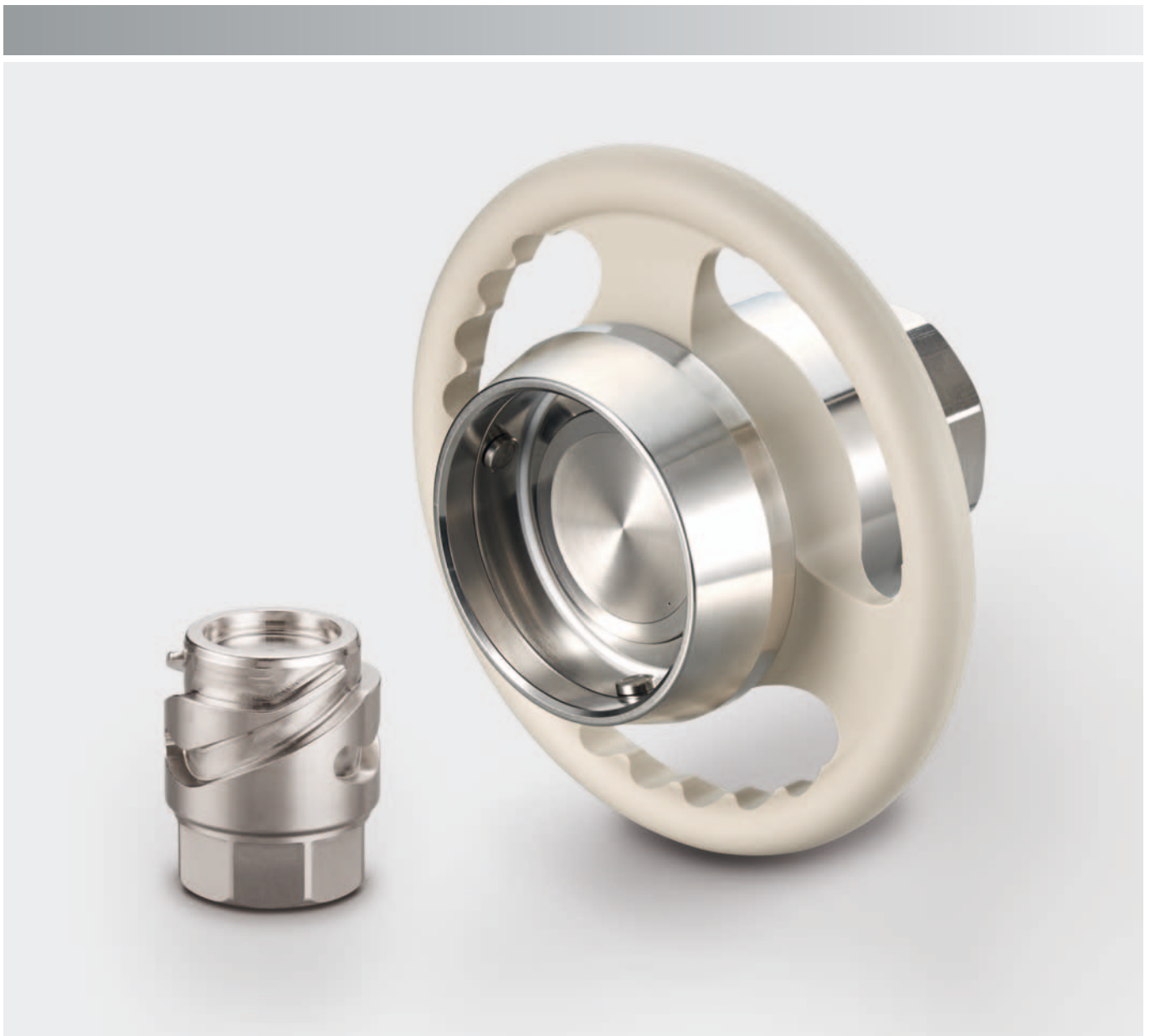


FAST MOVING TECHNOLOGY

STÄUBLI

TCB couplings

High flow anti-pollution transfer | All fluids



High flow
for your
demanding
applications





Performance, efficiency and reliability

Designed to meet strict requirements, TCB couplings guarantee an optimal flow rate and pressure drop ratio, as well as excellent compatibility with pressure peaks and vibrations.

Anti-pollution technology

With the flat-face design:

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

Easy to clean

- Major mechanical elements (e.g. cam curves) and many other lubrications do not come in contact with the media.
- No contamination during operation.

Simple, quick and safe handling

- Bayonet locking system for quick, easy and reliable connection.
- Ergonomic handwheel for convenient and effortless coupling operation.
- Torsion of the hose is avoided due to the integrated swivel.
- Intuitive coupling: no need to start at a certain angle.
- Catching end position allows the operator to feel when the coupling is fully connected and in its end position.

Modularity

Various options are available for adapting the coupling to suit your applications (see details on page 4).

Applications

- Fluid processes and transfer systems.
- Loading and unloading of rails cars, tank trucks, vessels, containers, tanks and drums.
- Connections for test benches.
- Temperature control on jacketed reactors.

For various industries such as: chemical and petrochemical, fine chemicals, oil and gas, steel, etc.

Compatible also with demanding fluids such as hazardous or strongly degreasing media.

Available options



Mechanical coding

A key locking system prevents any circuit inversion, therefore safeguarding the process.



Colour code

The tank and hose units are available in various colours, for easy identification of your circuits.



Stainless steel handwheel

For extreme ambient conditions in highly aggressive environments a stainless steel handwheel is available.




Extended design

This variant allows the operator to use the hose unit when the space is limited.

(Available for TCB40-DN50 only).

Technical specifications

	TCB20-DN25	TCB25-DN32	TCB30-DN40	TCB40-DN50	TCB50-DN65	TCB60-DN80	TCB80-DN100
Hose nominal diameter	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
Equivalent flow diameter (mm)	20	25	30	40	50	60	80
Maximum allowable pressure PS (bar):							
- for stainless steel version				25			
- for Hastelloy® version				25			
Minimum and maximum allowable temperature TS (°C) depending on O-ring type:							
- with Nitrile (NBR) seal				-15 to +100			
- with Ethylene-Propylene (EPDM) seal				-20 to +150			
- with Fluorocarbon (FKM) seal				0 to +150			
- with Perfluoroelastomer (FFKM) seal				0 to +150			
Shut-off	double						

Sealing

- O-rings
 - Nitrile (NBR)
 - Ethylene-Propylene (EPDM)
 - Fluorocarbon (FKM)
 - Perfluoroelastomer (FFKM)
- Thread gasket (BSP)
 - PTFE

Connection

- Thread: female BSP or NPT
 - Flange: EN 1092-1 PN 16 and PN 40 or ASME B16.5 class 150 psi and class 300 psi
- Other connections are available on request.

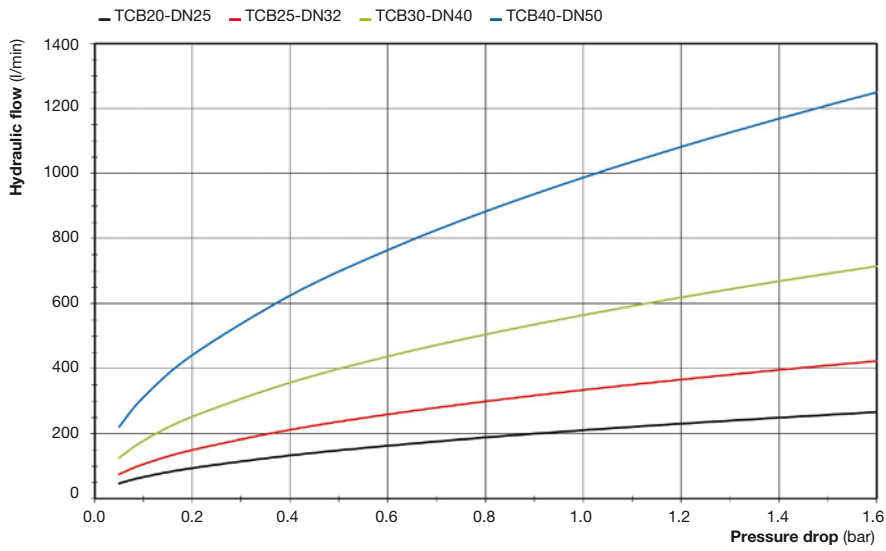
Construction

- Predominantly stainless steel or Hastelloy®. Other constructions are available on request. Please contact us for further details.
- Operating handwheel: polypropylene or stainless steel.
- Protective dust caps: polypropylene.

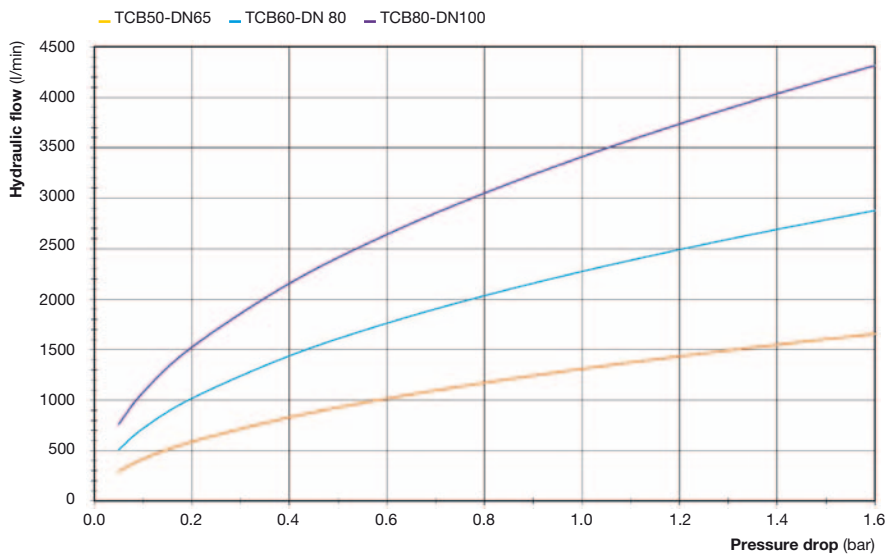
Reminder of product / diameter correspondences

- TCB20-DN25 – 1"
- TCB25-DN32 – 1 ¼"
- TCB30-DN40 – 1 ½"
- TCB40-DN50 – 2"
- TCB50-DN65 – 2 ½"
- TCB60-DN80 – 3"
- TCB80-DN100 – 4"

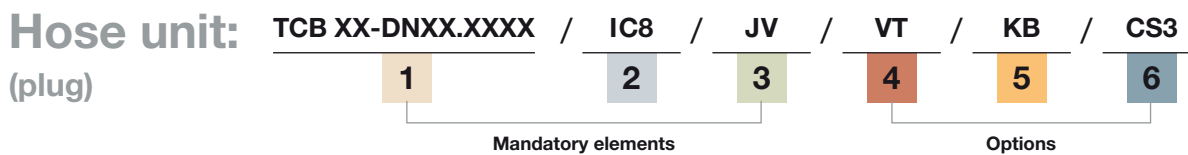
Hydraulic flow rate / pressure drop charts



Test conditions:
Fluid: water, 20 °C / 68 °F



Create your part number



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

- | | | | | | | | | | | | |
|--|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <p>1 Standard part number
to be chosen pages 8-9</p> <p>2 Material series (predominantly) Code
- Stainless steel..... IC8
- Hastelloy® B3..... NI1
- Hastelloy® C4..... NI2</p> <p>3 Type of seal Code
- Nitrile (NBR) JN
- Ethylene-Propylene (EPDM) JE
- Fluorocarbon (FKM)..... JV
- Perfluoroelastomer (FFKM) 6375.....JK1
- Perfluoroelastomer (FFKM) 0040.....JK2
- Perfluoroelastomer (FFKM) 6230.....JK3
- Perfluoroelastomer (FFKM) 4079.....JK5</p> | <p>4 Handwheel Code
- Polypropylene VT
(Not available on TCB20-DN25 and TCB25-DN32:
knurling instead).
- Stainless steel VTS</p> <p>5 Colour code Code
- Red KR
- Blue..... KB
- Green..... KV
- Yellow KJ
- Orange..... KO</p> <p>6 Mechanical coding Code
- Key-lock..... CS3
Available codes: 123 to 345</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>123</td><td>124</td><td>125</td><td>134</td><td>135</td> </tr> <tr> <td>145</td><td>234</td><td>235</td><td>245</td><td>345</td> </tr> </table> <p>Please contact us for further details.</p> | 123 | 124 | 125 | 134 | 135 | 145 | 234 | 235 | 245 | 345 |
| 123 | 124 | 125 | 134 | 135 | | | | | | | |
| 145 | 234 | 235 | 245 | 345 | | | | | | | |



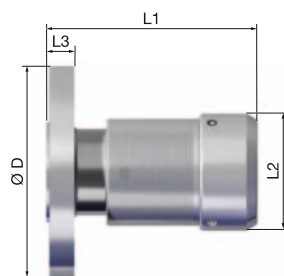
To create your tank unit part number, add the following elements and options to the standard part number:

- | | | | | | | | | | | | |
|--|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <p>1 Standard part number
to be chosen pages 10-11</p> <p>2 Material series (predominantly) Code
- Stainless steel..... IC8
- Hastelloy® B3..... NI1
- Hastelloy® C4..... NI2</p> <p>3 Type of seal Code
- Nitrile (NBR) JN
- Ethylene-Propylene (EPDM) JE
- Fluorocarbon (FKM)..... JV
- Perfluoroelastomer (FFKM) 6375.....JK1
- Perfluoroelastomer (FFKM) 0040.....JK2
- Perfluoroelastomer (FFKM) 6230.....JK3
- Perfluoroelastomer (FFKM) 4079.....JK5</p> | <p>4 Colour code Code
- Red KR
- Blue..... KB
- Green..... KV
- Yellow KJ
- Orange..... KO</p> <p>5 Mechanical coding Code
- Key-lock..... CS3
Available codes: 123 to 345</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>123</td><td>124</td><td>125</td><td>134</td><td>135</td> </tr> <tr> <td>145</td><td>234</td><td>235</td><td>245</td><td>345</td> </tr> </table> <p>Please contact us for further details.</p> | 123 | 124 | 125 | 134 | 135 | 145 | 234 | 235 | 245 | 345 |
| 123 | 124 | 125 | 134 | 135 | | | | | | | |
| 145 | 234 | 235 | 245 | 345 | | | | | | | |

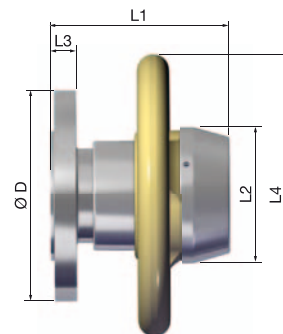
Part numbers

Hose unit (plug)

Designation	Model	Connection	Dimensions (mm)					Part numbers
			L1	L2	L3	L4	Ø D	
Flanges	TCB20-DN25	ANSI B16.5 (150 psi) 1"	107.2	60	14.3		107.9	TCB20-DN25.7B15 *
		ANSI B16.5 (300 psi) 1"	110.5	60	17.5		123.8	TCB20-DN25.7B25 *
		EN 1092-1 (PN 40) DN 25	111	60	18		115	TCB20-DN25.7A54 *
	TCB25-DN32	ANSI B16.5 (150 psi) 1 ¼"	114.2	76	15.9		118	TCB25-DN32.7B16 *
		ANSI B16.5 (300 psi) 1 ¼"	117.6	76	19		133.3	TCB25-DN32.7B26 *
		EN 1092-1 (PN 40) DN 32	143	76	18		140	TCB25-DN32.7A55 *
	TCB30-DN40	ANSI B16.5 (150 psi) 1 ½"	125.5	89	17.5	200	127	TCB30-DN40.7B17 *
		ANSI B16.5 (300 psi) 1 ½"	128.6	89	20.6	200	155.6	TCB30-DN40.7B27 *
		EN 1092-1 (PN 40) DN 40	126	89	18	200	150	TCB30-DN40.7A56 *
	TCB40-DN50	ANSI B16.5 (150 psi) 2"	146.9	106	19	220	152.4	TCB40-DN50.7B18 *
		ANSI B16.5 (300 psi) 2"	150.2	106	22.2	220	165.1	TCB40-DN50.7B28 *
		EN 1092-1 (PN 16 Form B) DN 50	145.8	106	18	220	165	TCB40-DN50.7A37 *
		EN 1092-1 (PN 40 Form B) DN 50	147.8	106	20	220	165	TCB40-DN50.7A57 *
	TCB50-DN65	ANSI B16.5 (150 psi) 2 ½"		121	22.2	240	177.8	TCB50-DN65.7B19 *
		ANSI B16.5 (300 psi) 2 ½"		121	25.4	240	190.5	TCB50-DN65.7B29 *
		EN 1092-1 (PN 16 Form B) DN 65		121	18	240	185	TCB50-DN65.7A38 *
		EN 1092-1 (PN 40 Form B) DN 65		121	22	240	185	TCB50-DN65.7A58 *
	TCB60-DN80	ANSI B16.5 (150 psi) 3"		148	23.8	270	190.5	TCB60-DN80.7B1A *
		ANSI B16.5 (300 psi) 3"	182.5	148	28.6	270	209.5	TCB60-DN80.7B2A *
		EN 1092-1 (PN 16 Form B) DN 80		148	20	270	200	TCB60-DN80.7A39 *
EN 1092-1 (PN 40 Form B) DN 80			148	24	270	200	TCB60-DN80.7A59 *	
TCB80-DN100	ANSI B16.5 (150 psi) 4"	199	180	23.8	319	228.6	TCB80-DN100.7B1C *	
	ANSI B16.5 (300 psi) 4"		180	31.7	319	254	TCB80-DN100.7B2C *	
	EN 1092-1 (PN 16 Form B) DN 100		180	20	319	220	TCB80-DN100.7A3A *	
	EN 1092-1 (PN 40 Form B) DN 100		180	24	319	235	TCB80-DN100.7A5A *	



TCB20-DN25 and TCB25-DN32 models

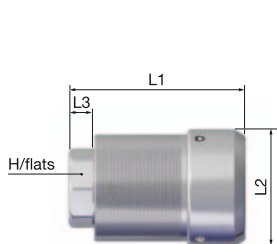


Others models

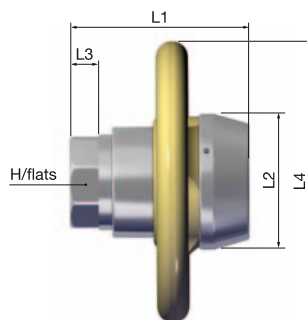
* Hastelloy versions upon request.

Hose unit (plug)

Designation	Model	Connection	Dimensions (mm)					Part numbers
			L1	L2	L3	L4	H/flats	
Female thread	TCB20-DN25	BSP 1"	92	60	12		38	TCB20-DN25.7105
		NPT 1"	106	60	22		38	TCB20-DN25.7205
	TCB25-DN32	BSP 1 1/4"	98.5	76	12		50	TCB25-DN32.7106
		NPT 1 1/4"	111.5	76	22		50	TCB25-DN32.7206
	TCB30-DN40	BSP 1 1/2"	114.5	89	16	200	55	TCB30-DN40.7107
		NPT 1 1/2"	123.5	89	22	200	55	TCB30-DN40.7207
	TCB40-DN50	BSP 2"	143	106	19	220	70	TCB40-DN50.7108
		NPT 2"	150	106	23	220	70	TCB40-DN50.7208
	TCB50-DN65	BSP 2 1/2"	160.5	121	23	240	85	TCB50-DN65.7109 *
		NPT 2 1/2"		121	31	240	85	TCB50-DN65.7209 *
	TCB60-DN80	BSP 3"	182.5	148	22	270	95	TCB60-DN80.710A *
		NPT 3"	182.5	148	33	270	95	TCB60-DN80.720A *
	TCB80-DN100	BSP 4"	200	180	22	319	125	TCB80-DN100.710C *
		NPT 4"	200	180	35	319	125	TCB80-DN100.720C *



TCB20-DN25 and TCB25-DN32 models

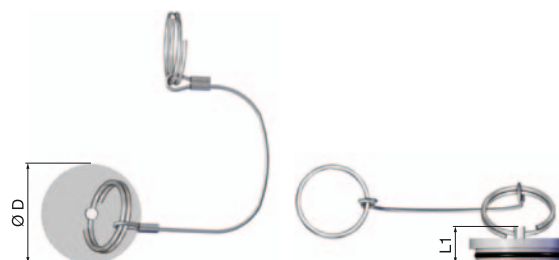


Others models

* not available for Hastelloy B3 version.

Hose unit caps

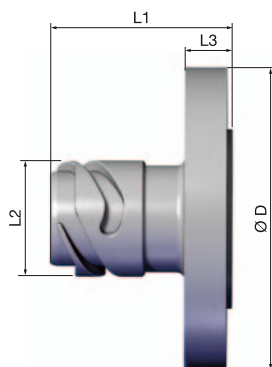
Model	Dimensions (mm)		Part numbers
	Ø D	L1	
TCB20-DN25	50	17	TCB20-DN25.8550/PPR
TCB25-DN32	61	19.5	TCB25-DN32.8550/PPR
TCB30-DN40	70	24	TCB30-DN40.8550/PPR
TCB40-DN50	87	25	TCB40-DN50.8550/PPR
TCB50-DN65	102	25	TCB50-DN65.8550/PPR
TCB60-DN80	125	25	TCB60-DN80.8550/PPR
TCB80-DN100	156	25	TCB80-DN100.8550/PPR



Part numbers

Tank unit (socket)

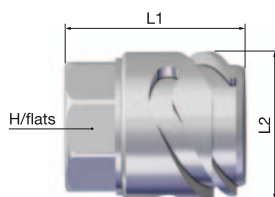
Designation	Model	Connection	Dimensions (mm)				Part numbers
			L1	L2	L3	Ø D	
Flanges	TCB20-DN25	ANSI B16.5 (150 psi) 1"	69	44	14.3	107.9	TCB20-DN25.1B15 *
		ANSI B16.5 (300 psi) 1"	69	44	17.5	123.8	TCB20-DN25.1B25 *
		EN 1092-1 (PN 40 Form B) DN 25	69	44	18	115	TCB20-DN25.1A54 *
	TCB25-DN32	ANSI B16.5 (150 psi) 1 ¼"	71.7	54	15.9	118	TCB25-DN32.1B16 *
		ANSI B16.5 (300 psi) 1 ¼"	75.1	54	19	133.3	TCB25-DN32.1B26 *
		EN 1092-1 (PN 40 Form B) DN 32	74	54	18	140	TCB25-DN32.1A55 *
	TCB30-DN40	ANSI B16.5 (150 psi) 1 ½"	82.5	62.5	17.5	127	TCB30-DN40.1B17 *
		ANSI B16.5 (300 psi) 1 ½"	85.6	62.5	20.6	155.6	TCB30-DN40.1B27 *
		EN 1092-1 (PN 40 Form B) DN 40	83	62.5	18	150	TCB30-DN40.1A56 *
	TCB40-DN50	ANSI B16.5 (150 psi) 2"	95.1	79.6	19	152.4	TCB40-DN50.1B18 *
		ANSI B16.5 (300 psi) 2"	98.4	79.6	22.2	165.1	TCB40-DN50.1B28 *
		EN 1092-1 (PN 16 Form B) DN 50	94	79.6	18	165	TCB40-DN50.1A37 *
		EN 1092-1 (PN 40 Form B) DN 50	96	79.6	20	165	TCB40-DN50.1A57 *
	TCB50-DN65	ANSI B16.5 (150 psi) 2 ½"		94.2	22.2	177.8	TCB50-DN65.1B19 *
		ANSI B16.5 (300 psi) 2 ½"		94.2	25.4	190.5	TCB50-DN65.1B29 *
		EN 1092-1 (PN 16 Form B) DN 65		94.2	18	185	TCB50-DN65.1A38 *
		EN 1092-1 (PN 40 Form B) DN 65		94.2	22	185	TCB50-DN65.1A58 *
	TCB60-DN80	ANSI B16.5 (150 psi) 3"	128.9	118	23.8	190.5	TCB60-DN80.1B1A *
		ANSI B16.5 (300 psi) 3"	133.4	118	28.4	209.6	TCB60-DN80.1B2A *
		EN 1092-1 (PN 16 Form B) DN 80	125	118	20	200	TCB60-DN80.1A39 *
EN 1092-1 (PN 40 Form B) DN 80		129	118	24	200	TCB60-DN80.1A59 *	
TCB80-DN100	ANSI B16.5 (150 psi) 4"	138.4	146.2	23.8	228.6	TCB80-DN100.1B1C *	
	ANSI B16.5 (300 psi) 4"		146.2	31.8	254	TCB80-DN100.1B2C *	
	EN 1092-1 (PN 16 Form B) DN 100		146.2	20	220	TCB80-DN100.1A3A *	
	EN 1092-1 (PN 40 Form B) DN 100		146.2	24	235	TCB80-DN100.1A5A *	



* Hastelloy versions upon request.

Tank unit (socket)

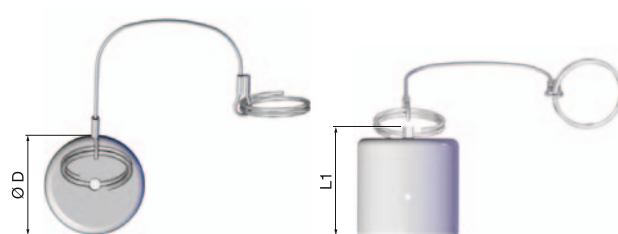
Designation	Model	Connection	Dimensions (mm)			Part numbers
			L1	L2	H/flats	
Female thread	TCB20-DN25	BSP 1"	53	44	38	TCB20-DN25.1105
		NPT 1"	68.5	44	38	TCB20-DN25.1205
	TCB25-DN32	BSP 1 ¼"	65	54	50	TCB25-DN32.1106
		NPT 1 ¼"	79.5	54	50	TCB25-DN32.1206
	TCB30-DN40	BSP 1 ½"	76	62.5	55	TCB30-DN40.1107
		NPT 1 ½"	85	62.5	55	TCB30-DN40.1207
	TCB40-DN50	BSP 2"	85.5	79.6	70	TCB40-DN50.1108
		NPT 2"	90.5	79.6	70	TCB40-DN50.1208
	TCB50-DN65	BSP 2 ½"	95	94.2	85	TCB50-DN65.1109 *
		NPT 2 ½"		94.2	85	TCB50-DN65.1209 *
	TCB60-DN80	BSP 3"	105	118	95	TCB60-DN80.110A *
		NPT 3"		118	95	TCB60-DN80.120A *
	TCB80-DN100	BSP 4"	113	146.2	125	TCB80-DN100.110C *
		NPT 4"		146.2	125	TCB80-DN100.120C *



* not available for Hastelloy B3 version.

Tank unit caps

Model	Dimensions (mm)		Part numbers
	Ø D	L1	
TCB20-DN25	52	56	TCB20-DN25.8500/PPR
TCB25-DN32	63	70.5	TCB25-DN32.8500/PPR
TCB30-DN40	72.5	70	TCB30-DN40.8500/PPR
TCB40-DN50	90	78.5	TCB40-DN50.8500/PPR
TCB50-DN65	106	90	TCB50-DN65.8500/PPR
TCB60-DN80	130	95	TCB60-DN80.8500/PPR
TCB65-DN100	159	101	TCB80-DN100.8500/PPR



Available on request:

Seal kits, repair kits, park adaptors, assembly and draining tools.



■ Stäubli Units ○ Representatives / Agents

Global presence of the Stäubli Group

www.staubli.com