SPX®

Where Ideas Meet Industry

APV
AN SPX BRAND

DELTA AP1 Aseptic Valves

for higher reliability, longer lifetime and lower cost

SPX®

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 pneumatic actuated version.

The housing of the Techno is made of stainless steel 1.4435 with an Ra value of < 0.5 micron for product wetted surfaces on the valve body as required by the pharmaceutical industry. The Techno version valve body comes with an EN 10204 / 3.1 certificate ensuring full documentation of all materials used. Both the Techno and the Econo versions are EHEDG and 3A certified.

Operating Principle

The diaphragm, shaft and cone are built from one TFM piece. The opening and closing of the valve is performed either by a pneumatic actuator or by a manual hand-wheel.

During opening and closing, the diaphragm is continuously supported by a unique fan support system, which relieves process pressure on the diaphragm, thus protecting it against overstress caused by pressure spikes. This system significantly increases diaphragm reliability and lifetime.

Applications

The choice of materials and the 3.1 marking mean that the Techno version of the DELTA AP1 Aseptic valve can be used in a sterile pharmaceutical application environment. The DELTA AP1 Aseptic valve can also be used in the biotech, health care and cosmetic industries as well as in various food applications.

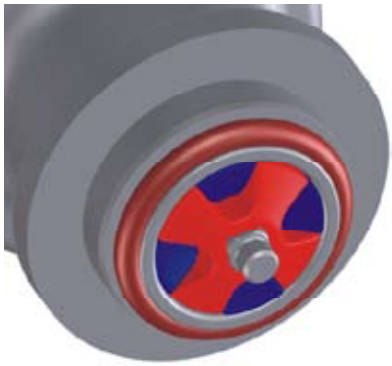
In the pharmaceutical industry, the Techno version can be used as a standard process valve, dosing valve, sample valve or as a true aseptic drain valve, e.g. in combination with an APV W+ centrifugal pump. The DELTA AP1 valve is welded directly onto the pump housing, thus avoiding the conventional clamp ring.

In the food industry, the DELTA AP1 valve can be used for pilot plants, as a sample valve or as a dosing valve for example for adding CO2/Nitrogen to beer or flavors to beverages.

Product Features and Benefits

Diaphragm Fan Support

This unique feature relieves process pressure on the diaphragm to significantly extend diaphragm lifetime. Production can also be run at 145 psi (10 bar) with no problems at all.



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 flat diaphragm is very flexible and can be used even for high-fibre products. The flatness of the design minimizes product wetted surface, and reduces cleaning time and consumption of CIP agents.

PTFE Diaphragm

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

Flexible Air Hose Connection

A flexible air hose connection helps to avoid untidy installations and reduce cabling costs. The air hose can be positioned in any direction and is simple to service.

Flexible air hose connection to avoid untidy installations.

3.1 Marking

The Techno line comes with an EN 10204 / 3.1 certificate documenting the source of all valve body parts in order to ensure optimum quality.

Globular Valve Body

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

20 Valve Body Configurations

The variety in valve body configurations ensures the right body for any installation, eliminating the need for extra valves because of inappropriate body configurations.

Clamp Housing Closure

The clamp housing closure enables quick and easy service, thus minimizing maintenance costs.

Limited Compression Principle

A mechanical blocking mechanism prevents overturning of the hand wheel, thus extending the diaphragm lifetime.

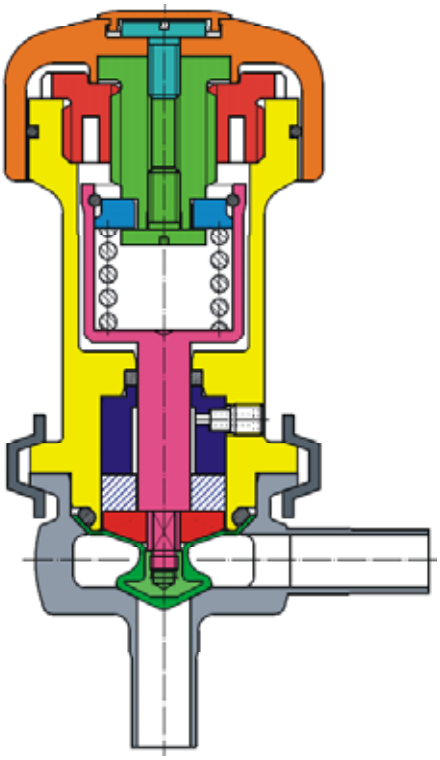
Metallic Stop

The metallic stop helps to increase gasket lifetime.

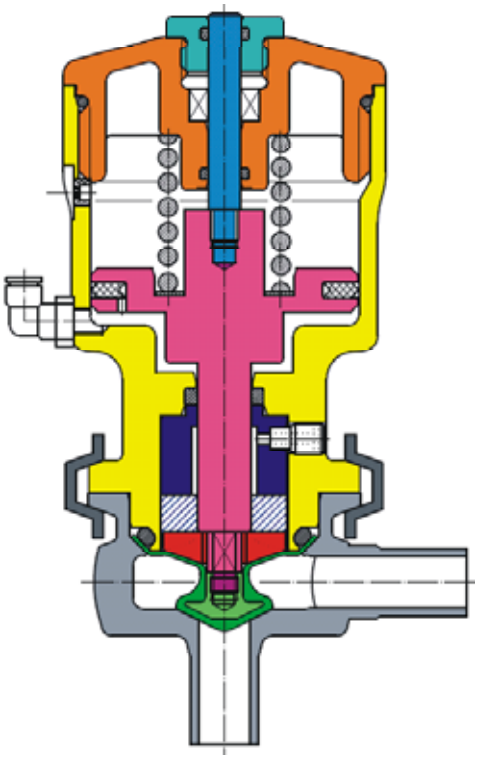
Options

The DELTA AP1 is available with a choice of three electrical feedback systems, enabling process monitoring via PLC and built-in safety procedures:

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



Manually actuated version



Pneumatic actuated version

Product specifications	
Sizes / DIN - pipe standard DIN 11866 / ISO - pipe standard DIN EN ISO1127	DN10, DN15, DN20 ½"
Product wetted parts	AISI 316L
Non-product wetted parts	AISI 304
Membrane material	PTFE TFM 1705 (FDA 21CRF177.1550, USP Class VI)
Valve body material	Techno: 1.4435 Econo: 1.4404
Surface roughness	Techno: Ra < 0.5 micron Econo: Ra < 0.8 micron
Actuator material	Techno: Stainless steel Econo: Synthetic material
Housing configurations	L, T and tank outlet versions
Max. temperature	275°F / 135°C (Short time SIP 302°F / 150°C)
Max. line pressure	145 psi (10 bar)
Min. control air pressure	87 psi (6 bar)
Max. control air pressure	116 psi (8 bar)

WHERE IDEAS MEET INDUSTRY

Your local contact:

APV, An SPX Brand
611 Sugar Creek Road
Delavan, WI 53115
Phone: (888) 278-4321
Email: answers.us@apv.com

For more information about our worldwide locations, approvals, certifications, and local representatives, please visit www.apv.com.

SPX Corporation reserves the right to incorporate our latest design and material changes without notice or obligation.

Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing.

Issued: 04/2009 8004-02-08-2008-US

Global Headquarters
13515 Ballantyne Corporate Place
Charlotte, North Carolina 28277
United States

Where Ideas Meet Industry