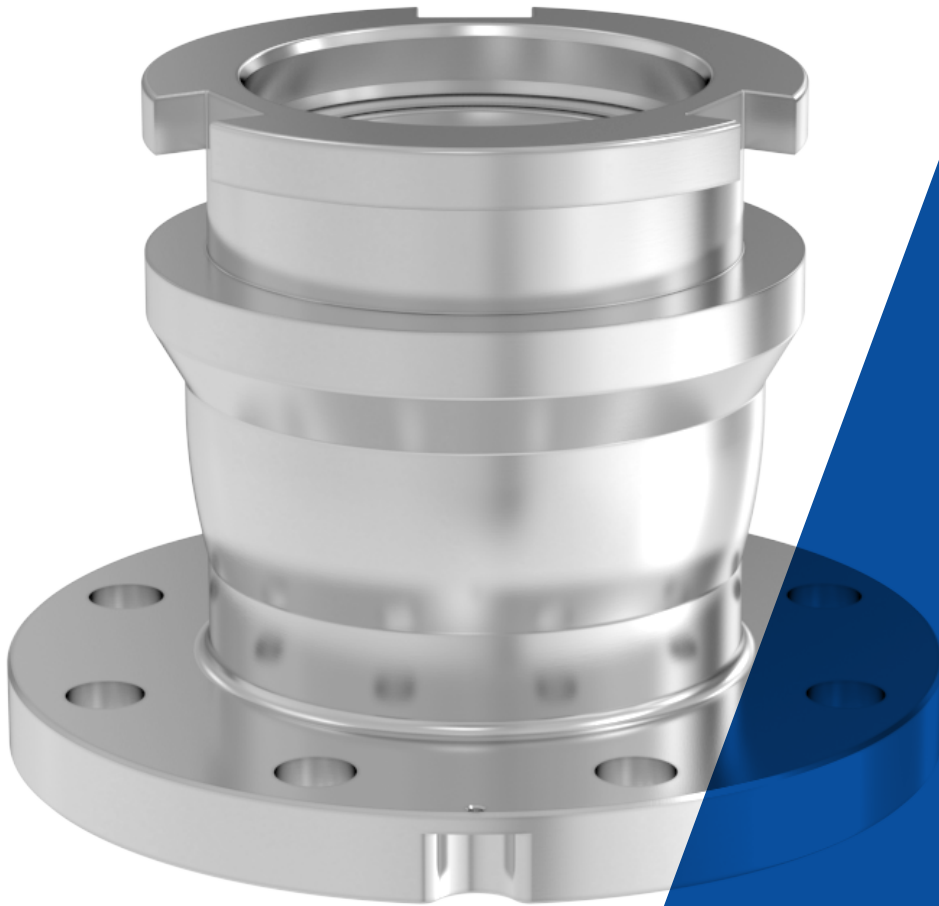


SERVICE INSTRUCTION

DCC - Tank Unit

4" - ISO 21593



VERSION: 250819

MannTek

DCC – TANK UNIT – 4”

Detail No.	Material	Ämne/Blank	Ytbeh./Treatment	Vikt/Weight
MannTek	Designed/drawn by J. Gustafsson	Scale: 1 : 2	Dimension with no tolerances acc. to Machined SS-ISO 2768-1 medium	
	Checked G. Koppin	Date 2019-09-17	Weld Forge Surface roughness SS-ISO 1302	
	Approved M. Bäckström		Form & position tol SS-ISO 2768-2-K	
4" DCC TU-Any Connection		Data nr./Comp No.	LCI563A4	Blad/Sheet 1 / 1
ISO version Assembly Drawing		Drawing No.	LCI5xxA4	Rev. -

MATERIAL: Brass, Stainless Steel

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

PERFORM A SERVICE: If leaking
According to application service plan,
(see regular service p.4)
If change of media

PLEASE NOTE

Make sure that you are using no grease for cryogenic applications



© Copyright Mann Teknik AB. Mann Teknik AB reserves the right to make changes at any time in prices, materials, specifications and models and to discontinue models without notice or obligations.

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: Tool 001 (O-Ring Tools)
Tool 020
Screwdriver

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

OTHERS: Loctite 2700® 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-LCI5-4)

Sealing kit (O-LCI5A)



© Copyright Mann Teknik AB. Mann Teknik AB reserves the right to make changes at any time in prices, materials, specifications and models and to discontinue models without notice or obligations.

MAINTENANCE AND SERVICE



Always depressurize 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 O-ring and seal.
2. Replace worn or damaged components.

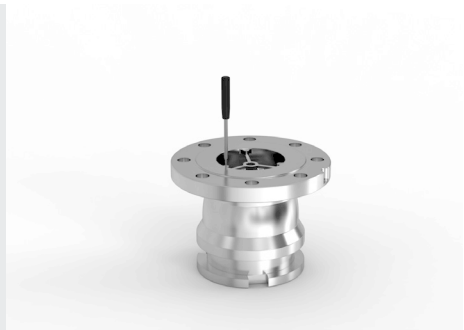
Check the state of the connection surface and verify that it is clean before proceeding with the connection. Minor scratches on the sealing surfaces can sometimes be polished out.

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 screwdriver



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

Use Tool 020

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



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

Replace damaged parts.



Remove the piston (pos.2).



CHANGE THE SEAL

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

Use O-ring hooks (Tool 020)

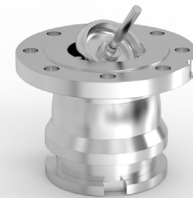
WARNING. Make sure that the seal doesn't get scratched when mounting.

*Please note the colour of the seal may vary

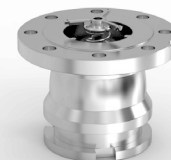


REASSEMBLE

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.



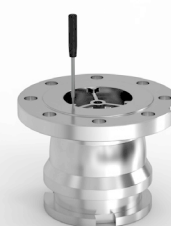
Press down the spindle steering and turn, to fix it in its position.

Use Tool 020



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 screwdriver

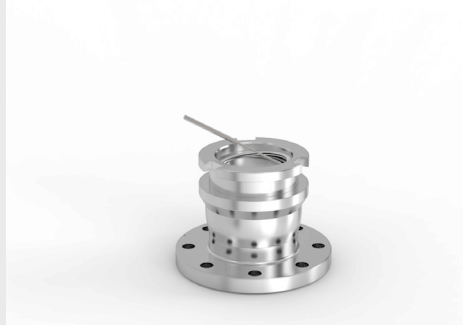


CHANGE THE SEAL

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

Use O-ring hooks (Tool 020)

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

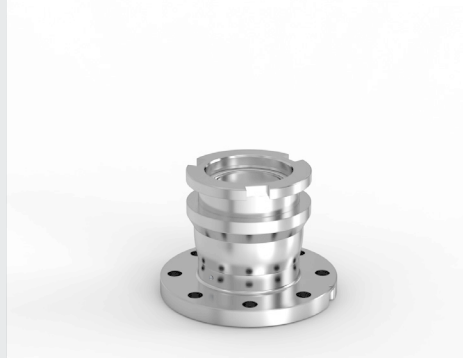


TEST THE COUPLING

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.

The following test parameters are in accordance with EN12266 and ISO21593:

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	COOLING DOWN TIME	KEEPING TIME
DN 25	30 s	5 min
DN 50	45 s	10 min
DN 65	60 s	15 min
DN 80	60 s	20 min
DN 100	90 s	25 min
DN 150	120 s	30 min
DN 200	300 s	30 min

TABLE 2 – MINIMUM TEST DURATION

TEST PROCEDURE:

- Connect the tank unit to a hose unit
- Cool down the couplings by opening the tank with liquid nitrogen for the cooling down time specified in tabel 2.
- Maintain the test pressure for the keeping time specified in table 2.
- Determine the leakage rate.
- Disconnect the hose unit and the tank unit.
- Maintain a test pressure according to table 1 in the tested unit(s) for the keeping time in table 2.
- Determine the leakage rate while depressurizing the units.

STORAGE

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