



**FUERTE**

**DRILLS AND CUTTING BITS**

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[www.3gteknik.com](http://www.3gteknik.com)



# WHO WE ARE ?

Our company founded in 2020 for the order to meet the corporate company needs in the sector, in 2020, it started to operate as your solution partner in the machine-mold and manufacturing sector



WIDE PRODUCT RANGE



QUICK DELIVERY



TECHNICAL SUPPORT



HIGH QUALITY SERVICE



BRAND PRODUCTS



COSTUMER SATISFACTION

## OUR MISSION

In order to be the biggest solution partner of our valued customers

Supporting your supply chain with our corporate infrastructure and digital platforms within the framework of lean management principles

To supply the desired quality at the lowest price

To offer 33 years of knowledge and experience in manufacturing and cutting tools to the service of our valued customers in order to make your production smoothly

To provide sales and support services to you by collaborating with the leading companies of the sector

## CONTACT US

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# FUERTE

-DRILL BITS

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-THREADED SETS AND MACHINE GUIDES

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-END MILLS

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-HARD SERIES

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-MICRO/MACRO SERIES

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-ALM SERIES

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# FUERTE / DRILL BITS

## 1897 EXTRA SHORT DRILL BIT SHARPENED SERIES

Fully Sharpened Suitable For Cutting Alloy Steel, Cast Steel, Grey, Pig Iron, Tempered Graphite And Aluminum Alloy



| PRODUCT CODE | d1 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|
| 110011020    | 2,0   | 38    | 12    |
| 110011025    | 2,5   | 43    | 14    |
| 110011030    | 3,0   | 46    | 16    |
| 110011035    | 3,5   | 52    | 20    |
| 110011040    | 4,0   | 55    | 22    |
| 110011045    | 4,5   | 58    | 24    |
| 110011050    | 5,0   | 62    | 26    |
| 110011055    | 5,5   | 66    | 28    |
| 110011060    | 6,0   | 66    | 28    |
| 110011065    | 6,5   | 70    | 31    |
| 110011070    | 7,0   | 74    | 34    |
| 110011075    | 7,5   | 74    | 34    |
| 110011080    | 8,0   | 79    | 37    |

## TIN SERIES



| PRODUCT CODE | d1 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|
| 110012020    | 2,0   | 38    | 12    |
| 110012025    | 2,5   | 43    | 14    |
| 110012030    | 3,0   | 46    | 16    |
| 110012035    | 3,5   | 52    | 20    |
| 110012040    | 4,0   | 55    | 22    |
| 110012045    | 4,5   | 58    | 24    |
| 110012050    | 5,0   | 62    | 26    |
| 110012055    | 5,5   | 66    | 28    |
| 110012060    | 6,0   | 66    | 28    |
| 110012065    | 6,5   | 70    | 31    |
| 110012070    | 7,0   | 74    | 34    |
| 110012075    | 7,5   | 74    | 34    |
| 110012080    | 8,0   | 79    | 37    |

## 338 SHORT DRILL BIT SB SH

Fully Sharpened Suitable For Cutting Alloy Steel, Cast Steel, Grey, Pig Iron, Tempered Graphite And Aluminum Alloy



| PRODUCT CODE | d1 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|
| 110026005    | 0,5   | 22    | 6     |
| 110026006    | 0,6   | 24    | 7     |
| 110026007    | 0,7   | 28    | 9     |
| 110026008    | 0,8   | 30    | 10    |
| 110026009    | 0,9   | 32    | 11    |
| 110026010    | 1,0   | 34    | 12    |
| 110026011    | 1,1   | 36    | 14    |
| 110026012    | 1,2   | 38    | 14    |
| 110026013    | 1,3   | 38    | 14    |
| 110026014    | 1,4   | 40    | 18    |
| 110026015    | 1,5   | 40    | 18    |
| 110026016    | 1,6   | 43    | 20    |
| 110026017    | 1,7   | 43    | 20    |

| PRODUCT CODE | d1 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|
| 110026018    | 1,8   | 46    | 22    |
| 110026019    | 1,9   | 46    | 22    |
| 110026020    | 2,0   | 49    | 24    |
| 110026021    | 2,1   | 49    | 24    |
| 110026022    | 2,2   | 53    | 27    |
| 110026023    | 2,3   | 53    | 27    |
| 110026024    | 2,4   | 57    | 30    |
| 110026025    | 2,5   | 57    | 30    |
| 110026026    | 2,6   | 57    | 30    |
| 110026027    | 2,7   | 61    | 33    |
| 110026028    | 2,8   | 61    | 33    |
| 110026029    | 2,9   | 61    | 33    |
| 110026030    | 3,0   | 61    | 33    |

| PRODUCT CODE | d1 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|
| 110026031    | 3,1   | 65    | 36    |
| 110026032    | 3,2   | 65    | 36    |
| 110026033    | 3,3   | 65    | 36    |
| 110026034    | 3,4   | 70    | 39    |
| 110026035    | 3,5   | 70    | 39    |
| 110026036    | 3,6   | 70    | 39    |
| 110026037    | 3,7   | 70    | 39    |
| 110026038    | 3,8   | 75    | 43    |
| 110026039    | 3,9   | 75    | 43    |
| 110026040    | 4,0   | 75    | 43    |
| 110026041    | 4,1   | 75    | 43    |
| 110026042    | 4,2   | 75    | 43    |
| 110026043    | 4,3   | 80    | 47    |

| PRODUCT CODE | d1 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|
| 110026044    | 4,4   | 80    | 47    |
| 110026045    | 4,5   | 80    | 47    |
| 110026046    | 4,6   | 80    | 47    |
| 110026047    | 4,7   | 80    | 47    |
| 110026048    | 4,8   | 86    | 52    |
| 110026049    | 4,9   | 86    | 52    |
| 110026050    | 5,0   | 86    | 52    |
| 110026051    | 5,1   | 86    | 52    |
| 110026052    | 5,2   | 86    | 52    |
| 110026053    | 5,3   | 86    | 52    |
| 110026054    | 5,4   | 93    | 57    |
| 110026055    | 5,5   | 93    | 57    |
| 110026056    | 5,6   | 93    | 57    |

| PRODUCT CODE | d1 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|
| 110026057    | 5,7   | 93    | 57    |
| 110026058    | 5,8   | 93    | 57    |
| 110026059    | 5,9   | 93    | 57    |
| 110026060    | 6,0   | 93    | 57    |
| 110026061    | 6,1   | 101   | 63    |
| 110026062    | 6,2   | 101   | 63    |
| 110026063    | 6,3   | 101   | 63    |
| 110026064    | 6,4   | 101   | 63    |
| 110026065    | 6,5   | 101   | 63    |
| 110026066    | 6,6   | 101   | 63    |
| 110026067    | 6,7   | 101   | 63    |
| 110026068    | 6,8   | 109   | 69    |
| 110026069    | 6,9   | 109   | 69    |

| PRODUCT CODE | d1 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|
| 110026070    | 7,0   | 109   | 69    |
| 110026071    | 7,1   | 109   | 69    |
| 110026072    | 7,2   | 109   | 69    |
| 110026073    | 7,3   | 109   | 69    |
| 110026074    | 7,4   | 109   | 69    |
| 110026075    | 7,5   | 109   | 69    |
| 110026076    | 7,6   | 117   | 75    |
| 110026077    | 7,7   | 117   | 75    |
| 110026078    | 7,8   | 117   | 75    |
| 110026079    | 7,9   | 117   | 75    |
| 110026080    | 8,0   | 117   | 75    |
| 110026081    | 8,1   | 117   | 75    |
| 110026082    | 8,2   | 117   | 75    |

# FUERTE / DRILL BITS

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110026083    | 8,3      | 117      | 75       |
| 110026084    | 8,4      | 117      | 75       |
| 110026085    | 8,5      | 117      | 75       |
| 110026086    | 8,6      | 125      | 81       |
| 110026087    | 8,7      | 125      | 81       |
| 110026088    | 8,8      | 125      | 81       |
| 110026089    | 8,9      | 125      | 81       |
| 110026090    | 9,0      | 125      | 81       |
| 110026091    | 9,1      | 125      | 81       |
| 110026092    | 9,2      | 125      | 81       |
| 110026093    | 9,3      | 125      | 81       |
| 110026094    | 9,4      | 125      | 81       |
| 110026095    | 9,5      | 125      | 81       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110026096    | 9,6      | 133      | 87       |
| 110026097    | 9,7      | 133      | 87       |
| 110026098    | 9,8      | 133      | 87       |
| 110026099    | 9,9      | 133      | 87       |
| 110026100    | 10,0     | 133      | 87       |
| 110026101    | 10,1     | 133      | 87       |
| 110026102    | 10,2     | 133      | 87       |
| 110026103    | 10,3     | 133      | 87       |
| 110026104    | 10,4     | 133      | 87       |
| 110026105    | 10,5     | 133      | 87       |
| 110026106    | 10,6     | 142      | 94       |
| 110026107    | 10,7     | 142      | 94       |
| 110026108    | 10,8     | 142      | 94       |

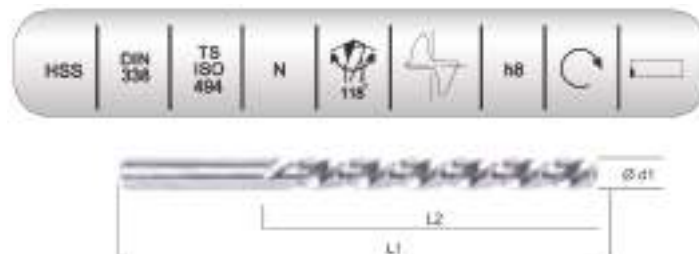
| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110026109    | 10,9     | 142      | 94       |
| 110026110    | 11,0     | 142      | 94       |
| 110026111    | 11,1     | 142      | 94       |
| 110026112    | 11,2     | 142      | 94       |
| 110026113    | 11,3     | 142      | 94       |
| 110026114    | 11,4     | 142      | 94       |
| 110026115    | 11,5     | 142      | 94       |
| 110026116    | 11,6     | 142      | 94       |
| 110026117    | 11,7     | 142      | 94       |
| 110026118    | 11,8     | 142      | 94       |
| 110026119    | 11,9     | 151      | 101      |
| 110026120    | 12,0     | 151      | 101      |
| 110026121    | 12,1     | 151      | 101      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110026122    | 12,2     | 151      | 101      |
| 110026123    | 12,3     | 151      | 101      |
| 110026124    | 12,4     | 151      | 101      |
| 110026125    | 12,5     | 151      | 101      |
| 110026126    | 12,6     | 151      | 101      |
| 110026127    | 12,7     | 151      | 101      |
| 110026128    | 12,8     | 151      | 101      |
| 110026130    | 13,0     | 151      | 101      |
| 110026135    | 13,5     | 160      | 108      |
| 110026140    | 14,0     | 160      | 108      |
| 110026145    | 14,5     | 169      | 114      |
| 110026150    | 15,0     | 169      | 114      |
| 110026155    | 15,5     | 178      | 120      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110026160    | 16,0     | 178      | 120      |
| 110026165    | 16,5     | 184      | 125      |
| 110026170    | 17,0     | 184      | 125      |
| 110026175    | 17,5     | 191      | 130      |
| 110026180    | 18,0     | 191      | 130      |
| 110026185    | 18,5     | 198      | 135      |
| 110026190    | 19,0     | 198      | 135      |
| 110026195    | 19,5     | 205      | 140      |
| 110026200    | 20,0     | 205      | 140      |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |

## 338 SHORT DRILL BIT HSS-G SHARPENED SERIES

Fully Sharpened Suitable For Cutting Alloy Steel, Cast Steel, Grey, Pig Iron, Tempered Graphite And Aluminum Alloy



| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110021005    | 0,5      | 22       | 6        |
| 110021006    | 0,6      | 24       | 7        |
| 110021007    | 0,7      | 28       | 9        |
| 110021008    | 0,8      | 30       | 10       |
| 110021009    | 0,9      | 32       | 11       |
| 110021010    | 1,0      | 34       | 12       |
| 110021011    | 1,1      | 36       | 14       |
| 110021012    | 1,2      | 38       | 14       |
| 110021013    | 1,3      | 38       | 14       |
| 110021014    | 1,4      | 40       | 18       |
| 110021015    | 1,5      | 40       | 18       |
| 110021016    | 1,6      | 43       | 20       |
| 110021017    | 1,7      | 43       | 20       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110021018    | 1,8      | 46       | 22       |
| 110021019    | 1,9      | 46       | 22       |
| 110021020    | 2,0      | 49       | 24       |
| 110021021    | 2,1      | 49       | 24       |
| 110021022    | 2,2      | 53       | 27       |
| 110021023    | 2,3      | 53       | 27       |
| 110021024    | 2,4      | 57       | 30       |
| 110021025    | 2,5      | 57       | 30       |
| 110021026    | 2,6      | 57       | 30       |
| 110021027    | 2,7      | 61       | 33       |
| 110021028    | 2,8      | 61       | 33       |
| 110021029    | 2,9      | 61       | 33       |
| 110021030    | 3,0      | 61       | 33       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110021031    | 3,1      | 65       | 36       |
| 110021032    | 3,2      | 65       | 36       |
| 110021033    | 3,3      | 65       | 36       |
| 110021034    | 3,4      | 70       | 39       |
| 110021035    | 3,5      | 70       | 39       |
| 110021036    | 3,6      | 70       | 39       |
| 110021037    | 3,7      | 70       | 39       |
| 110021038    | 3,8      | 75       | 43       |
| 110021039    | 3,9      | 75       | 43       |
| 110021040    | 4,0      | 75       | 43       |
| 110021041    | 4,1      | 75       | 43       |
| 110021042    | 4,2      | 75       | 43       |
| 110021043    | 4,3      | 80       | 47       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110021044    | 4,4      | 80       | 47       |
| 110021045    | 4,5      | 80       | 47       |
| 110021046    | 4,6      | 80       | 47       |
| 110021047    | 4,7      | 80       | 47       |
| 110021048    | 4,8      | 86       | 52       |
| 110021049    | 4,9      | 86       | 52       |
| 110021050    | 5,0      | 86       | 52       |
| 110021051    | 5,1      | 86       | 52       |
| 110021052    | 5,2      | 86       | 52       |
| 110021053    | 5,3      | 86       | 52       |
| 110021054    | 5,4      | 93       | 57       |
| 110021055    | 5,5      | 93       | 57       |
| 110021056    | 5,6      | 93       | 57       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110021057    | 5,7      | 93       | 57       |
| 110021058    | 5,8      | 93       | 57       |
| 110021059    | 5,9      | 93       | 57       |
| 110021060    | 6,0      | 93       | 57       |
| 110021061    | 6,1      | 101      | 63       |
| 110021062    | 6,2      | 101      | 63       |
| 110021063    | 6,3      | 101      | 63       |
| 110021064    | 6,4      | 101      | 63       |
| 110021065    | 6,5      | 101      | 63       |
| 110021066    | 6,6      | 101      | 63       |
| 110021067    | 6,7      | 101      | 63       |
| 110021068    | 6,8      | 109      | 69       |
| 110021069    | 6,9      | 109      | 69       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110021070    | 7,0      | 109      | 69       |
| 110021071    | 7,1      | 109      | 69       |
| 110021072    | 7,2      | 109      | 69       |
| 110021073    | 7,3      | 109      | 69       |
| 110021074    | 7,4      | 109      | 69       |
| 110021075    | 7,5      | 109      | 69       |
| 110021076    | 7,6      | 117      | 75       |
| 110021077    | 7,7      | 117      | 75       |
| 110021078    | 7,8      | 117      | 75       |
| 110021079    | 7,9      | 117      | 75       |
| 110021080    | 8,0      | 117      | 75       |
| 110021081    | 8,1      | 117      | 75       |
| 110021082    | 8,2      | 117      | 75       |

# FUERTE / DRILL BITS

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110021083    | 8,3      | 117      | 75       |
| 110021084    | 8,4      | 117      | 75       |
| 110021085    | 8,5      | 117      | 75       |
| 110021086    | 8,6      | 125      | 81       |
| 110021087    | 8,7      | 125      | 81       |
| 110021088    | 8,8      | 125      | 81       |
| 110021089    | 8,9      | 125      | 81       |
| 110021090    | 9,0      | 125      | 81       |
| 110021091    | 9,1      | 125      | 81       |
| 110021092    | 9,2      | 125      | 81       |
| 110021093    | 9,3      | 125      | 81       |
| 110021094    | 9,4      | 125      | 81       |
| 110021095    | 9,5      | 125      | 81       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110021096    | 9,6      | 133      | 87       |
| 110021097    | 9,7      | 133      | 87       |
| 110021098    | 9,8      | 133      | 87       |
| 110021099    | 9,9      | 133      | 87       |
| 110021100    | 10,0     | 133      | 87       |
| 110021101    | 10,1     | 133      | 87       |
| 110021102    | 10,2     | 133      | 87       |
| 110021103    | 10,3     | 133      | 87       |
| 110021104    | 10,4     | 133      | 87       |
| 110021105    | 10,5     | 133      | 87       |
| 110021106    | 10,6     | 142      | 94       |
| 110021107    | 10,7     | 142      | 94       |
| 110021108    | 10,8     | 142      | 94       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 1100260109   | 10,9     | 142      | 94       |
| 1100260110   | 11,0     | 142      | 94       |
| 1100260111   | 11,1     | 142      | 94       |
| 1100260112   | 11,2     | 142      | 94       |
| 1100260113   | 11,3     | 142      | 94       |
| 1100260114   | 11,4     | 142      | 94       |
| 1100260115   | 11,5     | 142      | 94       |
| 1100260116   | 11,6     | 142      | 94       |
| 1100260117   | 11,7     | 142      | 94       |
| 1100260118   | 11,8     | 142      | 94       |
| 1100260119   | 11,9     | 151      | 101      |
| 1100260120   | 12,0     | 151      | 101      |
| 1100260121   | 12,1     | 151      | 101      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110021122    | 12,2     | 151      | 101      |
| 110021123    | 12,3     | 151      | 101      |
| 110021124    | 12,4     | 151      | 101      |
| 110021125    | 12,5     | 151      | 101      |
| 110021126    | 12,6     | 151      | 101      |
| 110021127    | 12,7     | 151      | 101      |
| 110021128    | 12,8     | 151      | 101      |
| 110021129    | 12,9     | 151      | 101      |
| 110021130    | 13,0     | 151      | 101      |
| 110021135    | 13,5     | 160      | 108      |
| 110021140    | 14,0     | 160      | 108      |
| 110021145    | 14,5     | 169      | 114      |
| 110021150    | 15,0     | 169      | 114      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110021155    | 15,5     | 178      | 120      |
| 110021160    | 16,0     | 178      | 120      |
| 110021165    | 16,5     | 184      | 125      |
| 110021170    | 17,0     | 184      | 125      |
| 110021175    | 17,5     | 191      | 130      |
| 110021180    | 18,0     | 191      | 130      |
| 110021185    | 18,5     | 198      | 135      |
| 110021190    | 19,0     | 198      | 135      |
| 110021195    | 19,5     | 205      | 140      |
| 110022200    | 20,0     | 205      | 140      |
|              |          |          |          |
|              |          |          |          |

## 338 SHORT DRILL BIT HSS-G TİN SHARPENED SERIES

Fully Sharpened Suitable For Cutting Alloy Steel, Cast Steel, Grey, Pig Iron, Tempered Graphite And Aluminum Alloy



| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110022005    | 0,5      | 22       | 6        |
| 110022006    | 0,6      | 24       | 7        |
| 110022007    | 0,7      | 28       | 9        |
| 110022008    | 0,8      | 30       | 10       |
| 110022009    | 0,9      | 32       | 11       |
| 110022010    | 1,0      | 34       | 12       |
| 110022011    | 1,1      | 36       | 14       |
| 110022012    | 1,2      | 38       | 14       |
| 110022013    | 1,3      | 38       | 14       |
| 110022014    | 1,4      | 40       | 18       |
| 110022015    | 1,5      | 40       | 18       |
| 110022016    | 1,6      | 43       | 20       |
| 110022017    | 1,7      | 43       | 20       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110022018    | 1,8      | 46       | 22       |
| 110022019    | 1,9      | 46       | 22       |
| 110022020    | 2,0      | 49       | 24       |
| 110022021    | 2,1      | 49       | 24       |
| 110022022    | 2,2      | 53       | 27       |
| 110022023    | 2,3      | 53       | 27       |
| 110022024    | 2,4      | 57       | 30       |
| 110022025    | 2,5      | 57       | 30       |
| 110022026    | 2,6      | 57       | 30       |
| 110022027    | 2,7      | 61       | 33       |
| 110022028    | 2,8      | 61       | 33       |
| 110022029    | 2,9      | 61       | 33       |
| 110022030    | 3,0      | 61       | 33       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110022031    | 3,1      | 65       | 36       |
| 110022032    | 3,2      | 65       | 36       |
| 110022033    | 3,3      | 65       | 36       |
| 110022034    | 3,4      | 70       | 39       |
| 110022035    | 3,5      | 70       | 39       |
| 110022036    | 3,6      | 70       | 39       |
| 110022037    | 3,7      | 70       | 39       |
| 110022038    | 3,8      | 75       | 43       |
| 110022039    | 3,9      | 75       | 43       |
| 110022040    | 4,0      | 75       | 43       |
| 110022041    | 4,1      | 75       | 43       |
| 110022042    | 4,2      | 75       | 43       |
| 110022043    | 4,3      | 80       | 47       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110022044    | 4,4      | 80       | 47       |
| 110022045    | 4,5      | 80       | 47       |
| 110022046    | 4,6      | 80       | 47       |
| 110022047    | 4,7      | 80       | 47       |
| 110022048    | 4,8      | 86       | 52       |
| 110022049    | 4,9      | 86       | 52       |
| 110022050    | 5,0      | 86       | 52       |
| 110022051    | 5,1      | 86       | 52       |
| 110022052    | 5,2      | 86       | 52       |
| 110022053    | 5,3      | 86       | 52       |
| 110022054    | 5,4      | 93       | 57       |
| 110022055    | 5,5      | 93       | 57       |
| 110022056    | 5,6      | 93       | 57       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110022057    | 5,7      | 93       | 57       |
| 110022058    | 5,8      | 93       | 57       |
| 110022059    | 5,9      | 93       | 57       |
| 110022060    | 6,0      | 93       | 57       |
| 110022061    | 6,1      | 101      | 63       |
| 110022062    | 6,2      | 101      | 63       |
| 110022063    | 6,3      | 101      | 63       |
| 110022064    | 6,4      | 101      | 63       |
| 110022065    | 6,5      | 101      | 63       |
| 110022066    | 6,6      | 101      | 63       |
| 110022067    | 6,7      | 101      | 63       |
| 110022068    | 6,8      | 109      | 69       |
| 110022069    | 6,9      | 109      | 69       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110022070    | 7,0      | 109      | 69       |
| 110022071    | 7,1      | 109      | 69       |
| 110022072    | 7,2      | 109      | 69       |
| 110022073    | 7,3      | 109      | 69       |
| 110022074    | 7,4      | 109      | 69       |
| 110022075    | 7,5      | 109      | 69       |
| 110022076    | 7,6      | 117      | 75       |
| 110022077    | 7,7      | 117      | 75       |
| 110022078    | 7,8      | 117      | 75       |
| 110022079    | 7,9      | 117      | 75       |
| 110022080    | 8,0      | 117      | 75       |
| 110022081    | 8,1      | 117      | 75       |
| 110022082    | 8,2      | 117      | 75       |

# FUERTE / DRILL BITS

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110022083    | 8,3      | 117      | 75       |
| 110022084    | 8,4      | 117      | 75       |
| 110022085    | 8,5      | 117      | 75       |
| 110022086    | 8,6      | 125      | 81       |
| 110022087    | 8,7      | 125      | 81       |
| 110022088    | 8,8      | 125      | 81       |
| 110022089    | 8,9      | 125      | 81       |
| 110022090    | 9,0      | 125      | 81       |
| 110022091    | 9,1      | 125      | 81       |
| 110022092    | 9,2      | 125      | 81       |
| 110022093    | 9,3      | 125      | 81       |
| 110022094    | 9,4      | 125      | 81       |
| 110022095    | 9,5      | 125      | 81       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110022096    | 9,6      | 133      | 87       |
| 110022097    | 9,7      | 133      | 87       |
| 110022098    | 9,8      | 133      | 87       |
| 110022099    | 9,9      | 133      | 87       |
| 110022100    | 10,0     | 133      | 87       |
| 110022101    | 10,1     | 133      | 87       |
| 110022102    | 10,2     | 133      | 87       |
| 110022103    | 10,3     | 133      | 87       |
| 110022104    | 10,4     | 133      | 87       |
| 110022105    | 10,5     | 133      | 87       |
| 110022106    | 10,6     | 142      | 94       |
| 110022107    | 10,7     | 142      | 94       |
| 110022108    | 10,8     | 142      | 94       |

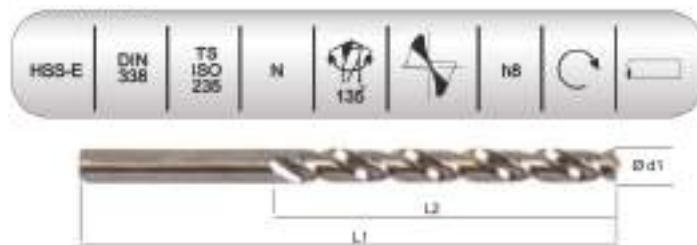
| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110022109    | 10,9     | 142      | 94       |
| 110022110    | 11,0     | 142      | 94       |
| 110022111    | 11,1     | 142      | 94       |
| 110022112    | 11,2     | 142      | 94       |
| 110022113    | 11,3     | 142      | 94       |
| 110022114    | 11,4     | 142      | 94       |
| 110022115    | 11,5     | 142      | 94       |
| 110022116    | 11,6     | 142      | 94       |
| 110022117    | 11,7     | 142      | 94       |
| 110022118    | 11,8     | 142      | 94       |
| 110022119    | 11,9     | 151      | 101      |
| 110022120    | 12,0     | 151      | 101      |
| 110022121    | 12,1     | 151      | 101      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110022122    | 12,2     | 151      | 101      |
| 110022123    | 12,3     | 151      | 101      |
| 110022124    | 12,4     | 151      | 101      |
| 110022125    | 12,5     | 151      | 101      |
| 110022126    | 12,6     | 151      | 101      |
| 110022127    | 12,7     | 151      | 101      |
| 110022128    | 12,8     | 151      | 101      |
| 110022130    | 13,0     | 151      | 101      |
| 110022135    | 13,5     | 160      | 108      |
| 110022140    | 14,0     | 160      | 108      |
| 110022145    | 14,5     | 169      | 114      |
| 110022150    | 15,0     | 169      | 114      |
| 110022155    | 15,5     | 178      | 120      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110022160    | 16,0     | 178      | 120      |
| 110022165    | 16,5     | 184      | 125      |
| 110022170    | 17,0     | 184      | 125      |
| 110022175    | 17,5     | 191      | 130      |
| 110022180    | 18,0     | 191      | 130      |
| 110022185    | 18,5     | 198      | 135      |
| 110022190    | 19,0     | 198      | 135      |
| 110022195    | 19,5     | 205      | 140      |
| 110022200    | 20,0     | 205      | 140      |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |

## CYLINDRICAL SHAFT DRILL BIT GOLD SERIES

Cross and Sharpened and Precisely Sharpened Tip, Resistant to Acid and Heat For Tough Machining Jobs, Suitable For Cutting Steel, Casts, Spring Steel, Pig Iron and Tempered Cast Metarials



| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120027005    | 0,5      | 22       | 6        |
| 120027006    | 0,6      | 24       | 7        |
| 120027007    | 0,7      | 28       | 9        |
| 120027008    | 0,8      | 30       | 10       |
| 120027009    | 0,9      | 32       | 11       |
| 120027010    | 1,0      | 34       | 12       |
| 120027011    | 1,1      | 36       | 14       |
| 120027012    | 1,2      | 38       | 14       |
| 120027013    | 1,3      | 38       | 14       |
| 120027014    | 1,4      | 40       | 18       |
| 120027015    | 1,5      | 40       | 18       |
| 120027016    | 1,6      | 43       | 20       |
| 120027017    | 1,7      | 43       | 20       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120027018    | 1,8      | 46       | 22       |
| 120027019    | 1,9      | 46       | 22       |
| 120027020    | 2,0      | 49       | 24       |
| 120027021    | 2,1      | 49       | 24       |
| 120027022    | 2,2      | 53       | 27       |
| 120027023    | 2,3      | 53       | 27       |
| 120027024    | 2,4      | 57       | 30       |
| 120027025    | 2,5      | 57       | 30       |
| 120027026    | 2,6      | 57       | 30       |
| 120027027    | 2,7      | 61       | 33       |
| 120027028    | 2,8      | 61       | 33       |
| 120027029    | 2,9      | 61       | 33       |
| 120027030    | 3,0      | 61       | 33       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120027031    | 3,1      | 65       | 36       |
| 120027032    | 3,2      | 65       | 36       |
| 120027033    | 3,3      | 65       | 36       |
| 120027034    | 3,4      | 70       | 39       |
| 120027035    | 3,5      | 70       | 39       |
| 120027036    | 3,6      | 70       | 39       |
| 120027037    | 3,7      | 70       | 39       |
| 120027038    | 3,8      | 75       | 43       |
| 120027039    | 3,9      | 75       | 43       |
| 120027040    | 4,0      | 75       | 43       |
| 120027041    | 4,1      | 75       | 43       |
| 120027042    | 4,2      | 75       | 43       |
| 120027043    | 4,3      | 80       | 47       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120027044    | 4,4      | 80       | 47       |
| 120027045    | 4,5      | 80       | 47       |
| 120027046    | 4,6      | 80       | 47       |
| 120027047    | 4,7      | 80       | 47       |
| 120027048    | 4,8      | 86       | 52       |
| 120027049    | 4,9      | 86       | 52       |
| 120027050    | 5,0      | 86       | 52       |
| 120027051    | 5,1      | 86       | 52       |
| 120027052    | 5,2      | 86       | 52       |
| 120027053    | 5,3      | 86       | 52       |
| 120027054    | 5,4      | 93       | 57       |
| 120027055    | 5,5      | 93       | 57       |
| 120027056    | 5,6      | 93       | 57       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120027057    | 5,7      | 93       | 57       |
| 120027058    | 5,8      | 93       | 57       |
| 120027059    | 5,9      | 93       | 57       |
| 120027060    | 6,0      | 93       | 57       |
| 120027061    | 6,1      | 101      | 63       |
| 120027062    | 6,2      | 101      | 63       |
| 120027063    | 6,3      | 101      | 63       |
| 120027064    | 6,4      | 101      | 63       |
| 120027065    | 6,5      | 101      | 63       |
| 120027066    | 6,6      | 101      | 63       |
| 120027067    | 6,7      | 101      | 63       |
| 110022068    | 6,8      | 109      | 69       |
| 120027069    | 6,9      | 109      | 69       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120027070    | 7,0      | 109      | 69       |
| 120027071    | 7,1      | 109      | 69       |
| 120027072    | 7,2      | 109      | 69       |
| 120027073    | 7,3      | 109      | 69       |
| 120027074    | 7,4      | 109      | 69       |
| 120027075    | 7,5      | 109      | 69       |
| 120027076    | 7,6      | 117      | 75       |
| 120027077    | 7,7      | 117      | 75       |
| 120027078    | 7,8      | 117      | 75       |
| 120027079    | 7,9      | 117      | 75       |
| 120027080    | 8,0      | 117      | 75       |
| 120027081    | 8,1      | 117      | 75       |
| 120027082    | 8,2      | 117      | 75       |



# FUERTE / DRILL BITS

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120027083    | 8,3      | 117      | 75       |
| 120027084    | 8,4      | 117      | 75       |
| 120027085    | 8,5      | 117      | 75       |
| 120027086    | 8,6      | 125      | 81       |
| 120027087    | 8,7      | 125      | 81       |
| 120027088    | 8,8      | 125      | 81       |
| 120027089    | 8,9      | 125      | 81       |
| 120027090    | 9,0      | 125      | 81       |
| 120027091    | 9,1      | 125      | 81       |
| 120027092    | 9,2      | 125      | 81       |
| 120027093    | 9,3      | 125      | 81       |
| 120027094    | 9,4      | 125      | 81       |
| 120027095    | 9,5      | 125      | 81       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120027096    | 9,6      | 133      | 87       |
| 120027097    | 9,7      | 133      | 87       |
| 120027098    | 9,8      | 133      | 87       |
| 120027099    | 9,9      | 133      | 87       |
| 120027100    | 10,0     | 133      | 87       |
| 120027101    | 10,1     | 133      | 87       |
| 120027102    | 10,2     | 133      | 87       |
| 120027103    | 10,3     | 133      | 87       |
| 120027104    | 10,4     | 133      | 87       |
| 120027105    | 10,5     | 133      | 87       |
| 120027106    | 10,6     | 142      | 94       |
| 120027107    | 10,7     | 142      | 94       |
| 120027108    | 10,8     | 142      | 94       |

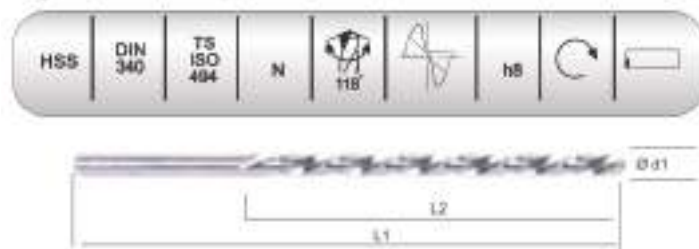
| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120027109    | 10,9     | 142      | 94       |
| 120027110    | 11,0     | 142      | 94       |
| 120027111    | 11,1     | 142      | 94       |
| 120027112    | 11,2     | 142      | 94       |
| 120027113    | 11,3     | 142      | 94       |
| 120027114    | 11,4     | 142      | 94       |
| 120022115    | 11,5     | 142      | 94       |
| 110027116    | 11,6     | 142      | 94       |
| 120027117    | 11,7     | 142      | 94       |
| 120027118    | 11,8     | 142      | 94       |
| 120027119    | 11,9     | 151      | 101      |
| 120027120    | 12,0     | 151      | 101      |
| 120027121    | 12,1     | 151      | 101      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120027122    | 12,2     | 151      | 101      |
| 120027123    | 12,3     | 151      | 101      |
| 120027124    | 12,4     | 151      | 101      |
| 120027125    | 12,5     | 151      | 101      |
| 120027126    | 12,6     | 151      | 101      |
| 120027127    | 12,7     | 151      | 101      |
| 120027128    | 12,8     | 151      | 101      |
| 120027130    | 13,0     | 151      | 101      |
| 120027135    | 13,5     | 160      | 108      |
| 120027140    | 14,0     | 160      | 108      |
| 120027145    | 14,5     | 169      | 114      |
| 120027150    | 15,0     | 169      | 114      |
| 120027155    | 15,5     | 178      | 120      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120027160    | 16,0     | 178      | 120      |
| 120027165    | 16,5     | 184      | 125      |
| 120027170    | 17,0     | 184      | 125      |
| 120027175    | 17,5     | 191      | 130      |
| 120027180    | 18,0     | 191      | 130      |
| 120027185    | 18,5     | 198      | 135      |
| 120027190    | 19,0     | 198      | 135      |
| 120027195    | 19,5     | 205      | 140      |
| 120027200    | 20,0     | 205      | 140      |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |

## CYLINDRICAL SHAFT LONG DRILL BIT HSS-G SHARPENED SERIES

Fully Sharpened Suitable For Cutting Alloy Steel, Cast Steel, Grey, Pig Iron, Tempered Graphite And Aluminum Alloy



| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110031010    | 1,0      | 56       | 33       |
| 110031015    | 1,5      | 70       | 45       |
| 110031020    | 2,0      | 85       | 56       |
| 110031025    | 2,5      | 95       | 62       |
| 110031030    | 3,0      | 100      | 66       |
| 110031035    | 3,5      | 112      | 73       |
| 110031040    | 4,0      | 119      | 78       |
| 110031045    | 4,5      | 126      | 82       |
| 110031050    | 5,0      | 132      | 87       |
| 110031055    | 5,5      | 139      | 91       |
| 110031060    | 6,0      | 148      | 97       |
| 110031065    | 6,5      | 148      | 97       |
| 110031070    | 7,0      | 156      | 102      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110031075    | 7,5      | 156      | 102      |
| 110031080    | 8,0      | 165      | 109      |
| 110031085    | 8,5      | 165      | 109      |
| 110031090    | 9,0      | 175      | 115      |
| 110031095    | 9,5      | 175      | 115      |
| 110031100    | 10,0     | 184      | 121      |
| 110031105    | 10,5     | 184      | 121      |
| 110031110    | 11,0     | 195      | 128      |
| 110031115    | 11,5     | 195      | 128      |
| 110031120    | 12,0     | 205      | 134      |
| 110031125    | 12,5     | 205      | 134      |
| 110031130    | 13,0     | 205      | 134      |
| 110031135    | 13,5     | 214      | 140      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110031140    | 14,0     | 214      | 140      |
| 110031145    | 14,5     | 220      | 144      |
| 110031150    | 15,0     | 220      | 144      |
| 110031155    | 15,5     | 227      | 149      |
| 110031160    | 16,0     | 227      | 149      |
| 110031165    | 16,5     | 235      | 154      |
| 110031170    | 17,0     | 235      | 154      |
| 110031175    | 17,5     | 241      | 158      |
| 110031180    | 18,0     | 241      | 158      |
| 110031185    | 18,5     | 247      | 162      |
| 110031190    | 19,0     | 247      | 162      |
| 110031195    | 19,5     | 254      | 166      |
| 110031200    | 20,0     | 254      | 166      |



# FUERTE / DRILL BITS

## CYLINDRICAL SHAFT LONG DRILL BIT HSS-E GT SHARPENED SERIES

Fully Sharpened Suitable For Cutting Alloy Steel, Cast Steel, Grey, Pig Iron, Tempered Graphite And Aluminum Alloy



| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120041010    | 1,0      | 56       | 33       |
| 120041015    | 1,5      | 70       | 45       |
| 120041020    | 2,0      | 85       | 56       |
| 120041025    | 2,5      | 95       | 62       |
| 120041030    | 3,0      | 100      | 66       |
| 120041035    | 3,5      | 112      | 73       |
| 120041040    | 4,0      | 119      | 78       |
| 120041045    | 4,5      | 126      | 82       |
| 120041050    | 5,0      | 132      | 87       |
| 120041055    | 5,5      | 139      | 91       |
| 120041060    | 6,0      | 148      | 97       |
| 120041065    | 6,5      | 148      | 97       |
| 120041070    | 7,0      | 156      | 102      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120041075    | 7,5      | 156      | 102      |
| 120041080    | 8,0      | 165      | 109      |
| 120041085    | 8,5      | 165      | 109      |
| 120041090    | 9,0      | 175      | 115      |
| 120041095    | 9,5      | 175      | 115      |
| 120041100    | 10,0     | 184      | 121      |
| 120041105    | 10,5     | 184      | 121      |
| 120041110    | 11,0     | 195      | 128      |
| 120041115    | 11,5     | 195      | 128      |
| 120041120    | 12,0     | 205      | 134      |
| 120041125    | 12,5     | 205      | 134      |
| 120041130    | 13,0     | 205      | 134      |
| 120041135    | 13,5     | 214      | 140      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120041140    | 14,0     | 214      | 140      |
| 120041145    | 14,5     | 220      | 144      |
| 120041150    | 15,0     | 220      | 144      |
| 120041155    | 15,5     | 227      | 149      |
| 120041160    | 16,0     | 227      | 149      |
| 120041165    | 16,5     | 235      | 154      |
| 120041170    | 17,0     | 235      | 154      |
| 120041175    | 17,5     | 241      | 158      |
| 120041180    | 18,0     | 241      | 158      |
| 120041185    | 18,5     | 247      | 162      |
| 120041190    | 19,0     | 247      | 162      |
| 120041195    | 19,5     | 254      | 166      |
| 120041200    | 20,0     | 254      | 166      |

## CYLINDRICAL SHAFT 1869/1 LONG DRILL BIT NR-1 SHARPENED SERIES

Fully Sharpened Suitable For Cutting Alloy Steel, Cast Steel, Grey, Pig Iron, Tempered Graphite And Aluminum Alloy

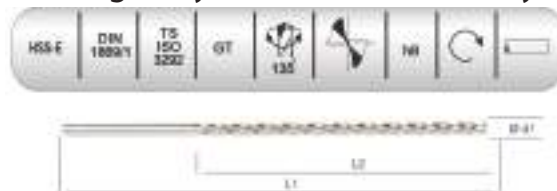


| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110051020    | 2,0      | 125      | 85       |
| 110051025    | 2,5      | 140      | 95       |
| 110051030    | 3,0      | 150      | 100      |
| 110051035    | 3,5      | 165      | 115      |
| 110051040    | 4,0      | 175      | 120      |
| 110051045    | 4,5      | 185      | 125      |
| 110051050    | 5,0      | 195      | 135      |
| 110051055    | 5,5      | 205      | 140      |
| 110051060    | 6,0      | 205      | 140      |
| 110051065    | 6,5      | 215      | 150      |
| 110051070    | 7,0      | 225      | 155      |
| 110051075    | 7,5      | 225      | 155      |
| 110051080    | 8,0      | 240      | 165      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110051085    | 8,5      | 240      | 165      |
| 110051090    | 9,0      | 250      | 170      |
| 110051095    | 9,5      | 250      | 170      |
| 110051100    | 10,0     | 265      | 180      |
| 110051105    | 10,5     | 265      | 185      |
| 110051110    | 11,0     | 280      | 195      |
| 110051115    | 11,5     | 280      | 195      |
| 110051120    | 12,0     | 295      | 205      |
| 110051125    | 12,5     | 295      | 205      |
| 110051130    | 13,0     | 295      | 205      |
|              |          |          |          |
|              |          |          |          |

## CYLINDRICAL SHAFT 1869/1 EXTRA LONG DRILL BIT NR-1 HSSE-E GT SHARPENED SERIES

Fully Sharpened Suitable For Cutting Alloy Steel, Cast Steel, Grey, Pig Iron, Tempered Graphite And Aluminum Alloy



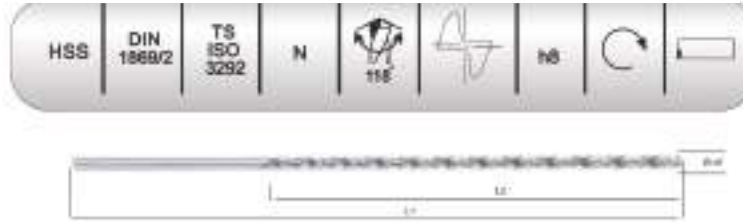
| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110051020    | 2,0      | 125      | 85       |
| 110051025    | 2,5      | 140      | 95       |
| 110051030    | 3,0      | 150      | 100      |
| 110051035    | 3,5      | 165      | 115      |
| 110051040    | 4,0      | 175      | 120      |
| 110051045    | 4,5      | 185      | 125      |
| 110051050    | 5,0      | 195      | 135      |
| 110051055    | 5,5      | 205      | 140      |
| 110051060    | 6,0      | 205      | 140      |
| 110051065    | 6,5      | 215      | 150      |
| 110051070    | 7,0      | 225      | 155      |
| 110051075    | 7,5      | 225      | 155      |
| 110051080    | 8,0      | 240      | 165      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110051085    | 8,5      | 240      | 165      |
| 110051090    | 9,0      | 250      | 170      |
| 110051095    | 9,5      | 250      | 170      |
| 110051100    | 10,0     | 265      | 180      |
| 110051105    | 10,5     | 265      | 185      |
| 110051110    | 11,0     | 280      | 195      |
| 110051115    | 11,5     | 280      | 195      |
| 110051120    | 12,0     | 295      | 205      |
| 110051125    | 12,5     | 295      | 205      |
| 110051130    | 13,0     | 295      | 205      |
|              |          |          |          |
|              |          |          |          |

# FUERTE / DRILL BITS

## CYLINDRICAL SHAFT 1869/2 EXTRA LONG DRILL BIT NR-2 HSS SHARPENED SERIES

Fully Sharpened Suitable For Cutting Alloy Steel, Cast Steel, Grey, Pig Iron, Tempered Graphite And Aluminum Alloy

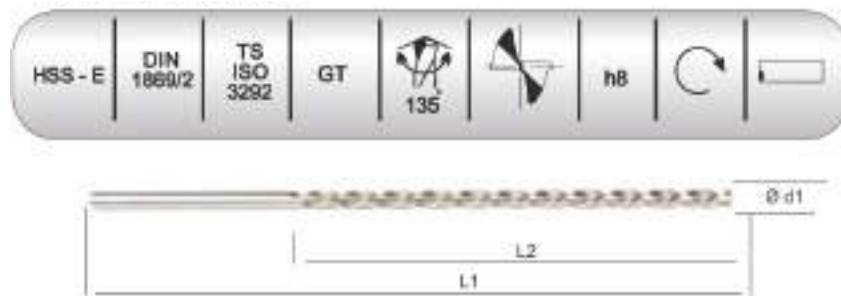


| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110071030    | 3,0      | 190      | 130      |
| 110071035    | 5,5      | 210      | 145      |
| 110071040    | 4,0      | 220      | 150      |
| 110071045    | 4,5      | 235      | 160      |
| 110071050    | 5,0      | 245      | 170      |
| 110071055    | 5,5      | 260      | 180      |
| 110071060    | 6,0      | 260      | 180      |
| 110071065    | 6,5      | 275      | 190      |
| 110071070    | 7,0      | 290      | 200      |
| 110071075    | 7,5      | 290      | 200      |
| 110071080    | 8,0      | 305      | 210      |
| 110071085    | 8,5      | 305      | 210      |
| 110071090    | 9,0      | 320      | 220      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110071095    | 9,5      | 320      | 220      |
| 110071100    | 10,0     | 340      | 235      |
| 110071105    | 10,5     | 340      | 235      |
| 110071110    | 11,0     | 365      | 250      |
| 110071115    | 11,5     | 365      | 250      |
| 110071120    | 12,0     | 375      | 260      |
| 110071125    | 12,5     | 375      | 260      |
| 110071130    | 13,0     | 375      | 260      |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |

## CYLINDRICAL SHAFT 1869/2 EXTRA LONG DRILL BIT NR-2 HSSE-E GT SHARPENED SERIES

Fully Sharpened Suitable For Cutting Alloy Steel, Cast Steel, Grey, Pig Iron, Tempered Graphite And Aluminum Alloy



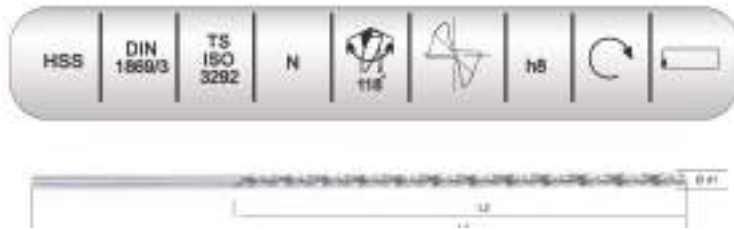
| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120081030    | 3,0      | 190      | 130      |
| 120081035    | 5,5      | 210      | 145      |
| 120081040    | 4,0      | 220      | 150      |
| 120081045    | 4,5      | 235      | 160      |
| 120081050    | 5,0      | 245      | 170      |
| 120081055    | 5,5      | 260      | 180      |
| 120081060    | 6,0      | 260      | 180      |
| 120081065    | 6,5      | 275      | 190      |
| 120081070    | 7,0      | 290      | 200      |
| 120081075    | 7,5      | 290      | 200      |
| 120081080    | 8,0      | 305      | 210      |
| 120081085    | 8,5      | 305      | 210      |
| 120081090    | 9,0      | 320      | 220      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120081095    | 9,5      | 320      | 220      |
| 120081100    | 10,0     | 340      | 235      |
| 120081105    | 10,5     | 340      | 235      |
| 120081110    | 11,0     | 365      | 250      |
| 120081115    | 11,5     | 365      | 250      |
| 120081120    | 12,0     | 375      | 260      |
| 120081125    | 12,5     | 375      | 260      |
| 120081130    | 13,0     | 375      | 260      |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |

# FUERTE / DRILL BITS

CYLINDRICAL SHAFT 1869/3 EXTRA LONG DRILL BIT NR-3 HSS SHARPENED SERIES

Fully Sharpened Suitable For Cutting Alloy Steel, Cast Steel, Grey, Pig Iron, Tempered Graphite And Aluminum Alloy



| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110091035    | 3,5      | 265      | 180      |
| 110091040    | 4,0      | 280      | 190      |
| 110091045    | 4,5      | 295      | 200      |
| 110091050    | 5,0      | 315      | 210      |
| 110091055    | 5,5      | 330      | 225      |
| 110091060    | 6,0      | 330      | 225      |
| 110091065    | 6,5      | 350      | 235      |
| 110091070    | 7,0      | 370      | 250      |
| 110091075    | 7,5      | 370      | 250      |
| 110091080    | 8,0      | 390      | 265      |
| 110091085    | 8,5      | 390      | 265      |
| 110091090    | 9,0      | 410      | 280      |
| 110091095    | 9,5      | 410      | 280      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110091100    | 10,0     | 430      | 295      |
| 110091105    | 10,5     | 430      | 295      |
| 110091110    | 11,0     | 455      | 310      |
| 110091115    | 11,5     | 455      | 310      |
| 110091120    | 12,0     | 480      | 330      |
| 110091125    | 12,5     | 480      | 330      |
| 110091130    | 13,0     | 480      | 330      |
| 120041010    | 1,0      | 56       | 33       |
| 120041015    | 1,5      | 70       | 45       |
| 120041020    | 2,0      | 85       | 56       |
| 120041025    | 2,5      | 95       | 62       |
| 120041030    | 3,0      | 100      | 66       |
| 120041035    | 3,5      | 112      | 73       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120041040    | 4,0      | 119      | 78       |
| 120041045    | 4,5      | 126      | 82       |
| 120041050    | 5,0      | 132      | 87       |
| 120041055    | 5,5      | 139      | 91       |
| 120041060    | 6,0      | 148      | 97       |
| 120041065    | 6,5      | 148      | 97       |
| 120041070    | 7,0      | 156      | 102      |
| 120041075    | 7,5      | 156      | 102      |
| 120041080    | 8,0      | 165      | 109      |
| 120041085    | 8,5      | 165      | 109      |
| 120041090    | 9,0      | 175      | 115      |
| 120041095    | 9,5      | 175      | 115      |
| 120041100    | 10,0     | 184      | 121      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120041105    | 10,5     | 184      | 121      |
| 120041110    | 11,0     | 195      | 128      |
| 120041115    | 11,5     | 195      | 128      |
| 120041120    | 12,0     | 205      | 134      |
| 120041125    | 12,5     | 205      | 134      |
| 120041130    | 13,0     | 205      | 134      |
| 120041135    | 13,5     | 214      | 140      |
| 120041140    | 14,0     | 214      | 140      |
| 120041145    | 14,5     | 220      | 144      |
| 120041150    | 15,0     | 220      | 144      |
| 120041155    | 15,5     | 227      | 149      |
| 120041160    | 16,0     | 227      | 149      |
| 120041165    | 16,5     | 235      | 154      |

[illegible]

# FUERTE / DRILL BITS

## CYLINDRICAL SHAFT 1869/3 EXTRA LONG DRILL BIT NR-3 HSS-E GT SHARPENED SERIES

Fully Sharpened Suitable For Cutting Alloy Steel, Cast Steel, Grey, Pig Iron, Tempered Graphite And Aluminum Alloy



| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120101035    | 3,5      | 265      | 180      |
| 120101040    | 4,0      | 280      | 190      |
| 120101045    | 4,5      | 295      | 200      |
| 120101050    | 5,0      | 315      | 210      |
| 120101055    | 5,5      | 330      | 225      |
| 120101060    | 6,0      | 330      | 225      |
| 120101065    | 6,5      | 350      | 235      |
| 120101070    | 7,0      | 370      | 250      |
| 120101075    | 7,5      | 370      | 250      |
| 120101080    | 8,0      | 390      | 265      |
| 120101085    | 8,5      | 390      | 265      |
| 120101090    | 9,0      | 410      | 280      |
| 120101095    | 9,5      | 410      | 280      |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 120101100    | 10,0     | 430      | 295      |
| 120101105    | 10,5     | 430      | 295      |
| 120101110    | 11,0     | 455      | 310      |
| 120101115    | 11,5     | 455      | 310      |
| 120101120    | 12,0     | 480      | 330      |
| 120101125    | 12,5     | 480      | 330      |
| 120101130    | 13,0     | 480      | 330      |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |

## 345 MORK CONICAL SERIES CANICAL SHAFT DRILL BIT



| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110111080    | 8,0      | 156      | 6        |
| 110111085    | 8,5      | 156      | 7        |
| 110111090    | 9,0      | 162      | 9        |
| 110111095    | 9,5      | 162      | 10       |
| 110111100    | 10,0     | 168      | 11       |
| 110111105    | 10,5     | 168      | 12       |
| 110111110    | 11,0     | 175      | 14       |
| 110111115    | 11,5     | 175      | 14       |
| 110111120    | 12,0     | 182      | 14       |
| 110111125    | 12,5     | 182      | 18       |
| 110111130    | 13,0     | 182      | 18       |
| 110111135    | 13,5     | 189      | 20       |
| 110111140    | 14,0     | 189      | 20       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110111145    | 14,5     | 212      | 22       |
| 110111150    | 15,0     | 212      | 22       |
| 110111155    | 15,5     | 218      | 24       |
| 110111160    | 16,0     | 218      | 24       |
| 110111165    | 16,5     | 223      | 27       |
| 110111170    | 17,0     | 223      | 27       |
| 110111175    | 17,5     | 228      | 30       |
| 110111180    | 18,0     | 228      | 30       |
| 110111185    | 18,5     | 233      | 30       |
| 110111190    | 19,0     | 233      | 33       |
| 110111195    | 19,5     | 238      | 33       |
| 110111200    | 20,0     | 238      | 33       |
| 110111205    | 20,5     | 243      | 33       |

# FUERTE / DRILL BITS

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110111210    | 21,0     | 243      | 36       |
| 110111215    | 21,5     | 248      | 36       |
| 110111220    | 22,0     | 248      | 36       |
| 110111225    | 22,5     | 253      | 39       |
| 110111230    | 23,0     | 253      | 39       |
| 110111235    | 23,5     | 276      | 39       |
| 110111240    | 24,0     | 281      | 39       |
| 110111245    | 24,5     | 281      | 43       |
| 110111250    | 25,0     | 281      | 43       |
| 110111255    | 25,5     | 286      | 43       |
| 110111260    | 26,0     | 286      | 43       |
| 110111265    | 26,5     | 291      | 43       |
| 110111270    | 27,0     | 291      | 47       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110111275    | 27,5     | 291      | 47       |
| 110111280    | 28,0     | 291      | 47       |
| 110111285    | 28,5     | 296      | 47       |
| 110111290    | 29,0     | 296      | 47       |
| 110111295    | 29,5     | 296      | 52       |
| 110111300    | 30,0     | 296      | 52       |
| 110111305    | 30,5     | 301      | 52       |
| 110111310    | 31,0     | 301      | 52       |
| 110111315    | 31,5     | 334      | 52       |
| 110111320    | 32,0     | 334      | 52       |
| 110111325    | 32,5     | 334      | 57       |
| 110111330    | 33,0     | 334      | 57       |
| 110111335    | 33,5     | 339      | 57       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110111340    | 34,0     | 339      | 57       |
| 110111345    | 34,5     | 339      | 57       |
| 110111350    | 35,0     | 339      | 57       |
| 110111355    | 35,5     | 344      | 57       |
| 110111360    | 36,0     | 344      | 63       |
| 110111365    | 36,5     | 344      | 63       |
| 110111370    | 37,0     | 344      | 63       |
| 110111375    | 37,5     | 349      | 63       |
| 110111380    | 38,0     | 349      | 63       |
| 110111385    | 38,5     | 349      | 63       |
| 110111390    | 39,0     | 349      | 63       |
| 110111395    | 39,5     | 349      | 69       |
| 110111400    | 40,0     | 349      | 69       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 110111410    | 41,0     | 354      | 205      |
| 110111420    | 42,0     | 354      | 205      |
| 110111430    | 43,0     | 359      | 210      |
| 110111440    | 44,0     | 359      | 210      |
| 110111450    | 45,0     | 359      | 210      |
| 110111460    | 46,0     | 364      | 215      |
| 110111470    | 47,0     | 364      | 215      |
| 110111480    | 48,0     | 369      | 220      |
| 110111490    | 49,0     | 369      | 220      |
| 110111500    | 50,0     | 369      | 220      |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |

## 333 CENTRE DRILL FORM/A CENTRE PUNCH SERIES



| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|
| 110121010    | 1,0      | 3,2      | 31,5     | 1,3      |
| 110121012    | 1,25     | 3,2      | 31,5     | 1,6      |
| 110121016    | 1,6      | 4,0      | 35,5     | 2,0      |
| 110121020    | 2,0      | 5,0      | 40       | 2,5      |
| 110121025    | 2,5      | 6,3      | 45       | 3,1      |
| 110121031    | 3,15     | 8,0      | 50       | 3,9      |
| 110121040    | 4,0      | 10,0     | 56       | 5,0      |
| 110121050    | 5,0      | 12,5     | 63       | 6,3      |
| 110121063    | 6,3      | 16,0     | 71       | 8,0      |
| 110121080    | 8,0      | 20,0     | 80       | 10,1     |
| 110121100    | 10,0     | 25,0     | 100      | 12,8     |
|              |          |          |          |          |
|              |          |          |          |          |

# FUERTE / DRILL BITS

## LONG CENTRE DRILL

| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|
| 110131020    | 1,0      | 3,2      | 31,5     | 1,3      |
| 110131025    | 1,25     | 3,2      | 31,5     | 1,6      |
| 110131031    | 1,6      | 4,0      | 35,5     | 2,0      |
| 110131040    | 2,0      | 5,0      | 40       | 2,5      |
| 110131050    | 2,5      | 6,3      | 45       | 3,1      |

## DIN 33B CENTRE DRILL



| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|
| 110141020    | 2,0      | 8,0      | 50       | 2,5      |
| 110141025    | 2,5      | 10,0     | 56       | 3,1      |
| 110141031    | 3,15     | 11,2     | 60       | 3,9      |
| 110141040    | 4,0      | 14,0     | 67       | 5,0      |
| 110141050    | 25,05    | 18,0     | 75       | 6,3      |
| 110141063    | 6,3      | 20,0     | 80       | 8,0      |
| 110141080    | 8,0      | 25,0     | 100      | 10,1     |
| 110141100    | 10,0     | 31,5     | 100      | 12,8     |

## GRADED PLATE BORING DRILL BIT



| PRODUCT CODE | d1<br>mm — d2<br>mm | Ø    | L1<br>mm |
|--------------|---------------------|------|----------|
| 110161412    | 4-12                | 6,0  | 65       |
| 110161420    | 4-20                | 8,0  | 75       |
| 110161430    | 4-30                | 10,0 | 100      |
| 110161439    | 4-39                | 10,0 | 107      |
| —            | —                   | —    | —        |

# FUERTE / DRILL BITS



| PRODUCT CODE | d1<br>mm — d2<br>mm | Ø    | L1<br>mm |
|--------------|---------------------|------|----------|
| 110162412    | 4-12                | 6,0  | 65       |
| 110162420    | 4-20                | 8,0  | 75       |
| 110162430    | 4-30                | 10,0 | 100      |
| 110162439    | 4-39                | 10,0 | 107      |
| —            | —                   | —    | —        |

## COUNTER SINK BITS



| PRODUCT CODE | d1<br>mm | d2<br>mm | d3<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|----------|
| 110171063    | 6,3      | 5        | 1,5      | 45       | 5        |
| 110171083    | 8,3      | 6        | 2        | 50       | 6        |
| 110171104    | 10,4     | 6        | 2,5      | 50       | 7,1      |
| 110171124    | 12,4     | 8        | 2,8      | 56       | 8        |
| 110171165    | 16,5     | 10       | 3,2      | 60       | 10       |
| 110171205    | 20,5     | 10       | 3,5      | 63       | 12,5     |
| 110171250    | 25,0     | 10       | 3,8      | 67       | 15       |
| 110171315    | 31,5     | 18       | 4,2      | 71       | 18       |



# FUERTE / DRILL BITS



TIN

| PRODUCT CODE | d1<br>mm | d2<br>mm | d3<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|----------|
| 110172063    | 6,3      | 5        | 1,5      | 45       | 5        |
| 110172083    | 8,3      | 6        | 2        | 50       | 6        |
| 110172104    | 10,4     | 6        | 2,5      | 50       | 7,1      |
| 110172124    | 12,4     | 8        | 2,8      | 56       | 8        |
| 110172165    | 16,5     | 10       | 3,2      | 60       | 10       |
| 110172205    | 20,5     | 10       | 3,5      | 63       | 12,5     |
| 110172250    | 25,0     | 10       | 3,8      | 67       | 15       |
| 110172315    | 31,5     | 18       | 4,2      | 71       | 18       |

## 206 HAND DRIFT PUNCHES



| PRODUCT CODE | d1<br>mm | K    | L1<br>mm | L2<br>mm |
|--------------|----------|------|----------|----------|
| 110181030    | 3,0      | 2,24 | 50       | 25       |
| 110181035    | 3,5      | 2,70 | 58       | 29       |
| 110181040    | 4,0      | 3,15 | 62       | 31       |
| 110181045    | 4,5      | 3,55 | 71       | 35       |
| 110181050    | 5,0      | 4,00 | 76       | 38       |
| 110181055    | 5,5      | 4,50 | 81       | 41       |
| 110181060    | 6,0      | 4,50 | 87       | 44       |
| 110181065    | 6,5      | 5,00 | 93       | 47       |
| 110181070    | 7,0      | 5,60 | 93       | 47       |
| 110181075    | 7,5      | 5,60 | 100      | 50       |
| 110181080    | 8,0      | 6,30 | 107      | 54       |
| 110181085    | 8,5      | 6,30 | 107      | 54       |
| 110181090    | 9,0      | 7,10 | 115      | 58       |

| PRODUCT CODE | d1<br>mm | K     | L1<br>mm | L2<br>mm |
|--------------|----------|-------|----------|----------|
| 110181095    | 9,5      | 7,10  | 115      | 58       |
| 110181100    | 10,0     | 8,00  | 124      | 62       |
| 110181105    | 10,5     | 8,00  | 124      | 62       |
| 110181110    | 11,0     | 9,00  | 133      | 66       |
| 110181115    | 11,5     | 9,00  | 133      | 66       |
| 110181120    | 12,0     | 10,00 | 142      | 71       |
| 110181125    | 12,5     | 10,00 | 142      | 71       |
| 110181130    | 13,0     | 10,00 | 152      | 76       |
| 110181135    | 13,5     | 11,20 | 152      | 76       |
| 110181140    | 14,0     | 11,20 | 152      | 76       |
| 110181145    | 14,5     | 11,20 | 163      | 81       |
| 110181150    | 15,0     | 11,20 | 163      | 81       |
| 110181155    | 15,5     | 12,50 | 163      | 81       |

| PRODUCT CODE | d1<br>mm | K     | L1<br>mm | L2<br>mm |
|--------------|----------|-------|----------|----------|
| 110181160    | 16,0     | 12,50 | 163      | 81       |
| 110181165    | 16,5     | 12,50 | 175      | 87       |
| 110181170    | 17,0     | 12,50 | 175      | 87       |
| 110181175    | 17,5     | 14,00 | 175      | 87       |
| 110181180    | 18,0     | 14,00 | 175      | 87       |
| 110181185    | 18,5     | 14,00 | 188      | 93       |
| 110181190    | 19,0     | 14,00 | 188      | 93       |
| 110181195    | 19,5     | 16,00 | 188      | 93       |
| 110181200    | 20,0     | 16,00 | 188      | 93       |
| 110181210    | 21,0     | 16,00 | 201      | 100      |
| 110181220    | 22,0     | 18,00 | 201      | 100      |
| 110181230    | 23,0     | 18,00 | 201      | 100      |
| 110181240    | 24,0     | 20,00 | 215      | 107      |

| PRODUCT CODE | d1<br>mm | K     | L1<br>mm | L2<br>mm |
|--------------|----------|-------|----------|----------|
| 110181250    | 25,0     | 20,00 | 215      | 107      |
| 110181260    | 26,0     | 20,00 | 231      | 115      |
| 110181270    | 27,0     | 22,40 | 231      | 115      |
| 110181280    | 28,0     | 22,40 | 231      | 115      |
| 110181290    | 29,0     | 22,40 | 247      | 124      |
| 110181300    | 30,0     | 22,40 | 247      | 124      |

# FUERTE / DRILL BITS

## 212 MACHINE DRIFT PUNCHES



| PRODUCT CODE | d1 mm | K    | L1 mm | L2 mm |
|--------------|-------|------|-------|-------|
| 110191030    | 3,0   | 2,24 | 50    | 25    |
| 110191040    | 4,0   | 2,70 | 58    | 29    |
| 110191050    | 5,0   | 3,15 | 62    | 31    |
| 110191060    | 6,0   | 3,55 | 71    | 35    |
| 110191070    | 7,0   | 4,00 | 76    | 38    |
| 110191080    | 8,0   | 4,50 | 81    | 41    |
| 110191100    | 10,0  | 4,50 | 87    | 44    |
| 110191120    | 12,0  | 5,00 | 93    | 47    |
| 110191140    | 14,0  | 5,60 | 93    | 47    |
| 110191160    | 16,0  | 5,60 | 100   | 50    |
| 110191180    | 18,0  | 6,30 | 107   | 54    |
| 110191200    | 20,0  | 6,30 | 107   | 54    |

| PRODUCT CODE | d1 mm | K     | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 120191030    | 3,0   | 15,00 | 61    | 15    |
| 120191040    | 4,0   | 19,00 | 75    | 19    |
| 120191050    | 5,0   | 23,00 | 86    | 23    |
| 120191060    | 6,0   | 26,00 | 93    | 26    |
| 120191070    | 7,0   | 31,00 | 109   | 31    |
| 120191080    | 8,0   | 33,00 | 117   | 33    |
| 120191100    | 10,0  | 38,00 | 133   | 38    |
| 120191120    | 12,0  | 44,00 | 151   | 44    |
| 120191140    | 14,0  | 47,00 | 160   | 47    |
| 120191160    | 16,0  | 52,00 | 170   | 52    |
| 120191180    | 18,0  | 56,00 | 182   | 56    |
| 120191200    | 20,0  | 60,00 | 195   | 60    |

## CARBIDE DRIFT PUNCHES



SHORT



LONG

| PRODUCT CODE | d1 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|
| 140193030    | 3     | 50    | 14    |
| 140193040    | 4     | 51    | 18    |
| 140193050    | 5     | 51    | 20    |
| 140193060    | 6     | 58    | 20    |
| 140193070    | 7     | 64    | 22    |
| 140193080    | 8     | 64    | 25    |
| 140193090    | 9     | 73    | 25    |
| 140193100    | 10    | 73    | 25    |
| 140193110    | 11    | 84    | 25    |
| 140193120    | 12    | 84    | 25    |
| 140193130    | 13    | 84    | 25    |
| 140193140    | 14    | 84    | 25    |
| 140193150    | 15    | 93    | 25    |
| 140193160    | 16    | 93    | 25    |
| 140193180    | 18    | 93    | 25    |
| 140193200    | 20    | 100   | 25    |

| PRODUCT CODE | d1 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|
| 140203030    | 3     | 61    | 15    |
| 140203040    | 4     | 75    | 19    |
| 140203050    | 5     | 86    | 23    |
| 140203060    | 6     | 93    | 26    |
| 140203070    | 7     | 109   | 31    |
| 140203080    | 8     | 117   | 33    |
| 140203090    | 9     | 125   | 36    |
| 140203100    | 10    | 133   | 38    |
| 140203110    | 11    | 142   | 41    |
| 140203120    | 12    | 151   | 44    |
| 140203130    | 13    | 151   | 44    |
| 140203140    | 14    | 151   | 47    |
| 140203160    | 16    | 151   | 52    |
| 140203180    | 18    | 151   | 56    |
| 140203200    | 20    | 151   | 60    |

# FUERTE / DRILL BITS

## DIN 9534 CARBIDE DRILL BITS



| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 140213030    | 3,0      | 46       | 12       |
| 140213031    | 3,1      | 55       | 14       |
| 140213032    | 3,2      | 55       | 16       |
| 140213033    | 3,3      | 55       | 18       |
| 140213034    | 3,4      | 55       | 18       |
| 140213035    | 3,5      | 55       | 18       |
| 140213036    | 3,6      | 55       | 18       |
| 140213037    | 3,7      | 55       | 18       |
| 140213038    | 3,8      | 55       | 20       |
| 140213039    | 3,9      | 55       | 20       |
| 140213040    | 4,0      | 55       | 20       |
| 140213041    | 4,1      | 62       | 20       |
| 140213042    | 4,2      | 62       | 22       |
| 140213043    | 4,3      | 62       | 22       |
| 140213044    | 4,4      | 62       | 22       |
| 140213045    | 4,5      | 62       | 22       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 140213046    | 4,6      | 62       | 22       |
| 140213047    | 4,7      | 62       | 24       |
| 140213048    | 4,8      | 62       | 24       |
| 140213049    | 4,9      | 62       | 24       |
| 140213050    | 5,0      | 62       | 24       |
| 140213051    | 5,1      | 66       | 24       |
| 140213052    | 5,2      | 66       | 26       |
| 140213053    | 5,3      | 66       | 26       |
| 140213054    | 5,4      | 66       | 26       |
| 140213055    | 5,5      | 66       | 26       |
| 140213056    | 5,6      | 66       | 26       |
| 140213057    | 5,7      | 66       | 28       |
| 140213058    | 5,8      | 66       | 28       |
| 140213059    | 5,9      | 66       | 28       |
| 140213060    | 6,0      | 66       | 28       |
| 140213061    | 6,1      | 74       | 28       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 140213062    | 6,2      | 74       | 28       |
| 140213063    | 6,3      | 74       | 31       |
| 140213064    | 6,4      | 74       | 31       |
| 140213065    | 6,5      | 74       | 31       |
| 140213066    | 6,6      | 74       | 31       |
| 140213067    | 6,7      | 74       | 31       |
| 140213068    | 6,8      | 74       | 31       |
| 140213069    | 6,9      | 74       | 31       |
| 140213070    | 7,0      | 74       | 31       |
| 140213071    | 7,1      | 79       | 34       |
| 140213072    | 7,2      | 79       | 34       |
| 140213073    | 7,3      | 79       | 34       |
| 140213074    | 7,4      | 79       | 34       |
| 140213075    | 7,5      | 79       | 34       |
| 140213076    | 7,6      | 79       | 34       |
| 140213077    | 7,7      | 79       | 37       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 140213078    | 7,8      | 79       | 37       |
| 140213079    | 7,9      | 79       | 37       |
| 140213080    | 8,0      | 79       | 37       |
| 140213081    | 8,1      | 89       | 37       |
| 140213082    | 8,2      | 89       | 37       |
| 140213083    | 8,3      | 89       | 37       |
| 140213084    | 8,4      | 89       | 37       |
| 140213085    | 8,5      | 89       | 37       |
| 140213086    | 8,6      | 89       | 37       |
| 140213087    | 8,7      | 89       | 40       |
| 140213088    | 8,8      | 89       | 40       |
| 140213089    | 8,9      | 89       | 40       |
| 140213090    | 9,0      | 89       | 40       |
| 140213091    | 9,1      | 89       | 40       |
| 140213092    | 9,2      | 89       | 40       |
| 140213093    | 9,3      | 89       | 40       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 140213094    | 9,4      | 89       | 40       |
| 140213095    | 9,5      | 89       | 40       |
| 140213096    | 9,6      | 89       | 40       |
| 140213097    | 9,7      | 89       | 43       |
| 140213098    | 9,8      | 89       | 43       |
| 140213099    | 9,9      | 89       | 43       |
| 140213100    | 10,0     | 89       | 43       |
| 140213105    | 10,5     | 102      | 43       |
| 140213110    | 11,0     | 102      | 43       |
| 140213115    | 11,5     | 102      | 47       |
| 140213120    | 12,0     | 102      | 47       |
| 140213125    | 12,5     | 107      | 51       |
| 140213130    | 13,0     | 107      | 51       |
| 140213135    | 13,5     | 107      | 51       |
| 140213140    | 14,0     | 107      | 54       |
| 140213145    | 14,5     | 115      | 54       |

| PRODUCT CODE | d1<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|
| 140213150    | 15,0     | 115      | 56       |
| 140213155    | 15,5     | 115      | 56       |
| 140213160    | 16,0     | 115      | 58       |
| 140213165    | 16,5     | 123      | 58       |
| 140213170    | 17,0     | 123      | 58       |
| 140213175    | 17,5     | 123      | 58       |
| 140213180    | 18,0     | 123      | 58       |
| 140213185    | 18,5     | 131      | 62       |
| 140213190    | 19,0     | 131      | 62       |
| 140213195    | 19,5     | 131      | 62       |
| 140213200    | 20,0     | 131      | 62       |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |
|              |          |          |          |

# FUERTE / DRILL BITS

## 3D CARBIDE DRILL BITS



| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 140223030    | 3,0   | 8,0   | 62    | 20    |
| 140223031    | 3,1   | 8,0   | 62    | 20    |
| 140223032    | 3,2   | 8,0   | 62    | 20    |
| 140223033    | 3,3   | 8,0   | 62    | 62    |
| 140223034    | 3,4   | 10,0  | 62    | 20    |
| 140223035    | 3,5   | 10,0  | 62    | 20    |
| 140223036    | 3,6   | 10,0  | 62    | 20    |
| 140223037    | 3,7   | 10,0  | 62    | 20    |
| 140223038    | 3,8   | 10,0  | 66    | 24    |
| 140223039    | 3,9   | 10,0  | 66    | 24    |
| 140223040    | 4,0   | 10,0  | 66    | 24    |
| 140223041    | 4,1   | 10,0  | 66    | 24    |
| 140223042    | 4,2   | 10,0  | 66    | 24    |
| 140223043    | 4,3   | 10,0  | 66    | 24    |
| 140223044    | 4,4   | 10,0  | 66    | 24    |
| 140223045    | 4,5   | 10,0  | 66    | 24    |

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 140223046    | 4,6   | 10,0  | 66    | 24    |
| 140223047    | 4,7   | 10,0  | 66    | 24    |
| 140223048    | 4,8   | 10,0  | 66    | 28    |
| 140223049    | 4,9   | 10,0  | 66    | 28    |
| 140223050    | 5,0   | 10,0  | 66    | 28    |
| 140223051    | 5,1   | 10,0  | 66    | 28    |
| 140223052    | 5,2   | 10,0  | 66    | 28    |
| 140223053    | 5,3   | 10,0  | 66    | 28    |
| 140223054    | 5,4   | 10,0  | 66    | 28    |
| 140223055    | 5,5   | 10,0  | 66    | 28    |
| 140223056    | 5,6   | 10,0  | 66    | 28    |
| 140223057    | 5,7   | 10,0  | 66    | 28    |
| 140223058    | 5,8   | 10,0  | 66    | 28    |
| 140223059    | 5,9   | 10,0  | 66    | 28    |
| 140223060    | 6,0   | 10,0  | 66    | 28    |
| 140223061    | 6,1   | 10,0  | 79    | 34    |

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 140223062    | 6,2   | 10,0  | 79    | 34    |
| 140223063    | 6,3   | 10,0  | 79    | 34    |
| 140223064    | 6,4   | 10,0  | 79    | 34    |
| 140223065    | 6,5   | 10,0  | 79    | 34    |
| 140223066    | 6,6   | 10,0  | 79    | 34    |
| 140223067    | 6,7   | 10,0  | 79    | 34    |
| 140223068    | 6,8   | 10,0  | 79    | 34    |
| 140223069    | 6,9   | 10,0  | 79    | 34    |
| 140223070    | 7,0   | 10,0  | 79    | 34    |
| 140223071    | 7,1   | 10,0  | 79    | 41    |
| 140223072    | 7,2   | 10,0  | 79    | 41    |
| 140223073    | 7,3   | 10,0  | 79    | 41    |
| 140223074    | 7,4   | 10,0  | 79    | 41    |
| 140223075    | 7,5   | 10,0  | 79    | 41    |
| 140223076    | 7,6   | 10,0  | 79    | 41    |
| 140223077    | 7,7   | 10,0  | 79    | 41    |

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 140223078    | 7,8   | 10,0  | 79    | 41    |
| 140223079    | 7,9   | 10,0  | 79    | 41    |
| 140223080    | 8,0   | 10,0  | 79    | 41    |
| 140223081    | 8,1   | 10,0  | 89    | 47    |
| 140223082    | 8,2   | 10,0  | 89    | 47    |
| 140223083    | 8,3   | 10,0  | 89    | 47    |
| 140223084    | 8,4   | 10,0  | 89    | 47    |
| 140223085    | 8,5   | 10,0  | 89    | 47    |
| 140223086    | 8,6   | 10,0  | 89    | 47    |
| 140223087    | 8,7   | 10,0  | 89    | 47    |
| 140223088    | 8,8   | 10,0  | 89    | 47    |
| 140223089    | 8,9   | 10,0  | 89    | 47    |
| 140223090    | 9,0   | 10,0  | 89    | 47    |
| 140223091    | 9,1   | 10,0  | 89    | 47    |
| 140223092    | 9,2   | 10,0  | 89    | 47    |
| 140223093    | 9,3   | 10,0  | 89    | 47    |

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 140223094    | 9,4   | 10,0  | 89    | 47    |
| 140223095    | 9,5   | 10,0  | 89    | 47    |
| 140223096    | 9,6   | 10,0  | 89    | 47    |
| 140223097    | 9,7   | 10,0  | 89    | 47    |
| 140223098    | 9,8   | 10,0  | 89    | 47    |
| 140223099    | 9,9   | 10,0  | 89    | 47    |
| 140223100    | 10,0  | 10,0  | 89    | 47    |
| 140223101    | 10,1  | 12,0  | 102   | 55    |
| 140223102    | 10,2  | 12,0  | 102   | 55    |
| 140223103    | 10,3  | 12,0  | 102   | 55    |
| 140223105    | 10,5  | 12,0  | 102   | 55    |
| 140223110    | 11,0  | 12,0  | 102   | 55    |
| 140223115    | 11,5  | 12,0  | 102   | 55    |
| 140223120    | 12,0  | 12,0  | 102   | 55    |
| 140223125    | 12,5  | 14,0  | 107   | 60    |

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 140223130    | 13,0  | 14,0  | 107   | 60    |
| 140223135    | 13,5  | 14,0  | 107   | 60    |
| 140223140    | 14,0  | 14,0  | 107   | 60    |
| 140223145    | 14,5  | 16,0  | 115   | 65    |
| 140223150    | 15,0  | 16,0  | 115   | 65    |
| 140223155    | 15,5  | 16,0  | 115   | 65    |
| 140223160    | 16,0  | 16,0  | 115   | 65    |
| 140223165    | 16,5  | 18,0  | 123   | 73    |
| 140223170    | 17,0  | 18,0  | 123   | 73    |
| 140223175    | 17,5  | 20,0  | 123   | 73    |
| 140223180    | 18,0  | 20,0  | 123   | 73    |
| 140223185    | 18,5  | 20,0  | 131   | 79    |
| 140223190    | 19,0  | 20,0  | 131   | 79    |
| 140223195    | 19,5  | 20,0  | 131   | 79    |
| 140223200    | 20,0  | 20,0  | 131   | 79    |

# FUERTE / DRILL BITS

## DIN 338 CARBIDE DRILL BITS



| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 140023030    | 3,0   | 3,0   | 61    | 33    |
| 140023033    | 3,3   | 4,0   | 75    | 33    |
| 140023035    | 3,5   | 4,0   | 75    | 39    |
| 140023038    | 3,8   | 4,0   | 75    | 39    |
| 140023040    | 4,0   | 4,0   | 75    | 43    |
| 140023042    | 4,2   | 5,0   | 86    | 43    |
| 140023045    | 4,5   | 5,0   | 86    | 47    |
| 140023050    | 5,0   | 6,0   | 86    | 52    |
| 140023055    | 5,5   | 6,0   | 93    | 57    |
| 140023060    | 6,0   | 6,0   | 96    | 57    |
| 140023065    | 6,5   | 7,0   | 109   | 63    |
| 140023068    | 6,8   | 7,0   | 109   | 63    |
| 140023070    | 7,0   | 7,0   | 109   | 69    |
| 140023075    | 7,5   | 8,0   | 117   | 69    |

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 140023080    | 8,0   | 8,0   | 117   | 75    |
| 140023085    | 8,5   | 9,0   | 125   | 75    |
| 140023090    | 9,0   | 9,0   | 125   | 81    |
| 140023095    | 9,5   | 10,0  | 133   | 81    |
| 140023100    | 10,0  | 10,0  | 133   | 87    |
| 140023102    | 10,2  | 11,0  | 142   | 87    |
| 140023105    | 10,5  | 11,0  | 142   | 87    |
| 140023110    | 11,0  | 11,0  | 142   | 94    |
| 140023115    | 11,5  | 12,0  | 151   | 94    |
| 140023120    | 12,0  | 12,0  | 151   | 101   |
| 140023125    | 12,5  | 13,0  | 151   | 101   |
| 140023130    | 13,0  | 13,0  | 151   | 101   |
| 140023135    | 13,5  | 14,0  | 151   | 101   |
| 140023140    | 14,0  | 14,0  | 101   | 120   |

## 5D CARBIDE DRILL BITS



| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 140233030    | 3,0   | 6,0   | 66    | 23    |
| 140233031    | 3,1   | 6,0   | 66    | 23    |
| 140233032    | 3,2   | 6,0   | 66    | 23    |
| 140233033    | 3,3   | 6,0   | 66    | 23    |
| 140233034    | 3,4   | 6,0   | 66    | 23    |
| 140233035    | 3,5   | 6,0   | 66    | 23    |
| 140233036    | 3,6   | 6,0   | 66    | 23    |
| 140233037    | 3,7   | 6,0   | 66    | 23    |
| 140233038    | 3,8   | 6,0   | 74    | 29    |
| 140233039    | 3,9   | 6,0   | 74    | 29    |
| 140233040    | 4,0   | 6,0   | 74    | 29    |
| 140233041    | 4,1   | 6,0   | 74    | 29    |
| 140233042    | 4,2   | 6,0   | 74    | 29    |
| 140233043    | 4,3   | 6,0   | 74    | 29    |
| 140233044    | 4,4   | 6,0   | 74    | 29    |
| 140233045    | 4,5   | 6,0   | 74    | 29    |

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 140233046    | 4,6   | 6,0   | 74    | 29    |
| 140233047    | 4,7   | 6,0   | 74    | 29    |
| 140233048    | 4,8   | 6,0   | 82    | 32    |
| 140233049    | 4,9   | 6,0   | 82    | 35    |
| 140233050    | 5,0   | 6,0   | 82    | 35    |
| 140233051    | 5,1   | 6,0   | 82    | 35    |
| 140233052    | 5,2   | 6,0   | 82    | 35    |
| 140233053    | 5,3   | 6,0   | 82    | 35    |
| 140233054    | 5,4   | 6,0   | 82    | 35    |
| 140233055    | 5,5   | 6,0   | 82    | 35    |
| 140233056    | 5,6   | 6,0   | 82    | 35    |
| 140233057    | 5,7   | 6,0   | 82    | 35    |
| 140233058    | 5,8   | 6,0   | 82    | 35    |
| 140233059    | 5,9   | 6,0   | 82    | 35    |
| 140233060    | 6,0   | 6,0   | 82    | 35    |
| 140233061    | 6,1   | 8,0   | 91    | 43    |

# FUERTE / DRILL BITS

| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|
| 140233062    | 6,2      | 8,0      | 91       | 43       |
| 140233063    | 6,3      | 8,0      | 91       | 43       |
| 140233064    | 6,4      | 8,0      | 91       | 43       |
| 140233065    | 6,5      | 8,0      | 91       | 43       |
| 140233066    | 6,6      | 8,0      | 91       | 43       |
| 140233067    | 6,7      | 8,0      | 91       | 43       |
| 140233068    | 6,8      | 8,0      | 91       | 43       |
| 140233069    | 6,9      | 8,0      | 91       | 43       |
| 140233070    | 7,0      | 8,0      | 91       | 43       |
| 140233071    | 7,1      | 8,0      | 91       | 43       |
| 140233072    | 7,2      | 8,0      | 91       | 43       |
| 140233073    | 7,3      | 8,0      | 91       | 43       |
| 140233074    | 7,4      | 8,0      | 91       | 43       |
| 140233075    | 7,5      | 8,0      | 91       | 43       |
| 140233076    | 7,6      | 10,0     | 91       | 43       |
| 140233077    | 7,7      | 10,0     | 91       | 43       |

| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|
| 140233078    | 7,8      | 10,0     | 91       | 43       |
| 140233079    | 7,9      | 10,0     | 91       | 43       |
| 140233080    | 8,0      | 10,0     | 91       | 43       |
| 140233081    | 8,1      | 10,0     | 103      | 49       |
| 140233082    | 8,2      | 10,0     | 103      | 49       |
| 140233083    | 8,3      | 10,0     | 103      | 49       |
| 140233084    | 8,4      | 10,0     | 103      | 49       |
| 140233085    | 8,5      | 10,0     | 103      | 49       |
| 140233086    | 8,6      | 10,0     | 103      | 49       |
| 140233087    | 8,7      | 10,0     | 103      | 49       |
| 140233088    | 8,8      | 10,0     | 103      | 49       |
| 140233089    | 8,9      | 10,0     | 103      | 49       |
| 140233090    | 9,0      | 10,0     | 103      | 49       |
| 140233091    | 9,1      | 10,0     | 103      | 49       |
| 140233092    | 9,2      | 10,0     | 103      | 49       |
| 140233093    | 9,3      | 10,0     | 103      | 49       |

| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|
| 140233094    | 9,4      | 10,0     | 103      | 49       |
| 140233095    | 9,5      | 10,0     | 103      | 49       |
| 140233096    | 9,6      | 10,0     | 103      | 49       |
| 140233097    | 9,7      | 10,0     | 103      | 49       |
| 140233098    | 9,8      | 10,0     | 103      | 49       |
| 140233099    | 9,9      | 10,0     | 103      | 49       |
| 140233100    | 10,0     | 10,0     | 103      | 49       |
| 140233105    | 10,5     | 12,0     | 118      | 56       |
| 140233110    | 11,0     | 12,0     | 118      | 56       |
| 140233115    | 11,5     | 12,0     | 118      | 56       |
| 140233120    | 12,0     | 12,0     | 118      | 56       |
| 140233125    | 12,5     | 14,0     | 124      | 60       |
| 140233130    | 13,0     | 14,0     | 124      | 60       |
| 140233135    | 13,5     | 14,0     | 124      | 60       |
| 140233140    | 14,0     | 14,0     | 124      | 60       |
| 140233145    | 14,5     | 16,0     | 133      | 63       |

| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|
| 140233150    | 15,0     | 16,0     | 133      | 63       |
| 140233155    | 15,5     | 16,0     | 133      | 63       |
| 140233160    | 16,0     | 16,0     | 133      | 63       |
| 140233165    | 16,5     | 18,0     | 143      | 71       |
| 140233170    | 17,0     | 18,0     | 143      | 71       |
| 140233175    | 17,5     | 18,0     | 143      | 71       |
| 140233180    | 18,0     | 18,0     | 143      | 71       |
| 140233185    | 18,5     | 20,0     | 153      | 77       |
| 140233190    | 19,0     | 20,0     | 153      | 77       |
| 140233195    | 19,5     | 20,0     | 153      | 77       |
| 140233200    | 20,0     | 20,0     | 153      | 77       |
|              |          |          |          |          |
|              |          |          |          |          |
|              |          |          |          |          |
|              |          |          |          |          |

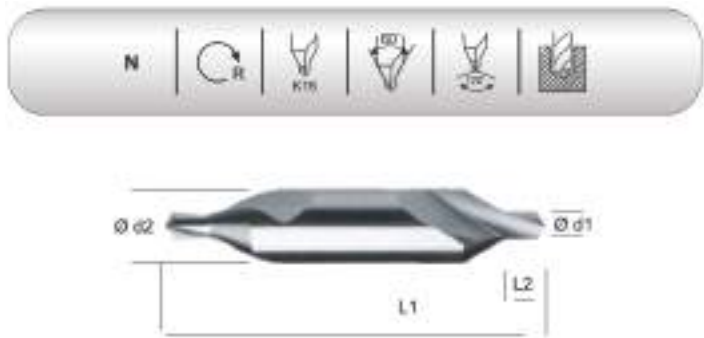
## MICRO SERIES CARBIDE DRILL BITS



| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|
| 140263010    | 1,0      | 3,0      | 50       | 8        |
| 140263011    | 1,1      | 3,0      | 50       | 8        |
| 140263012    | 1,2      | 3,0      | 50       | 8        |
| 140263013    | 1,3      | 3,0      | 50       | 8        |
| 140263014    | 1,4      | 3,0      | 50       | 10       |
| 140263015    | 1,5      | 3,0      | 50       | 10       |
| 140263016    | 1,6      | 3,0      | 50       | 10       |
| 140263017    | 1,7      | 3,0      | 50       | 10       |
| 140263018    | 1,8      | 3,0      | 50       | 12       |
| 140263019    | 1,9      | 3,0      | 50       | 12       |
| 140263020    | 2,0      | 3,0      | 50       | 12       |
| 140263021    | 2,1      | 3,0      | 50       | 12       |
| 140263022    | 2,2      | 3,0      | 50       | 12       |
| 140263023    | 2,3      | 3,0      | 50       | 14       |
| 140263024    | 2,4      | 3,0      | 50       | 14       |
| 140263025    | 2,5      | 3,0      | 50       | 14       |
| 140263026    | 2,6      | 3,0      | 50       | 14       |
| 140263027    | 2,7      | 3,0      | 50       | 14       |
| 140263028    | 2,8      | 3,0      | 50       | 14       |
| 140263029    | 2,9      | 3,0      | 50       | 14       |
| 140263030    | 3,0      | 3,0      | 50       | 14       |

# FUERTE / DRILL BITS

## CENTRE PUNCH CARBIDE DRILL BITS



| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|
| 140123010    | 1,0      | 3,0      | 50       | 1,3      |
| 140123012    | 1,25     | 3,0      | 50       | 1,6      |
| 140123016    | 1,6      | 4,0      | 50       | 2,0      |
| 140123020    | 2,0      | 5,0      | 50       | 2,5      |
| 140123025    | 2,5      | 6,0      | 57       | 3,1      |
| 140123031    | 3,15     | 8,0      | 63       | 3,9      |
| 140123040    | 4,0      | 10,0     | 72       | 5,0      |
| 140123050    | 5,0      | 12,0     | 83       | 6,3      |
| 140123063    | 6,3      | 16,0     | 92       | 8,0      |
| 140123080    | 8,0      | 20,0     | 100      | 10,1     |





# FUERTE / Threaded Sets&Machine Guides

## DIN 352 TRIPLE KIT GUIDES



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 211011030    | M3       | 0,50    | 40       | 11       | 4        |
| 211011035    | M3,5     | 0,60    | 45       | 13       | 4        |
| 211011040    | M4       | 0,70    | 45       | 13       | 5        |
| 211011050    | M5       | 0,80    | 50       | 16       | 6        |
| 211011060    | M6       | 1,00    | 56       | 19       | 6        |
| 211011070    | M7       | 1,00    | 56       | 19       | 6        |
| 211011080    | M8       | 1,25    | 63       | 22       | 6        |
| 211011100    | M10      | 1,50    | 70       | 24       | 7        |
| 211011120    | M12      | 1,75    | 75       | 28       | 9        |
| 211011140    | M14      | 2,00    | 80       | 30       | 11       |
| 211011160    | M16      | 2,00    | 80       | 32       | 12       |
| 211011180    | M18      | 2,50    | 95       | 34       | 14       |
| 211011200    | M20      | 2,50    | 95       | 34       | 16       |
| 211011220    | M22      | 2,50    | 100      | 34       | 18       |
| 211011240    | M24      | 3,00    | 110      | 38       | 18       |
| 211011260    | M26      | 3,00    | 110      | 38       | 20       |
| 211011270    | M27      | 3,00    | 125      | 38       | 20       |
| 211011300    | M30      | 3,50    | 125      | 45       | 22       |
| 211011330    | M33      | 3,50    | 125      | 50       | 25       |
| 211011360    | M36      | 4,00    | 150      | 56       | 28       |
| 211011390    | M39      | 4,00    | 150      | 60       | 32       |
| 211011420    | M42      | 4,50    | 150      | 60       | 32       |
| 211011450    | M45      | 4,50    | 160      | 65       | 36       |
| 211011480    | M48      | 5,00    | 180      | 70       | 36       |
| 211011520    | M52      | 5,00    | 180      | 70       | 40       |



# FUERTE / Threaded Sets&Machine Guides

## MACHINE GUIDES

### 371/B Oblique Mouth Sharpening Reinforced Handle Machine Guides



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 220141030    | M3       | 0,50    | 56       | 10       | 3,5      |
| 220141035    | M3,5     | 0,60    | 56       | 12       | 4,5      |
| 220141040    | M4       | 0,70    | 63       | 14       | 4,5      |
| 220141050    | M5       | 0,80    | 70       | 16       | 6,0      |
| 220141060    | M6       | 1,00    | 80       | 16       | 6,0      |
| 220141070    | M7       | 1,00    | 80       | 16       | 8,0      |
| 220141080    | M8       | 1,25    | 90       | 18       | 8,0      |
| 220141100    | M10      | 1,50    | 100      | 20       | 10,0     |

### 371/B Oblique Mouth Sharpening Reinforced Handle Machine Guides



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 220171120    | M12      | 1,75    | 110      | 24       | 9        |
| 220171140    | M14      | 2,00    | 110      | 26       | 11       |
| 220171160    | M16      | 2,00    | 100      | 28       | 12       |
| 220171180    | M18      | 2,50    | 125      | 30       | 14       |
| 220171200    | M20      | 2,50    | 140      | 32       | 16       |
| 220171220    | M22      | 2,50    | 140      | 32       | 18       |
| 220171240    | M24      | 3,00    | 160      | 34       | 18       |
| 220171270    | M27      | 3,00    | 160      | 38       | 20       |
| 220171300    | M30      | 3,50    | 180      | 45       | 22       |

# FUERTE / Threaded Sets&Machine Guides

## MACHINE GUIDES

### 371/C Helical Reinforced Handle Machine Guides



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 220151030    | M3       | 0,50    | 56       | 10       | 4        |
| 220151035    | M3,5     | 0,60    | 56       | 12       | 4        |
| 220151040    | M4       | 0,70    | 63       | 14       | 5        |
| 220151050    | M5       | 0,80    | 70       | 16       | 6        |
| 220151060    | M6       | 1,00    | 80       | 16       | 6        |
| 220151070    | M7       | 1,00    | 80       | 16       | 8        |
| 220151080    | M8       | 1,25    | 90       | 18       | 8        |
| 220151100    | M10      | 1,50    | 100      | 20       | 10       |

### 376/C Helical Thin Handle Machine Guides



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 220181120    | M12      | 1,75    | 110      | 24       | 9        |
| 220181140    | M14      | 2,00    | 110      | 26       | 11       |
| 220181160    | M16      | 2,00    | 100      | 28       | 12       |
| 220181180    | M18      | 2,50    | 125      | 30       | 14       |
| 220181200    | M20      | 2,50    | 140      | 32       | 16       |
| 220181220    | M22      | 2,50    | 140      | 32       | 18       |
| 220181240    | M24      | 3,00    | 160      | 34       | 18       |
| 220181270    | M27      | 3,00    | 160      | 38       | 20       |
| 220181300    | M30      | 3,50    | 180      | 45       | 22       |

# FUERTE / Threaded Sets&Machine Guides

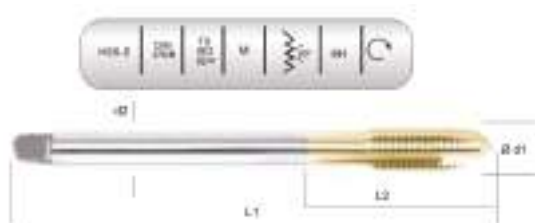
## MACHINE GUIDES TIN COVERED

### 371/B Oblique Mouth Sharpening Reinforced Handle Machine Guides



| PRODUCT CODE | d1 mm | P mm | L1 mm | L2 mm | d2 mm |
|--------------|-------|------|-------|-------|-------|
| 220142030    | M3    | 0,50 | 56    | 10    | 4     |
| 220142035    | M3,5  | 0,60 | 56    | 12    | 4     |
| 220142040    | M4    | 0,70 | 63    | 14    | 5     |
| 220142050    | M5    | 0,80 | 70    | 16    | 6     |
| 220142060    | M6    | 1,00 | 80    | 16    | 6     |
| 220142070    | M7    | 1,00 | 80    | 16    | 8     |
| 220142080    | M8    | 1,25 | 90    | 18    | 8     |
| 220142100    | M10   | 1,50 | 100   | 20    | 10    |

### 376/B Oblique Mouth Sharpening Reinforced Handle Machine Guides



| PRODUCT CODE | d1 mm | P mm | L1 mm | L2 mm | d2 mm |
|--------------|-------|------|-------|-------|-------|
| 220172120    | M12   | 1,75 | 110   | 24    | 9     |
| 220172140    | M14   | 2,00 | 110   | 26    | 11    |
| 220172160    | M16   | 2,00 | 100   | 28    | 12    |
| 220172180    | M18   | 2,50 | 125   | 30    | 14    |
| 220172200    | M20   | 2,50 | 140   | 32    | 16    |
| 220172220    | M22   | 2,50 | 140   | 32    | 18    |
| 220172240    | M24   | 3,00 | 160   | 34    | 18    |
| 220172270    | M27   | 3,00 | 160   | 38    | 20    |
| 220172300    | M30   | 3,50 | 180   | 45    | 22    |

# FUERTE / Threaded Sets&Machine Guides

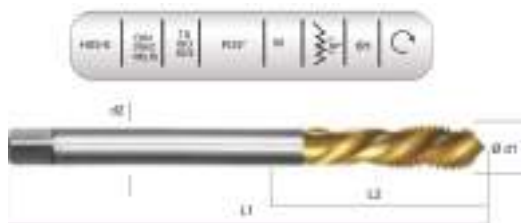
## MACHINE GUIDES TIN COVERED

### 371/C Helical Reinforced Handle Machine Guides



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 220152030    | M3       | 0,50    | 56       | 10       | 4        |
| 220152035    | M3,5     | 0,60    | 56       | 12       | 4        |
| 220152040    | M4       | 0,70    | 63       | 14       | 5        |
| 220152050    | M5       | 0,80    | 70       | 16       | 6        |
| 220152060    | M6       | 1,00    | 80       | 16       | 6        |
| 220145070    | M7       | 1,00    | 80       | 16       | 8        |
| 220145080    | M8       | 1,25    | 90       | 18       | 8        |
| 220145100    | M10      | 1,50    | 100      | 20       | 10       |

### 376/C Helical Thin Handle Machine Guides



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 220182120    | M12      | 1,75    | 110      | 24       | 9        |
| 220182140    | M14      | 2,00    | 110      | 26       | 11       |
| 220182160    | M16      | 2,00    | 100      | 28       | 12       |
| 220182180    | M18      | 2,50    | 125      | 30       | 14       |
| 220182200    | M20      | 2,50    | 140      | 32       | 16       |
| 220182220    | M22      | 2,50    | 140      | 32       | 18       |
| 220182240    | M24      | 3,00    | 160      | 34       | 18       |
| 220182270    | M27      | 3,00    | 160      | 38       | 20       |
| 220182300    | M30      | 3,50    | 180      | 45       | 22       |

# FUERTE / Threaded Sets & Machine Guides

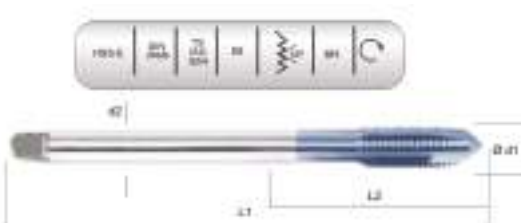
## INOX SERIES MACHINE GUIDES

## 371/B Oblique Mouth Sharpening Reinforced Handle Machine Guides



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 220353030    | M3       | 0,50    | 56       | 10       | 4        |
| 220353035    | M3,5     | 0,60    | 56       | 12       | 4        |
| 220353040    | M4       | 0,70    | 63       | 14       | 5        |
| 220353050    | M5       | 0,80    | 70       | 16       | 6        |
| 220353060    | M6       | 1,00    | 80       | 16       | 6        |
| 220353070    | M7       | 1,00    | 80       | 16       | 8        |
| 220353080    | M8       | 1,25    | 90       | 18       | 8        |
| 220353100    | M10      | 1,50    | 100      | 20       | 10       |

## 376/B Oblique Mouth Sharpening Reinforced Handle Machine Guides



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 220373120    | M12      | 1,75    | 110      | 24       | 9        |
| 220373140    | M14      | 2,00    | 110      | 26       | 11       |
| 220373160    | M16      | 2,00    | 100      | 28       | 12       |
| 220373180    | M18      | 2,50    | 125      | 30       | 14       |
| 220373200    | M20      | 2,50    | 140      | 32       | 16       |
| 220373220    | M22      | 2,50    | 140      | 32       | 18       |
| 220373240    | M24      | 3,00    | 160      | 34       | 18       |
| 220373270    | M27      | 3,00    | 160      | 38       | 20       |
| 220373300    | M30      | 3,50    | 180      | 45       | 22       |

# FUERTE / Threaded Sets&Machine Guides

## INOX SERIES MACHINE GUIDES

### 371/C Helical Reinforced Handle Machine Guides



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 220363030    | M3       | 0,50    | 56       | 10       | 4        |
| 220363035    | M3,5     | 0,60    | 56       | 12       | 4        |
| 220363040    | M4       | 0,70    | 63       | 14       | 5        |
| 220363050    | M5       | 0,80    | 70       | 16       | 6        |
| 220363060    | M6       | 1,00    | 80       | 16       | 6        |
| 220363070    | M7       | 1,00    | 80       | 16       | 8        |
| 220363080    | M8       | 1,25    | 90       | 18       | 8        |
| 220363100    | M10      | 1,50    | 100      | 20       | 10       |

### 376/C Helical Thin Handle Machine Guides



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 220383120    | M12      | 1,75    | 110      | 24       | 9        |
| 220383140    | M14      | 2,00    | 110      | 26       | 11       |
| 220383160    | M16      | 2,00    | 100      | 28       | 12       |
| 220383180    | M18      | 2,50    | 125      | 30       | 14       |
| 220383200    | M20      | 2,50    | 140      | 32       | 16       |
| 220383220    | M22      | 2,50    | 140      | 32       | 18       |
| 220383240    | M24      | 3,00    | 160      | 34       | 18       |
| 220383270    | M27      | 3,00    | 160      | 38       | 20       |
| 220383300    | M30      | 3,50    | 180      | 45       | 22       |

# FUERTE / Threaded Sets&Machine Guides

## ALUMINUM SERIES MACHINE GUIDES

### 371/B ALM Series Machine Guides - SKIPPING TOOTH



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 220391030    | M3       | 0,50    | 56       | 10       | 4        |
| 220391035    | M3,5     | 0,60    | 56       | 12       | 4        |
| 220391040    | M4       | 0,70    | 63       | 14       | 5        |
| 220391050    | M5       | 0,80    | 70       | 16       | 6        |
| 220391060    | M6       | 1,00    | 80       | 16       | 6        |
| 220391070    | M7       | 1,00    | 80       | 16       | 8        |
| 220391080    | M8       | 1,25    | 90       | 18       | 8        |
| 220391100    | M10      | 1,50    | 100      | 20       | 10       |

### 376/B ALM Series Machine Guides - SKIPPING TOOTH



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 220401120    | M12      | 1,75    | 110      | 24       | 9        |
| 220401140    | M14      | 2,00    | 110      | 26       | 11       |
| 220401160    | M16      | 2,00    | 100      | 28       | 12       |
| 220401180    | M18      | 2,50    | 125      | 30       | 14       |
| 220401200    | M20      | 2,50    | 140      | 32       | 16       |
| 220401220    | M22      | 2,50    | 140      | 32       | 18       |
| 220401240    | M24      | 3,00    | 160      | 34       | 18       |
| 220401270    | M27      | 3,00    | 160      | 38       | 20       |
| 220401300    | M30      | 3,50    | 180      | 45       | 22       |

# FUERTE / Threaded Sets&Machine Guides

## ALUMINUM SERIES MACHINE GUIDES



| PRODUCT CODE | d1 mm | P mm | L1 mm | L2 mm | d2 mm |
|--------------|-------|------|-------|-------|-------|
| 220411030    | M3    | 0,50 | 56    | 10    | 4     |
| 220411035    | M3,5  | 0,60 | 56    | 12    | 4     |
| 220411040    | M4    | 0,70 | 63    | 14    | 5     |
| 220411050    | M5    | 0,80 | 70    | 16    | 6     |
| 220411060    | M6    | 1,00 | 80    | 16    | 6     |
| 220411070    | M7    | 1,00 | 80    | 16    | 8     |
| 220411080    | M8    | 1,25 | 90    | 18    | 8     |
| 220411100    | M10   | 1,50 | 100   | 20    | 10    |



| PRODUCT CODE | d1 mm | P mm | L1 mm | L2 mm | d2 mm |
|--------------|-------|------|-------|-------|-------|
| 220421120    | M12   | 1,75 | 110   | 24    | 9     |
| 220421140    | M14   | 2,00 | 110   | 26    | 11    |
| 220421160    | M16   | 2,00 | 100   | 28    | 12    |
| 220421180    | M18   | 2,50 | 125   | 30    | 14    |
| 220421200    | M20   | 2,50 | 140   | 32    | 16    |
| 220421220    | M22   | 2,50 | 140   | 32    | 18    |
| 220421240    | M24   | 3,00 | 160   | 34    | 18    |
| 220421270    | M27   | 3,00 | 160   | 38    | 20    |
| 220421300    | M30   | 3,50 | 180   | 45    | 22    |



# FUERTE / Threaded Sets&Machine Guides

## PMG SERIES MACHINE GUIDES

### 371/B PMG Series Machine Guides

| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 230434030    | M3       | 0,50    | 56       | 10       | 4        |
| 230434035    | M3,5     | 0,60    | 56       | 12       | 4        |
| 230434040    | M4       | 0,70    | 63       | 14       | 5        |
| 230434050    | M5       | 0,80    | 70       | 16       | 6        |
| 230434060    | M6       | 1,00    | 80       | 16       | 6        |
| 230434070    | M7       | 1,00    | 80       | 16       | 8        |
| 230434080    | M8       | 1,25    | 90       | 18       | 8        |
| 230434100    | M10      | 1,50    | 100      | 20       | 10       |

### 376/B PMG Series Machine Guides

| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 230454120    | M12      | 1,75    | 110      | 24       | 9        |
| 230454140    | M14      | 2,00    | 110      | 28       | 11       |
| 230454160    | M16      | 2,00    | 100      |          | 12       |
| 230454180    | M18      | 2,50    | 125      | 30       | 14       |
| 230454200    | M20      | 2,50    | 140      | 32       | 16       |
| 230454220    | M22      | 2,50    | 140      | 32       | 18       |
| 230454240    | M24      | 3,00    | 160      | 34       | 18       |
| 230454270    | M27      | 3,00    | 160      | 38       | 20       |
| 230454300    | M30      | 3,50    | 180      | 45       | 22       |



# FUERTE / Threaded Sets&Machine Guides

## PMG SERIES MACHINE GUIDES

### 371/B Helical MG Series Machine Guides



| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 230444030    | M3       | 0,50    | 56       | 10       | 4        |
| 230444035    | M3,5     | 0,60    | 56       | 12       | 4        |
| 230444040    | M4       | 0,70    | 63       | 14       | 5        |
| 230444050    | M5       | 0,80    | 70       | 16       | 6        |
| 230444060    | M6       | 1,00    | 80       | 16       | 6        |
| 230444070    | M7       | 1,00    | 80       | 16       | 8        |
| 230444080    | M8       | 1,25    | 90       | 18       | 8        |
| 230444100    | M10      | 1,50    | 100      | 20       | 10       |

### 376/B Helical PMG Series Machine Guides

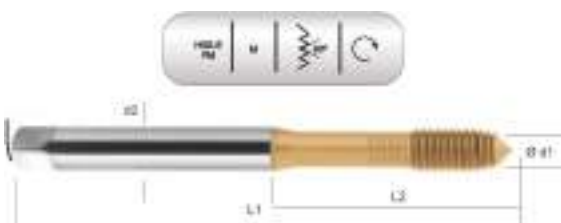


| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 230464120    | M12      | 1,75    | 110      | 24       | 9        |
| 230464140    | M14      | 2,00    | 110      | 28       | 11       |
| 230464160    | M16      | 2,00    | 100      |          | 12       |
| 230464180    | M18      | 2,50    | 125      | 30       | 14       |
| 230464200    | M20      | 2,50    | 140      | 32       | 16       |
| 230464220    | M22      | 2,50    | 140      | 32       | 18       |
| 23046440     | M24      | 3,00    | 160      | 34       | 18       |
| 23046470     | M27      | 3,00    | 160      | 38       | 20       |
| 230464300    | M30      | 3,50    | 180      | 45       | 22       |

# FUERTE / Threaded Sets&Machine Guides

## MACHINE GUIDES RUBBING SERIES

### 371/B Non-Canal Rubbing Series Machine Guides



| PRODUCT CODE | d1 mm | P mm | L1 mm | L2 mm | d2 mm |
|--------------|-------|------|-------|-------|-------|
| 230472030    | M3    | 0,50 | 56    | 10    | 4     |
| 230472040    | M4    | 0,60 | 56    | 12    | 4     |
| 230472050    | M5    | 0,70 | 63    | 14    | 5     |
| 230472060    | M6    | 0,80 | 70    | 16    | 6     |
| 230472080    | M8    | 1,00 | 80    | 16    | 6     |
| 230472100    | M10   | 1,00 | 80    | 16    | 8     |

### 376/B non-Canal rubbing Series Machine Guides



| PRODUCT CODE | d1 mm | P mm | L1 mm | L2 mm | d2 mm |
|--------------|-------|------|-------|-------|-------|
| 230492120    | M12   | 1,75 | 110   | 24    | 9     |
| 230492140    | M14   | 2,00 | 110   | 28    | 11    |
| 230492160    | M16   | 2,00 | 100   |       | 12    |
| 230492180    | M18   | 2,50 | 125   | 30    | 14    |
| 230492200    | M20   | 2,50 | 140   | 32    | 16    |

### 371/B Rubbing Series Machine Guides With Oil Canal



| PRODUCT CODE | d1 mm | P mm | L1 mm | L2 mm | d2 mm |
|--------------|-------|------|-------|-------|-------|
| 230482030    | M3    | 0,50 | 56    | 10    | 4     |
| 230482040    | M4    | 0,60 | 56    | 12    | 4     |
| 230482050    | M5    | 0,70 | 63    | 14    | 5     |
| 230482060    | M6    | 0,80 | 70    | 16    | 6     |
| 230482080    | M8    | 1,00 | 80    | 16    | 6     |
| 230482100    | M10   | 1,00 | 80    | 16    | 8     |

# FUERTE / Threaded Sets&Machine Guides

## MACHINE GUIDES RUBBING SERIES

### 376/B Rubbing Series Machine Guides With Oil Canal

| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 230502120    | M12      | 1,75    | 110      | 24       | 9        |
| 230502140    | M14      | 2,00    | 110      | 28       | 11       |
| 230502160    | M16      | 2,00    | 100      |          | 12       |
| 230502180    | M18      | 2,50    | 125      | 30       | 14       |
| 230502200    | M20      | 2,50    | 140      | 32       | 16       |



## DIN 374 THIN SCREWED MACHINE GUIDES

### 374/B Thin Threaded Machine Guides

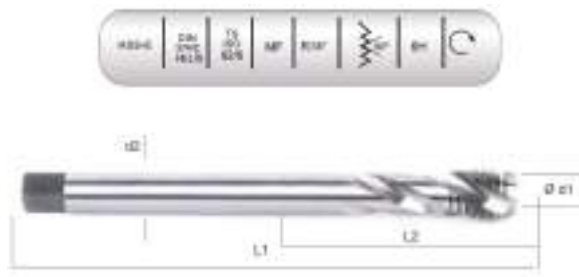
| PRODUCT CODE | d1<br>mm | P<br>mm | L1<br>mm | L2<br>mm | d2<br>mm |
|--------------|----------|---------|----------|----------|----------|
| 220201061    | M6       | 0,75    | 80       | 14       | 5        |
| 220201080    | M8       | 0,75    | 80       | 22       | 6        |
| 220201081    | M8       | 1,00    | 90       | 22       | 6        |
| 220201100    | M10      | 0,75    | 90       | 20       | 7        |
| 220201101    | M10      | 1,00    | 90       | 20       | 7        |
| 220201102    | M10      | 1,25    | 90       | 20       | 7        |
| 220201120    | M12      | 0,75    | 100      | 22       | 9        |
| 220201121    | M12      | 1,00    | 100      | 22       | 9        |
| 220201122    | M12      | 1,25    | 100      | 22       | 9        |
| 220201123    | M12      | 1,50    | 100      | 22       | 9        |
| 220201140    | M14      | 1,00    | 100      | 22       | 11       |
| 220201141    | M14      | 1,25    | 100      | 22       | 11       |
| 220201142    | M14      | 1,50    | 100      | 22       | 11       |



# FUERTE / Threaded Sets&Machine Guides

| PRODUCT CODE | d1 mm | P mm | L1 mm | L2 mm | d2 mm | PRODUCT CODE | d1 mm | P mm | L1 mm | L2 mm | d2 mm |
|--------------|-------|------|-------|-------|-------|--------------|-------|------|-------|-------|-------|
| 220201160    | M16   | 1,00 | 100   | 22    | 12    | 220201222    | M22   | 2,00 | 140   | 25    | 18    |
| 220201161    | M16   | 1,50 | 100   | 22    | 12    | 220201240    | M24   | 1,00 | 140   | 28    | 18    |
| 220201180    | M18   | 1,00 | 110   | 25    | 14    | 220201241    | M24   | 1,50 | 140   | 28    | 18    |
| 220201181    | M18   | 1,50 | 110   | 25    | 14    | 220201242    | M24   | 2,00 | 140   | 28    | 18    |
| 220201182    | M18   | 2,00 | 110   | 25    | 14    | 220201270    | M27   | 1,50 | 140   | 28    | 20    |
| 220201200    | M20   | 1,00 | 125   | 25    | 16    | 220201271    | M27   | 2,00 | 140   | 28    | 20    |
| 220201201    | M20   | 1,50 | 125   | 25    | 16    | 220201280    | M28   | 1,50 | 140   | 28    | 20    |
| 220201202    | M20   | 2,00 | 125   | 25    | 16    | 220201281    | M28   | 2,00 | 140   | 28    | 20    |
| 220201220    | M22   | 1,00 | 140   | 25    | 18    | 220201300    | M30   | 1,50 | 150   | 28    | 22    |
| 220201221    | M22   | 1,50 | 140   | 25    | 18    | 220201301    | M30   | 2,00 | 150   | 28    | 22    |

## 374/C Helical Thin Threaded Machine Guides



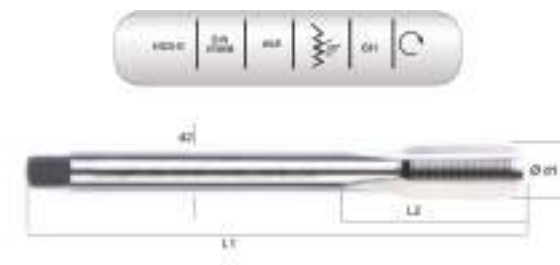
| PRODUCT CODE | d1 mm | P mm | L1 mm | L2 mm | d2 mm |
|--------------|-------|------|-------|-------|-------|
| 220211061    | M6    | 0,75 | 80    | 14    | 5     |
| 220211080    | M8    | 0,75 | 80    | 22    | 6     |
| 220211081    | M8    | 1,00 | 90    | 22    | 6     |
| 220211100    | M10   | 0,75 | 90    | 20    | 7     |
| 220211101    | M10   | 1,00 | 90    | 20    | 7     |
| 220211102    | M10   | 1,25 | 90    | 20    | 7     |
| 220211120    | M12   | 0,75 | 100   | 22    | 9     |
| 220211121    | M12   | 1,00 | 100   | 22    | 9     |
| 220211122    | M12   | 1,25 | 100   | 22    | 9     |
| 220211123    | M12   | 1,50 | 100   | 22    | 9     |
| 220211140    | M14   | 1,00 | 100   | 22    | 11    |
| 220211141    | M14   | 1,25 | 100   | 22    | 11    |
| 220211142    | M14   | 1,50 | 100   | 22    | 11    |

# FUERTE / Threaded Sets&Machine Guides

| PRODUCT CODE | d1 mm | P mm | L1 mm | L2 mm | d2 mm | PRODUCT CODE | d1 mm | P mm | L1 mm | L2 mm | d2 mm |
|--------------|-------|------|-------|-------|-------|--------------|-------|------|-------|-------|-------|
| 220211160    | M16   | 1,00 | 100   | 22    | 12    | 220211222    | M22   | 2,00 | 140   | 25    | 18    |
| 220211161    | M16   | 1,50 | 100   | 22    | 12    | 220211240    | M24   | 1,00 | 140   | 28    | 18    |
| 220211080    | M18   | 1,00 | 110   | 25    | 14    | 220211241    | M24   | 1,50 | 140   | 28    | 18    |
| 220211181    | M18   | 1,50 | 110   | 25    | 14    | 220211242    | M24   | 2,00 | 140   | 28    | 18    |
| 220211182    | M18   | 2,00 | 110   | 25    | 14    | 220211270    | M27   | 1,50 | 140   | 28    | 20    |
| 220211200    | M20   | 1,00 | 125   | 25    | 16    | 220211271    | M27   | 2,00 | 140   | 28    | 20    |
| 220211201    | M20   | 1,50 | 125   | 25    | 16    | 220211280    | M28   | 1,50 | 140   | 28    | 20    |
| 220211202    | M20   | 2,00 | 125   | 25    | 16    | 220211281    | M28   | 2,00 | 140   | 28    | 20    |
| 220211220    | M22   | 1,00 | 140   | 25    | 18    | 220211300    | M30   | 1,50 | 150   | 28    | 22    |
| 220211221    | M22   | 1,50 | 140   | 25    | 18    | 220211301    | M30   | 2,00 | 150   | 28    | 22    |

## DIN 5156 TUBE SCREWED MACHINE GUIDES

### 5156/B Tube Screwed and Thin Shaft With Straight Canal Machine Guides



| PRODUCT CODE | d1 mm | P mm  | L1 mm | L2 mm | d2 mm |
|--------------|-------|-------|-------|-------|-------|
| 220321018    | 1/8"  | 28,00 | 90    | 12    | 7     |
| 220321014    | 1/4"  | 19,00 | 100   | 16    | 11    |
| 220321038    | 3/8"  | 19,00 | 100   | 18    | 12    |
| 220321012    | 1/2"  | 14,00 | 125   | 22    | 16    |
| 220321034    | 3/4"  | 14,00 | 140   | 23    | 20    |
| 220321100    | 1"    | 11,00 | 160   | 28    | 25    |

### 5156/B Tube Screwed and Thin Shaft With Helical Canal Machine Guides



| PRODUCT CODE | d1 mm | P mm  | L1 mm | L2 mm | d2 mm |
|--------------|-------|-------|-------|-------|-------|
| 220321018    | 1/8"  | 28,00 | 90    | 12    | 7     |
| 220321014    | 1/4"  | 19,00 | 100   | 16    | 11    |
| 220321038    | 3/8"  | 19,00 | 100   | 18    | 12    |
| 220321012    | 1/2"  | 14,00 | 125   | 22    | 16    |
| 220321034    | 3/4"  | 14,00 | 140   | 23    | 20    |
| 220321100    | 1"    | 11,00 | 160   | 28    | 25    |

# FUERTE / Threaded Sets&Machine Guides

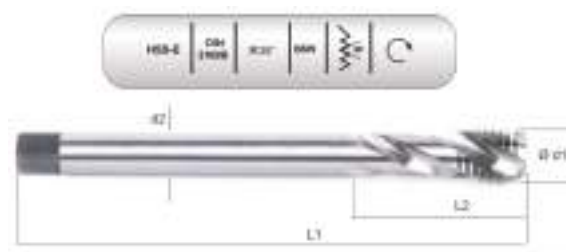
## DIN 2183 WHITWORTH SCREWED MACHINE GUIDES

### 2183/B Whitworth Thin Shaft With Straight Canal Machine Guides



| PRODUCT CODE | d1 mm | P mm  | L1 mm | L2 mm | d2 mm |
|--------------|-------|-------|-------|-------|-------|
| 220291014    | 1/4"  | 20,00 | 80    | 17    | 4,5   |
| 220291516    | 5/16" | 18,00 | 90    | 20    | 6     |
| 220291038    | 3/8"  | 16,00 | 100   | 22    | 7     |
| 220291716    | 7/16" | 14,00 | 100   | 22    | 8     |
| 220291012    | 1/2"  | 12,00 | 110   | 25    | 9     |
| 220291916    | 9/16" | 12,00 | 110   | 25    | 11    |
| 220291058    | 5/8"  | 11,00 | 110   | 27    | 12    |
| 220291034    | 3/4"  | 10,00 | 125   | 30    | 14    |
| 220291078    | 7/8"  | 9,00  | 140   | 32    | 18    |
| 220291100    | 1"    | 8,50  | 140   | 36    | 20    |

### 2183/B Whitworth Thin Shaft With Helical Canal Machine Guides



| PRODUCT CODE | d1 mm | P mm  | L1 mm | L2 mm | d2 mm |
|--------------|-------|-------|-------|-------|-------|
| 220201014    | 1/4"  | 20,00 | 80    | 17    | 6     |
| 220201516    | 5/16" | 18,00 | 90    | 20    | 6     |
| 220201038    | 3/8"  | 16,00 | 100   | 22    | 8     |
| 220201716    | 7/16" | 14,00 | 100   | 22    | 6     |
| 220201012    | 1/2"  | 12,00 | 110   | 25    | 7     |
| 220201916    | 9/16" | 12,00 | 110   | 25    | 9     |
| 220201058    | 5/8"  | 11,00 | 110   | 27    | 9     |
| 220201034    | 3/4"  | 10,00 | 125   | 30    | 11    |
| 220201078    | 7/8"  | 9,00  | 140   | 32    | 15    |
| 220201100    | 1"    | 8,50  | 140   | 36    | 15    |

# FUERTE / Threaded Sets&Machine Guides

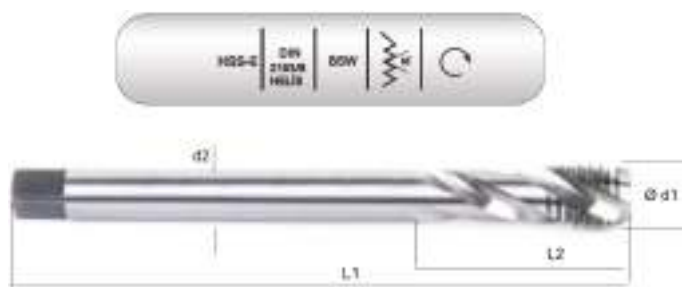
## DIN 2183 UNC SCREWED MACHINE GUIDES

### 2183/B UNC Thin Shaft With Straight Canal Machine Guides



| PRODUCT CODE | d1 mm | P mm  | L1 mm | L2 mm | d2 mm |
|--------------|-------|-------|-------|-------|-------|
| 220231014    | 1/4"  | 20,00 | 80    | 17    | 6     |
| 220231516    | 5/16" | 18,00 | 90    | 20    | 6     |
| 220231038    | 3/8"  | 16,00 | 100   | 22    | 8     |
| 220231716    | 7/16" | 14,00 | 100   | 22    | 6     |
| 220231012    | 1/2"  | 13,00 | 110   | 25    | 7     |
| 220231916    | 9/16" | 12,00 | 110   | 25    | 9     |
| 220231058    | 5/8"  | 11,00 | 110   | 27    | 9     |
| 220231034    | 3/4"  | 10,00 | 125   | 30    | 11    |
| 220231078    | 7/8"  | 9,00  | 140   | 32    | 15    |
| 220231100    | 1"    | 8,50  | 140   | 36    | 15    |

### 2183/B Helical UNC Thin Shaft With Straight Canal Machine Guides



| PRODUCT CODE | d1 mm | P mm  | L1 mm | L2 mm | d2 mm |
|--------------|-------|-------|-------|-------|-------|
| 220241014    | 1/4"  | 20,00 | 80    | 17    | 6     |
| 220241516    | 5/16" | 18,00 | 90    | 20    | 6     |
| 220241038    | 3/8"  | 16,00 | 100   | 22    | 8     |
| 220241716    | 7/16" | 14,00 | 100   | 22    | 6     |
| 220241012    | 1/2"  | 13,00 | 110   | 25    | 7     |
| 220241916    | 9/16" | 12,00 | 110   | 25    | 9     |
| 220241058    | 5/8"  | 11,00 | 110   | 27    | 9     |
| 220241034    | 3/4"  | 10,00 | 125   | 30    | 11    |
| 220241078    | 7/8"  | 9,00  | 140   | 32    | 15    |
| 220241100    | 1"    | 8,50  | 140   | 36    | 15    |



# FUERTE / Threaded Sets&Machine Guides

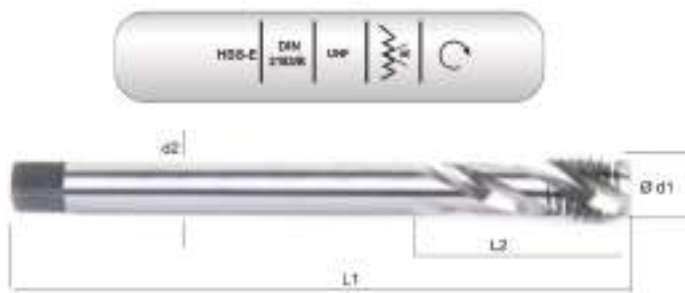
## DIN 2183 UNF THIN SCREWED MACHINE GUIDES

### 2183/B UNF Thin Threaded With Straight Canal Machine Guides



| PRODUCT CODE | d1 mm | P mm  | L1 mm | L2 mm | d2 mm |
|--------------|-------|-------|-------|-------|-------|
| 220261014    | 1/4"  | 28,00 | 50    | 16    | 6     |
| 220261516    | 5/16" | 24,00 | 56    | 22    | 6     |
| 220236038    | 3/8"  | 24,00 | 63    | 20    | 7     |
| 220261716    | 7/16" | 20,00 | 63    | 20    | 8     |
| 220261012    | 1/2"  | 28,00 | 70    | 22    | 9     |
| 220261916    | 9/16" | 18,00 | 70    | 22    | 11    |
| 220261058    | 5/8"  | 18,00 | 70    | 22    | 12    |
| 220261034    | 3/4"  | 16,00 | 80    | 22    | 14    |
| 220261078    | 7/8"  | 14,00 | 80    | 22    | 18    |
| 220261100    | 1"    | 12,00 | 90    | 22    | 18    |

### 2183/B Helical UNF Thin Threaded With Straight Canal Machine Guides



| PRODUCT CODE | d1 mm | P mm  | L1 mm | L2 mm | d2 mm |
|--------------|-------|-------|-------|-------|-------|
| 220271014    | 1/4"  | 28,00 | 50    | 16    | 6     |
| 220271516    | 5/16" | 24,00 | 56    | 22    | 6     |
| 220271038    | 3/8"  | 24,00 | 63    | 20    | 7     |
| 220271716    | 7/16" | 20,00 | 63    | 20    | 8     |
| 220271012    | 1/2"  | 28,00 | 70    | 22    | 9     |
| 220271916    | 9/16" | 18,00 | 70    | 22    | 11    |
| 220271058    | 5/8"  | 18,00 | 70    | 22    | 12    |
| 220271034    | 3/4"  | 16,00 | 80    | 22    | 14    |
| 220271078    | 7/8"  | 14,00 | 80    | 22    | 18    |
| 220271100    | 1"    | 12,00 | 90    | 22    | 18    |

# FUERTE / END MILLS

## HSS SHORT END MILLS 844



| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|
| 320031030    | 3        | 52       | 8        | 6        |
| 320031040    | 4        | 55       | 11       | 6        |
| 320031050    | 5        | 57       | 13       | 6        |
| 320031060    | 6        | 57       | 13       | 6        |
| 320031070    | 7        | 66       | 16       | 10       |
| 320031080    | 8        | 69       | 19       | 10       |
| 320031090    | 9        | 69       | 19       | 10       |
| 320031100    | 10       | 72       | 22       | 10       |
| 320031110    | 11       | 79       | 22       | 12       |
| 320031120    | 12       | 83       | 26       | 12       |
| 320031130    | 13       | 83       | 26       | 16       |
| 320031140    | 14       | 83       | 26       | 16       |
| 320031150    | 15       | 83       | 26       | 16       |
| 320031160    | 16       | 92       | 32       | 16       |
| 320031170    | 17       | 92       | 32       | 16       |
| 320031180    | 18       | 92       | 32       | 16       |
| 320031190    | 19       | 92       | 32       | 16       |
| 320031200    | 20       | 104      | 38       | 20       |
| 320031210    | 21       | 104      | 38       | 20       |
| 320031220    | 22       | 104      | 38       | 20       |
| 320031230    | 23       | 104      | 38       | 20       |
| 320031240    | 24       | 121      | 45       | 25       |
| 320031250    | 25       | 121      | 45       | 25       |

# FUERTE / END MILLS

## HSS LONG END MILLS 844



| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|
| 320061020    | 3        | 51       | 12       | 6        |
| 320061030    | 3        | 51       | 12       | 6        |
| 320061040    | 4        | 63       | 19       | 6        |
| 320061050    | 5        | 68       | 24       | 6        |
| 320061060    | 6        | 68       | 24       | 6        |
| 320061070    | 7        | 80       | 30       | 10       |
| 320061080    | 8        | 88       | 38       | 10       |
| 320061090    | 9        | 88       | 38       | 10       |
| 320061100    | 10       | 95       | 45       | 10       |
| 320061110    | 11       | 102      | 45       | 12       |
| 320061120    | 12       | 110      | 53       | 12       |
| 320061130    | 13       | 110      | 53       | 12       |
| 320061140    | 14       | 110      | 53       | 12       |
| 320061150    | 15       | 110      | 53       | 12       |
| 320061160    | 16       | 123      | 63       | 16       |
| 320061170    | 17       | 123      | 63       | 16       |
| 320061180    | 18       | 123      | 63       | 16       |
| 320061190    | 19       | 123      | 63       | 16       |
| 320061200    | 20       | 141      | 75       | 20       |
| 320061210    | 21       | 141      | 75       | 20       |
| 320061220    | 22       | 141      | 75       | 20       |
| 320061230    | 23       | 166      | 90       | 25       |
| 320061240    | 24       | 166      | 90       | 25       |
| 320061250    | 25       | 166      | 90       | 25       |

# FUERTE / End Mills

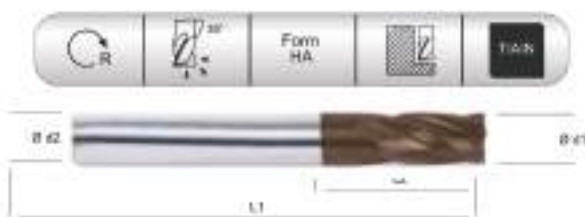


## SHORT CARBIDE END MILLS



| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|--------------|-------|-------|-------|-------|
| 340095030    | 3     | 3     | 50    | 12    | 340095130    | 13    | 13    | 84    | 32    |
| 340095040    | 4     | 4     | 51    | 14    | 340095140    | 14    | 14    | 84    | 32    |
| 340095050    | 5     | 5     | 51    | 16    | 340095150    | 15    | 15    | 93    | 32    |
| 340095060    | 6     | 6     | 58    | 19    | 340095160    | 16    | 16    | 93    | 32    |
| 340095070    | 7     | 7     | 64    | 20    | 340095180    | 18    | 18    | 93    | 35    |
| 340095080    | 8     | 8     | 64    | 20    | 340095200    | 20    | 20    | 100   | 38    |
| 340095090    | 9     | 9     | 73    | 21    | 340095220    | 22    | 22    | 100   | 38    |
| 340095100    | 10    | 10    | 73    | 21    | 340095240    | 24    | 24    | 100   | 38    |
| 340095110    | 11    | 11    | 84    | 25    | 340095250    | 25    | 25    | 100   | 38    |
| 340095120    | 12    | 12    | 84    | 25    |              |       |       |       |       |

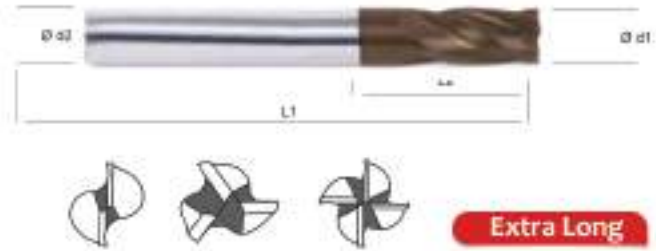
## LONG CARBIDE END MILLS



| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 340125030    | 3     | 3     | 75    | 20    |
| 340125040    | 4     | 4     | 75    | 20    |
| 340125050    | 5     | 5     | 75    | 25    |
| 340125060    | 6     | 6     | 75    | 30    |
| 340125080    | 8     | 8     | 75    | 30    |
| 340125100    | 10    | 10    | 100   | 45    |
| 340125120    | 12    | 12    | 100   | 45    |
| 340125140    | 14    | 14    | 100   | 45    |
| 340125160    | 16    | 16    | 100   | 45    |
| 340125180    | 18    | 18    | 100   | 45    |
| 340125200    | 20    | 20    | 100   | 45    |

# FUERTE / End Mills

## EXTRA LONG CARBIDE END MILLS



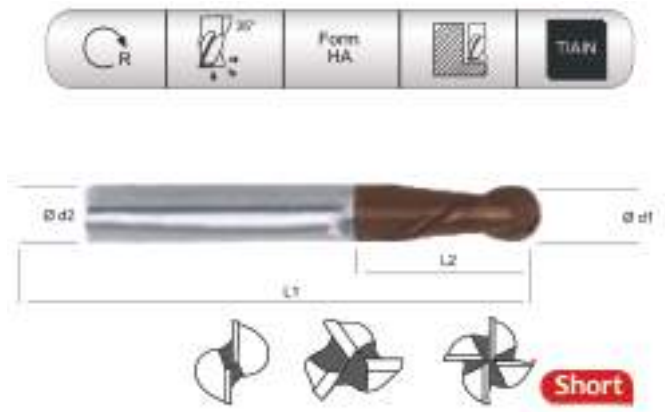
| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|
| 340125030    | 3        | 3        | 100      | 20       |
| 340125040    | 4        | 4        | 100      | 25       |
| 340125050    | 5        | 5        | 100      | 25       |
| 340125060    | 6        | 6        | 100      | 40       |
| 340125080    | 8        | 8        | 100      | 45       |
| 340125100    | 10       | 10       | 150      | 45       |
| 340125120    | 12       | 12       | 150      | 65       |
| 340125140    | 14       | 14       | 150      | 65       |
| 340125160    | 16       | 16       | 150      | 75       |
| 340125180    | 18       | 18       | 150      | 75       |
| 340125200    | 20       | 20       | 150      | 75       |

## SPHERICAL HEAD CARBIDE END MILLS



| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm |
|--------------|----------|----------|----------|----------|
| 340215030    | 3        | 3        | 75       | 20       |
| 340215040    | 4        | 4        | 75       | 20       |
| 340215050    | 5        | 5        | 75       | 25       |
| 340215060    | 6        | 6        | 75       | 30       |
| 340215080    | 8        | 8        | 75       | 30       |
| 340215100    | 10       | 10       | 100      | 45       |
| 340215120    | 12       | 12       | 100      | 45       |
| 340215140    | 14       | 14       | 100      | 45       |
| 340215160    | 16       | 16       | 100      | 45       |
| 340215180    | 18       | 18       | 100      | 45       |
| 340215200    | 20       | 20       | 100      | 45       |

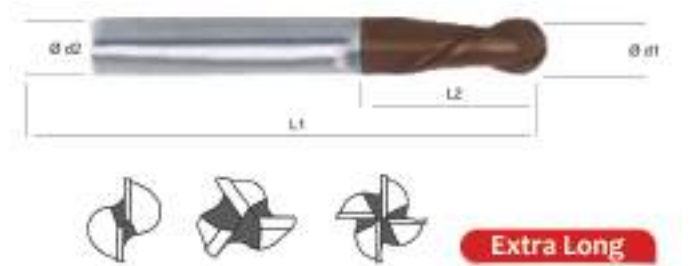
# FUERTE / End Mills



SHORT

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 340185030    | 3     | 3     | 50    | 12    |
| 340185040    | 4     | 4     | 51    | 14    |
| 340185050    | 5     | 5     | 51    | 16    |
| 340185060    | 6     | 6     | 58    | 19    |
| 340185080    | 8     | 8     | 64    | 20    |
| 340185100    | 10    | 10    | 73    | 21    |
| 340185120    | 12    | 12    | 84    | 25    |
| 340185140    | 14    | 14    | 84    | 32    |
| 340185160    | 16    | 16    | 93    | 32    |
| 340185180    | 18    | 18    | 93    | 35    |
| 340185200    | 20    | 20    | 100   | 38    |
| 340185220    | 22    | 22    | 100   | 38    |
| 340185240    | 24    | 24    | 100   | 38    |
| 340185250    | 25    | 25    | 100   | 38    |

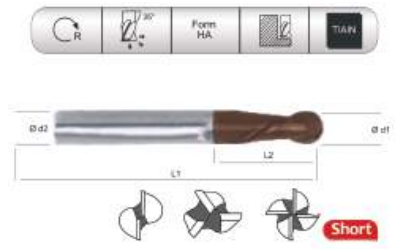
| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm |
|--------------|-------|-------|-------|-------|
| 340215030    | 3     | 3     | 75    | 20    |
| 340215040    | 4     | 4     | 75    | 20    |
| 340215050    | 5     | 5     | 75    | 25    |
| 340215060    | 6     | 6     | 75    | 30    |
| 340215080    | 8     | 8     | 75    | 30    |
| 340215100    | 10    | 10    | 100   | 45    |
| 340215120    | 12    | 12    | 100   | 45    |
| 340215140    | 14    | 14    | 100   | 45    |
| 340215160    | 16    | 16    | 100   | 45    |
| 340215180    | 18    | 18    | 100   | 45    |
| 340215200    | 20    | 20    | 100   | 45    |



EXTRA LONG

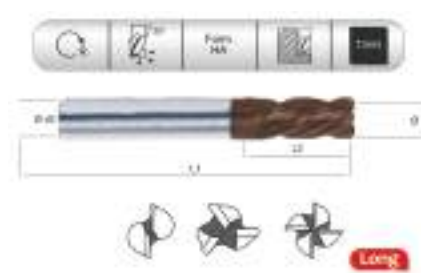
# FUERTE / End Mills

## CORNER RADIUS SHORT CARBIDE END MILLS



| PRODUCT CODE | d1 mm | L1 mm | L2 mm | r   |
|--------------|-------|-------|-------|-----|
| 340275030    | 3     | 50    | 12    | 0,5 |
| 340275040    | 4     | 51    | 14    | 0,5 |
| 340275050    | 5     | 61    | 16    | 0,5 |
| 340275060    | 6     | 58    | 19    | 0,5 |
| 340275061    | 6     | 58    | 19    | 1,0 |
| 340275080    | 8     | 64    | 20    | 0,5 |
| 340275081    | 8     | 64    | 20    | 1,0 |
| 340275082    | 8     | 64    | 20    | 1,5 |
| 340275083    | 8     | 64    | 20    | 2,0 |
| 340275100    | 10    | 73    | 21    | 0,5 |
| 340275101    | 10    | 73    | 21    | 1,0 |
| 340275102    | 10    | 73    | 21    | 1,5 |
| 340275103    | 10    | 73    | 21    | 2,0 |
| 340275120    | 12    | 84    | 25    | 0,5 |
| 340275121    | 12    | 84    | 25    | 1,0 |
| 340275122    | 12    | 84    | 25    | 1,5 |
| 340275123    | 12    | 84    | 25    | 2,0 |
| 340275140    | 14    | 84    | 32    | 1,0 |
| 340275141    | 14    | 84    | 32    | 1,5 |
| 340275142    | 14    | 84    | 32    | 2,0 |
| 340275143    | 14    | 84    | 32    | 3,0 |
| 340275160    | 16    | 93    | 25    | 1,0 |
| 340275161    | 16    | 93    | 32    | 1,5 |
| 340275162    | 16    | 93    | 32    | 2,0 |
| 340275163    | 16    | 93    | 32    | 3,0 |

## CORNER RADIUS LONG CARBIDE END MILLS



| PRODUCT CODE | d1 mm | L1 mm | L2 mm | r   |
|--------------|-------|-------|-------|-----|
| 340305030    | 3     | 75    | 20    | 0,5 |
| 340305040    | 4     | 75    | 20    | 0,5 |
| 340305050    | 5     | 75    | 25    | 0,5 |
| 340305060    | 6     | 75    | 30    | 0,5 |
| 340305061    | 6     | 75    | 30    | 1,0 |
| 340305080    | 8     | 75    | 30    | 0,5 |
| 340305081    | 8     | 75    | 30    | 1,0 |
| 340305082    | 8     | 75    | 30    | 1,5 |
| 340305083    | 8     | 75    | 30    | 2,0 |
| 340305100    | 10    | 100   | 45    | 0,5 |
| 340305101    | 10    | 100   | 45    | 1,0 |
| 340305102    | 10    | 100   | 45    | 1,5 |
| 340305103    | 10    | 100   | 45    | 2,0 |
| 340305120    | 12    | 100   | 45    | 0,5 |
| 340305121    | 12    | 100   | 45    | 1,0 |
| 340305122    | 12    | 100   | 45    | 1,5 |
| 340305123    | 12    | 100   | 45    | 2,0 |
| 340305140    | 14    | 100   | 45    | 1,0 |
| 340305141    | 14    | 100   | 45    | 1,5 |
| 340305142    | 14    | 100   | 45    | 2,0 |
| 340305143    | 14    | 100   | 45    | 3,0 |
| 340305160    | 16    | 100   | 45    | 1,0 |
| 340305161    | 16    | 100   | 45    | 1,5 |
| 340305162    | 16    | 100   | 45    | 2,0 |
| 340305163    | 16    | 100   | 45    | 3,0 |

# FUERTE / End Mills

## MULTI FLUTE CARBIDE END MILLS



Short

| PRODUCT CODE | d1 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|---|
| 340345060    | 6     | 58    | 19    | 6 |
| 340345070    | 7     | 64    | 26    | 6 |
| 340345080    | 8     | 64    | 20    | 6 |
| 340345090    | 9     | 73    | 21    | 6 |
| 340345100    | 10    | 73    | 21    | 6 |
| 340345110    | 11    | 84    | 25    | 6 |
| 340345120    | 12    | 84    | 25    | 6 |
| 340345130    | 13    | 84    | 32    | 6 |
| 340345140    | 14    | 84    | 32    | 6 |
| 340345150    | 15    | 93    | 32    | 6 |
| 340345160    | 16    | 93    | 32    | 6 |
| 340345180    | 18    | 93    | 35    | 6 |
| 340345200    | 20    | 100   | 38    | 8 |



Long

| PRODUCT CODE | d1 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|---|
| 340365060    | 6     | 75    | 30    | 6 |
| 340365070    | 7     | 75    | 30    | 6 |
| 340365080    | 8     | 75    | 30    | 6 |
| 340365090    | 9     | 100   | 45    | 6 |
| 340365100    | 10    | 100   | 45    | 6 |
| 340365110    | 11    | 100   | 45    | 6 |
| 340365120    | 12    | 100   | 45    | 6 |
| 340365130    | 13    | 100   | 45    | 6 |
| 340365140    | 14    | 100   | 45    | 6 |
| 340365150    | 15    | 100   | 45    | 6 |
| 340365160    | 16    | 100   | 45    | 6 |
| 340365180    | 18    | 150   | 75    | 6 |
| 340365200    | 20    | 150   | 75    | 8 |

## ROUGH SAWDUST CARBIDE END MILLS



Short

| PRODUCT CODE | d1 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|---|
| 340385060    | 6     | 57    | 19    | 4 |
| 340385070    | 7     | 60    | 19    | 4 |
| 340385080    | 8     | 63    | 20    | 4 |
| 340385090    | 9     | 67    | 20    | 4 |
| 340385100    | 10    | 72    | 21    | 4 |
| 340385120    | 12    | 83    | 25    | 4 |
| 340385140    | 14    | 83    | 32    | 4 |
| 340385160    | 16    | 92    | 32    | 4 |
| 340385180    | 18    | 92    | 35    | 4 |
| 340385200    | 20    | 104   | 38    | 4 |



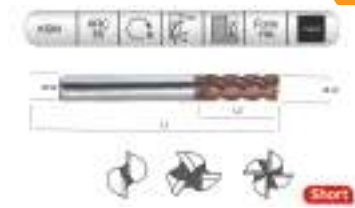
Long

| PRODUCT CODE | d1 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|---|
| 340395060    | 6     | 75    | 30    | 4 |
| 340395070    | 7     | 75    | 30    | 4 |
| 340395080    | 8     | 80    | 30    | 4 |
| 340395090    | 9     | 100   | 45    | 4 |
| 340395100    | 10    | 100   | 45    | 4 |
| 340395120    | 12    | 108   | 45    | 4 |
| 340395140    | 14    | 108   | 45    | 4 |
| 340395160    | 16    | 108   | 45    | 4 |
| 340395180    | 18    | 150   | 75    | 4 |
| 340395200    | 20    | 150   | 75    | 4 |



# FUERTE / Hard Series

## CARBIDE END MILLS



| PRODUCT CODE | d1 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|---|
| 340404030    | 3     | 40    | 10    | 4 |
| 340404040    | 4     | 50    | 12    | 4 |
| 340404050    | 5     | 50    | 14    | 4 |
| 340404060    | 6     | 60    | 14    | 4 |
| 340404080    | 8     | 64    | 20    | 4 |
| 340404100    | 10    | 75    | 22    | 4 |
| 340404120    | 12    | 80    | 25    | 4 |
| 340404140    | 14    | 80    | 30    | 4 |
| 340404160    | 16    | 80    | 32    | 4 |
| 340404180    | 18    | 100   | 32    | 4 |
| 340404200    | 20    | 100   | 38    | 4 |



| PRODUCT CODE | d1 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|---|
| 340454030    | 3     | 60    | 16    | 4 |
| 340454040    | 4     | 60    | 18    | 4 |
| 340454050    | 5     | 60    | 20    | 4 |
| 340454060    | 6     | 75    | 25    | 4 |
| 340454080    | 8     | 80    | 32    | 4 |
| 340454100    | 10    | 100   | 45    | 4 |
| 340454120    | 12    | 100   | 45    | 4 |
| 340454140    | 14    | 100   | 45    | 4 |
| 340454160    | 16    | 100   | 50    | 4 |
| 340484180    | 18    | 150   | 75    | 4 |
| 340484200    | 20    | 150   | 75    | 4 |

## SPHERICAL CARBIDE END MILLS



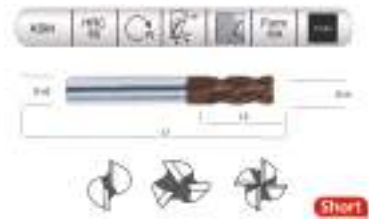
| PRODUCT CODE | d1 mm | L1 mm | L2 mm | r   |
|--------------|-------|-------|-------|-----|
| 340514030    | 3     | 40    | 6     | 1,5 |
| 340514040    | 4     | 50    | 8     | 2   |
| 340514050    | 5     | 50    | 8     | 2,5 |
| 340514060    | 6     | 60    | 10    | 3   |
| 340514080    | 8     | 60    | 10    | 4   |
| 340514100    | 10    | 75    | 12    | 5   |
| 340514120    | 12    | 80    | 12    | 6   |
| 340514140    | 14    | 80    | 12    | 7   |
| 340514160    | 16    | 80    | 16    | 8   |
| 340514180    | 18    | 100   | 16    | 9   |
| 340514200    | 20    | 100   | 20    | 10  |



| PRODUCT CODE | d1 mm | L1 mm | L2 mm | r   |
|--------------|-------|-------|-------|-----|
| 340544030    | 3     | 60    | 8     | 1,5 |
| 340544040    | 4     | 60    | 10    | 2   |
| 340544050    | 5     | 60    | 10    | 2,5 |
| 340544060    | 6     | 75    | 12    | 3   |
| 340544080    | 8     | 80    | 12    | 4   |
| 340544100    | 10    | 100   | 14    | 5   |
| 340544120    | 12    | 108   | 14    | 6   |
| 340544140    | 14    | 108   | 14    | 7   |
| 340544160    | 16    | 108   | 18    | 8   |
| 340574180    | 18    | 150   | 18    | 9   |
| 340574200    | 20    | 150   | 20    | 10  |

# FUERTE / Hard Series

## CORNER RADIUS CARBIDE END MILLS



| PRODUCT CODE | d1 mm | L1 mm | L2 mm | r       |
|--------------|-------|-------|-------|---------|
| 340604030    | 3     | 40    | 6     | (0,5-2) |
| 340604040    | 4     | 50    | 8     | (0,5-2) |
| 340604050    | 5     | 50    | 8     | (0,5-2) |
| 340604060    | 6     | 60    | 10    | (0,5-2) |
| 340604080    | 8     | 60    | 10    | (0,5-2) |
| 340604100    | 10    | 75    | 12    | (0,5-2) |
| 340604120    | 12    | 80    | 12    | (0,5-2) |
| 340604140    | 14    | 80    | 12    | (0,5-2) |
| 340604160    | 16    | 80    | 16    | (0,5-2) |
| 340604180    | 18    | 100   | 16    | (0,5-2) |
| 340604200    | 20    | 100   | 20    | (0,5-2) |



| PRODUCT CODE | d1 mm | L1 mm | L2 mm | r       |
|--------------|-------|-------|-------|---------|
| 340634030    | 3     | 60    | 8     | (0,5-2) |
| 340634040    | 4     | 60    | 10    | (0,5-2) |
| 340634050    | 5     | 60    | 10    | (0,5-2) |
| 340634060    | 6     | 75    | 12    | (0,5-2) |
| 340634080    | 8     | 80    | 12    | (0,5-2) |
| 340634100    | 10    | 100   | 14    | (0,5-2) |
| 340634120    | 12    | 108   | 14    | (0,5-2) |
| 340634140    | 14    | 108   | 14    | (0,5-2) |
| 340634160    | 16    | 108   | 18    | (0,5-2) |
| 340664180    | 18    | 150   | 18    | (0,5-2) |
| 340664200    | 20    | 150   | 20    | (0,5-2) |

## DIAMILL-CARBIDE END MILLS



| PRODUCT CODE | d1 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|---|
| 340674060    | 6     | 53    | 19    | 4 |
| 340674080    | 8     | 64    | 20    | 4 |
| 340674100    | 10    | 73    | 21    | 4 |
| 340674120    | 12    | 84    | 15    | 4 |
| 340674140    | 14    | 84    | 32    | 4 |
| 340674160    | 16    | 93    | 32    | 4 |
| 340674180    | 18    | 93    | 35    | 4 |
| 340674200    | 20    | 100   | 38    | 4 |



## Carbide Countersink Mills 90°

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | Z |
|--------------|-------|-------|-------|---|
| 140175060    | 6,0   | 6,0   | 57    | 4 |
| 140175080    | 8,0   | 8,0   | 63    | 5 |
| 140175100    | 10,0  | 10,0  | 75    | 6 |
| 140175120    | 12,0  | 12,0  | 83    | 6 |
| 140175140    | 14,0  | 14,0  | 83    | 6 |
| 140175160    | 16,0  | 16,0  | 92    | 6 |
| 140175180    | 18,0  | 18,0  | 92    | 6 |
| 140175200    | 20,0  | 20,0  | 92    | 6 |

# FUERTE / Micro&Macro Series

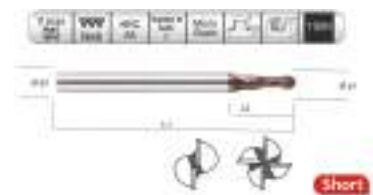
## MICRO MILLING CUTTERS



| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 340725005    | 0,5   | 3,0   | 50    | 0,8   | 2 |
| 340725006    | 0,6   | 3,0   | 50    | 1,0   | 2 |
| 340725007    | 0,7   | 3,0   | 50    | 1,0   | 2 |
| 340725008    | 0,8   | 3,0   | 50    | 1,2   | 2 |
| 340725009    | 0,9   | 3,0   | 50    | 1,2   | 2 |
| 340725010    | 1,0   | 3,0   | 50    | 1,5   | 2 |
| 340725015    | 1,5   | 3,0   | 50    | 2,0   | 2 |
| 340725020    | 2,0   | 3,0   | 50    | 3,0   | 2 |
| 340725025    | 2,5   | 3,0   | 50    | 3,5   | 2 |

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 340754005    | 0,5   | 3,0   | 50    | 0,8   | 2 |
| 340754006    | 0,6   | 3,0   | 50    | 1,0   | 2 |
| 340754007    | 0,7   | 3,0   | 50    | 1,0   | 2 |
| 340754008    | 0,8   | 3,0   | 50    | 1,2   | 2 |
| 340754009    | 0,9   | 3,0   | 50    | 1,2   | 2 |
| 340754010    | 1,0   | 3,0   | 50    | 1,5   | 2 |
| 340754015    | 1,5   | 3,0   | 50    | 2,0   | 2 |
| 340754020    | 2,0   | 3,0   | 50    | 3,0   | 2 |
| 340754025    | 2,5   | 3,0   | 50    | 3,5   | 2 |

## SPHERE MICRO MILLING CUTTERS



| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 340785005    | 0,5   | 3,0   | 50    | 0,8   | 2 |
| 340785006    | 0,6   | 3,0   | 50    | 1,0   | 2 |
| 340785007    | 0,7   | 3,0   | 50    | 1,0   | 2 |
| 340785008    | 0,8   | 3,0   | 50    | 1,2   | 2 |
| 340785009    | 0,9   | 3,0   | 50    | 1,2   | 2 |
| 340785010    | 1,0   | 3,0   | 50    | 1,5   | 2 |
| 340785015    | 1,5   | 3,0   | 50    | 2,0   | 2 |
| 340785020    | 2,0   | 3,0   | 50    | 3,0   | 2 |
| 340785025    | 2,5   | 3,0   | 50    | 3,5   | 2 |

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 340814005    | 0,5   | 3,0   | 50    | 0,8   | 2 |
| 340814006    | 0,6   | 3,0   | 50    | 1,0   | 2 |
| 340814007    | 0,7   | 3,0   | 50    | 1,0   | 2 |
| 340814008    | 0,8   | 3,0   | 50    | 1,2   | 2 |
| 340814009    | 0,9   | 3,0   | 50    | 1,2   | 2 |
| 340814010    | 1,0   | 3,0   | 50    | 1,5   | 2 |
| 340814015    | 1,5   | 3,0   | 50    | 2,0   | 2 |
| 340814020    | 2,0   | 3,0   | 50    | 3,0   | 2 |
| 340814025    | 2,5   | 3,0   | 50    | 3,5   | 2 |

# FUERTE / Micro&Macro Series

## MACRO MILLING CUTTERS



| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 340845010    | 1,0   | 6,0   | 50    | 1,5   | 2 |
| 340845015    | 1,5   | 6,0   | 50    | 2,0   | 2 |
| 340845020    | 2,0   | 6,0   | 50    | 3,0   | 2 |
| 340845025    | 2,5   | 6,0   | 50    | 3,5   | 2 |
| 340845030    | 3,0   | 6,0   | 50    | 4,5   | 2 |
| 340845035    | 3,5   | 6,0   | 50    | 4,5   | 2 |
| 340845040    | 4,0   | 6,0   | 50    | 4,5   | 2 |
| 340845045    | 4,5   | 6,0   | 50    | 4,5   | 2 |
| 340845050    | 5,0   | 6,0   | 50    | 4,5   | 2 |
| 340845055    | 5,5   | 6,0   | 50    | 4,5   | 2 |

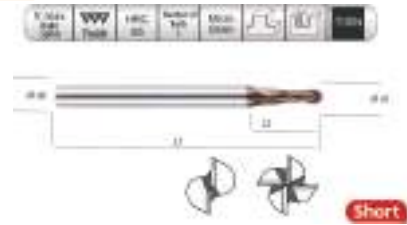


| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 340874010    | 1,0   | 6,0   | 50    | 1,5   | 2 |
| 340874015    | 1,5   | 6,0   | 50    | 2,0   | 2 |
| 340874020    | 2,0   | 6,0   | 50    | 3,0   | 2 |
| 340874025    | 2,5   | 6,0   | 50    | 3,5   | 2 |
| 340874030    | 3,0   | 6,0   | 50    | 4,5   | 2 |
| 340874035    | 3,5   | 6,0   | 50    | 4,5   | 2 |
| 340874040    | 4,0   | 6,0   | 50    | 4,5   | 2 |
| 340874045    | 4,5   | 6,0   | 50    | 4,5   | 2 |
| 340874050    | 5,0   | 6,0   | 50    | 4,5   | 2 |
| 340874055    | 5,5   | 6,0   | 50    | 4,5   | 2 |

## SPHERE MACRO MILLING CUTTERS



| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 340905010    | 1,0   | 6,0   | 50    | 1,5   | 2 |
| 340905015    | 1,5   | 6,0   | 50    | 2,0   | 2 |
| 340905020    | 2,0   | 6,0   | 50    | 3,0   | 2 |
| 340905025    | 2,5   | 6,0   | 50    | 3,5   | 2 |
| 340905030    | 3,0   | 6,0   | 50    | 4,5   | 2 |
| 340905035    | 3,5   | 6,0   | 50    | 4,5   | 2 |
| 340905040    | 4,0   | 6,0   | 50    | 4,5   | 2 |
| 340905045    | 4,5   | 6,0   | 50    | 4,5   | 2 |
| 340905050    | 5,0   | 6,0   | 50    | 4,5   | 2 |
| 340905055    | 5,5   | 6,0   | 50    | 4,5   | 2 |



| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 340934010    | 1,0   | 6,0   | 50    | 1,5   | 2 |
| 340934015    | 1,5   | 6,0   | 50    | 2,0   | 2 |
| 340934020    | 2,0   | 6,0   | 50    | 3,0   | 2 |
| 340934025    | 2,5   | 6,0   | 50    | 3,5   | 2 |
| 340934030    | 3,0   | 6,0   | 50    | 4,5   | 2 |
| 340934035    | 3,5   | 6,0   | 50    | 4,5   | 2 |
| 340934040    | 4,0   | 6,0   | 50    | 4,5   | 2 |
| 340934045    | 4,5   | 6,0   | 50    | 4,5   | 2 |
| 340934050    | 5,0   | 6,0   | 50    | 4,5   | 2 |
| 340934055    | 5,5   | 6,0   | 50    | 4,5   | 2 |

# FUERTE / Micro&Macro Series

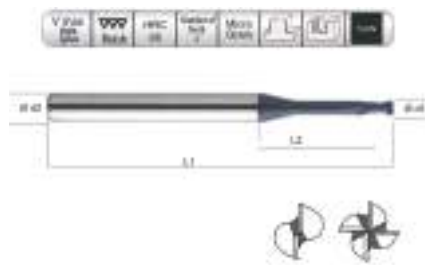
## CORNER RADIUS MACRO MILLING CUTTERS



| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm | Z |
|--------------|----------|----------|----------|----------|---|
| 341205010    | 1,0      | 6,0      | 50       | 1,5      | 2 |
| 341205015    | 1,5      | 6,0      | 50       | 2,0      | 2 |
| 341205020    | 2,0      | 6,0      | 50       | 3,0      | 2 |
| 341205025    | 2,5      | 6,0      | 50       | 3,5      | 2 |
| 341205030    | 3,0      | 6,0      | 50       | 4,5      | 2 |
| 341205035    | 3,5      | 6,0      | 50       | 4,5      | 2 |
| 341205040    | 4,0      | 6,0      | 50       | 4,5      | 2 |
| 341205045    | 4,5      | 6,0      | 50       | 4,5      | 2 |
| 341205050    | 5,0      | 6,0      | 50       | 4,5      | 2 |
| 341205055    | 5,5      | 6,0      | 50       | 4,5      | 2 |

| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm | Z |
|--------------|----------|----------|----------|----------|---|
| 351234010    | 1,0      | 6,0      | 50       | 1,5      | 2 |
| 351234015    | 1,5      | 6,0      | 50       | 2,0      | 2 |
| 351234020    | 2,0      | 6,0      | 50       | 3,0      | 2 |
| 351234025    | 2,5      | 6,0      | 50       | 3,5      | 2 |
| 351234030    | 3,0      | 6,0      | 50       | 4,5      | 2 |
| 351234035    | 3,5      | 6,0      | 50       | 4,5      | 2 |
| 351234040    | 4,0      | 6,0      | 50       | 4,5      | 2 |
| 351234045    | 4,5      | 6,0      | 50       | 4,5      | 2 |
| 351234050    | 5,0      | 6,0      | 50       | 4,5      | 2 |
| 351234055    | 5,5      | 6,0      | 50       | 4,5      | 2 |

## DBF END MILLS NT



| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm | Z |
|--------------|----------|----------|----------|----------|---|
| 340904100    | 1,0      | 4,0      | 50       | 6        | 2 |
| 340904101    | 1,0      | 4,0      | 50       | 8        | 2 |
| 340904102    | 1,0      | 4,0      | 50       | 10       | 2 |
| 340904103    | 1,0      | 4,0      | 50       | 12       | 2 |
| 340904104    | 1,0      | 4,0      | 50       | 14       | 2 |
| 340904105    | 1,0      | 4,0      | 50       | 16       | 2 |
| 340904106    | 1,0      | 4,0      | 50       | 20       | 2 |
| 340904150    | 1,5      | 4,0      | 50       | 6        | 2 |
| 340904151    | 1,5      | 4,0      | 50       | 8        | 2 |
| 340904152    | 1,5      | 4,0      | 50       | 10       | 2 |

| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm | Z |
|--------------|----------|----------|----------|----------|---|
| 340904153    | 1,5      | 4,0      | 50       | 12       | 2 |
| 340904154    | 1,5      | 4,0      | 50       | 14       | 2 |
| 340904155    | 1,5      | 4,0      | 50       | 16       | 2 |
| 340904156    | 1,5      | 4,0      | 50       | 20       | 2 |
| 340904200    | 2,0      | 4,0      | 50       | 6        | 2 |
| 340904201    | 2,0      | 4,0      | 50       | 8        | 2 |
| 340904202    | 2,0      | 4,0      | 50       | 10       | 2 |
| 340904203    | 2,0      | 4,0      | 50       | 12       | 2 |
| 340904204    | 2,0      | 4,0      | 50       | 14       | 2 |
| 340904205    | 2,0      | 4,0      | 50       | 16       | 2 |

# FUERTE / Micro&Macro Series

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 340904206    | 2,0   | 4,0   | 50    | 20    | 2 |
| 340904250    | 2,5   | 4,0   | 50    | 8     | 2 |
| 340904251    | 2,5   | 4,0   | 50    | 10    | 2 |
| 340904252    | 2,5   | 4,0   | 50    | 12    | 2 |
| 340904253    | 2,5   | 4,0   | 50    | 14    | 2 |
| 340904254    | 2,5   | 4,0   | 50    | 16    | 2 |
| 340904255    | 2,5   | 4,0   | 50    | 20    | 2 |
| 340904300    | 3,0   | 6,0   | 57    | 10    | 2 |
| 340904301    | 3,0   | 6,0   | 57    | 12    | 2 |
| 340904302    | 3,0   | 6,0   | 57    | 14    | 2 |
| 340904303    | 3,0   | 6,0   | 57    | 16    | 2 |

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 340904304    | 3,0   | 6,0   | 57    | 20    | 2 |
| 340904350    | 3,5   | 6,0   | 57    | 10    | 2 |
| 340904351    | 3,5   | 6,0   | 57    | 12    | 2 |
| 340904352    | 3,5   | 6,0   | 57    | 14    | 2 |
| 340904353    | 3,5   | 6,0   | 57    | 16    | 2 |
| 340904354    | 3,5   | 6,0   | 57    | 20    | 2 |
| 340904400    | 4,0   | 6,0   | 57    | 10    | 2 |
| 340904401    | 4,0   | 6,0   | 57    | 12    | 2 |
| 340904402    | 4,0   | 6,0   | 57    | 14    | 2 |
| 340904403    | 4,0   | 6,0   | 57    | 16    | 2 |
| 340904404    | 4,0   | 6,0   | 57    | 20    | 2 |

## SPHERE DBF END MILLS NT



| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 340995100    | 1,0   | 4,0   | 50    | 6     | 2 |
| 340995101    | 1,0   | 4,0   | 50    | 8     | 2 |
| 340995102    | 1,0   | 4,0   | 50    | 10    | 2 |
| 340995103    | 1,0   | 4,0   | 50    | 12    | 2 |
| 340995104    | 1,0   | 4,0   | 50    | 14    | 2 |
| 340995105    | 1,0   | 4,0   | 50    | 16    | 2 |
| 340995106    | 1,0   | 4,0   | 50    | 20    | 2 |
| 340995150    | 1,5   | 4,0   | 50    | 6     | 2 |
| 340995151    | 1,5   | 4,0   | 50    | 8     | 2 |
| 340995152    | 1,5   | 4,0   | 50    | 10    | 2 |

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 340995153    | 1,5   | 4,0   | 50    | 12    | 2 |
| 340995154    | 1,5   | 4,0   | 50    | 14    | 2 |
| 340995155    | 1,5   | 4,0   | 50    | 16    | 2 |
| 340995156    | 1,5   | 4,0   | 50    | 20    | 2 |
| 340995200    | 2,0   | 4,0   | 50    | 6     | 2 |
| 340995201    | 2,0   | 4,0   | 50    | 8     | 2 |
| 340995202    | 2,0   | 4,0   | 50    | 10    | 2 |
| 340995203    | 2,0   | 4,0   | 50    | 12    | 2 |
| 340995204    | 2,0   | 4,0   | 50    | 14    | 2 |
| 340995205    | 2,0   | 4,0   | 50    | 16    | 2 |

# FUERTE / Micro&Macro Series

| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm | Z |
|--------------|----------|----------|----------|----------|---|
| 340995206    | 2,0      | 4,0      | 50       | 20       | 2 |
| 340995250    | 2,5      | 4,0      | 50       | 8        | 2 |
| 340995251    | 2,5      | 4,0      | 50       | 10       | 2 |
| 340995252    | 2,5      | 4,0      | 50       | 12       | 2 |
| 340995253    | 2,5      | 4,0      | 50       | 14       | 2 |
| 340995254    | 2,5      | 4,0      | 50       | 16       | 2 |
| 340995255    | 2,5      | 4,0      | 50       | 20       | 2 |
| 340995300    | 3,0      | 6,0      | 57       | 10       | 2 |
| 340995301    | 3,0      | 6,0      | 57       | 12       | 2 |
| 340995302    | 3,0      | 6,0      | 57       | 14       | 2 |
| 340995303    | 3,0      | 6,0      | 57       | 16       | 2 |

| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm | Z |
|--------------|----------|----------|----------|----------|---|
| 340995304    | 3,0      | 6,0      | 57       | 20       | 2 |
| 340995350    | 3,5      | 6,0      | 57       | 10       | 2 |
| 340995351    | 3,5      | 6,0      | 57       | 12       | 2 |
| 340995352    | 3,5      | 6,0      | 57       | 14       | 2 |
| 340995353    | 3,5      | 6,0      | 57       | 16       | 2 |
| 340995354    | 3,5      | 6,0      | 57       | 20       | 2 |
| 340995400    | 4,0      | 6,0      | 57       | 10       | 2 |
| 340995401    | 4,0      | 6,0      | 57       | 12       | 2 |
| 340995402    | 4,0      | 6,0      | 57       | 14       | 2 |
| 340995403    | 4,0      | 6,0      | 57       | 16       | 2 |
| 340995404    | 4,0      | 6,0      | 57       | 20       | 2 |

## CORNER DBF END MILLS NT



| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm | Z |
|--------------|----------|----------|----------|----------|---|
| 351144010    | 1,0      | 4,0      | 50       | 6        | 2 |
| 351144011    | 1,0      | 4,0      | 50       | 8        | 2 |
| 351144012    | 1,0      | 4,0      | 50       | 10       | 2 |
| 351144013    | 1,0      | 4,0      | 50       | 12       | 2 |
| 351144014    | 1,0      | 4,0      | 50       | 14       | 2 |
| 351144015    | 1,0      | 4,0      | 50       | 16       | 2 |
| 351144016    | 1,0      | 4,0      | 50       | 20       | 2 |
| 351144150    | 1,5      | 4,0      | 50       | 6        | 2 |
| 351144151    | 1,5      | 4,0      | 50       | 8        | 2 |
| 351144152    | 1,5      | 4,0      | 50       | 10       | 2 |

| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm | Z |
|--------------|----------|----------|----------|----------|---|
| 351144153    | 1,5      | 4,0      | 50       | 12       | 2 |
| 351144154    | 1,5      | 4,0      | 50       | 14       | 2 |
| 351144155    | 1,5      | 4,0      | 50       | 16       | 2 |
| 351144156    | 1,5      | 4,0      | 50       | 20       | 2 |
| 351144200    | 2,0      | 4,0      | 50       | 6        | 2 |
| 351144201    | 2,0      | 4,0      | 50       | 8        | 2 |
| 351144202    | 2,0      | 4,0      | 50       | 10       | 2 |
| 351144203    | 2,0      | 4,0      | 50       | 12       | 2 |
| 351144204    | 2,0      | 4,0      | 50       | 14       | 2 |
| 351144205    | 2,0      | 4,0      | 50       | 16       | 2 |

# FUERTE / Micro&Macro Series

| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm | Z |
|--------------|----------|----------|----------|----------|---|
| 351144206    | 2,0      | 4,0      | 50       | 20       | 2 |
| 351144250    | 2,5      | 4,0      | 50       | 8        | 2 |
| 351144251    | 2,5      | 4,0      | 50       | 10       | 2 |
| 351144252    | 2,5      | 4,0      | 50       | 12       | 2 |
| 351144253    | 2,5      | 4,0      | 50       | 14       | 2 |
| 351144254    | 2,5      | 4,0      | 50       | 16       | 2 |
| 351144255    | 2,5      | 4,0      | 50       | 20       | 2 |
| 351144300    | 3,0      | 6,0      | 57       | 10       | 2 |
| 351144301    | 3,0      | 6,0      | 57       | 12       | 2 |
| 351144302    | 3,0      | 6,0      | 57       | 14       | 2 |
| 351144303    | 3,0      | 6,0      | 57       | 16       | 2 |

| PRODUCT CODE | d1<br>mm | d2<br>mm | L1<br>mm | L2<br>mm | Z |
|--------------|----------|----------|----------|----------|---|
| 351144304    | 3,0      | 6,0      | 57       | 20       | 2 |
| 351144350    | 3,5      | 6,0      | 57       | 10       | 2 |
| 351144351    | 3,5      | 6,0      | 57       | 12       | 2 |
| 351144352    | 3,5      | 6,0      | 57       | 14       | 2 |
| 351144353    | 3,5      | 6,0      | 57       | 16       | 2 |
| 351144354    | 3,5      | 6,0      | 57       | 20       | 2 |
| 351144400    | 4,0      | 6,0      | 57       | 10       | 2 |
| 351144401    | 4,0      | 6,0      | 57       | 12       | 2 |
| 351144402    | 4,0      | 6,0      | 57       | 14       | 2 |
| 351144403    | 4,0      | 6,0      | 57       | 16       | 2 |
| 351144404    | 4,0      | 6,0      | 57       | 20       | 2 |





# FUERTE / ALM Series

## THREE EDGED ALUMINUM PVC END MILLS



### Carbide Aluminum Performance Milling Cutter Z3

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 341101030    | 3,0   | 3,0   | 40    | 8     | 3 |
| 341101040    | 4,0   | 4,0   | 50    | 11    | 3 |
| 341101050    | 5,0   | 5,0   | 50    | 13    | 3 |
| 341101060    | 6,0   | 6,0   | 60    | 16    | 3 |
| 341101080    | 8,0   | 8,0   | 72    | 25    | 3 |
| 341101100    | 10,0  | 10,0  | 72    | 25    | 3 |
| 341101120    | 12,0  | 12,0  | 83    | 32    | 3 |
| 341101140    | 14,0  | 14,0  | 83    | 32    | 3 |
| 341101160    | 16,0  | 16,0  | 92    | 36    | 3 |
| 341101180    | 18,0  | 18,0  | 110   | 45    | 3 |
| 341101200    | 20,0  | 20,0  | 110   | 45    | 3 |



### Carbide Aluminum Performance Milling Cutter Z2-3

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z   |
|--------------|-------|-------|-------|-------|-----|
| 341041030    | 3,0   | 3,0   | 40    | 8     | 2-3 |
| 341041040    | 4,0   | 4,0   | 50    | 11    | 2-3 |
| 341041050    | 5,0   | 5,0   | 50    | 13    | 2-3 |
| 341041060    | 6,0   | 6,0   | 58    | 13    | 2-3 |
| 341041070    | 7,0   | 7,0   | 64    | 20    | 2-3 |
| 341041080    | 8,0   | 8,0   | 64    | 20    | 2-3 |
| 341041090    | 9,0   | 9,0   | 73    | 21    | 2-3 |
| 341041100    | 10,0  | 10,0  | 73    | 21    | 2-3 |
| 341041110    | 11,0  | 11,0  | 84    | 25    | 2-3 |
| 341041120    | 12,0  | 12,0  | 84    | 25    | 2-3 |
| 341041140    | 14,0  | 14,0  | 84    | 25    | 2-3 |
| 341041160    | 16,0  | 16,0  | 92    | 32    | 2-3 |
| 341041180    | 18,0  | 18,0  | 104   | 32    | 2-3 |
| 341041200    | 20,0  | 20,0  | 104   | 38    | 2-3 |

### Carbide Aluminum Performance Milling Cutter Z3

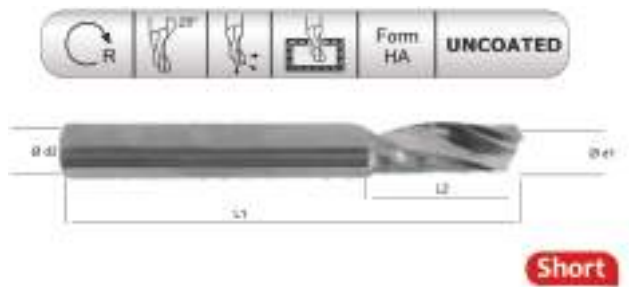
| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 341131030    | 3,0   | 3,0   | 75    | 20    | 3 |
| 341131040    | 4,0   | 4,0   | 75    | 20    | 3 |
| 341131050    | 5,0   | 5,0   | 75    | 25    | 3 |
| 341131060    | 6,0   | 6,0   | 75    | 25    | 3 |
| 341131080    | 8,0   | 8,0   | 75    | 30    | 3 |
| 341131100    | 10,0  | 10,0  | 75    | 30    | 3 |
| 341131120    | 12,0  | 12,0  | 100   | 45    | 3 |
| 341131140    | 14,0  | 14,0  | 100   | 45    | 3 |
| 341131160    | 16,0  | 16,0  | 100   | 45    | 3 |
| 341103180    | 18,0  | 18,0  | 150   | 75    | 3 |
| 341131200    | 20,0  | 20,0  | 150   | 75    | 3 |

### Carbide Aluminum Performance Milling Cutter Z2-3

| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z   |
|--------------|-------|-------|-------|-------|-----|
| 341071030    | 3,0   | 3,0   | 75    | 16    | 2-3 |
| 341071040    | 4,0   | 4,0   | 75    | 18    | 2-3 |
| 341071050    | 5,0   | 5,0   | 75    | 20    | 2-3 |
| 341071060    | 6,0   | 6,0   | 75    | 24    | 2-3 |
| 341071070    | 7,0   | 7,0   | 75    | 38    | 2-3 |
| 341071080    | 8,0   | 8,0   | 75    | 38    | 2-3 |
| 341071090    | 9,0   | 9,0   | 75    | 45    | 2-3 |
| 341071100    | 10,0  | 10,0  | 100   | 45    | 2-3 |
| 341071110    | 11,0  | 11,0  | 100   | 53    | 2-3 |
| 341071120    | 12,0  | 12,0  | 100   | 53    | 2-3 |
| 341071140    | 14,0  | 14,0  | 100   | 53    | 2-3 |
| 341071160    | 16,0  | 16,0  | 100   | 63    | 2-3 |
| 341071180    | 18,0  | 18,0  | 150   | 63    | 2-3 |
| 341071200    | 20,0  | 20,0  | 150   | 75    | 2-3 |

# FUERTE / ALM Series

## SINGLE EDGED END MILLS



| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 341021030    | 3,0   | 3,0   | 50    | 12    | 1 |
| 341021040    | 4,0   | 4,0   | 50    | 14    | 1 |
| 341021050    | 5,0   | 5,0   | 50    | 16    | 1 |
| 341021060    | 6,0   | 6,0   | 58    | 19    | 1 |
| 341021070    | 7,0   | 7,0   | 64    | 20    | 1 |
| 341021080    | 8,0   | 8,0   | 64    | 20    | 1 |
| 341021090    | 9,0   | 9,0   | 73    | 21    | 1 |
| 341021100    | 10,0  | 10,0  | 73    | 21    | 1 |
| 341021110    | 11,0  | 11,0  | 84    | 25    | 1 |
| 341021120    | 12,0  | 12,0  | 84    | 25    | 1 |



| PRODUCT CODE | d1 mm | d2 mm | L1 mm | L2 mm | Z |
|--------------|-------|-------|-------|-------|---|
| 341051030    | 3,0   | 3,0   | 65    | 16    | 1 |
| 341051040    | 4,0   | 4,0   | 65    | 18    | 1 |
| 341051050    | 5,0   | 5,0   | 65    | 20    | 1 |
| 341051060    | 6,0   | 6,0   | 68    | 24    | 1 |
| 341051070    | 7,0   | 7,0   | 68    | 24    | 1 |
| 341051080    | 8,0   | 8,0   | 88    | 38    | 1 |
| 341051090    | 9,0   | 9,0   | 88    | 38    | 1 |
| 341051100    | 10,0  | 10,0  | 100   | 45    | 1 |
| 341051110    | 11,0  | 11,0  | 100   | 45    | 1 |
| 341051120    | 12,0  | 12,0  | 110   | 53    | 1 |



# MONCARB

-APHW 100308 SERIES



-APKT 100305 SERIES



-APKT 160408 SERIES



-RNMX 1206 SERIES



-WNMJ 120412 SERIE



-XNMX 140608 SERIES



-XNMX 140608 SERIES



# APHV 100308 SERIES

## THREADED SETS



|              | D        | L    | B         | Z               | M           |
|--------------|----------|------|-----------|-----------------|-------------|
| PRODUCT CODE | Diameter | Size | Back Size | Number Of Mouth | Threat Size |
| APW10M0816   | 16       | 23   | 12        | 2               | 8           |
| APW10M1020   | 20       | 30   | 14        | 3               | 10          |
| APW10M1225   | 25       | 35   | 24        | 4               | 12          |
| APW10M1632   | 32       | 40   | 29        | 5               | 16          |
| APW10M1642   | 42       | 40   | 29        | 6               | 16          |

## SHAFTED DREDGE



|              | A        | B               | C    | C1                | Z               |
|--------------|----------|-----------------|------|-------------------|-----------------|
| PRODUCT CODE | Diameter | Handle Diameter | Size | Intermediate Size | Number Of Mouth |
| APW1014150   | 14       | 14              | 150  | 20                | 2               |
| APW1016160   | 16       | 14              | 160  | 25                | 2               |
| APW1017170   | 17       | 16              | 170  | 25                | 2               |
| APW1020170   | 20       | 18              | 170  | 25                | 3               |
| APW1021170   | 21       | 20              | 170  | 25                | 3               |
| APW1022170   | 25       | 20              | 170  | 33                | 4               |
| APW1025170   | 26       | 25              | 170  | 33                | 4               |
| APW1032190   | 32       | 32              | 190  | 52                | 4               |
| APW1033190   | 33       | 32              | 190  | 52                | 4               |

# APHV 100308 SERIES

## DIAMOND TIPS



PRODUCT CODE

Quality

APHW100308

TSH

APHW100308

TLX

## SOLID CARBIDE ADAPTERS



| ORDER NUMBER      | Diameter<br>ØD | Neck<br>ØD1 | Neck<br>L | Total<br>L | Secrew<br>M |
|-------------------|----------------|-------------|-----------|------------|-------------|
| CMS-16-150-16-M8  | 16             | 15,5        | 80        | 150        | M8          |
| CMS-16-200-16-M8  | 16             | 15,5        | 130       | 200        | M8          |
| CMS-20-150-20-M10 | 20             | 19,5        | 80        | 150        | M10         |
| CMS-20-200-20-M10 | 20             | 19,5        | 130       | 200        | M10         |
| CMS-25-200-25-M12 | 25             | 24,5        | 130       | 200        | M12         |
| CMS-32-300-32-M16 | 32             | 29,0        | 150       | 300        | M16         |

## Cutting Parameter For Finish Operation

| Set Diameters         |              |                       |      |      |      |      |      |
|-----------------------|--------------|-----------------------|------|------|------|------|------|
| Materials             | Cutting Rate |                       | 16   | 16   | 25   | 32   | 42   |
| Hardness Up to 40 HRC | 130-200      | Tooth<br>Feed<br>Rate | 0,25 | 0,25 | 0,25 | 0,25 | 0,25 |
| 40-54 HRC Hardness    | 100-150      |                       | 0,25 | 0,25 | 0,25 | 0,25 | 0,25 |
| 54-64 HRC Hardness    | 80-110       |                       | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 |
| Aluminum and Chopper  | 350          |                       | 0,25 | 0,25 | 0,25 | 0,25 | 0,25 |
| Cast, Stainless Steel | 140-190      |                       | 0,25 | 0,25 | 0,25 | 0,25 | 0,25 |
| Nickel Alloy Steel    | 120-170      |                       | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 |
| Titanium Alloys       | 30-60        |                       | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 |
| Tooth Feed Rate       | 50-70        |                       | 0,15 | 0,15 | 0,15 | 0,15 | 0,15 |

# APKT 100305 SERIES

## THREADED SETS



|              | D        | L      | B             | Z               | M           |            |
|--------------|----------|--------|---------------|-----------------|-------------|------------|
| PRODUCT CODE | Diameter | Lenght | Back Diameter | Number Of Edges | Thooth Size | Cutter Tip |
| APK10M0816   | 16       | 23     | 12            | 2               | 8           | APK1003    |
| APK10M1020   | 20       | 30     | 14            | 3               | 10          | APK1003    |
| APK10M1225   | 25       | 35     | 24            | 4               | 12          | APK1003    |
| APK10M1632   | 32       | 40     | 29            | 5               | 16          | APK1003    |
| APK10M1642   | 42       | 40     | 29            | 6               | 16          | APK1003    |

## DIAMOND TIPS



| PRODUCT CODE | Quality |
|--------------|---------|
| APKT100305   | TSH     |
| APKT100305   | TLX     |

## SHAFTED DREDGE



|              | A        | B              | C      | C1             | Z               |            |
|--------------|----------|----------------|--------|----------------|-----------------|------------|
| PRODUCT CODE | Diameter | Shank Diameter | Lenght | Interim Lenght | Number Of Edges | Cutter Tip |
| APK1014150   | 14       | 14             | 150    | 20             | 2               | APK1003    |
| APK1016150   | 16       | 14             | 160    | 25             | 2               | APK1003    |
| APK1017170   | 17       | 16             | 170    | 25             | 2               | APK1003    |
| APK1020170   | 20       | 18             | 170    | 25             | 3               | APK1003    |
| APK1021170   | 21       | 20             | 170    | 25             | 3               | APK1003    |
| APK1025170   | 25       | 20             | 170    | 33             | 4               | APK1003    |
| APK1026170   | 26       | 25             | 170    | 33             | 4               | APK1003    |
| APK1032230   | 32       | 32             | 230    | 40             | 5               | APK1003    |
| APK1033230   | 33       | 32             | 230    | 40             | 5               | APK1003    |

# APKT 160408 SERIES

## THREADED SETS



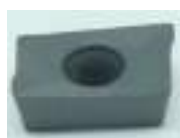
|              | D        | L      | B             | Z               | M           |
|--------------|----------|--------|---------------|-----------------|-------------|
| PRODUCT CODE | Diameter | Lenght | Back Diameter | Number Of Edges | Thooth Size |
| APK16M1225   | 25       | 35     | 24            | 2               | 12          |
| APK16M1226   | 26       | 35     | 24            | 2               | 12          |
| APK16M1632   | 32       | 42     | 29            | 3               | 16          |
| APK16M1635   | 35       | 42     | 29            | 3               | 16          |
| APK16M1640   | 40       | 42     | 29            | 4               | 16          |
| APK16M1642   | 42       | 42     | 29            | 4               | 16          |

## SHAFTED DREDGE



|              | A        | B              | C      | C1             | Z               |
|--------------|----------|----------------|--------|----------------|-----------------|
| PRODUCT CODE | Diameter | Shank Diameter | Lenght | Interim Lenght | Number Of Edges |
| APK1625230   | 25       | 20             | 170    | 33             | 2               |
| APK1626230   | 26       | 25             | 170    | 33             | 2               |
| APK1632230   | 32       | 25             | 230    | 40             | 2               |
| APK1633230   | 33       | 32             | 230    | 40             | 3               |
| APK1640230   | 40       | 32             | 230    | 40             | 3               |

## DIAMOND TIPS



| PRODUCT CODE | Quality |
|--------------|---------|
| APKT160408   | TSH     |
| APKT160408   | TLX     |



# RNMX 1206 SERIES

## RNMX CUTTING ENDS

- Ideal choose for high alloy steels, stainless steels, hardness steels, cast steels and titanium and nickel alloy steels
- Effective positive cutting angle provides compatibility with any type of machine and problem free operation
- 12 cutting edges and positive cutting edge allowing easy roughing with high milling
- Impact resistant, strong geometry and infrastructure

## Cutting Parameters

|                       |              | Sawdust Amount (Ap) |      |      |      |      |      |      |      |
|-----------------------|--------------|---------------------|------|------|------|------|------|------|------|
| Materials             | Cutting Rate | Tooth Feed Rate     | 0,3  | 0,5  | 0,75 | 1,0  | 1,5  | 2,0  | 2,5  |
| Alloy Steels          | 130-200      |                     | 1,44 | 1,00 | 0,84 | 0,70 | 0,60 | 0,50 | 0,50 |
| Mold Steels           | 100-150      |                     | 0,90 | 0,65 | 0,53 | 0,43 | 0,39 | 0,35 | 0,35 |
| Tool Steels           | 80-110       |                     | 0,85 | 0,60 | 0,50 | 0,40 | 0,35 | 0,30 | 0,30 |
| Aluminum and Chopper  | 350          |                     | 1,50 | 1,00 | 1,00 | 0,70 | 0,60 | 0,50 | 0,50 |
| Casts                 | 140-190      |                     | 1,50 | 1,00 | 1,00 | 0,70 | 0,60 | 0,50 | 0,50 |
| Stainless Steels      | 120-170      |                     | 1,00 | 0,75 | 0,63 | 0,54 | 0,45 | 0,39 | 0,39 |
| Nickel Alloy Steels   | 30-60        |                     | 0,60 | 0,40 | 0,35 | 0,30 | 0,27 | 0,24 | 0,24 |
| Titanium Alloy Steels | 50-70        |                     | 0,60 | 0,40 | 0,35 | 0,30 | 0,27 | 0,24 | 0,24 |

## RNMX SHAFTED HEADS



| PRODUCT CODE | A   | B  | C  | C1 | Z |
|--------------|-----|----|----|----|---|
| RN124004     | 40  | 40 | 38 | 16 | 4 |
| RN125204     | 52  | 45 | 46 | 22 | 5 |
| RN126305     | 63  | 45 | 46 | 22 | 5 |
| RN128006     | 80  | 50 | 58 | 27 | 6 |
| RN121009     | 100 | 50 | 78 | 32 | 7 |
| RN1212511    | 125 | 63 | 90 | 40 | 9 |



# RNMX 1206 SERIES

## RNMX SHAFTED DREDGE



| PRODUCT CODE | A  | B  | C   | C1 | C2 | C3 | D  | Z |
|--------------|----|----|-----|----|----|----|----|---|
| RN1232190    | 32 | 32 | 190 | 96 | 54 | 40 | 28 | 2 |

## Cutting Parameters

| Sawdust Amount (Ap)   |              |                 |      |      |      |      |      |      |      |
|-----------------------|--------------|-----------------|------|------|------|------|------|------|------|
| Materials             | Cutting Rate | Tooth Feed Rate | 0,3  | 0,5  | 0,75 | 1,0  | 1,5  | 2,0  | 2,5  |
| Alloy Steels          | 130-200      |                 | 1,44 | 1,00 | 0,84 | 0,70 | 0,60 | 0,50 | 0,50 |
| Mold Steels           | 100-150      |                 | 0,90 | 0,65 | 0,53 | 0,43 | 0,39 | 0,35 | 0,35 |
| Tool Steels           | 80-110       |                 | 0,85 | 0,60 | 0,50 | 0,40 | 0,35 | 0,30 | 0,30 |
| Aluminum and Chopper  | 350          |                 | 1,50 | 1,00 | 1,00 | 0,70 | 0,60 | 0,50 | 0,50 |
| Casts                 | 140-190      |                 | 1,50 | 1,00 | 1,00 | 0,70 | 0,60 | 0,50 | 0,50 |
| Stainless Steels      | 120-170      |                 | 1,00 | 0,75 | 0,63 | 0,54 | 0,45 | 0,39 | 0,39 |
| Nickel Alloy Steels   | 30-60        |                 | 0,60 | 0,40 | 0,35 | 0,30 | 0,27 | 0,24 | 0,24 |
| Titanium Alloy Steels | 50-70        |                 | 0,60 | 0,40 | 0,35 | 0,30 | 0,27 | 0,24 | 0,24 |

## RNMX THREADED SETS



| PRODUCT CODE | D  | L  | B  | Z | M  |
|--------------|----|----|----|---|----|
| RN12M1632    | 32 | 40 | 29 | 3 | 16 |
| RN12M1642    | 42 | 40 | 29 | 4 | 16 |

## DIAMOND SETS

| PRODUCT CODE    | QUALITY | RESERVE |
|-----------------|---------|---------|
| RNMX1206 MO TSH | TSH     | MS 3,5  |
| RNMX1206 MO TLX | TLX     | T15     |

# WNMJ 120412 SERIES

## WNMJ THREADED SETS



| PRODUCT CODE | D  | L  | B  | Z | M  |
|--------------|----|----|----|---|----|
| WN12M1632    | 32 | 40 | 29 | 3 | 16 |
| WN12M1635    | 35 | 40 | 29 | 3 | 16 |
| WN12M1642    | 42 | 40 | 29 | 4 | 16 |

## WNMJ SHAFTED HEAD



| PRODUCT CODE | D  | L  | B  | Z  | M |
|--------------|----|----|----|----|---|
| WN124004     | 40 | 40 | 38 | 16 | 4 |
| WN125204     | 52 | 45 | 46 | 22 | 4 |
| WN126305     | 63 | 45 | 46 | 22 | 5 |
| WN128006     | 80 | 50 | 58 | 27 | 6 |

## DIAMOND TIPS



| PRODUCT CODE | QUALITY | RESERVE |
|--------------|---------|---------|
| WNMJ 120412  | TSH     | MS 4,0  |
| WNMJ120412   | TLX     | T15     |

# XNMX 140608 SERIES

## XNMX SHAFTED HEAD



| PRODUCT CODE | Diameter | Height | Back Diameter | Hole Diameter | Number of Edges |
|--------------|----------|--------|---------------|---------------|-----------------|
| XN1400504    | 50       | 45     | 43            | 22            | 4               |
| XN1400635    | 63       | 45     | 48            | 22            | 5               |
| XN1400806    | 80       | 50     | 58            | 27            | 6               |
| XN1401007    | 100      | 60     | 78            | 32            | 7               |
| XN1401258    | 125      | 60     | 90            | 40            | 8               |
| XN1401609    | 160      | 63     | 93            | 40            | 9               |

## Cutting Parameters

|                       |              | Sawdust Amount  |      |      |      |      |      |
|-----------------------|--------------|-----------------|------|------|------|------|------|
| Materials             | Cutting Rate |                 | 1,0  | 2,0  | 3,0  | 4,0  | 5,0  |
| Hardness Up to 40 HRC | 150-240      | Tooth Feed Rate | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 |
| 40-54 HRC Hardness    | 100-170      |                 | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 |
| 54-64 HRC Hardness    | 80-130       |                 | 0,15 | 0,15 | 0,15 | 0,15 | 0,15 |
| Aluminum and Chopper  | 350          |                 | 0,25 | 0,25 | 0,25 | 0,25 | 0,25 |
| Cast Materials        | 140-190      |                 | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 |
| Stainless Steels      | 120-170      |                 | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 |
| Nickel Alloy Steels   | 30-60        |                 | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 |
| Titanium alloys       | 50-70        |                 | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 |

# XNMX 140608 SERIES

## MILLING TECHNIQUES



$a_e$  = Radial Cutting Depth  
 $D$  = Set Diameter

Eccentric Position  
Simultaneous Milling

Calculation Example

$$a_e = 50 \text{ mm}$$

$$D = 50 \times 1,2 = 60$$

→ Required Diameter: 63mm

## TECHNICAL INFORMATION

### Revolution Calculation

$$n = \frac{1000 \cdot v_c}{D \cdot \pi} \text{ [min}^{-1}\text{]}$$

$n$  = Revolution ( $\text{min}^{-1}$ )

$v_c$  = Cutting Speed ( $\text{m/dk}$ )

$D$  = Set Diameter (mm)

### Feed Rate Calculation

$$v_f = f_z \cdot Z \cdot n \text{ [mm/dk]}$$

$v_f$  = Cutting Speed ( $\text{mm/dk}$ )

$f_z$  = Tooth Feed Rate (mm)

$Z$  = Number of Edges

$n$  = Revolution ( $\text{min}^{-1}$ )

# XNMX 140608 SERIES

DIAMOND TIPS



PRODUCT CODE

QUALITY

RESERVE

XNMX 140608

TSH

MS 5,0

XNMX 140608

TLX

T20

## Cutting Parameters

### Sawdust Amount

| Materials             | Cutting Rate |                       | 1,0  | 2,0  | 3,0  | 4,0  | 5,0  |
|-----------------------|--------------|-----------------------|------|------|------|------|------|
| Hardness Up to 40 HRC | 150-240      | Tooth<br>Feed<br>Rate | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 |
| 40-54 HRC Hardness    | 100-170      |                       | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 |
| 54-64 HRC Hardness    | 80-130       |                       | 0,15 | 0,15 | 0,15 | 0,15 | 0,15 |
| Aluminum and Chopper  | 350          |                       | 0,25 | 0,25 | 0,25 | 0,25 | 0,25 |
| Cast Materials        | 140-190      |                       | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 |
| Stainless Steels      | 120-170      |                       | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 |
| Nickel Alloy Steels   | 30-60        |                       | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 |
| Titanium alloys       | 50-70        |                       | 0,10 | 0,10 | 0,10 | 0,10 | 0,10 |





**MONCARB**

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