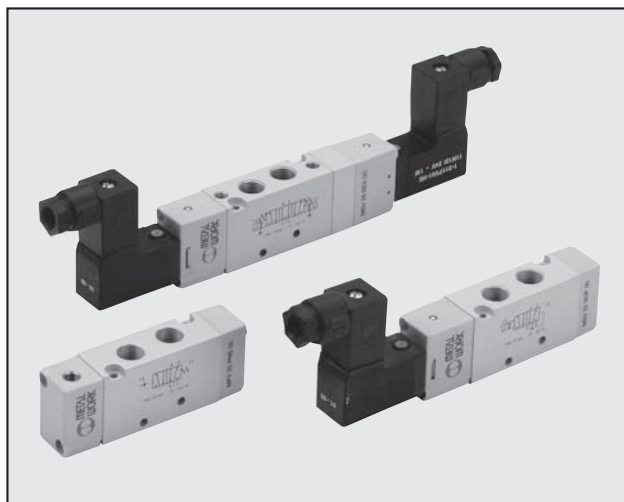




# MACH 16 VALVES

Available in size 1/8" only, versions 5/2 and 5/3 and with pneumatic and solenoid actuation. The Mach 16 valve is a typical small size valve, only 16 mm wide, with excellent performance 750 NL/min flow rate at 6 bar  $\Delta P$  1 Bar. The valve can be used in line, on a panel or on a base (multiple or manifold)  
The Mach design is the result of the miniaturisation concept with the same durability, sturdiness and reliability.

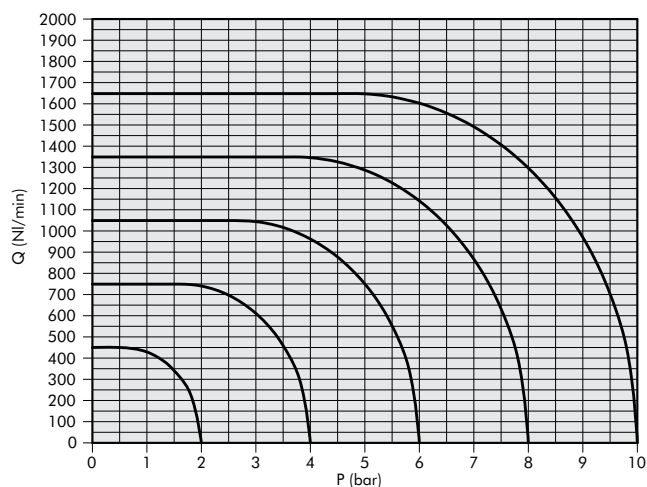


2

## TECHNICAL DATA

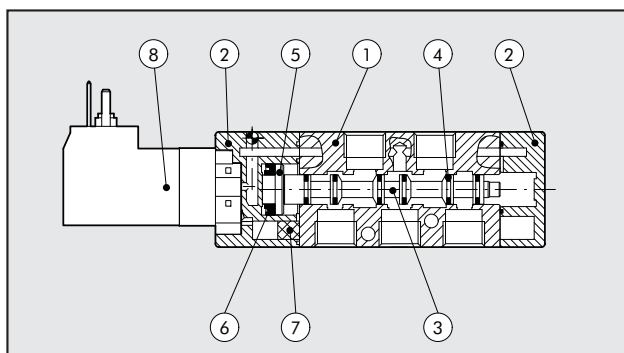
Valve port thread	1/8"
Type of control	M5 pneumatic actuation solenoid/pneumatic operation with integrated coil
Maximum outer diameter of gaskets for ports 1 - 3- 5	15 mm
Maximum outer diameter for ports 2 - 4	15 mm
Operating temperature range	-10°C to 60°C
Minimum actuation pressure pilot - pneumatic controls	monostable with pneumatic spring: see picture on page 2.2/88 1.6 bar for monostable valves - mechanical spring 1 bar for bistable valves - 1.9 bar for valves 5/3
Maximum operating pressure	10 bar
Fluid	Filtered lubricated or unlubricated air lubrication, if used, must be continuous
Recommended lubricant	ISO and UNI FD22
Solenoid pilot	Integrated coil DIN 43650 C shape
Manual	monostable on solenoid pilot (with bistable manual valve on request)
Number of ways in base	1-3-5 and pilot exhaust
Screws for wall-mounting single valve	2 screws M3
Screws for base-mounting valve	2 screws M2.5x30
Installation	in any position (vertical assembly is not recommended for bistable valves subjected to vibration)
Flow rate at 6 Bar $\Delta P$ 0.5 Bar	540 NL/min
Flow rate at 6 Bar $\Delta P$ 1 Bar	750 NL/min
Conductance C	149.8 NL/min · bar
Critical ratio b	0.525 bar/bar
Compatibility with oils:	please refer to page 6.1/08

## FLOW CHART

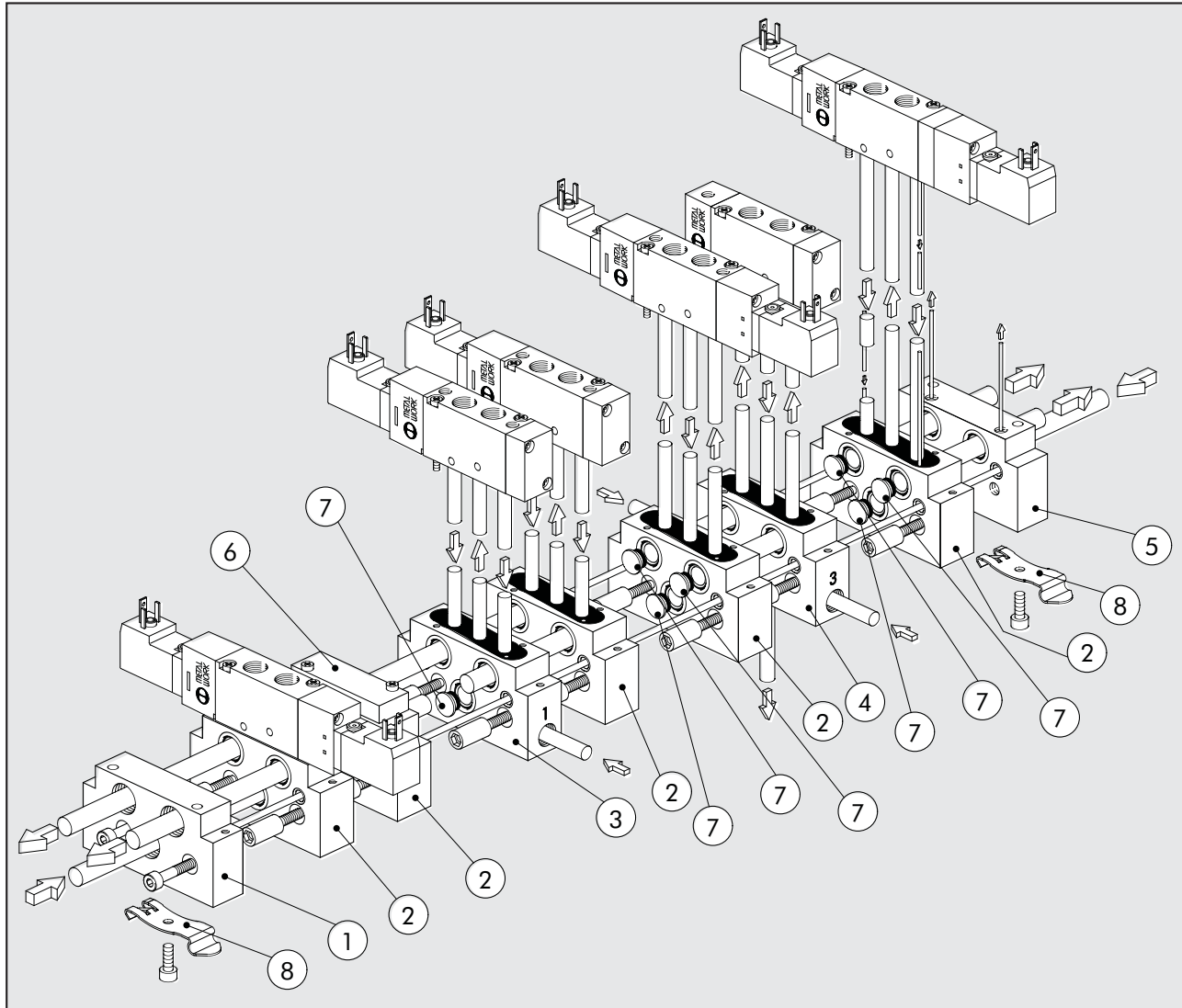


## COMPONENTS

- ① VALVE BODY: Aluminium
- ② CONTROL/END CAP: HOSTAFORM®
- ③ SPOOL: Aluminium
- ④ GASKETS: Polyurethane
- ⑤ PISTONS: HOSTAFORM®
- ⑥ PISTON GASKET: Polyurethane
- ⑦ FILTER: sintered bronze
- ⑧ PILOT: with integrated coil



### MANIFOLD BASES FOR MACH 16



Ref.	Description	Code
①	M16/VDMA Input end-plate kit	0227100201
②	M16 manifold base kit	0227100150
③	M16 separate feed manifold base kit	0227100301
④	M16 exhaust feed manifold base kit	0227100302
⑤	M16/VDMA output end-plate kit	0227100200
⑥	M16 blanking plate	0225004500
⑦	Intermediate diaphragm	0227100000
⑧	Connection bracket on DIN-bar	0227300600

### KEY TO CODES

M	S	V	2	5	S	O	P	O	O	24VDC		
FAMILY		PORT		FUNCTION		OPERATORS 14		RESETTING 12		FURTHER DETAILS	VOLTAGE	
MSV	solenoid/ pneumatic	2	1/8"	5	5/2	SO	solenoid/ pneumatic	P	pneumatic spring	OO	5/2	24VDC
MPV				6	5/3	SE		SE		S	mechanical spring	CC
						PN	PN	B	bistable	OC	open centres	110VAC
										PC	pressure centres	220VAC



# MACH 16 VALVES MPV, PNEUMATIC

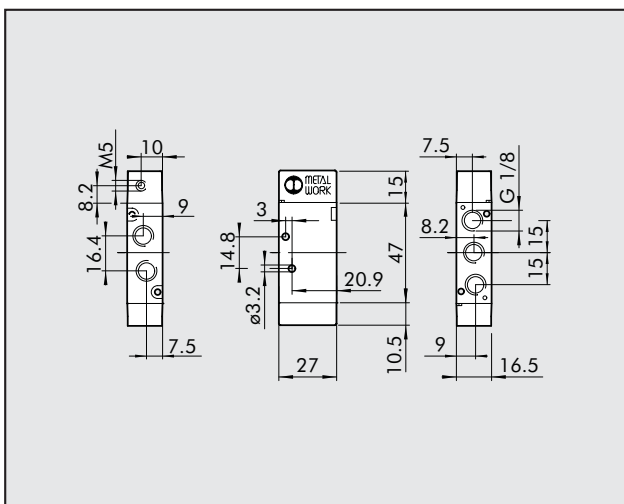
## TECHNICAL DATA

Operating pressure	vacuum – 10 bar
Minimum operating pressure:	
• monostable with pneumatic spring	see graph page 2.2/88
• monostable with mechanical spring	1.6 bar
• monostable 5/3	1.9 bar
• bistable	1 bar
Conductance C	149,8 Nl/min · bar
Critical ratio b	0.525 bar/bar
Flow rate at 6 Bar ΔP 0.5 Bar	540 Nl/min
Flow rate at 6 Bar ΔP 1 Bar	750 Nl/min
Repositioning response times at 6 Bar:	
• monostable	4 ms
• bistable	4 ms
Repositioning response times at 6 Bar:	
• monostable	8.4 ms
• bistable	4 ms



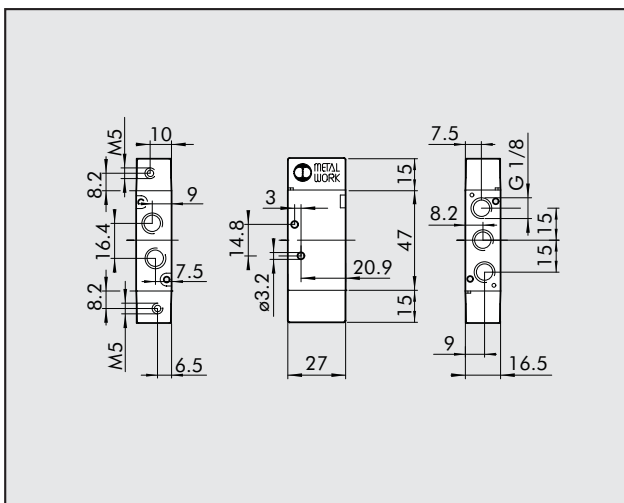
**2**

## MONOSTABLE 5/2



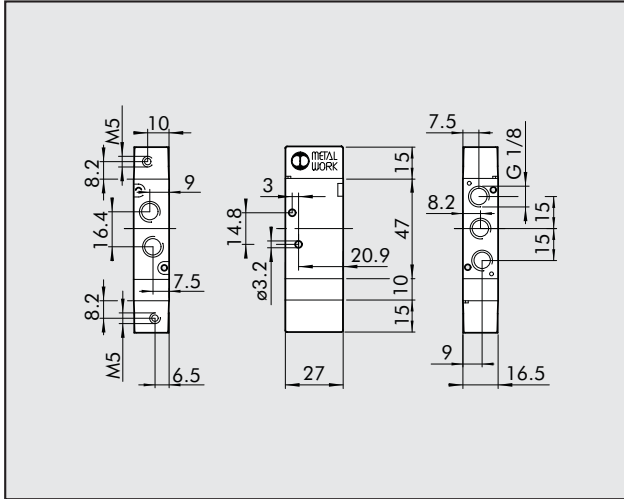
Symbol	Abbrev.	Code	Weight [g]
→	MPV 25 PNP OO	7062010100	60
→	MPV 25 PNS OO	7062010130	61

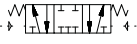
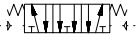
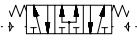
## BISTABLE 5/2



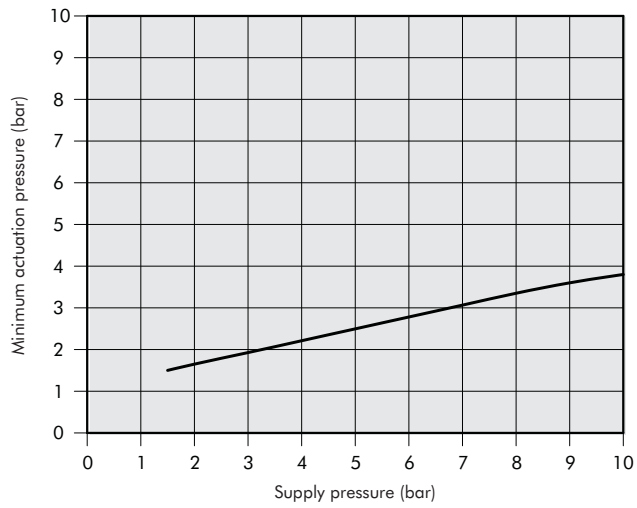
Symbol	Abbrev.	Code	Weight [g]
→	MPV 25 PNB OO	7062010110	62

**MONOSTABLE 5/3**



Symbol	Abbrev.	Code	Weight [g]
	MPV 26 PNS CC	7062010210	73
	MPV 26 PNS OC	7062010310	73
	MPV 26 PNS PC	7062010410	73

**OPERATING PRESSURE**



**NOTES**

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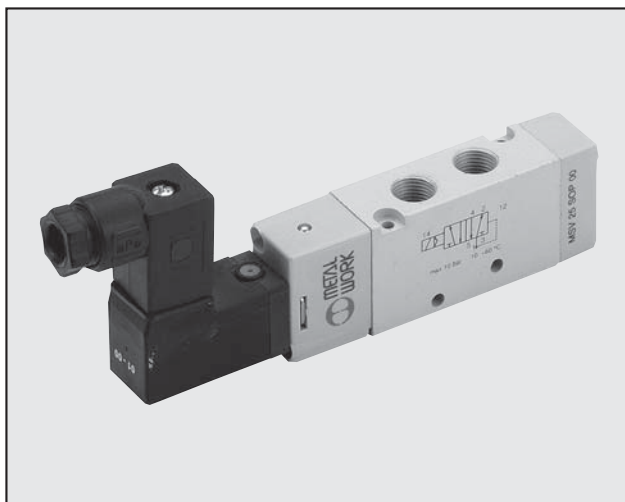
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# MACH 16 VALVES MPV, SOLENOID/PNEUMATIC

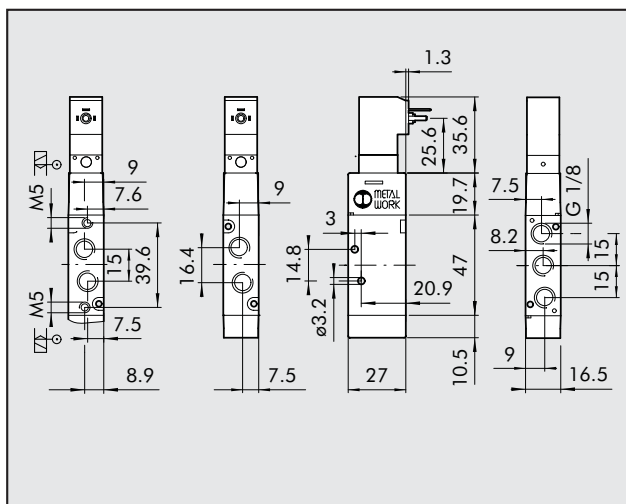
## TECHNICAL DATA

Operating pressure:	
• monostable	1.9-10 bar
• bistable	1-10 bar
• pilot-assisted	vacuum - 10 bar
Minimum pilot pressure	2 bar
Operating temperature range	-10° to 60°C
Conductance C	149.8 NI/min · bar
Critical ratio b	0.525 bar/bar
Flow rate at 6 Bar ΔP 0.5 Bar	540 NI/min
Flow rate at 6 Bar ΔP 1 Bar	750 NI/min
TRA/TRR monostable at 6 bar	12 ms / 26 ms
TRA/TRR bistable at 6 bar	21 ms / 21 ms
Type of operation: Manual	monostable on the solenoid pilot (also with bistable manual valve on request)
Pilot with integrated coil	24 VDC - 24 VAC - 110 VAC - 220 VAC
Powers	1 W
Voltage tolerance	-10% ÷ +15%
Insulation class	F 155
Degree of protection	IP 65 EN60529 with connector
Solenoid rating	100% ED
Electrical contacts	DIN 43650 C shape



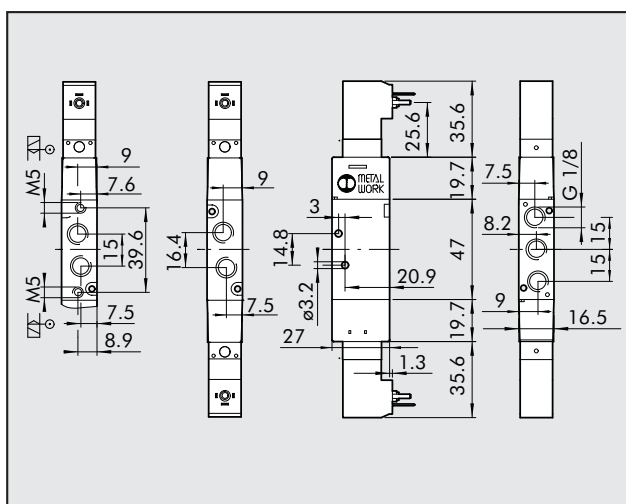
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## MONOSTABLE 5/2



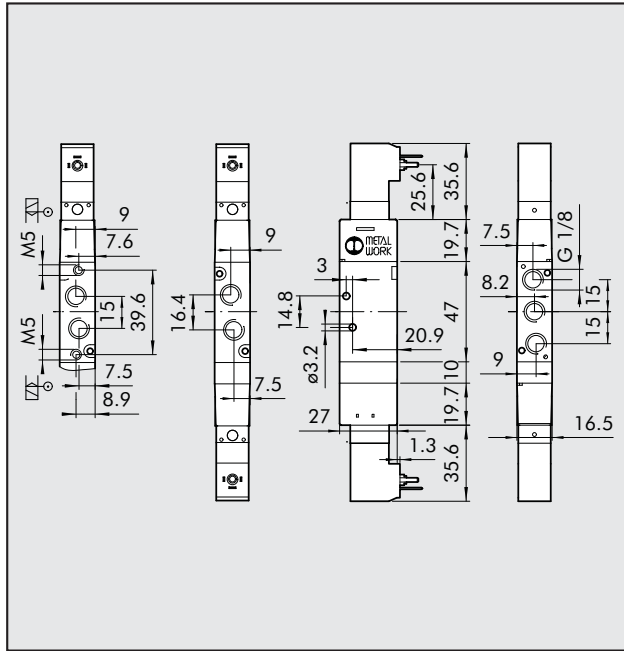
Symbol	Abbrev.	Code	Weight [g]
	MSV 25 SOP 00 24VDC	7062020102	92
	MSV 25 SOP 00 24VAC	7062020103	92
	MSV 25 SOP 00 110VAC	7062020104	92
	MSV 25 SOP 00 220VAC	7062020105	92
	MSV 25 SOS 00 24VDC	7062020132	93
	MSV 25 SOS 00 24VAC	7062020133	93
	MSV 25 SOS 00 110VAC	7062020134	93
	MSV 25 SES 00 24VDC	7062030132	93
	MSV 25 SES 00 24VAC	7062030133	93
	MSV 25 SES 00 110VAC	7062030134	93
	MSV 25 SES 00 220VAC	7062030135	93

## BISTABLE 5/2



Symbol	Abbrev.	Code	Weight [g]
	MSV 25 SOB 00 24VDC	7062020112	124
	MSV 25 SOB 00 24VAC	7062020113	124
	MSV 25 SOB 00 110VAC	7062020114	124
	MSV 25 SOB 00 220VAC	7062020115	124
	MSV 25 SEB 00 24VDC	7062030112	125
	MSV 25 SEB 00 24VAC	7062030113	125
	MSV 25 SEB 00 110VAC	7062030114	125
	MSV 25 SEB 00 220VAC	7062030115	125

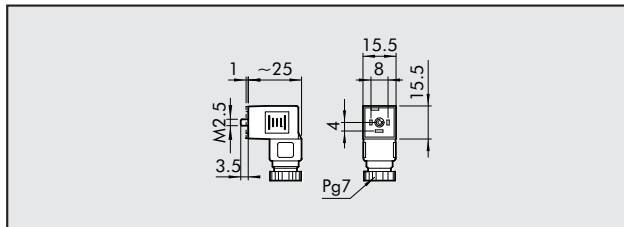
### MONOSTABLE 5/3



Symbol	Abbrev.	Code	Weight [g]
	MSV 26 SOS CC 24VDC	7062020212	142
	MSV 26 SOS CC 24VAC	7062020213	142
	MSV 26 SOS CC 110VAC	7062020214	142
	MSV 26 SOS CC 220VAC	7062020215	142
	MSV 26 SOS OC 24VDC	7062020312	142
	MSV 26 SOS OC 24VAC	7062020313	142
	MSV 26 SOS OC 110VAC	7062020314	142
	MSV 26 SOS OC 220VAC	7062020315	142
	MSV 26 SOS PC 24VDC	7062020412	142
	MSV 26 SOS PC 24VAC	7062020413	142
	MSV 26 SOS PC 110VAC	7062020414	142
	MSV 26 SOS PC 220VAC	7062020415	142
	MSV 26 SES CC 24VDC	7062030212	143
	MSV 26 SES CC 24VAC	7062030213	143
	MSV 26 SES CC 110VAC	7062030214	143
	MSV 26 SES CC 220VAC	7062030215	143
	MSV 26 SES OC 24VDC	7062030312	143
	MSV 26 SES OC 24VAC	7062030313	143
	MSV 26 SES OC 110VAC	7062030314	143
	MSV 26 SES OC 220VAC	7062030315	143
	MSV 26 SES PC 24VDC	7062030412	143
	MSV 26 SES PC 24VAC	7062030413	143
	MSV 26 SES PC 110VAC	7062030414	143
	MSV 26 SES PC 220VAC	7062030415	143

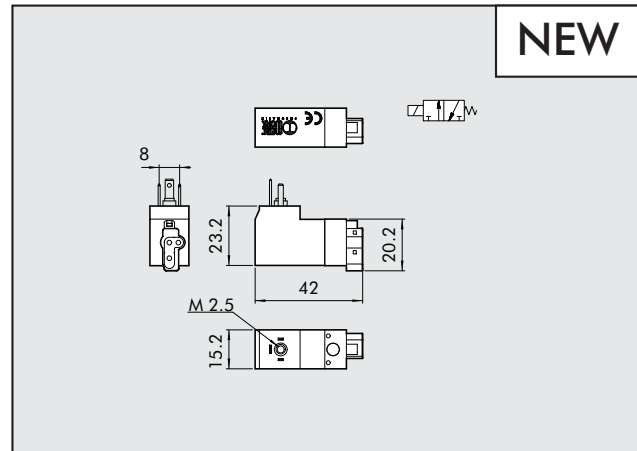
## ACCESSORIES: MACH 16 VALVES MSV, SOLENOID/PNEUMATIC

### CONNECTOR 15 mm SHAPE C TO DIN 43650

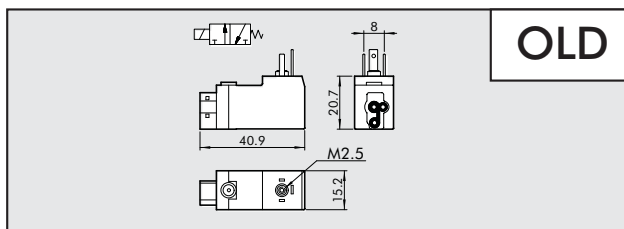


Code	Description
W0970501021	CONNECTOR 15 mm SHAPE C DIN 43650
W0970501022	CONNECTOR 15 mm SHAPE C DIN 43650 LED 24V
W0970501025	CONNECTOR 15 mm SHAPE C DIN 43650 LED+VDR 24V

### SPARE PARTS: COIL MACH 16



### SPARE PARTS: COIL MACH 16



Code	Description
W4015301000	IN-LINE PILOT 24 VDC
W4015301010	IN-LINE PILOT 24 VAC 50/60 Hz
W4015301020	IN-LINE PILOT 110 VAC 50/60 Hz
W4015301030	IN-LINE PILOT 220 VAC 50/60 Hz

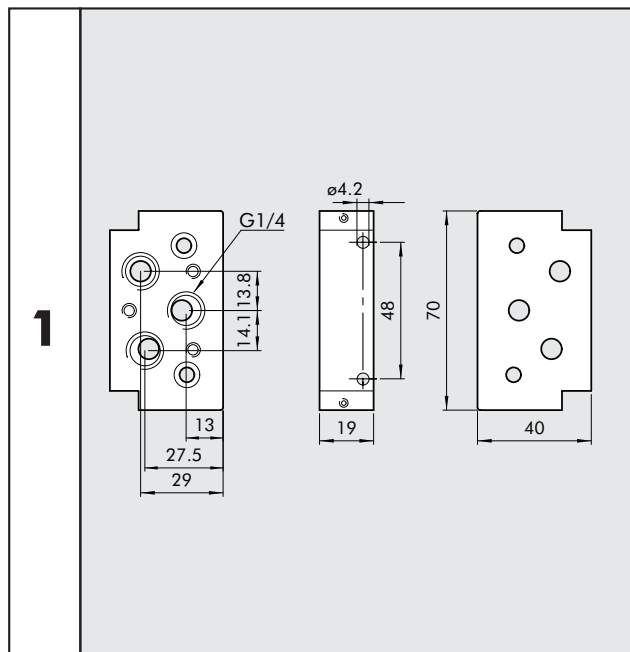
Code	Description
W4015301000	IN-LINE PILOT 24 VDC
W4015301010	IN-LINE PILOT 24 VAC 50/60 Hz
W4015301020	IN-LINE PILOT 110 VAC 50/60 Hz
W4015301030	IN-LINE PILOT 220 VAC 50/60 Hz

NB: if the pilot to be replaced bears the writing **CE**, you have to order among the NEW pilots, otherwise order among the OLD pilots



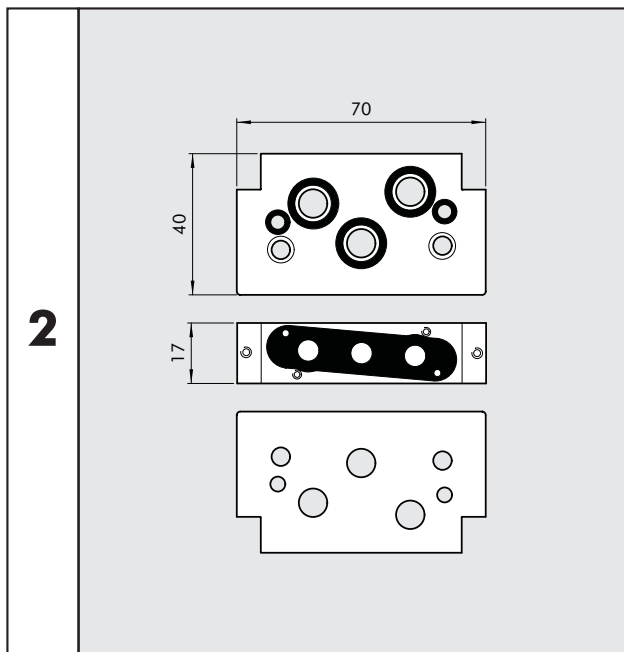
# MANIFOLD BASES FOR MACH 16 VALVES

## MACH 16 INPUT END-PLATE



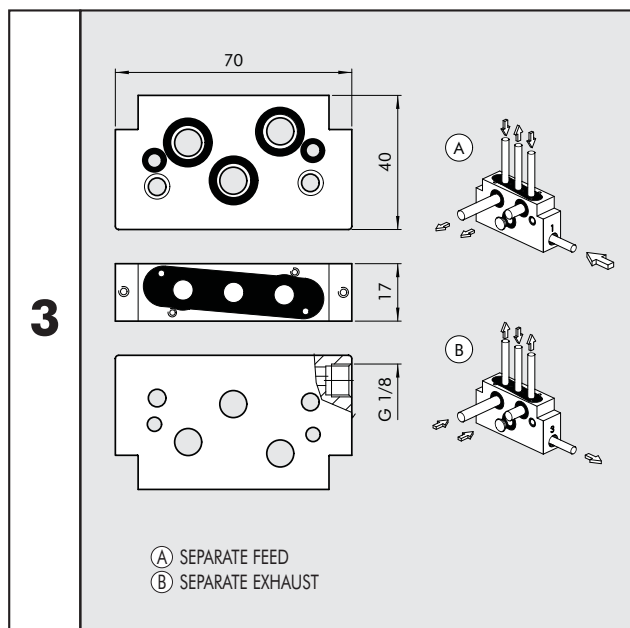
Code	Description	Weight [g]
0227100201	INPUT END-PLATE KIT M16/VDMA	125

## MACH 16 MANIFOLD BASE



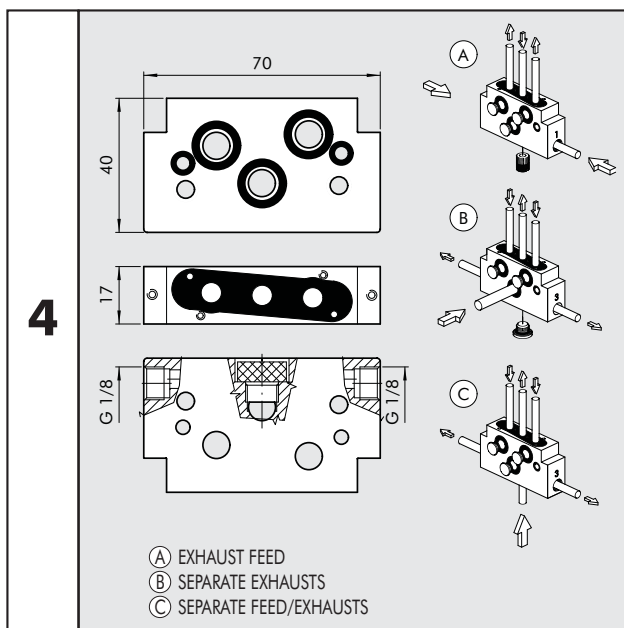
Code	Description	Weight [g]
0227100150	MANIFOLD BASE KIT M16	121

## MACH 16 SEPARATE FEED MANIFOLD BASE



Code	Description	Weight [g]
0227100301	MANIFOLD BASE KIT- SEPARATE FEED M16	119

## MACH 16 EXHAUST FEED MANIFOLD BASE

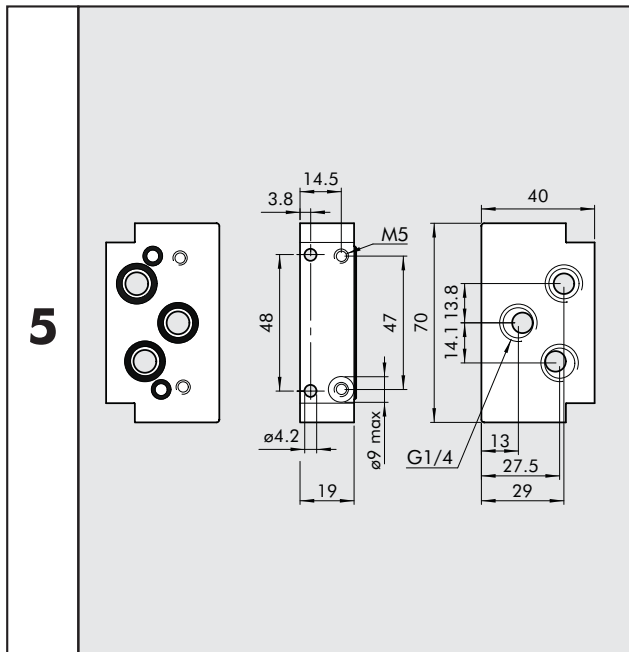


Code	Description	Weight [g]
0227100302	MANIFOLD BASE KIT- EXHAUST FEED	113

**2**

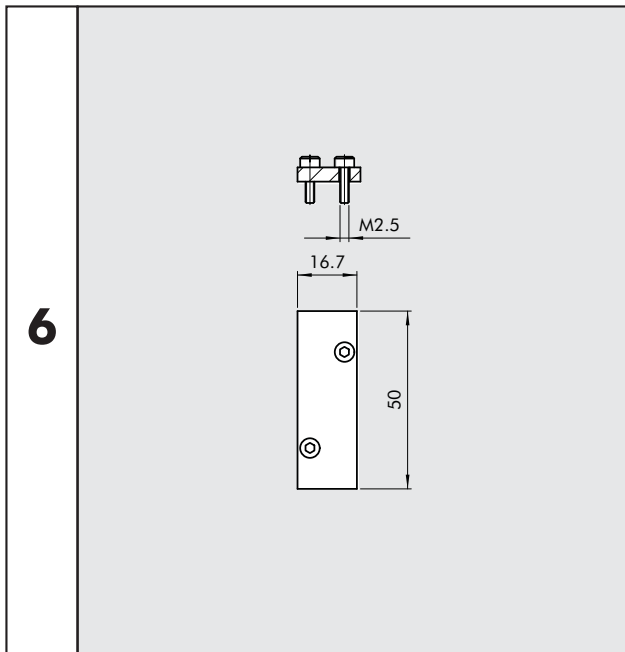


**MACH 16 OUTPUT END-PLATE**



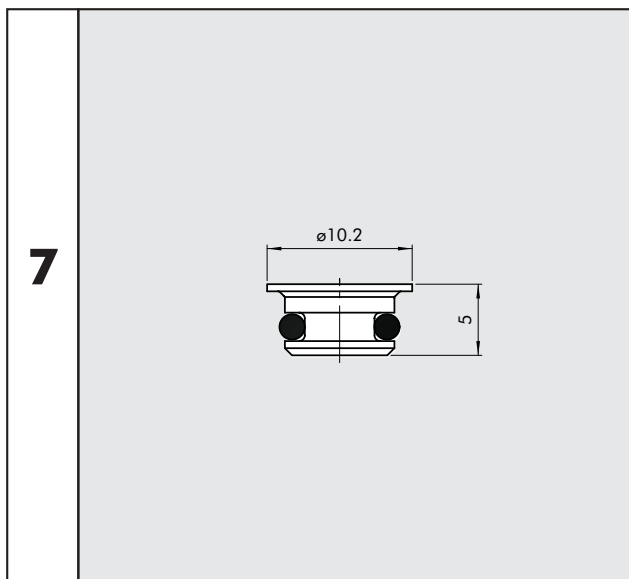
Code	Description	Weight [g]
0227100200	OUTPUT END-PLATE KIT M16/VDMA	122

**BLANKING PLATE – UNUSED POSITION**



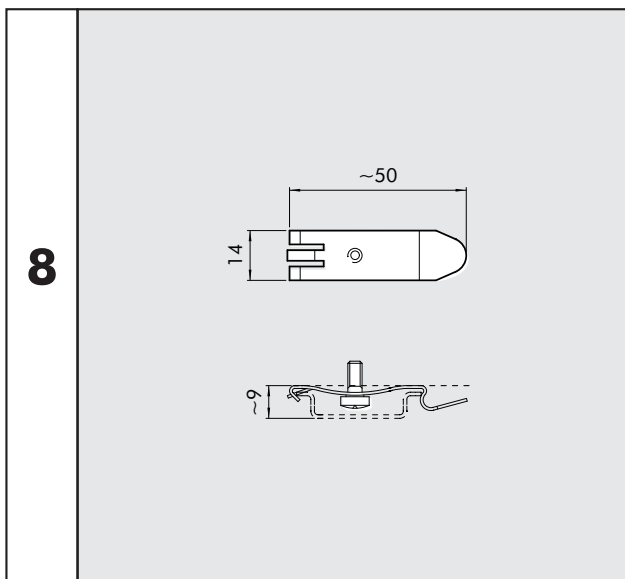
Code	Description	Weight [g]
0225004500	ACCESSORIES – BLANKING PLATE FOR MACH 16	18

**INTERMEDIATE DIAPHRAGM**



Code	Description	Weight [g]
0227100000	INTERMEDIATE DIAPHRAGM	1

**CONNECTION BRACKET ON DIN BAR**



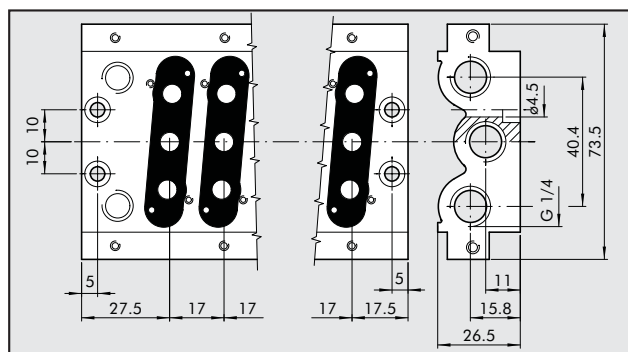
Code	Description	Weight [g]
0227300600	CONNECTION BRACKET ON DIN BAR	7





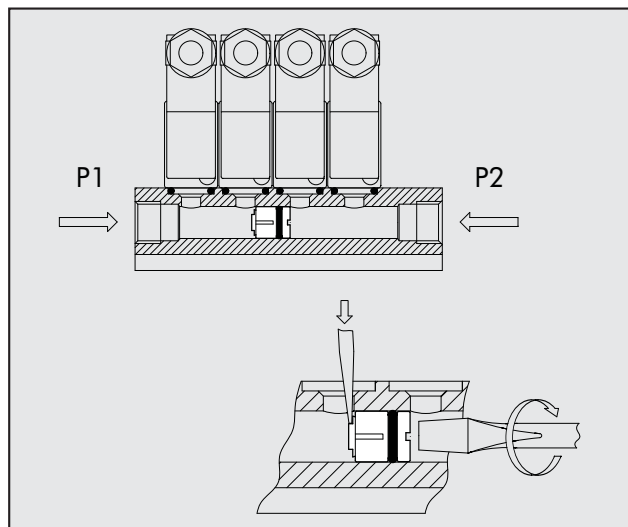
# MULTIPLE BASES FOR MACH 16 VALVES

## MULTIPLE BASE FOR MACH 16



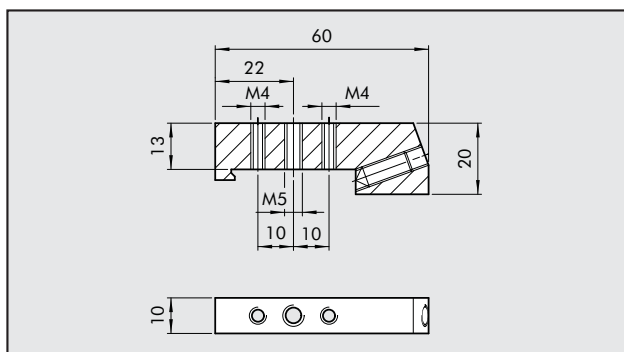
Code	Description	Posn.	Weight [g]
0225000201	ACC. BASE CVM.PN-08-02-0-000	2	180
0225000401	ACC. BASE CVM.PN-08-04-0-000	4	286
0225000601	ACC. BASE CVM.PN-08-06-0-000	6	390
0225000801	ACC. BASE CVM.PN-08-08-0-000	8	500
0225001001	ACC. BASE CVM.PN-08-10-0-000	10	613
0225001201	ACC. BASE CVM.PN-08-12-0-000	12	706

## INTERMEDIATE DIAPHRAGM



Code	Description	Weight [g]
0227100001	ACC. MULTIPLE BASE DIAPHRAGM	6

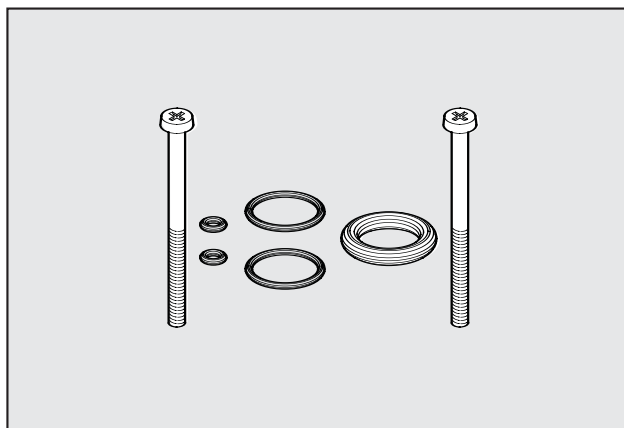
## Ω BAR ADAPTER MULTIPLE BASES FOR MACH 16



Code	Description	Weight [g]
0225004600	ACCESSORIES: OMEGA-ADAPTER MACH 16	46

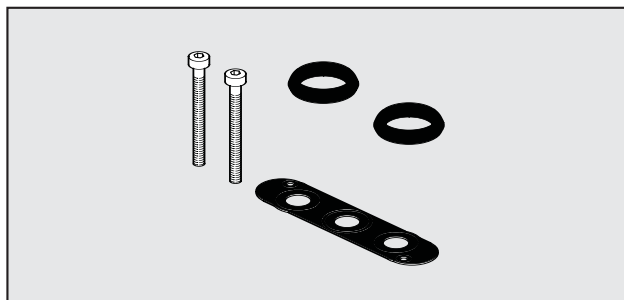
2

## GASKET KIT



Code	Description	Weight [g]
0226007001	M16 MULTIPLE BASE GASKET KIT	5

## KIT OF SPARE INTEGRATED GASKET



Code	Description	Weight [g]
0226007003	M16 MULTIPLE BASE GASKET KIT	5