

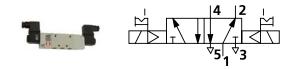
5/2-way valve

electropneumatic, with connector and coil, series 70 low temperature

PLUS

Art. No. 150080

Type No. 517.TT.52.18.B.110A



Exemplary illustration

The series 70 low temperature valves in electropneumatic version complement our range of traditional way valves of series 70. They represent a selection of the most commonly used electropneumatic way valves, which are manufactured with components for special low temperature applications. These valves have a wide range of applications as bushing valves, direct mounting on the cylinder with special adapters or as series valves with multi-base plates and individual interlinking plates (supply strips).

Technical data

Function	5/2
Operation	bistable
Control air supply	internal
Connection	G 1/8 IT
Voltage	110 V AC
Frequency	50/60 Hz
DN	5
Flow rate measurement 1	flow rate at 6 bar and Δp 0.5 bar
Flow rate 1	400 NI/min
Flow rate measurement 2	flow rate at 6 bar and Δp 1 bar
Flow rate 2	550 NI/min
Medium	filtered, dry and unlubricated compressed air
Required purity class in accordance w. ISO 8573-1	4.2.3
Min. operating pressure at -40 to -10 °C	5 bar
Min. operating pressure at -10 to 60 °C	3 bar
Operating pressure	max. 10 bar
Medium temperature	-40 to 60 °C
Ambient temperature	-40 to 50 °C
Valve body	aluminium
Piston	nickel-plated aluminium
Sealant	NBR



Technical data

Spring	special steel
Control air port	
Manual control	latching

Series 70 low temperature valves require the use of 22 mm coils with 5 W or 5 VA.

Commercial data

Customs tariff number	84818079
Country of origin	IT
eCl@ss 5.1.4	27291501
eCl@ss 9.0	27291390
UNSPSC_Code_v190501	40141603
UNSPSC_CodeDesc_v190501	Pneumatic valves



VALVES SERIES 70

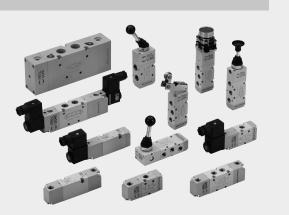
The Series 70 forms part of Metal Work's full range of traditional valves.

They are available in sizes 1/8", 1/4", 3/8" and 1/2", versions 3/2, 5/2, 5/3 and double 3/2, with mechanical, manual, pneumatic and electric drives.

They can be installed in line, onto a wall, on the cylinder (using a special bracket) or in series (on a multiple or modular base) to suit all possible applications.

A range of valves (Series 70 LT) designed using components for specific low-temperature applications is now available for the most commonly used types and sizes.

These highly reliable valves comply with the main applicable standards, including Atex, ISO 13489 and SIL, as stated in the documents and certificates available online.

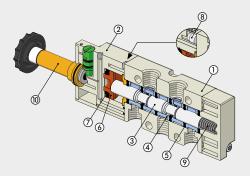


TECHNICAL DATA			1/8″	1/4″	3/8″	1/2″
Thread on the valve ports			1/8″	1/4″	3/8″	1/2″
Operating pressure series 70 versions		bar				
monostable and bistable differential				2.5 1	o 10	
bistable				1 tc		
asserved				vacuur	n to 10	
Operating pressure series 70 LT (low temp	verature) versions	bar				
hand operated				n to 10		-
pneumatic and solenoid/pneumatic	t = -40°C to -10°C			510		-
	t = -10°C to +60°C		3 to	5 10		-
Minimum pilot pressure		bar		2	.5	
Operating temperature range		°C				
series 70 versions				-10 t		
series 70 LT (low temperature) versions					o +60	
Nominal diameter		mm	5	7.5	13.3	15
Conductance C		nin · bar	121.43	264.26	505.52	971.43
Critical ratio b		bar/bar	0.32	0.27	0.32	0.43
Flow rate at 6 bar ΔP 0.5 bar		Nl/min	400	750	1560	3200
Flow rate at 6 bar ∆P 1 bar		Nl/min	550	1100	2150	4600
Installation				rtical assembly is not recomm		
Fluid				air without lubrication; lubr		
			For series 70 LT (low-l	emperature) versions, it is		pertetamente dried air.
Recommended lubricant				ISO and l		
14 A A			For series 70 L1	(low-temperature) it is no	t expected to be used wit	h lubricated air.
Maximum coil nut torque		Nm				
Compatibility with oils				See cho	ipter ZI	

COMPONENTS SERIES 70

- VALVE BODY: Aluminium
- CONTROL/END CAP: plastic

- 2 CONTROL/END CAP: plastic
 3 SPOOL: chemically nickel-plated aluminium
 4 DISTANCE PLATES: plastic
 5 GASKETS: NBR
 6 PISTONS: Hostaform®
 7 PISTON GASKET: NBR
 8 FILTER: plastic
 9 SPRINGS: special steel
 10 OPERATOR: Brass pipe Stainless steel core



RIEGLER & Co. KG Schützenstraße 27 72574 Bad Urach Tel. +49 7125 9497-642 technik@riegler.de

Page 3 of 13

B1

VALVES SERIES 70



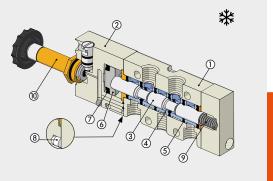
VALVES

VALVES SERIES 70



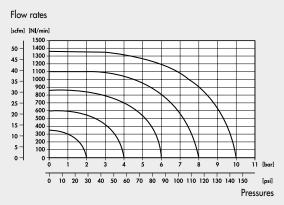
COMPONENTS SERIES 70 LT (LOW TEMPERATURE)

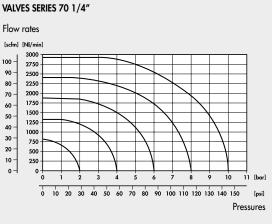
- 1) ALVE BODY: aluminium
- ALVE BODT: aluminium
 CONTROL/END CAP: aluminium
 SPOOL: chemically nickel-plated aluminium
 DISTANCE PLATES: plastic
- 5 GASKETS: HNBR
- 6 PISTONS: aluminium
- ⑦ PISTON GASKET: HNBR
- 8 FILTER: plastic
- ③ SPRINGS: special steel
- OPERATOR: brass pipe Stainless steel core (version specific for low-temperature applications)



FLOW CHARTS

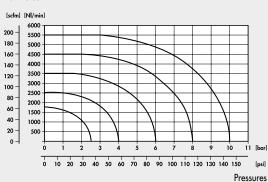
VALVES SERIES 70 1/8"



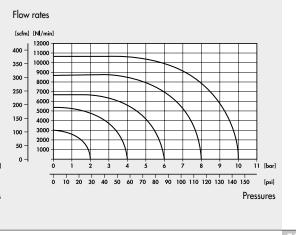


VALVES SERIES 70 3/8"





VALVES SERIES 70 1/2"



Page 4 of 13

RIEGLER & Co. KG Schützenstraße 27 72574 Bad Urach Tel. +49 7125 9497-642 technik@riegler.de



VALVES

VALVES SERIES 70 LT (LOW TEMPERATURE)



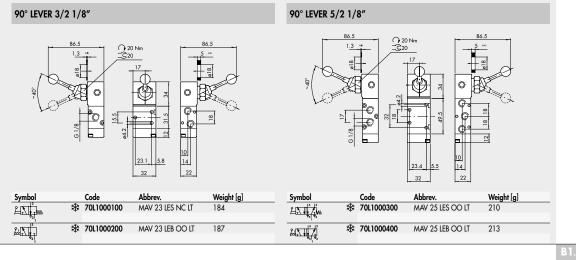
VALVES SERIES 70 LT (LOW TEMPERATURE)

TECHNICAL DATA		1/8″	1/4″	3/8″	
Operating pressure standard	bar				_
hand operated		١	acuum to 10)	
pneumatic and solenoid/pneumatic t = -40°	C to -10°C		5 to 10		
t = -10°C	to +60°C		3 to 10		
Operating temperature range	°C		-40 to +60		
Nominal diameter	mm	5	7.5	13.3	
Conductance C NI	/min · bar	121.43	264.26	505.52	
Critical ratio b	bar/bar	0.32	0.27	0.32	the state of the second
Flow rate at 6 bar ∆P 0.5 bar	Nl/min	400	750	1560	1000
Flow rate at 6 bar ΔP 1 bar	Nl/min	550	1100	2150	
PNEUMATIC					0 0 0
Minimum pilot pressure	bar				
t = -40°C to -10°C			5		
t = -10°C to +60°C			3		
TRA / TRR monostable at 6 bar (at 20°C)	ms	6/15	7/15	5/28	
TRA / TRR bistable at 6 bar (at 20°C)	ms	7/7	7/7	13/13	
SOLENOID/PNEUMATIC					
TRA / TRR monostable at 6 bar (at 20°C)	ms	15/35	19/45	21/72	θ
TRA / TRR bistable at 6 bar (at 20°C)	ms	20/20	21/21	18/18	1
Coil voltage values			12; 24 VDC		
0		24: 110	220V AC 5	i0/60Hz	
Power $t = -40^{\circ}$ C	to -10°C	5 W	(DC) - 5 VA	(AC)	
t = -10°C	to +60°C	2 W (DC) - 3.5 VA	(AC)	
Voltage tolerance	%		-10 to +15		2 st.
Insulation class			F 155		1 - Aller
Maximum coil nut torque	Nm		1		A ES: 1021102
Hand operator			Bistable		
Notes: after a long stop and with very low tempera	tures the mo	vement of th	e first		6
drives may be slower. It recommends the use of per					

 .,			
		•	

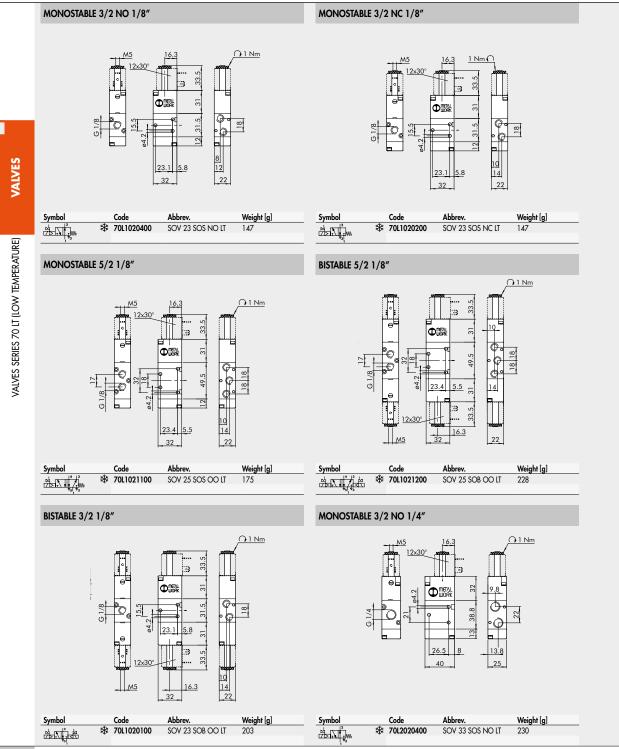
PNV	2	3	PN	S	0	0	LT
FAMILY	DIMENSIONS	FUNCTION	OPERATORS 14	RESETTING (12)		FURTHER DETAILS	
MAV manual valves PNV pneumatic valves SOV solenoid/ pneumatic	2 1/8" 3 1/4" C 3/8"	3 3/2 5 5/2 6 5/3	LE leva 90° PN pneumatic SO solenoid	S mechanical springsB bistableO stable for 5/3	NC norma NO norma CC closed OC open o	lication LT Illy closed Illy open centres centres re centres	low temperature

VALVES SERIES 70 LT, HAND OPERATED (LOW TEMPERATURE)





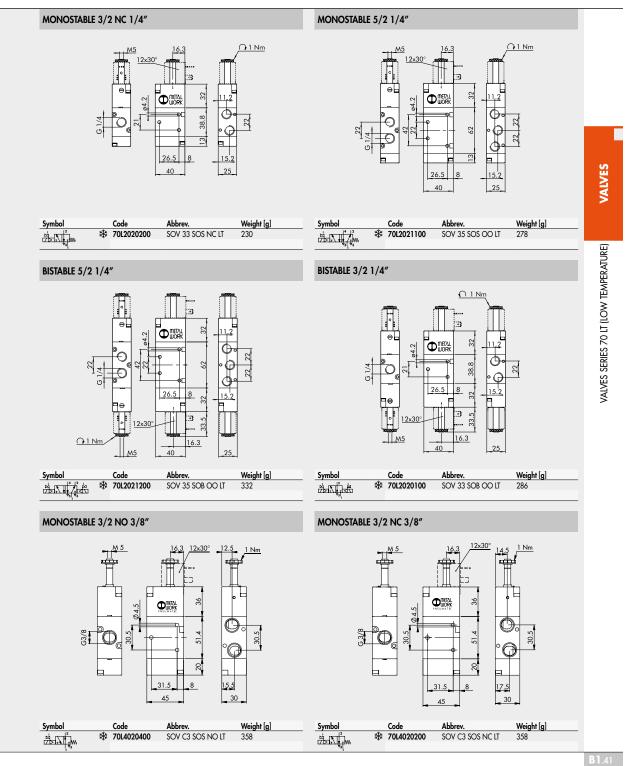
VALVES SERIES 70 LT, SOLENOID/PNEUMATIC (LOW TEMPERATURE)



B1.40



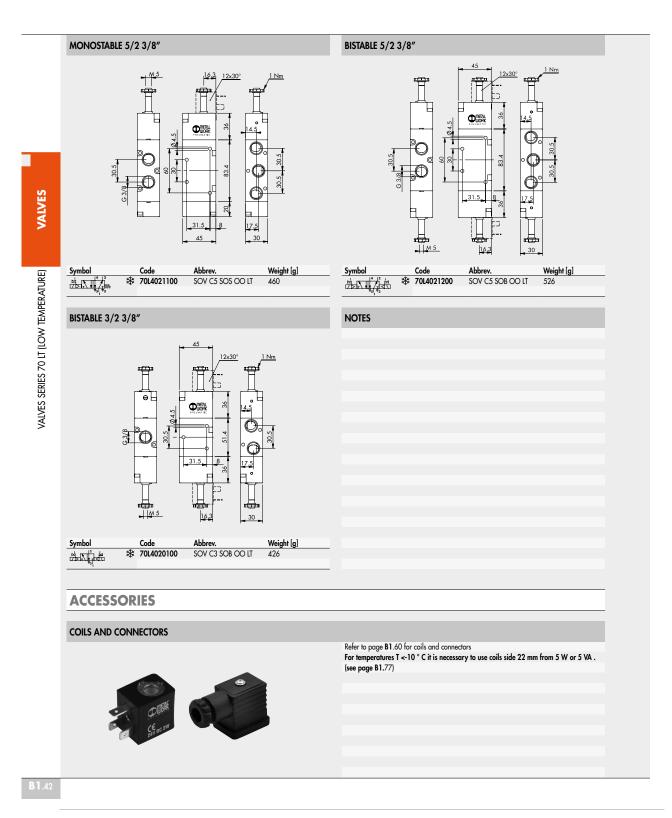




Page 7 of 13



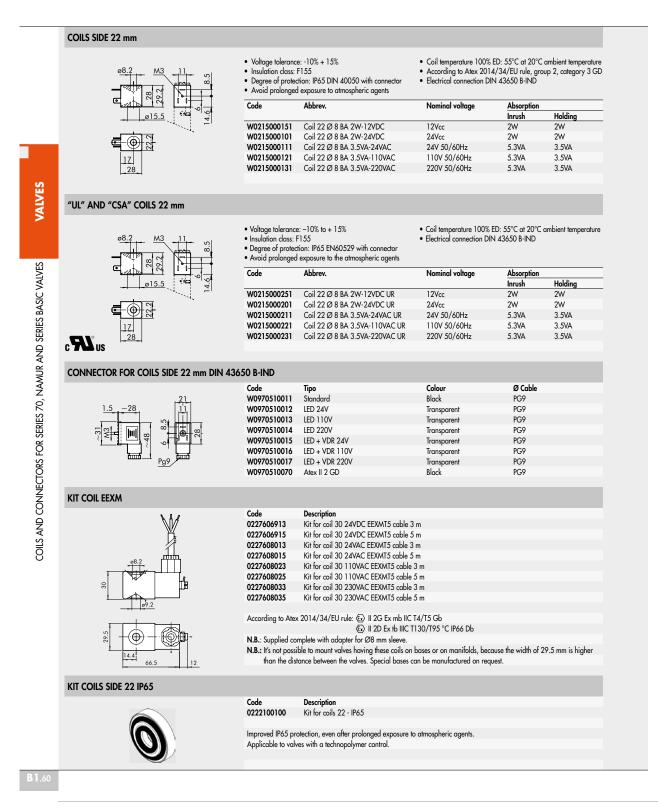




RIEGLER & Co. KG Schützenstraße 27 72574 Bad Urach Tel. +49 7125 9497-642 technik@riegler.de



COILS AND CONNECTORS FOR SERIES 70, NAMUR AND SERIES BASIC VALVES



Page 9 of 13





		Р	NEU	MATIC
NC/NO ADAPTER FOR PIV.T VALVES				
	Code	Description	Abbrev.	Weight [g]
	W0400101190	NC/NO adapter	I-9000	15
BASE BLANKING PLATE FOR PIV.T VALVES, UNUSED POSITIONS				
	Code	Description	Abbrev.	Weight [g]
	W0400112000	Blanking plate	B6000	5
14				
<u>22</u>				
<u>+</u>				
MULTIPLE BASES FOR PIV.B VALVES				
MULIIFLE DAJEJ FOK FIY.D YALVEJ	C	D :::		M * 1 - F 1
	Code W0400101201	Description Base 1 position	Abbrev. B4001	Weight [g] 42
	W0400101201	Base 2 positions	B4001 B4002	94
<u>G1/8</u> <u>G1/4</u> <u>G1/4</u>	W0400101203	Base 3 positions	B4002	142
	W0400101204	Base 4 positions	B4004	188
	W0400101205	Base 5 positions	B4005	234
17.5 33 33 17.5 17.5 18	W0400101206	Base 6 positions	B4006	280
	W0400101207 W0400101208	Base 7 positions Base 8 positions	B4007 B4008	326 372
33	W0400101209	Base 9 positions	B4000 B4009	418
BASE BLANKING PLATE FOR PIV.B VALVES, UNUSED POSITIONS				
32	Code	Description		Weight [g]
ø4.5	W0400112001	Blanking plate		14
24				
- <u>-</u>				
m <u></u>				
COILS, SIDE 22 mm FOR PIV.I SOLENOID VALVES, OPERATOR Ø 8				
	- 1/ 1/ 1/	ce: -10 to +15%		
<u>∞8.2 M3 11</u>	 Insulation class: 		onnoctor	
∞8.2 M3 11 v)	 Insulation class: Degree of prote 	ction: IP65 – EN60529 with a		
	 Insulation class: Degree of prote Avoid prolonge Maximum coil t 	action: IP65 – EN60529 with a d exposure to the atmospheric emperature at 100% use: 70°	: agents. C at 20° ambient ter	mperature
	 Insulation class: Degree of prote Avoid prolonge Maximum coil t According to A 	ation: IP65 – EN60529 with a d exposure to the atmospheric emperature at 100% use: 70° tex 2014/34/EU rule, group	: agents. C at 20° ambient ter	mperature
	 Insulation class: Degree of prote Avoid prolonge Maximum coil t According to A 	action: IP65 – EN60529 with a d exposure to the atmospheric emperature at 100% use: 70°	: agents. C at 20° ambient ter	mperature
	 Insulation class: Degree of prote Avoid prolonge Maximum coil t According to A 	ation: IP65 – EN60529 with a d exposure to the atmospheric emperature at 100% use: 70° tex 2014/34/EU rule, group	: agents. C at 20° ambient ter 2, category 3 GD Nominal	Absorption
	Insulation class: Degree of prote Avoid prolonge Maximum coil t According to A Electrical conne Code	ction: IP65 – EN60529 with a d exposure to the atmospheric emperature at 100% use: 70° tex 2014/34/EU rule, group ction DIN 43650 B-IND Abbrev.	: agents. C at 20° ambient ter 2, category 3 GD Nominal voltage	Absorption Inrush Holding
	Insulation class: Degree of prote Avoid prolonge Maximum coil t According to A Electrical conne Code W0215000051	ction: IP65 – EN60529 with a d exposure to the atmospheric emperature at 100% use: 70° exe 2014/34/EU rule, group ction DIN 43650 B-IND Abbrev. Coil 22 Ø 8 5W-12VDC	: agents. C at 20° ambient ter 2, category 3 GD Nominal voltage 12Vcc	Absorption Inrush Holding 5W 5W
	Insulation class: Degree of prote Avoid prolonge Maximum coil t According to A Electrical conne Code W0215000051 W0215000001	ction: IP65 – EN60529 with a d exposure to the atmospheric emperature at 100% use: 70° ex 2014/34/EU rule, group ction DIN 43650 B-IND Abbrev. Coil 22 Ø 8 5W-12VDC Coil 22 Ø 8 5W-24VDC	: agents. C at 20° ambient ter 2, category 3 GD Nominal voltage 12Vcc 24Vcc	Absorption Inrush Holding 5W 5W 5W 5W
	Insulation class: Degree of prote Avoid prolonge Maximum coil 1 According to A Electrical conne Code W0215000051 W0215000011 W0215000011	ction: IP65 – EN60529 with a d exposure to the atmospheric emperature at 100% use: 70° ex 2014/34/EU rule, group ction DIN 43650 B-IND Abbrev. Coil 22 Ø 8 5W-12VDC Coil 22 Ø 8 5W-24VDC	: agents. C at 20° ambient ter 2, category 3 GD Nominal voltage 12Vcc	Absorption Inrush Holding 5W 5W



Accessories

	Art. No.	Type No.
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 24 V AC, 50/60 Hz, 5 VA	118633	400-517-01
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 230 V AC, 50/60 Hz, 5 VA	118635	400-517-17
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 12 V DC, 5 W	118636	400-517-41
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 24 V DC, 5 W	118637	400-517-42
plug connector with LED, 230 V, 22 mm, type B, housing transparent, with seal and screw	117314	1920.9PL.17
plug connector with LED, 24 V, 22 mm, type B, housing transparent, with seal and screw	117316	1920.9PL.42
plug connector with LED, varistor 230 V, 22 mm, type B, housing transparent, with seal and screw	117317	1920.9PLV17
plug connector with LED, varistor 24 V, 22 mm, type B, housing transparent, with seal and screw	117318	1920.9PLV42
plug connector, 22 mm, type B, housing standard black, ATEX II 2 GD, with seal and screw	151011	1920.9PL110
plug connector with LED, 110 V, 22 mm, type B, housing transparent, with seal and screw	129849	1920.9PLV110
Supply strip for the way valves, mounting bracket set, height 120 mm, for valves connection G 1/8, exhaust/supply connection G 1/4	106604	518.120-18
Supply strip for the way valves, mounting bracket set, height 60 mm, for valves connection G 1/8, exhaust/supply connection G 1/4	106605	518.60-18
Supply strip for the way valves, mounting bracket set, height 30 mm, for valves connection G 1/8, exhaust/supply connection G 1/4	106606	518.30-18
Supply strip for the way valves, supply strip with 2 valve positions, for valves connection G 1/ 8, exhaust/supply connection G 1/4	106610	518.02-18
Supply strip for the way valves, supply strip with 3 valve positions, for valves connection G 1/ 8, exhaust/supply connection G 1/4	106611	518.03-18
Supply strip for the way valves, supply strip with 4 valve positions, for valves connection G 1/ 8, exhaust/supply connection G 1/4	106612	518.04-18
Supply strip for the way valves, supply strip with 5 valve positions, for valves connection G 1/ 8, exhaust/supply connection G 1/4	106613	518.05-18
Supply strip for the way valves, supply strip with 6 valve positions, for valves connection G 1/ 8, exhaust/supply connection G 1/4	106614	518.06-18
Supply strip for the way valves, supply strip with 7 valve positions, for valves connection G 1/ 8, exhaust/supply connection G 1/4	106615	518.07-18
Multi-base plate for the way valves, with 2 valve positions, for valves connection G 1/8, exhaust/supply connection G 1/4	106622	520.02-18
Multi-base plate for the way valves, with 3 valve positions, for valves connection G 1/8, exhaust/supply connection G 1/4	106623	520.03-18
Multi-base plate for the way valves, with 4 valve positions, for valves connection G 1/8, exhaust/supply connection G 1/4	106624	520.04-18
Multi-base plate for the way valves, with 5 valve positions, for valves connection G 1/8, exhaust/supply connection G 1/4	106625	520.05-18
Multi-base plate for the way valves, with 6 valve positions, for valves connection G 1/8, exhaust/supply connection G 1/4	106626	520.06-18
Multi-base plate for the way valves, with 7 valve positions, for valves connection G 1/8, exhaust/supply connection G 1/4	106627	520.07-18
Multi-base plate for the way valves, with 8 valve positions, for valves connection G 1/8, exhaust/supply connection G 1/4	106628	520.08-18
Multi-base plate for the way valves, with 9 valve positions, for valves connection G 1/8, exhaust/supply connection G 1/4	106629	520.09-18



Accessories

	Art. No.	Type No.
Multi-base plate for the way valves, with 10 valve positions, for valves connection G 1/8,	106630	520.10-18
exhaust/supply connection G 1/4		
Modular base, for valves connection G 1/8, manifold base system for valves series 70/basic	146733	0226004150
Terminal outlet w/o seals, for valves G 1/8, exhaust/supply G 1/4, manifold base system for valves series 70/basic	146734	0226004201
Terminal inlet with seals, for valves G 1/8, exhaust/supply G 1/4, manifold base system for valves series 70/basic	146735	0226004200
Terminal intermediate/upper supply, for valves G 1/8, exhaust/supply G 1/4, manifold base system for valves series 70/basic	146736	0226004300
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 24 V AC, 50/60 Hz, 5 VA	118633	400-517-01
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 230 V AC, 50/60 Hz, 5 VA	118635	400-517-17
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 12 V DC, 5 W	118636	400-517-41
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 24 V DC, 5 W	118637	400-517-42
plug connector with LED, 230 V, 22 mm, type B, housing transparent, with seal and screw	117314	1920.9PL.17
plug connector with LED, 24 V, 22 mm, type B, housing transparent, with seal and screw	117316	1920.9PL.42
plug connector with LED, varistor 230 V, 22 mm, type B, housing transparent, with seal and screw	117317	1920.9PLV17
plug connector with LED, varistor 24 V, 22 mm, type B, housing transparent, with seal and screw	117318	1920.9PLV42
plug connector, 22 mm, type B, housing standard black, ATEX II 2 GD, with seal and screw	151011	1920.9PL110
plug connector with LED, 110 V, 22 mm, type B, housing transparent, with seal and screw	129849	1920.9PLV110
Supply strip for the way valves, mounting bracket set, height 120 mm, for valves connection G 1/8, exhaust/supply connection G 1/4	106604	518.120-18
Supply strip for the way valves, mounting bracket set, height 60 mm, for valves connection G 1/8, exhaust/supply connection G 1/4	106605	518.60-18
Supply strip for the way valves, mounting bracket set, height 30 mm, for valves connection G 1/8, exhaust/supply connection G 1/4	106606	518.30-18
Supply strip for the way valves, supply strip with 2 valve positions, for valves connection G 1/8, exhaust/supply connection G 1/4	106610	518.02-18
Supply strip for the way valves, supply strip with 3 valve positions, for valves connection G 1/ 8, exhaust/supply connection G 1/4	106611	518.03-18
Supply strip for the way valves, supply strip with 4 valve positions, for valves connection G 1/ 8, exhaust/supply connection G 1/4	106612	518.04-18
Supply strip for the way valves, supply strip with 5 valve positions, for valves connection G 1/ 8, exhaust/supply connection G 1/4	106613	518.05-18
Supply strip for the way valves, supply strip with 6 valve positions, for valves connection G 1/ 8, exhaust/supply connection G 1/4	106614	518.06-18
Supply strip for the way valves, supply strip with 7 valve positions, for valves connection G 1/ 8, exhaust/supply connection G 1/4	106615	518.07-18
Multi-base plate for the way valves, with 2 valve positions, for valves connection G 1/8, exhaust/supply connection G 1/4	106622	520.02-18
Multi-base plate for the way valves, with 3 valve positions, for valves connection G 1/8, exhaust/supply connection G 1/4	106623	520.03-18
Multi-base plate for the way valves, with 4 valve positions, for valves connection G 1/8, exhaust/supply connection G 1/4	106624	520.04-18
Multi-base plate for the way valves, with 5 valve positions, for valves connection G 1/8, exhaust/supply connection G 1/4	106625	520.05-18



Accessories

Art. No.	Type No.
106626	520.06-18
106627	520.07-18
106628	520.08-18
106629	520.09-18
106630	520.10-18
146733	0226004150
146734	0226004201
146735	0226004200
146736	0226004300
-	106626 106627 106628 106629 106630 146733 146734 146735

Spareparts

	Art. No.	Type No.
Solenoid, 22 mm x Ø 8 mm, electrical connection equipment type B, 110 V AC, 50/60 Hz, 5 VA	118634	400-517-07
plug connector, 22 mm, type B, housing standard black, with seal and screw	117313	1920.9P
5/2-way valve low temperature, electropneumatic, bistable, G 1/8, pmax 10 bar, T = -40 60 °C, alum., without connector/coil	149942	70L1021200