

DELTA AP1 Aseptic Valves

- FOR HIGHER RELIABILITY, LONGER LIFETIME AND LOWER COST



Description

The DELTA AP1 Aseptic valve series from APV comes in two versions – the Techno and the Econo. Each is available in a hand-operated and pneumatically actuated version.

The housing of the Techno is made of stainless steel 1.4435 with a Ra value of < 0.5 micron for product-wetted surfaces as required by the pharmaceutical industry. The Techno body is supplied with a DIN EN 10204 (3.1) test certificate. Both the Techno and the Econo versions are EHEDG and 3A certified.

Operating principle

The diaphragm shaft with metal cone is built from one TFM/PTFE piece.

The opening and closing of the valve is performed either by a pneumatic actuator or by a manual hand-wheel.

A unique support system provides for more reliability and a longer lifetime of the diaphragm. Moreover, this system protects the diaphragm against excess pressure in every actuating position during opening and closing.

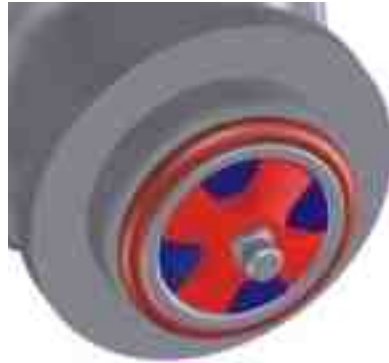
Applications

The aseptic diaphragm valve DELTA AP1 is used in aseptic processes of the pharmaceutical, biotechnological, cosmetics and food industries. It is applied, for example, as process valve, dosing valve, sampling valve or drain valve in combination with an APV W+ centrifugal pump. In this application, the DELTA AP1 valve is welded, free of dead spaces, direct to the pump housing.

Product features and benefits

Diaphragm support system

This unique construction consisting of a static and a dynamic part, relieves the diaphragm from process pressure, increasing its lifetime considerably.



Unique fan support for extended diaphragm lifetime.

Flat diaphragm

The flat diaphragm is built for reliability. It ensures smooth product flow and reduces pressure drops. The flatness of the design minimises product-wetted surface, and reduces cleaning time and consumption of CIP agents.

TFM/PTFE diaphragm

The PTFE diaphragm is very strong and robust. In contrast to standard elastomers, the diaphragm enables the use of a variety of cleaning agents and products.

Rotatable angle connections for air hoses

provide for space-saving installation and easy maintenance of the valves.



Rotatable angle connection for air hose

3.1 marking

The Techno line comes with a DIN EN 10204 (3.1) certificate.

Globular valve body

A globular valve body avoids dead ends preventing consequent contamination and longer CIP times.

Different body configurations available

The variety in valve body configurations ensures the right body for any installation.

Clamp housing closure

The clamp housing closure between valve body and actuator enables quick and easy service, thus minimising maintenance costs.

Limited compression of diaphragm shaft for manual valve

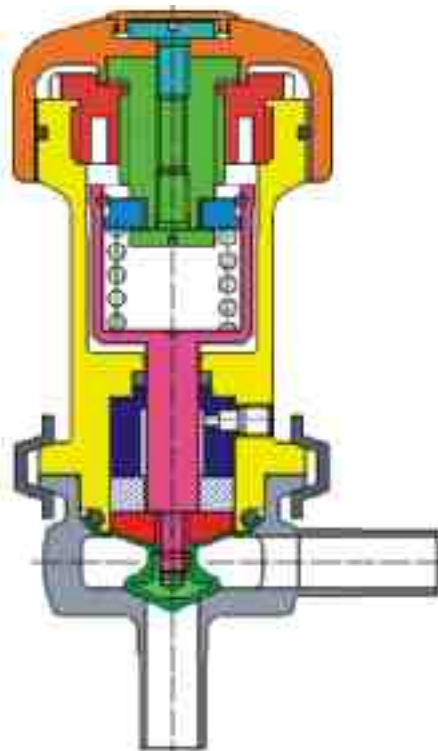
Closing of the valve, the valve shaft is driven into closed position by spring force. Thus, excess pressing of the diaphragm shaft by manual force is excluded.

Options

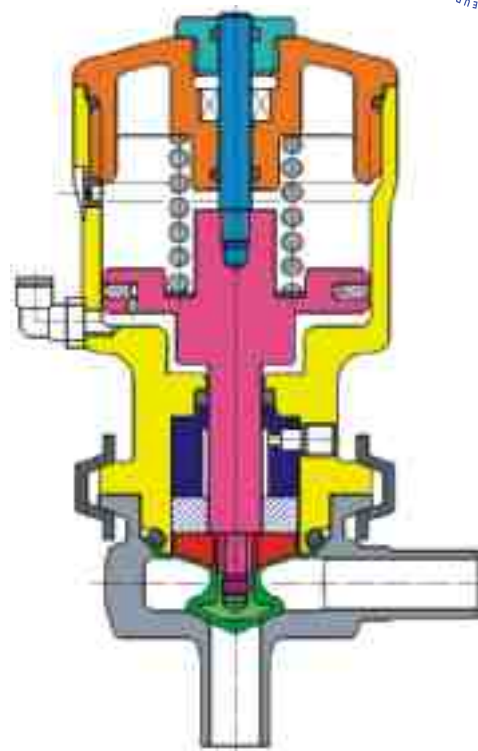
The DELTA AP1 is available with a choice of three electrical feedback systems, enabling process monitoring via PLC:

- A module with two proximity switches for the open and closed position signals

- A module with one proximity switch for the closed position signal
- A module with two mechanical micro switches for the open and closed position signals



Manually actuated version



Pneumatically actuated version

| PRODUCT SPECIFICATIONS | |
|--|---|
| Sizes / DIN - pipe standard DIN 11866 / ISO - pipe standard DIN EN ISO1127 | DN10, DN15, DN20 1/2" |
| Diaphragm material | PTFE TFM 1705 (FDA 21CFR177.1550, USP Class VI) |
| Valve body material | Techno: 1.4435 Econo: 1.4404 |
| Actuator material | 1.4301 |
| Surface roughness | Techno: Ra < 0.5 micron Econo: Ra < 0.8 micron |
| Housing configurations | L, T and tank outlet versions |
| Max. temperature | 135°C (Short time SIP 150°C) |
| Max. line pressure | 10 bar |
| Min. control air pressure | 6 bar |
| Max. control air pressure | 8 bar |

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- for higher reliability, longer lifetime
and lower cost



ABOUT SPX

Based in Charlotte, North Carolina, SPX Corporation (NYSE: SPW) is a global Fortune 500 multi-industry manufacturing leader. For more information, please visit www.spx.com.

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