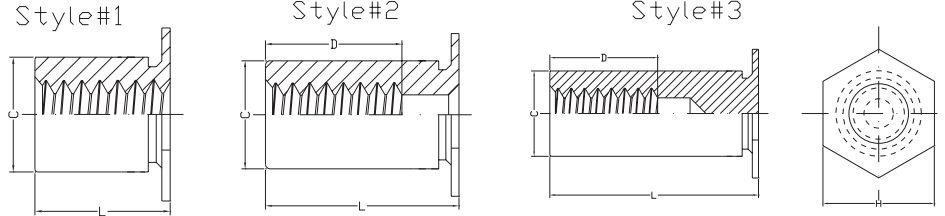
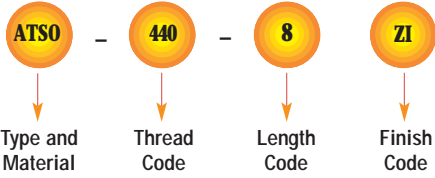


SELF-CLINCHING STANDOFFS

TYPES ATSO,ATSOS,ATSOA THREADED STANDOFFS
FOR SHEETS AS THIN AS .025" / 0.63mm



Part Number Designation



GENERAL DIMENSIONAL DATA

UNIFIED (inch)	Thread Code	Min. Sheet Thickness	Hole Size In Sheet +0.03 -0.00	C +0.00 -0.05	D Min. Thread Depth	H Nom.	Min. Dist. Hole C/L To Edge
	256	.025	.166	.165	.200	.187	.23
6256	.025	.213	.212	.250		.27	
440	.025	.166	.165	.220	.187	.23	
6440	.025	.213	.212		.250	.27	
632	.025	.213	.212		.270	.27	

METRIC (mm)	Thread Code	Min. Sheet Thickness	Hole Size In Sheet +0.08	C -0.13	D Min. Thread Depth	H Nom.	Min. Dist. Hole C/L To Edge
	M25	0.63	4.22	4.19	5.2	4.8	5.8
6M25	0.63	5.41	5.39	6.4		7.1	
M3	0.63	4.22	4.19	6.2	4.8	5.8	
6M3	0.63	5.41	5.39		6.4	7.1	
M35	0.63	5.41	5.39		7	6.4	7.1

THREAD SIZE AND LENGTH SELECTION DATA

UNIFIED (inch)	Thread Size	Type			Thread Code	Length "L" ±0.03 For other lengths / thread depth data see chart below												
		Steel	Stainless Steel	Aluminum		.090	.125	.187	.250	.312	.375	.437	.500	.562	.625	.687	.750	
	Length Code (Length "L" without decimal point)																	
.086-56 (#2-56)	ATSO	ATSOS	ATSOA	256	090 ⁽¹⁾	125 ⁽¹⁾	187 ⁽¹⁾	250 ⁽¹⁾	312 ⁽²⁾	375 ⁽²⁾	437 ⁽³⁾	500 ⁽³⁾	562 ⁽³⁾	625 ⁽³⁾	687 ⁽³⁾	750 ⁽³⁾		
				6256 ⁽⁴⁾														
.112-40 (#4-40)	ATSO	ATSOS	ATSOA	440	090 ⁽¹⁾	125 ⁽¹⁾	187 ⁽¹⁾	250 ⁽¹⁾	312 ⁽²⁾	375 ⁽²⁾	437 ⁽²⁾	500 ⁽³⁾	562 ⁽³⁾	625 ⁽³⁾	687 ⁽³⁾	750 ⁽³⁾		
				6440 ⁽⁴⁾														
.138-32 (#6-32)	ATSO	ATSOS	ATSOA	632	NA	125 ⁽¹⁾	187 ⁽¹⁾	250 ⁽¹⁾	312 ⁽¹⁾	375 ⁽²⁾	437 ⁽²⁾	500 ⁽²⁾	562 ⁽³⁾	625 ⁽³⁾	687 ⁽³⁾	750 ⁽³⁾		

METRIC (mm)	Thread Size x Pitch	Type			Thread Code	Length "L" ±0.08 For other lengths / thread depth data see chart below												
		Steel	Stainless Steel	Aluminum		2.00	3.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	19.00		
	Length Code (Length "L" without decimal point)																	
M2.5 X 0.45	ATSO	ATSOS	ATSOA	M25	200 ⁽¹⁾	300 ⁽¹⁾	400 ⁽¹⁾	600 ⁽¹⁾	800 ⁽²⁾	1000 ⁽³⁾	1200 ⁽³⁾	1400 ⁽³⁾	1600 ⁽³⁾	1800 ⁽³⁾	1900 ⁽³⁾			
				6M25 ⁽⁴⁾														
M3 X 0.5	ATSO	ATSOS	ATSOA	M3	200 ⁽¹⁾	300 ⁽¹⁾	400 ⁽¹⁾	600 ⁽¹⁾	800 ⁽²⁾	1000 ⁽²⁾	1200 ⁽³⁾	1400 ⁽³⁾	1600 ⁽³⁾	1800 ⁽³⁾	1900 ⁽³⁾			
				6M3 ⁽⁴⁾														
M3.5 X 0.6	ATSO	ATSOS	ATSOA	M35	NA	300 ⁽¹⁾	400 ⁽¹⁾	600 ⁽¹⁾	800 ⁽¹⁾	1000 ⁽²⁾	1200 ⁽²⁾	1400 ⁽³⁾	1600 ⁽³⁾	1800 ⁽³⁾	1900 ⁽³⁾			

- (1) Style #1. (2) Style #2. (3) Style #3. N/A Not Available.
 (4) Standoffs with thread codes 6256, 6440, 6M25, and 6M3 offer greater wall thickness for thread sizes 256, 440, M2.5, and M3, respectively.

LENGTH / STYLE DATA

UNIFIED (inch)	Thread Code	Length "L" (Style #1)	Length "L" (Style #2)	Length "L" (Style #3)
256 6256		.090-.250	.251-.375	.376-.750
		440 6440	.090-.280	.281-.450
632		.120-.350	.351-.540	.541-.750

METRIC (mm)	Thread Code	Length "L" (Style #1)	Length "L" (Style #2)	Length "L" (Style #3)
M25 6M25		2.00-6.30	6.32-9.50	9.52-19.00
		M3 6M3	2.00-7.50	7.52-11.00
M35		3.00-8.80	8.82-12.80	12.82-19.00

SELF-CLINCHING STANDOFFS

TYPES ATSO,ATSOS,ATSOA THREADED STANDOFFS
FOR SHEETS AS THIN AS .025" / 0.63mm



MATERIAL & FINISH SPECIFICATIONS

Type	Threads ⁽¹⁾	Fastener Materials					Standard Finishes			For Use In Sheet Hardness:				
	Internal, ANSI B1.1 2B ANSI/ASME B1.13M, 6H	Heat-treated Carbon Steel	Non-heat Treated Carbon Steel	7075-T6 Aluminum	303 Stainless Steel	400 Series Stainless Steel	Zinc Per ASTM B 633 SC1 (5µm) Type III, Colorless	Passivated and/or Tested Per ASTM A380	None	88 or less on the Rockwell "B" Scale	80 or less on the Rockwell "B" Scale	70 or less on the Rockwell "B" Scale	60 or less on the Rockwell "B" Scale	50 or less on the Rockwell "B" Scale
ATSO	•		•				•						•	
ATSOS	•				•			•			•			
ATSOA	•			•					•					•
Part Number Codes For Finishes							ZI	None	None					

(1) Where applicable.

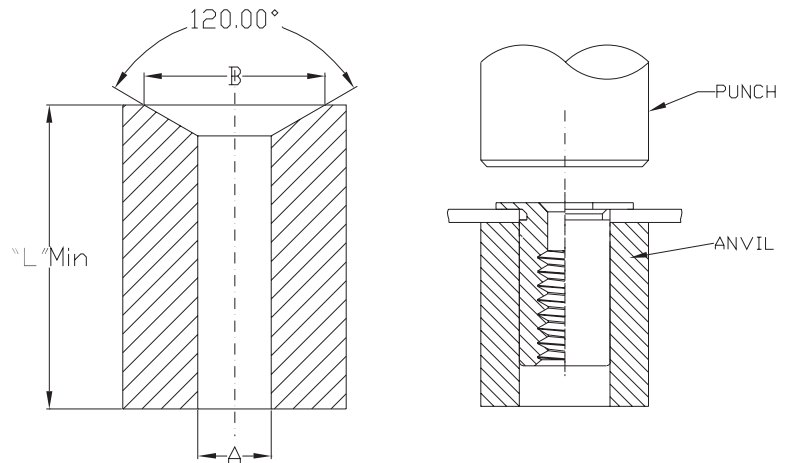
*Available on special order only.

INSTALLATION

Types ATSO, ATSOS, and ATSOA

- Punch or drill properly sized mounting hole in sheet. Do not perform any secondary operation such as deburring.
- Insert standoff through mounting hole of sheet and into anvil as shown in drawing.
- With punch and anvil surfaces parallel, apply only enough squeezing force to embed the standoff's head flush in the sheet. Drawing at right shows required installation anvil for sheet thickness of .025" to .032" / 0.63 to 0.81 mm. A chamfered anvil is not required for sheets over .032" / 0.81 mm.

REQUIRED INSTALLATION ANVIL



Standoff "C" Dimensions	Anvil Dimensions			
	A		B	
	(inches)	(mm)	(inches)	(mm)
.165" / 4.19 mm	.167 - .170	4.24 - 4.32	.187 - .194	4.75 - 4.93
.212" / 5.39 mm	.213 - .216	5.41 - 5.49	.250 - .257	6.35 - 6.53

PERFORMANCE DATA⁽¹⁾

Types ATSO, ATSOS, and ATSOA

Standoff "C" Dimension	Standoff Material	Test Sheet Material											
		.025" / 0.64 mm 5052-H34 Aluminum						.025" / 0.64 mm Cold-rolled Steel					
		Installation		Pushout		Torque-out		Installation		Pushout		Torque-out	
(lbs.)	(kN)	(lbs.)	(N)	(in. lbs.)	(N•m)	(lbs.)	(kN)	(lbs.)	(N)	(in. lbs.)	(N•m)		
.165" / 4.19 mm	Steel	1500	6.7	70	311	6	0.68	2000	8.9	100	445	9	1
	Stainless Steel	1500	6.7	70	311	6	0.68	2000	8.9	100	445	9	1
	Aluminum	1500	6.7	70	311	6	0.68	----	----	----	----	----	----
.212" / 5.38 mm	Steel	1800	8	90	400	11	1.24	2500	11.1	150	667	15	1.7
	Stainless Steel	1800	8	90	400	11	1.24	2500	11.1	150	667	15	1.7
	Aluminum	1800	8	90	400	11	1.24	----	----	----	----	----	----

- The installation, pushout, torque-out and pull-thru values reported are averages when all installation specifications and procedures are followed. Variations in mounting hole size, sheet material and installation procedure will affect this data. Performance testing of this product in your application is recommended. We will be happy to provide samples for this purpose.
- Standoffs installed in sheets thinner than .060" / 1.5 mm will have pull-thru, pushout, and torque-out values at 80% of tabulated values.
- Not recommended.