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#### Login

Summary of	Vitocal 2xx-G B10	Reg. No.	011-1W0287		
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 B10				
Heat Pump Type	Brine/Water				
Refrigerant	R410A				
Mass of Refrigerant	2.4 kg				
Certification Date	11.07.2019				



# Model: VITOCAL 200-G BWC 201.B10

Configure model			
Model name	VITOCAL 200-G BWC 201.B10		
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	10.36 kW	9.42 kW		
El input	2.16 kW	3.32 kW		
СОР	4.81	2.85		

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

# Average Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	46 dB(A)	46 dB(A)	

EN 14825			
		Low temperature	Medium temperature
Pdesignh	11.72 kW		
$\eta_{s}$	204 %	150 %	
Prated	11.72 kW	10.81 kW	
SCOP	5.32	3.97	
Tbiv	-7 °C	-7 °C	
TOL	-10 °C	-10 °C	
Pdh Tj = -7°C	10.31 kW	9.51 kW	
COP Tj = -7°C	4.99	3.23	
Cdh Tj = -7 °C	0.99	0.99	
Pdh Tj = +2°C	10.40 kW	9.78 kW	
COP Tj = +2°C	5.33	3.84	
Cdh Tj = +2 °C	0.99	0.99	
Pdh Tj = +7°C	10.48 kW	9.96 kW	
COP Tj = +7°C	5.67	4.31	
Cdh Tj = +7 °C	0.99	0.99	





COP Tj = 12°C  Cdh Tj = +12 °C  0.99  0.99  Pdh Tj = Tbiv  10.31 kW  9.51 kW  COP Tj = Tbiv  4.99  3.23  Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < 10.31 kW  9.42 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < 10.31 kW  COP Tj = TOL or Pdh Tj = Tdesignh if TOL < 10.96  Codh Tj = TOL or Pdh Tj = Tdesignh if TOL < 10.99  Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < 10.99  WTOL  65 °C  65 °C  Poff  0 W  0 W  PTO  0 W  0 W  PCK  0 W  0 W  Electricity  Supplementary Heater: Type of energy input  Electricity  Electricity  Supplementary Heater: PSUP  1.41 kW  1.39 kW  Backup Heater			
Cdh Tj = +12 °C       0.99       0.99         Pdh Tj = Tbiv       10.31 kW       9.51 kW         COP Tj = Tbiv       4.99       3.23         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL <	Pdh Tj = 12°C	10.58 kW	10.15 kW
Pdh Tj = Tbiv       10.31 kW       9.51 kW         COP Tj = Tbiv       4.99       3.23         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL        10.31 kW       9.42 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL        4.96       3.07         Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL        0.99       0.99         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       1.41 kW       1.39 kW         Backup Heater       0.00 kW         Annual energy consumption Qhe       4554       5630 kWh	COP Tj = 12°C	6.02	4.83
COP Tj = Tbiv       4.99       3.23         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL        10.31 kW       9.42 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL        4.96       3.07         Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL        0.99       0.99         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       1.41 kW       1.39 kW         Backup Heater       0.00 kW         Annual energy consumption Qhe       4554       5630 kWh	Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL        10.31 kW       9.42 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL        4.96       3.07         Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL        0.99       0.99         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       1.41 kW       1.39 kW         Backup Heater       0.00 kW         Annual energy consumption Qhe       4554       5630 kWh	Pdh Tj = Tbiv	10.31 kW	9.51 kW
Tdesignh       4.96       3.07         COP Tj = TOL or COP Tj = Tdesignh if TOL        0.99       0.99         Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL        0.99       0.99         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       1.41 kW       1.39 kW         Backup Heater       0.00 kW         Annual energy consumption Qhe       4554       5630 kWh	COP Tj = Tbiv	4.99	3.23
Tdesignh       0.99       0.99         Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL        0.99       0.99         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       1.41 kW       1.39 kW         Backup Heater       0.00 kW         Annual energy consumption Qhe       4554       5630 kWh	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.31 kW	9.42 kW
Tdesignh  WTOL  65 °C  65 °C  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  1.41 kW  1.39 kW  Backup Heater  0.00 kW  Annual energy consumption Qhe  4554  5630 kWh	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.96	3.07
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 1.41 kW 1.39 kW  Backup Heater 0.00 kW  Annual energy consumption Qhe 4554 5630 kWh	Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
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 1.41 kW 1.39 kW  Backup Heater 0.00 kW  Annual energy consumption Qhe 4554 5630 kWh	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 1.41 kW 1.39 kW  Backup Heater 0.00 kW  Annual energy consumption Qhe 4554 5630 kWh	Poff	o w	0 W
PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 1.41 kW 1.39 kW  Backup Heater 0.00 kW  Annual energy consumption Qhe 4554 5630 kWh	РТО	o w	0 W
Supplementary Heater: Type of energy input  Supplementary Heater: PSUP  1.41 kW  1.39 kW  Backup Heater  0.00 kW  Annual energy consumption Qhe  4554  5630 kWh	PSB	12 W	12 W
Supplementary Heater: PSUP  1.41 kW  1.39 kW  Backup Heater  0.00 kW  Annual energy consumption Qhe  4554  5630 kWh	PCK	0 W	0 W
Backup Heater 0.00 kW  Annual energy consumption Qhe 4554 5630 kWh	Supplementary Heater: Type of energy input	Electricity	Electricity
Annual energy consumption Qhe 4554 5630 kWh	Supplementary Heater: PSUP	1.41 kW	1.39 kW
	Backup Heater	0.00 kW	
	Annual energy consumption Qhe		5630 kWh

# Warmer Climate



EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	46 dB(A)	46 dB(A)	

EN 14825			
	Low temperature	Medium temperature	
$\eta_{s}$	208 %	145 %	
Prated	10.27 kW	9.39 kW	
SCOP	5.41	3.82	
Tbiv	2 °C	2 °C	
TOL	2 °C	2 °C	
Pdh Tj = +2°C	10.27 kW	9.39 kW	
COP Tj = +2°C	4.95	3.00	
Cdh Tj = +2 °C	0.99	0.99	
Pdh Tj = +7°C	10.33 kW	9.66 kW	
$COP Tj = +7^{\circ}C$	5.24	3.50	
Cdh Tj = +7 °C	0.99	0.99	
Pdh Tj = 12°C	10.46 kW	10.02 kW	
COP Tj = 12°C	5.79	4.40	
Cdh Tj = +12 °C	0.99	0.99	
Pdh Tj = Tbiv	10.27 kW	9.39 kW	





COP Tj = Tbiv	4.95	3.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.27 kW	9.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.95	3.00
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	0 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	0.00 kW	0.00 kW
Annual energy consumption Qhe	2536 kWh	3281 kWh

#### Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	46 dB(A)	46 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	206 %	143 %
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Prated	17.18 kW	15.83 kW		
SCOP	5.36	3.78		
Tbiv	-7 °C	-7 °C		
TOL	-22 °C	-22 °C		
Pdh Tj = -7°C	10.44 kW	9.78 kW		
COP Tj = -7°C	5.76	3.84		
Cdh Tj = -7 °C	0.99	0.99		
Pdh Tj = +2°C	10.48 kW	9.99 kW		
COP Tj = +2°C	6.47	4.37		
Cdh Tj = +2 °C	0.99	0.99		
Pdh Tj = $+7^{\circ}$ C	10.55 kW	10.16 kW		
$COPTj = +7^{\circ}C$	6.78	4.84		
Cdh Tj = +7 °C	0.99	0.99		
Pdh Tj = 12°C	10.55 kW	10.26 kW		
COP Tj = 12°C	6.85	5.25		
Cdh Tj = +12 °C	0.99	0.99		
Pdh Tj = Tbiv	10.44 kW	9.78 kW		
COP Tj = Tbiv	5.76	3.84		
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.44 kW	9.47 kW		
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.12	3.15		
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99		
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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	6.73 kW	6.35 kW
Annual energy consumption Qhe	7907 kWh	10312 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.47	9.65
COP Tj = -15°C (if TOL $<$ -20°C)	6.39	3.51
Cdh Tj = -15 °C	0.99	0.99



# Model: VITOCAL 200-G BWC 201.B10 SC

Configure model		
Model name	VITOCAL 200-G BWC 201.B10 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	10.36 kW	9.42 kW
El input	2.16 kW	3.32 kW
СОР	4.81	2.85

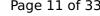
EN 14511-4		
Shutting off the heat transfer medium flow	naccod	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

# **Average Climate**



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)

EN 14825			
		Low temperature	Medium temperature
Pdesignh	11.72 kW		
$\eta_{s}$	204 %	150 %	
Prated	11.72 kW	10.81 kW	
SCOP	5.32	3.97	
Tbiv	-7 °C	-7 °C	
TOL	-10 °C	-10 °C	
Pdh Tj = -7°C	10.31 kW	9.51 kW	
COP Tj = -7°C	4.99	3.23	
Cdh Tj = -7 °C	0.99	0.99	
Pdh Tj = +2°C	10.40 kW	9.78 kW	
COP Tj = +2°C	5.33	3.84	
Cdh Tj = +2 °C	0.99	0.99	
Pdh Tj = +7°C	10.48 kW	9.96 kW	
COP Tj = +7°C	5.67	4.31	
Cdh Tj = +7 °C	0.99	0.99	





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Pdh Tj = 12°C	10.58 kW	10.15 kW	
COP Tj = 12°C	6.02	4.83	
Cdh Tj = +12 °C	0.99	0.99	
Pdh Tj = Tbiv	10.31 kW	9.51 kW	
COP Tj = Tbiv	4.99	3.23	
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.31 kW	9.42 kW	
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.96	3.07	
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99	
WTOL	65 °C	65 °C	
Poff	o w	o w	
РТО	o w	o w	
PSB	12 W	12 W	
PCK	0 W	0 W	
Supplementary Heater: Type of energy input	Electricity	Electricity	
Supplementary Heater: PSUP	1.41 kW	1.39 kW	
Backup Heater	0.00 kW		
Annual energy consumption Qhe	4554 kWh	5630 kWh	
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# Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	208 %	145 %
Prated	10.27 kW	9.39 kW
SCOP	5.41	3.82
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.27 kW	9.39 kW
COP Tj = +2°C	4.95	3.00
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	10.33 kW	9.66 kW
$COP Tj = +7^{\circ}C$	5.24	3.50
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	10.46 kW	10.02 kW
COP Tj = 12°C	5.79	4.40
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	10.27 kW	9.39 kW





COP Tj = Tbiv	4.95	3.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.27 kW	9.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.95	3.00
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	o w	0 W
PTO	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	0.00 kW	0.00 kW
Annual energy consumption Qhe	2536 kWh	3281 kWh

#### Colder Climate

	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)

EN 1482	25	
	Low temperature	Medium temperature
$\eta_{S}$	206 %	143 %





	<u>, , , , , , , , , , , , , , , , , , , </u>	IN database on 10 Mai 202.
Prated	17.18 kW	15.83 kW
SCOP	5.36	3.78
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	10.44 kW	9.78 kW
$COPTj = -7^{\circ}C$	5.76	3.84
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	10.48 kW	9.99 kW
COP Tj = +2°C	6.47	4.37
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	10.55 kW	10.16 kW
$COP Tj = +7^{\circ}C$	6.78	4.84
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	10.55 kW	10.26 kW
COP Tj = 12°C	6.85	5.25
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	10.44 kW	9.78 kW
COP Tj = Tbiv	5.76	3.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.44 kW	9.47 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.12	3.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99



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WTOL	65 °C	65 °C
Poff	0 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	6.73 kW	6.35 kW
Annual energy consumption Qhe	7907 kWh	10312 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.47	9.65
COP Tj = -15°C (if TOL $<$ -20°C)	6.39	3.51
Cdh Tj = -15 °C	0.99	0.99



# Model: VITOCAL 222-G BWT 221.B10

Со	Configure model	
Model name	VITOCAL 222-G BWT 221.B10	
Application	Heating + DHW + low temp	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

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

# Heating

	EN 14511-2	
	Low temperature	Medium temperature
Heat output	10.36 kW	9.42 kW
El input	2.16 kW	3.32 kW
СОР	4.81	2.85

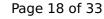
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

# Average Climate



	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)

EN 14825			
		Low temperature	Medium temperature
Pdesignh	11.72 kW		
$\eta_{s}$	204 %	150 %	
Prated	11.72 kW	10.81 kW	
SCOP	5.32	3.97	
Tbiv	-7 °C	-7 °C	
TOL	-10 °C	-10 °C	
Pdh Tj = -7°C	10.31 kW	9.51 kW	
COP Tj = -7°C	4.99	3.23	
Cdh Tj = -7 °C	0.99	0.99	
Pdh Tj = +2°C	10.40 kW	9.78 kW	
COP Tj = +2°C	5.33	3.84	
Cdh Tj = +2 °C	0.99	0.99	
Pdh Tj = +7°C	10.48 kW	9.96 kW	
COP Tj = +7°C	5.67	4.31	
Cdh Tj = +7 °C	0.99	0.99	





COP Tj = 12°C  Cdh Tj = +12 °C  0.99  0.99  Pdh Tj = Tbiv  10.31 kW  9.51 kW  COP Tj = Tbiv  4.99  3.23  Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < 10.31 kW  9.42 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < 10.31 kW  COP Tj = TOL or Pdh Tj = Tdesignh if TOL < 10.96  Codh Tj = TOL or Pdh Tj = Tdesignh if TOL < 10.99  Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < 10.99  WTOL  65 °C  65 °C  Poff  0 W  0 W  PTO  0 W  0 W  PCK  0 W  0 W  Electricity  Supplementary Heater: Type of energy input  Electricity  Electricity  Supplementary Heater: PSUP  1.41 kW  1.39 kW  Backup Heater			
Cdh Tj = +12 °C       0.99       0.99         Pdh Tj = Tbiv       10.31 kW       9.51 kW         COP Tj = Tbiv       4.99       3.23         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL <	Pdh Tj = 12°C	10.58 kW	10.15 kW
Pdh Tj = Tbiv       10.31 kW       9.51 kW         COP Tj = Tbiv       4.99       3.23         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL        10.31 kW       9.42 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL        4.96       3.07         Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL        0.99       0.99         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       1.41 kW       1.39 kW         Backup Heater       0.00 kW         Annual energy consumption Qhe       4554       5630 kWh	COP Tj = 12°C	6.02	4.83
COP Tj = Tbiv       4.99       3.23         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL        10.31 kW       9.42 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL        4.96       3.07         Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL        0.99       0.99         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       1.41 kW       1.39 kW         Backup Heater       0.00 kW         Annual energy consumption Qhe       4554       5630 kWh	Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL        10.31 kW       9.42 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL        4.96       3.07         Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL        0.99       0.99         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       1.41 kW       1.39 kW         Backup Heater       0.00 kW         Annual energy consumption Qhe       4554       5630 kWh	Pdh Tj = Tbiv	10.31 kW	9.51 kW
Tdesignh       4.96       3.07         COP Tj = TOL or COP Tj = Tdesignh if TOL        0.99       0.99         Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL        0.99       0.99         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       1.41 kW       1.39 kW         Backup Heater       0.00 kW         Annual energy consumption Qhe       4554       5630 kWh	COP Tj = Tbiv	4.99	3.23
Tdesignh       0.99       0.99         Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL        0.99       0.99         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       1.41 kW       1.39 kW         Backup Heater       0.00 kW         Annual energy consumption Qhe       4554       5630 kWh	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.31 kW	9.42 kW
Tdesignh  WTOL  65 °C  65 °C  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  1.41 kW  1.39 kW  Backup Heater  0.00 kW  Annual energy consumption Qhe  4554  5630 kWh	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.96	3.07
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 1.41 kW 1.39 kW  Backup Heater 0.00 kW  Annual energy consumption Qhe 4554 5630 kWh	Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
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 1.41 kW 1.39 kW  Backup Heater 0.00 kW  Annual energy consumption Qhe 4554 5630 kWh	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 1.41 kW 1.39 kW  Backup Heater 0.00 kW  Annual energy consumption Qhe 4554 5630 kWh	Poff	o w	0 W
PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 1.41 kW 1.39 kW  Backup Heater 0.00 kW  Annual energy consumption Qhe 4554 5630 kWh	РТО	o w	0 W
Supplementary Heater: Type of energy input  Supplementary Heater: PSUP  1.41 kW  1.39 kW  Backup Heater  0.00 kW  Annual energy consumption Qhe  4554  5630 kWh	PSB	12 W	12 W
Supplementary Heater: PSUP  1.41 kW  1.39 kW  Backup Heater  0.00 kW  Annual energy consumption Qhe  4554  5630 kWh	PCK	0 W	0 W
Backup Heater 0.00 kW  Annual energy consumption Qhe 4554 5630 kWh	Supplementary Heater: Type of energy input	Electricity	Electricity
Annual energy consumption Qhe 4554 5630 kWh	Supplementary Heater: PSUP	1.41 kW	1.39 kW
	Backup Heater	0.00 kW	
	Annual energy consumption Qhe		5630 kWh

# Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	208 %	145 %
Prated	10.27 kW	9.39 kW
SCOP	5.41	3.82
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.27 kW	9.39 kW
COP Tj = +2°C	4.95	3.00
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	10.33 kW	9.66 kW
$COP Tj = +7^{\circ}C$	5.24	3.50
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	10.46 kW	10.02 kW
COP Tj = 12°C	5.79	4.40
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	10.27 kW	9.39 kW





COP Tj = Tbiv       4.95       3.00         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       10.27 kW       9.39 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       4.95       3.00         Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       0.99       0.99         WTOL       65 °C       65 °C         Poff       0 W       0 W         PTO       0 W       0 W         PSB       12 W       12 W			
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 4.95 3.00  Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 0.99 0.99  WTOL 65 °C 65 °C  Poff 0 W 0 W  PTO 0 W	COP Tj = Tbiv	4.95	3.00
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.27 kW	9.39 kW
WTOL 65 °C 65 °C  Poff 0 W 0 W  PTO 0 W	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.95	3.00
Poff         0 W         0 W           PTO         0 W         0 W	Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
PTO 0 W 0 W	WTOL	65 °C	65 °C
	Poff	0 W	0 W
PSB 12 W 12 W	РТО	0 W	0 W
	PSB	12 W	12 W
PCK 0 W 0 W	PCK	0 W	0 W
Supplementary Heater: Type of energy input Electricity Electricity	Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP 0.00 kW 0.00 kW	Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe 2536 kWh 3281 kWh	Annual energy consumption Qhe	2536 kWh	3281 kWh

#### Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	206 %	143 %





This information was genera	ted by the Till KETMAI	tik database on 10 Mai 202
Prated	17.18 kW	15.83 kW
SCOP	5.36	3.78
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	10.44 kW	9.78 kW
$COP Tj = -7^{\circ}C$	5.76	3.84
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	10.48 kW	9.99 kW
$COP Tj = +2^{\circ}C$	6.47	4.37
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	10.55 kW	10.16 kW
$COP Tj = +7^{\circ}C$	6.78	4.84
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	10.55 kW	10.26 kW
COP Tj = 12°C	6.85	5.25
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	10.44 kW	9.78 kW
COP Tj = Tbiv	5.76	3.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.44 kW	9.47 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.12	3.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
	-	1





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	6.73 kW	6.35 kW
Annual energy consumption Qhe	7907 kWh	10312 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.47	9.65
COP Tj = -15°C (if TOL $<$ -20°C)	6.39	3.51
Cdh Tj = -15 °C	0.99	0.99

Domestic Hot Water (DHW)

**Average Climate** 



EN 16147	
Declared load profile	XL
Efficiency ηDHW	130 %
СОР	3.11
Heating up time	1:14 h:min
Standby power input	63.0 W
Reference hot water temperature	54.2 °C
Mixed water at 40°C	302 I

#### Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	130 %
СОР	3.11
Heating up time	1:14 h:min
Standby power input	63.0 W
Reference hot water temperature	54.2 °C
Mixed water at 40°C	302 I

# Colder Climate



# $$\operatorname{\textit{Page}}\xspace$ 24 of 33 This information was generated by the HP KEYMARK database on 18 Mar 2022

EN 16147	
Declared load profile	XL
Efficiency ηDHW	130 %
СОР	3.11
Heating up time	1:14 h:min
Standby power input	63.0 W
Reference hot water temperature	54.2 °C
Mixed water at 40°C	302 I



# Model: VITOCAL 222-G BWT 221.B10 SC

Configure model	
Model name	VITOCAL 222-G BWT 221.B10 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	10.36 kW	9.42 kW		
El input	2.16 kW	3.32 kW		
СОР	4.81	2.85		

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

# Average Climate



EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	46 dB(A)	46 dB(A)	

EN 14825				
		Low temperature	Medium temperature	
Pdesignh	11.72 kW			
$\eta_{s}$	204 %	150 %		
Prated	11.72 kW	10.81 kW		
SCOP	5.32	3.97		
Tbiv	-7 °C	-7 °C		
TOL	-10 °C	-10 °C		
Pdh Tj = -7°C	10.31 kW	9.51 kW		
COP Tj = -7°C	4.99	3.23		
Cdh Tj = -7 °C	0.99	0.99		
Pdh Tj = +2°C	10.40 kW	9.78 kW		
COP Tj = +2°C	5.33	3.84		
Cdh Tj = +2 °C	0.99	0.99		
Pdh Tj = +7°C	10.48 kW	9.96 kW		
COP Tj = +7°C	5.67	4.31		
Cdh Tj = +7 °C	0.99	0.99		





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Pdh Tj = 12°C	10.58 kW	10.15 kW	
COP Tj = 12°C	6.02	4.83	
Cdh Tj = +12 °C	0.99	0.99	
Pdh Tj = Tbiv	10.31 kW	9.51 kW	
COP Tj = Tbiv	4.99	3.23	
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.31 kW	9.42 kW	
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.96	3.07	
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99	
WTOL	65 °C	65 °C	
Poff	o w	o w	
РТО	o w	o w	
PSB	12 W	12 W	
PCK	0 W	0 W	
Supplementary Heater: Type of energy input	Electricity	Electricity	
Supplementary Heater: PSUP	1.41 kW	1.39 kW	
Backup Heater	0.00 kW		
Annual energy consumption Qhe	4554 kWh	5630 kWh	
	1	I .	

# Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	46 dB(A)	46 dB(A)	

EN 14825			
	Low temperature	Medium temperature	
$\eta_{s}$	208 %	145 %	
Prated	10.27 kW	9.39 kW	
SCOP	5.41	3.82	
Tbiv	2 °C	2 °C	
TOL	2 °C	2 °C	
Pdh Tj = +2°C	10.27 kW	9.39 kW	
COP Tj = +2°C	4.95	3.00	
Cdh Tj = +2 °C	0.99	0.99	
Pdh Tj = +7°C	10.33 kW	9.66 kW	
COP Tj = +7°C	5.24	3.50	
Cdh Tj = +7 °C	0.99	0.99	
Pdh Tj = 12°C	10.46 kW	10.02 kW	
COP Tj = 12°C	5.79	4.40	
Cdh Tj = +12 °C	0.99	0.99	
Pdh Tj = Tbiv	10.27 kW	9.39 kW	





1	
4.95	3.00
10.27 kW	9.39 kW
4.95	3.00
0.99	0.99
65 °C	65 °C
0 W	0 W
0 W	0 W
12 W	12 W
0 W	0 W
Electricity	Electricity
0.00 kW	0.00 kW
2536 kWh	3281 kWh
	10.27 kW 4.95 0.99 65 °C 0 W 0 W 12 W 0 W Electricity 0.00 kW

#### Colder Climate

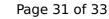
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	46 dB(A)	46 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	206 %	143 %





	<u>, , , , , , , , , , , , , , , , , , , </u>	IN database on 10 Mai 202.
Prated	17.18 kW	15.83 kW
SCOP	5.36	3.78
Tbiv	-7 °C	-7 °C
TOL	-22 °C	-22 °C
Pdh Tj = $-7^{\circ}$ C	10.44 kW	9.78 kW
$COPTj = -7^{\circ}C$	5.76	3.84
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	10.48 kW	9.99 kW
COP Tj = +2°C	6.47	4.37
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	10.55 kW	10.16 kW
$COPTj = +7^{\circ}C$	6.78	4.84
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	10.55 kW	10.26 kW
COP Tj = 12°C	6.85	5.25
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	10.44 kW	9.78 kW
COP Tj = Tbiv	5.76	3.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.44 kW	9.47 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.12	3.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99





WTOL	65 °C	65 °C
Poff	0 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	6.73 kW	6.35 kW
Annual energy consumption Qhe	7907 kWh	10312 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.47	9.65
COP Tj = -15°C (if TOL $<$ -20°C)	6.39	3.51
Cdh Tj = -15 °C	0.99	0.99

# Domestic Hot Water (DHW)

#### **Average Climate**

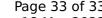


EN 16147	
Declared load profile	XL
Efficiency ηDHW	130 %
СОР	3.11
Heating up time	1:14 h:min
Standby power input	63.0 W
Reference hot water temperature	54.2 °C
Mixed water at 40°C	302 I

#### Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	130 %	
СОР	3.11	
Heating up time	1:14 h:min	
Standby power input	63.0 W	
Reference hot water temperature	54.2 °C	
Mixed water at 40°C	302 I	

# Colder Climate





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EN 16147		
Declared load profile	XL	
Efficiency ηDHW	130 %	
СОР	3.11	
Heating up time	1:14 h:min	
Standby power input	63.0 W	
Reference hot water temperature	54.2 °C	
Mixed water at 40°C	302 I	