

# Technical Information

## Recommended lubricants and torque values

| CORE DRILLS SERIES   |                                 | MATERIAL                        |  |  |                         |                |               |
|--|---------------------------------|---------------------------------|--|--|-------------------------|----------------|---------------|
| Lubricant/<br>cooling lubricant  | Aluminium<br>Non-ferrous metals | Steel<br>< 500 N/m <sup>2</sup> | Fine-grain steel<br>< 700 N/m <sup>2</sup> | Fine-grain steel<br>< 1,000 N/m <sup>2</sup> | Stainless steel<br>Inox | Casting        | Railway rails |
|    | <b>HSS-Co 8</b>                 |                                 | 10 – 15 m/min                              | 10 – 15 m/min                                | 10 – 15 m/min           | 15 – 20 m/min* |               |
|  | BDS 5000                        |                                 | ✓  | ✓  | ✓                       |                |               |
|  | BDS 5200                        |                                 | ✓  | ✓  | ✓                       |                |               |
|  | BDS 5500                        |                                 | ✓  | ✓  | ✓                       |                |               |
|  | BDS 6000                        |                                 |  |  |                         | ✓              |               |
|   | <b>VarioPLUS</b>                |                                 | 10 – 15 m/min                              | 10 – 15 m/min                                |                         |                |               |
|  | BDS 5000                        |                                 | ✓  | ✓  |                         |                |               |
|  | BDS 5200                        |                                 | ✓  | ✓  |                         |                |               |
|  | BDS 5500                        |                                 | ✓  | ✓  |                         |                |               |
|  | <b>Standard</b>                 | 25 – 30 m/min                   | 25 m/min                                   |  |                         | 10 – 20 m/min  |               |
|  | BDS 5000                        | ✓                               | ✓  |  |                         |                |               |
|  | BDS 5200                        |                                 | ✓  |  |                         |                |               |
|  | BDS 5500                        |                                 |  |  |                         |                |               |
|  | BDS 6000                        |                                 |  |  |                         | ✓              |               |
|  | <b>Carbide</b>                  |                                 | 35 m/min                                   | 25 m/min                                     | 20 m/min                | 20 m/min       |               |
|  | BDS 6000                        |                                 | ✓  | ✓  | ✓                       | ✓              |               |
|  | <b>Carbide PLUS</b>             |                                 | 35 m/min                                   | 25 m/min                                     | 20 m/min                | 20 m/min       |               |
|  | BDS 6000                        |                                 | ✓  | ✓  | ✓                       | ✓              |               |
|  | <b>Carbide RAIL</b>             |                                 |  |  |                         |                | 15 – 20 m/min |
|  | BDS 6000                        |                                 |  |  |                         |                | ✓             |

Cutting speed:  $V_c = \frac{d \times \pi \times n}{1,000} = \text{m/min.}$

Speed:  $n = \frac{v \times 1,000}{d \times \pi} = \text{min}^{-1}$

\*depending on the variety

| Broj obrtaja |                     |     |     |     |     |
|--------------|---------------------|-----|-----|-----|-----|
| mm           | Obimna brzina m/min |     |     |     |     |
|              | 10                  | 15  | 20  | 25  | 30  |
| 10           | 318                 | 478 | 637 | 796 | 955 |
| 11           | 290                 | 434 | 579 | 724 | 869 |
| 12           | 265                 | 398 | 531 | 663 | 796 |
| 13           | 245                 | 367 | 490 | 612 | 735 |
| 14           | 227                 | 341 | 455 | 569 | 682 |
| 15           | 212                 | 318 | 425 | 531 | 637 |
| 16           | 199                 | 299 | 398 | 498 | 597 |
| 17           | 187                 | 281 | 375 | 468 | 562 |
| 18           | 177                 | 265 | 354 | 442 | 531 |
| 19           | 168                 | 251 | 335 | 419 | 503 |
| 20           | 159                 | 239 | 318 | 398 | 478 |
| 21           | 152                 | 227 | 303 | 379 | 455 |
| 22           | 145                 | 217 | 290 | 362 | 434 |
| 23           | 138                 | 208 | 277 | 346 | 415 |
| 24           | 133                 | 199 | 265 | 332 | 398 |
| 25           | 127                 | 191 | 255 | 318 | 382 |
| 26           | 122                 | 184 | 245 | 306 | 367 |
| 27           | 118                 | 177 | 236 | 295 | 354 |
| 28           | 114                 | 171 | 227 | 284 | 341 |
| 29           | 110                 | 165 | 220 | 275 | 329 |
| 30           | 106                 | 159 | 212 | 265 | 318 |
| 31           | 103                 | 154 | 205 | 257 | 308 |
| 32           | 100                 | 149 | 199 | 249 | 299 |
| 33           | 97                  | 145 | 193 | 241 | 290 |
| 34           | 94                  | 141 | 187 | 234 | 281 |
| 35           | 91                  | 136 | 182 | 227 | 273 |
| 36           | 88                  | 133 | 177 | 221 | 265 |
| 37           | 86                  | 129 | 172 | 215 | 258 |
| 38           | 84                  | 126 | 168 | 210 | 251 |
| 39           | 82                  | 122 | 163 | 204 | 245 |
| 40           | 80                  | 119 | 159 | 199 | 239 |
| 41           | 78                  | 117 | 155 | 194 | 233 |
| 42           | 76                  | 114 | 152 | 190 | 227 |
| 43           | 74                  | 111 | 148 | 185 | 222 |
| 44           | 72                  | 109 | 145 | 181 | 217 |
| 45           | 71                  | 106 | 142 | 177 | 212 |
| 46           | 69                  | 104 | 138 | 173 | 208 |
| 47           | 68                  | 102 | 136 | 169 | 203 |
| 48           | 66                  | 100 | 133 | 166 | 199 |
| 49           | 65                  | 97  | 130 | 162 | 195 |
| 50           | 64                  | 96  | 127 | 159 | 191 |
| 51           | 62                  | 94  | 125 | 156 | 187 |
| 52           | 61                  | 92  | 122 | 153 | 184 |
| 53           | 60                  | 90  | 120 | 150 | 180 |
| 54           | 59                  | 88  | 118 | 147 | 177 |
| 55           | 58                  | 87  | 116 | 145 | 174 |

| Broj obrtaja |                     |    |     |     |     |
|--------------|---------------------|----|-----|-----|-----|
| mm           | Obimna brzina m/min |    |     |     |     |
|              | 10                  | 15 | 20  | 25  | 30  |
| 56           | 57                  | 85 | 114 | 142 | 171 |
| 57           | 56                  | 84 | 112 | 140 | 168 |
| 58           | 55                  | 82 | 110 | 137 | 165 |
| 59           | 54                  | 81 | 108 | 135 | 162 |
| 60           | 53                  | 80 | 106 | 133 | 159 |
| 61           | 52                  | 78 | 104 | 131 | 157 |
| 62           | 51                  | 77 | 103 | 128 | 154 |
| 63           | 51                  | 76 | 101 | 126 | 152 |
| 64           | 50                  | 75 | 100 | 124 | 149 |
| 65           | 49                  | 73 | 98  | 122 | 147 |
| 66           | 48                  | 72 | 97  | 121 | 145 |
| 67           | 48                  | 71 | 95  | 119 | 143 |
| 68           | 47                  | 70 | 94  | 117 | 141 |
| 69           | 46                  | 69 | 92  | 115 | 138 |
| 70           | 45                  | 68 | 91  | 114 | 136 |
| 71           | 45                  | 67 | 90  | 112 | 135 |
| 72           | 44                  | 66 | 88  | 111 | 133 |
| 73           | 44                  | 65 | 87  | 109 | 131 |
| 74           | 43                  | 65 | 86  | 108 | 129 |
| 75           | 42                  | 64 | 85  | 106 | 127 |
| 76           | 42                  | 63 | 84  | 105 | 126 |
| 77           | 41                  | 62 | 83  | 103 | 124 |
| 78           | 41                  | 61 | 82  | 102 | 122 |
| 79           | 40                  | 60 | 81  | 101 | 121 |
| 80           | 40                  | 60 | 80  | 100 | 119 |
| 81           | 39                  | 59 | 79  | 98  | 118 |
| 82           | 39                  | 58 | 78  | 97  | 117 |
| 83           | 38                  | 58 | 77  | 96  | 115 |
| 84           | 38                  | 57 | 76  | 95  | 114 |
| 85           | 37                  | 56 | 75  | 94  | 112 |
| 86           | 37                  | 56 | 74  | 93  | 111 |
| 87           | 37                  | 55 | 73  | 92  | 110 |
| 88           | 36                  | 54 | 72  | 90  | 109 |
| 89           | 36                  | 54 | 72  | 89  | 107 |
| 90           | 35                  | 53 | 71  | 88  | 106 |
| 91           | 35                  | 52 | 70  | 87  | 105 |
| 92           | 35                  | 52 | 69  | 87  | 104 |
| 93           | 34                  | 51 | 68  | 86  | 103 |
| 94           | 34                  | 51 | 68  | 85  | 102 |
| 95           | 34                  | 50 | 67  | 84  | 101 |
| 96           | 33                  | 50 | 66  | 83  | 100 |
| 97           | 33                  | 49 | 66  | 82  | 98  |
| 98           | 32                  | 49 | 65  | 81  | 97  |
| 99           | 32                  | 48 | 64  | 80  | 97  |
| 100          | 32                  | 48 | 64  | 80  | 96  |