



SARAL ENGINEERS LLP

BUSINESS DEVELOPMENT CONSULTANT

MECHANICAL VAPOR RECOMPRESSION (MVR)

VAPOFAN - THE LOW FLOW MVR BLOWER

The leader in Mechanical Vapor Recompression (MVR) Blowers and Compressors, has an improved solution for low flow MVR applications. SEL has offered low flow high speed MVR Blowers and now – through our continuous improvement program – we are offering our VapoFan line. This series of MVR Blowers offers advanced performance with improved reliability in a modular equipment offering. The VapoFan line is a complete system consisting of a vertically arranged blower with support structure, a high-speed motor and a Variable Frequency Drive (VFD) with machinery monitoring instruments mounted in a standalone control cabinet. Blower and motor are perfectly matched for mass flows from 200 to 9,000 kg/h.

KEY-FEATURES OF THE VAPOFAN

Dimensions and weights

- Weights: approx. 400 kg–700 kg
- Height: approx. 1.60 m–2.30 m
- Width: approx. 1.50 m x 1.00 m

The Blower

- Performance: up to 11 K temperature rise single stage
- Casing material: Duplex
- Impeller materials:
 - Welded: Super Duplex
 - Milled: 17-4PH or Titanium grade 5 for high mass flow units
- Shaft seal (4 rings): water/vapor buffer or vacuum suction

The Drive Train

The drive train is a perfectly matched system of the synchronous high-speed motor and the VFD cabinet.

- **High Speed Motor**
 - 160 kW, motor speed up to 13,500 rpm
 - 90 kW, motor speed up to 11,000 rpm
 - 37 and 55 kW, motor speed up to 13,500 rpm
 - Hybrid ceramic bearing L10h = 40,000 h
 - Automatic regreasing
- **VFD Cabinet**
 - HF filter, commutator, sine filter
 - Power supply: 400 V/50 Hz, 480 V/60 Hz
 - Control voltage: 24 VDC
 - Temperature, speed and vibration monitoring
 - Cabinet: (LxWxH) 1.0 x 0.66 x 2.2 m
 - Weight: approx. 360 kg

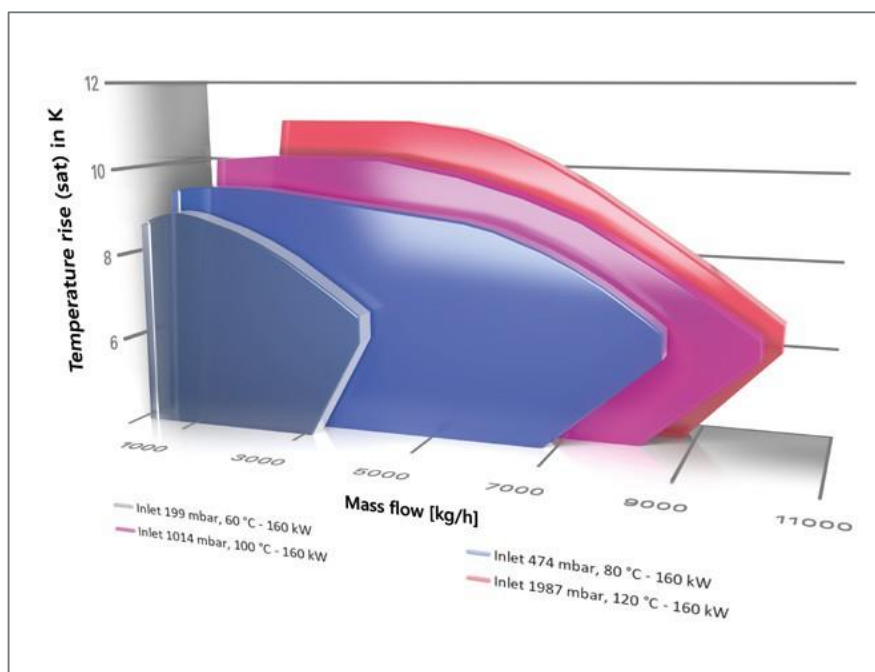


VapoFan 2-stage design



VFD Cabinet for High-Speed Motors

VapoFan Type	Volume Flow [m³/h]
28 125	1,800–2,880
28 160	2,880–4,680
32 140	2,160–3,960
32 180	3,600–6,480
36 160	3,240–5,400
36 200	4,680–8,280
40 180	3,960–6,840
40 225	6,480–10,800
45 200	5,040–8,640
45 250	7,560–12,600
56 250	7,920–12,960
56 315	12,240–18,000



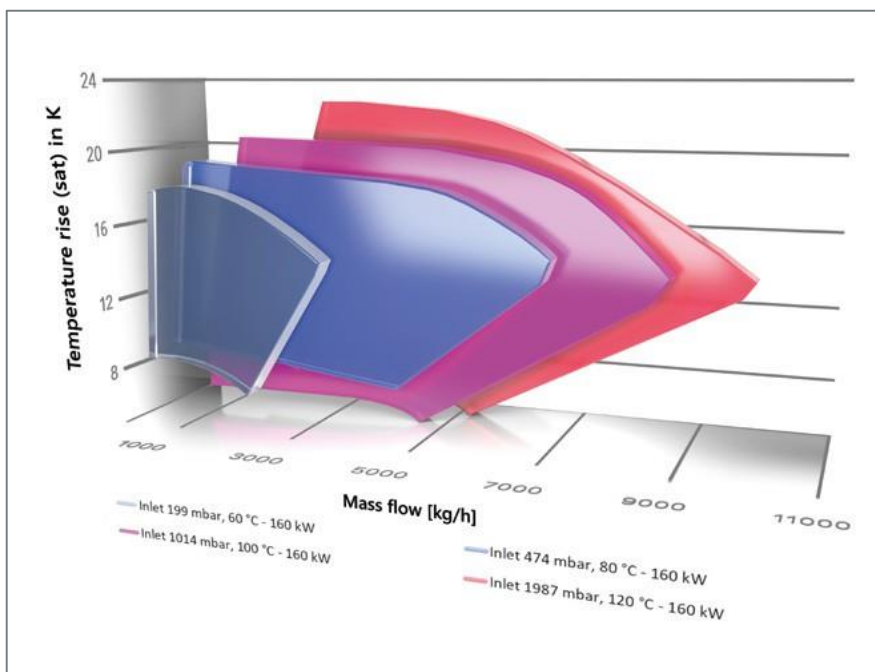
Single stage design - Performance summary of VapoFan product range

VAPOFAN 2-STAGE DESIGN

Additionally, we offer engineered standard 2-stage design – for temperature rise up to 22 K.

Dimensions and weights

- Weights: approx. 800 kg–1,400 kg
- Height: approx. 2.60 m
- Width: approx. 1.50 m



2-stage design - Performance summary of VapoFan product range