ecoFOREST

ecoGEO+ LITE PRO

R290 1-6kW
Brine to Water Heat Pumps
with Inverter Technology

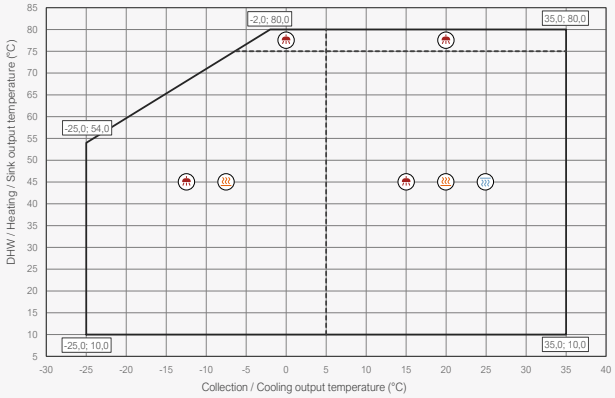
R290
ecoFOREST

Characteristics

- Modulating thermal output control across a wide range (17%–100%) and modulating flow control in both source and production circuits (20%–100%).
- Natural refrigerant R290: GWP 3.
- Inverter technology.
- Compact design including source and production circulators, 12L expansion vessel for production, source and production safety valves, and a 3-way valve for DHW.
- Integrated control of up to two different flow temperatures and one DHW tank.
- Integrated management of on/off external backup resistance for DHW service.
- Active cooling via cycle inversion integrated in Lite3 models.
- Models available in single-phase version.
- Integrated photovoltaic hybridisation.
- Integrated energy meters for monitoring electrical consumption, thermal output (heating/cooling), and instantaneous as well as seasonal efficiency monthly and annual.
- Refrigerant detection and evacuation system not required in ecoGEO⁺ Lite 1-6 PRO models.

Operational chart

ecoGEO⁺ Lite 1-6 PRO



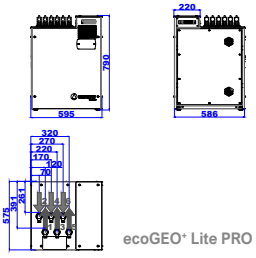
ecoGEO+ Lite 1-6 PRO

Brine to water heat pumps with Inverter technology and natural R290 refrigerant

SPECIFICATIONS ecoGEO+ Lite PRO			ecoGEO+ 1-6	
			Lite1	Lite3
APPLICATION	Place of installation	-	Indoor	
	Collection system	-	Ground source / Open loop	
	DHW, Heating and Pool heating	-	▪	▪
	Integrated passive cooling	-	-	-
	Integrated active cooling	-	-	▪
PERFORMANCE	Compressor modulation range	%	12.5 - 100	
	(2) Heating power output / COP B0W35	kW / -	1.0 - 6.0 / 4.3	
	(2) Heating power output / COP B0W55	kW / -	1.0 - 5.5 / 2.7	
	(2) Cooling power output / EER B30W7	kW / -	-	1.0 - 6.0 / 4.4
	(5) Max. DHW temperature without / with support	°C	75 / 80	
	(6) Maximum noise power level (LWA)	dB (A)	44	
	Energy label / ηs / SCOP W35 average clim. with control	-	A+++ / 184% / 4.71	
	Energy label / ηs / SCOP W55 average clim. with control	-	A++ / 146% / 3.76	
OPERATION LIMITS	Distribution / Set heating outlet temperature range	°C	10 - 75 / 20 - 75	
	Distribution / Set cooling outlet temperature range	°C	-	5 - 30 / 7 - 30
	Collection temperature range in heating / cooling mode	°C	-22 - 35 / 10 - 70	
	Minimum / Maximum refrigerant circuit pressure	bar	0.5 / 32.0	
	Collection / Production circuit pressure range (preload)	bar	0.5 - 3.0 (0.7) / 0.5 - 3.0 (1.5)	
	DHW tank capacity / maximum pressure	l / bar	-	
WORKING FLUIDS	R290 refrigerant load (GWP: 3)	kg	0.15	
	Compressor oil type / load	kg	PZ46M / 0.30	
	Primary circ. flow rate (Pmax, B0W35) ΔT 3°C / ΔT 5°C	m^3/h	1.5 / 0.9	
	Secondary circ. flow rate (Pmax, B0W35) ΔT 5°C / ΔT 7°C	m^3/h	1.0 / 0.7	
CONTROL ELECTRICAL DATA	(8) 1/N/PE 230 V / 50-60 Hz	-	▪	
	(9) Recommended external protection	-	-	
	Transformer primary circuit fuse	A	0.5	
	Transformer secondary circuit fuse	A	2.5	
HEAT PUMP ELECTRICAL DATA: SINGLE-PHASE VERSION	(8) 1/N/PE 230 V / 50-60 Hz	-	▪	
	(9) Recommended external protection	-	C16A	
	(2) Maximum consumption B0W35	kW / A	1.6 / 6.8	
	(2) Maximum consumption B0W55	kW / A	2.0 / 8.6	
	(7) Minimum / Maximum starting current	A	0.6 / 1.8	
	Correction of cos Ø	-	0.96 / 1	
DIMENSIONS & WEIGHT	Height x width x depth	mm	790x595x575	
	Empty weight (without packaging)	kg	170	

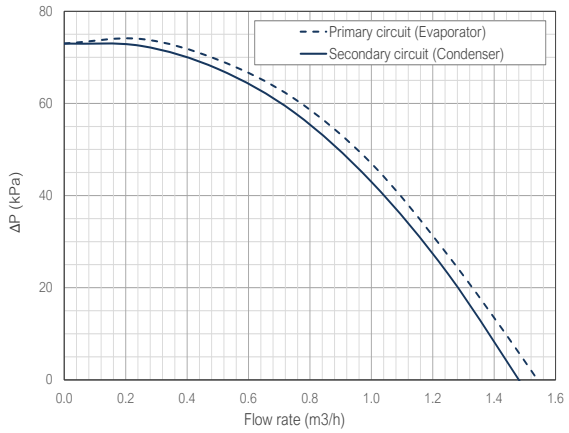
1. Air-to-water by means of a brine-to water heat pump combined with a hydraulic outdoor air unit.
2. In compliance with EN 14511, including circulation pumps, fan and compressor driver consumptions.
3. Production flow rate according to EN 14511.
4. Considering a heat slope from 20 to 50 °C in absence of consumption.
5. Considering support provided by an emergency electrical heater or HTR. Max. DHW temp. with HTR can be limited by the compressor discharge temp.
6. In compliance with EN 12102.
7. Starting current depends on the working conditions of the hydraulic circuits.
8. The admissible voltage range for proper operation of the heat pump is ±10%.
9. Maximum consumption can vary significantly according to working conditions, or if the compressor´s operation range is restricted. Consult the technical service manual for more information.
10. Certification in process.

Dimensions and hydraulic connections

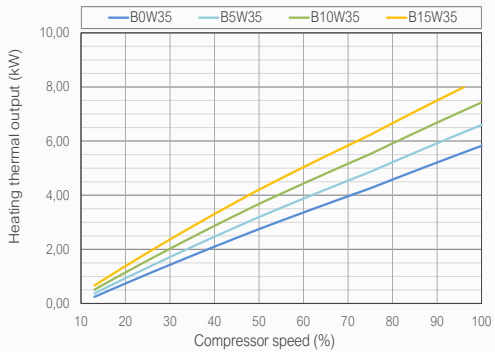


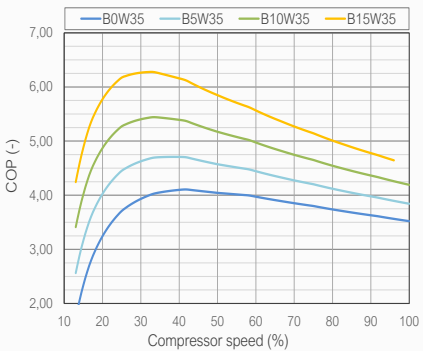
1. Heating/Cooling outlet **1" M**
2. Heating/Cooling inlet **1" M**
3. Brine outlet **1" M**
4. Brine inlet **1" M**
5. DHW system outlet **1" M**
6. DHW system inlet **1" M**
7. Drain **¾" M**

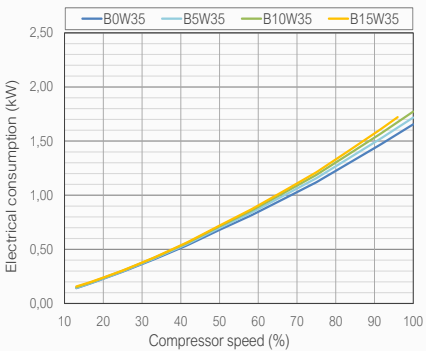
Available pressure drop



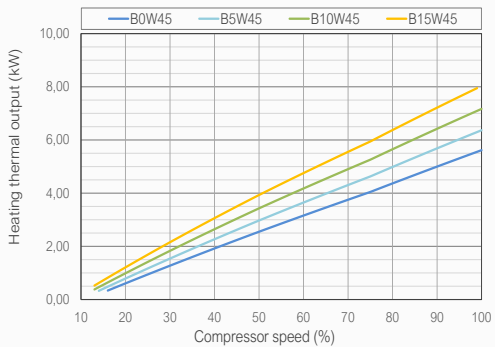
Heating **W35**

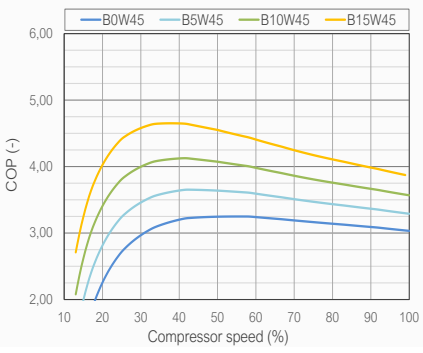


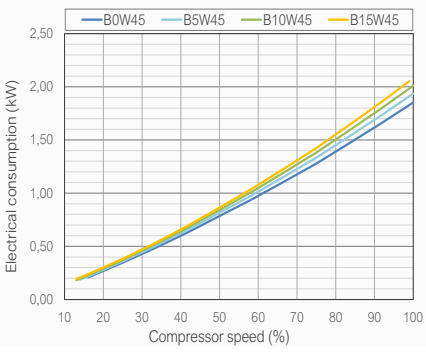




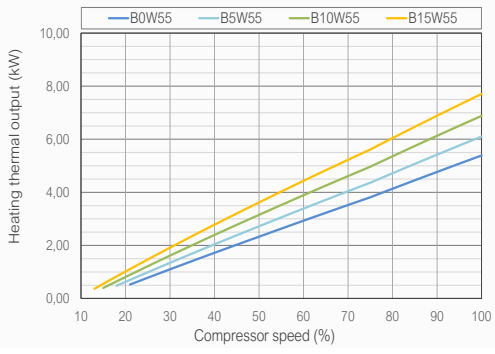
Heating **W45**

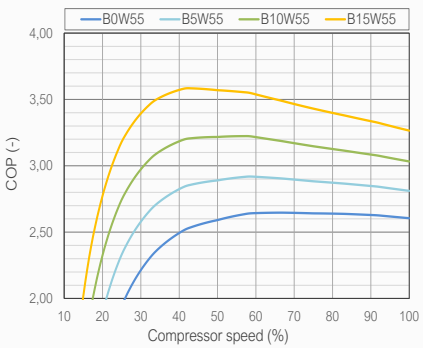


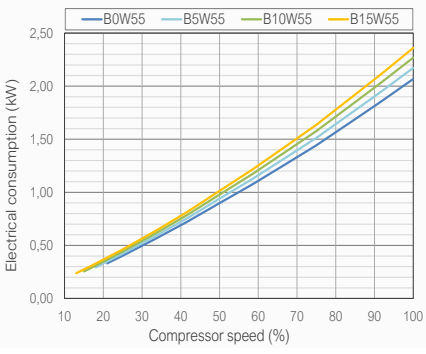




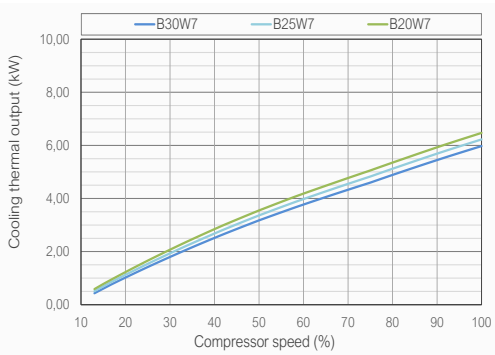
Heating **W55**

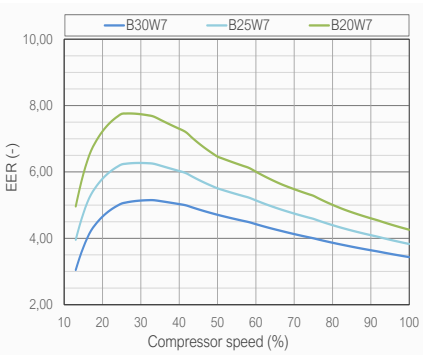


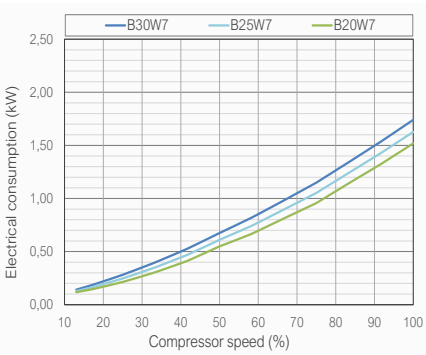




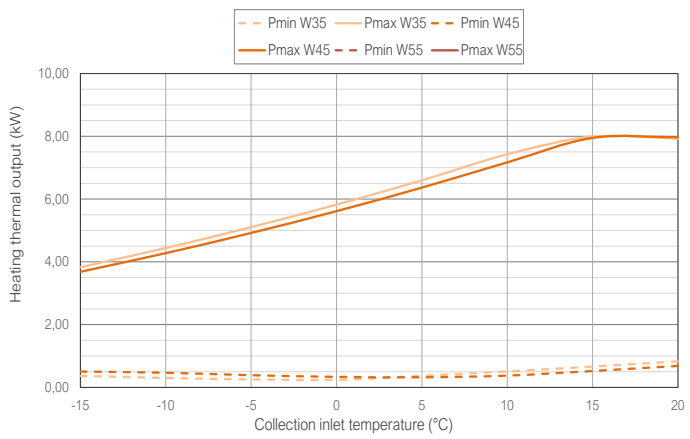
Cooling **W7**

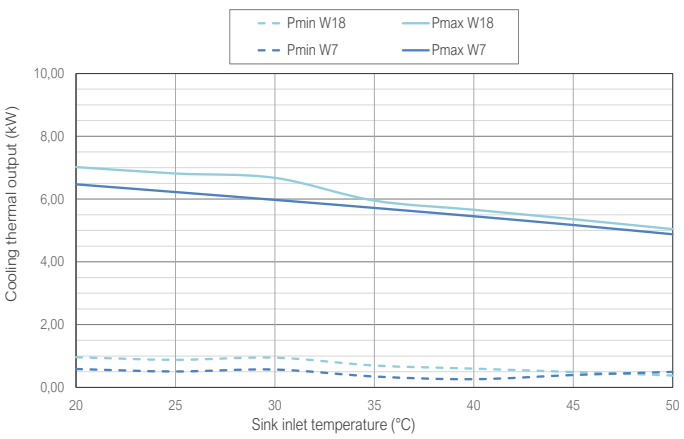






Thermal power - Brine system temperature





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