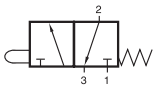
2.12

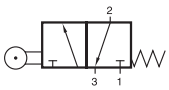
„HAFNER on the Rocks“ Low Temperature Valves

Selected models are available for explosion hazardous environment. For detailed information refer to chapter 2.15.

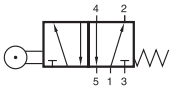
BG 311 701 TT/BR 311 701 TT/BR 511 701 TT



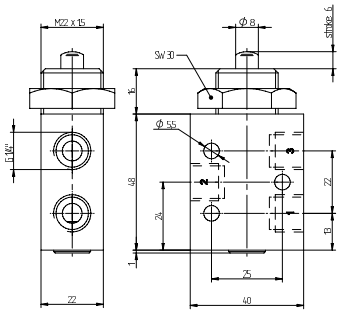
BG 311 701 TT



BR 311 701 TT



BR 511 701 TT



BG 311 701 TT

BG 311 701 TT heavy duty stem actuated 3/2-way spool valve with mechanical spring for low temperature environment -50° C to + 50° C. Suitable for wall or panel mounting. Nut for panel mounting M22 x 1,5 is included.

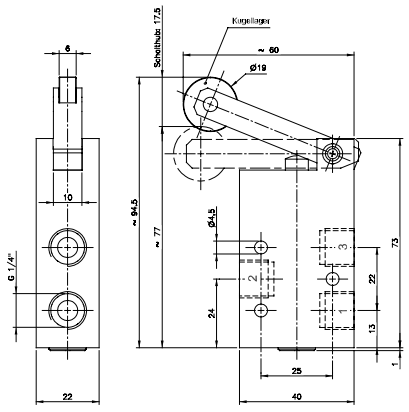
BR 311 701 TT / BR 511 701 TT heavy duty roller-lever spool valve with mechanical spring for low temperature environment -50° C to + 50° C. Lever-construction has proven capabilities in rough environmental applications for decades.

BR 311 701 TT 3/2-way, spring return
BR 511 701 TT 5/2-way, spring return

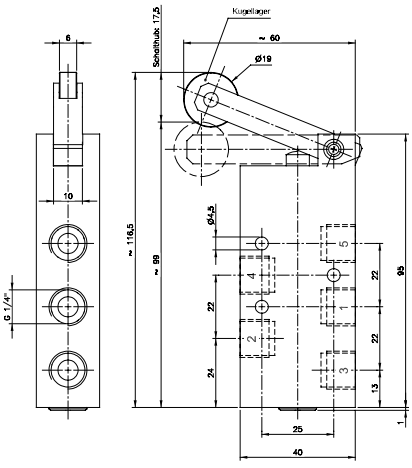
Due to the specific design of the low temperature seals pressure has to be applied to port 1.
For other versions (e.g. normally open) please get in touch with the manufacturer.

Please note:
When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of the environment and media.
Air has to be dried!
Below -40° C the leakage-rate of the valve can increase.
Further information on page 15. Use unlubricated air only.

Exhaust can be throttled.



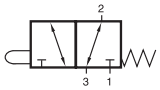
BR 311 701 TT



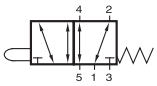
BR 511 701 TT

Type	Function	Port size	Air flow	Operating press.	Actuating force	Weight
BG 311 701 TT	3/2-way spring ret.	G 1/4”	1250 l/min	1 - 10 bar	17 N	0,13 kg
BR 311 701 TT	3/2-way spring ret.	G 1/4”	1250 l/min	1 - 10 bar	3,5 N	0,20 kg
BR 511 701 TT	5/2-way spring ret.	G 1/4”	1250 l/min	1 - 10 bar	3,5 N	0,25 kg

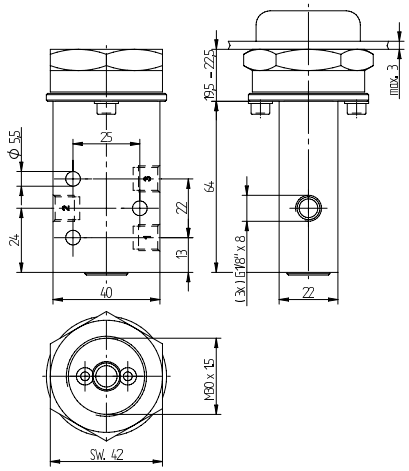
BAS 311 501 TT AIR Ex/BAS 511 501 TT AIR Ex



BAS 311 501 TT AIR Ex



BAS 511 501 TT AIR Ex

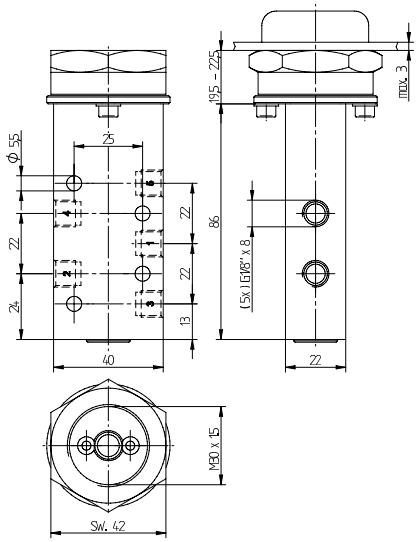


BAS 311 501 TT AIR Ex

3/2-way and 5/2-way spool valves with mechanical spring for panel mounting. For low temperature environment -40°C to +65°C and for explosion hazardous environment zone 1, 2, 21 and 22.

CE Ex II 2 G Ex h IIC T6 Gb
-40°C ≤ Ta ≤ +65°C

CE Ex II 2 D Ex h IIIC T80°C
Db -40°C ≤ Ta ≤ +65°C

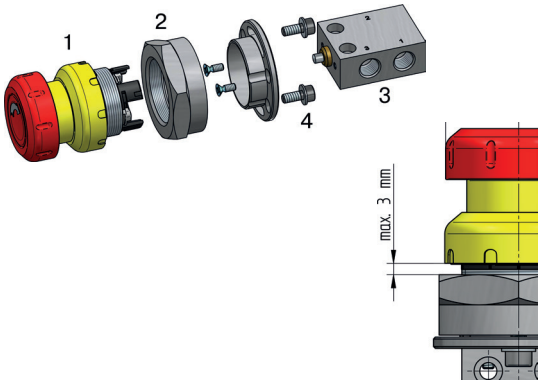


BAS 511 501 TT AIR Ex

Actuating elements are displayed on page 2.2.2.

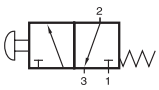
How to assemble the valve to the panel:
1. Insert the actuator (1) through the hole
2. Tighten the aluminum nut (2) firmly
3. Attach the valve (3) to the nut (2)
4. Fasten the valve with two screws (4)

Please note:
- The sheet thickness must not exceed 3 mm.
- Depending on the sheet thickness, a small gap may remain between the valve and the nut.

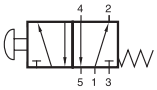


Type	Function	Port size	Air flow	Operating press.	Actuating force	Weight
BAS 311 501 TT AIR Ex	3/2-way	G 1/8”	650 l/min	1 - 10 bar	~ 40 N	0,20 kg
BAS 511 501 TT AIR Ex	5/2-way	G 1/8”	650 l/min	1 - 10 bar	~ 40 N	0,26 kg

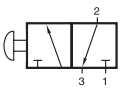
BH 311 701 TT/BH 320 701 TT
BH 511 701 TT/BH 520 701 TT



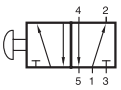
BH 311 701 TT



BH 511 701 TT



BH 320 701 TT



BH 520 701 TT

Manually actuated spool valve for low temperature environment - 50° C to + 50° C.

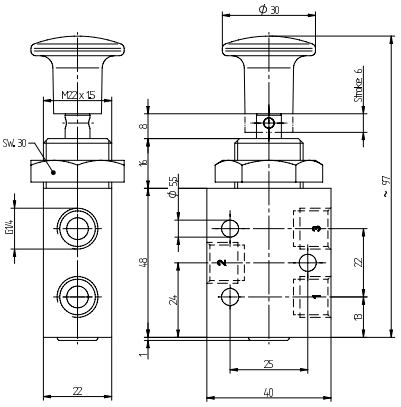
BH 311 701 3/2-way, normally closed, spring return
BH 320 701 3/2-way, indexed
BH 511 701 5/2-way, spring return
BH 520 701 5/2-way, indexed

Due to the specific design of the low temperature seals pressure has to be applied to port 1.
For other versions (e.g. normally open) please get in touch with the manufacturer.

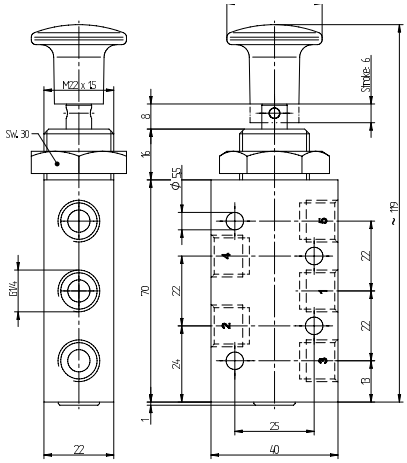
Please note:
When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of environment and media. Air has to be dried!
Below - 40° C the leakage-rate of the valve can increase.
Further information on page 15.
Use unlubricated air only.

Exhaust can be throttled.

Suitable for wall or panel mounting. Nut for panel mounting M22 x 1,5 is included.



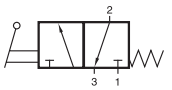
BH 311 701 TT/BH 320 701 TT



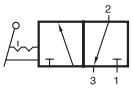
BH 511 701 TT/ BH 520 701 TT

Type	Function	Port size	Air flow	Operating press.	Actuating force	Weight
BH 311 701 TT	3/2-way spring ret.	G 1/4”	1250 l/min	1 - 10 bar	17 N	0,14 kg
BH 320 701 TT	3/2-way indexed	G 1/4”	1250 l/min	1 - 10 bar	18 N	0,14 kg
BH 511 701 TT	5/2-way spring ret.	G 1/4”	1250 l/min	1 - 10 bar	17 N	0,18 kg
BH 520 701 TT	5/2-way indexed	G 1/4”	1250 l/min	1 - 10 bar	18 N	0,18 kg

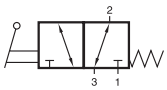
HV 311 701 TT/HV 311 121 TT
HVR 320 701 TT/HVR 320 121 TT



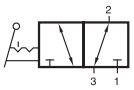
HV 311 701 TT



HVR 320 701 TT



HV 311 121 TT



HVR 320 121 TT

Lever actuated 3/2-way spool valve for low temperature environment - 50° C to + 50° C (series 701), +80° C (series 121).

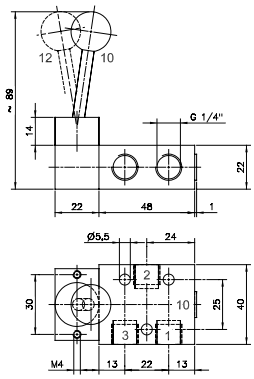
Type HV 311 normally closed, spring return
Type HVR 320 indexed

The lever is sealed by using a metal ball.

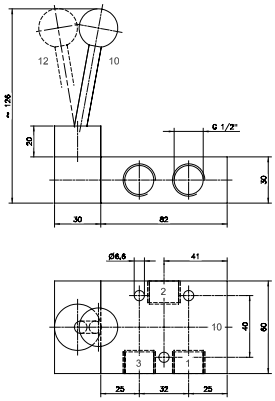
Valves type 701 TT:
Due to the specific design of the low temperature seals pressure has to be applied to port 1.
For other versions (e.g. normally open) please get in touch with the manufacturer.

Please note:
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.
Further information on page 15.
Use unlubricated air only.

Exhaust can be throttled.



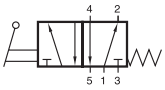
HV 311 701 TT/HVR 320 701 TT



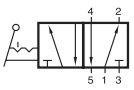
HV 311 121 TT/HVR 320 121 TT

Type	Function	Port size	Air flow	Operating press.	Actuating force	Weight	
HV 311 701 TT	3/2-way spring ret.	G 1/4"	1250 l/min	1 - 10 bar	20 N	0,20 kg	⚠
HV 311 121 TT	3/2-way spring ret.	G 1/2"	3000 l/min	1 - 10 bar	32 N	0,69 kg	
HVR 320 701 TT	3/2-way indexed	G 1/4"	1250 l/min	1 - 10 bar	20 N	0,20 kg	⚠
HVR 320 121 TT	3/2-way indexed	G 1/2"	3000 l/min	1 - 10 bar	32 N	0,69 kg	

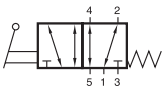
HV 511 701 TT/HV 511 121 TT
HVR 520 701 TT/HVR 520 121 TT



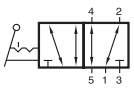
HV 511 701 TT



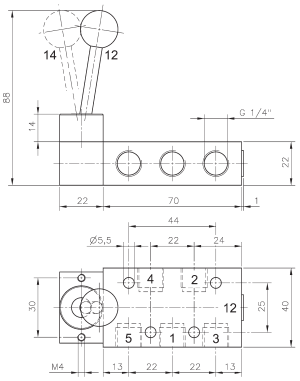
HVR 520 701 TT



HV 511 121 TT



HVR 520 121 TT



HV 511 701 TT/HVR 520 701 TT

Lever actuated 5/2-way spool valve for low temperature environment - 50° C to + 50° C (series 701), +80° C (series 121).

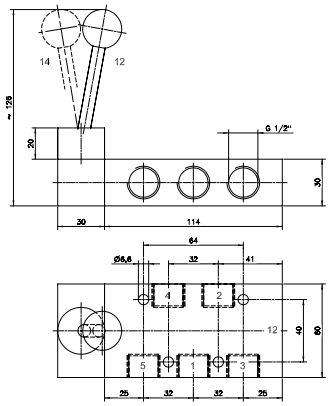
Type HV 511 spring return
Type HVR 520 indexed

The lever is sealed by using a metal ball.

Valves type 701 TT:
Due to the specific design of the low temperature seals pressure has to be applied to port 1. If other function is required please get in touch with the manufacturer.

Please note:
When operated below 0° C the pressure conden-sation 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.
Further information on page 15.
Use unlubricated air only.

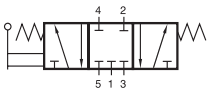
Exhaust can be throttled.



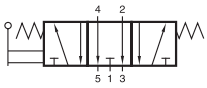
HV 511 121 TT/HVR 520 121 TT

Type	Function	Port size	Air flow	Operating press.	Actuating force	Weight	
HV 511 701 TT	5/2-way spring ret.	G 1/4"	1250 l/min	1 - 10 bar	20 N	0,24 kg	
HV 511 121 TT	5/2-way spring ret.	G 1/2"	3000 l/min	1 - 10 bar	32 N	0,79 kg	
HVR 520 701 TT	5/2-way indexed	G 1/4"	1250 l/min	1 - 10 bar	20 N	0,24 kg	
HVR 520 121 TT	5/2-way indexed	G 1/2"	3000 l/min	1 - 10 bar	32 N	0,79 kg	

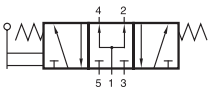
HV 53_ 701 TT/HV 53_ 121 TT
HVR 53_ 701 TT/HVR 53_ 121 TT



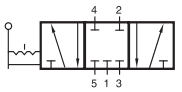
HV 531 701 TT
HV 531 121 TT



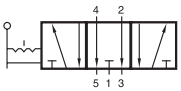
HV 532 701 TT
HV 532 121 TT



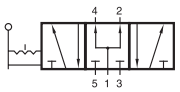
HV 533 701 TT
HV 533 121 TT



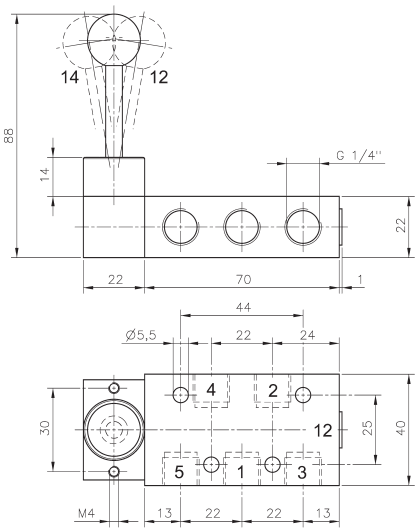
HVR 531 701 TT
HVR 531 121 TT



HVR 532 701 TT
HVR 532 121 TT



HVR 533 701 TT
HVR 533 121 TT



HV 53_ 701 TT/HVR 53_ 701 TT

Lever actuated 5/3-way spool valve for low temperature environment - 50° C to + 50° C (series 501/701), +80° C (series 121).

Type HV	spring return to middle position
Type HVR	indexed
Type 531	centre closed
Type 532	centre exhausted
Type 533	centre pressurised

When ordering please complete the type number by 1, 2 or 3 according to the type required.

The lever is sealed by using a metal ball.

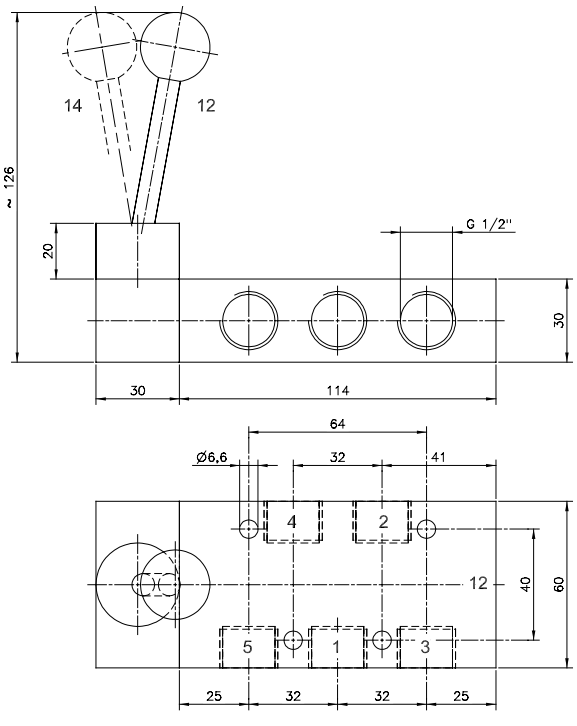
Valves type 701 TT:
Due to the specific design of the low temperature seals pressure has to be applied to port 1.
If other function is required please get in touch with the manufacturer.

Please note:
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.
Further information on page 15.

Use unlubricated air only.

For type HV 531 701 TT and HVR 531 701 TT: 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

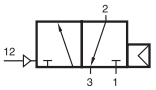
Exhaust can be throttled.



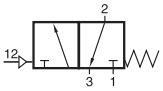
HV 53_ 121 TT/HVR 53_ 121 TT

Type	Function	Port size	Air flow	Operating press.	Actuating force	Weight	
HV 53_ 701 TT	spring ret.	G 1/4”	1250 l/min	1 - 10 bar	20 N	0,24 kg	
HVR 53_ 701 TT	indexed	G 1/4”	1250 l/min	1 - 10 bar	20 N	0,24 kg	
HV 53_ 121 TT	spring ret.	G 1/2”	3000 l/min	1 - 10 bar	32 N	0,79 kg	
HVR 53_ 121 TT	indexed	G 1/2”	3000 l/min	1 - 10 bar	32 N	0,79 kg	

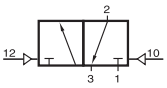
P 310 701 GTT/P 311 701 GTT/P 320 701 GTT



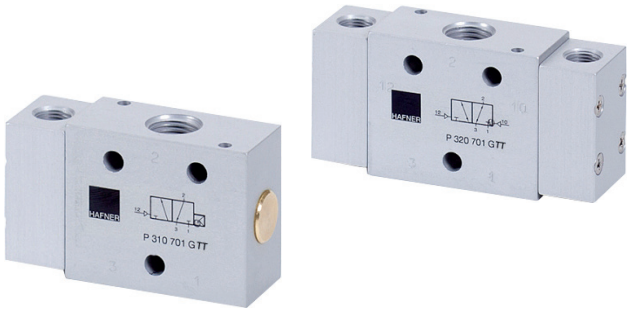
P 310 701 GTT



P 311 701 GTT



P 320 701 GTT



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

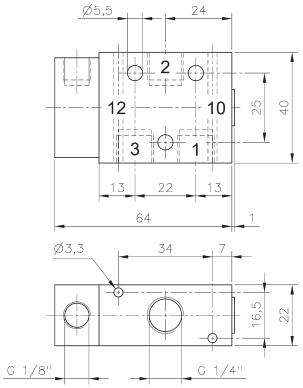
Type 310	single pilot n.c. air-spring return operating and actuating pressure should be at the same level.
Type 311	single pilot n.c. mechanical spring return
Type 320	double pilot

GTT: dual use, valves can be used in-line as well as on manifold plates. Manifolds are displayed on page 2.7.1.3.

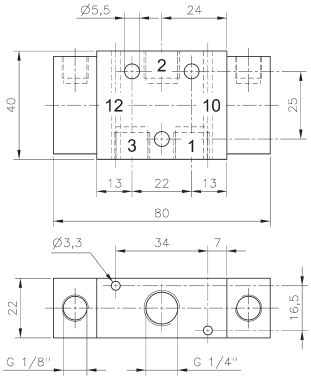
Due to the specific design of the low temperature seals pressure has to be applied to port 1.
For other versions (e.g. normally open) please get in touch with the manufacturer.

Please note:
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. Further information on page 15.
Use unlubricated air only.

Exhaust can be throttled.



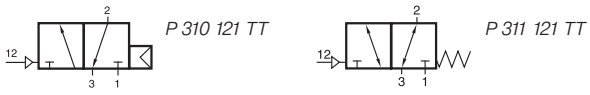
P 310 701 GTT/P 311 701 GTT

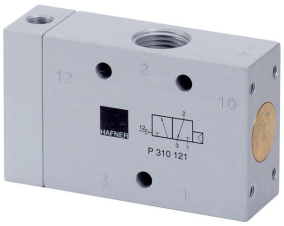


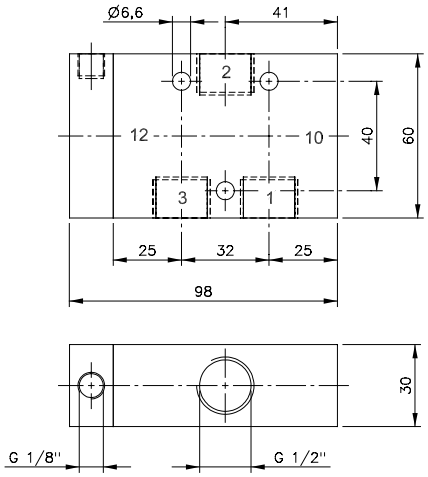
P 320 701 GTT

Type	Function	Port size	Air flow	Operating press.	Actuating press.	Weight	
P 310 701 GTT	n.c. air return	G 1/4”	1250 l/min	3 - 10 bar	the same	0,14 kg	Ex
P 311 701 GTT	n.c. mech. spring	G 1/4”	1250 l/min	3 - 10 bar	3 - 10 bar	0,14 kg	Ex
P 320 701 GTT	double pilot	G 1/4”	1250 l/min	3 - 10 bar	⩾ operating press.	0,17 kg	Ex

P 310 121 TT/P 311 121 TT







P 310 121 TT/P 311 121 TT

Pneumatically actuated 3/2-way spool valve for low temperature environment -50°C to +80°C.

Type P 310 121 TT with air-spring-return.
Operating pressure and actuating pressure should be at the same level.

Type P 311 121 TT with mechanical spring return.

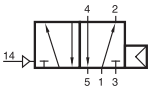
If pressure is attached to port 1 the function is normally closed.
If pressure is applied to port 3 the function is normally open.
Pressure can only be attached to port 2 if valve has a mechanical spring (type P 311 121 TT).

Exhaust can be throttled.

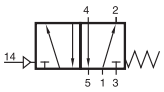
Please note:
When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of environment and media. Air has to be dried!
Below -40°C the leakage-rate of the valve can increase.
Further information on page 15.
Use unlubricated air only.

Type	Port size	Air flow	Operating press.	Actuating press.	Weight	
P 310 121 TT	G 1/2”	1250 l/min	3 - 10 bar	3 - 10 bar	0,45 kg	Ex
P 311 121 TT	G 1/2”	1250 l/min	3 - 10 bar	3 - 10 bar	0,45 kg	Ex

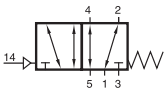
P 510 701 GTT/P 511 701 GTT
P 510 121 TT/P 511 121 TT



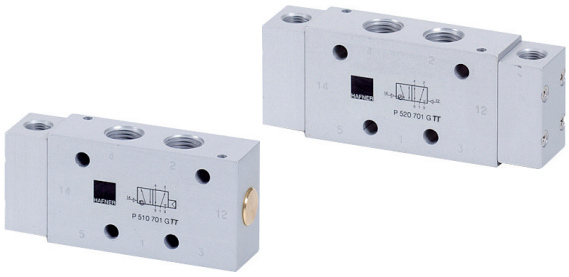
P 510 701 GTT
P 510 121 TT



P 511 701 GTT



P 511 121 TT



Pneumatically actuated 5/2-way spool valve for low temperature environment - 50° C to + 50° C (series 701), +80° C (series 121).

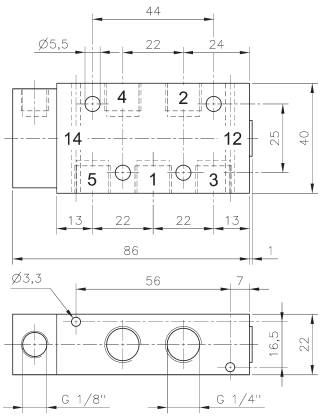
Type 510	single pilot air-spring return operating and actuating pressure should be at the same level.
Type 511	single pilot mechanical spring return

GTT: dual use, valves can be used in-line as well as on manifold plates. Manifolds are displayed on page 2.7.2.3.

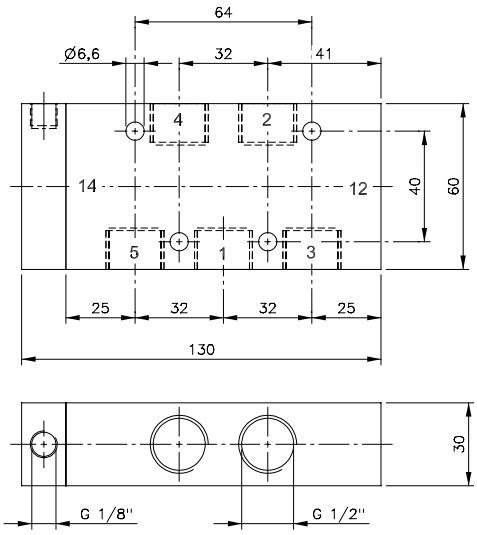
Please note:
When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of environment and media. Air has to be dried!
Below - 40° C the leakage-rate of the valve can increase.
Further information on page 15.
Use unlubricated air only.

Valves type P 51_ 701 GTT:
Due to the specific design of the low temperature seals pressure has to be applied to port 1.
For other versions please get in touch with the manufacturer.

Exhaust can be throttled.



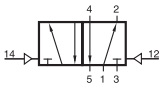
P 510 701 GTT/P 511 701 GTT



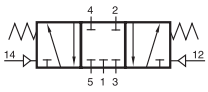
P 510 121 TT/P 511 121 TT

Type	Function	Port size	Air flow	Operating press.	Actuating press.	Weight	
P 510 701 GTT	air return	G 1/4”	1250 l/min	3 - 10 bar	3 - 10 bar	0,18 kg	Ex
P 511 701 GTT	mech. spring	G 1/4”	1250 l/min	3 - 10 bar	3 - 10 bar	0,18 kg	Ex
P 510 121 TT	air return	G 1/2”	3000 l/min	3 - 10 bar	3 - 10 bar	0,59 kg	Ex
P 511 121 TT	mech. spring	G 1/2”	3000 l/min	3 - 10 bar	3 - 10 bar	0,59 kg	Ex

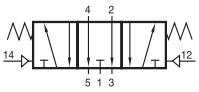
P 520 701 GTT/P 520 121 TT
P 53_ 701 GTT/P 53_121 TT



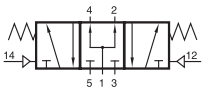
P 520 701 GTT
P 520 121 TT



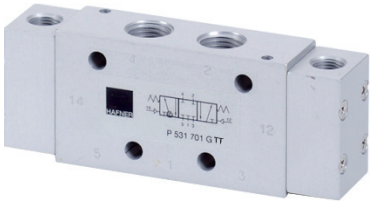
P 531 701 GTT
P 531 121 TT

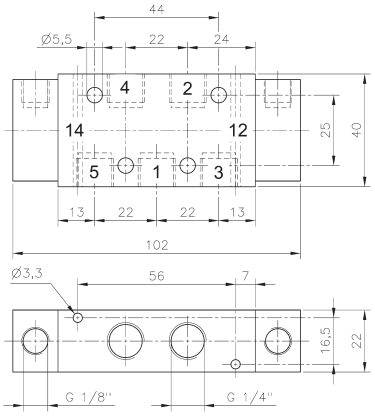


P 532 701 GTT
P 532 121 TT



P 533 701 GTT
P 533 121 TT





P 520 701 GTT/P 53_ 701 GTT

Pneumatically actuated 5-way valves for low temperature environment- 50° C to + 50° C (series 701), +80° C (series 121).

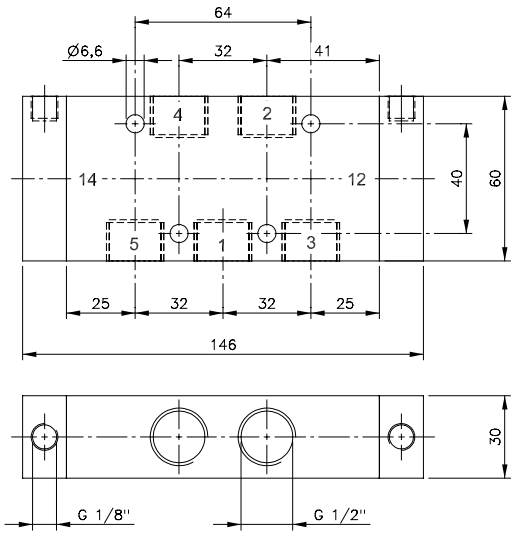
Type 520 double pilot
Type 531 5/3-way centre closed
Type 532 5/3-way centre exhausted
Type 533 5/3-way centre pressurised

GTT: dual use, valves can be used in-line as well as on manifold plates. Manifolds are displayed on page 2.7.2.3.

Please note:
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.
Further information on page 15.
Use unlubricated air only.

For type P 531 701 GTT:
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.

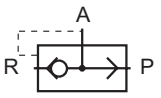
Exhaust can be throttled.



P 520 121 TT/P 53_ 121 TT

Type	Port size	Air flow	Operating press.	Actuating press.	Weight
P 520 701 GTT	G 1/4”	1250 l/min	3 - 10 bar	⩾ operating press.	0,22 kg
P 520 121 TT	G 1/2”	3000 l/min	3 - 10 bar	3 - 10 bar	0,67 kg
P 53_ 701 GTT	G 1/4”	1250 l/min	3 - 10 bar	3 - 10 bar	0,22 kg
P 53_ 121 TT	G 1/2”	3000 l/min	3 - 10 bar	3 - 10 bar	0,67 kg

SE 501 TT/SE 801 TT/SE 8101 TT/SE 121 TT

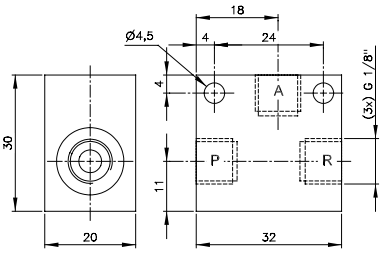


SE 501 TT
SE 801 TT
SE 8101 TT
SE 121 TT

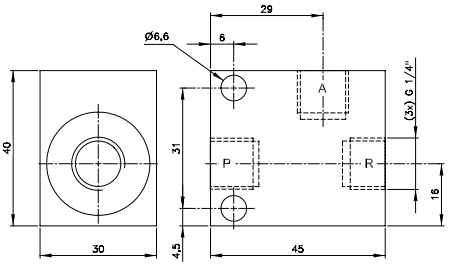
Quick-exhaust valve which can also be used as non-return valve as well as or-gate. For low temperature environment - 40° C to + 80° C.

If used as a non-return valve please plug port R.
Open from P to A, closed from A to P.

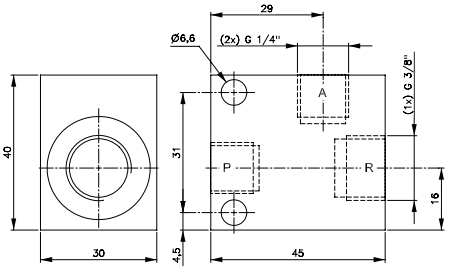
If used as an or-gate connect pressure to P and R.
Port A is outlet.



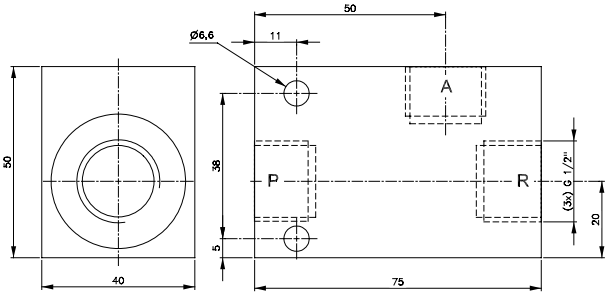
SE 501 TT



SE 801 TT



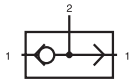
SE 8101 TT



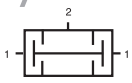
SE 121 TT

Type	Port size A + P	Port size R	Air flow from A to R	Operating press.	Weight
SE 501 TT	G 1/8”	G 1/8”	564 l/min	0,3 - 10 bar	0,06 kg
SE 801 TT	G 1/4”	G 1/4”	1188 l/min	0,2 - 10 bar	0,18 kg
SE 8101 TT	G 1/4”	G 3/8”	1188 l/min	0,2 - 10 bar	0,18 kg
SE 121 TT	G 1/2”	G 1/2”	3600 l/min	0,5 - 10 bar	0,26 kg

VA 401 TT/ES 401 TT



VA 401 TT



ES 401 TT

Logic elements for temperature environment -50°C to +50°C.

VA 401 TT OR-gate
The OR-gate has two inputs 1 and one output 2.

The shuttle valve is used when only one of two possible signals is required to pass on a signal.

Function: If one of two signal inputs are activated, an output signal on port 2 is present and the other input is blocked.

In case of pressurising both inputs at different pressure levels, the higher pressure is fed to port 2.

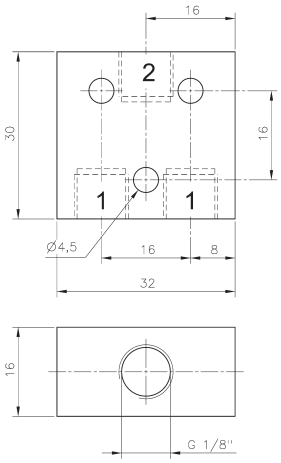
ES 401 TT AND-gate
The AND-gate has two inputs 1 and one output 2.

The dual-pressure valve is used when at least 2 signals are required before a signal is passed on.

Function: Only when both inputs are pressurised output 2 is pressurised.

If two different pressures are applied the lower pressure is fed to output 2.

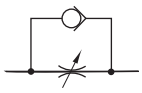
In case of only one signal at one of the two ports 1, the output 2 is blocked.



VA 401 TT/ES 401 TT

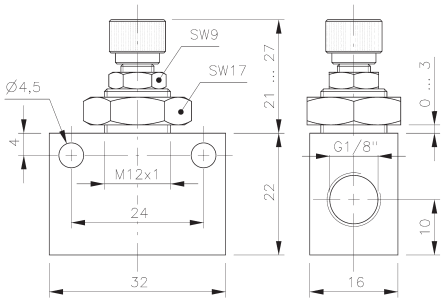
Type	Function	Port size	Air flow	Operating press.	Weight	
VA 401 TT	OR	G 1/8“	280 l/min	1 - 10 bar	0,04 kg	
ES 401 TT	AND	G 1/8“	280 l/min	1 - 10 bar	0,04 kg	

DR 501 TT/DR 801 TT/D 501 TT/D 801 TT

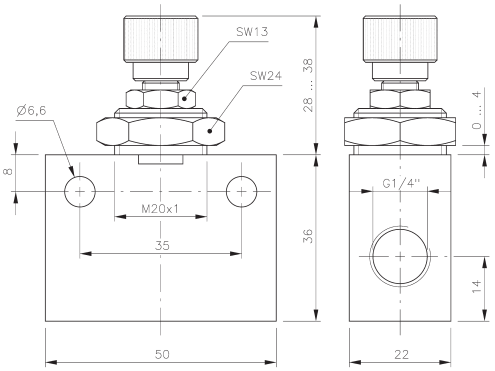


DR 501 TT
DR 801 TT

D 501 TT
D 801 TT



DR 501 TT/D 501 TT



DR 801 TT/D 801 TT

Block form flow regulator for low temperature environment -50°C to +50°C.

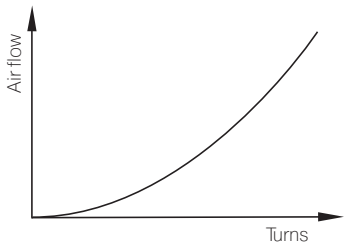
Type DR
uni-directional block form flow regulator.
Air streaming in the direction of the throttle can be regulated by turning the spindle. In the opposite direction air streams unthrottled.

Type D
bi-directional flow regulator. Air is regulated in both directions.

The throttle can be adjusted very precisely along the entire regulation range.

Adjustment can be locked.

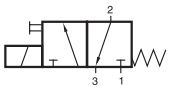
Suitable for wall and panel mounting.
Nut is included.



Type	Port size	Air flow*	Airflow in opposite direction*	Operating press.	Weight	
D 501 TT	G 1/8“	450 l/min	450 l/min	0,5 - 10 bar	0,04 kg	
D 801 TT	G 1/4“	1150 l/min	1150 l/min	0,5 - 10 bar	0,13 kg	
DR 501 TT	G 1/8“	450 l/min	450 l/min	2 - 10 bar	0,04 kg	
DR 801 TT	G 1/4“	1150 l/min	1150 l/min	2 - 10 bar	0,13 kg	

* Values at 10 bar inlet pressure and without back pressure.

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.

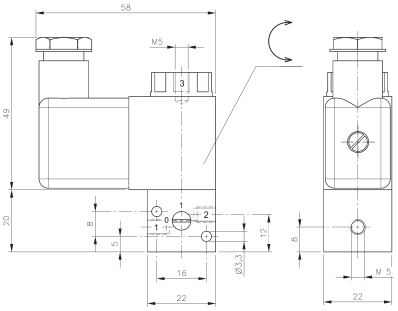
MH 311 013 TT and MH 311 017 TT are designed for piloting angle seat valves or small spring-return actuators.

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

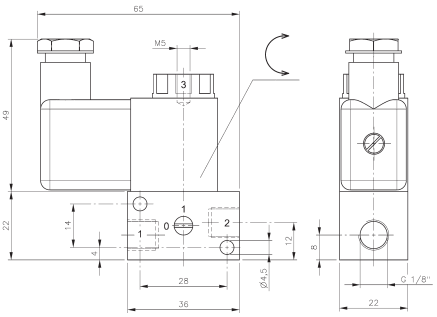
Please note:
When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of environment and media. Air has to be dried!
Use unlubricated air only.

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

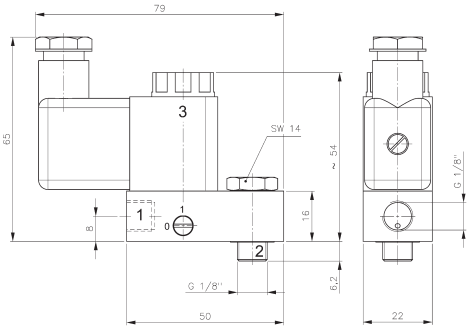
Valves are equipped with manual override to turn.



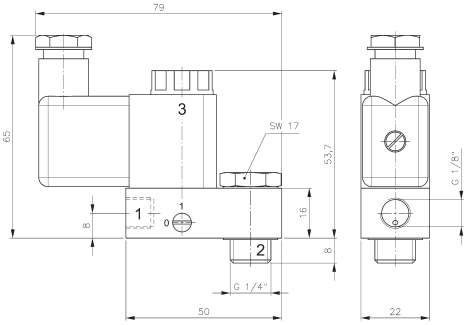
MH 311 012 TT



MH 311 015 TT



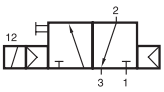
MH 311 013 TT



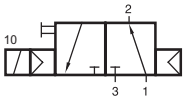
MH 311 017 TT

Type	Port size			Air flow	Operating press.	Power consumtion	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

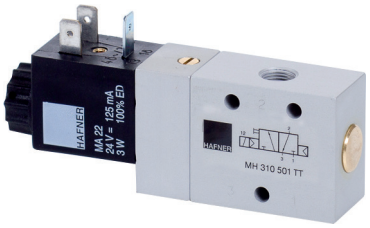
MH 310 701 GTT/MOH 310 701 GTT

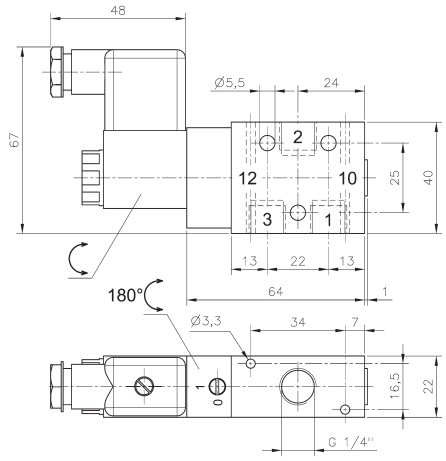


MH 310 701 GTT



MOH 310 701 GTT





MH 310 701 GTT/MOH 310 701 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

Valves can be used in-line as well as on manifold plates.
Manifolds are displayed on page 2.7.1.3.

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 note:
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.
Further information on page 15.
Use unlubricated air only.

Valves are also available with external pilot feed.

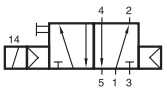
NPT ported valves are avilable on request.

G 1/2“ version available on request.

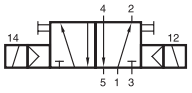
Type	Function	Port size	Air flow	Operating press.	Power cons.	Weight	
MH 310 701 GTT	n.c.	G 1/4”	1250 l/min	2 - 10 bar*	3 W = / 5 VA ~	0,23 kg	Ex
MOH 310 701 GTT	n.o.	G 1/4”	1250 l/min	2 - 10 bar*	3 W = / 5 VA ~	0,23 kg	Ex

* Below -20° C the operating pressure increases to 3 bar.

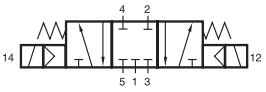
MH 510 701 GTT/MH 520 701 GTT/MH 53_ 701 TT



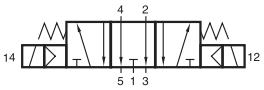
MH 510 701 GTT



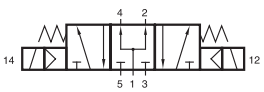
MH 520 701 GTT



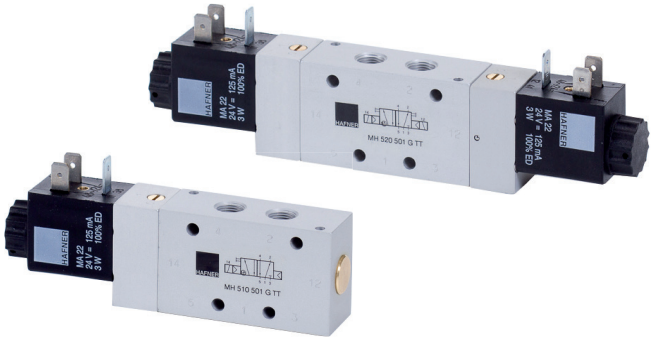
MH 531 701 GTT



MH 532 701 GTT



MH 533 701 GTT



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

Type 510	Air spring return
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 pressurised

Valves are dual use, they can be used in-line as well as on manifold plates. Manifolds are displayed on page 2.7.2.3.

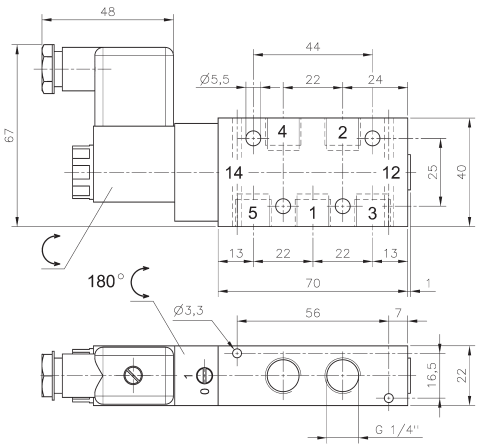
Available with solenoid operators
230V/50 Hz, 110V/50 Hz, 24V/50 Hz, 48V=, 24V=, 12V=.

Valves are equipped with manual override to turn.

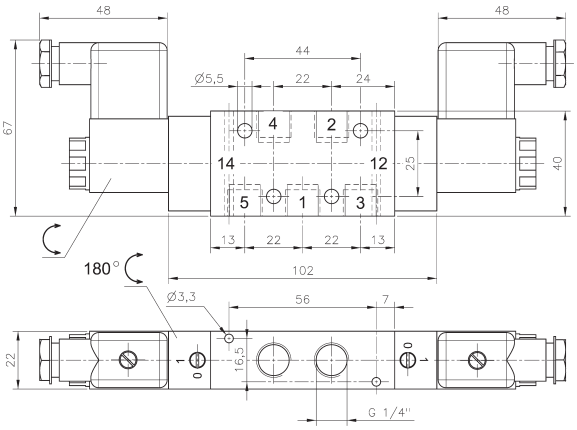
Please note:
When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of environment and media. Air has to be dried!
Below - 40° C the leakage-rate of the valve can increase.
Further information on page 15.
Use unlubricated air only.

On request:
- Valves with external pilot feed
- With NPT threads
- With G 1/2" ports

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.



MH 510 701 GTT

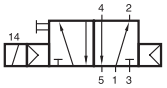


MH 520 701 GTT/MH 53_ 701 GTT

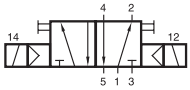
Type	Function	Port size	Air low	Operating press.	Power cons.	Weight	
MH 510 701 GTT	Spring return	G 1/4"	1250 l/min	2 - 10 bar*	3,0 W = / 5,0 VA ~	0,27 kg	Ex
MH 520 701 GTT	Bistable	G 1/4"	1250 l/min	2 - 10 bar*	3,0 W = / 5,0 VA ~	0,40 kg	Ex
MH 53_ 701 GTT	5/3-way	G 1/4"	1250 l/min	3 - 10 bar	3,0 W = / 5,0 VA ~	0,40 kg	Ex

* Below -20° C the operating pressure increases to 3 bar.

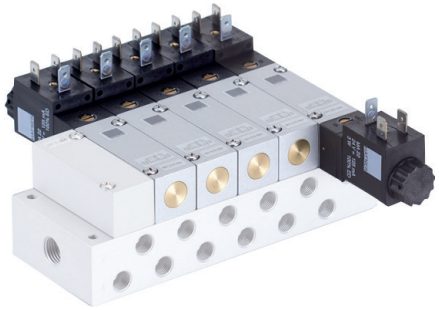
MH 510 504 TT/MH 510 704 TT
MH 520 504 TT/MH 520 704 TT



MH 510 504 TT
MH 510 704 TT



MH 520 504 TT
MH 520 704 TT



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

All the ports are in the plate, plates are displayed on page 2.7.2.7 and 2.7.2.8.

Type 510	With air spring return
Type 520	Double solenoid, actuated by impulse

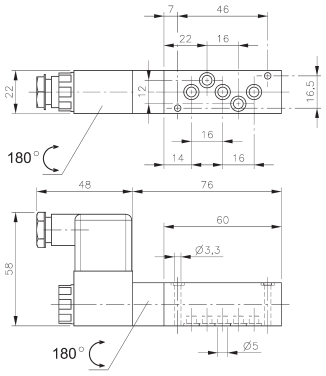
Available with solenoid operators
230V/50 Hz, 110V/50 Hz, 24V/50 Hz, 48V=, 24V=, 12V=.

Valves are equipped with manual override to turn.

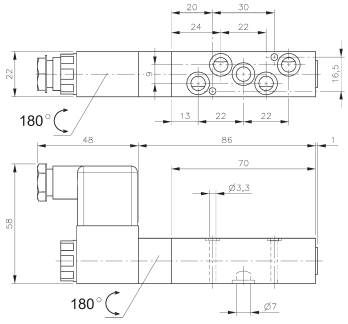
Please note:
When operated below 0° C the pressure condensation point has to be at least 15° C below the temperature of environment and media. Air has to be dried!

Below - 40° C the leakage-rate of the valve can increase.
Further information on page 15.
Use unlubricated air only.

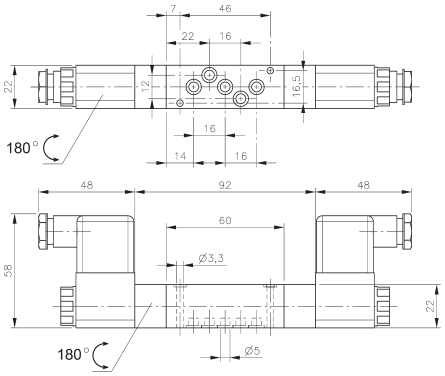
Mounting screws and seals are included.
5/3-way versions available on request.



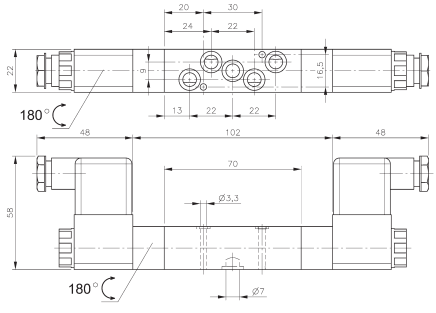
MH 510 504 TT



MH 510 704 TT



MH 520 504 TT

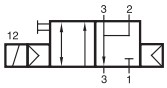


MH 520 704 TT

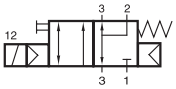
Type	Port size	Air flow	Operating press.	Power consumption	Weight
MH 510 504 TT	Ø 5 mm	650 l/min	2 - 10 bar*	3 W = / 5 VA ~	0,21 kg
MH 510 704 TT	Ø 7 mm	1250 l/min	2 - 10 bar*	3 W = / 5 VA ~	0,22 kg
MH 520 504 TT	Ø 5 mm	650 l/min	2 - 10 bar*	3 W = / 5 VA ~	0,32 kg
MH 520 704 TT	Ø 7 mm	1250 l/min	2 - 10 bar*	3 W = / 5 VA ~	0,34 kg

* Below -20° C the operating pressure increases to 3 bar.

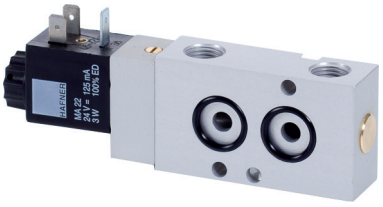
MNH 310 701 TT/MNH 311 701 TT

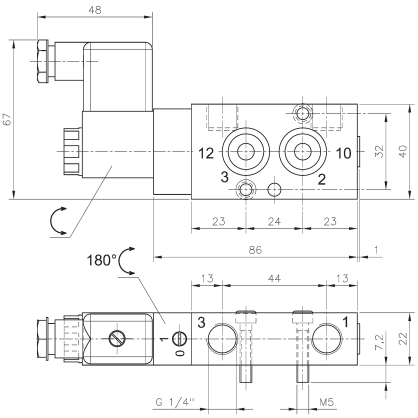


MNH 310 701 TT



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 NAMUR-standard, with exhaust air recirculation (purge).

Type MNH 310 _ _ _ with pneumatic spring return
Type MNH 311 _ _ _ with combined spring assuring a fail-safe function in case of cut-off of pressure supply.

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 note:
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.
Further information on page 15.
Use unlubricated air only.

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

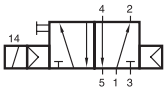
NPT ported valves are available on request.

G 1/2“ version available on request.

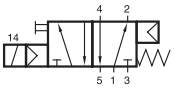
Type	NAMUR	Port size	Air flow	Operating press.	Power consumption	Weight	
MNH 310 701 TT	1/4”	G 1/4”	1250 l/min	2 - 10 bar*	3 W = / 5 VA ~	0,28 kg	Ex
MNH 311 701 TT	1/4”	G 1/4”	1250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,28 kg	Ex

* Below -20° C the operating pressure increases to 3 bar.

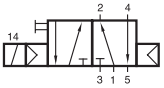
MNH 510 701 TT/MNH 511 701 TT
MNH 510 711 TT/MNH 511 711 TT



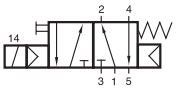
MNH 510 701 TT



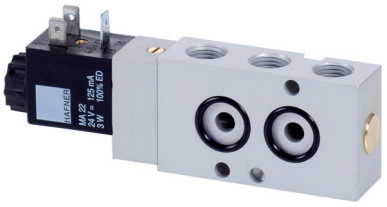
MNH 511 701 TT



MNH 510 711 TT



MNH 511 711 TT



5/2-way solenoid valve, actuated by permanent signal for low temperature environment - 50° C to + 50° C.
Interface according to NAMUR-standard, with exhaust air recirculation (purge).

Type MNH 510 _ _ _ with pneumatic spring return
Type MNH 511_ _ _ with combined spring

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

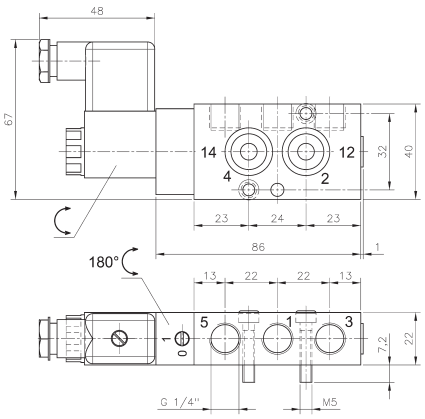
Valves are equipped with manual override to turn.

Please note:
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.
Further information on page 15.
Use unlubricated air only.

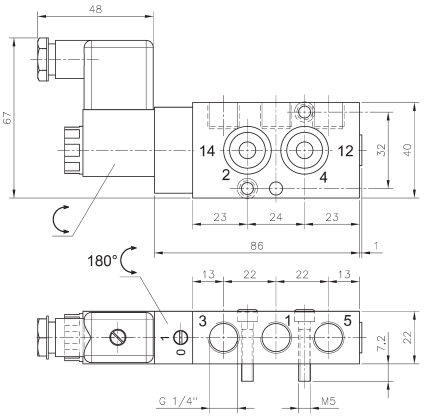
Delivery includes 1 pin, 2 screws, 2 O-rings.

NPT ported valves are available on request.

G 1/2“ version available on request.



MNH 510 701 TT/MNH 511 701 TT

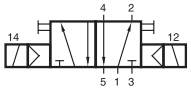


MNH 510 711 TT/MNH 511 711 TT
ports 2 and 4 are swapped!

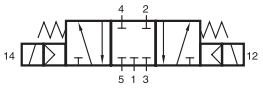
Type	NAMUR	Port size	Air flow	Operating press.	Power consumption	Weight	
MNH 510 701 TT	1/4”	G 1/4”	1250 l/min	2 - 10 bar*	3 W = / 5 VA ~	0,28 kg	Ex
MNH 511 701 TT	1/4”	G 1/4”	1250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,28 kg	Ex
MNH 510 711 TT	1/4”	G 1/4”	1250 l/min	2 - 10 bar*	3 W = / 5 VA ~	0,28 kg	Ex
MNH 511 711 TT	1/4”	G 1/4”	1250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,28 kg	

* Below -20° C the operating pressure increases to 3 bar.

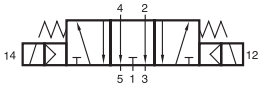
MNH 520 701 TT/MNH 53_ 701 TT



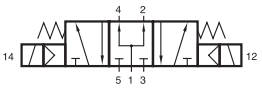
MNH 520 701 TT



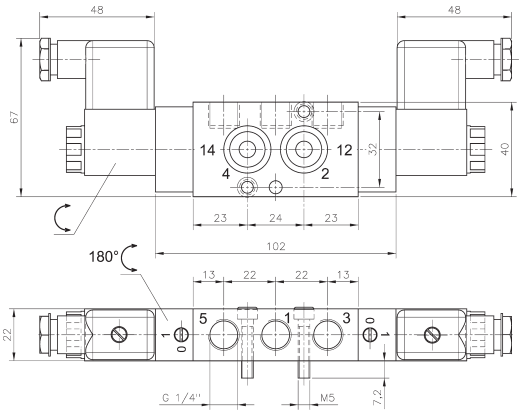
MNH 531 701 TT



MNH 532 701 TT



MNH 533 701 TT



MNH 520 701 TT/MNH 53_ 701 TT

5-way solenoid valves for low temperature environment
- 50° C to + 50° C.
Interface according to NAMUR-standard.

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 pressurised

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

Valves are generally equipped with manual override.

Please note:
When operated below 0° C the pressure condensation point has to be at least 15° C below thetemperature of environment and media. Air has to be dried!
Below - 40° C the leakage-rate of the valve can increase. Further information on page 15.
Use unlubricated air only.

For type 531 701:
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.

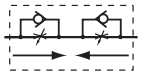
Delivery includes 1 pin, 2 screws, 2 O-rings.

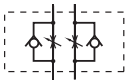
NPT ported valves are available on request.

Type	NAMUR	Port size	Air flow	Operating press.	Power cons.	Weight	
MNH 520 701 TT	1/4”	G 1/4”	1250 l/min	2 - 10 bar*	3 W = / 5 VA ~	0,41 kg	Ex
MNH 53_ 701 TT	1/4”	G 1/4”	1250 l/min	3 - 10 bar	3 W = / 5 VA ~	0,41 kg	Ex

* Below -20° C the operating pressure increases to 3 bar.

DRN 3 611 TT/DRN 5 611 TT


DRN 3 611 TT


DRN 5 611 TT

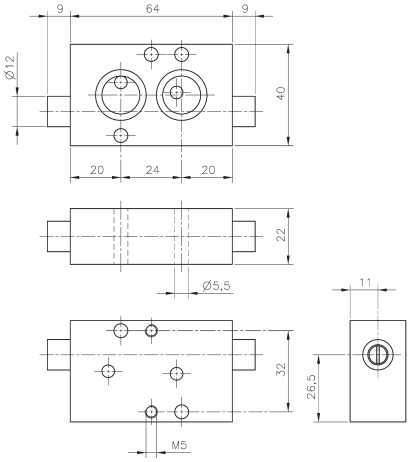
Block form flow regulator as intermediate plate, interface according to 1/4" NAMUR-standard for low temperature environment - 50° C to + 50° C.

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.

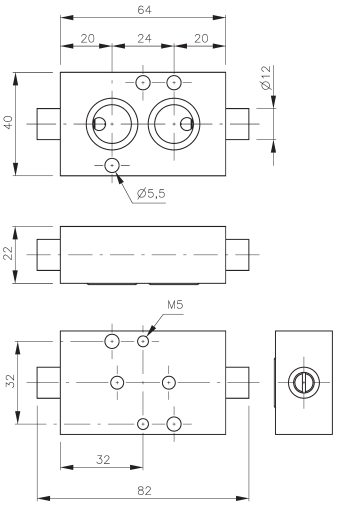
Type DRN 5 611 TT:
for 5/2 and 5/3 way valves only. To regulate the forward- and backward stroke of a double acting pneumatic actuator. To be operated with a screw-driver.

Please note:
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.



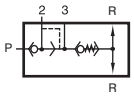
DRN 3 611



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	

UB 701 TT



UB 701 TT

The air-recirculation block guarantees, that only exhausting air from the actuation chamber is going into the spring chamber, no ambient atmosphere is sucked-in.

Valve is designed for spring return pneumatic actuators with 1/4” NAMUR-interface to be controlled by a remote piloted 3/2-way valve.

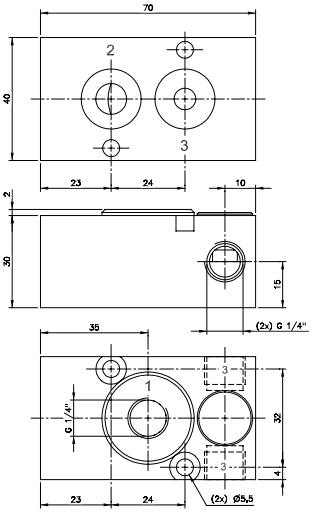
Standard with G 1/4“ pilot port. Materials being used:

Body:	aluminum
Diaphragm:	NBR
Other inner parts:	brass

One of the two exhaust ports 3 to be closed by a plug.

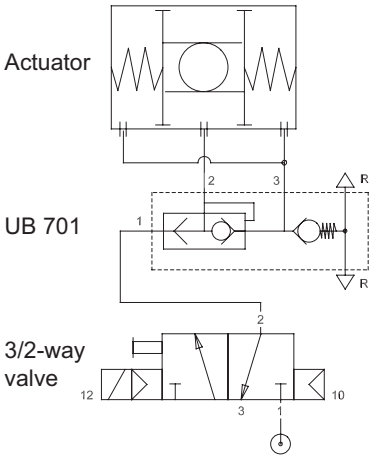
Delivery includes 2 srews, 2 O-rings, 1/4” plug for port 3.

Temperature range: -40°C to +50°C



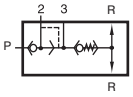
UB 701 TT

Function:

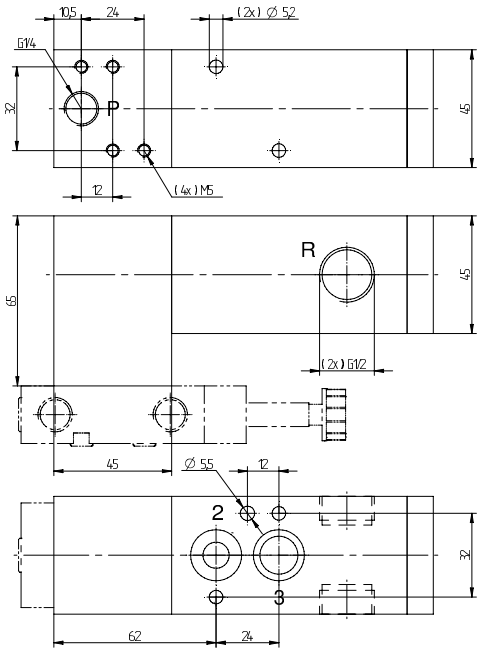


Type	NAMUR	Port size	Air flow	Operating pressure	Weight
UB 701 TT	1/4”	G 1/4”	1250 l/min	1 - 10 bar	0,22 kg

SENR 207 01 TT



SENR 207 01 TT



SENR 207 01 TT

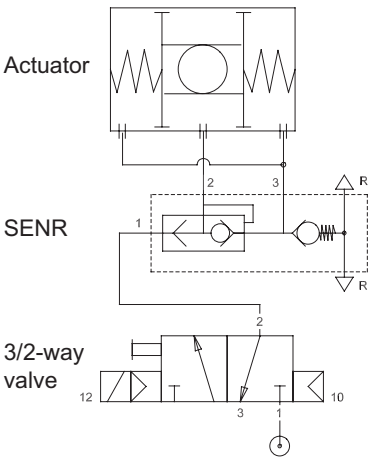
Quick-exhaust block for external piping and universal NAMUR-valve mounting for low temperature environment -40°C to +50°C.
The valve is designed for fast closing of spring-return actuators with 1/4" NAMUR-interface.

The block assures that only compressed air that has been used to open the actuator is used in the spring-chamber (non-return-function). Excess air is released very fast by the quick-exhaust valve, exhaust-port G 1/2", orifice 10 mm. The non-return valve makes absolutely sure that no ambient atmosphere can be sucked into the actuator.

Two exhaust-ports R allow that the product can always be assembled so the silencer faces downwards.

Delivery includes 2 screws, 2 O-rings, 1/2" plug for port R.

Function:



Type	NAMUR	Port P	Port R	Air flow P to 2	Air flow exhaust	Operating press.	Weight
SENR 207 01 TT	1/4"	G 1/4" - 1/4" NAMUR	G 1/2"	1250 l/min	2500 l/min	2 - 10 bar	0,85 kg