

NRB 0800-2406 B

Air-cooled chiller with free cooling (glycol-free)

Cooling capacity 211 ÷ 680,9 kW



- Microchannel coil
- Night mode
- Operation up to 50 °C outdoor air
- High efficiency also at partial loads



DESCRIPTION

Air-cooled outdoor chiller designed to meet air conditioning needs in residential/commercial complexes or industrial applications.

Outdoor units with scroll compressors, axial flow fans, micro-channel coil (source side), plate heat exchanger and thermostatic expansion valve (mechanical or electronic, depending on the model).

The base, the structure and the panels are made of galvanized steel treated with polyester paint RAL 9003.

VERSIONS

- A** High efficiency
- E** Silenced high efficiency
- N** Silenced very high efficiency
- U** Very high efficiency

FEATURES

Operating field

Operation at full load up to 50 °C external air temperature depending on the size and version. For more information refer to the dedicated documentations or the selection program Magellano.

Dual-circuit unit

Unit with 2 refrigerant circuits designed to provide maximum efficiency at full load, ensuring high efficiency at partial loads also and ensuring continuity in case one of the circuits stops.

Condensation control temperature

Fitted as standard with a device for electronic condensation control so that the unit can work even with low temperatures, adapting the air flow rate to the actual system request in order to reduce consumption.

Aluminium microchannel coils

The whole range uses microchannel condenser coils allowing reduction of refrigerant charge but keeping the same high efficiency.

Free-cooling water coils

These units also have a water coil dedicated to free-cooling mode. Free-cooling offers significant energy saving in applications that require cooling all year round.

As soon as the outside air temperature allows, a valve makes the water flow towards the free-cooling battery which is cooled directly by the air. The

compressors are completely shut down, if possible, leading to considerable electrical savings.

■ *If a higher output is needed in free cooling, there is also the "G" free cooling plus model with boosted water coil.*

Free cooling with glycol water

Intermediate plate heat exchanger that creates two circuits:

1. Glycol hydraulic circuit (glycol is added to protect the coil from freezing).
2. Primary hydraulic circuit for glycol-free systems.

Electronic expansion valve

The units from size 1805 to 2406 have an electronic expansion valve as standard.

The possibility to use electronic expansion valve, offers significant benefits, especially when the chiller is working with partial loads, increasing the energy efficiency of the unit.

Integrated hydronic kit

To obtain a solution that allows you to save money and to facilitate installation. These units can be configured with an integrated hydronic system. The kit contains the main hydraulic components, and is available in various configurations with a single pump or a standby pump too, so the customer can choose the right useful head.

CONTROL

Microprocessor adjustment, with 7", touch screen keyboard, which allows to navigate intuitively among the various screens, allowing to modify the operating parameters and graphically view the progress of some variables in real time and the adjustment includes complete management of the alarms and their log.

- The presence of a programmable timer allows functioning time periods and a possible second set-point to be set.
- The temperature control takes place with the integral proportional logic, based on the water output temperature.
- **Night mode:** only in the **non-silenced** versions is it possible to set a silenced operating mode, which is useful for example at night for greater acoustic comfort but always guarantees performance even at peak load times.

ACCESSORIES

AER485P1: RS-485 interface for supervision systems with MODBUS protocol.

AERBACP: Ethernet communication Interface for protocols Bacnet/IP, Modbus TCP/IP, SNMP

AERLINK: Wifi Gateway with an RS485 serial port that can be installed on all machines or on all controllers having an RS485 serial port themselves. The module is capable of simultaneously activating the AP WIFI (Access point) and WIFI Station functions, the latter making it possible to connect to the home or business LAN both with VMF-E5 and E6. To facilitate certain management and control operations of the unit, the AERAPP application is available both for Android and iOS systems.

AERNET: The device allows the control, the management and the remote monitoring of a Chiller with a PC, smartphone or tablet using Cloud connection. AERNET works as Master while every unit connected is configured as Slave (max. 6 unit); also, with a simple click is possible to save a log file with all the connected unit datas in the personal terminal for post analysis.

FB1: Air filter to protect the micro-channel coils. Formed of a frame and a composite baffle in micro-expanded aluminium mesh, with particularly low pressure drops.

FL: Flow switch.

MULTICHILLER_EVO: Control, switch-on and switch-off system of the single chillers where multiple units are installed in parallel, always ensuring constant flow rate to the evaporators.

PGD1: Allows you to control the unit at a distance.

AVX: Spring anti-vibration supports.

FACTORY FITTED ACCESSORIES

DRE: Electronic device for peak current reduction.

RIF: Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.

GP_: Anti-intrusion grid kit

T6: Double safety valve with exchange cock, both on the high and low pressure branches.

ACCESSORIES COMPATIBILITY

| Model | Ver | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|------------------|---------|------|------|------|------|------|------|------|------|------|------|------|
| AER485P1 | A,E,N,U | . | . | . | . | . | . | . | . | . | . | . |
| AERBACP | A,E,N,U | . | . | . | . | . | . | . | . | . | . | . |
| AERLINK | A,E,N,U | . | . | . | . | . | . | . | . | . | . | . |
| AERNET | A,E,N,U | . | . | . | . | . | . | . | . | . | . | . |
| FB1 | A,E,N,U | . | . | . | . | . | . | . | . | . | . | . |
| FL | A,E,N,U | . | . | . | . | . | . | . | . | . | . | . |
| MULTICHILLER_EVO | A,E,N,U | . | . | . | . | . | . | . | . | . | . | . |
| PGD1 | A,E,N,U | . | . | . | . | . | . | . | . | . | . | . |

Antivibration

| Ver | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Integrated hydronic kit: 00, DA, DB, DC, DE, DF, DG, DH, DI, DJ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ | | | | | | | | | | | |
| A,E,N,U | AVX. (1) | AVX. (1) | AVX. (1) | AVX. (1) | AVX. (1) | AVX. (1) | AVX. (1) | AVX. (1) | AVX. (1) | AVX. (1) | AVX. (1) |

(1) Contact us.

Device for peak current reduction

| Ver | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 |
|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| A,E,N,U | DRENRB0800 (1) | DRENRB0900 (1) | DRENRB1000 (1) | DRENRB1100 (1) | DRENRB1200 (1) | DRENRB1400 (1) |

(1) Only for supplies of 400V 3N ~ 50Hz and 400V 3 ~ 50Hz. x 2 or x 3 (if present) indicates the quantity to be ordered.

A grey background indicates the accessory must be assembled in the factory

| Ver | 1600 | 1805 | 2006 | 2206 | 2406 |
|---------|----------------|----------------|----------------|----------------|----------------|
| A,E,N,U | DRENRB1600 (1) | DRENRB1805 (1) | DRENRB2006 (1) | DRENRB2206 (1) | DRENRB2406 (1) |

(1) Only for supplies of 400V 3N ~ 50Hz and 400V 3 ~ 50Hz. x 2 or x 3 (if present) indicates the quantity to be ordered.

A grey background indicates the accessory must be assembled in the factory

Power factor correction

| Ver | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 |
|-----|------------|------------|------------|------------|------------|------------|
| A | RIFNRB0800 | RIFNRB0900 | RIFNRB1000 | RIFNRB1100 | RIFNRB1200 | RIFNRB1400 |
| E,U | RIFNRB0800 | RIFNRB0900 | RIFNRB1000 | RIFNRB1101 | RIFNRB1201 | RIFNRB1401 |
| N | RIFNRB0801 | RIFNRB0901 | RIFNRB1001 | RIFNRB1101 | RIFNRB1201 | RIFNRB1401 |

A grey background indicates the accessory must be assembled in the factory

| Ver | 1600 | 1805 | 2006 | 2206 | 2406 |
|-------|------------|------------|------------|------------|------------|
| A | RIFNRB1601 | RIFNRB1805 | RIFNRB2006 | RIFNRB2206 | RIFNRB2416 |
| E,N,U | RIFNRB1601 | RIFNRB1815 | RIFNRB2016 | RIFNRB2216 | RIFNRB2416 |

A grey background indicates the accessory must be assembled in the factory

Anti-intrusion grid

| Ver | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|-----|--------|--------|--------|--------|--------|--------|-------|------|------|------|------|
| A | GP2VN | GP2VN | GP3VNF | GP3VNF | GP3VNF | GP3VNF | GP4VN | GP4G | GP5G | GP5G | GP6V |
| E,U | GP3VNF | GP3VNF | GP3VNF | GP4VN | GP4VN | GP4VN | GP5VN | GP6V | GP6V | GP7V | GP7V |
| N | GP4VN | GP4VN | GP4VN | GP5VN | GP5VN | GP5VN | GP6V | GP7V | GP7V | GP8V | GP8V |

A grey background indicates the accessory must be assembled in the factory

CONFIGURATOR

| Field | Description |
|----------------|---|
| 1,2,3 | NRB |
| 4,5,6,7 | Size 0800, 0900, 1000, 1100, 1200, 1400, 1600, 1805, 2006, 2206, 2406 |
| 8 | Operating field |
| ° | Standard mechanic thermostatic valve |
| X | Electronic thermostatic expansion valve |
| Y | Low temperature mechanic thermostatic valve |
| Z | Low temperature electronic thermostatic valve |
| 9 | Model |
| B | Free-cooling glycol free |
| G | Free-cooling glycol free plus (1) |
| 10 | Heat recovery |
| ° | Without heat recovery |
| D | With desuperheater (2) |
| 11 | Version |
| A | High efficiency |
| E | Silenced high efficiency |
| N | Silenced very high efficiency |
| U | Very high efficiency |
| 12 | Coils / free-cooling coils |
| ° | Alluminium microchannel / Copper - aluminium |
| I | Copper-aluminium / Copper-aluminium |
| O | Painted alluminium microchannel / Copper painted aluminium |
| R | Copper-copper/Copper-copper |
| S | Copper-Tinned copper / Copper -Tinned copper |
| V | Copper-painted aluminium / Copper-painted aluminium |
| 13 | Fans |
| ° | Standard |
| J | Inverter |
| 14 | Power supply |
| ° | 400V~3 50Hz with magnet circuit breakers |
| 15,16 | Integrated hydronic kit |
| 00 | Without hydronic kit |
| PA | Pump A |
| PB | Pump B |
| PC | Pump C |
| PD | Pump D |
| PE | Pump E |
| PF | Pump F |
| PG | Pump G |
| PH | Pump H |
| PI | Pump I |
| PJ | Pump J (3) |
| DA | Pump A + stand-by pump |
| DB | Pump B + stand-by pump |
| DC | Pump C + stand-by pump |
| DE | Pump E + stand-by pump |
| DF | Pump F + stand-by pump |
| DG | Pump G + stand-by pump |
| DH | Pump H + stand-by pump |
| DI | Pump I + stand-by pump |
| DJ | Pump J + stand-by pump (3) |

(1) The Free cooling Plus "G" models are only compatible with "100" and "0" coils.

(2) The temperature of the water in the heat exchanger inlet must never drop below 35°C.

(3) For all configurations including pump J please contact the factory.

PERFORMANCE SPECIFICATIONS

NRB - A

| Size | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Model: B | | | | | | | | | | | | |
| Cooling performance chiller operation (1) | | | | | | | | | | | | |
| Cooling capacity | kW | 211,8 | 234,3 | 273,4 | 307,1 | 335,9 | 373,3 | 432,0 | 474,2 | 542,2 | 584,4 | 655,6 |
| Input power | kW | 76,0 | 88,0 | 93,9 | 108,9 | 124,8 | 145,6 | 157,1 | 185,1 | 201,0 | 229,4 | 243,7 |
| Cooling total input current | A | 134,0 | 152,0 | 165,0 | 189,0 | 215,0 | 248,0 | 270,0 | 316,0 | 347,0 | 394,0 | 423,0 |
| EER | W/W | 2,79 | 2,66 | 2,91 | 2,82 | 2,69 | 2,56 | 2,75 | 2,56 | 2,70 | 2,55 | 2,69 |
| Water flow rate system side | l/h | 36397 | 40249 | 46968 | 52762 | 57713 | 64138 | 74217 | 81471 | 93153 | 100403 | 112635 |
| Pressure drop system side | kPa | 53 | 58 | 66 | 74 | 88 | 100 | 74 | 85 | 107 | 112 | 116 |
| Cooling performances with free-cooling glycol-free (2) | | | | | | | | | | | | |
| Cooling capacity | kW | 119,9 | 121,9 | 165,6 | 172,5 | 176,2 | 181,3 | 239,5 | 242,7 | 306,2 | 309,1 | 369,3 |
| Input power | kW | 9,8 | 9,8 | 14,3 | 14,3 | 14,4 | 14,4 | 19,2 | 19,2 | 24,4 | 24,4 | 32,1 |
| Free cooling total input current | A | 17,0 | 17,0 | 25,0 | 25,0 | 25,0 | 25,0 | 33,0 | 33,0 | 42,0 | 42,0 | 56,0 |
| EER | W/W | 12,21 | 12,41 | 11,56 | 12,02 | 12,26 | 12,60 | 12,46 | 12,63 | 12,58 | 12,69 | 11,52 |

(1) System side water heat exchanger 12 °C/7 °C; External air 35 °C; Chiller operation 100%; Free-cooling 0%

(2) Acqua scambiatore lato utenza 12 °C / 8,7 °C ; Aria esterna 2 °C; circuito idraulico glicolato al 30%; circuito idraulico primario glicole 0%.

| Size | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Model: G | | | | | | | | | | | | |
| Cooling performance chiller operation (1) | | | | | | | | | | | | |
| Cooling capacity | kW | 210,3 | 232,4 | 271,9 | 305,1 | 333,3 | 369,6 | 428,9 | 469,8 | 538,2 | 579,2 | 650,8 |
| Input power | kW | 76,8 | 89,2 | 94,8 | 110,0 | 126,2 | 147,6 | 158,7 | 187,5 | 203,2 | 232,3 | 246,6 |
| Cooling total input current | A | 135,0 | 154,0 | 167,0 | 191,0 | 217,0 | 251,0 | 272,0 | 320,0 | 351,0 | 399,0 | 427,0 |
| EER | W/W | 2,74 | 2,61 | 2,87 | 2,77 | 2,64 | 2,50 | 2,70 | 2,51 | 2,65 | 2,49 | 2,64 |
| Water flow rate system side | l/h | 36136 | 39921 | 46723 | 52411 | 57266 | 63506 | 73697 | 80717 | 92472 | 99510 | 111819 |
| Pressure drop system side | kPa | 53 | 57 | 65 | 73 | 87 | 98 | 73 | 84 | 106 | 110 | 114 |
| Cooling performances with free-cooling glycol-free (2) | | | | | | | | | | | | |
| Cooling capacity | kW | 125,4 | 127,6 | 172,1 | 179,6 | 183,6 | 189,2 | 250,1 | 253,5 | 320,5 | 323,5 | 387,0 |
| Input power | kW | 9,9 | 9,9 | 14,5 | 14,5 | 14,6 | 14,6 | 19,5 | 19,5 | 24,6 | 24,6 | 32,4 |
| Free cooling total input current | A | 17,0 | 17,0 | 25,0 | 25,0 | 25,0 | 25,0 | 33,0 | 33,0 | 43,0 | 42,0 | 56,0 |
| EER | W/W | 12,62 | 12,83 | 11,86 | 12,36 | 12,62 | 12,99 | 12,85 | 13,03 | 13,00 | 13,13 | 11,94 |

(1) System side water heat exchanger 12 °C/7 °C; External air 35 °C; Chiller operation 100%; Free-cooling 0%

(2) Acqua scambiatore lato utenza 12 °C / 8,7 °C ; Aria esterna 2 °C; circuito idraulico glicolato al 30%; circuito idraulico primario glicole 0%.

NRB - E

| Size | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Model: B | | | | | | | | | | | | |
| Cooling performance chiller operation (1) | | | | | | | | | | | | |
| Cooling capacity | kW | 220,6 | 242,6 | 265,3 | 310,3 | 344,7 | 379,2 | 438,5 | 498,2 | 546,9 | 610,1 | 652,9 |
| Input power | kW | 73,4 | 84,2 | 95,7 | 106,6 | 122,4 | 142,0 | 155,3 | 174,8 | 199,2 | 219,5 | 244,7 |
| Cooling total input current | A | 126,0 | 142,0 | 160,0 | 179,0 | 205,0 | 236,0 | 258,0 | 292,0 | 333,0 | 368,0 | 411,0 |
| EER | W/W | 3,00 | 2,88 | 2,77 | 2,91 | 2,82 | 2,67 | 2,82 | 2,85 | 2,75 | 2,78 | 2,67 |
| Water flow rate system side | l/h | 37902 | 41688 | 45573 | 53310 | 59226 | 65155 | 75344 | 85588 | 93960 | 104827 | 112169 |
| Pressure drop system side | kPa | 48 | 53 | 61 | 68 | 84 | 102 | 69 | 86 | 103 | 123 | 116 |
| Cooling performances with free-cooling glycol-free (2) | | | | | | | | | | | | |
| Cooling capacity | kW | 139,1 | 141,5 | 143,7 | 187,8 | 192,4 | 195,3 | 245,4 | 298,2 | 309,3 | 351,9 | 355,1 |
| Input power | kW | 11,0 | 11,0 | 11,0 | 14,6 | 14,6 | 14,6 | 18,5 | 24,8 | 25,3 | 28,9 | 28,9 |
| Free cooling total input current | A | 19,0 | 19,0 | 18,0 | 24,0 | 24,0 | 24,0 | 31,0 | 41,0 | 42,0 | 48,0 | 48,0 |
| EER | W/W | 12,69 | 12,92 | 13,11 | 12,89 | 13,17 | 13,37 | 13,29 | 12,02 | 12,23 | 12,18 | 12,29 |

(1) System side water heat exchanger 12 °C/7 °C; External air 35 °C; Chiller operation 100%; Free-cooling 0%

(2) Acqua scambiatore lato utenza 12 °C / 8,7 °C ; Aria esterna 2 °C; circuito idraulico glicolato al 30%; circuito idraulico primario glicole 0%.

| Size | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Model: G | | | | | | | | | | | | |
| Cooling performance chiller operation (1) | | | | | | | | | | | | |
| Cooling capacity | kW | 219,4 | 241,1 | 263,2 | 308,4 | 342,1 | 375,8 | 435,2 | 494,7 | 542,4 | 605,4 | 647,1 |
| Input power | kW | 74,1 | 85,1 | 96,8 | 107,7 | 123,7 | 143,8 | 157,0 | 176,7 | 201,6 | 222,1 | 247,8 |
| Cooling total input current | A | 126,0 | 144,0 | 162,0 | 181,0 | 206,0 | 238,0 | 260,0 | 294,0 | 336,0 | 372,0 | 415,0 |
| EER | W/W | 2,96 | 2,83 | 2,72 | 2,86 | 2,76 | 2,61 | 2,77 | 2,80 | 2,69 | 2,73 | 2,61 |
| Water flow rate system side | l/h | 37695 | 41419 | 45215 | 52979 | 58785 | 64562 | 74775 | 84990 | 93195 | 104013 | 111187 |
| Pressure drop system side | kPa | 47 | 52 | 61 | 67 | 83 | 100 | 68 | 85 | 102 | 122 | 114 |
| Cooling performances with free-cooling glycol-free (2) | | | | | | | | | | | | |
| Cooling capacity | kW | 144,3 | 147,0 | 149,3 | 195,0 | 200,0 | 203,0 | 255,3 | 310,4 | 322,6 | 366,5 | 369,9 |
| Input power | kW | 11,1 | 11,1 | 11,1 | 14,7 | 14,8 | 14,8 | 18,7 | 25,0 | 25,5 | 29,2 | 29,2 |
| Free cooling total input current | A | 19,0 | 19,0 | 18,0 | 25,0 | 25,0 | 24,0 | 31,0 | 42,0 | 43,0 | 49,0 | 49,0 |
| EER | W/W | 13,03 | 13,28 | 13,48 | 13,24 | 13,55 | 13,75 | 13,68 | 12,40 | 12,64 | 12,57 | 12,69 |

(1) System side water heat exchanger 12 °C/7 °C; External air 35 °C; Chiller operation 100%; Free-cooling 0%

(2) Acqua scambiatore lato utenza 12 °C / 8,7 °C ; Aria esterna 2 °C; circuito idraulico glicolato al 30%; circuito idraulico primario glicole 0%.

NRB - U

| Size | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Model: B | | | | | | | | | | | | |
| Cooling performance chiller operation (1) | | | | | | | | | | | | |
| Cooling capacity | kW | 227,3 | 250,9 | 275,8 | 320,4 | 357,9 | 396,3 | 455,4 | 515,9 | 569,2 | 633,7 | 680,9 |
| Input power | kW | 73,7 | 83,6 | 94,1 | 106,4 | 120,6 | 138,5 | 153,5 | 173,2 | 195,2 | 215,9 | 238,4 |
| Cooling total input current | A | 133,0 | 149,0 | 166,0 | 189,0 | 212,0 | 240,0 | 267,0 | 304,0 | 341,0 | 379,0 | 418,0 |
| EER | W/W | 3,08 | 3,00 | 2,93 | 3,01 | 2,97 | 2,86 | 2,97 | 2,98 | 2,92 | 2,94 | 2,86 |
| Water flow rate system side | l/h | 39046 | 43104 | 47382 | 55045 | 61497 | 68087 | 78245 | 88642 | 97793 | 108881 | 116982 |
| Pressure drop system side | kPa | 51 | 56 | 66 | 72 | 90 | 111 | 75 | 92 | 112 | 133 | 126 |
| Cooling performances with free-cooling glycol-free (2) | | | | | | | | | | | | |
| Cooling capacity | kW | 159,6 | 162,9 | 165,8 | 215,5 | 222,0 | 225,8 | 284,2 | 346,2 | 361,7 | 409,5 | 413,7 |
| Input power | kW | 14,3 | 24,3 | 14,3 | 19,1 | 19,1 | 19,1 | 24,1 | 31,6 | 32,0 | 36,8 | 36,8 |
| Free cooling total input current | A | 26,0 | 26,0 | 25,0 | 34,0 | 33,0 | 33,0 | 42,0 | 55,0 | 56,0 | 65,0 | 64,0 |
| EER | W/W | 11,14 | 11,37 | 11,57 | 11,31 | 11,62 | 11,82 | 11,80 | 10,97 | 11,29 | 11,14 | 11,26 |

(1) System side water heat exchanger 12 °C/7 °C; External air 35 °C; Chiller operation 100%; Free-cooling 0%

(2) Acqua scambiatore lato utenza 12 °C / 8,7 °C ; Aria esterna 2 °C; circuito idraulico glicolato al 30%; circuito idraulico primario glicole 0%.

| Size | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Model: G | | | | | | | | | | | | |
| Cooling performance chiller operation (1) | | | | | | | | | | | | |
| Cooling capacity | kW | 226,2 | 249,6 | 274,2 | 318,8 | 356,0 | 393,8 | 452,9 | 513,3 | 565,9 | 630,2 | 676,8 |
| Input power | kW | 74,4 | 84,4 | 95,0 | 107,4 | 121,8 | 139,9 | 154,8 | 174,8 | 197,2 | 218,0 | 240,9 |
| Cooling total input current | A | 134,0 | 150,0 | 167,0 | 190,0 | 213,0 | 242,0 | 269,0 | 306,0 | 344,0 | 382,0 | 421,0 |
| EER | W/W | 3,04 | 2,96 | 2,89 | 2,97 | 2,92 | 2,82 | 2,93 | 2,94 | 2,87 | 2,89 | 2,81 |
| Water flow rate system side | l/h | 38871 | 42893 | 47115 | 54781 | 61158 | 67658 | 77819 | 88186 | 97229 | 108280 | 116278 |
| Pressure drop system side | kPa | 50 | 56 | - | 72 | 89 | 109 | 74 | 91 | 111 | 132 | 125 |
| Cooling performances with free-cooling glycol-free (2) | | | | | | | | | | | | |
| Cooling capacity | kW | 165,6 | 169,1 | 172,3 | 223,6 | 230,7 | 234,8 | 295,8 | 360,9 | 278,5 | 427,4 | 432,0 |
| Input power | kW | 14,5 | 14,5 | 14,5 | 19,3 | 19,3 | 19,3 | 24,4 | 31,9 | 32,4 | 37,2 | 37,2 |
| Free cooling total input current | A | 26,0 | 26,0 | 25,0 | 34,0 | 34,0 | 33,0 | 42,0 | 56,0 | 57,0 | 65,0 | 65,0 |
| EER | W/W | 11,42 | 11,66 | 11,88 | 11,59 | 11,93 | 12,14 | 12,13 | 11,31 | 11,68 | 11,50 | 11,62 |

(1) System side water heat exchanger 12 °C/7 °C; External air 35 °C; Chiller operation 100%; Free-cooling 0%

(2) Acqua scambiatore lato utenza 12 °C / 8,7 °C ; Aria esterna 2 °C; circuito idraulico glicolato al 30%; circuito idraulico primario glicole 0%.

NRB - N

| Size | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Model: B | | | | | | | | | | | | |
| Cooling performance chiller operation (1) | | | | | | | | | | | | |
| Cooling capacity | kW | 228,3 | 252,4 | 278,0 | 320,3 | 358,3 | 397,2 | 454,4 | 510,9 | 563,3 | 628,5 | 675,3 |
| Input power | kW | 72,5 | 82,2 | 92,3 | 104,6 | 118,7 | 136,3 | 151,0 | 171,5 | 194,0 | 213,5 | 236,4 |
| Cooling total input current | A | 124,0 | 140,0 | 156,0 | 177,0 | 199,0 | 227,0 | 251,0 | 287,0 | 325,0 | 360,0 | 399,0 |
| EER | W/W | 3,15 | 3,07 | 3,01 | 3,06 | 3,02 | 2,91 | 3,01 | 2,98 | 2,90 | 2,94 | 2,86 |
| Water flow rate system side | l/h | 39222 | 43370 | 47761 | 55033 | 61559 | 68239 | 78074 | 87785 | 96785 | 107983 | 116017 |
| Pressure drop system side | kPa | 46 | 50 | 60 | 72 | 91 | 103 | 71 | 90 | 110 | 131 | 124 |
| Cooling performances with free-cooling glycol-free (2) | | | | | | | | | | | | |
| Cooling capacity | kW | 173,9 | 177,9 | 181,5 | 218,5 | 225,6 | 235,0 | 293,7 | 331,4 | 347,7 | 386,9 | 390,8 |
| Input power | kW | 14,5 | 14,5 | 14,5 | 18,1 | 18,2 | 18,2 | 24,8 | 28,3 | 28,9 | 31,6 | 31,6 |
| Free cooling total input current | A | 25,0 | 25,0 | 25,0 | 31,0 | 31,0 | 30,0 | 41,0 | 47,0 | 48,0 | 53,0 | 53,0 |
| EER | W/W | 11,95 | 12,23 | 12,48 | 12,07 | 12,41 | 12,90 | 11,84 | 11,73 | 12,04 | 12,24 | 12,37 |

(1) System side water heat exchanger 12 °C/7 °C; External air 35 °C; Chiller operation 100%; Free-cooling 0%

(2) Acqua scambiatore lato utenza 12 °C / 8,7 °C ; Aria esterna 2 °C; circuito idraulico glicolato al 30%; circuito idraulico primario glicole 0%.

| Size | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Model: G | | | | | | | | | | | | |
| Cooling performance chiller operation (1) | | | | | | | | | | | | |
| Cooling capacity | kW | 227,4 | 251,4 | 276,7 | 318,8 | 356,3 | 394,6 | 451,9 | 508,1 | 559,8 | 624,6 | 670,7 |
| Input power | kW | 73,1 | 82,8 | 93,1 | 105,5 | 119,8 | 137,7 | 152,4 | 173,0 | 195,9 | 215,7 | 239,0 |
| Cooling total input current | A | 125,0 | 141,0 | 157,0 | 178,0 | 201,0 | 229,0 | 253,0 | 289,0 | 328,0 | 362,0 | 402,0 |
| EER | W/W | 3,11 | 3,03 | 2,97 | 3,02 | 2,98 | 2,87 | 2,97 | 2,94 | 2,86 | 2,90 | 2,81 |
| Water flow rate system side | l/h | 39073 | 43187 | 47536 | 54768 | 61222 | 67801 | 77644 | 87290 | 96173 | 107317 | 115226 |
| Pressure drop system side | kPa | 46 | 50 | 59 | 72 | 90 | 101 | 71 | 89 | 108 | 130 | 123 |
| Cooling performances with free-cooling glycol-free (2) | | | | | | | | | | | | |
| Cooling capacity | kW | 180,0 | 184,4 | 188,2 | 226,3 | 233,9 | 244,1 | 305,6 | 344,3 | 362,0 | 402,3 | 406,6 |
| Input power | kW | 14,7 | 14,6 | 14,7 | 18,3 | 18,4 | 18,4 | 25,0 | 28,5 | 29,2 | 31,9 | 31,9 |
| Free cooling total input current | A | 25,0 | 25,0 | 25,0 | 31,0 | 31,0 | 31,0 | 42,0 | 48,0 | 49,0 | 54,0 | 54,0 |
| EER | W/W | 12,25 | 12,55 | 12,81 | 12,37 | 12,73 | 13,26 | 12,20 | 12,07 | 12,42 | 12,61 | 12,74 |

(1) System side water heat exchanger 12 °C/7 °C; External air 35 °C; Chiller operation 100%; Free-cooling 0%

(2) Acqua scambiatore lato utenza 12 °C / 8,7 °C ; Aria esterna 2 °C; circuito idraulico glicolato al 30%; circuito idraulico primario glicole 0%.

ENERGY INDEX

| Size | | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|---|---|-----|------|------|------|------|------|------|------|------|------|------|------|
| Model: B | | | | | | | | | | | | | |
| SEPR - (EN14825: 2018) High temperature with standard fans (1) | | | | | | | | | | | | | |
| SEPR | A | W/W | 5,61 | 5,25 | 5,27 | 5,43 | 5,25 | 5,05 | 5,60 | 5,11 | 5,41 | 5,21 | 5,47 |
| | E | W/W | 6,07 | 5,58 | 5,44 | 5,59 | 5,50 | 5,13 | 5,77 | 5,66 | 5,47 | 5,47 | 5,37 |
| | N | W/W | 6,38 | 6,09 | 5,91 | 5,92 | 5,78 | 5,41 | 5,67 | 5,51 | 5,56 | 5,58 | 5,53 |
| | U | W/W | 6,22 | 5,87 | 5,69 | 5,84 | 5,71 | 5,56 | 5,73 | 5,52 | 5,60 | 5,58 | 5,53 |

(1) Calculation performed with FIXED water flow rate.

| Size | | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|---|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
| Model: G | | | | | | | | | | | | | |
| SEPR - (EN14825: 2018) High temperature with standard fans (1) | | | | | | | | | | | | | |
| SEPR | A | W/W | 5,82 | 5,37 | 5,48 | 5,60 | 5,37 | 4,87 | 5,57 | 5,06 | 5,39 | 5,17 | 5,45 |
| | E | W/W | 6,42 | 5,83 | 5,62 | 5,85 | 5,69 | 5,10 | 5,74 | 5,64 | 5,44 | 5,44 | 5,32 |
| | N,U | W/W | 6,96 | 6,54 | 6,28 | 6,28 | 6,08 | 5,63 | 6,13 | 5,90 | 5,77 | 5,73 | 5,58 |

(1) Calculation performed with FIXED water flow rate.

ELECTRIC DATA

| Size | | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|-----------------------|-----|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Electric data | | | | | | | | | | | | | |
| Maximum current (FLA) | A | A | 190,4 | 206,8 | 242,5 | 271,9 | 301,2 | 330,2 | 378,6 | 423,4 | 487,6 | 516,6 | 570,9 |
| | E,U | A | 209,8 | 226,2 | 242,5 | 291,3 | 320,6 | 349,6 | 398,0 | 468,1 | 512,9 | 561,3 | 590,3 |
| | N | A | 229,2 | 245,6 | 261,9 | 310,7 | 340,0 | 369,0 | 423,3 | 487,5 | 532,3 | 580,7 | 609,7 |
| Peak current (LRA) | A | A | 379,0 | 434,2 | 469,9 | 522,6 | 551,9 | 664,4 | 712,8 | 757,6 | 821,8 | 850,8 | 905,1 |
| | E,U | A | 398,4 | 453,6 | 469,9 | 542,0 | 571,3 | 683,8 | 732,2 | 802,3 | 847,1 | 895,5 | 924,5 |
| | N | A | 417,8 | 473,0 | 489,3 | 561,4 | 590,7 | 703,2 | 757,5 | 821,7 | 866,5 | 914,9 | 943,9 |

GENERAL TECHNICAL DATA

| Size | | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|---|---------|------|----------------|------|------|------|------|------|------|-------|-------|-------|-------|
| Compressor | | | | | | | | | | | | | |
| Type | A,E,N,U | type | Scroll | | | | | | | | | | |
| Compressor regulation | A,E,N,U | Type | On-Off | | | | | | | | | | |
| Number | A,E,N,U | no. | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 6 | 6 | 6 |
| Circuits | A,E,N,U | no. | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Refrigerant | A,E,N,U | type | R410A | | | | | | | | | | |
| Refrigerant charge (1) | A | kg | 32,0 | 32,0 | 48,0 | 48,0 | 48,0 | 48,0 | 64,0 | 64,0 | 80,0 | 80,0 | 96,0 |
| | E,U | kg | 48,0 | 48,0 | 48,0 | 64,0 | 64,0 | 64,0 | 80,0 | 96,0 | 96,0 | 112,0 | 112,0 |
| | N | kg | 64,0 | 64,0 | 64,0 | 80,0 | 80,0 | 80,0 | 96,0 | 112,0 | 112,0 | 128,0 | 128,0 |
| Hydraulic connections | | | | | | | | | | | | | |
| Connections (in/out) | A,E,N,U | Type | Grooved joints | | | | | | | | | | |
| Hydraulic connections without hydronic kit | | | | | | | | | | | | | |
| Sizes (in/out) | A,E,N,U | Ø | 3" | 3" | 3" | 3" | 3" | 3" | 4" | 4" | 4" | 4" | 4" |
| Hydraulic connections with hydronic kit | | | | | | | | | | | | | |
| Sizes (in/out) | A,E,N,U | Ø | 3" | 3" | 3" | 3" | 3" | 3" | 4" | 4" | 4" | 4" | 4" |

(1) The load indicated in the table is an estimated and preliminary value. The final value of the refrigerant load is indicated on the unit's technical label. For further information contact the office.

In the versions without a hydronic kit, the water filter is supplied with a connection point for making the connection. In the versions with a hydronic kit, it is supplied ready-mounted.

SOUND DATA

| Size | | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|--|---|-------|------|------|------|------|------|------|------|------|------|------|------|
| Sound data calculated in cooling mode (1) | | | | | | | | | | | | | |
| Sound power level | A | dB(A) | 88,0 | 88,1 | 90,3 | 90,2 | 90,2 | 90,2 | 91,7 | 92,2 | 93,9 | 94,4 | 95,8 |
| | E | dB(A) | 85,0 | 85,1 | 85,1 | 86,5 | 86,5 | 86,5 | 87,7 | 89,2 | 89,7 | 91,0 | 91,5 |
| | N | dB(A) | 86,5 | 86,6 | 86,6 | 87,7 | 87,7 | 87,7 | 88,7 | 90,0 | 90,5 | 91,7 | 92,2 |
| | U | dB(A) | 90,2 | 90,3 | 90,3 | 91,7 | 91,7 | 91,7 | 92,9 | 94,4 | 94,9 | 96,2 | 96,7 |
| Sound pressure level (10 m) | A | dB(A) | 55,9 | 56,0 | 58,0 | 57,9 | 57,9 | 57,9 | 59,3 | 59,8 | 61,3 | 61,8 | 63,2 |
| | E | dB(A) | 52,7 | 52,8 | 52,8 | 54,2 | 54,2 | 54,2 | 55,2 | 56,5 | 57,0 | 58,2 | 58,7 |
| | N | dB(A) | 54,2 | 54,3 | 54,3 | 55,2 | 55,2 | 55,2 | 56,0 | 57,2 | 57,7 | 58,8 | 59,3 |
| | U | dB(A) | 57,9 | 58,0 | 58,0 | 59,3 | 59,3 | 59,3 | 60,4 | 61,7 | 62,2 | 63,4 | 63,9 |

(1) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification. Sound pressure (cold functioning) measured in free field, 10m away from the unit external surface (in compliance with UNI EN ISO 3744).

FANS DATA

| Size | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 | |
|-----------------|---------|-------------------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Model: B | | | | | | | | | | | | | |
| Fan | | | | | | | | | | | | | |
| Type | A,E,N,U | type | | | | | | axials | | | | | |
| Number | A | no. | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 10 | 10 | 12 |
| | E,U | no. | 6 | 6 | 6 | 8 | 8 | 8 | 10 | 12 | 12 | 14 | 14 |
| | N | no. | 8 | 8 | 8 | 10 | 10 | 10 | 12 | 14 | 14 | 16 | 16 |
| Air flow rate | A | m ³ /h | 57600 | 57600 | 86400 | 86400 | 86400 | 86400 | 115200 | 115200 | 144000 | 144000 | 172800 |
| | E | m ³ /h | 64800 | 64800 | 64800 | 86400 | 86400 | 86400 | 108000 | 129600 | 129600 | 151200 | 151200 |
| | N | m ³ /h | 86400 | 86400 | 86400 | 108000 | 108000 | 108000 | 129600 | 151200 | 151200 | 172800 | 172800 |
| | U | m ³ /h | 86400 | 86400 | 86400 | 115200 | 115200 | 115200 | 144000 | 172800 | 172800 | 201600 | 201600 |

| Size | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 | |
|-----------------|---------|-------------------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Model: G | | | | | | | | | | | | | |
| Fan | | | | | | | | | | | | | |
| Type | A,E,N,U | type | | | | | | axials | | | | | |
| Number | A | no. | 4 | 4 | 6 | 6 | 6 | 8 | 8 | 10 | 10 | 12 | |
| | E,U | no. | 6 | 6 | 6 | 8 | 8 | 8 | 10 | 12 | 12 | 14 | 14 |
| | N | no. | 8 | 8 | 8 | 10 | 10 | 10 | 12 | 14 | 14 | 16 | 16 |
| Air flow rate | A | m ³ /h | 57600 | 57600 | 86400 | 86400 | 86400 | 86400 | 115200 | 115200 | 144000 | 144000 | 172800 |
| | E | m ³ /h | 64800 | 64800 | 64800 | 86400 | 86400 | 86400 | 108000 | 129600 | 129600 | 151200 | 151200 |
| | N | m ³ /h | 86400 | 86400 | 86400 | 108000 | 108000 | 108000 | 129600 | 151200 | 151200 | 172800 | 172800 |
| | U | m ³ /h | 86400 | 86400 | 86400 | 115200 | 115200 | 115200 | 144000 | 172800 | 172800 | 201600 | 201600 |

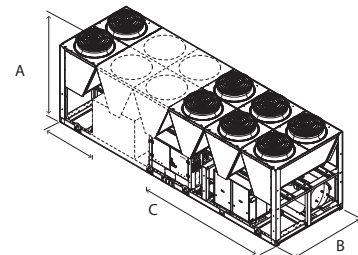
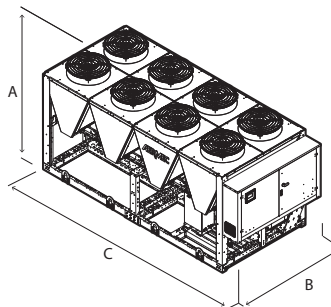
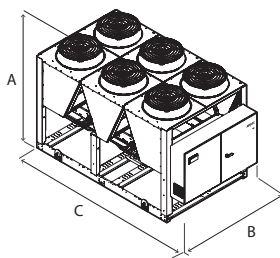
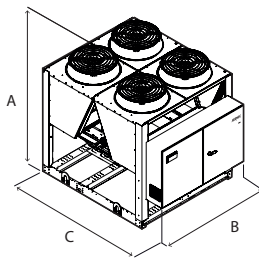
DIMENSIONS

NRB 0800-0900 A

NRB 1000-1400 A
NRB 0800-1000 E-U

NRB 1100-1400 E-U
NRB 0800-1000 N

NRB 1100-2406 N
NRB 1600-2406 U



| Size | | 0800 | 0900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1805 | 2006 | 2206 | 2406 |
|-------------------------------|---------|------|------|------|------|------|------|------|------|------|------|------|
| Dimensions and weights | | | | | | | | | | | | |
| A | A,E,N,U | mm | 2450 | 2450 | 2450 | 2450 | 2450 | 2450 | 2450 | 2450 | 2450 | 2450 |
| B | A,E,N,U | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| C | A | mm | 2780 | 2780 | 3970 | 3970 | 3970 | 3970 | 4760 | 5160 | 6350 | 6350 |
| | E,U | mm | 3970 | 3970 | 3970 | 4760 | 4760 | 4760 | 5950 | 7140 | 7140 | 8330 |
| | N | mm | 4760 | 4760 | 4760 | 5950 | 5950 | 5950 | 7140 | 8330 | 8330 | 9520 |

■ For the weights please contact the factory.

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