

Subtype THERMOR AUREA 2 size 9 R290

Certificate Holder	Groupe Atlantic
Address	Rue des Fondeurs BP 64
ZIP	59660
City	Merville
Country	FR
Certification Body	RISE CERT
Subtype title	THERMOR AUREA 2 size 9 R290
Registration number	012-C700423
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.05 kg
Certification Date	23.09.2025
Testing basis	EN 14511:2022, EN 14825:2022, EN 16147:2017+A1:2022, EN 12102:2022
Testing laboratory	ACTA INDUSTRIE - Laboratoire Acoustique et Climatique

**Model THERMOR AUREA COMPACT 2 - 9**

Model name	THERMOR AUREA COMPACT 2 - 9
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate
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	12.36 kW	13.12 kW
El input	2.65 kW	4.45 kW
COP	4.67	2.95

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level outdoor	56 dB(A)	56 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	186 %	140 %
Prated	12.00 kW	10.40 kW
SCOP	4.73	3.57
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.60 kW	9.20 kW
COP Tj = -7°C	2.74	2.16
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	6.50 kW	5.60 kW
COP Tj = +2°C	4.66	3.43
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.30 kW	4.20 kW

COP Tj = +7°C	6.75	4.88
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	5.40 kW	5.00 kW
COP Tj = 12°C	7.42	6.58
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	10.60 kW	9.20 kW
COP Tj = Tbiv	2.74	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.90 kW	8.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.31	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	20 W	20 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.10 kW	2.30 kW
Annual energy consumption Qhe	5241 kWh	6023 kWh

**EN 12102-1 | Warmer Climate**

	Low temperature	Medium temperature
Sound power level outdoor	56 dB(A)	56 dB(A)

**EN 14825 | Warmer Climate**

	Low temperature	Medium temperature
ηs	238 %	169 %
Prated	11.30 kW	10.60 kW
SCOP	6.01	4.29
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.30 kW	10.60 kW
COP Tj = +2°C	3.36	2.39
Cdh Tj = +2 °C	0.990	1.000
Pdh Tj = +7°C	7.30 kW	6.80 kW
COP Tj = +7°C	5.56	3.41
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	5.30 kW	4.70 kW
COP Tj = 12°C	7.24	5.95
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	11.30 kW	10.60 kW
COP Tj = Tbiv	3.36	2.39
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.30 kW	10.60 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.36	2.39
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	1.000
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	20 W	20 W
PSB	12 W	12 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	2510 kWh	3303 kWh

**Model THERMOR AUREA 2 M9**

Model name	THERMOR AUREA 2 M9
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate
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	12.29 kW	12.97 kW
El input	2.71 kW	4.47 kW
COP	4.53	2.90

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level indoor	36 dB(A)	36 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	184 %	135 %
Prated	11.90 kW	10.10 kW
SCOP	4.68	3.45
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.50 kW	8.90 kW
COP Tj = -7°C	2.69	2.11
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	6.40 kW	5.40 kW
COP Tj = +2°C	4.55	3.33
Cdh Tj = +2 °C	0.990	0.990

Pdh Tj = +7°C	5.20 kW	4.20 kW
COP Tj = +7°C	6.86	4.66
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	5.30 kW	4.90 kW
COP Tj = 12°C	7.60	6.36
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	10.50 kW	8.90 kW
COP Tj = Tbiv	2.69	2.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.80 kW	7.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	21 W	21 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.10 kW	2.20 kW
Annual energy consumption Qhe	5253 kWh	6041 kWh

**EN 12102-1 | Warmer Climate**

	Low temperature	Medium temperature
Sound power level indoor	36 dB(A)	36 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

**EN 14825 | Warmer Climate**

	Low temperature	Medium temperature
ηs	236 %	159 %
Prated	11.30 kW	10.40 kW
SCOP	5.97	4.06
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.30 kW	10.40 kW
COP Tj = +2°C	3.28	2.34
Cdh Tj = +2 °C	0.990	1.000
Pdh Tj = +7°C	7.30 kW	6.70 kW
COP Tj = +7°C	5.42	3.27
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	5.30 kW	4.60 kW
COP Tj = 12°C	7.33	5.53
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	11.30 kW	10.40 kW
COP Tj = Tbiv	3.28	2.34

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.30 kW	10.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.28	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	1.000
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	21 W	21 W
PSB	12 W	12 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	2530 kWh	3421 kWh

**Model THERMOR AUREA COMPACT 2 - 9 TRI**

Model name	THERMOR AUREA COMPACT 2 - 9 TRI
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate
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	12.36 kW	13.12 kW
El input	2.65 kW	4.45 kW
COP	4.67	2.95

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level outdoor	56 dB(A)	56 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	186 %	140 %
Prated	12.00 kW	10.40 kW
SCOP	4.73	3.57
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.60 kW	9.20 kW
COP Tj = -7°C	2.74	2.16
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	6.50 kW	5.60 kW
COP Tj = +2°C	4.66	3.43
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.30 kW	4.20 kW

COP Tj = +7°C	6.75	4.88
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	5.40 kW	5.00 kW
COP Tj = 12°C	7.42	6.58
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	10.60 kW	9.20 kW
COP Tj = Tbiv	2.74	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.90 kW	8.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.31	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	20 W	20 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.10 kW	2.30 kW
Annual energy consumption Qhe	5241 kWh	6023 kWh

**EN 12102-1 | Warmer Climate**

	Low temperature	Medium temperature
Sound power level outdoor	56 dB(A)	56 dB(A)

**EN 14825 | Warmer Climate**

	Low temperature	Medium temperature
ηs	238 %	169 %
Prated	11.30 kW	10.60 kW
SCOP	6.01	4.29
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.30 kW	10.60 kW
COP Tj = +2°C	3.36	2.39
Cdh Tj = +2 °C	0.990	1.000
Pdh Tj = +7°C	7.30 kW	6.80 kW
COP Tj = +7°C	5.56	3.41
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	5.30 kW	4.70 kW
COP Tj = 12°C	7.24	5.95
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	11.30 kW	10.60 kW
COP Tj = Tbiv	3.36	2.39
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.30 kW	10.60 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.36	2.39
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	1.000
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	20 W	20 W
PSB	12 W	12 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	2510 kWh	3303 kWh

**Model THERMOR AUREA 2 M9 TRI**

Model name	THERMOR AUREA 2 M9 TRI
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate
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	12.29 kW	12.97 kW
El input	2.71 kW	4.47 kW
COP	4.53	2.90

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level indoor	36 dB(A)	36 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	184 %	135 %
Prated	11.90 kW	10.10 kW
SCOP	4.68	3.45
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.50 kW	8.90 kW
COP Tj = -7°C	2.69	2.11
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	6.40 kW	5.40 kW
COP Tj = +2°C	4.55	3.33
Cdh Tj = +2 °C	0.990	0.990

Pdh Tj = +7°C	5.20 kW	4.20 kW
COP Tj = +7°C	6.86	4.66
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	5.30 kW	4.90 kW
COP Tj = 12°C	7.60	6.36
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	10.50 kW	8.90 kW
COP Tj = Tbiv	2.69	2.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.80 kW	7.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	21 W	21 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.10 kW	2.20 kW
Annual energy consumption Qhe	5253 kWh	6041 kWh

**EN 12102-1 | Warmer Climate**

	Low temperature	Medium temperature
Sound power level indoor	36 dB(A)	36 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

**EN 14825 | Warmer Climate**

	Low temperature	Medium temperature
ηs	236 %	159 %
Prated	11.30 kW	10.40 kW
SCOP	5.97	4.06
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.30 kW	10.40 kW
COP Tj = +2°C	3.28	2.34
Cdh Tj = +2 °C	0.990	1.000
Pdh Tj = +7°C	7.30 kW	6.70 kW
COP Tj = +7°C	5.42	3.27
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	5.30 kW	4.60 kW
COP Tj = 12°C	7.33	5.53
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	11.30 kW	10.40 kW
COP Tj = Tbiv	3.28	2.34

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.30 kW	10.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.28	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	1.000
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	21 W	21 W
PSB	12 W	12 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	2530 kWh	3421 kWh

**Model THERMOR AUREA 2 DUO 9**

Model name	THERMOR AUREA 2 DUO 9
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate
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 16147 | Average Climate**

Declared load profile	L
Efficiency $\eta_{DHW}$	120 %
COP	3.00
Heating up time	01:20 h:min
Standby power input	40.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	230 l

**EN 16147 | Warmer Climate**

Declared load profile	L
Efficiency $\eta_{DHW}$	129 %
COP	3.20
Heating up time	1:05 h:min
Standby power input	39.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	230 l

**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	12.29 kW	12.97 kW
El input	2.71 kW	4.47 kW
COP	4.53	2.90

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level indoor	36 dB(A)	36 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_S$	184 %	135 %
P <sub>rated</sub>	11.90 kW	10.10 kW
SCOP	4.68	3.45
T <sub>biv</sub>	-7 °C	-7 °C
T <sub>OL</sub>	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	10.50 kW	8.90 kW
COP T <sub>j</sub> = -7°C	2.69	2.11
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.990	1.000
P <sub>dh</sub> T <sub>j</sub> = +2°C	6.40 kW	5.40 kW
COP T <sub>j</sub> = +2°C	4.55	3.33
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.990	0.990
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.20 kW	4.20 kW
COP T <sub>j</sub> = +7°C	6.86	4.66
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.970	0.980
P <sub>dh</sub> T <sub>j</sub> = 12°C	5.30 kW	4.90 kW
COP T <sub>j</sub> = 12°C	7.60	6.36
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.970	0.970
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	10.50 kW	8.90 kW
COP T <sub>j</sub> = T <sub>biv</sub>	2.69	2.11
P <sub>dh</sub> T <sub>j</sub> = T <sub>OL</sub> or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if T <sub>OL</sub> < T <sub>designh</sub>	9.80 kW	7.90 kW
COP T <sub>j</sub> = T <sub>OL</sub> or COP T <sub>j</sub> = T <sub>designh</sub> if T <sub>OL</sub> < T <sub>designh</sub>	2.25	1.81
C <sub>dh</sub> T <sub>j</sub> = T <sub>OL</sub> or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if T <sub>OL</sub> < T <sub>designh</sub>	1.000	1.000
WT <sub>OL</sub>	75 °C	75 °C
P <sub>off</sub>	12 W	12 W
PTO	21 W	21 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.10 kW	2.20 kW
Annual energy consumption Q <sub>he</sub>	5253 kWh	6041 kWh

**EN 12102-1 | Warmer Climate**

	Low temperature	Medium temperature
Sound power level indoor	36 dB(A)	36 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

**EN 14825 | Warmer Climate**

	Low temperature	Medium temperature
$\eta_s$	236 %	159 %
Prated	11.30 kW	10.40 kW
SCOP	5.97	4.06
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.30 kW	10.40 kW
COP Tj = +2°C	3.28	2.34
Cdh Tj = +2 °C	0.990	1.000
Pdh Tj = +7°C	7.30 kW	6.70 kW
COP Tj = +7°C	5.42	3.27
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	5.30 kW	4.60 kW
COP Tj = 12°C	7.33	5.53
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	11.30 kW	10.40 kW
COP Tj = Tbiv	3.28	2.34
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.30 kW	10.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.28	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	1.000
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	21 W	21 W
PSB	12 W	12 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	2530 kWh	3421 kWh

**Model THERMOR AUREA 2 DUO 9 TRI**

Model name	THERMOR AUREA 2 DUO 9 TRI
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate
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 16147 | Average Climate**

Declared load profile	L
Efficiency $\eta_{DHW}$	120 %
COP	3.00
Heating up time	01:20 h:min
Standby power input	40.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	230 l

**EN 16147 | Warmer Climate**

Declared load profile	L
Efficiency $\eta_{DHW}$	129 %
COP	3.20
Heating up time	1:05 h:min
Standby power input	39.0 W
Reference hot water temperature	55.0 °C
Mixed water at 40°C	230 l

**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	12.29 kW	12.97 kW
El input	2.71 kW	4.47 kW
COP	4.53	2.90

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level indoor	36 dB(A)	36 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_S$	184 %	135 %
P <sub>rated</sub>	11.90 kW	10.10 kW
SCOP	4.68	3.45
T <sub>biv</sub>	-7 °C	-7 °C
T <sub>OL</sub>	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	10.50 kW	8.90 kW
COP T <sub>j</sub> = -7°C	2.69	2.11
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.990	1.000
P <sub>dh</sub> T <sub>j</sub> = +2°C	6.40 kW	5.40 kW
COP T <sub>j</sub> = +2°C	4.55	3.33
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.990	0.990
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.20 kW	4.20 kW
COP T <sub>j</sub> = +7°C	6.86	4.66
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.970	0.980
P <sub>dh</sub> T <sub>j</sub> = 12°C	5.30 kW	4.90 kW
COP T <sub>j</sub> = 12°C	7.60	6.36
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.970	0.970
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	10.50 kW	8.90 kW
COP T <sub>j</sub> = T <sub>biv</sub>	2.69	2.11
P <sub>dh</sub> T <sub>j</sub> = T <sub>OL</sub> or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if T <sub>OL</sub> < T <sub>designh</sub>	9.80 kW	7.90 kW
COP T <sub>j</sub> = T <sub>OL</sub> or COP T <sub>j</sub> = T <sub>designh</sub> if T <sub>OL</sub> < T <sub>designh</sub>	2.25	1.81
C <sub>dh</sub> T <sub>j</sub> = T <sub>OL</sub> or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if T <sub>OL</sub> < T <sub>designh</sub>	1.000	1.000
WT <sub>OL</sub>	75 °C	75 °C
P <sub>off</sub>	12 W	12 W
PTO	21 W	21 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.10 kW	2.20 kW
Annual energy consumption Q <sub>he</sub>	5253 kWh	6041 kWh

**EN 12102-1 | Warmer Climate**

	Low temperature	Medium temperature
Sound power level indoor	36 dB(A)	36 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

**EN 14825 | Warmer Climate**

	Low temperature	Medium temperature
ηs	236 %	159 %
Prated	11.30 kW	10.40 kW
SCOP	5.97	4.06
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.30 kW	10.40 kW
COP Tj = +2°C	3.28	2.34
Cdh Tj = +2 °C	0.990	1.000
Pdh Tj = +7°C	7.30 kW	6.70 kW
COP Tj = +7°C	5.42	3.27
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	5.30 kW	4.60 kW
COP Tj = 12°C	7.33	5.53
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	11.30 kW	10.40 kW
COP Tj = Tbiv	3.28	2.34
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.30 kW	10.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.28	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	1.000
WTOL	75 °C	75 °C
Poff	12 W	12 W
PTO	21 W	21 W
PSB	12 W	12 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	2530 kWh	3421 kWh