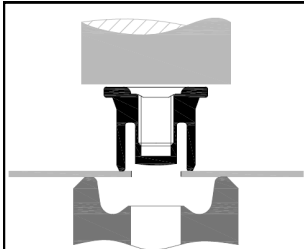


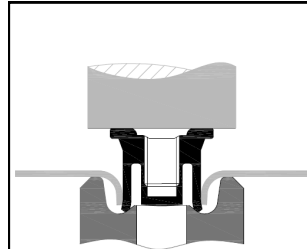
Flangeform Closed End Clinch Nuts are threaded fasteners with unique ribs designed for installation into thin gauge materials. The fastener plunges the pre-punched hole and wraps itself around the material whilst the ribs embed themselves providing an integral high strength attachment point. The one piece design provides a water tight seal, ideal for roof rack applications or where sealing is required.

PROCESS

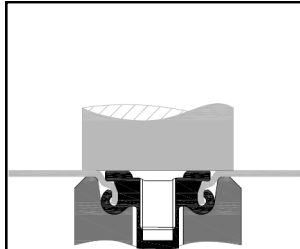
- **HOLE PREPERATION**—A pre-punched or drilled hole is required with a tolerance of +/- 0.1mm. Refer to product data sheet for hole sizes.
- **SHEET PREPERATION**— Flangeform is suited up to 80Rb, in some cases a pre-form may be required.
- **SHEET THICKNESS**—Refer to the product data sheet for material thickness range
- **INSTALLATION**—Can be used on progression, transfer, off-line mechanical / hydraulic presses using autofed or manual technique.
- **TOOLING**—Mini-Die (bottom tool) will vary depending upon the material thickness, hole size and hardness



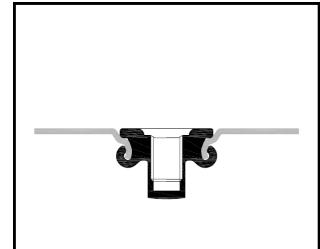
Material is placed over the mini-die & the nut located centrally.



Force is applied to the nut which enable it to plunge the material.



The nut is formed around the material by the form of the mini-die

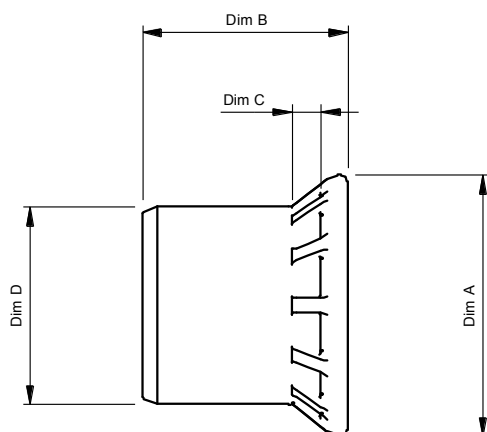
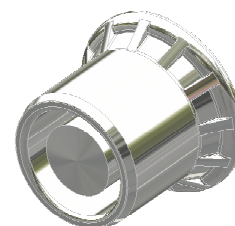


The nut is flush with the material and integral

ADVANTAGES

- High strength attachment point in thin materials
- Accurate & positive positioning
- High bending moment resistance
- One Piece closed end
- Pull & push out strength is of similar performance,
- Provides a flush mounting surface
- No weld splatter / fumes—environmentally friendly process
- Can be installed into 2 layers of material
- Ideally suited to multiple insertion and automated assembly in die or off line.

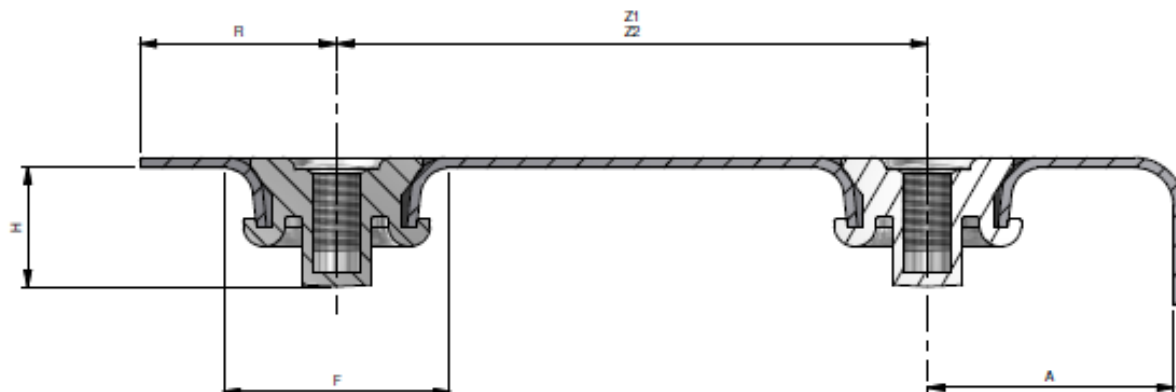
Technical data



Thread Size		Flange Dia. A	Overall Height B	Splined Length C	Can Dia. D	Material Thickness mm	Hole Size Typical	Tonnage Typical
Unified	Metric							
1/4	M6	17.6	13.85	2	13.29	0.7	5.1	4
						1	5.1	4
						1.2	5.9	4.5
						1.5	6.5	5.5
						2	6.5	6
						2.5	6.6	8
5/16	M8	21.75	18.24	2.05	16.48	0.7	6.9	5
						1	6.9	5
						1.2	8	5.5
						1.5	8	7.5
						2	8.5	8
						2.5	8.6	9.5
						3	8.9	10

Designs requiring different thread sizes are possible, please contact the engineering department for further information.

Technical data

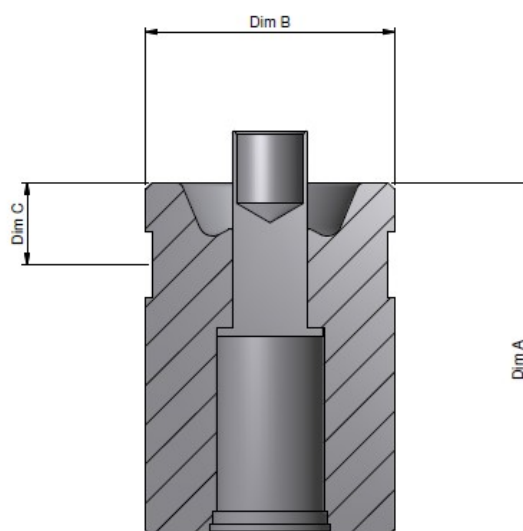


FLANGEFORM CLOSED END NUT INSTALLATION CRITERIA						
Thread Size	Height H	Diameter F	Distance R	Distance A	Distance Z1	Distance Z2
M6	11-13.5	19	14	15	28.5	24
M8	16-18.5	25.4	17	20	38	32

MINI DIE INSERTION TOOL DIMENSIONS

Mini-die tools are specific for each metric / imperial size of Flangeform nut and material thickness. This data is required to choose the correct mini-die for the application.

Closed End Nut Thread Size	Height A	Diameter B	Groove Centre C
M5	32.00 / 32.10	21.963 / 21.975	12.5
M6	38.00 / 38.10	28.463 / 28.475	12.5
M8	54.00 / 54.10	37.963 / 37.975	12.5
M10	66.10 / 66.00	44.980 / 45.000	21



HOW TO SPECIFY

- **PRODUCT CODE**—Double Reduced Spline feature is product code 1D
- **THREAD CODE**— Refer to thread code matrix
- **GRADE & PLATING CODE**—Grade 8 is H, 9 is J. Standard plating is Zinc & Clear trivalent passivation (W)
- **Blind Hole**—Designated with a BL

Part Number Layout / Meaning						
<u>Product</u>	-	<u>Thread</u>	-	<u>Grade & Finish</u>	-	<u>Blind Hole</u>
1D	-	M06	-	HW	-	BL
1D	-	M06	-	HW	-	BL
1D	-	M06	-	HW	-	BL
1D	-	M06	-	HW	-	BL

Thread Code Matrix

		M					
		4	5	6	8	10	12
Metric	Coarse - 6H	M04	M05	M06	M08	M10	M12
	Coarse - 6E	E04	E05	E06	E08	E10	E12
	Fine	N04	N05	N06	N08	N10	N12

Unified	Coarse	8-32	10-24	12-24	1/4-20	5/16-18	3/8-16	7/16-14	1/2-13
		CEG	CTE	CTV	C04	C05	C06	C07	C08
	Fine	8-36	10-32	12-28	1/4-28	5/16-24	3/8-24	7/16-20	1/2-20
		FEG	FTE	FTV	F04	F05	F06	F07	F08

Performance Data

Thread Size	Material Thickness mm	Cold Rolled Mild Steel		
		Push-out Kn	Pull-out Kn	Torque-out Nm
M6	0.7	4.8	4.5	36
	1	6.5	9.7	36
	1.5	13.1	16	36
	2	17	16	36
	2.5	27.9	18	36
M8	1	7.3	9.6	
	1.5	10.8	15.2	80
	2	16.7	20	80
	2.5	28	20	80
	3	29	20	80