



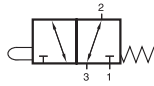
# 2.2 Valves for Panel Mounting

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

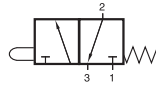


Selected models are available for low temperature application. For detailed information refer to chapter 2.11.

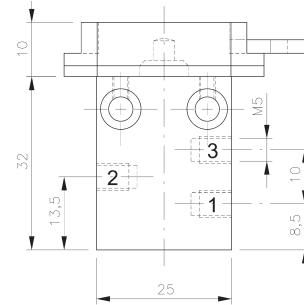
# BA 311 201/BA 311 202/BA 311 203 BA 311 243/BA 311 301



BA 311 201  
BA 311 301



BA 311 202  
BA 311 203  
BA 311 243



BA 311 201

3/2-way spool valve with mechanical spring for panel mounting.

Valves with ports 1 - 3 on the side (type 201 and 301) are similar to those described on page 2.1.1.1. and 2.1.1.4.

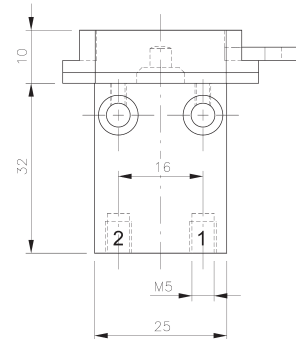
For the valve with the ports on the bottom (type 202) please refer to page 2.1.1.2.

Valves BA 311 203 and BA 311 243 have port 1 and 2 at one side and exhaust through the end-cap. BA 311 243 offers 4 mm push-in fittings at ports 1 and 2.

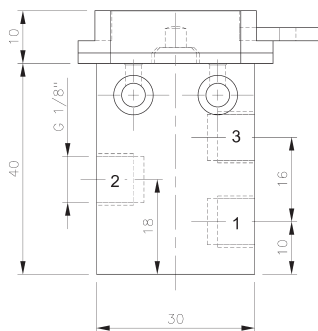
Normally open versions of BA 311 203 and BA 311 243 can be delivered on request.

The actuating elements are displayed on page 2.2.3.

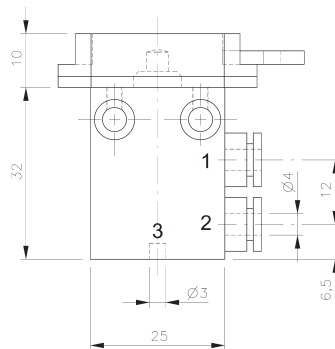
Selected valves can be used for technical vacuum too.



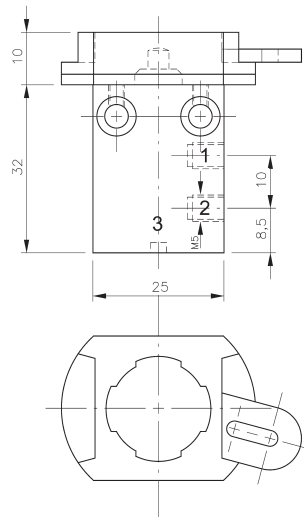
BA 311 202



BA 311 301

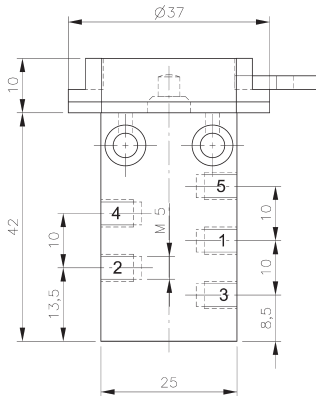
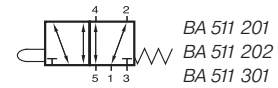


BA 311 243



BA 311 203

Type	Port size	Air flow	Operating press.	Actuating force	Weight
BA 311 201	M5	125 l/min	-0,9 - 10 bar	14 N	0,043 kg
BA 311 202	M5	125 l/min	0 - 10 bar	14 N	0,043 kg
BA 311 203	M5	125 l/min	0 - 10 bar	14 N	0,043 kg
BA 311 243	pif 4 mm	125 l/min	0 - 10 bar	14 N	0,043 kg
BA 311 301	G 1/8"	280 l/min	-0,9 - 10 bar	14 N	0,057 kg



**BA 511 201**

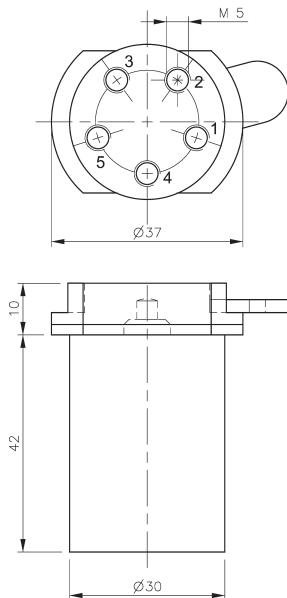


5/2-way spool valve with mechanical spring for panel mounting.

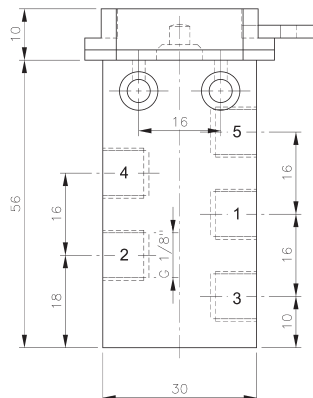
Actuating elements are displayed on page 2.2.3.

Exhaust can be throttled.

Selected valves can be used for technical vacuum too.



**BA 511 202**



**BA 511 301**

Type	Port size	Air flow	Operating press.	Actuating force	Weight
BA 511 201	M5	125 l/min	-0,9 - 10 bar	14 N	0,053 kg
BA 511 202	M5	125 l/min	0 - 10 bar	14 N	0,095 kg
BA 511 301	G 1/8"	280 l/min	-0,9 - 10 bar	14 N	0,075 kg

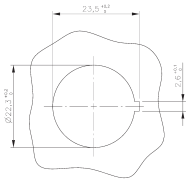


# Ø 22 mm Actuators for Panel Mounting

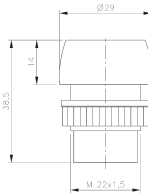


Actuating elements for valves displayed on page 2.2.1 and 2.2.2.

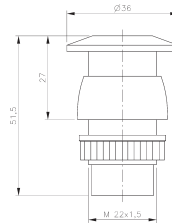
Declaration of manufacturer that actuation elements have no intrinsic ignition source can be supplied on request.



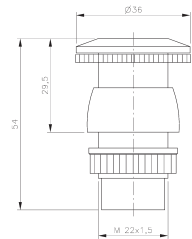
Panel mounting hole



BA 221



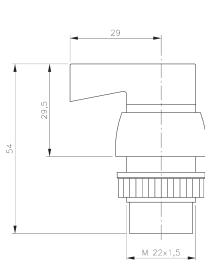
BA 222



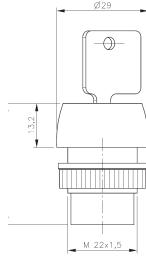
BA 223



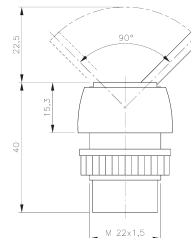
BA 221 SSK



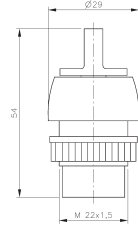
BA 224



BA 225



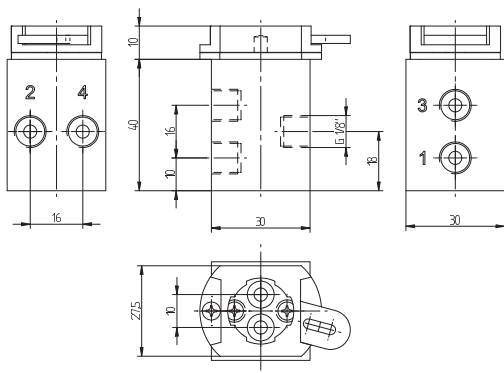
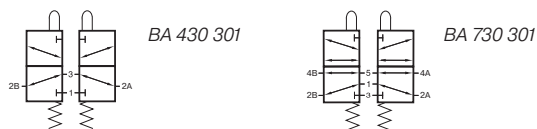
BA 226



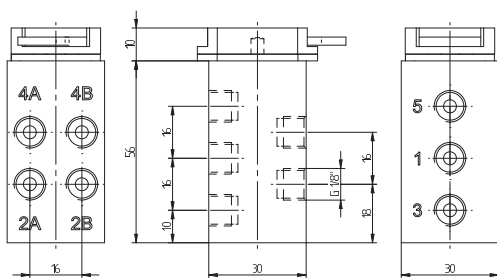
BA 227 01

Type	Actuation	Colour	Actuating force	Weight
BA 221 01	Push button	black	16 N	0,014 kg
BA 221 02	Push button	red	16 N	0,014 kg
BA 221 03	Push button	green	16 N	0,014 kg
BA 221 04	Push button	yellow	16 N	0,014 kg
BA 221 05	Push button	blue	16 N	0,014 kg
BA 221 06	Push button	white	16 N	0,014 kg
BA 222 01	Palm button	black	16 N	0,020 kg
BA 223 02*	Palm button w. detend	red	27 N	0,026 kg
BA 224 01	Rotary lever long	black	42 N/cm	0,021 kg
BA 225 00	Locking switch		25 N	0,080 kg
BA 226 01	Switch	black	16 N/cm	0,019 kg
BA 227 01	Rotary lever short	black	16 N/cm	0,018 kg
BA 221 SSK	Transparent dust protection cap for BA 221 __			0,009 kg

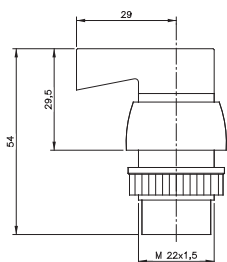
\* available on request: for 30 mm panel mounting hole.



**BA 430 301**



**BA 730 301**



**BA 334 01**



**BA 430 301**

4/3-way spool valve for panel mounting. Middle position exhausted. Typical application: for controlling two single-acting actuators.

**BA 730 301**

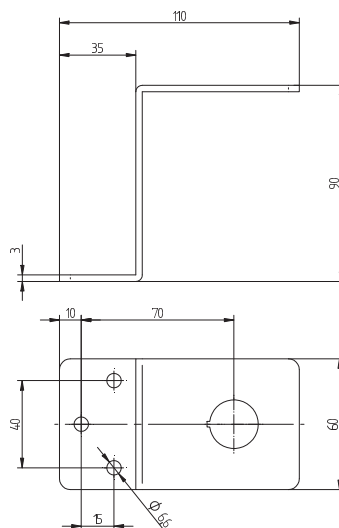
7/3-way spool valve for panel mounting. Typical application: for controlling two double-acting actuators.

**BA 334 01**

3-position rotary lever long with detent. Please note: Although the valves have a mechanic spring inside, the actuator is with detent.

**BW BA 22**

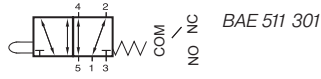
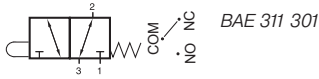
Mounting bracket to install a panel mounting valve without a control panel.



**BW BA 22**

Type	Function	Port size	Air flow	Operating press.	Actuating force	Weight
BA 430 301	double 3/2-way	G 1/8"	280 l/min	0 - 10 bar	14 N	0,110 kg
BA 730 301	double 5/2-way	G 1/8"	280 l/min	0 - 10 bar	14 N	0,150 kg
BA 334 01	Rotary lever long	-	-	-	42 N/cm	0,021 kg
BW BA 22	Mounting bracket	-	-	-	-	0,265 kg

# BAE 311 301/BAE 511 301



The BAE 311 301 is a 3/2-way spool valve with mechanical spring for panel mounting that can either be used normally closed (pressure at port 1) or normally open (pressure at port 3).

The BAE 511 301 is a 5/2-way spool valve with mechanical spring for panel mounting.

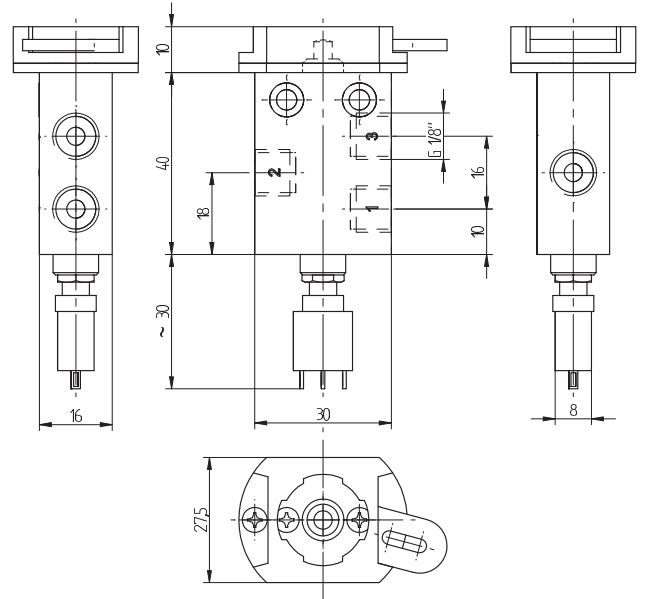
The valves include an electric switch that is actuated at the same time.

The electrical switch can be used up to 6 A / 125 VAC. Switch can be connected in two ways either normally open or normally closed.

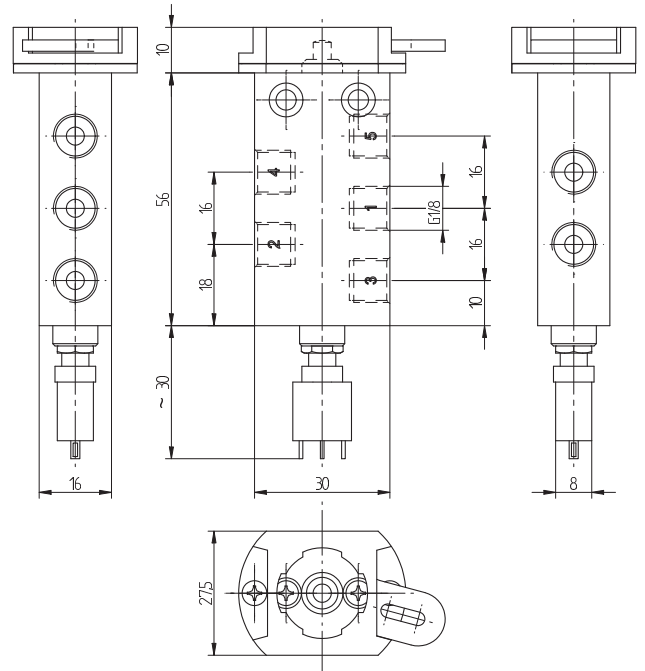
The electrical switch can also be combined with BA 311 201 and BA 511 201 on demand.

All the actuation-elements displayed on page 2.2.3 can be combined with the valve.

Please order including actuation element.



**BAE 311 301**

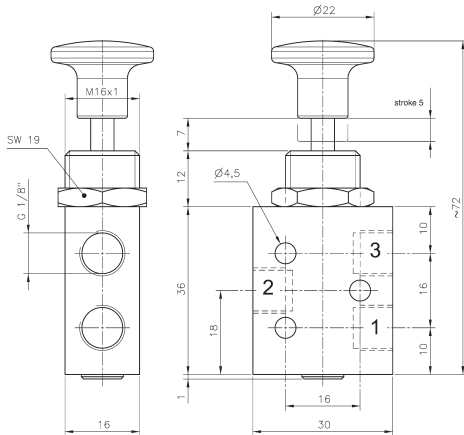
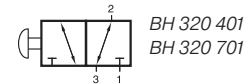
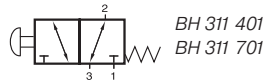


**BAE 511 301**

Type	Port size	Air flow	Operating press.	Actuating force	Weight
BAE 311 301	G 1/8"	280 l/min	0 - 10 bar	17 N	0,08 kg
BAE 511 301	G 1/8"	280 l/min	0 - 10 bar	17 N	0,097 kg



# BH 311 401/BH 320 401 BH 311 701/BH 320 701



**BH 311 401/BH 320 401**

Manually actuated 3/2-way spool valve either with spring return to outer position (type 311) or with two stable positions (type 320).

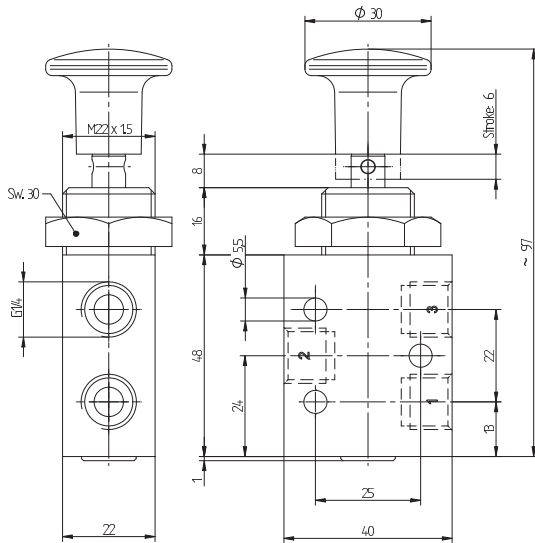
If pressure is applied to port 1 the function is normally closed.

If pressure is applied to port 3 the function is normally open.

Exhaust can be throttled.

Suitable for wall or panel mounting. Nut for panel mounting, M16 x 1 for G 1/8"-valves or M22 x 1,5 for G 1/4"-valves is included.

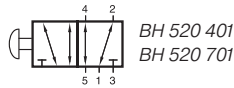
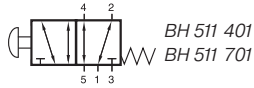
Selected valves can be used for technical vacuum too.



**BH 311 701/BH 320 701**

Type	Port size	Air flow	Operating press.	Actuating force	Weight
BH 311 401	G 1/8"	450 l/min	1 - 10 bar	11 N	0,064 kg
BH 320 401	G 1/8"	450 l/min	1 - 10 bar	12 N	0,064 kg
BH 311 701	G 1/4"	1250 l/min	-0,9 - 10 bar	17 N	0,140 kg ❄️
BH 320 701	G 1/4"	1250 l/min	-0,9 - 10 bar	18 N	0,140 kg ❄️

# BH 511 401/BH 520 401 BH 511 701/BH 520 701



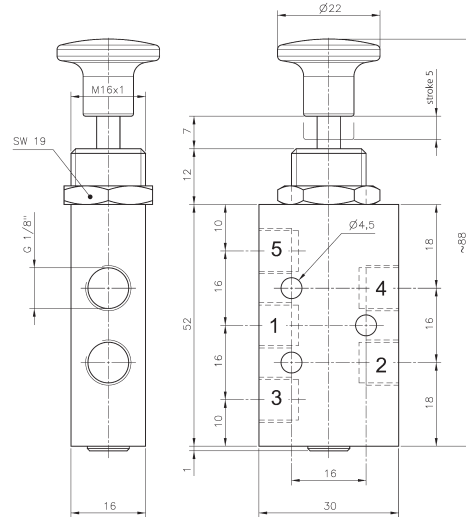
Manually actuated 5/2-way spool valve either with spring return to outer position (type 511) or with two stable positions (type 520).

Normally open from port 1 to 2 and from port 4 to 5. Operated open from port 1 to 4 and port 2 to 3.

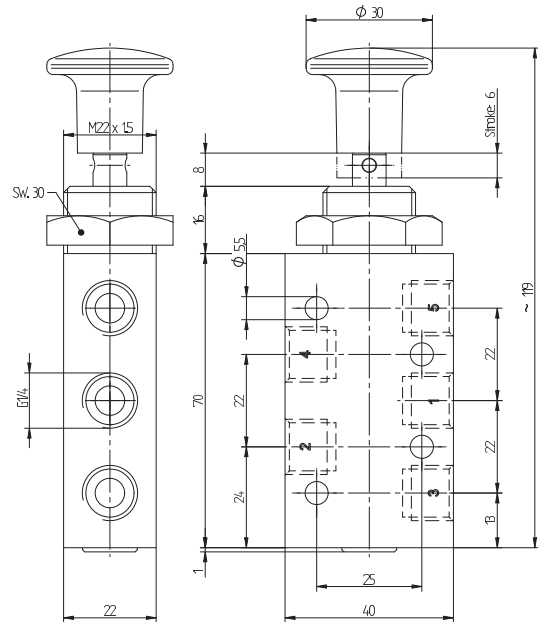
Exhaust can be throttled.

Suitable for wall or panel mounting. Nut for panel mounting, M16 x 1 for G 1/8"-valves or M22 x 1,5 for G 1/4"-valves is included.

Selected valves can be used for technical vacuum too.



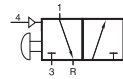
**BH 511 401/BH 520 401**



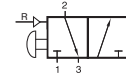
**BH 511 701/BH 520 701**

Type	Port size	Air flow	Operating press.	Actuating force	Weight
BH 511 401	G 1/8"	450 l/min	1 - 10 bar	11 N	0,080 kg
BH 520 401	G 1/8"	450 l/min	1 - 10 bar	12 N	0,080 kg
BH 511 701	G 1/4"	1250 l/min	-0,9 - 10 bar	17 N	0,180 kg ❄️
BH 520 701	G 1/4"	1250 l/min	-0,9 - 10 bar	18 N	0,180 kg ❄️

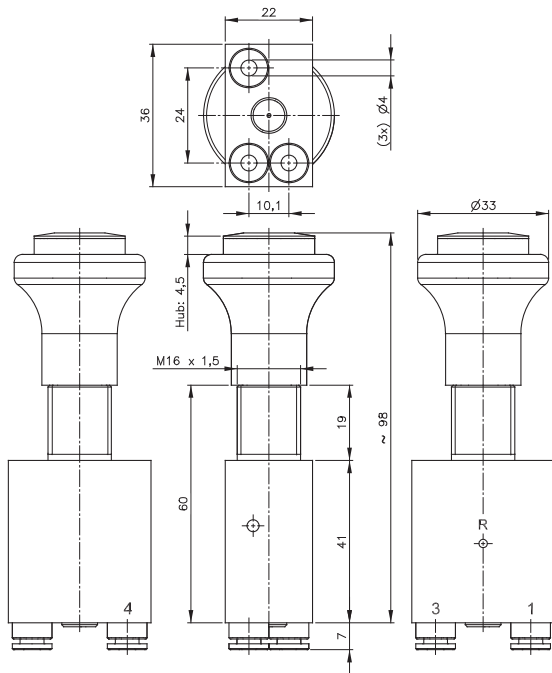




BHP 320 442



BHP 320 462



BHP 320 442



Manually actuated 3/2-way spool valve with 2 stable positions and pneumatic reset.

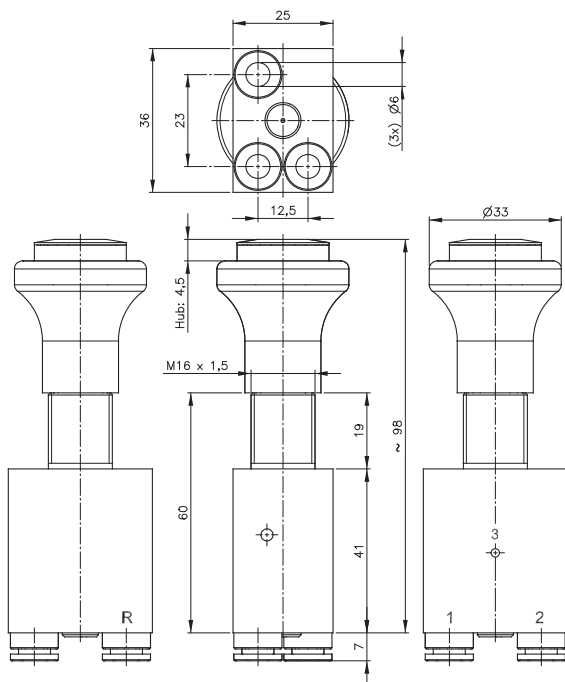
Ports on the bottom of the valve are equipped with integrated push-in fittings. Exhaust is undeducted. Valve is equipped with FKM seals.

If pressure is applied to port 4 (pneumatic reset-port) the stem is pulled in. The knob carries an indicator ring that sticks out when the valve is pulled = actuated.

The following knob-colours are available:

Colour code	Colour of knob	Colour of indicator
01	black	white
02	red	white
03	green	red
04	yellow	white
05	blue	white

If requested we add fixing nut DIN 439-VZ-M16x1,5 material: steel zinc plated.

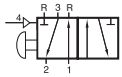


BHP 320 462

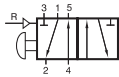
Type	Function	Ports	Air flow	Operating press.	Reset press.	Weight
BHP 320 442	3/2-way	pif 4 mm	300 l/min	1 - 16 bar	5 bar	0,13 kg
BHP 320 462	3/2-way	pif 6 mm	300 l/min	1 - 16 bar	5 bar	0,13 kg

Please add two digits for colour of knob.

# BHP 520 442/BHP 520 462



BHP 520 442



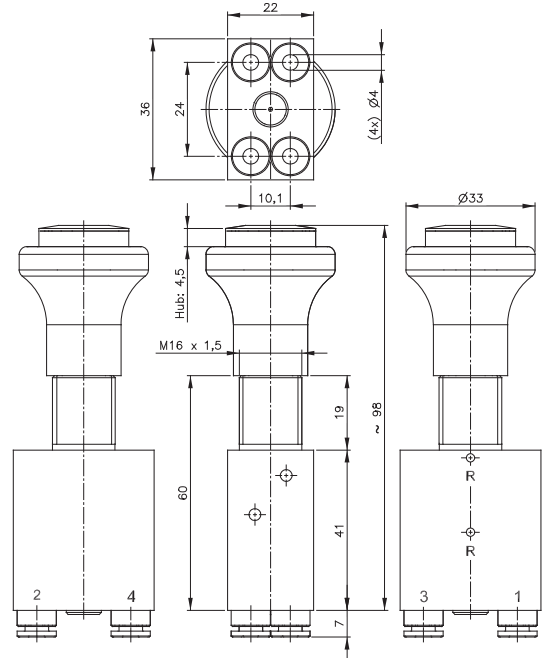
BHP 520 462



Manually actuated 5/2-way spool valve with 2 stable positions and pneumatic reset.

Ports on the bottom of the valve are equipped with integrated push-in fittings. Exhaust is undeducted. Valve is equipped with FKM seals.

If pressure is applied to port 4 (pneumatic reset-port) the stem is pulled in. The knob carries an indicator ring that sticks out when the valve is pulled = actuated.

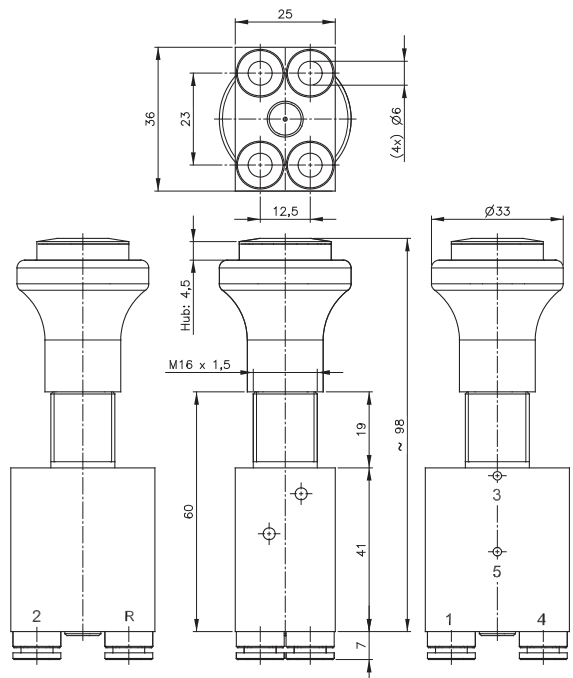


BHP 520 442

The following knob-colours are available:

Colour code	Colour of knob	Colour of indicator
01	black	white
02	red	white
03	green	red
04	yellow	white
05	blue	white

If requested we add fixing nut DIN 439-VZ-M16x1,5 material: steel zinc plated.



BHP 520 462

Type	Function	Ports	Air flow	Operating press.	Reset press.	Weight
BHP 520 442 _	5/2-way	pif 4 mm	300 l/min	1 - 16 bar	5 bar	0,13 kg
BHP 520 462 _	5/2-way	pif 6 mm	300 l/min	1 - 16 bar	5 bar	0,13 kg



Please add two digits for colour of knob.