

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | | |
|----------------------------|---|----------|----------------|
| Summary of | Ecodan Zubadan 14-200D AA | Reg. No. | 037-0023-20 |
| Certificate Holder | | | |
| Name | Mitsubishi Electric Air Conditioning Systems Europe LTD | | |
| Address | Nettlehill Road, Houston Industrial Estate | Zip | EH54 5EQ |
| City | Livingston | Country | United Kingdom |
| Certification Body | SZU - Strojirensky zkusebni ustav (Engineering Test Institute, Public Enterprise) | | |
| Name of testing laboratory | Heat Pump Test Center WPZ | | |
| Subtype title | Ecodan Zubadan 14-200D AA | | |
| Heat Pump Type | Outdoor Air/Water | | |
| Refrigerant | R32 | | |
| Mass Of Refrigerant | 1.7 kg | | |
| Certification Date | 06.10.2020 | | |
| Testing basis | HP Keymark scheme rules rev. no. 6 | | |

Model: PUD-SHWM140VAA(-BS) + E*ST20D-M*D

General Data

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

Heating

EN 14511-2

| | Low temperature | Medium temperature |
|------------------------|------------------------|------------------------|
| Heat output | 12.00 kW | 12.00 kW |
| El input | 2.55 kW | 4.90 kW |
| COP | 4.70 | 2.45 |
| Indoor water flow rate | 2.06 m ³ /h | 1.29 m ³ /h |

EN 14511-4

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

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 179 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 4.54 | 3.43 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 12.40 kW | 12.40 kW |
| COP Tj = -7°C | 2.76 | 2.15 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +2°C | 7.60 kW | 7.50 kW |
| COP Tj = +2°C | 4.34 | 3.15 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = +7°C | 5.20 kW | 6.30 kW |
| COP Tj = +7°C | 6.27 | 4.96 |
| Cdh | 0.98 | 0.99 |

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | |
|--|-------------|-------------|
| Pdh Tj = 12°C | 5.40 kW | 4.00 kW |
| COP Tj = 12°C | 9.00 | 6.90 |
| Cdh | 0.98 | 0.97 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 2.69 | 1.80 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |
| Poff | 15 W | 15 W |
| PTO | 15 W | 15 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 6265 kWh | 8315 kWh |

Warmer Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 224 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 5.68 | 3.96 |
| Tbiv | 2 °C | 2 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = +2°C | 14.00 kW | 14.00 kW |
| COP Tj = +2°C | 3.05 | 1.95 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +7°C | 9.00 kW | 8.80 kW |
| COP Tj = +7°C | 5.08 | 3.24 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = 12°C | 5.10 kW | 5.50 kW |
| COP Tj = 12°C | 7.18 | 5.50 |
| Cdh | 0.98 | 0.98 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 3.05 | 1.95 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | |
|--|-------------|-------------|
| Poff | 15 W | 15 W |
| PTO | 15 W | 15 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Q _{he} | 3236 kWh | 4667 kWh |

Domestic Hot Water (DHW)

Average Climate

| EN 16147 | |
|---------------------------------|------------|
| Declared load profile | L |
| Efficiency η_{DHW} | 145 % |
| COP | 3.41 |
| Heating up time | 1:31 h:min |
| Standby power input | 38.0 W |
| Reference hot water temperature | 52.5 °C |
| Mixed water at 40°C | 278 l |

Warmer Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

| EN 16147 | |
|---------------------------------|------------|
| Declared load profile | L |
| Efficiency η_{DHW} | 161 % |
| COP | 3.78 |
| Heating up time | 1:22 h:min |
| Standby power input | 34.0 W |
| Reference hot water temperature | 52.5 °C |
| Mixed water at 40°C | 278 l |

Model: PUD-SHWM140VAA(-BS) + E*ST20D-*M*D

General Data

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

Heating

EN 14511-2

| | Low temperature | Medium temperature |
|------------------------|------------------------|------------------------|
| Heat output | 12.00 kW | 12.00 kW |
| El input | 2.55 kW | 4.90 kW |
| COP | 4.70 | 2.45 |
| Indoor water flow rate | 2.06 m ³ /h | 1.29 m ³ /h |

EN 14511-4

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

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 179 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 4.54 | 3.43 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 12.40 kW | 12.40 kW |
| COP Tj = -7°C | 2.76 | 2.15 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +2°C | 7.60 kW | 7.50 kW |
| COP Tj = +2°C | 4.34 | 3.15 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = +7°C | 5.20 kW | 6.30 kW |
| COP Tj = +7°C | 6.27 | 4.96 |
| Cdh | 0.98 | 0.99 |

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | |
|--|-------------|-------------|
| Pdh Tj = 12°C | 5.40 kW | 4.00 kW |
| COP Tj = 12°C | 9.00 | 6.90 |
| Cdh | 0.98 | 0.97 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 2.69 | 1.80 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |
| Poff | 15 W | 15 W |
| PTO | 15 W | 15 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 6265 kWh | 8315 kWh |

Warmer Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 224 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 5.68 | 3.96 |
| Tbiv | 2 °C | 2 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = +2°C | 14.00 kW | 14.00 kW |
| COP Tj = +2°C | 3.05 | 1.95 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +7°C | 9.00 kW | 8.80 kW |
| COP Tj = +7°C | 5.08 | 3.24 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = 12°C | 5.10 kW | 5.50 kW |
| COP Tj = 12°C | 7.18 | 5.50 |
| Cdh | 0.98 | 0.98 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 3.05 | 1.95 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |

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|--|-------------|-------------|
| Poff | 15 W | 15 W |
| PTO | 15 W | 15 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Q _{he} | 3236 kWh | 4667 kWh |

Domestic Hot Water (DHW)

Average Climate

| EN 16147 | |
|---------------------------------|------------|
| Declared load profile | L |
| Efficiency η_{DHW} | 145 % |
| COP | 3.41 |
| Heating up time | 1:31 h:min |
| Standby power input | 38.0 W |
| Reference hot water temperature | 52.5 °C |
| Mixed water at 40°C | 278 l |

Warmer Climate

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| EN 16147 | |
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| Declared load profile | L |
| Efficiency η_{DHW} | 161 % |
| COP | 3.78 |
| Heating up time | 1:22 h:min |
| Standby power input | 34.0 W |
| Reference hot water temperature | 52.5 °C |
| Mixed water at 40°C | 278 l |

Model: PUD-SHWM140VAA(-BS) + E*SD-M*D

General Data

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

Heating

EN 14511-2

| | Low temperature | Medium temperature |
|------------------------|------------------------|------------------------|
| Heat output | 12.00 kW | 12.00 kW |
| El input | 2.55 kW | 4.90 kW |
| COP | 4.70 | 2.45 |
| Indoor water flow rate | 2.06 m ³ /h | 1.29 m ³ /h |

EN 14511-4

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

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 179 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 4.54 | 3.43 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 12.40 kW | 12.40 kW |
| COP Tj = -7°C | 2.76 | 2.15 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +2°C | 7.60 kW | 7.50 kW |
| COP Tj = +2°C | 4.34 | 3.15 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = +7°C | 5.20 kW | 6.30 kW |
| COP Tj = +7°C | 6.27 | 4.96 |
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| Pdh Tj = 12°C | 5.40 kW | 4.00 kW |
| COP Tj = 12°C | 9.00 | 6.90 |
| Cdh | 0.98 | 0.97 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 2.69 | 1.80 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |
| Poff | 15 W | 15 W |
| PTO | 15 W | 15 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 6265 kWh | 8315 kWh |

Warmer Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

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EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 224 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 5.68 | 3.96 |
| Tbiv | 2 °C | 2 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = +2°C | 14.00 kW | 14.00 kW |
| COP Tj = +2°C | 3.05 | 1.95 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +7°C | 9.00 kW | 8.80 kW |
| COP Tj = +7°C | 5.08 | 3.24 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = 12°C | 5.10 kW | 5.50 kW |
| COP Tj = 12°C | 7.18 | 5.50 |
| Cdh | 0.98 | 0.98 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 3.05 | 1.95 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | |
|--|-------------|-------------|
| Poff | 15 W | 15 W |
| PTO | 15 W | 15 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 3236 kWh | 4667 kWh |

Model: PUD-SHWM140VAA(-BS) + E*SD-*M*D

General Data

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

Heating

EN 14511-2

| | Low temperature | Medium temperature |
|------------------------|------------------------|------------------------|
| Heat output | 12.00 kW | 12.00 kW |
| El input | 2.55 kW | 4.90 kW |
| COP | 4.70 | 2.45 |
| Indoor water flow rate | 2.06 m ³ /h | 1.29 m ³ /h |

EN 14511-4

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

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 179 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 4.54 | 3.43 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 12.40 kW | 12.40 kW |
| COP Tj = -7°C | 2.76 | 2.15 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +2°C | 7.60 kW | 7.50 kW |
| COP Tj = +2°C | 4.34 | 3.15 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = +7°C | 5.20 kW | 6.30 kW |
| COP Tj = +7°C | 6.27 | 4.96 |
| Cdh | 0.98 | 0.99 |

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| | | |
|--|-------------|-------------|
| Pdh Tj = 12°C | 5.40 kW | 4.00 kW |
| COP Tj = 12°C | 9.00 | 6.90 |
| Cdh | 0.98 | 0.97 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 2.69 | 1.80 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |
| Poff | 15 W | 15 W |
| PTO | 15 W | 15 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 6265 kWh | 8315 kWh |

Warmer Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 224 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 5.68 | 3.96 |
| Tbiv | 2 °C | 2 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = +2°C | 14.00 kW | 14.00 kW |
| COP Tj = +2°C | 3.05 | 1.95 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +7°C | 9.00 kW | 8.80 kW |
| COP Tj = +7°C | 5.08 | 3.24 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = 12°C | 5.10 kW | 5.50 kW |
| COP Tj = 12°C | 7.18 | 5.50 |
| Cdh | 0.98 | 0.98 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 3.05 | 1.95 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | |
|--|-------------|-------------|
| Poff | 15 W | 15 W |
| PTO | 15 W | 15 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 3236 kWh | 4667 kWh |

Model: PUD-SHWM140YAA(-BS) + E*ST20D-M*D

General Data

| | |
|--------------|-------------|
| Power supply | 3x400V 50Hz |
|--------------|-------------|

Heating

EN 14511-2

| | Low temperature | Medium temperature |
|------------------------|------------------------|------------------------|
| Heat output | 12.00 kW | 12.00 kW |
| El input | 2.55 kW | 4.90 kW |
| COP | 4.70 | 2.45 |
| Indoor water flow rate | 2.06 m ³ /h | 1.29 m ³ /h |

EN 14511-4

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

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 177 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 4.51 | 3.42 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 12.40 kW | 12.40 kW |
| COP Tj = -7°C | 2.76 | 2.15 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +2°C | 7.60 kW | 7.50 kW |
| COP Tj = +2°C | 4.34 | 3.15 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = +7°C | 5.20 kW | 6.30 kW |
| COP Tj = +7°C | 6.27 | 4.96 |
| Cdh | 0.97 | 0.98 |

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | |
|--|-------------|-------------|
| Pdh Tj = 12°C | 5.40 kW | 4.00 kW |
| COP Tj = 12°C | 9.00 | 6.90 |
| Cdh | 0.96 | 0.96 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 2.69 | 1.80 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |
| Poff | 22 W | 22 W |
| PTO | 22 W | 22 W |
| PSB | 22 W | 22 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 6265 kWh | 8315 kWh |

Warmer Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 223 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 5.64 | 3.94 |
| Tbiv | 2 °C | 2 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = +2°C | 14.00 kW | 14.00 kW |
| COP Tj = +2°C | 3.05 | 1.95 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +7°C | 9.00 kW | 8.80 kW |
| COP Tj = +7°C | 5.08 | 3.24 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = 12°C | 5.10 kW | 5.50 kW |
| COP Tj = 12°C | 7.18 | 5.50 |
| Cdh | 0.97 | 0.98 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 3.05 | 1.95 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | |
|--|-------------|-------------|
| Poff | 22 W | 22 W |
| PTO | 22 W | 22 W |
| PSB | 22 W | 22 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Q _{he} | 3236 kWh | 4667 kWh |

Domestic Hot Water (DHW)

Average Climate

| EN 16147 | |
|---------------------------------|------------|
| Declared load profile | L |
| Efficiency η_{DHW} | 145 % |
| COP | 3.41 |
| Heating up time | 1:31 h:min |
| Standby power input | 38.0 W |
| Reference hot water temperature | 52.5 °C |
| Mixed water at 40°C | 278 l |

Warmer Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

| EN 16147 | |
|---------------------------------|------------|
| Declared load profile | L |
| Efficiency η_{DHW} | 161 % |
| COP | 3.78 |
| Heating up time | 1:22 h:min |
| Standby power input | 34.0 W |
| Reference hot water temperature | 52.5 °C |
| Mixed water at 40°C | 278 l |

Model: PUD-SHWM140YAA(-BS) + E*ST20D-*M*D

General Data

| | |
|--------------|-------------|
| Power supply | 3x400V 50Hz |
|--------------|-------------|

Heating

EN 14511-2

| | Low temperature | Medium temperature |
|------------------------|------------------------|------------------------|
| Heat output | 12.00 kW | 12.00 kW |
| El input | 2.55 kW | 4.90 kW |
| COP | 4.70 | 2.45 |
| Indoor water flow rate | 2.06 m ³ /h | 1.29 m ³ /h |

EN 14511-4

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

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 177 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 4.51 | 3.42 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 12.40 kW | 12.40 kW |
| COP Tj = -7°C | 2.76 | 2.15 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +2°C | 7.60 kW | 7.50 kW |
| COP Tj = +2°C | 4.34 | 3.15 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = +7°C | 5.20 kW | 6.30 kW |
| COP Tj = +7°C | 6.27 | 4.96 |
| Cdh | 0.97 | 0.98 |

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | |
|--|-------------|-------------|
| Pdh Tj = 12°C | 5.40 kW | 4.00 kW |
| COP Tj = 12°C | 9.00 | 6.90 |
| Cdh | 0.96 | 0.96 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 2.69 | 1.80 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |
| Poff | 22 W | 22 W |
| PTO | 22 W | 22 W |
| PSB | 22 W | 22 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 6265 kWh | 8315 kWh |

Warmer Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 223 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 5.64 | 3.94 |
| Tbiv | 2 °C | 2 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = +2°C | 14.00 kW | 14.00 kW |
| COP Tj = +2°C | 3.05 | 1.95 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +7°C | 9.00 kW | 8.80 kW |
| COP Tj = +7°C | 5.08 | 3.24 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = 12°C | 5.10 kW | 5.50 kW |
| COP Tj = 12°C | 7.18 | 5.50 |
| Cdh | 0.97 | 0.98 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 3.05 | 1.95 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | |
|--|-------------|-------------|
| Poff | 22 W | 22 W |
| PTO | 22 W | 22 W |
| PSB | 22 W | 22 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 3236 kWh | 4667 kWh |

Domestic Hot Water (DHW)

Average Climate

| EN 16147 | |
|---------------------------------|------------|
| Declared load profile | L |
| Efficiency η_{DHW} | 145 % |
| COP | 3.41 |
| Heating up time | 1:31 h:min |
| Standby power input | 38.0 W |
| Reference hot water temperature | 52.5 °C |
| Mixed water at 40°C | 278 l |

Warmer Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

| EN 16147 | |
|---------------------------------|------------|
| Declared load profile | L |
| Efficiency η_{DHW} | 161 % |
| COP | 3.78 |
| Heating up time | 1:22 h:min |
| Standby power input | 34.0 W |
| Reference hot water temperature | 52.5 °C |
| Mixed water at 40°C | 278 l |

Model: PUD-SHWM140YAA(-BS) + E*SD-M*D

General Data

| | |
|--------------|-------------|
| Power supply | 3x400V 50Hz |
|--------------|-------------|

Heating

EN 14511-2

| | Low temperature | Medium temperature |
|------------------------|------------------------|------------------------|
| Heat output | 12.00 kW | 12.00 kW |
| El input | 2.55 kW | 4.90 kW |
| COP | 4.70 | 2.45 |
| Indoor water flow rate | 2.06 m ³ /h | 1.29 m ³ /h |

EN 14511-4

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

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 177 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 4.51 | 3.42 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 12.40 kW | 12.40 kW |
| COP Tj = -7°C | 2.76 | 2.15 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +2°C | 7.60 kW | 7.50 kW |
| COP Tj = +2°C | 4.34 | 3.15 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = +7°C | 5.20 kW | 6.30 kW |
| COP Tj = +7°C | 6.27 | 4.96 |
| Cdh | 0.97 | 0.98 |

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | |
|--|-------------|-------------|
| Pdh Tj = 12°C | 5.40 kW | 4.00 kW |
| COP Tj = 12°C | 9.00 | 6.90 |
| Cdh | 0.96 | 0.96 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 2.69 | 1.80 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |
| Poff | 22 W | 22 W |
| PTO | 22 W | 22 W |
| PSB | 22 W | 22 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 6265 kWh | 8315 kWh |

Warmer Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 223 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 5.64 | 3.94 |
| Tbiv | 2 °C | 2 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = +2°C | 14.00 kW | 14.00 kW |
| COP Tj = +2°C | 3.05 | 1.95 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +7°C | 9.00 kW | 8.80 kW |
| COP Tj = +7°C | 5.08 | 3.24 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = 12°C | 5.10 kW | 5.50 kW |
| COP Tj = 12°C | 7.18 | 5.50 |
| Cdh | 0.97 | 0.98 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 3.05 | 1.95 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | |
|--|-------------|-------------|
| Poff | 22 W | 22 W |
| PTO | 22 W | 22 W |
| PSB | 22 W | 22 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 3236 kWh | 4667 kWh |

Model: PUD-SHWM140YAA(-BS) + E*SD-*M*D

General Data

| | |
|--------------|-------------|
| Power supply | 3x400V 50Hz |
|--------------|-------------|

Heating

EN 14511-2

| | Low temperature | Medium temperature |
|------------------------|------------------------|------------------------|
| Heat output | 12.00 kW | 12.00 kW |
| El input | 2.55 kW | 4.90 kW |
| COP | 4.70 | 2.45 |
| Indoor water flow rate | 2.06 m ³ /h | 1.29 m ³ /h |

EN 14511-4

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

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 177 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 4.51 | 3.42 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 12.40 kW | 12.40 kW |
| COP Tj = -7°C | 2.76 | 2.15 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +2°C | 7.60 kW | 7.50 kW |
| COP Tj = +2°C | 4.34 | 3.15 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = +7°C | 5.20 kW | 6.30 kW |
| COP Tj = +7°C | 6.27 | 4.96 |
| Cdh | 0.97 | 0.98 |

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | |
|--|-------------|-------------|
| Pdh Tj = 12°C | 5.40 kW | 4.00 kW |
| COP Tj = 12°C | 9.00 | 6.90 |
| Cdh | 0.96 | 0.96 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 2.69 | 1.80 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |
| Poff | 22 W | 22 W |
| PTO | 22 W | 22 W |
| PSB | 22 W | 22 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 6265 kWh | 8315 kWh |

Warmer Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 62 dB(A) | 62 dB(A) |

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 223 % | 134 % |
| Prated | 14.00 kW | 14.00 kW |
| SCOP | 5.64 | 3.94 |
| Tbiv | 2 °C | 2 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = +2°C | 14.00 kW | 14.00 kW |
| COP Tj = +2°C | 3.05 | 1.95 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +7°C | 9.00 kW | 8.80 kW |
| COP Tj = +7°C | 5.08 | 3.24 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = 12°C | 5.10 kW | 5.50 kW |
| COP Tj = 12°C | 7.18 | 5.50 |
| Cdh | 0.97 | 0.98 |
| Pdh Tj = Tbiv | 14.00 kW | 14.00 kW |
| COP Tj = Tbiv | 3.05 | 1.95 |
| Pdh Tj = TOL | 9.60 kW | 9.60 kW |
| COP Tj = TOL | 1.55 | 1.55 |
| WTOL | 60 °C | 60 °C |

This information was generated by the HP KEYMARK database on 17 Dec 2020

| | | |
|--|-------------|-------------|
| Poff | 22 W | 22 W |
| PTO | 22 W | 22 W |
| PSB | 22 W | 22 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 0.00 kW | 0.00 kW |
| Annual energy consumption Qhe | 3236 kWh | 4667 kWh |