

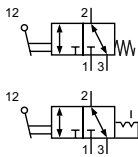
Technical details

<b>Temperature range</b>	-10°C ... +70°C (-10°C...+60°C for use in ATEX areas)
<b>Medium</b>	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
<b>Materials</b>	Body: Al (anodized), seals: NBR and POM, inner parts: Al, stainless steel and brass
	Products without their own potential ignition source in accordance with Directive 2014/34/EU, suitable for use in hazardous areas or versions in accordance with 2014/34/EU (ATEX) available.



Hand lever operated spool valve.

3/2-way-valves

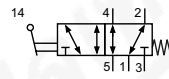


**HF-xx-310**  
3/2-way, hand lever, mechanical spring return

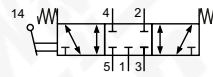
**HR-xx-320**  
3/2-way, two positions, hand lever, detent

Please complete: xx = 18 for G1/8  
xx = 14 for G1/4  
xx = 12 for G1/2

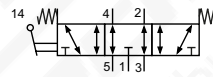
5/2- und 5/3-way-valves



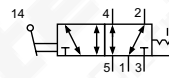
**HF-xx-510**  
5/2-way, hand lever, mechanical spring return



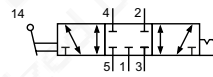
**HF-xx-530**  
5/3-way, center position closed, hand lever



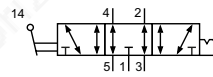
**HF-xx-533**  
5/3-way, center position exhausted, hand lever



**HR-xx-520**  
5/2-way, two positions, hand lever, detent



**HR-xx-530**  
5/3-way, center position closed, hand lever, detent



**HR-xx-533**  
5/3-way, center position exhausted, hand lever, detent

## Series HF and HR

### Technical data

Model-no.:	HF-18-310	HF-14-310	HF-12-310	HF-18-510	HF-14-510	HF-12-510
Connection	G1/8	G1/4	G1/2	G1/8	G1/4	G1/2
Nominal size (mm)	6	9	14	6	9	14
Flow rate (NI/min)	750	1580	3300	750	1580	3300
Operating pressure (bar)	0 ... 12	0 ... 12	0 ... 12	0 ... 12	0 ... 12	0 ... 12
Actuating force at 6 bar (N)	13	20	32	13	20	32
Weight (kg)	0.266	0.48	1.21	0.31	0.56	1.43

Model-no.:	HF-18-530	HF-14-530	HF-12-530	HF-18-533	HF-14-533	HF-12-533
Connection	G1/8	G1/4	G1/2	G1/8	G1/4	G1/2
Nominal size (mm)	6	9	14	6	9	14
Flow rate (NI/min)	780	1800	3300	780	1800	3300
Operating pressure (bar)	0 ... 10	0 ... 12	0 ... 12	0 ... 10	0 ... 12	0 ... 12
Actuating force at 6 bar (N)	20	25	36	20	25	36
Weight (kg)	0.32	0.58	1.43	0.32	0.58	1.43

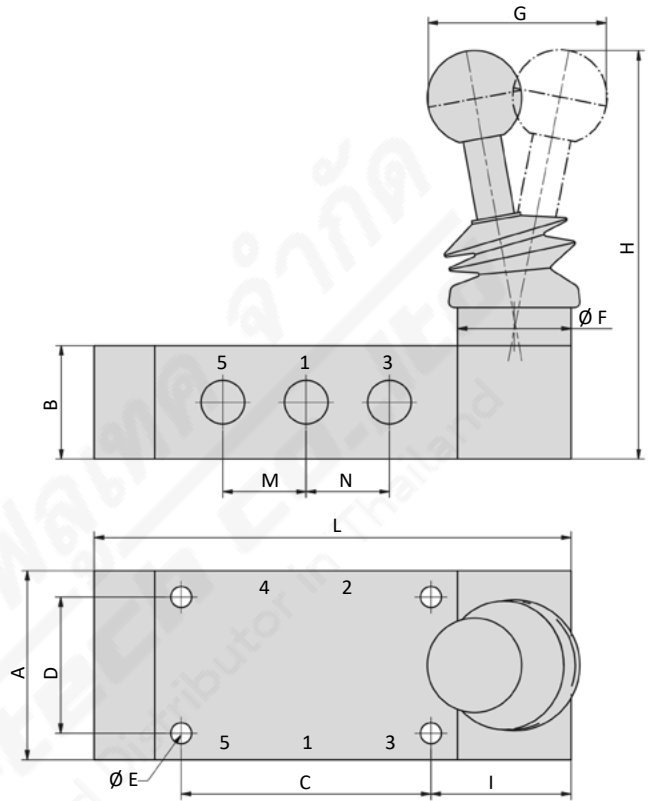
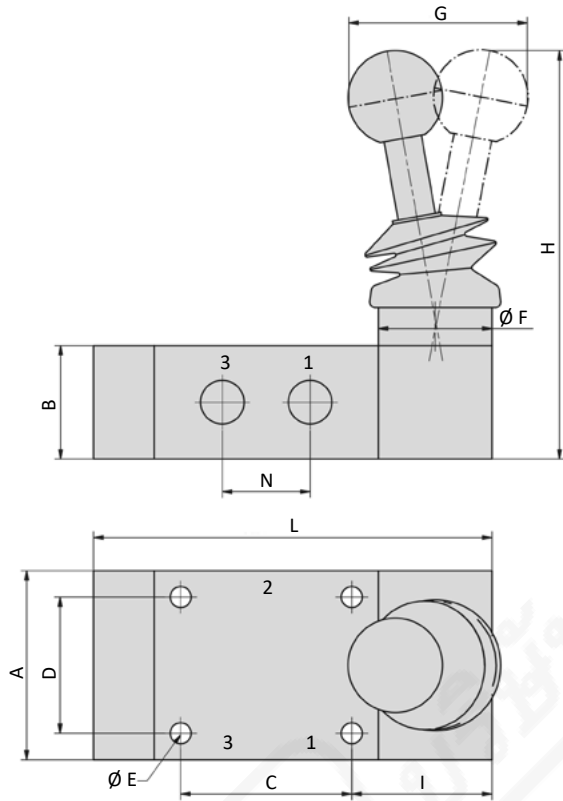
Model-no.:	HR-18-320	HR-14-320	HR-12-320	HR-18-520	HR-14-520	HR-12-520
Connection	G1/8	G1/4	G1/2	G1/8	G1/4	G1/2
Nominal size (mm)	6	9	14	6	9	14
Flow rate (NI/min)	750	1580	3300	750	1580	3300
Operating pressure (bar)	0 ... 12	0 ... 12	0 ... 12	0 ... 12	0 ... 12	0 ... 12
Actuating force at 6 bar (N)	16	24	36	16	24	36
Weight (kg)	0.268	0.485	1.215	0.312	0.564	1.43

Model-no.:	HR-18-530	HR-14-530	HR-12-530	HR-18-533	HR-14-533	HR-12-533
Connection	G1/8	G1/4	G1/2	G1/8	G1/4	G1/2
Nominal size (mm)	6	9	14	6	9	14
Flow rate (NI/min)	780	1800	3300	780	1800	3300
Operating pressure (bar)	0 ... 10	0 ... 12	0 ... 12	0 ... 10	0 ... 12	0 ... 12
Actuating force at 6 bar (N)	20	25	40	20	25	40
Weight (kg)	0.32	0.58	1.43	0.32	0.58	1.43

**Dimensions**

**Hx-xx-3xx**

**Hx-xx-5xx**



1 = pressure inlet  
 2,4 = outlets  
 3,5 = exhausts

Model-no.:		A	B	C	D	Ø E	Ø F	G	H	I	L	M	N
HF-18-310	HR-18-320	40	25	34	30	4,5	25	36	88	31	87	-	18
HF-14-310	HR-14-320	50	30	44	36	5,5	30	46	112	37	104	-	22
HF-12-310	HR-12-320	70	40	70	50	6,5	40	64	148	51	148	-	36
HF-18-510	HR-18-520	40	25	52	30	4,5	25	36	88	31	105	18	18
HF-14-510	HR-14-520	50	30	66	36	5,5	30	46	112	37	126	22	22
HF-12-510	HR-12-520	70	40	106	50	6,5	40	64	148	51	184	36	38
HF-18-53x	HR-18-53x	40	25	52	30	4,5	25	45	88	31	105	18	18
HF-14-53x	HR-14-53x	50	30	66	36	5,5	30	53	112	37	126	22	22
HF-12-53x	HR-12-53x	70	40	106	50	6,5	40	64	148	51	193	36	36



## Valves Mechanically or pneumatically operated

### Mechanically operated valves

#### Device marking

Mechanically operated valves are marked as follows:

**II 2G Ex h IIB T6 Gb**  
**II 2D Ex h IIIC T85°C Db**  
**-10°C T<sub>amb</sub> +50°C**

Marking according to DIN EN ISO 80079-36/ -37.

Mechanically operated valves conform to Equipment category 2 and can be used in Zone 1 respectively Zone 21.

#### Available valves

Series	Versions	Series	Versions
HF-12	310, 510	HR-14	320, 520
HF-14	310, 510	HR-18	320, 520
HF-18	310, 510		
HR-12	320, 520		

#### Explosion-proof equipment without inherent potential ignition sources

The articles listed in the appendix do not fall into the scope of the EU Directive 2014/34/EC. They are not subjected by Article 1 (2) and (3) of Directive 2014/34/EC. It has been proven by an ignition risk analysis that the valves have no potential ignition source of their own. They can be used in compliance with the requirements of e.g. DIN EN 1127-1:2019, DIN EN IEC 60079-0:2019, DIN EN ISO 80079-36:2016 and DIN EN ISO 80079-37:2016 in

Zone 1 explosion groups IIA, IIB and IIC, Zone 21 explosion groups IIIA, IIIB and IIIC  
 Zone 2 explosion groups IIA, IIB and IIC, Zone 22 explosion groups IIIA, IIIB and IIIC

The valves are not marked within the meaning of the ATEX Directive. They have to meet the requirements of the existing zones.

#### Available valves

Series	Versions	Series	Versions
HF-12	530, 533	HR-12	530, 533
HF-14	530, 533	HR-14	530, 533
HF-18	530, 533	HR-18	530, 533