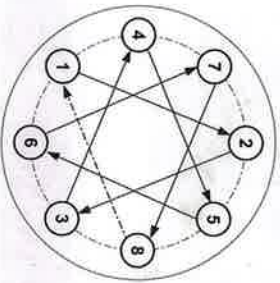
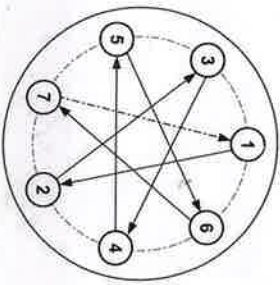


2 Rotor Fastening and Alignment

Outotec

Rotor fastening

Star pattern examples for crosswise bolt tightening



Odd number of bolts

Even number of bolts

Tightening torques

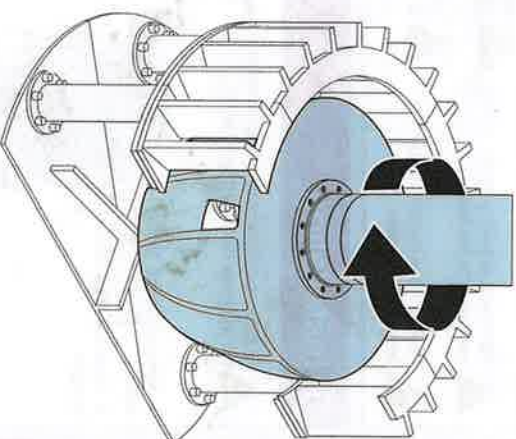
FloatForce type	No. of bolts	Bolt size	Torque [Nm]
500	6	M16	170
650	8	M16	170
750	10	M16	170
925	12	M16	170
900	12	M16	170
1050	12	M16	170
1300	12	M20	325
1500	12	M20	325
1750	12	M20	325
2200	24	M24	555

1. Measure the shaft run-out

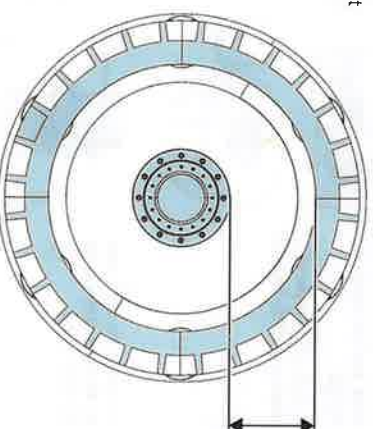
⚠ Allowed run-out is 2 mm.

⚠ If run-out is more than allowed, contact Outotec Service.

1. Turn the lower shaft 360 degrees by turning manually from rotor.



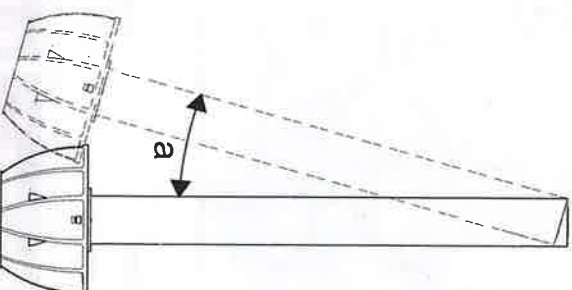
2. Lower shaft radial run-out tolerance measurement



2. Adjust the rotor angle

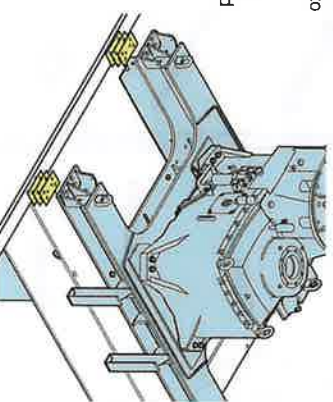
⚠ The offset angle (a) must be less than 0.15 degrees in every direction

1. Measure the lower shaft offset angle (a).



⚠ If the vertically angle is more than allowed, shim the drive rack.

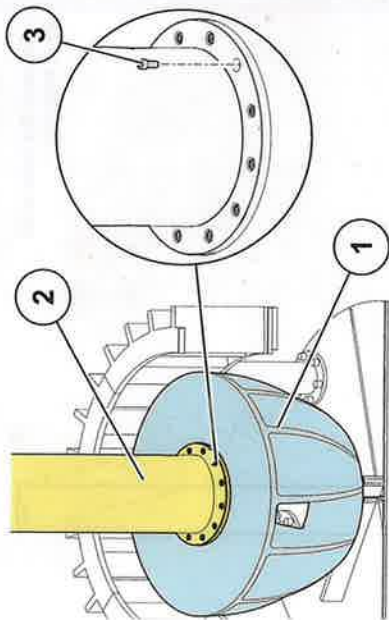
2. Align the lower shaft to an upright position by using shim plates between the fixing area of the drive unit rack and the bridge beams.



Refer to the following manuals: Fixation TankCell Installation Manual

Installation of the Rotor

Overview



- 1. Rotor
- 2. Lower shaft
- 3. Allen screws

2. Before you start



In case of problems, contact your local Outotec service.



Rinse and provide proper ventilation to the tank.



Separate the machines from the rest of the process.



Isolate all machines from power supply with a lockout-tagout procedure.



Follow instructions for work in confined space.



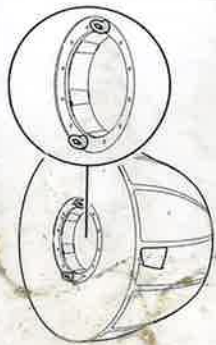
Make sure you follow local legislation for working with lifting and working in confined space



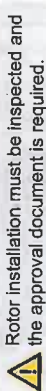
Use lifting bolts to lift the rotor



Make sure that the lifting equipment is strong and safe enough.



5. Installation



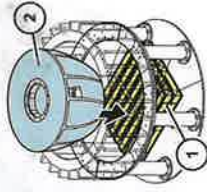
Rotor installation must be inspected and the approval document is required.



Heavy components.

1. Make a support for the rotor.

2. Place the rotor on the support

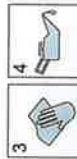


6. Screw 2-3 threaded rods (B) with nuts (C) and washers (D) evenly to the lower shaft flange and rotor.

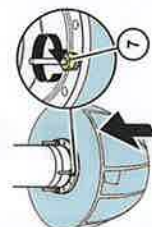


3. Clean and dry the bolt slots and the lower shaft flange.

4. Add a thin layer of grease or oil to the joint.



7. Lift the rotor in place by tightening the nuts evenly.



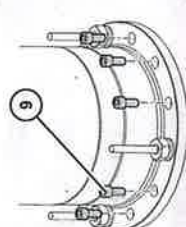
5. Lower the drive unit to the tank and line up the bolt holes.



8. Apply thread locker to the Allen screws.



9. Insert Allen screws to free fastening holes.



4. Required tools

A. Torque wrench



B. Threaded rods



C. Washers



D. Nuts



Accessories

The number of accessories depends on the size of the rotor.

Rotor



Allen screws



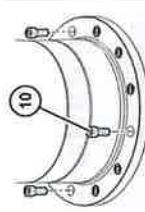
Thread locker



Polyurethane paste



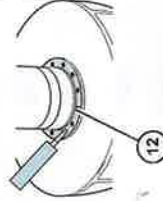
10. Remove the threaded rods and replace them with Allen screws.



11. Tighten the screws crosswise. See instructions on page 2.



12. Fill the joint border and the bolt heads with polyurethane paste



Make sure that there are no lumps or air bubbles.

Make a smooth finishing.

13. Align the rotor. See instructions on page 2.

14. Finish the work.

Before starting operation, make sure that all foreign objects are removed from the cell and it is safe to operate.