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Summary of	Vitocal 2xx-G B08	Reg. No.	011-1W0286		
Certificate Holder	Certificate Holder				
Name	Viessmann Wärmepumpen GmbH				
Address	Viessmannstr. 1	Zip	35107		
City	Allendorf/Eder	Country	Germany		
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH				
Subtype title	Vitocal 2xx-G B08				
Heat Pump Type	Brine/Water				
Refrigerant	R410A				
Mass of Refrigerant	1.95 kg				
Certification Date	11.07.2019				



Model: VITOCAL 200-G BWC 201.B08

Configure model			
Model name	VITOCAL 200-G BWC 201.B08		
Application	Heating (medium temp)		
Units	Indoor		
Climate Zone	Colder Climate + Warmer Climate		
Reversibility	No		
Cooling mode application (optional)	n/a		

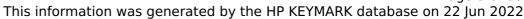
General Data		
Power supply	3x400V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	7.54 kW	6.95 kW	
El input	1.62 kW	2.51 kW	
СОР	4.64	2.74	

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Warmer Climate





EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	43 dB(A)	43 dB(A)	

	EN 14825	
	Low temperature	Medium temperature
η_{s}	205 %	143 %
Prated	7.61 kW	6.92 kW
SCOP	5.32	3.76
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.55 kW	6.92 kW
COP Tj = +2°C	4.85	2.99
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.61 kW	7.09 kW
COP Tj = +7°C	5.15	3.45
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.73 kW	7.34 kW
COP Tj = 12°C	5.69	4.34
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.55 kW	6.92 kW

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COP Tj = Tbiv 4.85 2.99 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 4.85 2.99 Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 0.99 1.00 WTOL 65 °C 65 °C Poff 0 W 0 W PTO 0 W 0 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 1897 kWh 2449 kWh			
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	COP Tj = Tbiv	4.85	2.99
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.55 kW	6.92 kW
WTOL 65 °C 65 °C 0 W 0 W PTO 0 W 0 W PSB 12 W 12 W PCK 0 W 0 W Electricity Electricity Supplementary Heater: Type of energy input Electricity 0.00 kW 0.00 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.85	2.99
Poff 0 W 0 W PTO 0 W 0 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	Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
PTO 0 W 0 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	WTOL	65 °C	65 °C
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	Poff	0 W	0 W
PCK 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 0.00 kW 0.00 kW	РТО	0 W	0 W
Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 0.00 kW 0.00 kW	PSB	12 W	12 W
Supplementary Heater: PSUP 0.00 kW 0.00 kW	PCK	o w	0 W
	Supplementary Heater: Type of energy input	Electricity	Electricity
Annual energy consumption Qhe 1897 kWh 2449 kWh	Supplementary Heater: PSUP	0.00 kW	0.00 kW
	Annual energy consumption Qhe	1897 kWh	2449 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	43 dB(A)	43 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{S}	195 %	142 %





Prated	12.50 kW	11.63 kW
SCOP	5.08	3.80
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.65 kW	7.21 kW
$COP Tj = -7^{\circ}C$	5.56	3.80
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	7.70 kW	7.36 kW
COP Tj = +2°C	5.90	4.33
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	7.76 kW	7.76 kW
$COPTj = +7^{\circ}C$	6.16	4.86
Cdh Tj = $+7$ °C	0.99	0.99
Pdh Tj = 12°C	7.77 kW	7.58 kW
COP Tj = 12°C	6.24	5.25
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.65 kW	7.21 kW
COP Tj = Tbiv	5.56	3.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.57 kW	6.96 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.11	3.09
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00



WTOL	65 °C	65 °C
Poff	o w	0 W
РТО	0 W	0 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.93 kW	4.67 kW
Annual energy consumption Qhe	6143 kWh	7633 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.62	7.10
COP Tj = -15°C (if TOL $<$ -20°C)	5.11	3.46
Cdh Tj = -15 °C	0.99	0.99

Average Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	43 dB(A)	43 dB(A)	

EN 14825			
		Low temperature	Medium temperature
Pdesignh	7.57 kW		'
ης	201 %	143 %	





Prated 8.60 kW 7.95 kW SCOP 5.23 3.79 Tbiv -7 °C -7 °C TOL -10 °C -10 °C Pdh Tj = -7 °C 7.57 kW 6.99 kW COP Tj = -7 °C 4.93 3.16 Cdh Tj = -7 °C 0.99 0.99 Pdh Tj = +2 °C 7.63 kW 7.19 kW COP Tj = +2 °C 5.23 3.77 Cdh Tj = +2 °C 0.99 0.99 Pdh Tj = +7 °C 7.69 kW 7.31 kW COP Tj = +7 °C 5.56 4.23 Cdh Tj = +7 °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	This information was g	,	,,
Tbiv $-7 ^{\circ}\text{C}$ $-7 ^{\circ}\text{C}$ TOL $-10 ^{\circ}\text{C}$ $-10 ^{\circ}\text{C}$ Pdh Tj = $-7 ^{\circ}\text{C}$ 7.57kW 6.99kW COP Tj = $-7 ^{\circ}\text{C}$ 4.93 3.16 Cdh Tj = $+7 ^{\circ}\text{C}$ 0.99 0.99 Pdh Tj = $+2 ^{\circ}\text{C}$ 0.99 0.99 Pdh Tj = $+7 ^{\circ}\text{C}$ 0.99 0.99 Cdh Tj = $+7 ^{\circ}\text{C}$ 0.99 0.99 Pdh Tj = $+12 ^{\circ}\text{C}$ 0.99 0.99 Pdh Tj = $+12 ^{\circ}\text{C}$ 0	Prated	8.60 kW	7.95 kW
TOL	SCOP	5.23	3.79
Pdh Tj = -7°C 7.57 kW 6.99 kW COP Tj = -7°C 4.93 3.16 Cdh Tj = -7 °C 0.99 0.99 Pdh Tj = +2°C 7.63 kW 7.19 kW COP Tj = +2°C 5.23 3.77 Cdh Tj = +2 °C 0.99 0.99 Pdh Tj = +7°C 7.69 kW 7.31 kW COP Tj = +7°C 5.56 4.23 Cdh Tj = +7°C 0.99 0.99 Pdh Tj = 12°C 7.76 kW 7.45 kW COP Tj = 12°C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW	Tbiv	-7 °C	-7 °C
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	TOL	-10 °C	-10 °C
Cdh Tj = -7 °C 0.99 0.99 Pdh Tj = $+2$ °C 7.63 kW 7.19 kW COP Tj = $+2$ °C 5.23 3.77 Cdh Tj = $+2$ °C 0.99 0.99 Pdh Tj = $+7$ °C 7.69 kW 7.31 kW COP Tj = $+7$ °C 5.56 4.23 Cdh Tj = $+7$ °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 5.91 4.80 Cdh Tj = $+12$ °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Pdh Tj = -7 °C	7.57 kW	6.99 kW
Pdh Tj = $+2^{\circ}$ C 7.63 kW 7.19 kW COP Tj = $+2^{\circ}$ C 5.23 3.77 Cdh Tj = $+2^{\circ}$ C 0.99 0.99 Pdh Tj = $+7^{\circ}$ C 7.69 kW 7.31 kW COP Tj = $+7^{\circ}$ C 5.56 4.23 Cdh Tj = $+7^{\circ}$ C 0.99 0.99 Pdh Tj = $+12^{\circ}$ C 7.76 kW 7.45 kW COP Tj = $+12^{\circ}$ C 5.91 4.80 Cdh Tj = $+12^{\circ}$ C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	$COP Tj = -7^{\circ}C$	4.93	3.16
COP Tj = +2°C 5.23 3.77 Cdh Tj = +2 °C 0.99 0.99 Pdh Tj = +7°C 7.69 kW 7.31 kW COP Tj = +7°C 5.56 4.23 Cdh Tj = +7 °C 0.99 0.99 Pdh Tj = 12°C 7.76 kW 7.45 kW COP Tj = 12°C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Cdh Tj = -7 °C	0.99	0.99
Cdh Tj = $+2$ °C 0.99 0.99 Pdh Tj = $+7$ °C 7.69 kW 7.31 kW COP Tj = $+7$ °C 5.56 4.23 Cdh Tj = $+7$ °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 5.91 4.80 Cdh Tj = $+12$ °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Pdh Tj = +2°C	7.63 kW	7.19 kW
Pdh Tj = $+7^{\circ}$ C 7.69 kW 7.31 kW COP Tj = $+7^{\circ}$ C 5.56 4.23 Cdh Tj = $+7^{\circ}$ C 0.99 0.99 Pdh Tj = 12° C 7.76 kW 7.45 kW COP Tj = 12° C 5.91 4.80 Cdh Tj = $+12^{\circ}$ C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	$COPTj = +2^{\circ}C$	5.23	3.77
COP Tj = $+7^{\circ}$ C 5.56 4.23 Cdh Tj = $+7^{\circ}$ C 0.99 0.99 Pdh Tj = 12° C 7.76 kW 7.45 kW COP Tj = 12° C 5.91 4.80 Cdh Tj = $+12^{\circ}$ C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Cdh Tj = +2 °C	0.99	0.99
Cdh Tj = $+7$ °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 5.91 4.80 Cdh Tj = $+12$ °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Pdh Tj = +7°C	7.69 kW	7.31 kW
Pdh Tj = 12°C 7.76 kW 7.45 kW COP Tj = 12°C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	$COP Tj = +7^{\circ}C$	5.56	4.23
COP Tj = 12°C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Cdh Tj = +7 °C	0.99	0.99
	Pdh Tj = 12°C	7.76 kW	7.45 kW
Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL < 4.88 2.99	COP Tj = 12°C	5.91	4.80
COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < 7.55 kW 6.92 kW Tdesignh COP Tj = TOL or COP Tj = Tdesignh if TOL < 4.88 2.99	Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL $<$ 4.88 2.99	Pdh Tj = Tbiv	7.57 kW	6.99 kW
Tdesignh COP Tj = TOL or COP Tj = Tdesignh if TOL $<$ 4.88 2.99	COP Tj = Tbiv	4.93	3.16
		7.55 kW	6.92 kW
		4.88	2.99





Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	65 °C	65 °C
Poff	o w	o w
РТО	o w	o w
PSB	12 W	12 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.05 kW	1.03 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	3398 kWh	4338 kWh



Model: VITOCAL 200-G BWC 201.B08 SC

Configure model		
Model name	VITOCAL 200-G BWC 201.B08 SC	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data	
Power supply	n/a

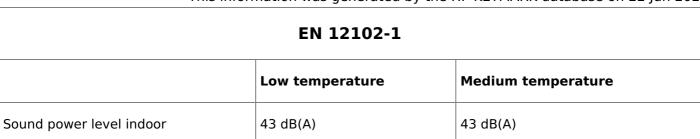
Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	7.54 kW	6.95 kW	
El input	1.62 kW	2.51 kW	
СОР	4.64	2.74	

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

Warmer Climate

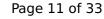




CEN heat pump

	EN 14825	
	Low temperature	Medium temperature
η_{s}	205 %	143 %
Prated	7.61 kW	6.92 kW
SCOP	5.32	3.76
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.55 kW	6.92 kW
COP Tj = +2°C	4.85	2.99
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.61 kW	7.09 kW
COP Tj = +7°C	5.15	3.45
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.73 kW	7.34 kW
COP Tj = 12°C	5.69	4.34
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.55 kW	6.92 kW

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COP Tj = Tbiv	4.85	2.99
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.55 kW	6.92 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.85	2.99
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	65 °C	65 °C
Poff	o w	o w
РТО	0 W	0 W
PSB	12 W	12 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1897 kWh	2449 kWh

Colder Climate

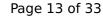
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	43 dB(A)	43 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{S}	195 %	142 %





	<u>, </u>	nk database on 22 jun 202
Prated	12.50 kW	11.63 kW
SCOP	5.08	3.80
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.65 kW	7.21 kW
$COPTj = -7^{\circ}C$	5.56	3.80
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	7.70 kW	7.36 kW
$COPTj = +2^{\circ}C$	5.90	4.33
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	7.76 kW	7.76 kW
$COPTj = +7^{\circ}C$	6.16	4.86
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.77 kW	7.58 kW
COP Tj = 12°C	6.24	5.25
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.65 kW	7.21 kW
COP Tj = Tbiv	5.56	3.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.57 kW	6.96 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.11	3.09
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00





WTOL	65 °C	65 °C
Poff	o w	0 W
РТО	o w	o w
PSB	12 W	12 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.93 kW	4.67 kW
Annual energy consumption Qhe	6095 kWh	7633 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.62	7.10
COP Tj = -15°C (if TOL<-20°C)	5.11	3.46
Cdh Tj = -15 °C	0.99	0.99

Average Climate

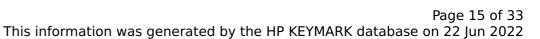
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825			
		Low temperature	Medium temperature
Pdesignh	7.57 kW		'
η_{s}	201 %	143 %	





Prated 8.60 kW 7.95 kW SCOP 5.23 3.79 Tbiv -7 °C -7 °C TOL -10 °C -10 °C Pdh Tj = -7 °C 7.57 kW 6.99 kW COP Tj = -7 °C 4.93 3.16 Cdh Tj = -7 °C 0.99 0.99 Pdh Tj = +2 °C 7.63 kW 7.19 kW COP Tj = +2 °C 5.23 3.77 Cdh Tj = +2 °C 0.99 0.99 Pdh Tj = +7 °C 7.69 kW 7.31 kW COP Tj = +7 °C 5.56 4.23 Cdh Tj = +7 °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	This information was g	,	,,
Tbiv $-7 ^{\circ}\text{C}$ $-7 ^{\circ}\text{C}$ TOL $-10 ^{\circ}\text{C}$ $-10 ^{\circ}\text{C}$ Pdh Tj = $-7 ^{\circ}\text{C}$ 7.57kW 6.99kW COP Tj = $-7 ^{\circ}\text{C}$ 4.93 3.16 Cdh Tj = $-7 ^{\circ}\text{C}$ 0.99 0.99 Pdh Tj = $+2 ^{\circ}\text{C}$ 7.63kW 7.19kW COP Tj = $+2 ^{\circ}\text{C}$ 7.69kW 7.31kW COP Tj = $+7 ^{\circ}\text{C}$ 7.69kW 7.31kW COP Tj = $+7 ^{\circ}\text{C}$ 7.69kW 7.31kW COP Tj = $+7 ^{\circ}\text{C}$ 7.69kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.76kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.76kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.76kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.76kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.76kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.76kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.57kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.55kW <td>Prated</td> <td>8.60 kW</td> <td>7.95 kW</td>	Prated	8.60 kW	7.95 kW
TOL -10 °C -10 °C Pdh Tj = -7 °C 7.57 kW 6.99 kW COP Tj = -7 °C 4.93 3.16 Cdh Tj = -7 °C 0.99 0.99 Pdh Tj = +2 °C 7.63 kW 7.19 kW COP Tj = +2 °C 5.23 3.77 Cdh Tj = +2 °C 9.99 0.99 Pdh Tj = +7 °C 7.69 kW 7.31 kW COP Tj = +7 °C 5.56 4.23 Cdh Tj = +7 °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 7.57 kW 6.99 kW COP Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < 4.88 2.99	SCOP	5.23	3.79
Pdh Tj = -7°C 7.57 kW 6.99 kW COP Tj = -7°C 4.93 3.16 Cdh Tj = -7 °C 0.99 0.99 Pdh Tj = +2°C 7.63 kW 7.19 kW COP Tj = +2°C 5.23 3.77 Cdh Tj = +2 °C 0.99 0.99 Pdh Tj = +7°C 7.69 kW 7.31 kW COP Tj = +7°C 5.56 4.23 Cdh Tj = +7 °C 0.99 0.99 Pdh Tj = 12°C 7.76 kW 7.45 kW COP Tj = 12°C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW	Tbiv	-7 °C	-7 °C
COP Tj = -7° C 4.93 3.16 Cdh Tj = -7° C 0.99 0.99 Pdh Tj = $+2^{\circ}$ C 7.63 kW 7.19 kW COP Tj = $+2^{\circ}$ C 5.23 3.77 Cdh Tj = $+2^{\circ}$ C 0.99 0.99 Pdh Tj = $+7^{\circ}$ C 7.69 kW 7.31 kW COP Tj = $+7^{\circ}$ C 5.56 4.23 Cdh Tj = $+7^{\circ}$ C 0.99 0.99 Pdh Tj = $+7^{\circ}$ C 7.76 kW 7.45 kW COP Tj = $+12^{\circ}$ C 5.91 4.80 Cdh Tj = $+12^{\circ}$ C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	TOL	-10 °C	-10 °C
Cdh Tj = -7 °C 0.99 0.99 Pdh Tj = $+2$ °C 7.63 kW 7.19 kW COP Tj = $+2$ °C 5.23 3.77 Cdh Tj = $+2$ °C 0.99 0.99 Pdh Tj = $+7$ °C 7.69 kW 7.31 kW COP Tj = $+7$ °C 5.56 4.23 Cdh Tj = $+7$ °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 5.91 4.80 Cdh Tj = $+12$ °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Pdh Tj = -7 °C	7.57 kW	6.99 kW
Pdh Tj = $+2^{\circ}$ C 7.63 kW 7.19 kW COP Tj = $+2^{\circ}$ C 5.23 3.77 Cdh Tj = $+2^{\circ}$ C 0.99 0.99 Pdh Tj = $+7^{\circ}$ C 7.69 kW 7.31 kW COP Tj = $+7^{\circ}$ C 5.56 4.23 Cdh Tj = $+7^{\circ}$ C 0.99 0.99 Pdh Tj = $+12^{\circ}$ C 7.76 kW 7.45 kW COP Tj = $+12^{\circ}$ C 5.91 4.80 Cdh Tj = $+12^{\circ}$ C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	$COP Tj = -7^{\circ}C$	4.93	3.16
COP Tj = +2°C 5.23 3.77 Cdh Tj = +2 °C 0.99 0.99 Pdh Tj = +7°C 7.69 kW 7.31 kW COP Tj = +7°C 5.56 4.23 Cdh Tj = +7 °C 0.99 0.99 Pdh Tj = 12°C 7.76 kW 7.45 kW COP Tj = 12°C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Cdh Tj = -7 °C	0.99	0.99
Cdh Tj = +2 °C 0.99 0.99 Pdh Tj = +7 °C 7.69 kW 7.31 kW COP Tj = +7 °C 5.56 4.23 Cdh Tj = +7 °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Pdh Tj = +2°C	7.63 kW	7.19 kW
Pdh Tj = $+7^{\circ}$ C 7.69 kW 7.31 kW COP Tj = $+7^{\circ}$ C 5.56 4.23 Cdh Tj = $+7^{\circ}$ C 0.99 0.99 Pdh Tj = 12° C 7.76 kW 7.45 kW COP Tj = 12° C 5.91 4.80 Cdh Tj = $+12^{\circ}$ C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	$COPTj = +2^{\circ}C$	5.23	3.77
COP Tj = $+7^{\circ}$ C 5.56 4.23 Cdh Tj = $+7^{\circ}$ C 0.99 0.99 Pdh Tj = 12° C 7.76 kW 7.45 kW COP Tj = 12° C 5.91 4.80 Cdh Tj = $+12^{\circ}$ C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Cdh Tj = +2 °C	0.99	0.99
Cdh Tj = $+7$ °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 5.91 4.80 Cdh Tj = $+12$ °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Pdh Tj = +7°C	7.69 kW	7.31 kW
Pdh Tj = 12°C 7.76 kW 7.45 kW COP Tj = 12°C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	$COP Tj = +7^{\circ}C$	5.56	4.23
COP Tj = 12°C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Cdh Tj = +7 °C	0.99	0.99
	Pdh Tj = 12°C	7.76 kW	7.45 kW
Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL < 4.88 2.99	COP Tj = 12°C	5.91	4.80
COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < 7.55 kW 6.92 kW Tdesignh COP Tj = TOL or COP Tj = Tdesignh if TOL < 4.88 2.99	Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL $<$ 4.88 2.99	Pdh Tj = Tbiv	7.57 kW	6.99 kW
Tdesignh COP Tj = TOL or COP Tj = Tdesignh if TOL $<$ 4.88 2.99	COP Tj = Tbiv	4.93	3.16
		7.55 kW	6.92 kW
		4.88	2.99





		-
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	65 °C	65 °C
Poff	o w	o w
РТО	o w	o w
PSB	12 W	12 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.05 kW	1.03 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	3398 kWh	4338 kWh

Model: VITOCAL 222-G BWT 221.B08

Configure model		
Model name	VITOCAL 222-G BWT 221.B08	
Application	Heating + DHW + low temp	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data	
Power supply	3x400V 50Hz
Off-peak product	Yes

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	7.54 kW	6.95 kW
El input	1.62 kW	2.51 kW
СОР	4.64	2.74

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

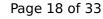
Warmer Climate



	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	205 %	143 %
Prated	7.61 kW	6.92 kW
SCOP	5.32	3.76
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	7.55 kW	6.92 kW
COP Tj = +2°C	4.85	2.99
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.61 kW	7.09 kW
COP Tj = +7°C	5.15	3.45
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.73 kW	7.34 kW
COP Tj = 12°C	5.69	4.34
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.55 kW	6.92 kW

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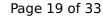


COP Tj = Tbiv 4.85 2.99 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 4.85 2.99 Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 0.99 1.00 WTOL 65 °C 65 °C Poff 0 W 0 W PTO 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 0.00 kW 0.00 kW Annual energy consumption Qhe 1897 kWh 2449 kWh			
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	COP Tj = Tbiv	4.85	2.99
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.55 kW	6.92 kW
WTOL 65 °C 65 °C Poff 0 W 0 W PTO 0 W 0 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	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.85	2.99
Poff 0 W 0 W PTO 0 W 0 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	Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
PTO 0 W 0 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	WTOL	65 °C	65 °C
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	Poff	o w	0 W
PCK 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 0.00 kW 0.00 kW	РТО	0 W	0 W
Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 0.00 kW 0.00 kW	PSB	12 W	12 W
Supplementary Heater: PSUP 0.00 kW 0.00 kW	PCK	0 W	0 W
	Supplementary Heater: Type of energy input	Electricity	Electricity
Annual energy consumption Qhe 1897 kWh 2449 kWh	Supplementary Heater: PSUP	0.00 kW	0.00 kW
	Annual energy consumption Qhe	1897 kWh	2449 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	43 dB(A)	43 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{S}	195 %	142 %





Prated	12.50 kW	11.63 kW
SCOP	5.08	3.80
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.65 kW	7.21 kW
$COP Tj = -7^{\circ}C$	5.56	3.80
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	7.70 kW	7.36 kW
COP Tj = +2°C	5.90	4.33
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	7.76 kW	7.76 kW
$COPTj = +7^{\circ}C$	6.16	4.86
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.77 kW	7.58 kW
COP Tj = 12°C	6.24	5.25
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.65 kW	7.21 kW
COP Tj = Tbiv	5.56	3.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.57 kW	6.96 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.11	3.09
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00



WTOL	65 °C	65 °C
Poff	o w	0 W
РТО	o w	0 W
PSB	12 W	12 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.93 kW	4.67 kW
Annual energy consumption Qhe	6095 kWh	7633 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.62	7.10
COP Tj = -15°C (if TOL $<$ -20°C)	5.11	3.46
Cdh Tj = -15 °C	0.99	0.99

Average Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	43 dB(A)	43 dB(A)	

EN 14825			
		Low temperature	Medium temperature
Pdesignh	7.57 kW		'
ης	201 %	143 %	





	, 	T THE TIP KLIMAKK
Prated	8.60 kW	7.95 kW
SCOP	5.23	3.79
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.57 kW	6.99 kW
COP Tj = -7°C	4.93	3.16
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	7.63 kW	7.19 kW
$COP Tj = +2^{\circ}C$	5.23	3.77
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.69 kW	7.31 kW
$COP Tj = +7^{\circ}C$	5.56	4.23
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.76 kW	7.45 kW
COP Tj = 12°C	5.91	4.80
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.57 kW	6.99 kW
COP Tj = Tbiv	4.93	3.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.55 kW	6.92 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.88	2.99





Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	65 °C	65 °C
Poff	o w	o w
РТО	o w	0 W
PSB	12 W	12 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.05 kW	1.03 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	3398 kWh	4338 kWh

Domestic Hot Water (DHW)

Warmer Climate



EN 16147		
Declared load profile	XL	
Efficiency ηDHW	130 %	
СОР	3.14	
Heating up time	1:47 h:min	
Standby power input	63.0 W	
Reference hot water temperature	54.1 °C	
Mixed water at 40°C	293 I	

Colder Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	130 %	
СОР	3.14	
Heating up time	1:47 h:min	
Standby power input	63.0 W	
Reference hot water temperature	54.1 °C	
Mixed water at 40°C	293 I	

Average Climate



EN 16147		
Declared load profile	XL	
Efficiency ηDHW	130 %	
СОР	3.14	
Heating up time	1:47 h:min	
Standby power input	63.0 W	
Reference hot water temperature	54.1 °C	
Mixed water at 40°C	293 I	



Model: VITOCAL 222-G BWT 221.B08 SC

Configure model		
Model name	VITOCAL 222-G BWT 221.B08 SC	
Application	Heating + DHW + low temp	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

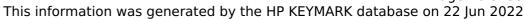
General Data	
Power supply	3x400V 50Hz
Off-peak product	Yes

Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	7.54 kW	6.95 kW	
El input	1.62 kW	2.51 kW	
СОР	4.64	2.74	

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Warmer Climate

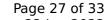




EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	43 dB(A)	43 dB(A)	

EN 14825				
Low temperature Medium temperatur				
η_{s}	205 %	143 %		
Prated	7.61 kW	6.92 kW		
SCOP	5.32	3.76		
Tbiv	2 °C	2 °C		
TOL	2 °C	2 °C		
Pdh Tj = +2°C	7.55 kW	6.92 kW		
COP Tj = +2°C	4.85	2.99		
Cdh Tj = +2 °C	0.99	0.99		
Pdh Tj = +7°C	7.61 kW	7.09 kW		
COP Tj = +7°C	5.15	3.45		
Cdh Tj = +7 °C	0.99	0.99		
Pdh Tj = 12°C	7.73 kW	7.34 kW		
COP Tj = 12°C	5.69	4.34		
Cdh Tj = +12 °C	0.99	0.99		
Pdh Tj = Tbiv	7.55 kW	6.92 kW		

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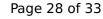


COP Tj = Tbiv	4.85	2.99
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.55 kW	6.92 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.85	2.99
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00
WTOL	65 °C	65 °C
Poff	o w	0 W
РТО	o w	0 W
PSB	12 W	12 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1897 kWh	2449 kWh

Colder Climate

EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	43 dB(A)	43 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	195 %	142 %





Prated	12.50 kW	11.63 kW
SCOP	5.08	3.80
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.65 kW	7.21 kW
$COP Tj = -7^{\circ}C$	5.56	3.80
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	7.70 kW	7.36 kW
COP Tj = +2°C	5.90	4.33
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	7.76 kW	7.76 kW
$COPTj = +7^{\circ}C$	6.16	4.86
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.77 kW	7.58 kW
COP Tj = 12°C	6.24	5.25
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.65 kW	7.21 kW
COP Tj = Tbiv	5.56	3.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.57 kW	6.96 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.11	3.09
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00





WTOL	65 °C	65 °C
Poff	o w	0 W
РТО	o w	0 W
PSB	12 W	12 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.93 kW	4.67 kW
Annual energy consumption Qhe	6095 kWh	7633 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.62	7.10
COP Tj = -15°C (if TOL $<$ -20°C)	5.11	3.46
Cdh Tj = -15 °C	0.99	0.99

Average Climate

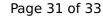
EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	43 dB(A)	43 dB(A)	

EN 14825			
		Low temperature	Medium temperature
Pdesignh	7.57 kW		'
η_{s}	201 %	143 %	





Prated 8.60 kW 7.95 kW SCOP 5.23 3.79 Tbiv -7 °C -7 °C TOL -10 °C -10 °C Pdh Tj = -7 °C 7.57 kW 6.99 kW COP Tj = -7 °C 4.93 3.16 Cdh Tj = -7 °C 0.99 0.99 Pdh Tj = +2 °C 7.63 kW 7.19 kW COP Tj = +2 °C 5.23 3.77 Cdh Tj = +2 °C 0.99 0.99 Pdh Tj = +7 °C 7.69 kW 7.31 kW COP Tj = +7 °C 5.56 4.23 Cdh Tj = +7 °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	This information was g	,	,,
Tbiv $-7 ^{\circ}\text{C}$ $-7 ^{\circ}\text{C}$ TOL $-10 ^{\circ}\text{C}$ $-10 ^{\circ}\text{C}$ Pdh Tj = $-7 ^{\circ}\text{C}$ 7.57kW 6.99kW COP Tj = $-7 ^{\circ}\text{C}$ 4.93 3.16 Cdh Tj = $-7 ^{\circ}\text{C}$ 0.99 0.99 Pdh Tj = $+2 ^{\circ}\text{C}$ 7.63kW 7.19kW COP Tj = $+2 ^{\circ}\text{C}$ 7.69kW 7.31kW COP Tj = $+7 ^{\circ}\text{C}$ 7.69kW 7.31kW COP Tj = $+7 ^{\circ}\text{C}$ 7.69kW 7.31kW COP Tj = $+7 ^{\circ}\text{C}$ 7.69kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.76kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.76kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.76kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.76kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.76kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.76kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.57kW 7.45kW COP Tj = $+7 ^{\circ}\text{C}$ 7.55kW <td>Prated</td> <td>8.60 kW</td> <td>7.95 kW</td>	Prated	8.60 kW	7.95 kW
TOL -10 °C -10 °C Pdh Tj = -7 °C 7.57 kW 6.99 kW COP Tj = -7 °C 4.93 3.16 Cdh Tj = -7 °C 0.99 0.99 Pdh Tj = +2 °C 7.63 kW 7.19 kW COP Tj = +2 °C 5.23 3.77 Cdh Tj = +2 °C 9.99 0.99 Pdh Tj = +7 °C 7.69 kW 7.31 kW COP Tj = +7 °C 5.56 4.23 Cdh Tj = +7 °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 7.57 kW 6.99 kW COP Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < 4.88 2.99	SCOP	5.23	3.79
Pdh Tj = -7°C 7.57 kW 6.99 kW COP Tj = -7°C 4.93 3.16 Cdh Tj = -7 °C 0.99 0.99 Pdh Tj = +2°C 7.63 kW 7.19 kW COP Tj = +2°C 5.23 3.77 Cdh Tj = +2 °C 0.99 0.99 Pdh Tj = +7°C 7.69 kW 7.31 kW COP Tj = +7°C 5.56 4.23 Cdh Tj = +7 °C 0.99 0.99 Pdh Tj = 12°C 7.76 kW 7.45 kW COP Tj = 12°C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW	Tbiv	-7 °C	-7 °C
COP Tj = -7° C 4.93 3.16 Cdh Tj = -7° C 0.99 0.99 Pdh Tj = $+2^{\circ}$ C 7.63 kW 7.19 kW COP Tj = $+2^{\circ}$ C 5.23 3.77 Cdh Tj = $+2^{\circ}$ C 0.99 0.99 Pdh Tj = $+7^{\circ}$ C 7.69 kW 7.31 kW COP Tj = $+7^{\circ}$ C 5.56 4.23 Cdh Tj = $+7^{\circ}$ C 0.99 0.99 Pdh Tj = $+7^{\circ}$ C 7.76 kW 7.45 kW COP Tj = $+12^{\circ}$ C 5.91 4.80 Cdh Tj = $+12^{\circ}$ C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	TOL	-10 °C	-10 °C
Cdh Tj = -7 °C 0.99 0.99 Pdh Tj = $+2$ °C 7.63 kW 7.19 kW COP Tj = $+2$ °C 5.23 3.77 Cdh Tj = $+2$ °C 0.99 0.99 Pdh Tj = $+7$ °C 7.69 kW 7.31 kW COP Tj = $+7$ °C 5.56 4.23 Cdh Tj = $+7$ °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 5.91 4.80 Cdh Tj = $+12$ °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Pdh Tj = -7 °C	7.57 kW	6.99 kW
Pdh Tj = $+2^{\circ}$ C 7.63 kW 7.19 kW COP Tj = $+2^{\circ}$ C 5.23 3.77 Cdh Tj = $+2^{\circ}$ C 0.99 0.99 Pdh Tj = $+7^{\circ}$ C 7.69 kW 7.31 kW COP Tj = $+7^{\circ}$ C 5.56 4.23 Cdh Tj = $+7^{\circ}$ C 0.99 0.99 Pdh Tj = $+12^{\circ}$ C 7.76 kW 7.45 kW COP Tj = $+12^{\circ}$ C 5.91 4.80 Cdh Tj = $+12^{\circ}$ C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	$COPTj = -7^{\circ}C$	4.93	3.16
COP Tj = +2°C 5.23 3.77 Cdh Tj = +2 °C 0.99 0.99 Pdh Tj = +7°C 7.69 kW 7.31 kW COP Tj = +7°C 5.56 4.23 Cdh Tj = +7 °C 0.99 0.99 Pdh Tj = 12°C 7.76 kW 7.45 kW COP Tj = 12°C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Cdh Tj = -7 °C	0.99	0.99
Cdh Tj = +2 °C 0.99 0.99 Pdh Tj = +7 °C 7.69 kW 7.31 kW COP Tj = +7 °C 5.56 4.23 Cdh Tj = +7 °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Pdh Tj = +2°C	7.63 kW	7.19 kW
Pdh Tj = $+7^{\circ}$ C 7.69 kW 7.31 kW COP Tj = $+7^{\circ}$ C 5.56 4.23 Cdh Tj = $+7^{\circ}$ C 0.99 0.99 Pdh Tj = 12° C 7.76 kW 7.45 kW COP Tj = 12° C 5.91 4.80 Cdh Tj = $+12^{\circ}$ C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	$COPTj = +2^{\circ}C$	5.23	3.77
COP Tj = $+7^{\circ}$ C 5.56 4.23 Cdh Tj = $+7^{\circ}$ C 0.99 0.99 Pdh Tj = 12° C 7.76 kW 7.45 kW COP Tj = 12° C 5.91 4.80 Cdh Tj = $+12^{\circ}$ C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Cdh Tj = +2 °C	0.99	0.99
Cdh Tj = $+7$ °C 0.99 0.99 Pdh Tj = 12 °C 7.76 kW 7.45 kW COP Tj = 12 °C 5.91 4.80 Cdh Tj = $+12$ °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Pdh Tj = +7°C	7.69 kW	7.31 kW
Pdh Tj = 12°C 7.76 kW 7.45 kW COP Tj = 12°C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	$COP Tj = +7^{\circ}C$	5.56	4.23
COP Tj = 12°C 5.91 4.80 Cdh Tj = +12 °C 0.99 0.99 Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL 4.88 2.99	Cdh Tj = +7 °C	0.99	0.99
	Pdh Tj = 12°C	7.76 kW	7.45 kW
Pdh Tj = Tbiv 7.57 kW 6.99 kW COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL < 4.88 2.99	COP Tj = 12°C	5.91	4.80
COP Tj = Tbiv 4.93 3.16 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < 7.55 kW 6.92 kW Tdesignh COP Tj = TOL or COP Tj = Tdesignh if TOL < 4.88 2.99	Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ 7.55 kW 6.92 kW COP Tj = TOL or COP Tj = Tdesignh if TOL $<$ 4.88 2.99	Pdh Tj = Tbiv	7.57 kW	6.99 kW
Tdesignh COP Tj = TOL or COP Tj = Tdesignh if TOL $<$ 4.88 2.99	COP Tj = Tbiv	4.93	3.16
		7.55 kW	6.92 kW
		4.88	2.99





Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1.00	
WTOL	65 °C	65 °C	
Poff	o w	0 W	
PTO	o w	0 W	
PSB	12 W	12 W	
PCK	o w	0 W	
Supplementary Heater: Type of energy input	Electricity	Electricity	
Supplementary Heater: PSUP	1.05 kW	1.03 kW	
Backup Heater	0.00 kW		
Annual energy consumption Qhe	3398 kWh	4338 kWh	

Domestic Hot Water (DHW)

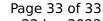
Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	130 %	
СОР	3.14	
Heating up time	1:47 h:min	
Standby power input	63.0 W	
Reference hot water temperature	54.1 °C	
Mixed water at 40°C	293 I	

Colder Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	130 %	
СОР	3.14	
Heating up time	1:47 h:min	
Standby power input	63.0 W	
Reference hot water temperature	54.1 °C	
Mixed water at 40°C	293 I	

Average Climate





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	130 %	
СОР	3.14	
Heating up time	1:47 h:min	
Standby power input	63.0 W	
Reference hot water temperature	54.1 °C	
Mixed water at 40°C	293 I	