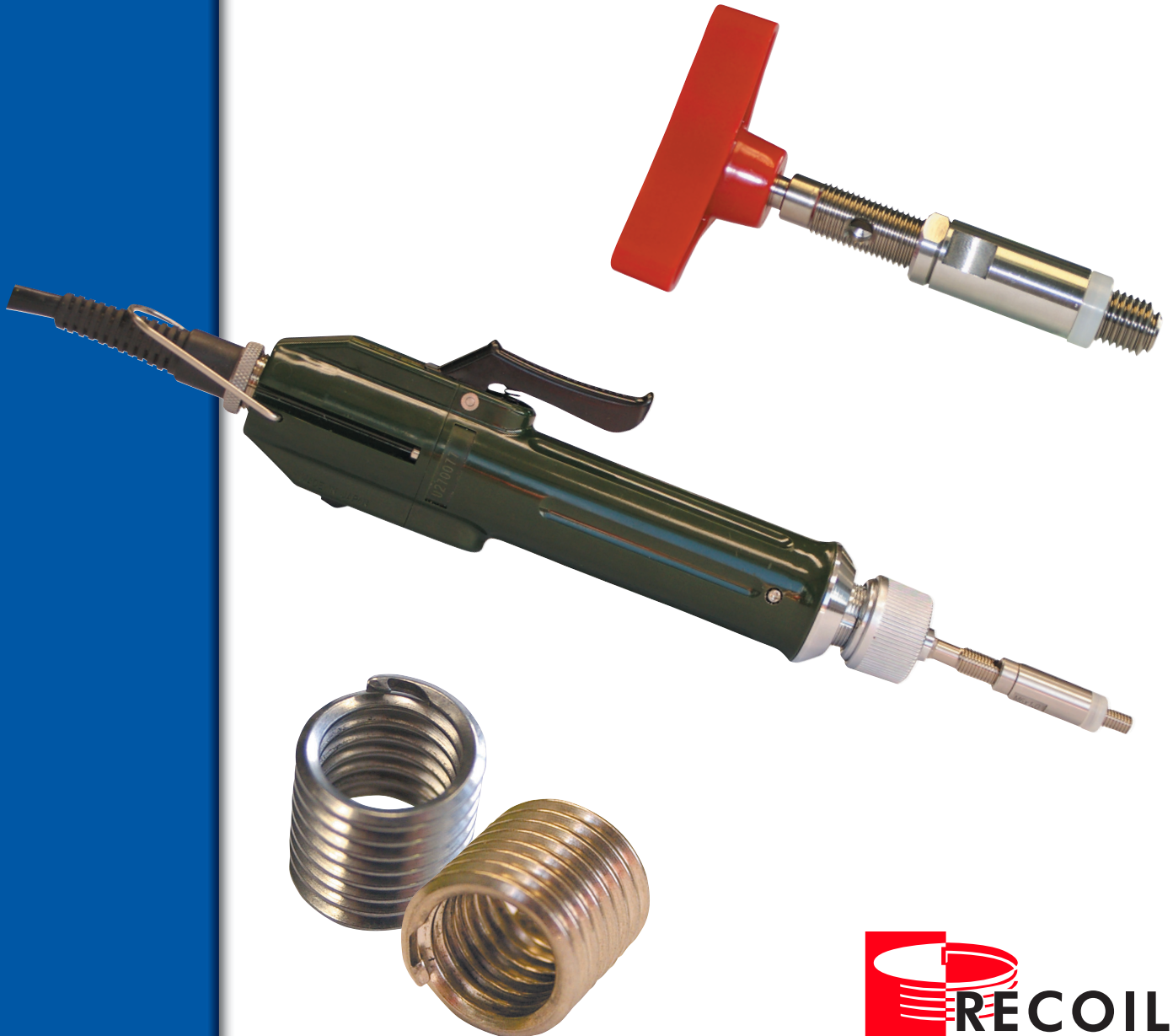


Recoil Tangless[®]

NEW

from Alcoa Fastening Systems



Tangless® or Tanged... the choice is yours.

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 Rc 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.

Insert Part Number Selection

Elements to form a complete and specific part number are selected from the table below. Follow the example shown for proper structure.

Part Number Example:

The example below consists of a Type 304 stainless steel Self-Locking Metric Tangless CoilThread Insert in M4X.7 nominal thread size, 1-1/2 diameter length, with dry film lubricant finish, supplied on strip feed for power tool installation.

2TLM - 4x.7C - 6 W SF

Basic Insert Type:

2TNM = Standard, Free-Running, Metric Tangless Insert

Size Designation (Internal Thread) and Material:

See tabulation on following page. All inserts are made of Type 304 stainless steel.

Nominal Length (mm):

See tabulation.

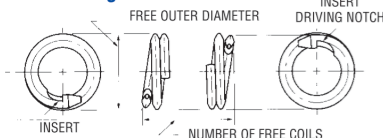
Finish:

W = Dry film lubricant per AS5272, Type I
 Y = Cadmium plated per QQ-P-416, Type II (Max. Thickness = .0001")
 No Finish = Leave blank if none is required.

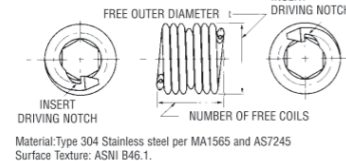
Packaging:

Supplied in bulk or on strip feed reels for power installation.
 SF = Strip Feed. Leave blank for bulk.

Free-Running Inserts



Self-Locking Inserts

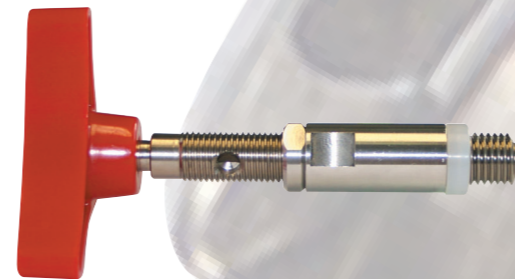


Nominal Thread Size	Basic Insert Type		Nominal Length (mm) ¹ Length of insert (in Dia) ²			Free Outer Diameter (mm)		Number of Free Coils ² Nominal Length		
	Free-Running Inserts	Self-Locking Inserts	1	1 1/2	2	Min.	Max.	1	1 1/2	2
	M2.5x.45	2TNM	2TLM	2.5	3.8	5	3.20	3.35	3.375	5.625
M3x.5	2TNM	2TLM	3	4.5	6	3.80	3.99	3.750	6.375	8.875
M4x.7	2TNM	2TLM	4	6	8	5.05	5.28	3.625	6.125	8.625
M5x.8	2TNM	2TLM	5	7.5	10	6.20	6.50	4.125	6.875	9.625
M6x1	2TNM	2TLM	6	9	12	7.40	7.78	4.000	6.750	9.500
M8x1.25	2TNM	2TLM	8	12	16	9.80	10.18	4.500	7.375	10.250
M10x1.5	2TNM	2TLM	10	15	20	11.95	12.5	4.875	8.00	11.125
M12x1.75	2TNM	2TLM	12	18	24	14.3	15.0	5	8.25	11.50

Notes:

- Nominal length is a calculated number and cannot be measured in the free state. It is the actual installed length plus 1/2 pitch.
- Number of free coils is the total number of convolutions (counted from notch to notch) and has a tolerance of ±1/4 coil.
- Please consult factory for 2-1/2 and 3 Diameter lengths.

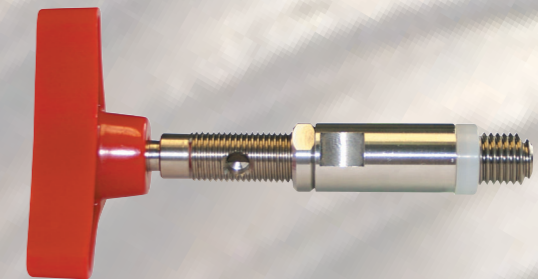
Replacement Pawl



Hex Shank Insertion Tool

- These tools are designed exclusively for use with the Electric Driver with the Quick Disconnect Hex Chuck.

Hex Shank Insertion Tool	Thread Size							
	M2.5x.45	M3x.5	M4x.7	M5x.8	M6x1	M8x1.25	M10x1.5	M12.1.75
Free-Running								
Insert Tool	2CTSB-M2.5F	2CTSB-M3F	2CTSB-M4F	2CTSB-M5F	2CTSB-M6F	2CTSB-M8F		
Locking								
Insert Tool	2CTSB-M2.5L	2CTSB-M3L	2CTSB-M4L	2CTSB-M5L	2CTSB-M6L	2CTSB-M8L		
Replacement								
Pawl	2CTSB-M2.5P	2CTSB-M3P	2CTSB-M4P	2CTSB-M5P	2CTSB-M6P	2CTSB-M8P		



Removal Tool

- Quick, non-destructive removal of inserts.
- No damage to the tapped threads.
- Can be used to adjust the depth of the installed insert.

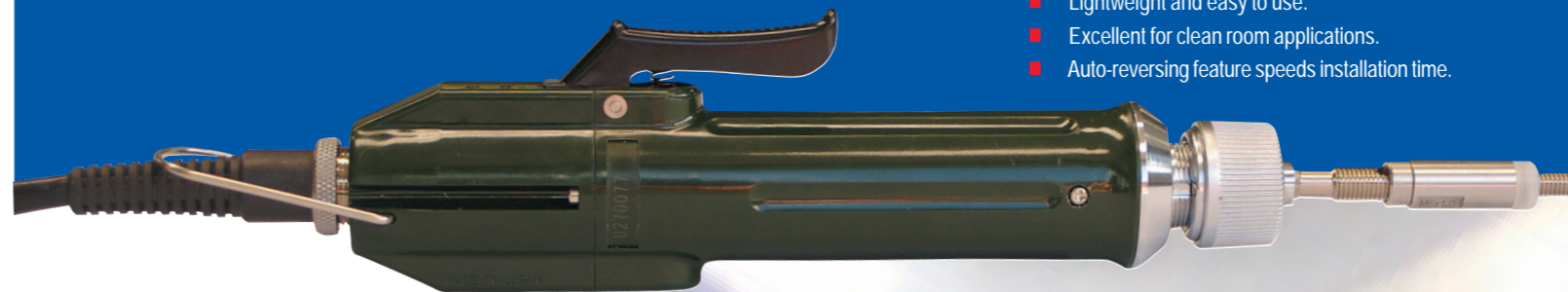
Hex Shank Insertion Tool	Thread Size							
	M2.5x.45	M3x.5	M4x.7	M5x.8	M6x1	M8x1.25	M10x1.5	M12.1.75
Removal Tool								
Assembly	CT16002R-M2.5	CT16002R-M3	CT16002R-M4	CT16002R-M5	CT16002R-M6	CT16002R-M8		
Replacement								
Removal Pawl	CT16402R-M2.5	CT16402R-M3	CT16402R-M4	CT16402R-M5	CT16402R-M6	CT16402R-M8		

Keyless Chuck Electric Driver

Specifically for faster and lower cost installation of KATO Tangless® Inserts. This tool will by itself install insert sizes M2.5 thru M8 replacing the previous need for 2 separate drivers!

Features:

- Lower cost than current electric drivers (small or large).
- Quick disconnect keyless chuck - Compatible with new, low-cost 2CTSB series Tangless tools.
- Uses the same transformer currently sold by KATO®, Heli-Coil®, Recoil® and Microdot®.
- Installs the entire range of Tangless Inserts. (Unified sizes: 2-56 thru 1/4", Metric sizes: M2.5 thru M8).
- Eliminates the need to purchase both the small and large electric drivers.
- Lightweight and easy to use.
- Excellent for clean room applications.
- Auto-reversing feature speeds installation time.





Recoil brand threaded inserts, installation tooling, taps, gauges, and thread repair kits accommodate a wide range of manufacturing and aftermarket applications in the automotive, aerospace, electronics, shipbuilding, defense, power-generation, and transportation industries. Offering a broad selection of sizes, materials, finishes, and coatings, Recoil inserts are manufactured in all of the popular thread forms and in accordance with the

world's most stringent quality standards, including AS9100, ISO9001, QS9000, and others. Competitively priced, these products deliver outstanding performance, durability, and value for thousands of uses. Alcoa Fastening Systems (AFS) also designs and manufactures non-standard Recoil inserts to meet special requirements.

Alcoa Fastening Systems Industrial: A Global Organization

Alcoa Fastening Systems (AFS) maintains company offices in the United States and Canada, with offices in many other countries. Authorized AFS fastener distributors are

also located in many of the world's industrial centers, where they provide a ready source of AFS fasteners, installation tools, tool parts, and application assistance.

Americas

Headquarters

8001 Imperial Drive
Waco, TX 76712, USA
P.O. Box 8117
Waco, TX 76714-8117, USA
Tel: 800 388 4825
Fax: 800 798 4825

Indianapolis Distribution
4536 West 78th Street
Indianapolis, IN 46268, USA
Tel: 800 732 3470 ext 1
Fax: 800 573 2645

Kingston Operations
1 Corporate Drive
Kingston, NY 12401, USA
Tel: 800 278 4825
Fax: 845 334 7333

Latin America Sales
Avenida Parque Lira
79-402 Tacubaya
MEXICO C P 11850
Tel: 52 55 5515 1776
Fax: 52 55 5277 7564

Mississauga Distribution
6150 Kennedy Road, Unit 10
Mississauga, Ontario L5T-2J4
CANADA
Tel: 905 564 4825
Fax: 905 564 1963

Stoughton Operations
44 Campanelli Parkway
Stoughton, MA 02072, USA
Tel: 800 732 3470 ext 2
Fax: 800 644 2177

Waco Operations
8001 Imperial Drive
Waco, TX 76712, USA
P.O. Box 8117
Waco, TX 76714-8117, USA
Tel: 800 388 4825
Fax: 800 798 4825

International Locations

Melbourne Operations
20 Stamford Road
Oakleigh, Victoria, 3166
AUSTRALIA
Tel: 61 3 9567 3321
Fax: 61 3 9563 1980

Shanghai Sales
2nd floor, 29 Jiatai Road
Waigaoqiao
Free Trade Zone
Shanghai 200131 CHINA
Tel 86-21-58665080
Fax 86-21-58681859

Telford Operations
Unit C, Stafford Park 7
Telford, Shropshire TF3, 3BQ
UNITED KINGDOM
Tel: 44 1952 290011
Fax: 44 1952 290459

Singapore Sales
8 Shenton Way #10-14
Temasek Tower
SINGAPORE
Tel + 65 62 24 58 70
Fax + 65 97 67 19 55

Your Authorized Distributor

For The Long Haul, The Future of Fastening Technology, The Future of Assembly Technology, The Future of Tooling Technology, and Tools of Productivity are service marks of Alcoa Fastening System. AFS provides technical assistance regarding the use and application of Huck fasteners and tooling.

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Part Number:

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**Alcoa
Fastening
Systems**



One Great ConnectionSM