

Subtype High Temperature 12 14 16 kW

| | |
|---------------------|------------------------------|
| Certificate Holder | Aquashield Europe s.r.o. |
| Address | Na Maninach 50a |
| ZIP | 170 00 |
| City | Prague |
| Country | CZ |
| Certification Body | ICIM S.p.A. |
| Subtype title | High Temperature 12 14 16 kW |
| Registration number | ICIM-PDC-000274 |
| Heat Pump Type | Outdoor Air/Water |
| Refrigerant | R290 |
| Mass of Refrigerant | 1.25 kg |
| Certification Date | 29.08.2024 |
| Testing basis | V12 |

Model AHP1412B1NA/10, AHP1412B1VA/10, AHP1412B1WA/10

| | |
|-------------------------------------|--|
| Model name | AHP1412B1NA/10, AHP1412B1VA/10, AHP1412B1WA/10 |
| Application | Heating (medium temp) |
| Units | Outdoor |
| Climate zone (for heating) | Colder, Warmer |
| Cooling mode application (optional) | n/a |
| Any additional heat sources | n/a |

General data

| | |
|------------------|-------------|
| Power supply | 1x230V 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 | 12.0 kW | 12.0 kW |
| EI input | 2.50 kW | 3.87 kW |
| COP | 4.80 | 3.10 |

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 65 dB(A) | 65 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| η_s | 183 % | 141 % |
| Prated | 12.1 kW | 12.0 kW |
| SCOP | 4.67 | 3.62 |
| Tbiv | -7 °C | -7 °C |
| TOL | -10.00 °C | -10.00 °C |
| Pdh Tj = -7°C | 10.75 kW | 10.58 kW |
| COP Tj = -7°C | 2.78 | 2.23 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 6.73 kW | 6.59 kW |
| COP Tj = +2°C | 4.55 | 3.52 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 5.23 kW | 4.78 kW |
| COP Tj = +7°C | 6.89 | 4.99 |

| | | |
|---|-------------|-------------|
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.34 kW | 5.59 kW |
| COP Tj = 12°C | 7.41 | 6.41 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 10.75 kW | 10.58 kW |
| COP Tj = Tbiv | 2.78 | 2.23 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.77 kW | 10.15 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.61 | 2.05 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14.00 W | 14.00 W |
| PSB | 9.00 W | 9.00 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 1.33 kW | 1.95 kW |
| Annual energy consumption Qhe | 5352 kWh | 6843 kWh |

EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 65 dB(A) | 65 dB(A) |

EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs | 162 % | 127 % |
| Prated | 11.5 kW | 10.8 kW |
| SCOP | 4.13 | 3.26 |
| Tbiv | -15.00 °C | -15.00 °C |
| TOL | -22.00 °C | -22.00 °C |
| Pdh Tj = -7°C | 7.11 kW | 6.76 kW |
| COP Tj = -7°C | 3.47 | 2.72 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 4.33 kW | 4.14 kW |
| COP Tj = +2°C | 5.18 | 4.05 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 5.08 kW | 5.00 kW |
| COP Tj = +7°C | 6.46 | 5.15 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.15 kW | 5.01 kW |
| COP Tj = 12°C | 6.84 | 5.66 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 9.39 kW | 8.84 kW |
| COP Tj = Tbiv | 2.49 | 1.98 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.70 kW | 6.84 kW |

| | | |
|---|-------------|-------------|
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.04 | 1.52 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14 W | 14 W |
| PSB | 9.00 W | 9.00 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 3.80 kW | 3.96 kW |
| Annual energy consumption Qhe | 6869.00 kWh | 8197.00 kWh |
| Pdh Tj = -15°C (if TOL | 9.39 | 8.84 |
| COP Tj = -15°C (if TOL | 2.49 | 1.98 |
| Cdh Tj = -15 °C | 0.9 | 0.9 |

EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 65 dB(A) | 65 dB(A) |

EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs | 232 % | 174 % |
| Prated | 11.70 kW | 12.40 kW |
| SCOP | 5.90 | 4.45 |
| Tbiv | 7 °C | 7 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 11.58 kW | 11.41 kW |
| COP Tj = +2°C | 3.30 | 2.55 |
| Cdh Tj = +2 °C | 0.900 | 0.900 |
| Pdh Tj = +7°C | 7.57 kW | 7.85 kW |
| COP Tj = +7°C | 5.78 | 3.99 |
| Cdh Tj = +7 °C | 0.900 | 0.900 |
| Pdh Tj = 12°C | 5.17 kW | 5.47 kW |
| COP Tj = 12°C | 6.98 | 5.90 |
| Cdh Tj = +12 °C | 0.900 | 0.900 |
| Pdh Tj = Tbiv | 7.57 kW | 7.85 kW |
| COP Tj = Tbiv | 5.78 | 3.99 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.58 kW | 11.41 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.30 | 2.55 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | | |
| WTOL | 75 °C | 75 °C |
| Poff | 9 W | 9 W |
| PTO | 14 W | 14 W |
| PSB | 9 W | 9 W |

| | | |
|--|-------------|-------------|
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.12 kW | 0.99 kW |
| Annual energy consumption Qhe | 2651 kWh | 3724 kWh |

Model AHP1414B1NA/10, AHP1414B1VA/10, AHP1414B1WA/10

| | |
|-------------------------------------|--|
| Model name | AHP1414B1NA/10, AHP1414B1VA/10, AHP1414B1WA/10 |
| Application | Heating (medium temp) |
| Units | Outdoor |
| Climate zone (for heating) | Colder, Warmer |
| Cooling mode application (optional) | n/a |
| Any additional heat sources | n/a |

General data

| | |
|------------------|-------------|
| Power supply | 1x230V 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 | 14.0 kW | 14.0 kW |
| EI input | 3.11 kW | 4.67 kW |
| COP | 4.50 | 3.00 |

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 65 dB(A) | 65 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| η_s | 182 % | 141 % |
| Prated | 13.7 kW | 13.0 kW |
| SCOP | 4.63 | 3.61 |
| Tbiv | -7 °C | -7 °C |
| TOL | -10.00 °C | -10.00 °C |
| Pdh Tj = -7°C | 12.08 kW | 11.47 kW |
| COP Tj = -7°C | 2.66 | 2.15 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 7.55 kW | 7.29 kW |
| COP Tj = +2°C | 4.45 | 3.50 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 5.25 kW | 4.85 kW |
| COP Tj = +7°C | 7.06 | 5.10 |

| | | |
|---|-------------|-------------|
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.23 kW | 5.60 kW |
| COP Tj = 12°C | 7.46 | 6.46 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 12.08 kW | 11.47 kW |
| COP Tj = Tbiv | 2.66 | 2.15 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.62 kW | 10.97 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.53 | 2.02 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14.00 W | 14.00 W |
| PSB | 9.00 W | 9.00 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.08 kW | 2.03 kW |
| Annual energy consumption Qhe | 6110 kWh | 7438 kWh |

EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 65 dB(A) | 65 dB(A) |

EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs | 162 % | 126 % |
| Prated | 12.6 kW | 12.0 kW |
| SCOP | 4.13 | 3.23 |
| Tbiv | -15.00 °C | -15.00 °C |
| TOL | -22.00 °C | -22.00 °C |
| Pdh Tj = -7°C | 7.83 kW | 7.39 kW |
| COP Tj = -7°C | 3.35 | 2.67 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 4.77 kW | 4.56 kW |
| COP Tj = +2°C | 5.37 | 4.00 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 5.08 kW | 4.99 kW |
| COP Tj = +7°C | 6.50 | 5.20 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.15 kW | 5.06 kW |
| COP Tj = 12°C | 6.85 | 5.81 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 10.31 kW | 9.77 kW |
| COP Tj = Tbiv | 2.39 | 1.95 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8.57 kW | 7.63 kW |

| | | |
|---|-------------|-------------|
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.01 | 1.53 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14 W | 14 W |
| PSB | 9.00 W | 9.00 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 4.03 kW | 4.37 kW |
| Annual energy consumption Qhe | 7513.00 kWh | 9168.00 kWh |
| Pdh Tj = -15°C (if TOL | 10.31 | 9.77 |
| COP Tj = -15°C (if TOL | 2.39 | 1.95 |
| Cdh Tj = -15 °C | 0.9 | 0.9 |

EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 65 dB(A) | 65 dB(A) |

EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs | 231.00 % | 174.00 % |
| Prated | 12.7 kW | 14.1 kW |
| SCOP | 5.85 | 4.43 |
| Tbiv | 7.00 °C | 7.00 °C |
| TOL | 2.00 °C | 2.00 °C |
| Pdh Tj = +2°C | 12.41 kW | 12.05 kW |
| COP Tj = +2°C | 3.21 | 2.48 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 8.19 kW | 9.11 kW |
| COP Tj = +7°C | 5.67 | 3.98 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.17 kW | 5.49 kW |
| COP Tj = 12°C | 7.02 | 6.01 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 8.19 kW | 9.11 kW |
| COP Tj = Tbiv | 5.67 | 3.98 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 12.41 kW | 12.05 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.21 | 2.48 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14.00 W | 14.00 W |
| PSB | 9 W | 9 W |
| PCK | 0.00 W | 0.00 W |

| | | |
|--|-------------|-------------|
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.29 kW | 2.21 kW |
| Annual energy consumption Qhe | 2897.00 kWh | 4256.00 kWh |

Model AHP1416B1NA/10, AHP1416B1VA/10, AHP1416B1WA/10

| | |
|-------------------------------------|--|
| Model name | AHP1416B1NA/10, AHP1416B1VA/10, AHP1416B1WA/10 |
| Application | Heating (medium temp) |
| Units | Outdoor |
| Climate zone (for heating) | Colder, Warmer |
| Cooling mode application (optional) | n/a |
| Any additional heat sources | n/a |

General data

| | |
|------------------|-------------|
| Power supply | 1x230V 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 | 15.0 kW | 15.0 kW |
| EI input | 3.41 kW | 5.26 kW |
| COP | 4.40 | 2.85 |

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 69 dB(A) | 69 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| η_s | 180 % | 139 % |
| Prated | 14.7 kW | 14.4 kW |
| SCOP | 4.59 | 3.57 |
| Tbiv | -7 °C | -7 °C |
| TOL | -10.00 °C | -10.00 °C |
| Pdh Tj = -7°C | 13.04 kW | 12.78 kW |
| COP Tj = -7°C | 2.54 | 2.05 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 8.00 kW | 7.96 kW |
| COP Tj = +2°C | 4.40 | 3.44 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 5.26 kW | 4.78 kW |
| COP Tj = +7°C | 7.12 | 5.13 |

| | | |
|---|-------------|-------------|
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.28 kW | 5.72 kW |
| COP Tj = 12°C | 7.56 | 6.58 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 13.04 kW | 12.78 kW |
| COP Tj = Tbiv | 2.54 | 2.05 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 12.81 kW | 12.54 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.37 | 1.94 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14.00 W | 14.00 W |
| PSB | 9.00 W | 9.00 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 1.89 kW | 1.86 kW |
| Annual energy consumption Qhe | 6617 kWh | 8349 kWh |

EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 69 dB(A) | 69 dB(A) |

EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs | 160 % | 128 % |
| Prated | 14.6 kW | 13.9 kW |
| SCOP | 4.08 | 3.29 |
| Tbiv | -15.00 °C | -15.00 °C |
| TOL | -22.00 °C | -22.00 °C |
| Pdh Tj = -7°C | 8.89 kW | 8.30 kW |
| COP Tj = -7°C | 3.25 | 2.70 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 5.87 kW | 5.18 kW |
| COP Tj = +2°C | 5.22 | 4.03 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 5.24 kW | 5.17 kW |
| COP Tj = +7°C | 6.67 | 5.44 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.32 kW | 5.23 kW |
| COP Tj = 12°C | 7.26 | 6.07 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 11.91 kW | 11.32 kW |
| COP Tj = Tbiv | 2.41 | 1.97 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.06 kW | 9.07 kW |

| | | |
|---|-------------|--------------|
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.02 | 1.56 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14 W | 14 W |
| PSB | 9.00 W | 9.00 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 4.54 kW | 4.83 kW |
| Annual energy consumption Qhe | 8813.00 kWh | 10408.00 kWh |
| Pdh Tj = -15°C (if TOL | 11.91 | 11.32 |
| COP Tj = -15°C (if TOL | 2.41 | 1.97 |
| Cdh Tj = -15 °C | 0.9 | 0.9 |

EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 69 dB(A) | 69 dB(A) |

EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs | 238.00 % | 181.00 % |
| Prated | 14.3 kW | 14.9 kW |
| SCOP | 6.05 | 4.62 |
| Tbiv | 7.00 °C | 7.00 °C |
| TOL | 2.00 °C | 2.00 °C |
| Pdh Tj = +2°C | 13.82 kW | 13.47 kW |
| COP Tj = +2°C | 3.18 | 2.48 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 9.17 kW | 9.58 kW |
| COP Tj = +7°C | 5.82 | 4.04 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.34 kW | 5.64 kW |
| COP Tj = 12°C | 7.33 | 6.31 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 9.17 kW | 9.58 kW |
| COP Tj = Tbiv | 5.82 | 4.04 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 13.82 kW | 13.47 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.18 | 2.48 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14.00 W | 14.00 W |
| PSB | 9 W | 9 W |
| PCK | 0.00 W | 0.00 W |

| | | |
|--|-------------|-------------|
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.48 kW | 1.43 kW |
| Annual energy consumption Qhe | 3159.00 kWh | 4306.00 kWh |

Model AHP1412B3NA/10, AHP1412B3VA/10, AHP1412B3WA/10

| | |
|-------------------------------------|--|
| Model name | AHP1412B3NA/10, AHP1412B3VA/10, AHP1412B3WA/10 |
| Application | Heating (medium temp) |
| Units | Outdoor |
| Climate zone (for heating) | Colder, Warmer |
| 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 | 12.0 kW | 12.0 kW |
| EI input | 2.50 kW | 3.87 kW |
| COP | 4.80 | 3.10 |

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 65 dB(A) | 65 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| η_s | 183 % | 141 % |
| Prated | 12.1 kW | 12.0 kW |
| SCOP | 4.67 | 3.62 |
| Tbiv | -7 °C | -7 °C |
| TOL | -10.00 °C | -10.00 °C |
| Pdh Tj = -7°C | 10.75 kW | 10.58 kW |
| COP Tj = -7°C | 2.78 | 2.23 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 6.73 kW | 6.59 kW |
| COP Tj = +2°C | 4.55 | 3.52 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 5.23 kW | 4.78 kW |
| COP Tj = +7°C | 6.89 | 4.99 |

| | | |
|---|-------------|-------------|
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.34 kW | 5.59 kW |
| COP Tj = 12°C | 7.41 | 6.41 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 10.75 kW | 10.58 kW |
| COP Tj = Tbiv | 2.78 | 2.23 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.77 kW | 10.15 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.61 | 2.05 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14.00 W | 14.00 W |
| PSB | 9.00 W | 9.00 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 1.33 kW | 1.95 kW |
| Annual energy consumption Qhe | 5352 kWh | 6843 kWh |

EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 65 dB(A) | 65 dB(A) |

EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs | 162 % | 127 % |
| Prated | 11.5 kW | 10.8 kW |
| SCOP | 4.13 | 3.26 |
| Tbiv | -15.00 °C | -15.00 °C |
| TOL | -22.00 °C | -22.00 °C |
| Pdh Tj = -7°C | 7.11 kW | 6.76 kW |
| COP Tj = -7°C | 3.47 | 2.72 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 4.33 kW | 4.14 kW |
| COP Tj = +2°C | 5.18 | 4.05 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 5.08 kW | 5.00 kW |
| COP Tj = +7°C | 6.46 | 5.15 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.15 kW | 5.01 kW |
| COP Tj = 12°C | 6.84 | 5.66 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 9.39 kW | 8.84 kW |
| COP Tj = Tbiv | 2.49 | 1.98 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.70 kW | 6.84 kW |

| | | |
|---|-------------|-------------|
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.04 | 1.52 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14 W | 14 W |
| PSB | 9.00 W | 9.00 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 3.80 kW | 3.96 kW |
| Annual energy consumption Qhe | 6869.00 kWh | 8197.00 kWh |
| Pdh Tj = -15°C (if TOL | 9.39 | 8.84 |
| COP Tj = -15°C (if TOL | 2.49 | 1.98 |
| Cdh Tj = -15 °C | 0.9 | 0.9 |

EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 65 dB(A) | 65 dB(A) |

EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs | 232 % | 174 % |
| Prated | 11.70 kW | 12.40 kW |
| SCOP | 5.90 | 4.45 |
| Tbiv | 7 °C | 7 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 11.58 kW | 11.41 kW |
| COP Tj = +2°C | 3.30 | 2.55 |
| Cdh Tj = +2 °C | 0.900 | 0.900 |
| Pdh Tj = +7°C | 7.57 kW | 7.85 kW |
| COP Tj = +7°C | 5.78 | 3.99 |
| Cdh Tj = +7 °C | 0.900 | 0.900 |
| Pdh Tj = 12°C | 5.17 kW | 5.47 kW |
| COP Tj = 12°C | 6.98 | 5.90 |
| Cdh Tj = +12 °C | 0.900 | 0.900 |
| Pdh Tj = Tbiv | 7.57 kW | 7.85 kW |
| COP Tj = Tbiv | 5.78 | 3.99 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.58 kW | 11.41 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.30 | 2.55 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | | |
| WTOL | 75 °C | 75 °C |
| Poff | 9 W | 9 W |
| PTO | 14 W | 14 W |
| PSB | 9 W | 9 W |

| | | |
|--|-------------|-------------|
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.12 kW | 0.99 kW |
| Annual energy consumption Qhe | 2651 kWh | 3724 kWh |

Model AHP1414B3NA/10, AHP1414B3VA/10, AHP1414B3WA/10

| | |
|-------------------------------------|--|
| Model name | AHP1414B3NA/10, AHP1414B3VA/10, AHP1414B3WA/10 |
| Application | Heating (medium temp) |
| Units | Outdoor |
| Climate zone (for heating) | Colder, Warmer |
| 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 | 14.0 kW | 14.0 kW |
| EI input | 3.11 kW | 4.67 kW |
| COP | 4.50 | 3.00 |

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 65 dB(A) | 65 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| η_s | 182 % | 141 % |
| Prated | 13.7 kW | 13.0 kW |
| SCOP | 4.63 | 3.61 |
| Tbiv | -7 °C | -7 °C |
| TOL | -10.00 °C | -10.00 °C |
| Pdh Tj = -7°C | 12.08 kW | 11.47 kW |
| COP Tj = -7°C | 2.66 | 2.15 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 7.55 kW | 7.29 kW |
| COP Tj = +2°C | 4.45 | 3.50 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 5.25 kW | 4.85 kW |
| COP Tj = +7°C | 7.06 | 5.10 |

| | | |
|---|-------------|-------------|
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.23 kW | 5.60 kW |
| COP Tj = 12°C | 7.46 | 6.46 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 12.08 kW | 11.47 kW |
| COP Tj = Tbiv | 2.66 | 2.15 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.62 kW | 10.97 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.53 | 2.02 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14.00 W | 14.00 W |
| PSB | 9.00 W | 9.00 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.08 kW | 2.03 kW |
| Annual energy consumption Qhe | 6110 kWh | 7438 kWh |

EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 65 dB(A) | 65 dB(A) |

EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs | 162 % | 126 % |
| Prated | 12.6 kW | 12.0 kW |
| SCOP | 4.13 | 3.23 |
| Tbiv | -15.00 °C | -15.00 °C |
| TOL | -22.00 °C | -22.00 °C |
| Pdh Tj = -7°C | 7.83 kW | 7.39 kW |
| COP Tj = -7°C | 3.35 | 2.67 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 4.77 kW | 4.56 kW |
| COP Tj = +2°C | 5.37 | 4.00 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 5.08 kW | 4.99 kW |
| COP Tj = +7°C | 6.50 | 5.20 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.15 kW | 5.06 kW |
| COP Tj = 12°C | 6.85 | 5.81 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 10.31 kW | 9.77 kW |
| COP Tj = Tbiv | 2.39 | 1.95 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8.57 kW | 7.63 kW |

| | | |
|---|-------------|-------------|
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.01 | 1.53 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14 W | 14 W |
| PSB | 9.00 W | 9.00 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 4.03 kW | 4.37 kW |
| Annual energy consumption Qhe | 7513.00 kWh | 9168.00 kWh |
| Pdh Tj = -15°C (if TOL | 10.31 | 9.77 |
| COP Tj = -15°C (if TOL | 2.39 | 1.95 |
| Cdh Tj = -15 °C | 0.9 | 0.9 |

EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 65 dB(A) | 65 dB(A) |

EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs | 231.00 % | 174.00 % |
| Prated | 12.7 kW | 14.1 kW |
| SCOP | 5.85 | 4.43 |
| Tbiv | 7.00 °C | 7.00 °C |
| TOL | 2.00 °C | 2.00 °C |
| Pdh Tj = +2°C | 12.41 kW | 12.05 kW |
| COP Tj = +2°C | 3.21 | 2.48 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 8.19 kW | 9.11 kW |
| COP Tj = +7°C | 5.67 | 3.98 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.17 kW | 5.49 kW |
| COP Tj = 12°C | 7.02 | 6.01 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 8.19 kW | 9.11 kW |
| COP Tj = Tbiv | 5.67 | 3.98 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 12.41 kW | 12.05 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.21 | 2.48 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14.00 W | 14.00 W |
| PSB | 9 W | 9 W |
| PCK | 0.00 W | 0.00 W |

| | | |
|--|-------------|-------------|
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.29 kW | 2.21 kW |
| Annual energy consumption Qhe | 2897.00 kWh | 4256.00 kWh |

Model AHP1416B3NA/10, AHP1416B3VA/10, AHP1416B3WA/10

| | |
|-------------------------------------|--|
| Model name | AHP1416B3NA/10, AHP1416B3VA/10, AHP1416B3WA/10 |
| Application | Heating (medium temp) |
| Units | Outdoor |
| Climate zone (for heating) | Colder, Warmer |
| 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 | 15.0 kW | 15.0 kW |
| EI input | 3.41 kW | 5.26 kW |
| COP | 4.40 | 2.85 |

EN 12102-1 | Average Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 69 dB(A) | 69 dB(A) |

EN 14825 | Average Climate

| | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| η_s | 180 % | 139 % |
| Prated | 14.7 kW | 14.4 kW |
| SCOP | 4.59 | 3.57 |
| Tbiv | -7 °C | -7 °C |
| TOL | -10.00 °C | -10.00 °C |
| Pdh Tj = -7°C | 13.04 kW | 12.78 kW |
| COP Tj = -7°C | 2.54 | 2.05 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 8.00 kW | 7.96 kW |
| COP Tj = +2°C | 4.40 | 3.44 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 5.26 kW | 4.78 kW |
| COP Tj = +7°C | 7.12 | 5.13 |

| | | |
|---|-------------|-------------|
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.28 kW | 5.72 kW |
| COP Tj = 12°C | 7.56 | 6.58 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 13.04 kW | 12.78 kW |
| COP Tj = Tbiv | 2.54 | 2.05 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 12.81 kW | 12.54 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.37 | 1.94 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14.00 W | 14.00 W |
| PSB | 9.00 W | 9.00 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 1.89 kW | 1.86 kW |
| Annual energy consumption Qhe | 6617 kWh | 8349 kWh |

EN 12102-1 | Colder Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 69 dB(A) | 69 dB(A) |

EN 14825 | Colder Climate

| | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs | 160 % | 128 % |
| Prated | 14.6 kW | 13.9 kW |
| SCOP | 4.08 | 3.29 |
| Tbiv | -15.00 °C | -15.00 °C |
| TOL | -22.00 °C | -22.00 °C |
| Pdh Tj = -7°C | 8.89 kW | 8.30 kW |
| COP Tj = -7°C | 3.25 | 2.70 |
| Cdh Tj = -7 °C | 0.90 | 0.90 |
| Pdh Tj = +2°C | 5.87 kW | 5.18 kW |
| COP Tj = +2°C | 5.22 | 4.03 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 5.24 kW | 5.17 kW |
| COP Tj = +7°C | 6.67 | 5.44 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.32 kW | 5.23 kW |
| COP Tj = 12°C | 7.26 | 6.07 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 11.91 kW | 11.32 kW |
| COP Tj = Tbiv | 2.41 | 1.97 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.06 kW | 9.07 kW |

| | | |
|---|-------------|--------------|
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.02 | 1.56 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14 W | 14 W |
| PSB | 9.00 W | 9.00 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 4.54 kW | 4.83 kW |
| Annual energy consumption Qhe | 8813.00 kWh | 10408.00 kWh |
| Pdh Tj = -15°C (if TOL | 11.91 | 11.32 |
| COP Tj = -15°C (if TOL | 2.41 | 1.97 |
| Cdh Tj = -15 °C | 0.9 | 0.9 |

EN 12102-1 | Warmer Climate

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 69 dB(A) | 69 dB(A) |

EN 14825 | Warmer Climate

| | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs | 238.00 % | 181.00 % |
| Prated | 14.3 kW | 14.9 kW |
| SCOP | 6.05 | 4.62 |
| Tbiv | 7.00 °C | 7.00 °C |
| TOL | 2.00 °C | 2.00 °C |
| Pdh Tj = +2°C | 13.82 kW | 13.47 kW |
| COP Tj = +2°C | 3.18 | 2.48 |
| Cdh Tj = +2 °C | 0.90 | 0.90 |
| Pdh Tj = +7°C | 9.17 kW | 9.58 kW |
| COP Tj = +7°C | 5.82 | 4.04 |
| Cdh Tj = +7 °C | 0.90 | 0.90 |
| Pdh Tj = 12°C | 5.34 kW | 5.64 kW |
| COP Tj = 12°C | 7.33 | 6.31 |
| Cdh Tj = +12 °C | 0.90 | 0.90 |
| Pdh Tj = Tbiv | 9.17 kW | 9.58 kW |
| COP Tj = Tbiv | 5.82 | 4.04 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 13.82 kW | 13.47 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.18 | 2.48 |
| WTOL | 75.00 °C | 75.00 °C |
| Poff | 9.00 W | 9.00 W |
| PTO | 14.00 W | 14.00 W |
| PSB | 9 W | 9 W |
| PCK | 0.00 W | 0.00 W |

| | | |
|--|-------------|-------------|
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0.48 kW | 1.43 kW |
| Annual energy consumption Qhe | 3159.00 kWh | 4306.00 kWh |