AL-280

Features

1. Relief valve, exclusive for the pressure control of pumps with high pulsation pressure or large pressure fluctuation.
2. The trim parts (valve and valve seat) are designed to continuously discharge fluid against its set pressure change without popping (patent pending), preventing chattering and hunting.
3. Stainless steel with excellent corrosion resistance is used for the adjusting spring.

Specifications

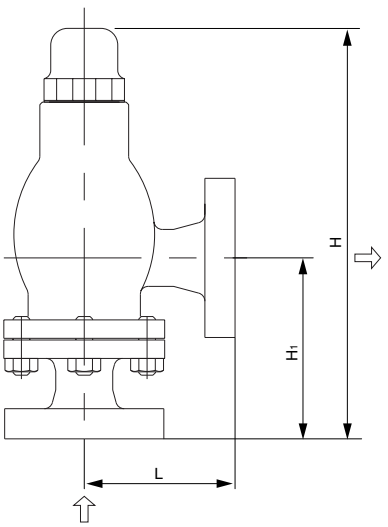
Structure		Closed type
Application		Cold and hot water, Oil (heavy oil A, heavy oil B, kerosene)
Working pressure		0.05-1.0 MPa
Maximum temperature		120˚C
Material	Valve case	Ductile cast iron
	Spring case	Ductile cast iron
	Valve, valve seat	Stainless steel
	Adjusting spring	Stainless steel
Connection		JIS 10K FF flanged

Dashpot structure

Dimensions and Weights

(mm)

Nominal size	L	H	H_1	Weight (kg)
15A	90	245	108	4.7
20A	90	245	108	5.0
25A	90	245	108	6.2
32A	91	285	115	8.6
40A	91	285	115	8.8
50A	105	331	132	13.0



Relief Valve Discharge Piping

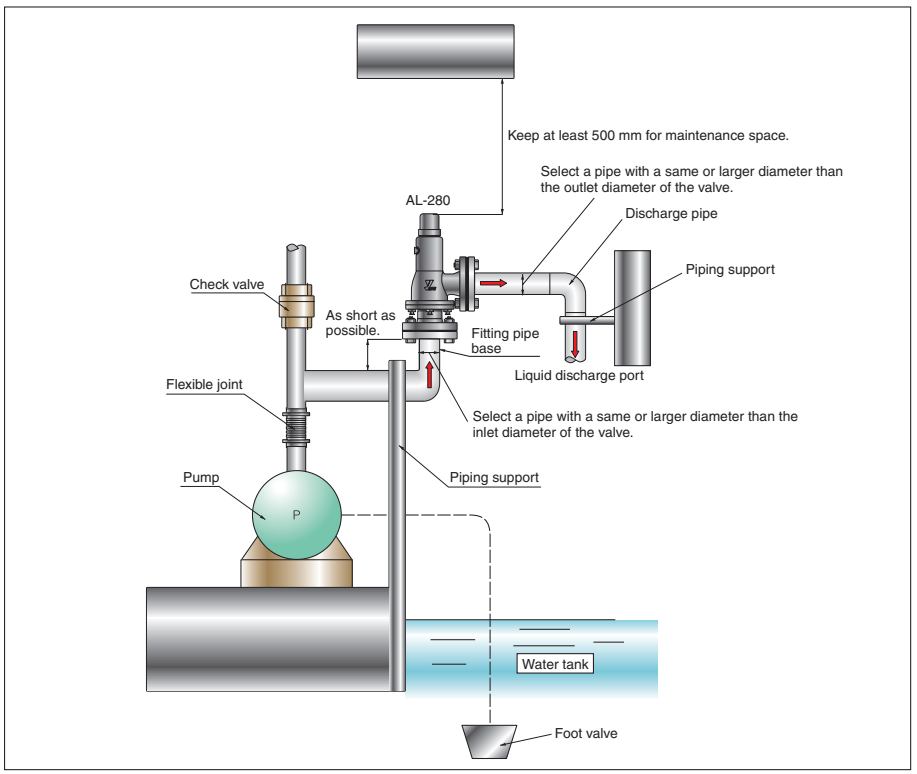


Table for Selecting Nominal Sizes

●Flow rate chart

The flow rate to each nominal size when the accumulation (overpressure to the set pressure) is 25% is as shown in Fig. 1.
See Fig. 2 when the accumulation is less than 25%.

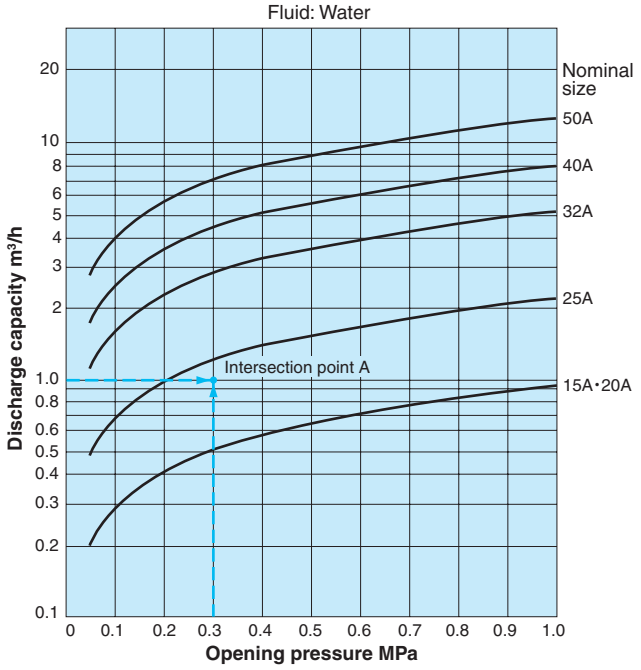
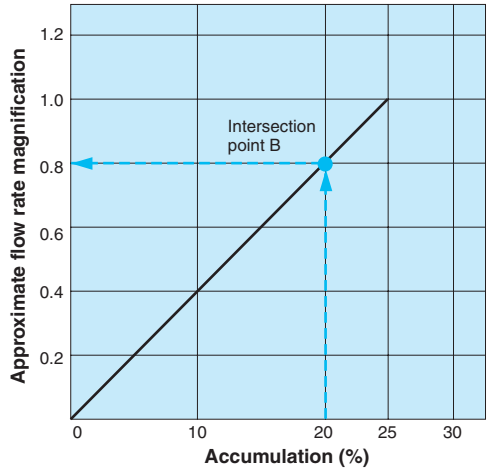


Fig. 1: Nominal size selection chart

[Example]
To select a nominal size when the working conditions are pressure: 0.3 MPa and discharge capacity: 1.0 m³/h, first find intersection point A of the pressure of 0.3 MPa on the horizontal axis and the discharge capacity of 1.0 m³/h on the vertical axis in Fig. 1.
Since intersection point A lies between the curve of nominal sizes 15A・25A and the curve of nominal size 25A, select the larger one, 25A.



When the accumulation is less than 25%, select an approximate flow rate magnification matching the accumulation based on this chart, and multiply the flow rate at 25% accumulation by the selected magnification.

Fig. 2: Approximate flow rate magnification

[Example]
To obtain the flow rate when the working conditions are nominal size: 25A, setting pressure: 0.1 MPa, and accumulation: 20%, first find the flow rate at an accumulation of 25% in Fig. 1. Then, mark intersection point B of the accumulation of 20% and the diagonal straight line in Fig. 2. Trace horizontally to the left from this intersection point B, and reach the point of 0.8 on the axis of approximate flow rate magnification.

●Discharge capacity (reference) (accumulation: 25%)

(m³/h)

Nominal size	Flow area (mm²)	Opening pressure (MPa)										
		0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
15A·20A	16.7	0.20	0.29	0.41	0.51	0.59	0.66	0.72	0.78	0.83	0.88	0.93
25A	36.2	0.49	0.69	0.98	1.20	1.38	1.54	1.69	1.83	1.96	2.07	2.19
32A	91.9	1.14	1.62	2.29	2.81	3.24	3.63	3.97	4.29	4.59	4.87	5.13
40A	143.6	1.79	2.53	3.58	4.39	5.07	5.67	6.21	6.71	7.17	7.61	8.02
50A	224.3	2.80	3.96	5.60	6.86	7.92	8.86	9.71	10.49	11.21	11.89	12.53