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

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

Configure model	
Model name	Vitocal 100-S AWB-M 101.B04
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.08 kW	4.36 kW
El input	0.80 kW	1.80 kW
COP	5.10	2.42

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

### Average Climate

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### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	126 %	
Prated	4.00 kW	3.70 kW	
SCOP	4.45	3.22	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	3.51 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.84	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.45 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	2.84	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.14 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.97	4.36	

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Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.83 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.49
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	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

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

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Pdh Tj = Tbiv	4.94 kW	4.08 kW
COP Tj = Tbiv	3.04	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.94 kW	4.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.04	1.98
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	6552 kWh	5450 kWh

## Colder Climate

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

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	135 %	86 %
Prated	4.40 kW	2.80 kW
SCOP	3.46	2.22
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.76 kW	1.85 kW
COP Tj = -7°C	2.91	1.72
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.23 kW	2.09 kW
COP Tj = +2°C	4.44	2.72
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.27 kW
COP Tj = 12°C	5.46	5.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.62 kW	2.30 kW
COP Tj = Tbiv	1.65	1.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	1.06 kW

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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.21	0.32
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	4.43 kW	2.82 kW
Annual energy consumption Qhe	10662 kWh	6791 kWh



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

Configure model	
Model name	Vitocal 100-S AWB-M-E 101.B04
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.08 kW	4.36 kW
El input	0.80 kW	1.80 kW
COP	5.10	2.42

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	126 %	
Prated	4.00 kW	3.70 kW	
SCOP	4.45	3.22	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	3.51 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.84	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.45 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	2.84	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.14 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.97	4.36	

This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.83 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.49
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	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = Tbiv	4.94 kW	4.08 kW
COP Tj = Tbiv	3.04	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.94 kW	4.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.04	1.98
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	6552 kWh	5450 kWh

## Colder Climate

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

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	135 %	86 %
Prated	4.40 kW	2.80 kW
SCOP	3.46	2.22
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.76 kW	1.85 kW
COP Tj = -7°C	2.91	1.72
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.23 kW	2.09 kW
COP Tj = +2°C	4.44	2.72
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.27 kW
COP Tj = 12°C	5.46	5.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.62 kW	2.30 kW
COP Tj = Tbiv	1.65	1.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	1.06 kW

This information was generated by the HP KEYMARK database on 18 Mar 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.21	0.32
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	4.43 kW	2.82 kW
Annual energy consumption Qhe	10662 kWh	6791 kWh

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

Configure model	
Model name	Vitocal 100-S AWB-M-E-AC 101.B04
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.08 kW	4.36 kW
El input	0.80 kW	1.80 kW
COP	5.10	2.42

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

## Average Climate



### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	126 %	
Prated	4.00 kW	3.70 kW	
SCOP	4.45	3.22	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	3.51 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.84	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.45 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	2.84	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.14 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.97	4.36	

This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.83 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.49
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	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = Tbiv	4.94 kW	4.08 kW
COP Tj = Tbiv	3.04	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.94 kW	4.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.04	1.98
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	6552 kWh	5450 kWh

## Colder Climate

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

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	135 %	86 %
Prated	4.40 kW	2.80 kW
SCOP	3.46	2.22
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.76 kW	1.85 kW
COP Tj = -7°C	2.91	1.72
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.23 kW	2.09 kW
COP Tj = +2°C	4.44	2.72
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.27 kW
COP Tj = 12°C	5.46	5.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.62 kW	2.30 kW
COP Tj = Tbiv	1.65	1.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	1.06 kW

This information was generated by the HP KEYMARK database on 18 Mar 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.21	0.32
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	4.43 kW	2.82 kW
Annual energy consumption Qhe	10662 kWh	6791 kWh

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

Configure model	
Model name	Vitocal 100-S AWB-M-E-AC 101.B04 F
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.08 kW	4.36 kW
El input	0.80 kW	1.80 kW
COP	5.10	2.42

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	126 %	
Prated	4.00 kW	3.70 kW	
SCOP	4.45	3.22	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	3.51 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.84	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.45 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	2.84	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.14 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.97	4.36	



This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.83 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.49
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	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = Tbiv	4.94 kW	4.08 kW
COP Tj = Tbiv	3.04	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.94 kW	4.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.04	1.98
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	6552 kWh	5450 kWh

## Colder Climate

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

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	135 %	86 %
Prated	4.40 kW	2.80 kW
SCOP	3.46	2.22
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.76 kW	1.85 kW
COP Tj = -7°C	2.91	1.72
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.23 kW	2.09 kW
COP Tj = +2°C	4.44	2.72
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.27 kW
COP Tj = 12°C	5.46	5.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.62 kW	2.30 kW
COP Tj = Tbiv	1.65	1.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	1.06 kW

This information was generated by the HP KEYMARK database on 18 Mar 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.21	0.32
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	4.43 kW	2.82 kW
Annual energy consumption Qhe	10662 kWh	6791 kWh

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

Configure model	
Model name	Vitocal 111-S AWBT-M-AC 111.B04
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.08 kW	4.36 kW
El input	0.80 kW	1.80 kW
COP	5.10	2.42

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	126 %	
Prated	4.00 kW	3.70 kW	
SCOP	4.45	3.22	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	3.51 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.84	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.45 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	2.84	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.14 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.97	4.36	

This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.83 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.49
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	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

## Domestic Hot Water (DHW)

### Average Climate



<b>EN 16147</b>	
Declared load profile	XL
Efficiency $\eta_{DHW}$	133 %
COP	3.32
Heating up time	2:15 h:min
Standby power input	25.0 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	296.1 l

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

Configure model	
Model name	Vitocal 111-S AWBT-M-E 111.B04
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.08 kW	4.36 kW
El input	0.80 kW	1.80 kW
COP	5.10	2.42

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	126 %	
Prated	4.00 kW	3.70 kW	
SCOP	4.45	3.22	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	3.51 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.84	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.45 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	2.84	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.14 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.97	4.36	

This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.83 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.49
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	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	XL
Efficiency $\eta_{DHW}$	133 %
COP	3.32
Heating up time	2:15 h:min
Standby power input	25.0 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	296.1 l

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

Configure model	
Model name	Vitocal 111-S AWBT-M-E-AC 111.B04
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.08 kW	4.36 kW
El input	0.80 kW	1.80 kW
COP	5.10	2.42

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	126 %	
Prated	4.00 kW	3.70 kW	
SCOP	4.45	3.22	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	3.51 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.84	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.45 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	2.84	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.14 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.97	4.36	

This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.83 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.49
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	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

## Domestic Hot Water (DHW)

### Average Climate



This information was generated by the HP KEYMARK database on 18 Mar 2022

<b>EN 16147</b>	
Declared load profile	XL
Efficiency $\eta_{DHW}$	133 %
COP	3.32
Heating up time	2:15 h:min
Standby power input	25.2 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	296.1 l

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

Configure model	
Model name	Vitocal 100-S AWB-M 101.B06
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	6.02 kW	4.36 kW
El input	1.23 kW	1.80 kW
COP	4.90	2.42

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	125 %	
P <sub>rated</sub>	5.10 kW	4.10 kW	
SCOP	4.45	3.20	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.53 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.85	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.04 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	4.30	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.11 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.93	4.76	

This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.40	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = Tbiv	2.85	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.08 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.49
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	1.04 kW	1.20 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	10549 kWh	8383 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = Tbiv	5.01 kW	4.08 kW
COP Tj = Tbiv	2.97	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.01 kW	4.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.97	1.98
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	6687 kWh	5450 kWh

## Colder Climate

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

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	135 %	90 %
Prated	4.80 kW	3.30 kW
SCOP	3.46	2.32
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.10 kW	2.10 kW
COP Tj = -7°C	2.89	1.81
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.40 kW	2.09 kW
COP Tj = +2°C	4.40	2.72
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.34 kW
COP Tj = 12°C	8.00	6.85
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.90 kW	2.67 kW
COP Tj = Tbiv	2.11	1.51
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	1.06 kW

This information was generated by the HP KEYMARK database on 18 Mar 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.21	0.32
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	4.78 kW	3.27 kW
Annual energy consumption Qhe	11493 kWh	7870 kWh



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

## Configure model

Model name	Vitocal 100-S AWB-M-E 101.B06
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

## General Data

Power supply	1x230V 50Hz
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## Heating

### EN 14511-2

	Low temperature	Medium temperature
Heat output	6.02 kW	4.36 kW
El input	1.23 kW	1.80 kW
COP	4.90	2.42

### EN 14511-4

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

## Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	125 %	
P <sub>rated</sub>	5.10 kW	4.10 kW	
SCOP	4.45	3.20	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.53 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.85	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.04 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	4.30	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.11 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.93	4.76	

This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.40	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = Tbiv	2.85	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.08 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.49
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	1.04 kW	1.20 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	10549 kWh	8383 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = Tbiv	5.01 kW	4.08 kW
COP Tj = Tbiv	2.97	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.01 kW	4.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.97	1.98
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	6687 kWh	5450 kWh

## Colder Climate

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

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	135 %	90 %
Prated	4.80 kW	3.30 kW
SCOP	3.46	2.32
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.10 kW	2.10 kW
COP Tj = -7°C	2.89	1.81
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.40 kW	2.09 kW
COP Tj = +2°C	4.40	2.72
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.34 kW
COP Tj = 12°C	8.00	6.85
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.90 kW	2.67 kW
COP Tj = Tbiv	2.11	1.51
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	1.06 kW

This information was generated by the HP KEYMARK database on 18 Mar 2022

COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	1.21	0.32
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	0.99	0.99
WTOL	55 °C	55 °C
P <sub>off</sub>	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	4.78 kW	3.27 kW
Annual energy consumption Q <sub>he</sub>	11493 kWh	7870 kWh

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

Configure model	
Model name	Vitocal 100-S AWB-M-E-AC 101.B06
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	6.02 kW	4.36 kW
El input	1.23 kW	1.80 kW
COP	4.90	2.42

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

## Average Climate



### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	125 %	
P <sub>rated</sub>	5.10 kW	4.10 kW	
SCOP	4.45	3.20	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.53 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.85	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.04 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	4.30	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.11 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.93	4.76	

This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.40	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = Tbiv	2.85	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.08 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.49
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	1.04 kW	1.20 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	10549 kWh	8383 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = Tbiv	5.01 kW	4.08 kW
COP Tj = Tbiv	2.97	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.01 kW	4.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.97	1.98
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	6687 kWh	5450 kWh

## Colder Climate

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

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	135 %	90 %
Prated	4.80 kW	3.30 kW
SCOP	3.46	2.32
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.10 kW	2.10 kW
COP Tj = -7°C	2.89	1.81
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.40 kW	2.09 kW
COP Tj = +2°C	4.40	2.72
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.34 kW
COP Tj = 12°C	8.00	6.85
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.90 kW	2.67 kW
COP Tj = Tbiv	2.11	1.51
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	1.06 kW

This information was generated by the HP KEYMARK database on 18 Mar 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.21	0.32
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	4.78 kW	3.27 kW
Annual energy consumption Qhe	11493 kWh	7870 kWh

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

## Configure model

Model name	Vitocal 100-S AWB-M-E-AC 101.B06 F
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

## General Data

Power supply	1x230V 50Hz
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## Heating

### EN 14511-2

	Low temperature	Medium temperature
Heat output	6.02 kW	4.36 kW
El input	1.23 kW	1.80 kW
COP	4.90	2.42

### EN 14511-4

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

## Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	125 %	
P <sub>rated</sub>	5.10 kW	4.10 kW	
SCOP	4.45	3.20	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.53 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.85	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.04 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	4.30	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.11 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.93	4.76	



This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.40	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = Tbiv	2.85	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.08 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.49
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	1.04 kW	1.20 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	10549 kWh	8383 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

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

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = Tbiv	5.01 kW	4.08 kW
COP Tj = Tbiv	2.97	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.01 kW	4.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.97	1.98
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	0.00 kW	0.00 kW
Annual energy consumption Qhe	6687 kWh	5450 kWh

## Colder Climate

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

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	135 %	90 %
Prated	4.80 kW	3.30 kW
SCOP	3.46	2.32
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.10 kW	2.10 kW
COP Tj = -7°C	2.89	1.81
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.40 kW	2.09 kW
COP Tj = +2°C	4.40	2.72
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	3.14 kW	2.88 kW
COP Tj = +7°C	6.20	4.76
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.43 kW	3.34 kW
COP Tj = 12°C	8.00	6.85
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.90 kW	2.67 kW
COP Tj = Tbiv	2.11	1.51
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.30 kW	1.06 kW

This information was generated by the HP KEYMARK database on 18 Mar 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.21	0.32
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	4.78 kW	3.27 kW
Annual energy consumption Qhe	11493 kWh	7870 kWh

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

Configure model	
Model name	Vitocal 111-S AWBT-M-AC 111.B06
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	6.02 kW	4.36 kW
El input	1.23 kW	1.80 kW
COP	4.90	2.42

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

## Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	125 %	
P <sub>rated</sub>	5.10 kW	4.10 kW	
SCOP	4.45	3.20	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.53 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.85	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.04 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	4.30	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.11 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.93	4.76	

This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.40	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = Tbiv	2.85	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.08 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.49
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	1.04 kW	1.20 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	10549 kWh	8383 kWh

## Domestic Hot Water (DHW)

### Average Climate



This information was generated by the HP KEYMARK database on 18 Mar 2022

<b>EN 16147</b>	
Declared load profile	XL
Efficiency $\eta_{DHW}$	133 %
COP	3.32
Heating up time	2:15 h:min
Standby power input	25.0 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	296.1 l

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

## Configure model

Model name	Vitocal 111-S AWBT-M-E 111.B06
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

## General Data

Power supply	1x230V 50Hz
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## Heating

### EN 14511-2

	Low temperature	Medium temperature
Heat output	6.02 kW	4.36 kW
El input	1.23 kW	1.80 kW
COP	4.90	2.42

### EN 14511-4

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

## Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	125 %	
P <sub>rated</sub>	5.10 kW	4.10 kW	
SCOP	4.45	3.20	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.53 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.85	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.04 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	4.30	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.11 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.93	4.76	

This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.40	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = Tbiv	2.85	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.08 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.49
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	1.04 kW	1.20 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	10549 kWh	8383 kWh

## Domestic Hot Water (DHW)

### Average Climate

This information was generated by the HP KEYMARK database on 18 Mar 2022

<b>EN 16147</b>	
Declared load profile	XL
Efficiency $\eta_{DHW}$	133 %
COP	3.32
Heating up time	2:15 h:min
Standby power input	25.0 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	296.1 l

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

Configure model	
Model name	Vitocal 111-S AWBT-M-E-AC 111.B06
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	6.02 kW	4.36 kW
El input	1.23 kW	1.80 kW
COP	4.90	2.42

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

## Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	125 %	
P <sub>rated</sub>	5.10 kW	4.10 kW	
SCOP	4.45	3.20	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.53 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.85	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.04 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	4.30	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.11 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.93	4.76	

This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.40	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = Tbiv	2.85	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.08 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.49
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	1.04 kW	1.20 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	10549 kWh	8383 kWh

## Domestic Hot Water (DHW)

### Average Climate



<b>EN 16147</b>	
Declared load profile	XL
Efficiency $\eta_{DHW}$	133 %
COP	3.32
Heating up time	2:15 h:min
Standby power input	25.0 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	296.1 l

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

## Configure model

Model name	Vitocal 111-S AWBT-M-E-AC 111.B06 F
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

## General Data

Power supply	1x230V 50Hz
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## Heating

### EN 14511-2

	Low temperature	Medium temperature
Heat output	6.02 kW	4.36 kW
El input	1.23 kW	1.80 kW
COP	4.90	2.42

### EN 14511-4

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

## Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	125 %	
P <sub>rated</sub>	5.10 kW	4.10 kW	
SCOP	4.45	3.20	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.53 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.85	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.04 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	4.30	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.11 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.93	4.76	

This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.40	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	4.53 kW	3.59 kW
COP Tj = Tbiv	2.85	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.08 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.49
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	1.04 kW	1.20 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	10549 kWh	8383 kWh

## Domestic Hot Water (DHW)

### Average Climate

This information was generated by the HP KEYMARK database on 18 Mar 2022

<b>EN 16147</b>	
Declared load profile	XL
Efficiency $\eta_{DHW}$	133 %
COP	3.32
Heating up time	2:15 h:min
Standby power input	25.0 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	296.1 l

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

Configure model	
Model name	Vitocal 111-S AWBT-M-E-AC 111.B04 F
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.08 kW	4.36 kW
El input	0.80 kW	1.80 kW
COP	5.10	2.42

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

## Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825

		Low temperature	Medium temperature
P <sub>designh</sub>	3.70 kW		
$\eta_s$	175 %	126 %	
Prated	4.00 kW	3.70 kW	
SCOP	4.45	3.22	
T <sub>biv</sub>	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
P <sub>dh</sub> T <sub>j</sub> = -7°C	3.51 kW	3.31 kW	
COP T <sub>j</sub> = -7°C	2.84	1.89	
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.45 kW	2.65 kW	
COP T <sub>j</sub> = +2°C	2.84	3.18	
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.99	0.99	
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.14 kW	2.74 kW	
COP T <sub>j</sub> = +7°C	5.97	4.36	

This information was generated by the HP KEYMARK database on 18 Mar 2022

Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.60 kW	3.27 kW
COP Tj = 12°C	8.78	6.35
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	3.51 kW	3.31 kW
COP Tj = Tbiv	2.84	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.83 kW	2.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.49
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	0.14 kW	0.88 kW
Backup Heater	0.00 kW	
Annual energy consumption Qhe	8202 kWh	7700 kWh

## Domestic Hot Water (DHW)

### Average Climate



<b>EN 16147</b>	
Declared load profile	XL
Efficiency $\eta_{DHW}$	133 %
COP	3.32
Heating up time	2:15 h:min
Standby power input	25.0 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	296.1 l