

Height adjustable material stand MSR as manual aid for supporting and moving the workpieces for metal saws

Convincing arguments: quality, efficiency and price

- Optimum aids to support long and heavy workpieces
- Universally applicable for e.g. metal band saws, circular saws, etc.
- Easy and efficient material transportation for the supply and removal of workpieces
- Roller support infinitely height adjustable and can be clamped
- Safe workpiece support due to steel rollers which are massive high-capable of bearing
- Infinitely extendable
- Mounting option of the distance measuring system LMS

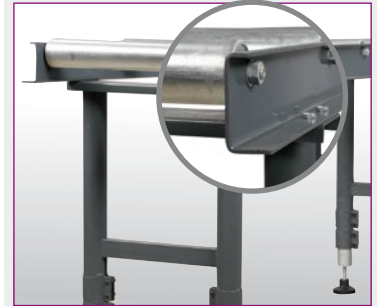


Fig.: MSR 7

Fig.: MSR 10

Type	MSR 4	MSR 7	MSR 10
Item No	335 7610	335 7611	335 7613
Type	MSR 4H	MSR 7H	MSR 10H
Item No	335 7001	335 7002	335 7003
Technical data			
Diameter of support rollers	60 mm	60 mm	60 mm
Width of support rollers	360 mm	360 mm	360 mm
Static table load	500 kg	700 kg	700 kg
Dimensions			
Length	1'000 mm	2'000 mm	3'000 mm
Width	440 mm	440 mm	440 mm
Height	650 - 950 mm	650 - 950 mm	650 - 950 mm
Height H-Version	650 - 1'050 mm	650 - 1'050 mm	650 - 1'050 mm
Net weight	30 kg / 33 kg	58 kg / 61 kg	79 kg / 82 kg
Standard equipment		Fixing material for elongation	
Accessories		PVC rolls 3 pieces	
Item No		335 7609	
Standard equipment		Wall holder Add-on kit	

Convincing arguments...



Frame

- Stable type
- Solid special profile

Load-bearing rollers

- Steel
- Ball bearings on both sides



Layer height

- Infinitely variable from 650 to 950 mm



Accessories PVC rolls

- Additionally mountable
- Made of anti-skid PVC
- To avoid scratches
- Simply mount rolls into the existing mounting brackets

Fig.: PVC rolls in practical wall bracket

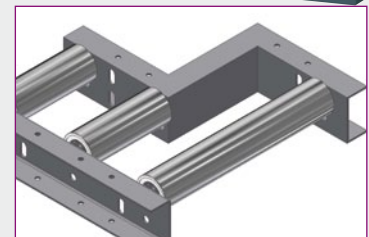


table extension

- In addition mountable
- Can be mounted in both directions

Distance measuring system to be attached to the Optimum material stand MSR for perfect distance measurement and exact positioning

Convincing arguments: quality, efficiency and price

- Magnetic measuring system with magnetic tape
- For recurring measuring tasks with high precision of 0.1 mm
- Automatic switching on of the display
- During longer standstills the measuring system switches off and keeps the last measurement saved
- Measuring accuracy: $\pm(0.025 + 0.02 \times \text{measuring length [m]})$
- Battery life of up to 10 years



- Display: LCD
- Switching functions:
 - Zeroing display
 - Reset
- Direction indicator \pm
- Measuring unit 0.01 mm
- Absolute measurement and chain measurement function
- Right end/left end stop



Fig.: Material stand MSR 7 with distance measuring system LMS 2

Type	LMS 1	LMS 2	LMS 3	LMS 4
Item No	338 3881	338 3882	338 3883	338 3884
Technical data				
Rail length	1'000 mm	2'000 mm	3'000 mm	4'000 mm
Travel	830 mm	1'830 mm	2'830 mm	3'830 mm

Convincing arguments...



Slide

- Easily moveable
- Precisely guided
- Replaceable durable dry bearings



Positioning slide

- Folding upwards



Material stop

- For large diameters
- Easy installation by the client

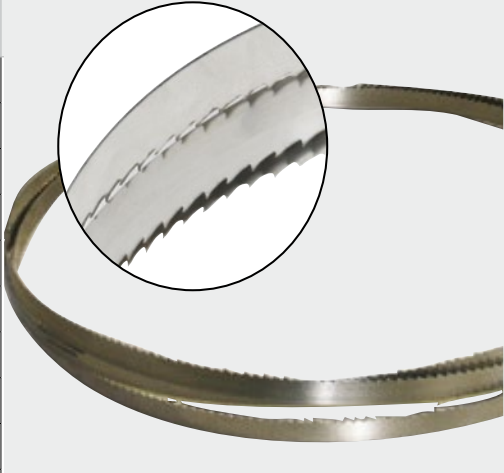


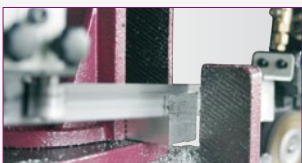
Linear guide rails

- Lubricant-free
- Very smooth running
- Wear resistant
- Corrosion-resistant
- Little friction values
- High static bearing capacity

Bi-metal saw bands

The feedstock is a two-component material (bi-metal) attained by electrode welding. The band which is manufactured from this material has a hard curable, hard-wearing high speed steel whereas the band body is manufactured from alloyed hard-torn and fatigue resistant quenched and tempered steel. The applications for materials which can be sawn range from non-ferrous materials up to materials which are difficult to machine.

Saw bands HSS bi-metal M 42					Saw bands suitable for:
Saw band size	Number of teeth	Tooth angle	Item No	€ plus VAT	
1'300 x 12.7 x 0.5 mm	10 - 14 tpi	0°	335 1509	17.00	 <ul style="list-style-type: none"> • Construction steel • Deep-drawing steel • Machining steel • Quenched and tempered steel • Case hardening steel • Cast iron • Carrier • Thin-walled tube • Solid round steel • Tube • Pack
1'470 x 13 x 0.65 mm	10 - 14 tpi	0°	335 1110	16.90	
1'638 x 13 x 0.65 mm	6 - 10 tpi	0°	335 1512	17.00	
1'638 x 13 x 0.65 mm	10 - 14 tpi	0°	335 1518	17.00	
1'735 x 12.7 x 0.9 mm	6 - 10 tpi	0°	335 1522	19.90	
1'735 x 13 x 0.9 mm	10 - 14 tpi	0°	335 1538	19.90	
2'362 x 19 x 0.9 mm	5 - 8 tpi	0°	335 7522	25.00	
2'362 x 19 x 0.9 mm	6 - 10 tpi	0°	335 7521	25.00	
2'080 x 20 x 0.9 mm	5 - 8 tpi	0°	335 7503	25.00	
2'080 x 20 x 0.9 mm	6 - 10 tpi	0°	335 7514	25.00	
2'480 x 27 x 0.9 mm	5 - 8 tpi	0°	335 7511	29.00	
2'480 x 27 x 0.9 mm	6 - 10 tpi	0°	335 7524	29.00	
2'750 x 27 x 0.9 mm	5 - 8 tpi	0°	335 7751	35.00	
2'750 x 27 x 0.9 mm	6 - 10 tpi	0°	335 7753	35.00	
2'925 x 27 x 0.9 mm	5 - 8 tpi	0°	335 7541	37.00	
2'925 x 27 x 0.9 mm	6 - 10 tpi	0°	335 7542	37.00	
2'480 x 27 x 0.9 mm	5 - 8 tpi	6°	335 7512	29.00	<ul style="list-style-type: none"> • Construction steel • Deep-drawing steel • Machining steel • Quenched and tempered steel • Case hardening steel • Corrosion- and acid-resistant steel • Solid square • Thin-walled tube • Solid round steel • Tube • Solid pack • Carrier • Solid flat steel
2'362 x 19 x 0.9 mm	5 - 8 tpi	6°	335 7516	25.00	
2'080 x 20 x 0.9 mm	5 - 8 tpi	6°	335 7505	25.00	
2'925 x 27 x 0.9 mm	4 - 6 tpi	6°	335 7540	37.00	
2'750 x 27 x 0.9 mm	5 - 8 tpi	10°	335 7752	35.00	<ul style="list-style-type: none"> • Deep-drawing steel • Machining steel • Quenched and tempered steel • Case hardening steel • Corrosion- and acid-resistant steel • Non-ferrous metals • Solid square • Thin-walled tube • Solid round steel • Tube • Solid flat steel • Construction steel
1'470 x 13 x 0.65 mm	6 tpi	10°	335 1109	16.90	
1'638 x 13 x 0.65 mm	6 tpi	10°	335 1511	17.00	
1'735 x 12.7 x 0.9 mm	6 tpi	10°	335 1521	19.90	



Metal band saw Regularly check:

- Function of the chip brush
- Function and concentration of the coolant
- Wear and parallelism of the saw band guidings
- Band tension
- Band speed



Coolant & Cutting fluid

- The coolant lubricates, cools down and transports the chips from the cutting channel. It is important:
- To use the recommended cutting liquid.
- To ensure that the cutting liquid is perfectly fed with the correct pressure.



Workpiece

- Make sure that the workpiece which needs to be machined is firmly fit in and can neither vibrate nor turn around.
- Do not use any damaged, twisted or heavily deformed workpieces.
- The cut is more accurate the nearer the saw band guideways are fixed on the workpiece.



Optimum chip formation

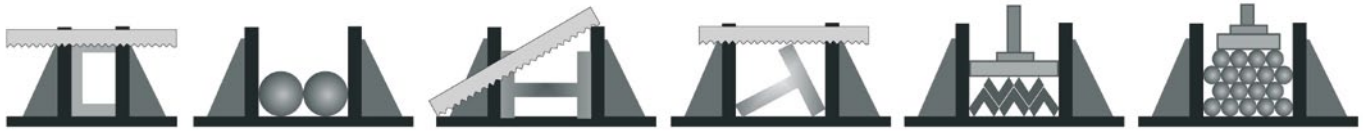
- Very fine powdery chips show too little cutting pressure.
- Thick, heavily pressed chips turning blue indicate an overload of the saw band.
- Loosely rolled chips are an indicator for optimum cutting conditions.

General information about saw bands

Convincing arguments: quality, efficiency and price

Workpiece

The workpiece to be processed must be firmly clamped so that it can neither vibrate nor turn around. Do not use any damaged, twisted or heavily deformed workpieces. The cut is more accurate the nearer the saw band guideways are fixed on the workpiece.



Tooth pitch (toothing)

The tooth pitch describes the number of teeth on one inch (25.4 mm).

As general rule it applies:

The shorter the cutting length (e.g. profile) the finer is the selected toothing. The more the teeth cam in the material (e.g. solid) the rougher is the used toothing.

If the tooth pitch is too large, it will cause cut deviations since the chips clog the cutting catches and the saw band is forced to leave its cutting line. If the tooth pitch is too small, it will cause tooth brakes, since the cutting pressure on the individual tooth is becoming too large. At least 3 teeth should cam in, in order to attain an economic result.

Retracting saw bands

- If the saw bands are correctly retracted, a long durability is guaranteed.
- Sharp cutting edges with extremely small edge radii are the condition for high cutting capacity of the saw bands.
- In order to attain the optimum lifetime, we recommend to cam in the saw band accordingly.
- Determine the correct cutting speed (m/min) and the feed (mm/min) depending on the material and the dimensions of your cutting material.
- It is important that the new saw band is only used with about 50% of the determined feed. Thus it is possible to avoid that the extremely sharp tooth edges are damaged by micro split-off at large chip thicknesses.
- At the beginning new saw bands might tend to vibrations and vibration noises. If this occurs, slightly reduce the cutting speed. In case of small workpiece dimensions about 300 - 500 cm² of the material to be cut should be machined when starting machining.
- If it is necessary to machine large workpiece, we recommend to start machining over a period of time of about 15 min. After starting machining, slowly increase the feed to the initially determined target value.

Materials	Cutting speed (M42)
Construction steel/Machining steel	80 - 90 m/min
Case hardening steels/quenched and tempered steels	45 - 75 m/min
Unalloyed tool steels/roller bearing steels	40 - 60 m/min
Alloyed tool steels/high-speed steels	30 - 40 m/min
Stainless steels	20 - 35 m/min
Heat resistant steels/high-temperature alloys	15 - 25 m/min

Optimum chip formation

- Sawdust is the best indicator for the correctly preset feed and saw band speed. Take a look at the produced chips and correctly adjust the feed.

Thin chips looking like powder

- Increase the feed or reduce the saw band speeds.



Burnt, heavy chips

- Reduce the feed and/or the saw band speed



Rippled, silver and warm chips

- Optimum feed and saw band speed



Toothing when using high speed steel bi-metal bands

Standard toothing		Combined toothing		Sawing of tubes 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
< 12 mm	14 tpi	< 25 mm	10 - 14 tpi	Wall thickness	Tooth pitch teeth (tpi)					
12 - 30 mm	10 tpi	20 - 40 mm	8 - 12 tpi	3 mm	8 - 12	8 - 12	8 - 12	8 - 12	6 - 10	6 - 10
30 - 50 mm	8 tpi	25 - 70 mm	6 - 10 tpi	8 mm	8 - 12	6 - 10	6 - 10	5 - 8	4 - 6	4 - 6
50 - 80 mm	6 tpi	35 - 90 mm	5 - 8 tpi	12 mm	6 - 10	5 - 8	5 - 8	4 - 6	4 - 6	4 - 6
80 - 100 mm	4 tpi	50 - 100 mm	4 - 6 tpi	15 mm	5 - 8	4 - 6	4 - 6	4 - 6	3 - 4	3 - 4
				20 mm	-	4 - 6	4 - 6	4 - 5	4 - 5	4 - 5

Clear grey tooth pitch is not available