

## Subtype VERSATI V Monobloc 12/14

Certificate Holder	Gree Electric Appliances, Inc. of Zhuhai
Address	West Jinji Rd
ZIP	519070
City	Qianshan, Zhuhai, Guangdong
Country	CN
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	VERSATI V Monobloc 12/14
Registration number	011-1W1087
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	1.2 kg
Certification Date	22.08.2025
Testing basis	HP KEYMARK certification scheme rules rev. 14
Testing laboratory	Intertek Testing Services Shenzhen LTD. Guangzhou Branch, CN

## Model GRS-CQ12Pd/NpG4-E

Model name	GRS-CQ12Pd/NpG4-E
Application	Heating + DHW + low temp
Units	Outdoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder 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	XL
Efficiency $\eta_{DHW}$	112 %
COP	2.67
Heating up time	1:31 h:min
Standby power input	56.0 W
Reference hot water temperature	51.3 °C
Mixed water at 40°C	316 l

### EN 16147 | Colder Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	88 %
COP	2.12
Heating up time	1:56 h:min
Standby power input	72.0 W
Reference hot water temperature	51.5 °C
Mixed water at 40°C	319 l

### EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	122 %
COP	2.92
Heating up time	1:15 h:min
Standby power input	51.0 W
Reference hot water temperature	51.5 °C
Mixed water at 40°C	320 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	12.00 kW	12.00 kW
El input	2.42 kW	3.87 kW
COP	4.95	3.10

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	187 %	140 %
Prated	12.00 kW	12.00 kW
SCOP	4.75	3.57
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.67 kW	10.86 kW
COP Tj = -7°C	2.74	2.19
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	6.77 kW	7.09 kW
COP Tj = +2°C	4.68	3.51
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.55 kW	4.43 kW
COP Tj = +7°C	6.76	4.76
Cdh Tj = +7 °C	0.960	0.970
Pdh Tj = 12°C	3.19 kW	2.98 kW
COP Tj = 12°C	7.10	5.49
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	10.67 kW	10.86 kW
COP Tj = Tbiv	2.74	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.82 kW	11.61 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.54	2.22
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	80 °C	80 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.18 kW	0.39 kW
Annual energy consumption Q <sub>he</sub>	5235 kWh	7049 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	156 %	121 %
Prated	11.00 kW	11.00 kW
SCOP	3.98	3.10
T <sub>biv</sub>	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.08 kW	7.01 kW
COP T <sub>j</sub> = -7°C	3.30	2.40
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.980	0.990
P <sub>dh</sub> T <sub>j</sub> = +2°C	4.14 kW	4.32 kW
COP T <sub>j</sub> = +2°C	4.89	3.77
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.970	0.970
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.72 kW	2.76 kW
COP T <sub>j</sub> = +7°C	5.70	4.75
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.950	0.950
P <sub>dh</sub> T <sub>j</sub> = 12°C	3.18 kW	2.97 kW
COP T <sub>j</sub> = 12°C	6.84	5.68
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.950	0.960
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	8.74 kW	8.76 kW
COP T <sub>j</sub> = T <sub>biv</sub>	2.51	2.16
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.94 kW	6.86 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	2.12	1.59
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	0.900	0.900
WTOL	80 °C	80 °C
P <sub>off</sub>	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.06 kW	4.14 kW
Annual energy consumption Q <sub>he</sub>	6624 kWh	8532 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL	8.74	8.76
COP T <sub>j</sub> = -15°C (if TOL	2.51	2.16

Cdh Tj = -15 °C	0.900	0.900
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#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	246 %	180 %
Prated	12.00 kW	12.00 kW
SCOP	6.23	4.58
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.82 kW	11.67 kW
COP Tj = +2°C	3.10	2.42
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	7.53 kW	9.06 kW
COP Tj = +7°C	5.81	3.92
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	3.47 kW	3.65 kW
COP Tj = 12°C	7.43	5.53
Cdh Tj = +12 °C	0.930	0.960
Pdh Tj = Tbiv	11.82 kW	11.67 kW
COP Tj = Tbiv	3.10	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.82 kW	11.67 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.10	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	80 °C	80 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 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	2538 kWh	3411 kWh

## Model GRS-CQ12Pd/NpG4-M

Model name	GRS-CQ12Pd/NpG4-M
Application	Heating + DHW + low temp
Units	Outdoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder 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	XL
Efficiency $\eta_{DHW}$	112 %
COP	2.67
Heating up time	1:31 h:min
Standby power input	56.0 W
Reference hot water temperature	51.3 °C
Mixed water at 40°C	316 l

### EN 16147 | Colder Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	89 %
COP	2.12
Heating up time	1:56 h:min
Standby power input	72.0 W
Reference hot water temperature	51.5 °C
Mixed water at 40°C	319 l

### EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	123 %
COP	2.92
Heating up time	1:15 h:min
Standby power input	51.0 W
Reference hot water temperature	51.5 °C
Mixed water at 40°C	320 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	12.00 kW	12.00 kW
El input	2.42 kW	3.87 kW
COP	4.95	3.10

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	187 %	140 %
Prated	12.00 kW	12.00 kW
SCOP	4.76	3.58
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.75 kW	10.52 kW
COP Tj = -7°C	2.69	2.11
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	6.81 kW	6.90 kW
COP Tj = +2°C	4.71	3.55
Cdh Tj = +2 °C	0.980	0.990
Pdh Tj = +7°C	4.48 kW	4.37 kW
COP Tj = +7°C	6.78	4.71
Cdh Tj = +7 °C	0.960	0.970
Pdh Tj = 12°C	3.18 kW	2.98 kW
COP Tj = 12°C	7.09	5.49
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	10.75 kW	10.52 kW
COP Tj = Tbiv	2.69	2.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.62 kW	11.54 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.54	2.21
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	80 °C	80 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.38 kW	0.46 kW
Annual energy consumption Q <sub>he</sub>	5272 kWh	6860 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	155 %	121 %
Prated	11.00 kW	11.00 kW
SCOP	4.00	3.10
T <sub>biv</sub>	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.08 kW	7.00 kW
COP T <sub>j</sub> = -7°C	3.31	2.40
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.990	0.990
P <sub>dh</sub> T <sub>j</sub> = +2°C	4.11 kW	4.31 kW
COP T <sub>j</sub> = +2°C	4.90	3.76
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.970	0.980
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.72 kW	2.76 kW
COP T <sub>j</sub> = +7°C	5.70	4.76
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.950	0.960
P <sub>dh</sub> T <sub>j</sub> = 12°C	3.17 kW	2.97 kW
COP T <sub>j</sub> = 12°C	6.83	5.68
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.950	0.950
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	8.75 kW	8.75 kW
COP T <sub>j</sub> = T <sub>biv</sub>	2.52	2.16
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.96 kW	6.86 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	2.14	1.59
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	0.900	0.900
WTOL	80 °C	80 °C
P <sub>off</sub>	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.04 kW	4.14 kW
Annual energy consumption Q <sub>he</sub>	6621 kWh	8525 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL	8.75	8.75
COP T <sub>j</sub> = -15°C (if TOL	2.52	2.16



Cdh Tj = -15 °C	0.900	0.900
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#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	246 %	180 %
Prated	12.00 kW	12.00 kW
SCOP	6.23	4.58
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.69 kW	11.69 kW
COP Tj = +2°C	3.09	2.42
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	7.53 kW	7.54 kW
COP Tj = +7°C	5.82	4.15
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	3.48 kW	3.61 kW
COP Tj = 12°C	7.43	5.57
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	11.69 kW	11.69 kW
COP Tj = Tbiv	3.09	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.69 kW	11.69 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.09	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	80 °C	80 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 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	2508 kWh	3408 kWh

## Model GRS-CQ14Pd/NpG4-E

Model name	GRS-CQ14Pd/NpG4-E
Application	Heating + DHW + low temp
Units	Outdoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder 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	XL
Efficiency $\eta_{DHW}$	112 %
COP	2.67
Heating up time	1:31 h:min
Standby power input	56.0 W
Reference hot water temperature	51.3 °C
Mixed water at 40°C	316 l

### EN 16147 | Colder Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	88 %
COP	2.12
Heating up time	1:56 h:min
Standby power input	72.0 W
Reference hot water temperature	51.5 °C
Mixed water at 40°C	319 l

### EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	122 %
COP	2.92
Heating up time	1:15 h:min
Standby power input	51.0 W
Reference hot water temperature	51.5 °C
Mixed water at 40°C	320 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	14.00 kW	14.00 kW
El input	2.98 kW	4.67 kW
COP	4.70	3.00

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	186 %	139 %
Prated	13.00 kW	13.00 kW
SCOP	4.73	3.55
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.14 kW	11.20 kW
COP Tj = -7°C	2.68	2.09
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	6.77 kW	7.09 kW
COP Tj = +2°C	4.68	3.51
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.55 kW	4.43 kW
COP Tj = +7°C	6.76	4.76
Cdh Tj = +7 °C	0.960	0.970
Pdh Tj = 12°C	3.19 kW	2.98 kW
COP Tj = 12°C	7.10	5.49
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	11.14 kW	11.20 kW
COP Tj = Tbiv	2.68	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.82 kW	11.61 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.54	2.22
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	80 °C	80 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.18 kW	1.39 kW
Annual energy consumption Q <sub>he</sub>	5489 kWh	7335 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	155 %	120 %
Prated	13.00 kW	13.00 kW
SCOP	3.95	3.08
T <sub>biv</sub>	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.68 kW	7.17 kW
COP T <sub>j</sub> = -7°C	3.30	2.40
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.980	0.990
P <sub>dh</sub> T <sub>j</sub> = +2°C	4.34 kW	4.66 kW
COP T <sub>j</sub> = +2°C	4.86	3.76
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.970	0.970
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.83 kW	2.97 kW
COP T <sub>j</sub> = +7°C	5.69	4.62
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.950	0.950
P <sub>dh</sub> T <sub>j</sub> = 12°C	3.18 kW	2.99 kW
COP T <sub>j</sub> = 12°C	6.84	5.71
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.950	0.960
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	10.21 kW	10.50 kW
COP T <sub>j</sub> = T <sub>biv</sub>	2.52	2.22
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.94 kW	6.86 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	2.12	1.59
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	0.900	0.900
WTOL	80 °C	80 °C
P <sub>off</sub>	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.06 kW	6.14 kW
Annual energy consumption Q <sub>he</sub>	7787 kWh	10254 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL	10.21	10.50
COP T <sub>j</sub> = -15°C (if TOL	2.52	2.22

Cdh Tj = -15 °C	0.900	0.900
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#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	232 %	170 %
Prated	13.00 kW	14.00 kW
SCOP	5.88	4.33
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.82 kW	12.67 kW
COP Tj = +2°C	3.10	2.33
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	8.67 kW	9.06 kW
COP Tj = +7°C	5.75	3.92
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	3.47 kW	3.65 kW
COP Tj = 12°C	7.43	5.53
Cdh Tj = +12 °C	0.930	0.960
Pdh Tj = Tbiv	8.67 kW	9.06 kW
COP Tj = Tbiv	5.75	3.92
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.82 kW	12.67 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.10	2.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	80 °C	80 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.18 kW	1.33 kW
Annual energy consumption Qhe	3060 kWh	4348 kWh

## Model GRS-CQ14Pd/NpG4-M

Model name	GRS-CQ14Pd/NpG4-M
Application	Heating + DHW + low temp
Units	Outdoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder 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	XL
Efficiency $\eta_{DHW}$	112 %
COP	2.67
Heating up time	1:31 h:min
Standby power input	56.0 W
Reference hot water temperature	51.3 °C
Mixed water at 40°C	316 l

### EN 16147 | Colder Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	112 %
COP	2.67
Heating up time	1:31 h:min
Standby power input	56.0 W
Reference hot water temperature	51.3 °C
Mixed water at 40°C	316 l

### EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	123 %
COP	2.92
Heating up time	1:15 h:min
Standby power input	51.0 W
Reference hot water temperature	51.5 °C
Mixed water at 40°C	320 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	14.00 kW	14.00 kW
El input	2.98 kW	4.67 kW
COP	4.70	3.00

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	187 %	140 %
Prated	13.00 kW	13.00 kW
SCOP	4.75	3.58
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.30 kW	11.66 kW
COP Tj = -7°C	2.66	2.12
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	6.80 kW	6.90 kW
COP Tj = +2°C	4.70	3.55
Cdh Tj = +2 °C	0.980	0.990
Pdh Tj = +7°C	4.47 kW	4.37 kW
COP Tj = +7°C	6.78	4.71
Cdh Tj = +7 °C	0.960	0.970
Pdh Tj = 12°C	3.13 kW	2.97 kW
COP Tj = 12°C	7.11	5.47
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	11.30 kW	11.66 kW
COP Tj = Tbiv	2.66	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.62 kW	11.54 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.54	2.21
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	80 °C	80 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.38 kW	1.46 kW
Annual energy consumption Q <sub>he</sub>	5560 kWh	7615 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	156 %	121 %
Prated	13.00 kW	13.00 kW
SCOP	3.98	3.11
T <sub>biv</sub>	-15 °C	-15 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.18 kW	7.19 kW
COP T <sub>j</sub> = -7°C	3.31	2.40
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.990	0.990
P <sub>dh</sub> T <sub>j</sub> = +2°C	4.41 kW	4.42 kW
COP T <sub>j</sub> = +2°C	4.86	3.77
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.970	0.970
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.82 kW	2.86 kW
COP T <sub>j</sub> = +7°C	5.71	4.76
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.950	0.950
P <sub>dh</sub> T <sub>j</sub> = 12°C	3.17 kW	2.96 kW
COP T <sub>j</sub> = 12°C	6.83	5.77
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.950	0.960
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	10.30 kW	10.41 kW
COP T <sub>j</sub> = T <sub>biv</sub>	2.53	2.22
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	6.95 kW	6.86 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	2.14	1.59
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	0.900	0.900
WTOL	80 °C	80 °C
P <sub>off</sub>	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.05 kW	6.14 kW
Annual energy consumption Q <sub>he</sub>	7836 kWh	10131 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL	10.30	10.41
COP T <sub>j</sub> = -15°C (if TOL	2.53	2.22



Cdh Tj = -15 °C	0.900	0.900
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#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	58 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	233 %	168 %
Prated	13.00 kW	14.00 kW
SCOP	5.91	4.27
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.68 kW	11.69 kW
COP Tj = +2°C	3.09	2.42
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	8.52 kW	9.00 kW
COP Tj = +7°C	5.77	3.90
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	3.47 kW	3.61 kW
COP Tj = 12°C	7.43	5.57
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	8.52 kW	9.00 kW
COP Tj = Tbiv	5.77	3.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.68 kW	11.69 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.09	2.42
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990
WTOL	80 °C	80 °C
Poff	25 W	25 W
PTO	25 W	25 W
PSB	25 W	25 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.32 kW	2.31 kW
Annual energy consumption Qhe	2998 kWh	4377 kWh