



# Pneumatic Control Valve for Steam

PN-COS  
PN-COSR

## Improve Process Steam Control and Steam Quality\*

\*PN-COS only



PN-COS

# 5 Functions in 1

## Superior Stability

Employing the self adjusting pressure reducing valve **COSPECT** enables **PN-COS** to respond instantaneously to any fluctuations in primary pressure and flow rate by automatically absorbing them. So it is capable of maintaining a constant supply of steam at a stable secondary pressure.

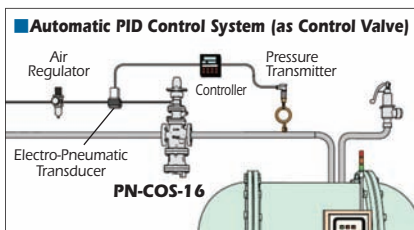
## 1 Use as a Control Valve

Combining with a controller and an electro-pneumatic transducer enables automatic PID operation. While primarily for pressure control, temperature control, etc. is possible depending on conditions. Because control operation is pneumatic, and the electro-pneumatic transducer can be installed in a separate location, **PN-COS** can be used in high temperature / humidity environments or hazardous areas.

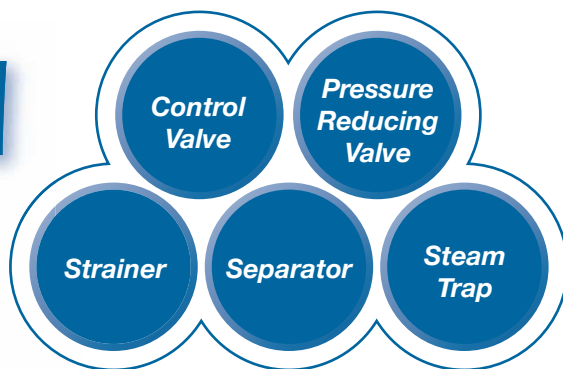
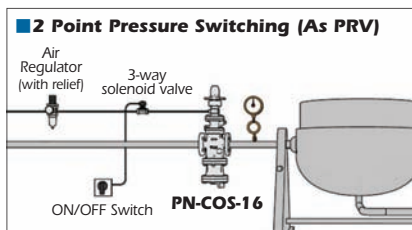
## 2 Use as a Pressure Reducing Valve

With the structure of a pilot operated pressure reducing valve, **PN-COS** can be combined with an air regulator\* to set secondary pressure remotely. Also, two point pressure setting is possible using motive air and the internal Adjustment Screw. Steam supply will be maintained even with motive air cut off.

\* with relief



(For explanation purposes only, not intended as installation designs.)



## 3 Features Improving Steam Quality

### Strainer

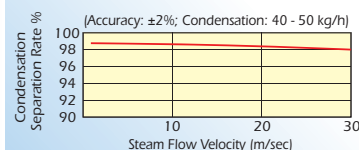
A 100 mesh screen captures large rust and scale particles. Trouble-causing foreign matter is not allowed to penetrate into the interior of the control valve or the steam using equipment.

### 4 Cyclone Separator

An SCE\* Separator with 98% separation efficiency removes entrained condensate and small particles of scale, to deliver dry steam.



\* Super Cyclonical Effects



$$\text{Separation Rate (\%)} = \frac{\text{quantity of condensate discharged}}{\text{quantity of incoming condensate}} \times 100$$

## 5 Steam Trap

A built-in free float steam trap continuously discharges the separated condensate and small particles of scale.



PN-COSR

Control Valve

Pressure Reducing Valve

Dual Functions

Like the **PN-COS**, the **PN-COSR**\* has the dual functions of a control valve and a pressure reducing valve with a great price to performance value, ideal for applications where dry steam is already being supplied through use of a separator, etc.

\* Does not include strainer, separator or steam trap functions.



Specifications	Model	DN	Body Material*	Connection	Max. Operating Pressure	Max. Operating Temp.	Primary Pressure Range	Adjustable Pressure Range	Differential Pressure	Minimum Adjustable Flow Rate	Required Motive Air Pressure**
PN-COS-16	PN-COSR-16	15,20,25,40,50	Cast Iron	Flanged (ASME)	13 barg	200 °C	2 to 13 barg	Within 10 to 84% of primary pressure but with a minimum pressure of 0.3 barg Max. pressure : [Motive air pressure - 1] barg	0.7 to 8.5 barg	5% of rated flow rate	[Desired secondary pressure + 1] barg to 16 barg
			Ductile Cast Iron Cast Stain. Steel	Flanged (DIN)	16 barg	220 °C	2 to 16 barg				

\* Major internal parts are Stainless Steel. Full product details (capacities, etc.) are included in the specification data sheet (SDS).

\*\*Use only oil free air filtered to 5 μm for motive air supply.



To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

**TLV EURO ENGINEERING UK LTD.**

Star Lodge, Montpellier Drive, Cheltenham, Gloucestershire, GL50 1TY, U.K.

Tel: [44]-(0)1242-227223 Fax: [44]-(0)1242-223077

E-mail: info@tlv.co.uk <http://www.tlv.com>

Manufacturer

**TLV CO., LTD.**

Kagogawa, Japan

is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001  
ISO 14001

