

# PNEUMATIC VALVES

## Series 200

### General

The pneumatic actuated valves are grouped in this part of catalogue because they have similar operating conditions of the solenoid valves. In fact the commutation signal is remote as it is for the manual and mechanical actuated valves.

In the first part of these catalogues are listed the pneumatic actuated valves for single use not suitable to be assembled on bases but eventually on manifold with one inlet port only.

The valves series 800 are suitable for both single and ganged applications. These valves have a diversified use of 3-ways and 5-ways based on balanced spool as shown on functional symbols. The repositions are made by spring, differential pneumatic spring or pneumatic for the bistable and centre spring return.

### Construction characteristics

	Body	Actuators	Bottom plates	Pistons	Spacers	Seals	Spools	Springs	
<b>Series 104</b>	Technopolymer		/	Aluminium	Technopolymer	NBR	Steel	Stainless steel	
<b>Series 105</b>	Aluminium		/					Spring steel	
<b>Series 805</b>	Aluminium				/	HNBR	Aluminium	Stainless steel	
<b>Series 808</b>								Spring steel	
<b>Series 228</b>	Aluminium	Aluminium Technopolymer	Technopolymer			NBR	Steel	Spring steel	<b>STD</b>
<b>Series T228</b> (Ver. 3/2-5/2)	Technopolymer					NBR	Technopolymer	Spring steel	
<b>Series T228</b> (Ver. 5/3)							Steel		
<b>Series 488</b>	Aluminium	Technopolymer				NBR	Steel	Stainless steel	
<b>Series T488</b> (Ver. 3/2-5/2)	Technopolymer					NBR	Technopolymer		
<b>Series T488</b> (Ver. 5/3)							Steel		
<b>Series 224</b>	Aluminium	Technopolymer	Aluminium	Technopolymer	NBR	Steel	Spring steel	<b>STD</b>	
<b>Series T224</b> (Ver. 3/2-5/2)	Technopolymer					NBR	Technopolymer	Spring steel	
<b>Series T224</b> (Ver. 5/3)							Steel	Stainless steel	
<b>Series 212</b>	Aluminium				Technopolymer	NBR	Steel	Spring steel	<b>STD</b>
<b>Series 212/2</b>					/	PUR	Aluminium		
<b>Series 211</b>	Aluminium					NBR	Steel		<b>STD</b>

### Use and maintenance

These valves have an average life of 15 million cycles depending on the application and air quality, filtered and lubricated air using specified lubricants will dramatically reduce the wear of the seals and ensures long and trouble free operation.

Please ensure that the valve is being used according with the manufacturers specification, such as air pressure and temperature and that exhaust ports 3 & 5 are protected against the possible ingress of dirt or debris.

Repair kits including the spool complete with seals are available for overhauling the valves; however, although this is a simple operation it should be carried out by a competent person.

**ATTENTION:** use hydraulic oil class H for lubrication such as MAGNA GC 32 (Castrol).





# PNEUMATIC ACTUATED VALVES

(series 200, T200, section 1)

# PNEUMAX

		Symbol	Description	Code	Max. pressure	Flow at 6 bar, Δp=1	Orifice size
<b>G 1/8"</b>	3/2		Pneumatic - Spring	<b>STD</b> 228.32.11.1	2,5-10 bar	540 NI/min	mm 6
			Pneumatic - Differential external	228.32.11.12			
			Pneumatic - Differential self aligned	228.32.11.12/1			
	5/2		Pneumatic - Pneumatic	<b>STD</b> 228.32.11.11	2-10 bar		
			Amplified pneumatic - Spring	228.32.13.1	0,5-10 bar		
			Pneumatic - Spring	<b>STD</b> 228.52.11.1	2,5-10 bar		
		Pneumatic - Differential external	<b>STD</b> 228.52.11.12				
		Pneumatic - Differential self aligned	228.52.11.12/1				
	5/3		Pneumatic - Pneumatic	<b>STD</b> 228.52.11.11	2-10 bar		
			Amplified pneumatic - Spring	228.52.13.1	0,5-10 bar		
			Pneumatic - Pneumatic - C.C.	<b>STD</b> 228.53.31.11.11	3-10 bar	410 NI/min	
		Pneumatic - Pneumatic - O.C.	228.53.32.11.11				
	Pneumatic - Pneumatic - P.C.	228.53.33.11.11					



		Symbol	Description	Code	Max. pressure	Flow at 6 bar, Δp=1	Orifice size
<b>G 1/4"</b>	3/2		Pneumatic - Spring	<b>STD</b> 224.32.11.1	2,5-10 bar	1360 NI/min	mm 8
			Pneumatic - Differential external	224.32.11.12			
			Pneumatic - Pneumatic	<b>STD</b> 224.32.11.11			
	5/2		Pneumatic - Spring	<b>STD</b> 224.52.11.1	2,5-10 bar		
			Pneumatic - Differential external	224.52.11.12			
			Pneumatic - Pneumatic	<b>STD</b> 224.52.11.11			
	5/3		Pneumatic - Pneumatic - C.C.	<b>STD</b> 224.53.31.11.11	3-10 bar	1280 NI/min	
			Pneumatic - Pneumatic - O.C.	224.53.32.11.11			
			Pneumatic - Pneumatic - P.C.	224.53.33.11.11			



		Symbol	Description	Code	Max. pressure	Flow at 6 bar, Δp=1	Orifice size
<b>G 1/2"</b>	3/2		Pneumatic - Spring	212.32.11.1	2,5-10 bar	3500NI/min	mm 15
			Pneumatic - Differential	212.32.11.12			
			Pneumatic - Pneumatic	212.32.11.11			
	5/2		Pneumatic - Spring	<b>STD</b> 212.52.11.1	2,5-10 bar		
			Pneumatic - Differential	212.52.11.12			
			Pneumatic - Pneumatic	<b>STD</b> 212.52.11.11			
	5/3		Pneumatic - Pneumatic - C.C.	<b>STD</b> 212.53.31.11.11	3-10 bar	3000NI/min	
			Pneumatic - Pneumatic - O.C.	212.53.32.11.11			
			Pneumatic - Pneumatic - P.C.	212.53.33.11.11			



<b>G 1"</b>	3/2		Pneumatic - Spring	211.32.11.1	2,5-10 bar	6500NI/min	mm 20
			Pneumatic - Differential	211.32.11.12			
			Pneumatic - Pneumatic	211.32.11.11			
	5/2		Pneumatic - Spring	211.52.11.1	2,5-10 bar		
			Pneumatic - Differential	211.52.11.12			
			Pneumatic - Pneumatic	211.52.11.11			
	5/3		Pneumatic - Pneumatic C.C.	211.53.31.11.11	3-10 bar		
			Pneumatic - Pneumatic O.C.	211.53.32.11.11			
			Pneumatic - Pneumatic P.C.	211.53.33.11.11			



Technical modifications keep in reserve !

(2010/10)



The components illustrated and described in the present catalogue are sold under the trademark **PNEUMAX**. Sales in Italy and abroad are handled through the organization indicated in the "**Sales network pages**". The overall dimensions and technical information are provided solely for information reasons and may be subject to change without notice.



1

<b>Pneumatic - Spring</b>	2/2 3/2	<b>Ordering code</b>	2/2 3/2	<b>Pneumatic - Spring</b>										
<i>Lateral connections</i>		<b>104.1.11.1.C.F</b>		<i>Rear connections</i>										
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>TYPE</td></tr> <tr><td>1 22 = 2 ways</td></tr> <tr><td>32 = 3 ways</td></tr> <tr><td>CONNECTION TYPE</td></tr> <tr><td>C L = Lateral</td></tr> <tr><td>P = Rear</td></tr> <tr><td>FUNCTION</td></tr> <tr><td>A = Normally Open</td></tr> <tr><td>C = Normally Closed</td></tr> </table>		TYPE	1 22 = 2 ways	32 = 3 ways	CONNECTION TYPE	C L = Lateral	P = Rear	FUNCTION	A = Normally Open	C = Normally Closed		
TYPE														
1 22 = 2 ways														
32 = 3 ways														
CONNECTION TYPE														
C L = Lateral														
P = Rear														
FUNCTION														
A = Normally Open														
C = Normally Closed														
Weight gr. 25 Minimum piloting pressure 2,5 bar				Weight gr. 25 Minimum piloting pressure 2,5 bar										

Operational characteristic							
Fluid	Max working pressure (bar)	Temperature °C		Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered air, with or without lubrication	10 bar	Min.	Max.	90 NI/min	mm 2,5	ø4 tube	M5

<b>Pneumatic - Spring</b>	3/2	<b>Ordering code</b>	5/2	<b>Pneumatic - Spring</b>				
		<b>105.1.11.1</b>						
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>TYPE</td></tr> <tr><td>1 32 = 3 ways</td></tr> <tr><td>52 = 5 ways</td></tr> </table>		TYPE	1 32 = 3 ways	52 = 5 ways		
TYPE								
1 32 = 3 ways								
52 = 5 ways								
Weight gr. 90 Minimum piloting pressure 2,5 bar				Weight gr. 100 Minimum piloting pressure 2,5 bar				

Operational characteristic							
Fluid	Max working pressure (bar)	Temperature °C		Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5	+70	120 NI/min	mm 2,5	M5	M5

<b>Pneumatic - Differential external</b>	3/2	<b>Ordering code</b>	5/2	<b>Pneumatic - Differential external</b>				
		<b>105.1.11.12</b>						
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>TYPE</td></tr> <tr><td>1 32 = 3 ways</td></tr> <tr><td>52 = 5 ways</td></tr> </table>		TYPE	1 32 = 3 ways	52 = 5 ways		
TYPE								
1 32 = 3 ways								
52 = 5 ways								
Weight gr. 110 Minimum piloting pressure 2,5 bar				Weight gr. 120 Minimum piloting pressure 2,5 bar				

Operational characteristic							
Fluid	Max working pressure (bar)	Temperature °C		Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5	+70	120 NI/min	mm 2,5	M5	M5



1

Pneumatic - Pneumatic

3/2

Ordering code

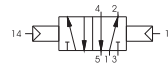
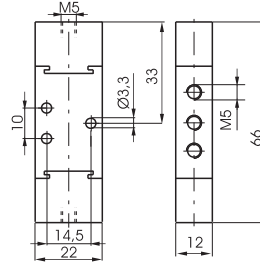
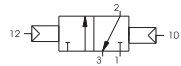
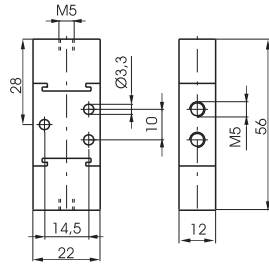
**105.1.11.11**

5/2

Pneumatic - Pneumatic

TYPE

- 32 = 3 ways
- 52 = 5 ways



Weight gr. 110  
Minimum piloting pressure 2,5 bar

Weight gr. 120  
Minimum piloting pressure 2,5 bar

**Operational characteristic**

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	120 NI/min	mm 2,5	M5	M5



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<b>Pneumatic - Spring</b>	3/2	<b>Ordering code</b> <b>805.11.1</b>	5/2	<b>Pneumatic - Spring</b>				
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="text-align: center;">TYPE</td></tr> <tr><td style="text-align: center;">1 32 = 3 ways</td></tr> <tr><td style="text-align: center;">52 = 5 ways</td></tr> </table>		TYPE	1 32 = 3 ways	52 = 5 ways		
				TYPE				
1 32 = 3 ways								
52 = 5 ways								
Weight gr. 45 Minimum piloting pressure 2 bar				Weight gr. 50 Minimum piloting pressure 2 bar				

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	160 NI/min	mm 2,5	M5	M5

<b>Pneumatic - Differential</b>	3/2	<b>Ordering code</b> <b>805.11.12</b>	5/2	<b>Pneumatic - Differential</b>				
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="text-align: center;">TYPE</td></tr> <tr><td style="text-align: center;">1 32 = 3 ways</td></tr> <tr><td style="text-align: center;">52 = 5 ways</td></tr> </table>		TYPE	1 32 = 3 ways	52 = 5 ways		
				TYPE				
1 32 = 3 ways								
52 = 5 ways								
Weight gr. 50 Minimum piloting pressure 2 bar				Weight gr. 55 Minimum piloting pressure 2 bar				

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	160 NI/min	mm 2,5	M5	M5

<b>Pneumatic - Pneumatic</b>	3/2	<b>Ordering code</b> <b>805.11.11</b>	5/2	<b>Pneumatic - Pneumatic</b>				
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="text-align: center;">TYPE</td></tr> <tr><td style="text-align: center;">1 32 = 3 ways</td></tr> <tr><td style="text-align: center;">52 = 5 ways</td></tr> </table>		TYPE	1 32 = 3 ways	52 = 5 ways		
				TYPE				
1 32 = 3 ways								
52 = 5 ways								
Weight gr. 55 Minimum piloting pressure 1,5 bar				Weight gr. 60 Minimum piloting pressure 1,5 bar				

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	160 NI/min	mm 2,5	M5	M5

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<b>Pneumatic - Spring</b>	3/2	Ordering code <b>228.11.1</b>	5/2	<b>Pneumatic - Spring</b>			
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>TYPE</td></tr> <tr><td>32 = 3 ways</td></tr> <tr><td>52 = 5 ways</td></tr> </table>	TYPE	32 = 3 ways	52 = 5 ways		
TYPE							
32 = 3 ways							
52 = 5 ways							
Weight gr. 110 Minimum piloting pressure 2,5 bar							
Weight gr. 130 Minimum piloting pressure 2,5 bar							

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	540 NI/min	mm 6	G 1/8"	G 1/8"

<b>Pneumatic - Differential external</b>	3/2	Ordering code <b>228.11.12</b>	5/2	<b>Pneumatic - Differential external</b>			
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>TYPE</td></tr> <tr><td>32 = 3 ways</td></tr> <tr><td>52 = 5 ways</td></tr> </table>	TYPE	32 = 3 ways	52 = 5 ways		
TYPE							
32 = 3 ways							
52 = 5 ways							
Weight gr. 140 Minimum piloting pressure 2,5 bar							
Weight gr. 160 Minimum piloting pressure 2,5 bar							

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	540 NI/min	mm 6	G 1/8"	G 1/8"

<b>Pneumatic - Differential self aligned</b>	3/2	Ordering code <b>228.11.12/1</b>	5/2	<b>Pneumatic - Differential self aligned</b>			
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>TYPE</td></tr> <tr><td>32 = 3 ways</td></tr> <tr><td>52 = 5 ways</td></tr> </table>	TYPE	32 = 3 ways	52 = 5 ways		
TYPE							
32 = 3 ways							
52 = 5 ways							
Weight gr. 130 Minimum piloting pressure 2,5 bar							
Weight gr. 150 Minimum piloting pressure 2,5 bar							

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	540 NI/min	mm 6	G 1/8"	G 1/8"



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<b>Pneumatic - Pneumatic</b>	3/2	<b>Ordering code</b> <b>228.11.11</b>	5/2	<b>Pneumatic - Pneumatic</b>
Weight gr. 140 Minimum piloting pressure 2 bar				
Weight gr. 160 Minimum piloting pressure 2 bar				

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	540 NI/min	mm 6	G 1/8"	G 1/8"

<b>Amplified pneumatic - Spring</b>	3/2	<b>Ordering code</b> <b>228.13.1</b>	5/2	<b>Amplified pneumatic - Spring</b>
Weight gr. 260 Minimum piloting pressure 0,5 bar				
Weight gr. 290 Minimum piloting pressure 0,5 bar				

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	540 NI/min	mm 6	G 1/8"	G 1/8"

<b>Pneumatic - Pneumatic</b>				5/3																					
Weight gr. 180 Minimum piloting pressure 3 bar																									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Ordering code</th> </tr> </thead> <tbody> <tr> <td colspan="2" style="text-align: center;"><b>228.53.F.11.11</b></td> </tr> <tr> <th colspan="2">FUNCTION</th> </tr> <tr> <td style="text-align: center;">F</td> <td>31 = Closed centres</td> </tr> <tr> <td></td> <td>32 = Open centres</td> </tr> <tr> <td></td> <td>33 = Pressured centres</td> </tr> </tbody> </table>					Ordering code		<b>228.53.F.11.11</b>		FUNCTION		F	31 = Closed centres		32 = Open centres		33 = Pressured centres									
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<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="7">Operational characteristic</th> </tr> <tr> <th>Fluid</th> <th>Max working pressure (bar)</th> <th>Temperature °C</th> <th>Flow rate at 6 bar with Δp=1 (NI/min)</th> <th>Orifice size (mm)</th> <th>Working ports size</th> <th>Pilot ports size</th> </tr> </thead> <tbody> <tr> <td>Filtered and lubricated air</td> <td>10 bar</td> <td>-5 - +70</td> <td>410 NI/min</td> <td>mm 6</td> <td>G 1/8"</td> <td>G 1/8"</td> </tr> </tbody> </table>					Operational characteristic							Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size	Filtered and lubricated air	10 bar	-5 - +70	410 NI/min	mm 6	G 1/8"	G 1/8"
Operational characteristic																									
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size																			
Filtered and lubricated air	10 bar	-5 - +70	410 NI/min	mm 6	G 1/8"	G 1/8"																			



1

<b>Pneumatic - Spring</b>	3/2	Ordering code <b>808.11.1</b>	5/2	<b>Pneumatic - Spring</b>				
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">TYPE</td> </tr> <tr> <td>32 = 3 ways</td> </tr> <tr> <td>52 = 5 ways</td> </tr> </table>		TYPE	32 = 3 ways	52 = 5 ways		
				TYPE				
32 = 3 ways								
52 = 5 ways								
<p>Weight gr. 95 Minimum piloting pressure 2 bar</p>				<p>Weight gr. 100 Minimum piloting pressure 2 bar</p>				

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	520 NI/min	mm 4	G 1/8"	M5

<b>Pneumatic - Differential</b>	3/2	Ordering code <b>808.11.12</b>	5/2	<b>Pneumatic - Differential</b>				
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">TYPE</td> </tr> <tr> <td>32 = 3 ways</td> </tr> <tr> <td>52 = 5 ways</td> </tr> </table>		TYPE	32 = 3 ways	52 = 5 ways		
				TYPE				
32 = 3 ways								
52 = 5 ways								
<p>Weight gr. 105 Minimum piloting pressure 2 bar</p>				<p>Weight gr. 110 Minimum piloting pressure 2 bar</p>				

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	520 NI/min	mm 4	G 1/8"	M5

<b>Pneumatic - Pneumatic</b>	3/2	Ordering code <b>808.11.11</b>	5/2	<b>Pneumatic - Pneumatic</b>				
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">TYPE</td> </tr> <tr> <td>32 = 3 ways</td> </tr> <tr> <td>52 = 5 ways</td> </tr> </table>		TYPE	32 = 3 ways	52 = 5 ways		
				TYPE				
32 = 3 ways								
52 = 5 ways								
<p>Weight gr. 115 Minimum piloting pressure 1,5 bar</p>				<p>Weight gr. 120 Minimum piloting pressure 1,5 bar</p>				

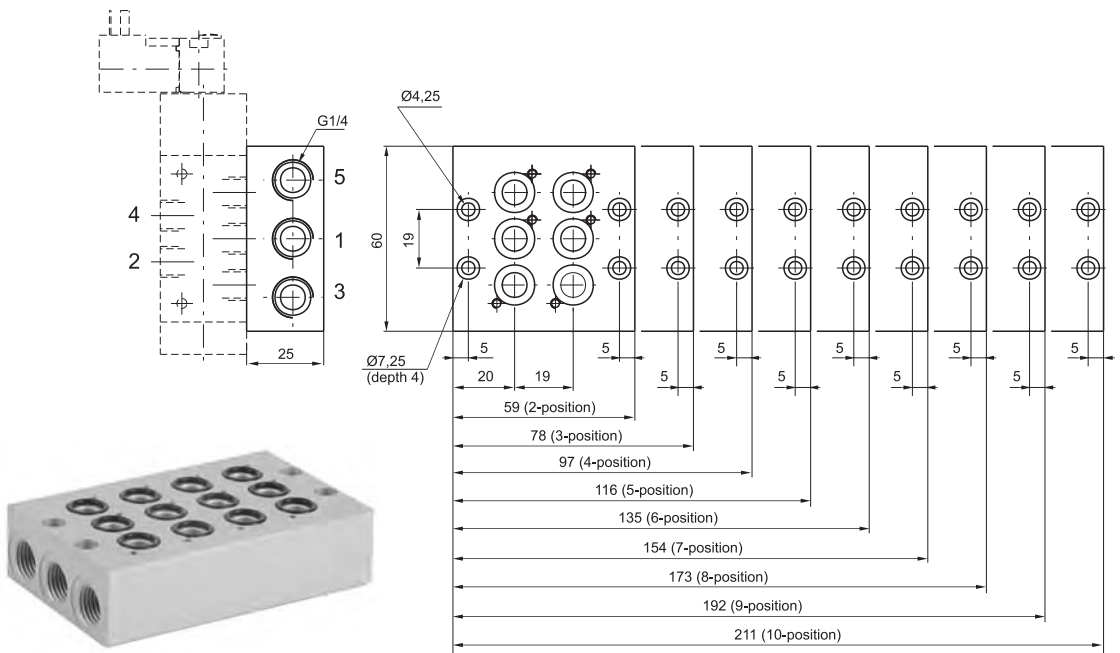
Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	520 NI/min	mm 4	G 1/8"	M5



1

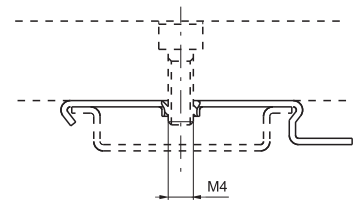
**Manifolds**

Ordering code
<b>808.N</b>
N. POSITIONS
02 = 2 pos. (weight gr. 180)
03 = 3 pos. (weight gr. 245)
04 = 4 ports (weight gr. 310)
05 = 5 pos. (weight gr. 375)
<b>06 = 6 pos. (weight gr. 440)</b>
07 = 7 pos. (weight gr. 500)
08 = 8 pos. (weight gr. 560)
09 = 9 pos. (weight gr. 620)
10 = 10 pos. (weight gr. 680)



**Clip**

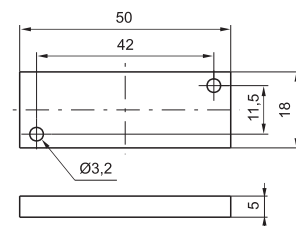
Ordering code
<b>800.00</b>



Weight gr. 5  
(for mounting the distributors groups on guide DIN 46277/3)

**Closing plate**

Ordering code
<b>808.00</b>



Weight gr. 65

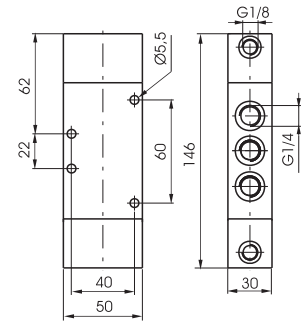




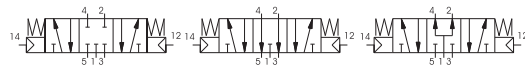
Pneumatic - Pneumatic

5/3

Ordering code
<b>224.53.F.11.11</b>
FUNCTION
F 31 = Closed centres
32 = Open centres
33 = Pressured centres



Weight gr. 550  
Minimum piloting pressure 3 bar



Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (l/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	1280 l/min	mm 8	G 1/4"	G 1/8"



1

<b>Pneumatic - Spring</b>	3/2	Ordering code <b>212.11.1</b>	5/2	<b>Pneumatic - Spring</b>
<p>Weight gr. 1110 Minimum piloting pressure 2,5 bar</p>		<p>Weight gr. 1390 Minimum piloting pressure 2,5 bar</p>		
				<p>TYPE</p> <p>32 = 3 ways</p> <p>52 = 5 ways</p>

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	3500 NI/min	mm 15	G 1/2"	G 1/8"

<b>Pneumatic - Differential external</b>	3/2	Ordering code <b>212.11.12</b>	5/2	<b>Pneumatic - Differential external</b>
<p>Weight gr. 1380 Minimum piloting pressure 2,5 bar</p>		<p>Weight gr. 1660 Minimum piloting pressure 2,5 bar</p>		
				<p>TYPE</p> <p>32 = 3 ways</p> <p>52 = 5 ways</p>

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	3500 NI/min	mm 15	G 1/2"	G 1/8"

<b>Pneumatic - Pneumatic</b>	3/2	Ordering code <b>212.11.11</b>	5/2	<b>Pneumatic - Pneumatic</b>
<p>Weight gr. 1350 Minimum piloting pressure 2 bar</p>		<p>Weight gr. 1630 Minimum piloting pressure 2 bar</p>		
				<p>TYPE</p> <p>32 = 3 ways</p> <p>52 = 5 ways</p>

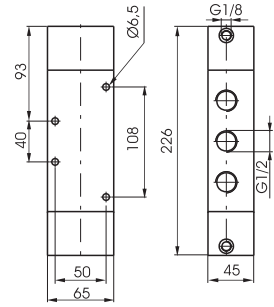
Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	3500 NI/min	mm 15	G 1/2"	G 1/8"



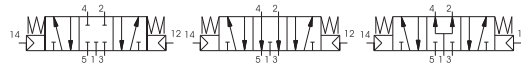
Pneumatic - Pneumatic

5/3

Ordering code	
<b>212.53.1.11.11</b>	
FUNCTION	
F	31 = Closed centres
	32 = Open centres
	33 = Pressured centres



Weight gr. 1650  
Minimum piloting pressure 3 bar



Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (Nl/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	3000 Nl/min	mm 15	G 1/2"	G 1/8"



1

<b>Pneumatic - Spring</b>	3/2	Ordering code <b>212/2.11.11</b>	5/2	<b>Pneumatic - Spring</b>			
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>TYPE</td></tr> <tr><td>32 = 3 ways</td></tr> <tr><td>52 = 5 ways</td></tr> </table>	TYPE	32 = 3 ways	52 = 5 ways		
			TYPE				
32 = 3 ways							
52 = 5 ways							

Weight gr. 524  
Minimum piloting pressure 2,5 bar

Weight gr. 644  
Minimum piloting pressure 2,5 bar

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	3600 NI/min	mm 15	G 1/2"	G 1/8"

<b>Pneumatic - Differential</b>	3/2	Ordering code <b>212/2.11.12</b>	5/2	<b>Pneumatic - Differential</b>			
<i>Diff. external - Normally closed</i>				<i>Diff. external</i>			
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>TYPE</td></tr> <tr><td>32 = 3 ways</td></tr> <tr><td>52 = 5 ways</td></tr> </table>	TYPE	32 = 3 ways	52 = 5 ways		
			TYPE				
32 = 3 ways							
52 = 5 ways							

Weight gr. 464  
Minimum piloting pressure 2,5 bar

Weight gr. 586  
Minimum piloting pressure 2,5 bar

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	3600 NI/min	mm 15	G 1/2"	G 1/8"

<b>Pneumatic - Differential</b>	3/2	Ordering code <b>212/2.11.12/F</b>	5/2	<b>Pneumatic - Differential</b>							
<i>Diff. self aligned</i>				<i>Diff. self aligned</i>							
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>TYPE</td></tr> <tr><td>32 = 3 ways</td></tr> <tr><td>52 = 5 ways</td></tr> <tr><td>FUNCTION</td></tr> <tr><td>1.C = 3 ways Normally Closed</td></tr> <tr><td>1.A = 3 ways Normally Open</td></tr> <tr><td>1 = 5 ways diff. self aligned</td></tr> </table>	TYPE	32 = 3 ways	52 = 5 ways	FUNCTION	1.C = 3 ways Normally Closed	1.A = 3 ways Normally Open	1 = 5 ways diff. self aligned		
			TYPE								
32 = 3 ways											
52 = 5 ways											
FUNCTION											
1.C = 3 ways Normally Closed											
1.A = 3 ways Normally Open											
1 = 5 ways diff. self aligned											

Weight gr. 466  
Minimum piloting pressure 2,5 bar

Weight gr. 588  
Minimum piloting pressure 2,5 bar

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	3600 NI/min	mm 15	G 1/2"	G 1/8"



Pneumatic - Pneumatic	3/2	Ordering code <b>212/2.1.11.11</b>	5/2	Pneumatic - Pneumatic			
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">TYPE</td> </tr> <tr> <td> <b>1</b>                      32 = 3 ways                      52 = 5 ways                 </td> </tr> </table>		TYPE	<b>1</b> 32 = 3 ways 52 = 5 ways		
				TYPE			
<b>1</b> 32 = 3 ways 52 = 5 ways							
Weight gr. 518 Minimum piloting pressure 2,5 bar				Weight gr. 640 Minimum piloting pressure 2,5 bar			

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	3600 NI/min	mm 15	G 1/2"	G 1/8"

Pneumatic - Pneumatic		Ordering code <b>212/2.53.F.11.11</b>		5/3		
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">FUNCTION</td> </tr> <tr> <td> <b>F</b>                      31 = Closed centres                      32 = Open centres                      33 = Pressured centres                 </td> </tr> </table>			FUNCTION	<b>F</b> 31 = Closed centres 32 = Open centres 33 = Pressured centres
					FUNCTION	
<b>F</b> 31 = Closed centres 32 = Open centres 33 = Pressured centres						
Weight gr. 684 Minimum piloting pressure 3 bar						

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	3300 NI/min	mm 15	G 1/2"	G 1/8"



1

<b>Pneumatic - Spring</b>	3/2	Ordering code <b>211.11.1</b>	5/2	<b>Pneumatic - Spring</b>
		<b>T</b> TYPE 32 = 3 ways 52 = 5 ways		
Weight gr. 3330 Minimum piloting pressure 2,5 bar			Weight gr. 4200 Minimum piloting pressure 2,5 bar	

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	6500 NI/min	mm 20	G 1"	G 1/8"

<b>Pneumatic - Differential external</b>	3/2	Ordering code <b>211.11.12</b>	5/2	<b>Pneumatic - Differential external</b>
		<b>T</b> TYPE 32 = 3 ways 52 = 5 ways		
Weight gr. 3330 Minimum piloting pressure 2,5 bar			Weight gr. 4200 Minimum piloting pressure 2,5 bar	

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	6500 NI/min	mm 20	G 1"	G 1/8"

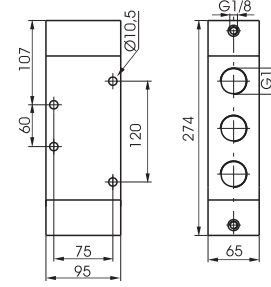
<b>Pneumatic - Pneumatic</b>	3/2	Ordering code <b>211.11.11</b>	5/2	<b>Pneumatic - Pneumatic</b>
		<b>T</b> TYPE 32 = 3 ways 52 = 5 ways		
Weight gr. 3330 Minimum piloting pressure 2 bar			Weight gr. 4200 Minimum piloting pressure 2 bar	

Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	6500 NI/min	mm 20	G 1"	G 1/8"



**Pneumatic - Pneumatic**

Ordering code
<b>211.53.F.11.11</b>
FUNCTION
F 31 = Closed centres
32 = Open centres
33 = Pressured centres



Weight gr. 4200  
Minimum piloting pressure 3 bar



Operational characteristic						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (l/min)	Orifice size (mm)	Working ports size	Pilot ports size
Filtered and lubricated air	10 bar	-5 - +70	6500 l/min	mm 20	G 1"	G 1/8"

