

# VARIO®-SP chemistry diaphragm pump MD 1C 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 particularly silent and vibration-free, and has an outstanding lifetime of its diaphragms and valves. For exceptional chemical resistance of the pump's internal flowpath it is also available as a chemistry design version (MD 1C VARIO-SP).

## Performance features

- contamination-free pumping and evacuation
- high flow rate even near ultimate vacuum
- VARIO®-SP = variable speed: Fast pump down at high motor speed, maintain vacuum with reduced motor speed
- very powerful and extremely compact; whisper quiet and ultra-low vibration, especially at low speed
- MD 1C VARIO-SP in chemistry design, with gas ballast valve and outstanding chemical resistance and superior vapor tolerance

Ordering data

| Product name   | Nominal mains voltage   mains frequency | Plug type  | Articleno. |
|----------------|---|------------|------------|
| MD 1C VARIO-SP | 24 V   DC                               | Open wires | 20696110   |

Items supplied

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

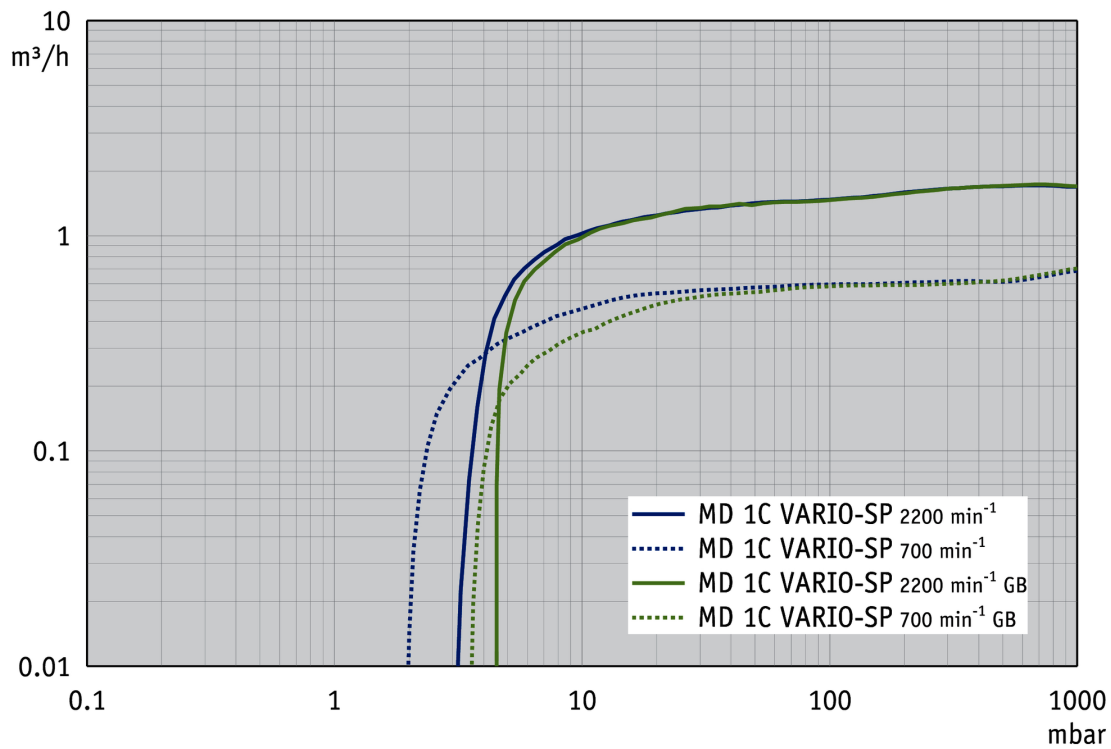
Accessories

- Rubber vacuum tubing DN 8 mm (20686001)
- Set of diaphragms and valves for MD 1C, MD 1C VARIO-SP, PC 2001/ 3001 VARIO, MV 0.5C MD 1C, MD 1C +AK+EK, MD 1C VARIO-SP, PC 2001 VARIO, PC 3001 VARIO, MV 0.5C (20696828)

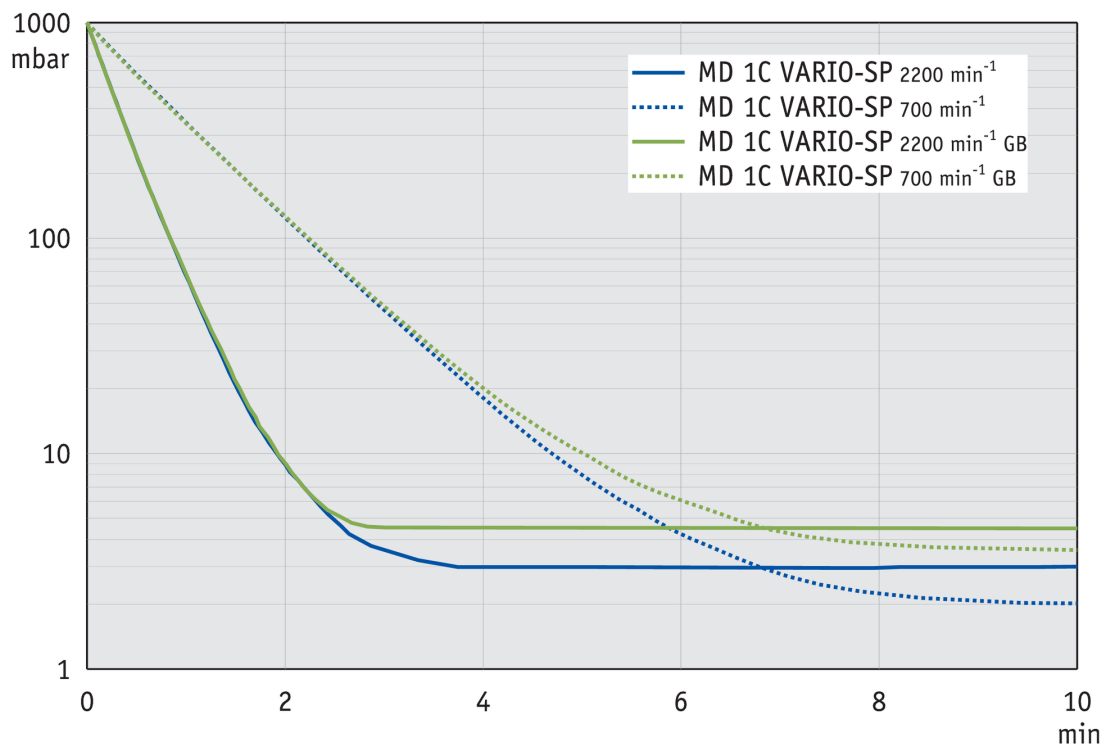
## Technical data

| Max. pumping speed 50 Hz (mbar)  | 1.8 m <sup>3</sup> /h                        |
|--|--|
| Max. pumping speed 60 Hz (cfm)   | 1.0 cfm                                      |
| Ultimate vacuum  | 2 mbar / 1.5 torr                            |
| Ultimate vacuum with gas ballast   | 4 mbar / 3 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 8-10 mm                       |
| Outlet connection  | Hose nozzle DN 8 mm                          |
| Rated motor power  | 0.064 kW                                     |
| Motor speed range  | 200 - 2400 min <sup>-1</sup>                 |
| Protection class IEC 60529   | IP 20  |
| Dimensions (L x W x H)   | 235 mm x 143 mm x 175 mm                     |
| Weight   | 4.2 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  |

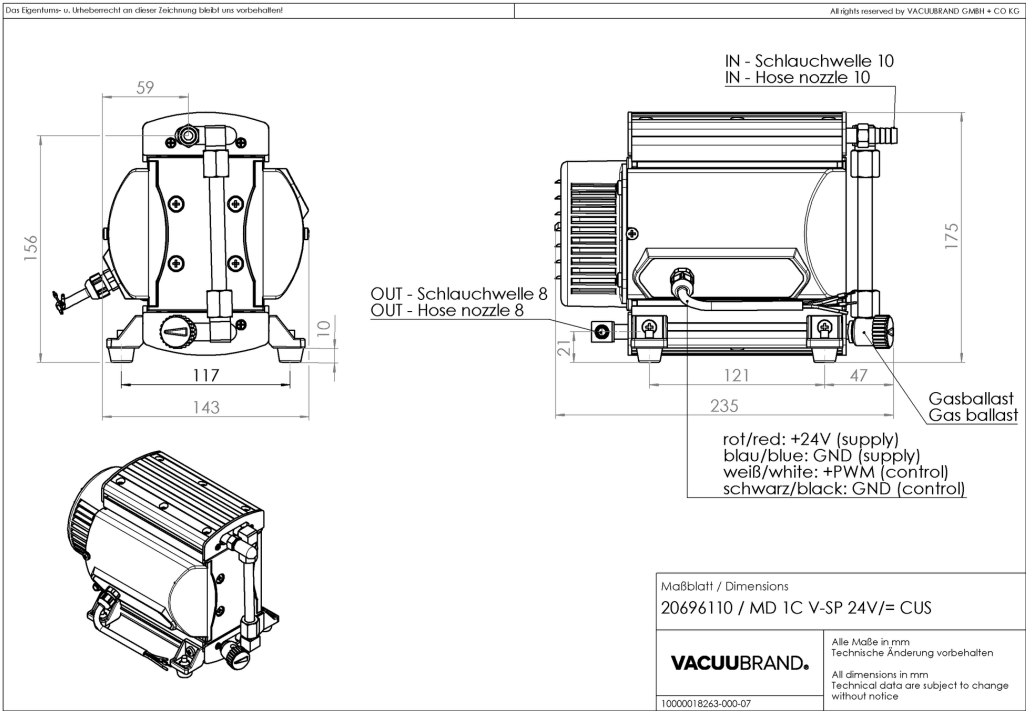
## Pumping speed graph at 50 Hz



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



Dimension sheet



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

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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