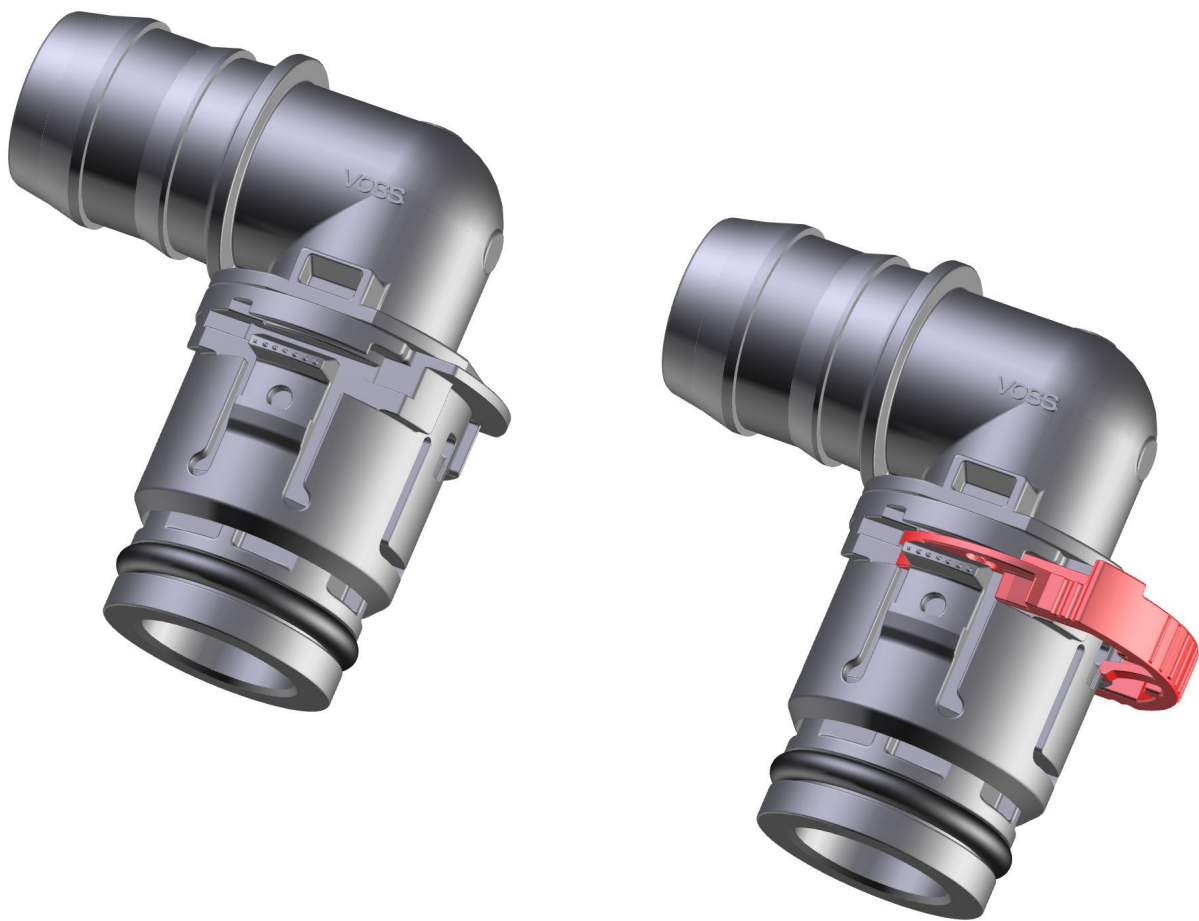




Assembly instructions VOSS quick connect system 271



The benchmark for customized connection solutions
in thermal management

A. Important notices

Please observe before using the quick connect systems

- ➡ VOSS quick connect system 271 is suitable for the fir-tree connection of cooling lines, especially for battery temperature control.
- ➡ The temperature range is from -40 °C to +85 °C
- ➡ The maximum operating pressure is 2 bar.
- ➡ You can use quick connect system 271 for different requirements upon request.

Please observe during assembly of the quick connect systems

- ! The assembly of the quick connect system must be conducted by professional mechanics subject to these assembly instructions.
- ! Incorrectly assembled connections can result in leakage or failure of the system.
- ! VOSS quick connect system 271 may only be used with connections and tubes described in chapter B ("Components and material").
- ! Before connecting both sides, components must be checked. They have to be clean and must not show any signs of damage.

System properties

- + VOSS quick connect system 271 is a plastic plug, optionally available with Double Lock (DL), for the connection of cooling lines (PA tubes), especially for components with recessed ports, or with material for profiled bores.
- + Connecting port according to VOSS standard
- + Available sizes: S6, S10, S14, S18
- + VOSS quick connect system 271^{DL} is available with a secondary lock (Double Lock) as additional safety device as well as visual and haptical connection indications.
- + The connection of VOSS quick connect system 271 is made by plugging the plug in the connection port. The arms of the locking element of the plug snap into the holes of the connection port. The complete connection is visually and haptically marked by snap-in.

B. Components and material

1. Tube dimensions and nominal sizes

Quick connect system 271					
PA tube		Available alignments: 90°/180°			
Inner diameter [mm]	Outer diameter x tube width [mm]	S6	S10	S14	S18
6	8x1	■			
8	10x1	■			
10	13x1		■		
11	13x1,5		■		
12	15x1,5		■		
14	17x1,5			■	
18	21x1,5				■

Further connection possibilities (e.g. hose), tube sizes or alignment possible on customer requests.

2. The quick connect systems 271

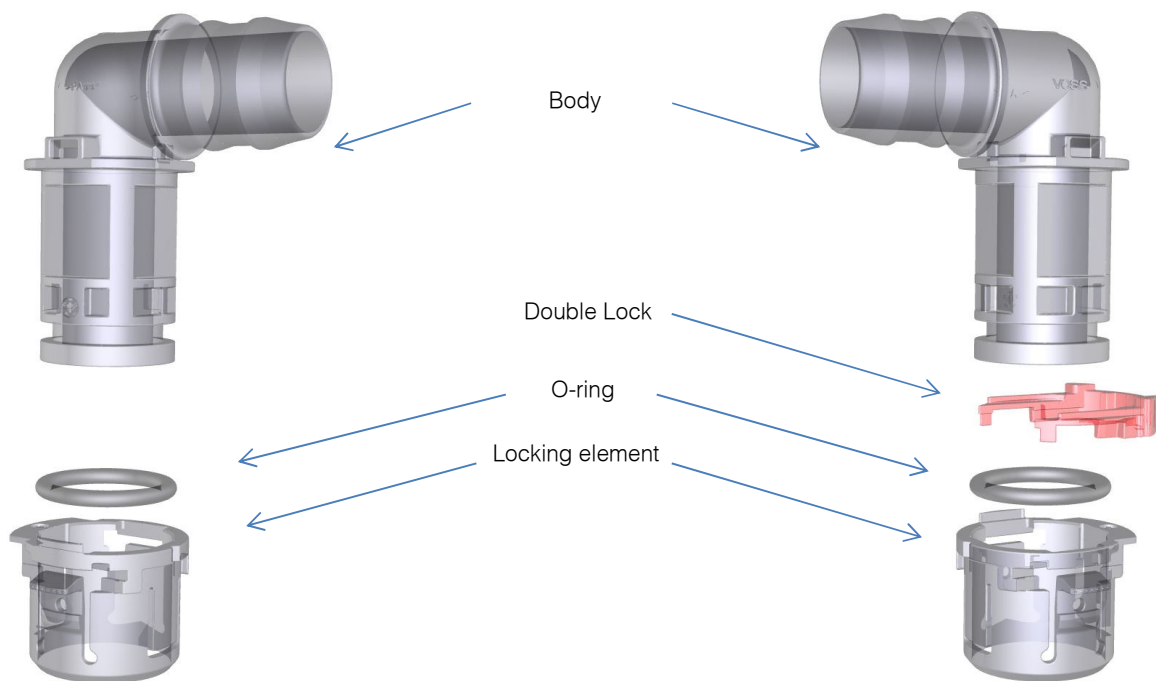


Fig. 1: Components of quick connect system 271 and 271^{DL}

Connecting port

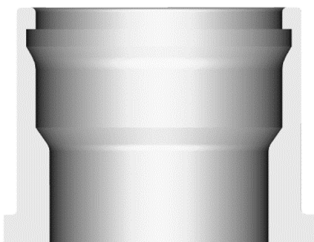


Fig. 2: Cross section of connecting port according to VOSS standard

Available alignments






Fig. 3: Straight and elbow plug 271, locking element can be rotated 90°



Fig. 4: Straight and elbow plug 271^{DL}, locking element & Double Lock can be rotated 90°

C. Assembly instructions

Use of arrow symbols in pictures:

-  Indicates special points of interest described in the text.
-  Indicates required manual actions and their direction.
-  Indicates operations that should be avoided.

As-delivered conditions

271



Fig. 5: As-delivered conditions quick connect system 271

271^{DL}



Fig. 6: As-delivered conditions quick connect system 271^{DL}
Double Lock in front position (protrudes)

1. Assembly

Step 1

Plug and connecting port separated (starting situation)

Only 271^{DL}:
Double Lock in front position (protrudes)



Fig. 7: Plug 271 and connecting port separated



Fig. 8: Plug 271^{DL} and connecting port separated

Step 2

Place plug centered above connecting port



Fig. 9: Centered placement of plug 271 above connecting port



Fig. 10: Centered placement of plug 271^{DL} above connecting port

Step 3

Insert plug into connecting port

271



Fig. 11: Inserting plug 271 into connecting port

271^{DL}



Fig. 12: Inserting plug 271^{DL} into connecting port

Incomplete assembly:
The arms of the locking element are not yet engaged and are not aligned with the connecting port

Only 271^{DL}:
Double Lock cannot be activated in this position



Fig. 13: Incomplete assembly plug 271



Fig. 14: Incomplete assembly plug 271^{DL}:
blocked Double Lock



Step 4

Insert the plug completely into the connecting port until the arms of the locking element snap into the connecting port

271



271^{DL}



Fig. 15: Plugging in plug 271 as far as it will go

Go on with step 6 (page 9)

Fig. 16: Plugging in plug 271^{DL} as far as it will go

271

Step 5

Only 271^{DL}:
Operate Double Lock
with finger on the front
corrugated surface ...

... until it snaps into the
body

Step 6

Completely assembled
plug (final position)

271^{DL}



Fig. 17: Activating the Double Lock

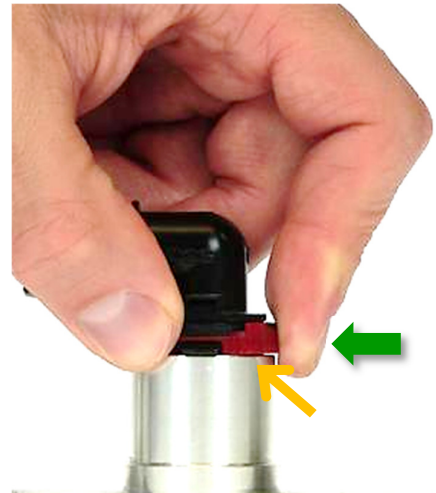


Fig. 18: Engaged Double Lock




Fig. 19: Completely assembled plug 271



Fig. 20: Completely assembled plug 271^{DL}

2. Disassembly

 Before disconnecting, the line must be free of pressure, and the area around the secondary lock must be free of dirt.

Step 1

Only 271^{DL}:
Double Lock is in
engaged position.
Locking element cannot
be operated in this
position

Grasp Double Lock
with two fingers ...

271

271^{DL}



Fig. 21: Blocked locking element plug 271^{DL}



Fig. 22: Grasping the Double Lock

271

... and pull away from
the body ...

271^{DL}



Fig. 23: Pulling away the Double Lock

... until Double Lock is
in front position again



Fig. 24: Pulled away Double Lock



Fig. 25: Unlocked plug 271^{DL}

Step 2

Grasp the locking element on both arms ...

271



Fig. 26: Grasping the locking element of plug 271

271^{DL}



Fig. 27: Grasping the locking element of plug 271^{DL}

... and squeeze



Fig. 28: Squeezing of the locking element of plug 271

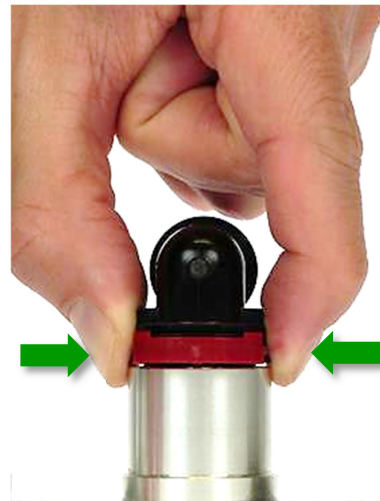


Fig. 29: Squeezing of the locking element of plug 271^{DL}

Simultaneously pull the plug out of the connecting port



Fig. 30: Pulling out the plug 271



Fig. 31: Pulling out the plug 271^{DL}

Step 3

Completely disassembled plug and connecting port

Only 271^{DL}:
Double Lock is again in front position (starting situation)



Fig. 32: Completely disassembled plug 271 with connecting port



Fig. 33: Completely disassembled plug 271^{DL} with connecting port

Customer service

Contact VOSS for questions concerning quick connectors, nylon tubes, line routing, etc.

Property rights

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Technical modifications and errors excepted.

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