

## Subtype Vitocal 2xx-G B17

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 B17
Registration number	011-1W0211
Heat Pump Type	Brine/Water and Water/Water
Refrigerant	R410A
Mass of Refrigerant	2.35 kg
Certification Date	18.08.2020

## Model VITOCAL 200-G BWC 201.B17

Model name	VITOCAL 200-G BWC 201.B17
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Heat Source	Brine+Water
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	17.33 kW	16.02 kW
El input	3.94 kW	5.57 kW
COP	4.40	2.88

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	47 dB(A)	47 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	182 %	141 %
Prated	17.31 kW	16.13 kW
SCOP	4.75	3.73
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	17.41 kW	16.13 kW
COP Tj = -7°C	4.47	3.13
Cdh Tj = -7 °C	0.998	0.999
Pdh Tj = +2°C	17.48 kW	16.61 kW
COP Tj = +2°C	4.70	3.68
Cdh Tj = +2 °C	0.998	0.998
Pdh Tj = +7°C	17.63 kW	16.88 kW

COP Tj = +7°C	4.00	4.07
Cdh Tj = +7 °C	0.998	0.998
Pdh Tj = 12°C	17.75 kW	17.17 kW
COP Tj = 12°C	4.94	4.50
Cdh Tj = +12 °C	0.998	0.998
Pdh Tj = Tbiv	17.33 kW	16.02 kW
COP Tj = Tbiv	4.40	2.97
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.33 kW	16.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.40	2.97
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.998	0.999
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	7531 kWh	8944 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	47 dB(A)	47 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	186 %	139 %
Prated	17.35 kW	16.15 kW
SCOP	4.85	3.67
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	17.52 kW	16.49 kW
COP Tj = -7°C	4.76	3.43
Cdh Tj = -7 °C	0.998	0.998
Pdh Tj = +2°C	17.59 kW	16.80 kW
COP Tj = +2°C	4.95	3.85
Cdh Tj = +2 °C	0.998	0.998
Pdh Tj = +7°C	17.71 kW	17.05 kW
COP Tj = +7°C	5.11	4.22
Cdh Tj = +7 °C	0.998	0.998
Pdh Tj = 12°C	17.73 kW	17.28 kW
COP Tj = 12°C	5.17	4.54
Cdh Tj = +12 °C	0.998	0.998
Pdh Tj = Tbiv	17.33 kW	16.02 kW

COP Tj = Tbiv	4.40	2.88
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.33 kW	16.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.40	2.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.998	0.999
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	8813 kWh	10843 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	47 dB(A)	47 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	185 %	137 %
Prated	17.35 kW	16.12 kW
SCOP	4.81	3.63
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	17.33 kW	16.02 kW
COP Tj = +2°C	4.40	2.88
Cdh Tj = +2 °C	0.998	0.999
Pdh Tj = +7°C	17.49 kW	16.39 kW
COP Tj = +7°C	4.66	3.31
Cdh Tj = +7 °C	0.998	0.999
Pdh Tj = 12°C	17.71 kW	16.97 kW
COP Tj = 12°C	5.04	4.07
Cdh Tj = +12 °C	0.998	0.998
Pdh Tj = Tbiv	17.33 kW	16.02 kW
COP Tj = Tbiv	4.40	2.88
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.33 kW	16.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.40	2.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.998	0.999
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 Q <sub>he</sub>	4817 kWh	5940 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	22.67 kW	20.32 kW
El input	4.46 kW	6.05 kW
COP	5.08	3.36

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	210 %	166 %
Prated	25.80 kW	23.50 kW
SCOP	5.45	4.36
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	22.78 kW	20.73 kW
COP T <sub>j</sub> = -7°C	5.20	3.65
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.996	0.997
P <sub>dh</sub> T <sub>j</sub> = +2°C	22.95 kW	21.48 kW
COP T <sub>j</sub> = +2°C	5.45	4.33
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.996	0.997
P <sub>dh</sub> T <sub>j</sub> = +7°C	23.14 kW	21.98 kW
COP T <sub>j</sub> = +7°C	5.69	4.82
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.996	0.997
P <sub>dh</sub> T <sub>j</sub> = 12°C	23.29 kW	22.41 kW
COP T <sub>j</sub> = 12°C	5.90	5.34
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.996	0.996
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	22.73 kW	20.73 kW
COP T <sub>j</sub> = T <sub>biv</sub>	5.20	3.65
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>	22.67 kW	20.32 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.08	3.36
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.996	0.998
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	3.13 kW	3.18 kW
Annual energy consumption Qhe	9789 kWh	11140 kWh

### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	192 %	161 %
Prated	37.80 kW	35.50 kW
SCOP	5.00	4.23
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	23.10 kW	21.70 kW
COP Tj = -7°C	5.68	4.51
Cdh Tj = -7 °C	0.996	0.997
Pdh Tj = +2°C	23.21 kW	22.10 kW
COP Tj = +2°C	5.81	4.94
Cdh Tj = +2 °C	0.996	0.997
Pdh Tj = +7°C	23.30 kW	22.43 kW
COP Tj = +7°C	5.92	5.34
Cdh Tj = +7 °C	0.996	0.996
Pdh Tj = 12°C	23.33 kW	22.61 kW
COP Tj = 12°C	5.92	5.62
Cdh Tj = +12 °C	0.996	0.996
Pdh Tj = Tbiv	23.10 kW	21.70 kW
COP Tj = Tbiv	5.68	4.51
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	22.67 kW	20.32 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.08	3.36
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.996	0.998
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	15.13 kW	15.18 kW
Annual energy consumption Q <sub>he</sub>	18645 kWh	20708 kWh

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	210 %	165 %
Prated	22.60 kW	20.30 kW
SCOP	5.45	4.33
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>d,h</sub> T <sub>j</sub> = +2°C	22.67 kW	20.32 kW
COP T <sub>j</sub> = +2°C	5.08	3.36
C <sub>d,h</sub> T <sub>j</sub> = +2 °C	0.996	0.998
P <sub>d,h</sub> T <sub>j</sub> = +7°C	22.76 kW	21.08 kW
COP T <sub>j</sub> = +7°C	5.31	3.92
C <sub>d,h</sub> T <sub>j</sub> = +7 °C	0.996	0.997
P <sub>d,h</sub> T <sub>j</sub> = 12°C	23.10 kW	22.15 kW
COP T <sub>j</sub> = 12°C	5.71	4.96
C <sub>d,h</sub> T <sub>j</sub> = +12 °C	0.996	0.997
P <sub>d,h</sub> T <sub>j</sub> = T <sub>biv</sub>	22.67 kW	20.32 kW
COP T <sub>j</sub> = T <sub>biv</sub>	5.08	3.36
P <sub>d,h</sub> T <sub>j</sub> = TOL or P <sub>d,h</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	22.67 kW	20.32 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	5.08	3.36
C <sub>d,h</sub> T <sub>j</sub> = TOL or P <sub>d,h</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	0.996	0.998
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	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	5538 kWh	6258 kWh

## Model VITOCAL 200-G BWC 201.B17 SC

Model name	VITOCAL 200-G BWC 201.B17 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	17.33 kW	16.02 kW
El input	3.94 kW	5.57 kW
COP	4.40	2.88

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	47 dB(A)	47 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	182 %	141 %
Prated	17.31 kW	16.13 kW
SCOP	4.75	3.73
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	17.41 kW	16.13 kW
COP Tj = -7°C	4.47	3.13
Cdh Tj = -7 °C	0.998	0.999
Pdh Tj = +2°C	17.48 kW	16.61 kW
COP Tj = +2°C	4.70	3.68
Cdh Tj = +2 °C	0.998	0.998
Pdh Tj = +7°C	17.63 kW	16.88 kW
COP Tj = +7°C	4.00	4.07



Cdh Tj = +7 °C	0.998	0.998
Pdh Tj = 12°C	17.75 kW	17.17 kW
COP Tj = 12°C	4.94	4.50
Cdh Tj = +12 °C	0.998	0.998
Pdh Tj = Tbiv	17.33 kW	16.02 kW
COP Tj = Tbiv	4.40	2.97
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.33 kW	16.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.40	2.97
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.998	0.999
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	7531 kWh	8944 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	47 dB(A)	47 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	186 %	139 %
Prated	17.35 kW	16.15 kW
SCOP	4.85	3.67
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	17.52 kW	16.49 kW
COP Tj = -7°C	4.76	3.43
Cdh Tj = -7 °C	0.998	0.998
Pdh Tj = +2°C	17.59 kW	16.80 kW
COP Tj = +2°C	4.95	3.85
Cdh Tj = +2 °C	0.998	0.998
Pdh Tj = +7°C	17.71 kW	17.05 kW
COP Tj = +7°C	5.11	4.22
Cdh Tj = +7 °C	0.998	0.998
Pdh Tj = 12°C	17.73 kW	17.28 kW
COP Tj = 12°C	5.17	4.54
Cdh Tj = +12 °C	0.998	0.998
Pdh Tj = Tbiv	17.33 kW	16.02 kW
COP Tj = Tbiv	4.40	2.88

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.33 kW	16.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.40	2.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.998	0.999
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	8813 kWh	10843 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	47 dB(A)	47 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	185 %	137 %
Prated	17.35 kW	16.12 kW
SCOP	4.81	3.63
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	17.33 kW	16.02 kW
COP Tj = +2°C	4.40	2.88
Cdh Tj = +2 °C	0.998	0.999
Pdh Tj = +7°C	17.49 kW	16.39 kW
COP Tj = +7°C	4.66	3.31
Cdh Tj = +7 °C	0.998	0.999
Pdh Tj = 12°C	17.71 kW	16.97 kW
COP Tj = 12°C	5.04	4.07
Cdh Tj = +12 °C	0.998	0.998
Pdh Tj = Tbiv	17.33 kW	16.02 kW
COP Tj = Tbiv	4.40	2.88
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.33 kW	16.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.40	2.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.998	0.999
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 Q <sub>he</sub>	4817 kWh	5940 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	22.67 kW	20.32 kW
EI input	4.46 kW	6.05 kW
COP	5.08	3.36

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	210 %	166 %
Prated	25.80 kW	23.50 kW
SCOP	5.45	4.36
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-10 °C	-10 °C
P <sub>d,h</sub> T <sub>j</sub> = -7°C	22.78 kW	20.73 kW
COP T <sub>j</sub> = -7°C	5.20	3.65
C <sub>d,h</sub> T <sub>j</sub> = -7 °C	0.996	0.997
P <sub>d,h</sub> T <sub>j</sub> = +2°C	22.95 kW	21.48 kW
COP T <sub>j</sub> = +2°C	5.45	4.33
C <sub>d,h</sub> T <sub>j</sub> = +2 °C	0.996	0.997
P <sub>d,h</sub> T <sub>j</sub> = +7°C	23.14 kW	21.98 kW
COP T <sub>j</sub> = +7°C	5.69	4.82
C <sub>d,h</sub> T <sub>j</sub> = +7 °C	0.996	0.997
P <sub>d,h</sub> T <sub>j</sub> = 12°C	23.29 kW	22.41 kW
COP T <sub>j</sub> = 12°C	5.90	5.34
C <sub>d,h</sub> T <sub>j</sub> = +12 °C	0.996	0.996
P <sub>d,h</sub> T <sub>j</sub> = T <sub>biv</sub>	22.73 kW	20.73 kW
COP T <sub>j</sub> = T <sub>biv</sub>	5.20	3.65
P <sub>d,h</sub> T <sub>j</sub> = TOL or P <sub>d,h</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	22.67 kW	20.32 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	5.08	3.36

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.996	0.998
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	3.13 kW	3.18 kW
Annual energy consumption Qhe	9789 kWh	11140 kWh

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	192 %	161 %
Prated	37.80 kW	35.50 kW
SCOP	5.00	4.23
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	23.10 kW	21.70 kW
COP Tj = -7°C	5.68	4.51
Cdh Tj = -7 °C	0.996	0.997
Pdh Tj = +2°C	23.21 kW	22.10 kW
COP Tj = +2°C	5.81	4.94
Cdh Tj = +2 °C	0.996	0.997
Pdh Tj = +7°C	23.30 kW	22.43 kW
COP Tj = +7°C	5.92	5.34
Cdh Tj = +7 °C	0.996	0.996
Pdh Tj = 12°C	23.33 kW	22.61 kW
COP Tj = 12°C	5.92	5.62
Cdh Tj = +12 °C	0.996	0.996
Pdh Tj = Tbiv	23.10 kW	21.70 kW
COP Tj = Tbiv	5.68	4.51
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	22.67 kW	20.32 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.08	3.36
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.996	0.998
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	15.13 kW	15.18 kW

Annual energy consumption Q <sub>he</sub>	18645 kWh	20708 kWh
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# EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	210 %	165 %
Prated	22.60 kW	20.30 kW
SCOP	5.45	4.33
T <sub>biv</sub>	2 °C	2 °C
TOL	2 °C	2 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	22.67 kW	20.32 kW
COP T <sub>j</sub> = +2°C	5.08	3.36
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.996	0.998
P <sub>dh</sub> T <sub>j</sub> = +7°C	22.76 kW	21.08 kW
COP T <sub>j</sub> = +7°C	5.31	3.92
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.996	0.997
P <sub>dh</sub> T <sub>j</sub> = 12°C	23.10 kW	22.15 kW
COP T <sub>j</sub> = 12°C	5.71	4.96
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.996	0.997
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	22.67 kW	20.32 kW
COP T <sub>j</sub> = T <sub>biv</sub>	5.08	3.36
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>	22.67 kW	20.32 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	5.08	3.36
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>	0.996	0.998
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	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	5538 kWh	6258 kWh