OPTIMUM®

MASCHINEN - GERMANY

METAL WORKING MACHINERY

FOR YOUR OPTIMUM IN QUALITY, VALUE FOR MONEY AND SERVICE



MAIN CATALOGUE 2026/27

OFFER FOR OUR CUSTOMERS WHO ARE ENTREPRENEURS AND NOT CONSUMERS

FOR YOUR OPTIMUM IN QUALITY, VALUE FOR MONEY AND SERVICE



Dear prospective customer, Dear customer,

To enable a wide range of metalworking applications, we have compiled a selection of machines for many different areas in our OPTIMUM main catalogue. Each of our products impresses with its quality, precision, long service life and value stability. OPTIMUM provides the ideal machine for a variety of tasks, ranging from bench drills to CNC lathes.

Your requirements are our target
For more than 25 years, we have focused on the design, development and production of OPTIMUM machines, and for more than 10 years on CNC machines.– We work unceasingly on continually optimising our machines. One important point here is also production, which is of great importance to us. This is why we made a careful choice of manufacturers to supplement our own production facilities. We set great store by the fact that these manufacturers meet our internal quality requirements. Besides our own manufacturing operations, OPTIMUM exclusively produces with manufacturers who meet our requirements. This means that we can offer you metalworking machines that impress on many scores.
OPTIMUM has built up a good reputation in the course of the years on what is a continually changing and developing tool and machine market. We are proud to say that we combine expertise, experience and a balanced price-performance ratio. Our utmost priority is you as a satisfied customer. With our motivated and expert personnel we strive to complete OPTIMUM's know-how and deliver it to you our customers.



Kilian, Robert, Simon and Eric Stürmer (from left)

YouTube

DISCOVER OUR PRODUCT VIDEOS NOW!

All of our product videos are available for you to watch on our YouTube channel OPTIMUM Maschinen Germany GmbH. Subscribe to our YouTube channel, to avoid missing any of the new videos.



Sales and Service Germany in Hallstadt/Bamberg

CUSTOMER SERVICE

Thanks to the professional OPTIMUM customer service, every customer can access the service they need from the comprehensive range at any time.

Our services can be broken down into the following four modules:
- Inventory and requirements analysis,
- System planning and consulting,
- Installation and commissioning,
- Maintenance and commissioning.

Our service partners and the OPTIMUM field service team provide reliable on-site support to customers across the country.

DEALERS AND SERVICE

Thanks to our comprehensive network of specialist dealers, you always have a local partner with OPTIMUM who guarantees the best possible advice, intensive support, and trouble-free after-sales service. And, of course, our expert staff is there to help you at any time. Please don't hesitate to contact our qualified team if you have any questions. We are happy to help.

ON SITE FOR YOU: ACROSS EUROPE AND WORLDWIDE

For many years, OPTIMUM Maschinen Germany has been synonymous with the development, design and production of metalworking machines and CNC machines characterised by high quality standards. In the course of the years, we have continually expanded our sales and service network.

OPTIMUM Maschinen Germany GmbH now operates on a global scale from its headquarters in Hallstadt, near Bamberg, in collaboration with expert partners. You will find Optimum representatives working closely with strong dealers across Europe. Our international sales network extends well beyond Germany's borders to many countries all over the world. This helps us to ensure that our customers can rely on the fast, uncomplicated and service-oriented expertise and quality standards of OPTIMUM thanks to our extensive sales organisation. We have established a responsible market position that you can trust in the course of the years!

OUR PRODUCTS

Are you looking for a functional machine that offers a comprehensive feature set at an attractive price? Then you are making the right decision in purchasing an OPTIMUM metalworking machine. Thanks to their outstanding quality and precise workmanship, our products offer you the best possible value for money. We cater to a comprehensive tool machine and sheet metal working programme and are guaranteed to have the right machine variant for your needs in our assortment. You can rely on OPTIMUM to handle all your metalworking requirements. This main catalogue will give you an impression of our capabilities and our wide product portfolio.

INNOVATIONS FROM OUR OWN PRODUCTION





Production using our own CNC machines



Production using state-of-the-art OPTIMUM 5-axis CNC machines

QUALITY

OPTIMUM products are manufactured under strict quality requirements. A price comparison with equivalent and comparable products will give you the certainty that with OPTIMUM you are buying machines that stand up to any comparison in terms of ease of use, equipment, quality, technology and value for money and are the right purchase decision for you.

We only use high-quality components from leading manufacturers, such as Schneider and Siemens. We also install DC electrics, Siemens and Kostal inverters, among others. In addition, we develop our own electrical components to guarantee optimal performance and the highest quality.

Come and see for yourself the robust construction and durability that characterise our metalworking machines.

Make your purchase with OPTIMUM and enjoy the benefits of first-class quality. Although there are many similar products on the market, none of them come close to OPTIMUM's high quality standard. Trust OPTIMUM innovation.



Optimum plant in Yangzhou, China

ALL OPTIMUM PRODUCTS ARE MANUFACTURED TO HIGH QUALITY STANDARDS!



Milling machine production



Metal-cutting band saw production



Drilling machine production



Lathe production

GERMAN QUALITY – MADE IN CHINA





OUR PRODUCTION SITES

Optimum (Yangzhou) Machinery Co., Ltd. began operating in Touqiao Town, near Yangzhou in Jiangsu Province, in 2006. The town is only about a three-hour drive from Shanghai. A total of 100 employees, including 10 technicians, work on a total area of 34 000 m² and a building area of 10 000 m².

The Optimum machine range is now manufactured in three production plants, which cover a total area of approximately 75 000 m² and have a total building area of around 30 000 m². These facilities employ around 210 people including 30 technicians in production.

We guarantee consistently high levels of precision and cost-effectiveness in production. Under the motto 'GERMAN QUALITY – MADE IN CHINA', we develop bespoke solutions for our customers and take responsibility for their quality. Our production facilities operate according to strict technical processes and quality controls in accordance with ISO 9001.
Our production facilities use filter systems in the paint booths.

Our team of experienced experts and technicians, combined with our advanced production facilities, enables us to manufacture quality products such as small and medium-sized CNC machining centres, CNC lathes, CNC milling machines, metal saws, and milling, drilling, and turning machines.





DIN EN ISO 9001 – EXCELLENT QUALITY

Our factory is certified according to DIN EN ISO 9001:2015. This means that all company departments and services are subject to strict quality requirements. And this means consistently high quality for you. The objective of high quality is thrilled customers. And achieving this demanding certification is ultimately driven by this approach. The key to the long-term success of our enterprise is also a relationship of trust with customers and suppliers. It is therefore just as important to us as the quality of our products.


IQNET
Certificate
Registration Number:


ZERTIFIKAT
Nr. 490570-1
Stürmer Maschinen GmbH
Dr.-Robert-Pfleger-Str. 26
96103 Hallstadt
Deutschland
OPTIMUM®
MASCHINEN - GERMANY
Optimum Maschinen Germany GmbH, Dr.-Robert-Pfleger-Str. 26, 96103 Hallstadt
ISO 9001:2015
Entwicklung, Beschaffung, Vertrieb, Logistik und Service von Maschinen und Zubehör.

QUALITY

OUR STANDARDS ARE HIGH. AND WE STRICTLY ADHERE TO THEM!



QUALITY TESTED AT OUR PRODUCTION FACILITIES

The excellence and safety of our products are assured by a system of internal processes, based on regular and frequent inspections in our factories and along the logistics chain. In order to ensure compliance with the strict requirements, each production site is regularly inspected.

At Optimum, development and production are in the same hands, and the company sets high standards in all areas.

This is why our customers get what they expect from Optimum: innovative, well thought-out products with high practical suitability and an exceptionally long service life.



The machines are coated with water-based paint.

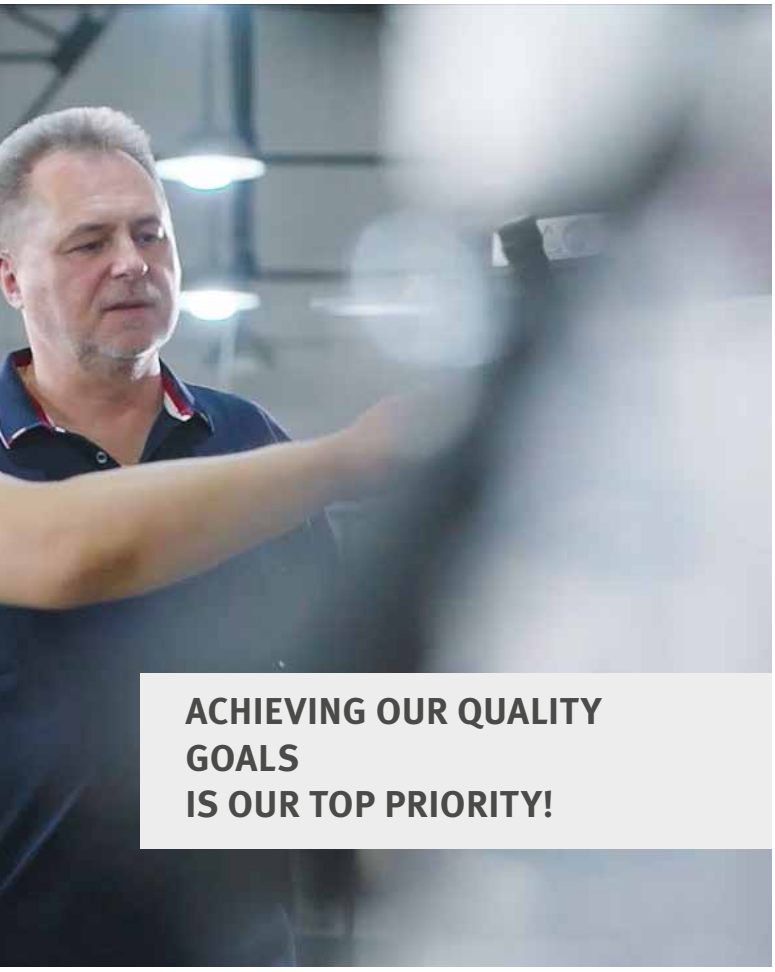
QUALITY CONTROL

Our company has developed a carefully planned quality management system and is certified according to ISO 9001:2008.

This system is an integral part of our operational workflows. No exceptions or compromises are made or entered into with regard to the quality level of the products from production.

Our Quality Assurance department is staffed by skilled employees who ensure that only products of impeccable quality are sold.

The Quality Assurance department consists of experienced technicians who are supervised by our German technicians, and attach great importance to high quality and impeccable product quality. Each production step is checked and compared at all times with the available specifications.



QUALITY ASSURANCE DEPARTMENT

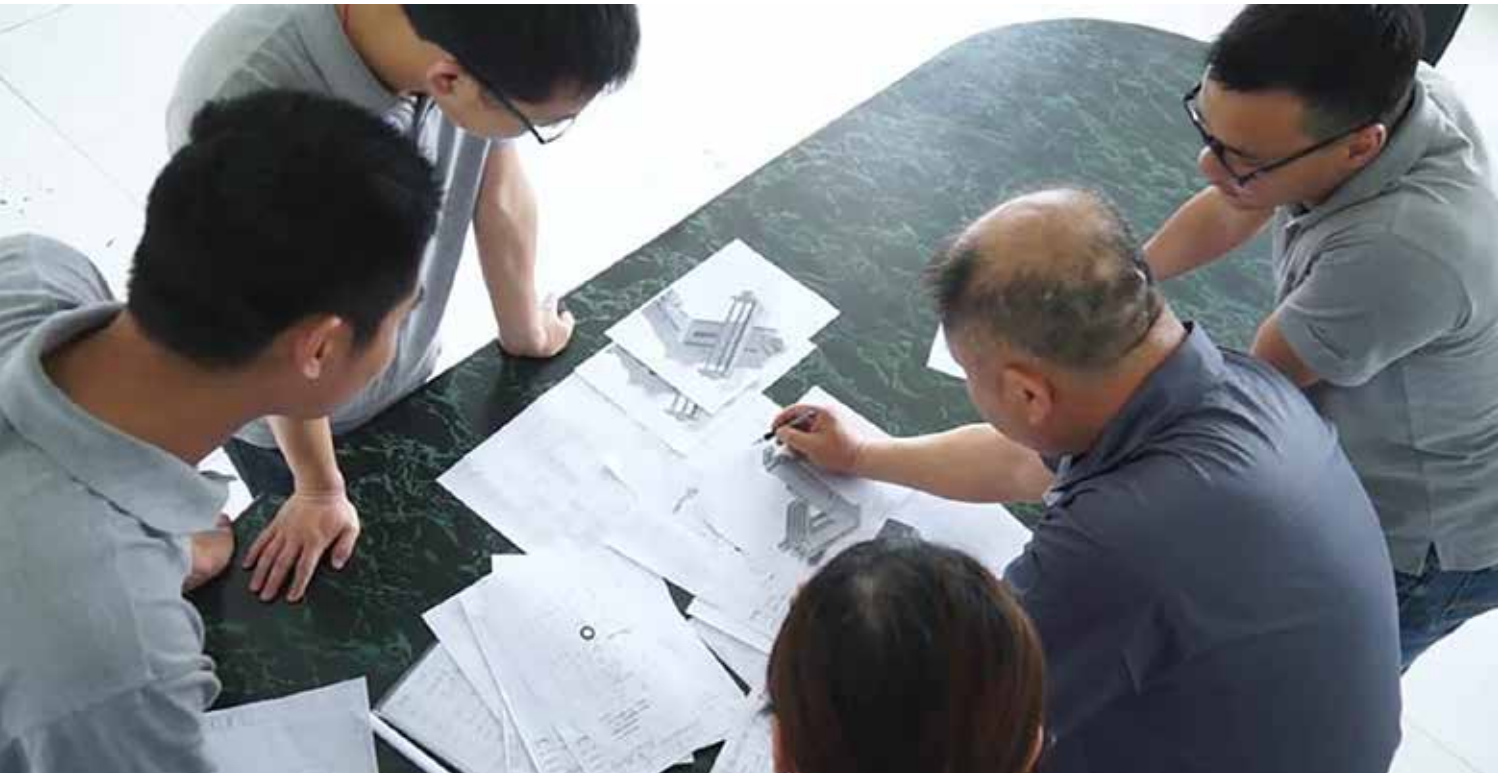
We want satisfied customers. This explains why our products' compliance with the customer quality requirements described earlier on is our company's top priority.







PRODUCTION SUPPORT



Our Engineering department has a well-coordinated team of specialists with excellent engineering qualifications. Their established expertise allows flexible and creative implementation of all requirements posed for our products and services.

A team of employees directly influences the production process on site through regular training and checks. It is only through this intensive support at the production site that we are in a position to achieve the proverbial OPTIMUM.





QUALITY MANAGEMENT, PRODUCTION, INCOMING GOODS INSPECTION

Alongside on-time delivery and a reliable service, the quality of our products is of the utmost importance to us. Our aim is to supply our customers at all times with products that meet our high quality standards and satisfy their individual requirements.

To ensure this, we rely on a comprehensive and consistent quality management system throughout the entire supply chain. Our quality managers carry out regular on-site inspections, monitoring both the production processes and compliance with the agreed quality requirements.

In addition, every consignment is subject to a comprehensive outgoing goods inspection. During this process, the products are carefully checked for quality, completeness, workmanship and compliance with the specified requirements. The tests are carried out in accordance with the applicable general technical guidelines and our own high quality standards.

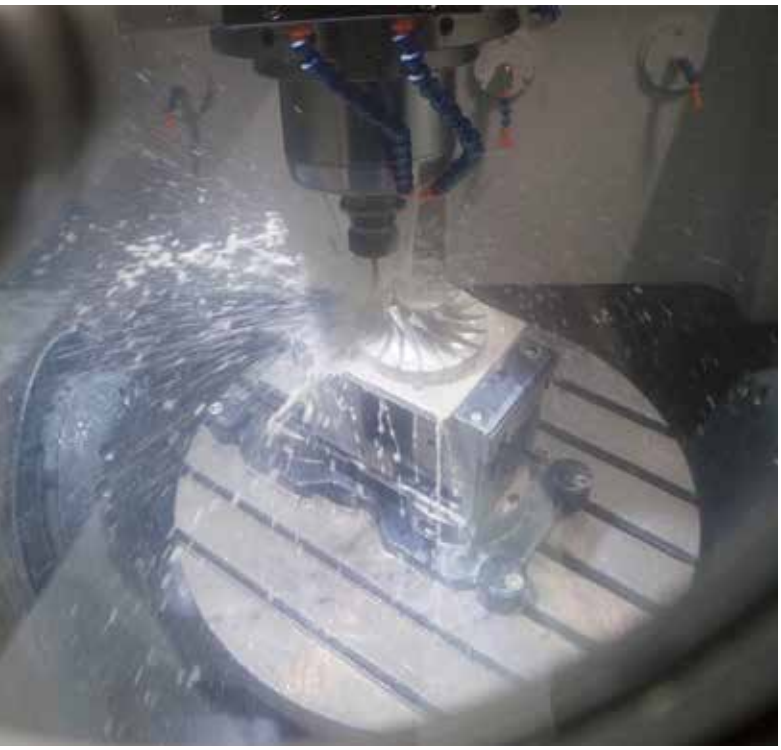


Through a combination of regular on-site inspections, a structured quality assurance process and comprehensive outgoing goods checks, we ensure consistently high product quality. This is how we lay the foundations for reliable products, long-term customer relationships and lasting customer satisfaction.

PLANNING



As early as the planning phase our engineering department manages the development of new products, which are manufactured both our facility and facilities operated by our partners. Big advantage: This means that the process of setting the course for successful product design immediately incorporates all market influences and customer requirements.



DEVELOPMENT

Development relies exclusively on state-of-the-art 3D CAD software, which we use to create a virtual model of the machine. Besides ensuring optimum functionality of the machines, our development process also targets re-usability of the data generated during the development phase. These data are not only used for devising production documents and manuals, but are also used for computations, for computer-aided manufacturing, and for visualisation and animations.

PRACTICAL TESTING

Our engineers combine theory and practice. To avoid leaving anything to chance in terms of product satisfaction, all of our machines and tools go through application engineering tests, and we also consistently involve selected customers in this process. This means that each new product is expected to prove itself in the daily grind before it comes a fixed part of our product range. Engineering analysis helps us to discover and eliminate any remaining weak points.

The clearly engineering oriented approach of our staff – in addition to the premium quality of our products, and our expert service – contribute towards constantly high levels of customer satisfaction. And our focus on technically affine employees ensures our market success – today and looking forward!



TECHNICAL CUSTOMER SUPPORT

Our customers rightly expect our specialists to use their knowledge and experience to their utmost satisfaction. Our product consultants support users with technical information. To allow this to happen, our customers can use our free telephone hotline and our info email address to request qualified information and solutions at short notice.

SAFEGUARDING COPYRIGHTS

To secure the rewards of our technical development work for both ourselves and our customers, patent and utility model protection is essential for our in-house developments. This helps us permanently keep the technical lead that OPTIMUM products have.

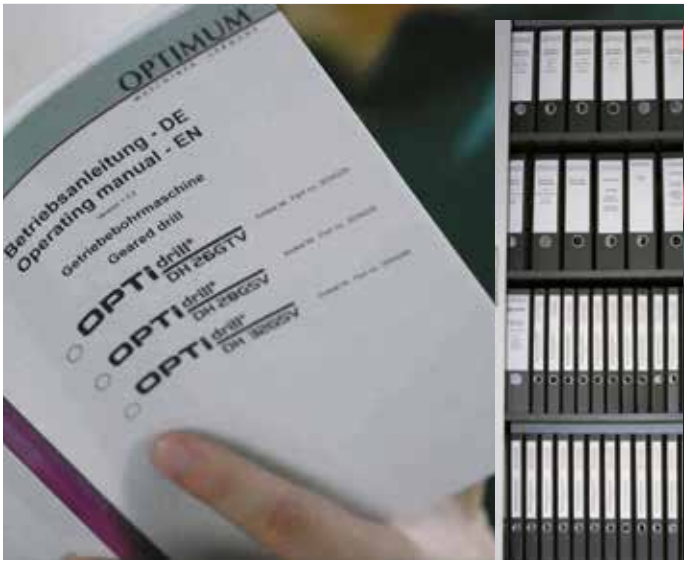
The entire catalogue is protected by copyright. Additionally, to protect our products, we register our rights to our brands, patents and designs where possible in each individual case. We take strong action against any violation of our intellectual property.

TECHNICAL DOCUMENTATION AND RISK ANALYSES

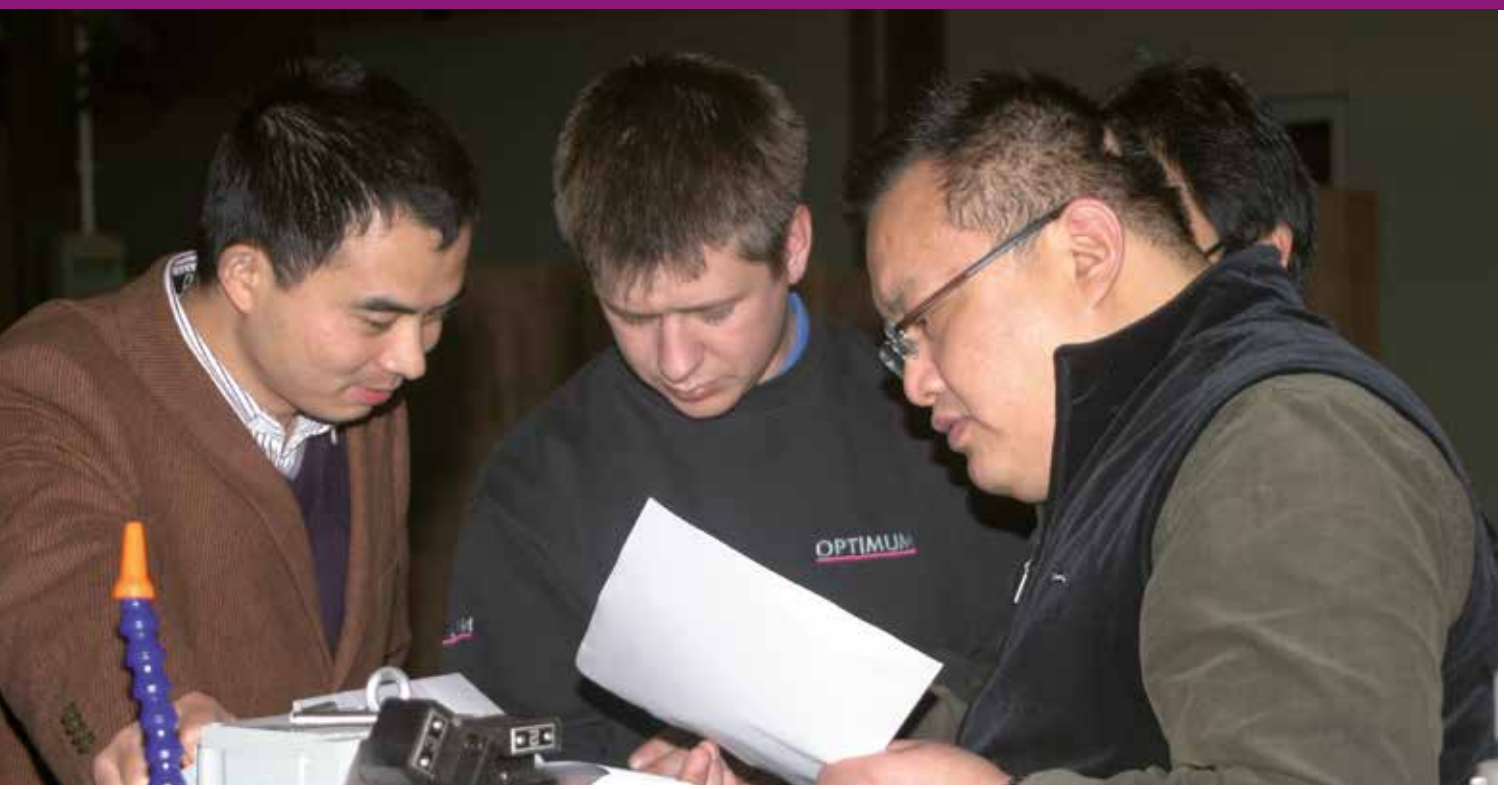
Our technical authors again achieve a high standardised level that meets or even exceeds all requirements. These huge efforts exclusively serve the purpose of facilitating the process of familiarisation with the machine for our customers, and ensuring permanent and safe operations.

Risk mitigation measures are developed to compensate for any safety risks identified in the scope of analysis. After implementing the measures, the residual risk is then evaluated.





SUPPLIER MANAGEMENT



Regular work meetings between our engineers and suppliers help to transfer our new developments and enhancements into series production at the manufacturing location in a targeted way. This direct support at our production facilities has been indispensable in manufacturing the quality products that our customers have trusted for more than 25 years.



SALES SUPPORT

The requirements for OPTIMUM machines are equally as diverse as the production requirements of our end customers and the workpieces to be machined. To ensure this, our representatives and retailers have access to the entire application-specific know-how of our engineers in case of queries.

In a qualified and explanatory sales talk, our customers are given the support they need to tune their choice of products to match their needs.



TRAININGS

For employees in technology, service and sales as well as for our customers: Our ability to handle our products successfully is largely determined by our ability to transfer technical knowledge to our dealers, their sales and service staff, and their customers through training. The big advantage: This qualification provides an opportunity to deliver expert advice and problem-solving support to customers at every stage. At our training centre, we offer practical product training courses designed to impart specialist knowledge in a clear and accessible way.



SUPPLY OF SPARE PARTS

We know that rapid availability of spare parts is one of the major preconditions for a working, customer-oriented service solution.

The planning, coordination and provisioning of spare parts is tuned at OPTIMUM Maschinen Germany GmbH so that our customers have the greatest possible benefits in terms of economic efficiency and speed.



SIEMENS COOPERATION PARTNER FOR CNC TRAINING

Siemens has for many years been the system supplier of the control and drive technology for CNC-controlled lathes and milling machines by OPTIMUM Maschinen Germany GmbH. Due to our long-standing and successful collaboration, a cooperation partnership for CNC training in Bavaria was agreed in June 2012. Target-group specific courses familiarise the participants of the training program with the various Sinumerik controls.





SERVICE SUPPORT

... after all, good service is important to us!

In service cases, our OPTIMUM technicians are available at any time with their experience to support your workshop operations and ensure fast and targeted repairs.

In close cooperation with the service centre and its internal and external staff, weaknesses are analysed and customer needs registered. These weaknesses and needs are then evaluated from an engineering point of view and set out as tangible requirements or action catalogues.

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CLASSIFICATION

INDUSTRY	**HIGHEST QUALITY GRADE**	› Industrial quality › The highest standard of quality for outstanding precision › For the most demanding applications › Extremely long service life › Uncompromising quality to meet the highest standards
INDUSTRY	**HIGH QUALITY STANDARD**	› Industrial quality › Excellent quality › Long service life › For demanding applications
CRAFTSMEN	**CRAFTSMEN WITH INDUSTRIAL STANDARDS**	› Machine tools tailored to meet the day-to-day needs of tradespeople, right through to professional use › for medium-sized batch manufacturers › Extensive range of accessories
CRAFTSMEN	**TRADESPEOPLE**	› Machine tools tailored to the day-to-day needs of the craft trades › for small and medium-sized batch manufacturers › Extensive range of accessories
HANDWERKER	**PROFESSIONAL DIY ENTHUSIASTS**	› Tools for DIY enthusiasts with high standards › Basic tools with enhanced features
DO-IT-YOURSELFERS	**DIY ENTHUSIAST**	› Basic machines › Extensive range of accessories

BENCH AND COLUMN DRILLING MACHINES

DP 26T | Art. no.: 3020620T

Modern design
with quiet running spindle
thanks to new spindle design.



D 33Pro | Art. no.: 3003040

Column drill
with V-belt drive



Entry level bench-top drilling machines with V-belt drive

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Safety electrical system operating at 24 V DC
- Guaranteed concentricity ≤ 0.03 mm, measured in the drill sleeve
- Drill spindle with precision ball bearings
- Separate emergency stop push button
- Drill table can be tilted ± 45° and rotated 360°
- Die-cast aluminium single-piece lever with soft-grip handles
- Generously dimensioned baseplate with T-slots, heavily ribbed on rear

DQ 18/DQ 22
- Precise workmanship; stable drilling table with two diagonal T-slots and all-around cooling water channel

DQ 22
- Generously dimensioned, height adjustable protective screen with safety switch

DQ 22 (400 V)
- Clockwise/anticlockwise rotation

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.



Fig.: DQ 14



Fig.: DQ 22

ARGUMENTS,...



Fig. Belt drive DQ 22.
Two belt pulleys for DQ 14/18

V-BELT DRIVE
› Best power transmission thanks to aluminium pulleys in conjunction with toothed GATES quality V-belt
› V-belt cover with safety switch



LED MACHINE LAMP
› Anti-glare LED lighting integrated into the drilling head No annoying shadows



DRILLING DEPTH STOP SCALE
› Easily adjustable and readable scale of the drilling depth stop



TABLE TILT SCALE
› The drilling table can be tilted 45° to the right or left.
› Easy-to-read angle scale



CHUCK
› Quick clamping chuck in standard scope of delivery

TECHNICAL DATA

Model	DQ 14	DQ 18	DQ 22
Article no. (230V)	3191040	3191042	3191044
Article no. (400V)	-	-	3191045
Power			
Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz	230 V or 400V ~50 Hz
Motor power	350 W	450 W	550 W
Drilling performance			
Drilling performance in steel (S235JR)	Ø 13 mm	Ø 15.9 mm	Ø 20 mm
Continuous drilling performance in steel (S235JR)	Ø 12 mm	Ø 14 mm	Ø 16 mm
Spindle			
Spindle sleeve stroke	52 mm	65 mm	85 mm
Throat depth	104 mm	127 mm	169 mm
Spindle seat	fixed/B16	MT2	MT2
Rotational speeds			
Spindle speeds	700 – 2 500 min^{-1}	600 – 2 400 min^{-1}	300 – 2 300 min^{-1}
Number of stages	5 stages	5 stages	12 stages
Drill table			
Drill table workspace L x W	170 x 170 mm	200 x 200 mm	270 x 270 mm
T-slot size (slot width)	14 mm, 2 diagonal	14 mm, 2 diagonal	14 mm, 2 diagonal
Load bearing capacity of table	8 kg	12 kg	15 kg
Drill table rotation/tilt ability	360° / ± 45°	360° / ± 45°	360° / ± 45°
Distance spindle – drilling table max.	250 mm	319 mm	460 mm
Machine foot			
Machine foot work surface L x W	138 x 128 mm	145 x 143 mm	191 x 187 mm
Max. distance spindle – machine base	340 mm	518 mm	639 mm
Dimensions and weight			
Column diameter	Ø 46 mm	Ø 60 mm	Ø 70 mm
Length x width x height approx.	472 x283 x 634 mm	568 x 319 x 849 mm	700 x 351 x 1 006 mm
Net weight approx.	18.5 kg	28.5 kg	41.7 kg

ACCESSORIES

Designation	Article no.
Twist drill HSS-CO 5%, 1-13 mmmm, 25-part	3201010
Twist drill HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Quick clamping drill chuck 1 – 10 mm; B16	3050610
Quick-action drill chuck DKC 13, 0 – 13 mm / B16	3050632
Quick-action drill chuck DKC 16, 0 – 16 mm / B16	3050633
Hold-down device 14 mm/M 12	3352031
Assortment of clamping tools SPW 12	3352077
Universal coolant unit 230 V	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Machine mobile base MSM 1	3353000
Information on the MSM machine base see page 88	
Universal machine and tool trolley MSU 3	3352990
Universal machine and tool trolley MSU 4	3352991
Information on machine and tool trolleys see page 88	
OWB 10 Workbench New	3353017
OWB 30 Workbench New	3353019
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Accessories DQ 18/DQ 22	Article no.
Quick-action drill chuck with MT2 mount 1 – 16 mm	3050571
Quick-action drill chuck with MT2 mount 1 – 13 mm	3050572
Tapered shank for drill chuck MT2/B16	3050659
Twist drill HSS MT2, 9-part	3051002
Thread tapping chuck 7 inserts M3 – M12	3050702

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95

SCOPE OF DELIVERY

DQ 14
- Quick-action drill chuck 1 – 15.9 mm
- T-slot nuts

DQ 18 / DQ 22
- Quick-action drill chuck 1 – 16 mm
- Tapered shank for drill chuck MT2/B16
- T-slot nuts

VARIO BELT DRIVE HEIMWERKER

Bench drill with V-belt drive and mechanically infinitely adjustable speed

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Safety electrical system operating at 24 V DC
- Guaranteed concentricity ≤ 0.03 mm measured in the drilling spindle
- User-friendly safety switch with IP 54 degree of protection
- Drill spindle with precision ball bearings
- Separate emergency stop push button
- Generously dimensioned, height adjustable protective screen with safety switch
- Precise workmanship; stable drilling table with two diagonal T-slots and all-around cooling water channel
- Drill table can be tilted ± 45° and rotated 360°
- Single-piece, pressure cast aluminium sleeve lever with Softgrip handles

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.



ARGUMENTS,...



V-BELT DRIVE
› Best power transmission thanks to aluminium pulleys in conjunction with toothed GATES quality V-belt
› V-belt cover with safety switch



SPEED CHANGE
› Whilst the drill spindle is rotating, the V-belt is adjusted to the required diameter using the hand lever. This changes the speed.



LED MACHINE LAMP
› Anti-glare LED lighting integrated into the drilling head No annoying shadows



DRILLING DEPTH STOP SCALE
› Easily adjustable and readable scale of the drilling depth stop

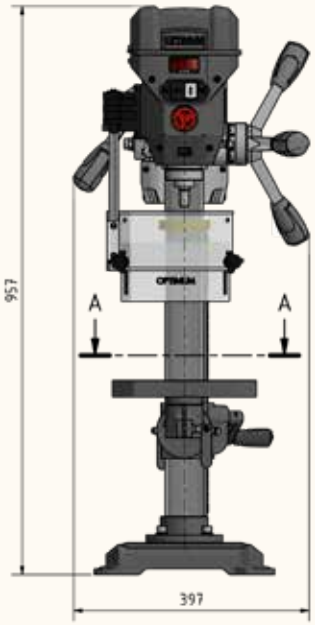


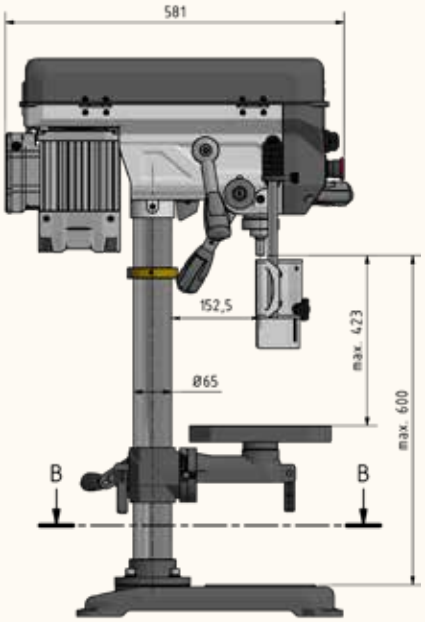
CHUCK
› OPTIMUM quick clamping chuck in standard scope of delivery

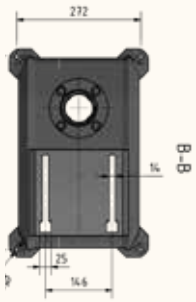
TECHNICAL DATA

Model	DQ 20V
Article no.	3191080
Power	
Electrical connection	230 V / 1 Ph ~50 Hz
Motor power	750 W
Drilling performance	
Drilling performance in steel (S235JR)	Ø 20 mm
Continuous drilling performance steel (S235JR)	Ø 16 mm
Spindle	
Spindle sleeve stroke	80 mm
Throat depth	152 mm
Spindle seat	MT2
Rotational speeds	
Spindle speeds	450 – 2 500 min^{-1}
Speed	mechanically adjustable
Drill table	
Work surface length x width	243 x 243 mm
T-slot size	14 mm, 2 diagonal
Load bearing capacity of table	15 kg
Drill table rotation/tilt ability	360° / ± 45°
Distance spindle – drilling table max.	423 mm
Machine foot	
Machine foot work surface L x W	181 x 187 mm
Clearance spindle – machine base	max. 599 mm
Dimensions and weight	
Column diameter	Ø 65 mm
Length x width x height approx.	580 x 400 x 960 mm
Net weight approx.	41 kg

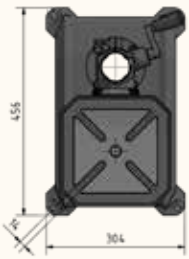
DIMENSIONS







Machine foot



Machine table

ACCESSORIES

Designation	Article no.
Quick-action drill chuck with MT2 mount 1 – 16 mm	3050571
Quick-action drill chuck with MT2 mount 1 – 13 mm	3050572
Tapered shank for drill chuck MT2/B16	3050659
Twist drill bit HSS MT2, 9-part	3051002
Twist drill bits HSS-CO 5%, 1 – 13 mm, 25-part	3201010
Twist drill bits HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Cone ejector MSP1	3050636
Assortment of clamping tools SPW 10, 58-part	3352076
Universal coolant unit	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100
Machine mobile base MSM 1	3353000
Information on the MSM machine base see page 88	
Universal machine and tool trolley MSU 3	3352990
Universal machine and tool trolley MSU 4	3352991
Information on machine and tool trolleys see page 88	
OWB 10 Workbench New	3353017
OWB 30 Workbench New	3353019
Information about the workbench see page 89	
More **accessories** and **information** on accessories from page 89	
You will find a wide selection of **machine vices** on page 95	

Important information on operating machines with frequency converters on page 333

SCOPE OF DELIVERY

- Quick-action drill chuck 1 – 16 mm
- Tapered shank for drill chuck MT2/B16
- T-slot nuts

Inexpensive bench and column drills with V-belt drive

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Guaranteed concentricity ≤ 0.03 mm measured in the drilling spindle
- User-friendly safety switch with IP 54 degree of protection
- Drilling spindle with precision ball bearings
- Separate emergency stop push button
- Clockwise/anticlockwise rotation
- Ground multi-tooth carrier
- Belt cover with safety switch
- Drill table can be tilted ± 45° and rotated 360°
- Solid, generously dimensioned baseplate with slots, rear heavily ribbed

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.



Fig.: DQ 25T



Fig.: DQ 25



Fig.: DQ 32

ARGUMENTS,...



V-BELT DRIVE
› Best power transmission thanks to aluminium pulleys in conjunction with toothed GATES quality V-belt
› V-belt cover with safety switch



TABLE TILT SCALE
› The drilling table can be tilted 45° to the right or left.
› Easy-to-read angle scale



DRILL TABLE
› Precise workmanship; stable drilling table with two diagonal T-slots and all-around cooling water channel



DRILLING DEPTH STOP SCALE
› Easily adjustable and readable scale of the drilling depth stop



CHUCK
› OPTIMUM quick clamping chuck in standard scope of delivery

TECHNICAL DATA

Model	DQ 25T	-
Article no.	3191047T	-
	Bench drill	

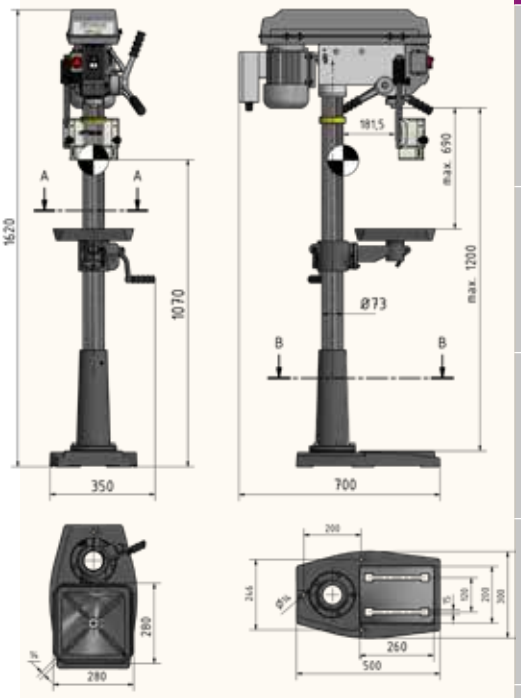
Model	DQ 25	DQ 32
Article no.	3191047	3191049
	Column drilling machines	
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Motor power	750 W	1.1 kW
Drilling performance		
Drilling performance in steel (S235JR)	Ø 25 mm	Ø 30 mm
Continuous drilling capacity in steel (S235JR)	Ø 20 mm	Ø 25 mm
Spindle		
Spindle sleeve stroke	80 mm	120 mm
Throat depth	181 mm	254 mm
Spindle seat	MT3	MT4
Rotational speeds		
Spindle speeds	200 – 2 440 min^{-1}	120 – 1 810 min^{-1}
Number of stages	12	9
Drill table		
Drill table workspace L x W	280 x 280 mm	355 x 355 mm
T-slot size	14 mm 2 running diagonally	14 mm 2 running diagonally
Load bearing capacity	40 kg	55 kg
Drill table rotation/tilt ability	360° / ± 45°	360° / ± 45°
Distance spindle – drilling table max.	690 mm	640 mm
Machine foot		
Machine base L x W	500 x 300 mm	575 x 350 mm
Machine base work area L x W	200 x 260 mm	230 x 295 mm
T-slot size / distance / number	15 mm / 120 mm / 2	15 mm / 138 mm / 2
Max. distance spindle – machine base	1 200 mm	1 170 mm
Dimensions and weight		
Column diameter	Ø 73 mm	Ø 92 mm
Length x width approx.	700 x 350 mm	850 x 390 mm
Height approx.	1 012 mm (DQ 25T) 1 620 mm (DQ25)	1 660 mm
Net weight approx.	67 kg (DQ 25T) 71 kg (DQ 25)	120 kg

ACCESSORIES

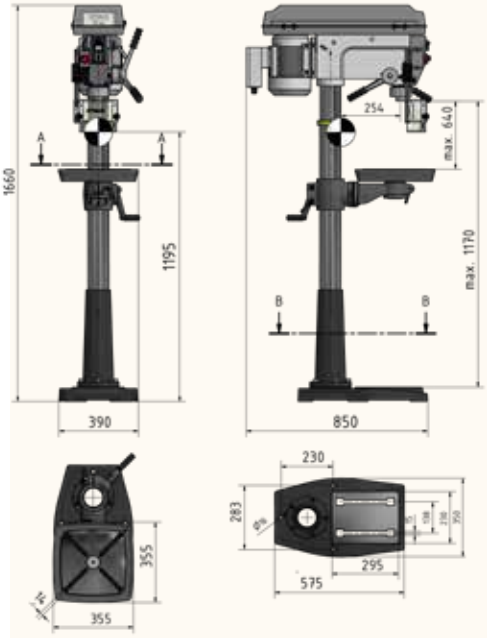
Designation	Article no.
Quick clamping drill chuck 1 – 10 mm; B16	3050610
Quick-action drill chuck DKC 13, 0 – 13 mm / B16	3050632
Quick-action drill chuck DKC 16, 0 – 16 mm / B16	3050633
Twist drill HSS-CO 5%, 1 – 13 mm, 25-part	3201010
Twist drill HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Hold-down device 14 mm/M 12	3352031
Assortment of clamping tools SPW 12	3352077
Universal coolant unit 230 V	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95

DIMENSIONS DQ 25



DIMENSIONS DQ 32



SCOPE OF DELIVERY

- Quick-action drill chuck 1 – 16 mm
- T-slot nuts
- Tapered shank for drill chuck MT3/B16 (DQ 25)
- Tapered shank for drill chuck MT4/ B16 (DQ32)

Bench drill with V-belt drive

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Guaranteed concentricity ≤ 0.02 mm measured in the drilling spindle
- User-friendly safety switch with IP 54 degree of protection
- Drill spindle with precision ball bearings
- Separate emergency stop push button
- Precise workmanship; stable drilling table with two diagonal T-slots and all-around cooling water channel
- High-quality quick-action drill chuck included as standard
- Folding drill chuck guard
- Single-piece, pressure cast aluminium sleeve lever with Softgrip handles

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.



ARGUMENTS,...



V-BELT DRIVE
› Ground multi-tooth carrier
› Optimal power transmission thanks to aluminium pulleys in combination with high-quality toothed V-belts
› V-belt cover with safety switch



TABLE TILT SCALE
› The drilling table can be tilted 45° to the right or left.
› Easy-to-read angle scale



DRILL TABLE
› Precise workmanship; stable drilling table with two diagonal T-slots and all-around cooling water channel
› Can be tilted sideways ± 45°
› Rotatable 360°

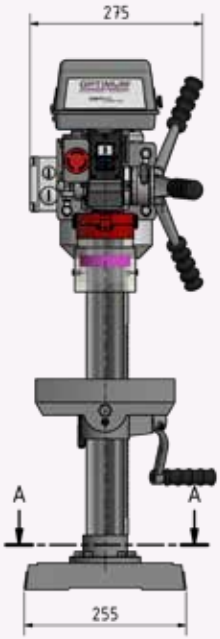


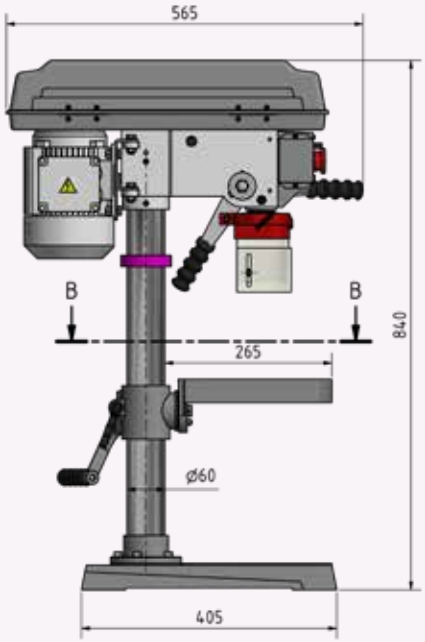
DRILLING DEPTH STOP SCALE
› Easily adjustable and readable scale of the drilling depth stop

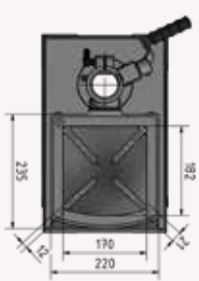
TECHNICAL DATA

Model	B 17Pro basic
Article no.	3003161 ✱✱
Power	
Electrical connection	230 V / 1 Ph ~50 Hz
Motor power	490 W
Drilling performance	
Drilling performance in steel (S235JR)	Ø 15.5 mm
Continuous drilling performance in steel (S235JR)	Ø 12 mm
Spindle	
Spindle sleeve stroke	65 mm
Spindle seat	MT2
Throat depth	152 mm
Rotational speeds	
Spindle speeds	680 – 2 700 min^{-1}
Number of stages	5 stages
Drill table	
Work surface length x width	235 x 220 mm
T-slot size	12 mm, 2 running diagonally
Load bearing capacity of table	18 kg
Drill table rotation/tilt ability	360° / ± 45°
Distance spindle – drilling table max.	325 mm
Machine foot	
Machine base L x W	255 x 405 mm
Machine base work area L x W	187 x 190 mm
T-slot size / distance / number	14 mm / 148 mm / 2
Max. distance spindle – machine base	530 mm
Dimensions and weight	
Column diameter	Ø 60 mm
Length x width x height approx.	565 x 275 x 840 mm
Net weight approx.	36.5 kg

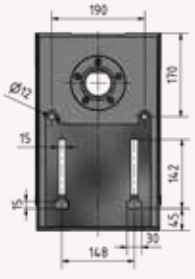
DIMENSIONS







Machine table



Machine foot

ACCESSORIES

Designation	Article no.
Quick-action drill chuck with MT2 mount 1 – 16 mm	3050571
Quick-action drill chuck with MT2 mount 1 – 13 mm	3050572
Quick clamping drill chuck 1 – 10 mm; B16	3050610
Quick-action drill chuck DKC 13, 0 – 13 mm / B16	3050632
Quick-action drill chuck DKC 16, 0 – 16 mm / B16	3050633
Tapered shank for drill chuck MT2/B16	3050659
Twist drill HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Twist drill HSS MT2, 9-part	3051002
Hold-down device 14 mm/M 12 (for the machine foot)	3352031
Assortment of clamping tools SPW 10	3352076
Universal coolant unit 230 V	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100
Machine mobile base MSM 1	3353000
Information on the MSM machine base see page 88	
Universal machine and tool trolley MSU 3	3352990
Universal machine and tool trolley MSU 4	3352991
Information on machine and tool trolleys see page 88	
OWB 10 Workbench New	3353017
OWB 30 Workbench New	3353019
Information about the workbench see page 89	

✱✱) no 3-year Stürmer warranty

SCOPE OF DELIVERY

- Quick-action drill chuck 1 – 13 mm
- Tapered shank for drill chuck MT2/ B 16
- T-slot nuts

Bench and column drilling machines with V-belt drive and digital drilling depth and speed display

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Safety electrical system operating at 24 V DC
- Guaranteed concentricity ≤ 0.02 mm measured in the drilling spindle
- User-friendly safety switch with IP 54 degree of protection
- Drill spindle with precision ball bearings
- Separate emergency stop push button
- Digital depth sensor
- Precision spindle hole
- Generously dimensioned, height adjustable protective screen with safety switch
- Premium quick-action drill chuck included as standard equipment
- V-belt cover with safety switch
- Single-piece, pressure cast aluminium sleeve lever with Softgrip handles
- Heavy duty design of entire machine

From D 23Pro
- GATES quality belts

From D 23Pro/400V
- Clockwise/anticlockwise rotation

D 33Pro
- Solid, generously dimensioned baseplate with T-slots, heavily ribbed on rear

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.



Fig.: D 23Pro

Fig.: D 26Pro

Fig.: D 33Pro

ARGUMENTS,...



V-BELT DRIVE
› Smooth running thanks to the precision-ground multi-tooth drive
› Best possible force transmission thanks to aluminium pulleys in combination with GATES quality toothed V-belts (as of D 23Pro)



DISPLAY
› Digital drilling depth and speed display integrated in housing
› Unit convertible metric / inch



DRILL TABLE
› Precise workmanship; stable drilling table with two diagonal T-slots and all-around cooling water channel
› Can be tilted sideways ± 45°
› Rotates 360°



Motor
› Industrial motor

TECHNICAL DATA

Model	D 17Pro	D 23Pro	D 26Pro	D 33Pro
Article no. (230V)	3003010	3003015	-	-
Article no. (400V)	-	3003020	3003030	3003040
Power				
Electrical connection	230 V / 1 Ph ~50 Hz	230 V or 400 V/	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Motor power	500 W	750 W	750 W	1.1 kW
Drilling performance				
Drilling performance in steel (S235JR)	Ø 16 mm	Ø 25 mm	Ø 25 mm	Ø 30 mm
Continuous drilling performance in steel (S235JR)	Ø 12 mm	Ø 20 mm	Ø 20 mm	Ø 25 mm
Spindle				
Spindle sleeve stroke	65 mm	80 mm	85 mm	120 mm
Spindle seat	MT2	MT2	MT3	MT4
Throat depth	152 mm	180 mm	210 mm	254 mm
Rotational speeds				
Spindle speeds	680 – 2 700 min^{-1}	200 – 2 440 min^{-1}	200 – 2 440 min^{-1}	120 – 1 810 min^{-1}
Number of stages	5 stages	12 stages	12 stages	9 stages
Drill table				
Work surface length x width	235 x 220 mm	280 x 245 mm	330 x 290 mm	475 x 425 mm
T-slot size	12 mm, 2 diagonal	12 mm, 2 diagonal	14 mm, 2 diagonal	14 mm, 2 diagonal
Table load--bearing capacity	18 kg	18 kg	20 kg	25 kg
Drill table rotation/tilt ability	360° / ± 45°	360° / ± 45°	360° / ± 45°	360° / ± 45°
Distance spindle – drilling table max.	325 mm	425 mm	720 mm	695 mm
Machine foot				
Machine foot work surface L x W	220 x 230 mm	240 x 250 mm	385 x 260 mm	410 x 325 mm
T-slot size / distance / number	16 mm / 148 mm / 2	16 mm / 170 mm / 2	16 mm / 170 mm / 2	16 mm / 250 mm / 2
Clearance spindle – machine base	max. 530 mm	max. 618 mm	max. 1 230 mm	max. 1 180 mm
Dimensions and weight				
Column diameter	Ø 60 mm	Ø 73 mm	Ø 80 mm	Ø 92 mm
Length x width x height approx.	585 x 305 x 840 mm	685 x 330 x 1 015 mm	730 x 345 x 1 645 mm	895 x 475 x 1 685 mm
Net weight approx.	36.5 kg	58 kg / 63.5 kg	90 kg	137 kg

ACCESSORIES

Designation	Article no.
Quick-action drill chuck 1 – 10 mm; B16	3050610
Quick-action drill chuck DKC 13, 0 – 13 mm / B16	3050632
Quick-action drill chuck DKC 16, 0 – 16 mm / B16	3050633
Twist drill bits HSS-CO 5%, 25-part	3201010
Twist drill bits HSS-CO 5%, 41-part	3201021
Hold-down device 14 mm/M 12	3352031
Universal coolant unit 230 V	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95

Accessories D 17Pro / D 23Pro	Article no.
Quick-action drill chuck with MT2 mount 1 – 16 mm	3050571
Quick-action drill chuck with MT2 mount 1 – 13 mm	3050572
Tapered shank for drill chuck MT2/B16	3050659
Twist drill HSS MT2, 9-part	3051002
Assortment of clamping tools SPW 10	3352076
Assortment of clamping tools SPW 14	3352078
Thread cutting chuck, 7 inserts M3 – M12	3050702

Accessories D 26Pro	Article no.
Quick-action drill chuck with MT2 mount 1 – 16 mm	3050573
Tapered shank for drill chuck MT3/B16	3050660
Twist drill HSS MT3, 9-part	3051003
Assortment of clamping tools SPW 12	3352077
Assortment of clamping tools SPW 14	3352078
Adapter MT3-MT2	3050663
Taper drill punch MSP1	3050636

Accessories B 33Pro	Article no.
Quick-action drill chuck with MT2 mount 1 – 16 mm	3050574
Tapered shank for drill chuck MT4/B16	3050661
Assortment of clamping tools SPW 12	3352077
Assortment of clamping tools SPW 14	3352078
Adapter MT4 - MT3	3050664
Cone ejector MSP2	3050637

SCOPE OF DELIVERY

- Quick-action drill chuck 1 – 16 mm
- Taper mandrel for drill chuck
- T-slot nuts

Bench and column drills with frequency inverter, digital drilling depth and speed display. Smooth running

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Industry quality drive motor
- Safety electrics in 24 V DC voltage
- Guaranteed concentricity ≤ 0.02 mm measured in the drilling spindle
- User-friendly safety switch with IP 54 degree of protection
- Drill spindle with precision ball bearings
- Separate emergency stop push button
- Digital depth sensor
- Precision spindle hole
- Generously dimensioned, height adjustable protective screen with safety switch
- Premium quick-action drill chuck included as standard equipment
- V-belt cover with safety switch
- Single-piece, pressure cast aluminium sleeve lever with Softgrip handles
- Heavy duty design of entire machine
- Clockwise/anticlockwise rotation
- Solid, generously dimensioned baseplate with T-slots, heavily ribbed on rear



Fig.: D 26Pro V

ARGUMENTS,...



› Premium Gates belts
› The toothed V-belts enable a higher power transmission to the shaft due to their smaller wrap angle on the V-belt pulleys.



› Frequency converter
› Industry quality drive motor



DISPLAY
› Digital drilling depth and speed display integrated in housing
› Unit convertible metric / inch



DRILL TABLE
› Precise workmanship; stable drilling table with two diagonal T-slots and all-around cooling water channel
› Can be tilted sideways ± 45°
› Rotates 360°

TECHNICAL DATA

Model	D 23Pro V*	D 26Pro V*	D 33Pro V*
Article no.	3011231	3011261	3011331
Power			
Electrical connection ~ 50 Hz	230V	230V	230V
Motor power	1.3 kW	1.3 kW	1.5 kW
Drilling performance			
Drilling performance in steel (S235JR)	Ø 25 mm	Ø 25 mm	Ø 30 mm
Continuous drilling performance in steel (S235JR)	Ø 20 mm	Ø 20 mm	Ø 25 mm
Spindle			
Spindle sleeve stroke	80 mm	85 mm	120 mm
Spindle seat	MT2	MT3	MT4
Throat depth	180 mm	210 mm	254 mm
Rotational speeds			
Spindle speeds	120 – 850 / 240 – 1 700 / 420 – 3 000 min^{-1}	120 – 850 / 240 – 1 700 / 420 – 3 000 min^{-1}	120 – 850 / 240 – 1 700 / 420 – 3 000 min^{-1}
Number of stages	3 stages	3 stages	3 stages
Drill table			
Work surface length x width	280 x 245 mm	330 x 290 mm	475 x 425 mm
T-slot size	12 mm, 2 diagonal	14 mm, 2 diagonal	14 mm, 2 diagonal
Table load--bearing capacity	18 kg	20 kg	25 kg
Drill table rotation/tilt ability	360° / ± 45°	360° / ± 45°	360° / ± 45°
Distance spindle – drilling table max.	415 mm	720 mm	685 mm
Machine foot			
Machine foot work surface L x W	240 x 260 mm	320 x 280 mm	410 x 325 mm
T-slot size / distance / number	16 mm / 170 mm / 2	16 mm / 170 mm / 2	16 mm / 250 mm / 2
Clearance spindle – machine base	max. 613 mm	max. 1 230 mm	max. 1 180 mm
Dimensions and weight			
Column diameter	Ø 73 mm	Ø 80 mm	Ø 92 mm
Length x width x height approx.	710 x 330 x 1 012 mm	770 x 345 x 1 645 mm	920 x 475 x 1 685 mm
Net weight approx.	58 kg	83 kg	130 kg

ACCESSORIES

Designation	Article no.
Quick-action drill chuck 1 – 10 mm; B16	3050610
Quick-action drill chuck DKC 13, 0 – 13 mm / B16	3050632
Quick-action drill chuck DKC 16, 0 – 16 mm / B16	3050633
Twist drill bits HSS-CO 5%, 25-part	3201010
Twist drill bits HSS-CO 5%, 41-part	3201021
Hold-down device 14 mm/M 12	3352031
Universal coolant unit 230 V	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100

Accessories D 23Pro V	Article no.
Quick-action drill chuck with MT2 mount 1 – 16 mm	3050571
Quick-action drill chuck with MT2 mount 1 – 13 mm	3050572
Tapered shank for drill chuck MT2/B16	3050659
Twist drill HSS MT2, 9-part	3051002
Assortment of clamping tools SPW 10	3352076
Assortment of clamping tools SPW 14	3352078
Thread cutting chuck, 7 inserts M3 – M12	3050702

Accessories D 26Pro V	Article no.
Quick-action drill chuck with MT2 mount 1 – 16 mm	3050573
Tapered shank for drill chuck MT3/B16	3050660
Twist drill HSS MT3, 9-part	3051003
Assortment of clamping tools SPW 12	3352077
Assortment of clamping tools SPW 14	3352078
Adapter MT3-MT2	3050663
Taper drill punch MSP1	3050636

Accessories D 33Pro V	Article no.
Quick-action drill chuck with MT2 mount 1 – 16 mm	3050574
Tapered shank for drill chuck MT4/B16	3050661
Assortment of clamping tools SPW 12	3352077
Assortment of clamping tools SPW 14	3352078
Adapter MT4 - MT3	3050664
Cone ejector MSP2	3050637

SCOPE OF DELIVERY

- Quick-action drill chuck 1 – 16 mm
- Taper mandrel for drill chuck
- T-slot nuts

* Note: The machines (frequency converters) comply with the DIN EN 55011 standard: Class C2. Important information on operating machines with frequency converters see page 325

Table drilling machine with continuously adjustable speed control

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Guaranteed concentricity ≤ 0.03 mm measured on the drilling spindle
- Drill spindle with precision ball bearings
- Membrane keyboard, dirt/water-resistant , easy to clean
- Separate emergency stop push button
- Thick walled cast column for high force absorption and stability
- EMC filter class C2

DX 13V
- Drill head height adjustable

DX 15V
- Drilling table height-adjustable via rack



Fig.: DX 13V



Fig.: DX 15V

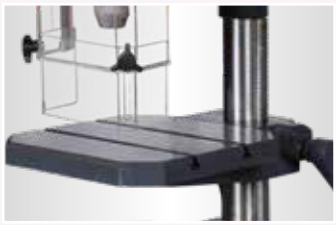
ARGUMENTS,...



DRILL CHUCK GUARD
› Height adjustability chuck guard with microswitch
› Premium OPTIMUM quick clamping chuck as standard



SPEED DISPLAY
› High-contrast, digital LED speed display integrated into the housing
› Speed control via potentiometer



DRILL TABLE
› Precisely machined robust drilling table with parallel T-slots



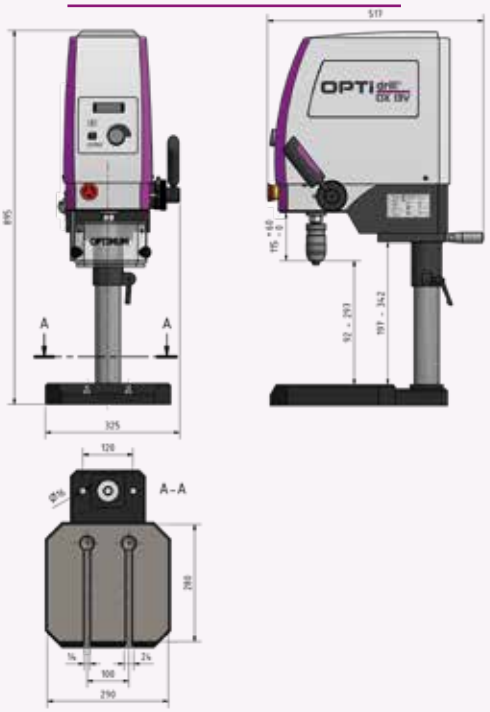
BASE PLATE
› Solid baseplate with, heavily ribbed on rear

TECHNICAL DATA

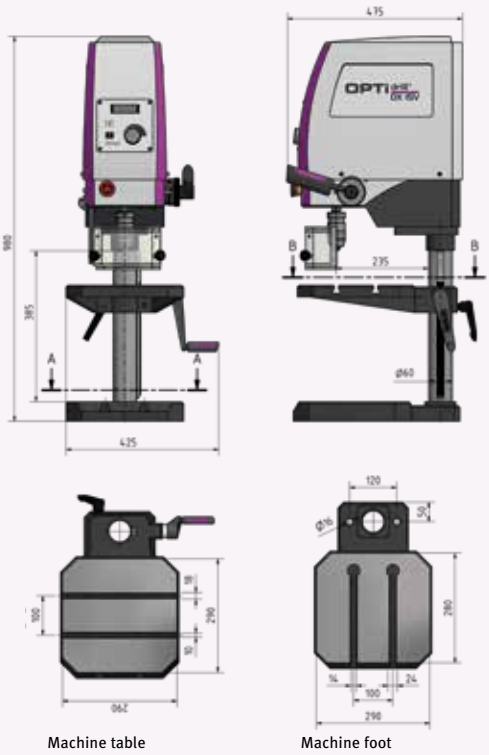
Model	DX 13V*	DX 15V*
Article no.	3020150	3020155
Power		
Electrical connection	230 V / 1 Ph ~50 Hz	
Motor power	850 W	
Drilling performance		
Drilling performance in steel (S235JR)	Ø 13 mm	Ø 15 mm
Continuous drilling performance in steel (S235JR)	Ø 11 mm	Ø 12 mm
Spindle		
Spindle sleeve stroke	60 mm	
Spindle seat	MT2	
Throat depth	235 mm	
Rotational speeds		
Spindle speeds	100 – 3 000 min^{-1}	
Number of stages	Electronic speed control	
Drill table		
Work surface length x width	-	290 x 290 mm
T-slot size / distance / number	-	10 mm / 100 mm / 2
Rotating drilling table	-	360°
Distance between spindle and table/ foot	-	98 – 375 mm
Machine foot		
Machine foot work surface L x W	280 x 290 mm	290 x 280 mm
T-slot size / distance / number	14 mm / 100 mm / 2	
Distance chuck – machine base	92 – 297 mm	290 – 355 mm
Dimensions and weight		
Column diameter	Ø 60 mm	
Length x width x height approx.	325 x 520 x 900 mm	425 x 475 x 980 mm
Net weight approx.	51 kg	66 kg

DIMENSIONS

Dimensions DX 13V



Dimensions DX 15V



Machine table

Machine foot

ACCESSORIES

Accessories	Article no.
Quick-action drill chuck with MT2 mount 1 – 16 mm	3050571
Quick-action drill chuck with MT2 mount 1 – 13 mm	3050572
Twist drill HSS MT2	3051002
T-slot nut (individual) M 8 / 10 mm	3353022
Assortment of clamping tools SPW 12, 58-part	3352077
Twist drill bits HSS-CO 5%, 1 – 13 mm, 25-part	3201010
Twist drill bits HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Hold-down device 14 mm/M 12	3352031
Assortment of clamping tools SPW 8, 58-part	3352075
Cutting oil spray 400 ml	3872100
Machine mobile base MSM 1	3353000
Information on the MSM machine base see page 88	
Universal machine and tool trolley MSU 3	3352990
Universal machine and tool trolley MSU 4	3352991
Information on machine and tool trolleys see page 88	
OWB 10 Workbench New	3353017
OWB 30 Workbench New	3353019
Information about the workbench see page 89	

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95

SCOPE OF DELIVERY

› Quick-action drill chuck 1 – 13 mm
› Taper mandrel for drill chuck MT2-B16

* Note: The machines (frequency converters) comply with the DIN EN 55011 standard: Class C2.
Important information on operating machines with frequency converters see page 325

Table drilling machine for precision mechanics with continuously adjustable speed control. Machine DX 17V highlight: menu-controlled operation of the drilling/thread tapping operation modes

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Guaranteed concentricity ≤ 0.02 mm measured on the drilling spindle
- Best possible force transmission thanks to aluminium pulleys
- Drill spindle with precision ball bearings
- Dirt/water-resistant, easy-to-clean membrane keyboard
- Separate emergency stop push button
- Anti-glare LED lighting on the left and right, integrated into the drilling head. No annoying shadows
- Height adjustability chuck guard with microswitch for maximum protection
- Precision drilling table with parallel T-slots, precision surface finish
- Swivelling drilling table
- Solid base plate with parallel T-slots

DX 17E
- High-contrast, digital LCD speed display

DX 17V
- OLED display
- Menu-controlled operation of the drilling/ thread cutting operation modes

PRODUCT VIDEO YouTube



Fig.: DX 17E



Fig.: DX 17V

ARGUMENTS,...



LCD DISPLAY DX 17E
› Spindle speed
› Depth display (actual)
› Clockwise/anticlockwise rotation
› Unit of dimension mm / inch
› Set zero point

OPTIMUM PATENT



OPERATING PANEL DX 17V
OLED display
1 - Selected tool and material
2 - Speed display
3 - Current drilling depth and thread depth
4 - Material selection
5 - Set drilling or thread depth as target value
6 - Piece counter
7 - Set unit

A suitable speed is suggested depending on the material and tool size. These parameters are entered via the menu. Speed display/current drilling depth and thread depth/set drilling or thread depth as target value/material selection/piece counter



SIEMENS INVERTER SINAMICS V20
› The inverter is equipped with an energy-optimised control method and automatic flux reduction to increase energy efficiency
› Wider voltage range, advanced cooling and painted electronic components increase the robustness of the inverter

TECHNICAL DATA

Model	DX 17E*	DX 17V*
Article no.	3020168	3020170
Power		
Electrical connection	230 V / 1 Ph ~50 Hz	
Motor power	1 kW	
Drilling performance		
Drilling performance in steel (S235JR)	Ø 16 mm	
Continuous drilling performance in steel (S235JR)	Ø 13 mm	
Thread tapping	-	M 8
Spindle		
Spindle sleeve stroke	60 mm	
Spindle seat	MT2	
Throat depth	235 mm	
Rotational speeds		
Spindle speeds	50 – 4 000 min^{-1}	
Number of stages	Electronic speed control	
Drill table		
Work surface length x width	290 x 290 mm	
T-slot size / distance / number	10 mm / 100 mm / 2	
Rotating drilling table	360°	
Clearance chuck – drilling table	98 – 315 mm	
Machine foot		
Machine foot work surface L x W	290 x 280 mm	
T-slot size / distance / number	14 mm / 100 mm / 2	
Distance chuck – machine base	max. 385 mm	
Dimensions and weight		
Column diameter	Ø 60 mm	
Length x width x height	425 x 480 x 910 mm	
Net weight	73 kg	



Fig.: MSU 3

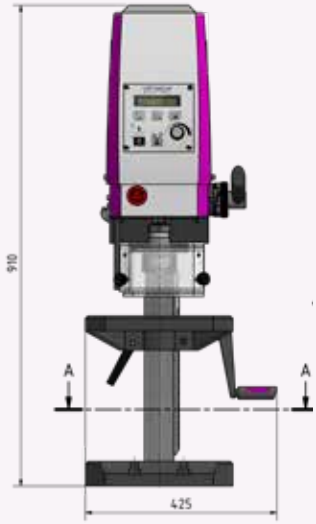
ACCESSORIES

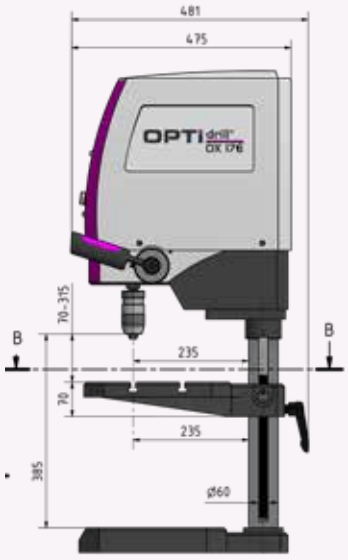
Designation	Article no.
Quick-action drill chuck with MT2 mount 1 – 16 mm	3050571
Quick-action drill chuck with MT2 mount 1 – 13 mm	3050572
Twist drill bits HSS-CO 5%, 1 – 13 mm, 25-part	3201010
Twist drill bits HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Assortment of clamping tools size 8	3352075
Assortment of clamping tools size 12	3352077
T-slot nut 10 mm / M 8	3353020
T-slot nut 14 mm / M 12	3353025
Universal coolant unit	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100
Machine mobile base MSM 1	3353000
Information on the MSM machine base see page 88	
Universal machine and tool trolley MSU 3	3352990
Universal machine and tool trolley MSU 4	3352991
Information on machine and tool trolleys see page 88	
OWB 10 Workbench New	3353017
OWB 30 Workbench New	3353019
Information about the workbench see page 89	

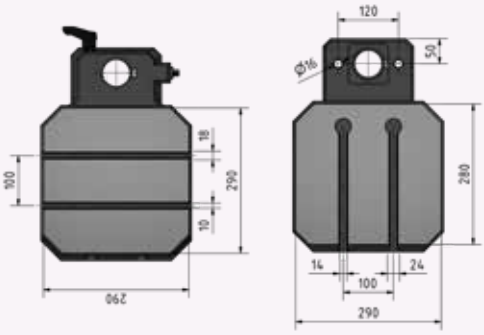
More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95

* Note: The machines (frequency converters) comply with the DIN EN 55011 standard: Class C2.
Important information on operating machines with frequency converters see page 325

DIMENSIONS







Machine table Machine foot

SCOPE OF DELIVERY

- Quick-action drill chuck 1 – 13 mm
- Taper mandrel for drill chuck MT2-B16

BELT DRIVE

CRAFTSMEN

DP 26T bench drill and DP 26F/DP 33 column drills with V-belt drive
in modern design

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Industrial motor
- Slow action spindle thanks to new spindle design
- Machine controls with safety electrical system in 24 V DC
- Guaranteed concentricity ≤ 0.02 mm measured in the drilling spindle
- Precision spindle hole
- Separate emergency stop push button
- Drilling depth stop
- LED machine lamp integrated in drilling head
- V-belt cover with safety switch
- Thick walled steel column for high force absorption and stability
- Solid, generously dimensioned baseplate with T-slots
- Precisely machined, stable drilling table with diagonal T-slots and surrounding cooling water channel, tiltable ± 45° to the side and rotatable 360°
- Heavy duty design of entire machine

400 V machines
- Clockwise/anticlockwise rotation

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.

PRODUCT VIDEO YouTube



Fig.: DP 26T



Fig.: DP 33

ARGUMENTS,...



V-BELT DRIVE
› Premium Gates belts
› The toothed V-belts enable a higher power transmission to the shaft due to their smaller wrap angle on the V-belt pulleys.
› Easy adjustment of the belt tension via excenter (toggle lever)



STATE-OF-THE-ART OPERATING CONCEPT
› Easily readable , digital display for viewing the speed, depth gauge and zero point



SPINDLE
› Outstanding smooth running thanks to innovative spindle geometry



DRILLING DEPTH STOP SCALE
› Easily adjustable and easy-to-read scale on the drilling depth stop

TECHNICAL DATA

Model	DP 26T	DP 26F	DP 33
Article no. (230V)	3020620T	3020620F	-
Article no. (400V)	3020625T	3020625F	3020640
Power			
Electrical connection	230 V / 1 Ph ~50 Hz oder 400 V / 3 Ph ~50 Hz		400 V / 3 Ph ~50 Hz
Motor power	750 W		1.1 kW
Drilling performance			
Drilling performance in steel (S235JR)	Ø 25 mm		Ø 30 mm
Continuous drilling performance in steel (S235JR)	Ø 20 mm		Ø 25 mm
Spindle			
Spindle sleeve stroke	95 mm		125 mm
Spindle seat	MT3		MT4
Throat depth	209 mm		270 mm
Rotational speeds			
Spindle speeds	200 – 2 440 min^{-1}		120 – 1 810 min^{-1}
Number of stages	12 stages		9 stages
Drill table			
Work surface length x width	308 x 308 mm		387 x 387 mm
T-slot size	12 mm, 2 running diagonally		14 mm, 2 running diagonally
Load bearing capacity of table	45 kg		65 kg
Drilling table tilts sideways / rotatable	± 45° / 360°		± 45° / 360°
Max. distance spindle – drill table	400 mm	770 mm	775 mm
Machine foot			
Foot work surface L x W	202 x 265 mm		270 x 327 mm
T-slot size / distance / number	14 mm / 120 mm / 2		16 mm / 150/ 150
Clearance spindle – machine base	max. 592 mm	max. 1 300 mm	max. 1 300 mm
Dimensions and weight			
Column diameter	Ø 80 mm		Ø 92 mm
Length x width x height approx.	750 x 410 x 1 025 mm	750 x 410 x 1 725 mm	945 x 480 x 1 880 mm
Net weight approx.	98 kg	107 kg	177 kg

ACCESSORIES

Designation	Article no.
Quick-action drill chuck DKC 13, 0 – 13 mm / B16	3050632
Quick-action drill chuck DKC 16, 0 – 16 mm / B16	3050633
Quick-action drill chuck with MT3 mount 1 – 16 mm	3050573
Quick-action drill chuck with MT4 mount 1 – 16 mm	3050574
Taper mandrel for drill chuck MT3- B16	3050660
Taper mandrel for drill chuck MT3- B16	3050661
Twist drill bits HSS-CO 5%, 1 – 13 mm, 25-part	3201010
Twist drill bits HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Twist drill bit HSS MT3, 9-part	3051003
Assortment of clamping tools size 10	3352076
Assortment of clamping tools size 12	3352077
Larger drilling table 475 x 425 mm (DP 33)	3020640001
Cutting oil spray 400 ml	3872100

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95

SCOPE OF DELIVERY

- Quick-action drill chuck 1 – 16 mm
- T-slot nuts
- Push-out tool
- Taper mandrel for drill chuck
- Operating tool

Bench drill DP 26V-T and column drills DP 26V-F/ DP 33V with electronically controlled drive in a modern design

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy duty design of entire machine
- Separate emergency stop push button
- Digital depth sensor
- Machine operation with safety electrics in 24 V DC voltage
- Guaranteed concentricity ≤ 0.02 mm measured in the drilling spindle
- Particularly smooth running thanks to new spindle design
- Industrial motor
- Main switch
- LED machine lamp integrated in drilling head
- Precision spindle hole
- Thick walled steel column for high force absorption and stability
- Speed display
- Solid, generously dimensioned baseplate with T-slots
- Precisely machined, stable drilling table with diagonal T-slots with all-round cooling water channel, can be tilted sideways by ±45° and rotated 360°
- V-belt cover with safety switch
- Thread tapping function with automatic changeover after reaching the depth

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.

PRODUCT VIDEO YouTube



Fig.: DP 26VT



Fig.: DP 26VF

ARGUMENTS,...



INVERTER DRIVE
› Stepless speed control using inverter technology
› Easily accessible
› Premium Gates belts
› To ensure that you can always set the optimal torque for machining, the belt can also be switched to the appropriate belt stage. This ensures a longer service life for the tools and reduces the load on the entire machine design
› Easy adjustment of the belt tension via excenter (toggle lever)

SIEMENS SINAMICS V 20 FREQUENCY INVERTER
› Energy-saving features
› Advanced cooling





STATE-OF-THE-ART OPERATING CONCEPT
› Easy-to-read digital display for showing:
- Speed
- Depth display
- Zero point

› Clockwise/anticlockwise rotation
› Thread tapping function



SPINDLE
› Outstanding smooth running thanks to innovative spindle geometry

TECHNICAL DATA

Model	DP 26V-T*	DP 26V-F*	DP 33V*
Article no.	3020675T	3020675F	3020680
	Bench drill	Column drill	Column drill
Power			
Electrical connection	400 V / 3 Ph ~50 Hz		400 V / 3 Ph ~50 Hz
Motor power	0.75 kW		1.1 kW
Drilling performance			
Drilling performance in steel (S235JR)	Ø 25 mm		Ø 30 mm
Continuous drilling performance in steel (S235JR)	Ø 20 mm		Ø 25 mm
Thread tapping in steel (S235JR)	M 10		M 12
Spindle			
Spindle sleeve stroke	95 mm		125 mm
Spindle seat	MT3		MT4
Throat depth	209 mm		270 mm
Rotational speeds			
Spindle speeds	60 – 3 050 min^{-1}		70 – 2 800 min^{-1}
Number of stages	12 stages, electronically adjustable		9 stages, electronically adjustable
Drill table			
Work surface length x width	308 x 308 mm		387 x 387 mm
T-slot size	12 mm, 2 running diagonally		14 mm, 2 running diagonally
Load bearing capacity of table	40 kg		55 kg
Drilling table tilts sideways / rotatable	± 45° / 360°		± 45° / 360°
Max. distance spindle – drill table	400 mm	770 mm	775 mm
Machine foot			
Foot work surface L x W	202 x 265 mm		270 x 327 mm
T-slot size / distance / number	14 mm / 120 mm / 2		14 mm / 150 / 150
Clearance spindle – machine base	max. 592 mm	max. 1 300 mm	max. 1 300 mm
Dimensions and weight			
Column diameter	Ø 80 mm		Ø 92 mm
Length x width x height approx.	845 x 406 x 1 025 mm	845 x 406 x 1 724 mm	945 x 480 x 1 880 mm
Net weight approx.	98 kg	107 kg	177 kg

ACCESSORIES

Designation	Article no.
Quick-action drill chuck DKC 13, 0 – 13 mm / B16	3050632
Quick-action drill chuck DKC 16, 0 – 16 mm / B16	3050633
Twist drill HSS-CO 5%, 1 – 13 mm, 25-part	3201010
Twist drill HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Assortment of clamping tools SPW 10	3352076
Assortment of clamping tools SPW 12	3352077
Cutting oil spray 400 ml	3872100
Accessories DP 26V	Article no.
Quick-action drill chuck with MT3 mount 1 – 16 mm	3050573
Taper mandrel for drill chuck MT3- B16	3050660
Twist drill bit HSS MT3, 9-part	3051003
Accessories DP 33V	Article no.
Quick-action drill chuck with MT4 mount 1 – 16 mm	3050574
Taper mandrel for drill chuck MT3- B16	3050661
Larger drill table 475 x 425 mm	3020640001

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95

SCOPE OF DELIVERY

- Quick-action drill chuck 1 – 16 mm
- T-slot nuts
- Push-out tool
- Taper mandrel for drill chuck
- Operating tool

* Note: The machine (frequency converter) complies with the DIN EN 55011 standard: Class C2 – Important information on operating machines with frequency converters see page 325

DP 26BV-T bench drill and DP 26BV-F/DP 33 column drills with V-belt drive in a modern design

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Separate emergency stop push button
- Digital depth sensor
- Machine operation with safety electrics in 24 V DC voltage
- Guaranteed concentricity ≤ 0.02 mm measured in the drilling spindle
- Particularly smooth running thanks to new spindle design
- Industrial motor
- LED machine lamp integrated in drilling head
- Precision spindle hole
- Thick walled steel column for high force absorption and stability
- Speed display
- Thread tapping device
- Main switch and motor circuit breaker
- Two-stage motor
- Solid, generously dimensioned baseplate with T-slots
- Precisely machined, stable drilling table with diagonal T-slots with all-round cooling water channel, can be tilted sideways by ±45° and rotated 360°
- V-belt cover with safety switch

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.

The highlight:
Speed adjustment at the touch of a button

PRODUCT VIDEO YouTube



Fig.: DP 26BV-T

Fig.: DP 26BV-F

ARGUMENTS,...



VARIATOR BELT DRIVE
› By varying the distance between the conical pulleys, the belt can have different diameters. This leads to a stepless adjustment of the transmission ratio and thus to a variable speed of the drilling spindle
› The highlight: The user can change the distance between the conical discs using an actuator via the pushbuttons on the control panel.
› The speed changes when the spindle is rotating

VARIATOR BELT DRIVE
› Durable wide groove v-belt
› Extremely reliable thanks to electronically adjustable speed
› Powerful, smooth action
› Speed change only possible when spindle is running
› Permanent optimal motor efficiency



STATE-OF-THE-ART OPERATING CONCEPT
› Easy-to-read digital display for showing:speed, depth gauge, zero point
› Clockwise/anticlockwise rotation
› Thread tapping function
› The highlight, speed adjustment at the touch of a button



SPINDLE
› Outstanding smooth running thanks to innovative spindle geometry

TECHNICAL DATA

Model	DP 26BV-T*	DP 26BV-F*	DP 33BV*
Article no.	3027660T	3027660F	3027685
Power			
Electrical connection	400 V / 3 Ph ~50 Hz		400 V / 3 Ph ~50 Hz
Motor power	0.45 / 0.75 kW		/ 1.5 kW
Drilling performance			
Drilling performance in steel (S235JR)	Ø 25 mm		Ø 30 mm
Continuous drilling performance in steel (S235JR)	Ø 20 mm		Ø 25 mm
Thread tapping in steel (S235JR)	M 10		M 12
Spindle			
Spindle sleeve stroke	95 mm		125 mm
Spindle seat	MT3		MT4
Throat depth	209 mm		270 mm
Rotational speeds			
Spindle speeds	420 – 2 100 min^{-1}		420 – 2 130 min^{-1}
Number of stages	2 stages, electronically adjustable		2 stages, electronically adjustable
Drill table			
Work surface length x width	308 x 308 mm		387 x 387 mm
	12 mm, 2 running diagonally		14 mm, 2 running diagonally
Load bearing capacity of table	40 kg		55 kg
Drill table can be tilted sideways	± 45° / 360°		± 45° / 360°
Max. distance spindle – drill table	400 mm	740 mm	775 mm
Machine foot			
Foot work surface L x W	202 x 265 mm		270 x 327 mm
T-slot size / distance / number	14 mm / 120 mm / 2		14 mm / 150 mm / 2
Clearance spindle – machine base	max. 592 mm	max. 1 300 mm	max. 1 300 mm
Dimensions and weight			
Column diameter	Ø 80 mm		Ø 92 mm
Length x width x height approx.	748 x 406 x 1 025 mm	748 x 406 x 1 724 mm	945 x 480 x 1 880 mm
Net weight approx.	101 kg	111 kg	177 kg

SCOPE OF DELIVERY

Designation	Article no.
Quick-action drill chuck DKC 13, 0 – 13 mm / B16	3050632
Quick-action drill chuck DKC 16, 0 – 16 mm / B16	3050633
Twist drill bits HSS-CO 5%, 1 – 13 mm, 25-part	3201010
Twist drill bits HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Assortment of clamping tools size 10	3352076
Assortment of clamping tools size 12	3352077
Cutting oil spray 400 ml	3872100
Accessories DP 26V	Article no.
Quick-action drill chuck with MT3 mount 1 – 16 mm	3050573
Taper mandrel for drill chuck MT3- B16	3050660
Twist drill bit HSS MT3, 9-part	3051003

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95

ACCESSORIES

- Quick-action drill chuck 1 – 16 mm
- T-slot nuts
- Push-out tool
- Taper mandrel for drill chuck
- Operating tool

Robust bench and column drills with V-belt drive

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Smooth, powerful industrial electric motor
- Guaranteed concentricity ≤ 0.015 mm measured in the drilling spindle
- Drill spindle with precision ball bearings
- Separate emergency stop push button
- Measuring scale for drilling depth
- Generously dimensioned, height adjustable protective screen with safety switch
- Premium Optimum quick clamping chuck as standard equipment
- Sturdy cast column
- Precision machined drilling table with two diagonal T-slots and all-around cooling water channel
- V-belt cover with safety switch
- V-belt quick tensioning device
- Solid, generously dimensioned baseplate with T-slots, heavily ribbed on rear
- The baseplate can be used for particularly high workpieces by swivelling out the drilling table

Equipment level	B 16H	B 24H	B 28H	B 34H
Machine lamp		✓	✓	✓
Clockwise/anticlockwise rotation		✓ (400 V)	✓	✓
Digital depth sensor				✓
Digital speed display				✓
Integrated push-out tool			✓	✓

ARGUMENTS,...



V-BELT DRIVE

› Smooth running thanks to the precision-ground multi-tooth drive
› Best possible force transmission thanks to aluminium pulleys in combination with GATES quality toothed V-belts



Fig.: B 16H



Fig.: B 24H



Fig.: B 28H



Fig.: B 34H

TECHNICAL DATA

Model	B 16H	B 24H	B 28H	B 34H
Article no. (230V)	-	3020241	-	-
Article no. (400V)	3020217	3020243	3020283	3020333
Power				
Electrical connection	400 V / 3 Ph ~50 Hz	230 V/1 Ph – 400 V/3 Ph	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Motor power	550 W	850 W	850 W	1.5 / 2.2 kW
Drilling performance				
Drilling performance in steel (S235JR)	Ø 13 mm	Ø 24 mm	Ø 28 mm	Ø 34 mm
Continuous drilling performance in steel (S235JR)	Ø 11 mm	Ø 20 mm	Ø 24 mm	Ø 26 mm
Spindle				
Spindle sleeve stroke	65 mm	85 mm	105 mm	160 mm
Spindle seat	MT2	MT2	MT3	MT4
Throat depth	130 mm	165 mm	200 mm	285 mm
Rotational speeds				
Spindle speeds	450 – 3 500 min^{-1}	350 – 4 000 min^{-1}	120 – 4 000 min^{-1}	145 – 4 800 min^{-1}
Number of stages	5 stages	7 stages	16 stages	2 x 9 speeds
Drill table				
Work surface length x width	230 x 245 mm	280 x 300 mm	340 x 360 mm	420 x 400 mm
T-slot size	12 mm 2 running diagonally	14 mm 2 running diagonally	14 mm 2 running diagonally	14 mm 2 running diagonally
Rotating drilling table	360°	360°	360°	360°
Max. distance spindle – drill table	370 mm	440 mm	860 mm	790 mm
Machine foot				
Machine foot work surface L x W	200 x 240 mm	280 x 260 mm	320 x 320 mm	390 x 390 mm
T-slot size / distance / number	12 mm / 80 mm / 2	14 mm / 120 mm / 2	14 mm / 120 mm / 2	14 mm / 150 mm / 2
Clearance spindle – machine base	max. 495 mm	max. 590 mm	max. 1 285 mm	max. 1 275 mm
Dimensions and weight				
Column diameter	Ø 60 mm	Ø 80 mm	Ø 92 mm	Ø 115 mm
Length x width x height	550 x 300 x 850 mm	665 x 435 x 1 000 mm	700 x 450 x 1 721 mm	920 x 585 x 1 900 mm
Net weight	54 kg	92 kg	142 kg	260 kg

ACCESSORIES

Designation	Article no.
Twist drill bits HSS-CO 5%, 25-part	3201010
Twist drill bits HSS-CO 5%, 41-part	3201021
Universal coolant unit	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100

Workbenches see page 89
More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95
Coolant accessories see page 93

Accessories B 16H / B 24H	Article no.
Quick-action drill chuck with MT2 mount, 1 – 16 mm	3050571
Quick-action drill chuck with MT2 mount 1 – 13 mm	3050572
Twist drill HSS MT2, 9-part	3051002
Assortment of clamping tools SPW 10, 58-part	3352076
Cone ejector MSP1	3050636

Accessories B 28H	Article no.
Quick-action drill chuck with MT3 mounting	3050573
Twist drill HSS / MT3, 9-part	3051003
Assortment of clamping tools SPW 12, 58-part	3352077
Thread tapping chuck, 7 inserts M3 – M12	3050705
Thread tapping chuck, 7 inserts M8 – M20	3050706
Adapter MT3-MT2	3050663

Accessories B 34H	Article no.
Quick-action drill chuck with MT4 mount	3050574
Assortment of clamping tools SPW 12, 58-part	3352077
Thread tapping chuck, 7 inserts M3 – M12	3050709
Thread tapping chuck, 7 inserts M8 – M20	3050710
Adapter MT4 - MT3	3050664

SCOPE OF DELIVERY

- Quick-action drill chuck 1 – 13 mm (B 16H)
- Quick-action drill chuck 1 – 16 mm (as of B 24H)
- Taper mandrel for drill chuck
- T-slot nuts

Robust bench and column drills with powerful OPTIMUM brushless drive, electronically adjustable speed

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Powerful brushless drive with particularly smooth action and high performance with almost constant torque over the entire speed range
- Guaranteed concentricity ≤ 0.015 mm measured in the drilling spindle
- Separate emergency stop push button
- Measuring scale for drilling depth
- Clockwise/anticlockwise rotation
- Best power transmission thanks to aluminium pulleys in conjunction with toothed GATES quality V-belt
- Smooth running thanks to the precision-ground multi-tooth drive
- Premium OPTIMUM quick clamping chuck as standard
- Digital speed display integrated in housing
- Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- Single-piece, pressure cast aluminium sleeve lever (B 24HV with Softgrip handles)
- V-belt cover with safety switch
- Precision workmanship; sturdy drilling table with two diagonal T-slots, 360° rotation and all-around cooling water channel
- Thick walled cast column for high force absorption and stability
- Solid baseplate, large dimensions and heavily ribbed on rear

Equipment level	B 24HV	B 28HV	B 34HV
Machine lamp	✓	✓	✓
Digital speed display	✓	✓	✓
Coolant system		✓	✓
Chip filter		✓	✓
Thread tapping function			✓
Digital depth sensor			✓
Integrated push-out tool		✓	✓

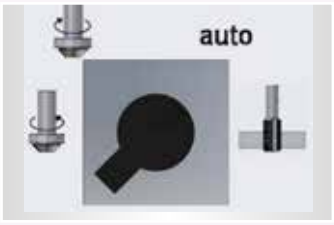


Fig.: B 24HV



Fig.: B 34HV

ARGUMENTS,...



B 34HV
OPERATING MODE SELECTOR SWITCH

"auto" operating mode
› Motor runs automatically after lever movement
› Stops again in original position
› Start and stop pushbuttons do not need to be actuated for repetitive drilling tasks

"Thread cutting" operating mode
› The motor is activated by moving the handle down
› The direction of rotation is changed by the limit switch on the adjustable drilling depth stop



POWERFUL BRUSHLESS DRIVE
› Particularly smooth action
› Extremely powerful
› Virtually constant torque over the entire speed range



MACHINE LAMP
› integrated into drill head



V-BELT TENSION LEVER
› Easy tensioning of the V-belts

TECHNICAL DATA

Model	B 24HV	B 28HV	B 34HV
Article no.	3020245	3020285	3020335
Power			
Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz
Motor power	2.2 kW	2.2 kW	2.6 kW
Coolant pump motor	-	40 W	40 W
Drilling performance			
Drilling performance in steel (S235JR)	Ø 24 mm	Ø 28 mm	Ø 34 mm
Continuous drilling performance in steel (S235JR)	Ø 20 mm	Ø 24 mm	Ø 26 mm
Thread tapping in steel (S235JR)	-	-	M 16 x 2 mm
Spindle			
Spindle sleeve stroke	85 mm	105 mm	160 mm
Spindle seat	MT2	MT3	MT4
Throat depth	165 mm	200 mm	285 mm
Rotational speeds			
Spindle speeds	100 – 5 950 min^{-1}	35 – 5 600 min^{-1}	40 – 5 000 min^{-1}
Number of stages	4 stages Electronic speed control	12 stages Electronic speed control	9 stages Electronic speed control
Drill table			
Work surface length x width	280 x 300 mm	340 x 360 mm	420 x 400 mm
T-slot size	14 mm, 2 running diagonally	14 mm, 2 running diagonally	14 mm, 2 running diagonally
Load bearing capacity of table	50 kg	50 kg	60 kg
Rotating drilling table	360°	360°	360°
Max. distance spindle – drill table	440 mm	860 mm	790 mm
Machine foot			
Machine foot work surface L x W	280 x 260 mm	320 x 320 mm	390 x 390 mm
T-slot size / distance / number	14 mm / 120 mm / 2	14 mm / 120 mm / 2	14 mm / 150 mm / 2
Rotating drilling table	360°	360°	360°
Clearance spindle – machine base	max. 590 mm	max. 1 285 mm	max. 1 275 mm
Dimensions and weight			
Column diameter	Ø 80 mm	Ø 92 mm	Ø 115 mm
Length x width x height	665 x 435 x 1 000 mm	700 x 475 x 1 755 mm	920 x 595 x 1 930 mm
Net weight	96 kg	166 kg	275 kg

ACCESSORIES

Designation	Article no.
Twist drill bits HSS-CO 5%, 25-part	3201010
Twist drill bits HSS-CO 5%, 41-part	3201021
Assortment of clamping tools size 12	3352077
Hold-down device 14 mm/M 12	3352031
Cutting oil spray 400 ml	3872100

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95
Coolant accessories see page 93
Workbenches see page 89

Accessories B 24HV	Article no.
Twist drill bit HSS MT2, 9-part	3051002
Thread tapping chuck, 7 inserts M3-M12	3050702

Accessories B 28HV	Article no.
Twist drill bit HSS MT3, 9-part	3051003
Thread tapping chuck, 7 inserts M3 - M12	3050705
Adapter MT3 - MT2	3050663

Accessories B 34HV	Article no.
Thread tapping chuck, 7 inserts M3 - M12	3050709
Adapter MT4 - MT3	3050664

SCOPE OF DELIVERY

› Quick-action drill chuck 1 – 16 mm
› Taper mandrel for drill chuck

* Note: The machines (frequency converters) comply with the DIN EN 55011 standard: Class C2. Important information on operating machines with frequency converters see page 325

VARIO BELT DRIVE CRAFTSMEN

Bench and column drilling machines with stepless, mechanical belt drive. Quick speed adjustment using a lever

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Smooth action powerful electric motor
- Two speeds
- Guaranteed concentricity ≤ 0.015 mm measured in the drilling spindle
- Drilling spindle with precision ball bearings
- Clockwise/anticlockwise rotation
- Digital speed display integrated in housing
- Precisely machined drilling table with 2 diagonal T-slots, 360° rotatable, with surrounding cooling water channel
- V-belt cover with safety switch
- Height adjustable chuck guard with micro switch for greatest possible protection of the user
- Premium quick clamping chuck as standard
- Thick walled cast column for high force absorption and stability
- Solid baseplate with, heavily ribbed on rear
- The baseplate can be used as a workspace for particularly high workpieces by swivelling out the drilling table

Equipment level	DH 24BV	DH 28BV	DH 40BV
Integrated push-out tool		✓	✓
Dig. Depth gauge			✓
Countershaft transmission			✓



Fig.: DH 24BV

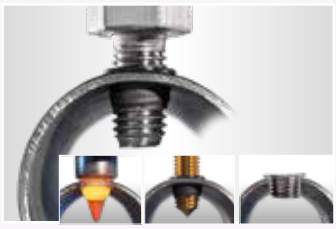


Fig.: DH 40BV

ARGUMENTS,...



SPEED SETTING
› Quicker speed adjustment using a lever



THERMDRILL
› Replaces rivet nuts
› Information see page 92



MACHINE LAMP
› integrated into drill head

VARIATOR BELT DRIVE



› Durable wide groove v-belt
› Extremely reliable thanks to electronically adjustable speed
› Powerful, smooth action
› Speed change possible during operation
› Permanent optimal motor efficiency

› By varying the distance between the conical pulleys, the belt can have different diameters
› This leads to a stepless adjustment of the transmission ratio and thus to a variable speed of the drilling spindle
› The highlight: The user can change the distance between the conical discs using an actuator via the push-buttons on the control panel
› The speed changes when the spindle is rotating

TECHNICAL DATA

Model	DH 24BV	DH 28BV	DH 40BV
Article no.	3020420	3020431	3020451
Power			
Electrical connection	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Motor power	1.5 kW	1.5 kW	1.5 / 2.2 kW
Drilling performance			
Drilling performance in steel (S235JR)	Ø 24 mm	Ø 28 mm	Ø 40 mm
Continuous drilling performance in steel (S235JR)	Ø 20 mm	Ø 24 mm	Ø 32 mm
Spindle			
Spindle sleeve stroke	85 mm	105 mm	160 mm
Spindle seat	MT2	MT3	MT4
Throat depth	165 mm	200 mm	285 mm
Rotational speeds			
Spindle speeds	300 – 4 000 min^{-1}	300 – 4 000 min^{-1}	150 – 2 000 min^{-1}
Number of stages	2 speed motor, manual	2 speed motor, manual	2 speed motor, manual
Drill table			
Work surface length x width	280 x 300 mm	340 x 360 mm	420 x 400 mm
T-slot size	14 mm, 2 running diagonally	14 mm, 2 running diagonally	14 mm, 2 running diagonally
Max. distance spindle – drill table	515 mm	860 mm	790 mm
Machine foot			
Machine foot work surface L x W	280 x 260 mm	320 x 320 mm	390 x 400 mm
T-slot size / distance / number	14 mm / 120 mm / 2	14 mm / 120 mm / 2	14 mm / 150 mm / 2
Rotating drilling table	360°	360°	360°
Clearance spindle – machine base	max. 681 mm	max. 1 285 mm	max. 1 275 mm
Dimensions and weight			
Column diameter	Ø 80 mm	Ø 92 mm	Ø 115 mm
Length x width x height	675 x 555 x 1 025 mm	755 x 550 x 1 745 mm	920 x 680 x 1 895 mm
Net weight	115 kg	152 kg	275 kg

ACCESSORIES

Designation	Article no.
Quick-action drill chuck 1 – 10 mm; B16	3050610
Quick-action drill chuck DKC 13, 0 – 13 mm / B16	3050632
Quick-action drill chuck DKC 16, 0 – 16 mm / B16	3050633
Twist drill bits HSS-CO 5%, 25-part	3201010
Twist drill bits HSS-CO 5%, 41-part	3201021
Assortment of clamping tools size 12	3352077
Hold-down device 14 mm/M 12	3352031
Universal coolant unit	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95
Coolant accessories see page 93
Workbenches see page 89

Accessories DH 24BV	Article no.
Quick-action drill chuck with MT2 mount 1 – 16 mm	3050571
Quick-action drill chuck with MT2 mount 1 – 13 mm	3050572
Tapered shank for drill chuck MT2/B16	3050659
Twist drill HSS MT2, 9-part	3051002
Cone ejector MSP1	3050636
Thread tapping chuck MT2, 7 pcs. M3 – 12	3050702
Assortment of clamping tools SPW 10, 58-part	3352076

Accessories DH 28BV	Article no.
Quick-action drill chuck with MT3 mounting	3050573
Tapered shank for drill chuck MT3/B16	3050660
Twist drill HSS / MT3, 9-part	3051003
Thread tapping chuck MT3, 7 pcs. M3-12	3050705
Thread tapping chuck MT3, 7 pcs. M8-20	3050706
Adapter MT3-MT2	3050663
Assortment of clamping tools SPW 12, 58-part	3352077

Accessories DH 40BV	Article no.
Quick-action drill chuck with MT4 mount	3050574
Tapered shank for drill chuck MT4/B16	3050661
Thread tapping chuck MT4, 7 pcs. M3-12	3050709
Thread tapping chuck MT4, 7 pcs. M8-20	3050710
Adapter MT4 - MT3	3050664
Assortment of clamping tools SPW 12, 58-part	3352077

SCOPE OF DELIVERY

- Quick-action drill chuck 1 – 16 mm
- Tapered shank for drill chuck MT
- T-slot nuts

GEAR DRILLING MACHINES

DH 26GT | Art. no.: 3034220

Bench drill
with gearwheels
made of polyamide



DH 35V | Art. no.: 3034253

Gear drilling machine with modern operating concept



Universal column gear drilling machines for milling and drilling with 12 speeds.

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, solid cast design
- Smooth running due to ground gearwheels running in an oil bath
- Two-stage industrial electric motor
- Thread tapping function
- Gear head and table are height adjustable
- Generously dimensioned, solid drilling table, precision workmanship, with 2 diagonal T-slots and recirculating coolant duct, heavily ribbed on rear side and double clamping
- Drilling depth stop
- Height-adjustable chuck protection with micro switch for greatest possible protection of the user
- Coupling for switching over from manual rough to manual fine feed
- Thick walled cast column for high force absorption and stability
- Solid baseplate with precision surface finish can be used as a workspace for particularly high workpieces by swivelling out the drilling table

Equipment	DH 40G	DH 40GP	DH 40GPE
Manual spindle sleeve feed	✓		
Mechanical sleeve feed		✓	
Electrical spindle sleeve feed			✓
LED work light			✓
Coolant pump			✓
Chip filter			✓



Fig.: DH 40G

Fig.: DH 40GPE

ARGUMENTS,...



DH 40GP
AUTOMATIC AND MANUAL SLEEVE FEED
› Drilling depth stop adjustable within range of 0-120 mm. The feed is automatically switched off after reaching the preset drilling depth and turned back to its original position by the spring force of the return spring



DH 40GPE
ELECTRICAL SLEEVE FEED
› The feed mechanism is operated directly by its own geared motor
› Advantage: The feed speed can be set independently of the current spindle speed



CONTROL PANEL
› User-friendly membrane keyboard

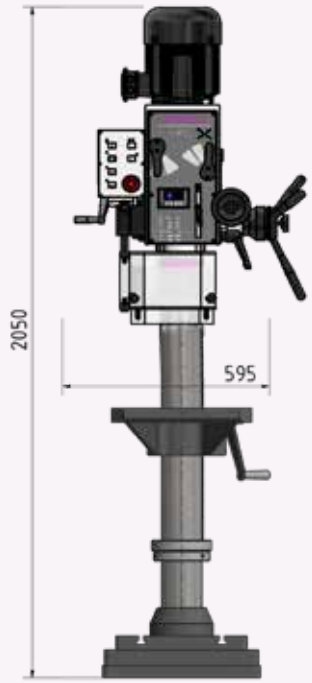


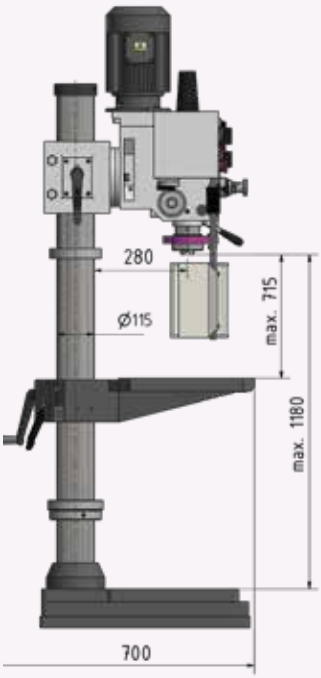
DISPLAY
› Digital depth display
› Programmable depth for direction reversal during thread tapping

TECHNICAL DATA

Model	DH 40G	DH 40GP	DH 40GPE*
Article no.	3035370	3035372	3035375
Power			
Electrical connection	400 V / 3 Ph ~50 Hz		
Motor power	1.1 / 1.5 kW		
Drilling performance			
Drilling performance in steel (S235JR)	Ø 32 mm		
Continuous drilling performance in steel (S235JR)	Ø 25 mm		
Thread tapping in steel (S235JR)	M 12		
Spindle			
Spindle sleeve stroke	120 mm (automatic mode) 115 mm		
Spindle sleeve diameter	75 mm		
Spindle seat	MT4		
Throat depth	280 mm		
Spindle sleeve feed	manual	mechanical 0.1 – 0.26 mm/rev	electrical 0.1 – 0.26 mm/rev
Drill head can be tilted/swivelled sideways	± 45° / 360°		
Drilling head height adjustment	265 mm		
Rotational speeds			
Spindle speeds	95 – 3 200 min^{-1}		
Gearbox stages	2 x 6 stages		
Drill table			
Length x width	500 x 460 mm		
T-slot size	14 mm, 2 running diagonally		
Cross table load capacity	50 kg		
Drill table sideways tiltable / rotatable	± 90° / 360°		
Max. distance spindle – drill table	785 mm		
Machine foot			
Machine foot work surface L x W	670 × 470 mm		
T-slot size / spacing / count	14 mm / 230 mm / 2		
Clearance spindle – machine base	max. 1 180 mm		
Dimensions and weight			
Column diameter	Ø 115 mm		
Length x width x height	595 x 700 x 2 050 mm		
Net weight	320 kg	335 kg	335 kg

DIMENSIONS





ACCESSORIES

Designation	Article no.
Assortment of clamping tools SPW 12, 58-part	3352077
Twist drill bits HSS-CO 5%, 25-part, 1 – 13 mm	3201010
Twist drill bits HSS-CO 5%, 41-part, 6 – 10 mm	3201021
Coolant mist lubricator MMC 1 with magnetic holder	3356663
Direct quick-action drill chuck 1 – 16 mm	3050574
Collet chuck set MT4/ ER 32, 32 – 20 mm	3352094
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 89 onwards

* The machine requires a neutral wire

SCOPE OF DELIVERY

- Gear rim drill chuck 1-13 mm/B16
- T-slot nuts
- Arbor MT4/B16
- Adapter MT4 – MT3
- Morse taper MT4/B22

Column gear drilling machines with cross table
The versatile machines for milling and drilling

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, solid cast design
- High running smoothness due to ground gear wheels running in an oil bath
- Large speed range of 95 – 3 200 min^{-1}
- Two-stage industrial quality electric motor
- Generously dimensioned, solid cross table with precision surface finish, adjustable via 3 hand wheels, includes integrated length scale
- Adjustable end stops on the cross table
- Gear head and table are height adjustable
- Table guideways precisely adjustable via gib strips
- Solid baseplate with precision surface finish can be used as a workspace for particularly high workpieces by swivelling out the X/Y table
- Drilling depth stop

PRODUCT VIDEO YouTube

Equipment	DH 40CT	DH 40CTP
Spindle sleeve feed	manual	mechanical
Speed dependent		✓
Clockwise/anticlockwise rotation	✓	✓
Thread tapping function	✓	✓
Cross table	✓	✓



Fig.: DH 40CT



Fig.: DH 40CTP

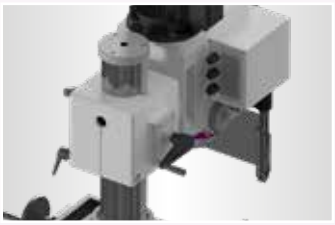
ARGUMENTS,...



DH 40CTP
MECHANICAL
SPINDLE SLEEVE FEED
› Drilling depth stop adjustable within range of 0-120 mm. The feed is automatically switched off after reaching the preset drilling depth and turned back to its original position by the spring force of the return spring



CONTROL PANEL
› User-friendly membrane keyboard



HEIGHT ADJUSTMENT
› of the milling head and cross table

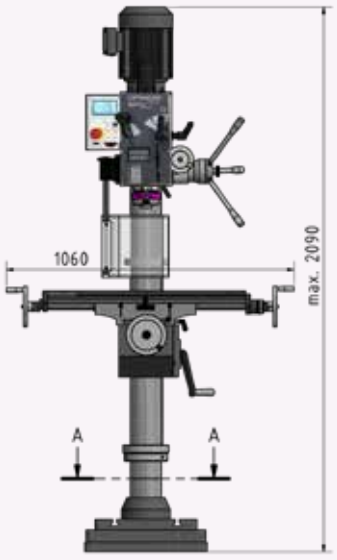


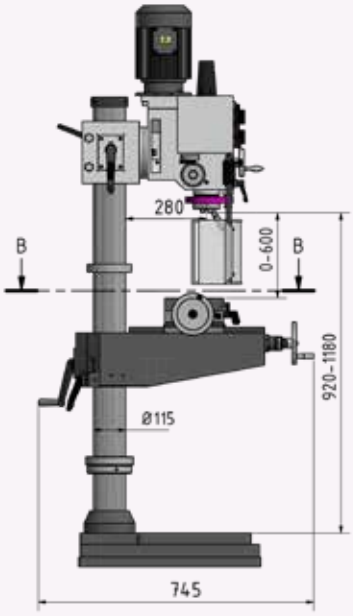
DISPLAY
› Digital depth display
› Programmable depth for direction reversal during thread tapping

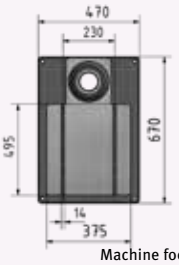
TECHNICAL DATA

Model	DH 40CT	DH 40CTP
Article no.	3035360	3035362
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	
Motor power	1.1 / 1.5 kW	
Drilling/milling performance		
Drilling performance in steel (S235JR)	Ø 32 mm	
Continuous drilling performance in steel (S235JR)	Ø 25 mm	
Cutter head size max.	Ø 76 mm	
End mill size max.	Ø 25 mm	
Thread tapping in steel (S235JR)	M 16	
Spindle		
Spindle sleeve stroke	120 mm	
Spindle sleeve diameter	75 mm	
Spindle seat	MT4	
Throat depth	280 mm	
Spindle sleeve feed	manual	mechanical 0.10 | 0.18 | 0.26 mm/rev
Drawbar	M 16	
Drill head can be tilted/swivelled sideways	± 45° / 360º	
Drilling head height adjustment	260 mm	
Rotational speeds		
Spindle speeds	95 – 3 200 min^{-1}	
Gearbox stages	2 x 6 stages	
Cross table		
Workspace length x width	730 x 210 mm	
T-slot size / number/ spacing	14 mm / 3 / 63 mm	
Cross table load capacity	50 kg	
Clearance spindle to cross table max.	600 mm	
X-axis travel distance manual	480 mm	
Y-axis travel distance manual	180 mm	
Y-axis travel distance manual	560 mm	
Machine foot		
Machine foot work surface L x W	495 x 375 mm	
T-slot size / distance / number	14 mm / 230 mm / 2	
Clearance spindle – machine base	max. 1 180 mm	
Dimensions and weight		
Column diameter	Ø 115 mm	
Length x width x height	1 060 x 745 x 2 090 mm	
Net weight	370 kg	

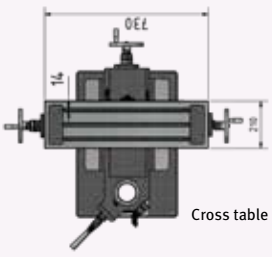
DIMENSIONS







Machine foot



Cross table

ACCESSORIES

Designation	Article no.
Assortment of clamping tools SPW 12, 58-part	3352077
Hold-down device 14 mm/M 12	3352031
Parallel shim set, 20-part	3354001
Horizontal-vertical rotary indexing table RT 150	3356150
Universal coolant unit	3351999
Cutting oil spray 400 ml	3872100

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95
Coolant accessories see page 93

SCOPE OF DELIVERY

- Gear rim drill chuck 1-13 mm/B16
- T-slot nuts
- Adapter MT4 – MT3
- Arbor for drill chuck MT4 / B16
- Operating tool

Column gear drilling machines with cross table

The versatile machines for milling and drilling

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, solid cast design
- High running smoothness due to ground gear wheels running in an oil bath
- Large speed range of 95 – 3 200 min^{-1}
- Two-stage industrial quality electric motor
- Generously dimensioned, solid cross table with precision surface finish, adjustable via 3 hand wheels, includes integrated length scale
- Adjustable end stops on the cross table
- Gear head and table are height adjustable
- Table guideways precisely adjustable via gib strips
- Solid baseplate with precision surface finish can be used as a workspace for particularly high workpieces by swivelling out the X/Y table
- Drilling depth stop
- Clockwise/anticlockwise rotation
- Thread tapping function

Equipment level	DH 40CTE	DH 40CTD
Spindle sleeve feed	electrical	electrical
Speed independent	✓	✓
Cross table	✓	✓
Coolant pump and chip filter	✓	✓
DRO6 in two axes		✓
LED work light	✓	✓



Fig.: DH 40CTPE

Fig.: DH 40CTD

ARGUMENTS,...



ELECTRICAL SLEEVE FEED
› The feed mechanism is operated directly by its own geared motor
› Advantage: The feed speed can be set independently of the current spindle speed



GEARHEAD
› Tiltable by ±45°



DH 40CTD
DIGITAL POSITION DISPLAY
DRO 6
› Magnetic measuring system in two axes



DRILLING DEPTH STOP
› Drilling several holes with the same depth

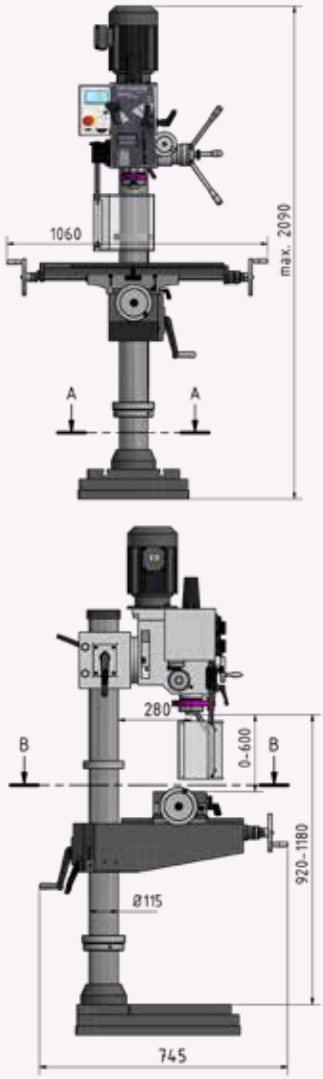


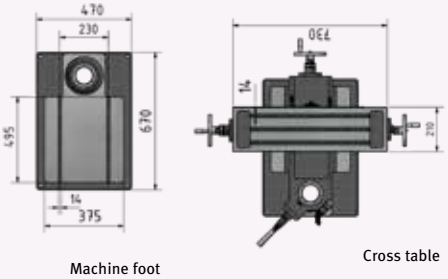
DISPLAY
› Digital depth display
› Programmable depth for direction reversal during thread tapping

TECHNICAL DATA

Model	DH 40CTE*	DH 40CTD*
Article no.	3035365	3035368
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	
Motor power	1.1 / 1.5 kW	
Drilling/milling performance		
Drilling performance in steel (S235JR)	Ø 32 mm	
Continuous drilling performance in steel (S235JR)	Ø 25 mm	
Cutter head size max.	Ø 76 mm	
End mill size max.	Ø 25 mm	
Thread tapping in steel (S235JR)	M 16	
Spindle		
Spindle sleeve stroke	120 mm	
Spindle sleeve diameter	75 mm	
Spindle seat	MT4	
Throat depth	280 mm	
Spindle sleeve feed	electrical 0.10 | 0.18 | 0.26 mm/rev	
Drawbar	M 16	
Drill head can be tilted/swivelled sideways	± 45° / 360º	
Drilling head height adjustment	260 mm	
Rotational speeds		
Spindle speeds	95 – 3 200 min^{-1}	
Gearbox stages	2 x 6 stages	
Cross table		
Workspace length x width	730 x 210 mm	
T-slot size / number/ spacing	14 mm / 3 / 63 mm	
Cross table load capacity	50 kg	
Clearance spindle to cross table max.	600 mm	
X-axis travel distance manual	480 mm	
Y-axis travel distance manual	180 mm	
Y-axis travel distance manual	560 mm	
Machine foot		
Machine foot work surface L x W	495 x 375 mm	
T-slot size / distance / number	14 mm / 230 mm / 2	
Clearance spindle – machine base	max. 1 180 mm	
Dimensions and weight		
Column diameter	Ø 115 mm	
Length x width x height	1 060 x 745 x 2 090 mm	
Net weight	370 kg	

DIMENSIONS





Machine foot

Cross table

ACCESSORIES

Designation	Article no.
Assortment of clamping tools SPW 12, 58-part	3352077
Hold-down device 14 mm/M 12	3352031
Parallel shim set, 20-part	3354001
Horizontal-vertical rotary indexing table RT 150	3356150
Universal coolant unit	3351999
Cutting oil spray 400 ml	3872100

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95
Coolant accessories see page 93

* The machines require a neutral wire

SCOPE OF DELIVERY

- Gear rim drill chuck 1-13 mm/B16
- T-slot nuts
- Adapter MT4 – MT3
- Arbor for drill chuck MT4 / B16
- Operating tool

Bench and post drills with polyamide gearwheels.
Installation of an optional footswitch possible with DH 32GS

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, solid cast design
- Excellent true running accuracy thanks to hardened and ground main spindle
- Low-maintenance, grease-lubricated gearbox
- Gearbox with PA6 gearwheels
- Large speed range
- Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- Adjustable drilling depth stop with millimetre scale
- Clockwise/anticlockwise rotation
- Machine lamp integrated in drilling head
- Integrated push-out tool for easy tool changes
- Precision machined drilling table with 2 diagonal T-slots, and recirculating coolant duct
- Thick walled cast column for high force absorption and stability
- Solid baseplate, large dimensions and heavily ribbed on rear

OPTIdrill DH 32GS
- Optional footswitch available for toggling between clockwise/anticlockwise run and for thread tapping (Article no. 3050032)

Equipment level	DH 26GT	DH 28GS	DH 32GS
Thread tapping function			✓
Automatic spindle sleeve feed			✓
Coolant pump/chip filter			✓



Fig.: DH 26GT with optional drill chuck



Fig.: DH 32GS

ARGUMENTS,...



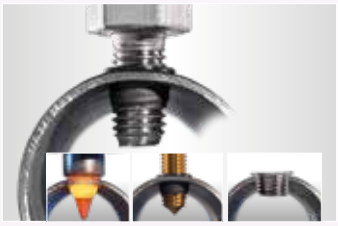
DH 32GS
AUTOMATIC SPINDLE SLEEVE FEED
› Activation by pressure switch in sleeve lever. An electromagnetic clutch provides propulsion. The switch-off function is activated either by reaching the drilling depth stop or by pressing the push button on the spindle sleeve lever again.



PUSH-OUT TOOL
› Integrated ejector for easy tool change



MACHINE LAMP
› integrated into drill head



THERMDRILL
› Replaces rivet nuts
› Information see page 92

TECHNICAL DATA

Model	DH 26GT	DH 28GS	DH 32GS
Article no.	3034220	3034230	3034240
Power			
Electrical connection	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Motor power	1.1 / 1.5 kW	1.1 / 1.5 kW	1.5 / 2.2 kW
Coolant pump motor	-	-	40 W
Drilling performance			
Drilling performance in steel (S235JR)	Ø 24 mm	Ø 26 mm	Ø 30 mm
Continuous drilling capacity in steel (S235JR)	Ø 21 mm	Ø 23 mm	Ø 26 mm
Thread tapping in steel (S235JR)	-	-	M16 x 2 mm
Spindle			
Spindle sleeve stroke	127 mm	127 mm	125 mm
Spindle seat	MT3	MT3	MT4
Throat depth	235 mm	260 mm	285 mm
Automatic spindle sleeve feed	-	-	2 stages: 0.05 – 0.1 mm/rev
Rotational speeds			
Spindle speeds	75 – 2 900 min^{-1}	75 – 2 900 min^{-1}	75 – 2 000 min^{-1}
Number of stages	8 stages	8 stages	8 stages
Drill table			
Drill table work surface, length x width	380 x 380 mm	376 x 394 mm	400 x 420 mm
T-slot size	14 mm, 2 running diagonally	14 mm, 2 running diagonally	14 mm, 2 running diagonally
Drill table load-bearing capacity	80 kg	100 kg	120 kg
Rotating drilling table	360°	360°	360°
Max. distance spindle – drill table	450 mm	875 mm	820 mm
Machine foot			
Machine foot work surface L x W	350 x 356 mm	350 x 356 mm	450 x 395 mm
T-slot size / distance / number	14 mm / 120 mm / 2	14 mm / 120 mm / 2	14 mm / 150 mm / 2
Max. distance spindle – machine base	610 mm	1 285 mm	1 270 mm
Dimensions and weight			
Column diameter	Ø 92 mm	Ø 92 mm	Ø 115 mm
Length x width x height	610 x 380 x 1 430 mm	640 x 376 x 2 080 mm	725 x 450 x 2 200 mm
Net weight	158 kg	175 kg	312 kg

ACCESSORIES

Designation	Article no.
Quick-action drill chuck 1 – 10 mm; B16	3050610
Quick-action drill chuck DKC 13, 0-13 mm / B16	3050632
Quick-action drill chuck DKC 16, 0-16 mm/ B16	3050633
Twist drill bits HSS-CO 5%, 25-part	3201010
Twist drill bits HSS-CO 5%, 41-part	3201021
Assortment of clamping tools SPW 12, 58-part	3352077
Thermdrill Basic Set	3060004
Cutting oil spray 400 ml	3872100

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95
Coolant accessories see page 93

Accessories DH 26GT / DH 28GS	Article no.
Quick-action drill chuck with MT3 mount 1 – 16 mm	3050573
Tapered shank for drill chuck MT3/B16	3050660
Twist drill HSS MT3	3051003
Adapter MT3-MT2	3050663
Thread tapping chuck, 7 inserts M3-M12	3050705
Thread tapping chuck, 7 inserts M8-M20	3050706
Universal coolant unit	3351999

Accessories DH 32GS	Article no.
Quick-action drill chuck with MT4 mount 1-16 mm	3050574
Tapered shank for drill chuck MT4/B16	3050661
Adapter MT4 - MT3	3050664
Adapter MT4 - MT2	3050665
Foot switch	3050032

Functions:
› Thread tapping
› Clockwise/anti-clockwise change over switch



SCOPE OF DELIVERY

› Taper mandrel for drill chuck MT3 (DH 26GT/ DH 28GS)
› Taper mandrel for drill chuck MT4 (DH 32GS)

Column drills with SIEMENS inverters and polyamide gear wheels.

With continuously adjustable speed control.
Installation of an optional footswitch possible

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, solid cast design
- Frequency converter
- Thread tapping function
- Smooth running thanks to the precision-ground multi-tooth drive
- Excellent true running accuracy thanks to hardened and ground main spindle
- Low-maintenance, grease-lubricated gearbox
- Gearbox with PA6 gearwheels
- Large speed range
- Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- Adjustable drilling depth stop with millimetre scale
- Clockwise/anticlockwise rotation
- Machine lamp integrated in drilling head
- Integrated push-out tool for easy tool changes
- Precision machined drilling table with two diagonal T-slots with all-around cooling water channel
- Thick walled cast column for high force absorption and stability
- Solid baseplate, large dimensions and heavily ribbed on rear
- Option to connect the optional foot switch (item no. 3050032). The foot switch is used to reverse the direction of rotation for thread tapping and can also be used to switch off the automatic spindle sleeve feed.

Equipment level	DH 28GSV	DH 32GSV
SIEMENS SINAMICS V 20 FREQUENCY INVERTER	✓	✓
Automatic spindle sleeve feed		✓
Coolant pump/chip filter		✓
Digital Display	✓	✓

PRODUCT VIDEO YouTube



Fig.: DH 28GSV with optional drill chuck



Fig.: DH 32GSV with optional drill chuck

ARGUMENTS,...



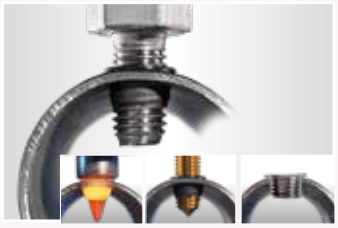
DH 32GSV
AUTOMATIC SPINDLE SLEEVE FEED
› Activation by pressure switch in sleeve lever. An electromagnetic clutch provides propulsion. The switch-off function is activated either by reaching the drilling depth stop or by pressing the push button on the spindle sleeve lever again.



CONTROL PANEL
› Easily readable , digital display for speed
› User-friendly membrane keyboard



SIEMENS SINAMICS V20
› Energy-saving features
› Advanced cooling
› Painted electronics assemblies

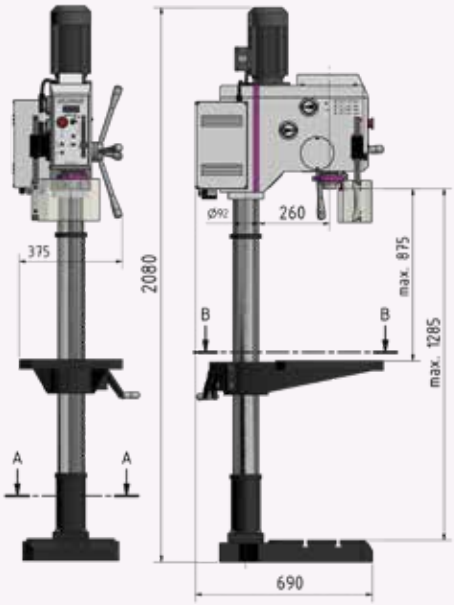


THERMDRILL
› Replaces rivet nuts
› Information see page 92

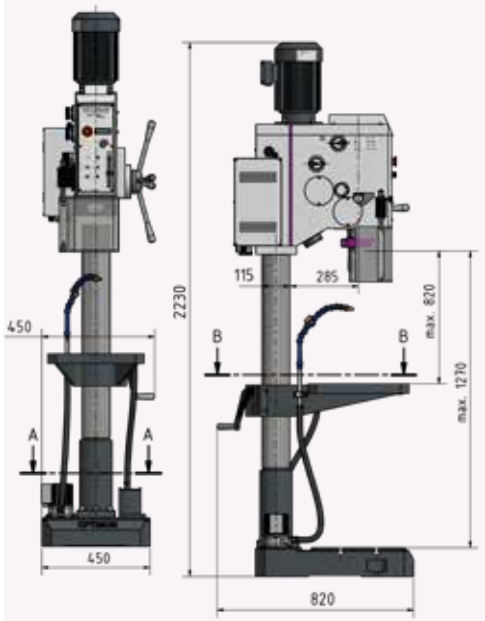
TECHNICAL DATA

Model	DH 28GSV	DH 32GSV
Article no.	3034235	3034245
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	
Motor power	1.5 kW	2.2 kW
Coolant pump motor	-	40 W
Drilling performance		
Drilling performance in steel (S235JR)	Ø 26 mm	Ø 30 mm
Continuous drilling capacity in steel (S235JR)	Ø 23 mm	Ø 26 mm
Thread tapping in steel (S235JR)	M 16 x 2 mm	
Spindle		
Spindle sleeve stroke	127 mm	125 mm
Spindle seat	MT3	MT4
Throat depth	260 mm	285 mm
Automatic spindle sleeve feed	-	0.05 – 0.1 mm/rev
Rotational speeds		
Spindle speeds	45 – 3 200 min^{-1}	40 – 3 000 min^{-1}
Number of stages	4 stages, electronically adjustable	
Drill table		
Drill table workspace L x W	376 x 394 mm	400 x 420 mm
T-slot size	14 mm, 2 running diagonally	
Drill table load-bearing capacity	100 kg	120 kg
Rotating drilling table	360°	
Max. distance spindle – drill table	875 mm	820 mm
Machine foot		
Machine foot work surface L x W	350 x 356 mm	420 x 395 mm
T-slot size / distance / number	14 mm / 120 mm / 2	14 mm / 150 mm / 2
Clearance spindle – machine base	max. 1 285 mm	max. 1 270 mm
Dimensions and weight		
Column diameter	Ø 92 mm	Ø 115 mm
Length x width x height	690 x 375 x 2 080 mm	820 x 450 x 2 230 mm
Net weight	184 kg	324 kg

DIMENSIONS DH 28GSV



DIMENSIONS DH 32GSV



ACCESSORIES

Designation	Article no.
Quick-action drill chuck 1 – 10 mm; B16	3050610
Quick-action drill chuck DKC 13, 0 – 13 mm / B16	3050632
Quick-action drill chuck DKC 16, 0 – 16 mm / B16	3050633
Twist drill bits HSS-CO 5%, 1-13 mm, 25-part	3201010
Twist drill bits HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Assortment of clamping tools SPW 12, 58-part	3352077
Cutting oil spray 400 ml	3872100
Thermdrill Basic Set	3060004
Foot switch	3050032
Functions: Thread tapping, right/left rotation switch	

More accessories and information about accessories from page 89 onwards

Accessories DH 28GSV	Article no.
Quick-action drill chuck with MT3 mount 1 – 16 mm	3050573
Twist drill HSS/ MT3	3051003
Adapter MT3-MT2	3050663
Universal coolant unit	3351999

Accessories DH 32GSV	Article no.
Quick-action drill chuck with MT4 mount 1 – 16 mm	3050574
Adapter MT4 - MT3	3050664
Adapter MT4 - MT2	3050665

SCOPE OF DELIVERY

- Taper mandrel for drill chuck MT3 (DH 28GSV)
- Taper mandrel for drill chuck MT4 (DH 32GSV)

* Note: The machines (frequency converters) comply with the DIN EN 55011 standard: class C2
Important information on operating machines with frequency converters on page 333

Geared drilling machine with thread cutting unit and electrically controlled spindle sleeve feed.

DH 35V with continuously adjustable speed control

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Dirt/water-resistant, easy-to-clean membrane keyboard
- 24 V DC electronics
- Electrical spindle sleeve feed
- Drilling depth stop
- Low-maintenance gear unit running in a closed oil sump
- Thread tapping device
- Machine lamp integrated in drilling head
- Main switch
- Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- Generously dimensioned, solid drilling table, precision workmanship, with 2 diagonal T-slots and recirculating coolant duct, heavily ribbed on rear side and double clamping
- Coolant unit with coolant tank integrated into base plate
- Chip filter removes coarse components from the coolant
- Robust, thick-walled cast-iron column for excellent force absorption
- Solid base plate with parallel T-slots, precision surface finish
- Option to connect the optional foot switch (Art. no. 3050032).

OPTIdrill DH 35V

- Continuously adjustable speed control
- Feed deactivation programmable
- Easily readable , digital display
- Digitally adjustable drilling and thread depth
- Digital zero point adjustable



Fig.: DH 35G with optional drill bit



Fig.: DH 35V

ARGUMENTS,...



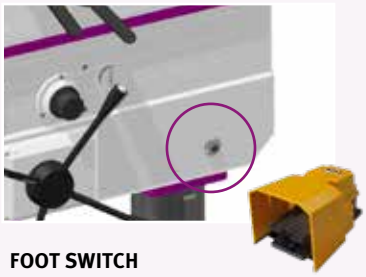
AUTOMATIC SPINDLE SLEEVE FEED

› For deep drilling or blind hole drilling, the clutch on the automatic sleeve feed can be released or engaged at any time by pressing the button on the feed handle



DH 35V
STATE-OF-THE-ART CONTROL SOLUTION

› Easy-to-read digital display for showing speed, drilling depth, thread depth and piece counter, percentage display of potentiometer position
› Feed deactivation via depth adjustment



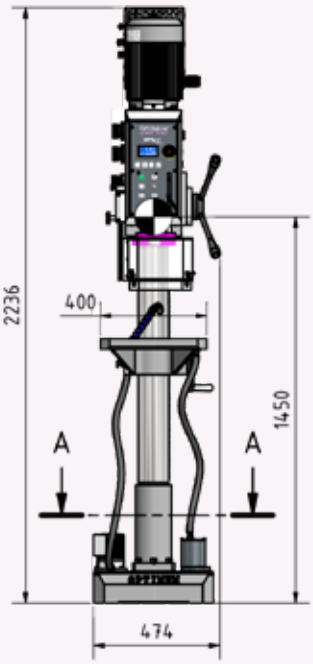
FOOT SWITCH

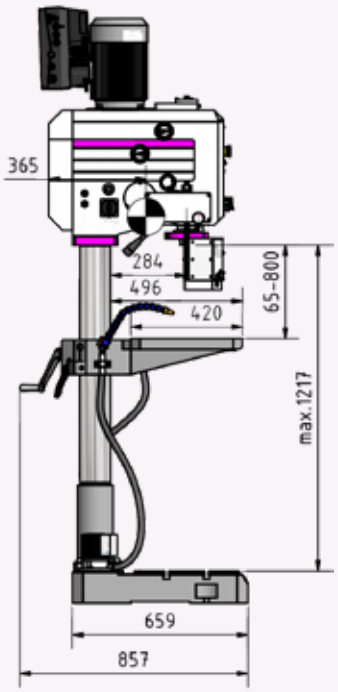
› Option to connect the optional foot switch The foot switch is used to reverse the direction of rotation for thread tapping, and can also be used to stop the automatic spindle sleeve feed (Art. no. 3050032) available

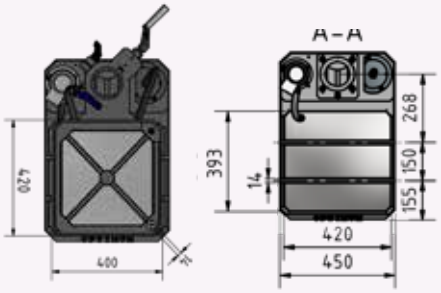
TECHNICAL DATA

Model	DH 35G	DH 35V*
Article no.	3034250	3034254
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	
Motor power	1.5 / 2.2 kW	2.2 kW
Coolant pump motor	40 W	
Drilling performance		
Drilling performance in steel (S235JR)	Ø 35 mm	
Continuous drilling performance in steel (S235JR)	Ø 26 mm	
Thread tapping in steel (S235JR)	M 24	
Spindle		
Spindle sleeve stroke	125 mm	
Spindle seat	MT4	
Throat depth	285 mm	
Automatic spindle sleeve feed	3 stages: 0.05 – 0.15 mm/rev	
Rotational speeds		
Spindle speeds	75 – 2 000 min^{-1}	30 – 2 950 min^{-1}
Number of stages	8 stages	4 stages, electronically adjustable
Drill table		
Drill table workspace L x W	400 × 420 mm	
T-slot size	14 mm, 2 running diagonally	
Drill table load-bearing capacity	200 kg	
Rotating drilling table	360°	
Clearance spindle – drilling table	65 – 800 mm	
Machine foot		
Machine foot work surface L x W	420 x 393 mm	
T-slot size / distance / number	14 mm / 150 mm / 2	
Clearance spindle – machine base	max. 1 217 mm	
Dimensions and weight		
Column diameter	Ø 115 mm	
Length x width x height	860 x 475 x 2 175 mm	
Net weight	350 kg	365 kg

DIMENSIONS







Drill table

Machine foot

ACCESSORIES

Designation	Article no.
Quick-action drill chuck with MT4 mount 1 – 16 mm	3050574
Twist drill bits HSS-CO 5%, 1-13 mmmm, 25-part	3201010
Twist drill bits HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Adapter MT4 - MT3	3050664
Adapter MT4 - MT2	3050665
Assortment of clamping tools SPW 12, 58-part	3352077
Cutting oil spray 400 ml	3872100
Hold-down device 14 mm/M 12	3352031
Thermdrill Basic Set	3060004
Foot switch for thread cutting and toggling clockwise/anticlockwise rotation	3050032



More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95
Coolant accessories see page 93

SCOPE OF DELIVERY

- Quick-action drill chuck 1 – 16 mm
- Tapered shank for drill chuck MT4/B16

* Note: The machines (frequency converters) comply with the DIN EN 55011 standard: class C2
Important information on operating machines with frequency converters see page 325

Heavy-duty gear-driven drills with a thread tapping device and infinitely variable speed control for industrial use

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, solid cast design
- Dirt/water-resistant, easy-to-clean membrane keyboard
- 24 V DC electronics
- Drilling depth stop
- Automatic gearwheel lubrication via oil pump
- Thread tapping device
- Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- Large, solid drill table, precisely machined with parallel T-slots and surrounding cooling water channel, heavily ribbed at the rear, ± 90° sideways tiltable.
- Machine lamp integrated in drilling head
- Main switch
- Cooling unit and coolant tank, can be removed for easier and complete emptying
- Chip filter in line with Machinery Directive
- Robust, thick-walled cast-iron column for excellent force absorption
- Solid base plate with parallel T-slots, precision surface finish
- Feed deactivation programmable
- Easily readable , digital display
- Digitally adjustable drilling and thread depth
- Digital zero point adjustable

DH 45V
- Frequency converter
- Continuously adjustable speed control

DH 45GE
- Electrically controlled sleeve feed

PRODUCT VIDEO YouTube



Fig.: DH 45GE with optional drill



Fig.: DH 45V with optional drill

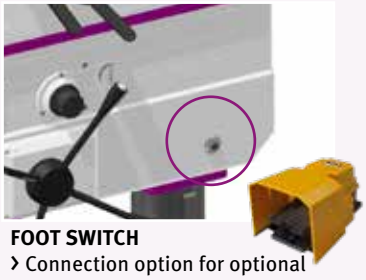
ARGUMENTS,...



PUSH-OUT TOOL
› for simple tool changes



STATE-OF-THE-ART CONTROL SOLUTION
› Easy-to-read digital display for showing speed, drilling depth, thread depth and piece counter.
› Feed deactivation via depth adjustment

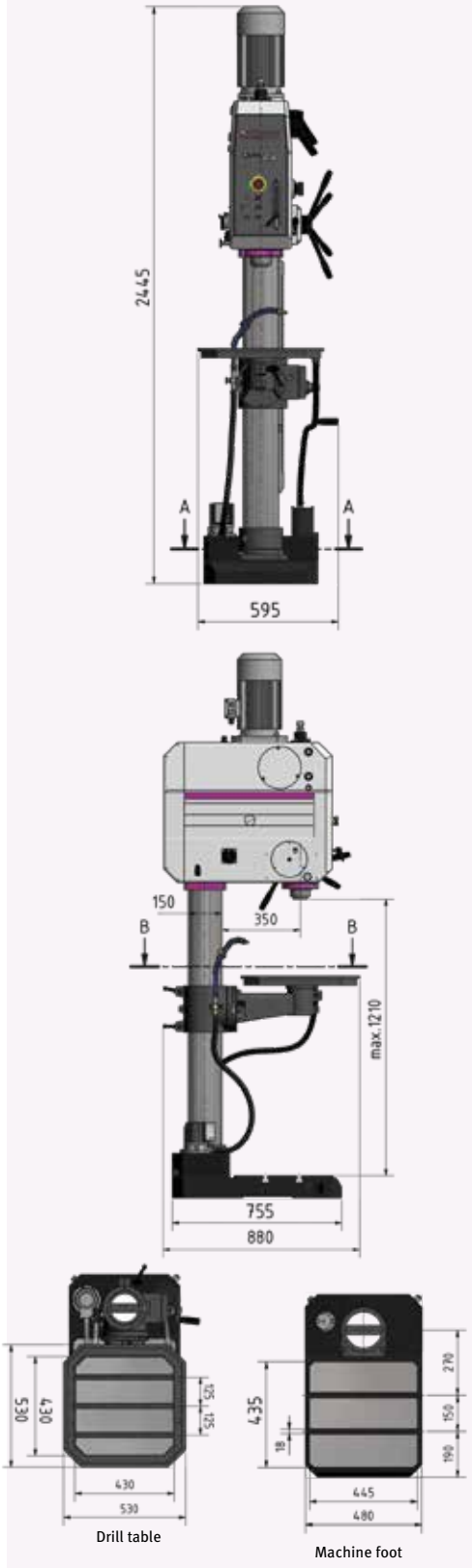


FOOT SWITCH
› Connection option for optional foot switch to switch between clockwise/anti-clockwise rotation and for thread cutting (item no. 3050032) available.

TECHNICAL DATA

Model	DH 45GE	DH 45V*
Article no.	3034257	3034263
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	
Motor power	2.2 kW	
Coolant pump motor	100 W	
Drilling performance		
Drilling performance in steel (S235JR)	Ø 40 mm	
Continuous drilling performance in steel (S235JR)	Ø 35 mm	
Thread tapping in steel (S235JR)	M 30	
Spindle		
Spindle sleeve stroke	180 mm	
Spindle seat	MT4	
Throat depth	350 mm	
Automatic spindle sleeve feed	3 stages: 0.1 – 0.2 mm/rev	
Rotational speeds		
Spindle speeds	90 – 1 520 min^{-1}	30 – 2 430 min^{-1}
Number of stages	8 stages	4 stages, electronically adjustable
Drill table		
Drill table workspace L x W	530 x 530 mm	
T-slot size / distance / number	18 mm / 125 mm / 3	
Drilling table load bearing capacity	250 kg	
Drill table rotation/tilt ability	360° / ± 90°	
Clearance spindle – drilling table	100 – 740 mm	
Machine foot		
Machine foot work surface L x W	435 x 445 mm	
T-slot size / distance / number	18 mm / 150 mm / 2	
Clearance spindle – machine base	max. 1 210 mm	
Dimensions and weight		
Column diameter	Ø 150 mm	
Length x width x height	880 x 595 x 2 445 mm	
Net weight	530 kg	550 kg

DIMENSIONS



ACCESSORIES

Designation	Article no.
Quick-action drill chuck with MT4 mount 1 – 16 mm	3050574
Twist drill bits HSS-CO 5%, 1-13 mmmm, 25-part	3201010
Twist drill bits HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Adapter MT4 - MT3	3050664
Adapter MT4 - MT2	3050665
Assortment of clamping tools SPW 16, 58-part	3352079
Hold-down device 14 mm/M 12	3352031
Thermdrill Basic Set	3060004
Cutting oil spray 400 ml	3872100
Foot switch	3050032
for thread cutting and toggling clockwise/anticlockwise rotation	

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95
Coolant accessories see page 93

SCOPE OF DELIVERY

- Quick-action drill chuck 1 – 16 mm
- Tapered shank for drill chuck MT4/B16

* Note: The machines (frequency converters) comply with the DIN EN 55011 standard: class C2
Important information on operating machines with frequency converters see page 325

Heavy-duty gear drilling machines with thread cutting device for industrial use. DH 55V with continuously adjustable speed control

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, solid cast design
- Dirt/water-resistant, easy-to-clean membrane keyboard
- 24 V DC electronics
- Electrically operated spindle sleeve feed
- Drilling depth stop
- Automatic gearwheel lubrication via oil pump
- Thread tapping device
- Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- Large, solid drill table, precisely machined with three parallel T-slots and surrounding cooling water channel, heavily ribbed at the rear, ± 90° sideways tiltable.
- Cooling unit and coolant tank, can be removed for easier and complete emptying
- Integrated push-out tool
- Machine lamp integrated in drilling head
- Chip filter in line with Machinery Directive
- Robust, thick-walled cast-iron column for excellent force absorption
- Solid base plate with two parallel T-slots, precision surface finish

OPTIdrill DH 55V

- Continuously adjustable speed control
- Feed deactivation programmable
- Easily readable , digital display
- Digitally adjustable drilling and thread depth
- Digital zero point adjustable



Fig.: DH 55G



Fig.: DH 55V

ARGUMENTS,...



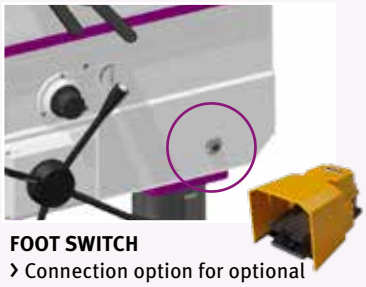
DH 55V
STATE-OF-THE-ART CONTROL SOLUTION

› Easy-to-read digital display for showing speed, drilling depth, thread depth and piece counter.
› Feed deactivation via depth adjustment



TABLE HEIGHT ADJUSTMENT

› The table can be adjusted in height either motorised (at the touch of a button) or mechanically (using a hand crank)



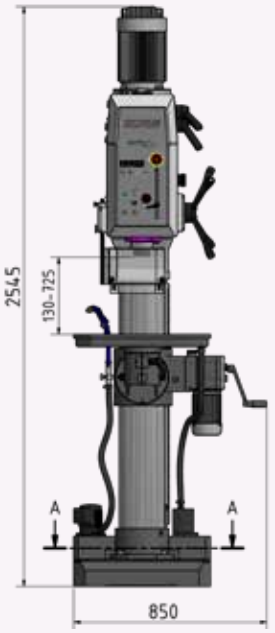
FOOT SWITCH

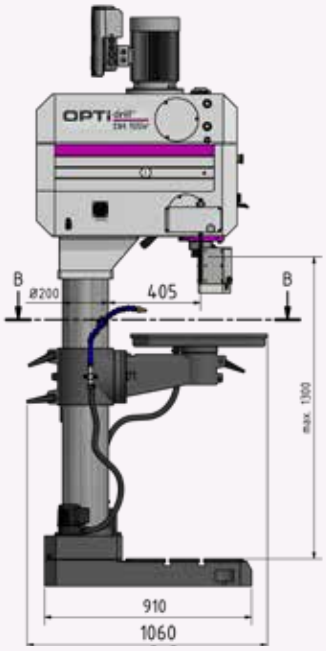
› Connection option for optional foot switch to switch between clockwise/anti-clockwise rotation and for thread cutting (item no. 3050032) available.

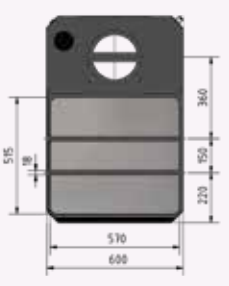
TECHNICAL DATA

Model	DH 55G	DH 55V*
Article no.	3034265	3034268
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	
Motor power	2.2 / 2.8 kW	2.8 kW
Coolant pump motor	100 W	
Drilling performance		
Drilling performance in steel (S235JR)	Ø 55 mm	
Continuous drilling performance in steel (S235JR)	Ø 50 mm	
Thread tapping in steel (S235JR)	M 42	
Spindle		
Spindle sleeve stroke	180 mm	
Spindle seat	MT4	
Throat depth	405 mm	
Automatic spindle sleeve feed	3 stages: 0.1 – 0.2 mm/rev	
Rotational speeds		
Spindle speeds	45 – 2 000 min^{-1}	10 – 3 000 min^{-1}
Number of stages	16 stages	4 stages electronically adjustable
Drill table		
Drill table workspace L x W	600 x 600 mm	
T-slot size / distance / number	18 mm / 160 mm / 3	
Drilling table load bearing capacity	350 kg	
Drill table rotation/tilt ability	360° / ± 90°	
Clearance spindle – drilling table	130 – 725 mm	
Machine foot		
Machine foot work surface L x W	910 x 600 mm	
T-slot size / distance / number	18 mm / 150 mm / 2	
Clearance spindle – machine base	max. 1 300 mm	
Dimensions and weight		
Column diameter	Ø 200 mm	
Length x width	850 x 1 060 mm	
height	2 500 mm	2 545 mm
Net weight	850 kg	907 kg

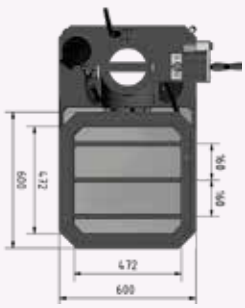
DIMENSIONS







Drill table



Machine foot

ACCESSORIES

Designation	Article no.
Quick-action drill chuck with MT4 mount 1 – 16 mm	3050574
Twist drill bits HSS-CO 5%, 1 – 13 mmmm, 25-part	3201010
Twist drill bits HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Adapter MT4 - MT3	3050664
Adapter MT4 - MT2	3050665
Assortment of clamping tools SPW 16, 58-part	3352079
Hold-down device 14 mm/M 12	3352031
Thermdrill Basic Set	3060004
Cutting oil spray 400 ml	3872100
Foot switch	3050032
for thread cutting and toggling clockwise/anticlockwise rotation	

More **accessories** and **information** on accessories from page 89
You will find a wide selection of machine vices on page 95
Coolant accessories see page 93

SCOPE OF DELIVERY

- Quick-action drill chuck 1 – 16 mm
- Tapered shank for drill chuck MT4/B16

* Note: The machines (frequency converters) comply with the DIN EN 55011 standard: class C2
Important information on operating machines with frequency converters see page 325

RADIAL DRILLING MACHINES

RB 8S | Art. no.: 3009181

Radial drilling machine
with large spindle – column distance



Visit our exhibition in Hallstadt/Bamberg

RD 5 | Art. no.: 3049050

Radial drilling machine
in top quality



BELT DRIVE

HEIMWERKER

Lightweight radial drilling machine with long throat
for wood, plastics, aluminium

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Best possible force transmission thanks to aluminium pulleys in combination with GATES toothed V-belts
- Guaranteed concentricity of the drill spindle ≤ 0.03 mm measured in the drill spindle.
- Drill spindle with precision ball bearings
- V-belt cover with safety switch
- Steel column for extremely smooth action and stability
- Solid and generously dimensioned baseplate with slots for T slot nuts, rear heavily ribbed
- User-friendly safety switch with IP 54 degree of protection
- Separate emergency stop push button
- Drilling depth stop
- OPTIMUM key type drill chuck in standard scope of delivery
- Optimal price-performance ratio
- Lasting value

OPTIdrill RB 6T
- Precision drilling table with fastening holes for extended drilling table support

OPTIdrill RB 8S
- Solid drilling table, precisely machined with two diagonal T-slots and a surrounding cooling water channel

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.


Fig.: RB 6T


Fig.: RB 8S

ARGUMENTS,...



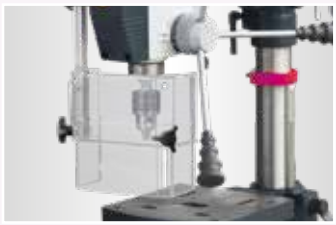
Spindle – column distance
› variable from 115 to 430 mm by shifting the drilling head



DRILLING HEAD
› Can be tilted sideways ± 45°



DRILL TABLE
› Precise workmanship
› Can be tilted sideways ± 45°



DRILL CHUCK PROTECTION
› Height-adjustable chuck protection with micro switch for best possible user protection

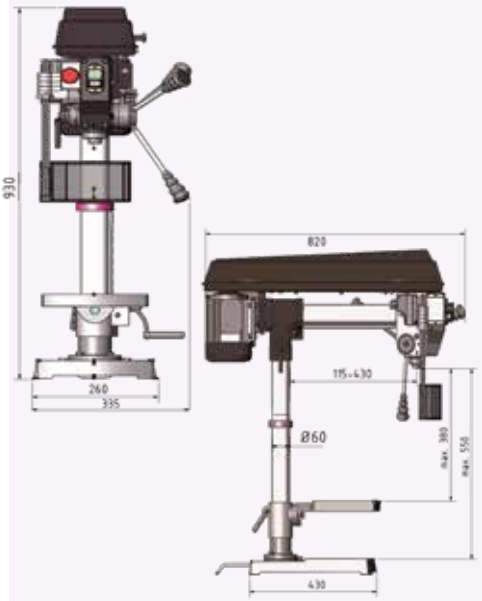


DRILLING DEPTH STOP
› Set the desired drilling depth using the drilling depth stop to ensure consistent results

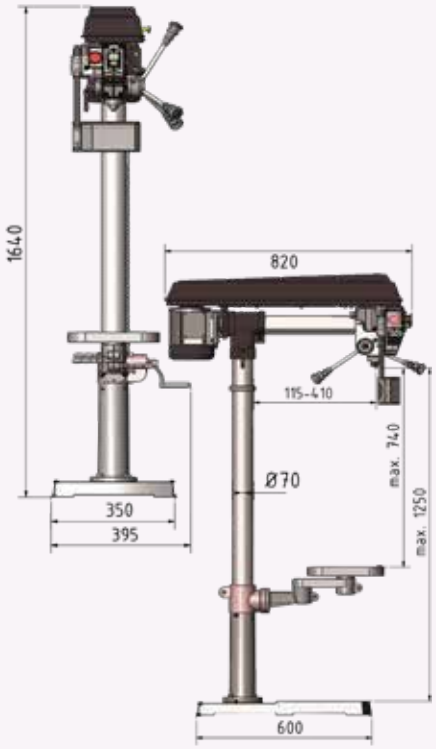
TECHNICAL DATA

Model	RB 6T	RB 8S
Article no.	3009161	3009181
Power		
Electrical connection	230 V / 1 Ph ~50 Hz	
Motor power	750 W	
Drilling performance		
Drilling performance in steel (S235JR)	Ø 16 mm	
Continuous drilling performance in steel (S235JR)	Ø 12 mm	
Spindle		
Spindle sleeve stroke	80 mm	
Spindle seat	MT2	
Throat depth	115 – 430 mm	
Rotational speeds		
Spindle speeds	390 – 3 000 min^{-1}	
Number of stages	5 stages	
Drill table		
Work surface length x width	225 x 230 mm	262 x 262 mm
T-slot size	-	14 mm running diagonally
Slot size	14 mm	-
Drill table rotation / tilting sideways	3 600 / ± 45°	
Max. distance spindle – drilling table	380 mm	740 mm
Machine foot		
Machine foot work surface L x W	430 x 260 mm	600 x 350 mm
T-slot size / spacing / count	14 mm / 130 mm / 2	14 mm / 220 mm / 2
Distance between spindle and – machine base	max. 550 mm	max. 1 250 mm
Dimensions and weight		
Column diameter	Ø 60 mm	Ø 70 mm
Length x width x height	820 x 335 x 930 mm	820 x 395 x 1 640 mm
Net weight	47 kg	60 kg

DIMENSIONS RB 6T



DIMENSIONS RB 8S



ACCESSORIES

Designation	Article no.
Quick-action drill chuck with MT2 mount 1 – 16 mm	3050571
Quick-action drill chuck with MT2 mount 1 – 13 mm	3050572
Twist drill bit HSS MT2, 9-part	3051002
Twist drill bits HSS-CO 5%, 1-13 mmmm, 25-part	3201010
Twist drill bits HSS-CO 5%, 6 – 10 mm, 41-part	3201021
Assortment of clamping tools SPW 12, 58-part	3352077
Cone ejector MSP1	3050636
Universal coolant unit 230 V	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100

More **accessories** and **information** on accessories from page 89
You will find a wide selection of **machine vices** on page 95
Coolant accessories see page 93

SCOPE OF DELIVERY

› Gear rim drill chuck 1-16 mm/B16
› Tapered shank for drill chuck MT2/B16

Precise, solid radial drilling machines
Ideal for versatile deployment in one-off and serial production

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Versatile range of applications, such as drilling, reaming, thread cutting
- Electrically braked motor
- Operating elements with 24V DC electrics and 2-channel safety chain in accordance with DIN EN 12717
- Heavy, solid, premium quality casting
- Long throat thanks to horizontally adjustable machine head
- Clearly-arranged control panel layout
- Smooth action pivoting and travel axes
- Torsionally stiff boom design, capable of supporting heavy loads
- Height-adjustment of boom via powerful motorised drive and lifting spindle
- Drilling head gear box runs in oil sump
- Boom guideways hardened and precision ground
- Gear wheels made of chrome-nickel steel, hardened and precision ground for lower noise and smooth action
- Drilling head and column can be clamped or released separately
- Clockwise/anticlockwise rotation
- Solid, generously dimensioned precision drilling table
- Hardened and ground clamping table with parallel T-slots
- Machine lamp
- Overload protection
- Thick-walled cast column ensures very smooth action and stability
- LED lamp
- Coolant unit with coolant tank in machine base
- Clamping table included in the scope of delivery
- Column and headstock mechanically clamped

QUALITY PRE-CHECK OPTIMUM

ARGUMENTS,...



CONTROL CABINET
› Standards-compliant setup
› Completely new development, based on an in-house development by Optimum
› Signal transmission via network cable with diagnostic function



TOUCH
› User-friendly membrane keypad with touch operation

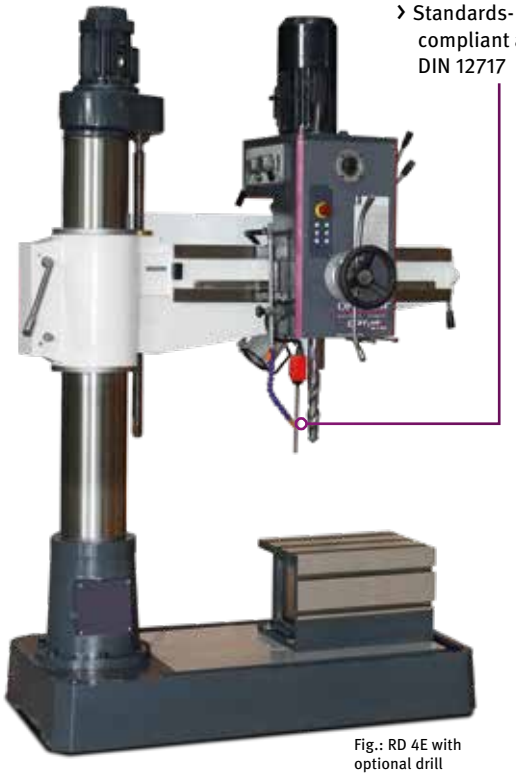


Fig.: RD 4E with optional drill

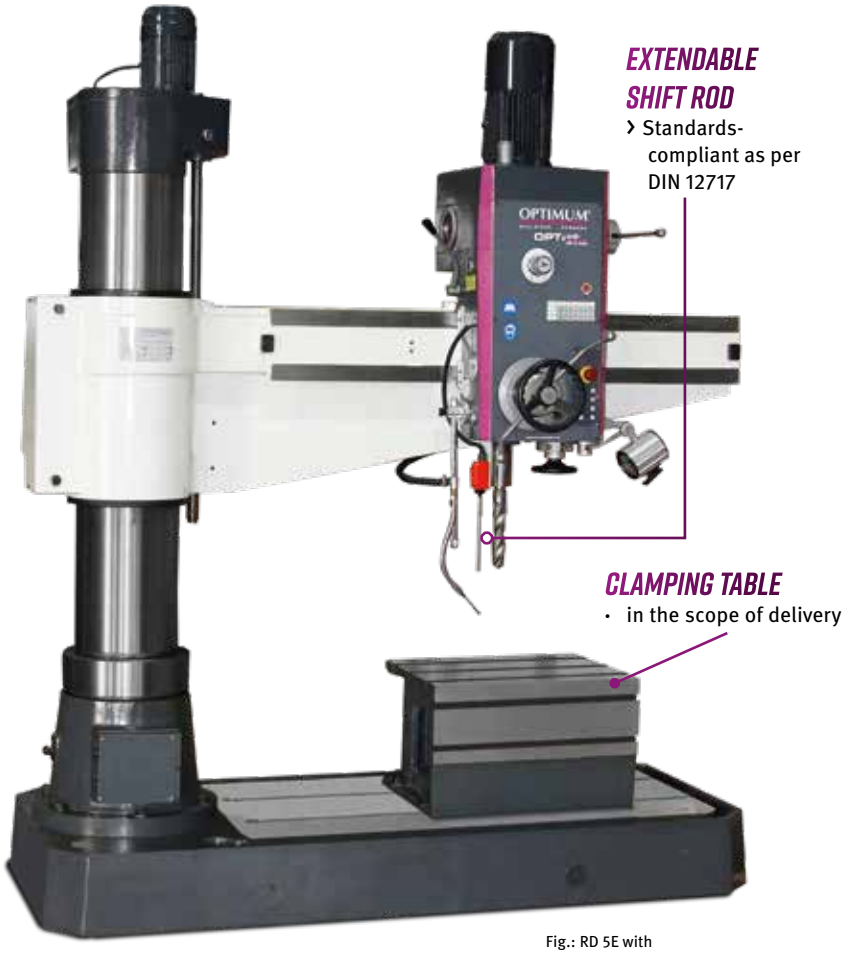


Fig.: RD 5E with optional drill

TECHNICAL DATA

Model	RD 4E	RD 5E
Article no.	3049340	3049350
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Total rated value	2.2 kW	3 kW
Drilling performance		
Drilling performance in steel (S235JR)	Ø 35 mm	Ø 45 mm
Continuous drilling performance in steel (S235JR)	Ø 32 mm	Ø 40 mm
Spindle		
Spindle sleeve stroke	200 mm	260 mm
Spindle seat	MT4	MT4
Automatic spindle sleeve feed	3 stages: 0.1 – 0.25 mm/rev	4 stages: 0 – 0.54 mm/rev
Boom		
Drilling head travel distance (horizontal)	570 mm	1 000 mm
Boom lift travel (vertical)	500 mm	680 mm
Rotational speeds		
Spindle speeds	75 – 1 220 min^{-1}	40 – 1 896 min^{-1}
Number of speeds	6	12
Drill table		
Base work area L x W x H	1 400 x 700 mm	1 400 x800 mm
T-slot size / spacing / count	16 mm / 200 mm / 2	22 mm / 260 mm / 2
Spindle – table distance	260 – 1 000 mm	280 – 1 210 mm
Spindle – column distance	300 – 870 mm	370 – 1 370 mm
Clamping table		
Clamping table work area L x W	400 x 340 x 300 mm	600 x 450 x 370 mm
T-slot size / number/ spacing	16 mm / 110 mm / 3	19 mm / 145 mm / 3
Distance spindle to clamping table	260 – 1 000 mm	280 – 1 210 mm
Dimensions and weight		
Column diameter	200 mm	280 mm
Length x width x height max.	1 550 x 750 x 2 200 mm	2 045 x 800 x 2 450 mm
Net weight	800 kg	2 200 kg

ACCESSORIES

Designation	Article no.
Quick-action drill chuck DKC 16, 0 – 16 mm / B16	3050633
Direct quick-action drill chuck MT4 / 1-16 mm	3050574
Tapered shank for drill chuck MT4/B16	3050661
Twist drill HSS MT3	3051003
Adapter MT4 – MT3	3050664
Hold-down device 18 mm/M 16	3352032
Assortment of clamping tools SPW 16, 58-part	3352079
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 87 onwards

MAGNETIC CORE DRILLING MACHINES

DM 50 | Art. no.: 3071051

Magnetic core drilling machine
with a drill bit diameter of up to 50 mm



DM 50PM | Art. no.: 3071550

Magnetic core drilling machine
with power-independent permanent magnet



Magnetic core drilling machines from OPTIMUM -
when reliability, precision and economical operation are essential

PRODUCT VIDEO YouTube

- Stable drilling guidance thanks to long and especially deep mounted sleeve holder
- The devices are earthed and double insulated, hence ideal for building sites
- Internal self-lubrication function for a longer service life of the gear unit
- Soft-start is gentle on the motor and prolongs the service life
- High-quality mechanical design
- Conversion from core to full drilling in just a few actions
- Protection class IP42

CLEARLY-ARRANGED CONTROL PANEL

› Ergonomic switch arrangement avoids confusion

POWERFUL MOTOR

› with high torque; low-maintenance

DETACHABLE COOLANT TANK

› External mounting (Does not apply to the VF version), well thought-out, practical

AUTOMATIC INTERNAL LUBRICATION

› The coolant is routed directly to the tip of the core bit
› No dry running and overheating of the drill bit
› No superfluous use of coolant
› Tool service lives and work results are substantially improved

MAGNETIC BASE

› Monitoring of magnetic force (if the magnetic force that can be built up is too low or if the magnets fail, the machine stops automatically)
› Magnetic based with wear-proof design to extend the service life of the magnetic base and thus the maximum magnetic holding force

* not all models



Transport case
› For convenient transport and optimum protection
› Ideal protection of the machines also in tough conditions.

Metal case
› for the DM 35PF and DM 50PM machines



OPTI drill® DM 35V

▶ Weldon shank



Fig. DM 50 with optional drill



Core drilling	
Drill bit Ø max.	Ø 35 mm
Bit depth max.	35 mm
Twist drilling	
Drill bit Ø max.	Ø 18 mm

OPTI drill® DM 50V

▶ Weldon shank



Fig. DM 50 with optional drill



Core drilling	
Drill bit Ø max.	Ø 50 mm
Bit depth max.	50 mm
Twist drilling	
Drill bit Ø max.	Ø 16 mm

OPTI drill® DM 35PF with automatic sleeve feed

▶ Weldon shank

Spindle sleeve feed



› Automatic
› Return side



Fig. DM 35PF with optional drill



Core drilling	
Drill bit Ø max.	Ø 35 mm
Bit depth max.	35 mm

Model	DM 35V[1]	DM 50V[1]	DM 35PF
Article no.	3071036	3071051	3071435
Power			
Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz
Motor power	1.6 kW	1.7 kW	1.6 kW
Collets			
Spindle seat	Weldon 3/4“	Weldon 3/4“	Weldon 3/4“
Spindle sleeve stroke	145 mm	145 mm	145 mm
Moving the head	110 mm	110 mm	115 mm
Magnetic foot			
Magnetic foot dimensions	166 x 80 x 44 mm	166 x 80 x 44 mm	166 x 80 mm
Magnetic attraction force	14.8 KN	15.6 KN	16 KN
Rotational speeds			
Speed without load	100 – 550 min^{-1}	100 – 530 min^{-1}	810 min^{-1}
Dimensions and weight			
Length x width x height approx.	270 x 210 x 480 mm	270 x 210 x 480 mm	350 x 250 x 430 mm
Net weight approx.	12 kg	13 kg	14 kg

1) The magnetic drill complies with standard DIN EN 55011:2011-04 Class C2
The products shown on this page are excluded from the "3-year Stürmer warranty".

OPTI drill® DM 48VT

- Infinitely adjustable speed
- Quick-action chuck
- Weldon and MT shank
- Low-wear brass guide
- Clockwise/anticlockwise rotation

› for perfect alignment

Bubble spirit level



Fig. with optionally available core drill



Core drilling	
Drill bit Ø max.	Ø 36 mm
Bit depth max.	50 mm
Twist drilling	
Drill bit Ø max.	Ø 22 mm
Thread cutting	
Drill bit Ø max.	M 20

OPTI drill® DM 60V

- Infinitely adjustable speed
- Quick-action chuck
- Weldon and MT shank
- Low-wear brass guide



Fig. with optionally available core drill



Core drilling	
Drill bit Ø max.	Ø 60 mm
Bit depth max.	50 mm
Twist drilling	
Drill bit Ø max.	Ø 23 mm

OPTI drill® DM 98V

- Infinitely adjustable speed
- Quick-action chuck
- Weldon and MT shank
- Low-wear brass guide

› for perfect alignment

Bubble spirit level



Fig. with optionally available core drill



Core drilling	
Drill bit Ø max.	Ø 98 mm
Bit depth max.	75 mm
Twist drilling	
Drill bit Ø max.	Ø 28 mm

Model	DM 48VT[1]	DM 60V[1]	DM 98V[1]
Article no.	3071248	3071161	3071199
Power			
Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz
Motor power	1.7 kW	1.89 kW	2.28 kW
Collets			
Drill chuck/spindle chuck	Weldon ¾" / MK2	Weldon ¾" / MK2	Weldon ¾" / MK3
Spindle sleeve stroke	150 mm	180 mm	190 mm
Moving the head	60 mm	-	80 mm
Magnetic foot			
Magnetic foot dimensions	165 x 80 x 44 mm	202 x 102 x 44 mm	202 x 103 mm
Magnetic attraction force	14.5 KN	16 KN	17 KN
Rotational speeds			
Speed without load	50 – 320 / 560 min^{-1} infinitely variable	310 – 550 min^{-1} continuously variable	100 – 140 / 170 / 360 min^{-1} infinitely variable
Dimensions and weight			
Length x width x height approx.	370 x 250 x 430 mm	330 x 230 x 490 mm	330 x 240 x 650 mm
Net weight approx.	13 kg	18.3 kg	18.5 kg

1) The magnetic drilling machines (speed-controlled) comply with the DIN EN 55011 standard: class C2
The products shown on this page are excluded from the "3-year Stürmer warranty".

OPTI drill® DM 38VF

for cramped conditions

- Infinitely adjustable speed
- Weldon shank
- Reversible handle can be fitted on either the left or right-hand side of the machine

New



Fig. with optionally available core drill



Core drilling	
Drill bit Ø max.	Ø 38 mm
Bit depth max.	35 mm

OPTI drill® DM 50PM

With permanent magnet

- Infinitely adjustable speed
- Weldon shank



Fig. with optionally available core drill



Core drilling	
Drill bit Ø max.	Ø 50 mm
Bit depth max.	50 mm
Twist drilling	
Drill bit Ø max.	Ø 16 mm

Arguments,...



Two magnets

› Can be individually switched

› The machine can be moved to check or clean the hole without losing its position on the pipe



Permanent magnet

› Power-independent permanent magnet, 100% safe

Model	DM 38VF	DM 50PM[1]
Article no.	3071339	3071550
Power		
Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz
Motor power	1.65 kW	1.7 kW
Collets		
Drill chuck	Weldon 3/4“	Weldon 3/4“
Spindle sleeve stroke	45 mm	150 mm
Moving the head	-	70 mm
Magnetic foot		
Magnetic foot dimensions	166 x 80 mm	2 pieces, 240 x 40 mm
Magnetic attraction force	14.5 KN	16.5 KN
Rotational speeds		
Speed without load	850 min^{-1}	20 – 320 / 600 min^{-1} 2 gear stages, infinitely variable
Dimensions and weight		
Length x width x height approx.	350 x 150 x 240 mm	320 x 270 x 450 mm
Net weight approx.	8.8 kg	11.6 kg

1) The magnetic drill complies with standard DIN EN 55011:2011-04 Class C2
The products shown on this page are excluded from the "3-year Stürmer warranty".

Core drill set

HSS-TiAlN 30 Art. no. 3072010



› Five HSS core drillsØ 12, 14, 16, 20, 22 mm

› A TiAlN core drill Ø 18 mm in our highest quality grade with TiAlN coating for a long service life and excellent cutting properties

› Set in plastic case, ejector pin

› Drilling depth 30 mm

Core drill set

TiAlN 30 Art. no. 3072020



› Six TiAlN core drills Ø 12 – 22 mm

› Hard and smooth TiAlN coating

› TiAlN coating for a long service life and excellent cutting properties

› Set in plastic case

› Ejector pin

› Drilling depth 30 mm

	Accessories	Art. no.	DM 35V 3071036	DM 50V 3071051	DM 38VF 3071338	DM 60V 3071161	DM 48VT 3071248	DM 35PF 3071435	DM 50PM 3071550	DM 98V 3071198
	Adapter for drill chuck Weldon 19 mm to 1/2"" x 20 ext. thread	3876020				●				●
	Drill chuck1.5 – 13 mm incl. chuck spanner	3876002								●
	MK2 quick-change chuck	3072102	●	●	●	●	●	●	●	●
	MK3 quick-change chuck	3072103	●	●	●		●	●	●	●
	Thread tapping chuck with 6 inserts MT2 M3 – M12	3050702	●	●	●	●	●	●	●	●
	Ejector pin 6.34 x 77 mm	30730077	●	●	●	●	●	●	●	●
	Ejector pin 6.34 x 103 mm	30730103	●	●	●	●	●	●	●	●
	Cutting oil spray	3872100	●	●	●	●	●	●	●	●

CORE DRILL

with Weldon shank

HSS



For all steels up to 750N strength

Ø mm	L mm	Art. no.
HSS		
12	25	30732512
13	25	30732513
14	25	30732514
15	25	30732515
16	25	30732516
17	25	30732517
18	25	30732518
19	25	30732519
20	25	30732520
21	25	30732521
22	25	30732522
23	25	30732523
24	25	30732524
25	25	30732525
26	25	30732526
27	25	30732527
28	25	30732528
29	25	30732529
30	25	30732530
32	25	30732532
33	25	30732533
34	25	30732534
35	25	30732535
36	25	30732536
37	25	30732537
38	25	30732538
40	25	30732540
42	25	30732542
44	25	30732544
45	25	30732545
48	25	30732548
50	25	30732550
55	25	30732555
60	25	30732560

Ø mm	L mm	Art. no.
HSS		
12	50	30735012
13	50	30735013
14	50	30735014
15	50	30735015
16	50	30735016
17	50	30735017
18	50	30735018
19	50	30735019
20	50	30735020
21	50	30735021
22	50	30735022
23	50	30735023
24	50	30735024
25	50	30735025
26	50	30735026
27	50	30735027
28	50	30735028
29	50	30735029
30	50	30735030
32	50	30735032
33	50	30735033
34	50	30735034
35	50	30735035
36	50	30735036
37	50	30735037
38	50	30735038
40	50	30735040
43	50	30735043
50	50	30735050
55	50	30735055
60	50	30735060

TiN



For all steels up to 900N strength. Also suitable for stainless steel.

Ø mm	L mm	Art. no.
TiN		
12	30	30733012
13	30	30733013
14	30	30733014
15	30	30733015
16	30	30733016
17	30	30733017
18	30	30733018
19	30	30733019
20	30	30733020
21	30	30733021
22	30	30733022
23	30	30733023
24	30	30733024
25	30	30733025
26	30	30733026
27	30	30733027
28	30	30733028
29	30	30733029
30	30	30733030
32	30	30733032
35	30	30733035
40	30	30733040
50	30	30733050
60	30	30733060
12	55	30735512
13	55	30735513
14	55	30735514
16	55	30735516

Ø mm	L mm	Art. no.
18	55	30735518
20	55	30735520
21	55	30735521
22	55	30735522
24	55	30735524
25	55	30735525
26	55	30735526
28	55	30735528
30	55	30735530
32	55	30735532
35	55	30735535
40	55	30735540
48	55	30735548
50	55	30735550

TiAln



For all steels up to 1100N strength and for all stainless steels.

Ø mm	L mm	Art. no.
TiAln		
12	30	30733012B
13	30	30733013B
14	30	30733014B
15	30	30733015B
16	30	30733016B
17	30	30733017B
18	30	30733018B
19	30	30733019B
20	30	30733020B
21	30	30733021B
22	30	30733022B
24	30	30733024B
25	30	30733025B
26	30	30733026B
28	30	30733028B
30	30	30733030B
32	30	30733032B
35	30	30733035B
40	30	30733040B
50	30	30733050B
12	55	30735512B
14	55	30735514B
16	55	30735516B
18	55	30735518B
20	55	30735520B
22	55	30735522B
23	55	30735523B
25	55	30735525B
28	55	30735528B
30	55	30735530B

THREAD TAPPING DEVICES

DG 36 | Art. no.: 3081036

Electrical
with freely positionable swiv-
el arm



Pneumatic tapping devices, compact in design and therefore very smooth-running

Facts that impress in terms of quality, performance and price

- For thread tapping in steel, stainless steel, aluminium and non-ferrous metals.
- It is highly productive and saves a significant amount of time compared to manual thread tapping.
- It is highly economically efficient due to its low investment and maintenance costs.
- Flexible operation, multi-angle adjustable
- Air springs on both sides for a stable hold
- Quick-release chuck
- Greater accuracy compared to manual thread tapping
- Includes swivel arm with large radius for easy positioning of the tap on the workpiece
- Includes function for swivelling the head for horizontal and vertical thread cutting.



Fig. DGP 12

Fig. DGP 16

SCOPE OF DELIVERY DGP 12:
- Collets 6 pcs. (M3 - M12)

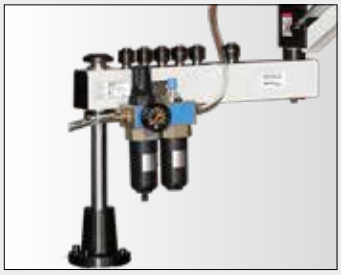
SCOPE OF DELIVERY DGP 16:
- Collets 8 pcs. (M3 - M16)

DIN 371 Standard M3 to M8
DIN 376 Standard from M10 upwards

Machine data	DGP 12	DGP 16
Article no.	3081120	3081126

Technical data		
Inlet pressure	6 – 8 bar	6 – 8 bar
Tap diameter	M3 – M12	M3 – M16
Speed max.	400 min^{-1}	250 min^{-1}
Torque range	0.5 – 30 Nm	0.5 – 60 Nm
Orientation	Vertical / Horizontal	Vertical / Horizontal
Drive	pneumatic	pneumatic
Working radius (max.)	860 mm	860 mm
Working radius (min.)	330 mm	330 mm
Distance of the forearm shaft	330 mm	330 mm
Height adjustment	368 mm	368 mm
Length of the pneumatic head	340 mm	340 mm
Machining radius	860 mm	860 mm
Angle adjustment	0 – 90°	0 – 90°
Air consumption	110 l/min.	110 l/min.
Net weight approx.	20 kg	22 kg

Arguments,...



MAINTENANCE UNIT
› Two-part maintenance units, consisting of a diaphragm pressure regulator with secondary venting



PNEUMATIC MOTOR
› Lightweight and flexible



1 Mobile machine base
› Compatible with all OPTIMUM tapping devices
› Possibility of fastening the tapping device on the left and right side
› Incl. wheels with brakes for mobile use
› Cast iron plate with 3 T-slots (16 mm)
› Equipped with one door incl. handle and 5 drawers with ball bearings
› Dimensions (LxWxH): 900x600x800 mm

3 Permanent magnet
› for mounting the thread cutting device
› Holding force: 1000 kg







Accessories	Art. no.
1 Base	3082000
2 Cutting oil spray	3872100
3 Permanent magnet	3082080
4 Cutting die holder GT12 M18-20	4460098

Electric thread tapping machines with freely positionable swivel arm for fast, precise threading in metals

Facts that impress in terms of quality, performance and price

- Servo motor, stable performance
- Flexible operation, multi-angle adjustable
- Intelligent touchscreen control, fast parameter setting
- Quick-release chuck
- Air springs on both sides for a stable hold
- Swivel arm with large radius for easy positioning of the tap on the workpiece
- High-torque servo motor
- Includes function for swivelling the head for horizontal and vertical thread cutting.



Fig. DG 16

Fig. DG 24

› DG 36: Height adjustment with ball screw for high precision



Fig. DG 36

Arguments,...



› Swivelling motor unit for thread tapping at any desired angle between 0° and 90°



› Intelligent touchscreen control
› Fast parameter setting
› adjustable to the following languages: German, English, French, Spanish, Polish, Hungarian (additional languages can be added later).

SCOPE OF DELIVERY
DG 16:
- 8-piece collets (M3 - M16)

DG 24:
- 9-piece collets (M5 - M24)

DG 36:
- 13-piece collets (M5 - M36)

DIN 371 Standard M3 to M8
DIN 376 Standard from M10 upwards

Mobile machine base

1 › Compatible with all OPTIMUM tapping devices
› Possibility of fastening the tapping device on the left and right side
› Incl. wheels with brakes for mobile use
› Cast iron plate with 3 T-slots (16 mm)
› Equipped with one door incl. handle and 5 drawers with ball bearings
› Dimensions (LxWxH): 900x600x800 mm

3 **Permanent magnet**
› for mounting the thread cutting device
› Holding force: 1000 kg







Machine data	DG 16	DG 24	DG 36
Art. no.	3081016	3081024	3081036

Technical data			
Electrical connection ~50Hz	230 V / 1 Ph	230 V / 1 Ph	230 V / 1 Ph
Motor power	600 W	1.2 kW	1.2 kW
Tap diameter	M3- M16	M5- M24	M5- M36
Speed max.	312 min^{-1}	200 min^{-1}	125 min^{-1}
Torque range	1 – 62.4 Nm	3 – 200 Nm	5 – 320 Nm
Orientation	Vertical	Vertical	Vertical
Drive	electric	electric	electric
Horizontal working area	1045 mm	1180 mm	1180 mm
Vertical working area	330 mm	370 mm	370 mm
Tap holder	ISO / DIN / JIS	ISO / DIN / JIS	ISO / DIN / JIS
Angle adjustment	0 – 90°	0 – 90°	0 – 90°
Net weight approx.	32 kg	48 kg	50 kg

Accessories	Art. no.
1 Base	3082000
2 Cutting oil spray	3872100
3 Permanent magnet	3082080
4 Cutting die holder GT12 M18-20	4460098

Option	Art. no.
Height adjustment of the tapping arm 0 – 500 mm Scope of delivery: Longer column, recirculating ball screw	
DG 16	3082100
DG 24	3082110

ACCESSORIES DRILLING MACHINES

OMB 30 workbench | Art. no.: 3353019

Height-adjustable in three stages, so that it can adapt flexibly to the user's demands



Universal Coolant system | Art. no.: 3351999

Complete with tank, flexible pipe, hose and switch-plug combination



	Designation	Size	Article no.
	**Coolant hoses basic equipment 1/4" – No. 1** › 8 pcs. articulated hoses 150 mm › 2 pcs. each of round nozzles 1/16" / 1/8" / 1/4", › 2 pcs. NPT connection 1/4" and 1/8", › 1 unit flat nozzle, › 1 unit Y-distributor, › 2 units shut-off valve inside and outside, › 2 units shut-off valve inside – 1/4", › 2 unit NPT extension, › 1 unit magnetic base, 1 unit flexible sealing tape	1/4"	3356704
	**Coolant hoses basic equipment 1/4" – No. 2** › 6 pcs. articulated hoses 150 mm, › 2 pcs. each of round nozzles 1/16" / 1/8" / 1/4", › 2 pcs. each of NPT connection 1/4" and 1/8", › 5 units flat nozzle, › 4 units 90° nozzle, › 1 unit Y-distributor, › 1 unit shut-off valve, inside and outside, › 1 piece stopcock inside – 1/4" › 1 piece clamping tong	1/4"	3356705
	**Coolant hoses basic equipment 1/2" – No. 1** › 6 pcs. articulated hoses 150 mm, › 2 pcs. each of round nozzles 1/2" / 1/8" / 1/4", › 2 pcs. each of NPT connection 1/4" and 1/2", › 1 unit flat nozzle, › 3 pcs. 90⁰ round nozzles 1/2" / 3/8" / 1/4", › 1 unit Y-distributor, › 1 unit shut-off valve, inside and outside, › 1 piece stopcock inside – 1/2" › 1 piece clamping tong	1/2"	3356800

The perfect extension for the coolant hoses of our machines

Universal coolant device	Art. no.
100W 230 V ~50 Hz	3351999

› Delivery height max. 2.5 m
› Delivery volume 3.5 litres per minute
› Tank capacity 11 litres
› Dimensions L x W x H approx.: 375 x 250 x 260 mm
› Complete with tank, flexible tube, hose and switch/plug combination
› Magnetic base fastener for coolant hose



Coolant mist lubricator	Art. no.
MMC1	3356663

› Magnetic base with a holding force of 75 kg
› Foot size L x W x H: 62 x 50 x 55 mm
› Screw connection for external compressed air supply
› Flexible and stable hose with a length of 500 mm



Coolant hose	Art. no.
KMS 2	3356660

› Insensitive to most solvents and chemicals
› Not electrically conductive
› Magnetic base holding force up to 50 kg
› Length of the coolant hoses 335 mm each
› Hose connection 6 mm
› Coolant hoses ¼“



Collet chuck set	Art. no.
MT2/ER 25 – M10	3352052
› Collet chuck	
› 15 collets; sizes Ø 1.5 – Ø 16 mm/DIN ISO 15488	
› Hook spanner, aluminium case	
MT2/ER 32 – M10	3352053
› Collet chuck	
› 18 collets; sizes Ø 2 – Ø 20 mm/DIN ISO 15488	
› Hook spanner, aluminium case	
MT3/ER 32 – M12	3352093
› Collet chuck	
› 18 collets; sizes Ø 2 – Ø 20 mm/DIN ISO 15488	
› Hook spanner, aluminium case	
MT4/ER 32 – M16	3352094
› Collet chuck	
› 18 collets; sizes Ø 2 – Ø 20 mm/DIN ISO 15488	
› Hook spanner, aluminium case	



Quick-action drill chuck	Art. no.
DKC13 / 0-13 mm; B16 4800 min^{-1}	3050632
DKC16 / 0-16 mm; B16 4000 min^{-1}	3050633



OPTIMUM precision quick-action drill chuck	Art. no.
1 – 10 mm; B16	3050610
True run accuracy better than 0.06 mm	



OPTIMUM Quick-action drill chuck with MT adapter	Art. no.
MT2 1 – 16 mm; up to 6000 min^{-1}	3050571
MT2 1 – 13 mm; up to 8000 min^{-1}	3050572
MT3 1 – 16 mm; up to 6000 min^{-1}	3050573
MT4 1 – 16 mm; up to 6000 min^{-1}	3050574



Tapping chuck with quick-change inserts	Art. no.
Note: The square size depends on the shank diameter of the hand tap (DIN 376)	
MT2 New	3050702
MT3	3050705
MT4	3050709
› 7 inserts M3 – M12	
› Shaft Ø M3 (2.5 mm), M4 (2.8 mm), M5 (3.5 mm),M6 (4.5 mm), M8 (6 mm), M10 (7 mm), M12 (9 mm)	



MT2	3050720
MT3	3050706
MT4	3050710
› 7 inserts M8 – M20	
› Shaft Ø M8 (6 mm), M10 (7 mm), M12 (9 mm), M14 (11 mm), M16 (12 mm), M18 (14 mm), M20 (16 mm)	

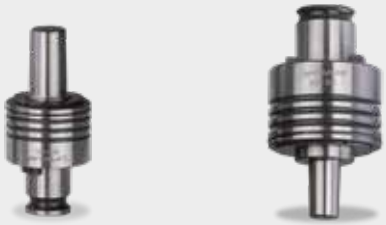


Thermdrill collet chuck	Art. no.
B16- ER32	3060007



Fig.: with optional quick change adapter

Quick change adapter with B16 collet	Art. no.
Tapping chuck small (M3-M12)	3050715
Tapping chuck large (M8-M20)	3050716



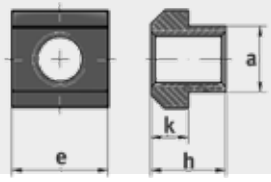
Assortment of clamping tool SPW	Art. no.
Size 8	3352075
› T-slot nuts 10 mm; clamping thread M 8	
Size 10	3352076
› T-slot nuts 12 mm; clamping thread M 10	
Size 12	3352077
› T-slot nuts 14 mm; clamping thread M 12	
Size 14	3352078
› T-slot nuts 16 mm; clamping thread M 14	
Size 16	3352079
› T-slot nuts 18 mm; clamping thread M 16	

› Metric thread
› 58-part: 24 pcs. pull studs, 6 pcs. T-slot nuts , 6 pcs. nuts, 4 pcs. extension nuts , 6 pcs. step blocks, 12 pcs. clamping blocks



T-slot nut (individual)					Art. no.
Type	**a**	**E**	**h**	**K**	
M8 x 10	9.7	15	12	6	3353020
M10 x 12	11.7	18	14	7	3353022
M12 x 14	13.7	22	16	8	3353025
M12 x 16	15.7	25	18	9	3353024
M14 x 16	15.7	25	18	9	3353026
M16 x 18	17.7	28	20	10	3353028





Twist drill HSS with morse taper	Art. no.
MT2	3051002
MT3	3051003

› 9-part; 14.5/16/18/20/22/24/26/28/30 mm
› Long service life
› Good chip removal
› Right-hand cutting



Twist drill set	Art. no.
25-part	3201010
› 1 – 13 mm	
41-part	3201021
› 6 – 10 mm (increasing by 0.1 mm)	

› As per DIN 338 HSS-CO 5 %
› Four-surface 135° cross grinding enables excellent self-centring
› Improved tool service life thanks to alloyed components
› High speed/feed properties
› Strong core design optimises the structural strength of the bit and minimises the risk of bit breakage
› Practical OPTIMUM plastic case



Fig. Spiral drill bit set 51-part

Countersink set	Art. no.
6-part 6/8/10/11.5/15/19 mm	3201050

› As per standard DIN 335C
› HSS
› Premium conical counterbores Burrs are nicely chamfered and removed without causing scratches
› Compatible with popular battery-powered screwdrivers and drills, including upright drilling machines
› Practical OPTIMUM plastic case





Spot facer set	Art. no.
6-part	3201051

› As per standard 373
› for M3 / M4 / M5 / M6 / M8 / M10 mm screws
› HSS
› Piloted counterbore size 6.5 x 3.2 mm / 8 x 4.3 mm / 10 x 5.3 mm /
11 x 6.4 mm / 15 x 8.54 mm / 18 x 10.5 mm
› Fine grade for countersinking screws and nuts as per DIN 74
› Practical OPTIMUM plastic case



Sheet metal peel drill set	Art. no.
3-part: 3 – 14 mm / 8 – 20 mm / 16 – 30.5 mm	3201055

› HSS
› With sharp tip, no pre-drilling required
› Conically rising blades and radially undercut circumference for peeling action
› Drilling without burr and chatter marks
› Utilisation: Steel sheet 0.1 – 2 mm, stainless steel (V2A) 0.1 – 1 mm, non-ferrous metals 0.1 – 5 mm, plastics – 10 mm
› Practical OPTIMUM plastic case



Stop angle	Art. no.
90⁰	3385052

› For clamping in case of mechanical processing of workpieces, checking and scribing work
› Precision: Parallelism and perpendicularity 0.01 to 100 mm
› Lateral reinforcing ribs
› Dimensions approx. L x W x H: 202 x 126 x 150 mm
› Weight approx. 7 kg



Thread repair	Art. no.
Range	3202010

› 5 pcs. twist drills (5.2 mm/6.3 mm/8.3 mm/10.4 mm/12.4 mm)
› 5 units thread tap: (M5 / M6 / M8 / M10 / M12)
› 5 units inserter for threaded inserts
› 5 units tang breaker
› 100 pcs. threaded inserts: 25 pcs. each M5x0.8 mm / M6x1.0 mm/ M8x1.25 mm/ M10x1.5 mm
› 10 pcs. threaded inserts: M12x1.75 mm
› For repairing defective threads
› For reinforcing the thread on materials with a low shear strength
› Practical OPTIMUM metal case





Drilling and thread tapping set	Art. no.
15-part	3202015

› Through bore
› HSS
› 7 pieces of thread taps: M3 / M4 / M5 / M6 / M8 / M10 / M12
› Set of 7 twist drills DIN 338; Ø2.5 mm / Ø3.3 mm / Ø4.2 mm / Ø5.0 mm / Ø6.8 mm / Ø8.5 mm / Ø10.2 mm
› Tap wrench DIN 1814 size 1½
› Practical OPTIMUM plastic case



Reduction sleeve	Art. no.
MT3- MT2	3050663
MT4- MT3	3050664
MT4- MT2	3050665



Morse taper with adapter	Art. no.
MT2- B16	3050659
MT3- B16	3050660
MT4- B16	3050661
MT5- B16	3050675
MT6- B16	3050676



Extension sleeve	Art. no.
MT2 – MT3	3050667
MT3 – MT4	3050668



Cone ejector	Art. no.
MSP 1 for MT1 up to MT3	3050636
MSP 2 for MT4 up to MT6	3050637



Thread tapping chuck	Art. no.
M5- M12	3352042

› Quick reverse built-in, immediately effective on changing the feed direction
› 4-stage adjustable slipping clutch
› With collet B16

Scope of delivery:
› 2 units flexible collet
› 2 units flat spanner
› Allen key



Hold-down unit set of 2	Art. no.
Table groove **14 mm/M 12**	3352031
› L x W x H approx.: 115 x 42 x 39 mm	
› Height adjustment: 0 – 89 mm	
Table groove **18 mm/M 16**	3352032
› L x W x H approx.: 133 x 50 x 49 mm	
› Height adjustment: 0 – 101 mm	

› Clamping height adjustable
› Brass plate below clamping arm protects material against damage



Cutting oil spray	Art. no.
400 ml	3872100

› adheres well
› Tool life is extended
› speeds up the workflow – improves chip removal
› Suitable for drilling, cutting, reaming, etc.
› for steel, stainless steel, non-ferrous metals, etc.
› in machining and manual processing



Universal machine and tool trolley

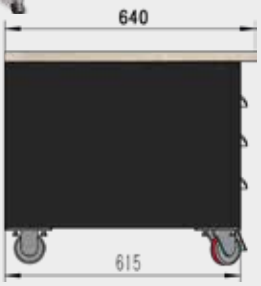
- All three ball bearing mounted drawers can be operated with full extension and are equipped with a stop at the end to prevent accidental opening when shunting or transporting
- Stable design
- Lockable with cylinder lock
- Interior drawer height 100 mm / 100 mm / 200 mm
- Two fixed rollers and two swivel rollers with brakes

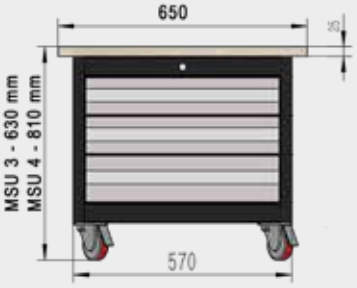


MSU 3



MSU 3





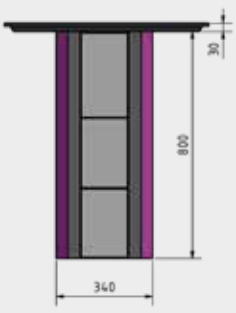
Model	MSU 3	MSU 4
Article no.	3352990	3352991
Load-bearing capacity	max. 500 kg	max. 500 kg
Load bearing capacity per drawer	max. 45 kg	max. 45 kg
Dimensions LxWxH approx.	640 x 650 x 630 mm	640 x 650 x 810 mm
Net weight approx.	47 kg	55.5 kg

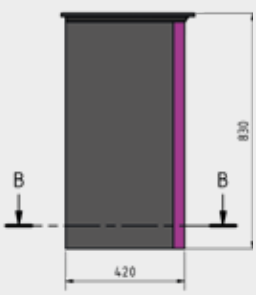
Universal base

- Take your bench drill to the next level. Our universal base ensures the perfect working height
- Handy storage spaces keep drill bits and tools within easy reach
- Eases the strain on your back for fatigue-free, precise work



MSM 1 with chip tray





Universal base	Art. no.
MSM 1	3353000
Chip tray	3352999
› Machine base dimensions approx. 420 x 340 x 800 mm	
› Chip tray dimensions approx. 720 x 470 x 30 mm	
› Machine base net weight approx. 28 kg	

OPTIMUM® MASCHINEN - GERMANY

- Ideally suited as a sturdy workbench or as a base frame for drilling, milling and small lathes
- Height-adjustable in three stages, so that it can be flexibly adapted to the user
- Robust construction made from durable materials, with meticulous workmanship. Sturdy frame construction that safely supports even heavier workpieces and ensures long-lasting stability.
- Robust drawer runners for reliable access and organisation.

Workbench	Art. no.
OWB 10	3353017
Max. load capacity	300 kg
Dimensions (L x W)	770 x 610 mm
Height dimensions (working height)	850 – 1020 mm
Net weight approx.	83 kg





Supplied disassembled and must be assembled

Workbench	Art. no.
OWB 30	3353019
Max. load capacity	300 kg
Dimensions (L x W)	1400 x 610 mm
Height dimensions (working height)	800 – 1020 mm
Net weight approx.	150 kg





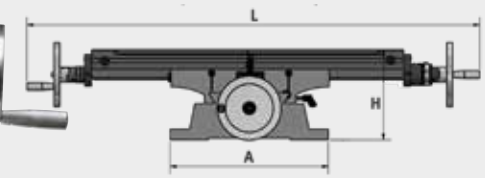
Supplied disassembled and must be assembled

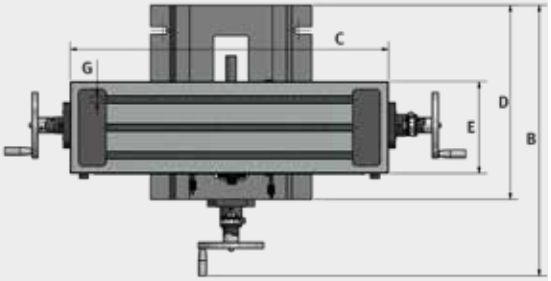
Cross tables

› Coolant channel
› Dovetail guide adjustable
› Handwheels right, front and left – for model KT 120 only right and front
› Adjustable handwheel scaling with 0.05 mm increments

Technical data	KT 120	KT 179	KT 180	KT 210
A (Base width)	222 mm	274 mm	274 mm	400 mm
D (base length)	280 mm	340 mm	340 mm	570 mm
C (table length)	400 mm	500 mm	700 mm	730 mm
E (table width)	120 mm	180 mm	180 mm	210 mm
G (T-slot size)	10 mm	12 mm	12 mm	14 mm
Dimensions (L x W x H) approx.	506 x 400 x 140 mm	748 x 483 x 155 mm	948 x 483 x 155 mm	1060 x 538 x 210 mm
Net weight approx.	22 kg	40 kg	52 kg	84 kg
Travel distances				
X axis	220 mm	287 mm	480 mm	480 mm
Y axis	165 mm	167 mm	170 mm	210 mm
Max. load	40 kg	55 kg	55 kg	80 kg





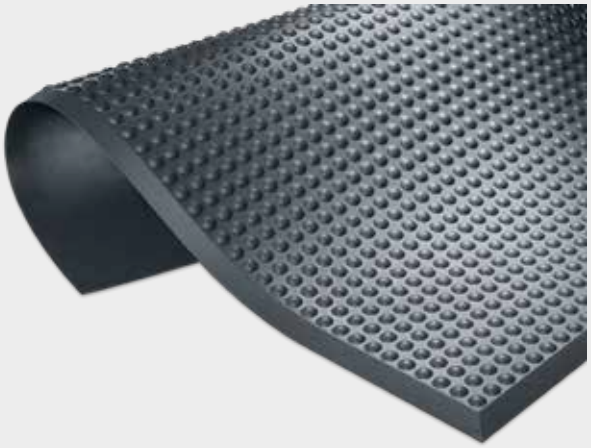


Model	Article no.
KT 120	3356595
KT 179	3356596
KT 180	3356591
KT 210	3356600

Workplace mats for dry and wet areas

› Colour anthracite
› Temperature resistant -35°C up to +95°C
› Fire-resistant B1 as per DIN 4102
› Made of polyurethane on polyether basis
› Surface: nubbed
› Underside: nubbed for maximum standing comfort and slip resistance
› 5-year warranty

MADE IN GERMANY





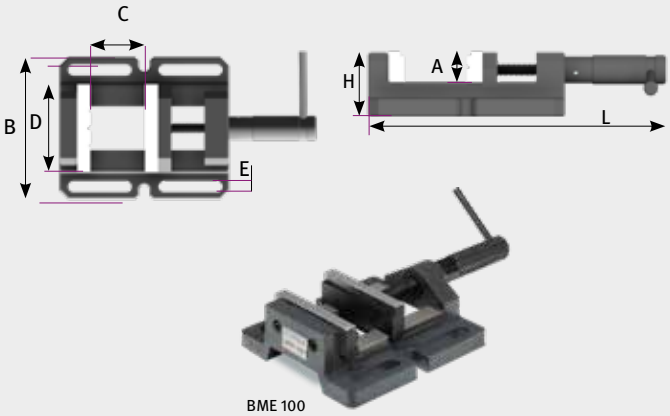
Work mat	Art. no.
Size: 1840 x 640 mm	6800000
› Net weight approx. 6 kg	
Size: 1840 x 940 mm	6800005
› Net weight approx. 9 kg	
Size: 3040 x 640 mm	6800001
› Net weight approx. 10.5 kg	
Size: 3040 x 940 mm	6800006
› Net weight approx. 15 kg	
› Thickness 14 mm	



Machine vices BME	Article no.
BME 85	3052630
BME 100	3052632
BME 120	3052634
BME 150	3052636

› Smooth action
› Precise jaw guidance
› Spindle with rolled trapezoid thread
› Many assembly options on drill table thanks to slots

Tech. data		A	C	D	E	L	B	H	kg
BME 85	mm	30	69	85	12	235	132	58	2.8
BME 100	mm	30	100	100	14	288	160	60	4.0
BME 120	mm	30	120	120	14	327	180	63	5.0
BME 150	mm	30	165	150	14	428	220	70	8.0

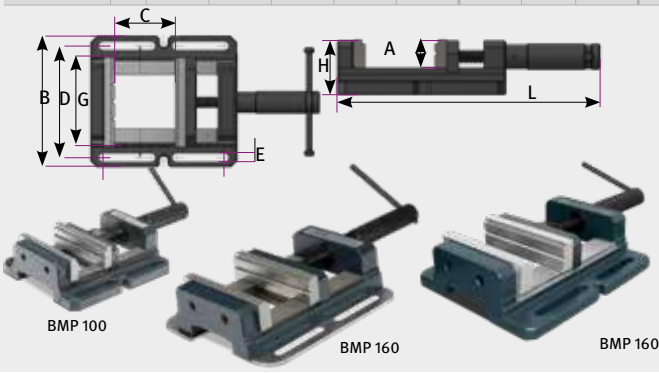


BME 100

Machine vices BMP	Article no.
BMP 100 Cast struts for fastening	3052610
BMP 130 Cast struts for fastening	3052613
BMP 160 Mounting plate for fastening	3052616
BMP 160L Cast struts for fastening	3052617
BMP 200 Mounting plate for fastening	3052620
BMP 200L Cast struts for fastening	3052621

› Smooth action
› Robust design with prism jaws
› Spindle with rolled trapezoid thread
› Many assembly options on drill table thanks to slots

Tech. data		A	G	C	D	E	L	B	H	kg
BMP 100	mm	30	100	100	133	13	294	162	64	5.6
BMP 130	mm	35	130	120	163	13	334	192	69	7.4
BMP 160	mm	40	160	145	205	13	420	250	77	13
BMP 160L	mm	40	160	145	205	13	420	250	82	15
BMP 200	mm	50	200	195	245	14.5	535	290	87	21.6
BMP 200L	mm	50	200	195	245	14.5	535	320	92	23

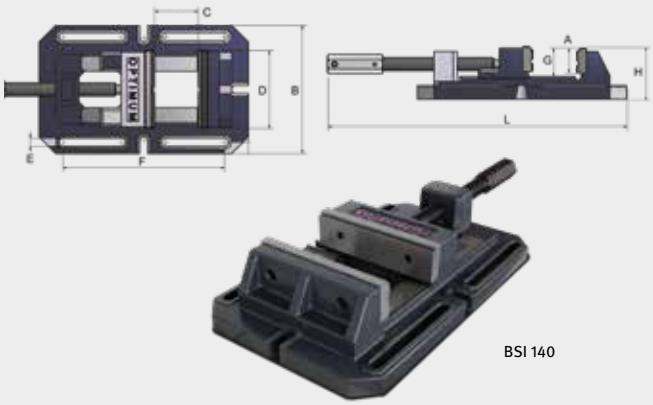


BMP 100 BMP 160 BMP 160L

Machine vices BSI	Article no.
BSI 100	3000210
BSI 140	3000214
BSI 200	3000220

› Drill vices in industrial quality
› Replaceable prism jaws
› Long guides on moving jaw prevent pivoting
› Precision ground prism jaws
› Many assembly options on drill table thanks to slots
› Premium grey cast
› Scraped guide surfaces

Tech. data		A	C	D	E	F	G	L	B	H	kg
BSI 100	mm	35	110	100	12	216	40	max. 460	170	74	8.7
BSI 140	mm	45	150	140	14	290	50	max. 610	230	93	18
BSI 200	mm	58	200	200	16	406	64	max. 788	290	118	37

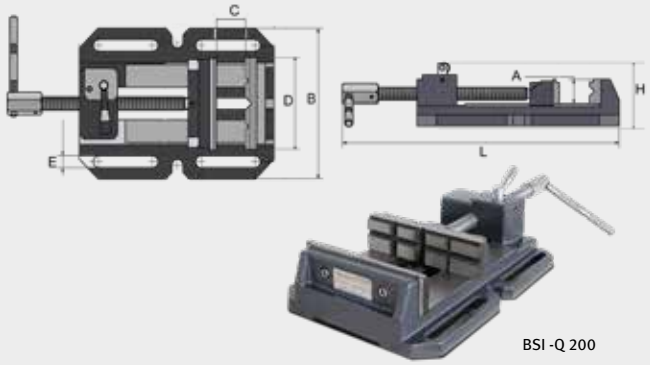


BSI 140

Machine vices BSI-Q	Article no.
BSI-Q 100	3000230
BSI-Q 140	3000234
BSI-Q 200	3000240

› Drill vices in industrial quality
› Quick clamping thanks to quick release
› Replaceable prism jaws
› Long guides on moving jaw prevent pivoting
› Precision ground prism jaws
› Many assembly options on drill table thanks to slots
› Premium grey cast . Scraped guide surfaces

Tech. data		A	C	D	E	L	B	H	kg
BSI-Q 100	mm	30	105	100	12	max. 335	150	95	5.5
BSI-Q 140	mm	40	155	140	14	max. 415	200	100	10.7
BSI-Q 200	mm	55	220	200	16	max. 525	275	125	20.2



BSI -Q 200

Thermdrill replaces rivet nuts

The Thermdrill process allows you to effortlessly produce 100% twist-proof and wobble-free threaded bushings from existing materials in just two simple steps. And at a fraction of the cost of rivet nuts.



High quality **Time saving** **Cost reduction**

- 100% torsion-proof
- For steel, stainless steel, non-ferrous metal, aluminium
- For all common thread sizes
- From 1.0 mm wall thickness
- For column drilling machine, milling machine and (

Configure starter set NOW



THERMDRILL®
Verbindungstechnik – Made in Germany

*Sufficient speed and motor power provided

CURIOUS?
Visit our website for more information:
thermdrill.com

Your starter set – easy to put together in **3 steps**

1. Thermal drill



SHAPE



For bushes **with** collars



CUT



For bushes **without** collars

M = Metric
G = Pipe thread

Made of solid carbide with a special polygon grind

Thread	version	Max. wall thickness [mm]	Art. no.	Max. wall thickness [mm]	Art. no.
M3	short	1.5	3060103	2.0	3060163
	long	2.5	3060123	4.0	3060143
M4	short	1.5	3060104	2.0	3060164
	long	2.5	3060124	4.0	3060144
M5	short	2.0	3060105	3.0	3060165
	long	3.0	3060125	4.5	3060145
M6	short	2.0	3060106	3.0	3060166
	long	3.5	3060126	5.0	3060146
M8	short	2.5	3060108	4.0	3060168
	long	4.0	3060128	6.0	3060148
M10	short	2.5	3060110	4.0	3060170
	long	4.5	3060130	6.5	3060150
M12	short	3.0	3060112	4.5	3060172
	long	5.0	3060132	7.0	3060152
BSP – British Standard Pipe					
G1/8"	short	2.5	3060301	4.0	3060341
	long	4.5	3060311	6.5	3060351
G1/4"	short	2.5	3060302	4.0	3060342
	long	5.0	3060312	7.0	3060352
G3/8"	short	2.5	3060303	4.0	3060343
	long	5.0	3060313	7.0	3060353
G1/2"	short	2.5	3060304	4.0	3060344

+ Further thread sizes can be found at: www.thermdrill.com/lieferprogramm

2. Thread former



with **TiN coating** and **lubrication groove tolerance 6HX**, Form C

Standard tool holder can be used

Thread	Art. no.
M3 × 0,5	3060201
M4 × 0,7	3060202
M5 × 0,8	3060204
M6 × 1,0	3060205
M8 × 1,25	3060207
M10 × 1,5	3060209
M12 × 1,75	3060211
BSP – British Standard Pipe	
G1/8"–28 90.0 L BSP	3060280
G1/4"–19 100.0 L BSP	3060281
G3/8"–19 100.0 L BSP	3060282
G1/2"–14 125.0 L BSP	3060283
G3/4" -14 140.0 L BSP	3060284
G1–11 160.0 L BSP	3060285

3. Basic equipment



Art. no.
3060004

Contents:
- Tool holder with cooling ring ER32-B16
- 1× open-end spanner and 1× hook spanner
- Adapter B16-MT2
- Adapter B16-MT3
- 1× ER32 collet each (6/8/10/12 mm)
- THERMDRILL Paste 100 kg
- Thread moulding oil 100 ml
- 1× Brass and bristle brush
- System case



Collet ER32
for G1/4" to G1/2" also order

ER32	Art. no.
14.0 mm	3441134
16.0 mm	3441136
18.0 mm	3441138

Tool set = thermal drill + thread former



TYPE **FORM**



TYPE **CUT**

Thread	version	max. Wall thickness [mm]	Art. no.	max. Wall thickness [mm]	Art. no.
M3	short	1.5	3060503	1.5	3060563
	long	2.5	3060523	2.5	3060583
M4	short	1.5	3060504	1.5	3060564
	long	2.5	3060524	2.5	3060584
M5	short	2.0	3060505	2.0	3060565
	long	3.0	3060525	3.0	3060585
M6	short	2.0	3060506	2.0	3060566
	long	3.5	3060526	3.5	3060586
M8	short	2.5	3060508	2.5	3060568
	long	4.0	3060528	4.0	3060588
M10	short	2.5	3060510	2.5	3060570
	long	4.5	3060530	4.5	3060590
M12	short	3.0	3060512	3.0	3060572
	long	5.0	3060532	5.0	3060592
BSP – British Standard Pipe					
G1/8"	short	2.5	3060460	2.5	3060480
	long	4.5	3060470	4.5	3060490
G1/4"	short	2.5	3060461	2.5	3060481
	long	5.0	3060471	5.0	3060491
G3/8"	short	2.5	3060462	2.5	3060482
	long	5.0	3060472	5.0	3060492
G1/2"	short	2.5	3060463	2.5	3060483

+ Further thread sizes can be found at: www.thermdrill.com/lieferprogramm

Speed + motor power

The details are guide values for applications in steel. For other materials, a speed adjustment is required.

+50% for aluminium, brass, copper, -10% for stainless steel

Thread	thermal drilling Speed [rpm]		Motor power		Thread forming Speed [rpm]
	min	ideal	min	kW	
M3	2600	3000	1.0 2.0	0.75 1.0	1350
M4	2300	2600	≤1.5 ≤4.0	1.0 1.5	1000
M5	2200	2500	3.0 4.5	1.0 1.5	800
M6	2000	2400	4.0 5.0	1.5 2.0	650
M8	1600	2200	4.0 6.0	1.5 2.0	500
M10	1500	2000	3.0 5.0	1.5 2.0	400
M12	1400	1800	3.0 5.0	1.5 2.0	350
G1/8"	1500	2000	3.0 5.0	1.5 2.0	400
G1/4"	1400	1600	2.5 4.0	1.5 2.0	350
G3/8"	1200	1400	2.5 5.0	2.0 2.2	300
G1/2"	1000	1200	2.5	2.5	250



also for milling machines and CNC systems

Starting instructions incl. CNC data and machine parameter:

PRODUCT VIDEO YouTube

Thermdrill paste



To protect the thermal drill from excessive wear

Packaging	Art. no.
1 kg	3060090
100 mg	0306000503
Brass brush	0306000502

Thread moulding oil



High-performance oil especially suitable for thread forming in aluminium, copper, brass, steel & stainless steel

Packaging	Art. no.
1 l	3060092
100 ml	0306000504
Bristle brush	0306000505

Quick-change set



for thread forming

Article	Art. no.
small (M3-M12)	3050715
large (M8-M20)	3050716

Cooling chuck

for thermo drilling



B16-ER32 + B16

Article	Art. no.
Adapter 'small'	3050715
Adapter 'large'	3050716
Cooling chuck B16	3060007

Compatibility overview: Accessories for drilling machin

Accessories drilling			Beltdrive drilling machines																									Drills with gear units										Radial				
			DQ 14	DQ 18	DQ 22	DQ 20V	DQ 25	DQ 32	D 17Pro/ B 17Pro basic	D 23Pro	D 26Pro	D 33Pro	DP 26T/DP 26F/DP 26V	DP 33/DP 33V	DX 13V	DX 15V	DX 17V/ DX 17E	B 16 H	B 24H / B 24HV	B 28H / B 28HV	B 34H / B 34HV	DH 18V	DH 24FT	DH 28FS	DH 24BV	DH 28BV	DH 40BV	DH 40G / GP/GPE	DH 40CT /CTP/CTE/CTED	DH 26GT	DH 28GS / DH 28GSV	DH 32GS / DH 32GSV	B 40GSP / GSM	DH 35G / DH 35V	DH 45G / DH 45V	B 50GSM	DH 55G / DH 55V	RB 6T	RB 8S	RD 4E / RD 5E	RD 4 / RD 5	RD 6
			B16	MT2	MT2	MT2	MT3	MT4	MT2	MT2	MT3	MT4	MT3	MT4	B 16	MT2	MT2	MT2	MT2	MT3	MT4	MT2	MT2	MT3	MT2	MT3	MT4	MT4	MT4	MT3	MT3	MT4	MT4	MT4	MT4	MT4	MT4	MT4	MT2	MT2	MT3	MT4	MT5
Tapping chuck B16 *(only in combination with adapter B16 / MT..)*		3352042	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Thread cutting chuck with quick-change inserts	MT2 -M3-12	3050702			● 400 V					● 400 V							●	●	●			●	●		●														●	●			
	MT3 -M3-12	3050705					●						● 400 V							●				●		●				●	●										●		
	MT4 -M3-12	3050709						●				●		●							●							●	●			●	●	●	●	●	●				●	
	MT3 -M8-20	3050706					●				●		● 400 V							●				●		●				●	●										●		
	MT4 -M8-20	3050710						●				●		●							●							●	●			●	●	●	●	●	●				●	
Quick change adapter B16	small	3050715		●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	large	3050716		●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Thermdrill collet chuck	B16- ER32	3060007	●												●																												
Quick-action drill chuck *(For MT spindle seat only in combination with matching adapter.)*	1–10 mm	3050610	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	DKC13	3050632	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	DKC16	3050633	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Quick-action drill chuck with MT adapter	MT2	3050571		●	●	●			●	●						●	●	●	●			●	●		●														●	●			
	MK2	3050572		●	●	●			●	●						●	●	●	●			●	●		●														●	●			
	MT3	3050573					●				●									●				●		●				●	●										●		
	MT 4	3050574						●				●		●							●							●	●			●	●	●	●	●	●				●	
Clamping tool assortment	Size 8	3352075														●	●																										
	Size 10	3352076							●	●								●				●	●																				
	Size 12	3352077	●	●	●	●	●	●			●	●				●	●		●	●	●			●	●	●	●	●	●	●	●	●	●		●				●	●			
	Size 14	3352078																																							●	●	
	Size 16	3352079																																	●	●	●						
T-slot nut (individual)	M8 x 10	3353020													●	●																											
	M10 x 12	3353022							●	●								●				●	●																				
	M12 x 14	3353025	●	●	●	●	●	●			●	●			●	●	●		●	●	●			●	●	●	●	●	●	●	●	●		●								
	M12 x 16	3353024	●	●	●	●	●	●			●	●			●	●	●		●	●	●			●	●	●	●	●	●	●	●	●		●								
	M14 x 16	3353026														●																										●		
	M16 x 18	3353028																																	●	●	●					●	
HSS twist drill	MT2	3051002		●	●	●			●	●						●	●	●	●			●	●		●														●	●			
	in combination with matching reduction MT2						●	●			●	●	●	●						●	●			●		●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●
	MT3	3051003					●				●		●							●				●		●				●	●										●		
	in combination with matching reduction sleeve MTx/MT3							●				●		●							●						●	●	●			●	●	●	●	●	●					●	●
Twist drill set	25-part	3201010	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	41-part	3201021	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Conical counterbore set		3201050	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Spot facer set		3201051	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Step drill bit set		3201055	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Thread repair		3202010	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Reduction sleeve	MK3-MK2	3050663					●				●									●						●				●	●										●		
	MK4-MK3	3050664						●				●									●							●	●			●		●		●	●	●				●	
	MK4-MK2	3050665																									●	●	●														

● Recommended ● * only for drilling work! For milling work, see milling machine vices! Q Recommended – restrictions apply

This equipment table covers all recommended equipment options. Depending on the individual case, use of accessories can be meaningful beyond this.

Accessories drilling			Beltdrive drilling machines																													Drills with gear units										Radial				
			DQ 14	DQ 18	DQ 22	DQ 20V	DQ 25	DQ 32	D 17Pro/ B 17Pro basic	D 23Pro	D 26Pro	D 33Pro	DP 26T/DP 26F/DP 26V	DP 33/DP 33V	DX 13V	DX 15V	DX 17V/ DX 17E	B 16 H	B 24H / B 24HV	B 28H / B 28HV	B 34H / B 34HV	DH 18V	DH 24FT	DH 28FS	DH 24BV	DH 28BV	DH 40BV	DH 40G / GP/GPE	DH 40CT /CTP/CTE/CTED	DH 26GT	DH 28GS / DH 28GSV	DH 32GS / DH 32GSV	B 40GSP / GSM	DH 35G / DH 35V	DH 45G / DH 45V	B 50GSM	DH 55G / DH 55V	RB 6T	RB 8S	RD 4E / RD 5E	RD 4 / RD 5	RD 6
			B16	MT2	MT2	MT2	MT3	MT4	MT2	MT2	MT3	MT4	MT3	MT4	B 16	MT2	MT2	MT2	MT2	MT3	MT4	MT2	MT2	MT3	MT2	MT3	MT4	MT4	MT4	MT3	MT3	MT4	MT4	MT4	MT4	MT4	MT4	MT4	MT2	MT2	MT3	MT4	MT5
Morse cone	MT2, B16	3050659		●	●	●			●	●						●	●	●	●			●	●		●														●	●			
	MT3, B16	3050660					●				●									●				●		●					●	●									●		
	MT4, B16	3050661						●				●									●						●	●	●			●	●	●	●	●	●				●		
	MT5, B16	3050675																																									●
Extension sleeve	MT2 – MT3	3050667															●		●			●	●		●														●	●			
	MT3 – MT4	3050668					●				●		●							●				●		●					●	●									●		
Cone ejector	MSP 1	3050636					●		●	●	●					●			●				●	●	●	●				●	●								●	●	●		
	MSP 2	3050637						●																			●															●	●
Blank holder	14 mm	3352031	●	●	●	●	●			●	●			●	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●	●		●				●	●			●
	18 mm	3352032																															●		●	●	●					●	
Morse taper for drill chuck	MT4/M16 B16	3350304																												●												
Thermdrill	MT2	3060007															●		●	●	●	●	●		●							●	●		●	●	●	●					
Universal coolant unit		3351999		●	●	●	●	●	●	●	●	●	●	●				●	●	H only Model	H only Model	●	●	●	●	●	●	●	●	●	●												
Workplace mats			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Cutting oil spray 400 ml		3872100	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Base units, workbenches

Machine mobile base MSM 1		3353000													●	●	●					●	●																				
Chip tray		3352999													●	●	●					●	●																				
Universal machine and tool trolley MSU 3		3352990	●	●	●	●			●	●			● T-model only		●	●	●	●	●			●	●	● FT model only	●														●				
Universal machine and tool trolley MSU 4		3352991	●	●	●	●			●	●			● T-model only		●	●	●	●	●			●	●	● FT model only	●														●				
OWB 10 Workbench		3353017	●	●	●	●			●	●			● T-model only		●	●	●	●	●			●	●	● FT model only	●														●				
OWB 30 Workbench		3353019	●	●	●	●			●	●			● T-model only		●	●	●	●	●			●	●	● FT model only	●														●				

Machine vices

BME 85		3052630	●						○																																		
BME 100		3052632	●	●	●	●	●		●																															●	●			
BME 120		3052634			●	●	●	●	○																															●	●			
BME 150		3052636						●																																				
BMP 100		3052610	●	●	●	●	●		●	●	●				●	●	●	●	●			●	●		●														●	●			
BMP 130		3052613			●	●	○	●		○	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●		●*										●	●			
BMP 160		3052616						●			○	●	●	●						●	●			●		●	●	●	●*	○	○	○	○	○	○	○	○					
BMP 200		3052620										●		●						○	●			○		○	●	●		○	○	○	○	○	○	○	○					
BSI 100		3000210						●			●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●		●*	●	●	●		●						●			
BSI 140		3000214										●		●					○	○	●		○	○	○	○	●	●	●*	●	●	●	●	●	●	●	●			●	●	●
BSI 200		3000220												○							○						●	●					●		●	●	●				●	●
BSI-Q 100		3000230						●			●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●		●*	●	●	●		●						●			
BSI-Q 140		3000234										●		●					○	○	●		○	○	○	○	●	●	●*	●	●	●	●	●	●	●	●			●	●	●
BSI-Q 200		3000240												○							○						●	●					●		●	●	●				●	●

DRILLING MILLING MACHINES

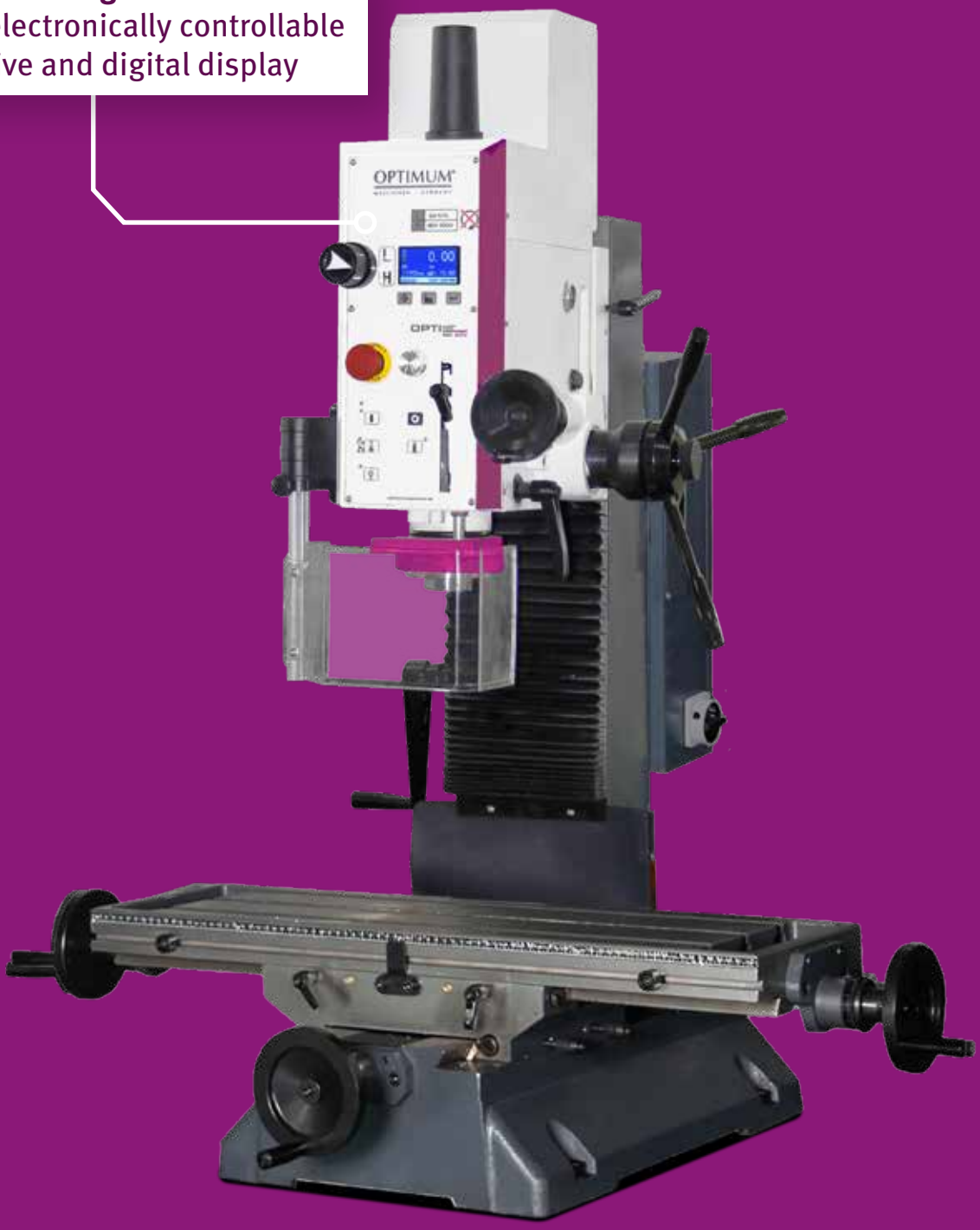
MH 3DV | Art. no.: 3337130

with inline spindle drive
No more gearbox, therefore
extremely smooth running



MB 4SV | Art. no.: 3343030

Milling machine
with electronically controllable drive and digital display



Small drilling and milling machine with electronically infinitely variable drive

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Two-speed transmission ratio
- MT2 tool holder
- The drill head can be tilted by 45°, enabling milling and drilling work at any angle
- Simple and clear control panel
- With 24V low voltage
- Feed spindles can be adjusted backlash-free using adjustable spindle nuts
- Adjustable limit stops
- Fine feed



ARGUMENTS,...



CONTROL UNIT
› Simple and clear operating unit with speed display
› Touch on/off switch
› Potentiometer
› Emergency stop button



CROSS TABLE
› Solid and generously dimensioned cross table with precision surface finish and T-slots
› Adjustable limit stops
› Longitudinal scale inset in cross table



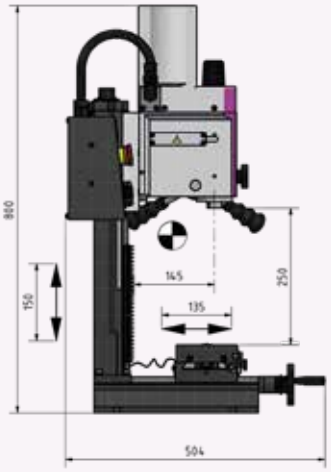
UNIVERSAL MACHINE SUBSTRUCTURE MSM 1 AND CHIP TRAY
› Optionally available
› Machine base dimensions approx. 420 x 340 x 800 mm
› Chip tray dimensions approx. 720 x 470 x 30 mm

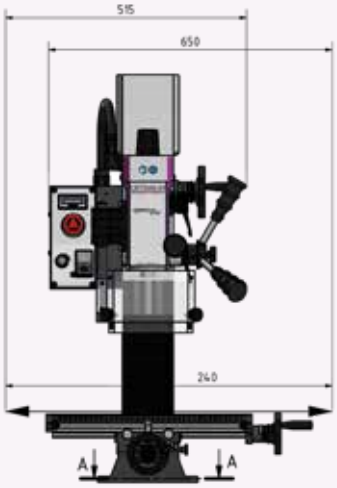
*OPTImill® is a registered brand of Optimum Maschinen Germany GmbH and exclusively used for milling machines

TECHNICAL DATA

Model	MH 15V
Article no.	3338110
Power	
Electrical connection	230 V / 1 Ph ~50 Hz
Motor power	500 W
Drilling/milling performance	
Drilling performance in steel (S235JR)	Ø 13 mm
Continuous drilling performance in steel (S235JR)	Ø 11 mm
Cutter head size max.	Ø 50 mm
End mill size max.	Ø 13 mm
Spindle	
Spindle sleeve stroke	50 mm
Spindle seat	MT2
Throat depth	145 mm
Drawbar	M 10
Drilling/milling head	
Spindle speeds	90 – 2 250 min^{-1}
Gearbox stages	2-speed, electronic speed control
Swivel range	± 90°
Cross table	
Cross table x width	400 x 120 mm
T-slot size / distance / number	10 mm / 35 mm / 3
Clearance spindle to cross table	250 mm
Travel distances	
X axis	240 mm
Y axis	135 mm
Z axis	150 mm
Dimensions and weight	
Length x width x height approx.	504 x 515 x 800 mm
Net weight approx.	58.5 kg

DIMENSIONS





SCOPE OF DELIVERY

› Morse taper MT2/B16
› Operating tool

ACCESSORIES

Designation	Article no.
Collet set MT2/ M10, 5-part direct tensioning	3351980
Collet set ER 25, 15-part	3441109
Collet chuck set MT2/ ER 25	3352052
Collet chuck set MT2/ ER 32	3352053
End mill set HSS TiN-coated 12-part	3352250
End mill set HSS TiN-coated 20-part	3352255
Quick-action drill chuck DKC 13/ 0 – 13 mm	3050632
Assortment of clamping tools size 8	3352075
T-slot nut M 8 / 10 mm	3353020
Universal coolant unit 230 V	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100

More **accessories** and **information on accessories** see page 151
Wiide selection of **machine vices** see page 148

DIGITAL POSITION DISPLAY

Designation	Article no.
Digital position display DRO 5	3383975
Factory assembly DRO 5	9000420
Magnetic strip per metre	3383980

Information on the digital **position indicator** see page 233

BASE UNIT/WORKBENCH

Designation	Article no.
Universal machine substructure MSM 1	3353000
Chip tray	3352999
Levelling feet SE 1 (4 units required)	3381012

Information about the universal base **MSM 1** see page 160

OWB 10 Workbench New	3353017
OWB 30 Workbench New	3353019

Information about the workbench see page 161

*The machine complies with the DIN EN 55011 standard: Class C2. Important information on operating machines with frequency converters can be found on the reverse side

Sturdy drilling and milling machines with electronically infinitely variable drive. OPTImill BF 20LVario with longer cross table.

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Feed spindles can be adjusted backlash-free using adjustable spindle nuts
- Sturdy dovetail guide, precision ground and shaved with adjustable gib strips
- EMC filter (to protect sensitive electronics against interference from conducted interference signals class B)
- All guideways are ground and visibly scraped (oil pockets for lubrication)
- Precision workmanship
- Two-speed gear ratio for powerful transmission of motor output
- Powerful DC motor with permanent current monitoring
- Two-row angular contact ball bearings in the axes, adjustable without play
- Safety electrical system 24-volt version
- Gaiter as guide protection
- Clockwise/anticlockwise rotation
- Drilling/milling head can be tilted by ± 90°, for milling and drilling work in any angular position

Back again
The original



Fig.: OPTImill BF 20Vario with optional accessories milling

ARGUMENTS,...



Z-column and X-axis
› Prepared 9 mm wide groove for retrofitting the magnetic tapes by simply gluing them in place



Protective screen
› Height-adjustable protective screen with microswitch for best possible user protection against chips and parts being flung out



Control panel
› Clearly-arranged



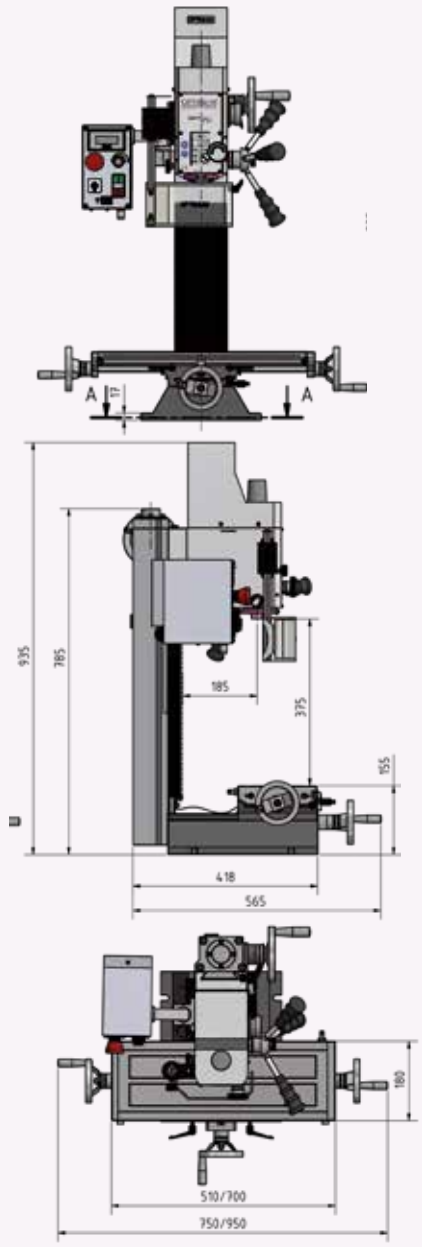
Digital spindle sleeve stroke indicator
› Display accuracy: 0.01 mm
› LCD display
› mm/inch switchable

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TECHNICAL DATA

Model	BF 20Vario	BF 20LVario
Article no.	3338120	3338122
Power		
Electrical connection	230 V / 1 Ph ~50 Hz	
Motor power	850 W	
Drilling/milling performance		
Drilling performance in steel (S235JR)	Ø 16 mm	
Continuous drilling capacitysteel (S235JR)	Ø 12 mm	
Cutter head size max.	Ø 63 mm	
End mill size max.	Ø 20 mm	
Spindle seat		
Spindle sleeve stroke	50 mm	
Spindle seat	MT2 / M10	
Throat depth	185 mm	
Drilling/milling head		
Swivel range	± 90°	
Spindle speeds	90 – 1 480 min^{-1} / 150 – 3 000 min^{-1}	
Gearbox stages	2-speed, electronic speed control	
Cross table		
Table length	500 mm	700 mm
Table width	180 mm	
T-slot size / spacing	12 mm / 63 mm	
Cross table load capacity max.	55 kg	
Travel distances		
X-axis	280 mm	480 mm
Y-axis	175 mm	
Z-axis	280 mm	
Dimensions and weight		
Length	745 mm	950 mm
Width x height max.	565 x 935 mm	
Total weight	103 kg	112 kg

DIMENSIONS



SCOPE OF DELIVERY

- Tapered mandrel MT2/B16 M 10
- Drawbar M10
- Operating tool



Mounting adapter
Lathes machine bed

ACCESSORIES

Designation	Article no.
Mounting adapter (for the TU2807 lathe machine bed)	3356574
Collet set MT2/ M10, 5-part direct tensioning	3351980
Collet set ER 25, 15-part	3441109
Collet chuck set MT2/ ER 25	3352052
Collet chuck set MT2/ ER 32	3352053
End mill set HSS TiN-coated 12-part	3352250
End mill set HSS TiN-coated 20-part	3352255
Quick-action drill chuck DKC 13/ 0 – 13 mm	3050632
Assortment of clamping tools size 8	3352075
T-slot nut M 8 / 10 mm	3353020
Universal coolant unit 230 V	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100

More **accessories** and **information on accessories** see page 151
Wiide selection of **machine vices** see page 148

DIGITAL POSITION DISPLAY

Designation	Article no.
Digital position display DRO 5	3383975
Factory assembly DRO 5	9000420
Magnetic strip per metre	3383980

Information on the digital **position indicator** see page 233

BASE UNIT/WORKBENCH

Designation	Article no.
Universal machine substructure MSM 1	3353000
Chip tray	3352999
Levelling feet SE 1 (4 units required)	3381012

Information about the universal base **MSM 1** see page 160

OWB 10 Workbench New	3353017
OWB 30 Workbench New	3353019

Information about the workbench see page 161

*The machine complies with the DIN EN 55011 standard: Class C2. Important information on operating machines with frequency converters can be found on the reverse side

Sturdy drilling and milling machines with electronically infinitely variable drive and manual spindle sleeve feed

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Precision workmanship
- Excellent concentricity thanks to tapered roller bearings, ≤ 0.015 mm measured in the spindle sleeve
- Motor with two-speed gear ratio for powerful transmission of motor output
- Powerful DC motor with permanent current monitoring
- Air filter for motor
- New electrics with improved motor protection (extended PCB and PCB for EMC)
- Safety electrical system 24-volt version
- Control electronics with integrated relay control
- Solid and generously dimensioned cross table with precision surface finish with T-slots and adjustable gib strips
- Adjustable limit stops
- Sturdy dovetail guide with adjustable gib strips
- Feed spindle play adjustable and re-adjustable
- Emergency stop button
- Drill and milling head can be tilted by ±60°
- Clockwise/anticlockwise rotation
- Machine lamp
- Two-row angular contact ball bearings in the axes, adjustable without play
- Height-adjustable protective screen with microswitch for best possible user protection against chips and parts being flung out
- Preparation for mounting the DRO5 digital position display on the X and Y axis (slot prepared for retrofitting magnetic strips)
- Lockable main switch

MH 20VL

- Greater travel distance in the X-axis

MH 20VLD

- Digital position display DRO 5



Fig.: MH 20VL with optional chuck and cutter.

ARGUMENTS,...



ENERGY CHAIN
› cable guidance easy on material



FEED
› Manual spindle sleeve feed with the fine feed



HEAT SINK
› Heat sink for cooling the electronics
› Good heat transfer capability



CONTROL PANEL
› Clearly-arranged control panel with user-friendly foil keyboard
› Easily readable digital display for speed and drilling depth



MH 20VLD
DIGITAL POSITION DISPLAY
DRO 5
› Four-line LCD display

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TECHNICAL DATA

Model	MH 20V	MH 20VL
Article no.	3338131	3338132

Model		MH 20VLD
Article no.	-	3338133

Power		
Electrical connection	230 V / 1 Ph ~50 Hz	
Motor power	750 W	
Drilling/milling performance		
Drilling performance in steel (S235JR)	Ø 16 mm	
Continuous drilling performance in steel (S235JR)	Ø 12 mm	
Cutter head size max.	Ø 52 mm	
End mill size max.	Ø 20 mm	
Spindle		
Spindle sleeve stroke	50 mm	
Spindle sleeve diameter	Ø 60 mm	
Spindle seat	MT2	
Drawbar	M10	
Throat depth	170 mm	
Drilling/milling head		
Spindle speeds	100 – 3 000 min^{-1}	
Gearbox stages	2-speed, electronic speed control	
Swivel range	± 60°	
Cross table		
Cross table x width	510 x 180 mm	700 x 180 mm
T-slot size / distance / number	12 mm / 63 mm / 3	
Cross table load capacity max.	40 kg	50 kg
Clearance spindle to cross table	255 mm	
Travel distances		
X axis	280 mm	480 mm
Y axis	175 mm	
Z axis	210 mm	
Dimensions and weight		
Length x width x height approx.	750 x 650 x 820 mm	770 x 714 x 917 mm
Net weight approx.	94 kg	99 kg

SCOPE OF DELIVERY

› Tapered mandrel MT2/B16
› Drawbar M10
› Operating tool

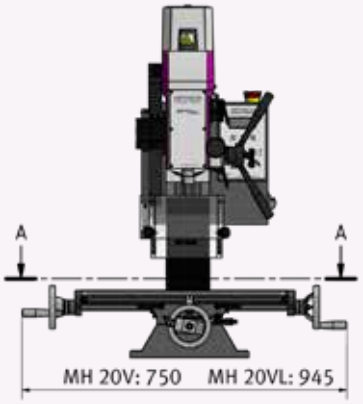
ACCESSORIES

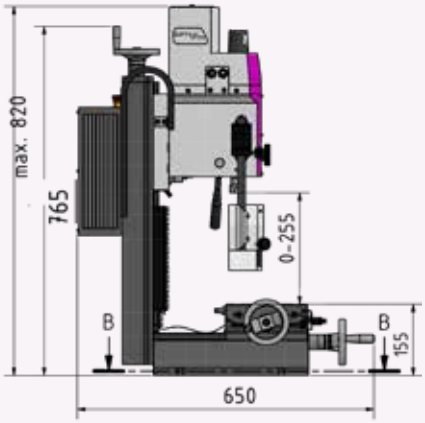
Designation	Article no.
Collet set MT2/ M10, 5-part direct tensioning	3351980
End mill set HSS TiN-coated, 12-part	3352250
End mill set HSS TiN-coated, 20-part	3352255
Collet set ER 25, 15-part	3441109
Quick-action drill chuck DKC 13/ 0 – 13 mm	3050632
Cutting oil spray 400 ml	3872100
Assembly kit for DRO5 on MH20V	3383990
Universal machine substructure MSM 1	3353000
Chip tray	3352999
OWB 10 Workbench New	3353017
OWB 30 Workbench New	3353019

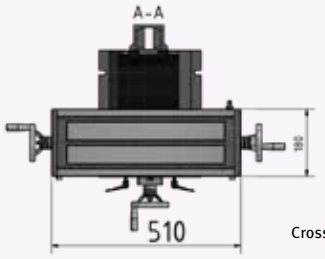
More **accessories** and **information on accessories** see page 151
Wiide selection of **machine vices** see page 148

Note: The machines (frequency converters) comply with the DIN EN 55011 standard: Class C2.
Important information on operating machines with frequency converters see page 333

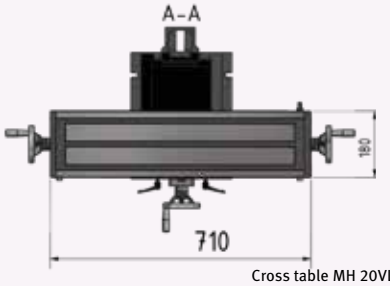
DIMENSIONS







Cross table MH 20V



Cross table MH 20VL/VLD

VICES

Designation	Article no.
FMS 100	3354100
FMSN 100	3354110
VMQ 80	3354180
VMQ 100	3354181
MV3-75	3354175
ZAS 50	3354170

Information on this see page 148

Sturdy drilling and milling machines with electronically infinitely variable drive. OPTImill MH 22VD with digital position display DRO 5

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Precision workmanship
- Excellent concentricity thanks to tapered roller bearings, ≤ 0.015 mm measured in the spindle sleeve
- Motor with two-speed gear ratio for powerful transmission of motor output
- Powerful DC motor with permanent current monitoring
- Safety electrical system 24-volt version
- Control electronics with integrated relay control
- Solid and generously dimensioned cross table with precision surface finish with T-slots and adjustable gib strips
- Adjustable limit stops
- Sturdy dovetail guide with adjustable gib strips
- Fine feed
- Emergency stop button
- Drill and milling head can be tilted by ±60°
- Clockwise/anticlockwise rotation
- Machine lamp
- Bore for easy oiling of the trapezoidal spindle
- Two-row angular contact ball bearings in the axes, adjustable without play
- Feed spindle play adjustable and re-adjustable
- Height-adjustable protective screen with microswitch against flying chips and parts, for maximum protection of the user
- X, Y and Z axis with slot prepared for retrofitting of the magnetic strips
- Gaiter as guide protection

MH 22VD

- Digital position display DRO 5
- Quick tool change system



Fig.: MH 22VD with optional milling cutter

ARGUMENTS,...



ENERGY CHAIN
› cable guidance easy on material



MECHANICAL QUICK-CHANGE CLAMPING SYSTEM
› Milling head equipped with collet for pull studs BT20x45°
› Easy to change by unlocking the mechanical safeguard and moving the sleeve lever upward



OPERATING PANEL
› Clearly-arranged control panel with user-friendly foil keyboard
› Easily readable digital display for speed and drilling depth

MH 22VD:
DIGITAL POSITION DISPLAY
› Four-line LCD display



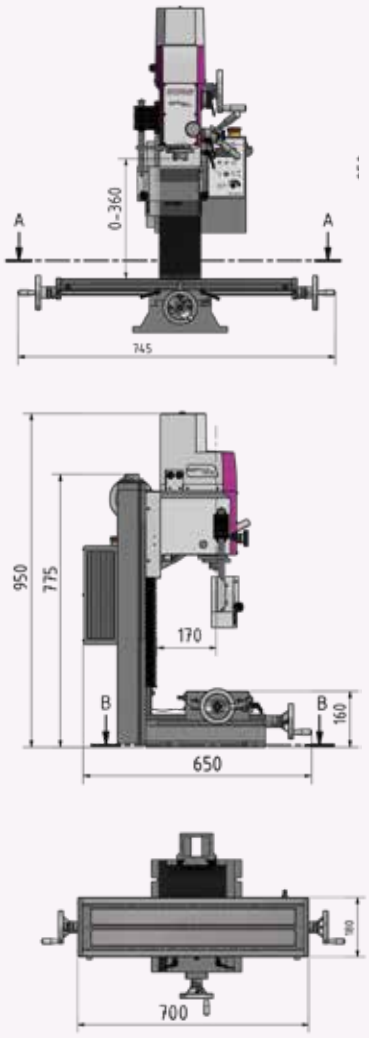
FEED
› Manual spindle sleeve feed with the fine feed

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TECHNICAL DATA

Model	MH 22V
Article no.	3338135
Model	**MH 22VD**
Article no.	3338136
Power	
Electrical connection	230 V / 1 Ph ~50 Hz
Motor power	950 W
Drilling/milling performance	
Drilling performance in steel (S235JR)	Ø 20 mm
Continuous drilling performance in steel (S235JR)	Ø 16 mm
Cutter head size max.	Ø 52 mm
End mill size max.	Ø 12 mm
Spindle	
Spindle sleeve stroke	40 mm
Spindle sleeve diameter	Ø 60 mm
Spindle seat	BT 20
Throat depth	170 mm
Drilling/milling head	
Spindle speeds	90 – 3 000 min^{-1}
Gearbox stages	2-speed, electronic speed control
Swivel range	± 60°
Cross table	
Cross table x width	700 x 180 mm
T-slot size / distance / number	12 mm / 63 mm / 3
Cross table load capacity max.	50 kg
Clearance spindle to cross table	360 mm
Travel distances	
X axis	480 mm
Y axis	175 mm
Z axis	270 mm
Dimensions and weight	
Length x width x height approx.	745 x 650 x 950 mm
Net weight approx.	120 kg

DIMENSIONS



ACCESSORIES

Designation	Article no.
Collet chuck ER 16	3352741
Collet chuck spanner ER 16	3352742
Collet set ER 16, 12-part , 1 – 10 mm	3440282
Milling head holder Ø 16 mm BT 20	3352728
End mill set HSS TiN-coated	3352250
Quick-action drill chuck DKC 13/ 0 – 13 mm	3050632
Chuck adapter BT 20 – B16	3352727
Cutting oil spray 400 ml	3872100
Weldon holder Ø 6 mm BT 20	3352732
Weldon holder Ø 8 mm BT 20	3352734
Weldon holder Ø 10 mm BT 20	3352736
Weldon holder Ø 12 mm BT 20	3352738
Pull stud BT 20 (Optimum custom-made, no standard BT 20 pull stud)	3352726
Assembly kit for DRO5 for MH22V	3383990
Machine mobile base MSM 1	3353000
Chip tray	3352999
OWB 10 Workbench New	3353017
OWB 30 Workbench New	3353019

More **accessories** and **information on accessories** see page 151

STARTER SET

Designation	Article no.
Starter set BT 20	3353281
› 1 piece cutter head holder Ø 16 mm	
› 2 Weldon holders each, Ø 6 mm / Ø 8 mm	
› 1 Weldon holders each, Ø 10 mm / Ø 12 mm	
› 1 unit tool fitting BT20/B16	
› 11 units pull studs	
› 1 piece quick-action drill chuck 1 – 13 mm	
› 1 piece facing and copying cutterhead	
› 2 units collet chuck ER 25	
› 1 piece collet spanner ER 25	
› 12-part collet set ER 25	

VICES

Designation	Article no.
FMS 100	3354100
FMSN 100	3354110
VMQ 80	3354180
VMQ 100	3354181
MV3-75	3354175
ZAS 50	3354170

Information on this see page 148

Note: The machines (frequency converters) comply with the DIN EN 55011 standard: Class C2.
Important information on 'Operating machines with frequency converters' on page 333

Sturdy milling machines with continuously variable electronic speed control. OPTImill MH 25SPV with stepper motors and DRO 5 digital position display

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Inverter motor
- Precision workmanship
- Clearly-arranged control panel with user-friendly foil keyboard
- Particularly smooth action
- Counterweight facilitates Z axis adjustment
- Variable speed control
- Easy tool changing thanks to tool quick clamping system
- Feed spindles can be adjusted thanks to adjustable spindle nuts
- Sturdy dovetail guide, precision ground and shaved with adjustable gib strips
- Angular ball bearings on the axes
- Height-adjustable, large protective screen with micro switch
- Gear head can be tilted+ 45°
- Clockwise/anticlockwise rotation

MH 25PV:

- Easily readable speed display in milling head
- Slot prepared for easy retroactive mounting of magnetic strips

MH 25SPV:

- Continuously variable feed on all axes
- Rapid traverse X/Y axis for fast positioning
- Digital 3-axis position display DRO 5
- Feed cut-off at end position
- Transportable control panel
- The feed switches off when the spindle is stationary
- Limit switches for all three axes



Fig.: MH 25SPV

ARGUMENTS,...



ENERGY CHAIN
› cable guidance easy on material



CONTROL PANEL
› User-friendly membrane keyboard with touch and switch control
› Easy to clean
› Excellent operability

MH 25SPV
› High mobility thanks to the control panel being removable from its holder



MECHANICAL QUICK-CHANGE CLAMPING SYSTEM
› Milling head equipped with collet for pull studs BT30x45°
› Easy change via a handle



SIEMENS INVERTER SINAMICS V20
› The inverter is equipped with an energy-optimised control method and automatic flux reduction to increase energy efficiency
› Wider voltage range, advanced cooling and painted electronic components increase the robustness of the inverter

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TECHNICAL DATA

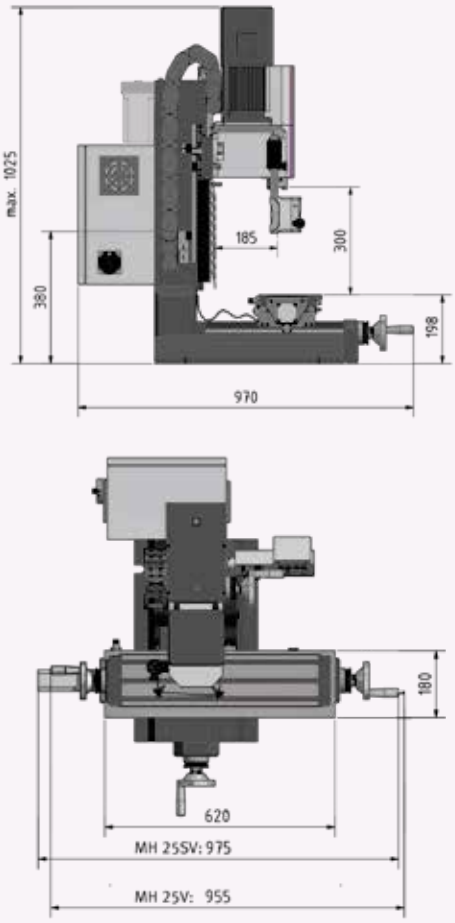
Model	MH 25PV	MH 25SPV
Article no.	3338156	3338161
Power		
Electrical connection	230 V / 1 Ph ~50 Hz	
Total rated value	2 kW	
Milling spindle		
Drive motor	1.5 kW	
Drive motor torque	10 Nm	
Drilling/milling performance		
Cutter head size max.	Ø 50 mm	
End mill size max.	Ø 25 mm	
Spindle		
Spindle sleeve stroke	60 mm	
Spindle seat	BT 30	
Throat depth	185 mm	
Drilling/milling head		
Spindle speeds	200 – 4 000 min^{-1}	
Gearbox stages	Electronic speed control	
Swivel range	45°	
Cross table		
Cross table x width	620 x 180 mm	
T-slot size / distance / number	12 mm / 50 mm / 3	
Cross table load capacity max.	30 kg	
Clearance spindle to cross table	300 mm	
Travel distances		
X axis	manual 400 mm	automatic ~380 mm manual 400 mm
Y axis	manual 210 mm	automatic ~130 mm manual 210 mm
Z axis	manual 210 mm	automatic ~130 mm manual 210 mm
Torque		
X/Y/Z axis	-	2.2 / 2.2 / 4.2 Nm
Travel speeds		
X axis	-	150 – 930 mm/min.
Y axis	-	100 – 580 mm/min.
Z axis	-	80 – 450 mm/min.
Dimensions and weight		
Length x height approx.	970 x 1 025 mm	
Width approx.	955 mm	975 mm
Net weight approx.	192 kg	200 kg

ACCESSORIES

Designation	Article no.
Collet chuck ER 32	3353304
Collet chuck spanner ER 32	3353307
Collet set ER 32, 3– 20 mm	3441122
Milling head holder Ø 22 mm	3353306
Quick-action drill chuck 1.5 – 16 mm	3536303
Weldon holder Ø 6 mm	3353310
Weldon holder Ø 8 mm	3353311
Weldon holder Ø 10 mm	3353312
Weldon holder Ø 12 mm	3353313
Weldon holder Ø 16 mm	3353314
Weldon holder Ø 20 mm	3353315
Adapter BT 30/MT2	3353305
Assembly and tool adjustment gauge	3536203
Pull stud 40 x 45° M12	3353302
Pull stud DIN2080 M12	3536177
Assortment of clamping tools SPW 10, 58-part	3352076
Cutting oil spray 400 ml	3872100
Universal substructure MSM2 (for information see page 169)	3353009

Note: The machines (frequency converters) comply with the DIN EN 55011 standard: Class C2.
Important information on 'Operating machines with frequency converters' on page 333

DIMENSIONS



STARTER SET

Designation	Article no.
Starter set BT 30	3353282
› Milling head holder Ø 22 mm	
› Drill chuck 1 – 13 mm	
› 2 Weldon Ø 6 mm and 20 mm	
› 1 piece each of Weldon Ø 8 / 10 / 12 / 16 mm	
› Adapter BT 30/MT2	
› 4 units collet chuck ER 32	
› Collet key ER 32	
› 18-part collet set ER 32	
› Height-adjuster	
› Assembly and tool adjustment gauge	
› 14 units pull studs	
› Taper wiper	

VICES

Designation	Article no.
FMS 100	3354100
VMQ 80	3354180
MV3-75	3354175
ZAS 50	3354170

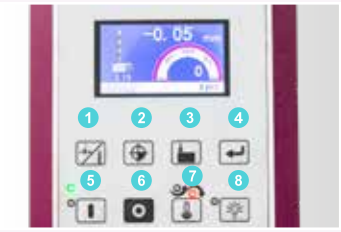
Information on this see page 148

Drilling and milling machines with electronically controllable drive and digital display

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Direct spindle drive, electronically adjustable
- Precision workmanship
- Powerful servo drive motor with high torque (maintenance-free)
- Solid and generously dimensioned cross table with precision surface finish with T-slots and adjustable gib strips
- Adjustable limit stops
- Sturdy dovetail guide with adjustable gib strips
- Clockwise/anticlockwise rotation
- Thread tapping
- Elegant, slim, modern design
- LED machine light
- Fine feed
- Emergency stop button
- Drilling and milling head can be tilted by ±90°
- Height-adjustable protective screen with microswitch against flying chips and parts, for maximum protection of the user

ARGUMENTS,...



DIGITAL DISPLAY

1. Operating mode selection: Thread tapping
2. Zero point setting (start of workpiece)
3. Setting the drilling and thread depth
4. Enter button
5. Push-button start
6. Push-button stop
7. Direction of rotation switch
8. LED machine light



INLINE SPINDLE DRIVE

› No more gearbox therefore extremely smooth running

Very quiet



Fig.: MH 2DV



Fig.: MH 3DV

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TECHNICAL DATA

Model	MH 2DV*	MH 3DV*
Article no.	3337126	3337130
Power		
Electrical connection	230 V / 1 Ph ~50 Hz	
Motor power	1.5 kW	2.2 kW
Drilling/milling performance		
Drilling performance in steel (S235JR)	Ø 16 mm	Ø 28 mm
Continuous drilling performance in steel (S235JR)	Ø 13 mm	Ø 25 mm
Cutter head size max.	Ø 63 mm	Ø 75 mm
End mill size max.	Ø 20 mm	Ø 30 mm
Spindle		
Spindle sleeve stroke	70 mm	100 mm
Spindle sleeve diameter	Ø 60 mm	Ø 68 mm
Spindle seat	MT2	MT3
Drawbar	M10	M 12
Drilling/milling head		
Spindle speeds	200 – 3 000 min^{-1}	120 – 3 000 min^{-1}
Gearbox stages	2-speed, electronic speed control	
Tiltable	± 90°	± 90°
Cross table		
Cross table x width	700 x 180 mm	750 x 210 mm
T-slot size / distance / number	12 mm / 63 mm / 3	
Cross table load capacity max.		50 kg
Travel distances		
X axis	480 mm	450 mm
Y axis	175 mm	200 mm
Z axis	280 mm	450 mm
Dimensions and weight		
Length x width x height approx.	956 x 591 x 998 mm	850 x 830 x 1 350 mm
Net weight approx.	118 kg	270 kg

ACCESSORIES

Designation	Article no.
Collet set MT2/ M10, 5-part direct tensioning	3351980
Collet set ER 25, 15-part	3441109
Collet chuck set MT2 / ER 25	3352052
Collet chuck set MT2 / ER 32	3352053
End mill set HSS TiN-coated 12-part	3352250
End mill set HSS TiN-coated 20-part	3352255
Quick-action drill chuck DKC 13 / 0 – 13 mm	3050632
Assortment of clamping tools size 8	3352075
T-slot nut M8 / 10 mm	3353020
Universal coolant unit 230 V	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100

More **accessories** and **information on accessories** see page 151

MACHINE BASE

Designation	Art. no.:
MSM 1 (MH2DV)	3353000
Chip tray (MH2DV)	3352999
MSM 3 (MH3DV)	3353014
Vibration damping machine foot SE 55 (4 units required)	3352981

VICES

Designation	Article no.
FMS 100	3354100
FMSN 100	3354110
VMQ 80	3354180
VMQ 100	3354181
MV3-75	3354175
ZAS 50	3354170

Information on this see page 148

* The machines comply with the DIN EN 55011 standard: MH 2DV: Class C1/MH 3DV: Class C2.
Important information on operating machines with frequency converters see page 333

Universal precision drilling and milling machines with two-stage drive motor with manual gearbox.

OPTImill MB 4D with digital position display DRO6

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, solid cast design
- Quality industrial electric motor
- High running smoothness due to ground gear wheels running in an oil bath
- Clockwise/anticlockwise rotation
- Solid and generously dimensioned cross table with precision surface finish with T-slots and adjustable gib strips
- Drilling depth stop
- Manual sleeve feed with fine feed
- Feed spindle play adjustable and re-adjustable
- Operation-friendly control panel with emergency stop shock switch
- Column with hand-honed dovetail guide
- Height-adjustable, large protective screen with micro switch
- Wide speed range from 95 – 3 200 min^{-1} thanks to 2 switchable speeds, electronically adjustable

MB 4D

- Digital position display DRO 6
- Magnetic measuring system in three axes



Fig.: MB 4D

ARGUMENTS,...



THREAD TAPPING MODE

› Motor is activated by moving the spindle sleeve lever downwards.
› When the set depth is reached, the spindle reverses direction.
› The tap turns out of the work-piece again
› When the spindle sleeve is completely retracted to the switching point again, the rota-tion of the spindle is stopped.



GEARHEAD

› The drilling/milling head can be tilted 45° to the left and right



FEED

› Manual spindle sleeve feed with the fine feed



CONTROL AND INDICATING ELEMENTS

› Digital display X, Y and Z axes
› Touch operation
› User-friendly and clearly arranged control panel with emergency stop switch

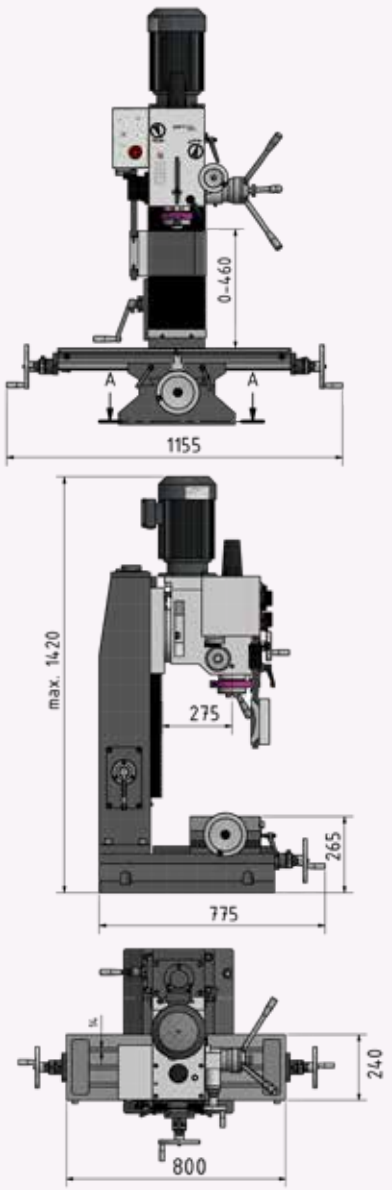
TECHNICAL DATA

Model	MB 4
Article no.	3338451

Model	MB 4D
Article no.	3338448

Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Motor power	1.1 / 1.5 kW
Drilling/milling performance	
Drilling performance in steel (S235JR)	Ø 32 mm
Continuous drilling performance in steel (S235JR)	Ø 28 mm
Cutter head size max.	Ø 63 mm
End mill size max.	Ø 28 mm
Spindle	
Spindle sleeve stroke	120 mm
Spindle seat	MT4
Spindle sleeve diameter	75 mm
Throat depth	275 mm
Drawbar	M16
Drilling/milling head	
Spindle speeds	95 – 3 200 min^{-1}
Gearbox stages	2 x 6 stages
Tiltable	± 45°
Cross table	
Cross table x width	800 x 240 mm
T-slot size / distance / number	14 mm / 63 mm / 3
Cross table load capacity	80 kg
Clearance spindle to cross table	460 mm
Travel distances	
X axis	450 mm
Y axis	195 mm
Z axis	430 mm
Dimensions and weight	
Length x width x height approx.	1 155 x 775 x 1 420 mm
Net weight approx.	320 kg

DIMENSIONS



ACCESSORIES

Designation	Article no.
Collet chuck MT4/M16	3352094
End mill set HSS TiN-coated 12-part	3352250
End mill set HSS TiN-coated 20-part	3352255
Copy and planer cutter MT4 Ø 63 mm	3350214
Boring head set MT4/B16	3352125
Drill chuck taper mandrel MT4 / B16	3350304
Tapping chuck MT4/ M3 – M12	3050709
Tapping chuck MT4/ M8 – M20	3050710
Parallel shim set, 18-part	3536191
Height-adjustable tailstock RST 1	3356155
Hold-down clamp 14 mm	3352031
Assortment of clamping tools SPW 12, 58-part	3352077
Universal table feed V 99S (for information see page 167)	3352021
Assembly kit V 99S for the X-axis	3352035
Universal coolant unit 230 V	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100
Steel chassis MSM 3	3353014
Vibration damping machine base SE 55 (4 units required)	3352981

More **accessories** and **information on accessories** see page 151

SCOPE OF DELIVERY

- Adapter MT4/MT3
- Tightening rod M16
- Mounting MT4/22 mm
- Operating tool

VICES

Designation	Article no.
FMS 100	3354100
FMS 125	3354125
FMSN 125	3354120
VMQ 100	3354181
MV3-75	3354175
DAS 100	3355500
ZAS 50	3354170

Information on this see page 148

Universal precision drilling/milling machines with servo drive.

OPTImill MB 4SVD with DRO 6 digital display

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Precision workmanship
- Thread tapping function
- Servo drive
- Solid and generously dimensioned cross table with precision surface finish with T-slots and adjustable gib strips
- Adjustable limit stops
- Sturdy dovetail guide with adjustable gib strips
- Clockwise/anticlockwise rotation
- LED machine light
- Emergency stop button
- Drilling and milling head can be tilted by ±45°



Fig.: MB 4SV

ARGUMENTS,...



DIGITAL DISPLAY

1. Pushbutton for spindle rotation "ON"
2. Spindle rotation direction selection
3. Lighting on/off
4. Pushbutton for spindle rotation "OFF"
5. Push button for thread tapping
6. Zero point set
7. Setting the thread depth
8. Enter button



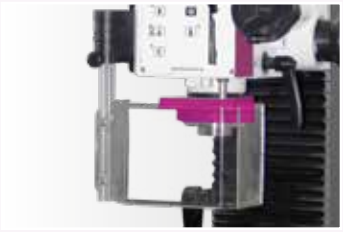
CONTROL CABINET

› Standards-compliant setup



FEED

› Manual spindle sleeve feed with the fine feed



PROTECTIVE SCREEN

› Height-adjustable protective screen with microswitch against flying chips and parts, for maximum protection of the user

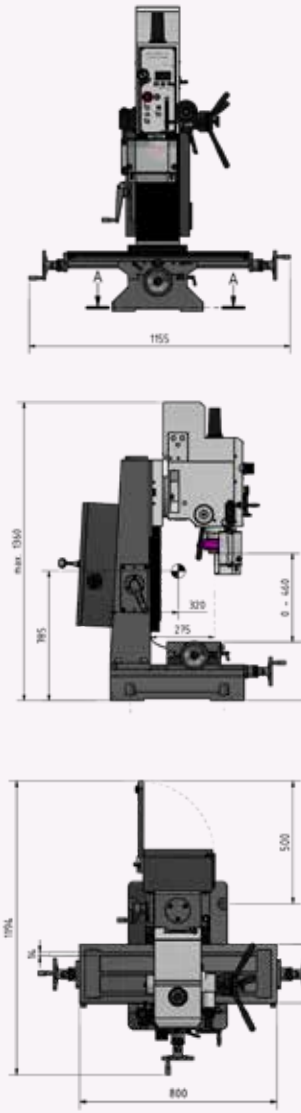
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TECHNICAL DATA

Model	MB 4SV
Article no.	3338458
Model	**MB 4SVD**
Article no.	3338459

Power	
Electrical connection	230 V / 3 Ph ~50 Hz
Motor power	3 kW
Drilling/milling performance	
Drilling performance in steel (S235JR)	Ø 32 mm
Continuous drilling performance in steel (S235JR)	Ø 28 mm
Cutter head size max.	Ø 63 mm
End mill size max.	Ø 26 mm
Spindle	
Spindle sleeve stroke	120 mm
Spindle sleeve diameter	75 mm
Throat depth	240 mm
Spindle seat	MT4
Drawbar	M16
Drilling/milling head	
Spindle speeds	60 – 3 000 min^{-1}
Gearbox stages	2 stages, electronically adjustable
Tiltable	± 45°
Cross table	
Cross table x width	800 x 240 mm
T-slot size / distance / number	14 mm / 80 mm / 3
Cross table load capacity	80 kg
Clearance spindle to cross table	460 mm
Travel distances	
X axis	450 mm
Y axis	200 mm
Z axis	380 mm
Dimensions and weight	
Length x width x height approx.	1 155 x 980 x 1 360 mm
Net weight approx.	320 kg

DIMENSIONS



ACCESSORIES

Designation	Article no.
Collet chuck MT4/M16	3352094
End mill set HSS TiN-coated 12-part	3352250
End mill set HSS TiN-coated 20-part	3352255
Copy and planer cutter MT4 Ø 63 mm	3350214
Bore head set MT4/B16	3352125
Arbour for drill chuck MT4/B16	3350304
Thread cutting chuck MT4/ M3 – M12	3050709
Thread cutting chuck MT4/ M8 – M20	3050710
Parallel shim set, 18-part	3536191
Height-adjustable tailstock RST 1	3356155
Hold-down clamp 14 mm	3352031
Assortment of clamping tools SPW 12, 58-part	3352077
Universal table feed V 99S (for information see page 167)	3352021
Assembly kit V 99S for the X-axis	3352035
Universal coolant unit 230 V	3351999
Coolant mist lubricator MMC 1 with magnetic holder	3356663
KMS 2 coolant hose	3356660
Cutting oil spray 400 ml	3872100
Steel chassis MSM 3	3353014
Vibration damping machine base SE 55 (4 units required)	3352981

More **accessories** and **information on accessories** see page 151

SCOPE OF DELIVERY

- Adapter MT4 / MT3
- Drawbar M16
- Mounting MT4/22 mm
- Operating tool

VICES

Designation	Article no.
FMS 100	3354100
FMS 125	3354125
FMSN 125	3354120
VMQ 100	3354181
MV3-75	3354175
DAS 100	3355500
ZAS 50	3354170

Information on this see page 148

Note: The machines (frequency converters) comply with the DIN EN 55011 standard: Class C2.
Important information on operating machines with frequency converters see page 333

Universal precision drilling/milling machines with manual gearbox.

OPTImill MH 35V with electronically controlled drive

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Excellent concentricity thanks to tapered roller bearings, ,≤ 0.015 mm measured in the spindle sleeve
- Solid and generously dimensioned cross table with precision surface finish and T-slots
- Control panel with user-friendly dirt and water resistant foil keyboard
- Easily readable digital display
- Drilling depth stop
- Clockwise/anticlockwise rotation
- Thread tapping mode
- Rotary pushbutton on control panel for adjusting the drilling depth, optionally in mm or inches, with zero point
- Height-adjustable protective screen with microswitch for best possible user protection against chips and parts being flung out
- Tiltable gear head ± 30°
- Feed spindle play adjustable and re-adjustable
- Heavy, stable and solid column made of high-quality grey cast iron, with ground and honed dovetail guide for high stability and precision as well as adjustable gib strips
- Z axis with slatted, stainless steel protective cover
- Optional, solid, heavy steel base MSM 3 (Article no.: 3353014) ensures stability
- The machine base is reinforced and moulded into a wedge shape at the front to create additional rigidity at the rear by using more material. The entire table can be milled over
- Very stable Z-column connection

MH 35G:

- Two-speed industrial motor and 6 additional gears

MH 35V:

- 6 speeds, electronically controlled
- Digital speed display



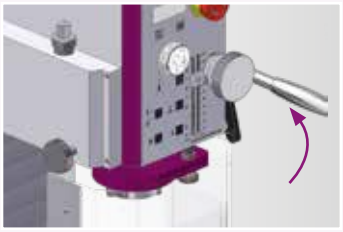
Fig.: MH 35G

ARGUMENTS,...



ENERGY CHAIN

› cable guidance easy on material



QUICK-CHANGE CLAMPING SYSTEM

› mechanical

› Easy to change by unlocking the mechanical safeguard and moving the sleeve lever upward



DIGITAL DISPLAY

› Depth selection optionally in mm or inch and zero point freely adjustable via the display

› Speed display



MACHINE FOOT

› The machine base is reinforced and moulded into a wedge shape at the front to create additional rigidity at the rear by using more material. The entire table can be milled over

› Very stable Z-column connection

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TECHNICAL DATA

Model	MH 35G	MH 35V*
Article no.	3338166	3338171
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	
Motor power	1.1 / 1.5 kW	1.5 kW
Drilling/milling performance		
Drilling performance in steel (S235JR)	Ø 32 mm	
Continuous drilling performance in steel (S235JR)	Ø 28 mm	
Cutter head size max.	Ø 80 mm	
End mill size max.	Ø 28 mm	
Spindle		
Spindle sleeve stroke	90 mm	
Spindle seat	BT 30	
Spindle sleeve diameter	68 mm	
Throat depth	215 mm	
Drilling/milling head		
Spindle speeds	220 – 3 100 min^{-1}	50 – 3 260 min^{-1}
Gearbox stages	2 x 6 stages	6 stages electronically adjustable
Swivel range	± 30°	
Cross table		
Cross table x width	750 x 210 mm	
T-slot size / distance / number	12 mm / 63 mm / 3	
Cross table load capacity max.	170 kg	
Clearance spindle to cross table max.	440 mm	
Travel distances		
X axis	450 mm	
Y axis	200 mm	
Z axis	460 mm	
Dimensions and weight		
Length x width x height approx.	850 x 1 030 x 1 340 mm	
Net weight approx.	318 kg	

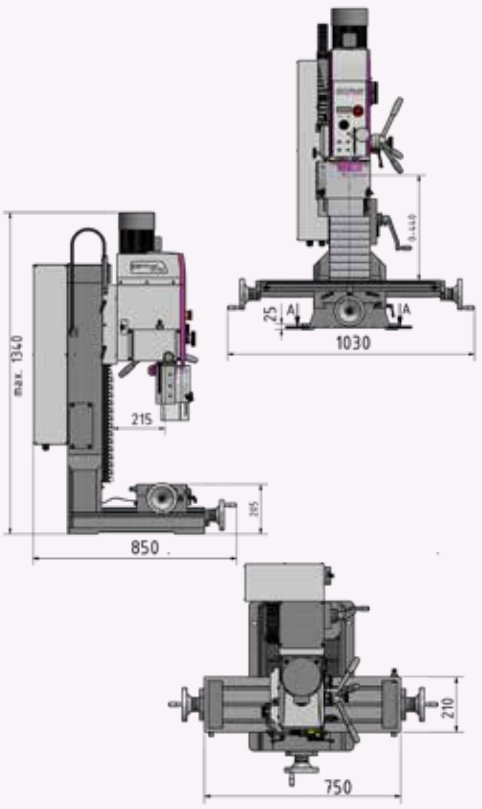
ACCESSORIES

Designation	Article no.
Collet chuck ER 32	3353304
Collet chuck spanner ER 32	3353307
Collet set ER 32, 3 – 20 mm	3441122
Chuck adapter BT 30/B16	3353308
Milling head holder BT 30 Ø 22 mm	3353306
Quick-action drill chuck 1 – 13 mm	3536333
Weldon holder Ø 6 mm	3353310
Weldon holder Ø 8 mm	3353311
Weldon holder Ø 10 mm	3353312
Weldon holder Ø 12 mm	3353313
Weldon holder Ø 16 mm	3353314
Weldon holder Ø 20 mm	3353315
Adapter BT 30/MT2	3353305
Height-adjuster	3536290
Assembly and tool adjustment gauge	3536203
Pull stud 40 x 45° M12	3353302
Assortment of clamping tools SPW 10, 58-part	3352076
Universal table feed V 99S (for information see page 167)	3352021
Assembly kit V 99S for the X-axis	3352035
Cutting oil spray 400 ml	3872100
Steel chassis MSM 3	3353014
Vibration damping machine base SE 55 (4 units required)	3352981

More **accessories** and **information on accessories** see page 151

* Note: The machines (frequency converters) comply with the DIN EN 55011 standard: Class C2.
Important information on 'Operating machines with frequency converters' on page 333

DIMENSIONS



SCOPE OF DELIVERY

› Operating tool

STARTER SET

Designation	Article no.
Starter set BT 30	3353282
› Milling head holder Ø 22 mm	
› Quick-action drill chuck 1 – 13 mm	
› 2 pieces each of Weldon Ø 6 mm and 20 mm	
› 1 piece each of Weldon Ø 8 / 10 / 12 / 16 mm	
› Adapter BT 30/MT2	
› 4 units collet chuck ER 32	
› Collet key ER 32	
› 18-part collet set ER 32	
› Height-adjuster	
› Assembly and tool adjustment gauge	
› 14 units pull studs	
› Taper wiper	

VICES

Designation	Article no.
FMS 125	3354125
VMQ 100	3354181
MV3-75	3354175
DAS 100	3355500
ZAS 50	3354170

Information on this see page 148

Universal precision drilling-milling machines with manual gearbox and motorised Z-axis height adjustment.

Optimill MH 50V with electronically controlled drive

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Excellent concentricity thanks to tapered roller bearings, ,≤ 0.015 mm measured in the spindle sleeve
- Gears in oil bath with ground, hardened gear wheels
- Control panel with user-friendly dirt and water resistant foil keyboard
- Rotary pushbutton on control panel for adjusting the drilling depth, optionally in mm or inches, with zero point
- Easily readable digital display
- Easily readable sleeve display in milling head
- Drilling depth stop
- Clockwise/anticlockwise rotation
- Thread tapping mode
- Electrical milling head height adjustment
- Manual fine feed
- Heavy, sturdy and solid columns made of premium cast material with ground and shaven dovetail guide for excellent stability and precision
- Tiltable gear head ± 30°
- Z axis with slatted, stainless steel protective cover
- Adjustable gib strips
- Feed spindle play adjustable and re-adjustable
- Height-adjustable protective screen with microswitch for best possible user protection against chips and parts being flung out
- Optional, solid, heavy steel base MSM 4 (article no.: 3353015) ensures stability
- The machine base is reinforced and moulded into a wedge shape at the front to create additional rigidity at the rear by using more material. The entire table can be milled over
- Very stable Z-column connection
- The longer Y-axis travel allows work to be carried out across the entire table area

MH 50G:

- Two-speed industrial motor and 6 additional gears

MH 50V:

- 6 speeds, electronically controlled
- Digital speed display



SIEMENS INVERTER SINAMICS V20

› The inverter is equipped with an energy-optimised control method and automatic flux reduction to increase energy efficiency
› Wider voltage range, advanced cooling and painted electronic assemblies

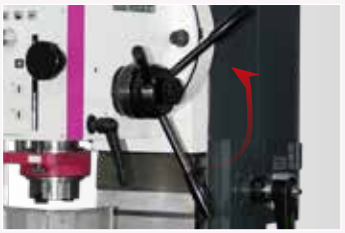
Fig.: MH 50V

ARGUMENTS,...



ENERGY CHAIN

› cable guidance easy on material



MECHANICAL QUICK-CHANGE CLAMPING SYSTEM

› The milling head is equipped with collet for pull stud BT40x45°
› Easy to change by unlocking the mechanical safeguard and moving the sleeve lever upward



DIGITAL DISPLAY

› Depth selection optionally in mm or inch and zero point freely adjustable via the display
› Rev counter (MH 50V only)



MACHINE FOOT

› The machine base is reinforced and moulded into a wedge shape at the front to create additional rigidity at the rear by using more material. The entire table can be milled over
› Extended machine table
› Very stable Z-column connection

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TECHNICAL DATA

Model	MH 50G	MH 50V*
Article no.	3338181	3338186
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	
Motor power	1.5 / 2.2 kW	2.2 kW
Drilling/milling performance		
Drilling performance in steel (S235JR)	Ø 38 mm	
Continuous drilling performance in steel (S235JR)	Ø 32 mm	
Cutter head size max.	Ø 80 mm	
End mill size max.	Ø 32 mm	
Spindle		
Spindle sleeve stroke	115 mm	
Spindle seat	BT 40	
Spindle sleeve diameter	Ø 80 mm	
Throat depth	285 mm	
Drilling/milling head		
Spindle speeds	225 – 3 260 min^{-1}	50 – 3 260 min^{-1}
Gearbox stages	2 x 6 stages	6 stages electr. adjustable
Swivel range	± 30°	
Cross table		
Cross table x width	1 000 x 240 mm	
T-slot size / number/ spacing	14 mm / 3 / 80 mm	
Cross table load capacity max.	175 kg	
Clearance spindle to cross table max.	545 mm	
Travel distances		
X axis manual	650 mm	
Y axis manual	295 mm	
Z axis	manual 465 mm / automatic ~385 mm	
Dimensions and weight		
Length x width x height approx.	1 210 x 1 020 x 1 645 mm	
Net weight approx.	518 kg	

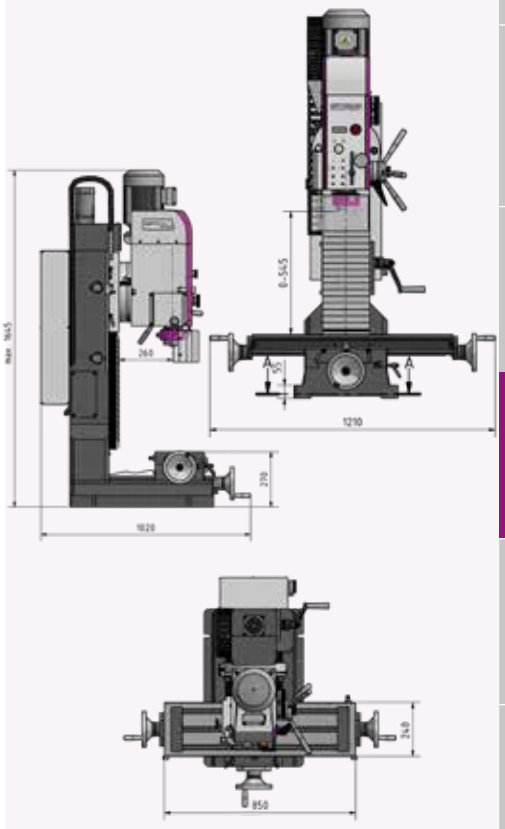
ACCESSORIES

Designation	Article no.
Collet chuck ER 32	3353334
Collet chuck spanner ER 32	3353307
Collet set ER 32, 3 – 20 mm	3441122
Milling head holder Ø 27 mm	3353336
Quick-action drill chuck 1.5 – 16 mm	3536303
Weldon holder Ø 6 mm	3353340
Weldon holder Ø 8 mm	3353341
Weldon holder Ø 10 mm	3353342
Weldon holder Ø 12 mm	3353343
Weldon holder Ø 16 mm	3353344
Weldon holder Ø 20 mm	3353345
Adapter BT 40/MT3	3353335
Assortment of clamping tools SPW 16, 58-part	3352079
Height-adjuster	3536290
Assembly and tool adjustment gauge	3536203
Taper wiper	3353331
Pull stud 40 x 45° M16	3353332
Cutting oil spray 400 ml	3872100
Universal table feed V 99S (for information see page 167)	3352021
Assembly kit V 99S for the X-axis	3352036
Steel chassis MSM 4	3353015
Vibration damping machine base SE 55 (4 units required)	3352981

More **accessories** and **information on accessories** see page 151

* Note: The machines (frequency converters) comply with the DIN EN 55011 standard: Class C2.
Important information on 'Operating machines with frequency converters' on page 333

DIMENSIONS



SCOPE OF DELIVERY

› Operating tool

STARTER SET

Designation	Article no.
Starter set BT 40	3353284
› Milling head holder Ø 27 mm	
› Quick-action drill chuck 1 – 13 mm	
› 2 Weldon Ø 6 mm and 20 mm	
› 1 piece each of Weldon Ø 8 / 10 / 12 / 16 mm	
› Adapter BT 40/MT3	
› 4 units collet chuck ER 32	
› Collet key ER 32	
› 18-part collet set ER 32	
› Height-adjuster	
› Assembly and tool adjustment gauge	
› 14 units pull studs	
› Taper wiper	

VICES

Designation	Article no.
FMS 125	3354125
FMSN 125	3354120
VMQ 100	3354181
MV3-75	3354175
DAS 100	3355500
ZAS 50	3354170

Information on this see page 148

UNIVERSAL DRILLING AND MILLING MACHINES



Visit our exhibition in Hallstadt/Bamberg


OPTIMUM
OPTImill
MT 60

DRO | MB 4PV VARIO | CRAFTSMEN

Universal drilling/milling machine with digital position display DRO 5
and machine base made of cast iron.
Optimill MB 4PV with electronically infinitely variable drive

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, solid cast design
- High running smoothness due to ground gear wheels running in an oil bath
- Solid and generously dimensioned cross table with precision surface finish and T-slots
- Tiltable gear head ± 45°
- Adjustable gib strips
- Drilling depth stop
- Clockwise/anticlockwise rotation
- Drilling/Thread tapping function
- Coolant system
- Solid column with hand-honed dovetail guide for maximum stability and best possible precision
- Feed spindle play adjustable and re-adjustable
- Height-adjustable, large protective screen with micro switch
- Machine lamp
- Solid cast machine chassis with chip channel

MB 4P:
- Two-stage industrial quality electric motor
- Wide speed range from 95 – 3 200 min^{-1} thanks to 12 switchable speeds

MB 4PV:
- Single-stage quality industrial electric motor
- Wide speed range from 60 to 2 760 min^{-1} thanks to 2 continuously variable gear speeds
- SINAMICS V20 frequency converter from SIEMENS

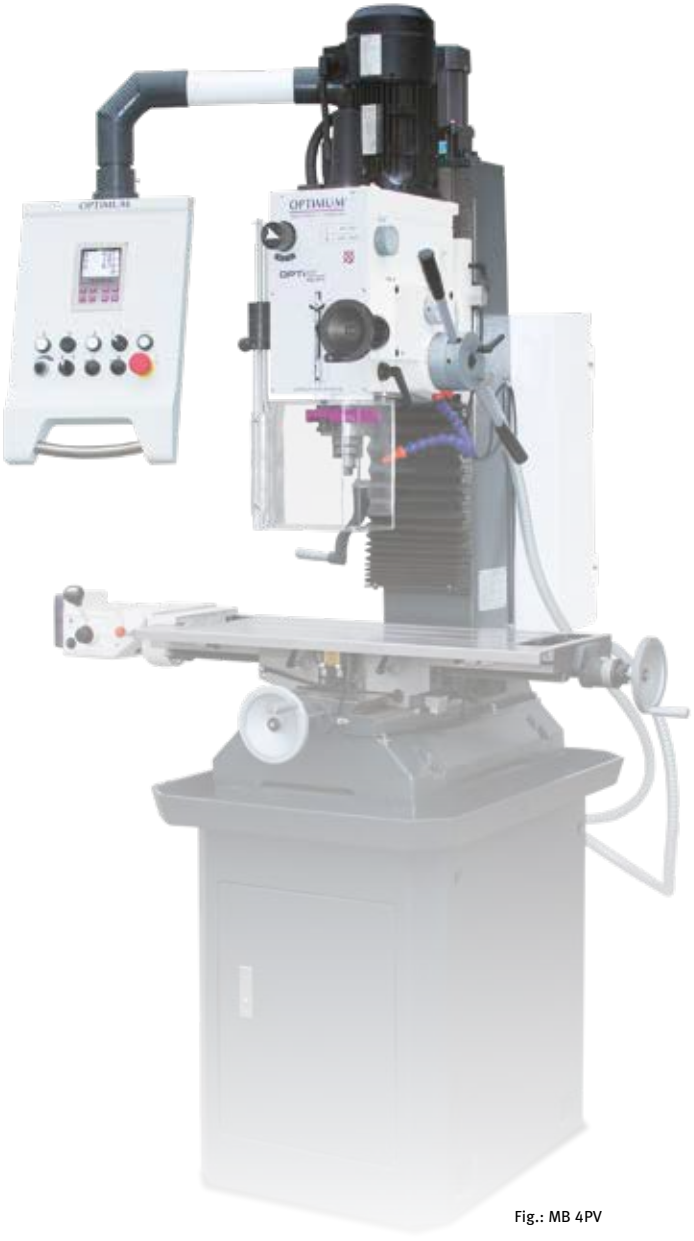


Fig.: MB 4PV

ARGUMENTS,...



AUTOMATIC SPINDLE SLEEVE FEED
› The sleeve moves downwards at the set feed speed and switches off again at the set drilling depth on the scale ring. The sleeve then moves back to its starting position.



X AXIS
› Motorised positioning of the X-axis with rapid traverse



DIGITAL POSITION DISPLAY
› Four-line LCD display



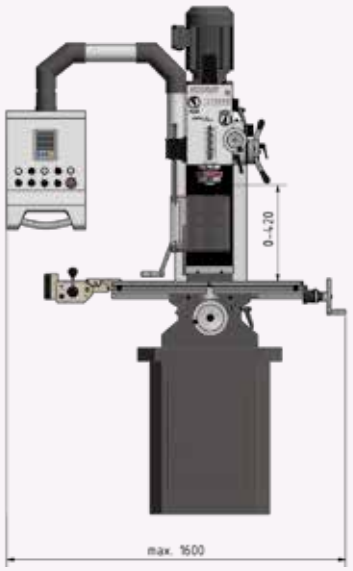
MB 4PV: SIEMENS INVERTER SINAMICS V20
› The inverter is equipped with an energy-optimised control method and automatic flux reduction to increase energy efficiency
› Wider voltage range, advanced cooling and painted electronic assemblies

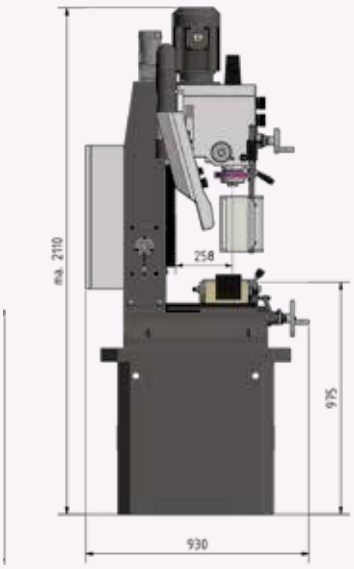
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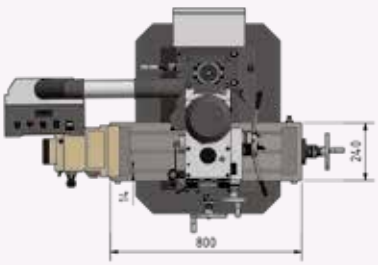
TECHNICAL DATA

Model	MB 4P	MB 4PV*
Article no.	3338460	3338466
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Motor power	1.1 / 1.5 kW	1.5 kW
Coolant pump motor	100 W	
Drilling/milling performance		
Drilling performance in steel (S235JR)	Ø 32 mm	Ø 24 mm
Continuous drilling performance in steel (S235JR)	Ø 28 mm	Ø 20 mm
Cutter head size max.	Ø 63 mm	Ø 63 mm
End mill size max.	Ø 28 mm	Ø 26 mm
Spindle		
Spindle sleeve stroke	120 mm	
Spindle sleeve diameter	75 mm	
Spindle seat	MT4	
Throat depth	258 mm	
Drawbar	M16	
Drilling/milling head		
Spindle speeds	95 – 3 200 min^{-1}	60 – 2 760 min^{-1}
Gearbox stages	2 x 6 stages	2 stages, electronically adjustable
Swivel range	± 45°	
Cross table		
Clearance spindle to cross table max.	420 mm	
Cross table x width	800 x 240 mm	
T-slot size / distance / number	14 mm / 80 mm / 3	
Automatic spindle sleeve feed	0.1 / 0.18 / 0.26 mm/rev	
Travel distances		
X axis	manual 560 mm / automatic ~480 mm	
Y axis manual	195 mm	
Z axis manual	350 mm	
Dimensions and weight		
Length x width x height approx.	1 600 x 930 x 2 110 mm	
Net weight approx.	495 kg	

DIMENSIONS







ACCESSORIES

Designation	Article no.
Collet chuck MT4/M16	3352094
Tapping chuck MT4/ M3 – M12	3050709
Tapping chuck MT4/ M8 – M20	3050710
End mill set HSS TiN-coated, 12-part	3352250
End mill set HSS TiN-coated, 20-part	3352255
Arbour for drill chuck MT4	3350304
Copy and planer cutter MT4	3350214
Boring head MT4	3352125
Parallel shim set, 20-part	3354001
Parallel shim set, 18-part	3536191
Horizontal-vertical rotary indexing table RT 150	3356150
Horizontal-vertical rotary indexing table RTE 165	3356365
Assortment of clamping tools SPW 12, 58-part	3352077
Cutting oil spray 400 ml	3872100
Vibration damping machine base SE 55 (4 units required)	3352981

More **accessories** and **information on accessories** see page 151
Coolant accessories on page 83

SCOPE OF DELIVERY

- Machine base
- Morse taper MT3/B16
- Adapter MT4/MT3
- Tightening rod M16
- Operating tool

*Note: The machines (frequency converters) comply with the DIN EN 55011 standard: Class C2.
Important information on 'Operating machines with frequency converters' on page 333

Universal drilling/milling machine with table feed on X- and Y-axis

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Vibration absorbing cast design
- Gears in oil bath with ground, hardened gear wheels
- Coolant system
- LED lamp
- Solid and generously dimensioned cross table with precision surface finish with T-slots and adjustable gib strips
- Adjustable guide rails
- Adjustable limit switch cut-off on the X axis
- Mechanical sleeve feed for drilling via sleeve lever
- Clockwise/anticlockwise rotation
- Coupling for switching from manual coarse feed to manual fine feed
- Operation-friendly control panel
- Height-adjustable protective screen with microswitch for best possible user protection against chips and parts being flung out



Fig.: MT50E

ARGUMENTS,...



MILLING HEAD
› Large throat depth of the Y-axis spindle head support from 250 to 650 mm
› Swivel range of the spindle head ± 45°



FEED
› Table feed on X- and Y-axis with speed adjustment



CROSS TABLE
› The cross slide (X-axis) can be rotated by ± 45°



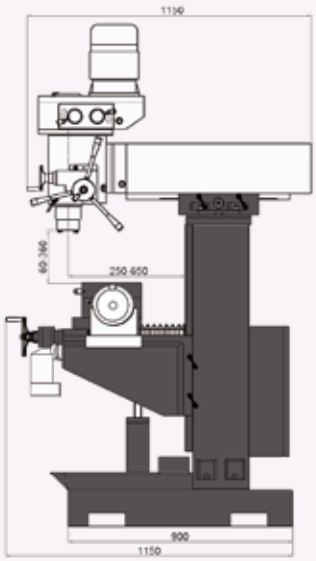
OPERATING PANEL
› Easy to operate
› Control of:
  › Direction of rotation
  › Coolant pump
  › Spindel Stop

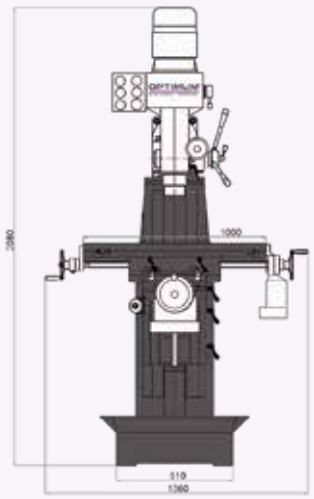
*OPTImill® is a registered brand of Optimum Maschinen Germany GmbH and exclusively used for milling machines

TECHNICAL DATA

Model	MT50E
Article no.	3336010
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Drive motor	0.85 / 1.5 kW
Coolant pump motor	40 W
Drilling/milling performance	
Drilling performance in steel (S235JR)	Ø 30 mm
Continuous drilling performance in steel (S235JR)	Ø 25 mm
Cutter head size max.	Ø 63 mm
End mill size max.	Ø 25 mm
Spindle	
Spindle sleeve stroke	120 mm
Spindle seat	ISO 40 DIN 2 080
Clearance spindle to cross table	60 – 360 mm
Throat depth	250 – 650 mm
Drawbar	M16
Drilling/milling head	
Spindle speeds	115 – 1 750 min^{-1}
Gear / motor stages	4-speed / 2-speed
Swivel range milling head	± 45°
Cross table	
Cross table x width	1 000 x 240 mm
Cross table load capacity max.	150 kg
T-slot size /number	14 mm / 4
Swivel range	± 45°
Travel distances	
X axis	manual 580 mm automatic ~500 mm
Y axis	manual 230 mm automatic ~150 mm
Z axis manual	320 mm
Dimensions and weight	
Length x width x height approx.	1 360 x 1 150 x 2 080 mm
Net weight approx.	760 kg

DIMENSIONS





ACCESSORIES

Designation	Article no.
Collet chuck set 18-part ISO 40	3352056
End mill set HSS TiN-coated 12-part	3352250
End mill set HSS TiN-coated 20-part	3352255
Drill chuck holder (arbour) ISO 40/ M16 / B16	3352070
Copying and facing blade head ISO 40 DIN 2 080	3350216
Precision bore head set ISO 40	3352128
Parallel shim set, 20-part	3354001
Parallel shim set, 18-part	3536191
Horizontal-vertical rotary indexing table RT 150	3356150
Horizontal-vertical rotary indexing table RT 200	3356200
Horizontal-vertical rotary indexing table RTE 165	3356365
Horizontal-vertical rotary indexing table RTU 165	3354165
Workpiece support WPS-4	3354264
Hold-down unit set of 2	3352031
Cutting oil spray 400 ml	3872100
Assortment of clamping tools SPW 12, 58-part	3352077
Precision machine shoe SEU1 (4 units required)	3352985

More **accessories** and **information on accessories** see page 151
Coolant accessories on page 83

SCOPE OF DELIVERY

- Gear rim drill chuck 3 – 13 mm / B18
- Arbor for drill chuck ISO 40 / B18
- T-slot nuts
- Push-out tool
- Adapter ISO 40/MT3
- Adapter MT3/MT2
- Operating tool

VICES

Designation	Article no.
FMS 125	3354125
FMSN 125	3354120
VMQ 100	3354181
MV3-75	3354175
MV3-125	3354178
DAS 100	3355500
ZAS 50	3354170

Information on this see page 148

Universal precision drilling/milling machine for horizontal and vertical milling work. With digital 3-axis position indicator DPA31 Plus

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, solid design made of high-quality, vibration-absorbing grey cast iron
- Gears in oil bath with ground, hardened gear wheels
- Coolant system
- Halogen machine lamp with tight beam
- Solid and generously dimensioned cross table with precision surface finish with T-slots and adjustable gib strips
- Milling head can be tilted sideways ± 45°
- Clockwise/anticlockwise rotation
- X axis can be moved optionally wit the hand wheel or the table feed unit
- Automatic end position cut-off on X axis
- Height-adjustable protective screen with microswitch for best possible user protection against chips and parts being flung out



Fig.: MT50

ARGUMENTS,...



HORIZONTAL MILLING POSITION
- With arrester and collet for disc milling cutter
- The spindle head carrier must be rotated by ± 180° for horizontal milling



OPTI OPERATING PANEL
- Integrated switch panel
- Integrated Digital position display DPA 31Plus
  - User-friendly membrane keyboard, splash water protected, sealed and dazzle free
  - Greater operation accuracy
  - Reduction of error quota
  - Clearly-arranged keyboard layout
- Pivots to left and right side of machine



CROSS TABLE HOUSING
- Fold-up type
- Removable



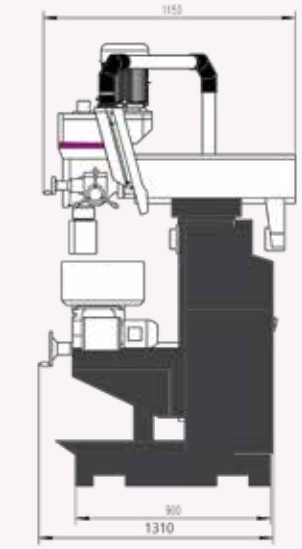
CROSS TABLE
- can be rotated ± 45° on both sides

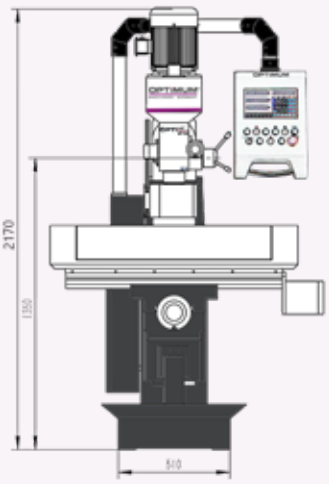
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TECHNICAL DATA

Model	MT50
Article no.	3336005
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	4.5 kW
Vertical drive motor	1.1 / 2.2 kW
Horizontal drive motor	1.5 kW
Coolant pump motor	40 W
Drilling/milling performance	
Drilling performance in steel (S235JR)	Ø 30 mm
Continuous drilling performance in steel (S235JR)	Ø 25 mm
Cutter head size max.	Ø 100 mm
End mill size max.	Ø 25 mm
Spindle	
Spindle sleeve stroke	120 mm
Spindle seat	ISO 40 DIN 2080
Clearance spindle to cross table	60 – 390 mm
Vertical	
Spindle speeds	115 – 1 750 min^{-1}
Gearbox stages	8 stages
Swivel range milling head	± 45°
Throat depth	240 – 650 mm
Horizontal	
Spindle speeds	60 – 1 350 min^{-1}
Gearbox stages	9 stages
Throat depth	0 – 185 mm
Cross table	
Cross table x width	1 000 x 240 mm
Cross table load capacity max.	160 kg
T-slot size /number	14 mm / 5
Rotatable cross table	± 45°
Travel distances	
X axis	manual 580 mm / automatic ~500 mm
Table feed X axis (8 speeds)	24 – 720 mm/min.
Y axis manual	200 mm
Z axis manual	340 mm
Dimensions and weight	
Length x width x height approx.	1 290 x 1 090 x 2 170 mm
Net weight approx.	820 kg

DIMENSIONS





SCOPE OF DELIVERY

- Gear rim drill chuck 3 – 13 mm / B18
- Arbor for drill chuck ISO 40 / B18
- Horizontal milling spindle with counter bearing, disc cutter holder Ø 22 mm, Ø 27 mm
- Adapter ISO 40/MT3
- Adapter ISO 40/MT2
- Tie rod vertical and horizontal
- T-slot nuts
- Push-out tool
- Operating tool

ACCESSORIES

Designation	Article no.
Collet chuck set 18-part ISO 40	3352056
End mill set HSS TiN-coated 12-part	3352250
End mill set HSS TiN-coated 20-part	3352255
Copying and facing blade head ISO 40 DIN 2 080	3350216
Precision bore head set ISO 40	3352128
Horizontal-vertical rotary indexing table RT 150	3356150
Horizontal-vertical rotary indexing table RTE 165	3356365
Horizontal-vertical rotary indexing table RTU 165	3354165
Assortment of clamping tools SPW 12, 58-part	3352077
Cutting oil spray 400 ml	3872100
Precision machine shoe SEU1(4 units required)	3352985

More **accessories** and **information on accessories** see page 151
Coolant accessories on page 83

VICES

Designation	Article no.
FMS 125	3354125
FMSN 125	3354120
VMQ 100	3354181
MV3-75	3354175
MV3-125	3354178
DAS 100	3355500
ZAS 50	3354170

Information on this see page 148

Universal milling machine for horizontal and vertical milling work.
With digital 3-axis position indicator DPA31 Plus

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, solid design made of high-quality, vibration-absorbing grey cast iron
- Solid and generously dimensioned cross table with precision surface finish with T-slots and adjustable gib strips
- Switch on automatic sleeve feed (drilling) via the sleeve feed lever or manual feed of the sleeve with the fine feed handwheel
- Clockwise/anticlockwise rotation
- Coolant system
- X axis can be moved optionally wit the hand wheel or the table feed unit
- Height-adjustable protective screen with microswitch for best possible user protection against chips and parts being flung out



Fig.: MT60

ARGUMENTS,...



HORIZONTAL MILLING POSITION
› With arrester and collet for disc milling cutter
› The spindle head carrier must be rotated by ± 180° for horizontal milling



MILLING HEAD
› Spindle head carrier moves to front and rear
› Y-axis spindle head carrier throat depth 200 – 550 mm
› Swivel range of the spindle head ± 45°



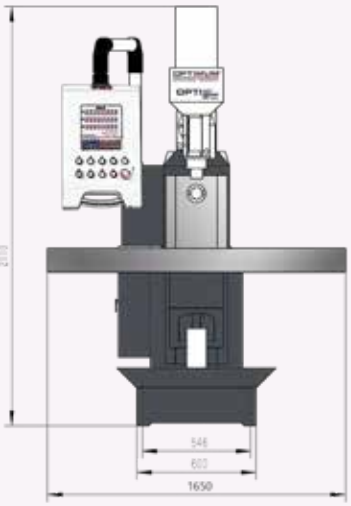
OPTI CONTROL PANEL
› Integrated switch panel
› Pivots to left and right side of machine
› Integrated DPA 31Plus digital position display
  › User-friendly membrane keyboard, splash water protected, sealed and dazzle free
  › Greater operation accuracy
  › Reduction of error quota
  › Clearly-arranged keyboard layout

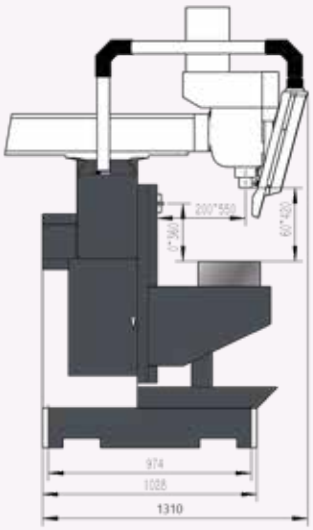
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TECHNICAL DATA

Model	MT60
Article no.	3336090
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	5 kW
Horizontal and vertical drive motor	2.2 kW
Coolant pump motor	40 W
Drilling/milling performance	
Drilling performance in steel (S235JR)	Ø 30 mm
Continuous drilling performance in steel (S235JR)	Ø 25 mm
Cutter head size max.	Ø 100 mm
End mill size max.	Ø 25 mm
Spindle	
Spindle sleeve stroke	120 mm
Spindle sleeve diameter	Ø 90 mm
Spindle seat	ISO 40 DIN 2 080
Clearance spindle to cross table	60 – 420 mm
Drawbar	M16
Vertical	
Spindle speeds	90 – 2 000 min^{-1}
Gearbox stages	8 stages
Swivel range milling head	± 45°
Throat depth	220 – 550 mm
Automatic spindle sleeve feed	3 stages: 0.08 / 0.25 / 1 mm/rev
Horizontal	
Spindle speeds	40 – 1 300 min^{-1}
Gearbox stages	9 stages
Throat depth	35 – 370 mm
Cross table	
Cross table x width	1 270 x 280 mm
Cross table load capacity max.	150 kg
T-slot size / spacing / count	14 mm / 50 mm / 4
Travel distances	
X axis	manual 750 mm / automatic ~680 mm
Y axis manual	230 mm
Z axis manual	360 mm
Dimensions and weight	
Length x width x height approx.	1 650 x 1 310 x 2 160 mm
Net weight approx.	1 300 kg

DIMENSIONS





SCOPE OF DELIVERY

- Gear rim drill chuck 3 – 13 mm / B18
- Arbor for drill chuck ISO 40 / B18
- Adapter ISO 40/MT3
- Adapter MT3/MT2
- Horizontal milling spindle with counter bearing, disc cutter holder Ø 22 mm, Ø 27 mm
- Drawbar horizontal and vertical
- Operating tool

ACCESSORIES

Designation	Article no.
Collet chuck set 18-part ISO 40	3352056
Drill chuck holder (arbour) ISO 40/ M16 / B16	3352070
End mill set HSS TiN-coated 20-part	3352255
Copying and facing blade head ISO 40 DIN 2 080	3350216
Precision bore head set ISO 40	3352128
Horizontal-vertical rotary indexing table RT 200	3356200
Horizontal-vertical rotary indexing table RTE 165	3356365
Horizontal-vertical rotary indexing table RTU 165	3354165
Assortment of clamping tools SPW 12, 58-part	3352077
Milling table feed V250 for the Y-axis	3352030
Factory assembly V250	9000489
Cutting oil spray 400 ml	3872100
Precision machine shoe SEU1 (4 units required)	3352985

More **accessories** and **information on accessories** see page 151

VICES

Designation	Article no.
FMS 125	3354125
FMSN 125	3354120
VMQ 100	3354181
MV3-75	3354175
MV3-125	3354178
DAS 100	3355500
ZAS 50	3354170

Information on this see page 148

MULTIFUNCTIONAL MILLING MACHINES

MF 4-B | Art. no.: 3348340

Drilling and milling machine
with mechanical infinitely variable drive



Visit our exhibition in Hallstadt/Bamberg

MX 3 | Art. no.: 3343030

Tool milling machine
TOP equipment
and quality



Multifunctional drilling / milling machines with mechanically infinitely variable drive and with digital 3-axis position indicator DPA 31Plus

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Solid design using premium cast meehanite
- Excellent concentricity thanks to tapered roller bearings, ,≤ 0.01 mm measured in the spindle sleeve
- X and Y axis with adjustable 55 ° dovetail guide
- Y-axis with adjustable flat guide
- Coolant system
- Solid and generously dimensioned Cross table with precision surface finish and adjustable stops
- Drill/milling head tiltable ± 45°
- Automatic spindle sleeve feed, 3 stages, 0.04 – 0.15 mm/rev
- Precision micro feed
- Adjustable drilling depth stop with millimetre scale, can be read off on front
- Clockwise/anticlockwise rotation
- Continuously variable speed control
- Milling spindle with precision bearing
- Mechanical spindle brake
- Height-adjustable protective screen with microswitch for best possible user protection against chips and parts being flung out



Fig.: MF 4-B

ARGUMENTS,...



MILLING HEAD
› The spindle head can be swivelled forwards or backwards by 45° and tilted to the right or left by 90°.



OPERATING PANEL
› Integrated switch panel
› New – now with integrated digital position indicator DPA 31Plus
  › User-friendly membrane keyboard, splash water protected, sealed and dazzle free
  › Greater operation accuracy
  › Reduction of error quota
  › Clearly-arranged keyboard layout
› Swivelling



CENTRAL LUBRICATION
› Reduces maintenance overhead
› Reduces wear
› Improves effectiveness and machine service life



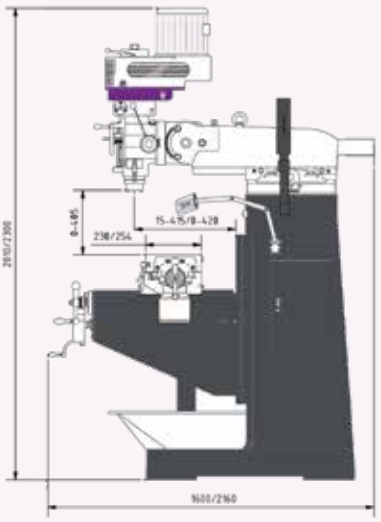
FEED
› Motorised feed on X, Y and Z axes

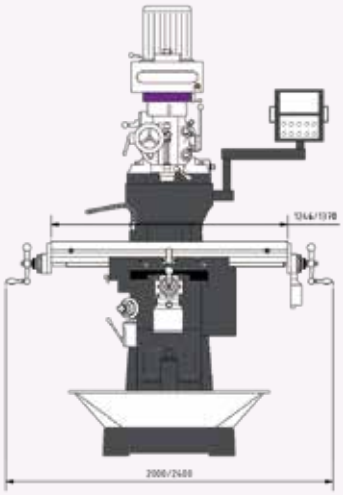
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TECHNICAL DATA

Model	MF 2-B		MF 4-B	
Article no.	3348330		3348340	
Power				
Electrical connection	400 V / 3 Ph ~50 Hz			
Total rated value	3 kW			
Drive motor	2.2 kW			
Coolant pump motor	90 W			
Drilling/milling performance				
Drilling performance in steel (S235JR)	Ø 24 mm			
Continuous drilling performance in steel (S235JR)	Ø 20 mm			
Cutter head size max.	Ø 76 mm			
End mill size max.	Ø 25 mm			
Spindle				
Spindle sleeve stroke	127 mm			
Spindle sleeve diameter	86 mm			
Spindle seat	ISO 40 DIN 2 080			
Clearance spindle to cross table	405 mm			
Throat depth	15 – 415 mm		0 – 420 mm	
Drilling/milling head				
Spindle speeds	60 – 4 200 min^{-1}			
Gearbox stages	2 stages, mechanically infinitely variable			
Milling cutter head travel distance	312 mm		470 mm	
Horizontal swivel range	± 90°			
Vertical swivelling range	± 45°			
Automatic spindle sleeve feed	3 stages: 0.038 / 0.076 / 0.152 mm/rev			
Cross table				
Cross table x width	1 246 x 230 mm		1 370 x 254 mm	
Cross table load capacity max.	200 kg		300 kg	
T-slot size / spacing / count	16 mm / 63 mm / 3			
Travel distances	manual	autom.	manual	autom.
X axis (Cross table)	790 mm	~690 mm	920 mm	~820 mm
Y axis (Cross table)	280 mm	~280 mm	380 mm	~380 mm
Z-axis (Cross table mount)	390 mm	~370 mm	400 mm	~380 mm
Dimensions and weight				
Length x width x height approx.	2 000 x 1 600 x 2 010 mm		2 400 x 2 160 x 2 300 mm	
Net weight approx.	1 000 kg		1 260 kg	

DIMENSIONS





ACCESSORIES

Designation	Article no.
Collet chuck set 18-part ISO 40	3352056
End mill set HSS TiN-coated 12-part	3352250
End mill set HSS TiN-coated 20-part	3352255
Precision Quick-action drill chuck 1 – 10 mm; B16	3050610
Copying and facing blade head ISO 40 DIN 2 080	3350216
Precision bore head set ISO 40	3352128
Parallel shim set, 18-part	3536191
Horizontal-vertical rotary indexing table RT 150	3356150
Horizontal-vertical rotary indexing table RT 200	3356200
Horizontal-vertical rotary indexing table RTE 165	3356365
Horizontal-vertical rotary indexing table RTU 165	3354165
Cutting oil spray 400 ml	3872100
Assortment of clamping tools SPW 14, 58-part	3352078
Precision machine shoe SEU1(4 units required)	3352985
Compressed air tool clamping system ISO 40 (see page 168)	3352394
Factory assembly compressed air tool clamping system ISO 40 (Order without assembly: Adjustment work may be required).	9000490

More **accessories** and **information on accessories** see page 151

SCOPE OF DELIVERY

- Chip tray
- Operating tool

VICES

Designation	Article no.
ZAS 50	3354170
HMS 125	3355127
FMS 125 (MF 2-B)	3354125
FMS 150 (MF 4-B)	3354150
FMSN 125 (MF 2-B)	3354120
FMSN 150 (MF 4-B)	3354130
VMQ 125 (MF 2-B)	3354182
VMQ 150 (MF 4-B)	3354183
MV3-75	3354175
MV3-125	3354178
DAS 100	3355500

Information on this see page 148

DPA VARIO INDUSTRIE

Multifunctional drilling/milling machines for professional deployment.

Electronically infinitely variable drive with frequency converter ‘Made in Germany’ and digital 3-axis position display

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

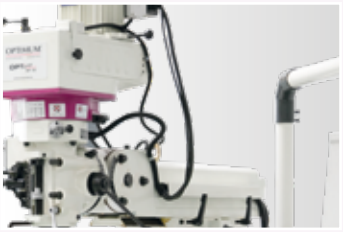
- Heavy, solid design using premium cast meehanite
- Excellent concentricity thanks to tapered roller bearings, ,≤ 0.01 mm measured in the spindle sleeve
- X and Z axis with adjustable dovetail guide
- Coolant system
- Digital position display
- Solid and generously dimensioned Cross table with precision surface finish and adjustable stops
- Spindle head: Tilt up/down ± 45° and swivel left/right ± 90°
- Automatic spindle sleeve feed
- Adjustable drilling depth stop with millimetre scale, can be read off on front
- Clockwise/anti-clockwise rotation for thread cutting
- Central lubrication
- Height-adjustable protective screen with microswitch for best possible user protection against chips and parts being flung out
- Y axis with flat guide
- Motorised table height adjustment (Z axis)

QUALITY PRE-CHECK



Fig.: with optional vice and Y-axis feed

ARGUMENTS,...



MILLING HEAD

› The spindle head can be swivelled forwards or backwards by 45° and tilted to the right or left by 90°.



OPTI OPERATING PANEL

› Integrated switch panel
› Swivelling
› Integrated digital position display



FREQUENCY CONVERTER MADE IN GERMANY



X AXIS

› Motorised table feed
› Continuously variable speed control
› Rapid traverse
› Clockwise/anticlockwise rotation

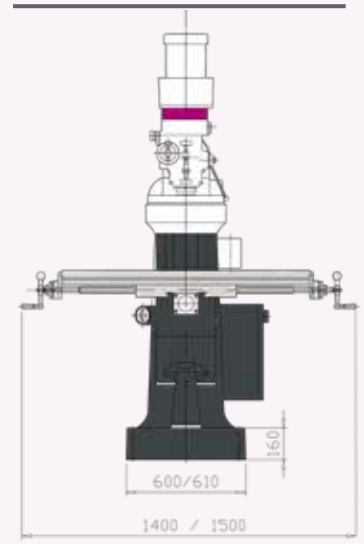
PRODUCT VIDEO YouTube

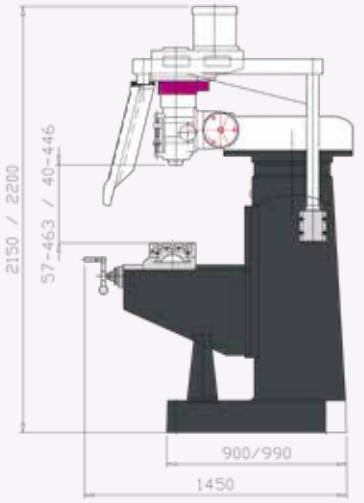
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TECHNICAL DATA

Model	MF 4V
Article no.	3336050
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	4.5 kW
Drive motor	3 kW
Coolant pump motor	100 watts
Drilling/milling performance	
Drilling performance in steel (S235JR)	Ø 32 mm
Continuous drilling performance in steel (S235JR)	Ø 28 mm
Cutter head size max.	Ø 100 mm
End mill size max.	Ø 20 mm
Spindle	
Spindle sleeve stroke	127 mm
Spindle seat	ISO 40 DIN 2 080
Clearance spindle to cross table	40 – 446 mm
Throat depth	200 – 680 mm
Drilling/milling head	
Spindle speeds	9 – 6 750 min^{-1}
Gearbox stages	8 stages, electronically adjustable
Pivot/swivel range	± 45° / ± 90°
Automatic spindle sleeve feed	3 stages: 0.038 / 0.076 / 0.152 mm/rev
Cross table	
Cross table mounting surface L x W	1 370 x 254 mm
Cross table load capacity max.	275 kg
T-slot size / spacing / count	16 mm / 63 mm / 3
Travel distances	
X axis (Cross table)	manual 900 mm/ automatic ~800 mm
Y axis (Cross table)	manual 320 mm
Y axis (milling head)	manual 480 mm
Z axis (Cross table)	manual 400 mm/ automatic ~365 mm
Dimensions and weight	
Length x width x height approx.	1 500 x 1 450 x 2 200 mm
Net weight approx.	1 150 kg

DIMENSIONS





ACCESSORIES

Designation	Article no.
Collet chuck set 18-part ISO 40	3352056
End mill set HSS TiN-coated 20-part	3352255
Drill chuck holder (arbour) ISO 40/ M16 / B16	3352070
Copying and facing blade head ISO 40 DIN 2 080	3350216
Precision bore head set ISO 40	3352128
Horizontal-vertical rotary indexing table RT 150	3356150
Horizontal-vertical rotary indexing table RT 200	3356200
Horizontal-vertical rotary indexing table RTE 165	3356365
Assortment of clamping tools SPW 14, 58-part	3352078
Precision machine shoe SEU1(4 units required)	3352985
Cutting oil spray 400 ml	3872100
Universal table feed V250S (see page 167)	3352025
Factory assembly universal table feed V250S	9000489
Compressed air tool clamping system ISO 40 (see page 168)	3352394
Factory assembly compressed air tool clamping system ISO 40 (Order without assembly: Adjustment work may be required).	9000490

More **accessories** and **information on accessories** see page 151

SCOPE OF DELIVERY

- Chip tray
- Operating tool

VICES

Designation	Article no.
ZAS 50	3354170
HMS 125	3355127
FMS 150	3354150
FMSN 150	3354130
VMQ 150	3354183
MV3-75	3354175
MV3-125	3354178
DAS 100	3355500
HCV 105	3536210
HCV 125	3536214

Information on this see page 148

Note: The machines (frequency converters) comply with the DIN EN 55011 standard: Class C2.
Important information on "General information on operating our machines" on page 333

Versatility.
The **universal milling machine** for workshops

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Versatile range of applications
- Robust machine construction
- Heavy, solid design using premium cast meehanite
- High running smoothness due to ground gear wheels running in an oil bath
- Sturdy adjustable flat bed guide on the Y and Z axis
- Central lubrication
- Generously dimensioned, decoupled hand wheels with scales
- LED machine lamp
- Coolant system
- Digital position indicator DPA31 Plus
- Easy operation of the switching elements
- Feed motor with fixed speeds
- Z axis with electrical table height adjustment
- Solid and generously dimensioned cross table with precision surface finish with re-adjustable gib strips and adjustable stops
- Vertical and horizontal milling position
- Height-adjustable protective screen with microswitch for best possible user protection against chips and parts being flung out



Fig.: MT100

ARGUMENTS,...



HORIZONTAL MILLING POSITION
› With arrester and collet for disc milling cutter



OPTI OPERATING PANEL
› Integrated switch panel
› New – now with integrated digital position indicatorDPA31 Plus
› Pivots to left and right side of machine



MILLING HEAD
› The milling head has two axes of rotation, allowing it to be swivelled and rotated at any spatial angle
› A specific angle can be set by rotating the rear and front part of the milling head



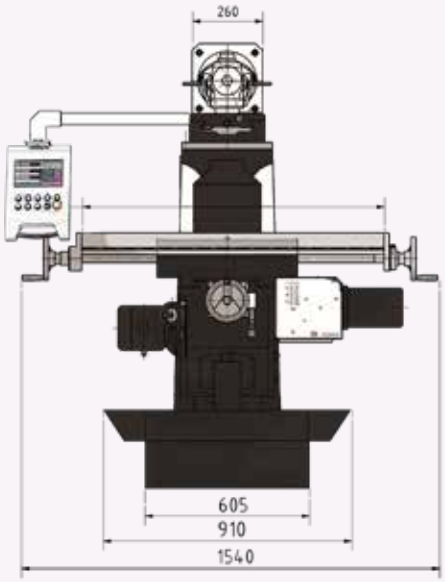
TABLE FEED
› X and Y axis
› Automatic

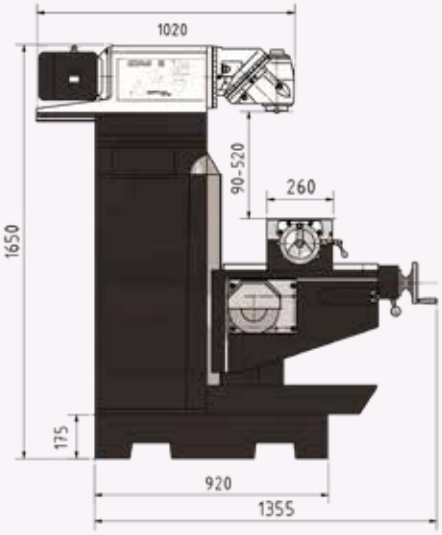
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TECHNICAL DATA

Model	MT100
Article no.	3336110
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	3.36 kW
Drive motor	2.2 kW
Output power of feed motor X/Y axis	370 watts
Feed motor output Z-axis	750 watts
Coolant pump motor	40 watts
Drilling/milling performance	
Cutter head size max.	Ø 85 mm
End mill size max.	Ø 20 mm
Spindle	
Spindle seat	ISO 40 DIN 2 080
Drawbar	M16
Clearance spindle to cross table	90 – 520 mm
Throat depth	60 – 500 mm
Vertical	
Spindle speeds	45 – 1 600 min^{-1}
Gearbox stages	11 stages
Milling head forward tilt	90°
Rotation of milling head	360°
Cross table	
Cross table x width	1 120 x 260 mm
Cross table load capacity max.	350 kg
T-slot size / spacing / count	14 mm / 63 mm / 3
X axis (Cross table)	
Travel distance	manual 600 mm / automatic ~480 mm
Table feed automatic	24 – 402 mm/min.
Y axis (Cross table)	
Travel distance	manual 270 mm / automatic ~215 mm
Table feed automatic	24 – 402 mm/min.
Z axis (Cross table)	
Travel distance	manual 380 mm / automatic ~340 mm
Table feed automatic	24 – 402 mm/min.
Dimensions and weight	
Length x width x height approx.	1 540 x 1 355 x 1 650 mm
Net weight approx.	1 300 kg

DIMENSIONS





ACCESSORIES

Designation	Article no.
Collet chuck set 18-part ISO 40	3352056
End mill set HSS TiN-coated 12-part	3352250
End mill set HSS TiN-coated 20-part	3352255
Precision Quick-action drill chuck 1 – 10 mm; B16	3050610
Drill chuck holder (arbour) ISO 40 / M16 / B16	3352070
Copying and facing blade head ISO 40 DIN 2 080	3350216
Precision bore head set ISO 40	3352128
Parallel shim set, 18-part	3536191
Horizontal-vertical rotary indexing table RT 200	3356200
Horizontal-vertical rotary indexing table RTE 165	3356365
Horizontal-vertical rotary indexing table RTU 165	3354165
Assortment of clamping tools SPW 12, 58-part	3352077
Universal dividing head TA 125	3356125
Precision machine shoe SEU1 (4 units required)	3352985
Cutting oil spray 400 ml	3872100

More **accessories** and **information on accessories** see page 151
Coolant accessories on page 83

SCOPE OF DELIVERY

› Horizontal milling spindle Ø 32 mm
› Milling arbour Ø 32 mm
› Operating tool

VICES

Designation	Article no.
HMS 125	3355127
FMS 150	3354150
FMSN 150	3354130
VMQ 125	3354182
MV3-75	3354175
MV3-125	3354178
DAS 100	3355500
HCV 105	3536210
HCV 125	3536214

Information on this see page 148

Versatility.
The **universal milling machine** for workshops with digital 3-axis position display

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Versatile range of applications
- Robust machine construction
- Heavy, solid design using premium cast meehanite
- High running smoothness due to ground gear wheels running in an oil bath
- All guides hardened and adjustable using gib strips
- Sturdy flat bed guide on the Y and Z axis
- Central lubrication
- Generously dimensioned, decoupled hand wheels with scales
- LED machine lamp
- Coolant system
- Easy operation of the switching elements
- Table feed: X axis, Y axis and Z axis
- Z axis with electrical table height adjustment
- Solid and generously dimensioned cross table with precision surface finish with re-adjustable gib strips and adjustable stops
- Vertical and horizontal milling position
- Milling head with two axes of rotation, thus pivots and rotates to any spatial angle
- Counterholder for horizontal milling machines conveniently located on the rear of the machine.
- Height-adjustable protective screen with microswitch for best possible user protection against chips and parts being flung out
- Feed motor with fixed speeds



Fig.: MT200

ARGUMENTS,...



HORIZONTAL MILLING POSITION
› With arrester and collet for disc milling cutter
› Adjustable plain bearing
› Horizontal milling counterholder, attached to rear of machine for easy access



OPTI OPERATING PANEL
› Integrated switch panel
› New – now with integrated digital position indicatorDPA31 Plus
› Pivots to left and right side of machine



MILLING HEAD
› The milling head has two axes of rotation, allowing it to be swivelled and rotated at any spatial angle
› A specific angle can be set by rotating the rear and front part of the milling head

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TECHNICAL DATA

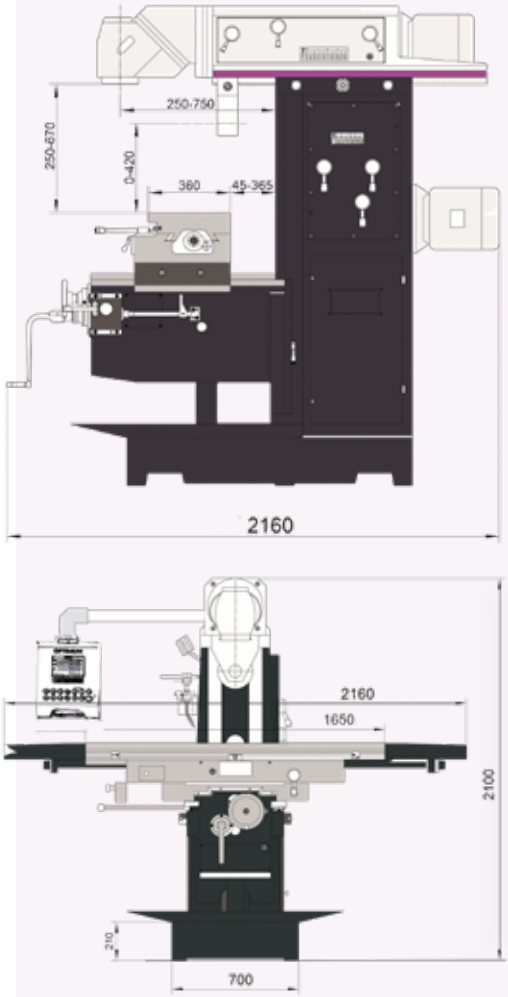
Model	MT200
Article no.	3336120
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	9.2 kW
Drive motor horizontal/vertical	4 kW
Feed motor output	1.1 kW
Coolant pump motor	90 watts
Milling capacity	
Cutter head size max.	Ø 100 mm
End mill size max.	Ø 20 mm
Spindle	
Horizontal/ vertical spindle seat	ISO 50 DIN 2 080
Drawbar	M24
Vertical	
Clearance spindle to cross table	250 – 670 mm
Throat depth	250 – 750 mm
Spindle speeds	60 – 1 750 min^{-1}
Gearbox stages	12 stages
Forward tilt of milling head	90°
Rotation of milling head	360°
Horizontal	
Clearance spindle to cross table	0 – 400 mm
Spindle speeds	58 – 1 800 min^{-1}
Gearbox stages	12 stages
Cross table	
Cross table x width	1 650 x 360 mm
Cross table load capacity max.	450 kg
T-slot size / spacing / count	14 mm / 95 mm / 3
Rotatable cross table	35°
X axis (Cross table)	
Travel distance	manual 1 290 mm / automatic ~1 210 mm
Table feed automatic	22 – 380 mm/min.
Table feed, stages	8 stages
Table feed rapid motion	1 290 mm/min.
Y axis (Cross table)	
Cross table travel distance	manual 280 mm / automatic ~200 mm
Table feed automatic	20 – 380 mm/min.
Table feed, stages	8 stages
Table feed rapid motion	1 290 mm/min.
Z axis (Cross table)	
Travel distance	manual 400 mm / automatic ~320 mm
Table feed automatic	7 – 127 mm/min.
Table feed, stages	8 stages
Table feed rapid motion	342 mm/min.
Dimensions and weight	
Length x width x height approx.	2 160 x 2 160 x 2 100 mm
Net weight approx.	2 700 kg

ACCESSORIES

Designation	Article no.
Morse taper ISO50 / B18 DIN2080	3352067
Parallel shim set, 18-part	3536191
Assortment of clamping tools SPW 12, 58-part	3352077
2-piece set of hold-down clamps, 14 mm/M12	3352031
Precision machine shoe SEU1 (4 units required)	3352985
Cutting oil spray 400 ml	3872100

More **accessories** and **information on accessories** see page 151

DIMENSIONS



SCOPE OF DELIVERY

- Horizontal milling spindle Ø 32 mm
- Horizontal milling spindle Ø 27 mm
- Adapter ISO 50
- Milling cutter chuck ISO 50 Ø 4 – Ø 26 mm
- Operating tool

VICES

Designation	Article no.
HMS 125	3355127
FMS 150	3354150
FMSN 150	3354130
VMQ 125	3354182
MV3-75	3354175
MV3-125	3354178
DAS 100	3355500
HCV 105	3536210
HCV 125	3536214

Information on this see page 148

Versatility.
The **universal milling machine** with servo-motorised feed

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Versatile range of applications
- Robust machine construction
- Heavy, solid design using premium cast meehanite
- High running smoothness due to ground gear wheels running in an oil bath
- All guides hardened and adjustable using gib strips
- Sturdy flat bed guide on the Y and Z axis
- Central lubrication
- Generously dimensioned, decoupled hand wheels with scales
- LED machine lamp
- Coolant system
- Easy operation of the switching elements
- Table feed in the X, Y and Z axes
- Feed system controllable by servomotor in fixed steps
- Solid and generously dimensioned cross table with precision surface finish with re-adjustable gib strips and adjustable stops
- Vertical and horizontal milling position
- Height-adjustable protective screen with microswitch for best possible user protection against chips and parts being flung out



Fig.: MT130S

ARGUMENTS,...



HORIZONTAL MILLING POSITION
› With arrester and collet for disc milling cutter



OPTI OPERATING PANEL
› Integrated switch panel
› Swivelling
› Integrated digital position display DPA31 Plus



MILLING HEAD
› The milling head has two axes of rotation, allowing it to be swivelled and rotated at any spatial angle
› A specific angle can be set by rotating the rear and front part of the milling head

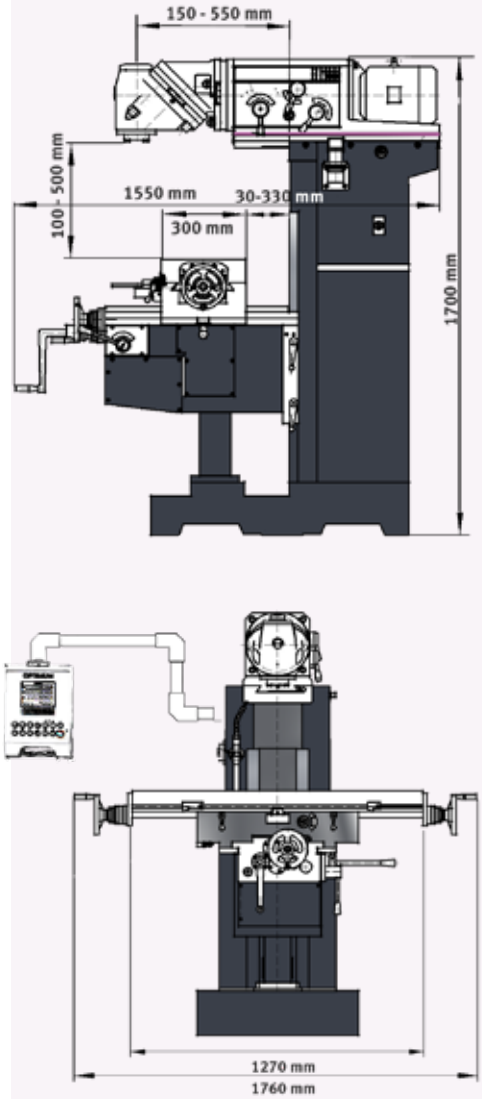
PRODUCT VIDEO YouTube

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TECHNICAL DATA

Model	MT130S
Article no.	3344110
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	6 kW
Drive motor	3 kW
Feed motor output	3 kW
Coolant pump motor	60 watts
Milling capacity	
Cutter head size max.	Ø 100 mm
End mill size max.	Ø 20 mm
Spindle	
Spindle seat	ISO 40 DIN 2 080
Drawbar	M16
Clearance spindle to cross table	100 – 500 mm
Throat depth	150 – 550 mm
Vertical	
Spindle speeds	45 – 1 660 min^{-1}
Gearbox stages	11 stages
Forward tilt of milling head	90°
Rotation of milling head	360°
Cross table	
Cross table x width	1 270 x 300 mm
Cross table load capacity max.	250 kg
T-slot size / spacing / count	14 mm / 80 mm / 3
X axis (Cross table)	
Travel distance	manual 720 mm / automatic ~650 mm
Table feed automatic	30 – 830 mm/min.
Rapid traverse	1 335 mm/min.
Y axis (Cross table)	
Travel distance	manual 300 mm / automatic ~220 mm
Table feed automatic	30 – 830 mm/min.
Rapid traverse	1 335 mm/min.
Z axis (Cross table)	
Travel distance	manual 400 mm / automatic ~320 mm
Table feed automatic	23 – 625 mm/min.
Rapid traverse	1 000 mm/min.
Dimensions and weight	
Length x width x height approx.	1 760 x 1 550 x 1 700 mm
Net weight approx.	1 450 kg

DIMENSIONS



SCOPE OF DELIVERY

- Tapered shank with counter bearing for horizontal milling cutters Ø27 mm
- Milling arbour Ø 27 mm
- Operating tool

ACCESSORIES

Designation	Article no.
Collet chuck set 18-part ISO 40	3352056
End mill set HSS TiN-coated 12-part	3352250
End mill set HSS TiN-coated 20-part	3352255
Drill chuck holder (arbour) ISO 40/ M16 / B16	3352070
Precision Quick-action drill chuck 1 – 10 mm; B16	3050610
Horizontal-vertical rotary indexing table RT 150	3356150
Horizontal-vertical rotary indexing table RT 200	3356200
Horizontal-vertical rotary indexing table RTE 165	3356365
Horizontal-vertical rotary indexing table RTU 165	3354165
Assortment of clamping tools SPW 12, 58-part	3352077
Precision machine shoe SEU1(4 units required)	3352985
Cutting oil spray 400 ml	3872100

More **accessories** and **information on accessories** see page 151
Coolant accessories on page 83

VICES

Designation	Article no.
HMS 125	3355127
FMS 150	3354150
FMSN 150	3354130
VMQ 125	3354182
MV3-75	3354175
MV3-125	3354178
DAS 100	3355500
HCV 105	3536210
HCV 125	3536214

Information can be found on page 155 onwards

Versatility.
The **universal milling machine** with digital 3-axis position display DPA31 Plus

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Versatile range of applications
- Robust machine construction
- Heavy, solid design using premium cast meehanite
- High running smoothness due to ground gear wheels running in an oil bath
- All guides hardened and adjustable using gib strips
- Sturdy flat bed guide on the Y and Z axis
- Central lubrication
- Generously dimensioned, decoupled hand wheels with scales
- LED machine lamp
- Decoupled hand wheels
- Coolant system
- Easy operation of the switching elements
- Table feed: X axis, Y axis and Z axis
- Feed system controllable by servomotor in fixed steps
- Solid and generously dimensioned cross table with precision surface finish with re-adjustable gib strips and adjustable stops
- Height-adjustable protective screen with microswitch for best possible user protection against chips and parts being flung out



Fig.: MT230S

ARGUMENTS,...



HORIZONTAL MILLING SPINDLE
› With arrester and collet for disc milling cutter
› Adjustable plain bearing
› Horizontal milling counterholder, attached to rear of machine for easy access



OPTI OPERATING PANEL
› Integrated switch panel
› Swivelling
› Integrated digital position display DPA31 Plus



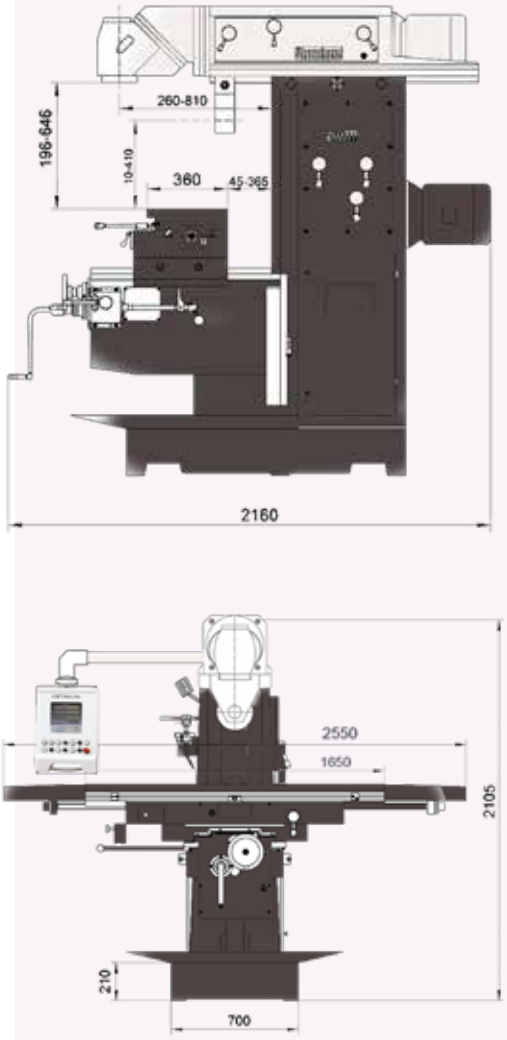
MILLING HEAD
› The milling head has two axes of rotation, allowing it to be swivelled and rotated at any spatial angle
› A specific angle can be set by rotating the rear and front part of the milling head

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TECHNICAL DATA

Model	MT230S
Article no.	3344125
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	12 kW
Vertical drive motor	4 kW
Horizontal drive motor	5.5 kW
Coolant pump motor	90 watts
Milling capacity	
Cutter head size max.	Ø 160 mm
End mill size max.	Ø 25 mm
Spindle	
Spindle seat	ISO 50 DIN 2 080
Drawbar	M 24
Vertical	
Clearance spindle to cross table	185 – 585 mm
Throat depth	260 – 940 mm
Spindle speeds	60 – 1 750 min^{-1}
Gearbox stages	12 stages
Forward tilt of milling head	90°
Rotation of milling head	360°
Horizontal	
Clearance spindle to cross table	15 – 415 mm
Spindle speeds	60 – 1 800 min^{-1}
Gearbox stages	12 stages
Cross table	
Table length x width	1 600 x 360 mm
Cross table load capacity max.	350 kg
T-slot size / number/ spacing	18 mm / 3 / 80 mm
Rotatable cross table	45°
X axis (Cross table)	
Travel distance	manual 1 300 mm / automatic ~1 220 mm
Table feed automatic	30 – 750 mm/min.
Table feed rapid motion	1 200 mm/min.
Y axis (Cross table)	
Travel distance	manual 300 mm / automatic ~220 mm
Table feed automatic	20 – 500 mm/min.
Table feed rapid motion	800 mm/min.
Z axis (Cross table)	
Travel distance	manual 400 mm / automatic ~320 mm
Table feed automatic	15 – 375 mm/min.
Table feed rapid motion	600 mm/min.
Dimensions and weight	
Length x width x height approx.	2 550 x 2 160 x 2 005 mm
Net weight approx.	2 800 kg

DIMENSIONS



SCOPE OF DELIVERY

- Horizontal milling spindle with counter bearing, disc cutter holder Ø 32 mm, Ø 27 mm
- Adapter ISO 50 (7:24) / MT4
- Drawbar horizontal and vertical M24
- Operating tool

ACCESSORIES

Designation	Article no.
Collet chuck set ISO 50/ER32	3352065
Morse taper ISO50 B18 DIN2080	3352067
Precision bore head set ISO 50	3352129
Parallel shim set, 18-part	3536191
Assortment of clamping tools SPW 16, 58-part	3352077
Precision machine shoe SEU1(4 units required)	3352985
2-piece set of hold-down clamps, 18 mm/M16	3352032
Cutting oil spray 400 ml	3872100

More **accessories** and **information on accessories** see page 151
Coolant accessories on page 83

VICES

Designation	Article no.
FMS 200	3354200
HMS 125	3355127
MV3-75	3354175
MV3-125	3354178
ZAS 50	3354170
DAS 100	3355500
HCV 105	3536210
HCV 125	3536214

Information on this see page 148

Note: The machines (frequency converters) comply with the DIN EN 55011 standard: Class C2.
Important information on "General information on operating our machines" on page 333

Tool milling machines with digital 3-axis position display

Very quiet

QUALITY PRE-CHECK

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Versatile range of applications
- Robust machine design
- All guides hardened
- Automatic centralised lubrication
- Electronic handwheels with large diameter and scale
- Simple operation of the switching elements for changing the speed
- Extremely quiet operation due to gearbox running in an oil bath
- Automatic table feed in the X Y and Z axes
- Ball screw and servo direct drives in all axes
- Coolant system
- Large vertical console and worktable
- Vertical and horizontal spindle
- Automatic feed with electric limit switches in all axes
- LED work light
- Drilling patterns, positions and rows of holes can be approached automatically
- By entering a feed speed and travel distance, the machine can automatically move the selected axis to the target position
- Feed rate and speed can be preselected using the technology calculator

ARGUMENTS,...



CONTROL CABINET
› The control cabinet is easier to maintain and more clearly laid out



SPINDLE
› Vertical milling
MILLING HEAD
› can be swivelled to the left and right respectively



Fig.: MX 3



› Recommended cutting parameters

New:
Touch-controlled operation
› Easy control of user input via the innovative Optimum input system
› The Optimum electronics have an integrated diagnostic function.
› Automatic operation with programmable stops and support for positions and drilling patterns
› Integrated technology computer for efficient control.



1 Optional table housing

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TECHNICAL DATA

Model	MX 2	MX 3	MX 4
Article no.	3343020	3343030	3343040
Power			
Electrical connection	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Total rated value	9 kW	9 kW	9 kW
Vertical drive motor	3.7 kW	3.7 kW	5.5 kW
Spindle			
Spindle seat	ISO 40 DIN 2 080	ISO 40 DIN 2 080	ISO 40 DIN 2 080
Vertical			
Spindle speeds	40 – 2 000 min^{-1}	40 – 2 000 min^{-1}	40 – 2 000 min^{-1}
Gearbox stages	2 stages	2 stages	2 stages
Cross table			
Horizontal cross table (L x W)	750 x 320 mm	800 x 400 mm	850 x 450 mm
Cross table load capacity max.	160 kg	200 kg	300 kg
T-slot size / number/ spacing	14 mm / 63 mm / 5	14 mm / 63 mm	14 mm / 63 mm
Vertical cross table (L x W)	890 x 225 mm	1 020 x 225 mm	1 190 x 250 mm
T-slot size / spacing / count	14 mm / 63 mm / 3	14 mm / 63 mm / 3	14 mm / 63 mm / 3
Travel distance			
X axis (Cross table)	405 mm	500 mm	600 mm
Y axis (Cross table)	305 mm	400 mm	450 mm
Z axis (Cross table)	400 mm	400 mm	450 mm
Feed drive speed	10 – 1 000 mm/min	10 – 1 000 mm/min	10 – 1 000 mm/min
Dimensions and weight			
Length x width x height approx.	1 900 x 1 650 x 1 882 mm	1 950 x 1 700 x 1 882 mm	2 200 x 1 900 x 2 000 mm
Net weight approx.	1 500 kg	1 550 kg	1 800 kg

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ACCESSORIES

Designation	Article no.
Collet chuck set 18-part ISO 40	3352056
End mill set HSS TiN-coated 12-part	3352250
End mill set HSS TiN-coated 20-part	3352255
Drill chuck holder (arbour) ISO 40/ M16 / B16	3352070
Precision Quick-action drill chuck 1 – 10 mm; B16	3050610
Horizontal-vertical rotary indexing table RT 150	3356150
Horizontal-vertical rotary indexing table RT 200	3356200
Horizontal-vertical rotary indexing table RTE 165	3356365
Horizontal-vertical rotary indexing table RTU 165	3354165
Assortment of clamping tools SPW 12, 58-part	3352077
Precision machine shoe SEU1(4 units required)	3352985
Cutting oil spray 400 ml	3872100
1 MX 2 housing	3343021
1 MX 3 housing	3343031
1 MX 4 housing	3343041

More **accessories** and **information on accessories** see page 151
Coolant accessories on page 83

SCOPE OF DELIVERY

- Reducing sleeve MT1 / MT2 / MT3
- Horizontal milling spindle
  Ø 16 mm / 22 mm / 27 mm / 32 mm
- Operating tool

VICES

Designation	Article no.
FMS 200	3354200
HMS 125	3355127
MV3-75	3354175
MV3-125	3354178
ZAS 50	3354170
DAS 100	3355500
HCV 105	3536210
HCV 125	3536214

Information on this see page 148

ACCESSORIES MILLING MACHINES

FMSN 125 | Art. no.: 3354120
Precision machine vice



V 250 | Art. no.: 3352025
Milling table feed



MSM 1 | Art. no.: 3353000
Universal base
with chip tray 3352999



Compatibility overview for vices

Accessories		Article No.	BF 16V	MH 20	MH 22	MH 25	MB 4	MH 35 /V	MH 50 /V	MB 4P	MB 4PV	MT50E	MT50	MT60	MF 2-B	MF 4-B	MF 2V	MF 4V	MT130S	MT100	MT200	MT230S	MX2/3/4	MZ 4S
Machine vices FMS	100	3354100	●	●	●	●	●			●	●													
	125	3354125					●	●	●	●	●	●	●	●	●		●							●
	150	3354150														●		●	●	●				●
	200	3354200																			●	●	●	
Machine vices HMS	100	3355100					●	●		●	●													
	125	3355127													●	●	●	●	●	●	●	●	●	●
	150	3355150																						●
	200	3355200																						●
Machine vices FMSN	100	3354110	●	●	●	●																		
	125	3354120					●	●	●	●	●	●	●	●	●		●						●	●
	150	3354130														●		●	●	●				●
Machine vices VMQ	80	3354180	●	●	●	●																		
	100	3354181	●	●	●		●	●	●	●	●	●	●	●	●		●						●	●
	125	3354182														●		●	●	●				●
	150	3354183																						●
Three-axis vices MV3	75	3354175	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	125	3354178											●	●	●	●	●	●	●	●	●	●	●	●
Two-axis vice ZAS	50	3354170	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Three-axis vice DAS	100	3355500					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●
Machine vice HCV	105	3536210															●	●	●	●	●	●	●	●
	125	3536214															●	●	●	●	●	●	●	●
Machine vice MVSP	150 x 200	3530104																						●
	150 x 200	3530108																						●

Compatibility overview, accessories for milling machines

Accessories		Article No.	BF 16	MH 20	MH 22	MH 25	MB 4	MH 35 /V/G	MH 50 /V	MB 4P	MB 4PV	MT50E	MT50	MT60	MF 2-B	MF 4-B	MF 2V	MF 4V	MT130S	MT100	MT200	MT230S	MX 2/3/4	MZ 4S
			MT2	MT2	BT 20	BT 30	MT4	BT 30	BT 40	MT4	MT4	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 50	ISO 50	ISO 40	ISO 40
Horizontal-vertical indexing table	RT 100	3356110	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○
	RT 150	3356150					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	RT 200	3356200										●	●	●	●	●	●	●	●	●	●	●	●	●
Horizontal-vertical indexing table	RTE 165	3356365					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	RTU 165	3354165					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Universal dividing head	TA 125	3356125					○	○	○	○	○	○	●	●	○	○	○	○	●	●	●	●	○	●
End mill set HSS	12-part	3352250	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	20-part	3352255	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
HSS twist drill	MT3	3051003					○	○		○	○						●	●	●	●			●	●
Twist drill set	25-part	3201010	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	41-part	3201021	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Milling cutter set HM	Hard metal	3352118	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Radius	3352116	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Clamping tool assortments	Size 8	3352075	●																					
	Size 10	3352076		●	●	●		●																
	Size 12	3352077					●			●	●	●	●	●					●	●	●		●	●
	Size 14	3352078													●	●	●	●						
	Size 16	3352079							●													●		
Edge sensor		3351171	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●
Quick-action drill chuck	1 – 10 mm B16	3050610	●	●	●	○	●	○	●	●	●	●	●	●	●	●	●	●	○	○	○	○	●	●
	0 – 13 mm B16	3050632	●	●	●	○	●	○	●	●	●	●	●	●	●	●	●	●	○	○	○	○	●	●
	0 – 16 mm B16	3050633	●	●	●	○	●	○	●	●	●	●	●	●	●	●	●	●	○	○	○	○	●	●
Morse cone	SK50 B18	3352067																			●	●		
Adapter	MT3/MT2	3350313															●	●	●	●			●	●
	MT4/MK3	3350314					●			●	●													
Mandrel for drill chuck B 16	MT2	3050670	●	●																				
	MT4	3350304					●			●	●													
	ISO 40	3352070										●	●	●	●	●	●	●	●	●			●	●
Cutter head mounting	MT2	3352102	●	●																				
Copy and facing cutterhead	BT 20	3350202			●																			
	BT 30	3350203				●		●																
	MT2/M10	3350212	●	●																				
	BT 40	3350204							●															
	MT4/M16	3350214					●			●	●													
	ISO 40	3350216										●	●	●	●	●	●	●	●	●			●	●
Pull stud	BT 20	3352726			●																			
	BT 30	3536302				●		●																
	BT 40	3536332							●															
Precision Bore head set	ISO 40	3352128										●	●	●	●	●	●	●	●	●			●	●
	ISO 50	3352129																			●	●		
Bore head set	MT4	3352125					●			●	●													
Collet chuck set	MT2/ER25	3352052	●	●																				
	MT2/ER32	3352053	●	●																				
	MT4/M16	3352094					●			●	●													
	ISO 30	3352054																						
	ISO 40	3352056										●	●	●	●	●	●	●	●	●			●	●
	ISO 50	3352065																			●	●		

Accessories		Article No.	BF 16	MH 20	MH 22	MH 25	MB 4	MH 35 /V/G	MH 50 /V	MB 4P	MB 4PV	MT50E	MT50	MT60	MF 2-B	MF 4-B	MF 2V	MF 4V	MT130S	MT100	MT200	MT230S	MX 2/3/4	MZ 4S
			MT2	MT2	BT 20	BT 30	MT4	BT 30	BT 40	MT4	MT4	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 40	ISO 50	ISO 50	ISO 40	ISO 40
Collet set	ER 16	3440282			●																			
	ER 25	3441109	●	●	●																			
	ER 32	3441122	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Collet chuck set, direct	MT2	3351980	●	●																				
Levelling platen	SE1	3381012	●	●	●	●	●	●	●	●	●													
	SE2	3381016										○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*		
														*Long threaded rod required (not included in scope of supply!)										
Vibration damper machine foot	SE 55	3352981	●	●	●	●	●	●	●	●	●													●
Precision machine shoe	SEU1	3352985										●	●	●	●	●	●	●	●	●	●	●	●	
Stop angle	90°	3385052				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Prism elbow	WP 30	3352195	●	●	●	●	●	●	●	●	●													
Table feed	V 99S	3352021					●	●	●															
	Mounting kit required	3352036							●															
		3352035					●	●																
	V 250S	3352025															●	●						
Tool clamping system	ISO 40	3352394															●	●						
Thread tapper	M5-M12	3352042	●	●	●	●	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●
Workpiece support	WPS-1	3354261	●	●	●	●	●	●	●	●	●													
	WPS-2	3354262	●	●	●	●																		
	WPS-3	3354263					●	●	●	●	●													
	WPS-4	3354264					○	○	○	○	○	●	●	●										
T-slot nut	M 8 -10mm	3353020	●																					
	M10 -12mm	3353022		●	●	●		●																
	M12 -14mm	3353025					●			●	●	●	●	●					●	●	●		●	●
	M14 -16mm	3353026													●	●	●	●						
	M16 -18mm	3353028							●													●		
Blank holder	14 mm	3352031					●			●	●	●	●	●										
	18 mm	3352032							●															
Parallel spacer kit		3354001	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Coolant system	230V	3351999	○*	○*	○*	○*	●	●	●															
Coolant hose	KMS 2	3356660	●	●	●	●	●	●	●															
Coolant mist lubricator	MMC 1	3356663	●	●	●	●	●	●	●															
Starter set	BT 20	3353281			●																			
	BT 30	3353282				●		●																
	BT 40	3353284							●			○**	○**	○**	○**	○**	○**	○**	○**	○**		○**		○**
Machine bases	MSM 1	3353000	●	●	●																			
	Chip tray	3352999	●	●	●																			
	MSM 2	3353009				●																		
	MSM 3	3353014					●	●																
	MSM 4	3353015							●															
Cutting oil spray		3872100	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

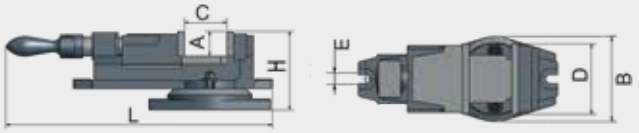
○* only in conjunction with base (item no. 3353000) and chip tray (item no. 3352999) ○** only in conjunction with the M16 tightening bolts (item no. 3536179)

Precision machine vices FMS	Article no.
FMS 100	3354100
FMS 125	3354125
FMS 150	3354150
FMS 200	3354200

› Robust design for milling, drilling and grinding
› Vice body made of premium cast material
› Guide surfaces hardened and ground
› Hardened and ground clamping jaws, replaceable
› With turntable, 360° rotatable

Prism jaws for FMS 100	3354102
Prism jaws for FMS 125	3354127
Prism jaws for FMS 150	3354152
Prism jaws for FMS 200	3354202

Dimensions		A	C	D	E	L	B	H	kg
FMS 100	mm	30	62	100	13	295	124	100	11
FMS 125	mm	37	85	125	13	370	148	128	17
FMS 150	mm	40	114	150	13	462	180	145	28
FMS 200	mm	58	150	200	16.5	620	237	202	58





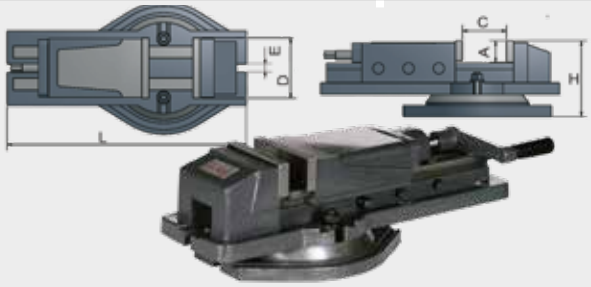
Hydraulic Precision machine vices HMS	Article no.
HMS 100	3355100
HMS 125	3355127
HMS 150	3355150

› Robust design for milling, drilling and grinding
› Vice body made of premium cast material
› Guide surfaces hardened and ground
› Booster system: requires little force, high pressure build-up during clamping
› Large clamping range due to lock bolts with various hole spacings
› With turntable, 360° rotatable. Protected spindle

Prism jaws for HMS 100	3355102
Prism jaws for HMS 125	3355129
Prism jaws for HMS 150	3355152
Prism jaws for HMS 200	3355202

Dimensions		A	D	E	L	B	H	kg
HMS 100	mm	36	100	15	525	Ø 270	122	27
HMS 125	mm	46	127	16	670	Ø 290	151	46
HMS 150	mm	51	150	17	800	Ø 328	169	64
HMS 200	mm	65	200	19	710	Ø 358	158	100

C	Span			Clamping pressure	
HMS 100	0 – 60 mm	57 – 115 mm	110 – 170 mm	2 500 kg	24.5 kN
HMS 125	0 – 76 mm	72 – 150 mm	146 – 224 mm	4 000 kg	39.25 kN
HMS 150	0 – 100 mm	98 – 200 mm	195 – 300 mm	4 500 kg	44.1 kN
HMS 200	0 – 100 mm	98 – 200 mm	195 – 300 mm	7 500 kg	73.6 kN



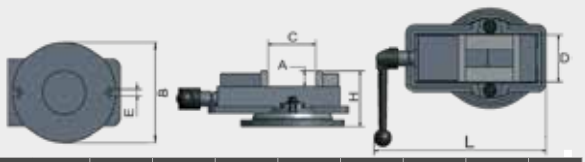
Precision machine vices FMSN	Article no.

› Vice body made of premium cast material
› Guide surfaces hardened and ground
› Hardened and ground clamping jaws, replaceable
› Protected spindle
› Clamping outward by repositioning the clamping jaws
› With turntable, 360° rotatable



FMSN 100	3354110
FMSN 125	3354120
FMSN 150	3354130

Prism jaws for FMSN 100	3354112
Prism jaws for FMSN 125	3354122
Prism jaws for FMSN 150	3354132

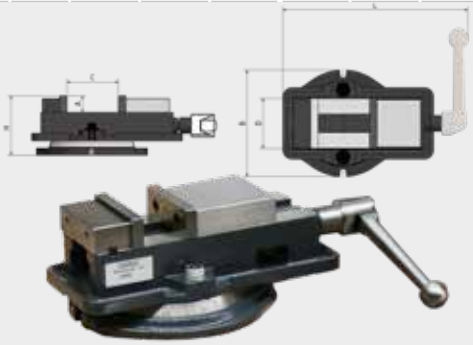


Dimensions		A	C	D	E	L	B	H	kg
FMSN 100	mm	36	101	100	14.5	319	Ø 240	319	19
FMSN 125	mm	36	108	135	16.5	369	Ø 278	369	29
FMSN 150	mm	46	146	155	18.5	425	Ø 332	425	36

Milling machine vices	Article no.
VMQ 50	3354179
VMQ 80	3354180
VMQ 100	3354181
VMQ 125	3354182
VMQ 150	3354183

› Robust design for milling, drilling and grinding
› Vice body made of premium cast material
› Guide surfaces hardened and ground
› Hardened and ground clamping jaws
› With turntable, 360° rotatable

Technical data		A	C	D	L	B	H	Weight
VMQ 50	mm	19	66	51	240	140	76	5.5 kg
VMQ 80	mm	24	77	72	290	190	94	8.5 kg
VMQ 100	mm	33	130	100	335	247	120	16 kg
VMQ 125	mm	40	135	125	370	252	135	21 kg
VMQ 150	mm	45	150	160	435	325	155	36 kg



Three-axis vice	Article no.
MV3-75	3354175
MV3-125	3354178

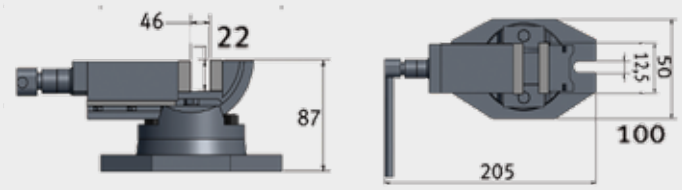
› Horizontal swivelling movement up to 90°
› Vertical swivelling movement up to ± 45°
› Hardened and ground clamping jaws
› With turntable, 360° rotatable

Technical data		A	C	D	E	L	B	H	Weight
MV3-75	mm	34	82	75.5	12	380	139	150	11 kg
MV3-125	mm	45	97	125	12	290	185	206	26 kg



Two-axis vice	Article no.
ZAS 50	3354170

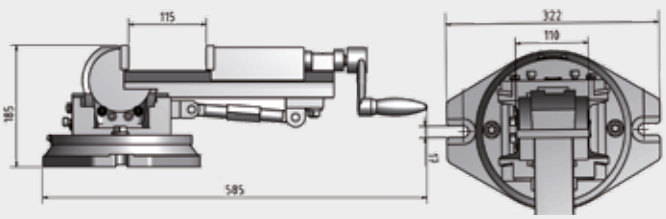
› Tiltable up to -90°
› Hardened and ground clamping jaws
› Easily readable scales for both axes
› With turntable, 360° rotatable
› Weight approx: 3.4 kg





Three-axis vice	Article no.
DAS 100	3355500
Prism jaws	3355502

› Premium cast material
› Guide surfaces hardened and ground
› With turntable, 360° rotatable
› Horizontal swivelling movement up to 90°
› Vertical swivelling movement up to ± 45° via threaded spindle
› Net weight approx. 32 kg

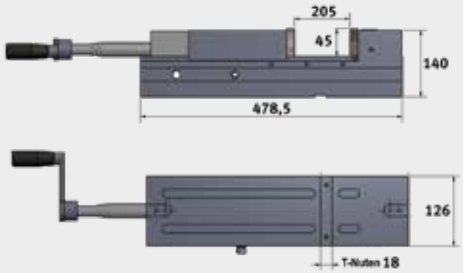




Hydraulic milling machine vise	Article no.
HCV 125	3536214
Soft jaws 2 units	3536221
L jaws 2 units	3536222

- High precision and repeating accuracy for series production and batch-size-one machining on CNC milling machines
- Robust design for milling
- Guide surfaces hardened and ground
- Booster system: requires little force, high pressure build-up during clamping
- Large clamping range due to lock bolts with various hole spacings
- Made of premium grade stainless steel

Span	Clamping pressure		Weight approx.
0 – 205 mm	4 000 kg	39.2 kN	35.4 kg

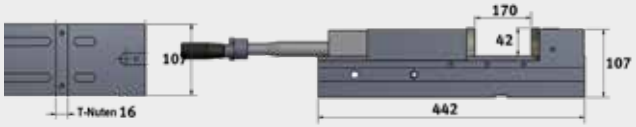




Hydraulic milling machine vise	Article no.
HCV 105	3536210

- High precision and repeating accuracy for series production and batch-size-one machining on CNC milling machines and machining centres
- Robust design for milling
- Guide surfaces hardened and ground
- Booster system: requires little force, high pressure build-up during clamping
- Large clamping range due to lock bolts with various hole spacings
- Made of premium grade stainless steel
- Long service life thanks to high quality
- High clamping force

Span		Clamping pressure		Weight approx.
0 – 85 mm	85 – 170 mm	2 500 kg	24.5 kN	22 kg



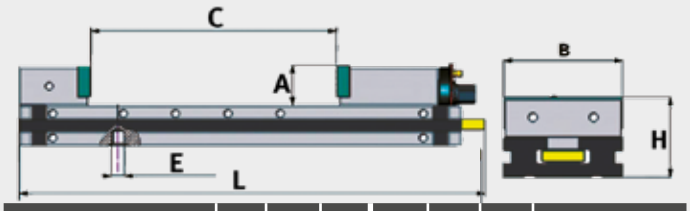


Modular milling machine vise	Article no.
MVSP 150 x 200	3530104
MVSP 150 x 300	3530108

- Hydraulic
- High precision and repeating accuracy for series production and batch-size-one machining on CNC milling machines and machining centres
- Robust design for milling
- Made completely of NiCrMo steel with hardness HRC60, tolerance 0.0015 mm
- Mobile jaws with extra long guides to prevent lift-off and slingshot risk
- Guide surfaces hardened and ground
- Large clamping range due to lock bolts with various hole spacings
- Long service life thanks to high quality
- Includes spanner
- Model MVSP with fixed jaws

MADE IN EUROPE





Technical data		A	C	E	L	B	H	Weight approx.
MVSP 150 x 200	mm	50	205	16	480	149	100	34 kg
MVSP 150 x 300	mm	50	305	16	580	149	100	38.6 kg

Horizontal-vertical rotary indexing table RT 100

› Quality rotary indexing tables made of premium cast meehanite
› Work table is scaled 360°
› Precision bearing
› 1 turn of the handwheel corresponds to a 4° rotation
› Stability also under high load
› Scale division on handwheel 2'
› Large spindle hole for clamping longer workpieces
› Indexing via handwheel with vernier scale possible
› Worm gear hardened and ground
› Angle degree division over 360 degree angle scale, groove 11 mm (M10), indirect dividing discs not possible

Rotary indexing table RT 100	3356110
Three-jaw lathe chuck Ø 85 mm	3356111
Tailstock Rst 1	3356155
› Centre height 72 – 108 mm	



Rst 1

Technical data		RT 100
Centring taper		MT2
Transmission ratio		90:1
Mounting surface diameter	mm	110
Height x length x width	mm	72 x 138 x 118
Centre height	mm	80
Slot width/count	mm	11/3
Net weight	kg	5

Horizontal-vertical rotary indexing table RT 150

› Quality rotary indexing tables made of premium cast meehanite
› Work table is scaled 360°
› Precision bearing
› 1 turn of the handwheel corresponds to a 4° rotation
› Stability also under high load
› Scale division on handwheel 2'
› Large spindle hole for clamping longer workpieces
› Indexing via handwheel with vernier scale possible
› Worm gear hardened and ground
› Angle degree divisions over 360 degree angle scale, groove 11 mm (M10), with optional indirect dividing discs, high number of divisions possible

Rotary indexing table RT 150	3356150
Three-jaw lathe chuck Ø 130 mm centric	3356100
Chuck flange including 3 slot nuts	3356154
Indirect indexer IT 150	3356152
› 3 segment discs, sector arm, angle shear with spring plate	
Tailstock Rst 1	3356155
› Centre height 72 – 108 mm	



Rst 1

Technical data		RT 150
Centring taper		MT2
Transmission ratio		90:1
Mounting surface diameter	mm	150
Height x length x width	mm	79 x 204 x 156
Centre height	mm	102
Slot width/count	mm	11/3
Net weight	kg	10

Horizontal-vertical rotary indexing table RT 200

› Quality rotary indexing tables made of premium cast meehanite
› Work table is scaled 360°
› Precision bearing
› 1 turn of the handwheel corresponds to a 4° rotation
› Stability also under high load
› Scale division on handwheel 2'
› Large spindle hole for clamping longer workpieces
› Indexing via handwheel with vernier scale possible
› Worm gear hardened and ground
› Angle degree divisions over 360 degree angle scale, groove 16 mm (M16), with optional indirect dividing discs, high number of divisions

Rotary indexing table RT 200	3356200
Three-jaw lathe chuck Ø 165 mm	3356225
Chuck flange including 3 slot nuts	3356254
Indirect indexer IT 200	3356205
› 2 segment discs, sector arm, angle shear with spring plate	
Tailstock Rst 2	3356157
› Centre height 110 – 145 mm	



Rst 2

Technical data		RT 200
Centring taper		MT3
Transmission ratio		90:1
Mounting surface diameter	mm	200
Height x length x width	mm	104 x 265 x 199
Centre height	mm	133
Slot width/count	mm	16/3
Net weight	kg	25

Horizontal-vertical rotary indexing table RTE 165

› Quality rotary indexing tables made of premium cast meehanite
› Precision taper roller bearing
› Stability also under high load
› 24 positions (15° indexing)
› Large spindle hole for clamping longer workpieces
› 3-jaw chuck (mounted)
› Direct indexing via serrated locking plates for higher production speeds for mass-produced parts
› Including clamping disc with 3 slots
› 24 divisions with direct indexing disc and angular degree divisions over 360 degree angle scale – no slot, three-jaw chuck mounted, no indirect
› 6 serrated locking plates for 2/3/4/6/8/12-part divisions
› Degree divisions via 360° scale

Rotary indexing table RTE 165	3356365
Tailstock Rst 2	3356157
› Centre height 110 – 145 mm	





RST 2

Technical data		RTE 165
Table diameter	mm	165
Height x length x width	mm	200 x 260 x 218
Centre height	mm	130
Clamping disc	mm	203
Passageway	mm	36
Net weight approx.	kg	32
Indexing precision of direct indexer		45°
Clamping options		Horizontal and vertical

Horizontal-vertical rotary indexing table RTU 165

› Quality rotary indexing tables made of premium cast meehanite
› Precision taper roller bearing
› Stability also under high load
› 24 positions (15° indexing)
› Large spindle hole for clamping longer workpieces
› 3-jaw chuck (mounted)
› Direct indexing via serrated locking plates for higher production speeds for mass-produced parts
› Including clamping disc with 3 slots
› 6 Indexing disks
› 24 divisions with direct indexing disc and angular degree divisions over 360 degree angle scale – no slot, three-jaw chuck mounted, large number of indirect divisions possible with with optional indexing disc
› Degree divisions over 360° scale with crank and vernier scale

Rotary indexing table RTU 165	3354165
Indirect indexer IT 200	3356205
› 3 segment discs, sector arm, angle shear with spring plate	
Tailstock Rst 2	3356157
› Centre height 110 – 145 mm	



IT 200



RST 2



Technical data		RTU 165
Table diameter	mm	165
Height x length x width	mm	250 x 391 x 235
Centre height	mm	130
Clamping disc	mm	203
Passageway	mm	36
Net weight approx.	kg	48
Indexing precision of direct indexer		45°
Clamping options		Horizontal and vertical

Universal dividing head TA 125

› Can be swivelled from -10° to +90°
› Hardened and ground worm gear
› Precision taper roller bearing
› Hardened and ground main indexing disc (24x division), to index directly at 15°
› Up to 300 indexing options possible with indirect indexing disks
› Tailstock Rst1 (centre height 72 – 108 mm)
› Centring tip 600 / MT2
› Lathe dog (tang)
› Chuck flange (Ø 140 mm, t = 12 mm) for carrier pin or mounting a lathe chuck
› 3 units Indirect indexing disc

Universal dividing head TA 125	3356125
Three-jaw lathe chuck Ø 130 mm centric	3356100







Technical data	TA 125
Transmission ratio	40:1
Closed height x width with centre x length	175 x 205 x 230 mm
Centre height	100 mm
Bore in mounting shaft (keyway)	18 mm
Slot width	16 mm
Direct indexing disc (division)	15°/ Ø 110 mm
Indirect indexing discs (hole on the indexing circle)	15, 16, 17, 18, 19, 20, 21, 23, 27, 29, 31, 33, 37, 39, 41, 43, 47
True running accuracy	0.015 mm
Net weight approx.	12 kg

HSS end mill set	Art. no.:
12-part	3352250

› 6 end mills, short version · Version with 2 cutting edges.
DIN 1835 B (Ø12x73, Ø10 x 63, Ø8 x 61, Ø6 x 52, Ø5 x 52, Ø4 x 51 mm)

› 6 end mills, short version · Version with 4 cutting edges.
DIN 1835 B (Ø12 x 83, Ø10 x 73, Ø8 x 61, Ø6 x 57, Ø5 x 57, Ø4 x 55 mm)

20-part	3352255

› 10 end mills DIN 327 D · Short version · 2 cutting edges
DIN 1 835 B, (3/4/5/6/8/10/12/14/18/20 mm)

› 10 end mills DIN 844 B · Short version · 4 cutting edges
DIN 1 835 B, (3/4/5/6/8/10/12/14/18/20 mm)

Features:

› Titanium coated
› Improved hardness and stability with 2x to 5x service life
› Twice the machining performance
› Improved workpiece finish
› Cylindrical shank and lateral lugs
› Version with 2 cutting edges for milling keyways/fixing slots and milling out the workpiece centre
› Vertical or lateral milling possible
› Version with 4 cutting edges and 30° right-hand twist for good chip removal in normal to hard materials



Milling cutter set	Art. no.:
Hard metal	3352119

› 18-part; 3 each in the sizes 3/4/6/8/10 and 12 mm
› 4-cutting edge version
› Coated solid carbide end mill (TiALN)
› Centre cut for plunging
› Rake angle 35 °

V7 Plus



3 pcs. each

Radius end mill set	Art. no.:
Radius	3352117

› 9-part; 3 each in the sizes 4 mm / 6 mm /8 mm
› 2-cutting edge version
› Coated solid carbide end mill (TiALN)
› Face cutting geometry for plunging
› Rake angle 30 °

V7 Plus





3 units each

Twist drill HSS	Art. no.:
MT2	3051002
MT3	3051003

› 9-piece; sizes 14.5/16/18/20/22/24/26/28/30 mm
› Long service life
› Good chip removal
› Right-hand cutting





Twist drill set	Art. no.
25-part	3201010

› 1 – 13 mm

41-part	3201021

› 6 – 10 mm (increasing by 0.1 mm)

Features

› DIN 338 HSS-CO 5%
› Four-surface 135° cross grinding enables excellent self-centring
› Improved tool service life thanks to alloyed components
› High speed/feed properties
› Strong core design optimises the structural strength of the bit and minimises the risk of bit breakage
› Practical OPTIMUM plastic case





Edge sensor	Art. no.:
with a rotating spindle	3351171

› Shank 10 mm
› Probe Ø 10 mm



Precision quick-action drill chuck	Art. no.:
1–10 mm; B16	3050610
1–16 mm; B18	3050630
› Concentricity ≤ 0.06 mm	



OPTIMUM Precision quick-action drill chuck	Art. no.:
DKC 13	3050632
› 0–13 mm; B16 to 4 800 min^{-1}	
DKC 16	3050633
› 0–16 mm; B16 to 4 000 min^{-1}	



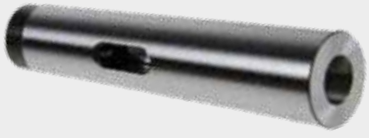
OPTIMUM Quick-release drill chuck	Art. no.:
MT2	3050571
MT3	3050573
MT4	3050574
› 1–16 mm, up to 6 000 min^{-1}	
MT2	3050572
› 1–13 mm, up to 8 000 min^{-1}	



Extension sleeves	Art. no.
MT2 – MT3	3050667
MT3 – MT4	3050668



Adapter	Art. no.
MK3 / MK2 / M12	3350313
MK4 / MK3 / M16	3350314



End mill arbour	Art. no.:
MT2 / M10 / B16	3050670
MK3 / M12 / B16	3350303
MK4 / M16 / B16	3350304
› External taper	



Chuck mount	Art. no.:
ISO 30 / M12 / B16	3352069
ISO 40 / M16 / B16	3352070
› External taper	



Milling head holder	Art. no.:
SK50	3352066
› External taper Ø 27 mm DIN2080	



Morse taper	Art. no.:
SK50	3352067
B18 DIN2080	



Mount	Art. no.
for cutter head	3352102
› External taper MT2 / milling cutter holder Ø 16 mm	



Adapter	Art. no.
BT 30/MK3	3536316



Copy and face milling cutter	Art. no.
Tool holder shank BT 20	3350202
Pull studs BT 20	3352726
› External Ø: 52 mm, ISO designation: RD X 1 003 D52/R5	
› Optimum custom build (no standard BT 20 bolts)	

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Tool holder shank BT 30	3350203
Pull studs BT 30	3536302
› External Ø: 52 mm, ISO designation: RD X 1 003 D52/R5	



Tool holder shank BT 40	3350204
Pull stud BT 40	3536332
› External Ø: 63 mm, ISO designation: RD X 1 003 D63/R5	



Mounting shank ISO 30/DIN 2 080	3350215
› External Ø: 52 mm, ISO designation: RD X 1 003 D52/R5	
Mounting shank ISO 40/DIN 2 080	3350216
› External Ø: 63 mm, ISO designation: RD X 1 003 D63/R5	



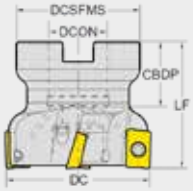
Mounting shank MT2/M10	3350212
Mounting shank MT3/M12	3350213
› External Ø: 52 mm, ISO designation: RD X 1 003 D52/R5	
Mounting shank MT4/M16	3350214
› 63 mm, ISO designation: RD X 1 003 D63/R5	



Features

- Universally deployable for machining all steels and NF metals
- For facing and copying
- Made of special steel – highly quenched and hardened
- Excellent planarity and true running accuracy
- Milling body with asymmetrical division for extremely smooth action and uniform cutting
- Body and clamping shank form a unit for a short projection length and stable clamping
- No additional end mill mandrel used
- Special geometry for high-speed milling
- Economical because, in case of a blunt cutting edge, the plate can simply be rotated further (can be used up to twelve times)
- Indexable inserts Ø 10 mm
- Includes five indexable inserts RDET 1 003 MOSN 8 026
- Including hexagon socket

Indexable insert milling cutter	Art. no.
50mm - F90-APKT16-D50Z5S22	3544255
80mm - F90-APKT16-D80Z7S27	3544256
› without indexable inserts	



V7 Plus

Art. no.	DC	Plates	LF	DCON	CBDP	DCSFMS
3544255	50	5 pcs.	40	22	20	45
3544256	80	7 pcs.	50	27	20	50

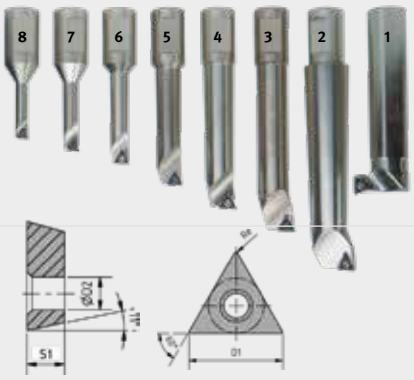
Indexable insert	Art. no.
AGPT160408-AL	3544260
› Aluminium, 10 pieces	



APKT160408PDTR	3544261
› Universal, 10 pieces	



Set of indexable inserts for drill rod	Art. no.
No. 1 - 4	3352136
No. 5 - 6	3352137
No. 7 + 8	3352138
› For steel, 10 pieces	
No. 1 - 4	3352141
No. 5 - 6	3352142
Set of indexable inserts for boring bars no. 7 and 8	3352143
› For aluminium, 10 pieces	



Article no.	ISO	D1	D2	S1	right
3352136	**BGT110304L-W**	11	3.4	3.18	0.4
3352141	**TBGT110304L-FY**	11	3.4	3.18	0.4
3352137	**TBGT090204L-W**	9.6	2.8	2.38	0.4
3352142	**TBGT090204L-FY**	9.6	2.8	2.38	0.4
3352138	**TBGT060104L-W**	6.2	2.2	1.59	0.4
3352143	**TBGT060104L-FY**	6.2	2.2	1.59	0.4

Cutting depth 0.2 – 0.6 – 1.0 mm, feed 0.05 – 0.15 – 0.25 mm, speed 100 – 250 – 400 mm

Carbide indexable inserts	Art. no.
RDET 1 003 MOSN8026	3350220
› 5 pcs.	
› For machining steel up to 900 N/mm 2, stainless steel, aluminium, non-ferrous metal, cast iron	
› Positive cutting geometry	
› PVD coated	



Collet chuck set	Art. no.
MT2/ER 25 – M10	3352052
› Collet chuck	
› 15 collets; sizes Ø 1.5 – Ø 16 mm/DIN ISO 15488	
› Hook wrench Aluminium case	
MT2/ER 32 – M10	3352053
MT3/ER 32 – M12	3352093
MT4/ER 32 – M16	3352094
ISO 30 / ER32- M12	3352054
› Pull stud M12 and pull stud BT 30	
ISO 40 / ER32- M16	3352056
› Pull stud M16 and pull stud BT 40	
ISO 50 / ER32- M24	3352065
› Pull stud M42 and pull stud BT 50	
Features	
› Collet chuck	
› 18 collets, sizes Ø 2 – Ø 20 mm/DIN ISO 15488	
› Hook wrench Aluminium case	



Precision boring head set	Art. no.
ISO 40/ER32 – M16/BT 40	3352128
ISO 50/ER32 – M24/BT 50	3352129

› 8 units boring bars: BJ2008-32L/BJ2010-40L/BJ2014-53L/BJ2016-68L/BJ2020-83L/BJ2025-96L/BJ2030-115L/BJ20-L20-100L
› Adjustment range 8 – 280 mm
› Including boring bars, studs, circle extension, tools, case
› Without indexable inserts





Boring head set	Art. no.
Spindle seat **MT3**	3352124
Spindle seat **MT4**	3352125
› For external and vertical machining	
› Scope of delivery: Boring head, 9 pcs. Boring bars with soldered HSS plate, Allen key	



Collet chuck	Art. no.
ISO 30/ER25	3352046
› Hook wrench	



ER32 collet (individual)	Art. no.
Ø 6 mm	3441126
Ø 8 mm	3441128
Ø 10 mm	3441130
Ø 12 mm	3441132



Collet (individual)) MT3 direct-clamping / M12	Art. no.
Ø 4 mm	3352004
Ø 6 mm	3352006
Ø 8 mm	3352008
Ø 10 mm	3352010
Ø 12 mm	3352012
Ø 16 mm	3352013



Collet set	Art. no.
MT2 direct clamping / M 10	3351980
› 5-part; sizes Ø4 / Ø6 / Ø8 / Ø10 / Ø12 mm	
MT3 direct tensioning / M12	3352014
› 6-part; sizes Ø4 / Ø6 / Ø8 / Ø10 / Ø12 / Ø16 mm	



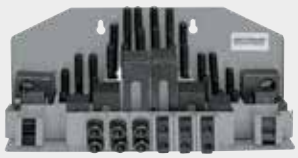
Collet set	Art. no.
ER 16	3440282
› 12 collets; sizes Ø 1 – Ø 10 mm	
ER 25	3441109
› 15 collets, sizes Ø 1 – Ø 16 mm/DIN ISO 15488	
ER 32	3441122
› 18 collets, sizes Ø 3 – Ø 20 mm/DIN ISO 15488	



Clamping tool assortment	Art. no.
Size 8	3352075
› T-slot nuts 10 mm; clamping thread M 8	
Size 10	3352076
› T-slot nuts 12 mm; clamping thread M 10	
Size 12	3352077
› T-nuts 14 mm; tightening thread M12	
Size 14	3352078
› T-slot nuts 16 mm; clamping thread M 14	
Size 16	3352079
› T-nuts 18 mm; tightening thread M16	
Features	
› 58-part	
› Practical wall bracket (SPW 8 only)	
› Metric thread	
› 24 pcs. pull studs	
› 6 pcs. T-slot nuts	
› 6 pcs. nuts	
› 4 pcs. extension nuts	
› 6 pcs. step blocks	
› 12 pcs. step blocks	

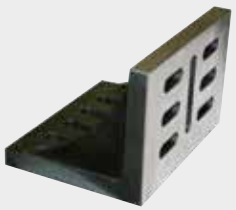


SPW10 – SPW 16



SPW8

Stop angle	Art. no.
90°	3385052
› For clamping in case of mechanical processing of workpieces, checking and scribing work	
› Precision: Parallelism and perpendicularity 0.01 to 100 mm	
› Lateral reinforcing ribs	
› Dimensions approx. L x W x H: 202 x 126 x 150 mm. Weight approx. 7 kg	



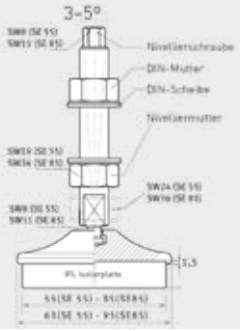
Pull stud	Art. no.
DIN 2 080 M16/M16	3536179
Pull stud DIN 2 080 M12/M12	3536177



Vibration damper machine foot	Art. no.
SE 55	3352981
› Levelling screw M12 x 1 x 150 mm	
› Maximum load: 600 kg	
SE 85	3352982
› Levelling screw M16 x 150 mm	
› Maximum load: 1 500 kg	
Features	
› Effective vibration and structure-borne noise insulation and noise reduction	
› Eliminates floor unevenness up to 5º	
› Fast and technically easy precision levelling by means of a regular threaded screw	

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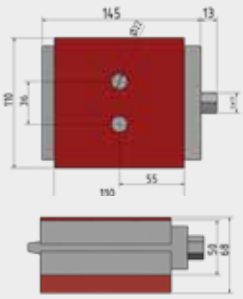




Precision machine shoe	Art. no.
SEU1	3352985
› Patented double spindle bearing	
› With slip-protection plate at top	
› Maximum load 60 kN	
› Suitable for M16 threaded rod	
› Vibration-insulation plate for particularly heavy loads. Good structure-borne noise insulation	
› Adjustment range +5 / -4 mm	
› High-precision, jerk-free levelling even of heavy machines	
› Up to 50% reduction in assembly time thanks to precision levelling and non-anchored installation.	
› Improves the dynamic behaviour of machines while reducing noise	
› Weight approx. 3.7 kg	

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Levelling platen	Art. no.
SE 1	3381012
SE 2	3381016
SE 3	3381018
› The machines and equipment can be installed without anchors and precisely levelled using the height adjustment system.	
› non-slip rubberised	

Load	SE 1	SE 2	SE 3
Milling machines	340 kg	460 kg	1 600 kg
gen. Machine	570 kg	1 460 kg	3 500 kg
Thread	M12	M16	M 20
Base Ø/Base height	120/32	160/35	185/39



A threaded rod is required for the following models:
MF2-B / MF4-B / MF2V/ MF4V / MT60 / MT100 / MT200 /MT230S

Universal milling table feed	Art. no.
V 99S	3352021
› Horizontal assembly	
› Motor: 90 W 230 V ~50 Hz	
MH 35V assembly kit for the X-axis	3352035
MH 50V assembly kit for the X-axis	3352036
V 250S	3352030
› Vertical assembly	
› Motor: 130 W 230 V ~50 Hz	
V 250	3352025
› Motor: 130 W 110 V ~50 Hz	
› For the Y axis of MF 2V / MF 4V	
› Includes assembly kit	
Features	
› Emergency stop shutdown, no restart	
› Stepless speed control and rapid feed (only possible if the feed is integrated into the emergency stop circuit.)	
› Clockwise/anticlockwise rotation	
› Overload protection and limit stop switch	
› For self-assembly	





Workpiece support	Art. no.
WPS-1	3354261
WPS-2	3354262
WPS-3	3354263
WPS-4	3354264
› Material S 45C	





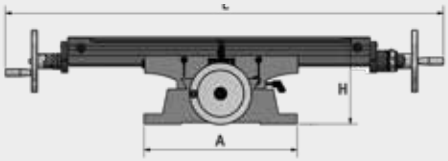
	Min. height (A)	height max. (B)	ØC	ØD	max. load	Weight
	mm				KN	kg
WPS-1	40	50	30	40	50	0.3
WPS-2	65	90	28	38	50	0.4
WPS-3	90	140	40	50	50	1.1
WPS-4	140	230	45	55	50	2.3

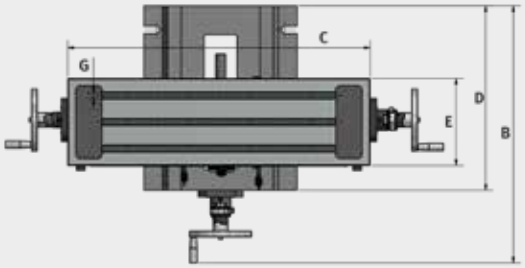
Prism	Art. no.
WP 30	3352195
› Robust design for use on tool machines.	
› High-precision design	
› Adjustable from 0° to 60° and from 0° to -30°	
› Hardened and ground carbon steel	
› Precision squareness 0.005 mm	
› Angle tolerance 0.01°	
› Dimensions approx. L x W x H: 75 x 25 x 32 mm	



Cross table	Art. no.
KT 120	3356595
KT 179	3356596
KT 180	3356591
KT 210	3356600
› Coolant channel	
› Dovetail guide adjustable	
› Adjustable handwheel scaling with 0.05 mm increments	







Technical data	KT120	KT179	KT 180	KT210
A (Base width)	222 mm	274 mm	274 mm	370 mm
D (base length)	280 mm	340 mm	340 mm	445 mm
C (table length)	400 mm	500 mm	700 mm	730 mm
E (table width)	120 mm	180 mm	180 mm	210 mm
G (T-slot size)	10 mm	12 mm	12 mm	14 mm
L x W x H (mm) approx.	506 x 400 x 140	748 x 483 x 155	948 x 483 x 155	1 060 x 620 x 210
Weight approx.	22 kg	46 kg	54 kg	84 kg
Travel distances				
X axis	220 mm	287 mm	480 mm	480 mm
Y axis	165 mm	167 mm	170 mm	210 mm
Max. load	40 kg	55 kg	55 kg	80 kg

Hold-down clamp	Art. no.
Set of 2 table grooves **14 mm/M12**	3352031
› L x W x H approx. 115 x 42 x 39 mm. Height adjustment: 0 – 89 mm	
Set of 2 table grooves **18 mm/M16**	3352032
› L x W x H approx.: 133 x 50 x 49 mm. Height adjustment: 0 – 101 mm	
Features	
› Clamping height adjustable	
› Brass plate below the clamping arm protects material against damage	



T-slot nut (individual)	Art. no.
M8 / 10 mm	3353020
M10 / 12 mm	3353022
M12 / 14 mm	3353025
M14 / 16 mm	3353026
M16 / 18 mm	3353028



Universal compressed air tool clamping system	Art. no.
for **MF 2V** and **MF 4V**	3352394
exclusive installation	
Factory assembly clamping system	9000490

› Including tool clamp, cover cap, maintenance unit, key type, drawbar, control cabinet, operating element
› High negative pressure achievable
› Short change times through single-handed operation
› Safe locking through toggle lever principle
› Precise guiding thanks to optimised geometry
› Low air consumption



(Note: Customisation work may be required for orders without factory assembly).

Set of parallel shims	Art. no.
18-part	3536191

› For precision work for parallel mounting of workpieces in machines, vices on scoring boards or tool machines
› Precision ground to an accuracy of 0.01 mm
› Length approx. 150 mm x width approx. 8.5 mm
› 2 pieces each: 14 mm; 16 mm; 20 mm; 24 mm; 30 mm; 32 mm; 36 mm; 40 mm; 44 mm





Parallel shim set	Art. no.
20-part	3354001

› For precision work for parallel mounting of workpieces in machines, vices on scoring boards or tool machines
› Precision ground to an accuracy of 0.01 mm
› Length approx. 150 mm x width approx. 3 mm
› 2 pieces each: 8 mm; 13 mm; 16 mm; 19 mm; 22 mm; 25 mm; 31 mm; 35 mm; 38 mm; 41 mm



Thread-tapping machine	Art. no.
M5 – M12/B16	3352042

› Quick reverse built-in, immediately effective on changing the feed direction
› 4-stage adjustable slipping clutch

Scope of delivery:

› Two flexible collets
› Two open-ended spanners
› Hand grip
› Allen key



Technical data	
Self-release path	4 mm
Freewheel	1.5 mm
Length compensation tensioned	8.5 mm
Max. speed	1 000 min^{-1}
Transmission ratio Forward and reverse motion	1 : 1.75
Cutting range	M5- M12
Clamping range	3.5 – 10
Length	B16 DIN 238
Length compensation compressed	156 mm
Shank holder	5 mm

Universal coolant device	
230V / 1 Ph	3351999

› Max. delivery height 2.5 m / delivery rate 8 l/min
› Tank capacity 11 litres. / Dimensions L x W x H approx.: 370 x 245 x 170 mm
› Complete with tank, flexible tube, hose and switch/plug combination
› Magnetic base fastener for coolant hose



Coolant hose	Art. no.
KMS 2	3356660

› Two flexible and stable coolant hoses made of individual plastic elements
› Not electrically conductive
› Magnetic base holding force up to 50 kg
› Length of the coolant hoses 335 mm each
› Resistant to most solvents and chemicals
› Universally deployable on all tool machines



Coolant mist lubricator	Art. no.
MMC1	3356663

› Magnetic base with a holding force of 75 kg
› Foot size L x W x H approx.: 62 x 50 x 55 mm
› Screw connection for external compressed air supply
› A flexible and sturdy hose with
› a length of 500 mm



Machine bases

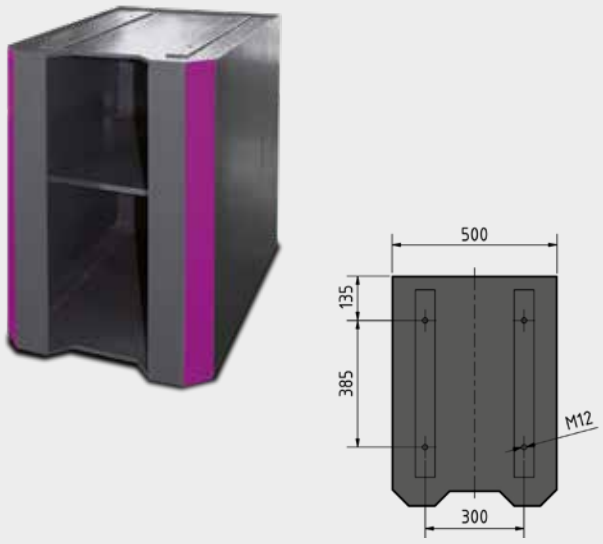
Universal base	Art. no.
MSM 1	3353000
Chip tray	3352999

› for milling machine models BF16 / MH20 / MH22
› Machine base dimensions approx. 420 x 340 x 800 mm
› Chip tray dimensions approx. 720 x 470 x 30 mm
› Machine base net weight approx. 28 kg



Universal base	Art. no.
MSM 2	3353009

› For milling machine models MH 25V / MH 25SV
› Solid design and weight ensure stability
› Net weight approx. 51 kg
› Dimensions approx. 500 x 700 x 750 mm



Universal base	Art. no.
MSM 3	3353014

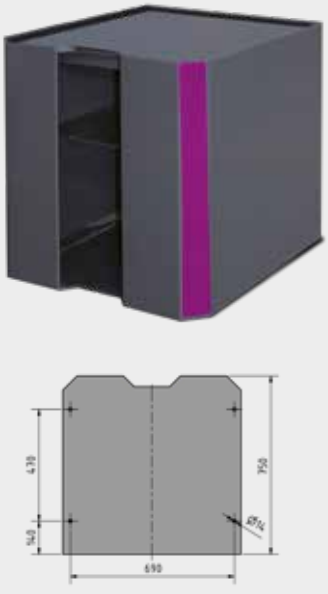
› for milling machine models MH 35G / MH 35V / MB 4
› Solid design and weight ensure stability
› Net weight approx. 86.5 kg
› Dimensions approx. 650 x 1 035 x 775 mm (including chip collection plates)
› Dimensions approx. 650 x 550 x 750 mm (excluding chip collection trays)

The rear mounting holes must be drilled by the customer



Universal base	Art. no.
MSM 4	3353015

› For milling machine MH 50G / MH 50V
› Solid design and weight ensure stability
› Net weight approx. 134 kg
› Dimensions approx. 650 x 550 x 750 mm



- Ideally suited as a sturdy workbench or as a machine base frame for drilling, milling and small lathes
- Height-adjustable in three stages, so that it can be flexibly adapted to the user
- Robust construction made from durable materials, with meticulous workmanship. Sturdy frame construction that safely supports even heavier workpieces and ensures long-lasting stability.
- Robust drawer runners for reliable access and organisation.

Workbench	Art. no.
OWB 10	3353017
Max. load capacity	300 kg
Dimensions (L x W)	770 x 610 mm
Height dimensions (working height)	850 – 1 020 mm
Net weight approx.	83 kg



Supplied disassembled and must be assembled



Application image with the optional DX 13V drill

Workbench	Art. no.
OWB 30	3353019
Max. load capacity	300 kg
Dimensions (L x W)	1 400 x 610 mm
Height dimensions (working height)	800 – 1 020 mm
Net weight approx.	150 kg



Supplied unassembled and requires assembly



Application image with the optional TU 2807 lathe

Starter set	Art. no.
BT 20	3353281
1 piece cutter head holder Ø 16 mm	
2 pieces of Weldon holder Ø 6 mm	
2 pieces of Weldon holder Ø 8 mm	
1 pieces of Weldon holder Ø 10 mm	
1 pieces of Weldon holder Ø 12 mm	
1 pc. tool holder BT20/B16	
11 units pull studs	
1 piece quick-action drill chuck 1 – 13 mm	
1 piece facing and copying cutterhead	
2 pcs collet chuck ER 25	
1 piece collet spanner ER 25	
12-part collet set ER 25	

Holder	Art. no.
Cutter head mount Ø 16 mm	3352728



Weldon holder	Art. no.
Ø 6 mm	3352732
Ø 8 mm	3352734
Ø 10 mm	3352736
Ø 12 mm	3352738



Tool holder	Art. no.
BT 20/B16	3352727



Collet chuck spanner	Art. no.
ER 16	3352742
ER 25	3352745



Optimum Precision quick release chuck	Art. no.
DKC 13 / 0-13 mm; B16 bis 4 800 min^{-1}	3050632
DKC 16 / 0-16 mm; B16 up to 4 000 min^{-1}	3050633



Copy and face milling cutter	Art. no.
	3350202



- Universally deployable for machining all steels and NF metals
- For facing and copying
- Made of special steel – highly quenched and hardened
- Excellent planarity and true running accuracy
- Including hexagon socket
- Outer diameter 52 mm
- ISO: RD X 1 003 D52/R5

Assembly and tool adjustment aid	Art. no.
	3352731



- For easy and precise adjustment of tools
- Vertical and horizontal collet for tools with a steep-angle taper

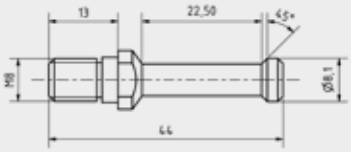
Collet chuck	Art. no.
ER 16	3352741
ER 25	3352744



Pull stud Optimum	Art. no.
	3352726

- Optimum custom build (no standard BT 20 bolts)





Collet set	Art. no.
ER 16, 12-part Ø 1-10 mm	3440282
ER 25, 15-part Ø 1-16 mm	3441109



Starter set	Art. no.
BT 30	3353282
1 piece cutter head holder Ø 22 mm	
1 piece drill chuck 1 – 13mm	
2 piece Weldon 6 mm	
1 piece Weldon 8 mm	
1 piece Weldon 10 mm	
1 piece Weldon 12 mm	
1 piece Weldon 16 mm	
2 piece Weldon 20 mm	
1 piece BT30-MT2 adapter	
4 units collet chuck ER 32	
1 piece collet spanner ER 32	
18-part collet set ER 32	
1 piece height adjuster	
1 piece assembly and tool setting aid	
14 pcs. pull studs BT 30	
1 pc. taper wiper	

Milling head holder	Art. no.
Ø 22 mm seat	3353306



Quick-action drill chuck	Art. no.
Clamping range 1.5 – 16 mm	3536303



Weldon holder	Art. no.
Ø 6 mm	3353310
Ø 8 mm	3353311
Ø 10 mm	3353312
Ø 12 mm	3353313
Ø 16 mm	3353314
Ø 20 mm	3353315



Adapter	Art. no.
BT 30/MK2	3353305
BT 30/MK3	3536316



Collet holder	Art. no.
ER 32	3353304



Chuck mount	Art. no.
BT 30 – B16	3353308



Collet chuck spanner	Art. no.
ER 32	3353307



Height adjustment device	Art. no.
Analogue version	3536290



› The reference point in the Z-axis can be quickly and easily determined, and the tools can be set to zero (e.g. when milling), without damaging the workpiece.
› Housing height 50 mm

Assembly and tool adjustment aid	Art. no.
	3536203



› For easy and precise adjustment of tools
› Vertical and horizontal collet for tools with a steep-angle taper

Taper wiper	Art. no.
	3353301



Pull stud	Art. no.
BT 30	3353302



DIN 2 080 M12/M12	3536177



Collet set	Art. no.
ER 32, 18-part Ø 1-10 mm	3441122



Starter set	Art. no.
BT 40	3353284
1 piece cutter head holder Ø 27 mm	
1 piece drill chuck 1 – 13mm	
2 piece Weldon 6 mm	
1 piece Weldon 8 mm	
1 piece Weldon 10 mm	
1 piece Weldon 12 mm	
1 piece Weldon 16 mm	
2 piece Weldon 20 mm	
1 piece BT40-MT3 adapter	
4 units collet chuck ER 32	
1 piece collet spanner ER 32	
18-part collet set ER 32	
1 piece height adjuster	
1 piece assembly and tool setting aid	
14 pcs. pull studs BT 40	
1 pc. taper wiper	

Milling head holder	Art. no.
Ø 27 mm seat	3353336



Quick-action drill chuck	Art. no.
Clamping range 1.5 – 16 mm	3536333



Weldon holder	Art. no.
Ø 6 mm	3353340
Ø 8 mm	3353341
Ø 10 mm	3353342
Ø 12 mm	3353343
Ø 16 mm	3353344
Ø 20 mm	3353345



Adapter	Art. no.
BT 40 / MT3	3353335



Collet holder	Art. no.
ER 32	3353334



fitting	Art. no.
BT 40/B16	3353338



Collet chuck spanner	Art. no.
ER 32	3353307



Height adjustment device	Art. no.
Analogue version	3536290



› The reference point in the Z-axis can be quickly and easily determined, and the tools can be set to zero (e.g. when milling), without damaging the workpiece.
› Housing height 50 mm

Assembly and tool adjustment aid	Art. no.
	3536204



› For easy and precise adjustment of tools
› Vertical and horizontal collet for tools with a steep-angle taper

Taper wiper	Art. no.
	3353331



Pull stud	Art. no.
BT 30	3353332



DIN 2 080 M12/M12	3536179



Collet set	Art. no.
ER 32, 18-part Ø 1-10 mm	3441122



LATHES

TM 3 110 | Art. no.: **3403010**

Lead and feed screw lathe
convinces through
easy handlingl



BELT VARIO DO-IT-YOURSELFERS

The small-scale lathe with electronically controllable speed

OPTIMUM the original

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Direct current motor
- Low-voltage electronics
- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Concentricity on the lathe chuck ≤ 0.05 mm
- Lead screw for thread cutting or automatic longitudinal turning
- Longitudinal, cross and top slide
- Automatic longitudinal/lead screw drive
- Clockwise/Anti-clockwise rotation switchable via control panel
- All guides adjustable without play using gib strips
- Sturdy metal handwheels with adjustable fine scaling 0.04 / 0.01 mm
- Ribbed grey cast prism bed, induction hardened and scraped
- Fast and easy speed change through V-belt
- Safety switch in cover
- Emergency stop button
- Chuck protection with microswitch
- Three-jaw lathe chuck included as standard
- Large thread cutting range thanks to interchangeable gear set included in standard delivery
- EMC filter class C1



TECHNICAL DATA

Model	TU 1503V [1]
Article no.	3420260
Power	
Electrical connection	230 V / 1 Ph ~50 Hz
Drive motor S6-60% operation	450 W
Spindle	
Spindle taper	MK1
Spindle bore	Ø 11 mm
Spindle seat	cylindrical Ø 22 mm
Turning tool size max.	8 mm
Work areas	
Centre height	75 mm
Centre width	265 mm
Swing Ø above machine bed [1]	150 mm
Swing Ø above cross slide	70 mm
Bed width	70 mm
Speed range	120 – 3 000 min^{-1}
Number of stages	2 stages, electronically adjustable
Travel distances	
Top slide	40 mm
Cross slide	55 mm
Bed slide	270 mm
Feed and pitch	
Longitudinal feed within the range	0.05 – 0.1 mm/rev (2 feeds)
Metric pitch	0.5 – 1.5 mm/rev (8 pitches)
Tailstock	
Tailstock seat	MT1 shortened
Tailstock sleeve travel	30 mm
Dimensions (L x W x H) approx.	570 x 340 x 300 mm
Net weight approx.	23 kg

SCOPE OF DELIVERY

- › Three-jaw lathe chuck Ø 80 mm, centric clamping
- › Non-rotating centring tip MT1
- › Double tool holder 8 mm
- › Splash guard
- › Chip tray
- › Change gear set
- › Operating tool

ACCESSORIES

Designation	Article no.
Three-jaw lathe chuck Ø 100 mm, Individual clamping	3440287
Four-jaw lathe chuck Ø 100 mm, Individual clamping	3440286
Four-jaw lathe chuck Ø 80 mm, centric clamping	3442808
Lathe tool set 8 mm, 5-part	3441662
Lathe tool set 8 mm, 11-part	3441601
Follow steady rest Passagewaymax. Ø 45 mm	3440210
Steady rest Passageway max. Ø 40 mm	3440211
Co-rotating centring tip MT 1	3440700
Collet chuck ER 16, Ø 22 mm, cylindrical	3440281
Collet set ER 16, 1 – 10 mm	3440282
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

1) Note: The machine (frequency converter) complies with the DIN EN 55011 standard class C1 Important information on operating machines with frequency inverters and general information on operating our machines on page 331

Modelbuilding lathe with electronic speed control and digital speed display

OPTIMUM the original

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Precision workmanship
- Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground
- Hardened and ground z-axis guideway
- Hardened spindle nose (DIN 6 350)
- Guaranteed true running accuracy of spindle nose better than 0.009 mm
- Automatic longitudinal/leading spindle drive
- Roll-milled trapezoidal thread on lead spindle
- Thrust bearings
- Leading spindle borne on two sintered bearings
- Longitudinal, cross and top slides
- Clockwise/Anti-clockwise rotation switchable via control panel
- Hardened main spindle borne on adjustable precision taper roller bearings
- Tapered roller bearings in P5 quality
- Cylindrical centring mount
- Hardened spindle nose with Ø 21 mm spindle bore
- Tailstock adjustable for turning spheres
- Tailstock sleeve and handwheel with adjustable fine scaling 0.02 mm; fast, easy adjustment without tools thanks to clamping lever
- Gearbox with interchangeable gearwheels
- Emergency stop button
- Quadruple tool holder, rotating
- Lathe chuck true running accuracy better than 0.04 mm
- Chuck protection with microswitch
- Three-jaw lathe chuck included as standard
- Interchangeable gear set as standard delivery enables large thread cutting area
- EMC filter class C1



TECHNICAL DATA

Model	TU 2004V[1)]
Article no.	3420310
Power	
Electrical connection	230 V / 1 Ph ~50 Hz
Drive motor	600 W
Spindle	
Spindle taper	MT3
Spindle bore	Ø 21 mm
Spindle seat	cylindrical Ø 72 mm
Three-jaw lathe chuck passageway	Ø 20 mm
Turning tool size max.	10 mm
Work areas	
Centre height	100 mm
Centre width	300 mm
Swing Ø above machine bed[1)]	200 mm
Swing Ø above cross slide	110 mm
Bed width	100 mm
Speed range	150 – 2 500 min^{-1}
Number of stages	2 stages, Electronic speed control
Travel distances	
Top slide	55 mm
Cross slide	75 mm
Bed slide	300 mm
Feed and pitches	
Longitudinal feed within the range	0.1/ 0.2 mm/rev (2 feeds)
Pitch – metric in range	0.25 – 3 mm/rev (14 pitches)
Pitch – inch in range	44 – 8 turns/inch (12 pitches)
Tailstock	
Tailstock seat	MT2
Tailstock sleeve travel	65 mm
Dimensions (L x W x H) approx.	830 x 425 x 360 mm
Net weight approx.	65 kg

SCOPE OF DELIVERY

- Three-jaw lathe chuck Ø 100 mm, centric clamping
- Two non-rotating centring tips MT2 and MT 3
- Quadruple tool holder 10 mm
- Splash guard
- Chip tray
- Change gear set
- Operating tool

ACCESSORIES

Designation	Art. no.:
Four-jaw lathe chuck Ø 100 mm centric clamping (chuck flange 3440312 is required)	3442810
Four-jaw lathe chuck Ø 100 mm individual clamping (chuck flange 3440312 is required)	3442872
Cylindrical chuck flange, for mounting the lathe chuck	3440312
Quick change tool holder SWH-AA	3384311
Factory assembly SWH-AA	9000401
Spare tool holder 12 x 50 Type D for square	3384312
Spare tool holder 12 x 50 type H for round	3384320
Lathe tool set 10 mm, 11-part	3441602
Lathe tool set 10 mm, 5-part	3441664
Follow steady rest, passageway max. Ø 40 mm	3440230
Fixed steady rest, passageway max. Ø 50 mm	3440231
Collet chuck ER 25 Ø 72 mm	3440305
Clamping disc Ø 170 mm	3440295
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

1) Note: The machine (frequency converter) complies with the DIN EN 55011 standard: class C1 Important information on operating machines with frequency inverters and general information on operating our machines on page 331

BELT | TU 2304V VARIO | DO-IT-YOURSELFERS

Lathes for DIY.
TU 2304V with electronic speed control

OPTIMUM the original

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Precision workmanship
- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.009 mm
- Concentricity on the lathe chuck ≤ 0.05 mm
- Lead screw for thread cutting or automatic longitudinal turning
- Clockwise/Anti-clockwise rotation switchable via control panel
- Roll-milled trapezoidal spindles
- Thrust bearings
- Precision slide
- Leading spindle borne on two sintered bearings
- All guides adjustable using gib strips
- Handwheels with adjustable fine scaling 0.04 / 0.01 mm
- Tailstock for taper turning, adjustable by ± 5 mm
- Tailstock sleeve and handwheel with adjustable fine scaling 0.02 mm
- Emergency stop button
- Fast, easy adjustment of tailstock without tools thanks to clamping lever
- Quadruple tool holder
- Main spindle bearing of tolerance class P5
- Hardened spindle nose
- Set of interchangeable gears for thread cutting included in standard scope of delivery
- Comprehensive accessories
- Lasting value

TU 2304V

- High-torque motor with constant torque curve to a great extent
- Speed change easily adjustable via potentiometer
- Digital speed display
- EMC filter class C1



Fig.: TU 2304V with optional machine base MST 1

ARGUMENTS,...



TU 2304V WITH DIGITAL SPEED DISPLAY
› Electronically adjustable 2-stage spindle speed 150 – 2 200 min^{-1}
› Speed change easily adjustable via potentiometer



MACHINE BED
› Grey cast iron prism bed heavily ribbed, aged for at least six months, induction hardened and precision ground



CHUCK GUARD
› with position switch
› Three-jaw lathe chuck Ø 100 mm, centric clamping, included in standard scope of delivery

ACCESSORIES

Machine base MST1
Art no. 3440409

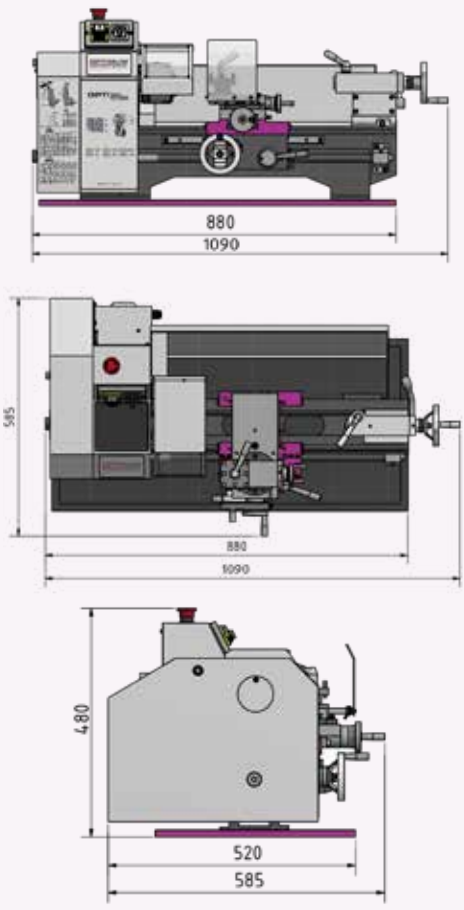
Machine mobile base OWB 50
Art no. 3353019

Levelling plate SE 1
(6 units needed)
Art no. 3381012

TECHNICAL DATA

Model	TU 2 304	TU 2304V[1)]
Article no.	3420320	3420325
Power		
Electrical connection	230 V / 1 Ph ~50 Hz	
Drive motor	750 W	
Spindle		
Spindle taper	MT3	
Spindle seat	cylindrical Ø 72 mm	
Spindle hole, bar passage diameter	Ø 20 mm	
Turning tool size max.	12 mm	
Work area		
Centre height	115 mm	
Centre width	450 mm	
Swing Ø above machine bed[1)]	230 mm	
Swing Ø above cross slide	128 mm	
Bed width	133 mm	
Speed range		
Spindle speed	125 – 2 000 min^{-1}	150 – 2 200 min^{-1}
Number of stages	6 stages	2 stages, electronically adjustable
Travel distances		
Top slide	75 mm	
Cross slide	120 mm	
Bed slide	360 mm	
Pitches		
Pitch – metric in range	0.4 – 3.5 mm/rev (14 pitches)	
Pitch – inch in range	44 – 8 turns/inch (14 pitches)	
Tailstock		
Tailstock seat	MT2	
Tailstock sleeve travel	70 mm	
Dimensions and weight		
Dimensions (L x W x H) approx.	1 090 x 585 x 510 mm	
Net weight approx.	111 kg	114 kg

DIMENSIONS



SCOPE OF DELIVERY

- Three-jaw lathe chuck Ø 100 mm, centric
- Non-rotating centring tip MT2 and MT3
- Quadruple tool holder 12 mm
- Splash guard
- Chip tray
- Change gear set
- Operating tool

ACCESSORIES

Designation	Article no.
Three-jaw lathe chuck Ø 125 mm, centric clamping (Chuck flange Art. no 3440313 required)	3442712
Four-jaw lathe chuck Ø 125 mm, centric clamping (Chuck flange Art. no 3440313 required)	3442812
Four-jaw lathe chuck Ø 125 mm, individual clamping (Chuck flange Art. no 3440313 required)	3442874
Cylindrical chuck flange, for mounting the lathe chuck	3440313
Quick change tool holder SWH 1-A	3384301
Factory assembly SWH 1-A	9000401
Spare tool holder 20 x 90 type D for square chisels	3384302
Spare tool holder 20 x 85 type H for round chisels	3384321
Lathe tool set 10 mm, 11-part	3441602
Lathe tool set 12 mm, 11-part	3441603
Lathe tool set 12 mm, 5-part "Made in Germany"	3441212
Fixed steady rest, passageway max. Ø 55 mm	3440361
Follow steady rest, passageway max. Ø 34 mm	3440360
Rotating centring tip MT 2	3440702
Clamping disc Ø 170 mm	3440295
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

ACCESSORIES

Designation	Art. no.
	
Digital position display DRO 5 incl. 3 magnetic sensors	3383975
Magnetic strip, length 1 100 mm	3383978
Factory assembly	9000420

For information on the DRO 5, see page 221

1) Note: The machine (frequency converter) complies with the DIN EN 55011 standard: class C1 Important information on operating machines with frequency inverters and general information on operating our machines on page 331

Lathes for DIY.
TU 2406V with electronic speed control

OPTIMUM the original

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Precision workmanship
- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.009 mm
- Concentricity on the lathe chuck ≤ 0.05 mm
- Lead screw for thread cutting or automatic longitudinal turning
- Clockwise/Anti-clockwise rotation switchable via control panel
- Roll-milled trapezoidal spindles
- Thrust bearings
- Precision slide
- Two tapered roller bearings in P5 quality
- Leading spindle borne on two sintered bearings
- All guides adjustable using gib strips
- Handwheels with adjustable fine scaling 0.04 / 0.01 mm
- Tailstock for taper turning, adjustable by ± 5 mm
- Tailstock sleeve and handwheel with adjustable fine scaling 0.02 mm
- Fast, easy adjustment of the tailstock without tools thanks to clamping lever
- Emergency stop button
- Quadruple tool holder
- Main spindle bearing of tolerance class P5
- Hardened spindle nose
- Set of interchangeable gears included in standard scope of delivery
- Three-jaw lathe chuck included as standard
- Comprehensive accessories
- Lasting value

TU 2406V

- Speed change easily adjustable via potentiometer
- Digital speed display
- EMC filter class C1



Fig.: TU 2406V with optional machine base MST 1

ARGUMENTS,...



TU 2406V WITH DIGITAL SPEED DISPLAY

› Electronically adjustable 2-stage spindle speed 150 – 2 500 min^{-1}

› Speed change easily adjustable via potentiometer



MACHINE BED

› Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground



CHUCK GUARD

› with position switch

› Three-jaw lathe chuck Ø 125 mm, centric clamping, included in standard scope of delivery

ACCESSORIES

Machine base MST1
Art no. 3440409

Machine mobile base OWB 50
Art no. 3353019

Levelling plate SE 1
(6 units needed)
Art no. 3381012

TECHNICAL DATA

Model	TU 2406	TU 2406V[1)]
Article no. (230 V)	3420350	3420355
Article no. (400 V)	3420353	-
Power		
Electrical connection	230 V / 1 Ph ~50 Hz 400 V / 3 Ph ~50 Hz	230 V / 1 Ph ~50 Hz
Drive motor	750 W	1.1 kW
Spindle		
Spindle taper	MT3	
Spindle seat	cylindrical Ø 52 mm	
Spindle hole, bar passage diameter	Ø 21 mm	
Turning tool size max.	14 mm	
Work area		
Centre height	125 mm	
Centre width	550 mm	
Swing Ø above machine bed[1)]	250 mm	
Swing Ø above cross slide	148 mm	
Bed width	133 mm	
Speed range		
Spindle speed	125 – 2 000 min^{-1}	150 – 2 500 min^{-1}
Number of stages	6 stages	2-speed, electronic speed control
Travel distances		
Top slide	75 mm	
Cross slide	120 mm	
Bed slide	550 mm	
Pitches		
Pitch – metric in range	0.4 – 3.5 mm/rev (14 pitches)	
Pitch – inch in range	44 – 10 turns/inch (12 pitches)	
Tailstock		
Tailstock seat	MT2	
Tailstock sleeve travel	60 mm	
Dimensions and weight		
Dimensions (L x W x H) approx.	1 250 x 581 x 485 mm	
Net weight approx.	125 kg	127 kg

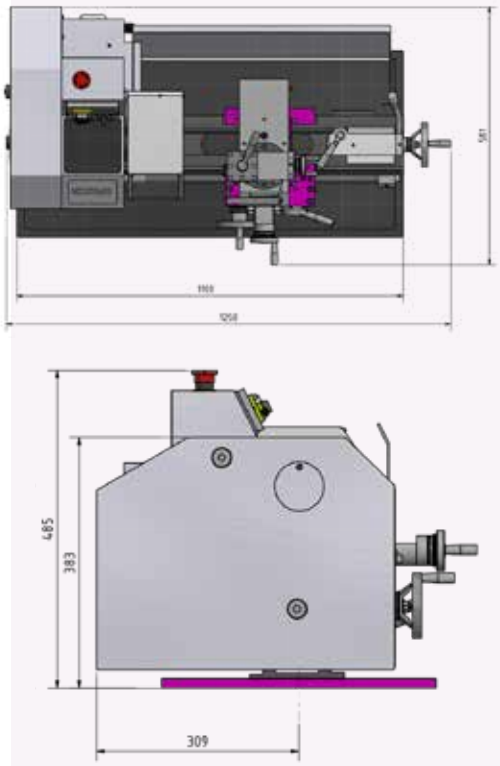
ACCESSORIES

Designation	Article no.
Four-jaw lathe chuck Ø 125 mm, centric clamping (Chuck flange Art. no 3440511 required)	3442812
Four-jaw lathe chuck Ø 125 mm, individual clamping (Chuck flange Art. no 3440511 required)	3442874
Cylindrical chuck flange, for mounting the lathe chuck	3440511
Quick change tool holder SWH 1-A	3384301
Factory assembly SWH 1-A	9000401
Spare tool holder 20 x 90 type D for square chisels	3384302
Spare tool holder 20 x 85 type H for round chisels	3384321
Lathe tool set 10 mm, 11-part	3441602
Lathe tool set 12 mm, 11-part	3441603
Lathe tool set 12 mm, 5-part	3441666
Lathe tool set 12 mm, 5-part "Made in Germany"	3441212
Fixed steady rest passageway max. Ø 50 mm	3441315
Follow steady rest passageway max. Ø 40 mm	3441310
Collet chuck ER 32, short taper	3440506
Clamping disc Ø 240 mm	3440552
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

1) Note: The machine (frequency converter) complies with the DIN EN 55011 standard: class C1 Important information on operating machines with frequency inverters and general information on operating our machines on page 331

DIMENSIONS



SCOPE OF DELIVERY

- Three-jaw lathe chuck Ø 125 mm, centric clamping
- Non-rotating centring tip MT2 and MT3
- Quadruple tool holder 14 mm
- Splash guard
- Chip tray
- Change gear set
- Operating tool

ACCESSORIES

Designation	Art. no.
	
Digital position display DRO 5 incl. 3 magnetic sensors	3383975
Magnetic strip, length 1 100 mm	3383978
Factory assembly	9000420

For information on the DRO 5, see page 221

Lead screw lathes with feed gear for the demanding user. TU 2506VB with electronically adjustable speed

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Precision workmanship
- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.009 mm
- Concentricity on the lathe chuck ≤ 0.04 mm
- Lead screw for thread cutting or automatic longitudinal turning
- Leading spindle borne on two sintered bearings
- All guides adjustable using gib strips
- Clockwise/Anti-clockwise rotation switchable via control panel
- Roll-milled trapezoidal spindles
- Tapered roller bearings in P5 quality
- Hardened main spindle borne on adjustable, precision taper roller bearings
- Hardened spindle nose with Ø 26 mm spindle bore
- Handwheels on slide with adjustable fine scaling 0.04 / 0.01 mm
- Top slide displaceable on cross slide
- Chip guard on top slide
- Tailstock for taper turning, adjustable by ± 5 mm
- Tailstock sleeve and handwheel with adjustable fine scaling 0.02 mm
- Fast, easy adjustment of the tailstock without tools thanks to clamping lever
- Emergency stop button
- Quadruple tool holder
- Interchangeable gear set included as standard for thread cutting
- Fully equipped; the user can immediately start productive work after commissioning

TU 2 506 VB

- Digital speed display



Fig.: TU 2506VB with optional base MST 1 and SE1

ARGUMENTS,...



TU 2506VB WITH DIGITAL SPEED DISPLAY

› Electronically adjustable 2-stage spindle speed 150 – 2 500 min^{-1}
› Speed change easily adjustable via potentiometer



MACHINE BED

› Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground



TAILSTOCK

› for taper turning, adjustable by ± 5 mm
› Fast, easy adjustment without tools thanks to clamping lever



CHUCK PROTECTION

› with position switch
› Three-jaw lathe chuck Ø 125 mm, centric clamping, included in standard scope of delivery

ACCESSORIES

Machine base MST1
Art no. 3440409

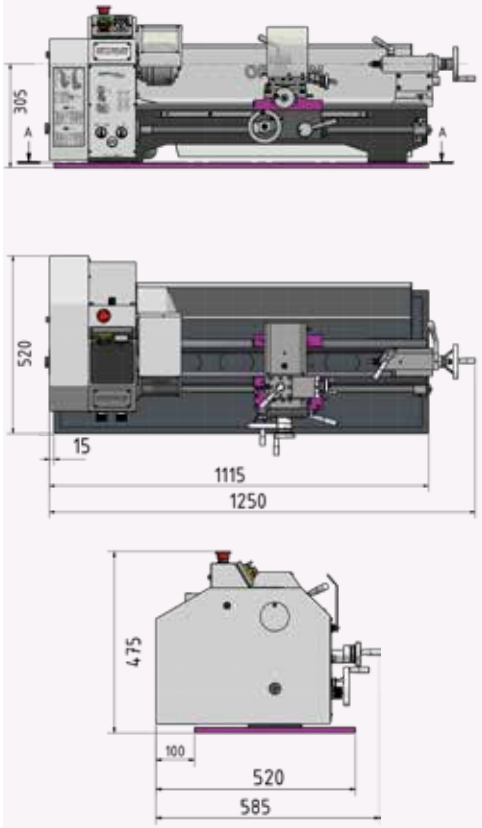
Machine mobile base OWB 50
Art no. 3353019

Levelling plate SE 1
(6 units needed)
Art no. 3381012

TECHNICAL DATA

Model	TU 2506	TU 2506VB [1]
Article no. (230 V)	3425001	3425010
Article no. (400 V)	3425003	-
Power		
Electrical connection	230 V / 1 Ph ~50 Hz 400 V / 3 Ph ~50 Hz	230 V / 1 Ph ~50 Hz
Drive motor	750 W	1.1 kW
Spindle		
Spindle taper	MT4	
Spindle seat	Short taper	
Spindle hole, bar passage diameter	Ø 26 mm	
Turning tool size max.	12 mm	
Work area		
Centre height	125 mm	
Centre width	550 mm	
Swing Ø above machine bed[1]	246 mm	
Swing Ø above cross slide	149 mm	
Bed width	134 mm	
Speed range		
Spindle speed	125 – 2 000 min^{-1}	150 – 2 500 min^{-1}
Number of stages	6 stages	2 stages, electronically adjustable
Travel distances		
Top slide	70 mm	
Cross slide	110 mm	
Bed slide	550 mm	
Feeds and pitches		
Longitudinal feed within the range	0.07 – 0.4 mm/rev (6 feeds)	
Pitch – metric in range	0.2 – 4 mm/rev (21 pitches)	
Pitch – inch in range	56 – 8 turns/inch (21 pitches)	
Tailstock		
Tailstock seat	MT2	
Tailstock quill diameter/travel	30 mm / 65 mm	
Dimensions and weight		
Dimensions (L x W x H) approx.	1 250 x 585 x 475	1 250 x 650 x 420
Net weight approx.	138 kg	132 kg

DIMENSIONS



SCOPE OF DELIVERY

- Three-jaw lathe chuck Ø 125 mm, centric clamping
- Non-rotating centring tip MT2 and MT4
- Quadruple tool holder 12 mm
- HSS lathe tools
- Splash guard
- Chip tray
- Change gear set
- Operating tool

ACCESSORIES

Designation	Article no.
Four-jaw lathe chuck Ø 125 mm, individual clamping (Chuck flange Art. no. 3441312 required)	3442874
Four-jaw lathe chuck Ø 125 mm, centric clamping (Chuck flange Art. no. 3441312 required)	3442812
Chuck flange, short cone, for mounting the lathe chuck	3441312
Quick change tool holder SWH 1-A	3384301
Factory assembly SWH 1-A	9000401
Spare tool holder 20 x 90 type D for square chisels	3384302
Spare tool holder 20 x 85 type H for round chisels	3384321
Lathe tool set 10 mm, 11-part	3441602
Lathe tool set 12 mm, 11-part	3441603
Lathe tool set 12 mm, 5-part "Made in Germany"	3441212
Fixed steady rest, passageway max. Ø 50 mm	3441315
Follow steady rest, passageway max. Ø 40 mm	3441310
Collet set ER 32, 3- 20 mm	3441122
Collet chuck ER 32, short taper	3441306
Clamping disc Ø 240 mm	3441352
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

ACCESSORIES

Designation	Art. no.
	
Digital position display DRO 5 incl. 3 magnetic sensors	3383975
Magnetic strip, length 1 100 mm	3383978
Factory assembly	9000420

For information on the DRO 5, see page 221

1) Note: The machine (frequency converter) complies with the DIN EN 55011 standard Class C2. Important information on operating machines with frequency inverters and general information on operating our machines on page 331

Lead-screw lathe with feed gearbox for high demands with electronically controlled speed

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Precision workmanship
- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.009 mm
- Concentricity on the lathe chuck ≤ 0.04 mm
- Lead screw for thread cutting or automatic longitudinal turning
- Automatic longitudinal/leading spindle drive
- Leading spindle borne on two sintered bearings
- Free moving feed gear with rounded gear wheels running in an oil bath
- All guides adjustable using gib strips
- Clockwise/Anti-clockwise rotation switchable via control panel
- Roll-milled trapezoidal spindles
- Hardened main spindle borne on adjustable, precision taper roller bearings
- Hardened spindle nose with Ø 26 mm spindle bore
- Tapered roller bearings in P5 quality
- Handwheels on slide with adjustable fine scaling 0.04 / 0.01 mm
- Top slide displaceable on cross slide
- Chip guard on top slide
- Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground
- Quadruple tool holder
- Emergency stop button
- Interchangeable gear set included as standard for thread cutting
- Fully equipped; the user can immediately start productive work after commissioning
- Digital speed display



Fig.: TU 2807VB with optional base MST 1 and SE1

ARGUMENTS,...



DIGITAL SPEED DISPLAY
› Electronically adjustable 2-stage spindle speed 150 – 2 500 min^{-1}
› Speed change easily adjustable via potentiometer



MACHINE BED
› Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground



TAILSTOCK
› for taper turning, adjustable by ± 5 mm
› Fast, easy adjustment without tools thanks to clamping lever



CHUCK PROTECTION
› with position switch
› Three-jaw lathe chuck Ø 125 mm, centric clamping, included in standard scope of delivery

ACCESSORIES

Machine base MST1
Art no. 3440409

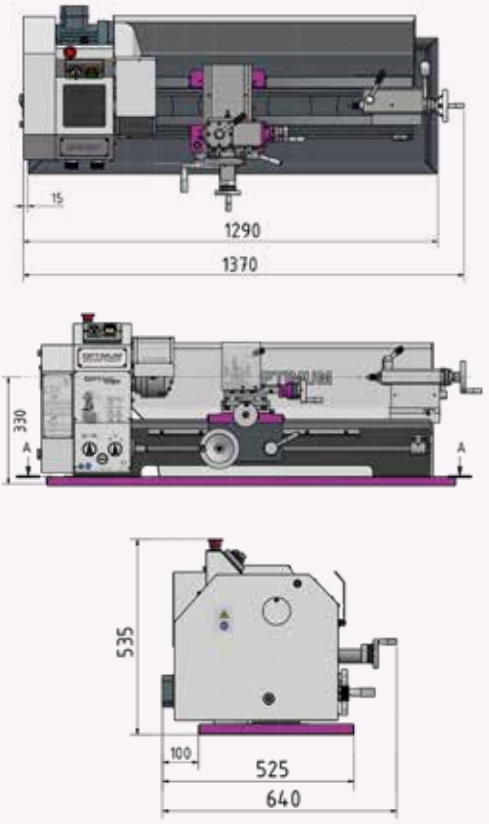
Machine mobile base OWB 50
Art no. 3353019

Levelling plate SE 1
(6 units needed)
Art no. 3381012

TECHNICAL DATA

Model	TU 2807VB [1]
Article no.	3427010
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Drive motor	850 W
Spindle	
Spindle taper	MT4
Spindle seat	Short taper
Spindle hole, bar passage diameter	Ø 26 mm
Turning tool size max.	12 mm
Work area	
Centre height	140 mm
Centre width	700 mm
Swing Ø above machine bed [1]	266 mm
Swing Ø above cross slide	170 mm
Bed width	180 mm
Speed range	
Spindle speed	150 – 2 500 min^{-1}
Number of stages	2 stages, electronically adjustable
Travel distances	
Top slide	60 mm
Cross slide	160 mm
Bed slide	580 mm
Feeds and pitches	
Longitudinal feed within the range	0.07 – 0.4 mm/rev (6 feeds)
Pitch – metric in range	0.2 – 3.5 mm/rev (18 pitches)
Pitch – inch in range	56 – 8 turns/inch (21 pitches)
Tailstock	
Tailstock seat	MT3
Tailstock quill diameter/travel	30 mm /85 mm
Dimensions and weight	
Dimensions (L x W x H) approx.	1 370 x 660 x 440 mm
Net weight approx.	188 kg

DIMENSIONS



SCOPE OF DELIVERY

- Three-jaw lathe chuck Ø 125 mm, centric clamping
- Non-rotating centring tip MT2 and MT4
- Quadruple tool holder 12 mm
- HSS lathe tools
- Splashguard
- Chip tray
- Change gear set
- Operating tool

ACCESSORIES

Designation	Article no.
Four-jaw lathe chuck Ø 125 mm, individual clamping (Chuck flange 3441312 required)	3442874
Four-jaw lathe chuck Ø 125 mm, centric clamping (Chuck flange 3441312 required)	3442812
Chuck flange, short cone, for mounting the lathe chuck Ø 125 mm	3441312
Three-jaw lathe chuck Ø 160 mm, centric clamping (Chuck flange 3441413 required)	3442716
Four-jaw lathe chuck Ø 160 mm, centric clamping (Chuck flange 3441413 required)	3442816
Chuck flange, short cone, for mounting the lathe chuck Ø 160 mm	3441413
Quick change tool holder SWH 1-A	3384301
Factory assembly SWH 1-A	9000401
Spare tool holder 20 x 90 type D for square chisels	3384302
Spare tool holder 20 x 85 type H for round chisels	3384321
Lathe tool set 12 mm, 11-part	3441603
Lathe tool set 12 mm, 5-part "Made in Germany"	3441212
Fixed steady rest, passageway max. Ø 55 mm	3441415
Follow steady rest, passageway max. Ø 56 mm	3441410
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

ACCESSORIES

Designation	Art. no.
Digital position display DRO 5 incl. 3 magnetic sensors	3383975
Magnetic strip, length 1 100 mm	3383978
Factory assembly	9000420

For information on the DRO 5, see page 221

1) Note: The machine (frequency converter) complies with the DIN EN 55011 standard: Class C2. Important information on operating machines with frequency inverters and general information on operating our machines on page 331

Lead and feed screw lathes with longitudinal and cross feed. TU 3008VB with electronically adjustable speed

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Precision workmanship
- Hardened and ground z-axis guideway
- Free moving feed gear with rounded gear wheels running in an oil bath
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Concentricity on the lathe chuck ≤ 0.04 mm
- Lead screw for thread cutting or automatic longitudinal turning
- Automatic longitudinal/cross feeds
- Leading and feed spindles borne on two sintered bearings
- Feed and lead spindle cover
- All guides adjustable using gib strips
- Clockwise/Anti-clockwise rotation switchable via control panel
- Tapered roller bearings in P5 quality
- Hardened main spindle borne on adjustable precision taper roller bearings
- Hardened spindle nose with large Ø 38 mm spindle bore
- Handwheels on slide with adjustable fine scaling 0.04 / 0.01 mm
- Quadruple tool holder
- Emergency stop button
- Three-jaw lathe chuck included as standard
- Interchangeable gear set included as standard for thread cutting
- Gear drive

TU 3008VB

- Speed change easily adjustable via potentiometer
- Digital speed display



Fig.: TU 3008VB with optional base MST 1 and SE1

ARGUMENTS,...



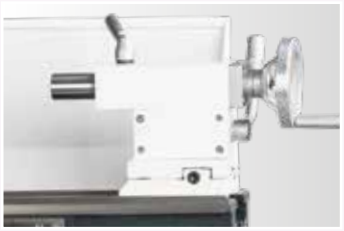
TU 3008VB WITH DIGITAL SPEED DISPLAY

› Electronically adjustable 4-stage spindle speed 75 – 2 400 min^{-1}
› Speed change easily adjustable via potentiometer



MACHINE BED

› Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground



TAILSTOCK

› for taper turning, adjustable by ± 5 mm
› Fast, easy adjustment without tools thanks to clamping lever



PREPARED

› for the assembly of the X, Z and Z0-axis measuring system

ACCESSORIES

Machine base MST1
Art no. 3440409

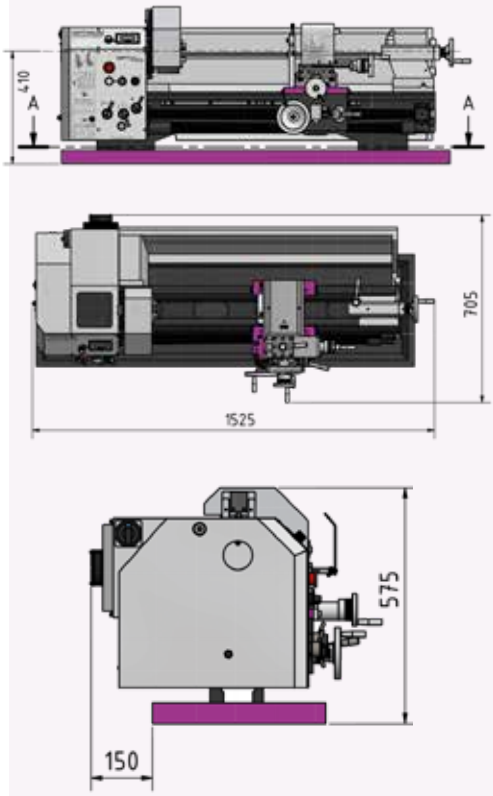
Machine mobile base OWB 50
Art no. 3353019

Levelling plate SE 1
(6 units needed)
Art no. 3381012

TECHNICAL DATA

Model	TU 3008G	TU 3008VB [1]
Article no.	3427210	3427206
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	230 V / 1 Ph
Drive motor	1.1 kW	1.1 kW
Spindle		
Spindle taper	MT5	
Spindle seat	Camlock DIN ISO 702- 2 No. 4	
Spindle hole, bar passage diameter	Ø 38 mm	
Turning tool size max.	25 mm	
Work area		
Centre height	158 mm	
Centre width	720 mm	800 mm
Swing Ø above machine bed[1]	310 mm	
Swing Ø above cross slide	190 mm	
Bed width	180 mm	
Speed range		
Spindle speed /stages TU 3 008	150 – 2 000 min^{-1} / 6 stages	
Spindle speed/stages TU 3008G	165 – 2 400 min^{-1} / 6 stages	
Spindle speed/stages TU 3008VB	75 – 2 500 min^{-1} / 4 speeds, electronically controlled	
Travel distances		
Top slide	65 mm	
Cross slide	150 mm	
Bed slide	600 mm	
Feeds and pitches		
Longitudinal feed within the range	0.085 – 0.832 mm/rev (9 feed rates)	
Cross feed within	0.01 – 0.1 mm/rev (9 feed rates)	
Pitch – metric in range	0.2 – 3.5 mm/rev (18 pitches)	
Pitch – inch in range	56 – 8 Thread pitches/inch (21 pitches)	
Tailstock		
Tailstock seat	MT3	
Tailstock quill diameter/travel	Ø 38 mm / 70 mm	
Dimensions and weight		
Dimensions (L x W x H) approx.	1 525 x 705 x 575 mm	
Net weight approx.	261 kg	243 kg

DIMENSIONS



SCOPE OF DELIVERY

- › Three-jaw lathe chuck Ø 160 mm, centric clamping
- › Non-rotating centring tips MT3 and MT5
- › Quadruple tool holder 25 mm
- › Splash guard
- › Chip tray
- › Change gear set
- › Operating tool

ACCESSORIES

Designation	Article no.
OPTIMUM four-jaw chuck Ø 160 mm, Camlock, DIN ISO 702-2 No. 4, centric clamping, speed 2 150 min^{-1}	3442840
BISON four-jaw chuck, Ø 160 mm, Camlock, DIN ISO 702-2 No. 4, centric clamping, speed 3 600 min^{-1}	3450355
Clamping disc Ø 300 mm Camlock DIN ISO 702-2 No. 4	3442976
Quick change tool holder SWH 1-A	3384301
Factory assembly SWH 1-A	9000401
Spare tool holder 20 x 90 type D for square chisels	3384302
Spare tool holder 20 x 85 type H for round chisels	3384321
Lathe tool set 16 mm, 11-part	3441604
Lathe tool set 16 mm, 5-part	3441668
Lathe tool set 16 mm, 5-part	3441610
Lathe tool set 16 mm, 5-part "Made in Germany"	3441216
Follow steady rest, passageway Ø 6 – 55 mm	3441460
Fixed steady rest, passageway Ø 6 – 60 mm	3441461
Position stop with granular adjustment	3441475
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

ACCESSORIES

Designation	Art. no.
Digital position display DRO 5 incl. 3 magnetic sensors	3383975
Magnetic strip, length 1 100 mm	3383978
Factory assembly	9000420

For information on the DRO 5, see page 221

1) Note: The machine (frequency converter) complies with the DIN EN 55011 standard: Class C2.
Important information on operating machines with frequency inverters and general information on operating our machines on page 331

Lead and feed screw lathe impresses with its ease of use

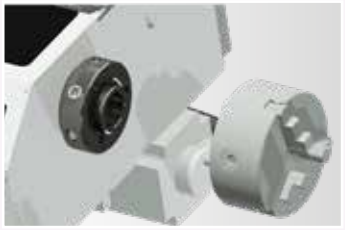
FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Precision workmanship
- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Concentricity on the lathe chuck ≤ 0.04 mm
- Lead screw for thread cutting or automatic longitudinal turning
- Lead screw and feed rod borne on two sintered bearings
- All guides adjustable using gib strips
- Free moving feed gear with rounded gear wheels running in an oil bath
- Switch rod on the bed slide for selection of longitudinal or cross feed
- Hardened main spindle borne on adjustable, precision taper roller bearings
- Hardened spindle nose
- Handwheels on slide with adjustable fine scaling 0.04 / 0.01 mm
- Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground
- Quadruple tool holder
- Emergency stop button
- Three-jaw lathe chuck included as standard
- Interchangeable gear set included as standard for thread cutting

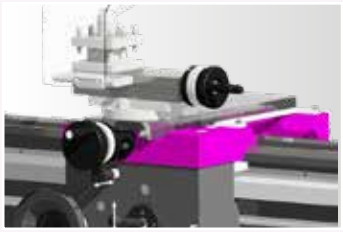


Fig.: TM 3 110 with optional machine base MST 1

ARGUMENTS,...



SPINDLE SEAT
› The spindle is designed as Camlock DIN ISO 702-2 no.4 holding fixture.



LONGITUDINAL/CROSS FEEDS
› Automatic longitudinal/cross feeds
› Switch rod enables longitudinal or cross feed. The engagement lever activates the feed with the feed screw



TAILSTOCK
› for taper turning, adjustable by ± 5 mm
› Tailstock sleeve and handwheel with adjustable fine scaling 0.02 mm
› Fast, easy adjustment without tools thanks to clamping lever

ACCESSORIES

Machine base MST1
Art no. 3440409

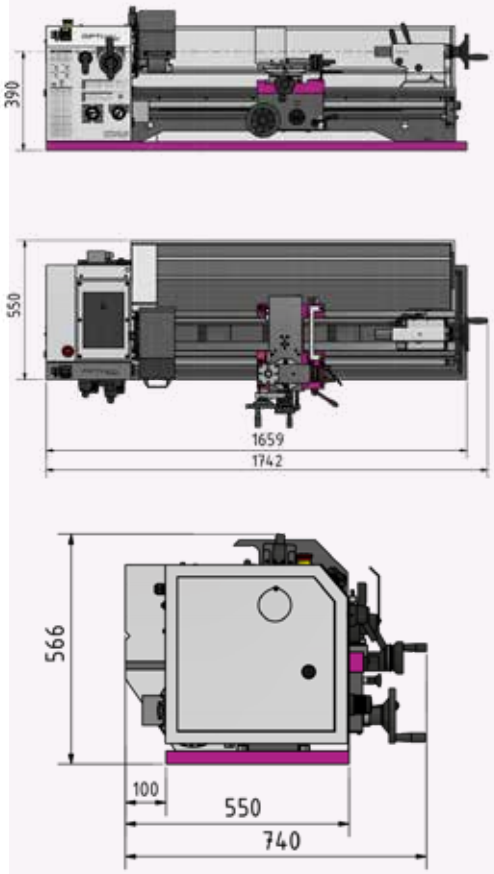
Machine mobile base OWB 50
Art no. 3353019

Levelling plate SE 1
(6 units needed)
Art no. 3381012

TECHNICAL DATA

Model	TM 3110
Article no.	3403010
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Spindle	
Drive motor	1.1 kW
Spindle taper	MT5
Spindle seat	Camlock DIN ISO 702- 2 No. 4
Spindle hole, bar passage diameter	Ø 38 mm
Turning tool size max.	16 mm
Work areas	
Centre height	155 mm
Centre width	1 000 mm
Swing Ø above machine bed(2)	323 mm
Swing Ø above cross slide	216 mm
Bed width	190 mm
Speed range	
Spindle speeds	65 – 2 000 min^{-1}
Number of stages	9 stages
Travel distances	
Top slide	90 mm
Cross slide	168 mm
Bed slide	850 mm
Feed and pitches	
Longitudinal feed within the range	0.02 – 0.4 mm/rev (24 feeds)
Cross feed within	0.01 – 0.2 mm/rev (32 feeds)
Pitch – metric in range	0.4 – 10 mm/rev (29 pitches)
Pitch – inch in range	56 – 4 turns/inch (34 pitches)
Tailstock	
Tailstock seat	MT3
Sleeve diameter / travel	Ø 38 mm / 100 mm
Dimensions and weight	
Dimensions (L x W x H) approx.	1 749 x 740 x 566 mm
Net weight approx.	360 kg

DIMENSIONS



SCOPE OF DELIVERY

- Three-jaw lathe chuck Ø 160 mm
- Reduction sleeve MT 5/ MT
- Two fixed centres MT 3
- Quadruple tool holder 25 mm
- Change gear set
- Machine initially filled with premium grade oil
- Operating tool

ACCESSORIES

Designation	Article no.
OPTIMUM four-jaw lathe chuck Ø 160 mm, Camlock, DIN ISO 702-2 No. 4 centric clamping, speed 2 150 min^{-1}	3442840
BISON four-jaw lathe chuck, Ø 160 mm, Camlock, DIN ISO 702-2 No. 4 centrically clamping, speed 3 600 rpm^{-1}	3450355
Quick change tool holder SWH 3-E	3384303
Factory assembly SWH 3-E	9000400
Lathe tool set 16 mm, 11-part	3441604
Lathe tool set 16 mm, 5-part	3441668
Lathe tool set 16 mm, 5-part "Made in Germany"	3441216
Lathe tool set 16 mm, 5-part	3441610
Follow steady rest, passageway Ø 10 – Ø 70 mm	3441465
Fixed steady rest, passageway Ø 10 – Ø 70 mm	3441466
Position stop with granular adjustment	3441475
Clamping disc Ø 300 mm Camlock DIN ISO 702-2 No. 4	3442976
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

ACCESSORIES

Designation	Art. no.
	
Digital position display DRO 5 incl. 3 magnetic sensors	3383975
Magnetic strip, length 1 100 mm	3383978
Factory assembly	9000420

For information on the DRO 5, see page 221

(2) General information on operating our machines on page 331

Lead and feed screw lathe with electronically adjustable speed convinces with easy handling

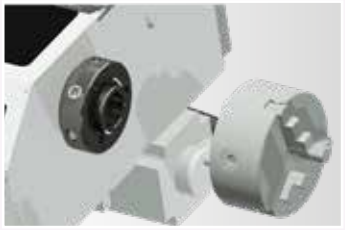
FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Precision workmanship
- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Concentricity on the lathe chuck ≤ 0.04 mm
- Lead screw for thread cutting or automatic longitudinal turning
- Lead screw and feed rod borne on two sintered bearings
- All guides adjustable using gib strips
- Free moving feed gear with rounded gear wheels running in an oil bath
- Switch rod on the bed slide for selection of longitudinal or cross feed
- Hardened main spindle borne on adjustable, precision taper roller bearings
- Hardened spindle nose
- Handwheels on slide with adjustable fine scaling 0.04 / 0.01 mm
- Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground
- Quadruple tool holder
- Emergency stop button
- Three-jaw lathe chuck included as standard
- Interchangeable gear set included as standard for thread cutting
- Speed change easily adjustable via potentiometer
- Digital speed display

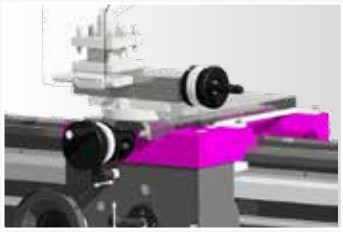


Fig.: TM 3110VB with optional machine base MST 1 and SE

ARGUMENTS,...



SPINDLE SEAT
› The spindle is designed as Camlock DIN ISO 702-2 no.4 holding fixture.



LONGITUDINAL/CROSS FEEDS
› Automatic longitudinal/cross feeds
› Switch rod enables longitudinal or cross feed. The engagement lever activates the feed with the feed screw



TAILSTOCK
› for taper turning, adjustable by ± 5 mm
› Tailstock sleeve and handwheel with adjustable fine scaling 0.02 mm
› Fast, easy adjustment without tools thanks to clamping lever

ACCESSORIES

Machine base MST1
Art no. 3440409

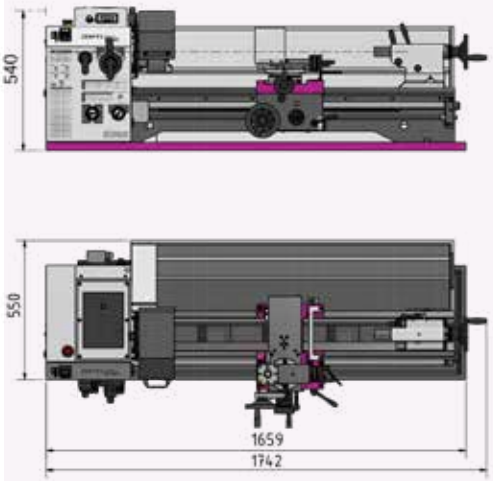
Machine mobile base OWB 50
Art no. 3353019

Levelling plate SE 1
(6 units needed)
Art no. 3381012

TECHNICAL DATA

Model	TM 3110VB [1]
Article no.	3403016
Power	
Electrical connection	230 V / 1 Ph ~50 Hz
Spindle	
Drive motor	1.5 kW
Spindle taper	MT5
Spindle seat	Camlock DIN ISO 702- 2 No. 4
Spindle hole, bar passage diameter	Ø 38 mm
Turning tool size max.	16 mm
Work areas	
Centre height	155 mm
Centre width	1 000 mm
Swing Ø above machine bed[3]	310 mm
Swing Ø above cross slide	196 mm
Bed width	190 mm
Speed range	
Spindle speeds	50 – 2 500 min^{-1}
Number of stages	3 stages, electronically adjustable
Travel distances	
Top slide	90 mm
Cross slide	168 mm
Bed slide	850 mm
Feed and pitches	
Longitudinal feed within the range	0.02 – 0.4 mm/rev (24 feeds)
Cross feed within	0.01 – 0.2 mm/rev (32 feeds)
Pitch – metric in range	0.4 – 10 mm/rev (29 pitches)
Pitch – inch in range	56 – 4 turns/inch (34 pitches)
Tailstock	
Tailstock seat	MT3
Sleeve diameter / travel	Ø 38 mm / 100 mm
Dimensions and weight	
Dimensions (L x W x H) approx.	1 632 x 770 x 540 mm
Net weight approx.	360 kg

DIMENSIONS



SCOPE OF DELIVERY

- Three-jaw lathe chuck Ø 160 mm Camlock No. 4
- Adapter MT5-MT3
- Two non-rotating centring tips MT3
- Quadruple tool holder 16 mm
- Change gear set
- Machine initially filled with premium grade oil
- Operating tool

ACCESSORIES

Designation	Article no.
OPTIMUM four-jaw lathe chuck Ø 160 mm, Camlock, DIN ISO 702-2 No. 4 centric clamping, speed 2 150 min^{-1}	3442840
BISON four-jaw lathe chuck, Ø 160 mm, Camlock, DIN ISO 702-2 No. 4 centrically clamping, speed 3 600 min^{-1}	3450355
Quick change tool holder SWH 3-E	3384303
Factory assembly SWH 3-E	9000400
Lathe tool set 16 mm, 11-part	3441604
Lathe tool set 16 mm, 5-part	3441668
Lathe tool set 16 mm, 5-part "Made in Germany"	3441216
Lathe tool set 16 mm, 5-part	3441610
Follow steady rest, passageway Ø 10 – Ø 70 mm	3441465
Fixed steady rest, passageway Ø 10 – Ø 70 mm	3441466
Position stop with granular adjustment	3441475
Clamping disc Ø 300 mm Camlock DIN ISO 702-2 No. 4	3442976
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

ACCESSORIES

Designation	Art. no.
Digital position display DRO 5 incl. 3 magnetic sensors	3383975
Magnetic strip, length 1 100 mm	3383978
Factory assembly	9000420

For information on the DRO 5, see page 221

1) Note: The machine (frequency converter) complies with the DIN EN 55011 standard: Class C2.
Important information on operating machines with frequency inverters and (3) general information on operating our machines on page 331

LATHE TWO-PART WITH STEEL BASE

TM 3310D | Art. no.: **3403025**

Lead and feed screw lathe
with digital position display
DPA 31Plus



TM 4010D | Art. no.: **3403045**

Lead and feed screw lathe
with digital position display DPA31 Plus



Visit our exhibition in Hallstadt/Bamberg

The lead and feed screw lathes impress with their sturdy construction and ease of use

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Hardened and ground z-axis guideway
- Precision slide
- DC 24 Volt electrical system
- Motor circuit switch
- Main motor electrically braked
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Free moving feed gear with rounded gear wheels running in an oil bath
- Hardened main spindle borne on adjustable, precision taper roller bearings
- Clockwise/anti-clockwise rotation switchable on bed slide
- Two-channel safety electronics
- Handwheels with adjustable fine scaling 0.04 / 0.02 mm
- Safety handwheels with release function tested in accordance with EN23125 in the X and Z axes
- Switch rod on the bed slide for selection of longitudinal or cross feed
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Machine chassis with sturdy steel design
- Quadruple tool holder
- Emergency stop switch on the right and left of the base

TM 3310V:
- Inverter drive with integrated EMC filter
- Low-noise motor operation thanks to high pulse frequency
- Fast current limitation (FCL) for trouble-free operation in case of sudden load peaks

DIGITAL POSITION DISPLAY
TM 3310D: DPA 31 PLUS
TM 3310V: DPA 32 WITH CUTTING CONSTANT VSC



Fig.: TM 3310D

ARGUMENTS,...



LED MACHINE LAMP
› Dazzle-free, integrated into chip guard



USER-FRIENDLY MEMBRANE KEY-BOARD
› Control on
› Direct run spindle
› EMERGENCY-STOP push button
› Lockable main switch



SPINDLE SEAT
› The spindle is designed as Camlock DIN ISO 702-2 no.4 holding fixture.

LATHE CHUCK
› Three-jaw lathe chuck Ø160 mm Camlock No. 4 included

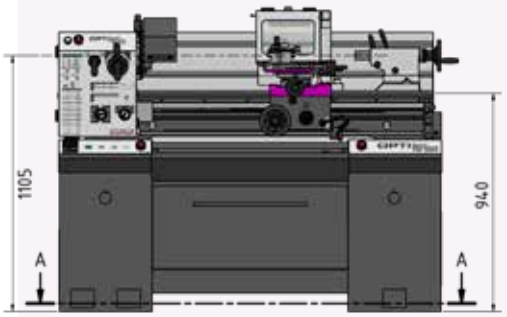


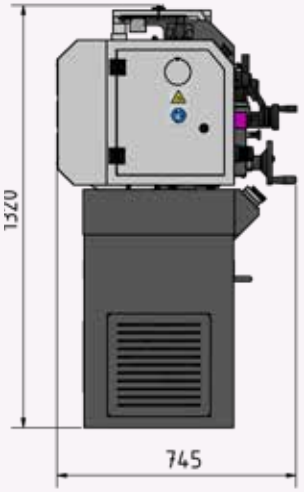
CHIP TRAY
› Pull-out chip drawer with guide rails

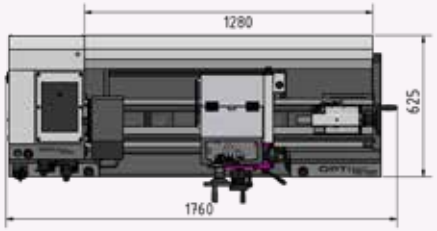
TECHNICAL DATA

Model	TM 3310	TM 3310D	TM 3310V
Article no.	3403020	3403025	3403027
Power			
Electrical connection	400 V / 3 Ph ~50 Hz		
Spindle			
Drive motor	1.5 kW		
Spindle taper	MT5		
Spindle seat	Camlock DIN ISO 702- 2 No. 4		
Spindle hole, bar passage diameter	Ø 38 mm		
Turning tool size max.	16 mm		
Work areas			
Centre height	165 mm		
Centre width	1 000 mm		
Swing Ø above machine bed(2)	330 mm		
Swing Ø above cross slide	216 mm		
Speed range			
Spindle speeds	65 – 2 000 min^{-1}		14 – 2 800 min^{-1}
Number of stages	9 stages		6 gear stages
Travel distances			
Top slide	90 mm		
Cross slide	168 mm		
Bed slide	850 mm		
Feed and pitches			
Longitudinal feed within the range	0.02 – 0.4 mm/rev (24 feeds)		
Cross feed within	0.01 – 0.2 mm/rev (32 feeds)		
Pitch – metric in range	0.4 – 10 mm/rev (29 pitches)		
Pitch – inch in range	56 – 4 turns/inch (27 pitches)		
Tailstock			
Tailstock seat	MT3		
Sleeve diameter / travel	Ø 38 mm / 100 mm		
Dimensions and weight			
Dimensions (L x W x H) approx.	1 760 x 745 x 1 320 (DPA 1 590) mm		
Net weight approx.	469 kg	471 kg	470 kg

DIMENSIONS







ACCESSORIES

Designation	Article no.
OPTIMUM three-jaw lathe chuck Ø 200 mm Camlock DIN ISO 702-2 No. 4 centric clamping	3442762
OPTIMUM four-jaw lathe chuck Ø 200 mm Camlock DIN ISO 702-2 No. 4 individual clamping	3442879
BISON three-jaw lathe chuck Ø 200 mm Camlock DIN ISO 702-2 No. 4 centric clamping	3450310
BISON four-jaw lathe chuck Ø 200 mm Camlock DIN ISO 702-2 No. 4 centric clamping	3450360
Quick change tool holder SWH 3-E	3384303
Factory assembly SWH 3-E	9000400
Lathe tool set 16 mm, 11-part	3441604
Lathe tool set 16 mm, 5-part	3441668
Lathe tool set 16 mm, 5-part "Made in Germany"	3441216
Lathe tool set 16 mm, 5-part	3441610
Follow steady rest, passageway Ø 10 – Ø 70 mm	3441469
Fixed steady rest, passageway Ø 10 – Ø 70 mm	3441470
Position stop with granular adjustment	3441475
Precision machine shoe SEU1 (6 pcs. required)	3352985
Clamping disc Ø 300 mm Camlock DIN ISO 702-2 No. 4	3442976
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

OUR RECOMMENDATION

cleancraft
flexCAT 378 EOT-PRO
Article no. 7003380



SCOPE OF DELIVERY

- Three-jaw lathe chuck Ø 160 mm Camlock No. 4
- LED machine lamp
- Adapter MT 5-MT 3
- Non-rotating centring tip MT 3
- Quadruple tool holder 16 mm
- Change gear set
- Machine base
- Machine initially filled with premium grade oil
- Operating tool

(2) General information on operating our machines on page 331

The lead and feed screw lathes impress with their sturdy construction and ease of use

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Spindle seat Camlock DIN ISO 702- 2 No. 5
- Motor circuit switch
- Main motor electrically braked
- Clockwise/anti-clockwise rotation switchable on bed slide
- Two-channel safety electronics
- Lead and feed screw cover made of stainless steel
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Perfectly concentric main spindle guarantees high load capacity thanks to use of precision taper roller bearings
- One change gear position
- With safety device to prevent simultaneous operation of thread cutting and pitch mechanism
- Safety hand wheels with release function in the X and Z axis
- All pitch gears made of steel, hardened and ground, shafts on needle bearings, all components lubricated in an oil bath
- Simple feed operation
- Switch cabinet more optimum control
- Coolant pump with coolant tank and fill level display Tank removable for easy cleaning
- LED machine lamp in machine housing
- Machine chassis with sturdy steel design
- Emergency stop button right and left
- Lockable main switch
- Three-jaw lathe chuck included in scope of delivery
- SWH included in scope of delivery

DIGITAL POSITION DISPLAY
TM 3610D DPA 31 PLUS
TM 3610V: DPA 32 WITH CUTTING CONSTANT VSC



ARGUMENTS,...



TM 3610V Siemens inverter SINAMICS G120D
› Safety Integrated
› Regenerative power supply, low mains feedback
› Energy savings of up to 20 %
› No brake resistors required
› You can find more detailed information in the main catalogue or at www.optimum-machines.com



CONTROL CABINET
› Optimum in-house development
› Signal transmission via network cable with diagnostic function
› 2-channel safety device



MEMBRANE KEYBOARD
› User-friendly membrane keypad with the functions: Machine on, coolant pump, light and direct running

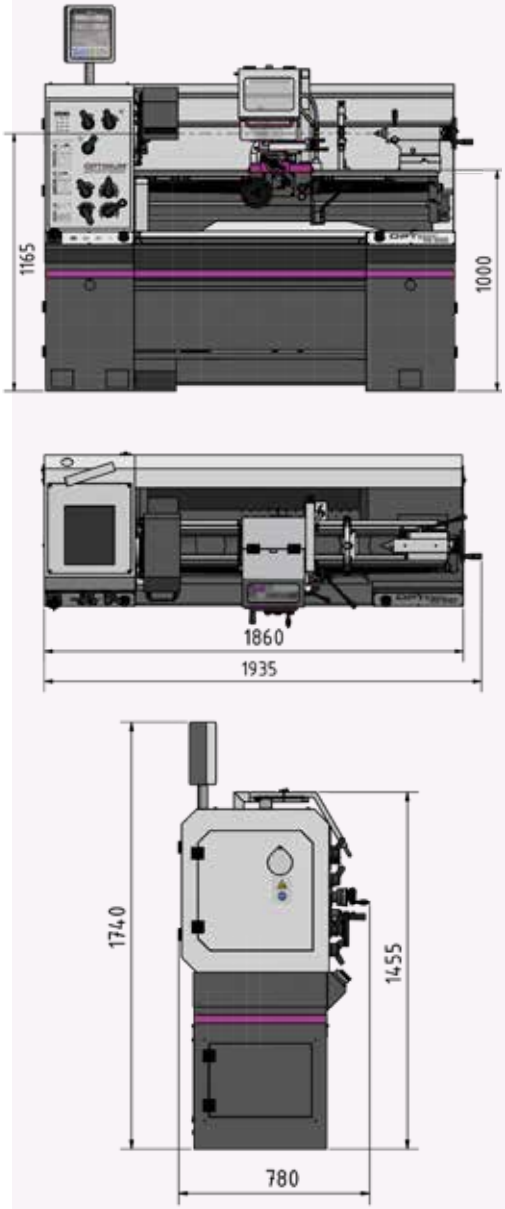


CHANGE GEAR WHEELS
› No change gear train; it is only equipped with a pair of gears with 35 teeth and 70 teeth, which can be changed each other

TECHNICAL DATA

Model	TM 3610	TM 3610D	TM 3610V*
Article no.	3403030	3403035	3403038
Power			
Electrical connection ~ 50 Hz	400 V / 3 Ph ~50 Hz		
Total rated value	2.2 KW		3 KW
Spindle			
Spindle taper	MT6		
Spindle seat	Camlock DIN ISO 702- 2 No. 5		
Spindle hole, bar passage diameter	Ø 52 mm		
Quick change tool holder	16 mm		
Work areas			
Centre height	180 mm		
Centre width	1 000 mm		
Swing Ø above machine bed(2)	360 mm		
Swing Ø above cross slide (3)	225 mm		
Speed range			
Spindle speeds	70 – 2 400 min^{-1}		40 – 3 000 min^{-1}
Number of speeds	8 stages		4 electronically adjustable stages
Travel distances			
Top slide	100 mm		
Cross slide	170 mm		
Feed and pitches			
Longitudinal feed within the range	0.03 – 2 mm/rev (28 feeds)		
Cross feed within	0.008 – 0.541 mm/rev (28 feeds)		
Pitch – metric in range	0.2 – 14 mm/rev (45 pitches)		
Pitch – inch in range	56 – 2 turns/inch (40 pitches)		
Tailstock			
Tailstock seat	MT3		
Sleeve diameter / travel	Ø 42 mm / 120 mm		
Dimensions and weight			
Dimensions (L x W x H) approx.	1 964 x 869 x 1 475 mm		
Net weight approx.	608 kg		

DIMENSIONS



ACCESSORIES

Designation	Article no.
OPTIMUM four-jaw lathe chuck Ø 200 mm, Camlock, DIN ISO 702-2 No. 5 centric clamping, speed 3 000 min^{-1}	3442845
OPTIMUM four-jaw lathe chuck Ø 200 mm, Camlock, DIN ISO 702-2 No. 5 individual clamping, speed 2 100 min^{-1}	3442880
BISON three-jaw lathe chuck, Ø 200 mm, Camlock, DIN ISO 702-2 No. 5 centric clamping, speed 3 000 min^{-1}	3450315
BISON four-jaw lathe chuck, Ø 200 mm, Camlock, DIN ISO 702-2 No. 5 centric clamping, speed 3 000 min^{-1}	3450365
Spare tool holder 20 x 100 type D for square chisels	3384304
Spare tool holder 30 x 100 type H for round chisels	3384322
Lathe tool set 16 mm, 11-part	3441604
Lathe tool set 16 mm, 5-part	3441668
Lathe tool set 16 mm, 5-part "Made in Germany"	3441216
Lathe tool set 16 mm, 5-part	3441610
Position stop with granular adjustment	3441475
Precision machine shoe SEU1 (6 pcs. required)	3352985
Clamping disc Ø 330 mm Camlock DIN ISO 702-2 No. 5	3442978
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

OUR RECOMMENDATION

cleancraft
flexCAT 378 EOT-PRO
Article no. 7003380



SCOPE OF DELIVERY

- Three-jaw lathe chuck Ø 200 mm Camlock No. 5
- Fixed steady rest Ø 7 – Ø 102 mm
- Travelling steady rest Ø 10 – Ø 60 mm
- LED machine lamp
- Adapter MT 6-MT 4
- Non-rotating centring tip MT4
- Quick change tool holder SWH 3-E
- Tool holder 20 x 100 type D for square chisels 18 mm
- Initial filling of the machine with high-quality oil
- Operating tool

*The machine complies with the DIN EN 55011 standard: Class C3. Important information on operating machines with frequency converters can be found on the reverse side
(2) General instructions for operating our machines on page 331 (3) Please note that operators are required to make conversions in the event of installing third-party chucks or flanged chucks to reach the stated, technically possible rotating diameter.

The lead and feed screw lathes impress with their sturdy construction and ease of use
TM 4010D with DPA 31Plus digital position display

QUALITY PRE-CHECK

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Spindle seat Camlock DIN ISO 702- 2 No. 5
- Motor circuit switch
- Main motor electrically braked
- Clockwise/anti-clockwise rotation switchable on bed slide
- Two-channel safety electronics
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Perfectly concentric main spindle guarantees high load capacity thanks to use of precision taper roller bearings
- With safety device to prevent simultaneous operation of thread cutting and pitch mechanism
- Safety hand wheels with release function in the X and Z axis
- All pitch gears made of steel, hardened and ground, shafts on needle bearings, all components lubricated in an oil bath
- Simple feed operation
- One change gear position
- Switch cabinet more optimum control
- Coolant pump with coolant tank and fill level display Tank removable for easy cleaning
- LED machine lamp in machine housing
- Machine chassis with sturdy steel design
- Emergency stop button right and left
- Lockable main switch
- Three-jaw lathe chuck included in scope of delivery
- SWH included in scope of delivery

DIGITAL POSITION DISPLAY

***TM 4010D:* DPA 31 PLUS**

***TM 4010V:* DPA 32 WITH CUTTING CONSTANT VSC**

PRODUCT VIDEO YouTube



Fig.: TM 4010D

ARGUMENTS,...



TM 4010V Siemens inverter SINAMICS G120D

› Safety Integrated
› Regenerative power supply, low mains feedback
› Energy savings of up to 20 %
› No brake resistors required
› More information can be found on page 198 or at www.optimum-machines.com



CONTROL CABINET

› Optimum in-house development
› Signal transmission via network cable with diagnostic function
› 2-channel safety device



MEMBRANE KEYBOARD

› User-friendly membrane keypad with the functions: Machine on, coolant pump, light and direct running



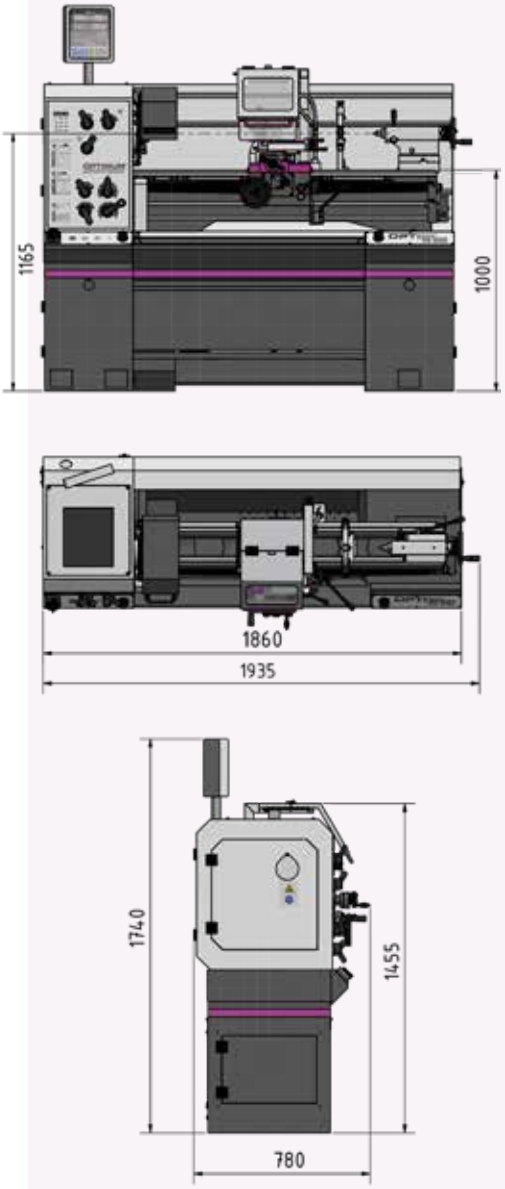
CHANGE GEAR WHEELS

› No change gear train; it is only equipped with a pair of gears with 35 teeth and 70 teeth, which can be changed each other.

TECHNICAL DATA

Model	TM 4010	TM 4010D	TM 4010V*
Article no.	3403041	3403046	3403050
Power			
Electrical connection	400 V / 3 Ph ~50 Hz		
Total rated value	3 kW		4.5 kW
Coolant pump motor	100 watts		
Spindle			
Drive motor	2.2 kW		4 kW
Spindle taper	MT6		
Spindle seat	Camlock DIN ISO 702- 2 No. 5		
Spindle hole, bar passage diameter	Ø 52 mm		
Quick change tool holder	SWH 3-E		
Work areas			
Centre height	200 mm		
Centre width	1 000 mm		
Swing Ø above machine bed(2)	400 mm		
Swing Ø above cross slide (3)	250 mm		
Bed width	203 mm		
Speed range			
Spindle speeds	70 – 2 000 min^{-1}		40 – 3 000 min^{-1}
Number of stages	8 stages		4 electronically adjustable stages
Travel distances			
Top slide	98 mm		
Cross slide	185 mm		
Bed slide	850 mm		
Feed and pitches			
Longitudinal feed within the range	0.03 – 2 mm/rev (28 feeds)		
Cross feed within	0.008 – 0.541 mm/rev (28 feeds)		
Pitch – metric in range	0.2 – 14 mm/rev (45 pitches)		
Pitch – inch in range	56 – 2 turns/inch (40 pitches)		
Tailstock			
Tailstock seat	MT4		
Sleeve diameter / travel	Ø 50 mm / 110 mm		
Dimensions and weight			
Dimensions (L x W x H) approx.	1 935 x 780 x 1 740 mm		
Net weight approx.	755 kg		

DIMENSIONS



ACCESSORIES

Designation	Article no.
OPTIMUM four-jaw lathe chuck Ø 200 mm, Camlock, DIN ISO 702-2 No. 5 centric clamping, speed 3 000 min^{-1}	3442845
OPTIMUM four-jaw lathe chuck Ø 200 mm, Camlock, DIN ISO 702-2 No. 5 individual clamping, speed 2 100 min^{-1}	3442880
BISON three-jaw lathe chuck, Ø 200 mm, Camlock, DIN ISO 702-2 No. 5 centric clamping, speed 3 000 min^{-1}	3450315
BISON four-jaw lathe chuck, Ø 200 mm, Camlock, DIN ISO 702-2 No. 5 centric clamping, speed 3 000 min^{-1}	3450365
Spare tool holder 20 x 100 type D for square chisels	3384304
Spare tool holder 30 x 100 type H for round chisels	3384322
Lathe tool set 16 mm, 11-part	3441604
Lathe tool set 16 mm, 5-part	3441668
Lathe tool set 16 mm, 5-part "Made in Germany"	3441216
Lathe tool set 16 mm, 5-part	3441610
Position stop with granular adjustment	3441475
Precision machine shoe SEU1 (6 pcs. required)	3352985
Clamping disc Ø 330 mm Camlock DIN ISO 702-2 No. 5	3442978
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

OUR RECOMMENDATION

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flexCAT 378 EOT-PRO
Article no. 7003380



SCOPE OF DELIVERY

- Three-jaw lathe chuck Ø 200 mm Camlock No. 5
- Fixed steady rest Ø 7 – Ø 102 mm
- Travelling steady rest Ø 10 – Ø 60 mm
- LED machine lamp
- Adapter MT 6 – MT 4
- Non-rotating centring tip MT4
- Quick change tool holder SWH 3-E
- Tool holder 20 x 100 type D for square chisels 18 mm
- Initial filling of the machine with high-quality oil
- Operating tool

*The machine complies with the DIN EN 55011 standard: Class C3. Important information on operating machines with frequency converters can be found on the reverse side (2) General instructions on the operation of our machines on page 331 / (3) Please note that operators are required to make conversions in the event of installing third-party chucks or flanged chucks to reach the stated, technically possible rotating diameter.

LATHE WITH STEEL/CAST IRON CHASSIS

Visit our exhibition in Hallstadt/Bamberg

Information on the Vario lathes
TH 4210V / TH 4615V / TH 5620V / TX 5216V / TZ4V

SIEMENS SINAMICS G 120D Frequency inverter



DIN
Machines according to Standard EN 61800

SINAMICS G120D
Brief overview of benefits

Highlights at a glance
Advanced safety function (STO, SLS)
STO – safe torque off as per EN 61800- 5
SLS – Safely limited speed as per EN 61800- 5

- ▶ Regenerative power supply, low mains feedback
- ▶ Energy savings of up to 20 %
- ▶ No brake resistors required
- ▶ Fast and easy diagnostic capability through LEDs
- ▶ Standardised plug connections throughout
- ▶ Robust and flat design (IP65)
- ▶ EMC class C3 as per EN 61800- 3
- ▶ Safety Integrated without encoder!
- ▶ More direct switch-over
- ▶ Faster braking
- ▶ Resilient to high overload

Siemens SAFETY INTEGRATED

- ▶ A comprehensive safety package that helps to protect both persons and machines. And in an extremely efficient and economic way thanks to complete integration of the safety functions in the control and drive technology.. In addition, it ensures safe and practical operation of your machine under all required operating conditions. . The safety functions meet the requirements of DIN EN 61508 for use up to and including SIL (Safety Integrity Level) 2 and categories 3 and PL (Performance Level) d as per DIN EN ISO 13849.

The feature scope includes, for example:

- ▶ Functions for safe monitoring of speed and standstill
- ▶ Direct connection of all safety-related signals and their internal logical links

TX 4 414 | Art. no.: **3432422**

Lead and feed screw lathe
fulfils the highest requirements in technical equipment and precision.



Precision lead and feed screw lathe with DPA 32 digital position display and quick-change tool holder

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Hardened and ground z-axis guideway
- Motor circuit switch
- Control cabinet with 24-V DC power supply
- Partial enclosure with integrated, large-sized chip guard
- Chip guard with integrated position indicator, coolant hose and additional control panel
- Two-channel safety electronics
- Plane und top slide spindle hardened and scraped, adjustable via split spindle nut
- Feed and lead screw cover
- Granular feed and tapping range
- Energy chain for material-friendly cable and hose guiding
- The default gear wheels for metric thread pitches and modular threads are already mounted in the machine. Interchangeable gears available as option for imperial and D.P threads
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Decoupled hand wheels approved in line with EN 23125
- Safety hand wheels with release function in the X and Z axis
- Chip tray pulls out to front
- Coolant system
- Quick change tool holder SWH 5-B
- Tool holder 25 x 120 type D for square chisels 20 mm
- LED machine light for complete elimination of the workspace

PRODUCT VIDEO YouTube



Fig.: TZ 4 with optional lathe chuck

ARGUMENTS,...



CONTROL CABINET
› 24 Volt DC power supply
› All contactors und relays by SIEMENS or Schneider



DIGITAL POSITION DISPLAY DPA 32
› LED display
› User-friendly membrane keyboard,
› splash-proof, closed and glare-free
› Greater operation accuracy
› Clear reduction of manufacturing times
› Reduction of error quota
› X, Y/Z0, Z axis each with 8-digit display
› Three evaluable measurement inputs, each with seven correction memories for tools



TOUCH PANEL CENTRALISED CONTROL
› For switching Lighting and coolant
› Switching for two-stage motor
› Foil keypad, easily cleanable

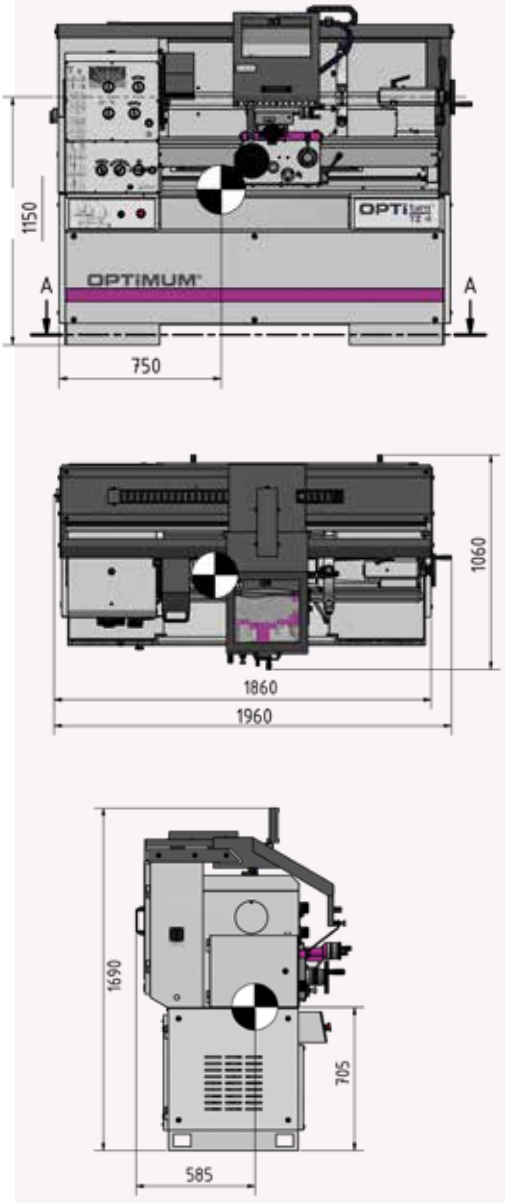


BED GEOMETRY
› Flat angle
› Higher force absorption

TECHNICAL DATA

Model	TZ 4
Article no.	3432242
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	6 kW
Coolant pump motor	125 watts
Spindle	
Drive motor	3 kW / 4.5 kW
Spindle taper	MT6
Spindle seat	DIN ISO 702- 1 No. 5 form A2
Spindle hole, bar passage diameter	Ø 52 mm
Quick change tool holder	SWH 5-B
Work area	
Centre height	200 mm
Centre width	800 mm
Swing Ø above machine bed(2)	400 mm
Swing Ø above cross slide	245 mm
Bed width	260 mm
Speed range	
Spindle speed	45 – 1 800 min^{-1}
Number of stages	16 stages
Travel distances	
Top slide	112 mm
Cross slide	212 mm
Bed slide	800 mm
Feeds and pitches	
Longitudinal feed within the range	0.026 – 1.84 mm/rev (48 feeds)
Cross feed within	0.013 – 0.93 mm/rev (48 feeds)
Pitch – metric in range	0.2 – 14 mm/rev (26 pitches)
Pitch – inch in range (Interchangeable gear set accessory art. no. 3444160)	80 – 1 turns/inch (42 pitches)
Modular thread in range	0.1 – 7mm x π (44 threads)
Diametral pitch in range (Interchangeable gear set accessory art. no. 3444160)	200 – 3 turns/ π (33 pitches)
Tailstock	
Tailstock seat	MT3
Sleeve diameter / travel	Ø 50 mm / 110 mm
Dimensions and weight	
Dimensions (L x W x H) approx.	1 960 x 1 060 x 1 690 mm
Net weight approx.	1 250 kg

DIMENSIONS



ACCESSORIES

Designation	Article no.
BISON four-jaw lathe chuck Ø 250 mm No. 5 form A2 cast iron, centric clamping (chuck flange 3450218 is required)	3450216
Chuck flange for mounting the Ø 250 mm lathe chuck	3450218
BISON three-jaw lathe chuck Ø 200 mm No. 5 form A2 cast iron, centric clamping (chuck flange 3450212 is required)	3450210
Chuck flange for mounting the Ø 200 mm lathe chuck	3450212
Carbide lathe tool set 20 mm, 5-part	3441617
Interchangeable gear set for imperial and D.P thread	3444160
Precision machine shoe SEU1 (8 pcs. required)	3352985
BISON chuck flange Lathe chuck Ø 160 mm (requires chuck collet chuck 3450245)	3450246
BISON collet chuck 16C – Ø 160 mm (requires chuck flange 3450246)	3450245
Clamping disc Ø 320 mm no. 5 form A2	3442979
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

2) General information on operating our machines on page 331

SCOPE OF DELIVERY

Lathe chuck
Do not forget!

- Fixed steady rest, passageway Ø 10 – Ø 130 mm
- Travelling steady rest passageway Ø 10 – Ø 100 mm
- Adapter MT 6-MT 3
- Non-rotating centring tip MT3
- Non-rotating, but temperature resistant centring tip MT 3
- Quick change tool holder SWH 5-B
- Tool holder 25 x 120 type D for square chisels 20 mm
- Machine initially filled with premium grade oil
- Operating tool

Precision feed and lead spindle lathe with electronically controlled drive and digital position display DPA 32

QUALITY PRE-CHECK

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Hardened and ground z-axis guideway
- Motor circuit switch
- Control cabinet with 24-V DC power supply
- Partial enclosure with integrated, large-sized chip guard
- Chip guard with integrated position indicator, coolant hose and additional control panel
- Two-channel safety electronics
- Safety hand wheels with release function in the X and Z axis
- Plane und top slide spindle hardened and scraped, adjustable via split spindle nut
- Electrically braked motor
- Feed and lead screw cover
- Granular feed and tapping range
- Energy chain for material-friendly cable and hose guiding
- The default gear wheels for metric thread pitches and modular threads are already mounted in the machine. Interchangeable gears available as option for imperial and D.P threads
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Decoupled hand wheels approved in line with EN 23125
- Reduction of the main spindle braking time thanks to energy recuperation
- Chip tray pulls out to front
- Coolant system
- Position measuring system on the Z-axis
- Magnetic tape system on the X and Zo axes
- Quick change tool holder SWH 5-B
- Tool holder 25 x 120 type D for square chisels 20 mm
- LED machine light for complete elimination of the workspace

PRODUCT VIDEO YouTube

TZ 4V
CUTTING CONSTANT VSC



Fig.: TZ 4V with optional lathe chuck

ARGUMENTS,...



SIEMENS SINAMICS INVERTER G120D
› More information on page 190



DIG. DIGITAL POSITION INDICATOR DPA 32 WITH CUTTING CONSTANT VSC
- › LED display
- › User-friendly membrane keyboard,
- › splash-proof, closed and glare-free
- › Greater operation accuracy
- › Clear reduction of manufacturing times
- › Reduction of error quota
- › X, Y/Z0, Z axis each with 8-digit display
- › Three evaluable measurement inputs, each with seven correction memories for tools



TOUCH PANEL CENTRALISED CONTROL
- › For switching Lighting and coolant
- › Foil keypad, easily cleanable

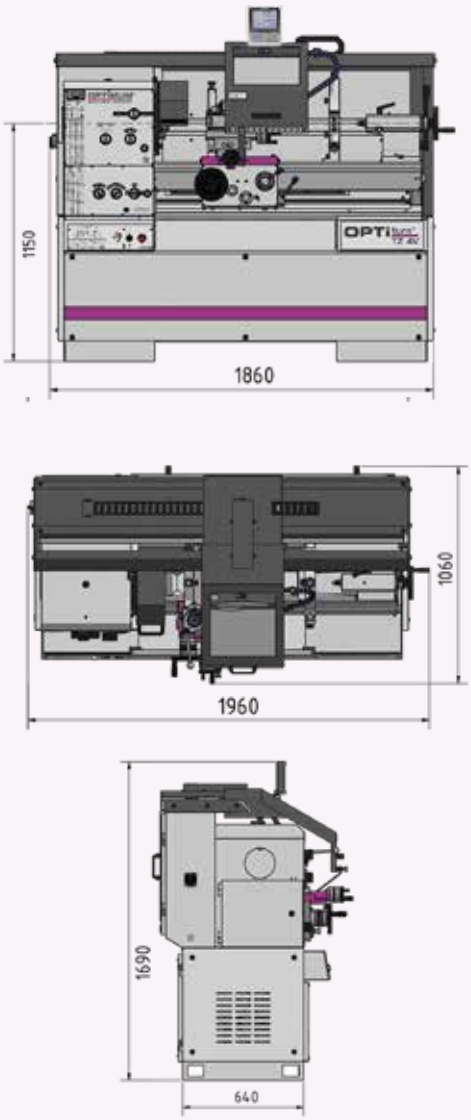


BED GEOMETRY
- › Flat angle
- › Higher force absorption

TECHNICAL DATA

Model	TZ 4V
Article no.	3432247
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	6 kW
Coolant pump motor	125 watts
Spindle	
Drive motor	5.5 kW
Spindle taper	MT6
Spindle seat	DIN ISO 702- 1 No. 5 form A2
Spindle hole, bar passage diameter	Ø 52 mm
Quick change tool holder	SWH 5-B
Work area	
Centre height	200 mm
Centre width	800 mm
Swing Ø above machine bed(2)	400 mm
Swing Ø above cross slide	245 mm
Bed width	260 mm
Speed range	
Spindle speed	50 – 3 000 min^{-1}
Number of stages	2 speed, electrically controlled
Travel distances	
Top slide	112 mm
Cross slide	212 mm
Bed slide	800 mm
Feeds and pitches	
Longitudinal feed within the range	0.0 263 – 1.8 416 mm/rev (48 feeds)
Cross feed within	0.0 133 – 0.9 321 mm/rev (48 feeds)
Pitch – metric in range	0.2 – 14 mm/rev (26 pitches)
Pitch – inch in range (Interchangeable gear set accessory art. no. 3444160)	80 – 1 turns/inch (42 pitches)
Modular thread in range	0.1 – 7mm x π (44 threads)
Diametral pitch in range (Interchangeable gear set accessory art. no. 3444160)	200 – 3 turns/ π (33 pitches)
Tailstock	
Tailstock seat	MT3
Sleeve diameter / travel	Ø 50 mm / 110 mm
Dimensions and weight	
Dimensions (L x W x H) approx.	1 960 x 1 060 x 1 690 mm
Net weight approx.	1 250 kg

DIMENSIONS



ACCESSORIES

Designation	Article no.
BISON four-jaw lathe chuck Ø 250 mm no. 5 form A2 steel centrically clamping (chuck flange 3450218 required)	3450217
Chuck flange for mounting the Ø 250 mm lathe chuck	3450218
BISON three-jaw lathe chuck Ø 200 mm no. 5 form A2 cast Centrically clamping(chuck flange 3450212 required)	3450210
Chuck flange for mounting the Ø 200 mm lathe chuck	3450212
Turning tool set Carbide 20 mm, 5-part (from page 247)	3441617
Interchangeable gear set for imperial and D.P thread	3444160
Precision machine shoe SEU1 (8 pcs. required)	3352985
BISON Lathe chuck flange Ø 160 mm (requires chuck collet chuck 3450245)	3450246
BISON collet chuck 16C – Ø 160 mm (requires chuck flange 3450246)	3450245
Clamping disc Ø 320 mm no. 5 form A2	3442979
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

OUR RECOMMENDATION

cleancraft

flexCAT 378 EOT-PRO
Article no. 7003380



SCOPE OF DELIVERY

Lathe chuck
Do not forget!

- Fixed steady rest, passageway Ø 10 – Ø 130 mm
- Travelling steady rest passageway Ø 10 – Ø 100 mm
- Adapter MT6-MT3
- Non-rotating centring tip MT3
- Non-rotating, but temperature resistant centring tip MT3
- Quick change tool holder SWH 5-B
- Tool holder 25 x 120 type D for square chisels 20 mm
- Machine initially filled with premium grade oil
- Operating tool

2) Note: The machine (frequency converter) complies with the DIN EN 55011 standard: Class C3.
Important information on operating machines with frequency inverters and general information on operating our machines on page 333

Precise lead and feed screw lathes with sophisticated technology, fully equipped and easy to operate.
TH 4210D / TH 4215D with DPA 31Plus digital position display

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Spindle seat Camlock DIN ISO 702- 2 No. 6
- Lead screw cover
- Precision slide
- All guides adjustable using gib strips
- Clockwise/anti-clockwise rotation switchable on bed slide, switchable via switching spindle
- Two-channel safety electronics
- Central lubrication in bed slide
- Top slide adjustment range ± 90°
- Main spindle runs in oil bath
- Gearwheels smooth action, hardened and scraped borne on 2 re-adjustable precision taper rollers
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- All metric pitches in range from 0.2 to 14 mm/rev and all inch pitches in range of 72 – 2 turns per inch configurable on control panel without replacing the interchangeable gear wheels thanks to gear shift
- Handwheels with adjustable fine scaling 0.04 / 0.02 mm
- Safety hand wheels with release function acc. to EN23125 in the X and Z axis
- Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- Chassis and machine bed single-piece cast meehanite
- Emergency stop device with foot pedal
- Quadruple tool holder



Fig.: TH 4210D with optional lathe chuck

ARGUMENTS,...



CONTROL CABINET
› 24 Volt DC power supply
› All contactors und relays by SIEMENS or Schneider



D VERSIONS WITH DPA 31PLUS DIGITAL POSITION DISPLAY
› User-friendly membrane keyboard
› Clear reduction of manufacturing times



TAILSTOCK
› Tailstock for taper turning, adjustable by ± 10 mm
› Tailstock sleeve and handwheel with adjustable fine scaling 0.025 mm
› Fast, easy adjustment of the tailstock without tools thanks to clamping lever

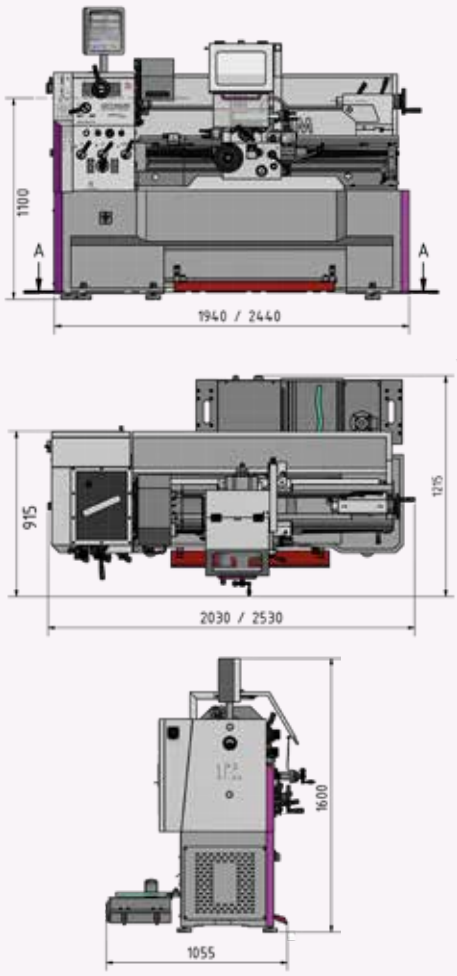


LED MACHINE LAMP
› in chip protection

TECHNICAL DATA

Model	TH 4210	TH 4210D	TH 4215D
Article no.	3462050	3462055	3462070
Power			
Electrical connection	400 V / 3 Ph ~50 Hz		
Total rated value	4.6 kW		
Coolant pump motor	100 W		
Spindle			
Drive motor	3 kW / 4.5 kW		
Spindle taper	MT6		
Spindle seat	Camlock DIN ISO 702- 2 No. 6		
Spindle hole, bar passage diameter	Ø 52 mm		
Turning tool size max.	20 mm		
Work area			
Centre height	210 mm		
Centre width	1 000 mm		1 500 mm
Swing Ø above machine bed(2)	420 mm		
Swing Ø above cross slide	250 mm		
Bed width	250 mm		
Swing Ø without bed bridge	590 mm		
Turning length in bed bridge	260 mm		
Speed range			
Spindle speed	45 – 1 800 min^{-1}		
Number of stages	16 stages		
Travel distances			
Top slide	140 mm		
Cross slide	230 mm		
Bed slide	780 mm		1 280 mm
Feeds and pitches			
Longitudinal feed within the range	0.05 – 1.7 mm/rev (17 feeds)		
Cross feed within	0.025 – 0.85 mm/rev (17 feeds)		
Pitch – metric in range	0.2 – 14 mm/rev (39 pitches)		
Pitch – inch in range	72 – 2 turns/inch (45 pitches)		
Modular thread in range	0.3 – 3.5 mm x π (18 threads)		
Diametral pitch in range	44 – 8 turns/π (21 pitches)		
Tailstock			
Tailstock seat	MT4		
Tailstock sleeve diameter / travel	Ø 50 mm / 120 mm		
Dimensions and weight			
Length approx.	1 940 mm		2 440 mm
width x height approx.	915 x 1 375 (DPA 1 600) mm		
Net weight approx.	1 160 kg		1 340 kg
Net weight with DPA 31Plus approx.	1 162 kg		

DIMENSIONS



SCOPE OF DELIVERY

Lathe chuck
Do not forget!

- Fixed steady rest, passageway Ø 10 – Ø 130 mm
- Travelling steady rest passageway Ø 10 – Ø 100 mm
- LED machine lamp
- Adapter MT 6-MT 4
- Non-rotating centring tip MT4
- Non-rotating, but temperature resistant centring tip MT4
- Quadruple tool holder, max. 20 mm
- Change gear set
- Gear wheels for threading gauge (metric)
- Machine initially filled with premium grade oil
- Operating tool

ACCESSORIES

Lathe chuck Camlock DIN ISO 702- 2 No. 6	Article no.
OPTIMUM lathe chuck, cast Ø 250 mm	
Three-jaw lathe chuck, centric clamping	3442765
Four-jaw lathe chuck, centric clamping	3442852
Four-jaw lathe chuck, independent jaw clamping	3442884
BISON Lathe chuck Ø 250 mm	
Three-jaw lathe chuck centric	3450330
Four-jaw lathe chuck, cast, centric	3450380
Three-jaw lathe chuck, steel, centric	3450530
Four-jaw lathe chuck, steel, centric	3450580

Information on lathe chuck from page 238

Accessories	Article no.
Spare tool holder 25 x 120 Type D for square	3384306
Spare tool holder 32 x 130 type H for round chisels	3384324
Lathe tool set, carbide, 20 mm, 5-part	3441670
Lathe tool set, carbide, 20 mm, 5-part	3441617
Precision machine shoe SEU1 (6 pcs. required)	3352985
Universal collet chuck device 5C	3441507
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

(2) General information on operating our machines on page 331

Precise lead and feed screw lathe with sophisticated technology, fully equipped and easy to operate. Featuring Siemens inverter Vario drive

QUALITY PRE-CHECK

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Spindle seat Camlock DIN ISO 702- 2 No. 6
- Speed monitoring in line with Machinery Directive
- Leading spindle cover
- Precision slide
- All guides adjustable using gib strips
- Clockwise/anti-clockwise rotation switchable on bed slide, switchable via switching spindle
- Two-channel safety electronics
- Central lubrication in bed slide
- Top slide adjustment range ± 90°
- Main spindle runs in oil bath
- Gearwheels smooth action, hardened and scraped borne on 2 re-adjustable precision taper rollers
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- All metric pitches in range from 0.2 to 14 mm/rev and all inch pitches in range of 72 – 2 turns per inch configurable on control panel without replacing the interchangeable gear wheels thanks to gear shift
- Handwheels with adjustable fine scaling 0.04 / 0.02 mm
- Safety hand wheels with release function acc. to EN23125 in the X and Z axis
- Tailstock for taper turning, adjustable by ± 10 mm
- Tailstock sleeve and handwheel with adjustable fine scaling 0.025 mm
- Fast, easy adjustment of the tailstock without tools thanks to clamping lever
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- LED machine lamp in chip guard
- Chassis and machine bed single-piece cast meehanite
- Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground
- Emergency stop device with foot pedal



Fig.: TH 4210V with optional lathe chuck

ARGUMENTS,...



SIEMENS SINAMICS INVERTER G120D

› More informations see page 198



CONTROL CABINET

› 24 Volt DC power supply
› All contactors und relays by SIEMENS or Schneider



DIGITAL POSITION INDICATOR DPA 32 WITH CUTTING CONSTANT VSC

› User-friendly membrane keyboard
› Clear reduction of manufacturing times
› Sensor for detecting spindle speeds



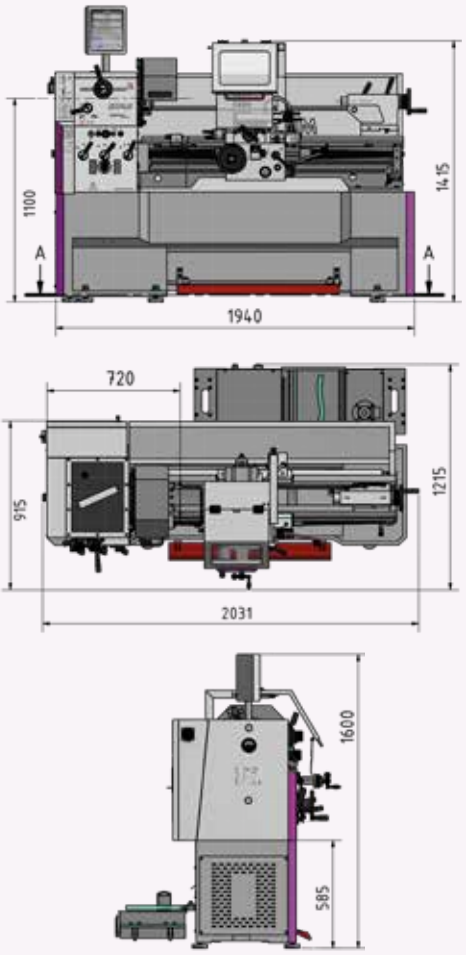
QUICK-CHANGE TOOL HOLDER SWH 5-B

› Including 25 x 120 type D tool holder for 20 mm square chisel included in scope of delivery

TECHNICAL DATA

Model	TH 4210V
Article no.	3462060
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	5.6 kW
Coolant pump motor	100 W
Spindle	
Drive motor	5.5 kW
Spindle taper	MT6
Spindle seat	Camlock DIN ISO 702- 2 No. 6
Spindle hole, bar passage diameter	Ø 52 mm
Quick change tool holder	SWH 5-B
Work area	
Centre height	210 mm
Centre width	1 000 mm
Swing Ø above machine bed(2)	420 mm
Swing Ø above cross slide	250 mm
Bed width	250 mm
Swing Ø without bed bridge	590 mm
Turning length in bed bridge	260 mm
Speed range	
Spindle speed	30 – 3 000 min^{-1}
Number of stages	2 stages, electronically adjustable
Travel distances	
Top slide	140 mm
Cross slide	230 mm
Bed slide	780 mm
Feeds and pitches	
Longitudinal feed within the range	0.05 – 1.7 mm/rev (17 feeds)
Cross feed within	0.025 – 0.85 mm/rev (17 feeds)
Pitch – metric in range	0.2 – 14 mm/rev (39 pitches)
Pitch – inch in range	72 – 2 turns/inch (45 pitches)
Modular thread in range	0.3 – 3.5 mm x π (18 threads)
Diametral pitch in range	44 – 8 turns/π (21 pitches)
Tailstock	
Tailstock seat	MT4
Tailstock sleeve diameter / travel	Ø 50 mm / 120 mm
Dimensions and weight	
Dimensions (L x W x H) approx.	2 031 x 915 x 1 415 (DPA 1 600) mm
Net weight approx.	1 162 kg

DIMENSIONS



SCOPE OF DELIVERY

Lathe chuck
Do not forget!

- Fixed steady rest, passageway Ø 10 – Ø 130 mm
- Travelling steady rest passageway Ø 10 – Ø 100 mm
- LED machine lamp
- Adapter MT6-MT4
- Non-rotating centring tip MT4
- Quick change tool holder SWH 5-B
- Tool holder 25 x 120 type D for square chisels 20 mm
- Change gear set
- Machine initially filled with premium grade oil
- Operating tool

ACCESSORIES

Lathe chuck Camlock DIN ISO 702- 2 No. 6	Art. no.
OPTIMUM lathe chuck, Ø 250 mm	
Three-jaw lathe chuck, centric clamping Speed max. 2 400 min^{-1}	3442765
Four-jaw lathe chuck, centric clamping Speed max. 2 400 min^{-1}	3442852
Four-jaw lathe chuck, independent jaw clamping Speed max. 1 600 min^{-1}	3442884
BISON Lathe chuck Ø 250 mm	
Three-jaw lathe chuck, centric clamping Speed max. 2 500 min^{-1}	3450330
Four-jaw lathe chuck, centric clamping Speed max. 2 500 min^{-1}	3450380
Three-jaw lathe chuck, steel	3450530
Four-jaw lathe chuck, steel	3450580

Information on lathe chuck from page 238

Accessories	Article no.
Quick change tool holder SWH 5-B	3384305
Factory assembly SWH 5-B	9000400
Spare tool holder 25 x 120 Type D square	3384306
Spare tool holder 32 x 130 type H for round	3384324
Lathe tool set, carbide, 25 mm, 5-part	3441672
Lathe tool set, carbide, 25 mm, 5-part Extension kit	3441623
Lathe tool set, carbide, 20 mm, 5-part	3441670
Lathe tool set, carbide, 20 mm, 5-part Extension kit	3441617
Precision machine shoe SEU1 (6 pcs. required)	3352985
Clamping block set 20-05	3440654

More accessories and information about accessories from page 228 onwards

2) Note: The machine (frequency converter) complies with the DIN EN 55011 standard: Class C3.
Important information on operating machines with frequency inverters and general information on operating our machines on page 333

Lead and feed screw lathe meets the highest requirements in terms of technical equipment and precision. With digital position display DPA 32

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Machine bed and chassis made of heavily ribbed cast material
- One-piece steel machine base
- High degrees of rigidity of the spindle bar housing thanks to heavily ribbed 25GG cast material
- Precision slide
- shafts on needle bearings, all components lubricated in oil bath
- Hardened and ground bed guides
- All electronic controls centrally accessible
- All gear wheels of the feed gear made of hardened steel
- Hand wheels decoupled and approved in line with EN 23125
- Two-channel safety electronics
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- Complete feed and lead spindle cover
- Working area completely illuminated
- Hardened and ground spindle guarantees high degrees of accuracy and durability
- The powerful machining performance means that a high level of chip removal during roughing work is no problem
- Energy chain for material-friendly cable and hose guiding
- Lockable chip guard moves with the bed slide with integrated position indicator and coolant hose, manually adjustable
- No change gears required
- With safety device to prevent simultaneous operation of thread cutting and pitch mechanism
- Electronically braked motor
- Electrical position shut-off with quadruple positioning stop
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN. Cleaning a coolant reservoir from the front
- Three-jaw lathe chuck included in scope of delivery
- Quick change tool holder SWH 5-B included in scope of delivery



Fig.: TX 4414

ARGUMENTS,...



CONTROL CABINET
› 24 Volt DC power supply
› All contactors und relays by SIEMENS or Schneider



DIGITAL POSITION DISPLAY DPA 32
› LED display
› User-friendly membrane keyboard



TOUCH PANEL CENTRALISED CONTROL
› For switching lighting and coolant and the drive for the lead screw
› Membrane keypad, easy to clean



BACK PANEL
› Easy to service thanks to removable rear panel

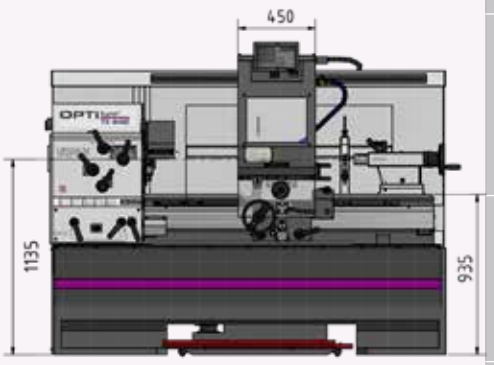


ELECTRIC FEED CUT-OFF
› of the Z-axis with four-position stop

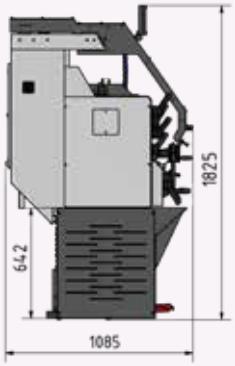
TECHNICAL DATA

Model	TX 4414
Article no.	3432422
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	6.1 kW
Coolant pump motor	100 W
Spindle	
Drive motor	5.5 kW
Spindle taper Reducing sleeve in the main spindle	MT6 MT5
Spindle seat	Camlock DIN ISO 702- 2 No. 6
Spindle hole, bar passage diameter	Ø 52 mm
Quick change tool holder	SWH 5-B
Work area	
Centre height	220 mm
Centre width	1 280 mm
Swing Ø above machine bed(2)	440 mm
Swing Ø above cross slide	250 mm
Bed width	300 mm
Speed range	
Spindle speed	40 – 2 200 min^{-1}
Number of speeds	12 stages
Travel distances	
Top slide	153 mm
Cross slide	290 mm
Bed slide	950 mm
Feeds and pitches	
Longitudinal feed within the range	0.05- 0.752 mm/rev (44 feeds)
Cross feed within	0.025 – 0.376 mm/rev (44 feeds)
Metric pitch	0.5 – 7.5 mm/rev (44 pitches)
Pitch – inch in range	60 – 4 turns/inch (44 pitches)
Modular thread in range	0.25 – 3.75mm x π (44 threads)
Diametral pitch in range	120 – 8 turns/ π (44 threads)
Tailstock	
Tailstock seat	MT4
Tailstock quill diameter/travel	Ø 58 mm / 180 mm
Dimensions and weight	
Dimensions (L x W x H) approx.	2 410 x 1 085 x 1 825 mm
Net weight approx.	2 030 kg

DIMENSIONS







ACCESSORIES

Designation	Article no.
OPTIMUM four-jaw lathe chuck Ø 200 mm Camlock DIN ISO 702-2 No. 6, centric clamping	3442846
BISON four-jaw lathe chuck Ø 200 mm Camlock DIN ISO 702-2 No. 6, centric clamping	3450370
Travelling steady rest passageway Ø 10 – Ø 170 mm	3438015
Fixed steady rest, passageway Ø 15 – Ø 165 mm	3438017
Co-rotating centring tip MT 4	3440704
BISON co-travelling centre MT 4	3451004
Precision machine shoe SEU1 (6 pcs. required)	3352985
Clamping disc Ø 350 mm Camlock DIN ISO 702-2 No. 6	3442980
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

SCOPE OF DELIVERY

- › Three-jaw lathe chuck Ø 200 mm Camlock No. 6
- › 2 non-rotating centring tip MT4 and MT5
- › Adapter MT6-MT5
- › Quick change tool holder SWH 5-B
- › Machine initially filled with premium grade oil
- › Operating tool



Fig.:
Steady rest



Fig.:
Follow steady rest

(2) General information on operating our machines on page 331

Lead and feed screw lathe meets the highest requirements in terms of technical equipment and precision. With digital position display DPA 32

QUALITY PRE-CHECK

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Machine bed and chassis made of heavily ribbed cast material
- One-piece steel machine base
- High degrees of rigidity of the spindle bar housing thanks to heavily ribbed 25GG cast material
- All gear wheels of the feed gear made of hardened steel
- shafts on needle bearings, all components lubricated in oil bath
- Hardened and ground spindle guarantees high degrees of accuracy and durability
- The powerful machining performance means that a high level of chip removal during roughing work is no problem
- Easy to service thanks to removable rear panel
- Energy chain for material-friendly cable and hose guiding
- Lockable chip guard moves with the bed slide with integrated position indicator and coolant hose, manually adjustable
- Hand wheels decoupled and approved in line with EN 23125
- Two-channel safety electronics
- No change gears required
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- With safety device to prevent simultaneous operation of thread cutting and pitch mechanism
- Hardened and ground bed guides
- Electronically braked motor
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN. Cleaning a coolant reservoir from the front
- Three-jaw lathe chuck included as standard
- Digital position indicator DPA 32 with cutting constant VSC

DIGITAL POSITION DISPLAY DPA 32
CUTTING CONSTANT VSC



Fig.: TX 4814V

ARGUMENTS,...



CONTROL CABINET
› 24 Volt DC power supply
› All contactors und relays by SIEMENS or Schneider



Siemens SINAMICS G120D inverter
› Safety Integrated
› Regenerative power supply, low mains feedback
› Energy savings of up to 20 %
› No brake resistors required



TOUCH PANEL CENTRALISED CONTROL
› For switching lighting and coolant and the drive for the feed screw
› Membrane keypad, easy to clean



BACK PANEL
› Easy to service thanks to removable rear panel

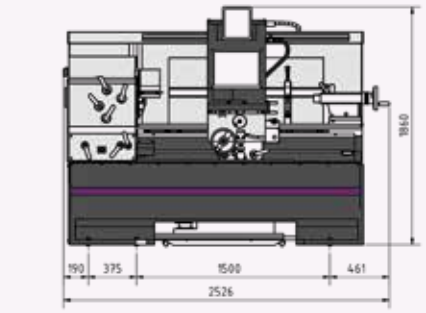


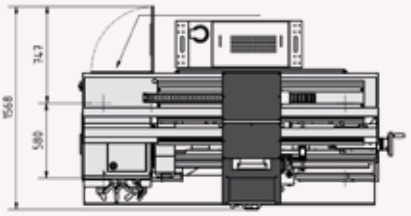
ELECTRIC FEED CUT-OFF
› of the Z-axis with four-position stop

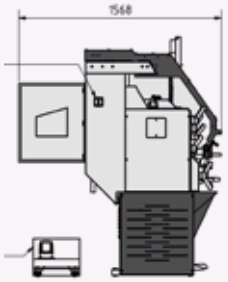
TECHNICAL DATA

Model	TX 4814V
Article no.	3432425
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	6.1 kW
Coolant pump motor	100 W
Spindle	
Drive motor	5.5 kW
Reducing sleeve in the main spindle	MT6
Spindle seat	Camlock DIN ISO 702- 2 No. 8
Spindle hole, bar passage diameter	Ø 80 mm
Quick change tool holder	SWH 5-B
Work area	
Centre height	240 mm
Centre width	1 380 mm
Swing Ø without bed bridge	280 mm
Swing Ø above machine bed(2)	440 mm
Bed with	300 mm
Speed range	
Spindle speed	12 – 2 500 min-1
Number of speeds	2 x 3 speeds
Travel distances	
Top slide	153 mm
Cross slide	290 mm
Bed slide	950 mm
Feeds and pitches	
Longitudinal feed within the range	0.05- 0.75 mm/rev (44 feeds)
Cross feed within	0.025 – 0.376 mm/rev (44 feeds)
Metric pitch	0.5 – 7.5 mm/rev (44 pitches)
Pitch – inch in range	60 – 4 turns/inch (44 pitches)
Modular thread in range	0.25 – 3.75mm x π (44 threads)
Diametral pitch in range	120 – 8 turns/ π (44 threads)
Tailstock	
Tailstock seat	MT5
Tailstock quill diameter/travel	Ø 60 mm / 130 mm
Dimensions and weight	
Dimensions (L x W x H) approx.	2 526 x 1,050 x 1,860 mm
Net weight approx.	1 700 kg

DIMENSIONS







ACCESSORIES

Designation	Article no.
OPTIMUM Four-jaw lathe chuck Ø 315 mm Camlock No. 8 centric clamping	3442856
BISON four-jaw lathe chuck Ø 250 mm Camlock no. 8 centric clamping	3450381
Travelling steady rest passageway Ø 10 – Ø 170 mm	3438015
Fixed steady rest, passageway Ø 15 – Ø 165 mm	3438017
Co-rotating centring tip MT 5	3440705
BISON co-travelling centre MT 5	3451005
Precision machine shoe SEU1 (6 pcs. required)	3352985
Clamping disc Ø 480 mm Camlock DIN ISO 702-2 No. 8	3442982
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

SCOPE OF DELIVERY

- Three-jaw lathe chuck Ø 200 mm Camlock No. 8
- 2 non-rotating centring tip MT4 and MT5
- Quick change tool holder SWH 5-B
- Machine initially filled with premium grade oil
- Operating tool



Fig.: Steady rest



Fig.: Follow steady rest

2) Note: The machine (frequency converter) complies with the DIN EN 55011 standard: Class C3.
Important information on operating machines with frequency inverters and general information on operating our machines on page 333

Precision lead and feed screw lathes – unique in terms of precision and control. With DPA 31Plus digital position display and quick change tool holder

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Shafts, gears and main spindle run in oil bath
- Leading spindle cover
- Precision slide
- All guides adjustable using gib strips
- Mechanical longitudinal feed switch-off of bed slide with four configurable eccentrics
- Clockwise/anti-clockwise rotation switchable on bed slide, switchable via switching spindle
- Two-channel safety electronics
- Central lubrication in bed slide
- Top slide adjustment range ± 90°
- Gearwheels smooth action, hardened and scraped borne on 2 re-adjustable precision taper rollers
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Generously dimensioned chip guard with integrated LED machine lamp
- Handwheels with adjustable fine scaling 0.04 / 0.02 mm
- Safety hand wheels with release function acc. to EN23125 in the X and Z axis
- Quick-switching feed gear with closed design, gears and shafts hardened and scraped, running in oil bath on precision bearings
- Scale on thread gauge adjustable
- Tailstock for taper turning, adjustable by ± 10 mm
- Tailstock sleeve and handwheel with adjustable fine scaling 0.025 mm
- Fast, easy adjustment of the tailstock without tools thanks to clamping lever
- Lines routed in energy chain
- Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- Emergency stop device with foot pedal

from TH 4615D:
Lines routed in energy chain

TH 4620D
- Without camshaft deactivation for the feed
- With electronic rapid feed





Fig.: TH 4615D with optional lathe chuck

ARGUMENTS,...



CONTROL CABINET
› 24 Volt DC power supply
› All contactors und relays by SIEMENS or Schneider



DIGITAL POSITION DISPLAY DPA 31PLUS
› User-friendly membrane keyboard
› Clear reduction of manufacturing times
› Sensor for detecting spindle speeds



from TH 4615D: ENERGY CHAIN
› for routing that is easy on the cable and hose material

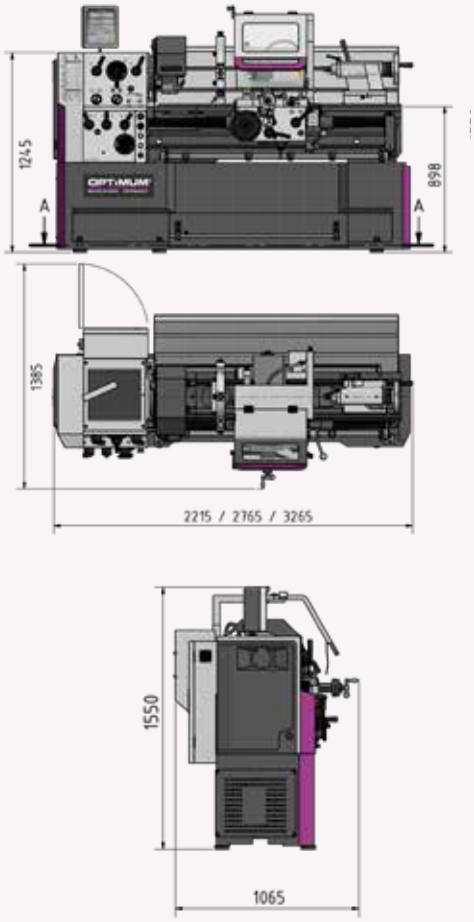


QUICK-CHANGE TOOL HOLDER SWH 5-B
› Including 25 x 120 type D tool holder for 20 mm square chisel included in scope of delivery

TECHNICAL DATA

Model	TH 4610D	TH 4615D	TH 4620D
Article no.	3462110	3462120	3462130
Power			
Electrical connection	400 V / 3 Ph ~50 Hz		
Total rated value	5.8 kW		
Coolant pump motor	125 watts		
Spindle			
Drive motor	5.5 kW		
Spindle taper	MT6		
Spindle seat	Camlock DIN ISO 702- 2 No. 6		
Spindle hole, bar passage diameter	Ø 58 mm		
Quick change tool holder	SWH 5-B		
Work area			
Centre height	230 mm		
Centre width	1 060 mm	1 560 mm	2 060 mm
Swing Ø above machine bed(2)	460 mm		
Swing Ø above cross slide	270 mm		
Bed width	300 mm		
Swing Ø without bed bridge	690 mm		
Turning length in bed bridge	240 mm		
Speed range			
Spindle speed	25 – 2 000 min^{-1}		
Number of stages	12 stages		
Travel distances			
Top slide	125 mm		
Cross slide	285 mm		
Bed slide	755 mm	1 305 mm	1 805 mm
Feeds and pitches			
Longitudinal feed in the range (machine without electric rapid traverse)	0.031 – 1.7 mm/rev (42 feeds)		
Cross feed in the range (machine without electric rapid traverse)	0.014 – 0.784 mm/rev (42 feeds)		
Longitudinal feed in the range (with electric rapid traverse)	0.055 – 3.065 mm/rev (42 feeds)		
Cross feed in the range (machine with electric rapid traverse)	0.025 – 1.386 mm/rev (42 feeds)		
Pitch – metric in range	0.1 – 14 mm/rev (41 pitches)		
Pitch – inch in range	112 – 2 turns/inch (41 pitches)		
Modular thread in range	0.1 – 7 mm x π (34 threads)		
Diametral pitch in range	112 – 4 turns/π (50 pitches)		
Tailstock			
Tailstock seat	MT4		
Sleeve diameter / travel	Ø 60 mm / 130 mm		
Dimensions and weight			
Length approx.	2 215 mm	2 765 mm	3 265 mm
width x height approx.	1 065 x 1 550 mm		
Net weight approx.	1 645 kg	1 810 kg	1 965 kg

DIMENSIONS



SCOPE OF DELIVERY

Lathe chuck
Do not forget!

- Fixed steady rest, passageway Ø 25 – Ø 178 mm
- Travelling steady rest passageway Ø 19 – Ø 114 mm
- LED machine lamp
- Adapter MT6-MT4
- Non-rotating centring tip MT4
- Non-rotating, but temperature resistant centring tip MT4
- Quick change tool holder SWH 5-B
- Tool holder 25 x 120 type D for square chisels 20 mm
- Thread gauge
- Change gear set
- Gear wheels for threading gauge (metric)
- Machine initially filled with premium grade oil
- Operating tool

ACCESSORIES

Designation	Article no.
Spare tool holder 25 x 120 Type D for square	3384306
Spare tool holder 32 x 130 type H for round chisels	3384324
Lathe tool set, carbide, 20 mm, 5-part	3441670
Lathe tool set, carbide, 20 mm, 5-part Extension kit	3441617
Collet set 3- 25 mm, 5C, 17-part	3441509
Collet chuck 5C – Camlock no. 6	3441556
Position stop with granular adjustment	3444022
Precision machine shoe SEU1 (6 pcs. required)	3352985
Clamping disc Ø 350 mm no. 6	3442980
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

Lathe chuck Camlock DIN ISO 702- 2 No. 6	Article no.
OPTIMUM lathe chuck, Ø 250 mm	
Three-jaw lathe chuck centric	3442765
Four-jaw lathe chuck centric	3442852
BISON Lathe chuck Ø 250 mm	
Three-jaw lathe chuck centric	3450330
Four-jaw lathe chuck centric	3450380

Information on lathe chuck from page 238

(2) General information on operating our machines on page 331

Precision lead and feed screw lathe – unique in terms of precision and operation with Siemens inverter Vario drive

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Shafts, gears and main spindle run in oil bath
- Leading spindle cover
- Precision slide
- All guides adjustable using gib strips
- Mechanical longitudinal feed switch-off of bed slide with four configurable eccentrics
- Clockwise/anti-clockwise rotation switchable on bed slide, switchable via switching spindle
- Two-channel safety electronics
- Central lubrication in bed slide
- Top slide adjustment range ± 90°
- Gearwheels smooth action, hardened and scraped borne on 2 re-adjustable precision taper rollers
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Generously dimensioned chip guard with integrated LED machine lamp
- Handwheels with adjustable fine scaling 0.04 / 0.02 mm
- Safety hand wheels with release function acc. to EN23125 in the X and Z axis
- Quick-switching feed gear with closed design, gears and shafts hardened and scraped, running in oil bath on precision bearings
- Scale on thread gauge adjustable
- Tailstock for taper turning, adjustable by ± 10 mm
- Tailstock sleeve and handwheel with adjustable fine scaling 0.025 mm
- Fast, easy adjustment of the tailstock without tools thanks to clamping lever
- Lines routed in energy chain
- Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- Emergency stop device with foot pedal
- Speed monitoring in line with Machinery Directive



Fig.: TH 4615V with optional lathe chuck

ARGUMENTS,...



SIEMENS SINAMICS INVERTER G120D
› More information on page 200



CONTROL CABINET
› 24 Volt DC power supply
› All contactors und relays by SIEMENS or Eaton



DIGITAL POSITION INDICATOR DPA 32 WITH CUTTING CONSTANT VSC
› User-friendly membrane keyboard
› Clear reduction of manufacturing times
› Sensor for detecting spindle speeds



QUICK-CHANGE TOOL HOLDER SWH 5-B
› including 25 x 120 type D tool holder for 20 mm square chisel included in scope of delivery

TECHNICAL DATA

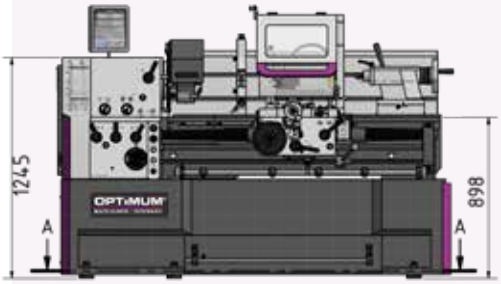
Model	TH 4615V
Article no.	3462125
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	8.5 kW
Coolant pump motor	125 watts
Spindle	
Drive motor	7.5 kW
Spindle taper	MT7
Spindle seat	Camlock DIN ISO 702- 2 No. 8
Spindle hole, bar passage diameter	Ø 80 mm
Quick change tool holder	SWH 5-B
Work area	
Centre height	230 mm
Centre width	1 560 mm
Swing Ø above machine bed(2)	460 mm
Swing Ø above cross slide	270 mm
Bed width	300 mm
Swing Ø without bed bridge	690 mm
Turning length in bed bridge	240 mm
Speed range	
Spindle speed	30 – 2 000 min^{-1}
Number of stages	2 stages, electronically adjustable
Travel distances	
Top slide	125 mm
Cross slide	285 mm
Bed slide	1 305 mm
Feeds and pitches	
Longitudinal feed in the range (machine without electric rapid traverse)	0.031 – 1.7 mm/rev (42 feeds)
Cross feed in the range (machine without electric rapid traverse)	0.014 – 0.784 mm/rev (42 feeds)
Longitudinal feed in the range (with electric rapid traverse)	0.109 – 3.065 mm/rev (35 feeds)
Cross feed in the range (machine with electric rapid traverse)	0.047 – 1.302 mm/rev (35 feeds)
Pitch – metric in range	0.1 – 14 mm/rev (41 pitches)
Pitch – inch in range	112 – 2 turns/inch (41 pitches)
Modular thread in range	0.1 – 7 mm x π (34 threads)
Diametral pitch in range	112 – 4 turns/π (50 pitches)
Tailstock	
Tailstock seat	MT4
Sleeve diameter / travel	Ø 60 mm / 130 mm
Dimensions and weight	
Dimensions (L x W x H) approx.	2 765 x 1 065 x 1 550 mm
Net weight approx.	2 020 kg

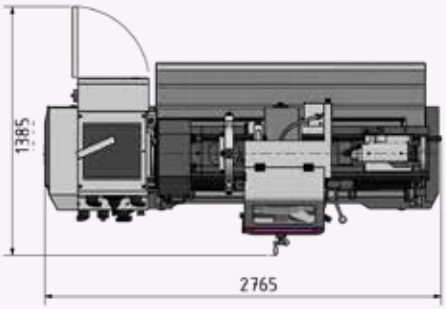
ACCESSORIES

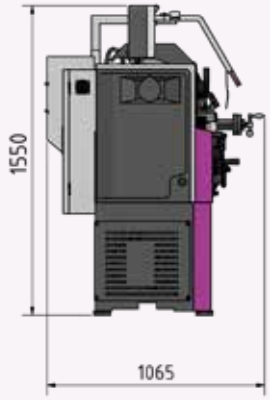
Designation	Article no.
OPTIMUM three-jaw lathe chuck Ø 315 mm Camlock DIN ISO 702-2 No. 8 centric, speed max. 1 800 min^{-1}	3442768
OPTIMUM four-jaw lathe chuck Ø 315 mm Camlock DIN ISO 702-2 No. 8 centric, speed max. 1 800 min^{-1}	3442856
OPTIMUM four-jaw lathe chuck Ø 315 mm Camlock DIN ISO 702-2 No. 8 individual, speed max. 1 200 min^{-1}	3442888
BISON three-jaw lathe chuck Ø 315 mm Camlock DIN ISO 702-2 No. 8 centric, speed max. 2 000 min^{-1}	3450335
BISON Four-jaw lathe chuck Ø 315 mm Camlock DIN ISO 702-2 No. 8 centric, speed max. 2 000 min^{-1}	3450385
Co-rotating centring tip MT 4	3440704
Position stop with granular adjustment	3444022
Clamping disc Ø 480 mm Camlock DIN ISO 702-2 No. 8	3442982

More accessories and information about accessories from page 228 onwards

DIMENSIONS







OUR RECOMMENDATION

cleancraft
flexCAT 378 EOT-PRO
Article no. 7003380



SCOPE OF DELIVERY

Lathe chuck
Do not forget!

- › Fixed steady rest, passageway Ø 25 – Ø 178 mm
- › Travelling steady rest passageway Ø 19 – Ø 114 mm
- › LED machine lamp
- › Adapter MT 7-MT 4
- › Non-rotating centring tip MT4
- › Non-rotating, but temperature resistant centring tip MT4
- › Quick change tool holder 5-B
- › Tool holder 25 x 120 type D for square chisels 20 mm
- › Thread gauge
- › Change gear set
- › Machine initially filled with premium grade oil
- › Operating tool

2) Note: The machine (frequency converter) complies with the DIN EN 55011 standard: Class C3.
Important information on operating machines with frequency inverters and general information on operating our machines on page 333

Lead and feed screw lathes meet the highest standards in terms of technical equipment and precision

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Machine bed and chassis made of heavily ribbed cast material
- One-piece steel machine base
- High degrees of rigidity of the spindle bar housing thanks to heavily ribbed 25GG cast material
- Precision slide
- shafts on needle bearings, all components lubricated in oil bath
- Hardened and ground bed guides
- All electronic controls centrally accessible
- All gear wheels of the feed gear made of hardened steel
- Hand wheels decoupled and approved in line with EN 23125
- Two-channel safety electronics
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Complete feed and lead spindle cover
- Working area completely illuminated
- Hardened and ground spindle guarantees high degrees of accuracy and durability
- The powerful machining performance means that a high level of chip removal during roughing work is no problem
- Lockable chip guard moves with the bed slide with integrated position indicator and coolant hose, manually adjustable
- Easy to service thanks to removable rear panel
- No change gears required
- With safety device to prevent simultaneous operation of thread cutting and pitch mechanism
- Electronically braked motor
- Rapid traverse
- Electrical position shut-off with quadruple positioning stop
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN. Cleaning a coolant reservoir from the front
- Three-jaw chuck included in standard scope of delivery

TX 5 216:
- Large spindle bore Ø 80 mm

TX 6 222:
- Large spindle bore Ø 105 mm

PRODUCT VIDEO YouTube



Fig. TX 5216

ARGUMENTS,...



CONTROL CABINET
› 24 Volt DC power supply
› All contactors und relays by SIEMENS or Schneider



DIGITAL POSITION DISPLAY DPA 32
› LED display
› User-friendly membrane keyboard,
› splash-proof, closed and glare-free
› Greater operation accuracy
› Clear reduction of manufacturing times
› Reduction of error quota



TOUCH PANEL CENTRALISED CONTROL
› Pitch deactivation using button
› Feed bar drive
› Rapid motion X and Y axis
› Machine lamp
› Coolant

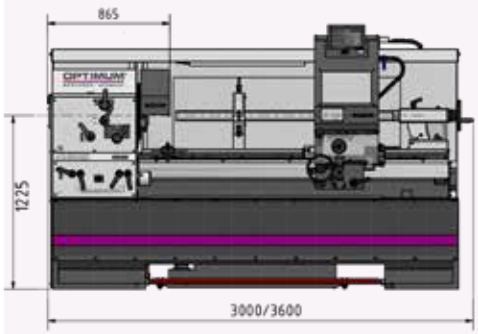


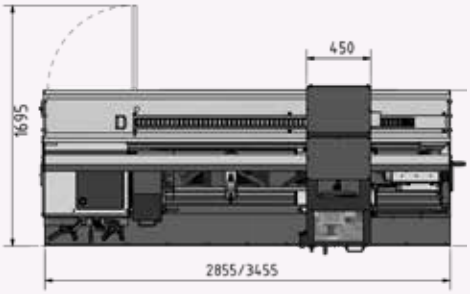
ELECTRIC FEED CUT-OFF
› of the Z-axis with four-position stop

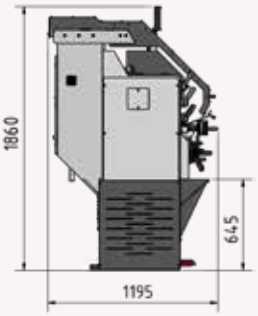
TECHNICAL DATA

Model	TX 5216	TX 6222
Article no.	3432442	3432462
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	
Total rated value	6.1 kW	8.5 kW
Coolant pump motor	100 W	
Spindle		
Drive motor	5.5 kW	7.5 kW
Spindle taper Reducing sleeve in the main spindle	MT 7 MT 5	Ø 113 mm (Taper 1:20)
Spindle seat	Camlock DIN ISO 702- 2 No. 8	
Spindle hole, bar passage diameter	Ø 80 mm	Ø 105 mm
Quick change tool holder	SWH 7-C	
Work area		
Centre height	260 mm	310 mm
Centre width	1 600 mm	2 225 mm
Swing Ø above machine bed(2)	520 mm	620 mm
Swing Ø above cross slide	324 mm	424 mm
Bed width	350 mm	
Speed range		
Spindle speed	30 – 1 500 min^{-1}	40 – 1 650 min^{-1}
Number of speeds	12 stages	
Travel distances		
Top slide	170 mm	
Cross slide	350 mm	
Bed slide	1 400 mm	2 000 mm
Feeds and pitches		
Longitudinal feed within the range	0.05 – 1.5 mm/rev (55 feeds)	
Cross feed within	0.025 – 0.75 mm/rev (55 feeds)	
Metric pitch	0.5 – 15 mm/rev (55 pitches)	
Pitch – inch in range	60 – 2 turns/inch (55 pitches)	
Modular thread in range	0.25 – 7.5mm x π (55 threads)	
Diametral pitch in range	120 – 4 turns/ π (55 threads)	
Tailstock		
Tailstock seat	MT5	
Tailstock sleeve diameter / travel	Ø 72 mm / 180 mm	
Dimensions and weight		
Dimensions (L x W x H) approx.	3 016 x 1 270 x 2 217 mm	3 550 x 1 200 x 1 830 mm
Net weight approx.	2 470 kg	2 800 kg

DIMENSIONS







SCOPE OF DELIVERY

- Three-jaw lathe chuck Ø 315 mm Camlock No. 8
- Non-rotating centring tip MT5, long
- Non-rotating centring tip MT5, short
- Quick change tool holder SWH 7-C
- Tool holder for square chisels 32 x 130 Type D for square chisels 25 mm
- Machine initially filled with premium grade oil
- Operating tool

TX 5 216:

- Adapter MT7-MT5

TX 6 222:

- Adapter Ø 113 mm-MT 5

ACCESSORIES

Designation	Article no.
TX 5 216	
Travelling steady rest passageway Ø 15 – Ø 125 mm	3438020
Fixed steady rest, passageway Ø 10 – Ø 185 mm	3438023
Fixed steady rest, passageway Ø 160 – Ø 285 mm	3438024
Carbide lathe tool set 20 mm	3441670
Carbide lathe tool set 20 mm, extension kit	3441617
TX 6 222	
Travelling steady rest passageway Ø 15 – Ø 125 mm	3438030
Fixed steady rest, passageway Ø 10 – Ø 185 mm	3438033
Fixed steady rest, passageway Ø 160 – Ø 285 mm	3438034
Carbide lathe tool set 25 mm	3441672
Carbide lathe tool set 25 mm, extension kit	3441623
BISON MT5 co-rotating centring tip	3451005
Precision machine shoe SEU1 (6 pcs. required)	3352985
Clamping disc Ø 480 mm Camlock DIN ISO 702-2 No. 8	3442982

More accessories and information about accessories from page 228 onwards


Fig.:
Steady rest


Fig.:
Follow steady rest

(2) General information on operating our machines on page 331

Precision lead and feed screw lathes with electronically adjustable drive and digital position indicator DPA 32

QUALITY PRE-CHECK

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Machine bed and chassis made of heavily ribbed cast material
- One-piece steel machine base
- High rigidity of the headstock housing thanks to heavily ribbed EN GJL 250 cast iron
- Precision slide
- shafts on needle bearings, all components lubricated in oil bath
- Hardened and ground bed guides
- All electronic controls centrally accessible
- All gear wheels of the feed gear made of hardened steel
- Hand wheels decoupled and approved in line with EN 23125
- Two-channel safety electronics
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Complete feed and lead spindle cover
- Working area completely illuminated
- Easy to service thanks to removable rear panel
- Hardened and ground spindle guarantees high degrees of accuracy and durability
- The powerful machining performance means that a high level of chip removal during roughing work is no problem
- Energy chain for material-friendly cable and hose guiding
- Lockable chip guard moves with the bed slide with integrated position indicator and coolant hose, manually adjustable
- No change gears required
- Rapid traverse
- With safety device to prevent simultaneous operation of thread cutting and pitch mechanism
- Electronic feed shut-off of Z axis
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN. Cleaning a coolant reservoir from the front
- Electrical position shut-off with quadruple positioning stop
- Three-jaw lathe chuck included as standard
- Quick change tool holder SWH 7-C
- Tool holder 32 x 130 type D for square chisels 25 mm

PRODUCT VIDEO YouTube

TX 5216V:
- Large spindle bore Ø 80 mm

TX 6222V:
- Large spindle bore Ø 105 mm

SIEMENS SINAMICS G120D FREQUENCY INVERTER



Fig. TX 5216V

ARGUMENTS,...



SIEMENS SINAMICS INVERTER G120D
› More informations see page 198



CONTROL CABINET
› 24 Volt DC power supply
› All contactors und relays by SIEMENS or Schneider



DIG. DIGITAL POSITION INDICATOR DPA 32 WITH CUTTING CONSTANT VSC



TOUCH PANEL CENTRALISED CONTROL
› Pitch deactivation using button
› Feed bar drive
› Rapid motion X and Y axis
› Machine lamp
› Coolant



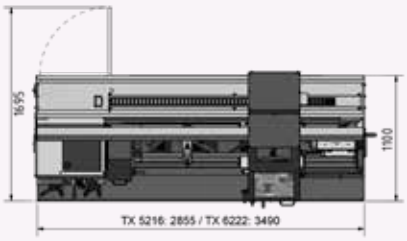
ELECTRIC FEED CUT-OFF
› of the Z-axis with four-position stop

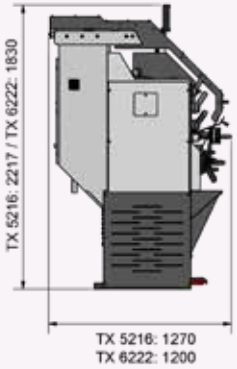
TECHNICAL DATA

Model	TX 5216V	TX 6222V
Article no.	3432447	3432467
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	
Total rated value	8 kW	12 kW
Coolant pump motor	100 W	
Spindle		
Drive motor	7.5 kW	11 kW
Spindle taper Reducing sleeve in the main spindle	MT 7 MT 5	Ø 113 mm (Taper 1:20)
Spindle seat	Camlock DIN ISO 702- 2 No. 8	
Spindle hole, bar passage diameter	Ø 80 mm	Ø 105 mm
Quick change tool holder	SWH 7-C	
Work area		
Centre height	260 mm	310 mm
Centre width	1 600 mm	2 225 mm
Swing Ø above machine bed[2]	520 mm	620 mm
Swing Ø above cross slide	324 mm	424 mm
Bed width	350 mm	
Speed range		
Spindle speed	12 – 1 800 min^{-1}	14 – 1 800 min^{-1}
Number of speeds	2 x 3 speeds	
Travel distances		
Top slide	170 mm	
Cross slide	350 mm	
Bed slide	1 400 mm	2 000 mm
Feeds and pitches		
Longitudinal feed within the range	0.05 – 1.5 mm/rev (55 feeds)	
Cross feed within	0.025 – 0.75 mm/rev (55 feeds)	
Metric pitch	0.5 – 15 mm/rev (55 pitches)	
Pitch – inch in range	60 – 2 turns/inch (55 pitches)	
Modular thread in range	0.25 – 7.5mm x π (55 threads)	
Diametral pitch in range	120 – 4 turns/π (55 threads)	
Tailstock		
Tailstock seat	MT5	
Tailstock sleeve diameter / travel	Ø 72 mm / 180 mm	
Dimensions and weight		
Dimensions (L x W x H) approx.	3 016 x 1 195 x 1 860	3 550 x 1 200 x 1 830
Net weight approx.	2 470 kg	2 800 kg

DIMENSIONS







ACCESSORIES

Designation	Article no.
TX 5216V	
Travelling steady rest passageway Ø 15 – Ø 125 mm	3438020
Fixed steady rest, passageway Ø 10 – Ø 185 mm	3438023
Fixed steady rest, passageway Ø 160 – Ø 285 mm	3438024
Carbide lathe tool set 20 mm	3441670
Carbide lathe tool set 20 mm, extension kit	3441617
TX 6222V	
Travelling steady rest passageway Ø 15 – Ø 125 mm	3438030
Fixed steady rest, passageway Ø 10 – Ø 185 mm	3438033
Fixed steady rest, passageway Ø 160 – Ø 285 mm	3438034
Carbide lathe tool set 25 mm	3441672
Carbide lathe tool set 25 mm, extension kit	3441623
BISON MT5 co-rotating centring tip	3451005
Precision machine shoe SEU1 (6 pcs. required)	3352985
Clamping disc Ø 480 mm Camlock DIN ISO 702-2 No. 8	3442982
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

SCOPE OF DELIVERY

- › Three-jaw lathe chuck Ø 315 mm Camlock No. 8
- › Non-rotating centring tip MT5, long
- › Non-rotating centring tip MT5, short
- › Quick change tool holder SWH 7-C
- › Tool holder for square chisels 32 x 130 Type D for square chisels 25 mm
- › Machine initially filled with premium grade oil
- › Operating tool

TX 5216V:

- › Adapter MT7-MT5

TX 6222V:

- › Adapter Ø 113 mm-MT 5



Fig.:
Steady rest



Fig.:
Follow steady rest

2) Note: The machine (frequency converter) complies with the DIN EN 55011 standard: Class C3.
Important information on operating machines with frequency inverters and general information on operating our machines on page 333

Heavy lead and feed screw lathes, characterised by excellent flexibility, precision and economy. With DPA 31Plus digital position display and quick change tool holder

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Spindle seat Camlock DIN ISO 702- 2 No. 8
- Lead screw cover
- Precision slide
- All guides adjustable using gib strips
- Clockwise/anti-clockwise rotation switchable on bed slide, switchable via switching spindle
- Two-channel safety electronics
- Central lubrication in bed slide
- Top slide adjustment range ± 90°
- Main spindle runs in oil bath
- Gears and shafts running in oil bath
- Gearwheels smooth action, hardened, ground and borne on 2 re-adjustable precision taper rollers
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Handwheels with adjustable fine scaling 0.04 / 0.02 mm
- Safety hand wheels with release function acc. to EN23125 in the X and Z axis
- Gears and shafts hardened and scraped, running in oil bath on precision bearings
- Clearly-arranged selector lever for switching the feed speeds
- Closed design of the quick shift feed gear
- EMERGENCY-STOP push button, motor circuit breaker, lockable main switch
- Emergency stop device with foot pedal
- Tailstock for taper turning, adjustable by ± 10 mm
- Tailstock sleeve and handwheel with adjustable fine scaling 0.025 mm. Fast, easy adjustment without tools thanks to clamping lever
- Energy chain for material-friendly cable and hose guiding
- Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- Scale on thread gauge adjustable



Fig.: TH 5615D with optional lathe chuck



CONTROL CABINET
› 24 Volt DC power supply
› All contactors und relays by SIEMENS or Schneider



DIG. POSITION DISPLAY DPA 31PLUS
› LED display
› User-friendly membrane keyboard,
› Clear reduction of manufacturing times
› Reduction of error quota
› X, Y/Z0, Z axis each with 8-digit display



LED MACHINE LAMP
› in chip protection



TH 5620D / TH 5630D
› With electronic rapid feed
› Without camshaft deactivation for the feed

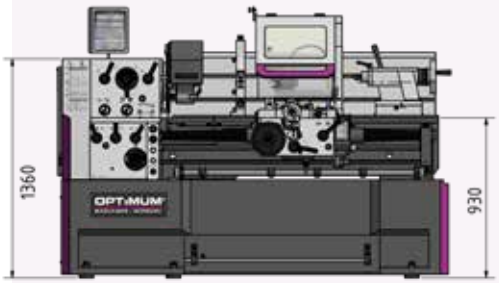


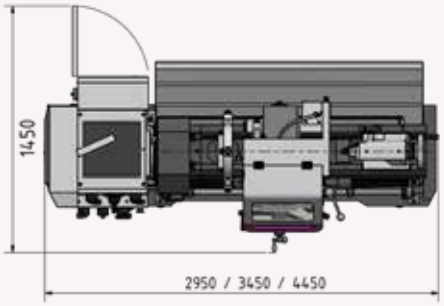
QUICK-CHANGE TOOL HOLDER SWH 5-B
› In the standard scope of delivery

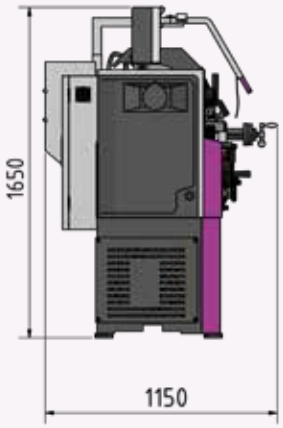
TECHNICAL DATA

Model	TH 5615D	TH 5620D	TH 5630D
Article no.	3462160	3462170	3462180
Power			
Electrical connection	400 V / 3 Ph ~50 Hz		
Total rated value	8.5 kW		
Coolant pump motor	125 watts		
Spindle			
Drive motor	7.5 kW		
Spindle taper	MT7		
Spindle seat	Camlock DIN ISO 702- 2 No. 8		
Spindle hole, bar passage diameter	Ø 80 mm		
Quick change tool holder	SWH 7-C		
Work area			
Centre height	280 mm		
Centre width	1 420 mm	1 910 mm	2 910 mm
Swing Ø above machine bed(2)	560 mm		
Swing Ø above cross slide	355 mm		
Bed width	350 mm		
Swing Ø without bed bridge	790 mm		
Turning length in bed bridge	170 mm		
Speed range			
Spindle speed	25 – 1 600 min^{-1}		
Number of stages	12 stages		
Travel distances			
Top slide	130 mm		
Cross slide	316 mm		
Bed slide	1 210 mm	1 710 mm	2 710 mm
Feeds and pitches			
Longitudinal feed within the range	0.059 – 1.646 mm/rev (35)		
Cross feed within	0.020 – 0.573 mm/rev (35)		
Pitch – metric in range	0.2 – 14 mm/rev (47)		
Pitch – inch in range	112 – 2 turns/inch (60 pitches)		
Modular thread in range	0.1 – 7mm x π (34 threads)		
Diametral pitch in range	112 – 4 turns/π (50 pitches)		
Tailstock			
Tailstock seat	MT5		
Sleeve diameter / travel	Ø 75 mm / 180 mm		
Dimensions and weight			
Length approx.	2 950 mm	3 450 mm	4 450 mm
width x height approx.	1 150 x 1 650 mm		
Net weight approx.	2 300 kg	2 560 kg	3 000 kg

DIMENSIONS







ACCESSORIES

Lathe chuck Ø 315 mm Camlock DIN ISO 702-2 No. 8	Article no.
OPTIMUM Three-jaw lathe chuck, centric, max. speed 1 800 min^{-1}	3442768
OPTIMUM Four-jaw lathe chuck, centric, max. 2 100 1 800 min^{-1}	3442856
OPTIMUM Four-jaw lathe chuck, individual, max. 1 200 min^{-1}	3442888
BISON Three-jaw lathe chuck, centric, max. 2 000 min^{-1}	3450335
BISON Four-jaw lathe chuck, centric, max. 2 000 min^{-1}	3450385
Lathe tool set, carbide, 25 mm, 5-part	3441670
Spare tool holder 40 x 160 type H for round	3384326
Spare tool holder 32 x 150 Type D square	3384308
BISON MT5 co-rotating centring tip	3451005
Position stop with granular adjustment	3444023
Precision machine shoe SEU1 (6 pcs. required for TH 5 615 and TH 5 620) (8 pcs. required for TH 5 630)	3352985
Clamping disc Ø 480 mm Camlock DIN ISO 702-2 No. 8	3442982

More accessories and information about accessories from page 228 onwards

OUR RECOMMENDATION

cleancraft
flexCAT 378 EOT-PRO
Article no. 7003380



Lathe chuck
Do not forget!

SCOPE OF DELIVERY

- Fixed steady rest, passageway Ø 19 – Ø 165 mm
- Travelling steady rest passageway Ø 16 – Ø 95 mm
- LED machine lamp
- Adapter MT7-MT5
- Non-rotating centring tip MT5
- Non-rotating, but temperature resistant centring tip MT 5
- Quick change tool holder SWH 7-C
- Tool holder 32 x 150 type D for square chisels 25 mm
- Thread gauge
- Gear wheels for threading gauge (metric)
- Change gear set
- Machine initially filled with premium grade oil
- Operating tool

(2) General information on operating our machines on page 331

Heavy lead and feed screw lathe, characterised by excellent flexibility, precision and economy. Featuring Siemens inverter Vario drive

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Spindle seat Camlock DIN ISO 702- 2 No. 8
- Two speeds
- Spindle bore / bar passage Ø 105 mm
- Siemens Sinamics frequency inverter / Safety Integrated
- Leading spindle cover
- Precision slide
- All guides adjustable using gib strips
- Clockwise/anti-clockwise rotation switchable on bed slide, switchable via switching spindle
- Two-channel safety electronics
- Central lubrication in bed slide
- Top slide adjustment range ± 90°
- Gearwheels smooth action, hardened, ground and borne on 2 re-adjustable precision taper rollers
- Gears and shafts hardened and scraped, running in oil bath on precision bearings
- Handwheels with adjustable fine scaling 0.04 / 0.02 mm
- Safety hand wheels with release function acc. to EN23125 in the X and Z axis
- Clearly-arranged selector lever for switching the feed speeds
- Closed design of the quick shift feed gear
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- EMERGENCY-STOP push button, motor circuit breaker, lockable main switch
- Emergency stop device with foot pedal
- Tailstock for taper turning, adjustable by ± 10 mm
- Tailstock sleeve and handwheel with adjustable fine scaling 0.025 mm. Fast, easy adjustment without tools thanks to clamping lever
- Heavily ribbed grey-cast-iron prism bed, induction hardened and precision ground
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- LED machine lamp in chip guard
- Energy chain for material-friendly cable and hose guiding
- Scale on thread gauge adjustable



Fig.: TH 5615V with optional lathe chuck

ARGUMENTS,...



SIEMENS SINAMICS INVERTER G120D
› More informations see page 198



CONTROL CABINET
› 24 Volt DC power supply
› All contactors und relays by SIEMENS or Schneider



DIG. POSITION INDICATOR DPA 32 WITH CUTTING CONSTANT VSC
› User-friendly membrane keyboard
› Sensor for detecting spindle speeds



› With electronic rapid traverse
› Without camshaft deactivation for the feed

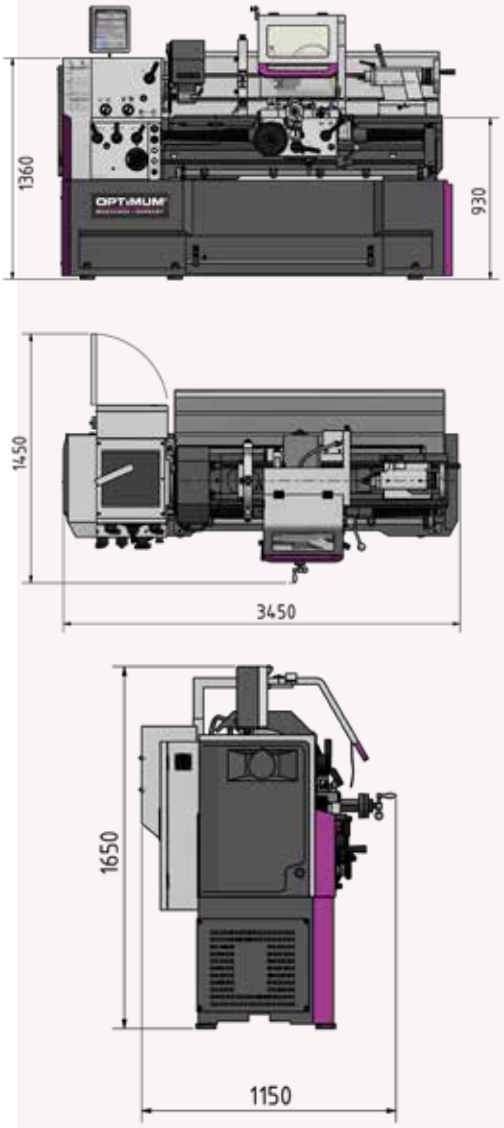


QUICK-CHANGE TOOL HOLDER SWH 7-C
› In the standard scope of delivery

TECHNICAL DATA

Model	TH 5620V
Article no.	3462175
Power	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	8.5 kW
Coolant pump motor	125 watts
Spindle	
Drive motor	7.5 kW
Spindle taper	Ø 113 mm (taper 1:20)
Spindle seat	Camlock DIN ISO 702- 2 No. 8
Spindle hole, bar passage diameter	Ø 105 mm
Quick change tool holder	SWH 7-C
Work area	
Centre height	280 mm
Centre width	1 910 mm
Swing Ø above machine bed(2)	560 mm
Swing Ø above cross slide	355 mm
Bed width	350 mm
Swing Ø without bed bridge	790 mm
Turning length in bed bridge	170 mm
Speed range	
Spindle speed	25 – 1 600 min^{-1}
Number of stages	2 speeds; electronically controlled
Travel distances	
Top slide	130 mm
Cross slide	316 mm
Bed slide	1 710 mm
Feeds and pitches	
Longitudinal feed within the range	0.031 – 1.7 mm/rev (42 feeds)
Cross feed within	0.014 – 0.784 mm/rev (42 feeds)
Pitch – metric in range	0.1 – 14 mm/rev (47 pitches)
Pitch – inch in range	112 – 2 turns/inch (60 pitches)
Modular thread in range	0.1 – 7mm x π (34 threads)
Diametral pitch in range	112 – 4 turns/ π (50 pitches)
Tailstock	
Tailstock seat	MT5
Sleeve diameter / travel	Ø 75 mm / 180 mm
Dimensions and weight	
Dimensions (L x W x H) approx.	3 450 x 1 150 x 1 650 mm
Net weight approx.	2 560 kg

DIMENSIONS



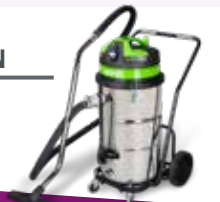
ACCESSORIES

Designation	Article no.
OPTIMUM three-jaw lathe chuck Ø 315 mm Camlock DIN ISO 702-2 No. 8 centric, speed max. 1 800 min^{-1}	3442768
OPTIMUM four-jaw lathe chuck Ø 315 mm Camlock DIN ISO 702-2 No. 8 centric, speed max. 1 800 min^{-1}	3442856
OPTIMUM four-jaw chuck, Ø 315 mm, Camlock, DIN ISO 702-2 No. 8, individual, speed max. 1 200 min^{-1}	3442888
BISON three-jaw lathe chuck Ø 315 mm Camlock DIN ISO 702-2 No. 8 centric, speed max. 2 000 min^{-1}	3450335
BISON Four-jaw lathe chuck Ø 315 mm Camlock DIN ISO 702-2 No. 8 centric, speed max. 2 000 min^{-1}	3450385
Turning tool set, Carbide 25 mm, 5-part (see page 248)	3441670
Spare tool holder 40 x 160 type H for round	3384326
Spare tool holder 32 x 150 Type D square	3384308
BISON co-travelling centre MT 5	3451005
Position stop with granular adjustment	3444023
Clamping disc Ø 480 mm Camlock DIN ISO 702-2 No. 8	3442982
Cutting oil spray 400 ml	3872100

OUR RECOMMENDATION

cleancraft

flexCAT 378 EOT-PRO
Article no. 7003380



Lathe chuck
Do not forget!

SCOPE OF DELIVERY

- Fixed steady rest, passageway Ø 19 – Ø 165 mm
- Travelling steady rest passageway Ø 16 – Ø 95 mm
- LED machine lamp
- Adapter Ø 113 mm-MT5
- Non-rotating centring tip MT5
- Non-rotating, but temperature resistant centring tip MT5
- Quick change tool holder SWH 7-C
- Tool holder 32 x 150 type D for square chisels 25 mm
- Thread gauge
- Gear wheels for threading gauge (metric)
- Change gear set
- Machine initially filled with premium grade oil
- Operating tool

2) Note: The machine (frequency converter) complies with the DIN EN 55011 standard: Class C3.
Important information on operating machines with frequency inverters and general information on operating our machines on page 333

Lead and feed screw lathes, characterised by excellent flexibility, precision and economy. With DPA 31Plus digital position display and quick change tool holder

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Spindle seat Camlock DIN ISO 702- 2 No. 8
- Lead screw cover
- Precision slide
- All guides adjustable using gib strips
- Clockwise/anti-clockwise rotation switchable on bed slide, switchable via switching spindle
- Two-channel safety electronics
- Central lubrication in bed slide
- Top slide adjustment range ± 90°
- Gearwheels smooth action, hardened, ground and borne on 2 re-adjustable precision taper rollers
- Clearly-arranged selector lever for switching the feed speeds
- Closed design of the quick shift feed gear
- Gears and shafts hardened and scraped, running in oil bath on precision bearings
- Hand wheels decoupled and approved in line with EN 23125
- Safety hand wheels with release function in the X axis
- Handwheels with adjustable fine scaling 0.04 / 0.02 mm
- Safety limit switch with positively opening contacts
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- EMERGENCY-STOP push button, motor circuit breaker, lockable main switch
- LED machine lamp
- Energy chain for material-friendly cable and hose guiding
- Emergency stop device with foot pedal
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- Electrical motor brake with fast emergency stop – in normal operations, fast stop without post-run
- Quick change tool holder SWH 9-D
- Tool holder 41 x 180 type D for square chisels 32 mm

ARGUMENTS,...



CONTROL CABINET
› 24 Volt DC power supply
› All contactors und relays by SIEMENS or Schneider



CROSS AND LONGITUDINAL FEED
› Rapid feed pushbutton and selector lever for activating or deactivating rapid feed in the cross and longitudinal directions, for even more efficient working. Does not switch off the entire machine when running into the limit switch



TAILSTOCK
› Tailstock crank for position change
› Tailstock sleeve with two adjustable transmission ratios 1/4 or 1/1 rev

DIG. POSITION DISPLAY DPA 31PLUS
› User-friendly membrane keyboard
› Clear reduction of manufacturing times
› Sensor for detecting spindle speeds

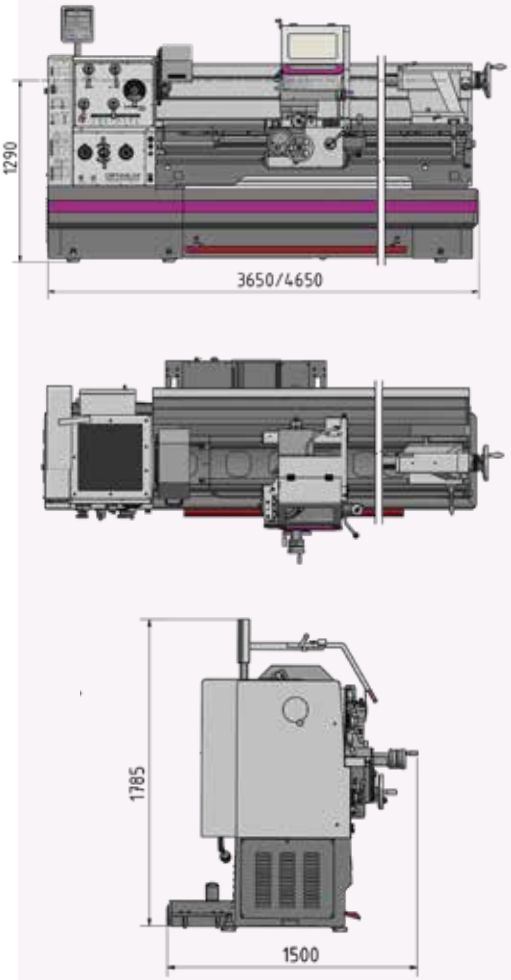


Fig.: TH 6630D

TECHNICAL DATA

Model	TH 6620D	TH 6630D
Article no.	3462210	3462220
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	
Total rated value	10 kW	
Coolant pump motor	150 W	
Spindle		
Drive motor	9 kW	
Spindle taper	Ø 113 mm (taper 1:20)	
Spindle seat	Camlock DIN ISO 702- 2 No. 8	
Spindle hole, bar passage diameter	Ø 105 mm	
Quick change tool holder	SWH 9-D	
Work area		
Centre height	330 mm	
Centre width	2 050 mm	3 050 mm
Swing Ø above machine bed(2)	660 mm	
Swing Ø above cross slide	440 mm	
Bed width	400 mm	
Swing Ø without bed bridge	900 mm	
Turning length in bed bridge	250 mm	
Load bearing capacity	1.4 t/m	
Speed range		
Spindle speed	25 – 1 600 min^{-1}	
Number of stages	16 stages	
Travel distances		
Top slide	230 mm	
Cross slide	368 mm	
Bed slide	1 965 mm	2 900 mm
Feeds and pitches		
Feed motor output	550 W	
Rapid traverse	3.8 m /min. max. 5 min. (30 min. break)	
Longitudinal feed within the range	0.044 – 1.48 mm/rev (25 feeds)	
Cross feed within	0.022 – 0.74 mm/rev (25 feeds)	
Pitch – metric in range	0.45 – 120 mm/rev (54 pitches)	
Pitch – inch in range	80 – 7/16 turns/inch (60 pitches)	
Modular thread in range	60 – 0.25mm x π (46 threads)	
Diametral pitch in range	160 – 7/8 turns/π (42 pitches)	
Tailstock		
Tailstock seat	MT 5	
Tailstock quill diameter/travel	90 mm / 235 mm	
Dimensions and weight		
Length approx.	3 650 mm	4 650 mm
width x height approx.	1 500 x 1 785 mm	
Net weight approx.	3 345 kg	3 730 kg

DIMENSIONS



OUR RECOMMENDATION

cleancraft

flexCAT 378 EOT-PRO
Article no. 7003380



Lathe chuck
Do not forget!

SCOPE OF DELIVERY

- Fixed steady rest, passageway Ø 20 – Ø 190 mm
- Travelling steady rest passageway Ø 20 – Ø 130 mm
- LED machine lamp
- Adapter Ø 113 mm-MT5
- Non-rotating centring tip MT 5
- Non-rotating, but temperature resistant centring tip MT5
- MT5 co-rotating centring tip
- Quick change tool holder SWH 9-D
- Tool holder 41 x 180 type D for square chisels 32 mm
- Change gear set
- Quality oil included
- Operating tool

ACCESSORIES

Lathe chuck Ø 315 mm Camlock DIN ISO 702-2 No. 8	Art. no.
OPTIMUM Three-jaw lathe chuck, centric, max. speed 1 800 min^{-1}	3442768
OPTIMUM Four-jaw lathe chuck, centric, max. 2 100 1 800 min^{-1}	3442856
OPTIMUM Four-jaw lathe chuck, individual, max. 1 200 min^{-1}	3442888
BISON Three-jaw lathe chuck, centric, max. 2 000 min^{-1}	3450335
BISON Four-jaw lathe chuck, centric, max. 2 000 min^{-1}	3450385
Carbide lathe tool set 25 mm	3441672
Carbide lathe tool set 25 mm, extension kit	3441623
Co-rotating centring tip MT 5	3440705
BISON co-rotating centring tip MT 5(2-row SKF angular contact bearings)	3451005
Precision machine shoe SEU1 (6 pcs. for TH 6 620 or 8 pcs. for TH 6 630 are required)	3352985

(2) General information on operating our machines on page 331

Lead and feed screw lathes, characterised by excellent flexibility, precision and economy. With DPA 31Plus digital position display and quick change tool holder

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Hardened and ground z-axis guideway
- Guaranteed concentricity of the spindle nose ≤ 0.015 mm
- Spindle seat Camlock DIN ISO 702- 2 No. 8
- Lead screw cover
- Precision slide
- All guides adjustable using gib strips
- Clockwise/anti-clockwise rotation switchable on bed slide, switchable via switching spindle
- Two-channel safety electronics
- Top slide adjustment range ± 90°
- Gearwheels smooth action, hardened, ground and borne on 2 re-adjustable precision taper rollers
- Clearly-arranged selector lever for switching the feed speeds
- Closed design of the quick shift feed gear
- Gears and shafts hardened and scraped, running in oil bath on precision bearings
- Hand wheels decoupled and approved in line with EN 23125
- Safety hand wheels with release function in the X axis
- Handwheels with adjustable fine scaling 0.04 / 0.02 mm
- Safety limit switch with positively opening contacts
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Central lubrication in bed slide
- EMERGENCY-STOP push button, motor circuit breaker, lockable main switch
- LED machine lamp
- Energy chain for material-friendly cable and hose guiding
- Emergency stop device with foot pedal
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- Electrical motor brake with fast emergency stop – in normal operations, fast stop without post-run
- Electrical system with Siemens and Schneider components
- Quick change tool holder SWH 9-D
- Tool holder 41 x 180 type D for square chisels 32 mm

ARGUMENTS,...



CONTROL CABINET
› 24 Volt DC power supply
› All contactors und relays by SIEMENS or Schneider



CROSS AND LONGITUDINAL FEED
› Rapid feed pushbutton and selector lever for activating or deactivating rapid feed in the cross and longitudinal directions, for even more efficient working. Does not switch off the entire machine when running into the limit switch



TAILSTOCK
› Tailstock crank for position change
› Tailstock sleeve with two adjustable transmission ratios 1/4 or 1/1 rev

DIG. POSITION DISPLAY DPA 31PLUS
› User-friendly membrane keyboard
› Clear reduction of manufacturing times
› Sensor for detecting spindle speeds

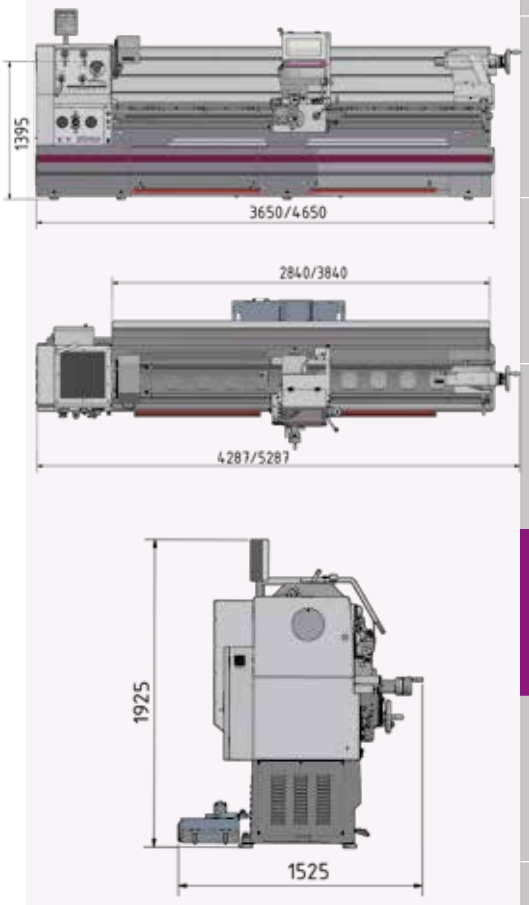


Fig.: TH 8030D

TECHNICAL DATA

Model	TH 8020D	TH 8030D
Article no.	3462230	3462240
Power		
Electrical connection	400 V / 3 Ph ~50 Hz	
Total rated value	12 kW	
Coolant pump motor	150 W	
Spindle		
Drive motor	11 kW	
Spindle taper	Ø 113 mm (taper 1:20)	
Spindle seat	Camlock DIN ISO 702- 2 No. 8	
Spindle hole, bar passage diameter	Ø 105 mm	
Quick change tool holder	SWH 9-D	
Work area		
Centre height	400 mm	
Centre width	2 050 mm	3 050 mm
Swing Ø above machine bed(2)	800 mm	
Swing Ø above cross slide	570 mm	
Bed width	400 mm	
Swing Ø without bed bridge	1 035 mm	
Turning length in bed bridge	250 mm	
Load bearing capacity	1.4 t/m	
Speed range		
Spindle speed	25 – 1 600 min^{-1}	
Number of stages	16 stages	
Travel distances		
Top slide	230 mm	
Cross slide	368 mm	
Bed slide	1 965 mm	2 900 mm
Feeds and pitches		
Feed motor output	550 W	
Rapid traverse	3.8 m /min. max. 5 min. (30 min. break)	
Longitudinal feed within the range	0.044 – 1.48 mm/rev (25 feeds)	
Cross feed within	0.022 – 0.74 mm/rev (25 feeds)	
Pitch – metric in range	0.45 – 120 mm/rev (54 pitches)	
Pitch – inch in range	80 – 7/16 turns/inch (60 pitches)	
Modular thread in range	60 – 0.25mm x π (46 threads)	
Diametral pitch in range	160 – 7/8 turns/π (42 pitches)	
Tailstock		
Tailstock seat	MT5	
Tailstock quill diameter/travel	90 mm / 235 mm	
Dimensions and weight		
Length approx.	4 287 mm	5 287 mm
width x height approx.	1 525 x 1 925 mm	
Net weight approx.	3 455 kg	3 820 kg

DIMENSIONS



OUR RECOMMENDATION

cleancraft
flexCAT 378 EOT-PRO
Article no. 7003380



ACCESSORIES

Lathe chuck Ø 315 mm Camlock DIN ISO 702-2 No. 8	Art. no.
OPTIMUM Three-jaw lathe chuck, centric, max. speed 1 800 min^{-1}	3442768
OPTIMUM Four-jaw lathe chuck, centric, max. 2 100 1 800 min^{-1}	3442856
OPTIMUM Four-jaw lathe chuck, individual, max. 1 200 min^{-1}	3442888
BISON Three-jaw lathe chuck, centric, max. 2 000 min^{-1}	3450335
BISON Four-jaw lathe chuck, centric, max. 2 000 min^{-1}	3450385
Carbide lathe tool set 25 mm	3441672
Carbide lathe tool set 25 mm, extension kit	3441623
BISON co-rotating centring tip MT 5(2-row SKF angular contact bearings)	3451005
Precision machine shoe SEU1 (8 units required)	3352985
Cutting oil spray 400 ml	3872100

More accessories and information about accessories from page 228 onwards

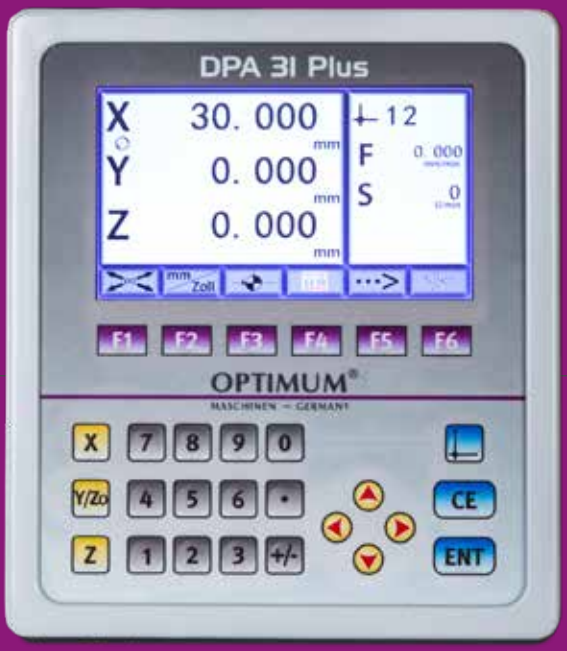
SCOPE OF DELIVERY

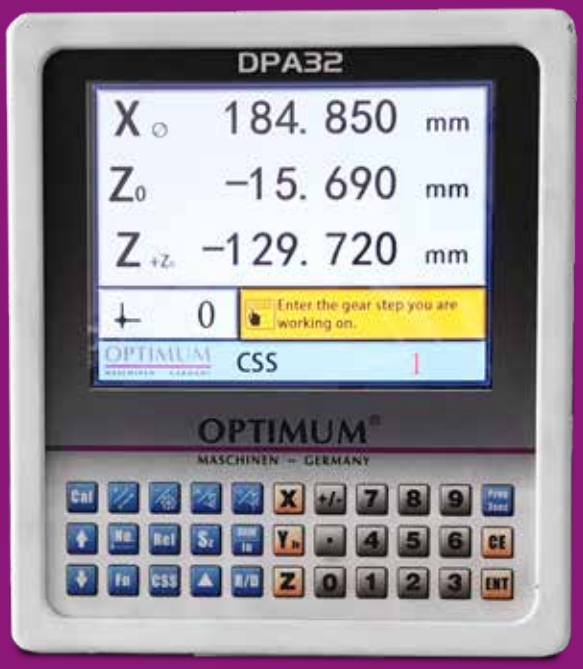
Lathe chuck
Do not forget!

- Fixed steady rest, passageway Ø 20 – Ø 185 mm
- Travelling steady rest passageway Ø 20 – Ø 125 mm
- LED machine lamp
- Adapter Ø 113 mm-MT5
- Non-rotating centring tip MT5
- Non-rotating, but temperature resistant centring tip MT5
- MT5 co-rotating centring tip
- Quick change tool holder SWH 9-D
- Tool holder 41 x 180 type D for square chisels 32 mm
- Change gear set
- Quality oil included
- Operating tool

(2) General information on operating our machines on page 331

DIGITAL POSITION DISPLAYS





DRO 5
Digital 3-axis position display

Digital position display	Article no.
DRO 5	3383975



Including 3 magnetic sensors



DRO 5	Article no.3383975
› Digital 3-axis position display for milling machines (X - Y - Z) and for lathes (X, Z, Z_0)	
› For measuring positions	
› Speed display	
› Three incremental inputs	
› Four-line LCD display	
› User-friendly menu navigation	
› Sturdy aluminium housing	
› Programming from the front	
› Dimensions L x W x H: 98 x 65 x 134 mm	
Including	
› Speed sensor cable length 5 metres	
› 3 units magnetic sensors without magnetic strip	
› Power supply cable length 6 metres	
› Magnetic plate	

fitting	Article no.
for the DRO	3383976

Magnetic tape	Article no.
Magnetic strip, length 1 100 mm	3383978
Magnetic strip, length 2 000 mm	3383979
Magnetic strip per metre	3383980



Factory assembly	
Magnetic strip three axes	9000420
Speed sensor	9000421

Assembly kit	
OPTIturn TU 3 008	3383985
OPImill MH 22V	3383990

Digital position displays DPA 31Plus and DPA 32

Digital position display	Article no.
DPA 31 Plus	3384029
DPA 32	3384033

With CSS function and cutting constant





Universally applicable digital position display
guarantees excellent results for machines thanks to increased accuracy

Details

- LED display
- Greater operation accuracy
- Clear reduction of manufacturing times
- Reduction of error quota
- Sensor supplied for acquiring spindle speeds
- Switchable from turning to milling machines
- Ergonomic membrane keypad, protected against dust and splash water

especially for lathes

- Diameter or radius display
- Display of Z0 and Z1 axes with addition function, separately or together possible

especially for milling machines

- Trigonometric function (sin, cos, tan)
- Circular segment calculation with individual coordinate specification

Application

- for precise, fast and reliable production
- Quick set-up thanks to precise positioning for mounting on lathes, milling machines, drilling machines, etc. for measuring traverse paths
- No parallax or reading errors
- Absolute repeatability

Possible functions

- Calculator,
- Speed display,
- Axis coupling (sum Z),
- Sub D plug sockets,
- Absolute/incremental operation,
- Inch/metric thread conversion,
- Bolt circle calculator (chain measurement),
- Coordinates in the circle (pitch circle),
- Drill holes in a circle (pitch circle),
- Measured values radius/diameter switchable,
- Zero reset data preset,
- Self-diagnosis,
- Linear error correction,
- 99 Tool memory

Note

When retrofitting position displays and measuring bars for lathes and milling machines, the customer must provide the machine with holes and threads

Measuring bars MSS31	Article no.
› The electronic measuring components of the measuring strips are protected and sealed in the housing	
› Provides accurate and reliable measurement results even if the measuring system is operated in oil or coolant	
› Tolerant towards vibration and magnetic interference	
› Without assembly	
51 mm (length 311 mm)	3384405
102 mm (length 362 mm)	3384410
152 mm (length 412 mm)	3384415
203 mm (length 463 mm)	3384417
254 mm (length 514 mm)	3384419
305 mm (length 565 mm)	3384421
356 mm (length 616 mm)	3384422
406 mm (length 666 mm)	3384423
457 mm (length 717 mm)	3384424
506 mm (length 766 mm)	3384425
559 mm (length 819 mm)	3384426
610 mm (length 870 mm)	3384427
660 mm (length 920 mm)	3384428
711 mm (length 971 mm)	3384429
762 mm (length 1 022 mm)	3384430
813 mm (length 1 073 mm)	3384431
864 mm (length 1 124 mm)	3384432
914 mm (length 1 174 mm)	3384433
965 mm (length 1 225 mm)	3384434
1 016 mm (length 1 276 mm)	3384435
1 118 mm (length 1 378 mm)	3384437
1 168 mm (length 1 428 mm)	3384438
1 219 mm (length 1 479 mm)	3384439
1 270 mm (length 1 530 mm)	3384440
1 321 mm (length 1 581 mm)	3384441
1 372 mm (length 1 632 mm)	3384442
1 422 mm (length 1 882 mm)	3384443
1 473 mm (length 1 933 mm)	3384444
1 524 mm (length 1 784 mm)	3384445
1 626 mm (length 1 886 mm)	3384446
1 727 mm (length 1 987 mm)	3384447
1 829 mm (length 2 089 mm)	3384448
1 930 mm (length 2 190 mm)	3384449
2 032 mm (length 2 292 mm)	3384450
2 134 mm (length 2 394 mm)	3384451
2 235 mm (length 2 495 mm)	3384452
2 337 mm (length 2 597 mm)	3384453
2 438 mm (length 2 698 mm)	3384454
2 540 mm (length 2 800 mm)	3384455
2 642 mm (length 2 902 mm)	3384456
2 743 mm (length 3 003 mm)	3384457
2 845 mm (length 3 105 mm)	3384458
2 946 mm (length 3 206 mm)	3384459
3 048 mm (length 3 248 mm)	3384460



Accessories	Article no.
1 metre extension cable	3384040
Active read head	3384035

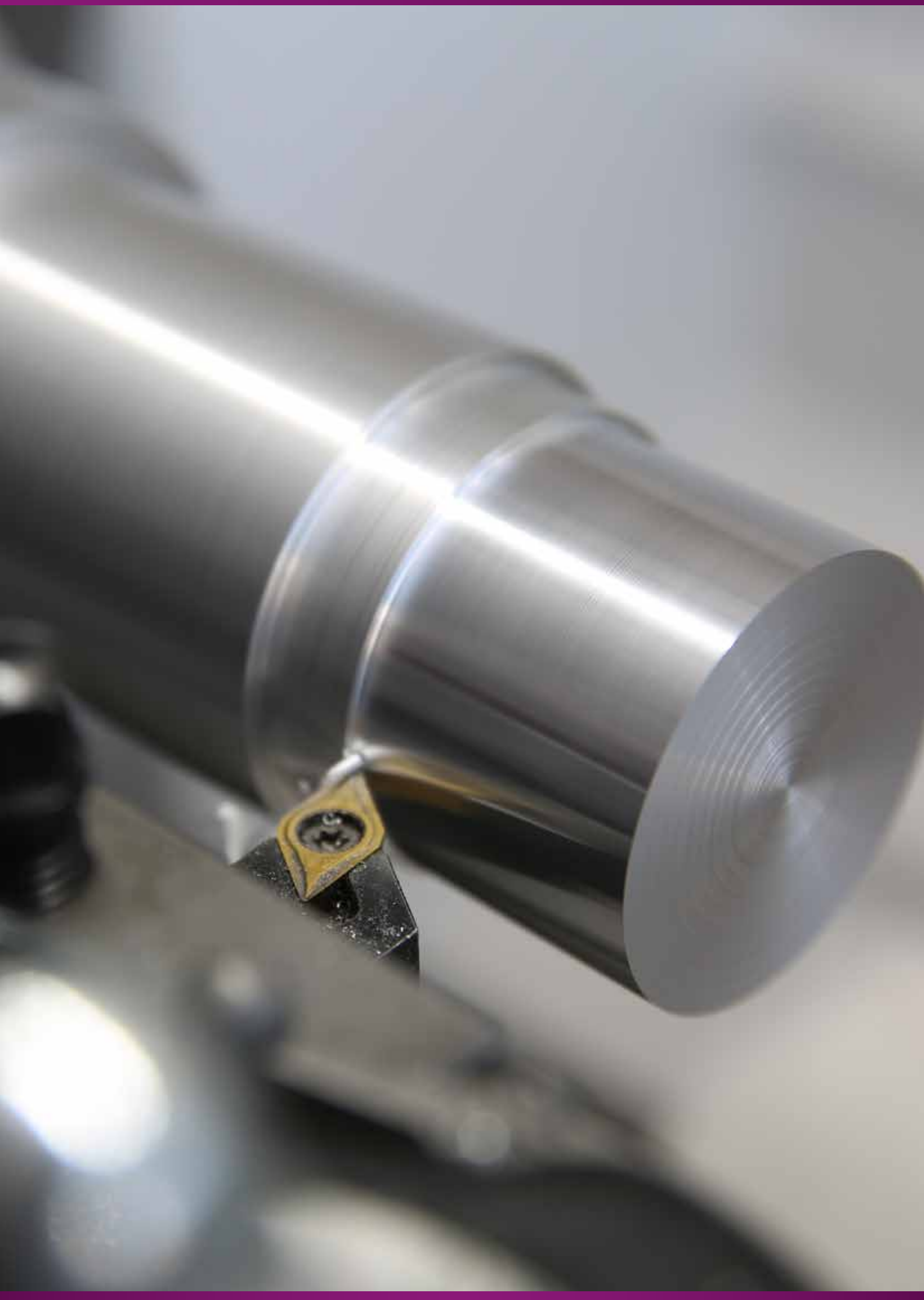


Magnetic strip	Article no.
› Magnetic strip for assembly machines that do not have enough space for magnetic scales	
› Connector 9-pin	
Length 1 100 mm	3383978
Length 2 000 mm	3383979



Measuring bars	Article no.
MSM 50 mm (185 mm)	3384505
MSM 75 mm (210 mm)	3384507
MSM 100 mm (235 mm)	3384510
MSM 125 mm (260 mm)	3384512
MSM 150 mm (285 mm)	3384515
MSM 175 mm (310 mm)	3384517
MSM 200 mm (335 mm)	3384520
MSM 225 mm (360 mm)	3384522
MSM 250 mm (385 mm)	3384525
MSM 275 mm (410 mm)	3384527
MSM 300 mm (435 mm)	3384530
MSM 325 mm (460 mm)	3384532
MSM 350 mm (485 mm)	3384535
MSM 400 mm (535 mm)	3384540
MSM 450 mm (585 mm)	3384545
MSM 500 mm (635 mm)	3384550
MSM 550 mm (685 mm)	3384555
MSM 600 mm (735 mm)	3384560
MSM 650 mm (785 mm)	3384565





ACCESSORIES LATHES



Compatibility overview, accessories for lathes

Turning accessories		Article no.	TU 1503V	TU 2004V	TU 2 304/V	TU 2 406/V	TU 2 506/V	TU 2 807/V	TU 3 008/G/V	TM 3 110	TH 3 309/D/V	TM 3 310/D	TH 3 610/D	TH 4 010/D	TH 4010V	TM 4 010/D	TH 42	TH 4210V	TH 46	TH 4615V	TZ 4/ TZ4V	TX 4 412	TX 5 216	TX 6 222	TH 56	TH 5620V	TH 66	TH 80
SWH	SWH AA	3384311		●																								
	SWH 1 – A	3384301			●	●	●	●	●																			
	SWH 3 – E	3384303								●	●	●	●	●	L	L												
	SWH 5 – B	3384305															●	L	L	L	L	L						
	SWH 7 – C	3384307																					L	L	L	L		
	SWH 9 – D	3384309																									L	L
Turning tool	Carbide 8 mm	3441662	●	●	●																							
	Carbide 10 mm	3441664			●	●	●	●	●																			
	Carbide 12 mm	3441666			●	●	●	●	●																			
	Carbide 12 mm	3441212			●	●	●	●	●																			
	Carbide 16 mm	3441668								●	●	●	●	●	●	●												
	Carbide 16 mm	3441216								●	●	●	●	●	●	●												
	Carbide 16 mm	3441610								●	●	●	●	●	●	●												
	Carbide 20 mm	3441670															●	●	●	●	●	●	●					
	Carbide 20 mm	3441617															●	●	●	●	●	●	●					
	Carbide 25 mm	3441672																●	●	●		●	●	●	●	●	●	●
	Carbide 25 mm	3441623																●	●	●		●	●	●	●	●	●	●
	Carbide 32 mm	3441674																									●	●
Single lathe tool 12 mm	SSSC L1212J09	3441225			●	●	●	●	●																			
	SCLC L1212J09	3441226			●	●	●	●	●																			
Turning tool	Carbide 8 mm	3441601	●	●	●																							
	Carbide 10 mm	3441602			●	●	●	●	●																			
	Carbide 12 mm	3441603			●	●	●	●	●																			
	Carbide 16 mm	3441604								●	●	●	●	●	●	●												
Inside turning tool set	10 mm	3441640			●	●	●	●	●																			
	12 mm	3441641			●	●	●	●	●		●	●	●			●												
	set	3441650									●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Pilot bit set		3203010			●	●	●	●	●		●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●
Anti-vibration element	SE 1	3381012			●*	●*	●*	●*	●*	●*	●	●				●					●							
	SE 2	3381016											●	●	●							●	●	●				
	SE 3	3381018															●	●	●	●					●	●	●	●
Levelling platen	SE 55	3352981			○*	○*	○*	○*	○*	○*	○*	○*				●						●						
	SE 85	3352982												●	●		●	●	●	●		●	●	●	●	●	●	●
Precision machine shoe	SEU1	3352985									●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Machine base	MST1	3440409			●	●	●	●	●	●																		
Number of SE required (*if using the MST)					6*	6*	6*	6*	6*	6*	8	6	6	6	6	6	6	6	6	6	8	6	6	6	6	6	6/8	8
Clamping block	Set 16-05	3440653							●		●	●	●	●	●	●												
	Set 20-05	3440654															●	●	●	●	●	●	●	●	●	●		
	Set 25-05	3440655																									●	●
HSS twist drill	MT 2	3051002		●	●	●	●	●																				
	MT 3	3051003							●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○
Clamping disc	Ø 170 mm	3440295		●																								
	Ø 220 mm	3440552				●																						
	Ø 240 mm	3441352					●																					
	Ø 265 mm	3441452						●																				
	Ø 300 mm Camlock No. 4	3442976							●		●																	
	Ø 320 mm Camlock No. 5	3442979														●					●							
	Ø 330 mm Camlock No. 5	3442978											●															
	Ø 350 mm Camlock No. 6	3442980															●	●	●									
	Ø 480 mm Camlock No. 8	3442982																		●			●	●	●	●	●	●
Chuck flange	Ø 100 mm cylindrical	3440312		●																								
	Ø 125 mm cylindrical	3440313			●																							
	Ø 125 mm cylindrical	3440511				●																						
	Ø 125 mm short taper	3441312					●	●																				
	Ø 160 mm short taper	3441413						●																				

Turning accessories		Article no.	TU 1503V	TU 2004V	TU 2 304/V	TU 2 406/V	TU 2 506/V	TU 2 807/V	TU 3 008/G/V	TM 3 110	TH 3 309/D/V	TM 3 310/D	TH 3 610/D	TH 4 010/D	TH 4010V	TM 4 010/D	TH 42	TH 4210V	TH 46	TH 4615V	TZ 4/ TZ4V	TX 4 412	TX 5 216	TX 6 222	TH 56	TH 5620V	TH 66	TH 80
BISON chuck flange	160 mm	3450246																			●							
Collet chuck	ER16	3440281	●																									
	ER25	3440305		●	●																							
	ER25	3440505				●																						
	ER32	3440506				●																						
	ER25	3441305					●	●																				
	ER32	3441306					●	●																				
Collet chuck	16C	3450245																			●							
Collet chuck	5C – No. 4	3441554							●	●	●	●																
	5C – No. 5	3441555											●	●	●	●												
	5C – No. 6	3441556															●	●	●									
	5C – No. 8	3441558																		●			●	●	●	●	●	●
Collet set	5C	3441509							●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●
Co-rotating centring tip	MT 2	3440702		●	●	●	●																					
	MT 3	3440703						●	●	●	●	●	●	●	●						●							
	MT 4	3440704															●	●	●	●		●						
	MT 5	3440705																					●	●	●	●	●	●
Co-rotating centring tip with replaceable tips	MT 2	3440732		●	●	●	●																					
	MT 3	3440733						●	●	●	●	●	●	●	●						●		●	●			●	●
	MT 4	3440734															●	●	●	●		●						
BISON Co-rotating centring tip	MT 2	3451002	●	●	●	●	●																					
	MT 3	3451003						●	●	●	●	●	●	●											●			
	MT 4	3451004														●	●	●	●	●		●						
	MT 5	3451005																			●		●	●	●		●	●
Collet set	ER 16	3440282	●																									
	ER 25	3441109		●	●	●	●	●																				
	ER 32	3441122		●		●	●	●																				
Collet chuck device	5C	3441506									●																	
Position stop		3441522									●																	
		3441523											●															
		3444022																	●	●								
		3444023																							●	●		
Hollow spindle stop	HSP 38	3444410							●	●	●	●																
	HSP 52	3444415											●	●	●	●	●	●			●	●						
	HSP 80	3444420																		●			●		●			
	HSP 105	3444425																						●		●	●	●
Steady rest		3440211	●																									
		3440231		●																								
		3440361			●																							
		3440515																										
		3441315				●	●																					
		3441415						●																				
		3441461							●																			
		3441470								●																		
Follow steady rest		3440210	●																									
		3440230		●																								
		3440360			●																							
		3441310				●	●																					
		3441410						●																				
		3441460							●																			
		3441469								●																		
Coolant system		3351999	●	●	●	●	●	●	●	●	●	●	●	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
Position display	DRO 5	3383975			●	●	●	●	●	●																		

L – Included in scope of delivery:	● Recommended	○ Recommended – restrictions apply

This equipment table covers all recommended equipment options. Depending on the individual case, use of accessories can be meaningful beyond this.

OPTIMUM THREE-JAW LATHE CHUCK

CAST DIN 6350

OPTIMUM® Three-jaw lathe chuck	Art. no.
Ø 80 mm	3440287
Block jaw set, soft, single piece	3442902
Ø 100 mm	3442710
Block jaw set, soft, single piece	3442904
Ø 125 mm	3442712
Block jaw set, soft, single piece	3442906
Ø 160 mm	3442716
Block jaw set, soft, single piece	3442716

› centric clamping
› Cylindrical centring mount as per DIN 6 350
› True run accuracy better than 0.05 mm
› Chuck flange required see page 230

Scope of delivery
› Single-piece hard jaws with outside-inside clamping
› Chuck key



CAST Camlock DIN 55029

OPTIMUM® Three-jaw lathe chuck	Article no.
Ø 160 mm Camlock No. 4	3442761
Block jaw set, soft, single piece	3442907
Ø 200 mm Camlock No. 4	3442762
Block jaw set, soft, single piece	3442910
Ø 200 mm Camlock No. 5	3442764
Block jaw set, soft, single piece	3442910
Ø 200 mm Camlock No. 6	3442763
Block jaw set, soft, single piece	3442910
Ø 250 mm Camlock No. 6	3442765
Block jaw set, soft, single piece	3442912
Ø 315 mm Camlock No. 8	3442768
Block jaw set, soft, single piece	3442916

› Centrically clamping DIN ISO 702-2
› DIN ISO 702- 2
› Camlock direct mount DIN 55029

Scope of delivery
› Single-piece hard jaws with outside-inside clamping
› Chuck key



OPTIMUM FOUR-JAW LATHE CHUCK

CAST DIN 6350

OPTIMUM® Four-jaw lathe chuck	Art. no.
Ø 80 mm	3442808
Block jaw set, soft, single piece	3442920
Ø 100 mm	3442810
Block jaw set, soft, single piece	3442922
Ø 125 mm	3442812
Block jaw set, soft, single piece	3442924
Ø 160 mm	3442816
Block jaw set, soft, single piece	3442926
› centric clamping	

OPTIMUM® Four-jaw lathe chuck	Article no.
Ø 80 mm	3440286
Ø 100 mm	3442872
Ø 125 mm	3442874
› Individual clamping	

› Cylindrical centring mount as per DIN 6 350
› True run accuracy better than 0.05 mm
› Chuck flange required see page 230

Scope of delivery
Lathe chuck centrically clamping:
› Hard jaws, one-piece, with external-internal clamping
Lathe chuck single clamping:
› Set of hard reversible jaws



CAST Camlock DIN 55029

OPTIMUM® Four-jaw lathe chuck	Article no.
Ø 160 mm Camlock No. 4	3442840
Block jaw set, soft, single piece	3442926
Ø 200 mm Camlock No. 4	3442843
Block jaw set, soft, single piece	3442927
Ø 200 mm Camlock No. 5	3442845
Block jaw set, soft, single piece	3442927
Ø 200 mm Camlock No. 6	3442846
Block jaw set, soft, single piece	3442928
Ø 250 mm Camlock No. 6	3442852
Block jaw set, soft, single piece	3442935
Ø 315 mm Camlock No. 8	3442856
Block jaw set, soft, single piece	3442938
› Centric clamping, DIN ISO 702-2	

OPTIMUM® Four-jaw lathe chuck	Article no.
Ø 200 mm Camlock No. 4	3442879
Ø 200 mm Camlock No. 5	3442880
Ø 250 mm Camlock No. 6	3442884
Ø 315 mm Camlock No. 8	3442888
Ø 400 mm Camlock No. 8	3442890
› Centric clamping, DIN ISO 702-2	

› Camlock direct mount DIN 55029
Scope of delivery
Lathe chuck centrically clamping:
› Hard jaws, single-part, turn-able, as outside-inside clamping
Lathe chuck single clamping:
› Set of hard reversible jaws

For technical data on the lathe chuck, see page 240 "Chuck flange" on page 230

THREE-JAW LATHE CHUCK

CAST DIN 6350

BISON Three-jaw lathe chuck	Art. no.
Ø 125 mm	3450230
Block jaw set, soft, single piece	3450410
Ø 160 mm	3450232
Block jaw set, soft, single piece	3450412

STEEL DIN 6350

BISON Three-jaw lathe chuck	Article no.
Ø 250 mm	3450530
Block jaw set, soft	3450426



› centric clamping
› All work surfaces induction hardened and ground
› Permanently high clamping and repeating accuracy
› Uniform clamping forces
› High true running accuracy (better than DIN 6 386)

Scope of delivery
› Single-piece hard jaws with outside-inside clamping
› Chuck key

CAST Camlock DIN 55029

BISON Three-jaw lathe chuck	Article no.
Ø 160 mm Camlock No. 4	3450305
Block jaw set, soft	3450412
Ø 200 mm Camlock No. 4	3450310
Block jaw set, soft	3450414
Ø 200 mm Camlock No. 5	3450315
Block jaw set, soft	3450414
Ø 200 mm Camlock No. 6	3450320
Block jaw set, soft	3450414
Ø 200 mm DIN 6 350 A2-5	3450210
Block jaw set, soft	3450414
Ø 250 mm Camlock No. 5	3450325
Block jaw set, soft	3450416
Ø 250 mm Camlock No. 6	3450330
Block jaw set, soft	3450416
Ø 250 mm Camlock No. 8	3450331
Block jaw set, soft	3450416
Ø 315 mm Camlock No. 8	3450335
Block jaw set, soft	3450418

› Centric clamping, DIN ISO 702-2
› All work surfaces induction hardened and ground
› Camlock direct mount DIN 55029
› High true running accuracy (better than DIN 6 386)

Scope of delivery
› Hard jaws, single-part, turn-able, as outside-inside clamping
› Chuck key

FOUR-JAW LATHE CHUCK

CAST DIN 6350

BISON Four-jaw lathe chuck	Article no.
Ø 125 mm	3450234
Block jaw set, soft	3450420
Ø 160 mm	3450236
Block jaw set, soft	3450422



› centric clamping
› All work surfaces induction hardened and ground
› Permanently high clamping and repeating accuracy
› Uniform clamping forces
› High true running accuracy (better than DIN 6 386)

Scope of delivery
› Single-piece hard jaws with outside-inside clamping
› Chuck key

Chuck flange	Article no.
Ø 125 mm for three and four-jaw lathe chucks Ø 125 mm	3450240
Ø 160 mm for three and four-jaw lathe chucks Ø 160 mm	3450241
Ø 200 mm for three and four-jaw lathe chucks Ø 200 mm	3450212
Ø 250 mm for three and four-jaw lathe chucks Ø 250 mm	3450218

For technical data on the lathe chuck, see page 231

CAST Camlock DIN 55029

BISON Four-jaw lathe chuck	Article no.
Ø 160 mm Camlock No. 4	3450355
Block jaw set, soft	3450422
Ø 200 mm Camlock No. 4	3450360
Block jaw set, soft	3450424
Ø 200 mm Camlock No. 5	3450365
Block jaw set, soft	3450424
Ø 200 mm Camlock No. 6	3450370
Block jaw set, soft	3450424
Ø 250 mm DIN 6 350 A2-5	3450216
Block jaw set, soft	3450426
Ø 250 mm Camlock No. 5	3450375
Block jaw set, soft	3450426
Ø 250 mm Camlock No. 6	3450380
Block jaw set, soft	3450426
Ø 250 mm Camlock No. 8	3450381
Block jaw set, soft	3450426
Ø 315 mm Camlock No. 8	3450385
Block jaw set, soft	3450428
Ø 400 mm Camlock No. 8	3450390
Block jaw set, soft	3450430

STEEL

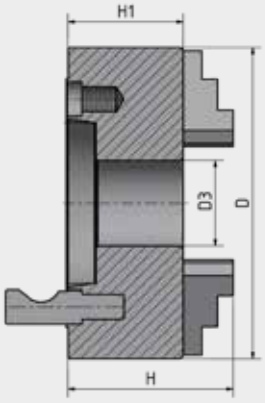
BISON Four-jaw lathe chuck	Article no.
Ø 250 mm Camlock No. 6	3450580
Block jaw set, soft	3450426
Ø 250 mm DIN 6 350 A2-5	3450217
Block jaw set, soft	3450426

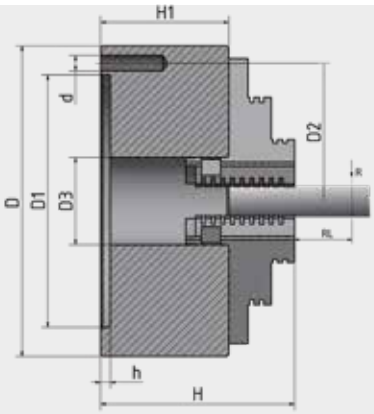
› Centric clamping, DIN ISO 702-2

Scope of delivery
› Hard jaws, single-part, turn-able, as outside-inside clamping

OPTIMUM

THREE-JAW LATHE CHUCK



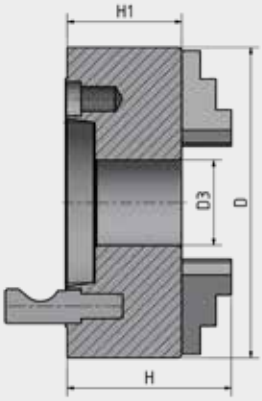


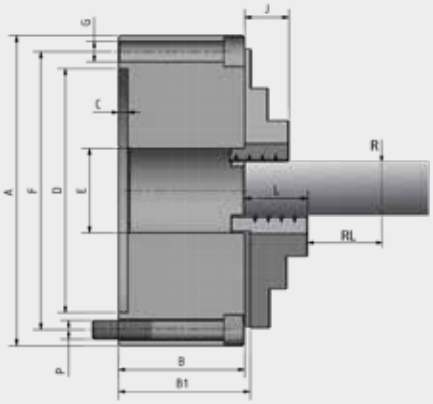
Chuck	Item No.	D	D1	D2	D3	d	H	H1	h	RL	true running accuracy (R)	Rotational speed (min^{-1})
Ø 80 mm	**3440287**	80	55	66	16	M6	66	50	3.5	50	0.06	4 000
Ø 100 mm	**3442710**	100	72	84	22	M8	75	55	3.5	50	0.06	4 200
Ø 125 mm	**3442712**	125	95	108	30	M8	84	58	4	50	0.06	3 800
Ø 160 mm	**3442716**	160	130	142	45	M8	95	65	5	50	0.06	3 000

Chuck	Camlock	Item No.	D	D3	H	H1	Indexing circle	RL	true running accuracy (R)	Rotational speed (min^{-1})
Ø 160 mm	No.4	**3442761**	160	40	101	71	82.6	50	0.06	3 000
Ø 200 mm	No.4	**3442762**	200	50	124	86	82.6	50	0.06	3 000
Ø 200 mm	No.5	**3442764**	200	52	124	86	104.8	50	0.06	3 000
Ø 200 mm	No.6	**3442763**	200	65	128	86	133.4	50	0.06	3 000
Ø 250 mm	No.6	**3442765**	250	70	140	98	133.4	50	0.06	2 400
Ø 315 mm	No.8	**3442768**	315	105	180	102.5	171.4	75	0.01	1 800

BISON

THREE-JAW LATHE CHUCK



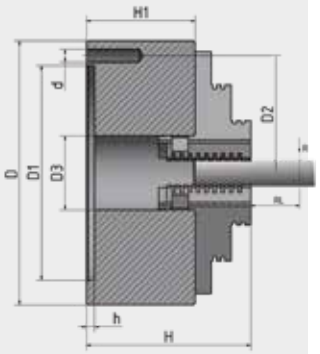


Chuck	Camlock	Item No.	D	D3	H1	H	Indexing circle	RL	true running accuracy (R)	Rotational speed (min^{-1})
Ø 160 mm	No.4	**3450305**	160	42	81.5	124.5	82.6	60	0.03	3 600
Ø 200 mm	No.4	**3450310**	200	56	107	136	82.6	80	0.04	3 000
Ø 200 mm	No.5	**3450315**	200	56	107	136	104.8	80	0.04	3 000
Ø 200 mm	No.6	**3450320**	200	55	91	136	133.4	80	0.04	3 000
Ø 250 mm	No.5	**3450325**	250	76	103.5	156.5	104.8	80	0.04	2 500
Ø 250 mm	No.6	**3450330**	250	76	103.5	156.5	133.4	80	0.04	2 500
Ø 250 mm	No.8	**3450331**	250	76	103.5	156.5	171.4	80	0.04	2 500
Ø 315 mm	No.8	**3450335**	315	103	117.7	174.7	171.4	120	0.05	2 000

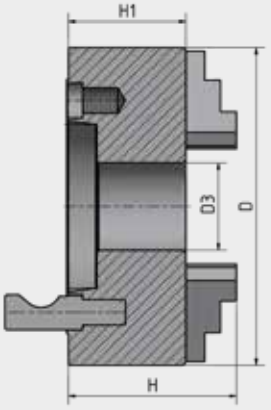
Chuck	Item No.	B	B1	C	D	E	F	G	J	L	kg	Rotational speed (min^{-1})
Ø 125 mm	**3450230**	56	60.8	4	95	32	108	3 x M8	20	40	5	4 000
Ø 160 mm	**3450232**	64.5	69.3	4	125	42	140	3 x M10	32	43	10	3 600

OPTIMUM FOUR-JAW LATHE CHUCK

Chuck	Item No.	D	D1	D2	D3	d	H	H1	h	Rotational speed (min⁻¹)
centric clamping										
Ø 80 mm	**3442808**	80	55	66	16	M6	66	50	3.5	4 300
Ø 100 mm	**3442810**	100	72	84	22	M8	75	55	3.5	3 400
Ø 125 mm	**3442812**	125	95	108	30	M8	84	58	4	2 750
Ø 160 mm	**3442816**	160	130	142	45	M8	95	65	5	2 150
Individual clamping										
Ø 80 mm	**3440286**	80	55	66	22	M6	59	42	4	4 800
Ø 100 mm	**3442872**	100	72	84	25	M8	75	54	4	3 500
Ø 125 mm	**3442874**	125	95	108	30	M8	78	58	6	3 000

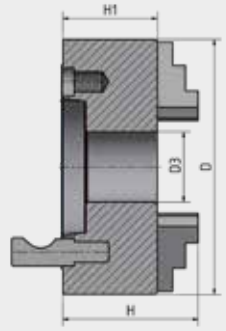


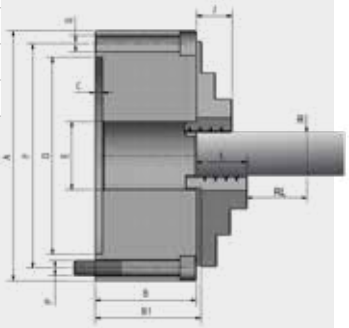
Chuck	Camlock	Item No.	D	D3	H1	H	RL	true running accuracy (R)	Indexing circle	Rotational speed (min⁻¹)
Camlock centric clamping										
Ø 160 mm	No.4	**3442840**	160	40	95	71	50	0.06	82.6	2 150
Ø 200 mm	No.4	**3442843**	200	50	109	86	50	0.06	82.6	3 000
Ø 200 mm	No.5	**3442845**	200	52	109	86	50	0.06	104.8	3 000
Ø 200 mm	No.6	**3442846**	200	65	109	86	50	0.06	133.4	3 000
Ø 250 mm	No.6	**3442852**	250	70	120	98	50	0.06	133.4	2 400
Ø 315 mm	No.8	**3442856**	315	105	142.5	102.5	75	0.01	171.4	1 800
Camlock individual clamping										
Ø 200 mm	No.4	**3442879**	200	56	107	75	50	0.06	82.6	2 100
Ø 200 mm	No.5	**3442880**	200	56	107	75	50	0.06	104.8	2 100
Ø 250 mm	No.6	**3442884**	250	100	120	80	50	0.06	133.4	1 600
Ø 315 mm	No.8	**3442888**	320	95	134	100	75	0.01	171.4	1 200
Ø 400 mm	No.8	**3442890**	400	125	148	101	75	0.01	171.4	1 000



FOUR-JAW-CHUCK

Chuck	Camlock	Item No.	D	D3	H1	H	RL	true running accuracy (R)	Indexing circle	Rotational speed (min⁻¹)
centric clamping										
Ø 160 mm	No.4	**3450355**	160	42	81.5	124.5	60	0.03	82.6	3 600
Ø 200 mm	No.4	**3450360**	200	55	91	136	80	0.04	82.6	3 000
Ø 200 mm	No.5	**3450365**	200	55	91	136	80	0.04	104.8	3 000
Ø 200 mm	No.6	**3450370**	200	55	91	136	80	0.04	133.4	3 000
Ø 250 mm	No.5	**3450375**	250	76	103.5	156.5	80	0.04	104.8	2 500
Ø 250 mm	No.6	**3450380**	250	76	103.5	156.5	80	0.04	133.4	2 500
Ø 250 mm	No.8	**3450381**	250	76	103.5	156.5	80	0.04	171.4	2 500
Ø 315 mm	No.8	**3450385**	315	103	117.7	174.7	120	0.05	171.4	2 000
Ø 400 mm	No.8	**3450390**	400	136	128.5	207.5	120	0.06	171.4	1 600





Chuck	Item No.	B	B1	C	H7	E	F	G	J	L	kg	Rotational speed (min⁻¹)
Ø 125 mm	**3450234**	56	60.8	4	95	32	108	3 x M8	20	40	5	4 000
Ø 160 mm	**3450236**	64.5	69.3	4	125	42	140	3 x M10	32	43	10	3 600
Ø 250 mm	**3450216**	75	79.8	4	160	55	176	6 x M10	29	45	17.5	2 500
Ø 250 mm	**3450217**	75	79.8	4	160	55	176	6 x M10	29	45	17.5	3 500

Quick change tool holder

Quick change tool holder set SWH AA	3384311
SWH AA	3384311
› Tool holder head AA	
› 3 units tool holder 12 x 50 type D for square chisels	
› 1 unit tool holder 12 x 50 type H for round chisels	
Spare tool holder 12 x 50 type D for square chisels	3384312
Spare tool holder 12 x 50 type H for round chisels	3384320



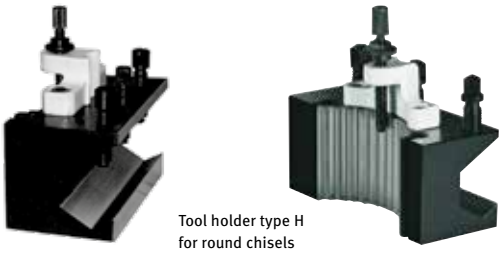
Tool holder head

SWH 1-A	3384301
› Tool holder head A	
› 3 units tool holder 20 x 90 type D for square chisels	
› 1 unit tool holder 20 x 85 type H for round chisels	
Spare tool holder 20 x 90 type D for square chisels	3384302
Spare tool holder 20 x 85 type H for round chisels	3384321

SWH 3-E	3384303
› Tool holder head E	
› 3 units tool holder 20 x 100 type D for square chisels	
› 1 unit tool holder 30 x 100 type H for round chisels	
Spare tool holder 20 x 100 type D for square chisels	3384304
Spare tool holder 30 x 100 type H for round chisels	3384322



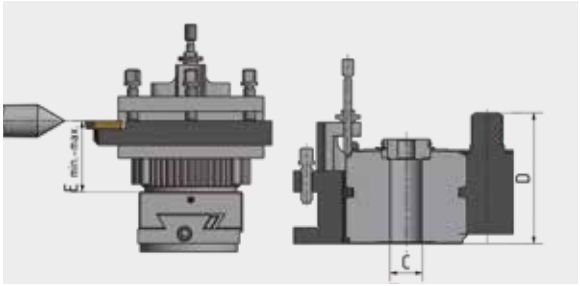
Tool holder type D
for square chisels



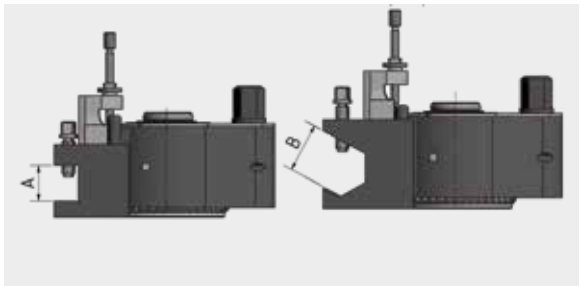
Tool holder type H
for round chisels

SWH 5-B	3384305
› Tool holder head B	
› 3 units tool holder 25 x 120 type D for square chisels	
› 1 unit tool holder 32 x 130 type H for round chisels	
Spare tool holder 25 x 120 type D for square chisels	3384306
Spare tool holder 32 x 130 type H for round chisels	3384324

SWH 7-C	3384307
› Tool holder head C	
› 3 units tool holder 32 x 150 type D for square chisels	
› 1 unit tool holder 40 x 160 type H for round chisels	
Spare tool holder 32 x 150 type D for square chisels	3384308
Spare tool holder 40 x 160 type H for round chisels	3384326



SWH 9-D	3384309
› Tool holder head D	
› 3 units tool holder 40 x 180 type D for square chisels	
› 1 unit tool holder 63 x 180 type H for round chisels	
Spare tool holder 40 x 180 type D for square chisels	3384332
Spare tool holder 63 x 180 type H for round chisels	3384333



Features of quick-change tool holder:

› Repeatability 0.01 mm
› Angle scale on the tool holder head
› 40 different angle settings
› Height adjustment via a knurled screw
› Tool holder head and tool holder with profile ground gears
› Play-free and repetition-accurate clamping of the change holder
› For self-assembly or factory assembly for a fee

Factory assembly and adjustment SWH	
› Only with orders for new machines	
for SWH AA / SWH 1-A	9000401
for SWH 3-E to SWH 9D	9000400

Tool holder head dimensions			SWH AA	SWH 1-A	SWH 3-E	SWH 5-B	SWH 7-C	SWH 9-D
Turning diameter		mm	120 – 220	150 – 300	200 – 400	300 – 500	400 – 700	600 – 800
Drive output lathe max.		kW	1	2	4.5	7	13	20
Support width square chisel max.	A	mm	12	20	20	25	32	40
Diameter round chisel max.	B	mm	Ø 12	Ø 20	Ø 20	Ø 25	Ø 32	Ø 40
Normal hole	C	mm	Ø 13	Ø 20	Ø 20	Ø 32	Ø 40	Ø 40
Height of base body/overall	D	mm	37	56	68	79	110	122
Height top carriage to lathe centre	E	mm	18 – 26	28.5 – 39.5	28.5 – 39.5	37 – 57	47 – 87	60 – 95

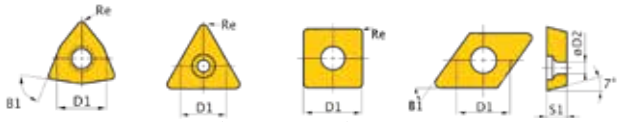
Turning tool set	Article no.
Carbide 8 mm	3441662

› 5-part
› With carbide indexable inserts
› TiN coated
› Aluminium box

	ISO
1	SWGC L0808 D05
2	SSDC N0808 D06
3	SWGC R0808 D05
4	STGC R0808 D09
5	SDJC R0808 D07



Carbide indexable replacement inserts (5 pieces each)



No.	Article no.	ISO	D1	D2	B1	S1	right
1/3	3441759	WCMT050308	7.94	3.2	80°	3.18	0.8
2	3441761	SCMT060204	6.35	2.8	90°	2.38	0.4
4	3441760	TCMT090204	5.56	2.5	60°	2.38	0.4
5	3441758	DCMT070204	6.35	2.8	55°	2.38	0.4

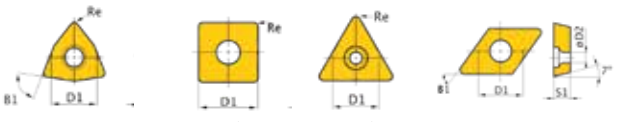
Turning tool set	Article no.
Carbide 10 mm	3441664

› 5-part
› With carbide indexable inserts
› TiN coated
› Aluminium box

	ISO
1	SWGC L1010 E05
2	SSDC N1010 E06
3	SWGC R1010 E05
4	STGC R1010 E09
5	SDJC R1010 E07



Carbide indexable replacement inserts (5 pieces each)



No.	Article no.	ISO	D1	D2	B1	S1	right
1/3	3441759	WCMT050308	7.94	3.2	80°	3.18	0.8
2	3441761	SCMT060204	6.35	2.8	90°	2.38	0.4
4	3441760	TCMT090204	5.56	2.5	60°	2.38	0.4
5	3441758	DCMT070204	6.35	2.8	55°	2.38	0.4

Turning tool set	Article no.
Carbide 12 mm	3441666

› 5-part
› With carbide indexable inserts
› TiN coated
› Aluminium box

	ISO
1	SWGC L1212 H 05
2	SSDC N1212 H 09
3	SWGC R1212 H 05
4	STGC R1212 H 11
5	SDJC R1212 H 07



Carbide indexable replacement inserts (5 pieces each)



No.	Article no.	ISO	D1	D2	B1	S1	right
1/3	3441759	WCMT050308	7.94	3.2	80°	3.18	0.8
2	3441763	SCMT09T304	9.525	4.4	90°	3.97	0.4
4	3441762	TCMT110204	6.35	2.8	60°	2.38	0.4
5	3441758	DCMT070204	6.35	2.8	55°	2.38	0.4

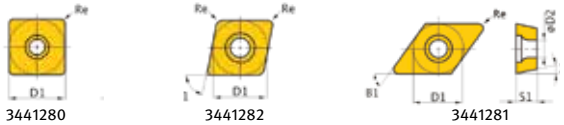
Turning tool set	Article no.
Carbide 12 mm	3441212

› 5-part
› With carbide indexable inserts
› TiN coated

MADE IN GERMANY



Carbide replacement indexable inserts (5 pieces each)



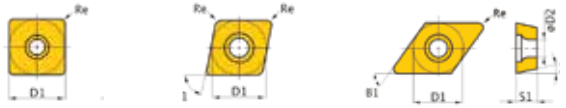
No.	Article no.	ISO	D1	D2	B1	S1	right
1	3441280	SCMT09T304	9.525	4.4	90°	3.97	0.4
2	3441282	CCMT09T304	9.525	4.4	80°	3.97	0.4
3-5	3441281	DCMT11T304	9.525	4.4	55°	3.97	0.4

Turning tool (single) 12 mm		Article no.
1	SSSC R1212 J09	3441220
2	SCLC R1212 J09	3441221
3	SDNC N1212 J11	3441222
4	SDJC R1212 J11	3441223
5	SDJC L1212 J11	3441224

MADE IN GERMANY



Carbide replacement indexable inserts (5 pieces each)



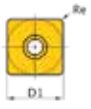
3441280 3441282 3441281

No.	Article no.	ISO	D1	D2	B1	S1	right
1	3441280	SCMT09T304	9.525	4.4	90°	3.97	0.4
2	3441282	CCMT09T304	9.525	4.4	80°	3.97	0.4
3-5	3441281	DCMT11T304	9.525	4.4	55°	3.97	0.4

Turning tool (single) 12 mm		Article no.
1	SCLC L1212J09	3441226



Carbide replacement indexable inserts (5 pieces each)



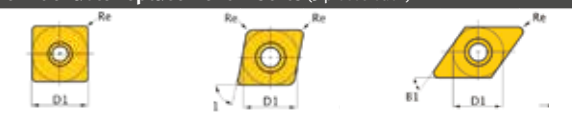
3441280

No.	Article no.	ISO	D1	D2	B1	S1	right
1	3441280	SCMT09T304	9.525	4.4	90°	3.97	0.4

Turning tool (single) 16 mm		Article no.
1	SSSC R1616 J09	3441230
2	SCLC R1616 J09	3441231
3	SDNC N1616 J11	3441232
4	SDJC R1616 J11	3441233
5	SDJC L1616 J11	3441234



Carbide indexable replacement inserts (5 pieces each)



3441280 3441282 3441281

No.	Article no.	ISO	D1	D2	B1	S1	right
1	3441280	SCMT09T304	9.525	4.4	90°	3.97	0.4
2	3441282	CCMT09T304	9.525	4.4	80°	3.97	0.4
3-5	3441281	DCMT11T304	9.525	4.4	55°	3.97	0.4

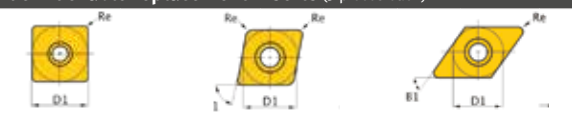
Turning tool set	Article no.
Carbide 16 mm	3441216

› 5-part
› With carbide indexable inserts
› TiN coated

ISO	
1	SSSC R1616 J09
2	SCLC R1616 J09
3	SDNC N1616 J11
4	SDJC R1616 J11
5	SDJC L1616 J11



Carbide indexable replacement inserts (5 pieces each)



3441280 3441282 3441281

No.	Article no.	ISO	D1	D2	B1	S1	right
1	3441280	SCMT09T304	9.525	4.4	90°	3.97	0.4
2	3441282	CCMT09T304	9.525	4.4	80°	3.97	0.4
3-5	3441281	DCMT11T304	9.525	4.4	55°	3.97	0.4

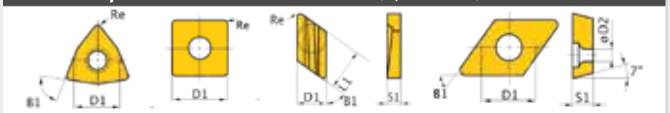
Turning tool set	Article no.
Carbide 16 mm	3441668

› 5-part
› With carbide indexable inserts
› TiN coated
› Aluminium box

	ISO
1	PWLN R1616 H06
2	PWLN L1616 H06
3	PSDNN 1 616 H09
4	CKJN R1616 H16
5	MDJN R1616 H11



Carbide replacement indexable inserts (5 pieces each)



No.	Article no.	ISO	D1	D2	B1	S1	right	L1
1/2	3441753	WNMG060408	9.252	3.81	80°	4.76	0.8	-
3	3441755	SNMG090304	9.252	3.81	90°	3.18	0.4	-
4	3441754	KNUX160405R	9.252		55°	4.76	0.5	16.15
5	3441750	DNMG110408	9.525	3.81	55°	4.76	0.8	-

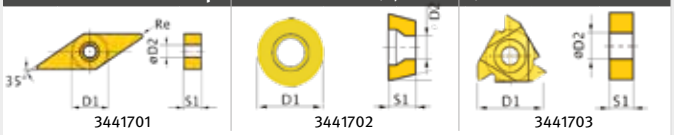
Turning tool set	Article no.
Carbide 16 mm	3441610

› 5-part
› With carbide indexable inserts
› TiN coated
› Aluminium box

	ISO
1	MVJNR 1 616 H16
2	MVVNN 1 616 H16
3	PRANN 1 616 H10
4	PRGNR 1 616 H10
5	SER 1 616 H16



Carbide indexable replacement inserts (5 pieces each)



No.	Article no.	ISO	D1	D2	B1	S1	right
1/3	3441701	VNMG160408	9.525	3.81	35°	4.76	0.8
2/4	3441702	RNMG1003MO	10	3.6	-	3.97	-
5	3441703	16ER AG60	16	3.95	60°	3.65	-

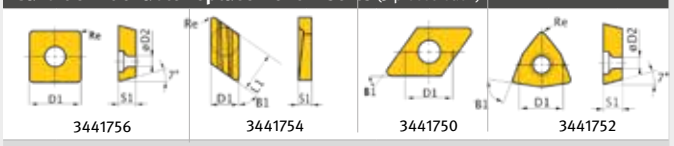
Turning tool set	Article no.
Carbide 20 mm	3441670

› 5-part
› With carbide indexable inserts
› TiN coated
› Aluminium box

	ISO
1	PWLN R2020 K08
2	PWLN L2020 K08
3	PSDN N2020 K12
4	CKJN R2020 K16
5	MDJN R2020 K11



Carbide indexable replacement inserts (5 pieces each)

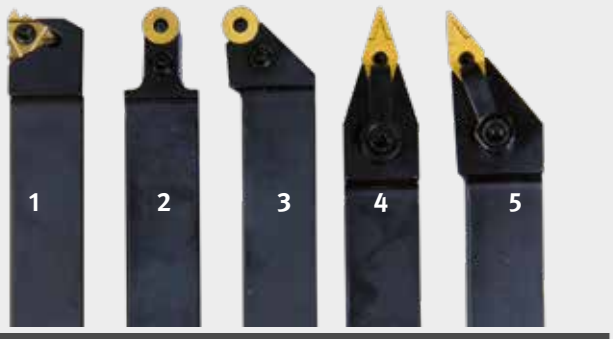


No.	Article no.	ISO	D1	D2	B1	S1	right	L1
1/2	3441752	WNMG080408	12.7	5.16	80°	4.76	0.8	-
3	3441756	SNMG120408	12.7	5.16	90°	4.76	0.8	-
4	3441754	KNUX160405R	9.252		55°	4.76	0.5	16.15
5	3441750	DNMG110408	9.525	3.81	55°	4.76	0.8	-

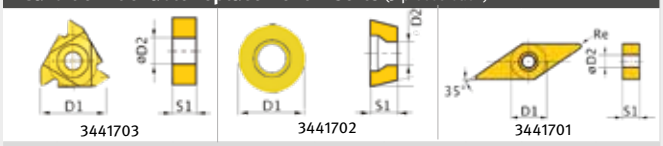
Turning tool set	Article no.
Carbide 20 mm	3441617

› 5-part
› With carbide indexable inserts
› TiN coated
› Aluminium box

	ISO
1	SER 2 020 K16
2	PRGNR 2 020 K10
3	PRANN 2 020 K10
4	MVVNN 2 020 K16
5	MVJNR 2 020 K16



Carbide indexable replacement inserts (5 pieces each)



No.	Article no.	ISO	D1	D2	B1	S1	right
1	3441703	16ER AG60	16	3.95	60°	3.65	-
2/3	3441702	RNMG1003MO	10	3.6	-	3.97	-
4/5	3441701	VNMG160408	9.525	3.81	35°	4.76	0.8

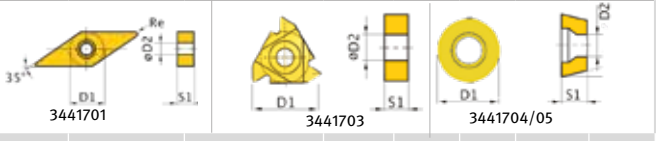
Turning tool set	Article no.
Carbide 25 mm	3441623

- › 5-part
- › With carbide indexable inserts
- › TiN coated
- › Aluminium box

	ISO
1	MVVN N2525 M16
2	SE R2525 M16
3	PRGN R2525 M12
4	PRAN N2525 M16
5	MDJN R2525 M16



Carbide indexable replacement inserts (5 pieces each)

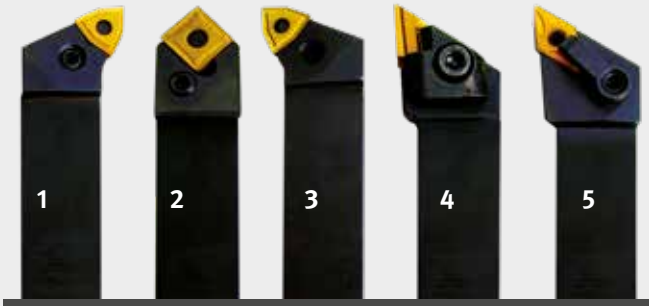


No.	Article no.	ISO	D1	D2	B1	S1	right
1/5	3441701	VNMG160408	9 525	3.81	35°	4.76	0.8
2	3441703	16ER AG60	16	3.95	60°	3.65	-
3	3441705	RNMG1204MO	12	4.75	R	5.1	-
4	3441704	RNMG1605MO	16	5.4	R	6.3	-

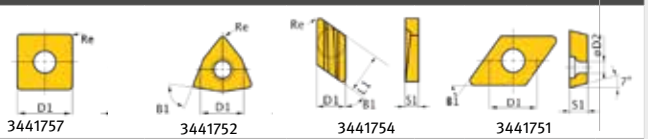
Turning tool set	Article no.
Carbide 25 mm	3441672

- › 5-part
- › With carbide indexable inserts
- › TiN coated
- › Aluminium box

	ISO
1	PWLN L2525 M08
2	PSDN N2525 M15
3	PWLN R2525 M08
4	CKJNR R2525 M16
5	MDJN R2525 M15



Carbide indexable replacement inserts (5 pieces each)



No.	Article no.	ISO	D1	D2	B1	S1	right	L1
1/3	3441752	WNMG080408	9.252	3.81	80°	4.76	0.8	-
2	3441757	SNMG150608	15.875	6.35	90°	6.35	0.8	-
4	3441754	KNUX160405R	9.252	-	55°	4.76	0.5	16.15
5	3441751	DNMG150408	12.7	5.16	55°	4.76	0.8	-

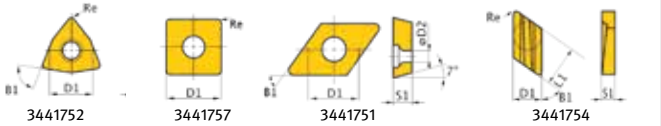
Turning tool set	Article no.
Carbide 32 mm	3441674

- › 5-part
- › With carbide indexable inserts
- › TiN coated
- › Aluminium box

	ISO
1	PWLN L3232 P08
2	PSDN N3232 P15
3	PWLN R3232 P08
4	CKJN R3232 P16
5	MDJN R3232 P15



Carbide indexable replacement inserts (5 pieces each)



No.	Article no.	ISO	D1	D2	B1	S1	right	L1
1/3	3441752	WNMG080408	9.252	3.81	80°	4.76	0.8	-
2	3441757	SNMG150608	15875	6.35	90°	6.35	0.8	-
4	3441754	KNUX160405R	9.252	-	55°	4.76	0.5	16.15
5	3441751	DNMG150408	12.7	5.16	55°	4.76	0.8	-

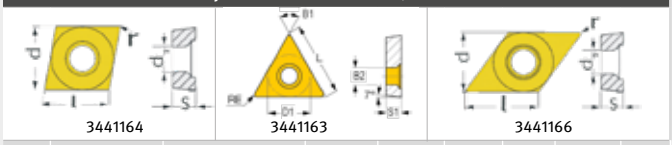
Inside turning tool set	Article no.
10 mm	3441640

- › 3-part
- › With carbide indexable inserts
- › TiN coated
- › Aluminium box

	ISO
1	S10K SCFCR 06
2	S10K SCFCR 07
3	S10K SCFCR 11



Carbide indexable replacement inserts (5 pieces each)



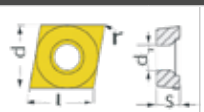
No.	Article no.	ISO		l	s	R	d	d1
1	3441164	CCMT060204	C/80°	6.35	2.60	0.4	6.35	2.7
2	3441163	TCMT110204	T/60°	10.84	2.53	0.4	9.1	2.7
3	3441166	DCMT070204	D/55°	7.30	2.53	0.4	6.35	2.7

Inside turning tool set	Article no.
12 mm	3441641
› 3-part	
› With carbide indexable inserts	
› TiN coated	
› Aluminium box	

	ISO
1	S12K SCFCR 06
2	S12K SCFCR 07
3	S12K SCFCR 11



Carbide indexable replacement inserts (5 pieces each)


3441164


3441163


3441166

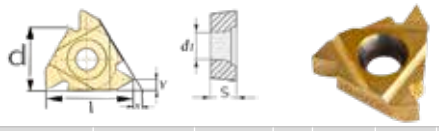
No.	Article no.	ISO		l	s	R	d	d1
1	3441164	CCMT060204	C/80°	6.35	2.60	0.4	6.35	2.7
2	3441163	TCMT110204	T/60°	10.84	2.53	0.4	9.1	2.7
3	3441166	DCMT070204	D/55°	7.30	2.53	0.4	6.35	2.7

Inside turning tool set	Article no.
8 – 20 mm	3441650
› 5-part (8/10/12/16/20 mm)	
› With carbide indexable inserts	
› TiN coated	
› Aluminium box	

	ISO
1	S10K SIR 0 008 H08
2	S10K SIR 0 010 K11
3	S10K SIR 0 012 M11
4	S10K SIR 0 016 P16
5	S10K SIR 0 020 S16

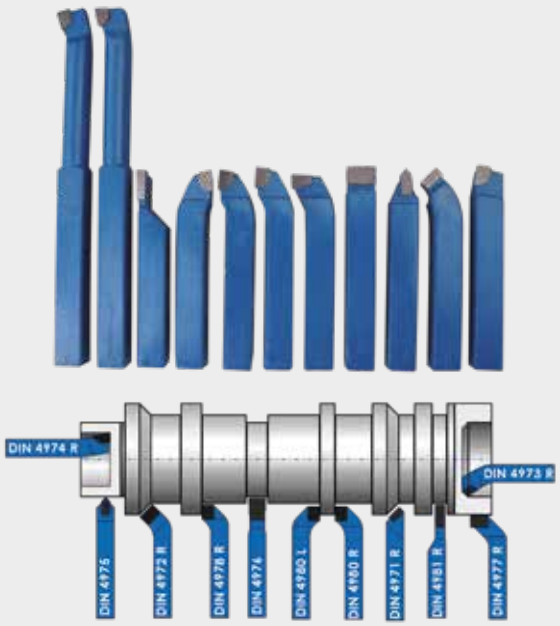


Carbide indexable replacement inserts (5 pieces each)

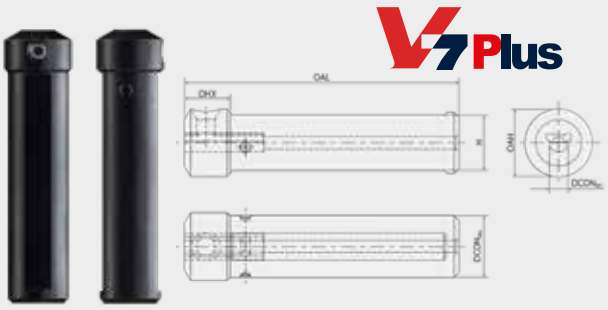


No.	Article no.	ISO		l	s	R	d	d1
1	3441725	08IR A60	60° IR	8	2.22	4.76	2.5	M10
2/3	3441726	11IR A60	60° IR	11	3.22	6.35	3.0	M12
4/5	3441727	16IR A60	60° IR	16	3.65	9.5	3.95	M16

Turning tool set	Article no.
8 mm	3441601
10 mm	3441602
12 mm	3441603
16 mm	3441604
› 11-part	
› With carbide plates soldered on	



Boring bar holder – 4 mm mount	Article no.
16mm (NCHI-16.4)	3544150
20mm (NCHI-20.4)	3544151
25mm (NCHI-25.4)	3544152
Boring bar holder – 6 mm mount	Article no.
16mm (NCHI-16.6)	3544155
20mm (NCHI-20.6)	3544156
25mm (NCHI-25.6)	3544157



Article no.	DDCONMS	OAL	H	OAH	OHX
3544150	16	75	14	17.5	14
3544151	20	90	18	20	14
3544152	25	110	23	25	14
3544155	16	75	14	18.5	14
3544156	20	90	18	22	14
3544157	25	110	23	25	14

Right-hand boring tool	Article no.
NCBP4R-27.10-005-YG812	3544010
NCBP4R-32.20-005-YG812	3544011
NCBP6R-62.20-020-YG812	3544012
NCBP6R-62.30-020-YG812	3544013





Art no.	DCON	DMIN	LU	RE	CDX	WF	OHX	OAL
3544010	4	2.7	10	0.05	0.2	1.2	13	28
3544011	4	3.2	20	0.05	0.2	1.45	23	38
3544012	6	6.2	20	0.20	0.5	2.95	25.5	48
3544013	6	6.2	30	2.0	0.5	2.95	35.5	58

Inside boring bar 90° right	Article no.
NCBF4R-22.13-010-YG812	3544030
NCBF4R-32.20-015-YG812	3544031
NCBF6R-62.15-020-YG812	3544032
NCBF6R-62.30-020-YG812	3544033

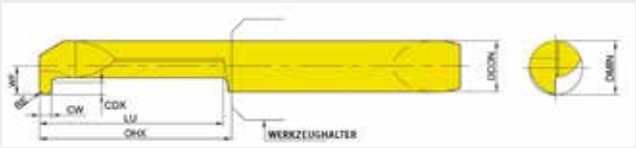




Art no.	DCON	DMIN	LU	RE	CDX	WF	OHX	OAL
3544030	4	2.2	13	0.10	0.2	0.95	18	33
3544031	4	3.2	20	0.15	0.2	1.45	23	38
3544032	6	3.2	15	0.20	0.5	2.95	20.5	43
3544033	6	6.2	30	0.20	0.5	2.95	35.5	58

Grooving insert, right radius	Article no.
NCGR4R-42.15-10x08-YG812	3544050
NCGR4R-42.15-15x08-YG812	3544051
NCGR6R-62.25-15x18-YG812	3544052
NCGR6R-62.25-20x18-YG812	3544053

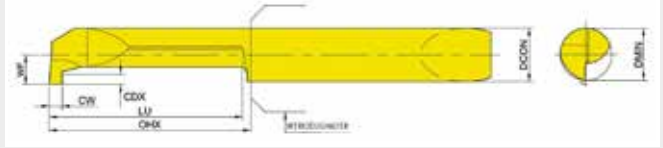




Art no.	DCON	DMIN	LU	RE	CW	CDX	WF	OHX	OAL
3544050	4	4.2	15	0.5	1.0	0.8	1.95	18	33
3544051	4	4.2	15	0.75	1.5	1	1.95	18	33
3544052	6	6.2	25	0.75	1.5	1.8	2.95	30.5	53
3544053	6	6.2	25	1	2.0	1.8	2.95	30.5	53

Grooving insert, right radius	Article no.
NCGS4R-42.10-100x08-YG812	3544070
NCGS6R-62.10-150x18-YG812	3544071
NCGS6R-62.25-150x18-YG812	3544072
NCGS6R-62.15-200x18-YG812	3544073





Art no.	DCON	DMIN	LU	CW	CDX	WF	OHX	OAL
3544070	4	4.2	10	1.00	0.8	1.95	13	38
3544071	6	6.2	10	1.50	1.8	2.95	15.5	38
3544072	6	6.2	25	1.50	1.8	2.95	30.5	53
3544073	6	6.2	15	2.00	1.8	2.95	20.5	43

Turning tool for chamfering 45° right	Article no.
NCCH6R-10.03-45-YG812	3544110





	DCON	DMIN	RE	CDX	WF	OHX	OAL
3544070	6	1.0	0.2	3.5	1.1	15.5	38

Co-rotating centring tip	Article no.
› Max. concentricity deviation 0.006 mm	
MT 1	3440701
› Max speed 5 000 min^{-1}; max. radial load 320 N	
MT 2	3440702
› Max speed 5 000 min^{-1}; max. radial load 400 N	
MT 3	3440703
› Max speed 4 500 min^{-1}; max. radial load 800 N	
MT 4	3440704
› Max speed 3 500 min^{-1}; max. radial load 1 250 N	
MT 5	3440705
› Max speed 3 000 min^{-1}; max. radial load 1 500 N	
MT 6	3440706
› Max speed 2 500 min^{-1}; max. radial load 1 800 N	



Co-rotating centring tip	Article no.
› Max. concentricity deviation 0.005 mm	
MT 2	3451002
› NSK ball roller bearings and INA needle bearings	
› Max speed 7 000 min^{-1}; max. radial load 2 000 N	
MT 3	3451003
› NSK ball roller bearings and INA needle bearings	
› Max speed 5 000 min^{-1}; max. radial load 4 000 N	
MT 4	3451004
› NSK ball roller bearings and INA needle bearings	
› Max speed 3 800 min^{-1}; max. radial load 8 000 N	
MT 5	3451005
› 2-row SKF angular contact bearings	
› Max speed 3 000 min^{-1}; max. radial load 20 000 N	



Collet set	Article no.
SPZ – 5C	3441509
› 17-part, clamping range 3- 25 mm	
› Norm 385 E	
› For universal collet chuck device	



Co-rotating centring tip MT 4	Article no.
MT 2	3440732
MT 3	3440733
MT 4	3440734

› With 7 replaceable tips
› Body made of hardened and ground tool steel
› Precision needle bearings guarantee excellent true running accuracy



Collet set	Article no.
› DIN 6499	
ER 16	3440282
› 12-part; clamping range Ø 1 – 10 mm	
ER 25	3441109
› 15-part; clamping range Ø 1 – 16 mm	
ER 32	3441122
› 18-part; clamping range Ø 3 – 20 mm	



Position stop	Article no.
› With fine adjustment	
› for lathe TU 3008/TM 3110/TM 3310/TM 4010	3441475
› for lathe TH 3 309	3441522
› for lathe TH 3 610	3441523
› for lathe TH 46	3444022
› for lathe TH 56	3444023



Fig. 3441522



Fig. 3444022

Due to tolerances on the machine bed, it may be necessary to rework the base body

Clamping disc	Article no.
Ø 170 mm for TU 2004V/TU 2 304	3440295
Ø 240 mm for TU 2 406	3440552
Ø 240 mm for TU 2 506	3441352
Ø 265 mm for TU 2 807	3441452
Ø 300 mm Camlock DIN ISO 702-2 No. 4	3442976
Ø 320 mm A 2-5	3442979
Ø 330 mm Camlock DIN ISO 702-2 No. 5	3442978
Ø 350 mm Camlock DIN ISO 702-2 No. 6	3442980
Ø 480 mm Camlock DIN ISO 702-2 No. 8	3442982



Collet chuck	Article no.
ER 16 Ø 22 mm	3440281
› cylindrical for TU 1503V	
ER 25 Ø 72 mm	3440305
› Cylindrical for TU 2004V / TU 2304	
ER 25 Ø 52 mm	3440505
› cylindrical for TU 2406	
ER 32 Ø 52 mm	3440506
› cylindrical for TU 2406 (Requires collet chuck spanner 3353307 – see page 172)	
ER 25 Ø 52 mm	3441305
› Cylindrical for TU 2506 / TU 2807	
ER 32 Ø 52 mm	3441306
› Short taper for TU 2506 / TU 2807	



Lathe chuck spanner	Article no.
10 mm (L x W 190 x 155 mm)	3442960
11 mm (L x W 190 x 155 mm)	3442961
12 mm (L x W 240 x 260 mm)	3442962
13 mm (L x W 240 x 260 mm)	3442963
14 mm (L x W 240 x 260 mm)	3442964



Chuck flange	Article no.
› For lathe chuck assembly	
Ø 160 mm Camlock DIN ISO 702-2 No. 4	3441512
› for four-jaw lathe chuck Ø 160 mm	



Ø 200 mm Camlock DIN ISO 702-2 No. 4	3441513
› for four-jaw lathe chuck Ø 200 mm	
Ø 200 mm Camlock DIN ISO 702-2 No. 5	3441514
› for four-jaw lathe chuck Ø 200 mm	



Ø 200 mm Camlock DIN ISO 702-2 No. 6	3444012
› for four-jaw lathe chuck Ø 200 mm	
Ø 250 mm Camlock DIN ISO 702-2 No. 6	3444013
› for four-jaw lathe chuck Ø 250 mm	
Ø 315 mm Camlock DIN ISO 702-2 No. 8	3444041
› for three- and four-jaw lathe chucks Ø 315 mm	



Chuck flange	Article no.
› For lathe chuck assembly	
Ø 100 mm	3440312
› cylindrical for TU 2004V	
Ø 125 mm	3440313
› cylindrical for TU 2304	
Ø 125 mm	3440511
› cylindrical for TU 2406	
Ø 125 mm	3441312
› Short taper for TU 2506 / TU 2807	
Ø 160 mm	3441413
› Short taper for TU 2807	



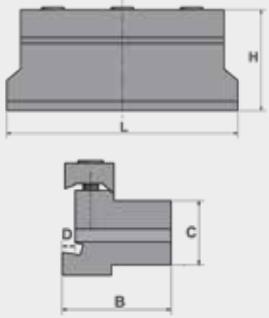
Clamping block set	Article no.
16-05	3440653
GTN 2 cutting insert set (10 pieces)	3440663
› For the lathes: TU 3 008 / TH 3 310 / TH 3 610 / TH 4 010	
› 1 unit clamping block SLTBN 16- 05	
› 1 item each parting off tool SLIH 26- 2 / SLIH 26- 3	
› 5 units cutting inserts GTN2 (cutting width 2.2 mm)	
› 5 units cutting inserts GTN3 (cutting width 3.1 mm)	
› Aluminium box	
20-05	3440654
GTN 3 cutting insert set (10 pieces)	3440664
› For the lathes: TH 4 210 / TH 46 / TH 56	
› 1 unit clamping block SLTBN 20- 05	
› 1 item each parting off tool SLIH 26- 3 / SLIH 26- 4	
› 5 units cutting inserts GTN3 (cutting width 3.1 mm)	
› 5 units cutting inserts GTN4 (cutting width 4.1 mm)	
› Aluminium box	
25-05	3440655
GTN 4 cutting insert set (10 pieces)	3440665
› For the lathes: TH 66 / TH 80	
› 1 unit clamping block SLTBN 25- 05	
› 1 item each parting off tool SLIH 26- 3 / SLIH 26- 4	
› 5 units cutting inserts GTN3 (cutting width 3.1 mm)	
› 5 units cutting inserts GTN4 (cutting width 4.1 mm)	
› Aluminium box	

TECHNICAL DATA

Clamping block	16-05	20-05	25-05
L x W x H	88x38x42 mm	88x38x43 mm	100x42x43.5 mm
C	16 mm	20 mm	25 mm
D	4 mm	5 mm	5 mm



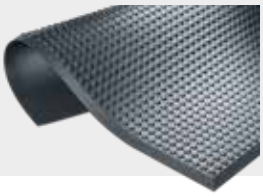
Clamping block set with clamping inserts and parting off tool



Workplace mats for dry and wet areas	Article no.
1 840 x 640 mm	6800000
1 840 x 940 mm	6800005
3 040 x 640 mm	6800001
3 040 x 940 mm	6800006
› Fire retardant	
› Made of polyurethane on polyether basis	
› Surface: nubbed and underside nubbed: for maximum standing comfort and slip resistance	
› Thickness 14 mm	
› Colour anthracite	
› Temperature resistance -35°C to +95°C	
› Fire classification B1 as per DIN 4102	
› 5-year warranty	

MADE IN GERMANY





Hollow spindle stop	Article no.
HSP 38	3444410
› Spindle Ø 35 – 42 mm	
HSP 52	3444415
› Spindle Ø 48 – 56 mm	
HSP 80	3444420
› Spindle Ø 76–84 mm	
HSP 105	3444425
› Spindle Ø 101 – 109 mm	
Features	
› Optimum auxiliary tool suits virtually any lathe	
› Worthwhile even for smallest batches	
› Expensive tooling time can be reduced to a minimum	
› Can be easily and quickly attached at any point of the hollow spindle	



Pilot bit set	Article no.
	3203010
› As per DIN 333 shape A	
› 10-part: 0.75/1/1.5/1.6/2/2.5/3/3.15/4/5 mm	
› Right-hand cutting tapered grinding edge 120°	
› Countersink angle 60°	
› Top quality HSS for tensile strength up to approx. 750 N/mm²	
› Powerful shank, also well suited for predrilling and expansion drilling with a twist drill bit	
› Practical OPTIMUM plastic case	





Collet chuck	Article no.
5C – Camlock no. 4	3441554
5C – Camlock no. 5	3441555
5C – Camlock no. 6	3441556
5C – Camlock no. 8	3441558
› for collets type 5C / 385E	
› as per DIN 6 341	
› With spindle mount according to DIN ISO 702-2	
› Concentricity ≤ 0.02 mm	



Levelling platen	Article no.
SE 1	3381012
SE 2	3381016
SE 3	3381018

› The machines and equipment can be installed without anchors and precisely levelled using the height adjustment system.
› non-slip rubberised



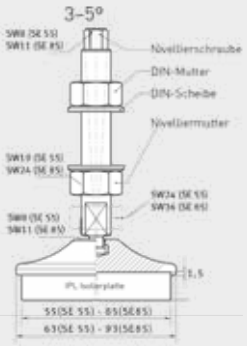
Load	SE 1	SE 2	SE 3
Milling machines	340 kg	460 kg	1 600 kg
Sawing/gen. Machine	570 kg	1 460 kg	3 500 kg
Thread	M 12	M 16	M 20
Base Ø/Base height	120/32	160/35	185/39

Machine foot vibration damper	Article no.
SE 55	3352981
› Levelling screw M12 x 1 x 150 mm	
› Maximum load: 600 kg	
SE 85	3352982
› Levelling screw M16 x 150 mm	
› Maximum load: 1 500 kg	

Features
› Effective vibration and structure-borne noise insulation and noise reduction
› Eliminates floor unevenness up to 5º
› Fast and technically easy precision levelling by means of a regular threaded screw

MADE IN GERMANY

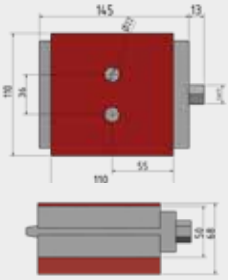




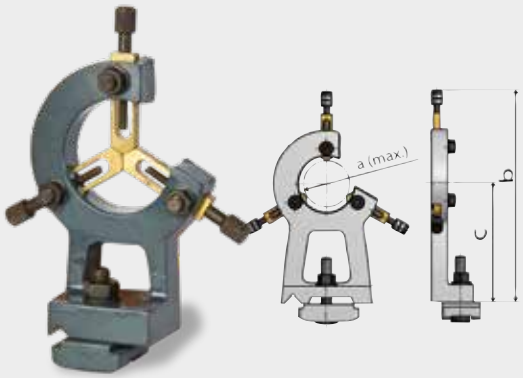
Precision machine shoe	Article no.
SEU1	3352985
› Patented double spindle bearing	
› With slip-protection plate at top	
› Maximum load 60 kN	
› Suitable for M16 threaded rod	
› Vibration-insulation plate for particularly heavy loads. Good structure-borne noise insulation	
› Adjustment range +5 / -4 mm	
› High-precision, jerk-free levelling even of heavy machines	
› Up to 50% reduction in assembly time thanks to precision levelling and non-anchored installation.	
› Improves the dynamic behaviour of machines while reducing noise	
› Weight approx. 3.7 kg	

MADE IN GERMANY





Steady rest	Article no.
for TU 1503V	3440211
› a = Ø 40 mm; b = 145 mm; c = 70,5 mm	
for TU 2004V	3440231
› a = Ø 50 mm; b = 200 mm; c = 100 mm	
for TU 2304 / TU 2304V	3440361
› a = Ø 55 mm; b = 220 mm; c = 115 mm	
for TU 2406 / TU 2 506	3441315
› a = Ø 50 mm; b = 245 mm; c = 125 mm	
for TU 2807 / TU 2807V	3441415
› a = Ø 55 mm; b = 250 mm; c = 140 mm	
for TU 3008 / TU 3008G / TU 3008V	3441461
› a = Ø 60 mm; b = 260 mm; c = 157 mm	



Follow steady rest	Article no.
for TU 1503V	3440210
› a = Ø 45 mm; b = 155 mm; c = 76 mm	
for TU 2004V	3440230
› a = Ø 40 mm; b = 195 mm; c = 100 mm	
for TU 2 304 / TU 2304V	3440360
› a = Ø 34 mm; b = 200 mm; c = 97 mm	
for TU 2 406 / TU 2 506	3441310
› a = Ø 40 mm; b = 220 mm; c = 107 mm	
for TU 2 807 / TU 2807V	3441410
› a = Ø 56 mm; b = 250 mm; c = 130 mm	
for TU 3 008 / TU 3008G / TU 3008V	3441460
› a = Ø 60 mm; b = 255 mm; c = 151 mm	



3440230 3441460 3441410

Cutting oil spray	Article no.
400 ml	3872100
› adheres very well	
› Tool life is extended	



METAL-CUTTING BAND SAWS
METAL-CUTTING CIRCULAR SAWS

SD 500 | Art. no.: **3292380**

Double mitre metal band saws
with versatile deployment options
in trades and industry



This manual band saw can either be installed on the optional work table with vise, or guided manually

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Powerful 1.1 kW motor
- Ideally suited for sawing solid steel materials with low tensile strength, preferably for sawing off pipes, steel sections, aluminium and non-ferrous metals.
- Also suitable for cutting wood, plastics and other thin non-ferrous metals
- Strong bridge construction with aluminium frame
- The saw supports virtually spark-free sawing without coolant and is thus easy on the material
- Reduced cutting noise
- Always the right working position thanks to the adjustable additional grip
- Transport case
- Removable from optional worktable for flexible use

ARGUMENTS,...



Speed regulator
› Variable saw blade speed 42 – 144 m/min. for various materials



Clamping lever
› Precise blade running is ensured by the easy-to-use saw blade tensioner and adjusting screws.



LED work light
› illuminates dark work areas for precise cutting





Work table
› Vice included
› Net weight 13 kg
Article no. 3184212

CUTTING AREA

with optional work table			
0°	Ø 115 mm	105 mm	100 x 115 mm
45°	Ø 45 mm	40 mm	30 x 45 mm
without optional work table			
0°	Ø 127 mm	127 mm	127 x 127 mm
45°	Ø 40 mm	40 mm	40 x 120 mm

Model	SQ-V10
Article no.	3184210
Technical data	
Electrical connection	230 V/1 Ph ~50 Hz
Motor power	1.1 kW
Saw blade speed	42 – 144 m/min
Saw blade dimensions	1 140 x 13 x 0.65 mm
Dimensions (L x W x H) approx.	465 x 280 x 165 mm
Net weight approx.	6.6 kg

SCOPE OF DELIVERY

› Transport case
› Bi-metal saw blade 10-14 teeth per inch M42

ACCESSORIES

Designation	Article no.
HSS saw blade M42 Bitec 10–14 tpi	3357548

Important information on operating machines with frequency converters on last page
The hand-held band saw (frequency converter) complies with the DIN EN 55011 standard: class C2

Transportable mitre bandsaws with excellent cutting precision, extremely low-noise

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Equipped as a factory standard with bi-metal saw blade
- Adjustable material stop for batch work
- Pushbutton on lever arm for saw blade run, switches the saw blade run on and off
- Base plate with anti-slip feet
- Swivelable saw bow from 0° to +60° to allow angled saw cuts
- Infinitely adjustable saw blade speed from 30 to 80 m/min

NEU with more power



ARGUMENTS,...



Saw blade guide
› Ball bearing saw blade guide for excellent blade running and thus for optimal cutting.



Pushbutton
› Pushbutton on lever arm for saw blade run
› Switches the saw blade run on and off

SCOPE OF DELIVERY

› Material stop
› Bi-metal saw blade

CUTTING AREA

			
0°	Ø 125 mm	125 mm	125x125 mm
45°	Ø 85 mm	85 mm	85x85 mm
60°	Ø 50 mm	50 mm	50x50 mm

The cutting area was determined for aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

Model	SQ-V13
Article no.	3194013

Technical data	
Electrical connection	230 V/1 Ph ~50 Hz
Motor power	750 W
Saw blade speed	30 – 80 m/min
Saw blade dimensions	1 440 x 13 x 0.65 mm
Cutting angle	0° – 60°
Length of open/closed vise approx.	795 / 670 mm
Width without/with material stop approx.	382 / 613 mm
Height of lower/upper end position approx.	640 / 420 mm
Net weight approx.	23 kg

Important information on operating machines with frequency converters on last page
The machine (frequency converter) complies with the DIN EN 55011 standard: Class C2.



ACCESSORIES

Designation	Article no.
Underframe MUG1	3351490
› Weight approx: 7.3 kg › Dimensions LxWxH approx.: 500x470x780 mm	
HSS saw blade bi-metal M 42, 6 – 10 tpi	3351546
HSS saw blade bi-metal M 42, 10 – 14 tpi	3351547

For information on saw blades, see page 262

VARIO GEARBOX CRAFTSMEN

Transportable mitre bandsaw with excellent cutting precision, extremely low-noise.

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Equipped as a factory standard with bi-metal saw blade
- Adjustable material stop for batch work
- Pushbutton on lever arm for saw blade run, switches the saw blade run on and off
- Base plate with anti-slip feet
- Low vibration and wear thanks to special gearbox with two hardened steel gears
- Vario drive motor with low speed and carbon brushes for up to 10x longer service life
- Saw arm can be swivelled from 0° to +60° to enable angled saw cuts



Fig.: SP13V

ARGUMENTS,...



Saw blade guide
› Ball bearing saw blade guide for excellent blade running and thus for optimal cutting



Vario drive
› Infinitely adjustable saw blade speed from 30 to 80 m/min

CUTTING AREA

0°	Ø 125 mm	125 mm	125x125 mm
45°	Ø 85 mm	85 mm	85x85 mm
60°	Ø 45 mm	45 mm	45x50 mm

The cutting area was determined for aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

SCOPE OF DELIVERY

› Material stop
› Bi-metal saw blade

Model	SP 13V
Article no.	3300075
Technical data	
Electrical connection	230 V/1 Ph ~50 Hz
Motor power	1 kW
Saw blade speed	30 – 80 m/min
Saw blade dimensions	1 440 x 13 x 0.65 mm
Cutting angle	0° – 60°
Length approx.	720 mm
Width without/with material stop approx.	300 / 650 mm
Height of lower/upper end position approx.	420 / 680 mm
Net weight approx.	19.5 kg



ACCESSORIES

Designation	Article no.
Underframe MUG1	3351490
› Weight approx: 7.3 kg › Dimensions LxWxH approx.: 500x470x780 mm	
HSS saw blade bi-metal M 42, 6 – 10 tpi	3351546
HSS saw blade bi-metal M 42, 10 – 14 tpi	3351547

For information on saw blades, see page 262

Important information on operating machines with frequency converters on last page
The machine (frequency converter) complies with the DIN EN 55011 standard: Class C2.

Transportable mitre bandsaw with excellent cutting precision, extremely low-noise.

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Equipped as a factory standard with bi-metal saw blade
- Adjustable material stop for batch work
- Pushbutton on lever arm for saw blade run, switches the saw blade run on and off
- Base plate with anti-slip feet
- Low vibration and wear thanks to special gearbox with two hardened steel gears
- Vario drive motor with low speed and carbon brushes for up to 10x longer service life
- Swivelable saw bow from 0° to +60° to allow angled saw cuts

ARGUMENTS,...



Saw blade guide
› Ball bearing saw blade guide for excellent blade running and thus for optimal cutting.



Vario drive
› Infinitely adjustable saw blade speed from 30 to 80 m/min



CUTTING AREA

			
0°	Ø 150 mm	140 mm	140x140 mm
45°	Ø 100 mm	100 mm	100x100 mm
60°	Ø 70 mm	65 mm	65x65 mm

The cutting area was determined for aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

Model	SP 15V
Article no.	3300080

Technical data	
Electrical connection	230 V/1 Ph ~50 Hz
Motor power	1.5 kW
Saw blade speed	30 – 80 m/min
Saw blade dimensions	1 735 x 13 x 0.9 mm
Cutting angle	0° – 60°
Length approx.	930 mm
Width without/with material stop approx.	480 / 950 mm
Height of lower/upper end position approx.	450 / 495 mm
Net weight approx.	30 kg



Substructure prepared for the KME1 coolant system

ACCESSORIES

Designation	Article no.
Machine base	3351495
› Weight approx: 49 kg	
Universal coolant unit	3351999
HSS saw blade bi-metal M 42, 6 tpi, 10°	3351521
HSS saw blade bi-metal M 42, 6 – 10 tpi, 0°	3351522
HSS saw blade bi-metal M 42, 10 – 14 tpi, 0° Bitec One	3351538

Transportable mitre bandsaw with excellent cutting precision, extremely low-noise.

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Equipped as a factory standard with bi-metal saw blade
- Adjustable material stop for batch work
- Pushbutton on lever arm for saw blade run, switches the saw blade run on and off
- Base plate with anti-slip feet
- Low vibration and wear thanks to special gearbox with two hardened steel gears
- Vario drive motor with low speed and carbon brushes for up to 10x longer service life
- Swivelable saw bow from 0° to +60° to allow angled saw cuts

ARGUMENTS,...



Saw blade guide
› Ball bearing saw blade guide for excellent blade running and thus for optimal cutting.



Vario drive
› Infinitely adjustable saw blade speed from 30 to 80 m/min



CUTTING AREA

0°	Ø 170 mm	140 mm	166 x 166 mm
45°	Ø 130 mm	130 mm	130 x 130 mm
60°	Ø 75 mm	75 mm	75 x 75 mm

The cutting area was determined for aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

Model	SP 17V
Article no.	3300085

Technical data	
Electrical connection	230 V/1 Ph ~50 Hz
Motor power	1.65 kW
Saw blade speed	30 – 80 m/min
Saw blade dimensions	2 030 x 20 x 0.90 mm
Cutting angle	0° – 60°
Length approx.	1 040 mm
Width without/with material stop approx.	480 / 950 mm
Height of lower/upper end position approx.	470 / 535 mm
Net weight approx.	36 kg



Machine base prepared for the KME1 coolant system

ACCESSORIES

Designation	Article no.
Machine base	3351495
› Weight approx: 49 kg	
Universal coolant unit	3351999
HSS saw blade bi-metal M 42, 6 tpi, 10°	3351519
HSS saw blade bi-metal M 42, 6 – 10 tpi, 0°	3351520
HSS saw blade bi-metal M 42, 10 – 14 tpi, 0°	3351523

Light and handy metal-cutting band saw. Ideal for universal deployment on construction sites, on jobs, in customer service vehicles, workshops, hobby workshops and in agriculture

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Quick clamping vice for fast workpiece clamping
- Saw arm can be swivelled from 0° to 45° to enable angled saw cuts
- Easily legible scale for adjusting the angle
- Microswitch for automatic limit position cut-off
- Automatic lowering of the saw bow via three-stage adjustable saw bow lowering pressure
- Equipped as a factory standard with bi-metal saw blade
- Large, practical handle and light weight allow for trouble-free transport to the construction site
- Adjustable material stop for batch work
- Fully equipped; the user can immediately start productive work after commissioning
- Transportation lock

ARGUMENTS,...



Automatic limit switch cut-off
› Switches the saw blade off at the bottom stop



Saw blade guide
› Ball bearing 3-point guide for excellent band running and thus for an optimal cut



CUTTING AREA

0°	Ø 100 mm	100 mm	100 x 150 mm
45°	Ø 60 mm	60 mm	60 x 95 mm

The cutting area was determined for aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

SCOPE OF DELIVERY

- › Material stop
- › Operating tool
- › Bi-metal saw blade



Model	S 100G
Article no.	3184230

Technical data	
Electrical connection	230 V/1 Ph ~50 Hz
Motor power	370 W
Saw blade speed	45 m/min
Saw blade dimensions	1 470 x 13 x 0.65 mm
Cutting angle	0° up to 45°
Length of vice open / closed approx.	950 / 850 mm
Width without/with material stop approx.	300 / 660 mm
Height of lower/upper end position approx.	680 / 820 mm
Net weight approx.	27.5 kg

ACCESSORIES

Designation	Article no.
Underframe MUG1	3351490
› Weight approx: 7.3 kg › Dimensions LxWxH approx.: 500 x 470 x 780 mm	
HSS saw blade bi-metal M 42, 10 – 14 tpi, 0°	3351110
Saw blade set HSS bi-metal M 42	3351100
› 1 pc. saw blade 6 tpi; 10 °	
› 2 pcs. saw blade 10 – 14 tpi; 0 °	

For information on saw blades, see page 262

SD 200V VARIO · GEARBOX · CRAFTSMEN

The gear-driven metal band saw for demanding sawing tasks

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Low-noise running action
- Sturdy cast design
- Saw arm lowering via hydraulic cylinder, continuously adjustable by throttle valve
- Microswitch for automatic limit position cut-off
- Easily legible scale for adjusting the angle
- Equipped as a factory standard with bi-metal saw blade
- Saw blade tensioning at front, adjustable via handwheel
- Ball-bearing borne saw blade guide
- Sturdy machine mobile base with large wheels and practical transport bar allows trouble-free relocation of the machine
- Adjustable material stop for batch work
- Easy-to-clean coolant parts
- Ground clamping surface
- Circuit breaker for belt cover
- Fully equipped; the user can immediately start productive work after commissioning

ARGUMENTS,...



Saw blade guide
› Ball-bearing borne; for an excellent band run and thus optimal cutting



Motor
› Powerful
› Two-stage

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.



Fig.: SD 200G

SCOPE OF DELIVERY

› Material stop
› Bi-metal saw blade
› Machine base

CUTTING AREA

			
0°	Ø 180 mm	180 mm	180 x 240 mm 50 x 300 mm
45°	Ø 110 mm	150 mm	110 x 170 mm

The cutting range was determined on the basis of the saw arm weight with aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

Model	SD 200G	SD 200V
Article no.	3300200	3300205
Technical data		
Electrical connection	400 V/3 Ph ~50 Hz	230 V/1 Ph ~50 Hz
Motor power	0.75 / 1.1 kW	750 W
Coolant pump motor	100 W	100 W
Lifting the saw arm	manual	manual
Feed	continuously variable	continuously variable
Saw blade speed	44 / 88 m/min	26 – 80 m/min
Saw blade dimensions	2 362 x 20 x 0.9 mm	2 362 x 20 x 0.9 mm
Cutting angle	0° up to 45°	0° up to 45°
Worktable height	530 mm	530 mm
Length approx.	1 295 mm	1 295 mm
Width with material stop approx.	535 mm	535 mm
Height of lower/upper end position approx.	790 mm / 1200 mm	790 mm / 1200 mm
Net weight approx.	130 kg	130 kg

ACCESSORIES

HSS Saw blades	Article no.
Bi-metal M 42, 5 – 8 tpi, 0°	3357522
Bi-metal M 42, 5 – 8 tpi, 5- 7°	3357516
Bi-metal M 42, 6 – 10 tpi, 0°	3357521
Bi-metal M 42, 10 – 14 tpi, 0°	3357520
Set bi-metal M 42	3357500

› 1 pc. saw blade 6 – 10 tpi; 0 °
› 1 pc. saw blade 5 – 8 tpi; 0 °
› 1 pc. saw blade 10 – 14 tpi; 0 °

For information on saw blades, see page 262

Metal-cutting band saw with pivoting saw head. S 275PV with infinitely variable saw blade speed

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Carbide guide and roller guide
- Replaceable wear plate
- Interchangeable clamping jaws
- Low-noise running action
- Sturdy cast design
- Excellent cutting precision thanks to vibration-free action
- Saw head lowering via hydraulic cylinder continuously adjustable by throttle valve
- Microswitch for automatic limit position cut-off
- Coolant system
- Equipped as a factory standard with bi-metal saw blade
- Adjustable material stop for batch work
- Robust machine base
- Carbide guide and roller guide
- Easily legible scale for adjusting the angle
- Overload protection

S 275P
- Motor protection switch
- Two switchable speeds

S 275PV
- Infinitely variable saw blade speed 20 – 90 m/min.
- Speed change possible during operation



Fig.: S 275N

SCOPE OF DELIVERY

› Material stop
› Bi-metal saw blade
› Machine base
› Coolant pump

ARGUMENTS,...



Control box
› Service-friendly electrics
› Interchangeable relays
› Control box built to the latest standards



Quick clamping vice
› Adjustable via handwheel
› Workpiece is clamped using a handy quick-clamping lever
› Interchangeable vice plates

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.

CUTTING AREA

			
0°	Ø 225 mm	170 mm	245x150 mm
45°	Ø 145 mm	145 mm	180x145 mm
60°	Ø 90 mm	90 mm	90x120 mm

The cutting range was determined on the basis of the saw arm weight with aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

Model	S 275P	S 275PV*
Article no.	3305275	3305280
Technical data		
Electrical connection	400 V/3 Ph ~50 Hz	230 V/1 Ph ~50 Hz
Motor power	1.1 kW	1.5 kW
Coolant pump motor	90 W	
Lifting the saw arm	manual	
Feed	continuously variable	
Saw blade speed	45 / 90 m/min	20 – 90 m/min
Saw blade dimensions	2 480 x 27 x 0.9 mm	
Cutting angle	0° up to 60°	
Length approx.	1 400 mm	
Width without / with material stop approx.	685 / 985 mm	
Height of lower/upper end position approx.	1 235 / 1 700 mm	
Net weight approx.	185 kg	

ACCESSORIES

Designation	Article no.
HSS saw blade bi-metal M 42, 5 – 8 tpi, 0°	3357511
HSS saw blade bi-metal M 42, 5 – 7 tpi, 5- 7°	3357512
HSS saw blade bi-metal M 42, 6 – 10 tpi, 0°	3357524
HSS saw blade bi-metal M 42, 10 – 14 tpi, 0°	3357525
Saw blade set HSS bi-metal M 42	3357504
› 1 pc. saw blade 6 – 10 tpi; 0 ° › 1 pc. saw blade 5 – 8 tpi; 0 ° › 1 pc. saw blade 5 – 7 tpi; 5- 7 °	

For information on saw blades, see page 262

Important information on operating machines with frequency converters on last page
The machine (frequency converter) complies with standard DIN EN 55011:2 011-04 Class C3.

OPTI saw® SD 280V

New

DOUBLE MITRE | GEARBOX | CRAFTSMEN

Metal band saw with swivelling saw arm and digital display for economical and precise work

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Inverter drive for stepless speed control
- Carbide guide and roller guide
- Interchangeable clamping jaws
- Replaceable wear plate
- Low-noise running action
- Sturdy cast design
- Excellent cutting precision thanks to vibration-free action
- Saw head lowering via hydraulic cylinder continuously adjustable by throttle valve
- Microswitch for automatic limit position cut-off
- Coolant system
- Adjustable material stop
- Easy-to-read scale for angle adjustment
- Overload protection
- Robust machine base with door and shelf



ARGUMENTS,...



› Digital angle display
› Digital speed display



Saw blade guide
› Ball-bearing borne; for an excellent band run and thus optimal cutting

CUTTING AREA

0°	Ø 225 mm	190 mm	150 x 245 mm
45°	Ø 145 mm	150 mm	190 x 150 mm
60°	Ø 90 mm	90 mm	120 x 90 mm

The cutting range was determined on the basis of the saw arm weight with aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

Model	SD 280V
Article no.	3305285

Technical data	
Electrical connection	230 V/1 Ph ~50 Hz
Motor power	1.5 kW
Coolant pump motor	90 W
Lifting the saw arm	manual
Feed	continuously variable
Saw blade speed	20 – 90 m/min
Saw blade dimensions	2 480 x 27 x 0.9 mm
Cutting angle	0° up to 60°
Length approx.	1 400 mm
Width without material stop approx.	685 / 985 mm
Height of lower end position approx.	1 235 / 1 700 mm
Net weight approx.	185 kg

ACCESSORIES

Designation	Article no.
HSS saw blade bi-metal M 42, 5 – 8 tpi, 0°	3357511
HSS saw blade bi-metal M 42, 5 – 7 tpi, 5- 7°	3357512
HSS saw blade bi-metal M 42, 6 – 10 tpi, 0°	3357524
HSS saw blade bi-metal M 42, 10 – 14 tpi, 0°	3357525
Saw blade set HSS bi-metal M 42	3357504
› 1 pc. saw blade 6 – 10 tpi; 0 ° › 1 pc. saw blade 5 – 8 tpi; 0 ° › 1 pc. saw blade 5 – 7 tpi; 5- 7 °	

For information on saw blades, see page 262

*The machine complies with the DIN EN 55011 standard: Class C2. Important information on operating machines with frequency converters can be found on the reverse side.

Metal band saw with swivelling saw arm for economical and precise work

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Low-noise running action
- Sturdy cast design
- Excellent cutting precision thanks to vibration-free action
- Saw head lowering via hydraulic cylinder continuously adjustable by throttle valve
- Microswitch for automatic limit position cut-off
- Coolant system
- Equipped as a factory standard with bi-metal saw blade
- Adjustable material stop for batch work
- Robust machine base
- Ball-bearing borne saw blade guide
- Easily legible scale for adjusting the angle
- Overload protection



The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.

SCOPE OF DELIVERY

- › Material stop
- › Bi-metal saw blade
- › Machine base
- › Coolant pump

ARGUMENTS,...



Saw blade tension
› Easy and accurate adjustment of the saw blade tension by pressure gauge



Robust quick-clamping vice
› Grooves for common angle settings



Saw blade guide
› Ball-bearing borne; for an excellent band run and thus optimal cutting

CUTTING AREA

			
0°	Ø 223 mm	180 mm	110 x 245 mm
+45°	Ø 145 mm	145 mm	170 x 145 mm
-45°	Ø 120 mm	120 mm	130 x 120 mm
60°	Ø 85 mm	85 mm	105 x 85 mm

The cutting range was determined on the basis of the saw arm weight with aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

Model	SD 285E
Article no.	3300287

Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Motor power	1.1 kW
Coolant pump motor	100 W
Lifting the saw arm	manual
Feed	continuously variable
Saw blade speed	45 / 90 m/min
Saw blade dimensions	2 645 x 27 x 0.9 mm
Cutting angle	-45° to 60°
Length approx.	1 450 mm
Width without material stop approx.	550 mm
Height of lower end position approx.	1 580 mm
Net weight approx.	245 kg

ACCESSORIES

Designation	Article no.
HSS saw blade bi-metal M 42, 5 – 8 tpi, 0°	3357535
HSS saw blade bi-metal M 42, 5 – 7 tpi, 6°	3357536
HSS saw blade bi-metal M 42, 6 – 10 tpi, 0°	3357537
HSS saw blade bi-metal M 42, 10 – 14 tpi, 0°	3357538

For information on saw blades, see page 262

Band saw for metal working with pivoting saw bow

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Low-noise running action
- Heavy cast design
- Excellent cutting precision thanks to vibration-free action
- Ball-bearing borne saw blade guide
- Chip brush
- Microswitch for automatic limit position cut-off
- Equipped as a factory standard with bi-metal saw blade
- Material stop with scaling
- Quick clamping vice, adjustable via hand wheel. Workpiece is clamped using a handy quick-clamping lever
- Sturdy machine chassis
- End stops adjustable to degree accuracy



SCOPE OF DELIVERY

› Material stop
› Bi-metal saw blade
› Machine base
› Coolant pump

ARGUMENTS,...



Saw blade tension
› Easy and accurate adjustment of the saw blade tension by pressure gauge



Pushbutton
› Manual saw blade operation – the hand lever is used to switch the saw blade on and off

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.

CUTTING AREA

			
0°	Ø 255 mm	190 mm	190 x 310 mm
45°	Ø 215 mm	190 mm	190 x 200 mm
-60°	Ø 135 mm	135 mm	135 x 135 mm
-45°	Ø 220 mm	190 mm	135 x 190 mm

The cutting range was determined on the basis of the saw arm weight with aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

Model	S 300DG
Article no.	3290290

Technical data	
Electrical connection	400 V / 3 Ph ~50 Hz
Motor power	1.5 kW
Coolant pump motor	100 W
Lifting the saw arm	manual
Feed	continuously variable
Saw blade speed	35/70 m/min.
Saw blade dimensions	2 750 x 27 x 0.9 mm
Cutting angle	45° up to -60°
Dimensions length approx.	1 680 mm
Width without / with material stop approx.	700 / 1 300 mm
Height of lower/upper end position approx.	1 600 / 1 850 mm
Weight approx.	335 kg

ACCESSORIES

Designation	Article no.
HSS saw blade bi-metal M 42, 5 – 8 tpi, 0°	3357751
HSS saw blade bi-metal M 42, 5 – 8 tpi, 10°	3357752
HSS saw blade bi-metal M 42, 6 – 10 tpi, 0°	3357753
HSS saw blade bi-metal M 42, 10 – 14 tpi, 0°	3357754
Saw blade set HSS bi-metal M 42	3357700
› 1 pc. saw blade 6 – 10 tpi; 0 ° › 1 pc. saw blade 5 – 8 tpi; 0 ° › 1 pc. saw blade 5 – 8 tpi; 10 °	

For information on saw blades, see page 262

Band saw for metalworking with Inventer Vario drive for infinitely adjustable saw blade speed

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Low-noise running action
- Heavy cast design
- Excellent cutting precision thanks to vibration-free action
- Ball-bearing borne saw blade guide
- EMC class C2
- Two-channel safety chain with quick stop for emergency stop
- Chip brush
- The “manual saw blade operation” pushbutton on the hand lever switches the saw blade on and off
- Powerful 100 Watt coolant system
- Microswitch for automatic limit position cut-off
- Equipped as a factory standard with bi-metal saw blade
- Material stop with scaling
- Quick clamping vice, adjustable via hand wheel. Workpiece is clamped using a handy quick-clamping lever
- Sturdy machine chassis
- End stops adjustable to degree accuracy



ARGUMENTS,...



Saw blade tension
› Easy and accurate adjustment of the saw blade tension by pressure gauge



Inverter
› for infinitely variable saw blade speed 15 – 90 m/ min

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.

SCOPE OF DELIVERY

› Material stop
› Bi-metal saw blade
› Machine base
› Coolant pump

CUTTING AREA

			
0°	Ø 255 mm	190 mm	190 x 310 mm
-45°	Ø 220 mm	190 mm	135 x 190 mm
-60°	Ø 135 mm	135 mm	135 x 135 mm
45°	Ø 215 mm	190 mm	190 x 200 mm

The cutting range was determined on the basis of the saw arm weight with aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

Model	SD 300V
Article no.	3290310

Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Motor power	1.5 kW
Coolant pump motor	100 W
Lifting the saw arm	manual
Feed	hydraulic via lowering cylinder
Saw blade speed	15 – 90 m/min
Saw blade dimensions	2 750 x 27 x 0.9 mm
Cutting angle	45° up to -60°
Length approx.	1 680 mm
Width without / with material stop approx.	700 / 1 330 mm
Height of lower/upper end position approx.	1 600 / 1 850 mm
Net weight approx.	335 kg

ACCESSORIES

Designation	Article no.
HSS saw blade bi-metal M 42, 5 – 8 tpi, 0°	3357751
HSS saw blade bi-metal M 42, 5 – 8 tpi, 10°	3357752
HSS saw blade bi-metal M 42, 6 – 10 tpi, 0°	3357753
HSS saw blade bi-metal M 42, 10 – 14 tpi, 0°	3357754
Saw blade set HSS bi-metal M 42	3357700
› 1 pc. saw blade 6 – 10 tpi; 0 ° › 1 pc. saw blade 5 – 8 tpi; 0 ° › 1 pc. saw blade 5 – 8 tpi; 10 °	

For information on saw blades, see page 262

Important information on operating machines with frequency converters on last page
The machine (frequency converter) complies with standard DIN EN 55011:2 011-04 Class C2.

SD 310V VARIO | TURN TABLE | DOUBLE MITRE | GEAR | INDUSTRY

Metal band saw with turntable

Drive for infinitely variable saw blade speed

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Low-noise running action
- Heavy cast design
- Carbide guide
- Excellent cutting precision thanks to vibration-free action
- EMC class C2
- Two-channel safety chain with quick stop for emergency stop
- High motor output even at low speeds
- Microswitch for automatic limit position cut-off
- Precise, re-adjustable and durable saw blade guide
- End stops adjustable to degree accuracy
- Chip brush
- Powerful 100 Watt coolant system
- Quick clamping vice, adjustable via hand wheel. Workpiece is clamped using a handy quick-clamping lever
- Sturdy machine chassis
- Control unit facilitates machine setup
- Fully equipped; the user can immediately start productive work after commissioning

SD 310V

- Professional inverter technology
- Infinitely variable saw blade speed via frequency converter

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.



Fig.: SD 310V

SCOPE OF DELIVERY

› Material stop
› Bi-metal saw blade
› Machine base
› Coolant pump

Model	SD 310	SD 310V*
Article no.	3290345	3290340

Technical data		
Electrical connection	400 V/3 Ph ~50 Hz	
Motor power	1.5 kW	
Coolant pump motor	100 W	
Lifting the saw arm	manual	
Feed	hydraulic via lowering cylinder	
Saw blade speed	35/ 70 m/min	15 – 100 m/min
Saw blade dimensions	2 750 x 27 x 0.9 mm	
Cutting angle	45° up to -60°	
Length approx.	1 850 mm	
Width without / with material stop approx.	700 / 1 300 mm	
Height of lower/upper end position approx.	1 600 / 2 000 mm	
Net weight approx.	380 kg	

ARGUMENTS,...



› Easy and accurate adjustment of the saw blade tension by pressure gauge



Turntable
› Any angle between 45° and -60° can be sawn, as the cutting gap swivels with the saw arm.



› SD 310V: Inverter for infinitely variable saw blade speed 15 – 100 m/ min

CUTTING AREA

			
0°	Ø 255 mm	255 mm	200 x 270 mm
-45°	Ø 190 mm	140 mm	140 x 210 mm
-60°	Ø 110 mm	110 mm	110 x 210 mm
45°	Ø 190 mm	160 mm	160 x 160 mm

The cutting range was determined on the basis of the saw arm weight with aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

ACCESSORIES

Designation	Article no.
HSS saw blade bi-metal M 42, 5 – 8 tpi, 0°	3357751
HSS saw blade bi-metal M 42, 5 – 8 tpi, 10°	3357752
HSS saw blade bi-metal M 42, 6 – 10 tpi, 0°	3357753
HSS saw blade bi-metal M 42, 10 – 14 tpi, 0°	3357754
Saw blade set HSS bi-metal M 42	3357700
› 1 pc. saw blade 6 – 10 tpi; 0 ° › 1 pc. saw blade 5 – 8 tpi; 0 ° › 1 pc. saw blade 5 – 8 tpi; 10 °	

For information on saw blades, see page 262

Important information on operating machines with frequency converters on last page
* The machine (frequency converter) complies with standard DIN EN 55011:2 011-04 Class C2.

Metal-cutting band saw with double mitre, heavy-duty design with a cutting capacity of up to 350 mm

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy-duty industrial design
- Low-noise running action
- Excellent cutting precision thanks to vibration-free action
- Two switchable speeds 36/72 m/min.
- Mitre adjustment up to -60° by swivelling the entire saw arm
- Generously dimensioned, robust quick clamping vise, adjustable via hand wheel Workpiece clamping with a practical quick-clamping lever, can be shifted for large materials
- Equipped as a factory standard with bi-metal saw blade
- End stops adjustable to degree accuracy
- Chip brush
- Combinable and individually adjustable carbide and ball bearing guides on the saw blade
- Precise, continuously adjustable saw blade movement via hydraulic cylinder
- Powerful 100 Watt coolant system
- Emergency stop button
- Robust machine base
- Microswitch for automatic limit position cut-off
- Roller support adjustable for long and heavy workpieces
- Fully equipped; the user can immediately start productive work after commissioning

ARGUMENTS,...



Saw blade tension
› Easy and accurate adjustment of the saw blade tension by pressure gauge



Roller support
› For supporting long materials



CUTTING AREA

			
0°	Ø 270 mm	230 mm	230 x 350 mm
45°	Ø 230 mm	200 mm	210 x 220 mm
60°	Ø 140 mm	140 mm	140 x 220 mm
-45°	Ø 230 mm	170 mm	140 x 200 mm

The cutting range was determined on the basis of the saw arm weight with aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

SCOPE OF DELIVERY

› Material stop
› Bi-metal saw blade
› Machine base
› Coolant pump

Model	S 350DG
Article no.	3290350

Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Total rated value	2.4 kW
Saw motor	2.2 kW
Coolant pump motor	50 W
Lifting the saw arm	manual
Feed	hydraulic via lowering cylinder
Saw blade speed	36/72 m/min.
Saw blade dimensions	2 750 x 27 x 0.9 mm
Cutting angle	-45° up to 60°
Length approx.	1 750 mm
Width without / with material stop approx.	1 075 / 1 415 mm
Height of lower/upper end position approx.	1 420 / 2 000 mm
Net weight approx.	550 kg

ACCESSORIES

Designation	Article no.
HSS saw blade bi-metal M 42, 5 – 8 tpi, 0°	3357751
HSS saw blade bi-metal M 42, 5 – 8 tpi, 10°	3357752
HSS saw blade bi-metal M 42, 6 – 10 tpi, 0°	3357753
HSS saw blade bi-metal M 42, 10 – 14 tpi, 0°	3357754
Saw blade set HSS bi-metal M 42	3357700
› 1 pc. saw blade 6 – 10 tpi; 0 ° › 1 pc. saw blade 5 – 8 tpi; 0 ° › 1 pc. saw blade 5 – 8 tpi; 10 °	

For information on saw blades, see page 262

Semi-automatic double mitre metal-cutting band saw with inverter drive. Professional and robust saw

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy-duty industrial design
- Low-noise running action
- Manual or semi-automatic operation
- Infinitely variable saw blade speed from 0–80 m/min.
- Excellent cutting precision thanks to vibration-free action
- Mitre adjustment up to 60° by swivelling the entire saw arm
- Equipped as a factory standard with bi-metal saw blade
- End stops adjustable to degree accuracy
- Chip brush
- Microswitch for automatic limit position cut-off
- Roller support adjustable for long and heavy workpieces
- Powerful 100 Watt coolant system
- Ball bearing borne saw blade guide with carbide tips for optimal cutting results
- Easy adjustment of the lowering speed via feed control valve in control panel
- Generously dimensioned, hydraulic quick-action vice, self-closing, movable for large cross-sections
- Machine with full equipment set; the user can immediately start productive work
- 2-channel safety chain with quick stop in case of emergency stop
- Infinitely variable saw blade speed

ARGUMENTS,...

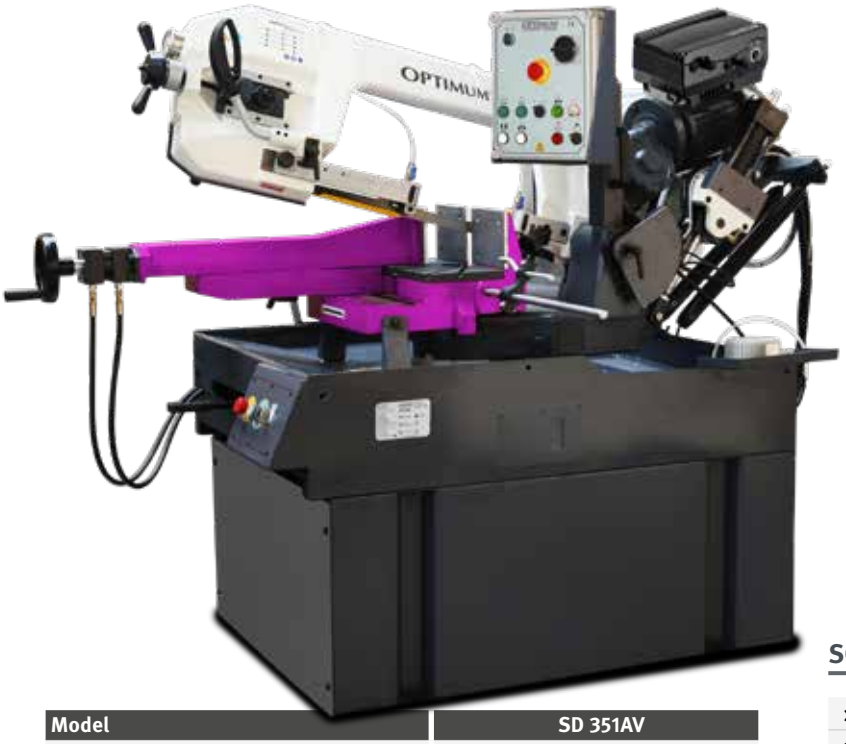


Inverter
› for infinitely variable saw blade speed 15 – 100 m/ min



Robust quick-clamping vice
› Grooves for common angle settings

Kostal Frequency converter



The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.

CUTTING AREA

			
0°	Ø 270 mm	230 mm	230 x 350 mm
45°	Ø 230 mm	200 mm	210 x 220 mm
60°	Ø 140 mm	140 mm	140 x 220 mm
-45°	Ø 230 mm	170 mm	140 x 200 mm

The cutting range was determined on the basis of the saw arm weight with aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

Model	SD 351AV
Article no.	3290361

Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Total rated value	3.8 kW
Saw motor	2.2 kW
Coolant pump motor	50 W
Motor-hydraulic pump	1.4 kW
Lifting the saw arm:	
Manual operation	Hydraulic via pushbutton
Semi-automatic operation	automatic
Saw blade speed	15 – 100 m/min continuously variable
Saw blade dimensions	2 750 x 27 x 0.9 mm
Cutting angle	-45° up to 60°
Length x width x height min. approx.	1 935 x 1 425 x 1 626 mm
Net weight approx.	600 kg

SCOPE OF DELIVERY

› Material stop
› Bi-metal saw blade 4-6 tpi M42
› Machine base
› Coolant pump

ACCESSORIES

Designation	Article no.
HSS saw blade bi-metal M 42, 5 – 8 tpi, 0°	3357541
HSS saw blade bi-metal M 42, 4 – 6 tpi, 6°	3357540
HSS saw blade bi-metal M 42, 6 – 10 tpi, 0°	3357542
HSS saw blade bi-metal M 42, 10 – 14 tpi, 0°	3357543
Saw blade set HSS bi-metal M 42	3357501
› 1 pc. saw blade 6 – 10 tpi; 0 ° › 1 pc. saw blade 5 – 8 tpi; 0 ° › 1 pc. saw blade 5 – 8 tpi; 10 °	

For information on saw blades, see page 262

Important information on operating machines with frequency converters on last page
The machine (frequency converter) complies with standard DIN EN 55011:2 011-04 Class C2.

Double mitre metal-cutting band saw with versatile deployment options in trades and industry

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy-duty industrial design
- Low-noise running action
- Excellent cutting precision thanks to vibration-free action
- Mitre adjustment -45° to 60° by swivelling the entire saw arm
- Equipped as a factory standard with bi-metal saw blade
- Microswitch for automatic limit position cut-off
- Powerful 100 Watt coolant system
- Ball bearing borne saw blade guide with carbide tips for optimal cutting results
- Easy adjustment of the lowering speed via feed control valve in control panel
- Clearly-arranged control panel



The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.

ARGUMENTS,...



Saw blade tension
› Easy and accurate adjustment of the saw blade tension by pressure gauge



Roller support
› For supporting long materials



Robust quick-clamping vice
› Grooves for common angle settings

SCOPE OF DELIVERY

- › Material stop
- › Bi-metal saw blade 4-6 tpi M42
- › Machine base
- › Coolant pump

CUTTING AREA

			
0°	Ø 355 mm	280 mm	280 x 490 mm
45°	Ø 355 mm	280 mm	280 x 340 mm
60°	Ø 230 mm	180 mm	180 x 220 mm
-45°	Ø 290 mm	250 mm	250 x 250 mm

The cutting range was determined on the basis of the saw arm weight with aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

Model	SD 500
Articel no.	3292380

Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Total rated value	3.8 kW
Saw motor	2.2 kW
Coolant pump motor	100 W
Lifting the saw arm	manual
Feed	hydraulic via lowering cylinder
Saw blade speed	35 / 70 m/min
Saw blade dimensions	3 770 x 34 x 1.1 mm
Cutting angle	-45° up to 60°
Dimensions L x W x H min. approx.	2 122 x 1 046 x 1 497 mm
Net weight approx.	552 kg

Please note: Restrictions apply for attaching material stand MSR

ACCESSORIES

Designation	Article no.
HSS saw blade bi-metal M 42, 5 – 8 tpi, 0°	3357590
HSS saw blade bi-metal M 42, 6 – 10 tpi, 0°	3357591

For information on saw blades, see page 262

VARIO | DOUBLE MITRE | GEARBOX | INDUSTRY

Semi-automatic double mitre metal-cutting band saw with inverter drive Versatile deployment options

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy-duty industrial design
- Low-noise running action
- Manual or semi-automatic operation
- Excellent cutting precision thanks to vibration-free action
- Mitre adjustment -45° to 60° by swivelling the entire saw arm
- Equipped as a factory standard with bi-metal saw blade
- Microswitch for automatic limit position cut-off
- Powerful 100 Watt coolant system
- Ball bearing borne saw blade guide with carbide tips for optimal cutting results
- Easy adjustment of the lowering speed via feed control valve in control panel
- Generously dimensioned, hydraulic quick clamping vise, self-locking, laterally displaceable
- Pressure gauge for correct saw band tension
- Clearly-arranged control panel

Function
Semi-automatic operation
- Closing the vice and activating the motor
- Lowering the saw arm for cutting
- Stopping the motor and returning the saw arm to its starting position



ARGUMENTS,...



Inverter
› for infinitely variable saw blade speed 20 – 80 m/ min



Saw blade tension
› Easy and accurate adjustment of the saw blade tension by pressure gauge

The machine is pre-assembled.
Individual components of the machine still have to be assembled and joined together.

Scope of delivery

› Material stop
› Bi-metal saw blade 4-6 tpi M42
› Machine base
› Coolant pump

Model	SD 500AV
Article no.	3292386

Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Total rated value	3.8 kW
Saw motor	3 kW
Coolant pump motor	100 W
Motor-hydraulic pump	1.4 kW
Lifting the saw arm:	
Manual operation	Hydraulic via pushbutton
Semi-automatic operation	automatic
Saw blade speed	20 – 80 m/min
Saw blade dimensions	3 770 x 34 x 1.1 mm
Cutting angle	45° up to -60°
Dimensions LxWxH min. approx.	2 129 x 1 046 x 1 687 mm
Net weight approx.	645 kg

CUTTING AREA

			
0°	Ø 355 mm	300 mm	300 x 490 mm
45°	Ø 350 mm	290 mm	290 x 340 mm
60°	Ø 230 mm	180 mm	180 x 220 mm
-45°	Ø 290 mm	250 mm	250 x 250 mm

The cutting range was determined on the basis of the saw arm weight with aluminium. It can vary when using different materials and may be smaller (not cutting capacity).

ACCESSORIES

Designation	Article no.
HSS saw blade bi-metal M 42, 5 – 8 tpi, 0°	3357590
HSS saw blade bi-metal M 42, 6 – 10 tpi, 0°	3357591

For information on saw blades, see page 262

Important information on operating machines with frequency converters on last page
The machine (frequency converter) complies with standard DIN EN 55011:2 011-04 Class C2.

Manual metal circular saws for steel, iron, light metals, solid material and profiles

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Swivelling range of 45° on both sides
- Easily readable angle scale supports precise work
- Mitre adjustment within seconds
- Protected vice spindle
- Solid machine base with drill holes on both sides for attaching the MSR material stand
- Long handle supports sawing without applying excessive force, includes integrated pushbutton (on/off)
- Automatic coolant pump switch-on during sawing
- Functional protection device, closed design, mobile
- Fast opening mechanism for optimal safety during cutting
- Solid machine base
- Protected vice spindle
- Machine base sizes:
  - CS 275 – 460 x 515 x 775 mm and
  - CS 315 – 546 x 620 x 801 mm
- The saw is delivered without a circular saw blade (saw blade division freely selectable)



ARGUMENTS,...



Vice

› Centric clamping
› 4-fold guided with individually adjustable clamping jaws. Cut always occurs in optimal position relative to workpiece



Coolant tank

› Integrated in chassis
› Tank capacity 8 litres

MATERIAL SUPPORTS

Designation	Article no.
MSR 4	3357610
MSR 4H	3357001
MSR 7	3357611
MSR 7H	3357002
MSR 10	3357613
MSR 10H	3357003

For information see page 272



CUTTING AREA

				
CS 275	0°	Ø 60 mm	60 mm	60 x 100 mm
CS 315		Ø 85 mm	85 mm	70 x 130 mm
CS 275	45°	Ø 60 mm	60 mm	60 x 70 mm
CS 315		Ø 85 mm	85 mm	70 x 90 mm

Model	CS 275	CS 315
Article no.	3302275	3302300
Technical data		
Electrical connection	400 V/3 Ph ~50 Hz	400 V/3 Ph ~50 Hz
Motor power	1.4 / 2.0 kW	0.75 / 1.5 kW
Coolant pump motor	40 W	
Swivel range	± 45°	± 45°
Cutting angle adjustment	Via rotating bearing block	
Feed	manual	
Cutting speed	41 / 82 min^{-1}	19 / 38 min^{-1}
Saw blade diameter	Ø 275 mm; Inner Ø 40 mm	Ø 315 mm; Inner Ø 40 mm
Vice clamping width	110 mm	135 mm
Dimensions LxWxH min. approx.	460 x 830 x 1 700 mm	560 x 902 x 1 765 mm
Net weight approx.	175 kg	235 kg

SCOPE OF DELIVERY

› Coolant system
› Machine base

ACCESSORIES

Metal circular saw blade	Article no.
CS 275	
4 mm/T, 220 teeth 2.5 mm	3357444
6 mm/T, 140 teeth 2.5 mm	3357446
8 mm/T, 110 teeth 2.5 mm	3357448
CS 315	
4 mm/T, 240 teeth 2.5 mm	3357454
6 mm/T, 150 teeth 2.5 mm	3357456
8 mm/T, 120 teeth 2.5 mm	3357458

General saw blade information

Workpiece
The workpiece to be machined must be firmly clamped so that it cannot vibrate or rotate. Do not use damaged, bent or severely deformed workpieces. The closer the band saw guides are fixed relative to the workpiece, the more precise the cut becomes.



Teeth per inch
The tooth pitch refers to the number of teeth per inch (25.4 mm).
As a general rule:
The shorter the cutting length (e.g: profiles), the finer the selected toothing. The greater the material attack (e.g., solid material), the coarser the tpi value used.
If the tooth pitch is too large, it can cause the cut to veer off course, as chips block the rake faces and force the saw band off its cutting line. To small a tpi value can cause teeth to break out as the cutting pressure on the individual tooth becomes too great. At least 3 teeth need to be engaged to achieve economical results.

Running in of saw blades
- Correct running in guarantees a long service life.
- Sharp cutting edges with extremely small edge curves are the precondition for high cutting capacity of the saw blades.
- To achieve an optimal service life, we recommend running in the saw blade appropriately.
- Depending on the material and the dimension of the material you are cutting, determine the correct cutting speed (m/min.) and feed rate (mm/min.).
- The important thing is: The new saw blade should only be used at approximately 50% of the determined feed rate. The idea is to avoid the extremely sharp cutting edges on the teeth being damaged by micro fracturing in case of large chip thicknesses.
- New saw blades may be prone to vibrations and vibration-induced noise at first. If this happens, reduce the cutting speed slightly. In case of small workpiece dimensions, the run-in should be over approx. 300 – 500 cm² of the material you are cutting.
- If you are processing large workpiece dimensions, we recommend running in for a period of approx. 15 min. After running in, gradually increase the feed rate to the target value determined previously.

Optimal chip formation
› Chips are the best indicator of a correctly adjusted feed and the correct saw blade speed. Take a look at the chips you generate and set the feed correctly.

Thin chips that look like powder
› Increase the feed rate or reduce the saw blade speed.



Burnt, heavy chips
› Reduce the feed rate and/or the saw blade speed



Crinkly, silver and warm chips
› Optimal feed rate and sawing speed



Materials	Cutting speed (M42)
Construction steel/Machining steel	80 – 90 m/min
Case-hardened steels/Heat-treated steels	45 – 75 m/min
Unalloyed tool steels/Rolled steels	40 – 60 m/min
Alloyed tool steels/high-speed steels	30 – 40 m/min
Stainless steels	20 – 35 m/min
Heat resistant steels/Highly heat-resistant alloys	15 – 25 m/min

Tooth pitches when using HSS bi-metal bands

Standard toothing		Combined toothing		Sawing pipes and profiles						
Profile cross section	Number of teeth per inch	Profile cross section	Number of teeth per inch	Diameter	Ø 40	Ø 80	Ø 100	Ø 150	Ø 200	Ø 300
				Wall thickness	Teeth per inch (TPI)					
‹ 12 mm	14 tpi	‹ 25 mm	10 – 14 tpi	3 mm	8 – 12	8 – 12	8 – 12	8 – 12	6 – 10	6 – 10
12 – 30 mm	10 tpi	20 – 40 mm	8 – 12 tpi	8 mm	8 – 12	6 – 10	6 – 10	5 – 8	4 – 6	4 – 6
30 – 50 mm	8 tpi	25 – 70 mm	6 – 10 tpi	12 mm	6 – 10	5 – 8	5 – 8	4 – 6	4 – 6	4 – 6
50 – 80 mm	6 tpi	35 – 90 mm	5 – 8 tpi	15 mm	5 – 8	4 – 6	4 – 6	4 – 6	3 – 4	3 – 4
80 – 100 mm	4 tpi	50 – 100 mm	4 – 6 tpi	20 mm	-	4 – 6	4 – 6	4 – 5	4 – 5	4 – 5

Teeth per inch 4 – 5 TPI not available from Optimum

Height-adjustable, universal MSR material stands as manual aid for supporting and moving workpieces on metal saws H version variably adjustable up to 1 050 mm

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Trouble-free and material transport when feeding and unloading workpieces
- Universally deployable for metal-cutting band saws, circular saws, etc.
- Roller support, continuously adjustable
- Safe workpiece support due to solid steel rollers with high load-bearing capacity
- Infinitely extensible
- Extension options for LMS length measuring systems
- Stable frame design with strong custom profile
- Steel bearing rollers, ball-bearing borne on both sides





Fig.: MSR 4



Fig.: MSR 10



Fig.: Example of use:
OPTIsaw S 275N, material stand MSR 4, measuring system LMS 1, digit. position display DRO 1; table extension MSR 1, connecting plates

! As this is a universal conveyor, it may be necessary to make adjustments to the connection plate depending on the type of machine.

Model	MSR 4	MSR 7	MSR 10
Article no.	3357610	3357611	3357613
Model	**MSR 4H**	**MSR 7H**	**MSR 10H**
Article no.	3357001	3357002	3357003

Technical data			
Idler roller diameter	Ø 60 mm	Ø 60 mm	Ø 60 mm
Idler roller width	360 mm	360 mm	360 mm
Static table load	500 kg	700 kg	700 kg
Dimensions length x width approx.	1 000 x 440 mm	2 000 x 440 mm	3 000 x 440 mm
Dimensions height approx.	650 – 950 mm	650 – 950 mm	650 – 950 mm
Dimensions height (H version) approx.	660 – 1 050 mm	660 – 1 050 mm	660 – 1 050 mm
Net weight / H version approx.	29 kg / 30.2 kg	44.7 kg / 46.1 kg	65.8 kg / 68 kg

ACCESSORIES

Designation	Article no.
PVC rollers	3357609

› Made of non-slip PVC
› Additionally attachable
› To avoid scratches

› Simply slot the rollers into the holder provided
› With practical wall-mount



Table extension	Article no.
MSR 1	3357006

› for MSR roller conveyors
› Removable rollers
› Additionally attachable
› Can be fitted in both directions



Designation	Article no.
Connecting plate	3357005

› Slotted holes
› Including attachments on the right and left
› Additionally attachable



SCOPE OF DELIVERY

› Fastening material for extension

Digital trimming and length measuring systems for attaching to MSR material stand. For perfect length measurement and precise positioning

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Magnetic measuring system with magnetic strip
- For recurring measuring tasks with high precision 0.05 mm
- Automatic display switch-on
- Material stop for small pieces with extension
- Positioning slide right- and left-hand, folds up
- In case of longer breaks, the measuring system switches off and keeps the last stored dimension
- Measurement accuracy: ±(0.025 + 0.02 mm × measurement length [m])



Fig.: MSR 4 material stand with LMS 10 length measuring system*

* When attaching the LMS length measuring system to the MSR material stand, it may be necessary for the customer to drill holes.

ARGUMENTS



Linear guide
› Lubrication-free
› Very quiet action
› Wear resistant
› Corrosion-resistant
› Low friction values
› High static load bearing capacity



Slide
› Easily movable
› Precisely guided
› Replaceable, long-life dry plain bearings
› Easy self-assembly



Digital display
› LCD
Switching functions:
› Metric / inch / angle
› absolute position or incremental position
› Zeroing
› ABS mode, fast calibration

Model	LMS 10	LMS 20	LMS 30	LMS 40
Article no.	3383851	3383852	3383853	3383854
Technical data				
Rail length	1 000 mm	2 000 mm	3 000 mm	4 000 mm
Travel distance	830 mm	1 830 mm	2 830 mm	3 830 mm

other lengths on request.

Manual trimming and length measuring systems LMS 1M/LMS 2M for attaching to MSR* material stand. For perfect length measurement and precise positioning

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRIC!

- Modular system
- For perfect length measurement and precise positioning
- For recurring measuring tasks with high precision



Trimming and length measuring systems	Article no.
› Sliding carriage with stop	
LMS 1M	3383841
› Guide rail 1 300 mm	
› Includes 1 metre rule	
LMS 2M	3383842
› Guide rail 2 300 mm	
› Includes 2 metre rule	
Magnification	3383846
› when using the stop plate in conjunction with circular saws	



Fig.: Magnification

* When attaching the LMS length measuring system to the MSR material stand, it may be necessary for the customer to drill holes.

Magnetic tape	Article no.
Length 1 600 mm for LMS 1M	3383876
Length 2 600 mm for LMS 2M	3383877
Yard goods (price per metre)	3383878

Extension rail	Article no.
› only in combination with DRO1	
Length 1 300 mm	3383843
Length 2 300 mm	3383844

Digital display	Article no.
DRO1	3383845
› With extension kit for LMS 1M / 2M	
› Radius/diameter mode	
› Parameter memory	
› Inch/metric adaptation	
› Multifunctional LCD display	
› Adjustable angular measurement	
› Absolute/incremental	
› 8-digit LCD display	
› Coordinate conversion	



SURFACE GRINDING MACHINES CYLINDRICAL GRINDING MACHINES

GT 40 | Art. no.: **3111040**

Surface grinding machine
with versatile deployment options
in trades and industry



GC 1 810 | Art. no.: **3121050**

Universal cylindrical grinding machine with a Siemens inverter Sinamics V20



Manual surface grinding machine with digital position indicator DPA 31 Plus for fine grinding (finishing) of metal surfaces

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Premium spindle with precision taper roller bearings
- Hardened and ground bed guides
- Turcite-B coated counter guides for excellent wear-resistance and low friction
- Integrated grinding wheel dressing device
- Machine base made of sturdy, torsion-resistant cast iron for maximum rigidity and stability
- Backlash-free V-flat guide on the Z axis and flat guides on the x and Y axes
- Trapezoidal threaded spindle on the Y axis
- Manual centralised lubrication system
- Coolant unit with external coolant tank
- All flat guides are finely honed and thus guarantee a high precision of all manual movements
- LED lamp
- Safety electrics in 24 V DC
- Grinding accuracy: 0.005 mm
- Corundum grinding wheel 46 grain for all popular metals included in standard scope of delivery
- Two-channel safety electrics
- EMC filter class
- Substantial energy savings thanks to IE3 motor



ARGUMENTS,...



Digital position display DPA 31Plus

› User-friendly membrane keyboard, splash water protected, dazzle free and easy to clean

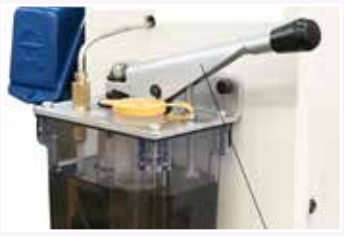
New measuring strips:

› The electronic measuring components of the measuring strips are protected and sealed in the housing
› Provides accurate and reliable measurement results even if the measuring system is operated in oil or coolant
› Tolerant towards vibration and magnetic interference



Permanent magnet

› Fast and safe workpiece clamping



Central lubrication

› manual

Model	GT 22
Article no.	3111020
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Grinding disc drive motor	1.5 kW
Coolant pump motor	125 W
Surface grinding table	
Surface grinding table length x width	200 x 450 mm
Magnetic clamping plate	200 x 500 mm
T-slot size / number of slots	14 mm / 1
Load bearing capacity of grinding table including permanent magnet	128 kg
Workpiece size length x width x height	450 x 200 x 350 mm
Spacing spindle centre – grinding table	max. 450 mm
Grinding disc	
Size of grinding disc	Ø 200 x 20mm , shaft Ø 31.75 mm
Clearance grinding wheel – grinding table	405 mm
Circumferential speed of grinding wheel	33 m/s
Grinding spindle true running accuracy	0.005 mm
Manual travel distance	
X axis	500 mm
Z axis	240 mm
Rotational speeds	
Constant spindle speed	2 850 min⁻
Dimensions and weight	
Length x width x height approx.	1 400 x 1 110 x 1 950 mm
Net weight approx.	900 kg

SCOPE OF DELIVERY

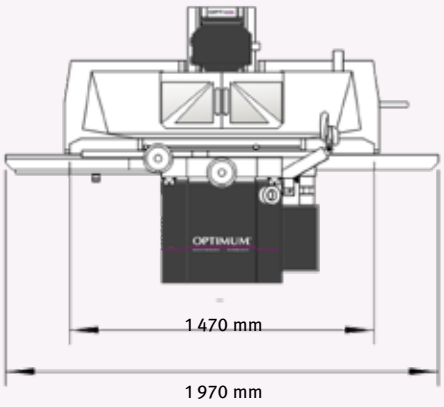
- Corundum grinding wheel 46 grain
- Digital position display
- Balancing stand
- Degaussing unit
- Grinding wheel and clamping chuck
- Dresser for grinding wheel (with diamond tip)
- Wheel balancing mandrel
- Wheel dresser
- Base plate for dresser
- Levelling feet
- Operating tool in toolbox

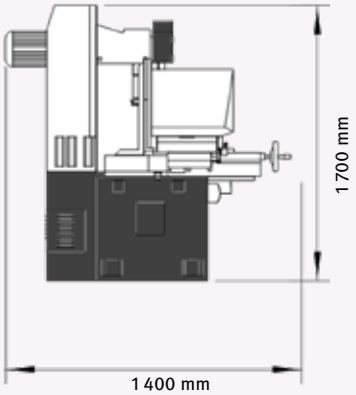
ACCESSORIES

Designation	Article no.
Magnetic separator with paper belt filter MPS 1	3112000
Spare filter paper	3112001
Grinding dust extraction	3112015
Grinding disc adapters	3112010
Diamond dresser	3112025
Corundum grinding discgrain size 46	3112040
Corundum grinding discgrain size 60	3112042
Corundum grinding disc grain size 80	3112044

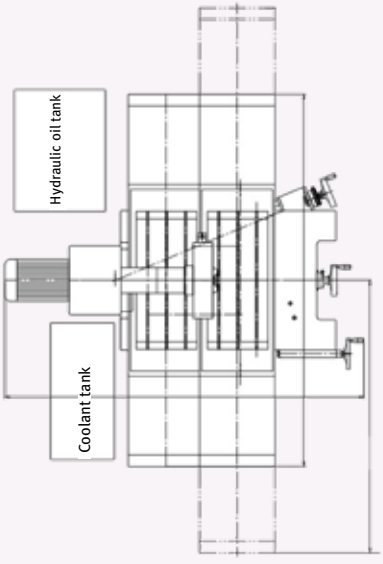
Information on accessories can be found on page 280.

DIMENSIONS





INSTALLATION PLAN



Solid surface grinding machine from OPTIMUM with compact dimensions.
Impresses with easy handling, precision and great grinding quality.

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Electro-magnetic clamping plate for holding the workpiece with automatic degaussing function
- Premium spindle with precision taper roller bearings
- Hardened and ground bed guides
- Turcite-B coated counter guides for excellent wear-resistance and low friction
- Grinding spindle with premium precision bearings
- Integrated grinding wheel dressing device
- External hydraulic power unit with heat exchanger for constant oil temperature
- Machine base made of sturdy, torsion-resistant cast iron for maximum rigidity and stability
- Backlash-free V-flat guide on the Z axis and flat guides on the x and Y axes
- Trapezoidal threaded spindle on the Y axis
- Precision ball screws
- Safety electrics in 24 V DC
- Guideways and transport spindle with centralised lubrication system
- All flat guides are finely honed and thus guarantee highest precision of all manual movements
- Generously dimensioned, decoupled hand wheels on all three axes
- Hydraulic lines according to DIN EN 853
- Grinding accuracy: 0.005 mm
- Corundum grinding wheel 46 grain for all popular metals included in standard scope of delivery
- Pivoting control panel substantially facilitates work
- Separate hydraulics unit with heat exchanger avoids vibrations and thermal load
- Two-channel safety electronics
- Grinding table splash guard
- EMC filter class
- Coolant unit with external coolant tank, capacity 100 litres
- Substantial energy savings thanks to IE3 motor

IE3 PREMIUM EFFICIENCY



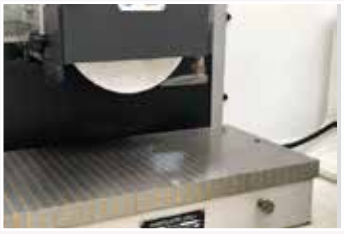
ARGUMENTS,...



Digital position display DPA 31Plus
› User-friendly membrane keyboard, splash water protected, dazzle free and easy to clean



Central lubrication
› Prevents wear, repair costs and unnecessary downtime to a major extent



Electromagnetic clamping plate
› Fast and safe workpiece clamping



Touch display
› Clear, easy and self-explanatory to use
› Innovative and technologically advanced
› available in the languages: – German, Polish, English, Chinese, Dutch, French

› Hand wheel for moving the Y axis
› Swivelling control panel

Technical data and dimension

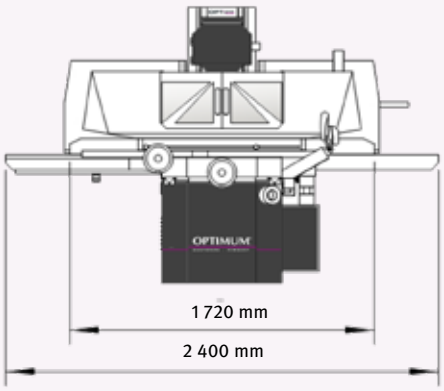
Model	GT 25
Article no.	3111025
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Total connected load	3.7 kW
Grinding disc drive motor	2.2 kW
Hydraulic motor	0.75 kW
Coolant pump motor	70 W
Surface grinding table	
Surface grinding table length x width	254 x 508 mm
Electro-magnetic clamping plate	250 x 500 mm
T-slot size / number of slots	14 mm / 1
Grinding table load bearing capacity including electromagnetic clamping plate	180 kg
Workpiece size length x width x height	508 x 254 x 350 mm
Spacing spindle centre – grinding table	max. 450 mm
Oscillating speeds of table	5 – 25 m/min
Grinding disc	
Size of grinding disc	Ø 200 x 20mm , shaft Ø 31.75 mm
Clearance grinding wheel – grinding table	405 mm
Circumferential speed of grinding wheel	33 m/s
Grinding spindle true running accuracy	0.005 mm
Oscillating travel/travel distance	
Oscillating travel X-axis	560 mm
Z-axis travel distance	275 mm
Y axis	
Continuous transverse feed	0.1 – 8 mm
Fast motion on Y axis	990 mm/min
Scale division on handwheel	0.02 mm
Z axis	
Step widths of fast motion feed	0.005 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05
Fast motion adjustment on the Z axis	480 mm/min
Scale division on handwheel	0.005 mm
Rotational speeds	
Constant spindle speed	2 850 min⁻
Dimensions and weight	
Length x width x height approx.	2 600 x 2 000 x 2 150 mm
Net weight approx.	1 900 kg

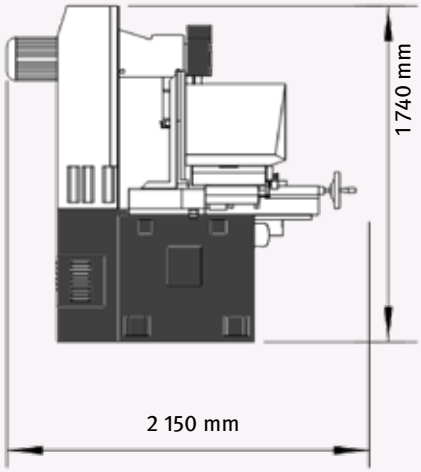
SCOPE OF DELIVERY

- Corundum grinding wheel 46 grain
- Digital position display
- Balancing stand
- Degaussing unit
- Grinding wheel and clamping chuck
- Dresser for grinding wheel (with diamond tip)
- Wheel balancing mandrel
- Wheel dresser
- Base plate for dresser
- Levelling feet
- Operating tool in toolbox

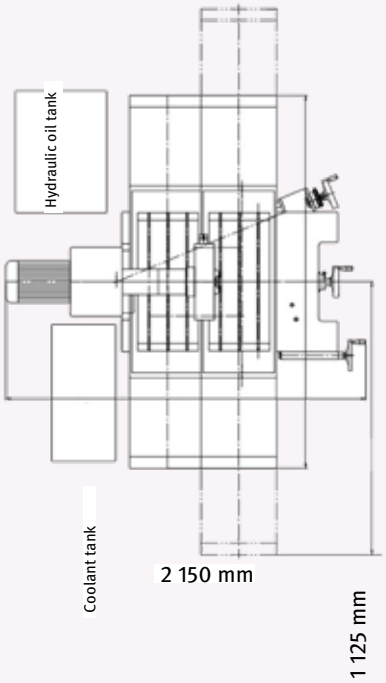
Accessories can be found on page 280.

DIMENSIONS





INSTALLATION PLAN



Solid surface grinding machine from OPTIMUM equipped with digitally controlled automatic vertical feed and digital position display DPA 31Plus

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Electro-magnetic clamping plate for holding the workpiece with automatic degaussing function
- Premium spindle with precision taper roller bearings
- Hardened and ground bed guides
- Turcite-B coated counter guides for excellent wear-resistance and low friction
- External hydraulic power unit with heat exchanger for constant oil temperature
- Machine base made of sturdy, torsion-resistant cast iron for maximum rigidity and stability
- Guideways for longitudinal, transverse and vertical movements are play-free and designed to self-centre as V and flat rails
- Precision ball screws
- Guideways and transport spindle with centralised lubrication system
- All flat guides are finely honed and thus guarantee highest precision of all manual movements
- Safety electrics in 24 V DC
- Generously dimensioned, decoupled hand wheels on all three axes
- Time-controlled centralised lubrication system
- Hydraulic lines according to DIN EN 853
- Grinding accuracy: 0.005 mm
- Corundum grinding wheel 46 grain for all popular metals included in standard scope of delivery
- Pivoting control panel substantially facilitates work
- Two-channel safety electronics
- Grinding table with splash protection enclosure
- Coolant unit with external coolant tank, capacity 100 litres
- Digitally controlled automatic vertical feed with servo motor
- Motorised vertical height adjustment via spindle
- Hydraulic and continuously adjustable longitudinal feed
- EMC filter class
- Substantial energy savings thanks to IE3 motor

IE3 PREMIUM EFFICIENCY



› Hand wheel for moving the Y axis
› Swivelling control panel

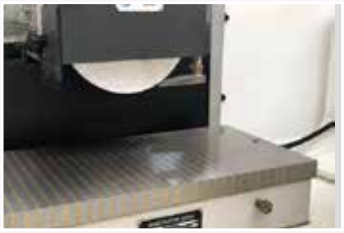
ARGUMENTS,...



Digital position display DPA 31 Plus
› User-friendly membrane keyboard, splash water protected, dazzle free and easy to clean



Dressing unit
› The grinding wheel can be sharpened with a dressing unit directly on the machine



Electromagnetic clamping plate
› Fast and safe workpiece clamping



Touch display
› Clear, easy and self-explanatory to use
› available in the languages: German, Polish, English, Chinese, Dutch, French
› The control system has been updated to avoid calculator operations.
› The workpiece height [H], the grinding height [h] and the resulting removal thickness [d] also appear in the input window.
› The subsequent infeed for coarse and fine grinding is determined automatically based on the number entered.

Technical data and dimension

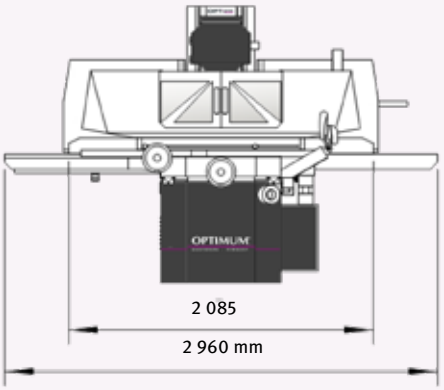
Model	GT 30
Article no.	3111030
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Total connected load	7.5 kW
Grinding disc drive motor	4 kW
Hydraulic motor	2.2 kW
Coolant pump motor	90 W
Surface grinding table	
Surface grinding table length x width	305 x 635 mm
Electro-magnetic clamping plate	300 x 600 mm
T-slot size / number of slots	14 mm / 1
Grinding table load bearing capacity including electromagnetic clamping plate	270 kg
Workpiece size length x width x height	635 x 305 x 405 mm
Spacing spindle centre – grinding table	max. 580 mm
Oscillating speeds of table	5 – 25 m/min
Grinding disc	
Size of grinding disc	350 x 40 x shaft Ø 127 mm
Clearance grinding wheel – grinding table	405 mm
Circumferential speed of grinding wheel	27 m/s
Grinding spindle true running accuracy	0.005 mm
Oscillating travel/travel distance	
Oscillating travel X-axis	765 mm
Z-axis travel distance	340 mm
Y axis	
Continuous transverse feed	0.1 – 8 mm
Fast motion on Y axis	990 mm/min
Scale division on handwheel	0.02 mm
Z axis	
Step widths of fast motion feed	0.005 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05
Fast motion adjustment on the Z axis	480 mm/min
Scale division on handwheel	0.005 mm
Rotational speeds	
Constant spindle speed	1 450 min⁻
Dimensions and weight	
Length x width x height approx.	2 960 x 2 200 x 1 900 mm
Net weight approx.	3 000 kg

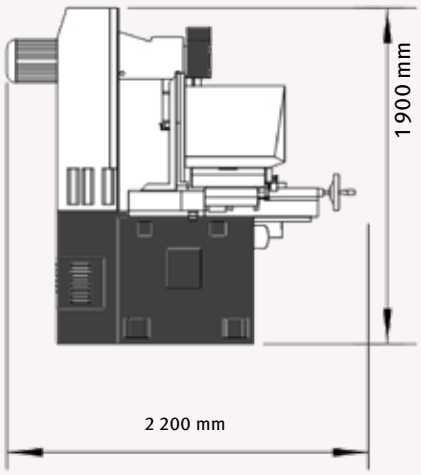
SCOPE OF DELIVERY

- Corundum grinding wheel 46 grain
- Digital position display
- Balancing stand
- Degaussing unit
- Grinding wheel and clamping chuck
- Dresser for grinding wheel (with diamond tip)
- Wheel balancing mandrel
- Wheel dresser
- Base plate for dresser
- Levelling feet
- Operating tool in toolbox

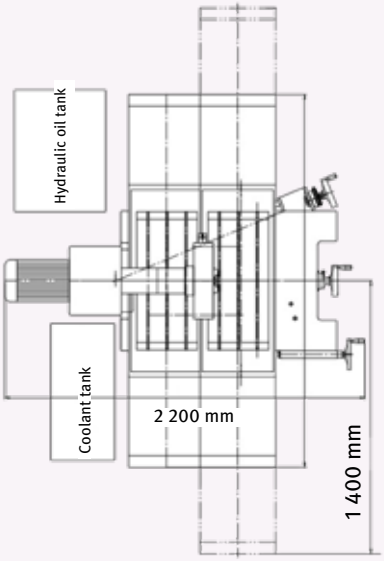
Accessories can be found on page 280.

DIMENSIONS





INSTALLATION PLAN



Solid surface grinding machine from OPTIMUM equipped with digitally controlled automatic vertical feed and digital position display DPA 31 Plus

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Electro-magnetic clamping plate for holding the workpiece with automatic degaussing function
- Premium spindle with precision taper roller bearings
- Hardened and ground bed guides
- Turcite-B coated counter guides for excellent wear-resistance and low friction
- Grinding spindle with premium precision bearings
- External hydraulic power unit with heat exchanger for constant oil temperature
- Machine base made of sturdy, torsion-resistant cast iron for maximum rigidity and stability
- Guideways for longitudinal, transverse and vertical movements are play-free and designed to self-centre as V and flat rails
- Precision ball screws
- Guideways and transport spindle with centralised lubrication system
- All flat guides are finely honed and thus guarantee highest precision of all manual movements
- Safety electrics in 24 V DC
- Generously dimensioned, decoupled hand wheels on all three axes
- Time-controlled centralised lubrication system
- Hydraulic lines according to DIN EN 853
- Grinding accuracy: 0.005 mm
- Corundum grinding wheel 46 grain for all popular metals included in standard scope of delivery
- Pivoting control panel substantially facilitates work
- Two-channel safety electronics
- Grinding table with splash protection enclosure
- Coolant unit with external coolant tank, capacity 100 litres
- Digitally controlled, automatic vertical feed with servo motor
- Motorised vertical height adjustment via spindle
- Hydraulic and continuously adjustable longitudinal feed
- EMC filter class
- Substantial energy savings thanks to IE3 motor

IE3 PREMIUM EFFICIENCY



› Hand wheel for moving the Y axis
› Swivelling control panel

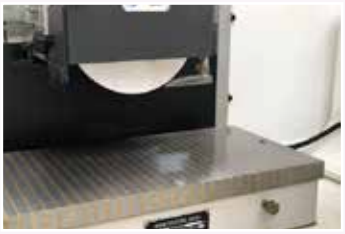
ARGUMENTS,...



Digital position display DPA 31-2
› User-friendly membrane keyboard, splash water protected, dazzle free and easy to clean



Dressing unit
› The grinding wheel can be sharpened with a dressing unit directly on the machine



Electromagnetic clamping plate
› Fast and safe workpiece clamping



Touch display
› Clear, easy and self-explanatory to use
› Innovative and technologically advanced
› available in the languages: – German, Polish, English, Chinese, Dutch, French

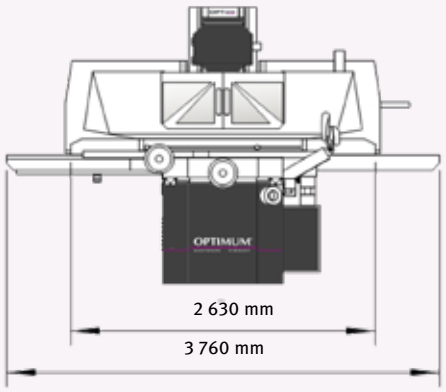
Model	GT 40
Article no.	3111040
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Total connected load	7.5 kW
Grinding disc drive motor	4 kW
Hydraulic motor	2.2 kW
Coolant pump motor	90 W
Surface grinding table	
Surface grinding table length x width	406 x 813 mm
Electro-magnetic clamping plate	400 x 800 mm
T-slot size / number of slots	14 mm / 3
Grinding table load bearing capacity including electromagnetic clamping plate	500 kg
Workpiece size length x width x height	813 x 406 x 405 mm
Spacing spindle centre – grinding table	max. 580 mm
Oscillating speeds of table	5 – 25 m/min
Grinding disc	
Size of grinding disc	350 x 40 x shaft Ø 127 mm
Clearance grinding wheel – grinding table	405 mm
Circumferential speed of grinding wheel	27 m/s
Grinding spindle true running accuracy	0.005 mm
Oscillating travel/travel distance	
Oscillating travel X-axis	830 mm
Z-axis travel distance	420 mm
Y axis	
Continuous transverse feed	0.1 – 8 mm
Fast motion on Y axis	990 mm/min
Scale division on handwheel	0.02 mm
Z axis	
Step widths of fast motion feed	0.005 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05
Fast motion adjustment on the Z axis	480 mm/min
Scale division on handwheel	0.005 mm
Rotational speeds	
Constant spindle speed	1 450 min⁻
Dimensions and weight	
Length x width x height approx.	3 760 x 2 400 x 1 900 mm
Net weight approx.	3 600 kg

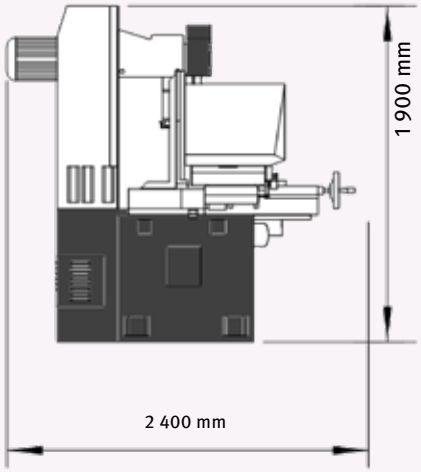
SCOPE OF DELIVERY

- Digital position display
- Coolant system
- External hydraulic unit with oil cooler
- Balancing station and balancing mandrel
- Corundum grinding wheel 46 grain
- Diamond stylus
- Table enclosure as splash guard when in use
- Levelling feet, adjusting screws and lock nuts
- Operating tool
- LED lamp
- Electromagnetic clamping plate
- Degaussing function

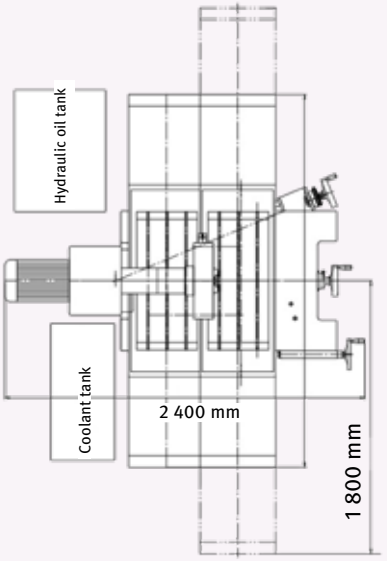
Accessories can be found on page 280.

DIMENSIONS





INSTALLATION PLAN



High-precision cylindrical grinding machine with automatic infeed and digital position indicator DPA 31

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy-duty, single-piece, heavily ribbed and wide machine bed
- Guideways induction-hardened and ground
- Solid headstock with high-precision main spindle mounted on tapered roller bearings impresses with outstanding stability under load
- Smooth running at maximum spindle speed
- All gearwheels are large, hardened and ground
- Manually operated 4-speed countershaft gearbox, high-quality frequency control technology
- Rapid traverse for x and Z axes enables fast positioning of the support and reduces non-productive times
- The spindle head rotates from 0 to 90° for conical grinding operations
- Adjustable overload clutch in the apron case protects the feed mechanism from damage and failure
- The table can be tilted for conical grinding processes – the scale enables precise adjustment to the desired position
- The longitudinal guide of the table and the cross guide of the grinding spindle material are each equipped with V and flat guides
- Swivelling spindle shaft (up to 180°) for inner grinding work.
- Head can be rotated for external or internal grinding

SIEMENS Inverter Sinamics V20





ARGUMENTS,...



Electronic control element
› Clearly arranged and ergonomically positioned electronic control element



Tailstock
› The hydraulic tailstock is characterised by maximum precision and rigidity.
› The foot pedal enables movement



Clamping plate
› The spindle head can be rotated from 0° up to 90° for conical operations.



Table
› For conical grinding between centres, the table can be rotated from +3° to -9°



Switch cabinet
› Clearly organised switch cabinet

Technical data

Model	GC 1 305
Article no.	3121040

Technical data	
Electrical connection power	400 V/3 Ph ~50 Hz
Total connected load	4 kW
Centre height	135 mm
Max. traverse path of the work table	640 mm
Grinding length	500 mm
Grinding diameter without steady rest	8 – 200 mm
Grinding diameter with steady rest	8 – 60 mm
Internal grinding diameter without steady rest	25 – 100 mm
Internal grinding diameter with steady rest	35 – 100 mm
Inner grinding depth	125 mm
Workpiece weight between the tips	max. 50 kg
Swivelling range of the worktable Right / Left	$+3^0$ / -9^0
Stepless table feed in the longitudinal axis	0.1 – 4 m/min
Traverse path per revolution of the handwheel	1 mm
Traverse path per handwheel graduation mark	0.005 mm
Speeds of the working spindle	25 – 380 min^{-1}
Swivelling range of the headstock	0 – 45°
Spindle taper	MT 4
Tailstock taper	MT 4
Spindle sleeve travel	25 mm
Dimensions (LxWxH)	2 250x1 600x1 500 mm
Weight	2 200 kg

SCOPE OF DELIVERY

- Three-jaw chuck for internal grinding with internal clamping jaws and external clamping jaws
- Coolant unit with external coolant tank
- Adjusting discs with adjusting screws
- Mounting flange for grinding disc
- Mounting flange for grinding disc with mounted grinding disc
- Internal grinding body 45x35x10 mm
- Internal grinding body 50x40x16mm
- Grinding rod – holder for internal grinding wheel Ø16 mm
- Grinding rod – holder for internal grinding wheel Ø10 mm
- Dressing device
- Grinding disc balancing stand
- Shaft for balancing the grinding wheel
- 2 pieces of tailstock tips MT 4
- 1 set of workpiece drivers
- Steady rest in open design
- Flat belt for internal grinding spindle drive
- Flat belt for drive workpiece headstock
- Flat belt for external grinding disc drive

ACCESSORIES

Grinding stone puller	Article no.
Curves	3122010
straight	3122015

High-precision cylindrical grinding machine with automatic infeed and digital position indicator DPA 31Plus

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy-duty, single-piece, heavily ribbed and wide machine bed
- Guideways induction-hardened and ground
- Solid headstock with high-precision main spindle mounted on tapered roller bearings impresses with outstanding stability under load
- Smooth running at maximum spindle speed
- All gearwheels are large, hardened and ground
- For conical grinding operations, the table can be rotated – the scale allows for precise adjustment to the desired position
- The longitudinal guide of the table and the cross guide of the wheelhead are each equipped with V and flat guides
- Rotating grinding head for internal machining
- Workpieces, external and internal grinding wheels, as well as hydraulic and coolant pumps, are driven individually
- Accuracy along the entire length of the workpiece is ensured by wide, precision-ground guides, which also allow for heavy workpieces.
- The table can be swivelled in two directions – its movement along the longitudinal axis is controlled either manually via a handwheel or automatically by an adjustable hydraulic feed mechanism
- The robust feed valve enables highly precise control of the Z-axis feed, and at the end of the table's longitudinal movement, the user can set a dwell time
- Rotating grinding head for internal machining
- Workpieces, external and internal grinding wheels, as well as hydraulic and coolant pumps, are driven individually.
- The hydraulic tailstock is characterised by maximum precision and rigidity.
- The foot pedal allows the tailstock to be controlled during loading

SIEMENS Inverter Sinamics V20



ARGUMENTS,...



Control element
› Clearly arranged and ergonomically positioned electronic control element



Control cabinet
› All contactors und relays from Siemens and Schneider
› Control cabinet with a clear layout



table
› For conical grinding between centres, the table can be rotated from +3° to -9°



Technical data

Model	GC 1 810
Article no.	3121050

Technical data	
Electrical connection power	9 kW
Centre height	180 mm
Max. traverse path of the work table	1,090 mm
Grinding length	1,000 mm
Grinding diameter without steady rest	8 – 320 mm
Grinding diameter with steady rest	8 – 60 mm
Internal grinding diameter without steady rest	30 – 100 mm
Internal grinding diameter with steady rest	35 – 100 mm
Inner grinding depth	125 mm
Workpiece weight between the tips	max. 150 kg
Swivelling range of the worktable Right / Left	+/- 3°
Stepless table feed in the longitudinal axis	0.1 – 4 m/min
Traverse path per revolution of the handwheel	1 mm
Traverse path per handwheel graduation mark	0.01 (coarse) / 0.0 025 (fine)
Speeds of the working spindle	25 – 220 min^{-1}
Swivel range of the workpiece headstock	0 – 45°
Spindle taper	MT 4
Tailstock taper	MT 4
Spindle sleeve travel distance	25 mm
Dimensions (LxWxH)	3 610x1 810x1 550 mm
Weight	3 700 kg

ACCESSORIES

Accessories	Article no.
Grinding disc dresser, curves	3122011
Grinding disc dresser, straight	3122016
Magnetic and dirt filter	3122030

SCOPE OF DELIVERY

- Three-jaw chuck, Ø 200 mm
- Grinding disc flange
- Grinding disc
- Grinding disc dresser
- Grinding disc dressing device
- Internal grinding disc
- Internal grinding tool
- Grinding rod Ø10x80mm
- Steady rest in open design
- Levelling wedges, 11 pieces
- Carbide centring tip MT 4
- Balancing shaft
- Key
- V-belt
- High-speed flat ribbon cable
- Driver
- Measuring bridge plate

Accessories for surface grinding machines

Magnetic separator and paper belt filter	Article no.
MPS 1	3112000

› Magnetic separator filters out metal contaminants
› Paper belt filter for versatile and safe filtering of fluids such as grinding fluids, cooling lubricants, etc. during operation.

Filtration (water-based emulsion)	30 ~ 40 µm
Coolant pump flow rate	25 litres per minute
Tank volume	120 litres
Overall dimensions LxWxH approx.	1 290x460x580 mm
Diameter of (non-woven) filter cloth	Ø 200 mm
Width of filter cloth	400 mm
Coolant pump drive power	120 W
Filter cloth feed motor drive power	90 W
Weight approx.	110 kg



Designation	Article no.
Spare filter paper	3112001

› Dimensions LxW approx.: 100 metres x 400 mm



Grinding dust extraction	Article no.
GT 22 / GT 25	3112015
GT 30 / GT 40	3112016

› for grinding work without coolant
› Air volume is 240 m³/hour
› Motor power 370 W 400 V/~50Hz
› Air outlet Ø 70 mm/ Air inlet Ø 60 mm
› Dimensions approx: 570x330x580 mm



Grinding wheel adapter	Article no.
GT 22 / GT 25	3112010
GT 30 / GT 40	3112011

› For fast grinding wheel change



Corundum grinding wheel	Article no.
› Dimensions approx: 200x20x31.75 mm	
46 grain	3112040
60 grain	3112042
80 grain	3112044



Corundum grinding wheel	Article no.
› Dimensions approx: 350x40x127 mm	
46 grain	3112050
60 grain	3112052
80 grain	3112054

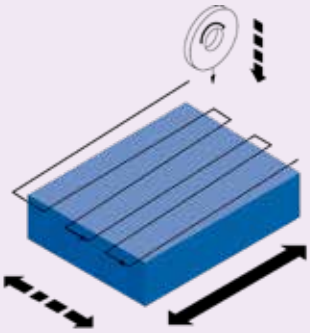


Designation	3112025
Diamond dresser	3112050

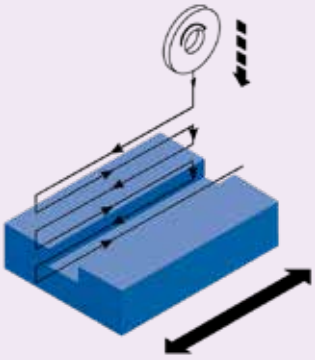
› for the grinding wheel
› 3/8x2“x1.00 carat



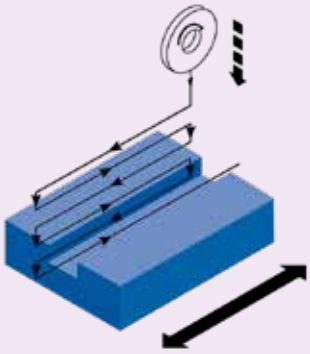
The GT 25, GT 30 and GT 40 series models are equipped with automatic feed control. Various grinding cycles are available as shown in the diagram.
Workpieces can be individually processed by entering the number of feeds with a minimum possible feed of 0.001 mm and by selecting the type of grinding.
The maximum possible feed per sequence step during automatic feed control is 0.01 mm.
A further possibility is to enter the number of grinding passes without grinding wheel feed in order to enable "firing" on the workpiece



Surface grinding with feed at start point



Slot grinding with feed at start point



Slot grinding with feed at start and end point

DRILLING/GRINDING MACHINES

GH 20T | Art. no.: 3111040

Grinding machine
for burins and tools
for various
tool geometries



The handy drill bit grinding device from quantum. For easy regrinding of twist drills from Ø 3 mm to Ø 13 mm

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Easy to operate for inexpensive grinding of twist drill bits with two cutting edges
- Drill bit grinding without prior experience – clean, fast and precise
- Easy to transport
- Easy replacement of the grinding wheel
- Positively-driven sharpening action, thus easy to operate
- Automatic grinding of the tip geometry thanks to cam
- Robust plastic housing with anti-slip base
- Diamond grinding stone with long service life for the perfect grind

DRILL BIT GRINDERS



Fig.: GQ-D13

APPLICATIONS

Three steps to a ground drill bit



Adjust the drill bit
› Twist drills are aligned in projection length and at the correct angle



Sharpening the drill bit
› Through slight rotation from stop to stop



Tipping the drill bit
› Again through slight rotation from stop to stop

SCOPE OF DELIVERY

› Diamond grinding wheel
› Collet chuck holder

Model	GQ-D13
Article no.	3140020
Technical data	
Electrical connection	230 V/1 Ph ~50 Hz
Motor power	80 W
Grinding wheel dimensions	Ø 78 mm
Grinding capacity of drill bits	Ø 3 mm to Ø 13 mm
Infinitely variable speed	4 200 min^{-1}
Dimensions Length x width x height approx.	220 x 200 x 160 mm
Net weight approx.	2.5 kg

ACCESSORIES

Grinding disc	Article no.
Replacement grinding wheel	3140021

› Crystalline cubic boron nitride
› Grain size: 170 – 200
› Field of application: High-speed steel (HSS)



The handy drill bit grinder. Ideal for grinding twist drills

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Easy to operate for inexpensive grinding of twist drill bits with two cutting edges
- Drill bit grinding without prior experience – clean, fast and precise
- Easy to transport
- Grinding stone with long service life for the perfect grind on HSS (high-speed steel) drill bits
- Diamond grinding stone available as option for HM drill bits from accessories programme.
- Fully equipped with ER collets in the machine interior

DRILL BIT GRINDERS



Fig.: GH 10T



Fig.: GH 15T

DRILL BIT



› ... with blunt cutting edges



› ..fast and easy regrinding

SCOPE OF DELIVERY

with complete assortment of collets



GH 10T

› 11 pcs. collets ER 20 sizes Ø 2 to Ø 13 mm



GH 15T

› 6 pcs. collets ER 20 sizes Ø 3 to Ø 8 mm

› 22 pcs. collets ER 40 sizes Ø 8 to Ø 30 mm

Model	GH 10T	GH 15T
Article no.	3100111	3100116
Technical data		
Electrical connection	230 V/1 Ph ~50 Hz	230 V/1 Ph ~50 Hz
Motor power	180 W	450 W
Grinding disc material	Steel disc, coated with cubic crystalline boron nitride	
Collet chuck holder	ER20 DIN 6 499	ER20 and ER 40 DIN 6 499
Infinitely variable speed	5 300 min^{-1}	5 000 min^{-1}
Tip sharpening angle	90° – 1 3⁵⁰	90° – 1 4⁵⁰
Grinding capacity of drill bits	Ø 2 mm to Ø 13 mm	Ø 3 mm to Ø 30 mm
Dimensions LxWxH approx.	310x180x190 mm	450x240x270 mm
Net weight approx.	9.5 kg	33 kg

ACCESSORIES

Designation	Article no.
Replacement grinding disc made of crystalline cubic boron nitride for GH 10T	3100126
Replacement grinding disc made of crystalline cubic boron nitride for GH 15T	3100127
› Grain size: 170 – 200	
› Field of application: High-speed steel (HSS)	
Replacement grinding disc made of diamond for GH 10T	3100131
Replacement grinding disc made of diamond for GH 15T	3100132
› Grain size: 150	
› Field of application: Carbide	

GRINDING MACHINE FOR BURINS AND TOOLS

Versatile burins and tools grinding machine for various tool geometries

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Many swivel and adjustment options suitable for producing engraving tools (cylindrical, centric, conical)
- F or grinding stamps drills, electrodes, lathe tools, centring tips, etc.
- High precision thanks to robust machine body and vibration-free driven precision grinding spindle
- Easy handling and operation
- Indexing head with 24 latching positions
- Adjustable dressing device



Supplied without CEKON plug

ACCESSORIES

Replacement grinding wheel	Article no.
Corundum grain size 80	3100128
› High-speed steel (HSS)	
Diamond grain size 150	3100129
› Carbide	


Fig.: Corundum


Fig.: Diamond

PRODUCT VIDEO YouTube

Model	GH 20T
Article no.	3100125

Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Motor power	370 W
Grinding wheel speed, diamond	5 000 min^{-1}
Max. grinding speed	35 m/s
Motor speed	2 750 min^{-1}
Tool holder travel distance	140 mm
Tool holder fine adjustment	18 mm
Longitudinal fine adjustment	6 mm
vertical/rear side	0° – 40°
horizontal/conical grinding	0° – 1 8°°
Negative angles	0° – 52°
Latching setting angle of rotation	22* x 15° 1 8°°
Clamping range	Ø 1 – 12 mm
Clamping jaw type	385E (5C), DIN 6 341
Length x width x height approx.	350 x 450 x 340 mm
Net weight approx.	45 kg

* Two latching positions occupied for sharpening drill bits

ARGUMENTS,...



› Collets 385E (5C) DIN 6 341 Ø 37.5 mm; L=89 mm; 20°
› Sizes Ø 4/6/8/10/12 mm



› Corundum cup grinding wheel Ø 100 x 51 x Ø 20 mm
› Diamond Cup grinding wheel Ø 100 x 51 x Ø 20 mm
(already fitted on delivery)



› Device for sharpening lathe tools



› Device for sharpening end mills



› Device for sharpening twist drill bits



› Operating tool

GRINDING MACHINES AND VARIO DRIVES

GB 120SD | Art. no.: **3101200**

Belt grinder
Possible applications on smallest space



GU 30 | Art. no.: **3101530**

Bench grinders
Long service life and smooth running



Belt grinding machine offers the user a maximum of application possibilities on a minimal footprint

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

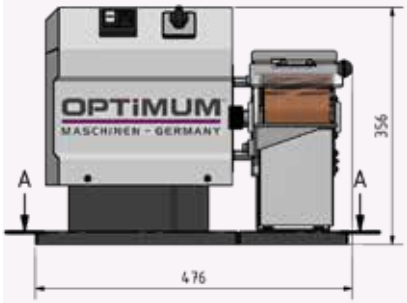
- Heavy, durable industrial design with maintenance-free motor
- Long service life and quiet action thanks to balanced rotor with quality ball bearings
- Sturdy and stable machine body
- Tray for safety glasses

BELT GRINDER





DIMENSIONS



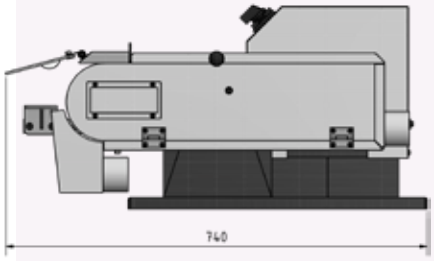




Fig. shows sample application

SCOPE OF DELIVERY

› Grinding belt

Model	GB 100S
Article no.	3101660
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Motor power	1.3 / 1.8 kW
Grinding belt dimensions (W x L)	100 x 1 190 mm
Speed	1 450 / 2 850 min^{-1}
Circumferential speed of grinding belt	19.4 m/s at 2 850 min^{-1}
Usable contact surface for grinding at top on grinding belt	345 x 100 mm
Nominal width of suction connection	Ø 60 mm
Dimensions Length x width x height approx.	740 x 476 x 356 mm
Net weight approx.	47 kg

ACCESSORIES

Designation	Article no.
Machine mobile base GU 4	3107119
› Without extraction unit	
Machine mobile base GU 5	3107114
› Cyclone extraction	
› Noise-insulated	
Suction pipes (2 pcs.)	3107116
› variable length 300 – 1 000 mm	
Mounting plate	3107116
› Absolutely essential when mounting the GB 100S belt grinder on the GU 4 /4H machine base	
For information on the bases, see page 306	
Grinding belts grit 40 (5 pcs.)	3357637
Grinding belts grit 60 (5 pcs.)	3357638
Grinding belts grit 80 (5 pcs.)	3357639
Grinding belts grit 120 (5 pcs.)	3357640

Belt grinder offers users a wide range of possible applications

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, durable industrial design with maintenance-free motor
- Two-stage motor
- Simple belt adjustment
- Stable working conditions
- Long service life and quiet action thanks to balanced rotor with quality ball bearings
- Tray for safety glasses
- Motor protection switch

BELT GRINDER



Prepared for GU 2 machine base with cyclone extraction unit

GB 120SD Including base

ARGUMENTS,...

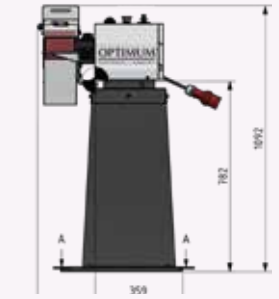


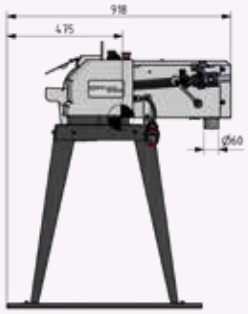
› Support surface 90° can be swivelled upwards
› Swivelling possible by loosening just one screw



› Suction connection on the underside and rear, outer diameter 60 mm

DIMENSIONS





SCOPE OF DELIVERY

› Grinding belt

Model	GB 120SD
Article no.	3321200

Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Motor power	1.5 / 2.2 kW
Grinding belt dimensions (W x L)	120 x 1 500 mm
Usable contact surface for grinding at top	360 x 130 mm
Circumferential speed of grinding belt	29.8 m/s at 2 850 min.$^{-1}$
Grinding attachment swivel range	0 – 45°
Nominal width of suction connection	Ø 50 mm
Dimensions Length x width x height approx.	918 x 594 x 1 092 mm
Net weight approx.	77.5 kg

ACCESSORIES

Designation	Article no.
GU 2 – Machine chassis with cyclone extraction unit	3107115
For information on the machine bases, see page 303	
Grinding belts grit 40 (5 pcs.)	3357691
Grinding belts grit 60 (5 pcs.)	3357692
Grinding belts grit 80 (5 pcs.)	3357693
Grinding belts grit 120 (5 pcs.)	3357694
Grinding belts grit 180 (5 pcs.)	3357695
Grinding belts grit 240 (5 pcs.)	3357696

BELT GRINDER

Belt grinders in heavy and robust industrial **design** for roughing, finishing and profile grinding of various materials in continuous operation

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Time-saving deburring of edges and weld polishing
- Sturdy and vibration-free design
- Powerful motor
- Grinding table can be tilted 25° forwards and 15° backwards
- Continuously adjustable top stop supports fast and convenient initial grinding of workpieces
- Large surface grinding surface
- Additional safety device
- Front extraction duct for attaching an extraction unit
- Spark guard
- Workpiece support allows grinding at the required angle
- One grinding belt included in standard scope of delivery



Fig.: GBS 75

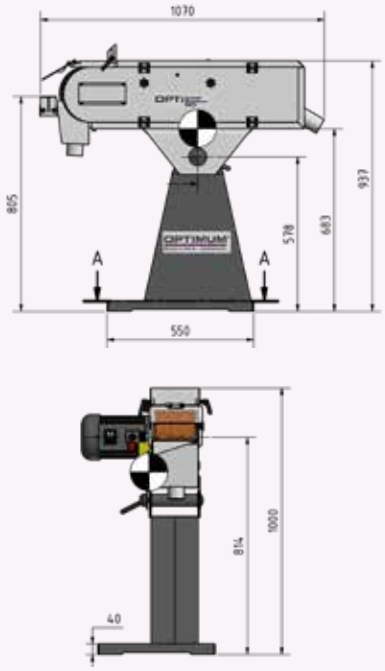
Fig.: GBS 150

ARGUMENTS,...



Surface grinding surface
› Open throughout and to rear
› Also perfectly suited for machining longer workpieces

DIMENSIONS



SCOPE OF DELIVERY

› Grinding belt 60 grain
› Allen key

Model	GBS 75	GBS 150
Article no.	3321155	3321160
Technical data		
Electrical connection	400 V/3 Ph ~50 Hz	400 V/3 Ph ~50 Hz
Motor power	1.5 / 2.2 kW	1.5 / 2.2 kW
Grinding belt dimensions	75 x 2 000 mm	150 x 2 000 mm
Surface grinding surface	98 x 60 mm	173 x 60 mm
Speed	1 450 / 2 850 min^{-1}	1 450 / 2 850 min^{-1}
Circumferential speed of grinding belt	29.4 m/s at 2 850 min^{-1}	29.4 m/s at 2 850 min^{-1}
Nominal outside width of suction connection	Ø 60 mm	Ø 60 mm
Dimensions LxWxH approx.	430 x 1 070 x 1 000 mm	500 x 1 070 x 1 000 mm
Height: Bottom pivot bearing	1 035 mm	1 065 mm
Height: Top pivot bearing	1 090 mm	1 065 mm
Net weight approx.	72 kg	87.5 kg

ACCESSORIES

GBS 75*	Article no.
Grinding belt grain size 40 (5 pcs.)	3357642
Grinding belt grain size 60 (5 pcs.)	3357644
Grinding belt grain size 80 (5 pcs.)	3357646
Grinding belt grain size 120 (5 pcs.)	3357648
Grinding belt grain size 180 (5 pcs.)	3357649
Grinding belt grain size 240 (5 pcs.)	3357650

GBS 150	Article no.
Grinding belt grain size 40 (5 pcs.)	3357672
Grinding belt grain size 60 (5 pcs.)	3357674
Grinding belt grain size 80 (5 pcs.)	3357676
Grinding belt grain size 120 (5 pcs.)	3357678
Grinding belt grain size 180 (5 pcs.)	3357679
Grinding belt grain size 240 (5 pcs.)	3357680

Machine base with cyclone extraction see page 303

Disc grinding machine for processing surfaces, edges and curves

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, durable industrial design with maintenance-free motor
- Long service life and quiet action thanks to balanced rotor with quality ball bearings
- Versatile areas of application:
- For roughing, fine and moulding grinding work
- Sturdy and stable machine body
- Balanced aluminium grinding wheel for smooth action
- Powerful motor
- Delivered with grinding sheet
- Tray for safety glasses

DISK GRINDER





Fig.: with optional GU 1 base with extraction unit.
Informations see page 307

ARGUMENTS,...

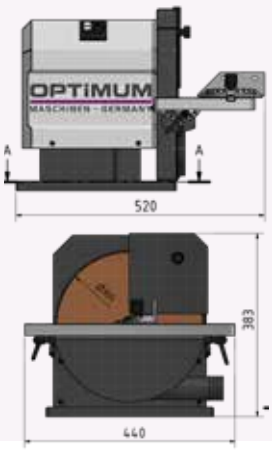


Mitre stop
› Mitre stop can be swivelled through 180°
› Grinding table can be tilted up to ± 45°



Velcro fastener pad
› Good grinding wheel adhesion, easy replacement

DIMENSIONS



Model	GB 305D
Article no.	3101675

Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Motor power	1.1 kW
Grinding wheel dimensions	Ø 305 mm
Speed	1 450 min^{-1}
Table support	440 x 210 mm
Adjustment of angle stop	1 8°°
Grinding attachment swivel range	0 – 45°
Nominal width of suction connection	Ø 50 mm
Dimensions Length x width x height approx.	560 x 440 x 380 mm
Net weight approx.	25 kg

ACCESSORIES

Designation	Article no.
Machine mobile base GU 1	3107109
› 400 V with extraction unit	
Suction pipes (2 pcs.)	3107111
› variable length 300 – 1 000 mm	
Machine mobile base GU 4	3107119
› Without extraction unit	
For information on the machine bases, see page 307	
Grinding sheets grit 40 (5 pcs.)	3357854
Grinding sheets grit 60 (5 pcs.)	3357856
Grinding sheets grit 80 (5 pcs.)	3357858
Grinding sheets grit 100 (5 pcs.)	3357860
Grinding sheets grit 120 (5 pcs.)	3357862
Grinding sheets grit 150 (5 pcs.)	3357865
Grinding sheets grit 180 (5 pcs.)	3357866
Grinding sheets grit 240 (5 pcs.)	3357867

Disc grinder for machining metal surfaces

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Versatile areas of application:
- For roughing, fine and moulding grinding work
- Sturdy and stable machine body
- Balanced aluminium grinding wheel for smooth action
- Powerful motor
- Delivered with grinding sheet bonded onto grinding wheel

DISK GRINDER



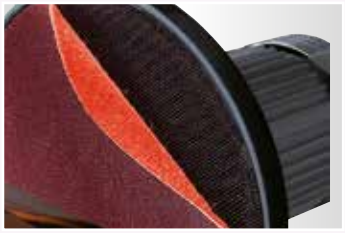
ARGUMENTS,...



Suction port
› Factory standard extraction duct with two diameters for attaching an extraction unit
› Outside nominal width ± Ø 30/ Ø 38 mm



Mitre stop
› Standard mitre fence can be swivelled up to ± 60°
› Grinding table can be tilted up to ± 45°



Velcro fastener pad
› Optional accessory (Article no.: 3357801). Good grinding wheel adhesion, easy replacement

SCOPE OF DELIVERY

› Adjustable angle stop
› Grinding sheet
› Velcro fastener pad

Model	TS 305
Article no.	3310305
Technical data	
Electrical connection	230 V/1 Ph ~50 Hz
Motor power	900 W
Grinding disc dimension	Ø 305 mm
Speed	1 420 min^{-1}
Table support	155 x 440 mm
Adjustment of angle stop	± 60°
Tiltable grinding table	± 45°
Dimensions L x W x H approx.	440 x 445 x 365 mm
Net weight approx.	30 kg

ACCESSORIES

Designation	Article no.
Velcro fastener pad	3357801
Grinding sheets grain size 40 (5 pcs.)	3357854
Grinding sheets grain size 60 (5 pcs.)	3357856
Grinding sheets grain size 80 (5 pcs.)	3357858
Grinding sheets grain size 100 (5 pcs.)	3357860
Grinding sheets grain size 120 (5 pcs.)	3357862
Grinding sheets grain size 150 (5 pcs.)	3357865
Grinding sheets grain size 180 (5 pcs.)	3357866
Grinding sheets grain size 240 (5 pcs.)	3357867
› Grinding sheets with Velcro fastenings	



Bench grinders from OPTIMUM. A quality product for trades and industry.

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, durable industrial design with maintenance-free motor
- Housing made of strand cast aluminium
- One-piece housing prevents misalignment
- Long service life and quiet action thanks to balanced rotor with quality ball bearings
- Sturdy adjustable workpiece support
- Extraction duct for attaching an extraction unit
- Vibration-damping rubber feet
- Coarse and fine grinding disc (K36/K80) included in standard scope of delivery
- GU 25 and GU 30 with stand plate

BENCH GRINDERS

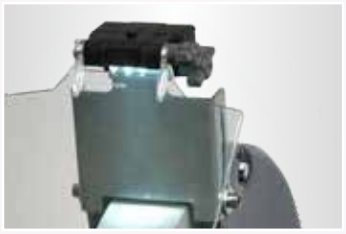


Fig.: GU 30

ARGUMENTS,...



Spark guard
› on each grinding disc
› reduces flying sparks
› made from shatterproof material
› close-fitting and easily adjustable
› Magnifying glass in the protective screen



LED lighting
› on both sides

OPTION:
Vario drive with SIEMENS Iinverter SINAMICS V20 see from page 298

SCOPE OF DELIVERY

› 2 pcs. grain size 36 and grain size 80 grinding discs
› Diamond grinding wheel puller

ACCESSORIES

Machine bases can be found on page 304 onwards

Grinding discs can be found on page 311

Model	GU 15	GU 18	GU 20	GU 25	GU 30
Article no. (230 V)	3101505	3101510	3101515	-	-
Article no. (400 V)	-	-	3101520	3101525	3101530
Technical data					
Electricalconnection	230 V/1 Ph ~50 Hz	230 V/1 Ph ~50 Hz	230 V / 400 V ~50 Hz	400 V/3 Ph ~50 Hz	400 V/3 Ph ~50 Hz
Motor power S6	450 W	450 W	600 W	1.5 kW	2.2 kW
Grinding wheel dimensions	Ø 150 x 20 mm	Ø 175 x 25 mm	Ø 200 x 30 mm	Ø 250 x 40 mm	Ø 300 x 50 mm
Shaft diameter	Ø 16 mm	Ø 32 mm	Ø 32 mm	Ø 32 mm	Ø 25 mm
Grinding speed	22 m/s	26 m/s	30 m/s	37 m/s	22 m/s
Rotational speeds	2 850 min^{-1}	2 850 min^{-1}	2 850 min^{-1}	2 850 min^{-1}	1 450 min^{-1}
Nominal width of suction connection	Ø 34 mm	Ø 34 mm	Ø 34 mm	Ø 34 mm	Ø 35 / Ø 50 mm
Dimensions LxWxH approx.	389 x 205 x 265 mm	389 x 235 x 280 mm	495 x 260 x 330 mm	471 x 320 x 365 mm	678 x 422 x 525 mm
Net weight approx.	11 kg	14 kg	19 kg	33 kg	65 kg

PREMIUM line

PREMIUM bench grinders
GZ – DD Models with base and integrated suction system

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy industrial grinding machine absorbs the vibrations, which are low anyway, thanks to its high deadweight
- Also suitable for strong thrust force on the grinding wheels
- Maintenance-free, durable, induction motor with smooth action
- Cast iron housing
- Spark guard
- Sturdy, adjustable workpiece support
- Grinding wheels not included in standard scope of delivery

GZ-D models:

- without chassis (chassis available as option)



GZ-DD models:

› Integrated extraction system with aluminium fan and self-cleaning impellers
› Dust bag made of self-extinguishing woven material
› Sturdy base with water tray

BENCH GRINDERS



Fig.: GZ 25DD with optional grinding disc

OPTION:
Vario drive with SIEMENS inverter SINAMICS V20
see page 299 onwards



ACCESSORIES

Designation	Article no.
Machine bases without extraction for GZ 20D	3091120
Machine bases without extraction for GZ 20D	3091122
Electronic brake	3091099
› Controlled braking	
› Including factory assembly	



DO NOT FORGET:
Grinding discs not included in the scope of delivery.
These can be found on page 311

Model	GZ 20D	GZ 25D	GZ 30D
Article no.	3091010	3091015	3091020
Model	**GZ 20DD**	**GZ 25DD**	**GZ 30DD**
Article no.	3091040	3091045	3091050
Technical data			
Electrical connection	400 V/3 Ph ~50 Hz	400 V/3 Ph ~50 Hz	400 V/3 Ph ~50 Hz
Motor power	750 W	1.1 kW	1.8 kW
Grinding wheel dimensions	Ø 200 x 25 mm	Ø 250 x 30 mm	Ø 300 x 35 mm
Shaft diameter	Ø 20 mm	Ø 25 mm	Ø 30 mm
Rotational speeds	2 800 min^{-1}	1 400 min^{-1}	1 400 min^{-1}
Dimensions LxWxH GZ models approx.	550 x 290 x 360 mm	670 x 340 x 410 mm	810 x 420 x 560 mm
Dimensions LxWxH GZ-DD models approx.	800 x 710 x 1 120 mm	800 x 710 x 1 300 mm	810 x 1 200 x 1 320 mm
Net weight GZ/GZ-DD models approx.	25 kg / 63.7 kg	44.8 kg / 91 kg	64.5 kg / 124 kg

PREMIUM Industrial – grinder, extremely robust and stable

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Suitable for intensive industrial use
- Heavy industrial grinding machine absorbs the vibrations, which are low anyway, thanks to its high deadweight
- Also suitable for strong thrust force on the grinding wheels
- Maintenance-free, durable, induction motor with smooth action
- Cast iron housing
- Spark guard
- Stable, displaceable workpiece support
- Grinding wheels not included in standard scope of delivery

BENCH GRINDERS



Fig.: Showing optional grinding discs and GU4-H machine base

OPTION:
Vario drive with SIEMENS Inverter SINAMICS V20
see page 301 onwards

ARGUMENTS,...



Material support
› Displaceable
› Sturdy



Extraction port
› Nominal width 90 mm



Control unit
› with emergency stop button



Model	GZ40D
Article no.	3091025
Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Motor power	4.4 kW
Grinding wheel dimensions	Ø 400x50 mm
Shaft diameter	Ø 40 mm
Rotational speeds	1 400 min^{-1}
Nominal diameter of the extraction connection	90 mm
Dimensions LxWxH approx.	980x600x660 mm
Net weight approx.	168 kg

ACCESSORIES

DO NOT FORGET:
Grinding discs not included in the scope of delivery. You will find these on page 306

Designation	Article no.
Machine base GU 4-H	3107123
GU 5-H machine base with cyclone extraction	3107124
Suction pipes for GU 5-H 2 flexible pipes, Ø 60 mm	3107116

Informations see page 311

Functional universal grinding machines with grinding attachment

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Robust and sturdy universal grinding machines with grinding belt and grinding wheel for a variety of materials
- Heavy, durable industrial design with maintenance-free motor
- Housing made of strand cast aluminium
- One-piece housing prevents misalignment
- Large, heavy fastening flanges ensure excellent disc true running accuracy
- Grinding attachment with graphite support; prevents friction and heat
- Stop allows for fast and convenient initial grinding of the workpieces
- Extraction duct for attaching an extraction unit
- Belt run adjustment without tools – adjustable using a single star knob
- Universal corundum grinding wheel and grinding belt included in standard scope of delivery
- GU 25S and GU 30S with base plate

UNIVERSAL GRINDERS



Fig.: GU 30S

OPTION:
Vario drive with SIEMENS Inverter SINAMICS V20
see page 298 onwards

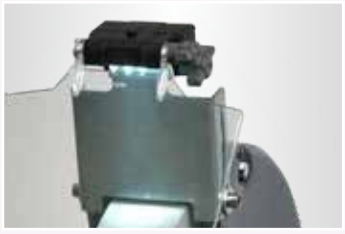
ARGUMENTS,...



Grinding attachment
› can be adjusted in a swivelling range of 0°-90° via the flange



Grinding disc
› Sturdy workpiece support surface
› Adjustable spark protection



LED lighting

Model	GU 20S	GU 25S	GU 30S
Article no. (230 V)	3101570	-	-
Article no. (400 V)	3101575	3101580	3101585
Technical data			
Electrical connection	230 V or 400V	400 V/3 Ph ~50 Hz	400 V/3 Ph ~50 Hz
Motor power S6	600 W	1.5 KW	2.2 kW
Grinding wheel dimensions	Ø 200x30 mm	Ø 250x40 mm	Ø 300x50 mm
Shaft diameter	Ø 32 mm	Ø 32 mm	Ø 25 mm
Grinding belt dimensions	75x762 mm	75x1 016 mm	100x1 190 mm
Nominal width of suction connection	Ø 32 mm	Ø 32 mm	Ø 35 / Ø 50 mm
Grinding speed Grinding belt	16 m/s	16 m/s	10 m/s
Grinding speed of grinding disc	30 m/s	37 m/s	27 m/s
Dimensions LxWxH approx.	501x261x459 mm	514x319x596 mm	767x420x527 mm
Net weight approx.	20.7 kg	31.5 kg	64.5 kg

SCOPE OF DELIVERY

› Grinding wheel normal corundum fine 80 grain
› Grinding belt normal corundum fine 80 grain

ACCESSORIES

Machine bases can be found on page 306 onwards

Grinding discs can be found on page 311

Effective brush deburrer for the trade and for small batches

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, durable industrial design with maintenance-free motor
- Long service life and quiet action thanks to balanced rotor with quality ball bearings
- For deburring pipes, sections and flat workpieces made of metal
- Tray for safety glasses
- Sturdy and stable machine body
- Safe and clean working with the optional GU 1 machine base with cyclone dust extraction

BRUSH DEBURRER





Fig.: Showing optional GU1 machine base

ARGUMENTS,...

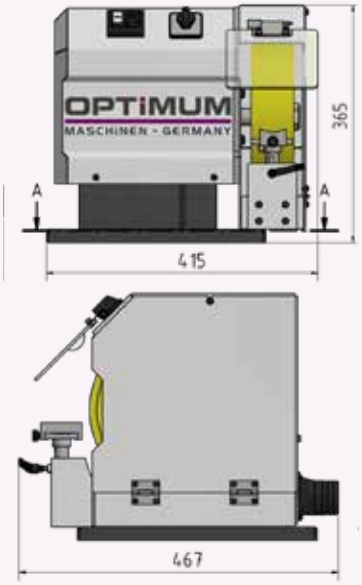


Material support
› Height-adjustable
› Holder also for round material



Extraction duct
› The suction connection has an external diameter of 50 mm.

DIMENSIONS



Model	GB 250B
Article no.	3101670

Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Motor power	1.3 / 1.8 kW
Round brush dimensions	Ø 250 x 40 mm
Shaft diameter	Ø 25 mm
Peripheral speed of the round brush	37.3 m/s at 2 850 min^{-1}
Rotational speeds	1 450/ 2 850 min^{-1}
Nominal width of suction connection	Ø 50 mm
Dimensions LxWxH approx.	415 x 467 x 356 mm
Net weight approx.	36 kg

SCOPE OF DELIVERY

› Round brush, wire thickness 0.35 mm

ACCESSORIES

Designation	Article no.
Base unit GU 1 – 400 V with extraction system	3107109
Base unit **GU 4**	3107119
For information on the bases, see page 311	
2 flexible extraction pipes	3107111
Round brush 250 x 32-37mm steel wire with 25mm adapter	3098070
Round brush 250 x 42-47 mm – 0.2 mm with 25 mm adapter	3107451
Round brush 250 x 42-47 mm – 0.3 mm with 25 mm adapter	3107452

Combined grinding machines by Optimum for workshops

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Durable design with maintenance-free motor
- Housing made of strand cast aluminium
- One-piece housing prevents misalignment
- Large, heavy fastening flanges ensure excellent disc true running accuracy
- Grinding attachment with graphite support – prevents friction and heat
- Stop allows for fast and convenient initial grinding of the workpieces
- Swivelling brush protection housing
- Extraction duct for attaching an extraction unit
- One grinding wheel and one multi-purpose brush included in scope of delivery
- GU 25B with base plate

COMBINED GRINDERS

OPTION:
Vario drive with SIEMENS Inverter SINAMICS V20
see page 298 onwards



Fig. GU 25B

ARGUMENTS,...



Material support
› Mobile and sturdy



Multi-purpose brush
› in swivelling brush housing
› High tensile steel wire
› with extraction duct



Spark guard
› on each grinding disc reduces sparks and is made of shatter-proof material
› close-fitting and easily adjustable

LED lighting

SCOPE OF DELIVERY

› Grinding wheel – normal corundum coarse 36 grain
› Multi-purpose wire brush, wire thickness 0.3 mm

ACCESSORIES

You will find bases starting on page 306.

Grinding discs and multi-purpose wire brushes can be found on page 311.

Model	GU 15B	GU 18B	GU 20B	GU 25B
Article no. (230 V)	3101600	3101605	3101610	-
Article no. (400 V)	-	-	3101615	3101620
Technical data				
Electrical connection	230 V/1 Ph ~50 Hz	230 V/1 Ph ~50 Hz	230 V or 400 V	400 V/3 Ph ~50 Hz
Motor power S6	450 W	450 W	600 W	1.5 kW
Grinding wheel dimensions	Ø 150 x 20 mm	Ø 175 x 25 mm	Ø 200 x 30 mm	Ø 250 x 40 mm
Dimension of multi-purpose wire brush	Ø 150 x 20 mm	Ø 175 x 25 mm	Ø 200 x 25 mm	Ø 250 x 30 mm
Shaft diameter	Ø 16 mm	Ø 32 mm	Ø 32 mm	Ø 32 mm
Rotational speeds	2 850 min^{-1}	2 850 min^{-1}	2 850 min^{-1}	2 850 min^{-1}
Nominal diameter of the extraction connection	Ø 34 – 35 mm	Ø 34 – 35 mm	Ø 34 – 35 mm	Ø 34 – 35 mm
Dimensions Length x width x height approx.	428 x 305 x 230 mm	428 x 305 x 244 mm	517 x 345 x 282 mm	526 x 380 x 319 mm
Net weight approx.	10.7 kg	12.3 kg	18.5 kg	32.5 kg

PREMIUM Combined grinding machines for workshops, steel construction companies. GZ – CD Models with chassis and integrated extraction system

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy industrial combined grinding machine absorbs the vibrations, which are low anyway, thanks to its high deadweight
- Also suitable for strong thrust force on the grinding wheel and brush
- Maintenance-free, durable, induction motor with smooth action
- Cast iron housing
- Sturdy, adjustable workpiece support

COMBINED GRINDERS

OPTION:
Vario drive with SIEMENS Inverter SINAMICS V20
see page 299 onwards



Fig.: GZ 20C with optional grinding disc and brush

ARGUMENTS,...



Fig.: GZ 20CD with optional grinding disc and brush

GZ – CD models with base unit and integrated suction system
› Made in Italy
› Perfectly aligned to avoid noise and vibrations
› self-cleaning wings

Dust collection bag
› For a clean workplace
› More safety – collects glowing chips in a sack



Material support
› Mobile and sturdy

Model	GZ 20C	GZ 25C
Article no.	3091070	3091075
Model	**GZ 20CD**	**GZ 25CD**
Article no.	3091080	3091085

Technical data		
Electrical connection	400 V/3 Ph ~50 Hz	400 V/3 Ph ~50 Hz
Motor power	750 W	1.1 kW
Grinding wheel dimensions	Ø 200 x 25 mm	Ø 250 x 30 mm
Round brush dimensions	Ø 200 x 25 mm	Ø 250 x 25 mm
Shaft diameter	Ø 20 mm	Ø 25 mm
Rotational speeds	2 800 min^{-1}	1 400 min^{-1}
Dimensions LxWxH GZ C approx.	650 x 300 x 360 mm	850 x 340 x 410 mm
Dimensions LxWxH GZ CD approx.	900 x 710 x 1 300 mm	850 x 1 200 x 1 300 mm
Net weight GZ- C / GZ-CD approx.	26.5 kg / 67 kg	48 kg / 94 kg

ACCESSORIES

DO NOT FORGET:
Grinding disc and brush not included. These can be found on page 311

Designation	Article no.
Electronic brake	3091099
› Controlled braking	
› Including factory assembly	



Machine base without extraction GZ 20D	3091120
Machine base without extraction GZ 25D	3091122

Informations see page 303

PREMIUM combination grinder – a powerful industrial grinder with multi-purpose brush and grinding disc

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Suitable for intensive industrial use
- Heavy-duty combined grinding machine absorbs the vibrations thanks to its high deadweight
- Also suitable for strong thrust force on the grinding wheel and brush
- Maintenance-free, durable, induction motor with smooth action
- Cast iron housing
- Swivelling brush protection housing with extraction ducts
- Sturdy, adjustable workpiece support

COMBINED GRINDERS



Fig.: Showing optional grinding wheel, brush, and GU4-H chassis

OPTION:
Vario drive with SIEMENS Inverter SINAMICS V20
see page 301 onwards

ARGUMENTS,...



Material support
› Displaceable
› Sturdy



Multi-purpose brush
› with swivelling brush housing
› Optional multi-purpose brush made of high-strength steel wire



Speed
› constant speed, also under load

Model	GZ 40C
Article no.	3091079

Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Motor power	4.4 kW
Grinding wheel dimensions	Ø 400 x 50 mm
Grinding disc shaft diameter	Ø 40 mm
Round brush dimensions	Ø 350 x 35 mm
Round brush shaft diameter	Ø 25 mm
Rotational speeds	1 400 min^{-1}
Nominal diameter of the extraction connection	Ø 90 mm
Dimensions Length x width x height approx.	1 200 x 660 x 580 mm
Net weight approx.	144 kg

ACCESSORIES

Designation	Article no.
Round brush 350 x 50-55 x 25 mm – 0.2 mm high-tensile steel wire	3098092
Round brush 350 x 55-60 x 25 mm – 0.35 mm high-tensile steel wire	3098093
Grinding disc grain size 36	3098150
Grinding disc grain size 60	3098152
Grinding disc grain size 80	3098154
Machine base GU 4-H	3107123
Machine base GU 5-H with cyclone extraction	3107124
Suction pipes for GU 5-H 2 pieces, flexible, Ø 60 mm	3107116

DO NOT FORGET:
Grinding disc and multi-purpose brush not included in the scope of delivery. These can be found on page 311

Polishing machine for fine surface finishing on metal workpieces

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Heavy, durable industrial design with maintenance-free motor
- Housing made of strand cast aluminium
- Long service life and quiet action thanks to balanced rotor with quality ball bearings
- Two wide polishing discs included in standard scope of delivery
- Vibration-damping rubber feet
- without extraction hood – can be ordered separately as an option

POLISHING MACHINE

OPTION:
Vario drive with SIEMENS Inverter SINAMICS V20
see page 298 onwards



Fig.: GU 20P



Fig.: Vario conversion
Machine base with view window (not available)

ACCESSORIES

› 2 buffing discs

Model	GU 20P	GU 25P
Article no. (230 V)	3101540	-
Article no. (400 V)	3101545	3101550
Technical data		
Electrical connection	230 V or 400 V	400 V/3 Ph ~50 Hz
Motor power	600 W	1.5 kW
Polishing disc dimensions	Ø 200x20 mm	Ø 250x25 mm
Shaft diameter	Ø 16 mm	Ø 20 mm
Polishing speed	30 m/s	37 m/s
Speed	2 850 min^{-1}	2 850 min^{-1}
Dimensions LxWxH approx.	545x200x262 mm	555x250x296 mm
Net weight approx.	10.6 kg	17.4 kg

ACCESSORIES

Designation	Article no.
GU 3 machine base without extraction	3107118
GU 1 machine base (230 V)	3107110
GU 1 machine base (400 V)	3107109
› Cyclone extraction unit with two motors	
Suction pipes (2 pcs.)	3107111
Extraction hood set for GU 20P	3107060
Extraction hood set for GU 25P	3107061
› 2-part (left and right)	
› For use of an extraction unit	



When using suction units, it is necessary to clean the suction unit more frequently when starting with new discs, as large loose pieces of fabric may come loose.

Polishing machine for fine surface finishing on metal workpieces

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

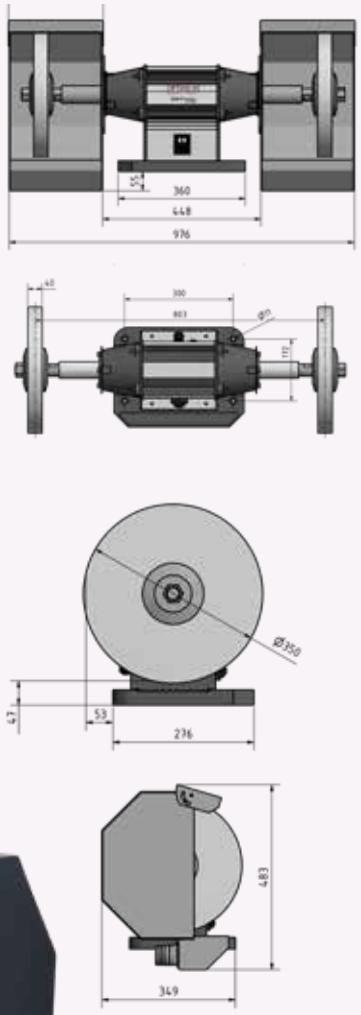
- Heavy, durable industrial design with maintenance-free motor
- Housing made of strand cast aluminium
- Long service life and quiet action thanks to balanced rotor with quality ball bearings
- Emergency stop button
- Two wide polishing discs included in standard scope of delivery
- Vibration-damping rubber feet, base plate
- Extraction hood for use of an extraction unit

POLISHING MACHINE



OPTION:
Vario drive with SIEMENS Inverter SINAMICS V20
see page 300 onwards

DIMENSIONS



Model	GU 35P
Article no.	3101560

Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Motor power	2.2 kW
Polishing disc dimensions	Ø 350 x 30 mm
Shaft diameter	Ø 25 mm
Speed	1 450 min^{-1}
Polishing speed	27 m/s
Dimensions Length x width x height approx.	1 017 x 420 x 527 mm
Net weight approx.	64.1 kg

SCOPE OF DELIVERY

› 2 buffing discs

ACCESSORIES

Designation	Article no.
Machine mobile bafe GU 4	3107119
GU 5 machine base with cyclone extraction system	3107114
Suction pipes for GU 5 2 pieces, flexible, Ø 60 mm	3107116

PREMIUM Polishing machine – a powerful industrial machine

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Suitable for intensive industrial use
- Heavy-duty buffing grinder absorbs the vibrations (which are low anyway) thanks to its high deadweight
- Maintenance-free, durable, induction motor with smooth action
- Cast iron housing
- Polishing discs not included in standard scope of supply

OPTION:
Vario drive with SIEMENS Inverter SINAMICS V20
see page 301 onwards

POLISHING MACHINE



Fig: with optional polishing discs and GU4-H machine base

ARGUMENTS,...



Safety enclosure
› swivelling
› Connector for connecting a suction device



Control unit
› with emergency stop button



Housing
› Made of cast iron
› Very high damping capacity

DO NOT FORGET:
Polishing discs not included

Model	GZ 40P
Article no.	3091130

Technical data	
Electrical connection	400 V/3 Ph ~50 Hz
Motor power	4.4 kW
Polishing disc dimensions	350 x 30 mm
Shaft diameter	Ø 25 mm
Rotational speeds	1 400 min^{-1}
Nominal diameter of the extraction connection	Ø 90 mm
Dimensions Length x width x height approx.	1 390 x 530 x 580 mm
Net weight approx.	110 kg

ACCESSORIES

Designation	Article no.
Hard polishing disc 	3107341
Soft polishing disc 	3107340
Machine base GU 4-H	3107123
Machine base GU 5-H with Cyclone extraction	3107124
Suction pipes for GU 5-H 2 flexible pipes, Ø 60 mm	3107116

When using suction units, it is necessary to clean the suction unit more frequently when starting with new discs, as large loose pieces of fabric may come loose.

Vario drive with GU 1 / GU 3 base unit

The Vario drive with GU 1 or GU 3 machine base
enables stepless control of the grinder speed.



Vario drive with SIEMENS Sinamics V20 inverter

› Wider voltage range, advanced cooling and painted electronic components increase the robustness of the inverter
› Stable operation even with difficult grid conditions

Vario conversion with machine base	Article no.
GU 1	3491530
Motor output up to 1.5 kW	
› Peripheral speeds 37 m/s to 6 m/s adjustable	
› Without grinder- must be ordered separately along with your order.	
› Sturdy base	
› Cyclone extraction unit integrated in machine base, consequently less space required	
› Noise-insulated	

Automatic start-up

No need to additionally switch the extraction unit on or off because the extraction unit switches on or off automatically after a delay of 23 seconds when the grinding device is switched on or off. The residual dust is extracted after switching off the machine in line with the Hazardous Materials Ordinance

Machines required	Article no.
› Combined grinding machine GU 20B	3101615
› Combined grinding machine GU 25B	3101620
› Polishing machine GU 20P	3101545
› Polishing machine GU 25P	3101550
› Bench grinder GU 20	3101520
› Bench grinder GU 25	3101525
› Universal grinding machine GU 20S	3101575
› Universal grinding machine GU 25S	3101580



Fig.: Example: Vario conversion with GU 20

Vario conversion with machine base	Article no.
GU 3	3491531
Motor output up to 1.5 kW	
› Peripheral speeds 37 m/s to 6 m/s adjustable	
› Without grinder- must be ordered separately along with your order	
› Coolant tray	
› Small footprint	

Machines required	Article no.
› Combined grinding machine GU 20B	3101615
› Combined grinding machine GU 25B	3101620
› Polishing machine GU 20P	3101545
› Polishing machine GU 25P	3101550
› Bench grinder GU 20	3101520
› Bench grinder GU 25	3101525
› Universal grinding machine GU 20S	3101575
› Universal grinding machine GU 25S	3101580



Fig.: Example: Vario conversion with base unit and sample view window GU 20

The Vario conversion complies with the DIN EN 55011 standard Class C2 Note: The suction unit requires a zero conductor in the 400 V version

Vario drive with GZ base



Vario drive with GZ machine base, with or without extraction unit enables stepless control of the grinder speed.

Vario drive with SIEMENS Sinamics V20 inverter

› Wider voltage range, advanced cooling and painted electronic components increase the robustness of the inverter
› Stable operation even with difficult grid conditions

Vario conversion with machine base	Article no.
GZ without extraction	3491513
Motor output up to 0.75 kW	
› Peripheral speeds 30 m/s to 5 m/s adjustable	
› Without grinder- must be ordered separately along with your order.	

Machines required	Article no.
› Bench grinder GZ 20D	3091010
› Universal grinder GZ 20C	3091070

Vario conversion with machine base	Article no.
GZ without extraction	3491533
Motor output up to 1.5 kW	
› Peripheral speeds 19 m/s to 3 m/s adjustable	
› Without grinder- must be ordered separately along with your order.	

Machines required	Article no.
› Bench grinder GZ 25D	3091015
› Universal grinder GZ 25C	3091075



Fig.: Example: Vario conversion with GZ 25D

Vario conversion with machine base	Article no.
GZ with cyclone extraction unit	3491514
Motor output up to 0.75 kW	
› Peripheral speeds 30 m/s to 5 m/s adjustable	
› Chassis (scope of delivery) is converted to Vario	

Required machines with base unit	Article no.
› Bench grinder GZ 20DD	3091040
› Universal grinder GZ 20CD	3091080

Vario conversion with machine base	Article no.
GZ with cyclone extraction unit	3491534
Motor output up to 1.1 kW	
› Peripheral speeds 19 m/s to 3 m/s adjustable	
› Chassis (scope of delivery) is converted to Vario	

Required machines with base unit	Article no.
› Bench grinder GZ 25DD	3091045
› Universal grinder GZ 25CD	3091085



Fig.: Example: Vario conversion with GZ 25DD

The Vario conversion complies with the DIN EN 55011 standard Class C2 Note: The suction unit requires a zero conductor in the 400 V version

Vario drive with GU 4 / GU 5 base

The Vario drive with GU 4 or GU 5 machine base
enables stepless control of the grinder speed.



Vario drive with SIEMENS Sinamics V20 inverter

› Wider voltage range, advanced cooling and painted electronic components increase the robustness of the inverter
› Stable operation even with difficult grid conditions

Vario conversion with machine base	Article no.
GU 4	3491550
Motor output up to 2.2 kW	
› Peripheral speeds 34 m/s to 6 m/s adjustable	
› Without grinder- must be ordered separately along with your order	
› Coolant tray	
› Small footprint	

Machines required	Article no.
› Bench grinder GU 30	3101530
› Combined grinding machine GU 30S	3101585
› Polishing machine GU 35P	3101560



Vario conversion with machine base with cyclone extraction system	Article no.
GU 5	3491552
Motor output up to 2.2 kW	
› Peripheral speeds 34 m/s to 6 m/s adjustable	
› Without grinder- must be ordered separately along with your order.	
› Sturdy base	
› Cyclone extraction unit integrated in machine base, consequently less space required	
› Noise-insulated	

Machines required	Article no.
› Bench grinder GU 30	3101530
› Combined grinding machine GU 30S	3101585
› Polishing machine GU 35P	3101560



Automatic start-up
No need to additionally switch the extraction unit on or off because the extraction unit switches on or off automatically after a delay of 23 seconds when the grinding device is switched on or off. The residual dust is extracted after switching off the machine in line with the Hazardous Materials Ordinance

You can find more information about the Machine bases base on page 308.

The Vario conversion complies with the DIN EN 55011 standard Class C2 Note: The suction unit requires a zero conductor in the 400 V version

Vario drive with GU 4-H / GU 5-H base



The Vario drive with GU 4-H or GU 5-H machine base
enables stepless control of the grinder speed

Vario drive with SIEMENS Sinamics V20 inverter
› Wider voltage range, advanced cooling and painted electronic components increase the robustness of the inverter
› Stable operation even with difficult grid conditions

Vario conversion with machine base	Article no.
GU 4-H	3491571
Motor output up to 4.4 kW	
› Peripheral speeds 34 m/s to 6 m/s adjustable	
› Without grinder- must be ordered separately along with your order.	
› Coolant tray	
› Small footprint	

Machines required	Article no.
› Grinding machine GZ40D	3091025
› Combined grinding machine GZ 40C	3091079
› Polishing machine GZ 40P	3091130

Note: The GU 4-H machine base must be filled with concrete at the customer's site.



Vario conversion with machine base with cyclone extraction system	Article no.
GU 5-H	3491573
Motor output up to 4.4 kW	
› Peripheral speeds 34 m/s to 6 m/s adjustable	
› Without grinder- must be ordered separately along with your order.	
› Sturdy base	
› Cyclone extraction unit integrated in machine base, consequently less space required	
› Noise-insulated	

Machines required	Article no.
› Grinding machine GZ40D	3091025
› Combined grinding machine GZ 40C	3091079
› Polishing machine GZ 40P	3091130

Automatic start-up
No need to additionally switch the extraction unit on or off because the extraction unit switches on or off automatically after a delay of 23 seconds when the grinding device is switched on or off. The residual dust is extracted after switching off the machine in line with the Hazardous Materials Ordinance

Note: The GU 5-H machine base must be filled with concrete at the customer's site.

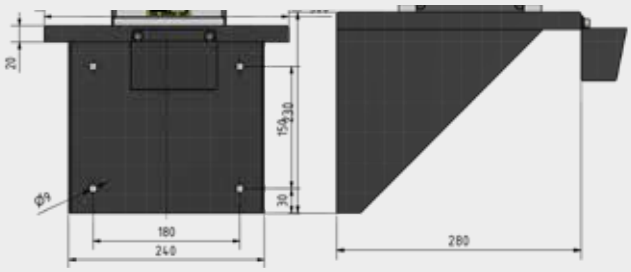


You can find more information about the Machine bases base on page 309.

Machine bases

Wall holder	Art. no.
	3107050
› Water tray	
› Drill holes must be made	
› LxWxH approx.: 332x300x230 mm	
Specially suited for our machines	
› Bench grinders GU 15 – GU 25	
› Universal grinding machines GU 20S and 25S	
› Combined sander GU 15B – GU 25B	
› Polishing machines GU 20P and GU 25P	





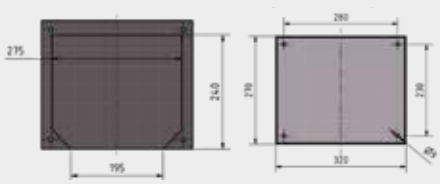
Machine base	Art. no.
for GZ 20	3091120
› Dimensions LxWxH approx. 400x370x760 mm	
› Net weight approx. 33 kg	
for GZ 25	3091122
› Dimensions LxWxH approx. 437x437x675 mm	
› Net weight approx. 40 kg	
for GZ 30	3091124
› Dimensions LxWxH approx. 460x430x760 mm	
› Net weight approx. 52 kg	
› Sturdy	
› Small footprint	
Specially suited for our machines	
› Bench grinders GZ 20 – GZ 30	
› Combined sanders GZ 20C – GZ 25C	



Machine base	Art. no.
GU 3	3107118
› Coolant tray	
› Small footprint	
› LxWxH approx.: 320x270x825 mm	
› Net weight approx. 14.5 kg	
Specially suited for our machines	
› Bench grinders GU 15 – GU 25	
› Universal grinding machines GU 20S and 25S	
› Combined sander GU 15B – GU 25B	
› Polishing machines GU 20P and GU 25P	



DRILL HOLES



Top

ACCESSORIES



Designation	Article no.
Emergency stop facility	3107072
› incl. assembly and base GU3	
(for 400 V – machines only)	

Machine chassis with cyclone extraction unit	Article no.
GU 1 – 230 V/1 Ph	3107110
GU 1 – 400 V/3 Ph	3107109
Motor power 1.3 kW	
› Speed 29000 min^{-1}	
› Air flow rate 2.3 m³ per minute	
› Dimensions L x W x H approx. 477 (550) x 340 x 805 (890) mm	
› Net weight approx. 42 kg	
› Sturdy base	
› Cyclone extraction unit integrated in machine base, consequently less space required	
› Noise-insulated	
› Y adapter for two-pipe extraction unit connection each with Ø 50 mm	
› Without drilled holes – must be drilled individually	
Specially suited for our machines	
› GU and GU-S	



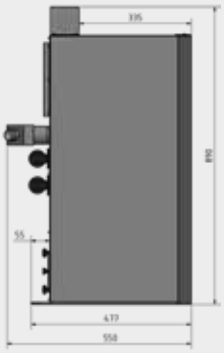
Lamp holder
› prepared for machine lamp LED 3- 500

Automatic start-up
No need to additionally switch the extraction unit on or off because the extraction unit switches on or off automatically after a delay of 23 seconds when the grinding device is switched on or off. The residual dust is extracted after switching off the machine in line with the Hazardous Materials Ordinance

Note: The extraction unit requires a zero conductor in the 400 V version



DIMENSIONS





ACCESSORIES

Designation	Article no.
Emergency stop facility	3107071
› incl. assembly and base GU1	
(for 400 V – machines only)	
Extraction hose	3107111
› 2 pcs. flexible	
› Connection with Ø 50 mm and Ø 35 mm	



Fig. shows sample application

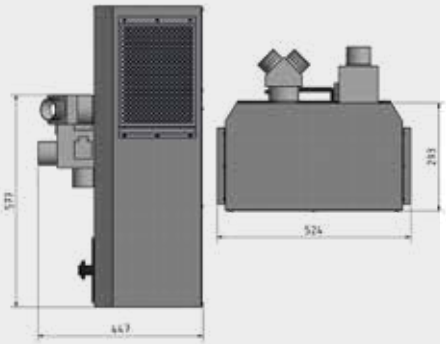
Machine chassis with cyclone extraction unit	Article no.
GU 2	3107115
› Total connected load 4 kW / 400 V, 3-phase, ~50 Hz	
› Motor power per blower 4 kW	
› Number of blowers: 2	
› Speed 29000 min-1	
› Net weight approx. 42 kg	
› Air flow rate 4.6 m³ per minute^{-1}	
› Chip filter container, capacity 15 litres	
› Dimensions L x W x H approx. 525 x 440 x 815 mm	
› Net weight approx. 60 kg	
› Cyclone extraction unit with two motors	
› Includes Y-adapter for two-tube extraction connection, 60 x 300 – 1 000 mm flexible	
› Small footprint	
› Noise-insulated	
› External 230 V permanent power supply	
Specially suited for our machines	
› GBS 75 / GBS 150 / GB 100S or external machines	



Chip drawer

Automatic start-up
No need to additionally switch the extraction unit on or off because the extraction unit switches on or off automatically after a delay of 23 seconds when the grinding device is switched on or off. The residual dust is extracted after switching off the machine in line with the Hazardous Materials Ordinance

DIMENSIONS



ACCESSORIES

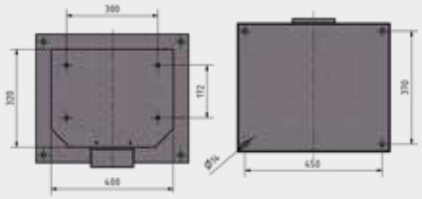
Extraction hose	3107116
› 2 pcs. flexible	
› Connection with Ø 60 mm	
approx. length 300 – 1 000 mm	

The bases GU 1 and GU 2 comply with the DIN EN 55011 standard: Class C2. Note: The suction unit needs a neutral conductor

Universal base	Art. no.
GU 4	3107119
› Coolant tray	
› Small footprint	
› LxWxH approx.: 500x420x770 mm	
› Net weight 30 kg	
Specially suited for our machines	
› Bench grinder GU 30	
› Universal grinding machine GU 30S	
› Polishing grinder GU 35P	
› Disc grinder GB 305D	
› Brush deburrer GB 250B	
› Belt grinding machine GB 100S	



DRILL HOLES



Base **Top**

ACCESSORIES

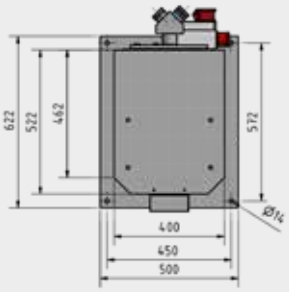


Designation	Article no.
Emergency stop facility	3107073
› incl. assembly and base GU4	
(for 400 V – machines only)	
Mounting plate	3107125
› Absolutely essential when mounting the GB 100S belt grinder on the GU 4 /4H machine base	

Universal base unit with cyclone extraction	Article no.
GU 5	3107114
› Total connected load 4 kW 400 V/3 Ph	
› Speed 29000 min^{-1}	
› Air flow rate 2.3 m^3 per minute	
› Dust container capacity 2.5 litres	
› Dimensions LxWxH approx. 744x500x770 mm	
› Net weight approx. 50 kg	
› Sturdy base	
› Cyclone extraction unit integrated in machine base, consequently less space required	
› Noise-insulated	
› Without drilled holes – must be drilled individually	
› Y adapter for two-tube extraction unit connection	
Specially suited for our machines	
› Bench grinder GU 30	
› Universal grinding machine GU 30S	
› Polishing grinder GU 35P	
› Disc grinder GB 305D	
› Brush deburrer GB 250B	
› Belt grinding machine GB 100S	



DIMENSIONS



ACCESSORIES



Designation	Article no.
Emergency stop facility	3107073
› incl. assembly and base GU4	
(for 400 V – machines only)	
Mounting plate	3107125
› Absolutely essential when mounting the GB 100S belt grinder on the GU 4 /4H machine base	
Suction pipes	3107116
› incl. assembly and base GU4	
› approx. length 300 – 1 000 mm	

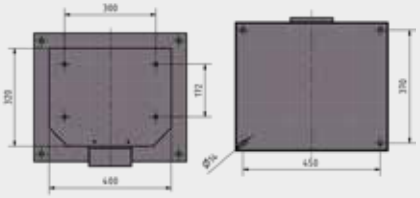
Automatic start-up

When the external device is switched on, the extraction unit automatically starts up after a delay of 2- 3 seconds. There is no need to additionally switch the extraction system on or off: The residual dust is extracted after switching off the machine in line with the Hazardous Materials Ordinance

Universal base for heavy loads	Art. no.
GU 4-H	3107123
› Coolant tray	
› Small footprint	
› LxWxH approx.: 500x420x770 mm	
› Weight: 33 kg (empty) / 139 kg (filled)	
› The base must be filled with concrete by the customer.	
Specially suited for our machines	
› Grinding machine GZ 40D	
› Combined grinder GZ 40C	
› Polishing machine GZ 40P	
› Belt grinding machine GB 100S	



DRILL HOLES



Base **Top**

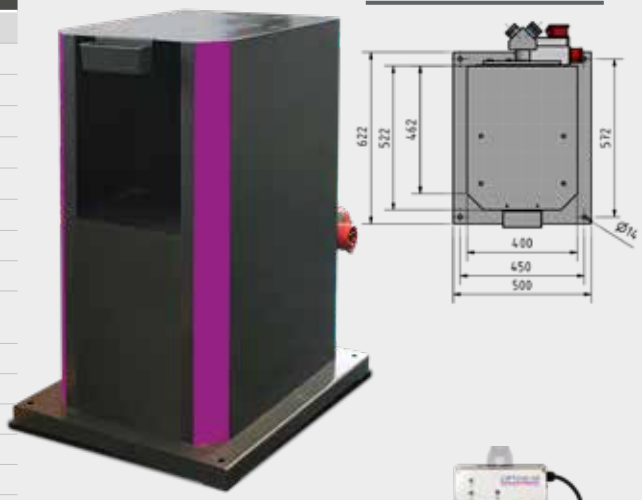
ACCESSORIES



Designation	Article no.
Emergency stop facility	3107073
› incl. assembly and base GU4	
(for 400 V – machines only)	
Mounting plate	3107125
› Absolutely essential when mounting the GB 100S belt grinder on the GU 4 /4H machine base	

Universal base unit with cyclone extraction system for heavy loads	Article no.
GU 5-H	3107124
› Total connected load 4 kW 400 V/3 Ph	
› Speed 29000 min-1	
› Air flow rate 2.3 m³ per minute	
› Dust container capacity 0.06 m²	
› Dimensions LxWxH approx. 744x500x770 mm	
› Weight approx. 53 kg (empty) / 165 kg (filled)	
› The base must be filled with concrete by the customer.	
› Sturdy base	
› Cyclone extraction unit integrated in machine base, consequently less space required	
› Noise-insulated	
› Without drilled holes – must be drilled individually	
› Y adapter for two-tube extraction unit connection	
Specially suited for our machines	
› Grinding machine GZ 40D	
› Combined grinder GZ 40C	
› Polishing machine GZ 40P	
› Belt grinding machine GB 100S	

DIMENSIONS





ACCESSORIES

Designation	Article no.
Emergency stop facility	3107073
› incl. assembly and base GU4	
(for 400 V – machines only)	
Mounting plate	3107125
› Absolutely essential when mounting the GB 100S belt grinder on the GU 4 /4H machine base	
Suction pipes	3107116
› incl. assembly and base GU4	
› approx. length 300 – 1 000 mm	

Automatic start-up

When the external device is switched on, the extraction unit automatically starts up after a delay of 2- 3 seconds. There is no need to additionally switch the extraction system on or off: The residual dust is extracted after switching off the machine in line with the Hazardous Materials Ordinance

Workbenches

- Ideally suited as a sturdy workbench or as a machine base frame for drilling, milling and small lathes
- Height-adjustable in three stages, so that it can be flexibly adapted to the user
- Supplied disassembled and must be assembled
- Robust construction made from durable materials, with meticulous workmanship. Sturdy frame construction that safely supports even heavier workpieces and ensures long-lasting stability.
- Robust drawer runners for reliable access and organisation.

Workbench	Art. no.
OWB 10	3353017
Max. load capacity	300 kg
Dimensions (L x W)	770 x 610 mm
Height dimensions (working height)	850 – 1 020 mm
Net weight approx.	83 kg





Supplied disassembled and must be assembled

Workbench	Art. no.
OWB 30	3353019
Max. load capacity	300 kg
Dimensions (L x W)	1 400 x 610 mm
Height dimensions (working height)	800 – 1 020 mm
Net weight approx.	150 kg





Supplied disassembled and must be assembled

Normal corundum grinding wheel	Article no.
for GU 15	
Ø 150x20 mm shaft **Ø 16 mm** grit size 36 (coarse)	3107150
Ø 150x20 mm shaft **Ø 16 mm** grit size 80 (fine)	3107155
for GU 18	
Ø 175x25 mm shaft **Ø 32 mm** grit size 36 (coarse)	3107180
Ø 175x25 mm shaft **Ø 32 mm** grit size 80 (fine)	3107185
for GU 20	
Ø 200x30 mm shaft **Ø 32 mm** grit size 36 (coarse)	3107210
Ø 200x30 mm shaft **Ø 32 mm** grit size 80 (fine)	3107215
for GU 25	
Ø 250x40 mm shaft **Ø 32 mm** grit size 36 (coarse)	3107250
Ø 250x40 mm shaft **Ø 32 mm** grit size 80 (fine)	3107255
for GU 30	
Ø 300x50 mm shaft **Ø 75 mm** grit size 36 (coarse)	3107270
Ø 300x50 mm shaft **Ø 75 mm** grit size 80 (fine)	3107275
for GZ 20	
Ø 200x25 mm shaft **Ø 20 mm,** grit size 36, hardness M	3098121
Ø 200x25 mm shaft **Ø 20 mm,** grit size 60, hardness M	3098123
Ø 200x25 mm shaft **Ø 20 mm,** grit size 80, hardness M	3098125
for GZ 25	
Ø 250x30 mm shaft **Ø 25 mm,** grit size 36, hardness M	3098131
Ø 250x30 mm shaft **Ø 25 mm,** grit size 60, hardness M	3098133
Ø 250x30 mm shaft **Ø 25 mm,** grit size 80, hardness M	3098135
for GZ 30	
Ø 300x35 mm shaft **Ø 30 mm,** grit size 36, hardness M	3098141
Ø 300x35 mm shaft **Ø 30 mm,** grit size 60, hardness M	3098143
Ø 300x35 mm shaft **Ø 30 mm,** grit size 80, hardness M	3098145
for GZ 40	
Ø 400x50 mm shaft **40 mm,** grit size 36	3098150
Ø 400x50 mm shaft **40 mm,** grit size 60	3098152
Ø 400x50 mm shaft **40 mm,** grit size 80	3098154
› Max. speed 1 650 min^{-1}	



Polishing disc	Article no.
for GU 20P	
Ø 200x20 shaft **Ø 16 mm hard**	3107321
Ø 200x20 shaft **Ø 16 mm soft**	3107320
for GU 25P	
Ø 250x25 shaft **Ø 20 mm hard**	3107331
Ø 250x25 shaft **Ø 20 mm soft**	3107330
for GU 30P / GU 40P	
Ø 350x40 shaft **Ø 25 mm hard**	3107341
Ø 350x30 shaft **Ø 25 mm soft**	3107340



hard



soft

Multi-purpose wire brush, round brush	Article no.
for GB 250B, GU 25B and GZ 25C	
Ø 250x32–37 mm stainless steel with 25 mm adapter	3098070
for GB 250B	
Ø 250x42–47 mm – 0.2 mm with 25 mm adapter	3107451
Ø 250x42–47 mm – 0.3 mm with 25 mm adapter	3107452
for GU 15B / GU 18B / GU 20B / GU 25B	
Ø 150x20 mm shaft **Ø 16 mm** thickness 0.3 mm	3107425
Ø 175x20 mm shaft **Ø 32 mm** thickness 0.3 mm	3107430
Ø 200x20 mm shaft **Ø 32 mm** thickness 0.3 mm	3107435
Ø 250x20 mm shaft **Ø 32 mm** thickness 0.3 mm	3107440
GZ 20C/GZ 20CD	
Ø 200x25x20 mm – 0.35 mm high tensile steel wire	3098081
Ø 200x25x20 mm – 0.5 mm high tensile steel wire	3098082
GZ 25C/GZ 25CD	
Round brush **250x30x25 mm – 0.3 mm** high tensile steel wire	3098086
Round brush **250x30x25 mm – 0.5 mm** high tensile steel wire	3098087
GZ 40C	
Round brush **350x50-55x25 mm – 0.2 mm** high-tensile steel wire	3098092
Round brush **350x55-60x25 mm – 0.35 mm** high-tensile steel wire	3098093

Grinding belt	Article no.
For GU 20S	
762x75 mm, grit size **40** (PU=5 pcs.)	3357612
762x75 mm, grit size **60** (PU=5 pcs.)	3357614
762x75 mm, grit size **80** (PU=5 pcs.)	3357616
762x75 mm, grit size **120** (PU=5 pcs.)	3357618
762x75 mm, grit size **180** (PU=5 pcs.)	3357619
762x75 mm, grit size **240** (PU=5 pcs.)	3357620
For GU 25S	
1 016x75 mm, grit size **40** (PU=5 pcs.)	3357682
1 016x75 mm, grit size **60** (PU=5 pcs.)	3357684
1 016x75 mm, grit size **80** (PU=5 pcs.)	3357686
1 016x75 mm, grit size **120** (PU=5 pcs.)	3357688
1 016x75 mm, grit size **180** (PU=5 pcs.)	3357689
1 016x75 mm, grit size **240** (PU=5 pcs.)	3357690
For GU 30S	
1 190x100 mm, grit size **40** (PU=5 pcs.)	3357637
1 190x100 mm, grit size **60** (PU=5 pcs.)	3357638
1 190x100 mm, grit size **80** (PU=5 pcs.)	3357639
1 190x100 mm, grit size **120** (PU=5 pcs.)	3357640
Features	
Grinding belts with a fabric backing for stainless steel and unalloyed steel	

Designation	Article no.
Grinding wheel dresser	3101821
› Diamond	
› Dimensions approx.45x13 mm	



SHEET METAL WORKING
METALWORKING

PD 8-12 | Art. no.: **3359080**

Manual toggle press



SAR 1 000 | Art. no.: **3242100**

Sheet metal working machine 3 in 1: Plate rolling, folding, and cutting

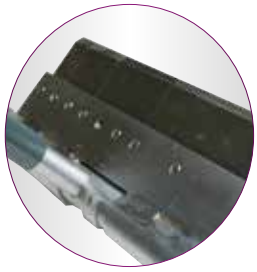


Folding machine FP 30 – universally deployable

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Folding machine FP 30 for bending and folding sheet metals
- Removable bending beam segments
- Convenient swivel movement of the bending beam via lever handle
- Premium quality bending beam
- For use on a vice





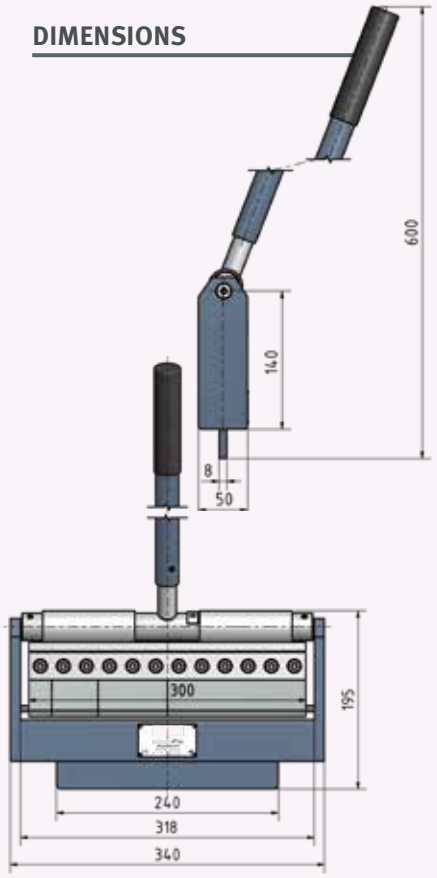
› Bending segment pieces 150 mm/75 mm/50 mm and 25 mm removable

Fig.: Folding machine FP 30

Model	FP 30
Article no.	3244028
Performance features	
Max material width	320 mm
Max. sheet thickness	2.5 mm

Max. folding performance at 90°	
Aluminium/copper	300 x 2 mm
Steel sheet	300 x 1 mm
Net weight approx.	10 kg

DIMENSIONS



Three-roller roll bending machine BM3 – universally deployable

Facts that impress in terms of quality, performance and price

- Bending and rolling of wires, tubes and sheet
- Polished bending rollers
- Borne steel side frames (self-lubricating)
- Two removable unwinding rollers
- Material thickness and rolling radius separately adjustable
- For use on a vice
- Sturdy support surface



› Wire insertion grooves Ø 1 – 2 – 3 – 4 – 5 mm

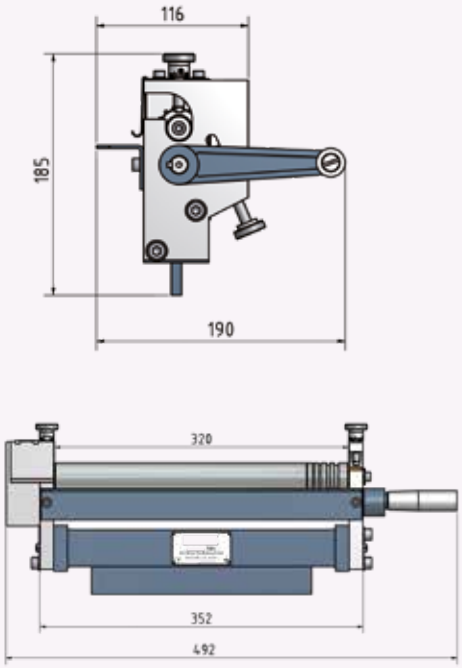


Fig.: BM 3

Model	BM 3
Article no.	3244030
Performance features	
Max material width	310 mm
Bending Ø min.	35 mm
Bending Ø max.	unlimited
Net weight approx.	10 kg

Rolling thickness max.	
Steel sheet St. 37	1 mm
Stainless steel	1 mm
Aluminium/copper	2 mm
Brass	1 mm
Gold/silver/tinplate	2 mm
Narrow widths	3 mm
Round materials	1 – 5 mm
Unwinding roller	Ø 30 mm

DIMENSIONS



Sheet metal working machine 3 in 1: Plate rolling, folding, and cutting. Ideally suited for demanding users

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Modern design and sturdy steel construction
- High level of design flexibility thanks to segmented folding rail with removable segments
- Operation via two large, adjustable and easily operable levers arranged at the side
- Scissor table with recessed measuring strips and right-angle stop on both sides
- Easily adjustable top, rear and bottom rollers
- Long support surface
- Adjustable rear stop and extensible front material support for safe support of large-format sheet metal





ACCESSORIES

Designation	Article no.
Machine base	3242107
› LxWxH: 1185x500x700 mm	

Model	SAR 1 000
Article no.	3242100
Technical data	
Max material width	700 mm
Plate rolling	
Plate rolling min.	Ø48 mm
Plate rolling max.	Ø unlimited
Steel sheet (S235JR)	up to 1 mm
Stainless steel	up to 0.5 mm
Aluminium/copper	up to 1.5 mm
Brass	up to 1 mm
Gold/silver/tinplate	up to 1.5 mm
Unwinding roller Ø	48 mm
Folding	
Max. sheet thickness	2.5 mm*
Aluminium/copper	up to 1.5 mm
Steel sheet (S235JR)	up to 1 mm
Number of segments	7
Cutting	
Cutting capacity max.	up to 1 mm
Net weight approx.	290 kg

SCOPE OF DELIVERY

- › Adjustable rear stop
- › Front material support
- › Tool

APPLICATIONS



Plate rolling
- › Adjusting screws for material thickness with scale
- › Ground bending rollers with wire insert slots on the bottom and front rollers

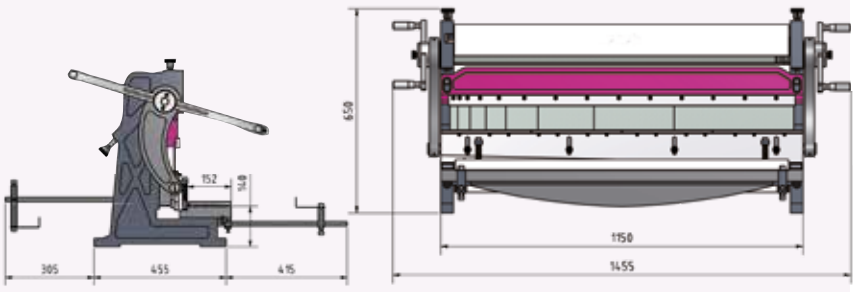


Folding
- › Premium folding bars
- › Spring hold-down unit
- › Segmented bevelling rail 40 mm/50 mm/65 mm/100 mm/180 mm/255 mm/380 mm for cassette bending



Cutting
- › Clean and burr-free cutting thanks to top and bottom blades made of quality grade steel

DIMENSIONS



PS 125 / PS 150 / PS 300

Lever-action snips – a quality product for trade applications

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- For cutting metal plates, sheet, round and flat steel
- Sturdy snip body
- Good ergonomic cutting geometry
- Easy, strength-saving cutting over the entire length of the cut
- Robust handle ensures a good grip
- Premium blades
- The workpiece to be cut is held down in horizontal position by the hold-down unit
- Stable base and holes drilled for stationary fastening



Fig.: Ps 300

Fig.: Ps 125

ARGUMENTS,...



Blade

› Premium blade with long service life
› Hold-down unit prevents sheet twisting during cutting
› Strong springs prevent the shears closing autonomously

Model	PS 125	PS 150	PS 300
Article no.	3241006	3241007	3241012
Cutting capacity			
Max. cutting length (b)	95 mm	115 mm	235 mm
Max. sheet thickness (c)	3 mm*	4 mm*	4 mm*
Dimensions LxWxH approx.	245x110x935 mm	325x120x960 mm	490x155x1 340 mm
Net weight approx.	8.7 kg	10.7 kg	23 kg

*Not over the entire length – material steel (S235JR), stainless steel up to 1 mm

ACCESSORIES



Replacement blade set	Article no.
› 2-part	
for PS 125	3241025
for PS 150	3241026
for PS 300	3241028

DDP 10/DDP 20/DDP 30/DDP 50

Precision arbour presses with robust and solid design. For mechanical workshops and repair operations

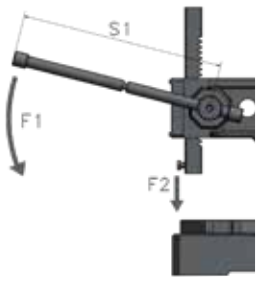
FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- For pressing in and out of bearings, mandrels, bushings, spindles, pins
- Stable design
- Premium grey cast body
- Variably adjustable lever
- Baseplate adjustable in four positions
- For fastening on a workbench





Model	DDP 10	DDP 20	DDP 30	DDP 50
Article no.	3359011	3359012	3359013	3359015
Technical data				
Maximum force (F2)	11.2 kN	12.6 kN	11.6 kN	15.3 kN
Throat depth	95 mm	120 mm	150 mm	226 mm
Mounting hole	Ø10 mm	Ø13 mm	Ø13 mm	Ø16 mm
Max. workpiece height	123 mm	195 mm	310 mm	459 mm
Plunger size LxWxH	25x25x240 mm	32x32x345 mm	38x38x455 mm	50x50x647 mm
Slot size	16 mm	24 mm	28 mm	28 mm
Dimensions LxWxH approx.	270x180x410 mm	430x235x680 mm	455x260x850 mm	650x350x785 mm
Net weight approx.	14 kg	33 kg	55 kg	167 kg



Effective force		DDP 10		DDP 20		DDP 30		DDP 50	
Hand force	F1	392.4 N	589 N	392.4 N	589 N	392.4 N	589 N	392.4 N	589 N
		(40 kg)	(60 kg)	(40 kg)	(60 kg)	(40 kg)	(60 kg)	(40 kg)	(60 kg)
Long lever	S1	340 mm		450 mm		600 mm		850 mm	

PD 3 – Arbor press
PD 5 / PD 8/12 – Manual toggle presses

FACTS THAT IMPRESS IN TERMS OF QUALITY, PERFORMANCE AND PRICE

- Adjustable off-set depth
- Hardened and ground spindle
- Long spindle guide
- High force at the end of the stroke
- Honed tappet guide and ground tappets ensure a long service life and precise guidance
- Quick changeover thanks to simple and safe adjustment of the working height
- Ground press tables allow reproducible positioning of your tools
- Locating holes in the plunger and table top for precise alignment of the tools
- Support table with T-slots for attaching workpiece clamping fixtures

PD 5:
- Latching function
- Spindle for height adjustment

PD 8/12:
- Spindle for height adjustment
- Pressing up to 12 kN is possible by moving the link rod

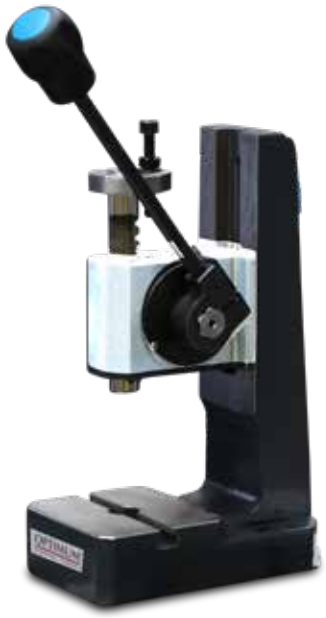


Fig.: PD 3



› with locking mechanism

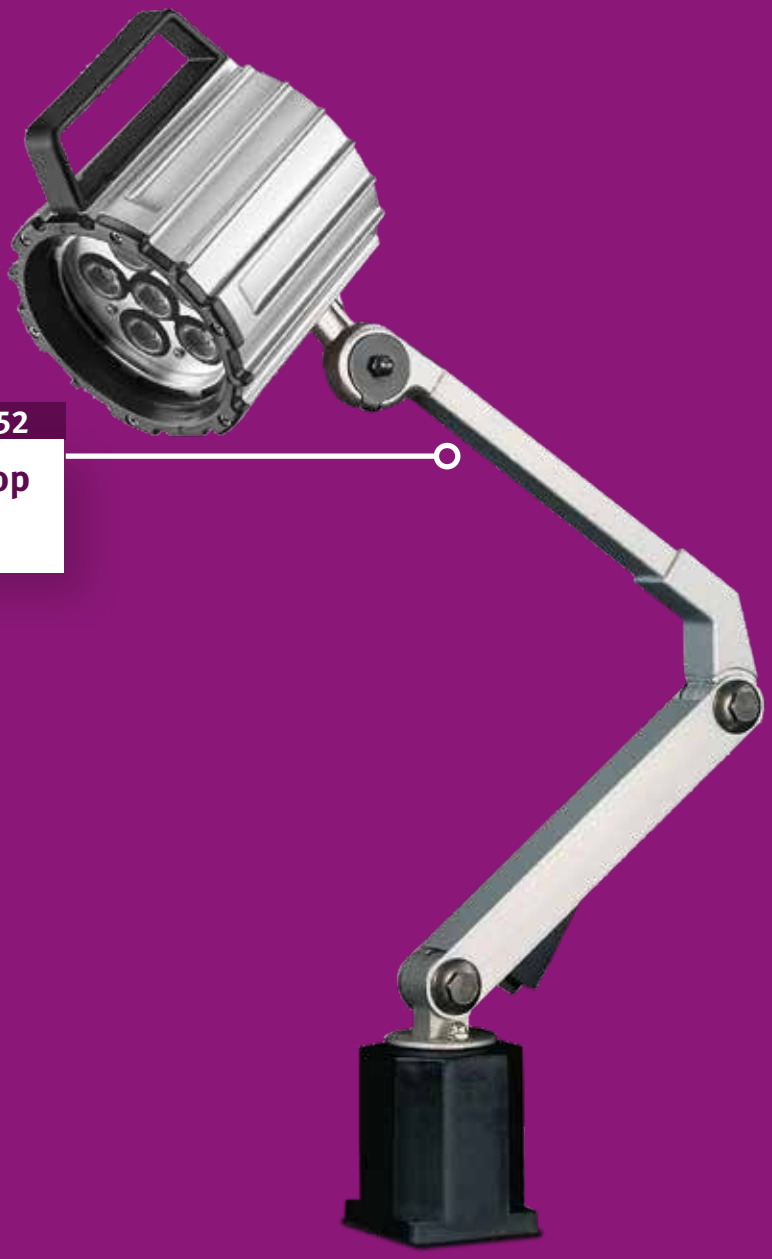
Fig.: PD 5



Fig.: PD 8/12

Model	PD 3	PD 5	PD 8/12
Article no.	3359030	3359050	3359080
Maximum force	3 kN	5 kN	8 kN / 12 kN
Throat depth	80 mm	65 mm	150 mm
Mounting hole	Ø 10 mm	Ø 10 mm	Ø 25 mm
Stroke of the spindle sleeve	30 mm	40 mm	60 mm
Head travel distance	50 – 170 mm	65 – 180 mm	90 – 410 mm
Table size	110 x 100 mm	115 x 80 mm	260 x 300 mm
T-slot size	16 mm	16 mm	14 mm
Dimensions (L x W x H)	180 x 110 x 300 mm	190 x 115 x 507 mm	460 x 300 x 940 mm
Weight	10 kg	13 kg	134 kg

MACHINE LAMPS
COOLANT ACCESSORIES
MEASURING ACCESSORIES



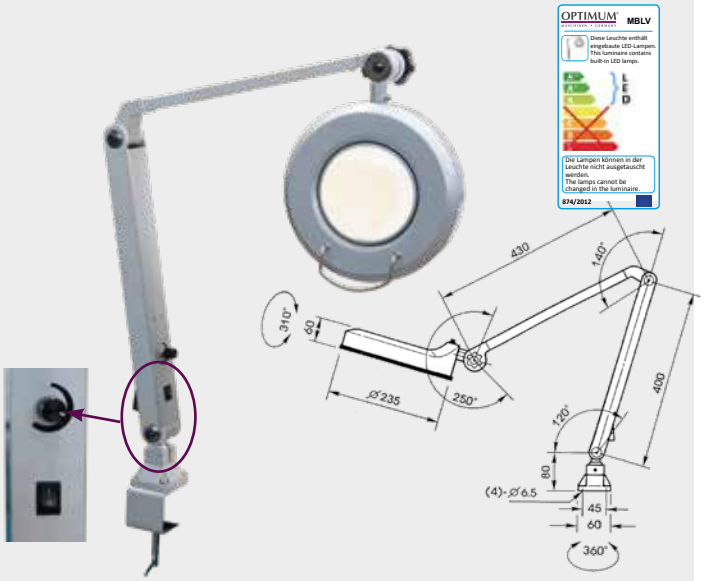
MWG 6-600 | Art. no.: **3351052**

LED machine and workshop lamp

Machine lamps

LED magnifying lamp	Art. no.
MBLV	3351090

› Electrical connection 14 W / 230 V ~50 Hz
› Luminous flux 2 200 Lm
› Colour temperature 5 700 K ±5%
› Large magnifying glass: Ø 125 mm
› Luminous intensity dimmable 10 – 100 %
› Joint easily adjustable and lockable thanks to clamp screw
› Pleasant, glare-free light
› Joint arm length 830 mm
› Protection class IP20
› Magnifying lamp with 1.5x optical magnification



Machine lamp	Art. no.
LED 3- 500	3351010

› Electrical connection 3x1 W LED / 230 V ~50 Hz
› Colour temperature 4 000 – 4 500 K
› Made of oil-resistant and impact proof plastic
› No impairment of the service life through vibration or knocks
› Optimum mobility of the articulated arm
› IP degree of protection IP64 (dust and splash-water protected)
› Lifetime 60 000 operating hours
› Low exterior temperature; lubricants and coolants do not burn on
› Mains supply cable approx. 1.2 m
› Energy-saving and durable machine lamp

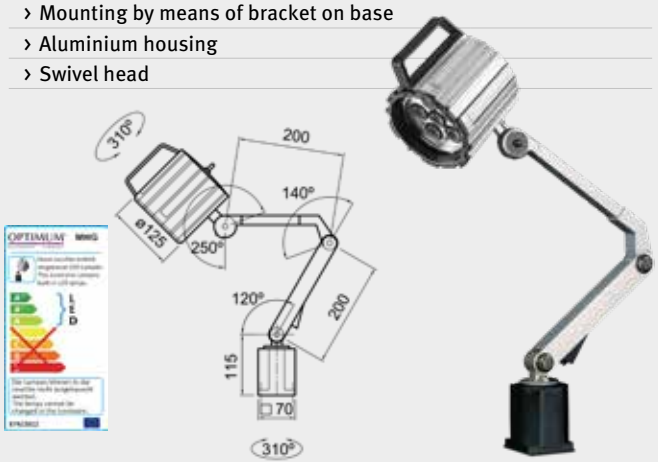


LED workbench lamp	Art. no.
WBL 3	3351062

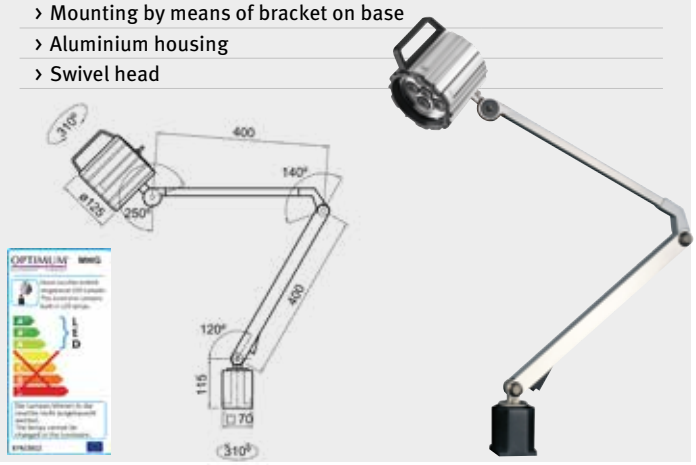
› Electrical connection 3x1 Watt LED / 230 V ~50 Hz
› Luminosity 480 Lm
› Colour temperature 5 700 K ±5%
› Articulated arm with sleeve for best possible mobility
› Excellent positional stability
› Swivel head
› Impact-proof, easy-to-clean plastic housing
› Arm length 520 mm
› IP Degree of protection: IP20
› Magnetic base, fixing bracket
› Integrated transformer



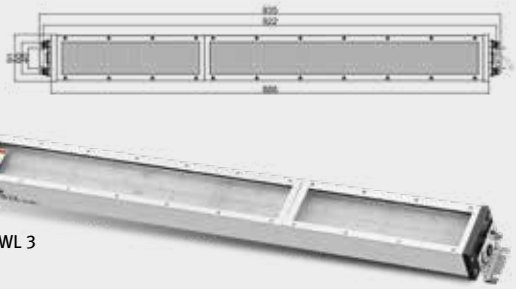
LED machine and workshop lamp	Art. no.
MWG 6-600	3351052
› Foot size: 70 x 70 mm	
› Arm length: 400 mm	
› Arm type: Swivelling	
› Electrical connection 6 x 2 Watt LED / 230 V ~50 Hz	
› Luminosity 1 020 Lm	
› Colour temperature 5 700 K ±5%	
› Robust and powerful articulated machine lamp	
› State of the art LED technology	
› Low exterior temperature; lubricants and coolants do not burn on	
› Beam angle 60° (reflector)	
› Rotatable 310°	
› Maximum permissible ambient temperature Tmax. 50° C	
› LED service life › 60000 hours	
› Degree of protection IP65, protection class I (operation with PE connection)	
› Mounting by means of bracket on base	
› Aluminium housing	
› Swivel head	



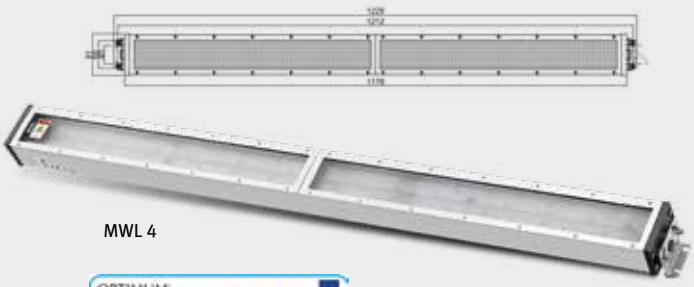
LED machine and workshop lamp	Art. no.
MWG 6-720	3351053
› Foot size: 70 x 70 mm	
› Arm length: 800 mm	
› Arm type: Swivelling	
› Electrical connection 6 x 2 Watt LED / 230 V ~50 Hz	
› Luminosity 1,020 Lm	
› Colour temperature 5 700 K ±5%	
› Robust and powerful articulated machine lamp	
› State of the art LED technology	
› Low exterior temperature; lubricants and coolants do not burn on	
› Beam angle 60° (reflector)	
› Rotatable 310°	
› Maximum permissible ambient temperature Tmax. 50° C	
› LED service life › 60000 hours	
› Degree of protection IP65, protection class I (operation with PE connection)	
› Mounting by means of bracket on base	
› Aluminium housing	
› Swivel head	



LED machine and workshop lamp	Art. no.
MWL 3 (230 V AC)	3351042*
› Power 84 watts	
› Lamp length 920 mm	
› Luminous flux (lumens) 13200 lm	
MWL 4 (230 V AC)	3351033
MWL 4 (24 V DC)	3351043*
› Power 112 watts	
› Lamp length 1 210 mm	
› Luminous flux (lumens) 17600 lm	
Features	
› Colour temperature 5 700 K ±5%	
› Safety glass	
› Robust, high-luminosity machine lamp	
› Aluminium housing with black side parts	
› Beam angle 120° (reflector)	
› LED service life › 60 000 h	
› Vibration-resistant at 10 to 55 Hz (amplitude 0.35 mm), shock-resistant up to 50 g	
› Degree of protection IP65, protection class I (operation with PE connection)	
› Operational mode: Continuous operation	
› Maximum permissible ambient temperature Tmax. 50° C°	
› Mounting by means of bracket, swivelling angle ± 45°	



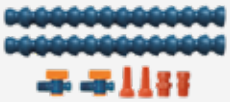
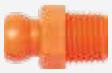
MWL 3



MWL 4



Coolant accessories

	Designation		Size	Article no.
	Coolant hose set 2 pcs. articulated hoses; 300 mm 2 pcs. round nozzles, 1 pc. shut-off valve 1 pc. magnetic base		1/4"	3356700
			½"	3356801
	Coolant hoses 4 pcs. articulated hoses; 150 mm		1/4"	3356701
	**Coolant hose set** 2 pcs. articulated hoses; 150 mm 2 pcs. NPT connection 1/4" and 1/8" 3 pcs. round nozzle 1/16" / 1/8" / 1/4" 1 pc. flat nozzle		1/4"	3356702
	**Coolant hose set** 2 pcs. articulated hoses; 150 mm 2 pcs. NPT connection 1/4" and 1/8" 3 pcs. round nozzle 1/16" / 1/8" / 1/4"		½"	3356802
	**Coolant hose set** 2 pcs. articulated hoses; 150 mm 2 pcs. NPT connection 1/4" and 1/8" 2 pcs. round nozzles 1/8"/ 1/4" 2 pcs. shut-off valve		1/4"	3356703
	**Grips**		1/4"	3356710
			½"	3356810
	**Articulated hose** Hose roll 15 metres		1/4"	3356711
			½"	3356811
	**Circular nozzles**		1/4"	3356712
			½"	3356812
	**Flat nozzles** 5-hole 5 pcs.		1/4"	3356713
			½"	3356820
	**Flat nozzles** 5 pcs.		1/4"	3356714
			½"	3356813
	**Flat nozzle** 75 mm wide 2 pcs.		1/4"	3356715
			½"	3356814
	**Connector** Threaded connection RP3/8" 5 pcs.		1/4"	3356716
			½"	3356815
	**Connector** Threaded connection RP½" 5 pcs.		½"	3356816
	**Y connector** 5 pcs. 1/4" 2 pcs. ½"		1/4"	3356717
			½"	3356817
	**Cap** 5 pcs.		1/4"	3356718
			½"	3356818
	**Stopcock for articulated hose** 2 pcs.	Thread connection RP 1/4"	1/4"	3356719
		Threaded connection RP½"	½"	3356819

	Designation	Size	Article no.
	**Coolant hoses basic equipment 1/4" – No. 1** › 8 pcs. articulated hoses 150 mm › 2 pcs. each of round nozzles 1/16" / 1/8" / 1/4", › 2 pcs. NPT connection 1/4" and 1/8", › 1 pc. flat nozzle, › 1 pc. Y-distributor, › 2 pcs. shut-off valve inside and outside, › 2 pcs. shut-off valve inside – 1/4", › 2 pcs. NPT extension, › 1 pc. magnetic base, 1 unit flexible sealing tape	1/4"	3356704
	**Coolant hoses basic equipment 1/4" – No. 2** › 6 pcs. articulated hoses 150 mm, › 2 pcs. each of round nozzles 1/16" / 1/8" / 1/4", › 2 pcs. each of NPT connection 1/4" and 1/8", › 5 pcs. flat nozzle, › 4 pcs. 90° nozzle, › 1 pc. Y-distributor, › 1 pc. shut-off valve, inside and outside, › 1 pc. stopcock inside – 1/4" › 1 pc. clamping tong	1/4"	3356705
	**Coolant hoses basic equipment 1/2" – No. 1** › 6 pcs. articulated hoses 150 mm, › 2 pcs. each of round nozzles 1/2" / 3/8" / 1/4", › 2 pcs. each of NPT connection 1/4" and 1/2", › 1 pc. flat nozzle, › 3 pcs. 90° round nozzles 1/2" / 3/8" / 1/4", › 1 pc. Y-distributor, › 1 pc. shut-off valve, inside and outside, › 1 pc. stopcock inside – 1/2" › 1 pc. clamping tong	1/2"	3356800

Universal coolant device	Art. no.
230V	3351999
› Max. delivery height 2.5 m / delivery rate 8 l/min	
› Tank capacity 11 litres. / Dimensions LxWxH: 370x245x170 mm	
› Complete with tank, flexible tube, hose and switch/plug combination	
› Magnetic base fastener for coolant hose	



Coolant hose	Art. no.
KMS 2	3356660
› Insensitive to most solvents and chemicals	
› Not electrically conductive	
› Magnetic base holding force up to 50 kg	
› Length of the coolant hoses 335 mm each	
› Hose connection 6 mm	
› Coolant hoses ¼“	



Coolant mist lubricator	Art. no.
MMC1	3356663
› Magnetic base with a holding force of 75 kg	
› Foot size LxWxH: 62x50x55 mm	
› Screw connection for external compressed air supply	
› Flexible and stable hose with a length of 500 mm	



Cutting and cooling lubricant	Art. no.
OPTIlub 3.9	3530035
› High-pressure resistant cutting and cooling lubricant	
› 10 litre cannister	

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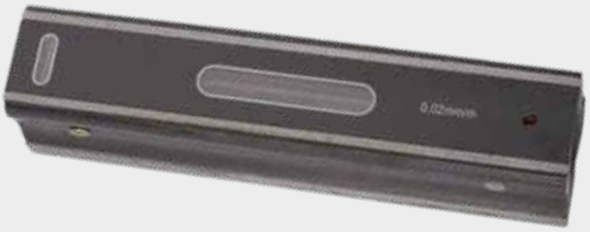
Designation	Art. no.
Dial gauge	3385090

› Precision as per DIN 878
› Metal housing matt chrome plated
› Clamping shank 8 mm
› Pitch 0.01 mm
› Measuring range 10 mm
› Outer ring with two adjustable tolerance marks
› Scale rotatable via outer ring for easy zeroing



Designation	Art. no.
Machine spirit level	3356663

› With prismatic base for levelling horizontal surfaces and shafts
› Compact and stress-free installation of the longitudinal spirit level guarantees constant precision
› Precision 0.02 mm/m
› Horizontal and longitudinal spirit level as per DIN 2 276 Form B
› Eliminates time-consuming adjustment work
› Heat protected handle
› Dimensions approx. 200 x 46 x 46 mm



Designation	Art. no.
Precision magnetic measuring stand	3356650

› Measuring column Ø 12 mm x 181 mm
› Traverse Ø 10 mm x 160 mm
› Magnetic base L x W x H: 50 x 62 x 55 mm
› Holding force 50 kg
› Dial gauge holder with mounting hole for dial gauges, fine indicators, electrical length measuring probes



Designation	Art. no.
Measuring and test plate	3385060

› Dimensions L x W x H approx.: 630 x 400 x 100 mm
› Precision 7 µ
› Granite
› Thermally and dynamically stable
› Compressive strength 250 – 260 N/mm²
› DIN 876/0
› Corrosion-free



MAINTENANCE CONTRACTS

Your benefits with a maintenance contract
› Ensuring functionality
› Reduction of unnecessary and expensive downtime
› Use of original spare parts
› Manufacturer expertise
› Support from specialised staff
› Warranty on work carried out
› On-site counselling
› Flat-rate maintenance costs for clearly defined work

Options:	
Article no.	
WARTOP 1	Maintenance of drilling machines
WARTOP 2	Maintenance of lathes
WARTOP 3	Maintenance of milling machines
WARTOP 4	Maintenance of grinding machines
WARTOP 5	Maintenance of saws

- incl. 400 kilometres in total (200 km one way)
- each additional kilometre is invoiced at EUR 0.80
- plus travelling expenses EUR 120.00 per hour or part thereof.
- Accommodation costs and expenses at cost



General notes on operating our machines
› Our machines must be supervised at all times during operation. Leaving the machine during operations constitutes gross negligence.
› The details on machine precision are found in the technical data of the catalogue pages. If no values are found here, please contact info@optimum-maschinen.de for further information.
› The stated precisions are achieved under standardised conditions (correct installation of the machine and ambient temperature of 20 °C). The machines are not designed for continuous operation.
› Please note that operators are required to make conversions in the event of installing third-party chucks or flanged chucks to reach the stated, technically possible rotating diameter.
› All machines are designed S6-60% operation.

Operation of machines with frequency converters
› Electrical connection only by a qualified electrician
Machines with frequency inverters or inverters must not be operated via an ordinary plug. A permanent connection is required. The drive components conduct a high leakage current via the protective conductor. Touching conductive parts when the protective conductor is interrupted can result in death or serious injury.

› Building electrics:
In order to avoid tripping of residual current circuit breakers – if present in the building electrics – an all-current-sensitive residual current circuit breaker type B is required.
AC – sensitive AC type RCDs (AC only) are not suitable for frequency inverters. AC sensitive earth-leakage circuit breakers of type AC are no longer in use and are no longer permitted in Germany.

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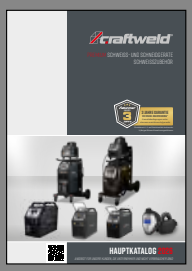

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