

W-L R290 / 10kW / DATASHEET Ground Source Heat Pump Brine to Water

SPECIFICATION	S VOLTA W-L 10 R290	UNITS	S/L H	S/L P	S/L A	S/L F	
APPLICATION	Place of installation	_	Indoors				
	Type of brine system ¹	_	Ground source / Air source / Hybrid source				
	DHW, Heating and Pool	_	\checkmark	\checkmark	\checkmark	\checkmark	
	Superheater (SH) system option ¹¹	_	\checkmark	\checkmark	\checkmark	\checkmark	
	Integrated Active cooling	_	_	_	\checkmark	\checkmark	
	Integrated Passive cooling	_	_	\checkmark	_	\checkmark	
PERFORMANCE	Modulation range of the compressor	%	15 to 100				
	Heating power output ² , BOW35	kW	1.9 to 10.2				
	COP ² , BOW35	_	4.3				
	Active cooling power output ² , B35W7	kW	— 1.6 to 8.6			o 8.6	
	EER 2, B35W7	_	-		4	4.1	
	Max. DHW temperature without / with support ⁵	°C	75 / 80				
	Noise power emission level ⁶	db	35 to 46				
	Energy label / ŋs / SCOP W35 average climate control	_	A+++ / 180% / 4.78				
	Energy label / ŋs / SCOP W55 average climate control	_	A++ / 140% / 3.75				
OPERATION LIMITS	Distribution / Set heating outlet temperature range	°C	10 to 70 / 70				
	Distribution / Set cooling outlet temperature range	°C	-20 to 35 /-15 5 to 35 / 7				
	Brine inlet temperature range in heating applications	°C	-25 to 35				
	Brine inlet temperature range in cooling applications	°C	10 to 70				
	Minimum / Maximum refrigerant circuit pressure	bar	1/32				
	Production / Pre-load circuit pressure	bar	0.5 to 3,0 / 1.5				
	Brine / Pre-load circuit pressure	bar	0.5 to 3.0 / 0.7				
	Volume / Max. DHW storage tank pressure (VOLTA W L)	l/bar	165 / 8				
WORKING FLUIDS	R290 Refrigerant load	kg	0,6				
	Compressor oil type / load	kg	HXL4467 / 0.74				
CONTROL ELECTRICAL DATA	1/N/PE 230 V / 50-60 Hz ⁸	_	\checkmark				
	Maximum recommended external protection ⁹	_	C16A				
	Transformer primary circuit fuse	А	0.5				
	Transformer secondary circuit fuse	А	√				
ELECTRICAL DATA: SINGLE-PHASE	1/N/PE 230 V / 50-60 Hz ⁸	_	\checkmark				
	Maximum recommended external protection ⁹	_	C25A				
	Maximum consumption ² , BOW35	kW / A	2.9 / 12.4				
	Maximum consumption ² , BOW35	kW/A	3.7 / 15.9				
	Minimum / Maximum starting current ⁷	A	2.8 / 5.8				
	Correction of cosine Ø	_	0.96 / 1				
ELECTRICAL DATA: THREE-PHASE	3/N/PE 400 V / 50-60 Hz ⁸	_	√				
	Maximum recommended external protection ⁹	_	СІЗА				
	Maximum consumption ² , BOW35	kW / A	2.9 / 4.1				
	Maximum consumption ² , BOW35	kW/A	3.7 / 5.3				
	Minimum / Maximum starting current ⁷	A	0.9 / 4.2				
	Correction of cosine Ø	_	0.96/1				
DIMENSIONS/ WEIGHT	Height x width x depth	 mm	VOLTA W 5: 1051x609x716 · VOLTA W L: 1943x609x724				
	Empty weight (without assembly)		5 195 · L 260	S 205 · L 270		5 205 · L 27	
	Empig weigin (windul assenibly)	kg	3133.1500	3203.22/0	2132.1500	3203.22/1	

 Air source by replacing the ground source circuit by one or more VOLTA W-0 air units. Consult the VOLTA W-0 aerothermal units manual for more detailed information.

2. In compliance with EN 14511, this includes the consumption of the circulation pumps and the compressor driver.

3. Considering brine and production flow rates in compliance with EN 14511.

4. Considering a heat slope from 20°C to 50°C in absence of consumption.

5. Considering support provided by the emergency electrical heater.

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%.

 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 detailed information.

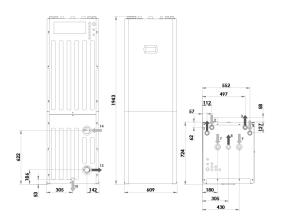
10. Certification in process.

11. Integrated by default in modules S/L A and S/L F.



Dimensions and hydraulic connections

VOLTA W L

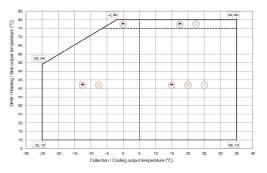


1. Heating/Cooling Outlet - 1 1/4" M

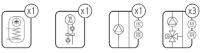
- 2. Heating/Cooling Inlet 1 1/4" M
- Brine Outlet 1 1/4" M
 Brine Inlet 1 1/4" M
- 5. DHW system Outlet 1 1/4" M 6. DHW System Inlet - 1 1/4" M
 7. CW Inlet - 1" F

- 8. DHW Outlet 1" F 9. DHW Recirculation Inlet - 3/4" F
- 10. Drain 16 mm
- 11. Safetv duct outlet Ø80

Operational chart



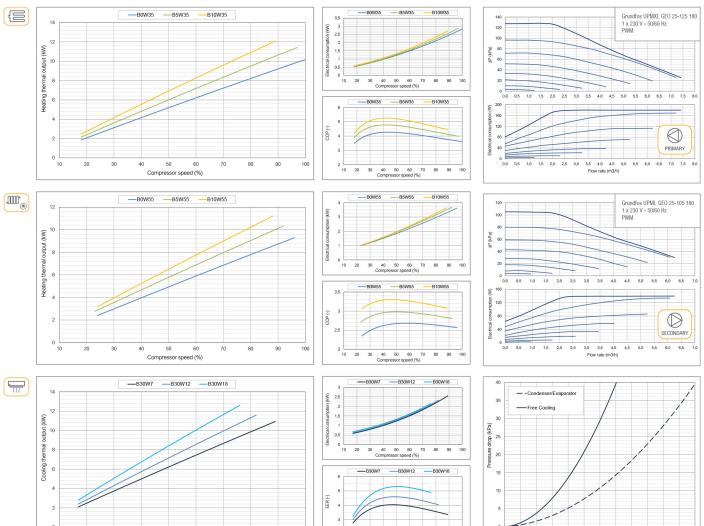
Installation management



Hydraulic performance

Performance curves

Thermal performance



2 L 10

20

30 40 Come 50 60 70 ssor speed (%) 80 90



30

20

40 50 60

Compressor speed (%)

70

80

90

6,0

2,5 3,0 3,5

Flow rate (m3/h)

0,0 0,5 1,0 1,5 2,0 4,5 5,0 5,5

4,0