

Air-Water Heat Pump

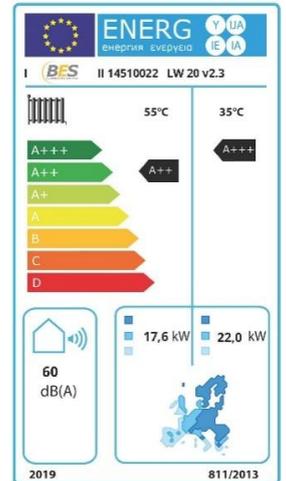
14 kW / 20 kW with natural refrigerant



LW 14 kW / 20 kW v2.3

Range of application :

- ▶ external air as energy source
- ▶ for heating and cooling
- ▶ new construction and refurbishment



- ▶ External temperature based e-TALK controller with mixer and domestic hot water control
- ▶ Remote monitoring (optional in EMM electrical cabinet)
- ▶ Fully-automatic operation for heating and cooling
- ▶ Fully hermetic inverter compressor heat pump
- ▶ Air operating temperature -25 °C to 43 °C
- ▶ Modularly expandable through cascading
- ▶ Phase sequence integrated monitoring
- ▶ Utilizes external air as energy source
- ▶ With natural refrigerant R290
- ▶ Extremely silent operation
- ▶ Low GWP value of 3

Seasonal energy efficiency
in heating

185%

Clime middle

Efficiency class

A+++

LW 14 v2.3

Operating point **	Heating capacity* (kW)		Power consumption (kW)		Current consumption (A)		Coefficient of Performance (COP/EER)		Refrigeration capacity (kW)		Cooling capacity (kW)	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
	30 Hz	90 Hz	30 Hz	90 Hz	30 Hz	90 Hz	30 Hz	90 Hz	30 Hz	90 Hz	30 Hz	90 Hz
A 7/W 35***	5,9	14,8	1,1	3,5	2,0	6,3	5,4	4,2	4,8	11,3	-	-
A 7/W 55****	6,6	13,2	1,4	3,3	2,5	5,9	4,7	4,0	5,2	9,9	-	-
A -7/W 35***	4,5	10,6	1,1	3,4	2,0	6,1	4,1	3,1	3,4	7,2	-	-
A -7/W 55****	3,9	9,4	1,4	4,3	2,5	7,7	2,8	2,2	2,5	5,1	-	-
A -15/W 35***	3,7	8,3	1,1	3,4	2,0	6,1	3,4	2,4	2,6	4,9	-	-
A -15/W 55****	3,2	7,3	1,3	4,2	2,3	7,5	2,5	1,7	1,9	3,1	-	-
A 35/W 7	-	-	1,4	4,0	3,1	10,4	3,1	2,7	-	-	4,3	10,8

Energetic classification - ErP-Guideline**

Climate zone: average

η_s (%) * 35°C	Energy class at 35°C	SCOP 35	η_s (%) * 55°C	Energy class at 55°C	SCOP 55
180,8%	A+++	4,6	134,7%	A++	3,4

Noise emissions **

sound power		sound pressure level (1m)	
W35°C	W55°C	W35°C	W55°C
59 dBA	59 dBA	44 dBA	45 dBA

LW 20 v2.3

Operating point **	Heating capacity* (kW)		Power consumption (kW)		Current consumption (A)		Coefficient of Performance (COP/EER)		Refrigeration capacity (kW)		Cooling capacity (kW)	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
	30 Hz	90 Hz	30 Hz	90 Hz	30 Hz	90 Hz	30 Hz	90 Hz	30 Hz	90 Hz	30 Hz	90 Hz
A 7/W 35***	8,8	22,0	1,7	5,3	3,0	9,5	5,2	4,2	7,1	16,7	-	-
A 7/W 55****	7,8	17,6	1,7	4,4	3,0	7,9	4,6	4,0	6,1	13,2	-	-
A -7/W 35***	6,7	15,8	1,6	5,2	2,9	9,3	4,2	3,0	5,1	10,6	-	-
A -7/W 55****	5,9	13,9	2,0	6,4	3,6	11,4	3,0	2,2	3,9	7,5	-	-
A -15/W 35***	5,4	12,3	1,6	5,0	2,9	8,9	3,4	2,5	3,8	7,3	-	-
A -15/W 55****	4,8	10,8	2,0	6,2	3,6	11,1	2,4	1,7	2,8	4,6	-	-
A 35/W 7	-	-	2,0	5,6	3,6	10,0	3,1	2,7	-	-	6,2	15,3

Energetic classification - ErP-Guideline**

Climate zone: average

η_s (%) * 35°C	Energy class at 35°C	SCOP 35	η_s (%) * 55°C	Energy class at 55°C	SCOP 55
184,6%	A+++	4,7	138,9%	A++	3,6

Noise emissions **

sound power		sound pressure level (1m)	
W35°C	W55°C	W35°C	W55°C
60 dBA	62 dBA	45 dBA	46 dBA

* Seasonal energy efficiency of space heating.

** Test according to EN 14825:2022, EN 12102-1:2022, EN 14511-3:2022

*** Water temperature inlet/outlet 30°C / 35°C

**** Water temperature inlet/outlet 15°C / 55°C

	14 kW	20 kW
Condenser (Heating secondary)		
Type	plate heat exchanger	
Recommended volume flow	1,0 - 2,6 m ³ /h	1,5 - 3,7 m ³ /h
Max. operating pressure	32 bar	
Max. temperature	150°C	
Connections heating	2x DN25	
Max./min. inlet temperature (heating)	70°C / 20°C	
Max./min. inlet temperature (cooling)	18°C / 7°C	

Charging pump	APM25-9-130 PWM1	APF25-12-130E PWM1
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Evaporator (source primary)		
Type	Finned-tube heat exchanger	
Insulation	PVC- and CFC-free	
Recommended volume flow	2.000 - 4.000 m ³ /h	3.000 - 6.000 m ³ /h
Amount of fans	1	2
Max. operating pressure	32 bar	
Max. temperature	80°C	
Source connections	none	
Max./min. source inlet temperature (heating)	40°C / -20°C	
Max./min. source inlet temperature (cooling)	40°C / -15°C	
Expansion valve	electronical	

Cooling cycle		
Insulation cooling cycle	PVC- and FCKW-free	
Compressor	Scroll	
Electric motor technology	DC-Inverter	
Number of compressors / cooling circuits	Scroll	
Refrigerant	1	
Filling capacity	1,15 kg	1,4 kg

Housing		
Dimensions (W x D x H)	1080 mm x 480 mm x 1060 mm	1080 mm x 480 mm x 1372 mm
Colour	RAL 7016 / structure for exterior location	
Weight	138 kg	170 kg
Material / sound insulation	steel sheet electrolytically galvanised and powder coated / insulating board 20 mm	

Electrical data		
Nominal voltage (heat pump)	3 Ph/3+N/50-60 Hz/ 380-415V	
Compressor startup current	11 A	13 A
Max. compressor operating current	12,2 A	14,3 A
Fuse protection slow-blow (compressor)	C 13 A 4-pol.	C 16 A 4-pol.
Fuse protection (control AP housing)	B 13 A 2-pol.	
Type of protection	IPX4	
Supply compressor*	5 x 2,5 mm ² flexible	
Supply control/fan*	12 x 0,75 mm ² flexible	
Supply control AP housing*	3 x 1,5 mm ² flexible	

Product-No.	1451 0014	1451 0022
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* The width for the supplies is to be configured depending on the laying and length

Accessories (optional):

Description	Product-No.
EnergyManagementMaster electrical cabinet for LW 14 and LW 20kW v2.3 Modbus	22000121

