



# REDUCING VALVE FOR AIR

## MODEL ACOS-10

### 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. Patented self-aligning shock-absorbing spherical piston and advanced pilot regulator designs maintain secondary air pressure accuracy, even during adverse process conditions.
3. Built-in patented separator, with condensate separation efficiency as high as 98%, and self-modulating free float air trap provide dry, high-quality steam 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 primary and secondary pressure-sensing channels make external sensing lines unnecessary.



### Specifications

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

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS):

Maximum Allowable Pressure (MPaG) PMA: 1.57

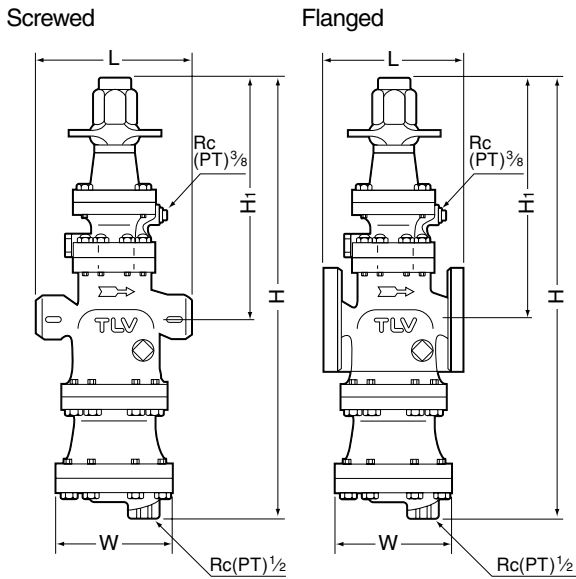
Maximum Allowable Temperature (°C) TMA: 220

1 MPa = 10.197kg/cm<sup>2</sup>



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 Screwed\*** (mm)

Size	L	H	H <sub>1</sub>	W	Weight (kg)
15	175	495	285	105	14
20					
25	190	522	282	150	19

\* Rc(PT), other standards available

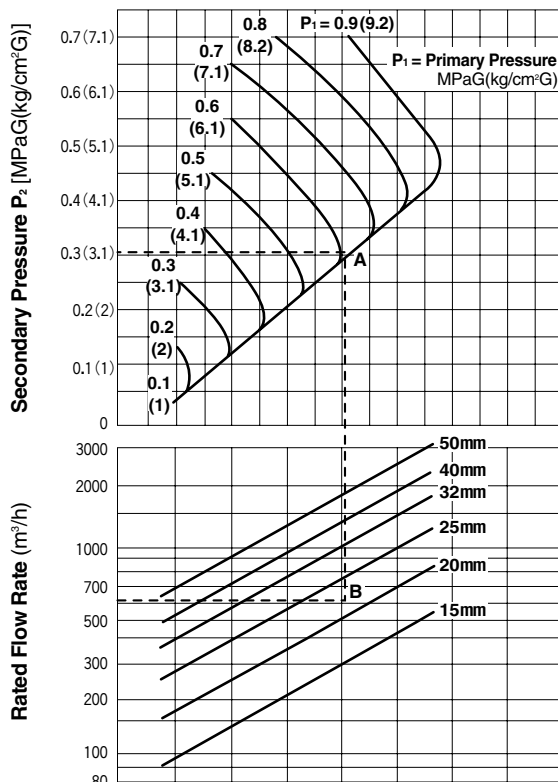
**ACOS-10 Flanged\*** (mm)

Size	L	H	H <sub>1</sub>	W	Weight (kg)
15	150	495	285	105	15
20	160				
25	190	522	282	150	20
32	190	572	302	165	25
40					27
50**	220	635	315	195	42
	255				

\* JIS10/16K, other standards available

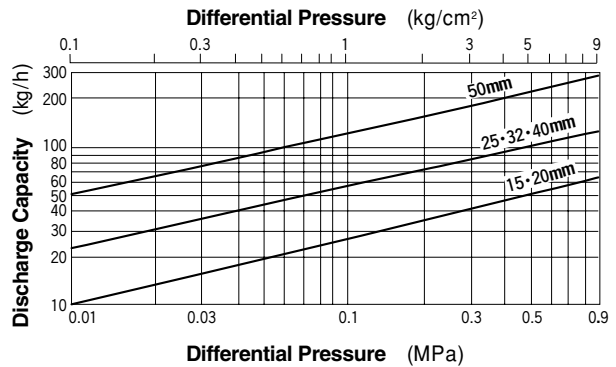
\*\* Upper figure: JIS10K, lower figure: JIS16K

**Sizing Chart**



Rated flow rates represent equivalent flow rates of standard air (air at 20°C and 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.
3. Recommended safety factor: at least 1.5.

**CAUTION** 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 m<sup>3</sup>/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 m<sup>3</sup>/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.

Manufacturer

ISO 9001/ISO 14001

**TLV**® CO., LTD.  
Kakogawa, Japan

is approved by LRQA Ltd. to ISO 9001/14001

