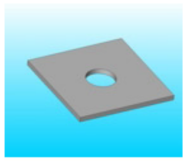
TR Self-Clinch Nut Installation Guide

This article provides a 4-point step-by-step storyboard style installation guide for the TR Self-Clinch Nut.

The TR Self-Clinch nut can be installed into a pre-punched or pre-drilled hole using a press capable of a squeezing action, causing the parent material to flow into the specially designed under head configuration offering a load bearing and torque resistant joint.



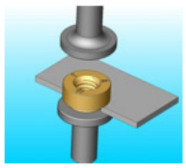
Step: 1

Ensure the correct spigot length has been selected for sheet thickness being used. Select the appropriate hole size from the table below for the bush size required. Punch the hole diameter into the sheet material.

Step: 2

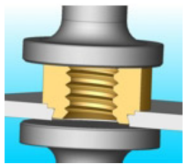
Place the Nuts spigot end into the hole on the side opposite the mating face. So that nut rests on the serrations Ensure both plate and nut are aligned along the same axis.

If the nut is not seated 'square' in the hole, the joint will be imperfect and mating threads will mis-align.



Step: 3

Using a profiled punch, apply only sufficient pressure to 'squeeze' the spigot over and its serrations into the parent sheet metal.



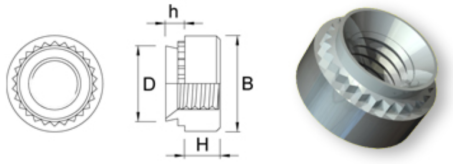
Step: 4

The serrations if properly installed will providetorsional (rotational) resistance. After installation the spigot joint should be flush with the sheet metal.

Using the table below with reference to the specific size of the clinch nut, select the correct Hole size for the installation of the fastener.

For the best dimensional accuracy and therefore performance, TR Fastenings recommends that all holes in the sheet metal application be punched.

To install the fastener into the punched Hole a profiled punch or a ball bearing of a suitable size is required. Note it is essential that the recommended Hole tolerances be observed.



These guideline geometry values are in mm.

Metric Dimensions															
Thread and pitch	M2			M2.5			M3			M3alt			M3.5		
Code	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2
D max	4.22			4.22			4.22			4.73			4.73		
B±0.2	6.3			6.3			6.3			7.1			7.1		
H±0.10	1.5			1.5			1.5			1.5			1.5		
h max	0.76	0.97	1.37	0.76	0.97	1.37	0.76	0.97	1.37	0.76	0.97	1.37	0.76	0.97	1.37
Minimum rec sheet thickness	0.8	1	1.4	0.8	1	1.4	0.8	1	1.4	0.8	1	1.4	0.8	1	1.4
Hole size ±0.08 -0.00	4.25			4.25			4.25			4.75			4.75		
Minimum distance to edge of sheet	4.8			4.8			4.8			5.6			5.6		

Metric Dimensions												
Thread and pitch	M4			M5			M6		M8		M10	
Code	0	-1	-2	0	-1	-2	-1	-2	-1	-2	-1	-2
D max	5.38			6.38			8.72		10.44		13.98	
B±0.2	7.9			8.7			11.05		12.65		17.35	
H±0.10	2			2			4.1		5.5		7.5	
h max	0.76	0.97	1.37	0.76	0.97	1.37	1.37	2.21	1.37	2.21	2.2	3.05
Minimum rec sheet thickness	0.8	1	1.4	0.8	1	1.4	1.4	2.3	1.4	2.3	2.3	3.1
Hole size ±0.08 -0.00	5.4			6.4			8.75		10.5		14	
Minimum distance to edge of sheet	6.9			7.1			8.6		9.7		13.55	

Imperial Dimensions											
Thread and pitch	#2-56			#4-40				#6-32			
Code	0	-1	-2	0	-1	-2	-3	0	-1	-2	-3
D max	.165"			.165"				.187"			
B±0.2	.25"			.25"				.28"			
H±0.10	.07"			.07"				.07"			
h max	.030"	.038"	.054"	.030"	.038"	.054"	.087"	.030"	.038"	.054"	.087"
Minimum rec sheet thickness	.032"	.040"	.056"	.032"	.040"	.056"	.091"	.032"	.040"	.056"	.091"
Hole size ±0.08 -0.00	.166"			.166"				.188"			
Minimum distance to edge of sheet	.19"			.19"				.22"			

Imperial Dimensions											
Thread and pitch	#8-32				#10-24 & 10-32				#12-24		
Code	0	-1	-2	-3	0	-1	-2	-3	-1	-2	-3
D max	.212"				.249"				.276"		
B±0.2	.31"				.34"				.38"		
H±0.10	.09"				.09"				.13"		
h max	.030"	.038"	.054"	.087"	.030"	.038"	.054"	.087"	.038"	.054"	.087"
Minimum rec sheet thickness	.032"	.040"	.056"	.091"	.032"	.040"	.056"	.091"	.040"	.056"	.091"
Hole size ±0.08 -0.00	.213"				.250"				.277"		
Minimum distance to edge of sheet	.27"				.28"				.31"		

Imperial Dimensions									
Thread and pitch	#1/4-20			#5/16-18			#3/8-16		
Code	-1	-2	-3	-1	-2	-3	-1	-2	-3
D max	.343"			.412"			.499"		
B±0.2	.43"			.50"			.56"		
H±0.10	.17"			.23"			.27"		
h max	.054"	.087"	.120"	.054"	.087"	.120"	.087"	.120"	.235"
Minimum rec sheet thickness	.056"	.091"	.125"	.056"	.091"	.125"	.091"	.125"	.250"
Hole size ±0.08 -0.00	.344"			.413"			.500"		
Minimum distance to edge of sheet	.34"			.38"			.44"		

Note: Due to the fact that fastening applications differ greatly, the above information is for guidance only and is correct to the best of our knowledge. The customer must satisfy themselves with the performance of the fastener and validity of the data. TR Fastenings will not be held responsible for any failure that may occur from the use of this information.

The embedded serration feature anchor the Clinch nut into the sheet metal.