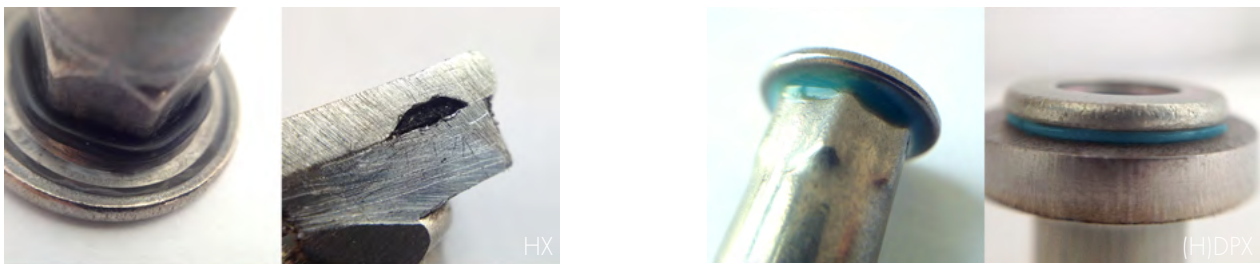


## Trusted and carefree watertight Tubtara-sheet assemblies



### ● Watertight HX closed-end Tubtara® with o-ring seal (mechanical)

- Large flanged head with a cylindrical groove and O-ring seal mounted underneath
- O-ring seal slides into the groove and is - independent from setting force - compressed between head and plate during installation
- Metal-to-metal contact after setting, therefore assuring spin out resistance
- HX concept guarantees a seal away from possible burrs or sharp hole edges
- Seal fully protected against UV-light influences
- Excellent protection against ingress of fluids, moisture, oil or dirt even under high pressures up to at least 10 bar <sup>1</sup>
- Different seal material like Viton, EPDM or Silicone possible
- IP 68 guaranteed under Dejong test conditions

### ● Watertight (H)DPX Tubtara® with applied sealant under head (chemical)

- Non-reactive peripheral seal, made of flexible organic based material, applied under the head
- Seal material is gap filling, forming a robust seal between mating surfaces
- Slight variations in seal thickness may influence head height and grip range
- Seal is resistant to many automotive oils, antifreeze and transmission fluids
- Seal can be applied on stocked standard Tubtara parts (all materials and shank types)
- IP 67 guaranteed under Dejong test conditions

Seal type	Seal material	Seal colour	Head type	IP class	Temperature range	Sealing capacity	UV shielded	Shore hardness	Standard / on request
HX	NBR	black	large HX	IP68 <sup>1</sup>	-30°C +120°C	tested till 10 bar IP68 <sup>1</sup>	YES	approx. 70	ST
HX	EPDM	black	large HX	IP68 <sup>1</sup>	-50°C +120°C	tested till 10 bar IP68 <sup>1</sup>	YES	approx. 70	OR
HX	Viton	black	large HX	IP68 <sup>1</sup>	-20° +200°C	tested till 10 bar IP68 <sup>1</sup>	YES	approx. 75	OR
D1	polyurethane resin	blue	P, F <sup>3</sup>	IP67 <sup>1</sup>	-40°C - 100°C (150°C peak)	> 150 bar	NO	approx. 50 A	ST
D2	polyurethane acrylate	green	P, F <sup>3</sup>	IP67 <sup>1</sup>	-40°C - 100°C	> 150 bar	NO	50 - 65 A	OR
D3	silicone	red	P, F <sup>3</sup>	IP67 <sup>2</sup>	-50°C +300°C	> 150 bar	NO	43 A	OR
D4	acrylate	light blue	K <sup>3</sup>	IP34 - IP67 <sup>2</sup>	-60°C +160°C	Low (weak seal)	NO	-	OR
D5	epoxy based	yellow	P, F <sup>3</sup>	IP67 <sup>2</sup>	-40°C +150°C	> 150 bar	NO	50 D	OR

<sup>1</sup> according to Dejong test conditions

<sup>2</sup> depending on quality hole and handling, subject to testing

<sup>3</sup> P: flat head - F: countersunk head subject to testing - K: low profile head



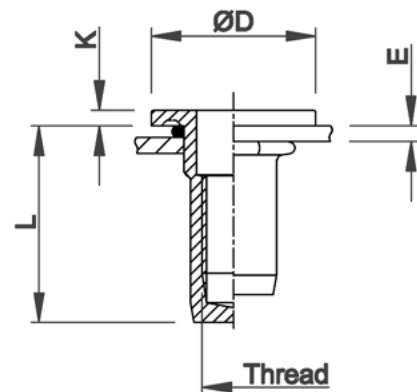
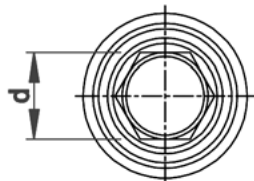
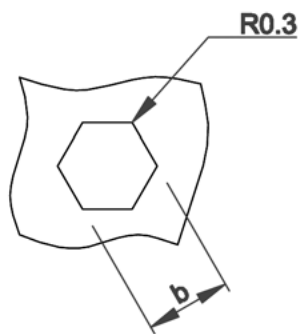


## Stainless Steel 304

Semi-hexagonal shank  
Flat head with underhead seal  
Closed end

HX

watertight  
10 bar (IP68<sup>1</sup>)



THREAD	TYPE	E = grip	L	b <sup>+0,1</sup> = hex hole	d = hex shank	D	K	kg/1000	ORDER CODE	BOX Small	BOX Large
M5	HX3001	0,5-3,0	19,0	7,0	7,0	13,5	1,5	3,8	545 905	(500)	2500
M6	HX3001	0,5-3,0	21,5	9,0	9,0	16,0	1,5	7,5	546 903	(500)	1250
M8	HX3001	0,5-3,0	25,0	11,0	11,0	21,0	2,0	13,1	548 902	-	500

Small box: only for DFS customers, not export - (xxx) handling cost can be charged

Other gripranges, M10 and M12 in progress

All dimensions in mm - Technical data subject to modification

Tolerances and characteristics see chapter 'Technical Information'

<sup>1</sup> IP 68 guaranteed under Dejong test conditions





## Stainless Steel 316

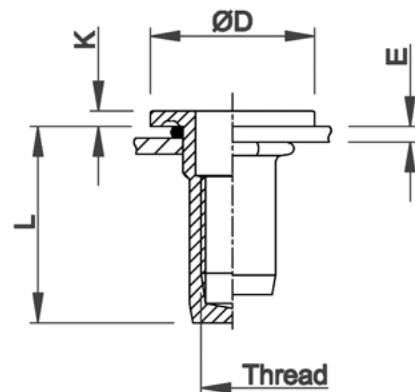
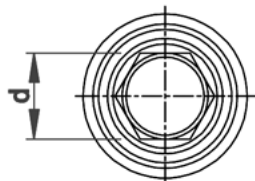
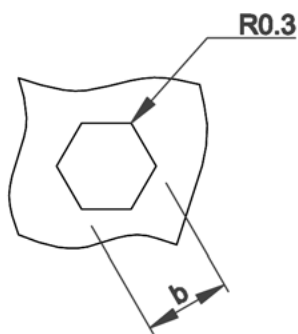
(contains > 2% Molybden)

Semi-hexagonal shank  
Flat head with underhead seal  
Closed end

HX

watertight  
10 bar (IP68<sup>1</sup>)

extra high  
corrosion resistance



THREAD	TYPE	E = grip	L	b <sup>+0,1</sup> = hex hole	d = hex shank	D	K	kg/1000	ORDER CODE	BOX Small	BOX Large
M5	HX3001	0,5-3,0	19,0	7,0	7,0	13,5	1,5	3,8	555 905	(500)	2500
M6	HX3001	0,5-3,0	21,5	9,0	9,0	16,0	1,5	7,5	556 903	-	500
	HX4501	2,0-4,5							-	-	
M8	HX3001	0,5-3,0	25,0	11,0	11,0	21,0	2,0	13,1	558 902	-	500

Small box: only for DFS customers, not export - (xxx) handling cost can be charged

Other gripranges, M10 and M12 in progress

All dimensions in mm - Technical data subject to modification

Tolerances and characteristics see chapter 'Technical Information'

<sup>1</sup> IP68 guaranteed under Dejong test conditions





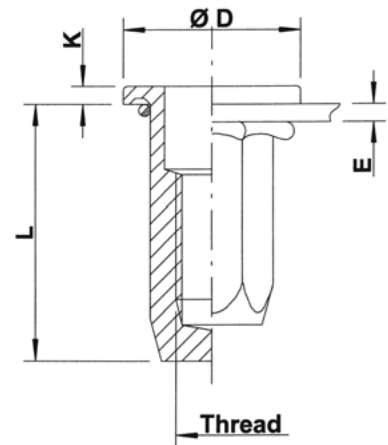
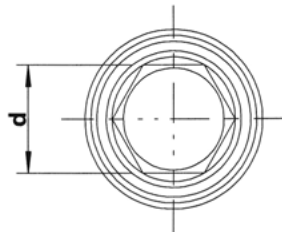
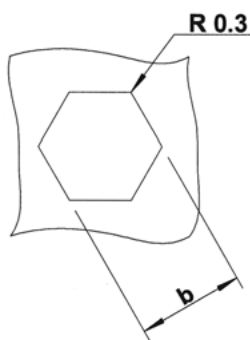
## Steel

Full-hexagonal shank  
Flat head with underhead seal  
Closed end

Zinktop 480h, Cr<sup>VI</sup> - free

HX

watertight  
10 bar (IP68<sup>1</sup>)



THREAD	TYPE	E = grip	L	b <sup>+0,1</sup> = hex hole	d = hex shank	D	K	kg/1000	ORDER CODE	BOX Small	BOX Large
M5	HX3001	0,5-3,0	19,0	7,0	7,0	13,0	1,5	4,3	525 925	(1000)	2500
M6	HX3001	0,5-3,0	21,5	9,0	9,0	15,0	1,5	8,0	526 942	(1000)	1250
	HX5501	3,0-5,5	24,0					8,3	526 949*	-	1250
M8	HX3001	0,5-3,0	26,7	11,0	11,0	20,0	2,0	14,8	528 935	-	500
	HX6001	3,0-6,0	29,7					15,4	528 943	-	500
	HX8001	6,0-8,0	31,7					16,0	528 958	-	-

Small box: only for DFS customers, not export - (xxx) handling cost can be charged

\* **Non-stock item:** minimum order quantity required after depletion of stock

Other gripranges, M10 and M12 in progress

All dimensions in mm - Technical data subject to modification  
Tolerances and characteristics see chapter 'Technical Information'

<sup>1</sup> IP 68 guaranteed under Depond test conditions



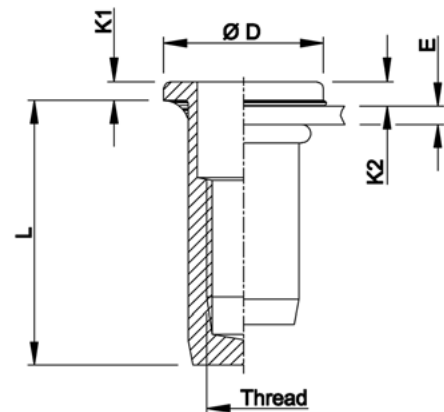
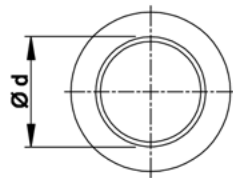
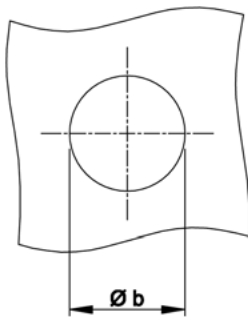


## Stainless Steel 304

Round shank  
Flat head with underhead seal  
Closed end

DPX

watertight IP67<sup>1</sup>



THREAD	TYPE	E = grip	L	b <sup>+0,1</sup> = drill dia	d = shank dia	D	K1	K2	kg/1000	ORDER CODE	BOX Small	BOX Large
M4	DPX15	0,5-1,5	15,0	6,0	6,0	9,0	1,0	1,3	2,3	544 1105	(1000)	5000
M5	DPX25	0,5-2,5	17,5	7,0	7,0	10,0	1,0	1,3	3,1	545 1805	(500)	2500
	DPX45	2,5-4,5	19,5									
M6	DPX25	0,5-2,5	21,5	9,0	9,0	12,0	1,5	1,9	6,7	546 1005	(500)	1500
	DPX45	2,5-4,5	23,5									
M8	DPX25	0,5-2,5	23,5	11,0	11,0	15,0	1,5	2,0	10,0	548 0655	(500)	1000
	DPX50	2,5-5,0	26,0									

Small box: only for DFS customers, not export - (xxx) handling cost can be charged

Delivery time: minimum 3 weeks based on stock availability of standard **Tubtara**®  
Other gripranges, M10 and M12 on demand

All dimensions in mm - Technical data subject to modification  
Tolerances and characteristics see chapter "Technical Information"

<sup>1</sup> IP 67 guaranteed under Dejongd test conditions

K2: Reference values only. Several factors (seal thickness, hole size, setting force ...) influence head and seal thickness after installation.



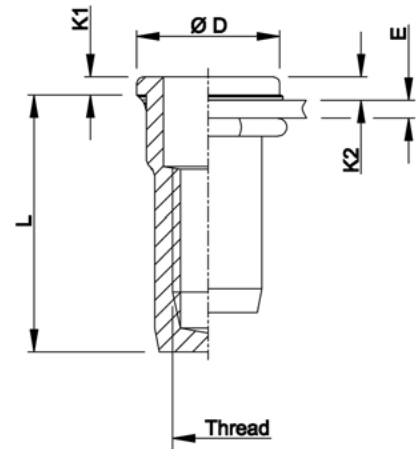
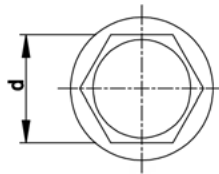
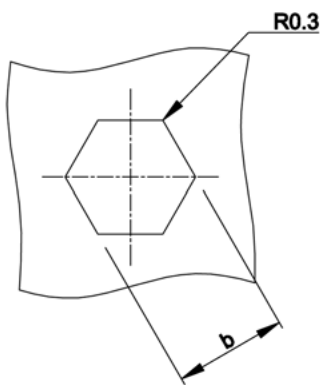


## Stainless Steel 304

Semi-hexagonal shank  
Flat head with underhead seal  
Closed end

HDPX

watertight IP67<sup>1</sup>



THREAD	TYPE	E = grip	L	b <sup>+0,1</sup> = hex hole	d = hex shank	D	K1	K2	kg/1000	ORDER CODE	BOX Small	BOX Large
M4	HDPX15	0,5-1,5	15,0	6,0	6,0	9,0	1,0	1,3	2,3	544 5205	(1000)	5000
M5	HDPX20	0,5-2,0	17,5	7,0	7,0	10,0	1,0	1,3	3,1	545 5205	(500)	2500
M6	HDPX20	0,5-2,0	21,5	9,0	9,0	12,0	1,5	1,9	6,7	546 4705	(500)	1500
	HDPX40	2,0-4,0	23,5									
M8	HDPX20	0,5-2,0	23,5	11,0	11,0	15,0	1,5	2,0	9,8	548 2605	(500)	1000
	HDPX45	2,0-4,5	26,0									

Small box: only for DFS customers, not export - (xxx) handling cost can be charged

Delivery time: minimum 3 weeks based on stock availability of standard Tubtara®  
Other grip ranges, M10 and M12 on demand

All dimensions in mm - Technical data subject to modification  
Tolerances and characteristics see chapter "Technical Information"

<sup>1</sup> IP 67 guaranteed under Dejong test conditions

K2: Reference values only. Several factors (seal thickness, hole size, setting force ...) influence head and seal thickness after installation.





## Stainless Steel 316

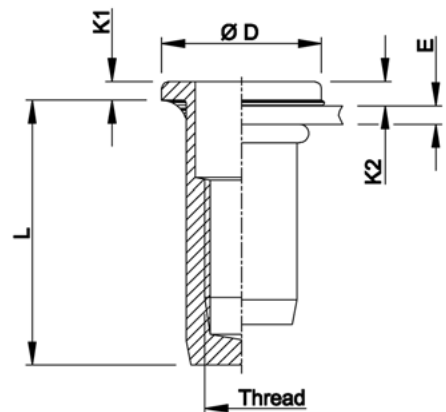
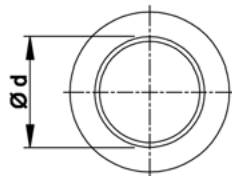
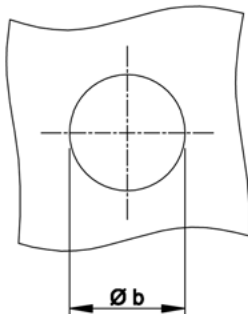
(contains > 2% Molybden)

Round shank  
Flat head with underhead seal  
Closed end

DPX

watertight IP67<sup>1</sup>

extra high  
corrosion resistance



THREAD	TYPE	E = grip	L	b <sup>+0,1</sup> = drill dia	d = shank dia	D	K1	K2	kg/1000	ORDER CODE	BOX Small	BOX Large
M4	DPX15	0,5-1,5	15,0	6,0	6,0	9,0	1,0	1,3	2,3	554 1105	(500)	1500
M5	DPX25	0,5-2,5	17,5	7,0	7,0	10,0	1,0	1,3	3,1	555 1805	(500)	1500
	DPX45	2,5-4,5	19,5									
M6	DPX25	0,5-2,5	21,5	9,0	9,0	12,0	1,5	1,9	6,7	556 1005	(500)	750
M8	DPX25	0,5-2,5	23,5	11,0	11,0	15,0	1,5	2,0	10,0	558 0655	(500)	1000

Small box: only for DFS customers, not export - (xxx) handling cost can be charged

Delivery time: minimum 3 weeks based on stock availability of standard **Tubtara**®  
Other grip ranges and dimensions on demand

All dimensions in mm - Technical data subject to modification  
Tolerances and characteristics see chapter "Technical information"

<sup>1</sup> IP 67 guaranteed under Dejongd test conditions

K2: Reference values only. Several factors (seal thickness, hole size, setting force ...) influence head and seal thickness after installation.





## Stainless Steel 316

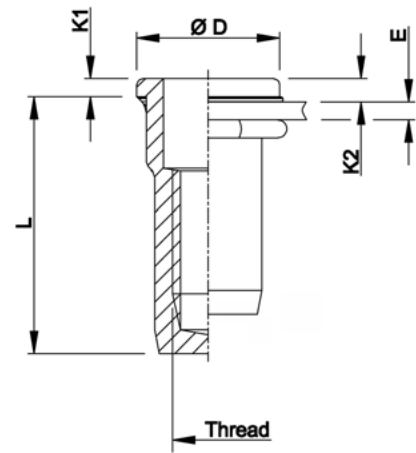
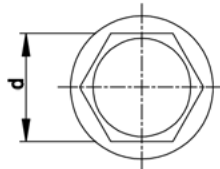
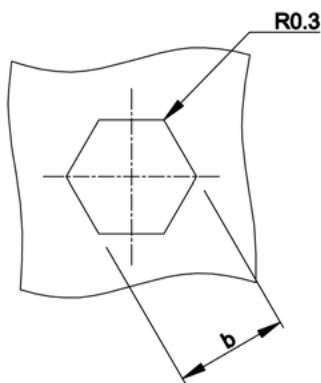
(contains > 2% Molybden)

Semi-hexagonal shank  
Flat head with underhead seal  
Closed end

HDPX

watertight IP67<sup>1</sup>

extra high  
corrosion resistance



THREAD	TYPE	E = grip	L	b <sup>+0,1</sup> = hex hole	d = hex shank	D	K1	K2	kg/1000	ORDER CODE	BOX Small	BOX Large
M4	HDPX15	0,5-1,5	15,0	6,0	6,0	9,0	1,0	1,3	2,3	554 5205	(500)	2000
M5	HDPX20	0,5-2,0	17,5	7,0	7,0	10,0	1,0	1,3	3,1	555 5205	(500)	1500
M6	HDPX20	0,5-2,0	21,5	9,0	9,0	12,0	1,5	1,9	6,7	556 4705	(500)	750
	HDPX40	2,0-4,0	23,5									
M8	HDPX20	0,5-2,0	23,5	11,0	11,0	15,0	1,5	2,0	9,8	558 2605	-	500
	HDPX45	2,0-4,5	26,0									

Small box: only for DFS customers, not export - (xxx) handling cost can be charged

Delivery time: minimum 3 weeks based on stock availability of standard Tubtara®  
Other gripranges and dimensions on demand

All dimensions in mm - Technical data subject to modification  
Tolerances and characteristics see chapter "Technical Information"

<sup>1</sup> IP 67 guaranteed under Dejongd test conditions

K2: Reference values only. Several factors (seal thickness, hole size, setting force ...) influence head and seal thickness after installation.

