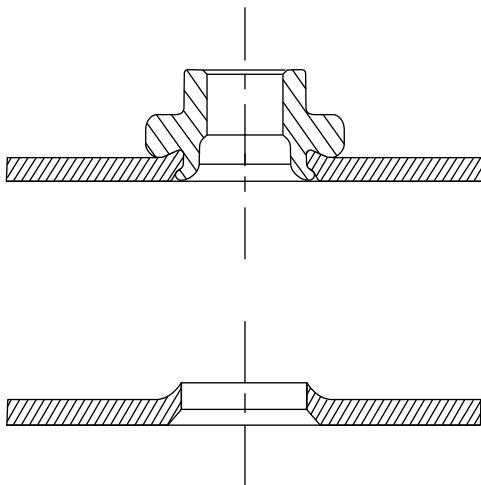




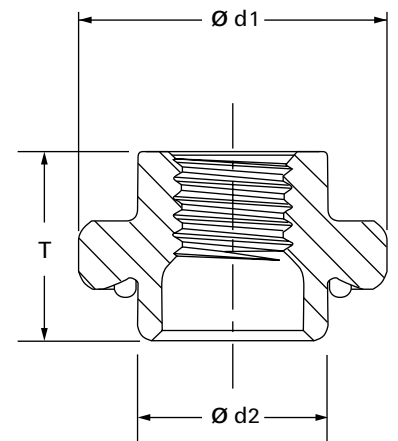
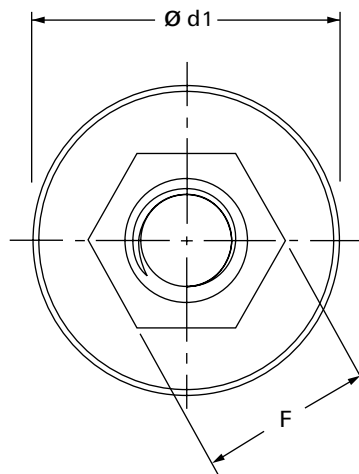
# FIN Series Clinch Nut

## ROUND CLINCH NUTS FOR WIDE RANGING APPLICATIONS

FabriSteel's FIN Series Clinch Nuts are installed in pre-pierced holes in a metal panel and are clinched in place for maximum twist-out and push-out performance. These fasteners are available in 6mm - 12mm thread sizes and are ideal for panel thicknesses ranging from 0.75mm - 4.00mm. The unique design of the FIN Clinch Nut results in a secure, permanent installation with high torque characteristics. Available in bulk form, these Clinch Nuts come standard with a ZF (zinc flash) finish and dry lube.

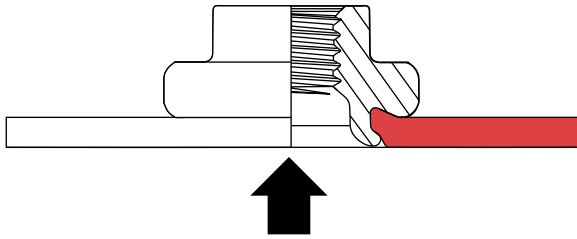


Panel must be pre-pierced and pre-formed to accept nut.

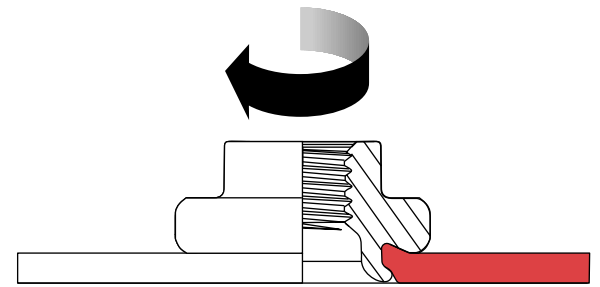


All dimensions below in millimeters.

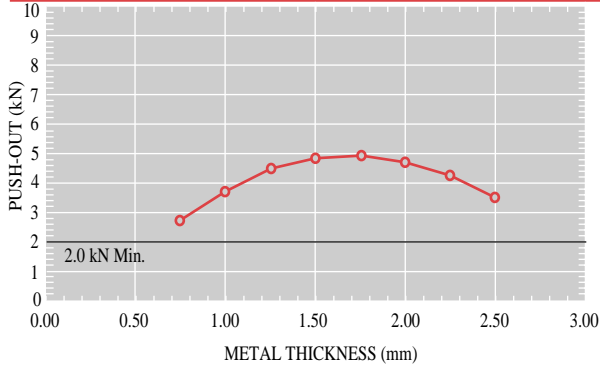
PIERCE NUT SERIES	NUT NUMBER	THREAD SIZE	PROPERTY CLASS GRADE	METAL RANGE	INSTALL. LOAD (TONS)	$\varnothing d1$ NUT DIA.	$\varnothing d2$ NUT DIA.	T NUT THICKNESS	F
FIN06	FIN6M610HX	M6 x 1.0	8-10	0.75-1.29	10	MAX 16.1	MAX 9.9	MAX 10.8	MAX 8.0
				1.30-1.50					
				1.51-1.99					
				2.00-2.50					
FIN08	FIN8M825HX	M8 x 1.25	8-10	0.75-1.29	12.8	MAX 21.1	MAX 13.0	MAX 12.8	MAX 11.0
				1.30-1.99					
				2.00-3.00					
FIN10	FIN1M015HX	M10 x 1.5	8-10	0.75-1.29	22.5	MAX 26.1	MAX 15.2	MAX 15.5	MAX 13.0
				1.30-1.99					
				2.00-4.00					
FIN12	FIN2M275HX	M12 x 1.75	8-10	1.00-1.99	28.1	MAX 28.1	MAX 16.3	MAX 17.3	MAX 15.0
				2.00-4.00					



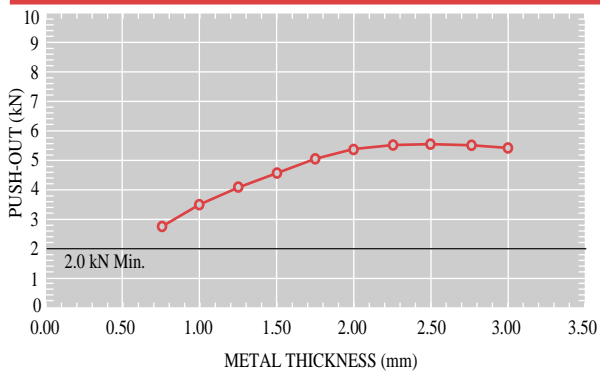
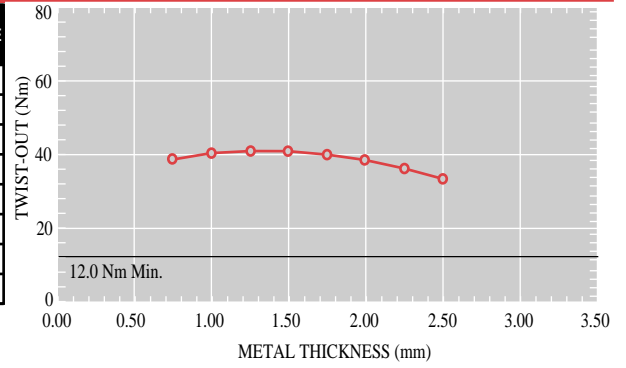
**PUSH-OUT**



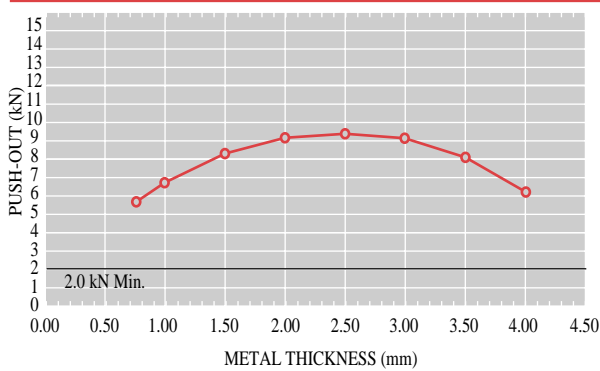
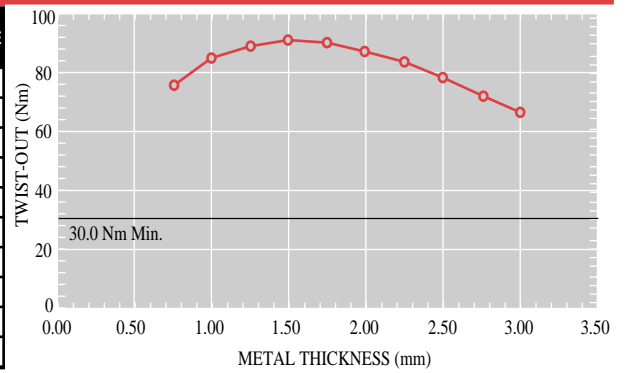
**TWIST-OUT**



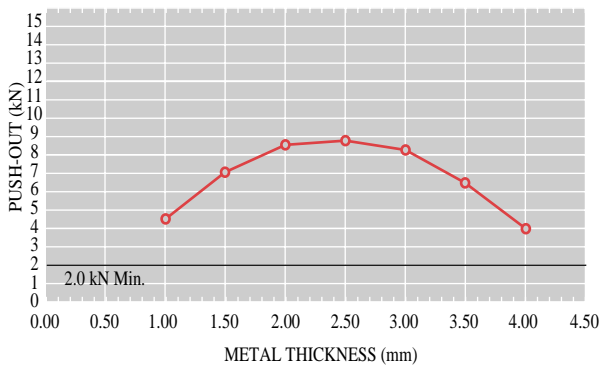
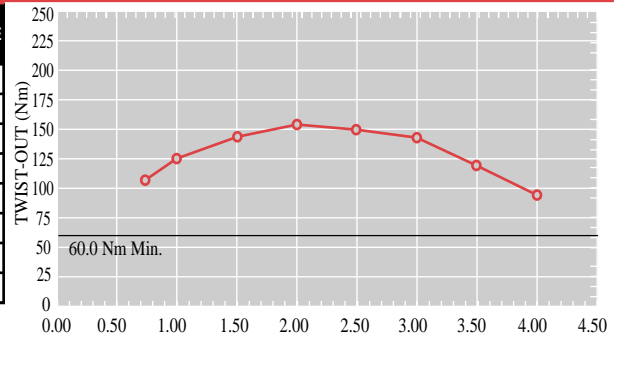
<b>FIN 06</b>		
PANEL THICKNESS (MM)	PUSH-OUT PERFORMANCE (kN)	TWIST-OUT PERFORMANCE (Nm)
0.75	2.80	38.8
1.00	3.75	40.4
1.25	4.45	41.1
1.50	4.85	41.1
1.75	4.95	40.2
2.00	4.75	38.5
2.25	4.30	36.0
2.50	3.55	32.8



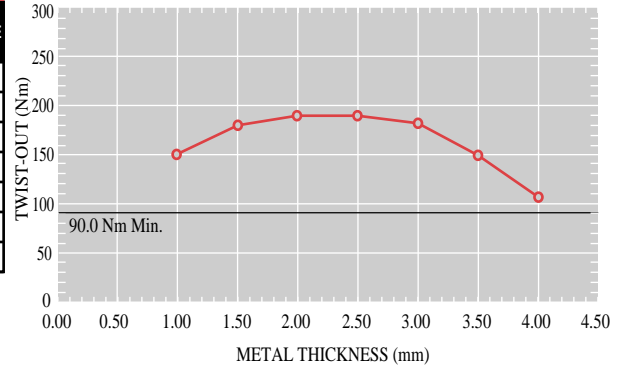
<b>FIN 08</b>		
PANEL THICKNESS (MM)	PUSH-OUT PERFORMANCE (kN)	TWIST-OUT PERFORMANCE (Nm)
0.75	2.88	76.8
1.00	3.49	84.3
1.25	4.10	89.1
1.50	4.65	91.2
1.75	5.09	90.8
2.00	5.40	88.2
2.25	5.57	83.8
2.50	5.60	78.4
2.75	5.54	72.8
3.00	5.42	68.0



<b>FIN 10</b>		
PANEL THICKNESS (MM)	PUSH-OUT PERFORMANCE (kN)	TWIST-OUT PERFORMANCE (Nm)
0.75	5.70	110
1.00	6.80	125
1.50	8.30	145
2.00	9.10	155
2.50	9.35	150
3.00	9.05	140
3.50	8.15	120
4.00	6.35	95



<b>FIN 12</b>		
PANEL THICKNESS (MM)	PUSH-OUT PERFORMANCE (kN)	TWIST-OUT PERFORMANCE (Nm)
1.00	4.65	150
1.50	7.05	175
2.00	8.45	190
2.50	8.85	190
3.00	8.25	175
3.50	6.50	150
4.00	3.90	105

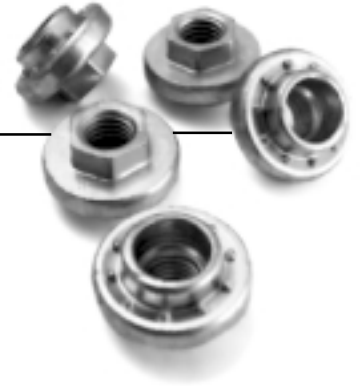


Note: All data are mean-3sigma for nuts installed in 1008/1010 mild steel.

The data presented here are for Fabristeel ISO Class 9 clinch nuts. These nuts were installed in 1008/1010 plain carbon steel with properties HRB 50-65. The installation and performance of this mechanically attached fastener is dependent on sheet metal properties. Therefore, results in customer material may vary from these data. This data is not to be considered a specification. To ensure proper application of this product, please consult with a Fabristeel representative to coordinate your application evaluation.

# Part Design Guidelines

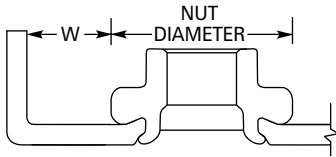
## FIN SERIES CLINCH NUTS



FIN Series Clinch Nuts are precision made, high quality threaded fasteners that are installed in pre-pierced holes in sheet metal stampings by the same presses and the same dies used to form the part. Available in bulk form, FIN Series Clinch Nuts offer savings in time and materials over other fasteners.

### WHEN A FORMING OPERATION FOLLOWS A CLINCH NUT OPERATION.

Do not form part closer than dia. of nut ( $W$ ) when nut is installed as shown below. Tooling alterations are necessary to reduce " $W$ " below 12 mm (.47 in.); consult your representative.

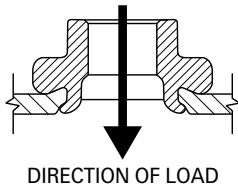


### APPLICATION IN SPECIAL MATERIALS.

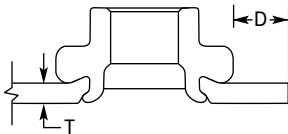
For HSLA, stainless steel, aluminum, or plastic material, consult your representative.

### DIRECTION OF ASSEMBLED LOAD.

Assembled load must be against shoulders of nut.



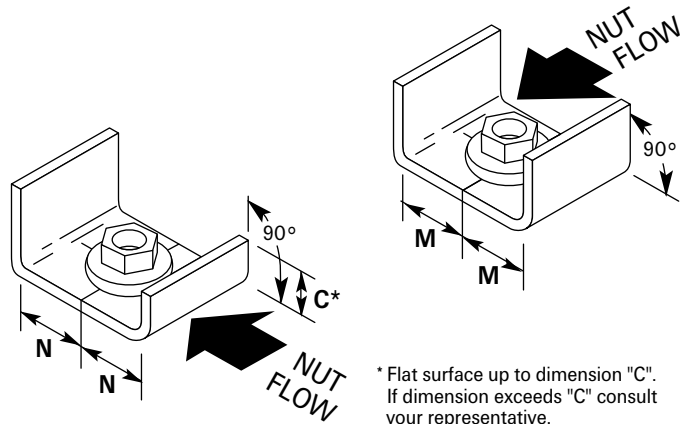
### NUT EDGE TO PANEL EDGE DISTANCE.



Minimum nut edge to panel edge distance is  $2 \times T$ .

### NUT TO FLANGE DISTANCES (WITH STANDARD INSTALLATION TOOLING).

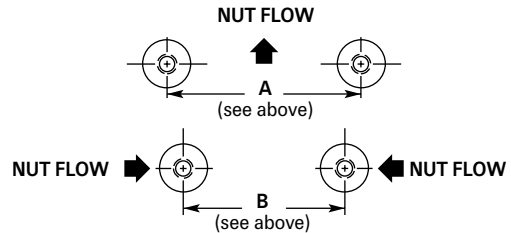
Note: Closer nut-to-flange distances may be achieved using altered standard and/or special tooling. Consult your representative.



\* Flat surface up to dimension " $C$ ". If dimension exceeds " $C$ " consult your representative.

### MINIMUM NUT SPACING (WITH STANDARD INSTALLATION TOOLING).

Closer spacing may be achieved using altered standard and/or special tooling. Consult your representative.



All dimensions below in millimeters.

NUT NUMBER	A	B	M	N	"C" (MAX)
FIN06	58.0	46.0	18.0	18.0	63.5
FIN08	58.0	52.0	24.0	24.0	63.5
FIN10	58.0	56.0	25.0	25.0	60.5
FIN12	68.0	58.0	27.0	27.0	59.0

\* Consult representative for dimension

# FIN Series Nut Installation. As easy as...

**1** The Clinch Nut is automatically placed in position in the installation tool (head) until the metal panel is in position with the die button underneath.

**2** As the die closes, the plunger pushes the nut into the pre-pierced, pre-embossed hole in the metal panel.

**3** The die button forms the metal panel to lock the nut securely in place.

