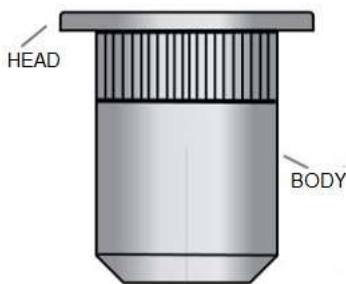




Blind Rivet Nuts - Technical Guide

Blind rivet nuts are single-part hollow-thread nuts which are installed from a single side without the need for reworking.

1. Terminology

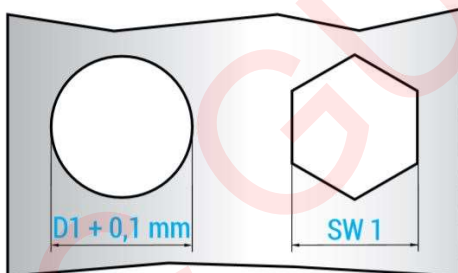
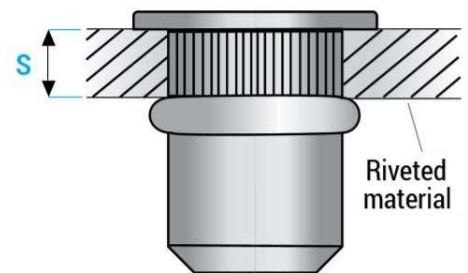


Head – Part of the Blind Nut which lies on the component

Body - Part of the blind rivet nut below the rivet head

Grip thickness - Designates the thickness of the material (one or several components) being riveted.

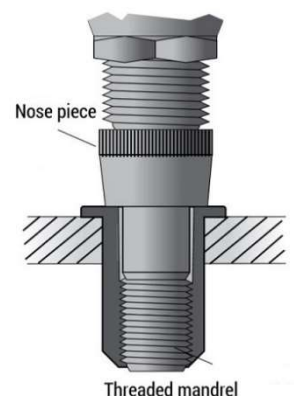
Grip range - The material thickness s must be within the minimum and the maximum value for which the particular blind rivet nut is designed.



Dimension of the drilling hole - For cylindrical receiving holes, this dimension is referred to as the diameter $D1 + 0.1$ mm, and for hexagonal receiving holes - as the width across flats $AF 1$ (SW 1). Please see the recommended drilling hole dimension on the respective datasheet.

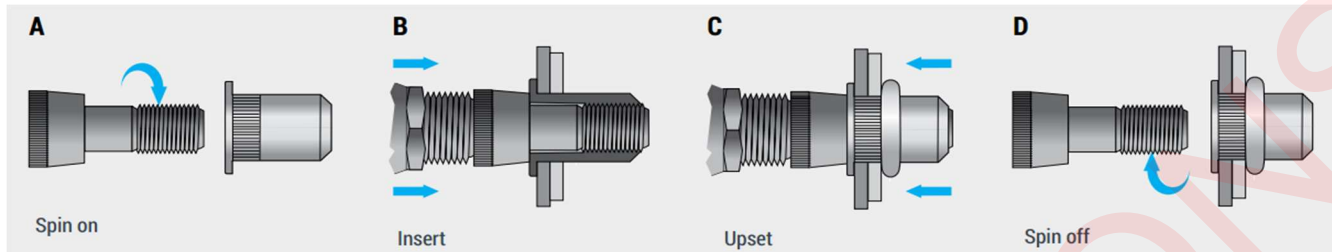
Nose piece - Part of the setting tool which lies against the head of the blind rivet nut during the setting process.

Threaded mandrel - Part to screw the blind rivet nut onto



2. Installation procedure

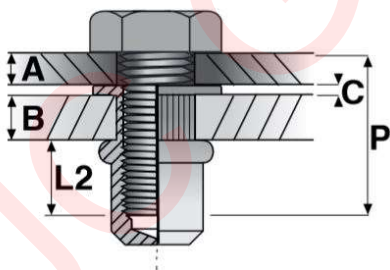
The spindle stroke procedure is recommended. For setting, the blind rivet nut has to be screwed onto the mandrel of the tool, inserted into the drilled hole of the component and then fixed by activating the tool. In doing so, the closing head of the blind rivet nut will be formed. After unscrewing the blind rivet nut, the components can be screwed together.



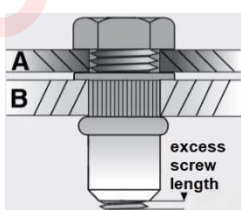
- We recommend using preferably blind rivet nuts with knurled or hexagonal body in order to eliminate the risk of rotation.
- It must be ensured that the components cannot rotate against each other. Only a minimum gap is allowed between the components to be connected.
- Prior to the setting of blind rivet nuts series, determine the optimal settings for your setting tool (stroke setting and/or force setting) conducting a mounting test.
- Lubrication of the screw joint: In case of volume production, in particular components made of stainless steel, we recommend to lubricate the threaded mandrel of your setting tool prior to the first installation and afterwards periodically, in order to ensure the optimal setting and to increase the life cycle of your setting tool.

3. Optimum Joint Design Recommendations

- Closed Shapes such as tubing/ extrusions need enough clearance in the blind space for the nut to be fully inserted.
- Hole size should be as per product tolerance and perpendicular to the job surface.
- The thread of the blind rivet nut has the standard tolerances 6H as per ISO 68. They can be used with standard screw thread with the tolerances of 6G.
- Mating screw thread length should engage all threads of the rivet nut to assure optimum torque strength.
- If the mating screw has any kind of locking mechanism, a Hex or Semi-Hex body nut in a hex hole will be required to resist the prevailing torque created by the locking mechanism.



Closed Body End The screw length (P) for a closed blind rivet nut is linked to the material thickness of the riveted components (A+B) plus the head height or the gap size (C) in combination with the length of the internal thread L2.



Open body end: The screw protrusion must be at least one thread turn

4. Material Combination Guide

The following rule applies in order to avoid contact corrosion:

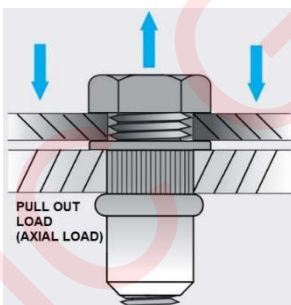
The connecting parts in a specific application must have at least the same corrosion resistance as the connected components. If this is not possible, the connecting parts must be of higher quality than the components.

Which Blind Nut into which Sheet? The version you choose also depends on the resistance of the blind rivet nut and screw.

XXX – Highly Recommended. XX – Recommended. X – Not preferred. – Not advisable

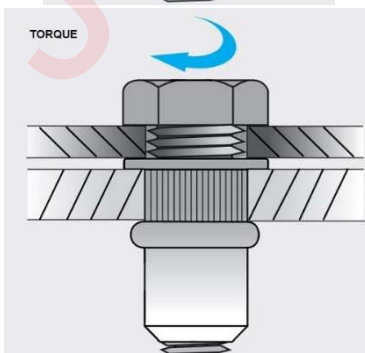
	 AL	 ST	 A2	 A4
Aluminium 	XXX	--	XXX	XXX
Steel zinc plated 	X	XXX	XX	XX
Stainless steel A2 	XX	--	XXX	XXX
Stainless steel A4 	XX	--	XXX	XXX
Copper 	XX	--	XX	XX
Brass 	XX	--	XX	XX

5. Mechanical Properties



Pull out Load or sometimes referred as pus out. Load values given in the datasheets are only reference values.

We strongly advise the customer to do their own tests in the proper material thickness and specific application.



Tightening torque: The test assembly of the screw connection of a non-rotating component with a screw against the head of the blind rivet nut. While doing this, the load-bearing capacity of the nut thread is determined.

Maximum Torque: A Torque value after which the free removability of the screw in the nut thread must still be provided.

6. Variants:

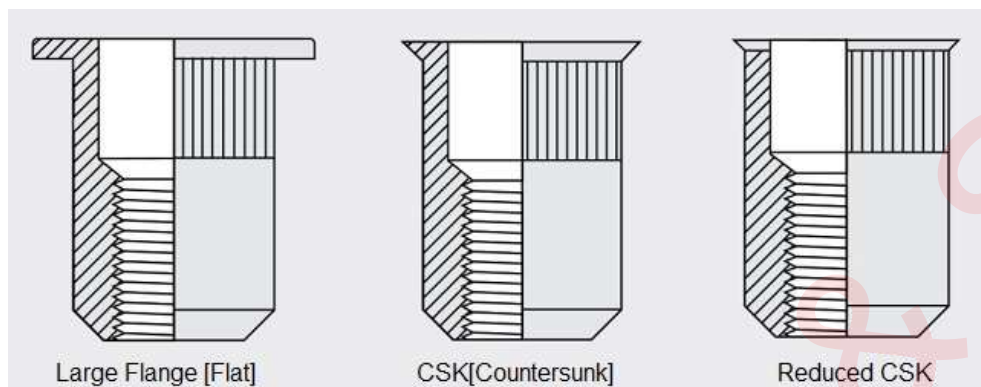
Body Shape:



Body Type:

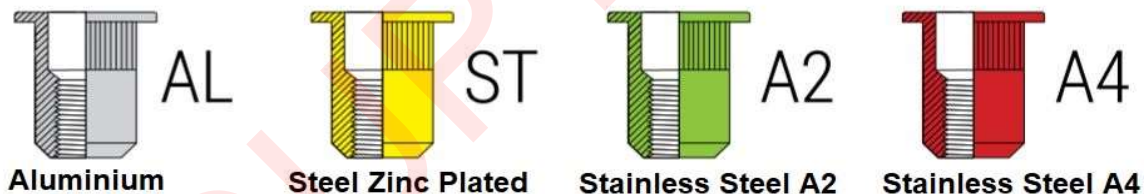


Collar/Flange:



Grip Range: Normal [Gr1], Long series [Gr2], Extra Long Series [Gr3]

Materials:



7. BLIND NUT Selection Guide

Parent Material	Pierced Hole	Drilled Hole	Punched Hole	Laser Cut Hole	Molded Hole
Sheet Metal		Round Body	Round/Hex	Round/Hex	
Tubing	Round/Hex	Round Body			
Aluminium Extrusion		Round Body			
Hydroformed Tubing	Round/Hex	Round Body			
Foam Core Panels		Round Body			
SMC/Blow Molded Plastic		Round/Split			
Plastic Extrusion		Round/Split			
Injection Molded Plastic		Round/Split			Round/Hex
Layered Fiberglass		Round/Split			