

**25-PIECE TAP AND DIE MASTER SET -**  
9/16" THROUGH 1"

**Includes Coarse & Fine Threads**

**Packed in a hinged plastic case. Includes 1 each Plug Tap and 1 each Round Die for the following Thread Sizes:**  
9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14, 1-8, 1-14, 1/4-18NPT

**Also Includes:**  
Adjustable Die Stock - 1-1/2" Round,  
Adjustable Die Stock - 2" Round,  
Adjustable Handle Tap Wrench

**Order No. 4398000      Price:**



**39-PIECE TAP AND DIE SET -**  
NO. 4 THROUGH 1/2"

**Includes Coarse & Fine Threads**

**Packed in a hinged plastic case with removable tray. Includes 1 each Plug Tap and 1 each Solid Round Die for the following Thread Sizes:**  
4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 1/8-27NPT.

**Also includes:**  
Adjustable Die Stock, Adjustable Handle Tap Wrench, T-Handle Tap Wrench, Screw Pitch Gauge, Screwdriver

**Order No. 4323614      Price:**

**66 - PIECE TAP AND DIE MASTER SET -**  
NO. 4 THROUGH 1"

**Packed in a hinged plastic case with removable plastic trays.**

**Includes one each Plug Tap and one each Hexagon Die for the following Thread Sizes:**  
4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14, 1-8, 1-14, 1/8-27NPT, 1/4-18NPT

**Also includes:**  
Adjustable Die Stocks: 1", 1-7/16", 1-13/16", Plain Die Stock: 5/8"  
Adjustable Handle Tap Wrenches (2), Two-in-One Tap Wrench, Screw Pitch Gauge

**Order No. 4397606      Price:**

**41-PIECE TAP AND DIE SET -**  
NO. 4 THROUGH 1/2"

**Includes Coarse & Fine Threads**

**Packed in a hinged plastic case with removable tray. Includes one each Plug Tap and Hexagon Die for the following Thread Sizes:**  
4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 1/8-27NPT

**Also includes:**  
Plain Die Stock, Adjustable Die Stock, Adjustable Handle Tap Wrench, T-Tap Wrench, T-Tap Wrench with 3/8" Square Drive, Screw Pitch Gauge, Screwdriver.

**Order No. 4324606      Price:**

**RECTANGULAR TOOL BITS**  
SERIES 614: M2 STEEL  
SERIES 615: COBALT (5%) STEEL



Overall Size	Length	M2		Cobalt (5%)	
		Order No.	Price	Order No.	Price
1/4x3/8	3	6141624	-	-	-
1/4x3/8	4	-	-	6151624	-
1/4x1/2	4	6141632	-	6151632	-
1/4x3/4	5	6141648	-	6151648	-
1/4x1	6	6141664	-	6151664	-
5/16x1/2	4	6142032	-	6152032	-
5/16x3/4	5	6142048	-	6152048	-
5/16x1	6	6142064	-	6152064	-
3/8x1/2	4	6142432	-	6152432	-
3/8x5/8	4-1/2	6142440	-	-	-
3/8x3/4	5	6142448	-	6152448	-
3/8x1	6	6142464	-	6152464	-
1/2x3/4	6	6143248	-	6153248	-
1/2x1	7	6143264	-	6153264	-
1/2x1-1/4	7	6143280	-	-	-
5/8x3/4	5	6144048	-	-	-
5/8x7/8	6	6144056	-	-	-
5/8x1	7	6144064	-	-	-
5/8x1-1/4	7	6144080	-	-	-
3/4x1	6	6144864	-	-	-
3/4x1	7	-	-	6154865	-
3/4x1-1/4	6	6144880	-	-	-
3/4x1-1/4	7	6144881	-	-	-

**41-PIECE TAP AND DIE SET -**  
3mm THROUGH 12mm

**Includes Coarse & Fine Threads**

**Packed in a hinged plastic case with removable tray. Includes one each Plug Tap and Hexagon Die for the following Thread Sizes:**  
3-.50, 4-.70, 4-.75, 5-.80, 5-.90, 6-1.00, 7-1.00, 8-1.00, 8-1.25, 9-1.00, 9-1.25, 10-1.25, 10-1.50, 11-1.50, 12-1.50, 12-1.75, 1/8-28BSP

**Also includes:**  
Plain Die Stock, Adjustable Die Stock, Adjustable Handle Tap Wrench, T-Tap Wrench, T-Tap Wrench with 3/8" Square Drive, Screw Pitch Gauge, Screwdriver.

**Order No. 4326317      Price:**

## SQUARE GROUND TOOL BITS

SERIES 131: M2 STEEL

SERIES 132: COBALT STEEL (5% & 10%)



## SQUARE GROUND TOOL BITS - METRIC SIZES / REGULAR AND LONG LENGTH

SERIES 131: M2 STEEL

SERIES 132: COBALT (M42 - 8%) STEEL



Size	Overall Length	M2		5% Cobalt		10% Cobalt	
		Order No.	Price	Order No.	Price	Order No.	Price
1/8	2-1/2	1335008		1340008		1346008	
3/16	2-1/2	1335012		1340012		1346012	
1/4	2-1/2	1335016		1340016		1346016	
5/16	2-1/2	1335020		1340020		1346020	
3/8	3	1335024		1340024		1346024	
7/16	3-1/2	1335028		1340028		1346028	
1/2	4	1335032		1340032		1346032	
5/8	4-1/2	1335040		1340040		1346040	
3/4	5	1335048		1340048		1346048	
7/8	6	1335056		1340056			
1	7	1335064		1340064			
1-1/4	7	1335080		-			

Size	Overall Length	M2		Cobalt (M42)	
		Order No.	Price	Order No.	Price
4	80	3104080		9904080	
5	100	3105100		3405100	
5	200	3105200		3405200	
6	100	3106100		9906100	
6	200	3106200		9406200	
8	100	3108100		3408100	
8	200	3108200		9408200	
10	100	3110100		3410100	
10	200	3110200		3410200	
12	100	3112100		3412100	
12	200	9112200		3412200	
14	150	3114150		3414150	
16	150	3116150		3416150	
18	150	3118150		3418150	
20	200	3120200		3420200	

## LONG SQUARE GROUND TOOL BITS

SERIES 612: M2 STEEL

SERIES 613: COBALT (5%) STEEL



Size	Overall Length	M2		Cobalt (5%)	
		Order No.	Price	Order No.	Price
1/4	6	6120166		6130166	
5/16	6	6120206		6130206	
3/8	6	6120246		6130246	
3/8	8	6120248		6130248	
1/2	6	6120326		6130326	
1/2	8	6120328		6130328	
5/8	8	6120408		6130408	
3/4	8	6120488		6130488	

## GROUND CUT-OFF BLADES - P TYPE (T SHAPED)

SERIES 134: M2 & COBALT (5%) STEEL



Model No.	Size (W x H x L)	M2		Cobalt (5%)	
		Order No.	Price	Order No.	Price
P1N	0.040 x 1/2 x 3-1/2	1340001		1340101	
P1	1/16 x 1/2 x 4-1/2	1340002		1340102	
P2	3/32 x 1/2 x 4-1/2	1340003		1340103	
P3S	1/8 x 1/2 x 4-1/2	1340004		1340104	
P3N	3/32 x 11/16 x 5	1340005		1340105	
P3	1/8 x 11/16 x 5	1340006		1340106	
P3W	1/8 x 3/4 x 5	1340007		1340107	
P5X	1/8 x 7/8 x 6	1340010		1340108	
P5	3/16 x 7/8 x 6	1340009		1340109	

## GROUND CUT-OFF BLADES - BEVELED TYPE

SERIES 134:

M2 & COBALT (5%) STEEL



Size	Overall Length	M2		Cobalt (5%)	
		Order No.	Price	Order No.	Price
11/16 x 1/16	5	1351044		1350044	
1/2 x 3/32	4-1/2	1351032		1350032	
5/8 x 3/32	5	1351041		1350041	
3/4 x 1/8	5	1351048		1350048	
7/8 x 1/8	6	1351056		1350056	
1 x 3/16	6-1/2	1351064		1350064	
1-1/8 x 1/4	7	1351072		1350072	

## ROUND GROUND TOOL BITS - METRIC SIZES

SERIES 133: M2 & COBALT (M42 - 8%) STEEL



## ROUND GROUND TOOL BITS

SERIES 133: M2 STEEL



Size	Overall Length	Order No.	Price
1/8	2-3/4	1345008	
3/16	3-1/2	1345012	
1/4	4-1/2	1345016	
5/16	4	1345020	
3/8	5	1345024	
7/16	5-1/2	1345028	
1/2	6	1345032	
9/16	6	1345036	
5/8	6	1345041	
3/4	6	1345048	

Size	Overall Length	M2		Cobalt (M42)	
		Order No.	Price	Order No.	Price
3	60	3303060		3203060	
4	80	3304080		3204080	
5	100	3305100		3205100	
6	100	3306100		3206100	
8	100	3308100		3208100	
10	100	3310100		3210100	
12	100	3312100		3212100	
14	150	3314150		3214150	
16	150	3316150		3216150	
18	150	3318150		3218150	
20	200	3320200		3220200	

AR



AL



BR



BL



C



D



E



## CARBIDE TIPPED TOOL BITS

SERIES 129: GEN. PURPOSE GRADE  
 SERIES 130: STEEL GRADE



## CARBIDE TIPPED TOOL BITS

SERIES 839:



Tool Style	Size	Order No.		Price
		Gen.Purpose	Steel	
AR4	1/4 x 1/4 x 2	2950041	3010041	
AR5	5/16 x 5/16 x 2-1/4	2950051	3010051	
AR6	3/8 x 3/8 x 2-1/2	2950061	3010061	
AR7	7/16 x 7/16 x 3	2950071	3010071	
AR8	1/2 x 1/2 x 3-1/2	2950081	3010081	
AR10	5/8 x 5/8 x 4	2950101	3010101	
AR12	3/4 x 3/4 x 4-1/2	2950121	3010121	
AR16	1 x 1 x 7	2950161	3010161	
AL4	1/4 x 1/4 x 2	2950042	3010042	
AL5	5/16 x 5/16 x 2-1/4	2950052	3010052	
AL6	3/8 x 3/8 x 2-1/2	2950062	3010062	
AL7	7/16 x 7/16 x 3	2950072	3010072	
AL8	1/2 x 1/2 x 3-1/2	2950082	3010082	
AL10	5/8 x 5/8 x 4	2950102	3010102	
AL12	3/4 x 3/4 x 4-1/2	2950122	3010122	
AL16	1 x 1 x 7	2950162	3010162	
BR4	1/4 x 1/4 x 2	2950043	3010043	
BR5	5/16 x 5/16 x 2-1/4	2950053	3010053	
BR6	3/8 x 3/8 x 2-1/2	2950063	3010063	
BR7	7/16 x 7/16 x 3	2950073	3010073	
BR8	1/2 x 1/2 x 3-1/2	2950083	3010083	
BR10	5/8 x 5/8 x 4	2950103	3010103	
BR12	3/4 x 3/4 x 4-1/2	2950123	3010123	
BR16	1 x 1 x 7	2950163	3010163	
BL4	1/4 x 1/4 x 2	2950044	3010044	
BL5	5/16 x 5/16 x 2-1/4	2950054	3010054	
BL6	3/8 x 3/8 x 2-1/2	2950064	3010064	
BL7	7/16 x 7/16 x 3	2950074	3010074	
BL8	1/2 x 1/2 x 3-1/2	2950084	3010084	
BL10	5/8 x 5/8 x 4	2950104	3010104	
BL12	3/4 x 3/4 x 4-1/2	2950124	3010124	
BL16	1 x 1 x 7	2950164	3010164	
C4	1/4 x 1/4 x 2	2950045	3010045	
C5	5/16 x 5/16 x 2-1/4	2950055	3010055	
C6	3/8 x 3/8 x 2-1/2	2950065	3010065	
C7	7/16 x 7/16 x 3	2950075	3010075	
C8	1/2 x 1/2 x 3-1/2	2950085	3010085	
C10	5/8 x 5/8 x 4	2950105	3010105	
C12	3/4 x 3/4 x 4-1/2	2950125	3010125	
C16	1 x 1 x 7	2950165	3010165	
D4	1/4 x 1/4 x 2	2950046	3010046	
D5	5/16 x 5/16 x 2-1/4	2950056	3010056	
D6	3/8 x 3/8 x 2-1/2	2950066	3010066	
D7	7/16 x 7/16 x 3	2950076	3010076	
D8	1/2 x 1/2 x 3-1/2	2950086	3010086	
D10	5/8 x 5/8 x 4	2950106	3010106	
D12	3/4 x 3/4 x 4-1/2	2950126	3010126	
D16	1 x 1 x 7	2950166	3010166	
E4	1/4 x 1/4 x 2	2950047	3010047	
E5	5/16 x 5/16 x 2-1/4	2950057	3010057	
E6	3/8 x 3/8 x 2-1/2	2950067	3010067	
E7	7/16 x 7/16 x 3	2950077	3010077	
E8	1/2 x 1/2 x 3-1/2	2950087	3010087	
E10	5/8 x 5/8 x 4	2950107	3010107	
E12	3/4 x 3/4 x 4-1/2	2950127	3010127	
E16	1 x 1 x 7	2950167	3010167	

Tool Style	Size	General Purpose		Steel	
		Order No.	Price	Order No.	Price
AR4	1/4 x 1/4 x 2	8390041		8391041	
AR5	5/16 x 5/16 x 2-1/4	8390051		8391051	
AR6	3/8 x 3/8 x 2-1/2	8390061		8391061	
AR7	7/16 x 7/16 x 3	8390071		8391071	
AR8	1/2 x 1/2 x 3-1/2	8390081		8391081	
AR10	5/8 x 5/8 x 4	8390101		8391101	
AR12	3/4 x 3/4 x 4-1/2	8390121		8391121	
AR16	1 x 1 x 7	8390161		8391161	
AL4	1/4 x 1/4 x 2	8390042		8391042	
AL5	5/16 x 5/16 x 2-1/4	8390052		8391052	
AL6	3/8 x 3/8 x 2-1/2	8390062		8391062	
AL7	7/16 x 7/16 x 3	8390072		8391072	
AL8	1/2 x 1/2 x 3-1/2	8390082		8391082	
AL10	5/8 x 5/8 x 4	8390102		8391102	
AL12	3/4 x 3/4 x 4-1/2	8390122		8391122	
AL16	1 x 1 x 7	8390162		8391162	
BR4	1/4 x 1/4 x 2	8390043		8391043	
BR5	5/16 x 5/16 x 2-1/4	8390053		8391053	
BR6	3/8 x 3/8 x 2-1/2	8390063		8391063	
BR7	7/16 x 7/16 x 3	8390073		8391073	
BR8	1/2 x 1/2 x 3-1/2	8390083		8391083	
BR10	5/8 x 5/8 x 4	8390103		8391103	
BR12	3/4 x 3/4 x 4-1/2	8390123		8391123	
BR16	1 x 1 x 7	8390163		8391163	
BL4	1/4 x 1/4 x 2	8390044		8391044	
BL5	5/16 x 5/16 x 2-1/4	8390054		8391054	
BL6	3/8 x 3/8 x 2-1/2	8390064		8391064	
BL7	7/16 x 7/16 x 3	8390074		8391074	
BL8	1/2 x 1/2 x 3-1/2	8390084		8391084	
BL10	5/8 x 5/8 x 4	8390104		8391104	
BL12	3/4 x 3/4 x 4-1/2	8390124		8391124	
BL16	1 x 1 x 7	8390164		8391164	
C4	1/4 x 1/4 x 2	8390045		8391045	
C5	5/16 x 5/16 x 2-1/4	8390055		8391055	
C6	3/8 x 3/8 x 2-1/2	8390065		8391065	
C7	7/16 x 7/16 x 3	8390075		8391075	
C8	1/2 x 1/2 x 3-1/2	8390085		8391085	
C10	5/8 x 5/8 x 4	8390105		8391105	
C12	3/4 x 3/4 x 4-1/2	8390125		8391125	
C16	1 x 1 x 7	8390165		8391165	
D4	1/4 x 1/4 x 2	8390046		8391046	
D5	5/16 x 5/16 x 2-1/4	8390056		8391056	
D6	3/8 x 3/8 x 2-1/2	8390066		8391066	
D7	7/16 x 7/16 x 3	8390076		8391076	
D8	1/2 x 1/2 x 3-1/2	8390086		8391086	
D10	5/8 x 5/8 x 4	8390106		8391106	
D12	3/4 x 3/4 x 4-1/2	8390126		8391126	
D16	1 x 1 x 7	8390166		8391166	
E4	1/4 x 1/4 x 2	8390047		8391047	
E5	5/16 x 5/16 x 2-1/4	8390057		8391057	
E6	3/8 x 3/8 x 2-1/2	8390067		8391067	
E7	7/16 x 7/16 x 3	8390077		8391077	
E8	1/2 x 1/2 x 3-1/2	8390087		8391087	
E10	5/8 x 5/8 x 4	8390107		8391107	
E12	3/4 x 3/4 x 4-1/2	8390127		8391127	
E16	1 x 1 x 7	8390167		8391167	

# CARBIDE TIPPED TOOL BITS

SERIES 129: GEN. PURPOSE GRADE

SERIES 130: STEEL GRADE



## CUT-OFF

Style CTR & CTL

Tool Style		Tip Width	Shank			Order No.				Price
Right Hand	Left Hand		w	h	L	General Purpose		Steel		
						Right Hand	Left Hand	Right Hand	Left Hand	
CTR-11	CTL-11	1/8	1/2	1	5	2950011	2951011	3100011	3011011	
CTR-22	CTL-22	3/16	1/2	1	5	2950022	2951022	3100022	3011022	
CTR-33	CTL-33	1/4	1/2	1	5	2950033	2951033	3100033	3011033	
CTR-44	CTL-44	5/16	1/2	1	5	2950048	2951044	3100048	3011044	
CTR-55	CTL-55	3/8	5/8	1-1/4	5	2950058	2951055	3100058	3011055	



## OFFSET THREADING

Style ER & EL

Tool Style		Shank			Order No.				Price
Right Hand	Left Hand	w	h	L	General Purpose		Steel		
					Right Hand	Left Hand	Right Hand	Left Hand	
ER-4	EL-4	1/4	1/4	2	9112004	9112104	6115004	6115104	
ER-6	EL-6	3/8	3/8	2-1/2	6112006	9112106	6115006	6115106	
ER-8	EL-8	1/2	1/2	3-1/2	6112008	6112108	6115008	6115108	



## END CUTTING OFFSET

Style FR & FL

Tool Style		Shank			Order No.				Price
Right Hand	Left Hand	w	h	L	General Purpose		Steel		
					Right Hand	Left Hand	Right Hand	Left Hand	
FR-8	FL-8	1/2	1/2	3-1/2	6122008	6122108	6125008	6125108	
FR-10	FL-10	5/8	5/8	4	6122010	9122110	6125010	6125110	



## SIDE CUTTING OFFSET

Style GR & GL

Tool Style		Shank			Order No.				Price
Right Hand	Left Hand	w	h	L	General Purpose		Steel		
					Right Hand	Left Hand	Right Hand	Left Hand	
GR-8	GL-8	1/2	1/2	3-1/2	6132008	6132108	6135008	6135108	
GR-10	GL-10	5/8	5/8	4	6132010	6132110	6135010	6135110	
GR-12	GL-12	3/4	3/4	4-1/2	6132012	-	6135012	6135112	
GR-16	GL-16	1	1	7	6132016	6132116	6135016	6135116	



## SQUARE SHANK BORING

Style TSA, TSC & TSE

Tool Style	Shank			Order No.		Price
	w	h	L	General Purpose	Steel	
TSA-5	5/16	5/16	1-1/2	6142005	6145005	
TSA-6	3/8	3/8	1-3/4	6142006	6145006	
TSA-8	1/2	1/2	2-1/2	6142008	6145008	
TSC-5	5/16	5/16	1-1/2	6142105	6145105	
TSC-6	3/8	3/8	1-3/4	6142106	6145106	
TSC-8	1/2	1/2	2-1/2	6142108	6145108	
TSC-10	5/8	5/8	3	6142110	6145110	
TSC-12	3/4	3/4	3-1/2	6142112	6145112	
TSE-5	5/16	5/16	1-1/2	6142205	6145205	
TSE-6	3/8	3/8	1-3/4	6142206	6145206	
TSE-8	1/2	1/2	2-1/2	6142208	6145208	
TSE-10	5/8	5/8	3	6142210	6145210	



## ROUND SHANK BORING

Style TRC & TRE

Tool Style	Shank		Order No.		Price
	dia.	L	General Purpose	Steel	
TRC-5	.312	1-1/2	6152005	6155005	
TRC-6	.375	1-3/4	6152006	6155006	
TRC-8	.500	2-1/2	-	6155008	
TRE-5	.312	1-1/2	6152105	6155105	
TRE-6	.375	1-3/4	6152106	6155106	
TRE-8	.500	2-1/2	6152108	6155108	



## DOUBLE ENDED BORING BARS SERIES 605:



Each bar has two precision broached holes, 45° on one end and 90° on the other end. Standard tool bits (H.S.S., CO., Carbide Tipped) are held firmly in place by a set screw. Bars can be held in boring tool holders, boring heads and drill chucks.

Diameter of Bar	Overall Length	Size of Tool Bit	Order No.	Price
1/4	5	5/32 Round	6050016	
5/16	5	3/16 Round	6050020	
3/8*	6	3/16 Round	6050024	
1/2*	6	3/16 Square	6050032	
9/16	9	3/16 Square	6050036	
5/8*	10	1/4 Square	6050040	
3/4*	12	1/4 Square	6050048	
1*	12	5/16 Square	6050064	
1	12	3/8 Square	6050065	
1-1/8	14	7/16 Square	6050072	
1-1/4	16	1/2 Square	6050080	
1-1/2	18	1/2 Square	6050096	

\* Sizes included in set below.

## DOUBLE ENDED BORING BAR SET - 5 PC. SERIES 605:



Consisting of 1 each of the above items marked with a (\*) on a fitted wooden block.

Order No. 6045000  
Price:



## BORING BARS WITH HOLDERS SERIES 660:



Tool Bits not included.

Made from Tool Steel. Each bar has two precision broached holes, 45° on one end and 90° on the other end. Standard tool bits (H.S.S., CO., Carbide Tipped) are held firmly in place by a set screw. Comes complete with screws and hex keys.

Bar Size		Holder Size		Size of Tool Bit (Square)	Order No.	Price
Dia.	Length	Length	Square			
3/8	4-1/2	2-1/4	9/16	1/8	6600008	
7/16	5-1/4	2-1/2	5/8	3/16	6600012	
9/16	6-3/4	3	3/4	1/4	6600016	
3/4	9-1/4	3-3/4	1	5/16	6600020	
7/8	11-1/2	4-1/2	1-1/4	3/8	6600024	
1-1/8	13-1/2	5-1/4	1-3/8	7/16	6600028	
1-1/4	15-1/2	6	1-5/8	1/2	6600032	

## DOUBLE ENDED CALIBRATED BORING BARS SERIES 605:



Permanently graduated in 1/4" calibration to speed production by indicating depth of bore.

Order No.	Diameter of Bar	Overall Length	Tool Bit Size	Price
6050100	3/8"	6"	3/16"Round	
6050101	1/2"	6"	3/16"Square	
6050102	1/2"	9"	3/16"Square	
9050103	5/8"	10"	3/16"Square	
6050104	3/4"	12"	1/4"Square	
6050105	1"	12"	1/4"Square	
6050106	1-1/4"	16"	3/8"Square	
6050107	1-1/2"	18"	3/8"Square	

## 5PC FLY CUTTER HOLDER SET SERIES 427:



- Consists of 4 Pcs with 1/2" (12.7mm) shank suitable for 3/16" (4.50mm).1/4" (6mm), 5/16" (8mm), 3/8" (9.5mm) tool bits and 1 pc with 5/8" (15.8mm) shank suitable for 1/2" (12.7mm) tool bits
- Supplied on a wooden stand without tool bits.

Order No. 2430050  
Price:

## FLY CUTTER TOOL HOLDERS




### SERIES 427:

Use standard tool bits for machining up to 6" wide surface. Made of hardened steel and counter balanced for faster feeds and smoother finishes. Sets of 3 tools each are supplied on a wooden stand.



Dia. of Head	Dia. of Shank	Size of Tool Bit	Order No.	Price
3/4	1/2	3/16	2434832	
1-1/8	1/2	1/4	2437232	
1-1/2	1/2	5/16	2439632	
3 pc. Set of above.			2430032	
1-1/2	3/4	5/16	2439648	
2	3/4	5/16	2432048	
2-1/2	3/4	5/16	2432548	
3 pc. Set of above.			2430048	
2-1/2	R-8	5/16	2430025	

**HIGH SPEED STEEL  
CARBIDE TIPPED BORING BARS - HEAVY DUTY**  
  
**SERIES 145 : C2 GENERAL PURPOSE GRADE**  
**SERIES 146 : C6 STEEL GRADE**



**COBALT BORING BARS - HEAVY DUTY**  
  
**SERIES 147:**

\*Ground Shanks  
 \*Shank Tolerance + .0000"; -.001"

\*Ground Shanks  
 \*Shank Tolerance + .0000"; -.0005"

Shank Dia.	Overall Length	Bore Depth	Min. Bore	Tool No.	General Purpose	Steel Grade	Price
3/8	2	3/4	5/16	MA5S	3222401	3262401	
3/8	2-3/8	1-1/8	5/16	MA5M	3222402	3262402	
3/8	2-3/4	1-1/2	5/16	MA5L	3222403	3262403	
3/8	2-3/16	15/16	3/8	MA3S	3222404	3262404	
3/8	2-21/32	1-13/32	3/8	MA3M	3222405	3262405	
3/8	3-1/8	1-7/8	3/8	MA3L	3222406	3262406	
3/8	2-3/8	1-1/8	7/16	MA7S	3222407	3262407	
3/8	2-15/16	1-7/8	7/16	MA7M	3222408	3262408	
3/8	3-1/2	2-1/4	7/16	MA7L	3222409	3262409	
<b>9 pc. 3/8" Sk. set consisting of 1 each of above.</b>							<b>3222400 3262400</b>
1/2	2-1/4	3/4	5/16	MB5S	3223201	3263201	
1/2	2-5/8	1-1/8	5/16	MB5M	3223202	3263202	
1/2	3	1-1/2	5/16	MB5L	3223203	3263203	
1/2	2-5/8	1-1/8	7/16	MB7S	3223204	3263204	
1/2	3-3/16	1-11/16	7/16	MB7M	3223205	3263205	
1/2	3-3/4	2-1/4	7/16	MB7L	3223206	3263206	
1/2	3	1-1/2	9/16	MB9S	3223207	3263207	
1/2	3-3/4	2-1/4	9/16	MB9M	3223208	3263208	
1/2	4-1/2	3	9/16	MB9L	3223209	3263209	
<b>9 pc. 1/2" Sk. set consisting of 1 each of above.</b>							<b>3223200 3263200</b>
5/8	2-1/4	3/4	5/16	MC5S	3224001	3264001	
5/8	2-5/8	1-1/8	5/16	MC5M	3224002	3264002	
5/8	3	1-1/2	5/16	MC5L	3224003	3264003	
5/8	2-5/8	1-1/8	7/16	MC7S	3224004	3264004	
5/8	3-3/16	1-11/16	7/16	MC7M	3224005	3264005	
5/8	3-3/4	2-1/4	7/16	MC7L	3224006	3264006	
5/8	3	1-1/2	9/16	MC9S	3224007	3264007	
5/8	3-3/4	2-1/4	9/16	MC9M	3224008	3264008	
5/8	4-1/2	3	9/16	MC9L	3224009	3264009	
5/8	3-3/8	1-7/8	11/16	MC11S	3224110	3264110	
5/8	4-5/16	2-13/16	11/16	MC11M	3224111	3264111	
5/8	5-1/4	3-3/4	11/16	MC11L	3224112	3264112	
<b>12 pc. 5/8" Sk. set consisting of 1 each of above.</b>							<b>3224000 3264000</b>
3/4	3-1/8	1-1/8	7/16	MD7S	3224801	3264801	
3/4	3-11/16	1-11/16	7/16	MD7M	3224802	3264802	
3/4	4-1/4	2-1/4	7/16	MD7L	3224803	3264803	
3/4	3-1/2	1-1/2	9/16	MD9S	3224804	3264804	
3/4	4-1/4	2-1/4	9/16	MD9M	3224805	3264805	
3/4	5	3	9/16	MD9L	3224806	3264806	
3/4	3-7/8	1-7/8	11/16	MD11S	3224807	3264807	
3/4	4-13/16	2-13/16	11/16	MD11M	3224808	3264808	
3/4	5-3/4	3-3/4	11/16	MD11L	3224809	3264809	
3/4	4-1/4	2-1/4	13/16	MD13S	3224810	3264810	
3/4	5-3/8	3-3/8	13/16	MD13M	3224811	3264811	
3/4	6-1/2	4-1/2	13/16	MD13L	3224812	3264812	
<b>12 pc. 3/4" Sk. set consisting of 1 each of above.</b>							<b>3224800 3264800</b>
1	5	3	9/16	ME9L	3226401	3266401	
1	5-3/4	3-3/4	11/16	ME11L	3226402	3266402	
1	6-1/2	4-1/2	7/8	ME14L	3226403	3266403	
1	6-1/2	4-1/2	1-1/16	ME18L	3226404	3266404	
1	7-3/4	5-3/4	1-1/8	ME20L	3226405	3266405	
1	8-1/4	6-1/4	1-1/2	ME24L	3226406	3266406	
1	9-1/2	7-1/2	1-5/8	ME26L	3226407	3266407	
<b>7 pc. 1" Sk. set consisting of 1 each of above.</b>							<b>3226400 3266400</b>

Shank Dia.	Overall Length	Bore Depth	Min. Bore	Tool No.	Order No.	Price
3/8	1-13/16	9/16	3/16	MAH3S	3352401	
3/8	2-3/16	15/16	3/16	MAH3L	3352402	
3/8	2	3/4	1/4	MAH4S	3352403	
3/8	2-1/2	1-1/4	1/4	MAH4L	3352404	
3/8	2-3/16	15/16	5/16	MAH5S	3352405	
3/8	2-13/16	1-9/16	5/16	MAH5L	3352406	
3/8	2-3/8	1-1/8	3/8	MAH6S	3352407	
3/8	3-1/8	1-7/8	3/8	MAH6L	3352408	
<b>8 pc. 3/8 Sk. set consisting of 1 each of above.</b>						<b>3352400</b>
1/2	2-1/8	3/4	1/4	MBH4S	3353201	
1/2	2-5/8	1-1/4	1/4	MBH4L	3353202	
1/2	2-5/16	15/16	5/16	MBH5S	3353203	
1/2	2-15/16	1-9/16	5/16	MBH5L	3353204	
1/2	2-1/2	1-1/8	3/8	MBH6S	3353205	
1/2	3-1/4	1-7/8	3/8	MBH6L	3353206	
1/2	2-11/16	1-5/16	7/16	MBH7S	3353207	
1/2	3-9/16	2-3/16	7/16	MBH7L	3353208	
1/2	2-7/8	1-1/2	1/2	MBH8S	3353209	
1/2	3-7/8	2-1/2	1/2	MBH8L	3353210	
<b>10 pc. 1/2" Sk. set consisting of 1 each of above.</b>						<b>3353200</b>
5/8	2-5/8	1-1/8	3/8	MCH6S	3354001	
5/8	3-3/8	1-7/8	3/8	MCH6L	3354002	
5/8	2-13/16	1-5/16	7/16	MCH7S	3354003	
5/8	3-11/16	2-3/16	7/16	MCH7L	3354004	
5/8	3	1-1/2	1/2	MCH8S	3354005	
5/8	4	2-1/2	1/2	MCH8L	3354006	
5/8	3-3/16	1-11/16	9/16	MCH9S	3354007	
5/8	4-5/16	2-13/16	9/16	MCH9L	3354008	
5/8	3-3/8	1-7/8	5/8	MCH10S	3354009	
5/8	4-5/8	3-1/8	5/8	MCH10L	3354010	
<b>10 pc. 5/8" Sk. set consisting of 1 each of above.</b>						<b>3354000</b>
3/4	2-7/8	1-1/8	3/8	MDH6S	3354801	
3/4	3-5/8	1-7/8	3/8	MDH6L	3354802	
3/4	3-1/16	1-5/16	7/16	MDH7S	3354803	
3/4	3-15/16	2-3/16	7/16	MDH7L	3354804	
3/4	3-1/4	1-1/2	1/2	MDH8S	3354805	
3/4	4-1/4	2-1/2	1/2	MDH8L	3354806	
3/4	3-7/16	1-11/16	9/16	MDH9S	3354807	
3/4	4-9/16	2-13/16	9/16	MDH9L	3354808	
3/4	3-5/8	1-7/8	5/8	MDH10S	3354809	
3/4	4-7/8	3-1/8	5/8	MDH10L	3354810	
3/4	3-13/16	2-1/16	11/16	MDH11S	3354811	
3/4	5-3/16	3-7/16	11/16	MDH11L	3354812	
3/4	4	2-1/4	3/4	MDH12S	3354813	
3/4	5-1/2	3-3/4	3/4	MDH12L	3354814	
<b>14 pc. 3/4" Sk. set consisting of 1 each of above.</b>						<b>3354800</b>



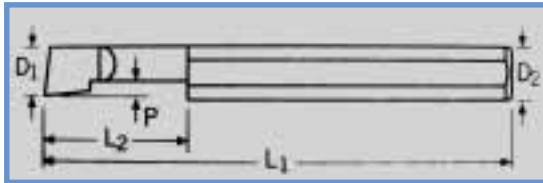
See INDEX for  
 Boring Heads and  
 Boring Tool Holders.

MICRO SIZE SOLID CARBIDE  
BORING TOOLS  
SERIES 710:



**Tolerances:**

- Shank Dia.  $-.0001''$  to  $-.0003''$
- Min. Bore Dia.  $+.000''$ ,  $-.005''$
- Max Bore Depth  $+.050''$ ,  $-.000''$
- Overall Length  $\pm 1/64$



Min. Bore Size D1	Shank Dia. D2	Overall Length L1	Bore Depth L2	Projection P	Order No.	Price
.050	1/8	1-1/2	.150	.013	950150	
.050	1/8	1-1/2	.200	.013	950200	
.050	1/8	1-1/2	.300	.013	50300	
.060	1/8	1-1/2	.150	.015	9960150	
.080	1/8	1-1/2	.150	.020	980150	
.080	1/8	1-1/2	.200	.020	980200	
.080	1/8	1-1/2	.300	.020	980300	
.100	1/8	1-1/2	.300	.025	100300	
.120	3/16	2	.250	.030	9120250	
.120	3/16	2	.350	.030	120350	
.120	3/16	2	.500	.030	120500	
.120	3/16	2	.600	.030	120600	
.140	3/16	2	.400	.035	9940400	
.140	3/16	2	.500	.035	9940500	
.140	3/16	2	.600	.035	940600	
.060	3/16	2	.400	.040	160400	
.060	3/16	2	.500	.040	160500	

HIGH SPEED STEEL  
KEYWAY BROACH SETS  
SERIES 144: MEDA - SUPERIOR IMPORT  
SERIES 616: HASSAY SAVAGE USA



MEDA Superior Import



All broach sets are supplied in fitted boxes and come complete with broaches, slotted bushings, and necessary shims.

Set No.	Keyway Comb.	Broach Sizes	Bushings*	MEDA		Hassay Savage	
				Order No.	Price	Order No.	Price
1	15	1/16-I, 3/32-I, 1/8-I	I: 1/4, 5/16, 3/8, 7/16, 1/2	5868500		1440000	
C2-A	14	1/8-II, 3/16-III, 1/4-III	II: 1/2, 5/8, 3/4, 7/8 III: 1, 1-1/8, 1-1/4, 1-3/8, 1-1/2	-		1440005	
C-1	18	1/8-II, 3/16-II, 1/4-III, 3/8-III	II: 1/2, 5/8, 3/4, 7/8 III: 1, 1-1/8, 1-1/4, 1-3/8, 1-1/2	5868510		1440010	
C-1A	18	1/8-II, 3/16-II, 1/4-III, 3/8-III	II: 9/16, 11/16, 13/16 III: 15/16, 1-1/16, 1-3/16, 1-5/16, 1-7/16, 1-9/16	-		1440011	
C-10	36	1/8-II, 3/16-II, 1/4-III, 3/8-III	II: 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8 III: 15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-9/16	5868511		1441011	
C10-A	30	1/8-II, 3/16-III, 1/4-III	II: 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8 III: 15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-9/16	-		1440015	
3-D	32	5/16-IV, 3/8-IV, 7/16-IV, 1/2-IV	IV: 1-1/2, 1-5/8, 1-3/4, 1-7/8, 2, 2-1/8, 2-1/4, 2-1/2	-		1440041	
M10	10	2mm-I, 3mm-I	I: 6, 7, 8, 9, 10mm	-		0015410	
M18	18	4mm-II, 5mm-II 6mm-III, 8mm-III	II: 12, 14, 16, 18mm III: 20, 22, 24, 26, 28mm	-		0015418	
M26	26	4mm-II, 5mm-II 6mm-III, 8mm-III	II: 12, 14, 15, 16mm III: 18, 19, 20, 22, 24, 25, 26, 28, 30mm	5868570		-	
M40	36	2mm-I, 3mm-I 4mm-II, 5mm-II 6mm-III, 8mm-III	I: 8, 10mm II: 12, 14, 16, 18mm III: 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 34, 36mm	-		1615440	

\*All Bushings supplied with sets 1, C-1, C-1A, and C-10 are collared. Bushings supplied with set 3-D are plain.



Please inquire for other set configurations as well as other types of broaches. See Index for Arbor Presses.

**HIGH SPEED STEEL**  
**INDIVIDUAL KEYWAY BROACHES**

**SERIES 144: MEDA - SUPERIOR IMPORT**

**SERIES 616: HASSAY SAVAGE - USA**

Includes all required shims.



Keyway Size	Tolerances	Broach Dimensions	Shims Required	MEDA		Hassay Savage	
				Order No.	Price	Order No.	Price
1/16-I	.0625-.0635	1/8 x 5-1/4	0	1355059		1440059	
3/32-I	.0937-.0947	1/8 x 5-1/4	0	1355079		1440079	
1/8-I	.1252-.1262	1/8 x 5-1/4	1	1355099		1440099	
3/32-II	.0937-.0947	3/16 x 7	0	1355061		1440061	
1/8-II	.1252-.1262	3/16 x 7	1	1355081		1440081	
5/32-II	.1564-.1574	3/16 x 7	1	1355101		1440101	
3/16-II	.1877-.1887	3/16 x 7	1	1355121		1440121	
3/16-III	.1877-.1887	3/8 x 11-7/8	1	1355122		1440122	
1/4-III	.2502-.2512	3/8 x 11-7/8	1	1355162		1440162	
5/16-III	.3127-.3137	3/8 x 11-7/8	1	1355202		1440202	
3/8-III	.3755-.3765	3/8 x 11-7/8	2	1355242		1440242	
5/16-IV	.3127-.3137	9/16 x 13-7/8	1	1355203		1440203	
3/8-IV	.3755-.3765	9/16 x 13-7/8	2	1355243		1440243	
7/16-IV	.4380-.4390	9/16 x 13-7/8	2	1355283		1440283	
1/2-IV	.5006-.5016	9/16 x 13-7/8	3	1355323		1440323	
5/8-V	.6260-.6270	3/4 x 15-1/4	4	1355404		1440404	
3/4-V	.7515-.7525	3/4 x 15-1/4	5	1355484		1440484	
7/8-VI	.8765-.8775	1 x 19-1/4	6	1355564		1440564	
1-VI	1.0015-1.0025	1 x 19-1/4	7	1355644		1440644	



TiN Coated Broaches available; please inquire

**BUSHINGS FOR KEYWAY BROACHES**

**SERIES 616: HASSAY SAVAGE - USA**



**"I" Bushings Length: 1-1/8"**

Diameter	Order No.	Price
1/4	1445016	
5/16	1445020	
3/8	1445024	
7/16	1445028	
1/2	1445032	



**"II" Bushings Length: 1-11/16"**

Diameter	Order No.	Price
1/2	1446032	
9/16	1446036	
5/8	1446040	
11/16	1446044	
3/4	1446048	
13/16	1446052	
7/8	1446056	

**"IV" Bushings Length:\*\*\***

Diameter	Order No.	Price
1-7/16	1448092	
1-1/2	1448096	
1-9/16	1448136	
1-5/8	1448140	
1-11/16	1448144	
1-3/4	1448148	
1-13/16	1448152	
1-7/8	1448156	
1-15/16	1448160	
2	1448200	
2-1/16	1448204	
2-1/8	1448208	
2-3/16	1448212	
2-1/4	1448216	
2-5/16	1448220	
2-3/8	1448224	
2-7/16	1448228	
2-1/2	1448232	
2-9/16	1448236	
2-5/8	1448240	
2-11/16	1448244	
2-3/4	1448248	
2-13/16	1448252	
2-7/8	1448256	
2-15/16	1448260	
3	1448300	



**"III" Bushings Length: 2-1/2"**

Diameter	Order No.	Price
3/4	1447048	
13/16	1447052	
7/8	1447056	
15/16	1447060	
1	1447064	
1-1/16	1447068	
1-1/8	1447072	
1-3/16	1447076	
1-1/4	1447080	
1-5/16	1447084	
1-3/8	1447088	
1-7/16	1447092	
1-1/2	1447096	
1-9/16	1447136	

**"V" Bushings Length: 6"**

Diameter	Order No.	Price
2-5/16	1449220	
2-3/8	1449224	
2-7/16	1449228	
2-1/2	1449232	
2-9/16	1449236	
2-5/8	1449240	
2-11/16	1449244	
2-3/4	1449248	
2-13/16	1449252	
2-7/8	1449256	
2-15/16	1449260	
3	1449300	

\*\*\* 1-7/16 - 1-3/4" Diameters Length: 4"  
 1-13/16 - 2-5/16" Diameters Length: 5"  
 2-3/8 - 3" Diameters Length: 6"

**HIGH SPEED STEEL  
KEYWAY BROACHES - METRIC**

**SERIES 144: MEDA - SUPERIOR IMPORT  
SERIES 616: HASSAY SAVAGE - USA**



Includes all required shims

Broach Size mm	Tolerances	Broach Dimensions (in.)	Stand. Milli. Keys	Shims Required	MEDA		Hassay Savage	
					Order No.	Price	Order No.	Price
2mm-I	.0787-.0792	1/8 x 5-1/4	2 x 2	0	6160025		6161025	
3mm-I	.1181-.1186	1/8 x 5-1/4	3 x 3	1	6160035		6161035	
4mm-II	.1575-.1580	1/4 x 7	4 x 4	1	6160046		6161046	
5mm-II	.1968-.1974	1/4 x 7	5 x 5	1	6160056		6161056	
5mm-III	.1968-.1974	3/8 x 11-7/8	5 x 5	1	6160057		6161057	
6mm-III	.2362-.2367	3/8 x 11-7/8	6 x 6	1	6160067		6161067	
8mm-III	.3150-.3155	3/8 x 11-7/8	8 x 7	1	6160087		6161087	
10mm-IV	.3937-.3942	9/16 x 13-7/8	10 x 8	2	6160108		6161108	
12mm-IV	.4724-.4730	9/16 x 13-7/8	12 x 8	2	6160128		6161128	
14mm-IV	.5512-.5519	9/16 x 13-7/8	14 x 9	2	6160148		6161148	
16mm-V	.6299-.6306	3/4 x 15-1/4	16 x 10	3	6160169		6161169	
18mm-V	.7087-.7093	3/4 x 15-1/4	18 x 11	3	6160189		6161189	
20mm-VI	.7874-.7883	1 x 19-1/4	20 x 12	3	6160200		6161200	
22mm-VI	.8661-.8669	1 x 19-1/4	22 x 14	4	6160220		6161220	
24mm-VI	.9449-.9458	1 x 19-1/4	24 x 14	4	6160240		6161240	
25mm-VI	.9842-.9851	1 x 19-1/4	25 x 14	4	6160250		6161250	

**BUSHINGS FOR METRIC  
KEYWAY BROACHES**

**SERIES 616:**

I, II, and III: Collared

IV and V : Plain



"I" Bushings Diameter (mm)	Order No.	Price
6	6165006	
8	6165008	
10	6165010	


  

"II" Bushings Diameter (mm)	Order No.	Price
12	6166012	
14	6166014	
15	6166015	
16	6166016	
17	6166017	
18	6166018	
19	6166019	

"III" Bushings Diameter (mm)	Order No.	Price
18	6167018	
19	6167019	
20	6167020	
22	6167022	
24	6167024	
25	6167025	
26	6167026	
28	6167028	
30	6167030	
32	6167032	
34	6167034	
35	6167035	
36	6167036	

"IV" Bushings Diameter (mm)	Order No.	Price
32	6168032	
34	6168034	
35	6168035	
36	6168036	
38	6168038	
40	6168040	
42	6168042	
44	6168044	
45	6168045	
46	6168046	
48	6168048	
50	6168050	
52	6168052	
54	6168054	
56	6168056	

"V" Bushings Diameter (mm)	Order No.	Price
52	6169052	
54	6169054	
55	6169055	
56	6169056	
58	6169058	
60	6169060	
62	6169062	
64	6169064	
65	6169065	
66	6169066	
68	6169068	
70	6169070	
72	6169072	

 Please inquire for other set configurations as well as other types of broaches.  
See Index for ARBOR PRESSES.

**HIGH SPEED STEEL**  
**SQUARE KEYWAY BROACHES**  
**SERIES 616 : HASSAY SAVAGE - USA**



**NOTES:** Standard square broaches are HSS push type; designed for one-pass finishing when used with arbor or hydraulic press, or vertical broaching machine.



Square Size	Tolerances	Dimensions Across Corners	Pilot Diameter	Drill Size	Broach Length	Order No.	Price
1/8	.1250-.1260	.1750-.1770	.1280	No. 30	4-5/8	6171008	
5/32	.1565-.1575	.2180-.2200	.1585	No. 21	5-5/8	6171010	
3/16	.1880-.1890	.2620-.2640	.1930	No. 10	5-11/16	6171012	
7/32	.2190-.2200	.3050-.3070	.2275	No. 1	6-7/8	6171014	
1/4	.2505-.2515	.3500-.3520	.2651	17/64	7	6171016	
9/32	.2815-.2825	.3930-.3950	.2964	19/64	7-1/4	6171018	
5/16	.3130-.3140	.4370-.4390	.3271	21/64	8-1/8	6171020	
11/32	.3440-.3450	.4810-.4830	.3589	23/64	9-5/8	6171022	
3/8	.3755-.3765	.5230-.5250	.3901	25/64	9-7/8	6171024	
13/32	.4065-.4075	.5680-.5700	.4214	27/64	10-7/8	6171026	
7/16	.4385-.4395	.6110-.6130	.4526	29/64	11-3/8	6171028	
15/32	.4690-.4700	.6560-.6580	.4995	1/2	12-1/2	6171030	
1/2	.5005-.5015	.6970-.6990	.5307	17/32	12-5/8	6171032	
9/16	.5630-.5640	.7860-.7880	.5932	19/32	14-7/8	6171036	
5/8	.6260-.6270	.8710-.8730	.6557	21/32	16-13/16	6171040	
11/16	.6885-.6895	.9610-.9630	.7495	3/4	18-1/2	6171044	
3/4	.7510-.7520	1.0450-1.0470	.8120	13/16	18-7/8	6171048	
7/8	.8765-.8775	1.2280-1.2300	.9370	15/16	22-3/4	6171056	
1	1.0020-1.0030	1.4030-1.4050	1.0932	1-3/32	24-1/2	6171064	

**HIGH SPEED STEEL**  
**METRIC SQUARE KEYWAY BROACHES**  
**SERIES 616:**



Square Size	Tolerances (inches)	Dimensions Across Corners (in.)	Pilot Diameter -.0005 (in.)	Drill Size mm	Broach Length (in.)	Order No.	Price
4mm	.1580-.1585	.2080-.2090	.1655	4.2	5-9/16	17001	
5mm	.1973-.1983	.2645-.2655	.2047	5.2	6-7/8	9917002	
6mm	.2367-.2377	.3295-.3300	.250	6.35	7	17003	
8mm	.3155-.3165	.4405-.4410	.3267	8.3	8-3/16	9917004	
10mm	.3942-.3952	.5435-.5445	.4057	10.3	10-7/8	17005	
12mm	.4729-.4739	.6540-.6550	.4921	12.5	12-1/2	9917006	
14mm	.5517-.5527	.7700-.7710	.5905	15.0	14-7/8	17007	
16mm	.6310-.6320	.8780-.8790	.6693	17.0	16-13/16	17008	
18mm	.7092-.7102	.9880-.9890	.7874	20.0	18-1/2	17009	
20mm	.7879-.7889	1.0990-1.1000	.8661	22.0	18-7/8	17010	
22mm	.8666-.8676	1.2110-1.2120	.9448	24.0	23-1/4	17011	
24mm	.9454-.9464	1.3170-1.3180	1.0236	26.0	24-9/16	17012	
25mm	.9848-.9858	1.3730-1.3740	1.0630	27.0	24-9/16	17013	

**Quality Cutting Tools**



**THE CHOICE IS YOURS!!!**

**HIGH SPEED STEEL  
HEXAGON BROACHES  
SERIES 616:**




**NOTES:** Standard hexagon broaches are HSS push type; designed for one-pass finishing when used with arbor or hydraulic press, or vertical broaching machine.

Hex Size	Tolerances	Diagonal Dimensions	Pilot Diameter	Drill Size	Broach Length	Order No.	Price
1/8	.1255-.1260	.1450-.1470	.1245	1/8	4-5/8	6162008	
5/32	.1565-.1570	.1800-.1820	.1557	5/32	5-1/2	6162010	
3/16	.1880-.1890	.2145-.2155	.1870	3/16	5-9/16	6162012	
7/32	.2190-.2200	.2500-.2520	.2182	7/32	6	6162014	
1/4	.2505-.2515	.2865-.2875	.2495	1/4	6-1/2	6162016	
9/32	.2815-.2825	.3220-.3240	.2807	9/32	7-3/4	6162018	
5/16	.3130-.3140	.3580-.3590	.3120	5/16	8-1/4	6162020	
11/32	.3440-.3450	.3950-.3970	.3432	11/32	8-1/4	6162022	
3/8	.3755-.3765	.4300-.4310	.3745	3/8	9	6162024	
13/32	.4065-.4075	.4670-.4690	.4057	13/32	10	6162026	
7/16	.4385-.4395	.5020-.5030	.4370	7/16	10-3/4	6162028	
15/32	.4690-.4700	.5390-.5410	.4682	15/32	12-3/8	6162030	
1/2	.5005-.5015	.5740-.5750	.4995	1/2	12-1/2	6162032	
9/16	.5630-.5640	.6480-.6500	.5620	9/16	14-1/4	6162036	
5/8	.6260-.6270	.7170-.7185	.6245	5/8	16-7/8	6162040	
11/16	.6880-.6890	.7930-.7950	.6870	11/16	17	6162044	
3/4	.7510-.7520	.8610-.8625	.7495	3/4	17-7/8	6162048	
7/8	.8755-.8765	1.0060-1.0075	.8745	7/8	18-7/8	6162056	
1	1.0020-1.0030	1.1520-1.1530	.9995	1	19-7/8	6162064	

**HIGH SPEED STEEL  
METRIC HEXAGON KEYWAY BROACHES  
SERIES 616 :**



Hex Size	Tolerances	Diagonal Dimensions	Pilot Diameter	Drill Size	Broach Length (in.)	Order No.	Price
4mm	.1580-.1585	.1820-.1830	.1575	4.0	5-1/2	6163004	
5mm	.1973-.1983	.2270-.2280	.1968	5.0	6	6163005	
6mm	.2367-.2377	.2730-.2740	.2362	6.0	6-1/2	6163006	
7mm	.2760-.2770	.3180-.3190	.2756	7.0	7-3/4	6163007	
8mm	.3155-.3165	.3634-.3644	.3150	8.0	8-1/4	6163008	
10mm	.3942-.3952	.4543-.4553	.3937	10.0	10	6163010	
12mm	.4729-.4739	.5452-.5462	.4724	12.0	12-3/8	6163012	
14mm	.5517-.5527	.6332-.6342	.5512	14.0	14-1/4	6163014	
16mm	.6310-.6320	.7248-.7258	.6230	16.0	16-7/8	6163016	
18mm	.7092-.7102	.8150-.8160	.7087	18.0	17	6163018	
20mm	.7879-.7889	.9049-.9059	.7874	20.0	17-7/8	6163020	
22mm	.8666-.8676	.9958-.9968	.8661	22.0	18-7/8	6163022	
24mm	.9454-.9464	1.0868-1.0878	.9449	24.0	19-7/8	6163024	
25mm	.9848-.9858	1.1323-1.1333	.9842	25.0	19-7/8	6163025	

 Please inquire for other set configurations as well as other types of broaches. See Index for Arbor Presses.