TITGEMEYER

U-VAL

Fastening Technology / Threaded Inserts

Tubtara®

Blind Rivet Nuts

Tubtara®
BLIND RIVET NUTS

Contents

Tubtara® blind rivet nuts

Dejond launched its first Tubtara® blind rivet nuts back in 1954, which, back then, were machined on a lathe. Only ten years later, production methods evolved towards more specialised cold-forming technology. Today, Dejond offers one of the widest ranges of high-quality, cold-formed blind rivet nuts. Each and every rivet is manufactured at its EN 9100 certified production facility in Wilrijk (Belgium). Tubtara® is a registered trademark of Dejond.
Besides standard and customised blind rivet nuts, the Tubtara® team can also custom cold-form selected parts according to its customers' drawings for very specific applications.

EN 9100 certification: quality guaranteed

The entire Tubtara® team is involved in quality assurance and is more than ever committed to meeting the challenges of the future. Dejond lives up to its social and ecological responsibilities and tries to create a balance between economic, social and environmental aspects through responsible manufacturing technologies.
Following a specific request by its aerospace customers, the Tubtara® division upgraded its ISO 9001 quality management system to the higher EN/AS/JISQ 9100 level in 2014. This certification helps Dejond to meet its customers' most stringent requirements while strengthening its position in the aerospace industry, which imposes strict safety standards and controls to ensure reliable quality. It is comparable to the TS 16949 automotive directive.

Dejond can be found in the OASIS (Online Aerospace Supplier Information System) database of the IAQG (International Aerospace Quality Group).

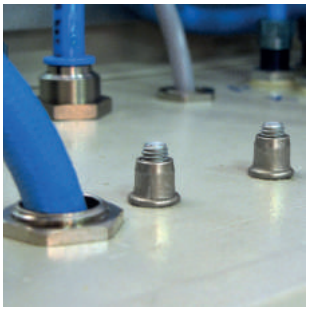
64 years of innovation

Over the last 64 years, the Tubtara® division of Dejond has established itself as a pioneer in the production of blind rivet nuts based on a long tradition of innovation.
It has been able to use its deep knowledge of materials and cold forming production processes to constantly develop its product portfolio. The Tubtara® team heads into the next 60 years with a clear vision for the future:

- high and constant quality performance
- innovative and in-house R&D
- customer partnerships through technical and commercial support
- worry-free deliveries

Tubtara® has the ambition to stay at the forefront of blind rivet nut design and manufacturing. As such, its goal is to continue to play a leading role in future technological developments, which is why it continues to invest in R&D.

Tubtara® is a mechanical fastener that ensures a strong thread in thin and thick metal plates or profiles, in composites or (engineered) plastics. It is ideal for applications where there is little or no access from/at the rear. It can clinch separate sheets or profiles together – acting as a rivet – and enables the (dis)assembly of a third component via a bolt or screw.



Benefits

10 reasons for choosing Tubtara® blind rivet nuts:

1. Simple blind installation: applied from one side of the workpiece
2. Low assembly cost versus other methods of installing threads in plates or profiles
3. Fast, easy assembly: further reducing the assembly costs
4. Zero-risk installation: no damage to the workpiece surface, enabling installation in pre-coated or pre-painted applications for a clean, undamaged thread
5. No deformation of the workpiece
6. No surface preparation required
7. Ideal for close-to-edge applications
8. Suitable for repeated assembly
9. Retained fastener: cf. Machinery Directive 2006/42/EC
10. Low installation cost: no expensive tools or applications

Applications

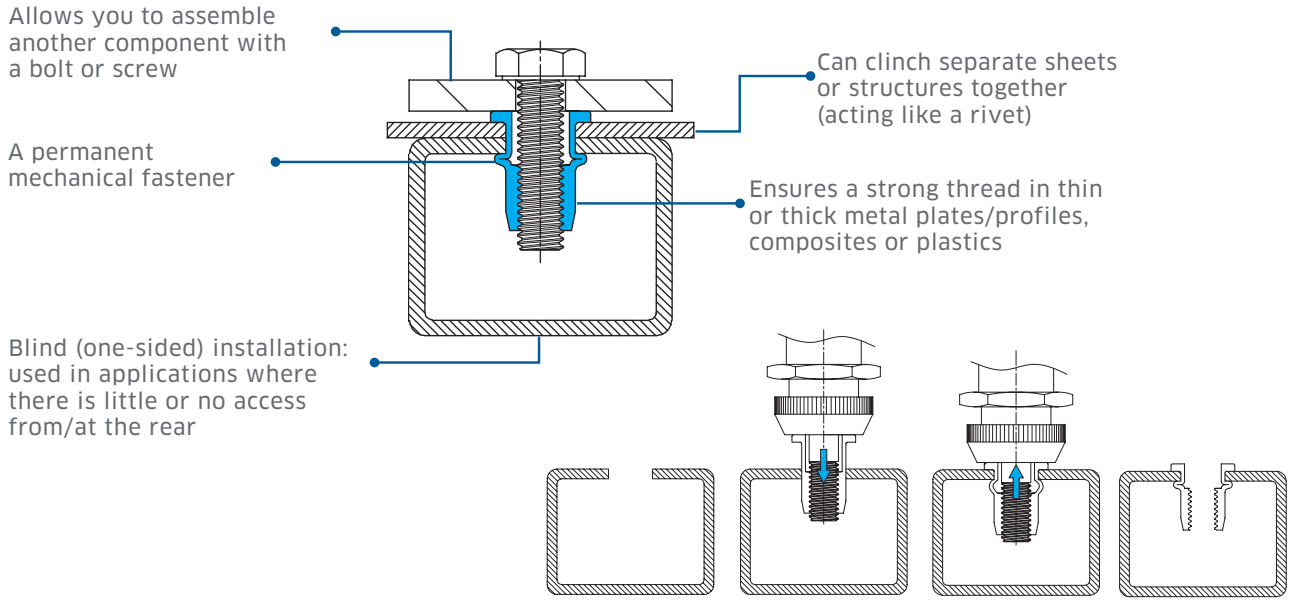
Tubtara® blind rivet nuts are used in all kinds of sheet metal, plastic and composite applications. They eliminate the need for tapping, welding or working with nuts and bolts. As such, they form an ideal solution for enclosed applications that can only be accessed from one side.

They are used in market segments such as:

- Aerospace
- Automotive
- White goods
- Electronics
- Metal furniture
- Railways
- Telecom
- Food
- Lighting
- Marine
- Offshore
- Medical
- etc.

e.g. cabinets, pipes, cable trays, leg levelling, window & door profiles, rails, benches, fences, metal enclosures, heating installations, air-conditioning, swimming pools, solar panels.

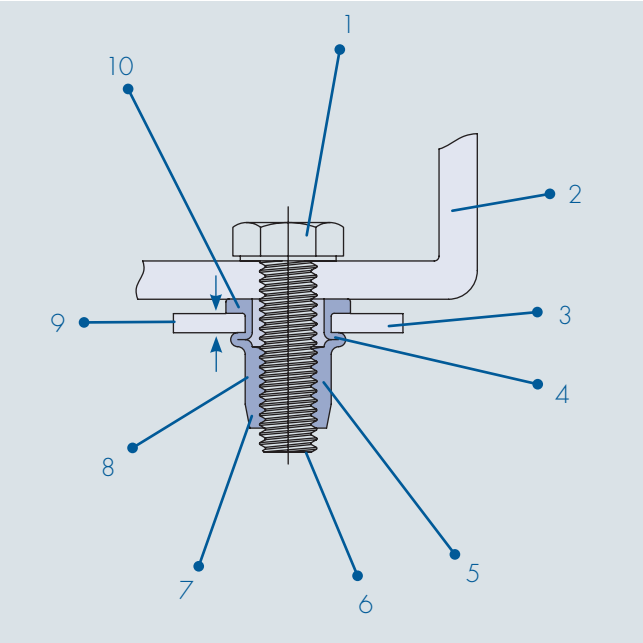
Installation



Installation in less than three seconds!

Terminology

1. Screw or bolt inserted for assembly of another part
2. Assembled part
3. Workpiece: can be one sheet/profile or several sheets which require clinching
4. Bulb or counter head: the chamber (unthreaded section) is deformed during setting
5. Strong, secure internal thread
6. Open or closed end: closed-end version prevents the ingress of dirt and fluids, especially in combination with an underhead seal
7. Chamfer: guides the Tubtara® into the hole
8. Shank: round, full- or semi-hexagonal, knurled or splined version
9. Grip
10. Head: flat, countersunk, low profile, watertight, anti-turn head or customised head type



Product description

Steel	M5	RS	UFO	40
Stainless steel	M10	H	SPX	35
Aluminium	M8	-	UPO	80
Steel	M10	H	SPX	110
Steel	M4	KN	UKO	30
↓	↓	↓	↓	↓
Material	Thread	Shank	Head & shank	Max. grip
		RS: splined	U / S: Unigrip	40 = 4 mm
		H: hexagonal	F: countersunk head	35 = 3.5 mm
		KN: knurled	P: flat head	80 = 8 mm
		– : round	K: low profile head	110 = 11 mm
			O: open end	30 = 3 mm
			X: closed end	

How to choose the appropriate Tubtara®

- What kind of material and surface treatment do you need?
- What is the required thread size?
- Choose the correct grip range for the required material thickness of the application
- Choose the required head and shank style
- Do you need an open- or closed-end version?
- Check the technical characteristics of your chosen Tubtara®.

We recommend testing the product in your specific application in advance.
Samples are available on request.

Subject to change

Customised solutions

Customised features

Different materials and coatings

Specific anti-rotation head

Special thread requirements

Setting in engineered plastics

In-house R&D department and technical support for specific applications

Dejond has more than 60 years of experience in developing and manufacturing Tubtara® blind rivet nuts. Tubtara® has become synonymous with high quality performance, innovation, in-house R&D and technical support – always one step ahead of the industry demand.
Tubtara® blind rivet nuts can be tailor-made in accordance with your specifications and to suit the demands of almost every application. Our in-house R&D engineers always strive to manufacture the best possible blind rivet. These customised solutions offer additional features to our standard Tubtara®, such as:
increased torque-to-turn, sealing, controlled deformation, integration into parent material, centering, pressure spread, compatibility with other fasteners or tools, or special thread requirements.

The Tubtara® fasteners designed for the latest aerospace programmes are used, for instance, in composite material and aluminium structures on wing parts and seats. Besides blind rivet nuts, Dejond also concentrates on cold-forming selected parts according to customer drawings for very specific applications.

Materials and coatings

The right coating choice can offer additional characteristics to your Tubtara®.

Standard coating Zinktop:

- High-quality Cr6+- and Ni-free plating
- Conforms with ROHS-2, REACH, ELV directives
- Corrosion resistant: 96 h white rust - 480 h red rust
- Layer thickness: 10µ ± 2µ

Coating options

Photo	Coating / Type	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 Cr3+	on req.	24	72	blue/white	*	✓	Cr6+-free
2	Zinc black Cr3+	on req.	48	96	black	*	✓	Cr6+-free
3	Zinc yellow Cr3+	on req.	96	240	light yellow	**	✓	Cr6+-free
4	Zinktop	ST	96	480	light grey	****	✓	Cr6+- and Ni free
5	Zinktop, cobalt free	on req.	96	480	light grey	****	✓	Cr6+-, Ni and Co free
6	Ultra 1000	on req.	240	1000	light grey	*****	✓	Cr6+- and Ni free
7	ZnNi (zinc nickel)	on req.	Quality according to customer specification					
8	Vibraseal®	on req.	X	X	red. green			seals + anti-vibration
9	Gleitmo®	on req.	X	X				friction reduction
10	Seal Inox®	on req.	X	X	matt grey	*****		avoids galling
11	Passivation	on req.				******		only on stainless steel

The Ultra 1000 more than doubles the resistance to red rust in the salt spray test compared to the standard Zinktop. The blue and black trivalent coatings as well as the cobalt-free Zinktop have been developed to tackle imminent REACH regulations and can be delivered on demand.

* Zinc yellow Cr6+ plating is no longer standard and has been omitted from this catalogue.
Due to REACH phase-out, the production of steel, yellow hexavalent chromated parts has been fully discontinued.

Why use a coating?

	Steel, Zinktop	Steel, coloured	Passivation on stainless steel	Gleitmo®	Vibraseal®	Seal Inox ®	Molykote®
Adequate visual aspects		+					
Colour distinction		+			o	o	
To avoid galling				+		+	+
Reduced friction				+		+	+
Increased friction				-		-	-
Avoids galvanic couple	o	o	+		+	+	
Electrical conductivity	+				-	-	-
Anti-vibration function					+		
Increased corrosion resistance	+		+			+	
Seal function					+	+	
UV illumination				+			

- negative influence

o possible influence

+ positive influence

We strongly advise that you perform some tests in the specific applications environment. Samples are available on request.

Stock items

Material			WNr.
Aluminium	AlMg2.5	5052	3.3523
Steel	C8C	QST 34-3	1.0213
A2 stainless steel	304Cu		1.4567
A4 stainless steel	316Cu		1.4578

Non-stock items

Material			WNr.
A5 stainless steel	316Ti		1.4571
A6 stainless steel	904L		1.4539
High-strength steel	23MnB4		1.5535
High-strength Aluminium	AlMg3.5	5154	

Galvanic compatibility

Galvanic corrosion may occur as a result of electric potential difference resulting from two metals coming into contact with each other in the presence of an electrolyte. During this process, the surface is first removed from the more ignoble material. Tears, gaps or coating deposits between the surfaces should be avoided to prevent or restrict any ingress of corrosion.

Base material used in Tubtara®	Blind rivet nuts Galv. steel	Material Aluminium	304 + 316 stainless
Aluminium			
Galvanised steel			
Copper, brass	TT	TT	
4xx stainless steel	TT	TT	
304 + 316 stainless	TT	TT	

Base material and Tubtara® OK

Base metal corrodes on contact with Tubtara®

TT Base metal OK, Tubtara® corrodes

Base material strongly corrodes in presence of Tubtara®

Subject to change

Cold-formed Tubtara® in high alloy austenitic A5 and A6 stainless steel

Delivery options

- Standard shanks
- Standard heads
- Open or closed end
- 1st and 2nd grip range

Material

- A5 stainless steel: 316 Ti – WNr 1.4571
- A6 stainless steel: 904L – WNr 1.4539

Applications

- Extremely demanding, chloride bearing applications where even A4 (316) stainless steel fasteners offer insufficient corrosion protection
- A6 grade is also armoured against strong acid bearing environments
- Civil engineering, tunnel infrastructures, ceiling panels in swimming pools, etc.

Advantages

- Superior corrosion protection, mainly thanks to considerable nickel and molybdenum content
- A6 stainless steel (PRE-Wert 35) guarantees superior protection against pitting and crevice corrosion compared to A4/316 steel (PRE 25). (PRE = pitting resistance equivalent value).

Samples

The following samples are available from stock:

- A6 stainless steel: M6 UPO 30
- A5 stainless steel: M8 UPO 30 / M8 UPO 65 / M8 UFO 45 / M8 UFO 65 / M8 UFX 45 / M8 UKO 30 / M8 HUKO 30

Other dimensions on request

Seal Inox®
Topcoat on stainless steel

What is Seal Inox®?

– Seal Inox® is a topcoat that makes it easier to assemble stainless steel threaded parts. The integrated lubricant additive in this topcoat prevents gripping during assembly, also known as "galling". Galling is caused by the adhesion of two sliding surfaces under increased friction and often occurs between stainless steel threaded connections.

Characteristics:

– Thin dry layer
– Can be applied in single or double layers. [To avoid any assembly problems, we recommend that you use a (hex) hole tolerance of 0.05 – 0.15 mm instead of 0 – 0.1 mm.]
– Visually distinguishable grey treatment; other colours on request
– Friction coefficient 0.09 – 0.14 (according to DIN EN ISO 16047)
– Temperature resistance: 180°C
– Conforms to ELV and RoHS, Cr6+ free

Benefits of a Seal Inox® topcoat on stainless steel Tubtara® blind rivet nuts

– Reduces friction and prevents galling
– Provides a higher clamping force
– Reduces assembly time
– Slows down contact corrosion
– Protects against various chemicals, e.g. chlorides, acids and oils
– Can be applied on different steel qualities: 304, 316, 316Ti, 904L
– Is predominantly applied on hexagonal or knurled Tubtara® shanks since Seal Inox® will be present on both inside and outside surfaces, thus potentially reducing torque-to-turn for round Tubtara® blind rivet nuts.

Delivery options

– Semi-hexagonal or knurled shank
– Standard heads
– Open or closed end
– Various grip ranges

Availability

Seal Inox® is only applied to order. Please order separately.
Prices and lead times available on request.