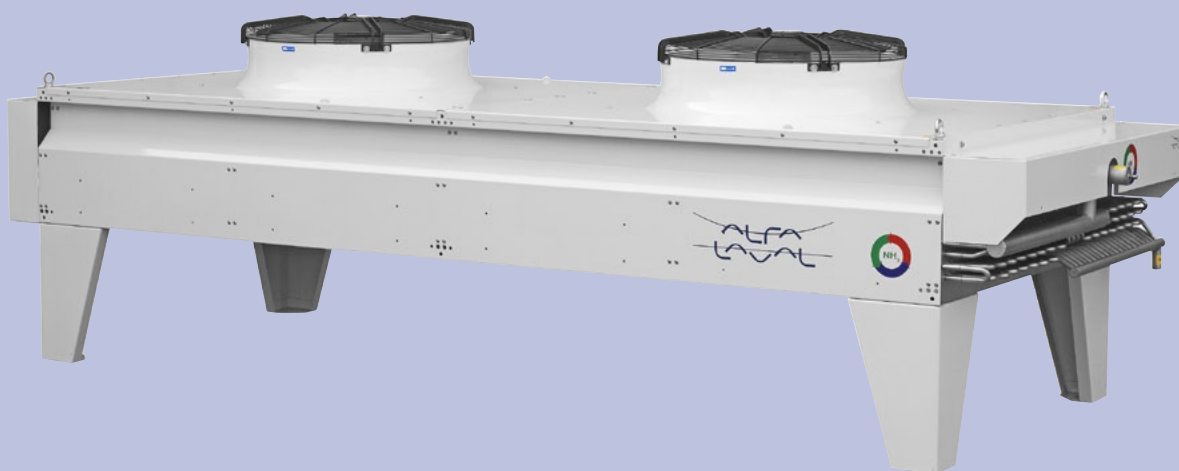




AlfaBlue Ammonia

Air cooled condensers – BNM, BND



Application

The Alfa Laval condenser with stainless steel tubes are especially designed for refrigeration plants where ammonia refrigerant is used. The condensers are designed for outdoor operation.

Heat exchanger

Innovative heat exchanger gives excellent heat transfer performance, thanks to the new fins pattern and surface corrugation, developed by Alfa Laval, combined with smooth stainless steel tubes.



Smooth stainless steel tubes

A well proven automatic TIG welding technology is used for the connection tubes.

Heat transfer sections are floating mounted protecting perfectly the heat exchanger tubes during transportation and compensate the stress caused by the thermal expansion.

In the BND, double connection provides opportunity for two completely independent heat exchangers.

Each heat exchanger undergoes a pressure and leaking test with dry air at 28 bar.

Fan motor

On the BNM, four different fan diameters are available: 630, 800, 910, 1000 mm; on the BND, 800, 910, 1000 mm with three-phase motor 400V-50 Hz. The motors are with external rotor, protection class IP 54 according to DIN 40050. Integrated thermal protection by thermo contacts provides reliable protection against thermal overload.

These axial condensers BNM and BND are available in five noise levels fan motor, (S) standard, (L) low, (Q) quiet, (R) residential and the new (T) high performance fan.

Frame and casework

The BNM and BND are manufactured with innovative AlfaBlue design profile that provides sturdy construction, higher rigidity with less weight, safe transport.

The standard execution has a high corrosion resistance the casework is made with galvanised steel sheets painted RAL 9002 (corrosion resistance C4).

Support manufactured in galvanised steel, with optimised length to permit uniform air suction in the coil.

FEATURES AND BENEFITS

Footprint

- Optimised footprint with higher capacity

630, 800, 910 and 1000 mm fan

- More performance available
- Low power consumption fan motor
- More choices on noise level
- Flexible design

RAL 9002 all parts painted

- No cutting edge
- Higher corrosion resistance, double surface treatment

Coil design

- Increased heat transfer thanks to innovative fins corrugation

Casing

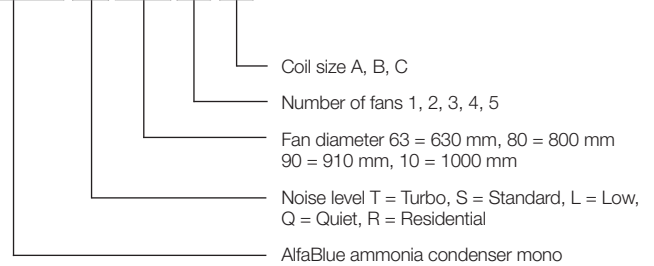
- Strong casing with new design

High energy efficiency

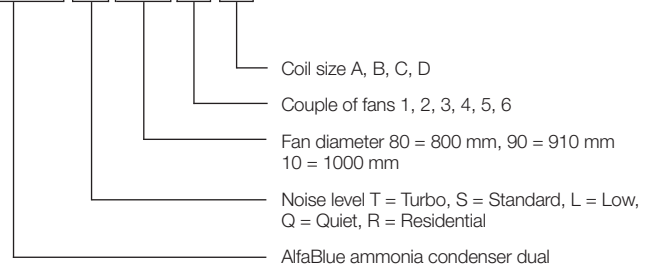
- Best performance with low energy consumption

Code description

B N M S 80 5 B



B N D L 90 4 B



OPTIONS

Non standard fin spacing

- For heavy dusty environments

Multi-circuits

- Split the capacity and connect more compressors

Coil treatment

- Corrosion resistance
- Useful for aggressive environments

Spray water device (only BND)

- Possibility to select smaller units
- Keep the performance during the hot season

Vibration dampers

- Useful to reduce vibrations

SPECIAL FANS

EC fans

- Best alternative for frequency converter control

480/3 ph-60 Hz IP54

- High adaptability on every market

IP55

- High protection fan to be used in tropical or desert areas

ELECTRICAL PARTS

Switch on/off

- Local safety switch wired to isolate the fan, EMC switch also available

Terminal box

- All fans are wired for an easy electrical connection

Switchboard

- Manufacture reliability
- Corrosion/Shock/Condensation/UV resistance
- Wide range of solutions
- IP66 for casing, IP56 for switchboard
- 100% recyclable

Cabling

- Ready for installation

Design for frequency converter

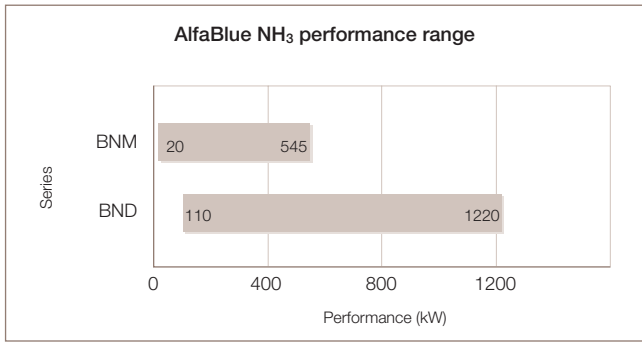
- Units can run under frequency control (when air temperature is below the design it permits energy saving, noise reduction and longer fan motor lifetime)

Fan step control

- Energy saving
- Better control of performance

Fan speed control

- Energy saving
- Noise reduction when air temperature is below design temperature
- Variable and fine control of velocity according to heat reject



| Model | Dimensions (mm) | BNM 631 | BNM 632 | BNM 633 | BNM 634 |
|---------|-----------------|---------|---------|---------|---------|
| BNM 630 | W | 1640 | 1215 | 1215 | 1215 |
| | L | 1640 | 2730 | 3820 | 4910 |
| | D | 720 | 720 | 720 | 720 |

| Model | Dimensions (mm) | BNM 631 | BNM 632 | BNM633 |
|----------|-----------------|---------|---------|--------|
| BNM 630L | W | 1215 | 1215 | 1215 |
| | L | 1950 | 3350 | 4750 |
| | D | 720 | 720 | 720 |

| Model | Dimensions (mm) | BNM 801 | BNM 802 | BNM 803 | BNM 804 | BCM 805 |
|---------|-----------------|---------|---------|---------|---------|---------|
| BNM 800 | W | 1455 | 1455 | 1455 | 1455 | 1455 |
| | L | 2300 | 4050 | 5800 | 7550 | 9300 |
| | D | 750 | 750 | 750 | 750 | 750 |

| Model | Dimensions (mm) | BNM 901 | BNM 902 | BNM 903 | BNM 904 |
|---------|-----------------|---------|---------|---------|---------|
| BNM 910 | W | 1455 | 1455 | 1455 | 1455 |
| | L | 2650 | 4750 | 6850 | 8950 |
| | D | 790 | 790 | 790 | 790 |

| Model | Dimensions (mm) | BNM 1001 | BNM 1002 | BNM 1003 | BNM 1004 |
|----------|-----------------|----------|----------|----------|----------|
| BNM 1000 | W | 1455 | 1455 | 1455 | 1455 |
| | L | 2650 | 4750 | 6850 | 8950 |
| | D | 790 | 790 | 790 | 790 |

| Model | Dimensions (mm) | BND 802 | BND 803 | BND 804 | BND 805 | BND 806 |
|---------|-----------------|---------|---------|---------|---------|---------|
| BND 800 | W | 2290 | 2290 | 2290 | 2290 | 2290 |
| | L | 4050 | 5800 | 7550 | 9300 | 11050 |
| | D | 750 | 750 | 750 | 750 | 750 |

| Model | Dimensions (mm) | BND 902 | BND 903 | BND 904 | BND 905 |
|---------|-----------------|---------|---------|---------|---------|
| BND 910 | W | 2290 | 2290 | 2290 | 2290 |
| | L | 4750 | 6850 | 8950 | 11050 |
| | D | 790 | 790 | 790 | 790 |

| Model | Dimensions (mm) | BND 1002 | BND 1003 | BND 1004 | BND 1005 |
|----------|-----------------|----------|----------|----------|----------|
| BND 1000 | W | 2290 | 2290 | 2290 | 2290 |
| | L | 4750 | 6850 | 8950 | 11050 |
| | D | 790 | 790 | 790 | 790 |

