AL-24,24F

Full bore type | Lift type | Safety valve | **Relief valve**
Safety relief valve | Lever type | Closed type | Dash-pot structure
Handle type | Stainless | High pressure gas testing products
Diaphragm | Non-leakage

■Features

1. No need to worry about rust by made of bronze for valve case and stainless steel for valve seat. Operation is reliable since the valve is diaphragm type with no sliding part.
2. Wide set pressure range is available by only one spring. Changing set pressure is easy, because the adjusting screw is handle type and lock nut is butterfly nut.
3. Opening and closing are smooth even when the valve operates continuously, and surely relief the fluid at set pressure. Also it can operate stably from small to large flow rate.
4. Valve materials can be selected from EPDM or FKM (fluororubber) depending on the specification.
5. Can be connected in any direction (horizontal or vertical).

■Specifications

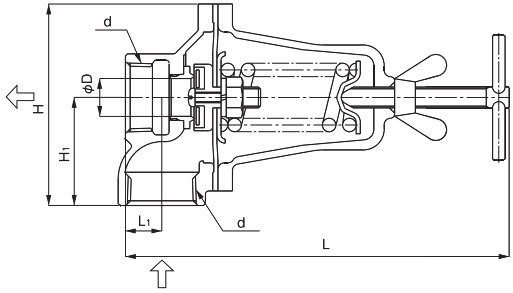
Model		AL-24	AL-24F
Application		Cold and hot water	Cold and hot water, Oil, Other non-dangerous fluids
Working pressure		0.1-0.7 MPa *1	
Maximum temperature		60°C	120°C
Material	Valve case	Bronze *2	
	Valve	NBR	FKM
	Valve seat	Stainless steel	
	Diaphragm	EPDM	FKM
Connection		JIS Rc screwed	

*1 Available with working pressure between 0.05MPa and 0.1MPa.
*2 Available with NPb-treated.

■Dimensions and Weights

(mm)

Nominal size	d	L	L_1	H	H_1	D	Weight (kg)
15A	Rc 1/2	180.5	20.5	91	46	15	1.4
20A	Rc 3/4	181.5	18.5	92	47	15	1.4
25A	Rc 1	187.5	17.5	97	52	18.2	1.6



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■Certified Capacity Table for AL-24, 24F

· Set pressure range 0.1 to 0.7 MPa (accumulation 25%)

(m^3/h)

Nominal size	Set pressure (MPa)												
	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70
15A	0.31	0.38	0.44	0.49	0.54	0.58	0.63	0.66	0.70	0.73	0.77	0.80	0.83
20A	0.31	0.38	0.44	0.49	0.54	0.58	0.63	0.66	0.70	0.73	0.77	0.80	0.83
25A	0.46	0.56	0.65	0.73	0.80	0.86	0.92	0.98	1.03	1.08	1.13	1.18	1.22

· Set pressure range 0.05 to 0.1 MPa (accumulation 25%)

(m^3/h)

Nominal size	Set pressure (MPa)					
	0.05	0.06	0.07	0.08	0.09	0.10
15A	1.27	1.39	1.50	1.61	1.70	1.80
20A	1.27	1.39	1.50	1.61	1.70	1.80
25A	1.87	2.05	2.21	2.37	2.51	2.65

· Calculation formula

$$V = \frac{AK}{12.4\sqrt{\frac{G}{P}}}$$

V: Discharge capacity (m^3/h)
D: Seat diameter (mm)
ℓ: Lift (mm)
0.1-0.7 MPa $\ell = D/40$
0.05-0.1 MPa $\ell = D/7$
A: Effective area (m^2)
$A = \pi D\ell$
K: 0.7(Flow rate coefficient)
G: Specific gravity
P: Opening pressure (MPa)
Viscosity is calculated from formula for viscosity correction.

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