

Modular XYZ Xpansion™ Pins



NEW

MITEE-BITE Products releases the new Modular XYZ Xpansion™ Pins for Tombstone, Grid Plate and Fixture Plate applications. The unique, patent pending design provides accurate location, repeatability and high holding forces for securing parts on the inside diameter. The XYZ Pin provides “out of the way workholding” and accessibility to all work surfaces with absolutely no external clamping interference. The Threaded Pin is available in standard sizes of 1/2, 5/8, M12 and M16 for tombstones and grid plates. The Press Fit Pins are available in 1/4, 3/8, 1/2, 5/8, M6, M10, M12 and M16 diameters for custom applications. Both styles of the pins are manufactured from “heat treatable” 17-4PH stainless steel. The Press Fit Pins are now also available in 12L14 mild steel. The Pins expand up to 0.030" (0.7mm) and the diameter can be machined for specific applications. The top of the Pins have a slight taper creating maximum line contact in bore and provides clearance during load/unload. Designed for quick set-ups on secondary operations, material coming off prep stations, water-jets or even applications outside of your machining centers!

**PRESS FIT
NOW AVAILABLE
IN 12L14**



Install pin body



Install tapered drive screw



Raw stock on pins



Op 1



Op 2 including c'bore on same fixture

Continuous Improvement Programs = Innovation!

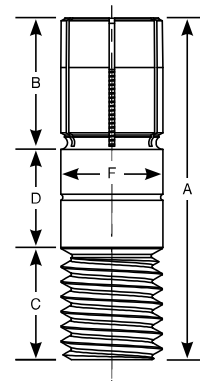
PATENT PENDING #62/254,456

THREADED PINS in 17-4PH



Threaded XYZ Pins incorporate an internal rotary broached hex for simple installation and removal from a tombstone, grid plate or fixture plate. Threaded Pins may be installed in a drilled and reamed hole for precise location or set in a hardened drill bushing for additional strength and wear resistance.

To install a Threaded XYZ Pin in a precision bore, drill/tap accordingly and ream the hole over the nominal diameter minimum of +0.0001 to +0.0005". (+.003 to +0.013mm)



Part Number	External Thread	A	B	C	D	F (+/-) .000/.001" (.000/.025mm)	G*	Replacement Tapered Screw	Tapered Screw Thread x Length
31850	1/2"-13	1.625"	0.60"	0.53"	0.50"	.500"	0.413"	31010	1/4-20 x 1 1/4
38850	M12-1.75	40mm	15mm	13mm	12.00mm	12.00mm	10.5mm	38010	M6-1 x 30mm
31860	5/8" -11	1.875"	0.62"	0.62"	0.62"	.625"	0.472"	31020	5/16-18 x 1 1/4
38860	M16-2	45mm	16mm	13mm	16.00mm	16.00mm	12mm	38020	M8-1.25 x 30mm

*G minimum diameter pin can be machined or turned down to **Torque of Pin body needs to exceed torque of Tapered screw
Tapered screw included with pin.

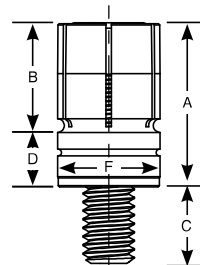
PRESS FIT PINS *All sizes available in both 17-4PH and 12L14*



Pins are intended for press fit or close tolerance removable slide fit applications. Install in a precision bore or a bushing with the center threaded for the Tapered screw. If precise location is not necessary, pin can be used on top of fixture plate. An accessory kit

is available to make Installation and Removal (I/R) of the XYZ Pins quick and easy.

NOTE: If recessing pin into fixture beyond slits be sure to provide clearance for expanding segments.



17-4PH Part Number	12L14 Part Number	Description	A	B	C	D	F (+/-) .000/.001" (.000/.025mm)	G*	Replacement Tapered Screw	Tapered Screw Thread x Length	Installation/ Removal (I/R) Kit**
31730	31630	Press Fit 1/4"	.500"	0.27"	.29"	.23"	0.250"	.219"	31731S	5-40 x 5/8	31720
38730	38630	Press Fit 6mm	13mm	7mm	7.3mm	5.8mm	6.00mm	5.5mm	38731S	M3-0.5 x 16mm	38720
31740	31640	Press Fit 3/8"	.750"	0.50"	.33"	0.25"	0.375"	0.281"	31002S	8-32 x 7/8	31721
38740	38640	Press Fit 10mm	19mm	12.7mm	8.4mm	6.35mm	10.00mm	7.5mm	38002S	M4-0.7 x 22mm	38721
31750	31650	Press Fit 1/2"	.750"	0.50"	.45"	0.25"	.500"	0.413"	31010S	1/4-20 x 7/8	31722
38750	38650	Press Fit 12mm	19mm	12.7mm	11.1mm	6.35mm	12.00mm	10.5mm	38010S	M6-1 x 22mm	38722
31760	31660	Press Fit 5/8"	.750"	0.50"	.52"	0.25"	.625"	0.472"	31020S	5/16-18 x 7/8	31723
38760	38660	Press Fit 16mm	19mm	12.7mm	13mm	6.35mm	16.00mm	12mm	38020S	M8-1.25 x 22mm	38723

*G minimum diameter pin can be machined or turned down to **Kit includes screws (2) SHCS
Tapered screw included with pin.

SPECIFIC FEATURES/INSTALLATION



Figure 1

PRESS FIT INSTALLATION:

Place Pin in prepared bore, place I/R Tool over pin as shown in figure 1. Using the smaller socket head cap screw (SHCS) provided, thread into fixture to evenly draw down pin. Remove SHCS and replace with Tapered screw when ready to use.



Figure 2

PRESS FIT REMOVAL:

Place the I/R Tool over the clamp as shown in figure 2, thread the larger SHCS into the "internal threads" of the Pin and tighten the screw to extract the Pin.

NOTE: It is recommended to fit Pin with a drill bushing when the Pin must be frequently removed. Or drill and ream the bore hole over the nominal diameter minimum of +0.0001 to +0.0005" (+0.003 to +0.013mm)