Summary of	Vitocal 100-S/111-S | 12-16kW 400V	Reg. No.	011-1W0404
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 | 12-16kW 400V		
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 101.A12

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	11.50 kW	9.72 kW
El input	2.58 kW	3.65 kW
COP	4.45	2.66
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

Average Climate

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	8.80 kW		
η_s	156 %	110 %	
Prated	9.00 kW	8.79 kW	
SCOP	3.98	2.83	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	7.98 kW	7.70 kW	
COP Tj = -7°C	2.87	1.93	
Cdh	0.99	0.99	
Pdh Tj = +2°C	5.63 kW	5.17 kW	
COP Tj = +2°C	3.90	3.50	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.78 kW	8.52 kW	
COP Tj = +7°C	4.86	3.66	

Cdh	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	7.98 kW	7.70 kW
COP Tj = Tbiv	2.87	1.93
Pdh Tj = TOL	7.54 kW	6.94 kW
COP Tj = TOL	2.80	1.75
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	1.48 kW	1.85 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	4696 kWh	6362 kWh

Colder Climate

EN 14825	
	Low temperature
COP Tj = +2°C	3.50

Warmer Climate

EN 14825		
	Low temperature	**Medium temperature**
COP Tj = +2°C	n/a	1.93
Cdh	0.99	

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	11.50 kW	9.72 kW
El input	2.58 kW	3.65 kW
COP	4.45	2.66
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

Average Climate

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	8.80 kW		
η_s	156 %	110 %	
Prated	9.00 kW	8.79 kW	
SCOP	3.98	2.83	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	7.98 kW	7.70 kW	
COP Tj = -7°C	2.87	1.93	
Cdh	0.99	0.99	
Pdh Tj = +2°C	5.63 kW	5.17 kW	
COP Tj = +2°C	3.90	3.50	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.78 kW	8.52 kW	
COP Tj = +7°C	4.86	3.66	

Cdh	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	7.98 kW	7.70 kW
COP Tj = Tbiv	2.87	1.93
Pdh Tj = TOL	7.54 kW	6.94 kW
COP Tj = TOL	2.80	1.75
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	1.48 kW	1.85 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	4696 kWh	6362 kWh

Colder Climate

EN 14825	
	Low temperature
COP Tj = +2°C	3.50

Warmer Climate

EN 14825		
	Low temperature	**Medium temperature**
COP Tj = +2°C	n/a	1.93
Cdh	0.99	

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	11.50 kW	9.72 kW
El input	2.58 kW	3.65 kW
COP	4.45	2.66
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

Average Climate

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	8.80 kW		
η_s	156 %	110 %	
Prated	9.00 kW	8.79 kW	
SCOP	3.98	2.83	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	7.98 kW	7.70 kW	
COP Tj = -7°C	2.87	1.93	
Cdh	0.99	0.99	
Pdh Tj = +2°C	5.63 kW	5.17 kW	
COP Tj = +2°C	3.90	3.50	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.78 kW	8.52 kW	
COP Tj = +7°C	4.86	3.66	

Cdh	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	7.98 kW	7.70 kW
COP Tj = Tbiv	2.87	1.93
Pdh Tj = TOL	7.54 kW	6.94 kW
COP Tj = TOL	2.80	1.75
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	1.48 kW	1.85 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	4696 kWh	6362 kWh

Colder Climate

EN 14825	
	Low temperature
COP Tj = +2°C	3.50

Warmer Climate

EN 14825		
	Low temperature	**Medium temperature**
COP Tj = +2°C	n/a	1.93
Cdh	0.99	

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	11.50 kW	9.72 kW
El input	2.58 kW	3.65 kW
COP	4.45	2.66
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

Average Climate

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	8.80 kW		
η_s	156 %	110 %	
Prated	9.00 kW	8.79 kW	
SCOP	3.98	2.83	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	7.98 kW	7.70 kW	
COP Tj = -7°C	2.87	1.93	
Cdh	0.99	0.99	
Pdh Tj = +2°C	5.63 kW	5.17 kW	
COP Tj = +2°C	3.90	3.50	
Cdh	n/a	0.99	
Pdh Tj = +7°C	5.78 kW	8.52 kW	
COP Tj = +7°C	4.86	3.66	

Cdh	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	7.98 kW	7.70 kW
COP Tj = Tbiv	2.87	1.93
Pdh Tj = TOL	7.54 kW	6.94 kW
COP Tj = TOL	2.80	1.75
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	1.48 kW	1.85 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	4696 kWh	6362 kWh

Colder Climate

EN 14825	
	Low temperature
COP Tj = +2°C	3.50

Warmer Climate

EN 14825		
	Low temperature	**Medium temperature**
COP Tj = +2°C	n/a	1.93
Cdh	0.99	

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	124 %
COP	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 l

Colder Climate

Warmer Climate

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	11.50 kW	9.72 kW
El input	2.58 kW	3.65 kW
COP	4.45	2.66
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

Average Climate

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	8.80 kW		
η_s	156 %	110 %	
Prated	9.00 kW	8.79 kW	
SCOP	3.98	2.83	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	7.98 kW	7.70 kW	
COP Tj = -7°C	2.87	1.93	
Cdh	0.99	0.99	
Pdh Tj = +2°C	5.63 kW	5.17 kW	
COP Tj = +2°C	3.90	3.50	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.78 kW	8.52 kW	
COP Tj = +7°C	4.86	3.66	

Cdh	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	7.98 kW	7.70 kW
COP Tj = Tbiv	2.87	1.93
Pdh Tj = TOL	7.54 kW	6.94 kW
COP Tj = TOL	2.80	1.75
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	1.48 kW	1.85 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	4696 kWh	6362 kWh

Colder Climate

EN 14825	
	Low temperature
COP Tj = +2°C	3.50

Warmer Climate

EN 14825		
	Low temperature	**Medium temperature**
COP Tj = +2°C	n/a	1.93
Cdh	0.99	

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	124 %
COP	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 l

Colder Climate

Warmer Climate

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	11.50 kW	9.72 kW
El input	2.58 kW	3.65 kW
COP	4.45	2.66
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

Average Climate

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	8.80 kW		
η_s	156 %	110 %	
Prated	9.00 kW	8.79 kW	
SCOP	3.98	2.83	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	7.98 kW	7.70 kW	
COP Tj = -7°C	2.87	1.93	
Cdh	0.99	0.99	
Pdh Tj = +2°C	5.63 kW	5.17 kW	
COP Tj = +2°C	3.90	3.50	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.78 kW	8.52 kW	
COP Tj = +7°C	4.86	3.66	

Cdh	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	7.98 kW	7.70 kW
COP Tj = Tbiv	2.87	1.93
Pdh Tj = TOL	7.54 kW	6.94 kW
COP Tj = TOL	2.80	1.75
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	1.48 kW	1.85 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	4696 kWh	6362 kWh

Colder Climate

EN 14825	
	Low temperature
COP Tj = +2°C	3.50

Warmer Climate

EN 14825		
	Low temperature	**Medium temperature**
COP Tj = +2°C	n/a	1.93
Cdh	0.99	

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	124 %
COP	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 l

Colder Climate

Warmer Climate

Model: Vitocal 100-S AWB 101.A14

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	13.50 kW	11.61 kW
El input	3.00 kW	4.38 kW
COP	4.50	2.81
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

Average Climate

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	9.80 kW		
η_s	154 %	111 %	
Prated	8.90 kW	9.80 kW	
SCOP	3.93	2.85	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	7.92 kW	8.70 kW	
COP Tj = -7°C	2.55	2.02	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.35 kW	5.90 kW	
COP Tj = +2°C	3.91	2.68	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.97 kW	8.12 kW	
COP Tj = +7°C	5.04	3.75	

Cdh	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	7.92 kW	8.70 kW
COP Tj = Tbiv	2.55	2.02
Pdh Tj = TOL	8.52 kW	7.71 kW
COP Tj = TOL	2.72	1.78
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	0.43 kW	2.13 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	18488 kWh	20328 kWh

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	13.50 kW	11.61 kW
El input	3.00 kW	4.38 kW
COP	4.50	2.81
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

Average Climate

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	9.80 kW		
η_s	154 %	111 %	
Prated	8.90 kW	9.80 kW	
SCOP	3.93	2.85	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	7.92 kW	8.70 kW	
COP Tj = -7°C	2.55	2.02	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.35 kW	5.90 kW	
COP Tj = +2°C	3.91	2.68	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.97 kW	8.12 kW	
COP Tj = +7°C	5.04	3.75	

Cdh	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	7.92 kW	8.70 kW
COP Tj = Tbiv	2.55	2.02
Pdh Tj = TOL	8.52 kW	7.71 kW
COP Tj = TOL	2.72	1.78
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	0.43 kW	2.13 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	18488 kWh	20328 kWh

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	13.50 kW	11.61 kW
El input	3.00 kW	4.38 kW
COP	4.50	2.81
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

Average Climate

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	9.80 kW		
η_s	154 %	111 %	
Prated	8.90 kW	9.80 kW	
SCOP	3.93	2.85	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	7.92 kW	8.70 kW	
COP Tj = -7°C	2.55	2.02	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.35 kW	5.90 kW	
COP Tj = +2°C	3.91	2.68	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.97 kW	8.12 kW	
COP Tj = +7°C	5.04	3.75	

Cdh	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	7.92 kW	8.70 kW
COP Tj = Tbiv	2.55	2.02
Pdh Tj = TOL	8.52 kW	7.71 kW
COP Tj = TOL	2.72	1.78
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	0.43 kW	2.13 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	18488 kWh	20328 kWh

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	13.50 kW	11.61 kW
El input	3.00 kW	4.38 kW
COP	4.50	2.81
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

Average Climate

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	9.80 kW		
η_s	154 %	111 %	
Prated	8.90 kW	9.80 kW	
SCOP	3.93	2.85	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	7.92 kW	8.70 kW	
COP Tj = -7°C	2.55	2.02	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.35 kW	5.90 kW	
COP Tj = +2°C	3.91	2.68	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.97 kW	8.12 kW	
COP Tj = +7°C	5.04	3.75	

Cdh	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	7.92 kW	8.70 kW
COP Tj = Tbiv	2.55	2.02
Pdh Tj = TOL	8.52 kW	7.71 kW
COP Tj = TOL	2.72	1.78
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	0.43 kW	2.13 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	18488 kWh	20328 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	124 %
COP	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 l

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	13.50 kW	11.61 kW
El input	3.00 kW	4.38 kW
COP	4.50	2.81
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

Average Climate

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	9.80 kW		
η_s	154 %	111 %	
Prated	8.90 kW	9.80 kW	
SCOP	3.93	2.85	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	7.92 kW	8.70 kW	
COP Tj = -7°C	2.55	2.02	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.35 kW	5.90 kW	
COP Tj = +2°C	3.91	2.68	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.97 kW	8.12 kW	
COP Tj = +7°C	5.04	3.75	

Cdh	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	7.92 kW	8.70 kW
COP Tj = Tbiv	2.55	2.02
Pdh Tj = TOL	8.52 kW	7.71 kW
COP Tj = TOL	2.72	1.78
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	0.43 kW	2.13 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	18488 kWh	20328 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147

Declared load profile	XL
Efficiency ηDHW	124 %
COP	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 l

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	13.50 kW	11.61 kW
El input	3.00 kW	4.38 kW
COP	4.50	2.81
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

Average Climate

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	9.80 kW		
η_s	154 %	111 %	
Prated	8.90 kW	9.80 kW	
SCOP	3.93	2.85	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	7.92 kW	8.70 kW	
COP Tj = -7°C	2.55	2.02	
Cdh	0.99	0.99	
Pdh Tj = +2°C	6.35 kW	5.90 kW	
COP Tj = +2°C	3.91	2.68	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.97 kW	8.12 kW	
COP Tj = +7°C	5.04	3.75	

Cdh	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	7.92 kW	8.70 kW
COP Tj = Tbiv	2.55	2.02
Pdh Tj = TOL	8.52 kW	7.71 kW
COP Tj = TOL	2.72	1.78
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	0.43 kW	2.13 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	18488 kWh	20328 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	124 %
COP	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 l

Model: Vitocal 100-S AWB 101.A16

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	15.74 kW	12.67 kW
El input	3.60 kW	4.95 kW
COP	4.37	2.62
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

Average Climate

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	10.80 kW		
η_s	151 %	111 %	
Prated	12.80 kW	10.83 kW	
SCOP	3.85	2.85	
Tbiv	-7 °C	-4 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	11.33 kW	9.20 kW	
COP Tj = -7°C	2.46	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	7.16 kW	6.61 kW	
COP Tj = +2°C	3.70	2.77	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.98 kW	5.08 kW	
COP Tj = +7°C	5.17	3.74	

Cdh	0.99	0.99
Pdh Tj = 12°C	7.17 kW	6.41 kW
COP Tj = 12°C	6.92	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	11.33 kW	8.33 kW
COP Tj = Tbiv	2.46	2.06
Pdh Tj = TOL	10.68 kW	9.51 kW
COP Tj = TOL	2.41	1.88
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	2.12 kW	1.32 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	26449 kWh	22384 kWh

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	15.74 kW	12.67 kW
El input	3.60 kW	4.95 kW
COP	4.37	2.62
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

Average Climate

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	10.80 kW		
η_s	151 %	111 %	
Prated	12.80 kW	10.83 kW	
SCOP	3.85	2.85	
Tbiv	-7 °C	-4 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	11.33 kW	9.20 kW	
COP Tj = -7°C	2.46	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	7.16 kW	6.61 kW	
COP Tj = +2°C	3.70	2.77	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.98 kW	5.08 kW	
COP Tj = +7°C	5.17	3.74	

Cdh	0.99	0.99
Pdh Tj = 12°C	7.17 kW	6.41 kW
COP Tj = 12°C	6.92	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	11.33 kW	8.33 kW
COP Tj = Tbiv	2.46	2.06
Pdh Tj = TOL	10.68 kW	9.51 kW
COP Tj = TOL	2.41	1.88
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	2.12 kW	1.32 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	26449 kWh	22384 kWh

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	15.74 kW	12.67 kW
El input	3.60 kW	4.95 kW
COP	4.37	2.62
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

Average Climate

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	10.80 kW		
η_s	151 %	111 %	
Prated	12.80 kW	10.83 kW	
SCOP	3.85	2.85	
Tbiv	-7 °C	-4 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	11.33 kW	9.20 kW	
COP Tj = -7°C	2.46	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	7.16 kW	6.61 kW	
COP Tj = +2°C	3.70	2.77	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.98 kW	5.08 kW	
COP Tj = +7°C	5.17	3.74	

Cdh	0.99	0.99
Pdh Tj = 12°C	7.17 kW	6.41 kW
COP Tj = 12°C	6.92	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	11.33 kW	8.33 kW
COP Tj = Tbiv	2.46	2.06
Pdh Tj = TOL	10.68 kW	9.51 kW
COP Tj = TOL	2.41	1.88
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	2.12 kW	1.32 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	26449 kWh	22384 kWh

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	15.74 kW	12.67 kW
El input	3.60 kW	4.95 kW
COP	4.37	2.62
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

Average Climate

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	10.80 kW		
η_s	151 %	111 %	
Prated	12.80 kW	10.83 kW	
SCOP	3.85	2.85	
Tbiv	-7 °C	-4 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	11.33 kW	9.20 kW	
COP Tj = -7°C	2.46	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	7.16 kW	6.61 kW	
COP Tj = +2°C	3.70	2.77	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.98 kW	5.08 kW	
COP Tj = +7°C	5.17	3.74	

Cdh	0.99	0.99
Pdh Tj = 12°C	7.17 kW	6.41 kW
COP Tj = 12°C	6.92	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	11.33 kW	8.33 kW
COP Tj = Tbiv	2.46	2.06
Pdh Tj = TOL	10.68 kW	9.51 kW
COP Tj = TOL	2.41	1.88
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	2.12 kW	1.32 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	26449 kWh	22384 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	124 %
COP	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 l

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	15.74 kW	12.67 kW
El input	3.60 kW	4.95 kW
COP	4.37	2.62
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

Average Climate

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	10.80 kW		
η_s	151 %	111 %	
Prated	12.80 kW	10.83 kW	
SCOP	3.85	2.85	
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TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	11.33 kW	9.20 kW	
COP Tj = -7°C	2.46	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	7.16 kW	6.61 kW	
COP Tj = +2°C	3.70	2.77	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.98 kW	5.08 kW	
COP Tj = +7°C	5.17	3.74	

Cdh	0.99	0.99
Pdh Tj = 12°C	7.17 kW	6.41 kW
COP Tj = 12°C	6.92	4.84
Cdh	0.99	0.99
Pdh Tj = Tbiv	11.33 kW	8.33 kW
COP Tj = Tbiv	2.46	2.06
Pdh Tj = TOL	10.68 kW	9.51 kW
COP Tj = TOL	2.41	1.88
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	2.12 kW	1.32 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	26449 kWh	22384 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	124 %
COP	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 l

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

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	15.74 kW	12.67 kW
El input	3.60 kW	4.95 kW
COP	4.37	2.62
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

Average Climate

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	10.80 kW		
η_s	151 %	111 %	
Prated	12.80 kW	10.83 kW	
SCOP	3.85	2.85	
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TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	11.33 kW	9.20 kW	
COP Tj = -7°C	2.46	1.89	
Cdh	0.99	0.99	
Pdh Tj = +2°C	7.16 kW	6.61 kW	
COP Tj = +2°C	3.70	2.77	
Cdh	0.99	0.99	
Pdh Tj = +7°C	5.98 kW	5.08 kW	
COP Tj = +7°C	5.17	3.74	

Cdh	0.99	0.99
Pdh Tj = 12°C	7.17 kW	6.41 kW
COP Tj = 12°C	6.92	4.84
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COP Tj = TOL	2.41	1.88
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	2.12 kW	1.32 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	26449 kWh	22384 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	124 %
COP	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 l