

## Maintenance Notes

### for Long Handle Pump with Valve Combination

Order No. 5.27010/5.27015/5.27016

#### Important! Equipment must not be operated without water.

##### A Open the pump cylinder to grease with special fitting grease once per season.

During this process it is also possible to replace the sealing rings of the piston, the return spring and the rubber buffers. All bolts must be tight. All nuts and bolts are made of stainless steel. In order to avoid cold welding, apply fitting lubricant and remove any sand or dirt before you loosen or tighten bolts.

1. Loosen the pivot bolt on the pump swipe using an M13 spanner.
2. Use an M17 spanner to loosen the hold-down bolt on the cylinder cover. Remove the cover.
3. Loosen the 4 bolts of the inner cylinder cover (with the return spring connected to it, pay attention to the marking).
4. Pull out the piston with the piston rod (fasten to swipe).

##### B Maintenance of the valve combination

1. Check the water in-flow (pipe disconnecter and non-return valve).  
The minimum amount of water required is 45 l/min. If there is not enough water within the system, there will be reverse flows in the line making it hard to pump.
2. Clean the sieves in the pressure reduction valve and membrane valves if necessary.
3. Check all screw fittings for leakages.
4. Check pressure compensating tank for proper operation. The pressure in the rubber bladder must be 1.4 bar.

##### C Taking the equipment out of service during the period of frost (Drain all water conducting supply and drainage lines prior to the frost period).

1. Shut off the water supply to the concrete casing of the long handle pump, and open the drainage valve.  
The long handle pump with valve combination must not be operated without water.
2. Remove the wooden pump swipe. This will avoid operation without water as well as injuries caused by the pump swipe striking back. In addition, the wood is protected from wear and tear.

##### Opening the concrete casing of the pump

3. Remove the service lid. To do this, unscrew the two safety bolts using the M17 ratchet socket.  
Screw in the M12 eyebolts (included). Grip the eyebolts and carefully lift and remove the service lid.
4. Loosening the bolts on the flange plate of the pumps at the non-return valves. First loosen the outlet valve with the hose and the safety valve which connects to the distribution station, then loosen the inlet valve (spanner M46).
5. Loosen the screw fitting of the inlet hose at the pressure reducer.
6. Take out the valve combination together with the pressure compensating tank. First remove the valve part!  
Store this part protected from frost and re-assemble when the period of frost is over. Next remove the compensating tank ahead!
7. It is imperative that the screw fittings of the spraying head pipelines to the masts be loosened in order to drain them. Usually, they are located inside the concrete casing of the long handle pump.

- D Check that all screws and bolts are tight and re-tighten if necessary, especially the screws and bolts of moving parts. Pay attention to the general maintenance notes. If the grip bar of the pump is loose, tighten the 6 M12 safety nuts at the underside of the lid inside the concrete casing.



### Long Handle Pump for Forest Fountain

Service lid of the pump concrete casing with M10 hexagonal bolts for fastening and M12 eyebolts for lifting the lid.

