Login

| Summary of | Matrix series 4 6 kW | Reg. No. | 041-K014-01 |
|---|---|---|---|
| Certificate Holder | | | |
| Name | Inventor A.G. Electric Appliances S.A. | | |
| Address | 2 Thoukididou str. & 24th km National Road Athens - Lamia | Zip | 14565 |
| City | Agios Stefanos | Country | Greece |
| Certification Body | BRE Global Limited | | |
| Subtype title | Matrix series 4 6 kW | | |
| Heat Pump Type | Outdoor Air/Water | | |
| Refrigerant | R32 | | |
| Mass of Refrigerant | 1.5 kg | | |
| Certification Date | 10.05.2021 | | |
| Testing basis | Heat Pump Keymark Scheme Rules Rev 08 | | |

# Model: ATS04S / HU060S3

| Configure model | |
|---|---|
| Model name | ATS04S / HU060S3 |
| Application | Heating (medium temp) |
| Units | Indoor + Outdoor |
| Climate Zone | Colder Climate + Warmer Climate |
| Reversibility | Yes |
| Cooling mode application (optional) | n/a |

| General Data | |
|---|---|
| Power supply | 1x230V 50Hz |

## Average Climate

| EN 14825 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| $\eta_s$ | 191 % | 130 % |
| Prated | 5.52 kW | 4.40 kW |
| SCOP | 4.85 | 3.31 |
| Tbiv | -7 °C | -7 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 4.88 kW | 3.89 kW |
| COP Tj = -7°C | 3.19 | 2.17 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 3.06 kW | 2.38 kW |
| COP Tj = +2°C | 4.78 | 3.30 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 1.93 kW | 2.95 kW |
| COP Tj = +7°C | 6.13 | 4.41 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 1.48 kW | 1.32 kW |
| COP Tj = 12°C | 8.05 | 5.66 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 4.88 kW | 3.89 kW |
| COP Tj = Tbiv | 3.19 | 2.17 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 4.42 kW | 3.42 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.86 | 1.91 |
| WTOL | 65 °C | 65 °C |
| Poff | 14 W | 14 W |
| PTO | 24 W | 24 W |
| PSB | 14 W | 14 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 1.11 kW | 0.98 kW |
| Annual energy consumption Qhe | 2351 kWh | 2744 kWh |

| EN 12102-1 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Sound power level indoor | 38 dB(A) | 38 dB(A) |
| Sound power level outdoor | 56 dB(A) | 56 dB(A) |

## Heating

| EN 14511-2 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Heat output | 4.25 kW | 4.40 kW |
| El input | 0.82 kW | 1.49 kW |
| COP | 5.20 | 2.95 |

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

## Warmer Climate

## EN 12102-1

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 38 dB(A) | 38 dB(A) |
| Sound power level outdoor | 56 dB(A) | 56 dB(A) |

## EN 14825

| | Low temperature | Medium temperature |
|---|---|---|
| $\eta_s$ | 254 % | 162 % |
| Prated | 5.54 kW | 5.02 kW |
| SCOP | 6.52 | 4.14 |
| Tbiv | 7 °C | 7 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 5.35 kW | 4.84 kW |
| COP Tj = +2°C | 3.94 | 2.51 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 3.56 kW | 3.23 kW |
| COP Tj = +7°C | 5.92 | 3.68 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 1.64 kW | 1.47 kW |
| COP Tj = 12°C | 7.91 | 5.15 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |

| | | |
|---|---|---|
| Pdh Tj = Tbiv | 3.56 kW | 3.23 kW |
| COP Tj = Tbiv | 5.92 | 3.68 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 5.35 kW | 4.84 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.94 | 2.51 |
| WTOL | 65 °C | 65 °C |
| Poff | 14 W | 14 W |
| PTO | 24 W | 24 W |
| PSB | 14 W | 14 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.19 kW | 0.18 kW |
| Annual energy consumption Qhe | 1152 kWh | 1621 kWh |

## Colder Climate

| **EN 12102-1** | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Sound power level indoor | 38 dB(A) | 38 dB(A) |
| Sound power level outdoor | 56 dB(A) | 56 dB(A) |

| **EN 14825** | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| | | |

| | | |
|---|---|---|
| $\eta_s$ | 159 % | 102 % |
| Prated | 4.57 kW | 3.37 kW |
| SCOP | 4.06 | 2.63 |
| Tbiv | -15 °C | -15 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = -7°C | 2.76 kW | 2.14 kW |
| COP Tj = -7°C | 3.49 | 2.32 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 1.77 kW | 1.28 kW |
| COP Tj = +2°C | 4.95 | 2.99 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 1.17 kW | 1.01 kW |
| COP Tj = +7°C | 5.53 | 3.86 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 1.43 kW | 1.36 kW |
| COP Tj = 12°C | 7.67 | 6.28 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 3.72 kW | 2.75 kW |
| COP Tj = Tbiv | 2.57 | 1.74 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 2.80 kW | 1.64 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.97 | 1.02 |

| | | |
|---|---|---|
| WTOL | 65 °C | 65 °C |
| Poff | 14 W | 14 W |
| PTO | 24 W | 24 W |
| PSB | 14 W | 14 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 1.76 kW | 1.73 kW |
| Annual energy consumption Qhe | 2770 kWh | 3159 kWh |
| Pdh Tj = -15°C (if TOL<-20°C) | 3.72 | 2.75 |
| COP Tj = -15°C (if TOL<-20°C) | 2.57 | 1.74 |
| Cdh Tj = -15 °C | 0.90 | 0.90 |

# Model: ATS06S / HU060S3

| Configure model | |
|---|---|
| Model name | ATS06S / HU060S3 |
| Application | Heating (medium temp) |
| Units | Indoor + Outdoor |
| Climate Zone | Colder Climate + Warmer Climate |
| Reversibility | Yes |
| Cooling mode application (optional) | n/a |

| General Data | |
|---|---|
| Power supply | 1x230V 50Hz |

## Average Climate

| EN 14825 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| $\eta_s$ | 195 % | 138 % |
| Prated | 6.82 kW | 5.70 kW |
| SCOP | 4.95 | 3.52 |
| Tbiv | -7 °C | -7 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 6.03 kW | 5.05 kW |
| COP Tj = -7°C | 3.09 | 2.17 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 3.88 kW | 3.12 kW |
| COP Tj = +2°C | 4.85 | 3.51 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 2.40 kW | 2.09 kW |
| COP Tj = +7°C | 6.63 | 4.54 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 1.39 kW | 1.28 kW |
| COP Tj = 12°C | 7.83 | 5.59 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 6.03 kW | 5.05 kW |
| COP Tj = Tbiv | 3.09 | 2.17 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 5.36 kW | 4.52 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.76 | 1.91 |
| WTOL | 65 °C | 65 °C |
| Poff | 14 W | 14 W |
| PTO | 24 W | 24 W |
| PSB | 14 W | 14 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 1.45 kW | 1.18 kW |
| Annual energy consumption Qhe | 2846 kWh | 3345 kWh |

| EN 12102-1 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Sound power level indoor | 38 dB(A) | 38 dB(A) |
| Sound power level outdoor | 58 dB(A) | 58 dB(A) |

## Heating

| EN 14511-2 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Heat output | 6.20 kW | 6.00 kW |
| El input | 1.24 kW | 2.00 kW |
| COP | 5.00 | 3.00 |

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

## Warmer Climate

| EN 12102-1 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Sound power level indoor | 38 dB(A) | 38 dB(A) |
| Sound power level outdoor | 58 dB(A) | 58 dB(A) |

| EN 14825 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| $\eta_s$ | 258 % | 165 % |
| Prated | 6.12 kW | 5.15 kW |
| SCOP | 6.63 | 4.19 |
| Tbiv | 7 °C | 7 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 5.94 kW | 5.03 kW |
| COP Tj = +2°C | 3.91 | 2.48 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 3.93 kW | 3.31 kW |
| COP Tj = +7°C | 5.89 | 3.67 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 1.80 kW | 1.60 kW |
| COP Tj = 12°C | 8.20 | 5.29 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |

| | | |
|---|---|---|
| Pdh Tj = Tbiv | 3.93 kW | 3.31 kW |
| COP Tj = Tbiv | 5.89 | 3.67 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 5.94 kW | 5.03 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.91 | 2.48 |
| WTOL | 65 °C | 65 °C |
| Poff | 14 W | 14 W |
| PTO | 24 W | 24 W |
| PSB | 14 W | 14 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.18 kW | 0.12 kW |
| Annual energy consumption Qhe | 1251 kWh | 1640 kWh |

## Colder Climate

| **EN 12102-1** | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Sound power level indoor | 38 dB(A) | 38 dB(A) |
| Sound power level outdoor | 58 dB(A) | 58 dB(A) |

| **EN 14825** | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| | | |

| | | |
|---|---|---|
| $\eta_s$ | 165 % | 111 % |
| Prated | 5.63 kW | 4.26 kW |
| SCOP | 4.21 | 2.85 |
| Tbiv | -15 °C | -15 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = -7°C | 3.42 kW | 2.70 kW |
| COP Tj = -7°C | 3.59 | 2.46 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 2.06 kW | 1.61 kW |
| COP Tj = +2°C | 5.21 | 3.36 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 1.47 kW | 1.02 kW |
| COP Tj = +7°C | 6.24 | 3.94 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 1.44 kW | 1.37 kW |
| COP Tj = 12°C | 7.66 | 6.35 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 4.60 kW | 3.48 kW |
| COP Tj = Tbiv | 2.53 | 1.86 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.48 kW | 2.10 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.96 | 1.13 |

| | | |
|---|---|---|
| WTOL | 65 °C | 65 °C |
| Poff | 20 W | 20 W |
| PTO | 24 W | 24 W |
| PSB | 14 W | 14 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.15 kW | 2.16 kW |
| Annual energy consumption Qhe | 3301 kWh | 3681 kWh |
| Pdh Tj = -15°C (if TOL<-20°C) | 4.60 | 3.48 |
| COP Tj = -15°C (if TOL<-20°C) | 2.53 | 1.86 |
| Cdh Tj = -15 °C | 0.90 | 0.90 |

# Model: ATM*04S*

| Configure model | |
|---|---|
| Model name | ATM*04S* |
| Application | Heating (medium temp) |
| Units | Outdoor |
| Climate Zone | Colder Climate + Warmer Climate |
| Reversibility | Yes |
| Cooling mode application (optional) | n/a |

| General Data | |
|---|---|
| Power supply | 1x230V 50Hz |

## Average Climate

| EN 14825 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| $\eta_s$ | 191 % | 130 % |
| Prated | 5.52 kW | 4.40 kW |
| SCOP | 4.85 | 3.31 |
| Tbiv | -7 °C | -7 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 4.88 kW | 3.89 kW |
| COP Tj = -7°C | 3.19 | 2.17 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 3.06 kW | 2.38 kW |
| COP Tj = +2°C | 4.78 | 3.30 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 1.93 kW | 2.95 kW |
| COP Tj = +7°C | 6.13 | 4.41 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 1.48 kW | 1.32 kW |
| COP Tj = 12°C | 8.05 | 5.66 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 4.88 kW | 3.89 kW |
| COP Tj = Tbiv | 3.19 | 2.17 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 4.42 kW | 3.42 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.86 | 1.91 |
| WTOL | 65 °C | 65 °C |
| Poff | 14 W | 14 W |
| PTO | 24 W | 24 W |
| PSB | 14 W | 14 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 1.11 kW | 0.98 kW |
| Annual energy consumption Qhe | 2351 kWh | 2744 kWh |

| EN 12102-1 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Sound power level outdoor | 55 dB(A) | 55 dB(A) |

## Heating

| EN 14511-2 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Heat output | 4.20 kW | 4.40 kW |
| El input | 0.82 kW | 1.49 kW |
| COP | 5.10 | 2.95 |

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

## Warmer Climate

| EN 12102-1 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Sound power level outdoor | 55 dB(A) | 55 dB(A) |

## EN 14825

| | Low temperature | Medium temperature |
|---|---|---|
| $\eta_s$ | 254 % | 162 % |
| Prated | 5.54 kW | 5.02 kW |
| SCOP | 6.52 | 4.14 |
| Tbiv | 7 °C | 7 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 5.35 kW | 4.84 kW |
| COP Tj = +2°C | 3.94 | 2.51 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 3.56 kW | 3.23 kW |
| COP Tj = +7°C | 5.92 | 3.68 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 1.64 kW | 1.47 kW |
| COP Tj = 12°C | 7.91 | 5.15 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 3.56 kW | 3.23 kW |
| COP Tj = Tbiv | 5.92 | 3.68 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 5.35 kW | 4.84 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.94 | 2.51 |
| WTOL | 65 °C | 65 °C |

| | | |
|---|---|---|
| Poff | 14 W | 14 W |
| PTO | 24 W | 24 W |
| PSB | 14 W | 14 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.19 kW | 0.18 kW |
| Annual energy consumption Qhe | 1152 kWh | 1621 kWh |

## Colder Climate

| **EN 14825** | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| $\eta_s$ | 159 % | 102 % |
| Prated | 4.57 kW | 3.37 kW |
| SCOP | 4.06 | 2.63 |
| Tbiv | -15 °C | -15 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = -7°C | 2.76 kW | 2.14 kW |
| COP Tj = -7°C | 3.49 | 2.32 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 1.77 kW | 1.28 kW |
| COP Tj = +2°C | 4.95 | 2.99 |

| | | |
|---|---|---|
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 1.17 kW | 1.01 kW |
| COP Tj = +7°C | 5.53 | 3.86 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 1.43 kW | 1.36 kW |
| COP Tj = 12°C | 7.67 | 6.28 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 3.72 kW | 2.75 kW |
| COP Tj = Tbiv | 2.57 | 1.74 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 2.80 kW | 1.64 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.97 | 1.02 |
| WTOL | 65 °C | 65 °C |
| Poff | 14 W | 14 W |
| PTO | 24 W | 24 W |
| PSB | 14 W | 14 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 1.76 kW | 1.73 kW |
| Annual energy consumption Qhe | 2770 kWh | 3159 kWh |
| Pdh Tj = -15°C (if TOL<-20°C) | 3.72 | 2.75 |
| COP Tj = -15°C (if TOL<-20°C) | 2.57 | 1.74 |

| | | |
|---|---|---|
| Cdh Tj = -15 °C | 0.90 | 0.90 |

| EN 12102-1 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Sound power level outdoor | 55 dB(A) | 55 dB(A) |

# Model: ATM*06S*

| Configure model | |
|---|---|
| Model name | ATM*06S* |
| Application | Heating (medium temp) |
| Units | Outdoor |
| Climate Zone | Colder Climate + Warmer Climate |
| Reversibility | Yes |
| Cooling mode application (optional) | n/a |

| General Data | |
|---|---|
| Power supply | 1x230V 50Hz |

## Heating

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

| EN 14511-2 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Heat output | 6.35 kW | 6.00 kW |
| El input | 1.28 kW | 2.03 kW |
| COP | 4.95 | 2.95 |

## Average Climate

| EN 12102-1 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Sound power level outdoor | 58 dB(A) | 58 dB(A) |

| EN 14825 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| $\eta_s$ | 195 % | 138 % |
| Prated | 6.82 kW | 5.70 kW |
| SCOP | 4.95 | 3.52 |
| Tbiv | -7 °C | -7 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 6.03 kW | 5.05 kW |
| COP Tj = -7°C | 3.09 | 2.17 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 3.88 kW | 3.12 kW |
| COP Tj = +2°C | 4.85 | 3.51 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 2.40 kW | 2.09 kW |
| COP Tj = +7°C | 6.63 | 4.54 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 1.39 kW | 1.28 kW |

| | | |
|---|---|---|
| COP Tj = 12°C | 7.83 | 5.59 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 6.03 kW | 5.05 kW |
| COP Tj = Tbiv | 3.09 | 2.17 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 5.36 kW | 4.52 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.76 | 1.91 |
| WTOL | 65 °C | 65 °C |
| Poff | 14 W | 14 W |
| PTO | 24 W | 24 W |
| PSB | 14 W | 14 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 1.45 kW | 1.18 kW |
| Annual energy consumption Qhe | 2846 kWh | 3345 kWh |

## Warmer Climate

| **EN 12102-1** | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Sound power level outdoor | 58 dB(A) | 58 dB(A) |

| **EN 14825** | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |

| | | |
|---|---|---|
| $\eta_s$ | 258 % | 165 % |
| Prated | 6.12 kW | 5.15 kW |
| SCOP | 6.63 | 4.19 |
| Tbiv | 7 °C | 7 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 5.94 kW | 5.03 kW |
| COP Tj = +2°C | 3.91 | 2.48 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 3.93 kW | 3.31 kW |
| COP Tj = +7°C | 5.89 | 3.67 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 1.80 kW | 1.60 kW |
| COP Tj = 12°C | 8.20 | 5.29 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 3.93 kW | 3.31 kW |
| COP Tj = Tbiv | 5.89 | 3.67 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 5.94 kW | 5.03 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.91 | 2.48 |
| WTOL | 65 °C | 65 °C |
| Poff | 14 W | 14 W |

| | | |
|---|---|---|
| PTO | 24 W | 24 W |
| PSB | 14 W | 14 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.18 kW | 0.12 kW |
| Annual energy consumption Qhe | 1251 kWh | 1640 kWh |

## Colder Climate

| **EN 14825** | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| $\eta_s$ | 165 % | 111 % |
| Prated | 5.63 kW | 4.26 kW |
| SCOP | 4.21 | 2.85 |
| Tbiv | -15 °C | -15 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = -7°C | 3.42 kW | 2.70 kW |
| COP Tj = -7°C | 3.59 | 2.46 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 2.06 kW | 1.61 kW |
| COP Tj = +2°C | 5.21 | 3.36 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |

| | | |
|---|---|---|
| Pdh Tj = +7°C | 1.47 kW | 1.02 kW |
| COP Tj = +7°C | 6.24 | 3.94 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 1.44 kW | 1.37 kW |
| COP Tj = 12°C | 7.66 | 6.35 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 4.60 kW | 3.48 kW |
| COP Tj = Tbiv | 2.53 | 1.86 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.48 kW | 2.10 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.96 | 1.13 |
| WTOL | 65 °C | 65 °C |
| Poff | 20 W | 20 W |
| PTO | 24 W | 24 W |
| PSB | 14 W | 14 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.15 kW | 2.16 kW |
| Annual energy consumption Qhe | 3301 kWh | 3681 kWh |
| Pdh Tj = -15°C (if TOL<-20°C) | 4.60 | 3.48 |
| COP Tj = -15°C (if TOL<-20°C) | 2.53 | 1.86 |
| Cdh Tj = -15 °C | 0.90 | 0.90 |

| EN 12102-1 | | |
|---|---|---|
| | **Low temperature** | **Medium temperature** |
| Sound power level outdoor | 58 dB(A) | 58 dB(A) |