



5.

„Hafner on the Rocks“ Low Temperature Valves

Selected models are available for explosion hazardous environment. They are ATEX-Ex certified. For detailed information refer to chapter 8.



Temperature range: - 50° C to + 50° C

Please notice:
Below -40°C minimum operating pressure generally increases to 3 bar.

Overview: Manually and pneumatically actuated valves for low temperature environment

Actuation: Manually and pneumatically
Port-size: G 1/8", 1/8" NPT, G 1/4", 1/4" NPT
Flow: 650 NI (1/8"), 1.250 NI (1/4")
Function: 3/2-way, 5/2-way, 5/3-way

For detailed information in these items, please refer to our full catalogue chapter 2.9 or contact us directly.



Example:
3/2 and 5/2 manually actuated spool valve, G 1/4", spring return or indexed

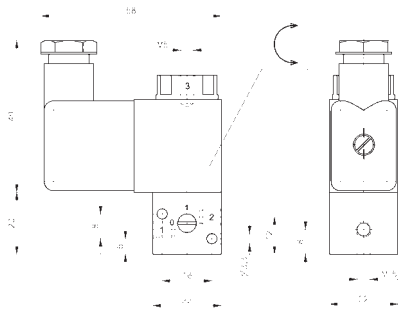


Example:
3/2 and 5/2 hand lever valve, G 1/4", spring return or indexed

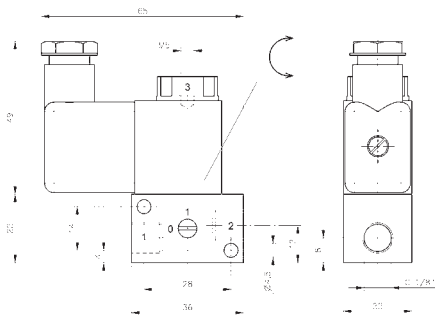


Example:
Single and double pilot 5/2 pneumatically act. valve, G 1/4"

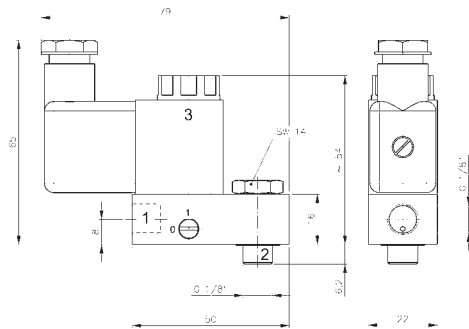
MH 311 012 TT/MH 311 015 TT MH 311 013 TT/MH 311 017 TT



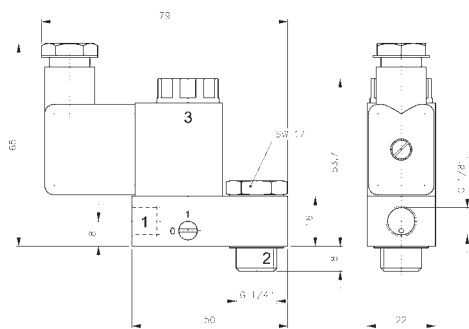
MH 311 012 TT



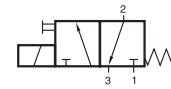
MH 311 015 TT



MH 311 013 TT



MH 311 017 TT



MH 311 012 TT
MH 311 015 TT
MH 311 013 TT
MH 311 017 TT



Direct acting 3/2-way solenoid valve equipped with mechanical spring return for low temperature environment - 50° C to + 50° C.

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

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

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

Please notice:

When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of environment and media. Air has to be dried!

Use unlubricated air only.

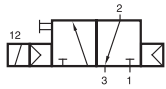
Available with solenoid operators:

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

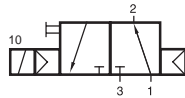
Valves are equipped with manual override to turn.

Type	Port size			Air flow	Operating pressure	Power consumption	Weight	
	1	2	3					
MH 311 012 TT	M5	M5	M5	40 l/min	0 - 10 bar	3 W = / 5 VA ~	0,12 kg	⊕
MH 311 015 TT	G 1/8"	G 1/8"	M5	50 l/min	0 - 10 bar	3 W = / 5 VA ~	0,14 kg	⊕
MH 311 013 TT	G 1/8"	G 1/8" Banjo	M5	50 l/min	0 - 10 bar	3 W = / 5 VA ~	0,14 kg	⊕
MH 311 017 TT	G 1/8"	G 1/4" Banjo	M5	50 l/min	0 - 10 bar	3 W = / 5 VA ~	0,16 kg	⊕

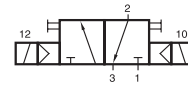
M(O)H 310 501 TT/M(O)H 310 701 GTT MH 320 501 TT/MH 320 701 GTT



MH 310 501 TT
MH 310 701 GTT



MOH 310 501 TT
MOH 310 701 GTT



MH 320 501 TT
MH 320 701 GTT



3/2-way solenoid valve for low temperature environment - 50° C to + 50° C.

Type MH 310 single solenoid n.c. air-spring return
Type MOH 310 single solenoid n.o. air-spring return
Type MH 320 double solenoid

G 1/4"-valves are dual use, they can be used in-line as well as on manifold plates. For manifold plates please refer to our full catalogue chapter 2.6.

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

Valves are equipped with manual override to turn.

Please notice:

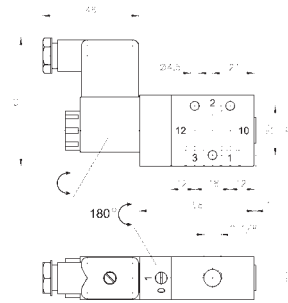
When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of environment and media. Air has to be dried!

Below - 40° C the leakage-rate of the valve can increase to 10 cm³ /min.

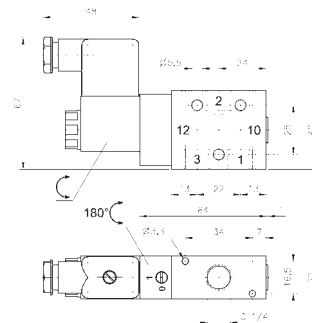
Use unlubricated air only.

Valves are also available with external pilot feed.

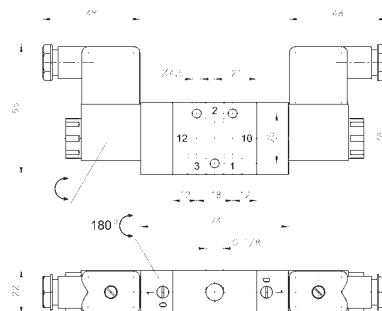
NPT ported valves are available on request.



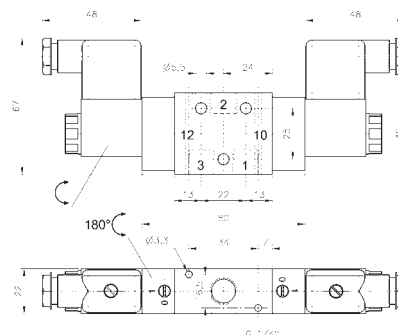
MH 310 501 TT/MOH 310 501 TT



MH 310 701 GTT/MOH 310 701 GTT

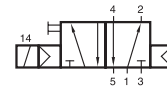


MH 320 501 TT

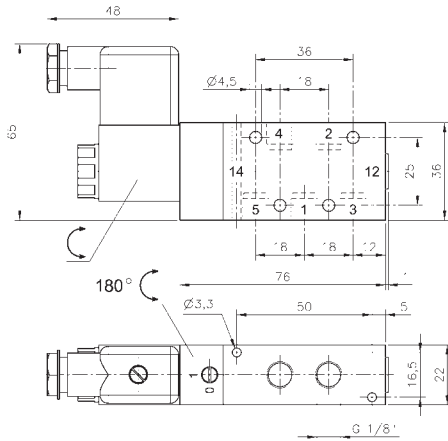


MH 320 701 GTT

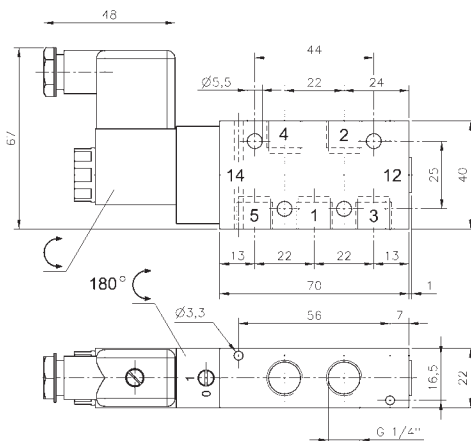
Type	Function	Port size	Air flow	Operating press.	Power cons.	Weight
MH 310 501 TT	n.c.	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,21 kg
MH 310 701 GTT	n.c.	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,23 kg
MOH 310 501 TT	n.o.	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,21 kg
MOH 310 701 GTT	n.o.	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,23 kg
MH 320 501 TT	double sol.	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,34 kg
MH 320 701 GTT	double sol.	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,36 kg



MH 510 501 GTT
MH 510 701 GTT



MH 510 501 GTT



MH 510 701 GTT



5/2-way single solenoid valve equipped with air spring return for low temperature environment - 50° C to + 50° C.

Valves are dual use, they can be used in-line as well as on manifold plates. For manifold plates please refer to our full catalogue chapter 2.6.

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

Valves are equipped with manual override to turn.

Please notice:

When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of environment and media. Air has to be dried!

Below - 40° C the leakage-rate of the valve can increase to 10 cm³ /min.

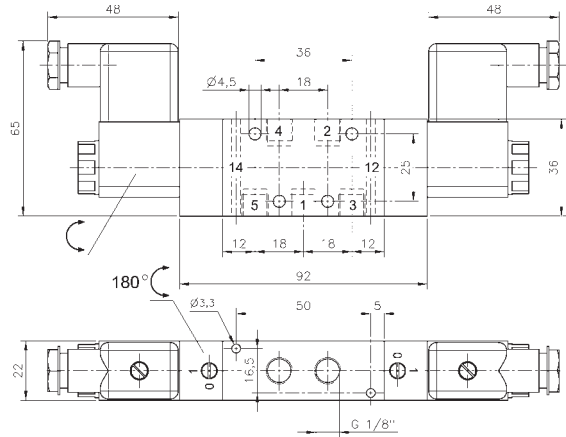
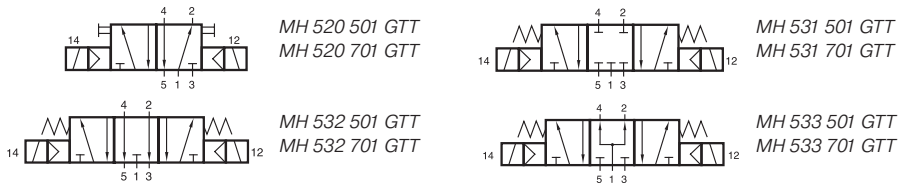
Use unlubricated air only.

Valves are also available with external pilot feed.

NPT ported valves are available on request.

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 510 501 GTT	G 1/8"	650 l/min	2 - 10 bar	3 W = / 5 VA ~	0,25 kg
MH 510 701 GTT	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,27 kg

MH 520 501 GTT/MH 520 701 GTT MH 53_ 501 GTT/MH 53_ 701 GTT



MH 520 501 GTT/MH 53_ 501 GTT

5-way solenoid valve for low temperature environment - 50° C to + 50° C.

- Type 520 5/2-way double solenoid, actuated by impulse
- Type 531 5/3-way centre closed
- Type 532 5/3-way centre exhausted
- Type 533 5/3-way centre pressurized

Valves are dual use, they can be used in-line as well as on manifold plates. For manifold plates please refer to our full catalogue chapter 2.6.

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

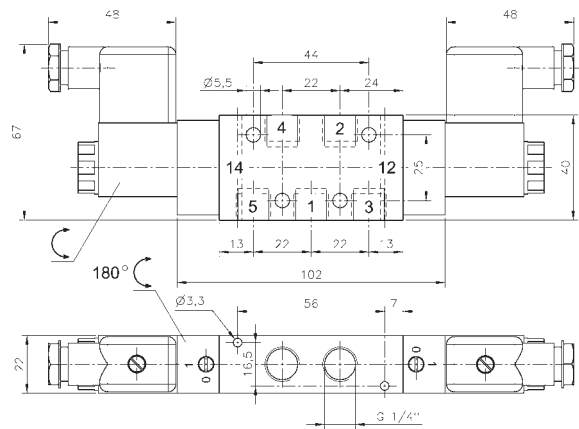
Valves are equipped with manual override to turn.

Please notice:
When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of environment and media. Air has to be dried!
Below - 40° C the leakage-rate of the valve can increase to 10 cm³/min.
Use unlubricated air only.

For type 531: pressure at port 1 has to be ≥ pressure at 2 and 4. If pressure supply is lost, 2 or 4 can exhaust and actuator might move.

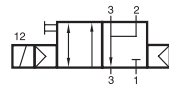
Valves are also available with external pilot feed.

NPT ported valves are available on request.

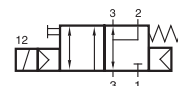


MH 520 701 GTT/MH 53_ 701 GTT

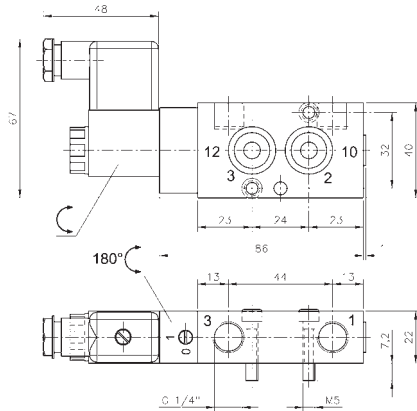
Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 520 501 GTT	G 1/8"	650 l/min	1 - 10 bar	3 W = / 5 VA ~	0,38 kg
MH 520 701 GTT	G 1/4"	1250 l/min	1 - 10 bar	3 W = / 5 VA ~	0,40 kg
MH 53_ 501 GTT	G 1/8"	650 l/min	3 - 10 bar	3 W = / 5 VA ~	0,38 kg
MH 53_ 701 GTT	G 1/4"	1250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,40 kg



MNH 310 701 TT



MNH 311 701 TT



MNH 310 701 TT/MNH 311 701 TT



3/2-way solenoid valve, actuated by permanent signal for low temperature environment - 50° C to + 50° C. Interface according to 1/4" NAMUR-standard, with exhaust air recirculation (purge).

Type MNH 310 701 with pneumatic spring return
 Type MNH 311 701 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.

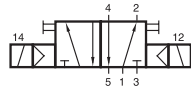
Please notice:
 When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of environment and media. Air has to be dried!
 Below - 40° C the leakage-rate of the valve can increase to 10 cm³ /min.
 Use unlubricated air only.

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

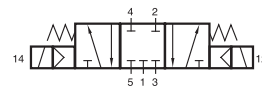
NPT ported valves are available on request.

Type	Port size	Air flow	Operating press.	Power consumption	Weight
MNH 310 701 TT	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,28 kg
MNH 311 701 TT	G 1/4"	1250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,28 kg

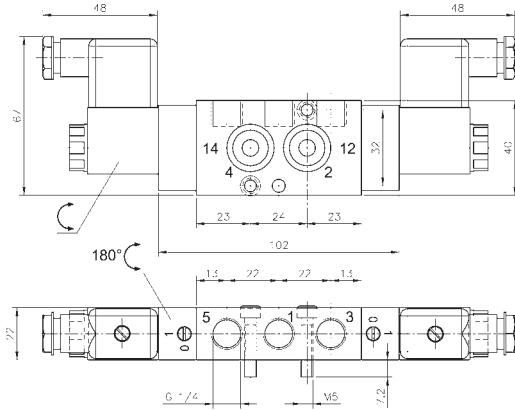




MNH 520 701 TT



MNH 531 701 TT



MNH 520 701 TT/MNH 531 701 TT



5-way solenoid valve for low temperature environment - 50° C to + 50° C. Interface according to 1/4" NAMUR-standard.

- Type 520 5/2-way double solenoid, actuated by impulse.
- Type 531 5/3-way centre closed. Other 5/3-way versions available on request.

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

Valves are equipped with manual override to turn.

Please notice:
When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of environment and media. Air has to be dried!
Below - 40° C the leakage-rate of the valve can increase to 10 cm³ /min.
Use unlubricated air only.

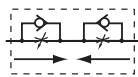
For type 531: pressure at port 1 has to be ≥ pressure at 2 and 4. If pressure supply is lost, 2 or 4 can exhaust and actuator might move.

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

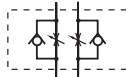
NPT ported valves are available on request.

Type	Function	Port size	Air flow	Operating pressure	Power consumption	Weight
MNH 520 701 TT	5/2 double sol.	G 1/4"	1250 l/min	2 - 10 bar	3 W = / 5 VA ~	0,41 kg
MNH 531 701 TT	5/3 centre closed	G 1/4"	1250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,41 kg

DRN 3 611 TT/DRN 5 611 TT



DRN 3 611 TT



DRN 5 611 TT



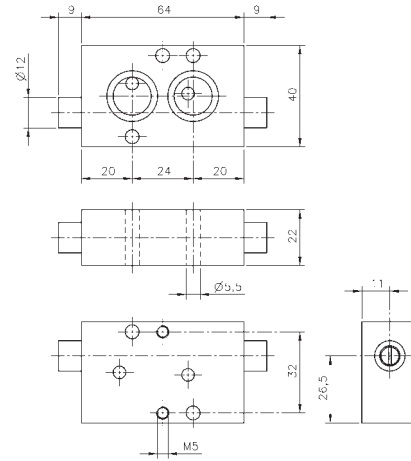
Block form flow regulator as intermediate plate, interface according to 1/4" NAMUR-standard for low temperature environment - 50° C to + 50° C.

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

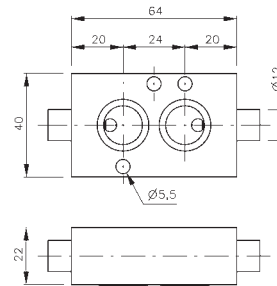
Type DRN 5 611 TT:
for 5/2 and 5/3 way valves only. To regulate the forward- and backward stroke of a double acting pneumatic actuator. To be operated with a screw-driver.

Please notice:
When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of environment and media. Air has to be dried!
Use unlubricated air only.

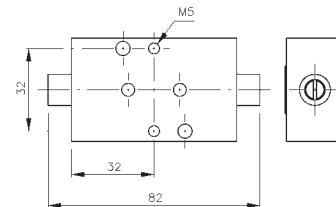
Delivery includes 1 pin, 2 screws (50 mm long), 2 O-rings.



DRN 3 611



DRN 5 611



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