



**Glen  
Dimplex**  
Thermal  
Solutions

**Riedel**

**HybridChiller**  
A revolution in  
refrigeration  
technology.

## HybridChiller.

### Really efficient cooling with waste heat.

Efficient cooling using waste heat: The adsorption refrigeration circuit uses waste heat between 55 and 95 °C. The compression refrigeration circuit provides precise process cooling.

Precise cooling: Really reliable thanks to combination of adsorption and compression. If a buffer tank is added coolant outlet temperature will be between +/- 0,5 K.

The HybridChiller was measured with a specific test setup in laboratory under four different part load conditions. Result: SEER (Seasonal Energy Efficiency Ratio) 19.6.

Investment that is often eligible for funding: Extremely efficient and often eligible for funding with waste heat from cogeneration plants, district heating or from various production processes in the metal and plastics processing industry.

Versatile use: With the HybridChiller, domestic hot water from solar collectors can be used for solar cooling in offices or hotel buildings, as well as in server rooms.

# HybridChiller.

## Technical data:

The HybridChiller combines compression and adsorption technology. With the adsorption process, it uses available (waste) heat as an energy source. Fluctuations in the waste heat and ambient temperature, as well as peak loads, are then balanced out by the compressor in a targeted way. For precise cooling temperatures, efficiently and reliably. The SEER and EER efficiency values have been determined in the laboratory of Fraunhofer ISE. And the first field tests show that the energy saving potential for users is enormous. Numerous funding programmes make the HybridChiller an even more attractive investment.

<b>HybridChiller.</b>	
Sound pressure level <sup>1</sup> 50 Hz / 60 Hz	59 / 62 dB(A)
Compressor	Scroll / 1x
Refrigerant	R 407C & R 718
Connection voltage	400 / 3 / 50 V / Ph / Hz
Max. power consumption	15.76 kW
Max. power consumption	30 A
SEER <sup>2/3/5</sup>	19.56
EER (partial load operation 100%) <sup>2/4/5</sup>	3.57 with power consumption of 6.82 kW
EER (partial load operation 75%) <sup>2/3/5</sup>	4.80 with power consumption of 3.82 kW
EER (partial load operation 50%) <sup>2/3/5</sup>	12.94 with power consumption of 0.90 kW
EER (partial load operation 25%) <sup>2/3/5</sup>	56.73 with power consumption of 0.11 kW
Weight	840 kg
Dimensions (W x H x D)	1,505 x 2,004 x 874 mm
Transport dimensions (W x H x D)	1,555 x 2,154 x 924 mm

<b>Circuits</b>	<b>Cold water</b>	<b>Heating water</b>	<b>Recooling</b>
Temperature range	8 – 21 °C	50 – 95 °C	22 – 40 °C
Max. thermal output	49.6 kW	32.3 kW	–
Heat transfer medium	Water	Water	Water / glycol
Volume flow	7.4 m <sup>3</sup> /h	2.5 m <sup>3</sup> /h	5.1 m <sup>3</sup> /h
Available delivery head / pressure drop	717 mbar	350 mbar	283 mbar
Connections flow/return	1 ½" Rp	1 ¼" Rp	1 ½" Rp

<sup>1</sup> Half sound field without reflection at a 5 m distance from the operator side at operating point.

<sup>2</sup> At 85 °C heating water temperature and 19 °C cold water inlet temperature.

<sup>3</sup> The EER = Energy Efficiency Ratio is determined in accordance with the Eurovent directive RS6/C/003-2015 and using the weighting factors specified there. The power consumption takes into account the complete system (Hybridchiller and heat exchanger) with power correction for the water pumps of all hydraulic circuits in accordance with EN 14511-3:2013.

<sup>4</sup> 100 % corresponds to 24 kW refrigeration capacity according to test conditions.

<sup>5</sup> Determined by Fraunhofer ISE.