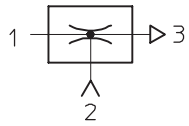
- Short switching times thanks to integrated solenoid valves
- Reliable release of parts under suction via ejector pulse
- Protection class IP65

Vacuum generators

Key features

Product overview

Vacuum generator



All Festo vacuum generators have a single-stage design and operate according to the venturi principle. The product families described below have been designed for a wide range of applications. The different performance classes of the individual product families make it possible to select vacuum generators tailored to suit specific requirements.

Standard and inline ejectors

VN-... ➔ 6 / 1.1-10

- Nominal size 0.45 ... 3 mm
- Max. vacuum 93%
- Temperature range 0 ... +60 °C
- A range of extremely effective generators suitable for use directly in the workplace
- Available as straight or T-shaped housing
- Low space requirement
- Low-cost
- No wearing parts
- Extremely fast evacuation time
- Vacuum switch (optional)

VAD-.../VAK-... ➔ 6 / 1.1-36

- Nominal size 0.5 ... 1.5 mm
- Max. vacuum 80%
- Temperature range –20 ...+80 °C
- Range of vacuum generators with sturdy aluminium casing
- VAK-...: Built-in reservoir VAD-...: Connection for additional external reservoir
- Maintenance-free
- VAK-...: Reliable setting down of workpieces

Vacuum generators

Key features

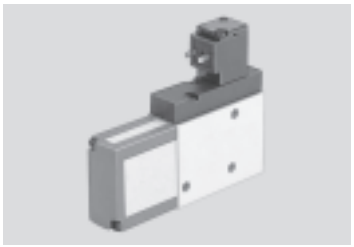
FESTO

Compact ejectors

VADM-...VADMI-... ➔ 6 / 1.2-8

- Nominal size 0.45 ... 3 mm
- Max. vacuum 88%
- Temperature range 0 ... +60 °C
- Compact design
- Minimal installation work required
- Short response times
- Built-in solenoid valve (on/off)
- VADMI-...: Additional built-in solenoid valve for ejector pulse
- Filter with display
- Air-saving circuit (optional)
- Vacuum switch (optional)
- Reliable setting down of workpieces

VAD-M-.../VAD-M...-I-... ➔ 6 / 1.2-28



- Nominal size 0.7 ... 2 mm
- Max. vacuum 85%
- Temperature range 0 ... +40 °C
- Compact design
- Minimal installation work required
- Short response times
- Built-in solenoid valve (on/off)
- VAD-M-I-...: Additional built-in solenoid valve for ejector pulse
- Reliable setting down of workpieces

Vacuum generators VAD-M

Key features

At a glance

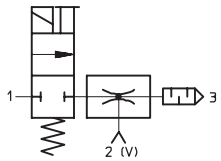
- Compact and sturdy design
- Short switching times thanks to integrated solenoid valves
- With manual override
- Maintenance-free because there are no moving parts
- With integrated silencer for reducing exhaust noise

Vacuum generators VAD-M...-...

The compressed air supply of these vacuum generators is controlled by the built-in solenoid valve.
When the electrical power supply is switched on, the valve is actuated and the flow of compressed air from 1 (P) to 3 (R) generates a vacuum at port 2, operating on the ejector principle.

Suction stops when the supply power to the valve is switched off.
Workpieces with smooth, impervious surfaces are picked up and retained.

- Built-in solenoid valve for:
  – Vacuum ON/OFF

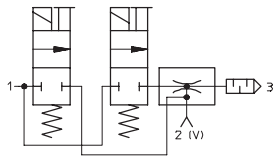


Vacuum generator VAD-M...-I-... with ejector pulse

With two integrated solenoid valves for vacuum ON/OFF and ejector pulse for rapid purging of vacuum, plus manual override

Compressed air enters the vacuum generator following the application of a voltage signal to the integrated solenoid valve, thereby creating a vacuum.
Once the voltage is switched off at the vacuum valve (B) and switched on at the ejector valve (A), the vacuum is rapidly purged at connection 2 (V) as a result of the application of pressure.

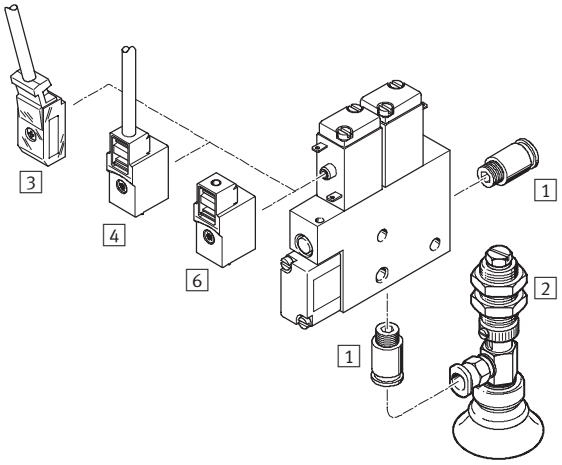
- Two integrated solenoid valves:
  – Vacuum ON/OFF
  – Ejector pulse



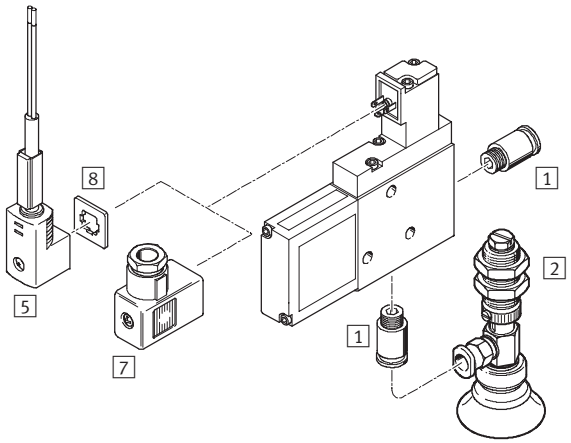
Vacuum generators VAD-M

Peripherals overview and type codes

VAD-MYB



VAD-ME



Mounting attachments and accessories			
	VAD-MYB	VAD-ME	➔ Page
1 Push-in fitting QS	■	■	Volume 3
2 Suction gripper ESG	■	■	6 / 2.1-6
3 Plug socket with cable KMYZ-2	■	–	6 / 4.1-21
4 Plug socket with cable KMYZ-4	■	–	6 / 4.1-22
5 Plug socket with cable KME-1	–	■	6 / 4.1-19
6 Plug socket MSSD-ZBZC	–	■	6 / 4.1-21
7 Plug socket MSSD-E	–	■	6 / 4.1-19
8 Illuminating seal ME-LD	–	■	6 / 4.1-19

VAD – MYB – I – ⅛

Type	
VAD	Vacuum generator, electrical

Solenoid coils	
MYB	Solenoid coil
ME	Solenoid coil

Functions	
I	With ejector pulse

Connection sizes	
⅛	G⅛ thread
¼	G¼ thread
⅜	G⅜ thread

Note

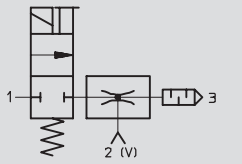
Possible combinations can be found in the ordering data.

Vacuum generators VAD-M

Technical data

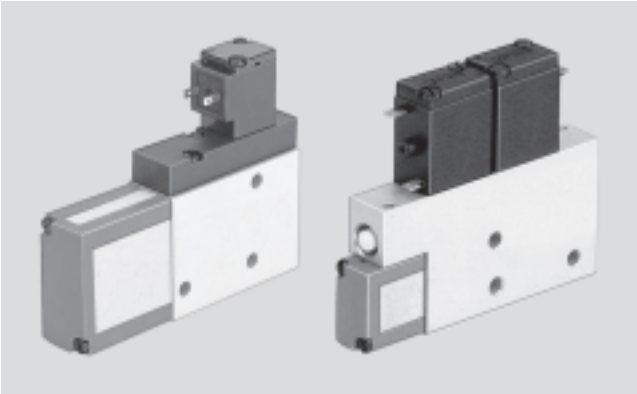
FESTO

Function



Temperature range
0 ... +40 °C

Operating pressure
1.5 ... 8 bar



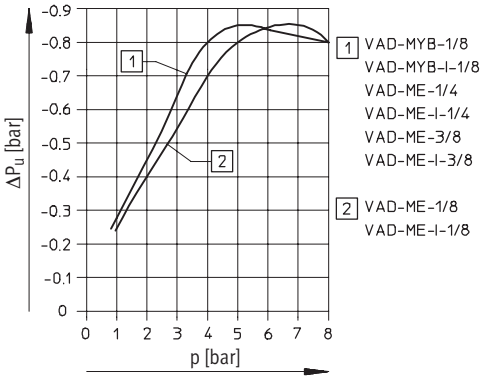
General technical data					
Type		VAD-MYB-...	VAD-ME-...		
Size		G1/8	G1/8	G1/4	G3/8
Design		Slim rectangular			
Operating medium		Compressed air, dried, filtered and unlubricated			
Mounting position		Any			
Ejector features		High vacuum			
Type of mounting		Via female threads			
Pneumatic connection 1/2		M5/G1/8	G1/8/G1/8	G1/8/G1/4	G1/4/G3/8
Nominal size of laval nozzle	[mm]	0.7	0.95	1.4	2.0
Max. vacuum	[%]	85			
Operating pressure	[bar]	1.5 ... 8			
Duty cycle	[%]	100			
Protection class		IP65			

Ambient conditions		
Variant		VAD-M...-...
Ambient temperature	[°C]	0 ... +40
Corrosion resistance	CRC[1)]	2

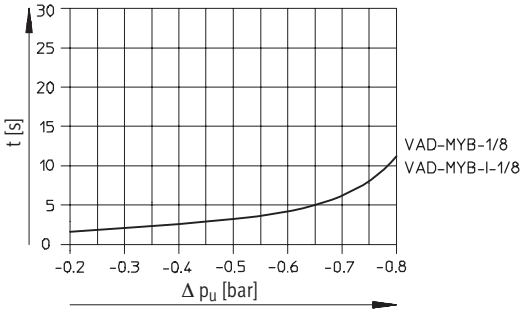
1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

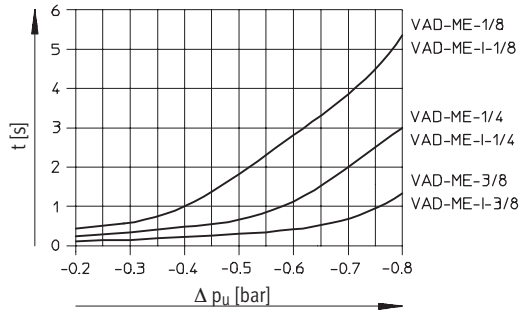
Weights [g]				
Type	VAD-MYB-...	VAD-ME-...		
Size	G1/8	G1/8	G1/4	G3/8
VAD-M...	80	125	210	240
VAD-M...-I-...	135	160	250	280

Vacuum ΔP_u as a function of operating pressure p

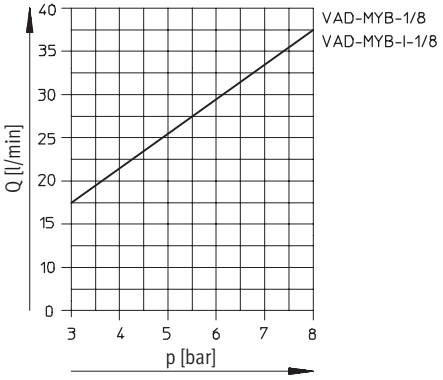


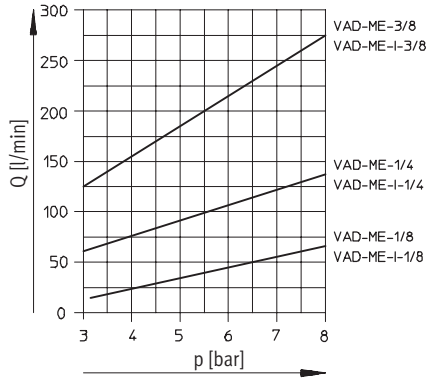
Evacuation time t [s] for 1 litre volume at 6 bar operating pressure



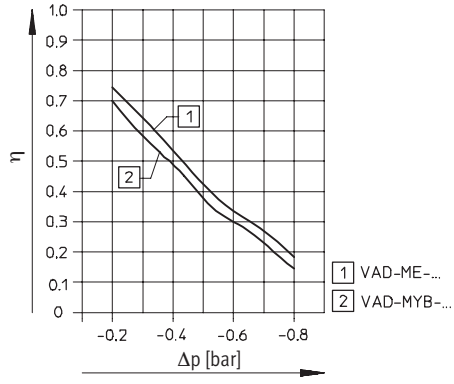


Air consumption Q as a function of operating pressure p



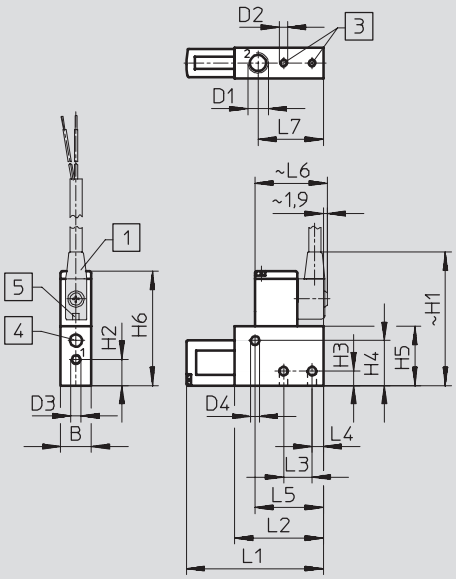


Efficiency η as a function of vacuum Δp at P_{nom} 6 bar

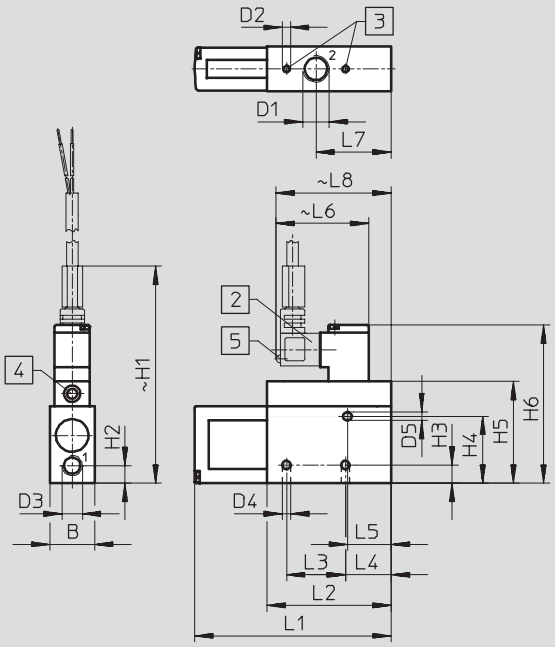


Dimensions

VAD-MYB-1/8



VAD-ME-1/8/-1/4/-3/8



1 Socket type KMYZ-2-24-... with 2-wire cable, 2.5 or 5 m long, ∅ 3.4 mm (2x 0.25 mm²)

2 Socket type KME-1-24-... with 2-wire cable, 2.5 or 5 m long, ∅ 5.6 mm (2x 0.75 mm²)

3 Mounting thread

4 Manual override

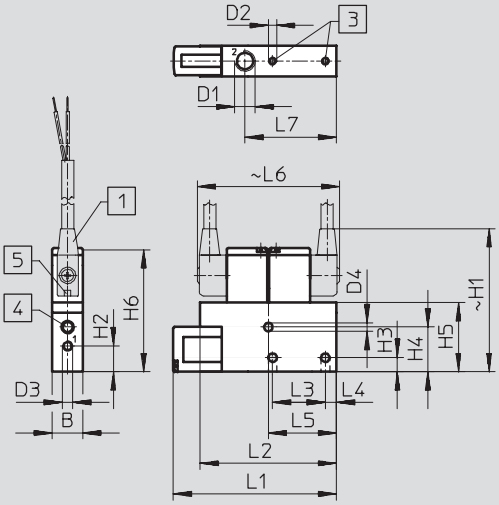
5 Yellow LED

Type	B	D1	D2	D3	D4	D5	H1	H2	H3	H4
VAD-MYB-1/8	15	G1/8	M4	M5	4.2	–	62.5	12.7	7	22
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

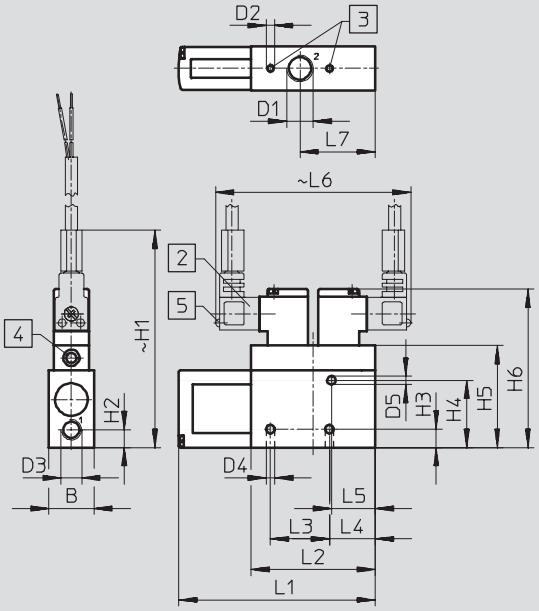
Type	H5	H6	L1	L2	L3	L4	L5	L6	L7	L8
VAD-MYB-1/8	29	56	67.2	43.5	14	5.5	33.5	34.6	–	–
VAD-ME-1/8	36	64	76	61	27	19	30.5	48	32.5	58
VAD-ME-1/4	50	77.8	96.6	61	29	22.5	21.5	48	37	58
VAD-ME-3/8	56	84.1	101.8	61	32	23.5	21.5	48	39.5	58

Dimensions

VAD-MYB-I-1/8



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



1 Socket type KMYZ-2-24-... with 2-wire cable, 2.5 or 5 m long, ∅ 3.4 mm (2x 0.25 mm²)

2 Socket type KME-1-24-... with 2-wire cable, 2.5 or 5 m long, ∅ 5.6 mm (2x 0.75 mm²)

3 Mounting thread
4 Manual override
5 Yellow LED

Type	B1	D1	D2	D3	D4	D5	H1	H2	H3	H4
VAD-MYB-I-1/8	15	G1/8	M4	M5	4.2	–	67.5	12.7	7	22
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

Type	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
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

Pneumatic connection	Solenoid coils	Without ejector pulse		With ejector pulse	
		Part No.	Type	Part No.	Type
G1/8	MYB	**35 553**	**VAD-MYB-1/8**	**35 530**	**VAD-MYB-I-1/8**
G1/8	ME	**35 554**	**VAD-ME-1/8**	**35 531**	**VAD-ME-I-1/8**
G1/4	ME	**35 555**	**VAD-ME-1/4**	**35 532**	**VAD-ME-I-1/4**
G3/8	ME	**35 556**	**VAD-ME-3/8**	**35 533**	**VAD-ME-I-3/8**