

Summary of	Vitocal 100-S/111-S   12-16kW 230V	Reg. No.	011-1W0403	
Certificate Holder			-	
Name	Viessmann Wärmepumpen GmbH			
Address	Viessmannstr. 1	Zip	35107	
City	Allendorf/Eder	Country	Germany	
Certification Body	DIN CERTCO Gesellschaft für Konformität	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Name of testing laboratory	Heat Pump Test Center WPZ			
Subtype title	Vitocal 100-S/111-S   12-16kW 230V			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R410a			
Mass Of Refrigerant	2.5 kg			
Certification Date	02.11.2020			
Testing basis	HP KEYMARK certification scheme rules rev. 7			

# Model: Vitocal 100-S AWB-M 101.A12

General Data		
Power supply	1x230V 50Hz	

## Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	11.50 kW	9.86 kW	
El input	2.45 kW	3.52 kW	
СОР	4.70	2.80	
Indoor water flow rate	0.90 m³/h	0.90 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	64 dB(A)	64 dB(A)

EN 14825			
		Low temperature	Medium temperature
Pdesignh	8.90 kW		
$\eta_{s}$	160 %	113 %	
Prated	9.20 kW	8.90 kW	
SCOP	4.08	2.90	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.15 kW	7.84 kW	
COP Tj = -7°C	2.88	1.93	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.17 kW	5.54 kW	
COP Tj = +2°C	3.93	2.76	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.99 kW	9.25 kW	
COP Tj = +7°C	5.31	3.89	





	5	by the HI KETMAKK
Cdh	0.99	0.99
Pdh Tj = 12°C	7.44 kW	6.77 kW
COP Tj = 12°C	7.15	5.44
Cdh	0.99	0.99
Pdh Tj = Tbiv	8.15 kW	7.84 kW
COP Tj = Tbiv	2.88	1.93
Pdh Tj = TOL	6.46 kW	7.02 kW
COP Tj = TOL	2.84	1.74
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	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	2.75 kW	1.84 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	19044 kWh	18303 kWh



# Model: Vitocal 100-S AWB-M-E 101.A12

General Data		
Power supply	1x230V 50Hz	

## Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	11.50 kW	9.86 kW	
El input	2.45 kW	3.52 kW	
СОР	4.70	2.80	
Indoor water flow rate	0.90 m³/h	0.90 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	64 dB(A)	64 dB(A)

EN 14825			
		Low temperature	Medium temperatur
Pdesignh	8.90 kW		
$\eta_{s}$	160 %	113 %	
Prated	9.20 kW	8.90 kW	
SCOP	4.08	2.90	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.15 kW	7.84 kW	
COP Tj = -7°C	2.88	1.93	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.17 kW	5.54 kW	
COP Tj = +2°C	3.93	2.76	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.99 kW	9.25 kW	
COP Tj = +7°C	5.31	3.89	





	5	by the HI KETMAKK
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Pdh Tj = Tbiv	8.15 kW	7.84 kW
COP Tj = Tbiv	2.88	1.93
Pdh Tj = TOL	6.46 kW	7.02 kW
COP Tj = TOL	2.84	1.74
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	o w	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	2.75 kW	1.84 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	19044 kWh	18303 kWh



# Model: Vitocal 100-S AWB-M-E-AC 101.A12

General Data	
Power supply	1x230V 50Hz

## Heating

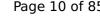
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	11.50 kW	9.86 kW	
El input	2.45 kW	3.52 kW	
СОР	4.70	2.80	
Indoor water flow rate	0.90 m³/h	0.90 m³/h	

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	64 dB(A)	64 dB(A)	

EN 14825			
		Low temperature	Medium temperature
Pdesignh	8.90 kW		
$\eta_{S}$	160 %	113 %	
Prated	9.20 kW	8.90 kW	
SCOP	4.08	2.90	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.15 kW	7.84 kW	
COP Tj = -7°C	2.88	1.93	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.17 kW	5.54 kW	
$COP Tj = +2^{\circ}C$	3.93	2.76	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.99 kW	9.25 kW	
$COP Tj = +7^{\circ}C$	5.31	3.89	
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Cdh	0.99	0.99		
Pdh Tj = 12°C	7.44 kW	6.77 kW		
COP Tj = 12°C	7.15	5.44		
Cdh	0.99	0.99		
Pdh Tj = Tbiv	8.15 kW	7.84 kW		
COP Tj = Tbiv	2.88	1.93		
Pdh Tj = TOL	6.46 kW	7.02 kW		
COP Tj = TOL	2.84	1.74		
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	0 W	o w		
Supplementary Heater: Type of energy input	electrical	electrical		
Supplementary Heater: PSUP	2.75 kW	1.84 kW		
Backup Heater	0.00 kW			
Annual energy consumption Qhe	19044 kWh	18303 kWh		



# Model: Vitocal 100-S AWB-M-E-AC 101.A12 F

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	11.50 kW	9.86 kW	
El input	2.45 kW	3.52 kW	
СОР	4.70	2.80	
Indoor water flow rate	0.90 m³/h	0.90 m³/h	

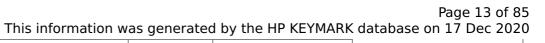
EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	



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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	64 dB(A)	64 dB(A)	

	EN 14825				
		Low temperature	Medium temperature		
Pdesignh	8.90 kW				
$\eta_{s}$	160 %	113 %			
Prated	9.20 kW	8.90 kW			
SCOP	4.08	2.90			
Tbiv	-7 °C	-7 °C			
TOL	-20 °C	-20 °C			
Pdh Tj = -7°C	8.15 kW	7.84 kW			
COP Tj = -7°C	2.88	1.93			
Cdh	0.99	0.99			
Pdh Tj = +2°C	6.17 kW	5.54 kW			
COP Tj = +2°C	3.93	2.76			
Cdh	0.99	0.99			
Pdh Tj = +7°C	5.99 kW	9.25 kW			
COP Tj = +7°C	5.31	3.89			





7.44 kW 6.77 kW  COP Tj = 12°C 7.15 5.44  Cdh 0.99 0.99  Cdh Tj = Tbiv 8.15 kW 7.84 kW  COP Tj = Tbiv 2.88 1.93  Cdh Tj = TOL 6.46 kW 7.02 kW  COP Tj = TOL 2.84 1.74  Cdh 0.99 0.99  VTOL 55 °C 55 °C  Coff 15 W 15 W  CTO 0 W 0 W  CSB 0 W 0 W  CSB 0 W 0 W  CSB 0 W 0 W  CSC 0 W 0	THIS IIIIOTHIACION W	us generated	Dy the HE KETMAKK	database on
COP Tj = 12°C  7.15  5.44  0.99  0.99  0.99  0.00 Tj = Tbiv  2.88  1.93  0.46 Tj = ToL  6.46 kW  7.02 kW  1.74  1.74  1.74  1.74  1.75 W  1.5	Cdh	0.99	0.99	
Cdh       0.99       0.99         Pdh Tj = Tbiv       8.15 kW       7.84 kW         COP Tj = Tbiv       2.88       1.93         Pdh Tj = TOL       6.46 kW       7.02 kW         COP Tj = TOL       2.84       1.74         Cdh       0.99       0.99         NTOL       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       2.75 kW       1.84 kW         Backup Heater       0.00 kW	Pdh Tj = 12°C	7.44 kW	6.77 kW	
Path Tj = Tbiv       8.15 kW       7.84 kW         COP Tj = Tbiv       2.88       1.93         Path Tj = TOL       6.46 kW       7.02 kW         COP Tj = TOL       2.84       1.74         Coth       0.99       0.99         VYOL       55 °C       55 °C         Poff       15 W       15 W         POTO       0 W       0 W         POSB       0 W       0 W         POCK       0 W       0 W         Supplementary Heater: Type of energy input       electrical         Supplementary Heater: PSUP       2.75 kW       1.84 kW         Backup Heater       0.00 kW	COP Tj = 12°C	7.15	5.44	
2.88 1.93  2.84 7.02 kW  2.0P Tj = TOL  2.84 1.74  2.0h  0.99 0.99  VTOL  55 °C  55 °C  0 W  0 W  0 W  0 W  0 W  0 W  0 W  0	Cdh	0.99	0.99	
Path Tj = TOL       6.46 kW       7.02 kW         COP Tj = TOL       2.84       1.74         Coth       0.99       0.99         VTOL       55 °C       55 °C         Poff       15 W       15 W         POTO       0 W       0 W         POSB       0 W       0 W         POCK       0 W       0 W         Supplementary Heater: Type of energy input       electrical         Supplementary Heater: PSUP       2.75 kW       1.84 kW         Backup Heater       0.00 kW	Pdh Tj = Tbiv	8.15 kW	7.84 kW	
2.84 1.74  2.84 1.74  2.84 0.99 0.99  VTOL 55 °C 55 °C  2.85 °C  2.86 0 W 0 W  2.87 0 W 0 W  2.88 0 W 0 W  3.88 0 W 0 W  3.89 0 W  3.80	COP Tj = Tbiv	2.88	1.93	
Och  Och  Och  Och  Och  Och  Och  Och	Pdh Tj = TOL	6.46 kW	7.02 kW	
NTOL 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 electrical supplementary Heater: PSUP 2.75 kW 1.84 kW  Backup Heater 0.00 kW	COP Tj = TOL	2.84	1.74	
Poff 15 W 15 W PTO 0 W 0 W PSB 0 W 0 W PCK 0 W 0 W PSB 15 W 15 W PCK 15 W PCK 15 W PCK 15 W 15 W PCK 15 W PCK 15 W 15 W PCK 15	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 2.75 kW 1.84 kW  Backup Heater 0.00 kW	WTOL	55 °C	55 °C	
O W O W  OCK O W O W  Supplementary Heater: Type of energy input electrical electrical  Supplementary Heater: PSUP 2.75 kW 1.84 kW  Sackup Heater 0.00 kW	Poff	15 W	15 W	
O W 0 W  Supplementary Heater: Type of energy input electrical electrical  Supplementary Heater: PSUP 2.75 kW 1.84 kW  Backup Heater 0.00 kW	РТО	o w	o w	
Supplementary Heater: Type of energy input electrical electrical  Supplementary Heater: PSUP 2.75 kW 1.84 kW  Backup Heater 0.00 kW	PSB	o w	o w	
Supplementary Heater: PSUP 2.75 kW 1.84 kW  Backup Heater 0.00 kW	PCK	o w	o w	
Backup Heater 0.00 kW	Supplementary Heater: Type of energy input	electrical	electrical	
	Supplementary Heater: PSUP	2.75 kW	1.84 kW	
Annual energy consumption Qhe 19044 kWh 18303 kWh	Backup Heater	0.00 kW		
	Annual energy consumption Qhe	19044 kWh	18303 kWh	



# Model: Vitocal 111-S AWBT-M-AC 111.A12

General Data		
Power supply 1x230V 50Hz		

## Heating

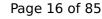
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	11.50 kW	9.86 kW	
El input	2.45 kW	3.52 kW	
СОР	4.70	2.80	
Indoor water flow rate	0.90 m³/h	0.90 m³/h	

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	64 dB(A)	64 dB(A)

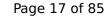
	EN 14825		
		Low temperature	Medium temperatur
Pdesignh	8.90 kW		
$\eta_{s}$	160 %	113 %	
Prated	9.20 kW	8.90 kW	
SCOP	4.08	2.90	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.15 kW	7.84 kW	
COP Tj = -7°C	2.88	1.93	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.17 kW	5.54 kW	
COP Tj = +2°C	3.93	2.76	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.99 kW	9.25 kW	
COP Tj = +7°C	5.31	3.89	





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Cdh	0.99	0.99
Pdh Tj = 12°C	7.44 kW	6.77 kW
COP Tj = 12°C	7.15	5.44
Cdh	0.99	0.99
Pdh Tj = Tbiv	8.15 kW	7.84 kW
COP Tj = Tbiv	2.88	1.93
Pdh Tj = TOL	6.46 kW	7.02 kW
COP Tj = TOL	2.84	1.74
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	2.75 kW	1.84 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	19044 kWh	18303 kWh

## Domestic Hot Water (DHW)





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	124 %	
СОР	2.55	
Heating up time	0:58 h:min	
Standby power input	35.0 W	
Reference hot water temperature	53.0 °C	
Mixed water at 40°C	290 I	



# Model: Vitocal 111-S AWBT-M-E 111.A12

General Data		
Power supply	1x230V 50Hz	

## Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	11.50 kW	9.86 kW	
El input	2.45 kW	3.52 kW	
СОР	4.70	2.80	
Indoor water flow rate	0.90 m³/h	0.90 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	64 dB(A)	64 dB(A)	

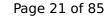
EN 14825			
		Low temperature	Medium temperature
Pdesignh	8.90 kW		
$\eta_{S}$	160 %	113 %	
Prated	9.20 kW	8.90 kW	
SCOP	4.08	2.90	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.15 kW	7.84 kW	
COP Tj = -7°C	2.88	1.93	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.17 kW	5.54 kW	
$COP Tj = +2^{\circ}C$	3.93	2.76	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.99 kW	9.25 kW	
$COP Tj = +7^{\circ}C$	5.31	3.89	
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Cdh	0.99	0.99
Pdh Tj = 12°C	7.44 kW	6.77 kW
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Cdh	0.99	0.99
Pdh Tj = Tbiv	8.15 kW	7.84 kW
COP Tj = Tbiv	2.88	1.93
Pdh Tj = TOL	6.46 kW	7.02 kW
COP Tj = TOL	2.84	1.74
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	2.75 kW	1.84 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	19044 kWh	18303 kWh

## Domestic Hot Water (DHW)





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	124 %	
СОР	2.55	
Heating up time	0:58 h:min	
Standby power input	35.0 W	
Reference hot water temperature	53.0 °C	
Mixed water at 40°C	290 I	



# Model: Vitocal 111-S AWBT-M-E-AC 111.A12

General Data		
Power supply	1x230V 50Hz	

## Heating

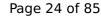
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	11.50 kW	9.86 kW	
El input	2.45 kW	3.52 kW	
СОР	4.70	2.80	
Indoor water flow rate	0.90 m³/h	0.90 m³/h	

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	64 dB(A)	64 dB(A)

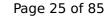
EN 14825			
		Low temperature	Medium temperature
Pdesignh	8.90 kW		
$\eta_{S}$	160 %	113 %	
Prated	9.20 kW	8.90 kW	
SCOP	4.08	2.90	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.15 kW	7.84 kW	
COP Tj = -7°C	2.88	1.93	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.17 kW	5.54 kW	
$COP Tj = +2^{\circ}C$	3.93	2.76	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.99 kW	9.25 kW	
$COP Tj = +7^{\circ}C$	5.31	3.89	
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Cdh	0.99	0.99
Pdh Tj = 12°C	7.44 kW	6.77 kW
COP Tj = 12°C	7.15	5.44
Cdh	0.99	0.99
Pdh Tj = Tbiv	8.15 kW	7.84 kW
COP Tj = Tbiv	2.88	1.93
Pdh Tj = TOL	6.46 kW	7.02 kW
COP Tj = TOL	2.84	1.74
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	2.75 kW	1.84 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	19044 kWh	18303 kWh

## Domestic Hot Water (DHW)





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	124 %	
СОР	2.55	
Heating up time	0:58 h:min	
Standby power input	35.0 W	
Reference hot water temperature	53.0 °C	
Mixed water at 40°C	290 I	

# Model: Vitocal 111-S AWBT-M-E-AC 111.A12 F

General Data		
Power supply	1x230V 50Hz	

## Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	11.50 kW	9.86 kW	
El input	2.45 kW	3.52 kW	
СОР	4.70	2.80	
Indoor water flow rate	0.90 m³/h	0.90 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



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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	64 dB(A)	64 dB(A)

	EN 14825		
		Low temperature	Medium temperature
Pdesignh	8.90 kW		
$\eta_{S}$	160 %	113 %	
Prated	9.20 kW	8.90 kW	
SCOP	4.08	2.90	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.15 kW	7.84 kW	
COP Tj = -7°C	2.88	1.93	
Cdh	0.99	0.99	
Pdh Tj = $+2^{\circ}$ C	6.17 kW	5.54 kW	
COP Tj = +2°C	3.93	2.76	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.99 kW	9.25 kW	
COP Tj = +7°C	5.31	3.89	





Cdh	0.99	0.99
Pdh Tj = 12°C	7.44 kW	6.77 kW
COP Tj = 12°C	7.15	5.44
Cdh	0.99	0.99
Pdh Tj = Tbiv	8.15 kW	7.84 kW
COP Tj = Tbiv	2.88	1.93
Pdh Tj = TOL	6.46 kW	7.02 kW
COP Tj = TOL	2.84	1.74
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	2.75 kW	1.84 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	19044 kWh	18303 kWh

## Domestic Hot Water (DHW)





 $$\operatorname{\textit{Page}}\xspace$  29 of 85 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	124 %	
СОР	2.55	
Heating up time	0:58 h:min	
Standby power input	35.0 W	
Reference hot water temperature	53.0 °C	
Mixed water at 40°C	290 I	



# Model: Vitocal 100-S AWB-M 101.A14

General Data		
Power supply	1x230V 50Hz	

## Heating

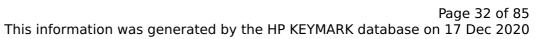
EN 14511-2		
	Low temperature	Medium temperature
Heat output	13.50 kW	11.82 kW
El input	2.89 kW	4.23 kW
СОР	4.67	2.80
Indoor water flow rate	0.90 m³/h	0.90 m³/h

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	64 dB(A)	64 dB(A)

EN 14825			
		Low temperature	Medium temperatur
Pdesignh	10.70 kW		
$\eta_{s}$	160 %	117 %	
Prated	9.90 kW	10.70 kW	
SCOP	4.08	3.00	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.73 kW	9.44 kW	
COP Tj = -7°C	2.86	2.05	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.34 kW	6.11 kW	
COP Tj = +2°C	3.92	2.82	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.99 kW	9.33 kW	
COP Tj = +7°C	5.31	4.03	





	· · J · · · ·	,
Cdh	0.99	0.99
Pdh Tj = 12°C	7.44 kW	6.77 kW
COP Tj = 12°C	7.15	5.44
Cdh	0.99	0.99
Pdh Tj = Tbiv	8.73 kW	9.44 kW
COP Tj = Tbiv	2.86	2.05
Pdh Tj = TOL	7.46 kW	6.81 kW
COP Tj = TOL	2.42	1.72
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	2.41 kW	3.86 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	20384 kWh	22040 kWh



# Model: Vitocal 100-S AWB-M-E 101.A14

General Data		
Power supply	1x230V 50Hz	

## Heating

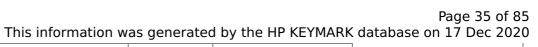
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	13.50 kW	11.82 kW	
El input	2.89 kW	4.23 kW	
СОР	4.67	2.80	
Indoor water flow rate	0.90 m³/h	0.90 m³/h	

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	64 dB(A)	64 dB(A)

EN 14825			
		Low temperature	Medium temperatur
Pdesignh	10.70 kW		
$\eta_{s}$	160 %	117 %	
Prated	9.90 kW	10.70 kW	
SCOP	4.08	3.00	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.73 kW	9.44 kW	
COP Tj = -7°C	2.86	2.05	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.34 kW	6.11 kW	
COP Tj = +2°C	3.92	2.82	
Cdh	0.99	0.99	
Pdh Tj = $+7^{\circ}$ C	5.99 kW	9.33 kW	
COP Tj = +7°C	5.31	4.03	





as generated	a by the fit RETHING	database on	17 DCC 2
0.99	0.99		
7.44 kW	6.77 kW		
7.15	5.44		
0.99	0.99		
8.73 kW	9.44 kW		
2.86	2.05		
7.46 kW	6.81 kW		
2.42	1.72		
0.99	0.99		
55 °C	55 °C		
15 W	15 W		
0 W	0 W		
0 W	0 W		
0 W	0 W		
electrical	electrical		
2.41 kW	3.86 kW		
0.00 kW			
20384 kWh	22040 kWh		
	0.99 7.44 kW 7.15 0.99 8.73 kW 2.86 7.46 kW 2.42 0.99 55 °C 15 W 0 W 0 W electrical 2.41 kW 0.00 kW	0.99       0.99         7.44 kW       6.77 kW         7.15       5.44         0.99       0.99         8.73 kW       9.44 kW         2.86       2.05         7.46 kW       6.81 kW         2.42       1.72         0.99       0.99         55 °C       55 °C         15 W       0 W         0 W       0 W         0 W       0 W         electrical       electrical         2.41 kW       3.86 kW         0.00 kW	7.44 kW 6.77 kW  7.15 5.44  0.99 0.99  8.73 kW 9.44 kW  2.86 2.05  7.46 kW 6.81 kW  2.42 1.72  0.99 0.99  55 °C 55 °C  15 W 15 W  0 W 0 W  0 W 0 W  electrical electrical  2.41 kW 3.86 kW  0.00 kW



# Model: Vitocal 100-S AWB-M-E-AC 101.A14

General Data		
Power supply	1x230V 50Hz	

## Heating

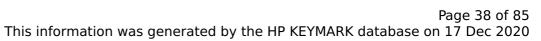
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	13.50 kW	11.82 kW	
El input	2.89 kW	4.23 kW	
СОР	4.67	2.80	
Indoor water flow rate	0.90 m³/h	0.90 m³/h	

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	64 dB(A)	64 dB(A)	

	EN 1482	5	
		Low temperature	Medium temperature
Pdesignh	10.70 kW		
$\eta_{S}$	160 %	117 %	
Prated	9.90 kW	10.70 kW	-
SCOP	4.08	3.00	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.73 kW	9.44 kW	
COP Tj = -7°C	2.86	2.05	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.34 kW	6.11 kW	
COP Tj = +2°C	3.92	2.82	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.99 kW	9.33 kW	
$COP Tj = +7^{\circ}C$	5.31	4.03	
	'	'	_





Pdh Tj = 12°C	This information is	as generated	a by the HI RETHARK	adiabase on 17
COP Tj = 12°C  7.15  5.44  0.99  0.99  Pdh Tj = Tbiv  8.73 kW  9.44 kW  COP Tj = Tbiv  2.86  2.05  Pdh Tj = TOL  7.46 kW  6.81 kW  COP Tj = TOL  2.42  1.72  Cdh  0.99  0.99  WTOL  55°C  55°C  Poff  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  8.73 kW  9.44 kW  9.44 kW  9.45 kW  9.46 kW  9.47 kW  9.49 kW  9.49 kW  9.49 kW  9.49 kW  9.49 kW  9.40 kW  9.4	Cdh	0.99	0.99	
Cdh       0.99       0.99         Pdh Tj = Tbiv       8.73 kW       9.44 kW         COP Tj = Tbiv       2.86       2.05         Pdh Tj = TOL       7.46 kW       6.81 kW         COP Tj = TOL       2.42       1.72         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       2.41 kW       3.86 kW         Backup Heater       0.00 kW	Pdh Tj = 12°C	7.44 kW	6.77 kW	
Pdh Tj = Tbiv       8.73 kW       9.44 kW         COP Tj = Tbiv       2.86       2.05         Pdh Tj = TOL       7.46 kW       6.81 kW         COP Tj = TOL       2.42       1.72         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       2.41 kW       3.86 kW         Backup Heater       0.00 kW	COP Tj = 12°C	7.15	5.44	
COP Tj = Tbiv       2.86       2.05         Pdh Tj = TOL       7.46 kW       6.81 kW         COP Tj = TOL       2.42       1.72         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       2.41 kW       3.86 kW         Backup Heater       0.00 kW	Cdh	0.99	0.99	
Pdh Tj = TOL  7.46 kW 6.81 kW  COP Tj = TOL 2.42 1.72  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 2.41 kW 3.86 kW  Backup Heater	Pdh Tj = Tbiv	8.73 kW	9.44 kW	
COP Tj = TOL       2.42       1.72         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       2.41 kW       3.86 kW         Backup Heater       0.00 kW	COP Tj = Tbiv	2.86	2.05	
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       2.41 kW       3.86 kW         Backup Heater       0.00 kW	Pdh Tj = TOL	7.46 kW	6.81 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 2.41 kW 3.86 kW  Backup Heater 0.00 kW	COP Tj = TOL	2.42	1.72	
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 2.41 kW 3.86 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 2.41 kW 3.86 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 2.41 kW 3.86 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 2.41 kW 3.86 kW  Backup Heater 0.00 kW	PTO	0 W	0 W	
Supplementary Heater: Type of energy input electrical electrical  Supplementary Heater: PSUP 2.41 kW 3.86 kW  Backup Heater 0.00 kW	PSB	0 W	o w	
Supplementary Heater: PSUP 2.41 kW 3.86 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	2.41 kW	3.86 kW	
Annual energy consumption Qhe 20384 kWh 22040 kWh	Backup Heater	0.00 kW		
·	Annual energy consumption Qhe	20384 kWh	22040 kWh	



# Model: Vitocal 100-S AWB-M-E-AC 101.A14 F

General Data		
Power supply	1x230V 50Hz	

# Heating

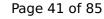
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	13.50 kW	11.82 kW	
El input	2.89 kW	4.23 kW	
СОР	4.67	2.80	
Indoor water flow rate	0.90 m³/h	0.90 m³/h	

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	64 dB(A)	64 dB(A)	

	EN 1482!	5	
		Low temperature	Medium temperature
Pdesignh	10.70 kW		
$\eta_{s}$	160 %	117 %	
Prated	9.90 kW	10.70 kW	
SCOP	4.08	3.00	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.73 kW	9.44 kW	
COP Tj = -7°C	2.86	2.05	
Cdh	0.99	0.99	
Pdh Tj = $+2^{\circ}$ C	6.34 kW	6.11 kW	
COP Tj = +2°C	3.92	2.82	
Cdh	0.99	0.99	
Pdh Tj = $+7^{\circ}$ C	5.99 kW	9.33 kW	
$COP Tj = +7^{\circ}C$	5.31	4.03	





Pdh Tj = 12°C	This information is	as generated	a by the HI RETHARK	adiabase on 17
COP Tj = 12°C  7.15  5.44  0.99  0.99  Pdh Tj = Tbiv  8.73 kW  9.44 kW  COP Tj = Tbiv  2.86  2.05  Pdh Tj = TOL  7.46 kW  6.81 kW  COP Tj = TOL  2.42  1.72  Cdh  0.99  0.99  WTOL  55°C  55°C  Poff  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  8.73 kW  9.44 kW  9.44 kW  9.45 kW  9.46 kW  9.47 kW  9.49 kW  9.49 kW  9.49 kW  9.49 kW  9.49 kW  9.40 kW  9.4	Cdh	0.99	0.99	
Cdh       0.99       0.99         Pdh Tj = Tbiv       8.73 kW       9.44 kW         COP Tj = Tbiv       2.86       2.05         Pdh Tj = TOL       7.46 kW       6.81 kW         COP Tj = TOL       2.42       1.72         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       2.41 kW       3.86 kW         Backup Heater       0.00 kW	Pdh Tj = 12°C	7.44 kW	6.77 kW	
Pdh Tj = Tbiv       8.73 kW       9.44 kW         COP Tj = Tbiv       2.86       2.05         Pdh Tj = TOL       7.46 kW       6.81 kW         COP Tj = TOL       2.42       1.72         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       2.41 kW       3.86 kW         Backup Heater       0.00 kW	COP Tj = 12°C	7.15	5.44	
COP Tj = Tbiv       2.86       2.05         Pdh Tj = TOL       7.46 kW       6.81 kW         COP Tj = TOL       2.42       1.72         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       2.41 kW       3.86 kW         Backup Heater       0.00 kW	Cdh	0.99	0.99	
Pdh Tj = TOL  7.46 kW 6.81 kW  COP Tj = TOL 2.42 1.72  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 2.41 kW 3.86 kW  Backup Heater	Pdh Tj = Tbiv	8.73 kW	9.44 kW	
COP Tj = TOL       2.42       1.72         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       2.41 kW       3.86 kW         Backup Heater       0.00 kW	COP Tj = Tbiv	2.86	2.05	
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       2.41 kW       3.86 kW         Backup Heater       0.00 kW	Pdh Tj = TOL	7.46 kW	6.81 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 2.41 kW 3.86 kW  Backup Heater 0.00 kW	COP Tj = TOL	2.42	1.72	
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 2.41 kW 3.86 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 2.41 kW 3.86 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 2.41 kW 3.86 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 2.41 kW 3.86 kW  Backup Heater 0.00 kW	PTO	0 W	0 W	
Supplementary Heater: Type of energy input electrical electrical  Supplementary Heater: PSUP 2.41 kW 3.86 kW  Backup Heater 0.00 kW	PSB	0 W	o w	
Supplementary Heater: PSUP 2.41 kW 3.86 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	2.41 kW	3.86 kW	
Annual energy consumption Qhe 20384 kWh 22040 kWh	Backup Heater	0.00 kW		
·	Annual energy consumption Qhe	20384 kWh	22040 kWh	



# Model: Vitocal 111-S AWBT-M-AC 111.A14

General Data		
Power supply	1x230V 50Hz	

# Heating

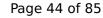
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	13.50 kW	11.82 kW	
El input	2.89 kW	4.23 kW	
СОР	4.67	2.80	
Indoor water flow rate	0.90 m³/h	0.90 m³/h	

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	64 dB(A)	64 dB(A)

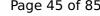
	EN 14825		
		Low temperature	Medium temperature
Pdesignh	10.70 kW		
$\eta_{S}$	160 %	117 %	
Prated	9.90 kW	10.70 kW	-
SCOP	4.08	3.00	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.73 kW	9.44 kW	
COP Tj = -7°C	2.86	2.05	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.34 kW	6.11 kW	
COP Tj = +2°C	3.92	2.82	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.99 kW	9.33 kW	
$COP Tj = +7^{\circ}C$	5.31	4.03	
	'	'	_





Cdh $0.99$ $0.99$ Pdh Tj = $12^{\circ}$ C $7.44 \text{ kW}$ $6.77 \text{ kW}$ COP Tj = $12^{\circ}$ C $7.15$ $5.44$
COP Tj = 12°C 7.15 5.44
Cdh 0.99 0.99
Pdh Tj = Tbiv 8.73 kW 9.44 kW
COP Tj = Tbiv 2.86 2.05
Pdh Tj = TOL 7.46 kW 6.81 kW
COP Tj = TOL 2.42 1.72
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 0.00 kW 0.00 kW
Backup Heater 0.00 kW
Annual energy consumption Qhe 20384 kWh 22040 kWh

# Domestic Hot Water (DHW)





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EN 16147		
Declared load profile	XL	
Efficiency ηDHW	124 %	
СОР	2.55	
Heating up time	0:58 h:min	
Standby power input	35.0 W	
Reference hot water temperature	53.0 °C	
Mixed water at 40°C	290 I	



# Model: Vitocal 111-S AWBT-M-E 111.A14

General Data	
Power supply	1x230V 50Hz

# Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	13.50 kW	11.82 kW	
El input	2.89 kW	4.23 kW	
СОР	4.67	2.80	
Indoor water flow rate	0.90 m³/h	0.90 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	64 dB(A)	64 dB(A)

	EN 14825		
		Low temperature	Medium temperature
Pdesignh	10.70 kW		
$\eta_{S}$	160 %	117 %	
Prated	9.90 kW	10.70 kW	-
SCOP	4.08	3.00	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.73 kW	9.44 kW	
COP Tj = -7°C	2.86	2.05	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.34 kW	6.11 kW	
COP Tj = +2°C	3.92	2.82	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.99 kW	9.33 kW	
$COP Tj = +7^{\circ}C$	5.31	4.03	
	'	'	_





Cdh	0.99	0.99	l
Pdh Tj = 12°C	7.44 kW	6.77 kW	
COP Tj = 12°C	7.15	5.44	
Cdh	0.99	0.99	
Pdh Tj = Tbiv	8.73 kW	9.44 kW	
COP Tj = Tbiv	2.86	2.05	
Pdh Tj = TOL	7.46 kW	6.81 kW	
COP Tj = TOL	2.42	1.72	
Cdh	0.99	0.99	
WTOL	55 °C	55 °C	
Poff	15 W	15 W	
PTO	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	2.41 kW	3.86 kW	l
Backup Heater	0.00 kW		
Annual energy consumption Qhe	20384 kWh	22040 kWh	

# Domestic Hot Water (DHW)





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	124 %	
СОР	2.55	
Heating up time	0:58 h:min	
Standby power input	35.0 W	
Reference hot water temperature	53.0 °C	
Mixed water at 40°C	290 I	

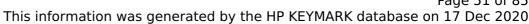
# Model: Vitocal 111-S AWBT-M-E-AC 111.A14

General Data	
Power supply	1x230V 50Hz

# Heating

	EN 14511-2	
	Low temperature	Medium temperature
Heat output	13.50 kW	11.82 kW
El input	2.89 kW	4.23 kW
СОР	4.67	2.80
Indoor water flow rate	0.90 m³/h	0.90 m³/h

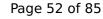
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed





	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

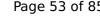
	EN 1482	5	
		Low temperature	Medium temperature
Pdesignh	10.70 kW		
$\eta_{s}$	160 %	117 %	
Prated	9.90 kW	10.70 kW	
SCOP	4.08	3.00	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.73 kW	9.44 kW	
COP Tj = -7°C	2.86	2.05	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.34 kW	6.11 kW	
COP Tj = +2°C	3.92	2.82	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.99 kW	9.33 kW	
COP Tj = +7°C	5.31	4.03	





Cdh	0.99	0.99
Pdh Tj = 12°C	7.44 kW	6.77 kW
COP Tj = 12°C	7.15	5.44
Cdh	0.99	0.99
Pdh Tj = Tbiv	8.73 kW	9.44 kW
COP Tj = Tbiv	2.86	2.05
Pdh Tj = TOL	7.46 kW	6.81 kW
COP Tj = TOL	2.42	1.72
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	0 W	o w
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	2.41 kW	3.86 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	20384 kWh	22040 kWh

# Domestic Hot Water (DHW)





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EN 16147	
Declared load profile	XL
Efficiency ηDHW	124 %
СОР	2.55
Heating up time	0:58 h:min
Standby power input	35.0 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	290 I



# Model: Vitocal 111-S AWBT-M-E-AC 111.A14 F

General Data		
Power supply	1x230V 50Hz	

# Heating

	EN 14511-2	
	Low temperature	Medium temperature
Heat output	13.50 kW	11.82 kW
El input	2.89 kW	4.23 kW
СОР	4.67	2.80
Indoor water flow rate	0.90 m³/h	0.90 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	64 dB(A)	64 dB(A)

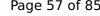
	EN 1482	5	
		Low temperature	Medium temperatur
Pdesignh	10.70 kW		
$\eta_{s}$	160 %	117 %	
Prated	9.90 kW	10.70 kW	-
SCOP	4.08	3.00	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.73 kW	9.44 kW	
COP Tj = -7°C	2.86	2.05	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.34 kW	6.11 kW	
COP Tj = +2°C	3.92	2.82	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.99 kW	9.33 kW	
COP Tj = +7°C	5.31	4.03	





Cdh	0.99	0.99
Pdh Tj = 12°C	7.44 kW	6.77 kW
COP Tj = 12°C	7.15	5.44
Cdh	0.99	0.99
Pdh Tj = Tbiv	8.73 kW	9.44 kW
COP Tj = Tbiv	2.86	2.05
Pdh Tj = TOL	7.46 kW	6.81 kW
COP Tj = TOL	2.42	1.72
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	2.41 kW	3.86 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	20384 kWh	22040 kWh

#### Domestic Hot Water (DHW)





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EN 16147	
Declared load profile	XL
Efficiency ηDHW	124 %
СОР	2.55
Heating up time	0:58 h:min
Standby power input	35.0 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	290 I



# Model: Vitocal 100-S AWB-M 101.A16

General Data	
Power supply	1x230V 50Hz

# Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	15.50 kW	13.43 kW	
El input	3.42 kW	4.94 kW	
СОР	4.53	2.72	
Indoor water flow rate	0.90 m³/h	0.90 m³/h	

EN 14511-4	
Shutting off the heat transfer medium flow	nassod
Shutting on the heat transfer medium now	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	64 dB(A)	64 dB(A)

11.80 kW 155 %	Low temperature	Medium temperature
	110.07	
155 %	110.0/	
	119 %	
10.00 kW	11.80 kW	
3.95	3.05	
-7 °C	-7 °C	
-20 °C	-20 °C	
8.85 kW	10.45 kW	
2.54	2.05	
0.99	0.99	
6.60 kW	6.65 kW	
3.76	2.86	
0.99	0.99	
5.93 kW	9.42 kW	
5.40	4.13	
	3.95 -7 °C -20 °C 8.85 kW 2.54 0.99 6.60 kW 3.76 0.99 5.93 kW	3.95 3.05  -7 °C -7 °C  -20 °C -20 °C  8.85 kW 10.45 kW  2.54 2.05  0.99 0.99  6.60 kW 6.65 kW  3.76 2.86  0.99 0.99  5.93 kW 9.42 kW





Cdh	0.99	0.99
Pdh Tj = 12°C	14.93 kW	6.77 kW
COP Tj = 12°C	6.49	5.44
Cdh	0.99	0.99
Pdh Tj = Tbiv	8.85 kW	10.45 kW
COP Tj = Tbiv	2.54	2.05
Pdh Tj = TOL	7.44 kW	7.81 kW
COP Tj = TOL	7.15	1.81
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	2.56 kW	4.00 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	24394 kWh	24394 kWh



# Model: Vitocal 100-S AWB-M-E 101.A16

General Data		
Power supply	1x230V 50Hz	

# Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	15.50 kW	13.43 kW
El input	3.42 kW	4.94 kW
СОР	4.53	2.72
Indoor water flow rate	0.90 m³/h	0.90 m³/h

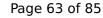
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed



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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	64 dB(A)	64 dB(A)

11.80 kW 155 %	Low temperature	Medium temperature
	110.07	
155 %	110.0/	
	119 %	
10.00 kW	11.80 kW	
3.95	3.05	
-7 °C	-7 °C	
-20 °C	-20 °C	
8.85 kW	10.45 kW	
2.54	2.05	
0.99	0.99	
6.60 kW	6.65 kW	
3.76	2.86	
0.99	0.99	
5.93 kW	9.42 kW	
5.40	4.13	
	3.95 -7 °C -20 °C 8.85 kW 2.54 0.99 6.60 kW 3.76 0.99 5.93 kW	3.95 3.05  -7 °C -7 °C  -20 °C -20 °C  8.85 kW 10.45 kW  2.54 2.05  0.99 0.99  6.60 kW 6.65 kW  3.76 2.86  0.99 0.99  5.93 kW 9.42 kW





0.99	0.99		
14.93 kW	6.77 kW		
6.49	5.44		
0.99	0.99		
8.85 kW	10.45 kW		
2.54	2.05		
7.44 kW	7.81 kW		
7.15	1.81		
0.99	0.99		
55 °C	55 °C		
15 W	15 W		
0 W	0 W		
0 W	0 W		
0 W	0 W		
electrical	electrical		
2.56 kW	4.00 kW		
0.00 kW			
24394 kWh	24394 kWh		
	14.93 kW 6.49 0.99 8.85 kW 2.54 7.44 kW 7.15 0.99 55 °C 15 W 0 W 0 W electrical 2.56 kW 0.00 kW	14.93 kW       6.77 kW         6.49       5.44         0.99       0.99         8.85 kW       10.45 kW         2.54       2.05         7.44 kW       7.81 kW         7.15       1.81         0.99       0.99         55 °C       55 °C         15 W       0 W         0 W       0 W         0 W       0 W         electrical       electrical         2.56 kW       4.00 kW	14.93 kW 6.77 kW 6.49 5.44 0.99 0.99 8.85 kW 10.45 kW 2.54 2.05 7.44 kW 7.81 kW 7.15 1.81 0.99 0.99 55 °C 55 °C 15 W 15 W 0 W 0 W 0 W 0 W electrical electrical 2.56 kW 4.00 kW 0.00 kW



# Model: Vitocal 100-S AWB-M-E-AC 101.A16

General Data	
Power supply	1x230V 50Hz

# Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	15.50 kW	13.43 kW	
El input	3.42 kW	4.94 kW	
СОР	4.53	2.72	
Indoor water flow rate	0.90 m³/h	0.90 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	64 dB(A)	64 dB(A)	

EN 14825			
		Low temperature	Medium temperature
Pdesignh	11.80 kW		
$\eta_{S}$	155 %	119 %	
Prated	10.00 kW	11.80 kW	
SCOP	3.95	3.05	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.85 kW	10.45 kW	
COP Tj = -7°C	2.54	2.05	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.60 kW	6.65 kW	
COP Tj = +2°C	3.76	2.86	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.93 kW	9.42 kW	
$COP Tj = +7^{\circ}C$	5.40	4.13	





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This information w		
Cdh	0.99	0.99
Pdh Tj = 12°C	14.93 kW	6.77 kW
COP Tj = 12°C	6.49	5.44
Cdh	0.99	0.99
Pdh Tj = Tbiv	8.85 kW	10.45 kW
COP Tj = Tbiv	2.54	2.05
Pdh Tj = TOL	7.44 kW	7.81 kW
COP Tj = TOL	7.15	1.81
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	2.56 kW	4.00 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	24394 kWh	24394 kWh



# Model: Vitocal 100-S AWB-M-E-AC 101.A16 F

General Data	
Power supply	1x230V 50Hz

# Heating

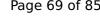
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	15.50 kW	13.43 kW	
El input	3.42 kW	4.94 kW	
СОР	4.53	2.72	
Indoor water flow rate	0.90 m³/h	0.90 m³/h	

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	64 dB(A)	64 dB(A)

EN 14825			
		Low temperature	Medium temperature
Pdesignh	11.80 kW		
$\eta_{S}$	155 %	119 %	
Prated	10.00 kW	11.80 kW	
SCOP	3.95	3.05	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.85 kW	10.45 kW	
COP Tj = -7°C	2.54	2.05	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.60 kW	6.65 kW	
COP Tj = +2°C	3.76	2.86	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.93 kW	9.42 kW	
$COP Tj = +7^{\circ}C$	5.40	4.13	





Cdh	0.99	0.99
Pdh Tj = 12°C	14.93 kW	6.77 kW
COP Tj = 12°C	6.49	5.44
Cdh	0.99	0.99
Pdh Tj = Tbiv	8.85 kW	10.45 kW
COP Tj = Tbiv	2.54	2.05
Pdh Tj = TOL	7.44 kW	7.81 kW
COP Tj = TOL	7.15	1.81
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	2.56 kW	4.00 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	24394 kWh	24394 kWh



# Model: Vitocal 111-S AWBT-M-AC 111.A16

Gener	al Data
Power supply	1x230V 50Hz

# Heating

	EN 14511-2	
	Low temperature	Medium temperature
Heat output	15.50 kW	13.43 kW
El input	3.42 kW	4.94 kW
СОР	4.53	2.72
Indoor water flow rate	0.90 m³/h	0.90 m³/h

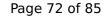
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed



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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	64 dB(A)	64 dB(A)

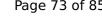
Low temperature  119 %  11.80 kW  3.05  -7 °C	Medium temperature
11.80 kW 3.05 -7 °C	
11.80 kW 3.05 -7 °C	
3.05 -7 °C	
-7 °C	
-20 °C	-1
-20 C	
10.45 kW	
2.05	
0.99	
6.65 kW	
2.86	
0.99	
9.42 kW	
4.13	
	2.86 0.99 9.42 kW





Cdh	0.99	0.99
Pdh Tj = 12°C	14.93 kW	6.77 kW
COP Tj = 12°C	6.49	5.44
Cdh	0.99	0.99
Pdh Tj = Tbiv	8.85 kW	10.45 kW
COP Tj = Tbiv	2.54	2.05
Pdh Tj = TOL	7.44 kW	7.81 kW
COP Tj = TOL	7.15	1.81
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	2.56 kW	4.00 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	24394 kWh	24394 kWh

#### Domestic Hot Water (DHW)





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EN 16147		
Declared load profile	XL	
Efficiency ηDHW	124 %	
СОР	2.55	
Heating up time	0:58 h:min	
Standby power input	35.0 W	
Reference hot water temperature	53.0 °C	
Mixed water at 40°C	290 I	



# Model: Vitocal 111-S AWBT-M-E 111.A16

General Data		
Power supply 1x230V 50Hz		

### Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	15.50 kW	13.43 kW	
El input	3.42 kW	4.94 kW	
СОР	4.53	2.72	
Indoor water flow rate	0.90 m³/h	0.90 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	64 dB(A)	64 dB(A)

EN 14825			
		Low temperature	Medium temperature
Pdesignh	11.80 kW		
$\eta_{S}$	155 %	119 %	
Prated	10.00 kW	11.80 kW	
SCOP	3.95	3.05	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.85 kW	10.45 kW	
COP Tj = -7°C	2.54	2.05	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.60 kW	6.65 kW	
COP Tj = +2°C	3.76	2.86	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.93 kW	9.42 kW	
$COP Tj = +7^{\circ}C$	5.40	4.13	

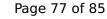
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	, ,		
0.99	0.99		
14.93 kW	6.77 kW		
6.49	5.44		
0.99	0.99		
8.85 kW	10.45 kW		
2.54	2.05		
7.44 kW	7.81 kW		
7.15	1.81		
0.99	0.99		
55 °C	55 °C		
15 W	15 W		
0 W	0 W		
0 W	0 W		
0 W	0 W		
electrical	electrical		
2.56 kW	4.00 kW		
0.00 kW			
24394 kWh	24394 kWh		
	0.99  14.93 kW  6.49  0.99  8.85 kW  2.54  7.44 kW  7.15  0.99  55 °C  15 W  0 W  0 W  electrical  2.56 kW  0.00 kW	0.99       0.99         14.93 kW       6.77 kW         6.49       5.44         0.99       0.99         8.85 kW       10.45 kW         2.54       2.05         7.44 kW       7.81 kW         7.15       1.81         0.99       0.99         55 °C       55 °C         15 W       0 W         0 W       0 W         0 W       0 W         electrical       electrical         2.56 kW       4.00 kW	14.93 kW       6.77 kW         6.49       5.44         0.99       0.99         8.85 kW       10.45 kW         2.54       2.05         7.44 kW       7.81 kW         7.15       1.81         0.99       0.99         55 °C       55 °C         15 W       15 W         0 W       0 W         0 W       0 W         electrical       electrical         2.56 kW       4.00 kW

#### Domestic Hot Water (DHW)





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	124 %	
СОР	2.55	
Heating up time	0:58 h:min	
Standby power input	35.0 W	
Reference hot water temperature	53.0 °C	
Mixed water at 40°C	290 I	

# Model: Vitocal 111-S AWBT-M-E-AC 111.A16

General Data		
Power supply 1x230V 50Hz		

### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	15.50 kW	13.43 kW
El input	3.42 kW	4.94 kW
СОР	4.53	2.72
Indoor water flow rate	0.90 m³/h	0.90 m³/h

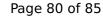
EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825			
		Low temperature	Medium temperature
Pdesignh	11.80 kW		
$\eta_{S}$	155 %	119 %	
Prated	10.00 kW	11.80 kW	
SCOP	3.95	3.05	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = $-7$ °C	8.85 kW	10.45 kW	
COP Tj = $-7^{\circ}$ C	2.54	2.05	
Cdh	0.99	0.99	
Pdh Tj = $+2$ °C	6.60 kW	6.65 kW	
$COP Tj = +2^{\circ}C$	3.76	2.86	
Cdh	0.99	0.99	
Pdh Tj = $+7^{\circ}$ C	5.93 kW	9.42 kW	
$COPTj = +7^{\circ}C$	5.40	4.13	

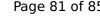
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Cdh	0.99	0.99
Pdh Tj = 12°C	14.93 kW	6.77 kW
COP Tj = 12°C	6.49	5.44
Cdh	0.99	0.99
Pdh Tj = Tbiv	8.85 kW	10.45 kW
COP Tj = Tbiv	2.54	2.05
Pdh Tj = TOL	7.44 kW	7.81 kW
COP Tj = TOL	7.15	1.81
Cdh	0.99	0.99
WTOL	55 °C	55 °C
Poff	15 W	15 W
РТО	0 W	0 W
PSB	o w	o w
РСК	0 W	0 W
Supplementary Heater: Type of energy input	electrical	electrical
Supplementary Heater: PSUP	2.56 kW	4.00 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	24394 kWh	24394 kWh

#### Domestic Hot Water (DHW)





# $$\operatorname{\textit{Page}}\xspace$ 81 of 85 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147			
Declared load profile	XL		
Efficiency ηDHW	124 %		
СОР	2.55		
Heating up time	0:58 h:min		
Standby power input	35.0 W		
Reference hot water temperature	53.0 °C		
Mixed water at 40°C	290		



# Model: Vitocal 111-S AWBT-M-E-AC 111.A16 F

General Data			
Power supply 1x230V 50Hz			

### Heating

EN 14511-2				
	Low temperature	Medium temperature		
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El input	3.42 kW	4.94 kW		
СОР	4.53	2.72		
Indoor water flow rate	0.90 m³/h	0.90 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	64 dB(A)	64 dB(A)		

EN 14825			
		Low temperature	Medium temperature
Pdesignh	11.80 kW		
$\eta_{S}$	155 %	119 %	
Prated	10.00 kW	11.80 kW	
SCOP	3.95	3.05	
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TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	8.85 kW	10.45 kW	
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Cdh	0.99	0.99	
Pdh Tj = $+7^{\circ}$ C	5.93 kW	9.42 kW	
$COP Tj = +7^{\circ}C$	5.40	4.13	

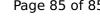
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Pdh Tj = 12°C	14.93 kW	6.77 kW	
COP Tj = 12°C	6.49	5.44	
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Pdh Tj = TOL	7.44 kW	7.81 kW	
COP Tj = TOL	7.15	1.81	
Cdh	0.99	0.99	
WTOL	55 °C	55 °C	
Poff	15 W	15 W	
PTO	o w	0 W	
PSB	o w	0 W	
PCK	0 W	0 W	
Supplementary Heater: Type of energy input	electrical	electrical	
Supplementary Heater: PSUP	2.56 kW	4.00 kW	
Backup Heater	0.00 kW		_
Annual energy consumption Qhe	24394 kWh	24394 kWh	

### Domestic Hot Water (DHW)





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