



# SSZ

## Screw Zerts

### FEATURES

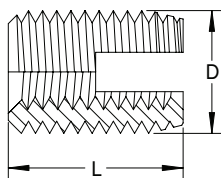
- Self-tapping installation in a variety of materials.
- High pull-out resistance in weak plastics.
- Suitable for applications where jack-out is unavoidable.



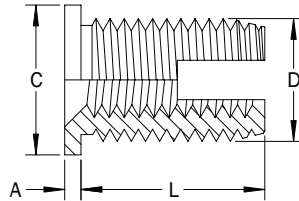
### PART DESCRIPTION EXAMPLE

SSZS	—	632	—	315 X 375	—	SS
T		T		T	T	T
Series Code		Insert or Stud Thread Code		Insert Length Code	Stud Length Code <sup>1</sup>	Material Code <sup>2</sup>

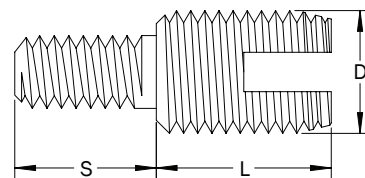
- (1) Omit stud length code for non-studded inserts.
- (2) SS material code designates stainless steel. Standard insert material is brass. Omit SS material code for brass inserts. Custom materials and finishes available by request.



**Insert**  
Series Code SSZ



**Headed Insert**  
Series Code SSZH



**Insert w/ Stud**  
Series Code SSZS

**GENERAL**

	Insert Thread	Insert Thread Code	L Insert Length	Insert Length Code	Boss Hole Dia. B		A Head Thickness	C Head Diameter	D Insert Diameter Max.
					Thermo-plastics +.004 -.000	Thermo-setting +.004 -.000			
<b>INCH</b>	2-56	256	.236	236	.157-.161	.161-.169	.023	.236	.177
	4-40	440	.236	236	.157-.161	.161-.169	.023	.236	.177
	6-32	632	.315	315	.209-.213	.217-.224	.029	.295	.236
	8-32	832	.315	315	.228-.232	.236-.244	.035	.312	.256
	10-24	1024	.394	394	.280-.283	.287-.299	.042	.374	.315
	10-32	1032	.394	394	.280-.283	.287-.299	.042	.374	.315
	1/4-20	2520	.551	551	.339-.346	.354-.370	.052	.472	.394
	1/4-28	2528	.551	551	.339-.346	.354-.370	.052	.472	.394
	5/16-18	3118	.591	591	.417-.425	.433-.449	.052	.551	.472
	5/16-24	3124	.591	591	.417-.425	.433-.449	.052	.551	.472
	3/8-16	3716	.709	709	.496-.504	.512-.528	.062	.630	.551
	3/8-24	3724	.709	709	.496-.504	.512-.528	.062	.630	.551
	1/2-13	5013	.866	866	.575-.583	.591-.606	.062	.709	.630
	1/2-20	5020	.866	866	.575-.583	.591-.606	.062	.709	.630

- (1) All dimensions are in inches and reference unless toleranced.
- (2) Pencom recommends determining the minimum hole wall thickness through testing in the application.

	Insert Thread	Insert Thread Code	L Insert Length	Insert Length Code	Boss Hole Dia. B		A Head Thickness	C Head Diameter	D Insert Diameter Max.
					Thermo-plastics +0.10 -0.00	Thermo-setting +0.10 -0.00			
<b>METRIC</b>	M2 x 0.4	M2	6.00	6.00	4.00-4.10	4.10-4.30	0.58	6.00	4.50
	M2.5 x 0.45	M2.5	6.00	6.00	4.00-4.10	4.10-4.30	0.58	6.00	4.50
	M3 x 0.5	M3	6.00	6.00	4.50-4.60	4.60-4.80	0.58	6.50	5.00
	M3.5 x 0.6	M3.5	8.00	8.00	5.30-5.40	5.50-5.70	0.73	7.50	6.00
	M4 x 0.7	M4	8.00	8.00	5.80-5.90	6.00-6.20	0.89	8.00	6.50
	M5 x 0.8	M5	10.00	10.00	7.10-7.20	7.30-7.60	1.06	9.50	8.00
	M6 x 1.0	M6	14.00	14.00	8.60-8.80	9.00-9.40	1.32	12.00	10.00
	M8 x 1.25	M8	15.00	15.00	10.60-10.80	11.00-11.40	1.32	14.00	12.00
	M10 x 1.5	M10	18.00	18.00	12.60-12.80	13.00-13.40	1.57	16.00	14.00
	M12 x 1.75	M12	22.00	22.00	14.60-14.80	15.00-15.40	1.57	18.00	16.0

- (1) All dimensions are in millimeters and reference unless toleranced.
- (2) Pencom recommends determining the minimum hole wall thickness through testing in the application.

## STUD LENGTH

INCH	Stud Thread	Stud Thread Code	D Insert Diameter Max.	S-Stud Length									
				.187	.250	.312	.375	.437	.500	.625	.750	.875	1.000
				Stud Length Code									
	2-56	256	.177	187	250	312	—	—	—	—	—	—	—
	4-40	440	.177	187	250	312	375	437	—	—	—	—	—
	6-32	632	.236	187	250	312	375	437	500	—	—	—	—
	8-32	832	.256	187	250	312	375	437	500	625	—	—	—
	10-24	1024	.315	187	250	312	375	437	500	625	750	—	—
	10-32	1032	.315	187	250	312	375	437	500	625	750	—	—
	1/4-20	2520	.394	—	250	312	375	437	500	625	750	875	1000
	1/4-28	2528	.394	—	250	312	375	437	500	625	750	875	1000
	5/16-18	3118	.472	—	—	312	375	437	500	625	750	875	1000
	5/16-24	3124	.472	—	—	312	375	437	500	625	750	875	1000
	3/8-16	3716	.551	—	—	—	375	437	500	625	750	875	1000
	3/8-24	3724	.551	—	—	—	375	437	500	625	750	875	1000
	1/2-13	5013	.630	—	—	—	—	—	500	625	750	875	1000
	1/2-20	5020	.630	—	—	—	—	—	500	625	750	875	1000

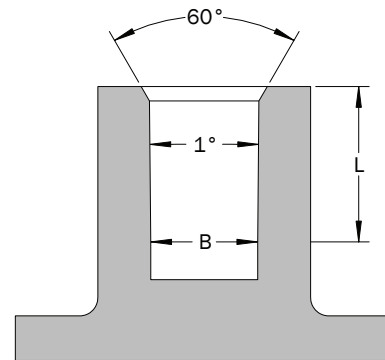
- (1) All dimensions are in inches and reference unless tolerated.  
 (2) Custom stud lengths available by request.

METRIC	Stud Thread	Stud Thread Code	D Insert Diameter Max.	S-Stud Length									
				5.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	25.00
				Stud Length Code									
	M2 x 0.4	M2	4.50	5.00	6.00	8.00	—	—	—	—	—	—	—
	M2.5 x 0.45	M2.5	4.50	5.00	6.00	8.00	10.00	—	—	—	—	—	—
	M3 x 0.5	M3	5.00	5.00	6.00	8.00	10.00	12.00	—	—	—	—	—
	M3.5 x 0.6	M3.5	6.00	5.00	6.00	8.00	10.00	12.00	14.00	—	—	—	—
	M4 x 0.7	M4	6.50	5.00	6.00	8.00	10.00	12.00	14.00	16.00	—	—	—
	M5 x 0.8	M5	8.00	5.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	—
	M6 x 1.0	M6	10.00	—	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	25.00
	M8 x 1.25	M8	12.00	—	—	8.00	10.00	12.00	14.00	16.00	18.00	20.00	25.00
	M10 x 1.5	M10	14.00	—	—	—	10.00	12.00	14.00	16.00	18.00	20.00	25.00
	M12 x 1.75	M12	16.00	—	—	—	—	12.00	14.00	16.00	18.00	20.00	25.00

- (1) All dimensions are in millimeters and reference unless tolerated.  
 (2) Custom stud lengths available by request.

## BOSS DESIGN RECOMMENDATION

The SSZ Screw Zert is designed to be installed into a straight hole with a 1° inclusive taper. 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. PENCOR recommends a 60° countersink, with a depth equal to the external thread pitch of the insert being used, at the top of the hole to prevent chipping of the surrounding boss hole surface. Hole diameters are dependant on the type of plastic being used with harder plastics requiring larger holes than softer plastics, for example. Diameter ranges shown in the tables are those recommended for thermoplastics and thermo-setting plastics with the exact hole size determined through testing in the application.



## INSTALLATION

The slot in the insert acts as a thread cutting edge. Inserts are installed following standard tapping procedures using hand tools or conventional tapping equipment.