

HeatBooster HBS 4

Industrial heat pump
for sustainable heat
production up to
165°C



Viking Heat Engines

Overview

The HeatBooster is an industrial heat pump specially designed to boost waste heat from industrial processes up to 165 °C, making it ideal for drying, sterilization and pasteurization as well as many other heat-demanding processes.

This highly flexible heat pump system offers unprecedented flexibility, adapting easily and quickly to fluctuations in the supply of, and demand for, heat. Another major advantage is its ability to provide a high coefficient of performance (COP) at high temperature lifts.

At the heart of the HeatBooster is the piston compressor developed together with the world's leading engine design company, AVL. The compressor is based on an industrial, heavy-duty machine design capable of year-round operation, resulting in a product with a long service life and minimum of maintenance. It can also operate on all common refrigerants, including the more environmentally friendly HFOs with a global warming potential (GWP) of 10 or less.

Disclaimer:

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Key features

- Robust and proven technology
- Maximum output temperature up to 165°C (heat sink)
- Maximum input temperature up to 120°C (heat source)
- Heating capacity up to 250 kW_{th}, nominal capacity 200 kW_{th}
- Many combinations in heat source/heat sink possible: water/water, steam/steam, water/steam, steam/water
- Modular and scalable heating capacity up to 4 MW_{th} (serial or parallel)
- High coefficient of performance (COP) at high temperature lifts
- Compatible with all 3rd and 4th-generation working fluids such as R1234ze, R1233zd, R1336mzzE and R1336mzzZ
- Compact footprint
- Highly efficient permanent magnet synchronous motor for variable speed control
- Consistently high COP over the complete load range (20-100%)
- Minimal maintenance, long lifetime and 24/7-monitoring ensure high uptime
- PLC controlled (Siemens S7). Intuitive operation with color touch display
- Very low internal friction through exclusive use of low-friction bearings
- Water cooled motor for very high temperature applications with integrated thermal monitoring
- Multi-compressor phase synchronization for low vibrations and pulsations

Technical data

Main unit

Size (L x W x H)*	2,600 x 1,500 x 1,500 mm
Weight	2,700 kg
Working fluid	Depends on operational conditions

Compressor

Quantity	4
Type	Piston
Power regulation	Continuous

Evaporator*

Max input temperature	120 °C
Heat transfer medium	Water
Pressure rating	PN10
Min volume flow	5 m³/h
Max volume flow	50 m³/h

Condenser*

Max output temperature	165 °C
Heat transfer medium	Water
Pressure rating	PN25
Min volume flow	5 m³/h
Max volume flow	50 m³/h

Electrical cabinet

Size (L x W x H)	1,000 x 400 x 1,900 mm
Weight	300 kg
Voltage/Frequency	400 V/50 Hz
Max current	160 A

*The data for steam versions may vary

Case examples

W50/W95

Heating power	230 kW
Cooling power	178 kW
Electrical power	58 kW
Coefficient of Performance (COP)	4
Working fluid	R1234ze

W90/S115

Heating power	210 kW
Cooling power	176 kW
Electrical power	39 kW
Coefficient of Performance (COP)	5.3
Working fluid	R1233zd

W85/W120

Heating power	250 kW
Cooling power	209 kW
Electrical power	51 kW
Coefficient of Performance (COP)	4.9
Working fluid	R1336mzzE

W115/W160

Heating power	246 kW
Cooling power	198 kW
Electrical power	58 kW
Coefficient of Performance (COP)	4.2
Working fluid	R1336mzzZ

S115/S160

Heating power	195 kW
Cooling power	141 kW
Electrical power	61 kW
Coefficient of performance (COP)	3.2
Working fluid	R1336mzzZ

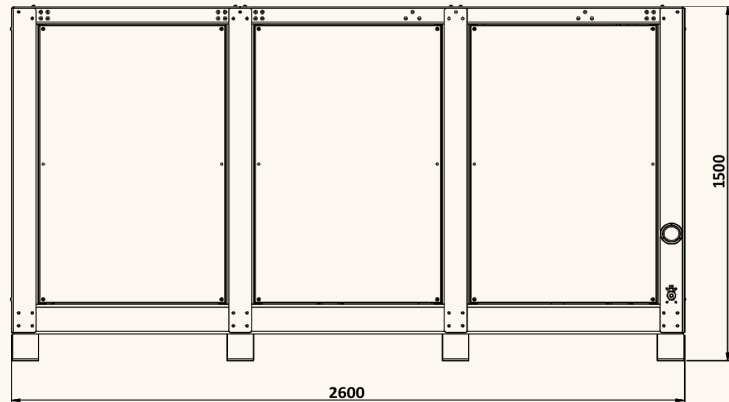
W=water temperature
S=saturated steam temperature

HBS 4

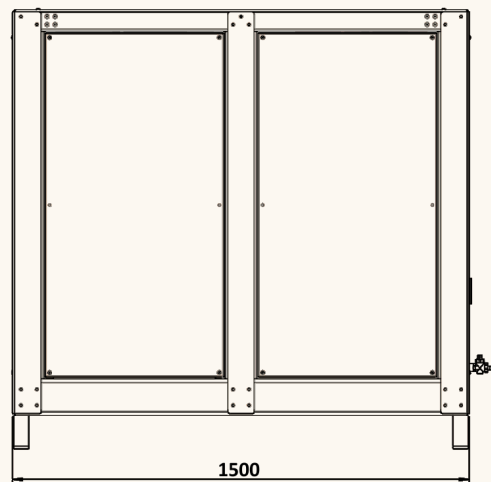


Dimensions

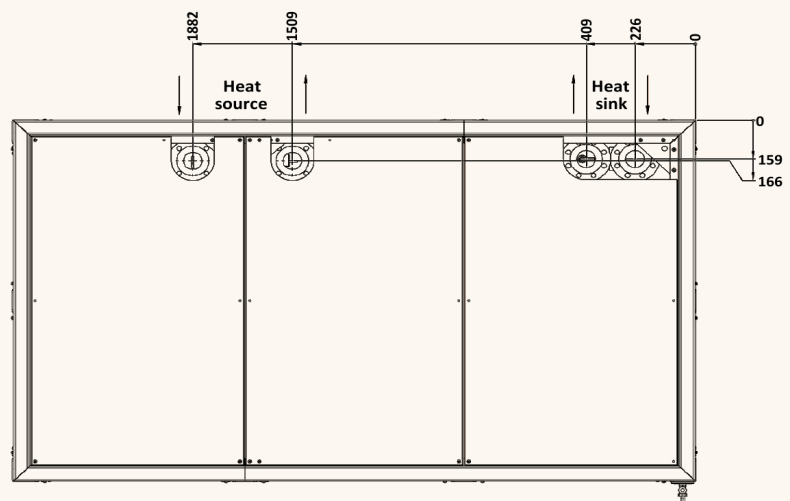
Front



Left



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