# TECHNICAL SPECIFICATIONS

## PREMIUM 22 SEER2 DUCTLESS HEAT PUMP

10 YEAR LIMITED WARRANTY PARTS AND COMPRESSOR

R454B

ENERGY STAR



## FEATURES

- **High Efficiency**
  Boasts an impressive 22 SEER2 rating, maximizing energy savings and overall system efficiency.
- **Available Capacities**
  Offered in 12,000 BTU/h, 18,000 BTU/h, and 24,000 BTU/h options to suit different room sizes and cooling needs.
- **Wide Operating Range**
  Performs reliably in extreme temperatures, from -25°C (-13°F) to 50°C (122°F).
- **Energy Star & NEEP Certified**
  Recognized for energy efficiency, meeting standards that help reduce operating costs and environmental impact. Eligibility for local rebate programs offers additional cost savings—check local Qualified Product Lists for details.
- **Efficient, Contemporary Indoor Units**
  Sleek, modern design that complements any interior while delivering top performance with auto restart and louver position memory.
- **Multi-Zone Compatibility**
  Easily integrates with multi-zone outdoor units to provide customized comfort across multiple rooms.
- **Wi-Fi Kit Included**
  Allows remote monitoring and control for convenience and flexibility from anywhere.
- **User-Friendly Remote Control**
  Elegant design with functions for Sleep Mode, LED light control, temperature adjustment, on/off, and a “Follow Me” feature for targeted comfort.

## ENVIRONMENTALLY RESPONSIBLE

Napoleon uses R-454B refrigerant, which offers improved energy efficiency and reduces greenhouse gas (GHG) emissions. This refrigerant has a significantly lower Global Warming Potential (GWP), no ozone depletion potential (ODP), and low toxicity. R-454B’s GWP is over 75% lower than its predecessor, R-410A, and it exceeds EPA requirements for low-GWP refrigerants (<700 GWP).

## NOMENCLATURE

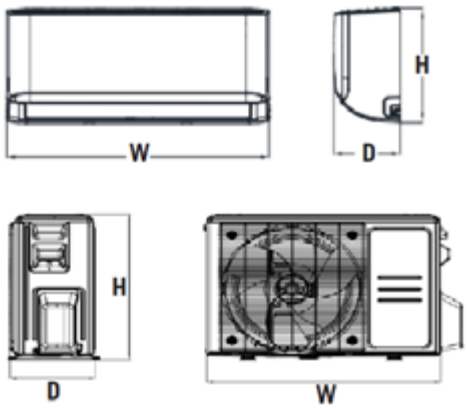
**PREMIUM 22 SEER2 DUCTLESS HEAT PUMP SERIES**



| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| N | D | H | A | S | 22 | B | A | B | - 24 | - 0 |
| Brand | Configuration | Type (Heat Pump/ or Cool Only) | Sales Channel | Single/Multi | Efficiency | Refrigerant | Revision | | Capacity in 000 BTU/h | Indoor/ Outdoor |
| *N = Napoleon* | *Ductless* | *Heat Pump* | *Distribution* | *Single* | *22 = 22 SEER2* | *B= R454B* | *A = Without Leak Sensor B = With Leak Sensor/ Shut off valve* | | *12 or 18 or 24* | *I = Indoor O = Outdoor* |

# DUCTLESS SPECIFICATIONS

| DIMENSIONS | | | |
|---|---|---|---|
| INDOOR DIMENSIONS | NDHAS22BB-12-I | NDHAS22BB-18-I | NDHAS22BB-24-I |
| Width (mm/in) | 802/31.57 | 1082/42.6 | 1082/42.6 |
| Depth (mm/in) | 200/7.87 | 234/9.21 | 234/9.21 |
| Height (mm/in) | 295/11.61 | 337/13.27 | 337/13.27 |
| Net weight (lb/kg) | 18.96/8.6 | 30.42/13.8 | 30.86/14 |
| Gross weight (lb/kg) | 24.25/11 | 39.68/18 | 40.56/18.4 |
| OUTDOOR DIMENSIONS | NDHAS22BA-12-O | NDHAS22BA-18-O | NDHAS22BA-24-O |
| Width (mm/in) | 765/30.12 | 890/35.04 | 946/37.24 |
| Depth (mm/in) | 303/11.93 | 342/13.46 | 410/16.14 |
| Height (mm/in) | 555/21.85 | 673/26.5 | 810/31.89 |
| Net weight (lb/kg) | 62.17/28.2 | 92.59/42 | 122.13/55.4 |
| Gross weight (lb/kg) | 67.68/30.7 | 100.31/45.5 | 132.28/60 |




| SYSTEM DATA | | | |
|---|---|---|---|
| | Ductless Heat Pump - Shipped in 2 PCS. NDHAS22SBB-12-I, NDHAS22BA-12-O | Ductless Heat Pump - Shipped in 2 PCS. NDHAS22BB-18-I, NDHAS22BA-18-O | Ductless Heat Pump - Shipped in 2 PCS. NDHAS22BB-24-I, NDHAS22BA-24-O |
| AHRI NUMBER | 215213703 | 215213704 | 215213705 |
| INDOOR SKU | NDHAS22BB-12-I | NDHAS22BB-18-I | NDHAS22BB-24-I |
| OUTDOOR SKU | NDHAS22BA-12-O | NDHAS22BA-18-O | NDHAS22BA-24-O |
| Cooling Capacity Rated BTU (Range) | 12000 (2600~13700) | 18000 (3600~20000) | 24000 (9700~27000) |
| Heating Capacity Rated BTU (Range) | 12000 (4100~14400) | 18000 (7600~22000) | 25000 (11300~32700) |
| SEER2 | 23.1 | 24 | 23.5 |
| HSPF2 (REGION IV) | 11.5 | 11.1 | 10 |
| EER2 | 12.2 | 13.5 | 13 |
| HSPF2 (REGION V) | 8.5 | 8.3 | 7.7 |
| Dehumidify (L/h) | 1.3 | 1.40 | 2.7 |
| Voltage | 208/230V,1Ph,60Hz | 208/230V,1Ph,60Hz | 208/230V,1Ph,60Hz |
| Indoor noise level (Hi/Mi/Lo) dBA | 43/37/20 | 45/40/26 | 48.5/43.5/27.5 |
| Outdoor noise level dBA | 54 | 59 | 60 |
| Compressor & Parts Limited Warranty | 10 years | 10 years | 10 years |
| Max. refrigerant pipe length (m) | 25 | 30 | 50 |
| Max. refrigerant pipe length (ft) | 82 | 98.4 | 164 |
| Max. difference in elevation (m) | 15 | 20 | 25 |
| Max. difference in elevation (ft) | 49.2 | 65.6 | 82 |
| Refrigeration GAS PIPE (mm/inch) | 9.52mm(3/8in) | 12.7mm(1/2in) | 15.9mm(5/8in) |
| Refrigeration LIQUID PIPE (mm/in) | 6.35mm(1/4in) | 6.35mm(1/4in) | 9.52mm(3/8in) |
| Heating at 17F (-8.33ºC) BTU | 9900 | 14500 | 21300 |
| Heating at 5F (-15ºC) BTU | 8600 | 13000 | 17800 |
| Heating at 5F (-15ºC) COP | 2.35 | 2.35 | 2.15 |
| Connection Wiring | 14AWG*4 Stranded, unshielded | 14AWG*4 Stranded, unshielded | 14AWG*4 Stranded, unshielded |
| Refridgerant Gas (oz/kg) | R454B 32.45/0.92 | R454B 47.97/1.36 | R454B 70.55/2 |
| Additional charge per metre (oz/ft)(g/m) | 0.16/15 | 0.16/15 | 0.32/30 |
| Compressor | Rotary | Rotary | Rotary |
| MAX FUSE (A) | 15 | 20 | 25 |
| Minimum Circuit Capacity | 12 | 18 | 24 |
| Rated Cooling Current (A) | 4.5 | 6 | 8 |
| Rated Heating Current (A) | 4.3 | 6.2 | 10.4 |
| Indoor air flow (Hi/Mi/Lo) CFM | 294.3/194.2/153 | 500.3/441.4/370.8 | 588.6/459.1/382.6 |
| Outdoor air flow CFM | 1235.3 | 1764.7 | 2235.3 |
| Indoor(cooling/ heating) | -25ºC (-13ºF) to 50ºC (122ºF) / -25ºC (-13ºF) to 24ºC (75ºF) | -25ºC (-13ºF) to 50ºC (122ºF) / -25ºC (-13ºF) to 24ºC (75ºF) | -25ºC (-13ºF) to 50ºC (122ºF) / -25ºC (-13ºF) to 24ºC (75ºF) |
| Outdoor(cooling/heating) | 16ºC (60.8ºF) to 32ºC (89.6ºF) / 0ºC (32ºF) to 30ºC (86ºF) | 16ºC (60.8ºF) to 32ºC (89.6ºF) / 0ºC (32ºF) to 30ºC (86ºF) | 16ºC (60.8ºF) to 32ºC (89.6ºF) / 0ºC (32ºF) to 30ºC (86ºF) |

# PERFORMANCE DATA – COOLING

DB – Dry Bulb  WB – Wet Bulb  TC:Total Cooling Capacity (BTU/hr)  S/T:Sensible Cooling Capacity Ratio  PI:Power Input(kW)  Input – Total Power (kW)

| COOLING | | INDOOR CONDITIONS | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OUT-DOOR DB(°F) | ID WB(°F) | 60.8°F(16.0°C) | | | | | 64.4°F(18.0°C) | | | | | 67°F(19.4°C) | | | | | 71.6°F(22.0°C) | | | | |
| | ID DB(°F) | 73.4°F (23.0°C) | 77.0°F (25.0°C) | 80.0°F (26.7°C) | 80.6°F (27.0°C) | 84.2°F (29.0°C) | 73.4°F (23.0°C) | 77.0°F (25.0°C) | 80.0°F( 26.7°C) | 80.6°F (27.0°C) | 84.2°F (29.0°C) | 73.4°F (23.0°C) | 77.0°F (25.0°C) | 80.0°F (26.7°C) | 80.6°F (27.0°C) | 84.2°F (29.0°C) | 73.4°F (23.0°C) | 77.0°F (25.0°C) | 80.0°F (26.7°C) | 80.6°F (27.0°C) | 84.2°F (29.0°C) |
| NDHAS22BB-12-I/NDHAS22BA-12-0 | | | | | | | | | | | | | | | | | | | | | |
| 5°F (-15.0°C) | TC | 11251 | 11266 | 11278 | 11279 | 11294 | 11929 | 11943 | 11955 | 11957 | 11971 | 12642 | 12658 | 12672 | 12675 | 12689 | 13403 | 13418 | 13432 | 13435 | 13451 |
| | S/T | 0.49 | 0.57 | 0.65 | 0.65 | 0.74 | 0.51 | 0.60 | 0.69 | 0.69 | 0.78 | 0.55 | 0.64 | 0.73 | 0.73 | 0.83 | 0.58 | 0.68 | 0.77 | 0.77 | 0.88 |
| | PI | 0.78 | 0.78 | 0.78 | 0.78 | 0.78 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.92 | 0.92 | 0.93 | 0.93 | 0.93 |
| 17°F (-8.3°C) | TC | 13338 | 13356 | 13370 | 13371 | 13389 | 14142 | 14159 | 14173 | 14175 | 14192 | 14987 | 15006 | 15023 | 15026 | 15043 | 15890 | 15907 | 15924 | 15927 | 15947 |
| | S/T | 0.49 | 0.57 | 0.65 | 0.65 | 0.74 | 0.52 | 0.61 | 0.69 | 0.69 | 0.79 | 0.55 | 0.64 | 0.73 | 0.73 | 0.83 | 0.58 | 0.68 | 0.78 | 0.78 | 0.88 |
| | PI | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| 35°F (1.7°C) | TC | 11076 | 11091 | 11103 | 11103 | 11118 | 11744 | 11758 | 11769 | 11771 | 11785 | 12445 | 12461 | 12475 | 12478 | 12492 | 13195 | 13209 | 13224 | 13226 | 13242 |
| | S/T | 0.49 | 0.58 | 0.66 | 0.66 | 0.75 | 0.52 | 0.61 | 0.70 | 0.70 | 0.79 | 0.55 | 0.65 | 0.74 | 0.74 | 0.84 | 0.59 | 0.69 | 0.78 | 0.78 | 0.89 |
| | PI | 0.77 | 0.77 | 0.78 | 0.78 | 0.78 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.92 | 0.92 | 0.92 | 0.92 | 0.93 |
| 47°F (8.3°C) | TC | 11334 | 11349 | 11362 | 11362 | 11378 | 12017 | 12032 | 12043 | 12046 | 12060 | 12735 | 12752 | 12766 | 12768 | 12783 | 13503 | 13517 | 13532 | 13534 | 13551 |
| | S/T | 0.50 | 0.58 | 0.66 | 0.66 | 0.75 | 0.53 | 0.62 | 0.70 | 0.70 | 0.80 | 0.56 | 0.65 | 0.74 | 0.74 | 0.85 | 0.59 | 0.69 | 0.79 | 0.79 | 0.90 |
| | PI | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 |
| 82°F (27.8°C) | TC | 11405 | 11420 | 11432 | 11433 | 11448 | 12092 | 12106 | 12118 | 12121 | 12135 | 12814 | 12831 | 12845 | 12848 | 12862 | 13587 | 13601 | 13616 | 13618 | 13635 |
| | S/T | 0.53 | 0.62 | 0.70 | 0.70 | 0.80 | 0.56 | 0.66 | 0.75 | 0.75 | 0.85 | 0.59 | 0.70 | 0.79 | 0.79 | 0.90 | 0.63 | 0.74 | 0.84 | 0.84 | 0.95 |
| | PI | 0.59 | 0.60 | 0.60 | 0.60 | 0.60 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| 95°F (35.0°C) | TC | 12172 | 12188 | 12201 | 12202 | 12218 | 12905 | 12920 | 12933 | 12936 | 12951 | 13676 | 13694 | 13709 | 13712 | 13727 | 14500 | 14516 | 14532 | 14534 | 14552 |
| | S/T | 0.53 | 0.63 | 0.71 | 0.71 | 0.81 | 0.57 | 0.66 | 0.75 | 0.75 | 0.86 | 0.60 | 0.70 | 0.80 | 0.80 | 0.91 | 0.64 | 0.75 | 0.85 | 0.85 | 0.97 |
| | PI | 1.07 | 1.08 | 1.08 | 1.08 | 1.08 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 | 1.28 | 1.28 | 1.28 | 1.28 | 1.28 |
| 110°F (43.0°C) | TC | 9938 | 9951 | 9962 | 9963 | 9976 | 10537 | 10549 | 10560 | 10562 | 10575 | 11167 | 11181 | 11193 | 11196 | 11208 | 11839 | 11852 | 11865 | 11867 | 11882 |
| | S/T | 0.57 | 0.67 | 0.76 | 0.76 | 0.86 | 0.60 | 0.71 | 0.80 | 0.80 | 0.91 | 0.64 | 0.75 | 0.85 | 0.85 | 0.97 | 0.68 | 0.79 | 0.90 | 0.90 | 1.00 |
| | PI | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 |
| 122°F (50.0°C) | TC | 6683 | 6692 | 6699 | 6700 | 6709 | 7086 | 7094 | 7101 | 7103 | 7111 | 7509 | 7519 | 7527 | 7529 | 7537 | 7962 | 7970 | 7979 | 7980 | 7990 |
| | S/T | 0.59 | 0.69 | 0.78 | 0.78 | 0.89 | 0.62 | 0.73 | 0.83 | 0.83 | 0.95 | 0.66 | 0.77 | 0.88 | 0.88 | 1.00 | 0.70 | 0.82 | 0.93 | 0.93 | 1.00 |
| | PI | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.80 | 0.80 | 0.81 | 0.81 | 0.81 | 0.85 | 0.85 | 0.85 | 0.85 | 0.86 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 |
| NNDHAS22BB-18-I/NDHAS22BA-18-0 | | | | | | | | | | | | | | | | | | | | | |
| 5°F (-15.0°C) | TC | 18333 | 18358 | 18378 | 18379 | 18404 | 19438 | 19461 | 19481 | 19484 | 19508 | 20600 | 20626 | 20649 | 20653 | 20676 | 21841 | 21865 | 21888 | 21892 | 21919 |
| | S/T | 0.49 | 0.57 | 0.65 | 0.65 | 0.74 | 0.51 | 0.60 | 0.69 | 0.69 | 0.78 | 0.55 | 0.64 | 0.73 | 0.73 | 0.83 | 0.58 | 0.68 | 0.77 | 0.77 | 0.88 |
| | PI | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| 17°F (-8.3°C) | TC | 18824 | 18850 | 18870 | 18871 | 18896 | 19959 | 19982 | 20002 | 20006 | 20030 | 21151 | 21179 | 21202 | 21206 | 21230 | 22425 | 22450 | 22474 | 22478 | 22506 |
| | S/T | 0.49 | 0.57 | 0.65 | 0.65 | 0.74 | 0.52 | 0.61 | 0.69 | 0.69 | 0.79 | 0.55 | 0.64 | 0.73 | 0.73 | 0.83 | 0.58 | 0.68 | 0.78 | 0.78 | 0.88 |
| | PI | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.62 | 0.62 | 0.63 | 0.63 | 0.63 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| 35°F (1.7°C) | TC | 18037 | 18061 | 18080 | 18081 | 18106 | 19124 | 19146 | 19165 | 19169 | 19192 | 20266 | 20292 | 20315 | 20319 | 20341 | 21487 | 21511 | 21534 | 21537 | 21564 |
| | S/T | 0.49 | 0.58 | 0.66 | 0.66 | 0.75 | 0.52 | 0.61 | 0.70 | 0.70 | 0.79 | 0.55 | 0.65 | 0.74 | 0.74 | 0.84 | 0.59 | 0.69 | 0.78 | 0.78 | 0.89 |
| | PI | 0.69 | 0.69 | 0.70 | 0.70 | 0.70 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.78 | 0.78 | 0.78 | 0.78 | 0.78 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| 47°F (8.3°C) | TC | 16373 | 16395 | 16412 | 16413 | 16435 | 17359 | 17380 | 17397 | 17400 | 17421 | 18396 | 18420 | 18441 | 18444 | 18465 | 19505 | 19526 | 19547 | 19550 | 19575 |
| | S/T | 0.50 | 0.58 | 0.66 | 0.66 | 0.75 | 0.53 | 0.62 | 0.70 | 0.70 | 0.80 | 0.56 | 0.65 | 0.74 | 0.74 | 0.85 | 0.59 | 0.69 | 0.79 | 0.79 | 0.90 |
| | PI | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.78 | 0.78 | 0.78 | 0.78 | 0.79 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| 82°F (27.8°C) | TC | 18389 | 18414 | 18433 | 18434 | 18459 | 19497 | 19520 | 19539 | 19543 | 19566 | 20662 | 20689 | 20712 | 20716 | 20739 | 21907 | 21931 | 21955 | 21958 | 21985 |
| | S/T | 0.53 | 0.62 | 0.70 | 0.70 | 0.80 | 0.56 | 0.66 | 0.75 | 0.75 | 0.85 | 0.59 | 0.70 | 0.79 | 0.79 | 0.90 | 0.63 | 0.74 | 0.84 | 0.84 | 0.95 |
| | PI | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.15 | 1.15 | 1.16 | 1.16 | 1.16 |
| 95°F (35.0°C) | TC | 18083 | 18107 | 18126 | 18127 | 18152 | 19172 | 19195 | 19214 | 19218 | 19241 | 20318 | 20344 | 20367 | 20371 | 20393 | 21542 | 21565 | 21589 | 21592 | 21619 |
| | S/T | 0.53 | 0.63 | 0.71 | 0.71 | 0.81 | 0.57 | 0.66 | 0.75 | 0.75 | 0.86 | 0.60 | 0.70 | 0.80 | 0.80 | 0.91 | 0.64 | 0.75 | 0.85 | 0.85 | 0.97 |
| | PI | 1.50 | 1.51 | 1.51 | 1.51 | 1.51 | 1.59 | 1.60 | 1.60 | 1.60 | 1.60 | 1.69 | 1.69 | 1.69 | 1.69 | 1.70 | 1.79 | 1.79 | 1.80 | 1.80 | 1.80 |
| 110°F (43.0°C) | TC | 12884 | 12901 | 12915 | 12916 | 12933 | 13660 | 13676 | 13690 | 13693 | 13709 | 14476 | 14495 | 14511 | 14514 | 14530 | 15349 | 15365 | 15382 | 15384 | 15403 |
| | S/T | 0.57 | 0.67 | 0.76 | 0.76 | 0.86 | 0.60 | 0.71 | 0.80 | 0.80 | 0.91 | 0.64 | 0.75 | 0.85 | 0.85 | 0.97 | 0.68 | 0.79 | 0.90 | 0.90 | 1.00 |
| | PI | 1.25 | 1.25 | 1.26 | 1.26 | 1.26 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 1.41 | 1.41 | 1.41 | 1.41 | 1.41 | 1.49 | 1.49 | 1.50 | 1.50 | 1.50 |
| 122°F (50.0°C) | TC | 8194 | 8205 | 8214 | 8215 | 8226 | 8688 | 8698 | 8707 | 8709 | 8719 | 9207 | 9219 | 9229 | 9231 | 9241 | 9762 | 9773 | 9783 | 9785 | 9797 |
| | S/T | 0.59 | 0.69 | 0.78 | 0.78 | 0.89 | 0.62 | 0.73 | 0.83 | 0.83 | 0.95 | 0.66 | 0.77 | 0.88 | 0.88 | 1.00 | 0.70 | 0.82 | 0.93 | 0.93 | 1.00 |
| | PI | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.15 | 1.16 | 1.16 | 1.16 | 1.16 |
| NDHAS22BB-24-I/NDHAS22BA-24-0 | | | | | | | | | | | | | | | | | | | | | |
| 5°F (-15.0°C) | TC | 22562 | 22593 | 22617 | 22618 | 22649 | 23922 | 23950 | 23974 | 23979 | 24007 | 25351 | 25384 | 25413 | 25417 | 25446 | 26879 | 26908 | 26937 | 26942 | 26975 |
| | S/T | 0.49 | 0.57 | 0.65 | 0.65 | 0.74 | 0.51 | 0.60 | 0.69 | 0.69 | 0.78 | 0.55 | 0.64 | 0.73 | 0.73 | 0.83 | 0.58 | 0.68 | 0.77 | 0.77 | 0.88 |
| | PI | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.81 | 0.81 | 0.81 | 0.81 | 0.82 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.91 | 0.91 | 0.91 | 0.91 | 0.92 |
| 17°F (-8.3°C) | TC | 22668 | 22699 | 22723 | 22724 | 22755 | 24035 | 24063 | 24087 | 24092 | 24120 | 25470 | 25504 | 25532 | 25537 | 25565 | 27005 | 27034 | 27064 | 27068 | 27102 |
| | S/T | 0.49 | 0.57 | 0.65 | 0.65 | 0.74 | 0.52 | 0.61 | 0.69 | 0.69 | 0.79 | 0.55 | 0.64 | 0.73 | 0.73 | 0.83 | 0.58 | 0.68 | 0.78 | 0.78 | 0.88 |
| | PI | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.97 | 0.98 | 0.98 | 0.98 | 0.98 | 1.03 | 1.03 | 1.04 | 1.04 | 1.04 | 1.09 | 1.10 | 1.10 | 1.10 | 1.10 |
| 35°F (1.7°C) | TC | 22947 | 22978 | 23003 | 23004 | 23035 | 24330 | 24359 | 24383 | 24388 | 24417 | 25784 | 25817 | 25846 | 25851 | 25880 | 27337 | 27367 | 27397 | 27401 | 27435 |
| | S/T | 0.49 | 0.58 | 0.66 | 0.66 | 0.75 | 0.52 | 0.61 | 0.70 | 0.70 | 0.79 | 0.55 | 0.65 | 0.74 | 0.74 | 0.84 | 0.59 | 0.69 | 0.78 | 0.78 | 0.89 |
| | PI | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 |
| 47°F (8.3°C) | TC | 22645 | 22676 | 22700 | 22701 | 22732 | 24010 | 24038 | 24062 | 24067 | 24095 | 25444 | 25477 | 25506 | 25511 | 25539 | 26977 | 27007 | 27036 | 27040 | 27074 |
| | S/T | 0.50 | 0.58 | 0.66 | 0.66 | 0.75 | 0.53 | 0.62 | 0.70 | 0.70 | 0.80 | 0.56 | 0.65 | 0.74 | 0.74 | 0.85 | 0.59 | 0.69 | 0.79 | 0.79 | 0.90 |
| | PI | 1.02 | 1.02 | 1.02 | 1.02 | 1.03 | 1.08 | 1.08 | 1.09 | 1.09 | 1.09 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.22 | 1.22 | 1.22 | 1.22 | 1.22 |
| 82°F (27.8°C) | TC | 25727 | 25762 | 25789 | 25791 | 25825 | 27278 | 27310 | 27337 | 27342 | 27375 | 28907 | 28945 | 28977 | 28982 | 29015 | 30649 | 30682 | 30716 | 30720 | 30759 |
| | S/T | 0.53 | 0.62 | 0.70 | 0.70 | 0.80 | 0.56 | 0.66 | 0.75 | 0.75 | 0.85 | 0.59 | 0.70 | 0.79 | 0.79 | 0.90 | 0.63 | 0.74 | 0.84 | 0.84 | 0.95 |
| | PI | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 | 1.51 | 1.51 | 1.52 | 1.52 | 1.52 | 1.60 | 1.61 | 1.61 | 1.61 | 1.61 | 1.70 | 1.70 | 1.70 | 1.70 | 1.71 |
| 95°F (35.0°C) | TC | 23949 | 23981 | 24007 | 24008 | 24041 | 25393 | 25423 | 25448 | 25453 | 25483 | 26910 | 26945 | 26975 | 26980 | 27010 | 28531 | 28562 | 28593 | 28597 | 28633 |
| | S/T | 0.53 | 0.63 | 0.71 | 0.71 | 0.81 | 0.57 | 0.66 | 0.75 | 0.75 | 0.86 | 0.60 | 0.70 | 0.80 | 0.80 | 0.91 | 0.64 | 0.75 | 0.85 | 0.85 | 0.97 |
| | PI | 2.27 | 2.27 | 2.27 | 2.27 | 2.27 | 2.40 | 2.41 | 2.41 | 2.41 | 2.41 | 2.55 | 2.55 | 2.55 | 2.55 | 2.56 | 2.70 | 2.70 | 2.70 | 2.71 | 2.71 |
| 110°F (43.0°C) | TC | 18420 | 18444 | 18464 | 18465 | 18490 | 19530 | 19553 | 19572 | 19576 | 19599 | 20696 | 20723 | 20746 | 20750 | 20773 | 21943 | 21967 | 21991 | 21995 | 22022 |
| | S/T | 0.57 | 0.67 | 0.76 | 0.76 | 0.86 | 0.60 | 0.71 | 0.80 | 0.80 | 0.91 | 0.64 | 0.75 | 0.85 | 0.85 | 0.97 | 0.68 | 0.79 | 0.90 | 0.90 | 1.00 |
| | PI | 2.08 | 2.08 | 2.08 | 2.09 | 2.09 | 2.21 | 2.21 | 2.21 | 2.21 | 2.21 | 2.34 | 2.34 | 2.34 | 2.34 | 2.35 | 2.48 | 2.48 | 2.48 | 2.48 | 2.49 |
| 122°F (50.0°C) | TC | 16642 | 16664 | 16682 | 16683 | 16705 | 17645 | 17665 | 17683 | 17686 | 17707 | 18699 | 18723 | 18744 | 18747 | 18768 | 19825 | 19847 | 19868 | 19872 | 19896 |
| | S/T | 0.59 | 0.69 | 0.78 | 0.78 | 0.89 | 0.62 | 0.73 | 0.83 | 0.83 | 0.95 | 0.66 | 0.77 | 0.88 | 0.88 | 1.00 | 0.70 | 0.82 | 0.93 | 0.93 | 1.00 |
| | PI | 2.19 | 2.19 | 2.19 | 2.19 | 2.20 | 2.32 | 2.32 | 2.32 | 2.33 | 2.33 | 2.46 | 2.46 | 2.46 | 2.46 | 2.47 | 2.61 | 2.61 | 2.61 | 2.61 | 2.62 |

# PERFORMANCE DATA – HEATING

DB – Dry Bulb WB – Wet Bulb TC:Total Cooling Capacity (BTU/hr) S/T:Sensible Cooling Capacity Ratio PI:Power Input(kW) Input – Total Power (kW)

| | HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | OUTDOOR DB(°F) | TC: Total Heating Capacity(BTU/hr) | | | | | PI: Power Input(kW) | | | | |
| | | Indoor Conditions(DB °F) | | | | | Indoor Conditions(DB °F) | | | | |
| | | 60.8°F(16.0°C) | 68°F(20.0°C) | 70°F(21.1°C) | 71.6°F(22.0°C) | 75.2°F(24.0°C) | 60.8°F(16.0°C) | 68°F(20.0°C) | 70°F(21.1°C) | 71.6°F(22.0°C) | 75.2°F(24.0°C) |
| NDHAS22BB-12-I/NDHAS22BA-12-O | -22°F(-30.0°C) | 6012 | 5891 | 5862 | 5838 | 5786 | 0.98 | 0.99 | 0.99 | 0.99 | 1.00 |
| | -13°F(-25.0°C) | 7506 | 7356 | 7319 | 7289 | 7224 | 1.05 | 1.06 | 1.07 | 1.07 | 1.07 |
| | -4°F(-20.0°C) | 8829 | 8653 | 8609 | 8575 | 8498 | 1.11 | 1.12 | 1.12 | 1.12 | 1.12 |
| | 5°F(-15.0°C) | 10475 | 10265 | 10214 | 10173 | 10082 | 1.15 | 1.16 | 1.16 | 1.16 | 1.17 |
| | 17°F(-8.3°C) | 13120 | 12858 | 12794 | 12742 | 12628 | 1.34 | 1.35 | 1.36 | 1.36 | 1.36 |
| | 35°F(1.7°C) | 14786 | 14490 | 14417 | 14360 | 14230 | 1.27 | 1.28 | 1.29 | 1.29 | 1.30 |
| | 47°F(8.3°C) | 15062 | 14761 | 14687 | 14628 | 14496 | 1.00 | 1.01 | 1.01 | 1.01 | 1.01 |
| | 64.4°F(18.0°C) | 10567 | 10355 | 10304 | 10262 | 10170 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| NDHAS22BB-18-I/NDHAS22BA-18-O | -22°F(-30.0°C) | 9259 | 9074 | 9028 | 8992 | 8911 | 1.44 | 1.45 | 1.46 | 1.46 | 1.46 |
| | -13°F(-25.0°C) | 11243 | 11018 | 10963 | 10919 | 10821 | 1.50 | 1.51 | 1.52 | 1.52 | 1.52 |
| | -4°F(-20.0°C) | 13871 | 13593 | 13525 | 13471 | 13350 | 1.56 | 1.58 | 1.58 | 1.58 | 1.59 |
| | 5°F(-15.0°C) | 15339 | 15032 | 14957 | 14897 | 14763 | 1.73 | 1.74 | 1.75 | 1.75 | 1.76 |
| | 17°F(-8.3°C) | 18308 | 17942 | 17853 | 17781 | 17621 | 1.95 | 1.96 | 1.96 | 1.97 | 1.98 |
| | 35°F(1.7°C) | 22767 | 22312 | 22200 | 22112 | 21913 | 1.73 | 1.74 | 1.75 | 1.75 | 1.76 |
| | 47°F(8.3°C) | 22005 | 21565 | 21457 | 21371 | 21179 | 1.07 | 1.08 | 1.08 | 1.09 | 1.09 |
| | 64.4°F(18.0°C) | 11894 | 11656 | 11597 | 11551 | 11447 | 2.12 | 2.13 | 2.14 | 2.14 | 2.15 |
| NDHAS22BB-24-I/NDHAS22BA-24-O | -22°F(-30.0°C) | 14182 | 13898 | 13829 | 13774 | 13650 | 2.21 | 2.23 | 2.23 | 2.24 | 2.25 |
| | -13°F(-25.0°C) | 18485 | 18115 | 18025 | 17953 | 17791 | 2.39 | 2.41 | 2.42 | 2.42 | 2.43 |
| | -4°F(-20.0°C) | 21835 | 21398 | 21291 | 21206 | 21015 | 2.56 | 2.58 | 2.58 | 2.59 | 2.60 |
| | 5°F(-15.0°C) | 27535 | 26984 | 26849 | 26742 | 26501 | 3.11 | 3.13 | 3.14 | 3.15 | 3.16 |
| | 17°F(-8.3°C) | 33559 | 32888 | 32724 | 32593 | 32299 | 3.29 | 3.32 | 3.32 | 3.33 | 3.34 |
| | 35°F(1.7°C) | 31367 | 30740 | 30586 | 30464 | 30190 | 2.41 | 2.43 | 2.44 | 2.44 | 2.45 |
| | 47°F(8.3°C) | 20774 | 20359 | 20257 | 20176 | 19994 | 1.85 | 1.87 | 1.87 | 1.88 | 1.88 |
| | 64.4°F(18.0°C) | 18237 | 17872 | 17783 | 17711 | 17552 | 1.09 | 1.10 | 1.10 | 1.10 | 1.11 |