HeatBooster

HBS 4

Industrial heat pump for sustainable heat production up to 160 °C

Viking Heat Engines

Overview

The HeatBooster is an industrial heat pump that has been specially designed to boost waste heat from industrial processes up to 160 °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 and less.

Key features

- Robust, proven technology that can reach temperatures up to 160 °C
- Heating capacity up to 200 kW
- High coefficient of performance (COP) at high-temperature lifts
- Compact footprint
- Compatible with all 3rd and 4th-generation working fluids (e.g. HFOs)
- Very low internal friction through exclusive use of low-friction bearings
- Internal oil circuit with oil filter and preheater
- Highly efficient permanent magnet synchronous motor for variable speed control
- Water cooled motor for very high temperature applications with integrated thermal monitoring
- Optimized for parallel operation, where several compressors can run in parallel
- Multi-compressor phase synchronization for low vibrations and pulsations, if needed

Technical data

Main unit

Size (L x W x H)	2,560 x 1,490 x 1,500 mm
Weight	3,500 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 m^3/h
Max volume flow	50 m^3/h

Condenser

Max output temperature	165 °C
Heat transfer medium	Water
Pressure rating	PN25
Min volume flow	5 m^3/h
Max volume flow	50 m^3/h

Electrical cabinet

Size (L x W x H)	1,200 x 600 x 2,200 mm
Weight	450 kg
Voltage/Frequency	400 V/50 Hz
Max current	160 A

W80/W120*

	*water temperature
Heating power	200 kW
Cooling power	160 kW
Electrical power	42 kW
Coefficient of Performance (COP)	4.8
Operating current	67 A
Working fluid	R245fa

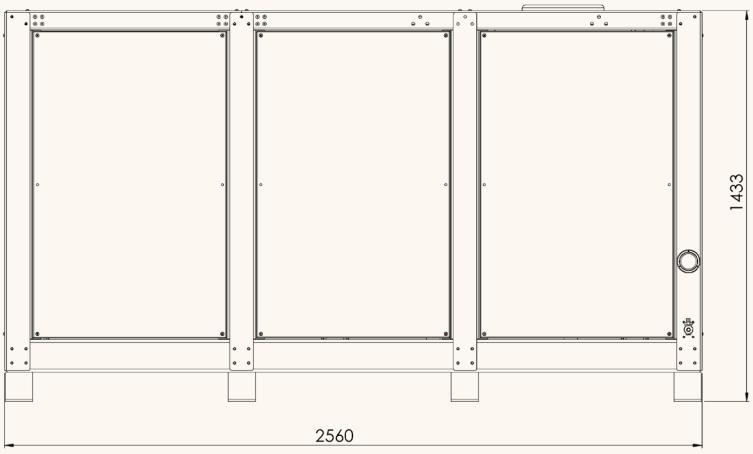
W100/W150

Heating power	164 kW
Cooling power	125 kW
Electrical power	41 kW
Coefficient of performance (COP)	4.0
Operating current	65 A
Working fluid	R1336mzz(Z)

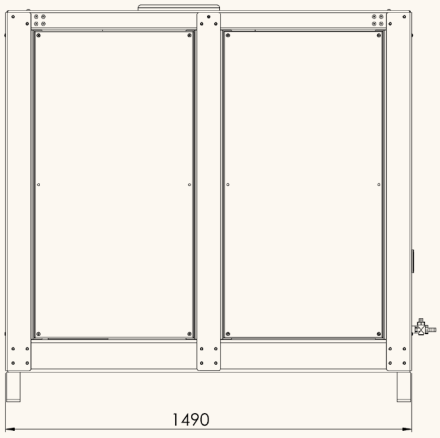
HBS 4

Dimensions

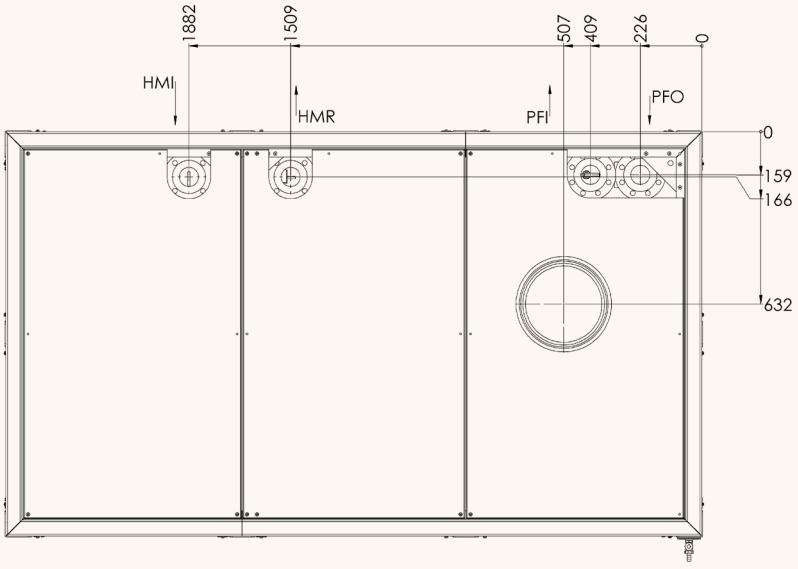
Front



Left



Top



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