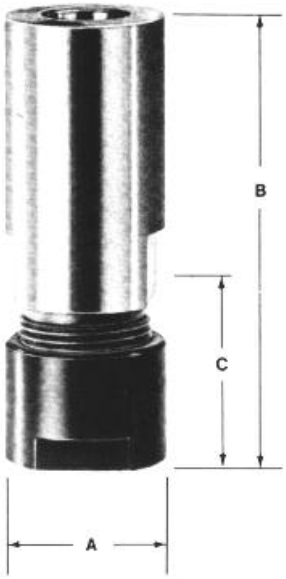
Designers & Manufacturers of Drilling & Tapping Solutions

Single Purpose Double Taper Collet Tool Holders

Single purpose double taper collet tool holders are accurate, rugged and a proven tool. They are used for close center drilling, tapping or reaming operations and have vertical adjustment for accurate blind hole depth control and compensation for tool length changes due to sharpening. Jacobs taper spindles on an existing or new multiple spindle head are used with this tool holder series.



Double taper collets collapse uniformly around the tool shank to insure accurate and powerful grip. Standard tools, NO shank modifications, are used with this style of holder. One collet is required for each tool shank size.

Vertical adjustment aids in set up and is accomplished by adjusting a set screw directly behind the tool. Thrusts is transferred to the tool holder body by the set screw thus reducing tool slippage within the collet caused by a combination of thrust and radial forces. Tool holders can not be removed from spindles for setting depths.

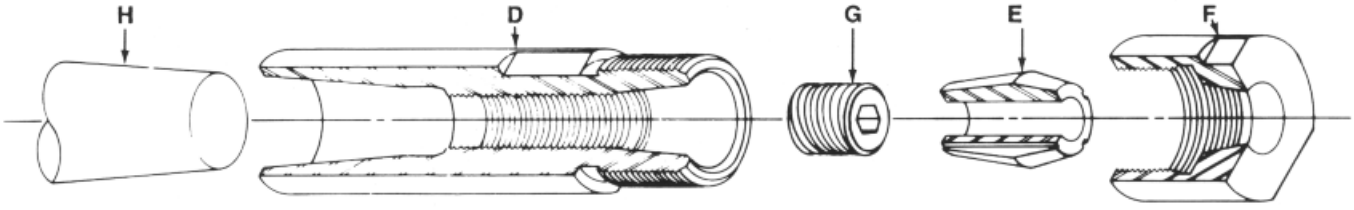
Ordering Information

1. Order by part number as shown in tabulations; assembly includes all components except collects; collets and replacement parts are ordered separately
2. Collets are single purpose, order one collet for each tool size; identify type of tool and add the decimal equivalent of tool shank diameter in place of XXXX.
   EXAMPLE: Collet part number 21472XXXX for 1/4 drill becomes 214722500 or for 1/4 tap becomes 214722550.
3. Tool holders on existing equipment are identified by measuring collet length and double taper intersection diameter; refer to replacement parts tabulation for dimensions. NOTE: Series 4703 and 4704 use same collet. Specify spindle taper when ordering tool holder body.

SPECIFICATIONS

Series	Assembly Part No.*	Capacity		DIMENSIONS				Spindle Taper
		Drill	Tap	A	B	C Min.	C Max.	
4701	0047.001-00	1/16 to 5/32	#0 to #8	.48	1.81	.44	.91	1 Jacobs
4702	0047.002-00	1/16 to 1/4	#0 to 1/4	.61	2.19	.56	1.16	1 Jacobs
4703	0047.003-00	1/8 to 3/8	#0 to 1/2	.93	2.50	.81	1.25	1 Jacobs
4704	0047.004-00	1/8 to 3/8	#0 to 1/2	.93	3.00	.81	1.62	33 Jacobs
4705	0047.005-00	3/16 to 1/2	#10 to 5/8	1.23	3.25	1.13	1.41	33 Jacobs

*Assembly includes all components except collets — collet part numbers are shown in tabulations at bottom of page.
C = depth that tool enters holder.



COLLETS AND REPLACEMENT PARTS

Series	Body	Collet‡			Nut	Set Screw	Spindle
	D	E	Dia.	Length	F	G	H
4701	0047.001-01	21471XXXX	.28	.38	2106.015-03	#10-32 x 1/4	1 Jacobs
4702	0047.002-01	21472XXXX	.40	.50	2106.016-03	5/16-24 x 3/8	1 Jacobs
4703	0047.003-01	21473XXXX	.61	.75	2106.017-03	7/16-20 x 3/8	1 Jacobs
4704	0047.004-01	21473XXXX	.61	.75	2106.017-03	7/16-20 x 3/8	33 Jacobs
4705	0047.005-01	21474XXXX	.82	1.06	2106.038-03	5/8-18 x 5/8	33 Jacobs

‡Add decimal equivalent of tool shank diameter in place of XXXX — order one collet for each tool size — double taper intersection diameter shown.
Loc-Wel set screw used on original equipment.

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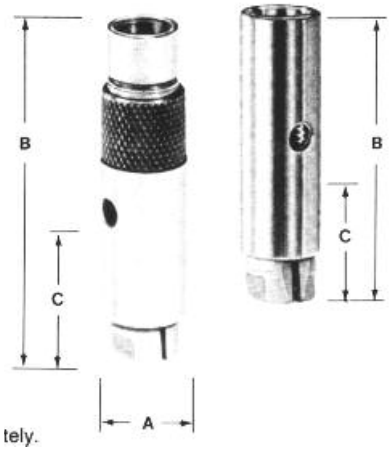
Designers & Manufacturers of Drilling & Tapping Solutions

Single Purpose Threaded Collet Tool Holders

Single purpose threaded collet tool holders are available with rigid grip or floating collets and may be used for accurate close center drilling or tapping operations. Style 1 tool holders utilize serrated spindles and have vertical adjustment. Vertical adjustment is accomplished by lifting the top collar on the body, repositioning the mating lock insert to another set of spindle serrations and returning the collar to its original position. Style 2 tool holders are used with Jacobs taper spindles on either multiple spindle heads or drill press spindles; but they do not have vertical adjustment feature.

Standard tooling is used with the rigid grip threaded collets. Drill drive is accomplished by using the tang of the readily available straight shank automotive series drills. Taps are driven by the shank square. On both drills and taps the round portion of the shank is clamped rigidly when the angular areas are tightened and resulting forces collapse the split collet.



tely.

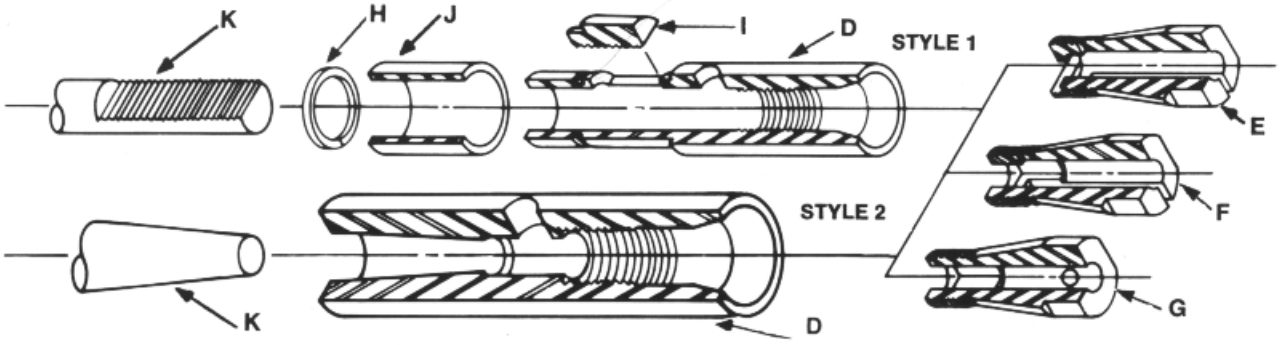
Ordering Information:

1. Order by part number as shown in tabulations; assembly includes all components except collets; collets and replacement parts are ordered separately.
2. Collets are single purpose, order one collet for each tool size; specify type of tool and size.
3. Tool holders on existing equipment are identified by the collet thread diameter, pitch and type of spindle.

SPECIFICATIONS

Series	Style	Assembly Part No.*	Capacity		DIMENSIONS				Spindle Dia./Taper
			Drill	Tap	A	B	C Drill	C Tap	
3800	1	3800.000-00	#60 to ¼	#0 to ¼	.63	2.31	.87	.75	.375 Serrated
4200	1	4200.000-00	#60 to 5/16	#0 to 5/16	.88	2.31	1.06	.81	.4375 Serrated
4300	2	4301.1A0-00	#60 to 5/16	#0 to 5/16	.88	2.06	1.06	.81	1 Jacobs
4300	2	4301.2A0-00	#60 to 5/16	#0 to 5/16	.88	2.06	1.06	.81	2 Jacobs
4400	2	4401.1A0-00	#60 to ¼	#0 to ¼	.56	1.88	.88	.75	1 Jacobs
5400	2	5401.0T0-00	#60 to 5/32	#0 to #10	.47	1.88	.84	.75	0 Jacobs XX

*Assembly includes all components except collets. Collet part numbers are shown in tabulation at bottom of page. XX 1 Jacobs Available
C = depth that tool enters holder. Style 1 holders have .25 vertical adjustment.



COLLETS AND REPLACEMENT PARTS

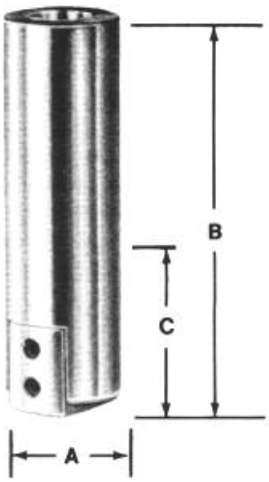
Series	Style	Body D	Collet E Drill	Collet F Tap-Rigid	Collet G Tap-Floating	Thread	Retaining Ring H	Spindle Lock I	Collar J	Spindle Dia./Taper K
3800	1	380100000	4402XXXXX	44030XXXX	4403FXXXX	3/8-24	380600000	660500000	660300000	.375 Serrated
4200	1	420100000	4202XXXXX	43020XXXX	NA	½-20	410510000	410200000	410400000	.4375 Serated
4300	2	43011A000	4202XXXXX	43020XXXX	NA	½-20	NR	NR	NR	1 Jacobs
4300	2	43012A000	4202XXXXX	43020XXXX	NA	½-20	NR	NR	NR	2 Jacobs
4400	2	44011A000	4402XXXXX	44030XXXX	4403FXXXX	3/8-24	NR	NR	NR	1 Jacobs
5400	2	54010T000	5402XXXXX	54030XXXX	5403FXXXX	5/16-24	NR	NR	NR	0 Jacobs

Part numbers with X to be completed by Ettco.
Order one collet for each tool size, identify tool and specify shank dia.
NA – Not available. NR – Not required.

Designers & Manufacturers of Drilling & Tapping Solutions

Single Purpose Insert Tool Holders

Single purpose insert drill, tap or reamer holders meet close center and true running tool requirements. Their rugged unique design features, such as preset overall tool lengths and vertical adjustment, will save set up and tool costs.



Preset overall tool lengths, important for blind hole drilling, may be accurately set away from the machine or multiple spindle head. One can imagine the difficulty of measuring and setting tools in a crowded area with close center spindles. Tooling changeover only requires an Allen wrench to loosen one set screw, removing the dull tool insert and installing another insert with sharpened tool. During the following production run another set of sharpened tools, using previously removed inserts, are reset for next changeover.

Vertical adjustment of insert will give up to 1/2 inch tool sharpening before machine stroke has to be adjusted.

Tap shank square is used for drive on tapping operations. Tap and drill shanks require modification for retention in insert, refer to page 8 for dimensions.

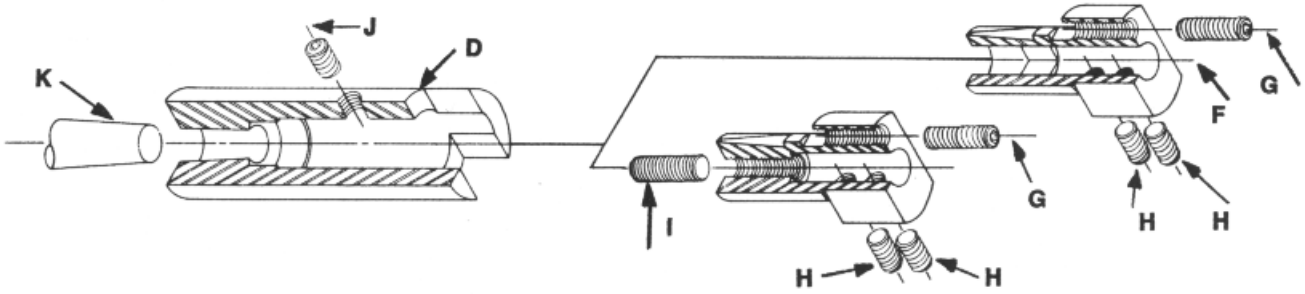
Ordering Information:

1. Order by part number as shown in tabulation; body and insert are sold separately.
2. Inserts are single purpose, order one insert for each tool size; identify type of tool and add the decimal equivalent of tool shank diameter in place of XXXX. EXAMPLE: Drill insert part number 5302BXXXX for 1/4 drill becomes 5302B2500. Tap insert part number 5303BXXX5 for 1/4 tap becomes 5303B2555.
3. Tool holders on existing equipment are identified by the “T” shaped insert and measuring the assembly outside diameter and overall length.

SPECIFICATIONS

Series	Capacity		DIMENSIONS				Spindle Taper
	Drill	Tap	A	B	C Drill	C Tap	
5300S	1/16 to 5/32	#0 to #8	.47	2.31	.84	.75	0 Jacobs
5300S	1/16 to 5/32	#0 to #8	.47	2.31	.84	.75	1 Jacobs
5300A	1/16 to 7/32	#0 to #10	.61	2.31	.84	.75	0 Jacobs
5300A	1/16 to 7/32	#0 to #10	.61	2.31	.84	.75	1 Jacobs
5300B	3/32 to 5/16	#0 to 5/16	.78	2.50	1.13	.94	1 Jacobs
5300C	3/16 to 7/16	#10 to 1/2	1.10	2.94	1.13	1.31	1 Jacobs
5300C	3/16 to 7/16	#10 to 1/2	1.10	2.94	1.13	1.31	33 Jacobs

Vertical adjustment for all series .50.
C = depth that tool enters holder.



REPLACEMENT PARTS

Series	Body Assy	Insert Assembly		V/ADJ Screw	Shank Screw	Thrust Screw	Insert Lock Scr.	Spindle Taper
	D	E-Drill	F-Tap	G	H	I	J	K
5300S	5301S0T00	5302SXXXX	5303SXXX5	#5-40 x 3/8	#6-32 x 3/16	#6-32 x 1/2	#8-32 x 1/8	0 Jacobs
5300S	5301S1A00	5302SXXXX	5303SXXX5	#5-40 x 3/8	#6-32 x 3/16	#6-32 x 1/2	#8-32 x 1/8	1 Jacobs
5300A	5301A0T00	5302AXXXX	5303AXXX5	#6-32 x 3/8	#6-32 x 3/16	#6-32 x 1/2	#10-32 x 3/16	0 Jacobs
5300A	5301A1A00	5302AXXXX	5303AXXX5	#6-32 x 3/8	#6-32 x 3/16	#6-32 x 1/2	#10-32 x 3/16	1 Jacobs
5300B	5301B1A00	5302BXXXX	5303BXXX5	#8-32 x 1/2	#8-32 x 1/4	#8-32 x 1/2	#10-32 x 3/16	1 Jacobs
5300C	5301C1A00	5302CXXXX	5303CXXX5	1/4-20 x 5/8	1/4-20 x 5/16	3/8-24 x 3/4	1/4-20 x 1/4	1 Jacobs
5300C	5301C3300	5302CXXXX	5303CXXX5	1/4-20 x 5/8	1/4-20 x 5/16	3/8-24 x 3/4	1/4-20 x 1/4	33 Jacobs

1. Body assembly includes insert lock screw “J” — insert assembly includes screws G. H. I. — body & insert assemblies are sold separately.
2. Part numbers with “X”—identify type of tool and add decimal equivalent of tool shank in place of X; Example: Drill insert 5302BXXXX for 1/4 drill becomes 5302B2500 or tap insert 5303BXXX5 for 1/4 tap becomes 5303B2555.

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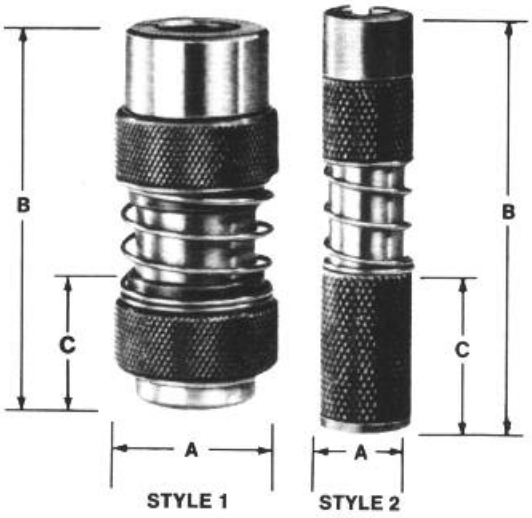
Designers & Manufacturers of Drilling & Tapping Solutions

Floating and Pitch Compensating Tap Holders

Floating tap holders provide lateral adjustment for operations having open tolerances on hole locations such as stampings or die castings. Pitch compensating tap holders are used to vertically compensate for variations between drill press spindle feed rate and tap lead. Also, they are used on multiple spindle heads, ratio 1:1, requiring taps of different leads.



Style 1 tap holders have vertical adjustment and lateral float. Vertical adjustment of tap is simple, no wrenches or special tools required; just lift knurled top collar and reposition mating serrations of holder and spindle. Float is pivotal and perpendicularity or accuracy of finished holes will be proportional to part hole location tolerances. The tap shank square is used for drive, while a loose running fit at the shank round area provides the float. Tap retention in the chuck is accomplished by an insert engaging a notch in the tap shank diameter.

Style 2 pitch compensating tap holders have vertical float in addition to the same features of style 1. Its design requires the drill press feed rate to be less than tap lead. Vertical float eliminates special drill press feed gears, lead screws or special multiple spindle head ratios.

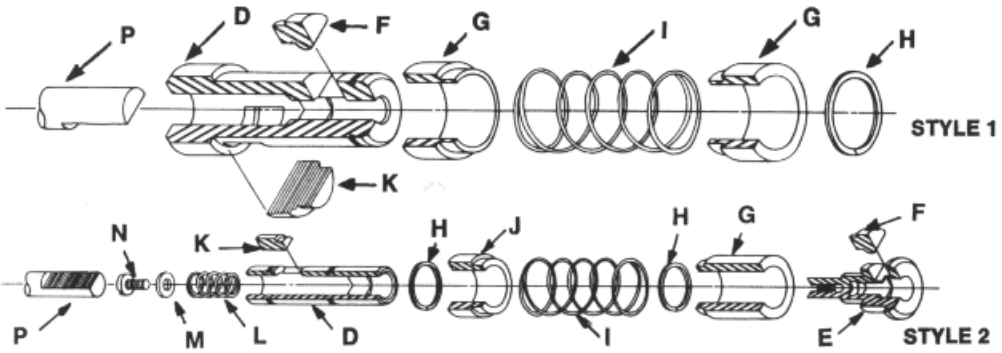
Ordering Information:

1. Order by part number; one assembly required for each tap size.
2. Specify tap size.
3. Tool holders on existing equipment are identified by the spindle size, outside diameter and length.

SPECIFICATIONS

Series	Style	Assembly Part No.	Tap Capacity	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	Vertical Adjustment	Serrated Spindle Diameter	Serrated Spindle Pitch
4000	1	4000.XXX-00	#0 to ¼	.75	1.94	.81	.25	.375	.040
4100	1	4100.XXX-00	#0 to 5/16	.91	1.94	.81	.25	.4375	.040
4600	1	4600.XXX-00	#10 to 13/16 1/16 to 3/8 NPT	1.25	2.78	1.13	.44	.625	.062
4600L	1	4600.LXX-X0	9/16 to 1 1/8 1/16 to ¾ NPT	1.63	2.88	.50*	.44	.625	.062
6000	2	6000.XXX-00	#0 to 5/16	.91	2.75	.66	.25	.4375	.040
6600	2	6600.XXX-00	#0 to ¼	.60	2.63	.66	.25	.375	.040

Part numbers with X to be completed by Ettco — specify tap size.
C = depth that tool enters holder.
*Dimension to bottom of shank square 4600L only.



REPLACEMENT PARTS

Series	Style	Body D	Tap Insert E	Tap Lock F	Bottom Collar G	Retaining Ring H	Collar Spring I	Top Collar J	Spindle Lock K	Compensating Spring L	Washer M	Screw N	Serrated Spindle Dia. P
4000	1	4001XXX00	NR	4003XXX00	400400000	400500000	400600000	NR	400200000	NR	NR	NR	.375
4100	1	4101XXX00	NR	4103XXX00	410400000	410520000	410600000	NR	410200000	NR	NR	NR	.4375
4600	1	4601XXX00	NR	4603XXX00	46040000	460500000	460600000	NR	460200000	NR	NR	NR	.625
4600L	1	4601LXXX0	NR	4603LXXX0	4604L000	4605L0000	4606L0000	NR	4602L0000	NR	NR	NR	.625
6000	2	600100000	6002XXX00	4103XXX00	600300000	410520000	410600000	410400000	410200000	600500000	600600000	600400000	.4375
6600	2	660100000	6602XXX00	6606XXX00	660400000	NR	660900000	660300000	660500000	660700000	NR	660800000	.375

Part numbers with X to be completed by Ettco — specify tap size and original equipment serial numbers.
NR — Not required.

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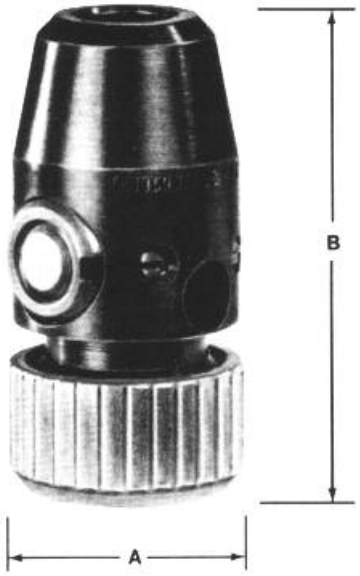
Visible-Grip Adjustable Tap Holders

Designers & Manufacturers of Drilling & Tapping Solutions

VISIBLE-GRIP adjustable tap holders are accurate, practical and lightweight. Tap changing is simple since one holder accurately adjusts to all tap sizes within its range.

There are two sets of jaws to guarantee true-running, powerful grip and positive drive. One set of adjustable precision-ground jaws center the tap by gripping on the shank diameter. Another set of adjustable jaws grip the tap square for positive rigid drive. There are NO loose parts such as collets and sleeves.

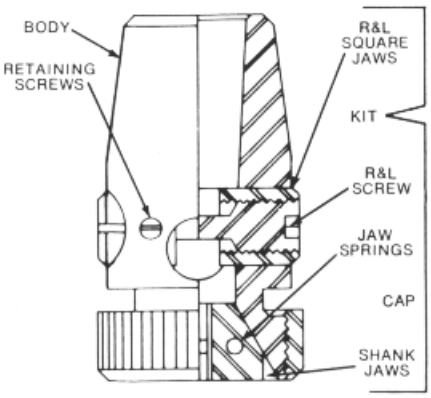
VISIBLE-GRIP tap holders are ideal for use on automatic or hand screw machines or drill presses with reversing motors. They are a proven product which has been used on Ettco high speed friction drive tappers for decades.



Ordering Information:
1. Order by part number as shown in tabulation.
2. Specify quantity.

REPLACEMENT PARTS					
Series	Body No.	Rebuilding Kit No. ‡	Chuck No.	Body No.	Rebuilding Kit No. ‡
1A	5561.068-01	5561.900-00	4D	5564.061-01	5564.900-00
1E	5561.060-01	5561.900-00	4E	5564.060-01	5564.900-00
2E	5562.060-01	5561.900-00	5D	5564.066-01	5565.900-00
3C	5563.061-01	5563.900-00	5E	5564.065-01	5565.900-00
3D	5563.062-01	5563.900-00	5J	5564.067-01	5565.900-00
3E	5563.060-01	5563.900-00			

‡Note: Rebuilding kit includes cap, shank jaws, jaw springs, R&L screw, R&L square jaws and retaining screws.



SPECIFICATIONS								
Series	Part Number	Capacity* Hand Tap	Capacity* Pipe Tap	Used on Tapper	Body Hole Taper/Straight	Dimensions A†	Dimensions B†	Dimensions C
1A	5561.068-00	No. 0 to ½	1/16 & 1/8SS	—	1 Jacobs	1.50	2.69	1.44
1E	5561.060-00	No. 0 to ½	1/16 & 1/8SS	1B	20 Ettco	1.50	2.69	1.44
2E	5562.060-00	No. 0 to ½	1/16 & 1/8SS	2B	2 Jacobs	1.50	2.69	1.44
3C	5563.061-00	No. 10 to 5/8	1/16 & 1/8	—	2 Jacobs	1.69	3.31	1.87
3D	5563.062-00	No. 10 to 5/8	1/16 & 1/8	—	3 Jacobs	1.69	3.31	1.87
3E	5563.060-00	No. 10 to 5/8	1/16 & 1/8	3B	.6855 Dia.	1.69	3.31	1.87
4D	5564.061-00	¼ to ¾	1/16 to ¼	—	3 Jacobs	1.75	3.31	1.94
4E	5564.060-00	¼ to ¾	1/16 to ¼	4B	7 Jarno	1.75	3.31	1.94
5D	5564.066-00	5/16 to 1"	3/8 & ½	—	3 Jacobs	2.37	3.81	1.87
5E	5564.065-00	5/16 to 1"	3/8 & ½	5B	7 Jarno	2.37	3.81	1.87
5J	5564.067-00	5/16 to 1"	3/8 & ½	—	8¾ Jarno	2.37	3.81	1.87

*Refer to A.S.A. standards for square, shank and overall length dimensions. Caution, pipe tap projection from chuck is small and clearances should be checked. Tap projection equals tap overall length + dim "C" — dim "B".

†Dimensions shown are maximum and will decrease as tap size decreases.

SS = Small shank 1/8 pipe tap.

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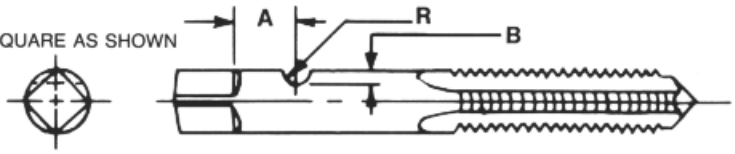
Designers & Manufacturers of Drilling & Tapping Solutions

Tap and Drill Shank Modification Dimensions

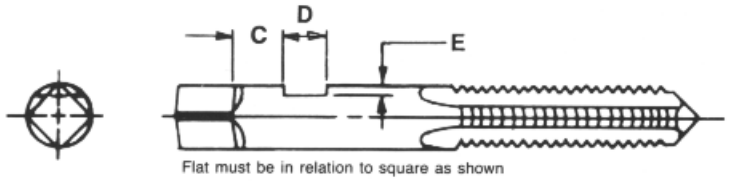
NOTCH MUST BE IN RELATION TO SQUARE AS SHOWN



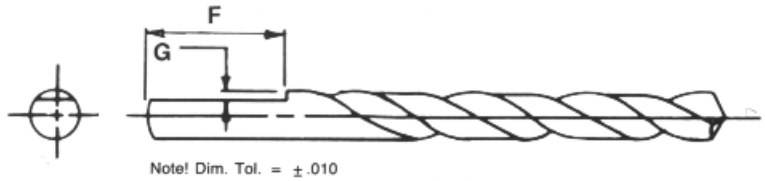
Holder or Collet Series	Dim. Tol. = ±.010	HAND TAP SIZES													
		0-6	8	10	12	1/4	5/16	3/8*	3/8	7/16	1/2	9/16	5/8	11/16	3/4
40.00-41.00 60.00-66.00	A	.219	.156	.156	.125	.125	.094	.094	.094	0	—	—	—	—	—
	B	.051	.054	.057	.060	.062	.074	.062	.070	.076	—	—	—	—	—
	R	.093	.093	.093	.093	.093	.093	.093	.093	.093	—	—	—	—	—
44.03F 54.03F	A	.188	.188	.188	.188	.188	—	—	—	—	—	—	—	—	—
	B	.050	.050	.050	.055	.055	—	—	—	—	—	—	—	—	—
	R	.093	.093	.093	.093	.093	—	—	—	—	—	—	—	—	—
46.00	A	—	—	.375	.343	.343	.313	.250	.250	.219	.188	.125	0	0	0
	B	—	—	.054	.057	.059	.066	.059	.067	.073	.073	.070	.070	.070	.070
	R	—	—	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125
46.00L	A	—	—	—	—	—	—	—	—	—	—	.031	.031	.031	.031
	B	—	—	—	—	—	—	—	—	—	—	.092	.092	.092	.092
	R	—	—	—	—	—	—	—	—	—	—	.125	.125	.125	.125

*Note! Shank smaller than standard

Holder Series	Dim. Tol. = ±.010	HAND TAP SIZES						PIPE TAP SIZES						
		13/16	7/8	15/16	1	1 1/16	1 1/8	1/16	1/8*	1/8	1/4	3/8	1/2	3/4
46.00	A	0	—	—	—	—	—	.25	.25	.25	.19	.18	—	—
	B	.070	—	—	—	—	—	.063	.063	.075	.070	.070	—	—
	R	.125	—	—	—	—	—	.125	.125	.125	.125	.125	—	—
46.00L	A	.031	.031	.031	.031	.031	.031	—	—	—	.031	.031	.031	.031
	B	.092	.092	.092	.092	.092	.092	—	—	—	.092	.092	.092	.092
	R	.125	.125	.125	.125	.125	.125	—	—	—	.125	.125	.125	.125



Flat must be in relation to square as shown



Note! Dim. Tol. = ±.010

Series	C	D	E	F	G
5300S	.218	.187	.046	.750	.015
5300A	.218	.187	.046	.750	.031
5300B	.281	.187	.046	1.062	.046
5300C	.500	.265	.046	1.062	.046

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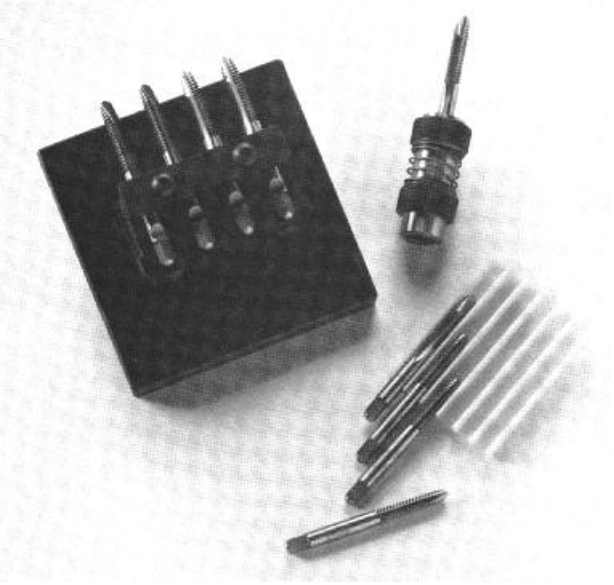
ROCKFORD ETTCO PROCUNIER

Tap Notch Grinding Fixture #0750.000-00

Designers & Manufacturers of Drilling & Tapping Solutions



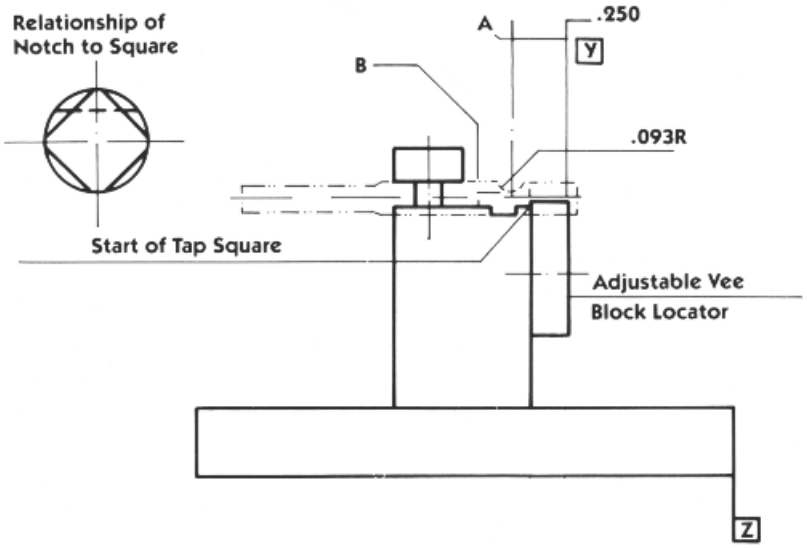
Cost-saving accessory for tap chucks
Convenient tap notch grinding fixture allows you to surface grind notch into tap shank.

Tap notch, which provides tap with radial float and allows it to self-align with the hole, is required when using taps in chucks and heads.

The fixture holds up to four taps and provides easy set-up and proper orientation on surface grinder. Unit is made of hardened tool steel and features spring-release clamp for quick, easy tap removal.

How to set-up and use notch grinding fixture.
1. Release adjustable Vee block locator
2. Place taps in the end Vees and orient square
3. Adjust Vee locator to tap square and clamp
4. Dress the surface grinding wheel to .093 radius
5. Clamp fixture to table and ensure that surface Z is parallel to the axis of the table
6. Locate surface Y and move over dimension A + .250 inches
7. Grind to depth B

Tap Shank Modification Dimensions



Holder or Collet Series	Dim. Tol. = ±.010	Hand Tap Sizes													
		0-6	8	10	12	1/4	5/16	3/8*	3/8	7/16	1/2	9/16	5/8	11/16	3/4
40.00-41.00 60.00-66.00	A	.219	.156	.156	.125	.125	.094	.094	.094	0	—	—	—	—	—
	B	.051	.054	.057	.060	.062	.074	.062	.070	.076	—	—	—	—	—
	R	.093	.093	.093	.093	.093	.093	.093	.093	.093	—	—	—	—	—
44.03F 54.03F	A	.188	.188	.188	.188	.188	—	—	—	—	—	—	—	—	—
	B	.050	.050	.050	.055	.055	—	—	—	—	—	—	—	—	—
	R	.093	.093	.093	.093	.093	—	—	—	—	—	—	—	—	—

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