

Subtype ZHHS-01-15K-R290-V5-M

Certificate Holder	JBG-2 Sp. z o.o.
Address	ul. Gajowa 5
ZIP	43-254
City	Warszowice
Country	PL
Certification Body	SZU - Strojirensky zkusebni ustav (Engineering Test Institute, Public Enterprise)
Subtype title	ZHHS-01-15K-R290-V5-M
Registration number	037-0141-23
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	0.8 kg
Certification Date	21.11.2023
Testing basis	HP Keymark certification scheme rules rev. no.12
Testing laboratory	SZU Brno, CZ

Model ZHHS-01-15K-R290-V5-M + BSEM01-0000

Model name	ZHHS-01-15K-R290-V5-M + BSEM01-0000
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 14511-4 | Heating**

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.70 kW	9.20 kW
El input	1.64 kW	2.89 kW
COP	5.29	3.19

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	dB(A)	dB(A)
Sound power level outdoor	57 dB(A)	61 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	213 %	156 %
Prated	10.30 kW	10.00 kW
SCOP	5.39	3.98
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.31 kW	8.98 kW
COP Tj = -7°C	3.19	2.18
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	5.66 kW	5.58 kW
COP Tj = +2°C	5.46	4.09
Cdh Tj = +2 °C	1.000	1.000

Pdh Tj = +7°C	4.44 kW	4.32 kW
COP Tj = +7°C	7.15	5.34
Cdh Tj = +7 °C	0.980	0.980
Pdh Tj = 12°C	5.01 kW	4.80 kW
COP Tj = 12°C	8.91	6.51
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	10.31 kW	9.97 kW
COP Tj = Tbiv	2.70	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.31 kW	9.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	1.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3831 kWh	5196 kWh