

STAINLESS STEEL DIAPHRAGM VALVES

TYPE: DVC (CLAMP), DVW (WELDED), DVCP (Pneumatically operated)

Stainless steel diaphragm valves

WORKING PRINCIPLE OF THE VALVE

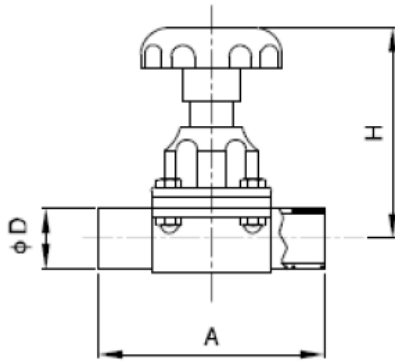
The valve is closed (the medium does not flow) - the diaphragm in the valve cavity rests against the partition in the valve. The valve is opened by moving the stem upwards manually or by pneumatic control. Closing of the valve is ensured using a pin that presses on the diaphragm. The valves are soft sealing and allow a perfect closing even if the flow of media contains some solid pieces.



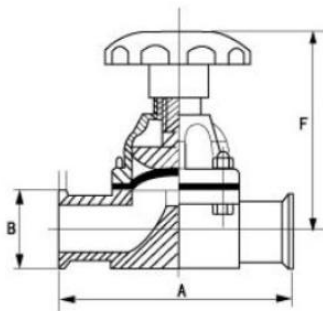
Technical characteristics of diaphragm valves:

Standard	DIN
Type	Welded DIN 11850-1 DIN CLAMP 32676
Dimension	DN15-DN50
Material	Stainless steel 1.4404 (AISI 316L), 1.4301 (AISI 304)
Surface polishing	Outside: Ra>0.8-1.6 μm Inside: Ra>0.4-0.8 μm
Material of diaphragm	EPDM -20 °C až 135 °C VMQ (silikon) -50 °C až 180 °C
Maximal working temperatures	-10 °C/120 °C
Operation of valves	Manual or via a pneumatic actuator (air pressure 5-8 bar)
The pressure of medium	0~1.6 Mpa (to 16 bar)

DIMENSIONS



Code		A (mm)	D (mm)	H (mm)
DVW_15_EPDM	DN15	92	18 x 1.5	102
DVW_20_EPDM	DN20	104	22 x 1.5	102
DVW_25_EPDM	DN25	133	28 x 1.5	102
DVW_32_EPDM	DN32	131	34 x 1.5	105
DVW_40_EPDM	DN40	164	40 x 1.5	116
DVW_50_EPDM	DN50	193	52 x 1.5	130

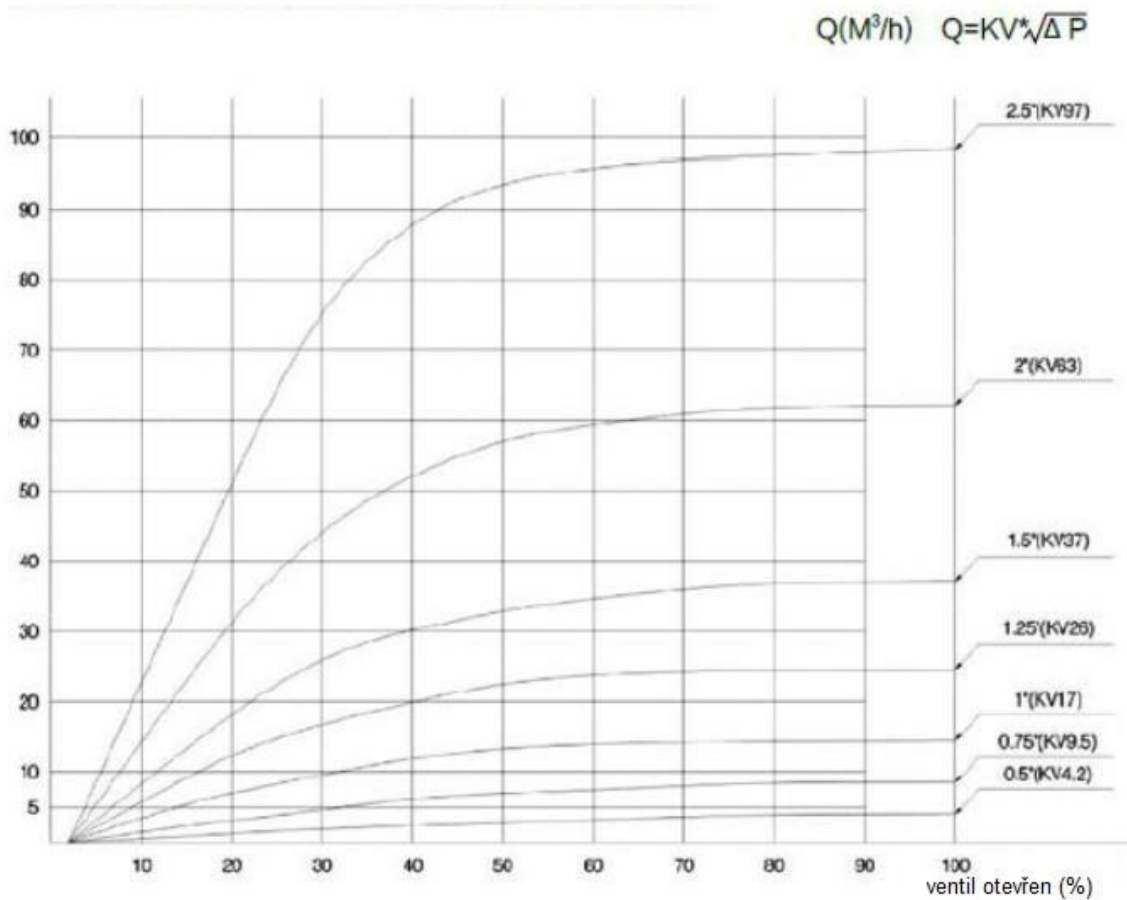


Code		A (mm)	B (mm)	F (mm)
DVC_25	DN25	133	50.5	101



Code		A (mm)	B (mm)	H (mm)
DVCP_25	DN25	133	50.5	175
DVCP_32	DN32	152	50.5	210
DVCP_40	DN40	164	50.5	220
DVCP_50	DN50	196	64	245

FLOW CHART



INSTALLATION OF THE VALVE

In the case of welding, the fitting must first be disassembled to avoid damaging the seal. We recommend checking the tightening of the bolts in operation.

MOUNTING/INSTALLATION

A) Preparations (requirements for the installation location)

- Pay special attention to: vibrations, thermal expansion of the tubes, excessive welding, overloading of the pipelines.
- Make sure the pipeline and the face of pipe connection flanges are clean. Any foreign material such as rust, pipe scale, metal clips, welding slages, etc. can obstruct disc movement and damage the seat and disc sealing surfaces.

B) Process connection

- Avoid damaging the valve, the actuator and the handle.
- Connection only to be undertaken by authorized and qualified specialist staff.
- Use only with the mechanical process connection provided—regarding the configuration, see order code on the device type label.
- Clean the valve and other parts from possible packing materials.
- Ensure that the connection are tight. Remember seal rings.
- The actuator can be installed in any position. Valves can be mounted either vertically or horizontally.
- Connect compressed air to actuator correctly.

SAFETY



- Never touch the valve or the pipelines when processing hot liquids or when sterilizing. Danger of burns!
- Never service the valve with valve and pipelines under pressure.
- Never stick your fingers through the valve ports if the actuator is supplied with compressed air.
- Operation by means of actuator: Automatic on/off operation by means of compressed air.
- Operation by means of standard handle:
 1. Manual on/off operation.
 2. pull the handle outwards while rotating it.

Before removing the valve from the pipeline or loosening any bolts, it is important to verify the following conditions:

1. Make sure the pipeline is depressurised and drained.
2. Care for the flow media. Proper care should be taken for protection against toxic and/or flammable fluids. Always use rubber gloves and protective goggles!

CLEANING AND MAINTENANCE

1. Make regular service and maintenance on your valves for them to be able to perform optimally. Regularly inspect your valves for leakage to ensure your process is running efficiently.
2. Use optimum air quality in operating the valves, i.e. avoiding dust, water and oil in the air system for a longer lifetime and service interval on the actuators.
3. Only operate within temperature ranges specified in the instruction manual to ensure smooth operation.
4. Carefully monitor your cleaning process since the composition of the cleaning solution can over time affect the rubber.
5. In order to obtain the longest possible lifetime for rubber seals it is essential to choose the right quality for the actual duty.
6. For product wetted parts ensure lubrication with Paraliq GTE 703 or **Loctite 8105** or a similar approved grease which makes maintaining your valve easier.
7. Always keep spare rubber seals in stock to avoid unplanned downtime.
8. Cleaning agents:
 1. Avoid excessive concentration of the cleaning agent.
=> Dose gradually
 2. Adjust the cleaning flow to the proces.
=> Sterilisation of milk/viscous liquids
=>Increase the cleaning flow
 3. Always rinse well with clean water after the cleaning.
Use clean water, free from chlorides.

The cleaning agents must be stored/disposed of in accordance with current regulations/directives.