

Subtype ZHHH-01-10K-R290-R5-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	ZHHH-01-10K-R290-R5-M
Registration number	037-0138-23
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	0.63 kg
Certification Date	21.11.2023
Testing basis	HP Keymark certification scheme rules rev. no.12
Testing laboratory	SZU Brno, CZ

Model ZHHH-01-10K-R290-R5-M + BSEM01-0000

Model name	ZHHH-01-10K-R290-R5-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	6.52 kW	8.53 kW
El input	1.53 kW	2.96 kW
COP	4.27	2.88

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	dB(A)	dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	179 %	138 %
Prated	6.50 kW	6.50 kW
SCOP	4.56	3.53
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.69 kW	5.77 kW
COP Tj = -7°C	2.92	2.28
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.62 kW	3.52 kW
COP Tj = +2°C	4.48	3.41
Cdh Tj = +2 °C	0.980	0.980

Pdh Tj = +7°C	2.50 kW	2.53 kW
COP Tj = +7°C	5.87	4.50
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	2.58 kW	2.51 kW
COP Tj = 12°C	7.16	6.28
Cdh Tj = +12 °C	0.950	0.950
Pdh Tj = Tbiv	6.74 kW	6.70 kW
COP Tj = Tbiv	2.62	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.74 kW	6.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.62	2.06
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	65 °C	65 °C
Poff	19 W	19 W
PTO	20 W	20 W
PSB	19 W	19 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	2943 kWh	3798 kWh