

VARIO®-SP diaphragm pump MD 1 VARIO-SP

[Link to the website](#)



Product description

The three-stage MD 1 VARIO-SP diaphragm pump, with its variable speed drive system, attains significantly higher pumping speed and a better ultimate vacuum than the corresponding fixed speed pump. The brushless 24V DC motor (maintenance-free) enables easy integration of the pump into other equipment, and operation independent of line voltage. The pump is extraordinarily silent and vibration-free, with an extended lifetime for its diaphragms.

Performance features

- contamination-free pumping and evacuation
- high flow rate even near ultimate vacuum
- variable speed: Fast pump down at high motor speed, with reduced speeds to maintain vacuum
- very powerful and extremely compact; whisper quiet and ultra-low vibration, especially at low speed
- customized versions available

Ordering data

Product name	Nominal mains voltage mains frequency	Plug type	Articleno.
MD 1 VARIO-SP	24 V DC	Open wires	20696101

Items supplied

Pump completely mounted, ready for use, with 2 m cable without plug and with manual

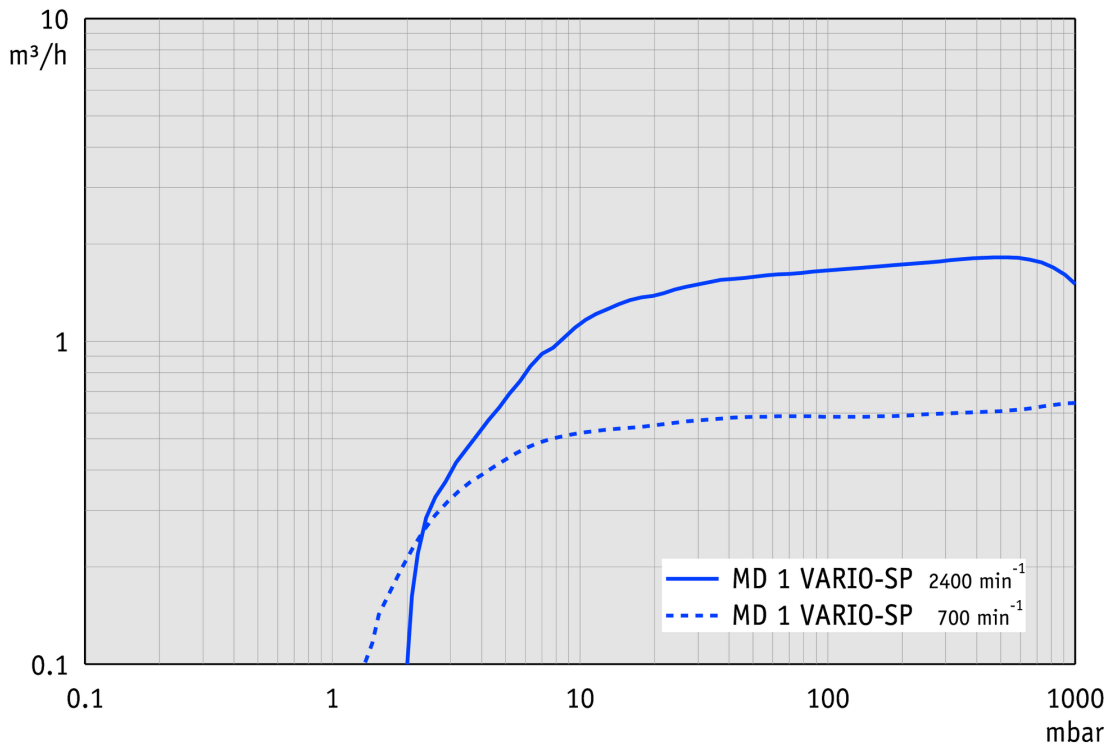
Accessories

- Rubber vacuum tubing DN 6 mm (20686000)
- Screw-in flange, stainless steel KF DN 16 / G1/8" (20637425)

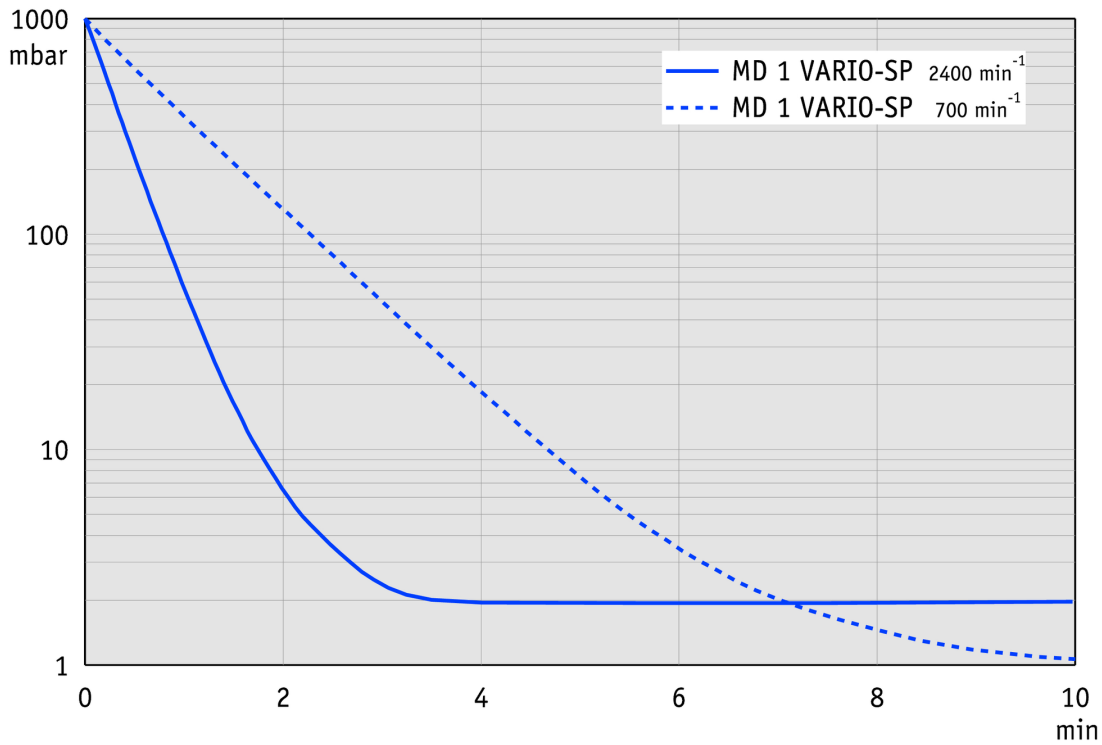
Technical data

Max. pumping speed 50 Hz (mbar)	1.8 m ³ /h
Max. pumping speed 60 Hz (cfm)	1.06 cfm
Ultimate vacuum	1 mbar / 0.75 torr
Number of heads	4
Number of stages	3
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	Hose nozzle DN 6 mm
Outlet connection	Silencer / G1/8"
Rated motor power	0.064 kW
Motor speed range	200 - 2400 min ⁻¹
Protection class IEC 60529	IP 20
Dimensions (L x W x H)	223 mm x 143 mm x 163 mm
Weight	4.1 kg
Noise (sound pressure level) in dBA at 50 Hz or 1500 rpm/62% (VARIO)/1500 rpm (VARIO-SP)/12500 Upm (VACUU·PURE®)	37 dBA
ATEX conformity	II 3/- G Ex h IIC T3 Gc X Internal Atm. only
NRTL certification	Yes

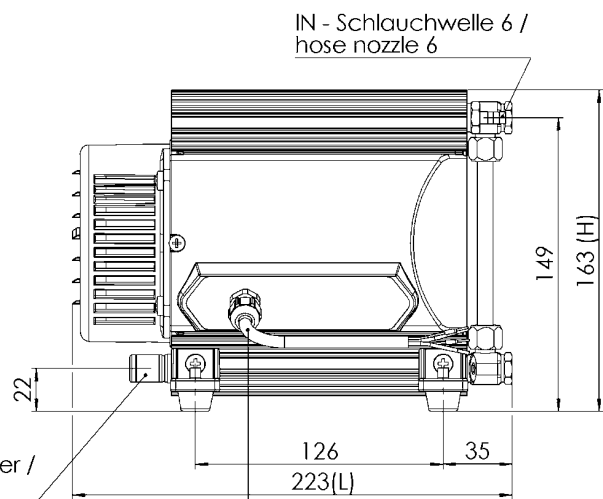
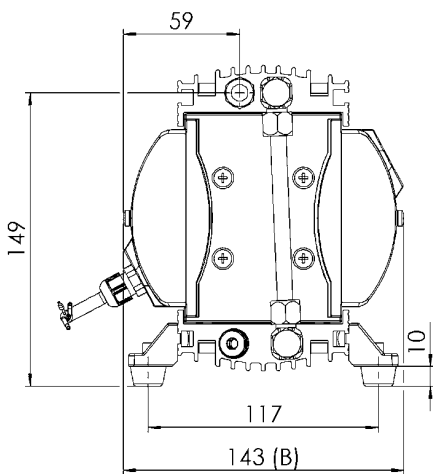
Pumping speed graph at 50 Hz



Pump down graph at 50 Hz (10 l volume)



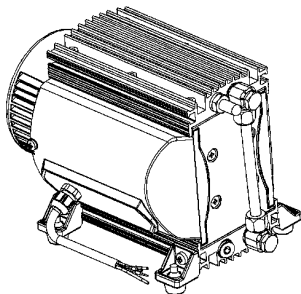
Dimension sheet



IN - Schlauchwelle 6 /
hose nozzle 6

EX - Schalldämpfer /
silencer

rot/red: +24V (supply)
blau/blue: GND (supply)
weiß/white: +PWM (control)
schwarz/black: GND (control)



Alle Maße / all dimensions (mm)

VACUUBRAND MD 1 V-SP
Version 2013/07/24

VACUUBRAND GMBH + CO KG
P.O. Box 1664
97877 Wertheim
T +49 9342 808 5550
F +49 9342 808 5555

info@vacuubrand.com
www.vacuubrand.com

VACUUBRAND®

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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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BRAND (Shanghai) Trading Co., Ltd.
Shanghai, China

T +86 21 6422 2318
info@brand.com.cn
china.brand.com.cn

BRAND Scientific Equipment Pvt. Ltd.
Mumbai, India

T +91 22 42957790
customersupport@brand.co.in
www.brand.co.in

BRANDTECH® Scientific, Inc.
Essex, CT. United States of America

T +1 860 767 2562
info@brandtech.com
www.brandtech.com