



# Manual diaphragm valve

## working principle

Manual or pneumatic operation, specifically for sanitary and aseptic processes in the pharmaceutical industry. This valve is ideal for fluid control and on/off tasks. The diaphragm provides a body seal and a seat seal. There is no path to the outside environment, so the diaphragm valve is suitable for aseptic processes. When the valve is closed, the pressure pad supporting the diaphragm moves toward the sealing surface on the valve body. As the pressure plate moves, the diaphragm bends and is forced to the seat area in the center of the valve body, thus closing the fluid path to the valve body. The relationship between the valve body and the pressure plate prevents the compression of the diaphragm. The valve can be operated manually or pneumatically, or it can be controlled by a controller and solenoid valve.

## Technical specifications

- © Specifications: 1"-4", DN25-DN100
- © Pressure: 10bar (145 PSI)
- © Material: ASTM 316L, 1.4404, 1.4435 NB2 Fe<0.5%
- © Temperature: -20°C +150°C (EPDM)-4°F+302°F (+140°C (SIP, 30) 284°F)
- © Connection: clamp, welding, thread, 3A BPE DIN SMS IDF ISO
- © valve body structure: straight through, three-way, U-shaped three-way, tank bottom valve, multi-channel diaphragm valve
- © Diaphragm material: EPDM + PTFE (double layer) / EPDM / Silicon / FPM (Vitong)
- © Certification: 3A-18-03, PED 97/23 EC,,FDA177.2600



# Third generation high clean diaphragm valve

## New generation diaphragm valve

DONJOY has carried out a comprehensive technical upgrade of all diaphragm valves in 2015. The upgraded design is more in line with the high clean technical requirements of GMP, ASME BPE, EHEDG and 3A. In particular, the dead angle processing reaches the requirement of  $\leq 1D$  to  $\leq 3D$ .

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# Multi functional high frequency canned diaphragm valve

## working principle

Multi functional high frequency canned diaphragm valve has a dual-station cylinder and a flow-adjustable filling valve.

For fast filling and to prevent spillage or spillage of the bottle.

The flow rate is maximum when 1 cylinder is working;

When the cylinder is working, the flow rate is the smallest, and the flow rate adjustment device can also be used to adjust the flow rate when the flow 2# cylinder is working.

## Recommended setting

1 cylinder opens when the liquid is filled to 70%-80% liquid level.

2 cylinders are opened to fill to a reasonable level.

## Technical advantages

With high efficiency, high precision canning, material zero overflow, long life (pressure 2bar up to 8 million times), flow adjustable, dual cylinder design.

## Technical specifications

Mini manual diaphragm valves are mainly used in materials sampling, biological systems, laboratories and other projects.

The valve has special advantages in filling equipment such as pharmaceuticals or beverages. When the working pressure is 3ba, the number of opening and closing times can reach 1.5 million life.

- SIZE: 1/4 "-3/4", DN6-DN15
- Standard BPE 3A DIN ISO IDF
- Certification PED/97/23/EC, 3A/54-04/1580, FDA.177.2600
- Maximum temperature: -20 to 150 ° C (depending on the sealing material) (stainless steel actuator)
- Maximum temperature: -20 to 130 ° C (depending on the sealing material) (plastic actuator)
- Maximum pressure: one direction (DELTA P=100%)
  - Normally closed rubber 8bar, PTFE 6bar (optional)
  - Normally closed rubber 6bar, PTFE 4.5bar (standard)
  - Normally open and double acting rubber 8bar, PTFE 6bar
- Replacement of different actuators can meet higher pressure levels
- Forged valve body: 1.4404/316L/1.4435 BN2
- Casting valve body: 1.4404/316L
- Connection method: welding, clamp, flange, thread
- Operation mode: manual and pneumatic





# Pneumatic Diaphragm Valve

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## Operating Principles

- Diaphragm valves, manually or pneumatically operated, are specifically designed for hygienic and aseptic processes in the pharmaceutical industries.
- The valve is excellent for flow control as well as for open/close duties.
- The diaphragm provides body seal as well as seat seal. There are no paths to outside environment so it is suitable for aseptic processes.
- When valve is closed, a pressure pad which supports diaphragm to move towards sealing face on body. When pressure plate moves, diaphragm flexes and is forced down onto seat area in the centre of body, thus it closed off flow path through body.
- The interrelationship of body is to prevent the compression of diaphragm.
- The valve can be manually/pneumatically operated, and can be controlled by control tops and solenoid valves.

## Technical Specifications

- ◎ Size: 1"-4", DN25-DN100
- ◎ Pressure: 10bar (145 PSI)
- ◎ Material: ASTM 316L, 1.4404, 1.4435 NB2 Fe <0.5%
- ◎ Temperature: -20 °C + 150 °C (EPDM) -4 °F + 302 °F (+ 140 °C (SIP, 30) 284 °F)
- ◎ Connection: Clamp, Weld, Thread, 3A BPE DIN SMS IDF ISO
- ◎ Body Structure: straight, tee, U-tee, tank bottom valve, multi-channel diaphragm
- ◎ Diaphragm Material: EPDM + PTFE (double layer) / EPDM / Silicon / FPM (Viton)
- ◎ Certificate: 3A-18-03, Glass II USP Glass VI Chapter 88, PED 97/23 EC, FDA177.2600

