

TECHNICAL DATA SHEET

ALab™ C410 Chemistry-Design Diaphragm Vacuum Pump

Oil-free chemistry-design diaphragm pump • 13 mbar ultimate vacuum • 25 L/min • 50 dB



ACS Material ALab™ C410 Chemistry-Design Diaphragm Vacuum Pump

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SECTION I

Product Overview

The ALab™ C410 Chemistry-Design Diaphragm Vacuum Pump is an oil-free vacuum source for rotary evaporation and other laboratory vacuum work. It reaches an ultimate vacuum of 13 mbar, moves 25 L/min of free air, and is rated for continuous operation with a manufacturer-stated noise level of 50 dB. Two pump heads driven at 1450 rpm supply the vacuum through 8 mm hose nozzles, and the published speed table lets the pump be matched to a given system volume and working pressure. It connects directly to the RE100-Pro and RE100-S distillation systems.

SECTION II

Core Advantages

- **Oil-free, chemistry-design** — no pump oil, no oil changes, no oil-mist contamination
- **25 L/min free air capacity** — published pressure/flow pairs from 1000 down to 280 mbar
- **13 mbar ultimate vacuum** — covers routine rotary evaporation of common solvents
- **Continuous-duty rating** — continuous operation, 95 W, manufacturer-stated 50 dB

SECTION III

Specifications

Technical data

Specifications	
Ultimate Vacuum (Final Pressure)	13 mbar
Free Air Capacity	25 L/min
Work Mode	Continuous operation
Motor Speed	1450 rpm
Nozzle Size	8 mm
Power	95 W
Noise	50 dB
Flow Rate at 1000 mbar	25 L/min
Flow Rate at 880 mbar	22 L/min
Flow Rate at 750 mbar	20 L/min
Flow Rate at 600 mbar	12 L/min

Specifications	
Flow Rate at 480 mbar	7.5 L/min
Flow Rate at 280 mbar	5 L/min
Electrical Configurations	US 110 V / 60 Hz · EU, UK 220 V / 50 Hz

Only the listed pressure/flow pairs are manufacturer-published. Intermediate pumping speeds are not specified.

Electrical configurations (one configuration per unit)

- US plug, 110 V / 60 Hz
- EU plug, 220 V / 50 Hz
- Connects to RE100-Pro and RE100-S
- Version-specific ratings for the US 110 V / 60 Hz configuration are pending manufacturer confirmation.
- UK plug, 220 V / 50 Hz
- Optional: vacuum regulator / moisture trap 18900186

SECTION IV

Applications

Typical applications for the ALab™ C410 Chemistry-Design Diaphragm Vacuum Pump include (suitability depends on vapor compatibility, system configuration and appropriate traps):

- **Rotary evaporation** — matched vacuum source for the RE100-Pro and RE100-S
- **Vacuum filtration & degassing** — oil-free suction for filtration and degassing
- **Vacuum drying** — continuous-duty evacuation of drying ovens and desiccators
- **Distillation support** — reduced-pressure distillation in chemical and pharma labs

Product value: oil-free operation with no oil mist or oil changes, a published pressure/flow table for transparent preliminary system sizing, and a continuous-duty rating with a manufacturer-stated 50 dB noise level. Solvent vapors pass through the pump and leave at the exhaust: use an appropriate cold trap or moisture trap for condensable vapors and route solvent-laden exhaust per laboratory safety procedures.

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