

# VARIO® diaphragm pump MV 2 VARIO select

[Link to the website](#)

## Product description

Four-stage diaphragm pumps - like the MV 2 VARIO select - are an excellent solution for continuous, oil-free pumping of non-corrosive gases at fractional millibar vacuum levels. Wetted parts are made of aluminum, stainless steel and carefully selected plastics suitable for a wide range of non-corrosive applications. The MV 2 VARIO select continuously adapts its motor speed to hold the desired vacuum level. That means the pump is whisper-quiet and generates ultra-low vibrations, and has high leak tightness. The highly flexible fabric-reinforced double FKM diaphragm is ideal for extended operating life. The VARIO® design includes the variable speed pump and the VACUU-SELECT vacuum controller with an external gauge head. The demand-responsive motor speed control on VARIO® models further extends the already long lifetimes of diaphragms and valves.

## Performance features

- VACUU-SELECT vacuum controller with graphical user interface and predefined applications simplifies work in the laboratory
- automatic boiling point detection and adjustment of the vacuum for short process times
- extraordinary diaphragm life for minimum operational and servicing costs
- contamination-free pumping and evacuation
- excellent ultimate vacuum, and even better ultimate vacuum with VARIO® version in TURBO-MODE for use as backing pump for turbo pumps

## Ordering data

Product name	Nominal mains voltage   mains frequency	Plug type	Articleno.
MV 2 VARIO select	200-230 V   50-60 Hz	CEE	20738150
MV 2 VARIO select	200-230 V   50-60 Hz	CH	20738151
MV 2 VARIO select	100-120 V   50-60 Hz	US	20738153
MV 2 VARIO select	200-230 V   50-60 Hz	CN	20738156

## Items supplied

Pump completely mounted, ready for use, with manual.

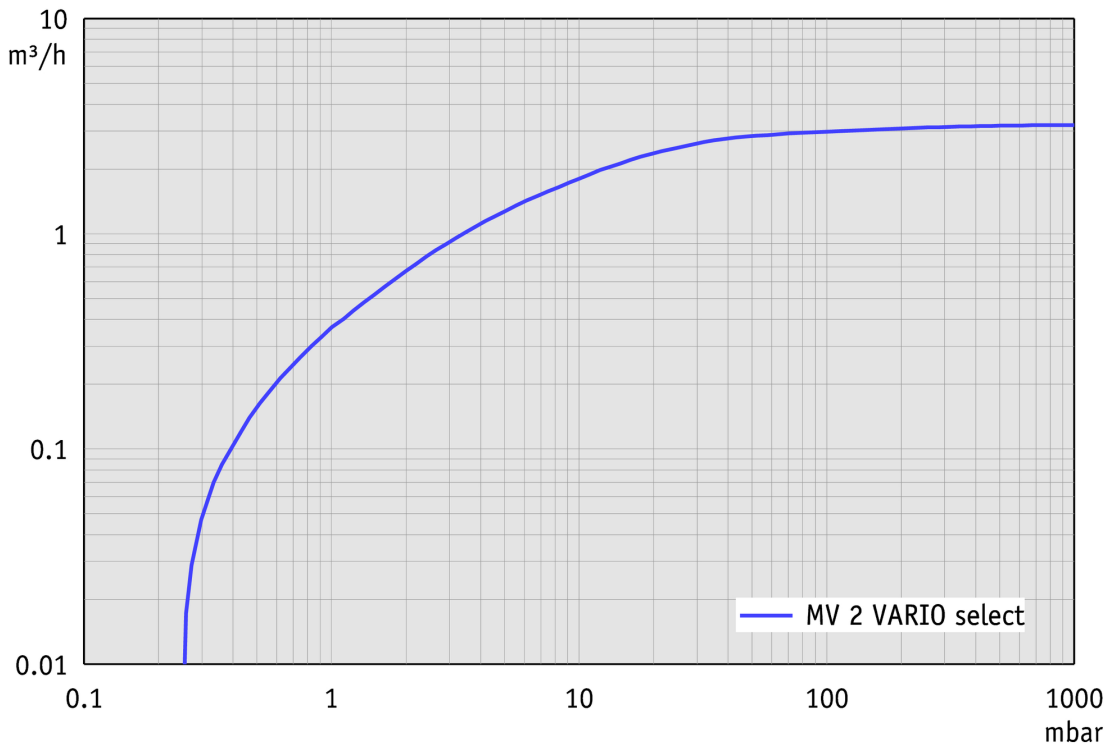
## Accessories

- Function extension for VACUU·SELECT controller VACUU·SELECT User Management (20700900)
- Rubber vacuum tubing DN 8 mm (20686001)
- Clamping ring for small flange KF DN 10/16 (20660000)
- External centring ring for small flange KF DN 10/16 (20660190)
- Small flange with hose nozzle KF DN 16 / DN 10 mm (20662806)
- Air admittance valve VB M-B (20674217)

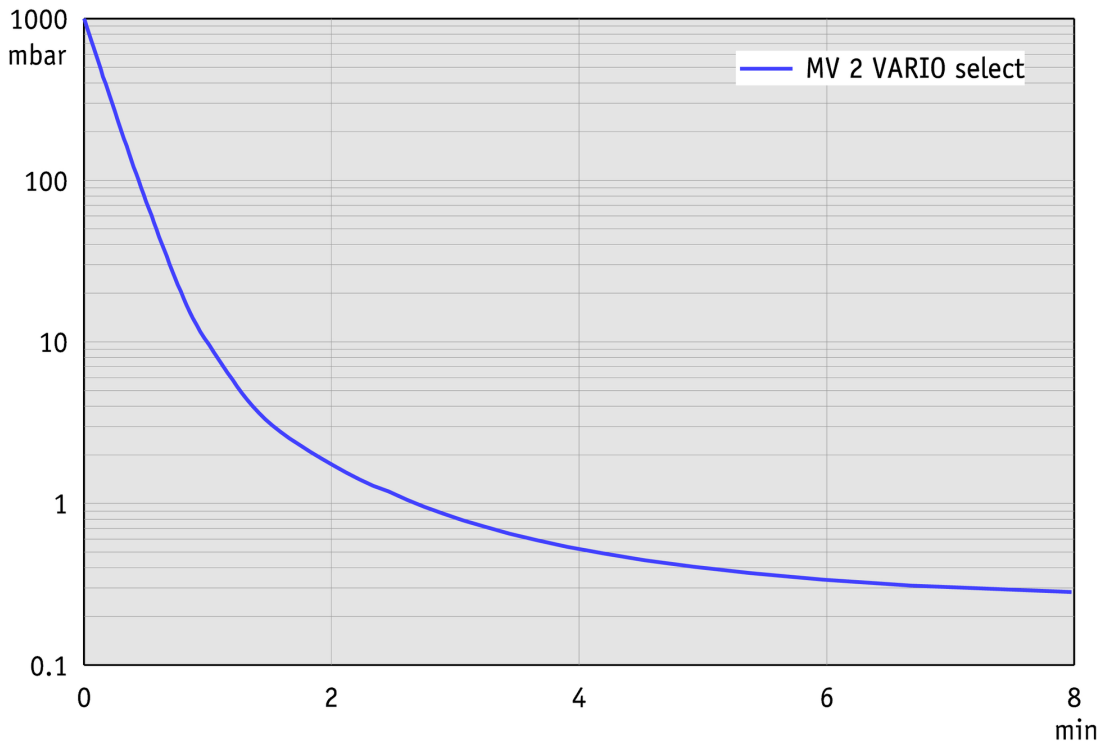
## Technical data

Max. pumping speed 50 Hz (mbar)	3.3 m <sup>3</sup> /h
Max. pumping speed 60 Hz (cfm)	1.9 cfm
Ultimate vacuum	0.3 mbar / 0.2 torr
Number of heads	4
Number of stages	4
Vacuum controller	VACUU-SELECT
Permissible ambient temperature range (operation)	10 - 40 °C
Permissible ambient temperature range (storage)	-10 - 60 °C
Max. outlet pressure (abs.)	1.1 bar
Inlet connection	small flange KF DN 16
Outlet connection	Silencer / G1/4"
Rated motor power	0.53 kW
Motor speed range	30 - 2400 min <sup>-1</sup>
Protection class IEC 60529	IP 20
Dimensions (L x W x H)	325 mm x 235 mm x 245 mm
Weight	19.1 kg
Noise (sound pressure level) in dBA at 50 Hz or 1500 rpm/62% (VARIO)/1500 rpm (VARIO-SP)/12500 Upm (VACUU-PURE®)	45 dBA
ATEX conformity	II 3/- G IIC T3 X Internal Atm. only
NRTL certification	No
Interface	Ethernet (RJ45): Modbus TCP / USB (Type A): Data transfer, software update, RS-232 (additional adapter required)

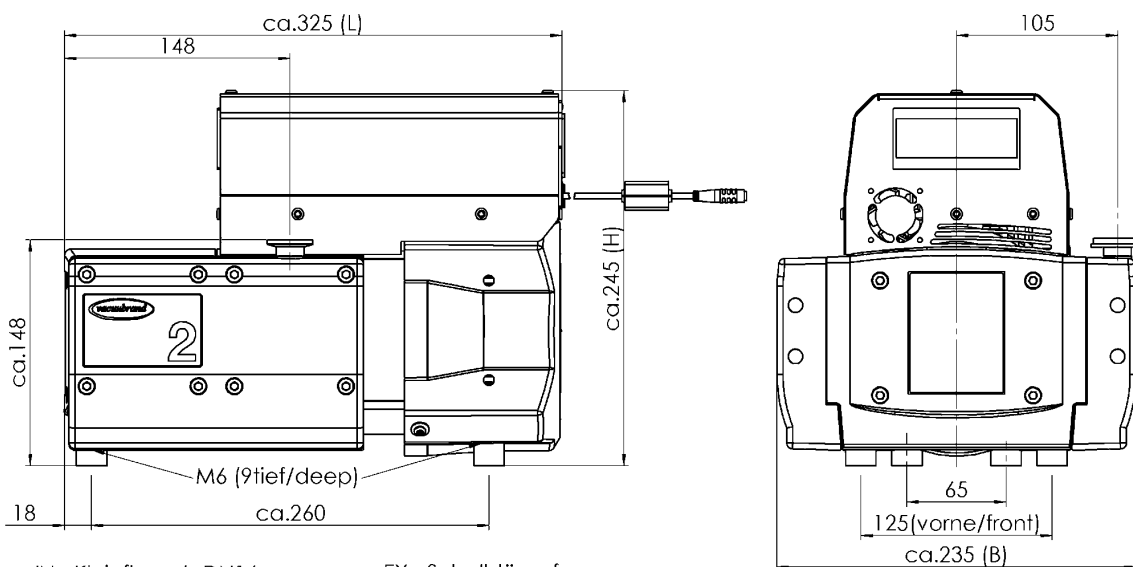
## Pumping speed graph at 50 Hz



## Pump down graph at 50 Hz (10 l volume)

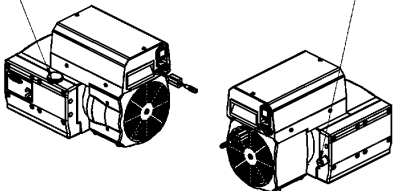


## Dimension sheet



IN - Kleinflansch DN16  
small flange 16

EX - Schalldämpfer  
silencer



Alle Maße / all dimensions (mm)

VACUUBRAND MV 2 NT VARIO  
Version 2013/07/26

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**VACUUBRAND®**

VACUUBRAND is part of the Brand group, a manufacturer of high-quality and innovative laboratory equipment and vacuum technology with a global team of approx. 1,000 employees.

With highly motivated and qualified employees, we manufacture the world's most comprehensive product family for vacuum generation, measurement and control for the rough and fine vacuum range in the laboratory.

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