

2.9

NAMUR-Valves

NAMUR 1/4" also called "NAMUR 1" in accordance to VDI/VDE 3845. NAMUR 1/2" also called "NAMUR 2".



Selected models are available for low temperature application.
For detailed information refer to chapter 2.11.



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

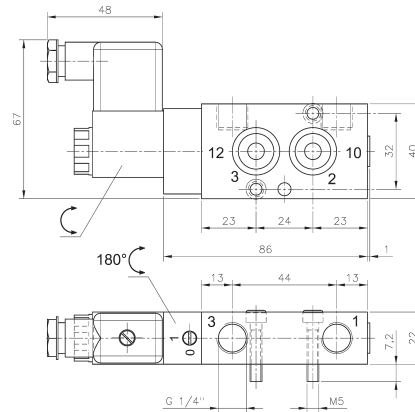
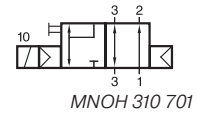
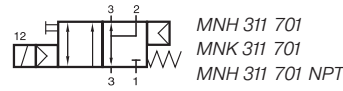
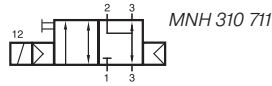
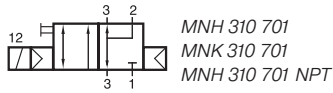


Selected models are available in stainless steel.
For detailed information refer to chapter 2.12.

Selected models are available for explosion hazardous environment. They are ATEX-Ex certified. For detailed information refer to chapter 2.14.



MNH 310 701/MNH 310 711/MNH 311 701 MNOH 310 701/MNK 310 701/MNK 311 701



**MNH 310 701/MNH 311 701/MNOH 310 701
MNH 310 701 NPT/MNH 311 701 NPT**

3/2-way solenoid valve, actuated by permanent signal. Interface according to 1/4" NAMUR-standard, with exhaust air recirculation ("purge").

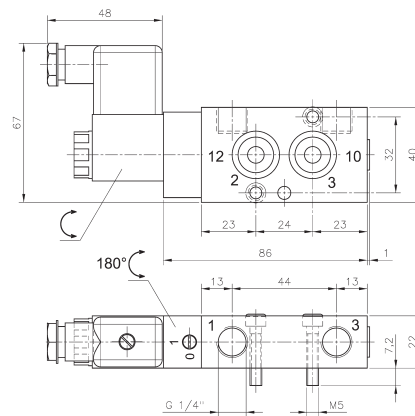
Type MNH 31_7_1 normally closed
Type MNOH 31_701 normally open
Type MNK 31_701 n.c. low power

MNH 310 701, MNH 310 711, MNOH 310 701 and MNK 310 701 with pneumatic spring return, MNH 311 701 and MNK 311 701 with combined spring assuring a fail-safe function.

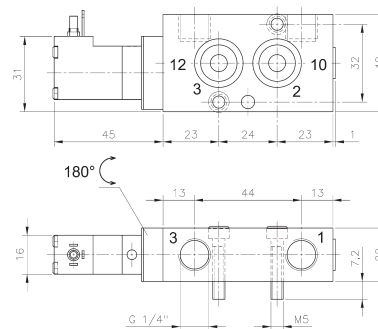
MNH generally with manual override to turn with solenoid operators 230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

MNK with manual override to push with solenoid operators 230V/50Hz, 110V/50Hz, 24V/50Hz, 24V=, 12V=, 6V=

Delivery includes 1 pin, 2 screws and 2 O-rings.



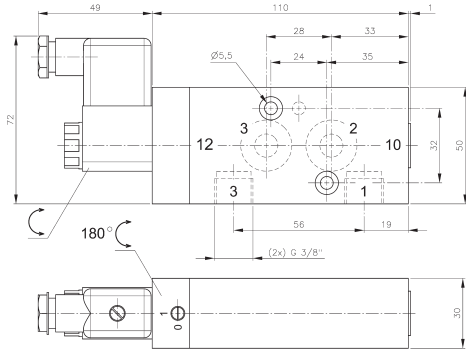
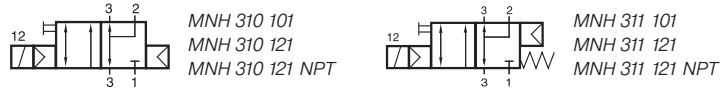
MNH 310 711 ports 1 and 3 are swapped!



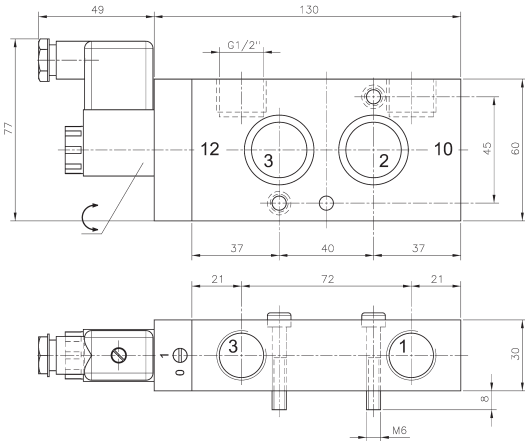
MNK 310 701/MNK 311 701

Type	Function	Port size	Air flow	Operating press.	Power cons.	Weight
MNH 310 701	n.c.	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,26 kg
MNOH 310 701	n.o.	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,26 kg
MNH 310 711	n.c.	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,26 kg
MNH 311 701	n.c.	G 1/4"	1250 l/min	2,5 - 10 bar	3 W = / 5 VA ~	0,26 kg
MNK 310 701	n.c.	G 1/4"	1250 l/min	2 - 10 bar	1,8 W = / 3 VA ~	0,21 kg
MNK 311 701	n.c.	G 1/4"	1250 l/min	2,5 - 10 bar	1,8 W = / 3 VA ~	0,21 kg
MNH 310 701 NPT	n.c.	1/4" NPT	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,26 kg
MNH 311 701 NPT	n.c.	1/4" NPT	1250 l/min	2,5 - 10 bar	3 W = / 5 VA ~	0,26 kg

MNH 310 101/MNH 311 101 MNH 310 121/MNH 311 121



MNH 310 101/MNH 311 101



**MNH 310 121/MNH 311 121
MNH 310 121 NPT/MNH 311 121 NPT**



3/2-way solenoid valve, actuated by permanent signal. Interface according to NAMUR-standard, with exhaust air recirculation ("purge").

Type 101 according to 1/4" NAMUR-standard
Type 121 according to 1/2" NAMUR-standard

MNH 310 101, MNH 310 121 with pneumatic spring return, MNH 311 101 and MNH 311 121 with combined spring assuring a fail-safe function.

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

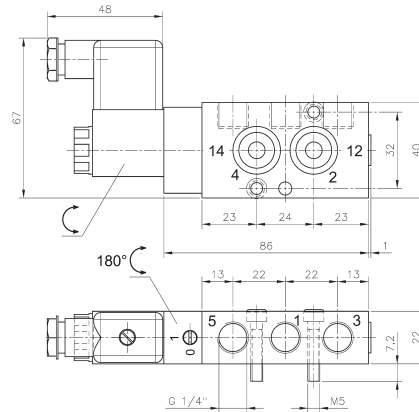
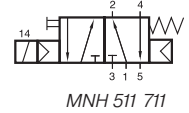
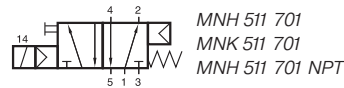
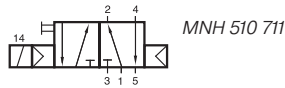
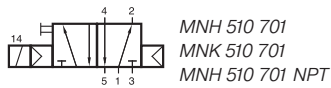
The valves are generally equipped with manual override to turn.

Delivery includes 1 pin, 2 screws, 2 O-rings.

Type	NAMUR Port size	Air flow	Operating press.	Power cons.	Weight
MNH 310 101	1/4" G 3/8"	2250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,55 kg
MNH 311 101	1/4" G 3/8"	2250 l/min	2,5 - 10 bar	3 W = / 5 VA ~	0,55 kg
MNH 310 121	1/2" G 1/2"	3000 l/min	1,0 - 10 bar	3 W = / 5 VA ~	0,70 kg
MNH 311 121	1/2" G 1/2"	3000 l/min	2,5 - 10 bar	3 W = / 5 VA ~	0,70 kg
MNH 310 121 NPT	1/2" 1/2" NPT	3000 l/min	1,0 - 10 bar	3 W = / 5 VA ~	0,70 kg
MNH 311 121 NPT	1/2" 1/2" NPT	3000 l/min	2,5 - 10 bar	3 W = / 5 VA ~	0,70 kg



MNH 510 701/MNH 510 711/MNH 511 701 MNH 511 711/MNK 510 701/MNK 511 701



MNH 510 701/MNH 511 701
MNH 510 701 NPT/MNH 511 701 NPT

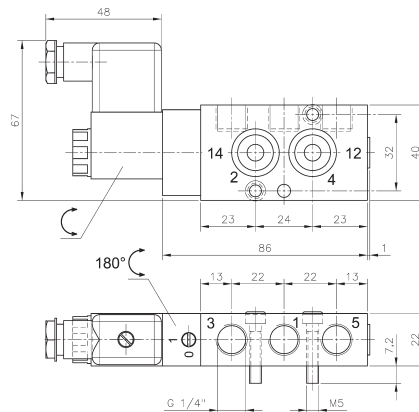
5/2-way solenoid valve, actuated by permanent signal. Interface according to 1/4" NAMUR-standard.

MNH 510 701, MNH 510 711 and MNK 510 701 with pneumatic spring return, MNH 511 701, MNH 511 711 and MNK 511 701 with combined spring.

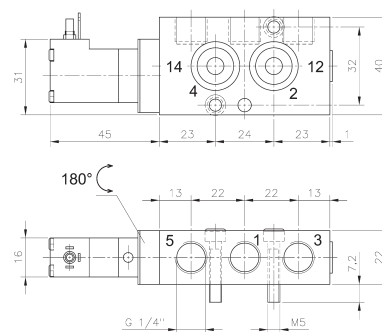
MNH generally with manual override to turn with solenoid operators 230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

MNK with manual override to push with solenoid operators 230V/50Hz, 110V/50Hz, 24V/50Hz, 24V=, 12V=, 6V=.

Delivery includes 1 pin, 2 screws, 2 O-rings.



MNH 510 711/MNH 511 711
ports 2,4,3,5 are swapped!

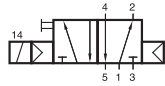


MNK 510 701/MNK 511 701

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MNH 510 701	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,26 kg
MNH 510 711	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,26 kg
MNH 511 701	G 1/4"	1250 l/min	2,5 - 10 bar	3 W = / 5 VA ~	0,26 kg
MNH 511 711	G 1/4"	1250 l/min	2,5 - 10 bar	3 W = / 5 VA ~	0,26 kg
MNK 510 701	G 1/4"	1250 l/min	2 - 10 bar	1,8 W = / 3 VA ~	0,21 kg
MNK 511 701	G 1/4"	1250 l/min	2,5 - 10 bar	1,8 W = / 3 VA ~	0,21 kg
MNH 510 701 NPT	1/4" NPT	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,26 kg
MNH 511 701 NPT	1/4" NPT	1250 l/min	2,5 - 10 bar	3 W = / 5 VA ~	0,26 kg



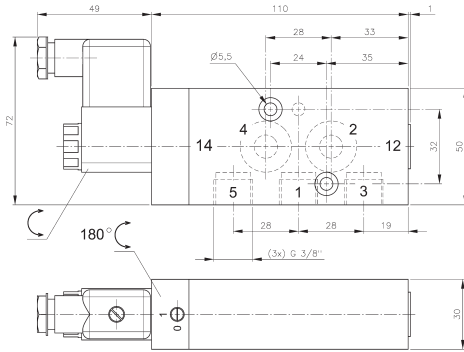
MNH 510 101/MNH 511 101 MNH 510 121/MNH 511 121



MNH 510 101
MNH 510 121
MNH 510 121 NPT



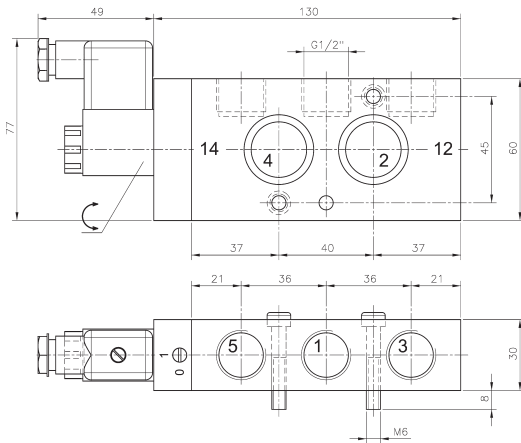
MNH 511 101
MNH 511 121
MNH 511 121 NPT



MNH 510 101/MNH 511 101



5/2-way solenoid valve, actuated by permanent signal. Interface according to NAMUR-standard.



**MNH 510 121/MNH 511 121
MNH 510 121 NPT/MNH 511 121 NPT**

Type 101 according to 1/4" NAMUR-standard
Type 121 according to 1/2" NAMUR-standard

MNH 510 101, MNH 510 121 with pneumatic spring return, MNH 511 101 and MNH 511 121 with combined spring.

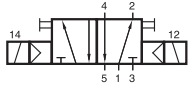
Available with solenoid operators:
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=,
24V~, 12V=.

The valves are generally equipped with manual override to turn.

Delivery includes 1 pin, 2 screws, 2 O-rings.

Type	NAMUR Port size	Air flow	Operating press.	Power cons.	Weight
MNH 510 101	1/4" G 3/8"	2250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,55 kg
MNH 511 101	1/4" G 3/8"	2250 l/min	2,5 - 10 bar	3 W = / 5 VA ~	0,55 kg
MNH 510 121	1/2" G 1/2"	3000 l/min	1,0 - 10 bar	3 W = / 5 VA ~	0,70 kg
MNH 511 121	1/2" G 1/2"	3000 l/min	2,5 - 10 bar	3 W = / 5 VA ~	0,70 kg
MNH 510 121 NPT	1/2" 1/2" NPT	3000 l/min	1,0 - 10 bar	3 W = / 5 VA ~	0,70 kg
MNH 511 121 NPT	1/2" 1/2" NPT	3000 l/min	2,5 - 10 bar	3 W = / 5 VA ~	0,70 kg

MNH 520 701/MNH 520 101/MNH 520 121 MNK 520 701



MNH 520 701
MNH 520 101
MNH 520 121
MNK 520 701
MNH 520 701 NPT
MNH 520 121 NPT

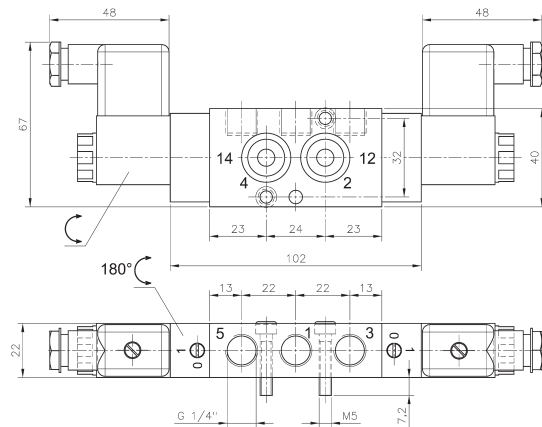


5/2-way solenoid valve actuated by impulse. Position is kept until next electrical signal even when not attached to electrical source. Interface according to NAMUR-standard.

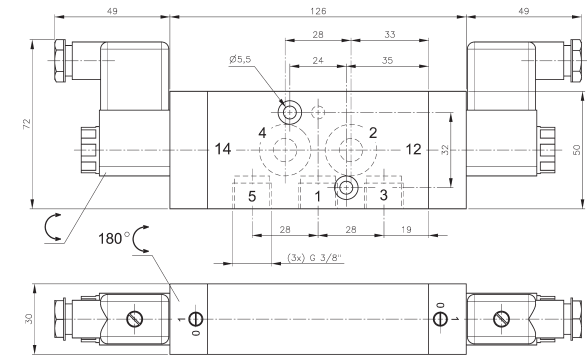
MNH generally with manual override to turn with solenoid operators 230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

MNK with manual override to push with solenoid operators 230V/50Hz, 110V/50Hz, 24V/50Hz, 24V=, 12V=, 6V=.

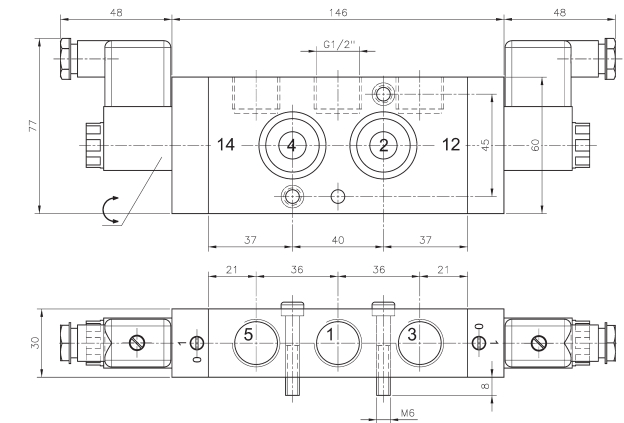
Delivery includes 1 pin, 2 screws, 2 O-rings.



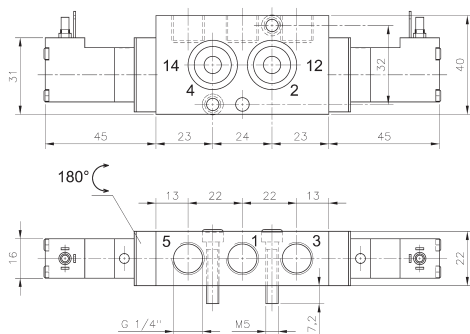
MNH 520 701/MNH 520 701 NPT



MNH 520 101



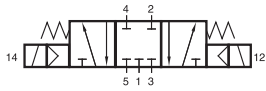
MNH 520 121/MNH 520 121 NPT



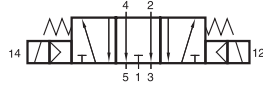
MNK 520 701

Type	NAMUR Port size	Air flow	Operating press.	Power cons.	Weight	
MNH 520 701	1/4" G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,35 kg	
MNH 520 101	1/4" G 3/8"	2250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,84 kg	
MNH 520 121	1/2" G 1/2"	3000 l/min	1,0 - 10 bar	3 W = / 5 VA ~	0,87 kg	
MNK 520 701	1/4" G 1/4"	1250 l/min	2 - 10 bar	1,8 W = / 3 VA ~	0,31 kg	
MNH 520 701 NPT	1/4" 1/4" NPT	1250 l/min	1,5 - 10 bar	3 W = / 5 VA ~	0,35 kg	
MNH 520 121 NPT	1/2" 1/2" NPT	3000 l/min	1,0 - 10 bar	3 W = / 5 VA ~	0,87 kg	

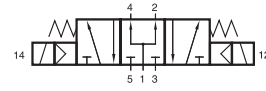
MNH 531 701/MNH 532 701/MNH 533 701 MNH 531 101/MNH 531 121/MNK 531 701



MNH 531 701
MNH 531 101
MNH 531 121
MNK 531 701
MNH 531 701 NPT
MNH 531 121 NPT



MNH 532 701



MNH 533 701



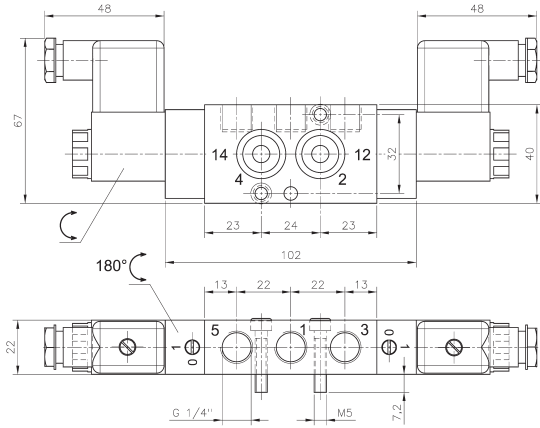
5/3-way solenoid valve with spring return to middle position. Interface according to NAMUR-standard.

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

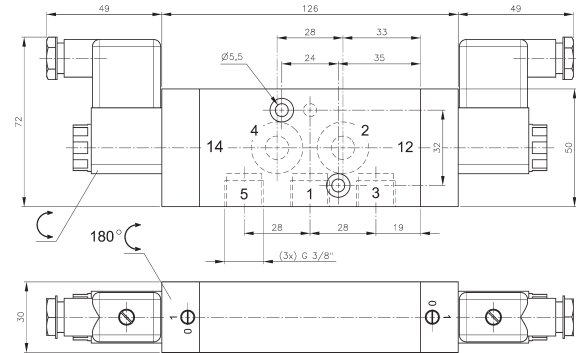
MNH generally with manual override to turn with solenoid operators 230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

MNK with manual override to push with solenoid operators 230V/50Hz, 110V/50Hz, 24V/50Hz, 24V=, 12V=, 6V=.

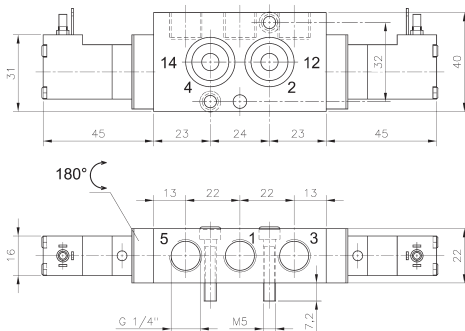
Delivery includes 1 pin, 2 screws and 2 O-rings.



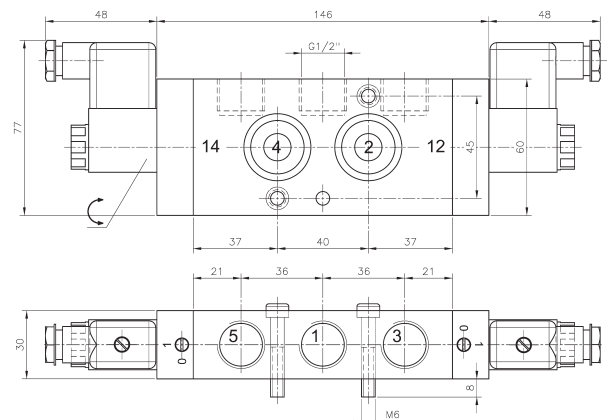
MNH 53_701/MNH 531 701 NPT



MNH 531 101

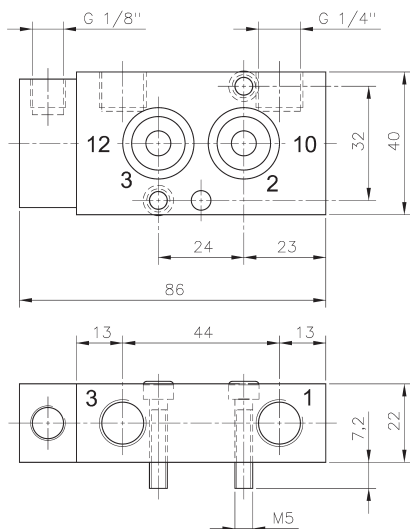


MNK 531 701

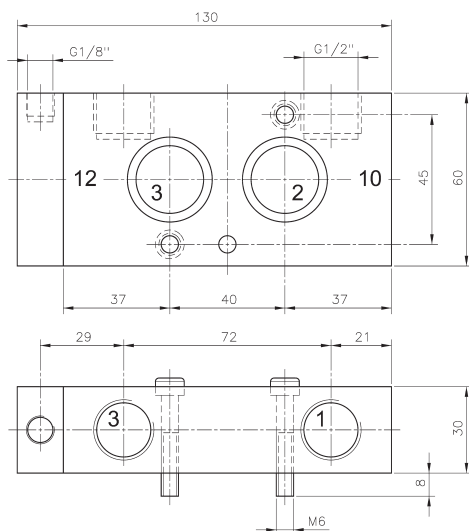


MNH 531 121/MNH 531 121 NPT

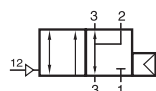
Type	NAMUR Port size	Air flow	Operating press.	Power cons.	Weight
MNH 53_701	1/4"	G 1/4"	1250 l/min 3 - 10 bar	3 W = / 5 VA ~	0,36 kg
MNH 531 101	1/4"	G 3/8"	2250 l/min 3 - 10 bar	3 W = / 5 VA ~	0,84 kg
MNH 531 121	1/2"	G 1/2"	3000 l/min 3 - 10 bar	3 W = / 5 VA ~	0,87 kg
MNK 531 701	1/4"	G 1/4"	1250 l/min 3 - 10 bar	1,8 W = / 3 VA ~	0,32 kg
MNH 531 701 NPT	1/4"	1/4" NPT	1250 l/min 3 - 10 bar	3 W = / 5 VA ~	0,36 kg
MNH 531 121 NPT	1/2"	1/2" NPT	3000 l/min 3 - 10 bar	3 W = / 5 VA ~	0,87 kg



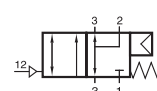
PN 310 701/PN 311 701



PN 310 121



PN 310 701
PN 310 121



PN 311 701



Pneumatically actuated 3/2-way spool valve. Interface according to NAMUR-standard with exhaust recirculation („purge”).

PN 310 701 and PN 310 121 with pneumatic spring. For valves with pure pneumatic spring operating and actuation pressure should be at the same level. PN 311 701 with combined mechanical and pneumatic spring return.

Port sizes type 701: 1 and 3: G 1/4"
12: G 1/8"

Port sizes type 121: 1 and 3: G 1/2"
12: G 1/8"

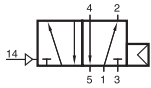
Delivery includes 1 pin, 2 screws, 2 O-rings.

NPT ported valves are available on request.

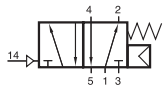
Type	NAMUR Port size	Air flow	Operating press.	Actuation press.	Weight
PN 310 701	1/4" G 1/4" - G 1/8"	1250 l/min	2 - 10 bar	the same	0,20 kg
PN 311 701	1/4" G 1/4" - G 1/8"	1250 l/min	3 - 10 bar	3 - 10 bar	0,20 kg
PN 310 121	1/2" G 1/2" - G 1/8"	3000 l/min	1 - 10 bar	the same	0,62 kg



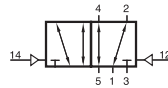
PN 510 701/PN 511 701/PN 510 121 PN 520 701/PN 520 121



PN 510 701
PN 510 121



PN 511 701



PN 520 701
PN 520 121



Pneumatically actuated 5/2-way spool valve. Interface according to NAMUR-standard.

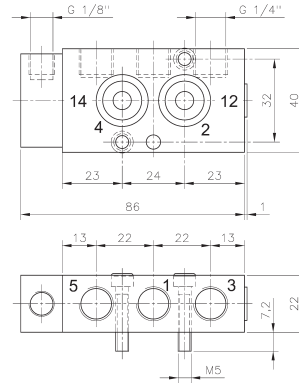
PN 510 701 and PN 510 121 with pneumatic spring. For valves with pure pneumatic spring operating and actuation pressure should be at the same level. PN 511 701 with combined mechanical and pneumatic spring return. PN 520 with double pilot.

Port sizes type 701: 1, 3 and 5: G 1/4"
12 and 14: G 1/8"

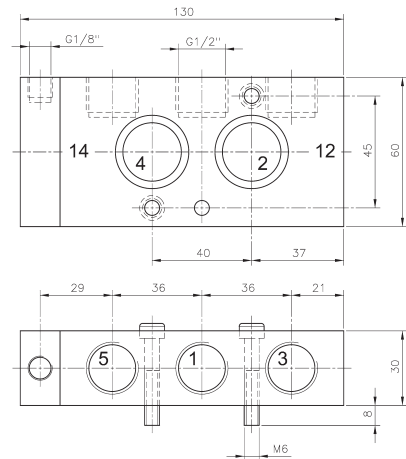
Port sizes type 121: 1, 3 and 5: G 1/2"
12 and 14: G 1/8"

Delivery includes 1 pin, 2 screws, 2 O-rings.

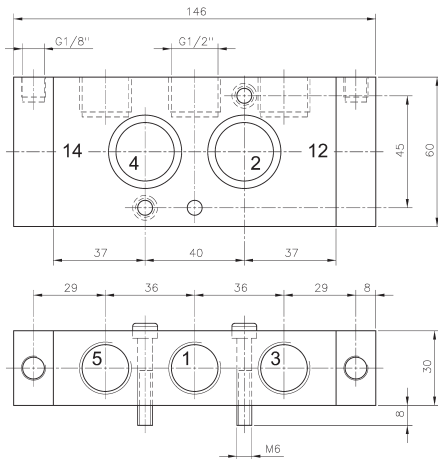
NPT ported valves are available on request.



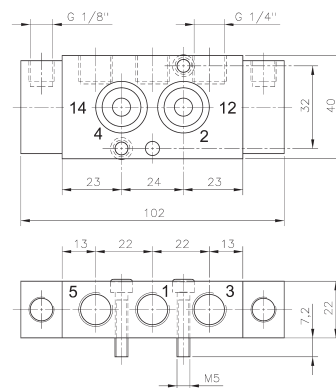
PN 510 701/PN 511 701



PN 510 121



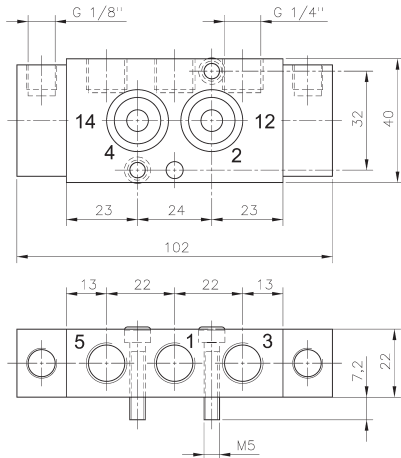
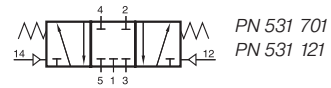
PN 520 121



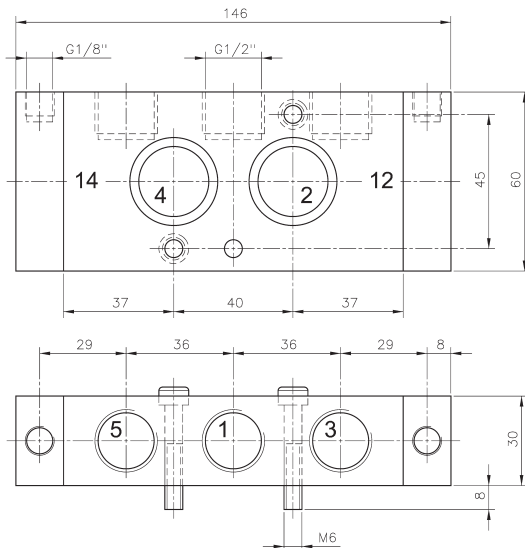
PN 520 701

Type	NAMUR Port size		Air flow	Operating press.	Actuating press.	Weight
PN 510 701	1/4"	G 1/4" - G 1/8"	1250 l/min	2 - 10 bar	the same	0,19 kg
PN 511 701	1/4"	G 1/4" - G 1/8"	1250 l/min	3 - 10 bar	3 - 10 bar	0,19 kg
PN 510 121	1/2"	G 1/2" - G 1/8"	3000 l/min	1 - 10 bar	the same	0,60 kg
PN 520 701	1/4"	G 1/4" - G 1/8"	1250 l/min	2 - 10 bar	2,5 - 10 bar	0,22 kg
PN 520 121	1/2"	G 1/2" - G 1/8"	3000 l/min	1 - 10 bar	2,5 - 10 bar	0,67 kg





PN 531 701



PN 531 121



Pneumatically actuated 5/3-way spool valve with spring return to middle position, centre closed. Interface according to NAMUR-standard.

Port sizes type 701: 1, 3 and 5: G 1/4"
12 and 14: G 1/8"

Port sizes type 121: 1, 3 and 5: G 1/2"
12 and 14: G 1/8"

Other 5/3-way versions (centre exhausted or pressurised) are available on request.

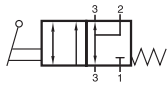
Delivery includes 1 pin, 2 screws, 2 O-rings.

NPT ported valves are available on request.

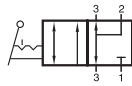
Type	NAMUR Port size	Air flow	Operating press.	Actuation press.	Weight
PN 531 701	1/4" G 1/4" - G 1/8"	1250 l/min	1 - 10 bar	3 - 10 bar	0,22 kg
PN 531 121	1/2" G 1/2" - G 1/8"	3000 l/min	1 - 10 bar	3 - 10 bar	0,67 kg



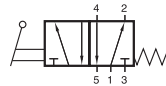
HVN 311 701/HVRN 320 701 HVN 511 701/HVRN 520 701



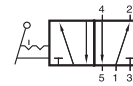
HVN 311 701



HVRN 320 701



HVN 511 701



HVRN 520 701



Lever actuated spool valves with interface according to 1/4" NAMUR- standard. 4 versions are offered:

- HVN 311 701 3/2-way, normally closed with spring return
- HVRN 320 701 3/2-way, indexed
- HVN 511 701 5/2-way with spring return
- HVRN 520 701 5/2-way indexed

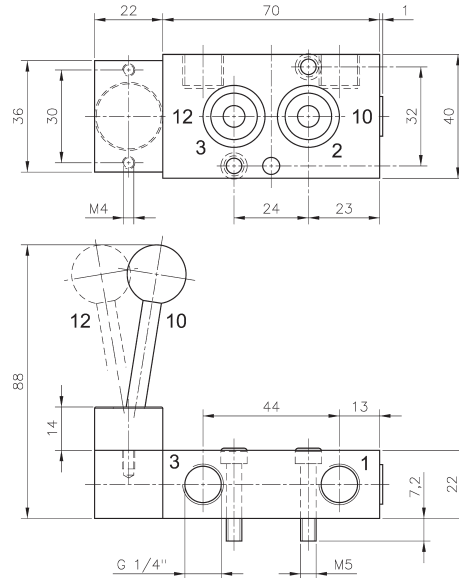
3/2-way valves offer exhaust air recirculation („purge“).

The lever is sealed by using a metal ball.

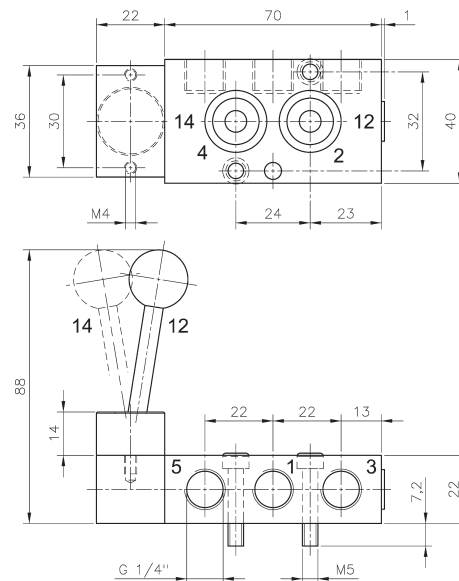
Exhaust can be throttled.

Delivery includes 1 pin, 2 screws, 2 O-rings.

NPT ported versions and 5/3-way valves are available on request.

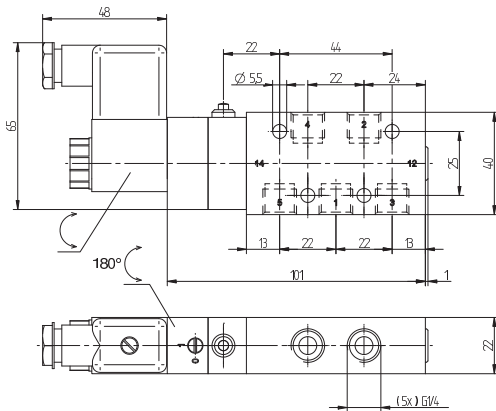


HVN 311 701/HVRN 320 701



HVN 511 701/HVRN 520 701

Type	Function	Port size	Air flow	Operating press.	Actuating force	Weight
HVN 311 701	3/2-way spring	G 1/4"	1250 l/min	1 - 10 bar	20 N	0,24 kg
HVRN 320 701	3/2-way indexed	G 1/4"	1250 l/min	1 - 10 bar	20 N	0,24 kg
HVN 511 701	5/2-way spring	G 1/4"	1250 l/min	1 - 10 bar	20 N	0,24 kg
HVRN 520 701	5/2-way indexed	G 1/4"	1250 l/min	1 - 10 bar	20 N	0,24 kg



MHLL 510 701 ALU



Valves with manual reset function for monitored reactivation by maintenance staff. When the solenoid valve is de-energized it will move to its default position.

A regular solenoid valve will be switched on just by energizing the solenoid.

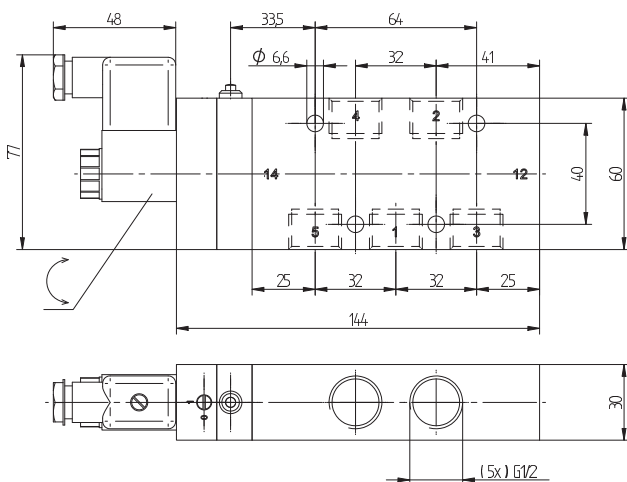
Unlike a valve with a manual reset function: In order to switch-on the valve the solenoid has to be actuated and initially a knob on the valve has to be pushed.

The requirement that an operator has to be physically present when an especially important or critical piece of equipment is activated is fulfilled by this product.

The manual reset system is available for our G 1/8", G 1/4" as well as G 1/2" valves.

On request:

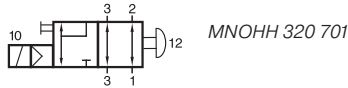
- *Stainless steel version*
- *ATEX-approved*
- *Pneumatically actuated valves*



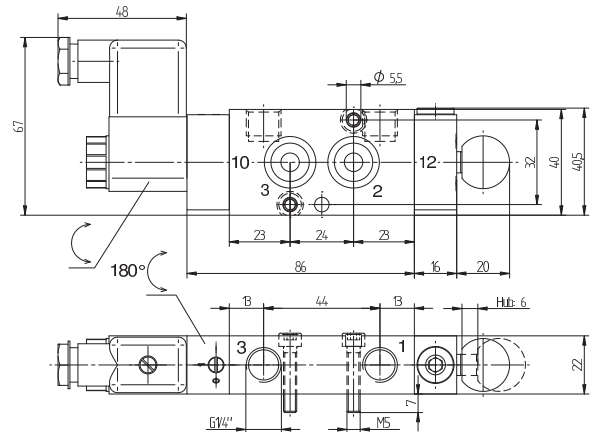
MHLL 510 121

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MHLL 510 701 ALU	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,30 kg
MHLL 510 121	G 1/2"	3000 l/min	1 - 10 bar	3 W = / 5 VA ~	0,72 kg

Valves with latch-lock function



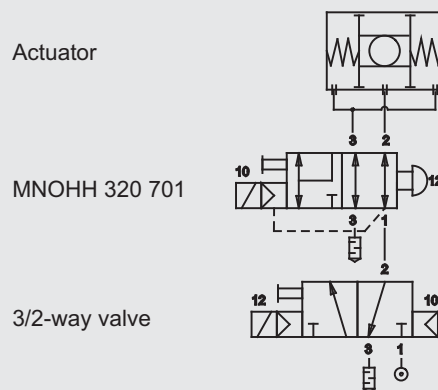
The MNOHH 320 701 is a 2-position valve, actuated from one side by solenoid, from the other side manually.
Interface according to 1/4" NAMUR- standard.
As long as there is no electric signal applied, the valve is open from 1 to 2 and port 3 can exhaust.
When an electric signal is applied to the solenoid, the valve moves to the closed position. The valve will stay in this position no matter if the electric signal cuts-off.
It can only be switched into the other position by manually pushing the knob.



Typical application:

Valve is mounted on a single acting actuator.
Another 3/2-way control valve is connected to port 1 of the MNOHH 320 701.
In normal operation, no electric signal is applied to the solenoid and the actuator can be opened and closed by the 3/2-way control valve. When there is an emergency, an electric signal is applied to the solenoid and the valve moves to the closed position. The air supply to the actuator is now cut-off and the actuator will close by the force of the spring.
As a result the process valve stays in this position until maintenance personnel is present and resets the valve.

Function:



On request:

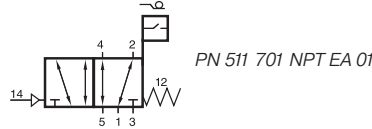
- Other functions
- ATEX-approved
- Stainless steel version

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MNOHH 320 701	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,30 kg

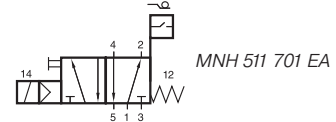
Valves with position feedback function



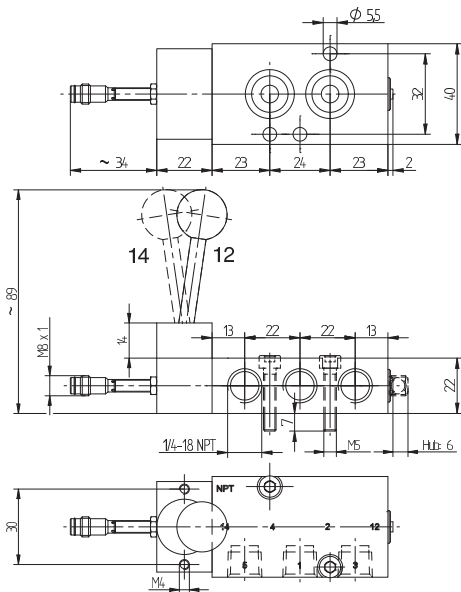
HVRN 520 701 L NPT EA 01



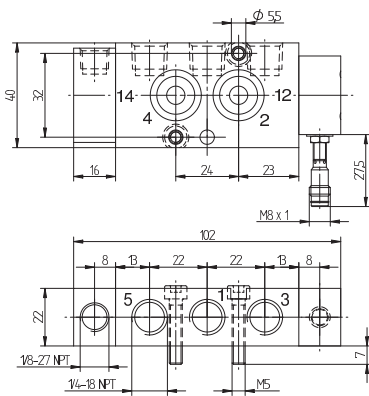
PN 511 701 NPT EA 01



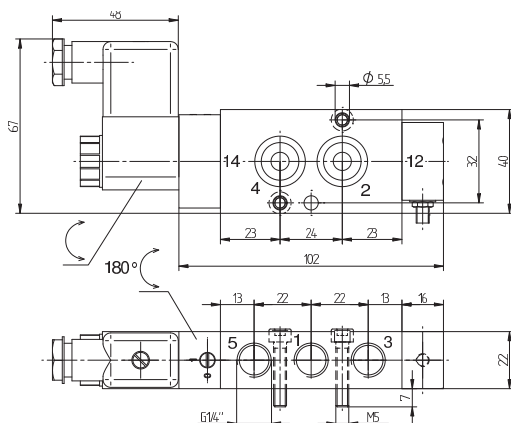
MNH 511 701 EA



HVRN 520 701 L NPT EA 01



PN 511 701 NPT EA 01



MNH 511 701 EA



The Machinery Directive DIN EN ISO 13849 is challenging machine manufacturers. The security level of control system has to be assessed, redundant systems or components with feedback-functions have to be installed.

Solution from Hafner:

Valves with position feedback function. The sensors give a signal assuring that the valve has fully switched through.

HVRN 520 701 L NPT EA 01:

Lever actuated 5/2-way spool valve, indexed. Interface according to 1/4" NAMUR-standard. Additionally the user can put a padlock in the drilling of the extended spool and thereby lock the valve. Equipped with an inductive sensor from Contrinex according to NAMUR (DIN 19234).

PN 511 701 NPT EA 01:

Pneumatically actuated 5/2-way spool valve. Interface according to 1/4" NAMUR-standard. Equipped with an inductive sensor from Contrinex according to NAMUR (DIN 19234).

MNH 511 701 EA:

5/2-way solenoid valve, actuated by permanent signal. Interface according to 1/4" NAMUR-standard. Equipped with an inductive sensor from Balluff with 0.30 m cable.

Other valves and sensors available on request.

Type	Port size	Air flow	Operating press.	Actuation press.	Power consumption	Weight
HVRN 520 701 L NPT EA 01	1/4" NPT	1250 l/min	1 - 10 bar	-	-	0,24 kg
PN 511 701 NPT EA 01	1/4" NPT	1250 l/min	1 - 10 bar	3 - 6 bar	-	0,19 kg
MNH 511 701 EA	G 1/4"	1250 l/min	2 - 10 bar	-	3 W = / 5 VA ~	0,25 kg

Valves for high temperature applications

Hafner is offering selected products to be used in **high temperature environment**.

All valves of the series 500 (G 1/8") as well as 700 (G 1/4") can be delivered like that. Other sizes available on request.

Temperature range solenoid valves (DC-coils only):
-10°C to +80° (100% ED)

The solenoid valves are available with coils 24V=.

For a better heat resistance, we equip the valves with the Epoxy coil (MA 22 D).



Sample Product: MNH 310 701 HT
3/2-way solenoid valve, interface according to 1/4" NAMUR-standard.
Equipped with aluminum pilot-head, aluminum fixing nut and Epoxy coil.
Inner seals are made from FKM.

Temperature range manually, mechanically and pneumatically actuated valves: **-10°C to +120°C**.



Sample Product: P 310 701 VIT
Pneumatically actuated 3/2-way valve with FKM seals.



Sample Product: HVR 520 701 L
Lever actuated 5/2-way spool valve, indexed, with FKM seals.
Added value: The user can put a padlock in the drilling of the extended spool and thereby lock the valve.



Sample Product: D 181 G
Block form flow regulator, bi-directional.
Port-size G 3/4", 6000 l/min air-flow.

*Other products can be made available for high temperature applications as well.
Please send us your inquiry!*