



Discrete direct acting 2 port solenoid valve for hot water
(special purpose valve)

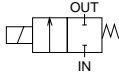
FHB Series

- NC (normally closed) type
- Port size: Rc1/8 to Rc1/2



JIS symbol

- NC (normally closed) type



Common specifications

Descriptions	FHB
Working fluid	Hot water (90 °C or less)
Working pressure	0 to 1.5
differential range MPa	(Refer to the maximum working pressure differential on the individual specifications)
Withstanding pressure (water pressure) MPa	5.0 (3.0 for orifice φ7, φ10 mm)
Fluid temperature °C	1 to 90 (no freezing)
Ambient temperature °C	-20 to 60
Heat proof class	H or equivalent
Atmosphere	No corrosive gas and flammable
Valve structure	Direct acting poppet structure
Valve seat leakage cm ³ /min	0 (water pressure)
Installation attitude	Free
Protective structure	IP65 or equivalent

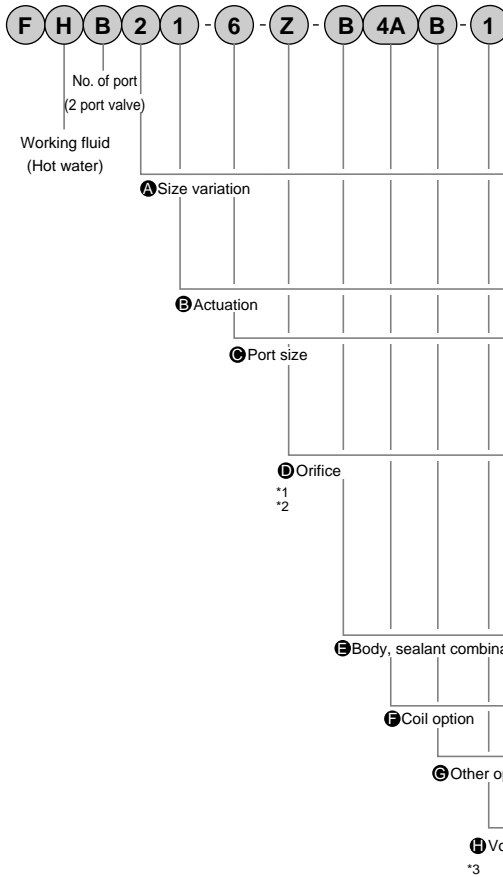
Individual specifications

Descriptions Model no.	Port size	Orifice (mm)	Cv flow factor	Max. working pressure differential MPa	Max. working pressure MPa	Rated voltage	Rated electric power (VA)				Power consumption (W)		Weight (kg)									
							At holding		At starting		AC											
							50Hz	60Hz	50Hz	60Hz	50Hz	60Hz										
NC (normally closed) type																						
FHB 21-6-Z -2	Rc1/8	1	0.035	1.5	1.5	100 VAC 50/60Hz	5.5	4	9	8	2.8	2	0.16									
		2	0.15	0.7																		
FHB 31-8-3 -5 -6	Rc1/8	3	0.31	0.7			1.5	100 VAC 50/60Hz	10	7	23	20		4.2	3.2	0.31						
		4	0.54	0.4																		
FHB 41-8-5 -6 -7	Rc1/4	5	0.75	0.25					1.5	100 VAC 50/60Hz	10	7		23	20		4.2	3.2	0.31			
		4	0.54	0.8																		
	Rc3/8	5	0.80	0.5																		
FHB 41-10-8 -5 -6	Rc3/8	6	0.54	0.8							0.3	110 VAC 60Hz		16	13		40	35		7.5	6.3	0.51
		7	1.10	0.2																		
FHB 41-10-8 -5 -6	Rc1/2	10	1.88	0.1										0.3	200 VAC 50/60Hz		16	13		40	35	
		4	0.54	1.1																		
FHB 51-8-5 -6 -7	Rc1/4	4	0.54	1.1	1.5	220 VAC 60Hz							23				19	60		50	11.5	
		5	0.80	0.7																		
	Rc3/8	7	1.10	0.3																		
FHB 51-10-8 -5 -6	Rc3/8	10	1.88	0.12			0.3	220 VAC 60Hz	23	19			60			50	11.5	10	0.79			
		Rc1/2	10	1.88																0.12		

*1: Use the allowable voltage fluctuation range within ±10% of the rated voltage.
*2: The leakage current must be less than values given below.

Leakage current	Voltage	100 VAC	200 VAC
	Model no.		
	FHB2	3mA or less	1.5mA or less
FHB3/4/5	6mA or less	3mA or less	

How to order



Symbol	Descriptions	Model no.			
		FHB	FHB	FHB	FHB
		21	31	41	51
A Size variation					
2	22 mm	●			
3	28 mm		●		
4	34 mm			●	
5	40 mm				●
B Actuation					
1	NC (normally closed) type	●	●	●	●
C Port size					
6	Rc1/8	●	●		
8	Rc1/4		●	●	●
10	Rc3/8			●	●
15	Rc1/2			●	●
D Orifice					
Z	φ 1	●			
2	φ 2	●			
3	φ 3		●		
5	φ 4		●	●	●
6	φ 5		●	●	●
7	φ 7			●	●
8	φ 10			●	●
E Body, sealant combination					
	Body	Sealant			
B	Bronze casting	FKM	●	●	●
F Coil option					
4A	Standard	Grommet lead wire	●	●	●
G Other options					
Blank	Standard	None	●	●	●
B	Option	Mounting plate	●	●	●
H Voltage					
1	100 VAC 50/60Hz, 110 VAC 60Hz	●	●	●	●
2	200 VAC 50/60Hz, 220 VAC 60Hz	●	●	●	●
For voltages other than the above, write in the voltage directly. (AC only)					

Select from the combination of ● marks in the above table.

<Example of model number>

FHB21-6-Z-B4A-B-1

Model: FHB

- A** Size variation : 22 mm
- B** Actuation : NC (normally closed) type
- C** Port size : Rc1/8
- D** Orifice : φ 1
- E** Body, sealant combination : Body - bronze casting, sealant - FKM
- F** Coil option : Grommet lead wire (heat proof class H or equivalent)
- G** Other options : Mounting plate
- H** Voltage : 100 VAC 50/60Hz, 110 VAC 60Hz

⚠ Note on model no. selection

*1: For the FHB41 and FHB51 orifice φ 4 mm (item (D) 5), φ 5 mm (item (D) 6), and φ 7 mm (item (D) 7), only the Rc1/4 (item (C) 8) or Rc3/8 (item (C) 10) bore sizes are available.

*2: For the orifice φ 10 mm (item (D) 8), the connection port is Rc3/8 (item (C) 10) and Rc1/2 (item (C) 15).

*3: Consult with CKD for other voltages that cannot be manufactured.

HNB/G

USB/G

FAB/G

FGB/G

FVB

FWB/G

FHB

FLB

AB

AG

AP/AD

APK/ADK

For dry air

Explosion proof

HVB/HVL

SAB/SVB

NP/NAP/NVP

CHB/G

MXB/G

Other G.P. systems

PDF/FAD/PJ

CVE/CVSE

CPE/CPD

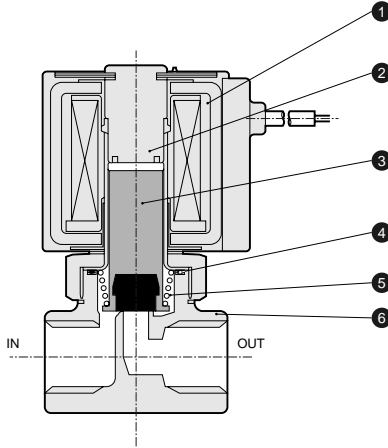
Medical analysis

Custom order

Special purpose valve for hot water
Direct acting 2 port solenoid valve

Internal structure and parts list

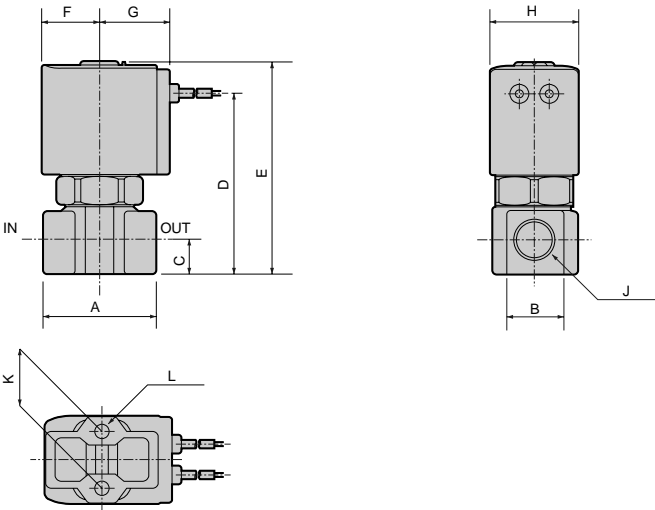
● FHB*1 series



No.	Parts name	Materials	
1	Coil assembly	-	-
2	Core assembly	SUS, Cu	Stainless steel, copper
3	Plunger assembly	SUS, FKM	Stainless steel, fluoro rubber
4	O ring	EPDM	Ethylene-propylene rubber
5	Spring	SUS	Stainless steel
6	Body	CAC407	Bronze casting

Dimensions (Page 116)

- Grommet lead wire (heat proof class H or equivalent) type
FHB*1-*-*B4A

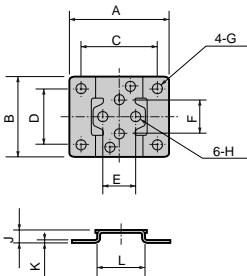


* Lead wire length 300mm

Model no.	A	B	C	D	E	F	G	H	J	K	L
FHB21	32	14	8	45.5	56	15.5	19.5	22	Rc1/8	15	M4 depth 6
FHB31	36	18	11	57.5	68.5	18.5	22.5	28	Rc1/8, Rc1/4	18	M5 depth 6
FHB41	40	23	12	67	81	22.5	26	34	Rc1/4, Rc3/8	18	M5 depth 8
FHB41-10/15-8 (orifice ϕ 10)	50	29	15	76	90				Rc3/8, Rc1/2		
FHB51	40	23	12	73.5	89	26	29.5	40		18	M5 depth 8
FHB51-10/15-8 (orifice ϕ 10)	50	29	15	82.5	98				Rc3/8, Rc1/2		

Optional dimensions (Page 116)

- Mounting plate
FHB*1-*-*B*B



Model no.	A	B	C	D	E	F	G	H	J	K	L
FHB21	40	34	30	25	15	15	ϕ 5	ϕ 4.5	6	1.2	20
FHB31	52	42	40	30	18	18	ϕ 6	ϕ 5.5	7	1.6	25
FHB41/51	56	48	44	36	18	18	ϕ 6	ϕ 5.5	7	1.6	30

HNB/G

USB/G

FAB/G

FGB/G

FVB

FWB/G

FHB

FLB

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AG

AP/AD

APK/ADK

For dry air

Explosion proof

HVB/HVL

SAB/SVB

NP/NAP/NVP

CHB/G

MXB/G

Other G.P. systems

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CVB/CVSE

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