

## Tool Bits

High Speed Steel, Precision Ground



### Rectangular

| Size            | Inch Rectangular Order No. | Size        | Metric Rectangular Order No. |
|-----------------|----------------------------|-------------|------------------------------|
| 1/8x1/2x4"      | 361-0000                   | 3x13x100mm  | 361-1000                     |
| 1/4x3/8x3       | 361-0003                   | 6x10x100mm  | 361-1005                     |
| 1/4x3/8x4       | 361-0005                   | 6x10x160mm  | 361-1010                     |
| 1/4x3/8x6       | 361-0010                   | 6x13x75mm   | 361-1015                     |
| 1/4x1/2x3       | 361-0015                   | 6x13x100mm  | 361-1020                     |
| 1/4x1/2x4       | 361-0020                   | 6x13x150mm  | 361-1025                     |
| 1/4x1/2x6       | 361-0025                   | 6x20x100mm  | 361-1030                     |
| 1/4x3/4x4       | 361-0030                   | 6x20x125mm  | 361-1035                     |
| 1/4x3/4x5       | 361-0035                   | 6x20x150mm  | 361-1040                     |
| 1/4x3/4x6       | 361-0040                   | 6x25x150mm  | 361-1045                     |
| 1/4x1x6         | 361-0045                   | 8x10x100mm  | 361-1050                     |
| 5/16x3/8x4      | 361-0050                   | 8x11x75mm   | 361-1055                     |
| 5/16x7/16x3     | 361-0055                   | 8x13x100mm  | 361-1060                     |
| 5/16x1/2x4      | 361-0060                   | 8x20x100mm  | 361-1065                     |
| 5/16x3/4x4      | 361-0065                   | 8x25x150mm  | 361-1070                     |
| 5/16x1x6        | 361-0070                   | 10x13x75mm  | 361-1075                     |
| 3/8x1/2x3       | 361-0075                   | 10x13x100mm | 361-1080                     |
| 3/8x1/2x4       | 361-0080                   | 10x16x100mm | 361-1085                     |
| 3/8x5/8x4       | 361-0085                   | 10x16x125mm | 361-1090                     |
| 3/8x5/8x5       | 361-0090                   | 10x16x150mm | 361-1095                     |
| 3/8x5/8x6       | 361-0095                   | 10x20x100mm | 361-1100                     |
| 3/8x3/4x4       | 361-0100                   | 10x20x150mm | 361-1105                     |
| 3/8x3/4x5       | 361-0103                   | 10x25x150mm | 361-1110                     |
| 3/8x3/4x6       | 361-0105                   | 13x20x100mm | 361-1115                     |
| 3/8x1x6         | 361-0110                   | 13x20x150mm | 361-1120                     |
| 3/8x1-1/4x6-1/2 | 361-0112                   | 13x25x175mm | 361-1125                     |
| 1/2x3/4x4       | 361-0115                   | 13x32x175mm | 361-1130                     |
| 1/2x3/4x5       | 361-0117                   | 13x38x175mm | 361-1135                     |
| 1/2x3/4x6       | 361-0120                   | 16x20x125mm | 361-1140                     |
| 1/2x1x7         | 361-0125                   | 16x22x150mm | 361-1145                     |
| 1/2x1-1/4x7     | 361-0130                   | 16x25x150mm | 361-1150                     |
| 1/2x1-1/2x7     | 361-0135                   | 16x25x175mm | 361-1155                     |
| 5/8x3/4x5       | 361-0140                   | 16x32x150mm | 361-1160                     |
| 5/8x7/8x6       | 361-0145                   | 16x32x175mm | 361-1165                     |
| 5/8x1x6         | 361-0150                   | 16x38x175mm | 361-1170                     |
| 5/8x1x7         | 361-0155                   | 22x25x150mm | 361-1175                     |
| 5/8x1-1/4x6     | 361-0160                   | 22x25x175mm | 361-1180                     |
| 5/8x1-1/4x7     | 361-0165                   | 22x32x150mm | 361-1185                     |
| 5/8x1-1/2x7     | 361-0170                   | 22x32x175mm | 361-1190                     |
| 3/4x1x6         | 361-0175                   | 22x38x175mm | 361-1195                     |
| 3/4x1x7         | 361-0180                   | 25x32x150mm | 361-1200                     |
| 3/4x1-1/4x6     | 361-0185                   | 25x32x175mm | 361-1205                     |
| 3/4x1-1/4x7     | 361-0190                   | 25x38x175mm | 361-1210                     |
| 3/4x1-1/2x7     | 361-0195                   |             |                              |
| 1x1-1/4x6       | 361-0200                   |             |                              |
| 1x1-1/4x7       | 361-0205                   |             |                              |
| 1x1-1/2x7       | 361-0210                   |             |                              |

### Square

| Size       | Inch Square Order No. |
|------------|-----------------------|
| 1/8x2-1/2" | 360-0010              |
| 1/8x4      | 360-0014              |
| 1/8x6      | 360-0016              |
| 1/8x8      | 360-0018              |
| 3/16x2     | 360-0020              |
| 3/16x2-1/2 | 360-0021              |
| 3/16x3     | 360-0022              |
| 3/16x4     | 360-0023              |
| 3/16x5     | 360-0024              |
| 3/16x6     | 360-0026              |
| 3/16x8     | 360-0028              |
| 1/4x2-1/2  | 360-0033              |
| 1/4x3      | 360-0034              |
| 1/4x4      | 360-0035              |
| 1/4x6      | 360-0037              |
| 1/4x8      | 360-0039              |
| 5/16x2-1/2 | 360-0049              |
| 5/16x3     | 360-0050              |
| 5/16x3-1/2 | 360-0051              |
| 5/16x4     | 360-0052              |
| 5/16x6     | 360-0054              |
| 5/16x8     | 360-0057              |
| 3/8x3      | 360-0067              |
| 3/8x4      | 360-0069              |
| 3/8x6      | 360-0071              |
| 3/8x8      | 360-0073              |
| 7/16x3-1/2 | 360-0090              |
| 7/16x4     | 360-0091              |
| 7/16x6     | 360-0095              |
| 7/16x8     | 360-0097              |
| 1/2x3      | 360-0109              |
| 1/2x4      | 360-0111              |
| 1/2x6      | 360-0113              |
| 1/2x8      | 360-0115              |
| 5/8x4      | 360-0127              |
| 5/8x4-1/2  | 360-0128              |
| 5/8x6      | 360-0131              |
| 5/8x8      | 360-0135              |
| 3/4x4      | 360-0147              |
| 3/4x5      | 360-0148              |
| 3/4x6      | 360-0149              |
| 3/4x8      | 360-0163              |
| 7/8x6      | 360-0165              |
| 1x4        | 360-0175              |
| 1x6        | 360-0177              |
| 1x7        | 360-0179              |
| 1x8        | 360-0180              |
| 1-1/8x8    | 360-0185              |
| 1-1/4x6    | 360-0200              |
| 1-1/4x8    | 360-0202              |
| 1-1/2x8    | 360-0204              |
| 1-1/2x10   | 360-0208              |
| 2x8        | 360-0210              |

### Round

| Size       | Inch Round Order No. | Size      | Metric Round Order No. |
|------------|----------------------|-----------|------------------------|
| 1/8x2-1/2" | 362-0030             | 2x50mm    | 362-1030               |
| 1/8x2-3/4  | 362-0031             | 2.5x50mm  | 362-1040               |
| 1/8x4      | 362-0034             | 3x60mm    | 362-1050               |
| 1/8x6      | 362-0036             | 3x100mm   | 362-1051               |
| 1/8x8      | 362-0038             | 3x150mm   | 362-1052               |
| 5/32x2-1/2 | 362-0040             | 3x200mm   | 362-1053               |
| 3/16x2     | 362-0050             | 3.5x60mm  | 362-1055               |
| 3/16x2-1/2 | 362-0051             | 4x80mm    | 362-1060               |
| 3/16x3     | 362-0052             | 4x100mm   | 362-1065               |
| 3/16x3-1/2 | 362-0053             | 4.5x80mm  | 362-1070               |
| 3/16x4     | 362-0054             | 5x80mm    | 362-1080               |
| 3/16x6     | 362-0056             | 5x100mm   | 362-1085               |
| 3/16x8     | 362-0058             | 5x150mm   | 362-1086               |
| 7/32x3-1/2 | 362-0064             | 5x200mm   | 362-1087               |
| 1/4x2-1/2  | 362-0074             | 5.5x90mm  | 362-1095               |
| 1/4x3      | 362-0075             | 6x80mm    | 362-1105               |
| 1/4x4      | 362-0077             | 6x100mm   | 362-1107               |
| 1/4x6      | 362-0078             | 6x150mm   | 362-1109               |
| 1/4x8      | 362-0079             | 6x200mm   | 362-1111               |
| 9/32x4     | 362-0090             | 6.5x100mm | 362-1115               |
| 5/16x2-1/2 | 362-0100             | 7x100mm   | 362-1120               |
| 5/16x3     | 362-0101             | 7.5x100mm | 362-1130               |
| 5/16x4     | 362-0102             | 8x60mm    | 362-1140               |
| 5/16x4-1/2 | 362-0103             | 8x100mm   | 362-1142               |
| 5/16x6     | 362-0104             | 8x150mm   | 362-1144               |
| 5/16x8     | 362-0107             | 8x200mm   | 362-1146               |
| 3/8x3      | 362-0117             | 9x125mm   | 362-1152               |
| 3/8x4      | 362-0119             | 10x100mm  | 362-1160               |
| 3/8x5      | 362-0121             | 10x150mm  | 362-1162               |
| 3/8x6      | 362-0123             | 10x200mm  | 362-1164               |
| 3/8x8      | 362-0124             | 12x100mm  | 362-1170               |
| 7/16x4     | 362-0133             | 12x150mm  | 362-1172               |
| 7/16x5-1/2 | 362-0135             | 12x200mm  | 362-1174               |
| 1/2x3      | 362-0143             | 14x150mm  | 362-1180               |
| 1/2x4      | 362-0145             | 14x200mm  | 362-1182               |
| 1/2x6      | 362-0147             | 16x100mm  | 362-1189               |
| 1/2x8      | 362-0149             | 16x150mm  | 362-1190               |
| 9/16x6     | 362-0153             | 16x200mm  | 362-1192               |
| 5/8x4      | 362-0160             | 18x200mm  | 362-1202               |
| 5/8x6      | 362-0163             | 20x100mm  | 362-1209               |
| 5/8x8      | 362-0168             | 20x150mm  | 362-1210               |
| 3/4x4      | 362-0173             | 20x200mm  | 362-1212               |
| 3/4x6      | 362-0175             | 18x150mm  | 362-1219               |
| 3/4x8      | 362-0178             | 25x100mm  | 362-1220               |
| 1x4        | 362-0191             | 25x150mm  | 362-1221               |
| 1x6        | 362-0193             | 25x200mm  | 362-1222               |
| 1x8        | 362-0198             |           |                        |

## Cobalt Tool Bits

- Can be used on forgings, castings and heavy materials cuts.
- Suitable in applications of heat environment.



### M35 5% Cobalt Rectangular Tool Bits

| Size          | 5% Cobalt Order No. | Size       | 5% Cobalt Order No. | Size        | 5% Cobalt Order No. |
|---------------|---------------------|------------|---------------------|-------------|---------------------|
| 3/16x5/16x4"  | 461-0000            | 5/16x1/2x6 | 461-0060            | 1/2x1x8     | 461-0127            |
| 1/8x1/2x4     | 461-0001            | 5/16x3/4x4 | 461-0063            | 1/2x1-1/4x7 | 461-0130            |
| 1/4x3/8x2-1/2 | 461-0002            | 5/16x3/4x5 | 461-0065            | 1/2x1-1/2x7 | 461-0135            |
| 1/4x3/8x4     | 461-0005            | 5/16x1x6   | 461-0070            | 5/8x3/4x5   | 461-0140            |
| 1/4x3/8x6     | 461-0007            | 3/8x1/2x4  | 461-0080            | 5/8x7/8x6   | 461-0145            |
| 1/4x1/2x3     | 461-0015            | 3/8x5/8x4  | 461-0088            | 5/8x1x6     | 461-0148            |
| 1/4x1/2x4     | 461-0020            | 3/8x5/8x5  | 461-0090            | 5/8x1x7     | 461-0150            |
| 1/4x1/2x6     | 461-0021            | 3/8x5/8x6  | 461-0092            | 5/8x1-1/4x6 | 461-0151            |
| 1/4x3/4x4     | 461-0033            | 3/8x3/4x4  | 461-0100            | 5/8x1-1/4x7 | 461-0152            |
| 1/4x3/4x5     | 461-0035            | 3/8x3/4x5  | 461-0103            | 5/8x1-1/2x7 | 461-0153            |
| 1/4x3/4x6     | 461-0037            | 3/8x3/4x6  | 461-0105            | 3/4x1x7     | 461-0155            |
| 1/4x1x6       | 461-0040            | 3/8x1x6    | 461-0110            | 3/4x1-1/4x7 | 461-0157            |
| 5/16x3/8x4    | 461-0045            | 1/2x3/4x4  | 461-0115            | 3/4x1-1/2x7 | 461-0159            |
| 5/16x7/16x3   | 461-0048            | 1/2x3/4x5  | 461-0117            | 1x1-1/4x7   | 461-0162            |
| 5/16x7/16x4   | 461-0050            | 1/2x3/4x6  | 461-0120            | 1x1-1/2x7   | 461-0166            |
| 5/16x1/2x4    | 461-0055            | 1/2x1x7    | 461-0125            |             |                     |



### M35 5% Cobalt Extra Length Square Tool Bits

| Size (Square x L) | 5% Cobalt Order No. | Size (Square x L) | 5% Cobalt Order No. | Size (Square x L) | 5% Cobalt Order No. |
|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|
| 1/4x4"            | 460-2158            | 3/8x4             | 460-2298            | 5/8x6             | 460-2600            |
| 1/4x6             | 460-2160            | 3/8x6             | 460-2300            | 5/8x8             | 460-2602            |
| 1/4x8             | 460-2200            | 3/8x8             | 460-2330            | 3/4x6             | 460-2606            |
| 5/16x4            | 460-2228            | 7/16x6            | 460-2335            | 3/4x8             | 460-2608            |
| 5/16x6            | 460-2230            | 1/2x6             | 460-2400            |                   |                     |
| 5/16x8            | 460-2260            | 1/2x8             | 460-2500            |                   |                     |

### M35 5% & 10% Cobalt Square Tool Bits

| Size (Square x L) | 5% Cobalt Order No. | 10% Cobalt Order No. | Size (Square x L) | 5% Cobalt Order No. | 10% Cobalt Order No. |
|-------------------|---------------------|----------------------|-------------------|---------------------|----------------------|
| 1/8x2-1/2"        | 460-0010            | 460-1010             | 3/4x5             | 460-0148            | 460-1148             |
| 3/16x2-1/2        | 460-0021            | 460-1021             | 7/8x6             | 460-0165            | 460-1152             |
| 1/4x2-1/2         | 460-0033            | 460-1033             | 1x7               | 460-0179            | 460-1155             |
| 5/16x2-1/2        | 460-0049            | 460-1049             | 1-1/8x8           | 460-0185            | 460-1160             |
| 3/8x3             | 460-0067            | 460-1067             | 1-1/4x7           | 460-0201            |                      |
| 7/16x3-1/2        | 460-0090            | 460-1090             | 1-1/4x9           | 460-0205            | 460-1165             |
| 1/2x4             | 460-0111            | 460-1111             | 1-1/2x10          | 460-0220            |                      |
| 5/8x4-1/2         | 460-0128            | 460-1128             |                   |                     |                      |

### M35 5% Cobalt Round Tool Bits



| Size       | Order No. | Size       | Order No. | Size   | Order No. |
|------------|-----------|------------|-----------|--------|-----------|
| 1/8x2-3/4" | 461-1031  | 3/8x3      | 461-1117  | 9/16x6 | 461-1153  |
| 3/16x3-1/2 | 461-1053  | 3/8x4      | 461-1119  | 5/8x3  | 461-1156  |
| 1/4x2-1/2  | 461-1074  | 3/8x5      | 461-1121  | 5/8x6  | 461-1163  |
| 1/4x2      | 461-1077  | 7/16x3-1/2 | 461-1132  | 3/4x6  | 461-1175  |
| 5/16x2-1/2 | 461-1100  | 7/16x4     | 461-1133  | 7/8x6  | 461-1181  |
| 5/16x3     | 461-1101  | 7/16x5-1/2 | 461-1135  | 1x6    | 461-1193  |
| 5/16x4     | 461-1102  | 1/2x4      | 461-1145  |        |           |
| 5/16x4-1/2 | 461-1103  | 1/2x6      | 461-1147  |        |           |

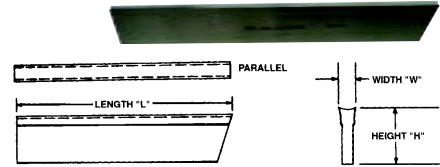
## 10° Double Beveled Cut Off Blades



|       |        | M2    |           | M35       |      |       |     | M2        |           | M35    |     |
|-------|--------|-------|-----------|-----------|------|-------|-----|-----------|-----------|--------|-----|
|       |        | H.S.S |           | Cobalt    |      |       |     | H.S.S     |           | Cobalt |     |
| Wide  | Ht.    | L     | Order No. | Order No. | Wide | Ht.   | L   | Order No. | Order No. | Wide   | Ht. |
| 1/16" | 11/16" | 5"    | 363-0000  | 461-2000  | 1/8  | 7/8   | 7   | 363-0012  | 461-2012  |        |     |
| 3/32  | 11/16  | 5     | 363-0001  | 461-2001  | 3/16 | 3/4   | 6   | 363-0016  | 461-0016  |        |     |
| 3/32  | 1/2    | 4.5   | 363-0002  | 461-2002  | 3/16 | 1     | 6.5 | 363-0006  | 461-2006  |        |     |
| 3/32  | 5/8    | 5     | 363-0003  | 461-2003  | 3/16 | 1     | 8   | 363-0013  | 461-2013  |        |     |
| 1/8   | 1/2    | 4.5   | 363-0014  | 461-2014  | 3/16 | 1-1/8 | 7   | 363-0007  | 461-2007  |        |     |
| 1/8   | 3/4    | 5     | 363-0004  | 461-2004  | 1/4  | 1-1/8 | 7   | 363-0008  | 461-2008  |        |     |
| 1/8   | 3/4    | 6     | 363-0011  | 461-2011  | 1/4  | 1-1/4 | 7   | 363-0009  | 461-2009  |        |     |
| 1/8   | 7/8    | 6     | 363-0005  | 461-2005  | 1/4  | 1-3/8 | 7   | 363-0010  | 461-0010  |        |     |

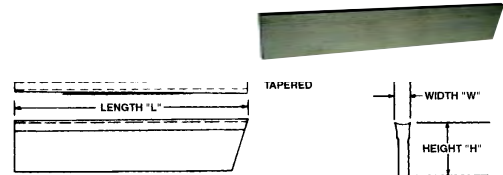
## T-Type Cut Off Blades

### Parallel Type



| Tool No. | W     | H     | L      | HSS Order No. | Cobalt Order No. |
|----------|-------|-------|--------|---------------|------------------|
| P1N      | .040" | 1/2"  | 3-1/2" | 363-6005      | 363-7005         |
| P1       | 1/16  | 1/2   | 4-1/2  | 363-6010      | 363-7010         |
| P2N      | 5/64  | 1/2   | 4-1/2  | 363-6015      | 363-7015         |
| P2       | 3/32  | 1/2   | 4-1/2  | 363-6020      | 363-7020         |
| P3S      | 1/8   | 1/2   | 4-1/2  | 363-6025      | 363-7025         |
| P3N      | 3/32  | 11/16 | 5      | 363-6030      | 363-7030         |
| P3       | 1/8   | 11/16 | 5      | 363-6035      | 363-7035         |
| P4       | 5/32  | 11/16 | 5      | 363-6040      | 363-7040         |
| P5S      | 3/16  | 11/16 | 5      | 363-6045      | 363-7045         |
| P3W      | 1/8   | 3/4   | 5      | 363-6050      | 363-7050         |
| P4W      | 5/32  | 3/4   | 5      | 363-6055      | 363-7055         |
| P5W      | 3/16  | 3/4   | 5      | 363-6060      | 363-7060         |
| P5X      | 1/8   | 7/8   | 6      | 363-6065      | 363-7065         |
| P5N      | 5/32  | 7/8   | 6      | 363-6070      | 363-7070         |
| P5       | 3/16  | 7/8   | 6      | 363-6075      | 363-7075         |
| P6       | 1/4   | 7/8   | 6      | 363-6080      | 363-7080         |
| P8       | 1/8   | 1-1/8 | 6-1/2  | 363-6085      | 363-7085         |
| P8X      | 5/32  | 1-1/8 | 6-1/2  | 363-6090      | 363-7090         |
| P8N      | 3/16  | 1-1/8 | 6-1/2  | 363-6095      | 363-7095         |
| P9       | 1/4   | 1-1/8 | 6-1/2  | 363-6100      | 363-7100         |
| P10      | 5/16  | 1-1/8 | 6-1/2  | 363-6105      |                  |

### Tapered Type



| Tool No. | W     | H     | L      | HSS Order No. | Cobalt Order No. |
|----------|-------|-------|--------|---------------|------------------|
| T1-N     | .040" | 1/2"  | 3-1/2" | 363-5005      | 363-5205         |
| T-1      | 1/16  | 1/2   | 4-1/4  | 363-5010      | 363-5210         |
| T-2-N    | 5/64  | 1/2   | 4-1/4  | 363-5015      | 363-5215         |
| T-2      | 3/32  | 1/2   | 4-1/4  | 363-5020      | 363-5220         |
| T3-S     | 1/8   | 1/2   | 4-1/4  | 363-5025      | 363-5225         |
| T3-N     | 3/32  | 11/16 | 4-1/4  | 363-5030      | 363-5230         |
| T3       | 1/8   | 11/16 | 4-1/4  | 363-5035      | 363-5235         |
| T4       | 5/32  | 11/16 | 4-1/4  | 363-5040      | 363-5240         |
| T5-S     | 3/16  | 11/16 | 5      | 363-5045      | 363-5245         |
| T3-W     | 1/8   | 3/4   | 5      | 363-5050      | 363-5250         |
| T4-W     | 5/32  | 3/4   | 5      | 363-5055      | 363-5255         |
| T5-W     | 3/16  | 3/4   | 5      | 363-5060      | 363-5260         |
| T5-X     | 1/8   | 7/8   | 5      | 363-5065      | 363-5265         |
| T5-N     | 5/32  | 7/8   | 5      | 363-5070      | 363-5270         |
| T5       | 3/16  | 7/8   | 5      | 363-5075      | 363-5275         |
| T6       | 1/4   | 7/8   | 5      | 363-5080      | 363-5280         |
| T8-X     | 1/8   | 1-1/8 | 5-1/2  | 363-5085      | 363-5285         |
| T8-N     | 5/32  | 1-1/8 | 5-1/2  | 363-5090      | 363-5290         |
| T8       | 3/16  | 1-1/8 | 5-1/2  | 363-5095      | 363-5295         |
| T9       | 1/4   | 1-1/8 | 5-1/2  | 363-5100      | 363-5300         |
| T10      | 5/16  | 1-1/8 | 5-1/2  | 363-5105      | 363-5305         |

## M42 Cobalt Square Tool Bits

### Inch

| Size       | Order No. | Size      | Order No. | Size     | Order No. |
|------------|-----------|-----------|-----------|----------|-----------|
| 1/8x2-1/2" | 460-6010  | 1/2x4     | 460-6111  | 1x8      | 460-6180  |
| 3/16x2-1/2 | 460-6021  | 5/8x4-1/2 | 460-6128  | 1-1/8x8  | 460-6185  |
| 1/4x2-1/2  | 460-6033  | 3/4x5"    | 460-6148  | 1-1/4x7  | 460-6201  |
| 5/16x2-1/2 | 460-6049  | 7/8x6     | 460-6165  | 1-1/4x9  | 460-6205  |
| 3/8x3      | 460-6067  | 1x7       | 460-6179  | 1-1/2x10 | 460-6220  |
| 7/16x3-1/2 | 460-6090  |           |           |          |           |

### Long Length

| Size    | Order No. | Size   | Order No. | Size  | Order No. |
|---------|-----------|--------|-----------|-------|-----------|
| 3/16x8" | 460-6123  | 5/16x8 | 460-6260  | 1/2x8 | 460-6500  |
| 1/4x4   | 460-6158  | 3/8x4  | 460-6298  | 5/8x6 | 460-6600  |
| 1/4x6   | 460-6160  | 3/8x6  | 460-6300  | 5/8x8 | 460-6602  |
| 1/4x8   | 460-6200  | 3/8x8" | 460-6330  | 3/4x6 | 460-6606  |
| 5/16x4  | 460-6228  | 7/16x6 | 460-6335  | 3/4x8 | 460-6608  |
| 5/16x6  | 460-6230  | 1/2x6  | 460-6400  |       |           |

### Metric

| Size  | Order No. | Size  | Order No. | Size   | Order No. | Size   | Order No. |
|-------|-----------|-------|-----------|--------|-----------|--------|-----------|
| 6x63  | 460-6715  | 8x100 | 460-6725  | 10x100 | 460-6735  | 12x100 | 460-6745  |
| 6x100 | 460-6720  | 8x150 | 460-6730  | 10x200 | 460-6740  | 20x200 | 460-6755  |

## Single End Boring Bars

### 45 & 90°



### Sets

| No. of Pieces | Angle | Sizes               | Order No. |
|---------------|-------|---------------------|-----------|
| 4             | 45°   | 1/4, 3/8, 1/2, 5/8" | 378-4140  |
| 4             | 90°   | 1/4, 3/8, 1/2, 5/8" | 378-4240  |

### Individual

| Diameter of Bar | Overall Length | Bit Size              | 45 Degree Order No. | 90 Degree Order No. |
|-----------------|----------------|-----------------------|---------------------|---------------------|
| 1/4"            | 2-1/2"         | 5/32" round tool bits | 378-4102            | 378-4202            |
| 5/16            | 2-1/2          | 3/16 round tool bits  | 378-4104            | 378-4204            |
| 3/8             | 3              | 3/16 round tool bits  | 378-4106            | 378-4206            |
| 1/2             | 3              | 3/16 square tool bits | 378-4108            | 378-4208            |
| 9/16            | 4-1/2          | 3/16 square tool bits | 378-4110            | 378-4210            |
| 5/8             | 5              | 1/4 square tool bits  | 378-4112            | 378-4212            |
| 3/4             | 6              | 1/4 square tool bits  | 378-4114            | 378-4214            |
| 1               | 6              | 5/16 square tool bits | 378-4116            | 378-4216            |
| 1               | 6              | 3/8 square tool bits  | 378-4118            | 378-4218            |
| 1-1/8           | 7              | 7/16 square tool bits | 378-4120            | 378-4220            |
| 1-1/4           | 8              | 1/2 square tool bits  | 378-4122            | 378-4222            |
| 1-1/2           | 9              | 1/2 square tool bits  | 378-4124            | 378-4224            |

## Double End Calibrated Boring Bars



### Individual

| Diameter Of Bar | Overall Length | Tool Bit Size          | Order No. |
|-----------------|----------------|------------------------|-----------|
| 3/8"            | 6"             | 3/16" round tool bits  | 378-4302  |
| 1/2             | 6              | 3/16" square tool bits | 378-4304  |
| 1/2             | 9              | 3/16" square tool bits | 378-4306  |
| 5/8             | 10             | 3/16" square tool bits | 378-4308  |
| 3/4             | 12             | 1/4" square tool bits  | 378-4310  |
| 1               | 12             | 1/4" square tool bits  | 378-4312  |
| 1-1/4           | 16             | 3/8" square tool bits  | 378-4314  |
| 1-1/2           | 18             | 3/8" square tool bits  | 378-4316  |

## Double End Boring Bars



### Individual

| Size       | Tool Bit Size        | Order No. |
|------------|----------------------|-----------|
| 1/4x5"     | 5/32" round tollbits | 378-4002  |
| 5/16x5     | 3/16 round toolbits  | 378-4004  |
| 3/8x6      | 3/16 round toolbits  | 378-4006  |
| 1/2x6      | 3/16 square toolbits | 378-4008  |
| 1/2x6      | 1/4 square toolbits  | 378-4009  |
| 1/2x9      | 1/4 square toolbits  | 378-4010  |
| 5/8x10     | 1/4 square toolbits  | 378-4012  |
| 3/4x12     | 1/4 square toolbits  | 378-4014  |
| 1x12       | 1/4 square toolbits  | 378-4015  |
| 1x12       | 5/16 square toolbits | 378-4016  |
| 1-1/4x16   | 1/2 square toolbits  | 378-4018  |
| 1-1/2x18   | 1/2 square toolbits  | 378-4020  |
| 9/16x6-1/2 | 1/4 square toolbits  | 378-4021  |

### Sets

| No. of Pieces | Sizes                    | Order No. |
|---------------|--------------------------|-----------|
| 4             | 1/2, 9/16, 5/8, 3/4"     | 378-4030  |
| 4             | 1/4, 5/16, 3/8, 1/2"     | 378-4031  |
| 5             | 1/4, 3/8, 1/2, 5/8, 3/4" | 378-4000  |
| 5             | 3/8, 1/2, 5/8, 3/4, 1"   | 378-4001  |

## Fly-Tool Cutter Holders & Sets

### Straight Shank

Counter balanced tap get smoother finished. Hardened steel, machines up to 6" wide surface with stand tool bit. Tool bit replaces end mill and resharpener. Sets come complete with wooden stand.



| No. of Piece | Head Diameter | Shank Size | Tool Bit Size | Individuals Order No. | Sets Order No. |
|--------------|---------------|------------|---------------|-----------------------|----------------|
| 3            | 3/4"          | 1/2"       | 3/16"         | 225-3031              |                |
|              | 1-1/8         | 1/2        | 1/4           | 225-3032              | 225-3030       |
|              | 1-1/2         | 1/2        | 5/16          | 225-3033              |                |
| 3            | 1-1/2         | 3/4        | 5/16          | 225-3041              |                |
|              | 2             | 3/4        | 5/16          | 225-3042              | 225-3040       |
|              | 2-1/2         | 3/4        | 5/16          | 225-3043              |                |
| 5            | 7/8           | 1/2        | 3/16          | 225-3044              |                |
|              | 1-1/4         | 1/2        | 1/4           | 225-3045              |                |
|              | 1-5/8         | 1/2        | 5/16          | 225-3046              | 225-3038       |
|              | 2             | 1/2        | 3/8           | 225-3035              |                |
|              | 2-1/2         | 5/8        | 1/2           | 225-3036              |                |
| 5            | 3/4           | 1/2        | 3/16          | 225-3031              |                |
|              | 1-1/8         | 1/2        | 1/4           | 225-3032              |                |
|              | 1-3/8         | 1/2        | 5/16          | 225-3034              | 225-3039       |
|              | 2             | 1/2        | 3/8           | 225-3035              |                |
|              | 2-1/2         | 5/8        | 1/2           | 225-3036              |                |