

FAST MOVING TECHNOLOGY

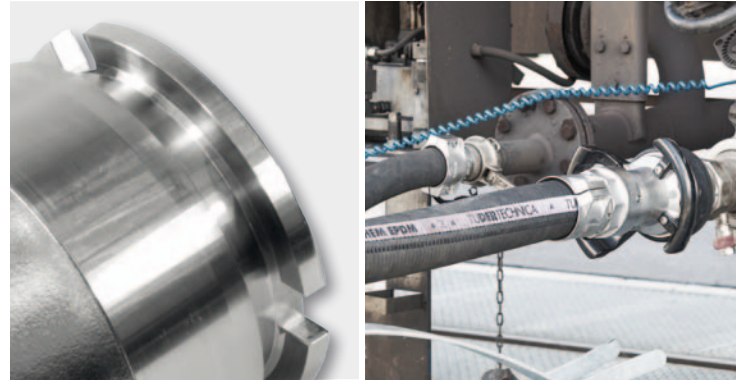
STÄUBLI

TTX couplings

High flow transfer | NATO STANAG 3756



Optimum flow,
minimal
pressure drop





Performance and efficiency

Designed to meet stringent requirements, TTX couplings guarantee a high flow rate / low pressure drop ratio so that you save time on your fluid transfers and thereby increase your energy efficiency.

Non-spill technology

Thanks to the flat-face design:

- Limited introduction of air into circuits during connection.
- Reduced possibility of workplace pollution on disconnection.
- Operators are protected against contamination.
- Easy cleaning.

Easy maintenance

- The modular design means fewer O-rings on the hose unit.
- Lower costs as well as reduced maintenance and downtime.
- Quick and easy seal removal and replacement due to the patented system and available tools.

Speed, ease of handling and safety

- Simple, quick and reliable connection thanks to the bayonet locking system.
- Strong handles made of forged aluminum with improved grip for effortless operation.
- Integrated swivel avoid torsion of the hose line even under pressure.
- Double bearing swivel for a better ergonomics under pressure and a better stability against lateral forces.
- Low force coupling operation.

Shock protection ring

to optimize product durability on the hose unit.

Modularity

Numerous options available for perfect adaptation to your different applications (see details on page 4).

Reliability

Technology providing excellent high flow, pressure peak and vibration resistance.

Plant integration

Optimized product for an easy integration into your installation without extra adapters as the valve shaft does never protrude from the fitting.

Based on NATO STANAG 3756 standard.

Applications

- Loading and unloading of rail tank wagon, tank trucks, containers, tanks and drums.
 - Fluid distribution and transfer systems.
 - Temperature control on double-wall reactors.
 - Connections for test benches.
- For fluids in various industries such as: chemical and petrochemical, fine chemicals, oil & gas, steel, etc.

Available options



Safety locking system

This safety lever, actionable with one hand, makes disconnection impossible unless it is activated.

It therefore prevents any untimely interruption during fluid transfers and reduces accident risks.



Proximity sensor

The sensor monitors that hose unit is coupled and in its end position.

When integrated into the customer's system, these sensors provide an additional level of safety, for example by authorizing or not authorizing pump start-up.



Mechanical coding

This key-lock system prevents any circuit inversion thereby safeguarding the process.



Color coding

Powder coating on tank unit.



Coloured handles

For easy circuit location, different colours are available for your hose unit handles.

Technical specifications


	TTX20-DN25	TTX30-DN50	TTX45-DN65	TTX60-DN80	TTX65-DN100
Hose nominal diameter	DN 25	DN 50	DN 65	DN 80	DN 100
Equivalent flow diameter (mm)	20	30	45	60	65

Maximum allowable pressure PS (bar):

- for aluminum version	16
- for stainless steel version	25

Minimum and maximum allowable temperature TS (°C) depending on material series and seal type:

	Stainless steel version	Aluminum version
- with Nitrile (NBR) seal	-15 to +100	-15 to +80
- with Ethylene-Propylene (EPDM) seal	-20 to +150	-20 to +80
- with Fluorocarbon (FKM) seal	0 to +180	0 to +80
- with Perfluoroelastomer (FFKM) seal	0 to +180	0 to +80

Shut-off	double	
-----------------	--------	---

Sealing

- Nitrile (NBR)
- Ethylene-Propylene (EPDM)
- Fluorocarbon (FKM)
- Perfluoroelastomer (FFKM)

Thread gasket BSP

- PTFE (for stainless steel version)
- PUR (for aluminium version)

Fitting

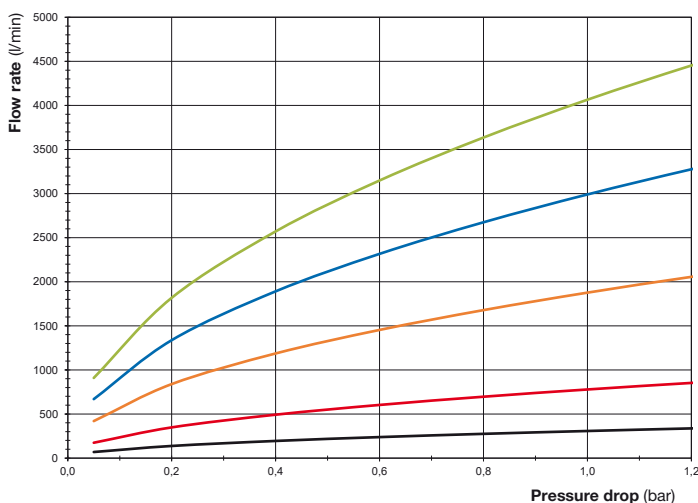
- Thread: female BSP or NPT
 - Flange: EN 1092-1 or ASME B16.5
- Other fittings available on request.

Construction

- Predominantly austenitic stainless steel or aluminum.
- Forged aluminum handles.
- Protective dust caps:
 - Nitrile
 - Polyethylene
 - Stainless steel
 - Aluminum
- Elastomer protective ring.

Flow rate / pressure drop hydraulic charts

— TTX20-DN25 – 1" — TTX30-DN50 – 2" — TTX45-DN65 – 2½"
 — TTX60-DN80 – 3" — TTX65-DN100 – 4"

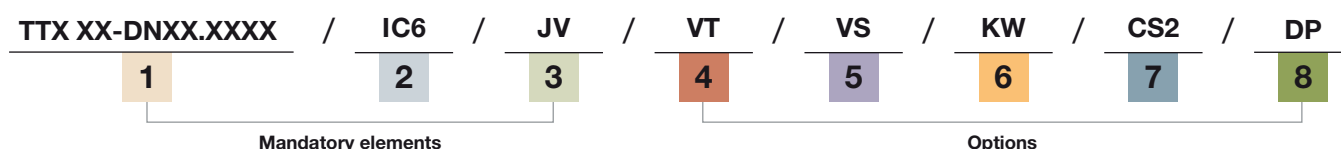


Test conditions:
 Fluid: n-Parafin 20 °C
 Density: 0.75 kg/m³
 Viskosity: 1.75 mm²/s

Reminder of product / diameter correspondences

- TTX20-DN25 – 1"
- TTX30-DN50 – 2"
- TTX45-DN65 – 2 ½"
- TTX60-DN80 – 3"
- TTX65-DN100 – 4"

How to create your hose unit (plug) part number



To create your hose unit part number, add the following elements and options to the standard part number:

- 1 Standard part number** Code

to be chosen page 8
- 2 Material series** (predominantly) Code

 - Stainless steel..... **IC6**
 - Aluminum..... L1

Other construction available on request depending on the fluid: consult us.
- 3 Type of seal** Code

 - Nitrile (NBR) JN
 - Ethylene-Propylene (EPDM) JE
 - Fluorocarbon (FPM)..... **JV**
 - Perfluoroelastomer (FFKM) 6375..... JK1
 - Perfluoroelastomer (FFKM) 0040..... JK2
 - Perfluoroelastomer (FFKM) 6230..... JK3
 - Perfluoroelastomer (FFKM) 4079..... JK5
- 4 Handles** Code

 - Standard handles (black)..... **VT**

Delivered as standard for TTX30-DN50, TTX45-DN65 and TTX60-DN80.

TTX20-DN25 : only this diameter can be delivered without handles: in this case do not put any code.

TTX65-DN100 : narrow handle option (VTE) also available (see below).

 - Narrow handles VTE

(Only available for TTX65-DN100)
- 5 Safety locking system** Code

 - With locking pins **VS**

(not available on TTX20-DN25)

 - By locking plate (only for TTX65-DN100)..... VSF
- 6 Colour code** Code

 - Red KR
 - Blue..... KB
 - Green..... KV
 - Yellow KJ
 - Orange..... KO
 - Purple **KW**

(Color on the handle - For TTX20-DN25: colour possible only if choice of handle option /VT - See point 4)
- 7 Mechanical coding** Code

 - Key-lock..... **CS2**

Selectivity:

 - TTX20-DN25:
10 options / 12 to 45

12	13	14	15	23
24	25	34	35	45

 - TTX30-DN50 to TTX65-DN100:
21 options / 12 to 67

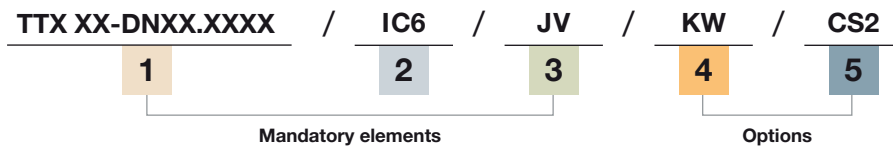
12	13	14	15	16	17	23	24	25	26	27
34	35	36	37	45	46	47	56	57	67	

Other key-locks on request: consult us.
- 8 Sensors** Code

 - Proximity sensor **DP**

(Not available on TTX20-DN25 and aluminum versions).

How to create your tank unit (socket) part number



To create your tank unit part number, add the following elements and options to the standard part number:

1 Standard part number

to be chosen page 10

2 Material series (predominantly) Code

- Stainless steel..... **IC6**
 - Aluminum..... L1
- Other construction available on request depending on the fluid: consult us.

3 Type of seal Code

- Nitrile (NBR) JN
- Ethylene-Propylene (EPDM) JE
- Fluorocarbon (FPM)..... **JV**
- Perfluoroelastomer (FFKM) 6375..... JK1
- Perfluoroelastomer (FFKM) 0040..... JK2
- Perfluoroelastomer (FFKM) 6230..... JK3
- Perfluoroelastomer (FFKM) 4079..... JK5

4 Colour code Code

- Red KR
- Blue..... KB
- Green KV
- Yellow KJ
- Orange..... KO
- Purple **KW**

(Coat of paint for colour code identification).

5 Mechanical coding Code

- Key-lock..... **CS2**

Selectivity:

- TTX20-DN25:
10 options / 12 to 45

12	13	14	15	23
24	25	34	35	45

- TTX30-DN50 to TTX65-DN100:
21 options / 12 to 67

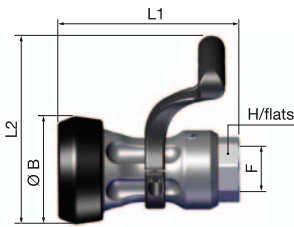
12	13	14	15	16	17	23	24	25	26	27
34	35	36	37	45	46	47	56	57	67	

Other key-locks on request: consult us.

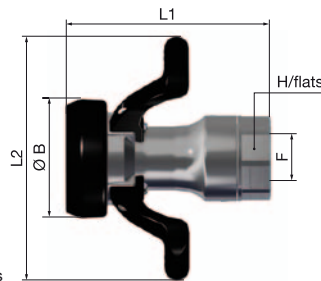
Part numbers

Hose unit (plug)

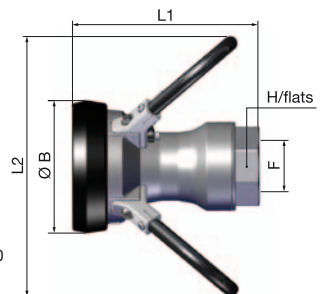
Designation	Model	Connection F	Dimensions (mm)				Part numbers
			L1	L2	ØB	H/flats or ØD	
Female thread	TTX20-DN25	BSP 1"	135.5	140	81	46	TTX20-DN25.7105 *
		NPT 1"	135.5	140	81	46	TTX20-DN25.7205 *
	TTX30-DN50	BSP 2"	164	200	98	65	TTX30-DN50.7108
		NPT 2"	168	200	98	65	TTX30-DN50.7208
	TTX45-DN65	BSP 2 1/2"	220	245	146	85	TTX45-DN65.7109 *
		NPT 2 1/2"	225	245	146	85	TTX45-DN65.7209 *
	TTX60-DN80	BSP 3"	232.5	258	160	100	TTX60-DN80.710A
		NPT 3"	242	258	160	100	TTX60-DN80.720A
	TTX65-DN100	BSP 4"	295	410	210	125	TTX65-DN100.710C
		NPT 4"	295	410	210	125	TTX65-DN100.720C



TTX20-DN25 model

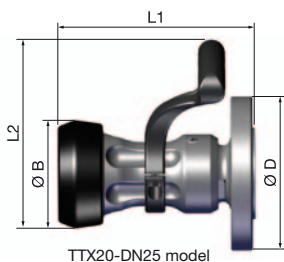


TTX30-DN50,
TTX45-DN65 and
TTX60-DN80 models

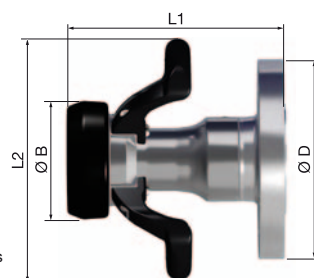


TTX65-DN100
model

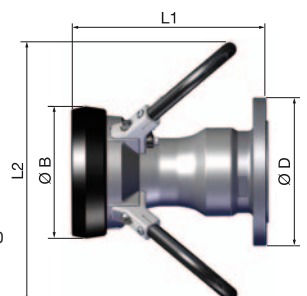
Flanges	Model	ASME B16.5 (150 psi) 2"	ASME B16.5 (300 psi) 2"	EN 1092-1 (PN 16 Form B) DN 50	EN 1092-1 (PN 40 Form B) DN 50	ASME B16.5 (150 psi) 2 1/2"	ASME B16.5 (300 psi) 2 1/2"	EN 1092-1 (PN 16 Form B) DN 65	EN 1092-1 (PN 40 Form B) DN 65	ASME B16.5 (150 psi) 3"	ASME B16.5 (300 psi) 3"	EN 1092-1 (PN 16 Form B) DN 80	EN 1092-1 (PN 40 Form B) DN 80	ASME B16.5 (150 psi) 4"	ASME B16.5 (300 psi) 4"	EN 1092-1 (PN 16 Form B) DN 100	EN 1092-1 (PN 40 Form B) DN 100	Dimensions (mm)		Part numbers		
																		L1	L2		ØB	ØD
TTX30-DN50		175	200	98	152.4																TTX30-DN50.7B18	
		179	200	98	165.1																	TTX30-DN50.7B28 *
		174	200	98	165																	TTX30-DN50.7A37
		176	200	98	165																	TTX30-DN50.7A57 *
TTX45-DN65		236	245	146	177.8																	TTX45-DN65.7B19 *
		239	245	146	190.5																	TTX45-DN65.7B29 *
		232	245	146	185																	TTX45-DN65.7A38 *
		236	245	146	185																	TTX45-DN65.7A58 *
TTX60-DN80		258.5	258	160	190.5																	TTX60-DN80.7B1A
		258.5	258	160	209.6																	TTX60-DN80.7B2A *
		250	258	160	200																	TTX60-DN80.7A39
		254	258	160	200																	TTX60-DN80.7A59 *
TTX65-DN100		310	410	210	228.6																	TTX65-DN100.7B1C
		318	410	210	254																	TTX65-DN100.7B2C *
		306	410	210	220																	TTX65-DN100.7A3A
		310	410	210	235																	TTX65-DN100.7A5A *



TTX20-DN25 model



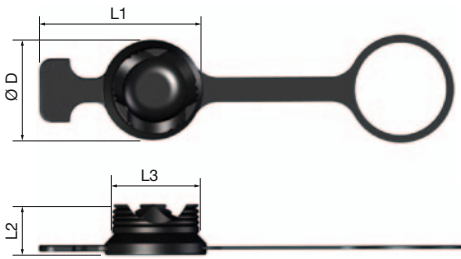
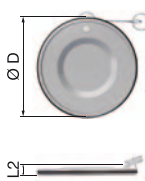
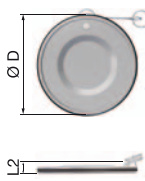

TTX30-DN50,
TTX45-DN65 and
TTX60-DN80 models



TTX65-DN100
model

* not available for aluminum version

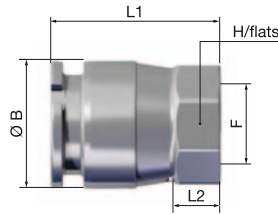
Hose unit caps

Designation	Model	Dimensions (mm)				Part numbers
		ØD	L1	L2	L3	
Nitrile cap 	TTX20-DN25	56	108	32.5	66	TTX20-DN25.8550/NBR
	TTX30-DN50	70	117.5	26	77	TTX30-DN50.8550/NBR
	TTX60-DN80	119	171.5	40	129	TTX60-DN80.8550/NBR
	TTX65-DN100	164	223	37.2	180	TTX65-DN100.8550/NBR
Aluminum cap 	TTX30-DN50	70		15.8		TTX30-DN50.8550/L1
	TTX60-DN80	119		15.8		TTX60-DN80.8550/L1
	TTX65-DN100	164		17.8		TTX65-DN100.8550/L1
Stainless steel cap 	TTX30-DN50	70		15.8		TTX30-DN50.8550/IC6
	TTX45-DN65	105		15.8		TTX45-DN65.8550/IC6
	TTX60-DN80	119		15.8		TTX60-DN80.8550/IC6
	TTX65-DN100	164		17.8		TTX65-DN100.8550/IC6
Polyethylene cap 	TTX30-DN50	70		15.8		TTX30-DN50.8550/PEH
	TTX60-DN80	119		15.8		TTX60-DN80.8550/PEH
	TTX65-DN100	164		17.8		TTX65-DN100.8550/PEH

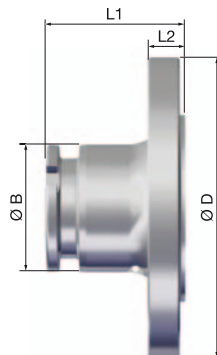
Part numbers

Tank unit (socket)

Designation	Model	Connection F	Dimensions (mm)				Part numbers
			L1	L2	ØB	H/flats or ØD	
Female thread	TTX20-DN25	BSP 1"	68.5	11	56	46	TTX20-DN25.1105 *
		NPT 1"	77.5	22	56	46	TTX20-DN25.1205 *
	TTX30-DN50	BSP 2"	92.5	20	70	65	TTX30-DN50.1108
		NPT 2"	94	21.5	70	65	TTX30-DN50.1208
	TTX45-DN65	BSP 2 1/2"	134	22	105	85	TTX45-DN65.1109 *
		NPT 2 1/2"	144	31	105	85	TTX45-DN65.1209 *
	TTX60-DN80	BSP 3"	134	34	119	100	TTX60-DN80.110A
		NPT 3"	144	34	119	100	TTX60-DN80.120A
	TTX65-DN100	BSP 4"	156	34	164	125	TTX65-DN100.110C
		NPT 4"	166	35	164	125	TTX65-DN100.120C

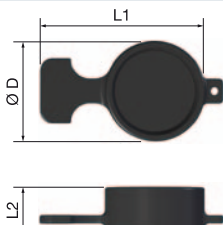
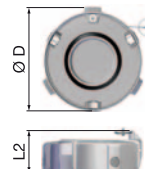
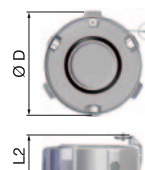
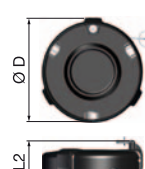


Flanges	Model	Connection F	Dimensions (mm)				Part numbers
			L1	L2	ØB	H/flats or ØD	
Flanges	TTX20-DN25	ASME B16.5 (150 psi) 1"	68	14.2	56	108	TTX20-DN25.1B15 *
		ASME B16.5 (300 psi) 1"	71	17.5	56	124	TTX20-DN25.1B25 *
		EN 1092-1 (PN 40 Form B) DN 25	71	18	56	115	TTX20-DN25.1A54 *
	TTX30-DN50	ASME B16.5 (150 psi) 2"	75	19.1	70	152.4	TTX30-DN50.1B18
		ASME B16.5 (300 psi) 2"	75	22.4	70	165.1	TTX30-DN50.1B28 *
		EN 1092-1 (PN 16 Form B) DN 50	75	18	70	165	TTX30-DN50.1A37
		EN 1092-1 (PN 40 Form B) DN 50	75	20	70	165	TTX30-DN50.1A57 *
	TTX45-DN65	ASME B16.5 (150 psi) 2 1/2"	114	22.2	105	177.8	TTX45-DN65.1B19 *
		ASME B16.5 (300 psi) 2 1/2"	114	25.4	105	190.5	TTX45-DN65.1B29 *
		EN 1092-1 (PN 16 Form B) DN 65	114	18	105	185	TTX45-DN65.1A38 *
		EN 1092-1 (PN 40 Form B) DN 65	114	22	105	185	TTX45-DN65.1A58 *
	TTX60-DN80	ASME B16.5 (150 psi) 3"	112	23.9	119	190.5	TTX60-DN80.1B1A
ASME B16.5 (300 psi) 3"		112	28.4	119	209.6	TTX60-DN80.1B2A *	
EN 1092-1 (PN 16 Form B) DN 80		112	20	119	200	TTX60-DN80.1A39	
EN 1092-1 (PN 40 Form B) DN 80		112	24	119	200	TTX60-DN80.1A59 *	
TTX65-DN100	ASME B16.5 (150 psi) 4"	134	23.9	164	228.6	TTX65-DN100.1B1C	
	ASME B16.5 (300 psi) 4"	134	31.8	164	254	TTX65-DN100.1B2C *	
	EN 1092-1 (PN 16 Form B) DN 100	134	20	164	220	TTX65-DN100.1A3A	
	EN 1092-1 (PN 40 Form B) DN 100	134	24	164	235	TTX65-DN100.1A5A *	



* not available for aluminum version

Tank unit caps

Designation	Model	Dimensions (mm)			Part numbers
		ØD	L1	L2	
Nitrile cap 	TTX20-DN25	65	120	30	TTX20-DN25.8500/NBR
	TTX30-DN50	80	136	36	TTX30-DN50.8500/NBR
	TTX60-DN80	133	184	50	TTX60-DN80.8500/NBR
	TTX65-DN100	179.5	234	57	TTX65-DN100.8500/NBR
Aluminum cap 	TTX30-DN50	89		57	TTX30-DN50.8500/L1
	TTX60-DN80	141		62.5	TTX60-DN80.8500/L1
	TTX65-DN100	186		76.5	TTX65-DN100.8500/L1
Stainless steel cap 	TTX30-DN50	89		57	TTX30-DN50.8500/IC6
	TTX45-DN65	127		62.5	TTX45-DN65.8500/IC6
	TTX60-DN80	141		62.5	TTX60-DN80.8500/IC6
	TTX65-DN100	186		76.5	TTX65-DN100.8500/IC6
Polyethylene cap 	TTX30-DN50	89		57	TTX30-DN50.8500/PEH
	TTX60-DN80	141		62.5	TTX60-DN80.8500/PEH
	TTX65-DN100	186		76.5	TTX65-DN100.8500/PEH

On request:

- Quick maintenance tools.
- Spare parts (handles, sealing kits, locking kits...).
- Other tools.

Don't hesitate to contact us.



■ Stäubli Units ○ Representatives / Agents

Global presence of the Stäubli Group

www.staubli.com