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Westfield Fasteners Product Specification:

Rivet Nuts - Countersunk Head with Knurled Shank, Closed Type

This product guide contains the specification for blind rivet nuts with a countersunk head, a straight knurled shank and a closed end. These are a stock item available from Westfield Fasteners.

Product Description

Rivet nuts are an alternative to weld nuts and are used for attaching a threaded hole into sheet metals and thin metal gauge parts, such as panels, tubes and castings. The rivet nut allows mating components to be quickly and easily attached and detached using the correct sized bolt. The larger sized rivet nuts can clamp together multiple layers of materials.

Blind rivet nuts are installed by inserting the rivet nut into an appropriately sized and shaped hole within the sheet material. The rivet nut is compressed using a pneumatic powered or hand rivet nut tool, gripping it firmly to the sheet material. In the compression process, the thinner walled section without the thread collapses to form a collar on the blind side of the sheet material. This prevents the nut from being pulled back through the hole and fixes it securely to the sheet material. Like blind rivets, rivet nuts do not require access to the back of the material. Features like knurling or the hexagonal shaped body within a hexagonal shaped hole will help to prevent the rivet nut from turning.

This particular type of rivet nut features a full countersunk head, a straight round knurled shank and a closed end, and is a more common type of rivet nut. The countersunk head allow for these rivets to sit flush when used in applications, allowing for a neat finish where the rivet nuts are visible, making them appropriate for most applications, including connecting soft or brittle materials to a rigid backing. The knurling/serrations will help to grip the nut to the connecting materials and stop it from turning. This type of rivet nut is used in a multitude of industries such as aerospace, automotive, rail, HVAC, white goods, electronics, DIY and general engineering.

Product Information

These rivet nuts are available in A2 and A4 stainless steel, zinc plated steel and aluminium. Separate tables by material are provided below and should be referred to together with Figure 1.

Table 1 below gives dimensions for stainless steel variants in available sizes from M3 to M12, along with information on sheet material thickness, pre-drilled hole sizes and tensile strengths. Table 2 provides similar information for zinc plated steel items.

Please note that the table data below supply typical strength values, head dimensions and overall length, which may vary between batches. Any tightening torque specifications given are guide values depending on the material of the original component and should be checked by testing.

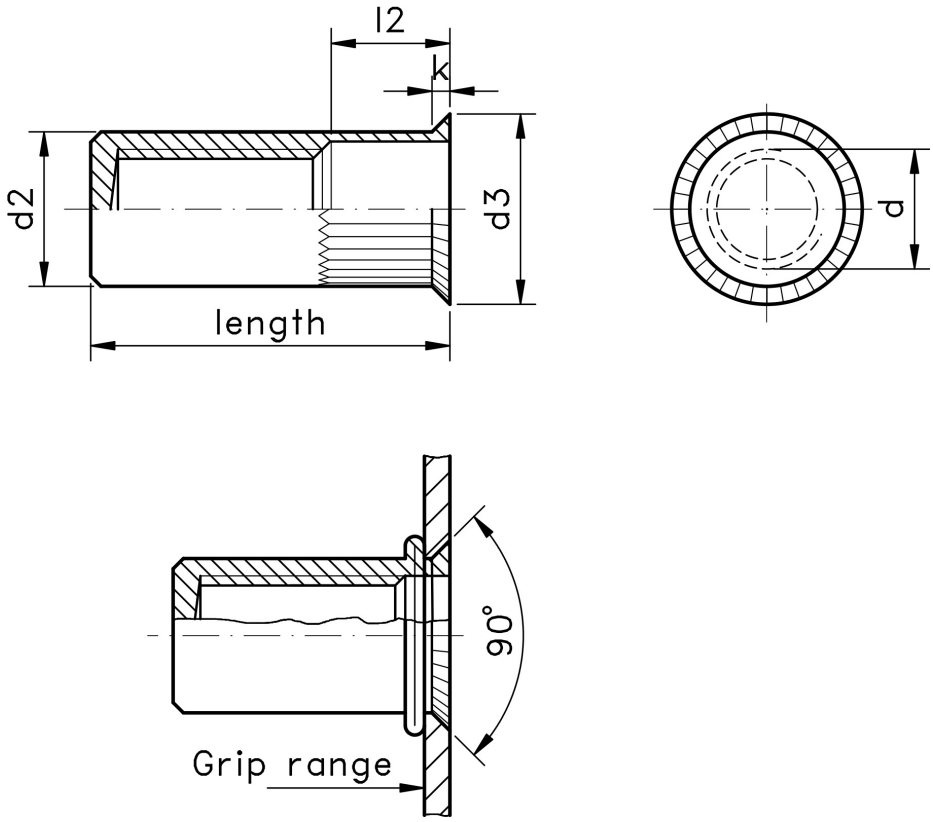

Figure 1: Rivet nuts with countersunk head, knurled shank and a closed end

Table 1: Dimensions & Tolerances (mm) for Stainless Steel Ranges

Thread Diameter (d)	Grip Range	Drill Hole	Body Diameter (d2)	Flange Diameter (d3)	Overall Body Length (l)	Flange Thickness (k)	Length 2 (l2)	Shear Force (N)	Tensile Strength (N)
M3	1.5 - 3.0	5	4.9	8	16.5	1.7	4.2	900	3900
M4	1.5 - 4.0	6	5.9	9	17.5		5.5	1500	6800
M5	1.5 - 4.0	7	6.9	10	20.5		5.8	2000	11500
M6	1.5 - 4.5	9	8.9	12	23.5		7	3000	16500
M8	1.5 - 4.5	11	10.9	14	28		7.8	4400	25000
M10	2.0 - 4.5	13	12.9	16	30.5		9	5000	32000
M12	2.0 - 4.5	16	15.9	19	31.5		10	65000	34000

Table 2: Dimensions & Tolerances (mm) for Bright Zinc Plated Ranges

Thread (d)	Grip Range	Drill Hole	Body Diameter (d2)	Flange Diameter (d3)	Flange Thickness (k)	Overall Body Length (l)	Length 2 (l2)	Max Tightening Torque (Nm)	Tensile Strength (N)
M3	1.5 - 2.5	5	4.9	7.5	1.5	15.5	4.2	1.0	3900
	2.5 - 4.0					17.5			
M4	1.5 - 3.0	6	5.9	9		17.5	5.5	3.0	6800
	3.0 - 5.0					19.5			
M5	1.5 - 3.5	7	6.9	10		19.5	5.8	6.0	10000
	3.5 - 5.0					23.5			
M6	1.5 - 4.0	9	8.9	12		23.5	7	10.0	15000
	4.0 - 6.0					25.5			
M8	1.5 - 4.5	11	10.9	14		26.5	7.8	24.0	27000
	4.5 - 6.0					29.5			
M10	1.5 - 5.0	13	12.9	16		30.0	9	32.0	28500
	4.5 - 6.5					32.5			