

MOUNTING INSTRUCTION



ONE-LEGGED LIQUID FEEDING TANK

WATER TANKS (1000 / 1900 L)



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MOUNTING INSTRUCTION FOR ONE-LEGGED LIQUID FEEDING TANK

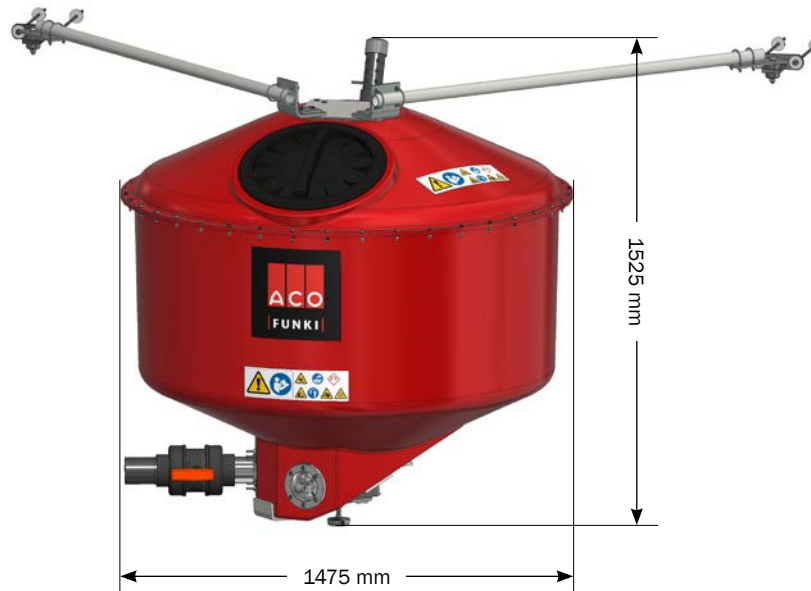
This mounting instruction contains information about how to assemble and install the water tanks used for liquid feeding. Accessories for the tanks (e.g. acid evaporator, bacteria preventing UV-light and rotating high pressure cleaner) are described in separate instructions.

Mounting instructions for residual tanks and mixing tanks are also found separately.

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One-legged liquid feeding tanks

The water tanks for liquid feeding come in two sizes with a capacity of 1000 L or 1900 L.



Water tank - 1000 L



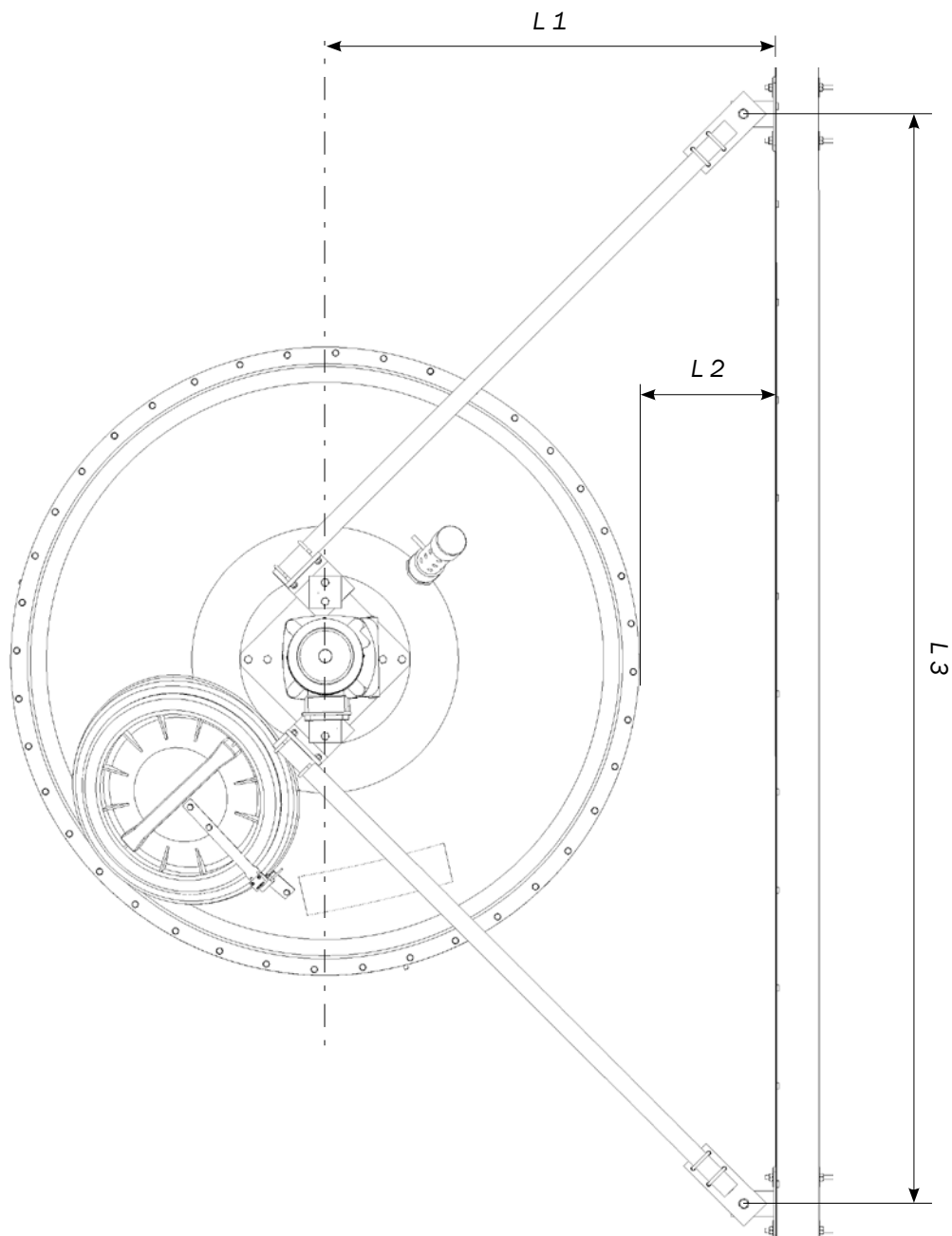
Water tank - 1900 L

OVERVIEW OF THE WATER TANK



1. Support fittings (see overview p. 8)
2. Hatch
3. Inspection cap
4. Foot (with load cell)
5. Outlet connection and ball valve
6. Fiberglass container, bottom part
7. Fiberglass container, upper part
8. Level tilting device
9. Ventilation

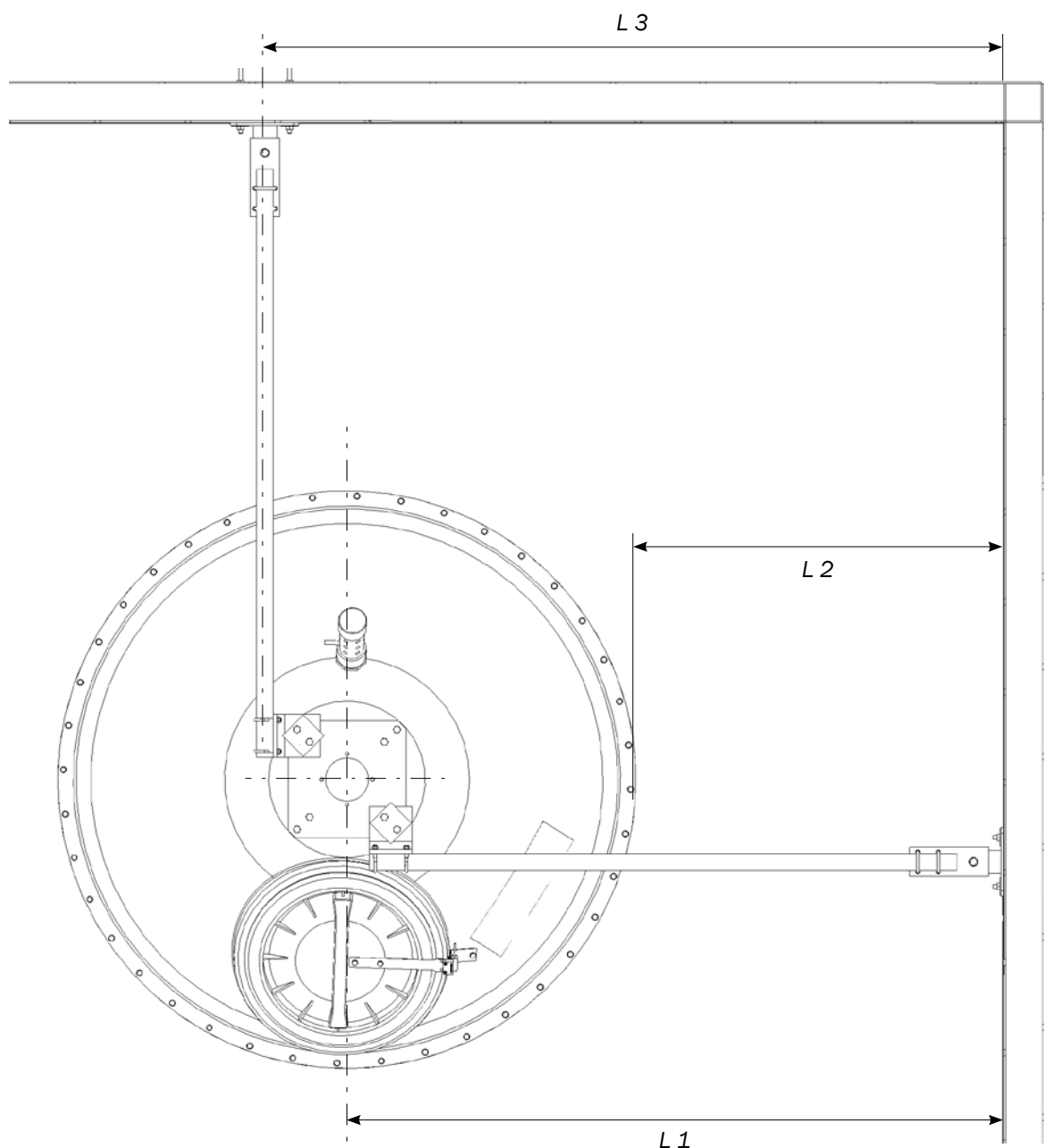
WALL MOUNTING



Mounting the tank against a single wall *(The diagonal of the top flange is parallel to the wall)*

- L1: Distance from wall to center of the tank
- L2: Distance from wall to edge of tank
- L3: Distance between wall fittings (center to center)

L-VALUES FOR WALL MOUNTING							
L1 (mm)	800	900	1000	1100	1200	1300	1400
L2 (mm)	60	160	260	360	460	560	660
L3 (mm)	1600	1600	1600	1600	1600	1600	1600



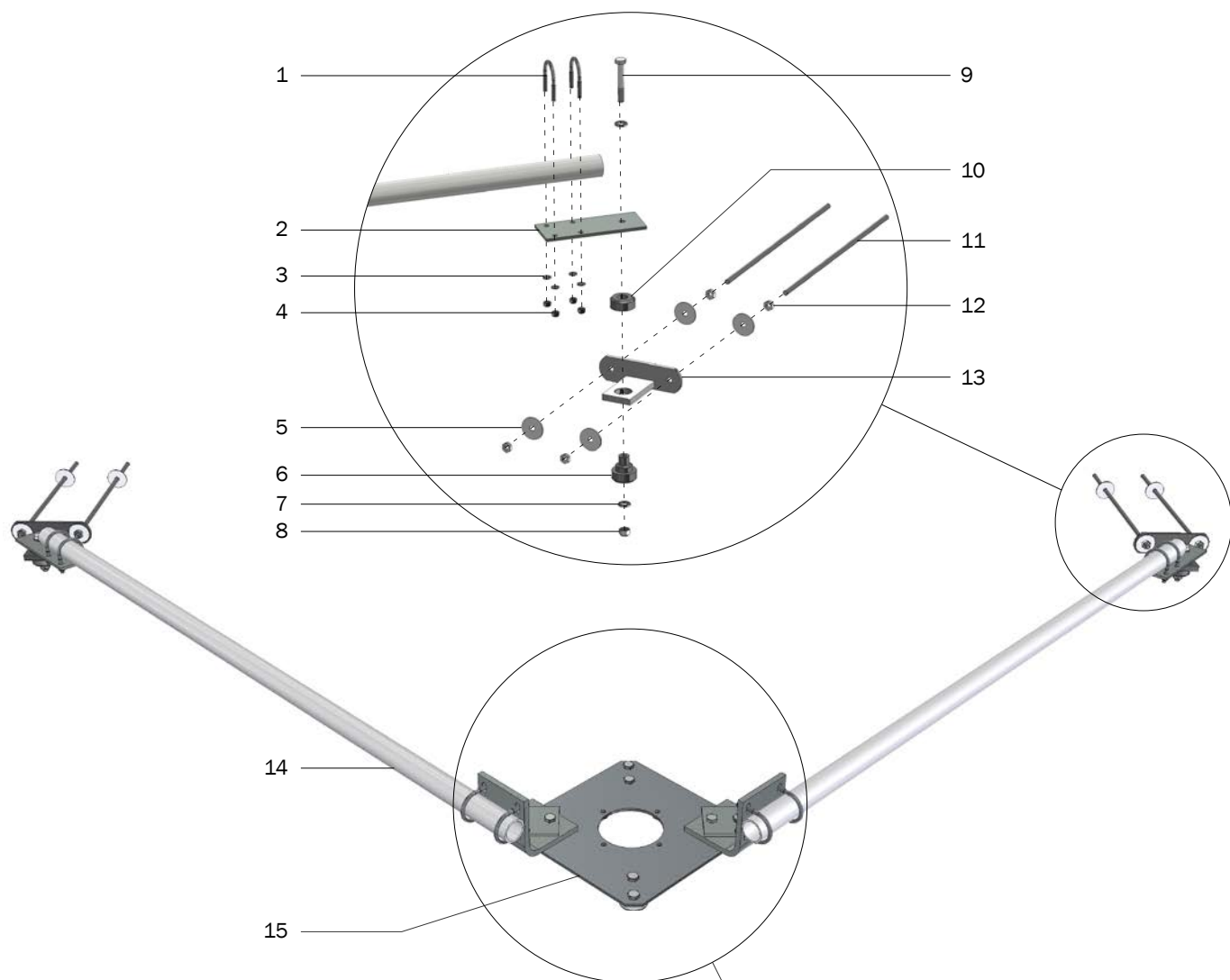
Mounting the tank in a corner (The sides of the top flange is parallel to the walls)

- L1: Distance from wall to center of the tank
 L2: Distance from wall to edge of tank
 L3: Distance from corner to center of wall fitting

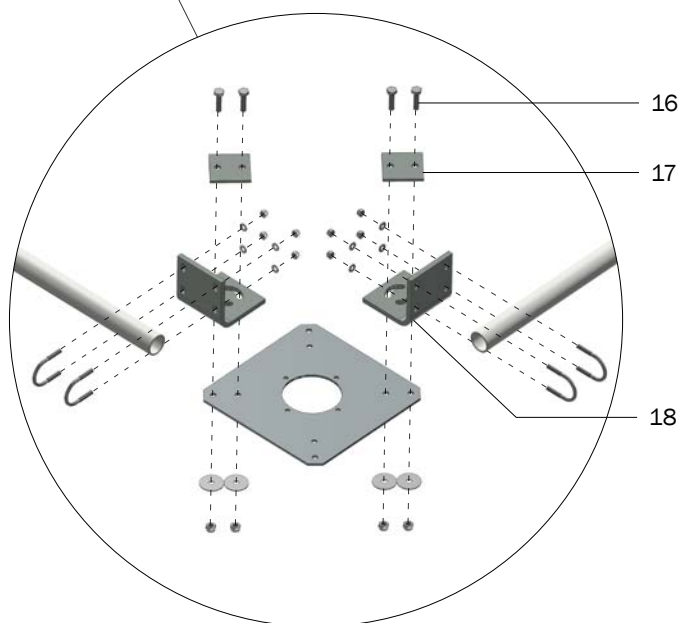
L-VALUES FOR CORNER MOUNTING

	800	900	1000	1100	1200	1300	1400
L1 (mm)	800	900	1000	1100	1200	1300	1400
L2 (mm)	60	160	260	360	460	560	660
L3 (mm)	900	1070	1170	1270	1370	1470	1570

OVERVIEW OF THE SUPPORT SET



1. U-bolt 1 1/4' x M8
2. Swivel bracket 5/4' rør
3. Washer $\varnothing 8 \times 8,4/16/1,6$ A2 DIN 125 A
4. Lock nut M8 FZB DIN 985
5. Washer $\varnothing 10 \times 40 \times 2,5$ FZB
6. Barrymount no 22002-15
7. Washer $\varnothing 12 \times 13/24/2,5$ A2 DIN 125 A
8. Lock nut M12 FZB DIN 985
9. Machine bolt M12 x 80 FZB kval. 109 DIN 931
10. Barrymount no 22002-15
11. Coach bolt FZB M10 x 420
12. Nut M10 FZB DIN 934
13. Wall bracket VF5
14. Pipe for support fitting VF5 1,5m
15. Tank flange $\varnothing 160$ mm med møtrik



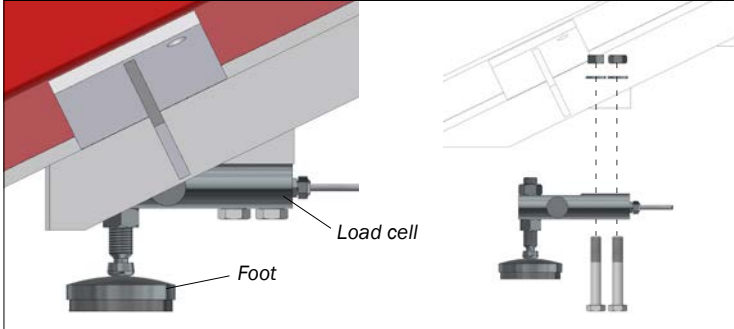
MARKING THE PLACEMENT OF THE TANK FOOT ON THE FLOOR

Measure out the placement of the center of the tank on the floor, and mark the place with an X. Drill a center bolt (coach bolt 8 x 70 mm) into the middle of the X on the floor.

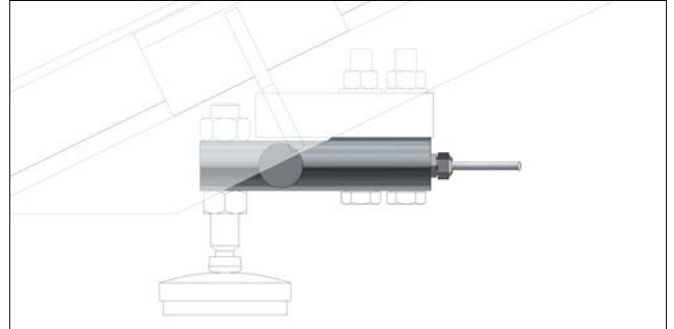
Later, when the tank is assembled and erected, the load cell is to be placed directly on top of the center bolt in the floor.

MOUNTING OF LOAD CELL

The load cell is mounted under the foot of the bottom part of the tank. Data from the load cell is registered by a load cell amplifier mounted on the wall near the tank. (Load cell amplifier is ordered separately.)



Mounting of load cell



Be sure to place the load cell correctly. The completely flat side must face down

LOAD CELL KIT

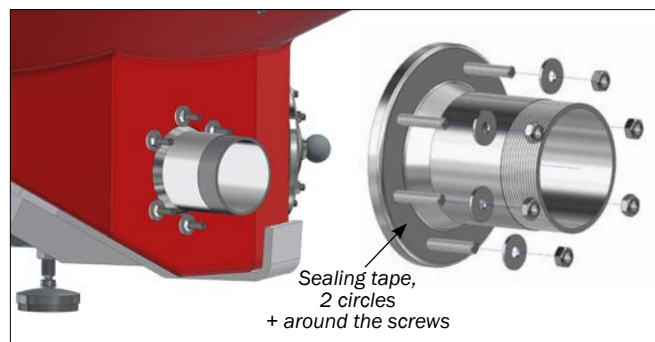
	Item no.	Description	PCS.
	0139-505	LOAD CELL KIT VF4	
1	0139-443	LOAD CELL 5510F 2000 KG	1
2	0139-444	MACHINE SHOE TYPE HJ-7C DSI	1
3	32900015	MACHINE SCREW M12X80 FZB QUAL. 10.9 DIN 931	2
4	33900028	NUT M12 A4-80 DIN 934	2
5	35600080	FLAT WASHER Ø12X13/24/2,5 A2 DIN 125 A	2

MOUNTING OF OUTLET CONNECTION

The outlet connection is placed in the bottom of the tank (see the overview illustration).

Apply two whole circles of sealants around the neck of the outlet connection and around the welded screws.

The outlet connection (with applied sealants) is mounted from the inside of the tank in one of the two pre-made holes (see ill.)



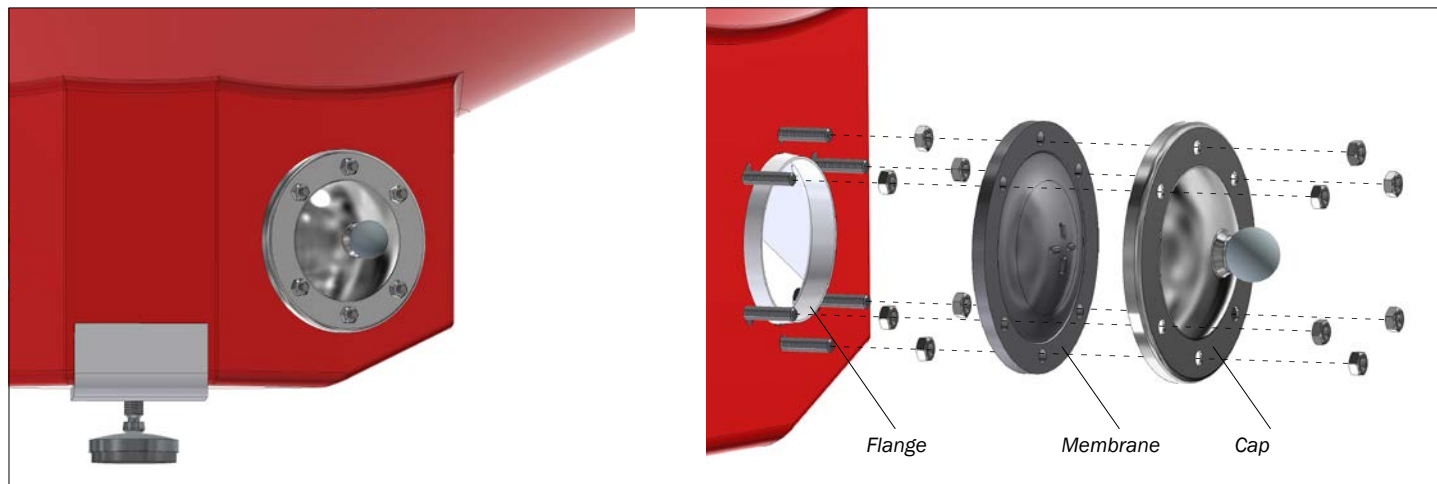
Mounting of outlet

MOUNTING OF INSPECTION CAP

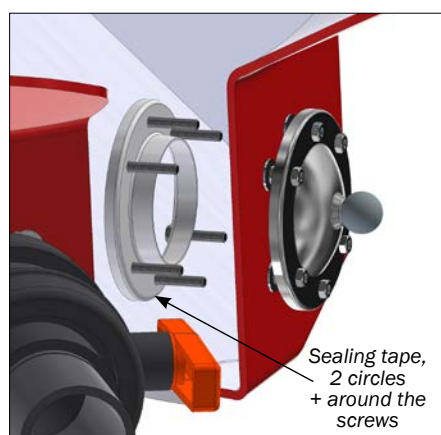
The inspection cap is placed in the bottom of the tank opposite the outlet connection (see overview illustration).

Apply two whole circles of sealants around the neck of the inspection cap and around the welded screws.

The flange (with applied sealants) is mounted from the inside of the tank in the other of the two pre-made holes (see ill.).



Inspection cap



Inspection cap, sealing tape on the inside

MOUNTING OF THE HATCH

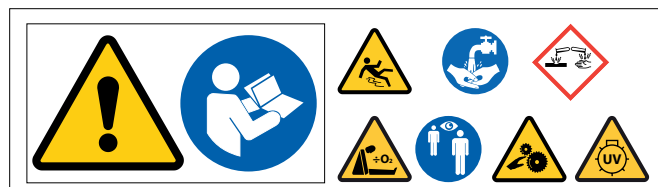
The hatch is pre-assembled and mounted on the tank.



Hatch

PLACING THE WARNING SIGNS

Warning signs are applied to the tank in two places, as shown. Use the clear cover labels (45x45 mm) to cover the icons not relevant to the specific tank; e.g. *acid, UV light and moving parts*. For example: If a UV light cleaner is not installed in the tank, the icon for *UV light* is covered.



Warning sign label

	READ THE MOUNTING INSTRUCTION! Read this manual thoroughly before mounting, use and service.
	CORROSIVE SUBSTANCES! The tank can contain acidic substances that can cause corrosive damage to skin and material.
	SLIPPERY! Risk of wet and slippery areas in and around the tank.
	MOVING PARTS! Risk of crushing due to moving machinery in the tank.
	LACK OF OXYGEN! There is no oxygen in the tank. Before entering the tank, be sure to vent the tank thoroughly.
	UV-LIGHT! The tank can contain UV light that can cause eye damage.
	SUPERVISION REQUIRED! A supervising person is required outside of the tank, when someone is working in the tank.
	WASH YOUR HANDS! Clean yourself and used tools thoroughly after working around the tank. Disposable tools (e.g. gloves) are discarded.

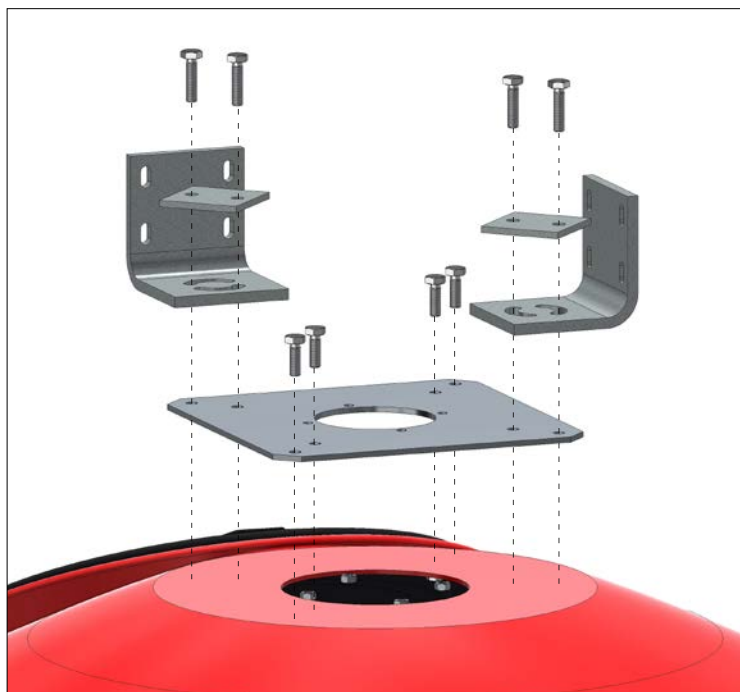


Where to place the warning signs

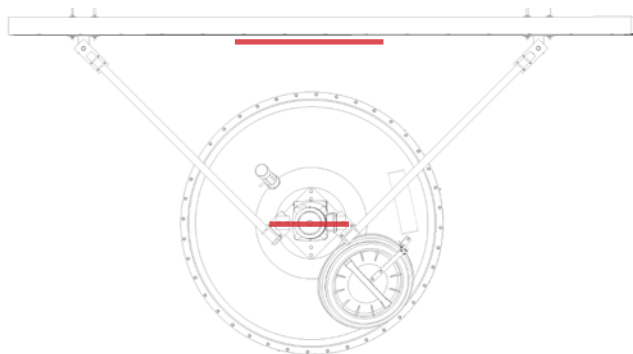
MOUNTING OF TOP FLANGE (FOR GEAR MOTOR) AND SWIVEL BRACKETS

The top flange is mounted centrally over the hole in the top of the tank. Use the flange as a template for drilling 8 holes. Use sealing tape on the inside around the screws, and fasten the flange using washers and nuts.

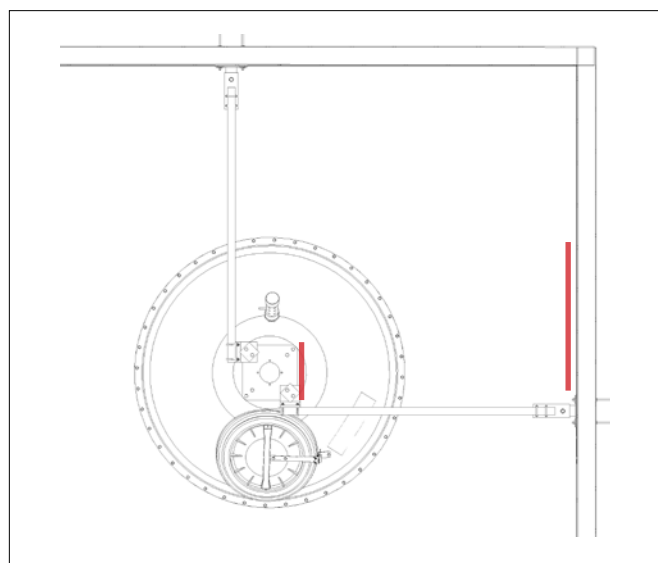
Seal the joint along the edges of the hole and the flange.
(It is advised to apply the sealants last, due to the discomfort of the smell.)



Mounting of the top flange and swivel brackets



Wall mounting: The diagonal of the top flange is parallel to the wall



Corner mounting: The edge of the top flange is parallel to the wall

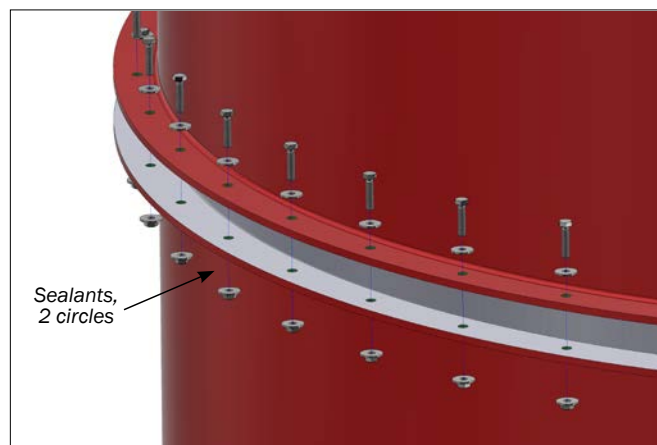
ASSEMBLING THE FIBERGLASS PARTS

Apply two whole circles of sealants around the flange. Assemble the parts flange to flange.

IMPORTANT! Position the upper part so that the hatch is placed so that it is easy to access it.

Also, be sure to place the outlet valve, inspection cap, hatch and top flange with swivel brackets correctly in relation to each other.

The tank parts are fastened as shown.



Assembling the fiberglass parts

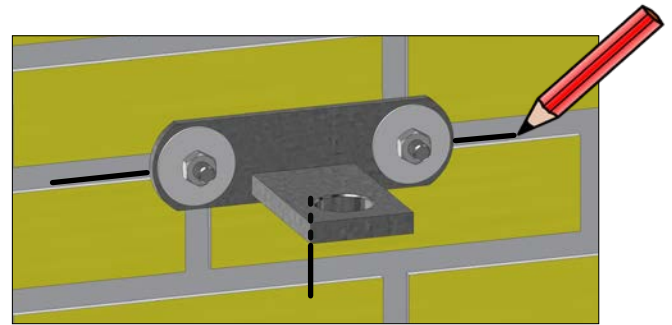
MOUNTING THE WALL BRACKETS

The tank is secured to the wall(-s) with two wall brackets.
Distance from floor to the holes for the brackets:

- Tank size 1000 L - 1370 mm
- Tank size 1900 L - 1935 mm

See illustrations showing the placement of the wall brackets when mounting against wall or corner on page 6-7.

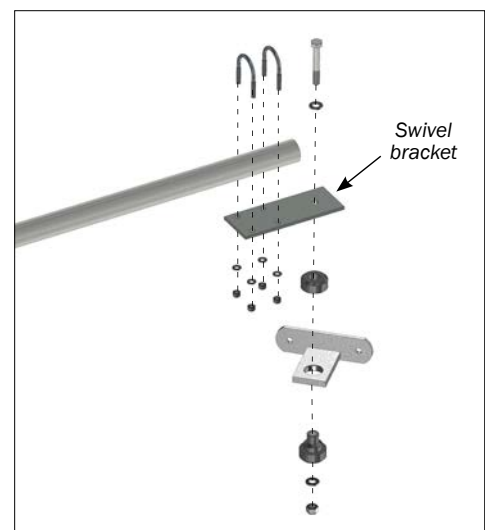
Mark the placement of the wall brackets on the wall, and mount the brackets with wall bolts.
Both wall brackets are placed so that the plate with the large hole is closest to the floor.



Marking the location of the wall brackets

MOUNTING SWIVEL BRACKETS ON PIPES

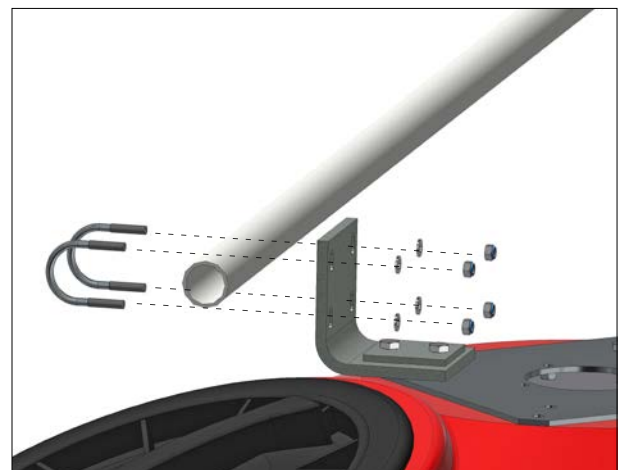
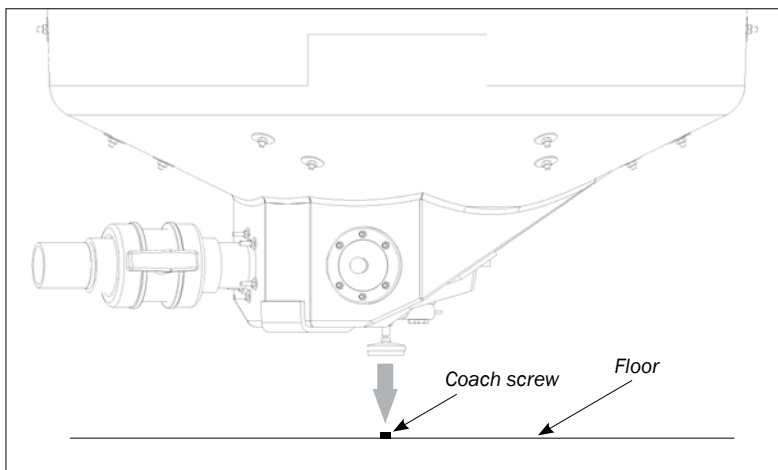
The wall swivel bracket is mounted on one end of the pipe. Place two U-bolts over the pipe and through the swivel bracket. Fasten the U-bolts with washers and lock nuts.



POSITIONING OF THE TANK

Place the tank so that the foot is on top of the coach screw in the floor. Set up the tank and mount the two pipes (with wall swivel brackets) on the two swivel brackets on top of the tank. Place two U-bolts over the pipe and through the swivel bracket. Fasten the U-bolts with washers and lock nuts. Later, the tank has to be levelled, so do not tighten the nuts too much at this point.

While the pipes are being mounted on the swivel brackets on top of the tank, the swivel brackets on the wall end of the pipe can be temporarily fastened in the wall brackets using an M12 set screw.



LEVELING THE TANK

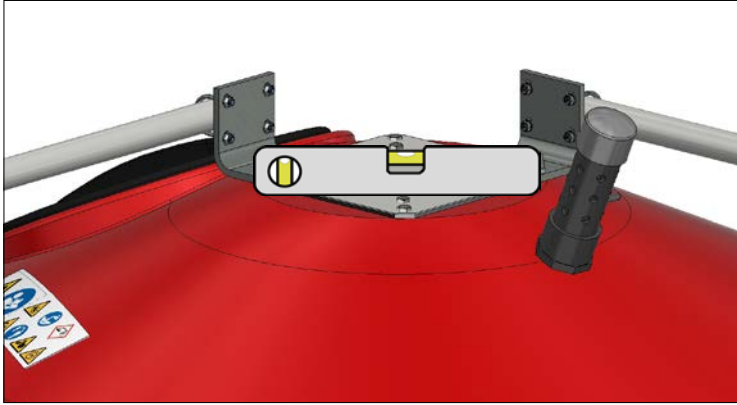
Level the tank so that the tank flange is horizontal.

The inclination can be adjusted by loosening the U-bolts in one of the swivel brackets on the top of the tank and displacing the bracket on the pipe so that the flange is horizontal. Adjustments may be made on both fittings.

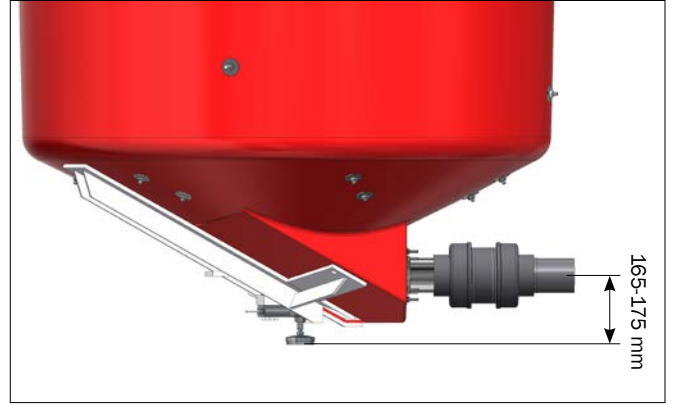
When the alignment is complete, tighten the locking nuts securely.

The pipes are shortened to appropriate length and the ends are deburred.

In addition, check the height of the outlet valve above the floor. The height is adjusted using the machine foot under the load cell (see illustration)



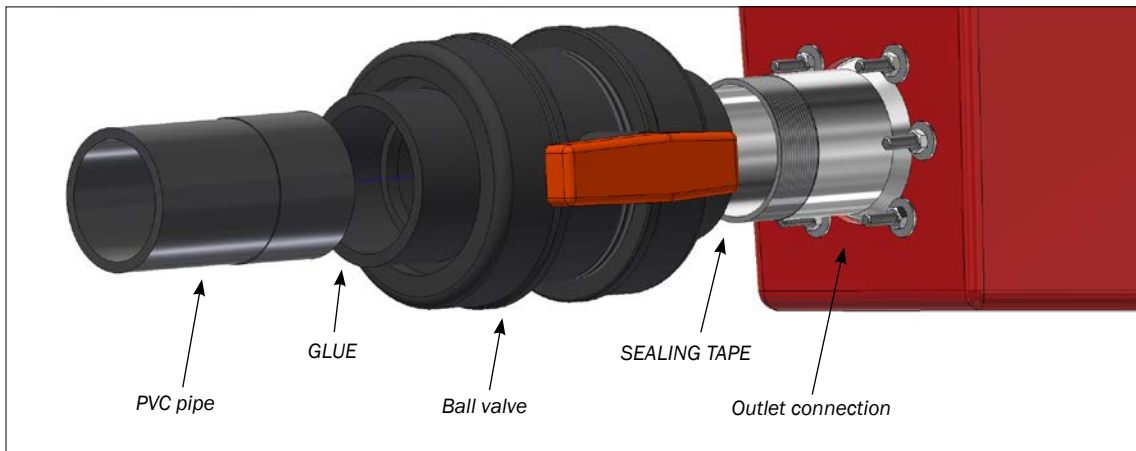
Ensure that the top flange is level



Adjust the distance from floor to center of outlet

PIPE FOR CONNECTING THE PUMP

A ball valve, a PVC pipe and a piece of flexible hose are mounted on the outlet connection. The feed pump is then connected to the flexible hose. The piping from the outlet to the pump should be as short as possible.



Pipe for connecting the pump

PIPE FOR INTAKE OF LIQUID COMPONENTS

The intake for liquid components (except water and acid) is placed in the top of the tank (see ill.). Remember to carefully seal the passage around the hole with sealing tape. The piping for liquid components should be joined together into one pipe immediately before the tank.

Intake of water through the bottom of the tank:

Water can be let in via the pipe for the feed pump in the bottom of the tank (see ill.).

Intake of acid through the top of the tank:

Inlet of acid is to be placed separately in the top, opposite the hatch, and as near the wall of the tank as possible (see ill.).

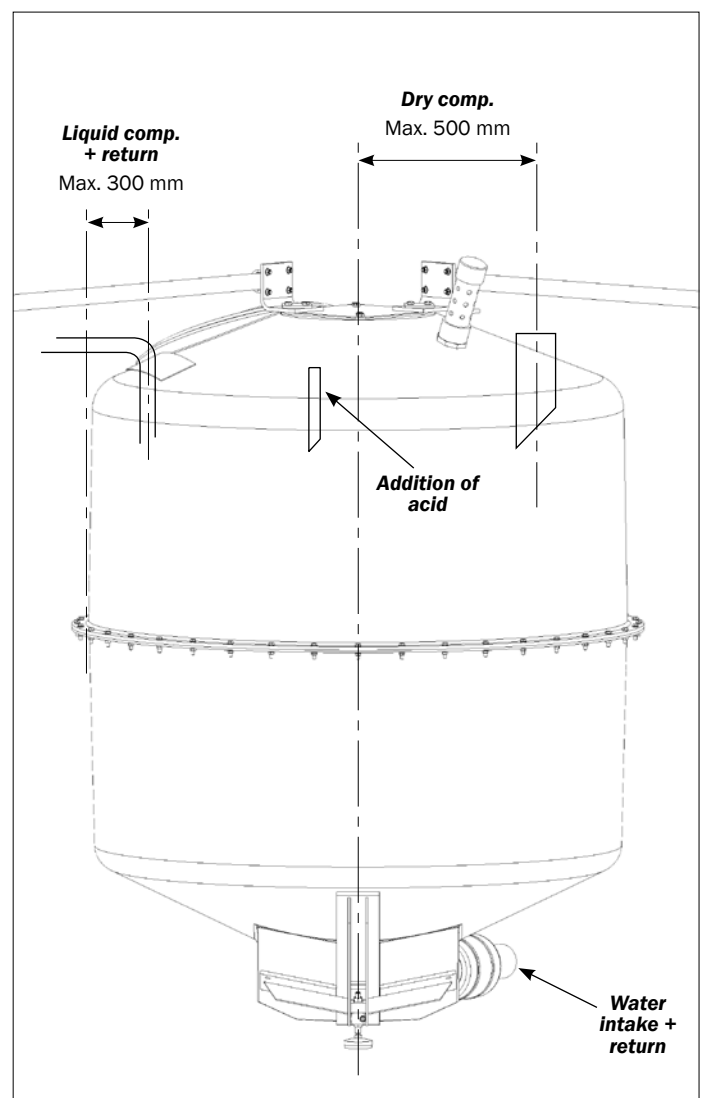
PIPE FOR INTAKE OF DRY COMPONENTS

The intake for dry components is placed in the top of the tank (see ill.). Use the intake pipe as a drill template.

Carefully seal the contact face with sealing tape. Place the pipe in the hole and mount it with screws (from the outside) and washers and nuts (on the inside).

Mount a rubber sleeve on the upper part of the intake pipe using a clamp ring.

All pipes for intake are ordered separately.



Intake of liquid and dry components

RETURN PIPES

The return pipes should be brought together into one pipe, immediately before the tank.

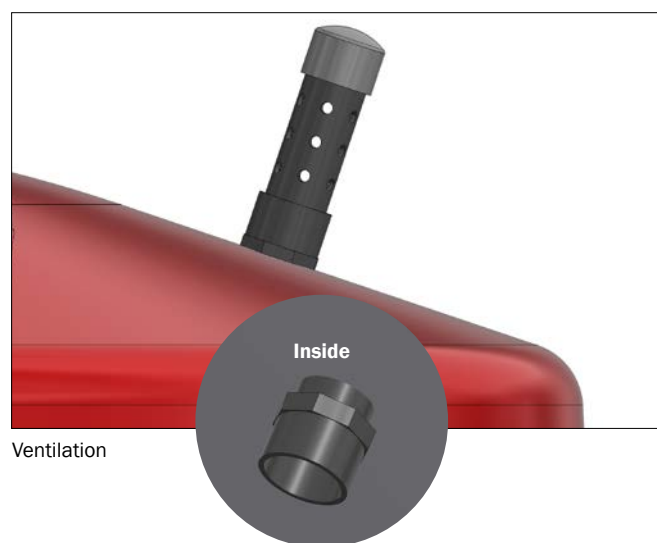
There are several options for placing return inlets:

- At the top of the tank, approx. 300 mm from the side of the tank (in the same way as the inlet pipe for liquid components).
- In the side of the tank (be aware of steps, counter agitators and other elements mounted in the tank).
- At the bottom of the tank (through the pipe for the feed pump)

Be aware that the feed jet from the return pipe is not directed straight into the bottom of the tank, as this allows air to be drawn into the feed pipe.

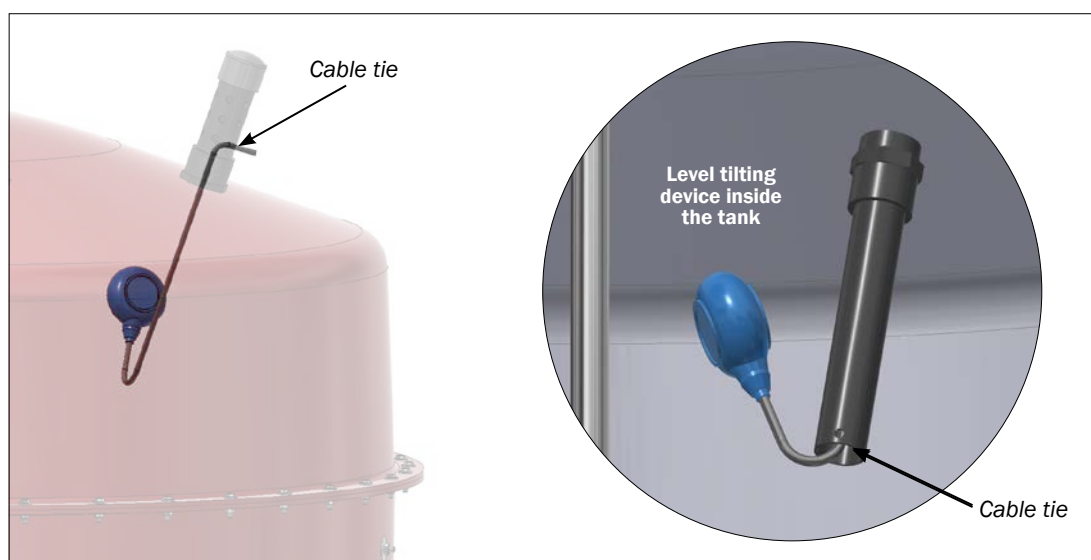
PIPE FOR VENTILATION OF THE TANK

The ventilation pipe is placed in the top of the tank. Remember to seal the passage with a flexible sealant around the hole.



MOUNTING OF LEVEL TILTING DEVICE

The level tilting device is mounted in the ventilation pipe. Fixate the device with cable ties (as shown) to keep it away from the stirrer.

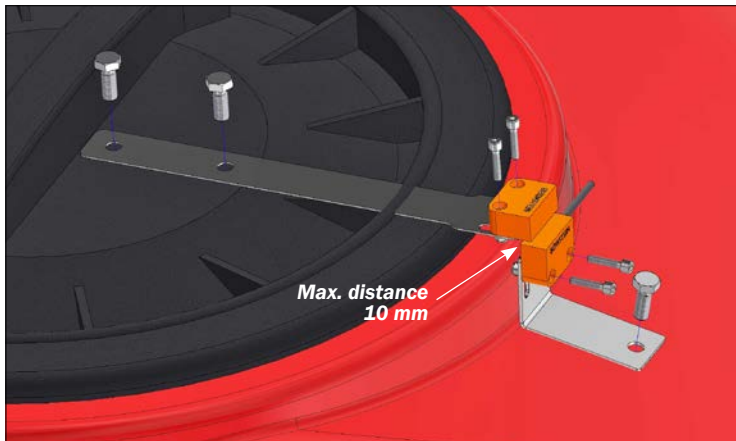


SAFETY SWITCH

A sensor (safety switch) is mounted onto the hatch, securing that the motor disconnects when the hatch is opened.

The brackets for the switch are mounted on the hatch and tank with the supplied set screws and locking nuts. Seal around the screws with sealing tape.

Mount the sensor on the brackets using hexagon socket screws. The part of the sensor with the cable is mounted on the bracket on the tank.



Safety switch on hatch



If the hatch is placed with the handle turned horizontally, the safety switch bracket is mounted on the handle of the hatch.



If the hatch is placed with the handle turned vertically, the safety switch bracket is mounted perpendicular to the handle of the hatch.

INTERNAL WASHING OF THE TANK, MANUALLY

If you wish to wash the tank thoroughly on the inside, you can use a high pressure cleaner.

Please note the following safety precautions:

- Before opening the tank, the tank must be ventilated thoroughly. This is best done by removing the inspection cap in the bottom of the tank and rinse the tank thoroughly with water
- All work in the tank must always be supervised by a person outside of the tank

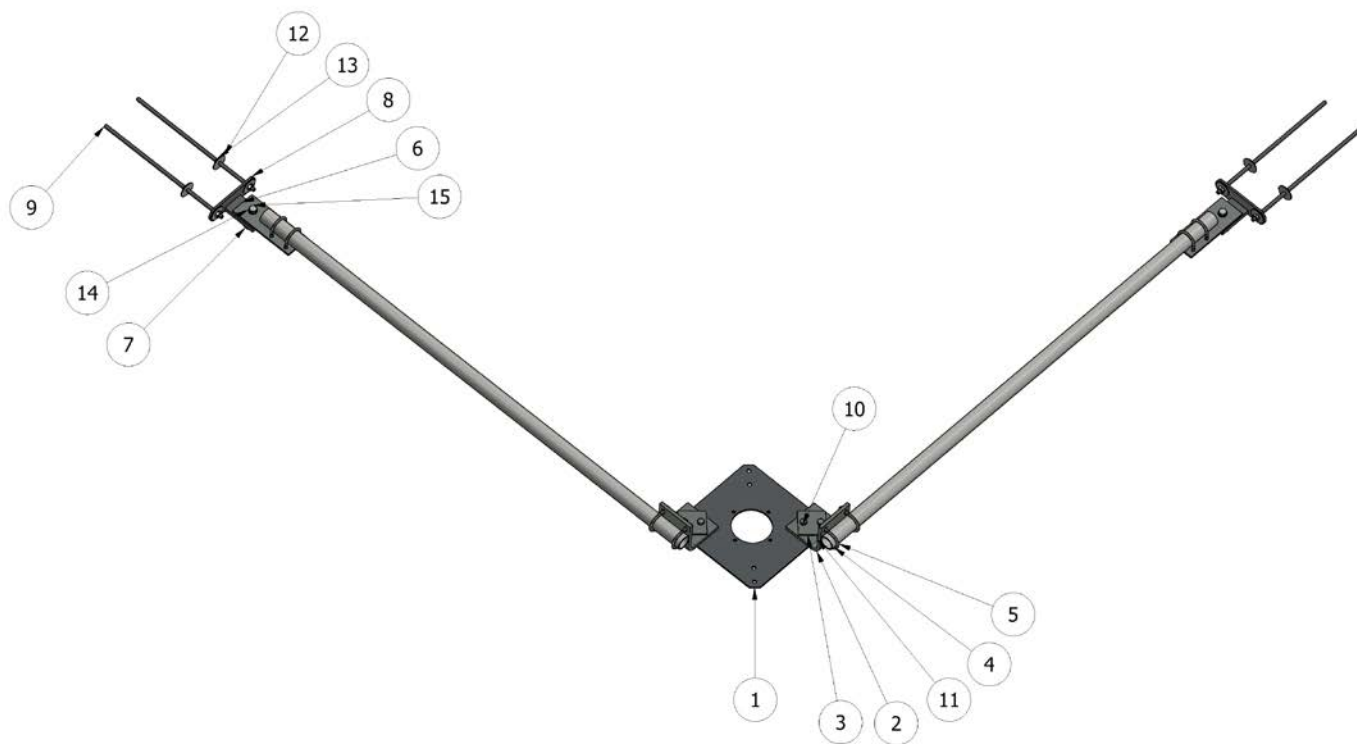
DISASSEMBLY - SAFETY PRECAUTIONS

When disassembling parts of the tank, please note the following safety precautions:

- Disconnect the power for the gear motor when dismantling parts and when working in the tank. All work in the tank must always be supervised by a person outside of the tank
- Before opening the tank, the tank must be ventilated thoroughly. This is best done by removing the inspection cap in the bottom of the tank and rinse the tank thoroughly with water
- When the safety precautions have been followed, one or more parts can be demounted. See this instruction for information on how the tank parts have been assembled

SPARE PARTS - SUPPORT SET FOR ONE-LEGGED WATER TANK 1000+1900 L

SPARE PARTS - ONE-LEGGED TANK, SUPPORT SET			
	Item no.	Description	Pcs.
1	0139-522	TANK FLANGE Ø160 WITH NUT	1
2	0139-946	TURN FITTINGS F/TANK FLANGE	2
3	0139-725	SMALL FITTING FOR TANK VF4	2
4	0139-623	PIPE FOR SUPPORT FITTINGS VF5	2
5	90100047	U-BOW 1 1/4' X M8	8
6	0139-625	TURNING FITTING 5/4' TUBE	2
7	23900294	BARRYMOUNT NO 22002-15	2
8	0139-624	WALL FITTING VF5	2
9	0511-110	WALL BOLT GALVANIZED M10X420	4
10	30310040	SET SCREW M10X40 A2 DIN 933	4
11	33908013	LOCK NUT M8 FZB DIN 985	16
12	0521-102	WASHER Ø10X40X2,5 FZB	8
13	33210017	NUT M10 FZB DIN 934	8
14	35600080	FLAT WASHER Ø12X13/24/2,5 A2 DIN 125 A	4
15	32900015	MACHINE SCREW M12X80 FZB QUAL. 10.9 DIN 931	2



SPARE PARTS - ONE-LEGGED TANK 1000 L			
	Item no.	Description	Pcs.
	0139-010		
1	0139-611	BOTTOM PART FOR TANK VF5	1
2	0139-738	UPPER PART F. TANK VF5 1000 KG	1
3	0300-216	VENTILATION FOR MIXING TANKS	1
4	0300-262	PIPE FOR LEVEL SENSOR	1
5	71200012	LEVEL TILTING DEVICE/FILLING	1
6	0139-522	TANK FLANGE Ø160 WITH NUT	1
7	30310030	SET SCREW M10X30 A2 DIN 933	4
8	30308035	SET SCREW M8X35 A2 DIN 933	40
9	35600037	FLAT WASHER Ø8X8,4/16/1,6 A2 DIN 125 A	96
10	33508013	NUT M8 A2 DIN 934	58
11	35600058	NUT WASHER Ø8X8,4/24/2 A2 DIN9021	12
12	0140-140	OUTLET PIPE FOR TANK VF7	1
13	0139-495	INSPECTION FLANGE VF4	1

	Item no.	Description	Pcs.
14	0139-496	INSPECTION COVER VF4	1
15	0138-451	MEMBRANE DN40	1
16	0140-064	PVC BALL VALVE 3"/Ø90	1
17	0140-063	PVC PIPE Ø90 FOR 3" VALVE	1
18	0140-040	ACO FUNKI LOGO LABEL 30X30 CM FOR TANK	1
19	0140-035	SAFETY LABEL 35X10 CM FOR TANK	1
20	74520	FLEXIBLE WATER SEALER 300 ML	1
21	29100001	THREAD TAPE 1 ROLL = 10 M	1
22	0140-036	COVER LABEL 45X45 MM FOR 0140-035	6
23	29900003	JOINT BAND 6 MM, SOLD IN ROLLS OF 8 M	1
24	76200023	CABLE TIE 290X4,5 MM BLACK	2
25	0139-505	LOAD CELL KIT VF4	1
26	0139-492	TANK FLANGE B5 F/FIBRE GLASS WATER TANK	1



SPARE PARTS - ONE-LEGGED WATER TANK 1900 L

SPARE PARTS - ONE-LEGGED TANK 1900 L			
	Item no.	Description	Pcs.
	0139-011		
1	0139-611	BOTTOM PART FOR TANK VF5	1
2	0139-612	UPPER PART F. TANK VF5 1900 KG	1
3	0300-216	VENTILATION FOR MIXING TANKS	1
4	0300-262	PIPE FOR LEVEL SENSOR	1
5	71200012	LEVEL TILTING DEVICE/FILLING	1
6	0139-522	TANK FLANGE Ø160 WITH NUT	1
7	30310030	SET SCREW M10X30 A2 DIN 933	4
8	30308035	SET SCREW M8X35 A2 DIN 933	40
9	35600037	FLAT WASHER Ø8X8,4/16/1,6 A2 DIN 125 A	96
10	33508013	NUT M8 A2 DIN 934	58
11	35600058	NUT WASHER Ø8X8,4/24/2 A2 DIN9021	12
12	0140-140	OUTLET PIPE FOR TANK VF7	1
13	0139-495	INSPECTION FLANGE VF4	1

	Item no.	Description	Pcs.
14	0138-451	MEMBRANE DN40	1
15	0139-496	INSPECTION COVER VF4	1
16	0140-064	PVC BALL VALVE 3"/Ø90	1
17	0140-063	PVC PIPE Ø90 FOR 3" VALVE	1
18	0140-035	SAFETY LABEL 35X10 CM FOR TANK	1
19	0140-040	ACO FUNKI LOGO LABEL 30X30 CM FOR TANK	1
20	74520	FLEXIBLE WATER SEALER 300ML	1
21	29100001	THREAD TAPE 1 ROLL = 10 M	1
22	0140-036	COVER LABEL 45X45 MM FOR 0140-035	6
23	29900003	JOINT BAND 6MM, SOLD IN ROLLS OF 8 M	1
24	76200023	CABLE TIE 290X4,5 MM BLACK	2
25	0139-492	TANK FLANGE B5 F/FIBERGLASS WATER TANK	1
26	0139-505	LOAD CELL KIT VF4	1

