

Subtype Idola S 3.2 8-10 - Idola ST 3.2 8-10

Certificate Holder	Lamborghini Caloreclima
Address	Via Ritonda 78A
ZIP	37047
City	San Bonifacio
Country	IT
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	Idola S 3.2 8-10 - Idola ST 3.2 8-10
Registration number	011-1W0603
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.65 kg
Certification Date	03.05.2023
Testing basis	HP KEYMARK certification scheme rules V11

Model Idola S 3.2 8

Model name	Idola S 3.2 8
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	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	8.40 kW	7.50 kW
El input	1.63 kW	2.36 kW
COP	5.15	3.18

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	2.22 kW	1.64 kW
Cooling capacity	7.45	8.30
EER	3.35	5.05

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	205 %	131 %
Prated	8.10 kW	6.60 kW
SCOP	5.16	3.31
Tbiv	-7 °C	-7 °C

TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.18 kW	5.84 kW
COP Tj = -7°C	3.35	2.16
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.65 kW	3.75 kW
COP Tj = +2°C	5.09	3.30
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.90 kW	2.42 kW
COP Tj = +7°C	6.82	4.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.63 kW	1.39 kW
COP Tj = 12°C	8.35	5.33
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.18 kW	5.84 kW
COP Tj = Tbiv	3.35	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.44 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.04	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.66 kW	1.70 kW
Annual energy consumption Qhe	3218 kWh	4056 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	170 %	112 %
Prated	7.00 kW	5.80 kW
SCOP	4.28	2.83
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.46 kW	3.86 kW
COP Tj = -7°C	3.66	2.48
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	2.69 kW	2.21 kW

COP Tj = +2°C	5.20	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	1.65 kW	1.44 kW
COP Tj = +7°C	6.53	4.11
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.65 kW	1.46 kW
COP Tj = 12°C	7.96	5.92
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	5.69 kW	4.71 kW
COP Tj = Tbiv	2.83	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.06 kW	2.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.95	1.22
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	60 °C	51 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.94 kW	3.00 kW
Annual energy consumption Qhe	3976 kWh	4950 kWh
Pdh Tj = -15°C (if TOL	5.69	4.71
COP Tj = -15°C (if TOL	2.83	1.90
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	277 %	176 %
Prated	8.10 kW	7.60 kW
SCOP	6.96	4.43
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.56 kW	7.55 kW
COP Tj = +2°C	3.98	2.59
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.22 kW	4.86 kW
COP Tj = +7°C	6.26	3.92
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	2.62 kW	2.31 kW
COP Tj = 12°C	9.23	5.55
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	5.22 kW	4.86 kW
COP Tj = Tbiv	6.26	3.92
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.56 kW	7.55 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.98	2.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	60 °C	62 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.54 kW	0.05 kW
Annual energy consumption Qhe	1551 kWh	2259 kWh

EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°C
Pdesignc	7.40 kW	8.40 kW
SEER	5.78	8.91
Pdc Tj = 35°C	7.38 kW	8.37 kW
EER Tj = 35°C	3.39	5.09
Cdc Tj = 35 °C	0.900	0.900
Pdc Tj = 30°C	5.72 kW	6.47 kW
EER Tj = 30°C	4.71	7.02
Cdc Tj = 30 °C	0.900	0.900
Pdc Tj = 25°C	3.62 kW	4.31 kW
EER Tj = 25°C	6.65	10.67
Cdc Tj = 25 °C	0.900	0.900
Pdc Tj = 20°C	1.64 kW	1.80 kW
EER Tj = 20°C	8.55	13.61
Cdc Tj = 20 °C	0.900	0.900
Poff	14 W	14 W
PTO	10 W	10 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	768 kWh	566 kWh

Model Idola S 3.2 10

Model name	Idola S 3.2 10
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	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	10.00 kW	9.50 kW
El input	2.02 kW	3.06 kW
COP	4.95	3.10

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	2.52 kW	2.18 kW
Cooling capacity	8.20	9.90
EER	3.25	4.55

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	204 %	136 %
Prated	9.20 kW	7.70 kW
SCOP	5.13	3.43
Tbiv	-7 °C	-7 °C

TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.10 kW	6.78 kW
COP Tj = -7°C	3.23	2.24
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.18 kW	4.28 kW
COP Tj = +2°C	5.01	3.42
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.32 kW	2.77 kW
COP Tj = +7°C	7.08	4.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.65 kW	1.58 kW
COP Tj = 12°C	8.58	5.68
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.10 kW	6.78 kW
COP Tj = Tbiv	3.23	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.40 kW	5.38 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.96	1.83
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.80 kW	2.32 kW
Annual energy consumption Qhe	3644 kWh	4539 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	170 %	116 %
Prated	7.70 kW	6.70 kW
SCOP	4.28	2.93
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.83 kW	4.27 kW
COP Tj = -7°C	3.60	2.54
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	2.94 kW	2.57 kW

COP Tj = +2°C	5.26	3.51
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	1.92 kW	1.65 kW
COP Tj = +7°C	7.08	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.65 kW	1.47 kW
COP Tj = 12°C	7.96	5.96
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.32 kW	5.47 kW
COP Tj = Tbiv	2.64	2.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.62 kW	2.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.22
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	60 °C	51 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.08 kW	3.91 kW
Annual energy consumption Qhe	4423 kWh	5540 kWh
Pdh Tj = -15°C (if TOL	6.32	5.47
COP Tj = -15°C (if TOL	2.64	2.00
Cdh Tj = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	281 %	180 %
Prated	8.60 kW	8.60 kW
SCOP	7.06	4.53
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.44 kW	8.06 kW
COP Tj = +2°C	3.84	2.59
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.52 kW	5.54 kW
COP Tj = +7°C	6.18	4.10
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	2.62 kW	2.53 kW
COP Tj = 12°C	9.04	5.82
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	5.52 kW	5.54 kW
COP Tj = Tbiv	6.18	4.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.44 kW	8.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.84	2.61
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	60 °C	62 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.16 kW	0.45 kW
Annual energy consumption Qhe	1617 kWh	2516 kWh

EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°C
Pdesignc	8.70 kW	10.00 kW
SEER	5.93	8.73
Pdc Tj = 35°C	8.73 kW	10.01 kW
EER Tj = 35°C	3.21	4.64
Cdc Tj = 35 °C	0.900	0.900
Pdc Tj = 30°C	6.68 kW	7.71 kW
EER Tj = 30°C	4.47	6.45
Cdc Tj = 30 °C	0.900	0.900
Pdc Tj = 25°C	4.26 kW	5.03 kW
EER Tj = 25°C	7.02	10.36
Cdc Tj = 25 °C	0.900	0.900
Pdc Tj = 20°C	1.94 kW	2.32 kW
EER Tj = 20°C	9.54	14.98
Cdc Tj = 20 °C	0.900	0.900
Poff	14 W	14 W
PTO	10 W	10 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	880 kWh	687 kWh

Model Idola ST 3.2 8

Model name	Idola ST 3.2 8
Application	Heating + DHW + low 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	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	L
Efficiency η_{DHW}	125 %
COP	2.92
Heating up time	4:05 h:min
Standby power input	44.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	215 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	103 %
COP	2.42
Heating up time	4:56 h:min
Standby power input	53.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	215 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.48
Heating up time	3:26 h:min
Standby power input	37.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	215 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	8.40 kW	7.50 kW
El input	1.63 kW	2.36 kW
COP	5.15	3.18

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	2.22 kW	1.64 kW
Cooling capacity	7.45	8.30
EER	3.35	5.05

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	205 %	131 %
Prated	8.10 kW	6.60 kW
SCOP	5.16	3.31
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.18 kW	5.84 kW
COP Tj = -7°C	3.35	2.16
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.65 kW	3.75 kW
COP Tj = +2°C	5.09	3.30
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.90 kW	2.42 kW
COP Tj = +7°C	6.82	4.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.63 kW	1.39 kW
COP Tj = 12°C	8.35	5.33
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.18 kW	5.84 kW
COP Tj = Tbiv	3.35	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.44 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.04	1.84

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.66 kW	1.70 kW
Annual energy consumption Qhe	3218 kWh	4056 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	170 %	112 %
Prated	7.00 kW	5.80 kW
SCOP	4.28	2.83
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.46 kW	3.86 kW
COP Tj = -7°C	3.66	2.48
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	2.69 kW	2.21 kW
COP Tj = +2°C	5.20	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	1.65 kW	1.44 kW
COP Tj = +7°C	6.53	4.11
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.65 kW	1.46 kW
COP Tj = 12°C	7.96	5.92
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	5.69 kW	4.71 kW
COP Tj = Tbiv	2.83	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.06 kW	2.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.95	1.22
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	60 °C	51 °C
Poff	14 W	14 W
PTO	24 W	24 W

PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.94 kW	3.00 kW
Annual energy consumption Q _{he}	3976 kWh	4950 kWh
P _{dh} T _j = -15°C (if TOL	5.69	4.71
COP T _j = -15°C (if TOL	2.83	1.90
C _{dh} T _j = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	277 %	176 %
Prated	8.10 kW	7.60 kW
SCOP	6.96	4.43
T _{biv}	7 °C	7 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	7.56 kW	7.55 kW
COP T _j = +2°C	3.98	2.59
C _{dh} T _j = +2 °C	0.900	0.900
P _{dh} T _j = +7°C	5.22 kW	4.86 kW
COP T _j = +7°C	6.26	3.92
C _{dh} T _j = +7 °C	0.900	0.900
P _{dh} T _j = 12°C	2.62 kW	2.31 kW
COP T _j = 12°C	9.23	5.55
C _{dh} T _j = +12 °C	0.900	0.900
P _{dh} T _j = T _{biv}	5.22 kW	4.86 kW
COP T _j = T _{biv}	6.26	3.92
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	7.56 kW	7.55 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.98	2.59
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.900	0.900
WTOL	60 °C	62 °C
P _{off}	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.54 kW	0.05 kW

Annual energy consumption Qhe	1551 kWh	2259 kWh
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EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°C
Pdesignc	7.40 kW	8.40 kW
SEER	5.78	8.91
Pdc Tj = 35°C	7.38 kW	8.37 kW
EER Tj = 35°C	3.39	5.09
Cdc Tj = 35 °C	0.900	0.900
Pdc Tj = 30°C	5.72 kW	6.47 kW
EER Tj = 30°C	4.71	7.02
Cdc Tj = 30 °C	0.900	0.900
Pdc Tj = 25°C	3.62 kW	4.31 kW
EER Tj = 25°C	6.65	10.67
Cdc Tj = 25 °C	0.900	0.900
Pdc Tj = 20°C	1.64 kW	1.80 kW
EER Tj = 20°C	8.55	13.61
Cdc Tj = 20 °C	0.900	0.900
Poff	14 W	14 W
PTO	10 W	10 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	768 kWh	566 kWh

Model Idola ST 3.2 10

Model name	Idola ST 3.2 10
Application	Heating + DHW + low 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	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 16147 | Average Climate

Declared load profile	L
Efficiency η_{DHW}	126 %
COP	2.95
Heating up time	3:57 h:min
Standby power input	46.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	215 l

EN 16147 | Colder Climate

Declared load profile	L
Efficiency η_{DHW}	104 %
COP	2.44
Heating up time	4:46 h:min
Standby power input	56.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	215 l

EN 16147 | Warmer Climate

Declared load profile	L
Efficiency η_{DHW}	150 %
COP	3.50
Heating up time	3:19 h:min
Standby power input	39.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	215 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	10.00 kW	9.50 kW
El input	2.02 kW	3.06 kW
COP	4.95	3.10

EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	2.52 kW	2.18 kW
Cooling capacity	8.20	9.90
EER	3.25	4.55

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	204 %	136 %
Prated	9.20 kW	7.70 kW
SCOP	5.13	3.43
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.10 kW	6.78 kW
COP Tj = -7°C	3.23	2.24
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.18 kW	4.28 kW
COP Tj = +2°C	5.01	3.42
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.32 kW	2.77 kW
COP Tj = +7°C	7.08	4.52
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.65 kW	1.58 kW
COP Tj = 12°C	8.58	5.68
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.10 kW	6.78 kW
COP Tj = Tbiv	3.23	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.40 kW	5.38 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.96	1.83

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.80 kW	2.32 kW
Annual energy consumption Qhe	3644 kWh	4539 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	170 %	116 %
Prated	7.70 kW	6.70 kW
SCOP	4.28	2.93
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.83 kW	4.27 kW
COP Tj = -7°C	3.60	2.54
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	2.94 kW	2.57 kW
COP Tj = +2°C	5.26	3.51
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	1.92 kW	1.65 kW
COP Tj = +7°C	7.08	4.37
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	1.65 kW	1.47 kW
COP Tj = 12°C	7.96	5.96
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.32 kW	5.47 kW
COP Tj = Tbiv	2.64	2.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.62 kW	2.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.22
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	60 °C	51 °C
Poff	14 W	14 W
PTO	24 W	24 W

PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.08 kW	3.91 kW
Annual energy consumption Q _{he}	4423 kWh	5540 kWh
P _{dh} T _j = -15 °C (if TOL	6.32	5.47
COP T _j = -15 °C (if TOL	2.64	2.00
C _{dh} T _j = -15 °C	0.900	0.900

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	281 %	180 %
Prated	8.60 kW	8.60 kW
SCOP	7.06	4.53
T _{biv}	7 °C	7 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2 °C	8.44 kW	8.06 kW
COP T _j = +2 °C	3.84	2.59
C _{dh} T _j = +2 °C	0.900	0.900
P _{dh} T _j = +7 °C	5.52 kW	5.54 kW
COP T _j = +7 °C	6.18	4.10
C _{dh} T _j = +7 °C	0.900	0.900
P _{dh} T _j = 12 °C	2.62 kW	2.53 kW
COP T _j = 12 °C	9.04	5.82
C _{dh} T _j = +12 °C	0.900	0.900
P _{dh} T _j = T _{biv}	5.52 kW	5.54 kW
COP T _j = T _{biv}	6.18	4.10
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	8.44 kW	8.15 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.84	2.61
C _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	0.900	0.900
WTOL	60 °C	62 °C
P _{off}	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.16 kW	0.45 kW

Annual energy consumption Q _{he}	1617 kWh	2516 kWh
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EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°C
P _{designc}	8.70 kW	10.00 kW
SEER	5.93	8.73
P _{dc} T _j = 35°C	8.73 kW	10.01 kW
EER T _j = 35°C	3.21	4.64
C _{dc} T _j = 35 °C	0.900	0.900
P _{dc} T _j = 30°C	6.68 kW	7.71 kW
EER T _j = 30°C	4.47	6.45
C _{dc} T _j = 30 °C	0.900	0.900
P _{dc} T _j = 25°C	4.26 kW	5.03 kW
EER T _j = 25°C	7.02	10.36
C _{dc} T _j = 25 °C	0.900	0.900
P _{dc} T _j = 20°C	1.94 kW	2.32 kW
EER T _j = 20°C	9.54	14.98
C _{dc} T _j = 20 °C	0.900	0.900
P _{off}	14 W	14 W
PTO	10 W	10 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Q _{ce}	880 kWh	687 kWh