

Subtype Air Source Heat Pump- R290-018

Certificate Holder	PERFEXIM Sp. z o.o.
Address	ul. Samotna 2
ZIP	61-441
City	Poznań
Country	PL
Certification Body	BRE Global Limited
Subtype title	Air Source Heat Pump- R290-018
Registration number	041-K103-04
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.4 kg
Certification Date	10.10.2024
Testing basis	HP KEYMARK certification scheme rules rev. no.14

Model PHA-50 (50-018-1945-001) BLN-018TC1

Model name	PHA-50 (50-018-1945-001) BLN-018TC1
Application	Heating (medium temp)
Units	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	1x230V 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	18.36 kW	18.16 kW
El input	4.09 kW	6.01 kW
COP	4.49	3.02

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	70 dB(A)	72 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	189 %	146 %
Prated	16.27 kW	16.44 kW
SCOP	4.81	3.72
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	14.39 kW	14.54 kW
COP Tj = -7°C	3.01	2.48
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.89 kW	8.91 kW
COP Tj = +2°C	4.70	3.52
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.64 kW	5.73 kW

COP Tj = +7°C	6.21	4.84
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	5.88 kW	5.52 kW
COP Tj = 12°C	8.74	6.85
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	14.39 kW	14.54 kW
COP Tj = Tbiv	3.01	2.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.98 kW	15.34 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	2.01
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	29 W	29 W
PSB	14 W	14 W
PCK	42 W	42 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.29 kW	1.11 kW
Annual energy consumption Qhe	6987 kWh	9142 kWh

Model PHA-50I (50-018-1945-101) BLN-018TC1

Model name	PHA-50I (50-018-1945-101) BLN-018TC1
Application	Heating (medium temp)
Units	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	1x230V 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	18.36 kW	18.16 kW
El input	4.09 kW	6.01 kW
COP	4.49	3.02

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	70 dB(A)	72 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	189 %	146 %
Prated	16.27 kW	16.44 kW
SCOP	4.81	3.72
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	14.39 kW	14.54 kW
COP Tj = -7°C	3.01	2.48
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.89 kW	8.91 kW
COP Tj = +2°C	4.70	3.52
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.64 kW	5.73 kW

COP Tj = +7°C	6.21	4.84
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	5.88 kW	5.52 kW
COP Tj = 12°C	8.74	6.85
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	14.39 kW	14.54 kW
COP Tj = Tbiv	3.01	2.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.98 kW	15.34 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	2.01
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	29 W	29 W
PSB	14 W	14 W
PCK	42 W	42 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.29 kW	1.11 kW
Annual energy consumption Qhe	6987 kWh	9142 kWh

Model PHA-50 (50-018-1945-003) BLN-018TC3

Model name	PHA-50 (50-018-1945-003) BLN-018TC3
Application	Heating (medium temp)
Units	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	18.42 kW	18.30 kW
El input	4.01 kW	5.94 kW
COP	4.60	3.08

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	70 dB(A)	72 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	189 %	145 %
Prated	16.34 kW	16.40 kW
SCOP	4.79	3.71
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	14.46 kW	14.51 kW
COP Tj = -7°C	3.10	2.48
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	9.08 kW	9.01 kW
COP Tj = +2°C	4.71	3.50
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.69 kW	5.74 kW

COP Tj = +7°C	6.04	4.82
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	5.70 kW	5.47 kW
COP Tj = 12°C	7.91	6.91
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	14.46 kW	14.51 kW
COP Tj = Tbiv	3.10	2.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.34 kW	15.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.78	2.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	29 W	29 W
PSB	14 W	14 W
PCK	43 W	43 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	1.20 kW
Annual energy consumption Qhe	7052 kWh	9145 kWh

Model PHA-50I (50-018-1945-103) BLN-018TC3

Model name	PHA-50I (50-018-1945-103) BLN-018TC3
Application	Heating (medium temp)
Units	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	18.42 kW	18.30 kW
EI input	4.01 kW	5.94 kW
COP	4.60	3.08

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	70 dB(A)	72 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	189 %	145 %
Prated	16.34 kW	16.40 kW
SCOP	4.79	3.71
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	14.46 kW	14.51 kW
COP Tj = -7°C	3.10	2.48
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	9.08 kW	9.01 kW
COP Tj = +2°C	4.71	3.50
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.69 kW	5.74 kW

COP Tj = +7°C	6.04	4.82
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	5.70 kW	5.47 kW
COP Tj = 12°C	7.91	6.91
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	14.46 kW	14.51 kW
COP Tj = Tbiv	3.10	2.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.34 kW	15.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.78	2.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	29 W	29 W
PSB	14 W	14 W
PCK	43 W	43 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	1.20 kW
Annual energy consumption Qhe	7052 kWh	9145 kWh