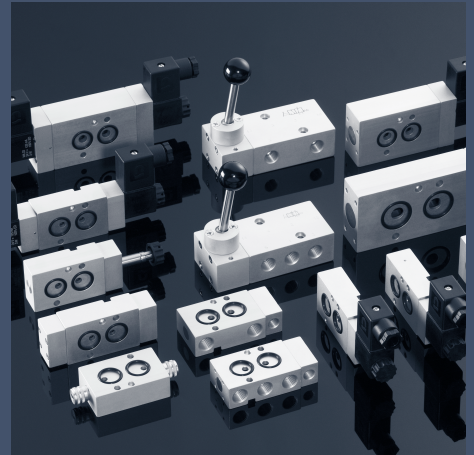


# Namur Valves



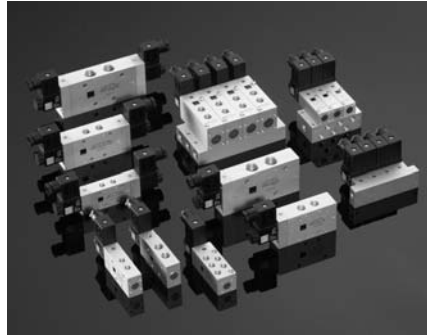
2008

# Product overview

Besides the products with Namur interface we offer a full range of pneumatic control valves. The range consists of a variety of differently actuated products, ported from M5 up to G 3/4". If you are interested to learn more about the entire product range, please send us your request for a full catalogue or visit our web-page [www.hafner-pneumatik.com](http://www.hafner-pneumatik.com). In the down-load area you find pdf-catalogues as well as CAD drawings.

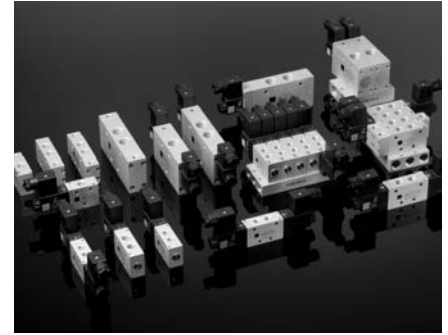
## Solenoid valves

A large variety of 3/2, 5/2 and 5/3 way solenoid valves, available with or without pilot assistance, inline or as manifold systems.



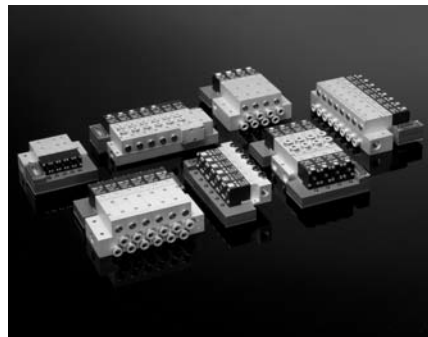
## G-Valves

Valves that can be used in-line and on manifold plates. Available are solenoid and pneumatically actuated valves, 5/2, 5/3, 3/2 and 3/3 way products with ports G 1/8", G 1/4" und G 1/2".



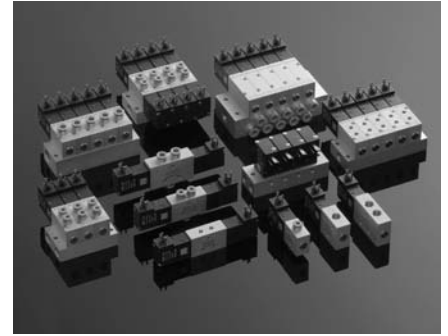
## The 181-series

For everyone who needs maximum flow: The 181 series from Hafner. G 3/4" ported with 6.000 l/min of flow, orifice size 18 mm. Like all our products the G 3/4" valves are equipped with the patented sealing system of the „swimming O-ring“.



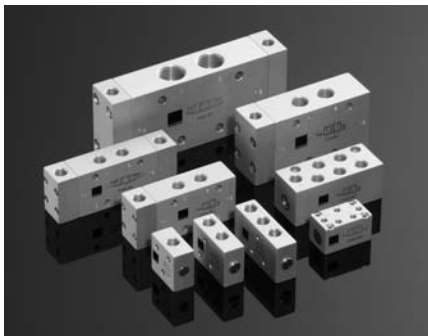
## Valve terminals

3 and 5 way valves with all the ports in the plate or port 2 and 4 in the valve, from 4 to 14 stations, using the MD valve range. Electrical connection: Water proof D Sub connector with 15 pins offering IP 65.



## MD 16

The Slim Line: 16 mm wide solenoid valves, inline or on different types of manifold plates. Also available with easy-to-use integrated fittings.



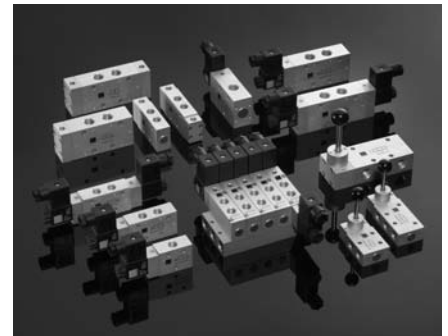
## Pneumatically actuated valves

Different sizes and designs of air pilot actuated valves, designed to best serve our customers needs for pure pneumatic applications.



## Mechanically and manually actuated valves

Extensive range of 3/2, 5/2 and 5/3 way valves with mechanical or manual actuators, impressive through their compact construction and the low actuating force!



## Compact Line

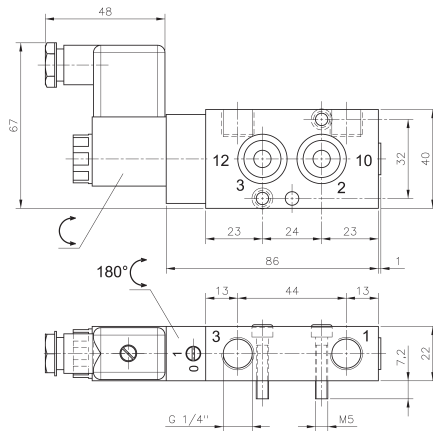
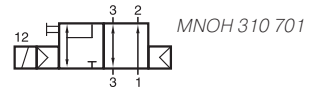
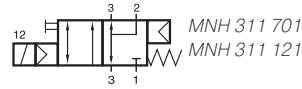
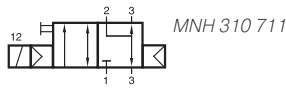
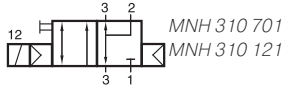
An extremely compact 1/4" valve range with a flow of 1.250 l/min and a 30 mm wide G 3/8" valve range with 2.250 l/min. Available with solenoid, air pilot or manual actuation.

page

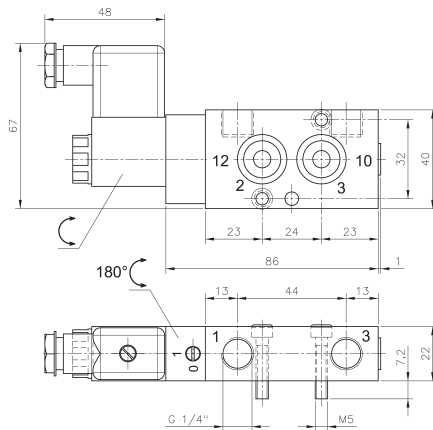
|    |                |  |  |                                    |
|----|----------------|--|--|------------------------------------|
|    | <b>2.8</b>     | <b>Valves for process-industry</b>   |  |                                    |
|    | <b>2.8.1</b>   | <b>Solenoid valves with Namur interface</b>                                    |  |                                    |
|    | <b>2.8.1.1</b> | <b>3/2 way valves</b>  |  |                                    |
| 4  | 2.8.1.1.1      | MNH 310 701/MNH 310 711<br>MNH 311 701/MNOH 310 701<br>MNH 310 121/MNH 311 121 | G 1/4"<br>G 1/4"<br>G 1/2"             |                                    |
| 5  | 2.8.1.1.2      | MNH 310 701 NPT/MNH 311 701 NPT<br>MNH 310 121 NPT/MNH 311 121 NPT             | 1/4" NPT<br>1/2" NPT                   |                                    |
|    | <b>2.8.1.2</b> | <b>5/2 way valves</b>  |  |                                    |
| 6  | 2.8.1.2.1      | MNH 510 701/MNH 510 711/MNH 511 701<br>MNH 510 121/MNH 511 121                 | G 1/4"<br>G 1/2"                       | single solenoid<br>single solenoid |
| 7  | 2.8.1.2.2      | MNH 510 701 NPT/MNH 511 701 NPT<br>MNH 510 121 NPT/MNH 511 121 NPT             | 1/4" NPT<br>1/2" NPT                   | single solenoid<br>single solenoid |
| 8  | 2.8.1.2.3      | MNH 520 701/MNH 520 121<br>MNH 520 701 NPT/ MNH 520 121 NPT                    | G 1/4" - G 1/2"<br>1/4" NPT - 1/2" NPT | double solenoid<br>double solenoid |
|    | <b>2.8.1.3</b> | <b>5/3 way valves</b>  |  |                                    |
| 9  | 2.8.1.3        | MNH 531 701/MNH 531 121/MNH 532 701<br>MNH 531 701 NPT/MNH 531 121 NPT         | G 1/4" - G 1/2"<br>1/4" NPT - 1/2" NPT |                                    |
|    | <b>2.8.2</b>   | <b>Pneumatically actuated valves with Namur interface</b>                      |  |                                    |
|    | <b>2.8.2.1</b> | <b>3/2 way valves</b>  |  |                                    |
| 10 | 2.8.2.1        | PN 310 701/PN 311 701/PN 310 121   | G 1/4" - G 1/2"                        |                                    |
|    | <b>2.8.2.2</b> | <b>5/2 way valves</b>  |  |                                    |
| 11 | 2.8.2.2.       | PN 510 701/PN 511 701/PN 510 121<br>PN 520 701/PN 520 121                      | G 1/4" - G 1/2"<br>G 1/4" - G 1/2"     | single pilot<br>double pilot       |
|    | <b>2.8.2.3</b> | <b>5/3 way valves</b>  |  |                                    |
| 12 | 2.8.2.3        | PN 531 701/PN 531 121  | G 1/4" - G 1/2"                        |                                    |
|    | <b>2.8.3</b>   | <b>Lever actuated valves with Namur interface</b>                              |  |                                    |
| 13 | 2.8.3          | HVN 311 701/HVRN 320 701<br>HVN 511 701/HVRN 520 701                           | G 1/4"<br>G 1/4"                       | 3/2 way<br>5/2 way                 |
|    | <b>2.8.4</b>   | <b>Flow regulators with Namur interface</b>                                    |  |                                    |
| 14 | 2.8.4          | DRN 5 601/DRN 5 611/DRN 3 601/DRN 3 611  |  |                                    |
|    | <b>2.8.5</b>   | <b>3/2-way pilot valves with banjo</b>   |  |                                    |
| 15 | 2.8.5          | MH 311 013/MH 311 017  |  |                                    |
|    | <b>2.8.6</b>   | <b>Accessories for valves with Namur interface</b>                             |  |                                    |
| 16 | 2.8.6          | Mounting Accessories and Spare-part Kits                                       |  |                                    |
|    |                | <b>Coils and Connectors</b>  |  |                                    |
| 17 | 2.9.2          | MA 22/MA 22 L /MA 22 D   |  | Standard coils 22 mm               |
| 18 | 2.9.3          | MA 22 EEx M II T4/MA 30 EEx i.A. IIC T6  |  | Explosion-proof coils              |
| 19 | 2.9.4          | ST 16/ST 22/ST 30  |  | Connectors                         |

The Hafner company policy is one of a continuous improvement process. We therefore reserve the right to amend, enhance and change specifications of the products presented in this document without notice.

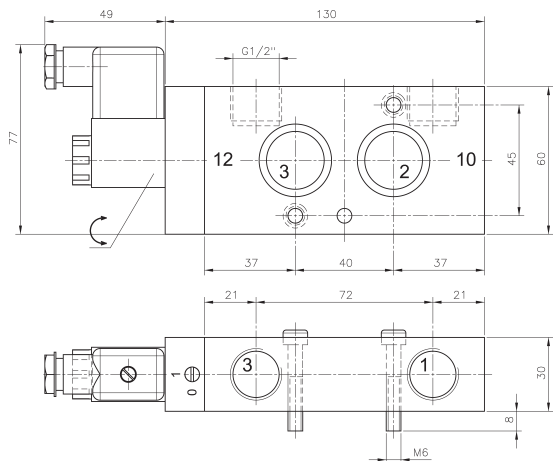
# MNH 310 701/MNH 310 711/MNH 311 701 MNOH 310 701/MNH 310 121/MNH 311 121



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



**MNH 310 711 ports 1 and 3 are swapped!**



**MNH 310 121/MNH 311 121**

3/2-way solenoid valve, normally closed, actuated by permanent signal. Interface according to Namur standard, with exhaust air recirculation („purge“).

Type MNH 3 \_\_\_\_\_ normally closed,  
Type MNOH 310 701 normally open.

MNH 310 701, MNH 310 711, MNH 310 121 and MNOH 310 701 with pneumatic spring return, MNH 311 701, MNH 311 121 with combined spring assuring a fail-safe function in case of cut-off of pressure supply.

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

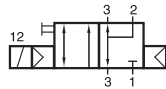
The valves are generally equipped with manual override to turn.

Delivery includes 1 pin, 2 screws, 2 O-rings and 1 connector as shown on the photo.

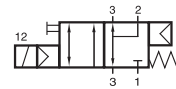
Versions with pure pneumatic spring are available in ATEX-approved EEx-versions EEx M and EEx i.A.. Please refer to page 2.9.3.

| Type         | Function | Port size | Air flow   | Operating press. | Power consumption | Weight  |
|--------------|----------|-----------|------------|------------------|-------------------|---------|
| MNH 310 701  | n.c.     | G 1/4"    | 1250 l/min | 1,5 - 10 bar     | 3 W = / 5 VA ~    | 0,27 kg |
| MNOH 310 701 | n.o.     | G 1/4"    | 1250 l/min | 1,5 - 10 bar     | 3 W = / 5 VA ~    | 0,27 kg |
| MNH 310 711  | n.c.     | G 1/4"    | 1250 l/min | 1,5 - 10 bar     | 3 W = / 5 VA ~    | 0,27 kg |
| MNH 311 701  | n.c.     | G 1/4"    | 1250 l/min | 2,5 - 10 bar     | 3 W = / 5 VA ~    | 0,27 kg |
| MNH 310 121  | n.c.     | G 1/2"    | 3000 l/min | 1 - 10 bar       | 3 W = / 5 VA ~    | 0,72 kg |
| MNH 311 121  | n.c.     | G 1/2"    | 3000 l/min | 2,5 - 10 bar     | 3 W = / 5 VA ~    | 0,72 kg |

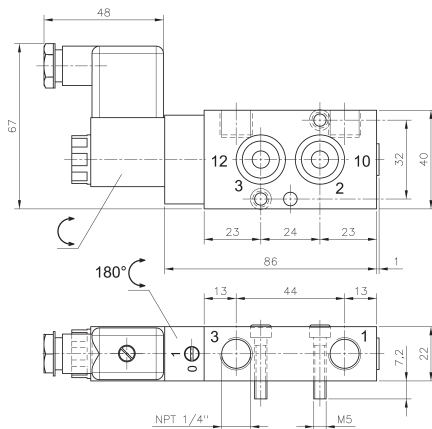
# MNH 310 701 NPT/MNH 311 701 NPT MNH 310 121 NPT/MNH 311 121 NPT



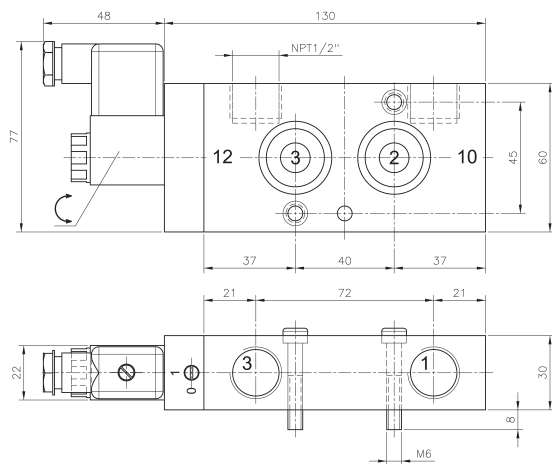
MNH 310 701 NPT  
MNH 310 121 NPT



MNH 311 701 NPT  
MNH 311 121 NPT



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



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



3/2-way solenoid valve, normally closed, actuated by permanent signal. Interface according to Namur standard, with exhaust air recirculation („purge“).

MNH 310 701 NPT and MNH 310 121 NPT with pneumatic spring return, MNH 311 701 NPT and MNH 311 121 NPT with combined spring assuring a fail-safe function in case of cut-off of pressure supply.

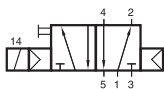
Available with actuators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=,  
24V=, 12V=.

The valves are generally equipped with manual override to turn.

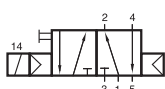
Delivery includes 1 pin, 2 screws, 2 O-rings and 1 connector as shown on the photo.

| Type            | Port size | Air flow   | Operating press. | Power consumption | Weight  |
|-----------------|-----------|------------|------------------|-------------------|---------|
| MNH 310 701 NPT | 1/4" NPT  | 1250 l/min | 1,5 - 10 bar     | 3 W = / 5 VA ~    | 0,27 kg |
| MNH 311 701 NPT | 1/4" NPT  | 1250 l/min | 2,5 - 10 bar     | 3 W = / 5 VA ~    | 0,27 kg |
| MNH 310 121 NPT | 1/2" NPT  | 3000 l/min | 1 - 10 bar       | 3 W = / 5 VA ~    | 0,72 kg |
| MNH 311 121 NPT | 1/2" NPT  | 3000 l/min | 2,5 - 10 bar     | 3 W = / 5 VA ~    | 0,72 kg |

# MNH 510 701/MNH 510 711/MNH 511 701 MNH 510 121/MNH 511 121



MNH 510 701  
MNH 510 121



MNH 510 711



MNH 511 701  
MNH 511 121



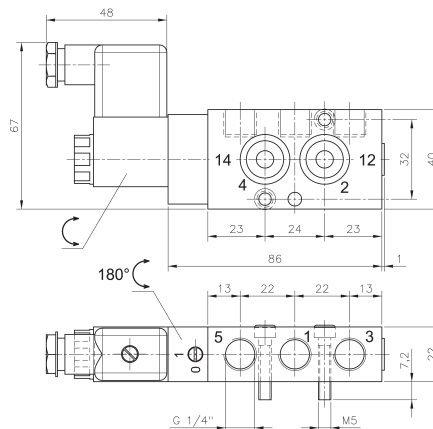
5/2-way solenoid valve, actuated by permanent signal. Interface according to Namur standard.

MNH 510 701, MNH 510 711 and MNH 510 121 with pneumatic spring return, MNH 511 701 and MNH 511 121 with combined spring assuring a fail-safe function in case of cut-off of pressure supply.

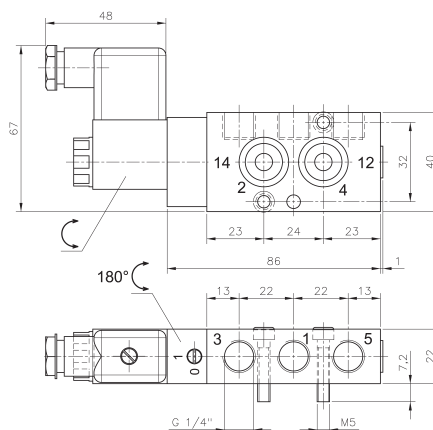
Available with actuators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=,  
24V~, 12V=.

The valves are generally equipped with manual override to turn.

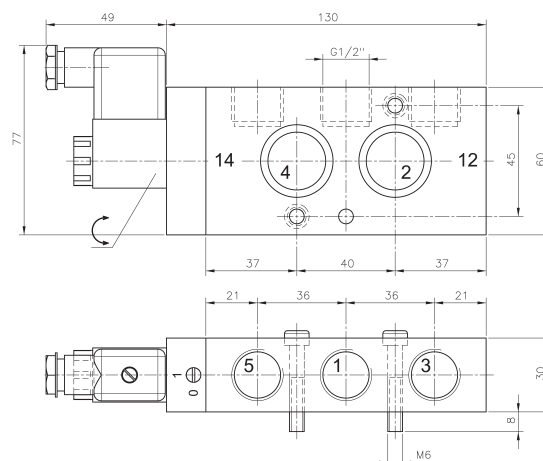
Delivery includes 1 pin, 2 screws, 2 O-rings and 1 connector as shown on the photo.



**MNH 510 701/MNH 511 701**



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

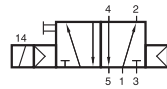


**MNH 510 121/MNH 511 121**

Versions with pure pneumatic spring are available in ATEX-approved EEx-versions EEx M and EEx i.A.. Please refer to page 2.9.3.

| Típuszám    | Castlakozás | Átáramlás  | Üzemi nyomás | Teljesítményigény | Tömeg   |
|-------------|-------------|------------|--------------|-------------------|---------|
| MNH 510 701 | G 1/4"      | 1250 l/min | 1,5 - 10 bar | 3 W = / 5 VA ~    | 0,27 kg |
| MNH 510 711 | G 1/4"      | 1250 l/min | 1,5 - 10 bar | 3 W = / 5 VA ~    | 0,27 kg |
| MNH 511 701 | G 1/4"      | 1250 l/min | 2,5 - 10 bar | 3 W = / 5 VA ~    | 0,27 kg |
| MNH 510 121 | G 1/2"      | 3000 l/min | 1 - 10 bar   | 3 W = / 5 VA ~    | 0,72 kg |
| MNH 511 121 | G 1/2"      | 3000 l/min | 2,5 - 10 bar | 3 W = / 5 VA ~    | 0,72 kg |

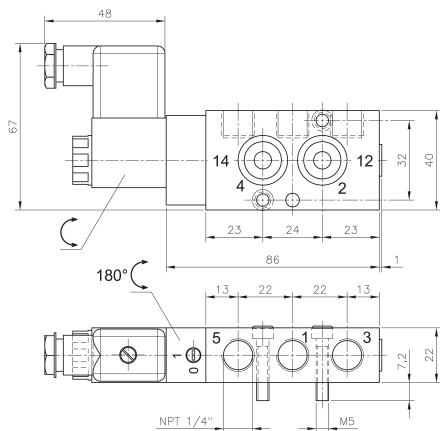
# MNH 510 701 NPT/MNH 511 701 NPT MNH 510 121 NPT/MNH 511 121 NPT



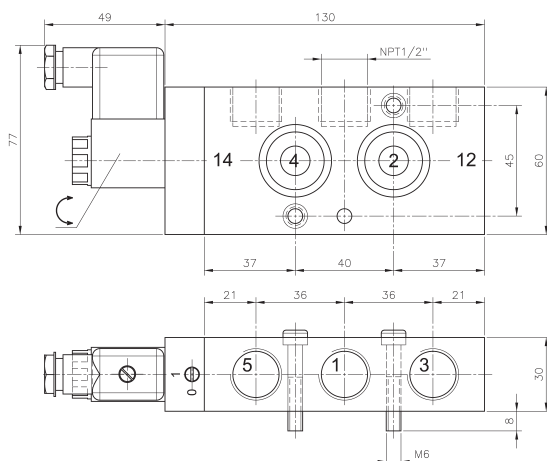
MNH 510 701 NPT  
MNH 510 121 NPT



MNH 511 701 NPT  
MNH 511 121 NPT



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



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



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

MNH 510 701 NPT and MNH 510 121 NPT with pneumatic spring return, MNH 511 701 NPT and MNH 511 121 NPT with combined spring assuring a fail-safe function in case of cut-off of pressure supply.

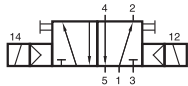
Available with actuators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=, 24V=, 12V=.

The valves are generally equipped with manual override to turn.

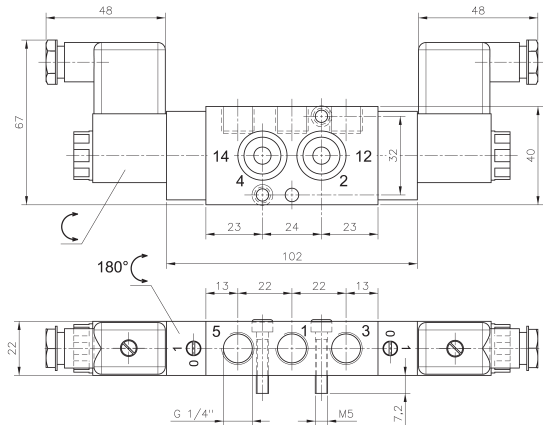
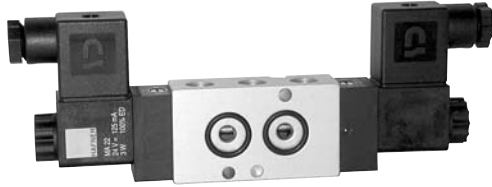
Delivery includes 1 pin, 2 screws, 2 O-rings and 1 connector as shown on the photo.

| Type            | Port size | Air flow   | Operating press. | Power consumption | Weight  |
|-----------------|-----------|------------|------------------|-------------------|---------|
| MNH 510 701 NPT | 1/4" NPT  | 1250 l/min | 1,5 - 10 bar     | 3 W = / 5 VA ~    | 0,27 kg |
| MNH 511 701 NPT | 1/4" NPT  | 1250 l/min | 2,5 - 10 bar     | 3 W = / 5 VA ~    | 0,27 kg |
| MNH 510 121 NPT | 1/2" NPT  | 3000 l/min | 1 - 10 bar       | 3 W = / 5 VA ~    | 0,72 kg |
| MNH 511 121 NPT | 1/2" NPT  | 3000 l/min | 2,5 - 10 bar     | 3 W = / 5 VA ~    | 0,72 kg |

# MNH 520 701 (NPT)/MNH 520 121 (NPT)



MNH 520 701  
MNH 520 701 NPT  
MNH 520 121  
MNH 520 121 NPT



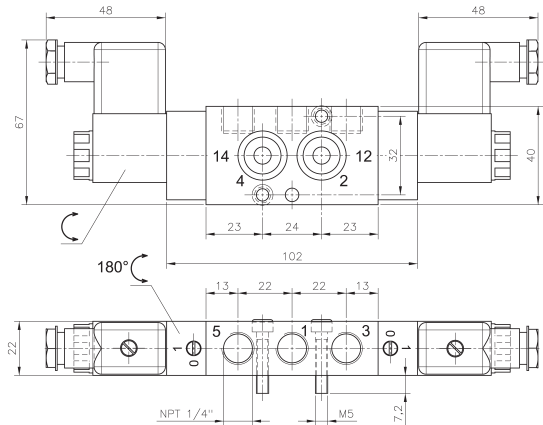
**MNH 520 701**

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.

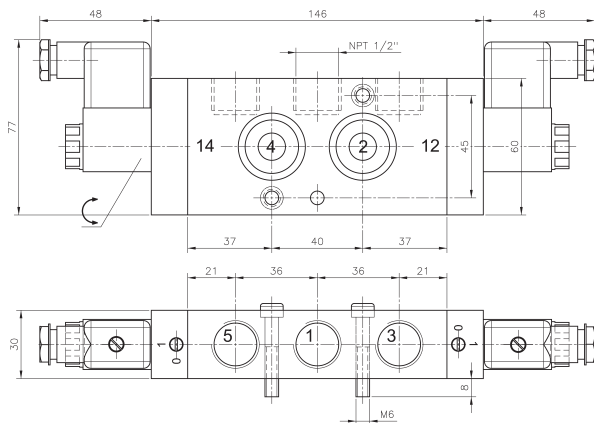
Available with actuators:  
230V/50Hz, 110V/50Hz, 24V/50Hz, 48V=,  
24V~, 12V=.

The valves are generally equipped with manual override to turn.

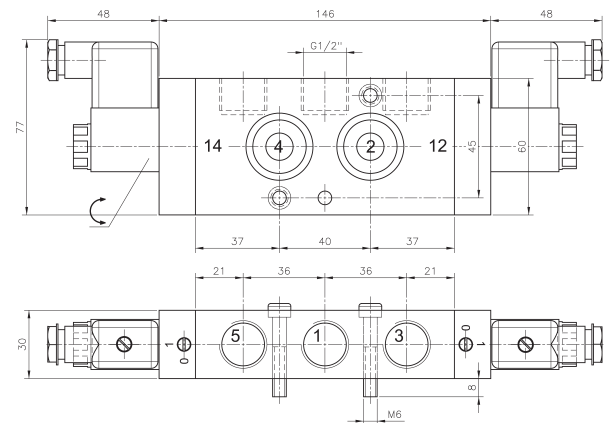
Delivery includes 1 pin, 2 screws, 2 O-rings and 2 connectors as shown on the photo.



**MNH 520 701 NPT**



**MNH 520 121 NPT**



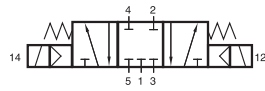
**MNH 520 121**

Also available in ATEX-approved EEx-versions  
EEx M and EEx i.A.. Please refer to page 2.9.3.

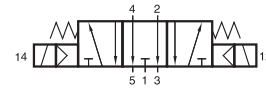
| Type            | Port size | Air flow   | Operating press. | Power consumption | Weight  |
|-----------------|-----------|------------|------------------|-------------------|---------|
| MNH 520 701     | G 1/4"    | 1250 l/min | 1,5 - 10 bar     | 3 W = / 5 VA ~    | 0,37 kg |
| MNH 520 701 NPT | 1/4" NPT  | 1250 l/min | 1,5 - 10 bar     | 3 W = / 5 VA ~    | 0,37 kg |
| MNH 520 121     | G 1/2"    | 3000 l/min | 1 - 10 bar       | 3 W = / 5 VA ~    | 0,89 kg |
| MNH 520 121 NPT | 1/2" NPT  | 3000 l/min | 1 - 10 bar       | 3 W = / 5 VA ~    | 0,89 kg |



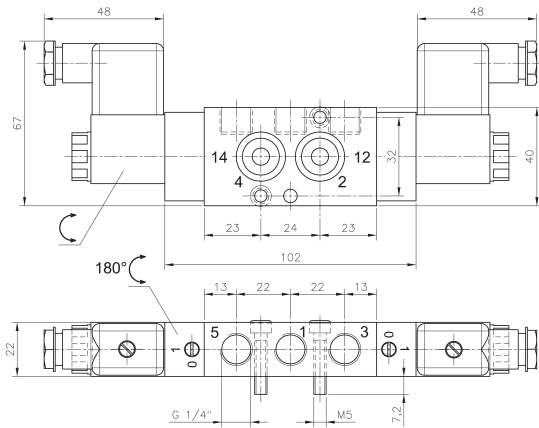
# MNH 531 701 (NPT)/MNH 531 121 (NPT) MNH 532 701



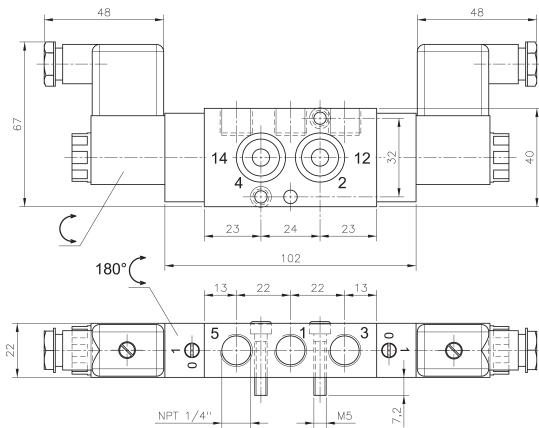
MNH 531 701  
MNH 531 701 NPT  
MNH 531 121  
MNH 531 121 NPT



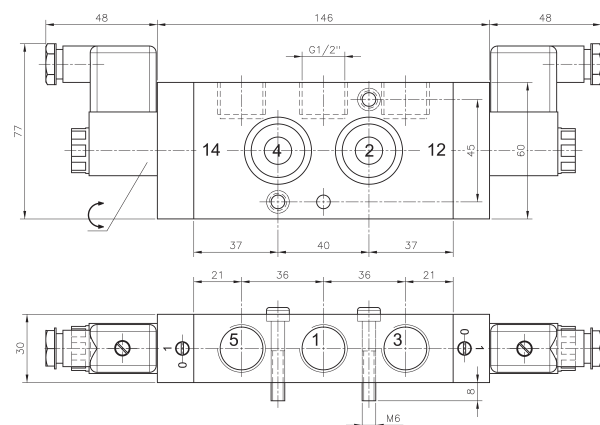
MNH 532 701



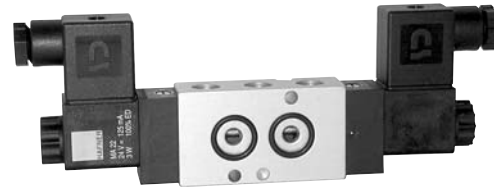
**MNH 531 701/MNH 532 701**



**MNH 531 701 NPT**



**MNH 531 121**



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

Type 531 normally closed  
Type 532 normally exhausted

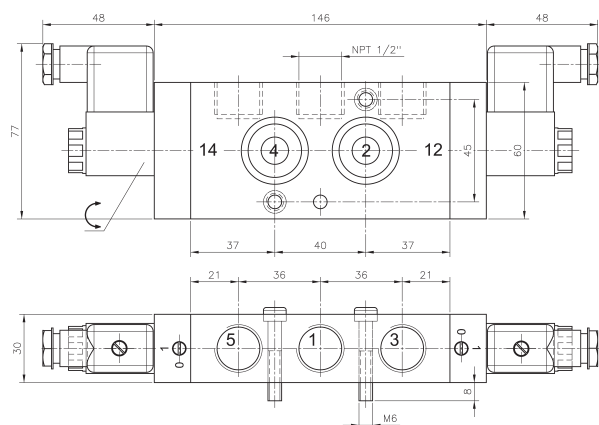
Other 5/3-way versions are available on request.

Available with actuators:  
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 and 2 connectors as shown on the photo.

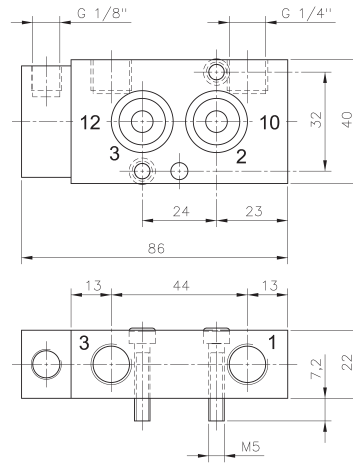
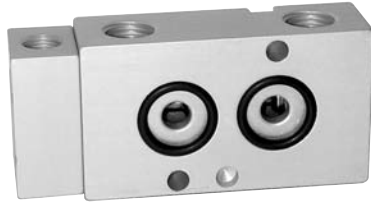
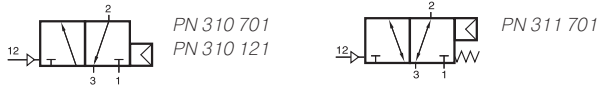
**MNH 531 701 and MNH 531 121 are also available in ATEX-approved EEx-versions EEx M and EEx i.A.. Please refer to page 2.9.3.**



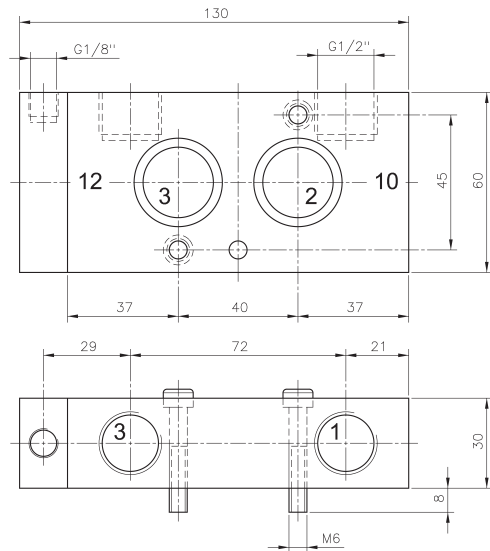
**MNH 531 121 NPT**

| Type            | Port size | Air flow   | Operating press. | Power consumption | Weight  |
|-----------------|-----------|------------|------------------|-------------------|---------|
| MNH 531 701     | G 1/4"    | 1250 l/min | 1,5 - 10 bar     | 3 W = / 5 VA ~    | 0,27 kg |
| MNH 531 701 NPT | 1/4" NPT  | 1250 l/min | 1,5 - 10 bar     | 3 W = / 5 VA ~    | 0,27 kg |
| MNH 532 701     | G 1/4"    | 1250 l/min | 1,5 - 10 bar     | 3 W = / 5 VA ~    | 0,27 kg |
| MNH 531 121     | G 1/2"    | 3000 l/min | 1 - 10 bar       | 3 W = / 5 VA ~    | 0,72 kg |
| MNH 531 121 NPT | 1/2" NPT  | 3000 l/min | 1 - 10 bar       | 3 W = / 5 VA ~    | 0,72 kg |

# PN 310 701/PN 311 701/PN 310 121



**PN 310 701/PN 311 701**



**PN 310 121**

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"

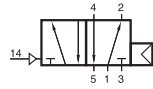
NPT ported valves are available on request.

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

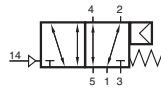
Valves PN 310 701 and PN 310 121 are also available for explosion hazardous environment in ATEX approved EEx-version II2G/D c T6.

| Type       | Port size       | Air flow   | Operating press. | Actuating press. | Weight  |
|------------|-----------------|------------|------------------|------------------|---------|
| PN 310 701 | G 1/4" - G 1/8" | 1250 l/min | 1,5 - 10 bar     | the same         | 0,20 kg |
| PN 311 701 | G 1/4" - G 1/8" | 1250 l/min | 1,5 - 10 bar     | 3 - 10 bar       | 0,20 kg |
| PN 310 121 | G 1/2" - G 1/8" | 3000 l/min | 1 - 10 bar       | the same         | 0,62 kg |

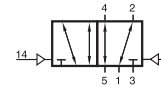
# PN 510 701/PN 511 701/PN 510 121 PN 520 701/PN 520 121



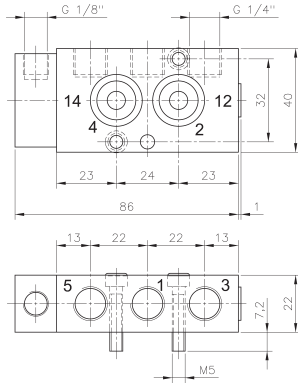
PN 510 701  
PN 510 121



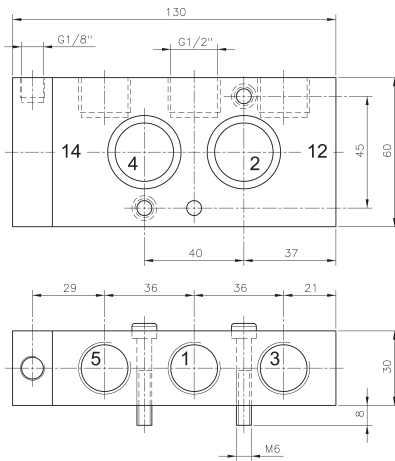
PN 511 701



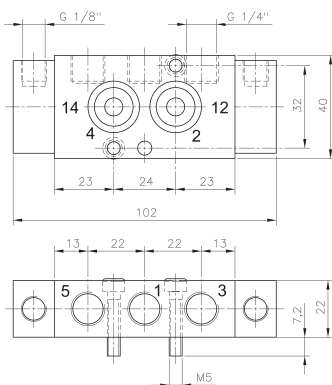
PN 520 701  
PN 520 121



PN 510 701/PN 511 701



PN 510 121



PN 520 701



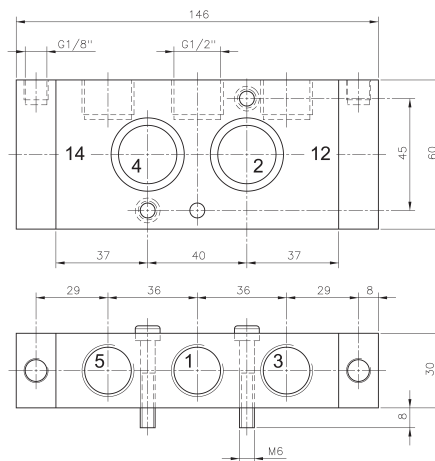
Pneumatically actuated 5/2-way spool valve. Interface according to Namur standard. PN 510 701 and PN 510 121 with pneumatic spring. For valves with pure pneumatic spring operating and actuation pressure should be at the same level. PN 511 701 with combined mechanical and pneumatic spring return.

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"

NPT ported valves are available on request.

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

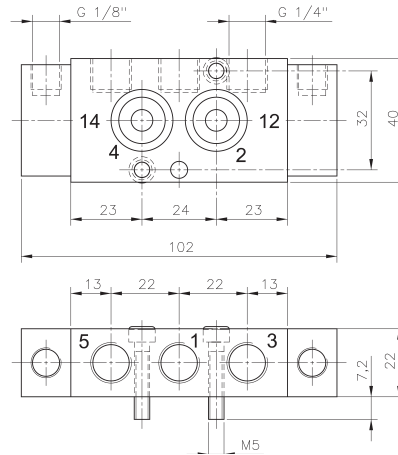
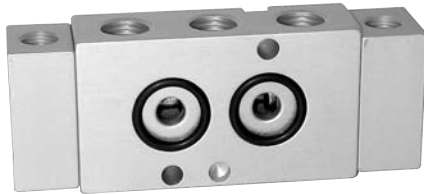
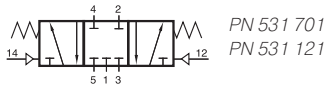


PN 520 121

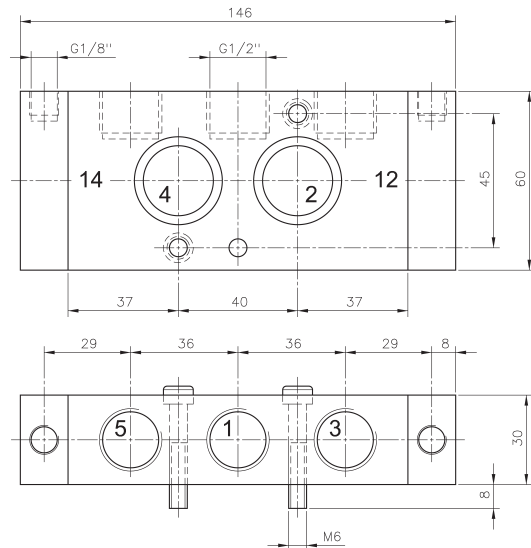
Valves PN 510 701, PN 510 121, PN 520 701 and PN 520 121 are also available for explosion hazardous environment in ATEX approved EEx-version II2G/D c T6.

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



**PN 531 701**



**PN 531 121**

Pneumatically actuated 5/3-way spool valve with spring return to middle position, middle position is 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"

NPT ported valves are available on request.

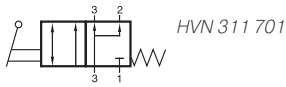
Other 5/3-way versions (middle position exhausted or pressurised) are available on request.

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

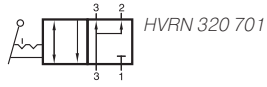
Valves PN 531 701 and PN 531 121 are also available for explosion hazardous environment in ATEX approved EEx-version II2G/D c T6.

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

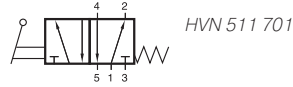
# HVN 311 701/HVRN 320 701 HVN 511 701/HVRN 520 701



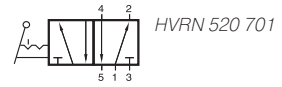
HVN 311 701



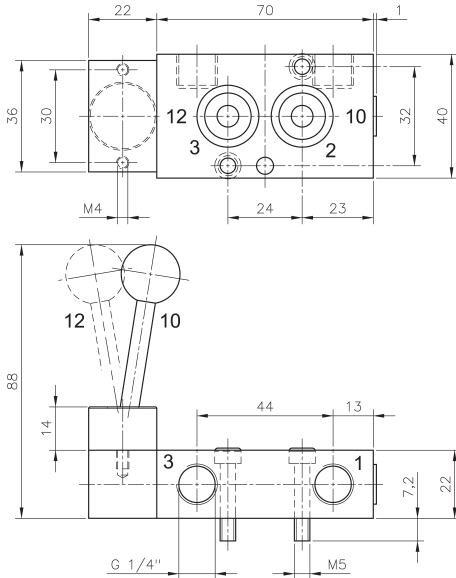
HVRN 320 701



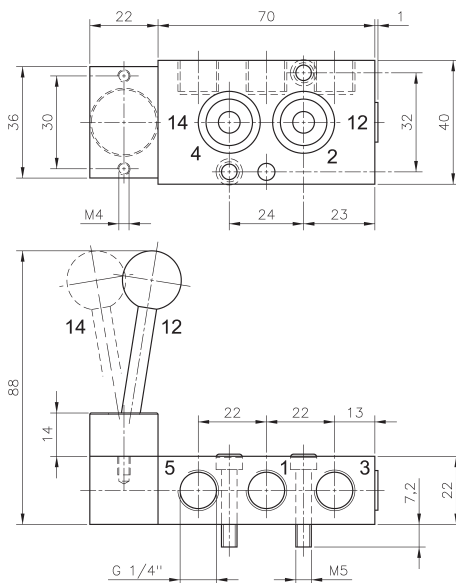
HVN 511 701



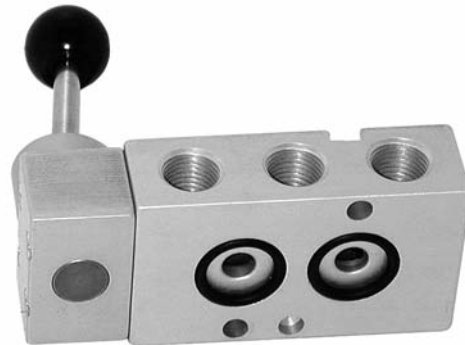
HVRN 520 701



**HVN 311 701/HVRN 320 701**



**HVN 511 701/HVRN 520 701**



Lever actuated G 1/4" spool valves with Namur interface. 4 versions are offered:

- HVN 311 701 3/2-way with spring return, normally closed
- 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 against the valve by using a metal ball.

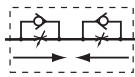
Exhaust can be throttled.

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

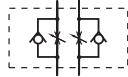
NPT-threaded versions and 5/3-way valves can be made available on request.

| Type         | Function            | Port size | Air flow    | Operating press. | Actuating force | Weight   |
|--------------|---------------------|-----------|-------------|------------------|-----------------|----------|
| HVN 311 701  | 3/2-way spring ret. | G 1/4"    | 1.250 l/min | 1 - 10 bar       | 20 N            | 0,240 kg |
| HVRN 320 701 | 3/2-way indexed     | G 1/4"    | 1.250 l/min | 1 - 10 bar       | 20 N            | 0,240 kg |
| HVN 511 701  | 5/2-way spring ret. | G 1/4"    | 1.250 l/min | 1 - 10 bar       | 20 N            | 0,240 kg |
| HVRN 520 701 | 5/2-way indexed     | G 1/4"    | 1.250 l/min | 1 - 10 bar       | 20 N            | 0,240 kg |

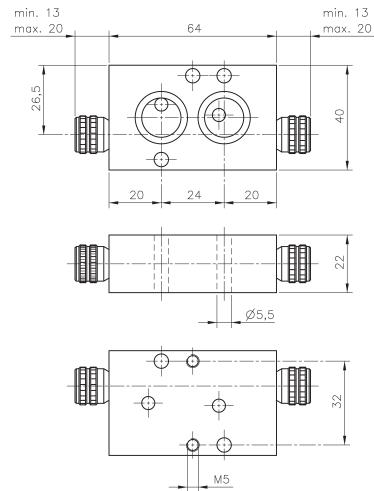
# DRN 3 601/DRN 3 611 DRN 5 601/DRN 5 611



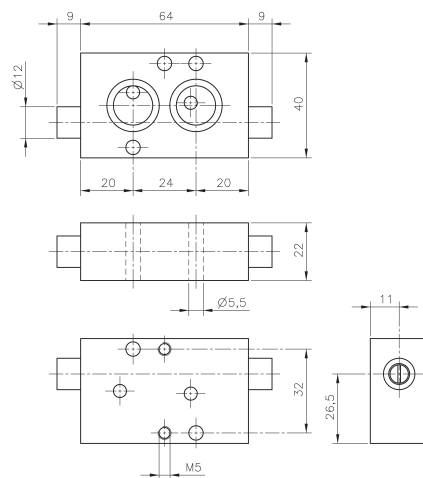
DRN 3 601  
DRN 3 611



DRN 5 601  
DRN 5 611



DRN 3 601



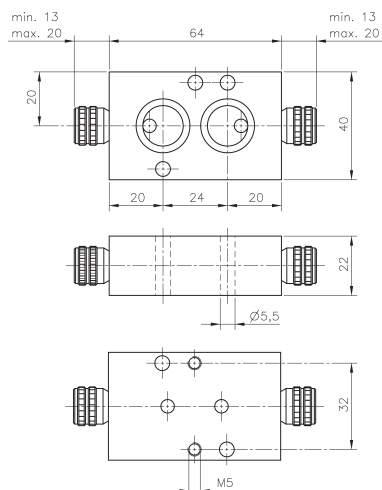
DRN 3 611

Block form flow regulator as intermediate plate, interface according to Namur standard G1/4".

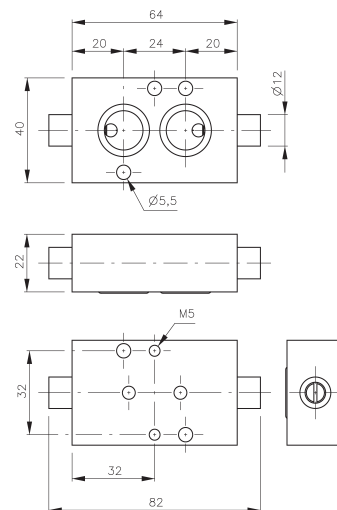
Type DRN 5 601 and DRN 5 611:  
for 5/2 and 5/3 way valves only. To regulate the forward- and backward-stroke of a double acting pneumatic actuator. DRN 5 601 to be operated manually, DRN 5 611 with a screw-driver.

Type DRN 3 601 and DRN 3 611:  
for 3/2-way valves with exhaust air recirculation. To regulate the forward stroke of a single acting pneumatic actuator and to regulate the exhaust air going into the spring return unit. DRN 3 601 to be operated manually, DRN 3 611 with a screw-driver.

Delivery includes 1 pin, 2 screws (45 mm long), 2 O-rings.

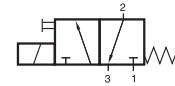


DRN 5 601

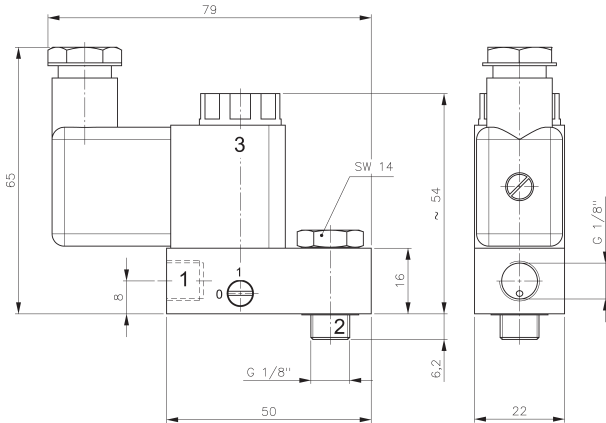


DRN 5 611

| Type      | Function | Port size | Operation    | Max. air flow | Operating pressure | Weight  |
|-----------|----------|-----------|--------------|---------------|--------------------|---------|
| DRN 3 601 | 3 way    | Ø 5 mm    | manually     | 650 l/min     | 0,5 - 10 bar       | 0,18 kg |
| DRN 3 611 | 3 way    | Ø 5 mm    | screw driver | 650 l/min     | 0,5 - 10 bar       | 0,18 kg |
| DRN 5 601 | 5 way    | Ø 5 mm    | manually     | 650 l/min     | 0,5 - 10 bar       | 0,18 kg |
| DRN 5 611 | 5 way    | Ø 5 mm    | screw driver | 650 l/min     | 0,5 - 10 bar       | 0,18 kg |



MH 311 013  
MH 311 017



**MH 311 013**



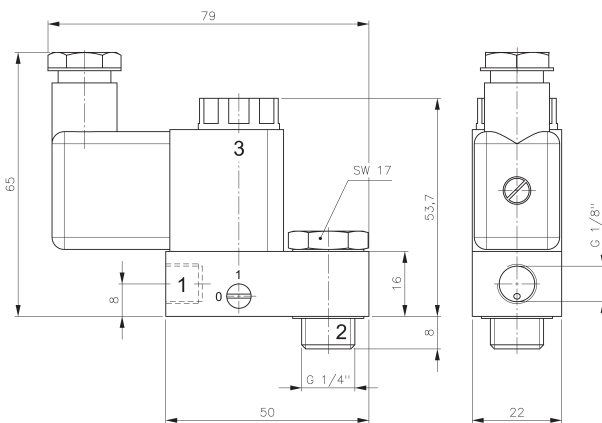
MH 311 013 and MH 311 017 are designed for piloting angle-seat-valves or small spring-return actuators.

Port 1 NPT-threaded are available on request.

Normally open versions are available on request.

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

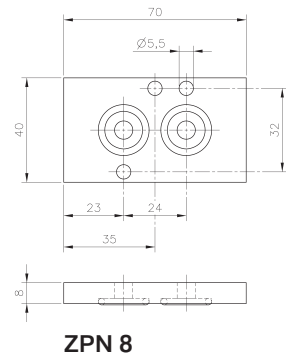
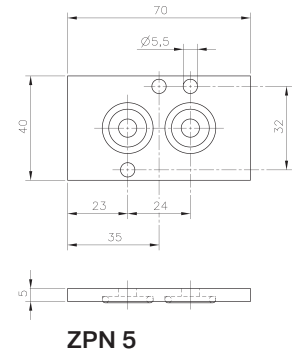
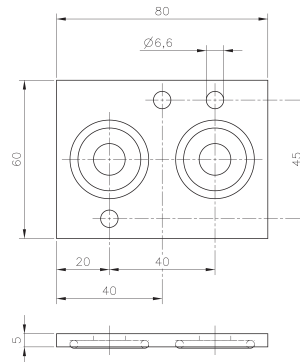
When assembling this valve to spring-return actuators, please take into consideration that there is no air recirculation into the spring chamber (no „purge“).



**MH 311 017**

| Type       | Function | Portsize |        |     | Air flow<br>[l/min] | Operating<br>pressure | Power-<br>consumption | Weight  |
|------------|----------|----------|--------|-----|---------------------|-----------------------|-----------------------|---------|
|            |          | 1        | 2      | 3   |                     |                       |                       |         |
| MH 311 013 | n.c.     | G 1/8"   | G 1/8" | M 5 | 50                  | 0 - 10 bar            | 3 W = / 5 VA ~        | 0,14 kg |
| MH 311 017 | n.c.     | G 1/8"   | G 1/4" | M 5 | 50                  | 0 - 10 bar            | 3 W = / 5 VA ~        | 0,16 kg |

# Mounting Accessories and Spare-part Kits

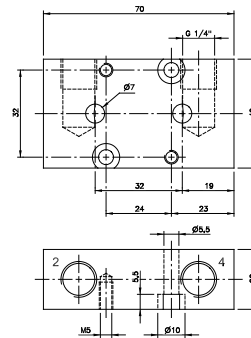


Mounting accessories to combine several Namur products when assembling them to an actuator. Also for replacement use, when screws, pins or seals are worn-out or have been lost.

O-ring seals are made from NBR 70° shore, fasteners such as screws and pins are made from stainless steel (A2) only.

**FPNW 22-1/4:**

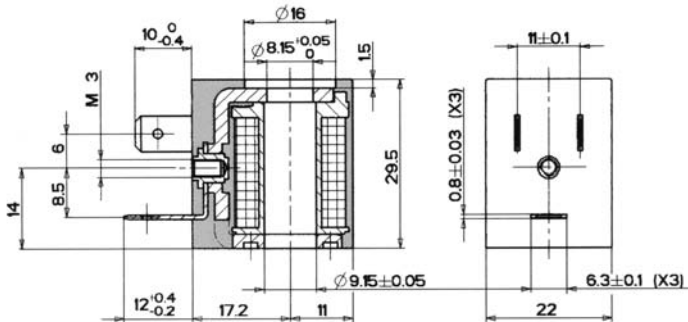
Plate to convert a 5-way Namur-valve into an inline valve. The Namur ports 2 and 4 are transferred into the plate and offer G1/4" BSP thread. Mounting plate can be assembled independently and the valve is attached later-on. The plate is useful for cylinder-valve-combinations, especially in the process industry e.g. for knife-gate-valves.



**FPNW 22-1/4**

| Type        | use and content  |
|-------------|--|
| ZPN 5       | Intermediate plate, made from anodised aluminium 5 mm thick to be used in case a 30 mm wide coil is to be assembled to a 22 mm wide G1/4" Namur-valve, e.g. Eex i.A..                |
| ZPN 6-5     | Intermediate plate, made from anodised aluminium 5 mm thick to be used in case a 36 mm wide coil is to be assembled to a 30 mm wide G1/2" Namur-valve, e.g. CSA / FM approved coils. |
| ZPN 8       | Intermediate plate, made from anodised aluminium 8 mm thick to be used in case a 36 mm wide coil is to be assembled to a 22 mm wide G1/4" Namur-valve, e.g. CSA / FM approved coils. |
| FPNW 22-1/4 | Plate to convert a 5-way Namur-valve into an inline valve.   |
| ETN 1       | Accessories for fitting 22 mm wide G1/4" Namurvalves to actuators, consists of: 10 screws DIN 912 M5 x 25 , 5 Pins DIN 913, M 5 x 10 and 10 O-rings 15 x 2,5.                        |
| ETN 2       | Accessories for fitting 30 mm wide G1/2" Namurvalves to actuators, consists of: 10 screws DIN 912 M6 x 35, 5 Pins DIN 913, M6 x 10 and 10 O-rings 24 x 3.                            |
| ETNS 1      | 10 screws DIN 912 M5 x 25 for fitting a regular 22 mm G1/4" Namurvalves to an actuator   |
| ETNS 2      | 10 screws DIN 912 M5 x 30 for fitting a 30 mm G1/4" Namurvalve to an actuator  |
| ETNS 3      | 10 screws DIN 912 M5 x 50 for fitting a 22 mm G1/4" Namurvalve and a DRN to an actuator  |
| ETNS 4      | 10 screws DIN 912 M5 x 60 for fitting a 30 mm G1/4" Namurvalves and a DRN to an actuator   |
| ETNS 5      | 10 screws DIN 912 M6 x 35 for fitting a 30 mm G1/2" Namurvalve to an actuator  |

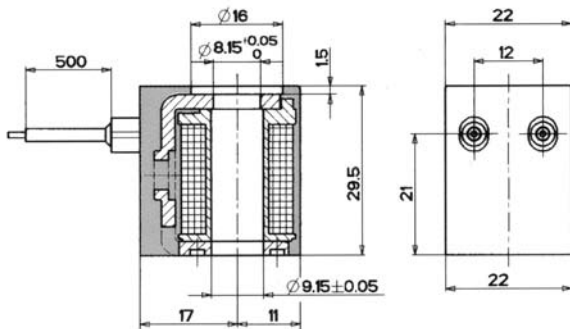




MA 22/MA 22 D



22 mm wide coils for solenoid valves.



MA 22 L

### MA 22

Housing: heat resistant bobbin moulded with 30% glass filled thermoplastic polyester material. Interface industry-form B, connectors are displayed on page 2.9.4. Equipped with appropriate connector coil offers IP 65.

### MA 22 L

Housing: heat resistant bobbin moulded with 30% glass filled thermoplastic polyester material. Flying leads version has a standard cable length of 500 mm, others are available on request. The coils are not grounded, please take national safety regulations into consideration!

### MA 22 D

Housing: Epoxy-material for applications in very wet environment. Interface with industryform, connectors are displayed on page 2.9.4. Equipped with appropriate connector coil offers IP 65. Systems for IP 67 on request.

| Type           | Voltage | Ampere | Power cons. | Connection                       | Available  |
|----------------|---------|--------|-------------|----------------------------------|------------|
| MA 22 12 DC    | 12 V=   | 250 mA | 3 W         | Industryform Type B (DIN 436 50) | from stock |
| MA 22 24DC     | 24 V=   | 125 mA | 3 W         | Industryform Type B (DIN 436 50) | from stock |
| MA 22 L 24DC   | 24 V=   | 125 mA | 3 W         | Flying leads                     | from stock |
| MA 22 48DC     | 48 V=   | 62 mA  | 3 W         | Industryform Type B (DIN 436 50) | from stock |
| MA 22 24AC     | 24 V~   | 200 mA | 5 VA        | Industryform Type B (DIN 436 50) | from stock |
| MA 22 110AC    | 110 V~  | 45 mA  | 5 VA        | Industryform Type B (DIN 436 50) | from stock |
| MA 22 L5 110AC | 110 V~  | 45 mA  | 5 VA        | Flying leads                     | on request |
| MA 22 230AC    | 230 V~  | 22 mA  | 5 VA        | Industryform Type B (DIN 436 50) | from stock |
| MA 22 L5 230AC | 230 V~  | 22 mA  | 5 VA        | Flying leads                     | on request |
| MA 22 D 24DC   | 24 V=   | 125 mA | 3 W         | Industryform Type B (DIN 436 50) | from stock |
| MA 22 D 230AC  | 230 V~  | 22 mA  | 5 VA        | Industryform Type B (DIN 436 50) | from stock |

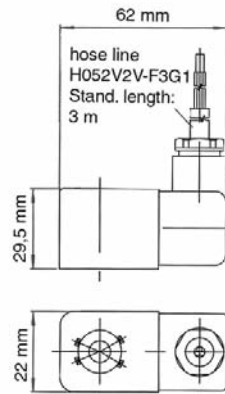
# MA 22 EEx M II T4/MA 30 EEx i.A. IIC T6



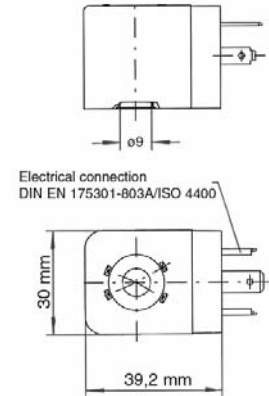
Atex approved solenoid valves for explosion-hazardous environment zone 1, product category 2G, ambient temperature: -10° ... + 50° C. Products for dusty environment zone 21, category 2D or zone 2, category 3D are available on request.

Standard cable length for MA 22 EEx M II T4:  
3 m, others on request.

Electrical connection for MA 30 EEx i.A. IIC T6:  
DIN EN 175301-803-A / ISO4400, certified connector offered on page 2.9.4.



MA 22 EEx M II T4



MA 30 EEx i.A. IIC T6

**Please notice: Maximum operating pressure for valves equipped with EEx i.A. solenoid is 8 bar!**

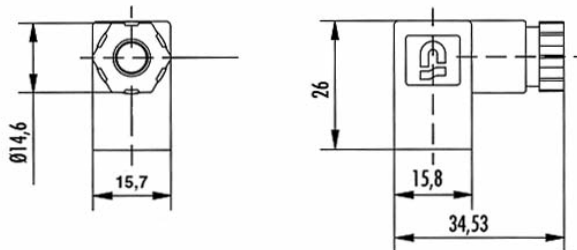
Admissible peak value of barrier: 28 VDC, 115 mA, 1,6 Watt.

Delivery includes valve with appropriately assembled operator system, coil, manual and declaration of conformity (066/04).

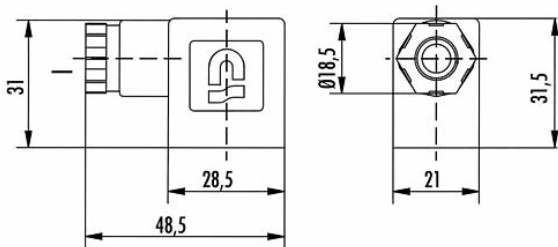
The following valves are available as systems for explosion-hazardous environment:

| Types  | page       |
|--|------------|
| MH 311 012 MH 311 015  | 2.5.1.1.1  |
| MH 312 MH 315  | 2.5.1.2.2  |
| MH 310 501 MOH 310 501 MH 310 701 MOH 310 701 MH 310 801 MOH 310 801 | 2.5.1.1.5  |
| MH 310 101 MOH 310 101 MH 310 121 MOH 310 121                        | 2.5.1.1.6  |
| MH 320 501 MH 320 701 MH 320 801                                     | 2.5.1.1.8  |
| MH 320 101 MH 320 121  | 2.5.1.1.9  |
| MH 510 501 MH 510 701 MH 510 801                                     | 2.5.2.1.4  |
| MH 510 101 MH 510 121  | 2.5.2.1.5  |
| MH 520 501 MH 520 701 MH 520 801                                     | 2.5.2.1.10 |
| MH 520 101 MH 520 121  | 2.5.2.1.11 |
| MH 53_501 MH 53_701 MH 53_801  | 2.5.3.1.3  |
| MH 53_101 MH 53_121  | 2.5.3.1.4  |
| MNH 310 701 MNH 310 711 MNH 310 121                                  | 2.8.1.1.1  |
| MNH 510 701 MNH 510 711 MNH 510 121                                  | 2.8.1.2.1  |
| MNH 520 701 MNH 520 121  | 2.8.1.2.3  |
| MNH 531 701 MNH 531 121  | 2.8.1.3    |

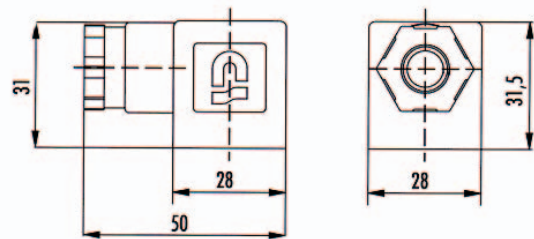
| Type                       | Operating press. | Power consumption    | Temp. class | ignition prot.   |
|----------------------------|------------------|----------------------|-------------|------------------|
| MA 22 EEx M II T4 24=      | max. 10 bar      | 5,0 Watt             | T 4         | encapsulation    |
| MA 22 EEx M II T4 110~     | max. 10 bar      | 4,5 VA               | T 4         | encapsulation    |
| MA 22 EEx M II T4 230~     | max. 10 bar      | 5,1 VA               | T 4         | encapsulation    |
| MA 30 EEx i.A. II C T6 24= | max. 8 bar       | max. 115 mA/1,6 Watt | T 6         | intrinsic safety |



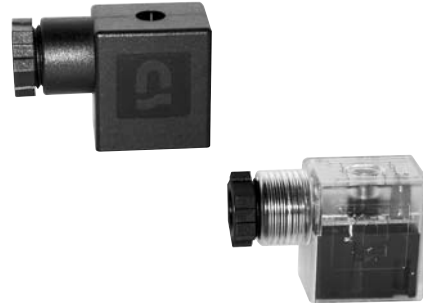
ST 16



ST 22



ST 30



Connectors as accessories for Hafner valves.

Using the enclosed flat seal, fastening screws and nuts the system reaches protection class IP 65 in accordance to IEC 60 529.

Other connectors are available on request.

Delivery includes connector, flat NBR gasket and fixing screw (zinc-plated steel).

ST 30 ATEX is an ATEX-approved connector especially designed for the use in combination with the EEx i.A. coils displayed on page 2.9.3.

| Type         | Form              | LED | VAR | Operat. voltage | Max. current | cable diamter |
|--------------|-------------------|-----|-----|-----------------|--------------|---------------|
| ST 16        | C, pin-dist. 8 mm | no  | no  | 0 - 250 V       | 6 A          | 5 - 6,5 mm    |
| ST 162 V 24  | C, pin-dist. 8 mm | red | yes | 24 V +/- 10 %   | 6 A          | 5 - 6,5 mm    |
| ST 162 V 230 | C, pin-dist. 8 mm | red | yes | 230 V +/- 10 %  | 6 A          | 5 - 6,5 mm    |
| ST 22        | B, industrial     | no  | no  | 0 - 250 V       | 10 A         | 6 - 8 mm      |
| ST 222 V 24  | B, industrial     | red | yes | 24 V +/- 10 %   | 10 A         | 6 - 8 mm      |
| ST 222 V 230 | B, industrial     | red | yes | 230 V +/- 10 %  | 10 A         | 6 - 8 mm      |
| ST 30 ATEX   | A, ISO 4400       | no  | no  | 24 V +/- 10 %   | 10 A         | 6 - 8 mm      |

Hafner-Pneumatik Krämer KG  
Stammheimer Straße 10

D-70806 Kornwestheim

Phone +49 - 71 54 - 82 72 60  
Fax +49 - 71 54 - 82 72 68

[info@hafner-pneumatik.de](mailto:info@hafner-pneumatik.de)  
[www.hafner-pneumatik.de](http://www.hafner-pneumatik.de)

Hafner Pneumatika Kft.  
Püski út 3.

H-9228 Halászi

Phone +36 - 96 - 57 30 12  
Fax +36 - 96 - 21 06 15

[ertekesites@hafner-pneumatika.com](mailto:ertekesites@hafner-pneumatika.com)  
[www.hafner-pneumatika.com](http://www.hafner-pneumatika.com)