

OPERATING GUIDE

Diaphragm Valves – 400 Series



**Assembling, Connecting
and Start up**



Recommended Spare Parts



Maintenance and Repair



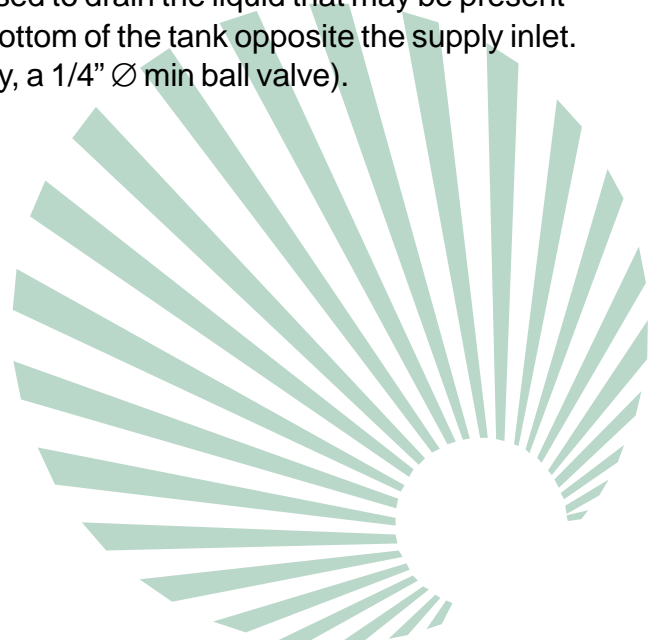
ASSEMBLING, CONNECTING AND START UP

Assembling and Connecting

Valve inlet:	IN connection – directly from tank
Valve outlet:	OUT connection – to blow tube (TS-TL-TF model)
Valve tightening:	Fixed to the tank with the special counter flange and fixing screws
Tube tightening:	With torque spanner set at: 10 Kgm for 3/4" and 1" valve, 18 Kgm for 1 1/2" valve and 30 Kgm for 2" valve
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 - 1,5 Bar
Feed piping:	For tank/header tank Ø min 3/4" for tank with 1" valve Ø min 1" for tank with 1 1/2" valve Ø min 1 1/2" for tank with 2" or 3" valve
Compressor and Circuit:	with sufficient capacity to pressurise the tank 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).



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: 1,6 Kgm for M6 (3/4" and 1") 3,8 Kgm for M8 (1 1/2") and 7 Kgm for M10 (2", 2 1/2" and 3")
- 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 1,5 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

