

SERVICE INSTRUCTION

DCC - Tank Unit

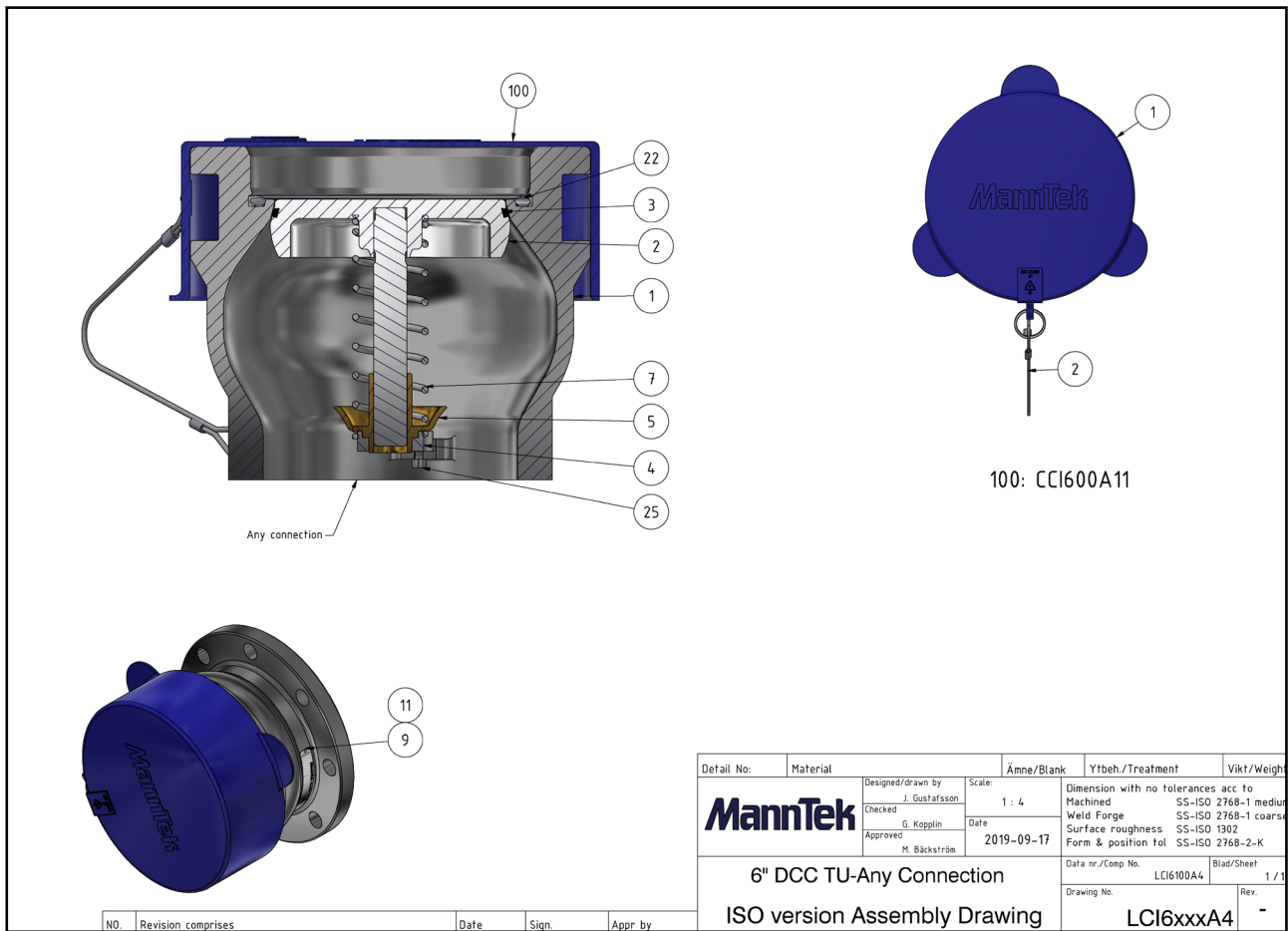
6" - ISO 21593



VERSION: 250819

MannTek

DCC – TANK UNIT – 6”



MATERIAL: Brass, Stainless Steel

TYPE OF CONNECTION: Threaded and Flanged couplings have the same service instruction.

PLEASE NOTE

Make sure that you are using no grease for cryogenic applications



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ITEMS NEEDED FOR SERVICE

PARTS NEEDED FOR SERVICE: Spare part kit and Sealing kit (for order numbers see the info box at the bottom of this page)

TOOLS NEEDED: VM171 (Seal Tool)
Tool 030
4 mm allen key

SPARE PART KIT INCLUDES: 1 pc. Bushing
1 pc. Spring

OTHERS: Loctite 2400® Thread locker.

CLEANING AGENTS: Strong clean® (Petroleum based degreasing agent)

PERFORM A SERVICE: If leaking
According to application service plan,
(see regular service p.3)
If change of media

PLEASE NOTE

Use only original MannTek spare parts for maintenance

Spare part kit (S-LCI6-4)

Sealing kit (O-LCI6A)



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MAINTENANCE AND SERVICE



Always de-pressurise the system and rinse off the parts before beginning any maintenance work. Use protective goggles.



Use tweezers and wear neoprene or PVC gloves. Do not touch adjacent parts with unprotected hands. Rinse off the parts once again before starting the “daily inspection”.

DAILY INSPECTION

1. Visually inspect the coupling for cleanliness, wear, loose parts, damage and signs of corrosion.
2. Visually inspect the front face of the coupling for wear, dirt and damage.
3. Visually inspect the coupling for leaks.

REGULAR SERVICE

Regular service interval is very much depending on local regulations and application conditions. If nothing else is specified or agreed and it is a new application with unknown parameters we recommend to make a first service after one year and then decide depending on the inspection result about further intervals.

The service procedure shall be as follows:

1. Replace the tank unit seals.
2. Replace worn or damaged components.

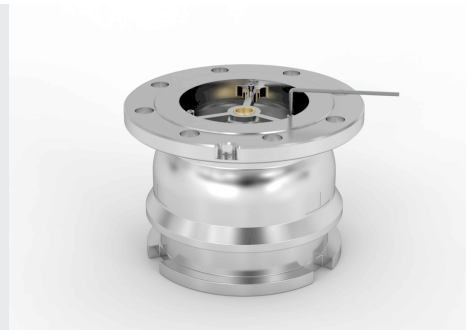
Check the state of the connection surface and verify that it is clean before proceeding with the connection. Minor scratches on the sealing surfaces can sometimes be polished out.

Couple the serviced tank unit to a usable hose unit as appropriate and check for the correct operation of the valve actuating and bayonet locking mechanism. Couple and uncouple the unit(s) several times.

DISASSEMBLE

Unscrew the three screws (pos.25, see drawing on page 2) in the piston guide.

Use a 4 mm allen key



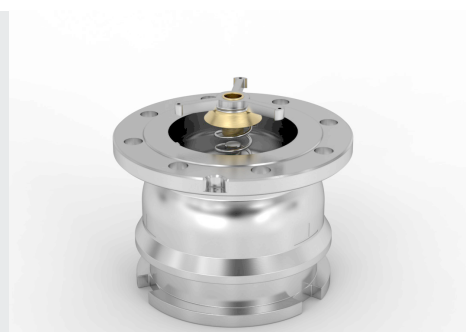
Push down the spindle steering and turn it until its free. Release it carefully.

Use Tool 030

WARNING. The spindle steering is spring loaded.
Risk of injury.



Take out the spindle steering (pos.4),
bushing (pos.6) and spring (pos.7).



Remove the piston (pos.2).



CHANGE THE SEAL

Replace the seal* (pos.3) on the piston with a new seal.

Use seal tool (VM171)

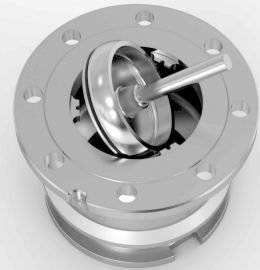
WARNING. Make sure that the seal doesn't get scratched when mounting.

*Please note the colour of the seal may vary



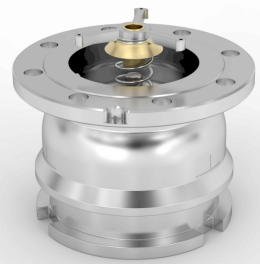
REASSEMBLE

To insert the piston (pos.2) back again it should be put in a relaxing position in the valve seat.



Put the spring (pos.7), spring cap (pos.6) and the spindle steering (pos.4) back into the body.

If necessary replace any damaged parts (S-LCI6-4).



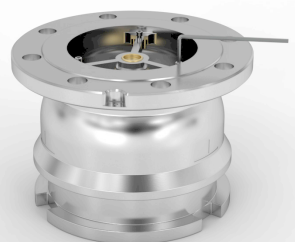
Press down the spindle steering and turn, to fix it in its position.

Use Tool 030



Make sure that the spindle steering is in its right position. Mount back the three screws to hold the spindle steering in place.

Use a 4 mm allen key

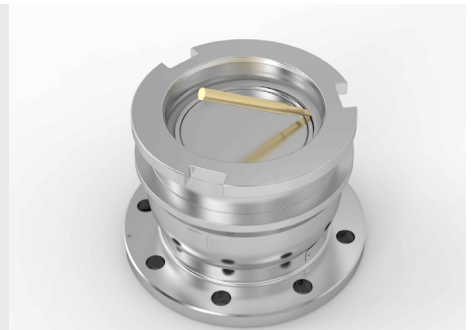


CHANGE THE SEAL

Replace the sealing ring (pos.22) with a new one.

Use seal tool (VM171)

WARNING. Make sure that the sealing surface in the bottom doesn't get scratched, not the seal either when mounting.

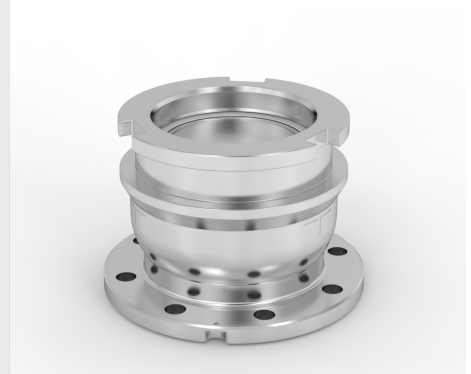


TEST THE COUPLING

Perform a visual inspection ensuring that everything is in its place. Also do a connection/disconnection with a tank unit that doesn't have any fluid inside

Finally, do a tightness test according to the test procedure described on the next page.

If the coupling functions correctly you are ready to mount the tank unit back in your application again.



TEST PROCEDURE

After each major service a pressure test and a leak test of each coupling is required.

TEST PROCEDURE	TEST PRESSURE	ACCEPTANCE CRITERIA
Tightness test (liquid nitrogen)	6 bar +/- 1 bar	No visually detectable leakage for the duration of the test

TABLE 1 – TEST PRESSURE

NOMINAL SIZE	MINIMUM COOL DOWN TIME
DN 25	10 min
DN 50	15 min
DN 65	20 min
DN 80	25 min
DN 100	30 min
DN 150	35 min
DN 200	40 min

TABLE 2 – MINIMUM COOL DOWN TIME

TEST PROCEDURE:

- Connect the tank unit to a hose unit.
- Cool down the coupling, by letting liquid nitrogen flow through it, until it is completely covered with icy powder. Make sure to adhere to the minimum cool-down time as defined in table 2, but continue cooling for longer if necessary.
- Maintain the test pressure defined in table 1.
- During the test duration, visually inspect for any detectable leakage.
- Disconnect the tank unit from the hose unit. If necessary, decrease the pressure during disconnection and increase it to the test pressure defined in table 1 afterward.
- Maintain a test pressure according to table 1 in the tested unit(s) for a minimum of 120 seconds.
- During the de-pressurisation of the units, visually inspect for any detectable leakage.

STORAGE

Store coupling in a dry, dust free, dark place, in ambient temperature.