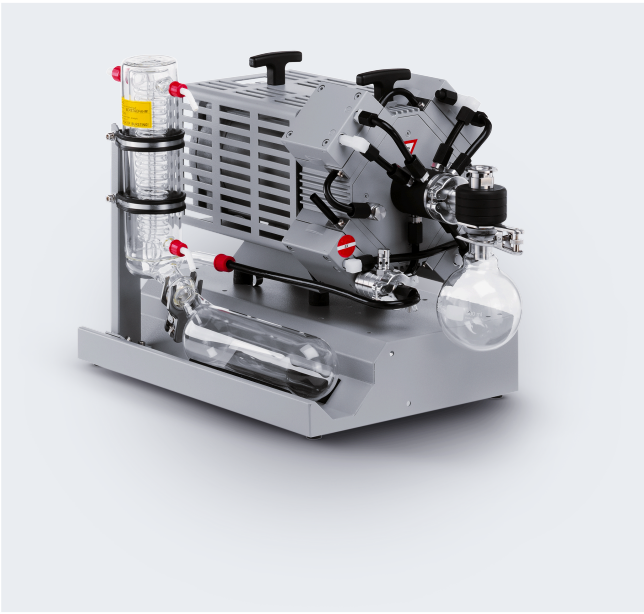
VACUUBRAND®

VARIO® chemistry vacuum system MD 4C EX VARIO +AK+EK



Link to the website

Product description

With the new ATEX VARIO® chemistry diaphragm pumps and vacuum systems, the vacuum can be precisely controlled by the motor speed. The VARIO® pump is driven by an additional control signal line. The optional vacuum controller VACUU·SELECT with ATEX vacuum sensor and Connection Box 100 enable fully automatic evaporations without the need for parameter settings or user programming. With the adaptive control it finds the boiling pressure independently and adjusts the vacuum continuously and optimally according to the vapor pressure. The vacuum controller and the Connection Box 100 are installed in a non-hazardous area.

Performance features

- full advantage of ATEX chemistry diaphragm pumps with separator AK and emission condenser EK
- VARIO®: short process times due to hysteresis-free VARIO® vacuum control
- VARIO®: VARIO®-pump operates on demand only as fast as necessary – minimal power consumption, extended maintenance intervals, silent operation
- VARIO®: Vacuum controller VACUU·SELECT (optional) for precise vacuum control and fully automatic processes
- Additional devices such as ATEX vacuum sensor and Connection Box 100 required for operation - also available from VACUUBRAND

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Link to the website:
https://shop.vacuubrand.com/20696937

Ordering data

Product name	Nominal mains voltage | mains frequency	Plug type	Articleno.
MD 4C EX VARIO +AK+EK	230 V | 50 Hz	Open wires	20696937

Items supplied

Pumping unit completely mounted with inlet separator and emission condenser, with manual. Shatter and shock protection for glass parts are to be provided by the customer. Speed control via 4-20 mA current loop (4 mA = 0 rpm, 20mA = 1500 rpm). Control signal and mains cable length 10 m, without plugs. Additional devices are required for operation, such as a connection box and controller.

Accessories

- Connection box for ATEX VARIO pumps Connection Box 100 (20635435)
- Vacuum sensor DMP 331i KF DN 16 (20635423)
- Vacuum sensor Cerabar PMP21 KF DN 16 (20635424)
- Vacuum controller CVC 3000 (20635028)
- PTFE-tubing (antistatic) with small flanges KF DN 25 (20686033)
- Analog-I/O-Module IN 4-20mA/OUT 0-10V VACUU·BUS® VACUU·BUS® (20635425)
- Isolating amplifier, for the connection of the ATEX VARIO pump/s Isolating amplifier 0-10V/4-20mA EX (20635426)
- Ex-i power/input isolating amplifier (20635427)
- (20612090)
- VACUU·BUS cable 2 m with male plug and with litz wires VACUU·BUS® (20612462)
- Set of diaphragms and valves MZ 2C EX, MD 4C EX (2x), MV 10C EX (4x) (20696837)

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Technical data

Max. pumping speed 50 Hz (m^3/h)	3.7 m^3/h
Ultimate vacuum	3 mbar / 2.3 torr
Ultimate vacumm with gas ballast	10 mbar / 7.5 torr
Number of heads	4
Number of stages	3
Vacuum controller	without controller
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 25
Outlet connection	Hose nozzle DN 8-10 mm
Coolant connection	2 x hose nozzle DN 6-8 mm
Rated motor power	0.25 kW
Motor speed range	30 - 1500 min^{-1}
Protection class IEC 60529	IP 54
Dimensions (L x W x H)	600 mm x 365 mm x 420 mm
Weight	36.8 kg
Noise (sound pressure level) in dBA at 50 Hz or 1500 rpm/62% (VARIO)/1500 rpm (VARIO-SP)/12500 Upm (VACUU·PURE®)	42 dBA
ATEX conformity	Pumping chamber (pumped gases): II 2G Ex h IIC T3 Gb X Environment with inert purge gas: II 2G Ex h IIB T4 Gb X Environment without inert purge gas: II 3G Ex h IIB T4 Gc X Motor: II 2G Ex db IIB T4 Gb
NRTL certification	No

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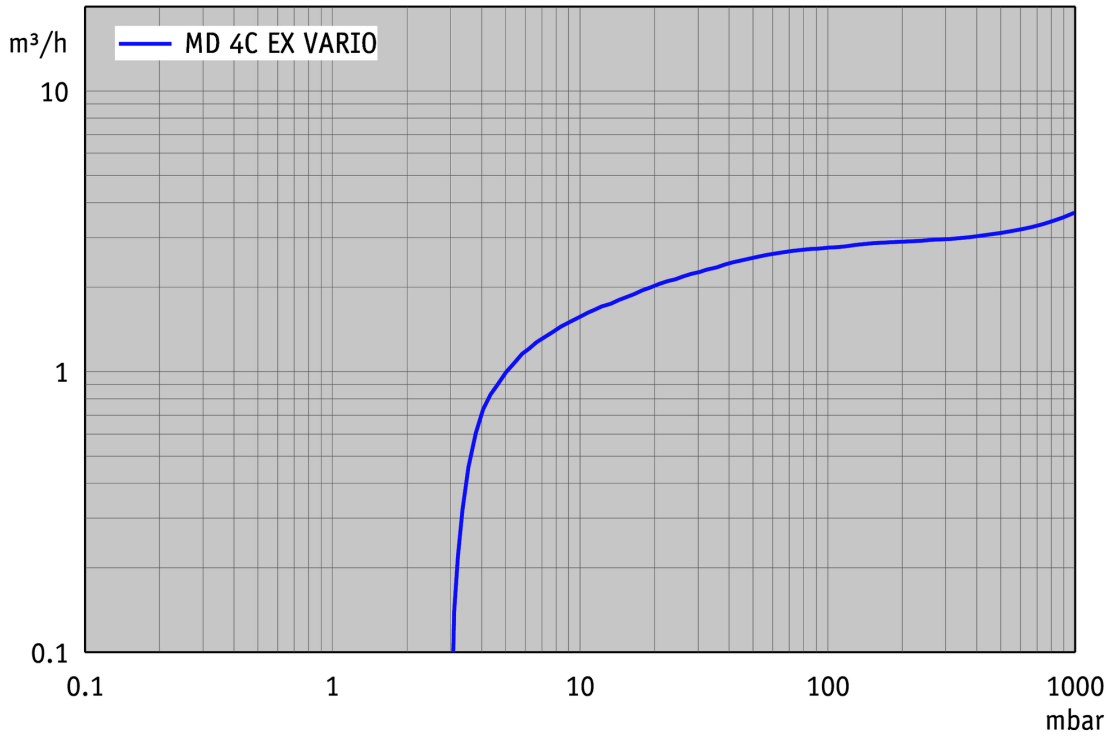
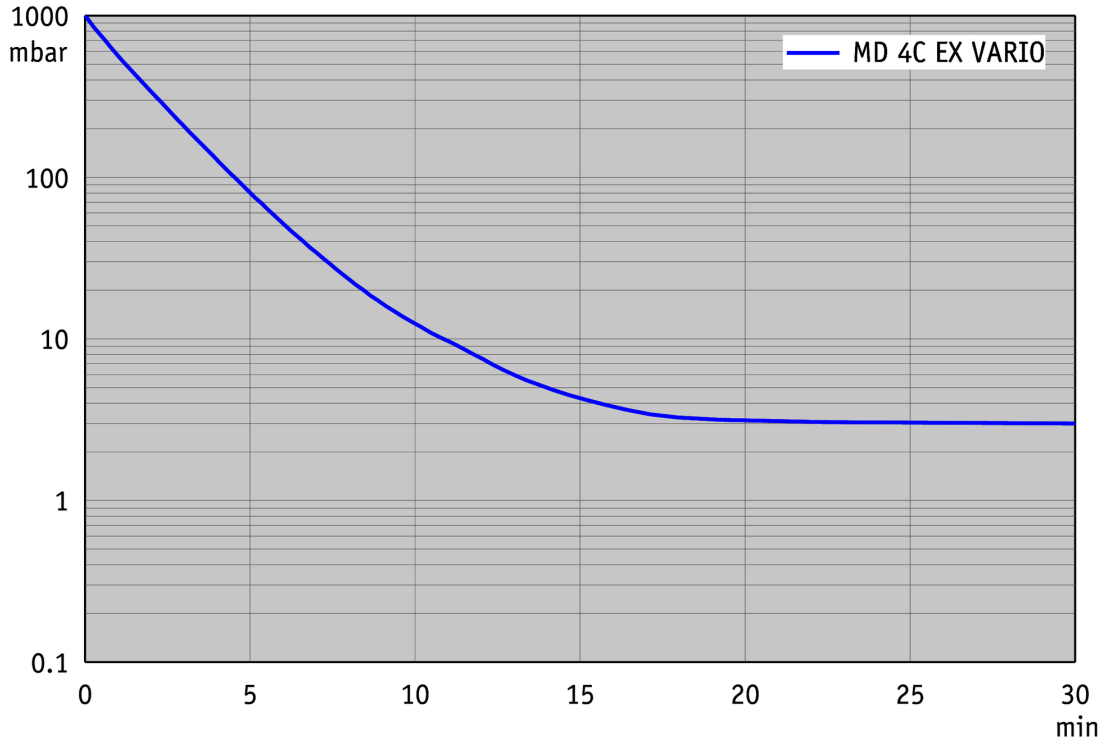
Pumping speed graph at 50 Hz



Pump down graph at 50 Hz (100 l volume)



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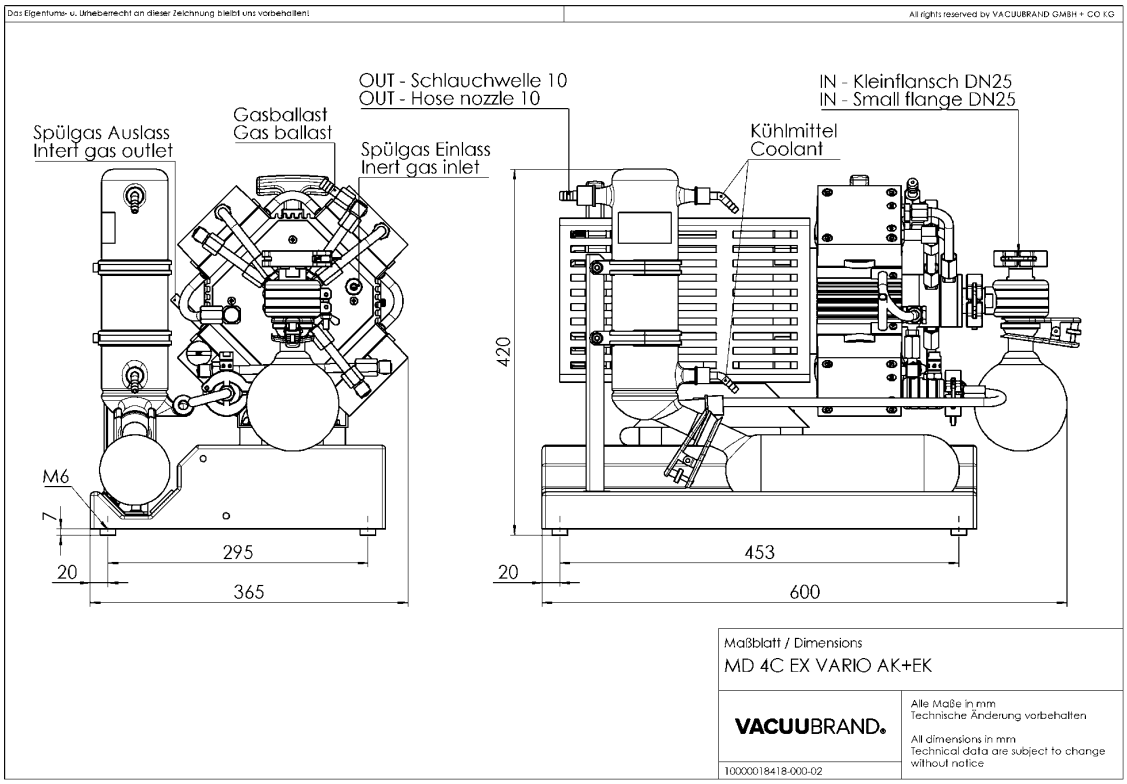
Dimension sheet





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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.

All with one goal:
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Engineering excellence is central to our ability to deliver products and solutions renowned for their quality, durability, and reliability. Innovative technology, high quality materials and extensive testing deliver unmatched performance - engineered and manufactured in Germany.

Together with you, our experts will find the best solution for your application and provide you with first-class service along the way.

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