

Subtype DC Inverter Air to Water Heat Pump Thermal 15

Certificate Holder	REFSYSTEM Sp. z o.o.
Address	Street Metalowców 5,
ZIP	86-300
City	Grudziądz
Country	PL
Certification Body	BRE Global Limited
Subtype title	DC Inverter Air to Water Heat Pump Thermal 15
Registration number	041-K053-04
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	2.55 kg
Certification Date	12.05.2023
Testing basis	Heat Pump Keymark Scheme Rules Rev 11

Model Thermal(b) 15 / Thermal(b) 15

Model name	Thermal(b) 15 / Thermal(b) 15
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 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	61 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	185 %	127 %
Prated	11.60 kW	11.04 kW
SCOP	4.70	3.24
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.26 kW	9.76 kW
COP Tj = -7°C	3.38	1.89
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	6.30 kW	6.11 kW
COP Tj = +2°C	4.69	3.22
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	6.13 kW	5.93 kW
COP Tj = +7°C	6.29	4.76
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	5.97 kW	6.92 kW
COP Tj = 12°C	6.02	5.80
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.26 kW	9.76 kW

COP $T_j = T_{biv}$	3.38	1.89
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	11.23 kW	9.13 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	3.02	1.70
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.900	0.900
WTOL	56 °C	56 °C
P _{off}	13 W	13 W
PTO	39 W	39 W
PSB	13 W	13 W
PCK	41 W	41 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.37 kW	1.91 kW
Annual energy consumption Q _{he}	5096 kWh	7039 kWh