

## DIAPHRAGM PUMP

### MD 4 NT AND MD 4 NT VARIO

- These three-stage diaphragm pumps are an excellent solution for continuous, oil-free pumping of non-corrosive gases. They reach an excellent ultimate vacuum of 1 mbar. All parts in contact with pumped gases and vapors are made of aluminum, stainless steel and carefully selected plastics suitable for a wide range of applications with non-corrosive gases. The new NT-series provides whisper quiet and ultra-low-vibration operation, high leak tightness and improved performance. The highly flexible fabric-reinforced double diaphragm made of FPM is ideal for extended operating life. The VARIO® design includes the VARIO® pump and the CVC 3000 vacuum controller with external gauge head. The demand-responsive motor speed control on VARIO® models further extends the already long lifetimes of VACUUBRAND diaphragms and valves.

**MD 4 NT**  
**3.8 m<sup>3</sup>/h**  
**1 mbar**



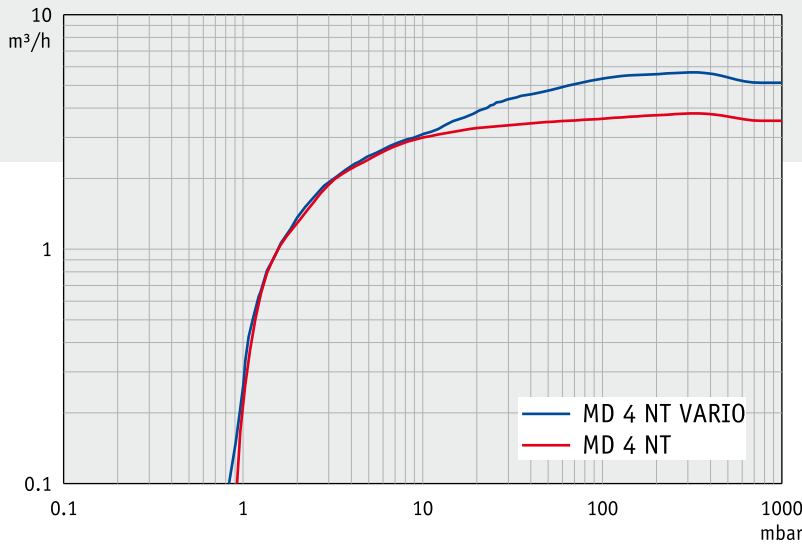
**MD 4 NT VARIO**  
**5.7 m<sup>3</sup>/h**  
**1 mbar**

#### PERFORMANCE FEATURES

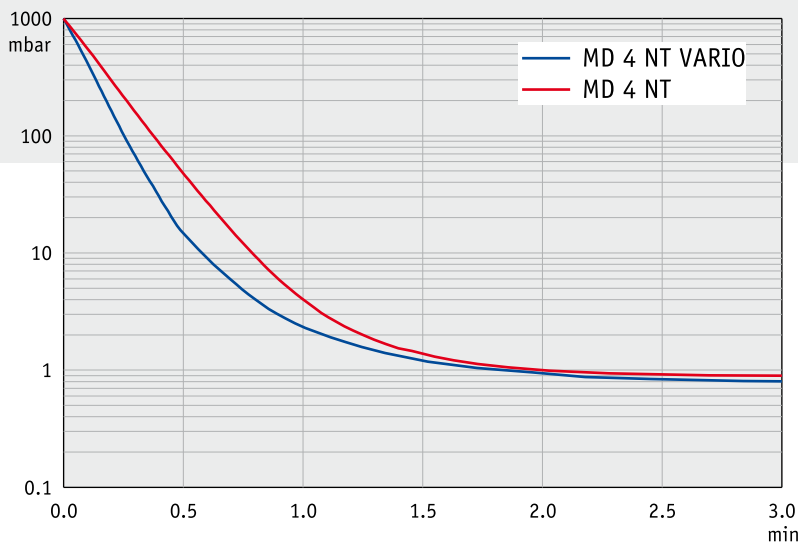
- contamination-free pumping and evacuation
- high flow rate even near ultimate vacuum
- VARIO® option for self-regulating vacuum optimization throughout the process
- excellent ultimate vacuum, VARIO® version with higher pumping speed and TURBO·MODE™ for use as backing pump for turbo pumps
- CVC 3000 controller on VARIO® version offers easy operation with clear text menus

#### APPLICATIONS

These three-stage diaphragm pumps are an excellent choice for continuous, contamination-free evacuation and pumping of non-aggressive gases at demanding vacuum conditions. They are especially suitable for applications in physics and analytics. The low ultimate vacuum makes these an attractive alternative to rotary vane pumps in many applications. Typical uses are as backing pump for turbomolecular drag pumps, and for degassing of viscous media. Additionally, the VARIO® model provides vacuum control by precise adjustment of the diaphragm pump's motor speed to process conditions. Depending on the application, the demand-responsive motor speed control of VARIO® models further extends the long diaphragm life for which VACUUBRAND pumps are known, and produces an even higher pumping speed.



Pumping speed graph at 50 Hz


 Pump down graph at 50 Hz  
(10 l volume)

Pumping speeds and pump down times are only for information. Ultimate vacuum specification: See "Technical Data"

<b>TECHNICAL DATA</b>		<b>MD 4 NT</b>	<b>MD 4 NT VARIO</b>	<b>ORDERING INFORMATION</b>		<b>MD 4 NT</b>
Vacuum controller	-	-	CVC 3000	230 V ~ 50-60 Hz	CEE	736000
Number of heads / stages	4 / 3	4 / 3	4 / 3	230 V ~ 50-60 Hz	CH	736001
Max. pumping speed at 50/60 Hz	m³/h 3.8/4.3	5.7	5.7	230 V ~ 50-60 Hz	UK	736002
Ultimate vacuum (abs.)	mbar 1	1	1	100-115 V ~ 50-60 Hz /		
Max. back pressure at outlet (abs.)	bar 1.1	1.1	1.1	120 V ~ 60 Hz	US	736003
Inlet connection (IN)	Small flange KF DN 16	Small flange KF DN 16	Small flange KF DN 16	100-115 V ~ 50-60 Hz / 120 V ~ 60 Hz		
Outlet connection (EX)	Silencer / G1/4"	Silencer / G1/4"	Silencer / G1/4"	200-230 V ~ 50-60 Hz		
Rated motor power	kW 0.25	0.53	0.53	IEC plug EN 60320		736005
Degree of protection	IP 40	IP 20	IP 20	With NRTL certification for Canada and the USA		
Dimensions (L x W x H)	mm 325 x 239 x 198	325 x 235 x 245	325 x 235 x 245	<b>ORDERING INFORMATION</b>		<b>MD 4 NT VARIO</b>
Weight	kg 16.4	18.6	18.6	200-230 V ~ 50-60 Hz	CEE	736300
				200-230 V ~ 50-60 Hz	CH	736301
				100-120 V ~ 50-60 Hz	US	736303

**ACCESSORIES MD 4 NT**

Stainless steel tubing KF DN  
16 (1000 mm: 673336)

**ACCESSORIES MD 4 NT VARIO**

Stainless steel tubing KF DN  
16 (1000 mm: 673336)  
Vent valve VBM-B (674217)

**ITEMS SUPPLIED**

Pump completely mounted, ready  
for use, with manual