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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			
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

Configure model	
Model name	Vitocal 100-S AWB 101.A12
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	8.80 kW		
η_s	156 %	110 %	
Prated	9.00 kW	8.79 kW	
SCOP	3.98	2.83	
T _{biv}	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	7.98 kW	7.70 kW	
COP T _j = -7°C	2.87	1.93	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	5.63 kW	5.17 kW	
COP T _j = +2°C	3.90	3.50	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.78 kW	8.52 kW	
COP T _j = +7°C	4.86	3.66	

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Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.98 kW	7.70 kW
COP Tj = Tbiv	2.87	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.54 kW	6.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
Supplementary Heater: PSUP	1.48 kW	1.85 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	4696 kWh	6362 kWh

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

Configure model	
Model name	Vitocal 100-S AWB-E 101.A12
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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	64 dB(A)	64 dB(A)

EN 14825

		Low temperature	Medium temperature
P _{designh}	8.80 kW		
η_s	156 %	110 %	
Prated	9.00 kW	8.79 kW	
SCOP	3.98	2.83	
T _{biv}	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	7.98 kW	7.70 kW	
COP T _j = -7°C	2.87	1.93	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	5.63 kW	5.17 kW	
COP T _j = +2°C	3.90	3.50	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.78 kW	8.52 kW	
COP T _j = +7°C	4.86	3.66	

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Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.98 kW	7.70 kW
COP Tj = Tbiv	2.87	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.54 kW	6.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
Supplementary Heater: PSUP	1.48 kW	1.85 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	4696 kWh	6362 kWh

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

Configure model	
Model name	Vitocal 100-S AWB-E-AC 101.A12
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	8.80 kW		
η_s	156 %	110 %	
Prated	9.00 kW	8.79 kW	
SCOP	3.98	2.83	
T _{biv}	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	7.98 kW	7.70 kW	
COP T _j = -7°C	2.87	1.93	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	5.63 kW	5.17 kW	
COP T _j = +2°C	3.90	3.50	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.78 kW	8.52 kW	
COP T _j = +7°C	4.86	3.66	

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Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.98 kW	7.70 kW
COP Tj = Tbiv	2.87	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.54 kW	6.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
Supplementary Heater: PSUP	1.48 kW	1.85 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	4696 kWh	6362 kWh

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

Configure model	
Model name	Vitocal 111-S AWBT-AC 111.A12
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	8.80 kW		
η_s	156 %	110 %	
Prated	9.00 kW	8.79 kW	
SCOP	3.98	2.83	
T _{biv}	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	7.98 kW	7.70 kW	
COP T _j = -7°C	2.87	1.93	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	5.63 kW	5.17 kW	
COP T _j = +2°C	3.90	3.50	
C _{dh} T _j = +2 °C	n/a	0.99	
P _{dh} T _j = +7°C	5.78 kW	8.52 kW	
COP T _j = +7°C	4.86	3.66	

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Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.98 kW	7.70 kW
COP Tj = Tbiv	2.87	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.54 kW	6.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
Supplementary Heater: PSUP	1.48 kW	1.85 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	4696 kWh	6362 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	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.A12

Configure model	
Model name	Vitocal 111-S AWBT-E 111.A12
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	8.80 kW		
η_s	156 %	110 %	
Prated	9.00 kW	8.79 kW	
SCOP	3.98	2.83	
T _{biv}	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	7.98 kW	7.70 kW	
COP T _j = -7°C	2.87	1.93	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	5.63 kW	5.17 kW	
COP T _j = +2°C	3.90	3.50	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.78 kW	8.52 kW	
COP T _j = +7°C	4.86	3.66	

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Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.98 kW	7.70 kW
COP Tj = Tbiv	2.87	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.54 kW	6.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
Supplementary Heater: PSUP	1.48 kW	1.85 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	4696 kWh	6362 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	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.A12

Configure model	
Model name	Vitocal 111-S AWBT-E-AC 111.A12
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	8.80 kW		
η_s	156 %	110 %	
Prated	9.00 kW	8.79 kW	
SCOP	3.98	2.83	
T _{biv}	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	7.98 kW	7.70 kW	
COP T _j = -7°C	2.87	1.93	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	5.63 kW	5.17 kW	
COP T _j = +2°C	3.90	3.50	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.78 kW	8.52 kW	
COP T _j = +7°C	4.86	3.66	

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Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.98 kW	7.70 kW
COP Tj = Tbiv	2.87	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.54 kW	6.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.75
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
Supplementary Heater: PSUP	1.48 kW	1.85 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	4696 kWh	6362 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	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.A14

Configure model	
Model name	Vitocal 100-S AWB 101.A14
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	9.80 kW		
η_s	154 %	111 %	
P _{rated}	8.90 kW	9.80 kW	
SCOP	3.93	2.85	
T _{biv}	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	7.92 kW	8.70 kW	
COP T _j = -7°C	2.55	2.02	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	6.35 kW	5.90 kW	
COP T _j = +2°C	3.91	2.68	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.97 kW	8.12 kW	
COP T _j = +7°C	5.04	3.75	

This information was generated by the HP KEYMARK database on 22 Jun 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.92 kW	8.70 kW
COP Tj = Tbiv	2.55	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.52 kW	7.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.72	1.78
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
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

Configure model	
Model name	Vitocal 100-S AWB-E 101.A14
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	9.80 kW		
η_s	154 %	111 %	
P _{rated}	8.90 kW	9.80 kW	
SCOP	3.93	2.85	
T _{biv}	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	7.92 kW	8.70 kW	
COP T _j = -7°C	2.55	2.02	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	6.35 kW	5.90 kW	
COP T _j = +2°C	3.91	2.68	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.97 kW	8.12 kW	
COP T _j = +7°C	5.04	3.75	

This information was generated by the HP KEYMARK database on 22 Jun 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.92 kW	8.70 kW
COP Tj = Tbiv	2.55	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.52 kW	7.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.72	1.78
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
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

Configure model

Model name	Vitocal 100-S AWB-E-AC 101.A14
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data

Power supply	3x400V 50Hz
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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

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
P _{designh}	9.80 kW		
η_s	154 %	111 %	
P _{rated}	8.90 kW	9.80 kW	
SCOP	3.93	2.85	
T _{biv}	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	7.92 kW	8.70 kW	
COP T _j = -7°C	2.55	2.02	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	6.35 kW	5.90 kW	
COP T _j = +2°C	3.91	2.68	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.97 kW	8.12 kW	
COP T _j = +7°C	5.04	3.75	

This information was generated by the HP KEYMARK database on 22 Jun 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.92 kW	8.70 kW
COP Tj = Tbiv	2.55	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.52 kW	7.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.72	1.78
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
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

Configure model	
Model name	Vitocal 111-S AWBT-AC 111.A14
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	9.80 kW		
η_s	154 %	111 %	
P _{rated}	8.90 kW	9.80 kW	
SCOP	3.93	2.85	
T _{biv}	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	7.92 kW	8.70 kW	
COP T _j = -7°C	2.55	2.02	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	6.35 kW	5.90 kW	
COP T _j = +2°C	3.91	2.68	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.97 kW	8.12 kW	
COP T _j = +7°C	5.04	3.75	

This information was generated by the HP KEYMARK database on 22 Jun 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.92 kW	8.70 kW
COP Tj = Tbiv	2.55	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.52 kW	7.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.72	1.78
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
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 η_{DHW}	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

Configure model	
Model name	Vitocal 111-S AWBT-E 111.A14
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	9.80 kW		
η_s	154 %	111 %	
P _{rated}	8.90 kW	9.80 kW	
SCOP	3.93	2.85	
T _{biv}	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	7.92 kW	8.70 kW	
COP T _j = -7°C	2.55	2.02	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	6.35 kW	5.90 kW	
COP T _j = +2°C	3.91	2.68	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.97 kW	8.12 kW	
COP T _j = +7°C	5.04	3.75	

This information was generated by the HP KEYMARK database on 22 Jun 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.92 kW	8.70 kW
COP Tj = Tbiv	2.55	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.52 kW	7.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.72	1.78
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
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 η_{DHW}	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

Configure model	
Model name	Vitocal 111-S AWBT-E-AC 111.A14
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	9.80 kW		
η_s	154 %	111 %	
P _{rated}	8.90 kW	9.80 kW	
SCOP	3.93	2.85	
T _{biv}	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	7.92 kW	8.70 kW	
COP T _j = -7°C	2.55	2.02	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	6.35 kW	5.90 kW	
COP T _j = +2°C	3.91	2.68	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.97 kW	8.12 kW	
COP T _j = +7°C	5.04	3.75	

This information was generated by the HP KEYMARK database on 22 Jun 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	14.35 kW	6.41 kW
COP Tj = 12°C	6.08	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	7.92 kW	8.70 kW
COP Tj = Tbiv	2.55	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.52 kW	7.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.72	1.78
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
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 η_{DHW}	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

Configure model	
Model name	Vitocal 100-S AWB 101.A16
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	10.80 kW		
η_s	151 %	111 %	
P _{rated}	12.80 kW	10.83 kW	
SCOP	3.85	2.85	
T _{biv}	-7 °C	-4 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	11.33 kW	9.20 kW	
COP T _j = -7°C	2.46	1.89	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	7.16 kW	6.61 kW	
COP T _j = +2°C	3.70	2.77	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.98 kW	5.08 kW	
COP T _j = +7°C	5.17	3.74	

This information was generated by the HP KEYMARK database on 22 Jun 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.17 kW	6.41 kW
COP Tj = 12°C	6.92	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	11.33 kW	8.33 kW
COP Tj = Tbiv	2.46	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.68 kW	9.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.41	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
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

Configure model	
Model name	Vitocal 100-S AWB-E 101.A16
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	10.80 kW		
η_s	151 %	111 %	
P _{rated}	12.80 kW	10.83 kW	
SCOP	3.85	2.85	
T _{biv}	-7 °C	-4 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	11.33 kW	9.20 kW	
COP T _j = -7°C	2.46	1.89	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	7.16 kW	6.61 kW	
COP T _j = +2°C	3.70	2.77	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.98 kW	5.08 kW	
COP T _j = +7°C	5.17	3.74	

This information was generated by the HP KEYMARK database on 22 Jun 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.17 kW	6.41 kW
COP Tj = 12°C	6.92	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	11.33 kW	8.33 kW
COP Tj = Tbiv	2.46	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.68 kW	9.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.41	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
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

Configure model	
Model name	Vitocal 100-S AWB-E-AC 101.A16
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	10.80 kW		
η_s	151 %	111 %	
P _{rated}	12.80 kW	10.83 kW	
SCOP	3.85	2.85	
T _{biv}	-7 °C	-4 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	11.33 kW	9.20 kW	
COP T _j = -7°C	2.46	1.89	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	7.16 kW	6.61 kW	
COP T _j = +2°C	3.70	2.77	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.98 kW	5.08 kW	
COP T _j = +7°C	5.17	3.74	

This information was generated by the HP KEYMARK database on 22 Jun 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.17 kW	6.41 kW
COP Tj = 12°C	6.92	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	11.33 kW	8.33 kW
COP Tj = Tbiv	2.46	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.68 kW	9.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.41	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
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

Configure model	
Model name	Vitocal 111-S AWBT-AC 111.A16
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	10.80 kW		
η_s	151 %	111 %	
P _{rated}	12.80 kW	10.83 kW	
SCOP	3.85	2.85	
T _{biv}	-7 °C	-4 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	11.33 kW	9.20 kW	
COP T _j = -7°C	2.46	1.89	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	7.16 kW	6.61 kW	
COP T _j = +2°C	3.70	2.77	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.98 kW	5.08 kW	
COP T _j = +7°C	5.17	3.74	

This information was generated by the HP KEYMARK database on 22 Jun 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.17 kW	6.41 kW
COP Tj = 12°C	6.92	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	11.33 kW	8.33 kW
COP Tj = Tbiv	2.46	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.68 kW	9.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.41	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
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 η_{DHW}	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

Configure model	
Model name	Vitocal 111-S AWBT-E 111.A16
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	10.80 kW		
η_s	151 %	111 %	
P _{rated}	12.80 kW	10.83 kW	
SCOP	3.85	2.85	
T _{biv}	-7 °C	-4 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	11.33 kW	9.20 kW	
COP T _j = -7°C	2.46	1.89	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	7.16 kW	6.61 kW	
COP T _j = +2°C	3.70	2.77	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.98 kW	5.08 kW	
COP T _j = +7°C	5.17	3.74	

This information was generated by the HP KEYMARK database on 22 Jun 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.17 kW	6.41 kW
COP Tj = 12°C	6.92	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	11.33 kW	8.33 kW
COP Tj = Tbiv	2.46	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.68 kW	9.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.41	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
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 η_{DHW}	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

Configure model	
Model name	Vitocal 111-S AWBT-E-AC 111.A16
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

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

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
P _{designh}	10.80 kW		
η_s	151 %	111 %	
P _{rated}	12.80 kW	10.83 kW	
SCOP	3.85	2.85	
T _{biv}	-7 °C	-4 °C	
TOL	-20 °C	-20 °C	
P _{dh} T _j = -7°C	11.33 kW	9.20 kW	
COP T _j = -7°C	2.46	1.89	
C _{dh} T _j = -7 °C	0.99	0.99	
P _{dh} T _j = +2°C	7.16 kW	6.61 kW	
COP T _j = +2°C	3.70	2.77	
C _{dh} T _j = +2 °C	0.99	0.99	
P _{dh} T _j = +7°C	5.98 kW	5.08 kW	
COP T _j = +7°C	5.17	3.74	

This information was generated by the HP KEYMARK database on 22 Jun 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	7.17 kW	6.41 kW
COP Tj = 12°C	6.92	4.84
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	11.33 kW	8.33 kW
COP Tj = Tbiv	2.46	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.68 kW	9.51 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.41	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	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	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	1.32 kW
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