



S = Bare shaft pumps with flexible coupling **F** = Direct Coupled Pumps (flanged) **T** = Tractor Pumps

WARNING "S-F-T"

When you receive the goods check that the data indicated on the serial plate corresponds to your order. The unit is without lubricating oil. Never start the unit without water. Remember that a primed pump can run with no delivery (i.e. with the discharge valve closed) for a maximum of 2-3 minutes.

USE LIMITS "S-F-T"

The liquid to be pumped must be chemically and mechanically non-aggressive water with a maximum solid content of 40 g/m³. Do not exceed the limit specified in the technical characteristic catalog.

INSTALLATION

"S-F" Correctly level and firmly fix the unit to the ground

"S" Make sure that the pump and engine are perfectly aligned; check this again after the unit has been operating for a while to correct any alterations: incorrect alignment can cause serious problems.

"T" The p.t.o. shaft should be connected with an alignment of less than 10 degrees.

SUCTION PIPING "S-F-T"

- Check that NPSH available on the suction line is approx. 3 feet greater than the NPSH required by the pump. Loss of head on the suction piping deriving from bends, footvalves and strainer should not exceed 3 feet.
- Use a pipe with a diameter larger than the pump suction inlet. Position the pipe so that it slopes gradually towards the pump with an inclination of at least 2% greater than the horizon.
- Check that piping is airtight.
- Use suitable supports to fix the line correctly to avoid strain or damage to the suction flange.
- Position the footvalve vertically and make sure that it is a suitable size for the pump delivery (with a free area of at least twice the area of the suction pipe) and that it is protected from clogging.
- Avoid tight bends or changes in size.

DISCHARGE PIPING "S-F-T"

- Use suitable sized piping to limit loss of head and thick enough to support the maximum operating pressure.
- Mount a discharge valve to stop or regulate flow.
- Mount a non-return valve with a by-pass to protect the pump against water hammer especially in the case of large level differences or very long pipes.
- Use suitable supports and firm fixtures to avoid strain or damage to the discharge flange.

STARTING "S-F-T"

- The unit must be started by qualified personnel.
- Fill the bearing support or gearbox with oil and check the level on the dipstick. The quality of oil to use is shown on the yellow sticker on unit. Change the oil after the first 80 hours of operation and then every 400-1000 hours at least once a year.
- Fill the pump and suction piping with water checking that no air is trapped in either.
- If possible rotate the shaft manually turning it from the coupling.
- Check rotation direction.
- Start the unit with the discharge valve slightly open and when the pump is running, open it to reach the required functioning characteristics.
- For pumps with stuffing-box packing make sure that there is a leakage of 20-60 drops per minute to cool and lubricate the shaft. Regulate flow by gradually and slowly either tightening or loosening the flange gland nuts.
- The pump should function without vibrations or unusual noise.
- Before stopping the unit almost fully close the discharge valve to prevent water hammer.

NOTE "S-F-T"

- When the pump remains inactive for long periods, especially during the winter, drain out the water to prevent freezing problems.
- Protect the internal parts with anti-rust oil and periodically rotate the pump shaft by hand.
- Rovatti pumps are subjected to strict tests during each stage of production and will function regularly for a long time to your full satisfaction if the instructions are followed carefully.
- The installation, use and operation of this equipment must be carried out, under the full responsibility of the installer, in compliance with current local laws and safety regulations.
- Incorrect installation and unsuitable use always causes failures, undue wear and dangerous breakages.
- The product guarantee covers any proven manufacture defects and is not recognized in case of incorrect use.
- For any further information not dealt with in these instructions or for any problems or special applications kindly contact us at 1-800-832-6224 or 1-770-459-4401.

