

# 2.5

## Solenoid Valves



Selected models are available for low temperature application. For detailed information refer to chapter 2.12.



Selected models are available with high flow and low power consumption. For detailed information refer to chapter 2.5.5.

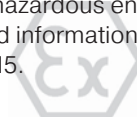


Selected models are available in stainless steel. For detailed information refer to chapter 2.13.

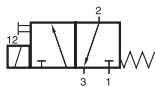


Selected models can be equipped for high temperature environments up to 80 °C, DC only!

Selected models are available for explosion hazardous environment. For detailed information refer to chapter 2.15.



# MD 311 010



MD 311 010



Direct acting 3/2-way solenoid, valve normally closed (n.c.), equipped with mechanical spring return.

By closing port 3 valve can be converted into a 2/2-way valve.

Available with solenoid operators:

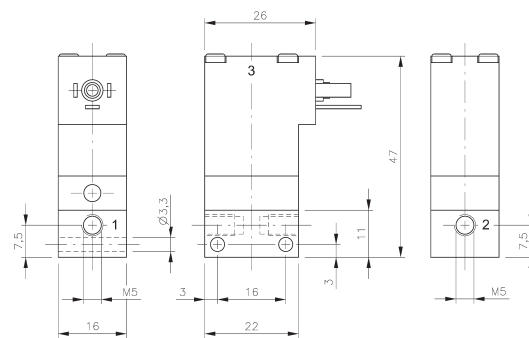
24V=, 12V=, 6V= either for connector form

C ISO 15217 or with flying leads, standard cable length 500 mm.

For details about solenoid system, please refer to page 2.14.1.

Valves are generally equipped with manual override to push.

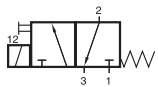
Valves can be used for technical vacuum too.



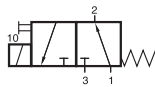
MD 311 010

Type	Funktion	Port size	Air flow	Operating press.	Power consumption	Weight
MD 311 010	n.c.	M5	30 l/min	-0,9 - 10 bar	1,8 W = / 3 VA ~	0,05 kg

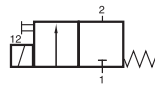
# MH 311 012/MOH 311 012/MH 211 012 MH 311 015/MOH 311 015/MH 211 015



MH 311 012  
MH 311 015



MOH 311 012  
MOH 311 015



MH 211 012  
MH 211 015



Direct acting 3/2-way and 2/2-way solenoid valve equipped with mechanical spring return.

### Type MH 311 \_\_\_

Normally closed, port 1 and 2 in the valve, port 3 at the top of the solenoid with manual override.

### Type MOH 311 \_\_\_

Normally open, port 2 and 3 in the valve, port 1 at the top of the solenoid with manual override.

### Type MH 211 \_\_\_

2/2-way valve n.c. with manual override.

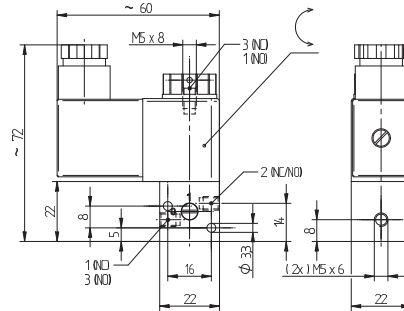
By closing port 3 3/2-way valves can be converted into 2/2-way version.

Please note: Drawings are for MH 311 \_\_\_-valves. For MOH-valves ports 1 and 3 are swapped, for MH 211 port 3 is not existing. MOH 311 and MH 211-valves are equipped with a flat plastic nut.

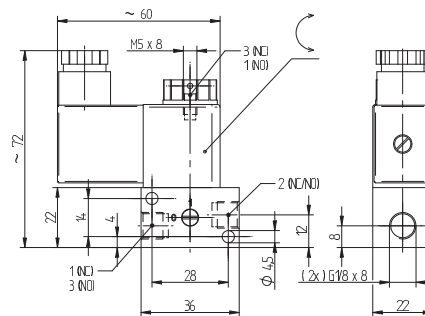
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves can be used for technical vacuum too.

Versions with a normally open operator system (port 1 in the body) available on request.



MH 311 012/MOH 311 012/MH 211 012

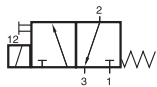


MH 311 015/MOH 311 015/MH 211 015

Type	Ways	Function	Port size			Air flow	Operating pressure	Power-consumption	Weight
			1	2	3				
MH 311 012	3/2	n.c.	M5	M5	M5	40 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,12 kg
MH 311 015	3/2	n.c.	G 1/8"	G 1/8"	M5	50 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,14 kg
MOH 311 012	3/2	n.o.	M5	M5	M5	40 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,12 kg
MOH 311 015	3/2	n.o.	M5	G 1/8"	G 1/8"	50 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,14 kg
MH 211 012	2/2	n.c.	M5	M5		40 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,12 kg
MH 211 015	2/2	n.c.	G 1/8"	G 1/8"		50 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,14 kg



# MH 311 209



MH 311 209

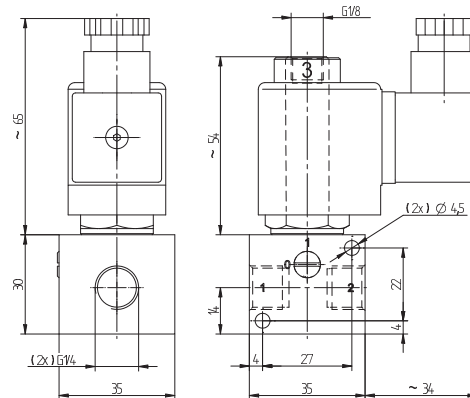


Normally closed direct acting 3/2-way solenoid valve equipped with mechanical spring return.  
Orifice size: 2 mm, max. pressure 10 bar.

Available with solenoid operators: 230V/50Hz, 24V/50 Hz, 24V=.  
Others on request.

Valves are generally equipped with manual override.

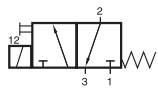
Suitable solenoid coils type MA 30 S13 \_\_ and connectors Form A (30 mm) type ST 30 can be found on page 2.14.5.



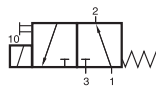
MH 311 209

Type	Port size			Air flow	Operating press.	Power cons.	Weight
	1	2	3				
MH 311 209	G 1/4"	G 1/4"	G 1/8"	120 l/min	0 - 10 bar	10 W = /13/11 VA ~	0,31 kg

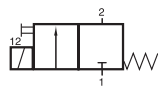
# MH 311 305/MH 311 309/MOH 311 305 MOH 311 309/MH 211 305/MH 211 309



MH 311 305  
MH 311 309



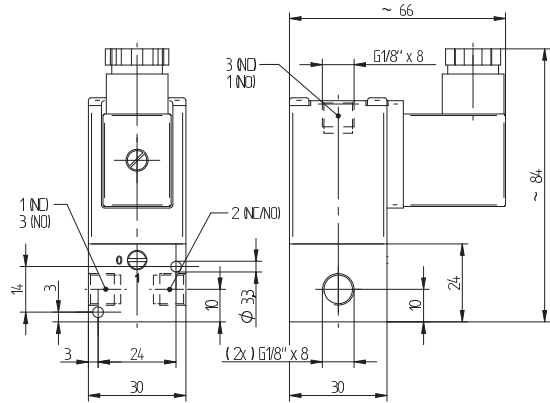
MOH 311 305  
MOH 311 309



MH 211 305  
MH 211 309



Direct acting 3/2-way and 2/2-way solenoid valve equipped with mechanical spring return.  
Orifice size: 3 mm, max. pressure: 7 bar.



**MH 311 305/MOH 311 305/MH 211 305**

**Type MH 311 \_\_\_**

Normally closed, port 1 and 2 in the valve, port 3 at the top of the solenoid

**Type MOH 311 \_\_\_**

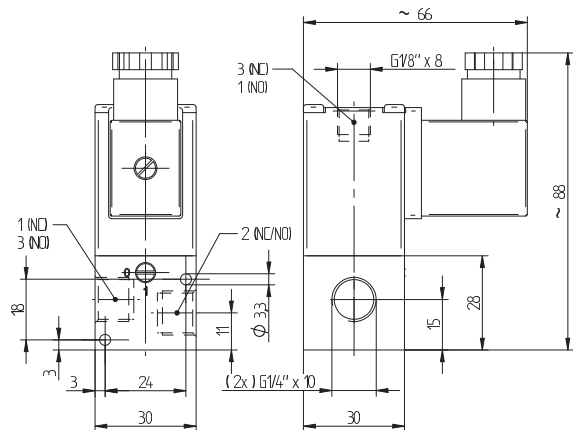
Normally open, port 2 and 3 in the valve, port 1 at the top of the solenoid

**Type MH 211 \_\_\_**

2/2-way valve n.c.

Please note:

Drawings are for MH 311 \_\_\_-valves. For MOH-valves ports 1 and 3 are swapped, for MH 211 port 3 is not existing.



**MH 311 309/MOH 311 309/MH 211 309**

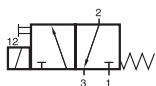
Available with solenoid operators: 230V/50Hz, 24V/50Hz, 24V=.

Valves are generally equipped with manual override.

Connector Industry B (22 mm). Flying leads on request.

Type	Ways	Function	Port size			Air flow	Operating pressure	Power consumption	Weight
			1	2	3				
MH 311 305	3/2	n.c.	G 1/8"	G 1/8"	G 1/8"	200 l/min	0 - 7 bar	7,5 W = /8,5 VA ~	0,17 kg
MH 311 309	3/2	n.c.	G 1/4"	G 1/4"	G 1/8"	200 l/min	0 - 7 bar	7,5 W = /8,5 VA ~	0,18 kg
MOH 311 305	3/2	n.o.	G 1/8"	G 1/8"	G 1/8"	200 l/min	0 - 7 bar	7,5 W = /8,5 VA ~	0,17 kg
MOH 311 309	3/2	n.o.	G 1/4"	G 1/4"	G 1/8"	200 l/min	0 - 7 bar	7,5 W = /8,5 VA ~	0,18 kg
MH 211 305	2/2	n.c.	G 1/8"	G 1/8"		200 l/min	0 - 7 bar	7,5 W = /8,5 VA ~	0,17 kg
MH 211 309	2/2	n.c.	G 1/4"	G 1/4"		200 l/min	0 - 7 bar	7,5 W = /8,5 VA ~	0,18 kg

# MH 311 019 6/MH 311 019 1/8



MH 311 019



Direct acting 3/2-way solenoid valve equipped with spring return. Orifice size 1.3 mm.

Normally closed, port 1 swivel either 1/8" or 6 mm pif, port 2 as banjo screw, exhaust through operator system with manual override.

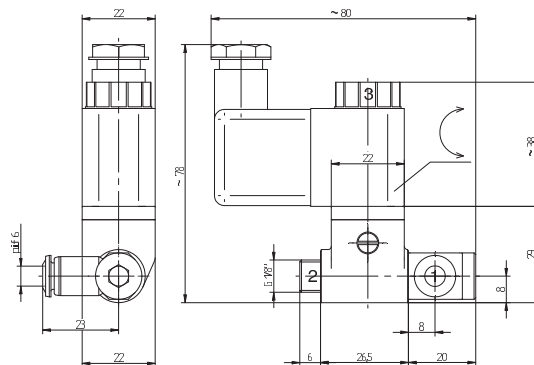
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Available accessory:

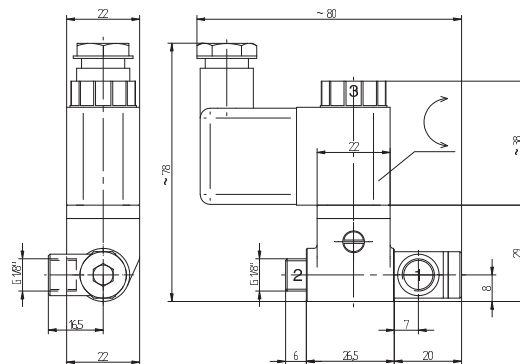
**KV SET 02**

Reducer fitting for banjo-screw to change from 1/8" to 1/4", with captive seal.

Version with a normally open operator system (port 1 in the body) available on request.



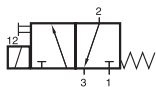
**MH 311 019 6**



**MH 311 019 1/8**

Type	Funct.	1	Port 2 banjo	3	Air flow	Operating pressure	Power consumption	Weight
MH 311 019 6	n.c.	Swivel 6 mm pif	G 1/8"	M5	50 l/min	-0,9 - 10 bar	3 W= / 5 VA	0,16 kg
MH 311 019 1/8	n.c.	Swivel G 1/8"	G 1/8"	hole	50 l/min	-0,9 - 10 bar	3 W= / 5 VA	0,16 kg

# MH 311 013/MH 311 017



MH 311 013  
MH 311 017



Direct acting 3/2-way solenoid valve equipped with mechanical spring return, normally closed.

Port 2 is a banjo that can be screwed directly into the actuator that is to be controlled.

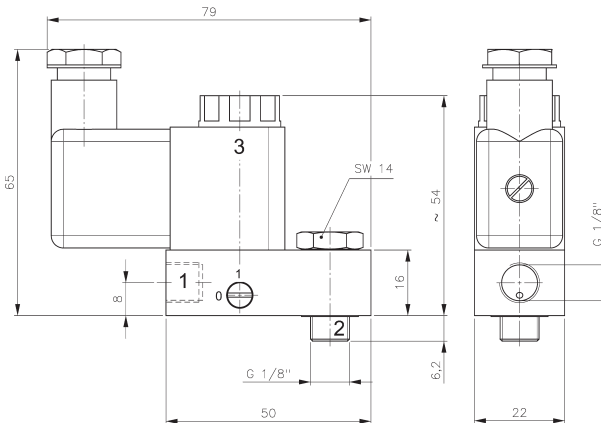
On request:

- Products with port 1 in NPT
- Products normally open
- 2/2-way version

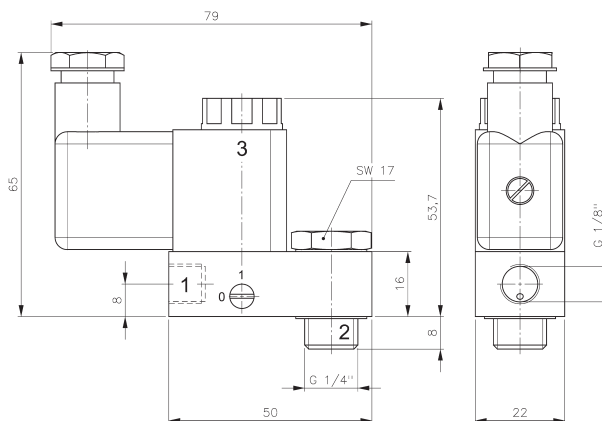
Available with solenoid operators:

230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves are generally equipped with manual override.



**MH 311 013**



**MH 311 017**

MH 311 013 and MH 311 017 are designed for piloting angle seat valves or small spring-return actuators.

When assembling this type of valve to a spring-return actuator, please take into consideration that there is no exhaust air recirculation ("purge").

Instead of the standard banjo-screw, the valve can also be equipped with a flow-regulating banjo-screw.

Three different versions are available on request: Banjo-screw to regulate the opening speed, the closing speed as well as the opening and closing speed (not independent).

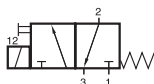


Version with integrated flow-regulator available on request.

Type	Function	Port			Air flow	Operating pressure	Power consumption	Weight
		1	2 banjo	3				
MH 311 013	n.c.	G 1/8"	G 1/8"	M5	50 l/min	0 - 10 bar	3 W = / 5 VA ~	0,14 kg ❄️
MH 311 017	n.c.	G 1/8"	G 1/4"	M5	50 l/min	0 - 10 bar	3 W = / 5 VA ~	0,16 kg ❄️



# MH 311 313/MH 311 317



MH 311 313  
MH 311 317



Direct acting 3/2-way solenoid valve equipped with mechanical spring return, normally closed.  
Orifice size: 3 mm, max. pressure: 7 bar.

Port 2 is a banjo that can be screwed directly into the actuator that is to be controlled.

On request:

- Products with port 1 in NPT
- Products normally open
- 2/2-way version

Available with solenoid operators: 230V/50Hz, 24V/50Hz, 24V=.

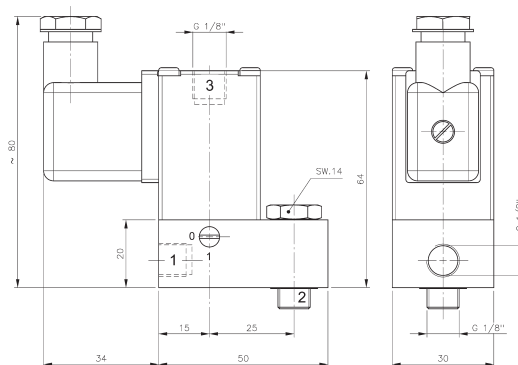
Valves are generally equipped with manual override.

Connector Industry B (22 mm). Flying leads on request.

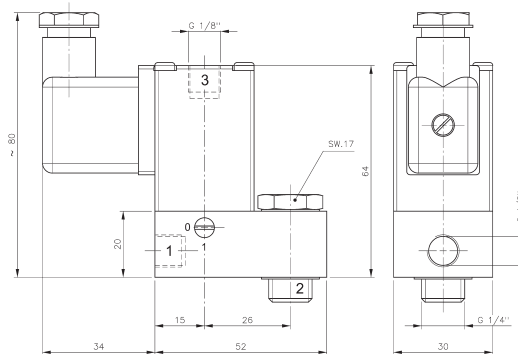
MH 311 313 and MH 311 317 are designed for piloting angle seat valves or small spring-return actuators.

When assembling this type of valve to a spring-return actuator, please take into consideration that there is no exhaust air recirculation ("purge").

Instead of the standard banjo-screw, the valve can also be equipped with a flow-regulating banjo-screw. Three different versions are available on request: Banjo-screw to regulate the opening speed, the closing speed as well as the opening and closing speed (not independent).



**MH 311 313**



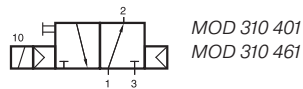
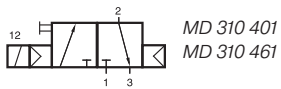
**MH 311 317**



Type	Function	Port			Air flow	Operating pressure	Power consumption	Weight
		1	2 banjo	3				
MH 311 313	n.c.	G 1/8"	G 1/8"	G 1/8"	150 l/min	0 - 7 bar	7,5 W = /8,5 VA ~	0,21 kg
MH 311 317	n.c.	G 1/8"	G 1/4"	G 1/8"	150 l/min	0 - 7 bar	7,5 W = /8,5 VA ~	0,22 kg



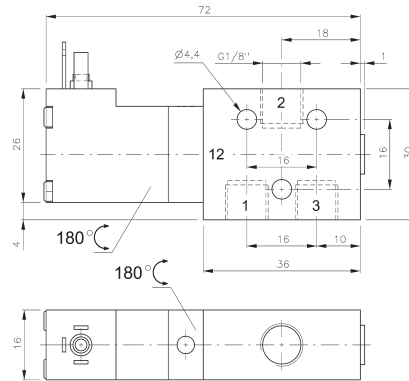
# MD 310 401/MD 310 461 MOD 310 401/MOD 310 461



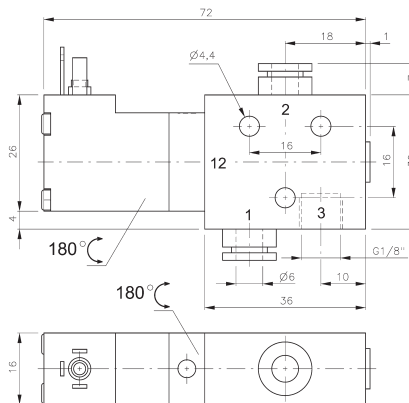
3/2-way solenoid valve normally closed (MD) or normally open (MOD) actuated by permanent signal and equipped with air spring return.

Available with solenoid operators:  
24V=, 12V=, 6V= either for connector form C ISO 15217 or with flying leads, standard cable length 500 mm. For details about solenoid system, please refer to page 2.14.1.

Valves are generally equipped with manual override to push.



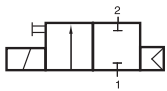
**MD 310 401/MOD 310 401**



**MD 310 461/MOD 310 461**

Type	Function	Port size 1 and 2	Air flow	Operating pressure	Power consumption	Weight
MD 310 401	n.c.	G 1/8"	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,09 kg
MD 310 461	n.c.	pif 6 mm	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,10 kg
MOD 310 401	n.o.	G 1/8"	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,09 kg
MOD 310 461	n.o.	pif 6 mm	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,10 kg

# MH 210 501/MH 210 701



MH 210 501  
MH 210 701

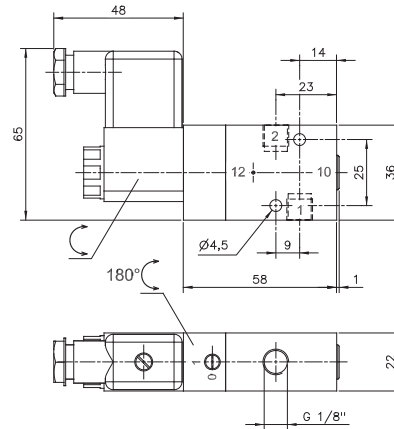


2/2-way solenoid valve, normally closed, actuated by permanent signal and equipped with air spring return.

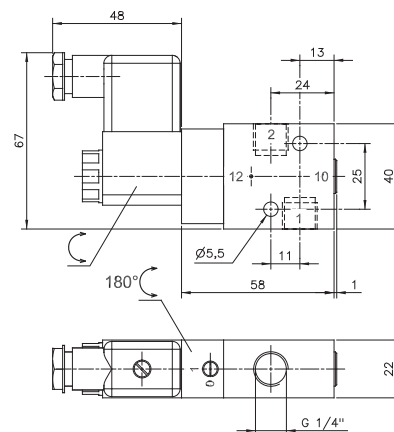
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves are generally equipped with manual override.

Normally open version (MOH) on request.



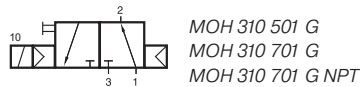
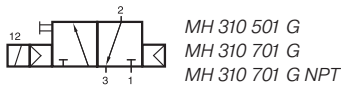
**MH 210 501**



**MH 210 701**

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 210 501	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,19 kg
MH 210 701	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,19 kg

# MH 310 501 G/MH 310 701 G MOH 310 501 G/MOH 310 701 G



3/2-way solenoid valve normally closed (MH) or normally open (MOH) actuated by permanent signal and equipped with air spring return.

The G-Series valves offer the flexibility of in-line fitment as well as the option of being assembled on to a manifold as shown. Manifolds are displayed on page 2.7.1.3.

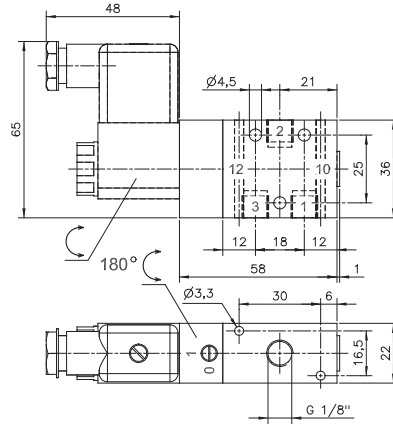
Normally open and normally closed products can be mixed on one plate.

Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

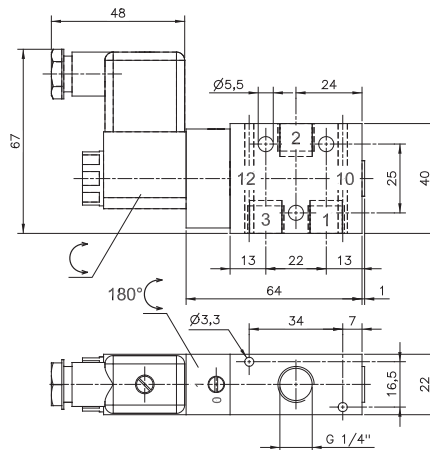
Valves are generally equipped with manual override.  
If requested without manual override please order M 310 \_\_\_ / MO 310 \_\_\_.

Please note:  
Do not close port 3 to convert into a 2-way valve.

Bistable double solenoid versions type „MH 320“ available on request.



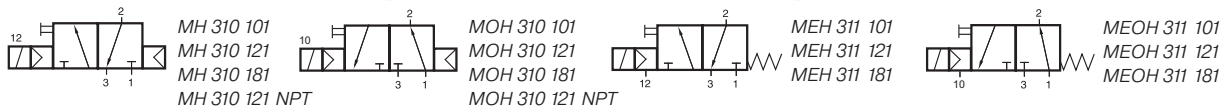
**MH 310 501 G/MOH 310 501 G**



**MH 310 701 G/MOH 310 701 G  
MH 310 701 G NPT/MOH 310 701 G NPT**

Type	Function	Port size	Air flow	Operating press.	Power consumption	Weight
MH 310 501 G	n.c.	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,20 kg
MH 310 701 G	n.c.	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,21 kg
MOH 310 501 G	n.o.	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,20 kg
MOH 310 701 G	n.o.	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,21 kg
MH 310 701 G NPT	n.c.	1/4" NPT	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,21 kg
MOH 310 701 G NPT	n.o.	1/4" NPT	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,21 kg

# MH 310 101/MH 310 121/MH 310 181 MOH 310 101/MOH 310 121/MOH 310 181



3/2-way solenoid valve normally closed (MH) or normally open (MOH) actuated by permanent signal and equipped with air spring return.

Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves are generally equipped with manual override. If requested without manual override please order M 310 \_\_\_ / MO 310 \_\_\_.

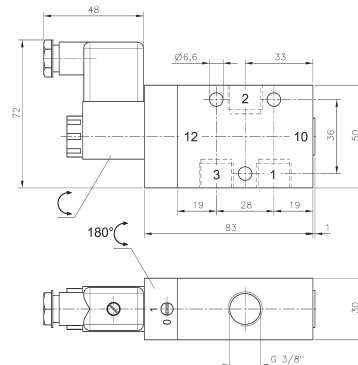
Valves are also available with external pilot feed.  
Type: MEH 311 \_\_\_ (n.c.) or MEOH 311 \_\_\_ (n.o.).  
Port 12: G 1/8".

Minimum actuation pressure: 3 bar.  
Operating pressure: 0 - 10 bar.  
Version for vacuum on request.

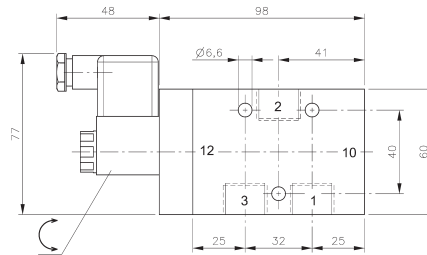
Please note:  
Do not close port 3 to convert into a 2-way valve.

Valve type M(O)H 310 101 G for manifolds displayed on page 2.7.2.4.

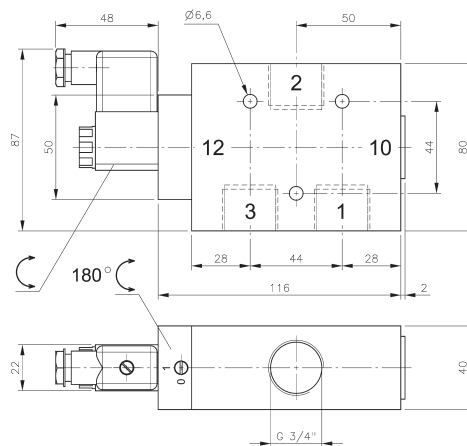
Bistable double solenoid versions type „MH 320“ available on request.



**MH 310 101/MOH 310 101**



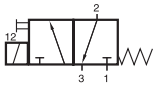
**MH 310 121/MOH 310 121  
MH 310 121 NPT/MOH 310 121 NPT**



**MH 310 181/MOH 310 181**

Type	Function	Port size	Air flow	Operating press.	Power consumption	Weight
MH 310 101	n.c.	G 3/8"	2250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,41 kg
MH 310 121	n.c.	G 1/2"	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,53 kg
MH 310 181	n.c.	G 3/4"	6000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,88 kg
MOH 310 101	n.o.	G 3/8"	2250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,41 kg
MOH 310 121	n.o.	G 1/2"	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,53 kg
MOH 310 181	n.o.	G 3/4"	6000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,88 kg
MH 310 121 NPT	n.c.	1/2" NPT	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,53 kg
MOH 310 121 NPT	n.o.	1/2" NPT	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,53 kg

# MH 312/MH 314/MH 315/MH 316



MH 312  
MH 314  
MH 315  
MH 316



System consisting of direct actuated 3/2 way solenoid valves actuated by permanent signal and a manifold plate for common pressure supply (1). Exhaust through the operator tube.

Normally closed with manual override to turn. Exhaust at the top of the operator tube, ported M5. Common exhaust line to be assembled on the top using banjo joints is available on request.

Available with solenoid operators  
230V/50 Hz, 110V/50 Hz, 24V/50 Hz, 48V=,  
24V=. 12V=.

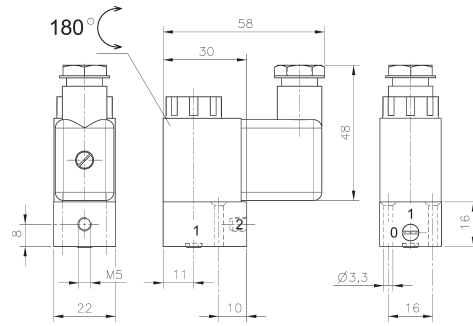
Different types of valves can be mixed on one plate.

Manifolds are displayed on page 2.7.1.1.

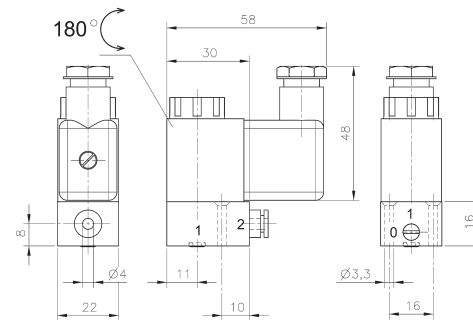
Blanking plates are also available: Type no. BP 3.

Mounting screws and seals are included.

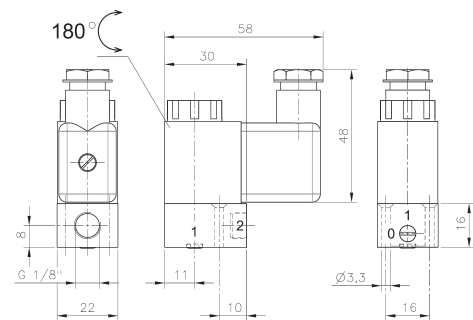
Valves can be used for technical vacuum too.



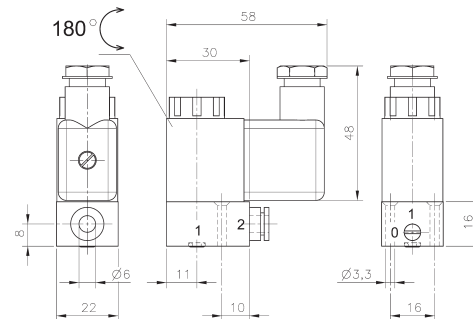
**MH 312**



**MH 314**



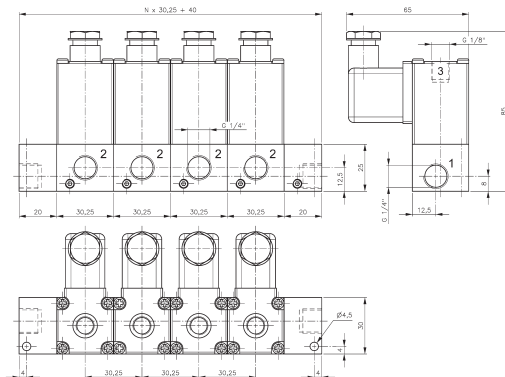
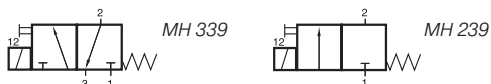
**MH 315**



**MH 316**

Type	Function	Port 2	Air flow	Operating press.	Power consumption	Weight
MH 312	n.c.	M5	40 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,13 kg
MH 314	n.c.	pif 4 mm	40 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,13 kg
MH 315	n.c.	G 1/8"	50 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,13 kg
MH 316	n.c.	pif 6 mm	50 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,13 kg

# MH 339/MH 239/R 33 R/R 33 L

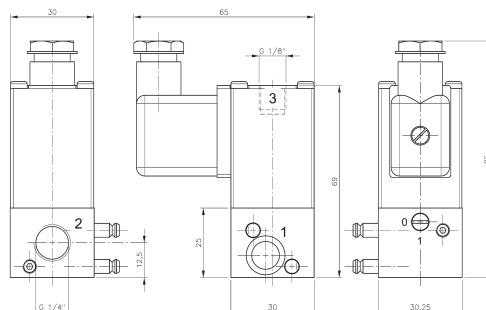


**Modular system MH 339/MH 239**

Modular system consisting of direct acting 3/2-way or 2/2-way solenoid valves normally closed, actuated by permanent signal and endplates for common pressure supply (1). Port 2 is in the valve, G 1/4", exhaust through the operator tube, thread G 1/8". By opening 2 hexagonsocket screws at the bodies the system can be taken apart at any point and valves can be added or taken away.

**Valves:**

- Type MH 339: 3/2-way – drawings show 3/2-way valves
- Type MH 229: 2/2-way – 2/2-way without port 3
- Orifice size: 3 mm, max. pressure: 7 bar.



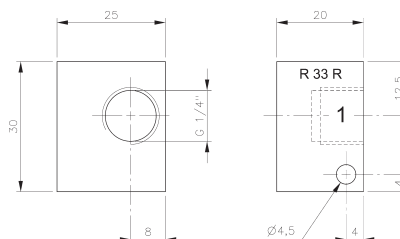
**Individual valve MH 339/MH 239**

Available with solenoid operators: 230V/50Hz, 24V/50Hz, 24V= Connector Industry B (22 mm). Flying leads on request.

Valves are generally equipped with manual override.

**The system consists of:**

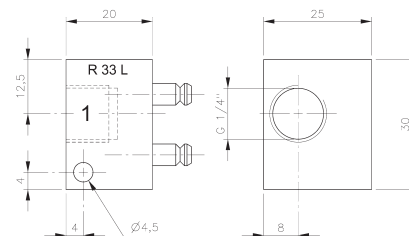
- End-plate right type R 33 R
- End-plate left type R 33 L
- Individual valve 3/2-way type MH 339
- Individual valve 2/2-way type MH 229



**End-plate right R 33 R**

The end-plates can be equipped with DIN-rail mounting clips. For details, please refer to page 2.9.7.

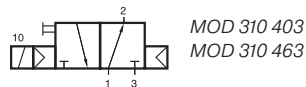
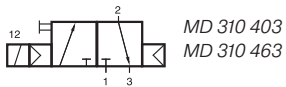
Products are to be ordered individually but system can be delivered fully assembled.



**End-plate left R 33 L**

Type	Ways	Function	Port size			Air flow	Operating pressure	Power consumption	Weight
			1	2	3				
MH 339	3/2	n.c.		G 1/4"	G 1/8"	200 l/min	0 - 7 bar	7,5 W = /8,5 VA ~	0,18 kg
MH 239	2/2	n.c.		G 1/4"		200 l/min	0 - 7 bar	7,5 W = /8,5 VA ~	0,18 kg
R 33 R		end-plate right	G 1/4"						0,04 kg
R 33 L		end-plate left	G 1/4"						0,04 kg

# MD 310 403/MD 310 463 MOD 310 403/MOD 310 463



3/2-way solenoid valve normally closed (MD) or normally open (MOD) for assembling on a manifold plate. Port 2 in the valve.

Available with solenoid operators:  
24V=, 12V=, 6V= either for connector form  
C ISO 15217 or with flying leads, standard cable length  
500 mm.  
For details about solenoid system, please refer to page  
2.14.1.

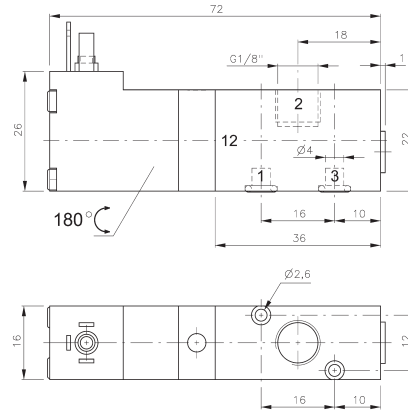
Valves are generally equipped with manual override to push.

Manifolds are displayed on page 2.7.1.2.

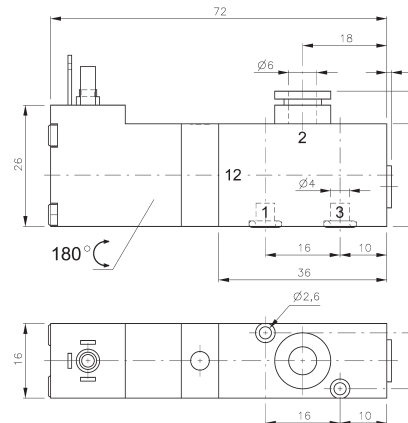
Valves normally open and normally closed can be mixed on  
one manifold plate!

Blanking plates are also available type BP 3 403.

Mounting screws and seals are included.



**MD 310 403/MOD 310 403**

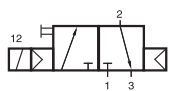


**MD 310 463/MOD 310 463**

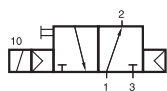
Type	Function	Port size	Air flow	Operating press.	Power consumption	Weight
MD 310 403	n.c.	G 1/8"	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,09 kg
MD 310 463	n.c.	pif 6 mm	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,09 kg
MOD 310 403	n.o.	G 1/8"	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,09 kg
MOD 310 463	n.o.	pif 6 mm	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,09 kg



# MD 310 404/MOD 310 404



MD 310 404



MOD 310 404



3/2-way solenoid valve normally closed (MD) or normally open (MOD) for assembling on a manifold plate. All the ports are in the plate.

Available with solenoid operators:  
24V=, 12V=, 6V= either for connector form C ISO 15217 or with flying leads, standard cable length 500 mm. For details about solenoid system, please refer to page 2.14.1.

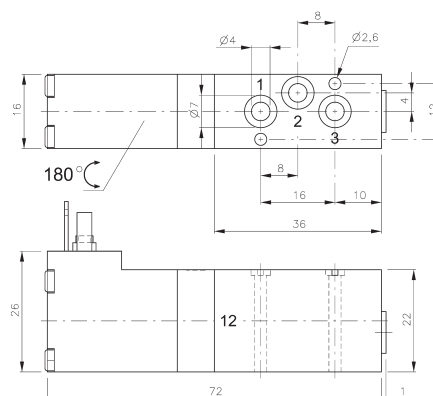
Valves are generally equipped with manual override to push.

Manifolds are displayed on page 2.7.1.2.

Valves normally open and normally closed can be mixed on one manifold plate!

Blanking plates are also available type BP 3 404.

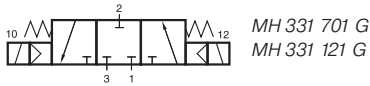
Mounting screws and seals are included.



MD 310 404/MOD 310 404

Type	Function	Air flow	Operating press.	Power consumption	Weight
MD 310 404	n.c.	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,09 kg
MOD 310 404	n.o.	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,09 kg

# MH 331 701 G/MH 331 121 G



G-Series 501 G/701 G



G-Series 121 G



3/3-way solenoid valve with spring return to middle position, actuated by permanent signal. Valve is to be used when a single acting cylinder or any other single acting actuator such as a lifting bag or car-suspension needs to be held in an intermediate position.

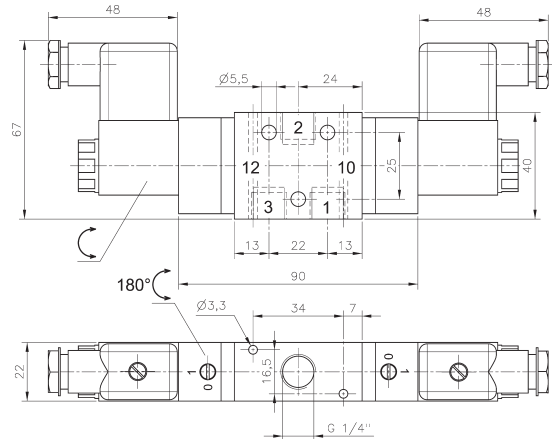
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

The G-Series valves offer the flexibility of in-line fitment as well as the option of being assembled on to a manifold as shown. Plates are displayed on page 2.7.1.3.

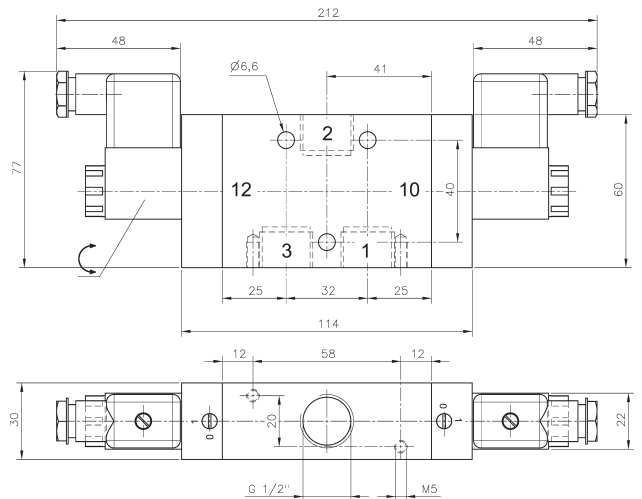
Valves G 1/2" have to be assembled onto the plate by fixing screws from the bottom through the plate into the valve.

Valves are generally equipped with manual override to turn.

Please note:  
Valves will be discontinued.



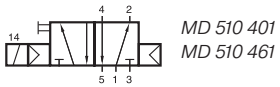
**MH 331 701 G**



**MH 331 121 G**

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 331 701 G	G 1/4"	1250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,32 kg
MH 331 121 G	G 1/2"	3000 l/min	3 - 10 bar	3 W = / 5 VA ~	0,72 kg

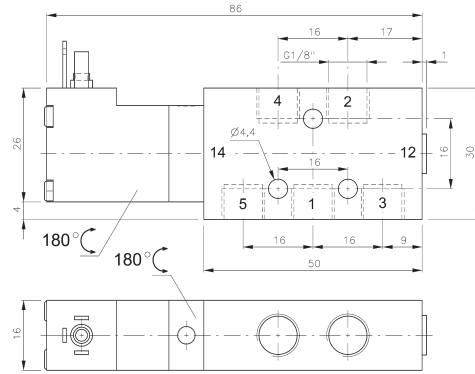
# MD 510 401/MD 510 461



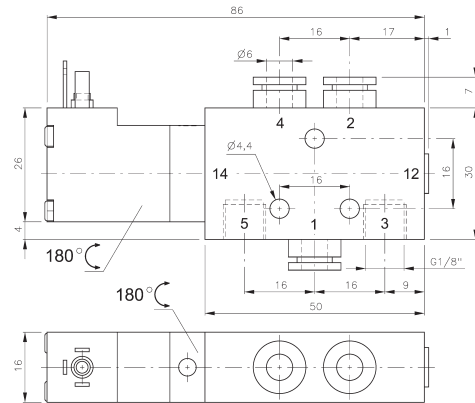
5/2-way solenoid valve actuated by permanent signal and equipped with air spring return.

Available with solenoid operators:  
24V=, 12V=, 6V= either for connector form C ISO 15217 or with flying leads, standard cable length 500 mm. For details about solenoid system, please refer to page 2.14.1.

Valves are generally equipped with manual override to push.



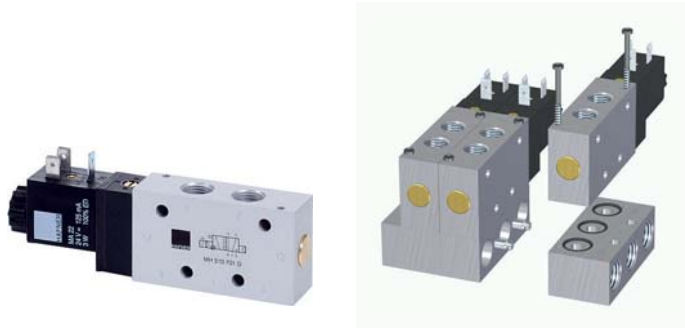
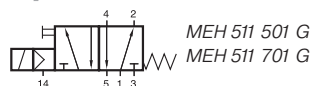
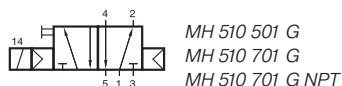
**MD 510 401**



**MD 510 461**

Type	Ports 1, 2, 4	Air flow	Operating press.	Power consumption	Weight
MD 510 401	G 1/8"	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,10 kg
MD 510 461	pif 6 mm	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,12 kg

# MH 510 501 G/MH 510 701 G



5/2-way solenoid valve actuated by permanent signal and equipped with air spring return.

The G-Series valves offer the flexibility of in-line fitment as well as the option of being assembled on to a manifold as shown. Manifolds for valves type 501 G are displayed on page 2.7.2.2, manifolds for valves type 701 G are displayed on page 2.7.2.3.

Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves are generally equipped with manual override. If requested without manual override please order M 510 \_\_\_\_.

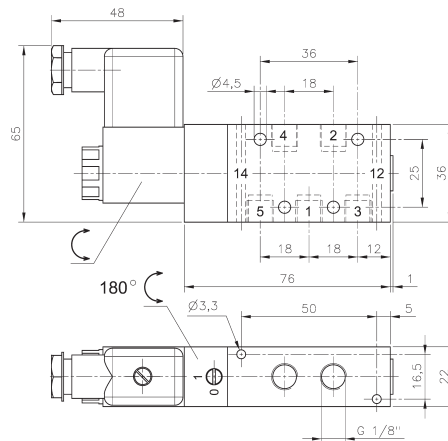
Valves are also available with external pilot feed. Type: MEH 511 \_\_\_\_ G.

Port 14: M5.

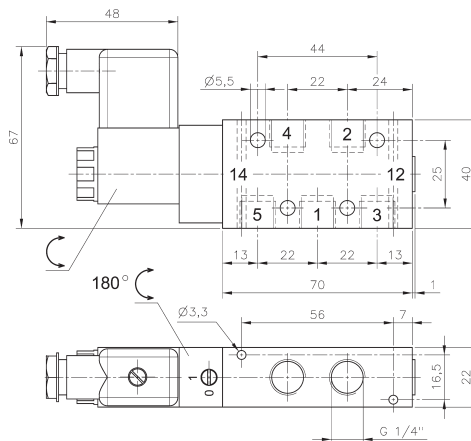
Minimum actuation pressure: 3 bar.

Operating pressure: 0 - 10 bar.

Version for vacuum on request.



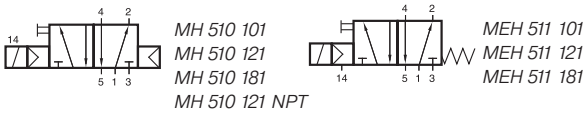
**MH 510 501 G**



**MH 510 701 G/MH 510 701 G NPT**

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 510 501 G	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,23 kg
MH 510 701 G	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,25 kg
MH 510 701 G NPT	1/4" NPT	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,25 kg

# MH 510 101/MH 510 121/MH 510 181



5/2-way solenoid valve actuated by permanent signal and equipped with air spring return.

Available with solenoid operators:  
 230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves are generally equipped with manual override.  
 If requested without manual override please order M 510 \_\_\_\_.

Valves are also available with external pilot feed.

Type: MEH 511 \_\_\_\_.

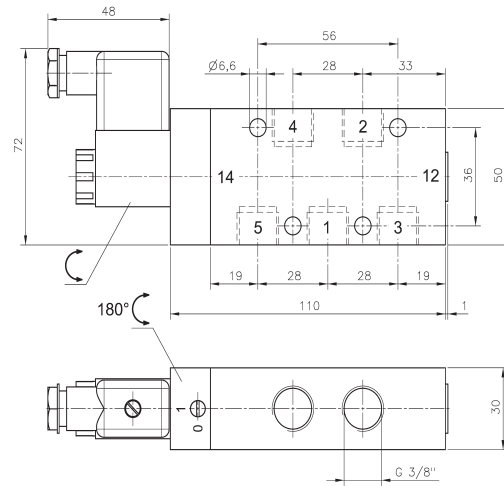
Port 14: G 1/8".

Minimum actuation pressure: 3 bar.

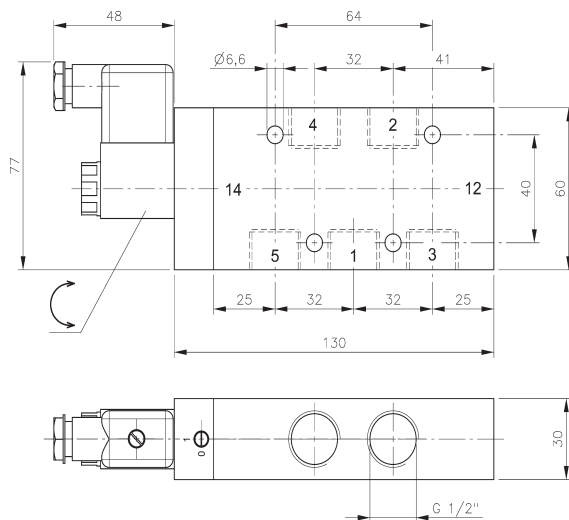
Operating pressure: 0 - 10 bar.

Version for vacuum on request.

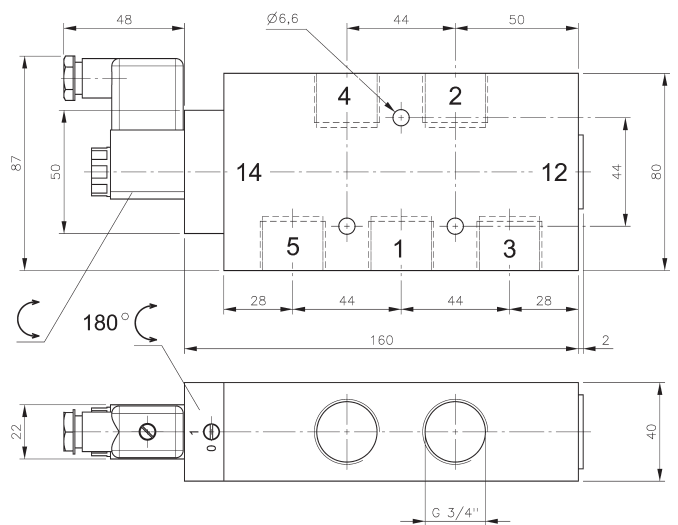
Valve type MH 510 101 G for manifolds displayed on page 2.7.2.4 and valve type MH 510 121 G for manifolds displayed on page 2.7.2.5.



**MH 510 101**



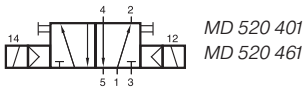
**MH 510 121/MH 510 121 NPT**



**MH 510 181**

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 510 101	G 3/8"	2250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,50 kg
MH 510 121	G 1/2"	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,67 kg
MH 510 181	G 3/4"	6000 l/min	1 - 10 bar	3 W = / 5 VA ~	1,29 kg
MH 510 121 NPT	1/2" NPT	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,67 kg

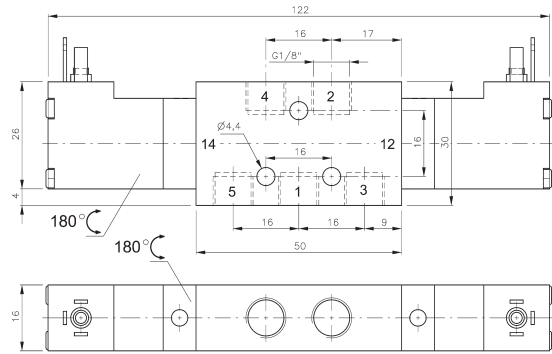
# MD 520 401/MD 520 461



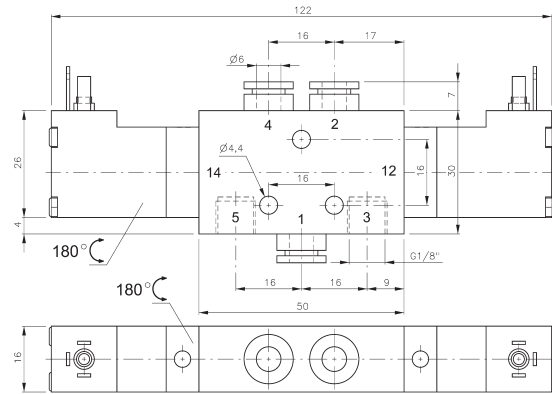
5/2-way double solenoid valve actuated by impulse. Position is kept until an electrical signal is applied to the opposite side even when not attached to electrical source.

Available with solenoid operators:  
 24V=, 12V=, 6V= either for connector form C ISO 15217 or with flying leads, standard cable length 500 mm. For details about solenoid system, please refer to page 2.14.1.

Valves are generally equipped with manual override to push.



**MD 520 401**



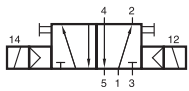
**MD 520 461**

Type	Ports 1, 2, 4	Air flow	Operating press.	Power consumption	Weight
MD 520 401	G 1/8"	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,15 kg
MD 520 461	pif 6 mm	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,16 kg

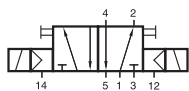




# MH 520 101/MH 520 121/MH 520 181



MH 520 101  
 MH 520 121  
 MH 520 181  
 MH 520 121 NPT



MEH 520 101  
 MEH 520 121  
 MEH 520 181



5/2-way double solenoid valve actuated by impulse. Position is kept until an electrical signal is applied to the opposite side even when not attached to electrical source.

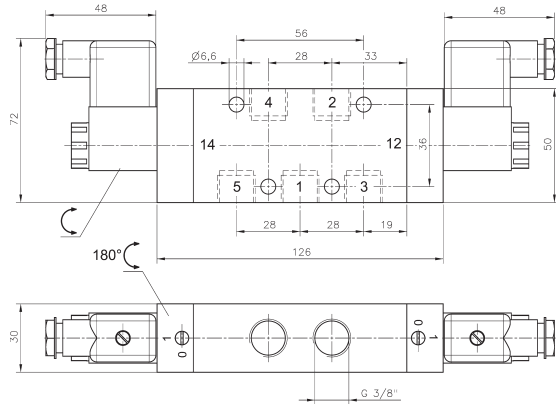
Available with solenoid operators:  
 230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves are generally equipped with manual override.  
 If requested without manual override please order M 520 \_\_ \_.

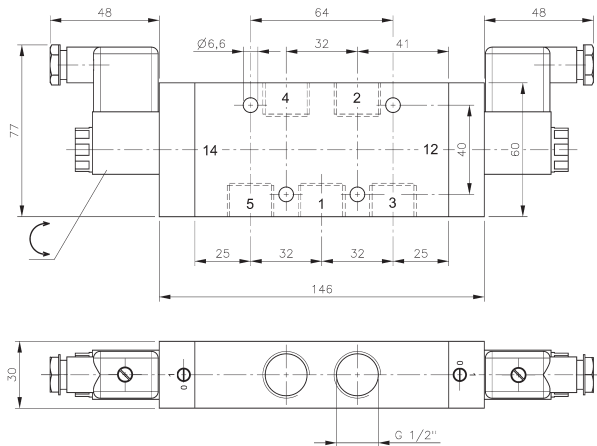
Valves are also available with external pilot feed.  
 Type: MEH 520 \_\_ \_.  
 Ports 12 and 14: G 1/8".  
 Minimum actuation pressure: 2,5 bar.  
 Operating pressure: 0 - 10 bar.

Version for vacuum on request.

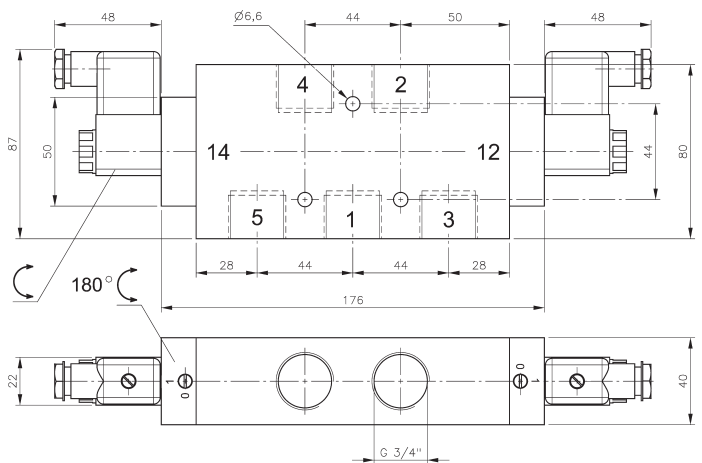
Valve type MH 520 101 G for manifolds displayed on page 2.7.2.4 and valve type MH 520 121 G for manifolds displayed on page 2.7.2.5.



**MH 520 101**



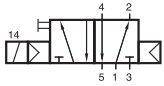
**MH 520 121/ MH 520 121 NPT**



**MH 520 181**

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 520 101	G 3/8"	2250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,66 kg
MH 520 121	G 1/2"	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,84 kg
MH 520 181	G 3/4"	6000 l/min	1 - 10 bar	3 W = / 5 VA ~	1,45 kg
MH 520 121 NPT	1/2" NPT	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,84 kg

# MD 510 403/MD 510 463



MD 510 403  
MD 510 463



5/2-way solenoid valve actuated by permanent signal and equipped with air spring return. Ports 2 and 4 are in the valve, ports 1, 3 and 5 in the manifold plate.

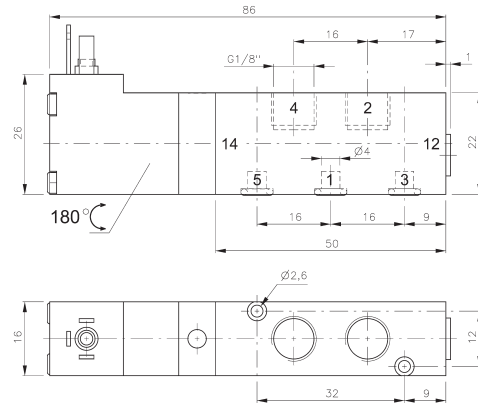
Available with solenoid operators:  
24V=, 12V=, 6V= either for connector form C ISO 15217 or with flying leads, standard cable length 500 mm. For details about solenoid system, please refer to page 2.14.1.

Valves are generally equipped with manual override to push.

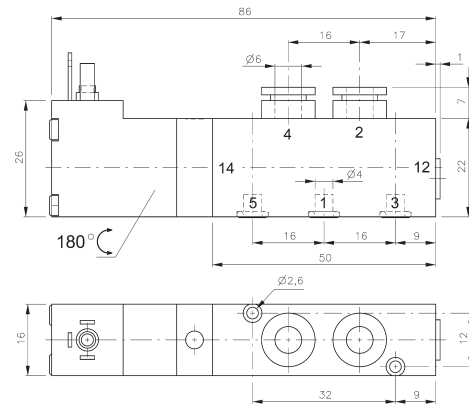
Manifolds are displayed on page 2.7.2.1.

Blanking plates are also available type BP 5 403.

Mounting screws and seals are included.



MD 510 403



MD 510 463

Type	Ports 1, 2, 4	Air flow	Operating press.	Power consumption	Weight
MD 510 403	G 1/8"	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,10 kg
MD 510 463	pif 6 mm	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,12 kg

# MH 510 503/MH 510 703



MH 510 503  
MH 510 703



5/2-way solenoid valve actuated by permanent signal and equipped with air spring return. Ports 2 and 4 are in the valve, ports 1, 3 and 5 in the manifold plate.

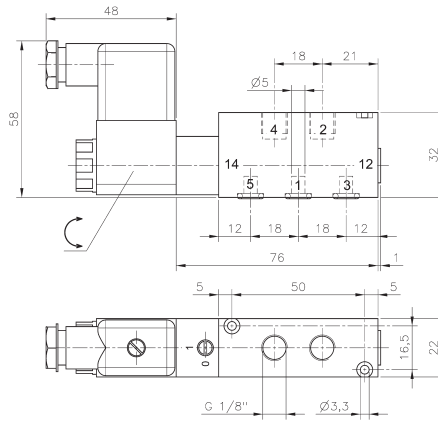
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves are generally equipped with manual override.  
If requested without manual override please order M 510 \_ \_ \_.

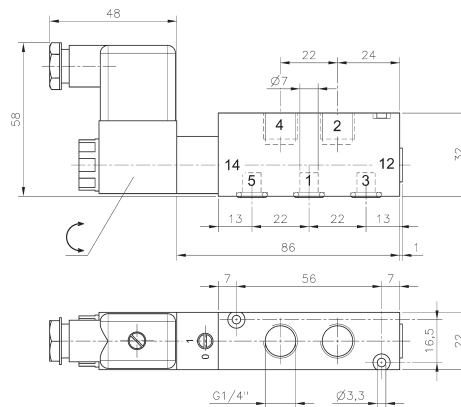
Manifolds for valves type 503 are displayed on page 2.7.2.2,  
manifolds for valves type 703 are displayed on page 2.7.2.3.

Blanking plates are also available type BP 5 503 or BP 5 703.

Mounting screws and seals are included.



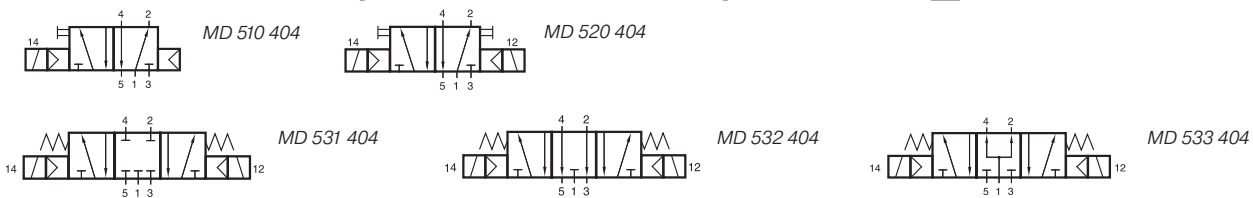
**MH 510 503**



**MH 510 703**

Type	Ports 2, 4	Air flow	Operating press.	Power consumption	Weight
MH 510 503	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,22 kg MK
MH 510 703	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,23 kg MK

# MD 510 404/MD 520 404/MD 53\_404



5-way solenoid valves with all the ports in the plate.

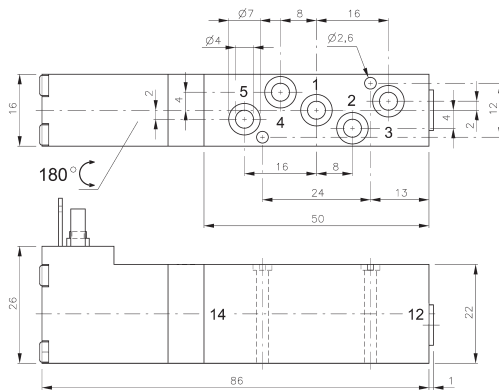
- Type 510 Air spring return
- Type 520 Double solenoid actuated by impulse
- Type 531 centre closed
- Type 532 centre exhausted
- Type 533 centre pressurised

Available with solenoid operators:  
 24V=, 12V=, 6V= either for connector form C ISO 15217 or with flying leads, standard cable length 500 mm.  
 For details about solenoid system, please refer to page 2.14.1.

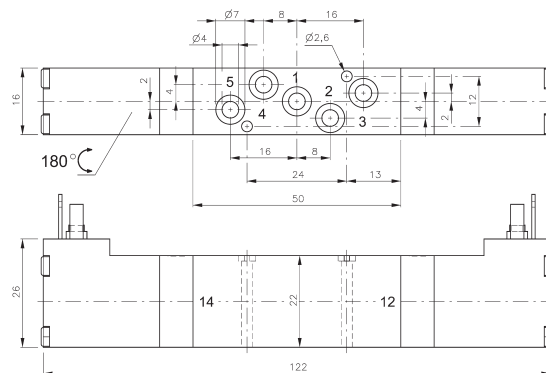
Valves are generally equipped with manual override to push.

Manifolds are displayed on page 2.7.2.6.  
 Blanking plates are also available type or BP 5 404.

Mounting screws and seals are included.



**MD 510 404**



**MD 520 404/MD 53\_404**

Type	Function	Port size	Air low	Operating press.	Power consumption	Weight
MD 510 404	Spring return	G 1/4"	Ø 4 mm	3 - 10 bar	1,8 W = / 3,0 VA ~	0,10 kg
MD 520 404	Bistable	G 1/4"	Ø 4 mm	3 - 10 bar	1,8 W = / 3,0 VA ~	0,14 kg
MD 53_404	5/3-way	G 1/2"	Ø 4 mm	3 - 10 bar	1,8 W = / 3,0 VA ~	0,14 kg

# MH 510 304/MH 510 504/MH 510 704



MH 510 304  
MH 510 504  
MH 510 704



5/2-way solenoid valve actuated by permanent signal and equipped with air spring return. All the ports are in the plate.

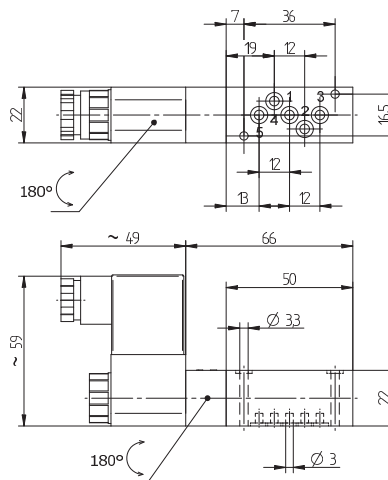
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves are generally equipped with manual override.  
If requested without manual override please order M 510 \_ \_ \_ \_.

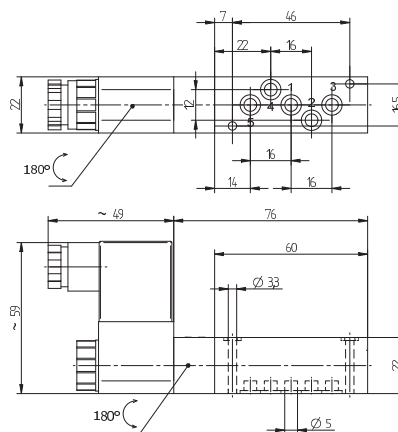
Manifolds for valves type 304 and 504 are displayed on page 2.7.2.7. Manifolds for valves type 704 are displayed on page 2.7.2.8 and 2.7.2.9.

Blanking plates are also available type BP 5 304, BP 5 504 or BP 5 704.

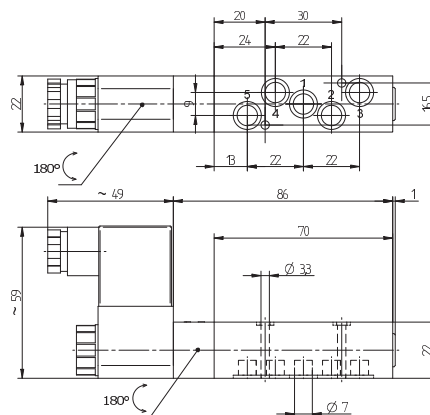
Mounting screws and seals are included.



**MH 510 304**



**MH 510 504**

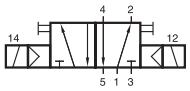


**MH 510 704**

Type	Port size	Air flow	Operating press.	Power cons.	Weight
MH 510 304	Ø 3 mm	220 l/min	2 - 10 bar	3 W = / 5 VA ~	0,18 kg
MH 510 504	Ø 5 mm	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,19 kg
MH 510 704	Ø 7 mm	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,20 kg



# MD 520 403/MD 520 463



MD 520 403  
MD 520 463



5/2-way double solenoid valve actuated by impulse. Position is kept until an electrical signal is applied to the opposite side even when not attached to electrical source. Ports 2 and 4 are in the valve, ports 1, 3 and 5 in the manifold plate.

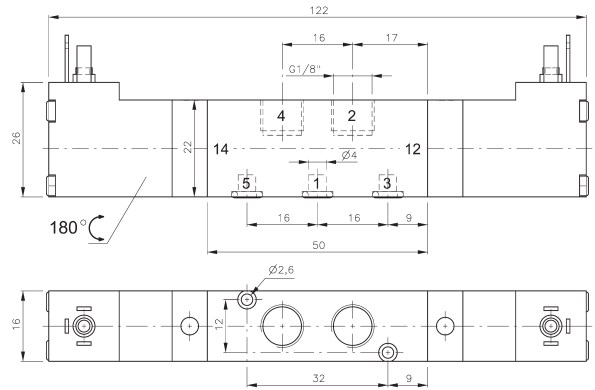
Available with solenoid operators:  
24V=, 12V=, 6V= either for connector form  
C ISO 15217 or with flying leads, standard cable length  
500 mm. For details about solenoid system, please refer to  
page 2.14.1.

Valves are generally equipped with manual override to push.

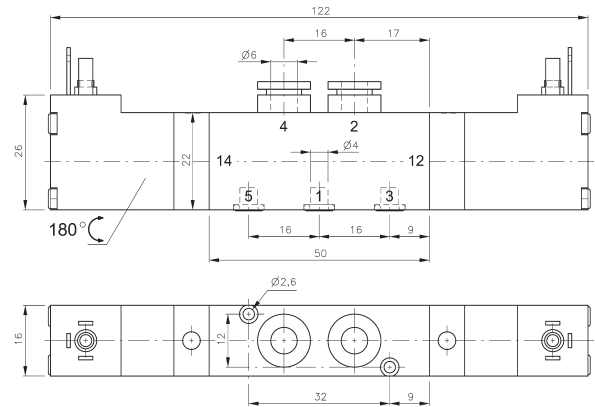
Manifolds are displayed on page 2.7.2.1.

Blanking plates are also available type BP 5 403.

Mounting screws and seals are included.



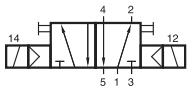
**MD 520 403**



**MD 520 463**

Type	Ports 1, 2, 4	Air flow	Operating press.	Power consumption	Weight
MD 520 403	G 1/8"	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,14 kg
MD 520 463	pif 6 mm	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,15 kg

# MH 520 503/MH 520 703



MH 520 503  
MH 520 703



5/2-way double solenoid valve actuated by impulse. Position is kept until an electrical signal is applied to the opposite side even when not attached to electrical source. Ports 2 and 4 are in the valve, ports 1, 3 and 5 in the manifold plate.

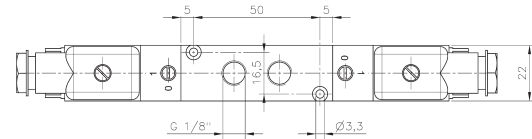
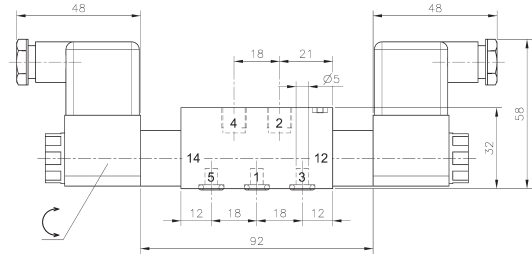
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves are generally equipped with manual override.  
If requested without manual override please order  
M 520 \_\_\_\_.

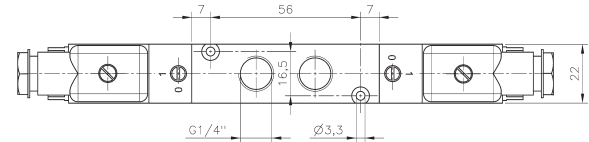
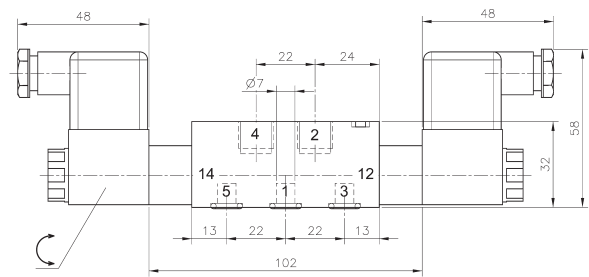
Manifolds for valves type 503 are displayed on page 2.7.2.2,  
manifolds for valves type 703 are displayed on page 2.7.2.3.

Blanking plates are also available type BP 5 503 or BP 5 703.

Mounting screws and seals are included.



**MH 520 503**

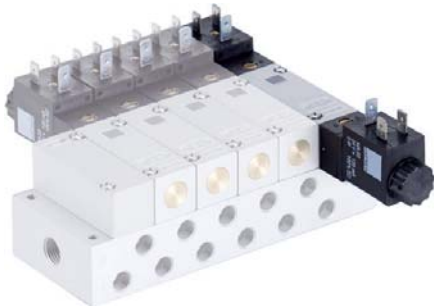
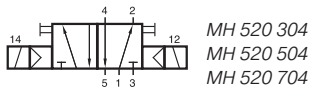


**MH 520 703**

Type	Ports 2, 4	Air flow	Operating press.	Power consumption	Weight	
MH 520 503	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,31 kg	MK
MH 520 703	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,33 kg	MK



# MH 520 304/MH 520 504/MH 520 704



5/2-way double solenoid valve actuated by impulse. Position is kept until an electrical signal is applied to the opposite side even when not attached to electrical source. All the ports are in the plate.

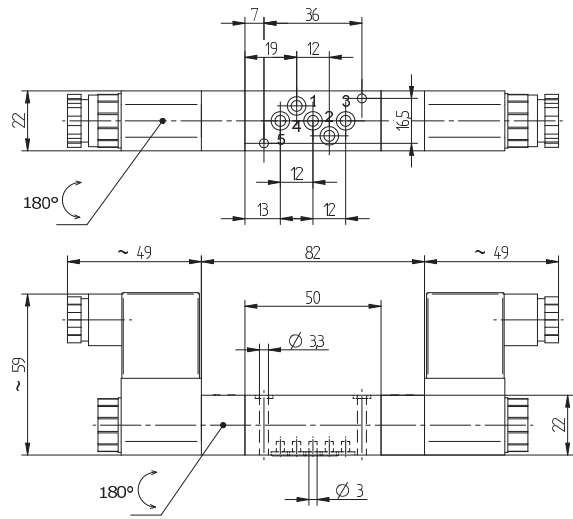
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves are generally equipped with manual override.  
If requested without manual override please order M 520 \_\_\_\_.

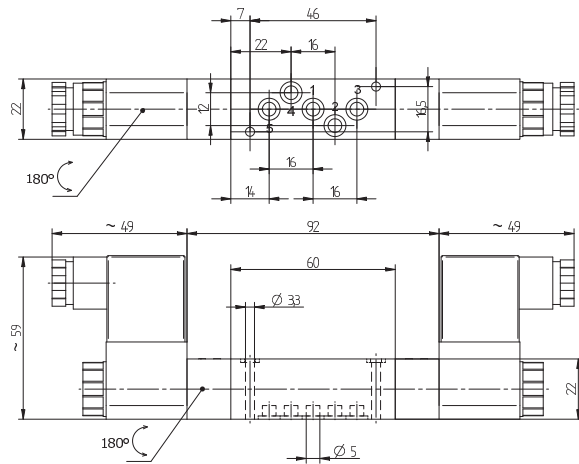
Manifolds for valves type 304 and 504 are displayed on page 2.7.2.7.  
Manifolds for valves type 704 are displayed on page 2.7.2.8 and 2.7.2.9.

Blanking plates are also available type BP 5 304, BP 5 504 or BP 5 704.

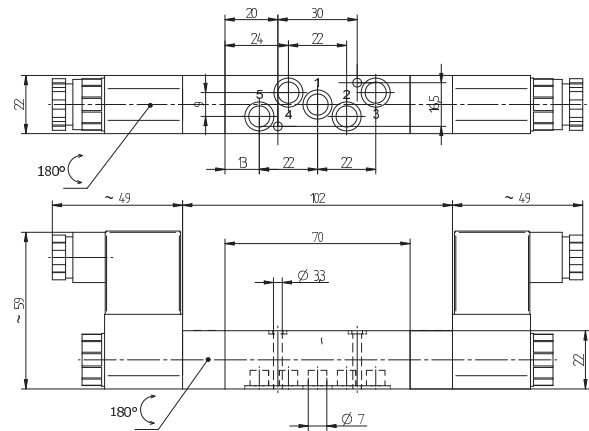
Mounting screws and seals are included.



**MH 520 304**



**MH 520 504**

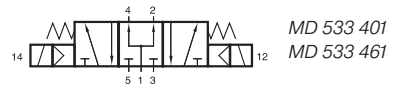
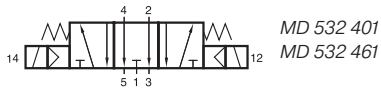
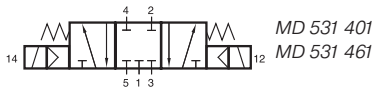


**MH 520 704**

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 520 304	Ø 3 mm	220 l/min	2 - 10 bar	3 W = / 5 VA ~	0,25 kg
MH 520 504	Ø 5 mm	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,27 kg
MH 520 704	Ø 7 mm	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,29 kg



# MD 53\_401/MD 53\_461



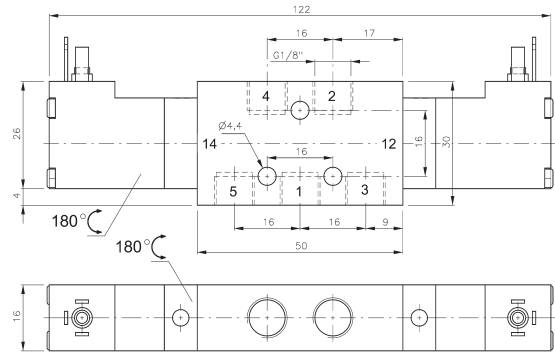
5/3-way solenoid valve with spring return to middle position, actuated by permanent signal.

- Type 531 centre closed
- Type 532 centre exhausted
- Type 533 centre pressurised

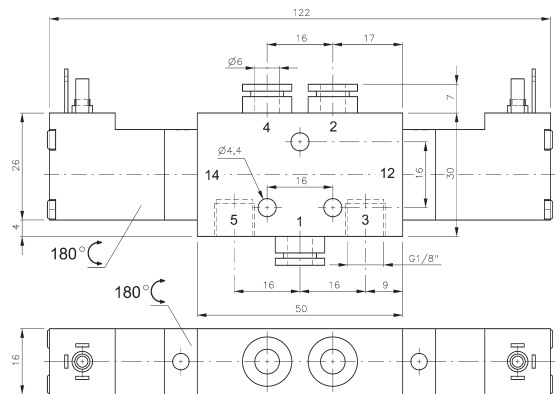
When ordering please complete the type number by 1, 2 or 3 according to the type required.

Available with solenoid operators:  
24V=, 12V=, 6V= either for connector form C ISO 15217 or with flying leads, standard cable length 500 mm. For details about solenoid system, please refer to page 2. 14. 1.

Valves are generally equipped with manual override to push.



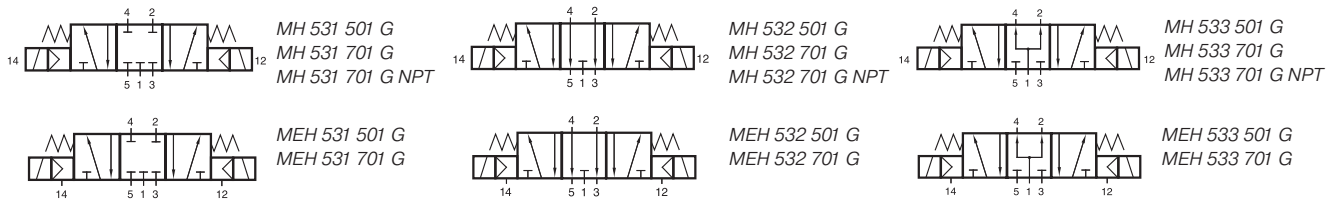
**MD 53\_401**



**MD 53\_461**

Type	Ports 1, 2, 4	Air flow	Operating press.	Power consumption	Weight
MD 53_401	G 1/8"	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,15 kg
MD 53_461	pif 6 mm	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,16 kg

# MH 53\_ 501 G/MH 53\_ 701 G



5/3-way solenoid valve with spring return to middle position, actuated by permanent signal.

- Type 531 centre closed
- Type 532 centre exhausted
- Type 533 centre pressurised

When ordering please complete the type number by 1, 2 or 3 according to the type required.

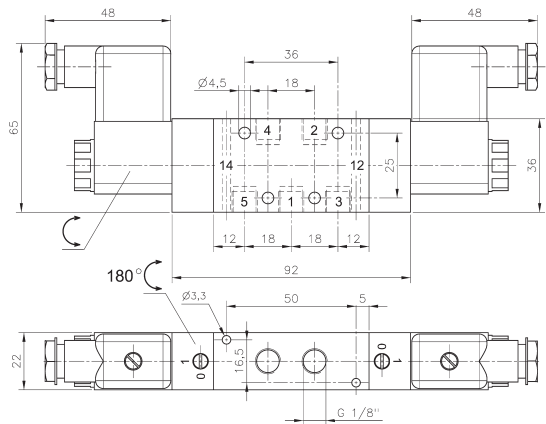
The G-Series valves offer the flexibility of in-line fitment as well as the option of being assembled on to a manifold as shown. Manifolds for valves type 501 G are displayed on page 2.7.2.2, manifolds for valves type 701 G are displayed on page 2.7.2.3.

Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

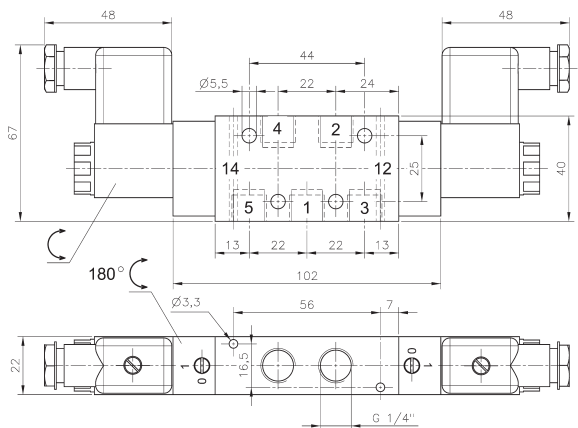
Valves are generally equipped with manual override. If requested without manual override please order M 53\_ \_ \_ \_ G.

Valves are also available with external pilot feed.  
Type: MEH 53\_ \_ \_ \_ G (please add 1 digit for type and 3 digits for size).  
Ports 12 and 14: M5.  
Minimum actuation pressure: 3 bar.  
Operating pressure: 0-10 bar.

Version for vacuum on request.



**MH 53\_ 501 G**

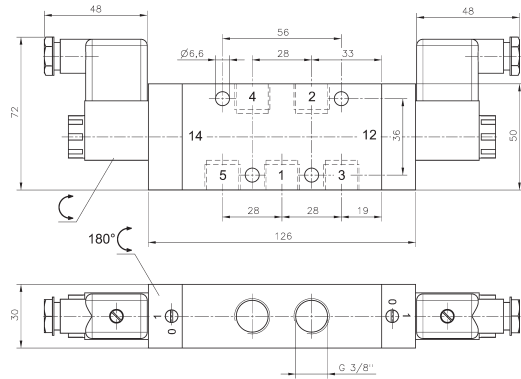
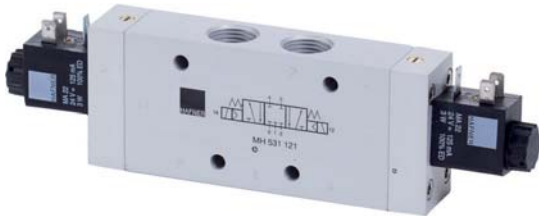
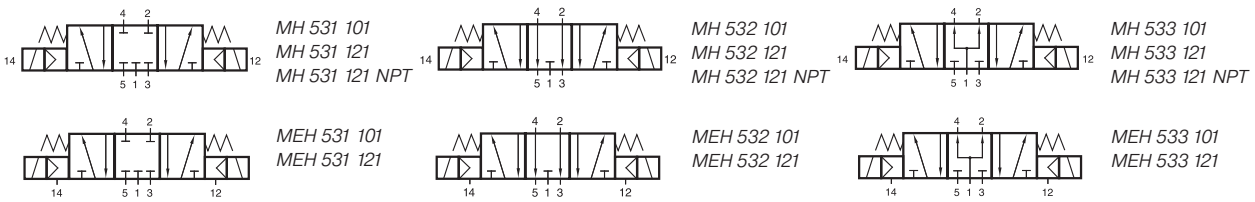


**MH 53\_ 701 G/MH 53\_ 701 G NPT**

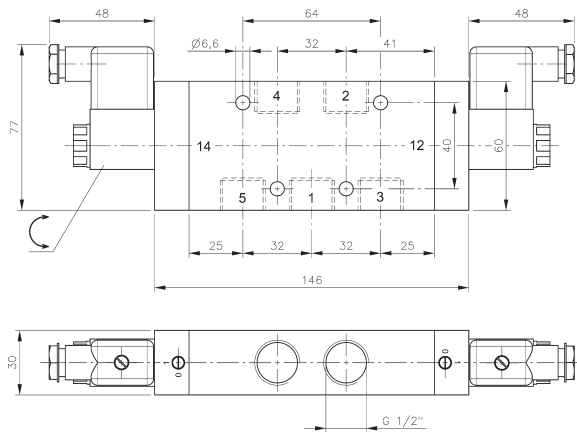
Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 53_ 501 G	G 1/8"	650 l/min	3 - 10 bar	3 W = / 5 VA ~	0,33 kg
MH 53_ 701 G	G 1/4"	1250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,35 kg
MH 53_ 701 G NPT	1/4" NPT	1250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,35 kg



# MH 53\_ 101/MH 53\_ 121



**MH 53\_101**



**MH 53\_121/MH 53\_ 121 NPT**

5/3-way solenoid valve with spring return to middle position, actuated by permanent signal.

- Type 531 centre closed
- Type 532 centre exhausted
- Type 533 centre pressurised

When ordering please complete the type number by 1, 2 or 3 according to the type required.

Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves are generally equipped with manual override. If requested without manual override please order M 53\_ \_ \_ \_.

Valves are also available with external pilot feed.  
Type: MEH 53\_ \_ \_ \_ (please add 1 digit for type and 3 digits for size).

Ports 12 and 14: G 1/8".  
Minimum actuation pressure: 3 bar.  
Operating pressure: 0-10 bar.

Version for vacuum on request.

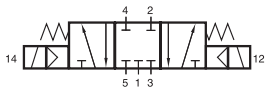
Valve type MH 53\_ 101 G for manifolds displayed on page 2.7.2.4 and valve type MH 53\_ 121 G for manifolds displayed on page 2.7.2.5.

G 3/4" versions available on request.

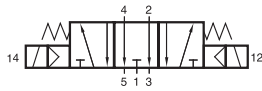
Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 53_ 101	G 3/8"	2250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,66 kg
MH 53_ 121	G 1/2"	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,84 kg
MH 53_ 121 NPT	1/2" NPT	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,84 kg



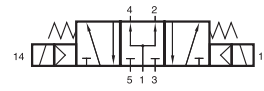
# MD 53\_403/MD 53\_463



MD 531 403  
MD 531 463



MD 532 403  
MD 532 463



MD 533 403  
MD 533 463



5/3-way solenoid valve with spring return to middle position, actuated by permanent signal. Ports 2 and 4 are in the valve, ports 1, 3 and 5 in the manifold plate.

- Type 531 centre closed
- Type 532 centre exhausted
- Type 533 centre pressurised

When ordering please complete the type number by 1, 2 or 3 according to the type required.

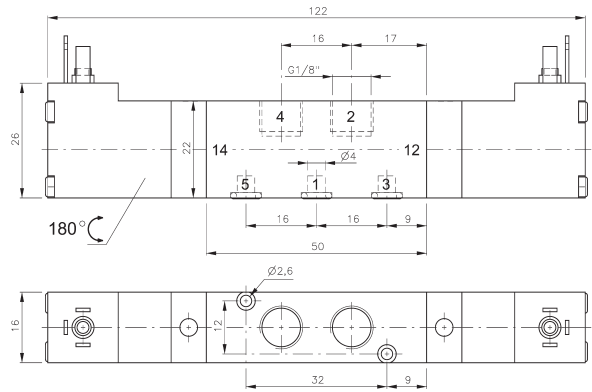
Available with solenoid operators:  
24V=, 12V=, 6V= either for connector form C ISO 15217 or with flying leads, standard cable length 500 mm. For details about solenoid system, please refer to page 2.14.1.

Valves are generally equipped with manual override to push.

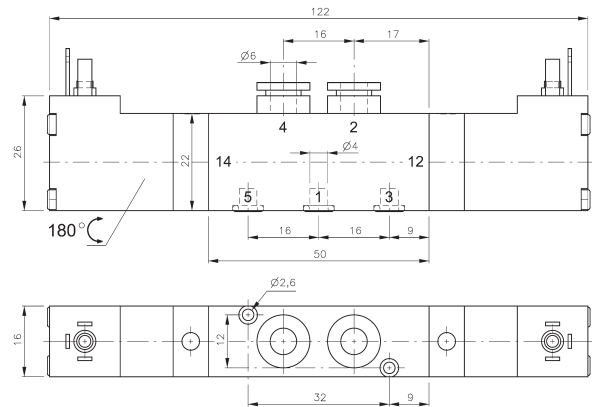
Manifolds are described on page 2.7.2.1.

Blanking plates are also available type BP 5 403.

Mounting screws and seals are included.



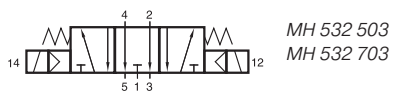
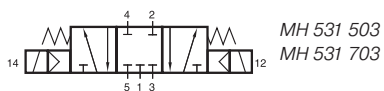
**MD 53\_403**



**MD 53\_463**

Type	Ports 1, 2, 4	Air flow	Operating press.	Power consumption	Weight
MD 53_403	G 1/8"	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,14 kg
MD 53_463	pif 6 mm	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,15 kg

# MH 53\_ 503/MH 53\_ 703



5/3-way solenoid valve with spring return to middle position, actuated by permanent signal. Ports 2 and 4 are in the valve, ports 1, 3 and 5 in the manifold plate.

- Type 531 centre closed
- Type 532 centre exhausted
- Type 533 centre pressurised

When ordering please complete the type number by 1, 2 or 3 according to the type required.

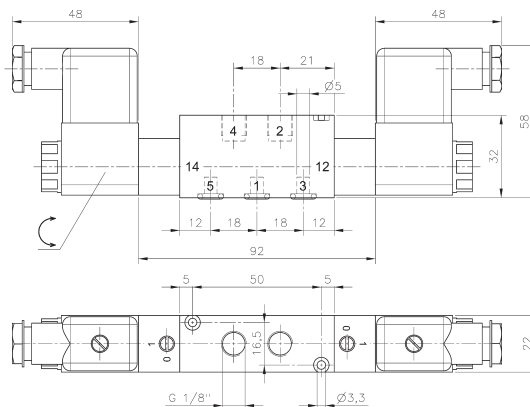
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves are generally equipped with manual override.  
If requested without manual override please order M 53\_ \_ \_ \_  
(please add 1 digit for type and 3 for size).

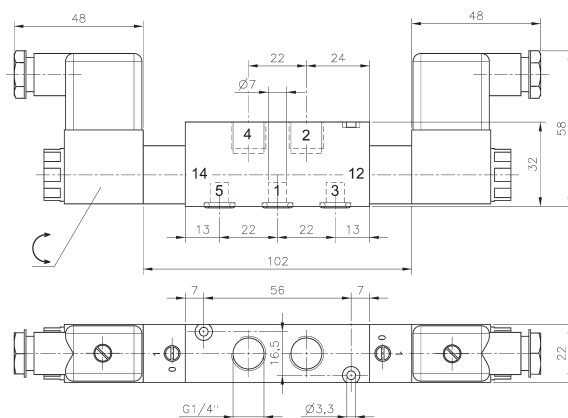
Manifolds for valves type 503 are displayed on page 2.7.2.2,  
manifolds for valves type 703 are displayed on page 2.7.2.3.

Blanking plates are also available type BP 5 503 or BP 5 703.

Mounting screws and seals are included.



**MH 53\_ 503**



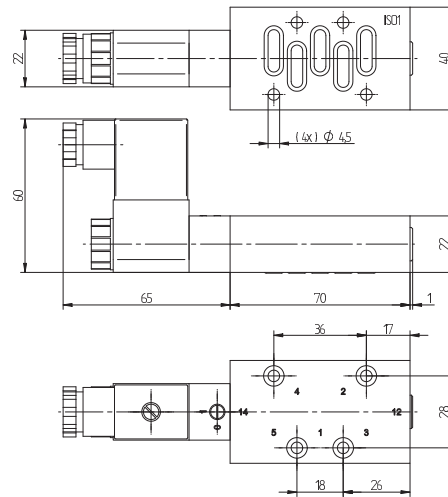
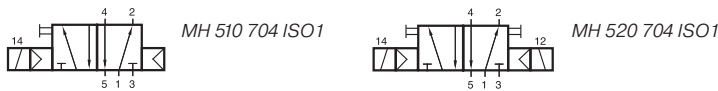
**MH 53\_ 703**

Type	Ports 2, 4	Air flow	Operating press.	Power consumption	Weight	
MH 53_ 503	G 1/8"	650 l/min	3 - 10 bar	3 W = / 5 VA ~	0,31 kg	MK
MH 53_ 703	G 1/4"	1250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,33 kg	MK

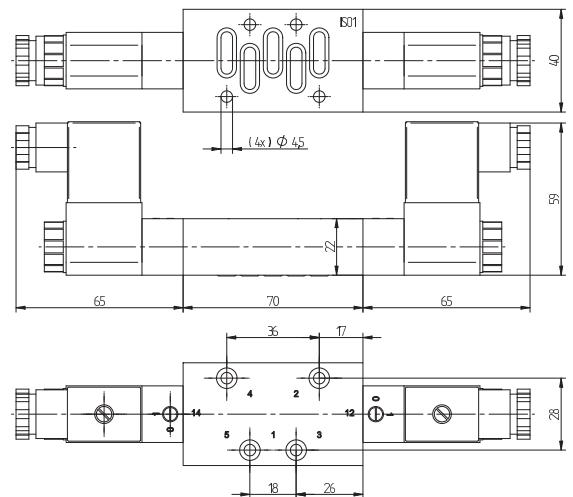




# MH 510 704 ISO1 / MH 520 704 ISO1 RP 5 704 ISO1



**MH 510 704 ISO1**



**MH 520 704 ISO1**

5-way solenoid valve and sub-base according to ISO 5599-1 size ISO 1.

Type 510 5/2-way single solenoid, with air spring return  
Type 520 5/2-way double solenoid, actuated by impulse

5/3-way centre closed available on request.

Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 48V/50Hz, 24V/50 Hz, 24V=, 12V=.

Valves are generally equipped with manual override.

Mounting screws and seals are included.

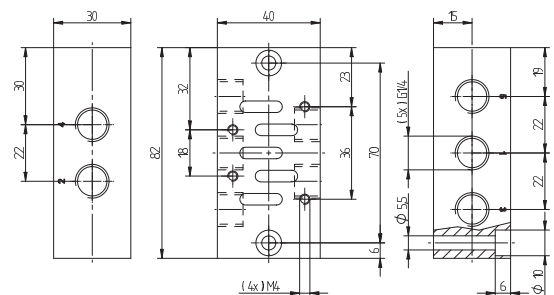
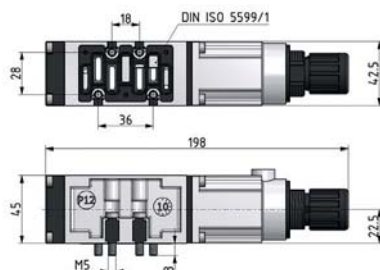
## RP 5 704 ISO1

Single sub-base with 5 x G 1/4" threads.

## ISO.1 P12

Flange-mounted pressure regulator which can be put between the sub-base and valve.

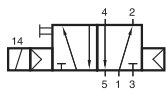
Adjustable pressure range: 0,5 - 10 bar



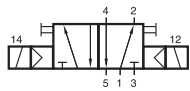
**RP 704 ISO1**

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 510 704 ISO1	Ø 7 mm	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,28 kg
MH 520 704 ISO1	Ø 7 mm	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,39 kg
RP 5 704 ISO1	G 1/4"	1250 l/min		3 W = / 5 VA ~	0,23 kg

# MH 510 184 ISO4/MH 520 184 ISO4



MH 510 184 ISO4



MH 520 184 ISO4



5-way solenoid valve according to ISO 5599-1 size ISO 4.

- Type 510 5/2-way single solenoid, with air spring return
- Type 520 5/2-way double solenoid, actuated by impulse

5/3-way centre closed available on request.

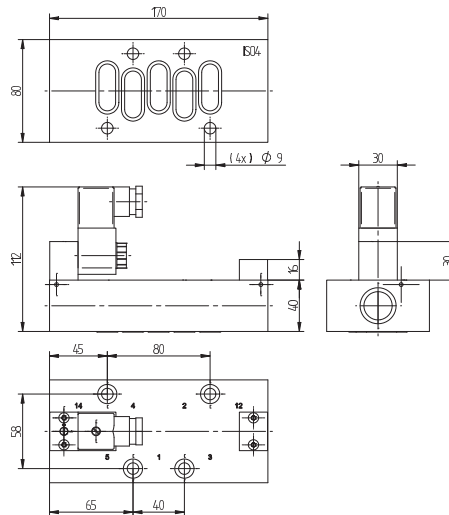
Valves can be used with industryform B coils (22 mm) type MA 22 displayed on page 2. 14.2 as well as Form A coils (30 mm) type MA 30 S9 displayed on page 2. 14.4.

Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 48V/50Hz, 24V/50 Hz, 24V=, 12V=.

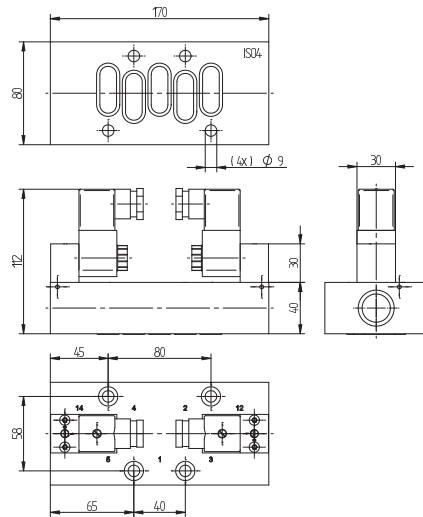
Valves are generally equipped with manual override.

Mounting screws and seals are included.

Manifolds are displayed on the next page.



**MH 510 184 ISO4**



**MH 520 184 ISO4**

Type	Port size	Air flow	Operating press.	Power consumption		Weight
				With MA 22 coils	With MA 30 S9 coils	
MH 510 184 ISO4	Ø 18 mm	6000 l/min	1 - 10 bar	3 W = / 5 VA ~	2 W = / 3 VA ~	1,55 kg
MH 520 184 ISO4	Ø 18 mm	6000 l/min	1 - 10 bar	3 W = / 5 VA ~	2 W = / 3 VA ~	1,70 kg

# RB 5\_\_ 184 K1 ISO4/RB 5\_\_ 184 K2 ISO4



Modular manifold system according to ISO 5599-1 size ISO 4 with all ports on the bottom.  
Plates are designed for assemblage in control cabinets.

Common connection to port 1 (pressure), 3 (exhaust) and 5 (exhaust). The ports 2 and 4 of the individual valves are also located in the manifold plate. The system can be build up and taken apart by just opening two hexagon socket screws. Additional stations can be added at any position and any time.

The following valves can be assembled to the system  
RB 5\_\_ 184 K\_ ISO4:

- 5/2 single solenoid      MH 510 184 ISO4 page 2.5.4.1.2
- 5/2 double solenoid    MH 520 184 ISO4 page 2.5.4.1.2

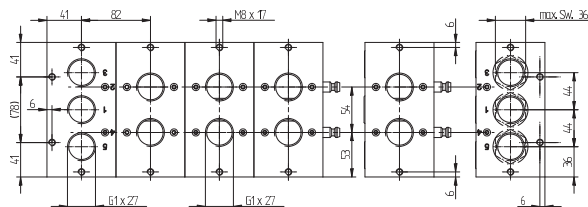
3/2-way functions by closing either port 2 or 4.

The system consists of:

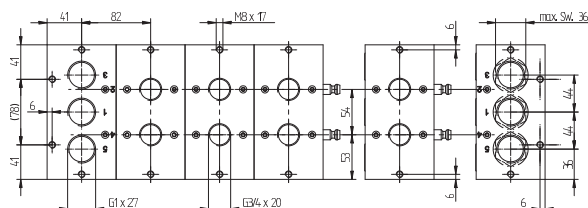
- End-plate right            type R 5 184 K1 R
- End-plate left            type R 5 184 K1 L
- Individual position      type R 5 184 K1 ISO4 with G 1" ports
- type R 5 184 K2 ISO4 with G 3/4" ports

Please note:  
End-plates are not offering an individual valve-position.

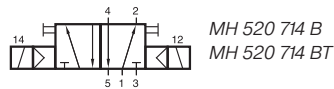
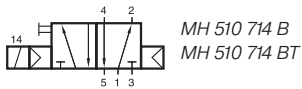
The plates can also be ordered assembled by the manufacturer. In this case order RB 5\_\_ 184 K\_ ISO4. Please add two digits for the number of positions required and one digit for the thread size.



**RB 5\_\_ 184 K1 ISO4**



# MH 510 714 B/MH 510 714 BT MH 520 714 B/ MH 520 714 BT



5-way solenoid valve with standardized interface which is widely used in packaging machines for bulk materials such as cement.

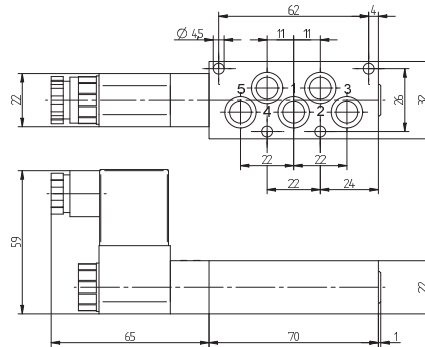
Type 510 5/2-way single solenoid, with air spring return  
Type 520 5/2-way double solenoid, actuated by impulse

Type B For manifold assembly  
Type BT For valve terminal assembly, including intermediate plate type ZP 714 BT

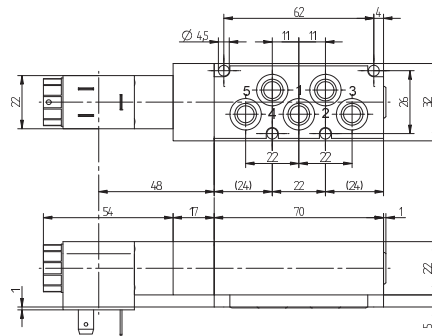
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 48V/50Hz, 24V/50 Hz, 24V=, 12V=.

Valves are generally equipped with manual override.

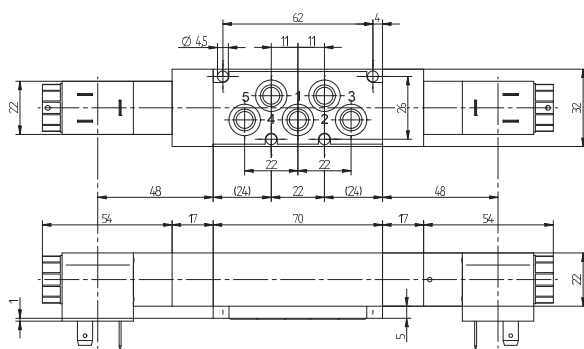
Mounting screws and seals are included.



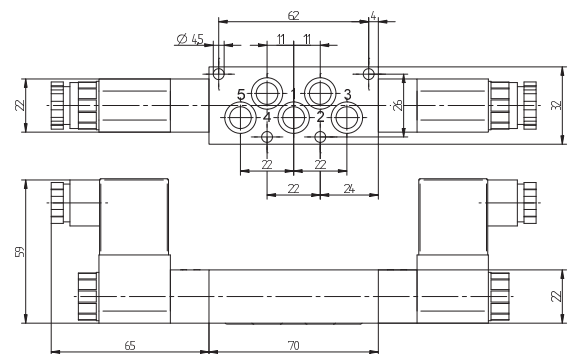
**MH 510 714 B**



**MH 510 714 BT**



**MH 520 714 BT**



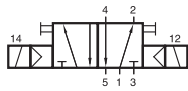
**MH 520 714 B**

Type	Usage	Port size	Air flow	Operating press.	Power cons.	Weight
MH 510 714 B	Manifold	Ø 7 mm	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,20 kg
MH 520 714 B	Manifold	Ø 7 mm	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,29 kg
MH 510 714 BT	Valve Terminal	Ø 7 mm	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,30 kg
MH 520 714 BT	Valve Terminal	Ø 7 mm	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,44 kg

# MH 510 704 J / MH 520 704 J



MH 510 704 J



MH 520 704 J



5-way solenoid valve with standardized interface which is widely used in packaging machines for bulk materials such as cement.

Type 510 5/2-way single solenoid, with air spring return  
 Type 520 5/2-way double solenoid, actuated by impulse

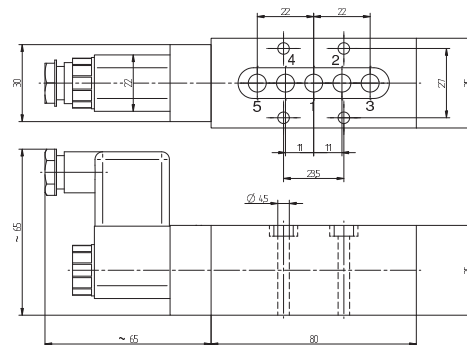
Available with solenoid operators:  
 230V/50Hz, 110V/50Hz, 48V/50Hz, 24V/50 Hz, 24V=, 12V=.

Valves are generally equipped with manual override.

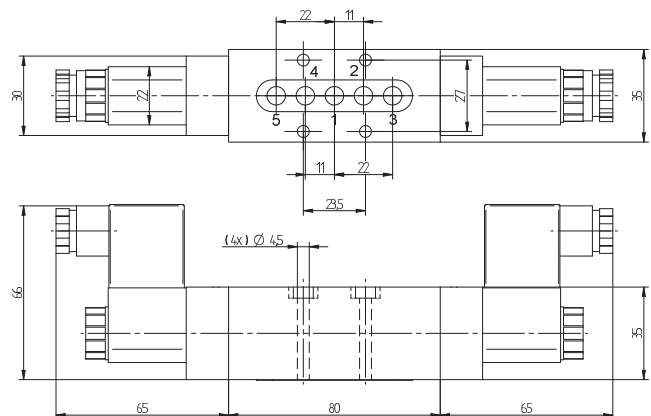
Mounting screws and seals are included.

Pneumatically actuated versions available on request.

Valves can be put onto the single base-plate type R 520 704 J which is displayed on the following page.



MH 510 704 J



MH 520 704 J

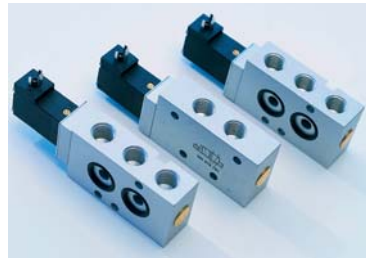
Type	Function	Port size	Air flow	Operating press.	Power cons.	Weight
MH 510 704 J	5/2-way single solenoid	Ø 7 mm	1250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,55 kg
MH 520 704 J	5/2-way double solenoid	Ø 7 mm	1250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,68 kg



# MK-Series

## MK

The MK- series is a combination of the 1.8 Watt solenoid-system MD 401 (detailed information on page 2.14.1) and the G 1/4" valves of the 700-series with a flow of 1.250 NL/min. The following valves are available:



MK 310 701 G	3/2-way single solenoid, n.c.	dual use	description on page 2.5.1.1.10
MOK 310 701 G	3/2-way single solenoid, n.o.	dual use	page 2.5.1.1.10
MK 510 701 G	5/2-way single solenoid	dual use	page 2.5.2.1.2
MK 520 701 G	5/2-way double solenoid	dual use	page 2.5.2.1.5
MK 531 701 G	5/3-way centre closed	dual use	page 2.5.3.1.2
MK 532 701 G	5/3-way centre exhausted	dual use	page 2.5.3.1.2
MK 533 701 G	5/3-way centre pressurised	dual use	page 2.5.3.1.2
MK 510 703	5/2-way single solenoid	manifold	page 2.5.2.2.2
MK 520 703	5/2-way double solenoid	manifold	page 2.5.2.2.6
MK 531 703	5/3-way centre closed	manifold	page 2.5.3.2.2
MK 532 703	5/3-way centre exhausted	manifold	page 2.5.3.2.2
MK 533 703	5/3-way centre pressurised	manifold	page 2.5.3.2.2
MK 510 704	5/2-way single solenoid	manifold	page 2.5.2.2.4
MK 520 704	5/2-way double solenoid	manifold	page 2.5.2.2.7
MK 531 704	5/3-way centre closed	manifold	page 2.5.3.2.3
MK 532 704	5/3-way centre exhausted	manifold	page 2.5.3.2.3
MK 533 704	5/3-way centre pressurised	manifold	page 2.5.3.2.3

as well as valves with NAMUR-interface, please refer to chapter 2.10.



## Advantages

- **High flow**
- **Compact design**
- **Low power consumption**



The valves are also used for the **22 mm terminals**, described in chapter 2.8.