

This information was generated by the HP KEYMARK database on 10 Mar 2021

| | | | |
|---------------------|------------------------------------|----------|-------------|
| Summary of | LWD 50A | Reg. No. | 041-K001-20 |
| Certificate Holder | | | |
| Name | ait-deutschland GmbH | | |
| Address | Industriestr. 3 | Zip | 95359 |
| City | Kasendorf | Country | Germany |
| Certification Body | BRE Global Limited | | |
| Subtype title | LWD 50A | | |
| Heat Pump Type | Outdoor Air/Water | | |
| Refrigerant | R290 | | |
| Mass Of Refrigerant | 0.95 kg | | |
| Certification Date | 12.05.2017 | | |
| Testing basis | HP Keymark Scheme Transition Rules | | |

Model: LWD 50A-HMD

General Data

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

Heating

EN 14511-2

| | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 7.10 kW | 6.57 kW |
| El input | 1.48 kW | 1.95 kW |
| COP | 4.80 | 3.37 |

EN 14511-4

| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |
|--|--------|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure | passed |
| Defrost test | passed |

Average Climate

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EN 12102-1

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 57 dB(A) | 57 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 164 % | 125 % |
| Prated | 6.02 kW | 5.41 kW |
| SCOP | 4.16 | 3.20 |
| Tbiv | -5 °C | -5 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 4.70 kW | 4.00 kW |
| COP Tj = -7°C | 3.27 | 1.99 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +2°C | 5.60 kW | 5.40 kW |
| COP Tj = +2°C | 4.20 | 3.18 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = +7°C | 7.20 kW | 7.10 kW |
| COP Tj = +7°C | 5.29 | 4.65 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = 12°C | 8.00 kW | 7.90 kW |

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| | | |
|---|-------------|-------------|
| COP Tj = 12°C | 6.14 | 5.97 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = Tbiv | 4.90 kW | 4.30 kW |
| COP Tj = Tbiv | 3.51 | 2.24 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 4.20 kW | 3.60 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.96 | 1.74 |
| Cdh | 0.90 | 0.90 |
| WTOL | 62 °C | 62 °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 | 1.82 kW | 1.81 kW |
| Annual energy consumption Qhe | 2989 kWh | 3491 kWh |

Warmer Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level outdoor | 57 dB(A) | 57 dB(A) |

| EN 14825 |
|-----------------|
|-----------------|

This information was generated by the HP KEYMARK database on 10 Mar 2021

| | Low temperature | Medium temperature |
|---|------------------------|---------------------------|
| η_s | 198 % | 160 % |
| Prated | 7.28 kW | 6.76 kW |
| SCOP | 5.02 | 4.07 |
| Tbiv | 4 °C | 4 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 5.60 kW | 5.20 kW |
| COP Tj = +2°C | 3.82 | 2.39 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +7°C | 7.20 kW | 6.70 kW |
| COP Tj = +7°C | 5.02 | 3.75 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = 12°C | 7.90 kW | 7.80 kW |
| COP Tj = 12°C | 5.95 | 5.38 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = Tbiv | 6.20 kW | 5.80 kW |
| COP Tj = Tbiv | 4.38 | 2.88 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 5.60 kW | 5.20 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.82 | 2.39 |
| Cdh | 0.90 | 0.90 |
| WTOL | 62 °C | 62 °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 | 1.68 kW | 1.56 kW |
| Annual energy consumption Qhe | 1937 kWh | 2217 kWh |

Colder Climate

| EN 12102-1 | | |
|---------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level outdoor | 57 dB(A) | 57 dB(A) |

| EN 14825 | | |
|-----------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| η_s | 147 % | 112 % |
| Prated | 5.56 kW | 4.88 kW |
| SCOP | 3.74 | 2.89 |
| Tbiv | -12 °C | -12 °C |
| TOL | -20 °C | -20 °C |
| Pdh Tj = -7°C | 4.80 kW | 4.30 kW |

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| | | |
|---|---------|---------|
| COP Tj = -7°C | 3.59 | 2.46 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = +2°C | 5.70 kW | 5.50 kW |
| COP Tj = +2°C | 4.48 | 3.61 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = +7°C | 7.30 kW | 7.20 kW |
| COP Tj = +7°C | 5.48 | 5.11 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = 12°C | 8.00 kW | 8.00 kW |
| COP Tj = 12°C | 6.10 | 6.31 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = Tbiv | 4.10 kW | 3.60 kW |
| COP Tj = Tbiv | 3.11 | 2.00 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.00 kW | 2.60 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.25 | 1.39 |
| Cdh | 0.90 | 0.90 |
| WTOL | 62 °C | 62 °C |
| Poff | 15 W | 15 W |
| PTO | 15 W | 15 W |
| PSB | 15 W | 15 W |
| PCK | 0 W | 0 W |

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| | | |
|---|-------------|-------------|
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 5.56 kW | 4.88 kW |
| Annual energy consumption Q _{he} | 3661 kWh | 4169 kWh |
| P _{dh} T _j = -15°C (if TOL<-20°C) | 3.70 | 3.20 |
| COP T _j = -15°C (if TOL<-20°C) | 2.78 | 1.76 |
| C _{dh} | 1.00 | 1.00 |

Model: LWD 50A-HTD

General Data

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

Heating

EN 14511-2

| | Low temperature | Medium temperature |
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| Heat output | 7.10 kW | 6.57 kW |
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EN 14511-4

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EN 12102-1

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| Cdh | 0.90 | 0.90 |
| WTOL | 62 °C | 62 °C |
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| PTO | 15 W | 15 W |
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| COP Tj = +2°C | 3.82 | 2.39 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +7°C | 7.20 kW | 6.70 kW |
| COP Tj = +7°C | 5.02 | 3.75 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = 12°C | 7.90 kW | 7.80 kW |
| COP Tj = 12°C | 5.95 | 5.38 |
| Cdh | 0.99 | 0.99 |
| Pdh Tj = Tbiv | 6.20 kW | 5.80 kW |
| COP Tj = Tbiv | 4.38 | 2.88 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 5.60 kW | 5.20 kW |
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| Prated | 5.56 kW | 4.88 kW |
| SCOP | 3.74 | 2.89 |
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| Pdh Tj = -7°C | 4.80 kW | 4.30 kW |

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| COP T _j = -15°C (if TOL<-20°C) | 2.78 | 1.76 |
| C _{dh} | 1.00 | 1.00 |