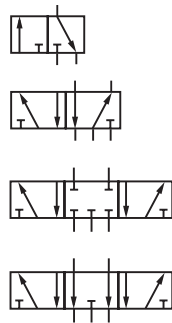


## 030, X30, X33 (SUPER X) 3/2, 5/2 and 5/3 manual and mechanical actuated spool valves 1/8", ø 6 mm PIF & 1/4"

**Wide range of operators**  
**Suitable for multi-directional flow**  
**and dual supply applications**  
**High flow capacity**



### Technical features

**Medium:**

Compressed air, filtered, lubricated and non-lubricated

**Operation:**

Spool valve, directly and indirectly actuated

**Ports:**

1/8", ø 6 mm PIF (available on the PA range only) and 1/4"

**Operating pressure:**

Max. 10 bar

**Flow:**

Size	l/min	Cv	Kv
1/8"	335	0,34	0,295
1/4"	965	0,98	0,351

**Ambient temperature:**

0 ... +70°C

Air supply must be dry enough to avoid ice formation at temperatures below +2°C

**Mounting:**

Through-holes in valve body

**3/2 way PA body valves**

Metal versions are available on request

**Port assembly torque:**

Use recommended torque for fittings. This should not exceed 10 Nm, otherwise damage may occur to body.

**PIF Ports:**

The PIF fittings are suitable for Nylon 11 or 12, polyurethane (92 to 98 shore) and other plasticised or unplasticised tubing which conforms to the tolerances specified in BS5409, Part 1, 1976, light and normal duty, DIN 73378, DIN 74234, NFE 49-100. Tube is to be cut square and free of burrs.

**Materials**

**Plastic version for 3/2 way valves only**

Body and end cover: PA6  
 Operators: Aluminium, steel, plastic etc.

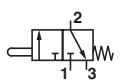
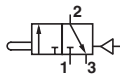
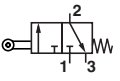
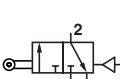

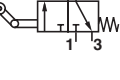
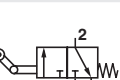

Seals: nitrile rubber

**Metal version**

Body: diecast zinc  
 End cover: aluminium or glass-filled nylon  
 Operators: Aluminium, steel, plastic etc.

Seals: nitrile rubber

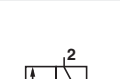
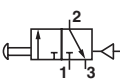
**Technical data**
**3/2 mechanical valves**

Symbol	Port size	Actuation	Body	Operating pressure (bar)	Operating force (N)	Weight (kg)	Spares kit	Dimension No.	Model
	G1/8	Plunger/spring	PA6	- 0,9 ... 10	31	0,06	03 8408 02	1	03 0400 02
	ø 6 mm	Plunger/spring	PA6	- 0,9 ... 10	31	0,07	03 8408 02	1	03 0400 32
	G1/4	Plunger/spring	Zinc	- 0,9 ... 10	53	0,34	03 8602 02	23	03 0600 02
	G1/8	Plunger/pilot	Zinc	- 0,9 ... 10 *1)	18	0,20	03 8408 02	2	03 0417 02
	G1/8	Roller/spring	PA6	- 0,9 ... 10	31	0,06	03 8408 02	3	03 0402 02
	ø 6 mm	Roller/spring	PA6	- 0,9 ... 10	31	0,07	03 8408 02	3	03 0402 32
	G1/4	Roller/spring	Zinc	- 0,9 ... 10	61	0,34	03 8602 02	24	03 0602 02
	G1/8	Roller/pilot	Zinc	- 0,9 ... 10	18 *1)	0,18	03 8408 02	4	03 0409 02
	G1/4	Roller/pilot	Zinc	- 0,9 ... 10	13 *1)	0,39	03 8612 02	25	03 0609 02
	G1/8	Roller lever/pilot	Zinc	- 0,9 ... 10	9 *1)	0,25	03 8408 02	6	03 0427 02
	G1/4	Roller lever/pilot	Zinc	- 0,9 ... 10	9 *1)	0,45	03 8612 02	27	03 0624 02
	G1/8	Roller lever/spring	PA6	- 0,9 ... 10	31	0,09	03 8408 02	5	03 0411 02
	ø 6 mm	Roller lever/spring	PA6	- 0,9 ... 10	31	0,10	03 8408 02	5	03 0411 32
	G1/4	Roller lever/spring	Zinc	- 0,9 ... 10	45	0,41	03 8602 02	26	03 0611 42
	G1/8	Roller lever (heavy duty) /spring	PA6	- 0,9 ... 10	31	0,12	03 8408 02	7	03 0293 02
	ø 6 mm	Roller lever (heavy duty) /spring	PA6	- 0,9 ... 10	31	0,13	03 8408 02	7	03 0293 32
	G1/8	One way trip lever/spring	PA6	- 0,9 ... 10	31	0,12	03 8408 02	9	03 0410 02
	ø 6 mm	One way trip lever/spring	PA6	- 0,9 ... 10	31	0,13	03 8408 02	9	03 0410 32
	G1/8	One way trip lever (heavy duty) /spring	PA6	- 0,9 ... 10	31	0,15	03 8408 02	10	03 0294 02
	ø 6 mm	One way trip lever (heavy duty) /spring	PA6	- 0,9 ... 10	31	0,16	03 8408 02	10	03 0294 32
	G1/8	Antenna/spring	PA6	- 0,9 ... 10	0,3 at tip	0,10	03 8432 02	11	03 0432 02
	ø 6 mm	Antenna/spring	PA6	- 0,9 ... 10	0,3 at tip	0,11	03 8432 02	11	03 0432 32
	G1/8	Sensitive roller/spring	Zinc	- 0,9 ... 10	1	0,25	03 8473 02	8	03 0423 02

\*1) At zero bar, reset pressure 2 bar minimum

Pressure for pilot function is the minimum pressure to operate the valve. The valve may switch below this pressure.

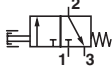
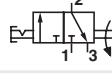
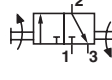
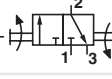
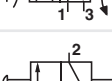
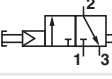

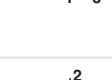
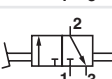

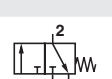
**3/2 manual valves**

Symbol	Port size	Actuation	Body	Colour	Operating pressure (bar)	Operating force (N)	Weight (kg)	Spares kit	Dimension No.	Model
	G1/8	Button/spring	PA6	Black	- 0,9 ... 10	31	0,07	03 8408 02	33	03 0404 02
	ø 6 mm	Button/spring	PA6	Black	- 0,9 ... 10	31	0,08	03 8408 02	33	03 0404 32
	G1/8	Button/spring	PA6	Green	- 0,9 ... 10	31	0,07	03 8408 02	33	03 0405 02
	ø 6 mm	Button/spring	PA6	Green	- 0,9 ... 10	31	0,08	03 8408 02	33	03 0405 32
	G1/8	Button/spring	PA6	Red	- 0,9 ... 10	31	0,07	03 8408 02	33	03 0406 02
	ø 6 mm	Button/spring	PA6	Red	- 0,9 ... 10	31	0,08	03 8408 02	33	03 0406 32
	G1/4	Knob/spring	Zinc	Black	- 0,9 ... 10	53	0,41	03 8612 02	67	03 0604 02
	G1/8	Knob/spring	PA6	Black	- 0,9 ... 10	18	0,07	03 8408 02	44	03 0345 02
	ø 6 mm	Knob/spring	PA6	Black	- 0,9 ... 10	18	0,08	03 8408 02	44	03 0345 32
	G1/8	Button (palm) /spring	PA6	Red	- 0,9 ... 10	31	0,13	03 8408 02	35	03 0366 02
	ø 6 mm	Button (palm) /spring	PA6	Red	- 0,9 ... 10	31	0,14	03 8408 02	35	03 0366 32
	G1/8	Button (palm) /spring	PA6	Green	- 0,9 ... 10	31	0,13	03 8408 02	35	03 0367 02
ø 6 mm	Button (palm) /spring	PA6	Green	- 0,9 ... 10	31	0,14	03 8408 02	35	03 0367 32	
	G1/8	Button/pilot	Zinc	Black	- 0,9 ... 10 *1)	18	0,22	03 8408 02	34	03 0408 02
	G1/8	Button/pilot	Zinc	Green	- 0,9 ... 10 *1)	18	0,22	03 8408 02	34	03 0420 02
	G1/8	Button/pilot	Zinc	Red	- 0,9 ... 10 *1)	18	0,22	03 8408 02	34	03 0421 02
	G1/4	Button/pilot	Zinc	Black	- 0,9 ... 10 *1)	13	0,42	03 8612 02	68	03 0608 02

\*1) At zero bar, reset pressure 2 bar minimum

Pressure for pilot function is the minimum pressure to operate the valve. The valve may switch below this pressure.

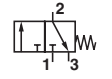
**3/2 manual valves**

Symbol	Port size	Actuation	Body	Colour	Operating pressure (bar)	Operating force (N)	Weight (kg)	Spares kit	Dimension No.	Model
	G1/8	Button (shrouded)/spring	PA6	Black	- 0,9 ... 10	31	0,11	03 8408 02	36	03 0414 02
	ø 6 mm	Button (shrouded)/spring	PA6	Black	- 0,9 ... 10	31	0,12	03 8408 02	36	03 0414 32
	G1/8	Button (shrouded)/spring	PA6	Green	- 0,9 ... 10	31	0,11	03 8408 02	36	03 0415 02
	ø 6 mm	Button (shrouded)/spring	PA6	Green	- 0,9 ... 10	31	0,12	03 8408 02	36	03 0415 32
	G1/8	Button (shrouded)/spring	PA6	Red	- 0,9 ... 10	31	0,11	03 8408 02	36	03 0416 02
	ø 6 mm	Button (shrouded)/spring	PA6	Red	- 0,9 ... 10	31	0,12	03 8408 02	36	03 0416 32
	G1/8	Emergency stop/twist reset	PA6	Red	- 0,9 ... 10	18	0,15	03 8408 02	37	SLV/11883/1
	ø 6 mm	Emergency stop/twist reset	PA6	Red	- 0,9 ... 10	18	0,16	03 8408 02	37	SLV/11883/3
	G1/8	Rotary knob/set reset	PA6	Black	- 0,9 ... 10	—	0,14	03 8408 02	47	03 0298 02
	ø 6 mm	Rotary knob/set reset	PA6	Black	- 0,9 ... 10	—	0,15	03 8408 02	47	03 0298 32
	G1/8	Rotary knob/set reset	PA6	Black	- 0,9 ... 10	—	0,16	03 8408 02	46	SLV/11807/1
	ø 6 mm	Rotary knob/set reset	PA6	Black	- 0,9 ... 10	—	0,17	03 8408 02	46	SLV/11807/3
	G1/8	Emergency stop/set reset	PA6	Red	- 0,9 ... 10	70	0,14	03 8408 02	38	03 0299 02
	ø 6 mm	Emergency stop/set reset	PA6	Red	- 0,9 ... 10	70	0,15	03 8408 02	38	03 0299 32
	G1/8	Botton (palm)/key	PA6	Red	- 0,9 ... 10	31	0,20	03 8408 02	39	03 0335 02 801
	ø 6 mm	Botton (palm)/key	PA6	Red	- 0,9 ... 10	31	0,21	03 8408 02	39	03 0335 32 801
	G1/8	Key/key	PA6	Red	- 0,9 ... 10	—	0,16	03 8408 02	48	03 0418 02 801
	ø 6 mm	Key/key	PA6	Red	- 0,9 ... 10	—	0,17	03 8408 02	48	03 0418 22 801
	G1/8	Knob/knob	PA6	Black	- 0,9 ... 10	18	0,07	03 8408 02	44	03 0425 02
	ø 6 mm	Knob/knob	PA6	Black	- 0,9 ... 10	18	0,08	03 8408 02	44	03 0425 32
	G1/4	Knob/knob	Zinc	Black	- 0,9 ... 10	13	0,37	03 8602 02	69	03 0625 02
	G1/8	Knob/knob or pilot	Zinc	Black	- 0,9 ... 10	18	0,21	03 8408 02	45	03 0424 02
	G1/4	Knob/knob or pilot	Zinc	Black	- 0,9 ... 10 *3)	13	0,41	03 8612 02	70	03 0627 02
	G1/8	Knob lever/spring	PA6	Black	- 0,9 ... 10	18	0,09	03 8408 02	43	03 0426 02
	ø 6 mm	Knob lever/spring	PA6	Black	- 0,9 ... 10	18	0,10	03 8408 02	43	03 0426 32
	G1/8	Lever/spring	Zinc	Black	- 0,9 ... 10	9	0,28	03 8408 02	42	03 0438 02
	G1/4	Lever/spring	Zinc	Black	- 0,9 ... 10	15	0,48	03 8602 02	71	03 0638 02
	G1/8	Toggle/toggle	PA6	Black	- 0,9 ... 10	28	0,06	03 8408 02	41	03 0403 02
	ø 6 mm	Toggle/toggle	PA6	Black	- 0,9 ... 10	28	0,07	03 8408 02	41	03 0403 32
	G1/8	Lever/lever	PA6	Black	- 0,9 ... 10	9	0,29	03 8408 02	42	03 0437 02
	G1/8	Lever/lever	Zinc	Black	- 0,9 ... 10	13	0,17	03 8408 02	40	03 0296 02
	G1/4	Lever/lever	Zinc	Black	- 0,9 ... 10	13	0,48	03 8602 02	71	03 0637 02
	G1/8	Pedal/spring	Zinc	Black	- 0,9 ... 10	22	1,03	03 8408 02	49	03 0481 02
	G1/4	Pedal/spring	Zinc	Black	- 0,9 ... 10	22	1,23	03 8602 02	66	03 0681 02
	G1/8	Pedal/pedal	Zinc	Black	- 0,9 ... 10	22	1,07	03 8408 02	49	03 0483 02
	G1/4	Pedal/pedal	Zinc	Black	- 0,9 ... 10	22	1,27	03 8602 02	66	03 0683 02

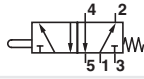
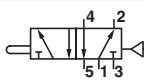
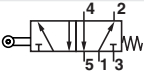
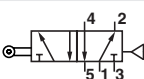
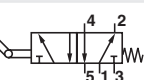
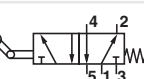
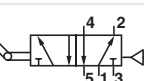
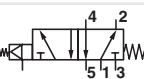
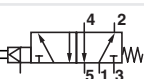
\*3) Reset pressure: 4 bar minimum

Pressure for pilot function is the minimum pressure to operate the valve. The valve may switch below this pressure.

**3/2 adaptor valves for Klöckner Möller actuators**

Symbol	Port size	Actuation	Body	Operating pressure (bar)	Operating force (N)	Weight (kg)	Spares kit	Dimension No.	Model
	G1/8	Plunger/spring	PA6	- 0,9 ... 10	31	0,60	03 8408 02	78	03 0295 02
	ø 6 mm	Plunger/spring	PA6	- 0,9 ... 10	31	0,50	03 8408 02	78	03 0295 32

**5/2 mechanical valves**

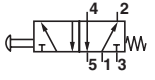
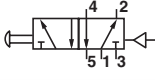
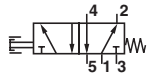
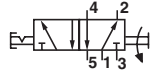
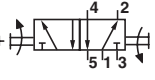
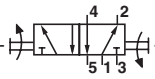
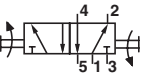

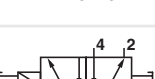

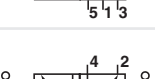
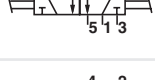
Symbol	Port size	Actuation	Operating pressure (bar)	Operating force (N)	Weight (kg)	Spares kit	Dimension No.	Model
	G1/8	Plunger/spring	- 0,9 ... 10	54	0,25	03 8408 02	12	X3 0440 02
	G1/4	Plunger/spring	- 0,9 ... 10	62	0,46	03 8602 02	28	X3 0640 02
	G1/8	Plunger/pilot	- 0,9 ... 10	22 *1)	0,31	03 8408 02	13	X3 0457 02
	G1/8	Roller/spring	- 0,9 ... 10	54	0,25	03 8408 02	14	X3 0442 02
	G1/4	Roller/spring	- 0,9 ... 10	67	0,46	03 8602 02	29	X3 0642 02
	G1/8	Roller/pilot	- 0,9 ... 10	22 *1)	0,29	03 8408 02	15	X3 0449 02
	G1/4	Roller/pilot	- 0,9 ... 10	13 *1)	0,50	03 8612 02	30	X3 0649 02
	G1/8	Roller lever/spring	- 0,9 ... 10	31	0,32	03 8408 02	16	X3 0451 02
	G1/4	Roller lever/spring	- 0,9 ... 10	45	0,53	03 8602 02	31	X3 0651 02
	G1/8	Roller lever (heavy duty)/spring	- 0,9 ... 10	31	0,29	03 8408 02	18	X3 0393 02
	G1/8	One-way trip/spring	- 0,9 ... 10	31	0,32	03 8408 02	20	X3 0450 02
	G1/8	One-way trip (heavy duty)/spring	- 0,9 ... 10	31	0,29	03 8408 02	21	X3 0394 02
	G1/8	Roller lever/pilot	- 0,9 ... 10	9 *1)	0,36	03 8408 02	17	X3 0467 02
	G1/4	Roller lever/pilot	- 0,9 ... 10	9 *1)	0,57	03 8612 02	32	X3 0664 02
	G1/8	Antennar/spring	- 0,9 ... 10 *2)	0,3	0,30	N/A	22	X3 0472 02
	G1/8	Sensitive roller/spring	- 0,9 ... 10 *2)	1	0,36	N/A	19	X3 0463 02

\*1) At zero bar, reset pressure 2 bar minimum

\*2) Constant pilot pressure supply: 3 bar minimum

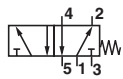
The operating pressure for pilot function is the minimum pressure to operate the valve. The valve may switch below this pressure.

**5/2 manual valves**

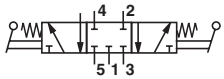
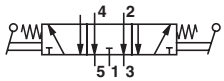
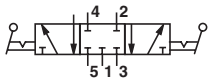
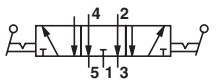
Symbol	Port size	Actuation	Colour	Operating pressure (bar)	Operating force (N)	Weight (kg)	Spares kit	Dimension No.	Model
	G1/8	Button (palm)/spring	Black	- 0,9 ... 10	54	0,26	03 8408 02	50	X3 0444 02
	G1/8	Button (palm)/spring	Green	- 0,9 ... 10	54	0,26	03 8408 02	50	X3 0445 02
	G1/8	Button (palm)/spring	Red	- 0,9 ... 10	54	0,26	03 8408 02	50	X3 0446 02
	G1/4	Button/spring	Black	- 0,9 ... 10	62	0,47	03 8602 02	72	X3 0644 02
	G1/8	Button (palm)/spring	Red	- 0,9 ... 10	31	0,40	03 8408 02	51	X3 0386 02
	G1/8	Button (palm)/spring	Green	- 0,9 ... 10	31	0,40	03 8408 02	51	X3 0387 02
	G1/8	Button (palm)/spring	Black	- 0,9 ... 10	31	0,40	03 8408 02	51	X3 0388 02
	G1/8	Button (palm)/pilot	Black	- 0,9 ... 10 *1)	22	0,34	03 8408 02	53	X3 0448 02
	G1/8	Button (palm)/pilot	Green	- 0,9 ... 10 *1)	22	0,34	03 8408 02	53	X3 0460 02
	G1/8	Button (palm)/pilot	Red	- 0,9 ... 10 *1)	22	0,34	03 8408 02	53	X3 0461 02
	G1/8	Button (shrouded)/spring	Black	- 0,9 ... 10	54	0,32	03 8408 02	52	X3 0454 02
	G1/8	Button (shrouded)/spring	Green	- 0,9 ... 10	54	0,32	03 8408 02	52	X3 0455 02
	G1/8	Button (shrouded)/spring	Red	- 0,9 ... 10	54	0,32	03 8408 02	52	X3 0456 02
	G1/8	Emergency stop/twist reset	Red	- 0,9 ... 10	18	0,54	03 8473 02	54	X3 0468 02
	G1/8	Button (palm)/key		- 0,9 ... 10	—	0,48	03 8408 02	55	X3 0375 02
	G1/8	Key/key		- 0,9 ... 10	—	0,47	03 8408 02	64	X3 0458 02 801
	G1/8	Rotary knob/knob reset		- 0,9 ... 10	—	0,48	03 8408 02	63	X3 0298 02
	G1/8	Knob/knob	Black	- 0,9 ... 10	22	0,28	03 8408 02	61	X3 0465 02
	G1/4	Knob/knob	Black	- 0,9 ... 10	13	0,49	03 8602 02	74	X3 0665 02
	G1/8	Knob, push/knob, pull or pilot	Black	- 0,9 ... 10 *1)	22	0,32	03 8602 02	62	X3 0464 02
	G1/4	Knob, push/knob, pull or pilot	Black	- 0,9 ... 10 *1)	13	0,54	03 8612 02	73	X3 0648 02
	G1/8	Knob lever/spring		- 0,9 ... 10	31	0,35	03 8408 02	60	X3 0466 02
	G1/8	Lever/spring	Black	- 0,9 ... 10	16	0,40	03 8408 02	58	X3 0478 02
	G1/4	Lever/spring	Black	- 0,9 ... 10	15	0,60	03 8602 02	75	X3 0678 02
	G1/8	Toggle/toggle	Black	- 0,9 ... 10	13	0,28	03 8408 02	56	X3 0296 02
	G1/8	Toggle/toggle	Black	- 0,9 ... 10	48	0,27	03 8408 02	57	X3 0443 02
	G1/8	Toggle/lever	Black	- 0,9 ... 10	13	0,40	03 8408 02	58	X3 0477 02
	G1/4	Toggle/lever	Black	- 0,9 ... 10	13	0,61	03 8602 02	75	X3 0677 02
	G1/8	Pedal/spring	Black	- 0,9 ... 10	22	1,12	03 8408 02	65	X3 0482 02
	G1/4	Pedal/spring	Black	- 0,9 ... 10	22	1,33	03 8602 02	77	X3 0682 02
	G1/8	Pedal/pedal	Black	- 0,9 ... 10	22	1,18	03 8408 02	65	X3 0484 02
	G1/4	Pedal/pedal	Black	- 0,9 ... 10	22	1,27	03 8602 02	76	X3 0683 02

The operating pressure for pilot function is the minimum pressure to operate the valve. The valve may switch below this pressure.

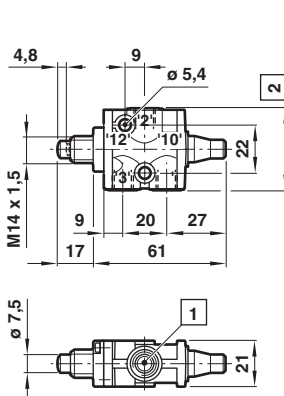
**5/2 adaptor valves for Klöckner Möller actuators**

Symbol	Port size	Actuation	Operating pressure (bar)	Operating force (N)	Weight (kg)	Spares kit	Dimension No.	Model
	G1/8	Plunger/spring	- 0,9 ... 10	54	0,25	03 8408 02	79	X0 0395 02

**5/3 manual valves**

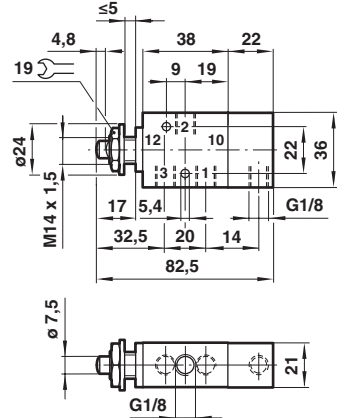
Symbol	Port size	Actuation	Colour	Function	Operating pressure (bar)	Operating force (N)	Weight (kg)	Spares kit	Dimension No.	Model
	G1/8	Lever/spring/lever	Black	APB	- 0,9 ... 10	15	0,85	03 8408 02	60	X3 3438 02
	G1/4	Lever/spring/lever	Black	APB	- 0,9 ... 10	15	1,06	03 8602 02	76	X3 3638 02
	G1/8	Lever/spring/lever	Black	COE	- 0,9 ... 10	15	0,85	03 8408 02	60	X3 3478 02
	G1/4	Lever/spring/lever	Black	COE	- 0,9 ... 10	15	1,06	03 8602 02	76	X3 3678 02
	G1/8	Lever/lever/lever	Black	APB	- 0,9 ... 10	12	0,44	03 8408 02	60	X3 3437 02
	G1/4	Lever/lever/lever	Black	APB	- 0,9 ... 10	12	0,65	03 8602 02	76	X3 3637 02
	G1/8	Lever/lever/lever	Black	COE	- 0,9 ... 10	12	0,44	03 8408 02	60	X3 3477 02
	G1/4	Lever/lever/lever	Black	COE	- 0,9 ... 10	12	0,65	03 8602 02	76	X3 3677 02

**Dimensions**
**1**

 03 0400 02, 03 0400 32  
 3/2 Plunger actuated spring return valve


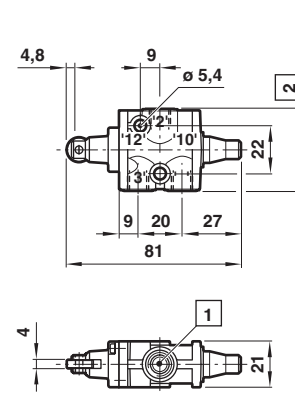
The plunger on this valve is designed for axial loading only.  
 Nut and mounting washer kit supplied as optional extra part number 03 0430 00

**2**

 03 0417 02  
 3/2 Plunger actuated pilot return valve


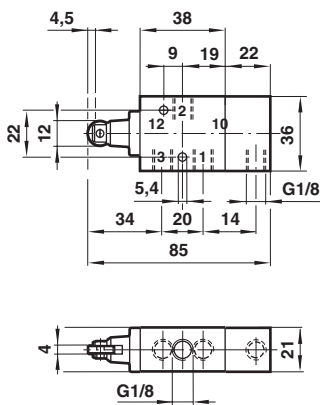
Full movement: 4,8 mm  
 Panel hole:  $\varnothing$  15 mm  
 The plunger on this valve is designed for axial loading only. This valve can be panel mounted.

**3**

 03 0402 02, 03 0402 32  
 3/2 Roller actuated spring return valve


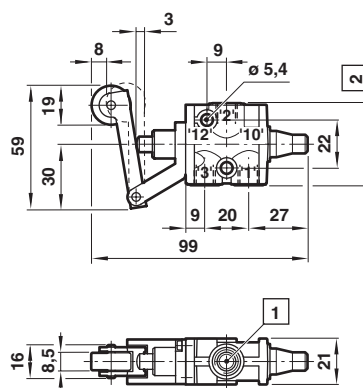
Maximum recommended cam rise: 4,5 mm  
 Cam angle of approach: 30° maximum  
 Cam speed: 8 m/min. maximum  
 Operating speed: 300 cpm

**4**

 03 0409 02  
 3/2 Roller actuated pilot return valve


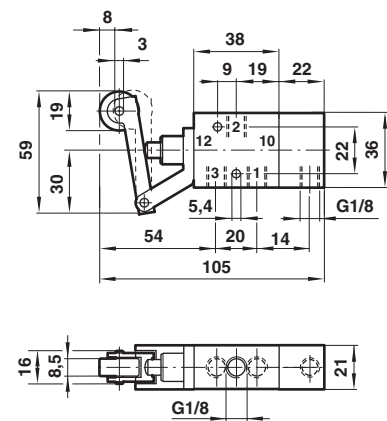
Maximum recommended cam rise: 4,5 mm  
 Cam angle of approach: 30° maximum  
 Cam speed: 8 m/min. maximum  
 Operating speed: 300 cpm

**5**

 03 0411 02, 03 0411 32  
 3/2 Roller lever actuated spring return valve


Operating travel: 8 mm  
 Over-travel: 3 mm  
 Cam angle of approach: 45° maximum  
 Cam speed: 8 m/min. maximum  
 Operating speed: 300 cpm

**6**

 03 0427 02  
 3/2 Roller lever actuated pilot return valve


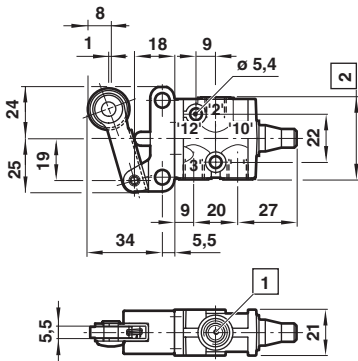
Operating travel: 8 mm;  
 Over-travel: 3 mm  
 Cam angle of approach: 45° maximum  
 Cam speed: 8 m/min. maximum  
 Operating speed: 300 cpm

 [1] Port size G1/8 or  $\varnothing$  6 mm

 [2] 37 mm for G1/8 and 45 mm for  $\varnothing$  6 mm

**7**

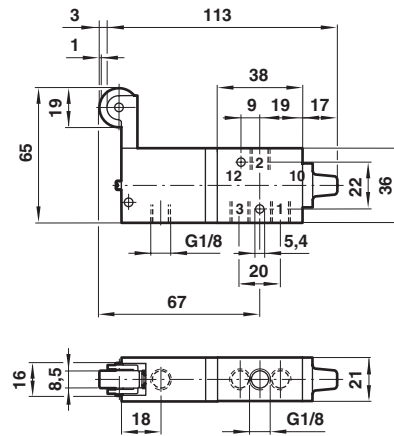
03 0293 02, 03 0293 32  
3/2 Heavy duty roller lever actuated spring return valve



Operating Travel: 8 mm  
Over-travel: 1 mm  
Cam angle of approach: 45° maximum  
Cam speed: 8 m/min. maximum  
Operating speed: 300 cpm

**8**

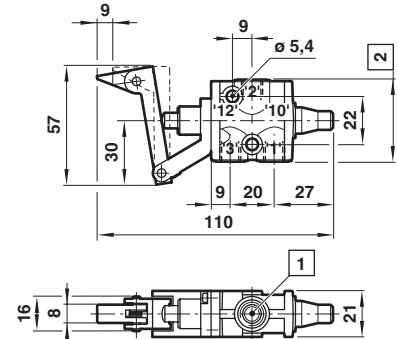
03 0423 02  
3/2 Sensitive roller lever actuated spring return valve



Pre-travel: 1 mm; Over-travel: 3 mm  
Cam angle of approach: 45° maximum  
Cam speed: 6,5 m/min. maximum

**9**

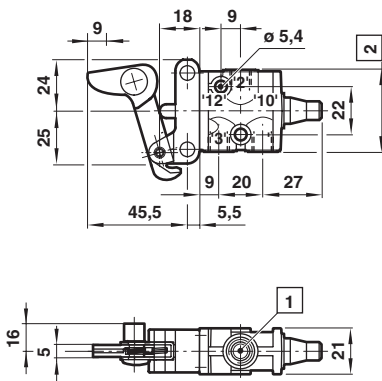
03 0410 02, 03 0410 32  
3/2 One-way trip actuated spring return valve



Cam rise: 9 mm  
Cam angle of approach: 90° maximum  
Cam speed: 2 m/min. maximum  
Operating speed: 120 cpm

**10**

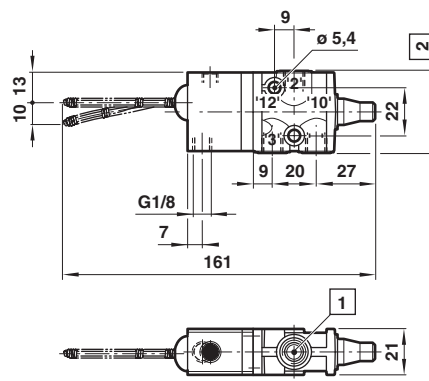
03 0294 02, 03 0294 32  
3/2 Heavy duty one-way trip actuated spring return valve



Cam rise: 9 mm  
Cam angle of approach: 90° maximum  
Cam speed: 2 m/min. maximum  
Operating speed: 120 cpm

**11**

03 0432 02, 03 0432 32  
3/2 Antenna actuated spring return valve

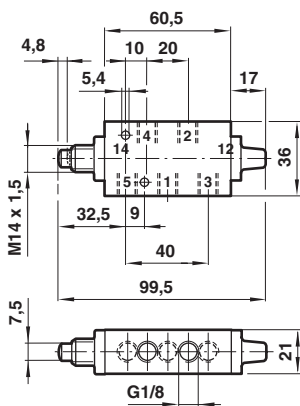


Operating movement: 10 mm  
minimum in any direction.

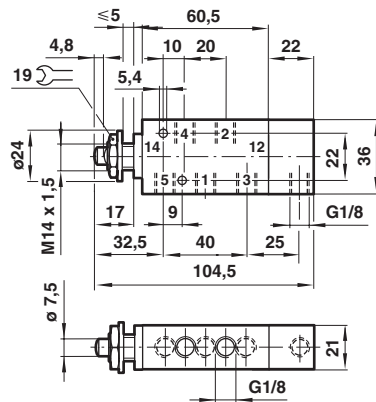
1 Port size G1/8 or ø 6 mm

2 37 mm for G1/8 and 45 mm for ø 6 mm

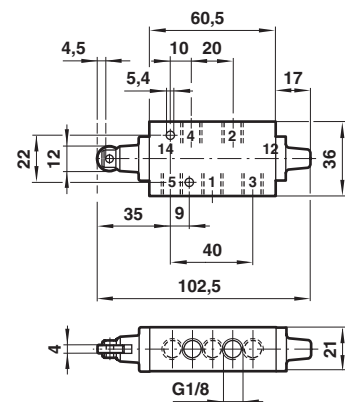


**12**
**X3 0440 02**  
**5/2 Plunger actuated spring return valve**


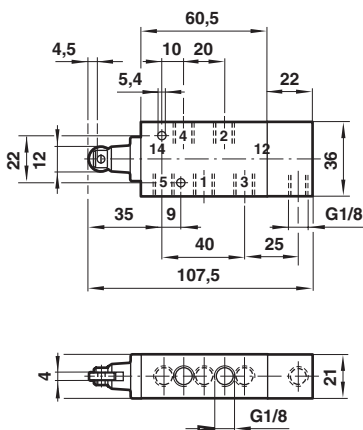
Full movement: 4,8 mm  
 The plunger on this valve is designed for axial loading only.  
 Nut and mounting washer kit supplied as optional extra part number 03 0430 00

**13**
**X3 0457 02**  
**5/2 Plunger actuated pilot return valve**


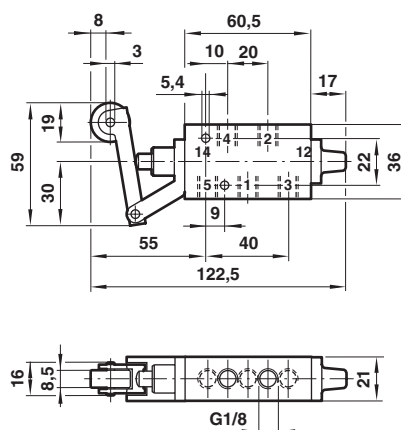
Full movement: 4,8 mm  
 Panel hole:  $\varnothing$  15 mm  
 The plunger on this valve is designed for axial mounting only. This valve can be panel mounted.

**14**
**X3 0442 02**  
**5/2 Roller actuated spring return valve**


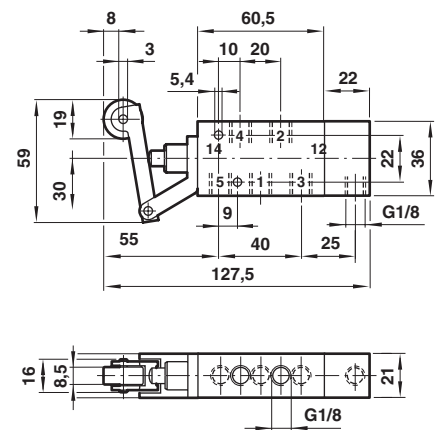
Maximum recommended cam rise: 4,5 mm  
 Cam angle of approach: 30° maximum  
 Cam speed: 8 m/min. maximum  
 Operating speed: 300 cpm

**15**
**X3 0449 02**  
**5/2 Roller actuated pilot return valve**


Maximum recommended cam rise: 4,5 mm  
 Cam angle of approach: 30° maximum  
 Cam speed: 8 m/min. maximum  
 Operating speed: 300 cpm

**16**
**X3 0451 02**  
**5/2 Roller lever actuated spring return valve**


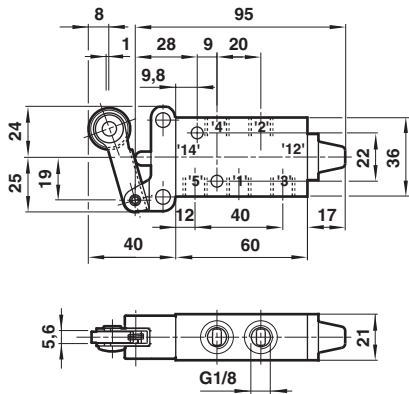
Operating travel: 8 mm  
 Over-travel: 3 mm  
 Cam angle of approach: 45° maximum  
 Cam speed: 8 m/min. maximum  
 Operating speed: 300 cpm

**17**
**X3 0467 02**  
**5/2 Roller lever actuated pilot return valve**


Operating travel: 8 mm; Over-travel: 3 mm  
 Cam angle of approach: 45° maximum  
 Cam speed: 8 m/min. maximum  
 Operating speed: 300 cpm

**18**

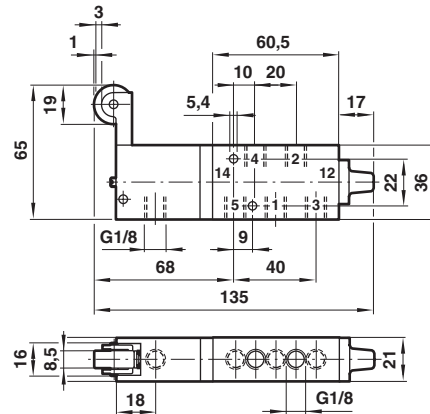
X3 0393 02  
5/2 Heavy duty roller lever actuated spring return valve



Operating travel: 8 mm  
Over-travel: 1 mm  
Cam angle of approach: 45° maximum  
Cam speed: 8 m/min. maximum  
Operating speed: 300 cpm

**19**

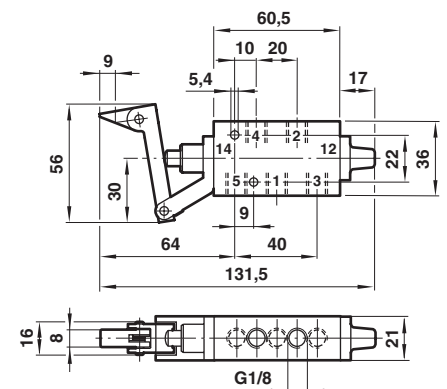
X3 0463 02  
5/2 Sensitive roller lever actuated spring return valve



Pre-travel: 1 mm;  
Over-travel: 3 mm  
Cam angle of approach: 45° maximum  
Cam speed: 6,5 m/min. maximum

**20**

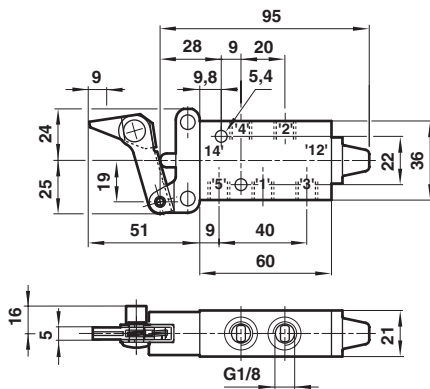
X3 0450 02  
5/2 One-way trip actuated spring return valve



Cam rise: 9 mm  
Cam angle of approach: 90° maximum  
Cam speed: 2 m/min. maximum  
Operating speed: 120 cpm

**21**

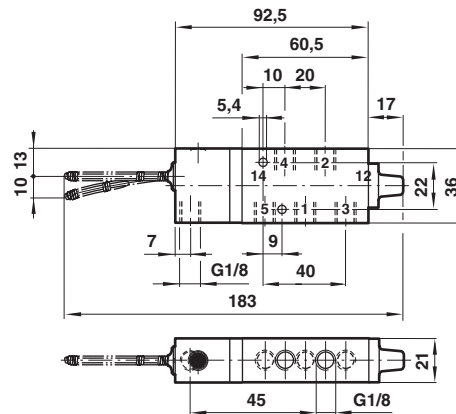
X3 0394 02  
5/2 Heavy duty one-way trip actuated spring return valve



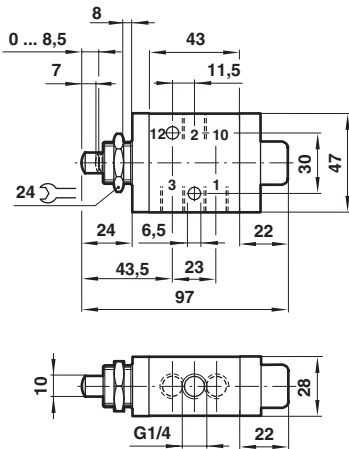
Cam rise: 9 mm  
Cam angle of approach: 90° maximum  
Cam speed: 2 m/min. maximum  
Operating speed: 120 cpm

**22**

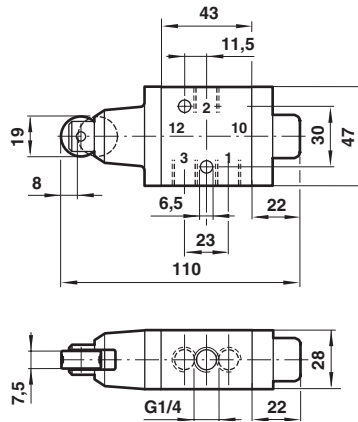
X3 0472 02  
5/2 Antenna actuated spring return valve



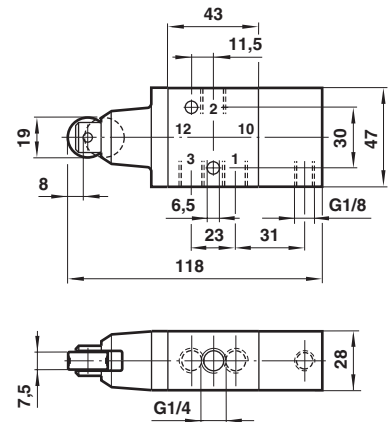
Operating movement: 10 mm minimum  
in any direction.

**23**
**03 0600 02**  
**3/2 Plunger actuated spring return valve**


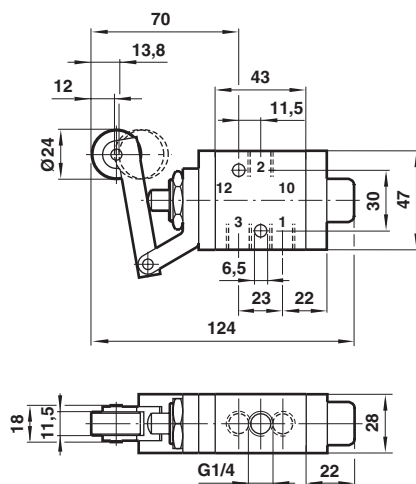
Panel hole:  $\varnothing$  21 mm  
 The plunger on this valve is designed for axial loading only.

**24**
**03 0602 02**  
**3/2 Roller actuated spring return valve**


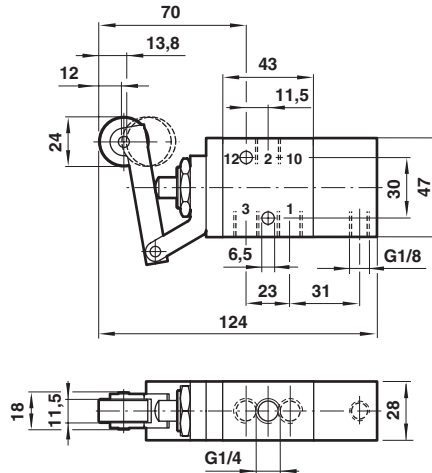
Cam angle of approach: 45° maximum  
 Cam speed: 6 m/min. maximum  
 Operating speed: 200 cpm

**25**
**03 0609 02**  
**3/2 Roller actuated pilot return valve**


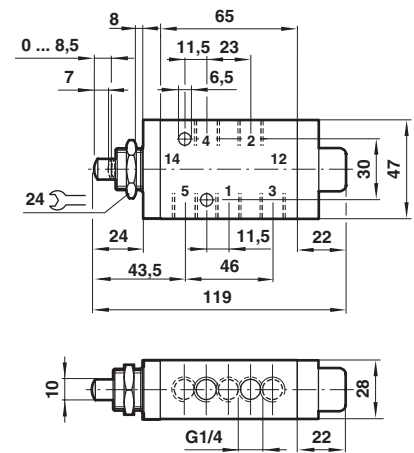
Cam angle of approach: 45° maximum  
 Cam speed: 6 m/min. maximum  
 Operating speed: 200 cpm

**26**
**03 0611 02**  
**3/2 Roller lever actuated spring return valve**


Cam angle of approach: 45° maximum  
 Cam speed: 5 m/min. maximum  
 Operating speed: 150 cpm

**27**
**03 0624 02**  
**3/2 Roller lever actuated pilot return valve**


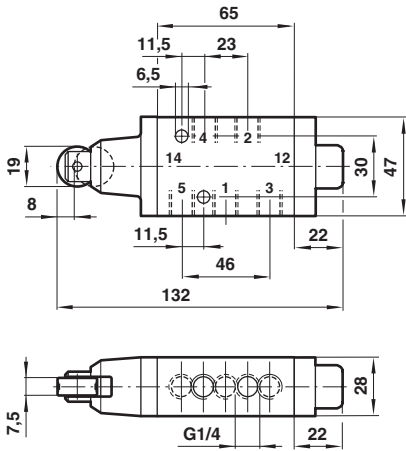
Cam angle of approach: 45° maximum  
 Cam speed: 5 m/min. maximum  
 Operating speed: 150 cpm

**28**
**X3 0640 02**  
**5/2 Plunger actuated spring return valve**


Panel hole:  $\varnothing$  21 mm  
 The plunger on this valve is designed for axial loading only.

**29**

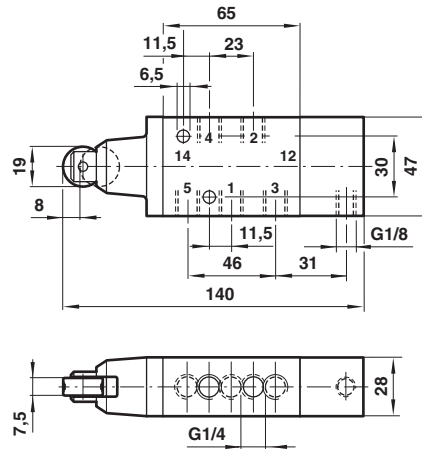
X3 0642 02  
5/2 Roller actuated spring return valve



Cam angle of approach: 45° maximum  
Cam speed: 6 m/min. maximum  
Operating speed: 200 cpm

**30**

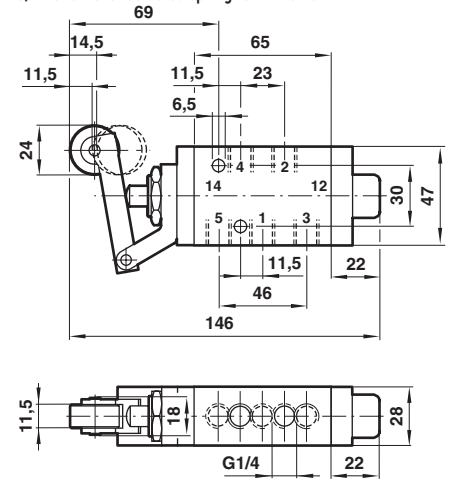
X3 0649 02  
5/2 Roller actuated pilot return valve



Cam angle of approach: 45° maximum  
Cam speed: 6 m/min. maximum  
Operating speed: 200 cpm

**31**

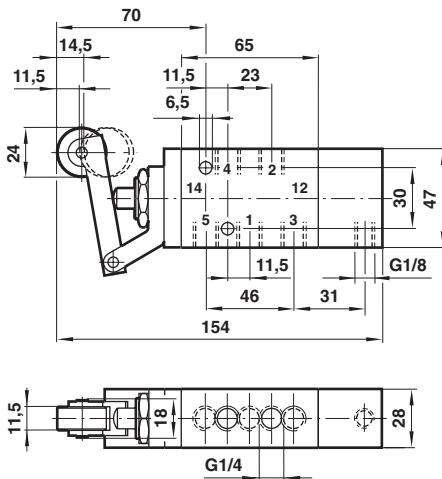
X3 0651 02  
5/2 Roller lever actuated spring return valve



Cam angle of approach: 45° maximum  
Cam speed: 5 m/min. maximum  
Operating speed: 150 cpm

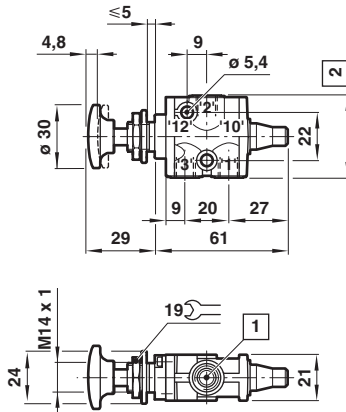
**32**

X3 0664 02  
5/2 Roller lever actuated pilot return valve



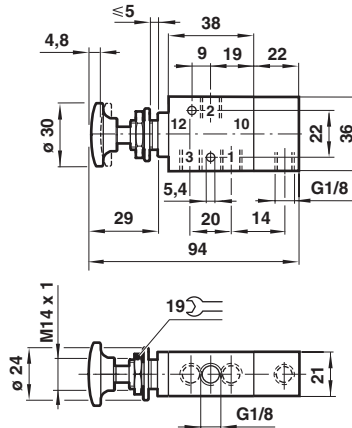
Cam angle of approach: 45° maximum  
Cam speed: 5 m/min. maximum  
Operating speed: 150 cpm man GÂ-5/2

**33**

 03 0404 02, 03 0405 02, 03 0406 02  
 3/2 Button operated spring return valves


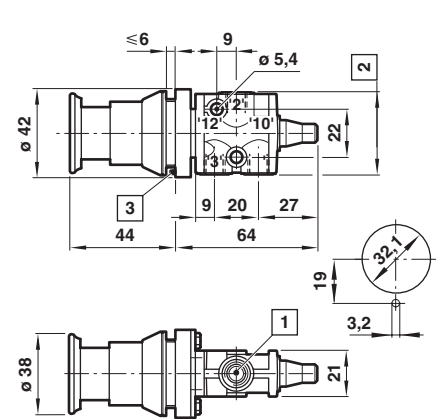
These valves are suitable for panel mounting by means of an optional nut and washer, reference 03 0430 00; a shrouded panel mounting kit is also available, reference 03 0429 00.

**34**

 03 0408 02, 03 0420 02, 03 0421 02  
 3/2 Button operated pilot return valve


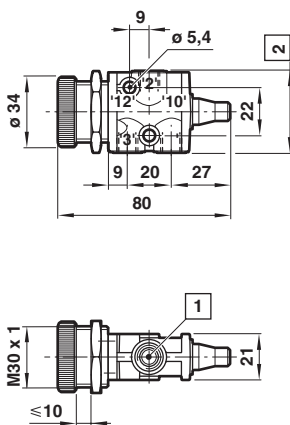
These valves are suitable for panel mounting by means of an optional nut and washer, reference 03 0430 00; a shrouded panel mounting kit is also available, reference 03 0429 00.

**35**

 03 0366 02, 03 0367 02, 03 0368 02  
 3/2 Button (Palm) operated spring return valves


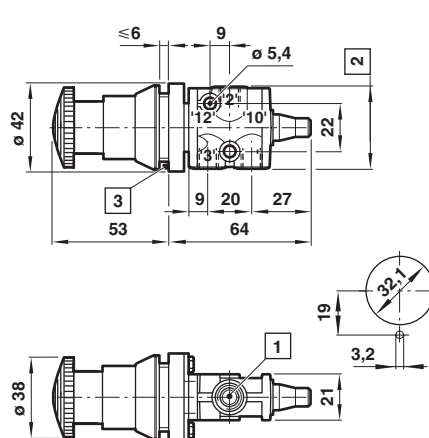
These valves are suitable for panel mounting.

**36**

 03 0414 02, 03 0415 02, 03 0416 02  
 3/2 Button (Shrouded) operated spring return valves


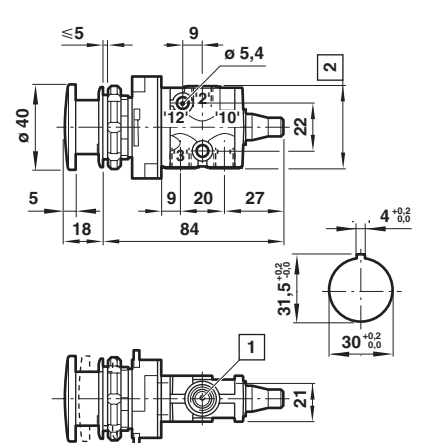
These valves are suitable for panel mounting.

**37**

 SLV/11883/1, SLV/11883/1  
 3/2 Button (Palm) operated, twist return valve  
 (Emergency stop)


Valve latches when button is depressed and returns when the locking ring is rotated anti-clockwise.  
 This valve is suitable for panel mounting.

**38**

 03 0299 02  
 3/2 Button (Palm) operated spring return valves  
 (Emergency stop)


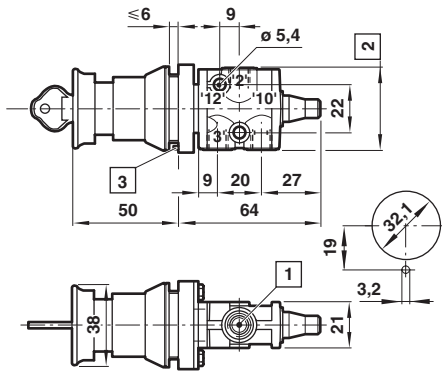
This valve is suitable for panel mounting.

 1 Port size G1/8 or  $\varnothing$  6 mm

 2 37 mm for G1/8 and 45 mm for  $\varnothing$  6 mm

**39**

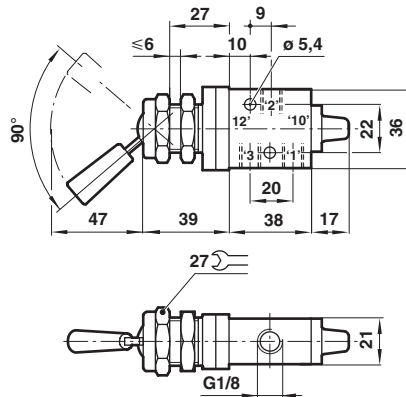
03 0335 02, 03 0335 32  
3/2 Button (Palm) operated key return valve



Valve latches when button is depressed. To reset, turn key. This valve is suitable for panel mounting.

**40**

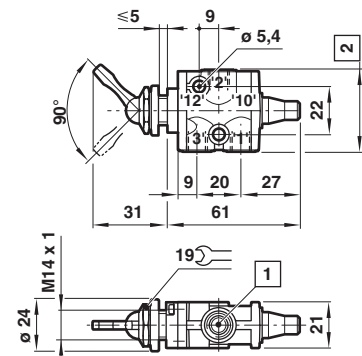
03 0296 02  
3/2 Toggle operated toggle return valve



Panel hole:  $\varnothing$  22,5 mm  
This valve is suitable for panel mounting.

**41**

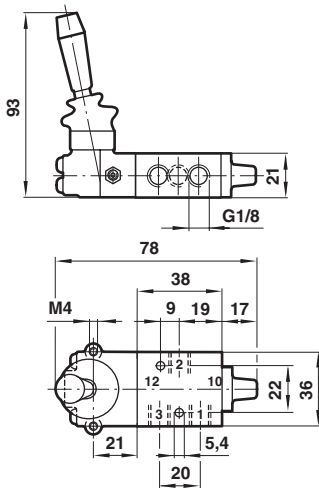
03 0403 02, 03 0403 32  
3/2 Toggle operated spring return valve



This valve is suitable for panel mounting. A fingertip extension is available for this valve, reference 07 0033 01.

**42**

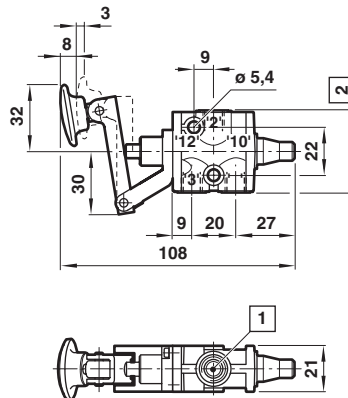
03 0438 02 & 03 0437 02  
3/2 Lever operated spring return valve



Model 03 0437 02 features a positive detent in each position and is suitable for panel mounting by means of a bezel kit, reference 03 3437 64.  
Panel hole:  $\varnothing$  24 mm  
Panel thickness: 8 mm maximum

**43**

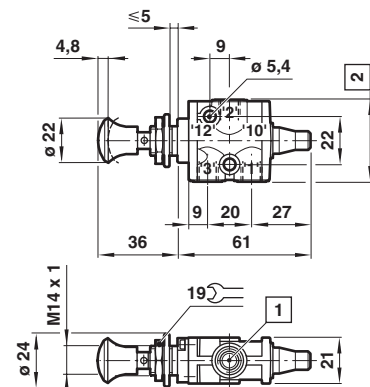
03 0426 02, 03 0426 32  
3/2 Knob lever operated spring return valve



This valve is suitable for panel mounting.  
Panel hole:  $\varnothing$  24 mm;  
Panel thickness: 8 mm maximum

**44**

03 0345 02, 03 0345 32  
3/2 Knob operated spring return valve  
03 0425 02, 03 0425 32  
3/2 Knob operated knob return valve



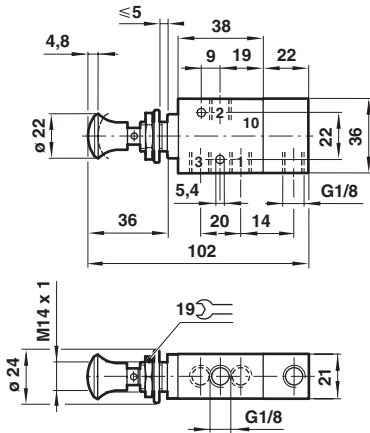
This valve is suitable for panel mounting by means of an optional nut and washer, reference 03 0430 00.

1 Port size G1/8 or  $\varnothing$  6 mm

2 37 mm for G1/8 and 45 mm for  $\varnothing$  6 mm

**45**

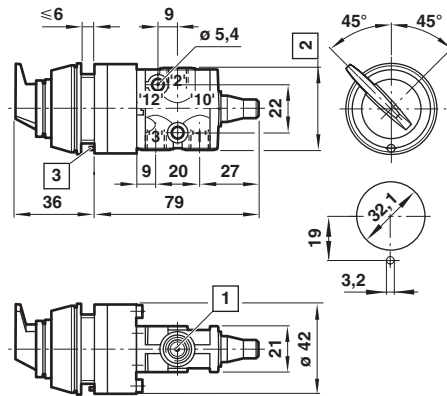
03 0424 02  
3/2 Knob operated, knob or pilot return valve



This valve is suitable for panel mounting by means of an optional nut and washer, reference 03 0430 00.

**46**

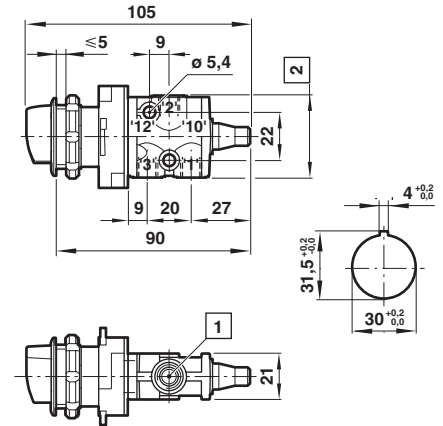
SLV/11807/1, SLV/11807/3  
3/2 Rotary knob operated rotary knob return valve



Switch shown in non-operated position  
This valve is suitable for panel mounting.

**47**

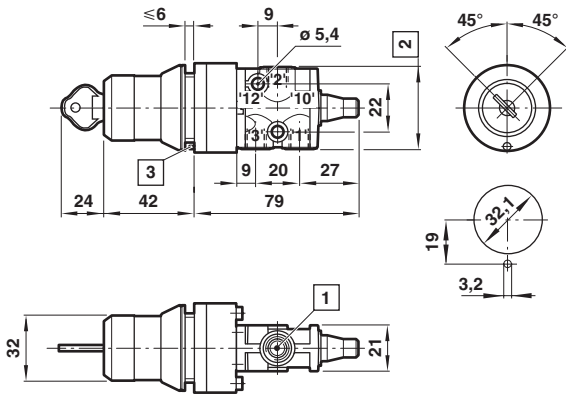
03 0298 02, 03 0298 32  
3/2 Rotary knob operated rotary knob return valve



This valve is suitable for panel mounting.

**48**

03 0418 02 801, 03 0418 32 801  
3/2 Key operated key return valve

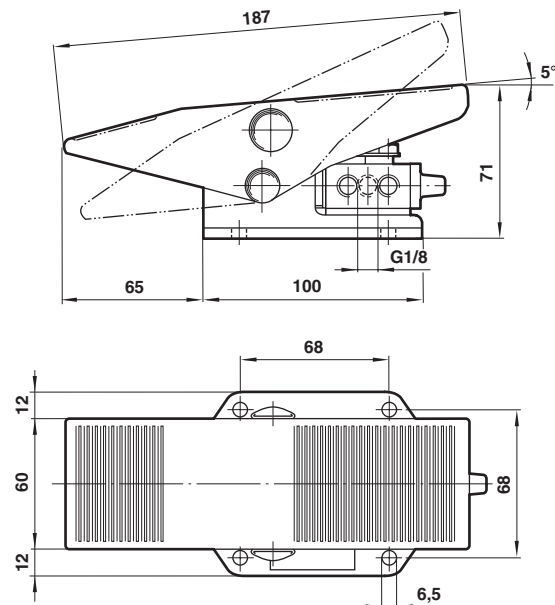


The key is removable in both positions.  
Key slot shown in non-operated position.  
Two keys are supplied.  
This valve is suitable for panel mounting.

**49**

03 0481 02  
3/2 Pedal operated spring return valve

03 0483 02  
3/2 Pedal operated pedal return valve



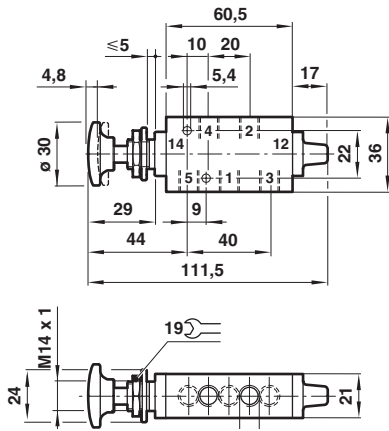
A foot guard is available for this valve, reference 03 0480 60.

1 Port size G1/8 or  $\phi$  6 mm

2 37 mm for G1/8 and 45 mm for  $\phi$  6 mm

**50**

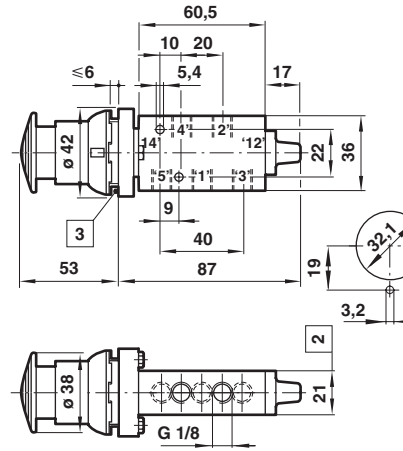
X3 0444 02, X3 0445 02, X3 0446 02  
5/2 Button (Palm) operated spring return valves



Operating force: 54 N  
These valves are suitable for panel mounting by means of an optional nut and washer, reference 03 0430 00; a shrouded panel mounting kit is also available, reference 03 0429 00.

**51**

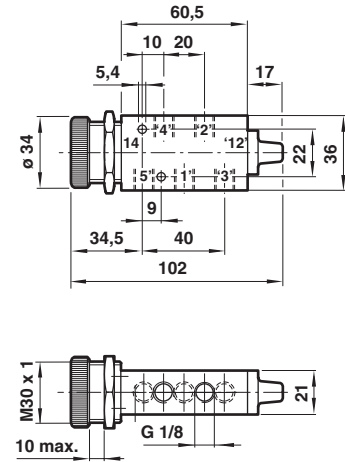
X3 0386 02, X3 0387 02, X3 0388 02  
5/2 Button (Palm) operated spring return valves



These valves are suitable for panel mounting.

**52**

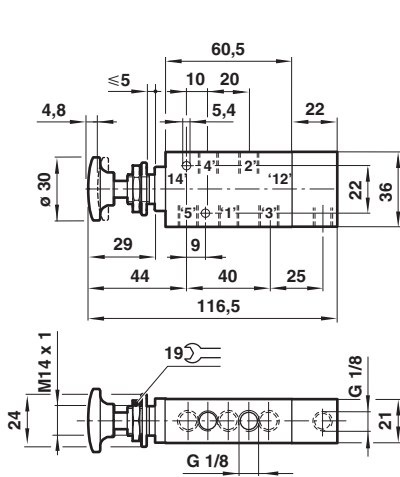
X3 0454 02, X3 0455 02, X3 0456 02  
5/2 Button (Shrouded) operated spring return valves



These valves are suitable for panel mounting.

**53**

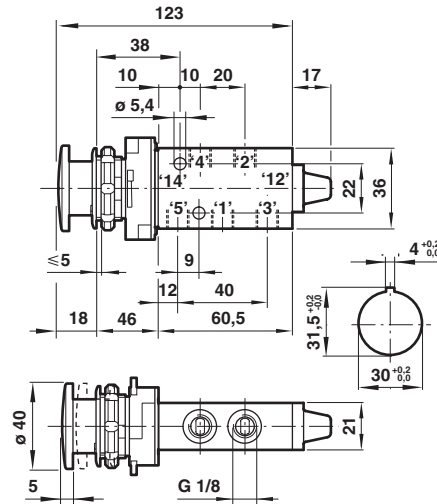
X3 0448 02, X3 0460 02, X3 0461 02  
5/2 Button (Palm) operated pilot return valves



These valves are suitable for panel mounting by means of an optional nut and washer, reference 03 0430 00; a shrouded panel mounting kit is also available, reference 03 0429 00.

**54**

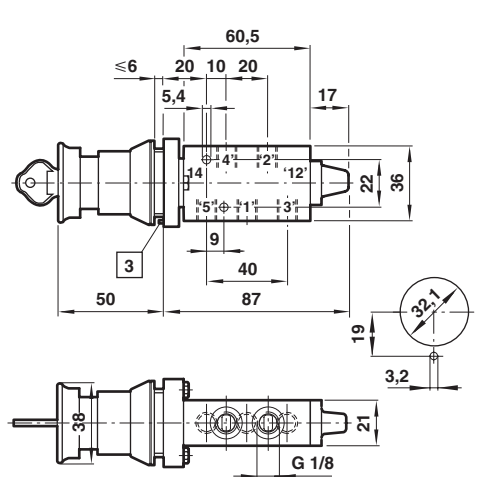
X3 0468 02  
5/2 Button (Palm) operated, twist return valve (Emergency stop)



Valve latches when button is depressed and returns when the locking ring is rotated anti-clockwise.  
This valve is suitable for panel mounting.

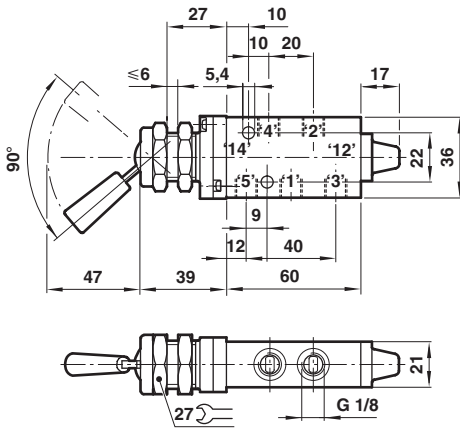
**55**

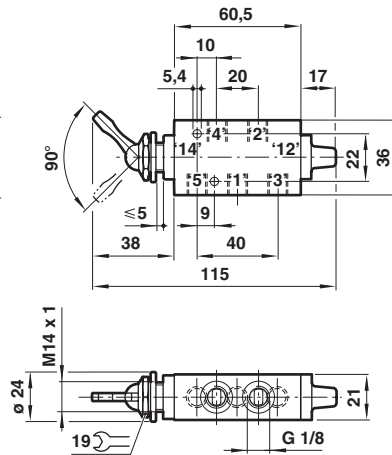
X3 0375 02  
5/2 Button (Palm) operated key return valve

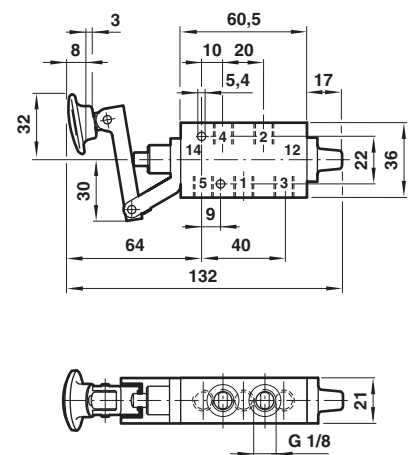


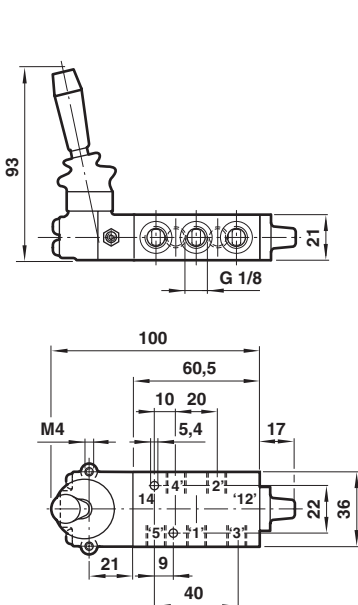
Valve latches when button is depressed. To reset, turn key. This valve is suitable for panel mounting.

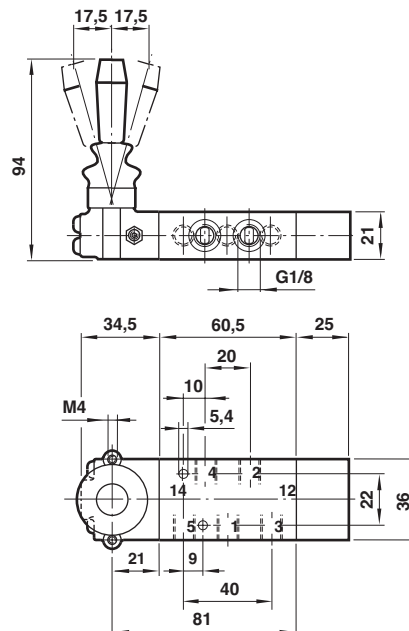


**56**
**X3 0296 02**  
**5/2 Toggle operated toggle return valve**

 Panel hole:  $\varnothing$  22,5 mm  
 This valve is suitable for panel mounting.

**57**
**X3 0443 02**  
**5/2 Toggle operated spring return valve5**

 This valve is suitable for panel mounting.  
 A fingertip extension is available for use  
 on this valve, reference 07 0033 01.

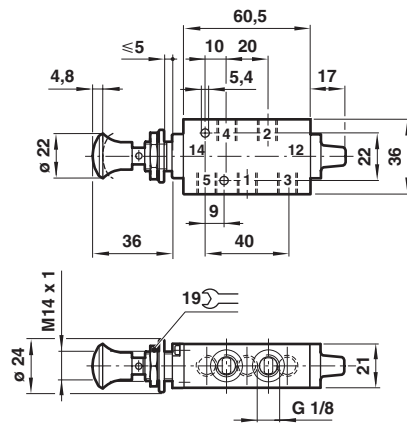
**58**
**X3 0466 02**  
**5/2 Lever operated spring return valve**

 This valve is suitable for panel mounting.  
 Panel hole:  $\varnothing$  24 mm;  
 Panel thickness: 8 mm maximum

**59**
**X3 0478 02, X3 0477 02**  
**5/2 Lever operated valve**

 Both models are suitable for panel  
 mounting by means of a bezel kit,  
 reference 03 3437 64.  
 Panel hole:  $\varnothing$  24 mm  
 Panel thickness: 8 mm maximum

**60**
**X3 3438 02, X3 3478 02, X3 3437 02, X3 3477 02**  
**5/3 Lever operated valves**

 All models are suitable for panel  
 mounting,  
 by means of a bezel kit,  
 reference 03 3437 64.  
 Panel hole:  $\varnothing$  24 mm  
 Panel thickness: 8mm maximum

**61**

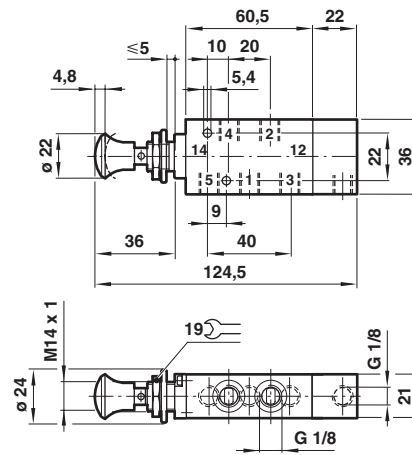
X3 0465 02  
5/2 Knob operated knob return valve



This valve is suitable for panel mounting by means of an optional nut and washer, reference 03 0430 00.

**62**

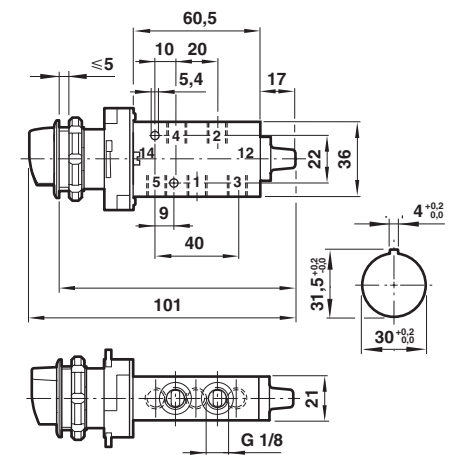
X3 0464 02  
5/2 Knob operated, knob or pilot return valve



These valves are suitable for panel mounting by means of an optional nut and washer, reference 03 0430 00

**63**

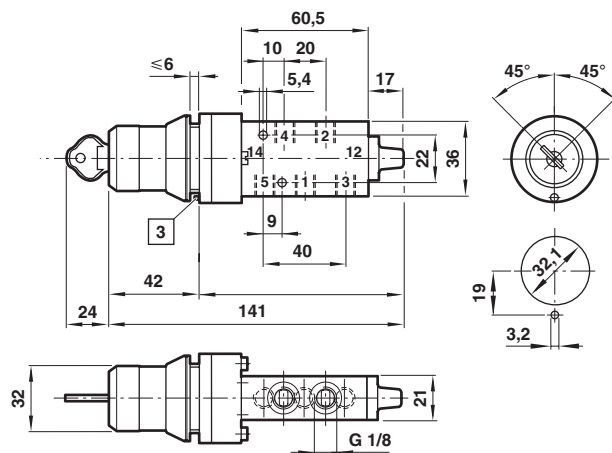
X3 0298 02  
5/2 Rotary knob operated knob return valve]



Switch shown in non-operated position. This valve is suitable for panel mounting.

**64**

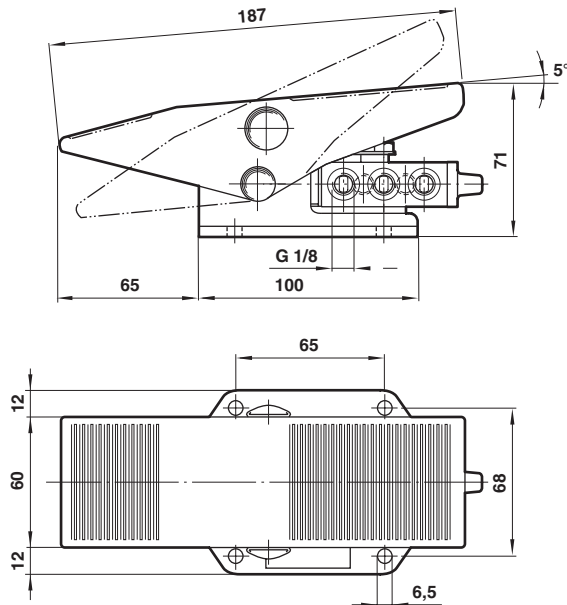
X3 0458 02 801  
5/2 Key operated key return valve



The key is removable in both positions. Key slot shown in non-operated position. Two keys are supplied. This valve is suitable for panel mounting.

**65**

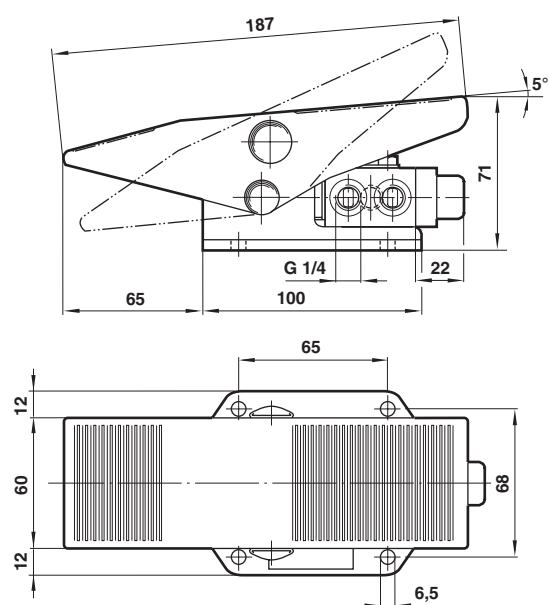
X3 0482 02  
5/2 Pedal operated spring return valve  
X3 0484 02  
5/2 Pedal operated pedal return valve



A foot guard is available for this valve, reference 03 0480 60.

**66**

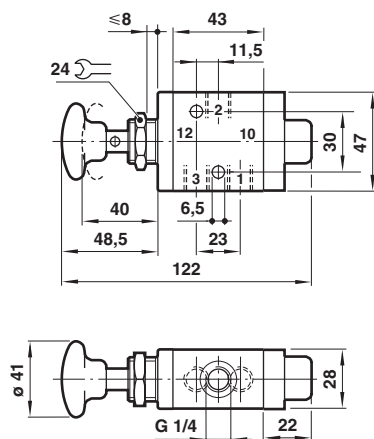
03 0681 02  
3/2 Pedal operated spring return valve  
03 0683 02  
3/2 Pedal operated pedal return valve



A foot guard is available for this valve, reference 03 0480 60.

**67**

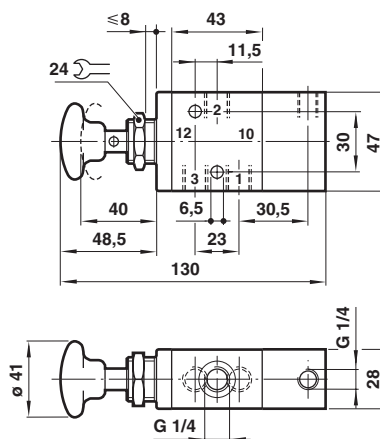
03 0604 02  
3/2 Button operated spring return valve



This valve is suitable for panel mounting and includes a nut and washer.  
Panel hole: Ø 21 mm

**68**

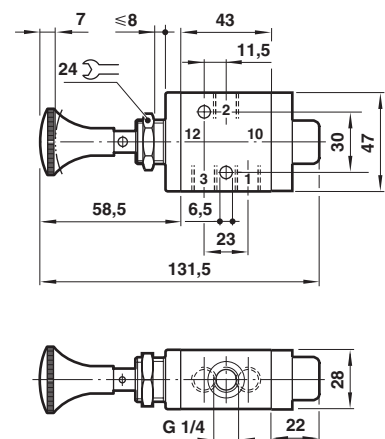
03 0608 02  
3/2 Button operated pilot return valve



This valve is suitable for panel mounting and includes a nut and washer.  
Panel hole: Ø 21 mm

**69**

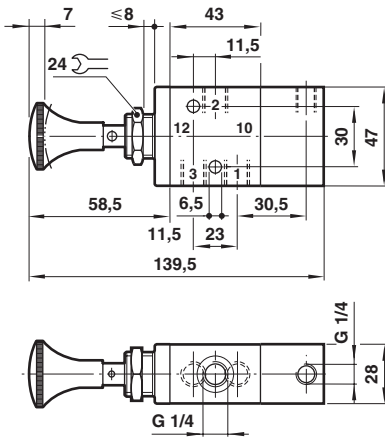
03 0625 02  
3/2 Knob operated knob return valve



This valve is suitable for panel mounting and includes a nut and washer.  
Panel hole: Ø 21 mm

**70**

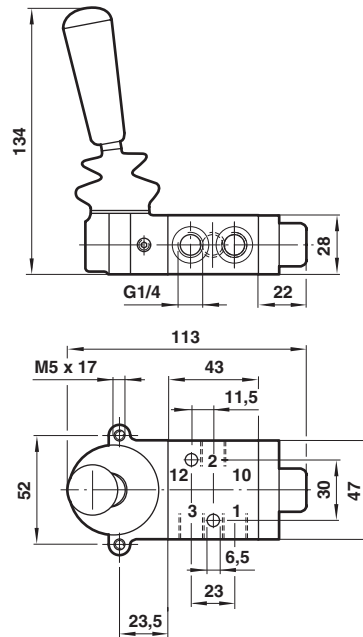
03 0627 02  
3/2 Knob operated, knob or pilot return valve



This valve is suitable for panel mounting and includes a nut and washer.  
Panel hole:  $\varnothing$  21 mm

**71**

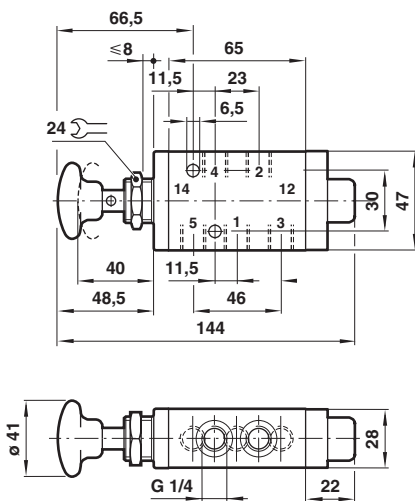
03 0638 02, 03 0637 02  
3/2 Lever operated valve



Model 03 0637 02 features a positive detent in each position.  
Both models are suitable for panel mounting by means of a bezel kit, reference 03 3637 64.  
Panel hole:  $\varnothing$  31 mm;  
Panel thickness: 8 mm maximum

**72**

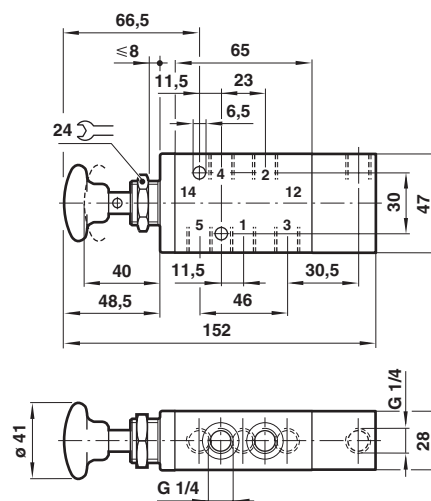
X3 0644 02  
5/2 Button operated spring return valve



This valve is suitable for panel mounting and includes a nut and washer.  
Panel hole:  $\varnothing$  21 mm

**73**

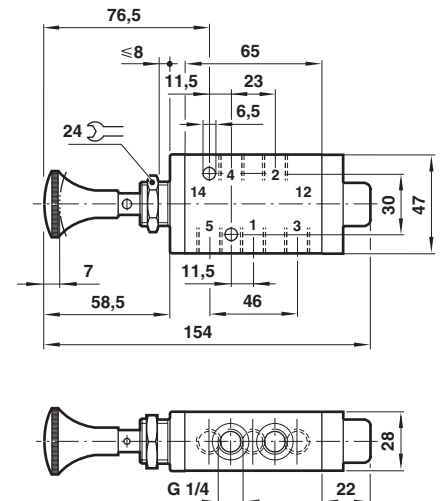
X3 0648 02  
5/2 Button operated pilot return valve



This valve is suitable for panel mounting and includes a nut and washer.  
Panel hole:  $\varnothing$  21 mm

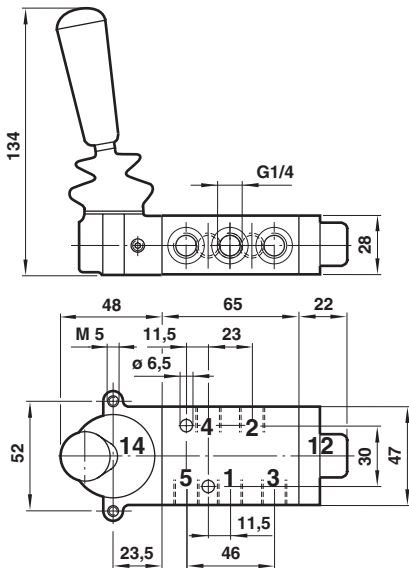
**74**

X3 0665 02  
5/2 Knob operated knob return valve



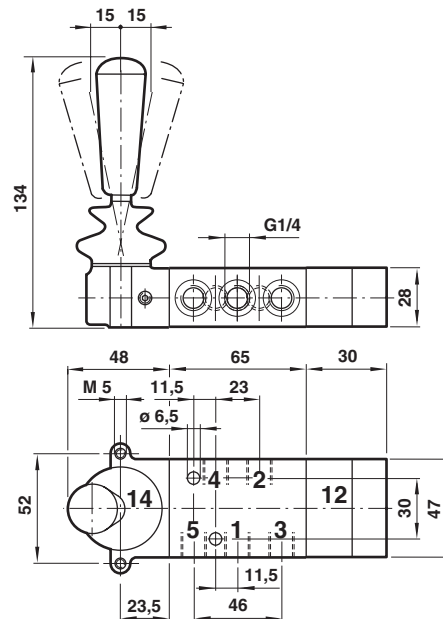
This valve is suitable for panel mounting and includes a nut and washer.  
Panel hole:  $\varnothing$  21 mm

**75**

 X3 0678 02, X3 0677 02  
 5/2 Lever operated valve


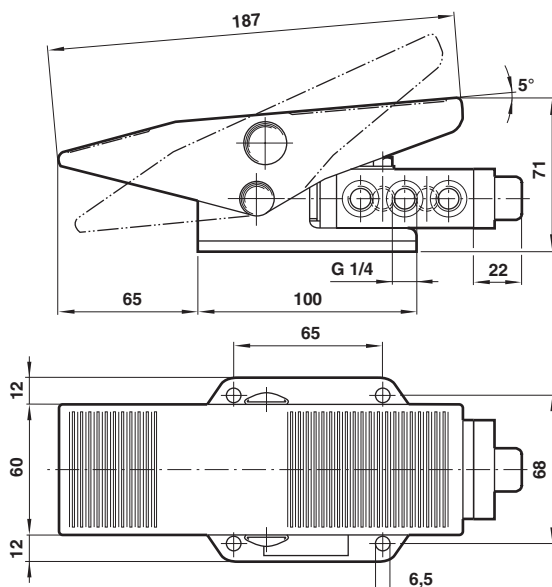
Model X3 0677 02 features a positive detent in each position.  
 Both models are suitable for panel mounting by means of a bezel kit, reference 03 3637 64.  
 Panel hole:  $\varnothing$  31 mm;  
 Panel thickness: 8 mm maximum,

**76**

 X3 3638 02, X3 3678 02, X3 3637 02, X3 3677 02  
 5/3 Three position lever operated valves


These valves are suitable for panel mounting by means of a bezel kit, reference 03 3637 64.  
 Panel hole:  $\varnothing$  31 mm  
 Panel thickness: 8 mm maximum

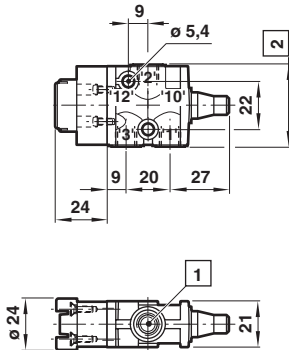
**77**

 X3 0682 02  
 5/2 Pedal operated spring return valve  
 X3 0684 02  
 5/2 Pedal operated pedal return valve


A foot guard is available for this valve, reference 03 0480 60.

**78**

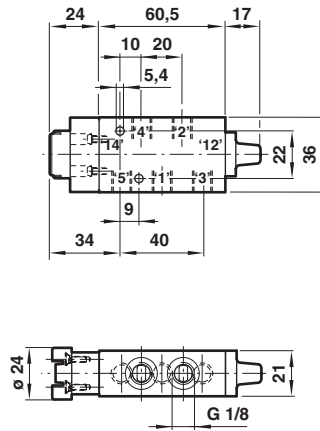
03 0295 02, 03 0295 32  
3/2 Adapter valve



This valve is for use with standard electrical style operating heads. For details see below.

**79**

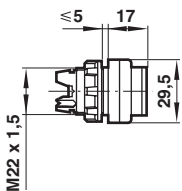
X3 0395 02  
5/2 Adapter valve



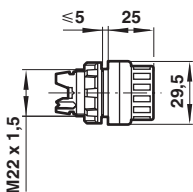
This valve is for use with standard electrical style operating heads. For details see below.

**Operating heads for use with  
G1/8, 3/2 and 5/2 Adaptor valves  
Panel hole: Ø 22,5 mm  
Panel thickness: 6 mm maximum**

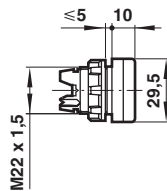
V11783-C01 (pink)  
V11783-C02 (green)  
V11783-C03 (black)  
Button (palm) operated, spring return



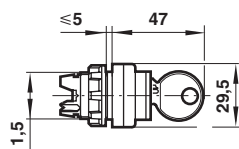
V11783-C10  
Rotary knob operated rotary knob return



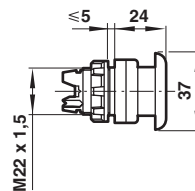
V11783-C04 (pink)  
V11783-C05 (green)  
V11783-C05 (black)  
Button (shrouded) operated, spring return



V11783-C12  
Key operated key return



V11783-C07 (red)  
V11783-C08 (green)  
Button (mushroom) operated, spring return



**Warning**

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under 'Technical features'.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.