

KATO[®]

THREAD KITS

YOUR THREAD REPAIR SPECIALIST



PERMA-COIL. PERMA-PLUG. PERMA-KEE. PERMA-RIVET.



KATO® THREAD KITS



Thread Kits Company is now [KATO Thread Kits](#).

Founded in 1984, Thread Kits Company is a leading manufacturer and global supplier of quality thread repair products for 40 years! In 2016, KATO Fastening Systems, Inc. (KATO), the original inventor and manufacturer of the revolutionary bi-directional Tangless® insert acquired Thread Kits, Company.

Thread repair solutions is our specialty. It began with Perma-Coil®, a recognized brand name in the automotive, industrial and production rebuilder industries. Today KATO Thread Kits offers a broad range of thread repair products to satisfy a variety of applications including our very popular Perma-Plug, Perma-Kee, Perma-Rivet, Time-Sert, and Big-Sert.

At KATO Thread Kits, our mission is to achieve Satisfaction-Plus™ by providing our customers with innovative products, service and support that meets and exceeds their expectations.

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MAINTENANCE - REPAIR - OVERHAUL

PERMA-COIL®

Perma-Coil Kits (Screw Thread Inserts for Maintenance, Repair and Overhaul) are universally accepted method of repairing stripped threads in all types of materials. By using Perma-Coil Kits, damaged threads can be brought back to the original thread size, and better than new. Thread wear, corrosion and galling will be virtually eliminated, and the assembly will be stronger than the original with Perma-Coil inserts. Unlike threaded solid bushing type fasteners, Perma-Coil inserts provide space and weight savings. In addition, Perma-Coil inserts eliminate the need for oversized drilling and tapping, thread welding, or plugging of damaged holes.

At Thread Kits, there is only one standard of quality for original equipment or repair. Perma-Coil inserts meet or exceed all applicable military, aerospace, and commercial standards.



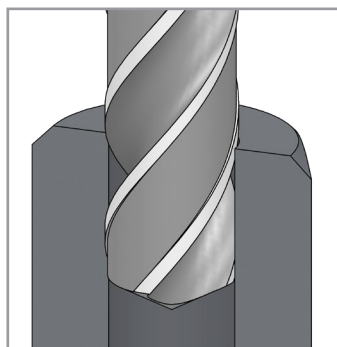


Proudly made in the USA.

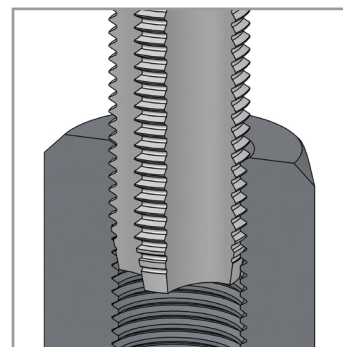
EACH KIT CONSISTS OF:

- Aerospace quality free-running tanged inserts; in the most popular 1.5D nominal length
- Perma-Coil STI Tap
- All steel threaded installation tool
- Complete and fool-proof instructions

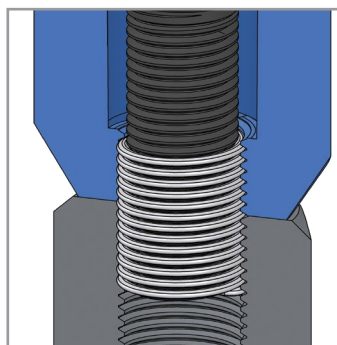
THREAD REPAIR MADE EASY



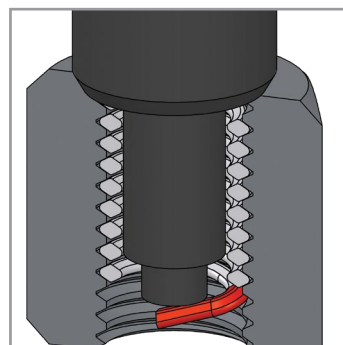
1. Drill out damaged threads.



2. Tap new threads.



3. Install new Perma-Coil insert. (Prewinding tool shown is used for fine thread applications only).



4. Remove tang from insert. You now have a permanently repaired thread.



insert pack

PERMA-COIL KITS

Thread Size	Repair Kits ¹		Replacement Parts				Bulk Inserts	Drill Size
	Part No.	Inserts Per Kit	Installation Tool	Tap	Inserts Pack ²	Inserts Per Pack	Perma-Coil Part No.	
Unified Coarse								
4-40	1208-014	(12/PKG)	1182-014	1428-014	208-014	(12/PKG)	TNC-04C-0168	1/8
5-40	1208-015	(12/PKG)	1182-015	1428-015	208-015	(12/PKG)	TNC-05C-0188	9/64
6-32	1208-016	(12/PKG)	1182-016	1428-016	208-016	(12/PKG)	TNC-06C-0207	5/32
8-32	1208-018	(12/PKG)	1182-018	1428-018	208-018	(12/PKG)	TNC-2C-0246	11/64
10-24	1208-101	(12/PKG)	1182-101	1428-101	208-101	(12/PKG)	TNC-3C-0285	13/64
12-24	1208-102	(12/PKG)	1182-102	1428-102	208-102	(12/PKG)	TNC-1C-0324	15/64
1/4-20	1208-104	(12/PKG)	1182-104	1428-104	208-104	(12/PKG)	TNC-4C-0375	17/64
5/16-18	1208-105	(12/PKG)	1182-105	1428-105	208-105	(12/PKG)	TNC-5C-0469	21/64
3/8-16	1208-106	(12/PKG)	1182-106	1428-106	208-106	(12/PKG)	TNC-6C-0562	25/64
7/16-14	1208-107	(6/PKG)	1182-107	1428-107	208-107	(6/PKG)	TNC-7C-0656	29/64
1/2-13	1208-108	(6/PKG)	1182-108	1428-108	208-108	(6/PKG)	TNC-8C-0750	17/32
9/16-12	1208-109	(6/PKG)	1182-109	1428-109	208-109	(6/PKG)	TNC-9C-0844	19/32
5/8-11	1208-110	(6/PKG)	1182-110	1428-110	208-110	(6/PKG)	TNC-10C-0938	21/32
3/4-10	1208-112	(4/PKG)	1182-112	1428-112	208-112	(4/PKG)	TNC-12C-1125	25/32
7/8-9	3208-C14	(6/PKG)	1182-114	1043-14CP3	108-114	(1/PKG)	TNC-14C-1312	29/32
1-8	3208-C16	(6/PKG)	1182-116	1043-16CP3	108-116	(1/PKG)	TNC-16C-1500	1 1/32
1 1/8-7	3208-C18	(5/PKG)	1182-118	1043-18CP3	108-118	(1/PKG)	TNC-18C-1688	1 11/64
1 1/4-7	3208-C20	(4/PKG)	1182-120	1043-20CP3	108-120	(1/PKG)	TNC-20C-1875	1 19/64
1 3/8-6	3208-C22	(4/PKG)	1182-122	1043-22CP3	108-122	(1/PKG)	TNC-22C-2062	1 27/64
1 1/2-6	3208-C24	(4/PKG)	1182-124	1043-24CP3	108-124	(1/PKG)	TNC-24C-2250	1 35/64
Unified Fine								
10-32	1208-201	(12/PKG)	1172-201	1428-201	208-201	(12/PKG)	TNF-3C-0285	13/64
1/4-28	1208-204	(12/PKG)	1172-204	1428-204	208-204	(12/PKG)	TNF-4C-0375	17/64
5/16-24	1208-205	(12/PKG)	1172-205	1428-205	208-205	(12/PKG)	TNF-5C-0312	21/64
3/8-24	1208-206	(12/PKG)	1172-206	1428-206	208-206	(12/PKG)	TNF-6C-0562	25/64
7/16-20	1208-207	(6/PKG)	1172-207	1428-207	208-207	(6/PKG)	TNF-7C-0656	29/64
1/2-20	1208-208	(6/PKG)	1172-208	1428-208	208-208	(6/PKG)	TNF-8C-0750	33/64
9/16-18	1208-209	(6/PKG)	1172-209	1428-209	208-209	(6/PKG)	TNF-9C-0844	37/64
5/8-18	1208-210	(6/PKG)	1172-210	1428-210	208-210	(6/PKG)	TNF-10C-0938	41/64
3/4-16	1208-212	(4/PKG)	1172-212	1428-212	208-212	(4/PKG)	TNF-12C-1125	49/64
7/8-14	3208-F14	(6/PKG)	1039-14F	1043-14FP3	108-214	(1/PKG)	TNF-14C-1312	57/64
1-14	3208-F164	(6/PKG)	1039-164F	1043-164FP3	108-2164	(1/PKG)	TNF-164C-1500	1 1/64
1-12	3208-F16	(6/PKG)	1039-16F	1043-16FP3	108-216	(1/PKG)	TNF-161C-1500	1 1/64
1 1/8-12	3208-F18	(5/PKG)	1039-18F	1043-18FP3	108-218	(1/PKG)	TNF-18C-1688	1 5/32
1 1/4-12	3208-F20	(4/PKG)	1039-20F	1043-20FP3	108-220	(1/PKG)	TNF-20C-1875	1 9/32
1 3/8-12	3208-F22	(4/PKG)	1039-22F	1043-22FP3	108-222	(1/PKG)	TNF-22C-2062	1 13/32
1 1/2-12	3208-F24	(4/PKG)	1039-24F	1043-24FP3	108-224	(1/PKG)	TNF-24C-2250	1 17/32

PERMA-COIL KITS

Thread Size	Repair Kits¹		Replacement Parts				Bulk Inserts	Drill Size
	Part No.	Inserts Per Kit	Installation Tool	Tap	Inserts Pack²	Inserts Per Pack	Perma-Coil Part No.	
Metric Coarse								
M3X0.5	1221-303	(12/PKG)	1287-303	1448-303	206-303	(12/PKG)	TNM-3X.5C-4.5	1/8
M4X0.7	1221-304	(12/PKG)	1287-304	1448-304	206-304	(12/PKG)	TNM-4X.7C-6	11/64
M5X0.8	1221-305	(12/PKG)	1287-305	1448-305	206-305	(12/PKG)	TNM-5X.8C-7.5	13/64
M6X1	1221-306	(12/PKG)	1287-306	1448-306	206-306	(12/PKG)	TNM-6X1C-9	1/4
M7X1	1221-307	(12/PKG)	1289-307	1448-307	206-307	(12/PKG)	TNM-7X1C-10.5	9/32
M8X1.25	1221-308	(12/PKG)	1289-308	1448-308	206-308	(12/PKG)	TNM-8X1.25C-12	21/64
M9X1.25	1221-309	(12/PKG)	1289-309	1448-309	206-309	(12/PKG)	TNM-9x1.25C-13.5	3/8
M10X1.5	1221-310	(12/PKG)	1289-310	1448-310	206-310	(12/PKG)	TNM-10X1.5C-15	13/32
M11X1.5	1221-311	(6/PKG)	1289-311	1448-311	106-311	(6/PKG)	TNM-11X1.5C-16.5	29/64
M12X1.75	3221-M12C	(6/PKG)	1289-312	5043-120CP4	106-312	(6/PKG)	TNM-12X1.75C-18	31/64
M14X2	3221-M14C	(6/PKG)	1289-314	5043-140CP4	106-314	(6/PKG)	TNM-14X2C-21	37/64
M16X2	3221-M16C	(6/PKG)	1289-316	5043-160CP4	106-316	(6/PKG)	TNM-16X2C-24	21/32
M18X2.5	3221-M18C	(6/PKG)	1289-318	5043-180CP4	106-318	(6/PKG)	TNM-18X2.5C-27	47/64
M20X2.5	3221-M20C	(6/PKG)	1289-320	5043-200CP4	106-320	(6/PKG)	TNM-20X2.5C-30	13/16
Metric Fine								
M8X1.0	1221-M8F	(6/PKG)	1287-608	1448-608	106-608	(6/PKG)	TNM-8X1C-12	21/64
M10X1.0	1221-M1010	(6/PKG)	1287-61010	1448-61010	106-61010	(6/PKG)	TNM-10X1C-15	13/32
M10X1.25	3221-M10F	(12/PKG)	1287-610	1448-610	106-610	(12/PKG)	TNM-10X1.25C-15	13/32
M11X1.0	1221-M11F	(6/PKG)	1287-611	1448-611	106-611	(6/PKG)	TNM-11X1C-16.5	7/16
M11X1.25	1221-M1125	(6/PKG)	1287-61125	1448-61125	106-61125	(6/PKG)	TNM-11X1.25C-16.5	29/64
M12X1.25	3221-M12F	(6/PKG)	1287-612	5043-120FP4	106-612	(6/PKG)	TNM-12X1.25C-18	31/64
M12X1.5	3221-M1215	(6/PKG)	1287-61215	5043-1215FP4	106-61215	(6/PKG)	TNM-12X1.5C-18	31/64
M14X1.5	3221-M14F	(6/PKG)	1287-614	5043-140FP4	106-614	(6/PKG)	TNM-14X1.5C-21	9/16
M16X1.5	3221-M16F	(6/PKG)	1287-616	5043-160FP4	106-616	(6/PKG)	TNM-16X1.5C-24	21/32

1. Perma-Coil repair kits include: Inserts, Installation Tool, and Tap.
2. Perma-Coil insert packs contain inserts only.
3. The above packs and insert bags contain inserts whose length is 1-1/2 times their diameter (For example, the 1/4-20 insert is 3/8" long).
4. Other sizes and lengths are available.

INSERTS DIMENSIONS

Thread Size	Size Designation	Nominal Length ¹					Free Outer Diameter		Number of Free Coils ²				
		Length of Insert (in Diameter)							Nominal Length (Diameter)				
		1	1.5	2	2.5	3	Min.	Max.	1	1.5	2	2.5	3
Unified Coarse													
1 (.073)-64	01	0.073	0.110	0.146	0.182	0.219	0.095	0.103	2-3/4	4-7/8	6-7/8	8-7/8	10-7/8
2 (.086)-56	02	0.086	0.129	0.172	0.215	0.258	0.110	0.119	3	5-1/4	7-3/8	9-5/8	11-7/8
3 (.099)-48	03	0.099	0.148	0.198	0.248	0.297	0.128	0.139	2-7/8	5	7-1/4	9-3/8	11-1/2
4 (.112)-40	04	0.112	0.168	0.224	0.280	0.336	0.144	0.159	2-3/4	4-3/4	6-3/4	8-7/8	10-7/8
5 (.125)-40	05	0.125	0.188	0.250	0.312	0.375	0.158	0.173	3-1/4	5-1/2	7-3/4	10	12-1/4
6 (.138)-32	06	0.138	0.207	0.276	0.345	0.414	0.178	0.193	2-3/4	4-3/4	6-7/8	8-7/8	10-7/8
8 (.164)-32	2	0.164	0.246	0.328	0.410	0.492	0.205	0.220	3-1/2	6	8-3/8	10-3/4	13-1/4
10 (.190)-24	3	0.190	0.285	0.380	0.475	0.570	0.244	0.259	2-7/8	5	7-1/8	9-1/4	11-3/8
12 (.216)-24	1	0.216	0.324	0.432	0.540	0.648	0.270	0.285	3-1/2	6	8-3/8	10-5/8	13-1/8
1/4 (.250)-20	4	0.250	0.375	0.500	0.625	0.750	0.310	0.330	3-3/8	5-3/4	8	10-3/8	12-3/4
5/16 (.3125)-18	5	0.312	0.469	0.625	0.781	0.938	0.380	0.400	4	6-5/8	9-1/4	11-7/8	14-5/8
3/8 (.3750)-16	6	0.375	0.562	0.750	0.938	1.125	0.452	0.472	4-3/8	7-1/4	10	12-7/8	15-3/4
7/16 (.4375)-14	7	0.438	0.656	0.875	1.094	1.312	0.526	0.551	4-1/2	7-3/8	10-1/4	13-1/8	16-1/8
1/2 (.5000)-13	8	0.500	0.750	1.000	1.250	1.500	0.597	0.622	4-7/8	7-7/8	11	14-1/8	17-1/8
9/16 (.5625)-12	9	0.562	0.844	1.125	1.406	1.688	0.669	0.694	5-1/8	8-1/4	11-1/2	14-3/4	17-7/8
5/8 (.6250)-11	10	0.625	0.938	1.250	1.562	1.875	0.742	0.767	5-1/4	8-1/2	11-3/4	15	18-3/8
3/4 (.750)-10	12	0.750	1.125	1.500	1.875	2.250	0.881	0.906	5-7/8	9-3/8	13	16-1/2	20-1/8
7/8 (.8750)-9	14	0.875	1.312	1.750	2.188	2.625	1.022	1.052	6-1/4	10	13-3/4	17-1/2	21-1/4
1 (1.0000)-8	16	1.000	1.500	2.000	2.500	3.000	1.166	1.196	6-3/8	10-1/8	14	17-3/4	21-5/8
1-1/8 (1.1250)-7	18	1.125	1.688	2.250	2.812	3.375	1.315	1.355	6-1/8	9-7/8	13-5/8	17-1/2	21-1/4
1-1/4 (1.2500)-7	20	1.250	1.875	2.500	3.125	3.750	1.443	1.483	7	11-1/4	15-3/8	19-1/2	23-3/4
1-3/8 (1.3750)-6	22	1.375	2.062	2.750	3.438	4.125	1.598	1.643	6-1/2	10-1/2	14-3/8	18-3/8	22-1/4
1-1/2 (1.5000)-6	24	1.500	2.250	3.000	3.750	4.500	1.727	1.772	7-1/4	11-1/2	15-7/8	20-1/8	24-1/2
Unified Fine													
0 (.060)-80	00	0.060	0.090	0.120	---	---	---	---	3	5-1/2	7-3/8	---	---
3 (.099)-56	03	0.099	0.148	0.198	0.248	0.297	0.131	0.146	3-3/8	5-5/8	8	10-3/8	12-5/8
4 (.112)-48	04	0.112	0.168	0.224	0.280	0.336	0.147	0.162	3-3/8	5-5/8	7-7/8	10-1/4	12-1/2
6 (.138)-40	06	0.138	0.207	0.276	0.345	0.414	0.173	0.193	3-1/2	6	8-3/8	10-3/4	13-1/4
8 (.164)-36	2	0.164	0.246	0.328	0.410	0.492	0.204	0.224	3-7/8	6-1/2	9-1/8	11-5/8	14-1/4
10 (.190)-32	3	0.190	0.285	0.380	0.475	0.570	0.236	0.256	4-1/8	6-7/8	9-1/2	12-1/4	14-7/8
1/4 (.250)-28	4	0.250	0.375	0.500	0.625	0.750	0.306	0.326	5	8-1/4	11-3/8	14-1/2	17-5/8
5/16 (.3125)-24	5	0.312	0.469	0.625	0.781	0.938	0.380	0.400	5-1/2	8-7/8	12-1/4	15-5/8	19
3/8 (.3750)-24	6	0.375	0.562	0.750	0.938	1.125	0.448	0.468	6-7/8	11	15	19-1/8	23-1/8
7/16 (.4375)-20	7	0.438	0.656	0.875	1.094	1.312	0.524	0.549	6-5/8	10-5/8	14-5/8	18-1/2	22-1/2
1/2 (.5000)-20	8	0.500	0.750	1.000	1.250	1.500	0.592	0.617	7-7/8	12-3/8	16-7/8	21-3/8	25-7/8
9/16 (.5625)-18	9	0.562	0.844	1.125	1.406	1.688	0.666	0.691	8	12-1/2	17-1/8	21-3/4	26-1/4
5/8 (.6250)-18	10	0.625	0.938	1.250	1.562	1.875	0.733	0.758	9	14-1/8	19-1/4	24-1/4	29-3/8
3/4 (.750)-16	12	0.750	1.125	1.500	1.875	2.250	0.876	0.901	9-3/4	15-1/8	20-5/8	26	31-1/2
7/8 (.8750)-14	14	0.875	1.312	1.750	2.188	2.625	1.021	1.051	9-7/8	15-1/2	21-1/8	26-5/8	32-1/4
1 (1.0000)-12	16	1.000	1.500	2.000	2.500	3.000	1.169	1.199	9-5/8	15	20-1/2	26	31-1/2
1-1/8 (1.1250)-12	18	1.125	1.688	2.250	2.812	3.375	1.304	1.334	11-1/8	17-1/4	23-3/8	29-1/2	35-3/4
1-1/4 (1.2500)-12	20	1.250	1.875	2.500	3.125	3.750	1.439	1.469	12-1/2	19-3/8	26-1/4	33	39-7/8
1-3/8 (1.3750)-12	22	1.375	2.062	2.750	3.438	4.125	1.575	1.610	13-3/4	21-3/8	28-7/8	36-1/2	44
1-1/2 (1.5000)-12	24	1.500	2.250	3.000	3.750	4.500	1.710	1.745	15-1/4	23-1/2	31-5/8	39-7/8	48-1/8

1. Nominal length is a calculated number and cannot be measured in the free state. It is the actual installed length plus 1/2 pitch.

2. The number of free coils is the total number of revolutions, and has a tolerance of $\pm 1/4$ coil. For Tangless inserts, the number of coils is counted from notch to notch. For tanged inserts, the number of coils is counted 90° from the tang.

INSERTS DIMENSIONS

Thread Size & Designation	Nominal Length ¹					Free Outer Diameter		Number of Free Coils ²				
	Length of Insert (in Diameter)							Nominal Length (Diameter)				
	1	1.5	2	2.5	3	Min.	Max.	1	1.5	2	2.5	3
Metric Coarse												
M2X0.4	2.0	3.0	4.0	5.0	6.0	2.50	2.70	3-1/4	5-1/2	7-3/4	10-1/8	12-3/8
M2.2X0.45	2.2	3.3	4.4	5.5	6.6	2.80	3.00	3-1/8	5-3/8	7-5/8	9-7/8	12-1/8
M2.5X0.45	2.5	3.8	5.0	6.3	7.5	3.20	3.70	3-3/8	5-3/4	8-1/8	10-1/2	12-3/4
M3X0.5	3.0	4.5	6.0	7.5	9.0	3.80	4.35	3-3/4	6-3/8	8-7/8	11-3/8	13-7/8
M3.5X0.6	3.5	5.3	7.0	8.8	10.5	4.40	4.95	3-3/4	6-3/8	8-3/4	11-3/8	13-3/4
M4X0.7	4.0	6.0	8.0	10.0	12.0	5.05	5.60	3-5/8	6-1/8	8-5/8	11-1/8	13-5/8
M5X0.8	5.0	7.5	10.0	12.5	15.0	6.20	6.80	4-1/8	6-7/8	9-5/8	12-3/8	15-1/8
M6X1	6.0	9.0	12.0	15.0	18.0	7.40	7.95	4	6-3/4	9-1/2	12-1/8	14-7/8
M7X1	7.0	10.5	14.0	17.5	21.0	8.65	9.20	4-7/8	8	11-1/8	14-1/8	17-1/4
M8X1.25	8.0	12.0	16.0	20.0	24.0	9.80	10.35	4-1/2	7-3/8	10-1/4	13-1/4	16-1/8
M10X1.5	10.0	15.0	20.0	25.0	30.0	11.95	12.50	4-7/8	8	11-1/8	14-1/4	17-3/8
M12X1.75	12.0	18.0	24.0	30.0	36.0	14.30	15.00	5	8-1/4	11-1/2	14-5/8	17-7/8
M14X2	14.0	21.0	28.0	35.0	42.0	16.65	17.35	5-1/8	8-1/2	11-3/4	15	18-3/8
M16X2	16.0	24.0	32.0	40.0	48.0	18.90	19.60	6-1/8	9-3/4	13-1/2	17-1/4	21
M18X2.5	18.0	27.0	36.0	45.0	54.0	21.30	22.00	5-3/8	8-7/8	12-1/4	15-5/8	19
M20X2.5	20.0	30.0	40.0	50.0	60.0	23.55	24.40	6-1/8	9-7/8	13-5/8	17-3/8	21-1/8
M22X2.5	22.0	33.0	44.0	55.0	66.0	25.90	26.90	6-3/4	10-7/8	14-7/8	19	23-1/8
M24X3	24.0	36.0	48.0	60.0	72.0	28.00	29.00	6-1/8	10	13-3/4	17-1/2	21-3/8
M27X3	27.0	40.5	54.0	67.5	81.0	31.40	32.40	7	11-1/4	15-1/2	19-3/4	24
Metric Fine												
M8X1	8.0	12.0	16.0	20.0	24.0	9.70	10.25	5-7/8	9-3/8	13	16-1/2	20-1/8
M10X1	10.0	15.0	20.0	25.0	30.0	11.95	12.50	7-5/8	12	16-1/2	21	25-1/2
M10X1.25	10.0	15.0	20.0	25.0	30.0	12.10	12.65	5-7/8	9-1/2	13-1/8	16-3/4	20-3/8
M12X1.25	12.0	18.0	24.0	30.0	36.0	14.30	15.00	7-1/4	11-5/8	15-7/8	20-1/4	24-1/2
M12X1.5	12.0	18.0	24.0	30.0	36.0	14.25	14.95	6	9-5/8	13-3/8	17	20-3/4
M14X1.5	14.0	21.0	28.0	35.0	42.0	16.55	17.25	7-1/8	11-3/8	15-5/8	20	24-1/4
M16X1.5	16.0	24.0	32.0	40.0	48.0	18.90	19.60	8-1/4	13-1/8	18	22-3/4	27-5/8
M18X1.5	18.0	27.0	36.0	45.0	54.0	21.05	21.75	9-1/2	15	20-3/8	25-7/8	31-3/8
M20X1.5	20.0	30.0	40.0	50.0	60.0	23.15	24.00	10-3/4	16-7/8	22-7/8	28-7/8	35
M22X1.5	22.0	33.0	44.0	55.0	66.0	25.55	26.45	11-7/8	18-1/2	25-1/8	31-5/8	38-1/4
M18X2	18.0	27.0	36.0	45.0	54.0	21.15	21.85	7	11-1/8	15-3/8	19-1/2	23-5/8
M20X2	20.0	30.0	40.0	50.0	60.0	23.20	24.05	7-7/8	12-1/2	17-1/4	21-7/8	26-1/2
M22X2	22.0	33.0	44.0	55.0	66.0	25.60	26.50	8-3/4	13-3/4	18-7/8	23-7/8	29
M24X2	24.0	36.0	48.0	60.0	72.0	28.10	29.10	9-1/2	15	20-3/8	25-7/8	31-3/4
M27X2	27.0	40.5	54.0	67.5	81.0	31.30	32.30	10-7/8	17	23-1/4	29-3/8	35-1/2
M30X2	30.0	45.0	60.0	75.0	90.0	34.50	35.70	12-1/4	19-1/8	25-7/8	32-3/4	39-1/2
M33X2	33.0	49.5	66.0	82.5	99.0	37.80	39.20	13-5/8	21-1/8	28-5/8	36	43-1/2
M39X2	39.0	58.5	78.0	97.5	117.0	44.30	45.70	16-3/8	25-1/4	34-1/8	43	51-7/8
M36X3	36.0	54.0	72.0	90.0	108.0	41.30	42.70	9-3/4	15-1/4	20-7/8	26-1/2	32
M39X3	39.0	58.5	78.0	97.5	117.0	44.40	45.80	10-3/4	16-3/4	22-3/4	28-7/8	34-7/8

3. All dimensions for unified sizes are in inches.

4. All dimensions for metric sizes are in millimeters.

PERMA-COIL / FREE-RUNNING / BULK INSERTS

Thread Size	Nominal Length	Part No.	MA/MS No.
Unified Coarse			
2-56	1	TNC-02C-0086	MS122095
	1.5	TNC-02C-0129	MS122135
	2	TNC-02C-0172	MS122175
	2.5	TNC-02C-0215	MS122215
	3	TNC-02C-0258	MS122255
3-48	1	TNC-03C-0099	MS122115
	1.5	TNC-03C-0148	MS122155
	2	TNC-03C-0198	MS122195
	2.5	TNC-03C-0248	MS122235
	3	TNC-03C-0297	MS122275
4-40	1	TNC-04C-0112	MS122076
	1.5	TNC-04C-0168	MS122116
	2	TNC-04C-0224	MS122156
	2.5	TNC-04C-0280	MS122196
	3	TNC-04C-0336	MS122236
5-40	1	TNC-05C-0125	MS122077
	1.5	TNC-05C-0188	MS122117
	2	TNC-05C-0250	MS122157
	2.5	TNC-05C-0312	MS122197
	3	TNC-05C-0375	MS122237
6-32	1	TNC-06C-0138	MS122078
	1.5	TNC-06C-0207	MS122118
	2	TNC-06C-0276	MS122158
	2.5	TNC-06C-0345	MS122198
	3	TNC-06C-0414	MS122238
8-32	1	TNC-2C-0164	MS122079
	1.5	TNC-2C-0246	MS122119
	2	TNC-2C-0328	MS122159
	2.5	TNC-2C-0410	MS122199
	3	TNC-2C-0492	MS122239
10-24	1	TNC-3C-0190	MS122080
	1.5	TNC-3C-0285	MS122120
	2	TNC-3C-0380	MS122160
	2.5	TNC-3C-0475	MS122200
	3	TNC-3C-0570	MS122240
12-24	1	TNC-1C-0216	---
	1.5	TNC-1C-0324	---
	2	TNC-1C-0432	---
	2.5	TNC-1C-0540	---
	3	TNC-1C-0648	---
1/4-20	1	TNC-4C-0250	MS122081
	1.5	TNC-4C-0375	MS122121
	2	TNC-4C-0500	MS122161
	2.5	TNC-4C-0625	MS122201
	3	TNC-4C-0750	MS122241

Thread Size	Nominal Length	Part No.	MA/MS No.
Unified Coarse			
5/16-18	1	TNC-5C-0312	MS122082
	1.5	TNC-5C-0469	MS122122
	2	TNC-5C-0625	MS122162
	2.5	TNC-5C-0781	MS122202
	3	TNC-5C-0938	MS122242
3/8-16	1	TNC-6C-0375	MS122083
	1.5	TNC-6C-0562	MS122123
	2	TNC-6C-0750	MS122163
	2.5	TNC-6C-0938	MS122203
	3	TNC-6C-1125	MS122243
7/16-14	1	TNC-7C-0438	MS122084
	1.5	TNC-7C-0656	MS122124
	2	TNC-7C-0875	MS122164
	2.5	TNC-7C-1094	MS122204
	3	TNC-7C-1312	MS122244
1/2-13	1	TNC-8C-0500	MS122085
	1.5	TNC-8C-0750	MS122125
	2	TNC-8C-1000	MS122165
	2.5	TNC-8C-1250	MS122205
	3	TNC-8C-1500	MS122245
9/16-12	1	TNC-9C-0562	MS122086
	1.5	TNC-9C-0844	MS122126
	2	TNC-9C-1125	MS122166
	2.5	TNC-9C-1406	MS122206
	3	TNC-9C-1688	MS122246
5/8-11	1	TNC-10C-0625	MS122087
	1.5	TNC-10C-0938	MS122127
	2	TNC-10C-1250	MS122167
	2.5	TNC-10C-1562	MS122207
	3	TNC-10C-1875	MS122247
3/4-10	1	TNC-12C-0750	MS122088
	1.5	TNC-12C-1125	MS122128
	2	TNC-12C-1500	MS122168
	2.5	TNC-12C-1875	MS122208
	3	TNC-12C-2250	MS122248
7/8-9	1	TNC-14C-0875	MS122089
	1.5	TNC-14C-1312	MS122129
	2	TNC-14C-1750	MS122169
	2.5	TNC-14C-2188	MS122209
	3	TNC-14C-2625	MS122249
1-8	1	TNC-16C-1000	MS122090
	1.5	TNC-16C-1500	MS122130
	2	TNC-16C-2000	MS122170
	2.5	TNC-16C-2500	MS122210
	3	TNC-16C-3000	MS122250

PERMA-COIL / FREE-RUNNING / BULK INSERTS

Thread Size	Nominal Length	Part No.	MA/MS No.
Unified Coarse			
1-1/8-7	1	TNC-18C-1125	MS122091
	1.5	TNC-18C-1688	MS122131
	2	TNC-18C-2250	MS122171
	2.5	TNC-18C-2812	MS122211
	3	TNC-18C-3375	MS122251
1-1/4-7	1	TNC-20C-1250	MS122092
	1.5	TNC-20C-1875	MS122132
	2	TNC-20C-2500	MS122172
	2.5	TNC-20C-3125	MS122212
	3	TNC-20C-3750	MS122252
1-3/8-6	1	TNC-22C-1375	MS122093
	1.5	TNC-22C-2062	MS122133
	2	TNC-22C-2750	MS122173
	2.5	TNC-22C-3438	MS122213
	3	TNC-22C-4125	MS122253
1-1/2-6	1	TNC-24C-1500	MS122094
	1.5	TNC-24C-2250	MS122134
	2	TNC-24C-3000	MS122174
	2.5	TNC-24C-3750	MS122214
	3	TNC-24C-4500	MS122254

UNIFIED FINE SIZES

Thread Size	Nominal Length	Part No.	MA/MS No.
Unified Fine			
3-56	1	TNF-03C-0099	MS124670
	1.5	TNF-03C-0148	MS124710
	2	TNF-03C-0198	MS124750
	2.5	TNF-03C-0248	MS124790
	3	TNF-03C-0297	MS124830
4-48	1	TNF-04C-0112	MS124671
	1.5	TNF-04C-0168	MS124711
	2	TNF-04C-0224	MS124751
	2.5	TNF-04C-0280	MS124791
	3	TNF-04C-0336	MS124831
6-40	1	TNF-06C-0138	MS124653
	1.5	TNF-06C-0207	MS124693
	2	TNF-06C-0276	MS124733
	2.5	TNF-06C-0345	MS124773
	3	TNF-06C-0414	MS124813
8-36	1	TNF-2C-0164	MS124654
	1.5	TNF-2C-0246	MS124694
	2	TNF-2C-0328	MS124734
	2.5	TNF-2C-0410	MS124774
	3	TNF-2C-0492	MS124814

Thread Size	Nominal Length	Part No.	MA/MS No.
Unified Fine			
10-32	1	TNF-3C-0190	MS124655
	1.5	TNF-3C-0285	MS124695
	2	TNF-3C-0380	MS124735
	2.5	TNF-3C-0475	MS124775
	3	TNF-3C-0570	MS124815
1/4-28	1	TNF-4C-0250	MS124656
	1.5	TNF-4C-0375	MS124696
	2	TNF-4C-0500	MS124736
	2.5	TNF-4C-0625	MS124776
	3	TNF-4C-0750	MS124816
5/16-24	1	TNF-5C-0312	MS124657
	1.5	TNF-5C-0469	MS124697
	2	TNF-5C-0625	MS124737
	2.5	TNF-5C-0781	MS124777
	3	TNF-5C-0938	MS124817
3/8-24	1	TNF-6C-0375	MS124658
	1.5	TNF-6C-0562	MS124698
	2	TNF-6C-0750	MS124738
	2.5	TNF-6C-0938	MS124778
	3	TNF-6C-1125	MS124818
7/16-20	1	TNF-7C-0438	MS124659
	1.5	TNF-7C-0656	MS124699
	2	TNF-7C-0875	MS124739
	2.5	TNF-7C-1094	MS124779
	3	TNF-7C-1312	MS124819
1/2-20	1	TNF-8C-0500	MS124660
	1.5	TNF-8C-0750	MS124700
	2	TNF-8C-1000	MS124740
	2.5	TNF-8C-1250	MS124780
	3	TNF-8C-1500	MS124820
9/16-18	1	TNF-9C-0562	MS124661
	1.5	TNF-9C-0844	MS124701
	2	TNF-9C-1125	MS124741
	2.5	TNF-9C-1406	MS124781
	3	TNF-9C-1688	MS124821
5/8-18	1	TNF-10C-0625	MS124662
	1.5	TNF-10C-0938	MS124702
	2	TNF-10C-1250	MS124742
	2.5	TNF-10C-1562	MS124782
	3	TNF-10C-1875	MS124822
3/4-16	1	TNF-12C-0750	MS124663
	1.5	TNF-12C-1125	MS124703
	2	TNF-12C-1500	MS124743
	2.5	TNF-12C-1875	MS124783
	3	TNF-12C-2250	MS124823

PERMA-COIL / FREE-RUNNING / BULK INSERTS

Thread Size	Nominal Length	Part No.	MA/MS No.
Unified Fine			
7/8-14	1	TNF-14C-0875	MS124664
	1.5	TNF-14C-1312	MS124704
	2	TNF-14C-1750	MS124744
	2.5	TNF-14C-2188	MS124784
	3	TNF-14C-2625	MS124824
1-14	1	TNF-164C-1000	---
	1.5	TNF-164C-1500	---
	2	TNF-164C-2000	---
1-12	1	TNF-161C-1000	MS124651
	1.5	TNF-161C-1500	MS124691
	2	TNF-161C-2000	MS124731
	2.5	TNF-161C-2500	MS124771
	3	TNF-161C-3000	MS124811
1-1/8-12	1	TNF-18C-1125	MS124666
	1.5	TNF-18C-1688	MS124706
	2	TNF-18C-2250	MS124746
	2.5	TNF-18C-2812	MS124786
	3	TNF-18C-3375	MS124826
1-1/4-12	1	TNF-20C-1250	MS124667
	1.5	TNF-20C-1875	MS124707
	2	TNF-20C-2500	MS124747
	2.5	TNF-20C-3125	MS124787
	3	TNF-20C-3750	MS124827
1-3/8-12	1	TNF-22C-1375	MS124668
	1.5	TNF-22C-2062	MS124708
	2	TNF-22C-2750	MS124748
	2.5	TNF-22C-3438	MS124788
	3	TNF-22C-4125	MS124828
1-1/2-12	1	TNF-24C-1500	MS124669
	1.5	TNF-24C-2250	MS124709
	2	TNF-24C-3000	MS124749
	2.5	TNF-24C-3750	MS124789
	3	TNF-24C-4500	MS124829

METRIC COARSE SIZES

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Coarse			
M2.2X0.45	1	TNM-2.2X.45C-2.2	MA3279-100
	1.5	TNM-2.2X.45C-3.3	MA3279-150
	2	TNM-2.2X.45C-4.4	MA3279-200
	2.5	TNM-2.2X.45C-5.5	MA3279-250
	3	TNM-2.2X.45C-6.6	MA3279-300

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Coarse			
M2.5X0.45	1	TNM-2.5X.45C-2.5	MA3279-101
	1.5	TNM-2.5X.45C-3.8	MA3279-151
	2	TNM-2.5X.45C-5	MA3279-201
	2.5	TNM-2.5X.45C-6.3	MA3279-251
	3	TNM-2.5X.45C-7.5	MA3279-301
M3X0.5	1	TNM-3X.5C-3	MA3279-102
	1.5	TNM-3X.5C-4.5	MA3279-152
	2	TNM-3X.5C-6	MA3279-202
	2.5	TNM-3X.5C-7.5	MA3279-252
M3.5X0.6	3	TNM-3X.5C-9	MA3279-302
	1	TNM-3.5X.6C-3.5	MA3279-103
	1.5	TNM-3.5X.6C-5.3	MA3279-153
	2	TNM-3.5X.6C-7	MA3279-203
M4X0.7	2.5	TNM-3.5X.6C-8.8	MA3279-253
	3	TNM-3.5X.6C-10.5	MA3279-303
	1	TNM-4X.7C-4	MA3279-104
	1.5	TNM-4X.7C-6	MA3279-154
M5X0.8	2	TNM-4X.7C-8	MA3279-204
	2.5	TNM-4X.7C-10	MA3279-254
	3	TNM-4X.7C-12	MA3279-304
	1	TNM-5X.8C-5	MA3279-105
M6X1	1.5	TNM-5X.8C-7.5	MA3279-155
	2	TNM-5X.8C-10	MA3279-205
	2.5	TNM-5X.8C-12.5	MA3279-255
	3	TNM-5X.8C-15	MA3279-305
M7X1	1	TNM-6X1C-6	MA3279-106
	1.5	TNM-6X1C-9	MA3279-156
	2	TNM-6X1C-12	MA3279-206
	2.5	TNM-6X1C-15	MA3279-256
M8X1.25	3	TNM-6X1C-18	MA3279-306
	1	TNM-7X1C-7	MA3279-107
	1.5	TNM-7X1C-10.5	MA3279-157
	2	TNM-7X1C-14	MA3279-207
M9X1.25	2.5	TNM-7X1C-17.5	MA3279-257
	3	TNM-7X1C-21	MA3279-307
	1	TNM-8X1.25C-8	MA3279-109
	1.5	TNM-8X1.25C-12	MA3279-159
M10X1.5	2	TNM-8X1.25C-16	MA3279-209
	2.5	TNM-8X1.25C-20	MA3279-259
	3	TNM-8X1.25C-24	MA3279-309
	1	TNM-9X1.25C-9	---
M12X1.75	1.5	TNM-9X1.25C-13.5	---
	2	TNM-9X1.25C-18	---

PERMA-COIL / FREE-RUNNING / BULK INSERTS

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Coarse			
M10X1.5	1	TNM-10X1.5C-10	MA3279-111
	1.5	TNM-10X1.5C-15	MA3279-161
	2	TNM-10X1.5C-20	MA3279-211
	2.5	TNM-10X1.5C-25	MA3279-261
	3	TNM-10X1.5C-30	MA3279-311
M11X1.5	1	TNM-11X1.5C-11	---
	1.5	TNM-11X1.5C-16.5	---
	2	TNM-11X1.5C-22	---
	2.5	TNM-11X1.5C-27.5	---
	3	TNM-11X1.5C-33	---
M12X1.75	1	TNM-12X1.75C-12	MA3279-114
	1.5	TNM-12X1.75C-18	MA3279-164
	2	TNM-12X1.75C-24	MA3279-214
	2.5	TNM-12X1.75C-30	MA3279-264
	3	TNM-12X1.75C-36	MA3279-314
M14X2	1	TNM-14X2C-14	MA3279-116
	1.5	TNM-14X2C-21	MA3279-166
	2	TNM-14X2C-28	MA3279-216
	2.5	TNM-14X2C-35	MA3279-266
	3	TNM-14X2C-42	MA3279-316
M16X2	1	TNM-16X2C-16	MA3279-118
	1.5	TNM-16X2C-24	MA3279-168
	2	TNM-16X2C-32	MA3279-218
	2.5	TNM-16X2C-40	MA3279-268
	3	TNM-16X2C-48	MA3279-318
M18X2.5	1	TNM-18X2.5C-18	MA3279-121
	1.5	TNM-18X2.5C-27	MA3279-171
	2	TNM-18X2.5C-36	MA3279-221
	2.5	TNM-18X2.5C-45	MA3279-271
	3	TNM-18X2.5C-54	MA3279-321
M20X2.5	1	TNM-20X2.5C-20	MA3279-124
	1.5	TNM-20X2.5C-30	MA3279-174
	2	TNM-20X2.5C-40	MA3279-224
	2.5	TNM-20X2.5C-50	MA3279-274
	3	TNM-20X2.5C-60	MA3279-324
M22X2.5	1	TNM-22X2.5C-22	MA3279-127
	1.5	TNM-22X2.5C-33	MA3279-177
	2	TNM-22X2.5C-44	MA3279-227
	2.5	TNM-22X2.5C-55	MA3279-277
	3	TNM-22X2.5C-66	MA3279-327
M24X3	1	TNM-24X3C-24	MA3279-129
	1.5	TNM-24X3C-36	MA3279-179
	2	TNM-24X3C-48	MA3279-229
	2.5	TNM-24X3C-60	MA3279-279
	3	TNM-24X3C-72	MA3279-329

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Coarse			
M27X3	1	TNM-27X3C-27	MA3279-131
	1.5	TNM-27X3C-40.5	MA3279-181
	2	TNM-27X3C-54	MA3279-231
	2.5	TNM-27X3C-67.5	MA3279-281
	3	TNM-27X3C-81	MA3279-331

METRIC FINE SIZES

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Fine			
M8X1	1	TNM-8X1C-8	MA3279-108
	1.5	TNM-8X1C-12	MA3279-158
	2	TNM-8X1C-16	MA3279-208
	2.5	TNM-8X1C-20	MA3279-258
	3	TNM-8X1C-24	MA3279-308
M10X1	1	TNM-10X1C-10	MA3279-141
	1.5	TNM-10X1C-15	MA3279-191
	2	TNM-10X1C-20	MA3279-241
	2.5	TNM-10X1C-25	MA3279-291
	3	TNM-10X1C-30	MA3279-341
M10X1.25	1	TNM-10X1.25C-10	MA3279-110
	1.5	TNM-10X1.25C-15	MA3279-160
	2	TNM-10X1.25C-20	MA3279-210
	2.5	TNM-10X1.25C-25	MA3279-260
	3	TNM-10X1.25C-30	MA3279-310
M11X1.0	1	TNM-11X1C-11	---
	1.5	TNM-11X1C-16.5	---
	2	TNM-11X1C-22	---
	2.5	TNM-11X1C-27.5	---
	3	TNM-11X1C-33	---
M11X1.25	1	TNM-11X1.25C-11	---
	1.5	TNM-11X1.25C-16.5	---
	2	TNM-11X1.25C-22	---
	2.5	TNM-11X1.25C-27.5	---
	3	TNM-11X1.25C-33	---
M12X1.25	1	TNM-12X1.25C-12	MA3279-112
	1.5	TNM-12X1.25C-18	MA3279-162
	2	TNM-12X1.25C-24	MA3279-212
	2.5	TNM-12X1.25C-30	MA3279-262
	3	TNM-12X1.25C-36	MA3279-312

PERMA-COIL / FREE-RUNNING / BULK INSERTS

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Fine			
M12X1.5	1	TNM-12X1.5C-12	MA3279-113
	1.5	TNM-12X1.5C-18	MA3279-163
	2	TNM-12X1.5C-24	MA3279-213
	2.5	TNM-12X1.5C-30	MA3279-263
	3	TNM-12X1.5C-36	MA3279-313
M14X1.5	1	TNM-14X1.5C-14	MA3279-115
	1.5	TNM-14X1.5C-21	MA3279-165
	2	TNM-14X1.5C-28	MA3279-215
	2.5	TNM-14X1.5C-35	MA3279-265
	3	TNM-14X1.5C-42	MA3279-315
M16X1.5	1	TNM-16X1.5C-16	MA3279-117
	1.5	TNM-16X1.5C-24	MA3279-167
	2	TNM-16X1.5C-32	MA3279-217
	2.5	TNM-16X1.5C-40	MA3279-267
	3	TNM-16X1.5C-48	MA3279-317
M18X1.5	1	TNM-18X1.5C-18	MA3279-119
	1.5	TNM-18X1.5C-27	MA3279-169
	2	TNM-18X1.5C-36	MA3279-219
	2.5	TNM-18X1.5C-45	MA3279-269
	3	TNM-18X1.5C-54	MA3279-319
M18X2	1	TNM-18X2C-18	MA3279-120
	1.5	TNM-18X2C-27	MA3279-170
	2	TNM-18X2C-36	MA3279-220
	2.5	TNM-18X2C-45	MA3279-270
	3	TNM-18X2C-54	MA3279-320
M20X1.5	1	TNM-20X1.5C-20	MA3279-122
	1.5	TNM-20X1.5C-30	MA3279-172
	2	TNM-20X1.5C-40	MA3279-222
	2.5	TNM-20X1.5C-50	MA3279-272
	3	TNM-20X1.5C-60	MA3279-322
M20X2	1	TNM-20X2C-20	MA3279-123
	1.5	TNM-20X2C-30	MA3279-173
	2	TNM-20X2C-40	MA3279-223
	2.5	TNM-20X2C-50	MA3279-273
	3	TNM-20X2C-60	MA3279-323
M22X1.5	1	TNM-22X1.5C-22	MA3279-125
	1.5	TNM-22X1.5C-33	MA3279-175
	2	TNM-22X1.5C-44	MA3279-225
	2.5	TNM-22X1.5C-55	MA3279-275
	3	TNM-22X1.5C-66	MA3279-325
M22X2	1	TNM-22X2C-22	MA3279-126
	1.5	TNM-22X2C-33	MA3279-176
	2	TNM-22X2C-44	MA3279-226
	2.5	TNM-22X2C-55	MA3279-276
	3	TNM-22X2C-66	MA3279-326

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Fine			
M24X2	1	TNM-24X2C-24	MA3279-128
	1.5	TNM-24X2C-36	MA3279-178
	2	TNM-24X2C-48	MA3279-228
	2.5	TNM-24X2C-60	MA3279-278
	3	TNM-24X2C-72	MA3279-328
M27X2	1	TNM-27X2C-27	MA3279-130
	1.5	TNM-27X2C-40.5	MA3279-180
	2	TNM-27X2C-54	MA3279-230
	2.5	TNM-27X2C-67.5	MA3279-280
	3	TNM-27X2C-81	MA3279-330
M30X2	1	TNM-30X2C-30	MA3279-132
	1.5	TNM-30X2C-45	MA3279-182
	2	TNM-30X2C-60	MA3279-232
	2.5	TNM-30X2C-75	MA3279-282
	3	TNM-30X2C-90	MA3279-332
M33X2	1	TNM-33X2C-33	MA3279-134
	1.5	TNM-33X2C-49.5	MA3279-184
	2	TNM-33X2C-66	MA3279-234
	2.5	TNM-33X2C-82.5	MA3279-284
	3	TNM-33X2C-99	MA3279-334
M39X2	1	TNM-39X2C-39	MA3279-138
	1.5	TNM-39X2C-58.5	MA3279-188
	2	TNM-39X2C-78	MA3279-238
	2.5	TNM-39X2C-97.5	MA3279-288
	3	TNM-39X2C-117	MA3279-338
M36X3	1	TNM-36X3C-36	MA3279-137
	1.5	TNM-36X3C-54	MA3279-187
	2	TNM-36X3C-72	MA3279-237
	2.5	TNM-36X3C-90	MA3279-287
	3	TNM-36X3C-108	MA3279-337
M39X3	1	TNM-39X3C-39	MA3279-139
	1.5	TNM-39X3C-58.5	MA3279-189
	2	TNM-39X3C-78	MA3279-239
	2.5	TNM-39X3C-97.5	MA3279-289
	3	TNM-39X3C-117	MA3279-339

PERMA-COIL / LOCKING / BULK INSERTS

Thread Size	Nominal Length	Part No.	MA/MS No.
Unified Coarse			
2-56	1	TLC-02C-0086	MS21209C0210
	1.5	TLC-02C-0129	MS21209C0215
	2	TLC-02C-0172	MS21209C0220
	2.5	TLC-02C-0215	MS21209C0225
	3	TLC-02C-0258	MS21209C0230
3-48	1	TLC-03C-0099	MS21209C0310
	1.5	TLC-03C-0148	MS21209C0315
	2	TLC-03C-0198	MS21209C0320
	2.5	TLC-03C-0248	MS21209C0325
	3	TLC-03C-0297	MS21209C0330
4-40	1	TLC-04C-0112	MS21209C0410
	1.5	TLC-04C-0168	MS21209C0415
	2	TLC-04C-0224	MS21209C0420
	2.5	TLC-04C-0280	MS21209C0425
	3	TLC-04C-0336	MS21209C0430
5-40	1	TLC-05C-0125	MS21209C0510
	1.5	TLC-05C-0188	MS21209C0515
	2	TLC-05C-0250	MS21209C0520
	2.5	TLC-05C-0312	MS21209C0525
	3	TLC-05C-0375	MS21209C0530
6-32	1	TLC-06C-0138	MS21209C0610
	1.5	TLC-06C-0207	MS21209C0615
	2	TLC-06C-0276	MS21209C0620
	2.5	TLC-06C-0345	MS21209C0625
	3	TLC-06C-0414	MS21209C0630
8-32	1	TLC-2C-0164	MS21209C0810
	1.5	TLC-2C-0246	MS21209C0815
	2	TLC-2C-0328	MS21209C0820
	2.5	TLC-2C-0410	MS21209C0825
	3	TLC-2C-0492	MS21209C0830
10-24	1	TLC-3C-0190	MS21209C1-10
	1.5	TLC-3C-0285	MS21209C1-15
	2	TLC-3C-0380	MS21209C1-20
	2.5	TLC-3C-0475	MS21209C1-25
	3	TLC-3C-0570	MS21209C1-30
12-24	1	TLC-1C-0216	MS21209C2-10
	1.5	TLC-1C-0324	MS21209C2-15
	2	TLC-1C-0432	MS21209C2-20
	2.5	TLC-1C-0540	MS21209C2-25
	3	TLC-1C-0648	MS21209C2-30
1/4-20	1	TLC-4C-0250	MS21209C4-10
	1.5	TLC-4C-0375	MS21209C4-15
	2	TLC-4C-0500	MS21209C4-20
	2.5	TLC-4C-0625	MS21209C4-25
	3	TLC-4C-0750	MS21209C4-30

Thread Size	Nominal Length	Part No.	MA/MS No.
Unified Coarse			
5/16-18	1	TLC-5C-0312	MS21209C5-10
	1.5	TLC-5C-0469	MS21209C5-15
	2	TLC-5C-0625	MS21209C5-20
	2.5	TLC-5C-0781	MS21209C5-25
	3	TLC-5C-0938	MS21209C5-30
3/8-16	1	TLC-6C-0375	MS21209C6-10
	1.5	TLC-6C-0562	MS21209C6-15
	2	TLC-6C-0750	MS21209C6-20
	2.5	TLC-6C-0938	MS21209C6-25
	3	TLC-6C-1125	MS21209C6-30
7/16-14	1	TLC-7C-0438	MS21209C7-10
	1.5	TLC-7C-0656	MS21209C7-15
	2	TLC-7C-0875	MS21209C7-20
	2.5	TLC-7C-1094	MS21209C7-25
	3	TLC-7C-1312	MS21209C7-30
1/2-13	1	TLC-8C-0500	MS21209C8-10
	1.5	TLC-8C-0750	MS21209C8-15
	2	TLC-8C-1000	MS21209C8-20
	2.5	TLC-8C-1250	MS21209C8-25
	3	TLC-8C-1500	MS21209C8-30
9/16-12	1	TLC-9C-0562	MS21209C9-10
	1.5	TLC-9C-0844	MS21209C9-15
	2	TLC-9C-1125	MS21209C9-20
	2.5	TLC-9C-1406	MS21209C9-25
	3	TLC-9C-1688	MS21209C9-30
5/8-11	1	TLC-10C-0625	MS21209C1010
	1.5	TLC-10C-0938	MS21209C1015
	2	TLC-10C-1250	MS21209C1020
	2.5	TLC-10C-1562	MS21209C1025
	3	TLC-10C-1875	MS21209C1030
3/4-10	1	TLC-12C-0750	MS21209C1210
	1.5	TLC-12C-1125	MS21209C1215
	2	TLC-12C-1500	MS21209C1220
	2.5	TLC-12C-1875	MS21209C1225
	3	TLC-12C-2250	MS21209C1230
7/8-9	1	TLC-14C-0875	MS21209C1410
	1.5	TLC-14C-1312	MS21209C1415
	2	TLC-14C-1750	MS21209C1420
	2.5	TLC-14C-2188	MS21209C1425
	3	TLC-14C-2625	MS21209C1430
1-8	1	TLC-16C-1000	MS21209C1610
	1.5	TLC-16C-1500	MS21209C1615
	2	TLC-16C-2000	MS21209C1620
	2.5	TLC-16C-2500	MS21209C1625
	3	TLC-16C-3000	MS21209C1630

PERMA-COIL / LOCKING / BULK INSERTS

Thread Size	Nominal Length	Part No.	MA/MS No.
Unified Coarse			
1-1/8-7	1	TLC-18C-1125	MS21209C1810
	1.5	TLC-18C-1688	MS21209C1815
	2	TLC-18C-2250	MS21209C1820
	2.5	TLC-18C-2812	MS21209C1825
	3	TLC-18C-3375	MS21209C1830
1-1/4-7	1	TLC-20C-1250	MS21209C2010
	1.5	TLC-20C-1875	MS21209C2015
	2	TLC-20C-2500	MS21209C2020
	2.5	TLC-20C-3125	MS21209C2025
	3	TLC-20C-3750	MS21209C2030
1-3/8-6	1	TLC-22C-1375	MS21209C2210
	1.5	TLC-22C-2062	MS21209C2215
	2	TLC-22C-2750	MS21209C2220
	2.5	TLC-22C-3438	MS21209C2225
	3	TLC-22C-4125	MS21209C2230
1-1/2-6	1	TLC-24C-1500	MS21209C2410
	1.5	TLC-24C-2250	MS21209C2415
	2	TLC-24C-3000	MS21209C2420
	2.5	TLC-24C-3750	MS21209C2425
	3	TLC-24C-4500	MS21209C2430

UNIFIED FINE SIZES

Thread Size	Nominal Length	Part No.	MA/MS No.
Unified Fine			
3-56	1	TLF-03C-0099	MS21209F0310
	1.5	TLF-03C-0148	MS21209F0315
	2	TLF-03C-0198	MS21209F0320
	2.5	TLF-03C-0248	MS21209F0325
	3	TLF-03C-0297	MS21209F0330
4-48	1	TLF-04C-0112	MS21209F0410
	1.5	TLF-04C-0168	MS21209F0415
	2	TLF-04C-0224	MS21209F0420
	2.5	TLF-04C-0280	MS21209F0425
	3	TLF-04C-0336	MS21209F0430
6-40	1	TLF-06C-0138	MS21209F0610
	1.5	TLF-06C-0207	MS21209F0615
	2	TLF-06C-0276	MS21209F0620
	2.5	TLF-06C-0345	MS21209F0625
	3	TLF-06C-0414	MS21209F0630
8-36	1	TLF-08C-0164	MS21209F0810
	1.5	TLF-08C-0246	MS21209F0815
	2	TLF-08C-0328	MS21209F0820
	2.5	TLF-08C-0410	MS21209F0825
	3	TLF-08C-0492	MS21209F0830

Thread Size	Nominal Length	Part No.	MA/MS No.
Unified Fine			
10-32	1	TLF-3C-0190	MS21209F1-10
	1.5	TLF-3C-0285	MS21209F1-15
	2	TLF-3C-0380	MS21209F1-20
	2.5	TLF-3C-0475	MS21209F1-25
	3	TLF-3C-0570	MS21209F1-30
1/4-28	1	TLF-4C-0250	MS21209F4-10
	1.5	TLF-4C-0375	MS21209F4-15
	2	TLF-4C-0500	MS21209F4-20
	2.5	TLF-4C-0625	MS21209F4-25
	3	TLF-4C-0750	MS21209F4-30
5/16-24	1	TLF-5C-0312	MS21209F5-10
	1.5	TLF-5C-0469	MS21209F5-15
	2	TLF-5C-0625	MS21209F5-20
	2.5	TLF-5C-0781	MS21209F5-25
	3	TLF-5C-0938	MS21209F5-30
3/8-24	1	TLF-6C-0375	MS21209F6-10
	1.5	TLF-6C-0562	MS21209F6-15
	2	TLF-6C-0750	MS21209F6-20
	2.5	TLF-6C-0938	MS21209F6-25
	3	TLF-6C-1125	MS21209F6-30
7/16-20	1	TLF-7C-0438	MS21209F7-10
	1.5	TLF-7C-0656	MS21209F7-15
	2	TLF-7C-0875	MS21209F7-20
	2.5	TLF-7C-1094	MS21209F7-25
	3	TLF-7C-1312	MS21209F7-30
1/2-20	1	TLF-8C-0500	MS21209F8-10
	1.5	TLF-8C-0750	MS21209F8-15
	2	TLF-8C-1000	MS21209F8-20
	2.5	TLF-8C-1250	MS21209F8-25
	3	TLF-8C-1500	MS21209F8-30
9/16-18	1	TLF-9C-0562	MS21209F9-10
	1.5	TLF-9C-0844	MS21209F9-15
	2	TLF-9C-1125	MS21209F9-20
	2.5	TLF-9C-1406	MS21209F9-25
	3	TLF-9C-1688	MS21209F9-30
5/8-18	1	TLF-10C-0625	MS21209F1010
	1.5	TLF-10C-0938	MS21209F1015
	2	TLF-10C-1250	MS21209F1020
	2.5	TLF-10C-1562	MS21209F1025
	3	TLF-10C-1875	MS21209F1030
3/4-16	1	TLF-12C-0750	MS21209F1210
	1.5	TLF-12C-1125	MS21209F1215
	2	TLF-12C-1500	MS21209F1220
	2.5	TLF-12C-1875	MS21209F1225
	3	TLF-12C-2250	MS21209F1230

PERMA-COIL / LOCKING / BULK INSERTS

Thread Size	Nominal Length	Part No.	MA/MS No.
Unified Fine			
7/8-14	1	TLF-14C-0875	MS21209F1410
	1.5	TLF-14C-1312	MS21209F1415
	2	TLF-14C-1750	MS21209F1420
	2.5	TLF-14C-2188	MS21209F1425
	3	TLF-14C-2625	MS21209F1430
1-12	1	TLF-161C-1000	MS21209F1610
	1.5	TLF-161C-1500	MS21209F1615
	2	TLF-161C-2000	MS21209F1620
	2.5	TLF-161C-2500	MS21209F1625
	3	TLF-161C-3000	MS21209F1630
1-1/8-12	1	TLF-18C-1125	MS21209F1810
	1.5	TLF-18C-1688	MS21209F1815
	2	TLF-18C-2250	MS21209F1820
	2.5	TLF-18C-2812	MS21209F1825
	3	TLF-18C-3375	MS21209F1830
1-1/4-12	1	TLF-20C-1250	MS21209F2010
	1.5	TLF-20C-1875	MS21209F2015
	2	TLF-20C-2500	MS21209F2020
	2.5	TLF-20C-3125	MS21209F2025
	3	TLF-20C-3750	MS21209F2030
1-3/8-12	1	TLF-22C-1375	MS21209F2210
	1.5	TLF-22C-2062	MS21209F2215
	2	TLF-22C-2750	MS21209F2220
	2.5	TLF-22C-3438	MS21209F2225
	3	TLF-22C-4125	MS21209F2230
1-1/2-12	1	TLF-24C-1500	MS21209F2410
	1.5	TLF-24C-2250	MS21209F2415
	2	TLF-24C-3000	MS21209F2420
	2.5	TLF-24C-3750	MS21209F2425
	3	TLF-24C-4500	MS21209F2430

METRIC COARSE SIZES

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Coarse			
M2.2X0.45	1	TLM-2.2X.45C-2.2	MA3329-100
	1.5	TLM-2.2X.45C-3.3	MA3329-150
	2	TLM-2.2X.45C-4.4	MA3329-200
	2.5	TLM-2.2X.45C-5.5	MA3329-250
	3	TLM-2.2X.45C-6.6	MA3329-300
M2.5X0.45	1	TLM-2.5X.45C-2.5	MA3329-101
	1.5	TLM-2.5X.45C-3.8	MA3329-151
	2	TLM-2.5X.45C-5	MA3329-201
	2.5	TLM-2.5X.45C-6.3	MA3329-251
	3	TLM-2.5X.45C-7.5	MA3329-301

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Coarse			
M3X0.5	1	TLM-3X.5C-3	MA3329-102
	1.5	TLM-3X.5C-4.5	MA3329-152
	2	TLM-3X.5C-6	MA3329-202
	2.5	TLM-3X.5C-7.5	MA3329-252
	3	TLM-3X.5C-9	MA3329-302
M3.5X0.6	1	TLM-3.5X.6C-3.5	MA3329-103
	1.5	TLM-3.5X.6C-5.3	MA3329-153
	2	TLM-3.5X.6C-7	MA3329-203
	2.5	TLM-3.5X.6C-8.8	MA3329-253
	3	TLM-3.5X.6C-10.5	MA3329-303
M4X0.7	1	TLM-4X.7C-4	MA3339-104
	1.5	TLM-4X.7C-6	MA3329-154
	2	TLM-4X.7C-8	MA3329-204
	2.5	TLM-4X.7C-10	MA3329-254
	3	TLM-4X.7C-12	MA3329-304
M5X0.8	1	TLM-5X.8C-5	MA3329-105
	1.5	TLM-5X.8C-7.5	MA3329-155
	2	TLM-5X.8C-10	MA3329-205
	2.5	TLM-5X.8C-12.5	MA3329-255
	3	TLM-5X.8C-15	MA3329-305
M6X1	1	TLM-6X1C-6	MA3329-106
	1.5	TLM-6X1C-9	MA3329-156
	2	TLM-6X1C-12	MA3329-206
	2.5	TLM-6X1C-15	MA3329-256
	3	TLM-6X1C-18	MA3329-306
M7X1	1	TLM-7X1C-7	MA3329-107
	1.5	TLM-7X1C-10.5	MA3329-157
	2	TLM-7X1C-14	MA3329-207
	2.5	TLM-7X1C-17.5	MA3329-257
	3	TLM-7X1C-21	MA3329-307
M8X1.25	1	TLM-8X1.25C-8	MA3329-109
	1.5	TLM-8X1.25C-12	MA3329-159
	2	TLM-8X1.25C-16	MA3329-209
	2.5	TLM-8X1.25C-20	MA3329-259
	3	TLM-8X1.25C-24	MA3329-309
M10X1.5	1	TLM-10X1.5C-10	MA3329-111
	1.5	TLM-10X1.5C-15	MA3329-161
	2	TLM-10X1.5C-20	MA3329-211
	2.5	TLM-10X1.5C-25	MA3329-261
	3	TLM-10X1.5C-30	MA3329-311
M12X1.75	1	TLM-12X1.75C-12	MA3329-114
	1.5	TLM-12X1.75C-18	MA3329-164
	2	TLM-12X1.75C-24	MA3329-214
	2.5	TLM-12X1.75C-30	MA3329-264
	3	TLM-12X1.75C-36	MA3329-314

PERMA-COIL / LOCKING / BULK INSERTS

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Coarse			
M14X2	1	TLM-14X2C-14	MA3329-116
	1.5	TLM-14X2C-21	MA3329-166
	2	TLM-14X2C-28	MA3329-216
	2.5	TLM-14X2C-35	MA3329-266
	3	TLM-14X2C-42	MA3329-316
M16X2	1	TLM-16X2C-16	MA3329-118
	1.5	TLM-16X2C-24	MA3329-168
	2	TLM-16X2C-32	MA3329-218
	2.5	TLM-16X2C-40	MA3329-268
	3	TLM-16X2C-48	MA3329-318
M18X2.5	1	TLM-18X2.5C-18	MA3329-121
	1.5	TLM-18X2.5C-27	MA3329-171
	2	TLM-18X2.5C-36	MA3329-221
	2.5	TLM-18X2.5C-45	MA3329-271
	3	TLM-18X2.5C-54	MA3329-321
M20X2.5	1	TLM-20X2.5C-20	MA3329-124
	1.5	TLM-20X2.5C-30	MA3329-174
	2	TLM-20X2.5C-40	MA3329-224
	2.5	TLM-20X2.5C-50	MA3329-274
	3	TLM-20X2.5C-60	MA3329-324
M22X2.5	1	TLM-22X2.5C-22	MA3329-127
	1.5	TLM-22X2.5C-33	MA3329-177
	2	TLM-22X2.5C-44	MA3329-227
	2.5	TLM-22X2.5C-55	MA3329-277
	3	TLM-22X2.5C-66	MA3329-327
M24X3	1	TLM-24X3C-24	MA3329-129
	1.5	TLM-24X3C-36	MA3329-179
	2	TLM-24X3C-48	MA3329-229
	2.5	TLM-24X3C-60	MA3329-279
	3	TLM-24X3C-72	MA3329-329
M27X3	1	TLM-27X3C-27	MA3329-131
	1.5	TLM-27X3C-40.5	MA3329-181
	2	TLM-27X3C-54	MA3329-231
	2.5	TLM-27X3C-67.5	MA3329-281
	3	TLM-27X3C-81	MA3329-331

METRIC FINE SIZES

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Fine			
M8X1	1	TLM-8X1C-8	MA3329-108
	1.5	TLM-8X1C-12	MA3329-158
	2	TLM-8X1C-16	MA3329-208
	2.5	TLM-8X1C-20	MA3329-258
	3	TLM-8X1C-24	MA3329-308

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Fine			
M10X1	1	TLM-10X1C-10	MA3329-141
	1.5	TLM-10X1C-15	MA3329-191
	2	TLM-10X1C-20	MA3329-241
	2.5	TLM-10X1C-25	MA3329-291
	3	TLM-10X1C-30	MA3329-341
M10X1.25	1	TLM-10X1.25C-10	MA3329-110
	1.5	TLM-10X1.25C-15	MA3329-160
	2	TLM-10X1.25C-20	MA3329-210
	2.5	TLM-10X1.25C-25	MA3329-260
	3	TLM-10X1.25C-30	MA3329-310
M12X1.25	1	TLM-12X1.25C-12	MA3329-112
	1.5	TLM-12X1.25C-18	MA3329-162
	2	TLM-12X1.25C-24	MA3329-212
	2.5	TLM-12X1.25C-30	MA3329-262
	3	TLM-12X1.25C-36	MA3329-312
M12X1.5	1	TLM-12X1.5C-12	MA3329-113
	1.5	TLM-12X1.5C-18	MA3329-163
	2	TLM-12X1.5C-24	MA3329-213
	2.5	TLM-12X1.5C-30	MA3329-263
	3	TLM-12X1.5C-36	MA3329-313
M14X1.5	1	TLM-14X1.5C-14	MA3329-115
	1.5	TLM-14X1.5C-21	MA3329-165
	2	TLM-14X1.5C-28	MA3329-215
	2.5	TLM-14X1.5C-35	MA3329-265
	3	TLM-14X1.5C-42	MA3329-315
M16X1.5	1	TLM-16X1.5C-16	MA3329-117
	1.5	TLM-16X1.5C-24	MA3329-167
	2	TLM-16X1.5C-32	MA3329-217
	2.5	TLM-16X1.5C-40	MA3329-267
	3	TLM-16X1.5C-48	MA3329-317
M18X1.5	1	TLM-18X1.5C-18	MA3329-119
	1.5	TLM-18X1.5C-27	MA3329-169
	2	TLM-18X1.5C-36	MA3329-219
	2.5	TLM-18X1.5C-45	MA3329-269
	3	TLM-18X1.5C-54	MA3329-319
M18X2	1	TLM-18X2C-18	MA3329-120
	1.5	TLM-18X2C-27	MA3329-170
	2	TLM-18X2C-36	MA3329-220
	2.5	TLM-18X2C-45	MA3329-270
	3	TLM-18X2C-54	MA3329-320
M20X1.5	1	TLM-20X1.5C-20	MA3329-122
	1.5	TLM-20X1.5C-30	MA3329-172
	2	TLM-20X1.5C-40	MA3329-222
	2.5	TLM-20X1.5C-50	MA3329-272
	3	TLM-20X1.5C-60	MA3329-322

PERMA-COIL / LOCKING / BULK INSERTS

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Fine			
M20X2	1	TLM-20X2C-20	MA3329-123
	1.5	TLM-20X2C-30	MA3329-173
	2	TLM-20X2C-40	MA3329-223
	2.5	TLM-20X2C-50	MA3329-273
	3	TLM-20X2C-60	MA3329-323
M22X1.5	1	TLM-22X1.5C-22	MA3329-125
	1.5	TLM-22X1.5C-33	MA3329-175
	2	TLM-22X1.5C-44	MA3329-225
	2.5	TLM-22X1.5C-55	MA3329-275
	3	TLM-22X1.5C-66	MA3329-325
M22X2	1	TLM-22X2C-22	MA3329-126
	1.5	TLM-22X2C-33	MA3329-176
	2	TLM-22X2C-44	MA3329-226
	2.5	TLM-22X2C-55	MA3329-276
	3	TLM-22X2C-66	MA3329-326
M24X2	1	TLM-24X2C-24	MA3329-128
	1.5	TLM-24X2C-36	MA3329-178
	2	TLM-24X2C-48	MA3329-228
	2.5	TLM-24X2C-60	MA3329-278
	3	TLM-24X2C-72	MA3329-328
M27X2	1	TLM-27X2C-27	MA3329-130
	1.5	TLM-27X2C-40.5	MA3329-180
	2	TLM-27X2C-54	MA3329-230
	2.5	TLM-27X2C-67.5	MA3329-280
	3	TLM-27X2C-81	MA3329-330
M30X2	1	TLM-30X2C-30	MA3329-132
	1.5	TLM-30X2C-45	MA3329-182
	2	TLM-30X2C-60	MA3329-232
	2.5	TLM-30X2C-75	MA3329-282
	3	TLM-30X2C-90	MA3329-332
M33X2	1	TLM-33X2C-33	MA3329-134
	1.5	TLM-33X2C-49.5	MA3329-184
	2	TLM-33X2C-66	MA3329-234
	2.5	TLM-33X2C-82.5	MA3329-284
	3	TLM-33X2C-99	MA3329-334
M36X2	1	TLM-36X2C-36	MA3329-136
	1.5	TLM-36X2C-54	MA3329-186
	2	TLM-36X2C-72	MA3329-236
	2.5	TLM-36X2C-90	MA3329-286
	3	TLM-36X2C-108	MA3329-336

Thread Size	Nominal Length	Part No.	MA/MS No.
Metric Fine			
M39X2	1	TLM-39X2C-39	MA3329-138
	1.5	TLM-39X2C-58.5	MA3329-188
	2	TLM-39X2C-78	MA3329-238
	2.5	TLM-39X2C-97.5	MA3329-288
	3	TLM-39X2C-117	MA3329-338
M36X3	1	TLM-36X3C-36	MA3329-137
	1.5	TLM-36X3C-54	MA3329-187
	2	TLM-36X3C-72	MA3329-237
	2.5	TLM-36X3C-90	MA3329-287
	3	TLM-36X3C-108	MA3329-337
M39X3	1	TLM-39X3C-39	MA3329-139
	1.5	TLM-39X3C-58.5	MA3329-189
	2	TLM-39X3C-78	MA3329-239
	2.5	TLM-39X3C-97.5	MA3329-289
	3	TLM-39X3C-117	MA3329-339



HIGH QUALITY & DURABILITY

MASTER THREAD REPAIR KITS

Perma-Coil Master Thread Repair Kits are designed for professionals and mechanics. The Master Thread Repair Kits contain the most popular thread sizes used in automotive and light truck applications. By using Perma-Coil Thread Repair Kits, damaged threads can be brought back to the original thread size, and made better than new. Thread wear, corrosion and galling will be virtually eliminated, and the assembly will be even stronger than the original with Perma-Coil inserts.

EACH MASTER THREAD REPAIR KIT CONSISTS OF:

- 30 (6 of each size) Aerospace quality free-running tapered inserts; in the most popular 1.5 Dia. nominal length.
- 5 Perma-Coil STI Tap.
- 5 All steel threaded installation mandrel.
- 5 Molded Prewinder Sleeve for Unified Fine (1208-FMK).
- 3 Molded Prewinder Sleeve for Metric (1221-MMK).
- 2 Molded Prewinder Sleeve for Metric (1221-SMK).
- Step by Step instructions including drill sizes.

1208-CMK	1208-FMK	1221-MMK	1221-SMK
Unified Coarse	Unified Fine	Metric Coarse	Metric Coarse
1/4-20	1/4-28	M5X0.8	M5X0.8
5/16-18	5/16-24	M6X1.0	M6X1.0
3/8-16	3/8-24	M8X1.25 ¹	M8X1.25 ¹
7/16-14	7/16-20	M10X1.25	M10X1.5 ¹
1/2-13	1/2-20	M10X1.5 ¹	M12X1.75 ¹

1. Prewinder not required.



SPARK PLUG REPAIR MADE EASY

PERMA-PLUG® KITS

Perma-Plug Kit is a professional spark plug thread repair kit that provides everything you'll need to quickly and easily repair worn or stripped spark plug threads. Perma-Plug works in aluminum and cast iron assemblies and provides a positive locking system. Perma-Plug requires no drilling, simply tap the hole with the included piloted tap tool. The Perma-Plug kit includes three insert lengths to accommodate all applications. With Perma-Plug the repaired threads are better than new, and the assembly is stronger than the original! Perma-Plug Kit can be used with taper seat or gasket type spark plugs.

EACH PERMA-PLUG KIT CONSISTS OF:

- Three solid bushing inserts (one each).
- 2214-S, M14X1.25 X 3/8" for short reach.
- 2214-N, M14X1.25 X 1/2" for normal reach.
- 2214-L, M14X1.25 X 3/4" for long reach.
- Expanding tool (swaging tool).
- Piloted Tap - No Drilling Required.

Complete Kit			
Thread Size	Part No.	Reach	Inserts Per Kit
M14X1.25	2200-14	3/8" Short	1
		1/2" Normal	1
		3/4" Long	1

Kit Content and Replacements Parts				
Tool	Tap	Reach	Part No.	Quantity
2294-14	2258-14	3/8" Short	2214-S	1
		1/2" Normal	2214-N	1
		3/4" Long	2214-L	1

Complete Display Center: Part No. 1400-1		
Tools	Part No.	Quantity
M14X1.25 Perma Plug Kit	2200-14	3
M14X1.25 x 3/8" Perma Plug Short Reach Insert	2214-S	4
M14X1.25 x 1/2" Perma Plug Normal Reach Insert	2214-N	4
M14X1.25 x 3/4" Perma Plug Long Reach Insert	2214-L	4



SPARK PLUG SERIES

Perma-Coil Spark Plug Kits is a quick and easy way to repair worn or stripped spark plug threads. Spark Plug kits are available in 10, 12, 14, and 18mm sizes.

Each kit includes the appropriate reamer/tap and installation tool for all sizes. For the 12 & 14mm, you choose the reach and quantity of Perma-Coil stainless steel inserts required. **It's not recommended to use Perma-Coil wire spark plug inserts to repair taper seat spark plug ports.**



Thread Size	Reach	Kit	Inserts Per Kit	Inserts Pack	Inserts Per Pack	Tap	Tool	Bulk Inserts
M10X1	1/2"	1210-410	(6/PKG)	410-500	(6/PKG)	1458-100	1094-100	SP1010-01-0500
M12X1.25	1/2"	1212-412 ¹	0	412-500	(6/PKG)	1458-123	1094-123	SP1213-01-0500
	3/4"		0	412-750	(6/PKG)			SP1213-01-0750
M14X1.25	3/8"	1214-414 ¹	0	414-375	(6/PKG)	1458-143	1094-143	SP1413-01-0375
	7/16"		0	414-438	(6/PKG)			SP1413-01-0438
	1/2"		0	414-500	(6/PKG)			SP1413-01-0500
	3/4"		0	414-750	(6/PKG)			SP1413-01-0750
M18X1.5	1/2"	1218-500	(6/PKG)	418-500	(6/PKG)	1458-185	1094-185	SP1815-01-0500

1. 12mm and 14mm spark plug kits contain tap and installation tool ONLY - NO inserts in kit. Purchase packages of inserts separately. Same tools are applicable regardless of insert reach.

PIPE THREAD SERIES

Thread Size	Repair Kits		Replacement Parts				Bulk Inserts	Drill Size
	Part No.	Inserts Per Pack	Installation Tool	Tap	Inserts Pack	Inserts Per Pack	Perma-Coil Part No.	
1/8-27	3218-2	12	1189-2	1188-2P	318-2	12	218-2	W
1/4-18	3218-4	12	1189-4	1188-4P	318-4	12	218-4	33/64
3/8-18	3218-6	10	1189-6	1188-6P	318-6	10	218-6	21/32
1/2-14	3218-8	10	1189-8	1188-8P	318-8	10	218-8	13/16
3/4-14	3218-12	10	1189-12	1188-12P	318-12	10	218-12	1 1/64
1-11 1/2	3218-16	6	1189-16	1188-16P	318-16	6	218-16	1 9/32

SPECIAL APPLICATIONS

Thread Size	Repair Kits		Replacement Parts				Bulk Inserts	Drill Size
	Part No.	Inserts Per Pack	Installation Tool	Tap	Inserts Pack	Inserts Per Pack	Perma-Coil Part No.	
7/8-20	3208-1420	10	1037-1420	1043-1420P2	208-1420	1	TNF-141C-0330	57/64
1-20	3208-1620	10	1037-1620	1043-1620P2	208-1620	1	TNF-162C-0325	1 1/64
11/16-16	3424-1250	9	1424-1	1043-1116	324-1116-1250	3	TNF-11C-1250	45/64
1/4-24	1208-404	12	1182-404	1428-404	208-404	12	TNF-41C-0500	17/64
3/8-20	1208-406	6	1172-406	1428-406	208-406	6	TNF-61C-0375	25/64

CROSS REFERENCE

Size	Kits		Inserts Packages	
	Perma-Coil	Helicoil	Perma-Coil	Helicoil
Inch Series Coarse				
8-32	1208-018	5521-2	208-018	R1185-2
10-24	1208-101	5521-3	208-101	R1185-3
12-24	1208-102	5521-1	208-102	R1185-1
1/4-20	1208-104	5521-4	208-104	R1185-4
5/16-18	1208-105	5521-5	208-105	R1185-5
3/8-16	1208-106	5521-6	208-106	R1185-6
7/16-14	1208-107	5521-7	208-107	R1185-7
1/2-13	1208-108	5521-8	208-108	R1185-8
9/16-12	1208-109	5521-9	208-109	R1185-9
5/8-11	1208-110	5521-10	208-110	R1185-10
3/4-10	1208-112	5521-12	208-112	R1185-12
7/8-9	3208-C14	5521-14	108-114	K1185-14
1-8	3208-C16	5521-16	108-116	K1185-16
1 1/8-7	3208-C18	5521-18	108-118	K1185-18
1 1/4-7	3208-C20	5521-20	108-120	K1185-20
1 3/8-6	3208-C22	5521-22	108-122	K1185-22
1 1/2-6	3208-C24	5521-24	108-124	K1185-24
Inch Series Fine				
10-32	1208-201	5528-3	208-201	R1191-3
1/4-28	1208-204	5528-4	208-204	R1191-4
5/16-24	1208-205	5528-5	208-205	R1191-5
3/8-24	1208-206	5528-6	208-206	R1191-6
7/16-20	1208-207	5528-7	208-207	R1191-7
1/2-20	1208-208	5528-8	208-208	R1191-8
9/16-18	1208-209	5528-9	208-209	R1191-9
5/8-18	1208-210	5528-10	208-210	R1191-10
3/4-16	1208-212	5528-12	208-212	R1191-12
7/8-14	3208-F14	5528-14	108-214	K1191-14
1-14	3208-F164	5528-16	108-2164	K1191-16
1-12	3208-F16	5528-161	108-216	K1191-161
1 1/8-12	3208-F18	5528-18	108-218	K1191-18
1 1/4-12	3208-F20	5528-20	108-220	K1191-20
1 3/8-12	3208-F22	5528-22	108-222	K1191-22
1 1/2-12	3208-F24	5528-24	108-224	K1191-24

Size	Kits		Inserts Packages	
	Perma-Coil	Helicoil	Perma-Coil	Helicoil
Metric Series Fine				
M3X0.5	1221-303	5546-3	206-303	R1084-3
M4X0.7	1221-304	5546-4	206-304	R1084-4
M5X0.8	1221-305	5546-5	206-305	R1084-5
M6X1	1221-306	5546-6	206-306	R1084-6
M7X1	1221-307	5546-7	206-307	R1084-7
M8X1.25	1221-308	5546-8	206-308	R1084-8
M9X1.25	1221-309	5546-9	206-309	R1084-9
M10X1.5	1221-310	5546-10	206-310	R1084-10
M11X1.5	1221-311	5546-11	206-311	R1084-11
M12X1.75	3221-M12C	5546-12	106-312	R1084-12
M14X2	3221-M14C	5546-14	106-314	R1084-14
M16X2	3221-M16C	5546-16	106-316	R1084-16
M18X2.5	3221-M18C	5546-18	106-318	R1084-18
M20X2.5	3221-M20C	5546-20	106-320	R1084-20
Metric Series Fine				
M8X1.0	1221-M8F	5542-8	106-608	R4255-8
M10X1.0	1221-M1010	5542-10	106-61010	R4255-10
M11X1.0	1221-M11F	5543-10	106-611	R4255-10
M11X1.25	1221-M1125	5543-11	106-61125	R4649-11
M12X1.25	3221-M12F	5543-12	106-612	R4649-12
M12X1.5	3221-M1215	5544-12	106-61215	R3745-12
M14X1.5	3221-M14F	5544-14	106-614	R3745-14
M16X1.5	3221-M16F	5544-16	106-616	R3745-16

SPARK PLUG SERIES (WIRE TYPE)

Size	Kits		Inserts Packages	
	Perma-Coil	Helicoil	Perma-Coil	Helicoil
M10X1	1210-410	5523-10	410-500	R474-4
M12X1.25	1212-412	5523-12	412-500	R482-1
			412-750	R482-2
M14X1.25	1214-414	5523-14	414-375	R512
			414-438	R513
			414-500	R513-13
			414-750	R513-10
M18X1.5	1218-500	5523-18	414-800	R514-6

SPARK PLUG SERIES (SOLID TYPE)

Size	Kits		Inserts Packages	
	Perma-Coil	Helicoil	Perma-Coil	Helicoil
M14X1.25	2200-14	5334-14	2214-L	R5326-L
			2214-N	R5326-N
			2214-S	R5326-S

DISPLAYS



Complete Display Center: Part No. **1208-5**
Inch Coarse & Spark Plug

Insert Kits - Includes One Each		
Thread Size	Part No.	Kits
1/4-20	1208-104	Repair Kit
5/16-18	1208-105	Repair Kit
3/8-16	1208-106	Repair Kit
7/16-14	1208-107	Repair Kit
1/2-13	1208-108	Repair Kit
M14 x 1.25	2200 - 14	Repair Kit

Insert Packs - Includes One Each		
Thread Size	Part No.	Insert Packs
1/4-20	208-104	Insert pack
5/16-18	208-105	Insert pack
3/8-16	208-106	Insert pack
7/16-14	208-107	Insert pack
1/2-13	208-108	Insert pack
M14 x 3/8	2214 - S	Insert pack
M14 x 1/2	2214 - N	Insert pack
M14 x 3/4	2214 - L	Insert pack

1.Solid Type Perma-Plug Inserts



Complete Display Center: Part No. **1221-3**
Metric Threads

Insert Kits - Includes One Each		
Thread Size	Part No.	Kits
M5X0.8	1221-305	Repair Kit
M6X1	1221-306	Repair Kit
M8X1.25	1221-308	Repair Kit
M10X1.5	1221-310	Repair Kit
M10X1.25	3221-M10F	Repair Kit
M12X1.75	3221-M12C	Repair Kit
M12X1.25	3221-M12F	Repair Kit

Insert Packs - Includes One Each		
Thread Size	Part No.	Insert Packs
M5X0.8	206-305	Insert pack
M6X1	206-306	Insert pack
M8X1.25	206-308	Insert pack
M10X1.5	206-310	Insert pack
M10X1.25	106-610	Insert pack
M12X1.75	106-312	Insert pack
M12X1.25	106-612	Insert pack

DISPLAYS



Complete Display Center: Part No. **1208-1**
Inch Coarse Threads

Insert Kits - Includes One Each		
Thread Size	Part No.	Kits
4-40	1208-014	Repair Kit
5-40	1208-015	Repair Kit
6-32	1208-016	Repair Kit
8-32	1208-018	Repair Kit
10-24	1208-101	Repair Kit
12-24	1208-102	Repair Kit
1/4-20	1208-104	Repair Kit
5/16-18	1208-105	Repair Kit
3/8-16	1208-106	Repair Kit
7/16-14	1208-107	Repair Kit
1/2-13	1208-108	Repair Kit
9/16-12	1208-109	Repair Kit
5/8-11	1208-110	Repair Kit
3/4-10	1208-112	Repair Kit
Insert Packs - Includes One Each		
Thread Size	Part No.	Insert pack
4-40	208-014	Insert pack
5-40	208-015	Insert pack
6-32	208-016	Insert pack
8-32	208-018	Insert pack
10-24	208-101	Insert pack
12-24	208-102	Insert pack
1/4-20	208-104	Insert pack
5/16-18	208-105	Insert pack
3/8-16	208-106	Insert pack
7/16-14	208-107	Insert pack
1/2-13	208-108	Insert pack
9/16-12	208-109	Insert pack
5/8-11	208-110	Insert pack
3/4-10	208-112	Insert pack



Complete Display Center: Part No. **1208-2**
Inch Fine Threads

Insert Kits - Includes One Each		
Thread Size	Part No.	Kits
10-32	1208-201	Repair Kit
1/4-28	1208-204	Repair Kit
5/16-24	1208-205	Repair Kit
3/8-24	1208-206	Repair Kit
7/16-20	1208-207	Repair Kit
1/2-20	1208-208	Repair Kit
5/8-18	1208-210	Repair Kit

Insert Packs - Includes One Each		
Thread Size	Part No.	Insert Packs
10-32	208-201	Insert pack
1/4-28	208-204	Insert pack
5/16-24	208-205	Insert pack
3/8-24	208-206	Insert pack
7/16-20	208-207	Insert pack
1/2-20	208-208	Insert pack
5/8-18	208-210	Insert pack

HIGH SPEED STEEL STI TAPS

STI (Screw Thread Insert) Taps are designed specifically to create internal threads that will accommodate a Perma-Coil insert. STI taps can be used in a range of materials including aluminum, magnesium, steel, plastics, and other free machining materials. Thread Kits taps are manufactured from high speed steel for durability and prolonged tooling life.



Thread Size	Plug Tap				Bottoming Tap			
	3B	Helicoil	2B	Helicoil	3B	Helicoil	2B	Helicoil
Unified Coarse								
4-40	CTC-04SRP-H1	04CPB	CTC-04SRP-H2	04CPA	CTC-04SRB-H1	04CBB	CTC-04SRB-H2	04CBA
5-40	CTC-05SRP-H1	05CPB	CTC-05SRP-H2	05CPA	CTC-05SRB-H1	05CBB	CTC-05SRB-H2	05CBA
6-32	CTC-06SRP-H2	06CPB	CTC-06SRP-H3	06CPA	CTC-06SRB-H2	06CBB	CTC-06SRB-H3	06CBA
8-32	CTC-2SRP-H2	2CPB	CTC-2SRP-H3	2CPA	CTC-2SRB-H2	2CBB	CTC-2SRB-H3	2CBA
10-24	CTC-3SRP-H2	3CPB	CTC-3SRP-H3	3CPA	CTC-3SRB-H2	3CBB	CTC-3SRB-H3	3CBA
12-24	CTC-1SRP-H2	1CPB	CTC-1SRP-H3	1CPA	CTC-1SRB-H2	1CBB	CTC-1SRB-H3	1CBA
1/4-20	CTC-4SRP-H2	4CPB	CTC-4SRP-H3	4CPA	CTC-4SRB-H2	4CBB	CTC-4SRB-H3	4CBA
5/16-18	CTC-5SRP-H3	5CPB	CTC-5SRP-H4	5CPA	CTC-5SRB-H3	5CBB	CTC-5SRB-H4	5CBA
3/8-16	CTC-6SRP-H3	6CPB	CTC-6SRP-H4	6CPA	CTC-6SRB-H3	6CBB	CTC-6SRB-H4	6CBA
7/16-14	CTC-7SRP-H3	7CPB	CTC-7SRP-H4	7CPA	CTC-7SRB-H3	7CBB	CTC-7SRB-H4	7CBA
1/2-13	CTC-8SRP-H3	8CPB	CTC-8SRP-H4	8CPA	CTC-8SRB-H3	8CBB	CTC-8SRB-H4	8CBA
9/16-12	CTC-9SRP-H3	187-9	CTC-9SRP-H4	38187-9	CTC-9SRB-H3	4187-9	CTC-9SRB-H4	43187-9
5/8-11	CTC-10SRP-H3	8187-10	CTC-10SRP-H4	18187-10	CTC-10SRB-H3	10187-10	CTC-10SRB-H4	20187-10
3/4-10	CTC-12SRP-H3	8187-12	CTC-12SRP-H5	18187-12	CTC-12SRB-H3	10187-12	CTC-12SRB-H5	20187-12
7/8-9	CTC-14SRP-H3	8187-14	CTC-14SRP-H5	18187-14	CTC-14SRB-H3	10187-14	CTC-14SRB-H5	20187-14
1-8	CTC-16SRP-H4	8187-16	CTC-16SRP-H6	18187-16	CTC-16SRB-H4	10187-16	CTC-16SRB-H6	20187-16
1 1/8-7	CTC-18SRP-H4	8187-18	CTC-18SRP-H6	18187-18	CTC-18SRB-H4	10187-18	CTC-18SRB-H6	20187-18
1 1/4-7	CTC-20SRP-H4	8187-20	CTC-20SRP-H6	18187-20	CTC-20SRB-H4	10187-20	CTC-20SRB-H6	20187-20
1 3/8-6	CTC-22SRP-H6	8187-22	CTC-22SRP-H8	18187-22	CTC-22SRB-H6	10187-22	CTC-22SRB-H8	20187-22
1 1/2-6	CTC-24SRP-H6	8187-24	CTC-24SRP-H8	18187-24	CTC-24SRB-H6	10187-24	CTC-24SRB-H8	20187-24
Unified Fine								
10-32	CTF-3SRP-H2	3FPB	CTF-3SRP-H3	3FPA	CTF-3SRB-H2	3FBB	CTF-3SRB-H3	3FBA
1/4-28	CTF-4SRP-H2	4FPB	CTF-4SRP-H3	4FPA	CTF-4SRB-H2	4FBB	CTF-4SRB-H3	4FBA
5/16-24	CTF-5SRP-H2	5FPB	CTF-5SRP-H3	5FPA	CTF-5SRB-H2	5FBB	CTF-5SRB-H3	5FBA
3/8-24	CTF-6SRP-H2	6FPB	CTF-6SRP-H3	6FPA	CTF-6SRB-H2	6FBB	CTF-6SRB-H3	6FBA
7/16-20	CTF-7SRP-H3	7FPB	CTF-7SRP-H4	7FPA	CTF-7SRB-H3	7FBB	CTF-7SRB-H4	7FBA
1/2-20	CTF-8SRP-H3	8FPB	CTF-8SRP-H4	8FPA	CTF-8SRB-H3	8FBB	CTF-8SRB-H4	8FBA
9/16-18	CTF-9SRP-H3	38193-9	CTF-9SRP-H4	18193-9	CTF-9SRB-H3	43193-9	CTF-9SRB-H4	20193-9
5/8-18	CTF-10SRP-H3	8193-10	CTF-10SRP-H4	18193-10	CTF-10SRB-H3	10193-10	CTF-10SRB-H4	20193-10
3/4-16	CTF-12SRP-H3	8193-12	CTF-12SRP-H4	18193-12	CTF-12SRB-H3	10193-12	CTF-12SRB-H4	20193-12
7/8-14	CTF-14SRP-H3	8193-14	CTF-14SRP-H4	18193-14	CTF-14SRB-H3	10193-14	CTF-14SRB-H4	20193-14
1-12	CTF-16SRP-H4	8193-16	CTF-16SRP-H6	18193-16	CTF-16SRB-H4	10193-16	CTF-16SRB-H6	20193-16
1 1/8-12	CTF-18SRP-H4	8193-18	CTF-18SRP-H6	18193-18	CTF-18SRB-H4	10193-18	CTF-18SRB-H6	20193-18
1 1/4-12	CTF-20SRP-H4	8193-20	CTF-20SRP-H6	18193-20	CTF-20SRB-H4	10193-20	CTF-20SRB-H6	20193-20
1 3/8-12	CTF-22SRP-H6	8193-22	CTF-22SRP-H8	18193-22	CTF-22SRB-H6	10193-22	CTF-22SRB-H8	20193-22
1 1/2-12	CTF-24SRP-H6	8193-24	CTF-24SRP-H8	18193-24	CTF-24SRB-H6	10193-24	CTF-24SRB-H8	20193-24

HIGH SPEED STEEL STI TAPS

Thread Size	Plug Tap				Bottoming Tap			
	4H	Helicoil	5H	Helicoil	4H	Helicoil	5H	Helicoil
Metric Coarse								
M3X0.5	CTM-3X.5SRP-4H	4687-3	CTM-3X.5SRP-5H	2087-3	CTM-3X.5SRB-4H	4693-3	CTM-3X.5SRB-5H	2093-3
M4X0.7	CTM-4X.7SRP-4H	4687-4	CTM-4X.7SRP-5H	2087-4	CTM-4X.7SRB-4H	4693-4	CTM-4X.7SRB-5H	2093-4
M5X0.8	CTM-5X.8SRP-4H	4687-5	CTM-5X.8SRP-5H	2087-5	CTM-5X.8SRB-4H	4693-5	CTM-5X.8SRB-5H	2093-5
M6X1	CTM-6X1SRP-4H	4687-6	CTM-6X1SRP-5H	2087-6	CTM-6X1SRB-4H	4693-6	CTM-6X1SRB-5H	2093-6
M7X1	CTM-7X1SRP-4H	4687-7	CTM-7X1SRP-5H	2087-7	CTM-7X1SRB-4H	4693-7	CTM-7X1SRB-5H	2093-7
M8X1.25	CTM-8X1.25SRP-4H	4687-8	CTM-8X1.25SRP-5H	2087-8	CTM-8X1.25SRB-4H	4693-8	CTM-8X1.25SRB-5H	2093-8
M10X1.5	CTM-10X1.5SRP-4H	4687-10	CTM-10X1.5SRP-5H	2087-10	CTM-10X1.5SRB-4H	4693-10	CTM-10X1.5SRB-5H	2093-10
M12X1.75	CTM-12X1.75SRP-4H	4687-12	CTM-12X1.75SRP-5H	2087-12	CTM-12X1.75SRB-4H	4693-12	CTM-12X1.75SRB-5H	2093-12
M14X2	CTM-14X2SRP-4H	4687-14	CTM-14X2SRP-5H	2087-14	CTM-14X2SRB-4H	4693-14	CTM-14X2SRB-5H	2093-14
M16X2	CTM-16X2SRP-4H	4687-16	CTM-16X2SRP-5H	2087-16	CTM-16X2SRB-4H	4693-16	CTM-16X2SRB-5H	2093-16
M18X2.5	CTM-18X2.5SRP-4H	4687-18	CTM-18X2.5SRP-5H	2087-18	CTM-18X2.5SRB-4H	4693-18	CTM-18X2.5SRB-5H	2093-18
M20X2.5	CTM-20X2.5SRP-4H	4687-20	CTM-20X2.5SRP-5H	2087-20	CTM-20X2.5SRB-4H	4693-20	CTM-20X2.5SRB-5H	2093-20
Metric Fine								
M8X1.0	CTM-8X1SRP-4H	5484-8	CTM-8X1SRP-5H	4984-8	CTM-8X1SRB-4H	5486-8	CTM-8X1SRB-5H	4986-8
M10X1.0	CTM-10X1SRP-4H	5484-10	CTM-10X1SRP-5H	4984-10	CTM-10X1SRB-4H	5486-10	CTM-10X1SRB-5H	4986-10
M10X1.25	CTM-10X1.25SRP-4H	5444-10	CTM-10X1.25SRP-5H	4944-10	CTM-10X1.25SRB-4H	5445-10	CTM-10X1.25SRB-5H	4945-10
M12X1.25	CTM-12X1.25SRP-4H	5444-12	CTM-12X1.25SRP-5H	4944-12	CTM-12X1.25SRB-4H	5445-12	CTM-12X1.25SRB-5H	4945-12
M12X1.5	CTM-12X1.5SRP-4H	5476-12	CTM-12X1.5SRP-5H	4976-12	CTM-12X1.5SRB-4H	5477-12	CTM-12X1.5SRB-5H	4977-12
M14X1.5	CTM-14X1.5SRP-4H	5476-14	CTM-14X1.5SRP-5H	4976-14	CTM-14X1.5SRB-4H	5477-14	CTM-14X1.5SRB-5H	4977-14
M16X1.5	CTM-16X1.5SRP-4H	5476-16	CTM-16X1.5SRP-5H	4976-16	CTM-16X1.5SRB-4H	5477-16	CTM-16X1.5SRB-5H	4977-16

REMOVAL TOOL



The **KATO Removal Tool (KRT)** is designed with a wedge-shaped tip and an integrated handle. The sharp tip is used to dig into the installed tanged insert (a hammer may be required). The handle is then used to turn the tool counter-clockwise while applying pressure until the insert is extracted from the parent material. Extraction of a tanged insert is only possible if the insert isn't installed too deep, and the KRT can reach it.

Thread Size	Tang Removal	Helicoil
Unified Thread Sizes		
2-56	KRTV-02	1227-02
#3 - #8	KRTV-06	1227-06
#10 - #3/8	KRTV-6	1227-6
#7/16 - #1	KRTV-16	1227-16
#1-1/8 - #1-1/2	KRTV-24	1227-24
Metric Thread Sizes		
M2.2 - M2.5	KRTV-02	1227-02
M3 - M4	KRTV-06	1227-06
M5 - M10	KRTV-6	1227-6
M12 - M24	KRTV-16	1227-16
M26 - M39	KRTV-24	1227-24

PREWINDER HAND TOOL

The **KATO Prewinder Hand (KPH)** installation tool is designed for higher volume users of Perma-Coil inserts. Unlike competitors that utilize plastic body parts, the all-steel construction of the KPH tool makes them sturdy and dependable. The KPH tool is designed with precision and durability in mind for manual installation of Perma-Coil inserts.



Thread Size	Part No.	Helicoil
Unified Coarse		
4-40	KPHC-04	7551-04
5-40	KPHC-05	7551-05
6-32	KPHC-06	7551-06
8-32	KPHC-2	7551-1
10-24	KPHC-3	7551-2
12-24	KPHC-1	7551-3
1/4-20	KPHC-4	7551-4
5/16-18	KPHC-5	7551-5
3/8-16	KPHC-6	7551-6
7/16-14	KPHC-7	7551-7
1/2-13	KPHC-8	7551-8
9/16-12	KPHC-9	3724-9
5/8-11	KPHC-10	3724-10
3/4-10	KPHC-12	3724-12
7/8-9	KPHC-14	3724-14
1-8	KPHC-16	3724-16
1 1/8-7	KPHC-18	3724-18
1 1/4-7	KPHC-20	3724-20
1 3/8-6	KPHC-22	3724-22
1 1/2-6	KPHC-24	3724-24

Thread Size	Part No.	Helicoil
Unified Fine		
10-32	KPHF-3	7552-3
1/4-28	KPHF-4	7552-4
5/16-24	KPHF-5	7552-5
3/8-24	KPHF-6	7552-6
7/16-20	2KIPF-7	7552-7
1/2-20	2KIPF-8	7552-8
9/16-18	KPHF-9	535-9
5/8-18	KPHF-10	535-10
3/4-16	KPHF-12	535-12
7/8-14	KPHF-14	535-14
1-12	KPHF-16	535-161
1 1/8-12	KPHF-18	535-18
1 1/4-12	KPHF-20	535-20
1 3/8-12	KPHF-22	535-22
1 1/2-12	KPHF-24	535-24

Thread Size	Part No.	Helicoil
Metric Coarse		
M3X0.5	KPHM-3	7751-3
M4X0.7	KPHM-4	7751-4
M5X0.8	KPHM-5	7751-5
M6X1	KPHM-6	7751-6
M7X1	KPHM-7	7751-7
M8X1.25	KPHM-8	7751-8
M10X1.5	KPHM-10	7751-10
M12X1.75	KPHM-12	7751-12
M14X2	KPHM-14	7751-14
M16X2	KPHM-16	7751-16
M18X2.5	KPHM-18	7751-18
M20X2.5	KPHM-20	7751-20
Metric Fine		
M8X1.0	KPHM-8X1	7755-8
M10X1.0	KPHM-10X1	7755-10
M10X1.25	KPHM-10X1.25	7756-10
M12X1.25	KPHM-12X1.25	7756-12
M12X1.5	KPHM-12X1.5	7753-12
M14X1.5	KPHM-14X1.5	7753-14
M16X1.5	KPHM-16X1.5	7753-16

TANG BREAK-OFF TOOL

The **KATO Tang Break-Off Tool (KTBT)**, as the name implies is a spring-loaded punch designed to cleanly break the tang off of conventional Perma-Coil inserts once they are installed. KATO recommends the tang be removed from the insert after installation.

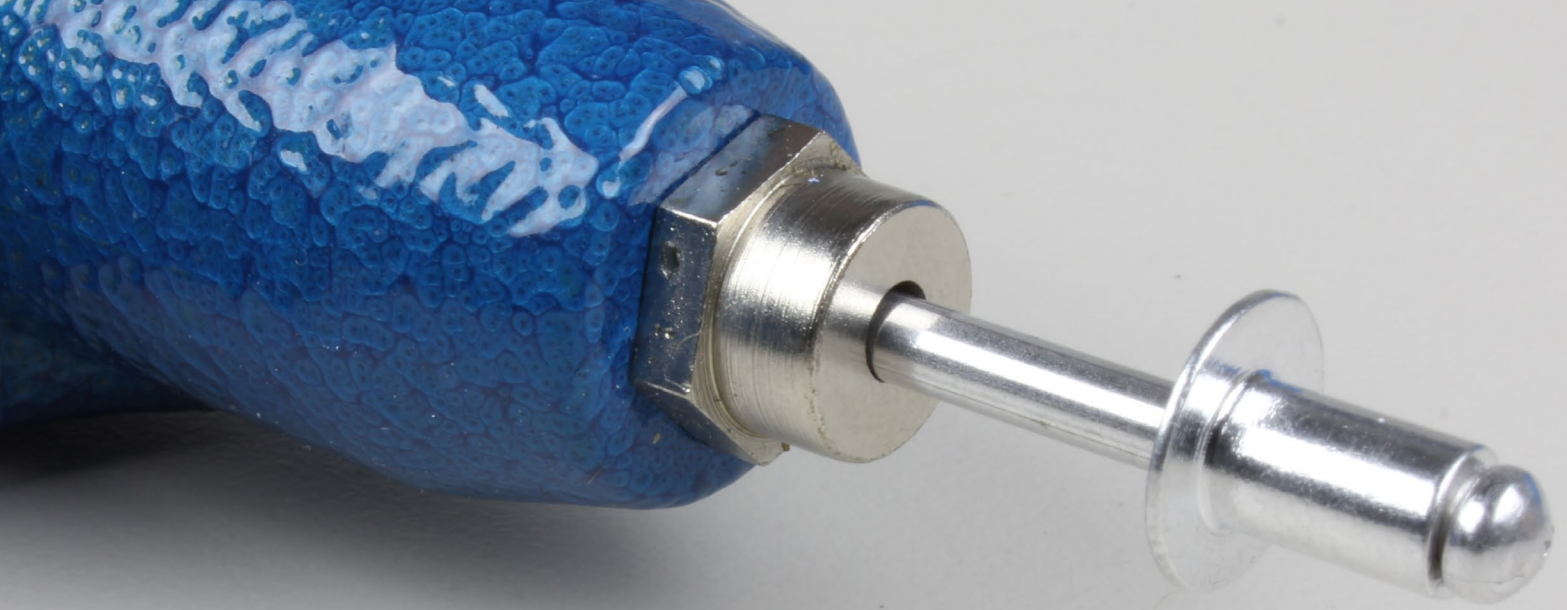


TANG BREAK-OFF TOOL

Thread Size	Tang Break-Off Tool (1, 1.5 & 2D)	Helicoil	Replacement Punch	Tang Break-Off Tool (2.5 & 3D)	Replacement Punch	Helicoil
Unified Coarse						
4-40	KTBT-04	3695-04	KTBT-04RP	KTBT-04-30	KTBT-04RP-30	3697-04
5-40	KTBT-04	3695-04	KTBT-04RP	KTBT-04-30	KTBT-04RP-30	3697-04
6-32	KTBT-06	3695-06	KTBT-06RP	KTBT-06-30	KTBT-06RP-30	3697-06
8-32	KTBT-2	3695-2	KTBT-2RP	KTBT-2-30	KTBT-2RP-30	3697-2
10-24	KTBT-3	3695-3	KTBT-3RP	KTBT-3-30	KTBT-3RP-30	3697-3
12-24	KTBT-3	3695-3	KTBT-3RP	KTBT-3-30	KTBT-3RP-30	3697-3
1/4-20	KTBT-4	3695-4	KTBT-4RP	KTBT-4-30	KTBT-4RP-30	3697-4
5/16-18	KTBT-5	3695-5	KTBT-5RP	KTBT-5-30	KTBT-5RP-30	3643-5
3/8-16	KTBT-6	3695-6	KTBT-6RP	KTBT-6-30	KTBT-6RP-30	3643-6
7/16-14	KTBT-7	3695-7	KTBT-7RP	KTBT-7-30	KTBT-7RP-30	3643-7
1/2-13	KTBT-8	3695-8	KTBT-8RP	KTBT-8-30	KTBT-8RP-30	3643-8
Unified Fine						
3-56	KTBT-02	3695-02	KTBT-02RP	KTBT-02-30	KTBT-02RP-30	3697-02
4-48	KTBT-04	3695-04	KTBT-04RP	KTBT-04-30	KTBT-04RP-30	3697-04
6-40	KTBT-06	3695-06	KTBT-06RP	KTBT-06-30	KTBT-06RP-30	3697-06
8-36	KTBT-2	3695-2	KTBT-2RP	KTBT-2-30	KTBT-2RP-30	3697-2
10-32	KTBT-3	3695-3	KTBT-3RP	KTBT-3-30	KTBT-3RP-30	3697-3
1/4-28	KTBT-4	3695-4	KTBT-4RP	KTBT-4-30	KTBT-4RP-30	3697-4
5/16-24	KTBT-5	3692-5	KTBT-5RP	KTBT-5-30	KTBT-5RP-30	3645-5
3/8-24	KTBT-6	3692-6	KTBT-6RP	KTBT-6-30	KTBT-6RP-30	3645-6
7/16-20	KTBT-7	3692-7	KTBT-7RP	KTBT-7-30	KTBT-7RP-30	3645-7
1/2-20	KTBT-8	3692-8	KTBT-8RP	KTBT-8-30	KTBT-8RP-30	3645-8

Thread Size	Tang Break-Off Tool (1, 1.5 & 2D)	Helicoil	Replacement Punch	Tang Break-Off Tool (2.5 & 3D)	Replacement Punch	Helicoil
Metric Coarse						
M3X0.5	KTBT-04	4238-3	KTBT-04RP	KTBT-04-30	KTBT-04RP-30	3697-04
M3.5X0.6	KTBT-06	4238-3	KTBT-06RP	KTBT-06-30	KTBT-06RP-30	3697-04
M4X0.7	KTBT-2	4238-4	KTBT-2RP	KTBT-2-30	KTBT-2RP-30	3697-2
M5X0.8	KTBT-3	4238-5	KTBT-3RP	KTBT-3-30	KTBT-3RP-30	3697-3
M6X1	KTBT-4	4238-6	KTBT-4RP	KTBT-4-30	KTBT-4RP-30	3697-4
M7X1	KTBT-4	4238-7	KTBT-4RP	KTBT-4-30	KTBT-4RP-30	4436-7
M8X1.25	KTBT-5	4238-8	KTBT-5RP	KTBT-5-30	KTBT-5RP-30	3643-5
M10X1.5	KTBT-6	4238-10	KTBT-6RP	KTBT-6-30	KTBT-6RP-30	4436-10
M12X1.75	KTBT-8	4238-12	KTBT-8RP	KTBT-8-30	KTBT-8RP-30	4436-12
Metric Fine						
M8X1	KTBT-5	4238-8	KTBT-5RP	KTBT-5-30	KTBT-5RP-30	3643-5
M10X1	KTBT-6	4238-10	KTBT-6RP	KTBT-6-30	KTBT-6RP-30	4436-10
M10X1.25	KTBT-6	4238-10	KTBT-6RP	KTBT-6-30	KTBT-6RP-30	4436-10
M12X1.25	KTBT-8	4238-12	KTBT-8RP	KTBT-8-30	KTBT-8RP-30	4436-12
M12X1.5	KTBT-8	4238-12	KTBT-8RP	KTBT-8-30	KTBT-8RP-30	4436-12

1. For sizes larger than 1/2" and M12 use long-nosed pliers; bend tang up and down to snap off a notch.



LARGE SELECTION OF MATERIALS & STYLES

PERMA-RIVET®

KATO Thread Kits offers a full line of headed rivets for general consumer and industrial applications. The materials and manufacturing processes used to head rivet bodies increase their shear and tensile values over a stamped eyelet-style rivet.

Perma-Rivets are used to fasten together two or more pieces of material of varying thickness. The rivet body alloy, in addition to being chosen for strength requirements, should also be selected for compatibility with the material to be joined to avoid galvanic corrosion caused by coupling dissimilar metals.





RIVET MATERIALS

In order to meet a variety of requirements for strength, corrosion and rust consideration and application materials, Perma-Rivets are offered in specific materials and material combinations.

Type	Application
All Steel	High Strength: Use with steel.
Aluminum	LightWeight: Use with Aluminum areas susceptible to rust & corrosion.
Alum./Steel	Combines features of both materials
All Stainless	Very High Strength: Use with stainless & steel. Prevents corrosion or rust.
Stainless/Steel	Very High Strength: Applications where corrosion resistance is not a major factor.
Copper	Electrical conductivity.

INSTALLATION

Perma-Rivets consist of two parts: (A) rivet body and (B) setting mandrel. In operation, the mandrel is pulled back to expand the rivet body and form a tight vibration-free faster. The mandrel breaks off automatically after the rivet is set.



1. After selecting the proper rivet, drill a hole corresponding to the diameter of the rivet through the materials to be fastened. When using counter-sunk head rivets, a 120° countersunk bit is required. Use Perma-Rivet Part No. P60928 for countersink drilling.
2. Open the handle of the rivet tool and insert the rivet mandrel in the nosepiece of the tool.
3. Place the rivet body in the predrilled hole. Then squeeze the rivet tool handles until the rivet mandrel breaks off.

PERMA-RIVET STYLES

RIVET STYLES

OPEN END

Designed for a wide range of applications, they resemble conventional tubular rivets when set, but retain the mandrel within the rivet body for added strength. Open end rivets are available in variety of materials in buttonhead, countersunk or large flange head styles.

CLOSED END

Specially configured with a cup-shaped end that forms a tight seal, Perma-Rivet closed end rivets are much stronger than open-end rivets. They are available in button head, and countersunk head styles.

T-RIVETS

Made for structural and high-stress applications. They feature a hardened steel mandrel, which splits the rivet body into a trifurcated shape. This provides high clamping strength even in thin or fragile material.

HEAD STYLES

BUTTON HEAD

Low profile design and neat appearance, this style is very versatile and most commonly used. The head size is twice the diameter of the rivet body. It provides enough bearing surface for all applications except soft or brittle material.

LARGE FLANGE

Features twice the under-head bearing surface as the button style. It is ideal for fastening soft or brittle materials to a rigid backing surface.

COUNTERSUNK

Designed with a 120° head profile for flush surface mounting applications.

PERMA-RIVET TOOLS



P39000

The P39000 is our most popular rivet tool, providing both quality and durability. The high-leverage handles are designed to have superior pulling power along with easy one hand operation. The P39000 sets rivets up to 3/16" diameter and comes with four interchangeable nosepieces (3/32", 1/8", 5/32", 3/16") and a wrench. Replacement jaws are sold separately.



P39005

The P39005 Pivot-Head rivet tool features a 360° rotating head designed for easy access to hard to reach applications. This patented tool is constructed of hardened steel and cast aluminum for longer life. The P39005 also includes built-in threaded nosepiece storage holes and a service wrench. The P39005 sets up to 3/16" steel rivets. Replacement jaws are sold separately.



P39010

The P39010 professional grade rivet tool is our most powerful hand riveter, taking the hard work out of setting large diameter blind rivets. With its unique collapsible handle design, the P39010 handles extend to provide excellent leverage and permits working a foot beyond natural reach. The P39010 easily sets from 1/8" to 1/4" diameter Perma-Rivets in all alloys. Furnished with standard nosepieces to set up to 1/4", wrenches and plastic storage case. Replacement parts sold separate.



P39040

The P39040 is a perfect medium-duty tool for the do-it-yourselfer or occasional user, setting all 1/8" - 5/32" steel, and 3/16" all aluminum Perma-Rivets. Nosepieces and wrench included. No replacement parts available.

PERMA-RIVET PART NUMBERS

A BL 6 -4 A

Rivet Material:

- **A** - Aluminum
- **S** - Carbon Steel
- **SS** - Stainless Steel

Head Style:

- **B** - Buttonhead
- **BL** - Buttonhead, Large Flange
- **C** - Countersunk

Rivet Diameter:

- In 32nds of an inch
6/32 = 3/16"

Max. Grip Length:

- In 16ths of an inch
4/16 = 1/4"

Mandrel Material:

- **A** - Aluminum
- **S** - Stainless Steel
- **CLD** - Closed End
- **Blank** - Steel

Rivet Dia	Head Dia	Grip Range	Plated Steel Rivet Steel Mandrel			Stainless Steel Rivet Steel Mandrel			Stainless Steel Rivet Stainless Steel Mandrel		
			Code No.	100 PC.	500 PC.	Code No.	100 PC.	500 PC.	Code No.	100 PC.	500 PC.
Open End Rivets											
3/32	3/16	Up to 1/8	SB3-2	P59435	P60435						
	3/16	1/8 to 1/4	SB3-4	P59436	P60436						
1/8	1/4	1/32 to 1/16	SB4-1	P59437	P60437						
	1/4	1/16 to 1/8	SB4-2	P59438	P60438	SSB4-2	P59560	P60560	SSB4-2S	P59540	P60540
	.220	1/16 to 1/8	SC4-2	P59439	P60439						
	3/8	1/16 to 1/8	SBL4-2	P59440	P60440						
	1/4	1/8 to 3/16	SB4-3	P59441	P60441	SSB4-3	P59561	P60561	SSB4-3S	P59541	P60541
	1/4	3/16 to 1/4	SB4-4	P59442	P60442	SSB4-4	P59562	P60562	SSB4-4S	P59542	P60542
	.220	3/16 to 1/4	SC4-4	P59443	P60443						
	3/8	3/16 to 1/4	SBL4-4	P59444	P60444						
	1/4	1/4 to 5/16	SB4-5	P59445	P60445						
	1/4	5/16 to 3/8	SB4-6	P59446	P60446	SSB4-6	P59563	P60563	SSB4-6S	P59543	P60543
	1/4	3/8 to 1/12	SB4-8	P59447	P60447	SSB4-8	P59573	P60573	SSB4-8S	P59544	P60544
5/32	5/16	1/16 to 1/8	SB5-2	P59448	P60448	SSB5-2	P59564	P60564	SSB5-2S	P59545	P60545
	5/16	1/8 to 3/16	SB5-3	P59449	P60449						
	5/16	3/16 to 1/4	SB5-4	P59450	P60450	SSB5-4	P59565	P60565	SSB5-4S	P59546	P60546
	5/16	1/4 to 3/8	SB5-6	P59451	P60451	SSB5-6	P59566	P60566	SSB5-6S	P59547	P60547
3/16	3/8	1/16 to 1/8	SB6-2	P59453	P60453	SSB6-2	P59567	P60567	SSB6-2S	P59548	P60548
	3/8	1/8 to 1/4	SB6-4	P59454	P60454	SSB6-4	P59568	P60568	SSB6-4S	P59549	P60549
	5/8	1/8 to 1/4	SBL6-4	P59455	P60455						
	3/8	1/4 to 3/8	SB6-6	P59456	P60456	SSB6-6	P59569	P60569	SSB6-6S	P59550	P60550
	5/8	1/4 to 3/8	SBL6-6	P59457	P60457						
	3/8	3/8 to 1/2	SB6-8	P59458	P60458	SSB6-8	P59570	P60570	SSB6-8S	P59551	P60551
	5/8	3/8 to 1/2	SBL6-8	P59459	P60459						
	3/8	1/2 to 5/8	SB6-10	P59460	P60460						
	5/8	1/2 to 5/8	SBL6-10	P59461	P60461						
	3/8	5/8 to 3/4	SB6-12	P59462	P60462						
	5/8	5/8 to 3/4	SBL6-12	P59463	P60463						
1/4	1/2	1/16 to 1/4	SB8-4	P59464	P60464						
	1/2	1/4 to 3/8	SB8-6	P59465	P60465						
	1/2	3/8 to 1/2	SB8-8	P59466	P60466						
	1/2	5/8 to 3/4	SB8-12	P59467	P60467						
Closed End Rivets											
3/16	3/8	1/8 to 1/4	SB6-4CLD	P59640	P60640						
1/4	1/2	1/8 to 1/4	SB8-4CLD	P59642	P60642						

Hole Size	Material	Code No.	100PC	Thrift Pack	
			Part No.	Part No.	Pkg/Qty
1/8	Steel	SS-8	P59660	P57660	40
1/8	Aluminum	AS-8	P59661	P57661	30
3/16	Aluminum	AS-10	P59662	P57662	30

BACK-UP WASHERS

Back-up washers are .056" - .062" thick. They are used when fastening soft materials or to compensate for oversize holes where access to both sides of work is possible.



Rivet Dia	Head Dia	Grip Range	Aluminum Rivet Aluminum Mandrel			Aluminum Rivet Steel Mandrel			Cooper Rivet Steel Mandrel		
			Code No.	100 PC.	500 PC.	Code No.	100 PC.	500 PC.	Code No.	100 PC.	500 PC.
Open End Rivets											
3/32	3/16	Up to 1/8	AB3-2A	P59470	P60470	AB3-2	P59503	P60503			
	3/16	1/8 to 1/4	AB3-4A	P59471	P60471	AB3-4	P59504	P60504			
1/8	1/4	1/32 to 1/16	AB4-1A	P59472	P60472	AB4-1	P59505	P60505			
	1/4	1/16 to 1/8	AB4-2A	P59473	P60473	AB4-2	P59506	P60506	CB4-2	P59571	P60571
	.220	1/16 to 1/8	AC4-2A	P59474	P60474	AC4-2	P59507	P60507			
	3/8	1/16 to 1/8	ABL4-2A	P59475	P60475	ABL4-2	P59508	P60508			
	1/4	1/8 to 3/16	AB4-3A	P59476	P60476	AB4-3	P59509	P60509			
	.220	1/8 to 3/16				AC4-3	P59510	P60510			
	1/4	3/16 to 1/4	AB4-4A	P59477	P60477	AB4-4	P59511	P60511	CB4-4	P59572	P60572
	.220	3/16 to 1/4				AC4-4	P59512	P60512			
	3/8	3/16 to 1/4	ABL4-4A	P59478	P60478	ABL4-4	P59513	P60513			
	1/4	1/4 to 5/16	AB4-5A	P59479	P60479	AB4-5	P59514	P60514			
	1/4	5/16 to 3/8	AB4-6A	P59480	P60480	AB4-6	P59515	P60515			
	1/4	3/8 to 1/12	AB4-8A	P59481	P60481	AB4-8	P59516	P60516			
5/32	5/16	1/16 to 1/8	AB5-2A	P59482	P60482	AB5-2	P59517	P60517			
	5/16	1/8 to 3/16	AB5-3A	P59483	P60483	AB5-3	P59518	P60518			
	5/16	3/16 to 1/4	AB5-4A	P59484	P60484	AB5-4	P59519	P60519			
	5/16	1/4 to 3/8	AB5-6A	P59485	P60485	AB5-6	P59520	P60520			
	5/16	3/8 to 1/12	AB5-8A	P59486	P60486	AB5-8	P59521	P60521			
3/16	3/8	1/16 to 1/8	AB6-2A	P59487	P60487	AB6-2	P59522	P60522			
	3/8	1/8 to 1/4	AB6-4A	P59488	P60488	AB6-4	P59523	P60523			
	5/8	1/8 to 1/4	ABL6-4A	P59489	P60489	ABL6-4	P59524	P60524			
	3/8	1/4 to 3/8	AB6-6A	P59490	P60490	AB6-6	P59525	P60525			
	5/8	1/4 to 3/8	ABL6-6A	P59491	P60491	ABL6-6	P59526	P60526			
	3/8	3/8 to 1/2	AB6-8A	P59492	P60492	AB6-8	P59527	P60527			
	5/8	3/8 to 1/2	ABL6-8A	P59493	P60493	ABL6-8	P59528	P60528			
	3/8	1/2 to 5/8	AB6-10A	P59494	P60494	AB6-10	P59529	P60529			
	5/8	1/2 to 5/8	ABL6-10A	P59495	P60495	ABL6-10	P59530	P60530			
	3/8	5/8 to 3/4	AB6-12A	P59496	P60496	AB6-12	P59531	P60531			
1/4	5/8	5/8 to 3/4	ABL6-12A	P59497	P60497	ABL6-12	P59532	P60532			
	1/2	1/16 to 1/4	AB8-4A	P59498	P60498	AB8-4	P59533	P60533			
	1/2	1/4 to 3/8	AB8-6A	P59499	P60499	AB8-6	P59534	P60534			
	1/2	3/8 to 1/2				AB8-8	P59535	P60535			
	1/2	5/8 to 3/4	AB8-12A	P59500	P60500	AB8-12	P59536	P60536			
Closed End Rivets											
1/8	.236	1/16 to 1/8	AB4-2ACLD	P59620	P60620	AB4-2CLD	P59590	P60590			
	.236	1/8 to 3/16				AB4-3CLD	P59604	P60604			
	.236	3/16 to 1/4	AB4-4ACLD	P59621	P60621	AD4-4CLD	P59592	P60592			
	.236	3/16 to 1/4				AC4-4CLD	P59593	P60593			
	.236	1/4 to 5/16				AB4-5CLD	P59608	P60608	CB4-5CLD	P59644	P60644
	.236	3/8 to 1/2				AB4-8CLD	P59595	P60595			
5/32	5/16	1/16 to 1/8				AB5-2CLD	P59596	P60596			
	5/16	1/8 to 3/16				AB5-3CLD	P59609	P60609			
	5/16	1/8 to 3/16				AC5-3CLD	P59607	P60607			
	5/16	1/16 to 1/4	AB5-4ACLD	P59622	P60622						
	5/16	3/16 to 5/16				AB5-5CLD	P59597	P60597			
3/16	3/8	1/8 to 1/4	AB6-4ACLD	P59624	P60624	AB6-4CLD	P59599	P60599			
	3/8	1/4 to 3/8				AB6-6CLD	P59605	P60605			
	3/8	3/8 to 1/2				AB6-8CLD	P59601	P60601			
1/4	1/2	1/8 to 1/4				AB8-4CLD	P59606	P60606			
	1/2	1/4 to 3/8				AB8-6CLD	P59603	P60603			
T-Rivets											
1/4	.510	1/32 to 9/64				AD8-140T	P59580	P60580			
	.510	9/64 to 3/16				AD8-187T	P59581	P60581			
	.510	33/64 to 5/8				AD8-620T	P59582	P60582			

THRIFT PACKS

Perma-Rivet offers nine of the most popular sizes, packaged in sturdy, clear plastic, resealable clamshell. Great for do-it-yourself use.

Rivet Dia	Head Dia	Grip Range	Steel Rivet Steel Mandrel		Aluminum Rivet Aluminum Mandrel		Package Quantity
			Part No.	Code No.	Part No.	Code No.	
Open End Rivets							
1/8	1/4	1/16-1/8	P57438	SB4-2	P57473	AB4-2A	25
	1/4	3/16-1/4	P57442	SB4-4	P57477	AB4-4A	20
	1/4	5/16-3/8	P57446	SB4-6	P57480	AB4-6A	15
3/16	3/8	Up to 1/8			P57487	AB6-2A	15
	3/8	1/8-1/4			P57488	AB6-4A	15
	3/8	1/4-3/8			P57490	AB6-6A	15



SPECIAL APPLICATION RIVETS

Rivet Dia	Head Dia	Applications	Steel Rivet Steel Mandrel		Aluminum Rivet Aluminum Mandrel		Aluminum Rivet Steel Mandrel		Stainless Steel Rivet Steel Mandrel	
			Part No.	Code No.	Part No.	Code No.	Part No.	Code No.	Part No.	Code No.
Shop Packs - 100 Per Box										
1/8	1/4	Aluminum Trim Channel Rivet			P59477	AB4-4A				
1/4	.510	Window Regulator Rivet					P59580	AD8-140T		
1/4	.510	Outside Door Handle Rivet					P59581	AD8-187T		
1/4	.510	Glass Stop Rivet					P59582	AD8-620T		
5/32	5/16	Swivel Emblem Trunk Lock Rivet					P59607	AC5-3CLD		
1/4	1/2	Bumper Rivet	P59800	SB8-4038						
3/16	3/8	Bumper Fascia Rivet	P59801	SB6-6025						
1/8	13/64	Std. Aluminum Trim Clip Rivet			P59802	ABN4-3A				
1/8	13/64	Long Aluminum Trim Clip Rivet			P59803	ABN4-4A				
1/8	13/64	Std. Stainless Trim Clip Rivet							P59804	SSBN4-3
1/8	.318	Rear Window Gasket Rivet					P59805	ABL4-3318		
1/8	1/4	Multi Purpose Rivet					P59806	ABL4-3		
Pro Packs - 500 Per Box										
1/8	1/4	Aluminum Trim Channel Rivet			P60477	AB4-4A				
1/4	.510	Window Regulator Rivet					P60580	AD8-140T		
1/4	.510	Outside Door Handle Rivet					P60581	AD8-187T		
1/4	.510	Glass Stop Rivet					P60582	AD8-620T		
5/32	5/16	Swivel Emblem Trunk Lock Rivet					P60607	AC5-3CLD		
1/4	1/2	Bumper Rivet	P60800	SB8-4038						
3/16	3/8	Bumper Fascia Rivet	P60801	SB6-6025						
1/8	13/64	Std. Aluminum Trim Clip Rivet			P60802	ABN4-3A				
1/8	13/64	Long Aluminum Trim Clip Rivet			P60803	ABN4-4A				
1/8	13/64	Std. Stainless Trim Clip Rivet							P60804	SSBN4-3
1/8	.318	Rear Window Gasket Rivet					P60805	ABL4-3318		
1/8	1/4	Multi Purpose Rivet					P60806	ABL4-3		

PLASTIC PERMA-RIVET

Plastic Perma-Rivets are the same precision-molded all nylon rivets used in today's automobiles for both original equipment and replacement parts. Plastic rivets are ideal for use in conductive and corrosive applications. Our plastic Perma-Rivets fasten plastic to plastic, plastic to metal, and plastic to fiberglass. As they set, three "legs" form to securely lock the components in place and prevent pullout, leaving an attractive finished appearance.

- Precision-molded, all-nylon.
- Secure lock prevents pull-out.
- Fastens plastic to plastic, plastic to metal or plastic to fiberglass.



Part No.	Rivet Dia.	Suggested Drill Size	Grip Range	Head Dia.	Replaces OEM Plastic Rivet Part No.
P57712	5.0mm	7/32	.059 -.177	.472	GM 20423647, Ford N803170S, Ford N804189S
P57714	5.0mm	7/32	.118 -.177	.472	AMC 8934202855, Ford N804863S, Chry 34202855, Chry 6500859
P57715	5.0mm	7/32	.118 -.236	.472	AMC8934202652, Chry 6500899, GM 20432975, Ford N804343S, VW 175-853-577
P57720	5.0mm	7/32	.236 -.394	.472	Chry 6500898, Chry 6500982
P57721	6.0mm	1/4	.157 -.335	.512	GM - BOC 25524005
P57732	6.3mm	1/4	.157-.236	.669	Chry 4370132, GM 14070914
P57735	6.3mm	1/4	.157-.236	.669	Chry 6500911, GM14063981, GM-CPC 15506827, GM-T&B 15506921, Ford/Mazda KA01500Z1, Ford N803043S
P57736	6.3mm	1/4	.157 -.394	.512	GM 20452072, Ford N803862S
P57737	6.3mm	1/4	.157 -.394	.669	AMC 8934201631, AMC 8934201835
P57741	6.3mm	1/4	.315 -.472	.661	Chry 4370138, Ford N804675S
P57747	6.6mm	9/32	.098 -.197	.512	GM 20421672
P57748	6.6mm	9/32	.098 -.197	.709	GM 20433026, VW 175-853-577A
P57752	7.0mm	5/16	.098 -.236	.709	GM 1019689, GM-CPC 10087278

P48005

This long-reach tool is exactly what is needed for today's hard to reach spots, especially in automotive applications such as flexible bumpers, wheel wells, license plate brackets and bumper reinforcements. In addition to the tool's long-reach, it offers a one-stroke setting and a universal nosepiece that sets all plastic rivets.



DISPLAYS



Complete Display Center: Part No. **P5835**



Complete Display Center: Part No. **P5856**

Perma-Rivet Thrift Pack Display					
Part No.	Head Dia	Grip Range	Rivet Dia.	Display Quantity	Package Quantity
Steel Rivet / Steel Mandrel					
P57438	SB4-2	1/16 - 1/8	1/8	5	25
P57422	SB4-4	3/16 - 1/4	1/8	5	20
P57446	SB4-6	5/16 - 3/8	1/8	5	15
Aluminum Rivet / Aluminum Mandrel					
P57473	AB4-2A	1/16 - 1/8	1/8	5	25
P57477	AB4-4A	3/16 - 1/4	1/8	5	20
P57480	AB4-6A	5/16 - 3/8	1/8	5	15
P57487	AB6-2A	Up to 1/8	3/16	5	15
P57488	AB6-4A	1/8 - 1/4	3/16	5	15
P57490	AB6-6A	1/4 - 3/8	3/16	5	15
Back Up Plates					
P57660	SS-8	1/8 Hole	Steel	3	40
P57661	AS-8	1/8 Hole	Aluminum	3	30
P57662	AS-10	3/16 Hole	Aluminum	3	30
Tools					
P39000	GR12			4	

Perma-Rivet Shop Pack Display					
Part No.	Head Dia	Grip Range	Rivet Dia.	Display Quantity	Package Quantity
Steel Rivet / Steel Mandrel					
P59438	SB4-2	1/16 - 1/8	1/8	3	100
P59439	SC4-2	1/16 - 1/8	1/8	2	100
P59442	SB4-4	3/16 - 1/4	1/8	6	100
P59443	SC4-4	3/16 - 1/4	1/8	3	100
P59446	SB4-6	5/16 - 3/8	1/8	4	100
P59447	SB4-8	3/8 - 1/2	1/8	3	100
Aluminum Rivet / Aluminum Mandrel					
P59473	AB4-2A	1/16 - 1/8	1/8	2	100
P59477	AB4-4A	3/16 - 1/4	1/8	4	100
P59480	AB4-6A	5/16 - 3/8	1/8	2	100
P59488	AB6-4A	1/8 - 1/4	3/16	3	100
P59490	AB6-6A	1/4 - 3/8	3/16	2	100
Tools					
P39000	GR12			2	

DISPLAYS



Complete Display Center: Part No. [P5870](#)

Perma-Rivet Plastic Rivet Display					
Part No.	Head Dia	Grip Range	Rivet Dia.	Display Quantity	Package Quantity
Steel Rivet / Steel Mandrel					
P57712	N/A	.059 - .177	5.0mm	2	25
P57714	N/A	.118 - .177	5.0mm	2	25
P57715	N/A	.188 - .236	5.0mm	2	25
P57720	N/A	.236 - .394	5.0mm	2	25
P57721	N/A	.157 - .335	6.0mm	2	25
P57732	N/A	.157 - .236	6.3mm	2	25
P57735	N/A	.157 - .236	6.3mm	2	25
P57736	N/A	.157 - .394	6.3mm	2	25
P57737	N/A	.157 - .394	6.3mm	2	25
P57741	N/A	.315 - .472	6.3mm	2	25
P57747	N/A	.098 - .197	6.6mm	2	25
P57748	N/A	.098 - .197	6.6mm	2	25
P57752	N/A	.098 - .236	7.0mm	2	25
Tools					
P48005	Plastic Rivet Setter			4	



ULTIMATE STRENGTH IN THREAD REPAIR

PERMA-KEE®

Perma-Kee inserts are solid, one piece, kee-locking inserts used to repair stripped or damaged threads in all types of metals and applications. When installed, locking-kees are driven into the surrounding parent material, locking the insert into place and keeping it from rotating due to vibration or torsion. No special taps are needed.

Perma-Kee inserts are available in carbon or stainless steel, both inch and metric series, and a variety of wall thickness – thinwall, heavy duty, extra heavy duty and solid styles.

Perma-Kee inserts are sold in bulk quantities. Installation tools sold separately.



THINWALL - INCH

Inserts					Installation						Removal	
TK Part No. ¹	Arconic Carbon Part No.	Internal Thread Class 2B	External Thread (Mod.) Class 2A	Length in.	TK Tool	Tool Arconic Part No.	Tap Drill Size	Countersink Diameter (+.010 / -.000)	Thread Tap		Drill	
									Size Class 2B	Min. Depth	Size	Depth
PKTC-3	73601	10-24	5/16-18	0.31	PKT-3T	72190	I	0.32	5/16-18	0.37	7/32	1/8
PKTF-3	74601	10-32										
PKTC-4	73041	1/4-20	3/8-16	0.37	PKT-4T	72250	Q	0.38	3/8-16	0.43	9/32	3/16
PKTF-4	74041	1/4-28										
PKTC-5	73051	5/16-18	7/16-14	0.43	PKT-5T	72312	X	0.44	7/16-14	0.50	11/32	3/16
PKTF-5	74051	5/16-24										
PKTC-6	73061	3/8-16	1/2-13	0.50	PKT-6T	72375	29/64	0.51	1/2-13	0.56	13/32	3/16
PKTF-6	74061	3/8-24										
PKTC-7	73071	7/16-14	9/16-12	0.56	PKT-7T	72375	33/64	0.57	9/16-12	0.62	15/32	3/16
PKTF-7	74071	7/16-20										
PKTC-8	73081	1/2-13	5/8-11	0.62	PKT-8T	72500	37/64	0.63	5/8-11	0.68	17/32	3/16
PKTF-8	74081	1/2-20										

THINWALL - METRIC

Inserts					Installation						Removal	
TK Part No. ¹	Arconic Carbon Part No.	Internal Thread Class 6H	External Thread Class 6g	Length mm.	TK Tool	Tool Arconic Part No.	Tap Drill Size	Countersink Diameter (+.25 / -.00)	Thread Tap		Drill	
									Size Class 6H	Min. Depth	Size	Depth
PKTM-5X.8	75051	M5-8	M8-1.25	8.0	PKTM-5T	72190	6.9	8.25	M8-1.25	9.5	5.50	4.00
PKTM-6X1	75061	M6-1	M10-1.25	10.0	PKTM-6T	72250	8.8	10.25	M10-1.25	11.5	7.50	4.75
PKTM-8X1	77081	M8-1	M12-1.25	12.0	PKTM-8T	72312	10.8	12.25	M12-1.25	13.5	9.50	4.75
PKTM-8X1.25	75081	M8-1.25										
PKTM-10X1.25	77101	M10-1.25	M14-1.5	14.0	PKTM-10T	72375	12.8	14.25	M14-1.5	15.5	11.50	4.75
PKTM-10X1.5	75101	M10-1.5										
PKTM-12X1.25	78121	M12-1.25	M16-1.5	16.0	PKTM-12T	72500	14.75	16.25	M16-1.5	17.5	13.50	4.75
PKTM-12X1.75	75121	M12-1.75										

1. Available in stainless steel (Add a S to the end of the part number. Example: PKTC-3S)

HEAVY DUTY - INCH

Inserts					Installation						Removal	
TK Part No. ¹	Arconic Carbon Part No.	Internal Thread Class 2B	External Thread (Mod.) Class 2A	Length in.	TK Tool	Tool Arconic Part No.	Tap Drill Size	Countersink Diameter (+.010 / -.000)	Thread Tap		Drill	
									Size Class 2B	Min. Depth	Size	Depth
PKHC-2	73582	8-32	5/16-18	0.31	PKH-2T	70582	I	0.32	5/16-18	0.37	7/32	1/8
PKHC-3	73602	10-24	3/8-16	0.31	PKH-3T	72190	Q	0.38	3/8-16	0.37	9/32	1/8
PKHF-3	74602	10-32										
PKHC-4	73042	1/4-20	7/16-14	0.37	PKH-4T	72250	X	0.44	7/16-14	0.43	11/32	3/16
PKHF-4	74042	1/4-28										
PKHC-5	73052	5/16-18	1/2-13	0.43	PKH-5T	72312	29/64	0.51	1/2-13	0.50	13/32	3/16
PKHF-5	74052	5/16-24										
PKHC-6	73062	3/8-16	9/16-12	0.50	PKH-6T	72375	33/64	0.57	9/16-12	0.56	15/32	3/16
PKHF-6	74062	3/8-24										
PKHC-7	73072	7/16-14	5/8-11	0.62	PKH-7T	72375	37/64	0.63	5/8-11	0.68	17/32	3/16
PKHF-7	74072	7/16-20										
PKHC-8	73082	1/2-13	3/4-16	0.62	PKH-8T	72500	45/64	0.76	3/4-16	0.68	21/32	3/16
PKHF-8	74082	1/2-20										
PKHC-9	73092	9/16-12	3/4-16	0.81	PKH-9T	72500	45/64	0.76	3/4-16	0.94	21/32	3/16
PKHF-9	74092	9/16-18										
PKHC-10	73102	5/8-11	7/8-14	0.87	PKH-10T	72625	53/64	0.88	7/8-14	1.00	25/32	5/16
PKHF-10	74102	5/8-18										
PKHC-12	73122	3/4-10	1 1/8-12	1.12	PKH-12T	72875	1 1/16	1.14	1 1/8-12	1.31	31/32	5/16
PKHF-12	74122	3/4-16										
PKHC-14	73142	7/8-9	1 1/4-12	1.25	PKH-14T	72875	1 3/16	1.27	1 1/4-12	1.44	1 3/32	5/16
PKHF-14	74142	7/8-14										
PKHC-16	73162	1-8	1 3/8-12	1.37	PKH-16T	72100	1 5/16	1.39	1 3/8-12	1.56	1 7/32	5/16
PKHF-16	74162	1-12										
PKHF-164	74162-14	1-14										

1. Available in stainless steel (Add a S to the end of the part number. Example: PKHC-2S)

HEAVY DUTY - METRIC

Inserts					Installation						Removal	
TK Part No. ¹	Arconic Carbon Part No.	Internal Thread Class 6H	External Thread Class 6g	Length mm.	TK Tool	Tool Arconic Part No.	Tap Drill Size	Countersink Diameter (+.25 / -.00)	Thread Tap		Drill	
									Size Class 6H	Min. Depth	Size	Depth
PKHM-4X.7	75042	M4-.7	M8-1.25	8.0	PKHM-4T	71042	6.90	8.25	M8-1.25	9.5	5.50	4.00
PKHM-5X.8	75052	M5-.8	M10-1.25	10.0	PKHM-5T	72190	8.80	10.25	M10-1.25	12.5	7.50	4.75
PKHM-6X1	75062	M6-1	M12-1.25	12.0	PKHM-6T	72250	10.80	12.25	M12-1.25	14.5	9.50	4.75
PKHM-8X1	77082	M8-1	M14-1.5	14.0	PKHM-8T	72312	12.80	14.25	M14-1.5	16.5	11.50	4.75
PKHM-8X1.25	75082	M8-1.25										
PKHM-10X1.25	77102	M10-1.25	M16-1.5	16.0	PKHM-10T	72375	14.75	16.25	M16-1.5	18.5	13.50	4.75
PKHM-10X1.5	75102	M10-1.5										
PKHM-12X1.25	78122	M12-1.25	M18-1.5	18.0	PKHM-12T	72500	16.75	18.25	M18-1.5	20.5	15.50	4.75
PKHM-12X1.75	75122	M12-1.75										
PKHM-14X1.5	77142	M14-1.5	M20-1.5	20.0	PKHM-14T	71142	18.75	20.25	M20-1.5	22.5	17.50	4.75
PKHM-14X2	75142	M14-2										
PKHM-16X1.5	77162	M16-1.5	M22-1.5	22.0	PKHM-16T	72625	20.50	22.25	M22-1.5	24.5	17.75	6.35
PKHM-16X2	75162	M16-2										
PKHM-18X1.5	78182	M18-1.5	M24-1.5	24.0	PKHM-18T	71182	22.50	24.25	M24-1.5	26.5	19.75	6.35
PKHM-20X1.5	78202	M20-1.5	M30-2	30.0	PKHM-20T	72875	28.00	30.25	M30-2	34.5	25.75	6.35
PKHM-20X2.5	75202	M20-2.5										
PKHM-22X1.5	78222	M22-1.5	M32-2	32.0	PKHM-22T	71222	30.00	32.25	M32-2	36.5	27.75	6.35
PKHM-24X2	75242	M24-2	M33-2	33.0	PKHM-24T	71242	31.00	33.25	M33-2	37.5	28.75	6.35
PKHM-24X3	77242	M24-3										

1. Available in stainless steel (Add a S to the end of the part number. Example: PKHM-4X.7S)

FOR LIGHTWEIGHT APPLICATIONS

THINWALL PERMA-KEE KITS

Designed for applications where material thickness is limited, the Thinwall Kit provides a secure fastening solution without compromising strength. Ideal for lightweight metals and thin-walled components, this kit ensures precise installation with minimal material displacement.



Internal Thread	External Thread	Kits	Inserts per Kit
Unified Sizes			
10-24	5/16-18	PKTC-3K	4
10-32	5/16-18	PKTF-3K	4
1/4-20	3/8-16	PKTC-4K	4
1/4-28	3/8-16	PKTF-4K	4
5/16-18	7/16-14	PKTC-5K	4
5/16-24	7/16-14	PKTF-5K	4
3/8-16	1/2-13	PKTC-6K	3
3/8-24	1/2-13	PKTF-6K	3
7/16-14	9/16-12	PKTC-7K	3
7/16-20	9/16-12	PKTF-7K	3
1/2-13	5/8-11	PKTC-8K	3
1/2-20	5/8-11	PKTF-8K	3
Metric Sizes			
M5X.8	M8X1.25	PKTM-5X.8K	4
M6X1	M10X1.25	PKTM-6X1K	4
M8X1	M12X1.25	PKTM-8X1K	4
M8X1.25	M12X1.25	PKTM-8X1.25K	4
M10X1.25	M14X1.5	PKTM-10X1.25K	3
M10X1.5	M14X1.5	PKTM-10X1.5K	3
M12X1.25	M16X1.5	PKTM-12X1.25K	3
M12X1.75	M16X1.5	PKTM-12X1.75K	3

EACH PERMA-KEE KIT CONSISTS OF:

- HSS drill
- HSS tap
- Installation tool
- Three to four Perma-Kee inserts



FOR EXTRA STRENGTH AND DURABILITY

HEAVY DUTY PERMA-KEE KITS

Built for demanding applications, the Heavy-Duty Kit is designed for projects requiring extra strength and durability. Suitable for high-load environments, this kit ensures a secure hold in thicker materials, making it perfect for industrial, automotive, and structural applications.



Internal Thread	External Thread	Kits	Inserts per Kit
Unified Sizes			
10-24	3/8-16	PKHC-3K	4
10-32	3/8-16	PKHF-3K	4
1/4-20	7/16-14	PKHC-4K	4
1/4-28	7/16-14	PKHF-4K	4
5/16-18	1/2-13	PKHC-5K	4
5/16-24	1/2-13	PKHF-5K	4
3/8-16	9/16-12	PKHC-6K	3
3/8-24	9/16-12	PKHF-6K	3
7/16-14	5/8-11	PKHC-7K	3
7/16-20	5/8-11	PKHF-7K	3
1/2-13	3/4-16	PKHC-8K	3
1/2-20	3/4-16	PKHF-8K	3
9/16-12	3/4-16	PKHC-9K	3
9/16-18	3/4-16	PKHF-9K	3
5/8-11	7/8-14	PKHC-10K	2
5/8-18	7/8-14	PKHF-10K	2
Metric Sizes			
M5X.8	M10X1.25	PKHM-5X.8K	4
M6X1	M12X1.25	PKHM-6X1K	4
M8X1	M14X1.5	PKHM-8X1K	4
M8X1.25	M14X1.5	PKHM-8X1.25K	4
M10X1.25	M16X1.5	PKHM-10X1.25K	3
M10X1.5	M16X1.5	PKHM-10X1.5K	3
M12X1.25	M18X1.5	PKHM-12X1.25K	3
M12X1.75	M18X1.5	PKHM-12X1.75K	3

EACH PERMA-KEE KIT CONSISTS OF:

- HSS drill
- HSS tap
- Installation tool
- Two to four Perma-Kee inserts





LEAK-PROOF AND SECURE

PERMA S-NUT™

The Perma S-Nut is a flanged rubber bushing with a brass nut molded into one end and used anywhere a leak-proof seal is required. By tightening a conventional machine screw into the threaded brass nut, the Perma S-Nut expands against the inner side of the parent material, making a secure fastening.

Perma S-Nuts do not require special tooling.

Perma Seal-Nut				
Part Number	Thread Size	Grip Range	Drill Size	Package Qty.
P57205	6-32	.015 - .156	5/16	25
P57207	8-32	.015 - .156	5/16	25
P57219	10-32	.015 - .192	3/8	25
P57243	1/4-20	.031 - .187	1/2	20
P57255	5/16-18	Up To .187	5/8	12
P57259	3/8-16	.015 - .438	3/4	6
P57220	M5 x 0.8	.015 - .192	3/8	25
P57244	M6 x 1.0	.031 - .187	1/2	20
P57256	M8 x 1.25	Up To .187	5/8	12



VIBRATION PROOF AND SECURE

PERMA RIVET-NUT™

Perma Rivet-Nuts are designed to provide placement of permanent threads in thin materials, to thin for tapped threads. Installed from one side, Perma Rivet-Nuts are perfect for sheet metal, fiberglass and rigid plastic. Perma Rivet-Nuts are made of steel (with a yellow zinc dichromate finish for corrosion-resistant threads) and are ribbed to keep them from loosening under vibration and will not rotate when attached to the mating material.

Perma Rivet-Nuts are available in a variety of sizes: 6-32 thru 3/8, M5 thru M10.

Perma Rivet-Nut				
Part Number	Thread Size	Grip Range	Drill Size	Package Qty.
P57821	6-32	.020 - .080	17/64	50
P57822	8-32	.020 - .080	17/64	50
P57823	10-24	.020 - .130	19/64	50
P57824	10-32	.020 - .130	19/64	50
P57825	1/4-20	.027 - .165	25/64	40
P57827	5/16-18	.027 - .150	17/32	25
P57829	3/8-16	.027 - .150	17/32	20
P57832	M5X0.8	.5mm - 3.3mm	19/64	50
P57833	M6X1	.7mm - 4.2mm	25/64	40
P57834	M8X1.25	.7mm - 3.8mm	17/32	25
P57835	M10X1.5	.7mm - 3.8mm	17/32	20
P57836	6-32	.080 - .130	17/64	50
P57837	8-32	.080 - .130	17/64	50
P57838	10-24	.130 - .225	19/64	50
P57839	10-32	.130 - .225	19/64	50
P57840	1/4-20	.165 - .260	25/64	40
P57842	5/16-18	.150 - .312	17/32	25
P57844	3/8-16	.150 - .312	17/32	20



P39300



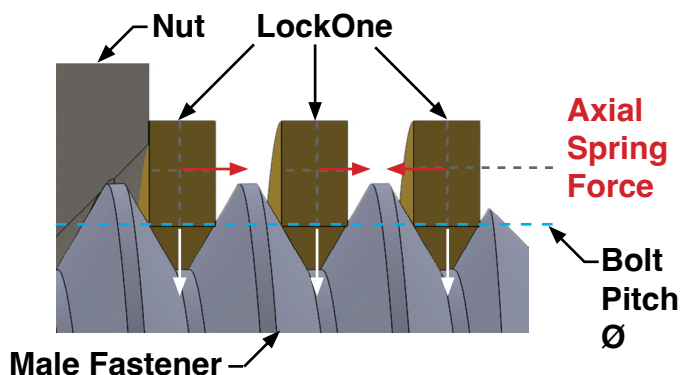
A SUPERIOR LOCKING FORCE

KATO LOCKONE®

LockOne is a revolutionary positive locking fastener designed to prevent a standard nut from loosening free under vibration. Upon installation, LockOne coils stretch, providing a superior locking force. Unlike nuts with nylon or locking compounds, LockOne does not degrade with each use. Due to the unique LockOne design, the assembly is FOD free. Save on assembly cost! No expensive replacement nuts! LockOne's lightweight design is perfect for use on weight sensitive applications. KATO LockOne replaces nylon nuts, double nuts (jam nuts), cotter pins, safety-wire, and thread locking compounds.



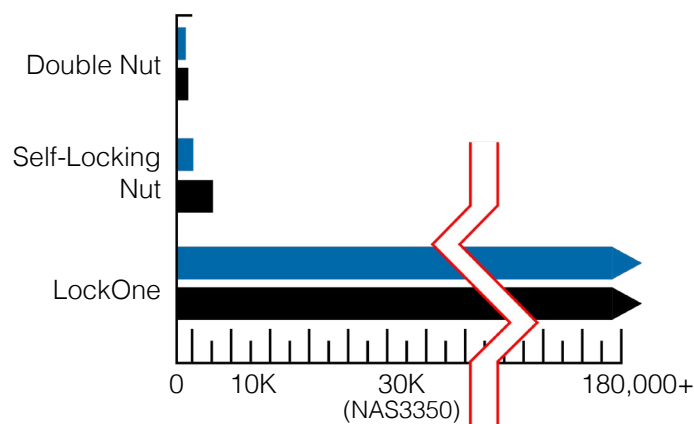
SUPERIOR FORCE



Once positioned in front of nut, LockOne engages the bolt along pitch diameter inducing spring forces axially and radially. These forces hold LockOne in place, preventing bolts and nuts from loosening free under vibration.

VIBRATION TESTED IN ACCORDANCE WITH NAS3350. LOCKONE CAN BE EASILY SUBSTITUTED INTO EXISTING DESIGNS.

PERFORMANCES



Vibration Cycle

LockOne surpasses the testing requirements of NAS3350 (National Aerospace Specification for impact type vibration test)

PART NUMBERS

Thread Size	Bulk Part No.	12PT-Socket
Unified Coarse		
1/4-20	KLOC-4	7/16
5/16-18	KLOC-5	1/2
3/8-16	KLOC-6	9/16
7/16-14	KLOC-7	11/16
1/2-13	KLOC-8	3/4
5/8-11	KLOC-10	15/16
3/4-10	KLOC-12	1-1/8
7/8-9	KLOC-14	1-5/16
1-8	KLOC-16	1-1/2
Unified Fine		
10-32	KLOF-3	3/8
1/4-28	KLOF-4	7/16
5/16-24	KLOF-5	1/2
3/8-24	KLOF-6	9/16
7/16-20	KLOF-7	11/16
1/2-20	KLOF-8	3/4
9/16-18	KLOF-9	7/8
5/8-18	KLOF-10	15/16
3/4-16	KLOF-12	3/4-16
1-12	KLOF-16	1-1/2
Metric Sizes		
M4X.7	KLOM-4	7mm
M5X.8	KLOM-5	8mm
M6X1	KLOM-6	10mm
M8X1.25	KLOM-8	13mm
M10X1.5	KLOM-10	17mm
M12X1.75	KLOM-12	19mm
M16X2	KLOM-16	24mm
M20X2.5	KLOM-20	30mm
M22X2.5	KLOM-22	32mm
M24X3	KLOM-24	36mm

INSTALLATION IS EASY



Simply load LockOne into the 12-Point socket.



Load the standard nut on the top of LockOne.



Tighten to application requirements.



If there is a gap between LockOne and the nut, simply hand tighten LockOne until it is flush with the nut.



FAST AND EASY TO INSTALL

LOCKONE PACK

LockOne Packs contain one size in the specified coarse, fine, or metric thread.

Thread Size	Pack Part No.	Qty.	12PT-Socket
Unified Coarse			
1/4-20	KLOC-4P	10	7/16
5/16-18	KLOC-5P	10	1/2
3/8-16	KLOC-6P	10	9/16
7/16-14	KLOC-7P	10	11/16
1/2-13	KLOC-8P	10	3/4
5/8-11	KLOC-10P	6	15/16
3/4-10	KLOC-12P	2	1-1/8
7/8-9	KLOC-14P	2	1-5/16
1-8	KLOC-16P	2	1-1/2
Unified Fine			
10-32	KLOF-3P	10	3/8
1/4-28	KLOF-4P	10	7/16
5/16-24	KLOF-5P	10	1/2
3/8-24	KLOF-6P	10	9/16
7/16-20	KLOF-7P	10	11/16
1/2-20	KLOF-8P	10	3/4
9/16-18	KLOF-9P	6	7/8
5/8-18	KLOF-10P	6	15/16
3/4-16	KLOF-12P	2	3/4-16
1-12	KLOF-16P	2	1-1/2

Thread Size	Pack Part No.	Qty.	12PT-Socket
Metric Sizes			
M4X.7	KLOM-4P	10	7mm
M5X.8	KLOM-5P	10	8mm
M6X1	KLOM-6P	10	10mm
M8X1.25	KLOM-8P	10	13mm
M10X1.5	KLOM-10P	10	17mm
M12X1.75	KLOM-12P	10	19mm
M16X2	KLOM-16P	6	24mm
M20X2.5	KLOM-20P	2	30mm
M22X2.5	KLOM-22P	2	32mm
M24X3	KLOM-24P	2	36mm





NO SPECIAL TOOLS REQUIRED

LOCKONE MASTER KITS

LockOne Master Kits contain a range of LockOne sizes in coarse or metric thread.

KLOC-KIT

Thread Size	Qty. (PC)	12PT-Socket
Unified Coarse		
1/4-20	10	7/16
5/16-18	10	1/2
3/8-16	10	9/16
7/16-14	10	11/16
1/2-13	10	3/4
5/8-11	10	15/16
3/4-10	6	1-1/8
7/8-9	4	1-5/16
1-8	2	1-1/2

KLOF-KIT

Thread Size	Qty. (PC)	12PT-Socket
Unified Coarse		
10-32	10	7/16
1/4-28	10	1/2
5/16-24	10	9/16
3/8-24	10	11/16
7/16-20	10	3/4
1/2-20	10	15/16
5/8-18	6	1-1/8
3/4-16	6	1-5/16
1-12	2	1-1/2

KLOM-KIT

Thread Size	Qty. (PC)	12PT-Socket
Metric Sizes		
M4X.7	10	7mm
M5X.8	10	8mm
M6X1	10	10mm
M8X1.25	10	13mm
M10X1.5	10	17mm
M12X1.75	10	19mm
M16X2	6	24mm
M20X2.5	4	30mm
M22X2.5	4	32mm
M24X3	2	36mm



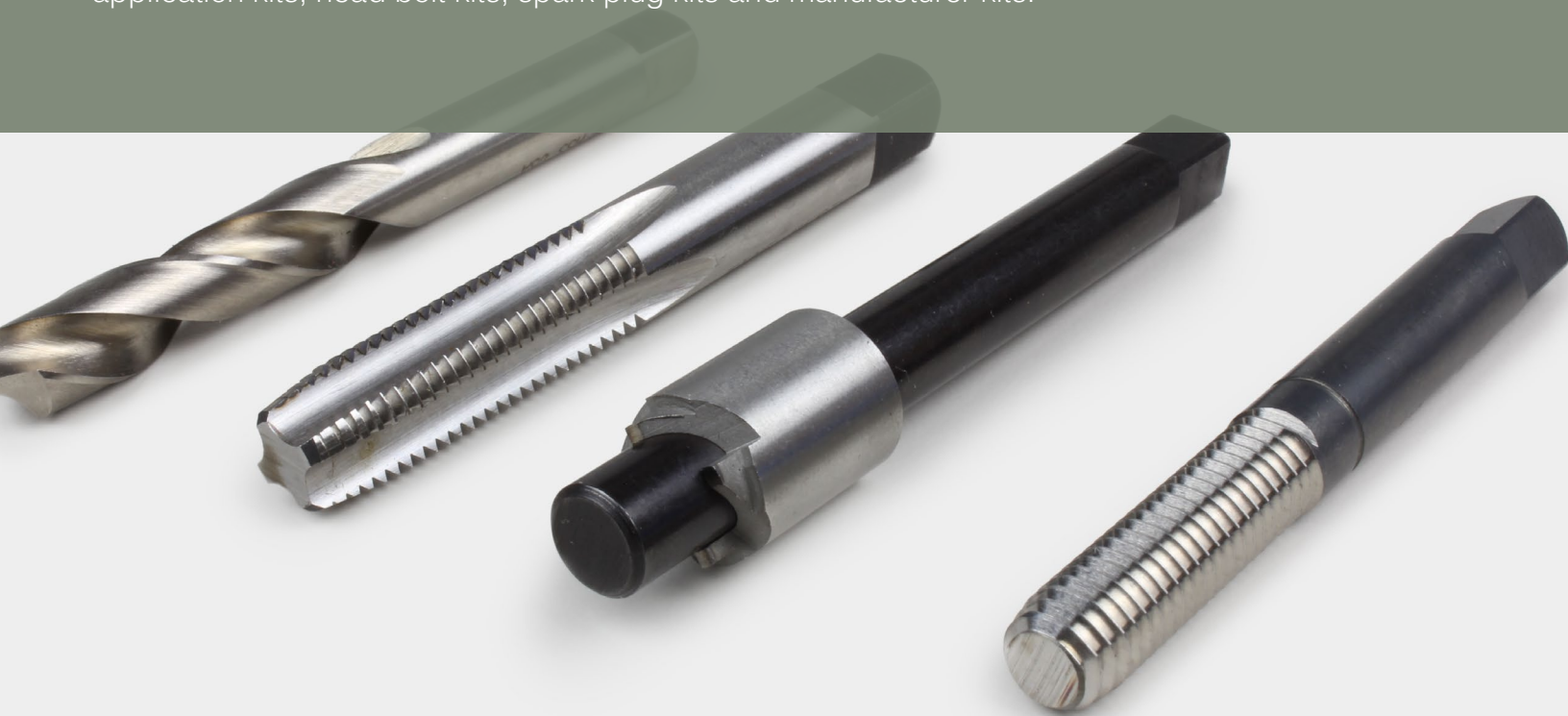


FOR AUTOMOTIVE PROFESSIONALS

TIME-SERTS®

Time-Sert a thread repair system that uses a thin-walled solid bushing insert made out of carbon or stainless steel. The unique style of this insert allows for easy installation, using a flanged top for positive placement in the tapped hole and is self-locking. On installation, the bottom internal threads of the insert are cold rolled to expand the mating external thread into the parent material, locking the insert in place.

Time-Sert inserts come in a variety of lengths and sizes along with having special application kits, head bolt kits, spark plug kits and manufacturer kits.



TIME-SERT DATA



EACH KIT CONSISTS OF:

- Drill
- Counterbore
- Cutting tap
- Insert driver
- Five (5) steel inserts

TAPER PIPE

Inserts		Drill		C. Bore		Tap
Size	Drill	Size	Min. Dia.	Min. Depth	Major Dia.	
1/8-27	13/32	0.406	0.466	0.055	0.449	
1/4-18	37/64	0.578	0.668	0.075	0.638	
3/8-18	23/32	0.718	0.837	0.075	0.794	
1/2-14	55/64	0.859	1.000	90 csk	0.942	
3/4-14	1 3/32	1.093	1.300	90 csk	1.194	

Inch					
Inserts	Drill		C. Bore		Tap
Size	Drill	Size	Min. Dia.	Min. Depth	Major Dia.
4-40	#31	.120	.170	.055	.147
6-32	#26	.147	.218	.070	.182
8-32	#17	.173	.241	.065	.208
10-24	13/64	.203	.288	.075	.247
10-32	13/64	.203	.274	.075	.234
12-24	#1	.228	.307	.075	.265
1/4-20	17/64	.265	.352	.075	.319
1/4-28	G	.261	.340	.075	.300
5/16-18	21/64	.328	.430	.085	.388
5/16-24	P	.323	.410	.080	.368
3/8-16	X	.397	.495	.085	.460
3/8-24	W	.386	.473	.080	.432
7/16-14	29/64	.453	.571	.110	.534
7/16-20	29/64	.453	.547	.085	.506
1/2-13	33/64	.515	.648	.110	.604
1/2-20	33/64	.515	.610	.085	.569
9/16-12	19/32	.593	.711	.130	.675
9/16-18	37/64	.578	.668	.110	.638
5/8-11	21/32	.656	.787	.135	.748
5/8-18	41/64	.640	.740	.110	.701
3/4-10	25/32	.781	.935	.135	.885
3/4-16	49/64	.765	.870	.110	.835

Metric					
Inserts	Drill		C. Bore		Tap
Size	Drill	Size	Min. Dia.	Min. Depth	Major Dia.
M3 X 0.5	1/8	.125	.170	.055	.140
M4 X 0.7	#19	.166	.226	.065	.194
M5 X 0.8	#8	.199	.279	.075	.238
M6 X 1.0	D	.246	.319	.075	.290
M7 X 1.0	L	.290	.351	.075	.330
M8 X 1.0	P	.323	.409	.080	.369
M8 X 1.25	P	.323	.419	.080	.381
M9 X 1.25	U	.368	.440	.080	.422
M10 X 1.0	13/32	.406	.466	.080	.449
M10 X 1.25	13/32	.406	.500	.085	.463
M10 X 1.5	13/32	.406	.500	.085	.474
M11 X 1.25	29/64	.453	.542	.085	.503
M11 X 1.5	29/64	.453	.552	.085	.516
M12 X 1.25	31/64	.484	.560	.085	.540
M12 X 1.5	31/64	.484	.595	.085	.552
M12 X 1.75	1/2	.500	.605	.110	.567
M13 X 1.5	17/32	.531	.612	.085	.594
M14 X 2.0	37/64	.578	.685	.110	.660
M14 X 1.5	37/64	.578	.668	.110	.634
M16 X 1.5	21/32	.656	.743	.110	.713
M16 X 2.0	21/32	.656	.787	.115	.741
M18 X 1.5	23/32	.718	.837	.125	.794
M20 X 1.5	51/64	.797	.925	.120	.890
M22 X 1.5	7/8	.875	.950	.100	.940
M24 X 1.5	24.5	.963	1.030	.750	1.010

TIME-SERT INCH KITS

Bold text are insert lengths supplied in kits.

Kits		Insert Length		Carbon Steel	Stainless Steel
Sizes	Part No.	Inches	MM	Part No.	Part No.
4-40	TS0440	.200	5.0	TS04401	TS04402
6-32	TS0632	.250	6.3	TS06321	TS06322
8-32	TS0832	.250	6.3	TS08321	TS08322
		.320	8.0	TS08323	TS08324
10-24	TS0024	.240	6.1	TS00240	TS00246
		.300	7.6	TS00241	TS00242
10-32	TS0032	.370	9.4	TS00243	TS00244
		.150	3.8	TS00329	TS00327
		.187	4.7	TS00325	TS00328
		.240	6.1	TS00320	TS00326
		.300	7.6	TS00321	TS00322
12-24	TS0124	.370	9.4	TS00323	TS00324
		.300	7.6	TS01241	TS01242
		.370	9.4	TS01243	TS01244
1/4-20	TS0140	.472	12.0	TS01245	TS01246
		.280	7.1	TS01400	TS01406
		.380	9.4	TS01401	TS01402
		.500	12.7	TS01403	TS01404
		.750	19.0	TS01405	TS01408
1/4-28	TS0148	1.000	25.4	TS01407	TS01409
		.280	7.1	TS01480	TS01486
		.380	9.4	TS01481	TS01482
1/4-24 Harley Davidson	TS0144	.500	12.7	TS01483	TS01484
		.280	7.1	TS01441	-----
		.380	9.4	TS01443	-----
1/4-32	TS0142	.500	12.7	TS01445	-----
		.180	4.5	TS01421	TS01422
		.250	6.3	TS01423	TS01424
		.380	9.4	TS01425	TS01426
5/16-18	TS0561	.500	12.7	TS01427	TS01428
		.350	8.9	TS05610	TS05617
		.450	11.4	TS05611	TS05612
		.620	15.7	TS05613	TS05614
5/16-24	TS0562	.750	19.0	TS05615	TS05616
		.350	8.9	TS05620	-----
		.450	11.4	TS05621	TS05622
		.620	15.7	TS05623	TS05624
3/8-16	TS0381	.750	19.0	TS05625	-----
		.312	7.9	TS03818	TS038182
		.400	10.0	TS03819	TS038192
		.520	13.2	TS03811	TS03812
		.620	15.7	TS03813	TS03814
		.750	19.0	TS03815	TS03816
		.900	22.8	TS038190	-----
3/8-24	TS0382	1.000	25.4	TS03810	TS038102
		1.200	30.4	TS03817	-----
		.300	7.6	-----	TS03820
		.350	8.9	TS03825	-----
		.520	13.2	TS03821	TS03822
		.750	19.0	TS03823	TS03824

Kits		Insert Length		Carbon Steel	Stainless Steel
Sizes	Part No.	Inches	MM	Part No.	Part No.
7/16-14	TS0761	.400	10.0	TS07610	-----
		.600	15.2	TS07611	TS07612
		.870	22.0	TS07613	TS07614
		1.000	25.4	TS076135	TS07619
		1.250	31.7	TS07615	TS07618
		1.500	38.0	TS07617	-----
7/16-20	TS0762	.250	6.3	TS07629	-----
		.370	9.4	TS076320	-----
		.480	12.2	TS07627	-----
		.600	15.2	TS07621	TS07622
		.870	22.0	TS07623	TS07624
		1.000	25.4	TS076231	-----
		1.370	34.7	TS07625	-----
7/16-24	TS0764	.500	12.7	TS07641	TS07642
		.600	15.2	TS07643	-----
1/2-13	TS0121	.800	20.3	TS07645	-----
		.400	10.0	TS01217	-----
		.650	16.5	TS01211	TS01212
		1.00	25.4	TS01213	TS01214
		1.250	31.7	TS01219	-----
1/2-20	TS0122	1.500	38.0	TS01215	-----
		.400	10.0	TS01225	TS01226
		.500	12.7	TS01220	-----
		.650	16.5	TS01221	TS01222
		1.000	25.4	TS01223	TS01224
9/16-12	TS0961	1.370	34.7	TS01227	-----
		.500	12.7	TS09610	-----
		.750	19.0	TS09611	-----
		1.120	28.4	TS09615	-----
9/16-18	TS0968	1.500	38.0	TS09617	-----
		.350	8.9	TS09687	-----
		.450	11.4	TS09685	-----
		.750	19.0	TS09681	-----
5/8-11	TS0581	1.120	28.4	TS09683	-----
		.500	12.7	TS05810	-----
		.850	21.6	TS05811	TS05812
		1.250	31.7	TS05813	TS05814
5/8-18	TS0588	1.500	38.0	TS05815	-----
		.320	8.1	TS05881	-----
		.450	11.4	TS05887	-----
		.850	21.6	TS05883	-----
3/4-10	TS0341	1.250	31.7	TS05885	-----
		.750	19.0	TS03415	-----
		1.100	28.0	TS03411	-----
3/4-16	TS0346	1.500	38.0	TS03413	-----
		.650	16.5	TS03460	-----
		1.100	28.0	TS03461	-----
		1.500	38.0	TS03463	-----

TIME-SERT METRIC KITS

Bold text are insert lengths supplied in kits.

Kits		Insert Length		Carbon Steel	Stainless Steel
Sizes	Part No.	MM	Inches	Part No.	Part No.
M3x0.5	TS1305	4.3	.163	TS13051	TS13052
		6.0	.240	TS13053	TS13054
M4X0.7	TS1407	4.0	.157	TS14077	----
		6.0	.240	TS14071	TS14072
		8.0	.320	TS14073	TS14074
M5X0.8	TS1508	5.0	.199	TS15080	TS150802
		7.6	.300	TS15081	TS15082
		10.0	.400	TS15083	TS15084
		12.0	.470	TS15085	----
M6X1.0	TS1610	5.0	.199	TS16100	TS161002
		8.0	.315	TS16105	TS16106
		9.4	.370	TS16101	TS16102
		12.0	.470	TS16103	TS16104
		15.0	.600	TS161031	----
		17.0	.669	TS16107	----
		19.0	.748	TS16109	----
M7X1.0	TS1710	10.0	.400	TS17101	----
		14.0	.550	TS17103	----
		18.0	.708	TS17105	----
		20.0	.800	TS17107	----
M8X1.0	TS1810	7.5	.295	TS18100	----
		11.7	.460	TS18101	----
M8X1.25	TS1812	8.0	.315	----	TS18128
		9.0	.360	TS181210	----
		10.0	.400	TS18125	----
		11.7	.460	TS18121	TS18122
		14.0	.550	TS18129	TS18126
		16.2	.640	TS18123	TS18124
		18.0	.708	TS18127	TS181226
		20.0	.800	TS181213	TS181224
		30.0	1.180	TS181217	----
M8X1.75 GM Rare	TS1817	16.2	.640	TS18173	----
M9x1.25	TS1912	9.0	.354	TS19120	----
		13.0	.510	TS19121	----
		18.0	.710	TS19123	----
		22.0	.866	TS19127	----
M10X1.0	TS1010	6.2	.244	TS10100	TS10106
		8.0	.315	TS10105	----
		9.0	.360	TS10101	TS10102
		15.0	.600	TS10103	TS10104
M10X1.25	TS1012	9.0	.354	TS10127	----
		14.0	.550	TS10121	TS10122
		16.2	.650	TS10123	TS10124
		20.0	.800	TS10125	TS10126
		25.0	.984	TS10129	----
M10X1.5	TS1015	9.4	.370	TS10157	TS10150
		11.0	.433	TS101511	----
		14.0	.550	TS10151	TS10152
		17.0	.669	TS101517	----
		20.0	.800	TS10153	TS10154
		22.0	.866	TS101522	----
		24.5	.960	TS10155	----
		30.0	1.180	TS10159	TS10158
M11X1.25	TS1112	40.0	1.575	TS101591	----
		22.0	.870	TS11123	----
		28.0	1.100	TS11121	----
		30.0	1.180	TS11127	----

Kits		Insert Length		Carbon Steel	Stainless Steel
Sizes	Part No.	MM	Inches	Part No.	Part No.
M11X1.5	TS1115	16.0	.630	TS11151	----
		22.0	.870	TS11153	----
		30.0	1.180	TS11155	----
M12X1.25	TS1212	9.0	.360	TS12121	----
		11.0	.430	TS12129	----
		15.0	.600	TS12123	TS12124
		24.0	.950	TS12125	TS12126
M12X1.5	TS1215	6.7	.263	TS12157	----
		9.2	.360	TS12151	----
		13.5	.531	TS121501	----
		16.2	.640	TS12153	TS12152
		20.0	.800	TS121505	----
		24.0	.950	TS12155	TS12154
		30.0	1.180	TS12159	TS12160
		10.0	.400	TS12177	----
M12X1.75	TS1217	12.0	.472	TS12170	----
		16.2	.640	TS12171	TS12172
		20.0	.800	TS12175	TS12176
		24.0	.950	TS12173	TS12174
		30.0	1.180	TS12179	----
		14.0	.551	TS13151	----
M13X1.5	TS1315	19.0	.748	TS13153	----
		24.0	.950	TS13155	----
		28.0	1.102	TS13157	----
		6.6	.260	TS14151	----
M14X1.5	TS1415	9.4	.370	TS14153	TS14154
		12.7	.500	TS14155	TS14156
		16.0	.630	TS141552	----
		17.8	.700	TS14157	TS141550
		24.0	.950	TS14158	TS141551
		26.0	1.023	TS141553	TS141554
		28.0	1.100	TS14159	TS141556
		12.0	.472	TS14201	----
M14X2.0	TS1420	18.0	.710	TS14203	TS14204
		24.0	.950	TS14205	----
		30.0	1.180	TS14207	----
M16X1.5	TS1615	7.0	.270	TS16151	TS16150
		12.7	.500	TS16153	TS16152
		16.0	.630	TS16159	TS16156
		20.0	.800	TS161575	TS16158
		24.0	.950	TS16155	TS16154
		32.0	1.250	TS16157	----
M16X2.0	TS1620	16.0	.630	TS16200	TS16202
		24.0	.950	TS16201	TS16204
		32.0	1.250	TS16203	TS16206
		38.0	1.496	TS16205	----
M18X1.5	TS1815	10.0	.400	TS18151	----
		15.0	.600	TS18157	----
		18.3	.720	TS18153	----
		27.0	1.060	TS18155	----
M20X1.5	TS2015	9.0	.354	TS20150	----
		12.0	.472	TS20151	----
		17.0	.669	TS20153	----
		30.0	1.180	TS20155	----
M22X1.5	TS2215C	10.0	.400	TS22151	----
		15.0	.590	TS22153	----
		20.0	.800	TS22155	----
M24X1.5	TS2415C	7.6	.300	TS24150	----
		10.0	.400	TS24151	----
		15.0	.590	TS24153	----
		20.0	.800	TS24155	----
		30.0	1.200	TS24157	----



SHOP KITS

THREAD MASTER KITS

Each Set Contains 5 Complete
Tool Kits and 20 Inserts of Each Size **(Total 100 inserts)**

Inch		Metric	
Coarse	Fine	Coarse	Fine
1/4-20	1/4-28	M5 X 0.8	M5 X 0.8
5/16-18	5/16-24	M6 X 1.0	M6 X 1.0
3/8-16	3/8-24	M8 X 1.25	M8 X 1.25
7/16-14	7/16-20	M10 X 1.5	M10 X 1.25
1/2-13	1/2-20	M12 X 1.75	M12 X 1.5
Carbon Steel No. TS 0010	Carbon Steel No. TS0020	Carbon Steel No. TS1000	Carbon Steel No. TS1001
Stainless Steel Part No. TS0011	Stainless Steel Part No. TS0021	Stainless Steel Part No. TS1002	Stainless Steel Part No. TS1003

MINI MASTER KITS

Each Set Contains 3 Complete
Tool Kits and 20 Inserts of Each Size **(Total 60 inserts)**

Inch		Metric	
Coarse	Fine	Coarse	Fine
1/4-20	1/4-28	M6 X 1.0	M6 X 1.0
5/16-18	5/16-24	M8 X 1.25	M8 X 1.25
3/8-16	3/8-24	M10 X 1.5	M10 X 1.25
Carbon Steel No. TS1203	Carbon Steel No. TS1204	Carbon Steel No. TS1201	Carbon Steel No. TS1202
Stainless Steel Part No. TS1205	Stainless Steel Part No. TS1206	Stainless Steel Part No. TS1207	Stainless Steel Part No. TS1208



DRAIN PAN REPAIR

DRAIN PAN KITS

All kits include all the tools plus 5 inserts and tap guide.

Drain Pan	Kit Part No.	Insert Part No.	Insert Length	Contains
1/2-13	TS0121C	TS01217	.400	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
1/2-20 (Aluminum)	TS0122A	TS01225	.400	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
1/2-20 reduces to 7/16-20 (Ford) ¹	TS0765	TS07629	---	Cbore, Driver, 5 inserts, 5 drain plugs with washers
3/4-16	TS0346C	TS03460	.650	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
3/4-10	TS0341C	TS03415	.750	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
M10X1.5	TS1015A	TS10157	9.4mm	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
M12X1.25	TS1212C	TS12121	9mm	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
M12X1.5	TS1215C	TS12151	9.2mm	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
M12X1.75	TS1217C	TS12170	9.2mm	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
M14X1.5 (VW, Chrysler..)	TS1415A	TS14155	12.7mm	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
M14X1.5 (Aluminum)	TS1415C	TS14153	9.4mm	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
M14X1.5 reduces to M12X1.5 (Honda & Acura) ¹	TS1485	TS12151	---	---
M14X1.25	TS14125A	TS44127	11mm	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
M16X1.5	TS1615C	TS16153	12.7mm	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
M18X1.5	TS1815C	TS18151	10mm	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
M20X1.5	TS2015A	TS20151	12mm	Drill, Cbore, Tap, Driver, Tap guide, 5 inserts
M22X1.5	TS2215C	TS22151	10mm	Step Reamer, Tap, Driver, Tap guide, 5 inserts
M24X1.5	TS2415C	TS24150	7.6mm	Step Reamer, Tap, Driver, Tap guide, 5 inserts

1. Tin Pan ONLY

SPARK PLUG KITS

Part No. **TS4412**



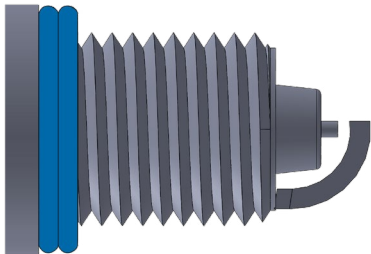
Part No. **TS4412E**



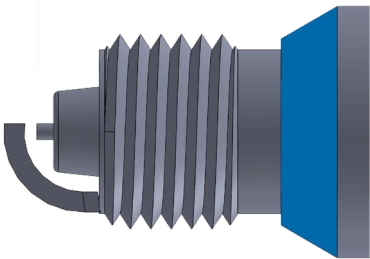
TS4412 & TS4412E Kits “DO NOT” include inserts.

SPARK PLUG INSERTS

**WASHER
SEAT**



Spark plugs seal with a washer on plug.



**TAPER
SEAT**

Must be used when installing taper seat inserts.

M14 X 1.25 Washer Seat		
Part No.	MM	Inches
TS44121	7.0	.270
TS44123	8.0	.320
TS44125	9.4	.370
TS44127	11.0	.430
TS44113	13.5	.530
TS44129	15.0	.600
TS44111	16.8	.660
TS44112	23.0	.905

M14 X 1.25 Taper Seat		
Part No.	MM	Inches
TS44181	7.0	.270
TS44183	10.0	.400
TS44185	15.7	.620
TS44186	16.8	.660
TS44187	24.0	.950
Sealer required for all Taper seat inserts. P/N 6020		

Spark plug kits do not contain inserts, order separately.

SPARK PLUG KITS

Kit Size	Kit Part No.	Length		Washer Seat Part No.
		MM	Inches	
1/4-32 RC engines	TS0142SP	4.5	.180	TS01421
M10X1.0 Standard Kit	TS4010	9.0	.350	TS40101
		12.0	.472	TS40102
M10X1.0 Deep Hole Kit	TS4010E	15.0	.600	TS40103
		23.0	.905	TS40105
M10X1.0 Glow Plug	TS4010GP	12.0	.472	TS40102
M10X1.25 Glow Plug	TS5000 DuraMax 6.6L Diesel	16.2	.650	TS10123ANF
M12x1.25	TS4212	9.0	.360	TS42121
		15.0	.600	TS42123
		17.5	.690	TS42125
		22.0	.866	TS42127
		24.0	.945	TS42129
M12x1.25 DeepHole Kit	TS4212E	9.0	.360	TS42121
		15.0	.600	TS42123
		17.5	.690	TS42125
		22.0	.866	TS42127
		24.0	.945	TS42129
M12x1.25 2008 Ford 3 Valve	TS4212H	-----	-----	-----
M14x1.25 Standard Kit	TS4412	7.0	.270	TS44121
		8.0	.320	TS44123
		9.4	.370	TS44125
		11.0	.430	TS44127
M14x1.25 DeepHole Kit For Holes 6" Deep	TS4412E	13.5	.530	TS44113
		15.0	.600	TS44129
		16.8	.660	TS44111
		23.0	.905	TS44112
M18X1.5	TS4815	10.0	.400	TS48151
		18.3	.720	TS48153
7/8-18	TS4718	11.0	.430	TS47181
		20.0	.780	TS47183
		24.5	1.000	TS47185

Kit Size	Kit Part No.	Length		Taper Seat Part No.
		MM	Inches	
M12x1.25 2008 Ford 3 Valve	TS4212H	21.0	.827	TS42126
M14x1.25 Standard Kit	TS4412	7.0	.270	TS44181
		10.0	.400	TS44183
		-----	-----	-----
		-----	-----	-----
M14x1.25 DeepHole Kit For Holes 6" Deep	TS4412E	15.7	.620	TS44185
		16.8	.660	TS44186
		24.0	.950	TS44187
M18X1.5	TS4815	10.0	.400	TS48181
		-----	-----	-----

Special Seats Cutters

For use on some taper seat spark plug repairs that have limited access to the spark plug hole.

M14 x 1.25 Part No. **TS44196**
M18 x 1.5 Part No. **TS48196**
M14 x 1.25 Extended Part No. **TS44196E**

Seat Cutter Guide

Used when the step tap cannot be threaded deep enough to allow use of the seat cutter.

M14 x 1.25 Part No. **TS44195**

Insert Driver Oil

This oil is superior for installing inserts.
Part No. **TS6010**

Sealer

This sealer must be used when installing taper seat inserts.
Part No. **TS6020**

Anti-Seize

Part No. **TS37229**

Spark plug kits do not contain inserts, order separately.

UNIVERSAL HEAD BOLT KITS

Universal head bolt kits can be used in any application of bolt size listed below. A simple tool setup is all that is required.

Universal Head Bolt				
Thread Size	Kit Part No.	Insert Part No.	Insert Quantity	Insert Length
M10X1.25	TS6250	TS10129	(10/PKG)	25mm
M10X1.5	TS7580	TS10155	(10/PKG)	24.5mm
M11X1.25	TS11125	TS11127	(10/PKG)	30mm
M11X1.5	TS2200	TS11155	(10/PKG)	30mm
M11X2.0	TS3700	TS112030	(10/PKG)	30mm
M12X1.25	TS4700	TS12127	(10/PKG)	30mm
M12X1.5	TS4800	TS12159	(10/PKG)	30mm
M12X1.75	TS4900	TS12179	(10/PKG)	30mm



Universal head bolt kits also available in oversize “BIG-SERT” versions.

TAPER PIPE THREAD KITS

National Pipe Thread (NPT)

Taper Pipe Thread Kits			
Thread Size	Insert Part No.	Insert Quantity	Insert Length
1/8-27	TS01271	(5/PKG)	.360
1/4-18	TS01181	(5/PKG)	.360
3/8-18	TS03181	(5/PKG)	.450
1/2-14	TS02141	(5/PKG)	.500
3/4-14	TS04141	(5/PKG)	.605

TAP GUIDES

Tap guides insure that the threads are square to the surface of the hole.



The lower portion of the tap guide should remain as square as possible to the engine surface. Turn the tap slowly while making sure the guide remains flush.

American Tap Guides	
Size	Part No.
1/4-20	TS31420
1/4-28	TS31420
5/16-18	TS35168
5/16-24	TS35168
3/8-16	TS33816
3/8-24	TS33824
7/16-14	TS37164
7/16-20	TS37162
1/2-13	TS31213
1/2-20	TS31225
5/8-18	TS25885
3/4-10	TS33415
3/4-16	TS33416

Metric Tap Guides	
Size	Part No.
M6X1.0	TS36105
M7X1.0	TS37105
M8X1.25	TS38125
M10X1.0	TS30105
M10X1.5	TS30155
M10X1.25	TS30125
M11X1.25	TS31125
M11X1.5	TS31155
M12X1.5	TS32155
M12X1.25	TS32125
M12X1.75	TS32175
M14X1.5	TS34155
M14X2.0	TS34255
M16X1.5	TS36155
M18X1.5	TS38155
M20X1.5	TS30215
M22X1.5	TS32255
M24X1.5	TS32455

SCREW EXTRACTORS



TS73406

Remove broken bolts 5/8 to 7/8.
If removing a Time-Sert insert, this tool will remove inserts from **1/2 to 9/16 inch or 14mm to 14mm** metric.

TS73415

5 pc set 3/32 to 5/8
If removing a Time-Sert inserts, this set will remove inserts from **4-40 to 7/16 or 4mm to 11mm** metric.

TS73307

Remove broken bolts 7/8 to 1-1/8.
If removing a Time-Sert insert, this tool will remove inserts from **5/8 to 3/4 inch or 16mm to 20mm** metric.

TS73308

Remove broken bolts 1-1/8 to 1-3/8.
If removing a Time-Sert inserts, this tool will remove inserts from **3/4 pipe insert**.



OVERSIZED THREAD REPAIR KITS

BIG-SERT®

Big-Sert is a heavy wall solid bushing. Easy to install with positive placement.

Big-Sert gives increased load protection for critical use.

Big-Sert wall repair oversize holes which have previously been repaired.

The install driver seats the insert and completes the bottom internal threads locking the insert in place. This pushes the pin out to contact the threaded hole. Back out of the insert is prevented by the cam lock effect of the pin.



BIG-SERT DATA

Inch					
Inserts	Drill		C. Bore		Tap
Part No.	Drill	Size	Min. Dia.	Min. Depth	Major Dia.
10-32	G	.261	.340	.050	.300
1/4-20	7.8mm	.307	.355	.050	.359
1/4-28	L	.290	.330	.055	.330
5/16-18	13/32	.406	.474	.085	.474
5/16-24	13/32	.406	.474	.085	.474
3/8-16	31/64	.484	.552	.085	.552
3/8-24	31/64	.484	.552	.085	.552
7/16-14	37/64	.578	.634	.085	.634
7/16-20	37/64	.578	.634	.085	.634
1/2-13	41/64	.640	.701	.085	.701
1/2-20	41/64	.640	.701	.085	.701

Metric					
Inserts	Drill		C. Bore		Tap
Part No.	Drill	Size	Min. Dia.	Min. Depth	Major Dia.
M5X0.8	D	.246	.290	.050	.290
M6X1.0	L	.290	.330	.085	.330
M7X1.0	U	.368	.440	.080	.422
M8X1.25	13/32	.406	.474	.085	.474
M10X1.0	31/64	.484	.552	.085	.552
M10X1.25	31/64	.484	.552	.085	.552
M10X1.5	31/64	.484	.552	.085	.552
M12X1.5	37/64	.578	.634	.085	.634
M12X1.75	37/64	.578	.634	.085	.634
M12X1.25	37/64	.578	.634	.085	.634

EACH KIT CONSISTS OF:

- Drill
- Counterbore
- Cutting tap
- Insert driver
- Five (5) steel inserts



BIG-SERT KITS

Inch				
Kit		Insert Length		Insert Part
Size	Part No.	Inches	MM	
1/4-20	TS5420	.380	9.4	TS54201
		.500	12.7	TS54203
1/4-28	TS5448	.380	9.4	TS54481
		.500	12.7	TS54483
5/16-18	TS5561	.450	11.4	TS55611
		.620	15.7	TS55613
5/16-24	TS5562	.450	11.4	TS55621
		.620	15.7	TS55623
3/8-16	TS5381	.400	10.1	TS53810
		.520	13.2	TS53811
		.750	19.0	TS53813
		1.000	25.4	TS53815
		1.250	31.7	TS53817
3/8-24	TS5382	.520	13.2	TS53821
		.750	19.0	TS53823
7/16-14	TS5761	.600	15.2	TS57611
		.870	22.0	TS57613
		1.000	25.4	TS57615
		1.250	31.7	TS57617
7/16-20	TS5762	.600	15.2	TS57621
		.870	22.0	TS57623
1/2-13	TS5121	.480	12.2	TS51210
		.650	16.5	TS51211
		1.00	25.4	TS51213
1/2-20	TS5122	.650	16.5	TS51221
		1.000	25.4	TS51223

We recommend using sealer 6020 on external thread of insert for added strength.

Bold text are insert lengths supplied in kits.

Metric				
Kit		Insert Length		Insert Part
Size	Part No.	Inches	MM	
M5X0.8	TS5508	.300	7.6	TS55081
		.394	10.0	TS55083
M6X1.0	TS5610	.370	9.4	TS56101
		.470	12.0	TS56103
M7X1.0	TS5710	.394	10.0	TS57101
		.800	20.0	TS57107
M8x1.0	TS5810	.460	11.7	TS58101
M8X1.25	TS5812	.460	11.7	TS58121
		.640	16.2	TS58123
		.708	18.0	TS58125
M10X1.0	TS5011	.360	9.0	TS50111
		.600	15.0	TS50113
M10X1.25	TS5012	.550	14.0	TS50121
		.800	20.0	TS50123
		.960	24.5	TS50125
M10X1.5	TS5015	.550	14.0	TS50151
		.800	20.0	TS50153
		.960	24.5	TS50155
M11X1.25 ¹	TS5112D	1.180	30.0	TS51125
M12X1.25	TS5212	.360	9.0	TS52120
		.600	15.0	TS52121
		.689	17.5	TS52122
		.950	24.0	TS52123
		1.180	30.0	TS52125
M12X1.5	TS5215	.360	9.2	TS52150
		.640	16.2	TS52151
		.950	24.0	TS52153
		1.180	30.0	TS52155
M12X1.75	TS5217	.472	12.0	TS52170
		.640	16.2	TS52171
		.950	24.0	TS52173
		1.180	30.0	TS52175

1. Not for Deep Holes

BIG-SERT SPARK PLUG KITS

M14X1.25 Spark Plug Repair Kits & Inserts.

Repair Oversized holes as large as .660 inches or 16.8 mm



Part No. **TS5141S**



Part No. **TS5141E**

TS5141S & TS5141E Kits “DO NOT” include inserts.

SPARK PLUG INSERTS

Washer Seat		
Part No.	Inches	MM
TS51401	.370	9.4
TS51403	.430	11.0
TS51405	.600	15.0
TS51407	.660	16.8
TS51409	.905	23.0

Taper Seat		
Part No.	Inches	MM
TS51453	.430	11.0
TS51455	.600	15.0
TS51457	.660	16.8
TS51459 ¹	.660	16.8
TS51460 ²	.950	24.0

- 1) Ford Triton
2) Ford Z-tech



FORD TRITON KIT



Part No. **TS5553**

Includes (5) inserts

Part No. **TS5600**

(not recommended for virgin holes use TS5553 Kit)

Ford Triple Oversized Spark Plug Kit
M14X1.25 Repair holes from 17mm to
18.5mm or (.670 in) to (.730 in).

Part No. **TS5588**

“Add On Kit”

Ford Triple Oversized Reducer to M14X1.25

This is a special kit that is used in conjunction with **(TS5553 or TS5141E)**
You must have 1 of these kits above to use this addon repair.

The kit will repair holes as large as .730 inches by installing a special
oversized insert that will accept our 3/4 reach M14X1.25 BIG-SERT
inserts TS51459, TS51407 or TS51457

UNIVERSAL HEAD BOLT KITS

Universal head bolt kits can be used in any application of bolt size listed right. A simple tool setup is all that is required.

Universal Head Bolt				
Thread Size	Kit Part No.	Insert Part No.	Insert Quantity	Insert Length
M10X1.25	TS6250BS	TS50125	(10/PKG)	25mm
M10X1.5	TS7580BS	TS50155	(10/PKG)	24.5mm
M11X1.25	TS11125BS	TS51125	(10/PKG)	28mm
M11X1.5	TS2200BS	TSJ-42385-507BS	(10/PKG)	30mm
M11X2.0	TS3700BS	TS37004	(10/PKG)	30mm
M12X1.25	TS4700BS	TS52125	(10/PKG)	30mm
M12X1.5	TS4800BS	TS52155	(10/PKG)	30mm
M12X1.75	TS4900BS	TS52175	(10/PKG)	30mm

TAP GUIDES



Tap guides insure that the threads are square to the surface of hole.

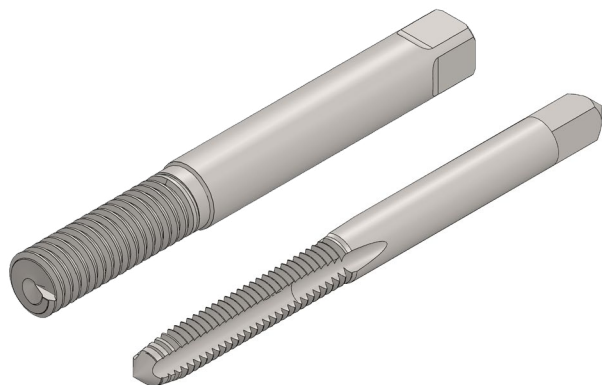
Inch Tap Guide	
Size	Part No.
1/4-20	TS75405
1/4-28	TS75405
5/16-18	TS75515
5/16-24	TS75515
3/8-16	TS75315
3/8-24	TS75315
7/16-14	TS57655
7/16-20	TS57655
1/2-13	TS75115
1/2-20	TS75115

Metric Tap Guide	
Size	Part No.
M6X1.0	TS75605
M8X1.25	TS75825
M10X1.0	TS75025
M10X1.5	TS75025
M10X1.25	TS75025
M12X1.5	TS75255
M12X1.25	TS75255
M12X1.75	TS75255



WWW.KATOFASTENING.COM

KATOpedia is the most comprehensive online encyclopedia on helical coil screw thread inserts. The KATO website has always contained more information on helical coil screw thread inserts than any other website in existence!



Instructions

Now you can view, read, and/or print any of our tooling instructions from our website. Stay up to date on all the latest information and procedures for installing Tangless or tanged inserts, setting and using installation tools, and learning important tips for tool maintenance and care!



Video Workshop

The KATO instructional videos have already helped thousands of customers learn how to setup and use their KATO tools, but we've made them even better. The Video Workshop contains instructional videos on the latest KATO tools. All of the videos were shot in HD for exceptional clarity. The videos are short, easy to follow, and excellent for training purposes!

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