

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.



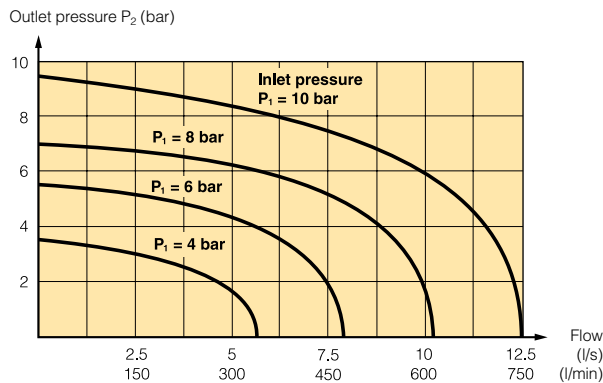
- B 43 - 1/8" ported, B53 - 1/4 ported
- Manual and mechanical operation
- Stainless steel spools
- Viton seals
- 3/2, 5/2, 3/3 and 5/3 versions.
- Integral mounting holes

Operating information		Material specification	
Type	Spool valves	Valve body	Aluminium
Style	Body ported	Spool	Stainless steel
Port size	G1/8 & G1/4	Seal spacers	Zinc die cast
Mounting	Any plane	Seals	Viton
Pressure range	Vacuum to 10 bar	Spring housing	Nylon
Temperature range	-10°C to +80°C	Spring	Zinc plated
Flow acc. (to ISO 6358)		End covers	Zinc die cast
	<b>Midget B43 series</b>	Actuators	Zinc die cast
	<b>Intermediate B53 series</b>	End cover screws	Zinc plated
	c = 1.13 NI/s x bar		
	c = 3.69 NI/s x bar		
	b = 0.36		
	b = 0.33		
	Qn = 5.5 l/s		
	Qn = 17.5 l/s		
	Qmax = 9.0 l/s		
	Qmax = 29 l/s		
	Cv = 0.24		
	Cv = 1.02		
		<b>Working medium, air quality</b>	
		Working medium:	Dry, filtered compressed air to ISO 8573-1 class 3.4.3.

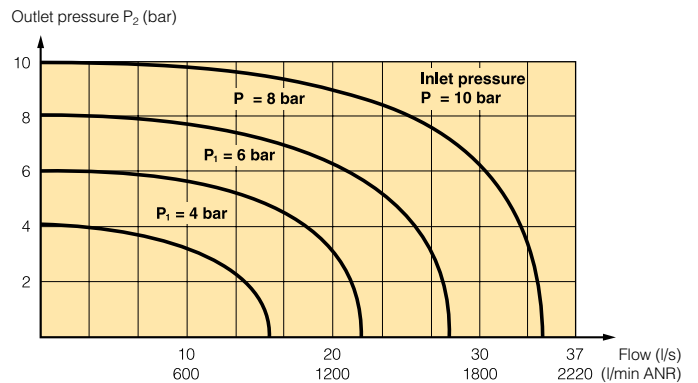
**Flow characteristics**

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	<b>B43003CS</b>
	3/2	Plunger	Air	14	<b>B43003CP</b>
	5/2	Plunger	Spring	36	<b>B43004CS</b>
	5/2	Plunger	Air	14	<b>B43004CP</b>
	3/2	Roller	Spring Lever	20	<b>B43003RS</b>
	3/2	Roller Lever	Air	7	<b>B43003RP</b>
	5/2	Roller Lever	Spring	20	<b>B43004RS</b>
	5/2	Roller Lever	Air	7	<b>B43004RP</b>
	3/2	One way lever	Spring	20	<b>B43003RTS</b>
	3/2	One way roller lever	Air	7	<b>B43003RTP</b>
	5/2	One way roller lever	Spring	20	<b>B43004RTS</b>
	5/2	One way roller lever	Air	7	<b>B43004RTP</b>

**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	<b>B53003CS</b>
	3/2	Plunger	Air	27	<b>B53003CP</b>
	5/2	Plunger	Spring	53	<b>B53004CS</b>
	5/2	Plunger	Air	27	<b>B53004CP</b>
	3/2	Roller	Spring	53	<b>B53003RS</b>
	3/2	Roller	Air	27	<b>B53003RP</b>
	5/2	Roller	Spring	53	<b>B53004RS</b>
	5/2	Roller	Air	27	<b>B53004RP</b>

**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	<b>B43003BXS</b>
	3/2	Black	Button	13	<b>B43003HXS</b>
	5/2	Black	Spring	36	<b>B43004BXS</b>
	5/2	Black	Button	13	<b>B43004HXS</b>
	3/2	Black	Air	13	<b>B43003BXP</b>
	3/2	Black	Air or Button	13	<b>B43003HXP</b>
	5/2	Black	Air	13	<b>B43004BXP</b>
	5/2	Black	Air or Button	13	<b>B43004XHP</b>
	3/2	Lock down lever	Spring	9	<b>B43003LS</b>
	3/2	Lock down lever	Spring	9	<b>B43004LS</b>
	3/2	Lock down lever	Air	3	<b>B43003LP</b>
	3/2	Lock down lever	Air	3	<b>B43004LP</b>

**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	<b>B53003HXS</b>
	3/2	Black	Button	27	<b>B53003HX</b>
	3/2	Black	Air	27	<b>B53003HXP</b>
	5/2	Black	Spring	53	<b>B53004HXS</b>
	5/2	Black	Button	27	<b>B53004HX</b>
	5/2	Black	Air	27	<b>B53004HXP</b>
	5/3	Button closed centre position	Button self centring	13	<b>B53005HXX</b>
	5/3	Button vented centre position	Air self centring	13	<b>B53004HXY</b>
	5/3	Button pressurised centre position	Air self centring	13	<b>B53004HXZ</b>

**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	<b>B53003LS</b>
	3/2	Lever	Air	9	<b>B53003LP</b>
	3/2	Lever	Lever	9	<b>B53003LT</b>
	3/3	Lever closed centre position	Lever	9	<b>B53003L</b>
	3/3	Lever closed centre position	Lever self centring	14	<b>B53003LX</b>
	5/2	Lever	Spring	14	<b>B53004LS</b>
	5/2	Lever	Air	14	<b>B53004LP</b>
	5/2	Lever	Lever	14	<b>B53004LT</b>
	5/3	Lever closed centre position	Lever held in three positions	9	<b>B53004L</b>
	5/3	Lever vented centre position	Lever held in three positions	9	<b>B53004LW</b>
	5/3	Lever pressurised centre position	Lever held in three positions	9	<b>B53004LN</b>
	5/3	Lever closed centre position	Lever self centring	14	<b>B53004LX</b>
	5/3	Lever vented centre position	Lever self centring	14	<b>B53004LY</b>
	5/3	Lever pressurised centre position	Lever self centring	14	<b>B53004LZ</b>

**Mounting kit**



Panel mounting kit **M53004L-10A**  
 Kit includes panel plate and M5 counter sunk head screws

**Midget 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	<b>B43003FS</b>
	5/2	Foot pedal	Spring	16	<b>B43004FS</b>

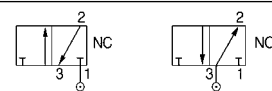
**Intermediate foot operated valves,  
B53 series - G1/4**

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

**Accessories**



Foot guard kit **3117**



All 3/2 type B43 & B5/3 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

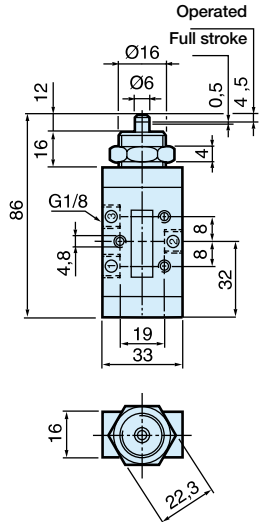
**Dimensions, G1/8 ported spool valves**

All dimensions in mm unless otherwise stated

**Mechanically operated valves**

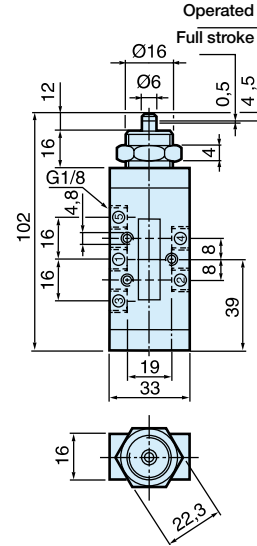
**3/2 valves**

Plunger operated spring return



**5/2 valves**

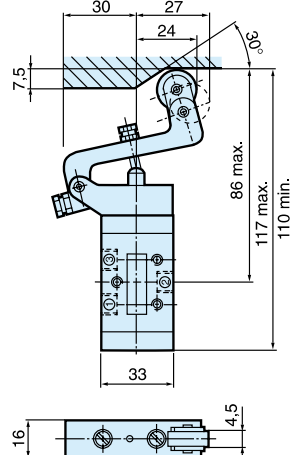
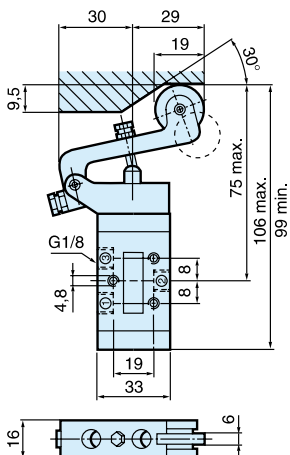
Plunger operated spring return



**3/2 valves**

Roller operated spring return

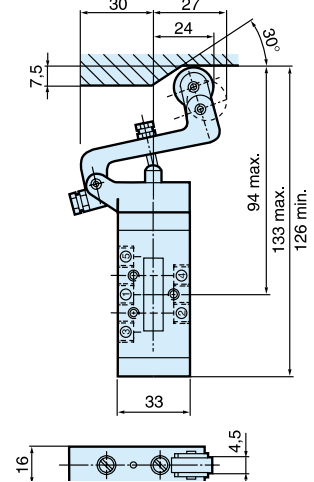
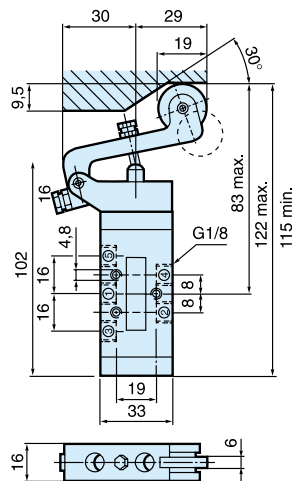
One way roller trip operate spring return



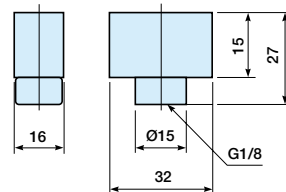
**5/2 valves**

Roller operated spring return

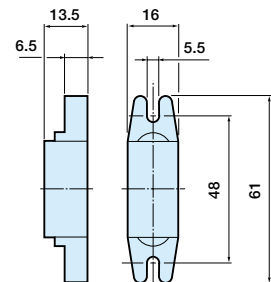
One way roller trip operate spring return



Air Pilot Return



Optional foot mounted - Spring return housing



**Dimensions, G1/8 ported spool valves**

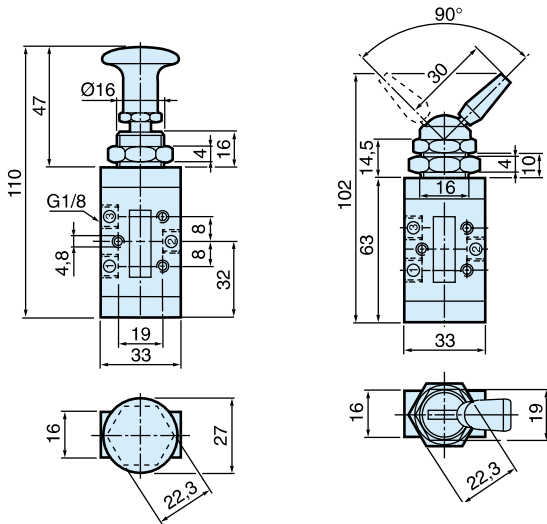
All dimensions in mm unless otherwise stated

**Manually operated valves**

**3/2 valves**

Button operated spring return or button returned

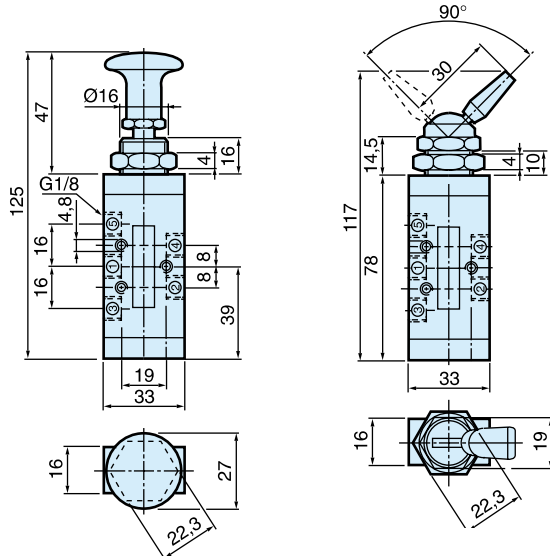
Lock down lever operated spring return



**5/2 valves**

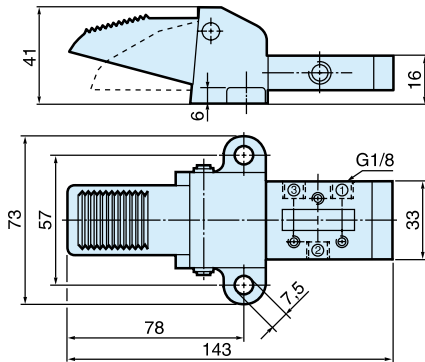
Button operated spring return or button returned

Lock down lever operated spring return



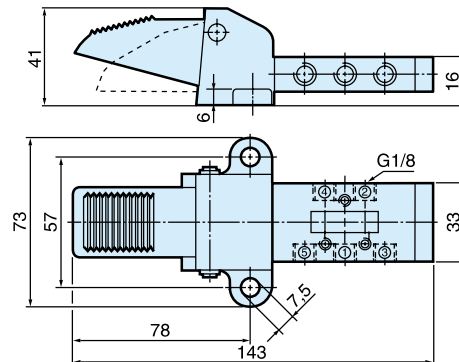
**3/2 valves**

Foot pedal operated spring return

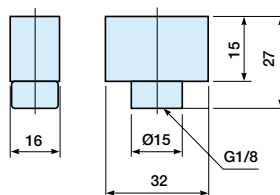


**5/2 valves**

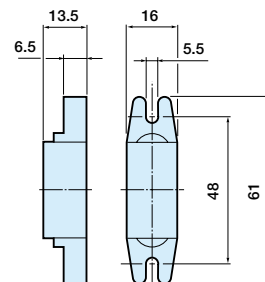
Foot pedal operated spring return



Air Pilot Return



Optional foot mounted - Spring return housing



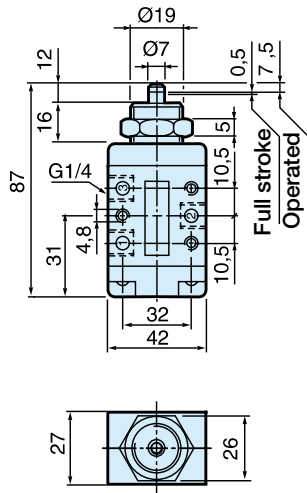
**Dimensions, G1/4 ported spool valves**

All dimensions in mm unless otherwise stated

**Mechanically operated valves**

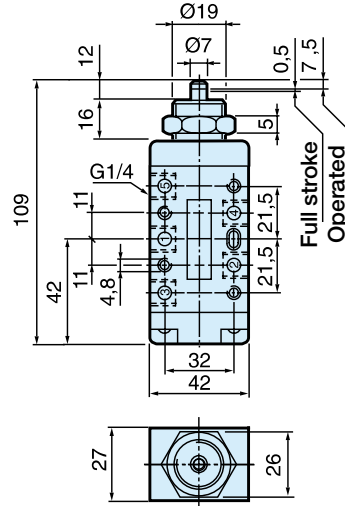
**3/2 valves**

Plunger operated spring return



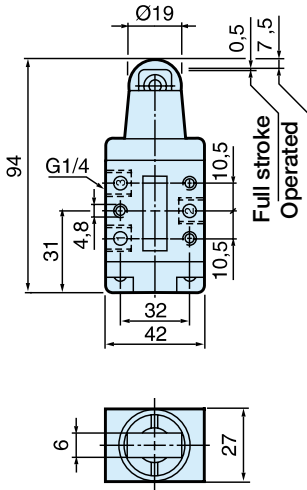
**5/2 valves**

Plunger operated spring return



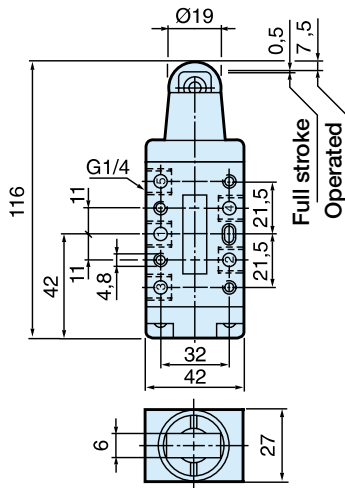
**3/2 valves**

Roller operated spring return

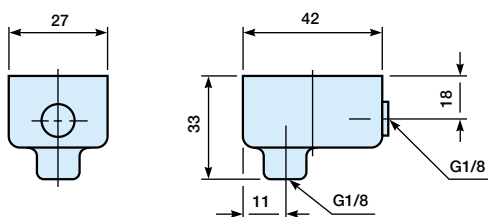


**5/2 valves**

Roller operated spring return



Air Pilot Return



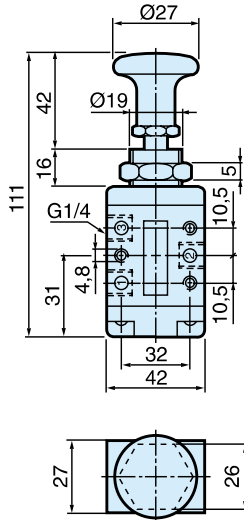
**Dimensions, G1/4 ported spool valves**

All dimensions in mm unless otherwise stated

**Manually operated valves**

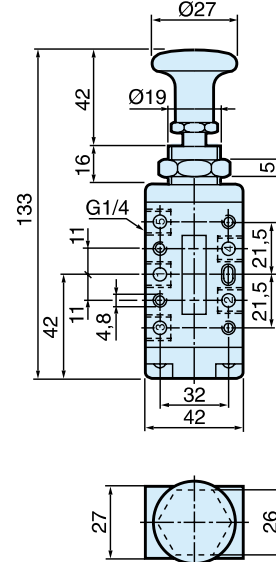
**3/2 valves**

Button operated spring return or button returned



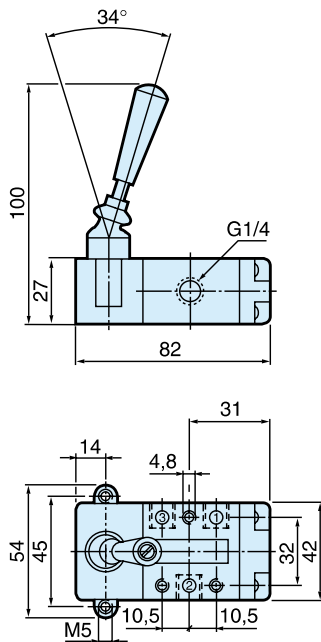
**5/2 valves**

Button operated spring return or button returned



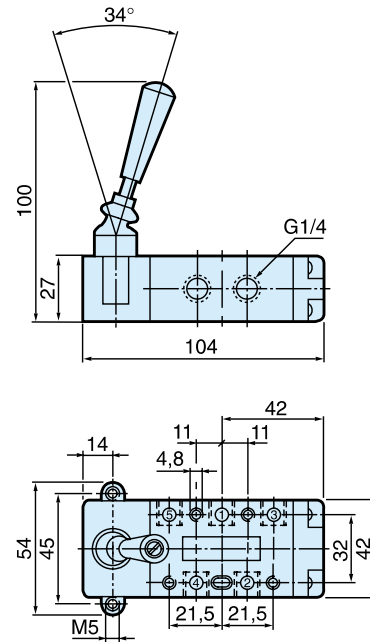
**3/2 valves**

Lever operated

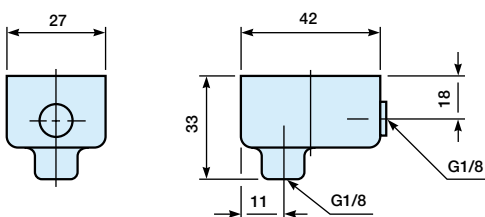


**5/2 valves**

Lever operated



Air Pilot Return





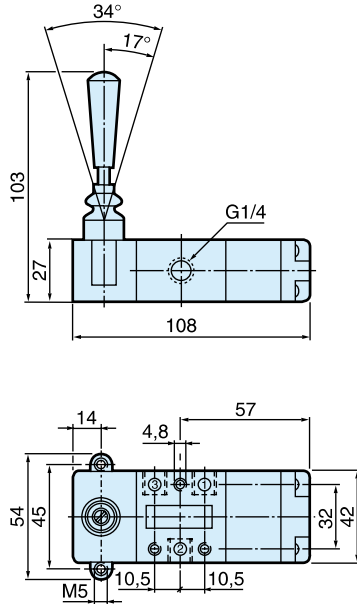
**Dimensions, G1/4 ported spool valves**

All dimensions in mm unless otherwise stated

**Manually operated valves**

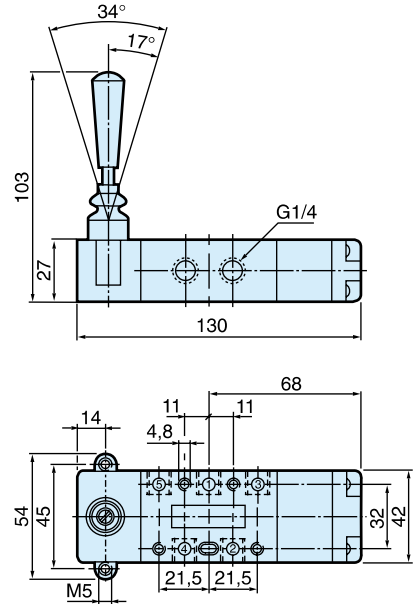
**3/3 valves (Self centring)**

Lever operated



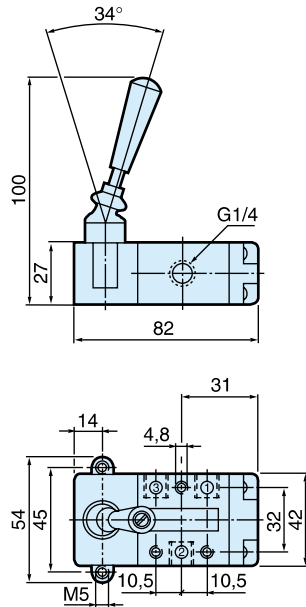
**5/3 valves (Self centring)**

Lever operated



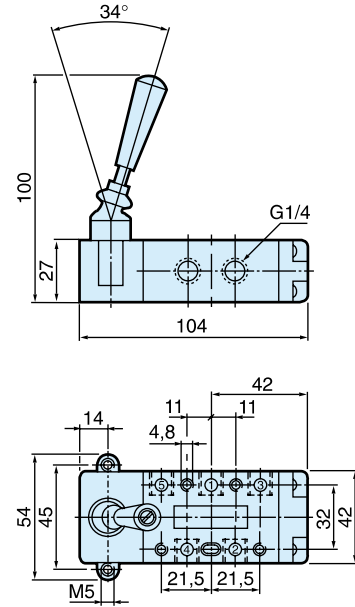
**3/3 valves (3 positions)**

Lever operated

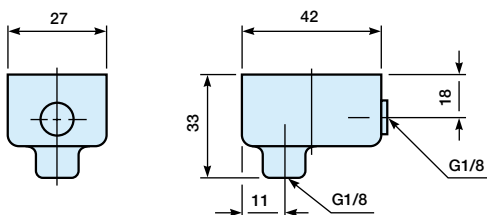


**5/3 valves (3 positions)**

Lever operated



Air Pilot Return



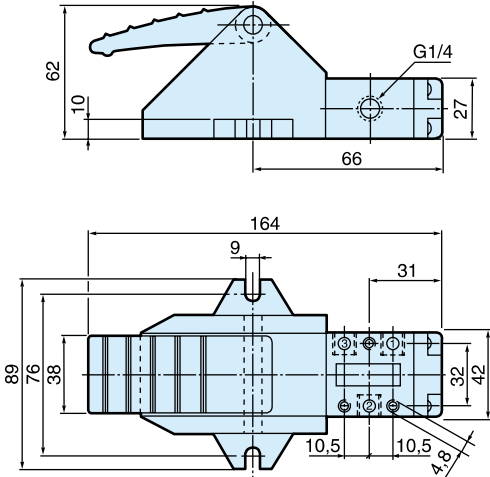
**Dimensions, G1/4 ported spool valves**

All dimensions in mm unless otherwise stated

**Manually operated valves**

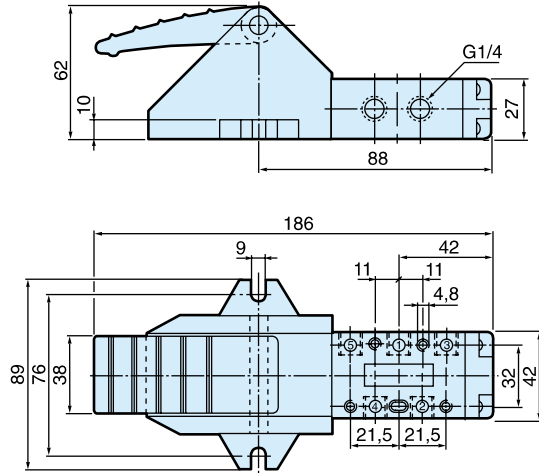
**3/2 valves**

Foot pedal operated spring return



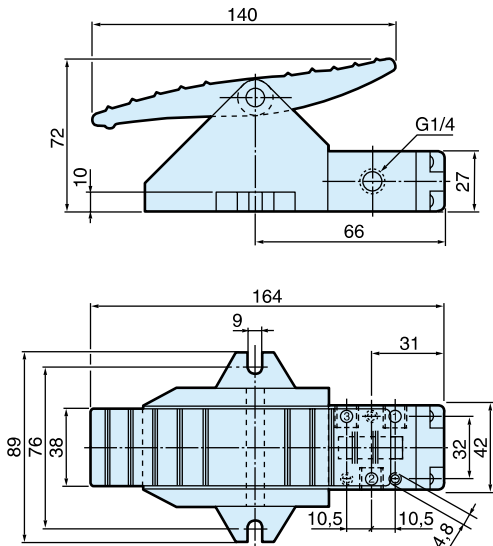
**5/2 valves**

Foot pedal operated spring return



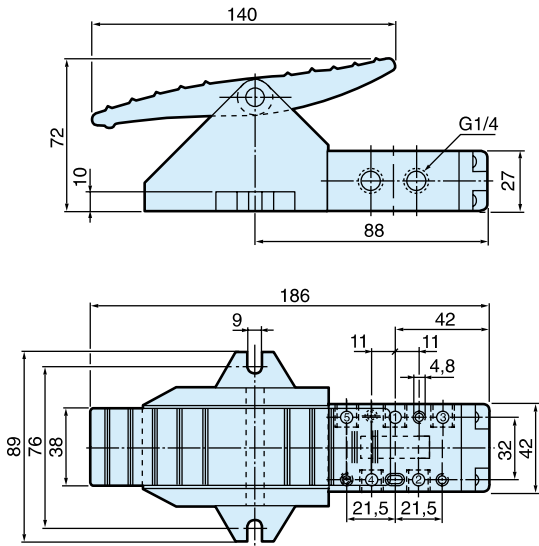
**3/2 valves**

Foot pedal operated



**5/2 valves**

Foot pedal operated



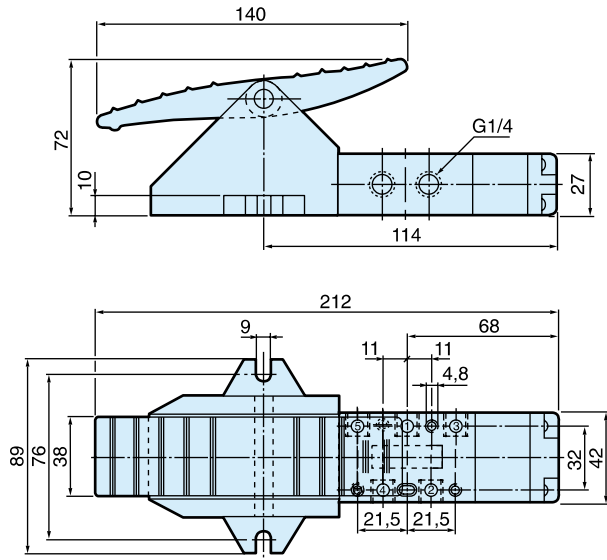
**Dimensions, G1/4 ported spool valves**

All dimensions in mm unless otherwise stated

**Manually operated valves**

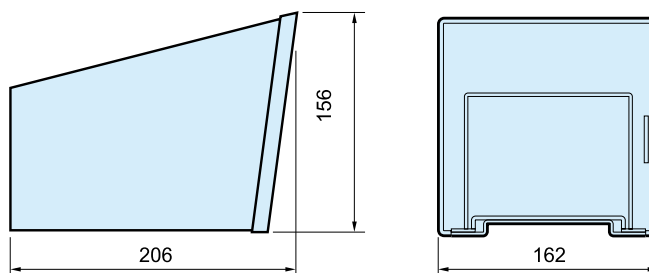
**5/3 valves**

Foot pedal operated



**Foot guard kit**

**3117**



## Service and Replacement Parts

## B43 Series Manually Operated Valves

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



## B53 Series Manually Operated Valves

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



## B43 Series Mechanically Operated Valves

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



## B53 Series Mechanically Operated Valves

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

