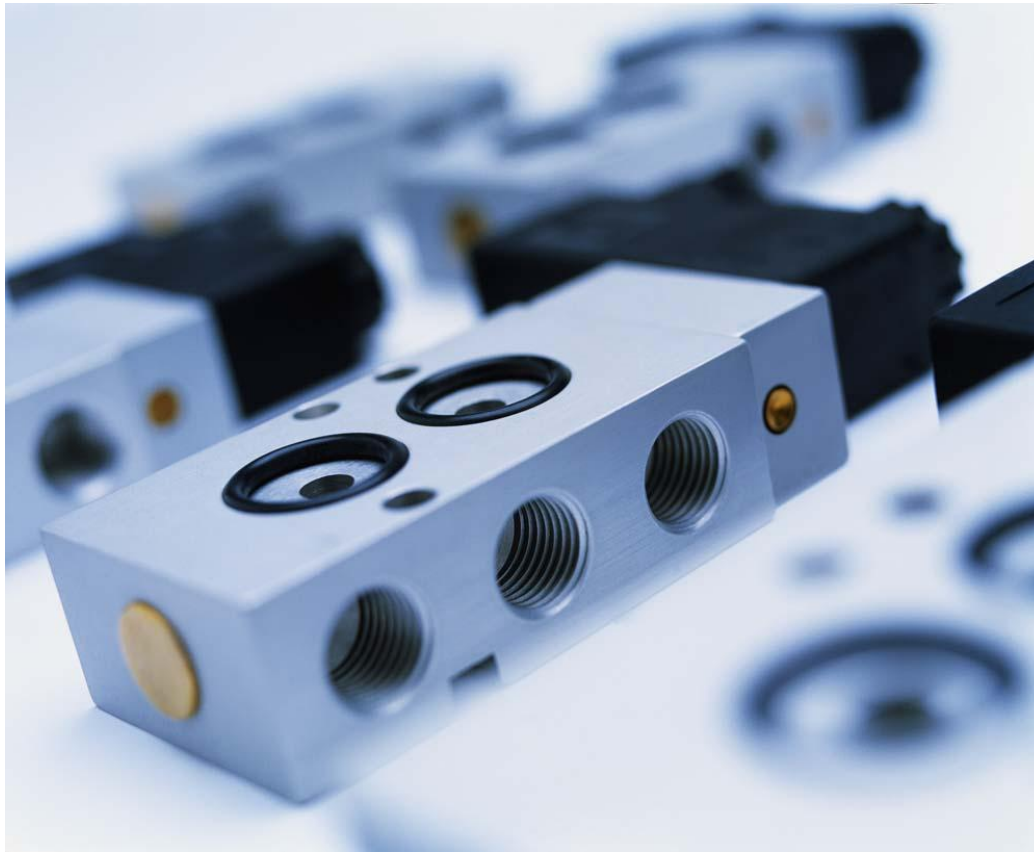


TORK valves with Namur interface



With the standard MNH 310 701 and MNH 510 701 Hafner offers really competitive products. But the Namur-range includes a lot more:

- Competitive Advantage of **coil-protection** against moisture
- **G 1/4"** and **G 1/2"** standard
- Air- or combined **spring return**
- Different **port-schemes**
- Valves with **BSP** and **NPT** threaded ports
- Different **manual overrides**
- Vast range of **accessories**
- ATEX-approved **EEx-products**
- Maximized **flow** (series 801)
- Different **materials** in use e.g. brass-free-products
- Non standard item, products designed on customer's requests

Besides maximum flow of 1.250 l/min in a compact design there are 11 more competitive advantages of the TORK Namur valves series 701.

Nut with sealing effect to keep moisture away

O-ring-seal between coil and valve-head to keep moisture out.

Fixing screws and accessories in stainless steel

End-cap made from brass (stainless steel on request)

Patented sealing system with the „swimming O-ring“

Body material: Anodised aluminium

Fibre-enforced PA-head, aluminium-version on request

Manual override to turn in brass, version to push in brass or in stainless steel available on request (only in combination with alu-head)

Operator made from brass and steel, full stainless steel version on request.

Spool in stainless steel, other inner-parts made from brass, NBR, POM, brass-free version on request

Fully encapsulated thermoplastic coil, 360° rotation.
Standard power consumption 3 Watt, 5 VA, 6 voltages.
Solenoid system with 2 Watt (only 24DC) on request.
Thermoset resin coils and EEx-solenoid systems class m and ia available on request.



TORK uses a special coil with covered yoke and additional seals between the coil and valve. Besides IP65 we are also offering IP67.

The yoke of the MA 22 standard coil is completely covered in Polyamide. This prevents the yoke from rusting and as a result not to burn out.



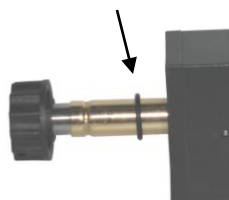
Protected yoke of Hafner's MA 22-coils



Open yoke at coils of competitors

Additionally an O-Ring between the operator tube and the coil protects the electrical part from moisture.

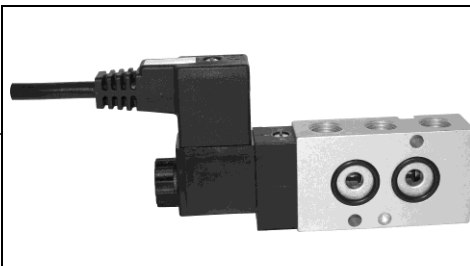
Seal at PA-head



Seal at Aluminum-head



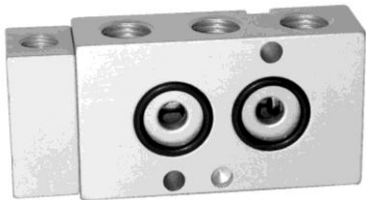
Using our Epoxy-coil, the special connector (with moulded cable) and a second O-ring, the system reaches protection class IP67 in accordance to IEC 60 529.



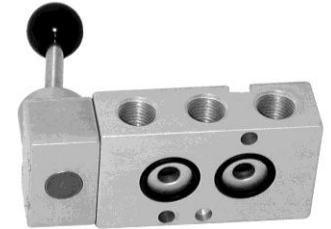
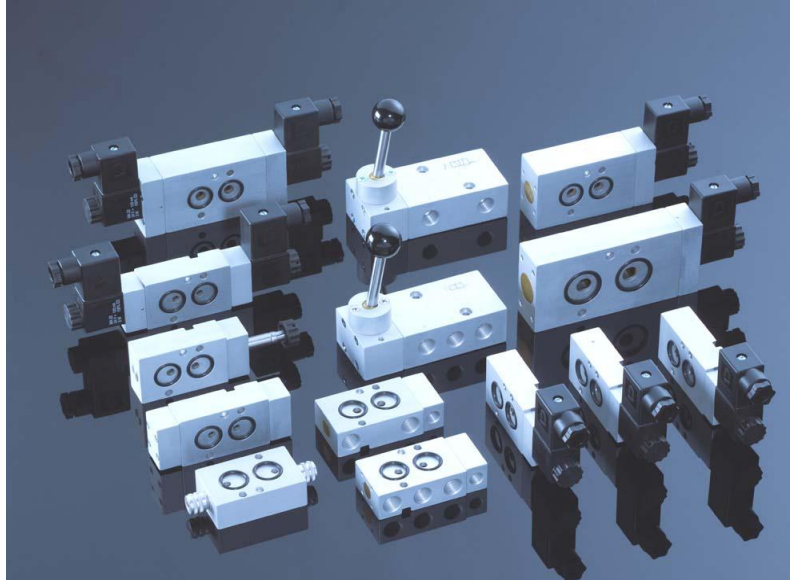
TORK offers a wider range of valves with Namur interface than most of our competitors.



Solenoid actuated 3/2, 5/2 and 5/3-way valves



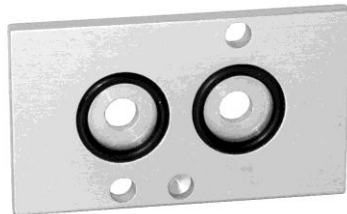
Pneumatically actuated 3/2, 5/2 and 5/3-way valves



Lever actuated 3/2 and 5/2-way valves



Conversion plate



Intermediate plates

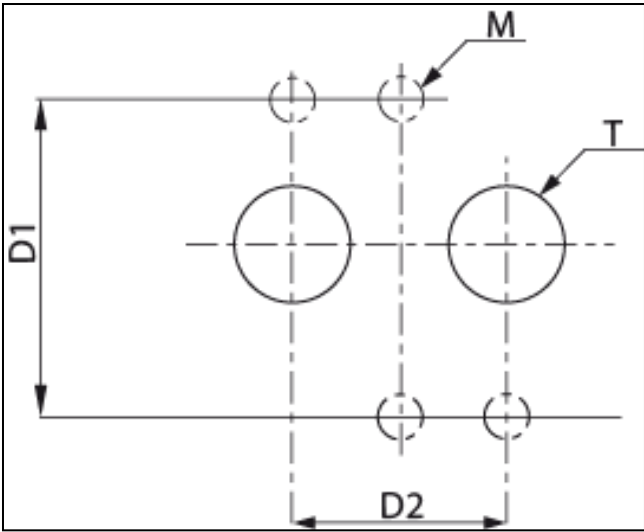
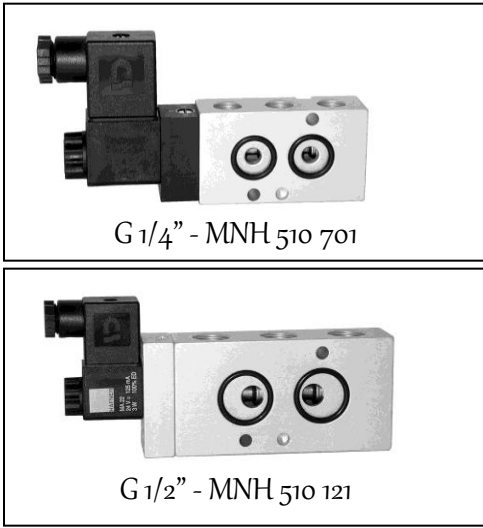


Block form flow regulators



The G 1/4“ standard as well as the G 1/2“ standard are part of our range.

Namur standard: Drawing of the actuator flange



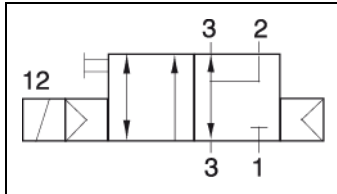
Notice: Difference between 1/4" – 1/8" and 1/2 " – 3/8 " is the air flow as well as the drilling depth of the fixing screws in the actuator. Therefore the valves to be used are the same, for G 1/8" and **G 1/4"** respectively G 3/8" and **G 1/2"**.

T	D1 (mm)	D2 (mm)	M (mm)
1/4 " (1/8")	32	24	M5
1/2 " (3/8")	45	40	M6

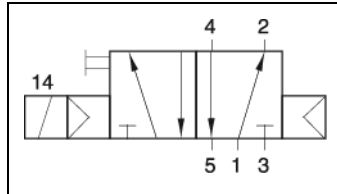


Single solenoid and single pilot valves are available with air spring or combined (air and mechanical spring) return.

Valves with air spring return

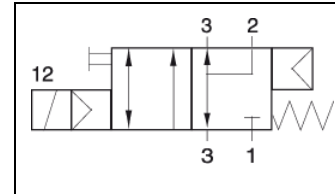


MNH 310 701

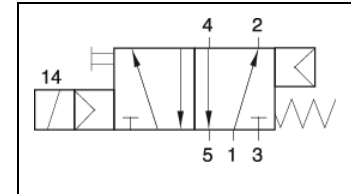


MNH 510 701

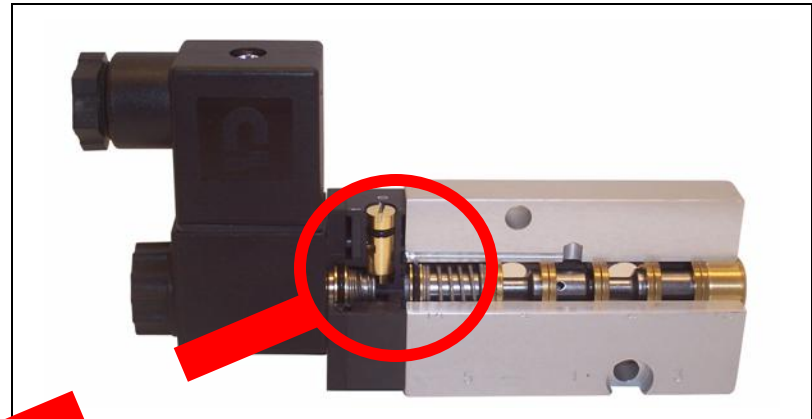
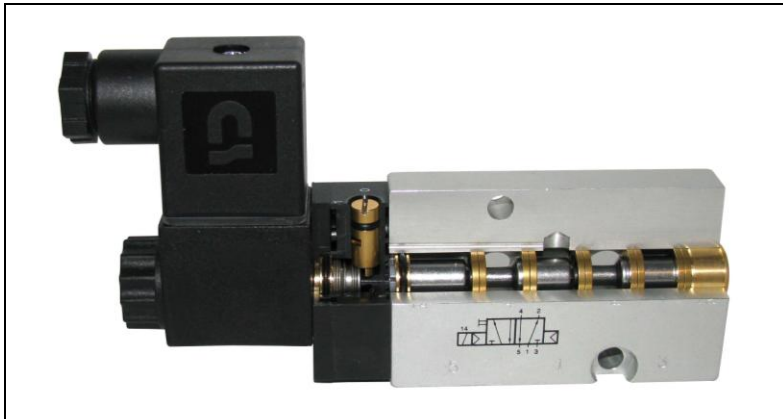
Valves with combined spring return



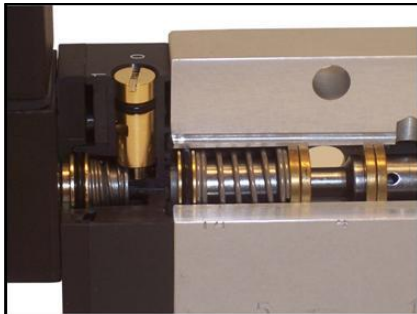
MNH 311 701



MNH 511 701



Combined spring assures a **fail-safe function** in case of loss of air pressure. Also available in the G 1/2" standard.

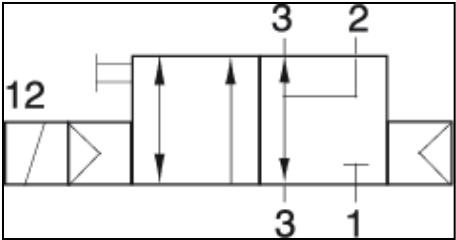


For single solenoid valves we offer two different port-schemes. Use depends on actuator interface.

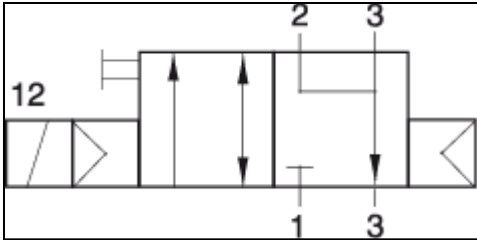
2 port-schemes for G 1/4" products

standard port-scheme

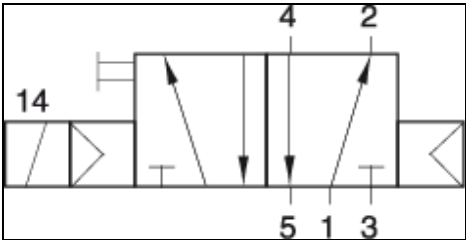
alternative port-scheme



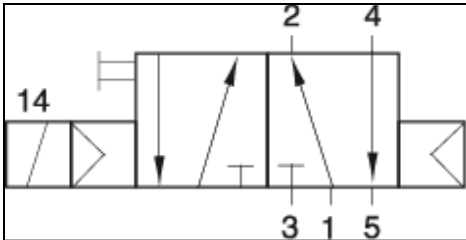
MNH 310 701



MNH 310 711

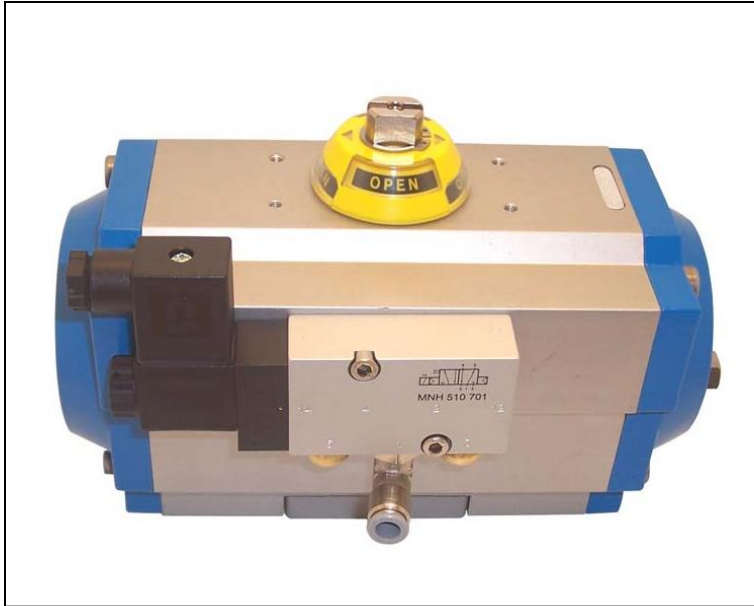


MNH 510 701

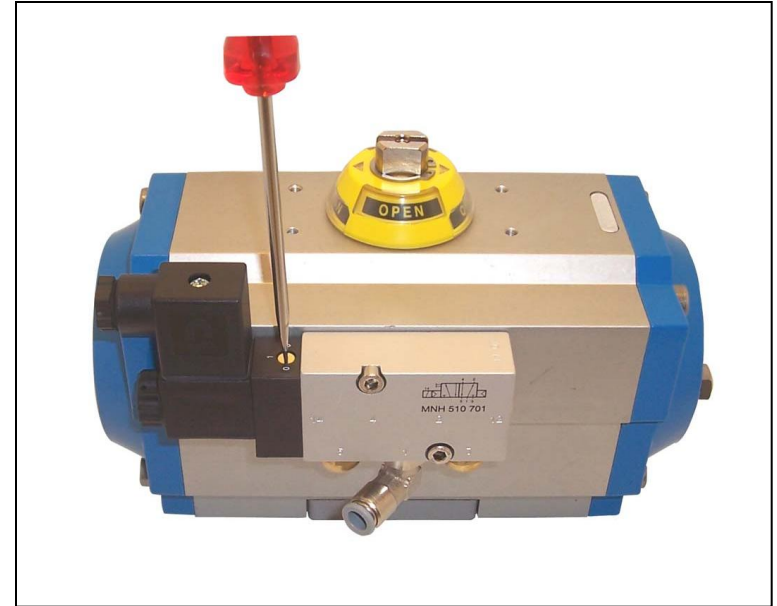


MNH 510 711

The head (pilot part) of our Namur solenoid valves can be turned by 180° to ensure an high level of accessibility to the manual override.



Standard MNH 510 701 mounted on a double acting actuator.
The override is on the same side as the fittings.



MNH 510 701 H180 mounted on a double acting actuator. The pilot part is turned by 180°. The override is on the other side from the fittings.

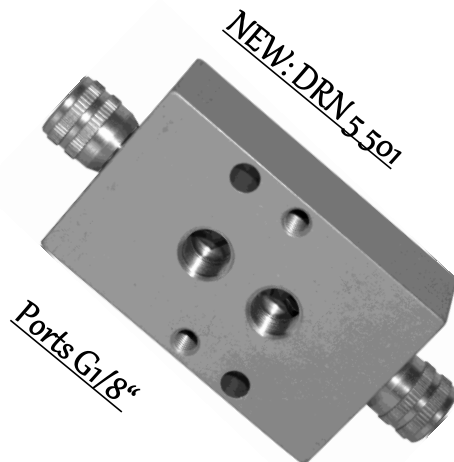
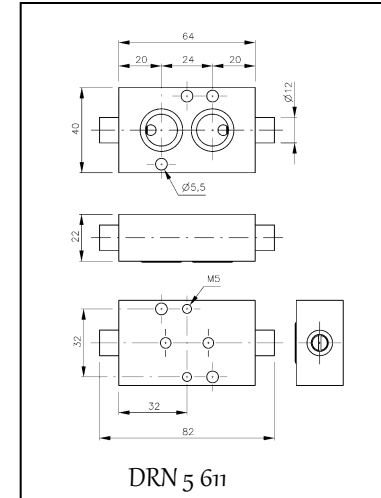
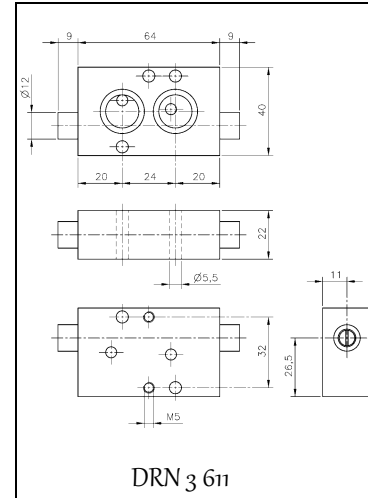
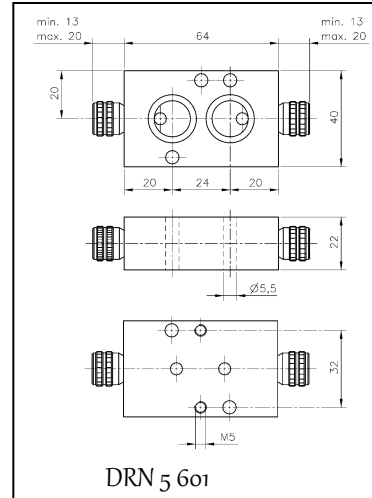
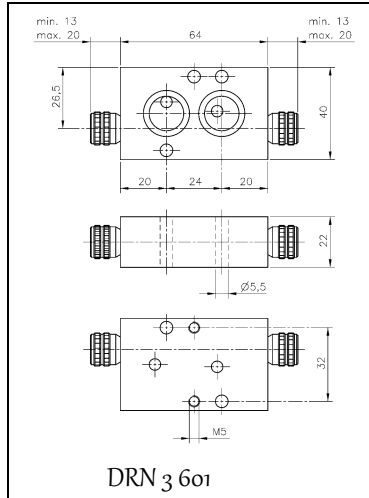
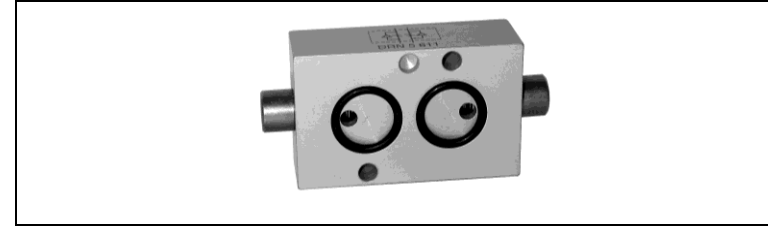
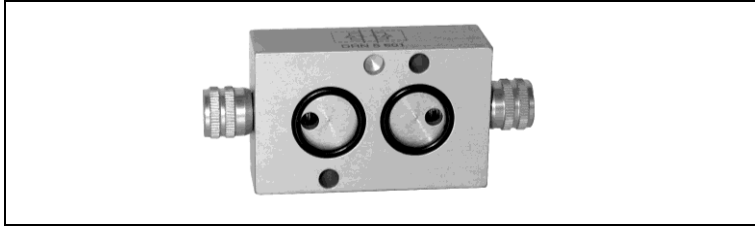
Advantage: Better accessibility

Available Overrides

Standard override **MNH**: manual, turn to operate

Alternative override **MND**: manual, momentary, push to operate

The block form flow regulators are offering a very precise regulation.

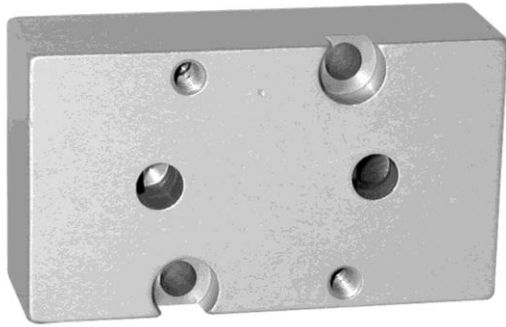


- Regulation for **5-way** and **3-way** valves.
- Two **kinds of manipulation**, manual or with a screw-driver
- **Very precise regulation**.
- Only possibility to regulate the **forward-** and **backward-** stroke of a **spring-return actuator**, that is controlled by a 3-way valve **separately** and **precisely**.
- Interface according to Namur standard **G 1/4"**.

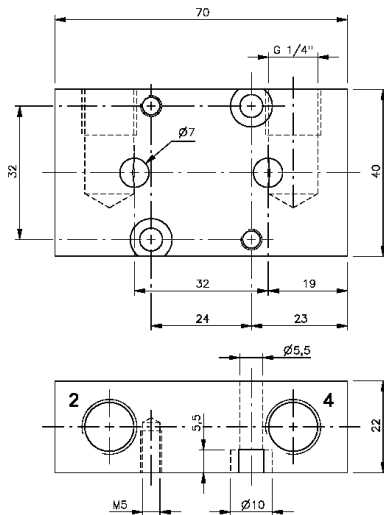
Various intermediate plates enlarge our Namur-range.

Type ZPN 5	Type ZPN 8	Type ZPN 6-5	Type ZPN 6-10
Intermediate plate to be used in case a 30 mm wide coil (e.g. EEx i.a.) is to be assembled to a 22 mm wide G 1/4" Namur-valve.	Intermediate plate to be used in case a 36 mm wide coil is to be assembled to a 22 mm wide G 1/4" Namur-valve.	Intermediate plate to be used in case a 36 mm wide coil is to be assembled to a 30 mm wide G 1/2" Namur-valve.	Adapter plate to be used in case a G 1/4" Namur valve is to be assembled to a G 1/2" actuator flange.

The conversion plate - a product that enables knife-gate users to install Namur-valves



FPNW 22-1/4



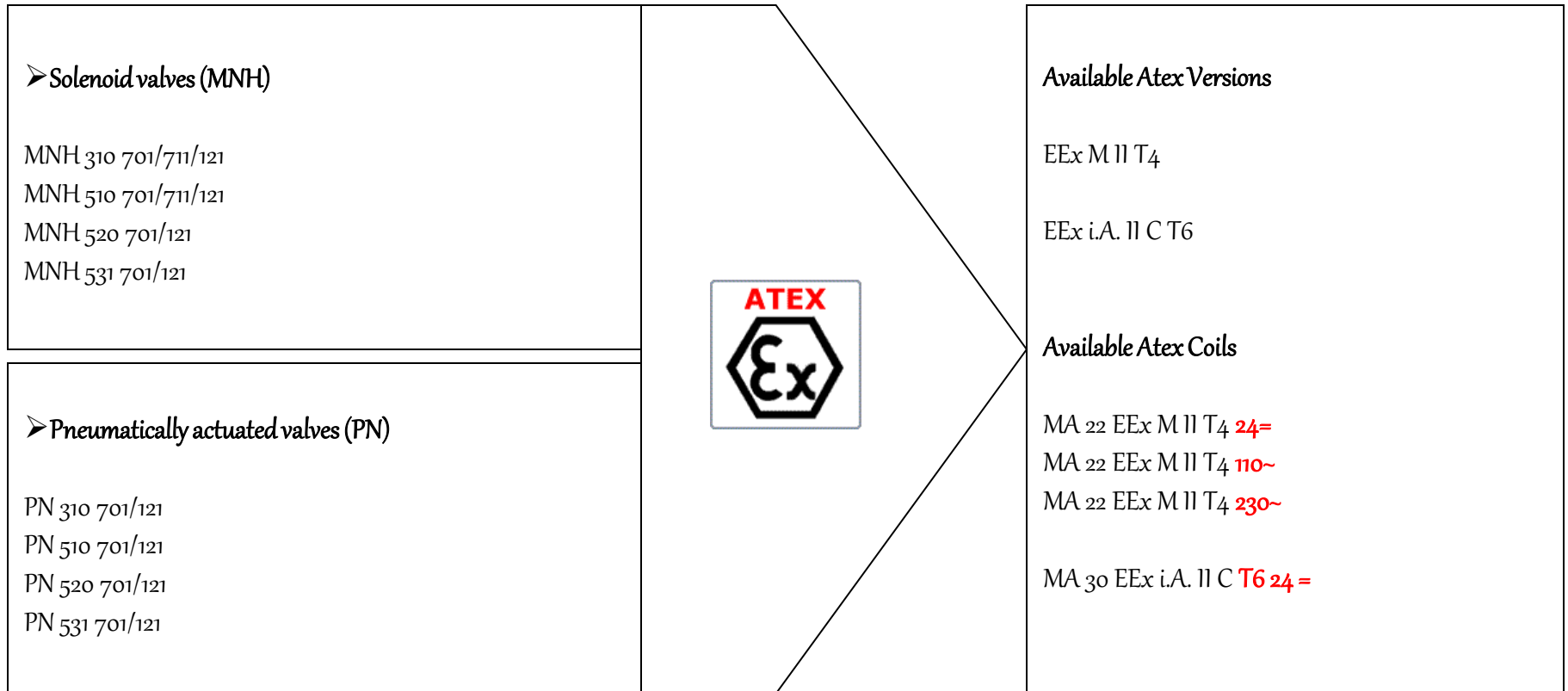
The **FPNW 22-1/4** plate converts a 5-way Namur-valve into an inline valve.

The Namur ports 2 and 4 are transferred into the plate and offer G 1/4" BSP thread.

The 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**.

Many TORK products are available in versions for explosion-hazardous environment.

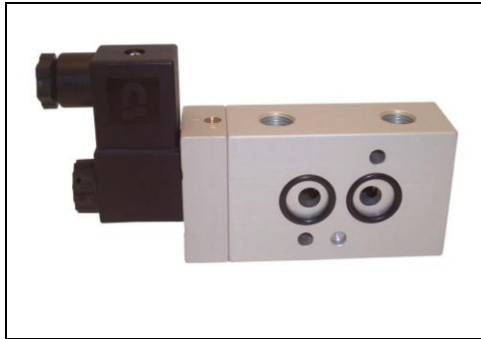


A presentation of ATEX-approved products for explosion hazardous environment is available on request.

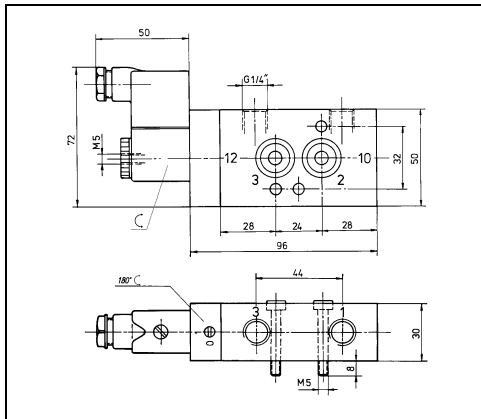
The TORK philosophy is to fulfill specific customer requirements

(1) → G 1/4" valves with maximum flow

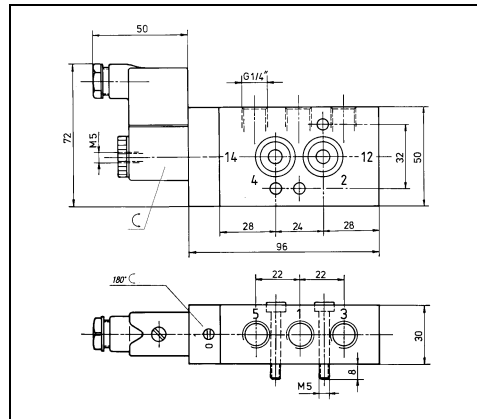
Our Series 801 supports you for the connection G 1/4" with a maximum flow of 1.500l/min



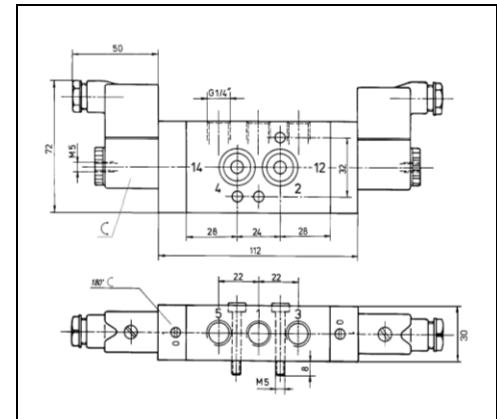
MNH 310 801



MNH 510 801



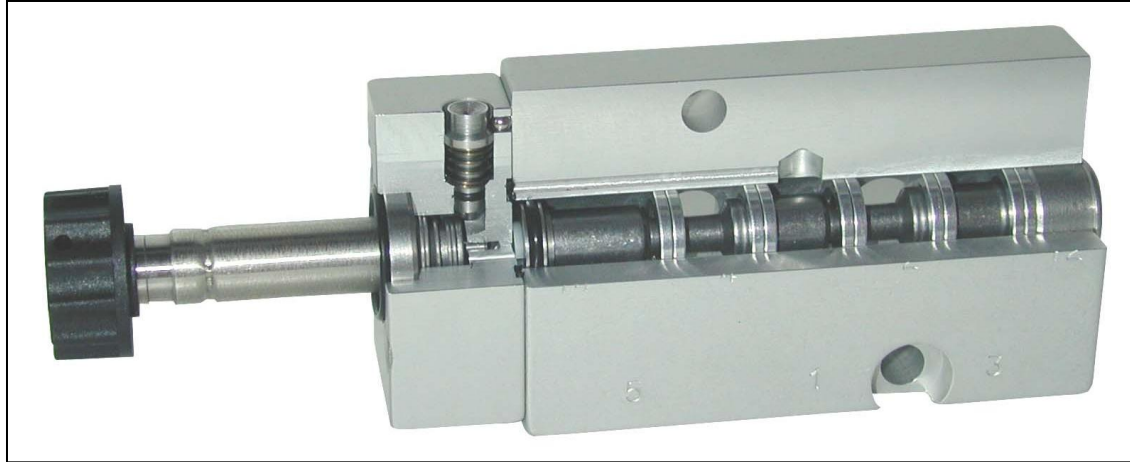
MNH 520/531 801



The TORK philosophy is to fulfill specific customer requirements

(2) → Brass free products

TORK offers two different types: EDS = brass-free to the outside, BMF = entirely brass-free

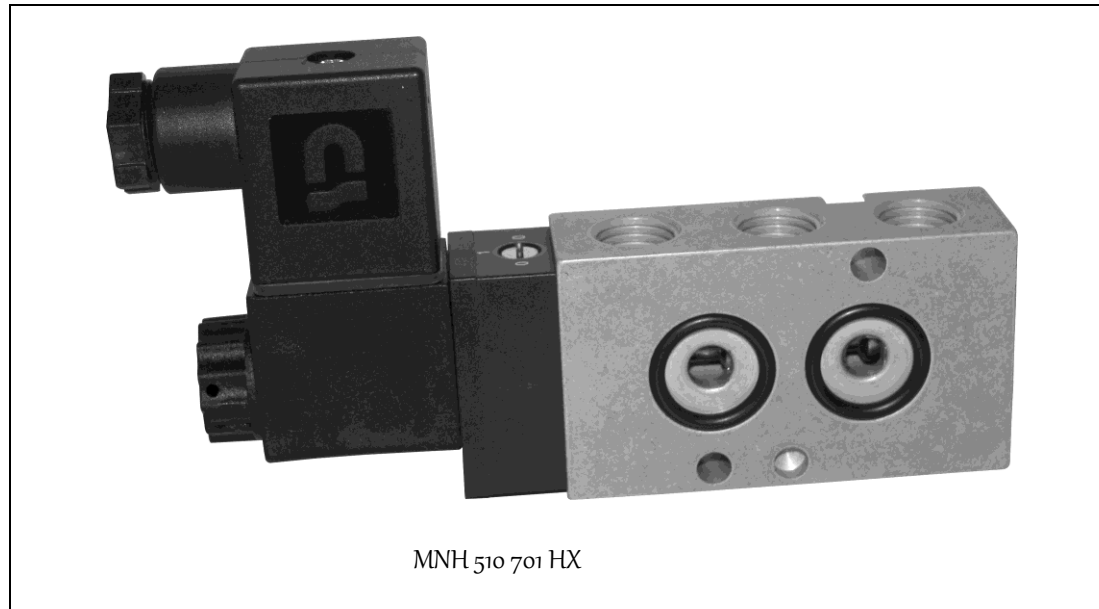


Parts of the valve	EDS version	BMF version
Pilot head	Aluminum	Aluminum
Operator system	stainless steel	stainless steel
Manual override (momentary)	stainless steel	stainless steel
Seat of pilot valve	brass	aluminium
Piston	brass	stainless steel
Cages for seals	brass	Aluminum
End-cap	stainless steel	stainless steel

The TORK philosophy is to fulfill specific customer requirements

(3) → Hard coated products

TORK has the possibility to offer products that are hard coated (hard anodized) on request.



- Products can be used in *the food-industry*.
- Valves can be made in “EDS = *brass-free to the outside*” version.

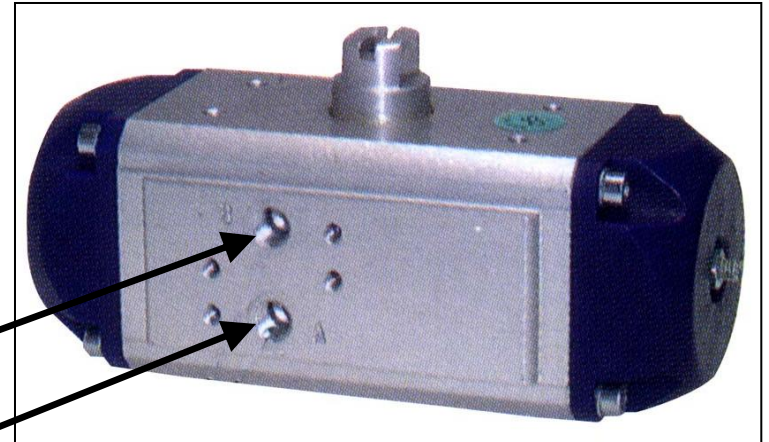
The TORK philosophy is to fulfill specific customer requirements

(4) → MNH 510 706

The MNH 510 706 gives you the possibility to turn the valve by 90°.
It allows to assemble the valve horizontal even so ports at the actuator are vertically orientated.



MNH 510 706

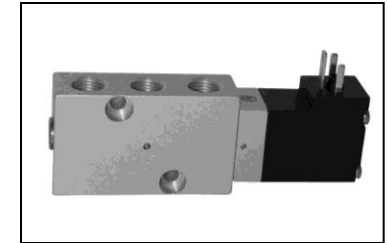
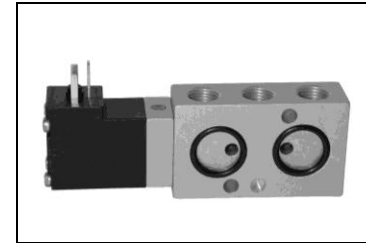
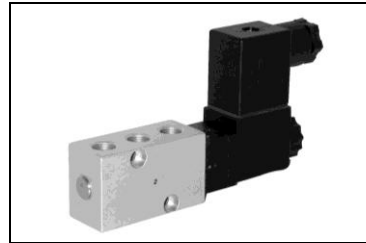
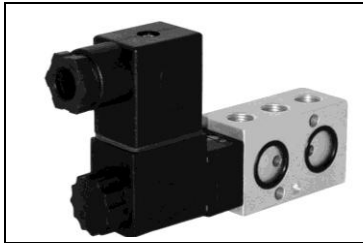


Actuator with vertically orientated ports

The TORK philosophy is to fulfill specific customer requirements

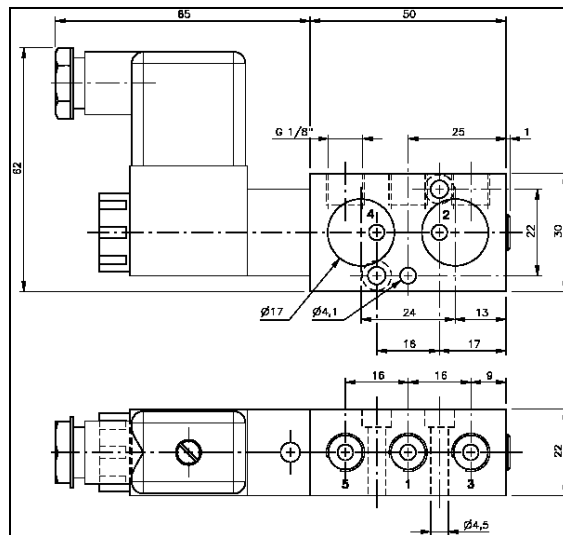
(5) → Non-standard range 401

Our compact series 401 is specially designed for smaller actuators.
(Please take note: The series 401 is in accordance with the Namur standard).

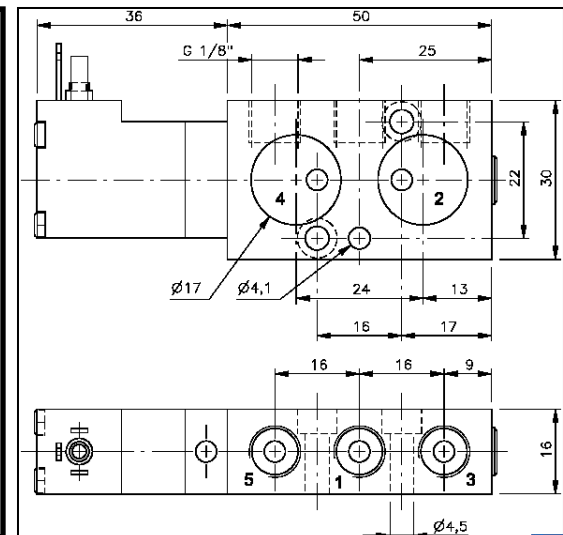


MNH 510 401

MND 510 401



Ports in accordance
to G 1/8" standard.
Fixing holes non-
standard.



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