

## ● Technical information

### Setting method

Select one of the Tubtara® blind rivet nuts out of our product range and a setting tool adequate for the application. Take a test workpiece and drill an appropriate hole.

Screw the Tubtara® (A) on the mandrel (B) of the setting tool. For an open version the mandrel should protrude about 1 mm, for a closed one until you feel resistance.

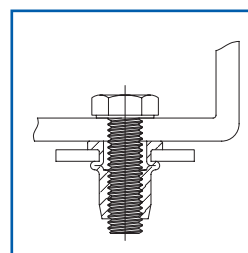
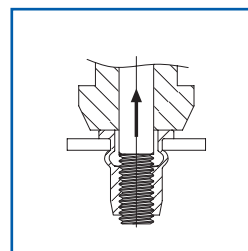
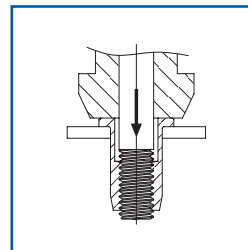
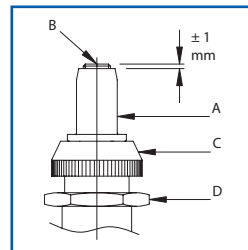
Screw the anvil (C) against the head of the Tubtara® and block it with the locking nut. (D)

Introduce the Tubtara® mounted on the setting tool, into the hole of the workpiece.

Now set the Tubtara®. You will see that the deformation chamber of the Tubtara® on the underside of the workpiece is deforming.

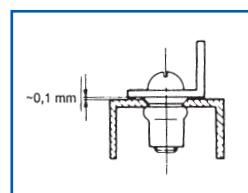
Unscrew the mandrel from the Tubtara®.

The Tubtara® is set. Now you can easily insert your bolt.



### ● Countersunk heads

When you use a Tubtara® with a countersunk head, always countersink at 90° so that the head of the installed Tubtara® protrudes about 0.1 mm above your workpiece. This allows direct touch with the assembled component which prevents rotation when screwing.



Don't you have the possibility to countersink?  
Use a low profile head !

● **General tolerances**

	Head form	Dimensions mm	Dimensions inches
D (head diameter)	Flat head Countersunk head Low profile head	± 0,35 0 - 0,5 - 0,15 + 0,3	± .014 0 - .020 - .006 + .012
K (head thickness)	Flat head Countersunk head Low profile head	± 0,15 0 + 0,3 - 0,05 + 0,3	± .006 0 + .012 - .002 + .012
L (length)		± 0,35	± .014
Thread = 6H			
Shank size		- 0,02 - 0,15	- .001 - .006

● **Material specification**

(subject to modification)

Aluminium: ALMG 2,5  
 Steel: QST 34-3  
 Stainless steel 304: 304 Cu  
 Stainless steel 316: 316 Cu  
 ...or equivalent.

● **Surface treatment**

on Tubtara® blind rivet nuts in steel

Zinktop:  
 WEEE / ROHS / ELV compliant  
 High-quality Cr<sup>VI</sup>-free plating with topcoating  
 96 h white rust - 480 h red rust  
 10µ ± 2µ

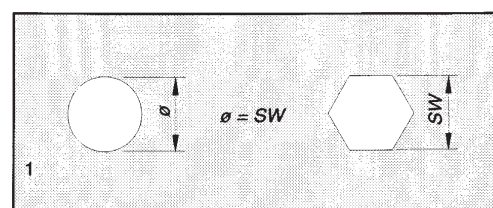
Zinc plated, yellow passivated:  
 10µ ± 2µ

other surface treatments on request

● **Hexagonal holes**

Blind rivet nuts with an hexagonal shank are the ideal solution to avoid rotation. But what if you aren't able to punch hexagonal holes?

Just use our special DFS 109 TH handtool to convert round holes into hexagonal ones ( see pg 50). Your problem is solved in less than no time.



**Don't hesitate to contact us, if you need additional info.**

Technical information

● Mechanical characteristics

Can be used as a guidance for other versions.

TYPE	Grip mm	ALUMINIUM			STEEL			STAINLESS STEEL 304 + 316		
		LOAD N	STROKE mm	THREAD N	LOAD N	STROKE mm	THREAD N	LOAD N	STROKE mm	THREAD N
M3 UPO 20	1	2000	2	3750	4000	2.5	> 5000			
	2	2600	1.5	3280	4750	2	> 5000			
M3 UPO 30	2	1850	1.5	3900	3700	2.5	> 5000			
	3	2050	1	3968	4750	2	> 5000			
M4 UPO 20	1							4900	2	9000
	2							5500	1.5	9000
M4 UPO 30	1	2100	3	5170	4300	2.5	> 8000			
	3	2430	1	4330	5650	1.5	> 8000			
M4 UPO 35	2							5500	2.6	9000
	3.5							6000	1.7	9000
M4 UPO 45	3	2050	2.75	4838	4200	2.5	> 8000			
	4.5	2875	1.5	4421	5000	1.5	> 8000			
M5 UPO 30	1	3050	3.5	6300	6150	3.5	12240	6500	2.7	> 16500
	3	3650	2	6000	7200	2.5	9600	7300	1.7	13750
M5 UPO 50	3							6500	4	> 16500
	5							8000	2	16000
M5 UPO 55	3	3000	3.5	6450	5750	4	11800			
	5.5	4300	1.5	5525	9650	2	10300			
M6 UPO 30	1	4500	3	11000	9400	4	21200	11850		> 23000
	3	5750	2	10000	12000	3	18500	14460	3	18800
M6 UPO 50	3							13500	4.5	> 24000
	5							15000	2.75	> 24000
M6 UPO 55	3	4500	3.5	11000	9000	3.5	22700			
	5.5	6100	1.75	10000	11000	2	19700			

**Upset Load:** Force (in Newton) necessary to deform the Tubtara® referred to in an adequate way.

**Upset Stroke:** Stroke (in mm) that should be set on the setting tool to give the Tubtara® referred to, the adequate deformation.

**Ultimate Thread Strength:** Surpassing this ultimate force (in Newton), the thread of the set blind rivet nut will be pulled out.

Can be used as a guidance for other versions.

TYPE	Grip mm	ALUMINIUM			STEEL			STAINLESS STEEL 304 + 316		
		LOAD N	STROKE mm	THREAD N	LOAD N	STROKE mm	THREAD N	LOAD N	STROKE mm	THREAD N
M6 UPO 80	5.5	4950	4.7	9160	8700	4	19900			
	8	5400	2	8200	11750	2.5	17200			
M8 UPO 30	1	5000	3	14900	11500	4	30400	14100	4.2	33250
	3	6600	2	14000	13750	2.5	26100	16000	2.6	25800
M8 UPO 55	3	5400	4	15500	11500	4	32500	14500	5.5	41000
	5.5	7400	2	11200	15500	2.5	31900	18500	3	37000
M8 UPO 80	5.5	5900	4	16100	10700	4	32400			
	8	7850	2	13600	14700	2.5	26500			
M10 UPO 30	1							14500	3.5	> 45000
	3							18500	2.5	> 45000
M10 UPO 35	1	6750	4	22100	13600	4.5	39600			
	3.5	9000	2.5	17700	17000	2.5	32400			
M10 UPO 50	3							14500	3.5	> 39500
	5							18500	2.5	> 37000
M10 UPO 60	3.5	9000	5	25250	14900	4	42300			
	6	13000	3	23000	17900	2.5	31700			
M10 SPO 35	1				13500	4.5	40500			
	3.5				16100	2.5	36100			
M10 SPO 60	3.5				15900	5.5	48000			
	6				20400	3	37500			
M12 UPO 40	1				19500	5.5	> 50000			
	4				25000	4	> 50000			
M12 UPO 70	4				19500	5.5	> 50000			
	7				25000	4	> 50000			

The mentioned values are average reference values only. We strongly advise the customer to do his own tests in the proper material thickness and specific application.

● **TUBTARA with seal under the head** (for productinfo see page 39)

Information about NBR O-Ring & compatibility with other products					
Shore Hardness	70-95	Aromatic Hydrocarbons	x	Lye	x
Hydraulic fluids	xxxx	Aliphatic Hydrocarbons	xxx	Chlorinated Hydrocarbons	x
Fuel Oils	xx	Water under 80°C	xxx	Ozone & Sunlight	x
Animal Oils	xxxx	Water over 80°C	x	Temperature range °C	-35 +120
Brake Fluid	-	Alcohols	xx	Electr. properties	-
Silicone & Grease	xx	Ketone	-	Compression sets	xxx
Gasoline	xxx	Acid (concentrated)	-	Flame resistance	No
Aromatic fluids up to 50 %	xx	Acid (diluted)	x		
Kerosene	xxx				

Key: **xxxx** very good → **x** satisfactory      **-** not suitable

● **Conversion table**

Multiply	by	To get
millimeter (mm)	.03937	inch (in)
inch (in)	25,4	millimeter (mm)
kilogram (kg)	2,2046	pound (lb)
pound (lb)	0,4536	kilogram (kg)
Newton (N)	0,2248	pound-force (lbf)

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