

# PILLER VAPOFAN HIGH SPEED BLOWERS FOR MVR PROCESSES

PILLER, the leader in Mechanical Vapor Recompression (MVR) Blowers, has an improved solution for low flow MVR applications. For over 30 years PILLER has offered low flow high speed MVR Blowers and now – through our continuous improvement program – we are offering our VapoFan series. This series of MVR Blowers offers advanced performance with improved reliability in a standard equipment offering. The VapoFan series is a complete system consisting of 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. The VapoFan is a standardized design for lower cost and shorter delivery with perfectly matched blower and motor for mass flows from 200 to 5000 kg/hr.

## KEY-FEATURES OF THE PILLER VAPOFAN

### Dimensions and weights

- Weights: approx. 400 kg–600 kg
- Height: approx. 1.60 m–2.20 m
- Width: approx. 1.50 m x 1.00 m

### PILLER High Speed Blower

- Performance: up to 10 K temperature rise single stage
- Casing material: Duplex
- Impeller materials:
  - Welded: Super Duplex
  - Milled: Weldural aluminum alloy and 17-4PH 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.

- **PILLER High Speed Motor**
  - 90 kW, motor speed up to 11,000 rpm
  - 55/37/22 kW, motor speed up to 13,500 rpm
  - Hybrid ceramic bearing L10h = 40,000 h
  - Automatic regreasing
- **VFD Cabinet**
  - VFD from KEB Automation KG, Germany
  - With KEB 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 2.11 m
  - Weight: approx. 500 kg

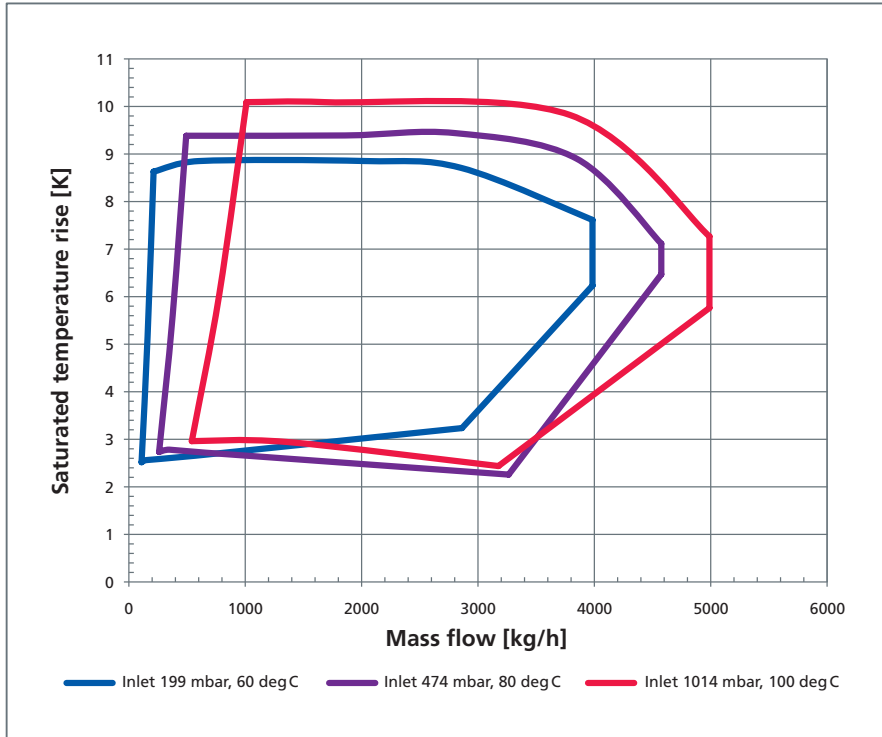


*PILLER VapoFan single stage*



*VFD Cabinet for PILLER High Speed Motors*

VapoFan Type	Mass flow [kg/h] at 60 degC
28 45	200–500
28 56	350–850
32 45	250–700
32 56	450–1,200
36 45	350–1,000
36 56	550–1,600
40 45	500–1,300
40 56	750–2,100
45 45	550–1,600
45 56	900–2,550
56 45	1,000–2,450
56 56	1,600–4,000



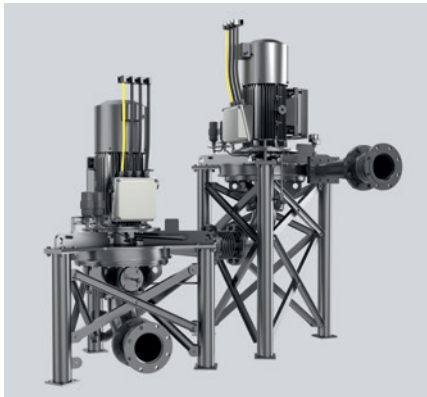
Single stage design – Performance summary of VapoFan product range

**VAPOFAN 2-STAGE DESIGN**

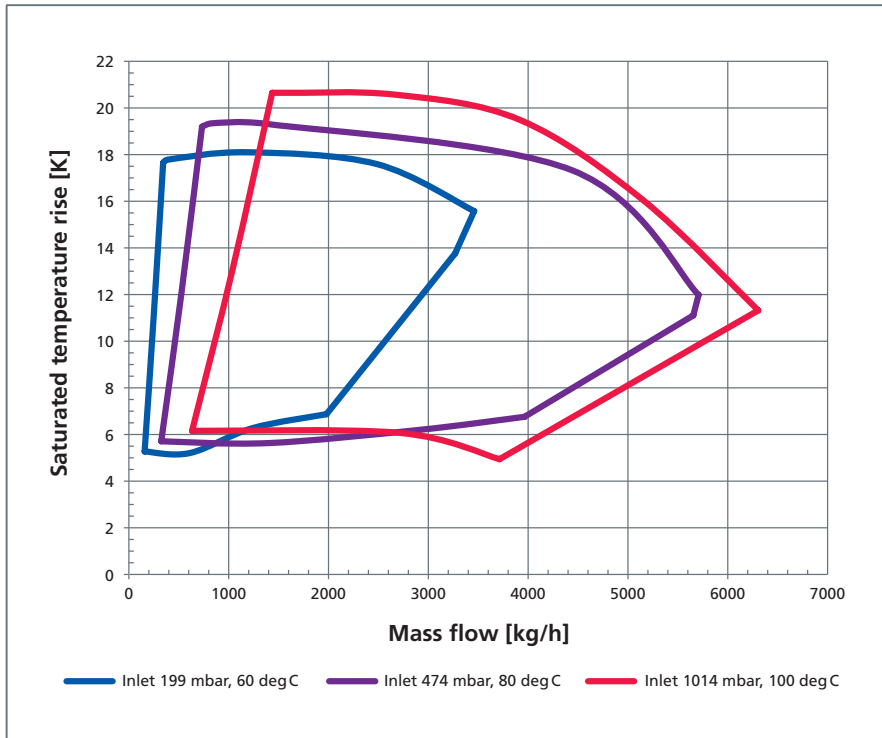
Additionally, we offer engineered standard 2-stage design – for temperature rise up to 21 K.

**Dimensions and weights**

- Weights: approx. 800 kg–1,200 kg
- Height: approx. 2.50 m
- Width: approx. 1.50 m



VapoFan 2-stage design



2-stage design – Performance summary of VapoFan product range

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