

Hand Installation Tools



Recoil Tools

AFS supplies a range of associated Recoil tooling to facilitate Recoil insert installation. The advantage of the Recoil tooling system is its simplicity, versatility, and ease of use. The hand installation tooling range includes the manual installation tool, the semi production "Prewinder" type, as well as manual and spring operated tang break off tools.

Manual Tool

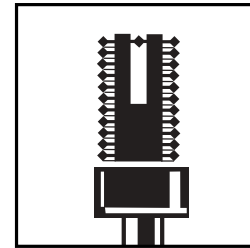
The standard Recoil insert installation tool is the most practical and simple to use for general applications. This tool may be used to install 1D through to 3D length inserts, but care must be taken to ensure that the adjustable collar is correctly set to suit the particular type and length of the Recoil insert. If the collar is incorrectly set, the insert will not drive properly and the tool may slip off the tang as the insert enters the hole.

For general use, the collar should be adjusted such that the insert tang is positioned mid-way along the slot with the insert coils compressed. This will allow the insert free movement to suit the parent material thread pitch during installation.

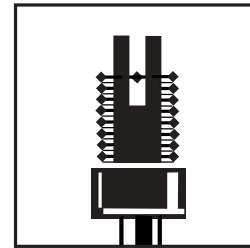
If the installation tool is used to break off the tang, then it must be lifted clear of the insert following installation and replaced into the insert at 90 degrees to its drive position. This ensures that the tool is correctly placed on the insert tang. Tap the tool sharply downward to produce a clean tang break.

Note: The manual installation tool is not recommended for the installation of locking inserts.

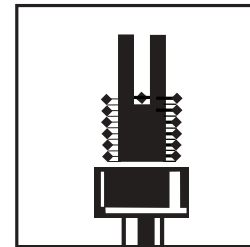
Note: Recoil manual tools are not recommended for use with other brands of wire thread inserts.



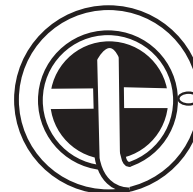
Collar Adjusted Too Low



Collar Adjusted Correctly



Collar Adjusted Too High



Tang Removal

Hand Installation Tools

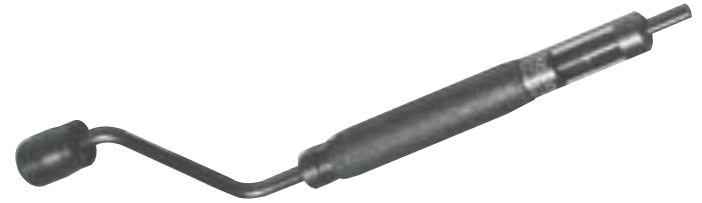
Semi Production "Prewinder" Type Installation Tool

This type of tool is ideal for installing inserts in small production runs or in areas where compressed air or electricity are not available and offers a quicker alternative to the simple hand installation tool. The tool is suitable for use when installing free running and locking inserts.

Threaded Mandrel Type

The threaded mandrel type is suitable for the installation of free running and locking inserts. The mandrel is wound into the insert which is then wound into the tapped hole. The mandrel is removed by turning the crank in a counter clockwise direction, leaving the insert in place.

Note: The threaded mandrel type installation tool is recommended for installing locking inserts.



UNC

SIZE	PART No THREADED
#2-56	53521
#3-48	53531
#4-40	53541
#5-40	53551
#6-32	53561
#8-32	53581
#10-24	53601
#12-24	53621
1/4-20	53041
5/16-18	53051
3/8-16	53061
7/16-14	53071
1/2-13	53081
9/16-12	53096
5/8-11	53106
3/4-10	53126
7/8-9	53146
1-8	53166
1 1/8-7	53186
1 1/4-7	53206
1 3/8-6	53226
1 1/2-6	53246

METRIC

SIZE	PART No THREADED
M2.2 x .45	55011
M2.5 x .45	55251
M3 x 0.5	55031
M3.5 x 0.6	55351
M4 x 0.7	55041
M5 x 0.8	55051
M6 x 1.0	55061
M7 x 1.0	55071
M8 x 1.25	55081
M10 x 1.5	55101
M12 x 1.75	55121
M14 x 2.0	55146
M16 x 2.0	55166
M18 x 2.5	55186
M8 x 1.0	57081
M10 x 1.0	58101
M10 x 1.25	57101
M12 x 1.25	58121
M12 x 1.50	57121
M14 x 1.5	57141
M16 x 1.5	57161
M18 x 1.5	58181

UNF

SIZE	PART No THREADED
#3-56	54531
#4-48	54541
#6-40	54561
#8-36	54581
#10-32	54601
1/4-28	54041
5/16-24	54051
3/8-24	54061
7/16-20	54071
1/2-20	54081
9/16-18	54091
5/8-18	54101
3/4-16	54121
7/8-14	54141
1-12	54161
1-14	54171
1 1/8-12	54181

Note: Part numbers ending in 6 are threaded mandrels only

Recoil Tang Break Tools

Recoil Tang Break Off Tools

Tang break off tools are available in hand, semi automatic spring type and pneumatic. The spring loaded and pneumatic tang break tools are recommended for removal of tangs in production applications. For large diameter fine thread inserts, e.g. M18-1.5 and above, 3/4-16 and above, the use of long nose pliers is an alternative method to break the tang.

Manual Tang Break Tool

The simple Recoil manual tang removal tool is suitable for low volume tang removal and is used for insert sizes up to 1/2" or M12. On larger sizes the multipurpose Recoil installation and tang break tool should be used. For tang removal, the tool is simply lifted and turned 90°, which will put the slot at right angles to the tang, then pushed downward with a sharp blow.



Spring Loaded Tang Break Tool (Pictured)

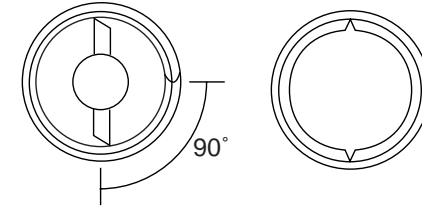
Spring loaded tang break tools offer effective removal of insert tangs and are suited from medium to large insert usage. Being spring loaded this tool requires no external power source and is suitable for tang removal on insert sizes up to 1/2" or M12. This tool is a spring loaded punch and when the tool is pushed down, the pin punches downward breaking off the tang.

Pneumatic Tang Break Tool

The pneumatic tang break tool is designed for high volume applications where rapid, effortless tang removal is required on insert sizes up to 3/4" or M20. This tool works on the same basis as the spring loaded tool, except the pin punches downward when an air cylinder is actuated by the valve.

Extraction Tool

Should inserts need to be removed, the use of the Recoil extraction tool is recommended. Extraction tools are simple and easy to use. As correct positioning will make the extraction easier, the tool should be turned 90° from the start of the coil allowing easy winding out of the insert. If the extraction tool is not gripping the insert, the edges can be resharpened.



Should the extracting tool not grip the insert, file a small notch in the insert for the tool to bite into.

Size of extraction tool and related size inserts

Size	Inch	Metric	Part No.
No.2	4-40 - 3/8	M3 - M10	50002
No.3	6-32 - 1	M4 - M24	50003
No.4	1 1/8 - 1/2	M27 - M39	50004
No.5	1 1/2 - 2 1/2	M8 - M65	50005

Reference Table for Tang Breaking Tool

INSERT PART	MANUAL		SPRING (ATBO) TYPE	PNEUMATIC TYPE
	TANG BREAK	COMBINED INSTALLATION TANG BREAK		
2-56, M2, M2.2	59060	50061	59061	59062
3-48, 3-56, M2.5	59070	50069	59071	59072
4-40, 4-48	59080	50077	59081	59082
5-40, M3	59090	50089	59091	59092
6-32, 6-40, M3.5	59100	50095	59101	59102
8-32, 8-36, M4	59130	50125	59121	59132
10-24, 12-24	59140	50140	59141	59142
10-32, M5	59160	50156	59141	59142
1/4-20, 1/4-28, M6	59190	50188	59181	59192
5/16-18	59220	50219	59241	59252
5/16-24, M8	59250	50250	59291	59252
3/8-16, M10-1.5	59280	50281	59291	59252
3/8-24, M10-1.25	59310	50313	59291	59252
7/16-14, 7/16-20, M11-1.25	59340	50344		
1/2-12, 1/2-13, M12-1.75	59380	50375		59332
M14-1.5		50438		59462
M16-1.5, 2		50500		
M18-1.5, 2, 2.5		50591		

