

OPERATING GUIDE

Diaphragm Valves – 700 Series



**Assembling, Connecting
and Start up**



Recommended Spare Parts



Maintenance and Repair



ASSEMBLING, CONNECTING AND START UP

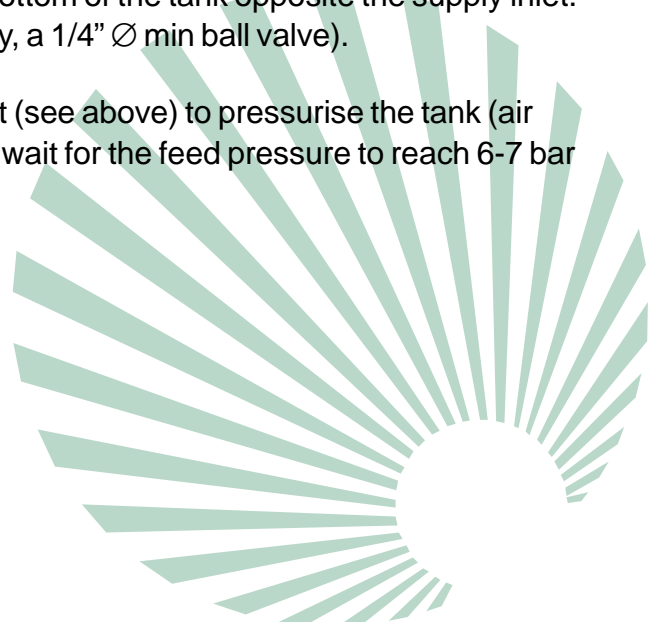
Assembling and Connecting

Valve inlet:	IN connection – from tank ‘flanged’ connector IN
Valve outlet:	OUT connection – to blow tube ‘fast’ connector OUT
Tube tightening:	Bayonet joints: pipe must be tightened fully against the shoulders. The nut must be fully tightened with a special CH spanner (to order separately)
Fluid:	Compressed Air – dried – filtered – oil free (you are advised to install the filter/reducer group immediately before the tank/plenum chamber) Min/max pressure 0,5 - 7,5 bar (when 7,5 bar is exceeded, air escapes from the pilot and the valve tends to open)
Feed piping:	For tank/header tank Ø min 1” for tank with 1” or 1 1/2” outlet valve Ø min 1 1/2” for tank with 2” or 2 1/2” outlet valve
Compressor and Circuit:	with sufficient capacity to pressurise the tank from 0-2 bar in a few seconds
Protection from rain:	Fix a cover to protect VEP valves installed in the open air

Start Up

Before operating the valves and pressuring the tank/plenum chamber, all dirt (e.g. chippings, rust and other impurities) must be removed from the piping and the plenum chamber. Before pressurising the tank/plenum chamber, you are advised to drain the liquid that may be present inside the tank by opening the drainage hole at the bottom of the tank opposite the supply inlet. This should use full-bore drainage (plug or, preferably, a 1/4” Ø min ball valve).

During the start-up phase, if throughput is insufficient (see above) to pressurise the tank (air escapes from the valves), close the tank feed valve, wait for the feed pressure to reach 6-7 bar and then re-open the valve quickly.



RECOMMENDED SPARE PARTS

For start up

≥ 5% of supply (min 1 piece)

Pilot group 1, complete with pilot solenoid, coil and connector

For first two years of service

≥ 10% of supply (min 2 pieces)

Pilot group 1, as above

Diaphragm 3, for single diaphragm valves

Diaphragm 3 and 4, for double diaphragm valves



MAINTENANCE AND REPAIR

Common Procedures

For all Control or Maintenance Operations

- Before totally or partially disassembling the valve, **Depressure** the tank/plenum chamber completely (in the case of VEP model also unplug the electrical connector)
- Replacing or checking the Diaphragm: when refitting the diaphragm, check that the flaps are lined up with the valve body and the rivet is correctly positioned
- Tighten the cover screws (without forcing), preferably with a torque spanner set at: 7 Kgm for M10 (2", 2 1/2", 3" and 3 1/2")
- Replacing Coil or checking pilot solenoid: dismantle the coil carefully (do not lose the core spring)

Routine Maintenance

Once a year check:

- that the electrical connections on the VEP valves are in good condition and the coil connector is waterproof
- that the pneumatic connections on the VEM valves are in good condition and that all other connections are tight

Trouble shooting

Carry out the following checks:

Valve does not open or vibrates:

- Check that coil or connecting wires are not disconnected
- Check sequence outlet: control voltage (tested at solenoid terminals) should not be subject to interference and must be in the tolerance range of $\pm 10\%$ of the nominal value

Pilot solenoid lets air escape. Valve lets air escape or stays open

- Check that compressed air pressure does not exceed 7,5 bar
- Check tightness of cover screws
- Dismantle valve cover and relative coil and check that there is no dirt and dust under the diaphragm or under the inner seal. Do not lose core spring

