



OILON CHILLHEAT Industrial Heat Pumps and Water Chiller

Finnish Engineered, Australian Distributed

Oilon ChillHeat

Industrial Heat Pumps & Water Chillers

P Series



S Series



Finnish-engineered industrial heat pumps for heating and cooling applications. Units connect in series or parallel for virtually unlimited system capacity.

- Combined heating and cooling
- Heat recovery
- District heating
- Process industry

Design Features



• Piston & Screw Compressors

P series: multi-piston for wide output temperature range up to 120 °C. **S series:** screw compressors for high-capacity continuous industrial duty.



• Up to 120 °C Output

P series achieves 120 °C at full power using R1233zd(E). Suitable for direct district heating network supply and high-temperature process use.



• Series & Parallel Cascading

Multiple units connect in series or parallel — or both — for virtually unlimited combined heating or cooling capacity.



• Versatile Automation

ChillHeat automation panel with Modbus RTU as standard. Optional Profibus, Profinet, BACnet, and EtherNet/IP interfaces.



• Wide Refrigerant Portfolio

Six options including R1233zd(E) at GWP 3.88 and R1234ze(E) at GWP 1.37 — future-ready against tightening F-gas legislation.



• Variable Frequency Drive

Standard on P30–P150 and S180–S1200. Optional on larger models. Stepless capacity control for significant part-load efficiency gains.



• Subcooler & Economiser

Optional upgrades that improve COP across almost all conditions — particularly valuable in high-temperature applications.



• Gas Detection & Safety

Optional refrigerant leak detection with ventilated enclosure. A1-class non-toxic, non-flammable refrigerant options available as standard.

Application Suitability

Application	P Series	S Series	S600B-S1000B
Combined heating & cooling	Excellent	Good	Good
Heat recovery — refrigeration plant	Excellent	Excellent	Excellent
Heat recovery — waste water	Excellent	Excellent	Excellent
Heat recovery — flue gases	Excellent	Excellent	Excellent
Heat recovery — industrial process	Excellent	Excellent	Excellent
Water chiller applications	Limited	Excellent	Excellent
Ground source heating	Limited	Good	Good
Heat extraction from outdoor air	Limited	Good	Good
Refrigeration applications	Limited	Good	Good

*Suitability ratings based on Oilon ChillHeat product documentation.
Final configuration confirmed at engineering stage.*

P Series

Piston Compressor Heat Pumps | 30 – 450 kW | Up to 120 °C

P30 – P150



P220 – P450



30 kW – 4 MW

Capacity Range

120 °C

Max Output Temp

-14 °C

Min Cooling Temp

9 Models

P30 - P450

P series heat pumps use multi-piston compressor technology for an extremely wide output temperature range — up to 120 °C with a good COP. ETL-listed versions available for selected refrigerants. Ideal for combined heating and cooling, high-temperature process heat recovery, and direct district heating supply.

P30 – P150 Technical Data

Models	Compressor	Circuit	H (mm)	L (mm)	W (mm)	Weight (kg)	Max Fuse
P30	Piston ×1	1	1297	1079	750	530	3×63A
P60	Piston ×2	1	2091	1852	911	920	3×125A
P75	Piston ×1	1	1801	1488	873	950	3×125A
P100	Piston ×2	1	2091	1906	911	1200	3×160A
P150	Piston ×2	1	2091	1996	911	1300	3×200A

P220 – P450 Technical Data

Models	Compressor	Circuit	H (mm)	L (mm)	W (mm)	Weight (kg)	Max Fuse
P220	Piston ×3	2	2091	3148	911	2300	3×400A
P300	Piston ×4	2	2091	3148	911	2600	3×630A
P380	Piston ×5	2	2091	4290	911	3100	3×800A
P450	Piston ×6	2	2091	4290	911	3700	3×800A

Standard supply: 3/N/PE 400V 50Hz. VFD standard on P30–P150; optional on P220–P450.

Refrigerant Options

Refrigerant	Class	Safety	GWP (EU 2024/573)	ODP	Max Outlet Temp
R1233zd(E)	HFO	A1	3.88	~0	120°C
R1234ze(E)	HFO	A2L	1.37	0	95°C
R515B	HFO/HFC	A1	288	0	95°C
R450A	HFO/HFC	A1	601	0	88°C
R513A	HFO/HFC	A1	629	0	80°C
R134a	HFC	A1	1430	0	80°C

Refrigerant selection depends on operating conditions and maximum output temperature required. Contact O'Brien Energy for engineering guidance.

Design Features



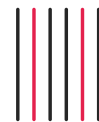
High-Temperature Priority

Achieves 120 °C at full power using R1233zd(E)—the only class of industrial heat pump suitable for direct district heating supply at high temperature.



ETL-Listed Options

ETL-listed versions available for selected refrigerants, supporting compliance with North American standards where required.



Dual-Circuit Design (P220+)

P220–P450 feature two independent refrigerant circuits for improved redundancy and flexibility in demanding industrial configurations.



VFD as Standard

Variable Frequency Drives standard on P30–P150 for stepless capacity modulation and optimised part-load performance.

S Series

Screw Compressor Heat Pumps | 180 – 2,000 kW | Up to 90 °C

S180 – S580



S600 – S2000



180 - 2000 kW

Heating Capacity

90 °C

Max Output (S600B)

-10 °C

Min Cooling Temp

11 Models

S180 - S2000

S series heat pumps use energy-efficient screw compressors for high-capacity, continuous-duty industrial applications. S180–S580 feature compact plate heat exchangers; S600–S2000 use heavy-duty shell and tube heat exchangers. Suited for demanding process industry use, large building climate control, and district heating and cooling production.

S180 – S580 | Single Screw · Plate Heat Exchanger

Models	Compressor	Circuit	H (mm)	L (mm)	W (mm)	Weight (kg)	Max Fuse
S180	Screw ×1	1	2286–2306	3124	945	2300	250A
S280	Screw ×1	1	2266–2286	3124	945	2900	335A
S380	Screw ×1	1	2208–2228	3124	945	3600	500A
S490	Screw ×1	1	2476–2496	3312	945	4000	630A
S580	Screw ×1	1	2476–2496	3312	945	4500	800A

Max output temperature: 85 °C. Standard supply: 3/N/PE 400V 50Hz.

Models	Compressor	Circuit	Max Fuse	Max Fuse
S600	Screw x2	2	85 °C (90 °C — S600B Variant)	2x3x400A
S800	Screw x2	2	85 °C (90 °C — S800B Variant)	2x500A
S1000	Screw x2	2	85 °C (90 °C — S1000B Variant)	2x630A
S1200	Screw x2	2	85 °C	2x800A
S1500	Screw x2	2	85 °C	2x3x800A
S2000	Screw x2	2	85 °C	2x1,250A

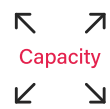
S600–S2000 dimensions are project-specific. Contact O'Brien Energy for confirmed engineering data.

Refrigerant Options

Refrigerant	Class	Safety	GWP (EU 2024/573)	ODP	Max Outlet Temp
R1234ze(E)	HFO	A2L	1.37	0	85°C
R515B	HFO/HFC	A1	288	0	85°C
R450A	HFO/HFC	A1	601	0	85°C
R513A	HFO/HFC	A1	629	0	85°C
R134a	HFC	A1	1430	0	85°C

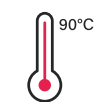
Refrigerant selection depends on operating conditions and maximum output temperature required. Contact O'Brien Energy for engineering guidance.

Design Features



High-Capacity Continuous Duty

Twin screw compressors in S600–S2000 deliver up to 2,000 kW per unit. Units cascade for effectively unlimited system capacity.



S600B–S1000B High-Temp Variant

The B-suffix models achieve 90°C output — bridging standard S series and P series for high-temperature preheating duty.



Shell & Tube HEX (S600+)

Heavy-duty shell and tube heat exchangers engineered for continuous industrial operation — robust against demanding process conditions.



VFD Standard to S1200

Variable frequency drives standard on S180–S1200; optional on S1500 and S2000 for capacity modulation across the full range.

Heat Recovery & Process Cooling	
Heat Source	Heat recovery and process cooling
Heat Sink	Space and process heating
Cooling Capacity	Cooling power 285 kW
Heating Capacity	• Very hot water (VHW) 0-500 kW • Warm water (WW) 10-354 kW
Water Temperatures (Cooling/Heating)	20°C/110°C
ChillHeat Pumps	• S 180 SU HC + VFDx1 R1234ze • 2 x P300 SU HC + VFDx1 High temp.

In Operation Right Now



*Calfors Bruk,
Sweden*

What **oilon** Users Say

The heat pump system is easy to set up and adjust, and the customer support has been brilliant.



Nicolas Regel,
Calfors Bruk

it was a positive surprise how fast Oilon could set up a system for these demanding running conditions. After the first meeting we already had a detailed system draft with performance data.



Patrick Renström,
AFRY

It is very easy to find a suitable heat pump solution to almost any process or customer need. Even if the heat pumps are serial-made products, it is always possible to find a suitable configuration in Oilon Selection Tool.

We are really impressed how reliable the system at Calfors has been from day one, even if the system is running at really high temperatures.

The Oilon Global Monitor is also making process optimization and trouble shooting easy.

The units are designed for easy maintenance.



Daniel Ankarbranth,
Francks Kylindustri

The heat pump system is working really well. The first year the system has saved us -600.000 SEK, and this year we are expecting the savings to exceed 1 MSEK.

In addition to saving money, the heat pump system is also reducing our carbon emissions.



Fredrik Målberg,
Calfors Bruk

Why O'Brien?

- **Australia's Largest**

Leading supplier of industrial boilers across Australia

- **20+ Years Experience**

Decades of engineering expertise in steam & hot water systems

- **24/7 Support**

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