










**TUBTARA®**  
your reliable connection

**Special  
blind rivet nuts**

## Geometry and mechanical values

Dejong is manufacturing a wide range of blind rivet nuts with trademark TUBTARA®. The standard programme can be briefly summarized with the following specifications:

<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Stainless steel 304 &amp; 316</li> <li>• Steel</li> <li>• Aluminium</li> </ul>	<p><b>Thread sizes</b></p> <ul style="list-style-type: none"> <li>• From M3 till M12</li> <li>• Imperial sizes (on request)</li> </ul>
<p><b>Head forms</b></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Flat</p> </div> <div style="text-align: center;">  <p>Countersunk</p> </div> <div style="text-align: center;">  <p>Low profile (flush)</p> </div> </div>	<p><b>Body forms</b></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Round</p> </div> <div style="text-align: center;">  <p>(Semi-) Hexagonal</p> </div> <div style="text-align: center;">  <p>Splined (knurled)</p> </div> </div> <p style="text-align: center;">Open or closed end</p>
	
<p><b>Grip ranges</b></p> <ul style="list-style-type: none"> <li>• Standard: from 0,5 mm up to 8,0 mm</li> <li>• Most common: 0,5 - 3,0 mm and 3,0 - 5,0 mm</li> <li>• Extended: 1,0 - 5,0 mm (multigrip) in steel and aluminium available on request</li> </ul>	

The table below shows some indicative, standard mechanical properties for steel TUBTARA's with round shank and flat head:

Thread size	Setting force	Min thread strength	Max torque	Torque-to-turn	Shear strength
	kN	kN	Nm	Nm	kN
M3	4,0	> 5,75	> 2	1,8	1,9
M4	4,5	> 10,75	>7,5	2,65	2,6
M5	6,5	> 12,00	>10	4,7	3,5
M6	9,5	> 21,00	>19	7	5
M8	12,0	> 33,00	>50	13	6
M10	15,5	> 40,00	>70	15	8
M12	20,5	> 63,00	>150	32	11,5

For stainless steel and aluminium these values will be respectively higher and lower. Variations due to setting and environmental conditions can be expected in practice. The values can be used as reference and optimized by using additional features as described further on in this brochure.

## Additional features

Function / Requirement	Solution / Examples
1. Increased torque-to-turn / spin-out resistance	Anti-rotation head (AT) Adjusted body size Splined (knurled) or hexagonal shank Non-symmetrical body Hex or splines under the head
2. Spacer function	Guiding spacer ring (on top of the flat head) Closed end Long version Thick head
3. Seal function	HX closed end with o-ring seal (mechanical) Applied (chemical) sealant under head.
4. Controlled deformation	Collar under head Other wall thickness or chamber depth Double chamber
5. (Full) integration into parent material ( e.g. composites)	Moulded insertion Perforated bigHead
6. Flush installation	Extra small head (UKO or UFO) Thin head Large angle flush head
7. Visual identification	Marks on head or body No / other chamfer
8. Centering	Centering ring on flat head Thick head
9. Search function (for automatic installation)	Alternative chamfer (on shank's end or at chamber entrance)
10. Pressure spread	Large flat head bigHead Long deformation chamber
11. Facilitate field repair (increased torque-to-turn resistance)	Anti-rotation head (AT) Flat head with 2 cross flats Flat Hex head
12. Compatibility with available fasteners	Length adapted to length of bolts used Extra long/short rivet nut Closed end (fool proof for length of bolt)
13. Compatibility with available tools	Flat hex head Flat head with 2 cross flats (turned/held by hex spanner)
14. Drip / dry function (paint, oil, ..)	Closed end with hole in bottom
15. Blind installation parameters and/or limited space	Extra short version Small head diameter Less thread windings
16. Thread requirements	Metric, imperial, fine, no threads Threads lock Fully threaded without deformation chamber Left thread
17. (Electrical) conductivity	Piercing spikes on top of (flat) head
18. Increased push-out force	Large head
19. Increased pull-out force (thread strength)	More thread windings Optimized geometry
20. Anti-vibration	Mechanical threads lock Anti-rotation head (AT) Chemical threads lock
21. Grip (range)	Customized grip (range) Longer/shorter grip range Multigrip

Contact our sales department for further information

## 1. Increased torque-to-turn / spin-out resistance



## 2. Spacer function



## 3. Seal function



## 4. Controlled deformation



## 5. (Full) integration into parent material (e.g. composites)



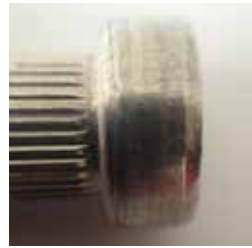
**6. Flush installation**



**7. Visual identification**



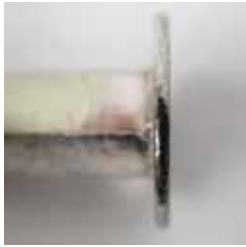
**8. Centering**



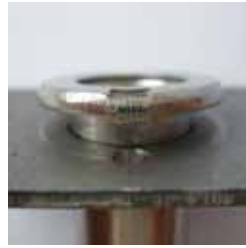
**9. Search function (for automatic installation)**



**10. Pressure spread**



**10. Pressure spread**





## 12. Compatibility with fasteners



## 13. Compatibility with tools



## 14. Drip / dry function (paint, oil, ...)



## 15. Blind installation / limited space



## 16. Thread requirements



## 17. (Electrical) conductivity



## 18. Increased push-out force



## 19. Increased pull-out force



## 20. Anti-vibration



## 21. Grip (range)



The material and coating choice of the TUBTARA® blind rivet nut offers additional characteristics:

Aluminium

lightweight, electrical conductivity, easily recyclable, passivation possible

Steel

in combination with specific platings, passivations and top coatings:  
increased corrosion resistance, friction reduction, visual identification or colour distinction

Stainless Steel  
A2, A4 and A5 / A6

high temperature properties, resistant to harsh environments and corrosive atmospheres or process fluids, weight-saving, durable, non-magnetic, easily recyclable, aesthetically attractive, friction lowering top coatings possible

## Materials and coatings

A proper choice of the right material and surface coating of the blind rivet nut is very important to obtain optimal functionality during the whole life cycle, especially when environmental conditions are unknown or critical e.g. due to contact with other metals or corrosive environments.



### Stainless steel

Besides steel and aluminium, Dejong's standard product range is available in stainless steel 304 and 316 (resp. A2 and A4). On request, we can also offer superior coldformed stainless A5 / A6 quality for critical chloride bearing environments, and several finishing options on stainless steel like Cadmium, ZnNi, Seal Inox or a passivation layer to cope with most environmental conditions.

### Steel

Next to our proven coatings – Zinktop and yellow Cr<sup>6+</sup> zinc plating – some new surface treatments have been developed lately:

- the Ultra 1000 coating is more than doubling the resistance to red rust in the salt spray test compared to the standard Zinktop,
- to tackle imminent Reach regulations an offer of blue, black and the new yellow trivalent coatings, as well as the Cobalt free Zinktop is available,
- ZnNi, Gleitmo<sup>®</sup> and Vibraseal<sup>®</sup> are a few more examples of possible finishes (on request).

### Coating options on steel



photo	coating description	standard / on request	salt spray test (h) ISO 9227		colour / aspect	corrosion protection	RoHS/Reach compliant	remarks
			white rust	red rust				
1	Zinc blue/white Cr <sup>3+</sup>	REQ	24	72	blue/white	*	<input checked="" type="checkbox"/>	Cr <sup>6+</sup> free
2	Zinc black Cr <sup>3+</sup>	REQ	48	96	black	*	<input checked="" type="checkbox"/>	Cr <sup>6+</sup> free
3	Zinc yellow Cr <sup>6+</sup>	ST	96	240	yellow	***	<input type="checkbox"/>	phase out 2016
4	Zinc yellow Cr <sup>3+</sup>	REQ	24	48	light yellow	**	<input checked="" type="checkbox"/>	Cr <sup>6+</sup> free
5	Zinktop	ST	96	480	light grey	****	<input checked="" type="checkbox"/>	Cr <sup>6+</sup> and Ni free
6	Zinktop Cobalt free	REQ	96	480	light grey	****	<input checked="" type="checkbox"/>	Cr <sup>6+</sup> , Ni and Co free
7	Ultra 1000	REQ	240	1000	matt grey	*****	<input checked="" type="checkbox"/>	Cr <sup>6+</sup> and Ni free
8	ZnNi (Zinc Nickel)	REQ			quality according to customer's specs			
9	Vibraseal <sup>®</sup>	REQ	x	x	red, green			seals + anti-vibration
10	Gleitmo <sup>®</sup>	REQ	x	x	-			friction reduction



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