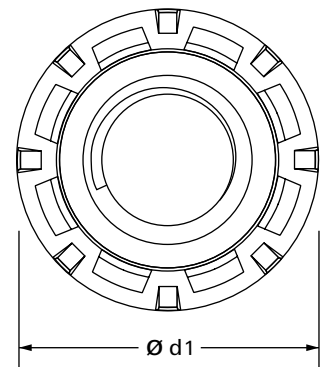
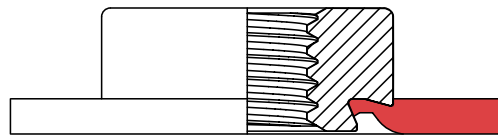
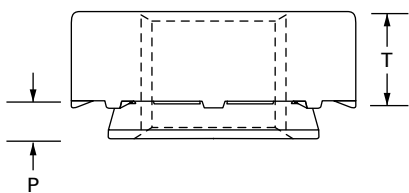




MHD Series Heavy Metal Nut

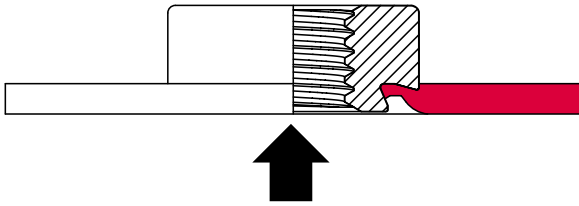
SELF-PIERCING ROUND PIERCE NUTS FOR HEAVY METAL APPLICATIONS

FabriSteel's MHD series Heavy Metal Nuts are self-piercing fasteners available in 6mm - 12mm thread sizes. These automatically fed fasteners can pierce metal up to 5.15mm and can be used in all areas of the vehicle. The unique design of the MHD Pierce Nut results in a secure, permanent installation with high torque characteristics. Available in bulk form, these Pierce Nuts meet ISO Class 10 requirements.

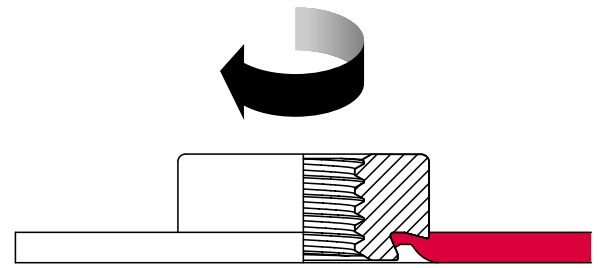


All dimensions below in millimeters.

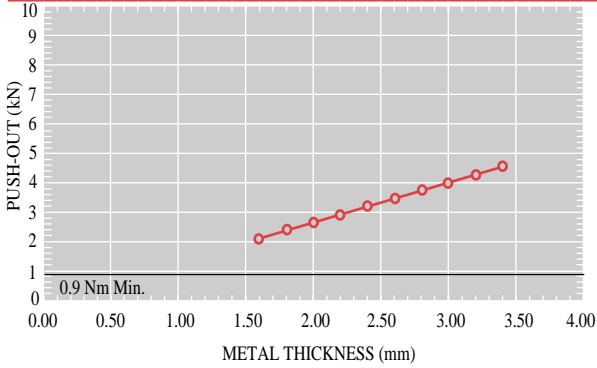
PIERCE NUT SERIES	NUT NUMBER	THREAD SIZE (6 g. TOL.)	PROPERTY CLASS GRADE	METAL RANGE	INSTALL. LOAD (TONS)	Ø d1 NUT DIA.	T NUT THICKNESS	P (REF.)
MHD06	MD6M16201	M6 x 1.0	10	1.60-2.00	20	MAX 13.65	MAX 3.90	1.45
	MD6M20271			2.01-2.75	20			1.85
	MD6M27351			2.76-3.50	20			2.60
MHD08	MD8M16201	M8 x 1.25	10	1.60-2.00	23	MAX 16.75	MAX 5.30	1.45
	MD8M20271			2.01-2.75	25			1.85
	MD8M27351			2.76-3.50	30			2.60
MHD10	MD1M20271	M10 x 1.5	10	2.00-2.75	20	MAX 19.8	MAX 6.35	1.85
	MD1M27351			2.76-3.50	25			2.60
	MD1M35431			3.51-4.25	25			3.35
MHD12	MD2M25321	M12 x 1.75	10	2.50-3.25	35	MAX 25.15	MAX 7.05	2.35
	MD2M32401			3.26-4.05	35			3.10
	MD2M40511			4.06-5.15	35			3.90



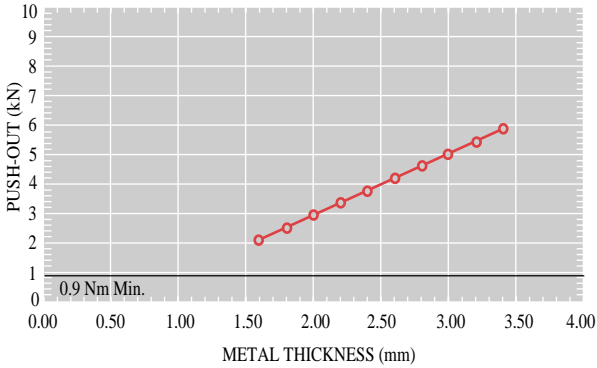
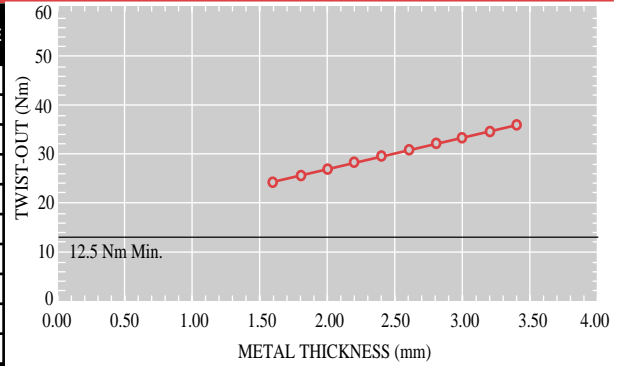
PUSH-OUT



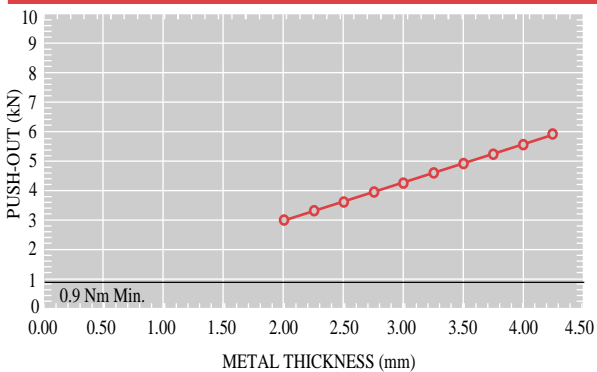
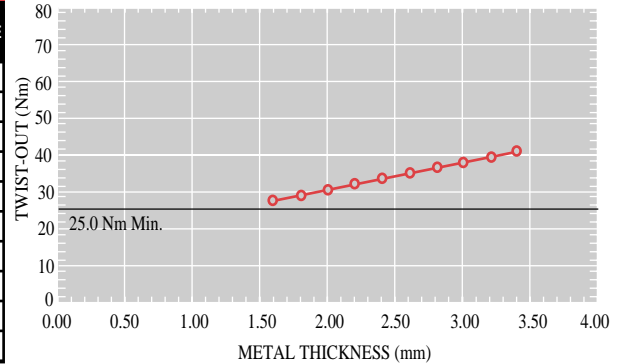
TWIST-OUT



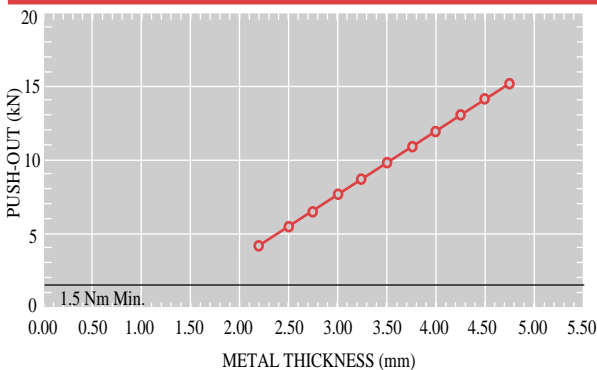
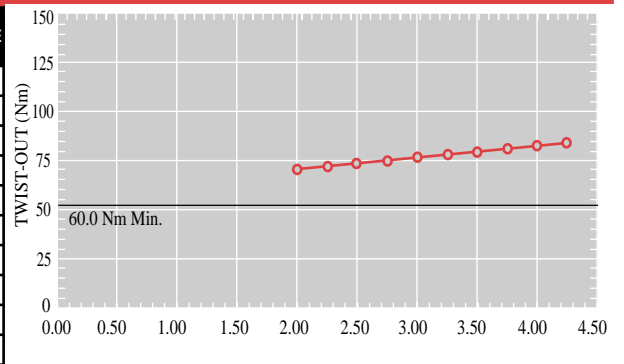
MHD 06		
PANEL THICKNESS (MM)	PUSH-OUT PERFORMANCE (kN)	TWIST-OUT PERFORMANCE (Nm)
1.60	2.10	24.00
1.80	2.38	25.30
2.00	2.67	26.70
2.20	2.95	28.00
2.40	3.23	29.30
2.60	3.52	30.70
2.80	3.80	32.00
3.00	4.08	33.30
3.20	4.37	34.70
3.40	4.65	36.00



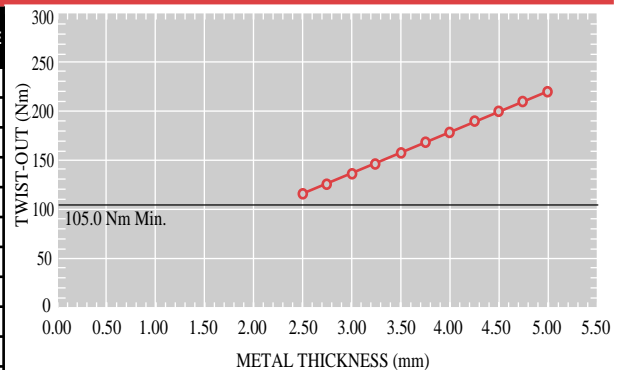
MHD 08		
PANEL THICKNESS (MM)	PUSH-OUT PERFORMANCE (kN)	TWIST-OUT PERFORMANCE (Nm)
1.60	2.18	27.30
1.80	2.59	28.90
2.00	3.01	30.50
2.20	3.42	32.10
2.40	3.84	33.80
2.60	4.25	35.40
2.80	4.67	37.00
3.00	5.09	38.60
3.20	5.50	40.20
3.40	5.92	41.80



MHD 10		
PANEL THICKNESS (MM)	PUSH-OUT PERFORMANCE (kN)	TWIST-OUT PERFORMANCE (Nm)
2.00	3.00	70.00
2.25	3.33	71.60
2.50	3.65	73.30
2.75	3.98	74.90
3.00	4.30	76.50
3.25	4.63	78.20
3.50	4.96	79.80
3.75	5.28	81.40
4.00	5.61	83.00
4.25	5.93	84.70



MHD 12		
PANEL THICKNESS (MM)	PUSH-OUT PERFORMANCE (kN)	TWIST-OUT PERFORMANCE (Nm)
2.50	3.50	115.00
2.75	4.65	125.50
3.00	5.80	136.00
3.25	6.97	146.50
3.50	8.13	157.00
3.75	9.29	167.50
4.00	10.44	178.00
4.25	11.60	188.50
4.50	12.75	199.00
4.75	13.92	209.50
5.00	15.07	220.00



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

The data presented here are for Fabrasteel self-piercing, ISO Class 10 MHD nuts. These nuts were installed in 1008/1010 plain carbon steel with properties HRB 55-75. The installation and performance of this mechanically attached fastener is highly 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, each application should be evaluated on an individual basis in customer material. Please consult with a Fabrasteel representative to coordinate your application evaluation.

Part Design Guidelines

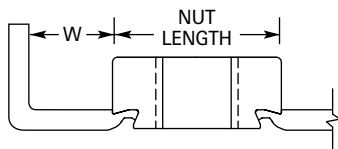
MHD SERIES HEAVY METAL NUTS

MHD Series Heavy Metal Nuts are precision made, heat treated, high quality threaded fasteners that can be installed in sheet metal stampings by the same presses and the same dies used to form the part. Available in bulk form, MHD Series Heavy Metal Nuts pierce their own hole through a sheet metal panel, offering substantial savings in time and materials over other fasteners.



WHEN A FORMING OPERATION FOLLOWS A PIERCE 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 7 mm (1/4 in.); consult your representative.

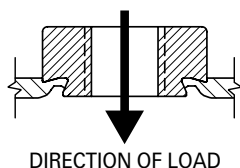


APPLICATION IN SPECIAL MATERIALS.

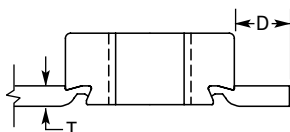
For HSLA, stainless steel, aluminum, or plastic material, consult your representative.

DIRECTION OF ASSEMBLED LOAD.

Assembled load must be against shoulders of nut.



NUT EDGE TO PANEL EDGE DISTANCE.



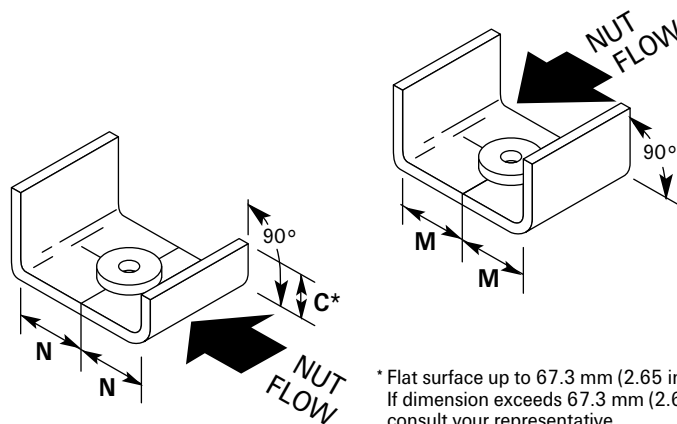
T (METAL RANGE)	D (MIN)	
	MM	IN
1.6 mm OR MORE .061 in.	2 x T	2 x T

EMBOSS REQUIREMENTS

MHD Series Round Pierce Nuts require no emboss.

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 67.3 mm (2.65 in.). If dimension exceeds 67.3 mm (2.65 in.) consult your representative.

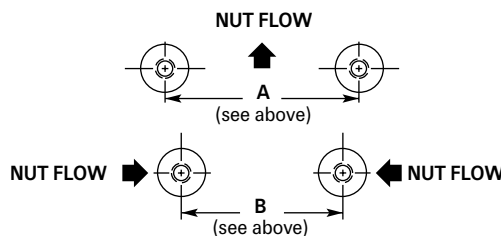
All dimensions below in millimeters.

NUT NUMBER	A	B	M	N
MHD06	58.0	64.0	29.0	25.0
MHD08	58.0	64.0	29.0	25.0
MHD10	*	*	*	*
MHD12	*	*	*	*

* Consult representative for dimension

MINIMUM NUT SPACING (WITH STANDARD INSTALLATION TOOLING).

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



MHD Series Heavy Metal Nut Installation. As easy as...

1 The Pierce 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 through the metal panel. The pilot area of the nut serves as the punch - virtually a new punch with every cycle of the press.

3 The die button forms the metal panel to lock the nut in place. The die-stamped blank (slug), cut by the pilot of the nut and assisted by the slug rod, drops through the die button as scrap.

