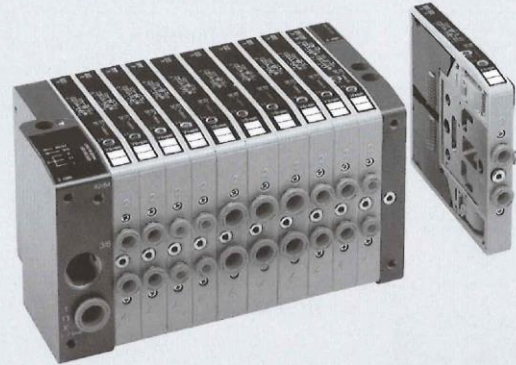


HDMs are the ideal solution for those requiring the unbeatable performance, flexibility and modularity of Multimach valves combined with sturdy mechanics and a high degree of protection against external agents. Each valve is enclosed in a reinforced technopolymer protective shell that acts as a shock-absorber and prevents the infiltration of dirt. The class of protection is IP65. The smooth, rounded design makes HDMs ideal for applications requiring frequent washing without the deposit of residues. All the pneumatic connections are on one side, with built-in push-in fittings. The user interface is on another side so that the fitter and the service engineer have everything at hand. Flexibility is total: there are 1-16 valves, input and output terminals for pipes of different sizes and intermediate modules for separate inputs and outputs. One very important new feature is that valves of different capacities can be mounted as required. Three different valve sizes can be combined at will. This means a valve can be replaced at any time by another one offering a different performance. It only takes a few seconds to replace or add a valve. To do this, merely loosen the two grub screws fixing the valve to the adjacent ones. Since the electrical signal is relayed from one valve to the next by means of gold-plated contacts connected to an electronic board, the electrical connections are entirely automatic. The ratio of the HDM's flow rate to its dimensions is unrivalled – miniaturisation and efficiency have reached a peak.

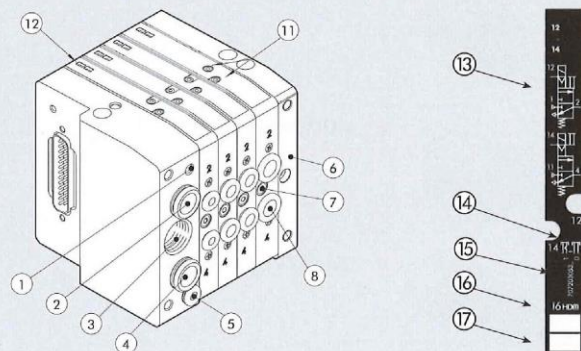


TECHNICAL DATA

Valve port connections	Ø 4,6,8,10 mm automatic fitting for ports 2 and 4 / power supply port for Ø10 or Ø 12 mm automatic fitting / 3/8 thread for exhaust port, M5 thread for exhaust pilot port					
Connection on the end-plate for the supply of pilots	Automatic fitting Ø 4 mm					
Maximum number of pilots	16					
Maximum number of valves	16 (same as the max. no. of pilots)					
Operating temperature range	°C -10 to +60					
Fluid	Filtered air without lubrication; lubrication, if used, must be continuous					
Flow rate at 6.3 bar ΔP 1 bar	Nl/min	11.5 mm Ø 4	11.5 mm Ø 6	14 mm Ø 8	23 mm Ø 8	23 mm Ø 10
version 5/2 and 3/2		200	500	650	1000	1200
version 5/3		200	300	300	500	500
Pressure range	bar	X (pilot supply) 3 to 7		1-11 (valve supply) vacuum at 10		
	Terminal 1-1				3 to 7	
	Terminal 1				24 VDC ± 10%	
Voltage range					0.9	
Power	W				PNP o NPN	
Control					F155	
Insulation class					IP65 (with conveyed exhaust)	
Degree of protection					100% ED	
Solenoid rating					8 / 45	
TRA/TRR 2x3/2 monostable at 6 bar	ms				8 / 33	
TRA/TRR 5/2 monostable at 6 bar	ms				20 / 20	
TRA/TRR 5/2 bistable at 6 bar	ms				20 / 20	
TRA/TRR 5/3 cc monostable at 6 bar	ms					
Note on use		Insert the pipes in the fittings, before passing air through the valves, otherwise the basket may be pulled out of its seat by the flow of air. Please refer to page 6-7 of the technical documentation latching, non-latching on request				
Compatibility with oils						
Manual Control						

COMPONENTS

- ① Exhaust - Solenoid pilot 82/84
- ② Valve supply - port 1
- ③ Threaded connection of exhausts 3/5
- ④ Valve supply - port 11
- ⑤ Electrical control supply X
- ⑥ Blind end-plate or right end-plate 1-11
- ⑦ Screw for valve wall-mounting
- ⑧ Utility port for pipe Ø 4, 6, 8 or 10 mm
- ⑪ Manual control
- ⑫ LED (LED on, solenoid valve energised)
- ⑬ Pneumatic symbol
- ⑭ Identification of the monostable or bistable manual control
- ⑮ Valve ordering code
- ⑯ Valve identification code
- ⑰ Blank space for valve number



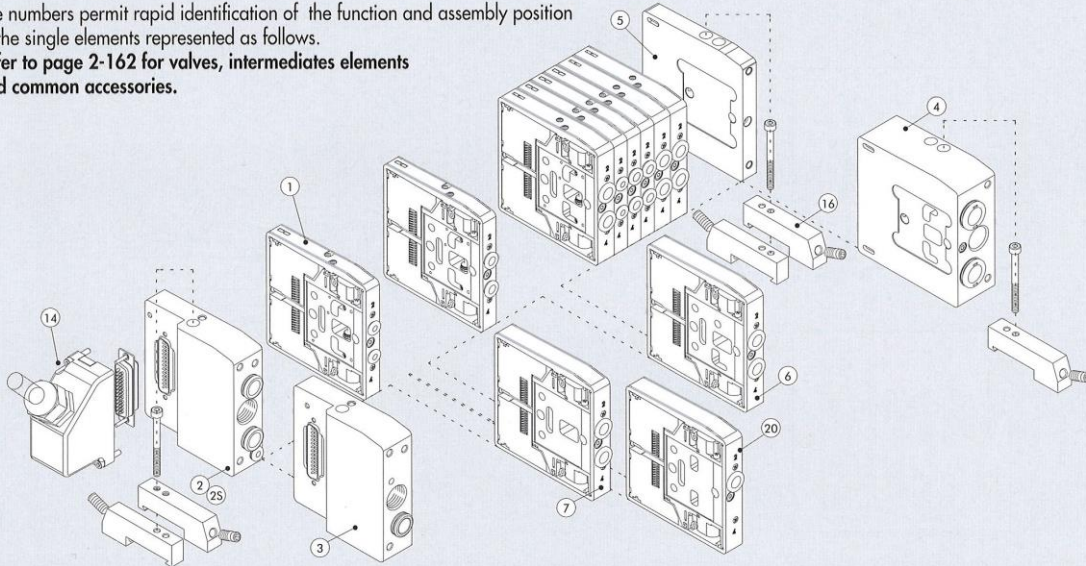
Valve terminals

Modular valve system, »HDM« series
 Type No. 3-8 to 2269.500
 Art. No. 106670 to 106702

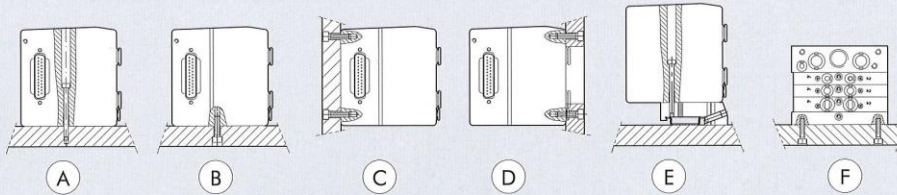


THE MULTIMACH WORLD: FLEXIBILITY

The numbers permit rapid identification of the function and assembly position of the single elements represented as follows.
 Refer to page 2-162 for valves, intermediates elements and common accessories.



FIXING THE BASE



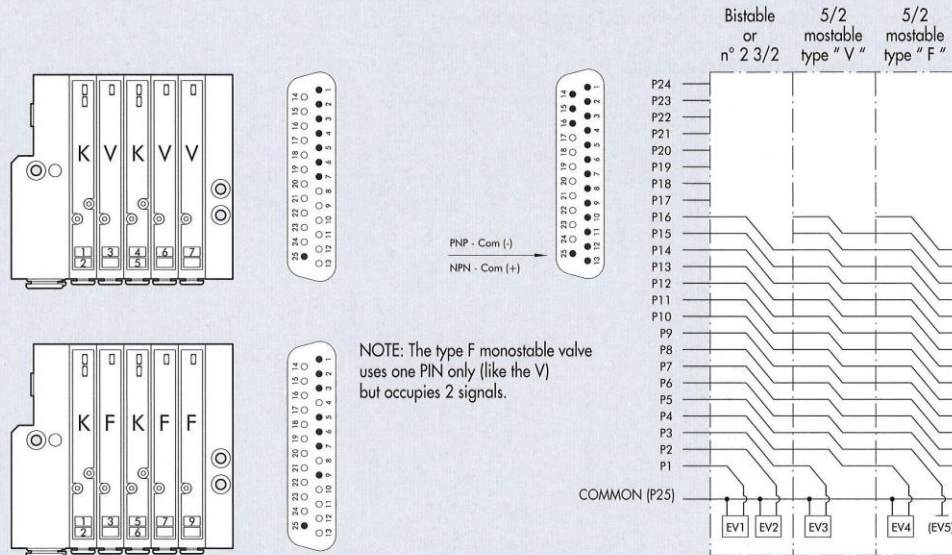
- (A) Fixing from above using the 1 or 1-11 input terminal and the blind terminal.
- (B) (C) Fixing from above using the 1 or 1-11 input terminal and the blind terminal, using the M5 threads on the bottom and the rear of the terminals.
- (D) Fixing from above using the 1 or 1-11 input terminal and the blind terminal, using the M5 threads on the front of the terminals.
 An opening for the pipes is made in the plate.
- (E) Fixing on the DIN bar with end-plate 1 or 1-11 and blind and plate, using the push-in bracket code 0227301600.
- (F) Lateral fixing using the blind terminal, and its M4 threads on the side lateral.
Note: The sole fixing admitted is the one showed.

KEY TO CODES

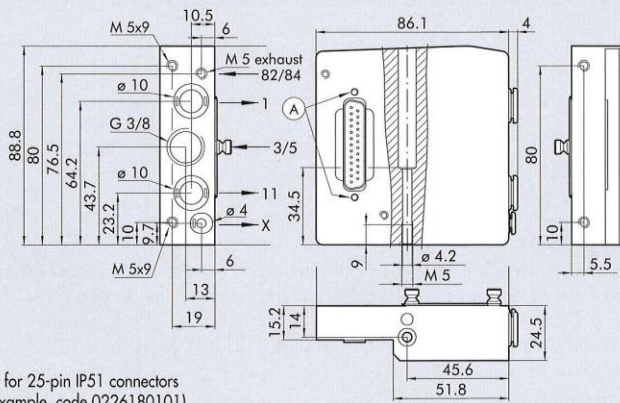
H D M VALVE	2 INPUT END-PLATE	8 ELECTRICAL BASE	M MANUAL TYPE	16 - W 8 - W 6 - O 4 - L 8 - 5 TYPE OF VALVE	1 4 - 1 6 FURTHER DETAILS
Heavy duty Multimach IP65	2 End-plate 1-11 pipe Ø 10 3 End-plate 1 pipe Ø 10 2S End-plate 1-11 pipe Ø 12	8 D-Sub 25 wire	M Monostable manual control B Bistable manual control	I n° 2 3/2 NC W n° 2 3/2 NO L 3/2 NO + 3/2 NC V 5/2 monostable K 5/2 bistable O 5/3 monostable *F 5/2 monostable 4 right-end-plate 1-11 pipe Ø12 5 blind end-plate 6 Passing-intermede 7 Blind intermediate 20 Exhaust section 4 Cartridge 4 6 Cartridge 6 8 Cartridge 8 - 14 mm 8S Cartridge 8 - 23 mm 10 Cartridge 10	14 IP65 25-wire shell 16 n° 2 brackets for DIN bar

* Uses a single PIN (like the V) and occupies 2 signals.

WIRING DIAGRAM



2 END-PLATE 1-11-25D - PIPE Ø10



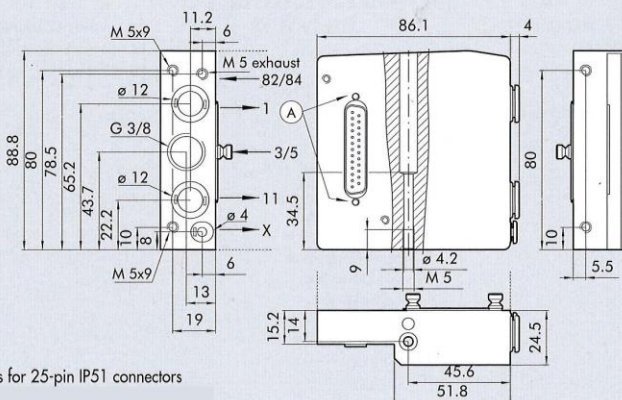
Code	Description	Weight [g]
2-8	End-plate HDM 1-11-25D Ø10	370

This end-plate allows for supplies to be differentiated

- Port 2
- Port 4
- Pilot supply

Material = aluminium

2S END-PLATE 1-11-25D - PIPE Ø12



Code	Description	Weight [g]
	End-plate HDM 1-11-25D Ø12	370

This end-plate allows for supplies to be differentiated

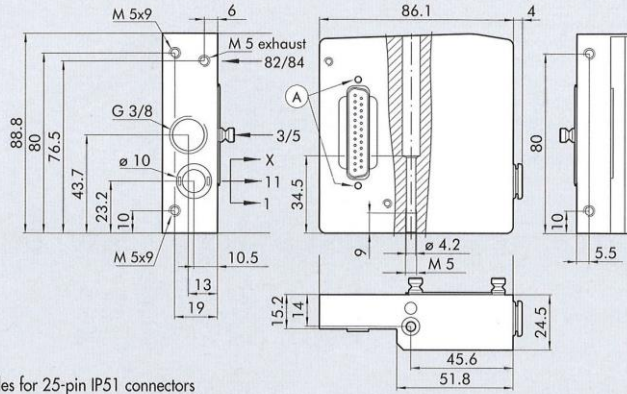
- Port 2
- Port 4
- Pilot supply

Valve terminals

Modular valve system, »HDM« series
 Type No. 3-8 to 2269.500
 Art. No. 106670 to 106702



③ END-PLATE 1-25D - PIPE Ø10

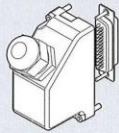


Ⓐ = Holes for 25-pin IP51 connectors
 (for example, code 0226180101)

Code	Description	Weight [g]
3-8	End-plate HDM 1-25D Ø10 Material = aluminium	370

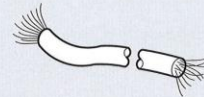
ACCESSORIES

⑭ 45° CONNECTOR KIT, 25 WIRES IP65



Code	Description	Weight [g]
	45° connector kit, 25 wires IP 65	65

CABLES



Code	Description	Weight [g]
	10-wire cable	86
	19-wire cable	122
	25-wire cable	130

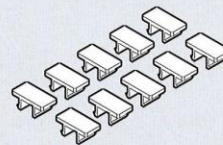
Specify the number of metres desired.

PRE-WIRED 45° CONNECTOR KIT, 25 WIRES IP65



Code	Description	Weight [g]
2269.100	Connector IP 65 + 25-wire 45° cable L = 1 m	190
2269.250	Connector IP 65 + 25-wire 45° cable L = 2.5 m	390
2269.500	Connector IP 65 + 25-wire 45° cable L = 5 m	740

IDENTIFICATION PLATE KIT



Code	Description
	Identification plate kit

WIRING DIAGRAM FOR PRE-WIRED PLUG CONNECTOR

25 PIN

Position of electrical contact	Colour of the corresponding wire	Position of electrical contact	Colour of the corresponding wire	Position of electrical contact	Colour of the corresponding wire	Position of electrical contact	Colour of the corresponding wire
1	blue/black	9	red/black	17	orange/white	25	green/black
2	red/brown	10	brown/white	18	green		
3	white/black	11	red/orange	19	yellow/black		
4	red/blue	12	light blue	20	white		
5	black/orange	13	yellow/white	21	blue/white		
6	yellow/red	14	yellow	22	brown		
7	black/brown	15	red/green	23	green/white		
8	white/red	16	orange	24	red		

2 END-PLATE 1-11 PROFIBUS-DP

Code	Description	Weight [g]
P-3	End-plate HDM 1-11 PROFIBUS Material = aluminium	730

3 END-PLATE 1 PROFIBUS-DP

Code	Description	Weight [g]
P-2	End-plate HDM 1 PROFIBUS Material = aluminium	730

ACCESSORIES

<p>M12 MALE CONNECTOR OUT-BUS</p> <p>Code Description Male connector B coding</p>	<p>M12 FEMALE CONNECTOR IN-BUS</p> <p>Code Description M12 female connector B coding</p>
<p>M8 CONNECTOR FOR POWER SUPPLY</p> <p>Code Description M8 connector for power supply wire 5 m</p>	<p>M8 - M12 PLUG</p> <p>Code Description Plug M8 Plug M12</p>

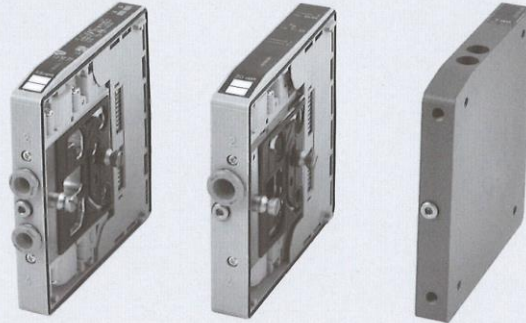
Valve terminals

Modular valve system, »HDM« series
 Type No. 3-8 to 2269.500
 Art. No. 106670 to 106702



HDM valve can be included in islands with any available input terminal. So the same valve can be connected to the multiple connection terminal, the AS-Interface terminal, the Profi bus-DP, terminal or the CAN-Open terminal.

Note: if you use valves 85 type or 10 exploiting their flow capacity, it is appropriate to choose the inlet end plate 1-11 type by feeding the pilots separately (to avoid the pressure to decrease too much on the pilots). If you use simultaneously more than one valve 85 or 10 it is necessary to potentiate the pneumatic feeding by inserting end plates having 12 mm pipe and/or through intermediate modules



MANUAL CONTROLS

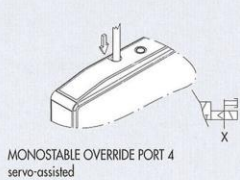
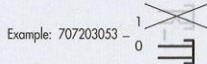


MONOSTABLE OVERRIDE PORT 2 servo-assisted

- Press and hold the manual control in position (not necessary for bistable type K valve)
- Release the manual control:
 - The manual control returns to the home position.
 - Valves type I, W, L, V, F, and O reposition.
 - The type K valve remains switched

N.B.: The pilot power supply X must be present.

- The reference code for the monostable control ends in 0 (2 for type F).



MONOSTABLE OVERRIDE PORT 4 servo-assisted

- Press and hold the manual control in position (not necessary for bistable type K valve)
- Release the manual control:
 - The manual control returns to the home position.
 - Valves type I, W, L, V and F reposition.
 - The type K valve remains switched

With type F and V valves, this manual control is not present.

N.B.: The pilot power supply X must be present.

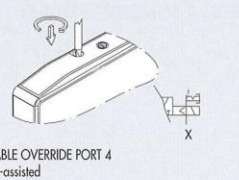
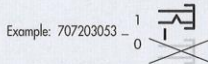


BISTABLE OVERRIDE PORT 2 servo-assisted

- Press the manual control right in then turn it clockwise 90 degrees and Leave it in position.
- Rotate the manual control 90 degrees anticlockwise, and then release it:
 - The manual control returns to the home position.
 - Valves type I, W, L, V, F, and O reposition.
 - The type K valve remains switched

N.B.: The pilot power supply X must be present.

- The reference code for the monostable control ends in 1 (3 for type F).



BISTABLE OVERRIDE PORT 4 servo-assisted

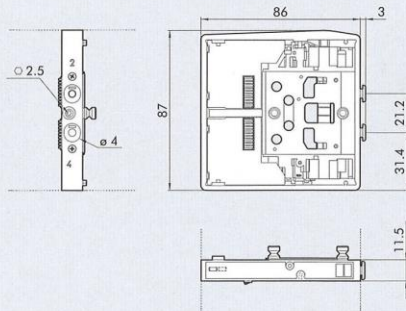
- Press the manual control right in then turn it 90 degrees clockwise and Leave it in position.
- Rotate the manual control 90 degrees anticlockwise, and then release it:
 - The manual control returns to the home position.
 - Valves type I, W, L and O reposition.
 - The type K valve remains switched

With type F and V valves, this manual control is not present.

N.B.: The pilot power supply X must be present.

① VALVE DIMENSIONS HDM Ø 4 Material = aluminium

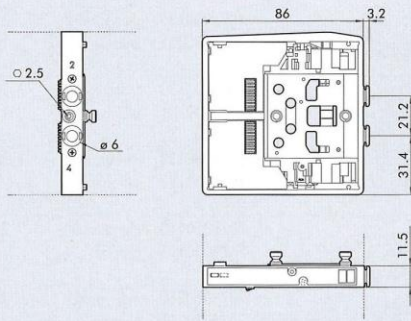
*uses a single PIN (like the V) and occupies 2 signals



Symbol	Diagram	Manual control	Weight [g]
HDM I4		monostable bistable	130
HDM W4		monostable bistable	130
HDM L4		monostable bistable	130
HDM V4		monostable bistable	115
HDM *F4		monostable bistable	115
HDM K4		monostable bistable	130
HDM O4		monostable bistable	130

① VALVE DIMENSIONS HDM Ø 6 Material = aluminium

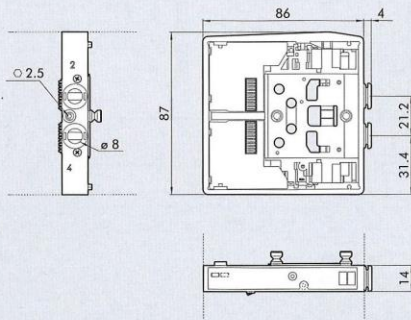
*uses a single PIN (like the V) and occupies 2 signals



Symbol	Manual control	Weight [g]
HDM	monostable	130
I6	bistable	
HDM	monostable	130
W6	bistable	
HDM	monostable	130
L6	bistable	
HDM	monostable	115
V6	bistable	
HDM	monostable	115
*F6	bistable	
HDM	monostable	130
K6	bistable	
HDM	monostable	130
O6	bistable	

① VALVE DIMENSIONS HDM Ø 8 Material = aluminium

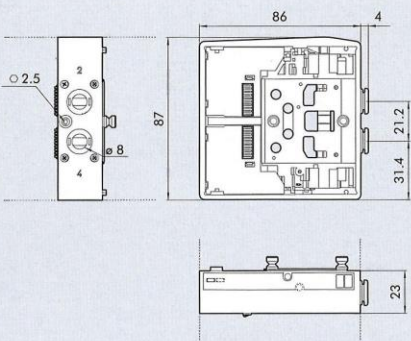
*uses a single PIN (like the V) and occupies 2 signals



Symbol	Manual control	Weight [g]
HDM	monostable	140
I8	bistable	
HDM	monostable	140
W8	bistable	
HDM	monostable	140
L8	bistable	
HDM	monostable	130
V8	bistable	
HDM	monostable	130
*F8	bistable	
HDM	monostable	140
K8	bistable	
HDM	monostable	140
O8	bistable	

① VALVE DIMENSIONS HDM Ø 8S

*uses a single PIN (like the V) and occupies 2 signals



Symbol	Manual control	Weight [g]
HDM	monostable	260
I8S	bistable	
HDM	monostable	260
W8S	bistable	
HDM	monostable	260
L8S	bistable	
HDM	monostable	241
V8S	bistable	
HDM	monostable	241
*F8S	bistable	
HDM	monostable	253
K8S	bistable	
HDM	monostable	262
O8S	bistable	

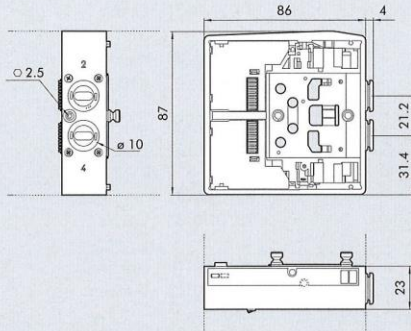
Valve terminals

Modular valve system, »HDM« series
 Type No. 3-8 to 2269.500
 Art. No. 106670 to 106702



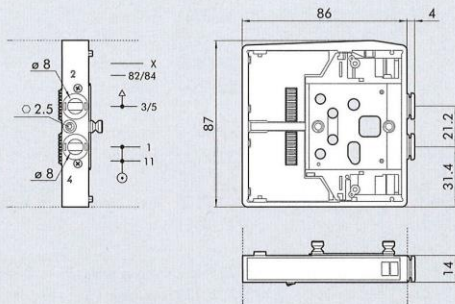
① VALVE DIMENSIONS HDM Ø 10

*uses a single PIN (like the V) and occupies 2 signals



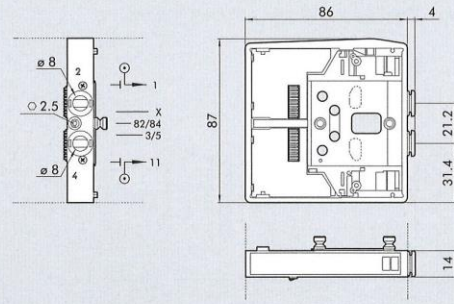
Symbol	Code	Manual control	Weight [g]
HDM	82/84	monostable	250
I10	12 14 11	bistable	
HDM	82/84	monostable	250
W10	12 14 11	bistable	
HDM	82/84	monostable	250
L10	12 14 11	bistable	
HDM	82/84	monostable	231
V10	14 11	bistable	
HDM	82/84	monostable	231
*F10	14 11	bistable	
HDM	82/84	monostable	243
K10	14 12	bistable	
HDM	82/84	monostable	252
O10	14 12	bistable	

⑥ INTERMEDIATE THROUGH



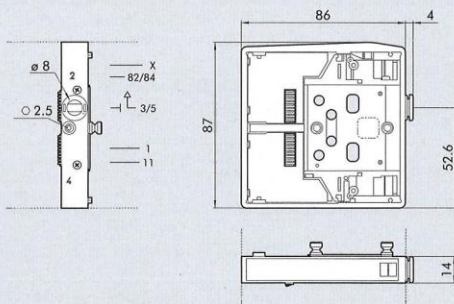
Code	Description	Weight [g]
6	Intermediate through HDM Material = aluminium	120

⑦ INTERMEDIATE BLIND



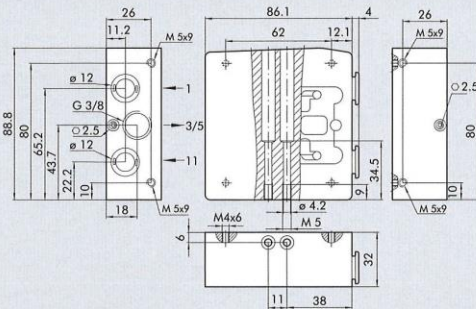
Code	Description	Weight [g]
7	Intermediate blind HDM Material = aluminium	117

⑳ INTERMEDIATE EXHAUST SWITCH



Code	Description	Weight [g]
20	Intermediate exhaust switch HDM Material = aluminium	125

④ RIGHT-END-PLATE 1-11 PIPE Ø 12

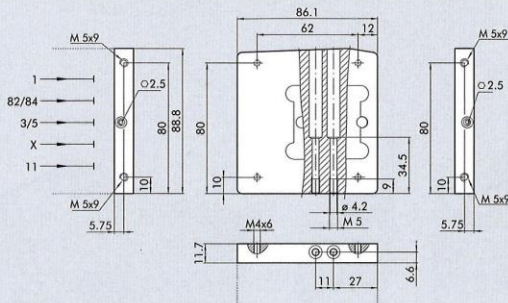


Code	Description	Weight [g]
	Righ-end-plate HDM 1-11 Ø 12	630

This end-plate allows for supplies to be differentiated:

- Port 2
- Port 4

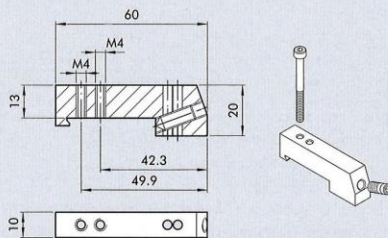
5 BLIND END-PLATE



Code	Description	Weight [g]
5	Blind end-plate HDM Material = aluminium	230

ACCESSORIES

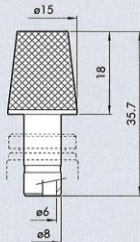
16 CONNECTION BRACKETS ON DIN BAR



Code	Description	Weight [g]
16	Connection brackets on din bar HDM/CM	30

Supplied complete with one M4x45 screws and one M6 grub screw
 Individually packed

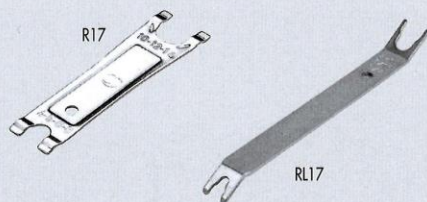
SILENCER FOR FITTING, Ø 8



Code	Description	Weight [g]
	Silencer for fitting, Ø 8	15

At the 3/5-exhaust port of the intermediate throughreference 6 and of the exhaust switch reference 20

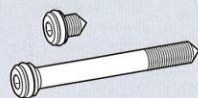
R17 - PIPE RELEASE SPANNER



Code	Rif.	Length [mm]	Ø Tube
	RL17	140	from 3 to 10
	R17	95	from 4 to 14

SPARES

GRUB SCREW KIT



Code	Description
	Grub screw for Multimach HDM/CM

Valve terminals

Modular valve system, »HDM« series

Type No. 3-8 to 2269.500

Art. No. 106670 to 106702



Summary Art. No:

Type No.	Art. No.
3-8	106670
2-8	106671
P-3	106672
P-2	106673
I 4	106674
W 4	106675
L 4	106676
V 4	106677
F 4	106678
K 4	106679
O 4	106680
I 6	106681
W 6	106682
L 6	106683
V 6	106684
F 6	106685
K 6	106686
O 6	106687
I 8	106688
W 8	106689
L 8	106690
V 8	106691
F 8	106692
K 8	106693
O 8	106694
6	106695
7	106696
20	106697
5	106698
16	106699
2269.100	106700
2269.250	106701
2269.500	106702