

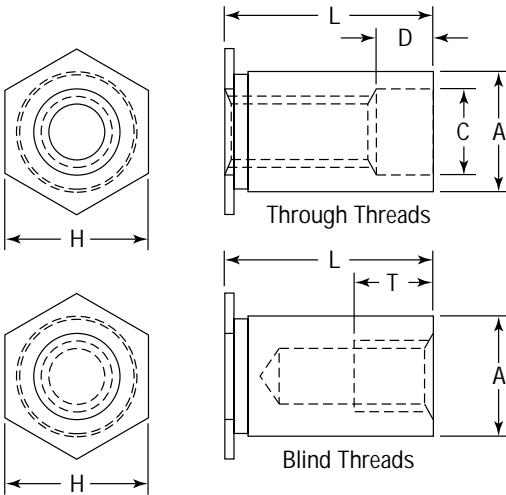


Self-Clinching Standoffs

Series CFSO, CFSOS, CFSOA, CFBSO, CFBSOS & CFSOA



CFSO and CFBSO self-clinching standoffs are designed for quick, easy installation with any standard pneumatic, hydraulic or mechanical press. Through-threaded or blind standoffs are used in metal panels with thickness of .040 in. (1.0 mm) and up. No secondary operation, such as reaming or deburring, is necessary prior to installation.



Series	Material	Finish
CFSO CFBSO	Heat-treated Carbon Steel	Zinc* Clear
CFSOS CFBSOS	303 Stainless Steel	Passivated ASTM A380
CFSOA CFBSOA	7075-T6 Aluminum	None

*Spec. ASTM B633-85

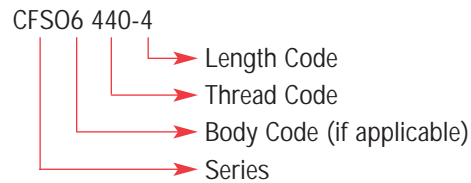
Thread: Class 2B, MIL-S-7742; (6H ISO Metric).

Use in: CFSO & CFBSO for materials with Rockwell Hardness of B-80 or less.

CFSOS & CFBSOS for materials with Rockwell Hardness of B-70 or less.

CFSOA & CFBSOA for materials with Rockwell Hardness of B-50 or less.

Part Number Structure:



All Measurements In Inches

Dimensions & Specifications

Thread Size	Part Number	Lengths L +.002 -.005															A Dim. +.003 -.000	H Hex Dim. (Nom.)	C Counter- bore Dia.	Min.	Min.		
		.125	.1875	.250	.3125	.375	.4375	.500	.5625	.625	.6875	.750	.8125	.875	.9375	1.00						1.0625	
#4-40	CFSO																	.166	.165	.1875	.125	.23	.040
	CFSOS	-4	-6	-8	-10	-12	-14	-16	-18	-20													
	CFSOA 440																						
	CFBSO																						
	CFBSOS				-10	-12	-14	-16	-18	-20	-22	-24											
	CFBSOA																						
#4-40	CFSO																.213	.212	.25	.125	.27	.040	
	CFSOS	-4	-6	-8	-10	-12	-14	-16	-18	-20	-22	-24											
	CFSOA 6440																						
	CFBSO																						
	CFBSOS				-10	-12	-14	-16	-18	-20	-22	-24											
	CFBSOA																						
T ±.0156					.1563	.1875	.25			.375													
D ±.0156		None				.1875			.3125		.4375												

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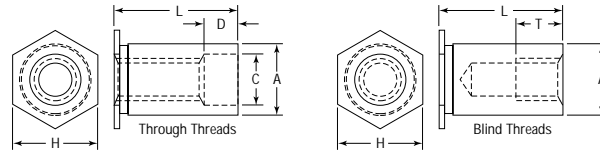


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Series CFSO, CFSOS, CFSOA, CFBSO, CFBSOS & CFBSOA



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All Measurements In Millimeters

Dimensions & Specifications

Thread Size	Part Number	Lengths L +.05 -.13 mm											T +.08 -.00	A Dim. +.00 -.13	H Hex Dim. (Nom.)	C Counter- bore Dia.	Min.	Min.	
		3	4	6	8	10	12	14	16	18	20	22							25
M3	CFSO													4.2	4.19	4.8	3.2	6.0	1.0
	CFSOS	-3	-4	-6	-8	-10	-12	-14											
	CFSOA																		
	CFBSO																		
	CFBSOS				-8	-10	-12	-14	-16	-18									
	CFBSOA																		
M3	CFSO												5.4	5.38	6.4	3.2	7.0	1.0	
	CFSOS	-3	-4	-6	-8	-10	-12	-14	-16	-18									
	CFSOA																		
	CFBSO																		
	CFBSOS				-8	-10	-12	-14	-16	-18	-20	-22							-25
	CFBSOA																		
M3.5	CFSO												5.4	5.38	6.4	4.0	7.0	1.0	
	CFSOS	-3	-4	-6	-8	-10	-12	-14	-16	-18									
	CFSOA																		
	CFBSO																		
	CFBSOS				-8	-10	-12	-14	-16	-18	-20	-22							-25
	CFBSOA																		
M4	CFSO												7.2	7.11	7.9	4.8	8.0	1.3	
	CFSOS	-3	-4	-6	-8	-10	-12	-14	-16	-18	-20	-22							
	CFSOA																		
	CFBSO																		
	CFBSOS				-8	-10	-12	-14	-16	-18	-20	-22							-25
	CFBSOA																		
M5	CFSO												7.2	7.11	7.9	5.2	8.0	1.3	
	CFSOS	-3	-4	-6	-8	-10	-12	-14	-16	-18	-20	-22							
	CFSOA																		
	CFBSO																		
	CFBSOS				-8	-10	-12	-14	-16	-18	-20	-22							-25
	CFBSOA																		
T ± 0.4				.32	4.0	5.0	6.5	9.5											
D ± 0.4		None			4.0			8.0			11.0								

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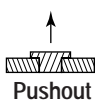



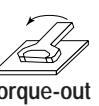
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Installation & Performance Data

		Sheet Material: .060" 5052-H34 Aluminum				.060" Cold-rolled Steel					
Thread Size	Standoff Material				Pull Through				Pull Through	Rec Tighten Torque Max. (in. lbs.)	
		Installation (lbs.)	Pushout (lbs.)	Torque-out (in.- lbs.)		Installation (lbs.)	Pushout (lbs.)	Torque-out (in.- lbs.)			
INCH (in.)	440	Steel	1075	155	10	270	2100	220	18	225	4.7
		Stainless Steel	1075	155	10	220	2100	220	18	260	3.6
		Aluminum	1075	155	10	160	nr	nr	nr	nr	2.7
	6440, 632	Steel	1680	290	24	300	3200	410	32	375	4.6, 8.6
		Stainless Steel	1680	290	24	235	3200	410	32	300	3.6, 6.8
		Aluminum	1680	290	24	180	nr	nr	nr	nr	2.7, 5.1
	8632, 832, 032	Steel	2350	380	44	560	3900	550	72	690	8.6, 17, 30
		Stainless Steel	2350	380	44	450	3900	550	72	550	6.8, 13, 24
		Aluminum	2350	380	44	340	nr	nr	nr	nr	5.2, 10, 17
		Sheet Material: 1.5mm 5052-H34 Aluminum				1.5mm Cold-rolled Steel					
Thread Size	Standoff Material	Installation (kN)	Pushout (N)	Torque-out (N·m)	Pull Through (N)	Installation (kN)	Pushout (N)	Torque-out (N·m)	Pull Through (N)	Rec Tighten Torque Max. (N·m)	
METRIC (mm)	M3	Steel	4.7	700	1.2	1230	9.6	990	2.1	1450	0.5
		Stainless Steel	4.7	700	1.2	985	9.6	990	2.1	1150	0.4
		Aluminum	4.7	700	1.2	740	nr	nr	nr	nr	0.3
	3.5M3	Steel	7.4	1310	2.79	1350	14.5	1850	3.9	1670	0.5
		Stainless Steel	7.4	1310	2.79	1100	14.5	1850	3.9	1350	0.4
		Aluminum	7.4	1310	2.79	810	nr	nr	nr	nr	0.3
	M4, M5	Steel	10.5	1750	5.01	2550	17.6	2460	8.45	3100	1.9, 3.4
		Stainless Steel	10.5	1750	5.01	2020	17.6	2460	8.45	2450	0.9, 2.7
		Aluminum	10.5	1750	5.01	1525	nr	nr	nr	nr	1.1, 2.1

nr = Not recommended.

RECOMMENDED INSTALLATION PROCEDURE

1. Insert Standoff through hole in sheet into anvil.
2. Apply only sufficient squeezing force between parallel surfaces of punch and anvil to embed hex head flush in sheet. Avoid excessive pressures.

