#### 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 standars, 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). (M2 coil are not included and have to be ordering separately).

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.

The valves equipped with polyurethane seals are not suitable for tropical climate.

#### Use and maintenance

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**

Series 1000	Size 1	Size 2	
Body	Zinc alloy	Aluminium	
Operators	Zinc alloy	Aluminium	
Spools	Stainless steel	Steel	
Seals	NBR	NBR	
Spacers	Technopolymer	Aluminium	
Springs	Spring steel	Spring steel	
Selectors	NBR	NBR	
Series 1010	Size 1	Size 2	Size 3
Body	Technopolymer	Technopolymer	Technopolymer
Operators	Technopolymer	Technopolymer	Technopolymer
Spools	Steel	Steel	Steel
Seals	NBR	NBR	NBR
Spacers	Technopolymer	Technopolymer	Technopolymer
Control pistons	Aluminium	Aluminium	Aluminium
Springs	Spring steel	Spring steel	Spring steel
		·	

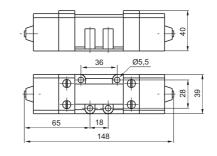
# Pneumatic - Spring - 5/2

Ordering code

1001.52.1.9



14 **—** 5 1 3 12



Weight gr. 780 Minimum operating pressure 2,5 bar

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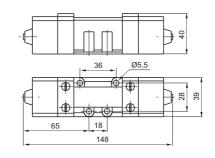
Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +70	840

# Pneumatic - Differential - 5/2

Ordering code

1001.52.1.6





Weight gr. 790 Minimum operating pressure 2 bar



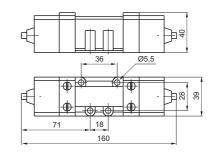
Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +70	840

# Pneumatic - Pneumatic - 5/2

Ordering code

1001.52.1.8





Weight gr. 800 Minimum operating pressure 1,5 bar



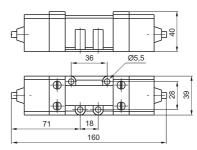
Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +70	840

# Pneumatic - Pneumatic - 5/3

Ordering code

1001.53.



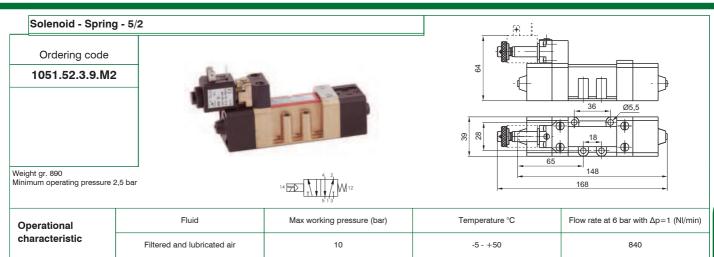


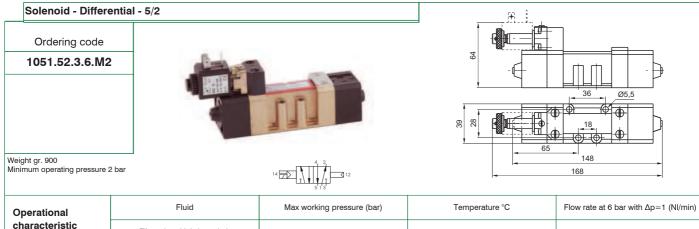
Weight gr. 800 Minimum operating pressure 3 bar

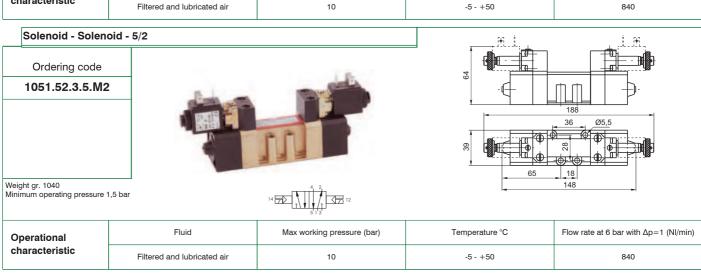


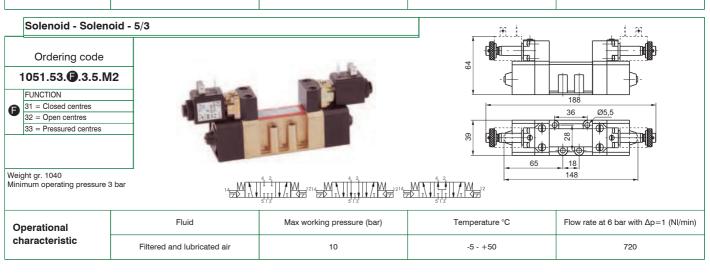
Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +70	720











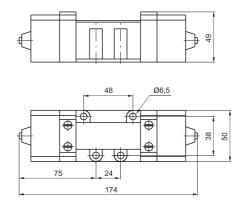


# Pneumatic - Differential - 5/2

Ordering code

1002.52.1.6





Weight gr. 730 Minimum operating pressure 2 bar



Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +70	1700

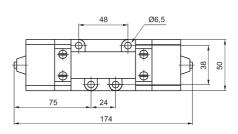
# Pneumatic - Pneumatic - 5/2

Ordering code

1002.52.1.8







Weight gr. 800 Minimum operating pressure 1,5 bar



Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +70	1700

## Pneumatic - Pneumatic - 5/3

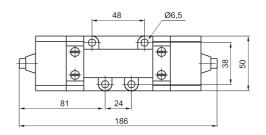
Ordering code

# 1002.53. 3.1.8

FUNCTION 31 = Closed centres 32 = Open centres 33 = Pressured centres





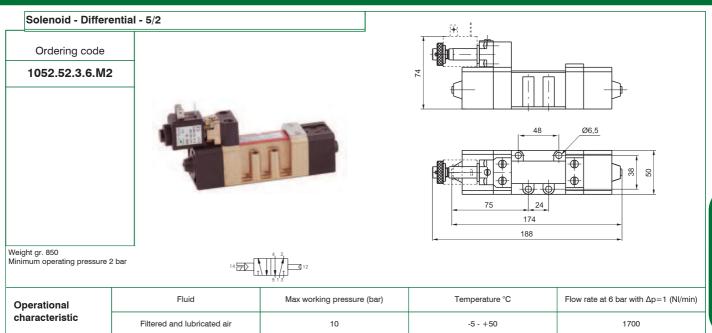


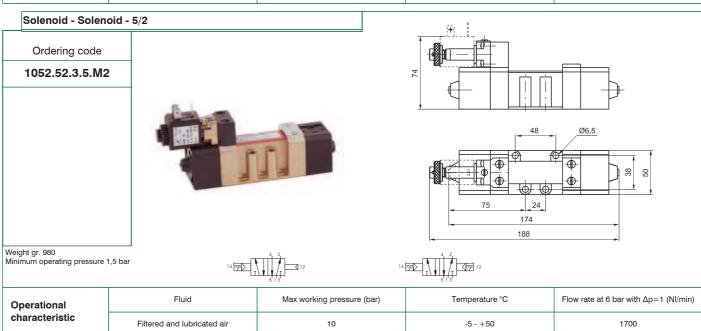
Weight gr. 740 Minimum operating pressure 3 bar

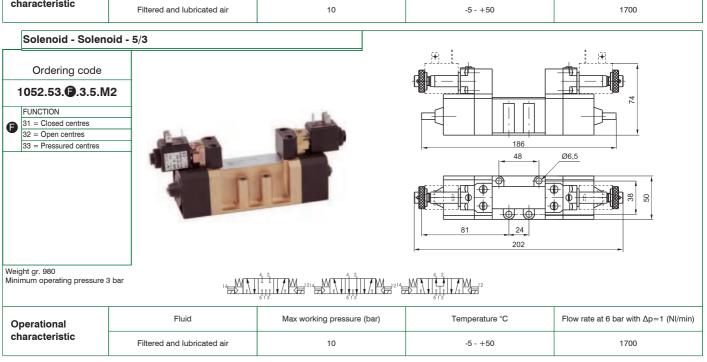


Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +70	1700

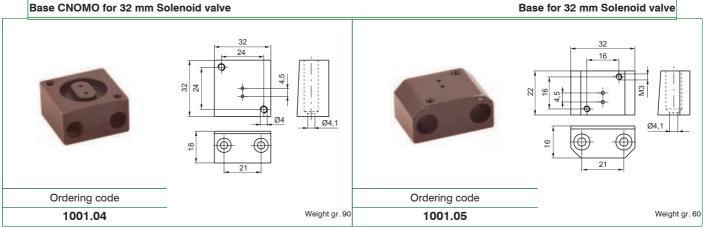


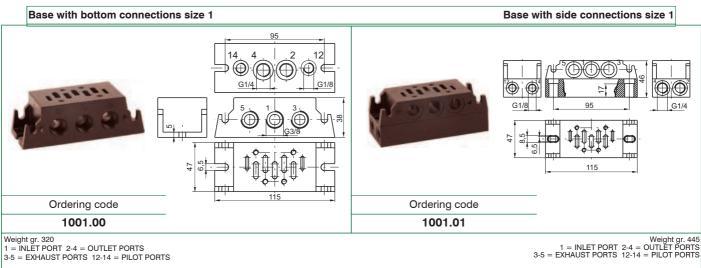


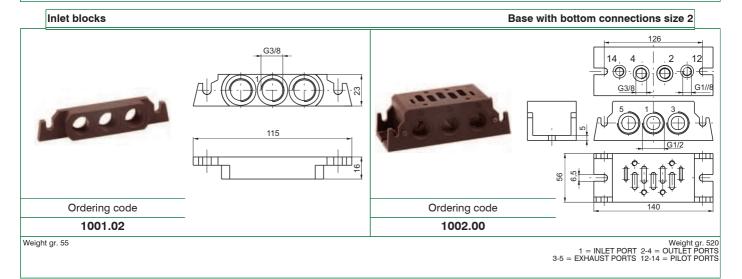






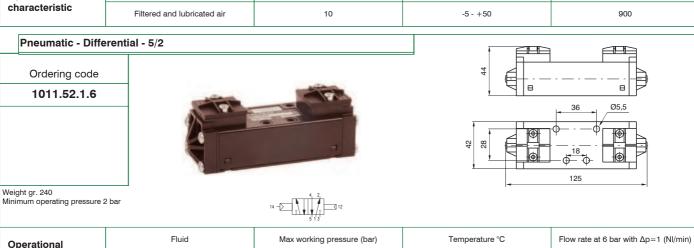


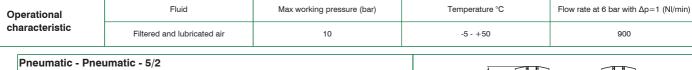


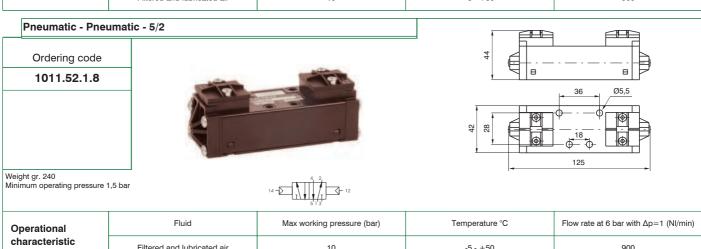












characteristic	Filtered and lubricated air	10	-5 - +50	900
Pneumatic - Pne	eumatic - 5/3			
Ordering code			4	
1011.53.🗗.1.8		18	, 9	. 36 Ø5,5
FUNCTION 31 = Closed centres 32 = Open centres 33 = Pressured centres		7	24 88	18
Weight gr. 240 Minimum operating pressure	3 bar	12 14 12 14 12 14 12 14 12 14 14 15 15 15 15 15 15 15 15 15 15 15 15 15	12 12 12	125
Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +50	900





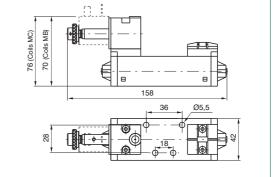
Ordering code

1011.52.3.9.

MECHANICAL CODE See Valves Series 300 CNOMO







Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +50	900

### Solenoid - Differential - 5/2

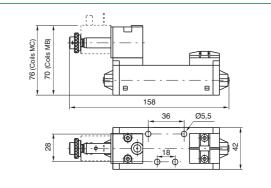
Ordering code

1011.52.3.6.

MECHANICAL CODE M See Valves Series 300 CNOMO

Weight gr. 290 Minimum operating pressure 2 bar





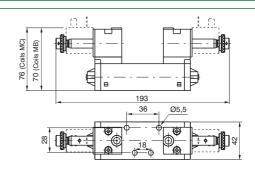
Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +50	900

## Solenoid - Solenoid - 5/2

Ordering code

1011.52.3.5.

MECHANICAL CODE M See Valves Series 300 CNOMO



Weight gr. 350 Minimum operating pressure 1,5 bar

	4	2,	
14	5 1		12

Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +50	900

# Solenoid - Solenoid - 5/3

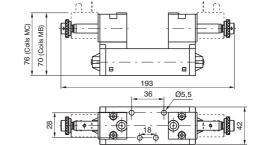
Ordering code

1011.53. 3.5.

FUNCTION 31 = Closed centres 32 = Open centres 33 = Pressured centres MECHANICAL CODE M See Valves Series 300 CNOMO

Weight gr. 350 Minimum operating pressure 3 bar

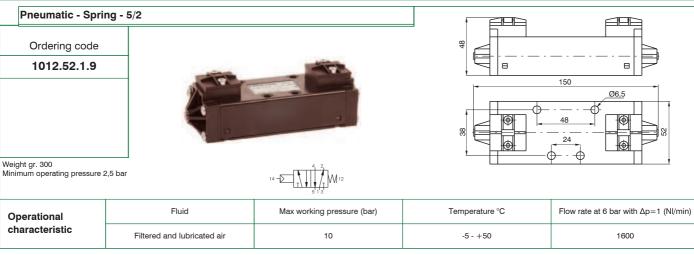


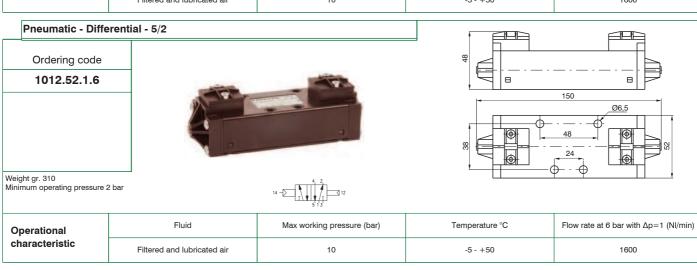


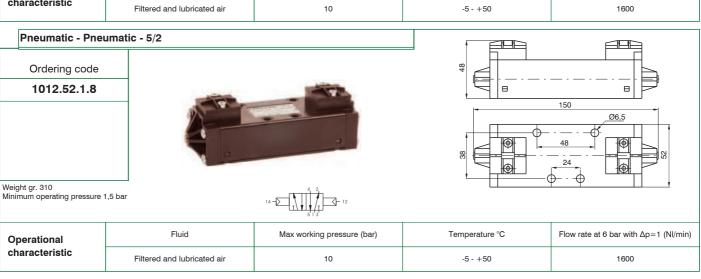
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14 11 11 12	14 M 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1214
5 1 3	5 1 3	5'1'3'

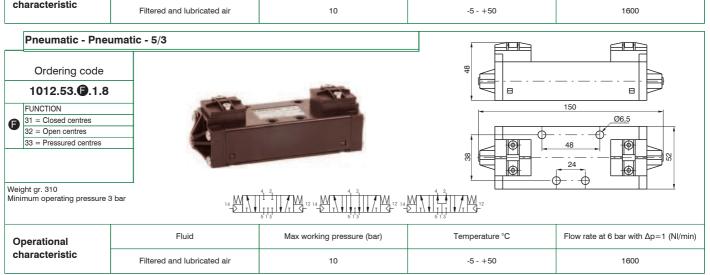
Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +50	900











Series 1000

Ordering code

1012.52.3.9.

MECHANICAL CODE See Valves Series 300 CNOMO



Operational characteristic





	14 Z M 12	1	
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
Filtered and lubricated air	10	-5 - +50	1600

73 (Coils MB)

# Solenoid - Differential - 5/2

Ordering code

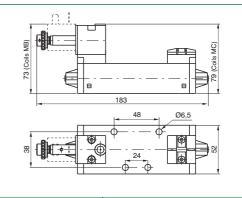
1012.52.3.6.

MECHANICAL CODE M See Valves Series 300 CNOMO

Weight gr. 360 Minimum operating pressure 2 bar







183

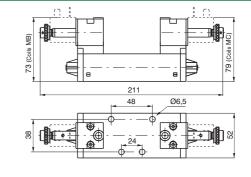
Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +50	1600

## Solenoid - Solenoid - 5/2

Ordering code

1012.52.3.5.

MECHANICAL CODE M See Valves Series 300 CNOMO



Weight gr. 420 Minimum operating pressure 1,5 bar

	 1, 2,	
14	J 13	12

Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +50	1600

# Solenoid - Solenoid - 5/3

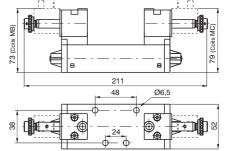
Ordering code

1012.53. 3.5.

FUNCTION 31 = Closed centres 32 = Open centres 33 = Pressured centres MECHANICAL CODE M See Valves Series 300 CNOMO

Weight gr. 420 Minimum operating pressure 3 bar





4, 2,	4, 2,	4, 2,
14 12 12	4 M 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	214

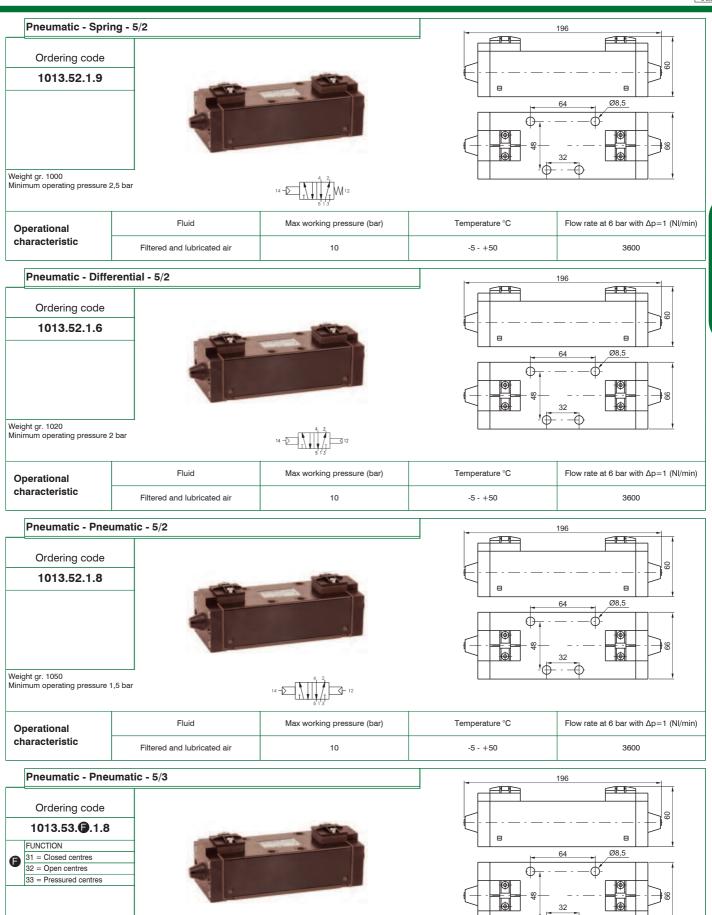
Operational	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
characteristic	Filtered and lubricated air	10	-5 - +50	1600

Weight gr. 1050 Minimum operating pressure 3 bar

Filtered and lubricated air

Operational characteristic





Flow rate at 6 bar with  $\Delta p=1$  (NI/min)

3000

Temperature °C

-5 - +50

Max working pressure (bar)

10

Ø8,5



Ordering code

Pneumatic - Spring - 5/2

1013.52.3.9.

MECHANICAL CODE
See Valves Series 300 CNOMO

Weight gr. 1060 Minimum operating pressure 2,5 bar

Operational characteristic





513		
Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
10	-5 - ±50	3600

85 (Coils MB)

# Pneumatic - Differential - 5/2

Fluid

Filtered and lubricated air

Ordering code

1013.52.3.6.

MECHANICAL CODE
See Valves Series 300 CNOMO

Weight gr. 1080 Minimum operating pressure 2 bar





85 (Coils MB)
213 64 08,5
32

213 64

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
	Filtered and lubricated air	10	-5 - +50	3600

## Pneumatic - Pneumatic - 5/2

Ordering code

1013.52.3.5.

MECHANICAL CODE
See Valves Series 300 CNOMO

Weight gr. 1170 Minimum operating pressure 1,5 bar



85 (Colls MB)	B (Colis MC)
-	230
	64 Ø8,5
\$ \$	32

230

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
	Filtered and lubricated air	10	-5 - +50	3600

## Pneumatic - Pneumatic - 5/3

Ordering code

1013.53. 3.5. 4

FUNCTION
31 = Closed centres
32 = Open centres
33 = Pressured centres

MECHANICAL CODE
See Valves Series 300 CNOMO

Weight gr. 1170 Minimum operating pressure 3 bar





(Coils MB)

Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)
	Filtered and lubricated air	10	-5 - +50	3000

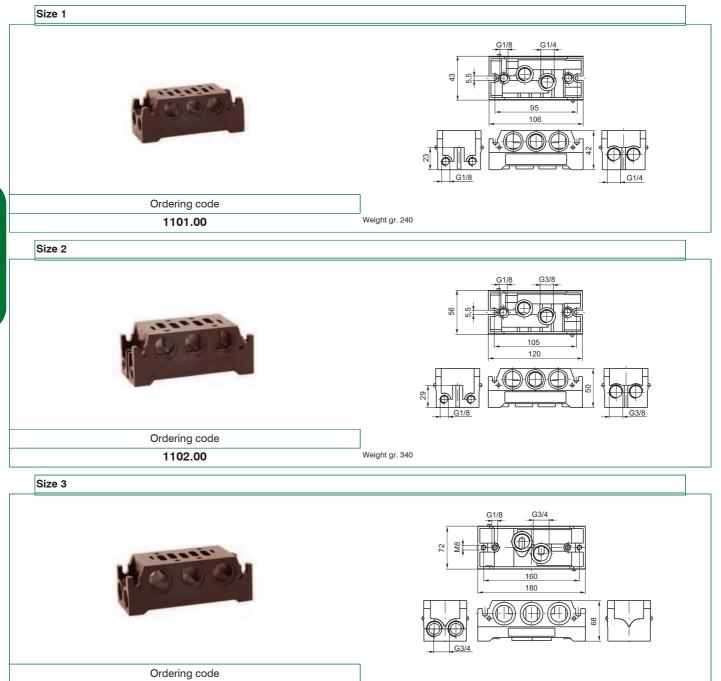


These bases are manufactured with the outlet and pilot ports on both the sides and the bottom faces giving the option for use with any application. Unused ports must be blanked off using threaded plugs which are not included in the part number or price. To isolate bases from each other for use with different 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)





Weight gr. 950

1103.00



