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Summary of	Vitocal 100-S/111-S 4-6kW 230V	Reg. No.	011-1W0401
-			
Certificate Holder			
Name	Viessmann Wärmepumpen GmbH		
Address	Viessmannstr. 1	Zip	35107
City	Allendorf/Eder	Country	Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Name of testing laboratory	Heat Pump Test Center WPZ		
Subtype title	Vitocal 100-S/111-S 4-6kW 230V		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R32		
Mass Of Refrigerant	0.95 kg		
Certification Date	02.11.2020		
Testing basis	HP KEYMARK certification scheme rules rev. 7		



Model: Vitocal 100-S AWB-M 101.B04

General Data		
Power supply	1x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	4.08 kW	4.36 kW	
El input	0.80 kW	1.80 kW	
СОР	5.10	2.42	
Indoor water flow rate	0.70 m³/h	0.70 m³/h	

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



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EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825			
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{s}	175 %	126 %	
Prated	4.00 kW	3.70 kW	-
SCOP	4.45	3.22	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	3.51 kW	3.31 kW	
COP Tj = -7°C	2.84	1.89	
Cdh	0.99	0.99	
Pdh Tj = $+2$ °C	2.45 kW	2.65 kW	
COP Tj = +2°C	2.84	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.14 kW	2.74 kW	
COP Tj = +7°C	5.97	4.36	





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Cdh 0.99 0.99 Pdh Tj = 12° C 3.60 kW 3.27 kW COP Tj = 12° C 8.78 6.35
COP Ti = 12°C 8.78 6.35
Cdh 0.99 0.99
Pdh Tj = Tbiv 3.51 kW 3.31 kW
COP Tj = Tbiv 2.84 1.89
Pdh Tj = TOL 3.83 kW 2.86 kW
COP Tj = TOL 2.56 1.49
Cdh 0.99 0.99
WTOL 55 °C 55 °C
Poff 15 W 15 W
PTO 0 W 0 W
PSB 0 W 0 W
PCK 0 W 0 W
Supplementary Heater: Type of energy input electrical electrical
Supplementary Heater: PSUP 0.14 kW 0.88 kW
Backup Heater 0.00 kW
Annual energy consumption Qhe 8202 kWh 7700 kWh

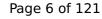
Warmer Climate



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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	197 %	150 %
Prated	4.90 kW	4.10 kW
SCOP	5.01	3.83
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.94 kW	4.08 kW
COP Tj = +2°C	3.04	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.07 kW	2.95 kW
COP Tj = +7°C	5.03	3.25
Cdh	0.99	0.99
Pdh Tj = 12°C	3.57 kW	3.31 kW
COP Tj = 12°C	5.89	5.18
Cdh	0.99	0.99



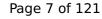


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Pdh Tj = Tbiv	4.94 kW	4.08 kW
COP Tj = Tbiv	3.04	1.98
Pdh Tj = TOL	4.94 kW	4.08 kW
COP Tj = TOL	3.04	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	0 W
PSB	o w	0 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6552 kWh	5450 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825		
	Low temperature	Medium temperature





η_{s}	135 %	86 %
Prated	4.40 kW	2.80 kW
SCOP	3.46	2.22
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.76 kW	1.85 kW
COP Tj = -7°C	2.91	1.72
Cdh	0.99	0.99
Pdh Tj = +2°C	2.23 kW	2.09 kW
COP Tj = +2°C	4.44	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.27 kW
COP Tj = 12°C	5.46	5.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.62 kW	2.30 kW
COP Tj = Tbiv	1.65	1.28
Pdh Tj = TOL	3.30 kW	1.06 kW



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COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	0 W
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.43 kW	2.82 kW
Annual energy consumption Qhe	10662 kWh	6791 kWh



Model: Vitocal 100-S AWB-M-E 101.B04

General Data		
Power supply	1x230V 50Hz	

Heating

EN 14511-2				
	Low temperature	Medium temperature		
Heat output	4.08 kW	4.36 kW		
El input	0.80 kW	1.80 kW		
СОР	5.10	2.42		
Indoor water flow rate	0.70 m³/h	0.70 m³/h		

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	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

	EN 1482	5	
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{s}	175 %	126 %	
Prated	4.00 kW	3.70 kW	-
SCOP	4.45	3.22	_
Tbiv	-7 °C	-7 °C	-
TOL	-20 °C	-20 °C	-
Pdh Tj = -7°C	3.51 kW	3.31 kW	
COP Tj = -7°C	2.84	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	2.45 kW	2.65 kW	
COP Tj = +2°C	2.84	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.14 kW	2.74 kW	
COP Tj = +7°C	5.97	4.36	



	CEN heat pump KEYMARK
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Cdh	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL	3.83 kW	2.86 kW
COP Tj = TOL	2.56	1.49
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	o w	o w
РСК	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

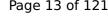
Warmer Climate



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EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	41 dB(A)	41 dB(A)		
Sound power level outdoor	62 dB(A)	62 dB(A)		

EN 14825			
	Low temperature	Medium temperature	
η_{s}	197 %	150 %	
Prated	4.90 kW	4.10 kW	
SCOP	5.01	3.83	
Tbiv	2 °C	2 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = +2°C	4.94 kW	4.08 kW	
COP Tj = +2°C	3.04	1.98	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.07 kW	2.95 kW	
COP Tj = +7°C	5.03	3.25	
Cdh	0.99	0.99	
Pdh Tj = 12°C	3.57 kW	3.31 kW	
COP Tj = 12°C	5.89	5.18	
Cdh	0.99	0.99	





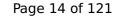
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Pdh Tj = Tbiv	4.94 kW	4.08 kW
COP Tj = Tbiv	3.04	1.98
Pdh Tj = TOL	4.94 kW	4.08 kW
COP Tj = TOL	3.04	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	o w
PSB	0 W	0 W
PCK	o w	o w
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6552 kWh	5450 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





η_{s}	135 %	86 %
Prated	4.40 kW	2.80 kW
SCOP	3.46	2.22
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.76 kW	1.85 kW
COP Tj = -7°C	2.91	1.72
Cdh	0.99	0.99
Pdh Tj = +2°C	2.23 kW	2.09 kW
COP Tj = +2°C	4.44	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.27 kW
COP Tj = 12°C	5.46	5.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.62 kW	2.30 kW
COP Tj = Tbiv	1.65	1.28
Pdh Tj = TOL	3.30 kW	1.06 kW



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COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	o w	0 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.43 kW	2.82 kW
Annual energy consumption Qhe	10662 kWh	6791 kWh



Model: Vitocal 100-S AWB-M-E-AC 101.B04

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.08 kW	4.36 kW
El input	0.80 kW	1.80 kW
СОР	5.10	2.42
Indoor water flow rate	0.70 m³/h	0.70 m³/h

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

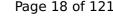
Average Climate



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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825			
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{S}	175 %	126 %	
Prated	4.00 kW	3.70 kW	-
SCOP	4.45	3.22	-
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	3.51 kW	3.31 kW	
COP Tj = -7°C	2.84	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	2.45 kW	2.65 kW	
COP Tj = +2°C	2.84	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.14 kW	2.74 kW	
COP Tj = +7°C	5.97	4.36	
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Cdh	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL	3.83 kW	2.86 kW
COP Tj = TOL	2.56	1.49
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	197 %	150 %
Prated	4.90 kW	4.10 kW
SCOP	5.01	3.83
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.94 kW	4.08 kW
COP Tj = +2°C	3.04	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.07 kW	2.95 kW
COP Tj = +7°C	5.03	3.25
Cdh	0.99	0.99
Pdh Tj = 12°C	3.57 kW	3.31 kW
COP Tj = 12°C	5.89	5.18
Cdh	0.99	0.99





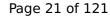
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Pdh Tj = Tbiv	4.94 kW	4.08 kW
COP Tj = Tbiv	3.04	1.98
Pdh Tj = TOL	4.94 kW	4.08 kW
COP Tj = TOL	3.04	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
PTO	0 W	0 W
PSB	o w	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6552 kWh	5450 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825		
	Low temperature	Medium temperature





η_{s}	135 %	86 %
Prated	4.40 kW	2.80 kW
SCOP	3.46	2.22
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.76 kW	1.85 kW
COP Tj = -7°C	2.91	1.72
Cdh	0.99	0.99
Pdh Tj = +2°C	2.23 kW	2.09 kW
COP Tj = +2°C	4.44	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.27 kW
COP Tj = 12°C	5.46	5.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.62 kW	2.30 kW
COP Tj = Tbiv	1.65	1.28
Pdh Tj = TOL	3.30 kW	1.06 kW



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COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	o w	0 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.43 kW	2.82 kW
Annual energy consumption Qhe	10662 kWh	6791 kWh



Model: Vitocal 100-S AWB-M-E-AC 101.B04 F

General Data		
Power supply 1x230V 50Hz		

Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	4.08 kW	4.36 kW	
El input	0.80 kW	1.80 kW	
СОР	5.10	2.42	
Indoor water flow rate	0.70 m³/h	0.70 m³/h	

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

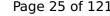
Average Climate



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EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825			
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{s}	175 %	126 %	
Prated	4.00 kW	3.70 kW	-
SCOP	4.45	3.22	
Tbiv	-7 °C	-7 °C	-
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	3.51 kW	3.31 kW	
COP Tj = -7°C	2.84	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	2.45 kW	2.65 kW	
COP Tj = +2°C	2.84	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.14 kW	2.74 kW	
COP Tj = +7°C	5.97	4.36	





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Cdh	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL	3.83 kW	2.86 kW
COP Tj = TOL	2.56	1.49
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	197 %	150 %
Prated	4.90 kW	4.10 kW
SCOP	5.01	3.83
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.94 kW	4.08 kW
COP Tj = +2°C	3.04	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.07 kW	2.95 kW
$COP Tj = +7^{\circ}C$	5.03	3.25
Cdh	0.99	0.99
Pdh Tj = 12°C	3.57 kW	3.31 kW
COP Tj = 12°C	5.89	5.18
Cdh	0.99	0.99
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Pdh Tj = Tbiv	4.94 kW	4.08 kW
COP Tj = Tbiv	3.04	1.98
Pdh Tj = TOL	4.94 kW	4.08 kW
COP Tj = TOL	3.04	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	o w
PSB	0 W	0 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6552 kWh	5450 kWh

Colder Climate

EN 12102-1 Low temperature Medium temperature Sound power level indoor 41 dB(A) 41 dB(A) Sound power level outdoor 62 dB(A) 62 dB(A)

EN 14825		
	Low temperature	Medium temperature





n_s	135 %	86 %
Prated	4.40 kW	2.80 kW
SCOP	3.46	2.22
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.76 kW	1.85 kW
COP Tj = -7°C	2.91	1.72
Cdh	0.99	0.99
Pdh Tj = +2°C	2.23 kW	2.09 kW
COP Tj = +2°C	4.44	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.27 kW
COP Tj = 12°C	5.46	5.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.62 kW	2.30 kW
COP Tj = Tbiv	1.65	1.28
Pdh Tj = TOL	3.30 kW	1.06 kW



$$\operatorname{\textit{Page}}\xspace$ 29 of 121 This information was generated by the HP KEYMARK database on 17 Dec 2020

COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	o w	0 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.43 kW	2.82 kW
Annual energy consumption Qhe	10662 kWh	6791 kWh



Model: Vitocal 111-S AWBT-M-AC 111.B04

General Data		
Power supply 1x230V 50Hz		

Heating

EN 14511-2				
Low temperature Medium temperature				
Heat output	4.08 kW	4.36 kW		
El input	0.80 kW	1.80 kW		
СОР	5.10	2.42		
Indoor water flow rate	0.70 m³/h	0.70 m³/h		

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	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825			
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{S}	175 %	126 %	
Prated	4.00 kW	3.70 kW	-
SCOP	4.45	3.22	-
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	3.51 kW	3.31 kW	
COP Tj = -7°C	2.84	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	2.45 kW	2.65 kW	
COP Tj = +2°C	2.84	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.14 kW	2.74 kW	
COP Tj = +7°C	5.97	4.36	
	I		





	_	
Cdh	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL	3.83 kW	2.86 kW
COP Tj = TOL	2.56	1.49
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	o w	0 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

Warmer Climate



EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	41 dB(A)	41 dB(A)		
Sound power level outdoor	62 dB(A)	62 dB(A)		

EN 14825		
	Low temperature	Medium temperature
η_{s}	197 %	150 %
Prated	4.90 kW	4.10 kW
SCOP	5.01	3.83
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.94 kW	4.08 kW
COP Tj = +2°C	3.04	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.07 kW	2.95 kW
COP Tj = +7°C	5.03	3.25
Cdh	0.99	0.99
Pdh Tj = 12°C	3.57 kW	3.31 kW
COP Tj = 12°C	5.89	5.18
Cdh	0.99	0.99





Pdh Tj = Tbiv	4.94 kW	4.08 kW
COP Tj = Tbiv	3.04	1.98
Pdh Tj = TOL	4.94 kW	4.08 kW
COP Tj = TOL	3.04	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	o w
PSB	o w	o w
PCK	o w	o w
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6552 kWh	5450 kWh

Colder Climate

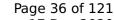
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature





η_{s}	135 %	86 %
Prated	4.40 kW	2.80 kW
SCOP	3.46	2.22
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.76 kW	1.85 kW
COP Tj = -7°C	2.91	1.72
Cdh	0.99	0.99
Pdh Tj = +2°C	2.23 kW	2.09 kW
COP Tj = +2°C	4.44	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.27 kW
COP Tj = 12°C	5.46	5.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.62 kW	2.30 kW
COP Tj = Tbiv	1.65	1.28
Pdh Tj = TOL	3.30 kW	1.06 kW





COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
PTO	0 W	0 W
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.43 kW	2.82 kW
Annual energy consumption Qhe	10662 kWh	6791 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	133 %	
СОР	3.32	
Heating up time	2:15 h:min	
Standby power input	25.0 W	
Reference hot water temperature	53.4 °C	
Mixed water at 40°C	296.1	



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This information was generated by the HP KEYMARK database on 17 Dec 2020

Warmer Climate



Model: Vitocal 111-S AWBT-M-E 111.B04

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.08 kW	4.36 kW
El input	0.80 kW	1.80 kW
СОР	5.10	2.42
Indoor water flow rate	0.70 m³/h	0.70 m³/h

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	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825			
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{s}	175 %	126 %	
Prated	4.00 kW	3.70 kW	-
SCOP	4.45	3.22	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	3.51 kW	3.31 kW	
COP Tj = -7°C	2.84	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	2.45 kW	2.65 kW	
COP Tj = +2°C	2.84	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.14 kW	2.74 kW	
COP Tj = +7°C	5.97	4.36	





		,
Cdh	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL	3.83 kW	2.86 kW
COP Tj = TOL	2.56	1.49
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	0 W	0 W
PCK	0 W	o w
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

Warmer Climate



	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	197 %	150 %
Prated	4.90 kW	4.10 kW
SCOP	5.01	3.83
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.94 kW	4.08 kW
COP Tj = +2°C	3.04	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.07 kW	2.95 kW
COP Tj = +7°C	5.03	3.25
Cdh	0.99	0.99
Pdh Tj = 12°C	3.57 kW	3.31 kW
COP Tj = 12°C	5.89	5.18
Cdh	0.99	0.99





Pdh Tj = Tbiv	4.94 kW	4.08 kW
COP Tj = Tbiv	3.04	1.98
Pdh Tj = TOL	4.94 kW	4.08 kW
COP Tj = TOL	3.04	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	o w
PSB	o w	o w
PCK	o w	o w
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6552 kWh	5450 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





η_{s}	135 %	86 %
Prated	4.40 kW	2.80 kW
SCOP	3.46	2.22
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.76 kW	1.85 kW
COP Tj = -7°C	2.91	1.72
Cdh	0.99	0.99
Pdh Tj = +2°C	2.23 kW	2.09 kW
COP Tj = +2°C	4.44	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.27 kW
COP Tj = 12°C	5.46	5.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.62 kW	2.30 kW
COP Tj = Tbiv	1.65	1.28
Pdh Tj = TOL	3.30 kW	1.06 kW





COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	o w	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.43 kW	2.82 kW
Annual energy consumption Qhe	10662 kWh	6791 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	W
Declared load profile	XL
Efficiency ηDHW	133 %
СОР	3.32
Heating up time	2:15 h:min
Standby power input	25.0 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	296.1



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This information was generated by the HP KEYMARK database on 17 Dec 2020

Warmer Climate



Model: Vitocal 111-S AWBT-M-E-AC 111.B04

General Data		
Power supply 1x230V 50Hz		

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	4.08 kW	4.36 kW	
El input	0.80 kW	1.80 kW	
СОР	5.10	2.42	
Indoor water flow rate	0.70 m³/h	0.70 m³/h	

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	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825			
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{s}	175 %	126 %	
Prated	4.00 kW	3.70 kW	-
SCOP	4.45	3.22	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	3.51 kW	3.31 kW	
COP Tj = -7°C	2.84	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	2.45 kW	2.65 kW	
COP Tj = +2°C	2.84	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.14 kW	2.74 kW	
COP Tj = +7°C	5.97	4.36	





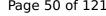
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Cdh	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL	3.83 kW	2.86 kW
COP Tj = TOL	2.56	1.49
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	0 W
PSB	o w	0 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh
	_	

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	197 %	150 %
Prated	4.90 kW	4.10 kW
SCOP	5.01	3.83
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.94 kW	4.08 kW
COP Tj = +2°C	3.04	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.07 kW	2.95 kW
COP Tj = +7°C	5.03	3.25
Cdh	0.99	0.99
Pdh Tj = 12°C	3.57 kW	3.31 kW
COP Tj = 12°C	5.89	5.18
Cdh	0.99	0.99



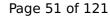


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Pdh Tj = Tbiv	4.94 kW	4.08 kW
COP Tj = Tbiv	3.04	1.98
Pdh Tj = TOL	4.94 kW	4.08 kW
COP Tj = TOL	3.04	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	o w
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6552 kWh	5450 kWh

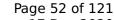
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





η_{s}	135 %	86 %
Prated	4.40 kW	2.80 kW
SCOP	3.46	2.22
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.76 kW	1.85 kW
COP Tj = -7°C	2.91	1.72
Cdh	0.99	0.99
Pdh Tj = +2°C	2.23 kW	2.09 kW
COP Tj = +2°C	4.44	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.27 kW
COP Tj = 12°C	5.46	5.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.62 kW	2.30 kW
COP Tj = Tbiv	1.65	1.28
Pdh Tj = TOL	3.30 kW	1.06 kW





COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	o w	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.43 kW	2.82 kW
Annual energy consumption Qhe	10662 kWh	6791 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147		
Designed lead worfile	W	
Declared load profile	XL	
Efficiency ηDHW	133 %	
СОР	3.32	
Heating up time	2:15 h:min	
Standby power input	25.2 W	
Reference hot water temperature	53.4 °C	
Mixed water at 40°C	296.1	



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This information was generated by the HP KEYMARK database on 17 Dec 2020

Warmer Climate



Model: Vitocal 100-S AWB-M 101.B06

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	6.02 kW	4.36 kW
El input	1.23 kW	1.80 kW
СОР	4.90	2.42
Indoor water flow rate	0.70 m³/h	0.70 m³/h

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	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825			
		Low temperature	Medium temperatur
Pdesignh	3.70 kW		
η_{s}	175 %	125 %	
Prated	5.10 kW	4.10 kW	
SCOP	4.45	3.20	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	4.53 kW	3.31 kW	
COP Tj = -7°C	2.85	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	3.04 kW	2.65 kW	
COP Tj = +2°C	4.30	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.11 kW	2.74 kW	
COP Tj = +7°C	5.93	4.76	





$$\operatorname{Page}\ 56$$ of 121 This information was generated by the HP KEYMARK database on 17 Dec 2020

Cdh	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.40	6.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = Tbiv	2.85	1.89
Pdh Tj = TOL	4.08 kW	2.86 kW
COP Tj = TOL	2.59	1.49
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	0 W
PSB	o w	o w
PCK	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	1.04 kW	1.20 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	10549 kWh	8383 kWh

Warmer Climate



 $$\operatorname{\textit{Page}}\xspace$ 57 of 121 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825			
	Low temperature	Medium temperature	
η_{s}	225 %	156 %	
Prated	5.70 kW	4.10 kW	
SCOP	5.70	3.97	
Tbiv	2 °C	2 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = +2°C	5.01 kW	4.08 kW	
COP Tj = +2°C	4.30	1.98	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.28 kW	2.95 kW	
COP Tj = +7°C	4.86	3.25	
Cdh	0.99	0.99	
Pdh Tj = 12°C	3.43 kW	3.31 kW	
COP Tj = 12°C	7.69	5.59	
Cdh	0.99	0.99	





$$\operatorname{\textit{Page}}\xspace$ 58 of 121 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = Tbiv	5.01 kW	4.08 kW
COP Tj = Tbiv	2.97	1.98
Pdh Tj = TOL	5.01 kW	4.08 kW
COP Tj = TOL	2.97	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	0 W
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6687 kWh	5450 kWh

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 1	4825	
	Low temperature	Medium temperature





n_s	135 %	90 %
Prated	4.80 kW	3.30 kW
SCOP	3.46	2.32
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.10 kW	2.10 kW
COP Tj = -7°C	2.89	1.81
Cdh	0.99	0.99
Pdh Tj = +2°C	2.40 kW	2.09 kW
COP Tj = +2°C	4.40	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.34 kW
COP Tj = 12°C	8.00	6.85
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.90 kW	2.67 kW
COP Tj = Tbiv	2.11	1.51
Pdh Tj = TOL	3.30 kW	1.06 kW



$$\operatorname{\textit{Page}}\xspace$ 60 of 121 This information was generated by the HP KEYMARK database on 17 Dec 2020

COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	0 W
PSB	0 W	0 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.78 kW	3.27 kW
Annual energy consumption Qhe	11493 kWh	7870 kWh



Model: Vitocal 100-S AWB-M-E 101.B06

General Data		
Power supply 1x230V 50Hz		

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	6.02 kW	4.36 kW	
El input	1.23 kW	1.80 kW	
СОР	4.90	2.42	
Indoor water flow rate	0.70 m³/h	0.70 m³/h	

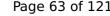
EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

Average Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825			
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{S}	175 %	125 %	
Prated	5.10 kW	4.10 kW	
SCOP	4.45	3.20	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7° C	4.53 kW	3.31 kW	
COP Tj = -7°C	2.85	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	3.04 kW	2.65 kW	
$COP Tj = +2^{\circ}C$	4.30	3.18	
Cdh	0.99	0.99	
Pdh Tj = $+7^{\circ}$ C	3.11 kW	2.74 kW	
COP Tj = +7°C	5.93	4.76	
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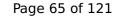
Pdh Tj = 12°C 3.60 kW 3.27 kW COP Tj = 12°C 8.40 6.35 Cdh 0.99 0.99 Pdh Tj = Tbiv 4.53 kW 3.59 kW COP Tj = Tbiv 2.85 1.89 Pdh Tj = TOL 4.08 kW 2.86 kW COP Tj = TOL 2.59 1.49 Cdh 0.99 0.99 WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW			· · · · · · · · · · · · · · · · · · ·
COP Tj = 12°C 8.40 6.35 Cdh 0.99 0.99 4.53 kW 3.59 kW COP Tj = Tbiv 2.85 1.89 Pdh Tj = TOL 4.08 kW 2.86 kW COP Tj = TOL 2.59 1.49 Cdh 0.99 0.99 WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater	Cdh	0.99	0.99
Cdh 0.99 0.99 Pdh Tj = Tbiv 4.53 kW 3.59 kW COP Tj = Tbiv 2.85 1.89 Pdh Tj = TOL 4.08 kW 2.86 kW COP Tj = TOL 2.59 1.49 Cdh 0.99 0.99 WTOL 55 °C 55 °C Peff 15 W 15 W PTO 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	Pdh Tj = 12°C	3.60 kW	3.27 kW
Pdh Tj = Tbiv 4.53 kW 3.59 kW COP Tj = Tbiv 2.85 1.89 Pdh Tj = TOL 4.08 kW 2.86 kW COP Tj = TOL 2.59 1.49 Cdh 0.99 WTOL 55 °C 55 °C Poff 15 W PTO 0 W 0 W PSB PCK 0 W 0 W Supplementary Heater: Type of energy input Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	COP Tj = 12°C	8.40	6.35
COP Tj = Tbiv 2.85 1.89 Pdh Tj = TOL 4.08 kW 2.86 kW COP Tj = TOL 2.59 1.49 Cdh 0.99 0.99 WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	Cdh	0.99	0.99
Pdh Tj = TOL 4.08 kW 2.86 kW COP Tj = TOL 2.59 1.49 Cdh 0.99 0.99 WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = TOL 2.59 1.49 Cdh 0.99 0.99 WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	COP Tj = Tbiv	2.85	1.89
Cdh 0.99 0.99 WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	Pdh Tj = TOL	4.08 kW	2.86 kW
WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	COP Tj = TOL	2.59	1.49
Poff 15 W 15 W PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	Cdh	0.99	0.99
PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	WTOL	55 °C	55 °C
PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	Poff	15 W	15 W
PCK 0 W 0 W Supplementary Heater: Type of energy input electrical electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	РТО	o w	0 W
Supplementary Heater: Type of energy input electrical electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	PSB	o w	o w
Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	PCK	0 W	0 W
Backup Heater 0.00 kW	Supplementary Heater: Type of energy input	electrical	electrical
	Supplementary Heater: PSUP	1.04 kW	1.20 kW
Annual energy consumption Qhe 10549 kWh 8383 kWh	Backup Heater	0.00 kW	
	Annual energy consumption Qhe	10549 kWh	8383 kWh

Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

	EN 14825	
	Low temperature	Medium temperature
η_{s}	225 %	156 %
Prated	5.70 kW	4.10 kW
SCOP	5.70	3.97
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	5.01 kW	4.08 kW
COP Tj = +2°C	4.30	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.28 kW	2.95 kW
COP Tj = +7°C	4.86	3.25
Cdh	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.31 kW
COP Tj = 12°C	7.69	5.59
Cdh	0.99	0.99

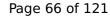




Pdh Tj = Tbiv	5.01 kW	4.08 kW
COP Tj = Tbiv	2.97	1.98
Pdh Tj = TOL	5.01 kW	4.08 kW
COP Tj = TOL	2.97	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	0 W
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6687 kWh	5450 kWh

	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





n_s	135 %	90 %
Prated	4.80 kW	3.30 kW
SCOP	3.46	2.32
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.10 kW	2.10 kW
COP Tj = -7°C	2.89	1.81
Cdh	0.99	0.99
Pdh Tj = +2°C	2.40 kW	2.09 kW
COP Tj = +2°C	4.40	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.34 kW
COP Tj = 12°C	8.00	6.85
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.90 kW	2.67 kW
COP Tj = Tbiv	2.11	1.51
Pdh Tj = TOL	3.30 kW	1.06 kW



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COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	0 W
PSB	0 W	0 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.78 kW	3.27 kW
Annual energy consumption Qhe	11493 kWh	7870 kWh



Model: Vitocal 100-S AWB-M-E-AC 101.B06

Gener	al Data
Power supply	1x230V 50Hz

Heating

	EN 14511-2	
	Low temperature	Medium temperature
Heat output	6.02 kW	4.36 kW
El input	1.23 kW	1.80 kW
СОР	4.90	2.42
Indoor water flow rate	0.70 m³/h	0.70 m³/h

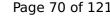
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Average Climate



	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

	EN 1482	5	
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{s}	175 %	125 %	
Prated	5.10 kW	4.10 kW	-
SCOP	4.45	3.20	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	4.53 kW	3.31 kW	
COP Tj = -7°C	2.85	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	3.04 kW	2.65 kW	
COP Tj = +2°C	4.30	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.11 kW	2.74 kW	
COP Tj = +7°C	5.93	4.76	





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Cdh	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.40	6.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = Tbiv	2.85	1.89
Pdh Tj = TOL	4.08 kW	2.86 kW
COP Tj = TOL	2.59	1.49
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	o w
PSB	o w	o w
РСК	o w	o w
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	1.04 kW	1.20 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	10549 kWh	8383 kWh

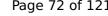
Warmer Climate



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EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825			
	Low temperature	Medium temperature	
η_{s}	225 %	156 %	
Prated	5.70 kW	4.10 kW	
SCOP	5.70	3.97	
Tbiv	2 °C	2 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = +2°C	5.01 kW	4.08 kW	
COP Tj = +2°C	4.30	1.98	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.28 kW	2.95 kW	
COP Tj = +7°C	4.86	3.25	
Cdh	0.99	0.99	
Pdh Tj = 12°C	3.43 kW	3.31 kW	
COP Tj = 12°C	7.69	5.59	
Cdh	0.99	0.99	



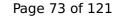


$$\operatorname{\textit{Page}}\ 72$$ of 121 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = Tbiv	5.01 kW	4.08 kW
COP Tj = Tbiv	2.97	1.98
Pdh Tj = TOL	5.01 kW	4.08 kW
COP Tj = TOL	2.97	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
PTO	o w	0 W
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6687 kWh	5450 kWh

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	41 dB(A)	41 dB(A)		
Sound power level outdoor	62 dB(A)	62 dB(A)		

EN 14825		
	Low temperature	Medium temperature





n_s	135 %	90 %
Prated	4.80 kW	3.30 kW
SCOP	3.46	2.32
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.10 kW	2.10 kW
COP Tj = -7°C	2.89	1.81
Cdh	0.99	0.99
Pdh Tj = +2°C	2.40 kW	2.09 kW
COP Tj = +2°C	4.40	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.34 kW
COP Tj = 12°C	8.00	6.85
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.90 kW	2.67 kW
COP Tj = Tbiv	2.11	1.51
Pdh Tj = TOL	3.30 kW	1.06 kW



$$\operatorname{\textit{Page}}\ 74$$ of 121 This information was generated by the HP KEYMARK database on 17 Dec 2020

COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
PTO	0 W	0 W
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.78 kW	3.27 kW
Annual energy consumption Qhe	11493 kWh	7870 kWh



Model: Vitocal 100-S AWB-M-E-AC 101.B06 F

General Data	
Power supply 1x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	6.02 kW	4.36 kW	
El input	1.23 kW	1.80 kW	
СОР	4.90	2.42	
Indoor water flow rate	0.70 m³/h	0.70 m³/h	

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



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825			
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{S}	175 %	125 %	
Prated	5.10 kW	4.10 kW	-
SCOP	4.45	3.20	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	4.53 kW	3.31 kW	
COP Tj = -7°C	2.85	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	3.04 kW	2.65 kW	
$COP Tj = +2^{\circ}C$	4.30	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.11 kW	2.74 kW	
COP Tj = +7°C	5.93	4.76	
		1	_





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Cdh 0.99 0.99
Pdh Tj = 12° C 3.60 kW 3.27 kW
COP Tj = 12°C 8.40 6.35
Cdh 0.99 0.99
Pdh Tj = Tbiv 4.53 kW 3.59 kW
COP Tj = Tbiv 2.85 1.89
Pdh Tj = TOL 4.08 kW 2.86 kW
COP Tj = TOL 2.59 1.49
Cdh 0.99 0.99
WTOL 55 °C 55 °C
Poff 15 W 15 W
PTO 0 W 0 W
PSB 0 W 0 W
PCK 0 W 0 W
Supplementary Heater: Type of energy input electrical electrical
Supplementary Heater: PSUP 1.04 kW 1.20 kW
Backup Heater 0.00 kW
Annual energy consumption Qhe 10549 kWh 8383 kWh

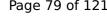
Warmer Climate



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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	225 %	156 %
Prated	5.70 kW	4.10 kW
SCOP	5.70	3.97
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	5.01 kW	4.08 kW
COP Tj = +2°C	4.30	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.28 kW	2.95 kW
COP Tj = +7°C	4.86	3.25
Cdh	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.31 kW
COP Tj = 12°C	7.69	5.59
Cdh	0.99	0.99





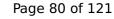
$$\operatorname{\textit{Page}}\ 79$ of 121$$ This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = Tbiv	5.01 kW	4.08 kW
COP Tj = Tbiv	2.97	1.98
Pdh Tj = TOL	5.01 kW	4.08 kW
COP Tj = TOL	2.97	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
PTO	o w	0 W
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6687 kWh	5450 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature





n_s	135 %	90 %
Prated	4.80 kW	3.30 kW
SCOP	3.46	2.32
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.10 kW	2.10 kW
COP Tj = -7°C	2.89	1.81
Cdh	0.99	0.99
Pdh Tj = +2°C	2.40 kW	2.09 kW
COP Tj = +2°C	4.40	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.34 kW
COP Tj = 12°C	8.00	6.85
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.90 kW	2.67 kW
COP Tj = Tbiv	2.11	1.51
Pdh Tj = TOL	3.30 kW	1.06 kW



$$\operatorname{\textit{Page}}\xspace$ 81 of 121 This information was generated by the HP KEYMARK database on 17 Dec 2020

COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	0 W
PSB	0 W	0 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.78 kW	3.27 kW
Annual energy consumption Qhe	11493 kWh	7870 kWh



Model: Vitocal 111-S AWBT-M-AC 111.B06

General Data		
Power supply	1x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	6.02 kW	4.36 kW	
El input	1.23 kW	1.80 kW	
СОР	4.90	2.42	
Indoor water flow rate	0.70 m³/h	0.70 m³/h	

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



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825			
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{S}	175 %	125 %	
Prated	5.10 kW	4.10 kW	-
SCOP	4.45	3.20	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	4.53 kW	3.31 kW	
COP Tj = -7°C	2.85	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	3.04 kW	2.65 kW	
$COP Tj = +2^{\circ}C$	4.30	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.11 kW	2.74 kW	
COP Tj = +7°C	5.93	4.76	
		1	_





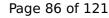
Cdh	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.40	6.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = Tbiv	2.85	1.89
Pdh Tj = TOL	4.08 kW	2.86 kW
COP Tj = TOL	2.59	1.49
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	0 W
PSB	o w	0 W
РСК	o w	o w
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	1.04 kW	1.20 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	10549 kWh	8383 kWh

Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825			
	Low temperature	Medium temperature	
η_{s}	225 %	156 %	
Prated	5.70 kW	4.10 kW	
SCOP	5.70	3.97	
Tbiv	2 °C	2 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = +2°C	5.01 kW	4.08 kW	
COP Tj = +2°C	4.30	1.98	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.28 kW	2.95 kW	
COP Tj = +7°C	4.86	3.25	
Cdh	0.99	0.99	
Pdh Tj = 12°C	3.43 kW	3.31 kW	
COP Tj = 12°C	7.69	5.59	
Cdh	0.99	0.99	





Pdh Tj = Tbiv	5.01 kW	4.08 kW
COP Tj = Tbiv	2.97	1.98
Pdh Tj = TOL	5.01 kW	4.08 kW
COP Tj = TOL	2.97	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	o w
PSB	o w	o w
PCK	o w	o w
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6687 kWh	5450 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825		
	Low temperature	Medium temperature





n_s	135 %	90 %
Prated	4.80 kW	3.30 kW
SCOP	3.46	2.32
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.10 kW	2.10 kW
COP Tj = -7°C	2.89	1.81
Cdh	0.99	0.99
Pdh Tj = +2°C	2.40 kW	2.09 kW
COP Tj = +2°C	4.40	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.34 kW
COP Tj = 12°C	8.00	6.85
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.90 kW	2.67 kW
COP Tj = Tbiv	2.11	1.51
Pdh Tj = TOL	3.30 kW	1.06 kW





COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	o w
PSB	0 W	o w
PCK	o w	o w
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.78 kW	3.27 kW
Annual energy consumption Qhe	11493 kWh	7870 kWh

Domestic Hot Water (DHW)

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	133 %	
СОР	3.32	
Heating up time	2:15 h:min	
Standby power input	25.0 W	
Reference hot water temperature	53.4 °C	
Mixed water at 40°C	296.1	



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This information was generated by the HP KEYMARK database on 17 Dec 2020

Warmer Climate

Colder Climate



Model: Vitocal 111-S AWBT-M-E 111.B06

General Data		
Power supply 1x230V 50Hz		

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	6.02 kW	4.36 kW	
El input	1.23 kW	1.80 kW	
СОР	4.90	2.42	
Indoor water flow rate	0.70 m³/h	0.70 m³/h	

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



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

	EN 1482	5	
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{s}	175 %	125 %	
Prated	5.10 kW	4.10 kW	
SCOP	4.45	3.20	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	4.53 kW	3.31 kW	
COP Tj = -7°C	2.85	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	3.04 kW	2.65 kW	
COP Tj = +2°C	4.30	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.11 kW	2.74 kW	
COP Tj = +7°C	5.93	4.76	





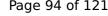
Cdh	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.40	6.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = Tbiv	2.85	1.89
Pdh Tj = TOL	4.08 kW	2.86 kW
COP Tj = TOL	2.59	1.49
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	0 W	0 W
РСК	0 W	o w
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	1.04 kW	1.20 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	10549 kWh	8383 kWh

Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	225 %	156 %
Prated	5.70 kW	4.10 kW
SCOP	5.70	3.97
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	5.01 kW	4.08 kW
COP Tj = +2°C	4.30	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.28 kW	2.95 kW
COP Tj = +7°C	4.86	3.25
Cdh	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.31 kW
COP Tj = 12°C	7.69	5.59
Cdh	0.99	0.99





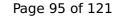
$$\operatorname{\textit{Page}}\xspace$ 94 of 121 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = Tbiv	5.01 kW	4.08 kW
COP Tj = Tbiv	2.97	1.98
Pdh Tj = TOL	5.01 kW	4.08 kW
COP Tj = TOL	2.97	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	0 W
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6687 kWh	5450 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature





n_s	135 %	90 %
Prated	4.80 kW	3.30 kW
SCOP	3.46	2.32
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.10 kW	2.10 kW
COP Tj = -7°C	2.89	1.81
Cdh	0.99	0.99
Pdh Tj = +2°C	2.40 kW	2.09 kW
COP Tj = +2°C	4.40	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.34 kW
COP Tj = 12°C	8.00	6.85
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.90 kW	2.67 kW
COP Tj = Tbiv	2.11	1.51
Pdh Tj = TOL	3.30 kW	1.06 kW





COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	0 W	o w
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.78 kW	3.27 kW
Annual energy consumption Qhe	11493 kWh	7870 kWh

Domestic Hot Water (DHW)

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	133 %	
СОР	3.32	
Heating up time	2:15 h:min	
Standby power input	25.0 W	
Reference hot water temperature	53.4 °C	
Mixed water at 40°C	296.1	



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This information was generated by the HP KEYMARK database on 17 Dec 2020

Warmer Climate

Colder Climate



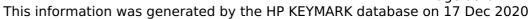
Model: Vitocal 111-S AWBT-M-E-AC 111.B06

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	6.02 kW	4.36 kW
El input	1.23 kW	1.80 kW
СОР	4.90	2.42
Indoor water flow rate	0.70 m³/h	0.70 m³/h

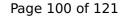
EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	





EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825			
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{s}	175 %	125 %	
Prated	5.10 kW	4.10 kW	
SCOP	4.45	3.20	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	4.53 kW	3.31 kW	
COP Tj = -7°C	2.85	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	3.04 kW	2.65 kW	
COP Tj = +2°C	4.30	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.11 kW	2.74 kW	
COP Tj = +7°C	5.93	4.76	





COP Tj = 12°C 8.40 6.35 Cdh 0.99 0.99
COP Tj = 12°C 8.40 6.35 Cdh 0.99 0.99
Cdh 0.99 0.99
Pdh Tj = Tbiv 4.53 kW 3.59 kW
COP Tj = Tbiv 2.85 1.89
Pdh Tj = TOL 4.08 kW 2.86 kW
COP Tj = TOL 2.59 1.49
Cdh 0.99 0.99
WTOL 55 °C 55 °C
Poff 15 W 15 W
PTO 0 W 0 W
PSB 0 W 0 W
PCK 0 W 0 W
Supplementary Heater: Type of energy input electrical electrical
Supplementary Heater: PSUP 1.04 kW 1.20 kW
Backup Heater 0.00 kW
Annual energy consumption Qhe 10549 kWh 8383 kWh

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	225 %	156 %
Prated	5.70 kW	4.10 kW
SCOP	5.70	3.97
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	5.01 kW	4.08 kW
COP Tj = +2°C	4.30	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.28 kW	2.95 kW
COP Tj = +7°C	4.86	3.25
Cdh	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.31 kW
COP Tj = 12°C	7.69	5.59
Cdh	0.99	0.99



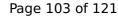


go		
Pdh Tj = Tbiv	5.01 kW	4.08 kW
COP Tj = Tbiv	2.97	1.98
Pdh Tj = TOL	5.01 kW	4.08 kW
COP Tj = TOL	2.97	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	0 W
PSB	o w	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6687 kWh	5450 kWh

Colder Climate

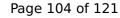
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature





η_{s}	135 %	90 %
Prated	4.80 kW	3.30 kW
SCOP	3.46	2.32
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.10 kW	2.10 kW
COP Tj = -7°C	2.89	1.81
Cdh	0.99	0.99
Pdh Tj = +2°C	2.40 kW	2.09 kW
COP Tj = +2°C	4.40	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.34 kW
COP Tj = 12°C	8.00	6.85
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.90 kW	2.67 kW
COP Tj = Tbiv	2.11	1.51
Pdh Tj = TOL	3.30 kW	1.06 kW





COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	o w	0 W
PCK	o w	o w
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.78 kW	3.27 kW
Annual energy consumption Qhe	11493 kWh	7870 kWh

Domestic Hot Water (DHW)

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	133 %	
СОР	3.32	
Heating up time	2:15 h:min	
Standby power input	25.0 W	
Reference hot water temperature	53.4 °C	
Mixed water at 40°C	296.1	



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This information was generated by the HP KEYMARK database on 17 Dec 2020

Warmer Climate

Colder Climate



Model: Vitocal 111-S AWBT-M-E-AC 111.B06 F

General Data	
Power supply	1x230V 50Hz

Heating

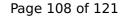
EN 14511-2		
	Low temperature	Medium temperature
Heat output	6.02 kW	4.36 kW
El input	1.23 kW	1.80 kW
СОР	4.90	2.42
Indoor water flow rate	0.70 m³/h	0.70 m³/h

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

 $$\operatorname{\textit{Page}}\xspace$ 107 of 121 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	41 dB(A)	41 dB(A)		
Sound power level outdoor	62 dB(A)	62 dB(A)		

	EN 1482	5	
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{S}	175 %	125 %	
Prated	5.10 kW	4.10 kW	
SCOP	4.45	3.20	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	4.53 kW	3.31 kW	
COP Tj = -7°C	2.85	1.89	
Cdh	0.99	0.99	
Pdh Tj = $+2^{\circ}$ C	3.04 kW	2.65 kW	
COP Tj = +2°C	4.30	3.18	
Cdh	0.99	0.99	
Pdh Tj = $+7^{\circ}$ C	3.11 kW	2.74 kW	
$COP Tj = +7^{\circ}C$	5.93	4.76	





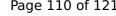
Pdh Tj = 12°C 3.60 kW 3.27 kW COP Tj = 12°C 8.40 6.35 Cdh 0.99 0.99 Pdh Tj = Tbiv 4.53 kW 3.59 kW COP Tj = Tbiv 2.85 1.89 Pdh Tj = TOL 4.08 kW 2.86 kW COP Tj = TOL 2.59 1.49 Cdh 0.99 0.99 WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW			· · · · · · · · · · · · · · · · · · ·
COP Tj = 12°C 8.40 6.35 Cdh 0.99 0.99 Pdh Tj = Tbiv 4.53 kW 3.59 kW COP Tj = Tbiv 2.85 1.89 Pdh Tj = TOL 4.08 kW 2.86 kW COP Tj = TOL Cdh 0.99 0.99 WTOL 55 °C 55 °C Poff 15 W PTO 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater	Cdh	0.99	0.99
Cdh 0.99 0.99 Pdh Tj = Tbiv 4.53 kW 3.59 kW COP Tj = Tbiv 2.85 1.89 Pdh Tj = TOL 4.08 kW 2.86 kW COP Tj = TOL 2.59 1.49 Cdh 0.99 0.99 WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	Pdh Tj = 12°C	3.60 kW	3.27 kW
Pdh Tj = Tbiv 4.53 kW 3.59 kW COP Tj = Tbiv 2.85 1.89 Pdh Tj = TOL 4.08 kW 2.86 kW COP Tj = TOL 2.59 1.49 Cdh 0.99 WTOL 55 °C 55 °C Poff 15 W PTO 0 W 0 W PSB PCK 0 W 0 W Supplementary Heater: Type of energy input Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	COP Tj = 12°C	8.40	6.35
COP Tj = Tbiv 2.85 1.89 Pdh Tj = TOL 4.08 kW 2.86 kW COP Tj = TOL 2.59 1.49 Cdh 0.99 0.99 WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	Cdh	0.99	0.99
Pdh Tj = TOL 4.08 kW 2.86 kW COP Tj = TOL 2.59 1.49 Cdh 0.99 0.99 WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = TOL 2.59 1.49 Cdh 0.99 0.99 WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	COP Tj = Tbiv	2.85	1.89
Cdh 0.99 0.99 WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	Pdh Tj = TOL	4.08 kW	2.86 kW
WTOL 55 °C 55 °C Poff 15 W 15 W PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	COP Tj = TOL	2.59	1.49
Poff 15 W 15 W PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	Cdh	0.99	0.99
PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	WTOL	55 °C	55 °C
PSB 0 W 0 W PCK 0 W 0 W Supplementary Heater: Type of energy input electrical electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	Poff	15 W	15 W
PCK 0 W 0 W Supplementary Heater: Type of energy input electrical electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	PTO	o w	0 W
Supplementary Heater: Type of energy input electrical electrical Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	PSB	o w	0 W
Supplementary Heater: PSUP 1.04 kW 1.20 kW Backup Heater 0.00 kW	PCK	o w	0 W
Backup Heater 0.00 kW	Supplementary Heater: Type of energy input	electrical	electrical
	Supplementary Heater: PSUP	1.04 kW	1.20 kW
Annual energy consumption Qhe 10549 kWh 8383 kWh	Backup Heater	0.00 kW	
	Annual energy consumption Qhe	10549 kWh	8383 kWh

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	225 %	156 %
Prated	5.70 kW	4.10 kW
SCOP	5.70	3.97
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	5.01 kW	4.08 kW
COP Tj = +2°C	4.30	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.28 kW	2.95 kW
COP Tj = +7°C	4.86	3.25
Cdh	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.31 kW
COP Tj = 12°C	7.69	5.59
Cdh	0.99	0.99



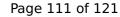


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Pdh Tj = Tbiv	5.01 kW	4.08 kW
COP Tj = Tbiv	2.97	1.98
Pdh Tj = TOL	5.01 kW	4.08 kW
COP Tj = TOL	2.97	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	o w
PSB	o w	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6687 kWh	5450 kWh

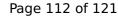
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature





n_s	135 %	90 %
Prated	4.80 kW	3.30 kW
SCOP	3.46	2.32
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.10 kW	2.10 kW
COP Tj = -7°C	2.89	1.81
Cdh	0.99	0.99
Pdh Tj = +2°C	2.40 kW	2.09 kW
COP Tj = +2°C	4.40	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.34 kW
COP Tj = 12°C	8.00	6.85
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.90 kW	2.67 kW
COP Tj = Tbiv	2.11	1.51
Pdh Tj = TOL	3.30 kW	1.06 kW





COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	o w	0 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.78 kW	3.27 kW
Annual energy consumption Qhe	11493 kWh	7870 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	133 %	
СОР	3.32	
Heating up time	2:15 h:min	
Standby power input	25.0 W	
Reference hot water temperature	53.4 °C	
Mixed water at 40°C	296.1	



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This information was generated by the HP KEYMARK database on 17 Dec 2020

Warmer Climate



Model: Vitocal 111-S AWBT-M-E-AC 111.B04 F

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.08 kW	4.36 kW
El input	0.80 kW	1.80 kW
СОР	5.10	2.42
Indoor water flow rate	0.70 m³/h	0.70 m³/h

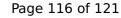
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825			
		Low temperature	Medium temperature
Pdesignh	3.70 kW		
η_{S}	175 %	126 %	
Prated	4.00 kW	3.70 kW	
SCOP	4.45	3.22	_
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	3.51 kW	3.31 kW	
COP Tj = -7°C	2.84	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	2.45 kW	2.65 kW	
COP Tj = +2°C	2.84	3.18	
Cdh	0.99	0.99	
Pdh Tj = +7°C	3.14 kW	2.74 kW	
COP Tj = +7°C	5.97	4.36	
	1	'	_





	1	
Cdh	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL	3.83 kW	2.86 kW
COP Tj = TOL	2.56	1.49
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	0 W	0 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

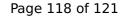
Warmer Climate



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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	197 %	150 %
Prated	4.90 kW	4.10 kW
SCOP	5.01	3.83
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.94 kW	4.08 kW
COP Tj = +2°C	3.04	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.07 kW	2.95 kW
COP Tj = +7°C	5.03	3.25
Cdh	0.99	0.99
Pdh Tj = 12°C	3.57 kW	3.31 kW
COP Tj = 12°C	5.89	5.18
Cdh	0.99	0.99

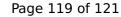




Pdh Tj = Tbiv	4.94 kW	4.08 kW
COP Tj = Tbiv	3.04	1.98
Pdh Tj = TOL	4.94 kW	4.08 kW
COP Tj = TOL	3.04	1.98
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	o w	0 W
PSB	o w	0 W
PCK	o w	o w
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6552 kWh	5450 kWh

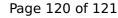
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	41 dB(A)	41 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825			
	Low temperature	Medium temperature	





η_{s}	135 %	86 %
Prated	4.40 kW	2.80 kW
SCOP	3.46	2.22
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.76 kW	1.85 kW
COP Tj = -7°C	2.91	1.72
Cdh	0.99	0.99
Pdh Tj = +2°C	2.23 kW	2.09 kW
COP Tj = +2°C	4.44	2.72
Cdh	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.27 kW
COP Tj = 12°C	5.46	5.35
Cdh	0.99	0.99
Pdh Tj = Tbiv	3.62 kW	2.30 kW
COP Tj = Tbiv	1.65	1.28
Pdh Tj = TOL	3.30 kW	1.06 kW





COP Tj = TOL	1.21	0.32
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
PTO	0 W	0 W
PSB	0 W	0 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	4.43 kW	2.82 kW
Annual energy consumption Qhe	10662 kWh	6791 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	133 %	
СОР	3.32	
Heating up time	2:15 h:min	
Standby power input	25.0 W	
Reference hot water temperature	53.4 °C	
Mixed water at 40°C	296.1	



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This information was generated by the HP KEYMARK database on 17 Dec 2020

Warmer Climate