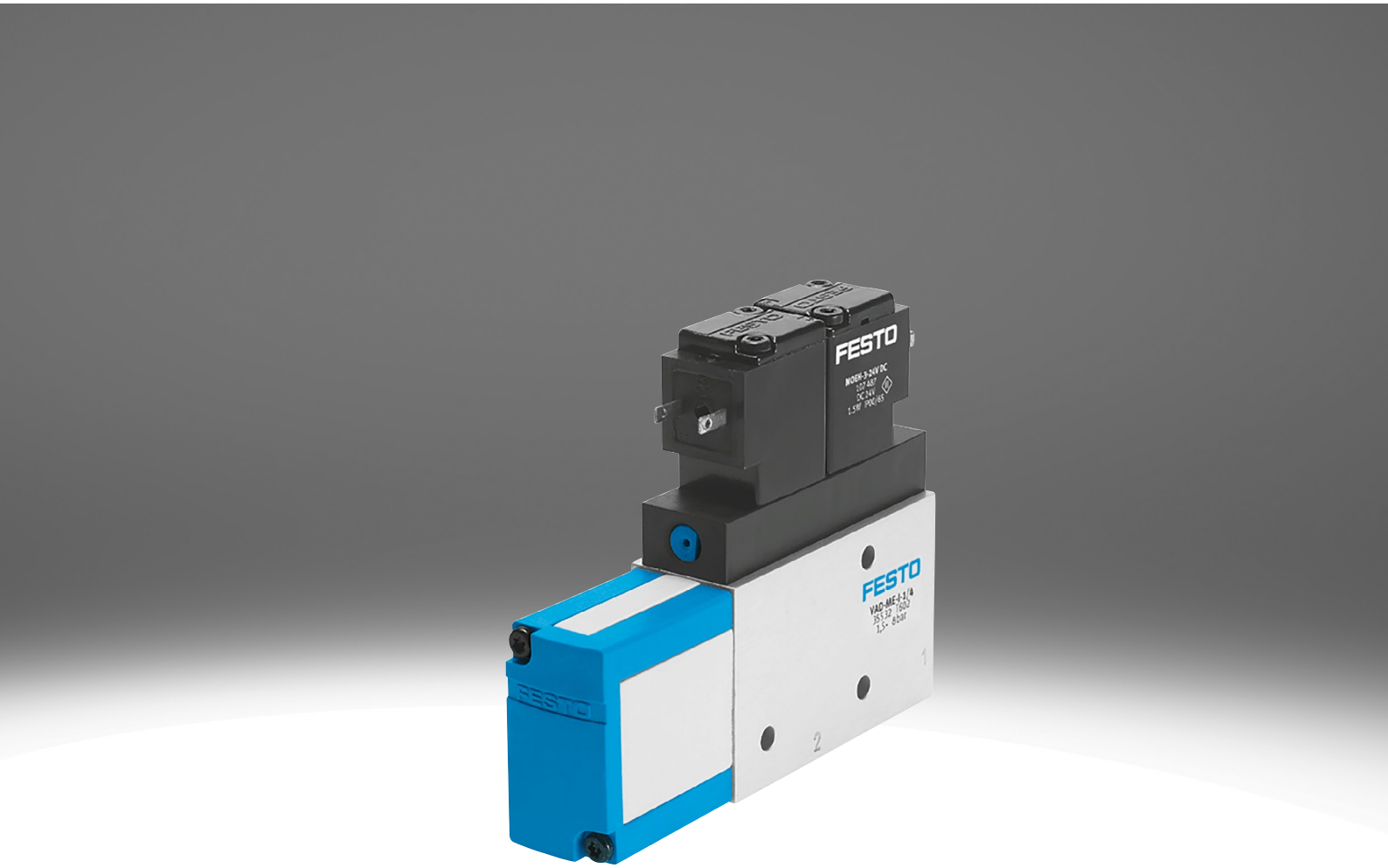
Vacuum generator VAD-M, VAD-M-I



Characteristics

At a glance

- Compact and sturdy design
- Short switching times with integrated solenoid valves
- With manual override
- Maintenance-free, as there are no moving parts
- With integrated silencer for reducing exhaust noise

Diagrams

Link vad-m

The diagrams shown in this document are also available online. These can be used to display precise values.

Additional function

[_] Without ejector pulse

Integrated solenoid valve for:
- Vacuum ON/OFF

The compressed air supply for these vacuum generators is controlled by the integrated solenoid valve. When the voltage is switched on, the valve is reversed and the compressed air flowing from 1 (P) to 3 (R) creates a vacuum at port 2 using the ejector principle. The suction process stops when the power supply to the valve is switched off. Workpieces with a smooth and air-tight surface are suctioned up and held firmly.

[I] Electric ejector pulse

Two integrated solenoid valves:
- Vacuum ON/OFF
- Ejector pulse

With two integrated solenoid valves for vacuum ON/OFF and ejector pulse for faster reduction of the vacuum and manual override. Compressed air enters the vacuum generator when a voltage signal is applied to the integrated solenoid valve, thereby creating a vacuum. Once the voltage is switched off at the vacuum valve (B) and the voltage at the ejector pulse valve (A) is switched on, the vacuum at port 2 (V) is rapidly purged as a result of the application of pressure.

Type code

001	Series	
VAD	Vacuum generator	

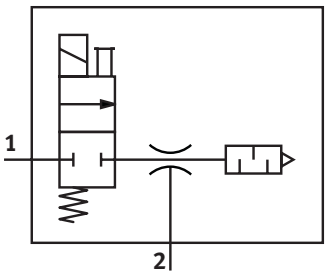
002	Electrical connection	
ME	Solenoid coil	
MYB	Solenoid coil	

003	Additional function	
	Without ejector pulse	
I	Electric ejector pulse	

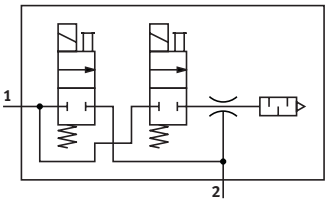
004	Vacuum connection	
1/8	Female thread G1/8	
1/4	Female thread G1/4	
3/8	Female thread G3/8	

Datasheet

Function – vacuum generator VAD-M...-... without ejector pulse



Function – vacuum generator VAD-M...-I-... with ejector pulse



General technical data

Additional function	Without ejector pulse				Electric ejector pulse			
Vacuum connection	G1/8		G1/4	G3/8	G1/8		G1/4	G3/8
Pneumatic connection, port 1	M5	G1/8		G1/4	M5	G1/8		G1/4
Nominal size, Laval nozzle	0.7 mm	0.95 mm	1.4 mm	2 mm	0.7 mm	0.95 mm	1.4 mm	2 mm
Design	T-shape							
Electrical connection	Plugs							
Ejector characteristic	High vacuum							
Mounting position	optional							
Type of mounting	Via female thread							
Max. vacuum	85%				90%			
Duty cycle	100%							
Degree of protection	IP65							

Operating and environmental conditions

Additional function	Without ejector pulse	Electric ejector pulse
Operating pressure	1.5 ... 8 bar	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]	
Note on operating and pilot medium	Lubricated operation not possible	
Ambient temperature	0 ... 40°C	0 ... 50°C
Media temperature	0 ... 40°C	0 ... 50°C
Corrosion resistance class CRC [1]	2 - Moderate corrosion stress	–

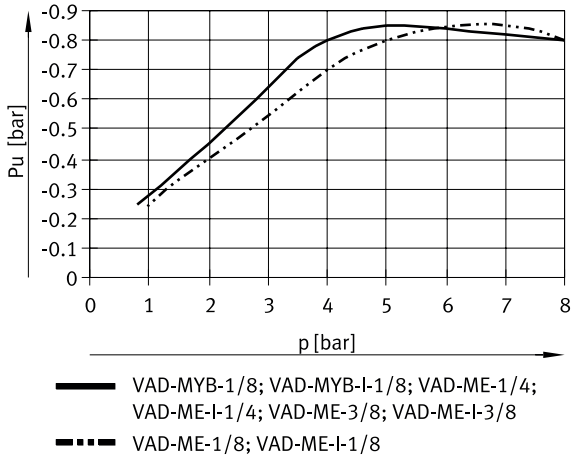
1) More information www.festo.com/x/topic/crc

Materials

Material housing	Aluminium
LABS (PWIS) conformity	VDMA24364-B2-L

Datasheet

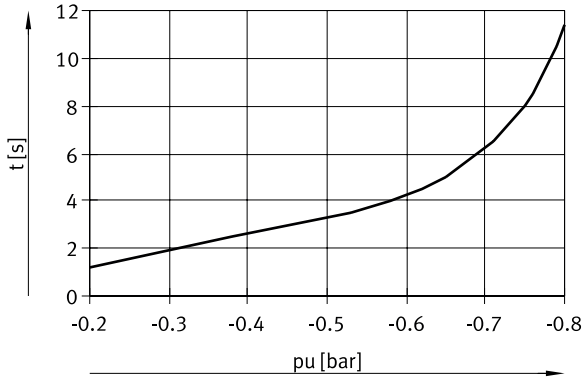
Vacuum ΔPu as a function of operating pressure p



VAD-MYB-1/8; VAD-MYB-I-1/8; VAD-ME-1/4; VAD-ME-I-1/4; VAD-ME-3/8; VAD-ME-I-3/8

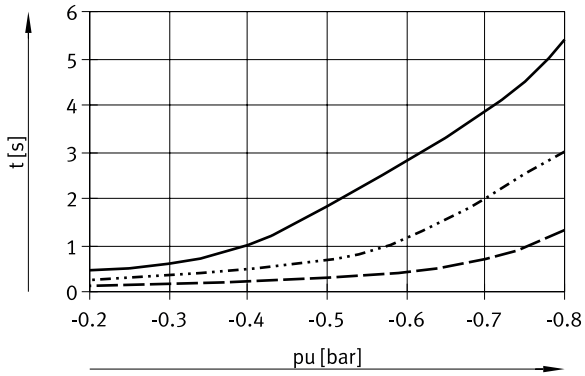
VAD-ME-1/8; VAD-ME-I-1/8

Evacuation time t [s] for 1 litre volume at 6 bar operating pressure (VAD-MYB)



VAD-MYB-1/8; VAD-MYB-I-1/8

Evacuation time t [s] for 1 litre volume atan operating pressure of 6 bar (VAD-ME)



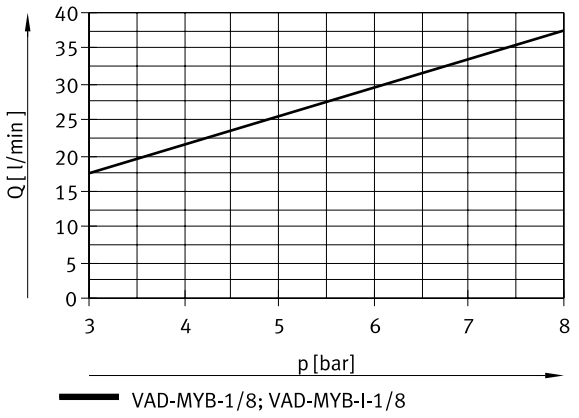
VAD-ME-1/8; VAD-ME-I-1/8

VAD-ME-1/4; VAD-ME-I-1/4

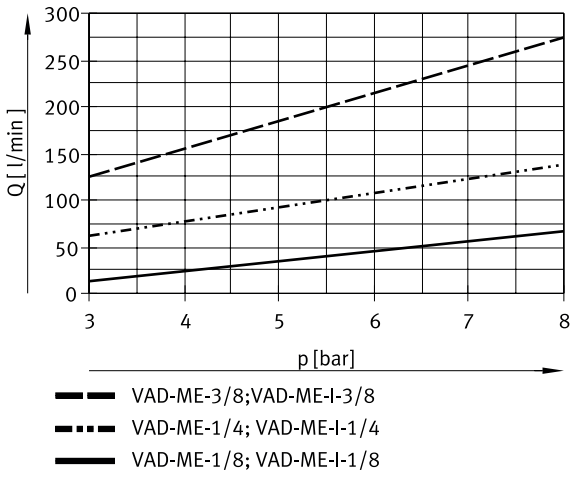
VAD-ME-3/8; VAD-ME-I-3/8

Datasheet

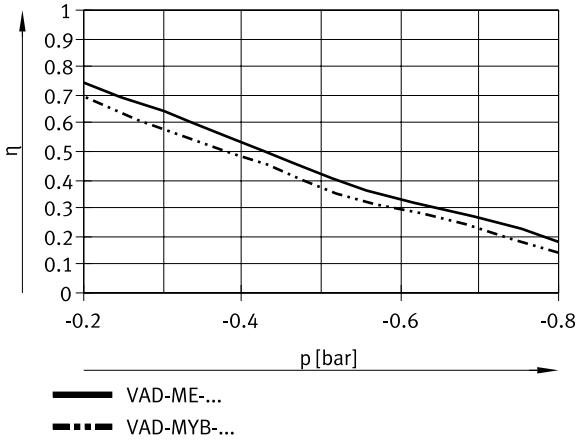
Air consumption Q as a function of operating pressure p (VAD-MYB)



Air consumption Q as a function of operating pressure p (VAD-ME)

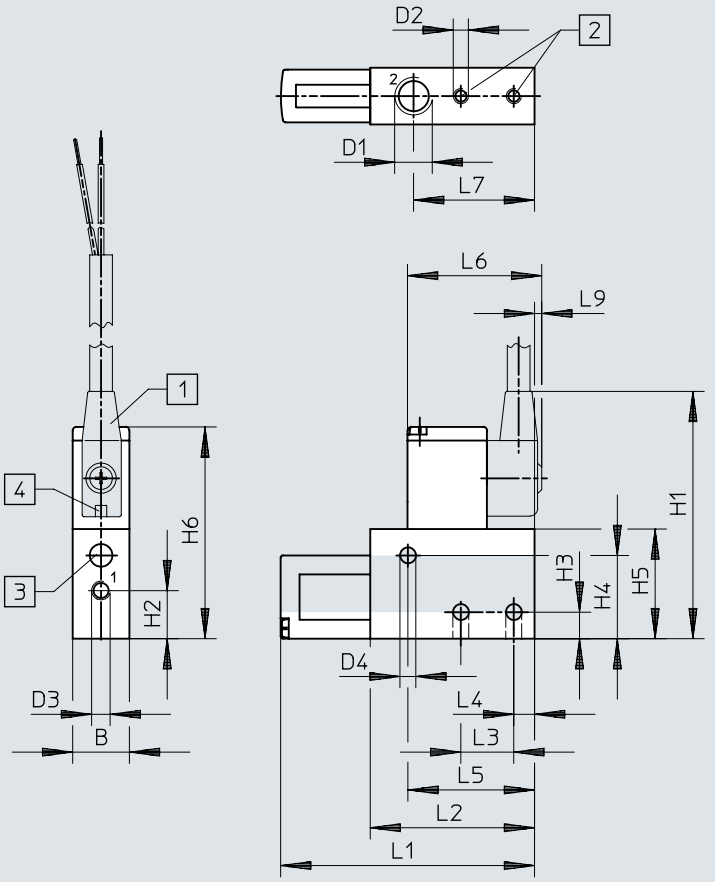


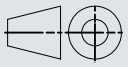
Efficiency η as a function of vacuum Δp at Pnom 6 bar



Dimensions

Dimensions – VAD-MYB-1/8 Download CAD data www.festo.com





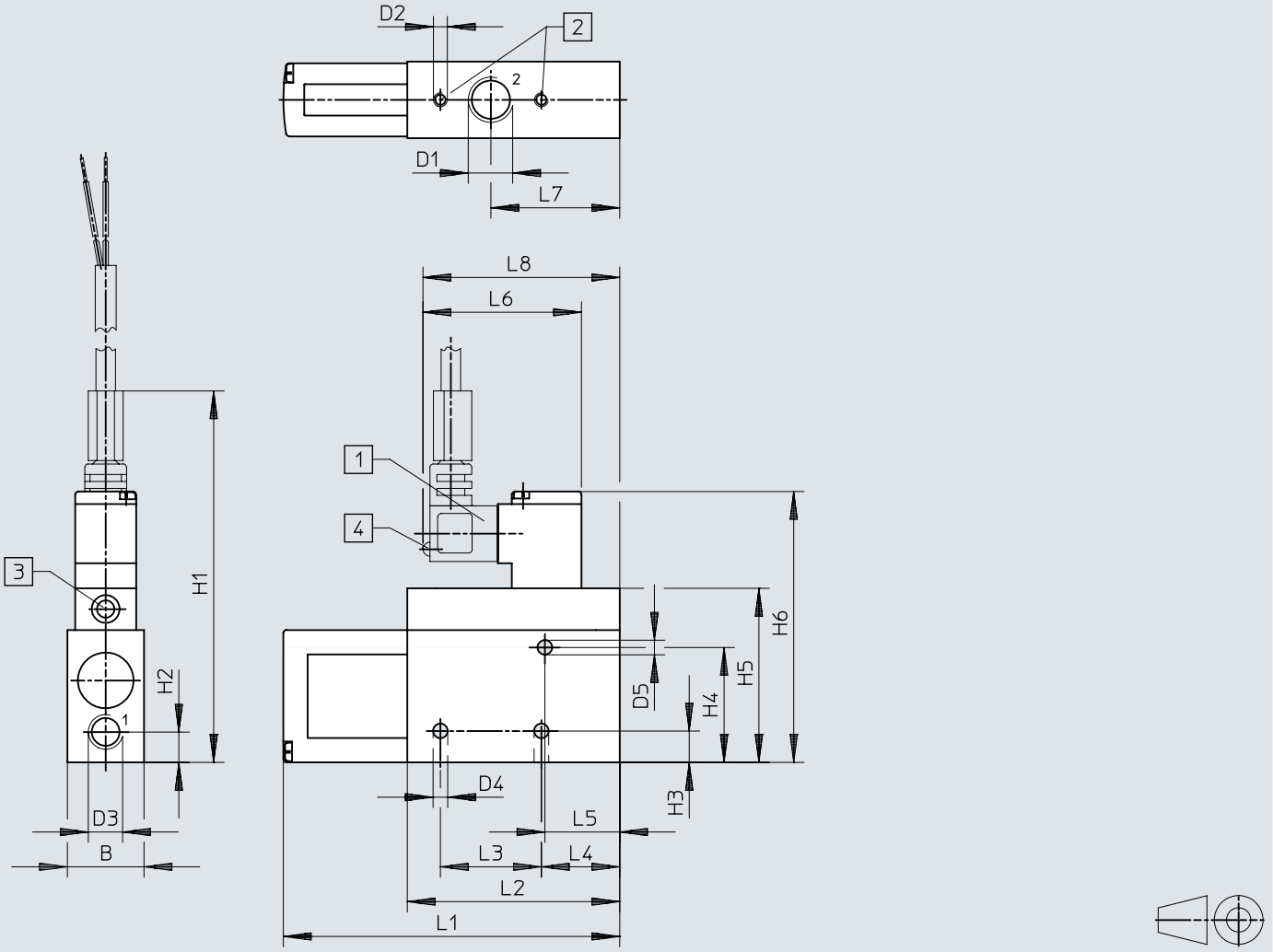
[1] Connecting cable KMYZ-2-24-... with 2-core cable, 2.5 m or 5 m long, 3.4 mm diameter (2x0.25 mm2)
[2] Mounting thread
[3] Manual override
[4] Yellow light emitting diode

	B	D1	D2	D3	D4	H1	H2	H3	H4
VAD-MYB-1/8	15	G1/8	M4	M5	4,2	62,5	12,7	7	22

	H5	H6	L1	L2	L3	L4	L5	L6
VAD-MYB-1/8	29	56	67,2	43,5	14	5,5	33,5	34,6

Dimensions

Dimensions – VAD-ME-1/8/-1/4/-3/8 Download CAD data www.festo.com



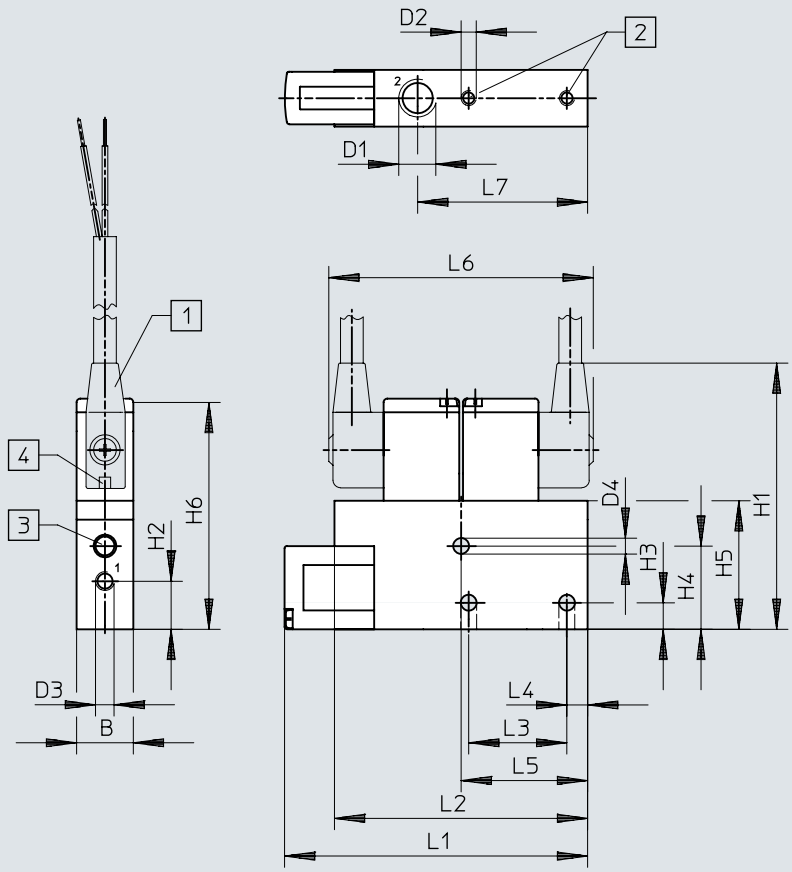
[1] Plug socket with cable KME-1-24-... with 2-core cable, 2.5 m or 5 m long, 5.6 mm diameter (2x0.75 mm2)
[2] Mounting thread
[3] Manual override
[4] Yellow light emitting diode

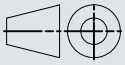
	B	D1	D2	D3	D4	D5	H1	H2	H3	H4
VAD-ME-1/8	18	G1/8	M4	G1/8	4,2	3,2	93	14,2	6,5	20
VAD-ME-1/4	22	G1/4	M4	G1/8	4,2	4,2	106,8	8,7	9	33
VAD-ME-3/8	22	G3/8	M5	G1/4	5,2	5,2	113,1	11	10	39

	H5	H6	L1	L2	L3	L4	L5	L6	L7	L8
VAD-ME-1/8	36	64	76	61	27	19	30,5	48	32,5	58
VAD-ME-1/4	50	77,8	96,6	61	29	22,5	21,5	48	37	58
VAD-ME-3/8	56	84,1	101,8	61	32	23,5	21,5	48	39,5	58

Dimensions

Dimensions – VAD-MYB-I-1/8 Download CAD data www.festo.com





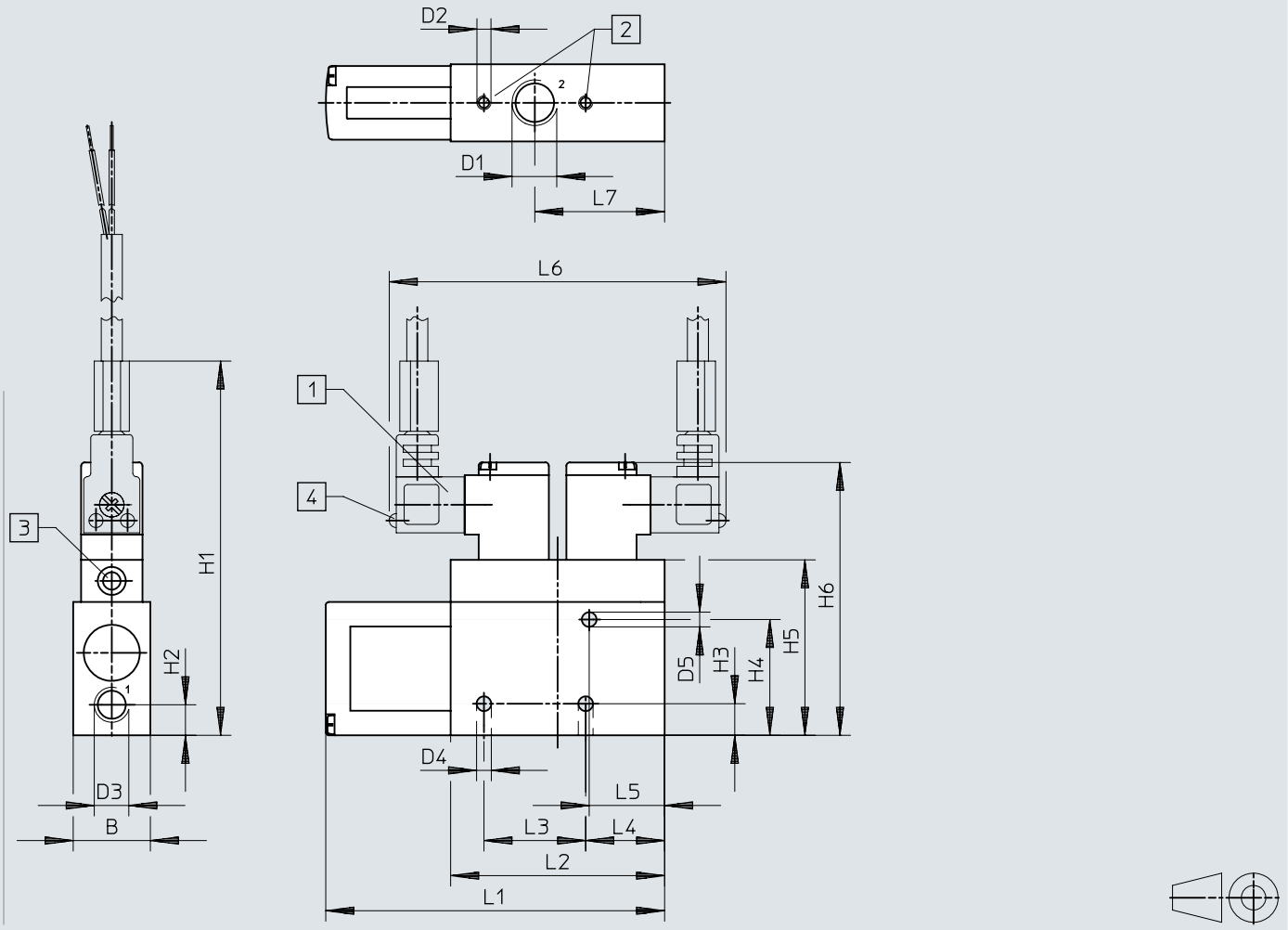
[1] Connecting cable KMYZ-2-24-... with 2-core cable, 2.5 m or 5 m long, 3.4 mm diameter (2x0.25 mm2)
[2] Mounting thread
[3] Manual override
[4] Yellow light emitting diode

	B1	D1	D2	D3	D4	H1	H2	H3	H4
VAD-MYB-I-1/8	15	G1/8	M4	M5	4,2	67,5	12,7	7	22

	H5	H6	L1	L2	L3	L4	L5	L6	L7
VAD-MYB-I-1/8	34	58,5	80,2	67	26	5,5	33,5	70	45

Dimensions

Dimensions – VAD-ME-I-1/8/-1/4/-3/8 Download CAD data www.festo.com



[1] Plug socket with cable KME-1-24-... with 2-core cable, 2.5 m or 5 m long, 5.6 mm diameter (2x0.75 mm2)
[2] Mounting thread
[3] Manual override
[4] Yellow light emitting diode

	B1	D1	D2	D3	D4	D5	H1	H2	H3	H4
VAD-ME-I-1/8	18	G1/8	M4	G1/8	4,2	3,2	93	14,2	6,5	20
VAD-ME-I-1/4	22	G1/4	M4	G1/8	4,2	4,2	106,8	8,7	9	33
VAD-ME-I-3/8	22	G3/8	M5	G1/4	5,2	5,2	113,1	11	10	39

	H5	H6	L1	L2	L3	L4	L5	L6	L7
VAD-ME-I-1/8	36	64	76	61	27	19	30,5	96	32,5
VAD-ME-I-1/4	50	77,8	96,6	61	29	22,5	21,5	96	37
VAD-ME-I-3/8	56	84	101,8	61	32	23,5	21,5	96	39,5

Ordering data

Ordering data – VAD-M without ejector pulse

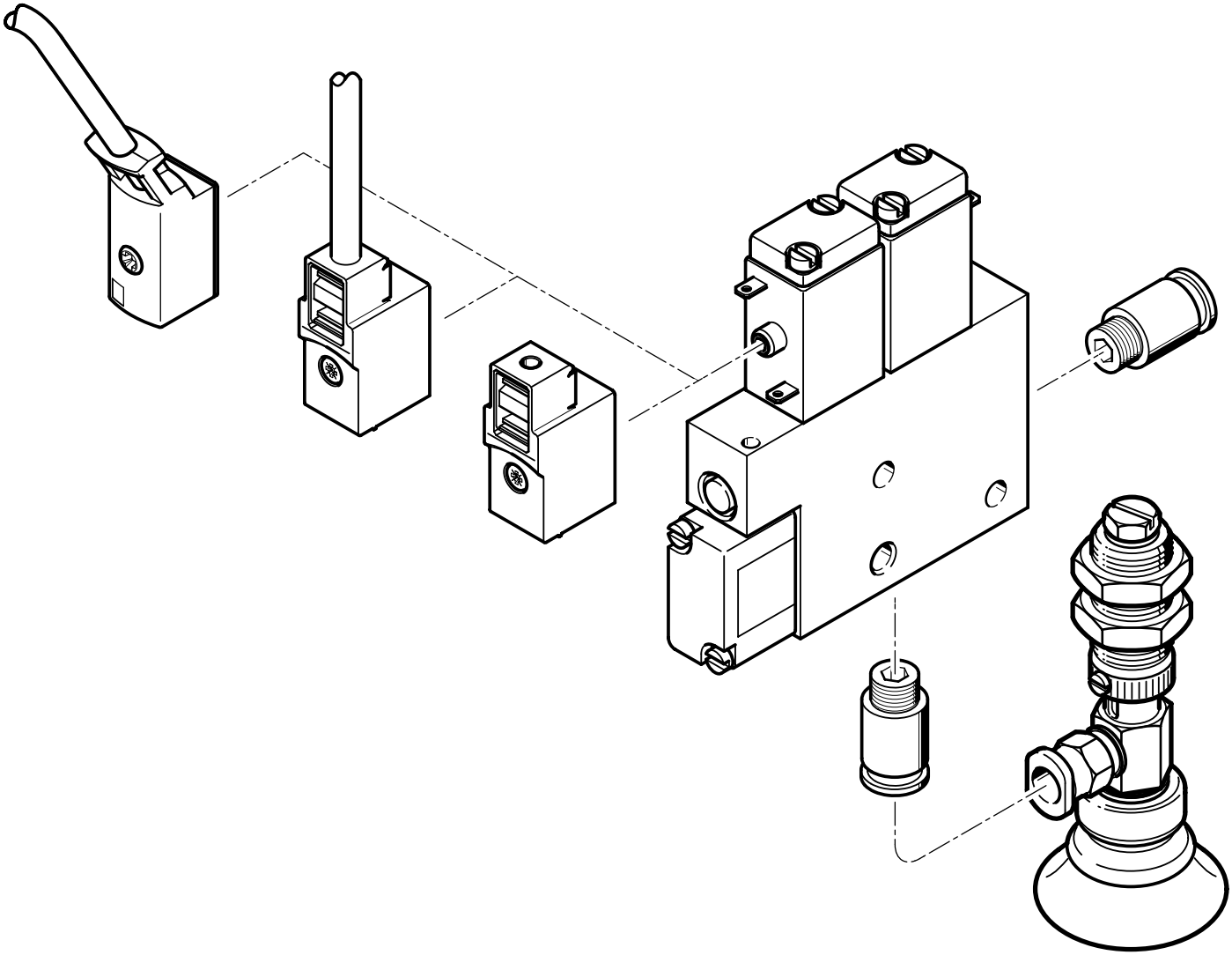
	Pneumatic connection, port 1	Vacuum connection	Nominal size, Laval nozzle	Product weight	Part no.	Type
	M5	G1/8	0.7 mm	80 g	**35553**	**VAD-MYB-1/8**
	G1/8		0.95 mm	123 g	**35554**	**VAD-ME-1/8**
		G1/4	1.4 mm	212 g	**35555**	**VAD-ME-1/4**
	G1/4	G3/8	2 mm	242 g	**35556**	**VAD-ME-3/8**

Ordering data – VAD-M with ejector pulse

	Pneumatic connection, port 1	Vacuum connection	Nominal size, Laval nozzle	Product weight	Part no.	Type
	M5	G1/8	0.7 mm	135 g	**35530**	**VAD-MYB-I-1/8**
	G1/8		0.95 mm	160 g	**35531**	**VAD-ME-I-1/8**
		G1/4	1.4 mm	250 g	**35532**	**VAD-ME-I-1/4**
	G1/4	G3/8	2 mm	280 g	**35533**	**VAD-ME-I-3/8**

Peripherals

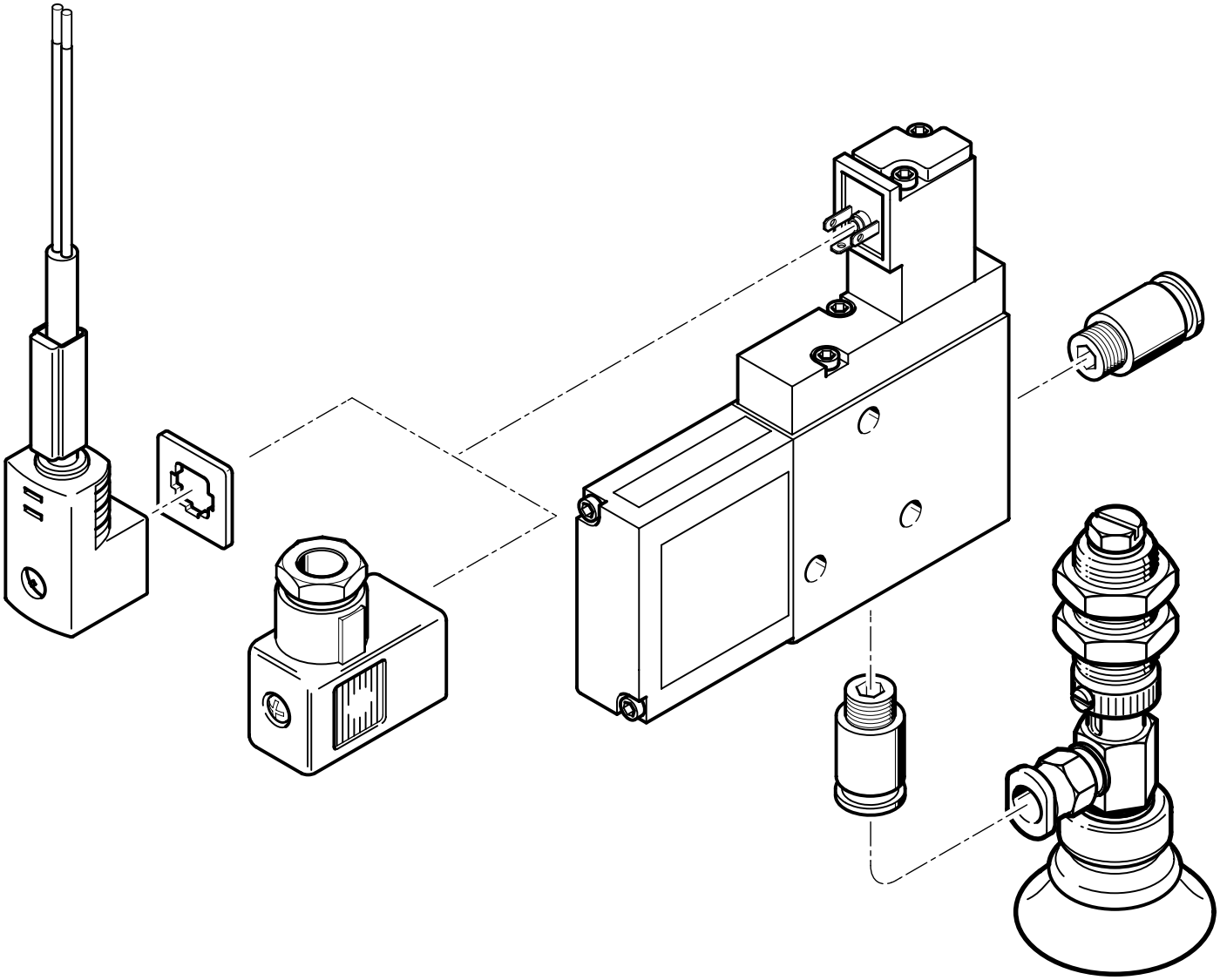
VAD-MYB



Accessories			→ Link
	Type/order code	Description	
[1]	Vacuum generator VAD-MYB		vad-m
[2]	Push-in fitting QS		qs
[3]	Suction gripper ESG		esg
[4]	Plug socket MSSD-ZBZC		mssd-zbzc
[5]	Connecting cable KMYZ-4		kmyz-4
[6]	Connecting cable KMYZ-2		kmyz-2

Peripherals

VAD-ME



Accessories			→ Link
	Type/order code	Description	
[1]	Vacuum generator VAD-ME		vad-m
[2]	Push-in fitting QS		qs
[3]	Suction gripper ESG		esg
[4]	Plug socket MSSD-E		14
[5]	Plug socket with cable KME-1		kme-1
[6]	Illuminating seal ME-LD		14

Accessories

Illuminating seal ME-LD-12-24DC

	Type of mounting	Electrical connection	Switching position indicator	Product weight	Part no.	Type
	On solenoid valve via M3 central screw	Type C, Square design MSE	LED	0.6 g	**19141**	**ME-LD-12-24DC**

Plug socket MSSD-E

	Type of mounting	Electrical connection 1	Electrical connection 2	Product weight	Part no.	Type
	On solenoid valve via M3 central screw	Angled socket, square design, 3-pin, type C	Screw terminal	8 g	**14098**	**MSSD-E**