

3/2-5/2-5/3 SPOOL VALVES (1/8" -1/4" -1/2") Series 400/500

General


These are 2 stage valves actuated electro-pneumatically. A serie 300 directly operated solenoid valve actuates pneumatically the principal power distributor. This integrated system allows configurations of systems requiring very little space. The pilot air is normally taken from the inlet port (autofeed) and the only actuating signal is electric. The range of the solenoid valves, as far as dimensions and mechanical construction, is similar to series 200. We have therefore solenoid valves G 1/8", G 1/4", G 1/2" and G 1" with identical pneumatic characteristics that are, however, actuated electrically. They have a balanced spool, insensitive to presence or absence of pressure. They are constructed in 3 and 5 way with 1 solenoid (monostable) or 2 solenoids (bistable) and also 5 ways 3 positions with closed centres, open centres and pressured centres.

It should be noted that the autofeed of the electric pilot requires always inlet through port 1 and if a 3 ways normally open configuration is desired, it is necessary to switch the operators.

In the tables showing individual valves, the quick reference tables show the output in NI/min at a inlet pressure of 6 bar and a pressure drop of 1 bar. All information was obtained using standards CETOP RP 50P.

Solenoid valves G 1/8" and G 1/4" can be equipped with microsolenoids as well as standard solenoids and they can be mounted in line or in 90 degrees on distributors. Please note that while the microsolenoid can be mounted in any direction, standard solenoid requires mounting as indicated in the photographs and diagrams.

The order codes pertain only to the solenoid valve with mechanical actuator "M2" or solenoid "S*" already assembled (see Series 300, section 1). (M2 coils are not included and have to be ordered separately).

Coils for M2 and solenoids "S"  homologated are available (see Series 300).



Construction characteristics

Body	Aluminium
Operators	Aluminium Technopolymer for spring bottom plate G 1/8", G1/4", G 1/2" and aluminium for G 1"
Spools	Stainless steel / Technopolymer fpt Series T488
Seals	NBR Polyurethane compound for oil free applications G 1/8", G 1/4" and G 1/2"
Spacers	Technopolymer (aluminium for G1")
Spring	Stainless steel or spring steel

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).



	Symbol	Description	Code	Max. pressure	Flow at 6 bar, Δp=1	Orifice size
G 1/8" 	3/2	Solenoid - Spring	468.32.0.1.M2	2,5-10 bar	540NI/min	mm 6
		Solenoid - Differential	468.32.0.12.M2			
		Solenoid - Solenoid	468.32.0.0.M2			
	5/2	Solenoid - Spring	468.52.0.1.M2	2,5-10 bar		
		Solenoid - Differential	468.52.0.12.M2			
		Solenoid - Solenoid	468.52.0.0.M2			
	5/3	Solenoid - Solenoid - C.C.	468.53.31.0.0.M2	3-10 bar		
		Solenoid - Solenoid - O.C.	468.53.32.0.0.M2			
		Solenoid - Solenoid - P.C.	468.53.33.0.0.M2			
G 1/4" 	3/2	Solenoid - Spring STD	468/1.32.0.1.M2	2,5-10 bar	540NI/min	mm 6
		Solenoid - Differential	468/1.32.0.12.M2			
		Solenoid - Solenoid STD	468/1.32.0.0.M2			
	5/2	Solenoid - Spring STD	468/1.52.0.1.M2	2,5-10 bar		
		Solenoid - Differential	468/1.52.0.12.M2			
		Solenoid - Solenoid STD	468/1.52.0.0.M2			
	5/3	Solenoid - Solenoid - C.C. STD	468/1.53.31.0.0.M2	3-10 bar		
		Solenoid - Solenoid - O.C. STD	468/1.53.32.0.0.M2			
		Solenoid - Solenoid - P.C. STD	468/1.53.33.0.0.M2			



	Symbol	Description	Code	Max. pressure	Flow at 6 bar, Δp=1	Orifice size
G 1/4" 	3/2	Solenoid - Spring	464.32.0.1.M2	2,5-10 bar	1360NI/min	mm 8
		Solenoid - Differential	464.32.0.12.M2			
		Solenoid - Solenoid	464.32.0.0.M2			
	5/2	Solenoid - Spring	464.52.0.1.M2	2,5-10 bar		
		Solenoid - Differential	464.52.0.12.M2			
		Solenoid - Solenoid	464.52.0.0.M2			
	5/3	Solenoid - Solenoid - C.C.	464.53.31.0.0.M2	3-10 bar		
		Solenoid - Solenoid - O.C.	464.53.32.0.0.M2			
		Solenoid - Solenoid - P.C.	464.53.33.0.0.M2			
Namur Interface 	3/2	Solenoid - Spring STD	514/N.32.0.1.M2	2,5-10 bar	1030NI/min	mm 7
		Solenoid - Differential	514/N.32.0.12.M2			
		Solenoid - Solenoid	514/N.32.0.0.M2			
	5/2	Solenoid - Spring STD	514/N.52.0.1.M2	2,5-10 bar		
		Solenoid - Differential	514/N.52.0.12.M2			
		Solenoid - Solenoid	514/N.52.0.0.M2			

Temperature -10 +50°C

Technical modifications keep in reserve !

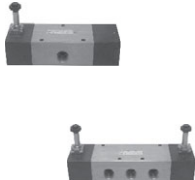



















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SOLENOID VALVES

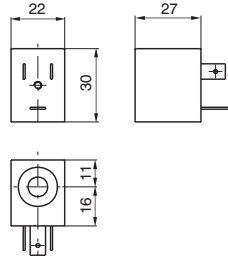
(series 400, section 2)

PNEUMAX

	Symbol	Description	Code	Max. pressure	Flow at 6 bar, Δp=1	Orifice size
G 1/2" 	3/2		Solenoid - Spring	452.32.0.1.M2	2,5-10 bar	3500NI/min
			Solenoid - Differential	452.32.0.12.M2		
			Solenoid - Solenoid	452.32.0.0.M2	2-10 bar	
	5/2		Solenoid - Spring	452.52.0.1.M2	2,5-10 bar	
			Solenoid - Differential	452.52.0.12.M2		
			Solenoid - Solenoid	452.52.0.0.M2	2-10 bar	
	5/3		Solenoid - Solenoid - C.C.	452.53.31.0.0.M2	3-10 bar	3000NI/min
			Solenoid - Solenoid - O.C.	452.53.32.0.0.M2		
			Solenoid - Solenoid - P.C.	452.53.33.0.0.M2		
	3/2		Solenoid - Spring	STD 452/1.32.0.1.M2	2,5-10 bar	3500NI/min
			Solenoid - Differential	452/1.32.0.12.M2	2-10 bar	
			Solenoid - Solenoid	STD 452/1.32.0.0.M2	2,5-10 bar	
	5/2		Solenoid - Spring	STD 452/1.52.0.1.M2		
			Solenoid - Differential	452/1.52.0.12.M2		
			Solenoid - Solenoid	STD 452/1.52.0.0.M2	3-10 bar	
	5/3		Solenoid - Solenoid - C.C.	STD 452/1.53.31.0.0.M2		
			Solenoid - Solenoid - O.C.	STD 452/1.53.32.0.0.M2		
			Solenoid - Solenoid - P.C.	STD 452/1.53.33.0.0.M2		

Coil

Coil type U1



Weight 54 gr.

* Use only with M2/9

Ordering code	Available voltages	Coils
MB 4 MB 5 MB 6	12 D.C. 24 D.C. 48 D.C.	STD STD STD Direct current
MB 9*	24 D.C. (2 Watt)	(Direct current, low consumption)
MB 17 MB 21 MB 22 MB 24	24/50 48/50 110/50 230/50	STD STD STD STD Alternating current 50 Hz
MB 37 MB 39 MB 41	24/60 110/60 230/60	Alternating current 60 Hz
MB 56 MB 57 MB 58	24/50-60 110/50-60 230/50-60	Alternating current 50/60 Hz
MB 66 MB 67 MB 68	24/50-60 110/50-60 230/50-60	Alternating current (low consumption) 50/60 Hz



Technical modifications keep in reserve !

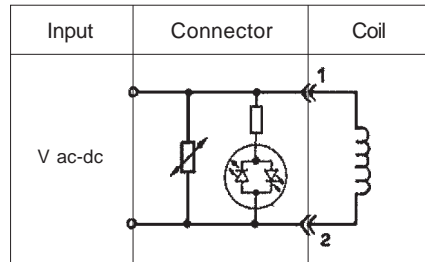
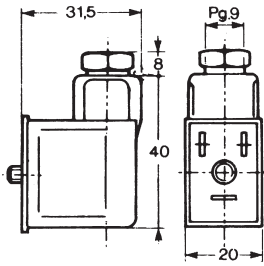
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Connector for coil (DIN 43650)



Ordering code	Supply voltage until	Coil type	Protection class	Remarks
MP1	0-250V~/300V=	U1	IP 65	CONNECTOR
MP1-LED-24V	24V	U1	IP 65	+LED
MP1-LED-24V-5M	24V	U1	IP 65	+LED+CABLE
MP1-LED-230V	230V	U1	IP 65	+LED

Electronic circuit for MP-LED



Bipolar LED and VDR to protect supply and switch.
 (The energy in the coil is limited by the VDR).
 Voltage: 24 or 230V.





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.

2

Solenoid - Spring	3/2	Ordering code 468.1.0.1.M2	5/2	Solenoid - Spring			
		<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. 240 Minimum working pressure 2,5 bar				Weight gr. 240 Minimum working pressure 2,5 bar			

Operational characteristics					
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	540 NI/min	mm 6	G 1/8"

Solenoid - Differential	3/2	Ordering code 468.1.0.12.M2	5/2	Solenoid - Differential			
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			TYPE				
32=3 ways							
52=5 ways							
Weight gr. 280 Minimum working pressure 2,5 bar				Weight gr. 320 Minimum working pressure 2,5 bar			

Operational characteristics					
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	540 NI/min	mm 6	G 1/8"

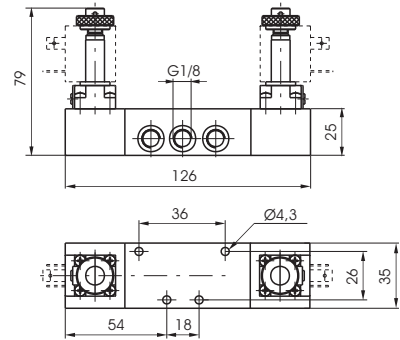
Solenoid - Solenoid	3/2	Ordering code 468.1.0.0.M2	5/2	Solenoid - Solenoid			
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			TYPE				
32=3 ways							
52=5 ways							
Weight gr. 370 Minimum working pressure 2 bar				Weight gr. 410 Minimum working pressure 2 bar			

Operational characteristics					
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	540 NI/min	mm 6	G 1/8"

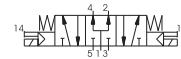
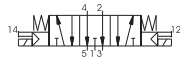
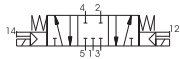
5/3

Solenoid - Solenoid

Ordering code
468.53.0.0.M2
FUNCTION
F 31=Closed centres
32=Open centres
33=Pressured centres



Weight gr. 420
Minimum working pressure 3 bar



Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	410 NI/min	mm 6	G 1/8"

3/2 Solenoid - Spring

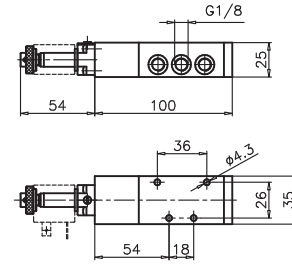
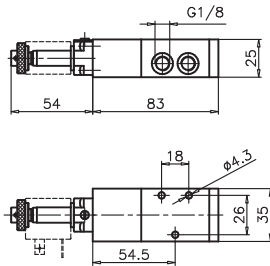
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Solenoid - Spring

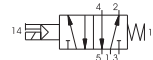
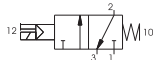
5/2

468/1.0.0.1.M2

TYPE
I 32=3 ways
52=5 ways



Weight gr. 240
Minimum working pressure 2,5 bar



Weight gr. 280
Minimum working pressure 2,5 bar

Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	540 NI/min	mm 6	G 1/8"

3/2 Solenoid - Differential

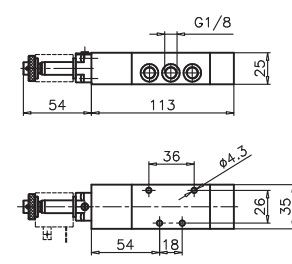
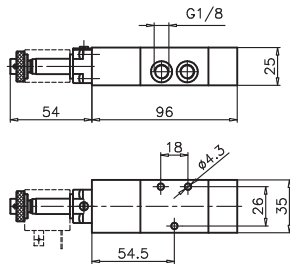
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Solenoid - Differential

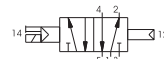
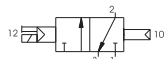
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468/1.0.0.12.M2

TYPE
I 32=3 ways
52=5 ways



Weight gr. 280
Minimum working pressure 2,5 bar





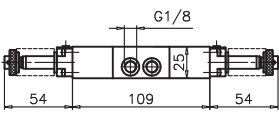
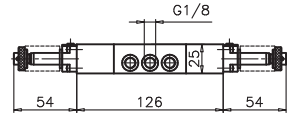
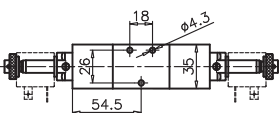
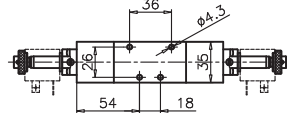
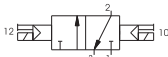
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Minimum working pressure 2,5 bar


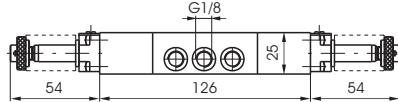
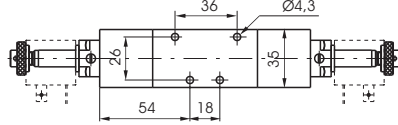
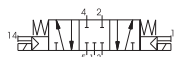

Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	540 NI/min	mm 6	G 1/8"

2

2

3/2 Solenoid - Solenoid		Ordering code		Solenoid - Solenoid							
		468/1.1.0.0.M2		5/2							
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T	TYPE										
	32=3 ways										
	52=5 ways										
											
											
Weight gr. 370 Minimum working pressure 2 bar				Weight gr. 410 Minimum working pressure 2 bar							
Operational characteristics											
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size						
Filtered and lubricated air	10 bar	-5 ÷ +50	540 NI/min	mm 6	G 1/8"						

Solenoid - Solenoid				5/3	
Ordering code					
468/1.53.F.0.0.M2					
FUNCTION					
31=Closed centres					
32=Open centres					
33=Pressured centres					
					
					
Weight gr. 420 Minimum working pressure 3 bar					
Operational characteristics					
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	410 NI/min	mm 6	G 1/8"

2

Solenoid - Spring	3/2	Ordering code 464.1.0.1.M2	5/2	Solenoid - Spring
		TYPE		
		T 32=3 ways 52=5 ways		
Weight gr. 530 Minimum working pressure 2,5 bar			Weight gr. 625 Minimum working pressure 2,5 bar	

Operational characteristics					
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10	-5 ÷ +50	1360 NI/min	mm 8	G 1/4"

Solenoid - Differential	3/2	Ordering code 464.1.0.12.M2	5/2	Solenoid - Differential
		TYPE		
		T 32=3 ways 52=5 ways		
Weight gr. 650 Minimum working pressure 2,5 bar			Weight gr. 740 Minimum working pressure 2,5 bar	

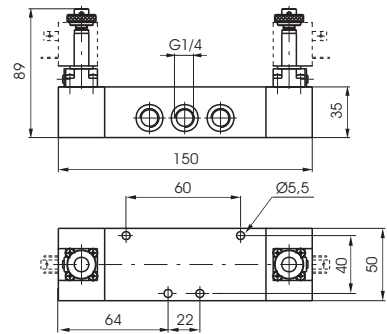
Operational characteristics					
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10	-5 ÷ +50	1360 NI/min	mm 8	G 1/4"

Solenoid - Solenoid	3/2	Ordering code 464.1.0.0.M2	5/2	Solenoid - Solenoid
		TYPE		
		T 32=3 ways 52=5 ways		
Weight gr. 730 Minimum working pressure 2 bar			Weight gr. 820 Minimum working pressure 2bar	

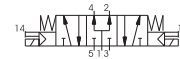
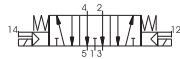
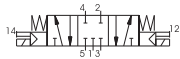
Operational characteristics					
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10	-5 ÷ +50	1360 NI/min	mm 8	G 1/4"

Solenoid - Solenoid

Ordering code
464.53.ⓕ.0.0.M2
FUNCTION
ⓕ = Closed centres
32 = Open centres
33 = Pressured centres



Weight gr. 820
Minimum working pressure 3 bar



Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10	-5 ÷ +50	1280 NI/min	mm 8	G 1/4"

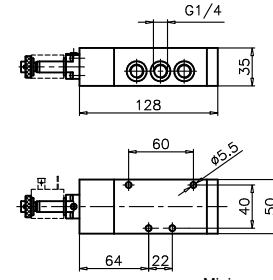
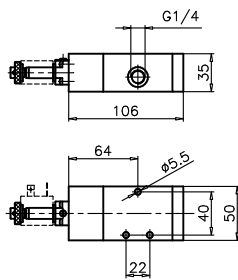
3/2 Solenoid - Spring

Ordering code

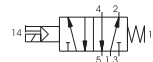
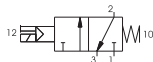
Solenoid - Spring

464/1.Ⓡ.0.1.M2

TYPE
Ⓡ = 3 ways
52 = 5 ways



Weight gr. 530
Minimum working pressure 2,5 bar



Weight gr. 625
Minimum working pressure 2,5 bar

Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	1360 NI/min	mm 8	G 1/4"

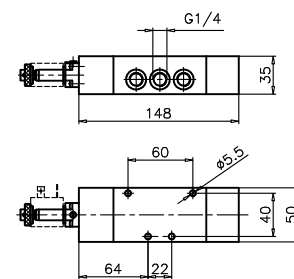
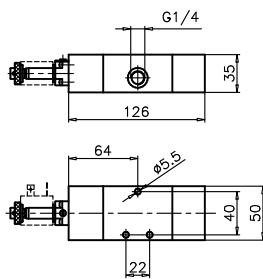
3/2 Solenoid - Differential

Ordering code

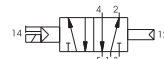
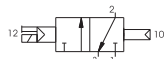
Solenoid - Differential

464/1.Ⓡ.0.12.M2

TYPE
Ⓡ = 3 ways
52 = 5 ways



Weight gr. 650
Minimum working pressure 2,5 bar



Weight gr. 740
Minimum working pressure 2,5 bar

Operational characteristics


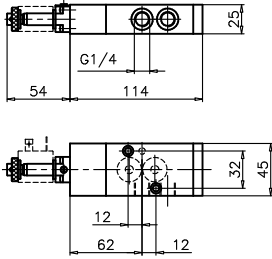

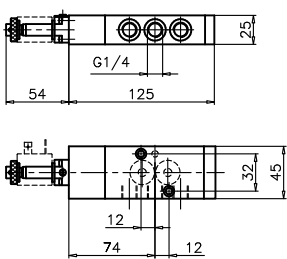
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	1360 NI/min	mm 8	G 1/4"


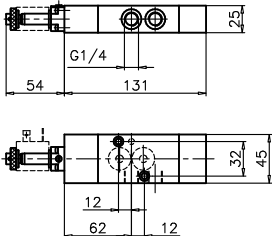

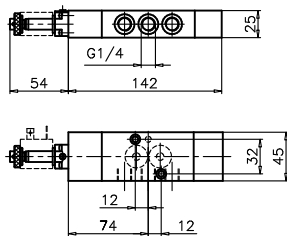



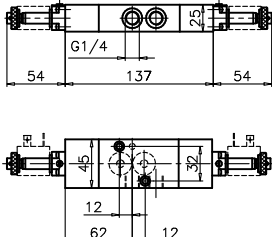

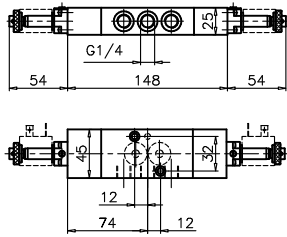
2

3/2	Solenoid - Solenoid	Ordering code	Solenoid - Solenoid			5/2
		464/1.1.0.0.M2				
		T TYPE 32=3 ways 52=5 ways				
				Weight gr. 820 Minimum working pressure 2 bar		
Weight gr. 730 Minimum working pressure 2 bar						
Operational characteristics						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	
Filtered and lubricated air	10 bar	-5 ÷ +50	1360 NI/min	mm 8	G 1/4"	

Solenoid - Solenoid						5/3
Ordering code						
464/1.53.F.0.0.M2						
F FUNCTION 31=Closed centres 32=Open centres 33=Pressured centres						
Weight gr. 820 Minimum working pressure 3 bar						
Operational characteristics						
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size	
Filtered and lubricated air	10 bar	-5 ÷ +50	1280 NI/min	mm 8	G 1/4"	

3/2 Solenoid - Spring		Ordering code			Solenoid - Spring 5/2	
  Weight gr. 390 Minimum working pressure 2,5 bar		514/N.0.1.M2 TYPE 32=3 ways 52=5 ways			  Weight gr. 450 Minimum working pressure 2,5 bar	
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-10 - +50	1030 Nl/min	mm 7	G 1/4"

3/2 Solenoid - Differential		Ordering code			Solenoid - Differential 5/2	
  Weight gr. 390 Minimum working pressure 2,5 bar		514/N.0.12.M2 TYPE 32=3 ways 52=5 ways			  Weight gr. 450 Minimum working pressure 2,5 bar	
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-10 - +50	1030 Nl/min	mm 7	G 1/4"

3/2 Solenoid - Solenoid		Ordering code			Solenoid - Solenoid 5/2	
  Weight gr. 390 Minimum working pressure 2,5 bar		514/N.0.0.M2 TYPE 32=3 ways 52=5 ways			  Weight gr. 450 Minimum working pressure 2,5 bar	
Operational characteristic	Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (Nl/min)	Orifice size (mm)	Working ports size
	Filtered and lubricated air	10 bar	-10 - +50	1030 Nl/min	mm 7	G 1/4"

Solenoid - Spring

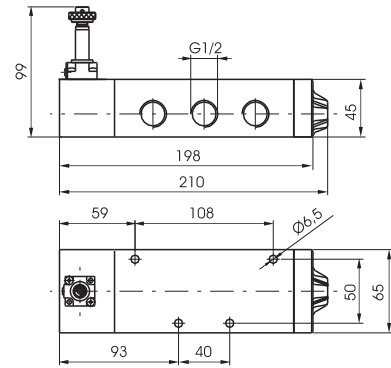
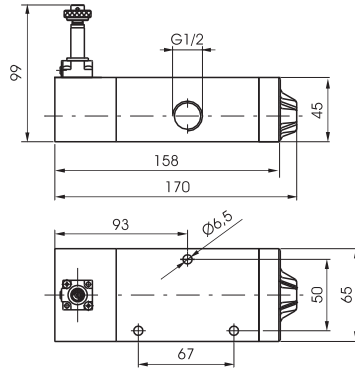
3/2
5/2

Ordering code

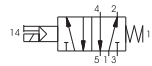
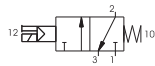
452.1.0.1.M2

TYPE

32=3 ways
52=5 ways



Weight gr. 1152
Minimum working pressure 2,5 bar



Weight gr. 1422
Minimum working pressure 2,5 bar

Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	3500 NI/min	mm 15	G 1/2"

Solenoid - Differential

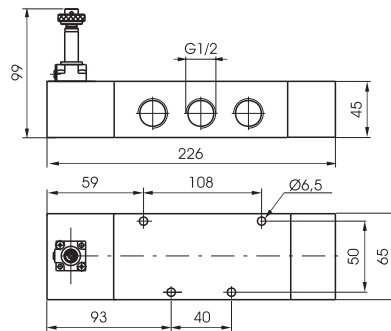
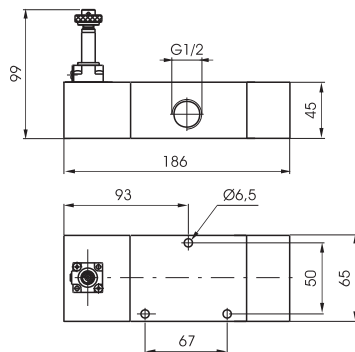
3/2
5/2

Ordering code

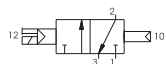
452.1.0.12.M2

TYPE

32=3 ways
52=5 ways



Weight gr. 1422
Minimum working pressure 2,5 bar



Weight gr. 1692
Minimum working pressure 2,5 bar

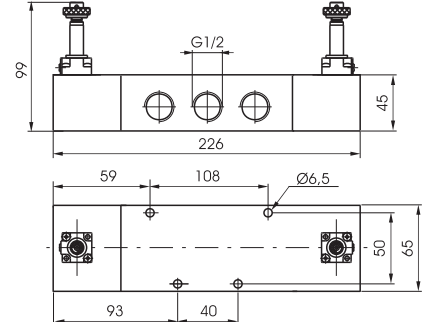
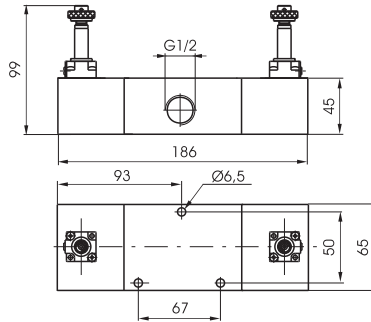
Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	3500 NI/min	mm 15	G 1/2"

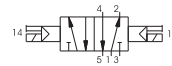
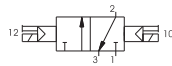
3/2
5/2

Solenoid - Solenoid

Ordering code	
452.0.0.0.M2	
TYPE	
1 32=3 ways	
52=5 ways	



Weight gr. 1474
Minimum working pressure 2 bar



Weight gr. 1744
Minimum working pressure 2 bar

Operational characteristics

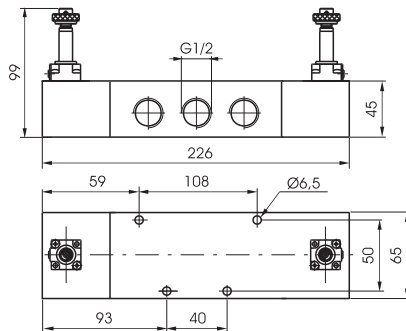
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	3500 NI/min	mm 15	G 1/2"

2

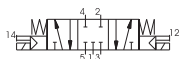
Solenoid - Solenoid

5/3

Ordering code	
452.53.0.0.M2	
FUNCTION	
F 31=Closed centres	
32=Open centres	
33=Pressured centres	



Weight gr. 1744
Minimum working pressure 3 bar



Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	3500 NI/min	mm 15	G 1/2"

Solenoid - Spring

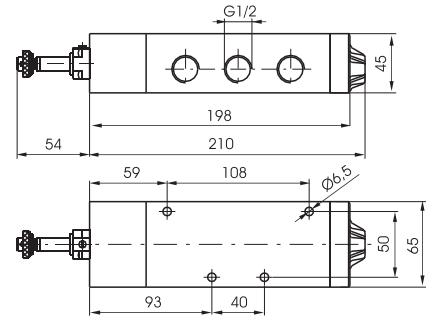
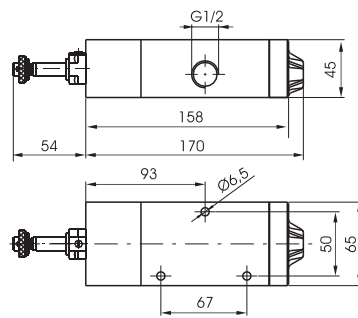
3/2
5/2

Ordering code

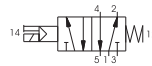
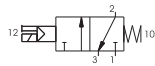
452/1.0.1.M2

TYPE

32=3 ways
52=5 ways



Weight gr. 1330
Minimum working pressure 2,5 bar



Weight gr. 1600
Minimum working pressure 2,5 bar

Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	3500 NI/min	mm 15	G 1/2"

Solenoid - Differential

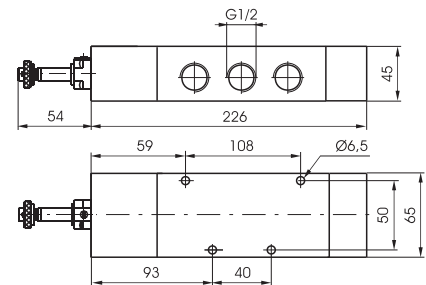
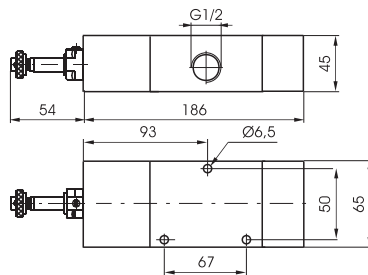
3/2
5/2

Ordering code

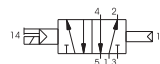
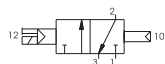
452/1.0.12.M2

TYPE

32=3 ways
52=5 ways



Weight gr. 1600
Minimum working pressure 2,5 bar



Weight gr. 1870
Minimum working pressure 2,5 bar

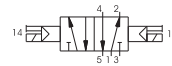
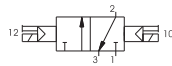
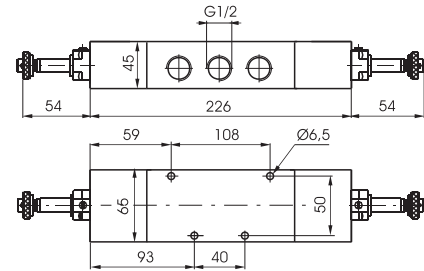
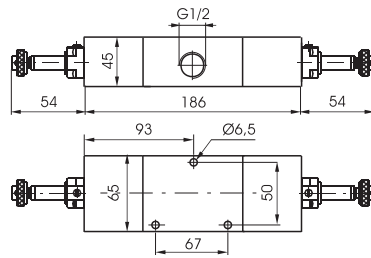
Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	3500 NI/min	mm 15	G 1/2"

3/2
5/2

Solenoid - Solenoid

Ordering code
452/1.1.0.0.M2
TYPE
32=3 ways
52=5 ways



Weight gr. 1830
Minimum working pressure 2 bar

Weight gr. 2100
Minimum working pressure 2 bar

Operational characteristics

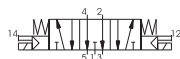
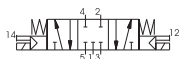
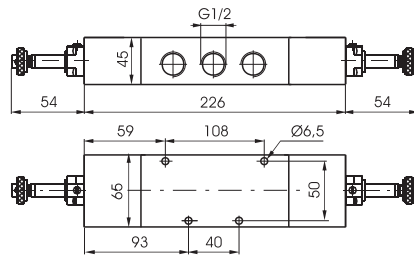
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	3500 NI/min	mm 15	G 1/2"

2

Solenoid - Solenoid

5/3

Ordering code
452/1.53.F.0.0.M2
FUNCTION
31=Closed centres
32=Open centres
33=Pressured centres



Weight gr. 2100
Minimum working pressure 3 bar

Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with Δp=1 (NI/min)	Orifice size (mm)	Working ports size
Filtered and lubricated air	10 bar	-5 ÷ +50	3500 NI/min	mm 15	G 1/2"