

APPLICATION AND USE

2F.. series valves are used to control fluids belonging to the group showed in the table according to article 9 of 97/23/CE directive (PED) in air-conditioning, thermoventilation and heating plants and in industrial processes; therefore, they cannot be employed as safety valves.

MANUFACTURING CHARACTERISTICS

They consist in a two-way simple seat valve body to be assembled on an electrical bidirectional actuator.



TECHNICAL CHARACTERISTICS

Model	2FGB DN25÷150	2FGA DN15÷100	2FSA DN25÷65	2FAA DN15÷80	2FAA.P DN15÷80
Construction	PN16	PN16	PN25	PN40	PN40
Body	cast iron	cast iron	spheroidal cast iron	steel	steel
Seat	cast iron	stainless steel	steel	stainless steel	stainless steel
Plug	forged brass	stainless steel	steel	stainless steel	stainless steel
Stem (Ø 9mm)	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel
Control characteristics	equal percentage	equal percentage	equal percentage	equal percentage	equal percentage
Stem packing	EPDM O-ring(4)	Teflon V-ring	Teflon V-ring	Teflon V-ring	(²)
Max. fluid temperature °C	150	200	230	230	350
Min. fluid temperature °C	-10 (1)	-10 (1)	-10 (1)	-10 (1)	-20 (1) (3)
Fluid (5)	Group 2	Group 2	Group 2	Group 2	Group 1
Connections	Flanged PN16	Flanged PN16	Flanged PN25	Flanged PN40	Flanged PN40
Leakage % Kvs (6)	0,03	0,02	0,02	0,02	0,02
Lowered stem action	normally open	normally closed	normally open	normally closed	normally closed

(1) For applications with possible ice formation on stem and gasket, see 248 accessory.

(2) Graphite packing for high temp.; forced lubrication on extended neck. Teflon gasket for low temperatures, see (³)

(3) For applications on fluids from -10 to -20 °C, replace letter P with T, e.g. 2FAA50T. In such a case, the max. temperature is 230 °C.

(4) Double O-ring and graphited teflon scraper ring.

(5) Group 1: water, overheated water, steam, diathermic oil.
For different fluids belonging to group 1, please contact our Sales Support.

Group 2: water, overheated water, steam.

For different fluids belonging to group 2, please contact our Sales Support.

(6) Leakage is measured according to the EN1349 standard.

MOTORIZED VALVES OPTIONS

MODEL DESCRIPTION

- A125-2** flanges with ANSI 125 bolt holes (for 2FGA DN25,32,50,65 and 2FGB DN25÷150 valves)
- A150-2** flanges with ANSI 150 bolt holes (for 2FAA DN32÷65 and 2FSA DN50÷65 valves)
- A300-2** flanges with ANSI 300 bolt holes (for 2FSA DN25÷65 and 2FAA DN15,32,40,50,65 valves)

ACCESSORIES

MODEL DESCRIPTION

- 248** stem heater for applications on -10 °C low temperature fluid with MVH, MVF and MVE actuators

ACTUATORS TECHNICAL CHARACTERISTICS, ELECTRICAL WIRING DIAGRAM AND INSTALLATION

See actuators data sheets and mounting instructions.

MAX DIFFERENTIAL AND CLOSE-OFF PRESSURE (kPa)

U-Bolt Connection	DN	Kvs	MVH	MVHA/C	MVH3K	MVF54	MVF58	MVF515	MVF59A/C	MVEX06	MVEX10
			A-AB	A-AB	A-AB	A-AB	A-AB	A-AB	A-AB	A-AB	A-AB
2FGA	15R0	0,6	1600	1600	1600	1600	1600	1600	1600	1600	1600
	15R1	1									
	15R2	1,6									
	15R3	2,5									
	15	4	1600	1600	1600	1210	1600	1600	1600	1600	1600
	20	6,3	1600	1510	1600	710	1600	1600	1600	1250	1600
	25	10	1600	920	1600	430	1060	1600	1220	760	1410
	32	16	1600	920	1600	430	1060	1600	1220	760	1410
	40	24	1340	620	1600	280	710	1470	820	510	950
	50	40	870	400	1600	180	460	960	530	330	620
	65	63	350	160	830	60	180	390	210	130	250
	80	110	230	100	550	-	120	250	-	80	160
	100	140	140	60	350		70	160		50	100
2FAA 2FAA..P	15R2	1,6	3000	3000	3000	1640	3000	3000	3000	3000	3000
	15	4	3000	1870	3000	530	2269	3000	2700	1450	3210
	20	6,3	2840	1110	3000	300	1343	3000	1600	850	1900
	25	10	1740	670	3000	180	820	1930	970	510	1160
	32	16	1740	670	3000	180	820	1930	970	510	1160
	40	24	1170	450	2920	110	550	1300	650	340	780
	50	40	760	290	1910	70	355	850	420	220	510
	65	63	310	110	790	20	142	340	170	80	200
	80	110	200	70	520	-	91	220	-	50	130
2FGB	25R4	4	1600	1100	1600	600	1247	1600	1400	940	1590
	25R7	6,3	1600	1100	1600	600	1247	1600	1400	940	1590
	25	10	1600	1100	1600	600	1247	1600	1400	940	1590
	40R	19	1170	590	1600	320	672	1270	750	500	860
	40	25	1170	590	1600	320	672	1270	750	500	860
	50	40	730	360	1600	200	418	790	470	310	530
	65	63	430	210	960	110	247	470	270	180	310
	80	100	280	130	620	70	158	300	-	110	200
	100	130	170	80	390	40	98	190		70	120
	125	200	100	50	240	-	61	110		40	70
	150	300	70	30	160		41	80		30	50
2FSA	25R4	4	2500	2150	2500	1190	2441	2500	2500	1850	2500
	25R7	6,3	2150	1080	2500	590	1233	2340	1390	930	1580
	25	10	2150	1080	2500	590	1233	2340	1390	930	1580
	32	16	1450	730	2500	390	830	1580	930	620	1060
	40	25	1040	520	2310	280	595	1140	670	440	760
	50	40	660	330	1470	-	376	720	420	280	480
	65	63	390	190	860		219	420	240	160	280

NOTE In order to avoid wear between plug and seat, we recommend not to overcome the differential pressure as follows:

2FGB = 200 kPa

2FGA = 600 kPa

2FSA = 800 kPa

2FAA = 1200 kPa

Kvs is the flow rate in m³/h of water at a temperature between 5 °C and 40 °C passing through a valve open at nominal stroke with 100 kPa (1 bar) differential pressure.

**** 2FGB-2FSA valves:** in emergency MVHA valve closed; MVHC valve open. **2FGA-2FAA valves:** in emergency MVHA valve open; MVHC valve closed.

Note: The max operating pressures at different temperatures for various PN classes must correspond to the following standards: UNI 1092-02 and UNI 12516-1.

INSTALLATION

Hydraulic connections

Respect the fluid direction as indicated by the arrow on the valve body or, in case letters are used with inlet in A and outlet AB.

Valve mounting:

Before mounting the valve, make sure pipes are clean, free from welding slags. The pipes must be perfectly aligned with the valve body and not subjected to vibrations. For installations on plants with high temperature fluids (steam, overheated water, diathermic oil) use expansion joints to avoid the dilatation of pipes to stress the valve body. Install the valves with the actuator in vertical position for fluid temperature up to 120°C; with higher temperatures they should be mounted horizontally.

Avoid the valve installation in plants which are considered aggressive and/or corrosive for valve materials.

Please contact our Sales Support in order to define which potentially aggressive or polluting substances can be used.

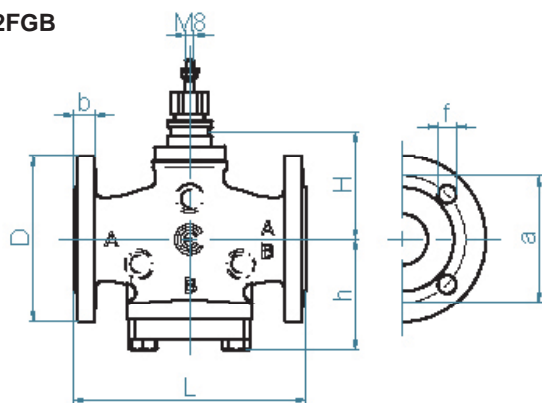
We disclaim all responsibility in case of valve failure due to external fortuitous events (fire, earthquakes etc.).

Notes:

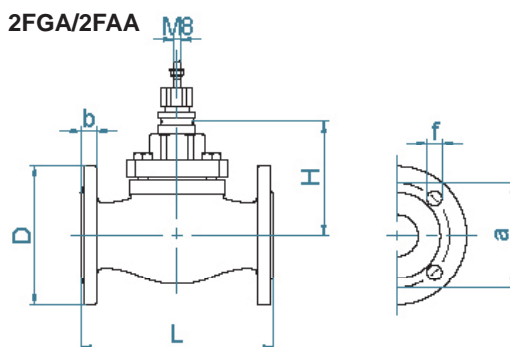
The actuator can be rotated with respect to the valve body by blocking the ring nut; after such operation re-tighten the ring nut.

OVERALL DIMENSIONS (mm)

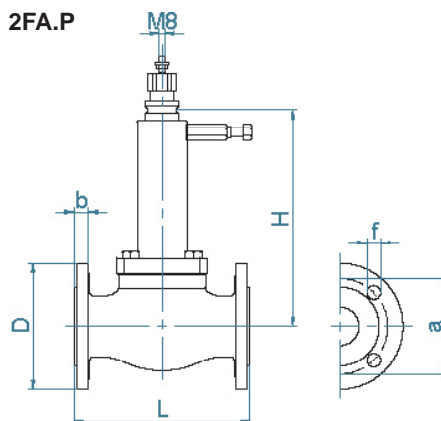
2FGB



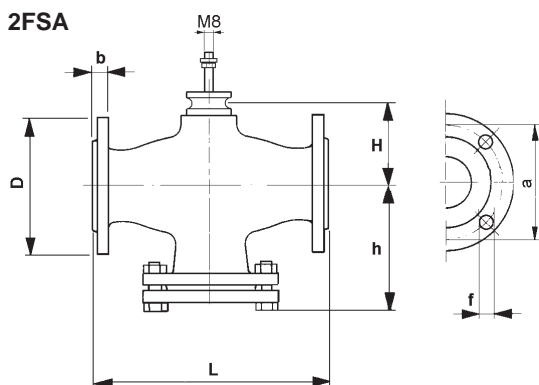
2FGA/2FAA



2FA.P



2FSA



Model	DN	L	H	h	D	b	a	f	Holes nr.	Weight [Kg]	Stroke [mm]
2FGB PN16	25	160	50	106	115	16	85	14	4	5	16,5
	40	200	64	128	150	18	110	18	4	9,6	25
	50	230	66	145	165	20	125	18	4	13	25
	65	290	84	175	185	20	145	18	4	18	25
	80	310	94	187	200	22	160	18	8	28,6	45
	100	350	105	207	220	22	180	18	8	32	45
	125	400	128	234	250	24	210	18	8	45	45
	150	480	146	277	285	24	240	22	8	60	45
2FGA PN16	15	130	107	--	95	16	65	14	4	3,5	16,5
	20	150	109	--	105	16	75	14	4	4,5	16,5
	25	160	112	--	115	16	85	14	4	5,5	16,5
	32	180	121	--	140	18	100	18	4	8,7	25
	40	200	129	--	150	18	110	18	4	10,3	25
	50	230	137	--	165	20	125	18	4	13,7	25
	65	270	175	--	185	20	145	18	4	19,6	25
	80	310	190	--	200	22	160	18	8	31,7	45
	100	350	215	--	220	24	180	18	8	43,5	45
2FAA PN40	15	130	107	--	95	16	65	14	4	4,1	16,5
	20	150	109	--	105	16	75	14	4	5,1	16,5
	25	160	112	--	115	16	85	14	4	6,1	16,5
	32	180	121	--	140	18	100	18	4	10,1	25
	40	200	152	--	150	18	110	18	4	12,3	25
	50	230	160	--	165	20	125	18	4	17	25
	65	270	175	--	185	20	145	18	8	23,8	25
	80	310	190	--	200	22	160	18	8	32	45
2FSA PN25	25	160	92	83	115	18	85	14	4	6	16,5
	32	180	97	102	140	18	100	18	4	10	25
	40	200	98	104	150	18	110	18	4	11	25
	50	230	107	110	165	20	125	18	4	16	25
	65	270	117	124	185	22	145	18	8	20	25
2FA. P PN40	15	130	178	--	95	16	65	14	4	6,2	16,5
	20	150	180	--	105	18	75	14	4	8,3	16,5
	25	160	183	--	115	18	85	14	4	8,6	16,5
	32	180	269	--	140	18	100	18	4	14,7	25
	40	200	277	--	150	18	110	18	4	15,4	25
	50	230	285	--	165	20	125	18	4	25	25
	65	270	300	--	185	22	145	18	8	29	25
	80	310	315	--	200	24	160	18	8	38	45

The performances stated in this sheet can be modified without any prior notice due to design improvements