

# 2.5 Solenoid Valves



Selected models are available for low temperature application.  
Temperature-range: - 50° C to + 50° C.  
For detailed information refer to chapter 2.9.

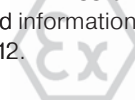


Selected models can be equipped for high temperature environments up to 80 °C, DC only!

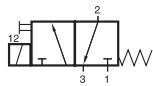


Selected models are available in stainless steel.  
For detailed information refer to chapter 2.10.

Selected models are available for explosion hazardous environment. They are ATEX-Ex certified.  
For detailed information refer to chapter 2.12.



# MD 311 010



MD 311 010



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

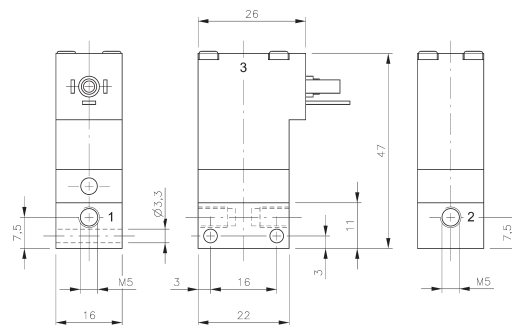
By closing port 3 valve can be converted into a 2/2-way valve.

Available with solenoid operators:  
230/50Hz, 110V/50Hz, 24V50Hz, 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. 11. 1.

Valves are generally equipped with manual  
override to push.

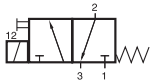
Valves can be used for technical vacuum too.



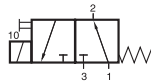
MD 311 010

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

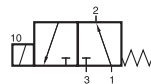
# MH 311 012/MOH 311 012/ MX 311 012 /MH 211 012 MH 311 015/MOH 311 015/ MX 311 015 /MH 211 015



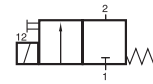
MH 311 012  
MH 311 015



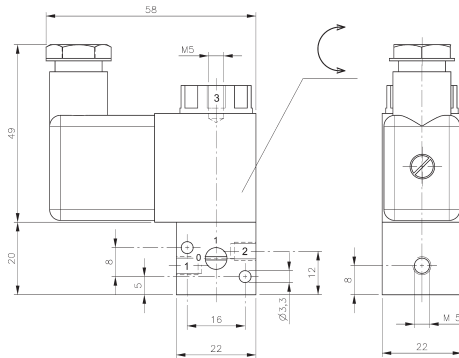
MOH 311 012  
MOH 311 015



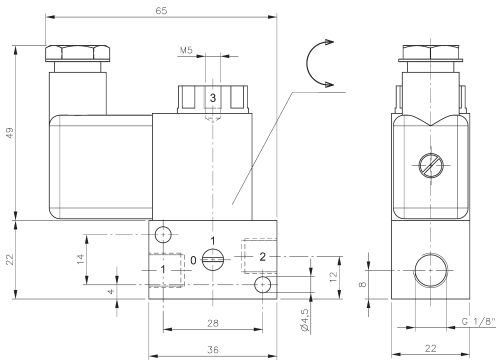
MX 311 012  
MX 311 015



MH 211 012  
MH 211 015



MH 311 012/MOH 311 012/MX 311 012/  
MH 211 012



MH 311 015/MOH 311 015/ MX 311 015  
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 MX 311 \_\_\_

Normally open, port 1 and 2 in the valve, port 3 at the top of the solenoid, no 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, not possible for MX.

Please notice: Drawings are for MH 311 \_\_\_-valves.

For MOH-valves ports 1 and 3 are swapped, for MH 211 port 3 is not existing. Operator system of MX-valve is 8 mm longer. MOH 311 and MH 211-valves are equipped with a flat plastic nut.

Available with solenoid operators:

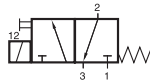
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

Valves can be used for technical vacuum too.

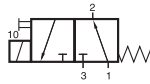
Type	Ways	Function	Port size			Air flow	Operating pressure	Power-consumption	Weight	
			1	2	3					
MH 311 012	3/2	n.c.	M5	M5	M5	40 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,12 kg	Ex
MH 311 015	3/2	n.c.	G 1/8"	G 1/8"	M5	50 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,14 kg	Ex
MOH 311 012	3/2	n.o.	M5	M5	M5	40 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,12 kg	Ex
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	Ex
MX 311 012	3/2	n.o.	M5	M5	hole	40 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,13 kg	
MX 311 015	3/2	n.o.	G 1/8"	G 1/8"	hole	50 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,15 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	



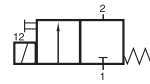
# MH 311 305/MH 311 309/MOH 311 305 MOH 311 309/MH 211 305/MH 211 309



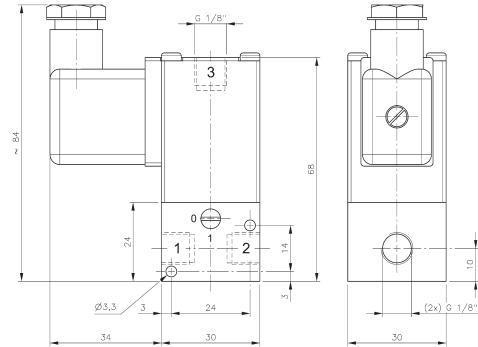
MH 311 305  
MH 311 309



MOH 311 305  
MOH 311 309



MH 211 305  
MH 211 309



MH 311 305/MOH 311 305/MH 211 305

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

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

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

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

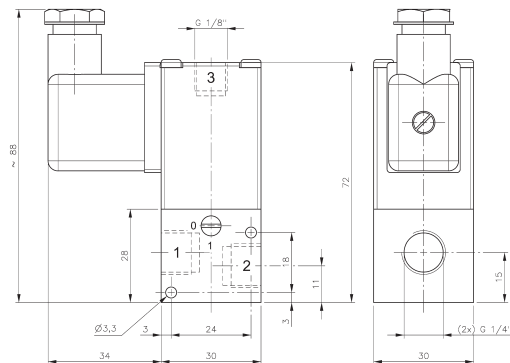
Normally open, port 2 and 3 in the valve, port 1 at the top of the solenoid

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

2/2-way valve n.c.

Please notice:

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

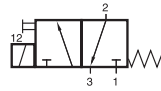
Available with solenoid operators:  
230VAC, 24DC.

Valves are generally equipped with manual override.

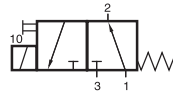
Connector Industry B (22 mm).

Type	Ways	Function	Port size			Air flow	Operating Power		Weight
			1	2	3		pressure	consumption	
MH 311 305	3/2	n.c.	G 1/8"	G 1/8"	G 1/8"	300 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"	300 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"	300 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"	300 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"		300 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"		300 l/min	0 - 7 bar	7,5 W = /8,5 VA ~ 0,18 kg	

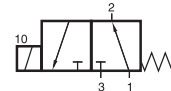
# MH 311 105/MOH 311 105/MX 311 105



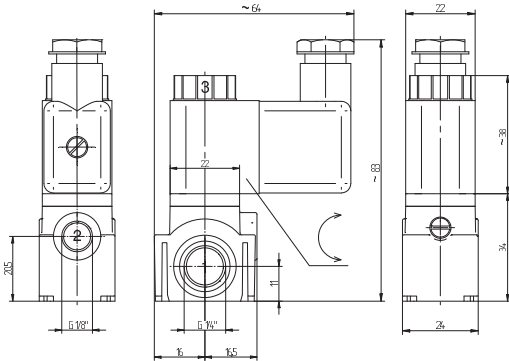
MH 311 105



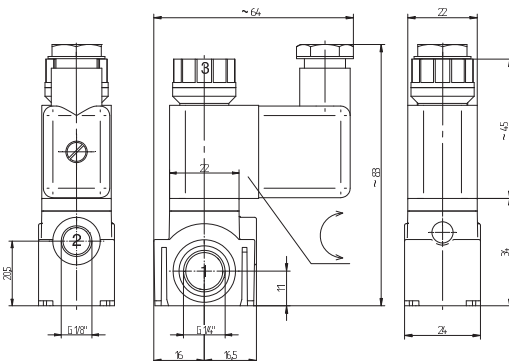
MOH 311 105



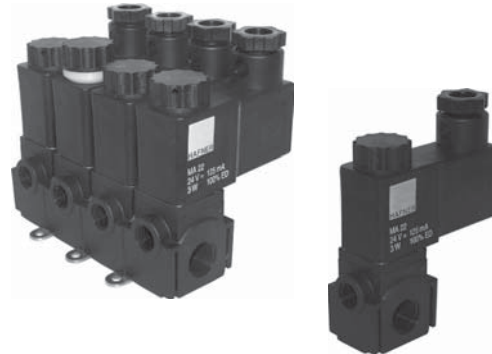
MX 311 105



**MH 311 105/MOH 311 105**



**MX 311 105**



Direct acting 3/2-way solenoid valve, equipped with mechanical spring return, body made from polyamide.

**Type MH 311 105**

Normally closed, port 1 in the body, including manual override

**Type MOH 311 105**

Normally open, port 1 at the top of the solenoid, including manual override

**Type MX 311 105**

Normally open, port 1 in the body, no manual override

Individual valves can easily be combined to manifold systems just by putting 2 brass brackets (type VBM 105) into the bodies from the bottom. MH and MX valves can be combined in the same manifold system

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

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

Valves can be used for technical vacuum too.

Available and useful accessories:

**VBM 105**

Set to connect two valves consisting of two brass clamping brackets and an NBR O-ring.

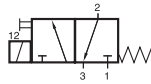
**3015 – 1/4**

Plug to close one side of the two supply ports in the valve, brass, nickel plated G 1/4" with O-ring seal.

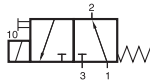
Type	Function	Port size			Air flow	Operating pressure	Power consumption	Weight
		1	2	3				
MH 311 105	n.c.	G 1/4"	G 1/8"	M5	60 l/min	-0,9 - 10 bar	3 W= / 5 VA	0,09 kg
MOH 311 105	n.o.	M5	G 1/8"	G 1/4"	60 l/min	-0,9 - 10 bar	3 W= / 5 VA	0,09 kg
MX 311 105	n.o.	G 1/4"	G 1/8"	hole	60 l/min	-0,9 - 10 bar	3 W= / 5 VA	0,09 kg



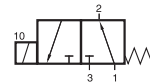
# MH 311 014/MOH 311 014 MH 311 019/MX 311 019



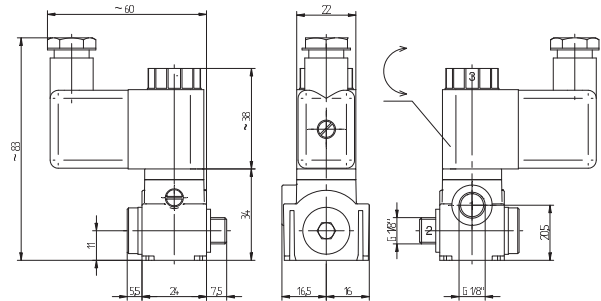
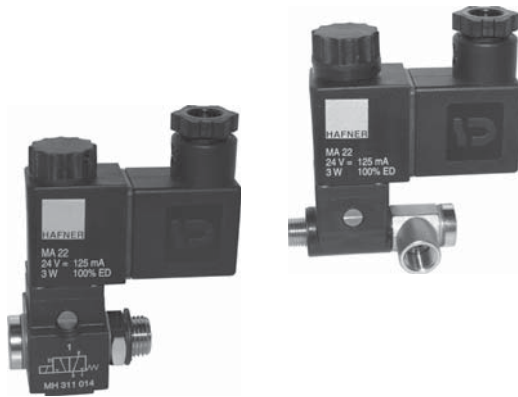
MH 311 014  
MH 311 019



MOH 311 014



MX 311 019



MH 311 014/MOH 311 014

Direct acting 3/2-way solenoid valve equipped with spring return.  
Orifice size 1.3 mm, max. pressure 7 bar.

**Type MH 311 014:**

Normally closed, port 1 in the valve, port 2 as banjo screw, exhaust through operator system with manual override.

**Type MH 311 019 \_\_:**

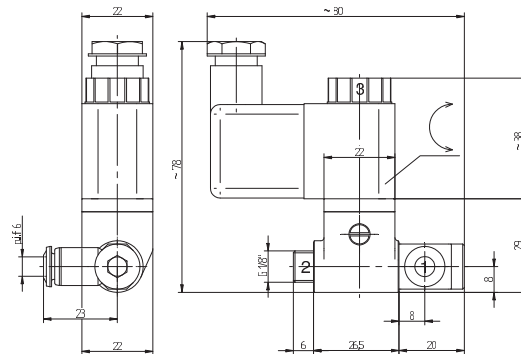
Normally closed, port 1 swivel either 1/8" or 6 mm pif, port 2 as banjo screw, exhaust through operator system with manual override.

**Type MOH 311 014:**

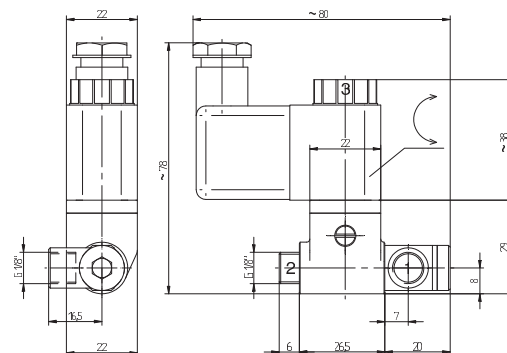
Normally open, port 1 at the top of the operator system, port 2 as banjo screw, exhaust at the body, manual override included, delivery with flat nut. Drawing displays MH-valve, for MOH ports 1 and 3 swapped.

**Type MX 311 019 \_\_:**

Normally open, port 1 swivel either 1/8" or 6 mm pif, port 2 as banjo screw, exhaust through operator system no manual override. Operator system is 8 mm longer than in drawing.



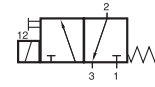
MH 311 019 6/MX 311 109 6



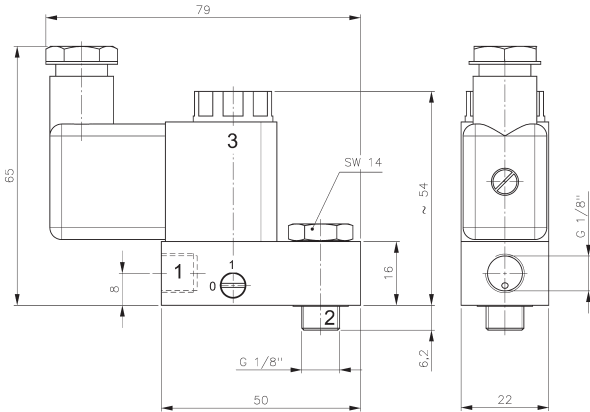
MH 311 019 1/8 / MX 311 019 1/8

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

Type	Funct.	Port 1	Port 2 banjo	Port 3	Air flow	Operating pressure	Power cons.	Weight
MH 311 014	n.c.	G 1/8"	G 1/8"	M5	60 l/min	-0,9 - 10 bar	3 W= / 5 VA	0,13 kg
MOH 311 014	n.o.	M5	G 1/8"	G 1/8"	60 l/min	-0,9 - 10 bar	3 W= / 5 VA	0,13 kg
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
MX 311 019 6	n.o.	Swivel 6 mm pif	G 1/8"	M5	50 l/min	-0,9 - 8 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 - 8 bar	3 W= / 5 VA	0,16 kg
MX 311 019 1/8	n.o.	Swivel G 1/8"	G 1/8"	hole	50 l/min	-0,9 - 8 bar	3 W= / 5 VA	0,16 kg



MH 311 013  
MH 311 017



**MH 311 013**



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.

Products with port 1 in NPT on request.

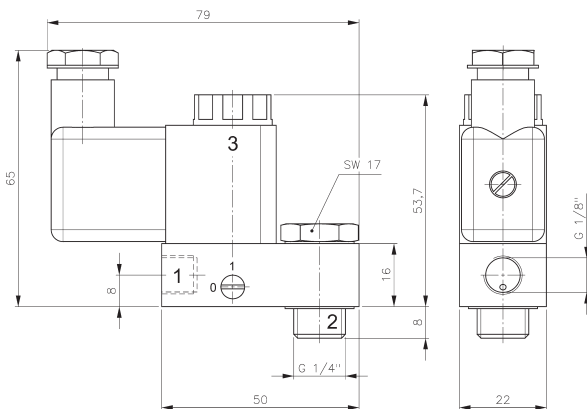
Products normally open on request.

2/2-way version on request.

Available with solenoid operators:

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

Valves are generally equipped with manual override.



**MH 311 017**



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

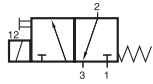
When assembling this type of valve to a spring-return actuator, please take into consideration that there is no exhaust air recirculation ("purge").

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).

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.

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

Available with solenoid operators:  
230VAC, 24DC.

Valves are generally equipped with manual override.

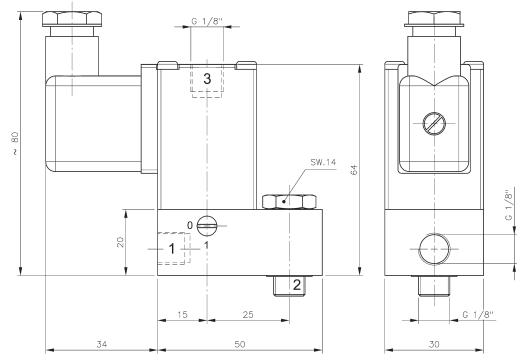
Connector Industry B (22 mm)

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

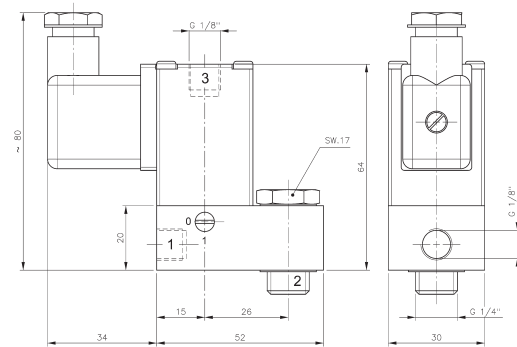
When assembling this type of valve to a spring-return actuator, please take into consideration that there is no exhaust air recirculation ("purge").

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



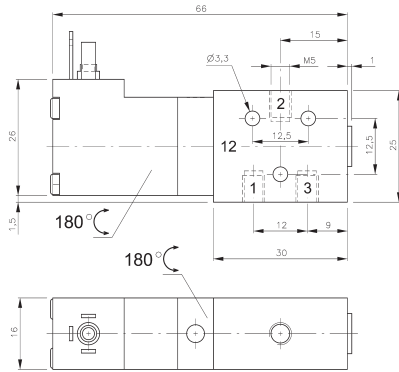
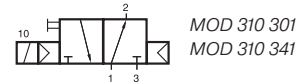
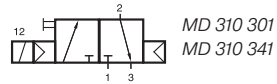
MH 311 317



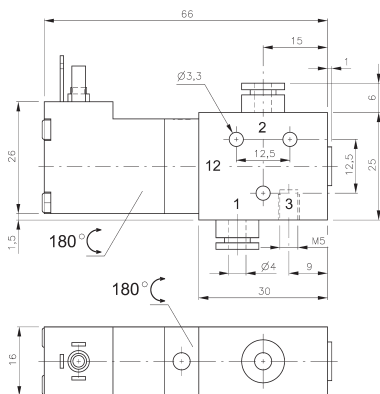
Type	Function	Port			Air flow	Operating pressure	Power consumption	Weight
		1	2 banjo	3				
MH 311 313	n.c.	G 1/8"	G 1/8"	G 1/8"	300 l/min	0 - 7 bar	7,5 W = /8,5 VA ~	0,21 kg
MH 311 317	n.c.	G 1/8"	G 1/4"	G 1/8"	300 l/min	0 - 7 bar	7,5 W = /8,5 VA ~	0,22 kg



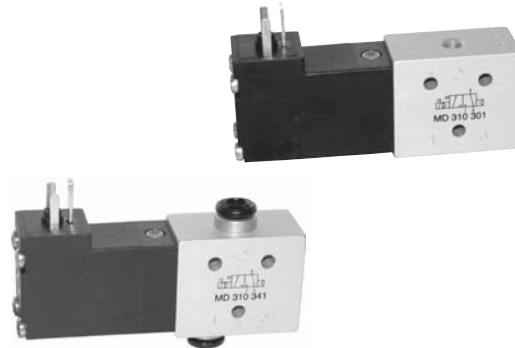
# MD 310 301/MD 310 341 MOD 310 301/MOD 310 341



**MD 310 301/MOD 310 301**



**MD 310 341/MOD 310 341**



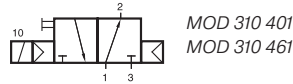
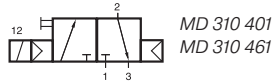
3/2-way solenoid valve normally closed (MD) or normally open (MOD) actuated by permanent signal and equipped with air spring return.

Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 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 2.11.1.

Valves are generally equipped with manual  
override to push.

Type	Function	Port size 1 and 2	Air flow	Operating pressure	Power consumption	Weight
MD 310 301	n.c.	M5	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,08 kg
MD 310 341	n.c.	pif 4 mm	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,09 kg
MOD 310 301	n.o.	M5	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,08 kg
MOD 310 341	n.o.	pif 4 mm	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,09 kg

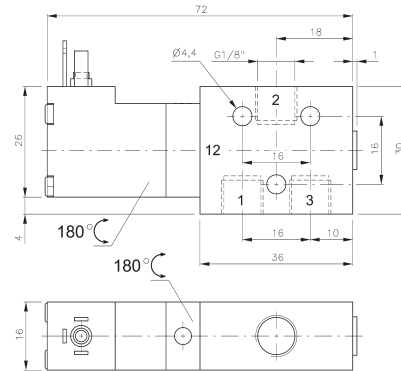
# MD 310 401/MD 310 461 MOD 310 401/MOD 310 461



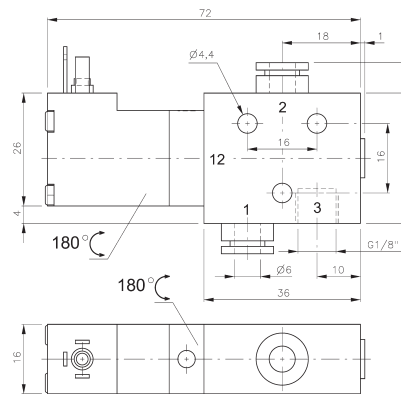
3/2-way solenoid valve normally closed (MD) or normally open (MOD) actuated by permanent signal and equipped with air spring return.

Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 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 2.11.1.

Valves are generally equipped with manual  
override to push.



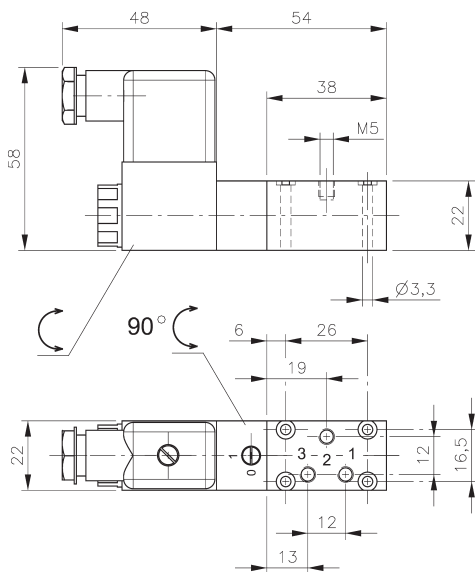
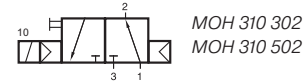
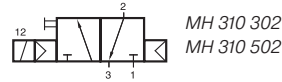
**MD 310 401/MOD 310 401**



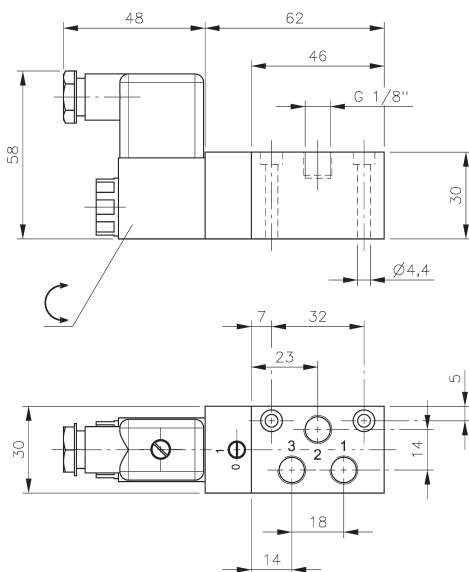
**MD 310 461/MOD 310 461**

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 310 302/MH 310 502 MOH 310 302/MOH 310 502



**MH 310 302/MOH 310 302**



**MH 310 502/MOH 310 502**



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

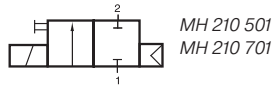
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=,  
24V=, 12V=.

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

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

Type	Function	Port size 1 and 2	Air flow	Operating pressure	Power consumption	Weight
MH 310 302	n.c.	M5	180 l/min	2 - 10 bar	3 W = / 5 VA ~	0,18 kg
MH 310 502	n.c.	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,25 kg
MOH 310 302	n.o.	M5	180 l/min	2 - 10 bar	3 W = / 5 VA ~	0,18 kg
MOH 310 502	n.o.	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,25 kg

# MH 210 501/MH 210 701

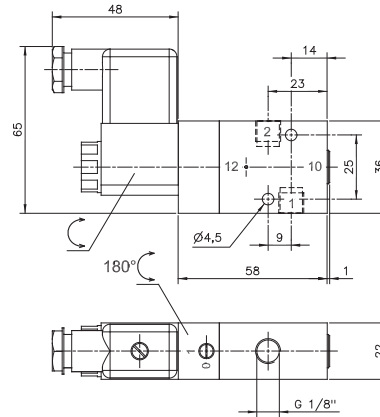


2/2-way solenoid valve, normally closed, actuated by permanent signal and equipped with air spring return.

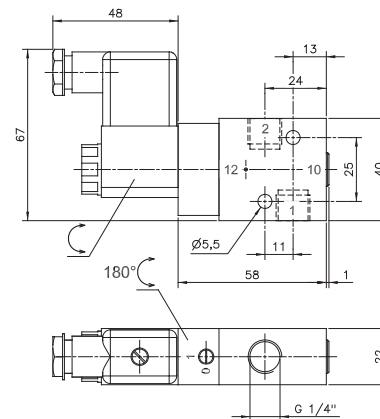
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=,  
24V=, 12V=.

Valves are generally equipped with manual override.

Normally open version (MOH) on request.



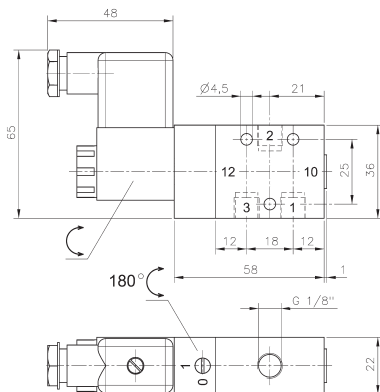
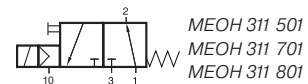
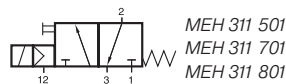
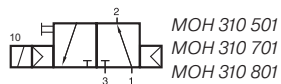
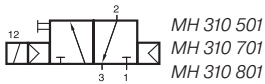
**MH 210 501**



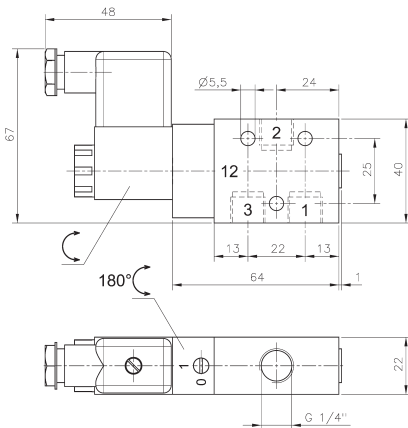
**MH 210 701**

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

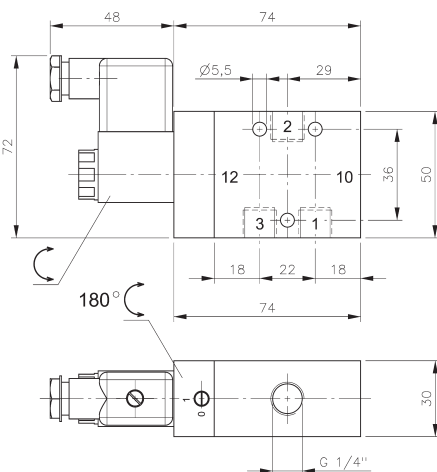
# MH 310 501/MH 310 701/MH 310 801 MOH 310 501/MOH 310 701/MOH 310 801



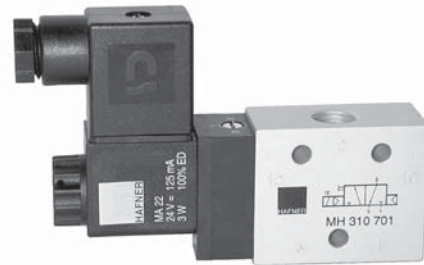
**MH 310 501/MOH 310 501**



**MH 310 701/MOH 310 701**



**MH 310 801/MOH 310 801**



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=.

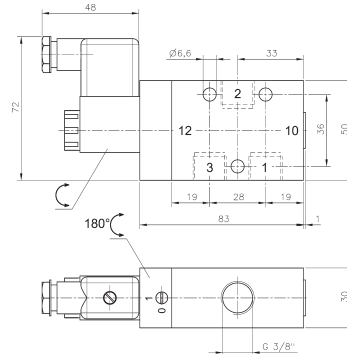
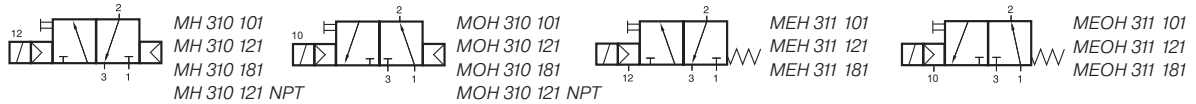
Valves are generally equipped with manual override.  
If requested without manual override please order  
M 310 \_\_\_ / MO 310 \_\_\_

Valves are also available with external pilot feed.  
Type: MEH 311 \_\_\_ (n.c.) or MEOH 311 \_\_\_ (n.o.).  
Port 12 series 501 and 701 M5, series 801 G 1/8".  
Minimum actuation pressure: 3 bar.  
Version for vacuum on request.

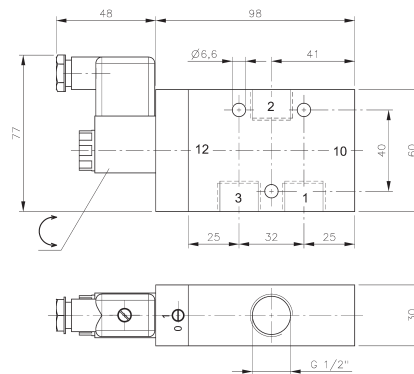
Please notice:  
Do not close port 3 to convert into a 2-way valve.

Type	Function	Port size	Air flow	Operating press.	Power consumption	Weight
MH 310 501	n.c.	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,19 kg
MH 310 701	n.c.	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,21 kg
MH 310 801	n.c.	G 1/4"	1450 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,39 kg
MOH 310 501	n.o.	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,19 kg
MOH 310 701	n.o.	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,21 kg
MOH 310 801	n.o.	G 1/4"	1450 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,39 kg

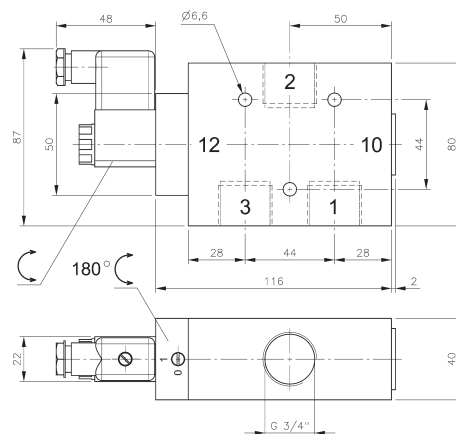
# MH 310 101/MH 310 121/MH 310 181 MOH 310 101/MOH 310 121/MOH 310 181



**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**

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".

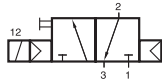
Minimum actuation pressure: 3 bar.  
Version for vacuum on request.

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

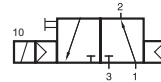
Type	Function	Port size	Air flow	Operating press.	Power cons.	Weight
MH 310 101	n.c.	G 3/8"	2250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,41 kg
MH 310 121	n.c.	G 1/2"	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,53 kg
MH 310 181	n.c.	G 3/4"	6000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,88 kg
MOH 310 101	n.o.	G 3/8"	2250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



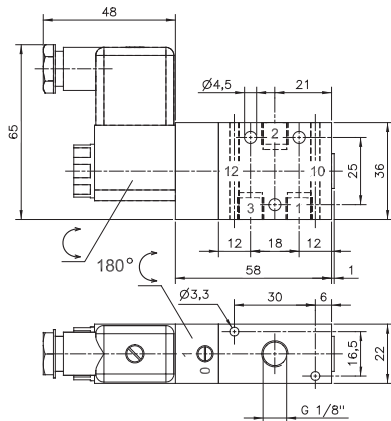
# MH 310 501 G/MH 310 701 G MOH 310 501 G/MOH 310 701 G



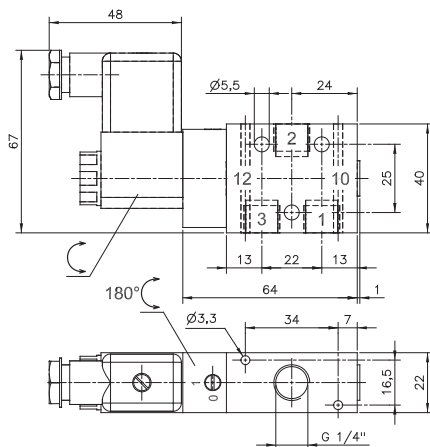
MH 310 501 G  
MH 310 701 G  
MH 310 701 G NPT



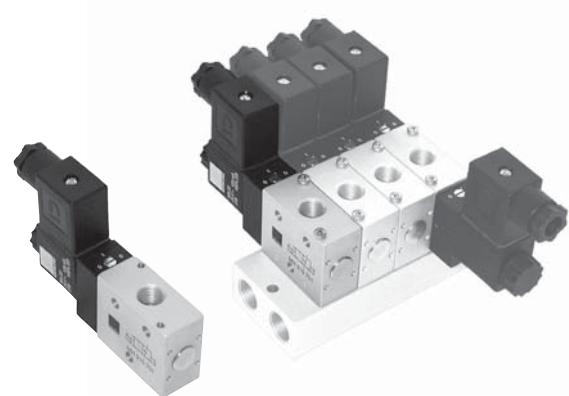
MOH 310 501 G  
MOH 310 701 G  
MOH 310 701 G NPT



**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**



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

Valves can either be used in-line or to be assembled onto a manifold plate. Manifolds for valves type 501 G are displayed on page 2.6.1.4, manifolds for valves type 701 G are displayed on page 2.6.1.5.

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

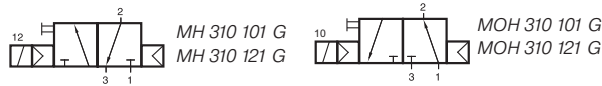
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

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

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

Type	Function	Port size	Air flow	Operating press.	Power cons.	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  MK
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  MK
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 G/MH 310 121 G MOH 310 101 G/MOH 310 121 G



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

Valves can either be used in-line or to be assembled onto a manifold plate. Manifolds for valves type 101 G are displayed on page 2.6.1.4, manifolds for valves type 121 G are displayed on page 2.6.1.5.

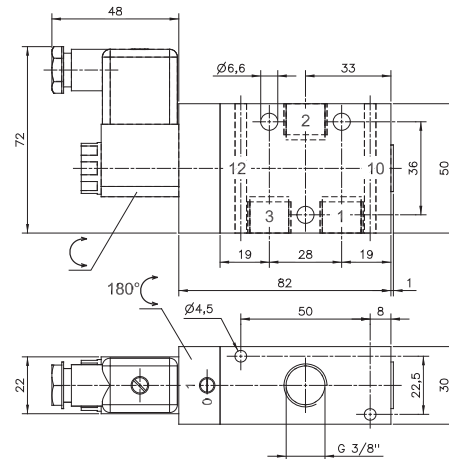
Normally open and normally closed products can be mixed on one plate.

Valves G1/2" have to be assembled onto the plate by fixing screws from the bottom through the plate into the valve.

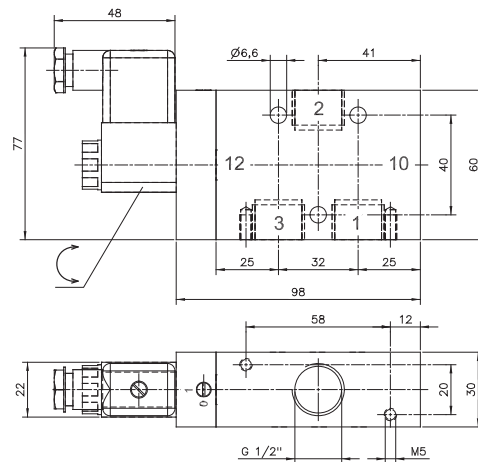
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=,  
24V-, 12V-.

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

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



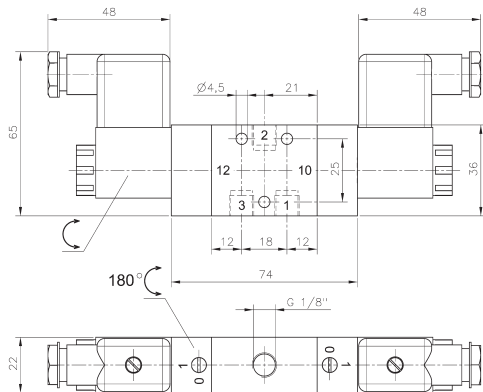
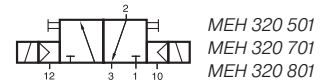
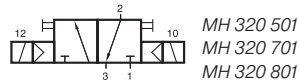
**MH 310 101 G/MOH 310 101 G**



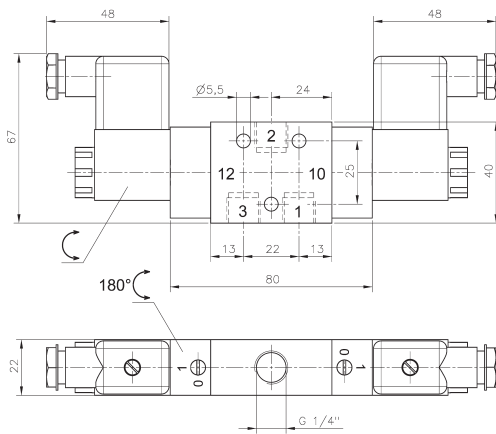
**MH 310 121 G/MOH 310 121 G**

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

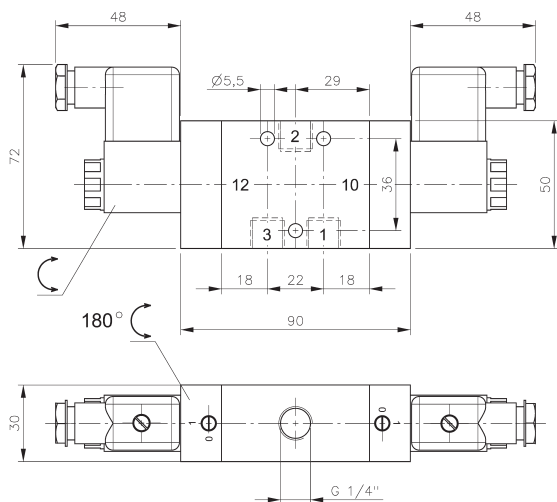
# MH 320 501/MH 320 701/MH 320 801



**MH 320 501**



**MH 320 701**



**MH 320 801**



3/2-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 an 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 type no. M 320 \_\_\_\_.

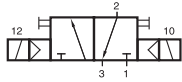
Valves are also available with external pilot feed.  
Type: MEH 320 \_\_\_\_.  
Port 12 series 501 and 701 M5, series 801 G 1/8".  
Minimum actuation pressure: 2,5 bar.

Version for vacuum on request.

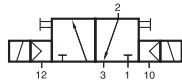
Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 320 501	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,29 kg
MH 320 701	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,31 kg
MH 320 801	G 1/4"	1450 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,54 kg



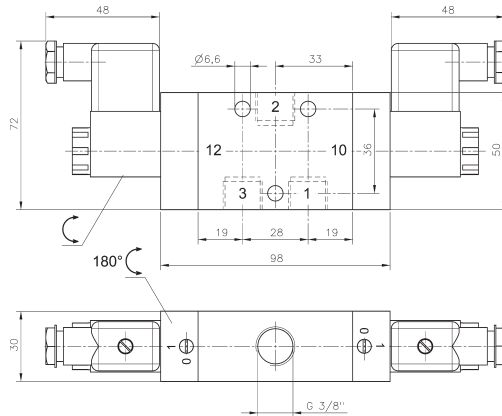
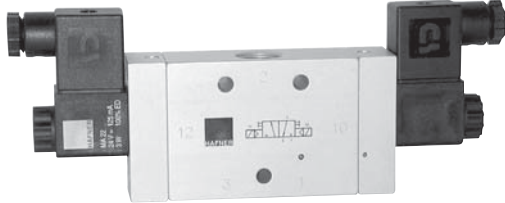
# MH 320 101/MH 320 121/MH 320 181



MH 320 101  
MH 320 121  
MH 320 181



MEH 320 101  
MEH 320 121  
MEH 320 181



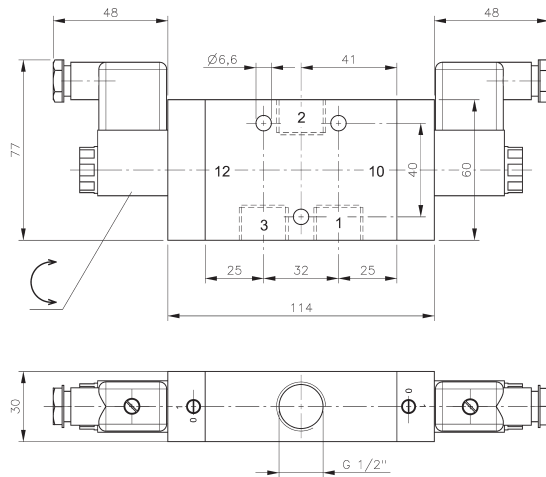
**MH 320 101**

3/2-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 an electrical source.

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

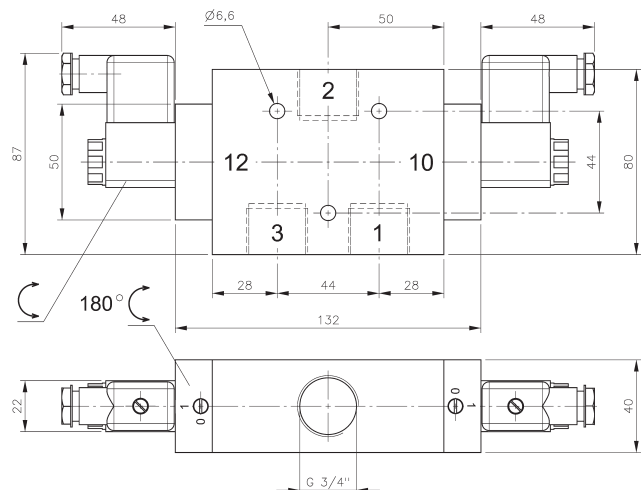
Valves are generally equipped with manual override. If requested without manual override please order type no. M 320 \_\_\_\_.

Valves are also available with external pilot feed.  
Type: MEH 320 \_\_\_\_ .  
Port 12: G 1/8".  
Minimum actuation pressure: 2,5 bar.



**MH 320 121**

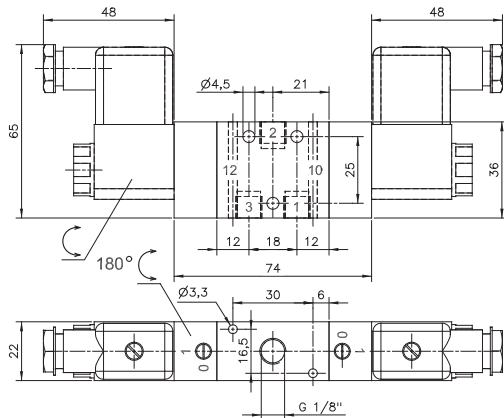
Version for vacuum on request.



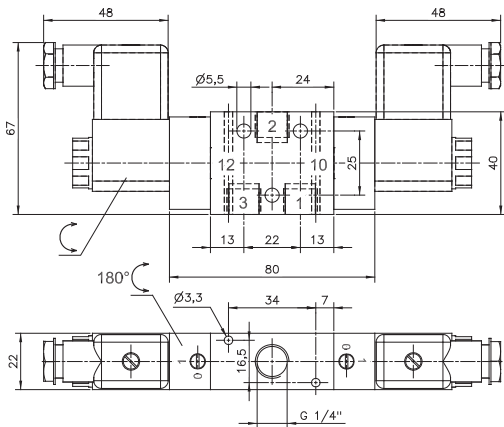
**MH 320 181**

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 320 101	G 3/8"	2250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,58 kg
MH 320 121	G 1/2"	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,70 kg
MH 320 181	G 3/4"	6000 l/min	1 - 10 bar	3 W = / 5 VA ~	1,08 kg

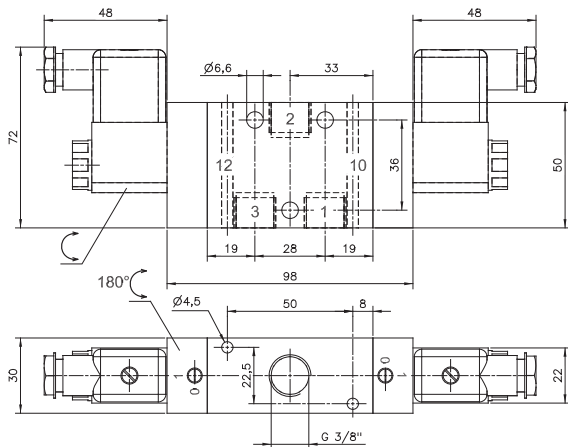
# MH 320 501 G/MH 320 701 G MH 320 101 G/MH 320 121 G



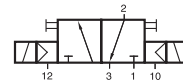
**MH 320 501 G**



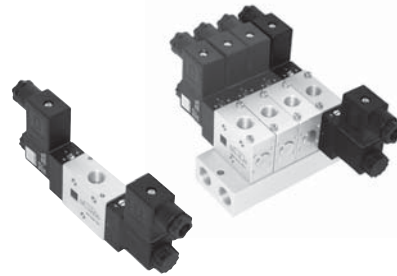
**MH 320 701 G**



**MH 320 101 G**



MH 320 501 G  
MH 320 701 G  
MH 320 101 G  
MH 320 121 G



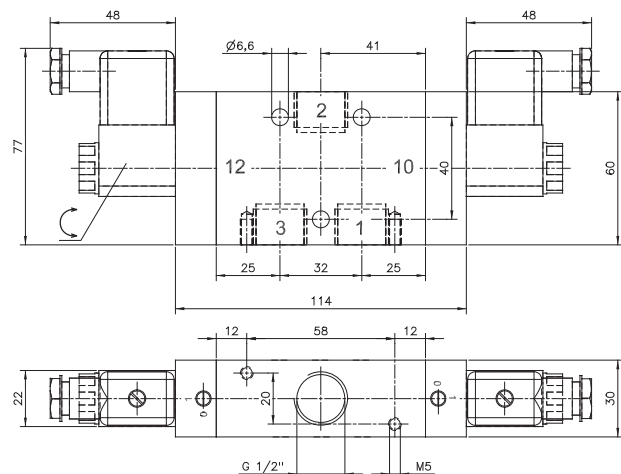
3/2-way double solenoid valve actuated by impulse. Position is kept until an electrical signal is applied to the opposite side even when not attached to an electrical source.

Valves can either be used in-line or to be assembled onto a manifold plate. Manifolds for valves type 501 G and 101 G are displayed on page 2.6.1.4, manifolds for valves type 701 G and 121 G are displayed on page 2.6.1.5.

Please notice: Valves G1/2" have to be assembled onto the plate by fixing screws from the bottom through the plate into the valve.

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

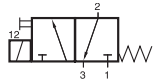
Valves are generally equipped with manual override. If requested without manual override please order M 310 \_\_\_ / MO 310 \_\_\_.



**MH 320 121 G**

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 320 501 G	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,29 kg
MH 320 701 G	G 1/4"	250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,31 kg
MH 320 101 G	G 3/8"	2250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,58 kg
MH 320 121 G	G 1/2"	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,70 kg

# MD 311 104/RD 3\_\_ 104/RD 3\_\_ 144



MD 311 104



System consisting of direct acting 3/2-way solenoid valves, normally closed, actuated by permanent signal and manifold plates for common pressure supply (1). Port 2 is in the plate, either threaded M5 or with 4 mm push-in fitting, exhaust through the operator tube, thread M3.

### Valves

Type MD 311 104:  
with electrical connection C ISO 15217, pins are 8 mm apart  
Type MD 311 104 L:  
with flying leads standard length 500 mm

Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 24V=,  
12V=, 6V=.

For details about solenoid system, please refer to page 2.11.1.

Valves are generally equipped with manual override to push.

### Plates

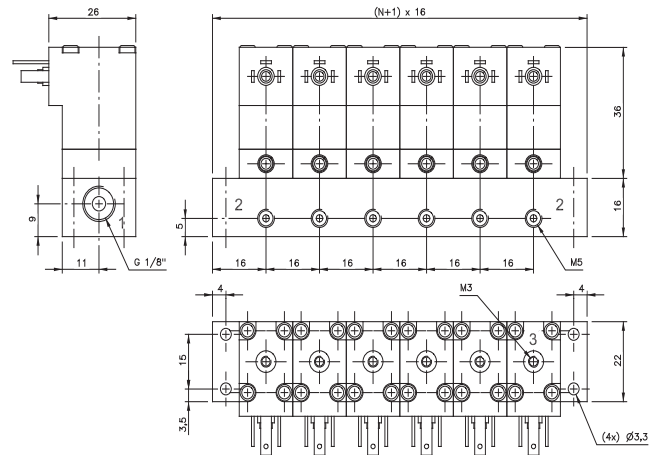
RD 3\_\_ 104:  
with M5 at port 2 (add 2 digits for number of positions required)

RD 3\_\_ 144:  
with pif 4 mm at port 2 (add 2 digits for number of positions required)

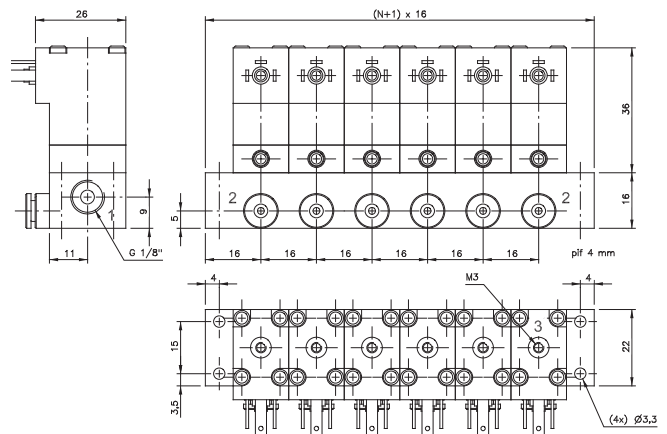
Plates are available with 2, 3, 4, 5, 6, 8, 10 and 12 positions, others on request.

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

Versions with common electrical connection (terminals) are displayed on page 2.7.2.1



MD 311 104/RD 3\_\_ 104



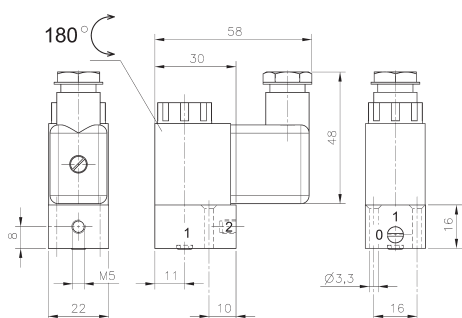
MD 311 104/RD 3\_\_ 144

Valves can be used for technical vacuum too.

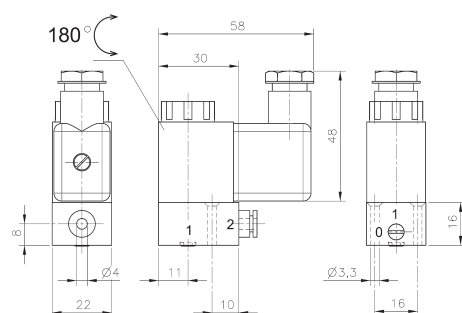
Type	Port size	Air flow	Operating press.	Power consumption	Weight
MD 311 104	form C, 8 mm pin	30 l/min	-0,9 - 10 bar	1,8 W = / 3,0 VA ~	0,06 kg
MD 311 104 L	flying leads	30 l/min	-0,9 - 10 bar	1,8 W = / 3,0 VA ~	0,07 kg



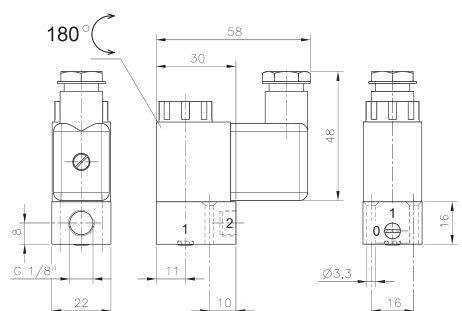
# MH 312/MH 314/MH 315/MH 316/MX 315



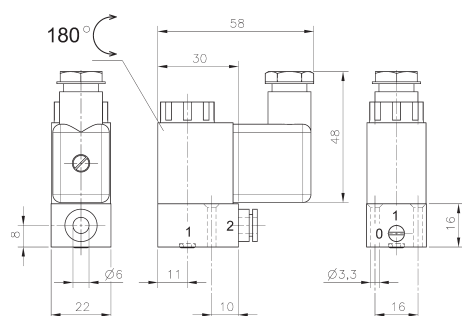
**MH 312**



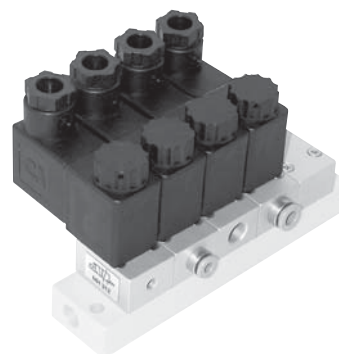
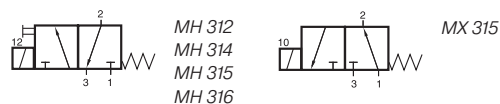
**MH 314**



**MH 315/MX 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.

**Type MH:**

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.

**Type MX:**

Normally open, no manual override, 8 mm longer operator system than in drawing. Exhaust is a hole on the top of the operator tube.

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 2.6.1.1.

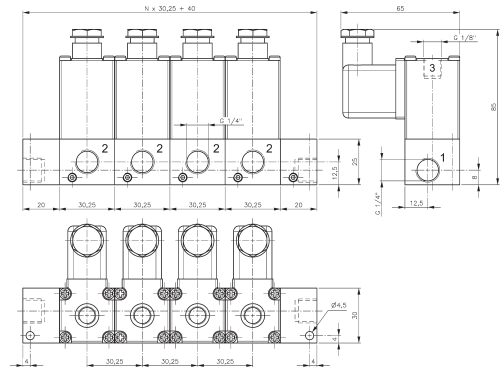
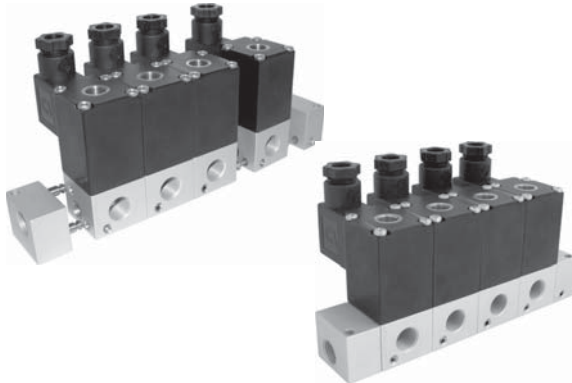
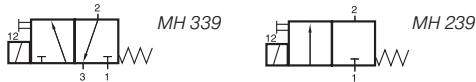
Blanking plates are also available: Type no. BP 3.

Mounting screws and seals are included.

Valves can be used for technical vacuum too.

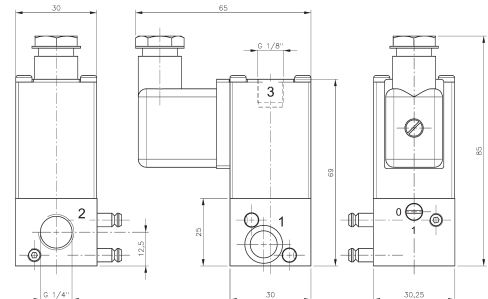
Type	Port 2	Air flow	Operating press.	Power consumption	Weight
MH 312	M5	40 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,13 kg
MH 314	pif 4 mm	40 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,13 kg
MH 315	G 1/8"	50 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,13 kg
MH 316	pif 6 mm	50 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,13 kg
MX 315	G 1/8"	50 l/min	-0,9 - 10 bar	3 W = / 5 VA ~	0,14 kg

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



Modular system MH 339/MH 239

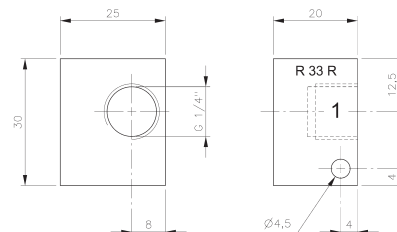
Modular system consisting of direct acting 3/2-way or 2/2-way solenoid valves normally closed, actuated by permanent signal and endplates for common pressure supply (1). Port 2 is in the valve, G 1/4", exhaust through the operator tube, thread G 1/8". By opening 2 hexagonsocket screws at the bodies the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



Individual valve MH 339/MH 239

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.



End-plate right R 33 R

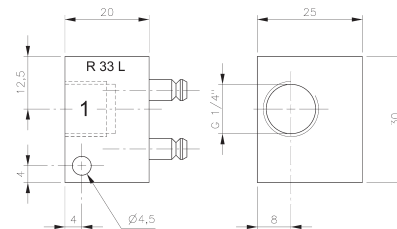
Available with solenoid operators:  
230V/50Hz, 24V/50Hz, 24V=  
Connector Industry B (22 mm).

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

The end-plates can be equipped with DIN-rail mounting clips. For details, please refer to page 2.6.3.



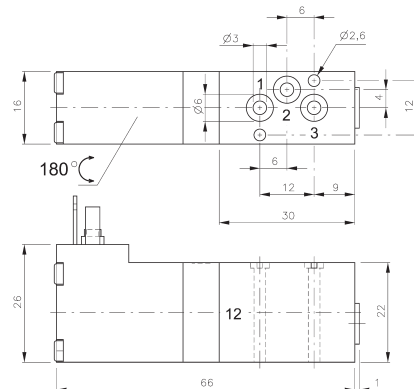
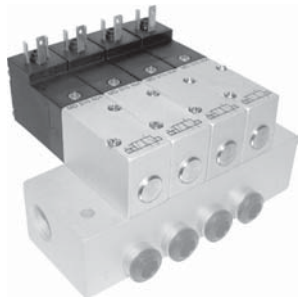
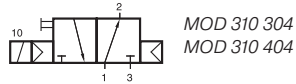
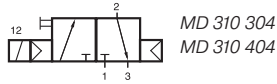
End-plate left R 33 L

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

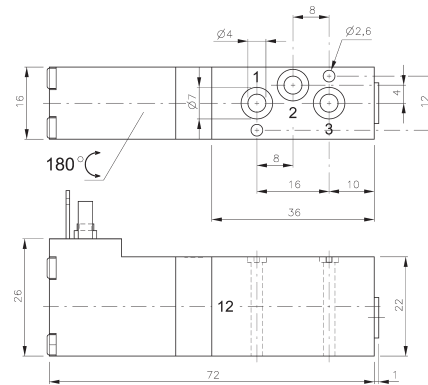
Type	Ways	Function	Port size			Air flow	Operating Power	Weight
			1	2	3			
MH 339	3/2	n.c.	G 1/4"	G 1/8"		300 l/min	0 - 7 bar	7,5 W = /8,5 VA ~ 0,18 kg
MH 239	2/2	n.c.	G 1/4"			300 l/min	0 - 7 bar	7,5 W = /8,5 VA ~ 0,18 kg
R 33 R		end-plate right	G 1/4"					0,04 kg
R 33 L		end-plate left	G 1/4"					0,04 kg



# MD 310 304/MD 310 404 MOD 310 304/MOD 310 404



**MD 310 304/MOD 310 304**



**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:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 24V=, 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 2.11.1.

Valves are generally equipped with manual override to push.

Manifolds are displayed on page 2.6.1.3.

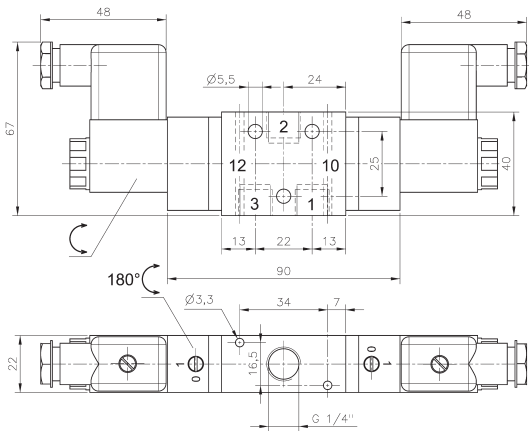
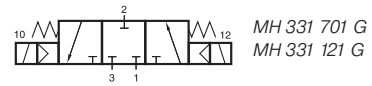
Valves normally open and normally closed can be mixed on one manifold plate!

Blanking plates are also available type BP 3 304 or BP 3 404.

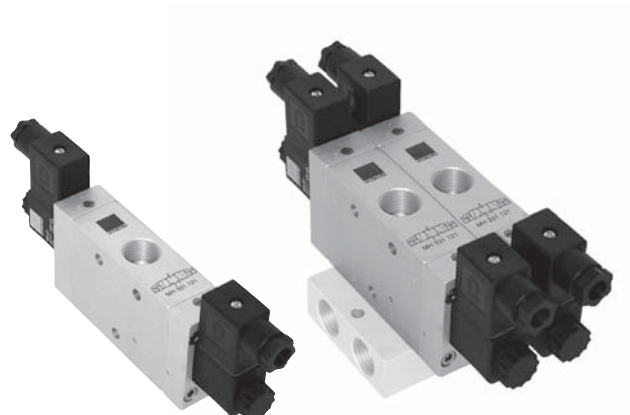
Mounting screws and seals are included.

Type	Function	Air flow	Operating press.	Power consumption	Weight
MD 310 304	n.c.	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,08 kg
MD 310 404	n.c.	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,09 kg
MOD 310 304	n.o.	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,08 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



**MH 331 701 G**



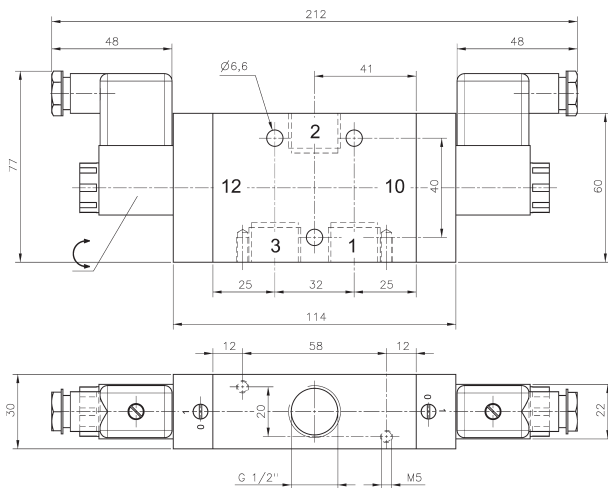
3/3-way solenoid valve with spring return to middle position, actuated by permanent signal. Valve is to be used when a single acting cylinder or any other single acting actuator such as a lifting bag or car-suspension needs to be held in an intermediate position.

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

Valves can be used in-line or on manifold plate, plates are displayed on page 2.6.1.5.

Please notice:  
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.

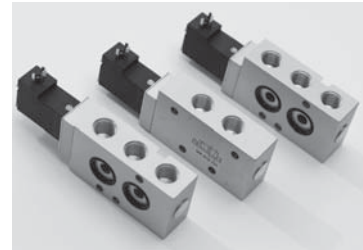


**MH 331 121 G**

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

## MK

The MK- series is a combination of the 1.8 Watt / 3.0 VA solenoid-system MA 16 (detailed information on page 2.11.1) and the G 1/4" valves of the 700-series with a flow of 1.250 NL/min. The following valves are available:

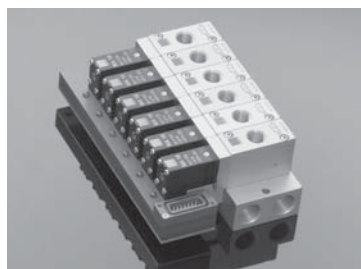


MK 310 701	3/2-way single solenoid, n.c.	in-line	description on page 2.5.1.1.12
MOK 310 701	3/2-way single solenoid, n.o.	in-line	page 2.5.1.1.12
MK 310 701 G	3/2-way single solenoid, n.c.	dual use	page 2.5.1.1.14
MOK 310 701 G	3/2-way single solenoid, n.o.	dual use	page 2.5.1.1.14
MK 320 701	3/2-way single solenoid	in-line	page 2.5.1.1.18
MK 320 701 G	3/2-way single solenoid	dual use	page 2.5.1.1.18
MK 510 701	5/2-way single solenoid	in-line	page 2.5.2.1.3
MK 520 701	5/2-way double solenoid	in-line	page 2.5.2.1.9
MK 531 701	5/3-way centre closed	in-line	page 2.5.3.1.2
MK 532 701	5/3-way centre exhausted	in-line	page 2.5.3.1.2
MK 533 701	5/3-way centre pressurized	in-line	page 2.5.3.1.2
MK 510 701 G	5/2-way single solenoid	dual use	page 2.5.2.1.5
MK 520 701 G	5/2-way double solenoid	dual use	page 2.5.2.1.11
MK 531 701 G	5/3-way centre closed	dual use	page 2.5.3.1.4
MK 532 701 G	5/3-way centre exhausted	dual use	page 2.5.3.1.4
MK 533 701 G	5/3-way centre pressurized	dual use	page 2.5.3.1.4
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 pressurized	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 2.5.2.2.8
MK 531 704	5/3-way centre closed	manifold	page 2.5.3.2.4
MK 532 704	5/3-way centre exhausted	manifold	page 2.5.3.2.4
MK 533 704	5/3-way centre pressurized	manifold	page 2.5.3.2.4

as well as valves with Namur interface, please refer to chapter 2.8.



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



The valves are also used for the **22 mm terminals**, described in chapter 2.7.

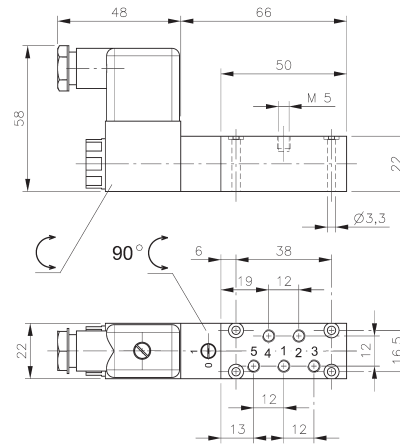
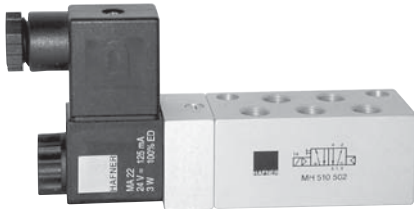




# MH 510 302/MH 510 502



MH 510 302  
MH 510 502

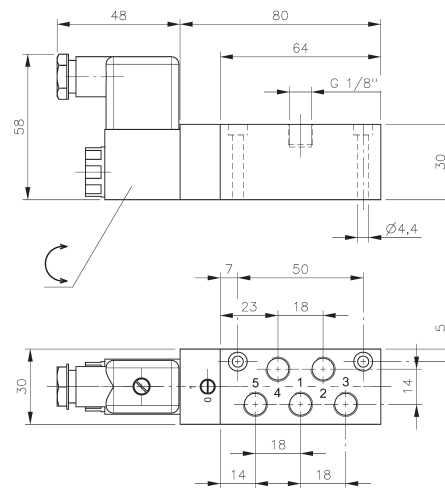


**MH 510 302**

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=.

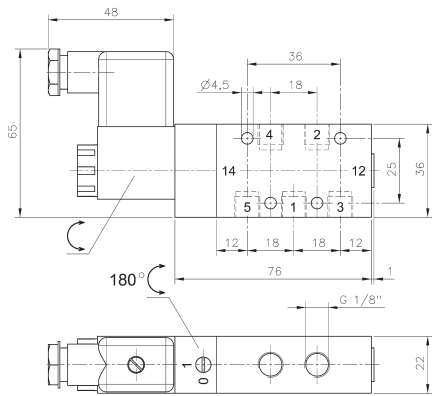
Valves are generally equipped with manual override.  
If requested without manual override please order  
M 510 \_\_\_\_.



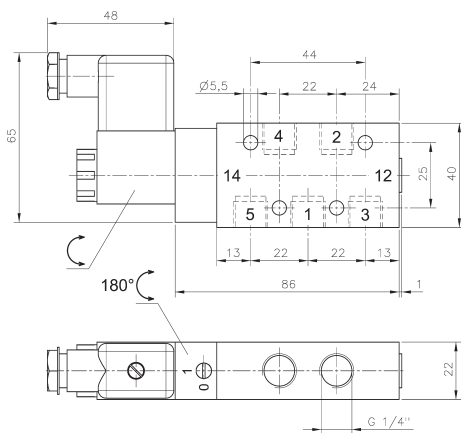
**MH 510 502**

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 510 302	M5	180 l/min	2 - 10 bar	3 W = / 5 VA ~	0,19 kg
MH 510 502	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,30 kg

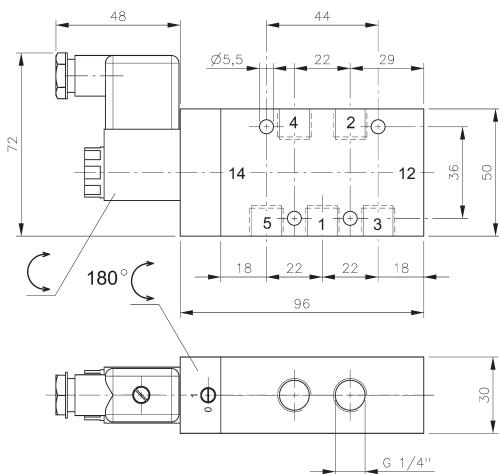
# MH 510 501/MH 510 701/MH 510 801



**MH 510 501**



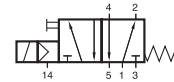
**MH 510 701**



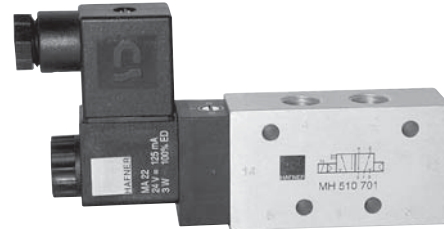
**MH 510 801**



MH 510 501  
MH 510 701  
MH 510 801



MEH 511 501  
MEH 511 701  
MEH 511 801



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=.

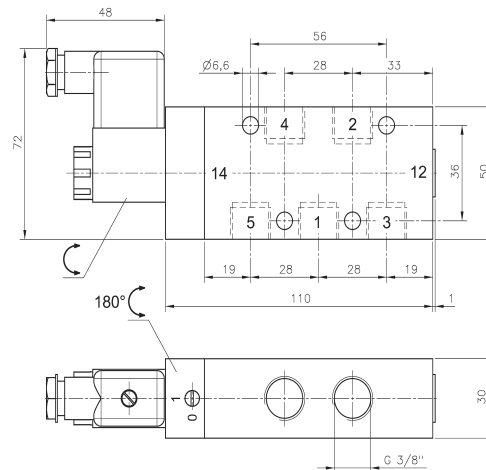
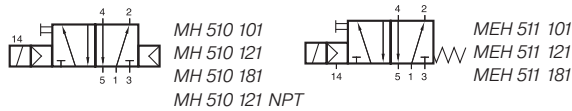
Valves are generally equipped with manual override.  
If requested without manual override please order  
M 510 \_\_\_\_.

Valves are also available with external pilot feed.  
Type: MEH 511 \_\_\_\_.  
Port 14 series 501 and 701 M5, series 801 G 1/8".  
Minimum actuation pressure: 3 bar.

Version for vacuum on request.

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 510 501	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,23 kg
MH 510 701	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,25 kg  MK
MH 510 801	G 1/4"	1450 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,48 kg

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



**MH 510 101**

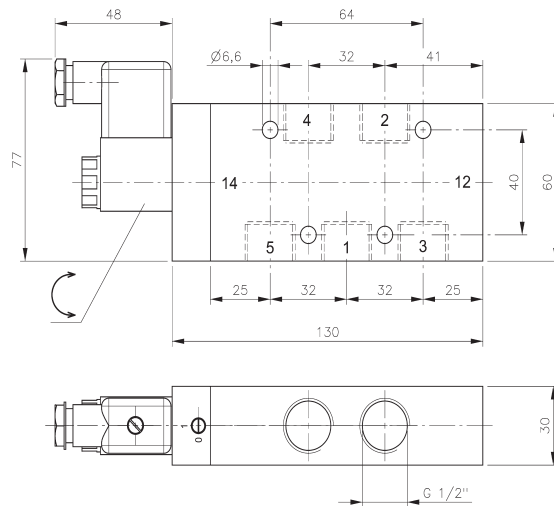
5/2-way solenoid valve actuated by permanent signal and equipped with air spring return.

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

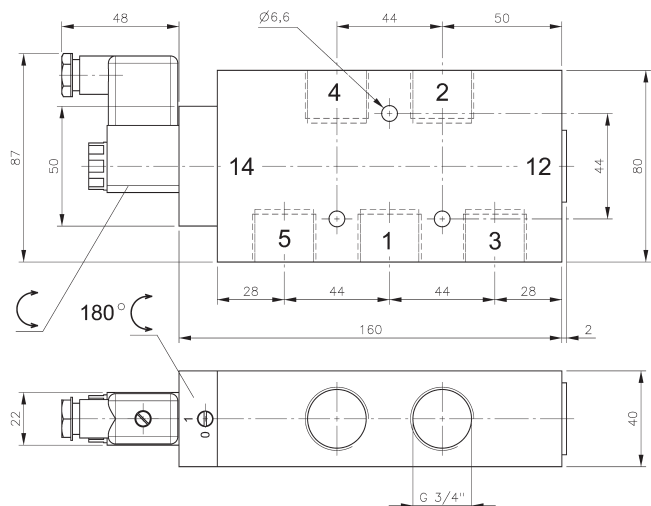
Valves are generally equipped with manual override.  
If requested without manual override please order  
M 510 \_\_\_\_.

Valves are also available with external pilot feed.  
Type: MEH 511 \_\_\_\_.  
Port 14: G 1/8".  
Minimum actuation pressure: 3 bar.

Version for vacuum on request.



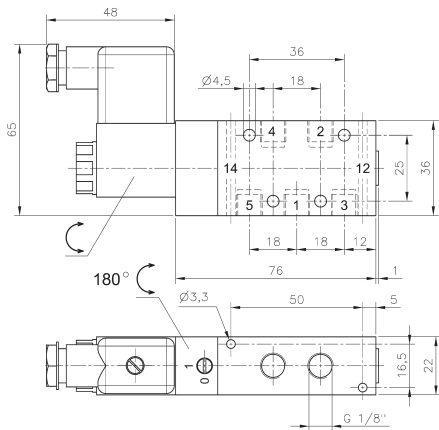
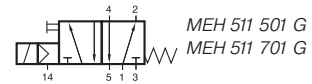
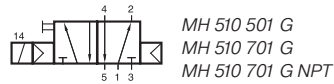
**MH 510 121/MH 510 121 NPT**



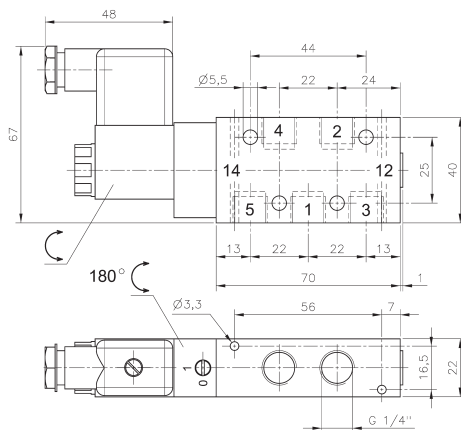
**MH 510 181**

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

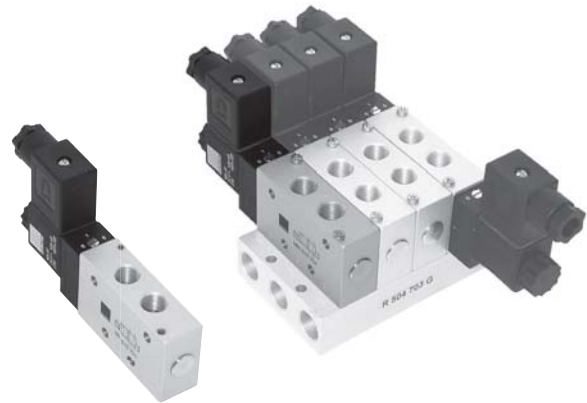
# MH 510 501 G/MH 510 701 G



**MH 510 501 G**



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



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

Valves can either be used in-line or on a manifold plate. Manifolds for valves type 501 G are displayed on page 2.6.2.2, manifolds for valves type 701 G are displayed on page 2.6.2.3.

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.

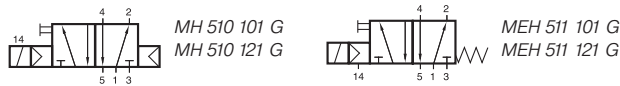
Minimum actuation pressure: 3 bar.

Version for vacuum on request.

Type	Port size	Air flow	Operating press.	Power cons.	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 G/MH 510 121 G



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

Valves can either be used in-line or to be assembled onto a manifold plate. Manifolds for valves type 101 G are displayed on page 2.6.2.4, manifolds for valves type 121 G are displayed on page 2.6.2.5.

Please notice:

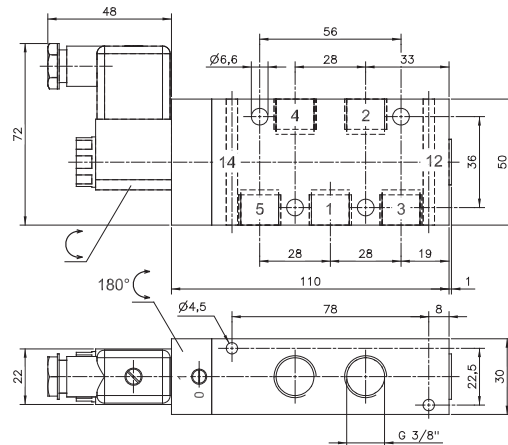
Valves G 1/2" have to be assembled onto the plate by fixing screws from the bottom through the plate into the valve.

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

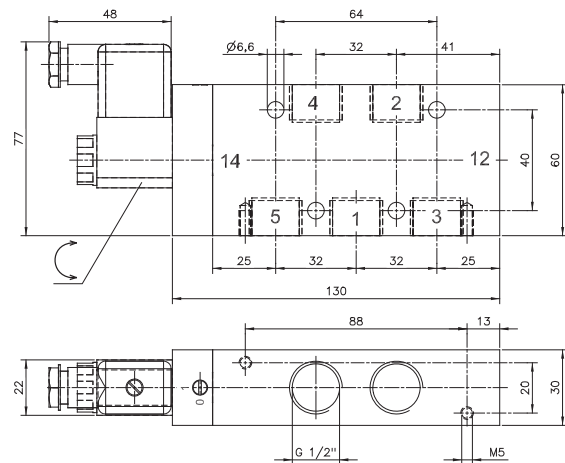
Valves are generally equipped with manual override.  
If requested without manual override please order  
M 510 \_\_\_ G

Valves are also available with external pilot feed.  
Type: MEH 511 \_\_\_ G.  
Port 14: G 1/8".  
Minimum actuation pressure: 3 bar.

Version for vacuum on request.



**MH 510 101 G**



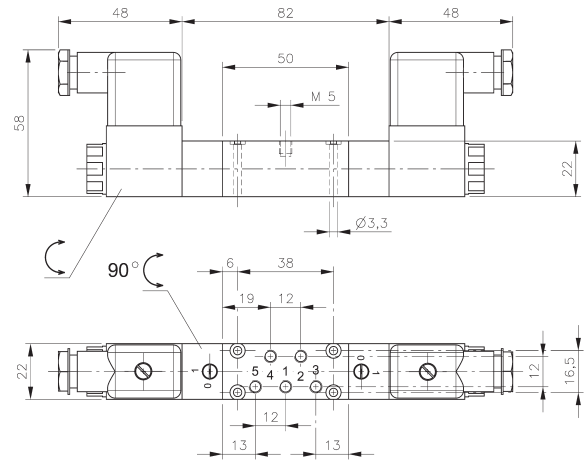
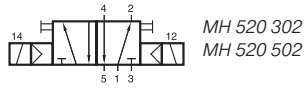
**MH 510 121 G**

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 510 101 G	G 3/8"	2250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,52 kg
MH 510 121 G	G 1/2"	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,70 kg

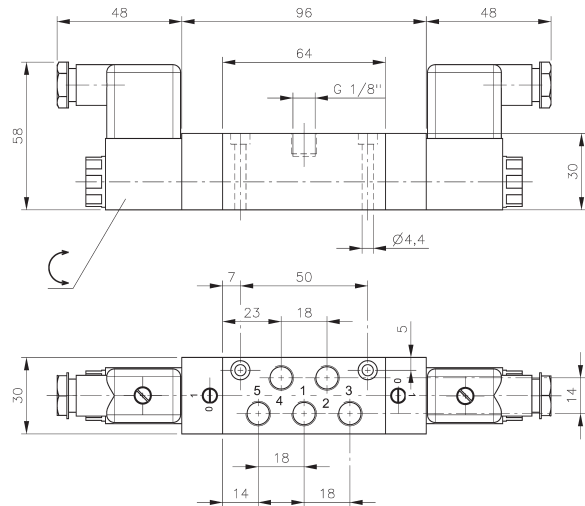




# MH 520 302/MH 520 502



**MH 520 302**



**MH 520 502**

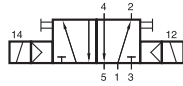
5/2-way double solenoid valve actuated by impulse. Position is kept until an electrical signal is applied to the opposite side even when not attached to electrical source.

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

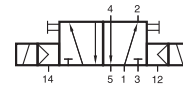
Valves are generally equipped with manual override. If requested without manual override please order M 520 \_\_\_\_.

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 520 302	M5	180 l/min	2 - 10 bar	3 W = / 5 VA ~	0,30 kg
MH 520 502	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,43 kg

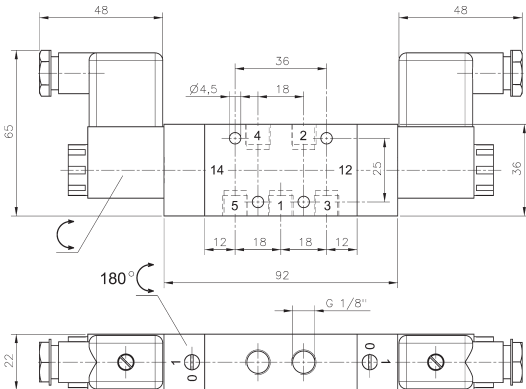
# MH 520 501/MH 520 701/MH 520 801



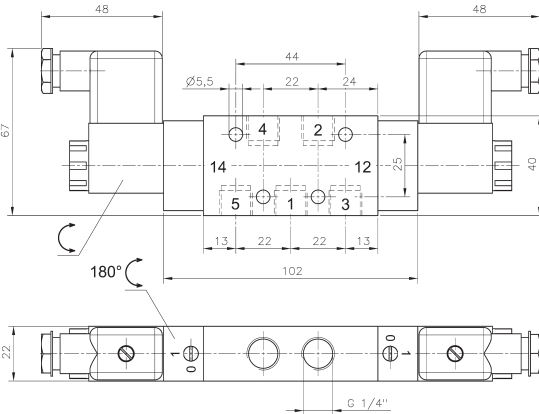
MH 520 501  
MH 520 701  
MH 520 801



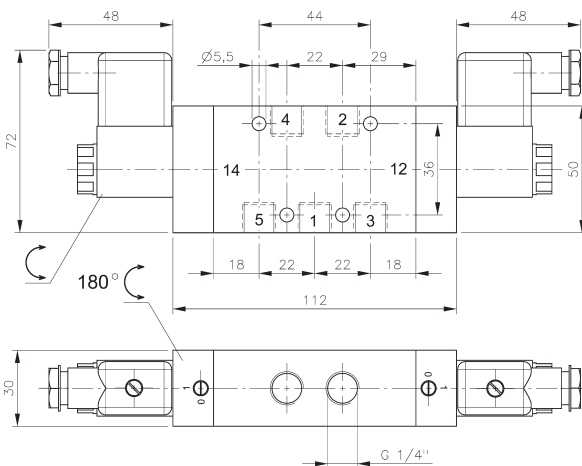
MEH 520 501  
MEH 520 701  
MEH 520 801



**MH 520 501**



**MH 520 701**



**MH 520 801**



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 \_ \_ \_.

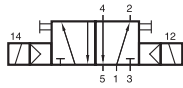
Ports 12 and 14 series 501 and 701: M5,  
series 801: G 1/8".

Minimum actuation pressure: 2,5 bar.

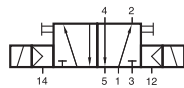
Version for vacuum on request.

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 520 501	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,33 kg
MH 520 701	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,35 kg  MK
MH 520 801	G 1/4"	1450 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,62 kg

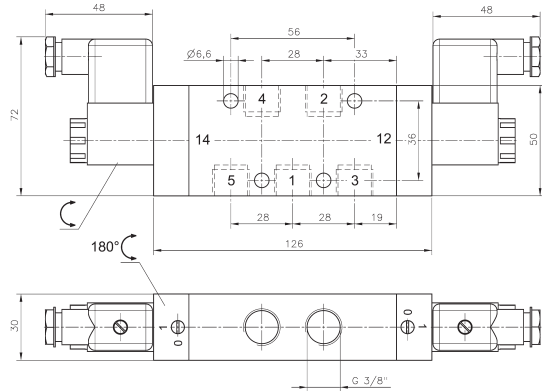
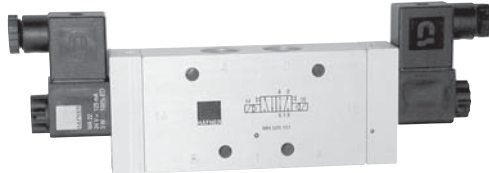
# MH 520 101/MH 520 121/MH 520 181



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



MEH 520 101  
MEH 520 121  
MEH 520 181



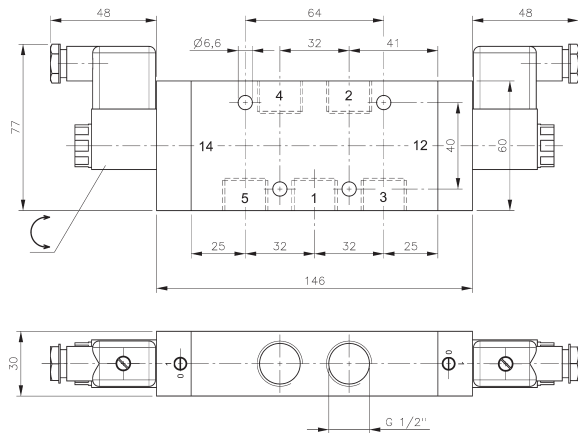
**MH 520 101**

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=.

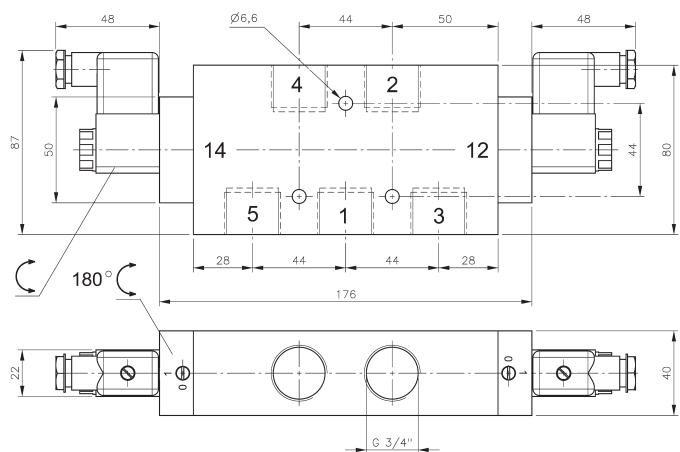
Valves are generally equipped with manual override. If requested without manual override please order M 520 \_\_\_\_.

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



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

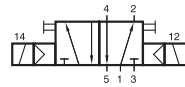
Version for vacuum on request.



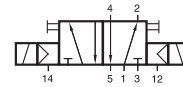
**MH 520 181**

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

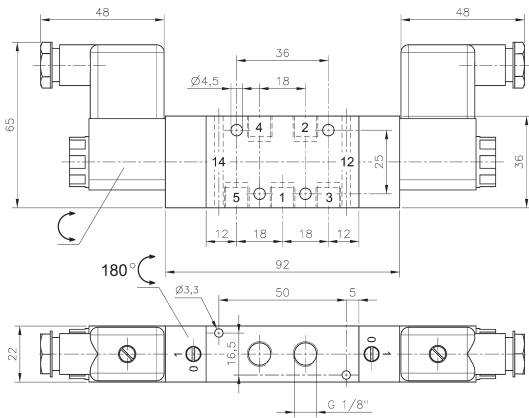
# MH 520 501 G/MH 520 701 G



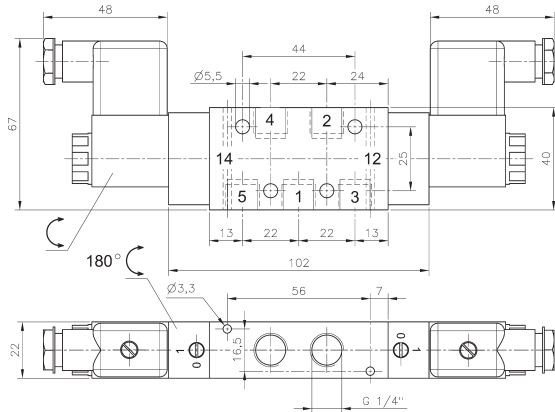
MH 520 501 G  
MH 520 701 G



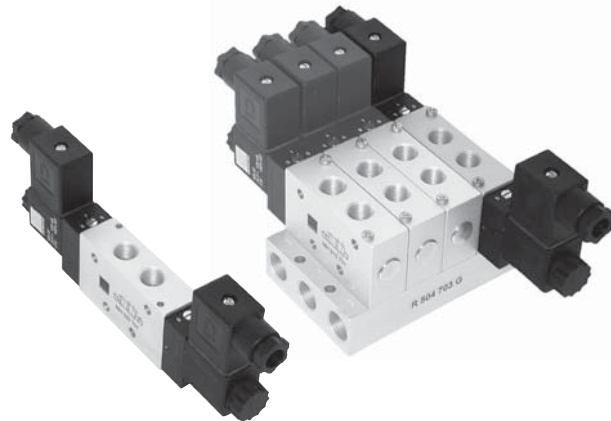
MEH 520 501 G  
MEH 520 701 G



**MH 520 501 G**



**MH 520 701 G/MH 520 701 G NPT**



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.

Valves can either be used in-line or on a manifold plate. Manifolds for valves type 501 G are displayed on page 2.6.2.2, manifolds for valves type 701 G are displayed on page 2.6.2.3.

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

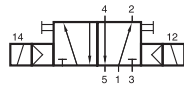
Valves are generally equipped with manual override. If requested without manual override please order M 520 \_\_\_\_.

Valves are also available with external pilot feed.  
Type: MEH 520 \_\_\_\_ G.  
Ports 12 and 14: M5.  
Minimum actuation pressure: 2,5 bar.

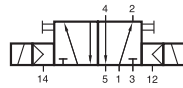
Version for vacuum on request.

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 520 501 G	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,33 kg
MH 520 701 G	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,35 kg
MH 520 701 G NPT	1/4" NPT	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,35 kg

# MH 520 101 G/MH 520 121 G



MH 520 101 G  
MH 520 121 G



MEH 520 101 G  
MEH 520 121 G



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.

Valves can either be used in-line or to be assembled onto a manifold plate. Manifolds for valves type 101 G are displayed on page 2.6.2.4, manifolds for valves type 121 G are displayed on page 2.6.2.5.

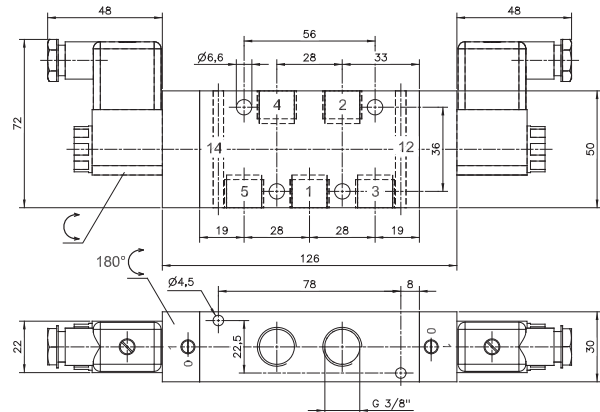
Please notice: Valves G1/2" have to be assembled onto the plate by fixing screws from the bottom through the plate into the valve.

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

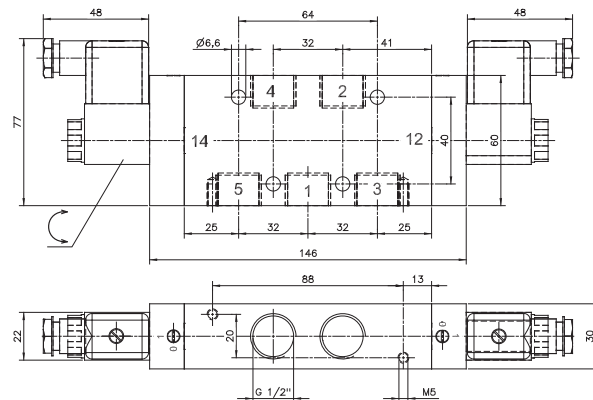
Valves are generally equipped with manual override. If requested without manual override please order M 520 \_\_\_ G

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

Version for vacuum on request.



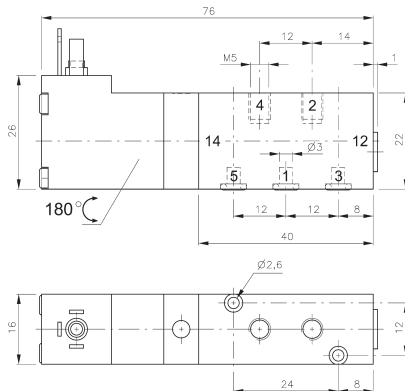
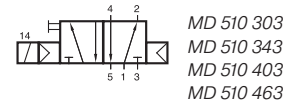
MH 520 101 G



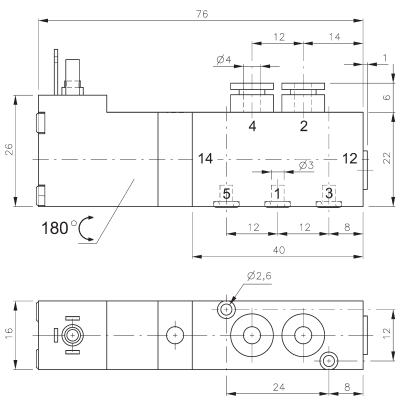
MH 520 121 G

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

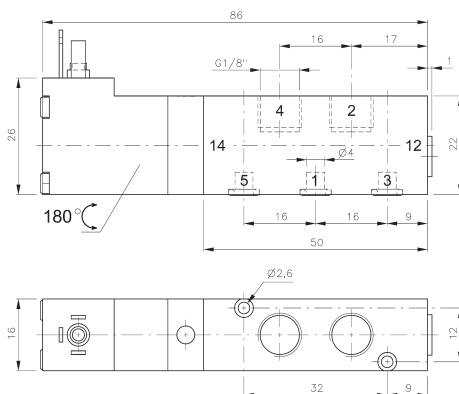
# MD 510 303/MD 510 343 MD 510 403/MD 510 463



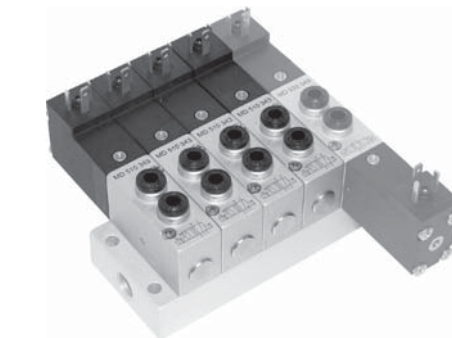
**MD 510 303**



**MD 510 343**



**MD 510 403**



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.

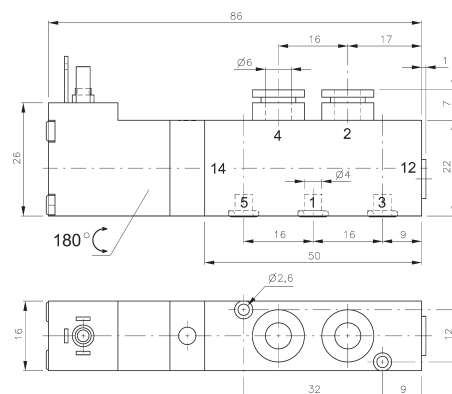
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 24V=,  
12V=, 6V= either for connector form C ISO 15217  
or with flying leads, standard cable length 500 mm.  
For details about solenoid system, please refer to  
page 2.11.1.

Valves are generally equipped with manual override  
to push.

Manifolds are displayed on page 2.6.2.1.

Blanking plates are also available type BP 5 303  
or BP 5 403.

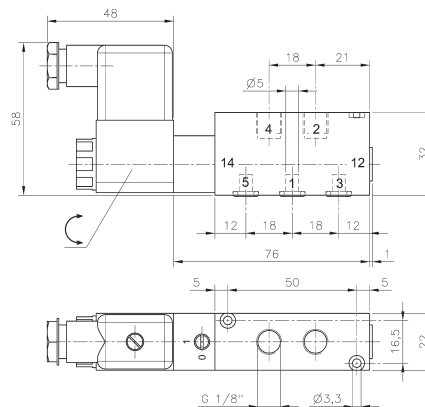
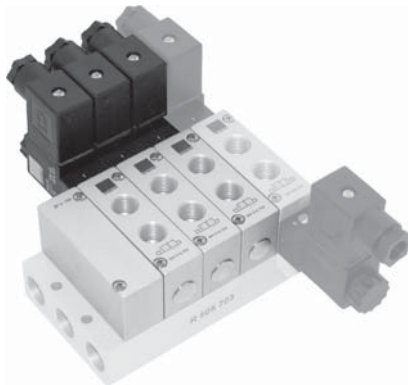
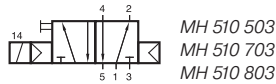
Mounting screws and seals are included.



**MD 510 463**

Type	Ports 1, 2, 4	Air flow	Operating press.	Powerconsumption	Weight
MD 510 303	M5	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,09 kg
MD 510 343	pif 4 mm	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,10 kg
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 510 803



**MH 510 503**

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.

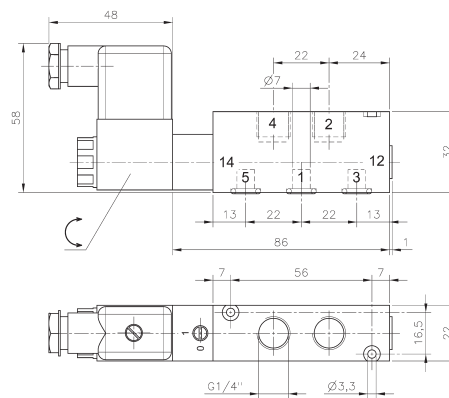
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=  
24V=, 12V=.

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

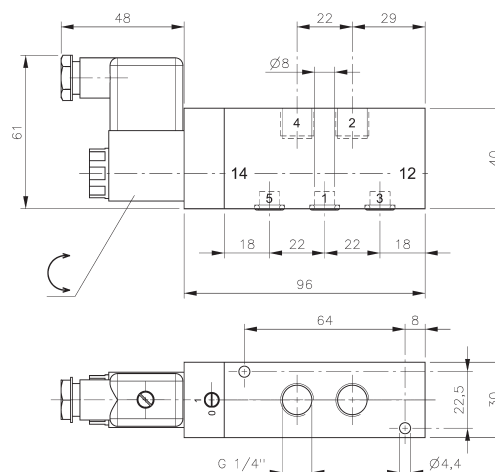
Manifolds for valves type 503 are displayed on page 2.6.2.2, manifolds for valves type 703 are displayed on page 2.6.2.3, manifolds for valves type 803 are displayed on page 2.6.2.5.

Blanking plates are also available type BP 5 503, BP 5 703 or BP 5 803.

Mounting screws and seals are included.



**MH 510 703**

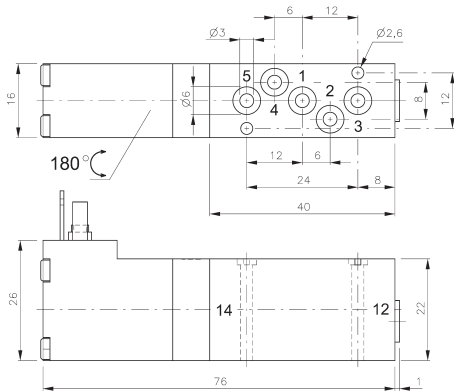
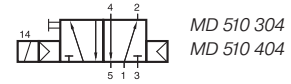


**MH 510 803**

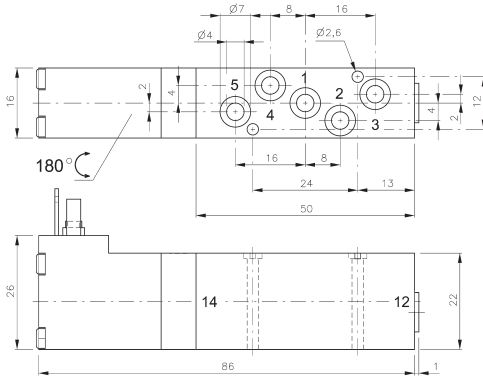
Type	Ports 2, 4	Air flow	Operating press.	Power consumption	Weight
MH 510 503	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,22 kg MK
MH 510 703	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,23 kg MK
MH 510 803	G 1/4"	1450 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,42 kg



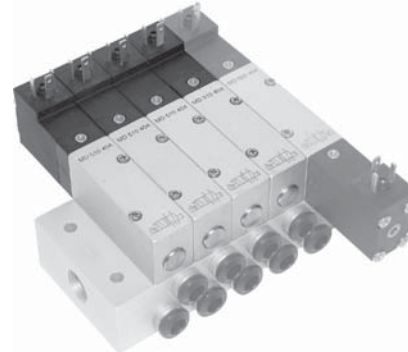
# MD 510 304/MD 510 404



**MD 510 304**



**MD 510 404**



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, 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 2.11.1.

Valves are generally equipped with manual override  
to push.

Manifolds are displayed on page 2.6.2.6.

Blanking plates are also available type BP 5 344  
or BP 5 464.

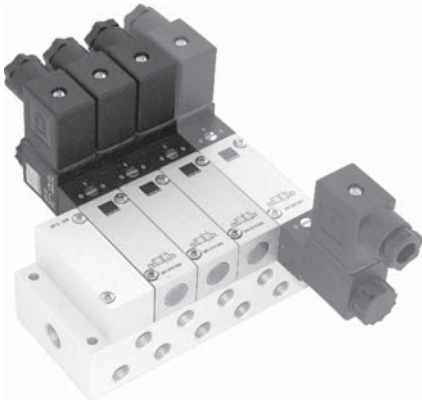
Mounting screws and seals are included.

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MD 510 304	Ø 3 mm	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,09 kg
MD 510 404	Ø 4 mm	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,10 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.

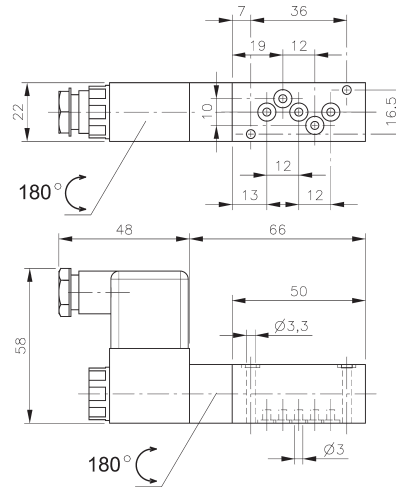
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=  
24V=, 12V=.

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

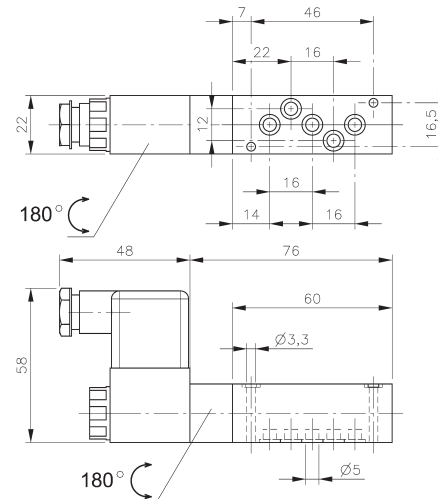
Manifolds for valves type 304 and 504 are displayed  
on page 2.6.2.7, manifolds for valves type 704 are  
displayed on page 2.6.2.8 and 2.6.2.9.

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

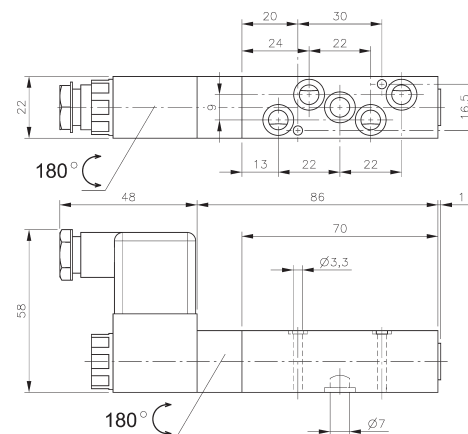
Mounting screws and seals are included.



**MH 510 304**



**MH 510 504**



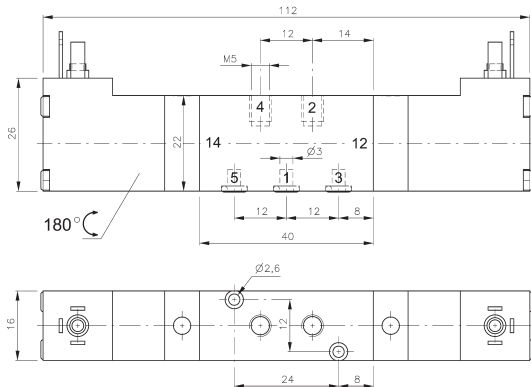
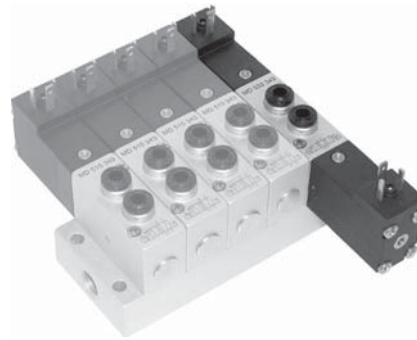
**MH 510 704**

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 ⚠️MK
MH 510 704	Ø 7 mm	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,20 kg ⚠️MK

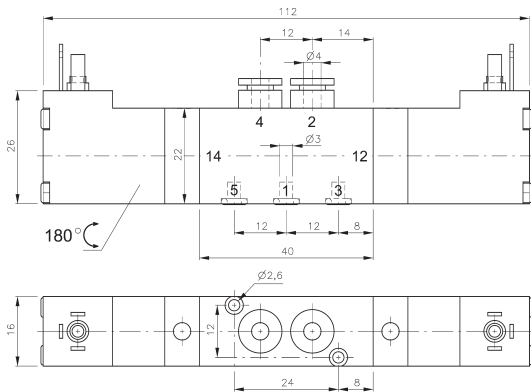
# MD 520 303/MD 520 343 MD 520 403/MD 520 463



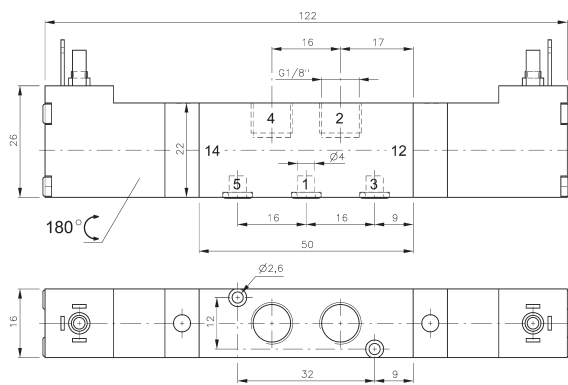
MD 520 303  
MD 520 343  
MD 520 403  
MD 520 463



MD 520 303



MD 520 343



MD 520 403

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.

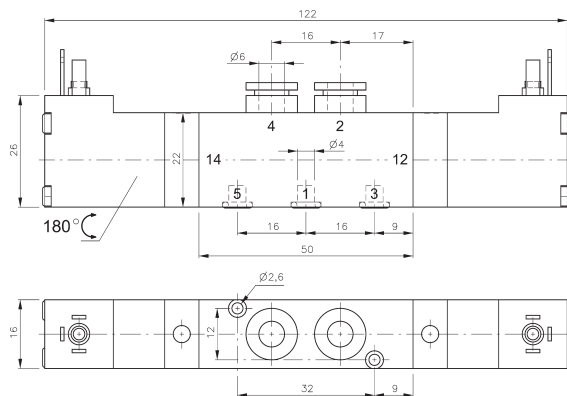
Available with solenoid operators: 230V/50Hz, 110V/50Hz, 24V/50Hz, 24V=, 12V=, 6V= either for connector form C ISO 15217 or with flying leads, standard cable length 500 mm. For details about solenoid system, please refer to page 2.11.1.

Valves are generally equipped with manual override to push.

Manifolds are displayed on page 2.6.2.1.

Blanking plates are also available type BP 5 303 or BP 5 403.

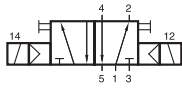
Mounting screws and seals are included.



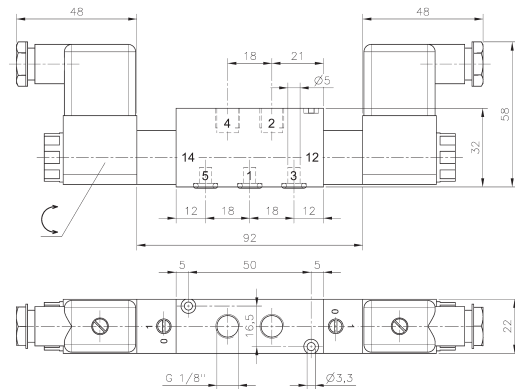
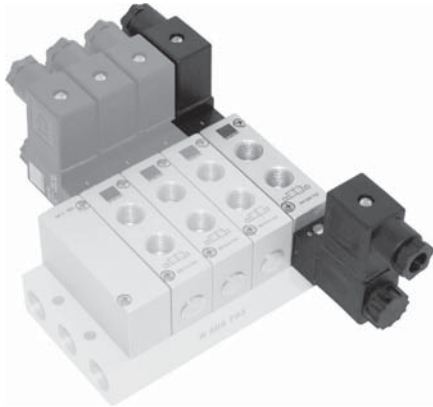
MD 520 463

Type	Ports 1, 2, 4	Air flow	Operating press.	Power consumption	Weight
MD 520 303	M5	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,13 kg
MD 520 343	pif 4 mm	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,14 kg
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

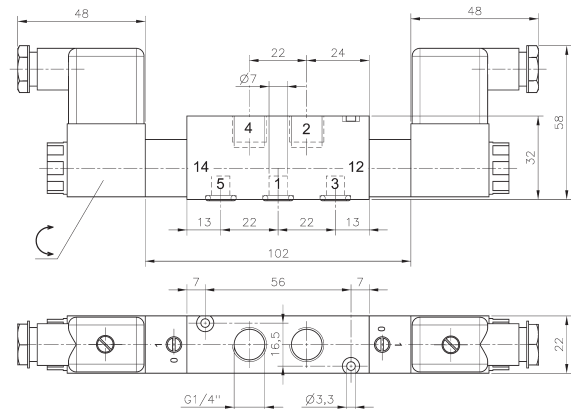
# MH 520 503/MH 520 703/MH 520 803



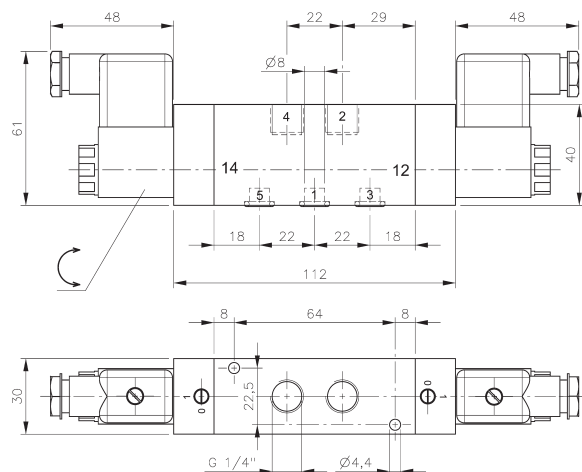
MH 520 503  
MH 520 703  
MH 520 803



**MH 520 503**



**MH 520 703**



**MH 520 803**

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=.

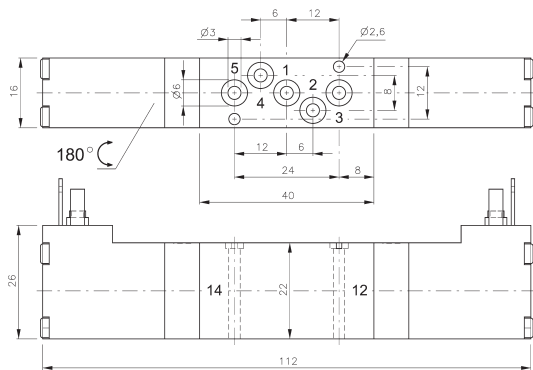
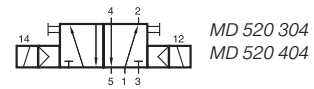
Valves are generally equipped with manual override. If requested without manual override please order M 520 \_ \_ \_.

Manifolds for valves type 503 are displayed on page 2.6.2.2, manifolds for valves type 703 are displayed on page 2.6.2.3, manifolds for valves type 803 are displayed on page 2.6.2.5.

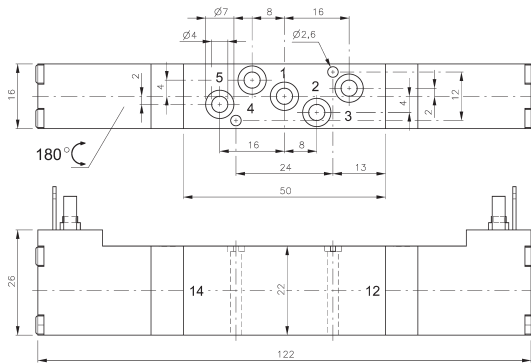
Blanking plates are also available type BP 5 503, BP 5 703 or BP 5 803.

Mounting screws and seals are included.

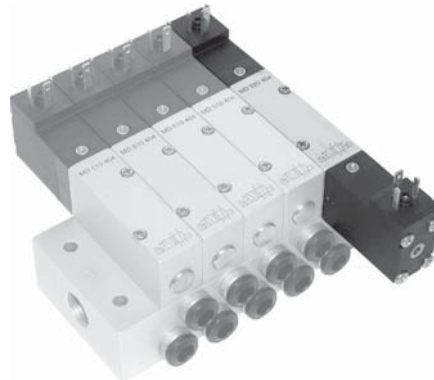
Type	Ports 2, 4	Air flow	Operating press.	Power consumption	Weight
MH 520 503	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,31 kg MK
MH 520 703	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,33 kg MK
MH 520 803	G 1/4"	1450 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,56 kg



**MD 520 304**



**MD 520 404**



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, 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 2.11.1.

Valves are generally equipped with manual override to push.

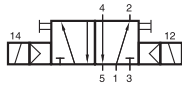
Manifolds are displayed on page 2.6.2.6.

Blanking plates are also available type BP 5 344  
or BP 5 464.

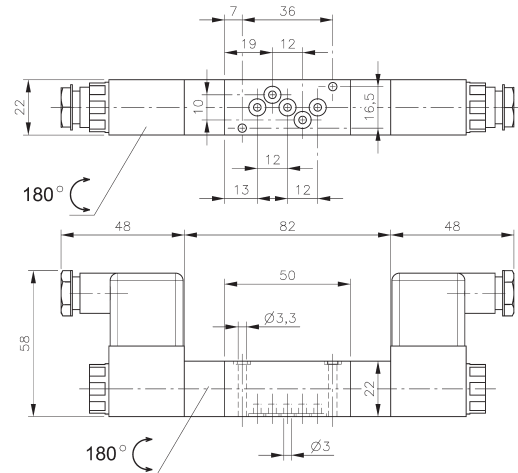
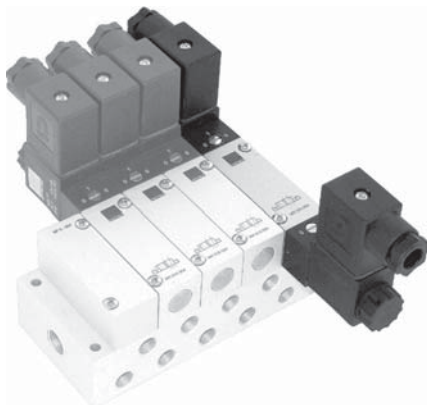
Mounting screws and seals are included.

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MD 520 304	Ø 3 mm	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,13 kg
MD 520 404	Ø 4 mm	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,14 kg

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



MH 520 304  
MH 520 504  
MH 520 704



**MH 520 304**

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.

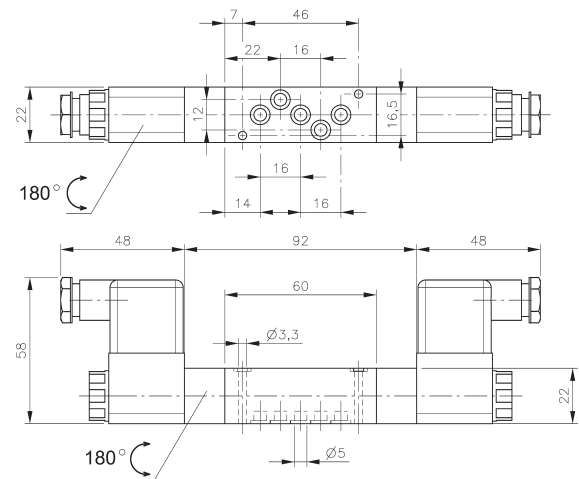
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=  
24V=, 12V=.

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

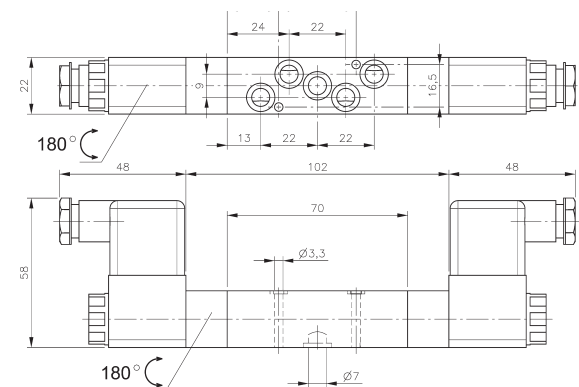
Manifolds for valves type 304 and 504 are displayed on page 2.6.2.7, manifolds for valves type 704 are displayed on page 2.6.2.8 and 2.6.2.9.

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

Mounting screws and seals are included.



**MH 520 504**



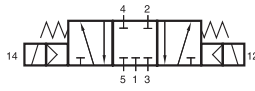
**MH 520 704**

Type	Port size	Air flow	Operating press.	Power cons.	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 ⚠️❄️MK
MH 520 704	Ø 7 mm	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,29 kg ⚠️❄️MK

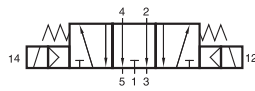




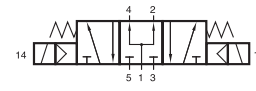
# MH 53\_ 501/MH 53\_ 701/MH 53\_ 801



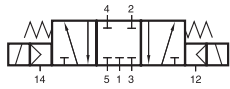
MH 531 501  
MH 531 701  
MH 531 801



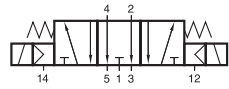
MH 532 501  
MH 532 701  
MH 532 801



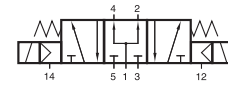
MH 533 501  
MH 533 701  
MH 533 801



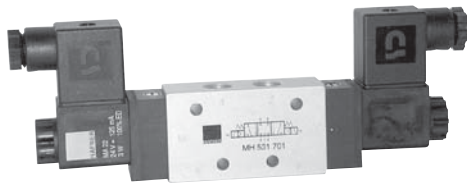
MEH 531 501  
MEH 531 701  
MEH 531 801



MEH 532 501  
MEH 532 701  
MEH 532 801



MEH 533 501  
MEH 533 701  
MEH 533 801



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.

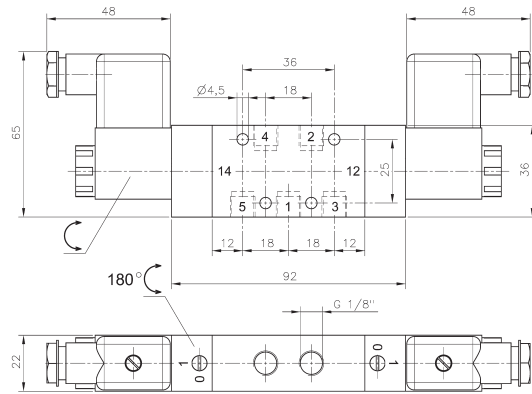
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=,  
24V =, 12V=.

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

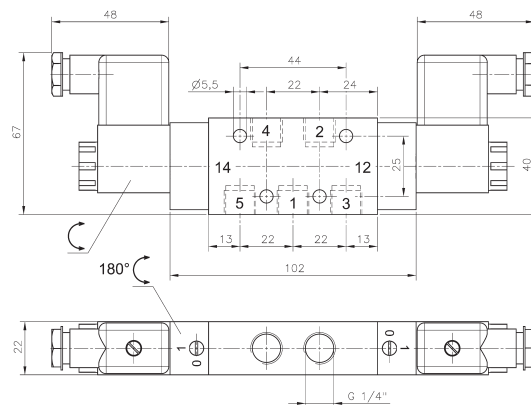
Valves are also available with external pilot feed.  
Type: MEH 53\_ \_ \_ \_ (please add 1 digit for type  
and 3 digits for size).

Ports 12 and 14 series 501 and 701: M5,  
series 801: G 1/8".

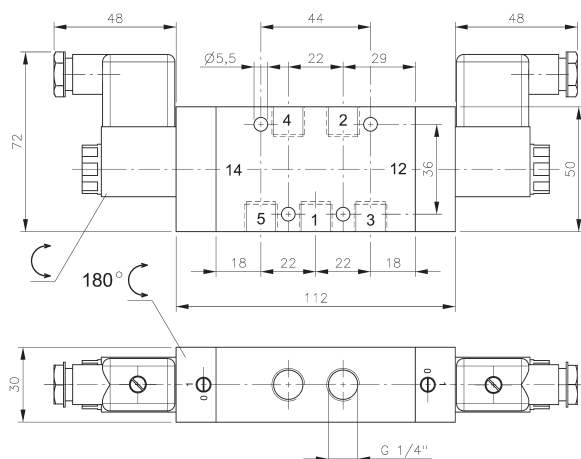
Minimum actuation pressure: 3 bar.  
Version for vacuum on request.



MH 53\_ 501



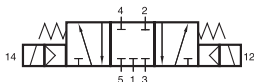
MH 53\_ 701



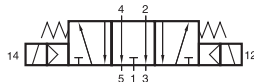
MH 53\_ 801

Type	Port size	Air flow	Operating press.	Power cons.	Weight
MH 53_ 501	G 1/8"	650 l/min	3 - 10 bar	3 W = / 5 VA ~	0,33 kg Ex
MH 53_ 701	G 1/4"	1250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,35 kg Ex MK 116
MH 53_ 801	G 1/4"	1450 l/min	3 - 10 bar	3 W = / 5 VA ~	0,62 kg Ex

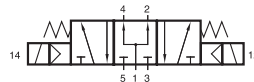
# MH 53\_ 101/MH 53\_ 121/MH 53\_ 181



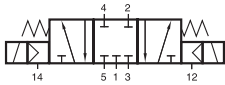
MH 531 101  
MH 531 121  
MH 531 181  
MH 531 121 NPT



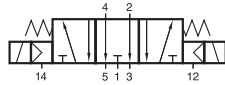
MH 532 101  
MH 532 121  
MH 532 181  
MH 532 121 NPT



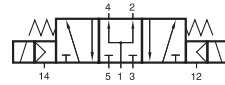
MH 533 101  
MH 533 121  
MH 533 181  
MH 533 121 NPT



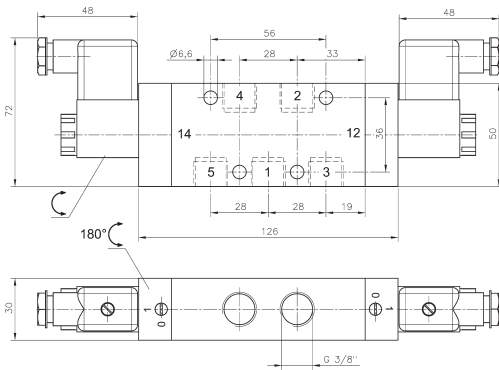
MEH 531 101  
MEH 531 121  
MEH 531 181



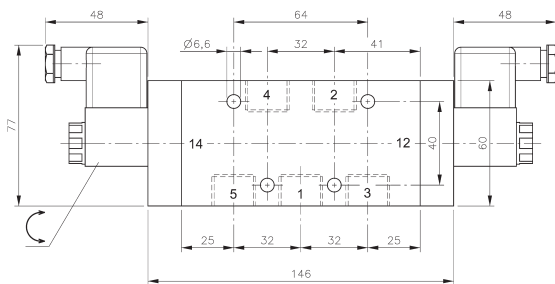
MEH 532 101  
MEH 532 121  
MEH 532 181



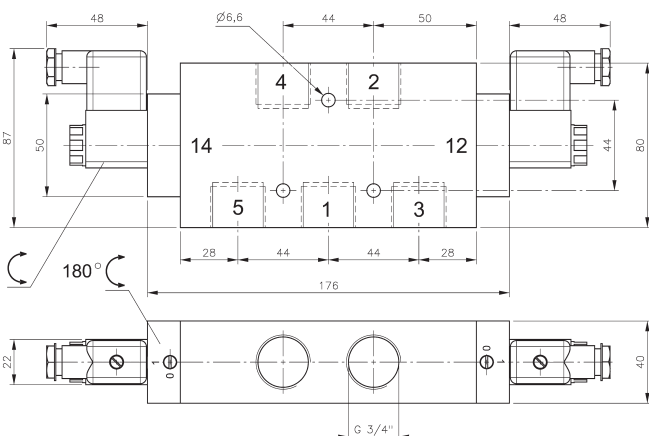
MEH 533 101  
MEH 533 121  
MEH 533 181



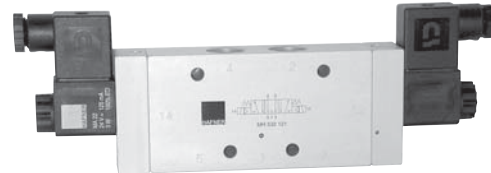
MH 53\_101



MH 53\_121/MH 53\_121 NPT



MH 53\_181



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).

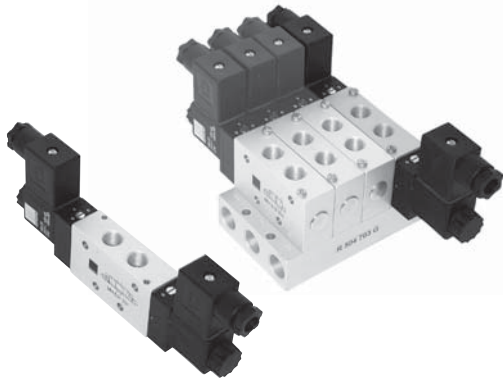
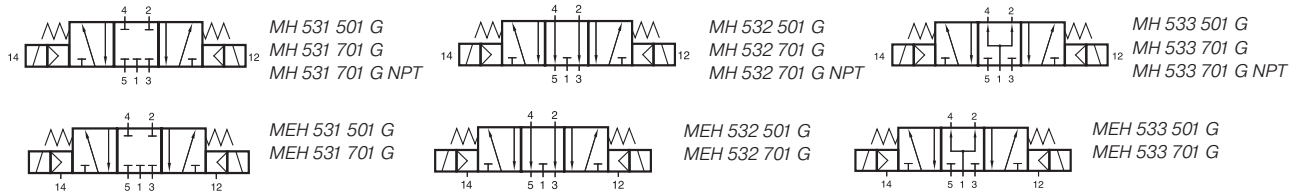
Ports 12 and 14: G 1/8".

Minimum actuation pressure: 3 bar.

Version for vacuum on request.

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 53_ 101	G 3/8"	2250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,66 kg
MH 53_ 121	G 1/2"	3000 l/min	3 - 10 bar	3 W = / 5 VA ~	0,84 kg
MH 53_ 181	G 3/4"	6000 l/min	3 - 10 bar	3 W = / 5 VA ~	1,45 kg
MH 53_ 121 NPT	1/2" NPT	3000 l/min	3 - 10 bar	3 W = / 5 VA ~	0,84 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.

Valves can either be used in-line or on a manifold plate. Manifolds for valves type 501 G are displayed on page 2.6.2.2, manifolds for valves type 701 G are displayed on page 2.6.2.3.

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

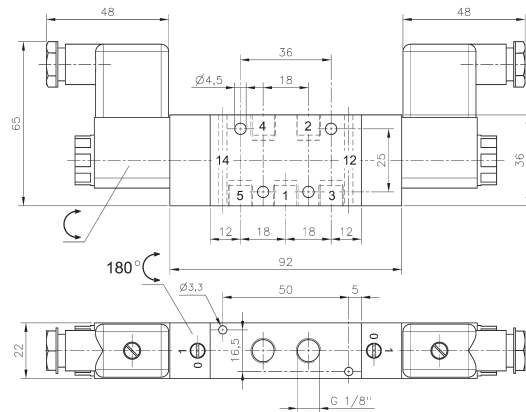
Valves are generally equipped with manual override. If requested without manual override please order M 53\_ \_ \_ G.

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

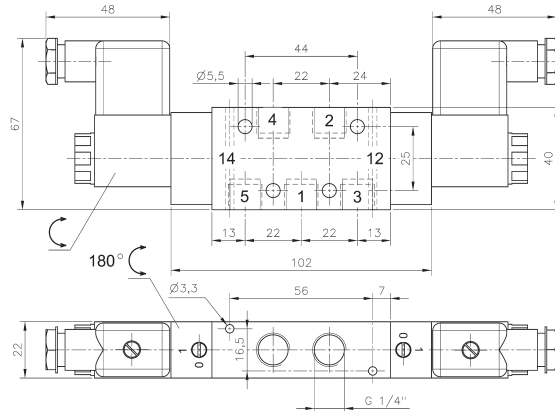
Ports 12 and 14: M5.

Minimum actuation pressure: 3 bar.

Version for vacuum on request.



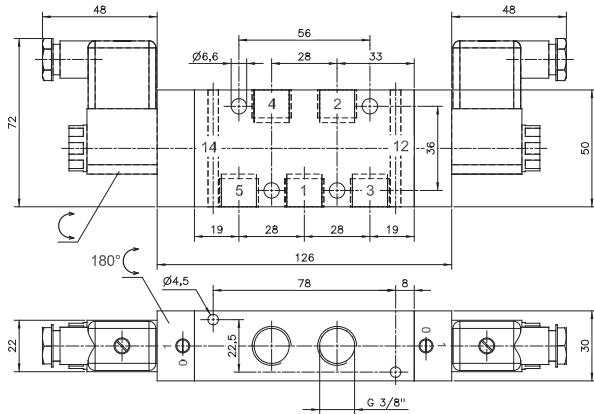
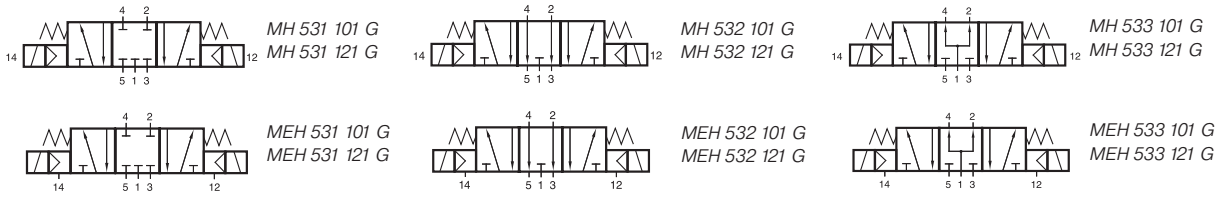
**MH 53\_ 501 G**



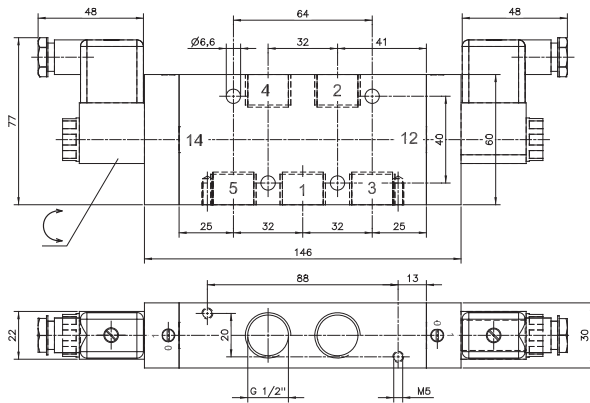
**MH 53\_ 701 G/MH 53\_ 701 G NPT**

Type	Port size	Air flow	Operating press.	Power cons.	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 G/MH 53\_121 G



**MH 53\_101 G**



**MH 53\_121 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.

Valves can either be used in-line or on a manifold plate. Manifolds for valves type 101 G are displayed on page 2.6.2.4, manifolds for valves type 121 G are displayed on page 2.6.2.5.

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).

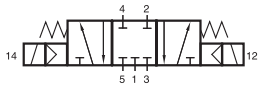
Ports 12 and 14: G 1/8\".

Minimum actuation pressure: 3 bar.

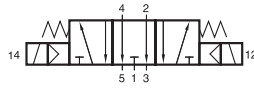
Version for vacuum on request.

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

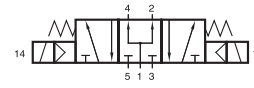
# MD 53\_303/MD 53\_343 MD 53\_403/MD 53\_463



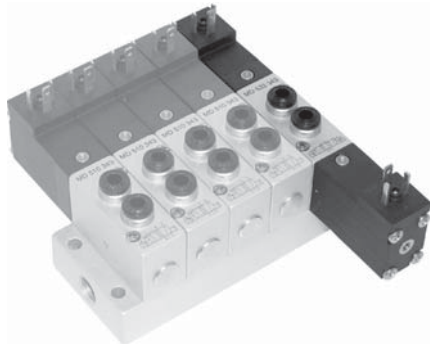
MD 531 303  
MD 531 343  
MD 531 403  
MD 531 463



MD 532 303  
MD 532 343  
MD 532 403  
MD 532 463



MD 533 303  
MD 533 343  
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.

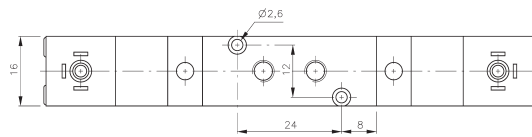
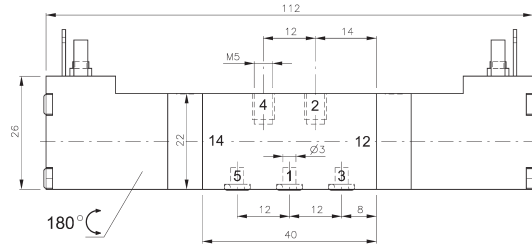
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 24V=  
12V=  
6V= either for connector form C ISO 15217 or with flying leads, standard cable length 500 mm. For details about solenoid system, please refer to page 2.11.1.

Valves are generally equipped with manual override to push.

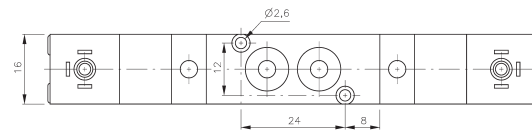
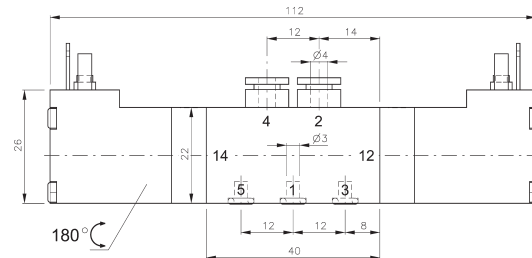
Manifolds are described on page 2.6.2.1.

Blanking plates are also available type BP 5 303 or BP 5 403.

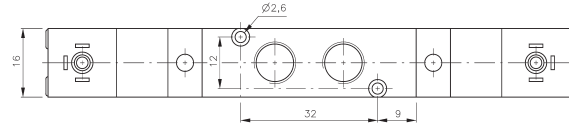
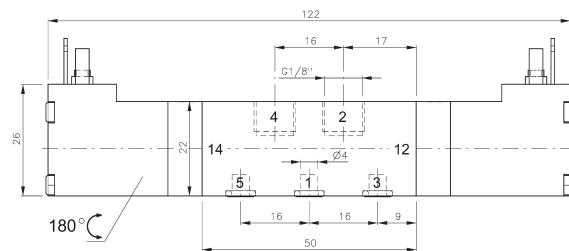
Mounting screws and seals are included.



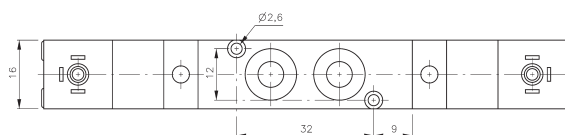
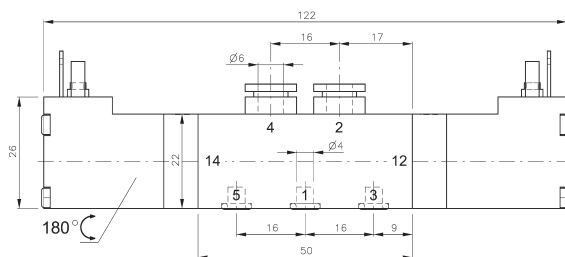
MD 53\_303



MD 53\_343



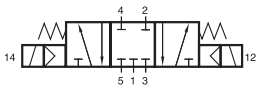
MD 53\_403



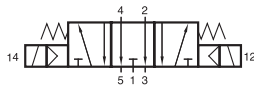
MD 53\_463

Type	Ports 1, 2, 4	Air flow	Operating press.	Power consumption	Weight
MD 53_303	M5	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,13 kg
MD 53_343	pif 4 mm	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,14 kg
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

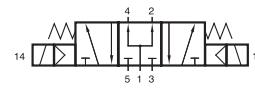
# MH 53\_ 503/MH 53\_ 703/MH 53\_ 803



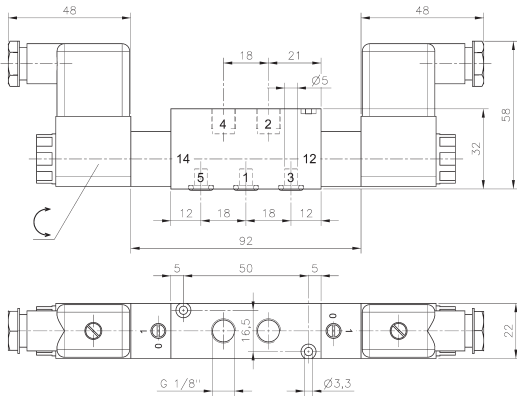
MH 531 503  
MH 531 703  
MH 531 803



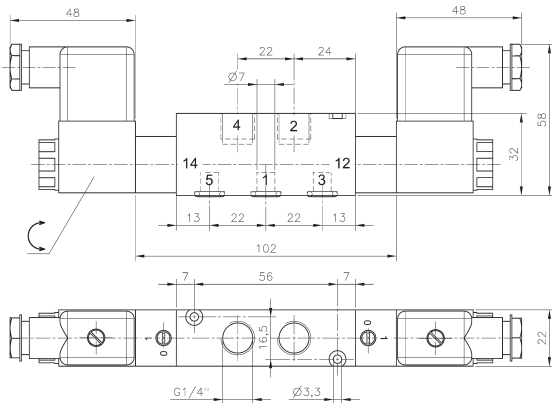
MH 532 503  
MH 532 703  
MH 532 803



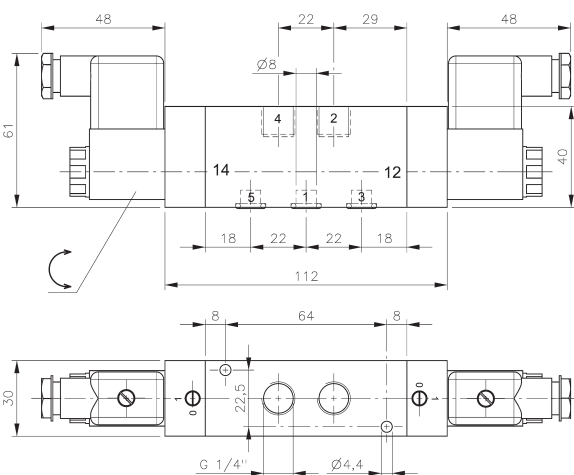
MH 533 503  
MH 533 703  
MH 533 803



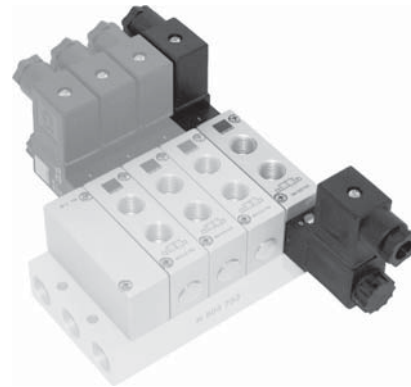
**MH 53\_ 503**



**MH 53\_ 703**



**MH 53\_ 803**



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).

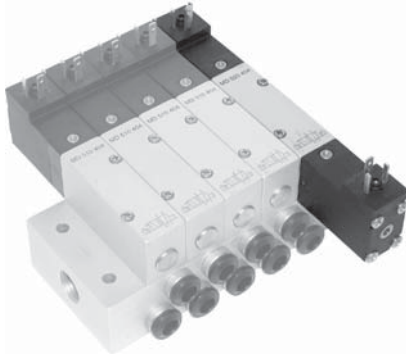
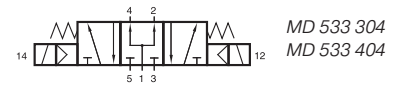
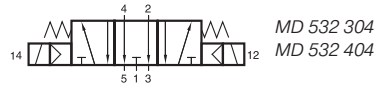
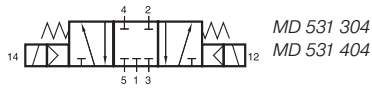
Manifolds for valves type 503 are displayed on page 2.6.2.2, manifolds for valves type 703 are displayed on page 2.6.2.3, manifolds for valves type 803 are displayed on page 2.6.2.5.

Blanking plates are also available type BP 5 503, BP 5 703 or BP 5 803.

Mounting screws and seals are included.

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 53_ 803	G 1/4"	1450 l/min	3 - 10 bar	3 W = / 5 VA ~	0,56 kg

# MD 53\_304/MD 53\_404



5/3-way solenoid valve with spring return to middle position, actuated by permanent signal. All the ports are in the 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.*

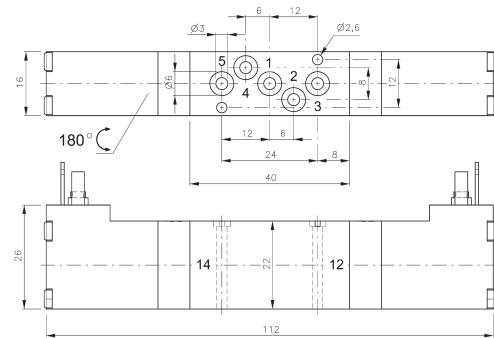
Available with solenoid operators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 24V=,  
12V=, 6V= either for connector form C ISO 15217  
or with flying leads, standard cable length 500 mm.  
For details about solenoid system, please refer to  
page 2.11.1.

Valves are generally equipped with manual override to push.

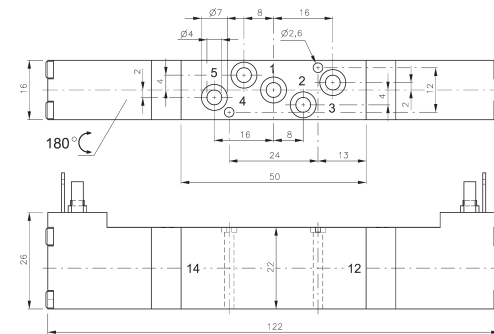
Manifolds are described on page 2.6.2.6.

Blanking plates are also available type BP 5 344  
or BP 5 464.

Mounting screws and seals are included.



**MD 53\_304**

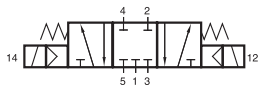


**MD 53\_404**

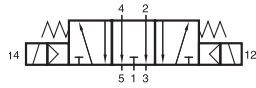
Type	Port size	Air flow	Operating press.	Power consumption	Weight
MD 53_304	Ø 3 mm	280 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,13 kg
MD 53_404	Ø 4 mm	450 l/min	3 - 10 bar	1,8 W = / 3,0 VA ~	0,14 kg



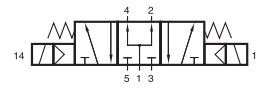
# MH 53\_304/MH 53\_504/MH 53\_704



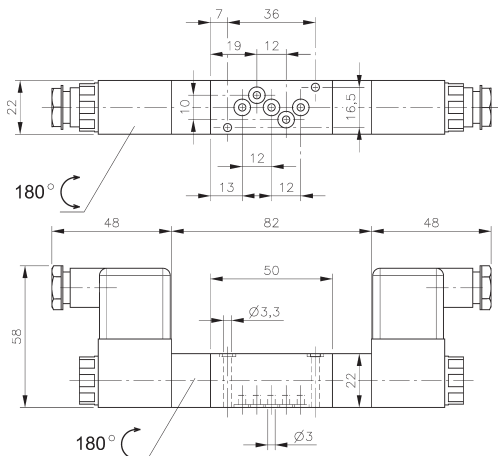
MH 531 304  
MH 531 504  
MH 531 704



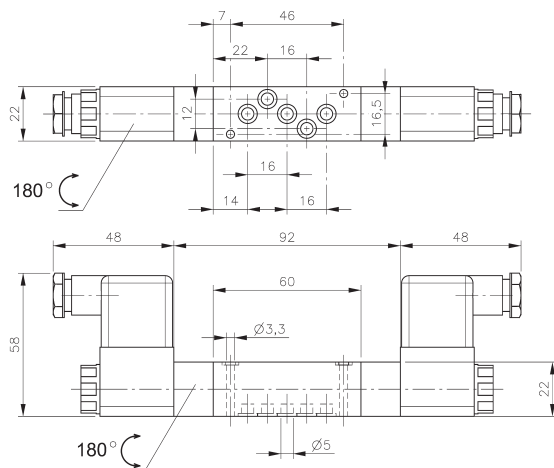
MH 532 304  
MH 532 504  
MH 532 704



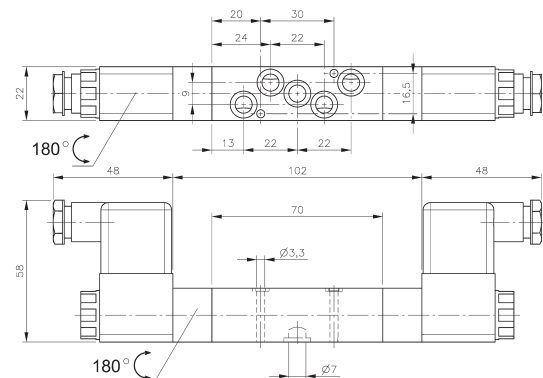
MH 533 304  
MH 533 504  
MH 533 704



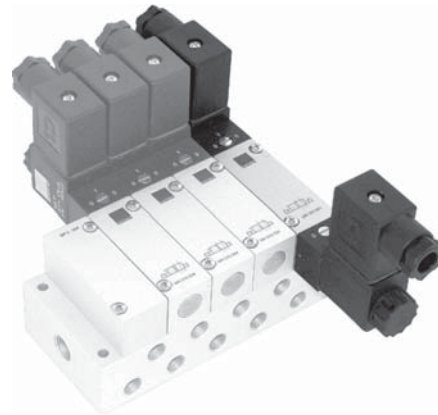
**MH 53\_304**



**MH 53\_504**



**MH 53\_704**



5/3-way solenoid valve with spring return to middle position, actuated by permanent signal. All the ports are in the 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).

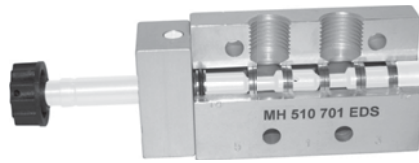
Manifolds for valves type 304 and 504 are displayed on page 2.6.2.7, manifolds for valves type 704 are displayed on page 2.6.2.8 and 2.6.2.9.

Blanking plates are also available:  
Type no. BP 5 304, BP 5 504 or BP 5 704.

Mounting screws and seals are included.

Type	Port size	Air flow	Operating press.	Power cons.	Weight
MH 53_304	Ø 3 mm	220 l/min	3 - 10 bar	3 W = / 5 VA ~	0,25 kg ❄️
MH 53_504	Ø 5 mm	650 l/min	3 - 10 bar	3 W = / 5 VA ~	0,27 kg ❄️⊗MK
MH 53_704	Ø 7 mm	1250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,29 kg ❄️⊗MK

# Examples for customer-specific products



## Version EDS and BMF

For applications where a valve with an aluminum body is appropriate but brass is not, we can deliver selected models either „brass-free to the outside“ (version EDS) or totally „brass-free“ (version EDS).

### Materials used:

	EDS	BMF
	<i>Brass-free to the outside</i>	<i>Entirely brass-free</i>
Body and head	Aluminum	Aluminum
Manual override	1.4404	1.4404
Operator tube	Stainless steel	Stainless steel
Seat below plunger	Brass	1.4404
Sealing system	Brass / NBR	1.4404 / PUR
Spool	Stainless steel	Stainless steel
Piston	Brass / NBR	1.4404 / PUR
Rubber parts	FKM	FKM
Endcap	1.4404	1.4404
Screws	A2	A2



## MSV 311 030

Direct actuated 3/2-way valve for vacuum use, orifice size 3 mm.



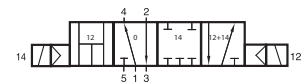
## MHP 520 501

G 1/8" 2-position valve, actuated from one side pneumatically, from the other side with a solenoid. Also available with external pilot-feed and in other sizes.



## RS 4

Connection for operator of direct actuated 3-way-valves can be used to capture exhaust for n.c. valves as well as supply for n.o. valves. Standard: 2, 4, 6 stations, others on request.



## MH 541 701

5/4-way solenoid valve, actuated by permanent signal.



## MH 510 714 B

5/2-way solenoid valve with an orifice size of 7 mm for the packaging industry. Valve is actuated by permanent signal and equipped with air spring return. A version for valve terminal assembling is also available, type MH 510 714 BT.



## MH 510 704 J

Range of 35 mm wide valves with an orifice size of 7 mm for the packaging industry. Range consists of single and double solenoid valves as well as of 5/3-way valves. Pilot actuated products are also available.