



COSPECT[®] AIR PRESSURE REDUCING VALVE

MODEL ACOS-10

SELF-ACTUATED PRESSURE REDUCING VALVE WITH SHOCK-ABSORBING PISTON

Features

Technologically advanced pressure reducing valve combined with condensate separator and air trap provides accurate control and air conditioning to maximize process system performance.

1. Space-saving unit simplifies system layout, piping and maintenance.
2. Self-aligning shock-absorbing spherical piston and advanced pilot regulator designs maintain secondary air pressure accuracy, even during adverse process conditions.
3. Built-in cyclone separator, with condensate separation efficiency as high as 98%, and self-modulating free float air trap provide dry, high-quality air supply.
4. Major internal components made of stainless steel for long service life.
5. Large surface area integral screens for pilot valve and main valve extend trouble-free service.
6. Internal secondary pressure-sensing channel makes external sensing line unnecessary.



Specifications

Model	ACOS-10
Connection	Flanged
Size (mm)	15, 20, 25, 32, 40, 50
Body Material	Cast Iron
Maximum Operating Pressure (MPaG) PMO	0.9
Maximum Operating Temperature (°C) TMO	100
Primary Pressure Range (MPaG)	0.1 – 0.9
Adjustable Pressure Range (MPaG)	0.05 – 0.7
Minimum Differential Pressure (MPa)	0.05
Minimum Adjustable Flow Rate	10% of rated flow rate
Applicable Fluid*	Air

* Do not use for toxic, flammable or otherwise hazardous fluids.

PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 1.6
Maximum Allowable Temperature (°C) TMA: 220

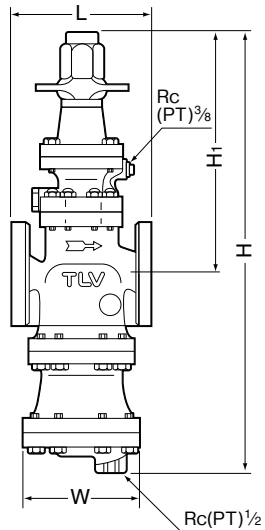
1 MPa = 10.197 kg/cm²



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.

Dimensions

● ACOS-10 Flanged

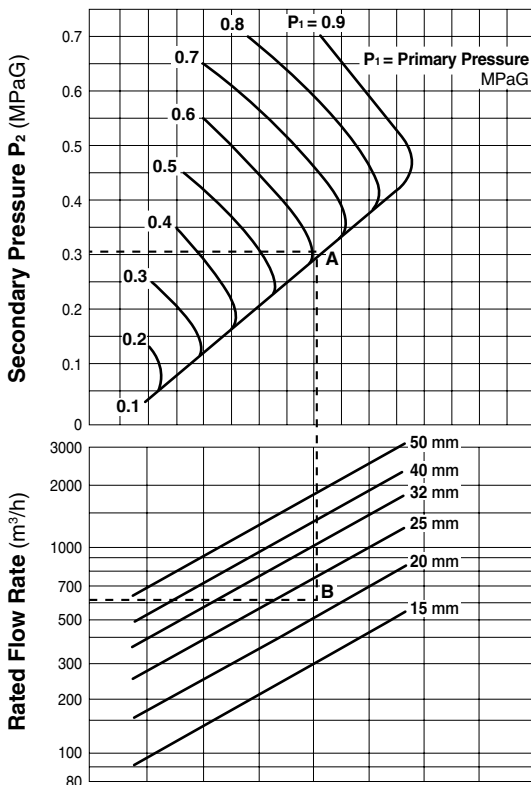


ACOS-10 Flanged (mm)

Size	L				H	H ₁	W	Weight* (kg)
	ASME Class							
	125FF	(150RF)	250RF	(300RF)				
(15)	—	170	—	170	495	285	105	[15]
(20)	—	182	—	182				[16]
25	176	188	188	192	522	282	150	21
32	206	220	220	220	572	302	165	25
40	209		222	224				27
50	255	255	260	261	635	315	195	43

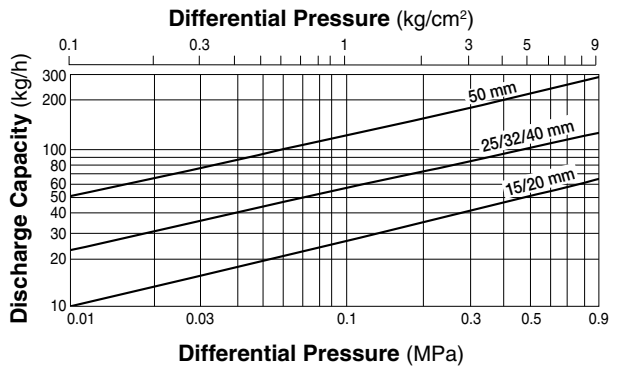
() No ASME standard exists for cast iron; machined to fit steel flanges
 Class 125 FF can connect to 150 RF, 250 RF can connect to 300 RF
 Other standards available, but length and weight may vary
 * Weight is for Class 250 RF [300 RF]

Sizing Chart



Rated flow rates represent equivalent flow rates of air at 20°C under atmospheric pressure.

Discharge Capacity



1. Differential pressure is the difference between the inlet pressure of the ACOS-10 and the outlet pressure of the trap.
2. Capacities are based on continuous discharge of condensate below 100°C with specific gravity of 1.



DO NOT use this product under conditions that exceed maximum differential pressure, as condensate backup will occur!

Sizing Example (see sizing chart at left)

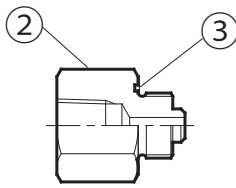
For primary pressure of 0.8 MPaG, set pressure 0.3 MPaG and air flow rate 600 m³/h, select an appropriate size.

1. Locate intersecting point A of 0.8 MPaG primary pressure and 0.3 MPaG set pressure. Go to point A and down until 600 m³/h, point B, is reached.
2. Since point B is located between 20 mm and 25 mm, the larger size, 25 mm, should be chosen.

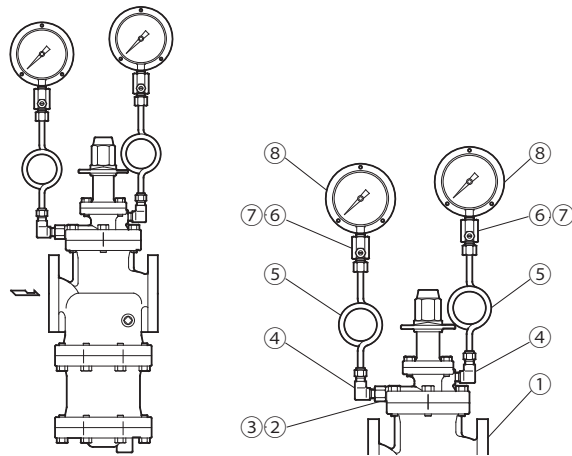
Option

<p>Pressure Gauge Unit</p>	<p>Replaces the standard screen holder plug to enable installation of a pressure gauge of the user's choice. Primary side: M16 holder plug (male/female), BSP/Rc(PT)/NPT 3/8. An elbow is required for pressure gauge installation. Secondary side: Rc(PT) 3/8 mounting port for elbow and pressure gauge installation.</p> <hr/> <p>Elbows, pressure gauge and connecting parts must be purchased separately.</p>
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• Configuration



• Installation Example



NOTE: For explanation purposes, a siphon tube style pressure gauge will be used. However, the instructions also apply to cooling tower-style pressure gauges.

No.	Part Name	No.	Part Name
1	Valve Body	5	Siphon Tube*
2	Holder Plug	6	Dampener*
3	Holder Plug Gasket	7	Dampener Gasket*
4	Elbow (male/female)*	8	Pressure Gauge*

* Purchase separately

Manufacturer
TLV CO., LTD.
 Kakogawa, Japan
is approved by LRQA Ltd. to ISO 9001/14001

