## Subtype Vitocal 250-A z5

| | |
|---|---|
| Certificate Holder | Viessmann Climate Solutions GmbH & Co. KG |
| Address | Viessmannstr. 1 |
| ZIP | 35107 |
| City | Allendorf/Eder |
| Country | DE |
| Certification Body | DIN CERTCO Gesellschaft für Konformitätsbewertung mbH |
| Subtype title | Vitocal 250-A z5 |
| Registration number | 011-1W0776 |
| Heat Pump Type | Outdoor Air/Water |
| Refrigerant | R290 |
| Mass of Refrigerant | 2 kg |
| Certification Date | 11.03.2024 |
| Testing basis | HP KEYMARK certification scheme rules V14 |

## Model IDU-A AWMIW.A1.19-V052 ODU 250-A AWMOF-251.A1.16-400-V001

| | |
|---|---|
| Model name | IDU-A AWMIW.A1.19-V052<br>ODU 250-A AWMOF-251.A1.16-400-V001 |
| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

## Model IDU-A AWMIW.A1.19-V052 ODU 250-A AWMOF-251.A1.19-400-V001

| | |
|---|---|
| Model name | IDU-A AWMIW.A1.19-V052<br>ODU 250-A AWMOF-251.A1.19-400-V001 |
| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

## Model IDU-A Modular AWMIW.A1.19-V051 ODU 250-A AWMOF-251.A1.16-400-V001

| | |
|---|---|
| Model name | IDU-A Modular AWMIW.A1.19-V051<br>ODU 250-A AWMOF-251.A1.16-400-V001 |
| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

| EN 12102-1 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

## Model IDU-A Modular AWMIW.A1.19-V051 ODU 250-A AWMOF-251.A1.19-400-V001

| | |
|---|---|
| Model name | IDU-A Modular AWMIW.A1.19-V051<br>ODU 250-A AWMOF-251.A1.19-400-V001 |
| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

## Model IDU-A 2C AWMIW.A1.19-V055 ODU 250-A AWMOF-251.A1.16-400-V001

| | |
|---|---|
| Model name | IDU-A 2C AWMIW.A1.19-V055<br>ODU 250-A AWMOF-251.A1.16-400-V001 |
| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

| EN 12102-1 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

## Model IDU-A 2C AWMIW.A1.19-V055 ODU 250-A AWMOF-251.A1.19-400-V001

| | |
|---|---|
| Model name | IDU-A 2C AWMIW.A1.19-V055<br>ODU 250-A AWMOF-251.A1.19-400-V001 |
| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

| EN 12102-1 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

## Model IDU-A AWMIW.A1.19-V052 ODU 250-A AWMOF-251.A1.16-400-V002

| | |
|---|---|
| Model name | IDU-A AWMIW.A1.19-V052<br>ODU 250-A AWMOF-251.A1.16-400-V002 |
| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

| EN 12102-1 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

## Model IDU-A AWMIW.A1.19-V052 ODU 250-A AWMOF-251.A1.19-400-V002

| | |
|---|---|
| Model name | IDU-A AWMIW.A1.19-V052<br>ODU 250-A AWMOF-251.A1.19-400-V002 |
| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

| EN 12102-1 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

## Model IDU-A Modular AWMIW.A1.19-V051 ODU 250-A AWMOF-251.A1.16-400-V002

| | |
|---|---|
| Model name | IDU-A Modular AWMIW.A1.19-V051<br>ODU 250-A AWMOF-251.A1.16-400-V002 |
| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

| EN 12102-1 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

## Model IDU-A Modular AWMIW.A1.19-V051 ODU 250-A AWMOF-251.A1.19-400-V002

| | |
|---|---|
| Model name | IDU-A Modular AWMIW.A1.19-V051<br>ODU 250-A AWMOF-251.A1.19-400-V002 |
| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

| EN 12102-1 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

## Model IDU-A 2C AWMIW.A1.19-V055 ODU 250-A AWMOF-251.A1.16-400-V002

| | |
|---|---|
| Model name | IDU-A 2C AWMIW.A1.19-V055<br>ODU 250-A AWMOF-251.A1.16-400-V002 |
| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

## Model IDU-A 2C AWMIW.A1.19-V055 ODU 250-A AWMOF-251.A1.19-400-V002

| | |
|---|---|
| Model name | IDU-A 2C AWMIW.A1.19-V055<br>ODU 250-A AWMOF-251.A1.19-400-V002 |
| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

| EN 12102-1 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

| Model IDU-A Compact AWMIT.A1.19-V053 ODU 250-A AWMOF-251.A1.16-400-V001 | |
|---|---|
| Model name | IDU-A Compact AWMIT.A1.19-V053<br>ODU 250-A AWMOF-251.A1.16-400-V001 |
| Application | Heating + DHW + low 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 16147 \| Average Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |
| EN 16147 \| Colder Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |
| EN 16147 \| Warmer Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |
| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model IDU-A Compact AWMIT.A1.19-V053 ODU 250-A AWMOF-251.A1.19-400-V001 | |
|---|---|
| Model name | IDU-A Compact AWMIT.A1.19-V053<br>ODU 250-A AWMOF-251.A1.19-400-V001 |
| Application | Heating + DHW + low 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 16147 \| Average Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Colder Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Warmer Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |

| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

| Model IDU-A Compact 2C AWMIT.A1.19-V056 ODU 250-A AWMOF-251.A1.16-400-V001 | |
|---|---|
| Model name | IDU-A Compact 2C AWMIT.A1.19-V056<br>ODU 250-A AWMOF-251.A1.16-400-V001 |
| Application | Heating + DHW + low 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 16147 \| Average Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |
| EN 16147 \| Colder Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |
| EN 16147 \| Warmer Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |
| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model IDU-A Compact 2C AWMIT.A1.19-V056 ODU 250-A AWMOF-251.A1.19-400-V001 | |
|---|---|
| Model name | IDU-A Compact 2C AWMIT.A1.19-V056<br>ODU 250-A AWMOF-251.A1.19-400-V001 |
| Application | Heating + DHW + low 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 16147 \| Average Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Colder Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Warmer Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |

| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

| EN 12102-1 \| Average Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Average Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

| Model IDU-A Compact AWMIT.A1.19-V053 ODU 250-A AWMOF-251.A1.16-400-V002 | |
|---|---|
| Model name | IDU-A Compact AWMIT.A1.19-V053<br>ODU 250-A AWMOF-251.A1.16-400-V002 |
| Application | Heating + DHW + low 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 16147 \| Average Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |
| EN 16147 \| Colder Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |
| EN 16147 \| Warmer Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |
| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model IDU-A Compact AWMIT.A1.19-V053 ODU 250-A AWMOF-251.A1.19-400-V002 | |
|---|---|
| Model name | IDU-A Compact AWMIT.A1.19-V053<br>ODU 250-A AWMOF-251.A1.19-400-V002 |
| Application | Heating + DHW + low 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 16147 \| Average Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |
| EN 16147 \| Colder Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |
| EN 16147 \| Warmer Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |
| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

| Model IDU-A Compact 2C AWMIT.A1.19-V056 ODU 250-A AWMOF-251.A1.16-400-V002 | |
|---|---|
| Model name | IDU-A Compact 2C AWMIT.A1.19-V056<br>ODU 250-A AWMOF-251.A1.16-400-V002 |
| Application | Heating + DHW + low 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 16147 \| Average Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Colder Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Warmer Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |

| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model IDU-A Compact 2C AWMIT.A1.19-V056 ODU 250-A AWMOF-251.A1.19-400-V002 | |
|---|---|
| Model name | IDU-A Compact 2C AWMIT.A1.19-V056 ODU 250-A AWMOF-251.A1.19-400-V002 |
| Application | Heating + DHW + low 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 16147 \| Average Climate | |
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Colder Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Warmer Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |

| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

## Model IDU-A Hybrid HWMIW.A1.19-V054 ODU 250-A AWMOF-251.A1.16-400-V001

| | |
|---|---|
| Model name | IDU-A Hybrid HWMIW.A1.19-V054<br>ODU 250-A AWMOF-251.A1.16-400-V001 |
| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

## Model IDU-A Hybrid HWMIW.A1.19-V054 ODU 250-A AWMOF-251.A1.19-400-V001

| | |
|---|---|
| Model name | IDU-A Hybrid HWMIW.A1.19-V054<br>ODU 250-A AWMOF-251.A1.19-400-V001 |
| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

## Model IDU-A Hybrid HWMIW.A1.19-V054 ODU 250-A AWMOF-251.A1.16-400-V002

| | |
|---|---|
| Model name | IDU-A Hybrid HWMIW.A1.19-V054<br>ODU 250-A AWMOF-251.A1.16-400-V002 |
| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

| EN 12102-1 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

## Model IDU-A Hybrid HWMIW.A1.19-V054 ODU 250-A AWMOF-251.A1.19-400-V002

| | |
|---|---|
| Model name | IDU-A Hybrid HWMIW.A1.19-V054<br>ODU 250-A AWMOF-251.A1.19-400-V002 |
| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

### EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

### EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

| Model Vitocal 250-A AWO-E-AC 251.A16 | |
|---|---|
| Model name | Vitocal 250-A AWO-E-AC 251.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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

| EN 12102-1 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

| EN 12102-1 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model Vitocal 250-A AWO-E-AC 251.A19 | |
|---|---|
| Model name | Vitocal 250-A AWO-E-AC 251.A19 |
| 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

| EN 12102-1 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

| Model Vitocal 250-A AWO-E-AC 251.A16 2C | |
|---|---|
| Model name | Vitocal 250-A AWO-E-AC 251.A16 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

| EN 12102-1 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

| EN 12102-1 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model Vitocal 250-A AWO-E-AC 251.A19 2C | |
|---|---|
| Model name | Vitocal 250-A AWO-E-AC 251.A19 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

| EN 12102-1 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

| Model Vitocal 250-A AWO-E-AC-AF 251.A16 | |
|---|---|
| Model name | Vitocal 250-A AWO-E-AC-AF 251.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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

| EN 12102-1 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

| EN 12102-1 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model Vitocal 250-A AWO-E-AC-AF 251.A19 | |
|---|---|
| Model name | Vitocal 250-A AWO-E-AC-AF 251.A19 |
| 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

| EN 12102-1 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

| Model Vitocal 250-A AWO-E-AC-AF 251.A16 2C | |
|---|---|
| Model name | Vitocal 250-A AWO-E-AC-AF 251.A16 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

| EN 12102-1 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

| EN 12102-1 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Colder Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model Vitocal 250-A AWO-E-AC-AF 251.A19 2C | |
|---|---|
| Model name | Vitocal 250-A AWO-E-AC-AF 251.A19 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

| EN 12102-1 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

| Model Vitocal 252-A AWOT-E-AC 251.A16 | |
|---|---|
| Model name | Vitocal 252-A AWOT-E-AC 251.A16 |
| Application | Heating + DHW + low 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>EN 16147 \| Average Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Colder Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Warmer Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |

| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model Vitocal 252-A AWOT-E-AC 251.A19 | |
|---|---|
| Model name | Vitocal 252-A AWOT-E-AC 251.A19 |
| Application | Heating + DHW + low 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>EN 16147 \| Average Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Colder Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Warmer Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |

| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

## Model Vitocal 252-A AWOT-E-AC 251.A16 2C

| | |
|---|---|
| Model name | Vitocal 252-A AWOT-E-AC 251.A16 2C |
| Application | Heating + DHW + low 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 |
| Phase-out Date | 29.08.2027 |

## General data

| | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

## Outdoor Air/Water

### EN 16147 | Average Climate

| | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |

### EN 16147 | Colder Climate

| | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |

### EN 16147 | Warmer Climate

| | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |

### 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model Vitocal 252-A AWOT-E-AC 251.A19 2C | |
|---|---|
| Model name | Vitocal 252-A AWOT-E-AC 251.A19 2C |
| Application | Heating + DHW + low 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>EN 16147 \| Average Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Colder Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Warmer Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |

| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

| Model Vitocal 252-A AWOT-E-AC-AF 251.A16 | |
|---|---|
| Model name | Vitocal 252-A AWOT-E-AC-AF 251.A16 |
| Application | Heating + DHW + low 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>EN 16147 \| Average Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Colder Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Warmer Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |

| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model Vitocal 252-A AWOT-E-AC-AF 251.A19 | |
|---|---|
| Model name | Vitocal 252-A AWOT-E-AC-AF 251.A19 |
| Application | Heating + DHW + low 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>EN 16147 \| Average Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Colder Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Warmer Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |

| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

| Model Vitocal 252-A AWOT-E-AC-AF 251.A16 2C | |
|---|---|
| Model name | Vitocal 252-A AWOT-E-AC-AF 251.A16 2C |
| Application | Heating + DHW + low 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>EN 16147 \| Average Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Colder Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Warmer Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |

| 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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model Vitocal 252-A AWOT-E-AC-AF 251.A19 2C | |
|---|---|
| Model name | Vitocal 252-A AWOT-E-AC-AF 251.A19 2C |
| Application | Heating + DHW + low 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>EN 16147 \| Average Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 116 % |
| COP | 2.89 |
| Heating up time | 01:14 h:min |
| Standby power input | 55.5 W |
| Reference hot water temperature | 53.3 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Colder Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 98 % |
| COP | 2.44 |
| Heating up time | 01:16 h:min |
| Standby power input | 83 W |
| Reference hot water temperature | 53.6 °C |
| Mixed water at 40°C | 260 l |

| EN 16147 \| Warmer Climate | |
|---|---|
| Declared load profile | XL |
| Efficiency ηDHW | 128 % |
| COP | 3.2 |
| Heating up time | 01:12 h:min |
| Standby power input | 52 W |
| Reference hot water temperature | 53.7 °C |
| Mixed water at 40°C | 260 l |

| 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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

## EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |

| | | |
|---|---|---|
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |

| | | |
|---|---|---|
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

| Model Vitocal 250-AH HAWO-AC 252.A16 | |
|---|---|
| Model name | Vitocal 250-AH HAWO-AC 252.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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

| EN 12102-1 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model Vitocal 250-AH HAWO-AC 252.A19 | |
|---|---|
| Model name | Vitocal 250-AH HAWO-AC 252.A19 |
| 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

| EN 12102-1 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |

| Model Vitocal 250-AH HAWO-AC-AF 252.A16 | |
|---|---|
| Model name | Vitocal 250-AH HAWO-AC-AF 252.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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>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 | 8.50 kW | 8.14 kW |
| El input | 1.60 kW | 2.46 kW |
| COP | 5.31 | 3.31 |

| EN 12102-1 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.29 kW | 12.09 kW |
| ηs | 190 % | 153 % |
| Prated | 13.29 kW | 12.09 kW |
| SCOP | 4.85 | 3.92 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 11.50 kW | 10.90 kW |
| COP Tj = -7°C | 2.80 | 2.30 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.10 kW | 6.40 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.40 kW | 7.20 kW |
| COP Tj = +7°C | 6.20 | 5.00 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.60 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 11.50 kW | 11.40 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.60 kW | 10.90 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.10 |
| Rated airflow rate | 3608 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 2.74 kW | 1.25 kW |
| Annual energy consumption Qhe | 5673 kWh | 6594 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 17.13 kW | 16.89 kW |
| ηs | 153 % | 127 % |
| Prated | 17.13 kW | 16.89 kW |
| SCOP | 3.90 | 3.26 |
| Tbiv | -9 °C | -9 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 10.30 kW | 10.20 kW |
| COP Tj = -7°C | 3.30 | 2.70 |
| Cdh Tj = -7 °C | 0.970 | 0.980 |
| Pdh Tj = +2°C | 6.50 kW | 6.30 kW |
| COP Tj = +2°C | 5.50 | 4.40 |
| Cdh Tj = +2 °C | 0.930 | 0.940 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.40 kW |
| COP Tj = +7°C | 6.50 | 5.40 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.60 kW | 8.60 kW |
| COP Tj = 12°C | 7.50 | 6.40 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.30 kW | 11.10 kW |
| COP Tj = Tbiv | 2.90 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 17.13 kW | 16.89 kW |
| Annual energy consumption Qhe | 10819 kWh | 12788 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.24 kW | 6.77 kW |
| ηs | 215 % | 159 % |
| Prated | 7.24 kW | 6.77 kW |
| SCOP | 5.46 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 4.50 | 2.90 |
| Cdh Tj = +2 °C | 0.950 | 0.970 |
| Pdh Tj = +7°C | 7.40 kW | 7.00 kW |
| COP Tj = +7°C | 5.70 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.10 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.80 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.50 | 2.90 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.50 | 2.90 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1772 kWh | 2236 kWh |

| Model Vitocal 250-AH HAWO-AC-AF 252.A19 | |
|---|---|
| Model name | Vitocal 250-AH HAWO-AC-AF 252.A19 |
| 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 |
| Phase-out Date | 29.08.2027 |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | Yes |

| Outdoor Air/Water<br>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 | 9.00 kW | 8.55 kW |
| El input | 1.71 kW | 2.59 kW |
| COP | 5.27 | 3.31 |

| EN 12102-1 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

| EN 14825 \| Average Climate | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 13.61 kW | 13.18 kW |
| ηs | 191 % | 152 % |
| Prated | 13.61 kW | 13.18 kW |
| SCOP | 4.86 | 3.89 |
| Tbiv | -7 °C | -8 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 12.00 kW | 11.90 kW |
| COP Tj = -7°C | 2.80 | 2.20 |
| Cdh Tj = -7 °C | 1.000 | 1.000 |

| | | |
|---|---|---|
| Pdh Tj = +2°C | 7.20 kW | 6.80 kW |
| COP Tj = +2°C | 5.00 | 3.90 |
| Cdh Tj = +2 °C | 1.000 | 1.000 |
| Pdh Tj = +7°C | 7.50 kW | 7.20 kW |
| COP Tj = +7°C | 6.30 | 5.10 |
| Cdh Tj = +7 °C | 0.991 | 0.992 |
| Pdh Tj = 12°C | 8.70 kW | 8.50 kW |
| COP Tj = 12°C | 7.70 | 6.40 |
| Cdh Tj = +12 °C | 0.990 | 0.992 |
| Pdh Tj = Tbiv | 12.00 kW | 12.10 kW |
| COP Tj = Tbiv | 2.80 | 2.20 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW | 11.50 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.60 | 2.00 |
| Rated airflow rate | 3693 m³/h | |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000 | 1.000 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 2.57 kW | 1.72 kW |
| Annual energy consumption Qhe | 5897 kWh | 7019 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 18.67 kW | 18.53 kW |
| ηs | 147 % | 121 % |
| Prated | 18.67 kW | 18.53 kW |
| SCOP | 3.75 | 3.10 |
| Tbiv | -8 °C | -8 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 11.20 kW | 11.10 kW |
| COP Tj = -7°C | 3.20 | 2.60 |
| Cdh Tj = -7 °C | 0.980 | 0.980 |
| Pdh Tj = +2°C | 6.90 kW | 6.60 kW |
| COP Tj = +2°C | 5.40 | 4.40 |
| Cdh Tj = +2 °C | 0.940 | 0.950 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 7.50 kW | 7.30 kW |
| COP Tj = +7°C | 6.50 | 5.50 |
| Cdh Tj = +7 °C | 0.930 | 0.940 |
| Pdh Tj = 12°C | 8.50 kW | 8.60 kW |
| COP Tj = 12°C | 7.40 | 6.50 |
| Cdh Tj = +12 °C | 0.930 | 0.940 |
| Pdh Tj = Tbiv | 11.80 kW | 11.70 kW |
| COP Tj = Tbiv | 3.00 | 2.40 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.60 kW | 7.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.40 | 1.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.970 | 0.980 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 18.67 kW | 18.53 kW |
| Annual energy consumption Qhe | 12265 kWh | 14724 kWh |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 40 dB(A) | 40 dB(A) |
| Sound power level outdoor | 48 dB(A) | 48 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Pdesignh | 7.22 kW | 6.73 kW |
| ηs | 215 % | 159 % |
| Prated | 7.22 kW | 6.73 kW |
| SCOP | 5.44 | 4.05 |
| Tbiv | 2 °C | 2 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.20 kW | 6.70 kW |
| COP Tj = +2°C | 4.40 | 2.80 |
| Cdh Tj = +2 °C | 0.970 | 0.970 |
| Pdh Tj = +7°C | 7.30 kW | 6.90 kW |
| COP Tj = +7°C | 5.60 | 3.80 |
| Cdh Tj = +7 °C | 0.940 | 0.960 |
| Pdh Tj = 12°C | 8.60 kW | 8.40 kW |
| COP Tj = 12°C | 7.20 | 5.60 |
| Cdh Tj = +12 °C | 0.930 | 0.950 |
| Pdh Tj = Tbiv | 7.20 kW | 6.70 kW |

| | | |
|---|---|---|
| COP Tj = Tbiv | 4.40 | 2.80 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.20 kW | 6.70 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.40 | 2.80 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.950 | 0.950 |
| WTOL | 70 °C | 70 °C |
| Poff | 11 W | 11 W |
| PTO | 16 W | 16 W |
| PSB | 16 W | 16 W |
| PCK | 33 W | 33 W |
| Supplementary Heater: Type of energy input | n/a | n/a |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 1773 kWh | 2224 kWh |