



# MTZ

## Molded Thru-hole Zerts

### FEATURES

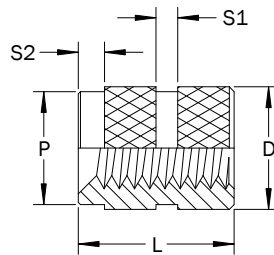
- Design provides excellent performance when molded in thermoplastics and thermosetting plastics.
- Tapped open end allows screw to pass through the insert.
- Custom lengths available by request.



### PART DESCRIPTION EXAMPLE

MTZ	—	632	—	219	—	SS
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Series Code		Insert Thread Code <sup>1</sup>		Insert Length Code		Material Code <sup>1</sup>

(1) SS material code designates stainless steel. Standard insert material is brass. Omit SS material code for brass inserts or use material code AL for aluminum inserts. Custom materials and finishes available by request.



Insert  
Series Code MTZ

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## GENERAL

INCH	Insert Thread	Insert Thread Code	L Insert Length ±.005	Insert Length Code	D Stock Dia. Before Knurl	P End Diameter ±.005	S1	S2	Thread Minor Diameter
	0-80	080	.125	125	.109	.078	.030	.030	.0475-.0510
	2-56	256	.125	125	.156	.142	.030	.030	.0670-.0737
	4-40	440	.188	188	.188	.171	.030	.030	.0860-.0939
	6-32	632	.219	219	.219	.202	.030	.060	.105-.114
	8-32	832	.250	250	.250	.226	.050	.060	.131-.139
	10-24	1024	.281	281	.281	.259	.050	.060	.146-.156
	10-32	1032	.281	281	.281	.259	.050	.060	.157-.164
	1/4-20	2520	.375	375	.344	.321	.060	.090	.197-.207
	1/4-28	2528	.375	375	.344	.321	.060	.090	.212-.220
	5/16-18	3118	.469	469	.437	.404	.080	.090	.260-.265
3/8-16	3716	.562	562	.500	.466	.090	.090	.309-.321	

(1) All dimensions are in inches and reference unless tolerated.

METRIC	Insert Thread	Insert Thread Code	L Insert Length ±0.13	Insert Length Code	D Stock Dia. Before Knurl	P End Diameter ±0.13	S1	S2	Thread Minor Diameter
	M2 x 0.4	M2	3.18	3.18	3.96	3.61	0.78	0.78	1.58-1.67
	M2.5 x 0.45	M2.5	4.77	4.77	4.77	4.34	0.78	0.78	2.03-2.14
	M3 x 0.5	M3	4.77	4.77	4.77	4.34	0.78	0.78	2.47-2.59
	M3.5 x 0.6	M3.5	5.56	5.56	5.56	5.13	0.78	1.57	2.87-3.01
	M4 x 0.7	M4	6.35	6.35	6.35	5.74	1.16	1.57	3.25-3.42
	M5 x 0.8	M5	7.13	7.13	7.13	6.57	1.16	1.57	4.15-4.34
	M6 x 1.0	M6	9.53	9.53	8.74	8.15	1.57	2.38	4.94-5.16
M10 x 1.5	M10	14.27	14.27	12.70	11.84	2.38	2.38	8.55-8.67	

(1) All dimensions are in millimeters and reference unless tolerated.

## INSTALLATION

The MTZ Molded Thru-hole Zert is designed to be molded into the host plastic using a core pin to locate the insert in the mold. A good fit between the core pin and insert will prevent plastic from flowing into the threads.

## PERFORMANCE

INCH	Insert Thread Code	Host Material	Pull-out (lbs)	Torque-out (in-lbs)
	080 256	ABS	96-104	5.2-5.6
		Polycarbonate	106-115	5.6-6.0
	440	ABS	166-175	5.5-6.0
		Polycarbonate	173-186	6.2-6.9
	632	ABS	290-298	7.5-8.0
		Polycarbonate	302-318	8.5-9.0
	832	ABS	368-370	13.6-14.0
		Polycarbonate	372-382	14.7-16.0
	1024 1032	ABS	432-444	50-55
Polycarbonate		445-454	52-57	
2520 2528	ABS	620-635	75-70	
	Polycarbonate	635-650	98-103	

METRIC	Insert Thread Code	Host Material	Pull-out (kN)	Torque-out (N-m)
	M2	ABS	0.43-0.46	0.59-0.63
		Polycarbonate	0.47-0.51	0.63-0.68
	M2.5 M3	ABS	0.73-0.77	0.62-0.67
		Polycarbonate	0.76-0.82	0.70-0.77
	M4	ABS	1.63-1.64	1.53-1.58
		Polycarbonate	1.65-1.69	1.66-1.80
	M5	ABS	1.92-1.97	5.65-6.22
		Polycarbonate	1.97-2.01	5.87-6.44
	M6	ABS	2.75-2.82	7.91-8.47
Polycarbonate		2.82-2.89	11.0-11.6	

(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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