

This information was generated by the HP KEYMARK database on 5 Mar 2021

| | | | |
|---------------------|--------------------------------|----------|-------------|
| Summary of | LWD 70A/SX | Reg. No. | 041-K001-44 |
| Certificate Holder | | | |
| Name | ait-deutschland GmbH | | |
| Address | Industriestr. 3 | Zip | 95359 |
| City | Kasendorf | Country | Germany |
| Certification Body | BRE Global Limited | | |
| Subtype title | LWD 70A/SX | | |
| Heat Pump Type | Outdoor Air/Water | | |
| Refrigerant | R290 | | |
| Mass Of Refrigerant | 1.1 kg | | |
| Certification Date | 24.11.2020 | | |
| Testing basis | HP Keymark Scheme Rules Rev 08 | | |

Model: LWD 70A/SX-HMD

General Data

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

Heating

EN 14511-2

| | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 9.33 kW | 8.49 kW |
| El input | 2.20 kW | 2.85 kW |
| COP | 4.24 | 2.97 |

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

EN 12102-1

| | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 58 dB(A) | 58 dB(A) |

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EN 14825

| | Low temperature | Medium temperature |
|---------------|------------------------|---------------------------|
| η_s | 144 % | 121 % |
| Prated | 8.84 kW | 8.13 kW |
| SCOP | 3.67 | 3.09 |
| Tbiv | -10 °C | -10 °C |
| TOL | -4 °C | -4 °C |
| Pdh Tj = -7°C | 6.18 kW | 5.81 kW |
| COP Tj = -7°C | 2.74 | 2.15 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +2°C | 7.55 kW | 7.22 kW |
| COP Tj = +2°C | 3.76 | 3.05 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +7°C | 9.52 kW | 9.29 kW |
| COP Tj = +7°C | 4.59 | 4.12 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = 12°C | 10.97 kW | 10.91 kW |
| COP Tj = 12°C | 4.92 | 4.84 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = Tbiv | 6.64 kW | 6.25 kW |
| COP Tj = Tbiv | 3.07 | 2.40 |

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| | | |
|---|-------------|-------------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 5.78 kW | 5.38 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.54 | 1.97 |
| WTOL | 62 °C | 62 °C |
| Poff | 10 W | 10 W |
| PTO | 10 W | 10 W |
| PSB | 10 W | 10 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 2.86 kW | 2.75 kW |
| Annual energy consumption Qhe | 4867 kWh | 5440 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 |
| η_s | 175 % | 148 % |
| Prated | 9.63 kW | 8.87 kW |
| SCOP | 4.44 | 3.76 |

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| | | |
|---|-------------|-------------|
| Tbiv | 4 °C | 4 °C |
| TOL | 2 °C | 2 °C |
| Pdh Tj = +2°C | 7.44 kW | 6.80 kW |
| COP Tj = +2°C | 3.51 | 2.42 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = +7°C | 9.43 kW | 8.87 kW |
| COP Tj = +7°C | 4.42 | 3.46 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = 12°C | 10.89 kW | 10.64 kW |
| COP Tj = 12°C | 4.91 | 4.59 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = Tbiv | 8.25 kW | 7.61 kW |
| COP Tj = Tbiv | 3.93 | 2.81 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.44 kW | 6.80 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.51 | 2.42 |
| WTOL | 62 °C | 62 °C |
| Poff | 10 W | 10 W |
| PTO | 10 W | 10 W |
| PSB | 10 W | 10 W |
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| Supplementary Heater: Type of energy input | electricity | electricity |

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| | | |
|---|----------|----------|
| Supplementary Heater: PSUP | 2.19 kW | 2.07 kW |
| Annual energy consumption Q _{he} | 2896 kWh | 3152 kWh |

Colder Climate

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

| EN 14825 | | |
|---------------------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| η_s | 128 % | 110 % |
| Prated | 5.99 kW | 5.61 kW |
| SCOP | 3.28 | 2.83 |
| T _{biv} | -20 °C | -20 °C |
| TOL | -16 °C | -16 °C |
| P _{dh} T _j = -7°C | 6.24 kW | 5.97 kW |
| COP T _j = -7°C | 2.84 | 2.38 |
| C _{dh} | 1.00 | 1.00 |
| P _{dh} T _j = +2°C | 7.60 kW | 7.37 kW |
| COP T _j = +2°C | 3.86 | 3.33 |
| C _{dh} | 1.00 | 1.00 |

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| | | |
|---|-------------|-------------|
| Pdh Tj = +7°C | 9.57 kW | 9.46 kW |
| COP Tj = +7°C | 4.61 | 4.37 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = 12°C | 10.95 kW | 11.05 kW |
| COP Tj = 12°C | 4.70 | 4.80 |
| Cdh | 1.00 | 1.00 |
| Pdh Tj = Tbiv | 5.18 kW | 4.73 kW |
| COP Tj = Tbiv | 2.33 | 1.85 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 5.05 kW | 4.18 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.27 | 1.64 |
| WTOL | 62 °C | 62 °C |
| Poff | 10 W | 10 W |
| PTO | 10 W | 10 W |
| PSB | 10 W | 10 W |
| PCK | 0 W | 0 W |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP | 5.99 kW | 5.61 kW |
| Annual energy consumption Qhe | 4508 kWh | 4893 kWh |
| Pdh Tj = -15°C (if TOL<-20°C) | 5.18 | 4.86 |
| COP Tj = -15°C (if TOL<-20°C) | 2.33 | 1.91 |
| Cdh | 1.00 | 1.00 |

Model: LWD 70A/SX-HTD S

General Data

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|--------------|-------------|
| Power supply | 1x230V 50Hz |
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| Pdh Tj = +7°C | 9.52 kW | 9.29 kW |
| COP Tj = +7°C | 4.59 | 4.12 |
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