



RECOIL®

2013



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Standard Kits	Inch
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Recoil Tapper System	Inch
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Introduction

Alcoa Fastening Systems' (AFS) Recoil manufacturing operations are located in Australia, with sales and warehouse facilities strategically located in North America, Asia, and Europe. Extensive worldwide distribution, coupled with the company's manufacturing strategy, offers significant advantages to end users.

Alcoa Fastening Systems ensures a global consistency of quality design standards in manufacturing the full range of wire thread inserts in one production facility. Users around the world can be assured of high standards and the consistency of all AFS products. Inserts are manufactured in standard sizes for all metric and inch thread forms. A comprehensive design facility is available to ensure that non-standard inserts can be manufactured for special part requirements.

Prompt availability of products to customers worldwide is ensured by an efficient international freight service and a network of stocking distributors. Alcoa Fastening Systems is committed to the highest quality products and operating systems and employs a strict quality management system in accordance with:

- AS9100 accreditation
- ISO9001 accreditation
- TS16949 accreditation
- ADS
- TS157 approval
- ISO14001 Environmental Systems

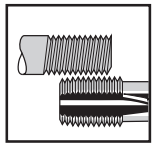
Alcoa Fastening Systems will provide technical assistance to production engineers so that optimum installation efficiency can be achieved and maintained. Recoil brand coils are available to the following international and customer standards:

- NASM122076 Series - Free Running - UNC
- NASM21209 Series – Locking UNC and UNF
- BS7751 - Metric - Coarse
- BS7753
- MA3279,MA3280,MA3281 - Metric - Free Running
- AS6733 Series - UNF - Unplated
- AGS3600 Series - UNF - Cad. Plated - Self Locking
- General Electric - C981, N926 Series, N913
- DIN8140
- NASM124651 Series - Free Running - UNF
- NASM8846
- BS7752 - Metric - Fine
- BS4377
- MA3329,MA3330,MA3331 - Metric - Self Locking
- AS8455 Series - UNF - Cadmium Plated
- AGS3700 Series - Nimonic Alloy 90 - Self Locking
- LN9499, LN9039
- BACI12AE - Boeing

How to install Recoil inserts.



1. **DRILL:** Drill to clear out the damaged thread with drill size as specified on kit (if necessary).



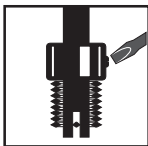
2. **CHECK:** Ensure tap thread matches bolt.



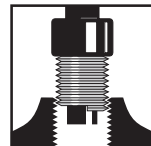
3. **TAP:** Place tap into tap wrench or use the square drive in the installation tool if provided. (Square drive tool only suitable for tapping non-ferrous alloys.)



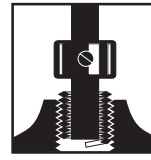
3a. **TAP HOLE:** Tap hole to the required depth using correct procedures (if unsure contact your dealer).



4. **SET TOOL:** Place insert on installation tool, positioning the adjustable top so that the insert tang is centered in the tang slot.



5. **INSTALL:** Wind insert in with light downward pressure until 1/4 to 1/2 turn below the surface.



6. **TANG REMOVAL:** Do not attempt to twist tang off with tool. Lift tool from tang, turn tool 90° and tap down sharply. Use Tang Break Tool where supplied. For sparkplug and large fine thread inserts, use long nose pliers to pull tang out.

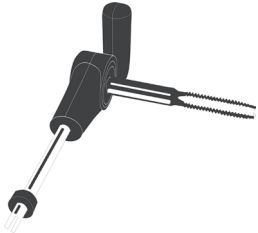
Thread Repair Kits Metric

Kit includes:

- High Speed Steel Drill
- HSS STI Tap
- Combination Tap and Installation Tool*
- Magnetic Tang Removal Tool
- Quantity of Inserts
- Easy to follow instructions
- All contained in a quality case



The Recoil Trade Series Kit includes only the best quality HSS taps which make them suitable for aluminium, magnesium, cast iron and most machinable steels. Everything you need for complete thread repair in one handy case.



Includes (sizes up to and including M12, 1/2")

1. New combo tap and installation tool
2. Magnetic Tang Break Tool (for easy tang removal in blind holes)
3. H.S.S. Drill

Thread Size	Metric Coarse 35000+ Part No.		Metric Medium 37000+ Part No.		Metric Extra Fine 38000+ Part No.		Inserts per Kit
M2 - 0.4	35028	*					15
M2.2 - 0.45	35018	*					15
M2.5 - 0.45	35258	*					15
M3 - 0.5	35038	*					15
M3.5 - 0.6	35358	*					15
M4 - 0.7	35048	*					15
M5 - 0.8	35058	*					15
M6 - 1	35068	*					15
M7 - 1	35078	*					15
M8 - 1			37088	*			15
M8 - 1.25	35088	*					15
M9 - 1			37098	*			15
M9 - 1.25	35098						15
M10 - 1					38108	*	15
M10 - 1.25			37108	*			10
M10 - 1.5	35108	*					10
M11 - 1					38118	*	10
M11 - 1.25			37118	*			10
M11 - 1.5	35118	*					10
M12 - 1					38120-1	*	10
M12 - 1.25					38128	*	10
M12 - 1.5			37128	*			10
M12 - 1.75	35128	*					10
M13 - 1.5			37138				6
M13 - 1.75	35138						6
M13 - 1.25					38138		6
M14 - 1.5			37148				6
M14 - 2	35148						6
M14 - 1.25					38148-1		6
M15 - 1.5			37158				6
M15 - 2	35158						6

* Drill and magnetic tangbreak tool included

Thread Repair Kits Metric

Thread Size	Metric Coarse 35000+ Part No.	Metric Medium 37000+ Part No.	Metric Extra Fine 38000+ Part No.	Inserts per Kit
M16 - 1.5		37168		6
M16 - 2	35168			6
M18 - 1.5			38188-1	6
M18 - 2		37188		6
M18 - 2.5	35188			6
M20 - 1.5			38208	6
M20 - 2		37208		6
M20 - 2.5	35208			6
M22 - 1.5			38220	5
M22 - 2		37220		5
M22 - 2.5	35220			5
M24 - 1.5			38240	5
M24 - 2		37240		5
M24 - 3	35240			5
M26 - 1.5			38260	5
M27 - 1.5			38270	5
M27 - 2		37270		5
M27 - 3	35270			5
M30 - 1.5			38300	5
M30 - 2		37300		5
M30 - 3	35300-3			5
M30 - 3.5	35300			5
M33 - 2		37330		5
M33 - 3.5	35330			5
M36 - 1.5			38360	4
M36 - 3		37360		4
M36 - 4	35360			4
M39 - 2			38390	4
M39 - 3		37390		4
M39 - 4	35390			4
M42 - 2			38420	4
M42 - 3		37420		4
M42 - 4.5	35420			4
M42 - 4	35420-4			4
M45 - 4.5	35450			4

Left Hand Threads Kits		
Thread Size	Part No.	Inserts per Kit
M6 - 1	35068LH	15
M8 - 1.25	35088LH	15
M10 - 1.5	35108LH	10
M12 - 1.75	35128LH	5

Pilot Nose Taps Kits		
Thread Size	Part No.	Inserts per Kit
M6 - 1	35063	15
M8 - 1.25	35083	15
M10 - 1.5	35103	10
M10 - 1.25	37103	10
M12 - 1.75	35123	10

* Drill and magnetic tangbreak tool included



Thread Repair Kits Inch

Thread Size	UNC 33000+		UNF 34000+		Inserts per Kit
	Part No.	*	Part No.	*	
#2 - 56	33528	*			15
#3 - 48	33538	*			15
#3 - 56			34538	*	15
#4 - 40	33548	*			15
#4 - 48			34548	*	15
#5 - 40	33558	*			15
#6 - 32	33568	*			15
#6 - 40			34568	*	15
#8 - 32	33588	*			15
#8 - 36			34588	*	15
#10 - 24	33608	*			15
#10 - 32			34608	*	15
#12 - 24	33628	*			15
#12 - 28			34628	*	15
1/4 - 20	33048	*			15
1/4 - 28			34048	*	15
5/16 - 18	33058	*			15
5/16 - 24			34058	*	15
3/8 - 16	33068	*			10
3/8 - 24			34068	*	10
7/16 - 14	33078	*			10
7/16 - 20			34078	*	10
1/2 - 13	33088	*			10
1/2 - 20			34088	*	10
9/16 - 12	33098				6
9/16 - 18			34098		6
5/8 - 11	33108				6
5/8 - 18			34108		6
11/16 - 11	33110				5
3/4 - 16			34128		5
3/4 - 10	33128				5
7/8 - 14			34140		5
7/8 - 9	33140				5
1" - 12			34160		5
1" - 8	33160				5
1" - 14			34160-14		5
1 1/8 - 7	33180				5
1 1/8 - 12			34180		5
1 1/4 - 7	33200				5
1 1/4 - 12			34200		5
1 3/8 - 6	33220				5
1 3/8 - 12			34220		5
1 1/2 - 6	33240				4
1 1/2 - 12			34240		4

* Drill and magnetic tangbreak tool included



Thread Repair Kits Inch

BSW 32000+

Size	Part No.		Inserts per Kit
1/8 - 40	32028	*	15
3/16 - 24	32038	*	15
1/4 - 20	32048	*	15
5/16 - 18	32058	*	15
3/8 - 16	32068	*	10
7/16 - 14	32078	*	10
1/2 - 12	32088	*	10
9/16 - 12	32098		6
5/8 - 11	32108		6
3/4 - 10	32128		6
7/8 - 9	32140		6
1" - 8	32160		5
1 1/8 - 7	32180		5
1 1/4 - 7	32200		5
1 3/8 - 6	32220		5
1 1/2 - 6	32240		5

BSP 31000+

Size	Part No.		Inserts per Kit
1/8 - 28	31028	*	10
1/4 - 19	31048		10
3/8 - 19	31068		6
1/2 - 14	31080		5
5/8 - 14	31100		5
3/4 - 14	31120		5
1" - 11	31160		5

SPECIALS UNEF

Size	Part No.		Inserts per Kit
1/4 - 32	34040-32		10
7/16 - 24	34070-24		10
9/16 - 20	34090-20		5

* Drill and magnetic tangbreak tool included

BSF 30000+

Size	Part No.		Inserts per Kit
3/16 - 32	30038	*	15
1/4 - 26	30048	*	15
5/16 - 22	30058	*	15
3/8 - 20	30068	*	10
7/16 - 18	30078	*	10
1/2 - 16	30080	*	10
9/16 - 16	30090		6
5/8 - 14	30100		6
3/4 - 12	30120		6
7/8 - 11	30140		5
1" - 10	30160		5
1 1/4 - 9	30200		5

BA 30500+

Size	Part No.		Inserts per Kit
0 BA	30508	*	15
2 BA	30528	*	15
4 BA	30548	*	15
6 BA	30568	*	15

8 TPI UN 36180+

Size	Part No.		Inserts per Kit
1 1/8 - 8	36180		5
1 1/4 - 8	36200		5
1 3/8 - 8	36220		5
1 1/2 - 8	36240		4
1 5/8 - 8	36260		4
1 3/4 - 8	36280		4
1 7/8 - 8	36300		4
2" - 8	36320		4

CUMMINS-HEAD BOLT

Size	Part No.		Inserts per Kit
11/16 - 11	34110-16		10

BSC / BRASS 36000+

Size	Part No.		Inserts per Kit
5/16 - 26	36508	*	15
3/8 - 26	36608	*	10
7/16 - 26	36708	*	5
1/2 - 26	36808	*	5

NPT 36000+

Size	Part No.		Inserts per Kit
1/8 - 27	36028		10
1/4 - 18	36048		10
3/8 - 18	36068		6
1/2 - 14	36080		5
3/4 - 14	36128		5
1 - 11 1/2	36160		5

LEFT HAND THREAD KITS

Size	Part No.		Inserts per Kit
1/4 - 20	33048LH	*	15
5/16 - 18	33058LH	*	15
3/8 - 16	33068LH	*	10
7/16 - 14	33078LH	*	5
1/2 - 13	33088LH	*	5

HARLEY

Size	Part No.		Inserts per Kit
1/4 - 24	34048-24		10
7/16 - 16	34078-16		5

CARBURETTOR

Size	Part No.		Inserts per Kit
7/8 - 20	34140-20		5
1" - 20	34160-20		5
7/8 - 12	34140-12		5



Sparkplug/Plugsaver Kits

For Thread Strengthening or Repair



SPARKPLUG 38000+	TRADE SERIES KIT Part No.	STD KIT Part No.	Description	Inserts per Kit
M10 - 1	38108-2		Contains 10 x M10-1 x 1.5D inserts & includes Hand Tool, Pilot Nose Tap and Magnetic Tangbreak Tool	10
M12 - 1.25	38120-2		Contains 5 x M12-1.25 x 1D, and 1.5D inserts & includes Hand Tool, Pilot Nose Tool and Magnetic Tangbreak Tool	10
M14 - 1.25		38140	Contains 5 x 3/4", and 3/8" Sparkplug inserts & includes extracting tool in large tin	10
M14 - 1.25	38148-2		Contains 5 x 3/4", and 3/8" Sparkplug inserts	10
M18 - 1.5	38188		NB: Spark Plug kits contain pilot nose taps	4
SPARKPLUG METRIC M14 - 1.25		38147	Contains 3 x 8.4, 3 x 12.4 & 3 x 16.4mm inserts	4
EXHAUST ANALYSIS KIT		38188-1X	NB: This kit contains high temperature Inconel Inserts	5

Sparkplug kits contain a Pilot nose Tap.
No drilling is required.

PLUGSAVER 38000+ - An alternative method of thread repair for standard and taper seat plugs, using Thinwall inserts.

Part No.	Description
38148	COMPLETE REPAIR KIT CONTAINS: 1 x 98146 - Expander, 1 x 98145 - Pilot Nose Tap 2 x 98142 - Plugsaver M14 - 1.25 x 9.5mm long 2 x 98143 - Plugsaver M14 - 1.25 x 12.7mm long 2 x 98144 - Plugsaver M14 - 1.25 x 19mm long
98142RP	Short Reach Insert (PKT OF 5) 9.5mm
98143RP	Medium Reach Insert (PKT OF 5) 12.7mm
98144RP	Long Reach Insert (PKT OF 5) 19mm
98145	Pilot Nose Tap
98146	Expanding Tool
98147RP	2 x 3/8", 2 x 1/2", 2 x 3/4" Inserts
98140T	F250 Kit



Range Kits

Recoil range kits contain a selection of Recoils most popular sizes. It provides you with an all in one workshop solution for Multi Diameter thread repairs. It's ideal for garages and other workshops where thread repairs are often undertaken.

Standard Kit Content*

- High speed steel (HSS) intermediate STI taps
- Quantity of inserts 1.5D length
- New Combo Tap Drive and Installation Tool*
- New Magnetic Tang Break Tool*
- Drill-bit*

* Kit contents differ depending on thread form and diameters



POPULAR SIZES			
Thread/Type	Part No.	Includes	Sizes per Kit
UNC	33004R	1/4, 5/16, 3/8, 7/16, 1/2	5
UNF	34004R	1/4, 5/16, 3/8, 7/16, 1/2	5
METRIC	35003R	M4, 5, 6, 8-1.25,10-1.5	5
METRIC	35004R	M5, 6, 8-1.25,10-1.5,12-1.75	5
METRIC	35005R	M6, 8-1.25,10-1.5,12-1.75,16-2	5

INCH			
Thread/Type	Part No.	Includes	Sizes per Kit
BSF	30004R	1/4, 5/16, 3/8, 7/16, 1/2	5
BSP	31004R	1/8, 1/4, 3/8	3
BSW	32004R	1/4, 5/16, 3/8, 7/16, 1/2	5
UNC	33002R	4-40, 6-32, 8-32, 10-24UNC & 10-32UNF	5
BSC/BRASS	36001R	1/4, 5/16, 3/8, 7/16, 1/2	5
NPT	36004R	1/8, 1/4, 3/8, 1/2	4

INCH - MINI RANGE KIT				
Thread/Type	Part No.	Includes	Price per Kit	Sizes per Kit
UNC	33001	1/4, 5/16, 3/8		3
HARLEY	34008	1/4-24 & 7/16-16 Harley, 3/8-20 BSF		3
UNF	34001	1/4, 5/16, 3/8		3

METRIC			
Thread/Type	Part No.	Includes	Sizes per Kit
METRIC	33005R	M6, 8-1.25, 10-1.5, 12-1.75, 14-1.25PN	5
METRIC	33007R	M4, 5, 6, 8-1.25	4
FINE	37000R	M8-1,10-1,10-1.25,12-1.25,12-1.5	5
METRIC	37003R	M6, 8-1.25, 10-1.5, 12-1.75, 14-2	5
METRIC	37004R	M4, 6, 8-1.25, 10-1.5, 12-1.75	5
M/CYCLE	38006R	M6, 8-1.25, 10-1.25, 12-1.25PN, 14-1.25PN	5
OPE	38007R	M5, 6, 8-1.25, 14-1.25PN, 1/4-20	5

BICYCLE CRANK & DERAILER			
Thread/Type	Part No.	Includes	Sizes per Kit
CRANK KIT	34096-20	1 EACH - LEFT & RIGHT HAND	2
		5 - 9/16-20X1/2" LEFT HAND INSERTS	
		5 - 9/16-20X1/2" RIGHT HAND INSERTS	
		1 - INSTALLATION TOOL	
DERAILLEUR KIT	38102	THREAD KIT M10-1 x 6.8mm	1
BICYCLE RANGE	34005	9/16-20 RH & LH, M10-1 x 6.8mm Derailleur	3

Replacement Insert Packets for Kits and Merchandiser - Metric

Most inserts in replacement packets are 1.5 x Diameter. For example - M6 is 9mm Long, 1/4" is 3/8" long.

Metric Coarse 25000+				Metric Medium 27000+				Metric Extra Fine 28000+			
Thread Size	Part No.	Ins/ Pkt	/	Thread Size	Part No.	Ins/ Pkt	/	Thread Size	Part No.	Ins/ Pkt	/
M2 - 0.4 x 1D	25022	10									
M2 - 0.4 x 1.5D	25023	10									
M2 - 0.4 x 2D	25024	10									
M2.2 - 0.45 x 1.5D	25013	10									
M2.5 - 0.45 x 1D	25252	10									
M2.5 - 0.45 x 1.5D	25253	10									
M2.5 - 0.45 x 2D	25254	10									
M3 - 0.5 x 1D	25032	10									
M3 - 0.5 x 1.5D	25033	10									
M3 - 0.5 x 2D	25034	10									
M3.5 - 0.6 x 1.5D	25353	10									
M4 - 0.7 x 1D	25042	10									
M4 - 0.7 x 1.5D	25043	10									
M4 - 0.7 x 2D	25044	10									
M5 - 0.8 x 1D	25052	10									
M5 - 0.8 x 1.5D	25053	10									
M5 - 0.8 x 2D	25054	10									
M6 - 1 x 1D	25062	10									
M6 - 1 x 1.5D	25063	10									
M6 - 1 x 2D	25064	10									
M6 - 1.0 x 2.5D	25065	10									
M7 - 1 x 1.D	25072	10									
M7 - 1 x 1.5D	25073	10									
M7 - 1 x 2.D	25074	10									
M8 - 1.25 x 1D	25082	10		M8 - 1 x 1D	27082	10					
M8 - 1.25 x 1.5D	25083	10		M8 - 1 x 1.5D	27083	10					
M8 - 1.25 x 2D	25084	10		M8 - 1 x 2.D	27084	10					
M8 - 1.25 x 2.5D	25085	10									
M9 - 1.25 x 1.5D	25093	10		M9 - 1 x 1.5D	27093	10					
M10 - 1.5 x 1D	25102	10		M10 - 1.25 x 1D	27102	10		M10 - 1 x 1D	28102	10	
M10 - 1.5 x 1.5D	25103	10		M10 - 1.25 x 1.5D	27103	10		M10 - 1 x 1.5D	28103	10	
M10 - 1.5 x 2D	25104	10		M10 - 1.25 x 2D	27104	10		M10 - 1 x 2D	28104	10	
M10 - 1.5 x 2.5D	25105	10		M10 - 1.25 x 3D	27106	10					
M11 - 1.5 x 1D	25112	10		M11 - 1.25 x 1.5D	27113	10		M11 - 1 x 1.5D	28113	10	
M11 - 1.5 x 1.5D	25113	10									
M12 - 1.75 x 1D	25122	10		M12 - 1.5 x 1D	27122	10		M12 - 1.25 x 1D	28122	10	
M12 - 1.75 x 1.5D	25123	10		M12 - 1.5 x 1.5D	27123	10		M12 - 1.25 x 1.5D	28123	10	
M12 - 1.75 x 2D	25124	10		M12 - 1.5 x 2D	27124	10		M12 - 1.25 x 2D	28124	10	
M13 - 1.75 x 1.5D	25133	5		M13 - 1.5 x 1.5D	27133	5		M13 - 1.25 x 1.5D	28133	10	
M14 - 2 x 1D	25142	5		M14 - 1.5 x 1.5D	27143	5					
M14 - 2 x 1.5D	25143	5		M14 - 1.5 x 2D	27144	5					
M14 - 2 x 2D	25144	5									
M15 - 2 x 1.5D	25153	5		M15 - 1.5 x 1.5D	27153	5					
M16 - 2 x 1D	25162	5		M16 - 1.5 x 1D	27162	5					
M16 - 2 x 1.5D	25163	5		M16 - 1.5 x 1.5D	27163	5					
M16 - 2 x 2D	25164	5		M16 - 1.5 x 2.5D	27165	5					
M16 - 2 x 2.5D	25165	5									
M18 - 2.5 x 1D	25182	5									
M18 - 2.5 x 1.5D	25183	5		M18 - 2 x 1.5D	27183	5		M18 - 1.5 x 1.5D	28183	5	
M20 - 2.5 x 1.5D	25203	5		M20 - 2 x 1.5D	27203	5		M20 - 1.5 x 1.5D	28203	5	
M22 - 2.5 x 1.5D	25223	3		M22 - 2 x 1.5D	27223	3		M22 - 1.5 x 1.5D	28223	3	
M24 - 3 x 1.5D	25243	3		M24 - 2 x 1.5D	27243	3		M24 - 1.5 x 1.5D	28243	3	
M30 - 3.5 x 1.5D	25303	1						M26 - 1.5 x 1.5D	28263	1	

Replacement Insert Packets for Kits and Merchandiser - Inch

Most inserts in replacement packets are 1.5 x Diameter. For example - M6 is 9mm Long, 1/4" is 3/8" long.

UNC 23000+			
Thread Size	Part No.	Ins/Pkt	
#2 - 56 x 1D	23522	10	
#2 - 56 x 1.5D	23523	10	
#3 - 48 x 1.5D	23533	10	
#4 - 40 x 1D	23542	10	
#4 - 40 x 1.5D	23543	10	
#4 - 40 x 2D	23544	10	
#5 - 40 x 1D	23552	10	
#5 - 40 x 1.5D	23553	10	
#5 - 40 x 2D	23554	10	
#6 - 32 x 1D	23562	10	
#6 - 32 x 1.5D	23563	10	
#6 - 32 x 2D	23564	10	
#8 - 32 x 1D	23582	10	
#8 - 32 x 1.5D	23583	10	
#8 - 32 x 2D	23584	10	
#10 - 24 x 1D	23602	10	
#10 - 24 x 1.5D	23603	10	
#10 - 24 x 2D	23604	10	
#12 - 24 x 1D	23622	10	
#12 - 24 x 1.5D	23623	10	
1/4 - 20 x 1D	23042	10	
1/4 - 20 x 1.5D	23043	10	
1/4 - 20 x 2D	23044	10	
5/16 - 18 x 1D	23052	10	
5/16 - 18 x 1.5D	23053	10	
5/16 - 18 x 2D	23054	10	
3/8 - 16 x 1D	23062	10	
3/8 - 16 x 1.5D	23063	10	
3/8 - 16 x 2D	23064	10	
7/16 - 14 x 1D	23072	10	
7/16 - 14 x 1.5D	23073	10	
7/16 - 14 x 2D	23074	10	
1/2 - 13 x 1D	23082	10	
1/2 - 13 x 1.5D	23083	10	
1/2 - 13 x 2D	23084	10	
9/16 - 12 x 1D	23092	5	
9/16 - 12 x 1.5D	23093	5	
5/8 - 11 x 1D	23102	5	
5/8 - 11 x 1.5D	23103	5	
11/16 - 11 x 1.5D	23113	5	
3/4 - 10 x 1D	23122	5	
3/4 - 10 x 1.5D	23123	5	
7/8 - 9 x 1.5D	23143	3	
1" - 8 x 1.5D	23163	3	
1 1/8 - 7 x 1D	23182	1	
1 1/8 - 7 x 1.5D	23183	1	
1 1/4 - 7 x 1D	23202	1	
1 1/4 - 7 x 1.5D	23203	1	
1 3/8 - 6 x 1.5D	23223	1	
1 1/2 - 6 x 1D	23242	1	
1 1/2 - 6 x 1.5D	23243	1	

UNF 24000+			
Thread Size	Part No.	Ins/Pkt	
#3 - 56 x 1.5D	24533	10	
#4 - 48 x 1.5D	24543	10	
#6 - 40 x 1D	24562	10	
#6 - 40 x 1.5D	24563	10	
#8 - 36 x 1.5D	24583	10	
#10 - 32 x 1D	24602	10	
#10 - 32 x 1.5D	24603	10	
#10 - 32 x 2D	24604	10	
#12 - 28 x 1.5D	24623	10	
1/4 - 28 x 1D	24042	10	
1/4 - 28 x 1.5D	24043	10	
1/4 - 28 x 2D	24044	10	
5/16 - 24 x 1D	24052	10	
5/16 - 24 x 1.5D	24053	10	
5/16 - 24 x 2D	24054	10	
3/8 - 24 x 1D	24062	10	
3/8 - 24 x 1.5D	24063	10	
3/8 - 24 x 2D	24064	10	
7/16 - 20 x 1D	24072	10	
7/16 - 20 x 1.5D	24073	10	
7/16 - 20 x 2D	24074	10	
1/2 - 20 x 1D	24082	10	
1/2 - 20 x 1.5D	24083	10	
1/2 - 20 x 2D	24084	10	
9/16 - 18 x 1D	24092	5	
9/16 - 18 x 1.5D	24093	5	
5/8 - 18 x 1D	24102	5	
5/8 - 18 x 1.5D	24103	5	
3/4 - 16 x 1D	24122	5	
3/4 - 16 x 1.5D	24123	5	
7/8 - 14 x 1.5D	24143	3	
1" - 12 x 1.5D	24163	3	
1 1/8 - 12 x 1D	24182	1	
1 1/8 - 12 x 1.5D	24183	1	
1 1/4 - 12 x 1D	24202	1	
1 1/4 - 12 x 1.5D	24203	1	
1 3/8 - 12 x 1.5D	24223	1	
1 1/2 - 12 x 1D	24242	1	
1 1/2 - 12 x 1.5D	24243	1	



Replacement Insert Packets for Kits and Merchandiser - Inch

Most inserts in replacement packets are 1.5 x Diameter. For example - M6 is 9mm Long, 1/4" is 3/8" long.

BSF 20000+		
Thread Size	Part No.	Ins/ Pkt
3/16 - 32 x 1D	20032	10
3/16 - 32 x 1.5D	20033	10
3/16 - 32 x 2D	20034	10
5/16 - 22 x 1.5D	20052	10
5/16 - 22 x 1D	20053	10
5/16 - 22 x 2D	20054	10
3/8 - 20 x 1D	20062	10
3/8 - 20 x 1.5D	20063	10
3/8 - 20 x 2D	20064	10
7/16 - 18 x 1D	20072	10
7/16 - 18 x 1.5D	20073	10
7/16 - 18 x 2D	20074	10
1/2 - 16 x 1D	20082	10
1/2 - 16 x 1.5D	20083	10
1/2 - 16 x 2D	20084	10
9/16 - 16 x 1.5D	20093	5
5/8 - 14 x 1.5D	20103	5
3/4 - 12 x 1.5D	20123	5
7/8 - 11 x 1.5D	20143	3
1" - 10 x 1.5D	20163	3

BA 20500+		
Thread Size	Part No.	Ins/ Pkt
0BA x 1.5D	20503	10
2BA x 1.5D	20523	10
4BA x 1.5D	20543	10
6BA x 1.5D	20563	10

SPARKPLUG 28000+		
Thread Size	Part No.	Ins/ Pkt
M10 - 1 x 1D	28102	10
M10 - 1 x 1.5D	28103	10
M10 - 1 x 2D	28104	10
M10 - 1 x 6.8mm	28107	10
M10 - 1 x .339"	28108	10
M10 - 1 x 1/2"	28109	10
M14 - 1.25 x 3/4"	28140	10
M14 - 1.25 x 7/16"	28147	10
M14 - 1.25 x 3/8"	28148	10
M14 - 1.25 x 1/2"	28149	10
M18 - 1.5 x 1/2"	28189	5

BSP 21000+		
Thread Size	Part No.	Ins/ Pkt
1/8 - 28 x 1D	21022	10
1/8 - 28 x 1.5D	21023	10
1/8 - 28 x 12D	21024	10
1/4 - 19 x 1D	21042	10
1/4 - 19 x 1.5D	21043	10
1/4 - 19 x 2D	21044	10
3/8 - 19 x 1D	21062	10
3/8 - 19 x 1.5D	21063	10
3/8 - 19 x 2D	21064	10
1/2 - 14 x 1.5D	21082	5
1/2 - 14 x 1.5D	21083	5
1/2 - 14 x 1.5D	21084	5
3/4 - 14 x 1.5D	21123	5
1" - 11 x 1.5D	21163	3

NPT 26000+		
Thread Size	Part No.	Ins/ Pkt
1/8 - 27 x 1.5D	26023	10
1/4 - 18 x 1.5D	26043	10
3/8 - 18 x .407D	26063	10
1/2 - 14 x 1.5D	26083	5
3/4 - 14 x .553D	26123	5
1 - 11 1/2 x 1.65D	26163	3

BICYCLE DERAILLEUR KIT		
Thread Size	Part No.	Ins/ Pkt
M10 - 1 x 6.8mm	28107	10

BICYCLE CRANK KIT		
Thread Size	Part No.	Ins/ Pkt
9/16 - 20 x 1/2	24090-20	10
9/16 - 20 x 1/2	24090-20LH	10

BSW 22000+		
Thread Size	Part No.	Ins/ Pkt
1/8 - 40 x 1.5D	22023	10
3/16 - 24 x 1.5D	22033	10
1/4 - 20 x 1.5D	22043	10
5/16 - 18 x 1.5D	22053	10
3/8 - 16 x 1.5D	22063	10
7/16 - 14 x 1.5D	22073	10
1/2 - 12 x 1D	22082	10
1/2 - 12 x 1.5D	22083	10
1/2 - 12 x 2D	22084	10
9/16 - 12 x 1.5D	22093	5
5/8 - 11 x 1.5D	22103	5
3/4 - 10 x 1.5D	22123	5
7/8 - 9 x 1.5D	22143	3
1" - 8 x 1.5D	22163	3

BSC 26500+		
Thread Size	Part No.	Ins/ Pkt
5/16 - 26 x 1.5D	26503	10
3/8 - 26 x 1.5D	26603	10
7/16 - 26 x 1.5D	26703	10
1/2 - 26 x 1.5D	26803	10

EXHAUST ANALYSIS 28000+			
Thread Size	Part No.	Length	Ins/ Pkt
M18 - 1.5	28181X	9mm	5

NB: This pkt contains 5 high temperature Inconel Inserts



Replacement Insert Packets for Kits and Merchandiser - Metric

Most inserts in replacement packets are 1.5 x Diameter. For example - M6 is 9mm Long, 1/4" is 3/8" long.

Metric Coarse 25000+				Metric Medium 27000+				Metric Extra Fine 28000+			
Thread Size	Part No.	Ins/ Pkt	/	Thread Size	Part No.	Ins/ Pkt	/	Thread Size	Part No.	Ins/ Pkt	/
M2 - 0.4 x 1D	25022	10									
M2 - 0.4 x 1.5D	25023	10									
M2 - 0.4 x 2D	25024	10									
M2.2 - 0.45 x 1.5D	25013	10									
M2.5 - 0.45 x 1D	25252	10									
M2.5 - 0.45 x 1.5D	25253	10									
M2.5 - 0.45 x 2D	25254	10									
M3 - 0.5 x 1D	25032	10									
M3 - 0.5 x 1.5D	25033	10									
M3 - 0.5 x 2D	25034	10									
M3.5 - 0.6 x 1.5D	25353	10									
M4 - 0.7 x 1D	25042	10									
M4 - 0.7 x 1.5D	25043	10									
M4 - 0.7 x 2D	25044	10									
M5 - 0.8 x 1D	25052	10									
M5 - 0.8 x 1.5D	25053	10									
M5 - 0.8 x 2D	25054	10									
M6 - 1 x 1D	25062	10									
M6 - 1 x 1.5D	25063	10									
M6 - 1 x 2D	25064	10									
M6 - 1.0 x 2.5D	25065	10									
M7 - 1 x 1.D	25072	10									
M7 - 1 x 1.5D	25073	10									
M7 - 1 x 2.D	25074	10									
M8 - 1.25 x 1D	25082	10		M8 - 1 x 1D	27082	10					
M8 - 1.25 x 1.5D	25083	10		M8 - 1 x 1.5D	27083	10					
M8 - 1.25 x 2D	25084	10		M8 - 1 x 2.D	27084	10					
M8 - 1.25 x 2.5D	25085	10									
M9 - 1.25 x 1.5D	25093	10		M9 - 1 x 1.5D	27093	10					
M10 - 1.5 x 1D	25102	10		M10 - 1.25 x 1D	27102	10		M10 - 1 x 1D	28102	10	
M10 - 1.5 x 1.5D	25103	10		M10 - 1.25 x 1.5D	27103	10		M10 - 1 x 1.5D	28103	10	
M10 - 1.5 x 2D	25104	10		M10 - 1.25 x 2D	27104	10		M10 - 1 x 2D	28104	10	
M10 - 1.5 x 2.5D	25105	10		M10 - 1.25 x 3D	27106	10					
M11 - 1.5 x 1D	25112	10		M11 - 1.25 x 1.5D	27113	10		M11 - 1 x 1.5D	28113	10	
M11 - 1.5 x 1.5D	25113	10									
M12 - 1.75 x 1D	25122	10		M12 - 1.5 x 1D	27122	10		M12 - 1.25 x 1D	28122	10	
M12 - 1.75 x 1.5D	25123	10		M12 - 1.5 x 1.5D	27123	10		M12 - 1.25 x 1.5D	28123	10	
M12 - 1.75 x 2D	25124	10		M12 - 1.5 x 2D	27124	10		M12 - 1.25 x 2D	28124	10	
M13 - 1.75 x 1.5D	25133	5		M13 - 1.5 x 1.5D	27133	5		M13 - 1.25 x 1.5D	28133	10	
M14 - 2 x 1D	25142	5		M14 - 1.5 x 1.5D	27143	5					
M14 - 2 x 1.5D	25143	5		M14 - 1.5 x 2D	27144	5					
M14 - 2 x 2D	25144	5									
M15 - 2 x 1.5D	25153	5		M15 - 1.5 x 1.5D	27153	5					
M16 - 2 x 1D	25162	5		M16 - 1.5 x 1D	27162	5					
M16 - 2 x 1.5D	25163	5		M16 - 1.5 x 1.5D	27163	5					
M16 - 2 x 2D	25164	5		M16 - 1.5 x 2.5D	27165	5					
M16 - 2 x 2.5D	25165	5									
M18 - 2.5 x 1D	25182	5									
M18 - 2.5 x 1.5D	25183	5		M18 - 2 x 1.5D	27183	5		M18 - 1.5 x 1.5D	28183	5	
M20 - 2.5 x 1.5D	25203	5		M20 - 2 x 1.5D	27203	5		M20 - 1.5 x 1.5D	28203	5	
M22 - 2.5 x 1.5D	25223	3		M22 - 2 x 1.5D	27223	3		M22 - 1.5 x 1.5D	28223	3	
M24 - 3 x 1.5D	25243	3		M24 - 2 x 1.5D	27243	3		M24 - 1.5 x 1.5D	28243	3	
M30 - 3.5 x 1.5D	25303	1						M26 - 1.5 x 1.5D	28263	1	

Replacement Insert Packets for Kits and Merchandiser - Inch

Most inserts in replacement packets are 1.5 x Diameter. For example - M6 is 9mm Long, 1/4" is 3/8" long.

UNC 23000+			
Thread Size	Part No.	Ins/Pkt	
#2 - 56 x 1D	23522	10	
#2 - 56 x 1.5D	23523	10	
#3 - 48 x 1.5D	23533	10	
#4 - 40 x 1D	23542	10	
#4 - 40 x 1.5D	23543	10	
#4 - 40 x 2D	23544	10	
#5 - 40 x 1D	23552	10	
#5 - 40 x 1.5D	23553	10	
#5 - 40 x 2D	23554	10	
#6 - 32 x 1D	23562	10	
#6 - 32 x 1.5D	23563	10	
#6 - 32 x 2D	23564	10	
#8 - 32 x 1D	23582	10	
#8 - 32 x 1.5D	23583	10	
#8 - 32 x 2D	23584	10	
#10 - 24 x 1D	23602	10	
#10 - 24 x 1.5D	23603	10	
#10 - 24 x 2D	23604	10	
#12 - 24 x 1D	23622	10	
#12 - 24 x 1.5D	23623	10	
1/4 - 20 x 1D	23042	10	
1/4 - 20 x 1.5D	23043	10	
1/4 - 20 x 2D	23044	10	
5/16 - 18 x 1D	23052	10	
5/16 - 18 x 1.5D	23053	10	
5/16 - 18 x 2D	23054	10	
3/8 - 16 x 1D	23062	10	
3/8 - 16 x 1.5D	23063	10	
3/8 - 16 x 2D	23064	10	
7/16 - 14 x 1D	23072	10	
7/16 - 14 x 1.5D	23073	10	
7/16 - 14 x 2D	23074	10	
1/2 - 13 x 1D	23082	10	
1/2 - 13 x 1.5D	23083	10	
1/2 - 13 x 2D	23084	10	
9/16 - 12 x 1D	23092	5	
9/16 - 12 x 1.5D	23093	5	
5/8 - 11 x 1D	23102	5	
5/8 - 11 x 1.5D	23103	5	
11/16 - 11 x 1.5D	23113	5	
3/4 - 10 x 1D	23122	5	
3/4 - 10 x 1.5D	23123	5	
7/8 - 9 x 1.5D	23143	3	
1" - 8 x 1.5D	23163	3	
1 1/8 - 7 x 1D	23182	1	
1 1/8 - 7 x 1.5D	23183	1	
1 1/4 - 7 x 1D	23202	1	
1 1/4 - 7 x 1.5D	23203	1	
1 3/8 - 6 x 1.5D	23223	1	
1 1/2 - 6 x 1D	23242	1	
1 1/2 - 6 x 1.5D	23243	1	

UNF 24000+			
Thread Size	Part No.	Ins/Pkt	
#3 - 56 x 1.5D	24533	10	
#4 - 48 x 1.5D	24543	10	
#6 - 40 x 1D	24562	10	
#6 - 40 x 1.5D	24563	10	
#8 - 36 x 1.5D	24583	10	
#10 - 32 x 1D	24602	10	
#10 - 32 x 1.5D	24603	10	
#10 - 32 x 2D	24604	10	
#12 - 28 x 1.5D	24623	10	
1/4 - 28 x 1D	24042	10	
1/4 - 28 x 1.5D	24043	10	
1/4 - 28 x 2D	24044	10	
5/16 - 24 x 1D	24052	10	
5/16 - 24 x 1.5D	24053	10	
5/16 - 24 x 2D	24054	10	
3/8 - 24 x 1D	24062	10	
3/8 - 24 x 1.5D	24063	10	
3/8 - 24 x 2D	24064	10	
7/16 - 20 x 1D	24072	10	
7/16 - 20 x 1.5D	24073	10	
7/16 - 20 x 2D	24074	10	
1/2 - 20 x 1D	24082	10	
1/2 - 20 x 1.5D	24083	10	
1/2 - 20 x 2D	24084	10	
9/16 - 18 x 1D	24092	5	
9/16 - 18 x 1.5D	24093	5	
5/8 - 18 x 1D	24102	5	
5/8 - 18 x 1.5D	24103	5	
3/4 - 16 x 1D	24122	5	
3/4 - 16 x 1.5D	24123	5	
7/8 - 14 x 1.5D	24143	3	
1" - 12 x 1.5D	24163	3	
1 1/8 - 12 x 1D	24182	1	
1 1/8 - 12 x 1.5D	24183	1	
1 1/4 - 12 x 1D	24202	1	
1 1/4 - 12 x 1.5D	24203	1	
1 3/8 - 12 x 1.5D	24223	1	
1 1/2 - 12 x 1D	24242	1	
1 1/2 - 12 x 1.5D	24243	1	



Replacement Insert Packets for Kits and Merchandiser - Inch

Most inserts in replacement packets are 1.5 x Diameter. For example - M6 is 9mm Long, 1/4" is 3/8" long.

BSF 20000+		
Thread Size	Part No.	Ins/ Pkt
3/16 - 32 x 1D	20032	10
3/16 - 32 x 1.5D	20033	10
3/16 - 32 x 2D	20034	10
5/16 - 22 x 1.5D	20052	10
5/16 - 22 x 1D	20053	10
5/16 - 22 x 2D	20054	10
3/8 - 20 x 1D	20062	10
3/8 - 20 x 1.5D	20063	10
3/8 - 20 x 2D	20064	10
7/16 - 18 x 1D	20072	10
7/16 - 18 x 1.5D	20073	10
7/16 - 18 x 2D	20074	10
1/2 - 16 x 1D	20082	10
1/2 - 16 x 1.5D	20083	10
1/2 - 16 x 2D	20084	10
9/16 - 16 x 1.5D	20093	5
5/8 - 14 x 1.5D	20103	5
3/4 - 12 x 1.5D	20123	5
7/8 - 11 x 1.5D	20143	3
1" - 10 x 1.5D	20163	3

BA 20500+		
Thread Size	Part No.	Ins/ Pkt
0BA x 1.5D	20503	10
2BA x 1.5D	20523	10
4BA x 1.5D	20543	10
6BA x 1.5D	20563	10

SPARKPLUG 28000+		
Thread Size	Part No.	Ins/ Pkt
M10 - 1 x 1D	28102	10
M10 - 1 x 1.5D	28103	10
M10 - 1 x 2D	28104	10
M10 - 1 x 6.8mm	28107	10
M10 - 1 x .339"	28108	10
M10 - 1 x 1/2"	28109	10
M14 - 1.25 x 3/4"	28140	10
M14 - 1.25 x 7/16"	28147	10
M14 - 1.25 x 3/8"	28148	10
M14 - 1.25 x 1/2"	28149	10
M18 - 1.5 x 1/2"	28189	5

BSP 21000+		
Thread Size	Part No.	Ins/ Pkt
1/8 - 28 x 1D	21022	10
1/8 - 28 x 1.5D	21023	10
1/8 - 28 x 12D	21024	10
1/4 - 19 x 1D	21042	10
1/4 - 19 x 1.5D	21043	10
1/4 - 19 x 2D	21044	10
3/8 - 19 x 1D	21062	10
3/8 - 19 x 1.5D	21063	10
3/8 - 19 x 2D	21064	10
1/2 - 14 x 1.5D	21082	5
1/2 - 14 x 1.5D	21083	5
1/2 - 14 x 1.5D	21084	5
3/4 - 14 x 1.5D	21123	5
1" - 11 x 1.5D	21163	3

NPT 26000+		
Thread Size	Part No.	Ins/ Pkt
1/8 - 27 x 1.5D	26023	10
1/4 - 18 x 1.5D	26043	10
3/8 - 18 x .407D	26063	10
1/2 - 14 x 1.5D	26083	5
3/4 - 14 x .553D	26123	5
1 - 11 1/2 x 1.65D	26163	3

BICYCLE DERAILLEUR KIT		
Thread Size	Part No.	Ins/ Pkt
M10 - 1 x 6.8mm	28107	10

BICYCLE CRANK KIT		
Thread Size	Part No.	Ins/ Pkt
9/16 - 20 x 1/2	24090-20	10
9/16 - 20 x 1/2	24090-20LH	10

BSW 22000+		
Thread Size	Part No.	Ins/ Pkt
1/8 - 40 x 1.5D	22023	10
3/16 - 24 x 1.5D	22033	10
1/4 - 20 x 1.5D	22043	10
5/16 - 18 x 1.5D	22053	10
3/8 - 16 x 1.5D	22063	10
7/16 - 14 x 1.5D	22073	10
1/2 - 12 x 1D	22082	10
1/2 - 12 x 1.5D	22083	10
1/2 - 12 x 2D	22084	10
9/16 - 12 x 1.5D	22093	5
5/8 - 11 x 1.5D	22103	5
3/4 - 10 x 1.5D	22123	5
7/8 - 9 x 1.5D	22143	3
1" - 8 x 1.5D	22163	3

BSC 26500+		
Thread Size	Part No.	Ins/ Pkt
5/16 - 26 x 1.5D	26503	10
3/8 - 26 x 1.5D	26603	10
7/16 - 26 x 1.5D	26703	10
1/2 - 26 x 1.5D	26803	10

EXHAUST ANALYSIS 28000+			
Thread Size	Part No.	Length	Ins/ Pkt
M18 - 1.5	28181X	9mm	5

NB: This pkt contains 5 high temperature Inconel Inserts



Bulk Inserts Free Running - Metric

METRIC COARSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
M2 - 0.4	05022	0.079	2.0	1D		
	05023	0.118	3.0	1.5D		
	05024	0.157	4.0	2D		
	05025 ▲	0.197	5.0	2.5D		
	05026 ▲	0.236	6.0	3D		
M2.2 - 0.45	05012	0.087	2.2	1D		
	05013	0.13	3.3	1.5D		
	05014	0.173	4.4	2D		
	05015 ▲	0.217	5.5	2.5D		
	05016 ▲	0.26	6.6	3D		
M2.5 - 0.45	05252	0.098	2.5	1D		
	05253	0.15	3.8	1.5D		
	05254	0.197	5.0	2D		
	05255	0.248	6.3	2.5D		
	05256	0.295	7.5	3D		
M3 - 0.5	05032	0.118	3.0	1D		
	05033	0.177	4.5	1.5D		
	05034	0.236	6.0	2D		
	05035	0.295	7.5	2.5D		
	05036	0.354	9.0	3D		
M3.5 - 0.6	05352	0.138	3.5	1D		
	05353	0.209	5.3	1.5D		
	05354	0.276	7.0	2D		
	05355 ▲	0.346	8.8	2.5D		
	05356 ▲	0.413	10.5	3D		
M4 - 0.7	05042	0.157	4.0	1D		
	05043	0.236	6.0	1.5D		
	05044	0.315	8.0	2D		
	05045	0.394	10.0	2.5D		
	05046	0.472	12.0	3D		
M5 - 0.8	05052	0.197	5.0	1D		
	05053	0.295	7.5	1.5D		
	05054	0.394	10.0	2D		
	05055	0.492	12.5	2.5D		
	05056	0.591	15.0	3D		
M6 - 1	05062	0.236	6.0	1D		
	05063	0.354	9.0	1.5D		
	05064	0.472	12.0	2D		
	05065	0.591	15.0	2.5D		
	05066	0.709	18.0	3D		
M7 - 1	05072	0.276	7.0	1D		
	05073	0.413	10.5	1.5D		
	05074	0.551	14.0	2D		
	05075	0.689	17.5	2.5D		
	05076	0.827	21.0	3D		
M8 - 1.25	05082	0.945	24.0	1D	M8 - 1	07082
	05083	0.472	12.0	1.5D		07083
	05084	0.63	16.0	2D		07084
	05085	0.787	20.0	2.5D		07085
	05086	0.945	24.0	3D		07086

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Dry film lubing and plating available.

Bulk Inserts Free Running - Metric

METRIC COARSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
M2 - 0.4	05022	0.079	2.0	1D		
	05023	0.118	3.0	1.5D		
	05024	0.157	4.0	2D		
	05025 ▲	0.197	5.0	2.5D		
	05026 ▲	0.236	6.0	3D		
M2.2 - 0.45	05012	0.087	2.2	1D		
	05013	0.13	3.3	1.5D		
	05014	0.173	4.4	2D		
	05015 ▲	0.217	5.5	2.5D		
	05016 ▲	0.26	6.6	3D		
M2.5 - 0.45	05252	0.098	2.5	1D		
	05253	0.15	3.8	1.5D		
	05254	0.197	5.0	2D		
	05255	0.248	6.3	2.5D		
	05256	0.295	7.5	3D		
M3 - 0.5	05032	0.118	3.0	1D		
	05033	0.177	4.5	1.5D		
	05034	0.236	6.0	2D		
	05035	0.295	7.5	2.5D		
	05036	0.354	9.0	3D		
M3.5 - 0.6	05352	0.138	3.5	1D		
	05353	0.209	5.3	1.5D		
	05354	0.276	7.0	2D		
	05355 ▲	0.346	8.8	2.5D		
	05356 ▲	0.413	10.5	3D		
M4 - 0.7	05042	0.157	4.0	1D		
	05043	0.236	6.0	1.5D		
	05044	0.315	8.0	2D		
	05045	0.394	10.0	2.5D		
	05046	0.472	12.0	3D		
M5 - 0.8	05052	0.197	5.0	1D		
	05053	0.295	7.5	1.5D		
	05054	0.394	10.0	2D		
	05055	0.492	12.5	2.5D		
	05056	0.591	15.0	3D		
M6 - 1	05062	0.236	6.0	1D		
	05063	0.354	9.0	1.5D		
	05064	0.472	12.0	2D		
	05065	0.591	15.0	2.5D		
	05066	0.709	18.0	3D		
M7 - 1	05072	0.276	7.0	1D		
	05073	0.413	10.5	1.5D		
	05074	0.551	14.0	2D		
	05075	0.689	17.5	2.5D		
	05076	0.827	21.0	3D		
M8 - 1.25	05082	0.945	24.0	1D	M8 - 1	07082
	05083	0.472	12.0	1.5D		07083
	05084	0.63	16.0	2D		07084
	05085	0.787	20.0	2.5D		07085
	05086	0.945	24.0	3D		07086

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Dry film lubing and plating available.

Bulk Inserts Free Running - Metric

METRIC COARSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
		0.315	8.0	1D	M8 - 0.75	08082 ▲
		0.394	10.0	1.25D		08083 ▲
		0.472	12.0	1.5D		08084 ▲
		0.63	16.0	2D		
		0.787	20.0	2.5D		
M9 - 1.25	05092	0.354	9.0	1D	M9 - 1	07092
	05093	0.531	13.5	1.5D		07093
	05094	0.709	18.0	2D		07094 ▲
	05095 ▲	0.886	22.5	2.5D		07095 ▲
	05096 ▲	1.063	27.0	3D		07096 ▲
M10 - 1.5	05102	0.394	10.0	1D	M10 - 1.25	07102
	05103	0.591	15.0	1.5D		07103
	05104	0.787	20.0	2D		07104
	05105	0.984	25.0	2.5D		07105
	05106	1.181	30.0	3D		07106
		0.394	10.0	1D	M10 - 1	08102
		0.591	15.0	1.5D		08103
		0.787	20.0	2D		08104
		0.984	25.0	2.5D		08105
		1.181	30.0	3D		08106
M11 - 1.5	05112	0.433	11.0	1D	M11 - 1.25	07112
	05113	0.650	16.5	1.5D		07113
	05114	0.866	22.0	2D		07114
	05115	1.083	27.5	2.5D		07115 ▲
	05116	1.299	33.0	3D		07116 ▲
		0.433	11.0	1D	M11 - 1	08112
		0.650	16.5	1.5D		08113
		0.866	22.0	2D		08114
		1.083	27.5	2.5D		08115 ▲
		1.299	33.0	3D		08116 ▲
M12 - 1.75	05122	0.472	12.0	1D	M12 - 1.5	07122
	05120-15	0.591	15.0	1.25D		
	05123	0.709	18.0	1.5D		07123
	05124	0.945	24.0	2D		07124
	05125	1.181	30.0	2.5D		07125
	05126	1.417	36.0	3D		07126
		0.472	12.0	1D	M12 - 1.25	08122
		0.709	18.0	1.5D		08123
		0.945	24.0	2D		08124
		1.181	30.0	2.5D		08125 ▲
		1.417	36.0	3D		08126 ▲
		0.472	12.0	1D	M12 - 1	08122-1.0 ▲
		0.709	18.0	1.5D		08123-1.0
		0.945	24.0	2D		08124-1.0 ▲
		1.181	30.0	2.5D		08125-1.0 ▲
		1.417	36.0	3D		08126-1.0 ▲

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Bulk Inserts Free Running - Metric

METRIC COARSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
		0.315	8.0	1D	M8 - 0.75	08082 ▲
		0.394	10.0	1.25D		08083 ▲
		0.472	12.0	1.5D		08084 ▲
		0.63	16.0	2D		
		0.787	20.0	2.5D		
M9 - 1.25	05092	0.354	9.0	1D	M9 - 1	07092
	05093	0.531	13.5	1.5D		07093
	05094	0.709	18.0	2D		07094 ▲
	05095 ▲	0.886	22.5	2.5D		07095 ▲
	05096 ▲	1.063	27.0	3D		07096 ▲
M10 - 1.5	05102	0.394	10.0	1D	M10 - 1.25	07102
	05103	0.591	15.0	1.5D		07103
	05104	0.787	20.0	2D		07104
	05105	0.984	25.0	2.5D		07105
	05106	1.181	30.0	3D		07106
		0.394	10.0	1D	M10 - 1	08102
		0.591	15.0	1.5D		08103
		0.787	20.0	2D		08104
		0.984	25.0	2.5D		08105
		1.181	30.0	3D		08106
M11 - 1.5	05112	0.433	11.0	1D	M11 - 1.25	07112
	05113	0.650	16.5	1.5D		07113
	05114	0.866	22.0	2D		07114
	05115	1.083	27.5	2.5D		07115 ▲
	05116	1.299	33.0	3D		07116 ▲
		0.433	11.0	1D	M11 - 1	08112
		0.650	16.5	1.5D		08113
		0.866	22.0	2D		08114
		1.083	27.5	2.5D		08115 ▲
		1.299	33.0	3D		08116 ▲
M12 - 1.75	05122	0.472	12.0	1D	M12 - 1.5	07122
	05120-15	0.591	15.0	1.25D		
	05123	0.709	18.0	1.5D		07123
	05124	0.945	24.0	2D		07124
	05125	1.181	30.0	2.5D		07125
	05126	1.417	36.0	3D		07126
		0.472	12.0	1D	M12 - 1.25	08122
		0.709	18.0	1.5D		08123
		0.945	24.0	2D		08124
		1.181	30.0	2.5D		08125 ▲
		1.417	36.0	3D		08126 ▲
		0.472	12.0	1D	M12 - 1	08122-1.0 ▲
		0.709	18.0	1.5D		08123-1.0
		0.945	24.0	2D		08124-1.0 ▲
		1.181	30.0	2.5D		08125-1.0 ▲
		1.417	36.0	3D		08126-1.0 ▲

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Bulk Inserts Free Running - Metric

METRIC COARSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
M13 - 1.75		0.512	13.0	1D	M13 - 1.5	
	05133 ▲	0.768	19.5	1.5D		07133 ▲
		1.024	26	2D		
		1.280	32.5	2.5D		
		1.535	39.0	3D		
		0.512	13.0	1D	M13 - 1.25	
		0.768	19.5	1.5D		08133 ▲
		1.024	26	2D		
		1.280	32.5	2.5D		
		1.535	39.0	3D		
M14 - 2	05142	0.551	14.0	1D	M14 - 1.5	07142
	05143	0.827	21.0	1.5D		07143
	05144	1.102	28.0	2D		07144
	05145	1.378	35.0	2.5D		07145 ▲
	05146	1.654	42.0	3D		07146 ▲
M15 - 2	05152 ▲	0.591	15.0	1D	M15 - 1.5	07152 ▲
	05153	0.886	22.5	1.5D		07153
	05154 ▲	1.181	30.0	2D		07154 ▲
	05155 ▲	1.476	37.5	2.5D		07155 ▲
	05156 ▲	1.772	45.0	3D		07156 ▲
M16 - 2	05162	0.63	16.0	1D	M16 - 1.5	07162
	05160-20▲	0.787	20.0	1.25D		
	05163	0.945	24.0	1.5D		07163
	05164	1.26	32.0	2D		07164
	05165	1.575	40.0	2.5D		07165 ▲
	05166	1.89	48.0	3D		07166 ▲
M18 - 2.5	05182	0.709	18.0	1D	M18 - 2	07182 ▲
	05183	1.063	27.0	1.5D		07183
	05184	1.417	36.0	2D		07184 ▲
	05185	1.772	45.0	2.5D		07185 ▲
	05186	2.126	54.0	3D		07186 ▲
		0.709	18.0	1D	M18 - 1.5	08182
		1.063	27.0	1.5D		08183
		1.417	36.0	2D		08184
		1.772	45.0	2.5D		08185
		2.126	54.0	3D		08186 ▲

METRIC COARSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
M20 - 2.5	05202	0.787	20.0	1D	M20 - 2	07202 ▲
	05200-25 ▲	0.984	25.0	1.25D		
	05203	1.181	30.0	1.5D		07203
	05204	1.575	40.0	2D		07204
	05205	1.969	50.0	2.5D		07205 ▲
	05206	2.362	60.0	3D		07206 ▲
		0.787	20.0	1D	M20 - 1.5	08202
		1.181	30.0	1.5D		08203
		1.575	40.0	2D		08204
		1.969	50.0	2.5D		08205 ▲
		2.362	60.0	3D		08206 ▲
M22 - 2.5	05222	0.866	22.0	1D	M22 - 2	07222 ▲
	05223	1.299	33.0	1.5D		07223
	05224 ▲	1.732	44.0	2D		07224 ▲
	05225	2.165	55.0	2.5D		07225 ▲
	05226 ▲	2.598	66.0	3D		07226 ▲

Bulk Inserts Free Running - Metric

METRIC COARSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
		0.866	22.0	1D	M22 - 1.5	08222
		1.299	33.0	1.5D		08223
		1.732	44.0	2D		08224
		2.165	55.0	2.5D		08225
		2.598	66.0	3D		08226 ▲
M24 - 3	05242	0.945	24.0	1D	M24 - 2	07242 ▲
	05243	1.417	36.0	1.5D		07243
	05244	1.89	48.0	2D		07244 ▲
	05245	2.362	60.0	2.5D		07245 ▲
	05246	2.835	72.0	3D		07246 ▲
		0.945	24.0	1D	M24 - 1.5	08242
		1.417	36.0	1.5D		08243
		1.89	48.0	2D		08244
		2.362	60.0	2.5D		08245 ▲
		2.835	72.0	3D		08246 ▲
		1.024	26.0	1D	M26 - 1.5	08262
		1.535	39.0	1.5D		08263
		2.047	52.0	2D		08264 ▲
		2.559	65.0	2.5D		08265 ▲
		3.071	78.0	3D		08266 ▲

METRIC COARSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
M27 - 3	05272 ▲	1.063	27.0	1D	M27 - 2	07272 ▲
	05273	1.594	40.5	1.5D		07273
	05274	2.126	54.0	2D		07274
	05275 ▲	2.657	67.5	2.5D		07275 ▲
	05276 ▲	3.189	81.0	3D		07276 ▲
		1.063	27.0	1D	M27 - 1.5	08272 ▲
		1.594	40.5	1.5D		08273 ▲
		2.126	54.0	2D		08274 ▲
		2.657	67.5	2.5D		08275 ▲
		3.189	81.0	3D		08276 ▲
M30 - 3.5	05302	1.181	30.0	1D	M30 - 2	07302 ▲
	05300-37.5	1.476	37.5	1.25D		
	05303	1.772	45.0	1.5D		07303
	05304	2.362	60.0	2D		07304 ▲
	05305 ▲	2.953	75.0	2.5D		07305 ▲
	05306 ▲	3.543	90.0	3D		07306 ▲
M30 - 3	05302-3 ▲	1.181	30.0	1D	M30 - 1.5	08302
	05303-3	1.772	45.0	1.5D		08303 ▲
	05304-3 ▲	2.362	60.0	2D		08304 ▲
	05305-3 ▲	2.953	75.0	2.5D		08305 ▲
	05306-3 ▲	3.543	90.0	3D		08306 ▲
M33 - 3.5	05332 ▲	1.299	33.0	1D	M33 - 2	07332 ▲
	05333	1.949	49.5	1.5D		07333 ▲
	05334 ▲	2.598	66.0	2D		07334 ▲
	05335 ▲	3.248	82.5	2.5D		07335 ▲
	05336 ▲	3.898	99.0	3D		07336 ▲
			1.299	33.00		1D
		1.949	49.50	1.5D	07333-3 ▲	
		2.598	66.00	2D	07334-3 ▲	

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Bulk Inserts Free Running - Metric

METRIC COARSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
M36 - 4.0	05362	1.417	36.0	1D	M36 - 3	07362
	05363	2.126	54.0	1.5D		07363
	05364	2.835	72.0	2D		07364
	05365 ▲	3.543	90.0	2.5D		07365 ▲
	05366 ▲	4.252	108.0	3D		07366 ▲
		1.417	36.0	1D	M36 - 1.5	08362 ▲
		2.126	54.0	1.5D		08363 ▲
		2.835	72.0	2D		08364 ▲
		3.543	90.0	2.5D		08365 ▲
		4.252	108.0	3D		08366 ▲
		1.417	36.0	1D	M36 - 2	07362-2 ▲
		2.126	54.0	1.5D		07363-2 ▲
		2.835	72.0	2D		07364-2 ▲
		3.543	90.0	2.5D		07365-2 ▲
		4.252	108.0	3D		07366-2 ▲
M39 - 4	05392	1.535	39.0	1D	M39 - 3	07392 ▲
	05393	2.303	58.5	1.5D		07393
	05394	3.071	78.0	2D		07394 ▲
	05395 ▲	3.839	97.5	2.5D		07395 ▲
	05396 ▲	4.606	117.0	3D		07396 ▲
		1.535	39.0	1D	M39 - 2	08392 ▲
		2.303	58.5	1.5D		08393
		3.071	78.0	2D		08394 ▲
		3.839	97.5	2.5D		08395 ▲
		4.606	117.0	3D		08396 ▲
M42 - 4.5	05422 ▲	1.654	42.0	1D	M42 - 3	07422
	05423	2.480	63.0	1.5D		07423 ▲
	05424 ▲	3.307	84.0	2D		07424 ▲
M42 - 4	05422-4 ▲	1.654	42.0	1D	M42 - 2	08422 ▲
	05423-4	2.480	63.0	1.5D		08423 ▲
	05424-4	3.307	84.0	2D		08424 ▲
M45 - 4.5	05453 ▲	2.657	67.5	1.5D	M45 - 3	07453
M48 - 5	05483	2.835	72.0	1.5D	M48 - 3	07483
M48 - 4	05483-4 ▲	2.835	72.0	1.5D		
M52 - 5	05523 ▲	3.071	78.0	1.5D	M52 - 3	07523 ▲

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.

Bulk Inserts Free Running - Metric - Sparkplug and Lefthand Thread

SPARKPLUG		INSTALLED LENGTH						
Thread Size	Part No.	inch	mm	D's				
M10 - 1	08108	0.339	8.6					
	08109	0.500	12.7					
M12 - 1.25	08122	0.500	12.7	1D				
	08123	0.750	19.1	1.5D				
M14 - 1.25	08148	0.375	9.5					
	08141	0.472	12.0					
	08147	0.438	11.1					
	08149	0.500	12.7					
	08140	0.750	19.1					
	08140-8.4 ▲	0.331	8.4					
	08140-12.4 ▲	0.488	12.4					
	08140-16.4 ▲	0.646	16.4					
M18 - 1.5	08189	0.500	12.7					
M18 - 1.5 (Inconel)	08181XUP	0.500	12.5					

METRIC LEFTHAND THREAD		INSTALLED LENGTH						
Thread Size	Part No.	inch	mm	D's				
M6 - 1	05063LH ▲	0.354	9.0	1.5D				
M8 - 1.25	05083LH ▲	0.472	12.0	1.5D				
M10 - 1.5	05103LH ▲	0.591	15.0	1.5D				
M12 - 1.75	05123LH ▲	0.709	18.0	1.5D				

BICYCLE		INSTALLED LENGTH						
Thread Size	Part No.	inch	mm	D's				
M10 - 1 x 6.8	08100-6.8 ▲	0.256	6.8					

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.
Dry film lubing and plating available.

Bulk Inserts Free Running - UNC/UNF

UNC Thread Size	INSTALLED LENGTH				UNF Thread Size	Part No.
	Part No.	inches	mm	D's		
#2 - 56	03522	0.086	2.2	1D		
	03523	0.129	3.3	1.5D		
	03524	0.172	4.4	2D		
	03525	0.215	5.5	2.5D		
#3 - 48	03526	0.258	6.6	3D		
	03532	0.099	2.5	1D	#3 - 56	04532 ▲
	03533	0.149	3.8	1.5D		04533
	03534 ▲	0.198	5.0	2D		04534 ▲
03535 ▲	0.248	6.3	2.5D	04535 ▲		
03536 ▲	0.297	7.5	3D	04536 ▲		
#4 - 40	03542	0.112	2.8	1D	#4 - 48	04542 ▲
	03543	0.168	4.3	1.5D		04543
	03544	0.224	5.7	2D		04544
	03545	0.280	7.1	2.5D		04545 ▲
	03546	0.336	8.5	3D		04546
#5 - 40	03552	0.112	2.8	1D		
	03553	0.168	4.3	1.5D		
	03554	0.224	5.7	2D		
	03555 ▲	0.280	7.1	2.5D		
	03556 ▲	0.336	8.5	3D		
#6 - 32	03562	0.138	3.5	1D	#6 - 40	04562 ▲
	03563	0.207	5.3	1.5D		04563
	03564	0.276	7	2D		04564 ▲
	03565	0.345	8.8	2.5D		04565 ▲
	03566	0.414	10.5	3D		04566 ▲
#8 - 32	03582	0.164	4.2	1D		#8 - 36
	03583	0.246	6.2	1.5D	04583	
	03584	0.328	8.3	2D	04584 ▲	
	03585	0.410	10.4	2.5D	04585 ▲	
	03586	0.492	12.5	3D	04586 ▲	
#10 - 24	03602	0.190	4.8	1D	#10 - 32	
	03603	0.285	7.2	1.5D		04603
	03604	0.380	9.7	2D		04604
	03605	0.475	12.1	2.5D		04605
	03606	0.570	14.5	3D		04606
#12 - 24	03622 ▲	0.216	5.5	1D		#12 - 28
	03623	0.324	8.2	1.5D	04623	
	03624	0.432	11	2D	04624	
	03625 ▲	0.540	13.7	2.5D	04625 ▲	
	03626 ▲	0.648	16.5	3D	04626 ▲	
1/4 - 20	03042	0.250	6.4	1D	1/4 - 28	
	03043	0.375	9.5	1.5D		04043
	03044	0.500	12.7	2D		04044
	03045	0.625	15.9	2.5D		04045
	03046	0.750	19.1	3D		04046
5/16 - 18	03052	0.313	8	1D		5/16 - 24
	03053	0.470	11.9	1.5D	04053	
	03054	0.626	15.9	2D	04054	
	03055	0.783	19.9	2.5D	04055	
	03056	0.939	23.9	3D	04056	
3/8 - 16	03062	0.375	9.5	1D	3/8 - 24	
	03063	0.563	14.3	1.5D		04063
	03064	0.750	19.1	2D		04064
	03065	0.938	23.8	2.5D		04065
	03066	1.125	28.6	3D		04066
7/16 - 14	03072	0.438	11.1	1D		7/16 - 20
	03073	0.657	16.7	1.5D	04073	
	03074	0.876	22.3	2D	04074	
	03075	1.095	27.8	2.5D	04075	
	03076	1.314	33.4	3D	04076 ▲	

Bulk Inserts Free Running - UNC/UNF

UNC		INSTALLED LENGTH			UNF	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
1/2 - 13	03082	0.500	12.7	1D	1/2 - 20	04082
	03083	0.750	19.1	1.5D		04083
	03084	1.000	25.4	2D		04084
	03085	1.250	31.8	2.5D		04085
	03086	1.500	38.1	3D		04086

UNC		INSTALLED LENGTH			UNF	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
9/16 - 12	03092	0.563	14.3	1D	9/16 - 18	04092
	03093	0.845	21.5	1.5D		04093
	03094	1.126	28.6	2D		04094
	03095	1.408	35.8	2.5D		04095 ▲
	03096 ▲	1.689	42.9	3D		04096 ▲
5/8 - 11	03102	0.625	15.9	1D	5/8 - 18	04102
	03103	0.938	23.8	1.5D		04103
	03104	1.250	31.8	2D		04104
	03105	1.563	39.7	2.5D		04105 ▲
	03106	1.875	47.6	3D		04106 ▲
11/16 - 11	03112 ▲	0.688	17.5	1D		
	03113	1.032	26.2	1.5D		
	03114 ▲	1.376	35	2D		
	03115	1.720	43.7	2.5D		
	03116	2.064	52.4	3D		
3/4 - 10	03122	0.750	19.1	1D	3/4 - 16	04122
	03123	1.125	28.6	1.5D		04123
	03124	1.500	38.1	2D		04124
	03125	1.875	47.6	2.5D		04125
	03126	2.250	57.2	3D		04126 ▲

UNC		INSTALLED LENGTH			UNF	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
7/8 - 9	03142	0.875	22.2	1D	7/8 - 14	04142
	03143	1.313	33.3	1.5D		04143
	03144	1.750	44.5	2D		04144 ▲
	03145 ▲	2.188	55.6	2.5D		04145 ▲
	03146	2.625	66.7	3D		04146 ▲
1" - 8	03162	1.000	25.4	1D	1" - 12	04162
	03163	1.500	38.1	1.5D		04163
	03164	2.000	50.8	2D		04164 ▲
	03165 ▲	2.500	63.5	2.5D		04165 ▲
	03166 ▲	3.000	76.2	3D		04166 ▲
		1.000	25.4	1D	1" - 14	04162-14
		1.500	38.1	1.5D		04163-14
		2.000	50.8	2D		04164-14
		2.500	63.5	2.5D		04165-14▲
		3.000	76.2	3D		04166-14▲

UNC		INSTALLED LENGTH			UNF	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
1 1/8 - 7	03182	1.125	28.6	1D	1 1/8 - 12	04182
	03183 ▲	1.688	42.9	1.5D		04183
	03184 ▲	2.250	57.2	2D		04184 ▲
	03185 ▲	2.813	71.4	2.5D		04185 ▲
	03186 ▲	3.375	85.7	3D		04186 ▲
1 1/4 - 7	03202	1.250	31.8	1D	1 1/4 - 12	04202
	03203	1.875	47.6	1.5D		04203
	03204	2.500	63.5	2D		04204 ▲
	03205 ▲	3.125	79.4	2.5D		04205 ▲
	03206 ▲	3.750	95.3	3D		04206 ▲

Bulk Inserts Free Running - UNC/UNF

UNC		INSTALLED LENGTH			UNF	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
1 3/8 - 6	03222 ▲	1.375	34.9	1D	1 3/8 - 12	04222 ▲
	03223	2.063	52.4	1.5D		04223
	03224 ▲	2.750	69.9	2D		04224 ▲
	03225 ▲	3.438	87.3	2.5D		04225 ▲
	03226 ▲	4.125	104.8	3D		04226 ▲
1 1/2 - 6	03242	1.500	38.1	1D	1 1/2 - 12	04242
	03243	2.250	57.2	1.5D		04243
	03244 ▲	3.000	76.2	2D		04244 ▲
	03245 ▲	3.750	95.3	2.5D		04245 ▲
	03246 ▲	4.500	114.3	3D		04246 ▲

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.
 Dry film lubing and plating available.

Bulk Inserts Free Running - BSW/BSF

BSW		INSTALLED LENGTH			BSF	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
1/8 - 40	02022	0.125	3.2	1D		
	02023	0.188	4.8	1.5D		
	02024	0.250	6.4	2D		
	02025	0.313	7.9	2.5D		
	02026	0.375	9.5	3D		
3/16 - 24	02032	0.188	4.8	1D	3/16 - 32	00032
	02033	0.281	7.1	1.5D		00033
	02034	0.376	9.6	2D		00034 ▲
	02035	0.470	11.9	2.5D		00035 ▲
	02036	0.564	14.3	3D		00036 ▲
1/4 - 20	02042	0.250	6.4	1D	1/4 - 26	00042 ▲
	02043	0.375	9.5	1.5D		00043
	02044	0.500	12.7	2D		00044
	02045	0.625	15.9	2.5D		00045 ▲
	02046	0.750	19.1	3D		00046 ▲
5/16 - 18	02052	0.313	8	1D	5/16 - 22	00052
	02053	0.470	11.9	1.5D		00053
	02054	0.626	15.9	2D		00054
	02055	0.783	19.9	2.5D		00055 ▲
	02056	0.939	23.9	3D		00056 ▲
3/8 - 16	02062	0.375	9.5	1D	3/8 - 20	00062
	02063	0.563	14.3	1.5D		00063
	02064	0.750	19.1	2D		00064
	02065	0.938	23.8	2.5D		00065 ▲
	02066	1.125	28.6	3D		00066 ▲
7/16 - 14	02072	0.438	11.1	1D	7/16 - 18	00072 ▲
	02073	0.657	16.7	1.5D		00073
	02074	0.876	22.3	2D		00074 ▲
	02075	1.095	27.8	2.5D		00075 ▲
	02076	1.314	33.4	3D		00076 ▲
1/2 - 12	02082	0.500	12.7	1D	1/2 - 16	00082
	02083	0.750	19.1	1.5D		00083
	02084	1.000	25.4	2D		00084
	02085	1.250	31.8	2.5D		00085 ▲
	02086	1.500	38.1	3D		00086 ▲

BSW		INSTALLED LENGTH			BSF	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
9/16 - 12	02092	0.563	14.3	1D	9/16 - 16	00092 ▲
	02093	0.845	21.5	1.5D		00093
	02094	1.126	28.6	2D		00094 ▲
	02095	1.408	35.8	2.5D		00095 ▲
	02096	1.689	42.9	3D		00096 ▲
5/8 - 11	02102	0.625	15.9	1D	5/8 - 14	00102
	02103	0.938	23.8	1.5D		00103
	02104	1.250	31.8	2D		00104
	02105	1.563	39.7	2.5D		00105 ▲
	02106	1.875	47.6	3D		00106 ▲
3/4 - 10	02122	0.750	19.1	1D	3/4 - 12	00122
	02123	1.125	28.6	1.5D		00123
	02124	1.500	38.1	2D		00124 ▲
	02125	1.875	47.6	2.5D		00125 ▲
	02126	2.250	57.2	3D		00126 ▲

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.
Dry film lubricating and plating available.

Bulk Inserts Free Running - BSW/BSF

BSW		INSTALLED LENGTH			BSF	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
7/8 - 9	02142	0.875	22.2	1D	7/8 - 11	00142 ▲
	02143	1.313	33.3	1.5D		00143 ▲
	02144	1.750	44.5	2D		00144 ▲
	02145	2.188	55.6	2.5D		00145 ▲
	02146	2.625	66.7	3D		00146 ▲
1" - 8	02162	1.000	25.4	1D	1" - 10	00162 ▲
	02163	1.500	38.1	1.5D		00163 ▲
	02164	2.000	50.8	2D		00164 ▲
	02165	2.500	63.5	2.5D		00165 ▲
	02166	3.000	76.2	3D		00166 ▲

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.
 Dry film lubing and plating available.

Bulk Inserts Free Running BA/BSC/BSP/NPT

BA		INSTALLED LENGTH			
Thread Size	Part No.	inches	mm	D's	
0BA	00502 ▲	0.236	6	1D	
	00503	0.354	9	1.5D	
	00504	0.472	12	2D	
	00505 ▲	0.591	15	2.5D	
	00506 ▲	0.709	18	3D	
2BA	00522	0.185	4.7	1D	
	00523	0.278	7.1	1.5D	
	00524 ▲	0.370	9.4	2D	
	00525 ▲	0.463	11.8	2.5D	
	00526 ▲	0.555	14.1	3D	
4BA	00542 ▲	0.142	3.6	1D	
	00543	0.213	5.4	1.5D	
	00544 ▲	0.283	7.2	2D	
	00545 ▲	0.354	9	2.5D	
	00546 ▲	0.425	10.8	3D	
6BA	00562 ▲	0.110	2.8	1D	
	00563	0.165	4.2	1.5D	
	00564	0.220	5.6	2D	
	00565 ▲	0.276	7	2.5D	
	00566 ▲	0.331	8.4	3D	

BSC		INSTALLED LENGTH			
Thread Size	Part No.	inches	mm	D's	
5/16 - 26	06502 ▲	0.313	8	1D	
	06503	0.470	11.9	1.5D	
	06504 ▲	0.626	15.9	2D	
3/8 - 26	06602 ▲	0.625	15.9	1D	
	06603	0.938	23.8	1.5D	
	06604 ▲	1.250	31.8	2D	
7/16 - 26	06702 ▲	0.438	11.1	1D	
	06703 ▲	0.656	16.7	1.5D	
	06704 ▲	0.876	22.3	2D	
1/2 - 26	06802 ▲	0.500	12.7	1D	
	06803	0.750	19.1	1.5D	
	06804 ▲	2.000	50.8	2D	

BSP		INSTALLED LENGTH				NPT	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.	
1/8 - 28	01022	0.125	3.2	1D	1/8 - 27		
	01023	0.188	4.8	1.5D			
	01024	0.250	6.4	2D			
	01025	0.313	7.9	2.5D			
		0.273	6.9	.273			06023
1/4 - 19	01042	0.250	6.4	1D	1/4 - 18		
	01043	0.375	9.5	1.5D			
	01044	0.500	12.7	2D			
	01045 ▲	0.625	15.9	2.5D			
		0.394	10.0	.394			06043
3/8 - 19	01062	0.375	9.5	1D	3/8 - 18		
	01063	0.563	14.3	1.5D			
	01064	0.750	19.1	2D			
	01065 ▲	0.938	23.8	2.5D			
		0.407	10.3	.407			06063

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.
Dry film lubing and plating available.

Bulk Inserts Free Running - BSP/NPT/Special Threads/UN

BSP		INSTALLED LENGTH			NPT	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
1/2 - 14	01082	0.500	12.7	1D	1/2 - 14	
	01083	0.750	19.1	1.5D		
	01084 ▲	1.000	25.4	2D		
	01085 ▲	1.250	31.8	2.5D		
5/8 - 14		0.534	13.6	.534		06083
	01102 ▲	0.625	15.9	1D		
	01103 ▲	0.938	23.8	1.5D		
	01104 ▲	1.250	31.8	2D		
3/4 - 14	01122	0.750	19.1	1D	3/4 - 14	
	01123	1.125	28.6	1.5D		
	01124 ▲	1.500	38.1	2D		
		0.553	14.0	.553		

BSP		INSTALLED LENGTH			NPT	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
1" - 11	01162	1.000	25.4	1D	1 - 11 1/2	
	01163 ▲	1.500	38.1	1.5D		
	01164 ▲	2.000	50.8	2D		
		0.661	16.8	.661		

SPECIAL THREADS		INSTALLED LENGTH				
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
1/4 - 32	04042-32	0.25	6.4	1D	1/4 - 24	04042-24
	04043-32	0.375	9.5	1.5D		04043-24
HARLEY 7/16 - 16	04073-16	0.657	16.7	1.5D		

SPECIAL THREADS		INSTALLED LENGTH				
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
CUMMINS 11/16 - 16	04110-16-1.25▲	0.86	21.8			
CARBY 7/8 - 20	04140-20-330▲	0.33	8.4			
CARBY 1" - 20	04160-20-325	0.325	8.3			

8 TPI UN		INSTALLED LENGTH				
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
1 1/8 - 8	06182 ▲	1.125	28.6	1D		
	06183 ▲	1.688	42.9	1.5D		
	06184	2.25	57.2	2D		
1 1/4 - 8	06202 ▲	1.25	31.8	1D		
	06203	1.875	47.6	1.5D		
	06204	2.5	63.5	2D		
1 3/8 - 8	06222 ▲	1.375	34.9	1D		
	06223 ▲	2.063	52.4	1.5D		
	06224 ▲	2.75	69.9	2D		
1 1/2 - 8	06242	1.5	38.1	1D		
	06243 ▲	2.25	57.2	1.5D		
	06244 ▲	3	76.2	2D		
1 5/8 - 8	06262 ▲	1.625	41.3	1D		
	06263 ▲	2.438	61.9	1.5D		
	06264 ▲	3.25	82.6	2D		
1 3/4 - 8	06282 ▲	1.75	44.5	1D		
	06283 ▲	2.625	66.7	1.5D		
	06284 ▲	3.5	88.9	2D		
1 7/8 - 8	06302 ▲	1.875	47.6	1D		
	06303 ▲	2.813	71.4	1.5D		
	06304 ▲	3.75	95.3	2D		
2" - 8	06322 ▲	2	50.8	1D		
	06323	3	76.2	1.5D		
	06324 ▲	4	101.6	2D		
2 1/8 - 8	06343 ▲	3.188	81	1.5D		

Bulk Inserts Free Running - UN/UNC LHT/Bicycle Threads

8 TPI UN		INSTALLED LENGTH				
Thread Size	Part No.	inches	mm	D's		
2 1/4 - 8	06362 ▲	2.25	57.2	1D		
	06363 ▲	3.375	85.7	1.5D		
	06402 ▲	2.5	63.5	1D		
2 1/2 - 8	06403 ▲	3.75	95.3	1.5D		
2 3/4 - 8	06443 ▲	2.75	69.9	1.5D		
3" - 8	06482 ▲	3	76.2	1D		
	06483 ▲	4.5	114.3	1.5D		

UNC LEFT HAND THREAD		INSTALLED LENGTH				
Thread Size	Part No.	inches	mm	D's		
1/4 - 20	03043LH	0.25	6.4	1.5D		
5/16 - 18	03053LH	0.313	8	1.5D		
3/8 - 16	03063LH	0.375	9.5	1.5D		
7/16 - 14	03073LH ▲	0.438	11.1	1.5D		
1/2 - 13	03083LH	0.5	12.7	1.5D		

BICYCLE THREADS		INSTALLED LENGTH				
Thread Size	Part No.	inches	mm	D's		
9/16 - 20	04090-20-0.5	0.5	12.7			
9/16 - 20	04090LH-20-0.5	0.5	12.7			

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.
Dry film lubricating and plating available.

Bulk Inserts Screw Locking - Metric

METRIC COURSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
M2.2 - 0.45	15012 ▲	0.087	2.2	1D		
	15013 ▲	0.130	3.3	1.5D		
	15014 ▲	0.173	4.4	2D		
	15015 ▲	0.217	5.5	2.5D		
	15016 ▲	0.260	6.6	3D		
M2.5 - 0.45	15252	0.098	2.5	1D		
	15253	0.150	3.8	1.5D		
	15254	0.197	5	2D		
	15255 ▲	0.248	6.3	2.5D		
	15256 ▲	0.295	7.5	3D		
M3 - 0.5	15032	0.118	3	1D		
	15033	0.177	4.5	1.5D		
	15034	0.236	6	2D		
	15035 ▲	0.296	7.5	2.5D		
	15036 ▲	0.354	9	3D		
M3.5 - 0.6	15352 ▲	0.138	3.5	1D		
	15353	0.209	5.3	1.5D		
	15354 ▲	0.276	7	2D		
	15355 ▲	0.346	8.8	2.5D		
	15356 ▲	0.413	10.5	3D		
M4 - 0.7	15042	0.157	4	1D		
	15043	0.236	6	1.5D		
	15044	0.315	8	2D		
	15045 ▲	0.394	10	2.5D		
	15046 ▲	0.472	12	3D		
M5 - 0.8	15052	0.197	5	1D		
	15053	0.295	7.5	1.5D		
	15054	0.394	10	2D		
	15055 ▲	0.492	12.5	2.5D		
	15056 ▲	0.591	15	3D		
M6 - 1	15062	0.236	6	1D		
	15063	0.354	9	1.5D		
	15064	0.472	12	2D		
	15065 ▲	0.591	15	2.5D		
	15066 ▲	0.709	18	3D		
M7 - 1	15072 ▲	0.276	7	1D		
	15073 ▲	0.413	10.5	1.5D		
	15074 ▲	0.551	14	2D		
	15075 ▲	0.689	17.5	2.5D		
	15076 ▲	0.827	21	3D		
M8 - 1.25	15082	0.315	8	1D	M8 - 1	17082
	15083	0.472	12	1.5D		17083 ▲
	15084	0.630	16	2D		17084 ▲
	15085 ▲	0.787	20	2.5D		17085 ▲
	15086 ▲	0.945	24	3D		17086 ▲
		0.315	8	1D	M8 - 0.75	18082 ▲
		0.472	12	1.5D		18083 ▲
		0.630	16	2D		18084 ▲
		0.787	20	2.5D		18085 ▲
		0.945	24	3D		18086 ▲
M10 - 1.5	15102	0.394	10	1D	M10 - 1.25	17102 ▲
	15103	0.591	15	1.5D		17103
	15104	0.787	20	2D		17104 ▲
	15105	0.984	25	2.5D		17105 ▲
	15106	1.181	30	3D		17106 ▲

Bulk Inserts Screw Locking - Metric

METRIC COURSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
		0.394	10	1D	M10 - 1	18102 ▲
		0.591	15	1.5D		18103 ▲
		0.787	20	2D		18104 ▲
		0.984	25	2.5D		18105 ▲
		1.181	30	3D		18106 ▲
M12 - 1.75	15122	0.472	12	1D	M12 - 1.5	17122 ▲
	15123	0.709	18	1.5D		17123 ▲
	15124	0.945	24	2D		17124 ▲
	15125	1.181	30	2.5D		17125 ▲
	15126 ▲	1.417	36	3D		17126 ▲
		0.472	12	1D	M12 - 1.25	18122 ▲
		0.709	18	1.5D		18123
		0.945	24	2D		18124 ▲
		1.181	30	2.5D		18125 ▲
		1.417	36	3D		18126 ▲

METRIC COURSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
M14 - 2	15142	0.551	14	1D	M14 - 1.5	17142 ▲
	15143	0.827	21	1.5D		17143
	15144 ▲	1.102	28	2D		17144 ▲
	15145 ▲	1.378	35	2.5D		17145 ▲
	15146 ▲	1.654	42	3D		17146 ▲
M16 - 2	15162	0.630	16	1D	M16 - 1.5	17162
	15163	0.945	24	1.5D		17163 ▲
	15164	1.260	32	2D		17164 ▲
	15165 ▲	1.575	40	2.5D		17165 ▲
	15166 ▲	1.890	48	3D		17166 ▲
M18 - 2.5	15182 ▲	0.709	18	1D	M18 - 2	17182 ▲
	15183	1.063	27	1.5D		17183 ▲
	15184 ▲	1.417	36	2D		17184 ▲
	15185 ▲	1.772	45	2.5D		17185 ▲
	15186 ▲	2.126	54	3D		17186 ▲

METRIC COURSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
M20 - 2.5	15202	0.787	20	1D	M20 - 2	17202 ▲
	15203	1.181	30	1.5D		17203 ▲
	15204 ▲	1.575	40	2D		17204
	15205 ▲	1.969	50	2.5D		17205 ▲
	15206 ▲	2.362	60	3D		17206 ▲
M22 - 2.5	15222 ▲	0.866	22	1D	M22 - 2	17222 ▲
	15223	1.299	33	1.5D		17223 ▲
	15224 ▲	1.732	44	2D		17224 ▲
	15225 ▲	2.165	55	2.5D		17225 ▲
	15226 ▲	2.598	66	3D		17226 ▲
M24 - 3	15242	0.945	24	1D	M24 - 2	17242 ▲
	15243	1.417	36	1.5D		17243 ▲
	15244 ▲	1.890	48	2D		17244 ▲
	15245 ▲	2.362	60	2.5D		17245 ▲
	15246 ▲	2.835	72	3D		17246 ▲

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.
Dry film lubing and plating available.

Bulk Inserts Screw Locking - Metric

METRIC COURSE		INSTALLED LENGTH			METRIC FINE	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
M27 - 3	15272	1.063	27	1D	M27 - 2	17272 ▲
	15273	1.594	40.5	1.5D		17273 ▲
	15274	2.126	54	2D		17274 ▲
	15275	2.657	67.5	2.5D		17275 ▲
	15276	3.189	81	3D		17276 ▲
M30 - 3.5	15302 ▲	1.181	30	1D	M30 - 2	17302 ▲
	15303 ▲	1.772	45	1.5D		17303 ▲
	15304 ▲	2.362	60	2D		17304 ▲
	15305 ▲	2.953	75	2.5D		17305 ▲
	15306 ▲	3.543	90	3D		17306 ▲
M30 - 3	15302-3▲	1.181	30	1D		
	15303-3▲	1.772	45	1.5D		
	15304-3▲	2.362	60	2D		
	15305-3▲	2.953	75	2.5D		
	15306-3▲	3.543	90	3D		
M36 - 4	15362 ▲	1.417	36	1D	M36 - 3	17362 ▲
	15363 ▲	2.126	54	1.5D		17363 ▲
	15364 ▲	2.835	72	2D		17364 ▲
	15365 ▲	3.543	90	2.5D		17365 ▲
	15366 ▲	4.252	108	3D		17366 ▲
M39 - 4	15392 ▲	1.535	39	1D	M39 - 3	17392 ▲
	15393 ▲	2.303	58.5	1.5D		17393 ▲
	15394 ▲	3.071	78	2D		17394 ▲

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.
Dry film lubing and plating available.

Bulk Inserts Screw Locking - UNC/UNF

UNC		INSTALLED LENGTH			UNF	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
#2 - 56	13522	0.086	2.2	1D		
	13523	0.129	3.3	1.5D		
	13524	0.172	4.4	2D		
	13525	0.215	5.5	2.5D		
	13526 ▲	0.258	6.6	3D		
#3 - 48	13532 ▲	0.099	2.5	1D	#3 - 56	14532 ▲
	13533	0.149	3.8	1.5D		14533 ▲
	13534	0.198	5	2D		14534 ▲
	13535 ▲	0.248	6.3	2.5D		
	13536 ▲	0.297	7.5	3D		
#4 - 40	13542	0.112	2.8	1D	#4 - 48	14542 ▲
	13543	0.168	4.3	1.5D		14543 ▲
	13544	0.224	5.7	2D		14544
	13545	0.280	7.1	2.5D		
	13546	0.336	8.5	3D		
#5 - 40	13552	0.125	3.2	1D		
	13553	0.188	4.8	1.5D		
	13554 ▲	0.250	6.4	2D		
	13555 ▲	0.313	7.9	2.5D		
	13556	0.375	9.5	3D		
#6 - 32	13562	0.138	3.5	1D	#6 - 40	14562 ▲
	13563	0.207	5.3	1.5D		14563
	13564	0.276	7	2D		14564
	13565	0.345	8.8	2.5D		
	13566	0.414	10.5	3D		
#8 - 32	13582	0.164	4.2	1D	#8 - 36	14582
	13583	0.246	6.2	1.5D		14583
	13584	0.328	8.3	2D		14584 ▲
	13585	0.410	10.4	2.5D		
	13586	0.492	12.5	3D		
#10 - 24	13602	0.190	4.8	1D	#10 - 32	14602
	13603	0.285	7.2	1.5D		14603
	13604	0.380	9.7	2D		14604
	13605 ▲	0.475	12.1	2.5D		14605
	13606	0.570	14.5	3D		14606
#12 - 24	13622	0.216	5.5	1D		
	13623 ▲	0.324	8.2	1.5D		
	13624 ▲	0.432	11	2D		
	13625 ▲	0.540	13.7	2.5D		
	13626 ▲	0.648	16.5	3D		
1/4-20	13042	0.250	6.4	1D	1/4 - 28	14042
	13043	0.375	9.5	1.5D		14043
	13044	0.500	12.7	2D		14044
	13045	0.625	15.9	2.5D		14045 ▲
	13046	0.750	19.1	3D		14046 ▲
5/16 - 18	13052	0.313	8	1D	5/16 - 24	14052
	13053	0.470	11.9	1.5D		14053
	13054	0.626	15.9	2D		14054
	13055 ▲	0.783	19.9	2.5D		14055
	13056 ▲	0.939	23.9	3D		14056 ▲
3/8 - 16	13062	0.375	9.5	1D	3/8 - 24	14062
	13063	0.563	14.3	1.5D		14063
	13064	0.750	19.1	2D		14064
	13065 ▲	0.938	23.8	2.5D		14065 ▲
	13066	1.125	28.6	3D		14066 ▲

Bulk Inserts Screw Locking - UNC/UNF

UNC		INSTALLED LENGTH			UNF	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
7/16 - 14	13072	0.438	11.1	1D	7/16 - 20	14072
	13073	0.657	16.7	1.5D		14073
	13074	0.876	22.3	2D		14074
	13075	1.095	27.8	2.5D		14075
	13076	1.314	33.4	3D		14076
1/2 - 13	13082	0.500	12.7	1D	1/2 - 20	14082
	13083	0.750	19.1	1.5D		14083
	13084	1.000	25.4	2D		14084
	13085	1.250	31.8	2.5D		14085
	13086	1.500	38.1	3D		14086

UNC		INSTALLED LENGTH			UNF	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
9/16 - 12	13092	0.56	14.3	1D	9/16 - 18	14092
	13093	0.85	21.5	1.5D		14093 ▲
	13094 ▲	1.13	28.6	2D		14094 ▲
	13095 ▲	1.41	35.8	2.5D		14095 ▲
	13096 ▲	1.69	42.9	3D		14096 ▲
5/8 - 11	13102	0.63	15.9	1D	5/8 - 18	14102
	13103	0.94	23.8	1.5D		14103
	13104	1.25	31.8	2D		14104 ▲
	13105 ▲	1.56	39.7	2.5D		14105 ▲
	13106 ▲	1.88	47.6	3D		14106 ▲
3/4 - 10	13122	0.69	17.5	1D	3/4 - 16	14122
	13123	1.03	26.2	1.5D		14123
	13124 ▲	1.38	35	2D		14124
	13125 ▲	1.72	43.7	2.5D		14125
	13126 ▲	2.06	52.4	3D		14126 ▲

UNC		INSTALLED LENGTH			UNF	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
7/8 - 9	13142	0.75	19.1	1D	7/8 - 14	14142 ▲
	13143	1.13	28.6	1.5D		14143 ▲
	13144	1.50	38.1	2D		14144 ▲
	13145 ▲	1.88	47.6	2.5D		14145 ▲
1" - 8	13162	0.88	22.2	1D	1" - 12	14162 ▲
	13163	1.31	33.3	1.5D		14163 ▲
	13164	1.75	44.5	2D		14164 ▲
	13165 ▲	2.19	55.6	2.5D		14165 ▲
	13166 ▲	2.63	66.7	3D		14166 ▲
		1.00	25.4	1D	1" - 14	14162-14 ▲
		1.50	38.1	1.5D		14163-14 ▲
		2.00	50.8	2D		14164-14 ▲
		2.50	63.5	2.5D		14165-14 ▲
		3.00	76.2	3D		14166-14 ▲

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Dry film lubing and plating available.

Bulk Inserts Screw Locking - UNC/UNF

UNC		INSTALLED LENGTH			UNF	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
1 1/8 - 7	13182	1.13	28.6	1D	1 1/8 - 12	14182 ▲
	13183	1.69	42.9	1.5D		14183 ▲
	13184	2.25	57.2	2D		14184 ▲
		2.81	71.4	2.5D		14185 ▲
		3.38	85.7	3D		14186 ▲
1 1/4 - 7	13202	1.25	31.8	1D	1 1/4 - 12	14202 ▲
	13203	1.88	47.6	1.5D		14203 ▲
	13204	2.50	63.5	2D		14204 ▲
	13205	3.13	79.4	2.5D		14205 ▲
	13206	3.75	95.3	3D		14206 ▲
1 3/8 - 6	13222	1.38	34.9	1D	1 3/8 - 12	14222 ▲
	13223	2.06	52.4	1.5D		14223 ▲
	13224	2.75	69.9	2D		14224 ▲
	13225	3.44	87.3	2.5D		14225 ▲
	13226	4.13	104.8	3D		14226 ▲
1 1/2 - 6	13242	1.50	38.1	1D	1 1/2 - 12	14242 ▲
	13243	2.25	57.2	1.5D		14243 ▲
	13244	3.00	76.2	2D		14244 ▲
	13245	3.75	95.3	2.5D		14245 ▲
	13246	4.50	114.3	3D		14246 ▲

8 TPI UNC		INSTALLED LENGTH				
Thread Size	Part No.	inches	mm	D's		
1 1/8 - 8	16182 ▲	1.13	28.6	1D		
	16183 ▲	1.69	42.9	1.5D		
	16184 ▲	2.25	57.2	2D		
1 1/4 - 8	16202 ▲	1.25	31.8	1D		
	16203 ▲	1.88	47.6	1.5D		
	16204 ▲	2.50	63.5	2D		
1 3/8 - 8	16222 ▲	1.38	34.9	1D		
	16223 ▲	2.06	52.4	1.5D		
	16224 ▲	2.75	69.9	2D		
1 1/2 - 8	16242 ▲	1.50	38.1	1D		
	16243 ▲	2.25	57.2	1.5D		
	16244 ▲	3.00	76.2	2D		
1 5/8 - 8	16262 ▲	1.63	41.3	1D		
	16263 ▲	2.44	61.9	1.5D		
	16264 ▲	3.25	82.6	2D		
1 3/4 - 8	16282 ▲	1.75	44.5	1D		
	16283 ▲	2.63	66.7	1.5D		
	16284 ▲	3.50	88.9	2D		
1 7/8 - 8	16302 ▲	1.88	47.6	1D		
	16303 ▲	2.81	71.4	1.5D		
	16304 ▲	3.75	95.3	2D		
2" - 8	16322 ▲	2.00	50.8	1D		
	16323 ▲	3.00	76.2	1.5D		
	16324 ▲	4.00	101.6	2D		

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply. Dry film lubing and plating available.

Inserts - Stripfeed - Metric



METRIC FREE RUNNING		INSERT LENGTH			
Thread Size	Part No.	inches	mm	D's	Qty/Reel
M2.2 - 0.45	05012SF	0.087	2.2	1D	1,000
	05013SF	0.130	3.3	1.5D	1,000
	05014SF	0.173	4.4	2D	1,000
M2.5 - 0.45	05252SF	0.098	2.5	1D	1,000
	05253SF	0.150	3.8	1.5D	1,000
	05254SF	0.197	5	2D	1,000
M3 - 0.5	05032SF	0.118	3	1D	1,000
	05033SF	0.177	4.5	1.5D	1,000
	05034SF	0.236	6	2D	1,000
M4 - 0.7	05042SF	0.157	4	1D	1,000
	05043SF	0.236	6	1.5D	1,000
	05044SF	0.315	8	2D	1,000
M5 - 0.8	05052SF	0.197	5	1D	1,000
	05053SF	0.295	7.5	1.5D	500
	05054SF	0.394	10	2D	500
M6 - 1	05062SF	0.236	6	1D	500
	05063SF	0.354	9	1.5D	500
	05064SF	0.472	12	2D	500
M8 - 1.25	05082SF	0.315	8	1D	500
	05083SF	0.472	12	1.5D	500
	05084SF	0.630	16	2D	500
M8 - 1	07082SF ▲	0.315	8	1D	500
	07083SF ▲	0.472	12	1.5D	500
	07084SF ▲	0.630	16	2D	500
M10 - 1.5	05102SF	0.394	10	1D	250
	05103SF	0.591	15	1.5D	250
	05104SF ▲	0.787	20	2D	250
M12 - 1.75	05122SF ▲	0.472	12	1D	125
	05123SF ▲	0.709	18	1.5D	125
	05124SF ▲	0.945	24	2D	125

SCREW LOCKING		INSERT LENGTH			
Thread Size	Part No.	inches	mm	D's	Qty/Reel
M2.2 - 0.45	15012SF ▲	0.087	2.2	1D	1,000
	15013SF ▲	0.130	3.3	1.5D	1,000
	15014SF ▲	0.173	4.4	2D	1,000
M2.5 - 0.45	15252SF ▲	0.098	2.5	1D	1,000
	15253SF ▲	0.150	3.8	1.5D	1,000
	15254SF ▲	0.197	5	2D	1,000
M3.5 - 0.6	15352SF ▲	0.138	3.5	1D	1,000
	15353SF ▲	0.209	5.3	1.5D	1,000
	15354SF ▲	0.276	7	2D	1,000
M4 - 0.7	15042SF	0.157	4	1D	1,000
	15043SF	0.236	6	1.5D	1,000
	15044SF	0.315	8	2D	1,000
M5 - 0.8	15052SF	0.197	5	1D	1,000
	15053SF	0.295	7.5	1.5D	500
	15054SF	0.394	10	2D	500
M6 - 1	15062SF	0.236	6	1D	500
	15063SF	0.354	9	1.5D	500
	15064SF	0.472	12	2D	500
M8 - 1.25	15082SF	0.315	8	1D	500
	15083SF	0.472	12	1.5D	500
	15084SF	0.630	16	2D	500
M10 - 1.5	15102SF ▲	0.472	10	1D	125
	15103SF ▲	0.709	15	1.5D	125
	15104SF ▲	0.945	20	2D	125
M12 - 1.75	15122SF ▲	0.472	12	1D	125
	15123SF ▲	0.709	18	1.5D	125
	15124SF ▲	0.945	24	2D	125

Inserts - Stripfeed - Inch



UNC FREE RUNNING					UNF FREE RUNNING		
Thread Size	Part No.	INSERT LENGTH		D's	Thread Size	Part No.	Qty/Reel
		inches	mm				
#2 - 56	03522SF	0.086	2.2	1D			1,000
	03523SF	0.129	3.3	1.5D			1,000
	03524SF ▲	0.172	4.4	2D			1,000
#3 - 48	03532SF ▲	0.099	2.5	1D	#3 - 56	04532SF ▲	1,000
	03533SF ▲	0.149	3.8	1.5D		04533SF ▲	1,000
	03534SF ▲	0.198	5	2D		04534SF ▲	1,000
#4 - 40	03542SF	0.112	2.8	1D	#4 - 48	04542SF ▲	1,000
	03543SF	0.168	4.3	1.5D		04543SF ▲	1,000
	03544SF	0.224	5.7	2D		04544SF ▲	1,000
#5 - 40	03552SF	0.125	3.2	1D			1,000
	03553SF	0.188	4.8	1.5D			1,000
	03554SF	0.250	6.4	2D			1,000
#6 - 32	03562SF	0.138	3.5	1D	#6 - 40	04562SF ▲	1,000
	03563SF	0.207	5.3	1.5D		04563SF ▲	1,000
	03564SF	0.276	7	2D		04564SF ▲	1,000
#8 - 32	03582SF	0.164	4.2	1D	#8 - 36	04582SF ▲	1,000
	03583SF	0.246	6.2	1.5D		04583SF ▲	1,000
	03584SF	0.328	8.3	2D		04584SF ▲	1,000
#10 - 24	03602SF	0.190	4.8	1D	#10 - 32	04602SF	1,000
	03603SF	0.285	7.2	1.5D		04603SF	500
	03604SF	0.380	9.7	2D		04604SF	500
1/4 - 20	03042SF	0.250	6.4	1D	1/4 - 28	04042SF	500
	03043SF	0.375	9.5	1.5D		04043SF	500
	03044SF	0.500	12.7	2D		04044SF ▲	500
5/16 - 18	03052SF	0.312	7.9	1D	5/16 - 24	04052SF ▲	250
	03053SF	0.468	11.9	1.5D		04053SF	250
	03054SF ▲	0.624	15.8	2D		04054SF ▲	250
3/8 - 16	03062SF ▲	0.375	9.5	1D			250
	03063SF ▲	0.563	14.3	1.5D			250
	03064SF ▲	0.750	19.1	2D			250

UNC SCREW LOCKING					UNF SCREW LOCKING		
Thread Size	Part No.	INSERT LENGTH		D's	Thread Size	Part No.	Qty/Reel
		inches	mm				
#2 - 56	13522SF	0.086	2.2	1D			1,000
	13523SF	0.129	3.3	1.5D			1,000
	13524SF	0.172	4.4	2D			1,000
#3 - 48	13532SF	0.099	2.5	1D	#3 - 56	14532SF ▲	1,000
	13533SF	0.149	3.8	1.5D		14533SF ▲	1,000
	13534SF	0.198	5	2D		14534SF ▲	1,000
#4 - 40	13542SF	0.112	2.8	1D	#4 - 48	14542SF ▲	1,000
	13543SF	0.168	4.3	1.5D		14543SF ▲	1,000
	13544SF	0.224	5.7	2D		14544SF ▲	1,000
#5 - 40	13552SF	0.125	3.2	1D			1,000
	13553SF	0.188	4.8	1.5D			1,000
	13554SF	0.250	6.4	2D			1,000
#6 - 32	13562SF	0.138	3.5	1D	#6 - 40	14562SF ▲	1,000
	13563SF	0.207	5.3	1.5D		14563SF ▲	1,000
	13564SF	0.276	7	2D		14564SF ▲	1,000
#8 - 32	13582SF	0.164	4.2	1D	#8 - 36	14582SF ▲	1,000
	13583SF	0.246	6.2	1.5D		14583SF ▲	1,000
	13584SF	0.328	8.3	2D		14584SF ▲	1,000

Inserts - Stripfeed - Inch



UNC SCREW LOCKING		INSERT LENGTH			UNF SCREW LOCKING	
Thread Size	Part No.	inches	mm	D's	Thread Size	Part No.
#10 - 24	13602SF ▲	0.190	4.8	1D	#10 - 32	14602SF
	13603SF ▲	0.285	7.2	1.5D		14603SF
	13604SF ▲	0.380	9.7	2D		14604SF
1/4-20	13042SF	0.250	6.4	1D	1/4 - 28	14042SF
	13043SF	0.375	9.5	1.5D		14043SF
	13044SF	0.500	12.7	2D		14044SF ▲
5/16 - 18	13052SF ▲	0.375	9.5	1D	5/16 - 24	14052SF ▲
	13053SF ▲	0.563	14.3	1.5D		14053SF ▲
	13054SF ▲	0.750	19.1	2D		14054SF ▲
3/8 - 16	13062SF ▲	0.312	7.9	1D		
	13063SF ▲	0.468	11.9	1.5D		
	13064SF ▲	0.624	15.8	2D		

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.
 Only supplied in full reel quantities.
 Dry film lubing and plating available.

Tangless Inserts

Tangless® Inserts:

- FOD-Free Design: No tangs to break off, retrieve...or lose.
- Approved for use on military programs by NASM8846 and NAS1130.
- Cost Reduction: Significantly decreased installation and inspection time.
- Bi-directional design eliminates insert orientation requirement.
- Quick, non-destructive removal prevents damage to castings.



Metric Tangless CoilThread Inserts are made of cold-rolled Type 304 stainless steel wire (AS7245 and MA1565), work-hardened to a tensile strength above 200,000 psi, a hardness of HRC 43-50 and an exceedingly smooth (8-16 micro-inches) surface finish. Metric Tangless Inserts are designed to replace tanged helical coil inserts as specified in MA3279 through MA3281 (standard thread) and MA3329 through MA3331 (locking thread). They install in standard STI tapped holes per MA1567. Installed inserts provide a finished thread meeting the requirements of FED-STD-H28, M Profile, Tolerance Classes 4H or 5H, as well as ISO metric thread specifications, and accept standard or MJ profile bolts or screws.

TANGLESS - METRIC FREE RUNNING SERIES

Thread Nominal	Nominal Length	Recoil Part No.	Free Coil Dia Min /Max.	Number of Coils	Length (mm)		KATO Part No.
M2.5 - 0.45	1D	TL05252		3.38	2.5		2TNM2.5x.45C-2.5
	1.5D	TL05253	3.20	5.63	3.75		2TNM2.5x.45C-3.8
	2D	TL05254	3.70	8.00	5		2TNM2.5x.45C-5
	2.5D	TL05255 ▲		10.50	6.25		2TNM2.5x.45C-6.3
	3D	TL05256 ▲		12.75	7.5		2TNM2.5x.45C-7.5
M3 - 0.5	1D	TL05032		3.75	3		2TNM3x.5C-3
	1.5D	TL05033	3.80	6.38	4.5		2TNM3x.5C-4.5
	2D	TL05034	4.35	8.88	6		2TNM3x.5C-6
	2.5D	TL05035 ▲		11.38	7.5		2TNM3x.5C-7.5
	3D	TL05036 ▲		13.88	9.0		2TNM3x.5C-9
M4 - 0.7	1D	TL05042		3.63	4		2TNM4x.7C-4
	1.5D	TL05043	5.05	6.13	6		2TNM4x.7C-6
	2D	TL05044	5.60	8.63	8		2TNM4x.7C-8
	2.5D	TL05045 ▲		11.13	10		2TNM4x.7C-10
	3D	TL05046 ▲		13.63	12		2TNM4x.7C-12
M5 - 0.8	1D	TL05052		4.13	5		2TNM5x.8C-5
	1.5D	TL05053	6.20	6.88	7.5		2TNM5x.8C-7.5
	2D	TL05054	6.80	9.63	10		2TNM5x.8C-10
	2.5D	TL05055 ▲		12.38	12.5		2TNM5x.8C-12.5
	3D	TL05056 ▲		15.13	15		2TNM5x.8C-5
M6 - 1	1D	TL05062		4.00	6		2TNM6x1C-6
	1.5D	TL05063	7.40	6.75	9		2TNM6x1C-9
	2D	TL05064	7.95	9.50	12		2TNM6x1C-12
	2.5D	TL05065 ▲		12.125	15		2TNM6x1C-15
	3D	TL05066 ▲		14.875	18		2TNM6x1C-18

Thread Nominal	Nominal Length	Recoil Part No.	Free Coil Dia Min /Max.	Number of Coils	Length (mm)		KATO Part No.
M8 - 1.25	1D	TL05082		4.500	10		2TNM8x1.25C-8
	1.5D	TL05083	9.80	7.38	12		2TNM8x1.25C-12
	2D	TL05084	10.35	10.25	16		2TNM8x1.25C-16
	2.5D	TL05085 ▲		13.25	18		2TNM8x1.25C-20
	3D	TL05086 ▲		16.13	20		2TNM8x1.25C-24
M10 - 1.5	1D	TL05102		4.90	10		2TNM10x1.5C-10
	1.5D	TL05103	11.95	8.00	15		2TNM10x1.5C-15
	2D	TL05104	12.50	11.10	20		2TNM10x1.5C-20
	2.5D	TL05105 ▲		14.25	25		2TNM10x1.5C-25
	3D	TL05106 ▲		17.38	30		2TNM10x1.5C-30

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.
Dry film lubing and plating available.

Tangless Inserts - Screw Locking

TANGLESS - SCREW LOCKING							
Thread Nominal	Nominal Length	Recoil Part No.	Free Coil Dia Min /Max.	Number of Coils	Length (mm)		KATO Part No.
M2.5 - 0.45	1D	TL15252		3.38	2.5		2TLM2.5x.45C-2.5
	1.5D	TL15253	3.20	5.63	3.75		2TLM2.5x.45C-3.8
	2D	TL15254	3.70	8.00	5		2TLM2.5x.45C-5
	2.5D	TL15255 ▲		10.50	6.25		2TLM2.5x.45C-6.3
	3D	TL15256 ▲		12.75	7.5		2TLM2.5x.45C-7.5
M3 - 0.5	1D	TL15032		3.75	3		2TLM3x0.5C-3
	1.5D	TL15033	3.80	6.38	4.5		2TLM3x0.5C-4.5
	2D	TL15034	4.35	8.88	6		2TLM3x0.5C-6
	2.5D	TL15035 ▲		11.38	7.5		2TLM3x0.5C-7.5
	3D	TL15036 ▲		13.88	9.0		2TLM3x0.5C-9
M4 - 0.7	1D	TL15042		3.63	4		2TLM4x0.7C-4
	1.5D	TL15043	5.05	6.13	6		2TLM4x0.7C-6
	2D	TL15044	5.60	8.63	8		2TLM4x0.7C-8
	2.5D	TL15045 ▲		11.13	10		2TLM4x0.7C-10
	3D	TL15046 ▲		13.63	12		2TLM4x0.7C-12
M5 - 0.8	1D	TL15052		4.13	5		2TLM5x0.8C-5
	1.5D	TL15053	6.20	6.88	7.5		2TLM5x0.8C-7.5
	2D	TL15054	6.80	9.63	10		2TLM5x0.8C-10
	2.5D	TL15055 ▲		12.38	12.5		2TLM5x0.8C-12.5
	3D	TL15056 ▲		15.13	15		2TLM5x0.8C-15
M6 - 1	1D	TL15062		4.00	6		2TLM6x1C-6
	1.5D	TL15063	7.40	6.75	9		2TLM6x1C-9
	2D	TL15064	7.95	9.50	12		2TLM6x1C-12
	2.5D	TL15065 ▲		12.13	15		2TLM6x1C-15
	3D	TL15066 ▲		14.88	18		2TLM6x1C-18

Thread Nominal	Nominal Length	Recoil Part No.	Free Coil Dia Min /Max.	Number of Coils	Length (mm)		KATO Part No.
M8 - 1.25	1D	TL15082		4.50	10		2TLM8x1.25C-8
	1.5D	TL15083	9.80	7.38	12		2TLM8x1.25C-12
	2D	TL15084	10.35	10.25	16		2TLM8x1.25C-16
	2.5D	TL15085 ▲		13.25	18		2TLM8x1.25C-20
	3D	TL15086 ▲		16.13	20		2TLM8x1.25C-24
M10 - 1.5	1D	TL15102		4.90	10		2TLM10x1.5C-10
	1.5D	TL15103	11.95	8.00	15		2TLM10x1.5C-15
	2D	TL15104	12.50	11.10	20		2TLM10x1.5C-20
	2.5D	TL15105 ▲		14.25	25		2TLM10x1.5C-25
	3D	TL15106 ▲		17.38	30		2TLM10x1.5C-30

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.
Dry film lubing and plating available.

Tangless Inserts - Tooling



Hex Shank Insertion Tool



Replacement Pawl

HEX SHANK INSERTION TOOL - FREE RUNNING			HEX SHANK INSERTION TOOL - LOCKING			REPLACEMENT PAWL		
Size	Recoil Part No.	Kato Part No.	Size	Recoil Part No.	Kato Part No.	Size	Recoil Part No.	Kato Part No.
M2.5 - 0.45	2CT10-M2.5F	2CT10-M2.5F	M2.5 - 0.45	2CT10-M2.5L	2CT10-M2.5L	M2.5 - 0.45	2CT10-M2.5P	2CT20-M2.5
M3 - 0.5	2CT10-M3F	2CT10-M3F	M3 - 0.5	2CT10-M3L	2CT10-M3L	M3 - 0.5	2CT10-M3P	2CT20-M3
M4 - 0.7	2CT10-M4F	2CT10-M4F	M4 - 0.7	2CT10-M4L	2CT10-M4L	M4 - 0.7	2CT10-M4P	2CT20-M4
M5 - 0.8	2CT10-M5F	2CT10-M5F	M5 - 0.8	2CT10-M5L	2CT10-M5L	M5 - 0.8	2CT10-M5P	2CT20-M5
M6 - 1	2CT10-M6F	2CT10-M6F	M6 - 1	2CT10-M6L	2CT10-M6L	M6 - 1	2CT10-M6P	2CT20-M6
M8 - 1.25	2CT10-M8F	2CT10-M8F	M8 - 1.25	2CT10-M8L	2CT10-M8L	M8 - 1.25	2CT10-M8P	2CT20-M8
M10 - 1.5	2CT10-M10F	2CT10-M10F	M10 - 1.5	2CT10-M10L	2CT10-M10L	M10 - 1.5	2CT10-M10P	2CT20-M10
M12 - 1.75	2CT10-M12F	2CT10-M12F	M12 - 1.75	2CT10-M12L	2CT10-M12L	M12 - 1.75	2CT10-M12P	2CT20-M12

Taps - Straight Flute Taps (Hand/Short Machine)

Metric - ISO Dimensions, HSS Material - 4H5H Tolerance



METRIC COARSE			METRIC MEDIUM			METRIC FINE		
Thread Size	Part No.	Type	Thread Size	Part No.	Type	Thread Size	Part No.	Type
M2 - 0.4	45024	TAPER						
	45025	INTER						
	45026	BOTT						
M2.2 - 0.45	45014 ▲	TAPER						
	45015	INTER						
	45016	BOTT						
M2.5 - 0.45	45254	TAPER						
	45255	INTER						
	45256	BOTT						
M3 - 0.5	45034	TAPER						
	45035	INTER						
	45036	BOTT						
M3.5 - 0.6	45354	TAPER						
	45355	INTER						
	45356	BOTT						
M4 - 0.7	45044	TAPER						
	45045	INTER						
	45046	BOTT						
M5 - 0.8	45054	TAPER						
	45055	INTER						
	45056	BOTT						
M6 - 1	45064	TAPER						
	45065	INTER						
	45066	BOTT						
	45067	P/NOSE						
	45065LH	L/HAND						
M7 - 1	45074	TAPER						
	45075	INTER						
	45076	BOTT						
M8 - 1.25	45084	TAPER	M8 - 1	47084	TAPER	M8 - 0.75	48084 ▲	TAPER
	45085	INTER		47085	INTER		48085 ▲	INTER
	45086	BOTT		47086	BOTT		48086 ▲	BOTT
	45087	P/NOSE						
	45085LH	L/HAND						
M9 - 1.25	45094	TAPER	M9 - 1	47094 ▲	TAPER			
	45095	INTER		47095	INTER			
	45096 ▲	BOTT		47096	BOTT			
M10 - 1.5	45104	TAPER	M10 - 1.25	47104	TAPER	M10 - 1	48104	TAPER
	45105	INTER		47105	INTER		48105	INTER
	45106	BOTT		47106	BOTT		48106	BOTT
	45107	P/NOSE		47107	P/NOSE		48107	P/NOSE
	45105LH	L/HAND						
M11 - 1.5	45114	TAPER	M11 - 1.25	47114	TAPER	M11 - 1	48114	TAPER
	45115	INTER		47115	INTER		48115	INTER
	45116	BOTT		47116	BOTT		48116	BOTT

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.
 Only supplied in full reel quantities.
 Dry film lubing and plating available.

Taps - Straight Flute Taps (Hand/Short Machine)

Metric - ISO Dimensions, HSS Material - 4H5H Tolerance



METRIC COARSE			METRIC MEDIUM			METRIC FINE		
Thread Size	Part No.	Type	Thread Size	Part No.	Type	Thread Size	Part No.	Type
M12 - 1.75	45124	TAPER	M12 - 1.5	47124	TAPER	M12 - 1.25	48124	TAPER
	45125	INTER		47125	INTER		48125	INTER
	45126	BOTT		47126	BOTT		48126	BOTT
	45127	P/NOSE					48127	P/NOSE
	45125LH	L/HAND						
						M12 - 1	48124-1▲	TAPER
							48125-1	INTER
							48126-1▲	BOTT
M13 - 1.75	45135	INTER	M13 - 1.5	47135	INTER	M13 - 1.25	48135	INTER
M14 - 2	45144	TAPER	M14 - 1.5	47144	TAPER	M14 - 1.25	48144	TAPER
	45145	INTER		47145	INTER		48145	INTER
	45146	BOTT		47146	BOTT		48146	BOTT
							48147	P/NOSE
M15 - 2	45154▲	TAPER	M15 - 1.5	47154▲	TAPER			
	45155	INTER		47155	INTER			
	45156	BOTT		47156	BOTT			
M16 - 2	45164	TAPER	M16 - 1.5	47164	TAPER			
	45165	INTER		47165	INTER			
	45166	BOTT		47166	BOTT			
M18 - 2.5	45184	TAPER	M18 - 2	47184	TAPER	M18 - 1.5	48184	TAPER
	45185	INTER		47185	INTER		48185	INTER
	45186	BOTT		47186	BOTT		48186	BOTT
							48187	P/NOSE
M20 - 2.5	45204	TAPER	M20 - 2	47204	TAPER	M20 - 1.5	48204	TAPER
	45205	INTER		47205	INTER		48205	INTER
	45206	BOTT		47206	BOTT		48206	BOTT
M22 - 2.5	45224	TAPER	M22 - 2	47224▲	TAPER	M22 - 1.5	48224	TAPER
	45225	INTER		47225	INTER		48225	INTER
	45226	BOTT		47226▲	BOTT		48226	BOTT
M24 - 3	45244	TAPER	M24 - 2	47244	TAPER	M24 - 1.5	48244	TAPER
	45245	INTER		47245	INTER		48245	INTER
	45246	BOTT		47246	BOTT		48246	BOTT
						M26 - 1.5	48264▲	TAPER
							48265	INTER
							48266	BOTT
M27 - 3	45274	TAPER	M27 - 2	47274	TAPER	M27 - 1.5	48274▲	TAPER
	45275	INTER		47275	INTER		48275	INTER
	45276	BOTT		47276▲	BOTT		48276▲	BOTT
M30 - 3.5	45304	TAPER	M30 - 2	47304	TAPER	M30 - 1.5	48304	TAPER
	45305	INTER		47305	INTER		48305	INTER
	45306	BOTT		47306	BOTT		48306	BOTT
M30 - 3	45305-3	INTER						
M33 - 3.5	45334	TAPER	M33 - 2	47334▲	TAPER			
	45335	INTER		47335	INTER			
	45336	BOTT		47336	BOTT			
M36 - 4	45364▲	TAPER	M36 - 3	47364▲	TAPER	M36 - 1.5	48364▲	TAPER
	45365	INTER		47365	INTER		48365	INTER
	45366	BOTT		47366	BOTT		48366▲	BOTT
M39 - 4	45394▲	TAPER	M39 - 3	47394▲	TAPER	M39 - 2	48394▲	TAPER
	45395	INTER		47395	INTER		48395	INTER
	45396▲	BOTT		47396▲	BOTT		48396▲	BOTT
M42 - 4.5	45424▲	TAPER	M42 - 3	47424▲	TAPER	M42 - 2	48424▲	TAPER
	45425▲	INTER		47425▲	INTER		48425▲	INTER
	45426▲	BOTT		47426	BOTT		48426	BOTT
M42 - 4	45425-4▲	INTER						

Taps - Straight Flute & Spiral Point Taps (Machine)

Metric - ISO Dimensions, HSS Material - Spiral Flute & Spiral Point - 4H5H Tolerance



METRIC COARSE			METRIC MEDIUM			
Thread Size	Part No.	Type	Thread Size	Part No.	Type	
M2 - 0.4	45028	SP/POINT				
	45029	SP/FLUTE				
M2.2 - 0.45	45018	SP/POINT				
	45019	SP/FLUTE				
M2.5 - 0.45	45258	SP/POINT				
	45259	SP/FLUTE				
M3 - 0.5	45038	SP/POINT				
	45039	SP/FLUTE				
M3.5 - 0.6	45358	SP/POINT				
	45359	SP/FLUTE				
M4 - 0.7	45048	SP/POINT				
	45049	SP/FLUTE				
	45058	SP/POINT				
M5 - 0.8	45059	SP/FLUTE				
M6 - 1	45068	SP/POINT				
	45069	SP/FLUTE				
M8 - 1.25	45088	SP/POINT	M8 - 1	47088	SP/POINT	
	45089	SP/FLUTE		47089	SP/FLUTE	
M10 - 1.5	45108	SP/POINT	M10 - 1.25	47108	SP/POINT	
	45109	SP/FLUTE		47109	SP/FLUTE	
M12 - 1.75	45128	SP/POINT	M12 - 1.5	47128 ▲	SP/POINT	
	45129	SP/FLUTE		47129	SP/FLUTE	
M14 - 2	45148	SP/POINT	M14 - 1.5	47148	SP/POINT	
	45149	SP/FLUTE		47149	SP/FLUTE	
M16 - 2	45168	SP/POINT	M16 - 1.5	47168	SP/POINT	
	45169	SP/FLUTE		47169	SP/FLUTE	
M18 - 2.5	45188	SP/POINT				
	45189	SP/FLUTE				
M20 - 2.5	45208	SP/POINT				
	45209	SP/FLUTE				
M24 - 3	45248	SP/POINT				
	45249	SP/FLUTE				

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply.

Taps - Straight Flute Taps (Hand/Short Machine)

Inch- ISO British Dimensions, ANSI / BS Dimensions, Other Sizes HSS Material - 3B Tolerance



UNC				BSW				UNF			
Thread Size	Part No.	Type		Thread Size	Part No.	Type		Thread Size	Part No.	Type	
#2 - 56	43524	TAPER		1/8 - 40	42024 ▲	TAPER					
	43525	INTER			42025	INTER					
	43526	BOTT			42026 ▲	BOTT					
#3 - 48	43534 ▲	TAPER						#3 - 56	44534 ▲	TAPER	
	43535	INTER							44535	INTER	
	43536 ▲	BOTT							44536 ▲	BOTT	
#4 - 40	43544	TAPER						#4 - 48	44544 ▲	TAPER	
	43545	INTER							44545	INTER	
	43546	BOTT							44546 ▲	BOTT	
#5 - 40	43554	TAPER									
	43555	INTER									
	43556	BOTT									
#6 - 32	43564	TAPER						#6 - 40	44564 ▲	TAPER	
	43565	INTER							44565	INTER	
	43566	BOTT							44566 ▲	BOTT	
#8 - 32	43584	TAPER						#8 - 36	44584 ▲	TAPER	
	43585	INTER							44585	INTER	
	43586	BOTT							44586 ▲	BOTT	
#10 - 24	43604	TAPER		3/16 - 24	42034	TAPER		#10 - 32	44604	TAPER	
	43605	INTER			42035	INTER			44605	INTER	
	43606	BOTT			42036	BOTT			44606	BOTT	
#12 - 24	43624	TAPER						#12 - 28	44624 ▲	TAPER	
	43625	INTER							44625	INTER	
	43626	BOTT							44626 ▲	BOTT	
1/4 - 20	43044	TAPER		1/4 - 20	42044	TAPER		1/4 - 28	44044	TAPER	
	43045	INTER			42045	INTER			44045	INTER	
	43046	BOTT			42046	BOTT			44046	BOTT	
5/16 - 18	43054	TAPER		5/16 - 18	42054	TAPER		5/16 - 24	44054	TAPER	
	43055	INTER			42055	INTER			44055	INTER	
	43056	BOTT			42056	BOTT			44056	BOTT	
3/8 - 16	43064	TAPER		3/8 - 16	42064	TAPER		3/8 - 24	44064	TAPER	
	43065	INTER			42065	INTER			44065	INTER	
	43066	BOTT			42066	BOTT			44066	BOTT	
7/16 - 14	43074	TAPER		7/16 - 14	42074	TAPER		7/16-20	44074	TAPER	
	43075	INTER			42075	INTER			44075	INTER	
	43076	BOTT			42076	BOTT			44076	BOTT	
1/2 - 13	43084	TAPER		1/2 - 12	42084	TAPER		1/2 - 20	44084	TAPER	
	43085	INTER			42085	INTER			44085	INTER	
	43086	BOTT			42086	BOTT			44086	BOTT	
9/16 - 12	43094	TAPER		9/16 - 12	42094 ▲	TAPER		9/16 - 18	44094	TAPER	
	43095	INTER			42095	INTER			44095	INTER	
	43096	BOTT			42096 ▲	BOTT			44096	BOTT	
5/8 - 11	43104	TAPER		5/8 - 11	42104 ▲	TAPER		5/8 - 18	44104	TAPER	
	43105	INTER			42105	INTER			44105	INTER	
	43106	BOTT			42106 ▲	BOTT			44106	BOTT	
11/16 - 11	43114 ▲	TAPER									
	43115	INTER									
	43116 ▲	BOTT									
3/4 - 10	43124	TAPER		3/4 - 10	42124 ▲	TAPER		3/4 - 16	44124	TAPER	
	43125	INTER			42125 ▲	INTER			44125	INTER	
	43126	BOTT			42126 ▲	BOTT			44126	BOTT	
7/8 - 9	43144	TAPER		7/8 - 9	42144 ▲	TAPER		7/8 - 14	44144 ▲	TAPER	
	43145	INTER			42145	INTER			44145	INTER	
	43146	BOTT			42146 ▲	BOTT			44146 ▲	BOTT	

▲ Denotes non-popular parts - Price On Application.
Minimum quantities and order values may apply.

Taps - Straight Flute Taps (Hand/Short Machine)

Inch - ISO British Dimensions, ANSI / BS Dimensions, Other Sizes HSS Material - 3B Tolerance



UNC		
Thread Size	Part No.	Type
1" - 8	43164 ▲	TAPER
	43165	INTER
	43166	BOTT
1 1/8 - 7	43184 ▲	TAPER
	43185	INTER
	43186 ▲	BOTT
1 1/4 - 7	43204	TAPER
	43205	INTER
	43206	BOTT
1 3/8 - 6	43224	TAPER
	43225	INTER
	43226	BOTT
1 1/2 - 6	43244	TAPER
	43245	INTER
	43246	BOTT

BSW		
Thread Size	Part No.	TYPE
1" - 8	42164 ▲	TAPER
	42165	INTER
	42166 ▲	BOTT
1 1/8 - 7	42184 ▲	TAPER
	42185	INTER
	42186 ▲	BOTT
1 1/4 - 7	42204 ▲	TAPER
	42205	INTER
	42206 ▲	BOTT
1 3/8 - 6	42224 ▲	TAPER
	42225	INTER
	42226 ▲	BOTT
1 1/2 - 6	42244 ▲	TAPER
	42245	INTER
	42246 ▲	BOTT

UNF		
Thread Size	Part No.	TYPE
1" - 12	44164 ▲	TAPER
	44165	INTER
	44166 ▲	BOTT
1" - 14	44164-14 ▲	TAPER
	44165-14	INTER
	44166-14 ▲	BOTT
1 1/8 - 12	44184 ▲	TAPER
	44185	INTER
	44186 ▲	BOTT
1 1/4 - 12	44204 ▲	TAPER
	44205	INTER
	44206 ▲	BOTT
1 3/8 - 12	44224 ▲	TAPER
	44225	INTER
	44226 ▲	BOTT
1 1/2 - 12	44244 ▲	TAPER
	44245	INTER
	44246 ▲	BOTT

UNC		
Thread Size	Part No.	Type
#2 - 56	43528 ▲	SP/POINT
	43529	SP/FLUTE
#3 - 48	43538 ▲	SP/POINT
	43539	SP/FLUTE
#4 - 40	43548 ▲	SP/POINT
	43549	SP/FLUTE
#5 - 40	43558 ▲	SP/POINT
	43559	SP/FLUTE
#6 - 32	43568 ▲	SP/POINT
	43569	SP/FLUTE
#8 - 32	43588 ▲	SP/POINT
	43589	SP/FLUTE
#10 - 24	43608 ▲	SP/POINT
	43609	SP/FLUTE
#12 - 24	43628 ▲	SP/POINT
	43629	SP/FLUTE
1/4 - 20	43048 ▲	SP/POINT
	43049	SP/FLUTE
5/16 - 18	43058 ▲	SP/POINT
	43059	SP/FLUTE
3/8 - 16	43068 ▲	SP/POINT
	43069	SP/FLUTE
7/16 - 14	43078 ▲	SP/POINT
	43079	SP/FLUTE
1/2 - 13	43088 ▲	SP/POINT
	43089	SP/FLUTE
5/8 - 11	43108 ▲	SP/POINT
	43109	SP/FLUTE
3/4 - 10	43128 ▲	SP/POINT
	43129	SP/FLUTE
7/8 - 9	43148 ▲	SP/POINT
	43149	SP/FLUTE
1" - 8	43168 ▲	SP/POINT
	43169 ▲	SP/FLUTE

UNF			
Thread Size	Part No.	Type	Price
#4 - 48	44548 ▲	SP/POINT	
	44549 ▲	SP/FLUTE	
#6 - 40	44568 ▲	SP/POINT	
	44569 ▲	SP/FLUTE	
#8 - 36	44588 ▲	SP/POINT	
	44589 ▲	SP/FLUTE	
#10 - 32	44608 ▲	SP/POINT	
	44609	SP/FLUTE	
1/4 - 28	44048 ▲	SP/POINT	
	44049	SP/FLUTE	
5/16 - 24	44058	SP/POINT	
	44059	SP/FLUTE	
3/8 - 24	44068 ▲	SP/POINT	
	44069	SP/FLUTE	
7/16 - 20	44078 ▲	SP/POINT	
	44079	SP/FLUTE	
1/2 - 20	44088 ▲	SP/POINT	
	44089	SP/FLUTE	
5/8 - 18	44108 ▲	SP/POINT	
	44109	SP/FLUTE	
3/4 - 16	44128 ▲	SP/POINT	
	44129	SP/FLUTE	

▲ Denotes non-popular parts - Price On Application.
Minimum quantities and order values may apply.

Taps - Straight Flute Taps (Hand/Short Machine)

Inch - ISO British Dimensions, ANSI / BS Dimensions, BA Dimensions, Other Sizes, HSS Material - 3B Tolerance



BSF		
Thread Size	Part No.	Type
3/16 - 32	40034 ▲	TAPER
	40035	INTER
	40036	BOTT
1/4 - 26	40044 ▲	TAPER
	40045	INTER
	40046	BOTT
5/16 - 22	40054 ▲	TAPER
	40055	INTER
	40056 ▲	BOTT
3/8 - 20	40064 ▲	TAPER
	40065	INTER
	40066 ▲	BOTT
7/16 - 18	40074 ▲	TAPER
	40075	INTER
	40076 ▲	BOTT
1/2 - 16	40084 ▲	TAPER
	40085	INTER
	40086 ▲	BOTT
9/16 - 16	40094 ▲	TAPER
	40095	INTER
	40096 ▲	BOTT
5/8 - 14	40104 ▲	TAPER
	40105	INTER
	40106 ▲	BOTT
3/4 - 12	40124 ▲	TAPER
	40125 ▲	INTER
	40126 ▲	BOTT
7/8 - 11	40144 ▲	TAPER
	40145	INTER
	40146 ▲	BOTT
1" - 10	40164 ▲	TAPER
	40165	INTER
	40166 ▲	BOTT
1 1/4 - 9	40204 ▲	TAPER
	40205	INTER
	40206 ▲	BOTT

BA		
Thread Size	Part No.	Type
0 BA	40504 ▲	TAPER
	40505	INTER
	40506	BOTT
2 BA	40524	TAPER
	40525	INTER
	40526	BOTT
4 BA	40544	TAPER
	40545	INTER
	40546	BOTT
6 BA	40564	TAPER
	40565	INTER
	40566	BOTT

BSP		
Thread Size	Part No.	Type
1/8 - 28	41024 ▲	TAPER
	41025	INTER
	41026	BOTT
1/4 - 19	41044	TAPER
	41045	INTER
	41046	BOTT
3/8 - 19	41064	TAPER
	41065	INTER
	41066	BOTT
1/2 - 14	41084	TAPER
	41085	INTER
	41086	BOTT
5/8 - 14	41104	TAPER
	41105	INTER
	41106	BOTT
3/4 - 14	41124	TAPER
	41125	INTER
	41126	BOTT
1" - 11	41164	TAPER
	41165	INTER
	41166	BOTT

SPECIAL SIZES		
Thread Size	Part No.	Type
UNEF 1/4 - 32	44044-32	TAPER
	44045-32	INTER
	44046-32	BOTT
HARLEY 1/4 - 24	44044-24▲	TAPER
	44045-24	INTER
	44046-24	BOTT
HARLEY 7/16 - 16	44074-16	TAPER
	44075-16	INTER
	44076-16	BOTT
CARB. 7/8 - 20	44144-20	TAPER
	44145-20	INTER
	44146-20	BOTT
CARB. 1 - 20	44164-20▲	TAPER
	44165-20	INTER
	44166-20	BOTT
CUMMINS 11/16 - 16	44114-16	TAPER
	44115-16	INTER
	44116-16▲	BOTT

NPT			
Thread Size	Part No.	Type	Price
1/8 - 27	46024 ▲	TAPER	
	46025	INTER	
	46026	BOTT	
1/4 - 18	46044 ▲	TAPER	
	46045	INTER	
	46046	BOTT	
3/8 - 18	46064	TAPER	
	46065	INTER	
	46066	BOTT	
1/2 - 14	46084 ▲	TAPER	
	46085	INTER	
	46086	BOTT	
3/4 - 14	46124 ▲	TAPER	
	46125	INTER	
	46126	BOTT	
1 - 11 1/2	46164 ▲	TAPER	
	46165	INTER	
	46166	BOTT	

BSC		
Thread Size	Part No.	Type
5/16 - 26	46504	TAPER
	46505	INTER
	46506	BOTT
3/8 - 26	46604	TAPER
	46605	INTER
	46606 ▲	BOTT
7/16 - 26	46704 ▲	TAPER
	46705	INTER
	46706 ▲	BOTT
1/2 - 26	46804 ▲	TAPER
	46805	INTER
	46806 ▲	BOTT

8 TPI UN		
Thread Size	Part No.	Type
1 1/8 - 8	46184 ▲	TAPER
	46185	INTER
	46186 ▲	BOTT
1 1/4 - 8	46204	TAPER
	46205	INTER
	46206	BOTT
1 3/8 - 8	46224 ▲	TAPER
	46225	INTER
	46226 ▲	BOTT
1 1/2 - 8	46244	TAPER
	46245	INTER
	46246	BOTT

8 TPI UN		
Thread Size	Part No.	Type
1 5/8 - 8	46264	TAPER
	46265	INTER
	46266 ▲	BOTT
1 3/4 - 8	46284	TAPER
	46285	INTER
	46286	BOTT
1 7/8 - 8	46304 ▲	TAPER
	46305	INTER
	46306	BOTT
2" - 8	46324 ▲	TAPER
	46325	INTER
	46326	BOTT

▲ Denotes non-popular parts - Price On Application.
Minimum quantities and order values may apply.

Tap Coatings - TiN - Titanium Nitride Coating

TiCN - Titanium Carbonitride Coating, TiAlN - Titanium Aluminium Nitride Coating

TAP SIZES			
INCH	BA	METRIC	
#2		M2	
#3		M2.5	
#4	6BA	M3	
#5, 1/8"			
#6	4BA	M3.5	
#8		M4	
#10	2BA	M5	
#12			
1/4"	0BA	M6	
		M7	
5/16"		M8	
3/8"		M9	
		M10	
7/16"		M11	
		M12	
1/2"		M13	
9/16"		M14	
		M15	
5/8"		M16	
		M18	
3/4"			
11/16"		M20	
7/8"		M22	
		M24	
1"			
		M27	
1 1/8"			
		M30	
1 1/4"			
		M33	
1 3/8"			
		M36	
1 1/2"			
		M39	
1 5/8"		M42	
1 3/4"		M47	
1 7/8"		M48	
2"		M50	



Taper



Intermediate



Spiral flute



Bottoming



Spiral point

Re-Grip / Plugsaver / Gauges / Drill-Out / X-Out

RE-GRIP - Friction Enhancing Compound	
Part No.	Size
11111	15ml tube on backing card

PITCH/TPI GAUGES	
Part No.	Size
65000	Metric
63000	Inch
69000	1 each Metric and Inch set

POWER EXTRACTORS - For removal broken Bolts, studs and screws

DRILL OUT - Power extractor for broken Bolts or studs

Micro Drill-Out Power Extractors	Size
P125	#5, #6, M3
P164	#8 & M4
P190	#10, #12 & M5
P236	1/4" & M6

Drill-Out Power Extractors	Size
P250	1/4" or 6mm
P312	5/16" or 8mm
P375	3/8" or 10mm
P500	1/2" or 12mm

Drill-Out Range Kits	Size
P450	Kit comprises P125, P164, P190, P230
P401	Kit comprises P250, P312, P375, P500
P701	Kit comprises P125, P164, P190, P236, P312, P375, P500

X-OUT - Extractors for removing all types of screws

Part No.	Size
2019P8001	Set of 3 X-Outs Removes # 8 to # 14 screws
2001P8001	Single X-Out Removes # 6 to # 8 screws
2003P8001	Single X-Out Removes # 10 to # 14 screws



Re - Grip



Thread Pitch Gauges



Drill - Out



X - Out

Gauges - For Gauging STI Holes

i.e. the tapped hole before the insert is installed



METRIC COARSE 65000+ TOLERANCE				
Size	4H5H		5H MED	
M2.0 - 0.4	65024		65025	
M2.2 - 0.45	65014		65015	
M2.5 - 0.45	65254		65255	
M3 - 0.5	65034		65035	
M3.5 - 0.6	65354		65355	
M4 - 0.7	65044		65045	
M5 - 0.8	65054		65055	
M6 - 1	65064		65065	
M7 - 1	65074		65075	
M8 - 1.25	65084		65085	
M9 - 1.25	65094		65095	
M10 - 1.5	65104		65105	
M11 - 1.5	65114		65115	
M12 - 1.75	65124		65125	
M13 - 1.75	65134		65135	
M14 - 2	65144		65145	
M15 - 2	65154		65155	
M16 - 2	65164		65165	
M18 - 2.5	65184		65185	
M20 - 2.5	65204		65205	
M22 - 2.5	65224		65225	
M24 - 3	65244		65245	
M27 - 3	65274		65275	
M30 - 3.5	65304		65305	
M30 - 3	65304-3		65305-3	
M36 - 4	65364		65365	
M39 - 4	65394		65395	
M42 - 4.5	65424		65425	
M42 - 4	65424-4		65425-4	

BSC 66500+ TOLERANCE				
Size		CLOSE		MEDIUM
1/4 - 26				60042
5/16 - 26				66502
3/8 - 26				66602
7/16 - 26				66702
1/2 - 26				66802

METRIC MEDIUM 67000+ TOLERANCE				
Size	4H5H		5H MED	
M8 - 1	67084		67085	
M9 - 1	67094		67095	
M10 - 1.25	67104		67105	
M11 - 1.25	67114		67115	
M12 - 1.5	67124		67125	
M13 - 1.5	67134		67135	
M14 - 1.5	67144		67145	
M15 - 1.5	67154		67155	
M16 - 1.5	67164		67165	
M18 - 2	67184		67185	
M20 - 2	67204		67205	
M22 - 2	67224		67225	
M24 - 2	67244		67245	
M27 - 2	67274		67305	
M30 - 2	67304		67305	
M36 - 3	67364		67365	
M39 - 3	67394		67395	
M42 - 3	67424		67425	

UNC 63000+ TOLERANCE				
Size	3B CLOSE		2B MEDIUM	
#2 - 56	63523		63522	
#3 - 48	63533		63532	
#4 - 40	63543		63542	
#5 - 40	63553		63552	
#6 - 32	63563		63562	
#8 - 32	63583		63582	
#10 - 24	63603		63602	
#12 - 24	63623		63622	
1/4 - 20	63043		63042	
5/16 - 18	63053		63052	
3/8 - 16	63063		63062	
7/16 - 14	63073		63072	
1/2 - 13	63083		63082	
9/16 - 12	63093		63092	
5/8 - 11	63103		63102	
11/16 - 11	63113		63112	
3/4 - 10	63123		63122	
7/8 - 9	63143		63142	
1" - 8	63163		63162	
1 1/8 - 7	63183		63182	
1 1/4 - 7	63203		63202	
1 3/8 - 6	63223		63222	
1 1/2 - 6	63243		63242	

UNF 64000+ TOLERANCE				
Size	3B CLOSE		2B MEDIUM	
#3 - 56	64533		64532	
#4 - 48	64543		64542	
#6 - 40	64563		64562	
#8 - 36	64583		64582	
#10 - 32	64603		64602	
1/4 - 28	64043		64042	
5/16 - 24	64053		64052	
3/8 - 24	64063		64062	
7/16 - 20	64073		64072	
1/2 - 20	64083		64082	
9/16 - 18	64093		64092	
5/8 - 18	64103		64102	
3/4 - 16	64123		64122	
7/8 - 14	64143		64142	
1" - 12	64163		64162	
1" - 14	64163-14		64162-14	
1 1/8 - 12	64183		64182	
1 1/4 - 12	64203		64202	
1 3/8 - 12	64223		64222	
1 1/2 - 12	64243		64242	

Gauges - For Gauging STI Holes

i.e. the tapped hole before the insert is installed



BA 60500+ TOLERANCE			
Size	MEDIUM		
0 BA			60502
1 BA			60512
2 BA			60522
4 BA			60542
6 BA			60562

METRIC X-FINE 68000+ TOLERANCE			
Size	4H5H	5H MED	
M10 - 1	68104		68105
M11 - 1	68114		68115
M12 - 1.25	68124		68125
M13 - 1.25	68134		68135
M18 - 1.5*	68184		68185
M20 - 1.5	68204		68205
M22 - 1.5	68224		68225
M24 - 1.5	68244		68245
M26 - 1.5	68264		68265
M27 - 1.5	68274		68275
M30 - 1.5	68304		68305
M36 - 1.5	68364		68365
M39 - 2	68394		68395
M42 - 2	68424		68425

* Different to sparkplug

SPARKPLUG 68000+ TOLERANCE			
Size	4H5H	5H MED	
M10 - 1	68104		
M12 - 1.25	68124		
M14 - 1.25	68144		
M18 - 1.5	68184		

8 TPI UN 66100+ TOLERANCE			
Size	3B CLOSE	2BMED	
1 1/8 - 8	66183		66182
1 1/4 - 8	66204		66202
1 3/8 - 8	66223		66222
1 1/2 - 8	66243		66242
1 5/8 - 8	66263		66262
1 3/4 - 8	66283		66282
1 7/8 - 8	66303		66302
2 - 8	66323		66322

BSP 61000+ TOLERANCE			
Size	MEDIUM ONLY		
1/8 - 28			61022
1/4 - 19			61042
3/8 - 19			61062
1/2 - 14			64082
5/8 - 14			61102
3/4 - 14			61122
1" - 11			61162

NPT 66000+ TOLERANCE			
Size	3B CLOSE	2BMED	
1/8 - 27	66023		
1/4 - 18	66043		
3/8 - 18	66063		
1/2 - 14	66083		
3/4 - 14	66123		
1 - 1 1/2	66163		

BSW 62000+ TOLERANCE			
Size	MEDIUM ONLY		
1/8 - 40			62022
3/16 - 24			62032
1/4 - 20			62042
5/16 - 18			62052
3/8 - 16			62062
7/16 - 14			62072
1/2 - 12			62082
9/16 - 12			62092
5/8 - 11			62102
3/4 - 10			62122
7/8 - 9			62142
1" - 8			62162
1 1/8 - 7			62182
1 1/4 - 7			62202
1 3/8 - 6			62222
1 1/2 - 6			62242

BSF 60000+ TOLERANCE			
Size	3B CLOSE	2BMED	
3/16 - 32			60032
1/4 - 26			60042
5/16 - 22			60052
3/8 - 20			60062
7/16 - 18			60072
1/2 - 16			60082
9/16 - 16			60092
5/8 - 14			60102
3/4 - 12			60122
7/8 - 11			60142
1" - 10			60162
1 1/4 - 9			60202

Power Installation Tools



UNC		SUIT ARO & NR TOOLS	
FRONT END ASSEMBLY			
Size	Part No.		
#2 - 56	53520		
#4 - 40	M8551-04-15		
#5 - 40	M8851-05-15		
#6 - 32	M8551-06-15		
#8 - 32	M8551-2-15		
#10 - 24	M8551-3-15		
1/4 - 20	M8551-4-15		
5/16 - 18	M8251-5-15		
3/8 - 16	M8251-6-16		
7/16 - 14	M8251-7-15		
1/2 - 13	M8251-8-15		
5/8 - 11	53100		
3/4 - 10	53120		

NR SERIES*		SPARE PARTS FOR FRONT END ASSEMBLY			
NR MOTOR & ADAPTOR		MOTOR - ADAPTOR SIZE		FRONT END ASSEMBLY MANDREL	
Part No.	Size	Part No.	Part No.	Part No.	Part No.
NR-HL1409	#2 - 56	53528		53529	
NR-HL1409	#4 - 40	M8557-04-15		M8553-04	
NR-HL1409	#5 - 40	M8557-05-15		M8553-05	
NR-HL1409	#6 - 32	M8557-06-15		M8553-06	
NR-HL1409	#8 - 32	M8557-2-15		M8553-2	
NR-HL1409	#10 - 24	M8557-3-15		M8553-3	
NR-HL1409	1/4 - 20	M8557-4-15		M8553-4	
NR-HL1410	5/16-18	M8257-5-15		M8253-5	
NR-HL1410	3/8 - 16	M8257-6-15		M8253-6	
NR-HL1410	7/16 - 14	M8257-7-15		M8253-7	
NR-HL1410	1/2 - 13	M8257-8-15		M8253-8	
NR-HL1410	5/8 - 11	53108		53109	
NR-HL1410	3/4 - 10	53128		53129	

UNF	Part No.		
#6 - 40	54560		
#10 - 32	M8552-3-15		
1/4 - 28	M8552-4-15		
5/16 - 24	M8252-5-15		
3/8 - 24	54060		
7/16 - 20	M8252-7-15		
1/2 - 20	M8252-8-15		
5/8 - 18	M8252-9		
3/4 - 16	54120		

Part No.	UNF	Part No.	Part No.
NR-HL1409	#6 - 40	54568	54569
NR-HL1409	#10 - 32	M8558-3-15	M8554-3
NR-HL1409	1/4 - 28	M8558-4-15	M8554-4
NR-HL1410	5/16 - 24	M8258-5-15	M8254-5
NR-HL1410	3/8 - 24	54068	54069
NR-HL1410	7/16 - 20	M8258-7-15	M8254-7
NR-HL1410	1/2 - 20	M8258-8-15	M8254-8
NR-HL1410	5/8 - 18	M8258-9	M8254-9
NR-HL1410	3/4 - 16	54128	54129

METRIC COARSE			
M2.2 - 0.45	55250		
M2.5 - 0.45	55250		
M3 - 0.5	M8751-3-15		
M3.5 - 0.6	M8751-3.5-15		
M4 - 0.7	M8751-4-15		
M5 - 0.8	M8751-5-15		
M6 - 1	M8751-6-15		
M7 - 1	55070		
M8 - 1.25	M8751-8-15		
M10 - 1.5	M8751-10-15		
M12 - 1.75	M8751-12-15		
M16 - 2	55160		

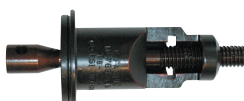
Part No.	Price	METRIC COARSE	Part No.
NR-HL1409		M2.2 - 0.45	55258
NR-HL1409		M2.5 - 0.45	55258
NR-HL1409		M3 - 0.5	M8769-3-15
NR-HL1409		M3.5 - 0.6	M8769-3.5-15
NR-HL1409		M4 - 0.7	M8769-4-15
NR-HL1409		M5 - 0.8	M8769-5-15
NR-HL1409		M6 - 1	M8769-6-15
NR-HL1410		M7 - 1	55078
NR-HL1410		M8 - 1.25	M8769-8-15
NR-HL1410		M10 - 1.5	M8769-10-15
NR-HL1410		M12 - 1.75	M8769-12-15
NR-HL1410		M16 - 2	55168

METRIC FINE			
M8 - 1	57080		
M10 - 1.25	57100		
M12 - 1.25	58120		
M12 - 1.5	57120		
M14 - 1.5	M8753-14		

Part No.	METRIC FINE	Part No.	Part No.
NR-HL1410	M8 - 1	57088	57089
NR-HL1410	M10 - 1.25	57108	57109
NR-HL1410	M12 - 1.25	58128	58129
NR-HL1410	M12 - 1.5	57128	57129
NR-HL1410	M14 - 1.5	M8773-14	M8774-14



Pneumatic Power Tool
(Air motor and adaptor)



Front End Assembly including Mandrel
(1 mandrel only in kit)



Electric Power Tool with Mandrel

Power Installation Tools



PNEUMATIC TANG BREAK-OFF TOOLS			
Metric Sizes	Inch Sizes	Part No.	
M6	1/4-20, 1/4-28	59192	
M10	3/8-16, 3/8-24	59252	
M12	1/2-12, 1/2-13	59332	
M14-1.5		59462	

WORK-ARM TOOL HOLDER*		Part No.
MANUAL - 16" - 38" Length of Reach		56014

Workarm/Tool Holder must be used on M2.5, 2.2 and 2-56 inserts.
 NOTE: Front End Assembly suits up to 2D inserts and up to 1.5D for 3/4", M20.
 Use on locking inserts 5/8", M14 and larger is marginal for power.
 No slot provided for strip feed. All other sizes are generally supplied with strip feed slot.

POWER TOOL "TOOL BOX"		Part No.
POWER TOOL - TOOL BOX		PTCASE

Power Tool "Tool Box" - Provides convenient storage for motor, front end assembly and spanners.

MERCHANTISERS	
Merchandisers - Contact AFS customer service or sales representative to discuss your best merchandiser stocking options.	



Work-Arm Tool Holder



Merchandisers



Standard Insertion Tools - Tool Fit Chart

EXTRACTING TOOLS

Metric Sizes	Inch Sizes	Part No.
M3 thru M10	#4 thru 3/8	50002
M4 thru M24	#6 thru 1"	50003
M20 thru M39	1 1/8" thru 1 1/2"	50004
M38 thru M65	1 1/2" thru 2 1/2"	50005

SPRING LOADED TANG BREAK TOOLS - (FOR RAPID TANG REMOVAL)

Metric Sizes	Inch Sizes	Part No.
M2, M2.2	#2	59061
M2.5	#3	59071
	#4	59081
M3	#5	59091
M3.5	#6	59101
M4	#8	59121
M5	#10, #12	59141
M6	1/4"	59181
M8	5/16"	59241
M10	3/8"	59291
M12	1/2"	59331

MAGNETIC TANG BREAK TOOLS - (MANUAL TANG REMOVAL)

Metric Sizes	UNC/UNF	BSW/BSF	Special Thread BSC	BA/BSP/NPT	Part No.
M2-0.4	#2-56				59060M
M2.2-0.45					59060M
M2.5-0.45	#3-48, #3-56			6BA	59070M
	#4-40, #4-48				59080M
M3-0.5	#5-40	1/8-40			59090M
M3.5-0.6	#6-32, #6-40			4BA	59100M
M4-0.7	#8-32, #8-36	5/32			59130M
	#10-24	3/16-24		2BA	59140M
M5-0.8	#10-32, #12-24, #12-28	3/16-32			59160M
M6-1	1/4-20, 1/4-28	1/4-20, 1/4-26	1/4-24, 1/4-26	0BA	59190M
		5/16-18			59200M
M7-1	5/16-18				59220M
M8-1, M8-1.25	5/16-24	5/16-22	5/16-26		59250M
M9-1, M9-1.25, M10-1.5	3/8-16, 3/8-24	3/8-16, 3/8-20			59280M
M10-1, M10-1.25	7/16-14, 7/16-20		3/8-26	1/8 BSP/NPT	59310M
M11-1, M11-1.25, M11-1.5		7/16-14, 7/16-18	7/16-16, 7/16-26		59340M
M12-1.25, M12-1.5, M12-1.75, M12-1	1/2-13, 1/2-20	1/2-12, 1/2-16	1/2-26		59380M



Spring Loaded Tang Break Tool



Extraction Tool



Magnetic Tang Break Tool

Standard Insertion Tools - Tool Fit Chart



Manual Installation Tool

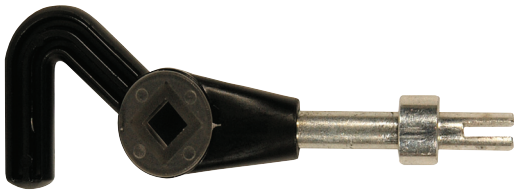
Metric Sizes	Part No.
M2 - 0.4	50061-20
M2.2 - 0.45	50061-21
M 2.5 - 0.45	50069-17
M3 - 0.5	50089-17
M3.5 - 0.6	50095-15
M4 - 0.7	50125-13
M5 - 0.8	50156-9
M6 - 1	50188-5
M7 - 1	50219-4
M8 - 1, M8 - 1.25	50250-7
M9 - 1, M 9 - 1.25	50281-5
M10-1.5, M10 - 1.25	50281-4
M10 - 1	50313-12
M11 - 1, M11 - 1.25, M11 - 1.5	50344-4
M12 - 1, M13 - 1.25, M13 - 1.5, M13 - 1.75	50375-0
M12 - 1.25, M12 - 1.5, M12 - 1.75	50375-1
M14 - 1.5, M14 - 2, M15 - 1.5, M15 - 2	50438-0
M14-1.25	50468-0
M16 - 1.5, M16 - 2	50500-0
M18 - 1.5 SP, M18 - 1.5, M18 - 2, M18 - 2.5	50591-0
M20 - 1.5, M20 - 2, M20 - 2.5	50591-0
M22 - 1.5, M22 - 2, M22 - 2.5	50688
M24 - 1.5, M24 - 2, M24 - 3	50750
M26 - 1.5, M27 - 1.5, M27 - 2, M27 - 3	50875
M30 - 1.5, M30 - 2, M30 - 3, M30 - 3.5	51000
M33 - 2, M33 - 3.5	51063
M36 - 1.5, M36 - 3, M36 - 4	51125
M39 - 2, M39 - 3, M39 - 4	51250
M42 - 2, M42 - 3, M42 - 4, M42 - 4.5	51250
M45 - 3, M45 - 4.5	51250
M48 - 3, M48 - 4, M48 - 5, M52 - 3, M52 - 5	51500

UNC/UNF	Part No.
UNC #2-56	50061-17
UNC #3-48, UNF #3-56	50069-17
UNC #4-40, UNF #4-48	50077-17
UNC #5-40,	50089-18
UNC #6-32	50095-16
UNF #6-40	50095-17
UNC #8-32, UNF #8-36	50125-14
UNC #10-24	50140-11
UNC #12-24, UNF #12-28	50156-10
UNF #10-32	50156-11
UNC 1/4 - 20, UNF 1/4 - 28	50188-10
UNC 5/16 - 18	50219-8
UNF 5/16 - 24	50250-8
UNC 3/8 - 16	50281-4
UNF 3/8 - 24	50313-6
UNC 7/16 - 14	50344-3
UNF 7/16 - 20	50344-4
UNC 1/2 - 13	50375-2
UNF 1/2 - 20	50375-3
UNC 9/16 - 12, UNF 9/16 - 18	50438-0
UNC 5/8 - 11, UNC 11/16 - 11, UNF 5/8 - 18	50500-0
UNC 3/4 - 10, UNF 3/4 - 16	50591-0
UNC 7/8 - 9, UNF 7/8 - 14	50688

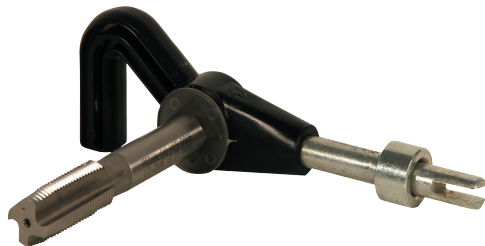
Standard Insertion Tools - Tool Fit Chart

UNC/UNF	Part No.
UNC 1"- 8, UNF 1"- 12, UNF 1"- 14	50750
UNC 1 1/8" - 7	50875
UNC 1 1/4"- 7, UNF 1 1/8"- 12	51000
UNC 1 3/8"- 6, UNF 1 1/4"- 12	51063
UNC 1 1/2"- 6, UNF 1 3/8"- 12	51125
UNF 1 1/2"- 12	51250
UNC 1 1/2 - 6, UNF 1 3/8 - 12	51125

BA, BSC, BSF, BSP, BSW, NPT & SPECIAL 8 TPI UN - STANDARD INSERTION TOOLS	Part No.
6BA	50077-17
1/8 - 40	50089-19
4BA	50095-15
2BA, 3/16 - 24	50140-9
3/16 - 32	50156-9
OBA, BSF 1/4 - 26, BSW 1/4 - 20	50188-5
BSW 5/16 - 18	50219-8
BSC 5/16 - 26	50250-4
BSF 5/16 - 22	50250-5
BSW 3/8 - 16	50281-4
BSF 3/8 - 20	50281-5
BSC 3/8 - 26, BSP 1/8 - 28	50313-5
BSC 7/16 - 26, BSF 7/16 - 18	50344-4
BSW 7/16 - 14	50344-1
BSC 1/2 - 26, BSF 1/2 - 16, BSW 1/2 - 12	50375-1
BSW 9/16 - 12, BSF 9/16 - 16, BSP 1/4 - 19, NPT 1/4 - 18	50438-0
BSF 5/8 - 14, BSP 3/8 - 19, NPT 3/8 - 18, 11/16 - 16	50500-0
BSW 3/4 - 10, BSF 3/4 - 12	50591-0
BSF 7/8 - 11, BSP 1/2 - 14, BSW 7/8 - 9, NPT 1/2 - 14	50688
BSF 1"- 10, BSW 1"- 8, 1"- 20	50750
BSW 1 1/8"- 7, BSP 5/8 - 14, BSW 1 3/8 - 6, NPT 3/4 - 14, UN 1 1/8 - 8	50875
BSW 1 1/4"- 7, BSF 1 1/4 - 9, UN 1 1/4 - 8	51000
UN 1 3/8 - 8	51063
BSP 3/4 - 14, BSW 1 1/2 - 6, NPT 1 1/2	51125
UN 1 5/8 - 8, UN 1 3/4 - 8	51250
UN 2 1/2 - 8	52125



Manual Installation Tool



Square Drive Installation Tool with tap

Square Drive sizes available up to and including M12 or 1/2". Tap Square Drive is only suitable for non-ferrous alloys.

Electric Installation Tools - Tool Fit Chart

Metric Sizes	Part No.
M2 - 0.4	55027
M2.5 - 0.45	55257
M3 - 0.5	55037B
M4 - 0.7	55047B
M5 - 0.8	55057B
M6 - 1	55067B
M8 - 1.25	55087B
M10-1.5	55107B
M10 - 1	58107B
M12 - 1.75	55127B
M12 - 1.5	58127B

Inch Sizes	Part No.
UNC #2 - 56	53527B
UNC #4 - 40	53547B
UNC #6 - 32	53567B
UNC #8 - 32	53587B
UNC #10 - 24	53607B
UNF #10 - 32	54607B
UNC 1/4 - 20	53047B
UNF 1/4 - 28	54047B
UNC 5/16 - 18	53057B
UNF 5/16 - 24	54057B
UNC 3/8 - 16	53067B
UNF 3/8 - 24	54067B
UNC 7/16 - 14	53077B
UNF 7/16 - 20	54077B
UNC 1/2 - 13	53087B
UNF 1/2 - 20	54087B



Electric Mandrel

Prewinder Installation Tools - Tool Fit Chart

LIGHTWEIGHT DESIGN			
Size	Type	Part No.	
M6 - 1	LIGHTWEIGHT DESIGN	55062U	
M8 - 1.25	LIGHTWEIGHT DESIGN	55082U	
M10 - 1.25	LIGHTWEIGHT DESIGN	57102U	
M10 - 1.5	LIGHTWEIGHT DESIGN	55102U	
M12 - 1.5	LIGHTWEIGHT DESIGN	57122U	
M12 - 1.75	LIGHTWEIGHT DESIGN	55122U	
#4 - 40	LIGHTWEIGHT DESIGN	53542U	
#6 - 32	LIGHTWEIGHT DESIGN	53562U	
#8 - 32	LIGHTWEIGHT DESIGN	53582U	
#10 - 24	LIGHTWEIGHT DESIGN	53600U ▲	
1/4 - 20	LIGHTWEIGHT DESIGN	53042U	
5/16 - 18	LIGHTWEIGHT DESIGN	53052U	
3/8 - 16	LIGHTWEIGHT DESIGN	53062U	
7/16 - 14	LIGHTWEIGHT DESIGN	53072U	
1/2 - 13	LIGHTWEIGHT DESIGN	53082U	
#10 - 32	LIGHTWEIGHT DESIGN	54602U	
1/4 - 28	LIGHTWEIGHT DESIGN	54042U	
5/16 - 24	LIGHTWEIGHT DESIGN	54052U	
3/8 - 24	LIGHTWEIGHT DESIGN	54062U	
7/16 - 20	LIGHTWEIGHT DESIGN	54072U	
1/2 - 20	LIGHTWEIGHT DESIGN	54082U	

UNC			
Size	Type	Part No.	
#2 - 56	PREWINDER	53521	
#3 - 48	MANDREL	53536	
#4 - 40	PREWINDER	53541	
#5 - 40	PREWINDER	53551	
#6 - 32	PREWINDER	53561	
#8 - 32	PREWINDER	53581	
#10 - 24	PREWINDER	53601	
#12 - 24	PREWINDER	53621	
1/4 - 20	PREWINDER	53041	
5/16 - 18	PREWINDER	53051	
3/8 - 16	PREWINDER	53061	
7/16 - 14	PREWINDER	53071	
1/2 - 13	PREWINDER	53081	
9/16 - 12	MANDREL	53096 ▲	
5/8 - 11	MANDREL	53106	
3/4 - 10	MANDREL	53126	
7/8 - 9	MANDREL	53146	
1" - 8	MANDREL	53166	
1 1/8 - 7	MANDREL	53186 ▲	
1 1/4 - 7	MANDREL	53206 ▲	
1 3/8 - 6	MANDREL	53226 ▲	
1 1/2 - 6	MANDREL	53246 ▲	

METRIC			
Size	Type	Part No.	
M2.2 - 0.45	PREWINDER	55011 ▲	
M2.5 - 0.45	PREWINDER	55251	
M3 - 0.5	PREWINDER	55031	
M3.5 - 0.6	PREWINDER	55351 ▲	
M4 - 0.7	PREWINDER	55041	
M5 - 0.8	PREWINDER	55051	
M6 - 1	PREWINDER	55061	
M7 - 1	PREWINDER	55071	
M8 - 1.25	PREWINDER	55081	
M10 - 1.5	PREWINDER	55101	
M12 - 1.75	PREWINDER	55121	
M14 - 2	MANDREL	55146	
M16 - 2	MANDREL	55166	
M18 - 2.5	MANDREL	55186	
M8 - 1	PREWINDER	57081	
M10 - 1	PREWINDER	58101	
M10 - 1.25	PREWINDER	57101	
M12 - 1.25	PREWINDER	58121	
M12 - 1.5	PREWINDER	57121	
M14 - 1.5	NON CAPTIVE	57141	
M16 - 1.5	NON CAPTIVE	57161	
M18 - 1.5	NON CAPTIVE	58181	

UNF			
Size	Type	Part No.	
#3 - 56	PREWINDER	54531	
#4 - 48	PREWINDER	54541	
#6 - 40	PREWINDER	54561	
#8 - 36	PREWINDER	54581	
#10 - 32	PREWINDER	54601	
1/4 - 20	PREWINDER	54041	
5/16 - 24	PREWINDER	54051	
3/8 - 24	PREWINDER	54061	
7/16 - 20	PREWINDER	54071	
1/2 - 20	PREWINDER	54081	
9/16 - 18	NON CAPTIVE	54091 ▲	
5/8 - 18	NON CAPTIVE	54101	
3/4 - 16	NON CAPTIVE	54121	
7/8 - 14	NON CAPTIVE	54141	
1" - 14	NON CAPTIVE	54171 ▲	
1" - 12	NON CAPTIVE	54161 ▲	
1 1/8 - 12	NON CAPTIVE	54181	

▲ Denotes non-popular parts - Price On Application.
Minimum quantities and order values may apply.

Australian Price List Effective July 2013.
All prices are exclusive of GST.



'Prewinder' Non Captive Type
Installation Tool



Semi Production 'Pre-Winder' Type
Installation Tool - Metal Body



Non-Captive 'Pre-Winder'
Type Installation Tool
- Aluminium Body

Carbon Steel Bulk Keyserts - Metric

Minimum Pack Quantities apply



LIGHTWEIGHT - METRIC SERIES - CARBON STEEL

INTERNAL						EXTERNAL				INSTALLATION TOOL	
Thread Size	Thread Class	Length	Drill	Part	Min.					Part	
CLASS 6H	CLASS 6G	(mm)	Size	No.	Qty					No.	
M5 - 0.8	M8 - 1.25	8	6.9	75051	5						72190
M6 - 1	M10 - 1.25	10	8.8	75061	5						72250
M8 - 1.25	M12 - 1.25	12	10.8	75081	5						72312
M8 - 1	M12 - 1.25	12	10.8	77081	5						72312
M10 - 1.5	M14 - 1.5	14	12.8	75101	4						72375
M10 - 1.25	M14 - 1.5	14	12.8	77101	4						72375
M12 - 1.75	M16 - 1.5	16	14.75	75121	4						72500
M12 - 1.25	M16 - 1.5	16	14.75	78121	4						72500

HEAVY DUTY - METRIC SERIES - CARBON STEEL

INTERNAL						EXTERNAL				INSTALLATION TOOL	
Thread Size	Thread Size	Length	Drill	Part	Min.					Part	
		(mm)	Size	No.	Qty					No.	
M4 - 0.7	M8 - 1.25	8	6.9	75042	3						71042
M5 - 0.8	M10 - 1.25	10	8.8	75052	5						72190
M6 - 1	M12 - 1.25	12	10.8	75062	5						72250
M8 - 1.25	M14 - 1.5	14	12.8	75082	5						72312
M8 - 1	M14 - 1.5	14	12.8	77082	5						72312
M10 - 1.5	M16 - 1.5	16	14.75	75102	4						72375
M10 - 1.25	M16 - 1.5	16	14.75	77102	4						72375
M12 - 1.75	M18 - 1.5	18	16.75	75122	4						72500
M12 - 1.25	M18 - 1.5	18	16.75	78122	4						72500
M14 - 2	M20 - 1.5	20	18.75	75142	3						72500
M14 - 1.5	M20 - 1.5	20	18.75	77142	3						72500
M16 - 2	M22 - 1.5	22	20.5	75162	2						72625
M16 - 1.5	M22 - 1.5	22	20.5	77162	2						72625
M18 - 1.5	M24 - 1.5	24	22.5	78182	1						71182 ▲
M20 - 2.5	M30 - 2	30	28	75202	1						72875
M20 - 1.5	M30 - 2	30	28	78202	1						72875
M22 - 1.5	M32 - 2	32	30	78222	1						72875
M24 - 3	M33 - 2	33	31	75242	1						71242
M24 - 2	M33-2	33	31	77242	1						71242

SOLID - METRIC - CARBON STEEL

EXTERNAL					
Thread Class	Length	Drill	Part	Min.	
CLASS 6G	(mm)	Size	No.	Qty	
M8 - 1.25	8	6.9	75084 ▲	1	
M10 - 1.25	10	8.8	77104 ▲	1	
M12 - 1.25	12	10.8	78124 ▲	1	
M14 - 1.5	14	12.8	77144 ▲	1	
M16 - 1.5	16	14.75	77164 ▲	1	
M18 - 1.5	18	16.75	78184 ▲	1	
M20 - 1.5	20	18.75	78204 ▲	1	
M22 - 1.5	22	20.5	78224 ▲	1	
M24 - 2	24	22.5	78244 ▲	1	
M30 - 2	30	28	77304 ▲	1	
M32 - 2	32	30	77322 ▲	1	
M33 - 2	33	31	77332 ▲	1	

▲ Denotes non-popular parts -
 \Price On Application. Minimum
 quantities and order values may apply.
 * Refer to Minimum Quantity

Carbon Steel Bulk Keyserts - Inch

Minimum Pack Quantities Apply



LIGHTWEIGHT - INCH SERIES - CARBON STEEL						INSTALLATION TOOL	
INTERNAL Thread Size Class 2B	EXTERNAL Thread Class 2A (MOD)	Length (mm)	Drill Size	Part No.	Min. Qty		Part No.
#10-24	5/16-18	0.31	I (.2720")	73601	8		72190
#10-32	5/16-18	0.31	I (.2720")	74601	8		72190
1/4-20	3/8-16	0.37	Q (.3320")	73041	7		72250
1/4-28	3/8-16	0.37	Q (.3320")	74041	7		72250
5/16-18	7/16-14	0.43	X (.3970")	73051	7		72312
5/16-24	7/16-14	0.43	X (.3970")	74051	7		72312
3/8-16	1/2-13	0.50	29/64	73061	7		72375
3/8-24	1/2-13	0.50	29/64	74061	7		72375
7/16-14	9/16-12	0.56	33/64	73071	7		72375
7/16-20	9/16-12	0.56	33/64	74071	7		72375
1/2-13	5/8-11	0.62	37/64	73081	7		72500
1/2-20	5/8-11	0.62	37/64	74081	7		72500

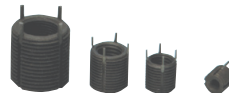
HEAVY DUTY - INCH SERIES - CARBON STEEL				Part No.	Min. Qty		Part No.
#8-32	5/16-18	0.31	I (.272")	73582	7		70582
#10-24	3/8-16	0.31	Q (.332")	73602	8		72190
#10-32	3/8-16	0.31	Q (.332")	74602	8		72190
1/4-20	7/16-14	0.37	X (.397")	73042	7		72250
1/4-28	7/16-14	0.37	X (.397")	74042	7		72250
5/16-18	1/2-13	0.43	29/64	73052	7		72312
5/16-24	1/2-13	0.43	29/64	74052	7		72312
3/8-16	9/16-12	0.50	33/64	73062	7		72375
3/8-24	9/16-12	0.50	33/64	74062	7		72375
7/16-14	5/8-11	0.62	37/64	73072	7		72375
7/16-20	5/8-11	0.62	37/64	74072	7		72375
1/2-13	3/4-16	0.62	45/64	73082	7		72500
1/2-20	3/4-16	0.62	45/64	74082	7		72500
9/16-12	3/4-16	0.81	45/64	73092	4		72500
9/16-18	3/4-16	0.81	45/64	74092	4		72500
5/8-11	7/8-14	0.87	53/64	73102	3		72625
5/8-18	7/8-14	0.87	53/64	74102	3		72625
3/4-10	1 1/8-12	1.12	11/16	73122	2		72875
3/4-16	1 1/8-12	1.12	11/16	74122	2		72875
7/8-9	1 1/4-12	1.25	13/16	73142	1		72875
7/8-14	1 1/4-12	1.25	13/16	74142	1		72875
1"-8	1 3/8-12	1.37	15/16	73162	1		72100
1"-12	1 3/8-12	1.37	15/16	74162	1		72100
1"-14	1 3/8-12	1.37	15/16	74162-14	1		70162▲
1 1/8-7	1/12-12	1.62	17/16	73182▲	1		70182▲
1 1/8-12	1/12-12	1.62	17/16	74182	1		70182▲
1 1/4-7	1 5/8-12	1.81	19/16	73202▲	1		70202
1 1/4-12	1 5/8-12	1.81	16/16	74202	1		70202
1 1/2-6	1 7/8-12	2.00	1 13/16	73242	1		70242▲
1 1/2-12	1 7/8-12	2.00	1 13/16	74242▲	1		70242▲

SOLID - METRIC - CARBON STEEL		KEYSERT PRICE PER EACH			
EXTERNAL Thread Class 2B	Length (mm)	Drill Size	Part No.	Min. Qty	
5/16-18	0.31	I (.272")	73054▲	1	
3/8-16	0.31	Q (.332")	73064▲	1	
7/16-14	0.37	X (.397")	73074▲	1	
1/2-13	0.43	29/64	73084▲	1	
9/16-12	0.5	33/64	73094▲	1	
5/8-11	0.62	37/64	73104▲	1	
3/4-16	0.68	45/64	73124▲	1	
7/8-14	0.87	53/64	73144▲	1	
1 - 12	0.87	15/16	74164▲	1	
1 1/8 - 12	1.12	1 1/16	74184▲	1	
1 1/4 - 12	1.25	1 3/16	74204▲	1	
1 3/8 - 12	1.37	1 5/16	74224▲	1	

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply. * Refer to Minimum Quantity

Stainless Steel Bulk Keyserts

Minimum Pack Quantities Apply



LIGHTWEIGHT - METRIC SERIES - STAINLESS STEEL						INSTALLATION TOOL	
INTERNAL	EXTERNAL						Part No.
Thread Class 6H	Thread Class 6G	Length (mm)	Drill Size	Part No.	Min. Qty		
M5 - 0.8	M8 - 1.25	8	6.9	75056	2		72190
M6 - 1	M10 - 1.25	10	8.8	75066	2		72250
M8 - 1.25	M12 - 1.25	12	10.8	75086	2		72312
M8 - 1	M12 - 1.25	12	10.8	77086	2		72312
M10 - 1.5	M14 - 1.5	14	12.8	75106	2		72375
M10 - 1.25	M14 - 1.5	14	12.8	77106	2		72375
M12 - 1.75	M16 - 1.5	16	14.75	75126	2		72500
M12 - 1.25	M16 - 1.5	16	14.75	78126	2		72500

HEAVY DUTY - METRIC SERIES - STAINLESS STEEL						INSTALLATION TOOL	
INTERNAL	EXTERNAL						Part No.
Thread Class 6H	Thread Class 6G	Length (mm)	Drill Size	Part No.	Min. Qty		
M4 - 0.7	M8 - 1.25	8	6.9	75047	2		71042
M5 - 0.8	M10 - 1.25	10	8.8	75057	2		72250
M6 - 1	M12 - 1.25	12	10.8	75067	2		72250
M8 - 1.25	M14 - 1.5	14	12.8	75087	2		72312
M8 - 1	M14 - 1.5	14	12.8	77087	2		72312
M10 - 1.5	M16 - 1.5	16	14.75	75107	2		72375
M10 - 1.25	M16 - 1.5	16	14.75	77107▲	2		72375
M12 - 1.75	M18 - 1.5	18	16.75	75127	2		72500
M12 - 1.25	M18 - 1.5	18	16.75	78127	2		72500
M14 - 2	M20 - 1.5	20	18.75	75147▲	1		72500▲
M14 - 1.5	M20 - 1.5	20	18.75	77147	1		72500
M16 - 2	M22 - 1.5	22	20.5	75167	1		72625
M16 - 1.5	M22 - 1.5	22	20.5	77167▲	1		72625
M18 - 1.5	M24 - 1.5	24	22.5	78187	1		71182
M20 - 2.5	M30 - 2	30	28	75207▲	1		72875
M20 - 1.5	M30 - 2	30	28	78207	1		72875
M22 - 1.5	M32 - 2	32	30	78227	1		72875
M24 - 3	M33 - 2	33	31	75247	1		71242
M24 - 2	M33 - 2	33	31	77247	1		71242

▲ Denotes non-popular parts - Price On Application.
Minimum quantities and order values may apply.

* Refer to Minimum Quantity

Stainless Steel Bulk Keyserts

Minimum Pack Quantities Apply



LIGHT WEIGHT SERIES - STAINLESS STEEL

INTERNAL Thread Size Class 2B	EXTERNAL Thread Class 6G	Length (mm)	Drill Size	Part No.	Min. Qty	INSTALLATION TOOL				Part No.
#10 - 24	5/16 - 18	0.31	I (.272")	73606	4					72190
#10 - 32	5/16 - 18	0.31	I (.272")	74606	4					72190
1/4 - 20	3/8 - 16	0.37	Q (.332")	73046	4					72250
1/4 - 28	3/8 - 16	0.37	Q (.332")	74046	4					72250
5/16 - 18	7/16 - 14	0.43	X (.397")	73056	3					72312
5/16 - 24	7/16 - 14	0.43	X (.397")	74056	3					72312
3/8 - 16	1/2 - 13	0.50	29/64	73066	3					72375
3/8 - 24	1/2 - 13	0.50	29/64	74066	3					72375
7/16 - 14	9/16 - 12	0.56	33/64	73076	2					72375
7/16 - 20	9/16 - 12	0.56	33/64	74076	2					72375
1/2 - 13	5/8 - 11	0.62	37/64	73086	2					72500
1/2 - 20	5/8 - 11	0.62	37/64	74086	2					72500

HEAVY DUTY - INCH SERIES - STAINLESS STEEL

				Part No.	Min. Qty					Part No.
#8 - 32	5/16 - 18	0.31	I (.272")	73587	3					70582
#10 - 24	3/8 - 16	0.31	Q (.332")	73607	3					72190
#10 - 32	3/8 - 16	0.31	Q (.332")	74607	3					72190
1/4 - 20	7/16 - 14	0.37	X (.397")	73047	3					72250
1/4 - 28	7/16 - 14	0.37	X (.397")	74047	3					72250
5/16 - 18	1/2 - 13	0.43	29/64	73057	2					72312
5/16 - 24	1/2 - 13	0.43	29/64	74057	2					72312
3/8 - 16	9/16 - 12	0.50	33/64	73067	2					72375
3/8 - 24	9/16 - 12	0.50	33/64	74067	2					72375
7/16 - 14	5/8 - 11	0.62	37/64	73077	2					72375
7/16 - 20	5/8 - 11	0.62	37/64	74077	2					72375
1/2 - 13	3/4 - 16	0.62	45/64	73087	2					72500
1/2 - 20	3/4 - 16	0.62	45/64	74087	2					72500
9/16 - 12	3/4 - 16	0.81	45/64	73097	2					72500
9/16 - 18	3/4 - 16	0.81	45/64	74097	2					72500
5/8 - 11	7/8 - 14	0.87	53/64	73107	2					72625
5/8 - 18	7/8 - 14	0.87	53/64	74107	2					72625
3/4 - 10	1 1/8 - 12	1.12	1 1/16	73127	2					72875
3/4 - 16	1 1/8 - 12	1.12	1 1/16	74127	2					72875
7/8 - 9	1 1/4 - 12	1.25	1 3/16	73147 ▲	1					72875
7/8 - 14	1 1/4 - 12	1.25	1 3/16	74147 ▲	1					72875
1" - 8	1 3/8 - 12	1.37	1 5/16	73167 ▲	1					72100
1" - 12	1 3/8 - 12	1.37	1 5/16	74167 ▲	1					72100

SOLID - INCH - STAINLESS STEEL

EXTERNAL Thread Class 2B	Length (Inch) (Modified)	Drill Size	KEYSERT PRICE PER EACH	
			Part No.	Min. Qty
5/16 - 18	0.31	I (.272")	73059 ▲	1
3/8 - 16	0.31	Q (.332")	73069 ▲	1
7/16 - 14	0.37	X (.397")	73079 ▲	1
1/2 - 13	0.43	37/64	73089 ▲	1
9/16 - 12	0.5	45/64	73099 ▲	1
5/8 - 11	0.62	53/64	73109 ▲	1
3/4 - 16	0.68	1 1/16	73129 ▲	1
7/8 - 14	0.87	1 3/16	73149 ▲	1
1" - 12	0.87	1 5/16	74169 ▲	1
1 1/8 - 12	1.12	1 7/16	74189 ▲	1
1 1/4 - 12	1.25	1 9/16	74209 ▲	1
1 3/8 - 12	1.37	1 5/16	74229 ▲	1

▲ Denotes non-popular parts - Price On Application. Minimum quantities and order values may apply. * Refer to Minimum Quantity

Carbon & Stainless Steel Keysert

Replacement Packets



LIGHTWEIGHT - INCH SERIES - CARBON STEEL

INTERNAL

Thread Size Class 2B	Part No.	Qty per/pkt	
#10 - 24	73601P	8	
#10 - 32	74601P	8	
1/4 - 20	73041P	7	
1/4 - 28	74041P	7	
5/16 - 18	73051P	7	
5/16 - 24	74051P	7	
3/8 - 16	73061P	7	
3/8 - 24	74061P	7	
7/16 - 14	73071P	7	
7/16 - 20	74071P	7	
1/2 - 13	73081P	7	
1/2 - 20	74081P	7	

LIGHTWEIGHT - METRIC SERIES - CARBON STEEL

INTERNAL

Thread Size Class 6H	Part No.	Qty per/pkt	
M5 - 0.8	75051P	5	
M6 - 1	75061P	5	
M8 - 1.25	75081P	5	
M8 - 1	77081P	5	
M10 - 1.5	75101P	4	
M10 - 1.25	77101P	4	
M12 - 1.75	75121P	4	
M12 - 1.25	78121P	4	

STAINLESS STEEL KEYSERT THREAD

INTERNAL

Thread Size Class 2B	Part No.	Qty per/pkt	
#10 - 24	73606P	4	
#10 - 32	74606P▲	4	
1/4 - 20	73046P	4	
1/4 - 28	74046P▲	4	
5/16 - 18	73056P	3	
5/16 - 24	74056P	3	
3/8 - 16	73066P	3	
3/8 - 24	74066P▲	3	
7/16 - 14	73076P▲	2	
7/16 - 20	74076P▲	2	
1/2 - 13	73086P	2	
1/2 - 20	74086P▲	2	

LIGHTWEIGHT - METRIC SERIES - STAINLESS STEEL

INTERNAL

Thread Size Class 6H	Part No.	Qty per/pkt	
M5 - 0.8	75056P	2	
M6 - 1	75066P	2	
M8 - 1.25	75086P	2	
M8 - 1	77086P▲	2	
M10 - 1.5	75106P	2	
M10 - 1.25	77106P	2	
M12 - 1.75	75126P	2	
M12 - 1.25	78126P▲	2	

▲ Denotes non-popular parts - Price On Application.
Minimum quantities and order values may apply.

The Recoil Tapper System - Metric



302 SERIES

STANDARD TAPPER FOR METALS, WOOD AND PLASTICS STEEL, CASE HARDENED, ZINC PLATED

Internal Thread Size	External Thread (mm)	Length (mm)	Part No.	
M3 - 0.5	5	6	3020030.16	
M3.5 - 0.6	6	8	3020035.16	
M4 - 0.7	6.5	8	3020040.16	*
M5 - 0.8	8	10	3020050.16	*
M6 - 1	9	12	3020061.16	*
M6 - 1	10	14	3020060.16	*
M8 - 1.25	12	15	3020080.16	*
M10 - 1.5	14	18	3020100.16	*
M10 - 1.25	14	18	3020106.16	*
M12 - 1.75	16	22	3020120.16	*
M12 - 1.5	16	22	3020127.16	*
M14 - 2	18	24	3020140.16	*
M16 - 2	20	22	3020160.16	*
M18 - 2.5	22	24	3020180.16	
M20 - 2.5	26	27	3020200.16	

■ Note: External Thread - Tolerances (ISO 2768-m) in accordance with Works Standard 302.

302.....40 SERIES

STANDARD TAPPER FOR METALS, WOOD AND PLASTICS STAINLESS STEEL (304)

Internal Thread	External Thread (mm)	Length (mm)	Part No.	
M3 - 0.5	5	6	3020030.40	
M3.5 - 0.6	6	8	3020035.40	
M4 - 0.7	6.5	8	3020040.40	
M5 - 0.8	8	10	3020050.40	
M6 - 1	9	12	3020061.40	
M6 - 1	10	14	3020060.40	*
M8 - 1.25	12	15	3020080.40	*
M10 - 1.5	14	18	3020100.40	
M12 - 1.75	16	22	3020120.40	
M14 - 2	18	24	3020140.40	
M16 - 2	20	22	3020160.40	
M18 - 2.5	22	24	3020180.40	
M20 - 2.5	26	27	3020200.40	

■ Note: External Thread - Tolerances (ISO 2768-m) in accordance with Works Standard 302.

305 SERIES

STANDARD TAPPER FOR SOFT THERMO PLASTICS BRASS

Internal Thread	External Thread (mm)	Length (mm)	Part No.	
M3 - 0.5	5	6	3050030.80	*
M3.5 - 0.6	6	8	3050035.80	
M4 - 0.7	6.5	8	3050040.80	*
M5 - 0.8	8	10	3050050.80	*
M6 - 1	10	14	3050060.80	

■ Note: External thread - Tolerances (ISO 2768-m) in accordance with Works Standard 305.

* Sizes normally available ex stock. Lead time and minimums may apply on all other sizes.

The Recoil Tapper System - Metric



307 SERIES

STANDARD TAPPER FOR METALS AND PLASTICS (SHORT VERSION) STEEL, CASE HARDENED, ZINC PLATED, YELLOW CHROMATED

Internal Thread	External Thread (mm)	Length (mm)	Part No.	
M3 - 0.5	5	4	3070030.16	*
M3.5 - 0.6	6	5	3070035.16	
M4 - 0.7	6.5	6	3070040.16	*
M5 - 0.7	8	7	3070050.16	*
M6 - 1	10	8	3070060.16	*
M8 - 1.25	12	9	3070080.16	*
M10 - 1.5	14	10	3070100.16	*
M12 - 1.5	16	12	3070120.16	
M14 - 1.5	18	14	3070140.16	
M16 - 2	20	14	3070160.16	

Note: External Thread - Special thread with flattened thread root. Tolerances (ISO 2768-m) in accordance with Works Standard 309.

308 SERIES

STANDARD TAPPER FOR METALS AND PLASTICS (LONG VERSION) STEEL, CASE HARDENED, ZINC PLATED, YELLOW CHROMATED

Internal Thread	External Thread (mm)	Length (mm)	Part No.	
M3 - 0.5	5	6	3080030.16	*
M3.5 - 0.6	6	8	3080035.16	
M4 - 0.7	6.5	8	3080040.16	*
M5 - 0.7	8	10	3080050.16	*
M6 - 1	10	12	3080060.16	*
M8 - 1.25	12	14	3080080.16	*
M10 - 1.5	14	18	3080100.16	*
M12 - 1.5	16	22	3080120.16	
M14 - 1.5	18	24	3080140.16	
M16 - 2	20	24	3080160.16	

Note: External Thread - Special thread with flattened thread root. Tolerances (ISO 2768-m) in accordance with Works Standard 309.

309 SERIES

STANDARD TAPPER FOR SOFTWOODS AND PLASTICS BRASS

Internal Thread	External Thread (mm)	Length (mm)	Part No.	
M2.5 - 0.45	5	6	3090025.80	
M3 - 0.5	5.5	6	3090030.80	*
M3.5 - 0.6	6.5	8	3090035.80	
M4 - 0.7	7	10	3090040.80	*
M5 - 0.7	9	12	3090050.80	*
M6 - 1	10	14	3090060.80	*
M8 - 1.25	13	20	3090080.80	*
M10 - 1.5	16	23	3090100.80	*
M12 - 1.5	19	26	3090120.80	
M16 - 2	24	26	3090160.80	

Note: External Thread - Wood thread. Tolerances (ISO 2768-m) in accordance with Works Standard 309.

* Sizes normally available ex stock. Lead time and minimums may apply on all other sizes. A wider range of sizes and materials available on request. Contact AFS for further information.

The Recoil Tapper System - Inch



UNC / UNF

302 SERIES

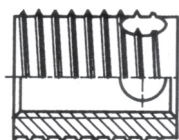
STANDARD TAPPER FOR METALS AND PLASTICS (SHORT VERSION)

STEEL, CASE HARDENED, ZINC PLATED YELLOW CHROMATED

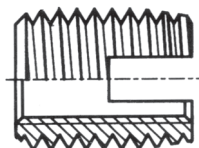
Internal Thread	External Thread (mm)	Length (mm)	Part No.	
#4 - 40 UNC	5	6	3020604.16	
#4 - 48 UNF	5	6	3020704.16	
#6 - 32 UNC	6	8	3020606.16	
#6 - 40 UNF	6	8	3020706.16	
#8 - 32 UNC	6.5	8	3020608.16	
#8 - 36 UNF	6.5	8	3020708.16	
#10 - 24 UNC	8	10	3020610.16	
#10 - 32 UNF	8	10	3020710.16	*
1/4 - 20 UNC	10	14	3020625.16	*
1/4 - 28 UNF	10	14	3020725.16	*
5/16 - 18 UNC	12	15	3020631.16	*
5/16 - 24 UNF	12	15	3020731.16	*
3/8 - 16 UNC	14	18	3020637.16	*
3/8 - 24 UNF	14	18	3020737.16	*
7/16 - 14 UNC	16	22	3020644.16	*
7/16 - 20 UNF	16	22	3020744.16	*
1/2 - 13 UNC	18	22	3020650.16	*
1/2 - 20 UNF	18	22	3020750.16	*
5/8 - 11 UNC	20	22	3020662.16	*
5/8 - 18 UNF	20	22	3020762.16	*

■ Note: External Thread - Tolerances (ISO 2768-m) in accordance with Works Standard 302.

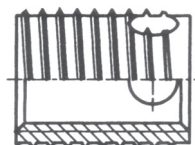
* Sizes normally available ex stock. Lead time and minimums may apply on all other sizes.
A wider range of sizes and materials available on request. Contact AFS for further information.



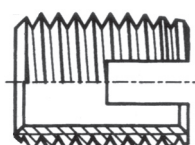
307 Series



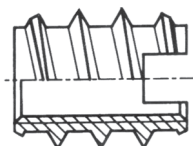
302 Series



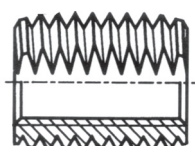
308 Series



302...40 Series



309 Series

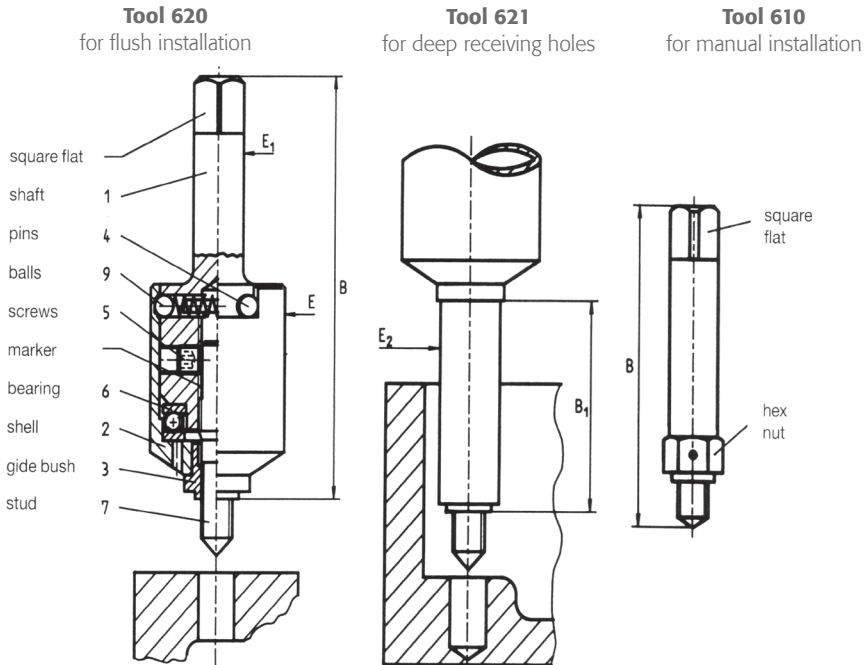


305 Series

Tapper Installation Tools

TAPPER INSTALLATION TOOLS - 620 SERIES			MANDREL
DRIVER FOR CONTINUOUS (FLUSH) INSTALLATION			Part No.
Internal Thread	Part No.		Part No.
M3	6200030.00		6200030.70
M4	6200040.00		6200040.70
M5	6200050.00		6200050.70
M6	6200060.00		6200060.70
M8	6200080.00		6200080.70
M10	6200100.00		6200100.70
M12	6200120.00		6200120.70
M14	6200140.00		6200140.70
M16	6200160.00		6200160.70

TAPPER INSTALLATION TOOLS - 621 SERIES			MANDREL
DRIVER FOR CONTINUOUS (DEEP RECEIVING HOLES) INSTALLATION			Part No.
Internal Thread	Part No.		Part No.
M3	6210030.00		6210030.70
M4	6210040.00		6210040.70
M5	6210050.00		6210050.70
M6	6210060.00		6210060.70
M8	6210080.00		6210080.70
M10	6210100.00		6210100.70
M12	6210120.00		6210120.70
M14	6210140.00		6210140.70
M16	6210160.00		6210160.70



Thread Identification and Drill Chart



METRIC

DIAMETER IN INCHES	THREAD SIZE MM	ISO COARSE			OTHER FINE PITCH	ISO FINE			BA				
		PITCH	DRILL SIZE INCH	MM		PITCH	DRILL SIZE INCH	MM	SIZE	DIAMETER INCH	MM	PITCH	DRILL MM
.079	M2	.40		2.1					0	0.236	6.0	1	6.2
.087	M2.2	.45	No.42	2.3					2	0.185	4.7	0.8	4.9
.098	M2.5	.45	No.37	2.6					4	0.142	3.6	0.66	3.8
.118	M3	.5	1/8	3.2					6	0.11	2.8	0.53	2.9
.138	M3.5	.6	No.27	3.7					8	0.86	2.2	0.43	2.3
.157	M4	.7	11/64	4.2					10	0.67	1.7	0.35	1.7
.197	M5	.8	3/64	5.2									
.236	M6	1	1/4	6.3									
.276	M7	1	9/32	7.3									
.315	M8	1.25	21/64	8.3	.75	1	21/64	8.3					
.354	M9	1.25		9.4		1		9.3					
.394	M10	1.5	13/32	10.4	1*	1.25	13/32	10.25					
.433	M11	1.5		11.5	1	1.25		11.25					
.472	M12	1.75	31/64	12.5	1, 1.25*	1.5	31/64	12.25					
.512	M13	1.75		13.5	1.25	1.5		13.25					
.551	M14	2	37/64	14.5	1.25*	1.5	9/16	14.25					
.630	M16	2	21/32	16.5		1.5	21/32	16.5					
.709	M18	2.5	47/64	18.75	1.5*	2	23/32	18.5					
.787	M20	2.5	13/16	20.75	1.5	2	3/16	20.5					
.866	M22	2.5		22.75	1.5	2		22.5					
.945	M24	3		24.75	1.5	2		24.5					

* M10 - 1, M12 - 1.25, M14 - 1.25, M18 - 1.5 - popular sparkplug sizes. Above M24 is available on request.

INCH

DIAMETER IN INCHES		THREAD SIZE MM	THREADS PER INCH (TPI)						DRILL SIZE								
			UNC	BSW (SAE)	UNF	BSF	BSP*	NPT*	UNC/BSW		UNF/SAE/BSF		BSP/NPT				
.86	2.18	#2	56	40	64				3/32	2.3	No.37	2.3					
.99	2.51	#3	48		56				No.36	2.7		2.7					
.112	2.84	#4	40		48				No.31	3.0	No.31	3.0					
.125	3.17	#5, 1/8	40	40	44		28	27	No.29	3.4		3.3	3/8	9.9			
.138	3.50	#6	32		40				No.25	3.7	No.26	3.7					
.164	4.16	#8	32		36				11/64	4.4	11/64	4.4					
.190	4.82	#10, 3/16	24		32				13/64	5.1	13/64	5.1					
.187	4.76	#3/16		24		32			13/64	5.0	13/64	5.0					
.216	5.49	#12, 7/32	24		28				15/64	5.6							
.250	6.35	1/4	20	20	28	26	19	18	17/64	6.7	17/64	6.6	33/64	13.5			
.312	7.93	5/16	18	18	24	22			21/64	8.3	21/64	8.2					
.375	9.52	3/8	16	16	24	20	19	18	25/64	9.9	25/64	9.8	21/32	17.0			
.437	11.11	7/16	14	14	20	18			29/64	11.5	29/64	11.5					
.500	12.70	1/2	13	12	20	16	14	14	17/32	13.0	33/64	13.0	13/16	21.5			
.562	14.28	9/16	12	12	18	16			19/32	14.5	37/64	14.5					
.625	15.87	5/8	11	11	18	14			21/32	16.5	41/64	16.25					
.750	19.05	3/4	10	10	16	12	14	14	25/32	19.75	49/64	19.5	1 1/64	27.0			
.875	22.22	7/8	9	6	14	11			29/32	23.0	57/64	22.5					
1.00	25.40	1"	8	8	12, 14	10	11	11 1/2	1 1/32	26.0	1 1/64	26.0	1 9/32	33.5			
1.125	28.57	1 1/8"	7	7	12	9	11		1 5/32	29.5	1 5/32	29.5					
1.25	31.75	1 1/4"	7	7	12	9	11		1 9/32	33.0	1 9/32	32.5					
1.375	34.92	1 3/8"	6	6	12	8	11		1 13/32	36.0	1 13/32	36.0					
1.50	38.10	1 1/2"	6	6	12	8	11		1 17/32	39.0	1 17/32	39.0					

* Nominal diameters for BSP and NPT are not thread diameters but relate to the inside diameter of the pipe.