

# Flexvalve Diaphragm Damper Type VPSX and VPRX

for pneumatic on/off control or regulation of process air extraction and material transport



**Diaphragm Damper Type VPSX**

## Flexvalve pneumatic dampers for process air extraction and ventilation.

Diaphragm dampers are suited for on/off control and regulation of pressure and flow control in process ventilation plants. The dampers are designed for air with high dust or particle concentrations, and can also be applied for textile fiber material and for paper clip.

Flexvalve dampers are recommended for pressure and flow control in air extraction plants with high velocities and many extraction spots, such as:

- Welding fume extraction
- Wood chip extraction
- Textile and paper extraction
- Dust extraction in process ventilation plants.

Diaphragm dampers have many advantages:

- Universal control of dust transport
- Compact design
- Open/close against high pressures
- Low noise level in air duct
- Short reaction time 1-4 seconds
- Low pressure resistance
- Very tight closure
- Long life time
- No safety risks
- Competitive price.

## Control or Regulation?

Two models of dampers are available:

- **VPSX** for on/off control of plants for process air extraction and material transport.
- **VPRX** for regulation of flow or pressure in process ventilation and material transport.

VPSX is controlled with a single solenoid valve and VPRX with a double valve.

## Kevlar Diaphragm damper model VPSX

Diaphragm damper consists of a Kevlar reinforced sleeve (with almost same opening area as the ducting) build into a steel housing. The damper opens/closes by inserting and deflating compressed air.

Model X has two guide vanes to ensure that the diaphragm opens/closes in two "tongues" that meets in the middle, and thereby closes the damper almost 100% tight.

The sleeve is made from natural rubber (NR) that is very resistant against most solid materials and gases. For special applications the sleeve can be coated with other types of rubber or polymers.

VPSX dampers in standard design are applied up to 5000 Pa vacuum and velocities up to 30 m/sec.

The damper housing is made from galvanizes steel plate and equipped with two nipples for steel ring connection (JKF type or Lindab Transfer type) or with Lindab "safe" rubber ring connections or plain with pipe ends.

## Complete pneumatic control set for on/off control

VPSX shut-off dampers are supplied complete with compressed air controller, which contains as follows:

- 1 pc. solenoid valve with both NO and NC opening
- 1 pc. 230V AC or 24V DC solenoid
- 1 pc. compressed air regulator with pressure gauge
- 1 pc. quick-release valve for compressed air.

The control set opens and closes the damper in 1-4 sec with signals from a controller such as FV50X, FV56X or FV57X.

The compressed air valve can be operated either NO or NC.

The air regulator is adjusted according to damper type and size.

The control set is normally supplied with connector for 8mm pipes.

## Pneumatic control set for pressure regulation

VPRX regulation dampers are supplied complete with:

- 1 pc. double solenoid valve with closed center position
- 2 pc. 24V DC solenoids for double pulse signals
- 1 pc. compressed air regulator with pressure gauge

This control set can receive double pulse signals from a regulator (e.g. FV56X, FV57X or FV68X) with very short response time. VPRX dampers are ideal for feedback regulation of pressure or flow in plants for process ventilation or material transport.

## Standard models and sizes, with JKF type nipples:

Nippel	Shut-off damper for on/off control		Regulation damper for material transport regulation	
	Type	Length	Type	Length
100 mm	VPSX 100	325 mm	VPRX 100	325 mm
125 mm	VPSX 125	380 mm	VPRX 125	380 mm
150 mm	VPSX 150	400 mm	VPRX 150	400 mm
160 mm	VPSX 160	400 mm	VPRX 160	400 mm
200 mm	VPSX 200	425 mm	VPRX 200	425 mm
250 mm	VPSX 250	480 mm	VPRX 250	480 mm
300 mm	VPSX 300	540 mm	VPRX 300	540 mm
350 mm	VPSZ 350	635 mm	VPRZ 350	635 mm
400 mm	VPSZ 400	575 mm	VPRZ 400	575 mm