

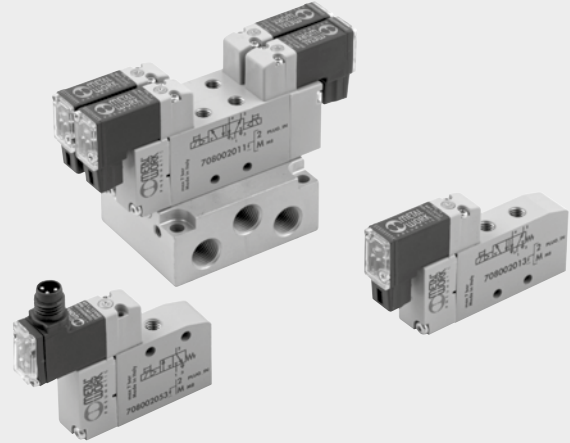
# VALVES MINIMACH



Space-saving valve, ideal for in industrial automation applications. Made according to the well-proven design of the Mach series, the MINIMACH has a painted aluminium body to ensure extra sturdiness and reliable operation in even the harshest of environments. The internal seals are made of FKM/FPM and are compatible with all oils used in compressors. The pneumatic couplings are M5 threaded, allowing the user to choose the diameter, type and angle of the fitting. The valve can be mounted in line or on a panel or multiple-port base. The following versions are available:

- 3/2 normally open or normally closed
- 5/2 monostable or bistable
- 5/3 closed centres, open centres, pressure centres.

Electropneumatic actuation with a 24V DC pilot.



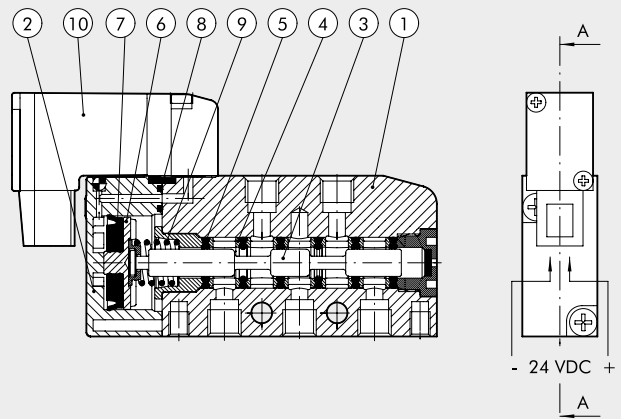
VALVES

VALVES MINIMACH

TECHNICAL DATA		
Valve port thread		M5
Type of actuation		electric-pneumatic
Maximum external diameter of fittings	mm	Ø 11
Operating temperature range	°C	-10 to +60
	°F	14 to +140
Fluid		Filtered air without lubrication; lubrication, if used, must be continuous
Pressure range	MPa	0.3 to 0.7
	bar	3 to 7
	psi	44 to 102
Flow rate at 6 bar ΔP 1 3/2	NI/min	140
Flow rate at 6 bar ΔP 1 5/2	NI/min	170
Flow rate at 6 bar ΔP 1 5/3	NI/min	80
Voltage range		24 VDC ± 10%
Power	W	0.9
Solenoid rating		100% ED
Manual operator		Monostable
TRA/TRR 3/2 at 6 bar	ms	8/23
TRA/TRR 5/2 monostable at 6 bar	ms	8/30
TRA/TRR 5/2 bistable at 6 bar	ms	15/15
TRA/TRR 5/3 at 6 bar	ms	9/30
Insulation class		F155
Degree of protection		IP51 for PLUG-IN version IP65 for M8 version
Installation		In any position. As for the bistable ones, if subject to vibration, the vertical assembly is not advisable
Compatibility with oils		See <b>chapter Z1</b>

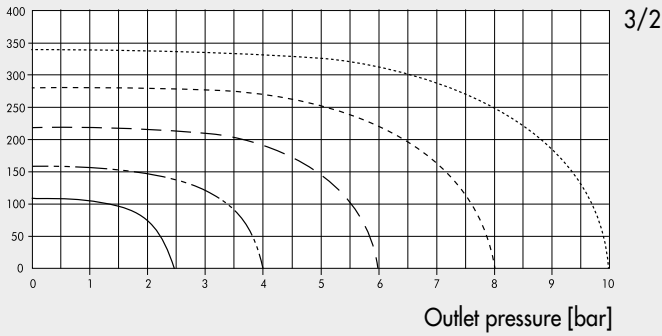
## COMPONENTS

- 1 VALVE BODY: chemically nickel-plated aluminium
- 2 CONTROL/END CAP: Hostaform®
- 3 SPOOL: chemically nickel-plated aluminium
- 4 DISTANCE PLATES: tecnopolymer
- 5 GASKETS: FKM-FPM
- 6 PISTONS: Hostaform®
- 7 PISTON GASKET: Polyurethane
- 8 FILTER: sintered bronze
- 9 SPRINGS: special steel
- 10 PILOT: with integrated coil

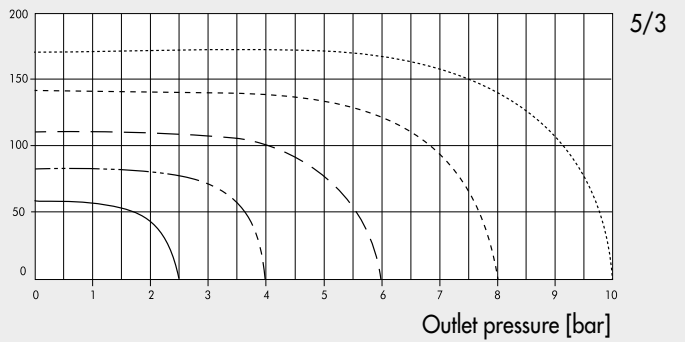


**FLOW CHART**

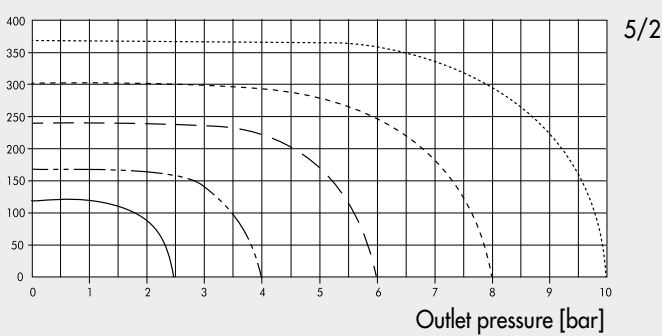
Flow rates [Nl/min]



Flow rates [Nl/min]



Flow rates [Nl/min]



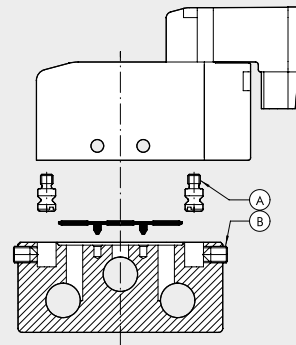
**HOW TO FIX THE VALVE TO THE BASE**

Proceed as follows:

1. screw the pins Ⓐ onto the valve
2. secure them with the ready-mounted grub screws Ⓑ on the base (0.5 Nm max)

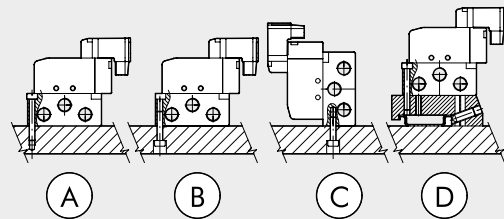
**IMPORTANT**

To secure properly, press the valve down onto the base while tightening the two grub screws.  
Do not tighten one grub screw completely before starting to tighten the other.



**HOW TO FIX THE BASE**

- Ⓐ From the top using M4 screws
- Ⓑ From below using M5 screws
- Ⓒ From the side using M4 screws
- Ⓓ From the top on the DIN bar via the M4 screws and bracket code 0225004600 (using 1 screw per bracket)



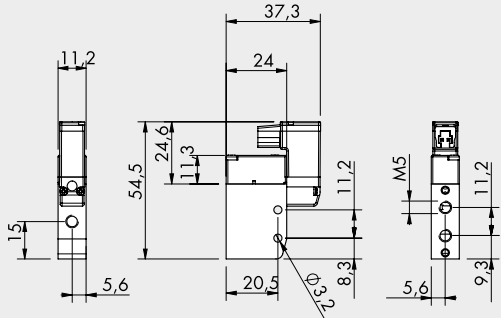
**SYNOPTIC, SIZES AND VERSIONS**

M S V	0	5	S O	B	O O	2 4 V D C
FAMILY	DIMENSIONS	FUNCTION	OPERATORS 14	RESETTING (12)	FURTHER DETAILS	
MSV minivalves solenoid	0 M5	3 3/2 5 5/2 6 5/3	SO solenoid	B bistable S mechanical springs	OO no indication NC normally closed NO normally open CC closed centres OC open centres PC pressure centres	24VDC PLUG-IN 24VDC connector M8 M8 24VDC connector

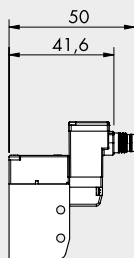
# MINIMACH VALVES SOLENOID-PNEUMATIC

## MONOSTABLE 3/2

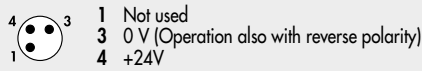
PLUG-IN VERSION



M8 VERSION



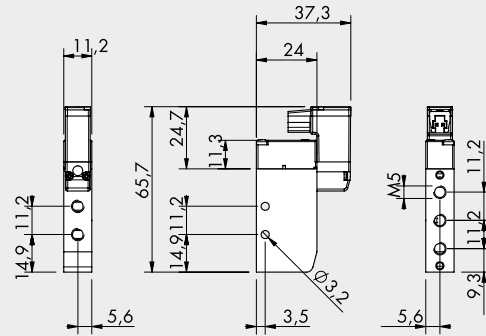
M8 CONNECTION



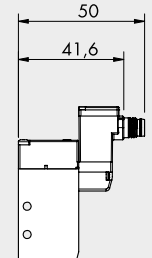
Symbol	Code	Abbrev.	Weight [g]
	7080020532	MSV 03 SOS NC 24VDC PLUG-IN	36.2
	708002053M	MSV 03 SOS NC 24VDC M8	36.2
	7080020632	MSV 03 SOS NO 24VDC PLUG-IN	36.2
	708002063M	MSV 03 SOS NO 24VDC M8	36.2

## MONOSTABLE 5/2

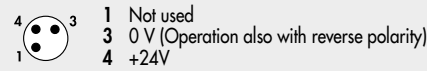
PLUG-IN VERSION



M8 VERSION



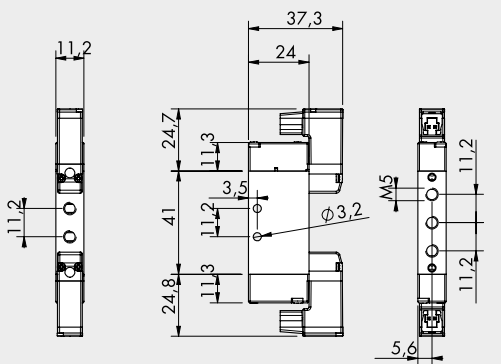
M8 CONNECTION



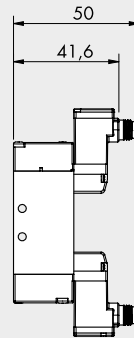
Symbol	Code	Abbrev.	Weight [g]
	7080020132	MSV 05 SOS OO 24VDC PLUG-IN	43.3
	708002013M	MSV 05 SOS OO 24VDC M8	43.3

## BISTABLE 5/2

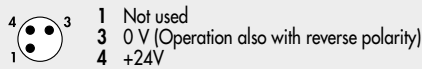
PLUG-IN VERSION



M8 VERSION



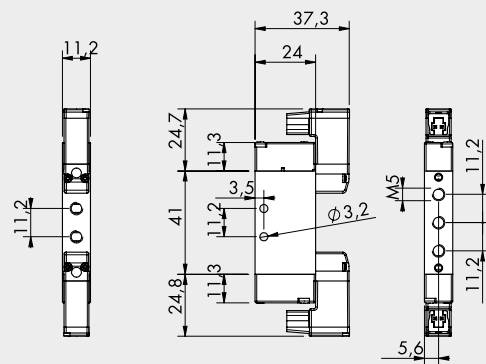
M8 CONNECTION



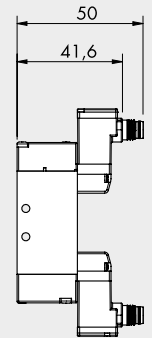
Symbol	Code	Abbrev.	Weight [g]
	7080020112	MSV 05 SOB OO 24VDC PLUG-IN	57
	708002011M	MSV 05 SOB OO 24VDC M8	57

## MONOSTABLE 5/3

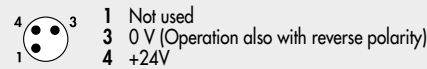
PLUG-IN VERSION



M8 VERSION



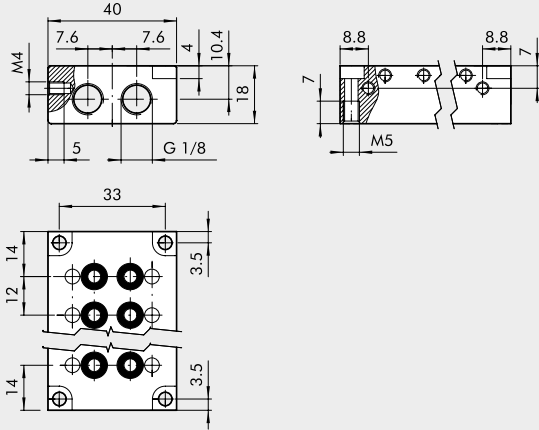
M8 CONNECTION



Symbol	Code	Abbrev.	Weight [g]
	7080020212	MSV 06 SOS CC 24VDC PLUG-IN	57
	708002021M	MSV 06 SOS CC 24VDC M8	57
	7080020312	MSV 06 SOS OC 24VDC PLUG-IN	57
	708002031M	MSV 06 SOS OC 24VDC M8	57
	7080020412	MSV 06 SOS PC 24VDC PLUG-IN	57
	708002041M	MSV 06 SOS PC 24VDC M8	57

## ACCESSORIES: MULTIPLE BASE

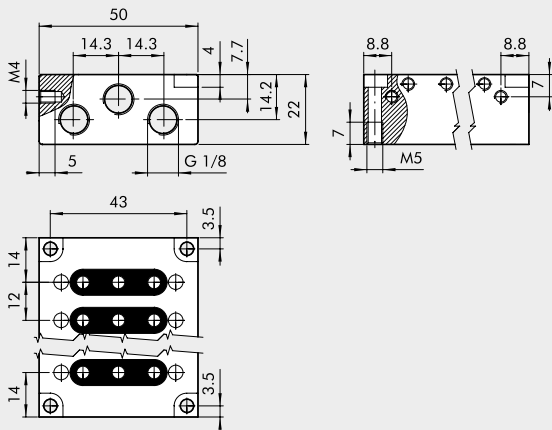
### 3/2 MULTIPLE BASE



Code	Description	Position	Weight [g]
0225010201	Base 2 position for 3/2 valves Minimach	2	60
0225010401	Base 4 position for 3/2 valves Minimach	4	99
0225010601	Base 6 position for 3/2 valves Minimach	6	135
0225010801	Base 8 position for 3/2 valves Minimach	8	178

N.B.: It is advisable to use straight connectors code 02400A\_\_\_\_\_

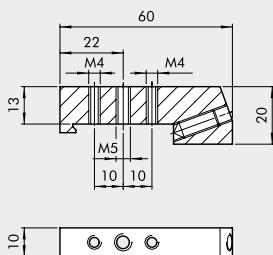
### 5/2 - 5/3 MULTIPLE BASE



Code	Description	Position	Weight [g]
0225020201	Base 2 position for 5/2-5/3 valves Minimach	2	95
0225020401	Base 4 position for 5/2-5/3 valves Minimach	4	154
0225020601	Base 6 position for 5/2-5/3 valves Minimach	6	211
0225020801	Base 8 position for 5/2-5/3 valves Minimach	8	270

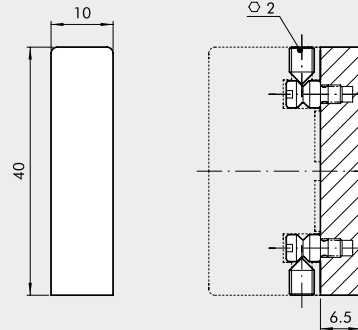
N.B.: It is advisable to use straight connectors code 02400A\_\_\_\_\_

### ADAPTER FOR BAR OMEGA (DIN EN 50022)



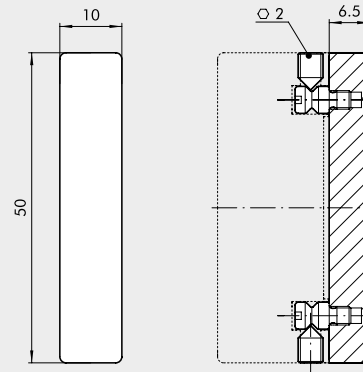
Code	Description	Weight [g]
0225004600	Omega-adaptor Mach 16	46

### BLANKING PLATE FOR 3/2 VALVES



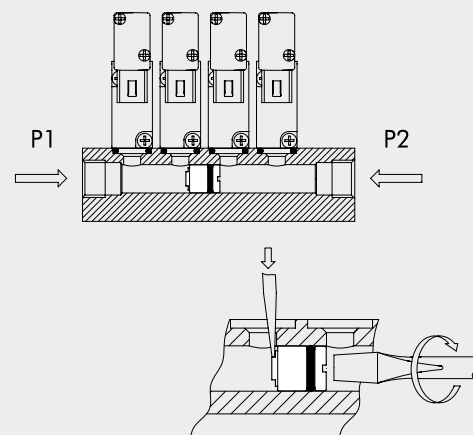
Code	Description	Weight [g]
0226009500	Blanking plate for 3/2 bases Minimach	9.5

### BLANKING PLATE FOR 5/2 - 5/3 VALVES



Code	Description	Weight [g]
0226009501	Blanking plate for 5/2-5/3 bases Minimach	11

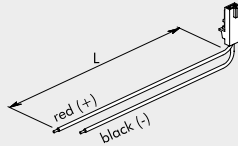
### INTERMEDIATE DIAPHRAGM



Code	Description	Weight [g]
0226009010	Minimach base diaphragm	3.5

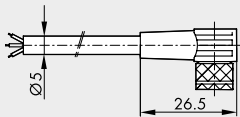
## ACCESSORIES: CONNECTORS

### PLUG-IN CONNECTOR



Code	Description
W0970512000	Plug-in connector for Mach 11 L = 300 mm
W0970512007	Plug-in connector for Mach 11 L = 1 m
W0970512002	Plug-in connector for Mach 11 L = 2 m

### 90° M8 CONNECTOR WITH CABLE



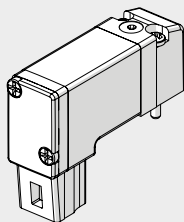
Pin	Cable color
1	Brown
3	Blue
4	Black

Code	Description
02400B0100	M8 female 3 PIN 90° HIGH FLEX CL6 connector with cable L = 1 m
02400B0250	M8 female 3 PIN 90° HIGH FLEX CL6 connector with cable L = 2.5 m
02400B0500	M8 female 3 PIN 90° HIGH FLEX CL6 connector with cable L = 5 m
02400B1000	M8 female 3 PIN 90° HIGH FLEX CL6 connector with cable L = 10 m

Mobile laying cable, class 6 according to IEC 60228  
 N.B.: It is inadvisable for use on multi-position bases 0225010\_\_ and 0225020\_\_

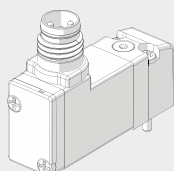
## SPARE PARTS

### PLUG-IN PILOT



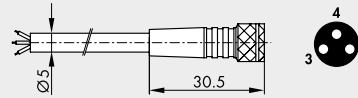
Code	Description
722113541100	PLT-10 722113541100

### M8 PILOT



Code	Description
7222M3541100	PLT-10 3/2 NC 0.8W 24VDC LED M8 with manual

### M8 STRAIGHT CONNECTOR WITH CABLE

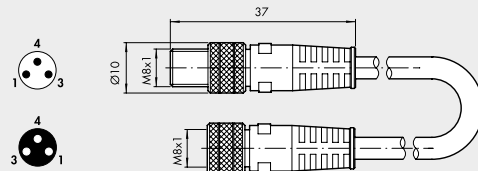


Pin	Cable color
1	Brown
3	Blue
4	Black

Code	Description
02400A0100	M8 female 3 PIN HIGH FLEX CL6 connector with cable L = 1 m
02400A0250	M8 female 3 PIN HIGH FLEX CL6 connector with cable L = 2.5 m
02400A0500	M8 female 3 PIN HIGH FLEX CL6 connector with cable L = 5 m
02400A1000	M8 female 3 PIN HIGH FLEX CL6 connector with cable L = 10 m

Mobile laying cable, class 6 according to IEC 60228

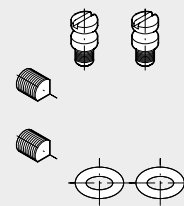
### M8 M - M8 F CONNECTOR



Code	Description
0240009009	M8-M8 3-pin straight connector with cable L = 3 m

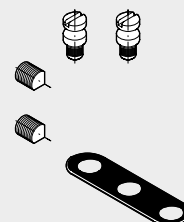
Note: Can be used for direct connection to the modules with digital INPUT of the EB 80 and CM valves

### KIT OF SPARE GASKET BASES FOR 3/2 VALVES



Code	Description	Weight [g]
0226009000	Gasket kit 3/2 multiple bases Minimach	2.5

### KIT OF SPARE GASKET BASES FOR 5/2 - 5/3 VALVES



Code	Description	Weight [g]
0226009001	Gasket kit 5/2-5/3 multiple bases Minimach	2.5