TDU

Cooling | High flow transfer

Applications

- Thermoregulation
- Connections for cooling of electronic equipment (super computer, data center,...)
- Broadcasting
- Water cooling unit (chiller)
- Rear door
- Heatexchanger
- Cooling of power converters
- Water cooling jackets
- Connections for cooling in chemical, pharma, industrial machinery and plastics
- Inerting applications

Direct flow for cooling applications

Patented
US Pat. 11867333
CN Pat. ZL201880094397.1
an other countries

Key advantages

Guarantee the safety of your installations and users

Gain in modularity

Improve your productivity with higher flow

Optimize your costs

How Stäubli design enhance your Performance

Full flow

The TDU coupling has a spherical valve which ensures a full flow of fluid, allowing for an optimal flow rate and pressure drop ratio thanks to internal design.

Two symmetrical parts for TDU unisex

The TDU is a symmetrical coupling. There is no male or female differentiation and both sides that need to be connected are fitted with identical interfaces.

Optional color code

For easy circuit identification, two colors (blue /KB and red /KR) are available.

Ease of use and ease of handling

- Intuitive handling without predefined sequence required to move the levers.
- Each coupling contains an integrated swivel that prevents torsion of the connected hose line.
- If needed, the swivel joint can be fixed using an enclosed screw. In most cases it is recommended to fix the swivel of one coupling half to ensure convenient operation.

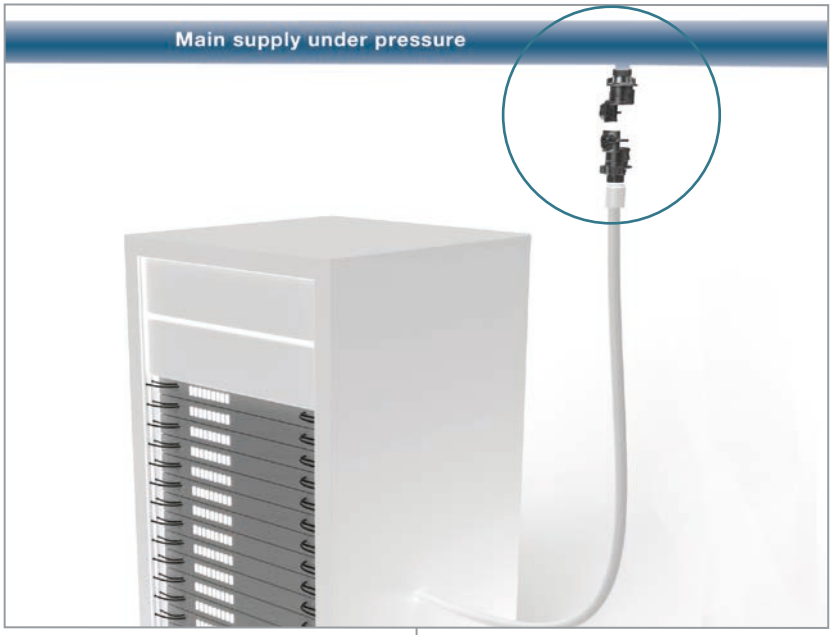
Quick, simple and safe connection

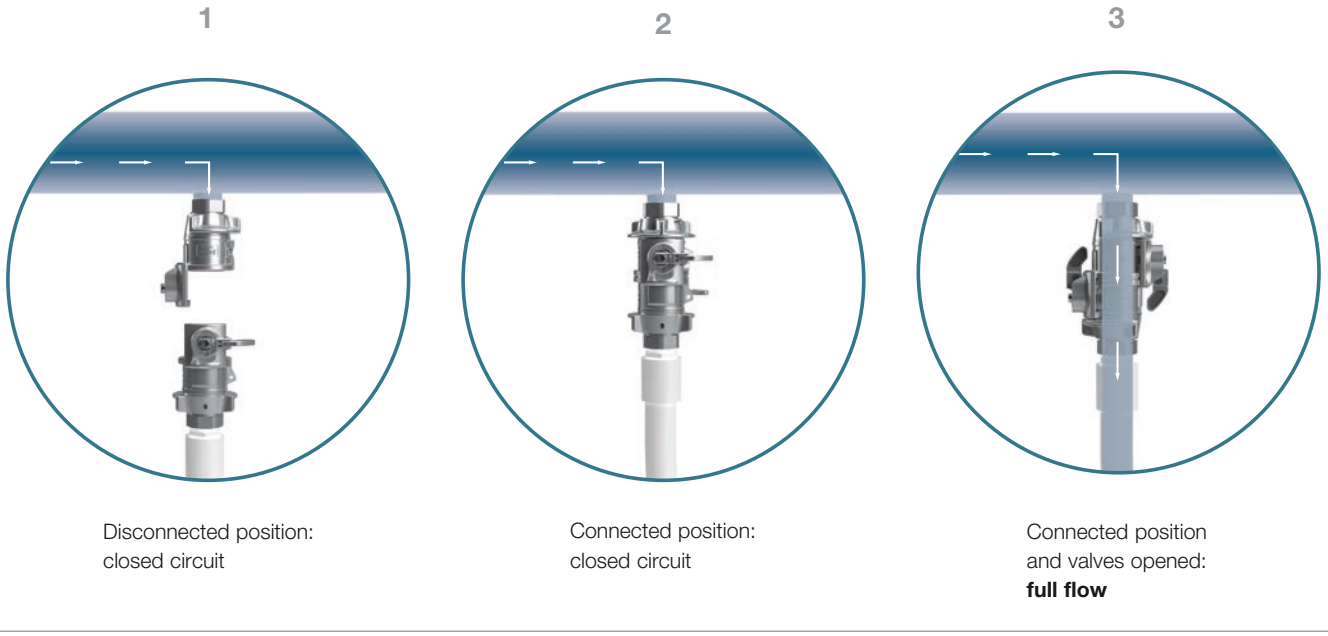
The TDU locking system is independent of the fluid stream. It allows connection even if one side is under pressure.

Completely safe operation

The patented design ensures safety and intuitive handling. The valves can only be opened when both coupling halves are fully connected. For disconnection, both valves must be closed completely.

Simplifies the roll out of your facilities





Disconnected position:
closed circuit

Connected position:
closed circuit

Connected position
and valves opened:
full flow

Technical specifications

	TDU24	TDU50
Nominal diameter DN (mm)	24	50
Maximum working pressure (bar)	10	
Operating temperature (°C): - with EPDM (JE) - with FKM (JV)	 -10 to +80 0 to +80	
Shut-off double		

Outside of this range please ask for confirmation.

Sealing

- O-ring: Ethylene-Propylene (EPDM) or Fluorocarbon (FKM)
- Bearing of ball valve: PTFE, PEEK

Connection

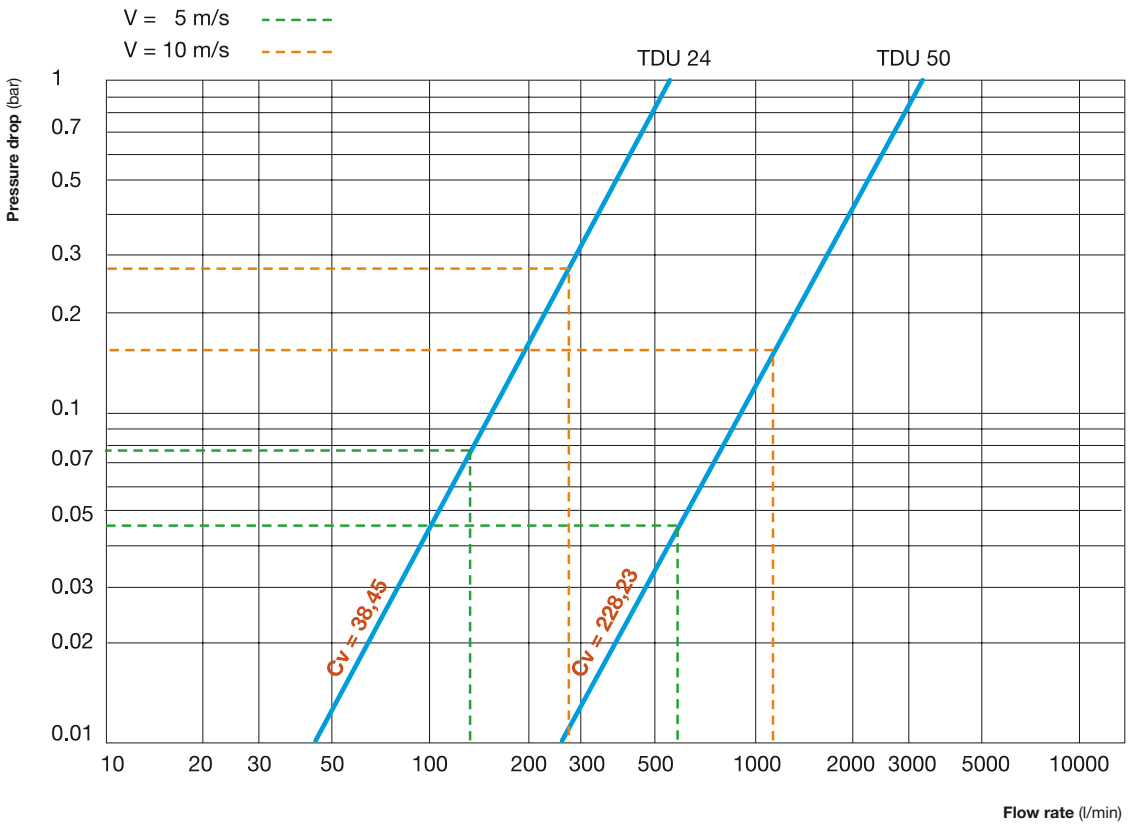
- Thread: BSP, NPT
- Hose barb
- Tri clamp

Others available on request (e.g. KES sealing)

Construction

- Stainless steel

Hydraulic flow rate / pressure drop charts

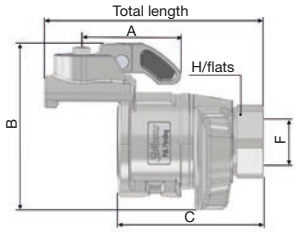


Test conditions:

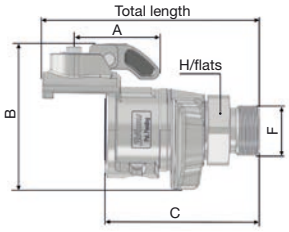
- Fluid: water
- Density: 998 kg/m^3
- Viskosity: 1.08 cSt

Part numbers

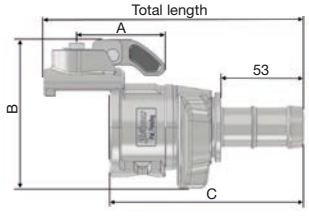
Description	Model	Connection F	Dimensions (mm)					Weight (kg)	Part numbers
			A	B	C	Total length	H/flats		
Female thread	**TDU24**	NPT 1"	56.6	95.5	82.4	124.4	41	1.3	**TDU24.7205/IC1/JE**
		BSP 1"	56.6	95.5	85.4	127.4	46	1.3	**TDU24.7105/IC1/JE**
		BSP 1 1/2"	56.6	95.5	99.4	141.4	55	1.5	**TDU24.7107/IC1/JE**
	TDU50	NPT 2"	65.9	120.5	125	185	75	3.8	**TDU50.7208/IC1/JE**
		BSP 2"	65.9	120.5	115	175	75	3.5	**TDU50.7108/IC1/JE**



Male thread with front seal	**TDU24**	BSP 1"	56.6	95.5	101.4	143.4	46	1.4	**TDU24.7155/IC1/JE**
	TDU50	BSP 2"	65.9	120.5	133	193	75	3.6	**TDU50.7158/IC1/JE**

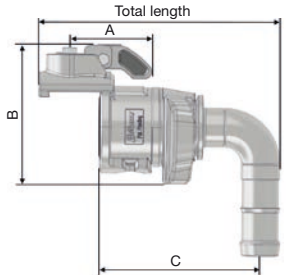


Hose barb	**TDU24**	Hose barb 25 mm	56.6	95.5	123.9	165.9		1.3	**TDU24.7825/IC1/JE**
	TDU50	Hose barb 50 mm	65.9	120.5	153	213	-	3.3	**TDU50.7850/IC1/JE**

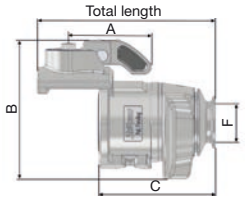


Part numbers

Description	Model	Connection F	Dimensions (mm)					Weight (kg)	Part numbers
			A	B	C	Total length	H/flats		
90° hose barb	**TDU24**	90° hose barb 25 mm	56.6	95.5	114.9	170.6	-	1.4	**TDU24.7825/IC1/JE/RE**
		90° hose barb 32 mm	56.6	95.5	123.9	183.1	-	1.4	**TDU24.7832/IC1/JE/RE**



Tri-clamp	**TDU24**	ASME BPE 2022 1"	56.6	95.5	85.4	127.4	-	1.3	**TDU24.7050/IC1/JE**
	TDU50	ASME BPE 2022 2"	65.9	120.5	110	170	-	3.3	**TDU50.7064/IC1/JE**



All references are available in EPDM (JE) and FKM (JV).

RD7020300E

● Stäubli Units ○ Representatives/Agents

Global presence of the Stäubli Group

www.staubli.com

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