## Subtype AEROTOP S09.2

| | |
|---|---|
| Certificate Holder | ELCO GmbH |
| Address | Hohenzollernstrasse 31 |
| ZIP | 72379 |
| City | Hechingen |
| Country | DE |
| Certification Body | DIN CERTCO Gesellschaft für Konformitätsbewertung mbH |
| Subtype title | AEROTOP S09.2 |
| Registration number | 011-1W0392 |
| Heat Pump Type | Outdoor Air/Water |
| Refrigerant | R410A |
| Mass of Refrigerant | 4 kg |
| Certification Date | 28.07.2020 |

| Model AEROTOP S09.2 | |
|---|---|
| Model name | AEROTOP S09.2 |
| Application | Heating (medium temp) |
| Units | Indoor |
| Climate zone (for heating) | Warmer Climate, Colder Climate |
| Reversibility | Yes |
| Cooling mode application (optional) | n/a |
| Any additional heat sources | n/a |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | n/a |

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 | 6.75 kW | 7.25 kW |
| El input | 1.34 kW | 3.23 kW |
| COP | 5.05 | 2.24 |

| EN 12102-1 \| Average Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

| EN 14825 \| Average Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| ηs | 196 % | 134 % |
| Prated | 9.91 kW | 8.20 kW |
| SCOP | 4.99 | 3.42 |
| Tbiv | -7 °C | -7 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 8.77 kW | 7.25 kW |
| COP Tj = -7°C | 3.18 | 2.24 |
| Cdh Tj = -7 °C | 0.99 | 0.99 |
| Pdh Tj = +2°C | 5.59 kW | 4.60 kW |
| COP Tj = +2°C | 4.99 | 3.13 |
| Cdh Tj = +2 °C | 0.98 | 0.98 |
| Pdh Tj = +7°C | 3.58 kW | 3.07 kW |

| | | |
|---|---|---|
| COP Tj = +7°C | 6.28 | 4.95 |
| Cdh Tj = +7 °C | 0.94 | 0.94 |
| Pdh Tj = 12°C | 3.03 kW | 3.00 kW |
| COP Tj = 12°C | 7.77 | 6.00 |
| Cdh Tj = +12 °C | 0.93 | 0.93 |
| Pdh Tj = Tbiv | 8.77 kW | 7.25 kW |
| COP Tj = Tbiv | 3.18 | 2.24 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.47 kW | 9.03 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.72 | 1.80 |
| WTOL | 63 °C | 63 °C |
| Poff | 35 W | 35 W |
| PTO | 36 W | 36 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.44 kW | 0.00 kW |
| Annual energy consumption Qhe | 4108 kWh | 4948 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| ηs | 151 % | 117 % |
| Prated | 11.28 kW | 10.57 kW |
| SCOP | 3.84 | 3.01 |
| Tbiv | -7 °C | -7 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 6.83 kW | 6.40 kW |
| COP Tj = -7°C | 3.12 | 2.44 |
| Cdh Tj = -7 °C | 0.990 | 0.990 |
| Pdh Tj = +2°C | 4.25 kW | 3.79 kW |
| COP Tj = +2°C | 5.38 | 4.21 |
| Cdh Tj = +2 °C | 0.980 | 0.980 |
| Pdh Tj = +7°C | 2.62 kW | 2.58 kW |
| COP Tj = +7°C | 6.24 | 4.96 |
| Cdh Tj = +7 °C | 0.940 | 0.940 |
| Pdh Tj = 12°C | 3.03 kW | 3.03 kW |
| COP Tj = 12°C | 7.77 | 6.45 |
| Cdh Tj = +12 °C | 0.930 | 0.930 |
| Pdh Tj = Tbiv | 6.83 kW | 6.40 kW |
| COP Tj = Tbiv | 3.12 | 2.44 |

| | | |
|---|---|---|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.91 kW | 6.54 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.02 | 1.33 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | | |
| WTOL | 63 °C | 63 °C |
| Poff | 35 W | 35 W |
| PTO | 36 W | 36 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 11.28 kW | 10.57 kW |
| Annual energy consumption Qhe | 7241 kWh | 8667 kWh |
| Pdh Tj = -15°C (if TOL | | |
| COP Tj = -15°C (if TOL | | |
| Cdh Tj = -15 °C | | |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| ηs | 230 % | 172 % |
| Prated | 9.05 kW | 9.78 kW |
| SCOP | 5.81 | 4.38 |
| Tbiv | 2 °C | 2 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = +2°C | 9.05 kW | 9.78 kW |
| COP Tj = +2°C | 3.79 | 2.68 |
| Cdh Tj = +2 °C | 0.98 | 0.98 |
| Pdh Tj = +7°C | 6.75 kW | 6.34 kW |
| COP Tj = +7°C | 5.04 | 3.89 |
| Cdh Tj = +7 °C | 0.94 | 0.94 |
| Pdh Tj = 12°C | 3.01 kW | 2.94 kW |
| COP Tj = 12°C | 7.34 | 5.35 |
| Cdh Tj = +12 °C | 0.93 | 0.93 |
| Pdh Tj = Tbiv | 9.05 kW | 9.78 kW |
| COP Tj = Tbiv | 3.79 | 2.68 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.05 kW | 9.78 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.79 | 2.68 |
| WTOL | 63 °C | 63 °C |
| Poff | 35 W | 35 W |

| | | |
|---|---|---|
| PTO | 36 W | 36 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 2081 kWh | 2983 kWh |

| Model AEROTOP S09.2_2-parts | |
|---|---|
| Model name | AEROTOP S09.2_2-parts |
| Application | Heating (medium temp) |
| Units | Indoor |
| Climate zone (for heating) | Warmer Climate, Colder Climate |
| Reversibility | Yes |
| Cooling mode application (optional) | n/a |
| Any additional heat sources | n/a |

| General data | |
|---|---|
| Power supply | 3x400V 50Hz |
| Off-peak product | n/a |

| 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 | 6.75 kW | 7.25 kW |
| El input | 1.34 kW | 3.23 kW |
| COP | 5.05 | 2.24 |

| EN 12102-1 \| Average Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

| EN 14825 \| Average Climate | | |
|---|---|---|
| | Low temperature | Medium temperature |
| ηs | 196 % | 134 % |
| Prated | 9.91 kW | 8.20 kW |
| SCOP | 4.99 | 3.42 |
| Tbiv | -7 °C | -7 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 8.77 kW | 7.25 kW |
| COP Tj = -7°C | 3.18 | 2.24 |
| Cdh Tj = -7 °C | 0.99 | 0.99 |
| Pdh Tj = +2°C | 5.59 kW | 4.60 kW |
| COP Tj = +2°C | 4.99 | 3.13 |
| Cdh Tj = +2 °C | 0.98 | 0.98 |
| Pdh Tj = +7°C | 3.58 kW | 3.07 kW |

| | | |
|---|---|---|
| COP Tj = +7°C | 6.28 | 4.95 |
| Cdh Tj = +7 °C | 0.94 | 0.94 |
| Pdh Tj = 12°C | 3.03 kW | 3.00 kW |
| COP Tj = 12°C | 7.77 | 6.00 |
| Cdh Tj = +12 °C | 0.93 | 0.93 |
| Pdh Tj = Tbiv | 8.77 kW | 7.25 kW |
| COP Tj = Tbiv | 3.18 | 2.24 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.47 kW | 9.03 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.72 | 1.80 |
| WTOL | 63 °C | 63 °C |
| Poff | 35 W | 35 W |
| PTO | 36 W | 36 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.44 kW | 0.00 kW |
| Annual energy consumption Qhe | 4108 kWh | 4948 kWh |

## EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

## EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|---|---|
| ηs | 151 % | 117 % |
| Prated | 11.28 kW | 10.57 kW |
| SCOP | 3.84 | 3.01 |
| Tbiv | -7 °C | -7 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 6.83 kW | 6.40 kW |
| COP Tj = -7°C | 3.12 | 2.44 |
| Cdh Tj = -7 °C | 0.990 | 0.990 |
| Pdh Tj = +2°C | 4.25 kW | 3.79 kW |
| COP Tj = +2°C | 5.38 | 4.21 |
| Cdh Tj = +2 °C | 0.980 | 0.980 |
| Pdh Tj = +7°C | 2.62 kW | 2.58 kW |
| COP Tj = +7°C | 6.24 | 4.96 |
| Cdh Tj = +7 °C | 0.940 | 0.940 |
| Pdh Tj = 12°C | 3.03 kW | 3.03 kW |
| COP Tj = 12°C | 7.77 | 6.45 |
| Cdh Tj = +12 °C | 0.930 | 0.930 |
| Pdh Tj = Tbiv | 6.83 kW | 6.40 kW |
| COP Tj = Tbiv | 3.12 | 2.44 |

| | | |
|---|---|---|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.91 kW | 6.54 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.02 | 1.33 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | | |
| WTOL | 63 °C | 63 °C |
| Poff | 35 W | 35 W |
| PTO | 36 W | 36 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 11.28 kW | 10.57 kW |
| Annual energy consumption Qhe | 7241 kWh | 8667 kWh |
| Pdh Tj = -15°C (if TOL | | |
| COP Tj = -15°C (if TOL | | |
| Cdh Tj = -15 °C | | |

## EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

## EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|---|---|
| ηs | 230 % | 172 % |
| Prated | 9.05 kW | 9.78 kW |
| SCOP | 5.81 | 4.38 |
| Tbiv | 2 °C | 2 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = +2°C | 9.05 kW | 9.78 kW |
| COP Tj = +2°C | 3.79 | 2.68 |
| Cdh Tj = +2 °C | 0.98 | 0.98 |
| Pdh Tj = +7°C | 6.75 kW | 6.34 kW |
| COP Tj = +7°C | 5.04 | 3.89 |
| Cdh Tj = +7 °C | 0.94 | 0.94 |
| Pdh Tj = 12°C | 3.01 kW | 2.94 kW |
| COP Tj = 12°C | 7.34 | 5.35 |
| Cdh Tj = +12 °C | 0.93 | 0.93 |
| Pdh Tj = Tbiv | 9.05 kW | 9.78 kW |
| COP Tj = Tbiv | 3.79 | 2.68 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.05 kW | 9.78 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.79 | 2.68 |
| WTOL | 63 °C | 63 °C |
| Poff | 35 W | 35 W |

| | | |
|---|---|---|
| PTO | 36 W | 36 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 2081 kWh | 2983 kWh |