



PHZ

Press-in Hex Zerts

FEATURES

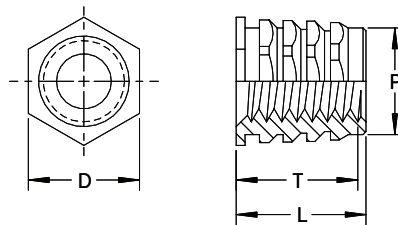
- Simple press-in installation for most thermoplastics.
- Hexagonal barbs provide high pull-out and torque-out resistance.
- Available in a wide variety of thread sizes.



PART DESCRIPTION EXAMPLE

PHZ	—	632	—	230	—	SS
T		T		T		T
Series Code		Insert Thread Code		Insert Length Code		Material Code ¹

(1) SS material code designates stainless steel and is the standard insert material. Inserts also available in aluminum—replace SS material code with AL. Custom materials and finishes available by request.



Insert
Series Code PHZ

GENERAL

	Insert Thread	Insert Thread Code	L Insert Length Max.	Insert Length Code	Boss		D Width Across Flats	P Pilot Diameter Max.	T Full Thread Depth Min. ²
					B Hole Dia. +.003 -.000	W Wall Thickness Min.			
INCH	2-56	256	.230	230	.187	.157	.187	.186	.212
	4-40	440	.230	230	.187	.157	.187	.186	.212
	6-32	632	.230	230	.187	.157	.187	.186	.212
	8-32	832	.265	265	.250	.188	.250	.249	.248
	10-24	1024	.265	265	.250	.188	.250	.249	.248
	10-32	1032	.265	265	.250	.188	.250	.249	.248
	1/4-20	2520	.315	315	.312	.219	.312	.311	.300
	1/4-28	2528	.315	315	.312	.219	.312	.311	.300
	5/16-18	3118	.365	365	.375	.288	.375	.374	.345
	5/16-24	3124	.365	365	.375	.288	.375	.374	.345

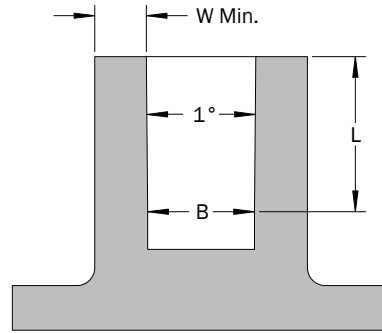
- (1) All dimensions are in inches and reference unless toleranced.
- (2) Although thread is tapped thru, thread go-gauge may not pass beyond the T dimension.

	Insert Thread	Insert Thread Code	L Insert Length Max.	Insert Length Code	Boss		D Width Across Flats	P Pilot Diameter Max.	T Full Thread Depth Min. ²
					B Hole Dia. +0.08 -0.00	W Wall Thickness Min.			
METRIC	M3 x 0.5	M3	5.84	5.84	4.75	3.98	4.75	4.72	5.38
	M3.5 x 0.6	M3.5	5.84	5.84	4.75	3.98	4.75	4.72	5.38
	M4 x 0.7	M4	6.73	6.73	6.35	4.77	6.35	6.32	6.30
	M5 x 0.8	M5	6.73	6.73	6.35	4.77	6.35	6.32	6.30
	M6 x 1.0	M6	8.00	8.00	7.92	5.57	7.92	7.89	7.62
	M8 x 1.25	M8	9.27	9.27	9.53	7.30	9.53	9.50	8.76

- (1) All dimensions are in millimeters and reference unless toleranced.
- (2) Although thread is tapped thru, thread go-gauge may not pass beyond the T dimension.

BOSS DESIGN RECOMMENDATION

The PHZ Press-in Hex Zert is designed to be installed into a straight hole with a 1° inclusive taper. The top of the hole should not be countersunk or counterbored as this will decrease the insert's performance. The recommended hole size applies at the point reached by the bottom of the insert. Molded holes should be used wherever possible as drilled holes may result in diminished performance. Minimum boss wall thicknesses shown are for reference and may vary depending on the type of plastic.



INSTALLATION

Press the insert into the boss using a squeezing action – never a hammer blow. Ensure that the insert maintains axial alignment during installation to prevent tilting which will induce side loads on the boss. Oversize boss holes weaken the insert's self-aligning characteristics causing side loads which may lead to possible boss cracking.

PERFORMANCE

INCH	Insert Thread Code	Boss Material	Installation (lbs)	Pull-out (lbs)	Torque-out (in-lbs)
	440		ABS	225	125
Polycarbonate			600	280	16
632		ABS	225	125	4
		Polycarbonate	600	280	16
832		ABS	300	135	10
		Polycarbonate	600	380	42
1024 1032		ABS	300	135	10
		Polycarbonate	600	380	42
2520 2528		ABS	400	235	28
		Polycarbonate	—	—	—

METRIC	Insert Thread Code	Boss Material	Installation (kN)	Pull-out (N)	Torque-out (N-m)
	M3		ABS	1.00	556
Polycarbonate			2.67	1245	1.80
M4		ABS	1.33	600	1.13
		Polycarbonate	2.67	1690	4.74
M5		ABS	1.33	600	1.13
		Polycarbonate	2.67	1690	4.74
M6		ABS	1.78	1045	3.16
		Polycarbonate	—	—	—

(1) Performance data shown is for reference only. Variations in application, boss material type and size, and installation method will affect the loads. PENCOM strongly encourages testing in the application.

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