



VALVES AND SOLENOID VALVES WITH "NAMUR" INTERFACE

COMPONENTS AND SISTEMS FOR AUTOMATION





Pneumax S.p.A.
Smart Technologies and Human Compentence

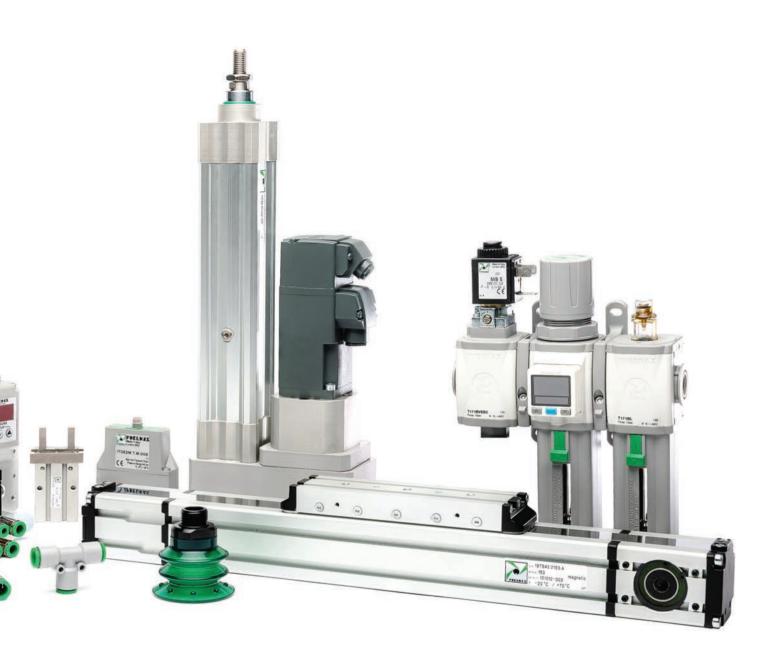
Founded in 1976, PNEUMAX S.p.A. is today one of the leading, international manufacturers of components and systems for industrial and process automation, it is at the fore front of a group comprised of 22 companies, with over 660 employees worldwide.

Ongoing investment in research and development has allowed Pneumax to continually expand its range of standard products and customised solutions, adding to the well-established pneumatic technology, is a range of electric drive actuators and fluid control components.









The ability to provide various technologies and solutions for each of our clients applications is the main objective of our company, making us the ideal strategic partner.

What defines us is the "Pneumax Business Attitude", born out of the capacity to combine industry sectors, technology and our application skills via client collaboration with our business sector and product sector specialists. This represents the main distinguishing factor of what **Pneumax** has to offer.



Pneumatic technology



Electric actuation



Fluid control



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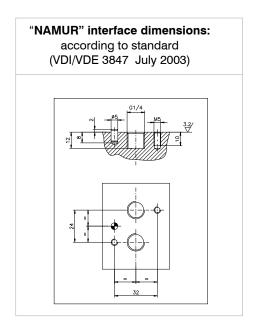


These are 2 stage valves actuated electro-pneumatically. A serie 300 directly operated solenoid valve actuates pneumatically the principal power distributor.

Everything is well integrated in a practical configuration that also permits applications where there is limited space. Used primarily to operate rotary actuators and wherever there is a "**NAMUR**" standard installation plan.

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 1/4" with identical pneumatic characteristics that are, however, actuated electrically. They have a balanced spool, insentive to presence or absence of pressure. They are constructed in 3 and 5 way with 1 solenoid (monostable) or 2 solenoids (bistable).



Construction characteristic

Body	Aluminium
Operators	Aluminium
Spools	Nickel plated steel
Seals	NBR
Spacers	Technopolymer
Springs	Spring steel
Screw	Zinc coated Steel

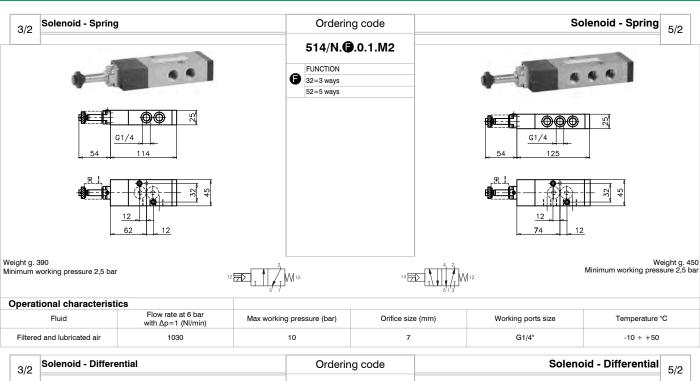
Use and maintenance

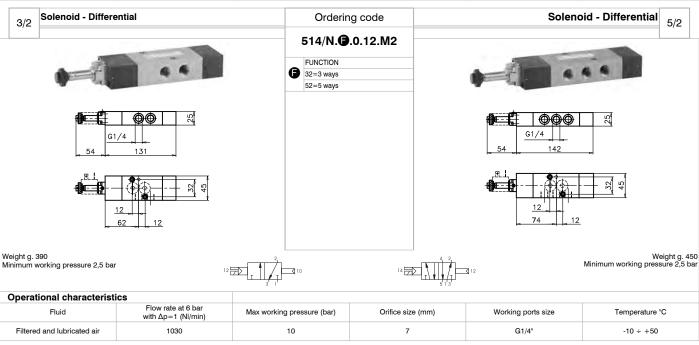
These valves have an average life of 15 million cycles depending on the application and air quality, filtered and lubricated air using specified lubricants will dramatically reduce the wear of the seals and ensures long and trouble free operation.

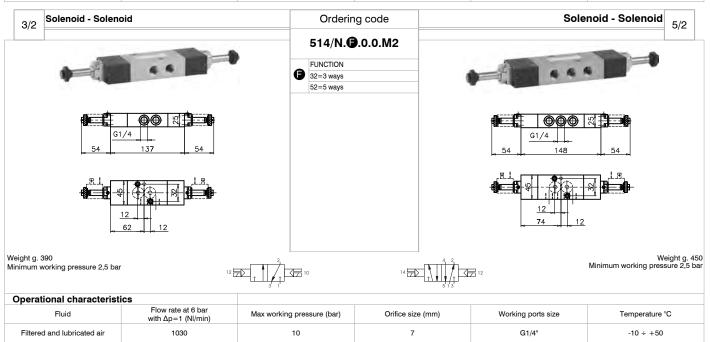
Please ensure that the valve is being used according with the manufacturers specification, such as air pressure and temperature and that exhaust ports 3 & 5 are protected against the possible ingress of dirt or debris.

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).









TECNO-NAMUR are 5/2 and 4/2 valves are solenoid valves pneumatically or electrically actuated. They are used in industrial automation applications or whenever a **NAMUR** mounting plane is available.

TECNO NAMUR is available in 5/2, 4/2 and all-purposes versions. The final user can switch from one version to another by simply changing interface plate and adding/removing a plug.

TECNO-NAMUR valves are produced using the most up to date technical features, granting flexible design and elevated characteristics over standard products.

Superior performance is further enhanced by the use of innovative materials of construction.

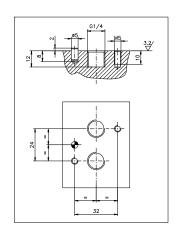
NOTE:

"Although accurately described, the 4/2 valve actually functions as a 3/2 normally closed valve and should be used as such."

"NAMUR" interface dimensions: according to standard

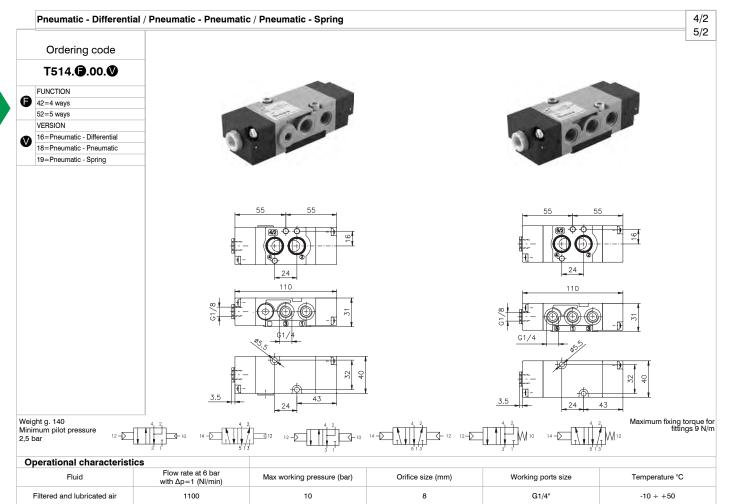
according to standard (VDI/VDE 3847 July 2003)



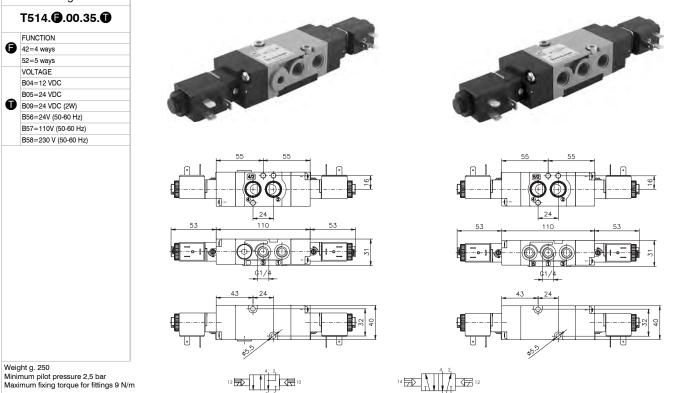


Construction characteristic

Body	Technopolymer
Operators	Technopolymer
Spools	Nickel plated steel
Seals	Nitrile rubber
Spacers	Technopolymer
Springs	Stainless Steel
Screw	Zinc coated Steel



Solenoid - Solenoid 4/2 Ordering code 5/2



Operational characterist	ics				
Fluid	Flow rate at 6 bar with Δp=1 (NI/min)	Max working pressure (bar)	Orifice size (mm)	Working ports size	Temperature °C
Filtered and lubricated air	1100	10	8	G1/4"	-10 ÷ +50



Solenoid - Differential / Solenoid - Spring

4/2 5/2

Ordering code

T514.**②**.00.**Ⅴ**.**①**

	FUNCTION
Ø	42=4 ways
	52=5 ways
	VEDCION

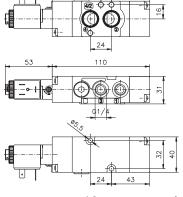
36=Solenoid - Differential 39=Solenoid - Spring VOLTAGE B04=12 VDC

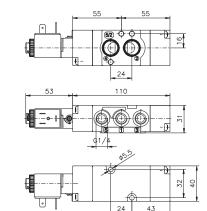
B05=24 VDC B09=24 VDC (2W) B56=24V (50-60 Hz) B57=110V (50-60 Hz) B58=230 V (50-60 Hz)

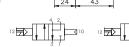
















Weight g. 200
Minimum pilot pressure 2,5 bar
Maximum fixing torque for fittings 9 N/m

Operational characteristi	ics				
Fluid	Flow rate at 6 bar with Δp=1 (NI/min)	Max working pressure (bar)	Orifice size (mm)	Working ports size	Temperature °C
Filtered and lubricated air	1100	10	8	G1/4"	-10 ÷ +50

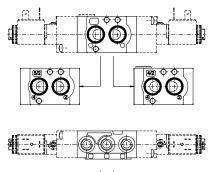
Universal kit

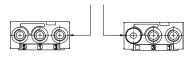
Ordering code

T514.92.00.♥.**①**

VERSION 16=Pneumatic - Differential 18=Pneumatic - Pneumatic 19=Pneumatic - Spring 35=Solenoid - Solenoid 36=Solenoid - Differential 39=Solenoid - Spring VOLTAGE B04=12 VDC B05=24 VDC B09=24 VDC (2W) B56=24V (50-60 Hz) B57=110V (50-60 Hz) B58=230 V (50-60 Hz)







Weight g. 170 Minimum pilot pressure 2,5 bar Maximum fixing torque for fittings 9 N/m

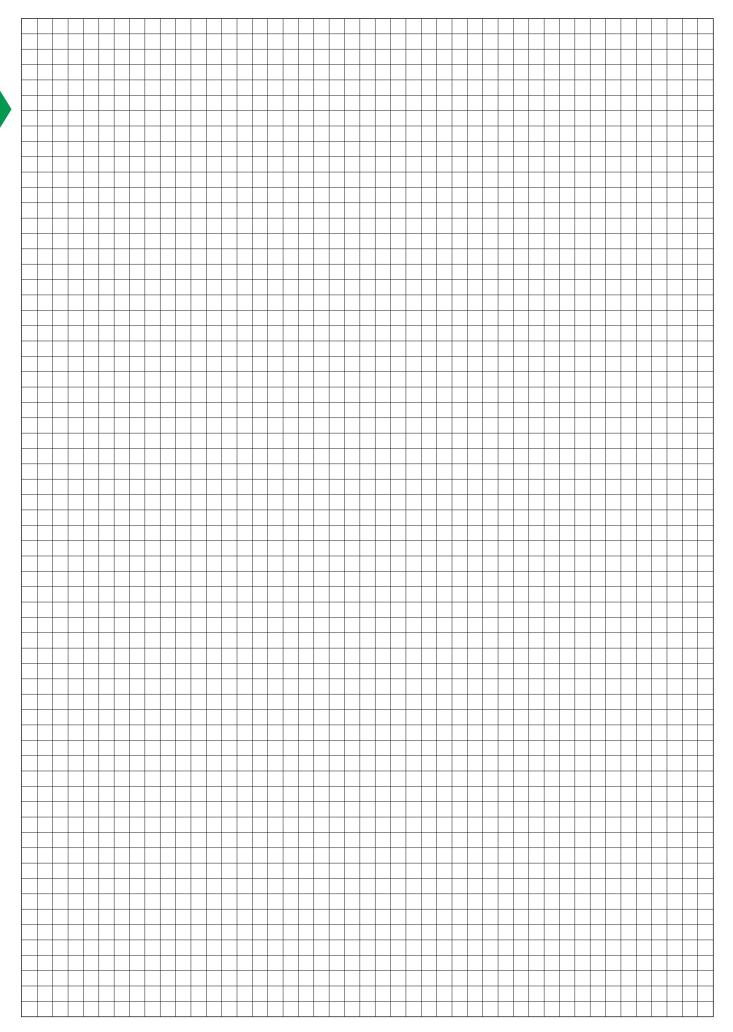




To change a 5/2 valve into a 4/2: Simply replace the bottom plate with the one included in the universal kit (cod. T514.92....) and by plugging page 5

						1314.82) and by plugging port 3
Operational characteristics						
	Fluid	Flow rate at 6 bar with Δp=1 (NI/min)	Max working pressure (bar)	Orifice size (mm)	Working ports size	Temperature °C
	Filtered and lubricated air	1100	10	8	G1/4"	-10 ÷ +50









NAMUR valves are 5/2 and 4/2 valves and electrovalves, piloted electrically or pneumatically, utilised primarily to operate rotary actuators and wherever there is a **NAMUR** standard installation plan.

The product is available in 5/2 and 4/2 versions or in a universal version which can be configured by the end user by replacing the fitting plate and adding a stopper.

The product is classified for use in potentially explosive atmospheres (Directive 2014/34/EU).

NAMUR valves have been developed using the latest, technical design solutions which guarantee flexibility and an increased flow rate capacity exceeding that of traditional, spool valves.

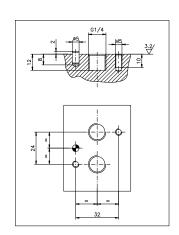
In addition, they have been produced with innovative materials which guarantee increased performance.

NOTE:

"Although accurately described, the 4/2 valve actually functions as a 3/2 normally closed valve and should be used as such."

"NAMUR" interface dimensions: according to standard (VDI/VDE 3847 July 2003)





Construction characteristic

Body	Aluminium
Operators	Technopolymer
Spools	Nickel plated steel
Seals	Nitrile rubber
Spacers	Technopolymer
Springs	Stainless Steel
Screw	Zinc coated Steel

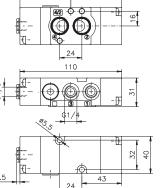
IMPORTANT: Version 515 (available only in 5/2), differs from version 514 because it is supplied without a plate.

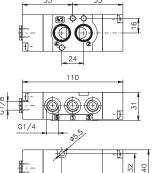
Certifications available:

CE S II 3G Ex h IIB T4 Gc X CE S II 3D Ex h IIIC T120°C Dc X IP65

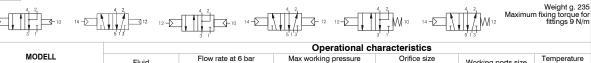
4/2 5/2 Pneumatic - Differential / Pneumatic - Pneumatic / Pneumatic - Spring Ordering code **Ø**514.**②**.00.**◎**◎ MODEL lacktriangledown=STANDARD Valve X=ATEX Valve FUNCTION 42=4 ways 52=5 ways VERSION

16=Pneumatic - Differential 18=Pneumatic - Pneumatic 19=Pneumatic - Spring TEMPERATURE OPTIONS =STANDARD Valve (-10 ÷ +50) =ATEX Valve (-30 ÷ +50) LT=Low temperature (-30 ÷ +50)





Weight g. 240 Minimum pilot pressure 2,5 bar



	MODELL	Operational characteristics							
Code Example		Fluid	Flow rate at 6 bar with Δp=1 (NI/min)	Max working pressure (bar)	Orifice size (mm)	Working ports size	Temperature °C		
514. ⑤ .00. ∅	STANDARD Valve	Filtered and lubricated air					-10 ÷ +50		
514. ⊕ .00. ⊘ LT	LT "Low Temperture" Valve				1100	10	8	G1/4"	-30 ÷ +50
X514. ⊕ .00. ♥	ATEX Valve						-30 ÷ +50		

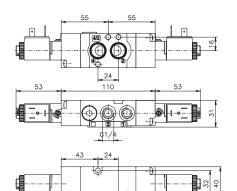
4/2 5/2 Solenoid - Solenoid

Ordering code

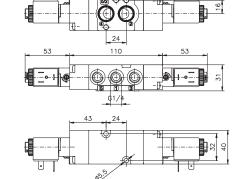
Ø514.**₱**.00.35.**₱⊚**

	MODEL
Ø	=STANDARD Valve
	X=ATEX Valve
	FUNCTION
Ø	42=4 ways
	52=5 ways
	VOLTAGE
	B04=12 VDC
	B05=24 VDC
	B09=24 VDC (2W)
	B56=24V (50-60 Hz)
	B57=110V (50-60 Hz)
	B58=230 V (50-60 Hz)
	C04=12 VDC
a	C05=24 VDC
U	C09=24 VDC (2W)
	C56=24V (50-60 Hz)
	C57=110V (50-60 Hz)
	C58=230 V (50-60 Hz)
	F04=12 VDC
	F05=24 VDC
	F56=24V (50-60 Hz)
	F57=110V (50-60 Hz)
	F58=230 V (50-60 Hz)
	TEMPERATURE OPTIONS
•	=STANDARD Valve (-10 ÷ +50)
	=ATEX Valve (-30 ÷ +50)









"LT" and "ATEX" Versions are not available with MF coils
Weight g. 410
Minimum pilot pressure 2,5 bar
Maximum fixing torque for fittings 9 N/m

LT=Low temperature (-30 ÷ +50)





	•							
		Operational characteristics						
Code Example	MODELL	Fluid	Flow rate at 6 bar with Δp=1 (NI/min)	Max working pressure (bar)	Orifice size (mm)	Working ports size	Temperature °C	
514. ⊕ .00. ⊕	STANDARD Valve	Filtered and lubricated air	1100	10	8	G1/4"	-10 ÷ +50	
514. @ .00. ⊕ LT	LT "Low Temperture" Valve						-30 ÷ +50	
X514. ⊕ .00. ⊕	ATEX Valve						-30 ÷ +50	

Solenoid - Differential / Solenoid - Spring

Ordering code

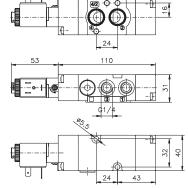
4/2 5/2

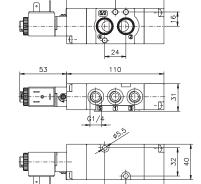
Ø514.**₱**.00.**♥**.**₽⊚** 0 =STANDARD Valve X=ATEX Valve FUNCTION • 42=4 ways 52=5 ways VERSION 36=Solenoid - Differential 39=Solenoid - Spring VOLTAGE B04=12 VDC B05=24 VDC B09=24 VDC (2W) B56=24V (50-60 Hz) B57=110V (50-60 Hz) B58=230 V (50-60 Hz) C04=12 VDC C05=24 VDC (2W) C56=24V (50-60 Hz) C57=110V (50-60 Hz) C58=230 V (50-60 Hz) F04=12 VDC F05=24 VDC F56=24V (50-60 Hz) F57=110V (50-60 Hz)











"LT" and "ATEX" Versions are not available with MF coils Weight g. 330 Minimum pilot pressure 2,5 bar

Maximum fixing torque for fittings 9 N/m

=STANDARD Valve (-10 ÷ +50) =ATEX Valve (-30 ÷ +50)

LT=Low temperature (-30 ÷ +50)

F58=230 V (50-60 Hz) TEMPERATURE OPTIONS

①







Weight g. 325

Code Example		Operational characteristics						
	MODELL	Fluid	Flow rate at 6 bar with Δp=1 (NI/min)	Max working pressure (bar)	Orifice size (mm)	Working ports size	Temperature °C	
514. (3 .00. \(\frac{1}{2}\)(1)	STANDARD Valve	Filtered and lubricated air	1100	10	8	G1/4"	-10 ÷ +50	
514. ₲ .00. ₡₲ LT	LT "Low Temperture" Valve						-30 ÷ +50	
X514. ᢙ .00. ♥①	ATEX Valve						-30 ÷ +50	

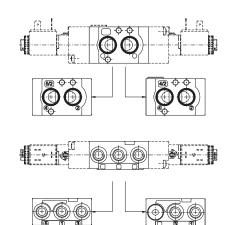
Universal kit

Ordering code

Ø514.92.00.**♥**.**●⊚**

	MODEL						
W	=STANDARD Valve						
	X=ATEX Valve						
	VERSION						
	16=Pneumatic - Differential						
_	18=Pneumatic - Pneumatic						
V	19=Pneumatic - Spring						
	35=Solenoid - Solenoid						
	36=Solenoid - Differential						
	39=Solenoid - Spring						
	VOLTAGE						
	B04=12 VDC						
	B05=24 VDC						
	B09=24 VDC (2W)						
	B56=24V (50-60 Hz)						
	B57=110V (50-60 Hz)						
	B58=230 V (50-60 Hz)						
_	C04=12 VDC						
U	C05=24 VDC						
	C09=24 VDC (2W)						
	C56=24V (50-60 Hz)						
	C57=110V (50-60 Hz)						
	C58=230 V (50-60 Hz)						
	F04=12 VDC						
	F05=24 VDC						
	F56=24V (50-60 Hz)						
	F57=110V (50-60 Hz)						
	TEMPERATURE OPTIONS						
(=STANDARD Valve (-10 ÷ +50)						
9	=ATEX Valve (-30 ÷ +50)						
	LT=Low temperature (-30 ÷ +50)						





"LT" and "ATEX" Versions are not available with MF coils Weight g. 405 Minimum pilot pressure 2,5 bar

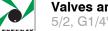
Maximum fixing torque for fittings 9 N/m





To change a 5/2 valve into a 4/2: Simply replace the bottom plate with the one included in the universal kit (cod. 514.92....) and by plugging port 5

Code Example		Operational characteristics						
	MODELL	Fluid	Flow rate at 6 bar with $\Delta p = 1$ (NI/min)	Max working pressure (bar)	Orifice size (mm)	Working ports size	Temperature °C	
514.92.00. Ø①	STANDARD Valve	Filtered and lubricated air	1100	10	8	G1/4"	-10 ÷ +50	
514.92.00. ♥⊕ LT	LT "Low Temperture" Valve						-30 ÷ +50	
X514.92.00. ♥①	ATEX Valve						-30 ÷ +50	



Pneumatic - Differential / Pneumatic - Pneumatic / Pneumatic - Spring

Ordering code

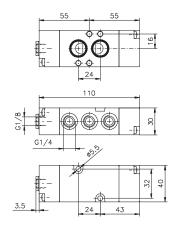
Ø515.52.00.**♥⊚**

0 =STANDARD Valve X=ATEX Valve VERSION 16=Pneumatic - Differential 18=Pneumatic - Pneumatic 19=Pneumatic - Spring TEMPERATURE OPTIONS =STANDARD Valve (-10 ÷ +50) =ATEX Valve (-30 ÷ +50)

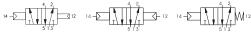
LT=Low temperature (-30 ÷ +50)







Weight g. 245 Minimum pilot pressure 2,5 bar



Maximum fixing torque for fittings 9 N/m

Code Example		Operational characteristics						
	MODELL	Fluid	Flow rate at 6 bar with $\Delta p = 1$ (NI/min)	Max working pressure (bar)	Orifice size (mm)	Working ports size	Temperature °C	
515.52.00.♥	STANDARD Valve	Filtered and lubricated air	1100	10	8	G1/4"	-10 ÷ +50	
515.52.00. ØL T	LT "Low Temperture" Valve						-30 ÷ +50	
X515.52.00. ⊕	ATEX Valve						-30 ÷ +50	

Solenoid - Solenoid

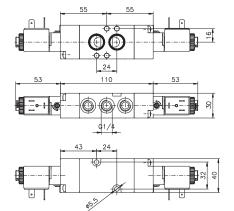
Ordering code

Ø515.52.00.35.**₽⊚**

MODEL lacktriangledown=STANDARD Valve X=ATEX Valve VOLTAGE B04=12 VDC B05=24 VDC B09=24 VDC (2W) B56=24V (50-60 Hz) B57=110V (50-60 Hz) B58=230 V (50-60 Hz) C04=12 VDC C05=24 VDC C09=24 VDC (2W) C09=24 VDC (2W) C56=24V (50-60 Hz) C57=110V (50-60 Hz) C58=230 V (50-60 Hz) F04=12 VDC F05=24 VDC F56=24V (50-60 Hz) F57=110V (50-60 Hz) F58=230 V (50-60 Hz) TEMPERATURE OPTIONS =STANDARD Valve (-10 ÷ +50) =ATEX Valve (-30 \div +50) LT=Low temperature (-30 ÷ +50)







"LT" and "ATEX" Versions are not available with MF coils Weight g. 415 Minimum pilot pressure 2,5 bar

Maximum fixing torque for fittings 9 N/m



Code Example		Operational characteristics						
	MODELL	Fluid	Flow rate at 6 bar with Δp=1 (NI/min)	Max working pressure (bar)	Orifice size (mm)	Working ports size	Temperature °C	
515.52.00.35.	STANDARD Valve	Filtered and lubricated air	1100	10	8	G1/4"	-10 ÷ +50	
515.52.00.35. @ LT	LT "Low Temperture" Valve						-30 ÷ +50	
X515.52.00.35.	ATEX Valve						-30 ÷ +50	



Solenoid - Differential / Solenoid - Spring

Ordering code

Ø515.52.00.**♥.©**





39=Solenoid - Spring VOLTAGE B04=12 VDC

B05=24 VDC

B09=24 VDC (2W) B56=24V (50-60 Hz) B57=110V (50-60 Hz) B58=230 V (50-60 Hz) C04=12 VDC

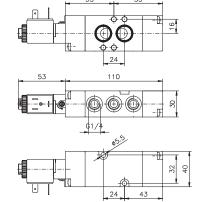
C05=24 VDC C09=24 VDC (2W) C56=24V (50-60 Hz) C57=110V (50-60 Hz) C58=230 V (50-60 Hz) F04=12 VDC F05=24 VDC

F58=230 V (50-60 Hz) TEMPERATURE OPTIONS =STANDARD Valve (-10 ÷ +50) =ATEX Valve (-30 ÷ +50) •

F56=24V (50-60 Hz) F57=110V (50-60 Hz)







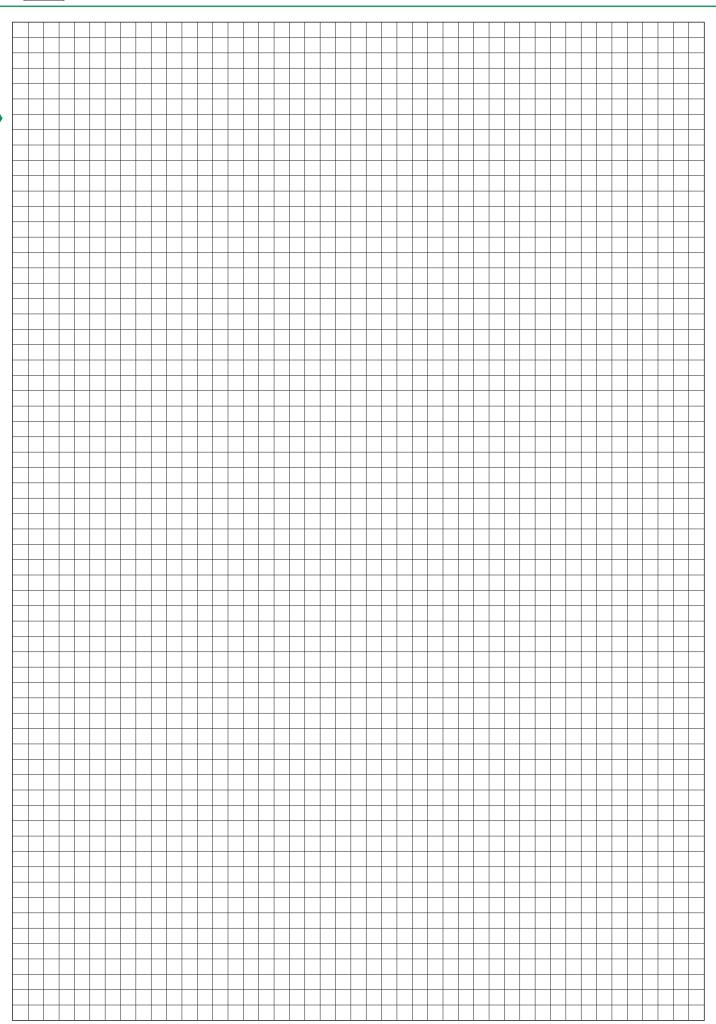
"LT" Version is available only with MB and MC coils Weight g. 330 Minimum pilot pressure 2,5 bar Maximum fixing torque for fittings 9 N/m

LT=Low temperature (-30 ÷ +50)





		Operational characteristics						
Code Example	MODELL	Fluid	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Max working pressure (bar)	Orifice size (mm)	Working ports size	Temperature °C	
515.52.00.♥.❶	STANDARD Valve	Filtered and lubricated air		0 10	8	G1/4"	-10 ÷ +50	
515.52.00. ⊘.⊕ LT	LT "Low Temperture" Valve		1100				-30 ÷ +50	
X515.52.00. ♥ . ①	ATEX Valve						-30 ÷ +50	







PNEUMAX S.p.A.

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