

6540372 PUMP SE 044A 3 X 220V 50 HZ
6540369 PUMP SE 044A 3 X 380-420V 50 HZ
6541600 PUMP SE 044A 3 X 690V 50 HZ

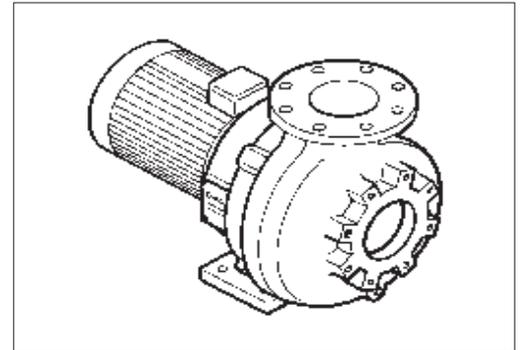
6540381 PUMP SE 044A 3 X 690V 60 HZ
6540371 PUMP SE 044A 3 X 230V 60 HZ
6540370 PUMP SE 044A 3 X 460V 60 HZ

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

1. Installation

Install the pump to the base and ensure that no load is transferred to the pump from the pipework. Use suitable spacers between the pump and the base when necessary. Follow the instructions of the manufacturer of motor and make sure that cooling air is provided for the motor.

Adjust pipework on the suction and pressure side so that the flanges fit easily together. Make sure that fixing of bolts will not cause any load to the pump body. Connect the cable to the control panel as shown in the electrical diagram. Check direction of rotation to be clockwise by shortly starting the pump.



! NOTE: Do not run the pump dry for more than just a few seconds, because longer dry running will damage the mechanical seal.

2. Start-up procedure

Clean the holding tank and pipework from any foreign objects. Fill the holding tank to the filling level before starting the pump. Follow the operation of the pump and check that it starts and stops as per in electric drawings.

3. Operation

During regular inspections check:

- that there are not alarms on
- that the pump does not make an unusual noise when running
- that the “running hours” meters of alternately running pumps show roughly the same reading

4. Maintenance

Evac SE 044A pump is specially designed to run together with Evac -ejector in heavy duty sewage conditions with minimal maintenance. The pump is equipped with Vortex impeller with no clearance adjustment, high quality mechanical seal and electric motor bearings for long life operation.

Once a year

Start pump manually and check that:

- there are not leakages
- pump is running smoothly
- the ejector generates vacuum normally
- alarms, valves etc. operate normally

At 10 000 running hours (or every five years)

Dismantle the pump and:

- clean pump housing
- change mechanical seal (5451310)
- change O-ring (5451330)
- change electric motor bearings

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5. Change of mechanical seal

5.1 Removal of impeller

Unscrew an impeller locking screw. Removal of impeller from the shaft can be done e.g. by using a puller. To prevent causing damage to the thread on the shaft, the thread should be protected. Place the claws of the puller as close to the impeller boss as possible. Do not crank the impeller unequally, as this can cause damage to shaft and seal.

! NOTE: The impeller locking screw must be changed to new one every time when unscrewed.

5.2 Removal of seal

Loosen the screw on the retaining ring. There is a hole in the rear wall through which removal can be done. Pull retaining ring, seal spring and rotating seal ring away. Be especially careful when dismantling the seal ring.

5.3 Dismantling the rear wall and stationary seal ring

Undo the four M12 x 30 hex bolts on the motor flange. Pull the rear wall away from the steering of the motor flange. Be careful not to damage the stationary seal ring when removing the rear wall. Remove the stationary seal ring if it is damaged or worn. Removal of stationary ring can be done by pressing it slightly from the motor side of the rear wall. Replace the whole seal, if it is damaged or worn.

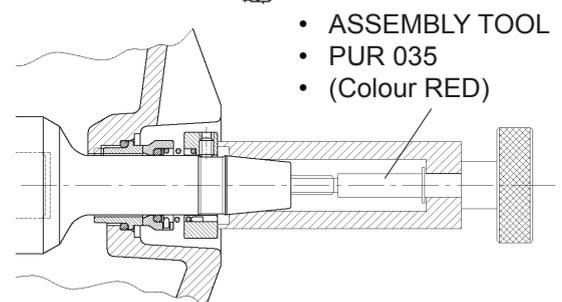
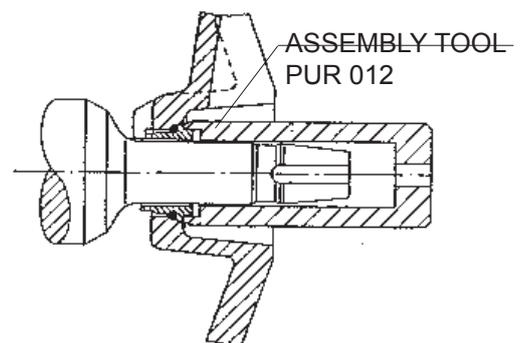
5.4 Assembly of stationary seal ring

Clean carefully the place of the stationary seal ring in the rear wall. Lubricate the O-ring with oil. Do not use vaseline.

Observe cleanliness in all assemblies. The assembly of the stationary seal ring must be carried out with most care to avoid damaging of the seal.

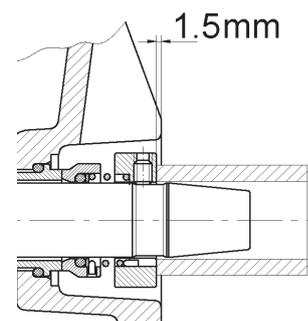
Assemble the rear wall on the motor where the pump shaft is installed. Fasten the four M12 x 30 hex bolts of the motor and rear wall.

Place the stationary seal ring so that the groove of the seal ring is in line with the projecting of the rear wall. Carefully press the seal into place by using the special assembly tool PUR 012. Avoid unnecessary force.



5.5 Assembly of rotating seal ring

Lubricate the O-ring and the sealing surfaces with oil. Cover the key way of the pump shaft with adhesive tape to avoid damage to the O-ring. Press the rotating seal ring together with the retaining ring and the spring onto the shaft by using the special assembly tool PUR 035 (Colour RED). Be sure that the end of the spring will go into the groove in the retaining ring. Tighten the socket head screw in the retaining ring carefully. Remove the adhesive tape from the key way.



! NOTE: Use the new assembly tool PUR 035 colour RED.

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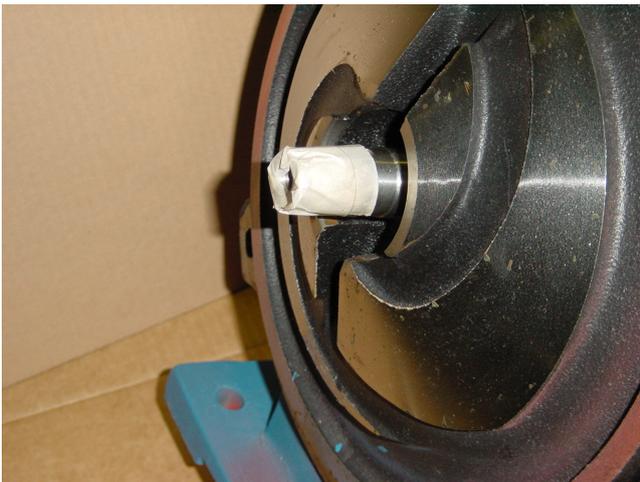
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5.6 Assembly of rotating seal ring without assembly tool PUR 035

Assembly of rotating seal ring without a special tool is not recommended. However, if it must be done it must be ensured that spring compression is correct.



1) Lubricate the O-ring and the sealing surfaces with oil.



2) Cover the key way of the pump shaft with adhesive tape to avoid damage to the O-ring.



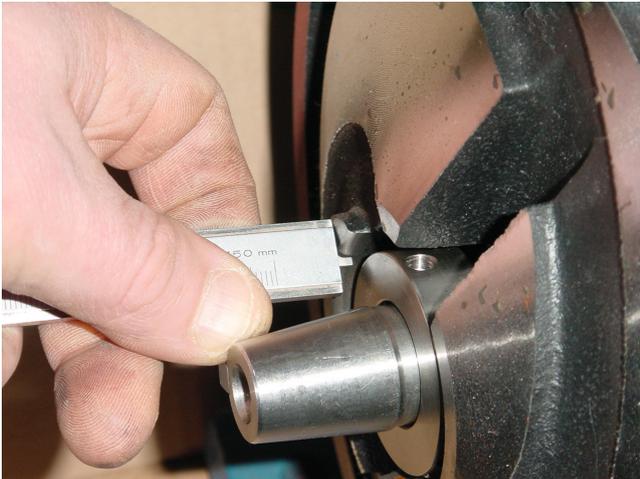
3) Push the rotating seal ring together with spring and retaining ring onto the shaft by using a suitable sleeve having inner diameter lightly bigger than 25 mm.

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4) Be sure that the end of the spring will go into the groove in the retaining ring.



5) Compression of the spring is correct when the distance from surface of the retaining ring to the surface of seal housing is 1.5 mm. (See picture.)



6) Tighten the socket head screw in the retaining ring carefully. The correct tightening torque is 7 Nm.

7) Remove the adhesive tape from the key way.

5.7 Installation of the impeller

Install the shaft key and the impeller. Secure the impeller using the impeller locking screw (P/N 5451350). The correct tightening torque is 40 Nm.

! NOTE: The impeller locking screw must be changed to new one every time when unscrewed.