

BRIEF OPERATING INSTRUCTIONS, WARNING SIGNS SURFACE TECHNOLOGY

ORION PISTON PUMP



PLEASE PUT UP IN THE WORKSHOP.
READ AND FOLLOW UP

The processing materials or solvents (fluids) pumped by our pumps/equipment have not been manufactured by us. We shall not be liable for their effects.

Because of the wide range of fluids and their different reactions, the operator must consult the fluid manufacturer on such matters as flow rate, the suitability of the fluids for the materials used in our equipment, spray fumes and explosion hazards, processing times after mixing as well as any toxic effects.

If fluids containing halogenated hydrocarbons such as trichloroethane or methylene chloride need to be used, the wetted parts of the suction and pressure system should not have a galvanized surface, nor any aluminum parts.

- There can be metal organic reactions that are explosive and extremely caustic.

Piston pumps are pressurized. This means that the pressure in the pressure system (pump, screen, hose line and gun) can cause serious injuries when it is released.

- Components not supplied by us must have dimensions that correspond to the given dimensions of the piston pump.
- Never exceed the maximum rated working pressure of the piston pump, gun, hose, etc.
- Because of the risk of fluid injection into skin, never place the spraying equipment (gun) directly on any part of the body (thumb, flat of the hand, etc).
- Do not point the spray nozzle at people or animals.
- When the spray system is activated, be aware of the rebound forces that are released (keep a tight grip on the gun, use a secured stand, work with care).
- Personal safety equipment (breathing apparatus, goggles, gloves, etc.) must be worn when working with fluids dangerous to health.
- Engage the gun safety latch after use.
- To reduce the risk of explosion due to static sparking, all equipment, accessories and objects to be sprayed within the spray area must be grounded.
 - Grounding bypass resistance < $10^6 \Omega$.

Subject to change

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Prepared by 09.09.99 Hilse	USER INFORMATION	Issued on 09.99
Checked by 10.09.99 Kuhn		79991 014001

- The necessity of wearing hearing protection depends on the working pressure and the resulting sound pressure level.
- No parts of the piston pump may be disassembled, when the pump is in operation.
- Before each disassembly (repair), first shut off the compressed air supply to the piston pump and relieve the pressure of the pump through the spray gun.
- Be careful, when loosening hoses. Obstructed hoses can still contain fluid under high pressure.
- Always have the equipment checked for operating safety by a qualified engineer after a 6-month shutdown or longer, and at least once every 12 months (- VBG 87).
- All repairs must be performed by qualified engineers.
- Use of non-genuine replacement parts will void the replacement warranty for piston pumps / equipment.
- Apply the specified torque values.
- The piston pump may run without load, but only under supervision and then only for a very short period of time and at a low air input pressure.
- Do not remove the suction hose or suction tube from the fluid and replace it when the pump is operating – this will cause air to enter into the system and result in spray failures.
- Ensure that the piston is at the lowest end of its stroke when it is stopped, to prevent liquid residue drying on the piston rod.
- Always use the lowest possible pressure when flushing. Hold the gun firmly against the side of a metal pail while flushing.
- Never immerse a running agitator propeller into a filled fluid container.
- Increase the rpm of the immersed agitator only slowly.

INSTALLATION, PREPARATIONS FOR OPERATION

- Install the piston pump vertically (see User Manual).
 - The installation surface or wall should be level and be able to hold the weight.
 - Use the correct size plugs and screws
- Ensure that the equipment is properly grounded (- ZH1/200).
- If possible, install the equipment in a place where temperatures do not drop below 15 °C.
- Install the in-line strainer
- Flush the piston pump thoroughly. After flushing, the solvent must be removed thoroughly from the equipment,

- Check the fluid containers; ensure that the fluid has been mixed well and the container is sufficiently filled.
- Immerse the suction installation in the fluid.
- Verify the operation of the gun safety latch.
- Activate the supply.
- Open the pressure regulation valve; slowly increase the air pressure, starting at 0.5 bar.
- Operate the piston pump with < 20 bar fluid pressure until no more air is pumped.
- Engage the gun lock, install the spray tip
 - The equipment is ready for operation.

OPERATION

- When the piston pump is not used at night, shut off the compressed air pressure to the pump and lower the fluid pressure by engaging the gun.
- Always ensure that the piston pump, hoses, gun, etc. are kept clean,
 - both inside and outside.
- The flushing frequency depends on the liquids used. In some cases, it is recommended to flush every day.
The equipment must always be flushed before the weekend or a longer shutdown period and with every fluid change.

SHUT DOWN

- The fluid pressure can increase under certain system conditions when the air motor pressure is relieved while the fluid pressure system is still pressurized.
Relieve the pressure of the piston pump (air and fluid) only by discharging fluid when the compressed air feed is shut off.
- FOR A SHORT PERIOD
 - Shut off the compressed air supply
 - Relieve the pressure from the piston pump by removing all fluid, e.g. by engaging the gun.
- FOR A LONGER PERIOD, FOR THE COMPANY HOLIDAY PERIOD
 - Flush piston pump well
 - Leave the detergent in the piston pump
 - Cut off the compressed air supply
 - Relieve the pressure of the piston pump by removing all flushing solvent, e.g. by engaging the gun.

- FOR A LONG PERIOD

- Flush piston pump thoroughly
- Pump solvent out of the piston pump
- Briefly run the piston pump empty at the lowest air pressure level
- Interrupt (screw off) the compressed air connection to the piston pump



Ensure that the piston is at the lowest end of its stroke when it is stopped, to prevent liquid residue drying on the piston rod.

CLEANING CLOGGED TIPS

During the work, the tip must be cleaned regularly from the front with a brush and solvent, to prevent material accumulation and clogging.

When a tip clogs during the work, shut off the compressed air supply, relieve the pressure at filter PN 500, engage the gun lock, screw the tip off the gun and clean it in solvent.

– Always blow out the tip from the front.

The tip should be left in solvent overnight and then blown out when the contamination cannot be removed with compressed air. If required, use the cleaning needle (publication B.5.90.11-P).

– Do not damage the hardened steel core of the tip.

DETAILED INFORMATION SUPPLIED IN THE USER MANUAL

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