

TOOLHOLDING



BORING HEADS



DRILL CHUCKS & ARBORS



ARBOR SPACERS & SHIMS



TAPPING HEADS



TOOLHOLDER CARTS,
COLLET RACKS



GLOBALY SOURCED
TOOLS PROVIDING A
BALANCE OF QUALITY & PRICE



COLLIS
TOOL CORPORATION
THE TOOL HOLDER PEOPLE

HOLDERS, ADAPTORS
& COLLETS



CENTERS, TOOL POSTS,
TOOLHOLDERS,
& KNURLING TOOLS

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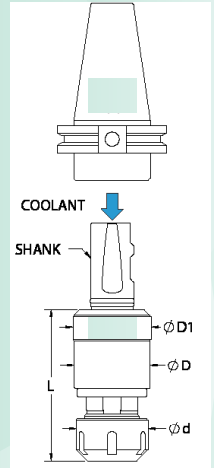
Tapping Heads

SFT II SynchroFlex II Series,

The Only Rigid Tap Driver Guaranteed To Double Tap Life
For Synchronous Tapping On CNC Machines

FEATURES

- SynchroFlex's patented precisely machined flexure compensates axially and radially for the unavoidable minute discrepancies between the machine's RPM, feed and traverse and the exact thread pitch and hole location.
- Any deviation at all from the correct feed rate for the thread pitch or the precise hole location results in added wear on the tap.
- SynchroFlex allows the tap to reproduce itself exactly for maximum life and better thread quality.
- All SFT II come standard with high pressure coolant through the spindle.

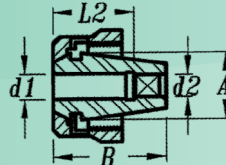


MODEL	CAPACITY (STEEL)	SHANK	COLLETS	WEIGHT (Kg.)	D	D1	d	L	ORDER NO.	PRICE EACH
SFT II 10	M2-M5 #2-#10 20mm 16mm	25mm 1"	ER11	0.4	23.5	23.5	19	52	3158-515	\$644.00
									3158-512	644.00
									3158-514	644.00
									3158-513	644.00
SFT II 50	M4.5-M12 #8-1/2" 20mm	25mm 1"	ER20	0.5	34.6	36.3	34	69	3158-522*	595.00
									3158-517*	595.00
									3158-519*	640.00
SFT II 75	M8-M20 1/4"-3/4"	25mm 1"	ER25	1.0	44.0	45.6	42	88	3158-536*	710.00
									3158-533*	710.00
SFT II 100	M16-M30 5/8"-1"	25mm 1"	ER40	2.0	62.0	63.6	63	117	3158-549*	1392.00
									3158-546*	1392.00

*Includes seal nut for use with sealing discs. All dimensions are shown in mm. 25.4mm + 1".

Square Drive ER Collets

(one collet required for each tap size)



SERIES	TAP SIZES	ORDER NO. RANGE	PRICE EACH
#11	#0-#10	3158-700 to 3158-702	\$158.00
#20	#8-3/8", 1/16" Pipe	3158-719 to 3158-727	129.00
#25	5/16"-3/4", 1/4" Pipe	3158-729 to 3158-744	139.00
#40	9/16"-1", 1/4", 3/8" 1/2" Pipes	3158-806 to 3158-817	171.00

SPD Series, Short Positive Drive, Reversing Tapping Attachments

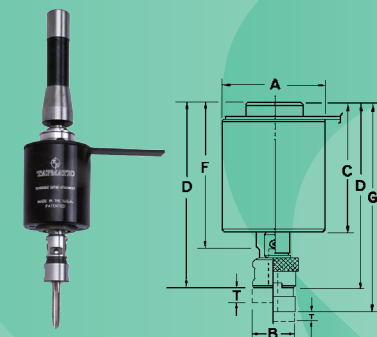
For N/C Machines With Bore Cycles, Automated Drill Units (and high production manual applications).

FEATURES

- **Positive Drive and Reverse:** The full power of the machine is transmitted to the tap in both drive and reverse to eliminate slippage.
- **Short Stroke Self-Feed:** This provides the minimum amount of axial float necessary to compensate or lead error on most automated equipment and still allows the tap to act as its own lead screw.
- **Re-entry Cushion:** Cushioned drive eliminates cross threading.
- **1 X 1 Reverse Ratio:** Permits the bore cycle of most N/C machines to be used for tapping. This eliminates the undesirable necessity of reversing the motors, spindles and gear trains of expensive numerically controlled equipment.

- **Top Stop Arm Location:** The top stop arm location of the "SPD" reduces the required length of a torque bar to its absolute minimum and eliminates interference with other tools being used in a set-up.
- **Collet Chuck Spindle Nose:** Jacobs RUBBER-FLEX® collets and back jaws adapt to all tap sizes, both metric and inch, within the attachment's rated capacity.
- **Standard Right Hand Tapping:** Units modified for left-hand tapping are available on special order at no extra cost.
- **Optional Quick Change Spindle Nose:** Accepts Tapmatic Collet Chuck Adapters, Positive Drive and Torque Release Tap Adapters for complete versatility.
- **Optional ERICKSON® Spindle Nose:** Available for Models SPD5 and SPD7. Accepts J & K type collets.

SPD3 (#0-1/4")			SPD5 (#6-1/2")			SPD7 (#10-3/4-16")			SPD9A (1/2-1-1/8")		
MOUNT TYPE	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH		ORDER NO.	PRICE EACH		ORDER NO.	PRICE EACH	
#3JT	-	-	-	-		3158-234	\$1374.00		-	-	
#4JT	-	-	-	-		-	-		3158-244	\$2137.00	
#6JT	3158-202	\$758.00	3158-218	\$994.00		-	-		-	-	
#33JT	3158-204	758.00	3158-220	994.00		-	-		-	-	
5/16-24	3158-208	773.00	-	-		-	-		-	-	
3/8-24	3158-210	773.00	3158-224	1029.00		-	-		-	-	
1/2-20	3158-212	773.00	3158-226	1029.00		3158-236	1374.00		-	-	
5/8-16	3158-214	773.00	3158-228	1029.00		3158-238	1374.00		-	-	
3/4-16	3158-216	773.00	3158-230	1029.00		3158-240	1374.00		3158-246	2137.00	
7/8-20	-	-	3158-232	1029.00		3158-242	1374.00		-	-	
1-1/2-18	-	-	-	-		-	-		3158-248	2137.00	



Complete information and instructions are packaged with each unit.

*** Capacity must be reduced a minimum of 25% for roll form taps.

* Increase CID & F dimension by .200 for SPD3, .391 for SPD5 and .525 for SPD7.

MODEL	CAPACITY IN STEEL	WEIGHT	REC. MAX SPEED	COLLETS (order separately)		A	B	T SELF-FEED	JACOBS TAPER MTS.	THREADED MTS.	C	D	F
				STANDARD	OPTIONAL								
SPD3	M1.4-M6 #0-1/4"	.45 Kg. 1 lb.	2000 RPM	21600 (#0-#8)	21500 (.040-.098)	52mm 2.062	19mm .750	3mm .125	#6, #33		79mm 3.125	115mm 4.540	96mm 3.812
				21700						5/16-24 %24	65mm 2.575	101mm 4.000	83mm 3.275
				(#10-1/4")						%20, %16 *%16	73mm 2.910	110mm 4.350	92mm 3.625
SPD5	M3-M12 #6-1/2"	1.36 Kg. 3 lbs.	1500 RPM	22100 (#0-1/2")	22000 (.194-.318)	69mm 2.718	27mm 1.070	5mm .187	#6, #33		98mm 3.885	139mm 5.485	114mm 4.520
				22200 (%1/2-1/2")	22300 (.090-.180)					%24, %20 %16, %16 *%16-20	92mm 3.625	132mm 5.230	108mm 4.255
SPD7	M5-M18 #10-3/4-16 NP 1/2"-1/2"	2.04 Kg. 4 lbs. 8 ozs.	1200 RPM	24100 (#10-1/2")	24300 (.110-.280)	76mm 3.000	36mm 1.450	7mm .250	#3		107mm 4.250	170mm 6.710	137mm 5.420
				24500 (%1/2-3/4")	24000 (.318-.480)					%20, %16 %16, %20	95mm 3.765	158mm 6.225	125mm 4.940
SPD9A	M10-M28 #1/2-1 1/2" NP 3/4"	5.00 Kg. 11 lbs.	600 RPM	26100 (%1/2-3/4")		103mm 4.090	57mm 2.250	10mm .400	#4		143mm 5.650	240mm 9.550	200mm 7.875
				26200 (%1/2-1 1/2")						%16	115mm 4.550	215mm 8.450	170mm 6.700

Tapping Heads

TAPMATIC®

Rx New Rx Series, Self Reversing Tap Attachments, For Manually Operated Drilling and Milling (Replaces R Series and X Series Tapping Attachments)

PERFORMANCE ADVANTAGES

- New Durable, Rugged Design For Higher Production On Manual Applications
- Accurate Depth Control • Heavy Duty Ball Clutch

FEATURES

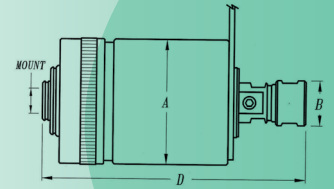
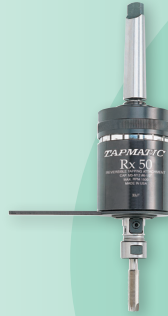
Self-Feed: Permits the tap to act as its own lead screw, allowing even inexperienced operators to produce gage perfect threads. Thread depth repeatability can be maintained accurately.

Pre-Selective Torque Drive: Completely adjustable for material and tap size, to prevent tap breakage.

1.75 x 1 Reverse Ratio: Permits the tap to retract from the tapped hole 75% faster than it entered which greatly increases production.

Re-Entry Cushion: A cushioned drive eliminates cross threading. It is possible to re-enter the same tapped hole as many times as necessary and still maintain a gage perfect thread.

Collet Chuck Spindle Nose: Jacobs RUBBER-FLEX collets and adjustable back jaws adapt to all tap sizes, both metric and inch, within an attachment's rated capacity.



	Rx 30 (#0-1/4)		Rx 50 (#6-1/2)		Rx 70 (#10-3/4)	
MOUNT TYPE	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
#33 JT	3158-144	\$770.00	3158-158	\$1029.00	-	-
#6 JT	3158-142	698.00	3158-156	1029.00	-	-
#3 JT	-	-	-	-	3158-168	\$1374.00
5/16"-24	3158-148	770.00	-	-	-	-
3/8"-24	3158-150	770.00	-	-	-	-
1/2"-20	3158-152	770.00	3158-162	1029.00	-	-
5/8"-16	3158-154	770.00	3158-164	1029.00	3158-172	1399.00
3/4"-16	-	-	3158-166	1029.00	3158-174	1399.00
7/8"-20	-	-	-	-	3158-176	1399.00

MODEL	CAPACITY	COLLET SERIES	MAX SPEED	WEIGHT	A	B	D	SELF-FEED
Rx30	#0-1/4" M1.4-M6 Roll Form #10 Max	#21000	2000 RPM	1.5 lb. .7 Kg.	2.125 53mm	0.75 19mm	4.58 116mm	0.13 3mm
Rx50	#6-1/2" M3-M12 Roll Form #3/8 Max NP 1/16", 1/8"	#22000	1500 RPM	4.0 lb. 1.8 Kg.	3 76mm	1.07 27mm	6.2 157mm	0.16 .4mm
Rx70	#10-3/4"-16 M5-M18 Roll Form 9/16" Max	#24000	1200 RPM	6.7 lb. 3.0 Kg.	3.5 88mm	1.45 36mm	7.14 182mm	0.16 4mm

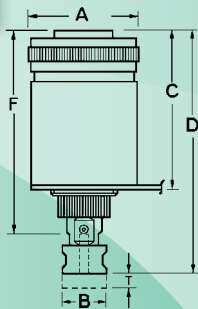
TC/DC For Manually Operated Drilling & Milling Machines

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*Tapping Attachment with Torque and Depth Control Designed for Shallow Hole Drilling on Manually Operated Milling & Drilling Machines

FEATURES

- Has the standard features of the X Series, plus depth control that eliminates the possibility of bottoming in your work piece and breaking taps.
- Self-Feed: Permits the tap to act as its own lead screw and consistently produce gage perfect threads.



Complete information and instructions are packaged with each unit.

	30 TC/DC (#0-1/4")		50 TC/DC (3/8-1/2")		70 TC/DC (#10-5/8")	
MOUNT TYPE	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
#3JT	-	-	-	-	3158-334	\$1343.00
#4JT	-	-	-	-	-	-
#6JT	3158-302	\$703.00	3158-320	\$1010.00	-	-
#33JT	3158-304	703.00	3158-322	1010.00	-	-
5/16-24	3158-310	703.00	-	-	-	-
3/8-24	3158-312	703.00	3158-326	1010.00	-	-
1/2-20	3158-314	703.00	3158-328	1010.00	3158-336	1343.00
5/8-16	3158-316	703.00	3158-330	1010.00	3158-338	1343.00
3/4-16	3158-318	703.00	3158-332	1010.00	3158-340	1343.00
7/8-20	-	-	-	-	3158-342	1343.00

*** Capacity must be reduced a minimum of 25% for roll form taps.

MODEL	CAPACITY IN STEEL	WEIGHT	REC. MAX SPEED	COLLETS (order separately)		A	B	E SELF-FEED	JACOBS TAPER MTS.	THREADED MTS.	C	D	F
30 TC/DC	M1.4-M6 #0-1/4"	.45 Kg. 1 lb.	2000 RPM	STANDARD	OPTIONAL								
				21600 (#0-#8)	21500 (.040-.098)	48mm	19mm	6mm	#6, #33	1/20, 1/16	81mm	109mm	92mm
				21700 (#10-1/4")		1.875	.750	.250		5/16-24, 1/8-24	72mm	99mm	82mm
											2.850	3.900	3.250
50 TC/DC	M3-M12 #6-1/2"	1.36 Kg. 3 lbs.	1500 RPM	22100 (#0-1/2")	22000 (.194-.318)	70mm	27mm	9mm	#6, #33	1/16, 1/8	109mm	148mm	122mm
				22200 (1/4"-1/2")	22300 (.090-.180)	2.750	1.070	.375		1/8, 1/4	104mm	142mm	118mm
											4.100	5.625	4.650
70 TC/DC	M5-M16 #10-3/4" NP 1/8"	2.04 Kg. 4 lbs. 8 ozs.	1200 RPM	24100 (#10-1/2")	24300 (.110-.280)	76mm	36mm	9mm	#3	1/20, 1/16	119mm	168mm	137mm
				24000 (5/16"-1/2")	24500 (.393-.590)	3.000	1.450	.375		1/8, 1/4	4.685	6.650	5.400

Rubber Flex Collets

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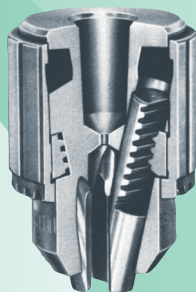


MFG. NO.	COLLET DESCRIPTION	ORDER NO.	PRICE	MFG. NO.	COLLET DESCRIPTION	ORDER NO.	PRICE	MFG. NO.	COLLET DESCRIPTION	ORDER NO.	PRICE
21400	.198-.255	3158-914	\$31.50	22000	.194-.318	3158-920	\$84.00	24000	5/16"-5/8" Standard	3158-940	\$97.00
21500	.040-.098	3158-915	84.00	22100	#0-1/4" Standard	3158-921	84.00	24100	#10-1/2" Standard	3158-941	97.00
21600	#0-#8 Standard	3158-916	84.00	22200	#1/4" -1/2" Standard	3158-922	84.00	24300	.110-.280	3158-943	97.00
21700	#10-1/4" Standard	3158-917	84.00	22300	.090-.180	3158-923	84.00	24500	.393-.590	3158-945	97.00
								26100	1/2"-3/4"	3158-961	146.00
								26200	7/8"-1-1/8"	3158-962	146.00

Jacobs® Super Chucks



The ball bearing super chuck is especially designed for EXTRA HEAVY DUTY drilling applications on production machines, jig borers, milling machines, lathes and radials. The ideal choice for those jobs that require close tolerance drilling.



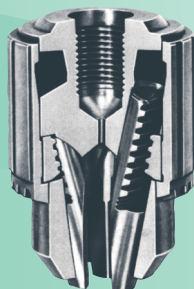
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MODEL NO.	CAPACITY INCHES	CHUCK MOUNT	KEY NO.	ORDER NO.	PRICE EACH
8-1/2N	0-1/4	2JT	K30	3147-517	\$208.50
11N	0-3/8	2JT	K32	3147-522	232.35
14N	0-1/2	3JT	K3	3147-528	324.82
16N	1/8-5/8	3JT	K4	3147-532	372.85
18N	1/8-3/4	4JT	K4	3147-536	560.78
20N	3/8-1	5JT	K5	3147-540	755.13

Jacobs® Plain Chucks



This fine chuck is offered for both medium duty portable, bench or floor type power tools in a wide range of capabilities for either threaded or taper mounted spindles.



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MODEL NO.	CAPACITY INCHES	MOUNT	KEY NO.	ORDER NO.	PRICE EACH
TAPER MOUNT					
0	0-5/32	0JT	K0	3148-005	\$ 139.02
1A	0-1/4	1JT	K1	3148-015	113.09
2A	0-3/8	2JT	K2	3148-065	155.98
33	5/64-1/2	33JT	K32	3148-095	203.74
33KD	5/64-1/2	33JT	K32	3148-100	193.11
3A	1/8-5/8	3JT	K3	3148-160	253.62
34-02	0-1/2	2JT	K3	3148-143	159.26
34-06	0-1/2	6JT	K3	3148-145	211.51
34-33	0-1/2	33JT	K3	3148-146	180.05
34-33C	0-1/2	33JT	K3	3148-147	166.35
36	.18-80	3JT	K4	3148-170	320.05
36KD	.18-80	3JT	K4	3148-190	306.68
THREAD MOUNT					
1B3/8	0-1/4	3/8-24	K7	3148-010	\$114.81
7BA3/8	0-1/4	3/8-24	K7	3148-035	128.18
41BA3/8	0-3/8	3/8-24	K30	3148-193	64.17
41BA1/2	0-3/8	1/2-20	K30	3148-197	178.93
2BA3/8	0-3/8	3/8-24	K2	3148-075	152.55
32BA1/2	0-3/8	1/2-20	K32	3148-090	169.24
33BA3/8	5/64-1/2	3/8-24	K32	3148-105	164.06
33BA1/2	5/64-1/2	1/2-20	K32	3148-115	157.24
33BA5/8	5/64-1/2	5/8-16	K3	3148-120	163.87
3B5/8	5/64-1/2	5/8-16	K3	3148-165	256.99
3BA-1/2	1/8-5/8	5/8-16	K3	3148-158	192.40
36B	.18-80	5/8-16	K4	3148-175	382.91
36B	.18-80	3/4-16	K4	3148-176	357.64

Jacobs® Keyless Chucks

Jacobs® Industrial Keyless Chucks are high precision devices specially designed for high accuracy applications on either conventional or CNC equipment. Tightened and released by hand, they permit more rapid tooling changes to increase machining productivity. A self-tightening feature produces significantly higher gripping force to resist tool shank slippage. Precision manufactured and tested to the most exacting quality standards, Jacobs® Industrial Keyless Chucks can be counted on for extremely high reliability and durability under the most demanding machining conditions.



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CAPACITY RANGE						
MODEL JKP	MIN. INCHES	MM	MAX. INCHES	MM	MOUNT JACOBS	ORDER NO.
80-J2S	0	0	0.315	8	J2S	3148-600
100-J2	0	0	0.394	10	J2	3148-601
100-J33	0	0	0.394	10	J33	3148-602
130-J2	0.039	1	0.512	13	J2	3148-603
130-J6	0.039	1	0.512	13	J6	3148-605
160-J6	0.118	3	0.630	16	J6	3148-606

FEATURES:

- Each chuck precision tested and furnished with an individualized certification number identifying its specific performance characteristics.
- Self-tightening feature automatically increases gripping force proportional to prevent tool shank slippage.
- All components exposed to wear are completely hardened to maintain accuracy and extended chuck life.
- Jacobs taper mount permits use on a wide range of high accuracy drill presses, jig borers, milling machines and production drilling equipment.

HIGH TORQUE / HIGH PRECISION MODEL

- For use on CNC machining centers in drilling, boring, counterboring and milling operations requiring heavy penetration.
- Furnished with milled wrench flats and spanner wrench to allow the application of supplementary gripping torque. Light tightening increases gripping torque up to 3 times high than hand tightening.
- Resists tool loosening on high speed machines with right hand rotation and instant spindle stop.



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CAPACITY RANGE						
MODEL JKT	MIN. INCHES	MM	MAX. INCHES	MM	MOUNT JACOBS	ORDER NO.
130-J2	0.039	0	0.512	13	J2	3148-611
130-J33	0.039	0	0.512	13	J33	3148-612
130-J6	0.039	1	0.512	13	J6	3148-613

Micro Drill Chuck Adapter

FEATURES:

- 1/2" precision ground straight shank .750 travel
- Free turning knurled hand grip
- Infinitely variable spring pressure
- Automatic return at release
- 0 Jacobs male taper



DESCRIPTION	ORDER NO.	PRICE EACH
Micro Drill Adapter Only	3142-470	\$ 39.90
Micro Drill Adapter with Jacobs Keyed Chuck. 0-5/32" capacity.	3142-480	163.82
Micro Drill Adapter with ROHM Keyless Chuck. 0-5/32" capacity.	3142-485	108.90

High Torque/High Precision Keyless Chucks With Integrated Shank

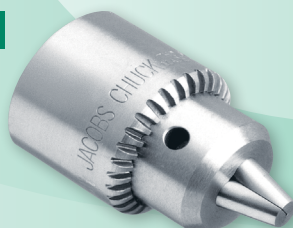


- High precision keyless drill chuck - arbor is integrated into the internal socket of the drill chuck.
- Self-tightening feature automatically increases gripping force proportional to increased torque to prevent tool shank slippage. For right hand rotation applications only.
- 100% individually controlled to ensure not to exceed a maximum total integrated run-out of 0.04 mm.

MODEL/ PART NO.	CAPACITY RANGE					DIMENSIONS								ORDER NO.	PRICE EACH
	MINIMUM		MAXIMUM		MOUNT	CLOSED LGTH.		OPEN LGTH.		SLEEVE DIA.					
	IN	MM	IN	MM		IN.	MM.	IN.	MM.	IN.	MM.				
JK 130-MT3	0.039	1	0.512	13.0	MT3	3.62	92	3.15	80	1.89	48	3148-563	\$444.99		
JK 130-MT4	0.039	1	0.512	13.0	MT4	3.54	90	3.23	82	1.89	48	3148-564	471.13		
JK 130-R8	0.039	1	0.512	13.0	R8	3.54	90	3.23	82	1.89	48	3148-565	487.29		
JK 160-MT3	0.118	3	0.630	16.0	MT3	3.78	96	3.35	85	2.13	54	3148-568	504.53		
JK 160-MT4	0.118	3	0.630	16.0	MT4	3.78	96	3.35	85	2.13	54	3148-569	528.22		
JK 160-R8	0.118	3	0.630	16.0	R8	3.78	96	3.35	85	2.13	54	3148-570	537.69		

Stainless Steel Chucks

- For special applications on either portable air-operated, or stationary machine tools.
- Resistant to chemical corrosion and reduces potential for hazardous sparking.



Drain Chuck

- Specifically designed for use with flexible coil spring tools. Allows coil spring to pass through chuck. Chuck may be hand tightened to secure coil spring at desired length transmitting tool rotation to shaft.
- Ideal for soil pipe and sewer cleaning tools.



MODEL/ PART NO.	CAPACITY RANGE				MOUNT STYLE	KEY NO.	ORDER NO.	PRICE EACH
	MINIMUM IN	MINIMUM MM	MAXIMUM IN	MAXIMUM MM				
OM-6624	0(1)	0	0.156	4	0-JT(2)	KOM	3147-560	\$281.26
OBM-6625	0(1)	0	0.156	4	5/16-24	KOM	3147-565	276.36
1M-6626	0(1)	0	0.250	6	1-JT(2)	K1M	3147-580	256.54
1BM-6627	0(1)	0	0.250	6	5/16-24	K1M	3147-570	280.44
1MM-6628	0(1)	0	0.250	6	3/8-24	K1M	3147-575	273.68

MODEL/ PART NO.	CAPACITY RANGE				MOUNT THREAD	KEY NO.	ORDER NO.	PRICE EACH
	MINIMUM IN	MINIMUM MM	MAXIMUM IN	MAXIMUM MM				
DC4595	0.25	6.4	0.500	13	13/16-20	-	3148-199	\$149.26

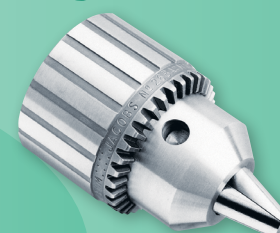
Adapt-A-Drive® Chuck

- Converts any cordless screwdriver to a multi-purpose mini-drill for bit sizes up to 1/4".
- Easy conversion— integral hex mount locks the Adapt-A-Drive® chuck into the screwdriver bit socket.
- Ideal for starting screw holes when using in hard-to reach spaces.



Professional Duty Chuck

- Industrial quality for the tradesman.
- Through-hardened jaws provide hard, durable gripping surfaces.
- One-piece sleeve eliminates crack between driving teeth often found in other designs.
- Each chuck is inspected for 100% performance and precision.
- Fluted sleeve finish.



MODEL/ PART NO.	CAPACITY RANGE				MOUNT THREAD	KEY NO.	ORDER NO.	PRICE EACH
	MINIMUM IN	MINIMUM MM	MAXIMUM IN	MAXIMUM MM				
30248	0.028	0.7	0.250	6.5	3/8-24	KG1	3148-200	\$30.16

MODEL/ PART NO.	CAPACITY RANGE				MOUNT THREAD	KEY NO.	ORDER NO.	PRICE EACH
	MINIMUM IN	MINIMUM MM	MAXIMUM IN	MAXIMUM MM				
30246	0.063	1.6	0.375	10	3/8-24	KK	3148-182	\$54.85

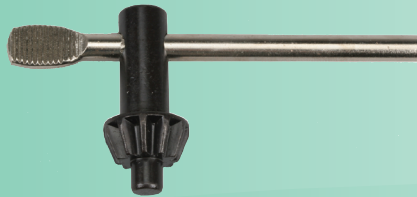
Chucks, Chuck Keys

Jacobs® 10

Multi-Craft® Chucks

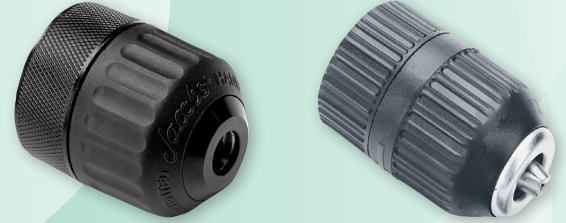
The Multi-Craft® Drill Chuck is mounted as original equipment on more drills than any other chuck by both domestic and import drill manufacturers. It features through-hardened jaws and a design found only in competitors' industrial-grade chucks. Each chuck is backed by the Jacobs® Warranty. Ideal for corded or cordless reversible or nonreversible power drills.

MODEL/ PART NO.	CAPACITY RANGE		MOUNT THREAD	KEY NO.	PRICE EACH		
	MINIMUM IN	MAXIMUM MM					
1/4" Capacity							
3148-186	0.028	0.7	0.250	6.5	3/8-24	KG1	\$20.24
3/8" Capacity							
3148-196	0.062	1.5	0.375	10.0	3/8-24	KG1	24.13
1/2" Capacity							
3148-184	0.078	2.0	0.500	13.0	3/8-24	KK	34.82
3148-185	0.078	2.0	0.500	13.0	1/2-20	KK	34.82



Hand-Tite® Keyless Drill Chucks

- **Keyless Operation** – Permits fast bit changes without lost key delays.
- **Superior Gripping Force** – Provides high mechanical advantage to convert hand tightening torque into superior bit gripping force.
- **Versatility** – Models available to fit all 10mm (3/8") and 13mm (1/2") variable speed corded and cordless portable drills.
- **Precision Operation** – Meet or exceed stringent DIN run-out and dimensional specifications.
- **Ergonomic Design** – Material and surface finish combinations result in increased comfort and performance.
- **Rugged Construction** – Constructed of high performance materials to maximize durability and performance.



MODEL/ PART NO.	CAPACITY RANGE				MOUNT THREAD	PRICE EACH
	MINIMUM		MAXIMUM			
	IN	MM	IN	MM		
10mm Capacity (3/8") Metal Sleeve, Exposed Jaws, Black Finish						
3148-198	0.040	1.0	0.375	10	3/8-24	\$40.77
13mm Capacity (1/2") Hard Nose, Black Finish						
3148-188	0.062	2.0	0.500	13	1/2-20	62.75
3148-187	0.062	2.0	0.500	13	3/8-24	62.75

Chuck Keys

Jacobs®			FOR JACOBS	FOR ROHM	FOR LFA	Jacobs®		Pittsburg®	
JACOBS	ROHM	LFA	CHUCK NOS.	CHUCK NOS.	CHUCK NOS.	PILOT SIZE	ORDER NO.	PRICE EACH	ORDER NO.
K0		0	0B			1/8	3148-324	\$ 8.85	3148-301
K1	S7	1	1A, 1B, 1BS, MC1	R0-0, R1-1	81-1A, 81-B1-	5/32	3148-317	6.26	3148-302
KG	S14	TB1	DC1G61, DC1G61AD, DC4G61, DC4G61AD, H1G61, H4561, MC2, MC11G41, MC1G60, MC1G61, MC1G75, U4G41, U4G60, U4G61		4200-B1, 412-B1 420-B1	1/4	3148-331	4.44	3148-314
KGA		T80				1/4	3148-326	3.95	3148-316
K2	S17	#2	2A, 2B, MC5	R2-38, R2-38TH	82-2A, 82-2B	1/4	3148-318	8.84	3148-303
K7	S18	T4	7, 7-1A, 7B	R6-12, R6-12TH, R6-38TH, R7-38TH		7/32	3148-321	7.48	3148-306
K32	S9	T5	11N, 32, 32B, 33, 33B, 33BA, 33F, 33KD, 3326, 3326A, MC-10, MC33	R2-2, R2-12, R2-33, R9-12, R9-12TH, R9-38, R9-38TH	82A-5A, 42BA-5A, 8282A-5B, 42-BA-5B, 82AS-5A	1/4	3148-319	9.03	3148-308
K3	S10	T6	3, 3A, 3AE, 3B, 3KD, 3PD, 6AE, 6A-2A, 6A-33, 6B, 14N, 34, 34B, 34KD, 34PD, 55B, 56B, 58B, 75A, 63A, 63AB	R3-2, R3-6, R3-6DP/TH, R3-12, R3-33, R3-58, R4-3, R4-58, R11-3	43-6A, 42-6B, 84-6A, 45-6A, 44-6B, 84-6B, 45-5B, 83S-6A, 84S-6A	5/16	3148-320	10.50	3148-304
K3C		T6C	633C, 633D			5/16	3148-327	12.74	3148-305
K30	S8	#13	30, 30-1A, 30B, 31B, 31BA, 8-1/2N, MC4	R7-1, R7-12, R7-38, R8-12, R8-38, R8-38TH	81B-13A, 81B-13B, 42-13B, 81BS-13A	15/64	3148-323	8.58	3148-307
KK	S19	TB13	DC8K33, DC8K61,		42-813,	9/32	3148-329	7.18	3148-315
K4	S13	#9	16N, 18BN, 36, 36B, 37KD, 37PD, 59B	R5-3, R-5, 3DP/TH, R5-4, R6-5	85-9A, 85B-9A, 85S-9A, 85BS-9A	3/8	3148-322	15.84	3148-309
K5		#26	20N			7/16	3148-328	34.16	3148-310

Morse Taper To Jacobs Taper



		Pittsburg		Jacobs	
MORSE TAPER	JACOBS TAPER	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
0	0	3142-400†	\$3.20	—	—
1	1	3142-411	3.20	3148-685	\$21.32
1	2	3142-412	3.20	3148-686	38.04
1	3	3142-413	3.20	—	—
1	6	3142-416	3.20	3148-687	26.74
2	33	3142-419	3.20	—	—
2	0	3142-420†	3.20	—	—
2	1	3142-421	3.20	3148-689	36.22
2	2	3142-422	3.20	3148-690	29.34
2	3	3142-423	3.20	3148-691	28.76
2	4	3142-424	4.45	3148-692	37.06
2	5	3142-425	7.80	—	—
2	6	3142-426	3.20	3148-693	39.42
2	33	3142-429	3.20	3148-694	29.34
3	1	3142-431	4.25	3148-695	25.64
3	2	3142-432	4.25	3148-696	41.00
3	3	3142-433	4.25	3148-697	38.90
3	4	3142-434	4.25	3148-698	45.59
3	5	3142-435	4.25	3148-699	54.48
3	6	3142-436	4.25	3148-700	41.00
3	33	3142-439	4.25	3148-701	39.69
4	2	3142-442	7.30	3148-702	71.91
4	3	3142-443	7.30	3148-703	61.22
4	4	3142-444	7.30	3148-704	63.19
4	5	3142-445	7.30	3148-705	88.39
4	6	3142-446	7.30	3148-706	64.33
4	33	3142-449	7.30	3148-707	64.69
5	2	3142-452	11.35	—	—
5	3	3142-453	11.35	3148-708	131.31
5	4	3142-454	11.35	3148-709	129.86
5	5	3142-455	11.35	3148-710	128.21
5	6	3142-456	11.35	—	—
5	33	3142-459	11.35	—	—

Straight Shank To Jacobs Taper



		Pittsburg		Jacobs	
SA. SHANK	JACOBS TAPER	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
1/2	0	3142-300	\$2.95	3148-715	\$29.87
1/2	1	3142-301	2.95	3148-716	29.96
1/2	2	3142-302	2.95	3148-717	29.96
1/2	3	3142-303	2.95	3148-718	29.96
1/2	4	3142-304	2.95	—	—
1/2	6	3142-306	2.95	3148-719	38.82
1/2	33	3142-309	2.95	3148-720	29.96
5/8	1	3142-321	2.95	3148-721	23.06
5/8	2	3142-322	2.95	3148-722	36.87
5/8	3	3142-323	2.95	3148-723	50.95
5/8	4	3142-324	2.95	—	—
5/8	6	3142-326	2.95	3148-724	39.69
5/8	33	3142-329	2.95	3148-725	33.90
3/4	2	3142-342	4.10	3148-726	50.95
3/4	3	3142-343	4.10	3148-727	46.54
3/4	4	3142-344	4.10	—	—
3/4	6	3142-346	4.10	3148-728	54.67
3/4	33	3142-349	4.10	3148-729	55.33
1	2	3142-362	4.65	—	—
1	3	3142-363	4.65	3148-730	55.43
1	4	3142-364	4.65	—	—
1	6	3142-366	4.65	3148-731	63.43
1	33	3142-369	4.65	—	—
1-1/2	3	3142-383	7.85	—	—
1-1/2	4	3142-384	11.25	—	—
1-3/4	3	3142-393	9.20	—	—
1-3/4	4	3142-394	13.15	—	—

R8 To Jacobs Taper



		Pittsburg		Jacobs	
FROM R8 TAPER	TO JACOBS TAPER	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
R8	1	3142-200	\$13.35	—	—
R8	2	3142-202	13.35	3148-745	\$158.16
R8	3	3142-204	13.35	3148-746	158.16
R8	4	3142-206	13.35	—	—
R8	6	3142-208	13.35	3148-747	158.16
R8	33	3142-210	13.35	3148-748	158.16

Threaded Arbors



2

10

				
SIZE	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
1/2 x 3/8-24	3142-160	\$5.05	—	—
1/2 x 1/2-20	3142-161	5.05	—	—
1MT x 3/8-24	3142-165	5.70	—	—
1MT x 1/2-20	3142-166	5.70	—	—
2MT x 3/8-24	3142-170	5.70	3148-735	\$106.41
2MT x 1/2-20	3142-172	5.70	3148-736	106.41
2MT x 5/8-16	3142-174	5.70	3148-737	106.75

Assorted Toolholders

2

Drill Sleeves



SIZE	M.T. HOLE	M.T. O.D.	SOFT WITH HARDENED TANG		HARDENED AND GROUND THROUGHOUT	
			ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
1 to 2	1	2	3147-012	\$ 3.40	3147-312	\$ 5.15
1 to 3	1	3	3147-013	4.70	3147-313	7.05
1 to 4	1	4	3147-014	7.25	3147-314	12.60
1 to 5	1	5	3147-015	11.65	3147-315	16.65
2 to 3	2	3	3147-023	4.70	3147-323	7.05
2 to 4	2	4	3147-024	7.25	3147-324	12.60
2 to 5	2	5	3147-025	11.65	3147-325	16.65
3 to 4	3	4	3147-034	7.25	3147-334	12.60
3 to 5	3	5	3147-035	11.65	3147-335	16.65
4 to 5	4	5	3147-045	11.65	3147-345	16.65
4 to 6	4	6	3147-046	33.20	3147-346	43.20
5 to 6	5	6	3147-056	35.90	3147-356	43.20

Extension Sockets



SIZE	SIZE HOLE	SHANK	ORDER NO.	PRICE EACH
1 to 1	1	1	3147-111	\$10.80
1 to 2	1	2	3147-112	10.80
1 to 3	1	3	3147-113	11.70
1 to 4	1	4	3147-114	16.50
2 to 1	2	1	3147-121	10.80
2 to 2	2	2	3147-122	10.80
2 to 3	2	3	3147-123	11.70
2 to 4	2	4	3147-124	14.80
2 to 5	2	5	3147-125	27.45
3 to 2	3	2	3147-132	14.80
3 to 3	3	3	3147-133	14.80
3 to 4	3	4	3147-134	14.80
3 to 5	3	5	3147-135	27.45
4 to 2	4	2	3147-142	21.15
4 to 3	4	3	3147-143	23.60
4 to 4	4	4	3147-144	23.60
4 to 5	4	5	3147-145	27.45
4 to 6	4	6	3147-146	69.30
5 to 3	5	3	3147-153	52.70
5 to 4	5	4	3147-154	52.70
5 to 5	5	5	3147-155	52.70
5 to 6	5	6	3147-156	69.30

Screw Machine Sockets



SIZE	M.T. HOLE	O.D.	OVERALL LENGTH	ORDER EACH	PRICE EACH
1	1	1	3-1/2	3147-201	\$ 7.25
2	1	1-1/4	3-1/2	3147-202	7.55
3	1	1-1/2	3-1/2	3147-203	7.95
4	2	1	4	3147-204	12.10
5	2	1-1/4	4	3147-205	12.10
6	2	1-1/2	4	3147-206	12.10
7	2	1-3/4	4	3147-207	12.10
8	2	2	4	3147-208	13.75
9	3	1-1/4	4-3/4	3147-209	15.30
10	3	1-1/2	4-3/4	3147-210	15.30
11	3	1-3/4	4-3/4	3147-211	15.30
12	3	2	4-3/4	3147-212	17.65
13	4	1-1/2	6	3147-213	17.65
14	4	1-3/4	6	3147-214	17.65
15	4	2	6	3147-215	17.65
16	5	2-1/4	7-3/8	3147-216	33.75
17	5	2-1/2	7-3/8	3147-217	33.75

Drill Drifts



SIZE	DESCRIPTION	ORDER NO.	PRICE EACH
1	Fitting #1 Sockets & Sleeves	3147-221	\$2.40
2	Fitting #2 Sockets & Sleeves	3147-222	2.55
3	Fitting #3 Sockets & Sleeves	3147-223	3.20
4	Fitting #4 & #5 Sockets & Sleeves	3147-224	4.05

3 Piece Slotting Saw Arbor Set



- For saw blades .001" to 3/16" thickness.
- Heat treated shanks.
- For hole sizes 1/4", 3/8" & 12".
- 1/2" Shanks.

Order No. 3142-021 Price Each\$31.40

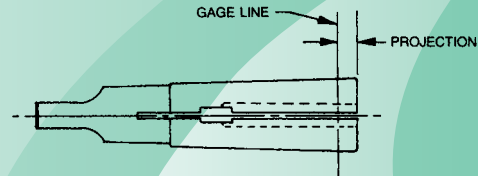
Vari-Saw Holder



- Spring loaded mechanism accepts saw blades with hole diameters from 1/2" to 1".
- Blades are firmly secured in position with hex head screw.
- Offers flexibility in sawing operation.

R8 Shank Order No. 3142-022 Price Each\$23.85
1/2" Shank Order No. 3142-020 Price Each\$15.00

Split Sleeve Drill & Reamer Drivers



DRILL SIZE	#0 M.T.	PRICE EACH	#1 M.T.	PRICE EACH	#2 M.T.	PRICE EACH
53	4870-115	\$44.00	—	—	—	—
1/16	—	—	4871-117	\$31.00	—	—
1.60MM	—	—	4871-117	31.00	—	—
52	—	—	4871-119	31.00	—	—
1.70MM	—	—	4871-121	31.00	—	—
51	—	—	4871-121	31.00	—	—
1.85MM	—	—	4871-123	31.00	—	—
49	—	—	4871-123	31.00	—	—
48	—	—	—	—	4872-209	\$33.00
1.95MM	—	—	—	—	4872-209	33.00
5/64	—	—	4871-125	31.00	—	—
47	—	—	4871-126	31.00	—	—
2.00MM	—	—	4871-126	31.00	—	—
2.05MM	—	—	4871-127	31.00	—	—
46	—	—	4871-127	31.00	—	—
44	4870-130	44.00	4871-130	31.00	—	—
2.20MM	4870-130	44.00	4871-130	31.00	—	—
2.25MM	4870-131	44.00	4871-131	31.00	—	—
43	4870-131	44.00	4871-131	31.00	—	—
42	—	—	4871-134†	13.80	4872-219	33.00
3/32	—	—	4871-134†	13.80	4872-219	33.00
40	—	—	4871-136	31.00	—	—
2.50MM	—	—	4871-136	31.00	—	—
38	—	—	4871-138	31.00	4872-223	33.00
2.60MM	—	—	4871-138	31.00	4872-223	33.00
2.70MM	—	—	—	—	4872-226	33.00
36	—	—	—	—	4872-226	33.00
7/64	—	—	4871-142†	13.80	4872-227	33.00
2.85MM	—	—	4871-145	31.00	—	—
33	—	—	4871-145	31.00	—	—
32	4870-146	44.00	4871-146	31.00	—	—
2.95MM	4870-146	44.00	4871-146	31.00	—	—
3.00MM	4870-292	44.00	—	—	—	—
31	4870-147	44.00	4871-147	31.00	—	—
3.05MM	4870-147	44.00	4871-147	31.00	—	—
1/8	4870-149	44.00	4871-149	31.00	4872-234	33.00
3.20MM	4870-149	44.00	4871-149	31.00	4872-234	33.00
3.25MM	—	—	4871-150	31.00	4872-235	33.00
30	—	—	4871-150	31.00	4872-235	33.00
3.30MM	—	—	4871-151	31.00	—	—
3.40MM	—	—	4871-152	31.00	—	—
29	—	—	4871-153	31.00	4872-238	33.00
28	—	—	4871-156	31.00	4872-241	33.00
9/64	—	—	4871-156	31.00	4872-241	33.00
27	—	—	—	—	4872-242	33.00
3.70MM	—	—	4871-439	31.00	—	—
26	—	—	4871-158	31.00	4872-243	33.00
3.75MM	—	—	4871-158	31.00	4872-243	33.00
25	—	—	4871-159	31.00	—	—
3.80MM	—	—	4871-159	31.00	—	—
24	—	—	4871-160	31.00	4872-245	33.00
23	—	—	4871-161	31.00	—	—
5/32	4870-162	\$44.00	4871-162	31.00	4872-247	33.00
22	—	—	4871-163	31.00	4872-248	33.00
4.00MM	—	—	4871-163	31.00	4872-248	33.00
21	—	—	4871-164	31.00	4872-249	33.00
20	—	—	4871-165	31.00	—	—
4.10MM	—	—	4871-165	31.00	—	—
4.20MM	4870-166	44.00	4871-166	31.00	—	—
19	4870-166	44.00	4871-166	31.00	—	—
4.30MM	—	—	4871-167	31.00	—	—
18	—	—	4871-167	31.00	—	—
11/64	4870-168	44.00	4871-168	31.00	4872-253	33.00
17	—	—	—	—	4872-254	33.00
4.40MM	—	—	—	—	4872-254	33.00
16	4870-170	44.00	4871-170	31.00	4872-255	33.00
4.50MM	4870-170	44.00	4871-170	31.00	4872-255	33.00

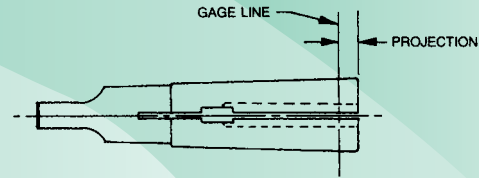
† Limited Quantities

DRILL SIZE	#0 M.T.	PRICE EACH	#1 M.T.	PRICE EACH	#2 M.T.	PRICE EACH
15	—	—	—	—	4872-256	\$33.00
14	4870-172	\$44.00	—	—	—	—
13	—	—	—	—	4872-258	33.00
4.70MM	—	—	—	—	4872-258	33.00
4.75MM	4870-174	44.00	4871-174	\$31.00	4872-259	33.00
3/16	4870-174	44.00	4871-174	31.00	4872-259	33.00
4.80MM	4870-175	44.00	4871-175	31.00	—	—
12	4870-175	44.00	4871-175	31.00	—	—
11	—	—	4871-176	31.00	—	—
4.90MM	—	—	4871-177	31.00	—	—
10	—	—	4871-177	31.00	—	—
9	—	—	4871-178	31.00	4872-263	33.00
5.00MM	—	—	4871-178	31.00	4872-263	33.00
8	—	—	4871-179	31.00	4872-264	33.00
5.10MM	—	—	4871-180	31.00	4872-265	33.00
7	—	—	4871-180	31.00	4872-265	33.00
13/64	—	—	4871-181	31.00	4872-266	33.00
6	—	—	4871-182	31.00	4872-267	33.00
5.20MM	—	—	4871-182	31.00	4872-267	33.00
5	—	—	4871-183	31.00	4872-268	33.00
5.30MM	4870-184	44.00	4871-184	31.00	4872-269	33.00
4	4870-184	44.00	4871-184	31.00	4872-269	33.00
5.40MM	—	—	4871-185	31.00	4872-270	33.00
3	—	—	4871-185	31.00	4872-270	33.00
5.50MM	—	—	4871-457	31.00	—	—
7/32	—	—	4871-186	31.00	4872-271	33.00
5.60MM	—	—	4871-187	31.00	4872-271	33.00
2	—	—	4871-187	31.00	4872-271	33.00
1	—	—	4871-189	31.00	4872-274	33.00
5.80MM	—	—	4871-189	31.00	4872-274	33.00
A	—	—	4871-191	31.00	4872-276	33.00
15/64	—	—	4871-191	31.00	4872-276	33.00
6.00MM	—	—	4871-462	31.00	4872-662	33.00
B	—	—	4871-192	31.00	4872-277	33.00
6.10MM	—	—	—	—	4872-278	33.00
C	—	—	4871-194	31.00	4872-279	33.00
D	—	—	4871-195	31.00	4872-280	33.00
6.25MM	—	—	4871-195	31.00	4872-280	33.00
1/4	4870-196	44.00	4871-196	31.00	4872-281	33.00
6.50MM	—	—	4871-467	31.00	—	—
F	—	—	4871-198	31.00	4872-283	33.00
6.60MM	—	—	4871-468	31.00	—	—
G	4871-199	31.00	4872-284	33.00	—	—
6.70MM	4871-469	31.00	4872-669	23.00	—	—
17/64	4871-200	31.00	4872-285	33.00	—	—
6.75MM	4871-200	31.00	4872-285	33.00	—	—
H	4871-200	31.00	4872-285	33.00	—	—
6.80MM	4871-470	31.00	—	—	—	—
6.90MM	4871-202	31.00	4872-287	33.00	—	—
I	4871-202	31.00	4872-287	33.00	—	—
7.00MM	—	—	4872-672	33.00	—	—
J	4871-203	31.00	4872-288	33.00	—	—
7.10MM	4871-473	31.00	4872-673	33.00	—	—
K	4871-205	31.00	4872-290	33.00	—	—
9/32	4871-205	31.00	4872-290	33.00	—	—
7.20MM	4871-474	31.00	—	—	—	—
L	4871-207	31.00	4872-292	33.00	—	—
M	4871-209	31.00	—	—	—	—
7.50MM	4871-209	31.00	—	—	—	—
19/64	4871-210	31.00	4872-295	33.00	—	—
N	—	—	4872-296	33.00	—	—
7.90MM	—	—	4872-681	33.00	—	—
5/16	4871-213	31.00	4872-298	33.00	—	—

(Continued)

Split Sleeve Drill & Reamer Drivers

6



DRILL SIZE	#1 M.T.	PRICE EACH	#2 M.T.	PRICE EACH	#3 M.T.	PRICE EACH
8.00MM	4871-482	\$31.00	4872-682	\$33.00	-	-
O	4871-214	31.00	4872-299	33.00	-	-
8.10MM	-	-	4872-683	33.00	-	-
8.20MM	4871-215	31.00	4872-300	33.00	-	-
P	4871-215	31.00	4872-300	33.00	-	-
8.30MM	-	-	4872-685	33.00	-	-
21/64	4871-216	31.00	4872-301	33.00	-	-
Q	4871-217	31.00	4872-302	33.00	-	-
8.50MM	4871-487	31.00	4872-687	33.00	-	-
8.60MM	4871-218	31.00	4872-303	33.00	-	-
R	4871-218	31.00	4872-303	33.00	-	-
8.70MM	4871-489	31.00	4872-689	33.00	-	-
11/32	4871-219	31.00	4872-304	33.00	-	-
8.80MM	4871-490	31.00	-	-	-	-
S	4871-220	31.00	4872-305	33.00	-	-
9.00MM	4871-221	31.00	4872-306	33.00	-	-
23/64	4871-223	31.00	4872-308	33.00	-	-
9.20MM	-	-	4872-694	33.00	-	-
U	4871-224	31.00	4872-309	33.00	-	-
9.50MM	-	-	4872-697	33.00	-	-
3/8	4871-225	31.00	4872-310	33.00	-	-
V	-	-	4872-311	33.00	4873-000	\$46.00
9.70MM	-	-	4872-699	33.00	-	-
9.8MM	-	-	4872-312	33.00	-	-
W	-	-	4872-312	33.00	-	-
9.90MM	-	-	4872-313	33.00	4873-002†	25.50
25/64	-	-	4872-313	33.00	4873-002†	25.50
10.00MM	-	-	4872-702	33.00	4873-104	46.00
X	-	-	4872-314	33.00	-	-
10.10MM	-	-	4872-314	33.00	-	-
10.20MM	-	-	4872-704	33.00	-	-
Y	-	-	4872-315	33.00	-	-
10.30MM	-	-	4872-316	33.00	4873-005	46.00
13/32	-	-	4872-316	33.00	4873-005	46.00
Z	-	-	4872-317	33.00	-	-
10.50MM	-	-	4872-317	33.00	-	-
10.70MM	-	-	4872-318	33.00	4873-007	46.00
27/64	-	-	4872-318	33.00	4873-007	46.00
11.00MM	4872-712	33.00	-	-	-	-
11.10MM	4872-319	33.00	4873-008	46.00	-	-
7/16	4872-319	33.00	4873-008	46.00	-	-
11.20MM	4872-714	33.00	-	-	-	-
11.50MM	4872-320	33.00	4873-009	46.00	-	-
29/64	4872-320	33.00	4873-009	46.00	-	-
11.90MM	4872-321	33.00	4873-010	46.00	-	-
15/32	4872-321	33.00	4873-010	46.00	-	-

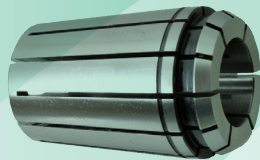
† Limited Quantities

DRILL SIZE	#2 M.T.	PRICE EACH	#3 M.T.	PRICE EACH	#4 M.T.	PRICE EACH
12.00MM	4872-722	\$33.00	4873-124	\$46.00	-	-
12.20MM	4872-724	33.00	-	-	-	-
12.30MM	4872-322	33.00	4873-011	46.00	-	-
31/64	4872-322	33.00	4873-011	46.00	-	-
12.50MM	4872-727	33.00	-	-	-	-
12.70MM	4872-323	33.00	4873-012	46.00	-	-
1/2	4872-323	33.00	4873-012	46.00	-	-
13.00MM	4872-732	33.00	-	-	-	-
33/64	4872-324	33.00	4873-013†	25.50	-	-
13.10MM	4872-324	33.00	4873-013†	25.50	-	-
17/32	4872-325	33.00	4873-014	46.00	-	-
13.50MM	4872-325	33.00	4873-014	46.00	-	-
13.80MM	4872-740	33.00	-	-	-	-
35/64	4872-326	33.00	4873-015	46.00	-	-
13.90MM	4872-326	33.00	4873-015	46.00	-	-
14.00MM	4872-742	33.00	4873-144	46.00	-	-
14.20MM	4872-744	33.00	-	-	-	-
9/16	4872-327	33.00	4873-016	46.00	-	-
14.50MM	4872-747	33.00	-	-	-	-
14.60MM	-	-	-	-	-	-
37/64	-	-	4873-017	46.00	-	-
14.70MM	-	-	4873-017	46.00	-	-
15.00MM	-	-	4873-154	46.00	-	-
19/32	-	-	4873-018	46.00	-	-
15.10MM	-	-	4873-018	46.00	-	-
39/64	-	-	4873-019	46.00	4874-002	\$76.00
15.50MM	-	-	4873-019	46.00	4874-002	76.00
5/8	-	-	4873-020	46.00	4874-003	76.00
41/64	-	-	4873-021	46.00	-	-
21/32	-	-	4873-022	46.00	4874-005	76.00
17.00MM	-	-	4873-174	46.00	-	-
43/64	-	-	4873-023	46.00	-	-
11/16	-	-	4873-024	46.00	4874-007	76.00
45/64	-	-	4873-025	46.00	-	-
18.00MM	-	-	4873-184	46.00	-	-
18.25MM	-	-	4873-026	46.00	-	-
23/32	-	-	4873-026	46.00	-	-
18.50MM	-	-	4873-189	46.00	-	-
47/64	-	-	4873-027	46.00	-	-
3/4	-	-	4873-028	46.00	4874-011	76.00
25/32	-	-	-	-	4874-013	76.00
13/16	-	-	-	-	4874-015	76.00
7/8	-	-	-	-	4874-019	76.00
15/16	-	-	-	-	4874-023	76.00
1	-	-	-	-	4874-027	76.00

Toolholder Systems



Precision Grip Single Angle Collets



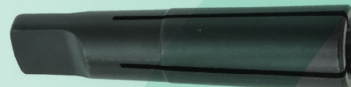
SERIES 100 [6]

SIZE	ORDER NO.	PRICE EACH
3/32	4874-200	\$53.00
1/8	4874-202	53.00
5/32	4874-204	53.00
3/16	4874-206	53.00
7/32	4874-208	53.00
1/4	4874-210	46.00
9/32	4874-212	46.00
5/16	4874-214	46.00
11/32	4874-216	46.00
3/8	4874-218	41.00
13/32	4874-220	41.00
7/16	4874-222	41.00
15/32	4874-224	41.00
1/2	4874-226	41.00
17/32	4874-228	41.00
9/16	4874-230	41.00
19/32	4874-232	41.00
5/8	4874-234	41.00
21/32	4874-236	41.00
11/16	4874-238	41.00
23/32	4874-240	41.00
3/4	4874-242	41.00
25/32	4874-244	41.00
13/16	4874-246	41.00
27/32	4874-248	41.00
7/8	4874-250	41.00
29/32	4874-252	41.00
15/16	4874-254	41.00
31/32	4874-256	41.00
1	4874-258	41.00

SERIES 150 [6]

SIZE	ORDER NO.	PRICE EACH
1/2	4874-300	\$58.00
17/32	4874-302	58.00
9/16	4874-304	58.00
19/32	4874-306	58.00
5/8	4874-308	58.00
21/32	4874-310	58.00
11/16	4874-312	58.00
23/32	4874-314	58.00
3/4	4874-316	58.00
25/32	4874-318	58.00
13/16	4874-320	58.00
27/32	4874-322	58.00
7/8	4874-324	58.00
29/32	4874-326	58.00
15/16	4874-328	58.00
31/32	4874-330	58.00
1	4874-332	58.00
1-1/32	4874-334	58.00
1-1/16	4874-336	58.00
1-3/32	4874-338	58.00
1-1/8	4874-340	58.00
1-5/32	4874-342	58.00
1-3/16	4874-344	58.00
1-1/4	4874-348	58.00
1-9/32	4874-350	58.00
1-5/16	4874-352	58.00
1-11/32	4874-354	58.00
1-3/8	4874-356	58.00
1-13/32	4874-358	58.00
1-7/16	4874-360	58.00
1-15/32	4874-362	58.00
1-1/2	4874-364	58.00

Split Sleeve Tap Drivers



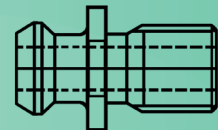
OUTSIDE M.T.	TAP SIZE	ORDER NO.	PRICE EACH
1	0-6	4871-300	\$33.00
1	8	4871-301	33.00
1	10	4871-302	33.00
1	12	4871-303	33.00
1	1/4	4871-320	33.00
1	5/16	4871-321	33.00
1	3/8	4871-322	33.00
2	1/4	4872-420	35.00
2	5/16	4872-421	35.00
2	3/8	4872-422	35.00
2	7/16	4872-424	35.00
2	1/2	4872-425	35.00
2	9/16	4872-426	38.00
2	5/8	4872-427	38.00
2	11/16	4872-428	38.00
3	1/2	4873-420	46.00
3	9/16	4873-421	46.00
3	5/8	4873-422	46.00
3	11/16	4873-423	46.00
3	3/4	4873-424	46.00
3	7/8	4873-425	46.00
4	3/4	4874-420	70.00
4	7/8	4874-421	70.00
4	1	4874-422	70.00
4	1-1/8	4874-423	70.00
4	1-1/4	4874-424	70.00
5	1-1/8	4875-100	125.00
5	1-1/4	4875-101	125.00
5	1-3/8	4875-102	125.00
5	1-1/2	4875-103	125.00
5	1-3/4	4875-104	125.00

Split Sleeve Tap Drivers - Pipe Sizes

OUTSIDE M.T.	TAP SIZE	ORDER NO.	PRICE EACH
2	1/16 SS	4872-450	\$38.00
2	1/8 LS	4872-451	38.00
3	1/4	4873-450	46.00
4	3/8	4874-450	70.00
4	1/2	4874-451	70.00
4	3/4	4874-452	70.00
5	3/4	4875-110	125.00
5	1	4875-111	125.00
5	1-1/4	4875-112	125.00
5	1-1/2	4875-113	125.00

Heavy Duty: P.O.A.

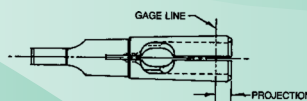
Retention Knobs



KNOB PT. NO.	V FLANGE TAPER	THREAD SIZE	PRICE EACH
4867-751	#40	5/8-11	\$56.00
4867-752	#45	3/4-10	49.00
4867-753	#50	1-8	49.00

Heavy Duty: P.O.A.

Collis Center Drill Drivers



NOMINAL CENTER DRILL SIZE	CTR. DRILL BODY DIAM.	#1 MORSE TAPER COLLIS NUMBER	PRICE EACH	#2 MORSE TAPER ORDER NUMBER	PRICE EACH	#3 MORSE TAPER ORDER NUMBER	PRICE EACH
1-11	1/8	4871-149	\$31.00	-	-	-	-
2-12	3/16	4871-502	40.00	4872-502	\$41.00	-	-
3-13	1/4	4871-503	40.00	4872-503	41.00	-	-
4-14	5/16	4871-504	40.00	4872-504	41.00	4873-503	\$46.00
5-15	7/16	-	-	4872-505	41.00	-	-
6-16	1/2	-	-	4872-506	41.00	-	-
7-17	5/8	-	-	-	-	4873-501	46.00
8-18	3/4	-	-	-	-	4873-502	46.00



TOOL SCOOT

Keep your tools organized!
Protect them from damage!

- Quality and mobility at an affordable price.
- Durable nylon inserts on both shelves help protect tool holders.
- Lower shelf angled for quick, easy tool access from either side.
- Solid, interlocking side panel construction for maximum strength and stability.
- Two end storage trays with universal mounting holes for tool lock.
- Heavy duty 5" x 1-1/4" casters load rated at 1000 lbs.
- All steel painted with our durable Ecolo-Clad in red & black.

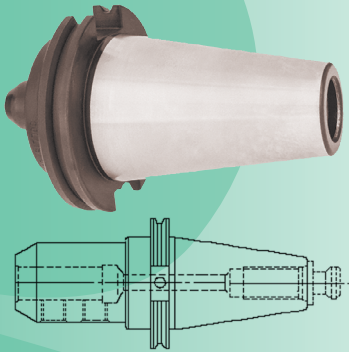
Tool Holders, Cutting Tools and Plastic Rack Not Included



MODEL NO.	TOOL STYLE	TOOL CAPACITY	WEIGHT	ORDER NO.	PRICE EACH
13940	BT, CAT "V" Flange, NMTB	48	75 lbs.	1919-285	\$495.00
13950	BT, CAT "V" Flange	36	75 lbs.	1919-295	495.00

Toolholder Systems

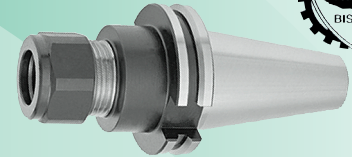
Caterpillar V-Flange End Mill Holder



2

BORE	GAGE LENGTH	ORDER NO.	PRICE EACH
NO. 40 TAPER			
3/8	2-1/2	4867-690	\$144.00
3/8	4-1/2	4867-780	178.00
1/2	2-5/8	4867-691	160.00
1/2	4-5/8	4867-781	178.00
5/8	3-3/4	4867-692	160.00
3/4	3-3/4	4867-693	169.00
3/4	5-3/4	4867-783	194.00
7/8	4	4867-694	169.00
1	4	4867-695	169.00
1	6	4867-785	194.00
1-1/4	4-1/4	4867-696	194.00
1-1/4	6-1/4	4867-786	207.00
1-1/2	4-5/8	4867-697	194.00
NO. 50 TAPER			
3/8	2-1/2	4867-840	205.00
3/8	4-1/2	4867-850	228.00
3/8	6-1/2	4867-860	228.00
1/2	2-5/8	4867-841	205.00
1/2	4-5/8	4867-851	228.00
1/2	6-5/8	4867-861	239.00
5/8	3-3/4	4867-842	205.00
5/8	5-3/4	4867-852	239.00
5/8	7-3/4	4867-862	286.00
3/4	3-3/4	4867-843	205.00
3/4	5-3/4	4867-853	239.00
3/4	7-3/4	4867-863	255.00
7/8	3-3/4	4867-844	205.00
7/8	5-3/4	4867-854	220.00
1	4	4867-845	220.00
1	6	4867-855	239.00
1	8	4867-865	255.00
1-1/4	4	4867-846	220.00
1-1/4	8	4867-866	255.00
1-1/2	4	4867-847	228.00
1-1/2	6	4867-857	303.00
1-1/2	8	4867-867	282.00
2	5-5/8	4867-848	335.00
2	7-5/8	4867-858	352.00

CAT 40 ER Collet Chucks Bison - Made In Poland



TAPER	RPM	ER COLLET	PROJ.	HEAD DIA.	CLAMPING RANGE	ORDER NO.	PRICE EA.
CAT 40	15,000	16	2.5	1.10	0.125 - 0.438	3176-312	\$187.00
CAT 40	15,000	16	4	1.10	0.125 - 0.438	3176-314	182.00
CAT 40	15,000	20	2.5	1.38	0.125 - 0.500	3176-322	187.00
CAT 40	15,000	20	4	1.38	0.125 - 0.500	3176-324	192.00
CAT 40	15,000	25	2.5	1.65	0.125 - 0.625	3176-327	195.00
CAT 40	15,000	25	4	1.65	0.125 - 0.625	3176-329	201.00
CAT 40	15,000	32	2.5	1.97	0.125 - 0.750	3176-332	205.00
CAT 40	15,000	32	4	1.97	0.125 - 0.750	3176-334	188.00
CAT 40	15,000	40	2.5	2.40	0.125 - 1.000	3176-342	230.00
CAT 40	15,000	40	4	2.40	0.125 - 1.000	3176-344	230.00

CAT 40 Keyless Drill Chucks Bison - Made In Poland



TAPER	JACOBS	RPM	ORDER NO.	PRICE EACH
CAT 40	1-13	1/32-1/2	3176-488	\$302.00
CAT 40	3-16	1/8-5/8	3176-490	324.00

CAT 40 Drill Chuck Adapters Bison - Made In Poland



TAPER	JACOBS	RPM	ORDER NO.	PRICE EACH
CAT 40	J2	8000	3176-462	\$93.00
CAT 40	J3	8000	3176-463	94.00
CAT 40	J4	8000	3176-464	95.00
CAT 40	J5	8000	3176-465	103.00
CAT 40	J6	8000	3176-466	94.00
CAT 40	J33	8000	3176-469	94.00

CAT 40 & CAT 50 End Mill Holders Coolant Through Capable Bison - Made In Poland



TAPER	RPM	HOLE	PROJ.	HEAD DIA.	ORDER NO.	PRICE EA.
CAT 40	25,000	1/8	2-1/2	0.750	3175-022	\$139.00
CAT 40	25,000	3/16	2-1/2	0.750	3175-032	134.00
CAT 40	25,000	1/4	2-1/2	0.827	3175-042	114.00
CAT 40	15,000	1/4	4	0.827	3175-644	124.00
CAT 40	25,000	3/8	2-1/2	1.000	3175-062	123.00
CAT 40	25,000	1/2	2-5/8	1.250	3175-082	111.00
CAT 40	15,000	1/2	5	1.250	3175-685	109.00
CAT 40	25,000	5/8	3-3/4	1.500	3175-103	129.00
CAT 40	25,000	3/4	3-3/4	1.750	3175-122	118.00
CAT 40	25,000	1	4	2.250	3175-164	160.00
CAT 40	25,000	1-1/4	4-1/4	2.500	3175-204	132.00
CAT 50	15,000	3/8	2-1/2	1.000	3175-962	145.00
CAT 50	15,000	1	4	2.250	3176-064	185.00
CAT 50	15,000	2	5-5/8	3.750	3176-185	219.00

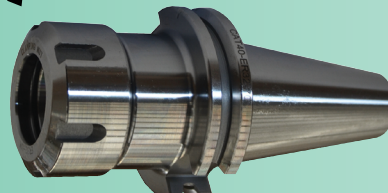
Pittsburg[®] ALLEGHANY CAT 40 V-Flange End Mill Holders



• Suitable for CNC RPM 12,000

2

Pittsburg[®] ALLEGHANY CAT40 ER Collet Chucks

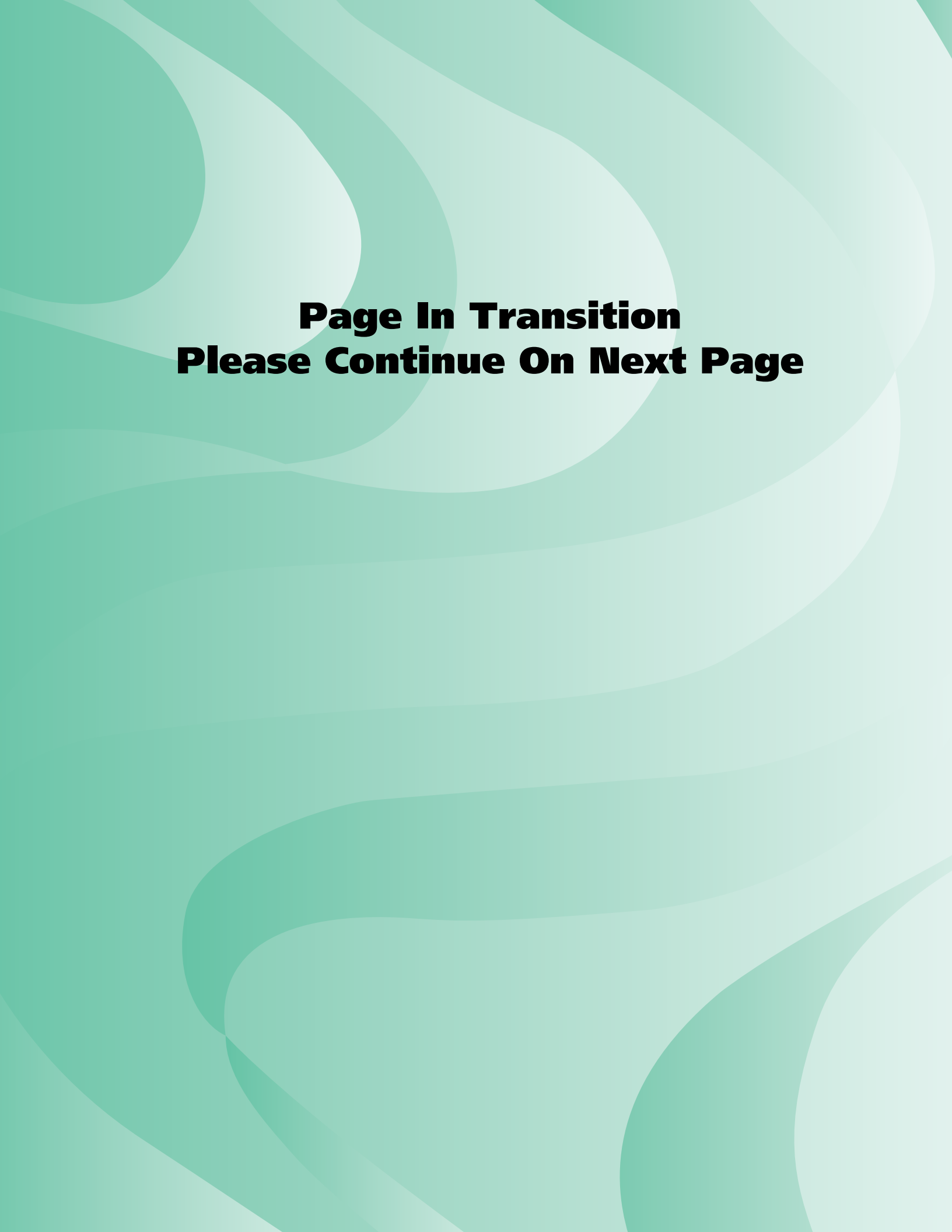


• Suitable for CNC RPM 12,000

2

TAPER	COLLET	PROJ. (IN.)	ORDER NO.	PRICE EACH
CAT40	ER16	2.48	3142-700	\$56.00
CAT40	ER16	3.94	3142-710	56.00
CAT40	ER32	2.76	3142-780	61.00
CAT40	ER32	3.94	3142-785	67.00

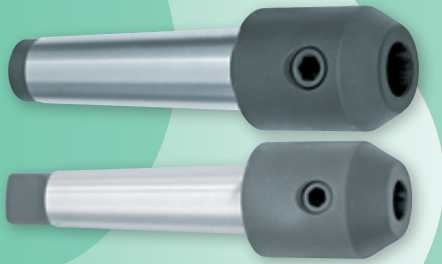
TAPER	HOLE DIA.	PROJ. (IN.)	HEAD DIA. (IN.)	ORDER NO.	PRICE EACH
CAT40	3/16	2-1/2	.75	3140-806	\$53.80
CAT40	1/4	2-1/2	.798	3140-808	53.80
CAT40	5/16	2-1/2	.887	3140-810	53.80
CAT40	3/8	2-1/2	1.26	3140-812	53.80
CAT40	1/2	2-5/8	1.75	3140-816	53.80
CAT40	5/8	3-3/4	1.75	3140-820	53.80
CAT40	3/4	3-3/4	1.75	3140-824	53.80
CAT40	1	4	2.48	3140-832	54.40
CAT40	1-1/4	4-1/8	2.75	3140-840	58.80



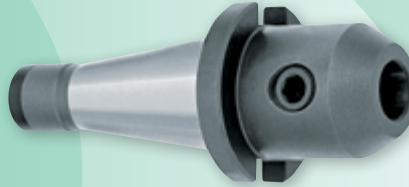
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End Mill Holders

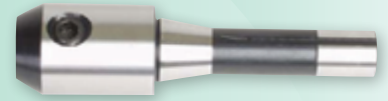
Morse Taper Shank Tang and Draw Bar Styles



30-40-50 National Standard Taper Draw Bar Styles



R8 Shank



TAPER (THREADS FOR DRAW BAR)	ARBOR HOLE	TANG ORDER NO.	PRICE EACH	DRAW BAR ORDER NO.	PRICE EACH
2MTS (3/8-16)	3/16	3140-021	\$ 19.70	3140-141	\$ 13.10
	3/8	3140-022	19.70	3140-142	13.10
	1/2	3140-023*	19.70	-	-
	5/8	3140-024*	21.40	3140-144*	14.20
3MTS (3/8-16)	3/16	3140-044	22.50	3140-164	15.00
	1/4	3140-045	22.50	-	-
	3/8	3140-046	22.50	-	-
	1/2	3140-047	22.50	-	-
	5/8	3140-048*	23.60	3140-168*	15.80
	3/4	3140-049*	23.60	-	-
4MTS (1/2-13)	3/8	3140-070	24.80	3140-190	16.50
	1/2	3140-071	24.80	3140-191	16.90
	5/8	3140-072	25.30	3140-192	16.90
	3/4	3140-073	25.30	3140-193	16.90
	7/8	3140-074*	27.00	3140-194*	18.00
	1	3140-075*	27.00	3140-195*	18.00
	1-1/4	-	-	3140-196*	22.50
5 MTS (5/8-11)	3/8	3140-096	39.40	3140-216	28.10
	1/2	3140-097	41.40	3140-217	28.10
	5/8	3140-098	42.60	3140-218	28.10
	3/4	3140-099	42.60	3140-219	28.10
	7/8	3140-100	44.40	3140-220	28.10
	1	3140-101	44.40	3140-221	28.10
	1-1/4	3140-102*	51.40	-	-
	1-1/2	3140-103*	60.50	-	-
	2	3140-104*	64.70	3140-224*	35.60

* FOR SINGLE-END END MILLS ONLY. DRAW BAR - LIMITED QUANTITIES

TAPER (THREADS FOR DRAW BAR)	ARBOR HOLE OR BORE	ORDER NO.	PRICE EACH
30 NST (1/2-13)	3/16	3140-541	\$38.30
	3/8	3140-542	38.30
	1/2	3140-543	38.30
	5/8	3140-544	38.30
	3/4	3140-545	38.30
	7/8	3140-546 *	47.80
	1	3140-547 *	47.80
40 NST (5/8-11)	3/16	3140-568	43.90
	3/8	3140-569	43.90
	1/2	3140-570	43.90
	5/8	3140-571	43.90
	3/4	3140-572	43.90
	7/8	3140-573	47.80
	1	3140-574 *	47.80
	1-1/4	3140-575 *	56.30
	1-1/2	3140-576 *	59.10
50 NST (1-8)	3/16	3140-596 †	64.70
	3/8	3140-597	64.70
	1/2	3140-598	64.70
	5/8	3140-599	64.70
	3/4	3140-600	64.70
	7/8	3140-601	70.30
	1	3140-602	90.00
	1-1/4	3140-603 *	104.10
	1-1/2	3140-604 *	105.80
	2	3140-605 *	112.50

† LIMITED QUANTITIES

* FOR SINGLE-END END MILLS ONLY

ARBOR HOLE OR BORE	ORDER NO.	PRICE EACH
3/16	3140-712	\$19.10
3/8	3140-724	19.10
1/2	3140-732	19.10
5/8	3140-740	24.20
3/4	3140-748*	24.20
7/8	3140-756*	24.20
1	3140-764*	24.20
1-1/4	3140-780*	32.10
1-1/2	3140-796*	38.30

* FOR SINGLE-END END MILLS ONLY

Lathe Mandrels



DIAM.	OVERALL LENGTH	ORDER NO.	PRICE EACH
1/8	2-1/2	3146-008	\$4.10
5/32	3	3146-010	4.40
13/64	3-3/4	3146-013	4.55
7/32	3-3/4	3146-014	4.55
15/64	3-3/4	3146-015	4.55
11/32	4-1/4	3146-022	5.00
23/64	4-1/4	3146-023	5.00
13/32	4-1/2	3146-026	5.25
15/32	5	3146-030	5.55
31/64	5	3146-031	5.55
1/2	5	3146-032	5.55
33/64	5-1/4	3146-033	6.40
35/64	5-1/4	3146-035	6.40
9/16	5-1/4	3146-036	6.40
37/64	5-1/2	3146-037	6.40
19/32	5-1/2	3146-038	6.40
41/64	5-3/4	3146-041	7.00
21/32	5-3/4	3146-042	7.00
11/16	5-3/4	3146-044	7.00

DIAM.	OVERALL LENGTH	ORDER NO.	PRICE EACH
45/64	6	3146-045	\$7.00
23/32	6	3146-046	7.00
47/64	6	3146-047	7.00
49/64	6-1/4	3146-049	8.55
25/32	6-1/4	3146-050	8.55
13/16	6-1/4	3146-052	8.55
53/64	6-1/2	3146-053	8.55
27/32	6-1/2	3146-054	8.55
29/32	6-3/4	3146-058	10.05
15/16	6-3/4	3146-060	10.05
31/32	7	3146-062	10.05
1-1/32	7-1/4	3146-066	12.75
1-1/16	7-1/4	3146-068	12.75
1-3/16	7-3/4	3146-076	15.00
1-7/32	8	3146-078	15.00
1-1/4	8	3146-080	15.00
1-15/16	8-1/4	3146-084	18.15
1-3/8	8-1/2	3146-088	18.15
1-7/16	8-3/4	3146-092	21.05
1-15/32	9	3146-094	21.05
1-9/16	9-1/4	3146-100	23.90

DIAM.	OVERALL LENGTH	ORDER NO.	PRICE EACH
1-5/8	9-1/2	3146-104	\$23.90
1-11/16	9-3/4	3146-108	27.05
1-3/4	10	3146-112	27.05
1-13/16	10-1/4	3146-116	30.60
1-27/32	10-1/2	3146-118	30.60
1-7/8	10-1/2	3146-120	30.60
1-15/16	10-1/2	3146-124	33.75
2	11	3146-128	33.75
2-3/32	11-1/2	3146-134	37.60
2-1/8	11-1/2	3146-136	37.60
2-5/32	12	3146-138	41.30
2-1/4	12	3146-144	41.30
2-3/8	12	3146-152	45.10
2-7/16	12	3146-156	49.85
2-15/32	12-1/2	3146-158	49.85
2-1/2	12-1/2	3146-160	49.85
2-9/16	12-1/2	3146-164	64.30
2-5/8	12-1/2	3146-168	64.30
2-3/4	13	3146-176	69.80
2-7/8	13	3146-184	77.05

Stub Arbors



ARBOR DIAM.	SHANK DIAM.	LG'TH OF SHOULDER TO NUT	RH ORDER NO.	PRICE EACH
1/2	1	3/4	3141-101†	\$ 40.50
5/8	1	3/4	3141-103†	53.20
3/4	1	1	3141-105†	59.30
7/8	1	3/4	3141-107†	63.00

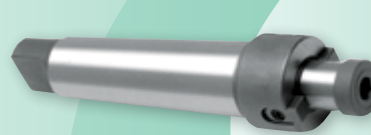
† Limited Quantities

Type "C" Shell End Mill Arbor

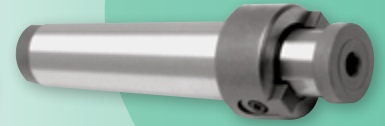


TAPER (THREADS FOR DRAW BAR)	SHELL END MILL ARBOR HOLE	DIAM. RANGE FOR SHELL END MILL	ORDER NO.	PRICE EACH
30 (1/2-13)	1/2	1-1/4" to 1-1/2"	3141-381	\$ 63.00
	3/4	1-3/4" to 2"	3141-382	63.00
	1	2-1/4" to 2-3/4"	3141-383	63.00
	1-1/4	3" to 3-1/2"	3141-384	65.30
40 (5/8-11)	1/2	1-1/4" to 1-1/2"	3141-405	72.00
	3/4	1-3/4" to 2"	3141-406	72.00
	1	2-1/4" to 2-3/4"	3141-407	72.00
	1-1/4	3" to 3-1/2"	3141-408	76.50
	1-1/2	4" to 5"	3141-409	76.50
50 (1"-8)	2	5-1/2" to 6"	3141-410	84.20
	1/2	1-1/4" to 1-1/2"	3141-430	110.20
	3/4	1-3/4" to 2"	3141-431	110.20
	1	2-1/4" to 2-3/4"	3141-432	110.20
	1-1/4	3" to 3-1/2"	3141-433	122.40
	1-1/2	4" to 5"	3141-434	122.40
	2	5-1/2" to 6"	3141-435	128.20

Morse Taper Shell End Mill Arbors



Tang Style

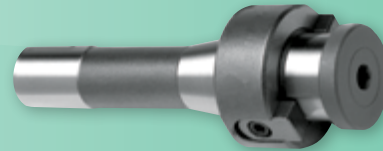


Draw Bar Style

TAPER (THREADS FOR DRAW BAR)	SHELL END MILL ARBOR HOLE	DIAM. RANGE FOR SHELL END MILL	TANG STYLE ORDER NO.	DRAW BAR STYLE ORDER NO.	PRICE EACH
3 MTS (3/8-16)	1/2	1-1/4" to 1-1/2"	3141-010	3141-060†	\$ 30.40
	3/4	1-3/4" to 2"	3141-011	3141-061†	30.40
	1	2-1/4" to 2-3/4"	3141-012	3141-062†	37.50
	1-1/4	3" to 3-1/2"	3141-013	3141-063†	37.50
4 MTS (1/2-13)	1/2	1-1/4" to 1-1/2"	3141-021	3141-071	33.80
	3/4	1-3/4" to 2"	-	3141-072	41.20
	1	2-1/4" to 2-3/4"	-	3141-073	45.00
	1-1/4	3" to 3-1/2"	3141-024	3141-074	45.00
	1-1/2	4" to 5"	3141-025	3141-075	45.00
5 MTS (5/8-11)	2	5-1/2" to 6"	3141-026	-	63.60
	1-1/4	3" to 3-1/2"	-	3141-096	65.60
6 MTS	1-1/2	4" to 5"	-	3141-097	65.60
	1	2-1/4" to 2-3/4"	3141-052	-	66.60
	1-1/4	3" to 3-1/2"	3141-053	-	82.00
	1-1/2	4" to 5"	3141-054	-	82.00

† Limited Quantities

R8 Shank Shell End Mill Arbor



SHELL END MILL ARBOR HOLE	DIAM. RANGE FOR SHELL END MILL	ORDER NO.	PRICE EACH
1/2	1-1/4" to 1-1/2"	3141-532	\$36.00
3/4	1-3/4" to 2"	3141-548	36.00
1	2-1/4" to 2-3/4"	3141-564	38.20
1-1/4	3" to 3-1/2"	3141-580	50.40
1-1/2	4" to 5"	3141-596	56.20

Screws for Arbors



THREAD SIZE	DIAM. FOR BORE IN SHELL END MILL	ORDER NO.	PRICE EACH
1/4-28	1/2	3141-716	\$ 5.70
3/8-24	3/4	3141-724	6.60
1/2-20	1	3141-732	9.40
5/8-18	1-1/4	3141-740	12.50
3/4-16	1-1/2	3141-748	16.40
1-14	2	3141-764	22.80

Milling Machine Arbors



Style A



TAPER (THREADS FOR DRAW BAR)	ARBOR NO.	ARBOR DIAM.	LG'TH OF SHOULDER TO NUT	DIAM. OF RUNNING BUSHINGS	BUSHINGS FURNISHED	ORDER NO.	PRICE EACH
30 NST (1/2-13)	30-7/8-A10-2	7/8	10	1-5/8	1	3144-005	\$124.40
	31-A10-2	1	10	1-5/8	1	3144-010	181.10
	31-1/4-A10-2	1-1/4	10	1-7/8	1	3144-015	199.20
	31-1/4-A10-3	1-1/4	10	1-7/8	1	3144-020	206.30
40 NST (5/8-11)	40-7/8-A10	7/8	10	NONE	NONE	3144-025	181.10
	40-7/8-A16-3	7/8	16	1-7/8	1	3144-030	207.00
	41-A8	1	8	NONE	NONE	3144-035	169.00
	41-A10	1	10	NONE	NONE	3144-040	181.10
	41-A12	1	12	NONE	NONE	3144-045	202.70
	41-A16-3	1	16	1-7/8	1	3144-050	215.70
	41-1/4-A8	1-1/4	8	NONE	NONE	3144-055	220.00
	41-1/4-A10	1-1/4	10	NONE	NONE	3144-060	224.40
50 NST (1-8)	41-1/4-A12	1-1/4	12	NONE	NONE	3144-065	228.70
	41-1/4-A16-3	1-1/4	16	1-7/8	1	3144-070	241.50
	50-7/8-A10	7/8	10	NONE	NONE	3144-075	232.90
	50-7/8-A18-4	7/8	18	2-1/8	1	3144-080	332.80
	51-A8	1	8	NONE	NONE	3144-085	271.60
	51-A12	1	12	NONE	NONE	3144-090	301.90
	51-18-4	1	18	2-1/8	1	3144-095	336.40
	51-1/4-A8	1-1/4	8	NONE	NONE	3144-100	284.70
	51-1/4-A12	1-1/4	12	NONE	NONE	3144-105	314.90
	51-1/4-A18-4	1-1/4	18	2-1/8	1	3144-110	345.10

Style B



TAPER (THREADS FOR DRAW BAR)	ARBOR NO.	ARBOR DIAM.	LG'TH OF SHOULDER TO NUT	DIAM. OF RUNNING BUSHINGS	BUSHINGS FURNISHED	ORDER NO.	PRICE EACH
30 NST (1/2-13)	31 B2	1	2	NONE	NONE	3144-205	\$ 172.50
40 NST (5/8-11)	40-7/8-B14-3	7/8	14	1-7/8	1	3144-210	172.50
	40-7/8-B16-3	7/8	16	1-7/8	1	3144-215	184.70
	41 B-3	1	3	NONE	NONE	3144-220†	92.20
	41 B14-3	1	14	1-7/8	1	3144-225	194.10
	41 B20-3	1	20	1-7/8	1	3144-230	213.20
	41-1/4-B-3	1-1/4	3	NONE	NONE	3144-235†	96.70
	41-1/4-B14-3	1-1/4	14	1-7/8	1	3144-240	241.50
	41-1/4-B20-3	1-1/4	20	1-7/8	1	3144-245	258.70
50 NST (1-8)	41-1/2-B20-4	1-1/2	20	2-1/8	1	3144-250	280.30
	51B-3-1/2	1	3-1/2	NONE	NONE	3144-255†	114.70
	51B15-4	1	15	2-1/8	1	3144-260	301.90
	51B18-4	1	18	2-1/8	2	3144-265	398.50
	51B24-4	1	24	2-1/8	2	3144-270	434.70
	51-1/4-B15-4	1-1/4	15	2-1/8	1	3144-280	301.90
	51-1/4-B18-4	1-1/4	18	2-1/8	2	3144-285	362.20
	51-1/4-B24-4	1-1/4	24	2-1/8	2	3144-290	405.50
	51-1/4-B30-4	1-1/4	30	2-1/8	2	3144-295	474.40
	51-1/2-B3-1/2	1-1/2	3-1/2	NONE	NONE	3144-300†	157.50
	51-1/2-B18-4	1-1/2	18	2-1/8	2	3144-305	371.00
	51-1/2-B24-5	1-1/2	24	2-3/4	2	3144-310	439.80
	51-1/2-B30-5	1-1/2	30	2-3/4	2	3144-315	517.50
	52-B24-5	2	24	2-3/4	2	3144-325	483.00
	52-B30-5	2	30	2-3/4	2	3144-330	690.00
	52-B36-5	2	36	2-3/4	2	3144-335	776.30
	52-1/2-B36-6	2-1/2	36	3-3/8	2	3144-340	1200.60

† Limited Quantities

Slitting Saw & Milling Machine Arbor



ARBOR SHANK	ARBOR DIAM.	LENGTH OF SHOULDER TO NUT	ORDER NO.	PRICE EACH
R8	1	2	3142-010	\$53.55
R8	1-1/4	2	3142-012	56.80

Milling Machine Adaptors

R8 to Morse Taper



FROM R8 (MALE)	TO MORSE (FEMALE)	ORDER NO.	PRICE EACH
R8	2	3142-150	\$11.20
R8	3	3142-152	12.60

NST to R8



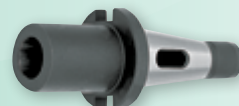
FROM NST (MALE)	TO R8 (FEMALE)	ORDER NO.	PRICE EACH
40	R8	3142-130	\$74.20
50	R8	3142-132	87.80

NST Adaptors



OUTSIDE TAPER (MALE)	INSIDE TAPER (FEMALE)	ORDER NO.	PRICE EACH
40	30	3142-100	\$58.50
50	30	3142-102	72.00
50	40	3142-104	72.00

Draw Bar Type



FROM NST (MALE) TAPER	TO MORSE (FEMALE) TAPER	DRAW BAR THREADS	ORDER NO.	PRICE EACH
40	2	5/8-11	3142-060	\$33.80
40	3	5/8-11	3142-062	33.80
40	4	5/8-11	3142-064	33.80
40	5	5/8-11	3142-066	38.20
50	2	1-8	3142-068	65.30
50	3	1-8	3142-070	65.30
50	4	1-8	3142-072	65.30
50	5	1-8	3142-074	74.20

NST to MT Open End Type



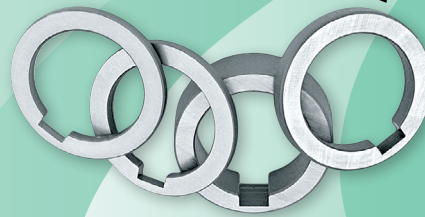
FROM NST (MALE) TAPER	TO MORSE (FEMALE) TAPER	ORDER NO.	PRICE EACH
40	2	3142-030†	\$28.10
40	3	3142-032†	28.10
40	4	3142-034†	28.10
50	3	3142-036†	54.40
50	4	3142-038†	54.40
50	5	3142-040†	60.00

† Limited Quantities

Arbors, Arbor Bushings & Nuts

Arbor Solid Spacers - With Keyways

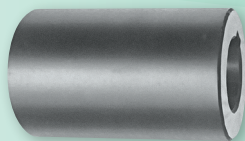
Spacers are hardened and have parallel and perpendicular surfaces precisely ground – accuracy .0002" – to ensure precise operation of cutters on milling machine arbors. Import.



WIDTH OF SPACER	7/8" HOLE-1-3/8" O.D.		1" HOLE-1-1/2" O.D.		1-1/4" HOLE-1-3/4" O.D.		1-1/2" HOLE-2-1/8" O.D.		2" HOLE-2-3/4" O.D.	
	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
1/16	3144-370	\$ 3.40	3144-387	\$ 4.00	3144-404	\$ 4.20	3144-421	\$ 6.10	3144-438	\$ 6.60
3/32	3144-371	3.40	3144-388	4.00	3144-405	4.20	3144-422	6.10	3144-439	6.60
1/8	3144-372	3.40	3144-389	3.70	3144-406	4.20	3144-423	6.10	3144-440	6.60
3/16	3144-373	3.40	3144-390	3.70	3144-407	4.20	3144-424	6.10	3144-441	6.60
1/4	3144-374	3.40	3144-391	4.00	3144-408	4.20	3144-425	6.10	3144-442	6.60
5/16	3144-375	3.40	3144-392	4.50	3144-409	4.20	3144-426	6.80	3144-443	6.60
3/8	3144-376	3.80	3144-393	4.70	3144-410	4.70	3144-427	7.10	3144-444	6.60
7/16	3144-377	5.30	3144-394	5.80	3144-411	6.60	3144-428	7.90	3144-445	8.70
1/2	3144-378	5.30	3144-395	5.80	3144-412	6.60	3144-429	8.30	3144-446	8.70
5/8	3144-379	5.30	3144-396	5.80	3144-413	6.60	3144-430	9.20	3144-447	8.70
3/4	3144-380	5.30	3144-397	6.80	3144-414	7.90	3144-431	10.00	3144-448	8.70
7/8	3144-381	5.80	3144-398	7.90	3144-415	8.00	3144-432	11.10	3144-449	12.10
1	3144-382	5.80	3144-399	7.90	3144-416	8.90	3144-433	11.50	3144-450	12.10
1-1/4	3144-383	6.60	3144-400	8.30	3144-417	8.90	3144-434	15.80	3144-451	16.60
1-1/2	3144-384	6.70	3144-401	10.50	3144-418	10.50	3144-435	15.80	3144-452	16.60
2	3144-385	10.10	3144-402	12.60	3144-419	12.60	3144-436	20.00	3144-453	21.10
3	3144-386	15.30	3144-403	16.40	3144-420	17.80	3144-437	30.60	3144-454	32.70
Width of Key	1/8		1/4		5/16		3/8		1/2	

Arbor Running Bushing With Keyways

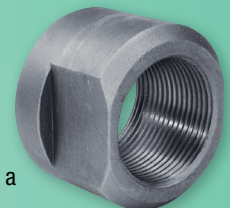
Bushings are hardened and have parallel and perpendicular surfaces precisely ground – accuracy .0002" – to ensure maximum holding power, rigid setup and accurate machining operations. Bushings have standard keyways which allow fixed mounting on arbor and preventing rotation.



BUSHING NO.	O.D.	HOLE DIA.	LGTH	ORDER NO.	PRICE EACH
2 - 7/8	1-5/8	7/8	2-5/8	3144-500	\$23.60
2 - 1	1-5/8	1	2-5/8	3144-501	23.60
2 - 1-1/4	1-7/8	1-1/4	2-5/8	3144-502	22.90
3 - 7/8	1-7/8	7/8	3-1/8	3144-503	27.30
3 - 1	1-7/8	1	3-1/8	3144-504	27.30
3 - 1-1/4	1-7/8	1-1/4	3-1/8	3144-505	27.30
4 - 7/8	2-1/8	7/8	3-3/4	3144-506	38.80
4 - 1	2-1/8	1	3-3/4	3144-507	38.80
4 - 1-1/4	2-1/8	1-1/4	3-3/4	3144-508	38.80
4 - 1-1/2	2-1/8	1-1/2	3-3/4	3144-509	39.40
5 - 7/8	2-3/4	7/8	4-1/4	3144-510	48.30
5 - 1	2-3/4	1	4-1/4	3144-511	48.30
5 - 1-1/4	2-3/4	1-1/4	4-1/4	3144-512	48.30
5 - 1-1/2	2-3/4	1-1/2	4-1/4	3144-513	48.30
5 - 2	2-3/4	2	4-1/4	3144-514	51.40

Nuts For Milling Machine Arbors

Arbor nuts are hardened and have a ground thread and shoulder



SIZE	FOR ARBOR DIA.	RH ORDER NO.	PRICE EACH
7/8 - 14	7/8	3144-530	\$18.60
1 - 14	1	3144-532	23.20
1-1/4 - 12	1-1/4	3144-534	25.90
1-1/2 - 12	1-1/2	3144-536	45.50
2 - 12	2	3144-538	60.30
2-1/2 - 12	2-1/2	3144-540	97.90

Arbor Spacers and Shims

• Shims DO NOT have a keyway, spacers DO have a keyway

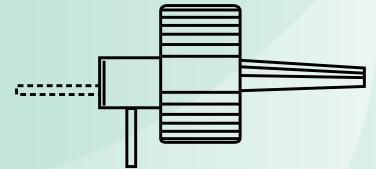
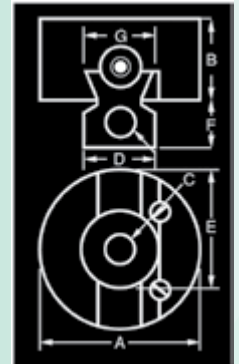
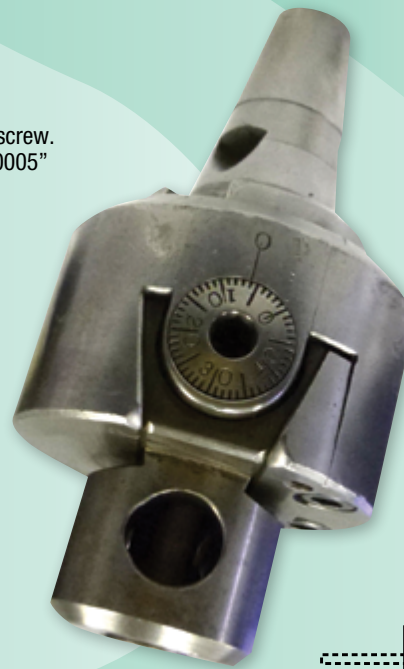
- Assortments contain one each of the 19 different thicknesses
- SIZES: .001, .0015, .002, .003, .004, .005, .006, .007, .008, .010, .012, .015, .020, .025, .031, .047, .062, .093, .125
- Used for fast, accurate spacing of milling cutters, gang cutters, saws, slitting blades, and grinding tools
- Special sizes, materials, and bulk quantities available on request
- Made of high quality Steel Shim • Finish can be #2 bright or matte • Keyways conform to American standards
- Packaged in airtight poly bags • 10 pieces per bag (except assortments)

SPACERS (WITH KEYWAY) ASSORTMENT	(3/8 ID x 5/8 OD)		(1/2 ID x 3/4 OD)		(5/8 ID x 1 OD)		(3/4 ID x 1-1/8 OD)		(1 ID x 1-1/2 OD)	
	ORDER NUMBER	PRICE EACH	ORDER NUMBER	PRICE EACH	ORDER NUMBER	PRICE EACH	ORDER NUMBER	PRICE EACH	ORDER NUMBER	PRICE EACH
19 pcs.	3234-120	\$ 11.81	3234-140	\$ 11.81	3234-160	\$ 14.48	3234-180	\$ 16.87	3234-220	\$ 18.52
SHIMS (WITHOUT KEYWAY) ASSORTMENT	(3/8 ID x 5/8 OD)		(1/2 ID x 3/4 OD)		(5/8 ID x 1 OD)		(3/4 ID x 1-1/8 OD)		(1 ID x 1-1/2 OD)	
	ORDER NUMBER	PRICE EACH	ORDER NUMBER	PRICE EACH	ORDER NUMBER	PRICE EACH	ORDER NUMBER	PRICE EACH	ORDER NUMBER	PRICE EACH
19 pcs.	3235-120	\$ 11.81	3235-140	\$ 11.81	3235-160	\$ 14.48	3235-180	\$ 16.87	3235-220	\$ 18.52

40 Series

Flynn's 40 Series designs offer a wide range of sizes and provisions for holding tools, perpendicular or parallel. All boring heads are standard with 20 TPI micrometer lead screw, .001" per graduation of screw dial. A 40 TPI is available at an extra cost permitting .0005" per graduation of the screw dial.

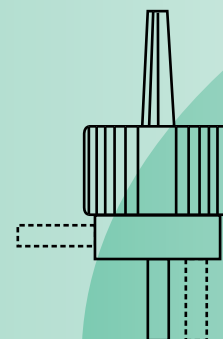
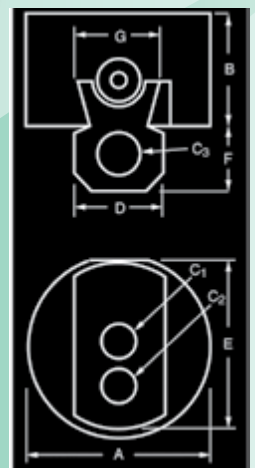
Dimensions and Specifications	No. 43	No. 43B	No. 45	No. 47	No. 48
A-Body Diameter	2-3/4"	2-3/4"	4"	4-1/2"	5"
B-Body Length	2"	2"	2-1/8"	2-5/8"	2-5/8"
C-Bar-Tool Capacity	1/2"	5/8"	3/4"	1"	1-1/4"
D-Tool Block	1-1/2"	1-1/2"	2"	2-1/2"	2-3/4"
E-Extension Length	1-7/8"	1-7/8"	2-3/4"	3"	3-3/8"
F-Extension Width	1-1/8"	1-1/8"	1-1/2"	1-3/4"	2"
G-Extends Past Body	1-1/4"	1-1/4"	1-7/8"	2-1/4"	2-1/2"
Bar Offset	5/8"	5/8"	1"	1"	1-1/4"
Bar or Tool Grip	1-1/2"	1-1/2"	2"	2-1/2"	2-3/4"
Dovetail Depth	7/8"	7/8"	1"	1-1/4"	1-1/4"
Net Weight	3 lbs.	3 lbs.	8 lbs.	12 lbs	15 lbs
Shank Series	175	175	175	250	250
Order No.	3157-015	3157-020	3157-025	3157-030	3157-035
Price Each Without Shank	\$475.00	\$475.00	\$500.00	\$700.00	\$900.00



60 Series

The 60 Series features a long and stockier tool block for better securing the tool, particularly horizontal position (Number 63,65 and 67). The horizontal hole is broached for holding either round or square tools. The two vertical mount holes are made possible by the logger tool block, one is centered in the block and the second is offset, greatly increasing the amount of overall offset that can be obtained. A vernier on the body facilitates adjustment of the micrometer offset screw, making possible extremely close visual offset adjustment. 20TPI micrometer lead screw is standard. 40TPI micrometer lead screw is available at extra cost.

Dimensions and Specifications	No. 63	No. 65	No. 67	No. 67B	No. 68
A-Body Diameter	2-3/4"	4"	5"	5"	8"
B-Body Length	2"	2-1/2"	3-1/8"	3-1/8"	3-1/8"
C1-Bar-Tool Capacity	1/2"	3/4"	1"	1-1/4"	2"
C1-Bar-Tool Capacity	5/8"	3/4"	1"	1-1/4"	2"
C3-Bar-Tool Capacity	1/2sq"	3/4sq"	1sq"	1-1/4"	2"
D-Tool Block	1-1/2"	2"	2-1/2"	2-1/2"	3"
E-Tool Block	2-5/8"	3-3/4"	4-13/16"	4-13/16"	7-1/2"
F-Tool Block	1-1/8"	1-1/2"	1-3/4"	2-1/8"	2-3/4"
G-Tool Block	1-1/4"	1-7/8"	2-1/4"	2-1/2"	3"
Bar Offset	5/8"	7/8"	1-5/16"	1-3/8"	1-3/4"
	from Center	Eachway	Eachway	Eachway	from Center
Bar Offset	1/2 back from Center				2-5/8 Back from Center
Bar Grip C-1,C-2	1-1/2"	2"	2-1/2"	2-1/2"	3-5/16"
Bar Grip C-3	2-5/8"	3-3/4"	4-13/16"	4-13/16"	-
Dovetail Depth	7/8"	1"	1-1/4"	1-1/4"	1-1/4"
Net Weight	3-3/4 lbs.	9-1/2 lbs.	19 lbs.	20 lbs.	52 lbs.
Shank Series	175	250	250	250	250
Order No.	3157-045	3157-050	3157-055	3157-060	3157-065
Price Each Without Shank	\$525.00	\$750.00	\$1200.00	\$1250.00	\$3350.00

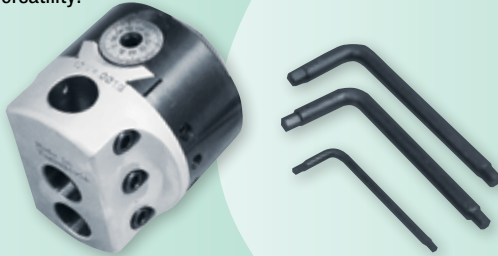


Boring Heads



Boring Heads

- Wide bearing surface assures maximum rigidity even when the bar is in an offset position.
- Features direct reading dial.
- Threaded back will accept a variety of shanks.
- Two vertical and one horizontal holes.
- Provides great versatility.



ACTUAL SIZE	OVERALL LGTH.	BORING BAR HOLE SIZE	CENTER DIST. BETWEEN HOLES	CROSS HOLE DIA.	OFFSET	THREAD BACK	ORDER NO.	PRICE EACH
2"	2-13/32"	1/2"	5/8"	1/2"	5/8"	7/8-20	3157-405	\$101.35
3"	3-5/32"	3/4"	15/16"	3/4"	1"	1-1/2 -18	3157-410	141.25
4"	3-3/4"	1"	1-1/4"	1"	1-5/8"	-	3157-415	217.00

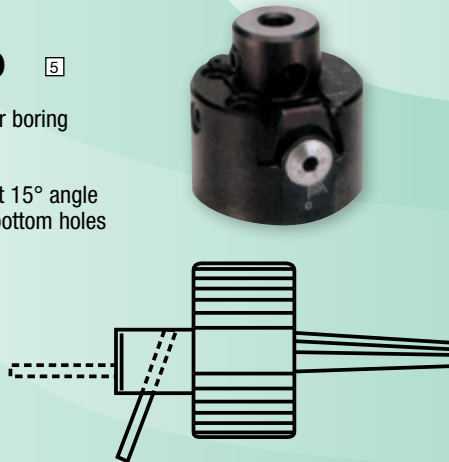
Boring Head Shanks

FOR 2" HEAD	ORDER NO.	PRICE EACH	FOR 3" & 4" HEAD	ORDER NO.	PRICE EACH
2MTS Draw Bar	3157-490	\$23.50	3MTS Tang	3157-430	\$29.50
2MT Tang	3157-495	23.50	4MTS Tang	3157-435	29.50
3MT Tang	3157-500	23.50	5MTS Tang	3157-440	29.50
4MT Tang	3157-505	23.50	1" Straight	3157-445	24.95
1/2" Straight	3157-510	11.95	1-1/4" Straight	3157-450	24.95
1" Straight	3157-515	11.95	1-1/2" Straight	3157-455	24.95
R8 Bridgeport	3157-520	25.00	R8 Bridgeport	3157-460	29.50

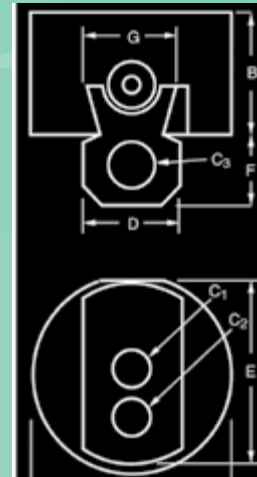
Flynn Number 25-ED

With two-way tool holder for boring small and large holes.

Square cross hole (1/2) is at 15° angle to slide to facilitate boring bottom holes and for fly cutting.



Dimensions and Specifications	No.25-ED
A-Body Diameter	2-3/4"
B-Body Length	2"
C-Bar-Tool Capacity	1/2"
D-Tool Block	1-1/2"
E-Extension Length	1-7/8"
F-Extension Width	1-1/8"
G-Extends Past Body	1-1/4"
Bar Offset	5/8"
Bar or Tool Grip	1-1/2"
Dovetail Depth	7/8"
Net Weight	3 lbs.
Shank Series	175
Order No.	3157-010
Price Each Without Shank	\$475.00



Arbors for Flynn Boring Heads

Shank Series 175 1-7/16-12				Shank Series 250 2-12				Shank Series 175 1-7/16-12				Shank Series 250 2-12			
Order No.	Price Each	Order No.	Price Each	Order No.	Price Each	Order No.	Price Each	Order No.	Price Each	Order No.	Price Each	Order No.	Price Each	Order No.	Price Each
Morse Taper				Straight Shank				Standard Taper				Standard Taper			
2MT	3157-170	\$250.00	-	-	3/4 x 4	3157-245	\$250.00	-	-	40 5/8-11	3157-220	\$450.00	3157-315	\$450.00	
3MT	3157-175	250.00	-	-	1 x 4	3157-250	250.00	-	-	50 1-8	3157-225	500.00	3157-320	500.00	
4MT	3157-180	250.00	3157-275	\$250.00	1-1/4 x 4	3157-255	250.00	-	-	Moore	3157-230	100.00	-	-	
5MT	3157-185	250.00	3157-280	250.00	1-1/2 x 4	3157-260	250.00	-	-						
6MT	-	-	3157-285	600.00	2 x 6	3157-265	250.00	-	-						
7MT	-	-	3157-290	700.00											
Bridgeport Taper															
R-8	3157-235	160.00	-	-											

Flynn Boring Head Sets

Set includes R8 Shank, 5 Tools & Case

BORING HEAD NUMBER	HEAD DIA.	BORING BAR HOLE SIZE	SHANK SIZE	ORDER NO.	PRICE EACH
25ED-Set	2-3/4	1/2	R-8	3157-080	\$475.00
43-Set	2-3/4	1/2	R-8	3157-085	475.00
63-Set	2-3/4	1/2-5/8	R-8	3157-090	575.00
43B-Set	2-3/4	5/8	R-8	3157-095	475.00
63B-Set	2-3/4	3/4	R-8	3157-100	575.00



Fly Cutters & Toolholders

Fly Cutter Sets



3

SHANK SIZE	HEAD DIA.	TOOL BIT SIZE	ORDER NO.	PRICE EACH
1/2	3/4	3/16	3143-301	\$20.70
	1-1/8	1/4		
	1-1/2	5/16		
3/4	1-1/2	5/16	3143-302	35.20
	2	5/16		
	2-1/2	5/16		

R8 Shank Fly Tool Cutter



- Counterbalanced to get smoother finishes
- Made of Hardened Steel
- Quality Import

3

TOOL BIT SIZE	HEAD DIA.	ORDER NO.	PRICE EACH
3/8	2-1/2"	3143-300	\$32.90

5 Piece Fly Cutter Set



3

- (4) tools with 3/16", 1/4", 5/16" & 3/8" tool bit capacity have 1/2" shanks
- (1) tool with 1/2" tool bit capacity has 5/8" shank
- Attractive wooden stand included.

Order No. 3143-303 Price Each...\$49.25

Carbide Tool Holders For Carbide Tipped Square Tool Bits



3

TOOL BIT SIZE	ORDER NUMBER			PRICE EACH
	STRAIGHT	RIGHT HAND	LEFT HAND	
1/4	3143-015	3143-001	3143-008	\$12.80
5/16	3143-016	3143-002	3143-009	15.90
3/8	3143-017	3143-003	3143-010	18.55
7/16	3143-018	3143-004	3143-011	21.60
1/2	3143-019	3143-005	3143-012	27.00
5/8	3143-020	3143-006	3143-013	47.85
3/4	3143-021	3143-007	3143-014	70.25

Turning Tool Holders

2

TOOL BIT SIZE	ORDER NUMBER			PRICE EACH
	STRAIGHT SHANK	RIGHT HAND	LEFT HAND	
3/16	3143-102	3143-120	3143-111	\$9.70
1/4	3143-103	3143-121	3143-112	10.20
5/16	3143-104	3143-122	3143-113	12.60
3/8	3143-105	3143-123	3143-114	15.85
7/16	3143-106	3143-124	3143-115	18.65
1/2	3143-107	3143-125	3143-116	25.25
5/8	3143-108	3143-126	3143-117	33.75
3/4	3143-109	3143-127	3143-118	61.65



Right Hand



Straight Shank



Left Hand

Cut Off Tool Holders

2

TOOL BIT SIZE	ORDER NUMBER			PRICE EACH
	STRAIGHT SHANK	RIGHT HAND	LEFT HAND	
3/32 x 1/2	3143-217	3143-201	3143-209	\$9.50
3/32 x 5/8	3143-218	3143-202	3143-210	10.70
1/8 x 3/4	3143-219	3143-203	3143-211	12.85
1/8 x 7/8	3143-220	3143-204	3143-212	17.95
3/16 x 1	3143-221	3143-205	3143-213	25.65
3/16 x 1-1/8	3143-222	3143-206	3143-214	34.90
1/4 x 1-1/4	3143-223	3143-207	3143-215	41.85
1/4 x 1-3/8	3143-224	-	-	52.45



Straight Shank



Left Hand

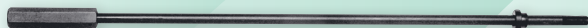


Right Hand

Machine Accessories

Drawbars for Mills

- Made of cold rolled steel.
- Black oxide plated.
- Made in U.S.A.

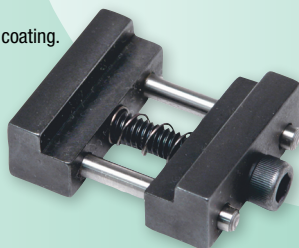


FITS MILLING MACHINE	ORDER NUMBER	PRICE EACH
1J Step Pulley	3143-420	\$32.60
2J Step Pulley	3143-421	36.40
Lagun Vari Speed	3143-424	58.60
Wells Index Vari Speed	3143-425	49.90

Easy Vise Stop

- Made from hardened steel with Black Oxide coating.
- Stop is 1" wide by 1-7/16" long.
- Made in U.S.A.

ORDER NO.	PRICE EACH
3143-407	\$10.50



Vise Speed Handle

For 6" Kurt Style Milling Machine Vises

- Made in U.S.A.



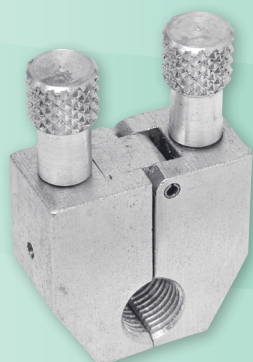
DESCRIPTION	ORDER NUMBER	PRICE EACH
Fits 6" Vise (3/4" Hex)	3143-412	\$27.80

Quill Stop

For All Milling Machines

- Quickly Sets Quill Depth.
- 1/2 – 20 threads for Mills.
- Made in U.S.A.

ORDER NO.	PRICE EACH
3143-417	\$12.30



Universal Collet Stop –

5 piece Set converts standard 1" Lathe Collets into solid or ejector stop collets.

- Comes complete with all attachments and springs.
- Made from steel with black oxide plating.
- Made in U.S.A.

ORDER NO.	PRICE EACH
3143-400	\$POA



Spider Handle for Mills

- Sturdy construction features a solid aluminum center with protective plating, and 3 heavy duty solid steel spokes and knobs.
- Black Oxide Plated.
- Made in U.S.A.

ORDER NO.	PRICE EACH
3143-415	\$27.80



Quill Feed Handle –

For all Bridgeport type Milling Machines

- All steel construction with heavy duty spring action.
- All parts Black Oxide Plated.
- Made in U.S.A.

ORDER NO.	PRICE EACH
3143-416	\$25.40



Adjustable Mill Stop

- 1/2" hole for T Slot mounting
- Rod 3/8" Diameter x 9-1/2".
- Base 2" x 4-1/2".
- Steel, Black Oxide Plated".

ORDER NO.	PRICE EACH
3143-408	\$25.10



5C Precision Chucks¹

Includes 2 sets of hardened steel jaws (internal & external) for increased clamping range.

- Made in U.S.A.

CHUCK DIAM.	T. I. R. REPEATABILITY	DESCRIPTION	ORDER NO.	PRICE EACH
3"	.003	3 Jaw – Self Centering	3143-440	\$175.00
3"	.005	4 Jaw – Independent	3143-442	200.00
4"	.003	3 Jaw –Self Centering	3143-444	250.00



Expanding Arbors

A handy accessory for Lathe Collets

- Made in U.S.A.

DESCRIPTION	ORDER NUMBER	PRICE EACH
8 pc. Set – 1/4" to 1-1/4" in Wooden Stand	3143-438	\$69.40
3 pc. Set – 1-1/2" to 2" in Wooden Stand	3143-433	73.90



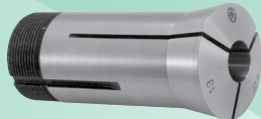
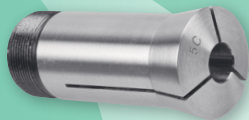
5C Adjustable Collet Stop

- Steel with Black Oxide plating.
- Made in U.S.A.

ORDER NO.	PRICE EACH
3143-403	\$POA



Collets



5C Round Collets

5C Round Collets

- Max runout of 0.02mm (0.0007")
- Max clamping range of Nominal Diameter – 0.2mm

SIZE	ORDER NO.	PRICE EACH	SIZE	ORDER NO.	PRICE EACH
1/16	3155-104	\$5.53	39/64	3155-139	\$4.62
5/64	3155-105	5.53	5/8	3155-140	4.62
3/32	3155-106	5.53	41/64	3155-141	4.62
7/64	3155-107	5.53	21/32	3155-142	4.62
1/8	3155-108	4.62	43/64	3155-143	4.62
9/64	3155-109	4.62	11/16	3155-144	4.62
5/32	3155-110	4.62	45/64	3155-145	4.62
11/64	3155-111	4.62	23/32	3155-146	4.62
3/16	3155-112	4.62	47/64	3155-147	4.62
13/64	3155-113	4.62	3/4	3155-148	4.62
7/32	3155-114	4.62	49/64	3155-149	4.62
15/64	3155-115	4.62	25/32	3155-150	4.62
1/4	3155-116	4.62	51/64	3155-151	4.62
17/64	3155-117	4.62	13/16	3155-152	4.62
9/32	3155-118	4.62	53/64	3155-153	4.62
19/64	3155-119	4.62	27/32	3155-154	4.62
5/16	3155-120	4.62	55/64	3155-155	4.62
21/64	3155-121	4.62	7/8	3155-156	4.62
11/32	3155-122	4.62	57/64	3155-157	4.62
23/64	3155-123	4.62	29/32	3155-158	4.62
3/8	3155-124	4.62	59/64	3155-159	4.62
25/64	3155-125	4.62	15/16	3155-160	4.62
13/32	3155-126	4.62	61/64	3155-161	4.62
27/64	3155-127	4.62	31/32	3155-162	4.62
7/16	3155-128	4.62	63/64	3155-163	4.62
29/64	3155-129	4.62	1	3155-164	4.62
15/32	3155-130	4.62	1-1/64	3155-165	4.62
31/64	3155-131	4.62	1-1/32	3155-166	4.62
1/2	3155-132	4.62	1-3/64	3155-167	4.62
33/64	3155-133	4.62	1-1/16	3155-168	4.62
17/32	3155-134	4.62	1-5/64	3155-169	4.62
35/64	3155-135	4.62	1-3/32	3155-170	4.62
9/16	3155-136	4.62	1-7/64	3155-171	4.62
37/64	3155-137	4.62	1-1/8	3155-172	4.62
19/32	3155-138	4.62	-	-	-

SIZE	ORDER NO.	PRICE EACH	SIZE	ORDER NO.	PRICE EACH
1/16	3156-404	\$33.00	39/64	3156-439	\$33.00
5/64	3156-405	33.00	5/8	3156-440	33.00
3/32	3156-406	33.00	41/64	3156-441	33.00
7/64	3156-407	33.00	21/32	3156-442	33.00
1/8	3156-408	33.00	43/64	3156-443	33.00
9/64	3156-409	33.00	11/16	3156-444	33.00
5/32	3156-410	29.00	45/64	3156-445	33.00
11/64	3156-411	33.00	23/32	3156-446	33.00
3/16	3156-412	33.00	47/64	3156-447	33.00
13/64	3156-413	33.00	3/4	3156-448	33.00
7/32	3156-414	33.00	49/64	3156-449	33.00
15/64	3156-415	33.00	25/32	3156-450	29.00
1/4	3156-416	33.00	51/64	3156-451	33.00
17/64	3156-417	33.00	13/16	3156-452	33.00
9/32	3156-418	33.00	53/64	3156-453	33.00
19/64	3156-419	33.00	27/32	3156-454	33.00
5/16	3156-420	29.00	55/64	3156-455	33.00
21/64	3156-421	33.00	7/8	3156-456	33.00
11/32	3156-422	33.00	57/64	3156-457	33.00
23/64	3156-423	33.00	29/32	3156-458	33.00
3/8	3156-424	33.00	59/64	3156-459	33.00
25/64	3156-425	33.00	15/16	3156-460	29.00
13/32	3156-426	33.00	61/64	3156-461	33.00
27/64	3156-427	33.00	31/32	3156-462	33.00
7/16	3156-428	33.00	63/64	3156-463	33.00
29/64	3156-429	33.00	1	3156-464	33.00
15/32	3156-430	29.00	1-1/64	3156-465	33.00
31/64	3156-431	33.00	1-1/32	3156-466	33.00
1/2	3156-432	33.00	1-3/64	3156-467	33.00
33/64	3156-433	33.00	1-1/16	3156-468	33.00
17/32	3156-434	33.00	-	-	-
35/64	3156-435	33.00	-	-	-
9/16	3156-436	33.00	-	-	-
37/64	3156-437	33.00	1-1/8	3156-472	33.00
19/32	3156-438	33.00	-	-	-



5C Sets Without stands



SIZE	ORDER NO.	PRICE EACH
5C 1/16 - 1-1/8 by 16ths	3156-005	\$120.10
5C 1/16 - 1-1/8 by 32nds	3156-010	233.60
5C 1/16 - 1-1/8 by 64ths	3156-015	460.60



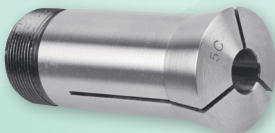
5C Set Without stand



SIZE	ORDER NO.	PRICE EACH
5C 1/16 - 1-1/8 by 16ths	3156-482	\$535.00



Metric 5C Collets



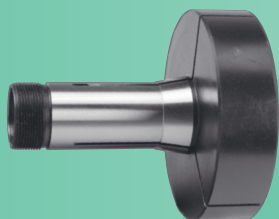
SIZE	ORDER NO.	PRICE EA.
3.0mm	3156-506	\$7.30
4.0mm	3156-508	7.30
5.0mm	3156-510	7.30
6.0mm	3156-512	7.30
7.0mm	3156-514	7.30
8.0mm	3156-516	7.30
9.0mm	3156-518	7.30
10.0mm	3156-520	7.30
11.0mm	3156-522	7.30
12.0mm	3156-524	7.30
13.0mm	3156-526	7.30
14.0mm	3156-528	7.30
15.0mm	3156-530	7.30
16.0mm	3156-532	7.30
17.0mm	3156-534	7.30
18.0mm	3156-536	7.30
19.0mm	3156-538	7.30
20.0mm	3156-540	7.30
21.0mm	3156-542	7.30
22.0mm	3156-544	7.30
23.0mm	3156-546	7.30
24.0mm	3156-548	7.30
25.0mm	3156-550	7.30

Metric 5C Set Without stand

SIZE	ORDER NO.	PRICE EACH
5C 3-25mm x 1mm	3156-582	\$ 167.90

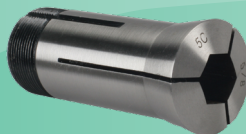


5C Step Collets



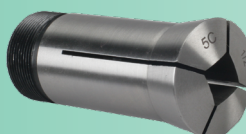
SIZE	ITEM NO.	PRICE EACH
5C Step Collet 2" Head	3156-302	\$25.70
5C Step Collet 3" Head	3156-303	31.25
5C Step Collet 4" Head	3156-304	48.40
5C Step Collet 5" Head	3156-305	56.35
5C Step Collet 6" Head	3156-306	79.75

5C Hex Collets



SIZE	ITEM NO.	PRICE EACH
1/8	3155-208	\$21.10
3/16	3155-212	21.10
1/4	3155-216	21.10
5/16	3155-220	21.10
3/8	3155-224	21.10
7/16	3155-228	21.10
1/2	3155-232	21.10
9/16	3155-236	21.10
5/8	3155-240	21.10
11/16	3155-244	21.10
3/4	3155-248	21.10
13/16	3155-252	21.10
7/8	3155-256	21.10
15/16	3155-260†	21.10

5C Square Collets



SIZE	ITEM NO.	PRICE EACH
1/8	3155-308	\$21.10
3/16	3155-312	21.10
1/4	3155-316	21.10
5/16	3155-320	21.10
3/8	3155-324	21.10
7/16	3155-328	21.10
1/2	3155-332	21.10
9/16	3155-336	21.10
5/8	3155-340	21.10
11/16	3155-344	21.10
3/4	3155-348	21.10
13/16	3155-352†	21.10

† Limited Quantities

† Limited Quantities

Collets



R8 Round Collets



SIZE	ORDER NO.	PRICE EACH	SIZE	ORDER NO.	PRICE EACH
1/16	3155-404	\$7.90	1/2	3155-432	\$6.40
3/32	3155-406	7.90	17/32	3155-434	6.40
1/8	3155-408	6.40	9/16	3155-436	6.40
5/32	3155-410	6.40	19/32	3155-438	6.40
3/16	3155-412	6.40	5/8	3155-440	6.40
7/32	3155-414	6.40	21/32	3155-442	6.40
1/4	3155-416	6.40	11/16	3155-444	6.40
9/32	3155-418	6.40	23/32	3155-446	6.40
5/16	3155-420	6.40	3/4	3155-448	6.40
11/32	3155-422	6.40	25/32	3155-450	6.40
3/8	3155-424	6.40	13/16	3155-452	6.40
13/32	3155-426	6.40	27/32	3155-454	6.40
7/16	3155-428	6.40	7/8	3155-456	6.40
15/32	3155-430	6.40	1	3155-458	11.75

R8 Sets Without stands

SIZE	ORDER NO.	PRICE EACH
R8 1/8 - 7/8 by 8ths	3156-120	\$ 44.80
R8 1/8 - 7/8 by 16ths	3156-125	83.20
R8 1/8 - 7/8 by 32nds	3156-130	160.00



R8 Round Collets



- Max runout of 0.02mm (0.0007")
- Max clamping range of Nominal Diameter – 0.2mm

SIZE	ORDER NO.	PRICE EACH	SIZE	ORDER NO.	PRICE EACH
3/32	3156-606	\$33.00	1/2	3156-632	\$33.00
1/8	3156-608	33.00	17/32	3156-634	33.00
5/32	3156-610	33.00	9/16	3156-636	33.00
3/16	3156-612	33.00	19/32	3156-638	33.00
7/32	3156-614	33.00	5/8	3156-640	33.00
1/4	3156-616	33.00	21/32	3156-642	33.00
9/32	3156-618	33.00	11/16	3156-644	33.00
5/16	3156-620	33.00	23/32	3156-646	33.00
11/32	3156-622	33.00	3/4	3156-648	33.00
3/8	3156-624	33.00	25/32	3156-650	33.00
13/32	3156-626	33.00	7/8	3156-656	33.00
7/16	3156-628	33.00	1	3156-664	33.00
15/32	3156-630	33.00	-	-	-

R8 Set Without stand



SIZE	ORDER NO.	PRICE EACH
R8 3/32 - 7/8 by 32nds*	3156-676	\$759.00

*Excludes 13/16 and 27/32



Metric R8 Collets



SIZE	ORDER NO.	PRICE EACH
3mm	3156-706	\$ 6.40
4mm	3156-708	6.40
5mm	3156-710	6.40
6mm	3156-712	6.40
7mm	3156-714	6.40
8mm	3156-716	6.40
9mm	3156-718	6.40
10mm	3156-720	6.40
11mm	3156-722	6.40
12mm	3156-724	6.40
13mm	3156-726	6.40
14mm	3156-728	6.40
15mm	3156-730	6.40
16mm	3156-732	6.40
17mm	3156-734	6.40
18mm	3156-736	6.40
19mm	3156-738	6.40
20mm	3156-740	6.40

Metric R8 Set Without stand

SIZE	ORDER NO.	PRICE EACH
R8 3mm - 20mm x 1mm	3156-762	\$115.20



5C Universal Collet Stop

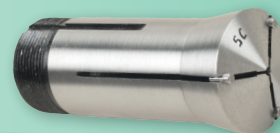


- Converts Standard 1" capacity Lathe Collets into Solid Stop or Spring Ejector Stop Collets without alteration of the Standard Collet.
- Fits directly into Collet. • Shiny Black Finish.

Order No. 3143-401 Price Each: \$14.90



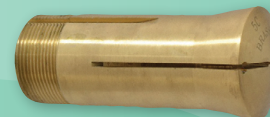
5C Emergency Collet



Order No. 3156-201
Price Each: \$10.60



5C Brass Emergency Collet



Order No. 3156-202
Price Each: \$25.60



5C Adjustable Collet Stop



- Fully threaded.
- For Chucking Parts to a depth of 3" from face of collet.
- Shiny Black Finish.

Order No. 3143-402 Price Each: \$6.10



3C Collets



SIZE	ORDER NO.	PRICE EA.	SIZE	ORDER NO.	PRICE EA.
1/16	3154-904	\$5.25	21/64	3154-921	\$5.25
9/64	3154-909	5.25	-	-	-
-	-	-	23/64	3154-923	5.25
17/64	3154-917	5.25	-	-	-
9/32	3154-918	5.25	31/64	3154-931	5.25
19/64	3154-919	5.25	-	-	-



Collet Racks

- Angled for visibility and easier selection of stored collets
- Tough, solvent free, epoxy finish: Ecolo-Clad for long-lasting protection
- Mounted on bench top • Heavy gauge steel



Order No. 1919-545 Price Each: \$28.80

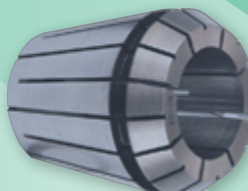
Holds up to 30 pieces 5C Collets.
Dimensions: Top 9"W x 12" D. Wt. 3 lbs.

Order No. 1919-550 Price Each: \$28.80

Holds up to 16 pieces R8 Collets.
Dimensions: Top 5 1/4"W x 9" D. Wt. 2 lbs.

ER Collets & Chucks

- Unique 8 degree taper design provides highest gripping power
- 16 Jaws give powerful gripping and parallel clamping
- True double angle for extreme concentricity



SIZES	NOMINAL SIZE (IN.)	COLLET RANGE (IN.) MIN-MAX	COLLET RANGE (MM.) MIN - MAX	ER11 ORDER NO.	PRICE EACH	ER16 ORDER NO.	PRICE EACH	ER 20 ORDER NO.	PRICE EACH	ER25 ORDER NO.	PRICE EACH	ER32 ORDER NO.	PRICE EACH	ER40 ORDER NO.	PRICE EACH
1/32"	1/32	0.020 - 0.040	0.5 - 1.0	3156-801	\$9.20	3156-811	\$10.20	-	-	-	-	-	-	-	-
1/16"	3/64, 1/16, 5/64	0.040 - 0.080	1.0 - 2.0	3156-802	9.20	3156-812	10.20	3156-832	\$10.20	3156-852	\$10.85	-	-	-	-
3/32"	3/32, 7/64	0.080 - 0.120	2.0 - 3.0	3156-803	9.20	3156-813	10.20	3156-833	10.20	3156-853	10.85	3156-883	\$11.10	-	-
1/8"	1/8, 9/64, 5/32	0.120 - 0.160	3.0 - 4.0	3156-804	9.20	3156-814	10.20	3156-834	10.20	3156-854	10.85	3156-884	11.10	-	\$11.80
3/16	11/64, 3/16	0.160 - 0.200	4.0 - 5.0	3156-806	9.20	3156-816	10.20	3156-836	10.20	3156-856	10.85	3156-886	11.10	3156-916	11.80
7/32	13/64, 7/32, 15/64	0.200 - 0.236	5.0 - 6.0	3156-807	9.20	3156-817	10.20	3156-837	10.20	3156-857	10.85	3156-887	11.10	3156-917	11.80
1/4	1/4, 17/64	0.236 - 0.275	6.0 - 7.0	3156-808	9.20	3156-818	10.20	3156-838	10.20	3156-858	10.85	3156-888	11.10	3156-918	11.80
5/16	9/32, 19/64, 5/16	0.275 - 0.315	7.0 - 8.0	-	-	3156-820	10.20	3156-840	10.20	3156-860	10.85	3156-890	11.10	3156-920	11.80
11/32	21/64, 11/32	0.315 - 0.354	8.0 - 9.0	-	-	3156-821	10.20	3156-841	10.20	3156-861	10.85	3156-891	11.10	3156-921	11.80
3/8	23/64, 3/8, 25/64	0.354 - 0.393	9.0 - 10.0	-	-	3156-822	10.20	3156-842	10.20	3156-862	10.85	3156-892	11.10	3156-922	11.80
13/32	13/32, 27/64	0.393 - 0.433	10.0 - 11.0	-	-	-	-	3156-843	10.20	3156-863	10.85	3156-893	11.10	3156-923	11.80
7/16	7/16, 29/64, 15/32	0.433 - 0.472	11.0 - 12.0	-	-	-	-	3156-844	10.20	3156-864	10.85	3156-894	11.10	3156-924	11.80
1/2	31/64, 1/2	0.472 - 0.511	12.0 - 13.0	-	-	-	-	3156-846	10.20	3156-866	10.85	3156-896	11.10	3156-926	11.80
17/32	33/64, 17/32, 35/64	0.511 - 0.551	13.0 - 14.0	-	-	-	-	-	-	3156-867	10.85	3156-897	11.10	3156-927	11.80
9/16	9/16, 37/64	0.551 - 0.590	14.0 - 15.0	-	-	-	-	-	-	3156-868	10.85	3156-898	11.10	3156-928	11.80
5/8	19/32, 39/64, 5/8	0.590 - 0.629	15.0 - 16.0	-	-	-	-	-	-	3156-870	10.85	3156-900	11.10	3156-930	11.80
21/32	41/64, 21/32	0.629 - 0.669	16.0 - 17.0	-	-	-	-	-	-	-	-	3156-901	11.10	3156-931	11.80
11/16	43/64, 11/16, 45/64	0.669 - 0.708	17.0 - 18.0	-	-	-	-	-	-	-	-	3156-902	11.10	3156-932	11.80
3/4	23/32, 47/64, 3/4	0.708 - 0.748	18.0 - 19.0	-	-	-	-	-	-	-	-	3156-904	11.10	3156-934	11.80
25/32	49/64, 25/32	0.748 - 0.787	19.0 - 20.0	-	-	-	-	-	-	-	-	3156-905	11.10	3156-935	11.80
13/16	51/64, 13/16	0.787 - 0.826	20.0 - 21.0	-	-	-	-	-	-	-	-	-	-	3156-936	11.80
27/32	53/64, 27/32	0.826 - 0.866	21.0 - 22.0	-	-	-	-	-	-	-	-	-	-	3156-937	11.80
7/8	7/8, 57/64, 55/64	0.866 - 0.905	22.0 - 23.0	-	-	-	-	-	-	-	-	-	-	3156-938	11.80
15/16	29/32, 59/64, 15/16	0.905 - 0.944	23.0 - 24.0	-	-	-	-	-	-	-	-	-	-	3156-940	11.80
31/32	61/64, 31/32	0.944 - 0.984	24.0 - 25.0	-	-	-	-	-	-	-	-	-	-	3156-941	11.80
1	63/64, 1, 1-1/64	0.984 - 1.020	25.0 - 26.0	-	-	-	-	-	-	-	-	-	-	3156-942	11.80

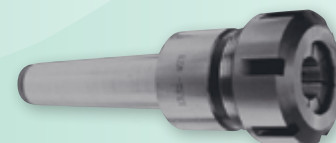
Sets

- Wooden stand included



SERIES	NO. OF COLLETS	SIZES	COLLET RANGE MIN-MAX (IN.)	COLLET RANGE MIN-MAX (MM.)	ORDER NO.	PRICE EACH
ER11	7	1/32 to 1/4	0.020 - 0.275	0.5 to 7	3156-963	\$74.65
ER16	10	1/32 to 3/8	0.020 - 0.393	0.5 to 10	3156-966	91.95
ER20	12	1/16 to 1/2	0.039 - 0.511	1.0 to 13	3156-969	111.15
ER25	15	1/16 to 5/8	0.039 - 0.629	1.0 to 16.0	3156-972	146.45
ER32	18	3/32 to 3/4	0.078 - 0.787	2.0 to 20.0	3156-975	180.40
ER40	23	1/8 to 1	0.118 - 1.023	3.0 to 26.0	3156-978	255.75

Morse Taper Shank



SHANK	TYPE	CAPACITY	DRAWBAR END	ORDER NO.	PRICE EACH
MT2	ER-20	.04-.511	3/8-16	3142-650	\$78.00
MT2	ER-25	.04-.629	3/8-16	3142-655	67.00
MT3	ER-32	.08-.787	1/2-13	3142-660	77.00
MT3	ER-40	.12 - 1.02	1/2-13	3142-665	85.00
MT4	ER-40	.12 - 1.02	5/8-11	3142-670	87.00

Straight Shank



SHANK	TYPE	CAPACITY	DRAWBAR END	ORDER NO.	PRICE EACH
5/8 x 2-1/2	ER-11	.02-.275	3/8-16	3142-540	\$64.00
3/4 x 2-1/2	ER-11	.02-.275	3/8-16	3142-545	64.00
3/4 x 4	ER-11	.02-.275	3/8-16	3142-550	64.00
3/4 x 2-1/2	ER-16	.02-.393	3/8-16	3142-555	70.00
3/4 x 4	ER-16	.02-.393	3/8-16	3142-560	72.00
3/4 x 6	ER-16	.02-.393	3/8-16	3142-565	75.00
3/4 x 2-1/2	ER-20	.04-.511	3/8-16	3142-570	66.00
3/4 x 4	ER-20	.04-.511	3/8-16	3142-575	72.00
3/4 x 6	ER-20	.04-.511	3/8-16	3142-580	75.00
3/4 x 2	ER-25	.04-.629	3/8-16	3142-585	72.00
3/4 x 4	ER-25	.04-.629	3/8-16	3142-590	87.00
1 x 2	ER-32	.08-.787	1/2-13	3142-595	66.00
1-1/4 x 6	ER-32	.08-.787	5/8-11	3142-600	89.00
1 x 2-3/8	ER-40	.12 - 1.02	1/2-13	3142-605	95.00
1-1/4 - 2-3/8	ER-40	.12 - 1.02	5/8-11	3142-610	95.00

NST Shank



SHANK	TYPE	CAPACITY	DRAWBAR END	ORDER NO.	PRICE EACH
30	ER-32	.08-.787	1/2-13	3142-510	\$70.00
30	ER-40	.12 - 1.02	1/2-13	3142-520	86.00
40	ER-40	.12 - 1.02	5/8-11	3142-522	88.00

R8 Shank



SHANK	TYPE	CAPACITY	DRAWBAR END	ORDER NO.	PRICE EACH
R8	ER-32	.08-.787	7/16-20	3142-530	\$70.00
R8	ER-40	.12 - 1.02	7-16-20	3142-532	74.00

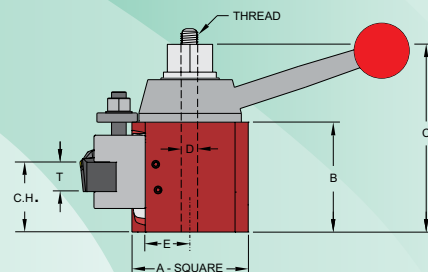
Tool Posts

2



SUPER Quick Change Tool Post with Triple Action Wedge Style Locking System

- Rigidity • Repeatability • Quality • Zero Backlash
- Triple Action Wedge Style Locking System
- Precise Repeatability within .0001
- 15° Locking Handle Position Adjustment
- Industry-Standard Interchangeable Holders
- Thousands of pounds of locking force with a finger tip



SUPER Quick Change Tool Post

Description	SDN25AXA	SDN30BXA	SDN35CXA	SDN40CA	SDN50DA	SDN60EA
Order Number	8001-000	8001-002	8001-004	8001-006	8001-008	8001-010
Price Each	\$ 436.49	\$ 546.08	\$ 746.97	\$ 939.09	\$ 1344.84	\$ 2075.67
Lathe Swing Over Bed	≤12	13-15	14-17	16-20	17-32	≥25
A	2.625	3.000	3.500	4.000	5.000	6.000
B	2.500	2.750	3.250	3.750	4.625	5.000
C	4.240	4.710	5.650	6.335	7.435	8.060
D	0.500	0.625	0.750	0.875	1.000	1.125
E	0.880	1.115	1.199	1.530	1.900	2.207
T-Tool Capacity*	1/2-3/4	5/8-1.0	3/4-1.0	1.0-1 1/4	1 1/4-1 1/2	1 1/2
Optimum C.H.**	1.250	1.312	1.625	1.937	2.562	3.000
C.H. MIN.	0.875	1.062	1.250	1.562	2.000	2.500
C.H. MAX.	1.875	1.937	2.250	2.562	3.575	3.500
Thread	1/2-20	5/8-18	3/4-16	7/8-14	1.0-14	1 1/8-12

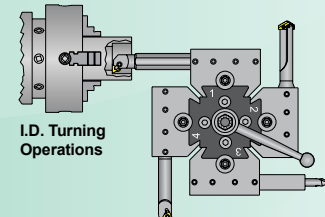
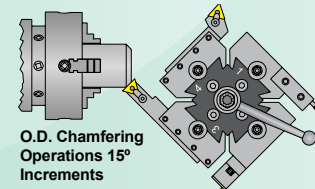
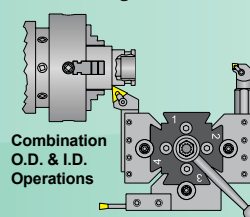
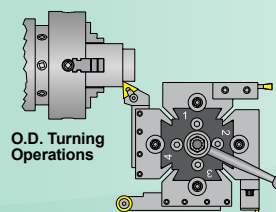
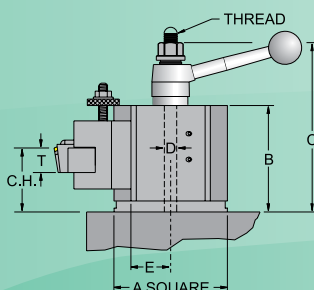
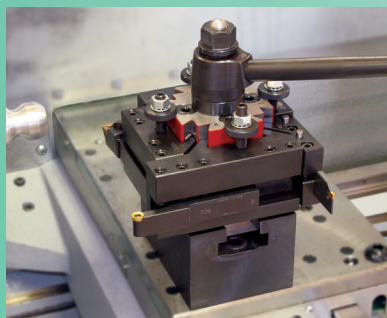
** Optimum center height is calculated with the smaller tool size of the tool capacity. If the higher size tool is to be used, add 1/8" to the optimum center height.

Quadra Indexing Quick Change Tool Post

The Multi-Patented Tool Post with The Most Advanced Indexing and Locking Technology

24 Super Precise Positioning Ball Bearings & 2 Pre-Loaded Indexing Pins

- Strong • Rigid • Precise!



Description	QITP25N		QITP30N		QITP35N		QITP40N		QITP50N		QITP60N	
Order Number	8000-000		8000-002		8000-004		8000-006		8000-008		8000-010	
Price Each	\$ 1187.52		\$ 1334.85		\$ 1607.16		\$ 2094.18		\$ 2790.22		\$ 3973.27	
Size	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
Lathe Swing Over Bed	≤12"	≤300,0	13-15"	320,0	14-17"	400,0	16-20"	450,0	17-32"	500,0	≥25-XHD	XHD
A	2.500	63.5	3.000	76.2	3.500	88.9	4.000	101.60	5.000	127.0	6.000	152.4
B	2.570	65.3	3.205	81.4	3.460	87.9	4.070	103.4	5.230	132.8	5.615	142.6
C	5.210	132.3	5.720	145.3	6.415	162.9	7.525	191.1	9.135	232.0	9.855	250.3
D	0.500	12.7	0.500	12.7	0.625	16.0	0.750	19.0	1.000	25.40	1.125	28.6
E	0.880	22.4	1.115	28.3	1.245	31.6	1.530	38.9	1.897	48.2	2.207	56.1
T-Tool Capacity	1/2-3/4	12-20	5/8-1.0	16-25	3/4-1.0	20-25	1.0-1 1/4	25-32	1 1/4 - 1 1/2	32-40	1 1/2	40.0
Optimum C.H.*	1.422	36.1	1.747	44.4	1.835	46.6	2.202	55.9	2.995	76.1	3.440	87.4
C.H. MIN.	0.995	25.3	1.213	30.8	1.445	36.7	1.757	44.6	2.245	57.0	2.750	69.9
C.H. MAX.	1.849	50.0	2.282	58.0	2.225	56.5	2.646	67.2	3.744	95.1	4.129	104.9
Thread	1/2-20	M12x1,75	1/2-20	M12x1,75	5/8-18	M16x2,0	3/4-16	M18x2,5	1.0-14	M24x3,0	1 1/8-12	M27x3,0

*Optimum center height is calculated with the smaller tool size of the tool capacity.

Tool Post & Toolholder Standard Sets

2



Super Quick Change Standard Sets

(1) Tool Post
(4) Holders

Tooling Not Included

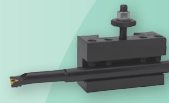
NEW



D1



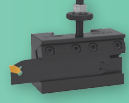
D2



D4-CNC



D7-71C



Description	SDN25AXA-SS	SDN30BXA-SS	SDN35CXA-SS	SDN40CA-SS	SDN50DA-SS	SDN60EA-SS
Lathe Swing	Up to 12"	13" to 15"	14" to 17"	16" to 20"	17" to 32"	≥ 25"
Order Number	8001-020	8001-021	8001-022	8001-023	8001-024	8001-025
Price Each	\$ 991.98	\$ 1188.34	\$ 1480.07	\$ 1336.18	\$ 2625.24	\$ 3894.58
5 Piece Standard Set Includes						
(1) Tool Post	SDN25AXA	SDN30BXA	SDN35CXA	SDN40CA	SDN50DA	SDN60EA
(4) Holders	(1) D25AXA-1 (1) D25AXA-2 (1) D25AXA-4-CNC (1) D25AXA-7-71C	(1) D30BXA-1 (1) D30BXA-2 (1) D30BXA-4-CNC (1) D30BXA-7-71C	(1) D35CXA-1 (1) D35CXA-2 (1) D35CXA-4-CNC (1) D35CXA-7-71C	(1) D40CA-1 (1) D40CA-2 (1) D40CA-4-CNC (1) D40CA-7-71C	(1) D50DA-1 (1) D50DA-2 (1) D50DA-4-CNC (1) D50DA-7-71C	(1) D60EA-1 (1) D60EA-2 (1) D60EA-4-CNC (1) D60EA-7-71C

Quadra Indexing Standard Sets

(1) Tool Post
(4) Holders

Tooling Not Included

NEW



QITP-1



QITP-2



QITP-4-CNC



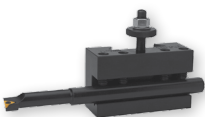
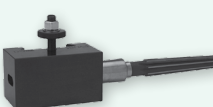
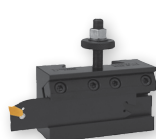
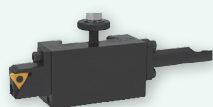
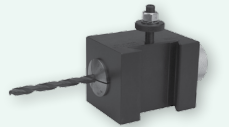
QITP-7-71C



Description	QITP25N-SS	QITP30N-SS	QITP35N-SS	QITP40N-SS	QITP50N-SS	QITP60N-SS
Lathe Swing	Up to 12"	13" to 15"	14" to 17"	16" to 20"	17" to 32"	≥ 25"
Order Number	8000-020	8000-021	8000-022	8000-023	8000-024	8000-025
Price Each	\$ 1923.65	\$ 2172.36	\$ 2612.18	\$ 3241.28	\$ 4404.15	\$ 6273.05
5 Piece Standard Set Includes						
(1) Tool Post	QITP25N	QITP30N	QITP35N	QITP40N	QITP50N	QITP60N
(4) Holders	(1) QITP25N-1 (1) QITP25N-2 (1) QITP25N-4-CNC (1) QITP25N-7-71C	(1) QITP30N-1 (1) QITP30N-2 (1) QITP30N-4-CNC (1) QITP30N-7-71C	(1) QITP35N-1 (1) QITP35N-2 (1) QITP35N-4-CNC (1) QITP35N-7-71C	(1) QITP40N-1 (1) QITP40N-2 (1) QITP40N-4-CNC (1) QITP40N-7-71C	(1) QITP50N-1 (1) QITP50N-2 (1) QITP50N-4-CNC (1) QITP50N-7-71C	(1) QITP60N-1 (1) QITP60N-2 (1) QITP60N-4-CNC (1) QITP60N-7-71C

SUPER Quick Change Toolholders



Use With SDN Tool Post	SDN25AXA	SDN30BXA	SDN35CXA	SDN40CA	SDN50DA	SDN60EA
Turning & Facing 	D25AXA-1 Tool Capacity 1/2"	D30BXA-1 Tool Capacity 5/8"	D35CXA-1 Tool Capacity 3/4"	D40CA-1 Tool Capacity 1"	D50DA-1 Tool Capacity 1 1/4"	D60EA-1 Tool Capacity 1 1/2"
	8001-100	8001-250	8001-400	8001-550	8001-700	8001-850
Price Each	\$ 81.37	\$ 92.38	\$ 115.10	\$ 142.95	\$ 229.76	\$ 356.41
Turning, Facing and Boring 	D25AXA-2 Tool Capacity 1/2"	D30BXA-2 Tool Capacity 5/8"	D35CXA-2 Tool Capacity 3/4"	D40CA-2 Tool Capacity 1"	D50DA-2 Tool Capacity 1 1/4"	D60EA-2 Tool Capacity 1 1/2"
	8001-104	8001-254	8001-404	8001-554	8001-704	8001-854
Price Each	\$ 85.23	\$ 101.88	\$ 120.68	\$ 152.22	\$ 246.03	\$ 369.15
Heavy Duty Boring 	D25AXA-4-750-DUAL Tool Capacity 3/4"	D30BXA-4-1000-DUAL Tool Capacity 1"	D35CXA-1000-DUAL Tool Capacity 1"	D40CA-4-1250-DUAL Tool Capacity 1 1/4"	D50DA-4-1550-DUAL Tool Capacity 1 1/2"	D60EA-4-2000-DUAL Tool Capacity 2"
	8001-111	8001-261	8001-411	8001-559	8001-709	8001-859
Price Each	\$ 172.07	\$ 200.84	\$ 230.85	\$ 277.00	\$ 435.27	\$ 675.31
Extra Heavy Duty Boring 	D25AXA-41-1000-DUAL Tool Capacity 1"	D30BXA-41-1250-DUAL Tool Capacity 1 1/4"	D35CXA-41-1250-DUAL Tool Capacity 1 1/4"	D40CA-41-1500-DUAL Tool Capacity 1 1/2"	D50DA-41-2000-DUAL Tool Capacity 2"	D60EA-41-2500-DUAL Tool Capacity 2 1/2"
	8001-113	8001-263	8001-413	8001-563	8001-713	8001-863
Price Each	\$ 180.48	\$ 209.85	\$ 251.81	\$ 283.29	\$ 474.85	\$ 734.16
Morse Taper 	-	-	D35CXA-5-4 Tool Capacity Morse Taper 4	D40CA-5-4 Tool Capacity Morse Taper 4	D50DA-5-5 Tool Capacity Morse Taper 5	D60EA-5-5 Tool Capacity Morse Taper 5
	-	-	8001-424	8001-572	8001-722	8001-872
Price Each	-	-	\$ 222.76	\$ 232.44	\$ 350.05	\$ 491.08
Extra HD Cut-Off Blade Toolholder 	D25AXA-7-71C Blade Size 19-2	D30BXA-7-71C Blade Size 19-2	D35CXA-7-71C Blade Size 26-2 to 26-6	D40CA-7-71C Blade Size 26-2 to 26-6	D50DA-7-71C Blade Size 32-3 to 32-9	D60EA-7-71C Blade Size 32-3 to 32-9
	8001-126	8001-276	8001-428	8001-576	8001-726	8001-876
Price Each	\$ 216.81	\$ 247.17	\$ 266.48	\$ 306.32	\$ 369.33	\$ 418.03
ID & OD Threading 	D25AXA-881-OE On Edge for OD Laydown for ID	D30BXA-881-OE On Edge for OD Laydown for ID	D35CXA-881-OE On Edge for OD Laydown for ID	D40CA-881-OE On Edge for OD Laydown for ID		
	8001-132	8001-282	8001-434	8001-582		
Price Each	\$ 234.20	\$ 258.23	\$ 277.00	\$ 309.75		
Dovetail Drill Chuck Holder 	D25AXA-35 Tool Capacity 0-12"	D30BXA-35 Tool Capacity 0-12"	D35CXA-35 Tool Capacity 0-12"	D40CA-35 Tool Capacity 0-12"		
	8001-140	8001-290	8001-442	8001-590		
Price Each	\$ 319.61	\$ 329.76	\$ 388.94	\$ 414.32		
5C Collet Holder 	D25AXA-36 5C Collet	D30BXA-36 5C Collet	D35CXA-36 5C Collet	D40CA-36 5C Collet		
	8001-142	8001-292	8001-444	8001-592		
Price Each	\$ 221.41	\$ 230.91	\$ 260.79	\$ 294.76		

Tooling not included

Quadra Indexing Quick Change Toolholders



Use With Quadra Tool Post	QITP25N	QITP30N	QITP35N	QITP40N	QITP50N	QITP60N
Turning & Facing 	QITP25N-1	QITP30N-1	QITP35N-1	QITP40N-1	QITP50N-1	QITP60N-1
Tool Capacity 3/4"	Tool Capacity 3/4"	Tool Capacity 3/4"	Tool Capacity 1"	Tool Capacity 1 1/4"	Tool Capacity 1 1/2"	Tool Capacity 1 1/2"
Order Number	8000-100	8000-250	8000-400	8000-550	8000-700	8000-850
Price Each	\$ 116.24	\$ 145.82	\$ 180.25	\$ 200.51	\$ 330.96	\$ 464.71
Turning, Facing and Boring 	QITP25N-2	QITP30N-2	QITP35N-2	QITP40N-2	QITP50N-2	QITP60N-2
Tool Capacity 3/4"	Tool Capacity 3/4"	Tool Capacity 3/4"	Tool Capacity 1"	Tool Capacity 1 1/4"	Tool Capacity 1 1/2"	Tool Capacity 1 1/2"
Order Number	8000-104	8000-254	8000-404	8000-554	8000-704	8000-854
Price Each	\$ 123.97	\$ 153.91	\$ 200.51	\$ 222.77	\$ 356.41	\$ 498.56
Heavy Duty Boring 	QITP25N-4-750-DUAL	QITP30N-4-1000-DUAL	QITP35N-4-1000-DUAL	QITP40N-4-1250-DUAL	QITP50N-4-1500-DUAL	QITP60N-4-2000-DUAL
Tool Capacity 3/4"	Tool Capacity 1"	Tool Capacity 1"	Tool Capacity 1 1/4"	Tool Capacity 1 1/2"	Tool Capacity 2"	Tool Capacity 2"
Order Number	8000-111	8000-261	8000-411	8000-561	8000-711	8000-861
Price Each	\$ 226.23	\$ 253.94	\$ 304.70	\$ 369.33	\$ 548.94	\$ 802.84
Extra Heavy Duty Boring 	—	—	QITP35N-41-1250-DUAL	QITP40N-41-CNC	QITP50N-41-CNC	QITP60N-41-CNC
Tool Capacity 1 1/4"	Tool Capacity 1 1/2"	Tool Capacity 2"	Tool Capacity 2 1/2"			
Order Number	—	—	8000-413	8000-563	8000-713	8000-863
Price Each	—	—	\$ 346.26	\$ POA	\$ 592.46	\$ 868.33
Morse Taper 	—	—	QITP35N-5-4	QITP40N-5-4	QITP50N-5-5	QITP60N-5-5
Tool Capacity Morse Taper 4	Tool Capacity Morse Taper 4	Tool Capacity Morse Taper 5	Tool Capacity Morse Taper 5			
Order Number	—	—	8000-424	8000-572	8000-722	8000-872
Price Each	—	—	\$ 239.71	\$ 293.79	\$ 417.69	\$ 582.58
Extra HD Cut-Off Blade Toolholder 	QITP25N-7-71C	QITP30N-7-71C	QITP35N-7-71C	QITP40N-7-71C	QITP50N-7-71C	QITP60N-7-71C
Blade Size 19-2	Blade Size 19-2	Blade Size 26-2 to 26-6	Blade Size 26-2 to 26-6	Blade Size 32-3 to 32-9	Blade Size 32-3 to 32-9	Blade Size 32-3 to 32-9
Order Number	8000-126	8000-276	8000-428	8000-576	8000-726	8000-876
Price Each	\$ 258.80	\$ 283.86	\$ 319.57	\$ 354.51	\$ 377.62	\$ 529.46
ID & OD Threading Toolholder Laydown Threading Bar Sold Separately 	QITP25N-881-OE	QITP30N-881-OE	QITP35N-881-OE	QITP40N-881-OE		
On Edge for OD Laydown for ID	On Edge for OD Laydown for ID	On Edge for OD Laydown for ID	On Edge for OD Laydown for ID	On Edge for OD Laydown for ID		
Order Number	8000-132	8000-282	8000-434	8000-582		
Price Each	\$ 274.51	\$ 294.64	\$ 324.85	\$ 372.68		
5C Collet Holder 	QITP25N-36	QITP30N-36	QITP35N-36	QITP40N-36		
5C Collet	5C Collet	5C Collet	5C Collet	5C Collet		
Order Number	8000-142	8000-292	8000-444	8000-592		
Price Each	\$ 250.61	\$ 267.32	\$ 308.14	\$ 367.55		

Tools not included

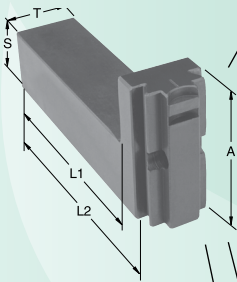
CNC Modular Knurling Tools



CNC Modular Knurling Tool Shank

The CNC Modular Knurling Tool includes **three standard shank sizes** and **seven standard knurling heads** to create any knurling tool combination.

- Specifically designed for the CNC Lathe.
- Precision square shank with preset center height.
- Right or Left hand applications.
- One shank fits all heads.
- One head fits all shanks.



- Cobalt knurl wheels, Tin-C coated.
- Center height adjustment.
- Interchangeable knurl heads.
- Carbide knurl pin.
- Easy set-up.
- High productivity.
- Best knurl quality.
- Long knurl wheel life.
- Low production cost.

1 - Small Diamond Cutting Knurling Tool- Cutting Range 5/16" to 1-1/2" Best for up to 1"

End feed range:
.004 to .012

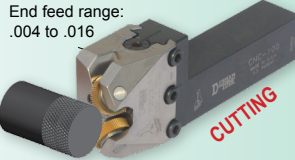


Description	Order No.	Price Each	Shank Size	Tool Length	Knurl Wheel Style
CNC-75-1-SW2	8020-410	\$ 952.78	3/4	5 3/4	SW2S
CNC-100-1-SW2	8020-420	1040.99	1	5 3/4	SW2S
CNC-125-1-SW2	8020-430	1106.75	1 1/4	6 1/4	SW2S

Supplied with set of straight knurl wheels, 30 TPI

2 - HD Diamond Cutting Knurling Tool-Cutting Range 1.0" to 5" Best for up to 3"

End feed range:
.004 to .016

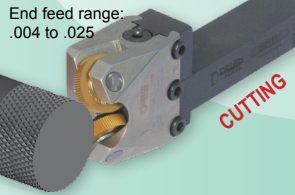


Description	Order No.	Price Each	Shank Size	Tool Length	Knurl Wheel Style	Knurl Pin Set	Price Each
CNC-75-2-R	8020-510	\$ 1119.59	3/4	5 3/4	RS	KPS-25-87-C 8028-925	\$ 45.49
CNC-100-2-R	8020-520	1186.96	1	5 3/4	RS		
CNC-125-2-R	8020-530	1267.15	1 1/4	6 1/4	RS		

Supplied with set of straight knurl wheels, 25 TPI

3 - Extra HD Diamond Cutting Knurling Tool-Cutting range 2.0" & up Best for over 2-1/2"

End feed range:
.004 to .025

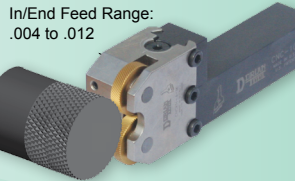


Description	Order No.	Price Each	Shank Size	Tool Length	Knurl Wheel Style	Knurl Pin Set	Price Each
CNC-75-3-M	8020-610	\$ 1145.03	3/4	5 7/8	MS	KPS-31-100-C 8028-945	\$ 47.50
CNC-100-3-M	8020-620	1200.72	1	5 7/8	MS		
CNC-125-3-M	8020-630	1270.32	1 1/4	6 3/8	MS		

Supplied with set of straight knurl wheels, 25 TPI

4 - Double Wheel Forming Knurling Tool

In/End Feed Range:
.004 to .012

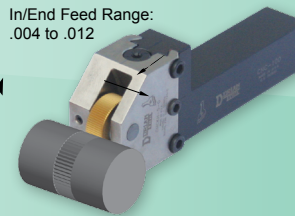


Description	Order No.	Price Each	Shank Size	Tool Length	Knurl Wheel Style	Knurl Pin Set	Price Each
CNC-75-4-M	8020-646	\$ 1106.75	3/4	6	M	KPS-31-125-C 8028-950	\$ 50.19
CNC-100-4-M	8020-648	1106.75	1	6	M		
CNC-125-4-M	8020-650	1106.75	1 1/4	6 1/2	M		

Supplied with set of diagonal knurl wheels, 25 TPI

5 - Single Wheel Forming Knurling Tool- Straight Bump Best for Narrow Knurling

In/End Feed Range:
.004 to .012



Description	Order No.	Price Each	Shank Size	Tool Length	Knurl Wheel Style	Knurl Pin Set	Price Each
CNC-75-5-O	8020-710	\$ 939.94	3/4	5 3/4	O	KPS-31-125-C 8028-950	\$ 50.19
CNC-100-5-O	8020-720	978.43	1	5 3/4	O		
CNC-125-5-O	8020-730	1029.75	1 1/4	6 1/4	O		

Supplied with set of straight knurl wheels, 25 TPI

6 - Shoulder Forming Knurling Tool-Diameter range: 5/16" & up

In/End Feed Range:
.004 to .012

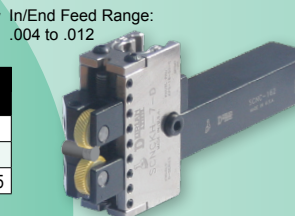


Description	Order No.	Price Each	Shank Size	Tool Length	Knurl Wheel Style	Knurl Pin Set	Price Each
CNC-75-6-SW4	8020-780	\$ 995.69	3/4	5 3/4	SW4	SW4.0P-2S 8029-085	\$ 77.79
CNC-100-6-SW4	8020-790	1044.10	1	5 3/4	SW4		
CNC-125-6-SW4	8020-800	1146.32	1 1/4	6 1/4	SW4		

Supplied with set of straight knurl wheels, 25 TPI

7 - Straddle Forming Knurling Tool -Diameter range: up to 1"

In/End Feed Range:
.004 to .012



Description	Order No.	Price Each	Shank Size	Tool Length	Knurl Wheel Style	Knurl Pin Set	Price Each
CNC-75-7-R	8020-910	\$1115.22	3/4	6	R	KPS-25-62-C 8028-915	\$ 39.07
CNC-100-7-R	8020-920	1173.48	1	6	R		
CNC-125-7-R	8020-930	1248.38	1 1/4	6 1/2	R		

Supplied with set of diagonal knurl wheels, 30 TPI

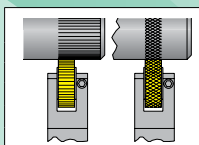
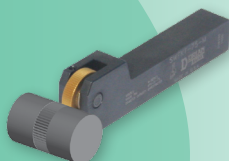
CNC Modular Knurling Tool Shank						
Desc.	S	T	L1	L2	A	
CNC-75	21010	.75	1.0	3.5	3.875	2.0
CNC-100	21020	1.0	1.0	3.5	3.875	2.0
CNC-125	21030	1.25	1.0	4.0	4.375	2.25

Supplied with Lock Screw and Adjustment Screw.

CNC Knurling Tools



SWFKT

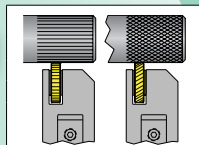


SWFKT - Single Wheel Fixed Knurling Tool

Description	Order No.	Price Each	Knurl Wheel Style	Desc.	Knurl Pin Set Order No.	Shank Size	Price Each
SWFKT-50-D	8021-730	\$ 115.48	D*	KPS-18-50	8028-805	1/2	\$ 16.34
SWFKT-75-M	8021-740	147.58	M**	KPS-31-75	8028-840	3/4	18.16
SWFKT-100-O	8021-750	163.61	O**	KPS-31-100	8028-845	1	18.16

* Supplied with 1 Straight Knurl Wheel 30 TPI. ** Supplied with 1 Straight Knurl Wheel 25 TPI.

SCKN



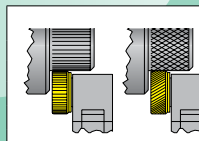
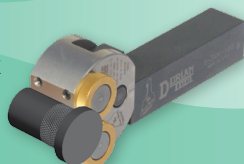
SCKN - Self-Centering Knurling Tool for C.N.C. Lathe

Description	Order No.	Price Each	Knurl Wheel Style	Desc.	Knurl Pin Set Order No.	Shank Size	Price Each
SCKN-50-D	8022-111	\$ 312.79	D*	KPS-18-50	8028-805	1/2	\$ 16.34
SCKN-75-M	8022-121	376.94	M**	KPS-31-75	8028-840	3/4	18.16
SCKN-100-M	8022-131	425.06	M**	KPS-31-75	8028-840	1	18.16

* Supplied with 1 set of 30 TPI Diagonal Knurl Wheels for Diamond Pattern.

** Supplied with 1 set of 25 TPI Diagonal Knurl Wheels for Diamond Pattern.

SSCK



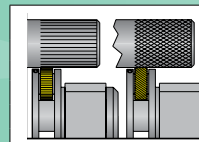
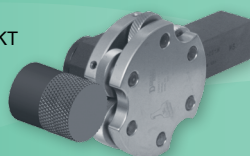
SSCK - Shoulder Self-Centering Knurling Tool for C.N.C. Lathe

Description	Order No.	Price Each	Knurl Wheel Style	Desc.	Knurl Pin Set Order No.	Shank Size	Price Each
SSCK-50-DW-2	8022-220	457.14	SW2*	SW2.0P-2S	8029-055	1/2	\$ 66.35
SSCK-75-DW-SW4	8022-240	553.38	SW4**	SW4.0P-2S	8029-085	3/4	77.79
SSCK-100-DW-SW4	8022-250	553.38	SW4**	SW4.0P-2S	8029-085	1	77.79

* Supplied with 1 set of 30 TPI Diagonal Knurl Wheels for Diamond Pattern.

** Supplied with 1 set of 25 TPI Diagonal Knurl Wheels for Diamond Pattern.

3SHKT

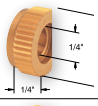
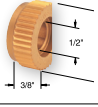
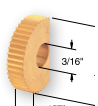
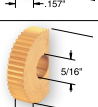
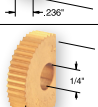
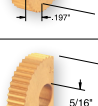


3SHKT - Three Swivel Head Knurling Tool

Description	Order No.	Price Each	Knurl Wheel Style	Desc.	Knurl Pin Set Order No.	Shank Size	Price Each
3SHKT-50-D	8021-510	\$ 432.78	D*	KPS-18-50	8028-805	1/2	\$ 16.34
3SHKT-75-M	8021-530	491.03	M**	KPS-31-100	8028-845	3/4	18.16
3SHKT-100-M	8021-540	549.31	M**	KPS-31-100	8028-845	1	18.16

* Supplied (2) 20 TPI, (2) 30 TPI & (2) 40 TPI Diagonal Knurl Wheels for Diamond Pattern.

** Supplied (2) 16 TPI, (2) 25 TPI & (2) 35 TPI Diagonal Knurl Wheels for Diamond Pattern.

Knurl Wheel Series	Specifications				Circular Knurl Pitch					
	Description	Pattern	Grade	Edge Prep	14	16	20	25	30	Price Each
SW2 	SW2S-XX-C	Straight	Cobalt	Full Faced	-		8027-404	8027-406	8027-408	\$ 57.64
	SW2R-XX-CB	Right Hand		Beveled			8027-479	8027-481	8027-483	57.64
	SW2L-XX-CB	Left Hand		Beveled			8027-529	8027-531	8027-533	57.64
SW4 	SW4S-XX-CB	Straight	Cobalt	Beveled	8028-029	-	8028-033	8028-035	8028-037	73.32
	SW4R-XX-CB	Right Hand		Beveled	8028-083	8028-085	8028-087	8028-089	8028-091	73.32
	SW4L-XX-CB	Left Hand		Beveled	8028-137	8028-139	8028-141	8028-143	8028-145	73.32
D 	DS-XX-CB	Straight	Cobalt	Beveled	-		8025-031	-	8025-035	34.45
	DDR-XX-CB	Right Hand		Beveled			-		8025-089	34.45
	DDL-XX-CB	Left Hand		Beveled			-		8025-143	34.45
M 	MS-XX-C	Straight	Cobalt	Full Faced	-		8025-310	8025-312	8025-314	57.15
	MDR-XX-CB	Right Hand		Beveled			8025-409	8025-411	8025-413	57.15
	MDL-XX-CB	Left Hand		Beveled			8025-475	8025-477	8025-479	57.15
R 	RS-XX-C	Straight	Cobalt	Full Faced	-		8026-510	8026-512	8026-514	40.45
O 	OS-XX-HSB	Straight	High Speed	Beveled	8025-641	-	8025-645	8025-647	-	41.10
	ODR-XX-HSB	Right Hand		Beveled	-	-	8025-777	8025-779		51.35
	ODL-XX-HSB	Left Hand		Beveled	-	-	8025-909	8025-911		51.35
	OF-XX-HS	Female Diamond		Full Faced	-		8026-074	8026-076		58.93

Live Centers

Economy Live Centers – High Speed Steel



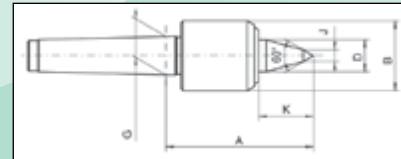
MT NO.	ACCURACY	ORDER NO.	PRICE EACH
1	0004"	3145-021	\$ 24.45
2	0004"	3145-022	27.20
3	0004"	3145-023	34.05
4	0004"	3145-024	48.30
5	0004"	3145-025	71.85
6	0004"	3145-026	137.90



Bison Revolving Live Centers – Made in Poland

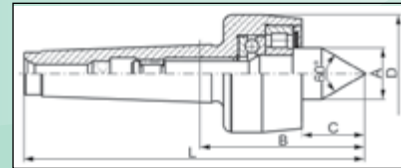


Extended Point Live Center - 60° Point, Small Body Dia.



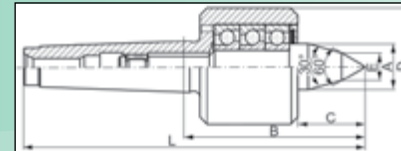
Morse Taper	Max. Wt. (Lbs.)	RPM	Runout	A (in.)	B (in.)	D (in.)	G (in.)	K (in.)	J (in.)	Order No.	Price Each
2MT	374	7,000	0.0003	2.87	1.26	0.59	0.7	1.14	0.39	3145-112	\$150.00
3MT	748	7,000	0.0003	2.91	1.34	0.59	0.94	1.18	0.43	3145-113	172.00
4MT	1540	6,300	0.0003	3.48	1.65	0.79	1.23	1.50	0.51	3145-114	241.00
5MT	3080	4,300	0.0004	4.69	2.28	1.18	1.75	1.93	0.55	3145-115	339.00
6MT	6600	3,000	0.0008	6.46	3.15	1.65	2.49	2.76	0.71	3145-116	579.00

Super Precision Live Center - 60° Point



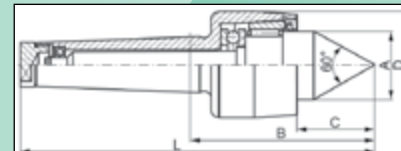
Morse Taper	Max. Wt. (Lbs.)	RPM	Runout	A (in.)	B (in.)	C (in.)	D (in.)	L (in.)	Order No.	Price Each
1MT	220	5,000	0.0002	0.59	1.95	0.67	1.5	4.06	3145-221	\$135.00
2MT	396	5,000	0.0001	0.71	2.2	0.85	1.57	4.74	3145-222	109.00
3MT	990	4,000	0.0001	0.98	2.95	1.08	2.20	6.14	3145-223	174.00
4MT	2200	3,000	0.0001	1.26	3.35	1.32	2.52	7.36	3145-224	183.00
5MT	4180	2,500	0.0002	1.57	4.25	1.73	3.35	9.33	3145-225	332.00
6MT	8140	2,000	0.0002	2.46	5.96	2.52	4.12	13.13	3145-226	598.00

NC Quad Bearing Precision Live Center - High Speed NC Extended Revolving Centers with 60° Point



Morse Taper	Max. Wt. (Lbs.)	RPM	Runout	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	L (in.)	Order No.	Price Each
4MT	2200	7,000	0.0002	1.10	4.67	1.93	2.76	0.55	8.70	3145-234	\$291.00
5MT	4400	6,000	0.0002	1.57	5.93	2.66	3.74	0.63	11.02	3145-235	480.00

Adjustable Live Center - Radial Compensation Revolving Centers with 60° Point



Morse Taper	Max. Wt. (Lbs.)	RPM	Runout	A (in.)	B (in.)	C (in.)	D (in.)	L (in.)	Order No.	Price Each
2MT	220	8,000	0.0002	0.94	2.87	1.04	1.73	5.41	3145-242	\$206.00
3MT	440	6,000	0.0001	1.10	3.35	1.28	1.89	6.54	3145-243	225.00
4MT	880	4,500	0.0001	1.50	3.72	1.741	2.36	7.74	3145-244	291.00
5MT	1,430	4,000	0.0001	1.97	4.59	2.19	2.95	9.69	3145-245	357.00
6MT	3,080	3,000	0.0001	2.38	5.31	2.46	3.54	12.48	3145-246	574.00

Dead Centers

Economy Dead Centers – High Speed Steel, Carbide Tipped

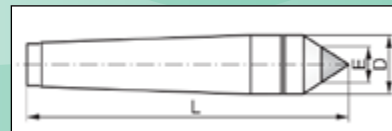
MT NO.	OVERALL LENGTH	HIGH SPEED		CARBIDE TIPPED	
		ORDER NO.	PRICE EACH	ORDER NO.	PRICE EACH
0	-	3145-010	\$3.60	3145-000	\$ 7.95
1	3-3/16	3145-011	3.90	3145-001	7.95
2	3-15/16	3145-012	4.75	3145-002	13.60
3	4-15/16	3145-013	6.75	3145-003	15.85
4	6-5/16	3145-014	11.10	3145-004	20.10
5	7-7/8	3145-015	20.25	3145-005	47.45
6	11	3145-016	48.60	3145-006	106.60



Bison Dead Centers – Made in Poland

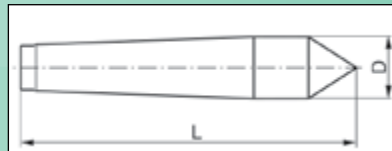
Carbide Tipped Dead Center - Full Point

MT Taper	L (in.)	D (in.)	E (in.)	Order No.	Price Each.
1	3.15	0.48	0.28	3145-321	\$34.00
2	3.94	0.71	0.28	3145-322	32.00
3	4.92	0.95	0.43	3145-323	51.00
4	6.30	1.24	0.55	3145-324	72.00
5	7.87	1.76	0.71	3145-325	97.00
6	10.63	2.51	0.71	3145-326	148.00



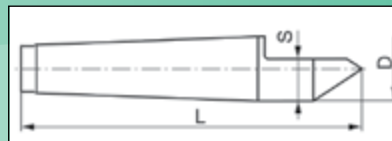
Dead Center - Full Point - Ball Bearing Steel

MT Taper	L (in.)	D (in.)	Order No.	Price Each
1	3.15	0.48	3145-331	\$16.00
2	3.94	0.71	3145-332	19.00
3	4.92	0.95	3145-333	25.00
4	6.30	1.24	3145-334	39.00
5	7.87	1.76	3145-335	70.00
6	10.63	2.51	3145-336	169.00



Half Dead Center - Ball Bearing Steel

MT Taper	L (in.)	D (in.)	S (in.)	Order No.	Price Each
1	3.15	0.48	0.30	3145-301	\$21.00
2	3.94	0.71	0.43	3145-302	23.00
3	4.92	0.95	0.59	3145-303	29.00
4	6.30	1.24	0.82	3145-304	45.00
5	7.87	1.76	1.15	3145-305	79.00
6	10.63	2.51	1.68	3145-306	168.00



Carbide Tipped Half Dead Center

MT Taper	L (in.)	D (in.)	E (in.)	S (in.)	Order No.	Price Each
1	3.15	0.48	0.28	0.41	3145-311	\$38.00
2	3.94	0.71	0.28	0.51	3145-312	41.00
3	4.92	0.95	0.43	0.72	3145-313	62.00
4	6.30	1.24	0.55	0.93	3145-314	73.00
5	7.87	1.76	0.71	1.26	3145-315	113.00
6	10.63	2.51	0.71	1.64	3145-316	185.00

