

The compact design of these valves make them a popular choice for manual or mechanical operation and their modular construction permit different operators to be fitted to the actuator and return assemblies.

The Midget and Intermediate valves are designed to have balanced forces across the spool so that 3/2 valves can be piped normally open or normally closed by changing the inlet supply from port 1 to port 3.



- B 43 - 1/8" ported, B53 - 1/4 ported
- Manual and mechanical operation
- Stainless steel spools
- Viton seals
- 3/2, 5/2, 3/3 and 5/3 versions.
- Integral mounting holes

Operating information

Type	Spool valves
Style	Body ported
Port size	G1/8 & G1/4
Mounting	Any plane
Pressure range	Vacuum to 10 bar
Temperature range	-10°C to +80°C
Flow acc. (to ISO 6358)	

Midget B43 series Intermediate B53 series

$c = 1.13 \text{ NI/s} \times \text{bar}$	$c = 3.69 \text{ NI/s} \times \text{bar}$
$b = 0.36$	$b = 0.33$
$Q_n = 5.5 \text{ l/s}$	$Q_n = 17.5 \text{ l/s}$
$Q_{\max} = 9.0 \text{ l/s}$	$Q_{\max} = 29 \text{ l/s}$
$C_v = 0.24$	$C_v = 1.02$

Material specification

Valve body	Aluminium
Spool	Stainless steel
Seal spacers	Zinc die cast
Seals	Viton
Spring housing	Nylon
Spring	Zinc plated
End covers	Zinc die cast
Actuators	Zinc die cast
End cover screws	Zinc plated

Working medium, air quality

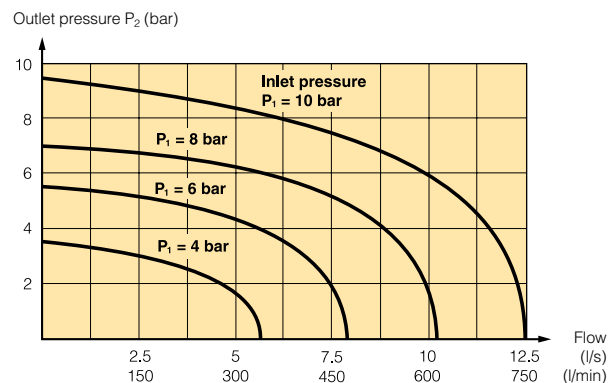
Working medium: Dry, filtered compressed air to ISO 8573-1 class 3.4.3.

Flow characteristics

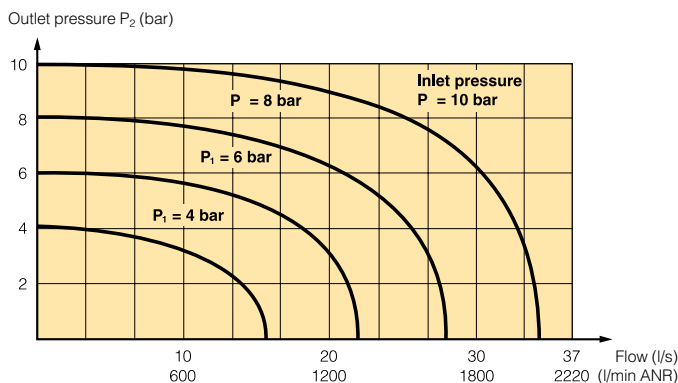
Flow capacities in accordance with ISO 6358

The flow curves shown below are typical.

Midget B43 series valves



Intermediate B53 series valves



Midget mechanically operated valves, B43 series - G1/8

Symbol	Type	Actuator Button	Return	Operating force at 6 bar, N	Order code
	3/2	Plunger	Spring	36	B43003CS
	3/2	Plunger	Air	14	B43003CP
	5/2	Plunger	Spring	36	B43004CS
	5/2	Plunger	Air	14	B43004CP
	3/2	Roller Lever	Spring	20	B43003RS
	3/2	Roller Lever	Air	7	B43003RP
	5/2	Roller Lever	Spring	20	B43004RS
	5/2	Roller Lever	Air	7	B43004RP
	3/2	One way lever	Spring	20	B43003RTS
	3/2	One way roller lever	Air	7	B43003RTP
	5/2	One way roller lever	Spring	20	B43004RTS
	5/2	One way roller lever	Air	7	B43004RTP

Midget manually operated valves, B43 series - G1/8

Symbol	Type	Actuator Button	Return	Operating force at 6 bar, N	Order code
	3/2	Black	Spring	36	B43003BXS
	3/2	Black	Button	13	B43003HXS
	5/2	Black	Spring	36	B43004BXS
	5/2	Black	Button	13	B43004HXS
	3/2	Black	Air	13	B43003BXP
	3/2	Black	Air or Button	13	B43003HXP
	5/2	Black	Air	13	B43004BXP
	5/2	Black	Air or Button	13	B43004HXP
	3/2	Lock down lever	Spring	9	B43003LS
	3/2	Lock down lever	Spring	9	B43004LS
	3/2	Lock down lever	Air	3	B43003LP
	3/2	Lock down lever	Air	3	B43004LP

Intermediate mechanically operated valves, B53 series - G1/4

Symbol	Type	Actuator Button	Return	Operating force at 6 bar, N	Order code
	3/2	Plunger	Spring	53	B53003CS
	3/2	Plunger	Air	27	B53003CP
	5/2	Plunger	Spring	53	B53004CS
	5/2	Plunger	Air	27	B53004CP
	3/2	Roller	Spring	53	B53003RS
	3/2	Roller	Air	27	B53003RP
	5/2	Roller	Spring	53	B53004RS
	5/2	Roller	Air	27	B53004RP

Intermediate manually operated valves, B53 series - G1/4

Symbol	Type	Actuator Button	Return	Operating force at 6 bar, N	Order code
	3/2	Black	Spring	53	B53003HXS
	3/2	Black	Button	27	B53003HXP
	3/2	Black	Air	27	B53003HXP
	5/2	Black	Spring	53	B53004HXS
	5/2	Black	Button	27	B53004HXP
	5/2	Black	Air	27	B53004HXP
	5/3	Button closed centring position	Button self centring	13	B53005HXX
	5/3	Button vented centring position	Air self centring	13	B53004HXY
	5/3	Button pressurised centring position	Air self centring	13	B53004HXZ

Intermediate lever operated valve,
B53 series - G1/4

Symbol	Type	Actuator Button	Return	Operating force at 6 bar, N	Order code
	3/2	Lever	Spring	14	B53003LS
	3/2	Lever	Air	9	B53003LP
	3/2	Lever	Lever	9	B53003LT
	3/3	Lever closed centre position	Lever	9	B53003L
	3/3	Lever closed centre position	Lever self centring	14	B53003LX
	5/2	Lever	Spring	14	B53004LS
	5/2	Lever	Air	14	B53004LP
	5/2	Lever	Lever	14	B53004LT
	5/3	Lever closed centre position	Lever held in three positions	9	B53004L
	5/3	Lever vented centre position	Lever held in three positions	9	B53004LW
	5/3	Lever pressurised centre position	Lever held in three positions	9	B53004LN
	5/3	Lever closed centre position	Lever self centring	14	B53004LX
	5/3	Lever vented centre position	Lever self centring	14	B53004LY
	5/3	Lever pressurised centre position	Lever self centring	14	B53004LZ

Mounting kit



Panel mounting kit

M53004L-10AKit includes panel plate and
M5 counter sunk head screwsMidget foot operated valves,
B43 series - G1/8

Symbol	Type	Actuator Button	Return	Operating force at 6 bar, N	Order code
	3/2	Foot pedal	Spring	16	B43003FS
	5/2	Foot pedal	Spring	16	B43004FS

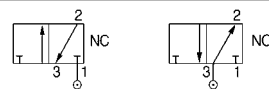
Intermediate foot operated valves,
B53 series - G1/4

Symbol	Type	Actuator Button	Return	Operating force at 6 bar, N	Order code
Single pedal operated					
	3/2	Foot pedal	Spring	95	B53003FS
	5/2	Foot pedal	Spring	95	B53004FS
Rocker pedal operated					
	3/2	Foot pedal	Foot pedal	18	B53003G
	5/2	Foot pedal	Foot pedal	18	B53004G
	5/3	Foot pedal closed centre position	Foot pedal self centring	18	B53004GX
	5/3	Foot pedal vented centre position	Foot pedal self centring	18	B53004GY
	5/3	Foot pedal pressurised centre position	Foot pedal self centring	18	B53004GZ

Accessories



Foot guard kit

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All 3/2 type B43 & B53 valves can be connected either as normally closed 3/2 valve (NC) or normally open 3/2 valve (NO) as required, by connecting the primary air supply to port 1 or port 3

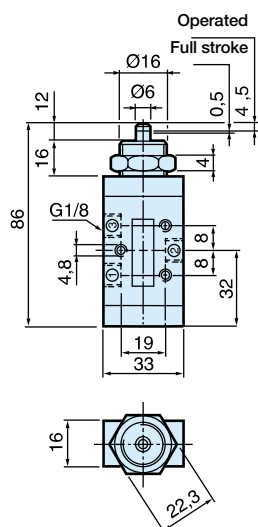
Dimensions, G1/8 ported spool valves

All dimensions in mm unless otherwise stated

Mechanically operated valves

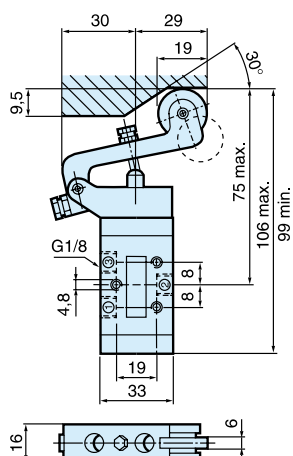
3/2 valves

Plunger operated spring return

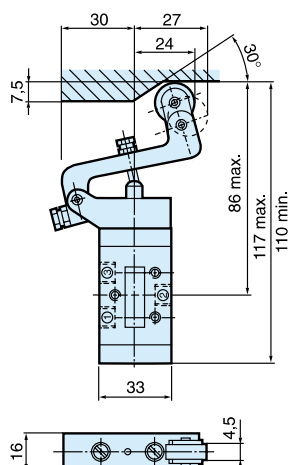


3/2 valves

Roller operated spring return

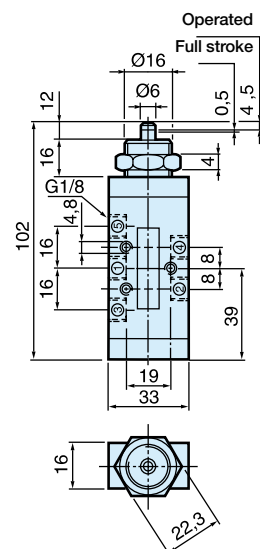


One way roller trip operate
spring return



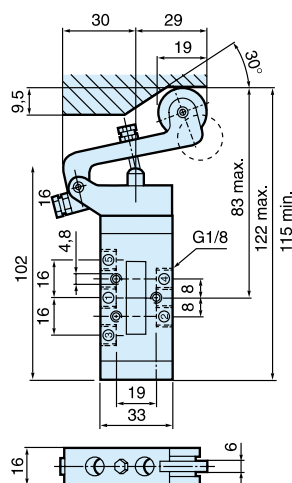
5/2 valves

Plunger operated spring return

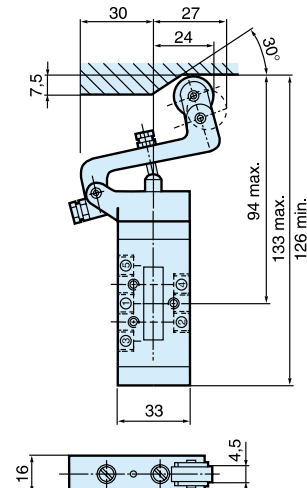


5/2 valves

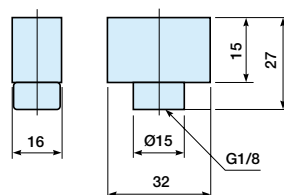
Roller operated spring return



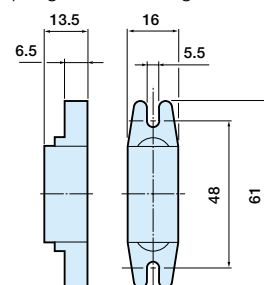
One way roller trip operate
spring return



Air Pilot Return



Optional foot mounted -
Spring return housing



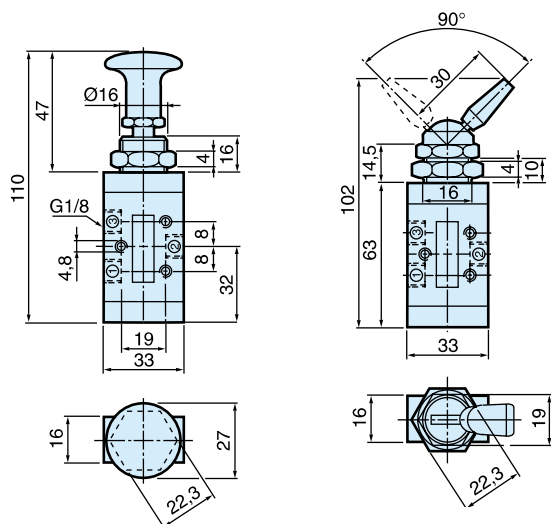
Dimensions, G1/8 ported spool valves

All dimensions in mm unless otherwise stated

Manually operated valves

3/2 valves

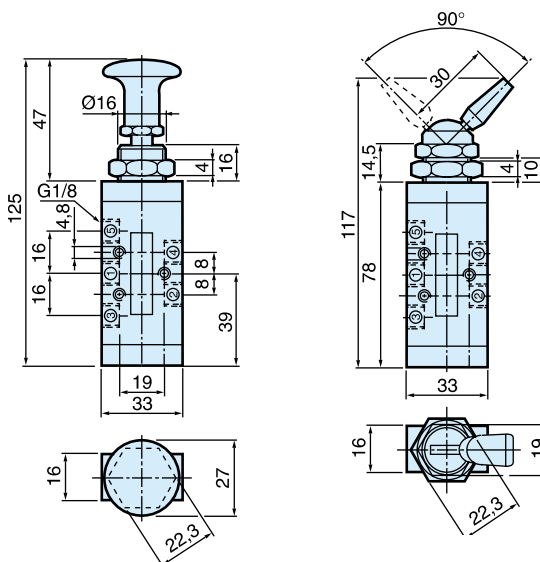
Button operated spring return
or button returned



Lock down lever
operated spring return

5/2 valves

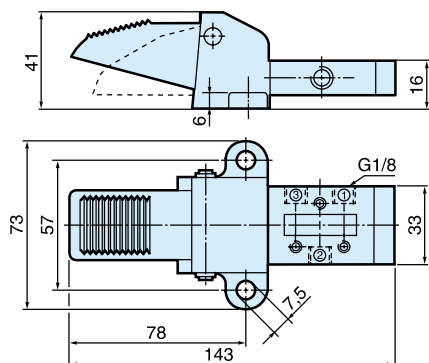
Button operated spring return
or button returned



Lock down lever
operated spring return

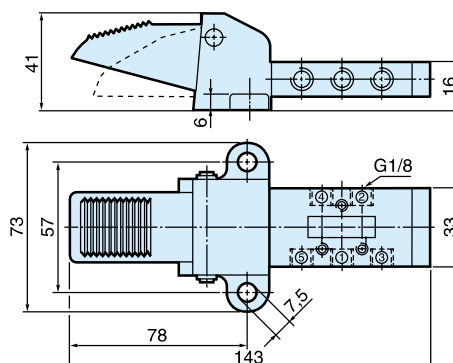
3/2 valves

Foot pedal operated spring return

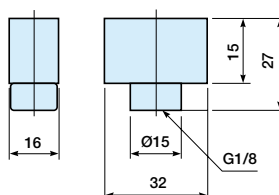


5/2 valves

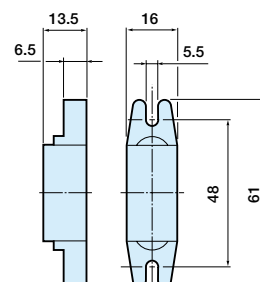
Foot pedal operated spring return



Air Pilot Return



Optional foot mounted -
Spring return housing



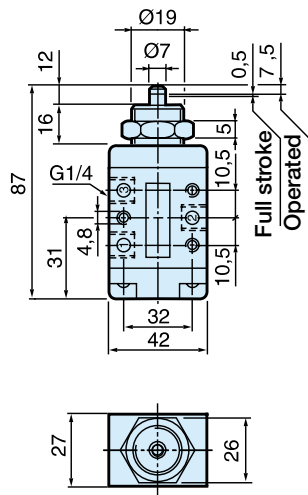
Dimensions, G1/4 ported spool valves

All dimensions in mm unless otherwise stated

Mechanically operated valves

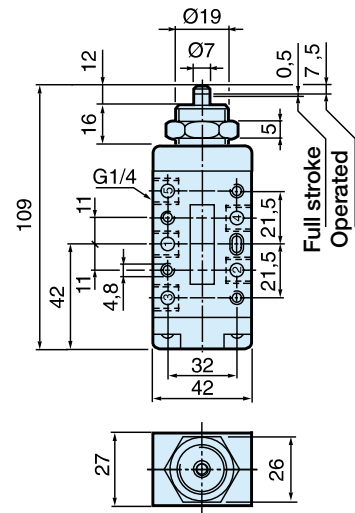
3/2 valves

Plunger operated spring return



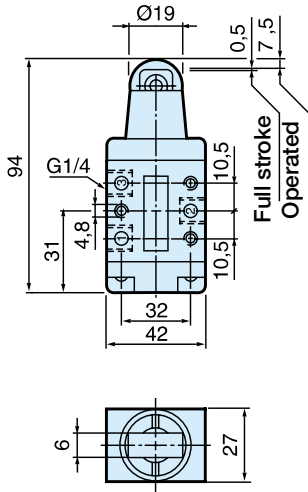
5/2 valves

Plunger operated spring return



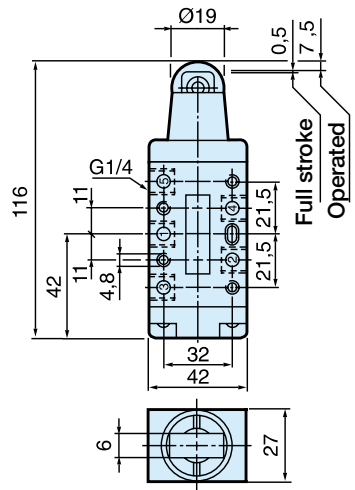
3/2 valves

Roller operated spring return

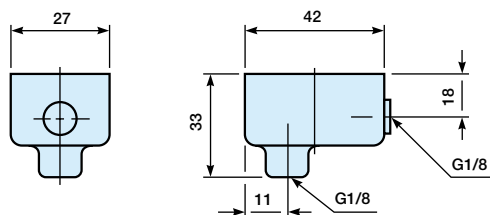


5/2 valves

Roller operated spring return



Air Pilot Return



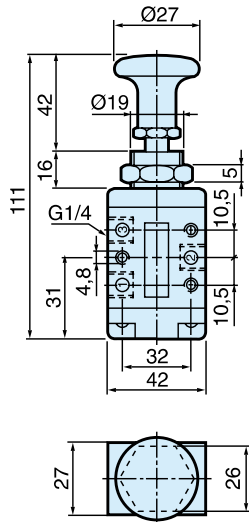
Dimensions, G1/4 ported spool valves

All dimensions in mm unless otherwise stated

Manually operated valves

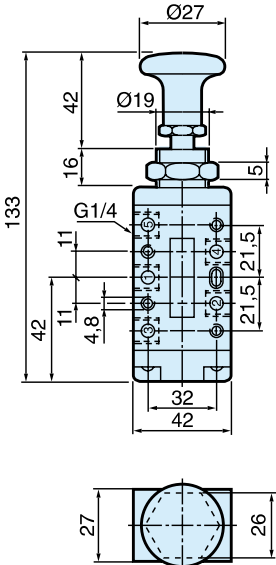
3/2 valves

Button operated spring return
or button returned



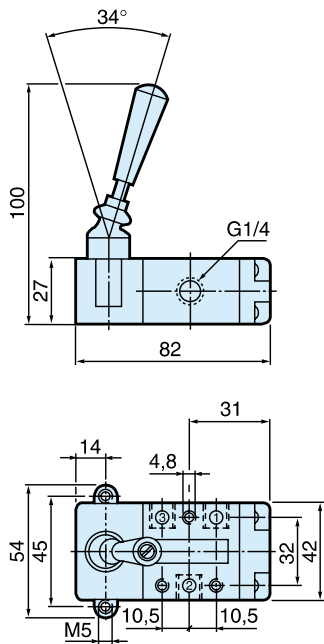
5/2 valves

Button operated spring return
or button returned



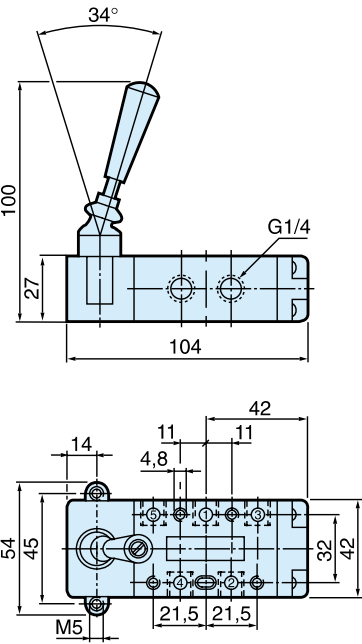
3/2 valves

Lever operated

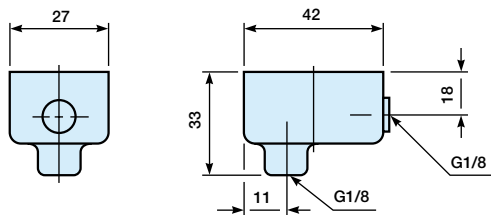


5/2 valves

Lever operated



Air Pilot Return



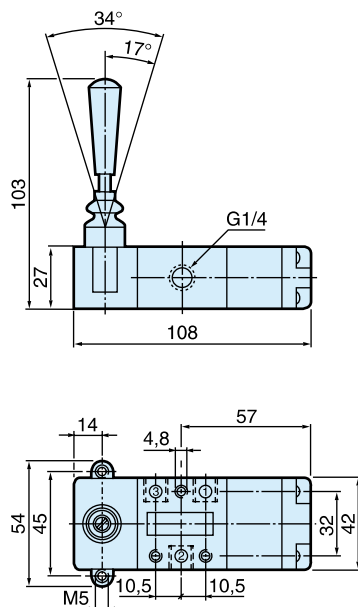
Dimensions, G1/4 ported spool valves

All dimensions in mm unless otherwise stated

Manually operated valves

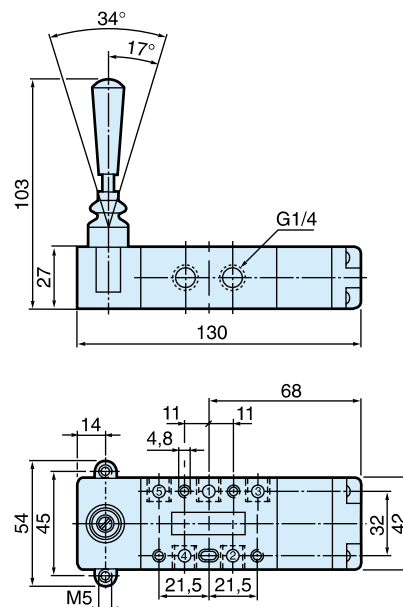
3/3 valves (Self centring)

Lever operated



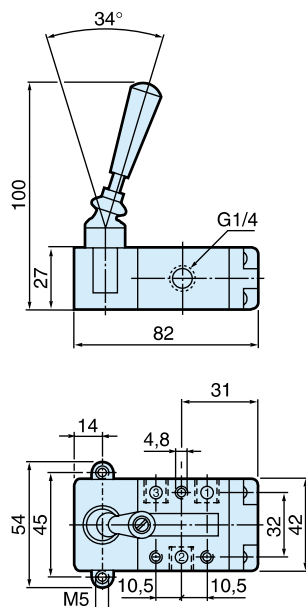
5/3 valves (Self centring)

Lever operated



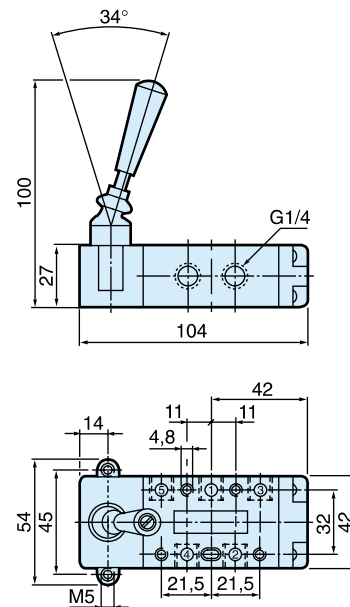
3/3 valves (3 positions)

Lever operated

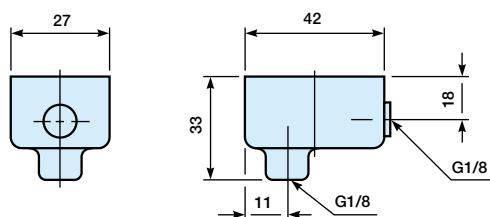


5/3 valves (3 positions)

Lever operated



Air Pilot Return



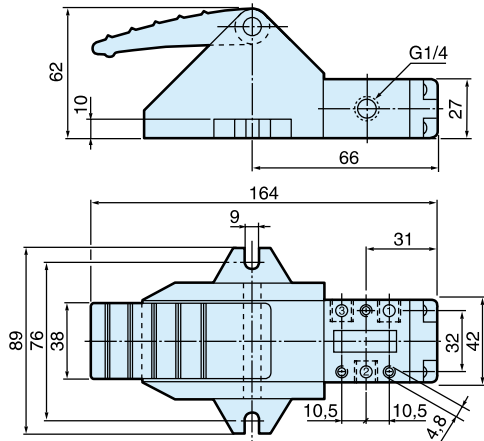
Dimensions, G1/4 ported spool valves

All dimensions in mm unless otherwise stated

Manually operated valves

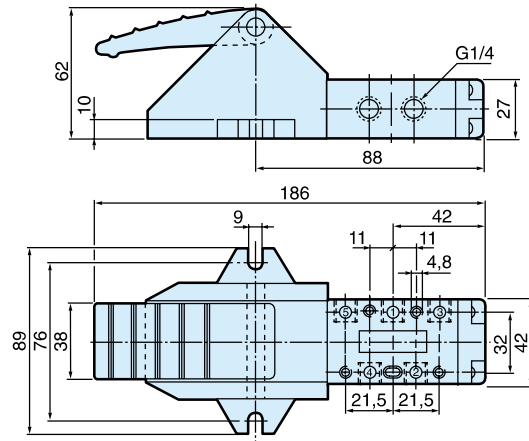
3/2 valves

Foot pedal operated spring return



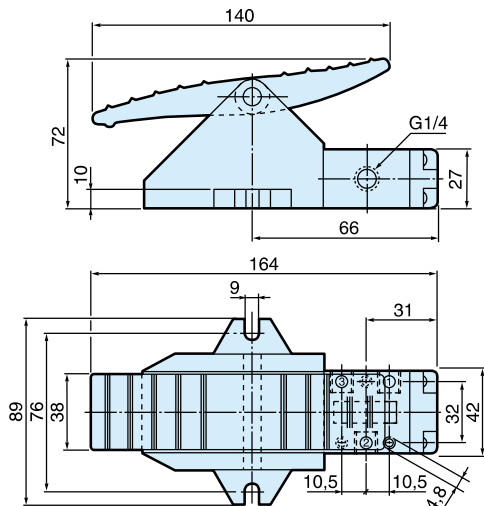
5/2 valves

Foot pedal operated spring return



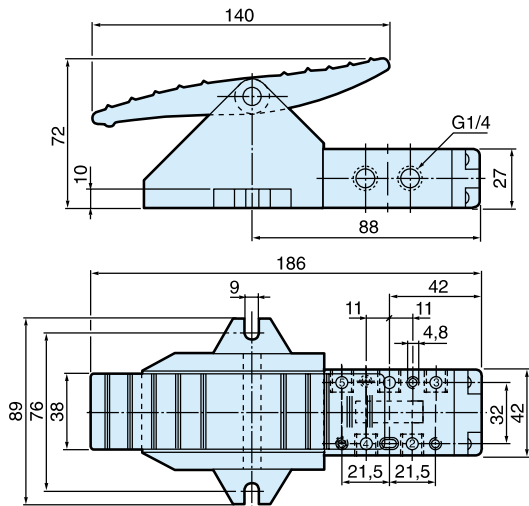
3/2 valves

Foot pedal operated



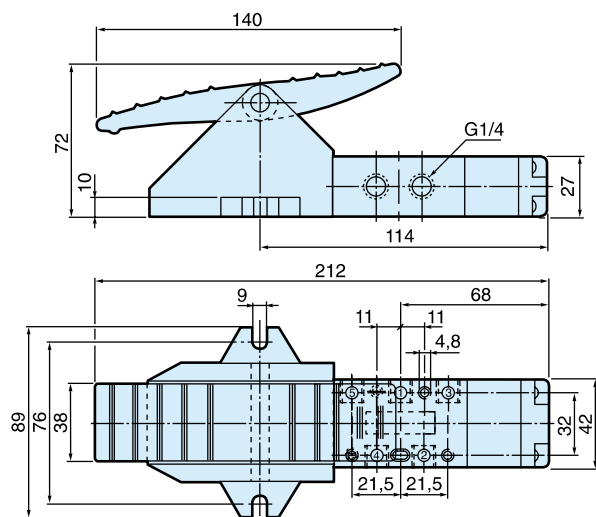
5/2 valves

Foot pedal operated



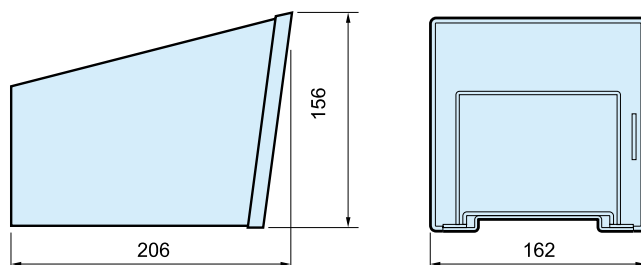
5/3 valves

Foot pedal operated



Foot guard kit

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Service and Replacement Parts

B43 Series Manually Operated Valves

Order code	Actuator	Replacement actuator	Repair kit
B43003BXS	Button	43004BX-100	
B43004BXS	Button		
B43004HXS	Button, Push/Pull	43004H-100	Body seal 43007A
B43003LS	Lockdown lever	43004L-200	
B43004LS	Lockdown lever		

B53 Series Manually Operated Valves

Order code	Actuator	Replacement actuator	Repair kit
B53003HXS	Button		
B53004HXS	Button		
B53003HX	Button, Push/Pull		
B53004HX	Button, Push/Pull	53004HX-100	Body seal 53007
B53004HXX	Button, Self centring		
B53004HXY	Button, Self centring		
B53004HXZ	Button, Self centring		
B53003FS	Foot	53004F-100	
B53004FS	Foot		
B53003LS	Lever	53004L-198	
B53004LS	Lever		
B53003LT	Lever, 2 positions	53004L-196	Body seal 53007
B53004LT	Lever, 2 positions		
B53004L	Lever, 3 positions	53004L-100	Lever kit 53004L-300R
B53004LW	Lever, 3 positions		
B53004LX	Lever, Self centring	53004L-198	
B53004LY	Lever, Self centring		

B43 Series Mechanically Operated Valves

Order code	Actuator	Replacement actuator	Repair kit
B43003CS	Plunger	43004C-100	
B43004CS	Plunger		Body seal 43007A
B43003RS	Roller Lever	43004R-200	
B43004RS	Roller Lever		

B53 Series Mechanically Operated Valves

Order code	Actuator	Replacement actuator	Repair kit
B53003CS	Plunger	53004C-100	
B53004CS	Plunger		Body seal 53007
B53003RS	Roller	53004R-100	
B53004RS	Roller		

