



2.5 Solenoid valve / pneumatic valve HMFH-5 series

Special cut-off structure, small shape size, large output flow, no oil lubrication, suitable for relatively harsh work and environment has good reliability.



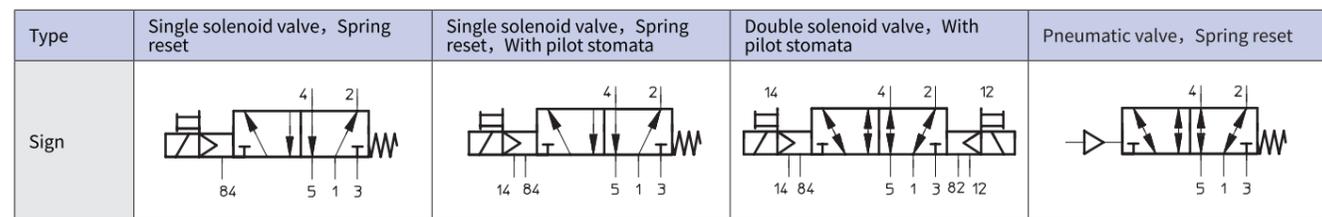
Summary

Special cut-off structure, small shape size, large output flow, no oil lubrication, suitable for relatively harsh work and environment has good reliability.

Product features

- Electric control or air control valve;
- Internal pilot or external pilot supply air source ;
- Strong structure and reliable performance.

Diagram



Product range overview

Function	Type	Code	Pneumatic connection	Operating voltage		Pilot air supply source		Reset method		
				[V DC]	[V AC]	Internal pilot	External Pilot	Pneumatic	Spring	
5/2-way Solenoid valve	Single solenoid valve		G1/8 G1/4	24	110, 220	■	■	-	■	
						■	■	-	■	
	Double solenoid valve		G1/8 G1/4	24	110, 220	■	■	-	-	
						■	■	-	-	
	Air control valve		HVL	G1/8 G1/4	-	-	-	-	-	■
									-	■

Solenoid valve[HMFH\HJMFH series]

·Type codes

Valve	HMFH-5	-1/8	-3	G		-A	
	①	②	③	④	⑤	⑥	⑦
①	HMFH-5: Single solenoid valve; HJMFH-5: Double solenoid valve;						
②	- Pneumatic connection:	1/8	G1/8	1/4	G1/4		
③	- Voltage:	3	AC110V	4	AC220V	5	DC24V
④	Electrical connection	G	Direct line	D	DIN socket-type	DZ	DIN socket-type, With an indicator lamp and an over-voltage inhibitor
⑤	- Pilot air supply source	A	With external pilot port	Internal			

- Solenoid valve[HMFH\HJMFH series]

·Type codes

Valve groups	PRS	-1/8	-02	-4
	①	②	③	④
①	PRS: Manifold block			
②	- Pneumatic connection: 1/8=HMFH-5-1/8... Valve groups; 1/4=HMFH-5-1/4... Valve groups			
③	- Number of valve groups: 02=2; 03=3...10=10			
④	- Voltage: 4=AC220V; 5=DC24V			

·Technical parameters-5/2-way single solenoid

General technical data				
Pneumatic connection	G1/8		G1/4	
Reset method	Mechanical spring	Pneumatic	Mechanical spring	Pneumatic
Valve function	5/2-way, Single solenoid valve			
Design	Poppet seat	Poppet seat	Poppet seat	Poppet seat
Sealing principle	Soft			
Actuation type	Electrical			
Type of control	Piloted			
Pilot air supply	Internal or external			
Flow direction	Non-reversible	Reversible	Non-reversible	Reversible
Exhaust function	Can be throttled			
Manual override	Detenting			
Type of mounting	Via through-hole			
Mounting position	Any			
Nominal width [mm]	5	8	7	10
Standard nominal flow rate [l/min]	750	1000	1300	1600
Valve size [mm]	27		33	

Operating and environmental conditions					
Pneumatic connection	G1/8		G1/4		
Reset method	Pneumatic	Mechanical spring	Pneumatic	Mechanical spring	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4], Lubricated or Unlubricated				
Operating pressure	Internal pilot air supply [bar]	3...10	2...10	3...10	2...10
	External pilot air supply [bar]	-0.9 ...+10	0...10	-0.9 ...+10	0...10
Pilot pressure	[bar]	3...10	2...10	3...10	1.5 ...10
Ambient temperature	[° C]	- 10 ...+60			
Temperature of medium	[° C]	- 10 ...+60			

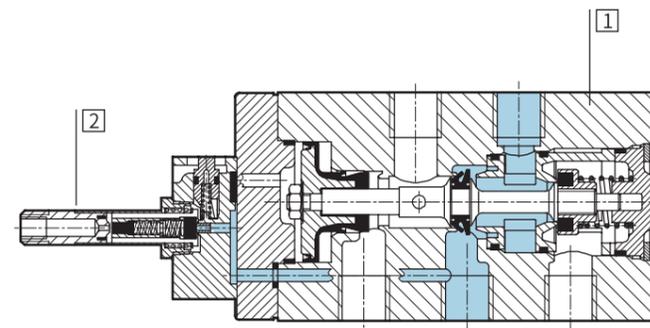
- Solenoid valve[HMFH\HJMFH series]

- Technical parameters-5/2-way single solenoid

Valve switching times [ms]				
Pneumatic connection	G1/8	G1/4	Pneumatic connection	G1/8
Reset method	Pneumatic	Mechanical spring	Pneumatic	Mechanical spring
On	10	10	25	12
Off	30	30	44	36

Electrical data				
Solenoid coil				
Electrical connection		Plug pins for plug sockets MSSD- F, KMF		
Operating voltage	Direct voltage	[V DC]	24	
	Alternating voltage	[V AC]	110, 220 (50 ...60 Hz)	
Characteristic coil data	Direct voltage	[W]	5	
	Alternating voltage	[VA]	Switch: 7.5 Hold: 6	
Degree of protection to EN 60529		IP65 (in combination with plug socket)		

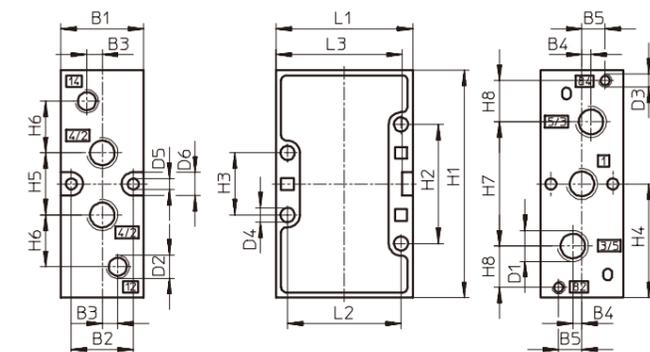
· Structure diagram



1	Housing	Die-cast aluminium
2	Pilot module	
-	Seals	BNR, PU

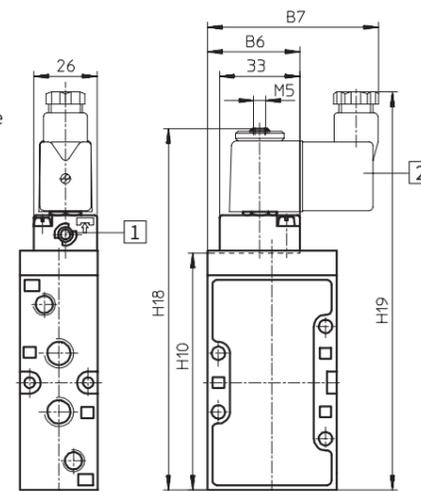
· Dimensions-pneumatic G1/8, G1/4 (Mechanical spring)

- Basic valve



- Mounting dimensions

[1] Manual override can be turned 180°
[2] Solenoid coil can be rotated 360°



- Solenoid valve[HMFH\HJMFH series]

- Dimensions-pneumatic G1/8, G1/4 (Mechanical spring)

Pneumatic connection	B1	B2	B3	B4	B5	B6	B7	D1	D2	D3	D4 Ø	D5 Ø	D6	H1
G1/8	26	19.5	5	3.5	8	36.8	67	G1/8	G1/8	M5	4.5	4.3	9	77
G1/4	32	24	6	3.5	9	38	70	G1/4	G1/8	M5	5.5	4.3	9	88

Pneumatic connection	H2	H3	H4	H5	H6	H7	H8	H10	H18	H19	L1	L2	L3
G1/8	41	21	38.5	22	19	42	12	86.5	136	152	47	40	43
G1/4	46	24	44	24	20	48	16	97.5	147	163	53	44	49

· Technical parameters-5/2-way Double solenoid

General technical data		
Pneumatic connection	G1/8	G1/4
Valve function	5/2-way Double solenoid	
Design	Poppet seat	
Sealing principle	Soft	
Actuation type	Electrical	
Type of control	Piloted	
Pilot air supply	Internal or external	
Flow direction	Not reversible	
Exhaust function	Can be throttled	
Manual override	Detenting	
Type of mounting	Via through-hole	
Mounting position	Any	
Nominal width [mm]	8	10
Standard nominal flow rate [l/min]	1000	1600
Valve size [mm]	27	33

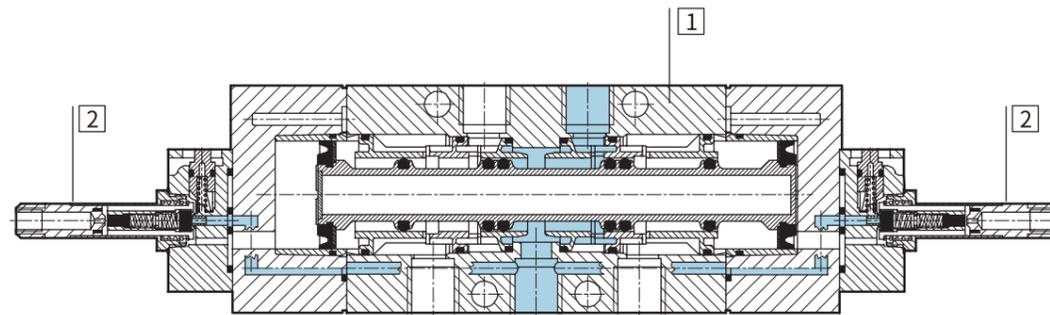
Operating and environmental conditions		
Pneumatic connection	G1/8	G1/4
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4], Lubricated or unlubricated	
Operating pressure	Internal pilot air supply [bar]	2...10
	External pilot air supply [bar]	-0.9 ...+10
Pilot pressure [bar]	2...10	
Ambient temperature [° C]	- 10 ...+60	
Temperature of medium [° C]	- 10 ...+60	

Valve switching times [ms]		
Pneumatic connection	G1/8	G1/4
Switching	12	14

Electrical data				
Solenoid coil				
Electrical connection		Plug pins for plug sockets MSSD- F, KMF		
Operating voltage	Direct voltage	[V DC]	24	
	Alternating voltage	[V AC]	110, 220 (50 ...60 Hz)	
Characteristic coil data	Direct voltage	[W]	5	
	Alternating voltage	[VA]	Switch: 7.5 Hold: 6	
Degree of protection to EN 60529		IP65 (in combination with plug socket)		

- Solenoid valve[HMFH\HJMFH series]

·Structure diagram



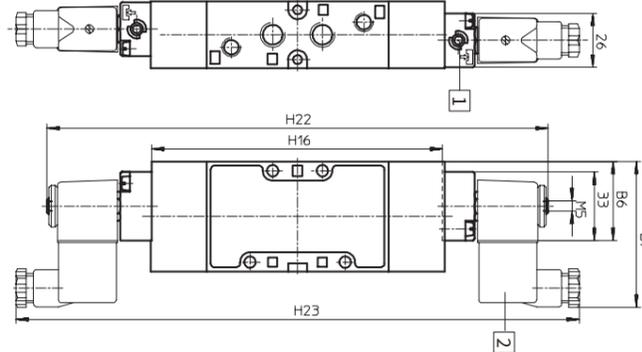
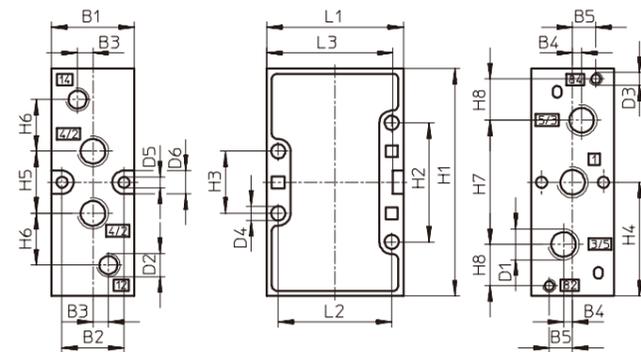
1	Housing	Die-cast aluminium
2	Pilot module	
-	Seals	NBR

· Dimensions-pneumatic connection G1/8, G1/4

- Basic valve

- Mounting dimensions

[1] Manual override can be turned 180° [2] Solenoid coil can be rotated 360°



Pneumatic connection	B1	B2	B3	B4	B5	B6	B7	D1	D2	D3	D4 ∅	D5 ∅	D6	H1	H2
G1/8	26	19.5	5	3.5	8	36.8	67	G1/8	G1/8	M5	4.5	4.3	9	77	41
G1/4	32	24	6	3.5	9	38	70	G1/4	G1/8	M5	5.5	4.3	9	88	46

Pneumatic connection	H3	H4	H5	H6	H7	H8	H16	H22	H23	L1	L2	L3
G1/8	21	38.5	22	19	42	12	129	227	260	47	40	43
G1/4	24	44	24	20	48	16	141.5	240	273	53	44	49

Air control valve [HVL series]

·Type of code

Air control valve	HVL-5	
	①	②
①	HVL-5: Air control valve(Single air control, 5/2 way valve)	
②	-Pneumatic connection: 1/8=G1/8; 1/4=G1/4	

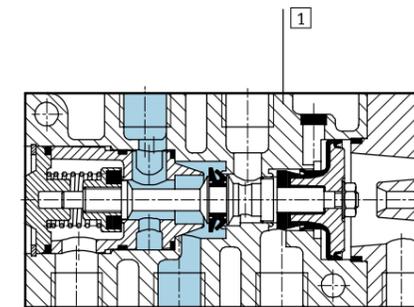
·Technical parameters-Air control valve

General technical parameters		
Pneumatic connection	G1/8	G1/4
Valve function	5/2-way, bistable	
Design	Poppet seat	
Sealing principle	Soft	
Actuation type	Pneumatic	
Reset method	Mechanical spring	
Type of control	Direct	
Flow direction	Not reversible	
Exhaust function	Can be throttled	
Manual override	None	
Type of mounting	Via through-hole	
Mounting position	Any	
Nominal width [mm]	5	7
Standard nominal flow rate [l/min]	750	1300
Valve size[mm]	27	33

Operating and environmental conditions		
Pneumatic connection	G1/8	G1/4
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4], Lubricated or unlubricated vacuum	
Operating pressure [bar]	0...10	0...10
Pilot pressure [bar]	1.5 ...10	1.5 ...10
Ambient temperature [°C]	- 10 ...+60	
Temperature of medium [°C]	- 10 ...+60	

Valve switching times [ms]		
Pneumatic connection	G1/8	G1/4
On	2	2
Off	10	12

·Structure diagram

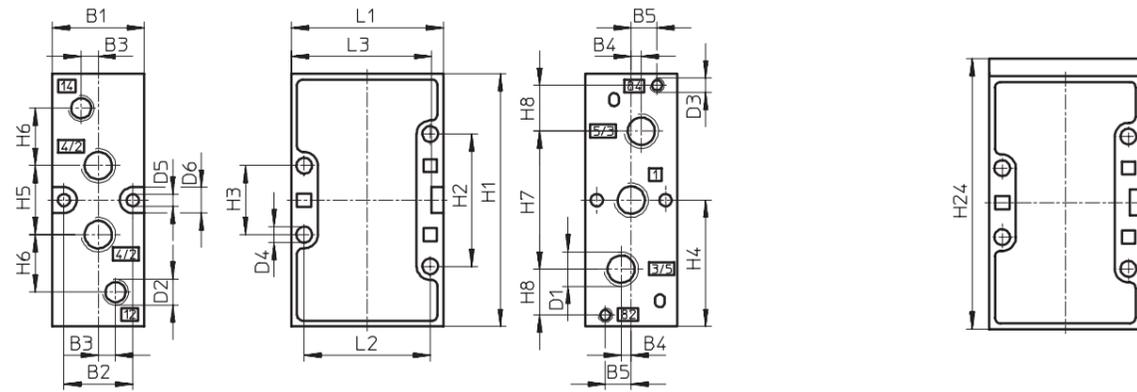


1	Housing	Die-cast aluminium
-	Seals	NBR

- Air control valve [HVL series]

· Dimensions-pneumatic connection G1/8, G1/4

- Basic valve

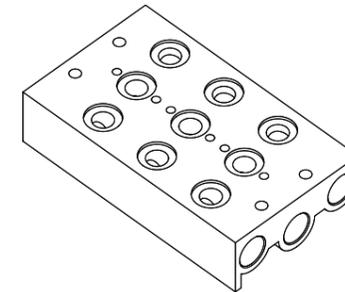


Pneumatic connection	B1	B2	B3	B4	B5	D1	D2	D3	D4 Ø	D5 Ø	D6	H1
G1/8	26	19.5	5	3.5	8	G1/8	G1/8	M5	4.5	4.3	9	77
G1/4	32	24	6	3.5	9	G1/4	G1/8	M5	5.5	4.3	9	88

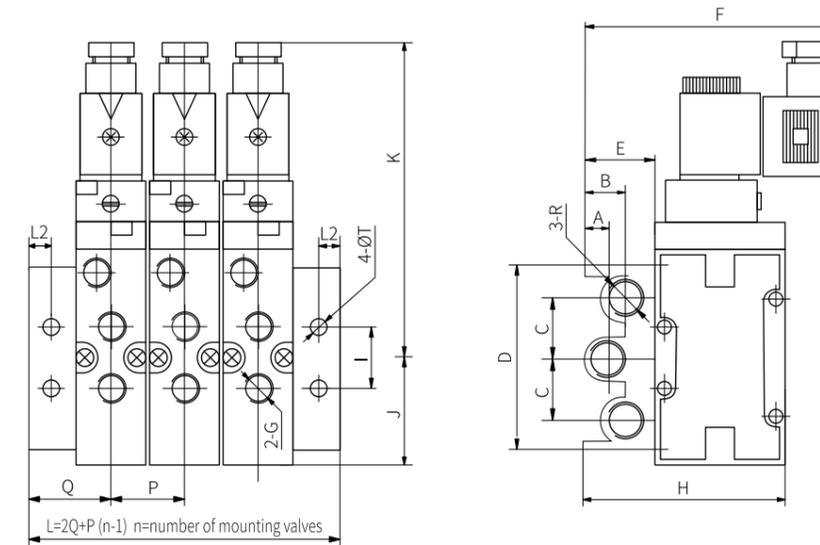
Pneumatic connection	H2	H3	H4	H5	H6	H7	H8	H24	L1	L2	L3
G1/8	41	21	38.5	22	19	42	12	86.5	47	40	43
G1/4	46	24	44	24	20	48	16	97.5	53	44	49

Accessories

· Manifold rail PRS (Materials: Anodized aluminium)



· Dimension



Code	A	B	C	D	E	F	G	H	I	J	K	P	Q	L2	T	R
PRS-1/8	9	14.5	22	65	25	92	1/8	72	22	38.5	112	27	29	8	5.5	1/4
PRS-1/4	12	17	27	75	30	100	1/4	83	27	44	118	33	32	8	5.5	3/8

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