

## Subtype Vitocal 2xx-G B06

Certificate Holder	Viessmann Climate Solutions GmbH & Co. KG
Address	Viessmannstr. 1
ZIP	35107
City	Allendorf/Eder
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	Vitocal 2xx-G B06
Registration number	011-1W0285
Heat Pump Type	Brine/Water and Water/Water
Refrigerant	R410A
Mass of Refrigerant	1.2 kg
Certification Date	11.07.2019

## Model VITOCAL 200-G BWC 201.B06

Model name	VITOCAL 200-G BWC 201.B06
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	Yes

## Brine/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	5.75 kW	5.12 kW
El input	1.32 kW	1.91 kW
COP	4.36	2.68

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	181 %	128 %
Prated	6.50 kW	5.90 kW
SCOP	4.72	3.39
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.77 kW	5.20 kW
COP Tj = -7°C	4.51	2.89
Cdh Tj = -7 °C	0.989	0.992
Pdh Tj = +2°C	5.83 kW	5.37 kW
COP Tj = +2°C	4.74	3.40
Cdh Tj = +2 °C	0.989	0.991
Pdh Tj = +7°C	5.89 kW	5.49 kW
COP Tj = +7°C	4.99	3.75

Cdh Tj = +7 °C	0.989	0.990
Pdh Tj = 12°C	5.96 kW	5.60 kW
COP Tj = 12°C	5.25	4.13
Cdh Tj = +12 °C	0.988	0.990
Pdh Tj = Tbiv	5.77 kW	5.20 kW
COP Tj = Tbiv	4.51	2.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.75 kW	5.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.68
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.993
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.75 kW	0.78 kW
Annual energy consumption Qhe	2847 kWh	3592 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	169 %	127 %
Prated	9.60 kW	8.80 kW
SCOP	4.43	3.37
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.89 kW	5.39 kW
COP Tj = -7°C	4.94	3.47
Cdh Tj = -7 °C	0.989	0.991
Pdh Tj = +2°C	5.94 kW	5.51 kW
COP Tj = +2°C	5.08	3.83
Cdh Tj = +2 °C	0.988	0.990
Pdh Tj = +7°C	5.98 kW	5.61 kW
COP Tj = +7°C	5.22	4.12
Cdh Tj = +7 °C	0.988	0.990
Pdh Tj = 12°C	5.96 kW	5.68 kW
COP Tj = 12°C	5.19	4.36
Cdh Tj = +12 °C	0.988	0.989
Pdh Tj = Tbiv	5.89 kW	5.39 kW
COP Tj = Tbiv	4.94	3.47

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.75 kW	5.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.36	2.68
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.993
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.85 kW	3.68 kW
Annual energy consumption Qhe	5345 kWh	6441 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	179 %	126 %
Prated	5.70 kW	5.10 kW
SCOP	4.66	3.36
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.75 kW	5.12 kW
COP Tj = +2°C	4.36	2.68
Cdh Tj = +2 °C	0.990	0.993
Pdh Tj = +7°C	5.82 kW	5.28 kW
COP Tj = +7°C	4.60	3.12
Cdh Tj = +7 °C	0.989	0.992
Pdh Tj = 12°C	5.92 kW	5.52 kW
COP Tj = 12°C	4.99	3.85
Cdh Tj = +12 °C	0.989	0.990
Pdh Tj = Tbiv	5.75 kW	5.12 kW
COP Tj = Tbiv	4.36	2.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.75 kW	5.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.36	2.68
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.993
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	15 W	15 W

PSB	15 W	15 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 Q <sub>he</sub>	1633 kWh	2027 kWh

#### Water/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	7.86 kW	6.97 kW
EI input	1.33 kW	2.00 kW
COP	5.90	3.49

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	250 %	176 %
Prated	8.90 kW	8.10 kW
SCOP	6.45	4.60
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.93 kW	7.17 kW
COP T <sub>j</sub> = -7°C	6.11	3.81
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.995	0.996
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.02 kW	7.49 kW
COP T <sub>j</sub> = +2°C	6.45	4.59
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.994	0.995
P <sub>dh</sub> T <sub>j</sub> = +7°C	8.11 kW	7.68 kW
COP T <sub>j</sub> = +7°C	6.81	5.13
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.994	0.995
P <sub>dh</sub> T <sub>j</sub> = 12°C	8.21 kW	7.87 kW
COP T <sub>j</sub> = 12°C	7.19	5.75
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.994	0.995
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	7.93 kW	7.17 kW
COP T <sub>j</sub> = T <sub>biv</sub>	6.11	3.81
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>	7.86 kW	6.97 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	5.90	3.49

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.996
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.04 kW	1.13 kW
Annual energy consumption Qhe	2852 kWh	3634 kWh

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	225 %	170 %
Prated	13.20 kW	12.30 kW
SCOP	5.83	4.45
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.13 kW	7.56 kW
COP Tj = -7°C	6.85	4.78
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	8.17 kW	7.74 kW
COP Tj = +2°C	7.04	5.28
Cdh Tj = +2 °C	0.994	0.995
Pdh Tj = +7°C	8.22 kW	7.86 kW
COP Tj = +7°C	7.22	5.74
Cdh Tj = +7 °C	0.994	0.995
Pdh Tj = 12°C	8.22 kW	7.93 kW
COP Tj = 12°C	7.18	6.06
Cdh Tj = +12 °C	0.994	0.994
Pdh Tj = Tbiv	8.13 kW	7.56 kW
COP Tj = Tbiv	6.85	4.78
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.86 kW	6.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.90	3.49
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.996
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.34 kW	5.33 kW

Annual energy consumption Q <sub>he</sub>	5579 kWh	6815 kWh
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# EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	252 %	175 %
Prated	7.80 kW	7.00 kW
SCOP	6.49	4.57
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	7.86 kW	6.97 kW
COP T <sub>j</sub> = +2°C	5.90	3.49
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.995	0.996
P <sub>dh</sub> T <sub>j</sub> = +7°C	7.98 kW	7.31 kW
COP T <sub>j</sub> = +7°C	6.30	4.13
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.994	0.996
P <sub>dh</sub> T <sub>j</sub> = 12°C	8.13 kW	7.75 kW
COP T <sub>j</sub> = 12°C	6.90	5.29
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.994	0.995
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	7.86 kW	6.97 kW
COP T <sub>j</sub> = T <sub>biv</sub>	5.90	3.49
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>	7.86 kW	6.97 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	5.90	3.49
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>	0.995	0.996
WTOL	65 °C	65 °C
P <sub>off</sub>	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 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 Q <sub>he</sub>	1606 kWh	2046 kWh

## Model VITOCAL 200-G BWC 201.B06 SC

Model name	VITOCAL 200-G BWC 201.B06 SC
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	n/a

## Brine/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	5.75 kW	5.12 kW
El input	1.32 kW	1.91 kW
COP	4.36	2.68

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	181 %	128 %
Prated	6.50 kW	5.90 kW
SCOP	4.72	3.39
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.77 kW	5.20 kW
COP Tj = -7°C	4.51	2.89
Cdh Tj = -7 °C	0.989	0.992
Pdh Tj = +2°C	5.83 kW	5.37 kW
COP Tj = +2°C	4.74	3.40
Cdh Tj = +2 °C	0.989	0.991
Pdh Tj = +7°C	5.89 kW	5.49 kW
COP Tj = +7°C	4.99	3.75



Cdh Tj = +7 °C	0.989	0.990
Pdh Tj = 12°C	5.96 kW	5.60 kW
COP Tj = 12°C	5.25	4.13
Cdh Tj = +12 °C	0.988	0.990
Pdh Tj = Tbiv	5.77 kW	5.20 kW
COP Tj = Tbiv	4.51	2.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.75 kW	5.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.68
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.993
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.75 kW	0.78 kW
Annual energy consumption Qhe	2847 kWh	3592 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	169 %	127 %
Prated	9.60 kW	8.80 kW
SCOP	4.43	3.37
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.89 kW	5.39 kW
COP Tj = -7°C	4.94	3.47
Cdh Tj = -7 °C	0.989	0.991
Pdh Tj = +2°C	5.94 kW	5.51 kW
COP Tj = +2°C	5.08	3.83
Cdh Tj = +2 °C	0.988	0.990
Pdh Tj = +7°C	5.98 kW	5.61 kW
COP Tj = +7°C	5.22	4.12
Cdh Tj = +7 °C	0.988	0.990
Pdh Tj = 12°C	5.96 kW	5.68 kW
COP Tj = 12°C	5.19	4.36
Cdh Tj = +12 °C	0.988	0.989
Pdh Tj = Tbiv	5.89 kW	5.39 kW
COP Tj = Tbiv	4.94	3.47

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.75 kW	5.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.36	2.68
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.993
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.85 kW	3.68 kW
Annual energy consumption Qhe	5345 kWh	6441 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	179 %	126 %
Prated	5.70 kW	5.10 kW
SCOP	4.66	3.36
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.75 kW	5.12 kW
COP Tj = +2°C	4.36	2.68
Cdh Tj = +2 °C	0.990	0.993
Pdh Tj = +7°C	5.82 kW	5.28 kW
COP Tj = +7°C	4.60	3.12
Cdh Tj = +7 °C	0.989	0.992
Pdh Tj = 12°C	5.92 kW	5.52 kW
COP Tj = 12°C	4.99	3.85
Cdh Tj = +12 °C	0.989	0.990
Pdh Tj = Tbiv	5.75 kW	5.12 kW
COP Tj = Tbiv	4.36	2.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.75 kW	5.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.36	2.68
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.993
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	15 W	15 W

PSB	15 W	15 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 Q <sub>he</sub>	1633 kWh	2027 kWh

#### Water/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	7.86 kW	6.97 kW
EI input	1.33 kW	2.00 kW
COP	5.90	3.49

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	250 %	176 %
Prated	8.90 kW	8.10 kW
SCOP	6.45	4.60
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.93 kW	7.17 kW
COP T <sub>j</sub> = -7°C	6.11	3.81
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.995	0.996
P <sub>dh</sub> T <sub>j</sub> = +2°C	8.02 kW	7.49 kW
COP T <sub>j</sub> = +2°C	6.45	4.59
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.994	0.995
P <sub>dh</sub> T <sub>j</sub> = +7°C	8.11 kW	7.68 kW
COP T <sub>j</sub> = +7°C	6.81	5.13
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.994	0.995
P <sub>dh</sub> T <sub>j</sub> = 12°C	8.21 kW	7.87 kW
COP T <sub>j</sub> = 12°C	7.19	5.75
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.994	0.995
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	7.93 kW	7.17 kW
COP T <sub>j</sub> = T <sub>biv</sub>	6.11	3.81
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>	7.86 kW	6.97 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	5.90	3.49

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.996
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.04 kW	1.13 kW
Annual energy consumption Qhe	2852 kWh	3634 kWh

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	225 %	170 %
Prated	13.20 kW	12.30 kW
SCOP	5.83	4.45
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.13 kW	7.56 kW
COP Tj = -7°C	6.85	4.78
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	8.17 kW	7.74 kW
COP Tj = +2°C	7.04	5.28
Cdh Tj = +2 °C	0.994	0.995
Pdh Tj = +7°C	8.22 kW	7.86 kW
COP Tj = +7°C	7.22	5.74
Cdh Tj = +7 °C	0.994	0.995
Pdh Tj = 12°C	8.22 kW	7.93 kW
COP Tj = 12°C	7.18	6.06
Cdh Tj = +12 °C	0.994	0.994
Pdh Tj = Tbiv	8.13 kW	7.56 kW
COP Tj = Tbiv	6.85	4.78
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.86 kW	6.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.90	3.49
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.996
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.34 kW	5.33 kW

Annual energy consumption Q <sub>he</sub>	5579 kWh	6815 kWh
EN 14825   Warmer Climate		
	Low temperature	Medium temperature
$\eta_s$	252 %	175 %
Prated	7.80 kW	7.00 kW
SCOP	6.49	4.57
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	7.86 kW	6.97 kW
COP T <sub>j</sub> = +2°C	5.90	3.49
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.995	0.996
P <sub>dh</sub> T <sub>j</sub> = +7°C	7.98 kW	7.31 kW
COP T <sub>j</sub> = +7°C	6.30	4.13
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.994	0.996
P <sub>dh</sub> T <sub>j</sub> = 12°C	8.13 kW	7.75 kW
COP T <sub>j</sub> = 12°C	6.90	5.29
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.994	0.995
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	7.86 kW	6.97 kW
COP T <sub>j</sub> = T <sub>biv</sub>	5.90	3.49
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>	7.86 kW	6.97 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	5.90	3.49
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>	0.995	0.996
WTOL	65 °C	65 °C
P <sub>off</sub>	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 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 Q <sub>he</sub>	1606 kWh	2046 kWh

## Model VITOCAL 222-G BWT 221.B06

Model name	VITOCAL 222-G BWT 221.B06
Application	Heating + DHW + low temp
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	Yes

## Brine/Water

### EN 16147 | Average Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	115 %
COP	2.80
Heating up time	2:04 h:min
Standby power input	56.0 W
Reference hot water temperature	52.4 °C
Mixed water at 40°C	289 l

### EN 16147 | Colder Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	115 %
COP	2.80
Heating up time	2:04 h:min
Standby power input	56.0 W
Reference hot water temperature	52.4 °C
Mixed water at 40°C	289 l

### EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	115 %
COP	2.80
Heating up time	2:04 h:min
Standby power input	56.0 W
Reference hot water temperature	52.4 °C
Mixed water at 40°C	289 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	5.75 kW	5.12 kW
El input	1.32 kW	1.91 kW
COP	4.36	2.68

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	181 %	128 %
Prated	6.50 kW	5.90 kW
SCOP	4.72	3.39
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.77 kW	5.20 kW
COP Tj = -7°C	4.51	2.89
Cdh Tj = -7 °C	0.989	0.992
Pdh Tj = +2°C	5.83 kW	5.37 kW
COP Tj = +2°C	4.74	3.40
Cdh Tj = +2 °C	0.989	0.991
Pdh Tj = +7°C	5.89 kW	5.49 kW
COP Tj = +7°C	4.99	3.75
Cdh Tj = +7 °C	0.989	0.990
Pdh Tj = 12°C	5.96 kW	5.60 kW
COP Tj = 12°C	5.25	4.13
Cdh Tj = +12 °C	0.988	0.990
Pdh Tj = Tbiv	5.77 kW	5.20 kW
COP Tj = Tbiv	4.51	2.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.75 kW	5.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.68
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.993
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	0.75 kW	0.78 kW
Annual energy consumption Q <sub>he</sub>	2847 kWh	3592 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	169 %	127 %
Prated	9.60 kW	8.80 kW
SCOP	4.43	3.37
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7 °C	5.89 kW	5.39 kW
COP T <sub>j</sub> = -7 °C	4.94	3.47
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.989	0.991
P <sub>dh</sub> T <sub>j</sub> = +2 °C	5.94 kW	5.51 kW
COP T <sub>j</sub> = +2 °C	5.08	3.83
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.988	0.990
P <sub>dh</sub> T <sub>j</sub> = +7 °C	5.98 kW	5.61 kW
COP T <sub>j</sub> = +7 °C	5.22	4.12
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.988	0.990
P <sub>dh</sub> T <sub>j</sub> = 12 °C	5.96 kW	5.68 kW
COP T <sub>j</sub> = 12 °C	5.19	4.36
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.988	0.989
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	5.89 kW	5.39 kW
COP T <sub>j</sub> = T <sub>biv</sub>	4.94	3.47
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>	5.75 kW	5.12 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	4.36	2.68
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>	0.990	0.993
WTOL	65 °C	65 °C
P <sub>off</sub>	0 W	0 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.85 kW	3.68 kW
Annual energy consumption Q <sub>he</sub>	5345 kWh	6441 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
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Sound power level indoor	40 dB(A)	40 dB(A)
EN 14825   Warmer Climate		
	Low temperature	Medium temperature
$\eta_s$	179 %	126 %
Prated	5.70 kW	5.10 kW
SCOP	4.66	3.36
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.75 kW	5.12 kW
COP Tj = +2°C	4.36	2.68
Cdh Tj = +2 °C	0.990	0.993
Pdh Tj = +7°C	5.82 kW	5.28 kW
COP Tj = +7°C	4.60	3.12
Cdh Tj = +7 °C	0.989	0.992
Pdh Tj = 12°C	5.92 kW	5.52 kW
COP Tj = 12°C	4.99	3.85
Cdh Tj = +12 °C	0.989	0.990
Pdh Tj = Tbiv	5.75 kW	5.12 kW
COP Tj = Tbiv	4.36	2.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.75 kW	5.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.36	2.68
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.993
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	15 W	15 W
PSB	15 W	15 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	1633 kWh	2027 kWh
Water/Water		
EN 16147   Average Climate		
Declared load profile	XL	
Efficiency $\eta_{DHW}$	115 %	
COP	2.80	
Heating up time	2,04 h:min	
Standby power input	56.0 W	
Reference hot water temperature	52.4 °C	
Mixed water at 40°C	289 l	
EN 16147   Colder Climate		

Declared load profile	XL
Efficiency $\eta_{DHW}$	115 %
COP	2.80
Heating up time	2,04 h:min
Standby power input	56.0 W
Reference hot water temperature	52.4 °C
Mixed water at 40°C	289 l

#### EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	115 %
COP	2.80
Heating up time	2,04 h:min
Standby power input	56.0 W
Reference hot water temperature	52.4 °C
Mixed water at 40°C	289 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	7.86 kW	6.97 kW
El input	1.33 kW	2.00 kW
COP	5.90	3.49

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	250 %	176 %
Prated	8.90 kW	8.10 kW
SCOP	6.45	4.60
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.93 kW	7.17 kW
COP Tj = -7°C	6.11	3.81
Cdh Tj = -7 °C	0.995	0.996
Pdh Tj = +2°C	8.02 kW	7.49 kW
COP Tj = +2°C	6.45	4.59
Cdh Tj = +2 °C	0.994	0.995
Pdh Tj = +7°C	8.11 kW	7.68 kW
COP Tj = +7°C	6.81	5.13
Cdh Tj = +7 °C	0.994	0.995

Pdh Tj = 12°C	8.21 kW	7.87 kW
COP Tj = 12°C	7.19	5.75
Cdh Tj = +12 °C	0.994	0.995
Pdh Tj = Tbiv	7.93 kW	7.17 kW
COP Tj = Tbiv	6.11	3.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.86 kW	6.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.90	3.49
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.996
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.04 kW	1.13 kW
Annual energy consumption Qhe	2852 kWh	3634 kWh

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	225 %	170 %
Prated	13.20 kW	12.30 kW
SCOP	5.83	4.45
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.13 kW	7.56 kW
COP Tj = -7°C	6.85	4.78
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	8.17 kW	7.74 kW
COP Tj = +2°C	7.04	5.28
Cdh Tj = +2 °C	0.994	0.995
Pdh Tj = +7°C	8.22 kW	7.86 kW
COP Tj = +7°C	7.22	5.74
Cdh Tj = +7 °C	0.994	0.995
Pdh Tj = 12°C	8.22 kW	7.93 kW
COP Tj = 12°C	7.18	6.06
Cdh Tj = +12 °C	0.994	0.994
Pdh Tj = Tbiv	8.13 kW	7.56 kW
COP Tj = Tbiv	6.85	4.78
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.86 kW	6.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.90	3.49

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.996
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.34 kW	5.33 kW
Annual energy consumption Qhe	5579 kWh	6815 kWh

### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	252 %	175 %
Prated	7.80 kW	7.00 kW
SCOP	6.49	4.57
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.86 kW	6.97 kW
COP Tj = +2°C	5.90	3.49
Cdh Tj = +2 °C	0.995	0.996
Pdh Tj = +7°C	7.98 kW	7.31 kW
COP Tj = +7°C	6.30	4.13
Cdh Tj = +7 °C	0.994	0.996
Pdh Tj = 12°C	8.13 kW	7.75 kW
COP Tj = 12°C	6.90	5.29
Cdh Tj = +12 °C	0.994	0.995
Pdh Tj = Tbiv	7.86 kW	6.97 kW
COP Tj = Tbiv	5.90	3.49
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.86 kW	6.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.90	3.49
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.996
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 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	1606 kWh	2046 kWh

## Model VITOCAL 222-G BWT 221.B06 SC

Model name	VITOCAL 222-G BWT 221.B06 SC
Application	Heating + DHW + low temp
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

### General data

Power supply	3x400V 50Hz
Off-peak product	Yes

### Brine/Water

#### EN 16147 | Average Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	115 %
COP	2.80
Heating up time	2:04 h:min
Standby power input	56.0 W
Reference hot water temperature	52.4 °C
Mixed water at 40°C	289 l

#### EN 16147 | Colder Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	115 %
COP	2.80
Heating up time	2:04 h:min
Standby power input	56.0 W
Reference hot water temperature	52.4 °C
Mixed water at 40°C	289 l

#### EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	115 %
COP	2.80
Heating up time	2:04 h:min
Standby power input	56.0 W
Reference hot water temperature	52.4 °C
Mixed water at 40°C	289 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	5.75 kW	5.12 kW
El input	1.32 kW	1.91 kW
COP	4.36	2.68

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	181 %	128 %
Prated	6.50 kW	5.90 kW
SCOP	4.72	3.39
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.77 kW	5.20 kW
COP Tj = -7°C	4.51	2.89
Cdh Tj = -7 °C	0.989	0.992
Pdh Tj = +2°C	5.83 kW	5.37 kW
COP Tj = +2°C	4.74	3.40
Cdh Tj = +2 °C	0.989	0.991
Pdh Tj = +7°C	5.89 kW	5.49 kW
COP Tj = +7°C	4.99	3.75
Cdh Tj = +7 °C	0.989	0.990
Pdh Tj = 12°C	5.96 kW	5.60 kW
COP Tj = 12°C	5.25	4.13
Cdh Tj = +12 °C	0.988	0.990
Pdh Tj = Tbiv	5.77 kW	5.20 kW
COP Tj = Tbiv	4.51	2.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.75 kW	5.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.43	2.68
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.993
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	0.75 kW	0.78 kW
Annual energy consumption Q <sub>he</sub>	2847 kWh	3592 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	169 %	127 %
Prated	9.60 kW	8.80 kW
SCOP	4.43	3.37
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.89 kW	5.39 kW
COP T <sub>j</sub> = -7°C	4.94	3.47
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.989	0.991
P <sub>dh</sub> T <sub>j</sub> = +2°C	5.94 kW	5.51 kW
COP T <sub>j</sub> = +2°C	5.08	3.83
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.988	0.990
P <sub>dh</sub> T <sub>j</sub> = +7°C	5.98 kW	5.61 kW
COP T <sub>j</sub> = +7°C	5.22	4.12
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.988	0.990
P <sub>dh</sub> T <sub>j</sub> = 12°C	5.96 kW	5.68 kW
COP T <sub>j</sub> = 12°C	5.19	4.36
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.988	0.989
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	5.89 kW	5.39 kW
COP T <sub>j</sub> = T <sub>biv</sub>	4.94	3.47
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>	5.75 kW	5.12 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	4.36	2.68
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>	0.990	0.993
WTOL	65 °C	65 °C
P <sub>off</sub>	0 W	0 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.85 kW	3.68 kW
Annual energy consumption Q <sub>he</sub>	5345 kWh	6441 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
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Sound power level indoor	40 dB(A)	40 dB(A)
EN 14825   Warmer Climate		
	Low temperature	Medium temperature
$\eta_s$	179 %	126 %
Prated	5.70 kW	5.10 kW
SCOP	4.66	3.36
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.75 kW	5.12 kW
COP Tj = +2°C	4.36	2.68
Cdh Tj = +2 °C	0.990	0.993
Pdh Tj = +7°C	5.82 kW	5.28 kW
COP Tj = +7°C	4.60	3.12
Cdh Tj = +7 °C	0.989	0.992
Pdh Tj = 12°C	5.92 kW	5.52 kW
COP Tj = 12°C	4.99	3.85
Cdh Tj = +12 °C	0.989	0.990
Pdh Tj = Tbiv	5.75 kW	5.12 kW
COP Tj = Tbiv	4.36	2.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.75 kW	5.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.36	2.68
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.993
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	15 W	15 W
PSB	15 W	15 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	1633 kWh	2027 kWh
Water/Water		
EN 16147   Average Climate		
Declared load profile	XL	
Efficiency $\eta_{DHW}$	115 %	
COP	2.80	
Heating up time	2,04 h:min	
Standby power input	56.0 W	
Reference hot water temperature	52.4 °C	
Mixed water at 40°C	289 l	
EN 16147   Colder Climate		



Declared load profile	XL
Efficiency $\eta_{DHW}$	115 %
COP	2.80
Heating up time	2,04 h:min
Standby power input	56.0 W
Reference hot water temperature	52.4 °C
Mixed water at 40°C	289 l

#### EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency $\eta_{DHW}$	115 %
COP	2.80
Heating up time	2,04 h:min
Standby power input	56.0 W
Reference hot water temperature	52.4 °C
Mixed water at 40°C	289 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	7.86 kW	6.97 kW
El input	1.33 kW	2.00 kW
COP	5.90	3.49

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	250 %	176 %
Prated	8.90 kW	8.10 kW
SCOP	6.45	4.60
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.93 kW	7.17 kW
COP Tj = -7°C	6.11	3.81
Cdh Tj = -7 °C	0.995	0.996
Pdh Tj = +2°C	8.02 kW	7.49 kW
COP Tj = +2°C	6.45	4.59
Cdh Tj = +2 °C	0.994	0.995
Pdh Tj = +7°C	8.11 kW	7.68 kW
COP Tj = +7°C	6.81	5.13
Cdh Tj = +7 °C	0.994	0.995

Pdh Tj = 12°C	8.21 kW	7.87 kW
COP Tj = 12°C	7.19	5.75
Cdh Tj = +12 °C	0.994	0.995
Pdh Tj = Tbiv	7.93 kW	7.17 kW
COP Tj = Tbiv	6.11	3.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.86 kW	6.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.90	3.49
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.996
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.04 kW	1.13 kW
Annual energy consumption Qhe	2852 kWh	3634 kWh

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	225 %	170 %
Prated	13.20 kW	12.30 kW
SCOP	5.83	4.45
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.13 kW	7.56 kW
COP Tj = -7°C	6.85	4.78
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	8.17 kW	7.74 kW
COP Tj = +2°C	7.04	5.28
Cdh Tj = +2 °C	0.994	0.995
Pdh Tj = +7°C	8.22 kW	7.86 kW
COP Tj = +7°C	7.22	5.74
Cdh Tj = +7 °C	0.994	0.995
Pdh Tj = 12°C	8.22 kW	7.93 kW
COP Tj = 12°C	7.18	6.06
Cdh Tj = +12 °C	0.994	0.994
Pdh Tj = Tbiv	8.13 kW	7.56 kW
COP Tj = Tbiv	6.85	4.78
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.86 kW	6.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.90	3.49

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.996
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.34 kW	5.33 kW
Annual energy consumption Qhe	5579 kWh	6815 kWh

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	252 %	175 %
Prated	7.80 kW	7.00 kW
SCOP	6.49	4.57
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.86 kW	6.97 kW
COP Tj = +2°C	5.90	3.49
Cdh Tj = +2 °C	0.995	0.996
Pdh Tj = +7°C	7.98 kW	7.31 kW
COP Tj = +7°C	6.30	4.13
Cdh Tj = +7 °C	0.994	0.996
Pdh Tj = 12°C	8.13 kW	7.75 kW
COP Tj = 12°C	6.90	5.29
Cdh Tj = +12 °C	0.994	0.995
Pdh Tj = Tbiv	7.86 kW	6.97 kW
COP Tj = Tbiv	5.90	3.49
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.86 kW	6.97 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.90	3.49
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.996
WTOL	65 °C	65 °C
Poff	0 W	0 W
PTO	7 W	7 W
PSB	7 W	7 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	1606 kWh	2046 kWh