

CHECK OUT THE REST OF ALL AMERICAN'S LINE OF LOCATING PINS AND BUSHINGS



L-PINS



TP-INS



LOCKING L-PINS



LOCKING T-PINS



JIG PINS



JIG GAGE PINS



CLAMPING PIS



JIG REST BUTTONS



ROUND REST BUTTONS



SCREW REST BUTTONS



LOCKING LOCATING PINS
ROUND AND RELIEVED



PILOT PIND



CONE LOCATING PINS
AND BUSHINGS



LOCATING PINS
ROUND AND RELIEVED



FLANGLESS LOCATING PINS
ROUND AND RELIEVED



SCREW LOCATING PINS
ROUND AND RELIEVED



BULLET NOSE PINS



BULLET NOSE DOWELS

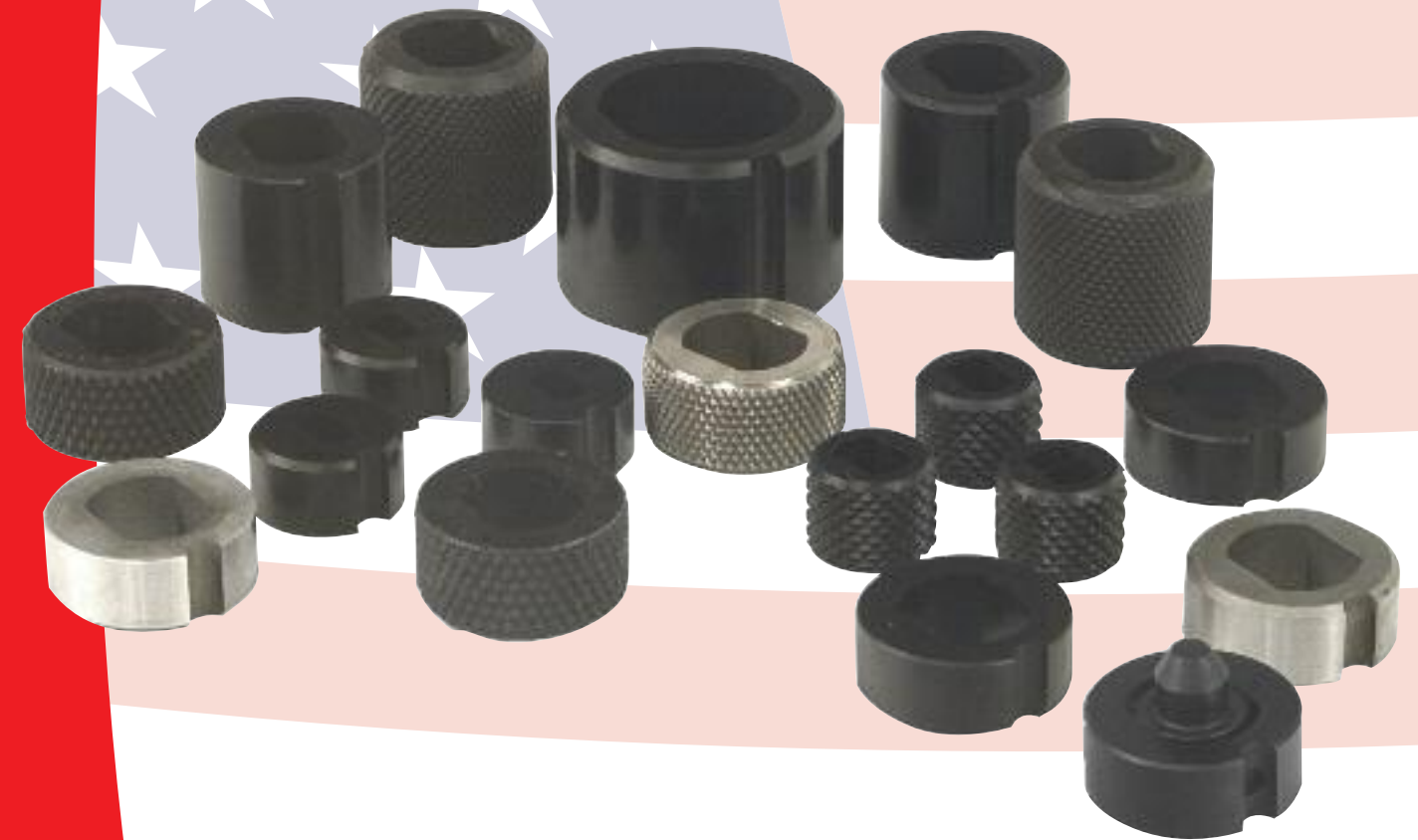
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FORM: BR18-811

Bushing and
Workholding Solutions
**all
american**®

SLOTTED LOCATOR BUSHINGS



All American Slotted Locator Bushings are specifically design to be useful when aligning two holes without binding. Our Slotted Locator bushings can be used with any of our L Pins, T Pins, Locating Pins, Pilot Pins Bullet Nose Pins and Dowels or Single Acting Kwik Lok pins. Call for special sizes and lengths. Also available in Stainless steel. Made in USA.

Slotted Locator Bushings for hard tooling. Use with "L" or "T" pins. Refer to the master round press fit bushing section of our main catalog for a complete selection, used with the locator bushings.

FEATURES & BENEFITS

- Cuts tool fabrication costs.
- Reduces loading & unloading time.
- Limits binding, pin breakage and shearing of holes due to slight misalignment.
- Perfect for use on high production tooling.

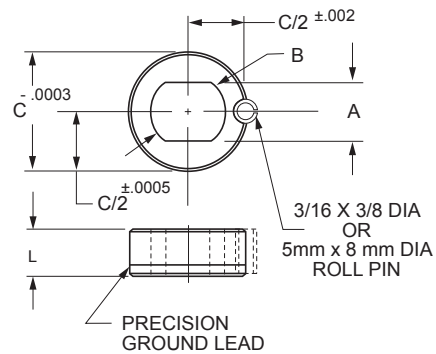
INSTALLATION

- Drill and ream a 3/16 hole, 5mm for metric sizes, for the roll pin.
- Bore mounting hole to provide minimum diametral interference, 0.0003 to 0.0005 inch, .0076 to .0127 mm, is generally adequate.
- Press slotted locator bushing and roll pin together until flush with top of plate. The roll pin sets a precise

alignment between slotted hole and layout axis.

MATERIAL

Slotted Locator Bushings are available in steel, stainless steel (303, 316, 420, 440, 17-4PH) and carbide. For ordering purposes, add "C" for carbide or 303SS, 316SS, 420SS, 440SS or 17-4PH for stainless steel on the end of the part number. Example - **178-25-303SS**.



PRESS FIT SLOTTED LOCATOR BUSHINGS

Case Hardened and Ground - Black Oxide Finish

P/N	DIMENSIONS			
	A	B	C	L
178-00	.1876 / .1882	.312	.7504	.400
178-05	.2501 / .2507	.375	.7504	.400
178-10	.2501 / .2507	.375	1.0004	.400
178-15	.3126 / .3132	.437	1.0004	.400
178-20	.3751 / .3757	.500	1.0004	.400
178-25	.5001 / .5007	.625	1.0004	.400
178-30	.5001 / .5007	.625	1.0004	.900
178-35	.6251 / .6257	.750	1.2504	.900
178-40	.7501 / .7510	.812	1.5004	1.000
178-45	.8751 / .8760	1.000	1.5004	1.000
178-50	1.0001 / 1.0010	1.062	1.5004	1.000

METRIC PRESS FIT SLOTTED LOCATOR BUSHINGS

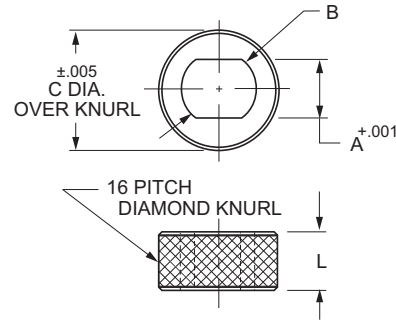
Case Hardened and Ground - Black Oxide Finish

P/N	DIMENSIONS			
	A	B	C	L
179-50	6.00/6.03mm	9mm	20mm	9mm
	.2363/.2373	.354	.7874	.354
179-55	8.00/8.03mm	11mm	24mm	9mm
	.3151/.3161	.433	.9449	.354
179-60	10.0/10.30mm	13mm	24mm	9mm
	.3938-.3948	.512	.9449	.354
179-65	12.0/12.30mm	15mm	24mm	14mm
	.4725-.4735	.591	.9449	.551
179-70	16.00/16.30mm	18mm	30mm	12mm
	.6300/.6310	.709	1.1811	.472
179-75	20.00/20.30mm	22mm	36mm	19mm
	.7875/.7885	.866	1.4173	.748
179-80	25.00/25.30mm	27mm	40mm	19mm
	.9844-.9854	1.063	1.5748	.748

The Knurled Locator Bushing for use with many soft tooling.

MATERIAL

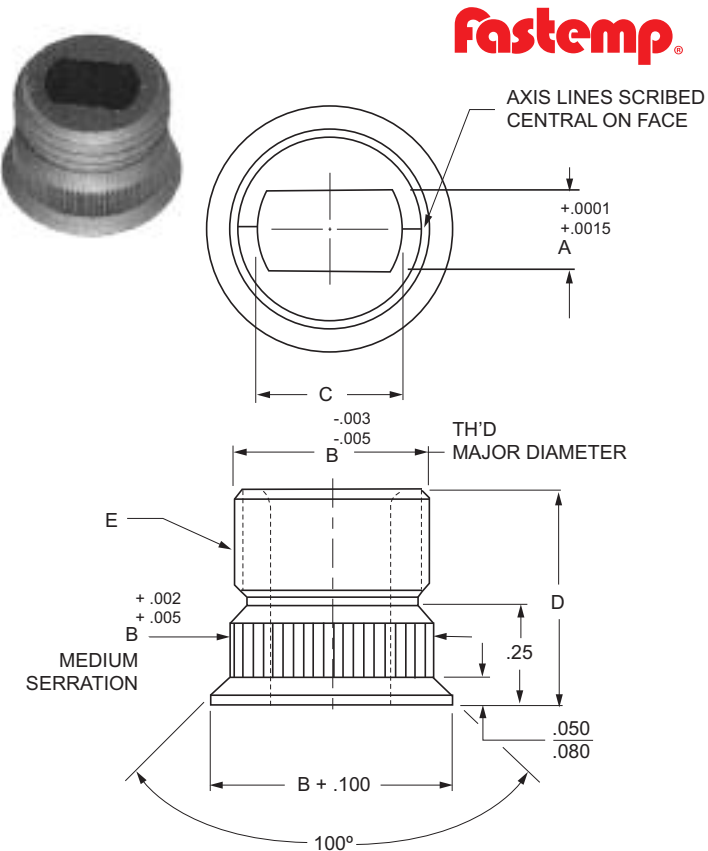
Knurled Locator Bushings are available in steel and stainless steel (303, 316, 420, 440, 17-4PH.) For ordering purposes add 303SS, 316SS, 420SS, 440SS or 17-4PH for stainless steel on the end of the part number. Example - **179-20-303SS**.



DIAMOND KNURLED LOCATOR BUSHINGS

Case Hardened and Ground - Black Oxide Finish

P/N	DIMENSIONS			
	A	B	C	L
179-00	.1876	.312	.565	.500
179-05	.2501	.375	.640	.500
179-10	.3126	.437	.765	.500
179-15	.3751	.500	.890	.500
179-20	.5001	.625	1.015	.500
179-25	.5001	.625	1.015	1.000



Floating Locator Pin Bushings use precise location on one axis while having a floating location on the opposite axis. These are usually used with a fixed locator pin to locate from two holes in a workpiece. Floating Locator Pin Bushings can replace relieved locator pin.

FEATURES & BENEFITS

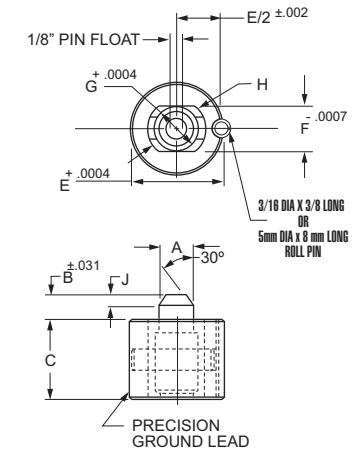
- Hold fixture location to within ±.050.
- Ideal for mastertool coordination.
- Eliminate jig boring.
- Numerical control tooling.

INSTALLATION

- Drill and ream a 3/16 hole, 5mm for metric sizes, for the roll pin.
- Bore mounting hole to provide minimum diametral interference, 0.0003 to 0.0005 inch, .0076 to .0127 mm, is generally adequate.
- Press slotted locator bushing and roll pin together until flush with top of plate. The roll pin sets a precise alignment between slotted hole and layout axis.

MATERIAL

Floating Locator Pin Bushings are available in steel and stainless steel (303, 316, 420, 440, 17-4PH.) For ordering purposes add 303SS, 316SS, 420SS, 440SS or 17-4PH for stainless steel on the end of the part number. Example - **445-00-303SS**.



FLOATING LOCATOR PIN BUSHINGS

Case Hardened and Ground - Black Oxide Finish

P/N	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	
445-00	.2500/.2495	.300	.400	.500	1.00	.500	.500	.625	1/8	
445-05	.3125/.3120	.300	.400	.500	1.00	.500	.500	.625	1/8	
445-10	.3750/.3745	.300	.400	.500	1.00	.500	.500	.625	1/8	
445-15	.5000/.4995	.300	.400	.500	1.00	.500	.500	.625	1/8	
445-20	.6250/.6245	.310	.400	.500	1.00	.500	.500	.625	1/8	
445-25	.2500/.2495	.300	.900	.500	1.00	.500	.500	.625	1/8	
445-30	.3125/.3120	.300	.900	.500	1.00	.500	.500	.625	1/8	
445-35	.3750/.3745	.300	.900	.500	1.00	.500	.500	.625	1/8	
445-40	.5000/.4995	.300	.900	.500	1.00	.500	.500	.625	1/8	
445-45	.6250/.6245	.310	.900	.500	1.00	.500	.500	.625	1/8	

THREADED TEMPLATE LOCATOR BUSHINGS

P/N	A	B O.D.	C	D	E	RETAINER RINGS	
						P/N	TEMPLATE THICKNESS
THTL-40-1/8	1/8 .1251					THTR-40-6	1/64-1/8
						THTR-40-5	9/64-3/16
						THTR-40-3	13/64-3/8
THTL-40-#30	#30 .1286					THTR-40-6	1/64-1/8
						THTR-40-5	9/64-3/16
						THTR-40-3	13/64-3/8
THTL-40-#20	#20 .1611		1/4			THTR-40-6	1/64-1/8
						THTR-40-5	9/64-3/16
						THTR-40-3	13/64-3/8
THTL-40-3/16	3/16 .1876					THTR-40-6	1/64-1/8
						THTR-40-5	9/64-3/16
						THTR-40-3	13/64-3/8
THTL-40-#10	#10 .1936	.625		1/2	5/8-18 LH	THTR-40-6	1/64-1/8
						THTR-40-5	9/64-3/16
						THTR-40-3	13/64-3/8
THTL-40-1/4	1/4 .2501		3/8			THTR-40-6	1/64-1/8
						THTR-40-5	9/64-3/16
						THTR-40-3	13/64-3/8
THTL-48-5/16	5/16 .3126		7/16			THTR-48-6	1/64-1/8
						THTR-48-5	9/64-3/16
						THTR-48-3	13/64-3/8
THTL-48-3/8	3/8 .3751		1/2			THTR-48-6	1/64-1/8
						THTR-48-5	9/64-3/16
						THTR-48-3	13/64-3/8
THTL-48-1/2	1/2 .5001	.750	1/2	3/4-16 LH		THTR-48-6	1/64-1/8
						THTR-48-5	9/64-3/16
						THTR-48-3	13/64-3/8
THTL-64-5/8	5/8 .6251		3/4			THTR-64-6	1/64-1/8
						THTR-64-5	9/64-3/16
						THTR-64-3	13/64-3/8
THTL-64-3/4	3/4 .7501	1.000	13/16	5/8	1"-14 LH	THTR-64-6	1/64-1/8
						THTR-64-5	9/64-3/16
						THTR-64-3	13/64-3/8