



INSTRUCTIONS 1008-F00 e

Section	1008
Effective	September 2007
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Translation of the
original instructions

General instructions

P Serie

INSTALLATION

OPERATION

MAINTENANCE



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Your distributor :

INSTALLATION

PUMP SELECTION

To obtain from MOUVEX pumps all the services you are entitled to, from the performance as well as from the life standpoint, it is necessary to select the proper pump type, rotation speed and materials of construction considering both the product to be pumped and the conditions under which the pump will be operated.

Our Technical Department shall be glad to help you solve your problem.

PIPE SIZE

The pump should be located as near the liquid supply as possible to have the minimum pipe suction lift and line.

The piping diameter should be computed, taking into account pipe length, flow rate and liquid viscosity, so as to keep friction losses within reasonable limits.

It is quite impossible to give both general and precise instructions as regards the choice of pipe size.

However there is no inconvenience to use large diameters especially on the suction end.

Generally speaking, the piping may be as large as the pump connections. If the suction lift is high, a larger size should be chosen on the suction end.

When viscous products are to be pumped, it is of the utmost importance that the piping diameter be very accurately determined, for friction losses are proportional to viscosity and inversely, proportional to the 4th power of the diameter. Therefore some money « saved » on piping size could entail considerable trouble. Do not overlook the help our Technical Department can give in this matter, provided it receives all needful data or better drawings of installation.

PIPING INSTALLATION

Avoid at all costs high points and syphons where air pocket can form and stop flow.

Slope the suction pipe up to the pump flanges.

Make sure to avoid air leaks at the joints in the line.

Where possible, use long radius elbows in preference to any other and avoid mounting them close to the pump.

Forces exerted by the pipes on the pump increase wear, cause shaft misalignment and may even cause breaks.

Make sure that all pipes are supported and are designed to allow thermal expansion and contraction (flexible unions or expansion loops are recommended).

Use isolating valves so as to avoid draining the system when disassembling the pump for inspection purposes.

Take precautions to prevent foreign bodies entering the pump.

Take care to protect the pump against abrasive particles often found in new pipings and tanks. Where possible remove all traces of dirt, rust... from the system prior to starting the pump.

Whenever the liquid may freeze, or set at ambient temperature, provide for handy draining by means of drain taps and air-intakes in the piping.

When suction lift is high or suction line must be kept full of liquid, install a foot valve and select a large one so as not to increase friction loss.

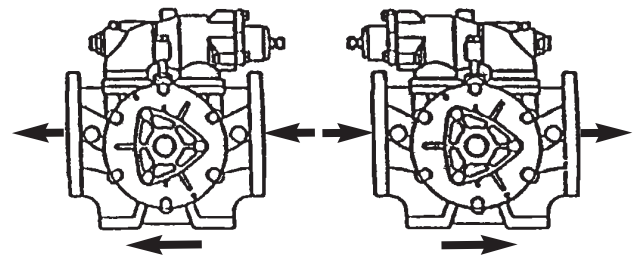
ROTATION (standard Pumps 6 vanes)

MOUVEX P series pumps are not reversible therefore they run in overflow direction.

It is possible to reverse the flow into the pump by returning the rotor and the vanes. The bypass must also be returned. See the adapted paragraph in the pump instructions manual.

Suction and discharge ends are bound to rotation as follows.

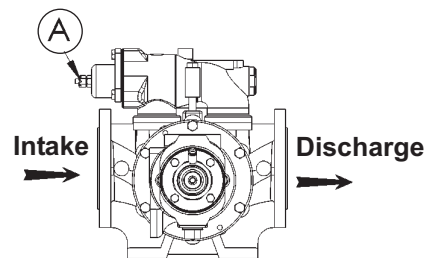
When the pump runs clockwise, suction end is on your right when you face keyed pump shaft end, reversely on your left when the pump runs counter-clockwise.



Clockwise rotation

Counterclockwise rotation

BYPASS ORIENTATION



The bypass protects the pump in one direction only. Check to make sure it is rightly installed : A cap must be on suction side.

To reverse bypass, remove fixing stud nuts and rotate bypass by 180°. Replace carefully sealing gaskets and tighten stud nuts securely.

To adjusting bypass pressure, remove cap A. Turn adjusting screw clockwise to increase pressure setting. Turn adjusting screw counter-clockwise to decrease pressure.

DOUBLE BYPASS (option : 12 vanes pumps)

Pumps equipped With a double bypass are designed to operate safely in both directions of rotations This implies, nonetheless, considerable reservations concerning the integrity of drive shaft parts.

The direction of rotation should not be changed until the pump has stopped completely.

PUMP CLEANING

Pumps are shipped thoroughly greased. (When handling such products as foods).

Take care to wash off the grease before starting the pump for the first time -either by flushing it with a solvent or by disassembling pump head and removing all traces of lubricant.

INSTALLATION (continued)

ANCHORING

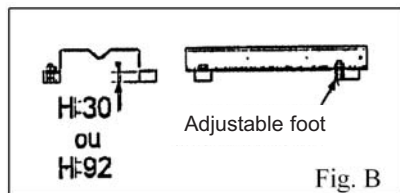
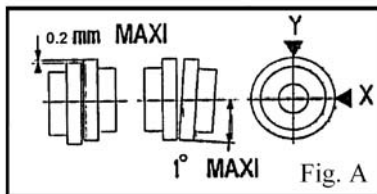
Correct seating of a pump unit is essential for its efficient operation and long working life.

WARNING : Alignment of motor and pump shafts.

The motor and pump shafts are aligned before dispatch ; however, check them systematically after installation and carry out realignment if needed.

Any alignment defects must be compensated for only as indicated below. Never readjust the pump and gear motor.

- Install the group with its base on a flat surface, at the right level and hard enough (according to standard BAEL 91 in the case of a block of concrete).
- Check the alignment of the coupling (see Fig. A) If the alignment is outside the tolerance range (0,2 mm and 1°) take up the flatness of the base using the adjustable foot (see Fig. B) to restore the factory setting.



Check alignment at every installation stage to make sure the pump or the unit incur no stress, that is :

- after fastening to foundations
- after fastening the pipes
- as soon as the pump has run at its normal working temperature.

NOTE :

Never rely on the flexible coupling to compensate for misalignment.

REMINDER :

NEVER START A UNIT IF THE COUPLING ALIGNMENT IS INCORRECT. THIS WILL RENDER OUR WARRANTY INVALID.

ELECTRIC MOTORS

Check motor plate and tension supplied.

Check wiring diagram.

Use large wire. Connections should be securely tightened.

Plug in earth connection.

Electric motors should be protected by suitable circuit breakers and fuses.

Start the pump empty to check the correct operation of the connections and check that the direction of rotation corresponds to installation's inlet and outlet direction. Follow the instructions below if necessary to change the direction of rotation.

Check direction of rotation. To change rotation :

On 3 phase motor : interchange two of lead wires

On 2 phase motor : interchange two wires of same phase

On 1 phase motor : follow instructions accompanying motor.

ENGINE DRIVEN UNITS

Since engines run in one direction only, check carefully direction of rotation to avoid mistake in connecting suction and discharge piping to pump openings.

Before starting up engines, read over Operation Instructions.

OPERATION

HIGH TEMPERATURE LIQUIDS

After pump has been operated for the first time, tighten all nuts and bolts since they expand with high temperature.

PUMP STORAGE

When pump is for some time, disassemble pump and lubricate thoroughly. If this cannot be done, fill the pump with oil through bypass openings and rotate it slowly by hand so as to circulate oil. Bearings should be well greased to prevent rusting.

DISMANTLING

Follow the Instructions to dismantle the vane pump P serie.

REASSEMBLY

Follow the Instructions to reassemble the P serie pumps.

MAINTENANCE

Grease in accordance with the above §.

Lubricate according to corresponding instructions bearings, speed reducers, motors and engines.

SHAFT SEAL

Conventional packings should be replaced when packing gland cannot be tightened any more.

Mechanical Seals require almost no maintenance (Refer to corresponding Technical List).

The warranty can be voided if the above instructions are not respected.