

Hand Installation Tools



Recoil Tools

Recoil supply a range of associated tooling to facilitate 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 in slotted and threaded mandrel 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.

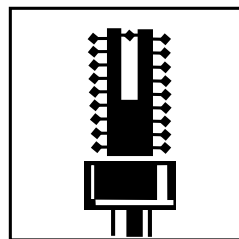
If the installation tool is used to break off the tang, then it must be lifted clear of the insert following installation and replaced into the insert at 90 degrees to its drive position. This ensures that the tool is correctly placed on the insert tang. Tap the tool sharply downward to produce a clean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

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

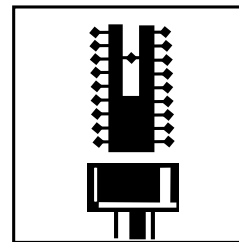
Note: Recoil manual tools are not recommended for use with other brands of wire thread inserts.



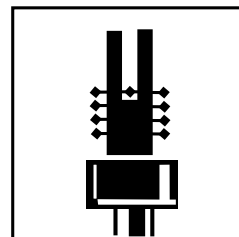
Too High



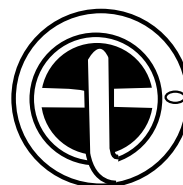
Correct



Too Low



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.

Slotted Mandrel Type

The slotted mandrel tool allows the rapid installation of inserts, however it is best suited to free running inserts. This tool eliminates the need to wind the mandrel into and out of the insert offering quicker installation cycles.

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 PLAIN (slotted)	PART No THREADED
#2-56		53526
#3-48		53536
#4-40	53542	53541
#5-40		53551
#6-32	53562	53561
#8-32	53582	53581
#10-24	53602	53601
#12-24		56621
1/4-20	53042	53041
5/16-18	53052	53051
3/8-16	53062	53061
7/16-14	53072	53071
1/2-13	53082	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

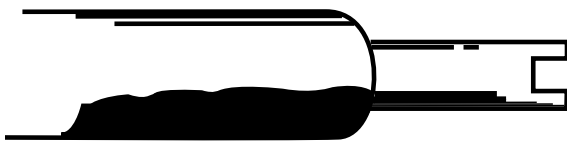
METRIC

SIZE	PART No PLAIN (slotted)	PART No THREADED
M2.2 x .45		55016
M2.5 x .45		55251
M3 x 0.5	55032	55031
M3.5 x 0.6		55351
M4 x 0.7	55042	55041
M5 x 0.8	55052	55051
M6 x 1.0	55062	55061
M7 x 1.0		55071
M8 x 1.25	55082	55081
M10 x 1.5	55102	55101
M12 x 1.75	55122	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	57102	57101
M12 x 1.25	58122	58121
M12 x 1.50	57122	57121
M14 x 1.5		57141
M16 x 1.5		57161
M18 x 1.5		58181

UNF

SIZE	PART No PLAIN (slotted)	PART No THREADED
#3-56		54531
#4-48		54541
#6-40		54561
#8-36		54581
#10-32	54602	54601
1/4-28	54042	54041
5/16-24	54052	54051
3/8-24	54062	54061
7/16-20	54072	54071
1/2-20	54082	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



Slotted Mandrel Type



Thread Mandrel Type

Recoil Tang Break Tools

Recoil Tang Break Off Tools

Tang breakoff 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, ie 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

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

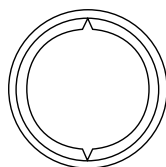
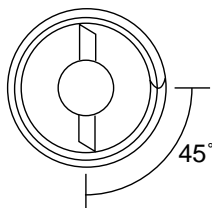
The Pneumatic Tang Break Tool is designed for high volume applications where rapid, effortless tang removal is required on insert sizes up to 3/4" or M20. This tool works on the same basis as the spring loaded tool, except the pin punches downward when an air cylinder is actuated by the valve.

Reference Table for Tang Breaking Tool

INSERT PART	MANUAL			
	TANG BREAK	COMBINED INSTALLATION TANG BREAK	SPRING (ATBO) TYPE	PNEUMATIC TYPE
2-56, M2, M2.2	59060		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, 10-32, 12-24, M5	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		

Extracting 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 45 degrees 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

