

AF-5,5S

3

Safety Relief Valve

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		



AF-5



AF-5S

■ Features

1. Full bore safety valve with increased safety. Compact and lightweight (about half size of the previous full bore type safety valve).
2. A material of excellent quality is used for the trim parts. High performance is maintained by precision processing and heat treatment.
3. Corrosion-free due to corrosion-resistant material (the AF-5S is all stainless made, offering high corrosion resistance and durability).
4. Due to lift lever mechanism a discharge inspection can be manually performed at more than 75% of the opening pressure.

■ Specifications

Model		AF-5		AF-5S	
Structure		Open type with a lever			
Application		Steam	Air, Other non-dangerous fluids	Steam, Air, Other non-dangerous fluids	
Working pressure		0.1-2.0 MPa	0.1-1.0 MPa	0.1-1.0 MPa	
Maximum temperature		220°C			
Material	Spring case	Bronze		Stainless steel	
	Valve, valve seat	Stainless steel			
Connection		Inlet: JIS R screwed Outlet: JIS Rc screwed			

■ Dimensions and Weights

• AF-5

Nominal size	Inlet diameter x Throat diameter x Outlet diameter di x dt x do	Valve seat diameter	Flow area $\frac{\pi}{4} dt^2$ (mm ²)	Lift ℓ (mm)	Dimension (mm)			Plug	Weight (kg)
					L	H ₁	H		
20A	R 1 x 15 x Rc 1	18	176.6	3.3	38	61	136 (151)	R 1/8	1.3 (1.5)
25A	R 1-1/4 x 19 x Rc 1-1/4	22	283.3	4.4	45	70	157 (182)	R 1/8	1.9 (2.1)
32A	R 1-1/2 x 24 x Rc 1-1/2	28	452.1	5.5	52	80	183 (202)	R 1/8	2.7 (3.0)
40A	R 2 x 30 x Rc 2	35	706.5	6.8	65	98	216 (252)	R 1/4	5.1 (6.0)
50A	R 2-1/2 x 38 x Rc 2-1/2	44	1133.5	8.7	77	121	262 (314)	R 1/4	8.4 (9.5)

• The nominal size and the connection size are different.

• The values in parentheses are the values for working pressure 1.6 MPa-2.0 MPa.

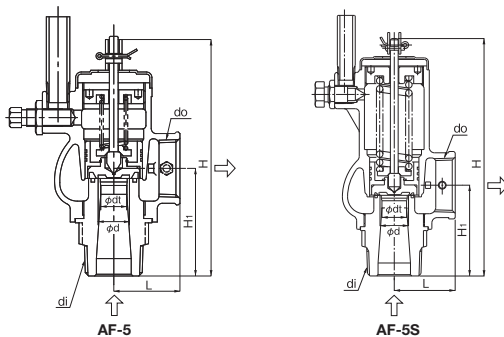
• AF-5S

Nominal size	Inlet diameter x Throat diameter x Outlet diameter di x dt x do	Valve seat diameter	Flow area $\frac{\pi}{4} dt^2$ (mm ²)	Lift ℓ (mm)	Dimension (mm)			Plug	Weight (kg)
					L	H ₁	H		
20A	R 1 x 15 x Rc 1	18	176.6	3.3	40	62	163	R 1/8	1.65
25A	R 1-1/4 x 19 x Rc 1-1/4	22	283.3	4.4	47	70	190	R 1/8	2.35
32A	R 1-1/2 x 24 x Rc 1-1/2	28	452.1	5.5	52	79	208	R 1/8	2.90
40A	R 2 x 30 x Rc 2	35	706.5	6.8	65	98	248	R 1/4	5.30
50A	R 2-1/2 x 38 x Rc 2-1/2	44	1133.5	8.7	77	121	315	R 1/4	9.20

• The nominal size and the connection size are different.

■At the Time of Ordering

When ordering, please inform set pressure and application. (If the application is steam, please also specify the usage either pressure vessel structure or boiler structure.)



■Certified Capacity Table for AF-5, 5S

· For steam (saturation temperature) <Pressure vessel structure standard>

(kg/h)

Pressure MPa / Nominal size	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
20A	159	231	310	390	468	545	621	697	773	849	925	1001	1076	1152	1227	1303	1378	1455	1531	1606
25A	255	370	498	627	751	875	997	1118	1240	1362	1484	1606	1726	1849	1968	2090	2211	2335	2456	2576
32A	407	591	794	1000	1199	1396	1591	1785	1979	2175	2369	2562	2755	2950	3142	3336	3529	3726	3919	4112
40A	636	925	1242	1563	1874	2182	2487	2790	3093	3398	3702	4005	4306	4611	4910	5213	5515	5823	6125	6425
50A	1021	1484	1992	2508	3007	3501	3991	4477	4963	5453	5940	6425	6909	7398	7877	8364	8849	9343	9826	10309

· AF-5: 0.1 MPa to 1.6 MPa AF-5S: 0.1 MPa to 1.0 MPa

<Boiler structure standard>

(kg/h)

Pressure MPa / Nominal size	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
20A	155	227	299	372	443	515	587	659	729	800	872	942	1013	1084	1156	1227	1296	1367	1439	1510
25A	249	365	480	598	711	827	942	1057	1170	1284	1398	1512	1625	1740	1854	1968	2080	2193	2309	2422
32A	398	582	767	954	1136	1320	1503	1687	1867	2050	2232	2413	2594	2777	2959	3141	3319	3500	3685	3865
40A	622	910	1198	1491	1775	2063	2350	2636	2918	3204	3488	3772	4054	4340	4625	4909	5187	5470	5759	6041
50A	998	1461	1923	2393	2848	3311	3770	4229	4681	5140	5597	6052	6505	6963	7420	7876	8323	8777	9239	9692

· For air (20°C) <Pressure vessel structure standard>

(kg/h)

Pressure MPa / Nominal size	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
20A	257	374	502	630	759	887	1015	1143	1272	1400
25A	413	600	806	1011	1217	1423	1629	1835	2040	2246
32A	659	958	1286	1614	1943	2271	2600	2928	3256	3585
40A	1030	1497	2010	2523	3036	3550	4063	4576	5089	5602
50A	1654	2402	3225	4049	4872	5695	6518	7342	8165	8988

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