

Material: Inserts - 303 CRES
Keys - 302 CRES

Finish: Passivated

Tolerances: ± 0.010 inch unless specified otherwise

Internal Threads: Per SAE AS8879

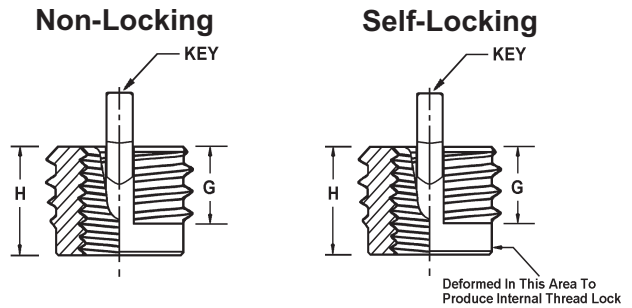
Dimensions: All dimensions below are in inches

Keys: Miniature Inserts are furnished with 2 locking keys

Material Identification Mark: None

Lubrication: Dry Film Lube on Self-Locking Inserts only

Performance: MIL-I-45914A (MS51830)



Miniature - Inch (See Page 3 for MS Part Number Cross Reference)

PART NUMBER*		INSERT				INSTALLATION					REMOVAL	
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread Class 2A	G Thread Length	H Length	Install Tool Part No.*	Tap Drill Size $+0.003$ -0.001	C'Sink Dia. $+0.010$ -0.000	Thread Tap		Drill	
									Size Class 2B	Min. Depth	Size	Depth
76283	77283	2 - 56	8 - 32	.090	.120	72552	.134	.166	8 - 32	.140	#33	1/16
76284	77284	4 - 40	10 - 32	.125	.170	72554	.161	.194	10 - 32	.160	#29	3/32
76285	77285	6 - 32	12 - 28	.125	.170	72556	.187	.220	12 - 28	.160	#21	3/32
76286	77286	8 - 32	1/4 - 28†	.175	.220	72558	.228	.255	1/4 - 28	.210	#8	1/8

* To complete the abbreviated part number in the table above use the prefix "217-0"

† Modified Minor Diameter

Material: Inserts - 303 CRES
Keys - 302 CRES

Finish: Passivated

Tolerances: ± 0.010 inch unless specified otherwise.

Internal Threads: Per SAE AS8879

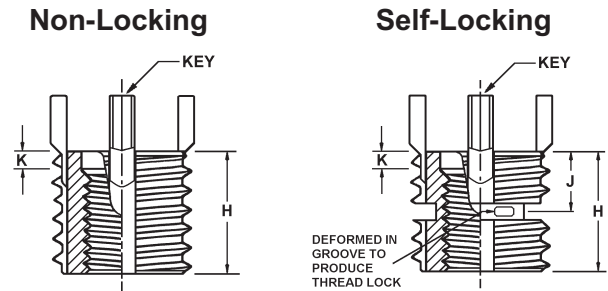
Dimensions: All dimensions below are in inches

Keys: Inserts with an internal thread size of 5/16 and larger are furnished with 4 locking keys. Smaller sizes have 2 locking keys.

Material Identification Mark: None

Lubrication: Dry Film Lube on Self-Locking Inserts only

Performance: MIL-I-45914A (MS51830 & NAS1394)



Lightweight - Inch (See Page 3 for MS/NAS Part Number Cross Reference)

PART NUMBER*		INSERT					INSTALLATION					REMOVAL	
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread (Mod.) Class 2A	H Length	J $\pm .030$	K C'Bore Depth	Install Tool Part No.*	Tap Drill Size ¹	C'Sink Dia. $+0.010$ -0.000	Thread Tap		Drill	
										Size Class 2B	Min. Depth	Size	Depth
76321	77321	10 - 24	5/16 - 18	.312	.22	.07	72568	.272	.323	5/16 - 18	.37	7/32	5/32
76521	77521	10 - 32					72569						
76322	77322	1/4 - 20	3/8 - 16	.375	.22	.07	72570	.332	.385	3/8 - 16	.43	9/32	3/16
76522	77522	1/4 - 28					72571						
76323	77323	5/16 - 18	7/16 - 14	.437	.22	.07	72572	.397	.447	7/16 - 14	.50	11/32	3/16
76523	77523	5/16 - 24					72573						
76324	77324	3/8 - 16	1/2 - 13	.500	.24	.07	72574	.453	.510	1/2 - 13	.56	13/32	3/16
76524	77524	3/8 - 24					72575						
76325	77325	7/16 - 14	9/16 - 12	.562	.27	.07	72576	.516	.572	9/16 - 12	.62	15/32	3/16
76525	77525	7/16 - 20					72577						
76326	77326	1/2 - 13	5/8 - 11	.625	.28	.07	72578	.578	.635	5/8 - 11	.68	17/32	3/16
76526	77526	1/2 - 20					72579						

* To complete the abbreviated part number in the table above use the prefix "217-0"

¹ Tap Drill Hole Tolerance: .234 to .500 = $+0.004/-0.001$
Over .500 = $+0.005/-0.001$

MS/NAS Style - 303 CRES Keylocking Threaded Inserts



Material: Inserts - 303 CRES
Keys - 302 CRES

Finish: Passivated

Tolerances: ±.010 inch unless specified otherwise.

Internal Threads: Per SAE AS8879

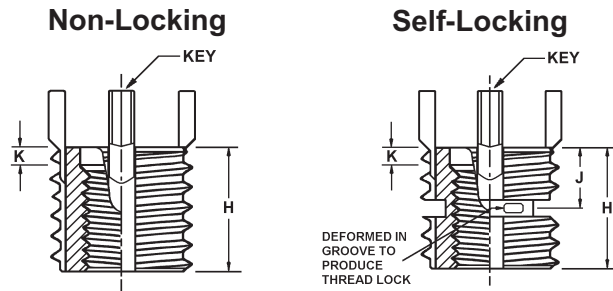
Dimensions: All dimensions below are in inches

Keys: Inserts with an internal thread size of 5/16 and larger are furnished with 4 locking keys. Smaller sizes have 2 locking keys.

Material Identification Mark: None

Lubrication: Dry Film Lube on Self-Locking Inserts only

Performance: MIL-I-45914A (MS51831 & NAS1395)



Heavy Duty - Inch (See Page 3 for MS/NAS Part Number Cross Reference)

PART NUMBER*		INSERT					INSTALLATION					REMOVAL	
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread (Mod.) Class 2A	H Length	J ±.030	K C'Bore Depth	Install Tool Part No.*	Tap Drill Size ¹	C'Sink Dia. +.010 -0.000	Thread Tap		Drill	
										Size Class 2B	Min. Depth	Size	Depth
76300	77300	8 - 32	5/16 - 18	.312	.22	.04	72590	.272	.323	5/16 - 18	.37	7/32	1/8
76301	77301	10 - 24	3/8 - 16	.312	.22	.07	72591	.332	.385	3/8 - 16	.37	9/32	1/8
76501	77501	10 - 32					72592						
76302	77302	1/4 - 20	7/16 - 14	.375	.22	.07	72593	.397	.447	7/16 - 14	.43	11/32	3/16
76502	77502	1/4 - 28					72594						
76303	77303	5/16 - 18	1/2 - 13	.437	.22	.07	72595	.453	.510	1/2 - 13	.50	13/32	3/16
76503	77503	5/16 - 24					72596						
76304	77304	3/8 - 16	9/16 - 12	.500	.25	.07	72597	.516	.572	9/16 - 12	.56	15/32	3/16
76504	77504	3/8 - 24					72598						
76305	77305	7/16 - 14	5/8 - 11	.625	.28	.10	72599	.578	.635	5/8 - 11	.68	17/32	3/16
76505	77505	7/16 - 20					72600						
76306	77306	1/2 - 13	11/16-11 NS	.688	.28	.10	72601	.641	.700	11/16-11 NS	.75	19/32	3/16
76506	77506	1/2 - 20					72602						
76307	77307	9/16 - 12	13/16 - 16	.812	.32	.10	72603	.766	.822	13/16-16	.94	23/32	3/16
76507	77507	9/16 - 18					72604						
76308	77308	5/8 - 11	7/8 - 14	.875	.33	.10	72605	.828	.885	7/8 - 14	1.00	25/32	3/16
76508	77508	5/8 - 18					72606						
76309	-	3/4 - 10	1-1/8 - 12	1.125	-	.10	72607	1.062	1.145	1-1/8 - 12	1.31	31/32	5/16
76509	-	3/4 - 16					72608						
-	77309	3/4 - 10					72607						
-	77509	3/4 - 16					72608						
76310	-	7/8 - 9	1-1/4 - 12	1.250	-	.10	72609	1.187	1.270	1-1/4 - 12	1.44	1-3/32	5/16
76510	-	7/8 - 14					72610						
-	77310	7/8 - 9					72609						
-	77510	7/8 - 14					72610						
76311	-	1" - 8	1-3/8 - 12	1.375	-	.10	72611	1.312	1.395	1-3/8 - 12	1.56	1-7/32	5/16
76511	-	1" - 12					72612						
-	77311	1" - 8					72611						
-	77511	1" - 12					72612						

* To complete the abbreviated part number in the table above use the prefix "217-0"

¹ Tap Drill Hole Tolerance:
.234 to .500 = +.004/-0.001
Over .500 = +.005/-0.001

Material: Inserts - 303 CRES
Keys - 302 CRES

Finish: Passivated

Tolerances: ± 0.010 inch unless specified otherwise.

Internal Threads: Per SAE AS8879

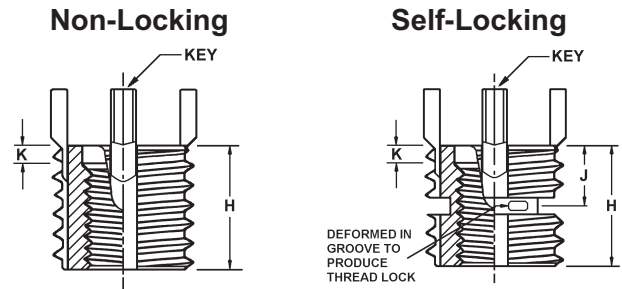
Dimensions: All dimensions below are in inches

Keys: Inserts with an internal thread size of 1/4 and larger are furnished with 4 locking keys. Smaller sizes have 2 locking keys.

Material Identification Mark: None

Lubrication: Dry Film Lube on Self-Locking Inserts only

Performance: MIL-I-45914A (MS51832)



Extra Heavy Duty - Inch (See Page 3 for MS Part Number Cross Reference)

PART NUMBER*		INSERT					INSTALLATION				REMOVAL		
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread (Mod.) Class 2A	H Length	J $\pm .030$	K C'Bore Depth	Install Tool Part No.*	Tap Drill Size ¹	C'Sink Dia. $+0.010$ -0.000	Thread Tap		Drill	
										Size Class 2B	Min. Depth	Size	Depth
76333	77333	10 - 24	7/16 - 14	.312	.22	.07	72628	.397	.447	7/16 - 14	.37	11/32	3/16
76533	77533	10 - 32					72629						
76334	77334	1/4 - 20	1/2 - 13	.375	.22	.07	72630	.453	.510	1/2 - 13	.44	13/32	3/16
76534	77534	1/4 - 28					72631						
76335	77335	5/16 - 18	9/16 - 12	.437	.22	.07	72632	.516	.572	9/16 - 12	.50	15/32	3/16
76535	77535	5/16 - 24					72633						
76336	77336	3/8 - 16	5/8 - 11	.500	.25	.07	72634	.578	.635	5/8 - 11	.56	17/32	3/16
76536	77536	3/8 - 24					72635						
76337	77337	7/16 - 14	11/16-11 NS	.625	.28	.10	72636	.641	.700	11/16-11 NS	.68	19/32	3/16
76537	77537	7/16 - 20					72637						
76338	77338	1/2 - 13	13/16 - 16	.688	.28	.10	72638	.766	.822	13/16-16	.75	23/32	3/16
76538	77538	1/2 - 20					72639						
76339	77339	9/16 - 12	7/8 - 14	.812	.32	.10	72640	.828	.885	7/8 - 14	.94	25/32	3/16
76539	77539	9/16 - 18					72641						
76340	77340	5/8 - 11	1" - 12	.875	.33	.10	72642	.937	1.020	1" - 12	1.00	27/32	5/16
76540	77540	5/8 - 18					72643						
76341	-	3/4 - 10	1-1/4 - 12	1.125	-	.10	72644	1.187	1.270	1-1/4 - 12	1.31	1-3/32	5/16
76541	-	3/4 - 16					72645						
-	77341	3/4 - 10					72644						
-	77541	3/4 - 16					72645						
76342	-	7/8 - 9	1-3/8 - 12	1.250	-	.10	72646	1.312	1.395	1-3/8 - 12	1.44	1-7/32	5/16
76542	-	7/8 - 14					72647						
-	77342	7/8 - 9					72646						
-	77542	7/8 - 14					72647						
76343	-	1" - 8	1-1/2 - 12	1.375	-	.10	72648	1.437	1.520	1-1/2 - 12	1.56	1-11/32	5/16
76543	-	1" - 12					72649						
-	77343	1" - 8					72648						
-	77543	1" - 12					72649						

* To complete the abbreviated part number in the table above use the prefix "217-0"

¹ Tap Drill Hole Tolerance:

.234 to .500 = $+0.004/-0.001$

Over .500 = $+0.005/-0.001$

MS/NAS Style - 303 CRES Keylocking Threaded Inserts



Material: Inserts - 303 CRES
Keys - 302 CRES

Finish: Passivated

Tolerances: ± 0.25 mm unless specified otherwise

Internal Threads: Per Fed Std H28/21, MJ Form

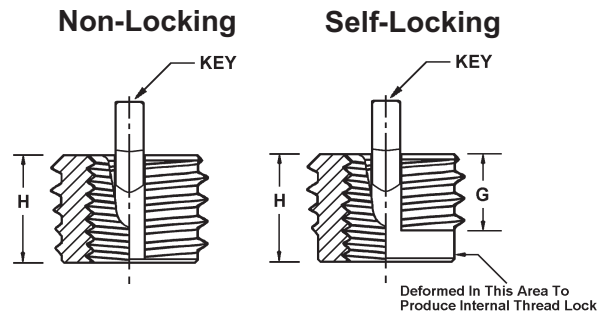
Dimensions: All dimensions below are in millimeters

Keys: Miniature Inserts are furnished with 2 locking keys

Material Identification Mark: None

Lubrication: Dry Film Lube on Self-Locking Inserts only

Performance: See note on the bottom of page 17



Miniature - Metric

PART NUMBER*		INSERT				INSTALLATION						REMOVAL	
Non-Locking	Self-Locking	Internal Thread Class 4H6H	External Thread Class 4h	G Thread Length	H Length	Install Tool Part No.*	Tap Drill Size $+0.080$ -0.025	C'Sink Dia. $+0.25$ -0.00	Thread Tap		Drill		
									Size Class 6H	Min. Depth	Size	Depth	
76382	77382	M 2x0.4	M 4x0.7	2.20	3.00	72682	3.4	4.1	M 4x0.7	4.0	2.8	2.00	
76383	77383	M 2.5x0.45	M 4.5x0.75	2.70	3.81	72683	3.9	4.6	M 4.5x0.75	5.0	3.0	2.00	
76384	77384	M 3x0.5	M 5x0.8	3.10	4.25	72684	4.4	5.1	M 5x0.8	5.5	3.5	2.25	
76386	77386	M 4x0.7	M 6x0.75	4.11	5.25	72686	5.5	6.1	M 6x0.75	6.5	4.6	2.50	

* To complete the abbreviated part numbers in the table above use the prefix "217-0"

Material: Inserts - 303 CRES
Keys - 302 CRES

Finish: Passivated

Tolerances: ± 0.25 mm unless specified otherwise.

Internal Threads: Per Fed Std H28/21, MJ Form

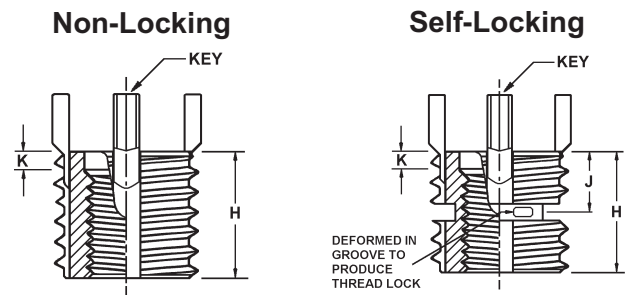
Dimensions: All dimensions below are in millimeters

Keys: Inserts with an internal thread size of M 6 and smaller are furnished with 2 locking keys. Larger sizes have 4 locking keys.

Material Identification Mark: None

Lubrication: Dry Film Lube on Self-Locking Inserts only

Performance: See note on the bottom of page 17



Lightweight - Metric

PART NUMBER*		INSERT					INSTALLATION						REMOVAL	
Non-Locking	Self-Locking	Internal Thread ¹ Class 4H5H	External Thread Class 4h	H Length	J $\pm .76$	K C'Bore Depth	Install Tool Part No.*	Tap Drill Size ²	C'Sink Dia. $+0.25$ -0.00	Thread Tap		Drill		
										Size Class 6H	Min. Depth	Size	Depth	
76351	77351	M 5x0.8	M 8x1.25	8.0	3.73	1.27	72651	6.90	8.25	M 8x1.25	9.5	5.50	4.00	
76551	77551	M 5x0.5												
76352	77352	M 6x1.0	M 10x1.25	10.0	6.02	1.78	72652	8.80	10.25	M 10x1.25	11.5	7.50	4.75	
76552	77552	M 6x0.75												
76353	77353	M 8x1.25	M 12x1.25	12.0	6.28	1.78	72653	10.80	12.25	M 12x1.25	13.5	9.50	4.75	
76553	77553	M 8x1.0												
76355	77355	M 10x1.5	M 14x1.5	14.0	6.46	2.29	72655	12.80	14.25	M 14x1.5	15.5	11.50	4.75	
76555	77555	M 10x1.25												
76356	77356	M 12x1.75	M 16x1.5	16.0	6.46	2.29	72656	14.75	16.25	M 16x1.5	17.5	13.50	4.75	
76556	77556	M 12x1.25												

* To complete the abbreviated part numbers in the table above use the prefix "217-0"

¹ Thread Class on M 5 Internal Thread is 4H6H

² Tap Drill Hole Tolerance: 6.90 to 10.80 = $+0.100/-0.025$
Over 12.80 = $+0.130/-0.025$

Material: Inserts - 303 CRES
Keys - 302 CRES

Finish: Passivated

Tolerances: ± 0.25 mm unless specified otherwise.

Internal Threads: Per Fed Std H28/21, MJ Form

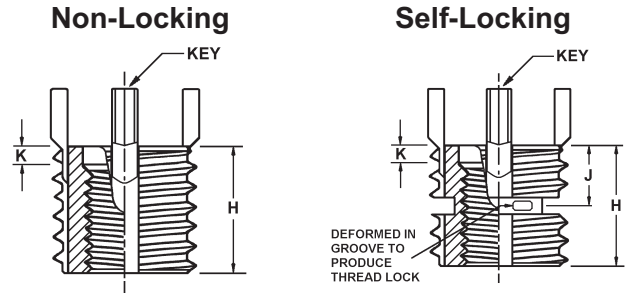
Dimensions: All dimensions below are in millimeters

Keys: Inserts with an internal thread size of M 6 and smaller are furnished with 2 locking keys. Larger sizes have 4 locking keys.

Material Identification Mark: None

Lubrication: Dry Film Lube on Self-Locking Inserts only

Performance: See note on the bottom of this page



Heavy Duty - Metric

PART NUMBER*		INSERT					INSTALLATION				REMOVAL		
Non-Locking	Self-Locking	Internal Thread ¹ Class 4H5H	External Thread Class 4h	H Length	J $\pm .76$	K C'Bore Depth	Install Tool Part No.*	Tap Drill Size ²	C'Sink Dia. $+0.25$ -0.00	Thread Tap		Drill	
										Size Class 6H	Min. Depth	Size	Depth
76363	77363	M 4x0.7	M 8x1.25	8.0	5.00	1.27	72663	6.90	8.25	M 8x1.25	9.5	5.50	4.00
76364	77364	M 5x0.8	M 10x1.25	10.0	5.50	1.27	72664	8.80	10.25	M 10x1.25	12.5	7.50	4.75
76365	77365	M 6x1.0	M 12x1.25	12.0	6.46	1.78	72665	10.80	12.25	M 12x1.25	14.5	9.50	4.75
76366	77366	M 8x1.25	M 14x1.5	14.0	6.46	1.78	72666	12.80	14.25	M 14x1.5	16.5	11.50	4.75
76566	77566	M 8x1.0											
76367	77367	M 10x1.5	M 16x1.5	16.0	6.46	2.29	72667	14.75	16.25	M 16x1.5	18.5	13.50	4.75
76567	77567	M 10x1.25											
76369	77369	M 12x1.75	M 18x1.5	18.0	7.23	2.29	72669	16.75	18.25	M 18x1.5	20.5	15.50	4.75
76569	77569	M 12x1.25											
76370	77370	M 14x2.0	M 20x1.5	20.0	7.73	2.79	72670	18.75	20.25	M 20x1.5	22.5	17.50	4.75
76570	77570	M 14x1.5											
76371	77371	M 16x2.0	M 22x1.5	22.0	8.50	2.79	72671	20.50	22.25	M 22x1.5	24.5	17.75	6.35
76571	77571	M 16x1.5											
76572	77572	M 18x1.5	M 24x2.0	24.0	9.25	2.79	72672	22.50	24.25	M 24x2.0	28.5	19.75	6.35
76373	77373	M 20x2.5	M 30x2.0	30.0	12.51	2.79	72673	28.00	30.25	M 30x2.0	34.5	25.75	6.35
76573	77573	M 20x1.5											
76574	77574	M 22x1.5	M 32x2.0	32.0	12.51	2.79	72674	30.00	32.25	M 32x2.0	36.5	27.75	6.35
76375	77375	M 24x3.0	M 33x2.0	33.0	13.97	3.81	72675	31.00	33.25	M 33x2.0	37.5	28.75	6.35
76575	77575	M 24x2.0											

* To complete the abbreviated part numbers in the table above use the prefix "217-0"

¹ Thread Class on M 4 and M 5 Internal Thread is 4H6H

² Tap Drill Hole Tolerance: 6.90 to 10.80 = $+0.100/-0.025$
Over 12.80 = $+0.130/-0.025$

Note: There is no National Aerospace Standard for Metric Keylocking Inserts manufactured from 303 CRES. The inserts shown on pages 16 and 17 are compliant with the other requirements of NA0147, NA0149, and NA0151 except for any references to the type of material or performance related to the material.