

# DIAPHRAGM PUMPS

## MD 12 AND MD 12C

vacuubrand

### MD 12 three-stage

..... **9.6** m<sup>3</sup>/h  
 ..... **6.1** cfm  
 ..... **173** l/min

..... **2** mbar  
 ..... **1.5** Torr

### MD 12C three-stage

..... **8.3** m<sup>3</sup>/h  
 ..... **5.2** cfm  
 ..... **148** l/min

..... **2** mbar  
 ..... **1.5** Torr

The MD 12 and MD 12C are the most powerful pumps of the three-stage diaphragm pump family, offering a pumping speed up to approx. 10 m<sup>3</sup>/h. They can be used in a wide range of applications, e.g. the pumping of air and inert gases, the backing of wide-range turbo pumps (MD 12) or the transfer of solvent vapours and aggressive gases (MD 12C). Their high pumping speed can lead to a significant improvement in process times, or allow the efficient simultaneous operation of processes in a vacuum network.



MD 12C

#### SPECIAL ADVANTAGES

- Outstanding pumping speed even at low pressures due to precisely guided planar diaphragm
- Three-stage design for higher performance compared to two-stage pumps
- Selected chemically resistant materials (MD 12C)
- Continuous, oil-free pumping of gases and vapours
- Gas ballast valve for working with condensates as standard (MD 12C)
- Optimised lifetime of diaphragms and valves of approx. 10,000 h under appropriate conditions
- No water consumption, no waste water
- Easy-to-change diaphragms and valves
- Low noise level and vibration
- Compact design

The choice between the two basic designs depends on the application:

#### MD 12 "Aluminium"

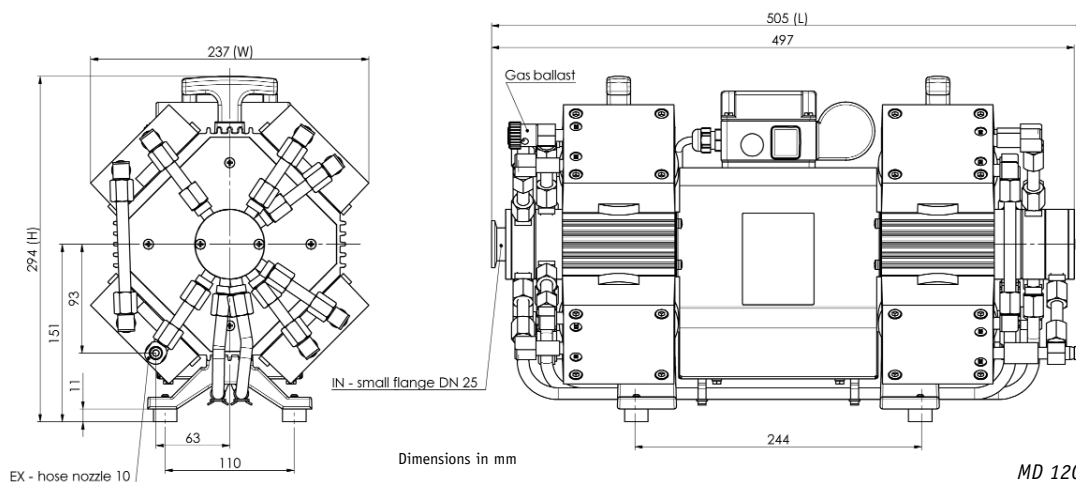
Gas-contacting parts made of e.g. aluminium, FPM and PE. Designed for a multitude of applications involving non-aggressive gases in laboratories and process plants, e.g. vacuum drying, vacuum impregnation, backing of cryo and wide-range turbo pumps.

#### MD 12C "Chemistry"

All parts coming into contact with gases and vapours are made of chemically resistant fluoroplastics, e.g. PTFE and ETFE. Typical applications are the transfer of aggressive gases and vapours, large rotary evaporators, drying chambers, local-area vacuum networks (VACUU-LAN®), etc.



MD 12



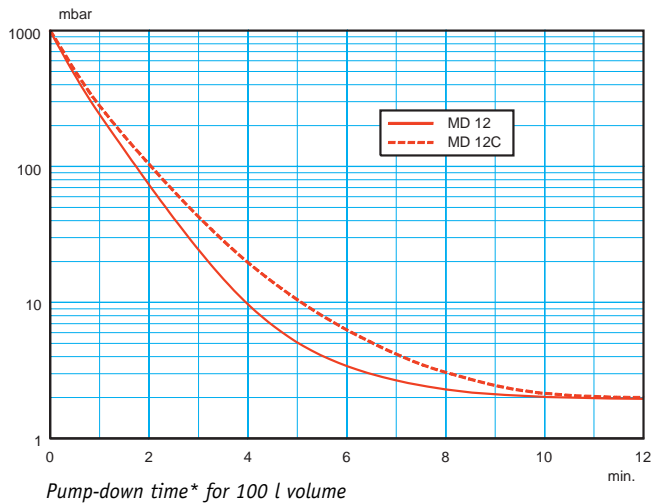
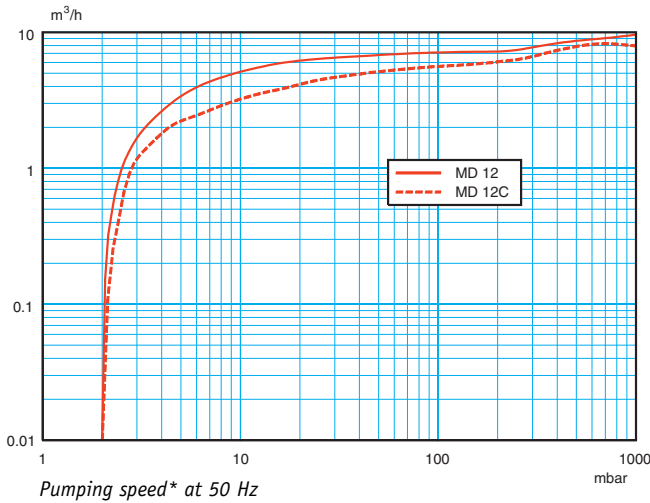
MD 12C



**VARIO Chemistry Pumping Unit PC 2012 VARIO: see page 101**

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#### TECHNICAL DATA

		MD 12	MD 12C
Number of stages		3	3
Max. pumping speed (DIN 28432) 50/60 Hz	m <sup>3</sup> /h//cfm	9.6/10.4//6.1	8.3/8.9//5.2
No. of cylinders		8	8
Ultimate vacuum (total)	mbar//Torr	2//1.5	2//1.5
Ultimate vacuum with gas ballast	mbar//Torr	-	9//6.8
Max. outlet pressure (total)	bar	1.1	1.1
Inlet connection (IN)		small flange NW 25	small flange NW 25
Outlet connection (EX)		hose nozzle NW 10/silencer	hose nozzle NW 10
Motor power	kW	0.39	0.39
Motor rpm (nominal) 50/60 Hz	min <sup>-1</sup>	1500/1800	1500/1800
Protection class		IP 20	IP 20
Dimensions (L x W x H)	mm	486 x 227 x 294	505 x 237 x 294
Mass	kg	24	25

**Items supplied:** Diaphragm pump with on/off switch, cable, plug and instructions for use.

#### ORDERING INFORMATION

		MD 12	MD 12C
230 V ~ 50-60 Hz	plug CEE	71 00 00	71 01 50
230 V ~ 50-60 Hz	plug CH	71 00 01	71 01 51
230 V ~ 50-60 Hz	plug UK	71 00 02	71 01 52
120 V ~ 60 Hz	plug US	71 00 03	71 01 53

#### ACCESSORIES

Base module for chemistry pumping unit PC 8 (without pump) for MD 12 (C)	69 99 49
Separator inlet side AK PC 8, NW 25 for MD 12 (C)	69 99 80
PTFE vacuum tubing with small flange NW 25	see page 117



PTFE Vacuum Tubing

\* Pumping speeds and pump-down times are only for information. Ultimate vacuum specification: see Technical Data.