

# Distributors and electrodistributors ISO 5599/1 Series 1000 -1010

Distributors and electro distributors  
ISO size 1

Distributors and electro distributors  
ISO size 2

Technopolymer Distributors  
and electro distributors  
ISO size 1

Technopolymer Distributors  
and electro distributors  
ISO size 2

Distributors and electro distributors  
ISO size 3

Modular bases

Inlet blocks

Single use bases



**General**

5 ways 2 or 3 positions distributors and electric distributors can be used mounted on individual or ganged bases.

A special feature of these devices is that some of their dimensional and functional characteristics comply with international standards, which require that distributors manufactured by different makers be interchangeable. These standards are ISO 5599/1, according to which certain dimensions are mandatory, namely, the mounting surface, the pitch of the fastening screws, the characteristic of the electric pilot, the flow rate, the pneumatic connections, and so on.

The design is based on the balanced spool principle with pneumatic or electropneumatic actuators and resetting by mechanically or pneumatically operated spring.

The 3 position closed centres, are obtained by spring operation.

The feed to the actuators on the distributors can be provided either by pressure intake from inlet 1 (autofeed) or through the base from inlets 12 and 14 (external feed); there are two separate types of these distributors: one is the Series 1000 and the other is the Series 1010.

The Serie 1000 includes size 1 and 2 and are built of die-cast aluminium. The selection is made by turning a seal fitted between body and operator by 180°, so to utilize external-feed pilot or with internal feed.

**Ordering codes are referring to distributors with "M2" mechanics or solenoid valves "S" mounted (see Series 300, section 1). (M2 coil are not included and have to be ordering separately).**

Coil for M2 and solenoid "S"  homologated are available (see pag. 1.26 - 1.27).

The series 1010 includes 3 sizes: 1, 2 and 3. The body and operators of distributor size 1 and 2 are built of acetal resin protected by an anodized aluminium cap, while size 3 is made of die-cast aluminium with protection cap as well. The selection is made as above. For the electro-distributors it is used the electro-pilots CNOMO Series M with possibility to instal the coils ISO 4400 (DIN 43650) or the coil MB 22x22.

The polyurethane seals are available for oil free operation. In this case, the ordering code becomes:

**1001..** becomes 1031    **1051..** becomes 1071    **1011..** becomes 1021  
**1002..** becomes 1032    **1052..** becomes 1072    **1012..** becomes 1022  
**1013..** becomes 1023

**Important:** on this type of valves a temperature higher than 40°C along with water or high humidity are causing a progressive reduction of mechanical characteristics of the seals. This chemical reaction (hydrolysis) duration depends by the ambient temperature and in some cases the seal becomes brittle and falls to pieces.

**Use and maintenance**    **The valves equipped with polyurethane seals are not suitable for tropical climate.**

These distributors have an average life span ranging between 10 and 15 million cycles, depending on operating conditions.

Proper lubrication cuts down the wear of the seals drastically, in the same way as proper filtering prevents the build-up of dirt and consequent malfunctioning of the distributors.

Make sure that the conditions of use comply with the pressure, temperature etc. limits indicated and that the fastening screws are tightened with the following maximum torques on distributors Serie 1010.

**Size 1 = 4 Nm                      Size 2 = 5 Nm                      Size 3 = 8 Nm**

Assembly kits, including the spool and seals subject to wear, are available for servicing, which can be carried out by anyone provided proper care is taken when reassembling the distributors.

**ATTENTION :** use only class H Hydraulic oils for lubrication. e.g. MAGNA GC 32 (CASTROL).



**Construction characteristics**

<b>Series 1000</b>	<b>Size 1</b>	<b>Size 2</b>	
Body	Zinc alloy	Die-cast aluminium	
Operators	Zinc alloy	Die-cast aluminium	
Spools	Nickel-plated steel (Kanigen)	Nickel-plated steel (Kanigen)	
Seals	Nitrile rubber (NBR) oil resistant	Nitrile rubber (NBR) oil resistant	
Spacers	Acetal resin	Aluminium	
Springs	Spring steel	Spring steel	
Selectors	Nitrile rubber (NBR) oil resistant	Nitrile rubber (NBR) oil resistant	
<b>Series 1010</b>	<b>Size 1</b>	<b>Size 2</b>	<b>Size 3</b>
Body	Acetal resin	Acetal resin	Die-cast aluminium
Operators	Acetal resin	Acetal resin	Die-cast aluminium
Spools	Nickel-plated steel (Kanigen)	Nickel-plated steel (Kanigen)	Nickel-plated steel (Kanigen)
Seals	Nitrile rubber (NBR) oil resistant	Nitrile rubber (NBR) oil resistant	Nitrile rubber (NBR) oil resist.
Spacers	Acetal resin	Acetal resin	Acetal resin
Control pistons	Aluminium	Aluminium	Aluminium
Springs	Spring steel	Spring steel	Spring steel

5/2

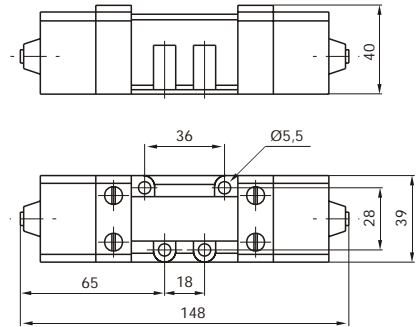
**Pneumatic Spring**

Ordering code

**1001.52.1.9**



Weight gr. 780



Minimum working pressure 2,5 bar

5/2

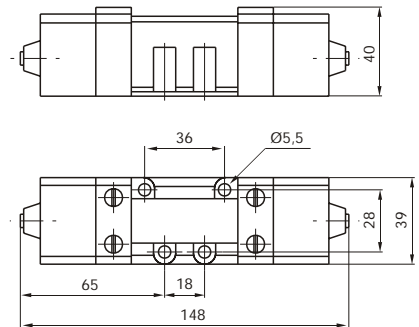
**Pneumatic Differential**

Ordering code

**1001.52.1.6**



Weight gr. 790



Minimum working pressure 2 bar

5/2 and 5/3

**Pneumatic Pneumatic**

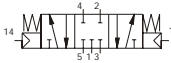
Ordering code

**1001.52.1.8**



Minimum working pressure 1,5 bar

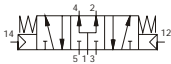
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**1001.53.32.1.8** *Open centres*

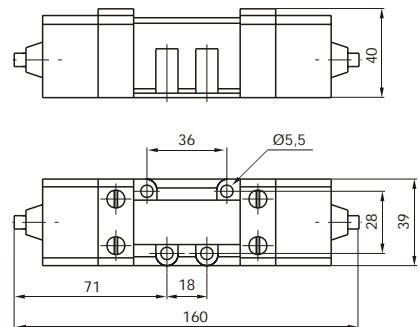


**1001.53.33.1.8** *Pressured centres*



Minimum working pressure 3 bar

Weight gr. 800



Operational characteristics	Fluid	Max working pressure	Operating temperature		Flow rate at 6 bar with $\Delta p = 1$ bar	Orifice size	Working ports size
	Filtered and lubricated	10 bar	min. -5°C	max. +70°C	840 NI/min (5/2) 720 NI/min (5/3)	-----	-----

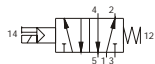


5/2

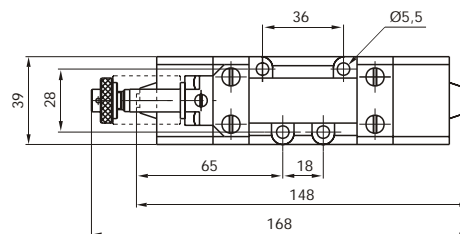
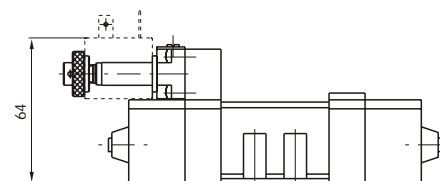
**Solenoid Spring**

Ordering code

**1051.52.3.9.M2**



Weight gr. 890



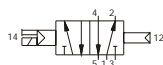
Minimum working pressure 2,5 bar

5/2

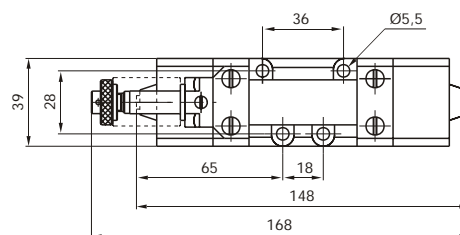
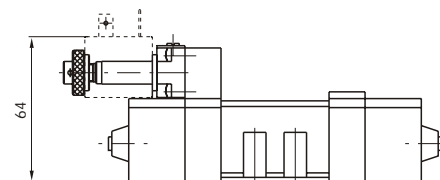
**Solenoid Differential**

Ordering code

**1051.52.3.6.M2**



Weight gr. 900



Minimum working pressure 2 bar

5/2 and 5/3

**Solenoid Solenoid**

Ordering code

**1051.52.3.5.M2**

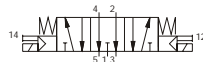


Minimum working pressure 1,5 bar

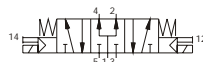
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**1051.53.32.3.5.M2** *Open centres*

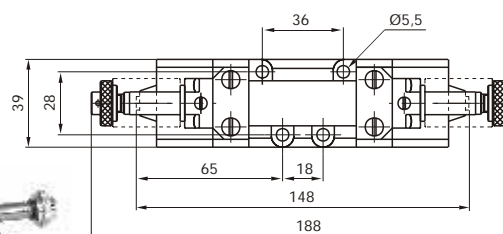
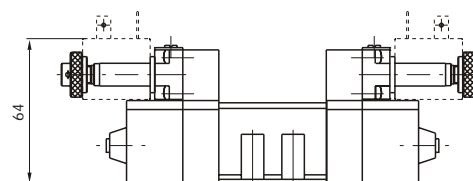


**1051.53.33.3.5.M2** *Pressured centres*



Minimum working pressure 3 bar

Weight gr. 1040



6

Operational characteristics	Fluid	Max working pressure	Operating temperature		Flow rate at 6 bar with $\Delta p = 1$ bar	Orifice size	Working ports size
	Filtered and lubricated	10 bar	min. -5°C	max. +50°C	840 NI/min (5/2) 720 NI/min (5/3)	-----	-----

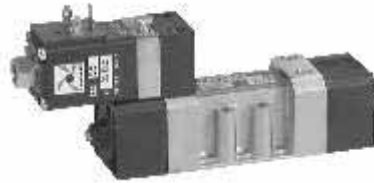
5/2

**Solenoid Spring**

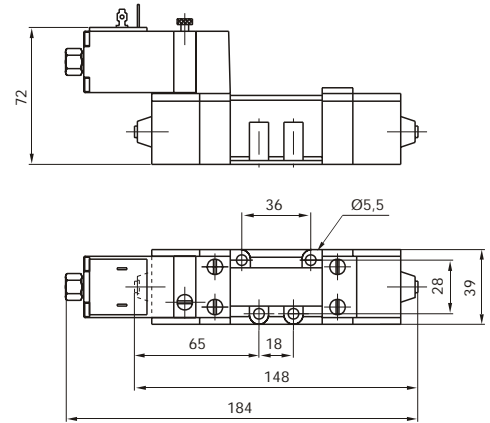
Ordering code

**1001.52.3.9.S\***

Weight gr. 1100



Minimum working pressure 2,5 bar



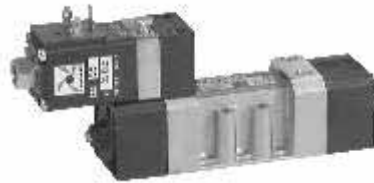
5/2

**Solenoid Differential**

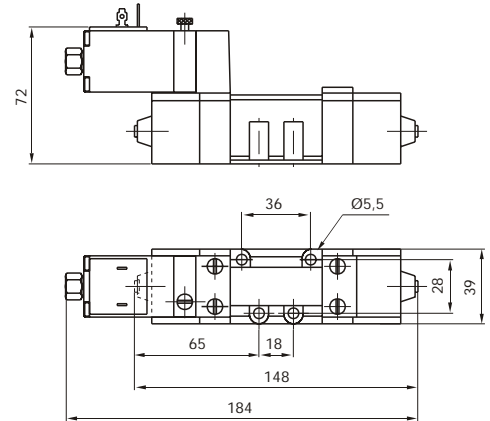
Ordering code

**1001.52.3.6.S\***

Weight gr. 1110



Minimum working pressure 2 bar



5/2 and 5/3

**Solenoid Solenoid**

Ordering code

**1001.52.3.5.S\***

Minimum working pressure 1,5 bar

**1001.53.31.3.5.S\*** Closed centres

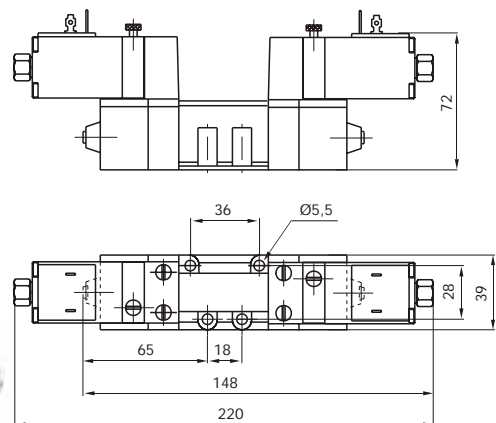
**1001.53.32.3.5.S\*** Open centres

**1001.53.33.3.5.S\*** Pressured centres



Minimum working pressure 3 bar

Weight gr. 1410



Operational characteristics	Fluid	Max working pressure	Operating temperature		Flow rate at 6 bar with $\Delta p = 1$ bar	Orifice size	Working ports size
	Filtered and lubricated	10 bar	min. -5°C	max. +50°C	840 NI/min (5/2) 720 NI/min (5/3)	-----	-----

5/2

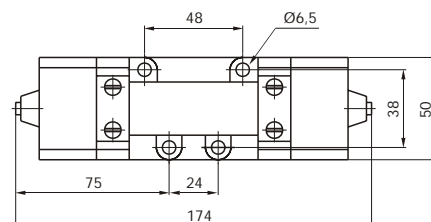
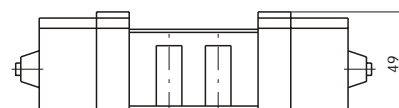
**Pneumatic Differential**

Ordering code

**1002.52.1.6**



Weight gr. 730



Minimum working pressure 2,5 bar

5/2

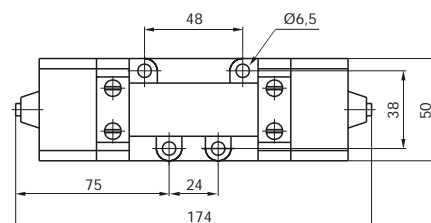
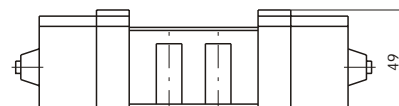
**Pneumatic Pneumatic**

Ordering code

**1002.52.1.8**



Weight gr. 740



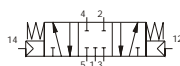
Minimum working pressure 2 bar

5/3

**Pneumatic Pneumatic**

Ordering code

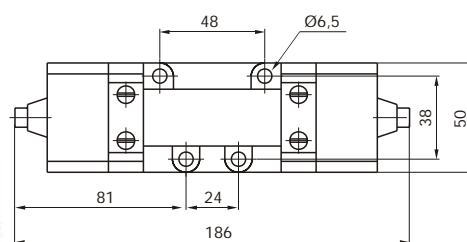
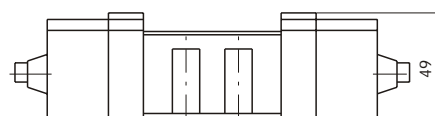
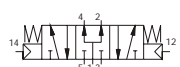
**1002.53.31.1.8** *Closed centres*



**1002.53.32.1.8** *Open centres*



**1002.53.33.1.8** *Pressured centres*



Minimum working pressure 3 bar

Weight gr. 740

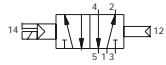
Operational characteristics	Fluid	Max working pressure	Operating temperature		Flow rate at 6 bar with $\Delta p = 1$ bar	Orifice size	Working ports size
	Filtered and lubricated	10 bar	min. -5°C	max. +70°C	1700 NI/min	-----	-----

5/2

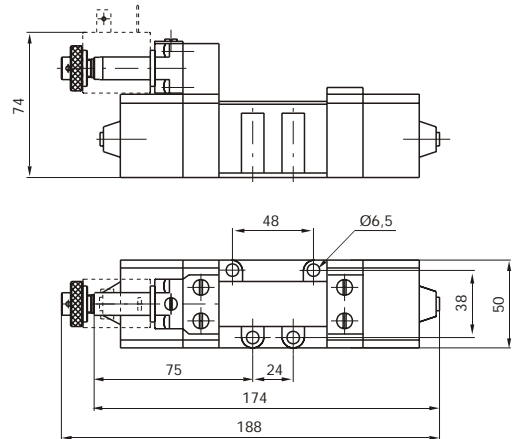
**Solenoid  
Differential**

Ordering code

**1052.52.3.6.M2**



Weight gr. 850



Minimum working pressure 2 bar

5/2

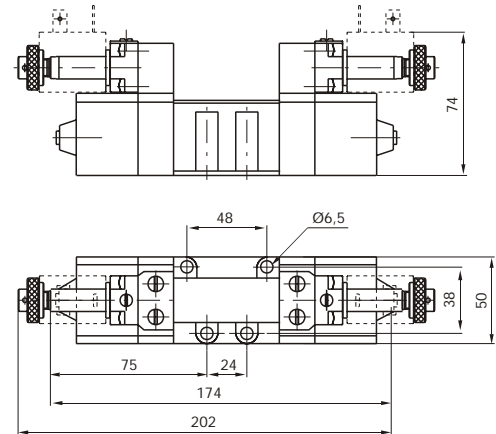
**Solenoid  
Solenoid**

Ordering code

**1052.52.3.5.M2**



Weight gr. 980



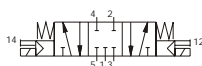
Minimum working pressure 1,5 bar

5/3

**Solenoid  
Solenoid**

Ordering code

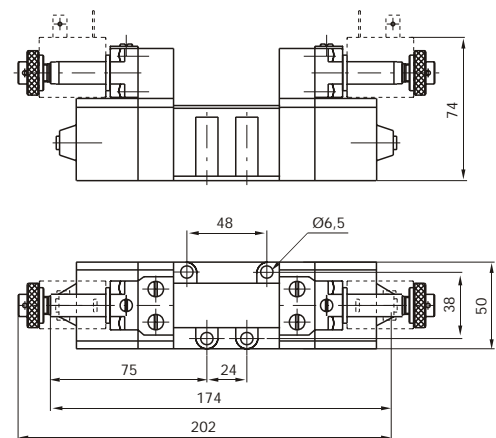
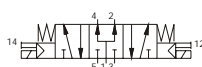
**1052.53.31.3.5.M2** *Closed centres*



**1052.53.32.3.5.M2** *Open centres*



**1052.53.33.3.5.M2** *Pressured centres*



Minimum working pressure 3 bar

Weight gr. 980

Operational characteristics	Fluid	Max working pressure	Operating temperature		Flow rate at 6 bar with $\Delta p = 1$ bar	Orifice size	Working ports size
	Filtered and lubricated	10 bar	min. -5°C	max. +50°C	1700 NI/min	-----	-----



5/2

**Solenoid  
Differential**

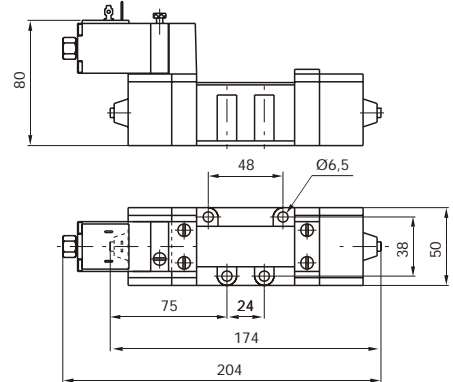
Ordering code

**1002.52.3.6.S\***

S\* = solenoid code  
(see page 1.23)



Weight gr. 1050



Minimum working pressure 2 bar

5/2

**Solenoid  
Solenoid**

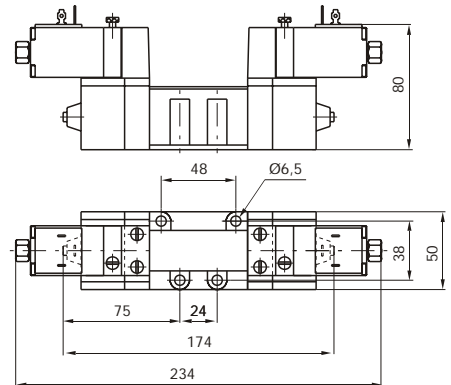
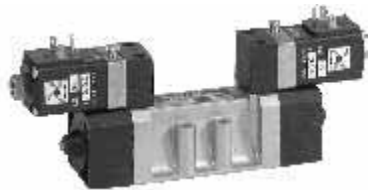
Ordering code

**1002.52.3.5.S\***

S\* = solenoid code  
(see page 1.23)



Weight gr. 1350



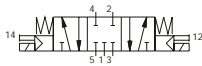
Minimum working pressure 1,5 bar

5/3

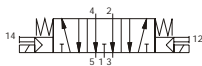
**Solenoid  
Solenoid**

Ordering code

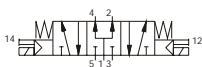
**1002.53.31.3.5.S\*** *Closed centres*



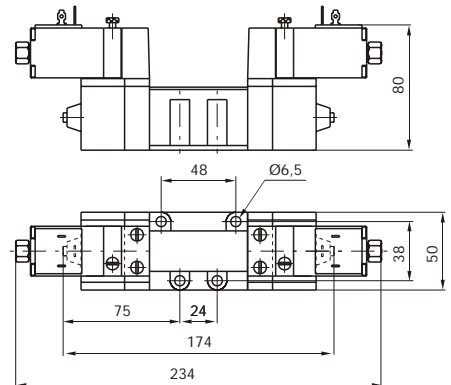
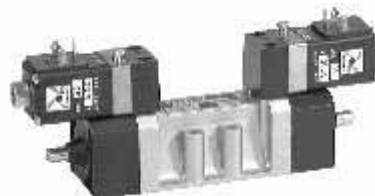
**1002.53.32.3.5.S\*** *Open centres*



**1002.53.33.3.5.S\*** *Pressured centres*



S\* = solenoid code  
(see page 1.23)



Minimum working pressure 3 bar

Weight gr. 1350

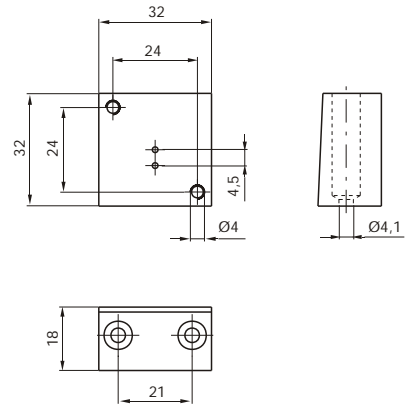
Operational characteristics	Fluid	Max working pressure	Operating temperature		Flow rate at 6 bar with $\Delta p = 1$ bar	Orifice size	Working ports size
	Filtered and lubricated	10 bar	min. -5°C	max. +50°C	1700 NI/min	-----	-----



**Base CNOMO for 32 mm Solenoid valve**

Ordering code

**1001.04**

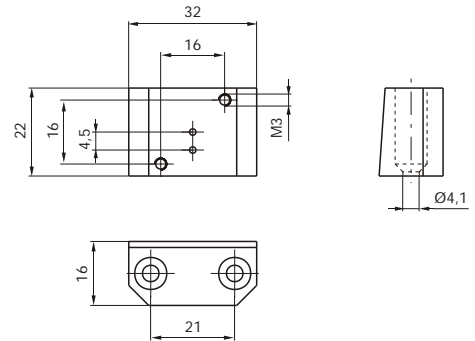


Weight gr. 90

**Base for 22 mm solenoid valve**

Ordering code

**1001.05**



Weight gr. 60

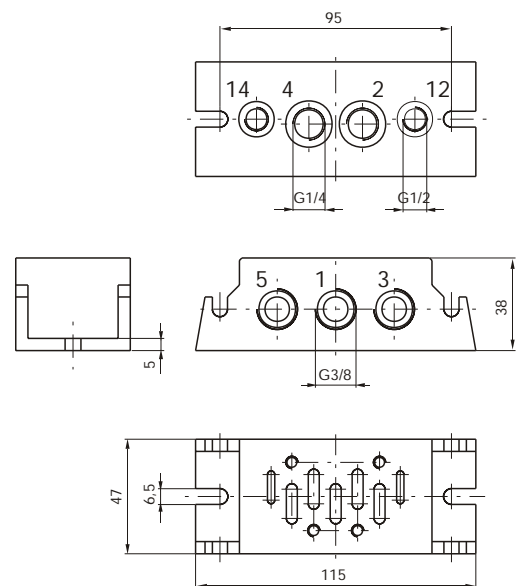
**Base with bottom connections size 1**

Ordering code

**1001.00**

- 1** = INLET PORT
- 2-4** = OUTLET PORTS
- 3-5** = EXHAUST PORTS
- 12-14** = PILOT PORTS

Weight gr. 320





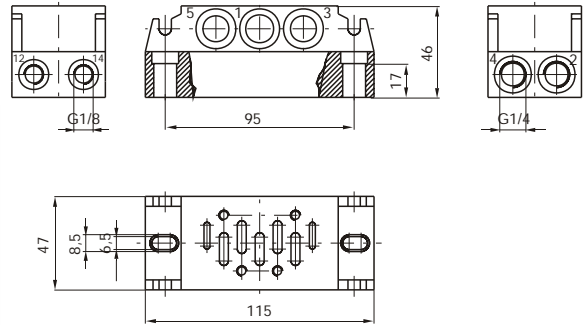
**Base with side connections size 1**

Ordering code

**1001.01**

- 1 = INLET PORT
- 2-4 = OUTLET PORTS
- 3-5 = EXHAUST PORTS
- 12-14 = PILOT PORTS

Weight gr. 445



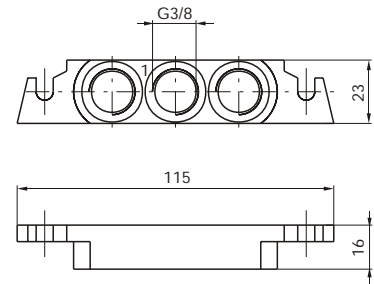
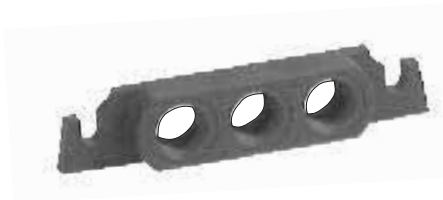
**Inlet blocks**

Ordering code

**1001.02**

- 1 = INLET PORT

Weight gr. 55



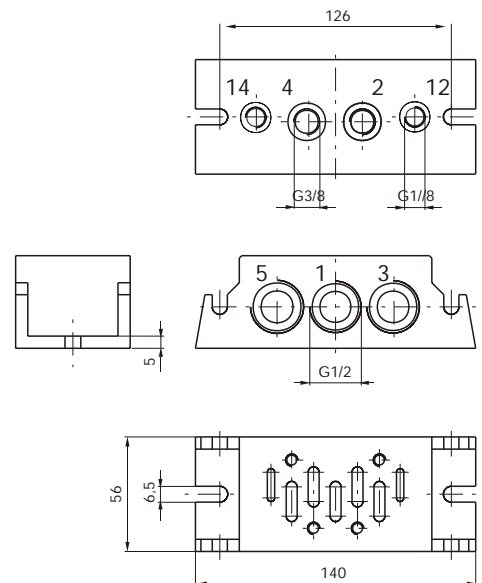
**Base with bottom connections size 2**

Ordering code

**1002.00**

- 1 = INLET PORT
- 2-4 = OUTLET PORTS
- 3-5 = EXHAUST PORTS
- 12-14 = PILOT PORTS

Weight gr. 520

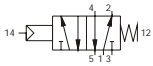


5/2

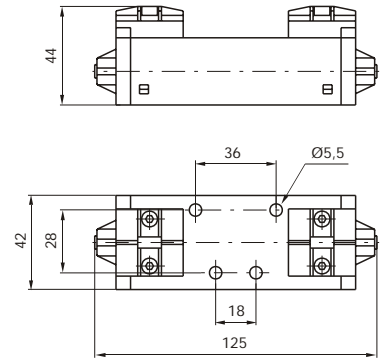
**Pneumatic Spring**

Ordering code

**1011.52.1.9**



Weight gr. 230



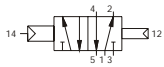
Minimum working pressure 2,5 bar

5/2

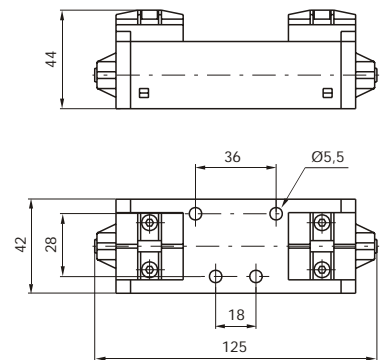
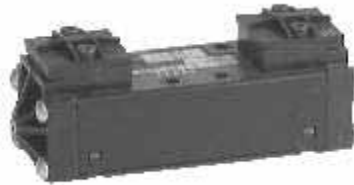
**Pneumatic Differential**

Ordering code

**1011.52.1.6**



Weight gr. 240



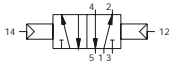
Minimum working pressure 2 bar

5/2 and 5/3

**Pneumatic Pneumatic**

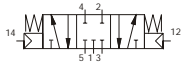
Ordering code

**1011.52.1.8**

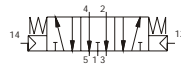


Minimum working pressure 1,5 bar

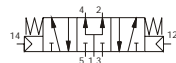
**1011.53.31.1.8** *Closed centres*



**1011.53.32.1.8** *Open centres*

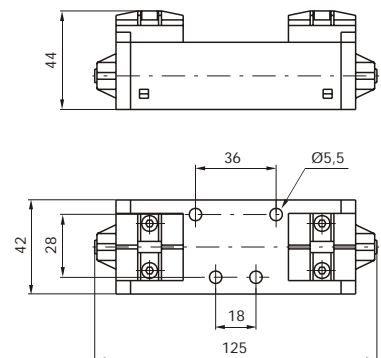


**1011.53.33.1.8** *Pressured centres*



Minimum working pressure 3 bar

Weight gr. 240



Operational characteristics	Fluid	Max working pressure	Operating temperature		Flow rate at 6 bar with $\Delta p = 1$ bar	Orifice size	Working ports size
	Filtered and lubricated	10 bar	min. -5°C	max. +50°C	900 NI/min	-----	-----



5/2

**Solenoid Spring**

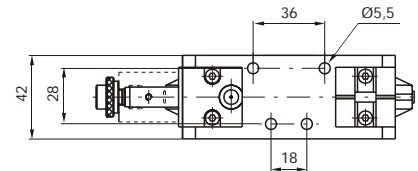
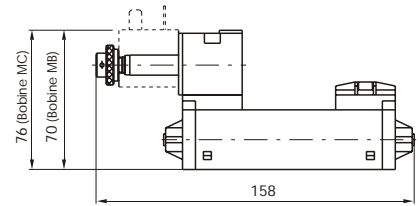
Ordering code

**1011.52.3.9.M\*\***

M\*\* = mechanical code (see page 1.20)



Weight gr. 290



Minimum working pressure 2,5 bar

5/2

**Solenoid Differential**

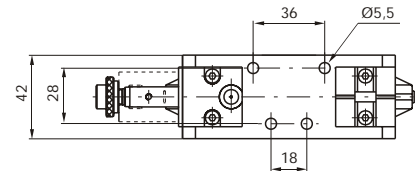
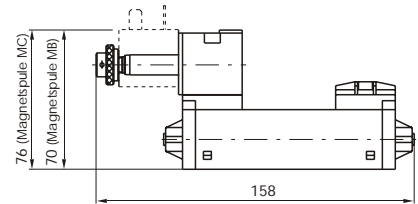
Ordering code

**1011.52.3.6.M\*\***

M\*\* = mechanical code (see page 1.20)



Weight gr. 290



Minimum working pressure 2 bar

5/2 and 5/3

**Solenoid Solenoid**

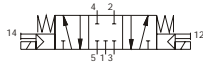
Ordering code

**1011.52.3.5.M\*\***

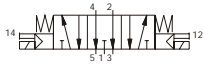


Minimum working pressure 1,5 bar

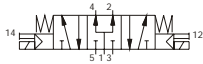
**1011.53.31.3.5.M\*\*** *Closed centres*



**1011.53.32.3.5.M\*\*** *Open centres*



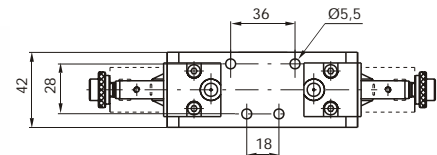
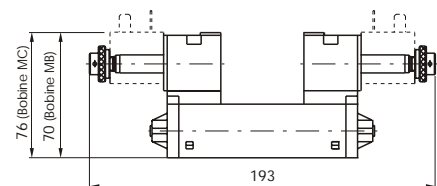
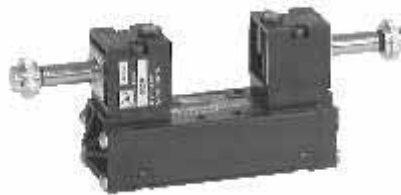
**1011.53.33.3.5.M\*\*** *Pressured centres*



M\*\* = mechanical code (see page 1.20)

Minimum working pressure 3 bar

Weight gr. 350



6

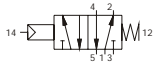
Operational characteristics	Fluid	Max working pressure	Operating temperature		Flow rate at 6 bar with $\Delta p = 1$ bar	Orifice size	Working ports size
	Filtered and lubricated	10 bar	min. -5° C	max. +50° C	900 NI/min	-----	-----

5/2

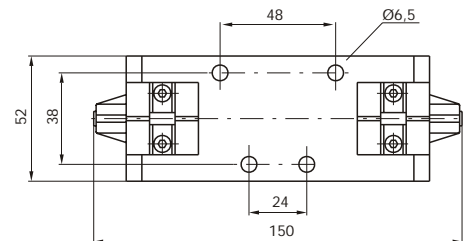
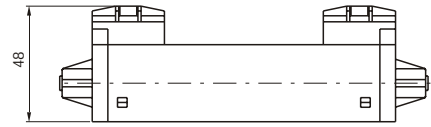
**Pneumatic Spring**

Ordering code

**1012.52.1.9**



Weight gr. 300



Minimum working pressure 2,5 bar

5/2

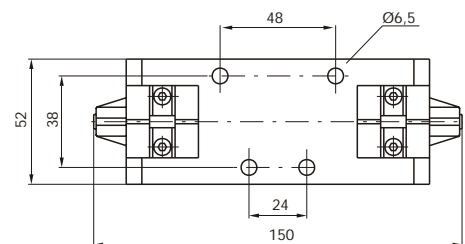
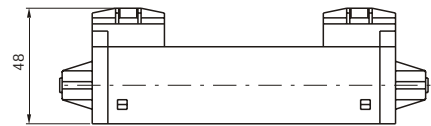
**Pneumatic Differential**

Ordering code

**1012.52.1.6**



Weight gr. 310



Minimum working pressure 2 bar

5/2 and 5/3

**Pneumatic Pneumatic**

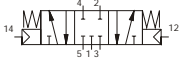
Ordering code

**1012.52.1.8**

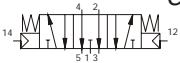


Minimum working pressure 1,5 bar

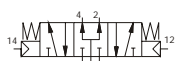
**1012.53.31.1.8** *Closed centres*



**1012.53.32.1.8** *Open centres*



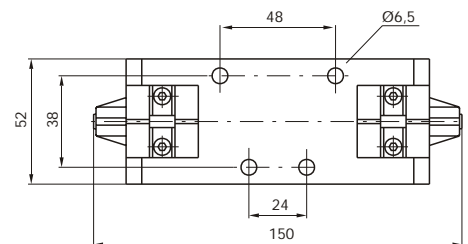
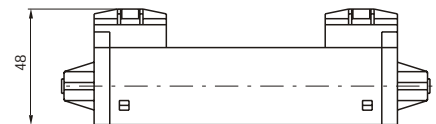
**1012.53.33.1.8** *Pressured centres*



Minimum working pressure 3 bar


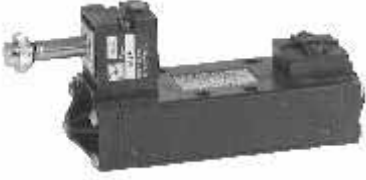
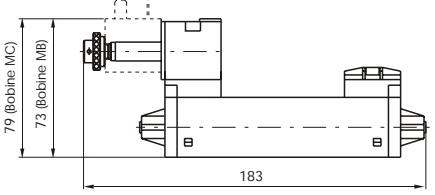
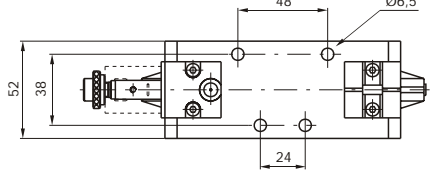

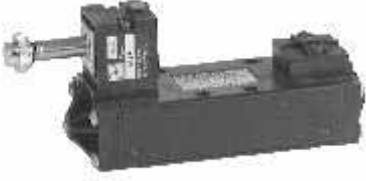
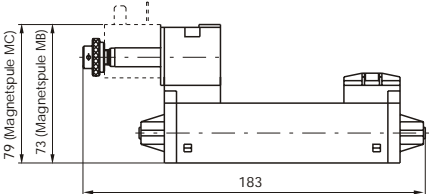
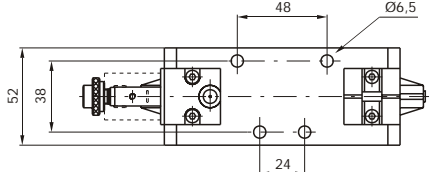

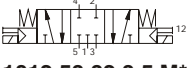

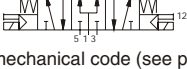

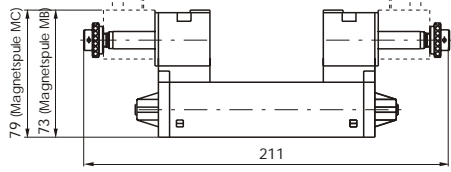
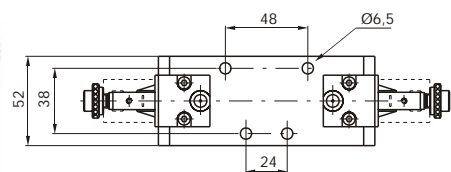


Weight gr. 310



Operational characteristics	Fluid	Max working pressure	Operating temperature		Flow rate at 6 bar with $\Delta p = 1$ bar	Orifice size	Working ports size
	Filtered and lubricated	10 bar	min. -5°C	max. +50°C	1600 NI/min	-----	-----



5/2							
<b>Solenoid Spring</b>							
Ordering code							
<b>1012.52.3.9.M**</b> M** = mechanical code (see page 1.20)							
							
Weight gr. 360							
Minimum working pressure 2,5 bar							
							
							
							
5/2							
<b>Solenoid Differential</b>							
Ordering code							
<b>1012.52.3.6.M**</b> M** = mechanical code (see page 1.20)							
							
Weight gr. 360							
Minimum working pressure 2 bar							
							
							
							
5/2 and 5/3							
<b>Solenoid Solenoid</b>							
Ordering code							
<b>1012.52.3.5.M**</b> Minimum working pressure 1,5 bar							
							
<b>1012.53.31.3.5.M**</b> <i>Closed centres</i> 							
<b>1012.53.32.3.5.M**</b> <i>Open centres</i> 							
<b>1012.53.33.3.5.M**</b> <i>Pressured centres</i> 							
M** = mechanical code (see page 1.20)							
Minimum working pressure 3 bar							
							
Weight gr. 420							
							
							
<b>Operational characteristics</b>	Fluid	Max working pressure	Operating temperature		Flow rate at 6 bar with $\Delta p = 1$ bar	Orifice size	Working ports size
	Filtered and lubricated	10 bar	min. -5°C	max. +50°C	1600 NI/min	-----	-----

5/2

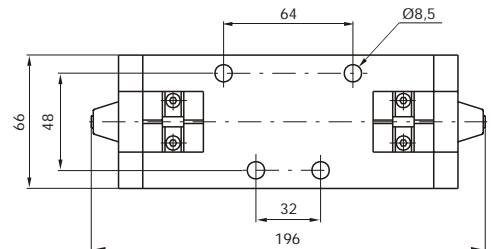
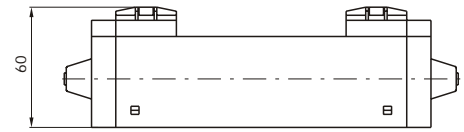
**Pneumatic Spring**

Ordering code

**1013.52.1.9**



Weight gr. 1000



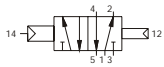
Minimum working pressure 2,5 bar

5/2

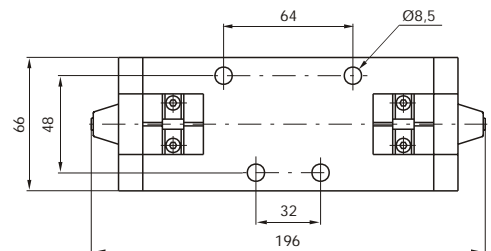
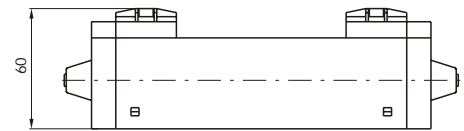
**Pneumatic Differential**

Ordering code

**1013.52.1.6**



Weight gr. 1020



Minimum working pressure 2 bar

5/2 and 5/3

**Pneumatic Pneumatic**

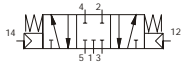
Ordering code

**1013.52.1.8**

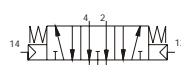


Minimum working pressure 1,5 bar

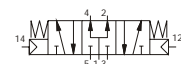
**1013.53.31.1.8** *Closed centres*



**1013.53.32.1.8** *Open centres*

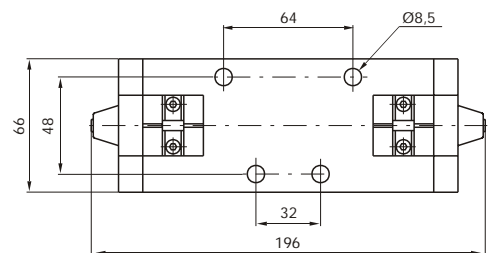
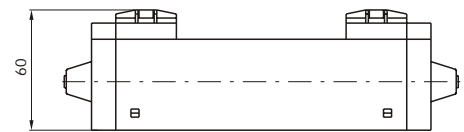


**1013.53.33.1.8** *Pressured centres*



Minimum working pressure 3 bar

Weight gr. 1050



Operational characteristics	Fluid	Max working pressure	Operating temperature		Flow rate at 6 bar with $\Delta p = 1$ bar	Orifice size	Working ports size
	Filtered and lubricated	10 bar	min. -5°C	max. +50°C	3600 NI/min (5/2) 3000 NI/min (5/3)	-----	-----

5/2

**Solenoid Spring**

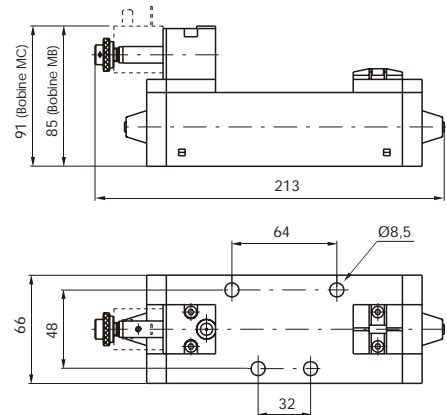
Ordering code

**1013.52.3.9.M\*\***

M\*\* = mechanical code (see page 1.20)



Weight gr. 1060



Minimum working pressure 2,5 bar

5/2

**Solenoid Differential**

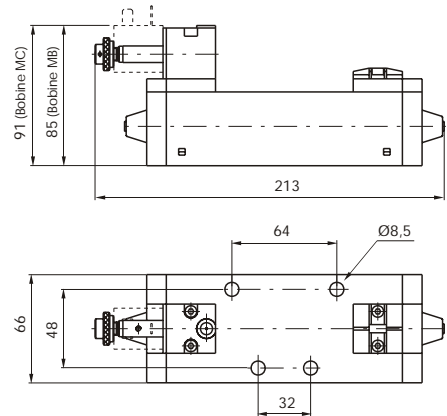
Ordering code

**1013.52.3.6.M\*\***

M\*\* = mechanical code (see page 1.20)



Weight gr. 1080



Minimum working pressure 2 bar

5/2 and 5/3

**Solenoid Solenoid**

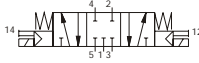
Ordering code

**1013.52.3.5.M\*\***

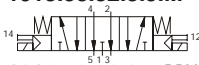


Minimum working pressure 1,5 bar

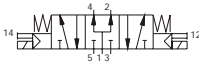
**1013.53.31.3.5.M\*\*** *Closed centres*



**1013.53.32.3.5.M\*\*** *Open centres*

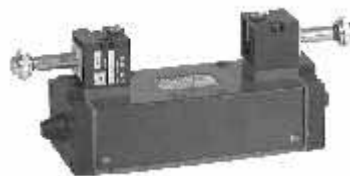


**1013.53.33.3.5.M\*\*** *Pressured centres*

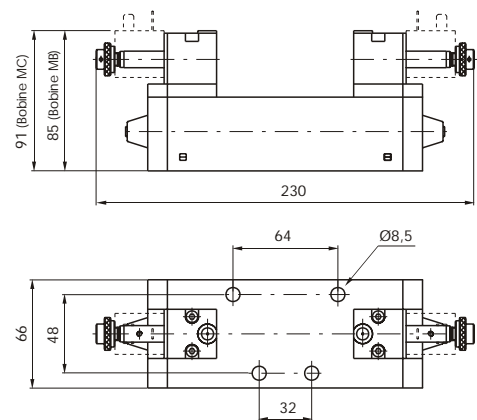


M\*\* = mechanical code (see page 1.20)

Minimum working pressure 3 bar



Weight gr. 1170



Operational characteristics	Fluid	Max working pressure	Operating temperature		Flow rate at 6 bar with $\Delta p = 1$ bar	Orifice size	Working ports size
	Filtered and lubricated	10 bar	min. -5°C	max. +50°C			
					3600 NI/min (5/2) 3000 NI/min (5/3)	-----	-----



These bases are manufactured with the outlet and pilot ports on both the sides and the bottom faces giving the option for use with any application. Unused ports must be blanked off using threaded plugs which are not included in the part number or price. To isolate bases from each other for use with different supply pressures ports 1, 3 & 5 should be plugged underneath the seal.

The codes are:

1101.17 (size 1) - 1102.17 (size 2) - 1103.17 (size 3)

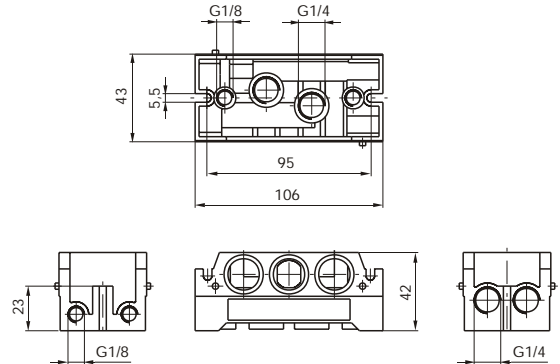
**Size 1**

Ordering code

1101.00



Weight gr. 240



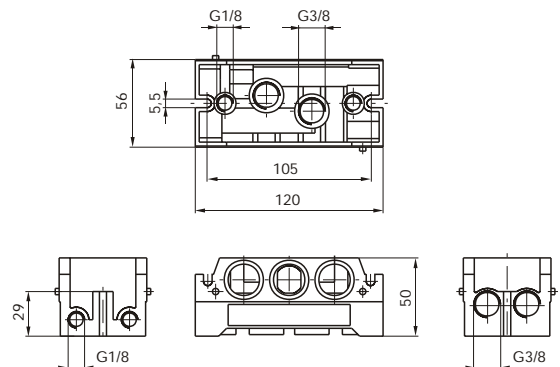
**Size 2**

Ordering code

1102.00



Weight gr. 340



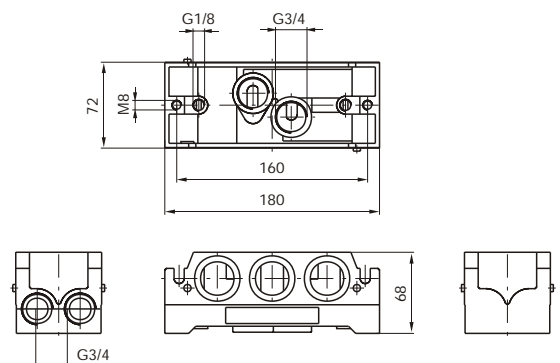
**Size 3**

Ordering code

1103.00



Weight gr. 950



**Size 1**

Ordering code

**1101.09**

Weight gr. 100



Ordering code

**Taille 1**

**1101.10**  
*Universal*

**1101.11**  
*Aligned connections*

**1101.12**  
*Top connections*

**1101.13**  
*Bottom connections*

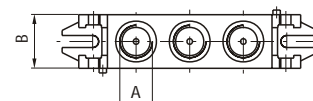
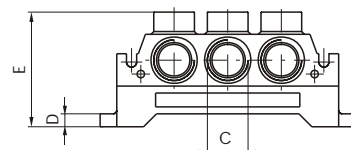
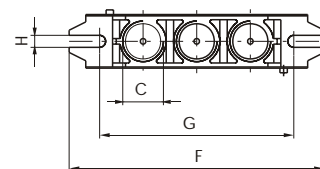
**Taille 2**

**1102.10**  
*Universal*

**1102.11**  
*Aligned connections*

**1102.12**  
*Top connections*

**1102.13**  
*Bottom connections*



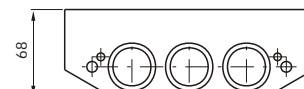
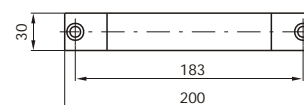
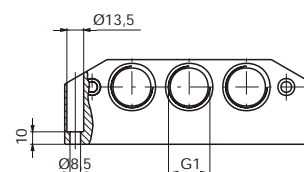
	A	B	C	D	E	F	G	H	Weight gr.
Size 1	G 1/4"	24	G 3/8"	7	52	106	95	5,5	160
Size 2	G 3/8"	29	G 1/2"	7	62	138	105	6,5	230

**Size 3**

Ordering code

**1103.11**  
*Aligned connections*

Weight gr. 840



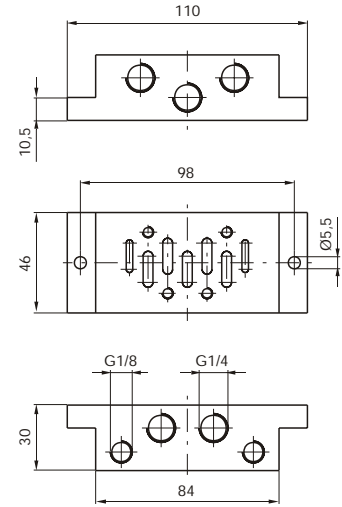
**Size 1- Shape "A"**

Ordering code

**1101.14**



Weight gr. 160



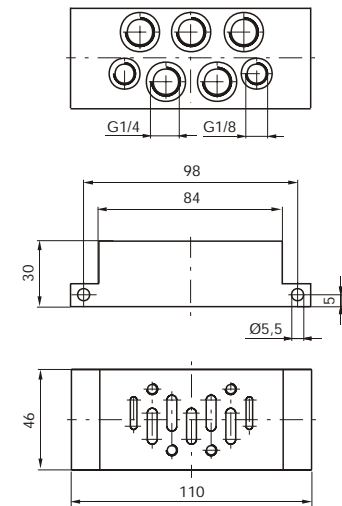
**Size 1- Shape "B"**

Ordering code

**1101.15**



Weight gr. 190



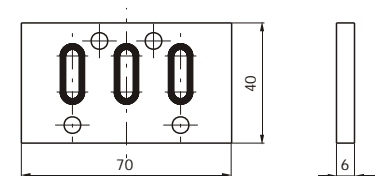
**Closing plate**

Ordering code

**1101.16**



Weight gr. 47



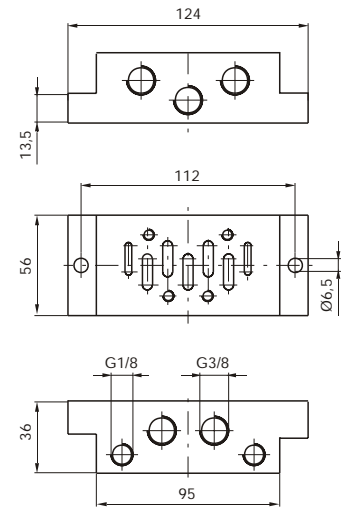
**Size 2 - Forme "A"**

Ordering code

**1102.14**



Weight gr. 190



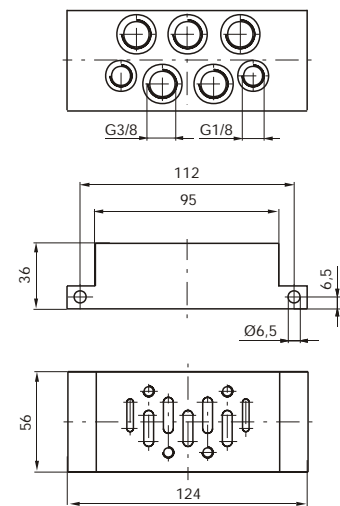
**Size 2 - Shape "B"**

Ordering code

**1102.15**



Weight gr. 220



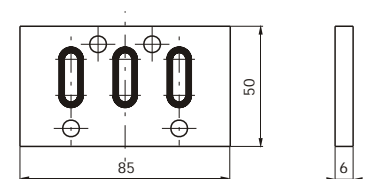
**Closing plate**

Ordering code

**1102.16**



Weight gr. 75





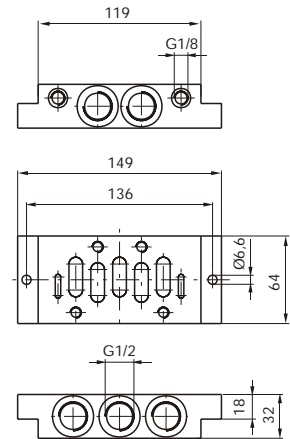
**Size 3 - Shape "A"**

Ordering code

**1103.14**



Weight gr. 600



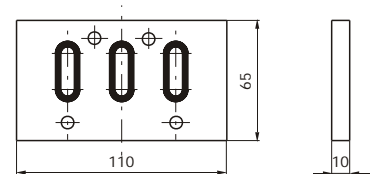
**Closing plate**

Ordering code

**1103.16**



Weight gr. 200



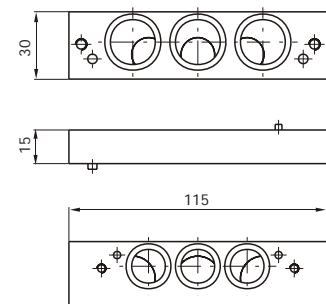
**Base adaptor ISO 1 - ISO 2**

Ordering code

**1100.2-1**



Weight gr. 110



**Base adaptor ISO 2 - ISO 3**

Ordering code

**1100.3-2**



Weight gr. 590

