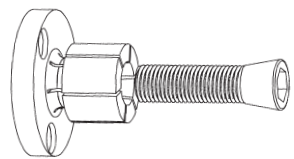
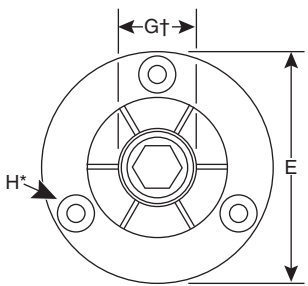
MITEE-BITE PRODUCTS LLC
340 Route 16B • Center Ossipee, NH 03814
800-543-3580 • 603-539-4538 • Fax: 603-539-2183
MiteeBite.com

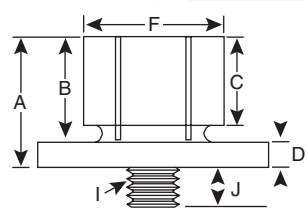
Cad files available online

MADE IN THE USA

ID Xpansion™ Clamp Instructions







G† - Minimum diameter the "F" dimension can be machined or turned down to.

H* - (3) Mounting Screws included - (4) for model numbers #9 & #10.

**Model #10 Made from 7075-T6511 aluminum.

Model #00 - #6

- Machine a counterbore in a fixture to fit the flange OD dimension specified in column "E" to the desired depth. Drill and tap the ID Clamp mounting holes per the thread type specified in column "H". Drill and tap a threaded hole specified in column "I" to a minimum full thread depth specified in column "J" and located in the center of the counterbore for the tapered screw.
- Expand ID Clamp approximately .003" over the fully relaxed diameter and using either a lathe, or a mill machine it down to fit the workpiece, typically the low limit size of the workpiece bore. If machining the ID Clamp on a lathe, use the hex nut provided against the back of the ID Clamp to tighten the tapered screw. The supplied hex nut is typically only used for machining the ID Clamp, not for in-service use.
- Maximum recommended expansion from fully relaxed for the #00 through #6 ID Clamps is as follows: #00 Ø.005"; #0 Ø.010"; #1 Ø.013"; #2 Ø.015"; #3 Ø.015"; #4 Ø.015"; #5 Ø.015"; #6 Ø.015".

Model #7 - #10

- In addition to the general instructions for using the #00-#6 ID Clamps to left, a Locking Ring (LR) is supplied to ensure the clamping segments remain rigid while machining the larger ID Clamps to the required size. #9 and #10 ID Clamps are supplied with 2 Locking Rings, the 2nd smaller Locking Ring is supplied in the event the ID Clamp is machined smaller than the diameter of the larger LR groove.
- Insert the Locking Ring into the provided face groove of the ID Clamp and tighten the Tapered Screw to approximately 40 Ft/Lbs. Machine ID Clamp to within +Ø.003 to +Ø.005" over the low limit bore size of the workpiece. Loosen the Tapered Screw to remove the Locking Ring and test fitment with workpiece. If workpiece fitment is too tight, repeat the machining process to achieve as close a fit to the low limit size of the workpiece bore as is desired for the application.
- Maximum recommended expansion from fully relaxed for the #7 through #10 ID Clamps is as follows: #7 Ø.015"; #8 Ø.015"; #9 Ø.020"; #10 Ø.080".

GENERAL NOTES - ID Clamps #00 through #9 are manufactured from 12L14 "Free Machining" low carbon steel. The #10 ID Clamp is manufactured from 7075-T6511 "High Strength" aluminum alloy. Overly aggressive material removal rates/practices are not recommended when machining "to size" due to the deep relief groove and segmenting (slotting) that provides for the characteristic expansion qualities of our ID Clamps.

Longer length tapered screws are available for all ID Clamps by adding an "L" to the end of the standard tapered screw part number, with the exception of 5/8-11 Inch P/N 31072 use P/N 31052L. For blind hole applications, please see our Manual Actuators, or call for availability of custom screws, or for other options.

Part No.	Model No.	A	B	C	D	+.000 E -.002	F	Max. Expansion Not To Exceed	G†	H*	I	J	Max. Torque (Ft/Lbs)	Holding Force (Lbs)	Repl. Tapered Screw
31000	#00	.42	.30	.24	.12	.787	.29	.005	.16	2-56 on .540 BHC	2-56 x 1/4	.16	0.5	250	31001
31050	#0	.86	.63	.59	.23	1.170	.49	.010	.28	6-32 on .825 BHC	8-32 x 1	.30	3.6	950	31002
31100	#1	.98	.75	.59	.23	1.240	.56	.013	.48	6-32 on .910 BHC	1/4-20 x 1 1/4	.50	13.3	1,900	31010
31150	#2	.98	.75	.59	.23	1.476	.79	.015	.53	6-32 on 1.140 BHC	5/16-18 x 1 1/4	.56	27.6	2,500	31020
31200	#3	1.13	.88	.69	.25	1.968	1.06	.015	.71	8-32 on 1.550 BHC	3/8-16 x 1 1/2	.71	49.3	4,500	31032
31250	#4	1.25	1.00	.81	.25	2.205	1.39	.015	.90	8-32 on 1.790 BHC	1/2-13 x 1 1/2	.71	120.0	5,900	31042
31300	#5	1.56	1.25	1.06	.31	2.736	1.65	.015	1.15	10-32 on 2.200 BHC	5/8-11 x 1 3/4	.79	224.0	10,000	31052
31350	#6	1.56	1.25	1.06	.31	2.972	2.03	.015	1.15	10-32 on 2.515 BHC	5/8-11 x 1 3/4	.79	224.0	10,000	31052
31400	#7	1.79	1.48	1.27	.31	4.232	3.06	.015	1.15	1/4-20 on 3.646 BHC	5/8-11 x 2	.79	224.0	10,000	31072
31450	#8	1.79	1.48	1.27	.31	5.232	4.06	.015	1.15	1/4-20 on 4.648 BHC	5/8-11 x 2	.79	224.0	10,000	31072
31500	#9	1.79	1.48	1.27	.31	5.232	6.89	.020	1.15	1/4-20 on 4.648 BHC	5/8-11 x 2	.79	224.0	10,000	31072
31550	#10**	1.79	1.48	1.27	.31	6.000	9.85	.080	1.15	1/4-20 on 5.250 BHC	5/8-11 x 2	.79	125.0	6,000	31072