

Subtype Vitocal x5x-A z4

Certificate Holder	Viessmann Climate Solutions SE
Address	Viessmannstr. 1
ZIP	35107
City	Allendorf/Eder
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	Vitocal x5x-A z4
Registration number	011-1W0465
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	2 kg
Certification Date	15.12.2021

Model Vitocal 250-A AWO-M-E-AC 251.A10

Model name	Vitocal 250-A AWO-M-E-AC 251.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-A AWO-M-E-AC 251.A13

Model name	Vitocal 250-A AWO-M-E-AC 251.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-A AWO-E-AC 251.A10

Model name	Vitocal 250-A AWO-E-AC 251.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-A AWO-E-AC 251.A13

Model name	Vitocal 250-A AWO-E-AC 251.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-A AWO-M-E-AC-AF 251.A10

Model name	Vitocal 250-A AWO-M-E-AC-AF 251.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-A AWO-M-E-AC-AF 251.A13

Model name	Vitocal 250-A AWO-M-E-AC-AF 251.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-A AWO-E-AC-AF 251.A10

Model name	Vitocal 250-A AWO-E-AC-AF 251.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-A AWO-E-AC-AF 251.A13

Model name	Vitocal 250-A AWO-E-AC-AF 251.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-A AWO-M-E-AC 251.A10 SP

Model name	Vitocal 250-A AWO-M-E-AC 251.A10 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-A AWO-M-E-AC 251.A13 SP

Model name	Vitocal 250-A AWO-M-E-AC 251.A13 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-A AWO-M-E-AC-AF 251.A10 SP

Model name	Vitocal 250-A AWO-M-E-AC-AF 251.A10 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-A AWO-M-E-AC-AF 251.A13 SP

Model name	Vitocal 250-A AWO-M-E-AC-AF 251.A13 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.4 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.1 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 252-A AWOT-M-E-AC 251.A10

Model name	Vitocal 252-A AWOT-M-E-AC 251.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 252-A AWOT-M-E-AC 251.A13

Model name	Vitocal 252-A AWOT-M-E-AC 251.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 252-A AWOT-E-AC 251.A10

Model name	Vitocal 252-A AWOT-E-AC 251.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 252-A AWOT-E-AC 251.A13

Model name	Vitocal 252-A AWOT-E-AC 251.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 252-A AWOT-M-E-AC-AF 251.A10

Model name	Vitocal 252-A AWOT-M-E-AC-AF 251.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 252-A AWOT-M-E-AC-AF 251.A13

Model name	Vitocal 252-A AWOT-M-E-AC-AF 251.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 252-A AWOT-E-AC-AF 251.A10

Model name	Vitocal 252-A AWOT-E-AC-AF 251.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 252-A AWOT-E-AC-AF 251.A13

Model name	Vitocal 252-A AWOT-E-AC-AF 251.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 252-A AWOT-M-E-AC 251.A10 SP

Model name	Vitocal 252-A AWOT-M-E-AC 251.A10 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 252-A AWOT-M-E-AC 251.A13 SP

Model name	Vitocal 252-A AWOT-M-E-AC 251.A13 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 252-A AWOT-M-E-AC-AF 251.A10 SP

Model name	Vitocal 252-A AWOT-M-E-AC-AF 251.A10 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 252-A AWOT-M-E-AC-AF 251.A13 SP

Model name	Vitocal 252-A AWOT-M-E-AC-AF 251.A13 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-A AWO-M-E-AC 251.A10 2C

Model name	Vitocal 250-A AWO-M-E-AC 251.A10 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-A AWO-M-E-AC 251.A13 2C

Model name	Vitocal 250-A AWO-M-E-AC 251.A13 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-A AWO-E-AC 251.A10 2C

Model name	Vitocal 250-A AWO-E-AC 251.A10 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-A AWO-E-AC 251.A13 2C

Model name	Vitocal 250-A AWO-E-AC 251.A13 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-A AWO-M-E-AC-AF 251.A10 2C

Model name	Vitocal 250-A AWO-M-E-AC-AF 251.A10 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-A AWO-M-E-AC-AF 251.A13 2C

Model name	Vitocal 250-A AWO-M-E-AC-AF 251.A13 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-A AWO-E-AC-AF 251.A10 2C

Model name	Vitocal 250-A AWO-E-AC-AF 251.A10 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-A AWO-E-AC-AF 251.A13 2C

Model name	Vitocal 250-A AWO-E-AC-AF 251.A13 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-A AWO-M-E-AC 251.A10 2C SP

Model name	Vitocal 250-A AWO-M-E-AC 251.A10 2C SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-A AWO-M-E-AC 251.A13 2C SP

Model name	Vitocal 250-A AWO-M-E-AC 251.A13 2C SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-A AWO-M-E-AC-AF 251.A10 2C SP

Model name	Vitocal 250-A AWO-M-E-AC-AF 251.A10 2C SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-A AWO-M-E-AC-AF 251.A13 2C SP

Model name	Vitocal 250-A AWO-M-E-AC-AF 251.A13 2C SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 252-A AWOT-M-E-AC 251.A10 2C

Model name	Vitocal 252-A AWOT-M-E-AC 251.A10 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 252-A AWOT-M-E-AC 251.A13 2C

Model name	Vitocal 252-A AWOT-M-E-AC 251.A13 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 252-A AWOT-E-AC 251.A10 2C

Model name	Vitocal 252-A AWOT-E-AC 251.A10 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 252-A AWOT-E-AC 251.A13 2C

Model name	Vitocal 252-A AWOT-E-AC 251.A13 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 252-A AWOT-M-E-AC-AF 251.A10 2C

Model name	Vitocal 252-A AWOT-M-E-AC-AF 251.A10 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 252-A AWOT-M-E-AC-AF 251.A13 2C

Model name	Vitocal 252-A AWOT-M-E-AC-AF 251.A13 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 252-A AWOT-E-AC-AF 251.A10 2C

Model name	Vitocal 252-A AWOT-E-AC-AF 251.A10 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 252-A AWOT-E-AC-AF 251.A13 2C

Model name	Vitocal 252-A AWOT-E-AC-AF 251.A13 2C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 252-A AWOT-M-E-AC 251.A10 2C SP

Model name	Vitocal 252-A AWOT-M-E-AC 251.A10 2C SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 252-A AWOT-M-E-AC 251.A13 2C SP

Model name	Vitocal 252-A AWOT-M-E-AC 251.A13 2C SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 252-A AWOT-M-E-AC-AF 251.A10 2C SP

Model name	Vitocal 252-A AWOT-M-E-AC-AF 251.A10 2C SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 252-A AWOT-M-E-AC-AF 251.A13 2C SP

Model name	Vitocal 252-A AWOT-M-E-AC-AF 251.A13 2C SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 150-A AWO-M-E-AC 151.A10

Model name	Vitocal 150-A AWO-M-E-AC 151.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.3 kW	6.75 kW
El input	1.46 kW	2.53 kW
COP	5	2.67

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	145 %
Prated	9.8 kW	9.37 kW
SCOP	4.83	3.7
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.7 kW	8.3 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.2 kW
COP Tj = +2°C	4.8	3.7

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6	4.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.3	6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.7 kW	8.3 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.9 kW	1.87 kW
Annual energy consumption Qhe	4129 kWh	5229 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	127 %
Prated	8.48 kW	7.98 kW
SCOP	4.08	3.25
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.2	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5	4
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.7	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	5126 kWh	6050 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	168 %
Prated	5.27 kW	4.65 kW
SCOP	6.04	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.2	2.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.3	3.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.2	5.4
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.2	2.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.2	2.7

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1165 kWh	1454 kWh

Model Vitocal 150-A AWO-M-E-AC 151.A13

Model name	Vitocal 150-A AWO-M-E-AC 151.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.1 kW	7.56 kW
El input	1.65 kW	2.47 kW
COP	4.9	3.06

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	12.42 kW	12.1 kW
SCOP	4.53	3.54
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.7 kW
COP Tj = -7°C	3	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.7 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.1 kW	9.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.7	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.32 kW	2.4 kW
Annual energy consumption Qhe	5672 kWh	6944 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	144 %	118 %
Prated	10.8 kW	10.35 kW
SCOP	3.67	3.03
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.4	3.6
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.2	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.5	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7252 kWh	8407 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	173 %
Prated	6.68 kW	6.62 kW
SCOP	6.05	4.41
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.4	3.7
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	6.9	5.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1518 kWh	2007 kWh

Model Vitocal 150-A AWO-M-E-AC 151.A16

Model name	Vitocal 150-A AWO-M-E-AC 151.A16
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.1 kW	8.49 kW
El input	1.86 kW	2.53 kW
COP	4.9	3.35

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	13.67 kW	13.37 kW
SCOP	4.52	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12 kW	11.8 kW
COP Tj = -7°C	2.9	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.4 kW	7.5 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.5 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.3 kW	5.7 kW
COP Tj = 12°C	7.3	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	12.1 kW	11.8 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.1 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.57 kW	2.67 kW
Annual energy consumption Qhe	6242 kWh	7670 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	141 %	117 %
Prated	11.83 kW	11.17 kW
SCOP	3.61	2.99
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.1 kW	11.7 kW
COP Tj = -7°C	2.8	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.6 kW	7.5 kW
COP Tj = +2°C	4.3	3.5
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.6 kW
COP Tj = +7°C	6.1	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.4 kW	5.7 kW

COP Tj = 12°C	7.3	6.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	9.7 kW	9.1 kW
COP Tj = Tbiv	2.4	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.4 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.2	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.83 kW	11.17 kW
Annual energy consumption Qhe	8080 kWh	10386 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	175 %
Prated	7.54 kW	7.56 kW
SCOP	6.06	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.5 kW	7.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.6 kW	6.1 kW
COP Tj = +7°C	5.4	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.6 kW
COP Tj = 12°C	7.3	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	7.5 kW	7.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.5 kW	7.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1662 kWh	2266 kWh

Model Vitocal 150-A AWO-E-AC 151.A10

Model name	Vitocal 150-A AWO-E-AC 151.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.3 kW	6.75 kW
El input	1.46 kW	2.53 kW
COP	5	2.67

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	145 %
Prated	9.8 kW	9.37 kW
SCOP	4.83	3.7
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.7 kW	8.3 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.2 kW
COP Tj = +2°C	4.8	3.7

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6	4.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.3	6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.7 kW	8.3 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.9 kW	1.87 kW
Annual energy consumption Qhe	4129 kWh	5229 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	127 %
Prated	8.48 kW	7.98 kW
SCOP	4.08	3.25
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.2	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5	4
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.7	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	5126 kWh	6050 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	168 %
Prated	5.27 kW	4.65 kW
SCOP	6.04	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.2	2.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.3	3.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.2	5.4
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.2	2.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.2	2.7

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1165 kWh	1454 kWh

Model Vitocal 150-A AWO-E-AC 151.A13

Model name	Vitocal 150-A AWO-E-AC 151.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.1 kW	7.56 kW
El input	1.65 kW	2.47 kW
COP	4.9	3.06

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	12.42 kW	12.1 kW
SCOP	4.53	3.54
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.7 kW
COP Tj = -7°C	3	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.7 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.1 kW	9.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.7	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.32 kW	2.4 kW
Annual energy consumption Qhe	5672 kWh	6944 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	144 %	118 %
Prated	10.8 kW	10.35 kW
SCOP	3.67	3.03
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.4	3.6
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.2	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.5	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7252 kWh	8407 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	173 %
Prated	6.68 kW	6.62 kW
SCOP	6.05	4.41
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.4	3.7
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	6.9	5.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1518 kWh	2007 kWh

Model Vitocal 150-A AWO-E-AC 151.A16

Model name	Vitocal 150-A AWO-E-AC 151.A16
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.1 kW	8.49 kW
El input	1.86 kW	2.53 kW
COP	4.9	3.35

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	13.67 kW	13.37 kW
SCOP	4.52	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12 kW	11.8 kW
COP Tj = -7°C	2.9	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.4 kW	7.5 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.5 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.3 kW	5.7 kW
COP Tj = 12°C	7.3	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	12.1 kW	11.8 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.1 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.57 kW	2.67 kW
Annual energy consumption Qhe	6242 kWh	7670 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	141 %	117 %
Prated	11.83 kW	11.17 kW
SCOP	3.61	2.99
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.1 kW	11.7 kW
COP Tj = -7°C	2.8	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.6 kW	7.5 kW
COP Tj = +2°C	4.3	3.5
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.6 kW
COP Tj = +7°C	6.1	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.4 kW	5.7 kW

COP Tj = 12°C	7.3	6.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	9.7 kW	9.1 kW
COP Tj = Tbiv	2.4	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.4 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.2	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.83 kW	11.17 kW
Annual energy consumption Qhe	8080 kWh	10386 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	175 %
Prated	7.54 kW	7.56 kW
SCOP	6.06	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.5 kW	7.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.6 kW	6.1 kW
COP Tj = +7°C	5.4	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.6 kW
COP Tj = 12°C	7.3	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	7.5 kW	7.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.5 kW	7.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1662 kWh	2266 kWh

Model Vitocal 150-A AWO-M-E-AC-AF 151.A10

Model name	Vitocal 150-A AWO-M-E-AC-AF 151.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.3 kW	6.75 kW
El input	1.46 kW	2.53 kW
COP	5	2.67

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	145 %
Prated	9.8 kW	9.37 kW
SCOP	4.83	3.7
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7 °C	8.7 kW	8.3 kW
COP Tj = -7 °C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2 °C	5.4 kW	5.2 kW
COP Tj = +2 °C	4.8	3.7

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6	4.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.3	6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.7 kW	8.3 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.9 kW	1.87 kW
Annual energy consumption Qhe	4129 kWh	5229 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	127 %
Prated	8.48 kW	7.98 kW
SCOP	4.08	3.25
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.2	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5	4
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.7	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	5126 kWh	6050 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	168 %
Prated	5.27 kW	4.65 kW
SCOP	6.04	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.2	2.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.3	3.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.2	5.4
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.2	2.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.2	2.7

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1165 kWh	1454 kWh

Model Vitocal 150-A AWO-M-E-AC-AF 151.A13

Model name	Vitocal 150-A AWO-M-E-AC-AF 151.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.1 kW	7.56 kW
El input	1.65 kW	2.47 kW
COP	4.9	3.06

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	12.42 kW	12.1 kW
SCOP	4.53	3.54
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.7 kW
COP Tj = -7°C	3	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.7 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.1 kW	9.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.7	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.32 kW	2.4 kW
Annual energy consumption Qhe	5672 kWh	6944 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	144 %	118 %
Prated	10.8 kW	10.35 kW
SCOP	3.67	3.03
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.4	3.6
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.2	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.5	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7252 kWh	8407 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	173 %
Prated	6.68 kW	6.62 kW
SCOP	6.05	4.41
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.4	3.7
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	6.9	5.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1518 kWh	2007 kWh

Model Vitocal 150-A AWO-M-E-AC-AF 151.A16

Model name	Vitocal 150-A AWO-M-E-AC-AF 151.A16
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.1 kW	8.49 kW
El input	1.86 kW	2.53 kW
COP	4.9	3.35

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	13.67 kW	13.37 kW
SCOP	4.52	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12 kW	11.8 kW
COP Tj = -7°C	2.9	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.4 kW	7.5 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.5 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.3 kW	5.7 kW
COP Tj = 12°C	7.3	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	12.1 kW	11.8 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.1 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.57 kW	2.67 kW
Annual energy consumption Qhe	6242 kWh	7670 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	141 %	117 %
Prated	11.83 kW	11.17 kW
SCOP	3.61	2.99
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.1 kW	11.7 kW
COP Tj = -7°C	2.8	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.6 kW	7.5 kW
COP Tj = +2°C	4.3	3.5
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.6 kW
COP Tj = +7°C	6.1	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.4 kW	5.7 kW

COP Tj = 12°C	7.3	6.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	9.7 kW	9.1 kW
COP Tj = Tbiv	2.4	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.4 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.2	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.83 kW	11.17 kW
Annual energy consumption Qhe	8080 kWh	10386 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	175 %
Prated	7.54 kW	7.56 kW
SCOP	6.06	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.5 kW	7.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.6 kW	6.1 kW
COP Tj = +7°C	5.4	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.6 kW
COP Tj = 12°C	7.3	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	7.5 kW	7.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.5 kW	7.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1662 kWh	2266 kWh

Model Vitocal 150-A AWO-E-AC-AF 151.A10

Model name	Vitocal 150-A AWO-E-AC-AF 151.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.3 kW	6.75 kW
El input	1.46 kW	2.53 kW
COP	5	2.67

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	145 %
Prated	9.8 kW	9.37 kW
SCOP	4.83	3.7
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7 °C	8.7 kW	8.3 kW
COP Tj = -7 °C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2 °C	5.4 kW	5.2 kW
COP Tj = +2 °C	4.8	3.7

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6	4.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.3	6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.7 kW	8.3 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.9 kW	1.87 kW
Annual energy consumption Qhe	4129 kWh	5229 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	127 %
Prated	8.48 kW	7.98 kW
SCOP	4.08	3.25
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.2	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5	4
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.7	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	5126 kWh	6050 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	168 %
Prated	5.27 kW	4.65 kW
SCOP	6.04	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.2	2.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.3	3.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.2	5.4
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.2	2.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.2	2.7

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1165 kWh	1454 kWh

Model Vitocal 150-A AWO-E-AC-AF 151.A13

Model name	Vitocal 150-A AWO-E-AC-AF 151.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.1 kW	7.56 kW
El input	1.65 kW	2.47 kW
COP	4.9	3.06

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	12.42 kW	12.1 kW
SCOP	4.53	3.54
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.7 kW
COP Tj = -7°C	3	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.7 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.1 kW	9.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.7	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.32 kW	2.4 kW
Annual energy consumption Qhe	5672 kWh	6944 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	144 %	118 %
Prated	10.8 kW	10.35 kW
SCOP	3.67	3.03
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.4	3.6
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.2	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.5	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7252 kWh	8407 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	173 %
Prated	6.68 kW	6.62 kW
SCOP	6.05	4.41
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.4	3.7
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	6.9	5.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1518 kWh	2007 kWh

Model Vitocal 150-A AWO-E-AC-AF 151.A16

Model name	Vitocal 150-A AWO-E-AC-AF 151.A16
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.1 kW	8.49 kW
El input	1.86 kW	2.53 kW
COP	4.9	3.35

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	13.67 kW	13.37 kW
SCOP	4.52	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12 kW	11.8 kW
COP Tj = -7°C	2.9	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.4 kW	7.5 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.5 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.3 kW	5.7 kW
COP Tj = 12°C	7.3	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	12.1 kW	11.8 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.1 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.57 kW	2.67 kW
Annual energy consumption Qhe	6242 kWh	7670 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	141 %	117 %
Prated	11.83 kW	11.17 kW
SCOP	3.61	2.99
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.1 kW	11.7 kW
COP Tj = -7°C	2.8	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.6 kW	7.5 kW
COP Tj = +2°C	4.3	3.5
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.6 kW
COP Tj = +7°C	6.1	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.4 kW	5.7 kW

COP Tj = 12°C	7.3	6.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	9.7 kW	9.1 kW
COP Tj = Tbiv	2.4	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.4 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.2	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.83 kW	11.17 kW
Annual energy consumption Qhe	8080 kWh	10386 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	175 %
Prated	7.54 kW	7.56 kW
SCOP	6.06	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.5 kW	7.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.6 kW	6.1 kW
COP Tj = +7°C	5.4	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.6 kW
COP Tj = 12°C	7.3	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	7.5 kW	7.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.5 kW	7.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1662 kWh	2266 kWh

Model Vitocal 150-A AWO-M-E-AC 151.A10 SP

Model name	Vitocal 150-A AWO-M-E-AC 151.A10 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.3 kW	6.75 kW
El input	1.46 kW	2.53 kW
COP	5	2.67

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	145 %
Prated	9.8 kW	9.37 kW
SCOP	4.83	3.7
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.7 kW	8.3 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.2 kW
COP Tj = +2°C	4.8	3.7

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6	4.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.3	6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.7 kW	8.3 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.9 kW	1.87 kW
Annual energy consumption Qhe	4129 kWh	5229 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	127 %
Prated	8.48 kW	7.98 kW
SCOP	4.08	3.25
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.2	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5	4
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.7	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	5126 kWh	6050 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	168 %
Prated	5.27 kW	4.65 kW
SCOP	6.04	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.2	2.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.3	3.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.2	5.4
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.2	2.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.2	2.7

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1165 kWh	1454 kWh

Model Vitocal 150-A AWO-M-E-AC 151.A13 SP

Model name	Vitocal 150-A AWO-M-E-AC 151.A13 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.1 kW	7.56 kW
El input	1.65 kW	2.47 kW
COP	4.9	3.06

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	12.42 kW	12.1 kW
SCOP	4.53	3.54
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.7 kW
COP Tj = -7°C	3	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.7 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.1 kW	9.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.7	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.32 kW	2.4 kW
Annual energy consumption Qhe	5672 kWh	6944 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	144 %	118 %
Prated	10.8 kW	10.35 kW
SCOP	3.67	3.03
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.4	3.6
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.2	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.5	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7252 kWh	8407 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	239 %	173 %
Prated	6.68 kW	6.62 kW
SCOP	6.05	4.41
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.4	3.7
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	6.9	5.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1518 kWh	2007 kWh

Model Vitocal 150-A AWO-M-E-AC 151.A16 SP

Model name	Vitocal 150-A AWO-M-E-AC 151.A16 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.1 kW	8.49 kW
El input	1.86 kW	2.53 kW
COP	4.9	3.35

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	13.67 kW	13.37 kW
SCOP	4.52	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12 kW	11.8 kW
COP Tj = -7°C	2.9	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.4 kW	7.5 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.5 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.3 kW	5.7 kW
COP Tj = 12°C	7.3	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	12.1 kW	11.8 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.1 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.57 kW	2.67 kW
Annual energy consumption Qhe	6242 kWh	7670 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	141 %	117 %
Prated	11.83 kW	11.17 kW
SCOP	3.61	2.99
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.1 kW	11.7 kW
COP Tj = -7°C	2.8	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.6 kW	7.5 kW
COP Tj = +2°C	4.3	3.5
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.6 kW
COP Tj = +7°C	6.1	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.4 kW	5.7 kW

COP Tj = 12°C	7.3	6.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	9.7 kW	9.1 kW
COP Tj = Tbiv	2.4	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.4 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.2	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.83 kW	11.17 kW
Annual energy consumption Qhe	8080 kWh	10386 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	175 %
Prated	7.54 kW	7.56 kW
SCOP	6.06	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.5 kW	7.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.6 kW	6.1 kW
COP Tj = +7°C	5.4	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.6 kW
COP Tj = 12°C	7.3	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	7.5 kW	7.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.5 kW	7.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1662 kWh	2266 kWh

Model Vitocal 150-A AWO-M-E-AC-AF 151.A10 SP

Model name	Vitocal 150-A AWO-M-E-AC-AF 151.A10 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.3 kW	6.75 kW
El input	1.46 kW	2.53 kW
COP	5	2.67

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	145 %
Prated	9.8 kW	9.37 kW
SCOP	4.83	3.7
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7 °C	8.7 kW	8.3 kW
COP Tj = -7 °C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2 °C	5.4 kW	5.2 kW
COP Tj = +2 °C	4.8	3.7

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6	4.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.3	6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.7 kW	8.3 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.9 kW	1.87 kW
Annual energy consumption Qhe	4129 kWh	5229 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	160 %	127 %
Prated	8.48 kW	7.98 kW
SCOP	4.08	3.25
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.2	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5	4
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.7	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	5126 kWh	6050 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	168 %
Prated	5.27 kW	4.65 kW
SCOP	6.04	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.2	2.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.3	3.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.2	5.4
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.2	2.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.2	2.7

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1165 kWh	1454 kWh

Model Vitocal 150-A AWO-M-E-AC-AF 151.A13 SP

Model name	Vitocal 150-A AWO-M-E-AC-AF 151.A13 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.1 kW	7.56 kW
El input	1.65 kW	2.47 kW
COP	4.9	3.06

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	12.42 kW	12.1 kW
SCOP	4.53	3.54
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.7 kW
COP Tj = -7°C	3	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.7 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.1 kW	9.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.7	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.32 kW	2.4 kW
Annual energy consumption Qhe	5672 kWh	6944 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	144 %	118 %
Prated	10.8 kW	10.35 kW
SCOP	3.67	3.03
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.4	3.6
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.2	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.5	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7252 kWh	8407 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	173 %
Prated	6.68 kW	6.62 kW
SCOP	6.05	4.41
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.4	3.7
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	6.9	5.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1518 kWh	2007 kWh

Model Vitocal 150-A AWO-M-E-AC-AF 151.A16 SP

Model name	Vitocal 150-A AWO-M-E-AC-AF 151.A16 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.1 kW	8.49 kW
El input	1.86 kW	2.53 kW
COP	4.9	3.35

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	13.67 kW	13.37 kW
SCOP	4.52	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12 kW	11.8 kW
COP Tj = -7°C	2.9	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.4 kW	7.5 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.5 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.3 kW	5.7 kW
COP Tj = 12°C	7.3	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	12.1 kW	11.8 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.1 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.57 kW	2.67 kW
Annual energy consumption Qhe	6242 kWh	7670 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	141 %	117 %
Prated	11.83 kW	11.17 kW
SCOP	3.61	2.99
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.1 kW	11.7 kW
COP Tj = -7°C	2.8	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.6 kW	7.5 kW
COP Tj = +2°C	4.3	3.5
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.6 kW
COP Tj = +7°C	6.1	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.4 kW	5.7 kW

COP Tj = 12°C	7.3	6.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	9.7 kW	9.1 kW
COP Tj = Tbiv	2.4	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.4 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.2	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.83 kW	11.17 kW
Annual energy consumption Qhe	8080 kWh	10386 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	175 %
Prated	7.54 kW	7.56 kW
SCOP	6.06	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.5 kW	7.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.6 kW	6.1 kW
COP Tj = +7°C	5.4	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.6 kW
COP Tj = 12°C	7.3	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	7.5 kW	7.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.5 kW	7.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1662 kWh	2266 kWh

Model Vitocal 151-A AWOT-M-E-AC 151.A10

Model name	Vitocal 151-A AWOT-M-E-AC 151.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.3 kW	6.75 kW
El input	1.46 kW	2.53 kW
COP	5	2.67

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	145 %
Prated	9.8 kW	9.37 kW
SCOP	4.83	3.7
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.7 kW	8.3 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.2 kW
COP Tj = +2°C	4.8	3.7

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6	4.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.3	6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.7 kW	8.3 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.9 kW	1.87 kW
Annual energy consumption Qhe	4129 kWh	5229 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	127 %
Prated	8.48 kW	7.98 kW
SCOP	4.08	3.25
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.2	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5	4
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.7	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	5126 kWh	6050 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	168 %
Prated	5.27 kW	4.65 kW
SCOP	6.04	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.2	2.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.3	3.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.2	5.4
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.2	2.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.2	2.7

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1165 kWh	1454 kWh

Model Vitocal 151-A AWOT-M-E-AC 151.A13

Model name	Vitocal 151-A AWOT-M-E-AC 151.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.1 kW	7.56 kW
El input	1.65 kW	2.47 kW
COP	4.9	3.06

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	12.42 kW	12.1 kW
SCOP	4.53	3.54
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.7 kW
COP Tj = -7°C	3	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.7 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.1 kW	9.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.7	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.32 kW	2.4 kW
Annual energy consumption Qhe	5672 kWh	6944 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	144 %	118 %
Prated	10.8 kW	10.35 kW
SCOP	3.67	3.03
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.4	3.6
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.2	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.5	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7252 kWh	8407 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	173 %
Prated	6.68 kW	6.62 kW
SCOP	6.05	4.41
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.4	3.7
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	6.9	5.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1518 kWh	2007 kWh

Model Vitocal 151-A AWOT-M-E-AC 151.A16

Model name	Vitocal 151-A AWOT-M-E-AC 151.A16
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.1 kW	8.49 kW
El input	1.86 kW	2.53 kW
COP	4.9	3.35

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	13.67 kW	13.37 kW
SCOP	4.52	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12 kW	11.8 kW
COP Tj = -7°C	2.9	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.4 kW	7.5 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.5 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.3 kW	5.7 kW
COP Tj = 12°C	7.3	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	12.1 kW	11.8 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.1 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.57 kW	2.67 kW
Annual energy consumption Qhe	6242 kWh	7670 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	141 %	117 %
Prated	11.83 kW	11.17 kW
SCOP	3.61	2.99
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.1 kW	11.7 kW
COP Tj = -7°C	2.8	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.6 kW	7.5 kW
COP Tj = +2°C	4.3	3.5
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.6 kW
COP Tj = +7°C	6.1	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.4 kW	5.7 kW

COP Tj = 12°C	7.3	6.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	9.7 kW	9.1 kW
COP Tj = Tbiv	2.4	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.4 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.2	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.83 kW	11.17 kW
Annual energy consumption Qhe	8080 kWh	10386 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	175 %
Prated	7.54 kW	7.56 kW
SCOP	6.06	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.5 kW	7.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.6 kW	6.1 kW
COP Tj = +7°C	5.4	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.6 kW
COP Tj = 12°C	7.3	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	7.5 kW	7.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.5 kW	7.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1662 kWh	2266 kWh

Model Vitocal 151-A AWOT-E-AC 151.A10

Model name	Vitocal 151-A AWOT-E-AC 151.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.3 kW	6.75 kW
El input	1.46 kW	2.53 kW
COP	5	2.67

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	145 %
Prated	9.8 kW	9.37 kW
SCOP	4.83	3.7
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7 °C	8.7 kW	8.3 kW
COP Tj = -7 °C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2 °C	5.4 kW	5.2 kW
COP Tj = +2 °C	4.8	3.7

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6	4.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.3	6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.7 kW	8.3 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.9 kW	1.87 kW
Annual energy consumption Qhe	4129 kWh	5229 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	127 %
Prated	8.48 kW	7.98 kW
SCOP	4.08	3.25
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.2	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5	4
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.7	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	5126 kWh	6050 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	168 %
Prated	5.27 kW	4.65 kW
SCOP	6.04	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.2	2.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.3	3.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.2	5.4
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.2	2.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.2	2.7

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1165 kWh	1454 kWh

Model Vitocal 151-A AWOT-E-AC 151.A13

Model name	Vitocal 151-A AWOT-E-AC 151.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.1 kW	7.56 kW
El input	1.65 kW	2.47 kW
COP	4.9	3.06

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	12.42 kW	12.1 kW
SCOP	4.53	3.54
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.7 kW
COP Tj = -7°C	3	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.7 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.1 kW	9.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.7	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.32 kW	2.4 kW
Annual energy consumption Qhe	5672 kWh	6944 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	144 %	118 %
Prated	10.8 kW	10.35 kW
SCOP	3.67	3.03
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.4	3.6
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.2	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.5	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7252 kWh	8407 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	173 %
Prated	6.68 kW	6.62 kW
SCOP	6.05	4.41
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.4	3.7
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	6.9	5.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1518 kWh	2007 kWh

Model Vitocal 151-A AWOT-E-AC 151.A16

Model name	Vitocal 151-A AWOT-E-AC 151.A16
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.1 kW	8.49 kW
El input	1.86 kW	2.53 kW
COP	4.9	3.35

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	13.67 kW	13.37 kW
SCOP	4.52	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12 kW	11.8 kW
COP Tj = -7°C	2.9	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.4 kW	7.5 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.5 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.3 kW	5.7 kW
COP Tj = 12°C	7.3	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	12.1 kW	11.8 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.1 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.57 kW	2.67 kW
Annual energy consumption Qhe	6242 kWh	7670 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	141 %	117 %
Prated	11.83 kW	11.17 kW
SCOP	3.61	2.99
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.1 kW	11.7 kW
COP Tj = -7°C	2.8	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.6 kW	7.5 kW
COP Tj = +2°C	4.3	3.5
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.6 kW
COP Tj = +7°C	6.1	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.4 kW	5.7 kW

COP Tj = 12°C	7.3	6.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	9.7 kW	9.1 kW
COP Tj = Tbiv	2.4	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.4 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.2	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.83 kW	11.17 kW
Annual energy consumption Qhe	8080 kWh	10386 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	175 %
Prated	7.54 kW	7.56 kW
SCOP	6.06	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.5 kW	7.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.6 kW	6.1 kW
COP Tj = +7°C	5.4	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.6 kW
COP Tj = 12°C	7.3	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	7.5 kW	7.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.5 kW	7.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1662 kWh	2266 kWh

Model Vitocal 151-A AWOT-M-E-AC-AF 151.A10

Model name	Vitocal 151-A AWOT-M-E-AC-AF 151.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.3 kW	6.75 kW
El input	1.46 kW	2.53 kW
COP	5	2.67

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	145 %
Prated	9.8 kW	9.37 kW
SCOP	4.83	3.7
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7 °C	8.7 kW	8.3 kW
COP Tj = -7 °C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2 °C	5.4 kW	5.2 kW
COP Tj = +2 °C	4.8	3.7

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6	4.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.3	6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.7 kW	8.3 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.9 kW	1.87 kW
Annual energy consumption Qhe	4129 kWh	5229 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	127 %
Prated	8.48 kW	7.98 kW
SCOP	4.08	3.25
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.2	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5	4
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.7	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	5126 kWh	6050 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	168 %
Prated	5.27 kW	4.65 kW
SCOP	6.04	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.2	2.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.3	3.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.2	5.4
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.2	2.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.2	2.7

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1165 kWh	1454 kWh

Model Vitocal 151-A AWOT-M-E-AC-AF 151.A13

Model name	Vitocal 151-A AWOT-M-E-AC-AF 151.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.1 kW	7.56 kW
El input	1.65 kW	2.47 kW
COP	4.9	3.06

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	12.42 kW	12.1 kW
SCOP	4.53	3.54
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.7 kW
COP Tj = -7°C	3	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.7 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.1 kW	9.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.7	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.32 kW	2.4 kW
Annual energy consumption Qhe	5672 kWh	6944 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	144 %	118 %
Prated	10.8 kW	10.35 kW
SCOP	3.67	3.03
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.4	3.6
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.2	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.5	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7252 kWh	8407 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	173 %
Prated	6.68 kW	6.62 kW
SCOP	6.05	4.41
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.4	3.7
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	6.9	5.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1518 kWh	2007 kWh

Model Vitocal 151-A AWOT-M-E-AC-AF 151.A16

Model name	Vitocal 151-A AWOT-M-E-AC-AF 151.A16
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.1 kW	8.49 kW
El input	1.86 kW	2.53 kW
COP	4.9	3.35

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	13.67 kW	13.37 kW
SCOP	4.52	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12 kW	11.8 kW
COP Tj = -7°C	2.9	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.4 kW	7.5 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.5 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.3 kW	5.7 kW
COP Tj = 12°C	7.3	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	12.1 kW	11.8 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.1 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.57 kW	2.67 kW
Annual energy consumption Qhe	6242 kWh	7670 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	141 %	117 %
Prated	11.83 kW	11.17 kW
SCOP	3.61	2.99
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.1 kW	11.7 kW
COP Tj = -7°C	2.8	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.6 kW	7.5 kW
COP Tj = +2°C	4.3	3.5
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.6 kW
COP Tj = +7°C	6.1	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.4 kW	5.7 kW

COP Tj = 12°C	7.3	6.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	9.7 kW	9.1 kW
COP Tj = Tbiv	2.4	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.4 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.2	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.83 kW	11.17 kW
Annual energy consumption Qhe	8080 kWh	10386 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	175 %
Prated	7.54 kW	7.56 kW
SCOP	6.06	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.5 kW	7.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.6 kW	6.1 kW
COP Tj = +7°C	5.4	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.6 kW
COP Tj = 12°C	7.3	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	7.5 kW	7.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.5 kW	7.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1662 kWh	2266 kWh

Model Vitocal 151-A AWOT-E-AC-AF 151.A10

Model name	Vitocal 151-A AWOT-E-AC-AF 151.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.3 kW	6.75 kW
El input	1.46 kW	2.53 kW
COP	5	2.67

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	145 %
Prated	9.8 kW	9.37 kW
SCOP	4.83	3.7
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7 °C	8.7 kW	8.3 kW
COP Tj = -7 °C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2 °C	5.4 kW	5.2 kW
COP Tj = +2 °C	4.8	3.7

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6	4.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.3	6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.7 kW	8.3 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.9 kW	1.87 kW
Annual energy consumption Qhe	4129 kWh	5229 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	160 %	127 %
Prated	8.48 kW	7.98 kW
SCOP	4.08	3.25
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.2	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5	4
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.7	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	5126 kWh	6050 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	168 %
Prated	5.27 kW	4.65 kW
SCOP	6.04	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.2	2.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.3	3.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.2	5.4
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.2	2.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.2	2.7

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1165 kWh	1454 kWh

Model Vitocal 151-A AWOT-E-AC-AF 151.A13

Model name	Vitocal 151-A AWOT-E-AC-AF 151.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.1 kW	7.56 kW
El input	1.65 kW	2.47 kW
COP	4.9	3.06

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	12.42 kW	12.1 kW
SCOP	4.53	3.54
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.7 kW
COP Tj = -7°C	3	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.7 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.1 kW	9.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.7	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.32 kW	2.4 kW
Annual energy consumption Qhe	5672 kWh	6944 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	144 %	118 %
Prated	10.8 kW	10.35 kW
SCOP	3.67	3.03
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.4	3.6
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.2	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.5	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7252 kWh	8407 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	173 %
Prated	6.68 kW	6.62 kW
SCOP	6.05	4.41
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.4	3.7
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	6.9	5.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1518 kWh	2007 kWh

Model Vitocal 151-A AWOT-E-AC-AF 151.A16

Model name	Vitocal 151-A AWOT-E-AC-AF 151.A16
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.1 kW	8.49 kW
El input	1.86 kW	2.53 kW
COP	4.9	3.35

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	13.67 kW	13.37 kW
SCOP	4.52	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12 kW	11.8 kW
COP Tj = -7°C	2.9	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.4 kW	7.5 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.5 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.3 kW	5.7 kW
COP Tj = 12°C	7.3	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	12.1 kW	11.8 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.1 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.57 kW	2.67 kW
Annual energy consumption Qhe	6242 kWh	7670 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	141 %	117 %
Prated	11.83 kW	11.17 kW
SCOP	3.61	2.99
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.1 kW	11.7 kW
COP Tj = -7°C	2.8	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.6 kW	7.5 kW
COP Tj = +2°C	4.3	3.5
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.6 kW
COP Tj = +7°C	6.1	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.4 kW	5.7 kW

COP Tj = 12°C	7.3	6.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	9.7 kW	9.1 kW
COP Tj = Tbiv	2.4	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.4 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.2	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.83 kW	11.17 kW
Annual energy consumption Qhe	8080 kWh	10386 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	175 %
Prated	7.54 kW	7.56 kW
SCOP	6.06	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.5 kW	7.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.6 kW	6.1 kW
COP Tj = +7°C	5.4	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.6 kW
COP Tj = 12°C	7.3	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	7.5 kW	7.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.5 kW	7.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1662 kWh	2266 kWh

Model Vitocal 151-A AWOT-M-E-AC 151.A10 SP

Model name	Vitocal 151-A AWOT-M-E-AC 151.A10 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.3 kW	6.75 kW
El input	1.46 kW	2.53 kW
COP	5	2.67

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	145 %
Prated	9.8 kW	9.37 kW
SCOP	4.83	3.7
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7 °C	8.7 kW	8.3 kW
COP Tj = -7 °C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2 °C	5.4 kW	5.2 kW
COP Tj = +2 °C	4.8	3.7

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6	4.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.3	6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.7 kW	8.3 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.9 kW	1.87 kW
Annual energy consumption Qhe	4129 kWh	5229 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	127 %
Prated	8.48 kW	7.98 kW
SCOP	4.08	3.25
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.2	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5	4
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.7	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	5126 kWh	6050 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	168 %
Prated	5.27 kW	4.65 kW
SCOP	6.04	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.2	2.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.3	3.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.2	5.4
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.2	2.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.2	2.7

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1165 kWh	1454 kWh

Model Vitocal 151-A AWOT-M-E-AC 151.A13 SP

Model name	Vitocal 151-A AWOT-M-E-AC 151.A13 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.1 kW	7.56 kW
El input	1.65 kW	2.47 kW
COP	4.9	3.06

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	12.42 kW	12.1 kW
SCOP	4.53	3.54
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.7 kW
COP Tj = -7°C	3	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.7 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.1 kW	9.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.7	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.32 kW	2.4 kW
Annual energy consumption Qhe	5672 kWh	6944 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	144 %	118 %
Prated	10.8 kW	10.35 kW
SCOP	3.67	3.03
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.4	3.6
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.2	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.5	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7252 kWh	8407 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	173 %
Prated	6.68 kW	6.62 kW
SCOP	6.05	4.41
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.4	3.7
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	6.9	5.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1518 kWh	2007 kWh

Model Vitocal 151-A AWOT-M-E-AC 151.A16 SP

Model name	Vitocal 151-A AWOT-M-E-AC 151.A16 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.1 kW	8.49 kW
El input	1.86 kW	2.53 kW
COP	4.9	3.35

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	13.67 kW	13.37 kW
SCOP	4.52	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12 kW	11.8 kW
COP Tj = -7°C	2.9	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.4 kW	7.5 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.5 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.3 kW	5.7 kW
COP Tj = 12°C	7.3	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	12.1 kW	11.8 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.1 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.57 kW	2.67 kW
Annual energy consumption Qhe	6242 kWh	7670 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	141 %	117 %
Prated	11.83 kW	11.17 kW
SCOP	3.61	2.99
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.1 kW	11.7 kW
COP Tj = -7°C	2.8	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.6 kW	7.5 kW
COP Tj = +2°C	4.3	3.5
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.6 kW
COP Tj = +7°C	6.1	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.4 kW	5.7 kW

COP Tj = 12°C	7.3	6.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	9.7 kW	9.1 kW
COP Tj = Tbiv	2.4	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.4 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.2	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.83 kW	11.17 kW
Annual energy consumption Qhe	8080 kWh	10386 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	175 %
Prated	7.54 kW	7.56 kW
SCOP	6.06	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.5 kW	7.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.6 kW	6.1 kW
COP Tj = +7°C	5.4	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.6 kW
COP Tj = 12°C	7.3	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	7.5 kW	7.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.5 kW	7.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1662 kWh	2266 kWh

Model Vitocal 151-A AWOT-M-E-AC-AF 151.A10 SP

Model name	Vitocal 151-A AWOT-M-E-AC-AF 151.A10 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.3 kW	6.75 kW
El input	1.46 kW	2.53 kW
COP	5	2.67

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	190 %	145 %
Prated	9.8 kW	9.37 kW
SCOP	4.83	3.7
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.7 kW	8.3 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.2 kW
COP Tj = +2°C	4.8	3.7

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6	4.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.3	6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.7 kW	8.3 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.9 kW	1.87 kW
Annual energy consumption Qhe	4129 kWh	5229 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	127 %
Prated	8.48 kW	7.98 kW
SCOP	4.08	3.25
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.2	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5	4
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.7	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	5126 kWh	6050 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	168 %
Prated	5.27 kW	4.65 kW
SCOP	6.04	4.27
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.2	2.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.3	3.6
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.2	5.4
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.2	2.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.2	2.7

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1165 kWh	1454 kWh

Model Vitocal 151-A AWOT-M-E-AC-AF 151.A13 SP

Model name	Vitocal 151-A AWOT-M-E-AC-AF 151.A13 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.1 kW	7.56 kW
El input	1.65 kW	2.47 kW
COP	4.9	3.06

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	12.42 kW	12.1 kW
SCOP	4.53	3.54
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.7 kW
COP Tj = -7°C	3	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.5 kW	5.7 kW
COP Tj = 12°C	7.4	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.7 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.1 kW	9.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.7	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.32 kW	2.4 kW
Annual energy consumption Qhe	5672 kWh	6944 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	144 %	118 %
Prated	10.8 kW	10.35 kW
SCOP	3.67	3.03
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.4	3.6
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.2	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.2	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.5	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7252 kWh	8407 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	173 %
Prated	6.68 kW	6.62 kW
SCOP	6.05	4.41
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.4	3.7
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	6.9	5.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1518 kWh	2007 kWh

Model Vitocal 151-A AWOT-M-E-AC-AF 151.A16 SP

Model name	Vitocal 151-A AWOT-M-E-AC-AF 151.A16 SP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	9.1 kW	8.49 kW
El input	1.86 kW	2.53 kW
COP	4.9	3.35

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	141 %
Prated	13.67 kW	13.37 kW
SCOP	4.52	3.6
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12 kW	11.8 kW
COP Tj = -7°C	2.9	2.3
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.4 kW	7.5 kW
COP Tj = +2°C	4.3	3.4

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.5 kW
COP Tj = +7°C	6.1	4.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.3 kW	5.7 kW
COP Tj = 12°C	7.3	6.3
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	12.1 kW	11.8 kW
COP Tj = Tbiv	2.9	2.3
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.1 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	2.1
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.57 kW	2.67 kW
Annual energy consumption Qhe	6242 kWh	7670 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	141 %	117 %
Prated	11.83 kW	11.17 kW
SCOP	3.61	2.99
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.1 kW	11.7 kW
COP Tj = -7°C	2.8	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	7.6 kW	7.5 kW
COP Tj = +2°C	4.3	3.5
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.7 kW	6.6 kW
COP Tj = +7°C	6.1	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.4 kW	5.7 kW

COP Tj = 12°C	7.3	6.5
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	9.7 kW	9.1 kW
COP Tj = Tbiv	2.4	2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.4 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.2	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.83 kW	11.17 kW
Annual energy consumption Qhe	8080 kWh	10386 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	239 %	175 %
Prated	7.54 kW	7.56 kW
SCOP	6.06	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.5 kW	7.6 kW
COP Tj = +2°C	3.8	2.8
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	6.6 kW	6.1 kW
COP Tj = +7°C	5.4	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.6 kW
COP Tj = 12°C	7.3	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	7.5 kW	7.6 kW
COP Tj = Tbiv	3.8	2.8
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.5 kW	7.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.8	2.8

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1662 kWh	2266 kWh

Model Vitocal 250-AH HAWO-M-AC 252.A10

Model name	Vitocal 250-AH HAWO-M-AC 252.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-AH HAWO-M-AC 252.A13

Model name	Vitocal 250-AH HAWO-M-AC 252.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-AH HAWO-AC 252.A10

Model name	Vitocal 250-AH HAWO-AC 252.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-AH HAWO-AC 252.A13

Model name	Vitocal 250-AH HAWO-AC 252.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-AH HAWO-M-AC-AF 252.A10

Model name	Vitocal 250-AH HAWO-M-AC-AF 252.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-AH HAWO-M-AC-AF 252.A13

Model name	Vitocal 250-AH HAWO-M-AC-AF 252.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh

Model Vitocal 250-AH HAWO-AC-AF 252.A10

Model name	Vitocal 250-AH HAWO-AC-AF 252.A10
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	7.31 kW	6.75 kW
El input	1.38 kW	2.27 kW
COP	5.31	2.97

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	197 %	152 %
Prated	9.8 kW	9.37 kW
SCOP	5.01	3.87
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.9 kW	8.5 kW
COP Tj = -7°C	3.4	2.6
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.4 kW	5.1 kW
COP Tj = +2°C	5	3.8

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.5 kW
COP Tj = +7°C	6.4	5
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.8	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.9 kW	8.5 kW
COP Tj = Tbiv	3.4	2.6
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.2 kW	7.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.2	2.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.6 kW	1.67 kW
Annual energy consumption Qhe	4055 kWh	4943 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	165 %	131 %
Prated	8.48 kW	7.98 kW
SCOP	4.19	3.35
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	8.7 kW	8.4 kW
COP Tj = -7°C	3.4	2.7
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.5 kW	5.2 kW
COP Tj = +2°C	5.3	4.1
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.2
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.9 kW	6.5 kW
COP Tj = Tbiv	2.8	2.2
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6 kW	5.5 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.9
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.48 kW	7.98 kW
Annual energy consumption Qhe	4988 kWh	5868 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	243 %	172 %
Prated	5.27 kW	4.65 kW
SCOP	6.14	4.37
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.3 kW	4.7 kW
COP Tj = +2°C	4.4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.8
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.8 kW	5.5 kW
COP Tj = 12°C	7.5	5.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	5.3 kW	4.7 kW
COP Tj = Tbiv	4.4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.3 kW	4.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1145 kWh	1419 kWh

Model Vitocal 250-AH HAWO-AC-AF 252.A13

Model name	Vitocal 250-AH HAWO-AC-AF 252.A13
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	Yes

Outdoor Air/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.13 kW	7.56 kW
El input	1.56 kW	2.23 kW
COP	5.21	3.4

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	195 %	154 %
Prated	12.42 kW	12.1 kW
SCOP	4.96	3.93
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3.1	2.4
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	5	3.9

Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.8 kW	5.7 kW
COP Tj = +7°C	6.5	5.1
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.7	6.6
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	11 kW	10.8 kW
COP Tj = Tbiv	3.1	2.4
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.3 kW	9.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.9	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	70 °C	70 °C
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.12 kW	2.3 kW
Annual energy consumption Qhe	5573 kWh	6662 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	148 %	122 %
Prated	10.8 kW	10.35 kW
SCOP	3.79	3.14
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	11 kW	10.8 kW
COP Tj = -7°C	3	2.5
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.8 kW	6.6 kW
COP Tj = +2°C	4.5	3.7
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.9 kW	5.7 kW
COP Tj = +7°C	6.5	5.3
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.6 kW	5.7 kW

COP Tj = 12°C	7.5	6.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	8.8 kW	8.4 kW
COP Tj = Tbiv	2.6	2.1
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.7 kW	7.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.3	1.8
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.8 kW	10.35 kW
Annual energy consumption Qhe	7028 kWh	8129 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	238 %	179 %
Prated	6.68 kW	6.62 kW
SCOP	6.03	4.55
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.7 kW	6.6 kW
COP Tj = +2°C	4	2.9
Cdh Tj = +2 °C	1	1
Pdh Tj = +7°C	5.7 kW	5.2 kW
COP Tj = +7°C	5.6	3.9
Cdh Tj = +7 °C	1	1
Pdh Tj = 12°C	5.7 kW	5.5 kW
COP Tj = 12°C	7.2	5.8
Cdh Tj = +12 °C	1	1
Pdh Tj = Tbiv	6.7 kW	6.6 kW
COP Tj = Tbiv	4	2.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.7 kW	6.6 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4	2.9

Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
Poff	0 W	0 W
PTO	14 W	14 W
PSB	16 W	16 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	1478 kWh	1942 kWh