AL-150

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. Versatile type, compatible with fluids such as steam, air, water, and oil.
2. Achieved the highest performance by segmentalize the pressure range and finished by ultra-precision technique.
3. The trim parts (valve and valve seat) and adjusting spring are made of stainless steel. Used for the trim parts is SCS14A (equivalent to SUS316) with outstanding corrosion resistance.
4. Closed structure prevents fluid leakage to outside.

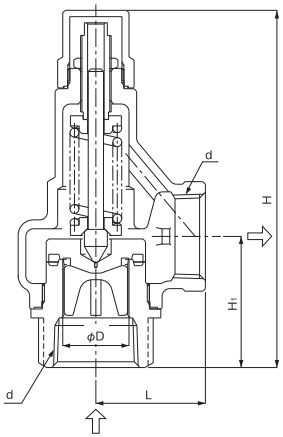
■Specifications

Structure		Closed type
Application		Steam, Air, Hot and cold water, Oil, Other non-dangerous fluids
Working pressure		0.05-1.0 MPa
Working temperature		5-220°C *1
Material	Spring case	Bronze
	Valve, Valve seat	Stainless steel (SCS14A)
	Adjusting spring	Stainless steel
Connection		JIS Rc screwed

*1 The maximum temperature is 150°C when using for water, oil, or other liquids.
· Please refer to the chart in P.3-82 for set pressure range.

■Dimensions and Weights

Nominal size	Dimension (mm)					Flow area πDℓ (mm²)	Weight (kg)
	d	D	L	H_1	H		
15A	Rc 1/2	16	34	40	128	20.1	0.7
20A	Rc 3/4	21	38	43	128.5	34.6	0.8
25A	Rc 1	26	43	51.5	144.5	53.0	1.1
32A	Rc 1-1/4	33	50	61.5	181.5	93.3	1.8
40A	Rc 1-1/2	41	60	60	205	135.2	2.8
50A	Rc 2	51	75	76	245.5	208.2	4.7



■Certified Capacity Table

· AL-150 for steam (saturation temperature) <Pressure vessel structure standard>

(kg/h)

Nominal size \ 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	15	20	29	40	50	60	70	80	90	100	109
20A	27	35	51	69	87	104	121	138	155	172	189
25A	42	54	78	105	133	159	186	212	237	263	289
32A	70	91	132	178	224	268	313	356	400	443	487
40A	105	136	198	266	335	402	468	534	599	664	729
50A	163	211	306	411	518	621	723	824	924	1025	1126

· AL-150 · 150T · 150TML for air (20˚C) <Pressure vessel structure standard>

(kg/h)

Nominal size \ 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	25	33	48	65	81	98	114	131	147	164	181
20A	44	57	83	111	140	169	197	226	254	283	311
25A	67	87	127	171	215	258	302	346	390	433	477
32A	113	147	214	288	362	435	509	582	656	730	803
40A	169	221	321	431	542	652	762	872	982	1093	1203
50A	262	341	496	666	836	1006	1176	1346	1516	1687	1857

· AL-150 · 150T · 150TML · 150TR for water (accumulation: 25%) <Yoshitake standard>

(m^3/h)

Nominal size \ 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	0.4	0.5	0.9	1.1	1.3	1.5	1.6	1.8	1.9	2.0	2.1
20A	0.6	0.9	1.6	2.0	2.3	2.6	2.8	3.1	3.3	3.5	3.7
25A	1.0	1.5	2.5	3.1	3.6	4.0	4.4	4.7	5.1	5.4	5.7
32A	1.8	2.6	4.5	5.5	6.3	7.1	7.8	8.4	9.0	9.5	10.0
40A	2.7	3.8	6.5	7.9	9.2	10.3	11.3	12.2	13.0	13.8	14.6
50A	4.1	5.9	10.0	12.3	14.2	15.9	17.4	18.8	20.1	21.3	22.4

· Please refer to P.3-12 for the calculation procedure for nominal size selection.

Soft seat is used for the trim parts!

Soft seat (O-ring) is used for the trim parts, ensuring the reliable airtightness of the valve seat.

Apply Pressure Classification List for Each Safety Valve Model

(unit: MPa)

Model	Nominal size	A	B	C	D	E	F	G	H
AL-150·150L·140	15A	0.05-0.2	0.21-0.3 0.31-0.4	0.41-0.55	0.56-0.75	0.76-1.0			
	20A	0.05-0.2	0.21-0.35	0.36-0.45	0.46-0.6	0.61-0.75	0.76-1.0		
	25A	0.05-0.2	0.21-0.35	0.36-0.45	0.46-0.55	0.56-0.8	0.81-1.0		
	32A	0.05-0.2	0.21-0.3 0.31-0.4	0.41-0.65	0.66-1.0				
	40A·50A	0.05-0.2	0.21-0.3 0.31-0.4	0.41-0.65	0.66-0.8	0.81-1.0			
AL-150H	15A						1.0-1.6		
	20A·25A							1.0-1.6	
	32A					1.0-1.6			
	40A·50A						1.0-1.6		
AL-140H	15A						1.0-1.3	1.31-2.0	
	20A·25A							1.0-1.6	1.61-2.0
	32A					1.0-1.6	1.61-2.0		
	40A·50A						1.0-1.6	1.61-2.0	
AL-150T·150T-N·150TR AL-150TML·140T	15A	0.05-0.2	0.21-0.4	0.41-0.55	0.56-0.75	0.76-1.0			
	20A	0.05-0.2	0.21-0.35	0.36-0.45	0.46-0.6	0.61-0.75	0.76-1.0		
	25A	0.05-0.2	0.21-0.35	0.36-0.45	0.46-0.55	0.56-0.8	0.81-1.0		
	32A	0.05-0.2	0.21-0.4	0.41-0.65	0.66-1.0				
	40A·50A	0.05-0.2	0.21-0.4	0.41-0.65	0.66-0.8	0.81-1.0			
AL-17·27	15A - 50A	0.05-0.2	0.21-0.4	0.41-0.65	0.66-1.0	1.01-1.6			
AL-10	15A - 40A	0.05-0.2	0.21-0.4	0.41-0.65	0.66-1.0				
	50A	0.05-0.1 0.11-0.2	0.21-0.4	0.41-0.65	0.66-1.0				
AL-250·250R AL-260·260R	15A	0.05-0.2	0.21-0.4	0.41-0.55	0.56-0.75	0.76-1.0			
	20A	0.05-0.2	0.21-0.35	0.36-0.45	0.46-0.6	0.61-0.75	0.76-1.0		
	25A	0.05-0.2	0.21-0.35	0.36-0.45	0.46-0.55	0.56-0.8	0.81-1.0		
	32A	0.05-0.2	0.21-0.4	0.41-0.65	0.66-1.0				
	40A·50A	0.05-0.2	0.21-0.4	0.41-0.65	0.66-0.8	0.81-1.0			
AL-300·301	15A - 50A	0.05-0.25	0.26-0.5	0.51-0.75	0.76-1.6				
AL-300T·301T	15A - 50A	0.05-0.25	0.26-0.5	0.51-0.75	0.76-1.3				
AL-280	15A·20A	0.05-0.2	0.21-0.35	0.36-0.45	0.46-0.6	0.61-0.75	0.76-1.0		
	25A	0.05-0.2	0.21-0.35	0.36-0.45	0.46-0.55	0.56-0.8	0.81-1.0		
	32A	0.05-0.2	0.21-0.4	0.41-0.65	0.66-1.0				
	40A·50A	0.05-0.2	0.21-0.4	0.41-0.65	0.66-0.8	0.81-1.0			
AL-4·4T	65A	0.05-0.1	0.11-0.25	0.26-0.55	0.56-1.0	1.01-1.5			
	80A - 125A	0.05-0.1	0.11-0.2	0.21-0.4	0.41-0.8	0.81-1.5			
	150A	0.05-0.1	0.11-0.2	0.21-0.4	0.41-0.8				
AL-4S·4ST	65A	0.05-0.1	0.11-0.25	0.26-0.55	0.56-1.0	1.01-2.0			
	80A·100A	0.05-0.1	0.11-0.2	0.21-0.4	0.41-0.8	0.81-1.6	1.61-2.0		
AL-5	20A	0.05-0.12	0.13-0.21	0.22-0.35	0.36-0.63	0.64-0.99	1.0-1.5		
	25A	0.05-0.08	0.09-0.15	0.16-0.25	0.26-0.45	0.46-0.75	0.76-1.0	1.01-1.1	1.11-1.5
	32A	0.05-0.08	0.09-0.17	0.18-0.25	0.26-0.45	0.46-0.75	0.76-1.0	1.01-1.1	1.11-1.5
	40A	0.05-0.08	0.09-0.15	0.16-0.4	0.41-0.7	0.71-1.0	1.01-1.1	1.11-1.5	
	50A	0.05-0.09	0.1-0.25	0.26-0.5	0.51-0.7	0.71-1.0	1.01-1.1	1.11-1.5	
AL-6	65A	0.05-0.1	0.11-0.25	0.26-0.55	0.56-1.0	1.01-1.5			
	80A	0.05-0.1	0.11-0.2	0.21-0.4	0.41-0.8	0.81-1.0	1.01-1.5		
	100A	0.05-0.1	0.11-0.2	0.21-0.4	0.41-0.8	0.81-1.0	1.01-1.5		
	125A	0.05-0.1	0.11-0.2	0.21-0.4	0.41-0.8	0.81-1.0	1.01-1.5		
	150A	0.05-0.1	0.11-0.2	0.21-0.4	0.41-0.8				
AL-31·31H	15A	0.05-0.15	0.16-0.25 0.26-0.35	0.36-0.45 0.46-0.55	0.56-0.65 0.66-0.75	0.76-0.85 0.86-1.0	1.0-1.3	1.31-1.6 1.61-2.0	
	20A	0.05-0.2	0.21-0.3		0.31-0.4 0.41-0.5	0.51-0.7	0.71-1.0	1.0-1.3 1.31-1.6	1.61-2.0
	25A	0.05-0.2	0.21-0.3	0.31-0.45	0.46-0.55	0.56-0.65 0.66-0.8	0.81-1.0	1.0-1.6	1.61-2.0
	32A - 50A	0.05-0.2	0.21-0.3	0.31-0.5	0.51-0.65	0.66-0.8	0.81-1.0	1.0-1.6	1.61-2.0