KRUGER

BNC

PLENUM FAN

with Backward Curved Wheels

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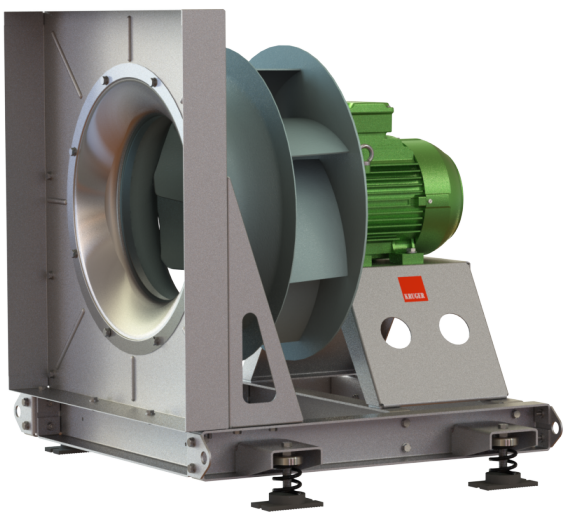
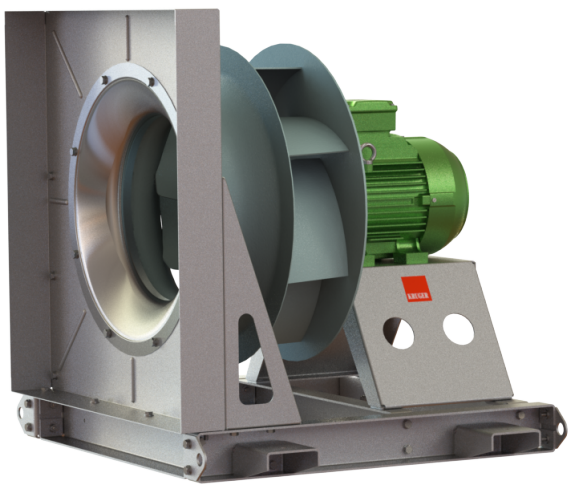
BNC Series

PLENUM FAN with Backward Curved Wheels

Kruger Ventilation Industries Asia Co Ltd certifies that the **BNC Series** shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.





BNC Series

Plenum Fans – Backward curved wheels

Kruger Plenum Fans are designed for air handling application where the fan wheel operates without housing, inside a plenum. This results in saving of space normally occupied by the fan housing, transition and diffusers. The fan wheel pressurizes the entire plenum in which the fan is installed. This allows air ducts to be directly connected from any direction to the plenum. The compact size of the plenum fan makes it an excellent selection for retrofit and replacement application and for variable air volume systems.

There are three types of BNC Series, i.e. BNC-R (regular type), BNC-P (high pressure ratio type), BNC-Q (high volume ratio type).

NOMENCLATURE

MODEL:BNC-R 450 / D I

- Fan operation class -- I , II & III
- Drive mode --'D' - Direct Driven
  'B' - Belt Driven
- Fan model
- Fan type -- P, R, Q

TYPE / OPERATING LIMIT

Each fan type has its maximum operating speed and power due to its mechanical design.

The operating limit of BNC series is set according to the requirement of class I, II and III limit as defined in AMCA standard 99.

The BNC series is available in Direct Driven and Belt Driven, Type D, B as follow:

ECOWATT BNC Series-Direct Drive

This direct drive Ecowatt BNC series comes with a Kruger Ecowatt permanent magnet motor and a Kruger Ecowatt drive with Kruger Ecowatt demand-controlled ventilation system. This construction is mainly for users who desire to have high energy saving with fluctuating demands particularly long over operating hours.

Kruger Ecowatt Motor

- 3-phase TEFC Squirrel Cage Premium Efficiency Permanent Magnet Motor with IE4/IE5 efficiency.
- Design Standards BS 4999, BS 5000, IEC 60034, IEC 60072
- 380-415 Hz/50Hz ± 10% of rated voltage
- Stator Insulation; Class F Insulation; Class B Temperature Rise
- Horizontal foot mounting or flange mounting: B3; B5, B14, B34; B35; V1
- Environmental Conditions: Standard Ambient Temperature: -20°C to 40°C; RH: <90% RH (non-condensation); Altitude < 1000m above sea level.

Kruger Ecowatt Drive

- High Performance with advanced vector control technology.
- Energy saving by PID function for Demand Controlled Ventilation.
- Easy control by Analog signal 0-10V, 4-20mA and RS485 Modbus RTU.
- Various drives both AC induction motor and Permanent magnet synchronous motor.
- IP54 protection rating, independent duct design (IP20 also available).
- Safety by STO (Safe Torque OFF) and fire overdrive function.
- Wide range of power 2.2kW – 220kW.

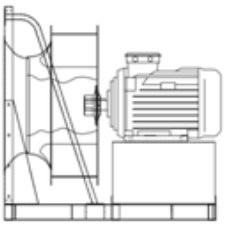
Kruger Ecowatt Demand Controlled Ventilation

- Automatic close loop PID control by TDP-PI Ventilation controller
  - Constant Airflow control
  - Constant Differential pressure control

  Controller will maintain Pressure or Airflow as setting value by change fan speed up-down automatically follow actual load demand.
- Manual speed control by REB-Ecowatt
  - Adjust Fan speed by your hand with potentiometer 10kohm

Why Choose an Ecowatt System

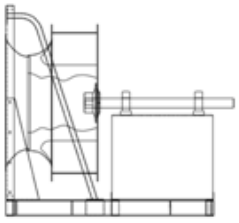
- Highly efficient backward curved with FEG rating from 85-90 with direct coupling reduces frictional losses and optimizes transmission and improves energy costs.
- The energy that the electric motor generates is transmitted directly to the impeller, which passes into airflow and pressure development increases the overall fan system efficiency.
- In addition, zero belt wears and break on belt improves reliability and productive run time and unnecessary maintenance.
- Save energy cost up to 78% when driven by Kruger Ecowatt system.



Direct Driven 'D'

This type is supplied with no belts nor pulley and therefore minimal maintenance is required. It is a compact, space saving design with motor directly connected to wheel. This construction is mainly for cleanroom, with or without VFD, since there is an absence of belt residue which may contaminate the airstreams.

Fan Size : 315 to 1,800
Volume : 3,000 to 300,000 m^3/h
Total Pressure : up to 4,500 Pa



Belt Driven 'B'

No bearings in the fan inlet to affect performance. Separate base for motor mounting is required.

Fan Size : 315 to 1,800
Volume : 3,000 to 300,000 m^3/h
Total Pressure : up to 4,500 Pa

Drawings and dimension data of belt driven are available upon request.

TECHNICAL SPECIFICATION

Wheel

The wheels of BNC series have backward curved blades manufactured in mild steel with polyester powder coating finish.

Shaft

Shafts are manufactured from C45 carbon steel using an automatic process for positioning and cutting of the keyways. All dimensional tolerances of the shaft are fully checked to ensure a precision fit. All shafts are then coated with an anti-corrosion varnish after assembly.

Bearing

Bearings used are either deep groove ball bearings with an adapter sleeve, or spherical roller bearings sealed at both sides for different duty application.

The bearings are lubricated for life and maintenance-free. If relubrication is necessary, it is recommended to use lithium base grease suitable for all temperatures within the operational limits.

Balancing Quality

All wheels are statically and dynamically balanced to ISO1940 and AMCA 204 – G2.5 standard.

All fans after assembly are trim-balanced to ISO1940 and AMCA 204 - G2.5 standard.

Other standard rather than G2.5 is available upon request.

ACCESSORIES

Inlet Guard

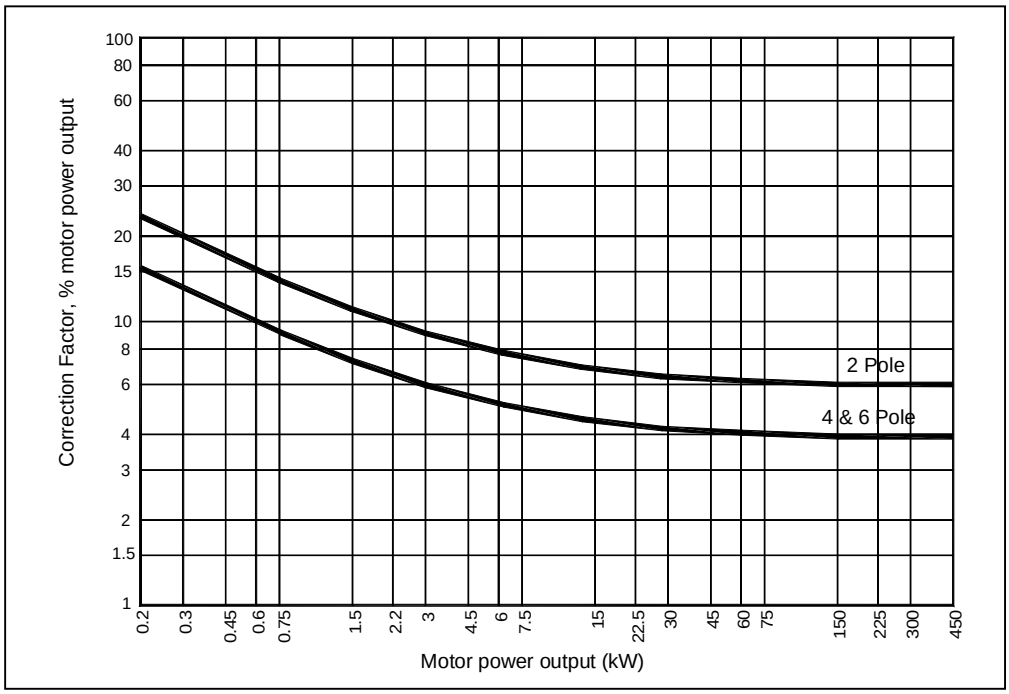
Inlet guards may be a requirement in some industrial safety regulations. These are available upon request.

Motor Selection

The power curves shown on each performance graph represents the absorbed power at the shaft of the fan measured in kW.

To determine the power of the motor to be installed, a correction factor should be applied to compensate for the transmission loss.

For conversion to horsepower (HP), use multiplying factor 1.34.



PERFORMANCE

The performance data shown on each diagram is derived from tests conducted in accordance with AMCA Standard 210 Fig 15 Installation type A (free inlet and free outlet condition).

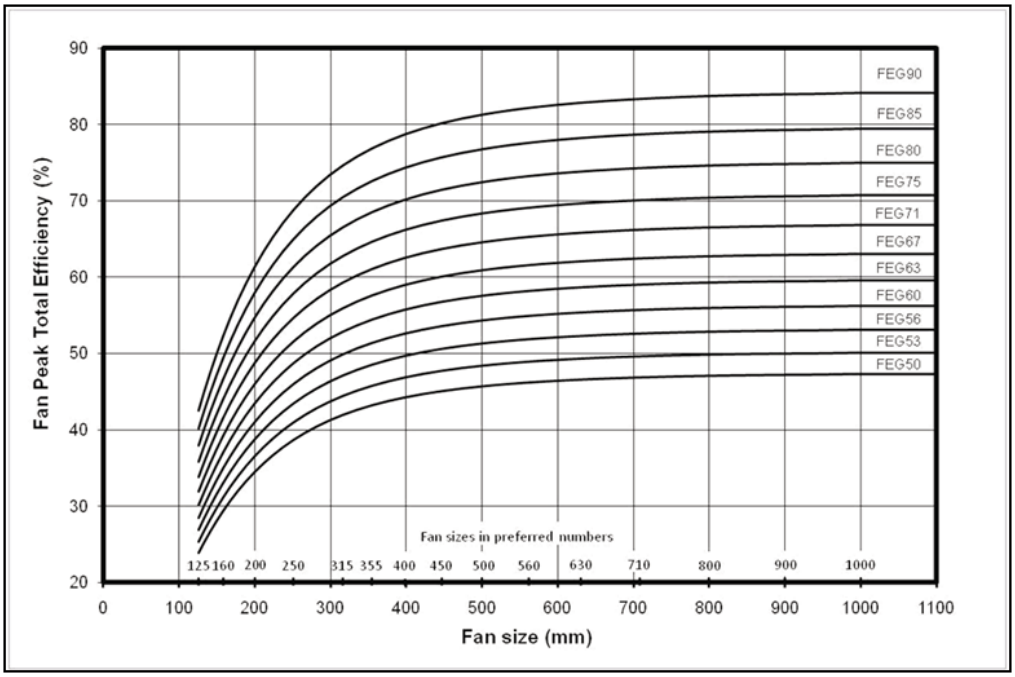
Ratings refer to standard air density with the total pressure as a function of the air volume, using logarithmic scale.

It is essential that, the same installation type and test standards are used at all times, when comparing fan performance.

According to ISO 12759/AMCA 205, BNC series can be classify as FEG 80 based on fan peak efficiency. The following is the explanation of FEG classification:

1. Fan size is the impeller diameter in mm.
2. The fan peak efficiency shall be calculated from the fan (total) pressure.
3. If this method is used for a direct driven fan, the fan efficiency is the impeller efficiency.
4. The FEG label for a given fan size is assigned when the fan peak efficiency is equal or lower than the efficiency at the grade upper limit and higher than efficiency at the grade upper limit of the next lower grade for the fan size.
5. For any fan sizes larger than 1016 mm, the values of the grade upper limits are the same as for a size of 1016 mm.
6. No labels are considered for the fans with the fan peak total efficiency below FEG50.
7. The values of efficiencies are calculated for fan sizes in the preferred R40 Series.
8. Not all fan sizes in preferred numbers shown.

Fan Efficiency Grades (FEG) for Fans without Drives (SI) – ISO 12759/AMCA 205



NOISE

The noise levels shown on each diagram refer to the sound power, "A-weighted" values and the data are obtained at the outlet side from tests conducted in accordance to AMCA Standard 300. The noise levels are determined as follow:

- Sound power level - ("A" scale): Lw (A) as catalogue
- Octave band spectrum: Lw = Lw(A) + Lw rel. dB [refer to Kruger for more details]
- Sound pressure level:

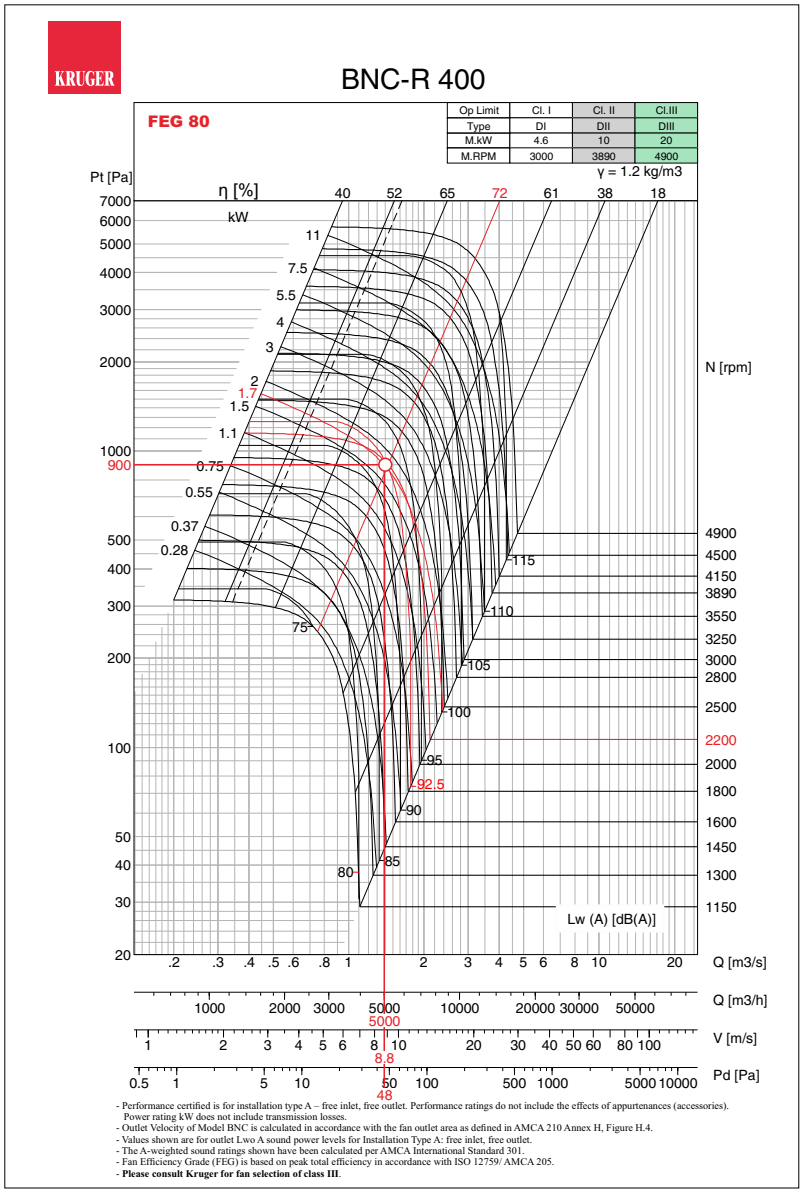
a) free field
$Lp(A) = Lw(A) - (20\log_{10}d) - 11$

b) room conditions
$Lp(A) = Lw(A) - (20\log_{10}d) - 7$

where d = distance of fan (m)

Example of Selection

Air Volume	Q=5000m^3/h
Outlet Velocity	V=8.8m/s
Dynamic Pressure	Pd=48Pa
Total Pressure	Pt=900Pa
Fan Speed	N=2200rpm
Absorbed Power	W=1.7kW
Total Efficiency	η=72%
Sound Power Level	Lw(A)=92.5dB(A)



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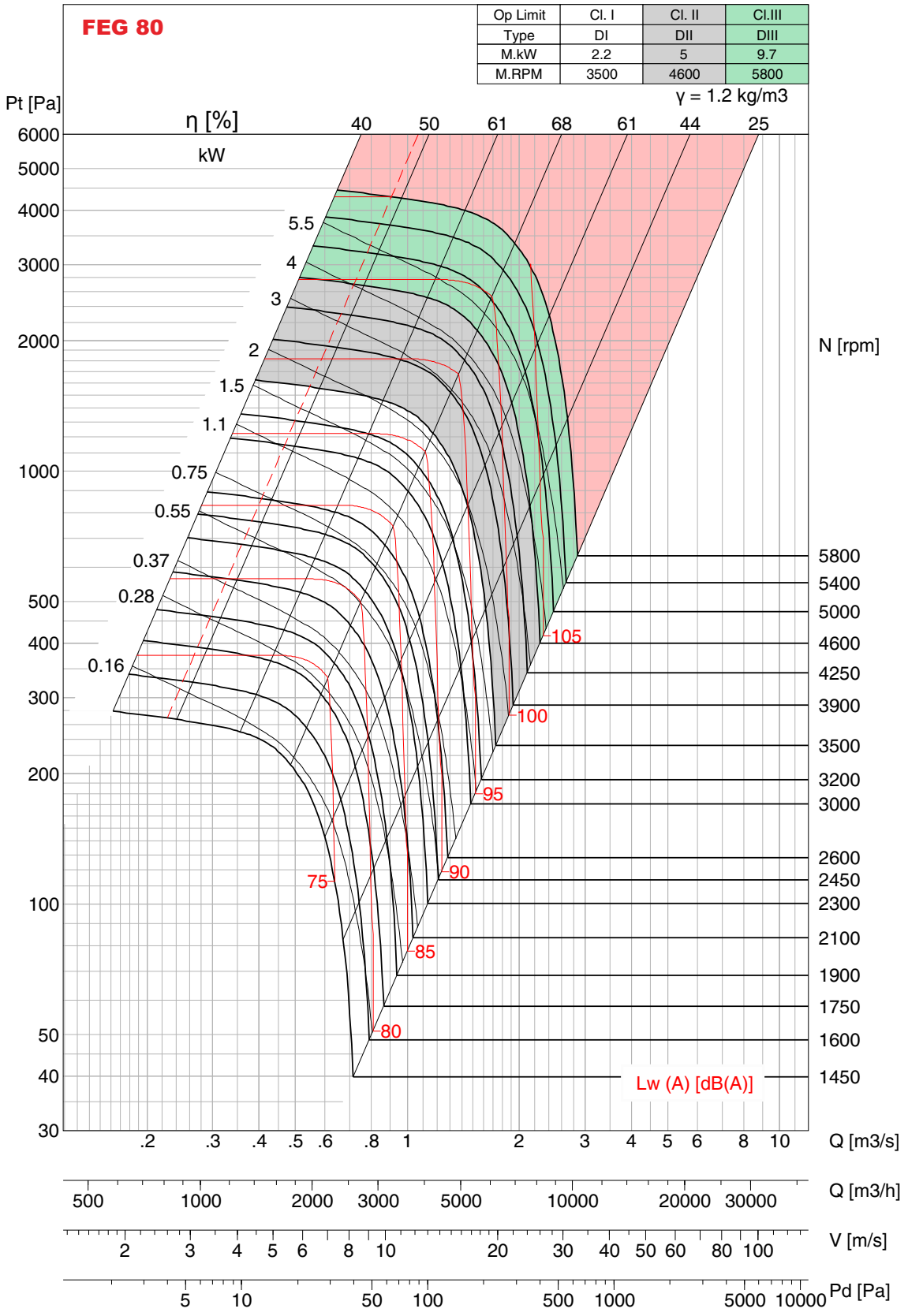
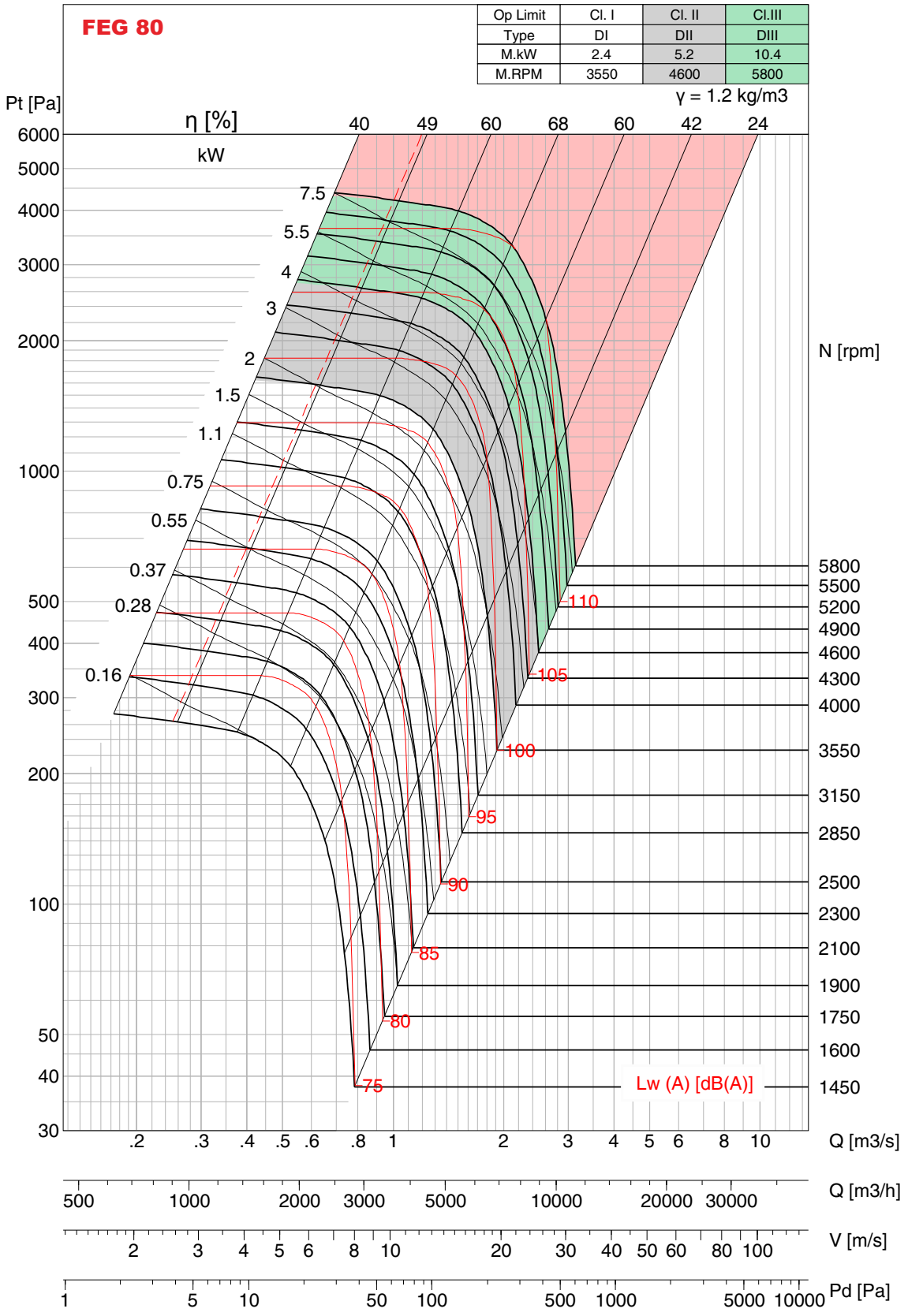
BNC-P 315



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

BNC-R 315



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
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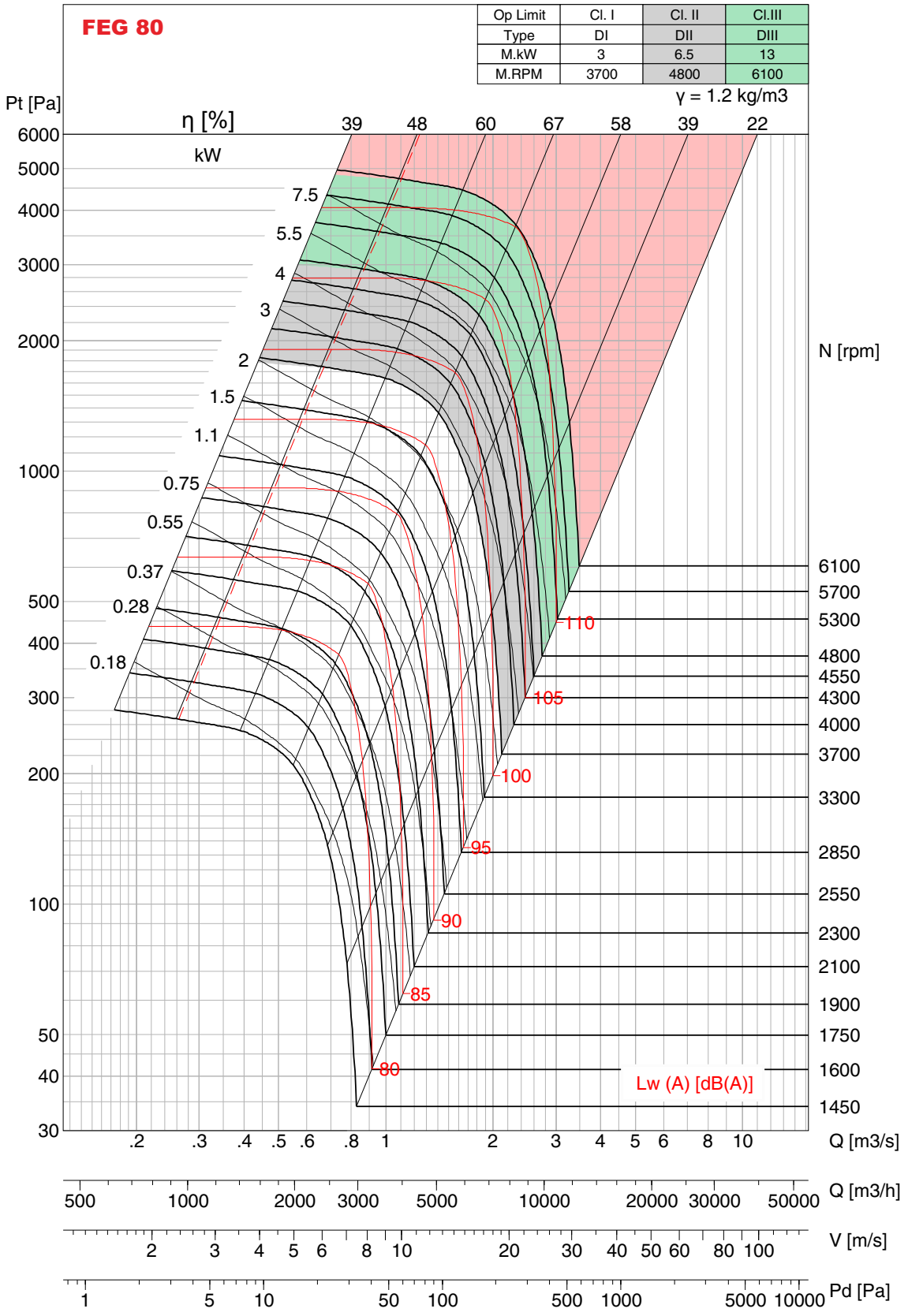
BNC-Q 315



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
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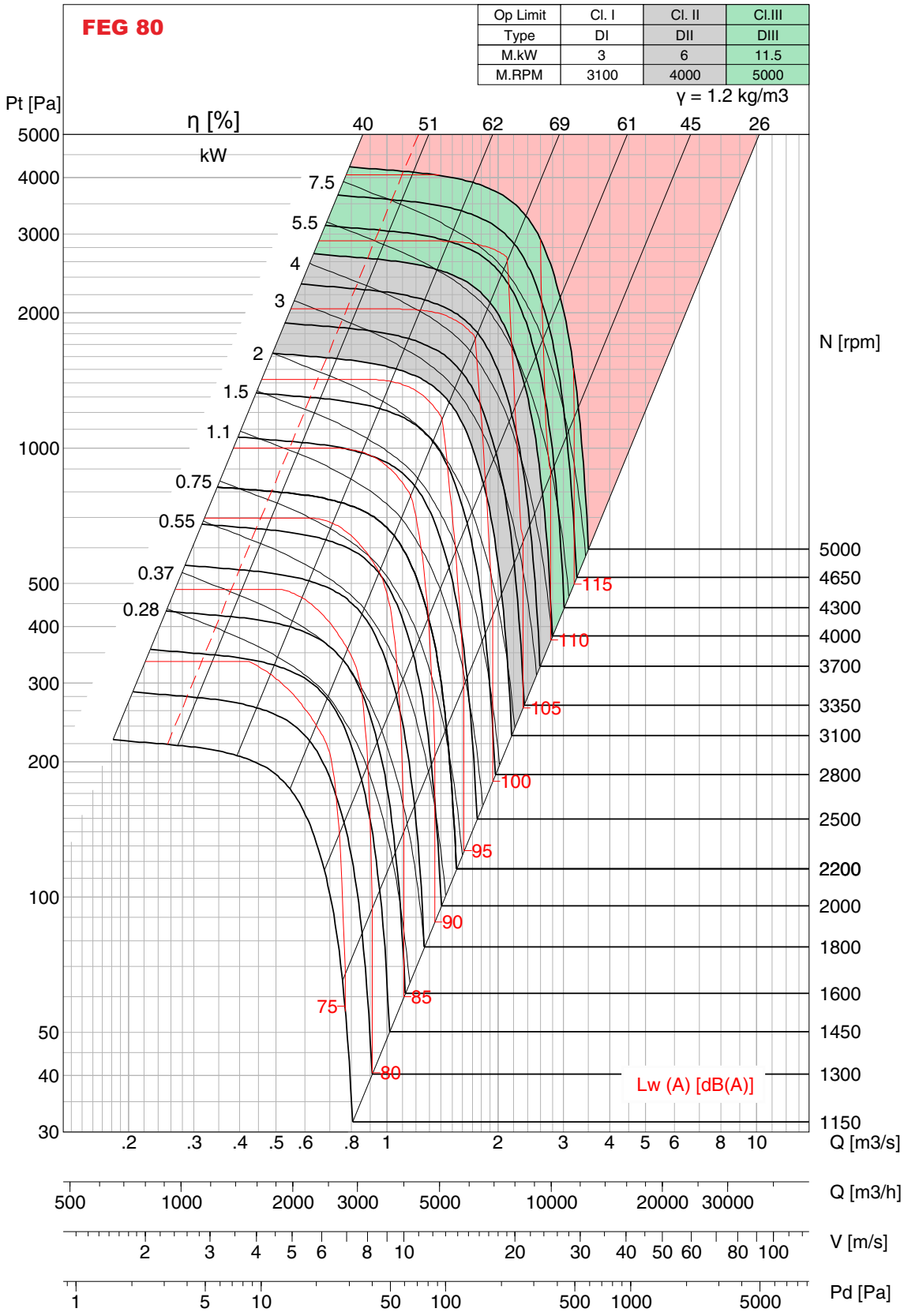
BNC-P 355



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

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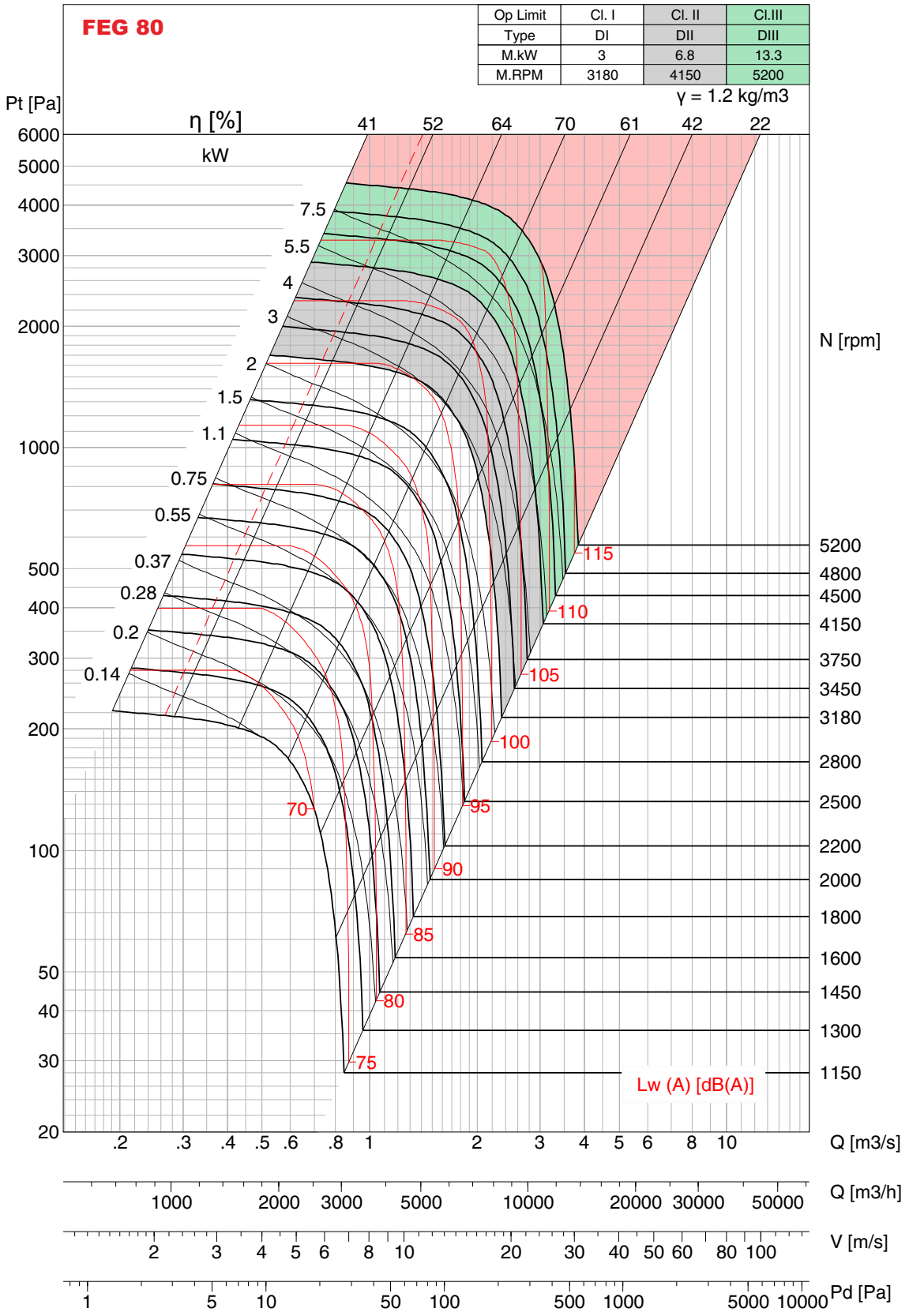
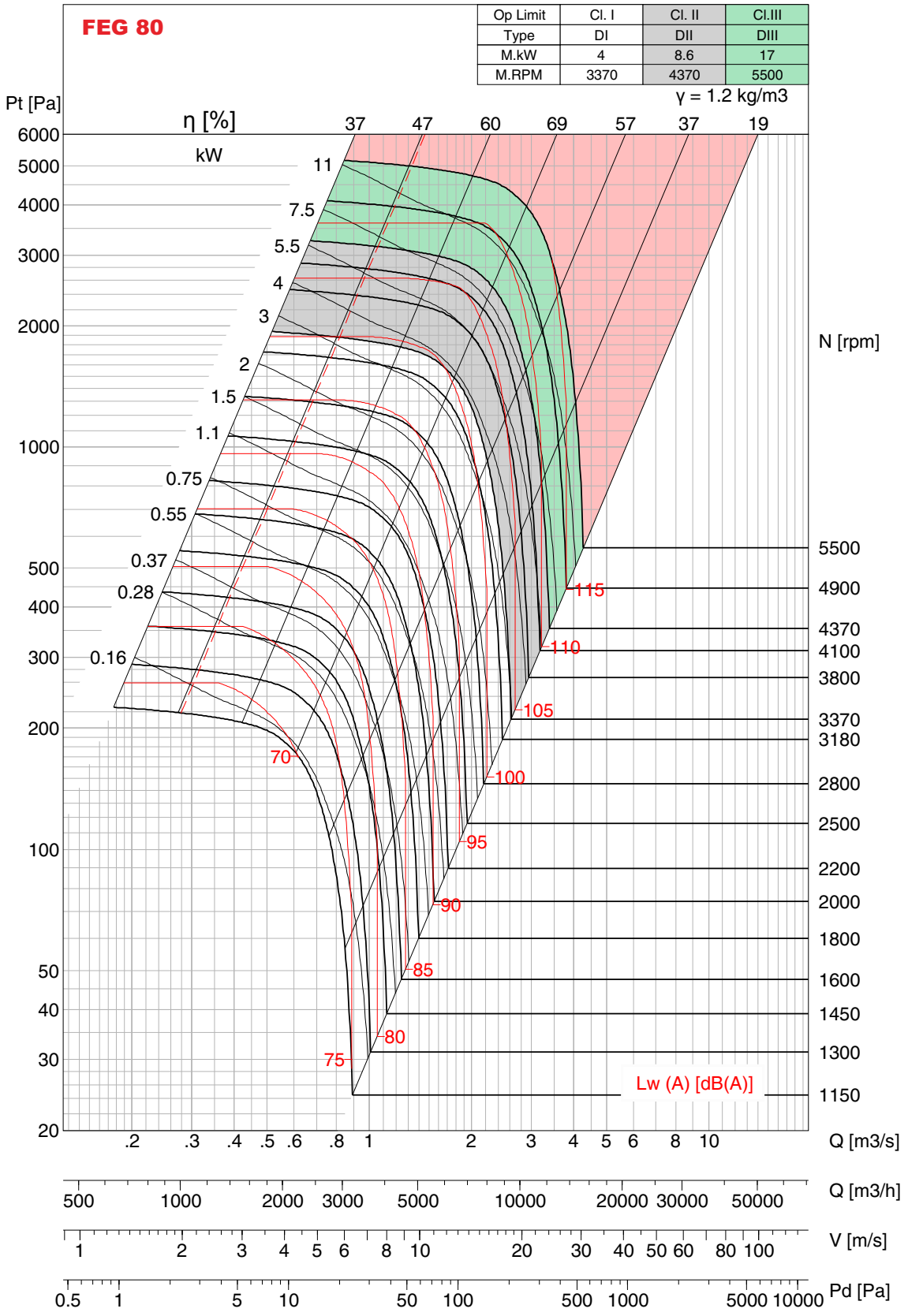
BNC-R 355



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

BNC-Q 355



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
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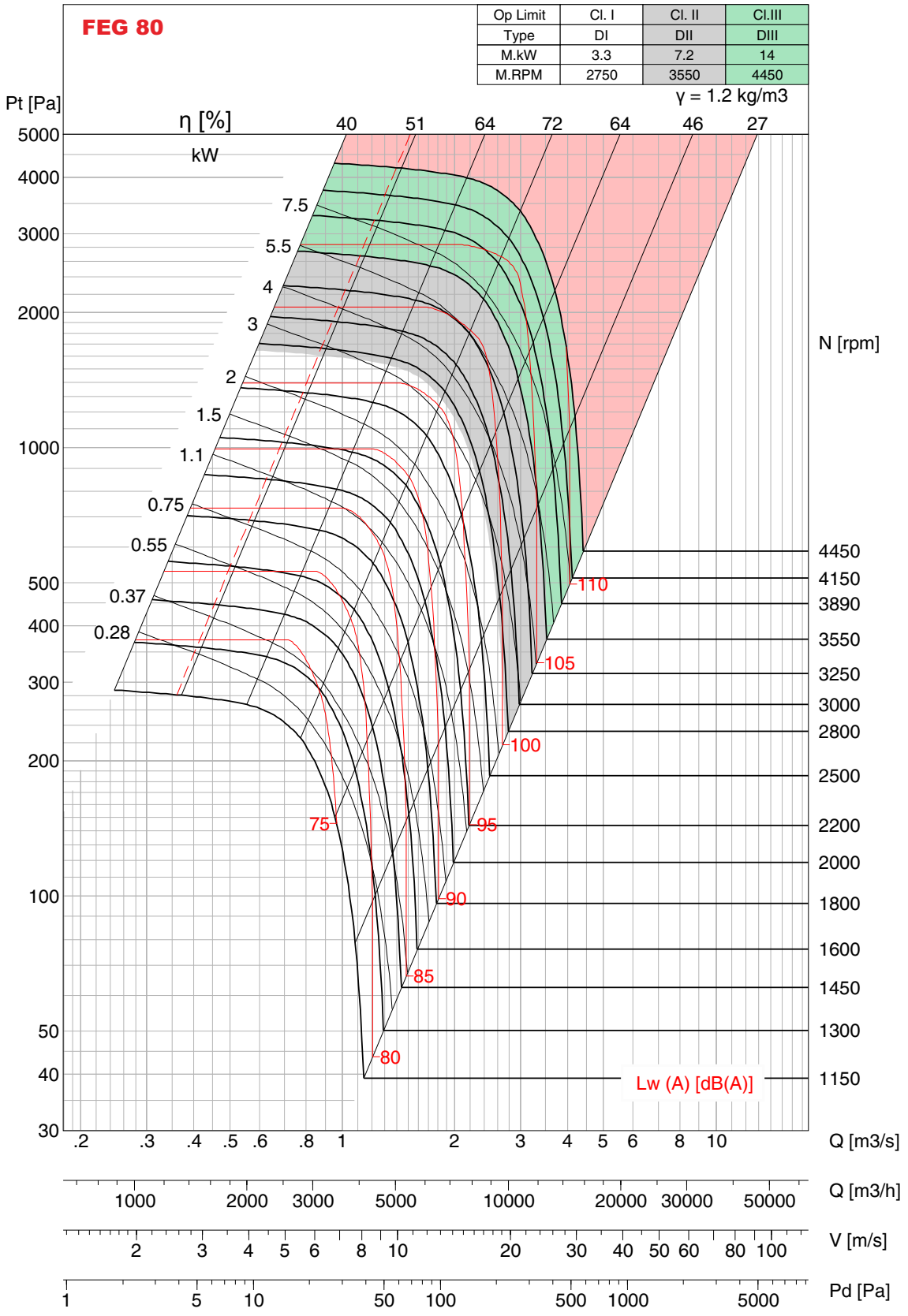
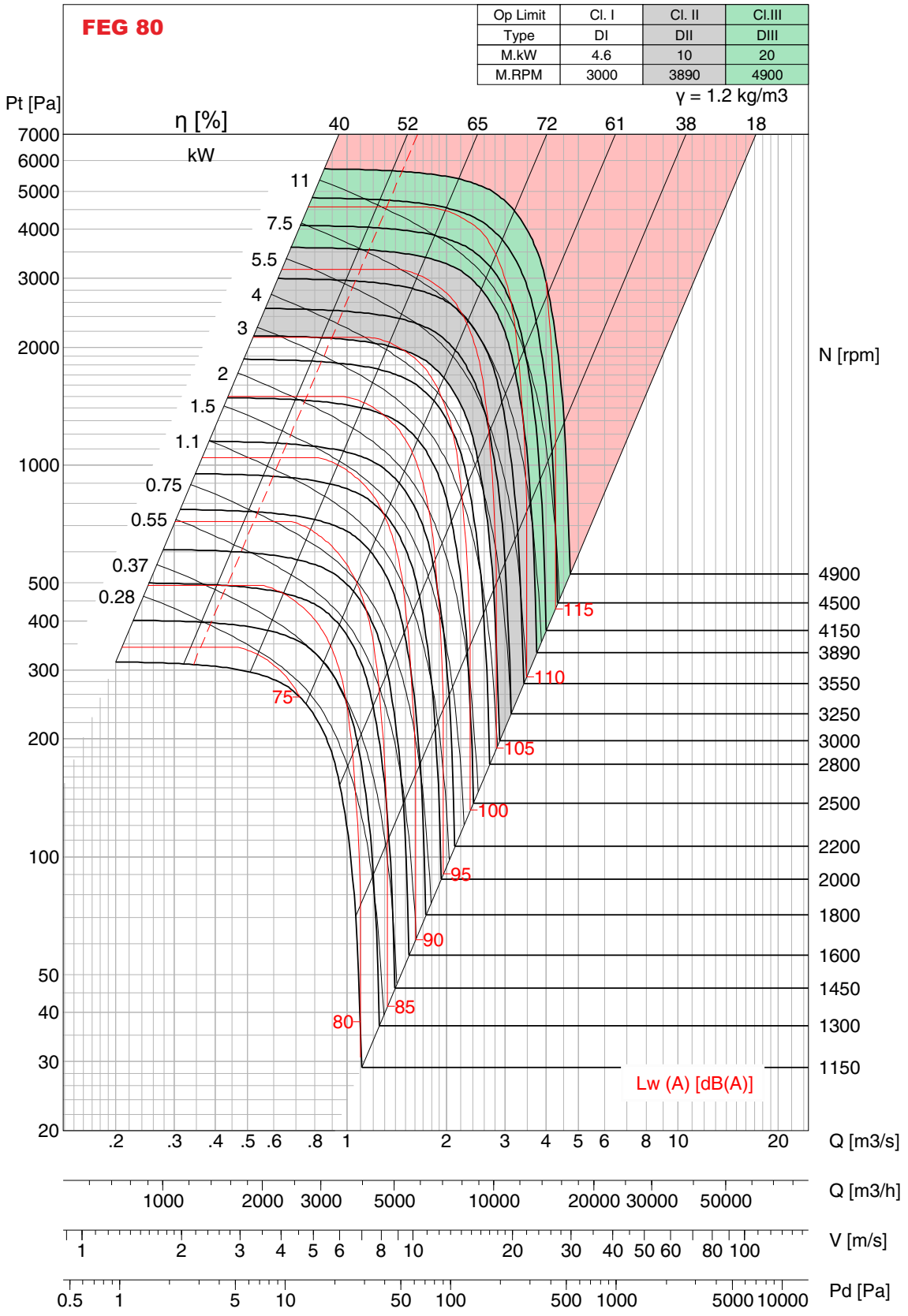
BNC-P 400



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

BNC-R 400



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
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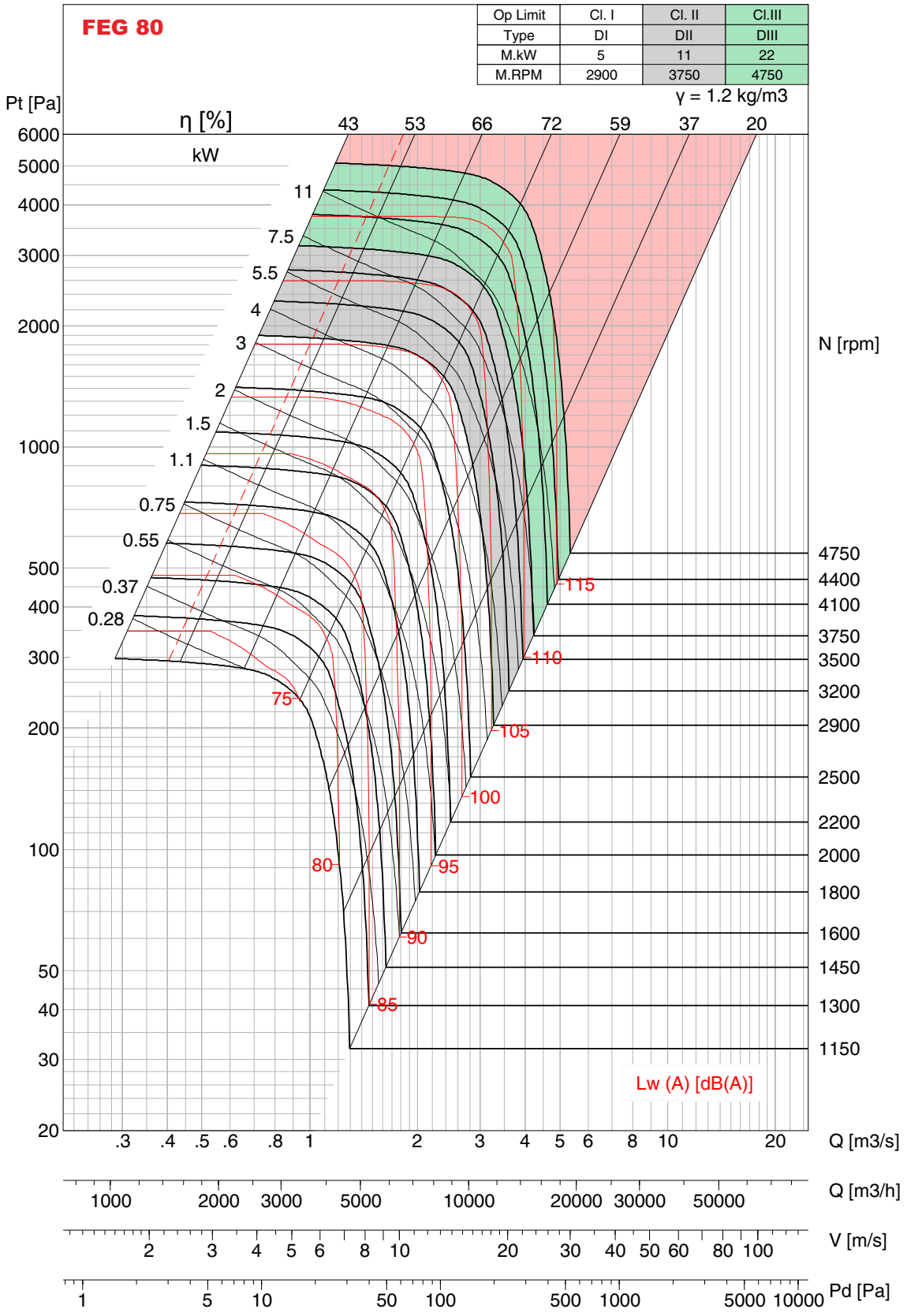
BNC-Q 400



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
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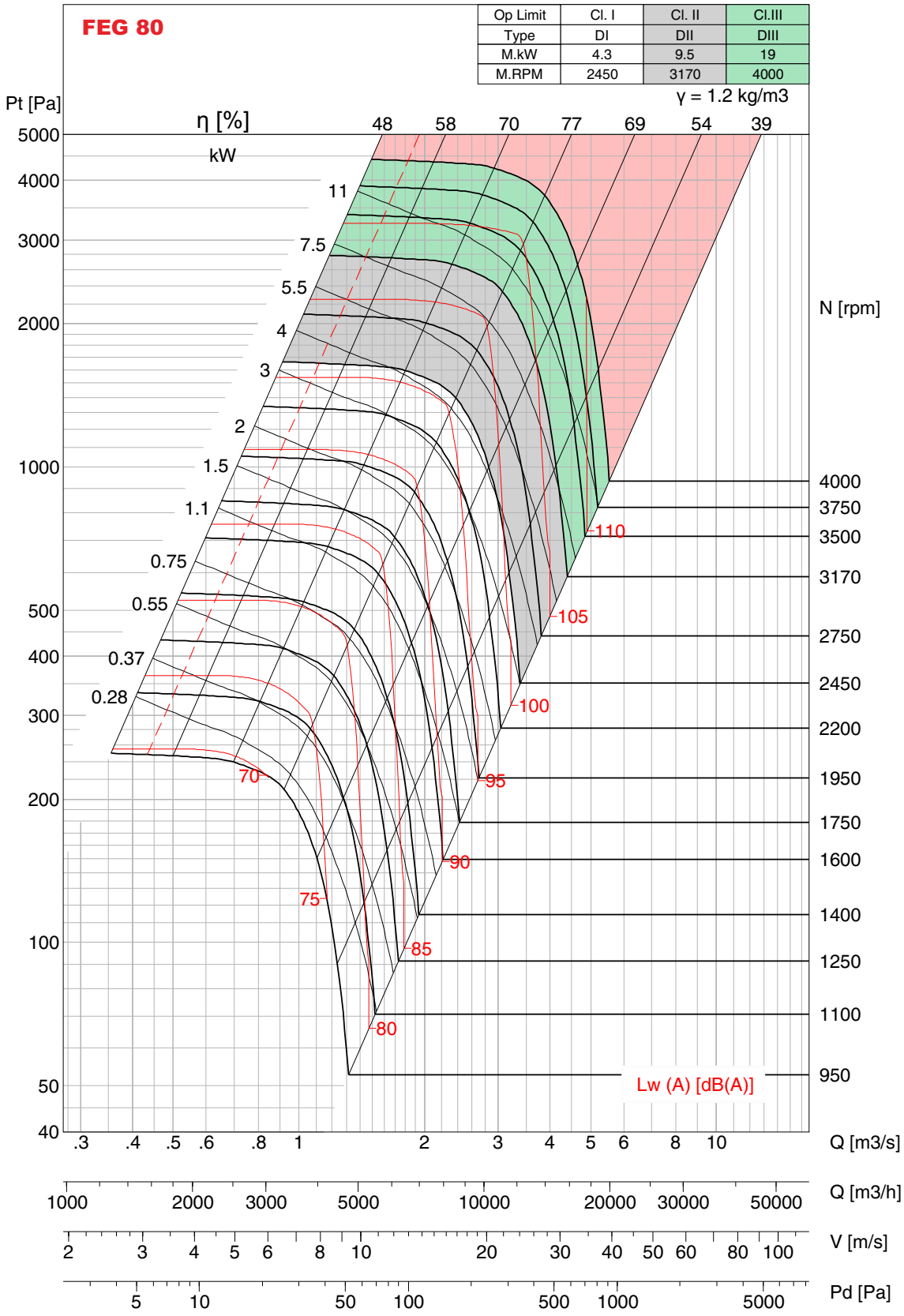
BNC-P 450



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

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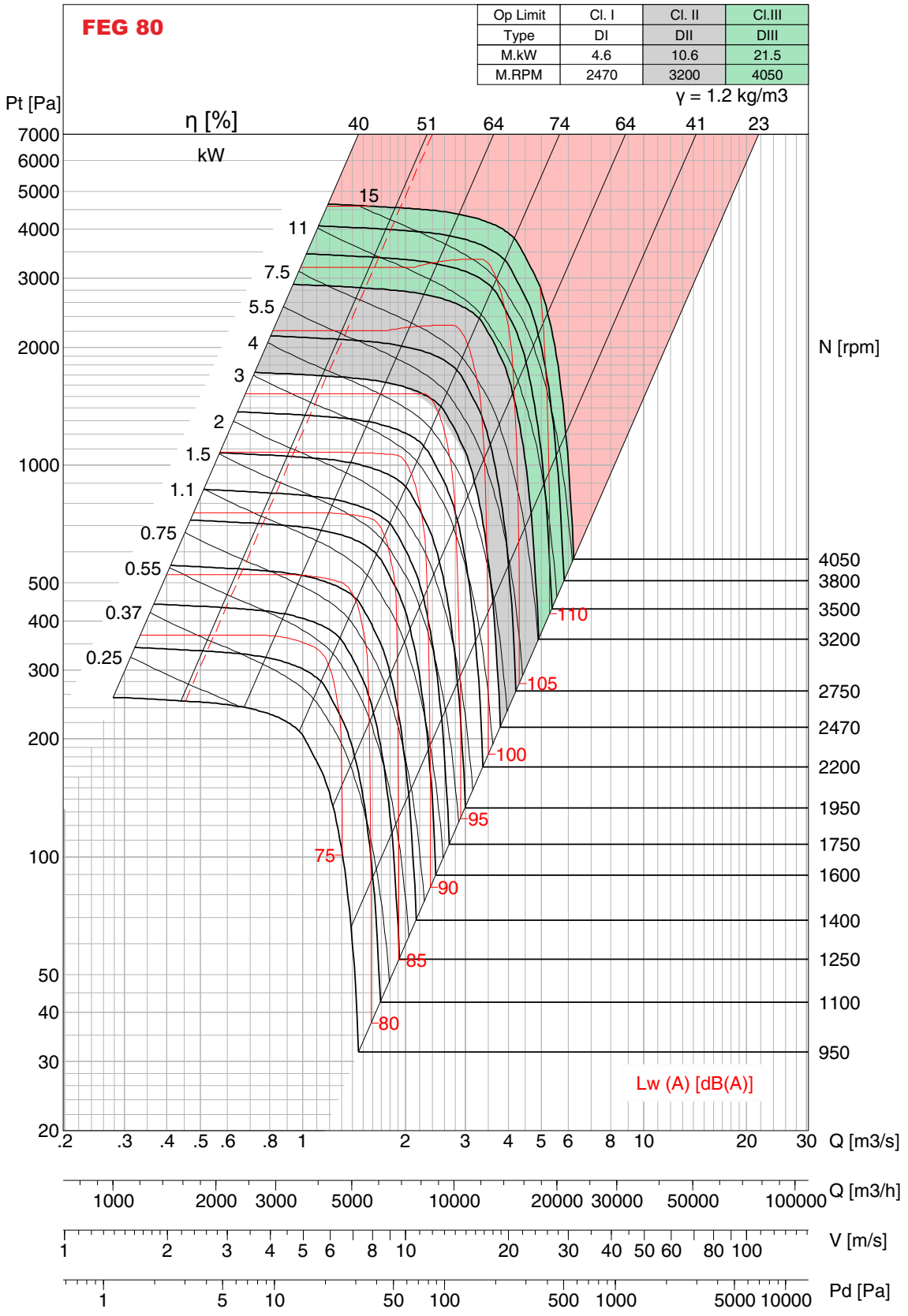
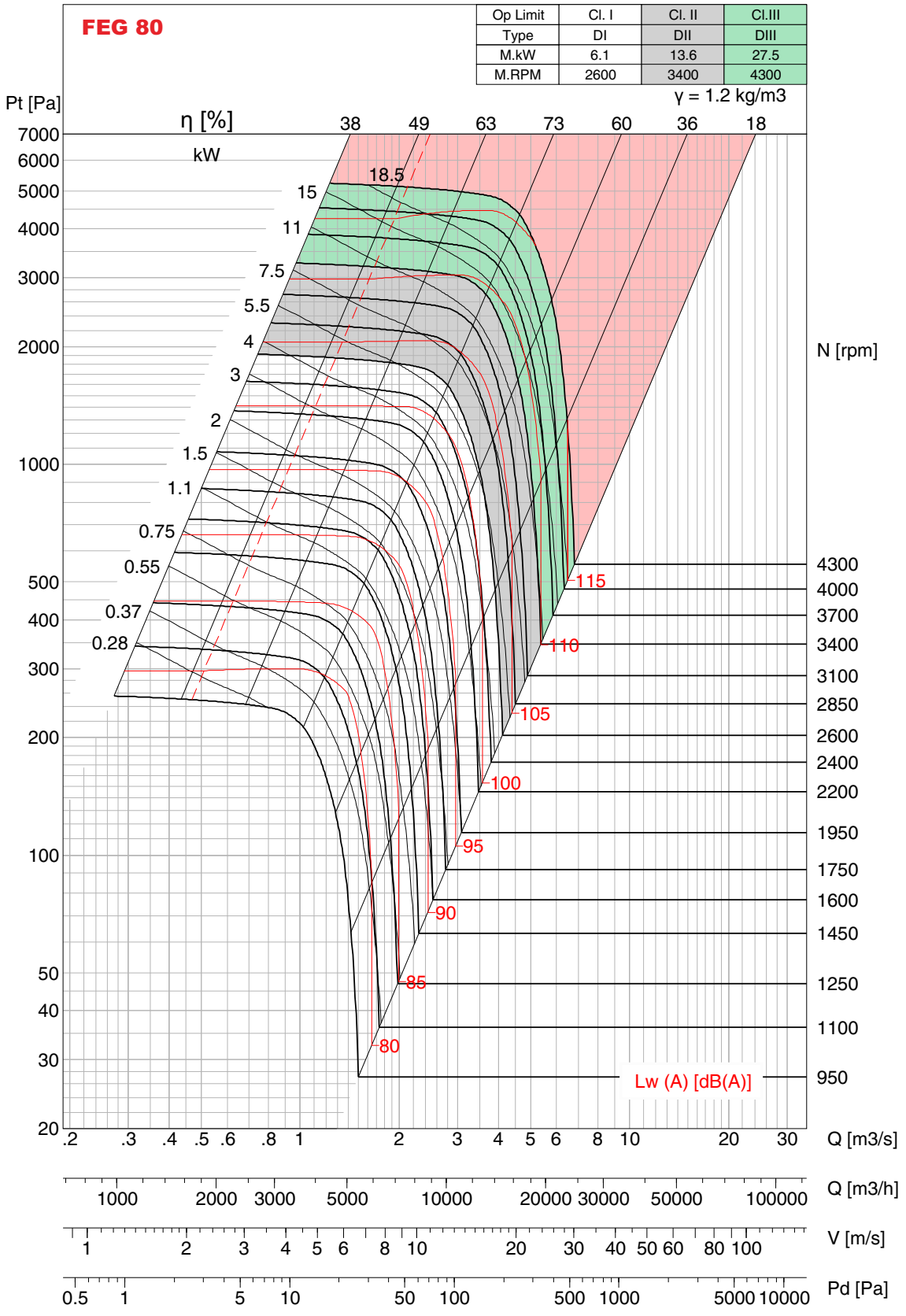
BNC-R 450



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

BNC-Q 450



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
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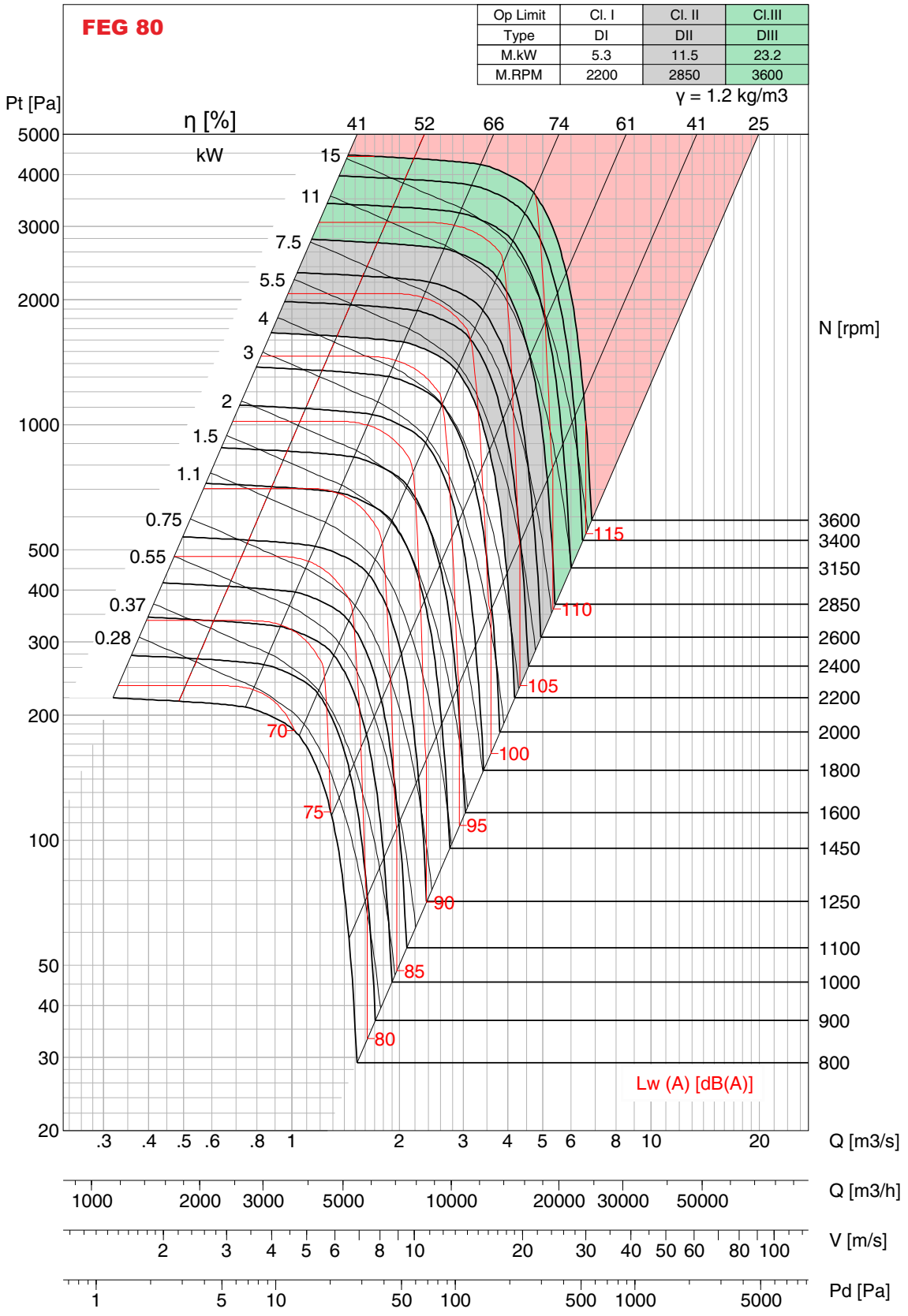
BNC-P 500



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
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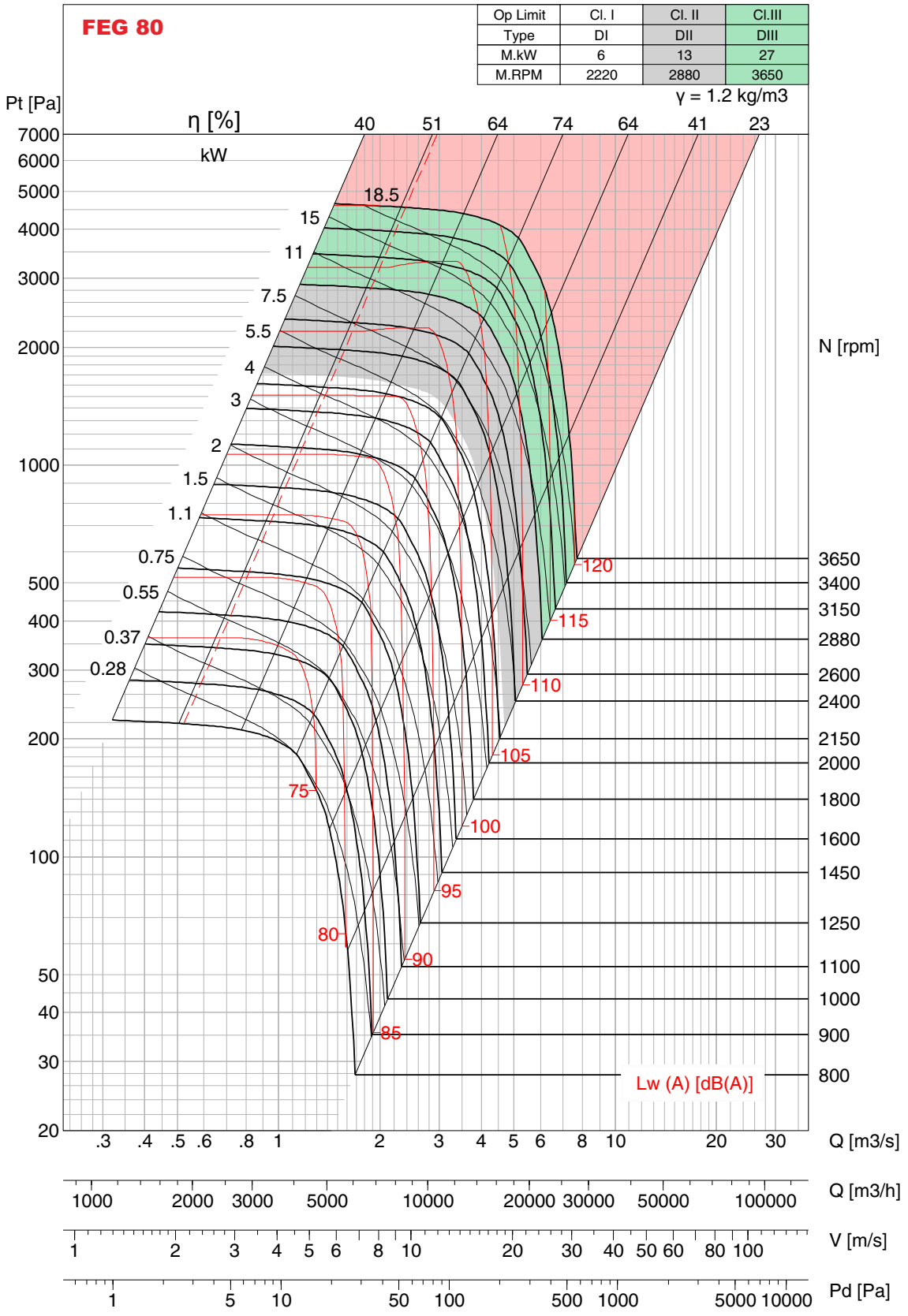
BNC-R 500



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
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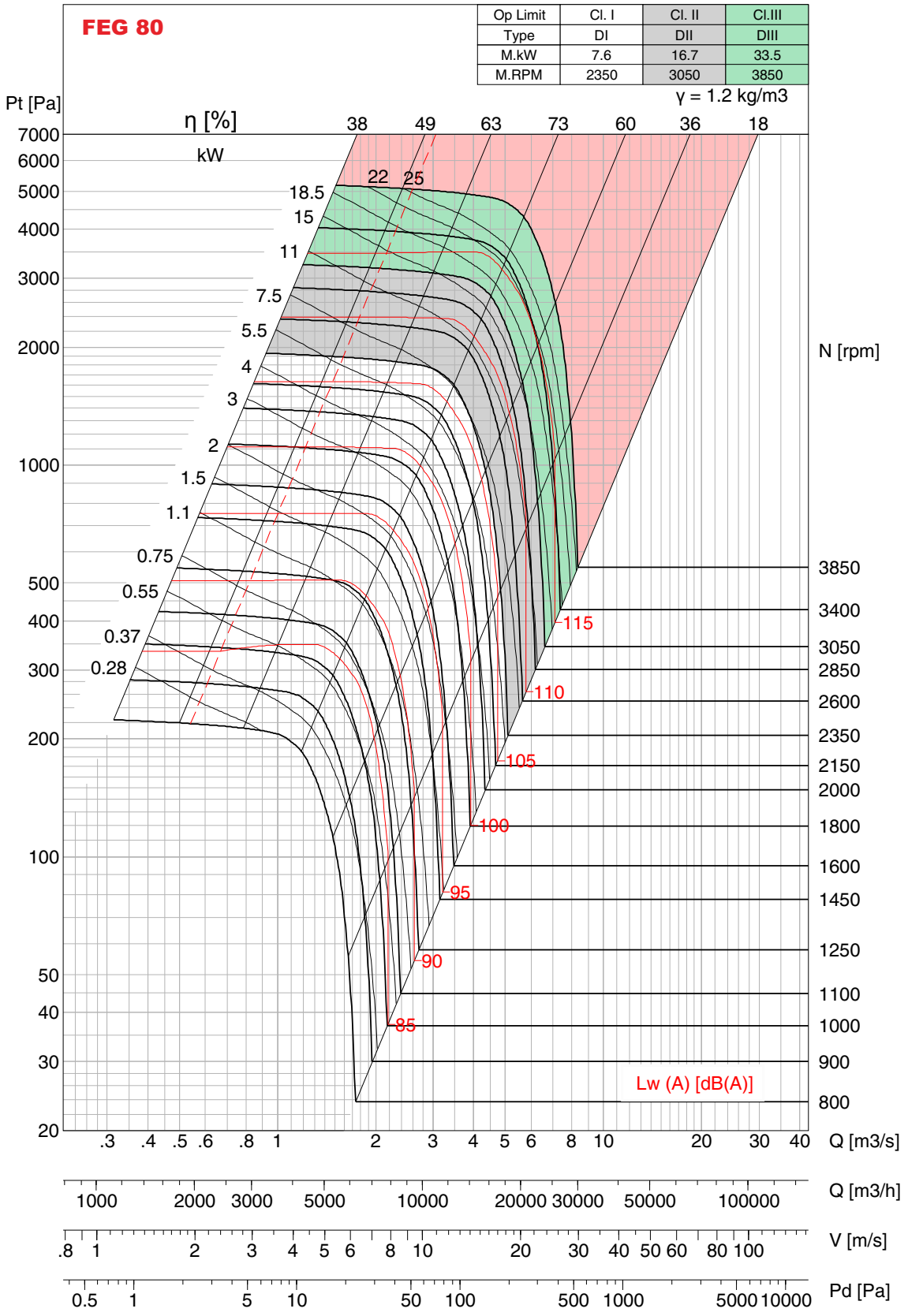
BNC-Q 500



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

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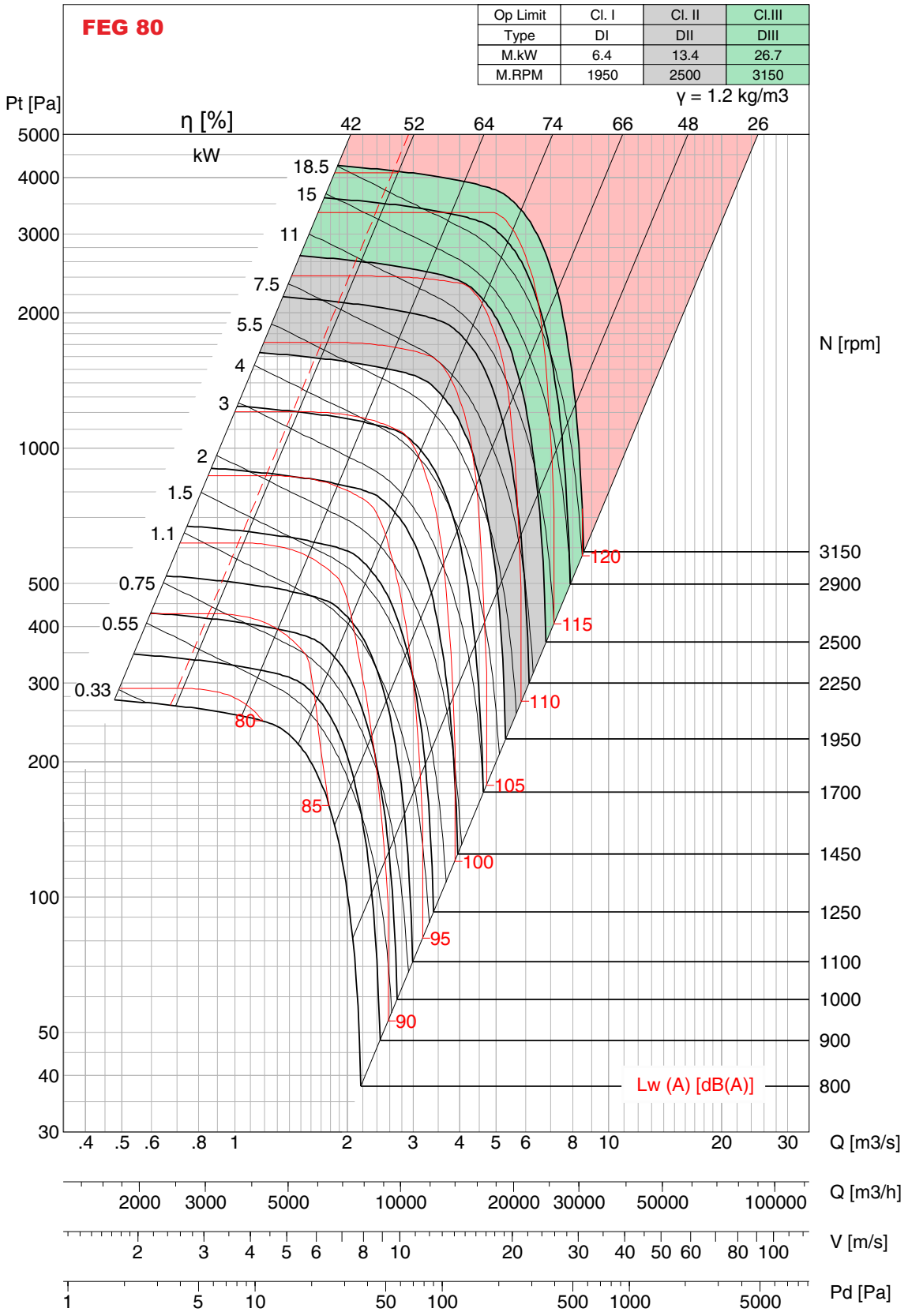
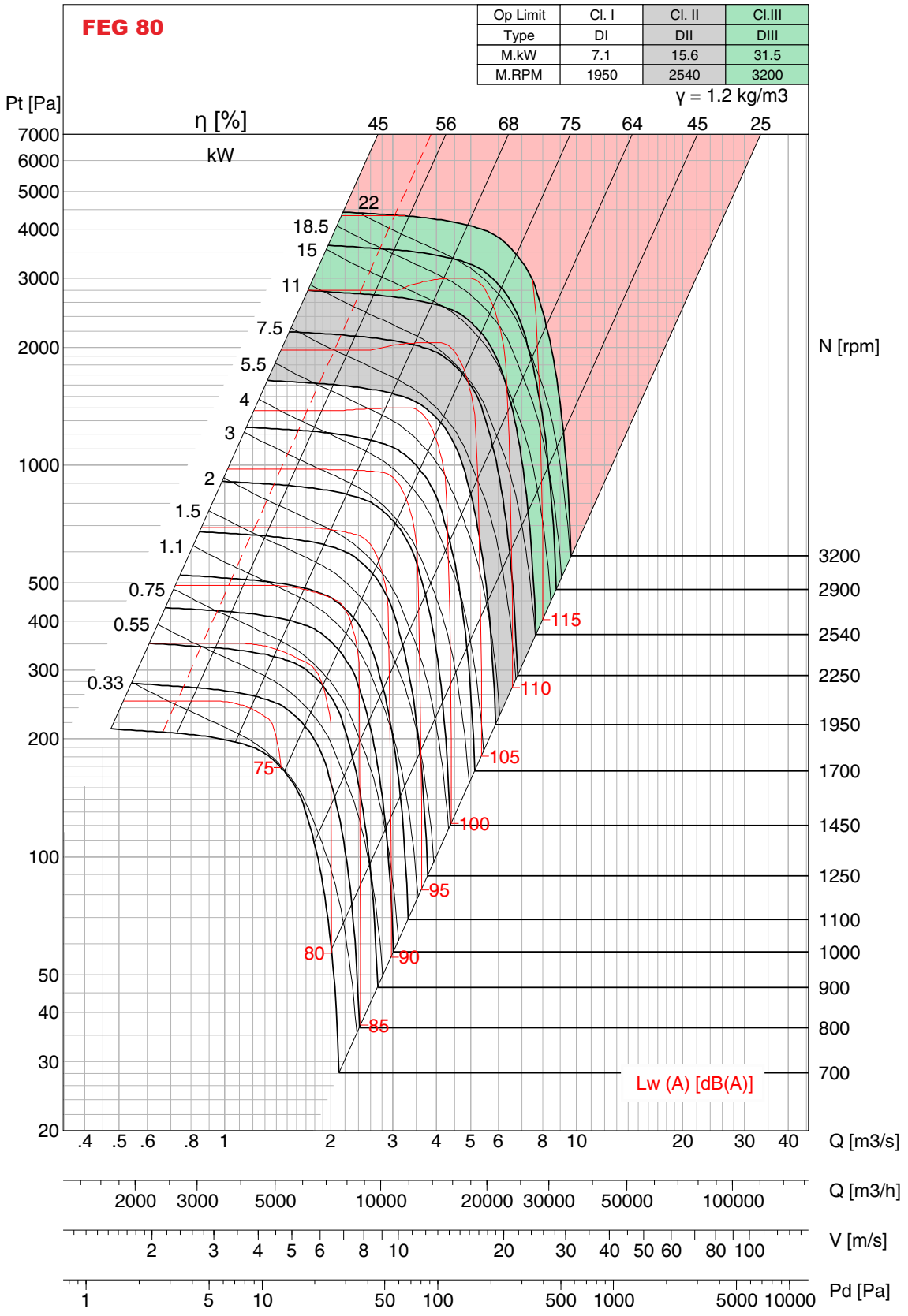
BNC-P 560



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

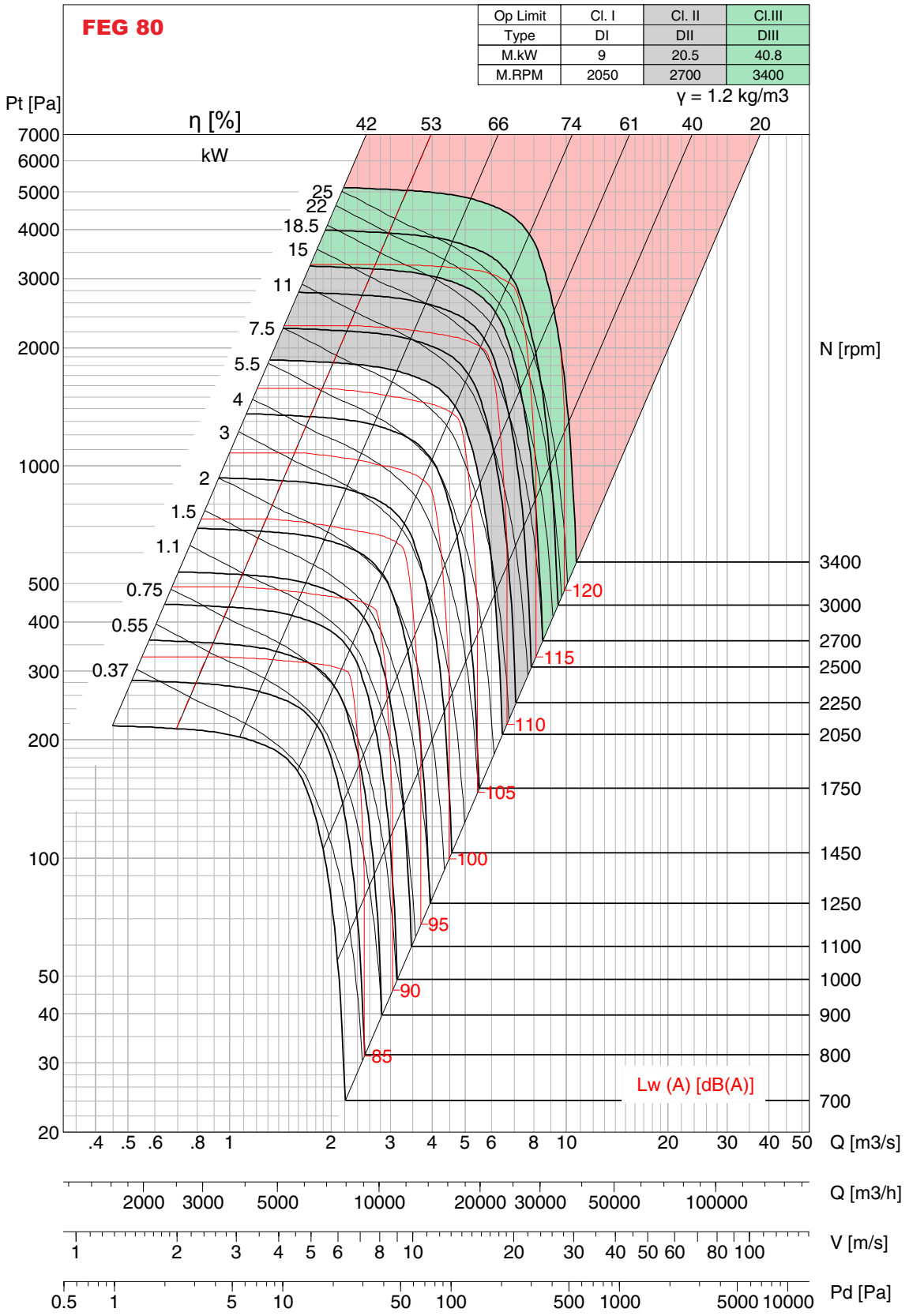
BNC-R 560



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

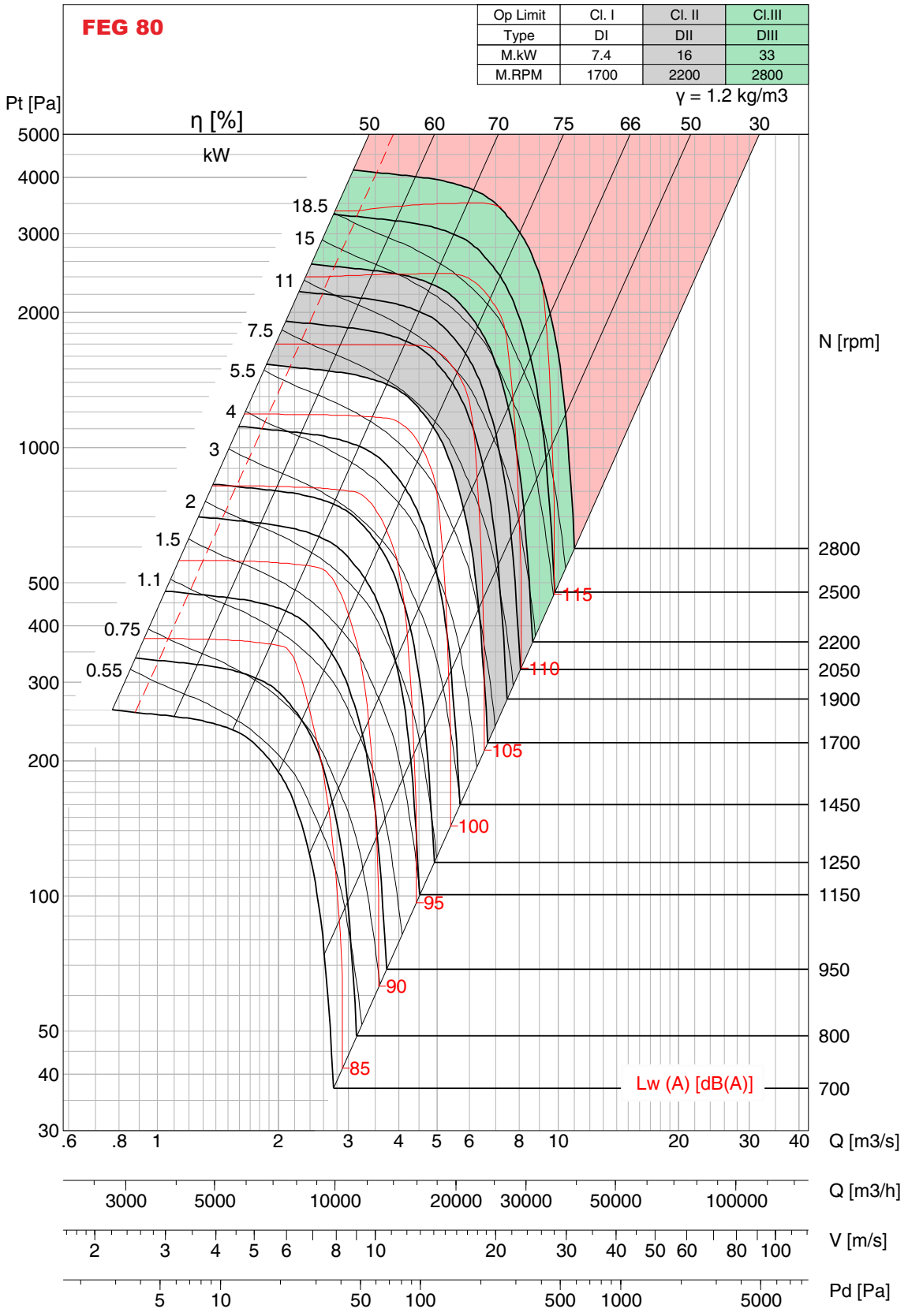
KRUGER

BNC-Q 560



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

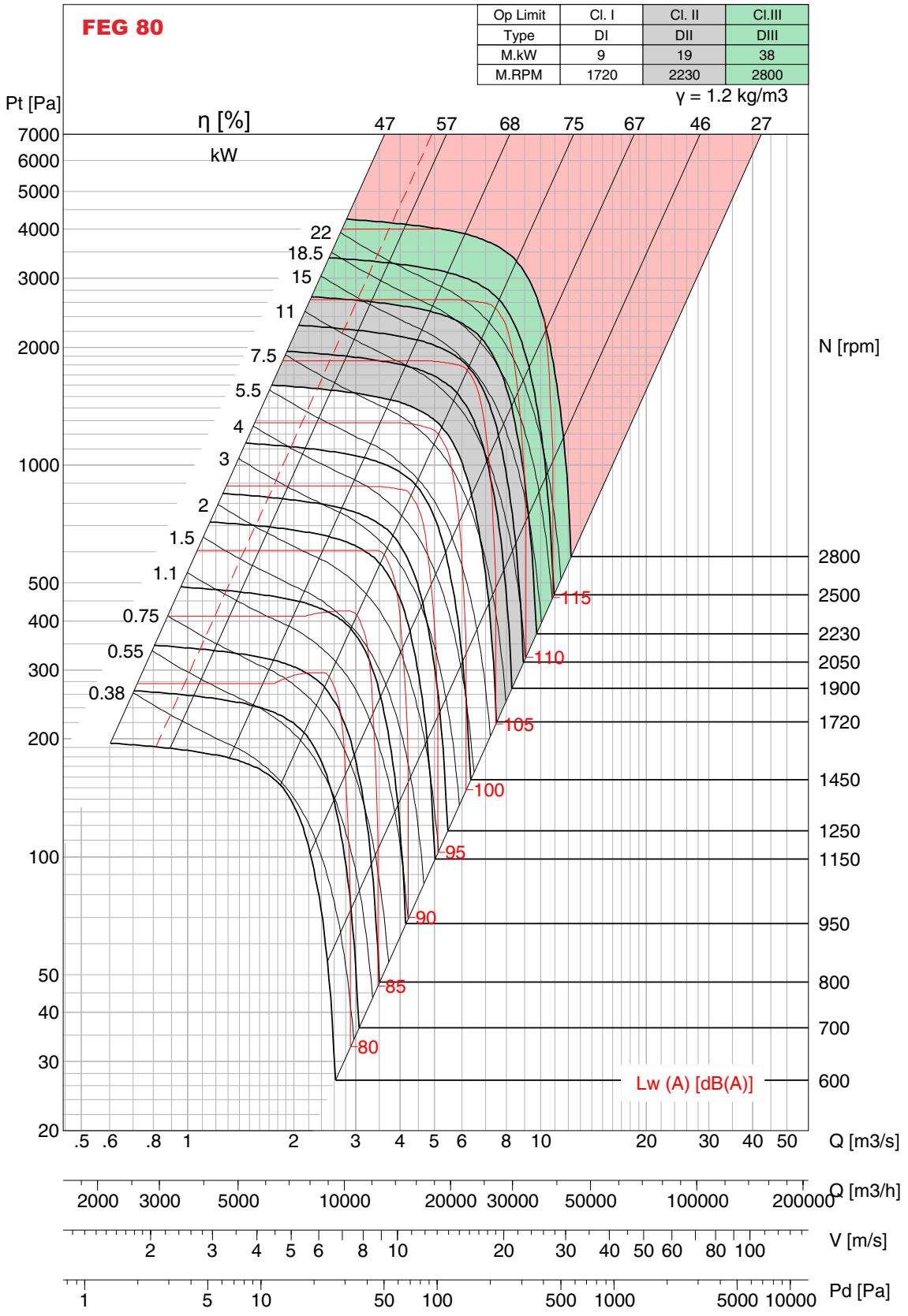
BNC-P 630



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

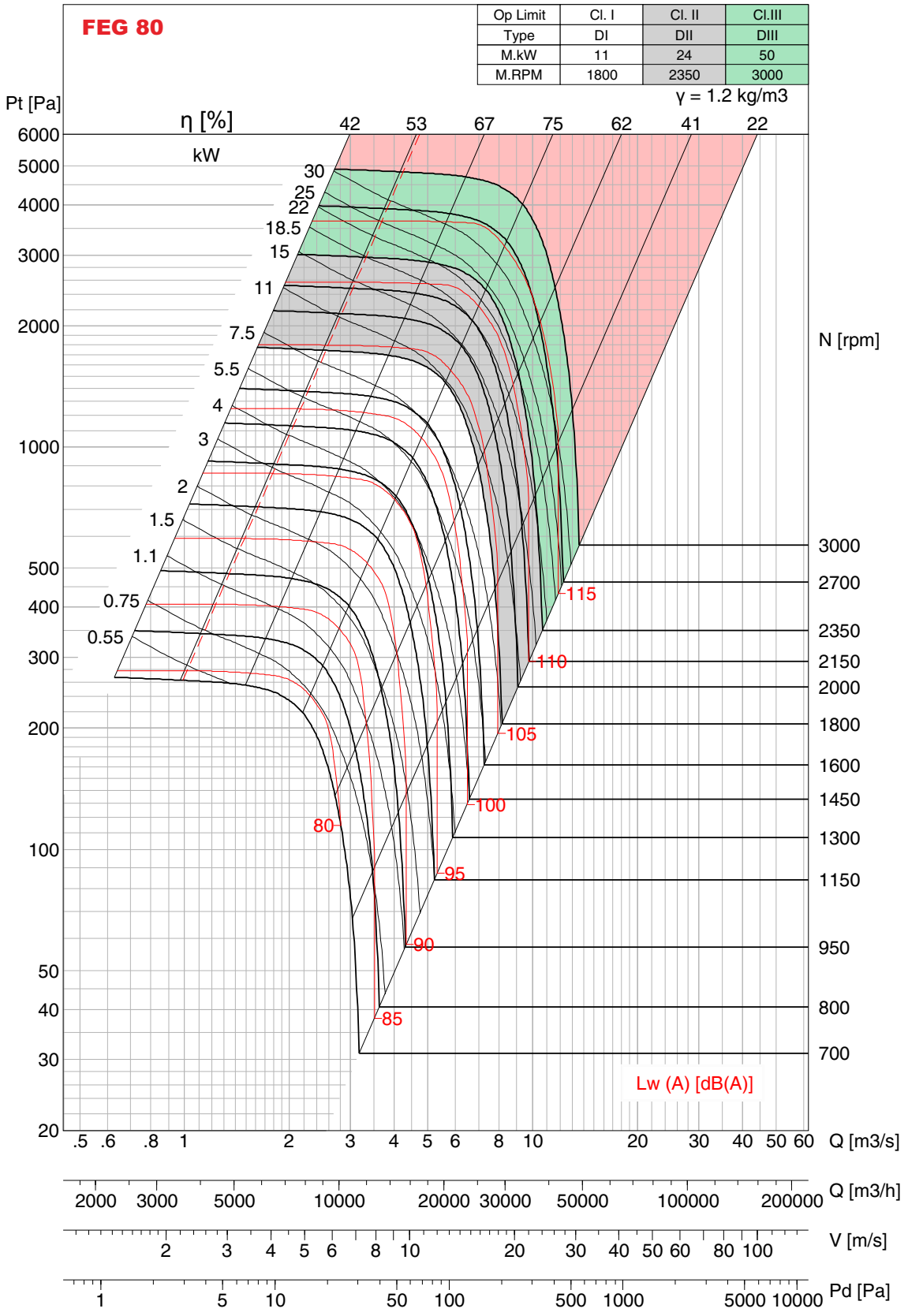
BNC-R 630



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

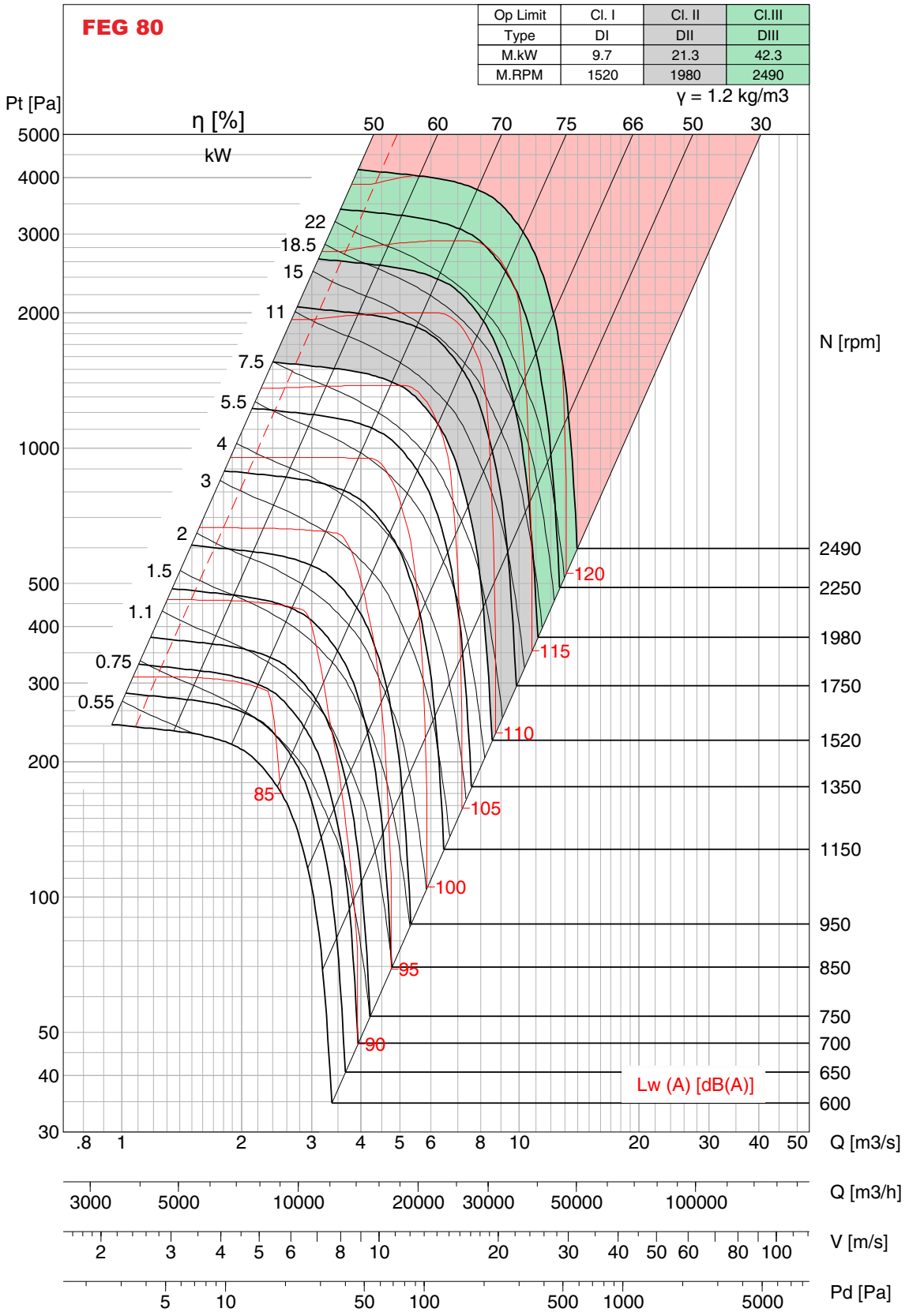
BNC-Q 630



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

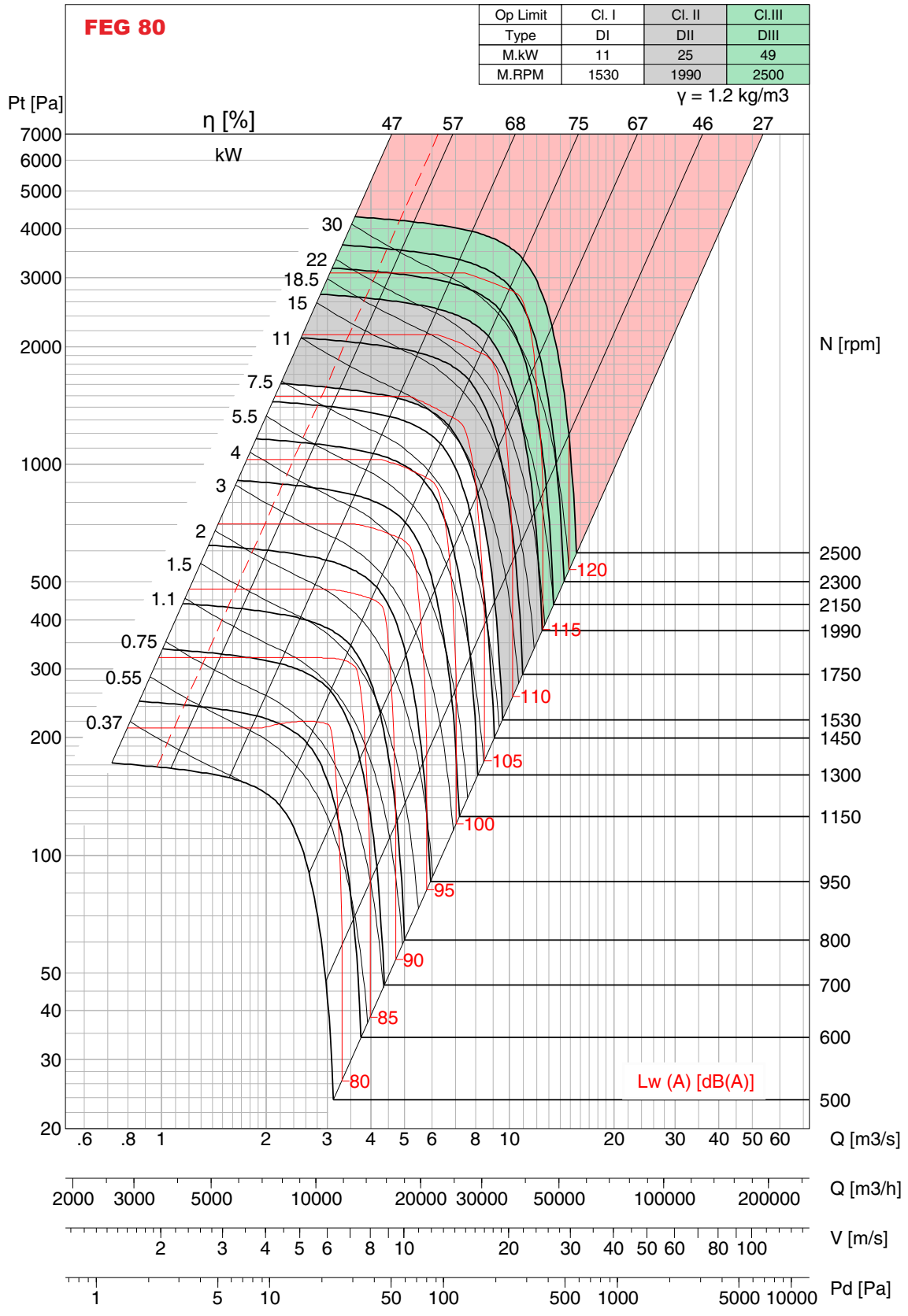
BNC-P 710



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

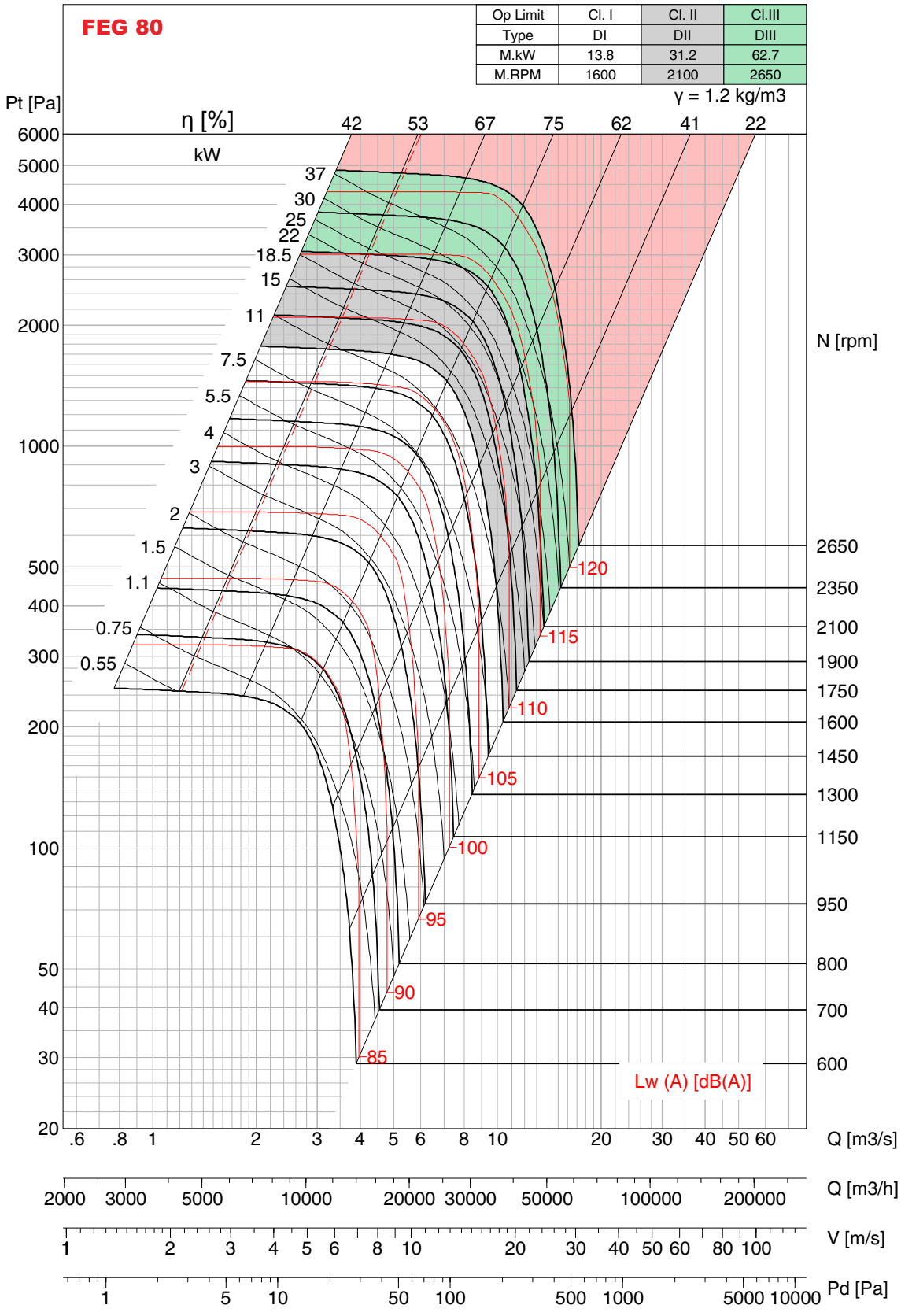
BNC-R 710



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

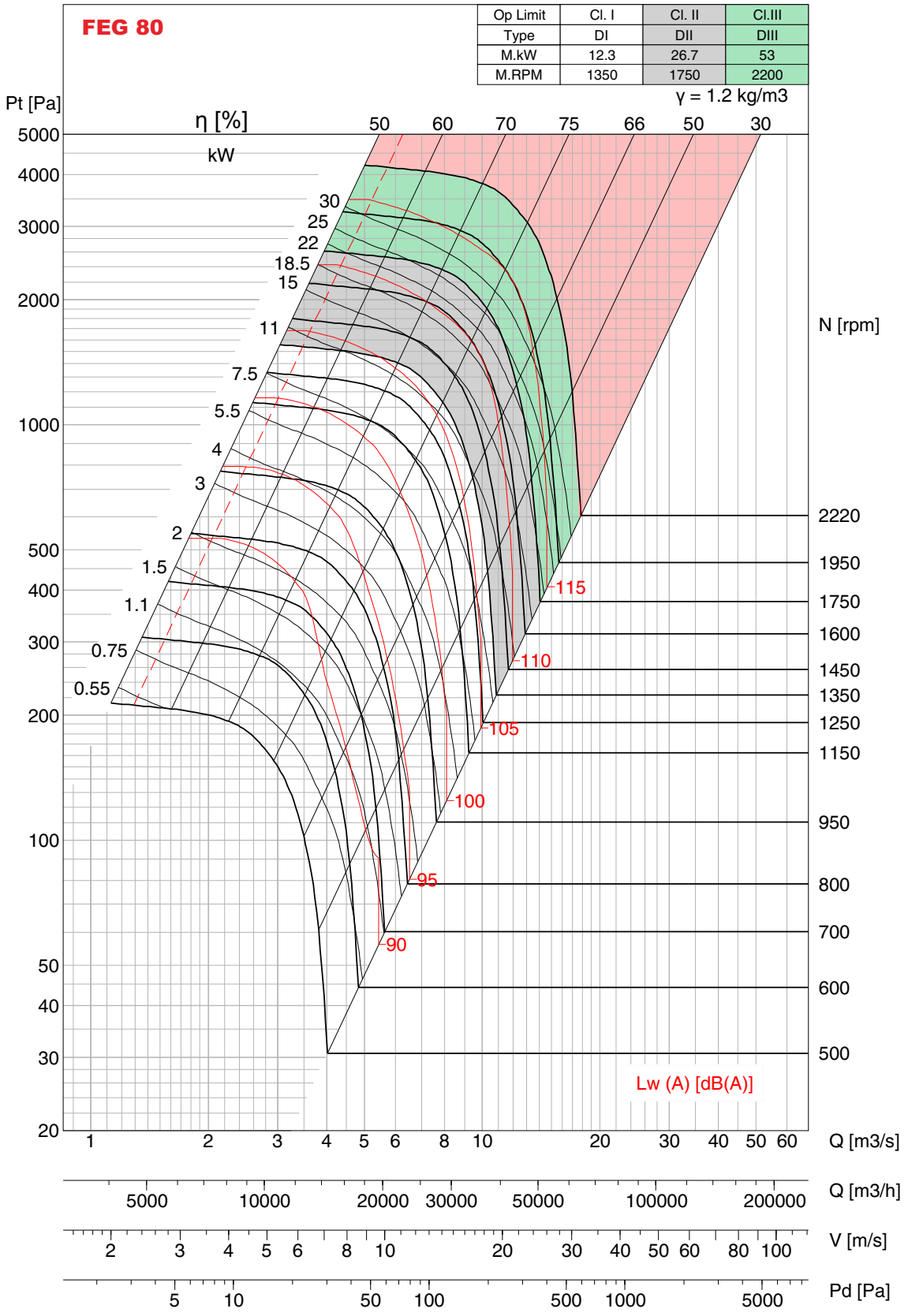
BNC-Q 710



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

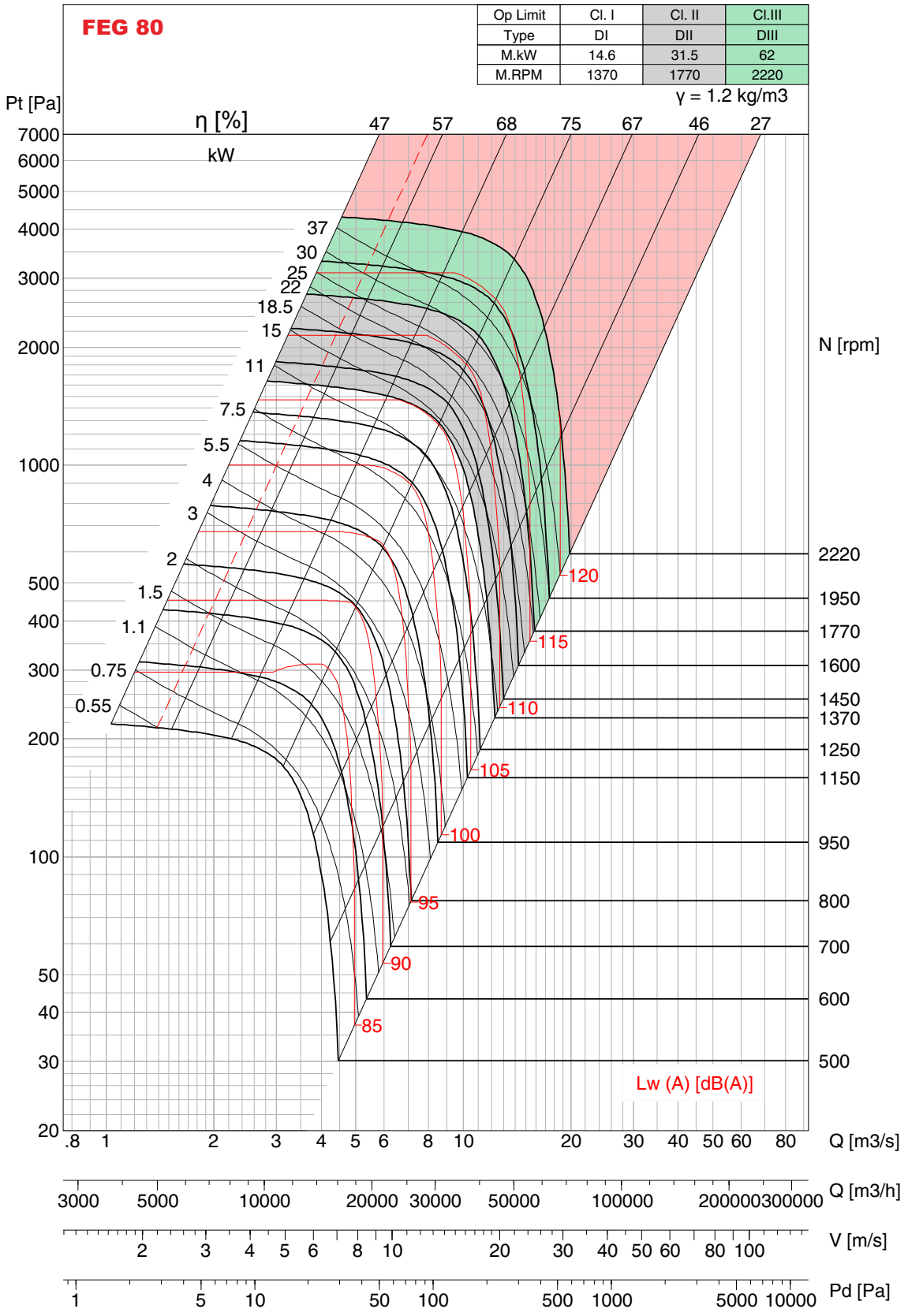
BNC-P 800



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

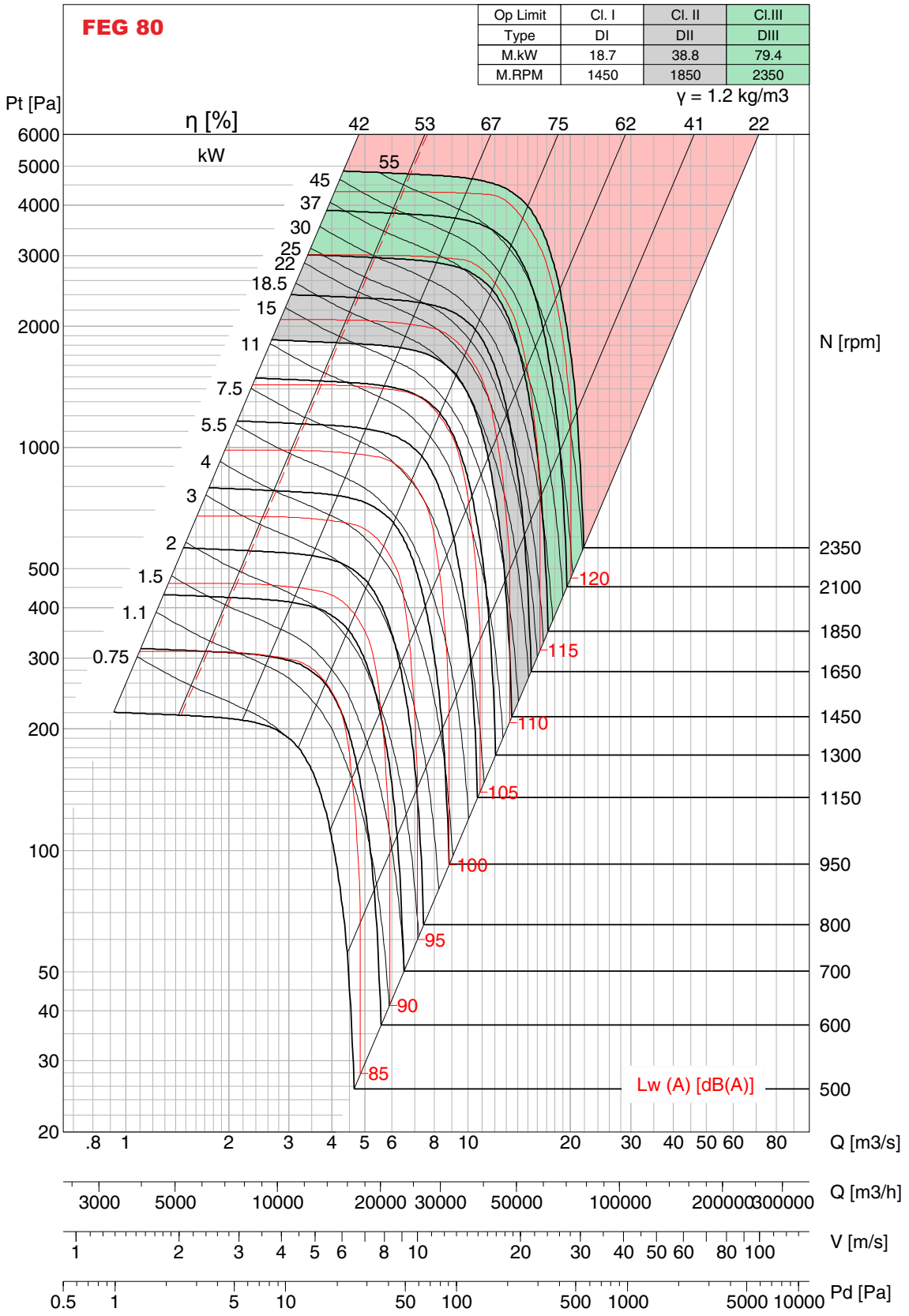
BNC-R 800



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

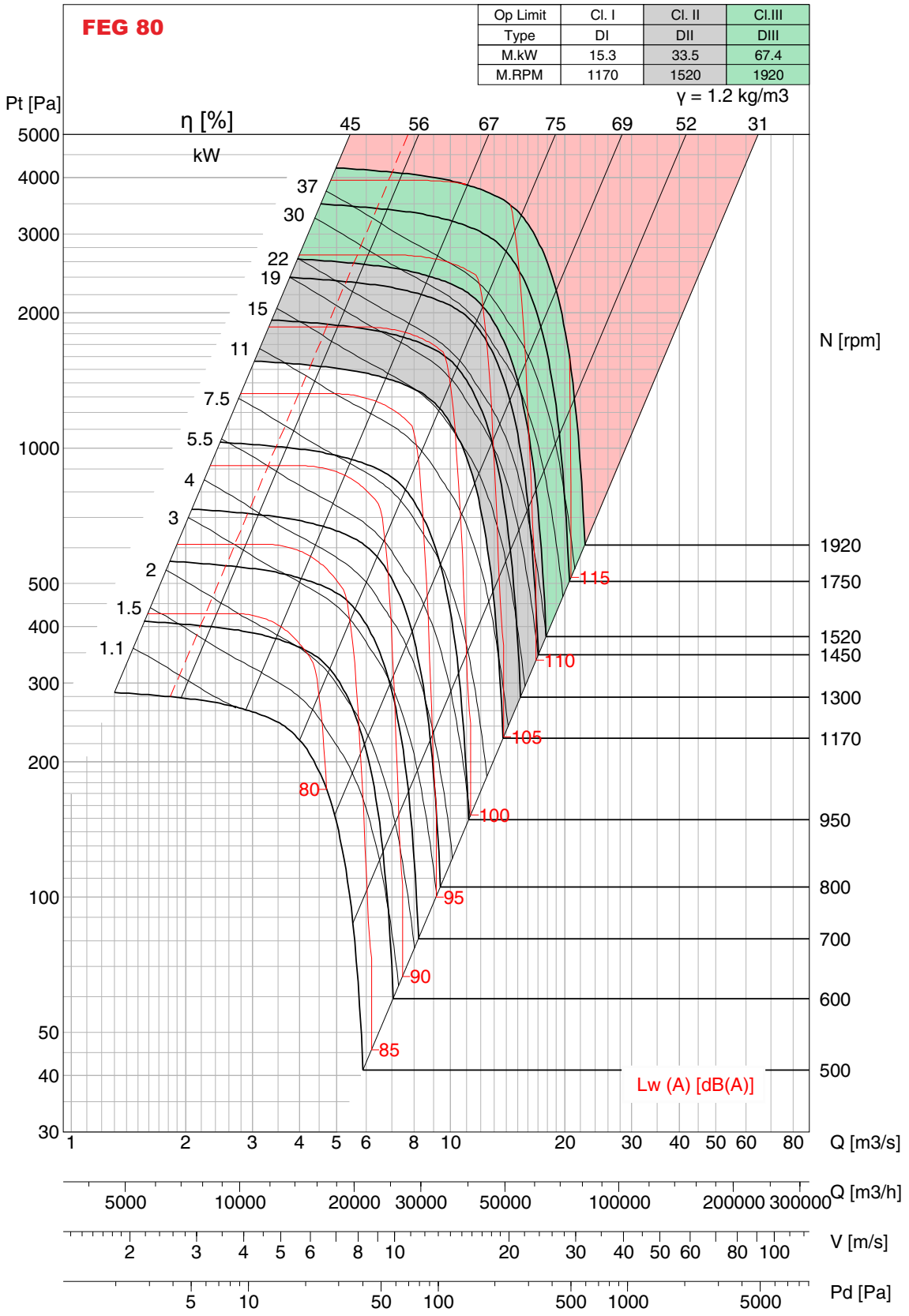
BNC-Q 800



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

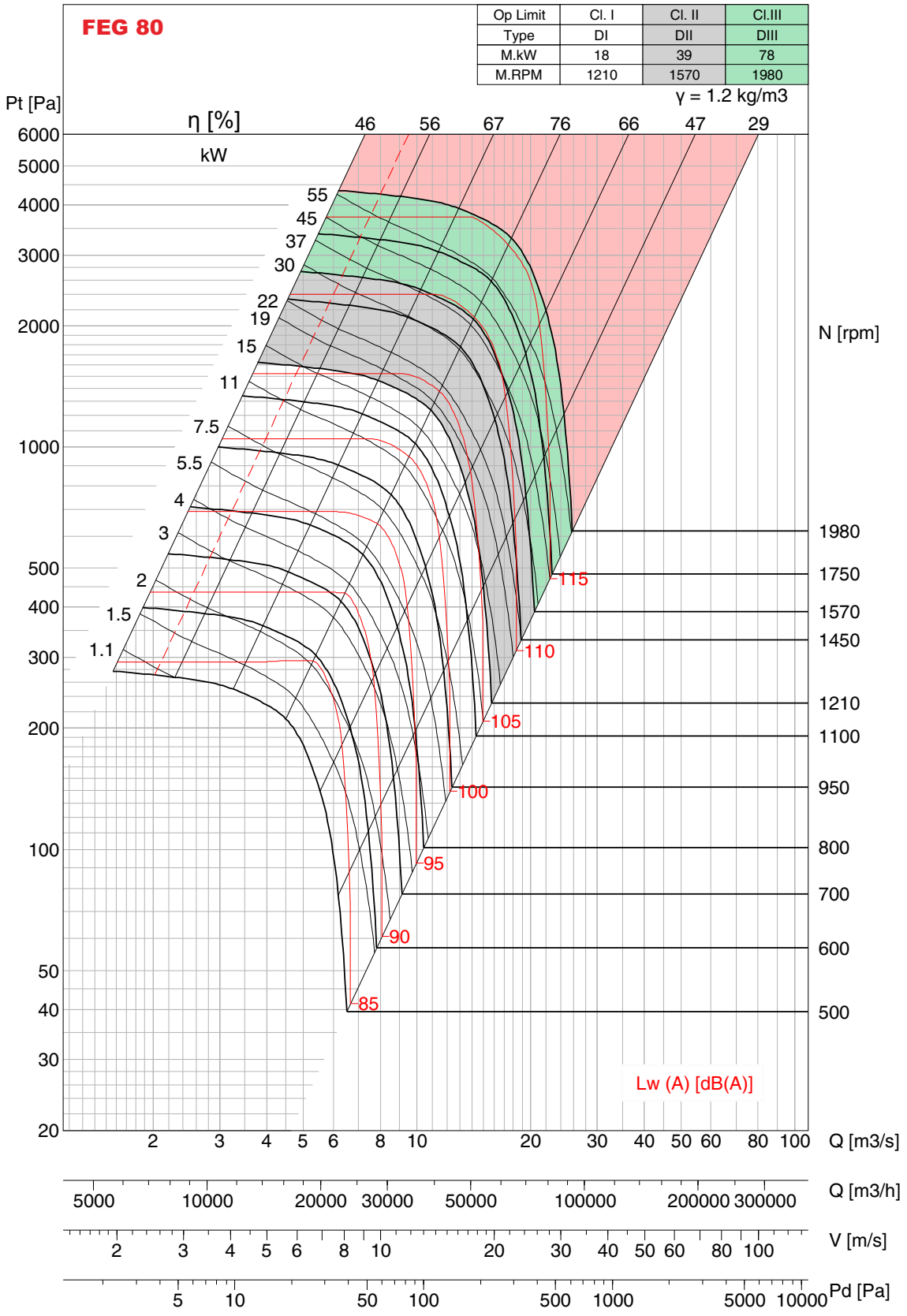
BNC-P 900



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

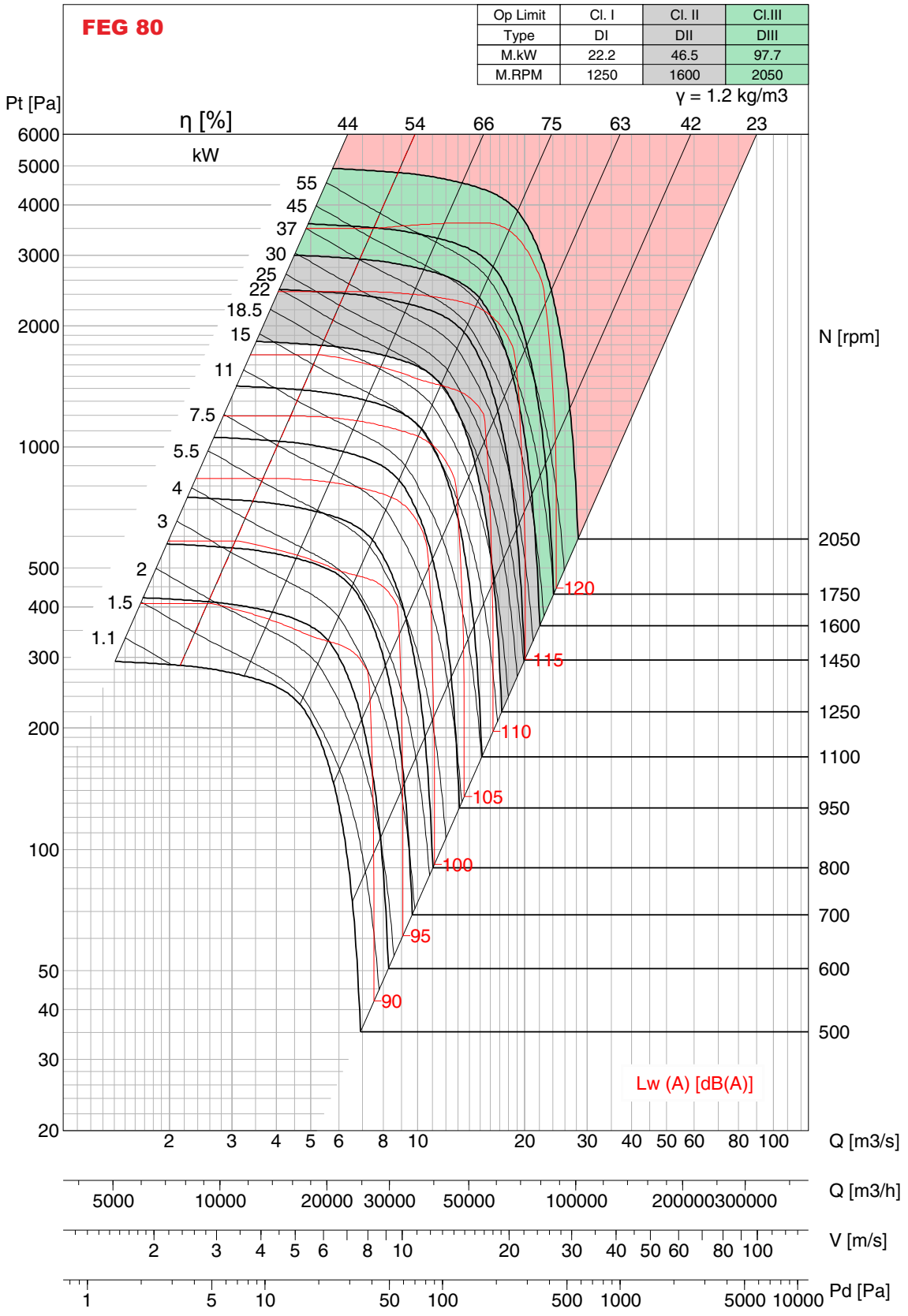
BNC-R 900



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

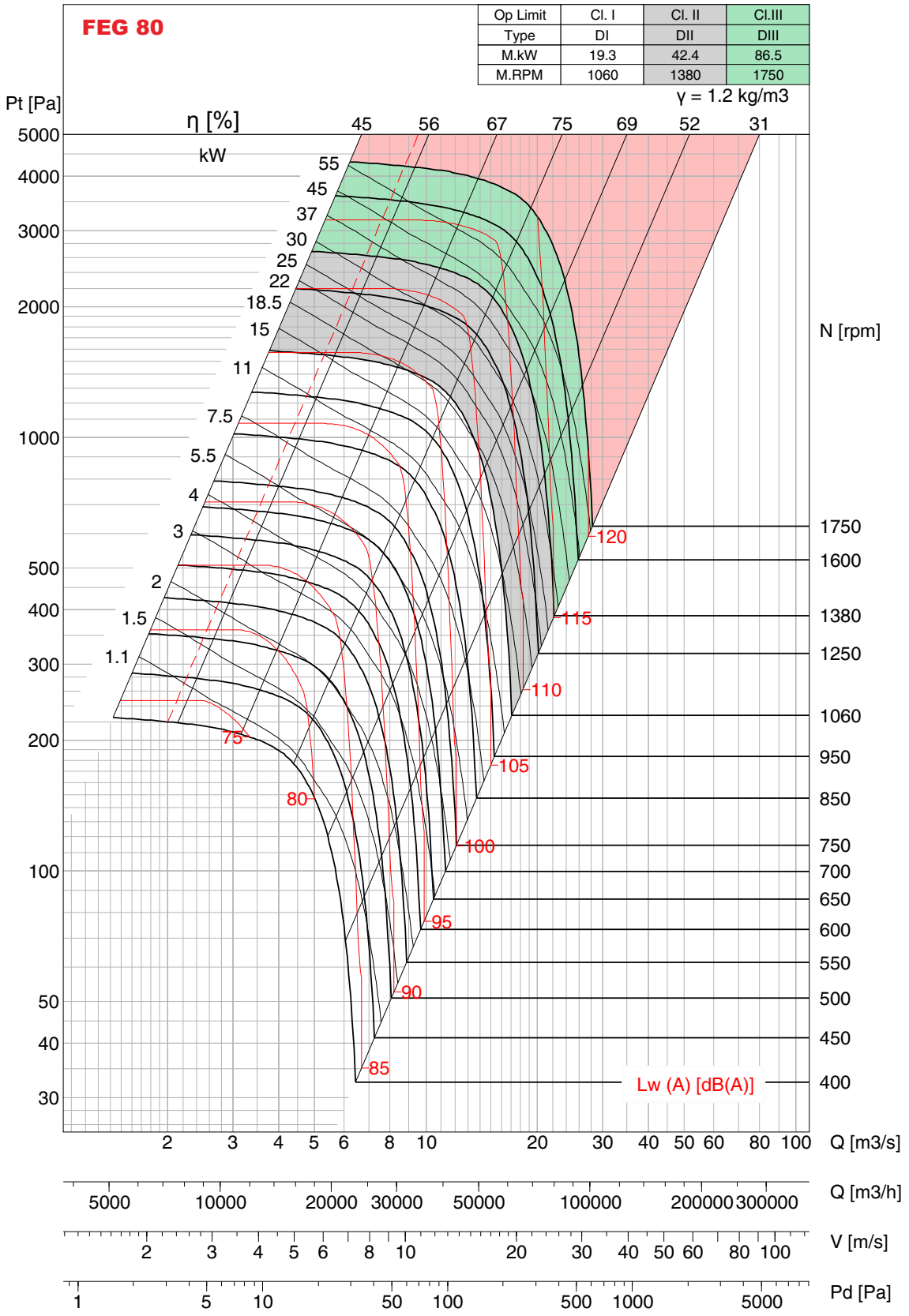
BNC-Q 900



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

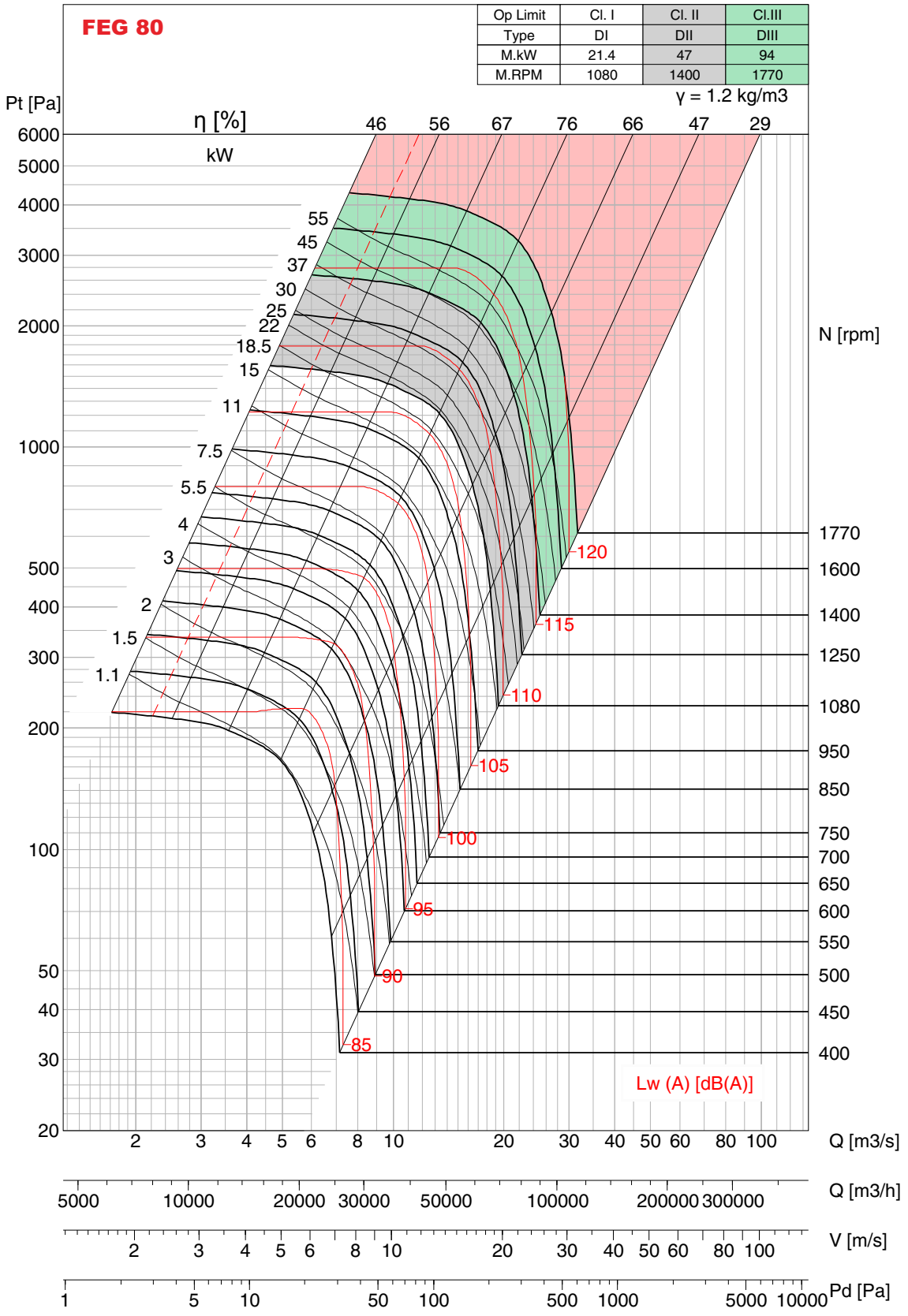
BNC-P 1000



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

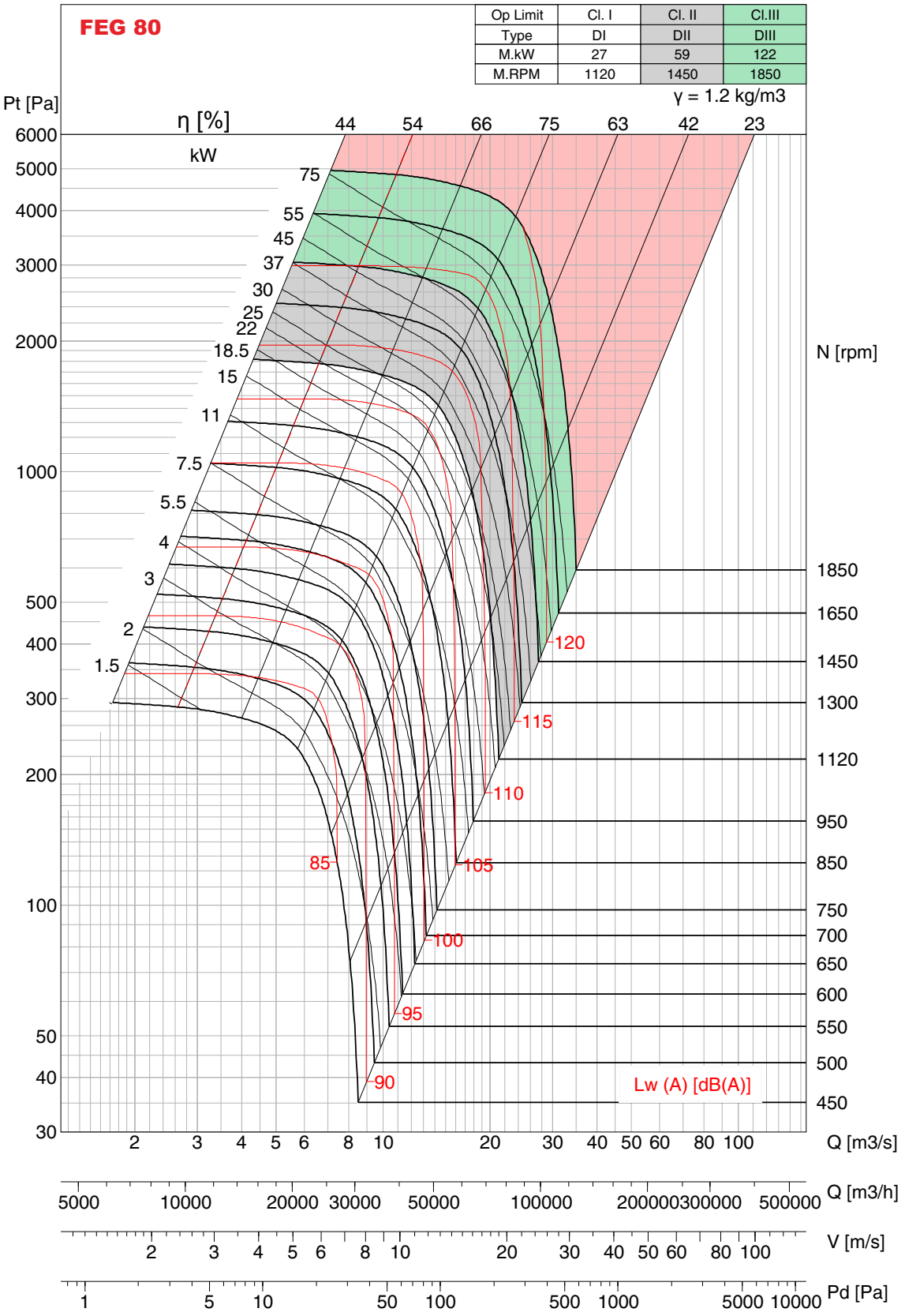
BNC-R 1000



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

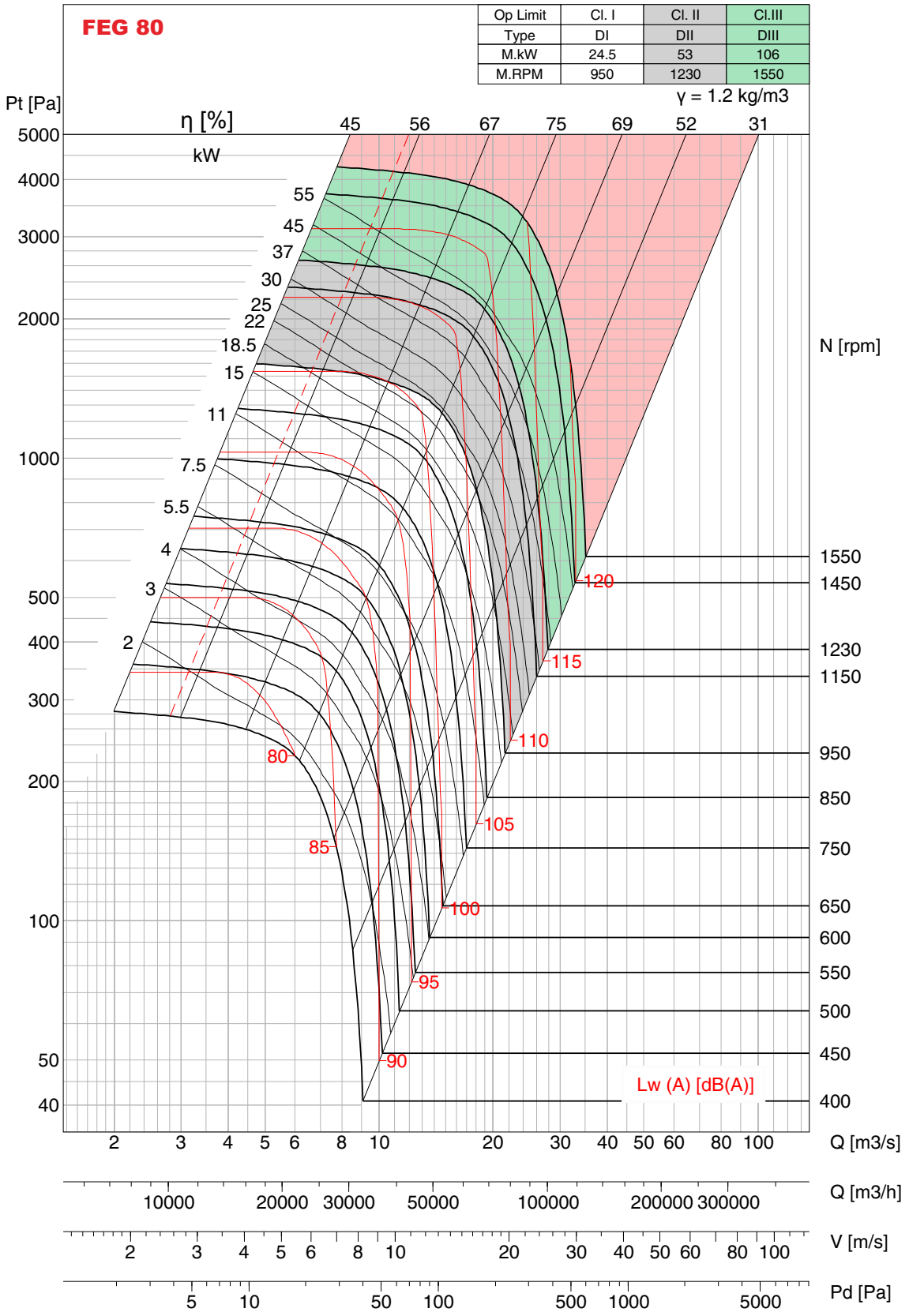
BNC-Q 1000



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

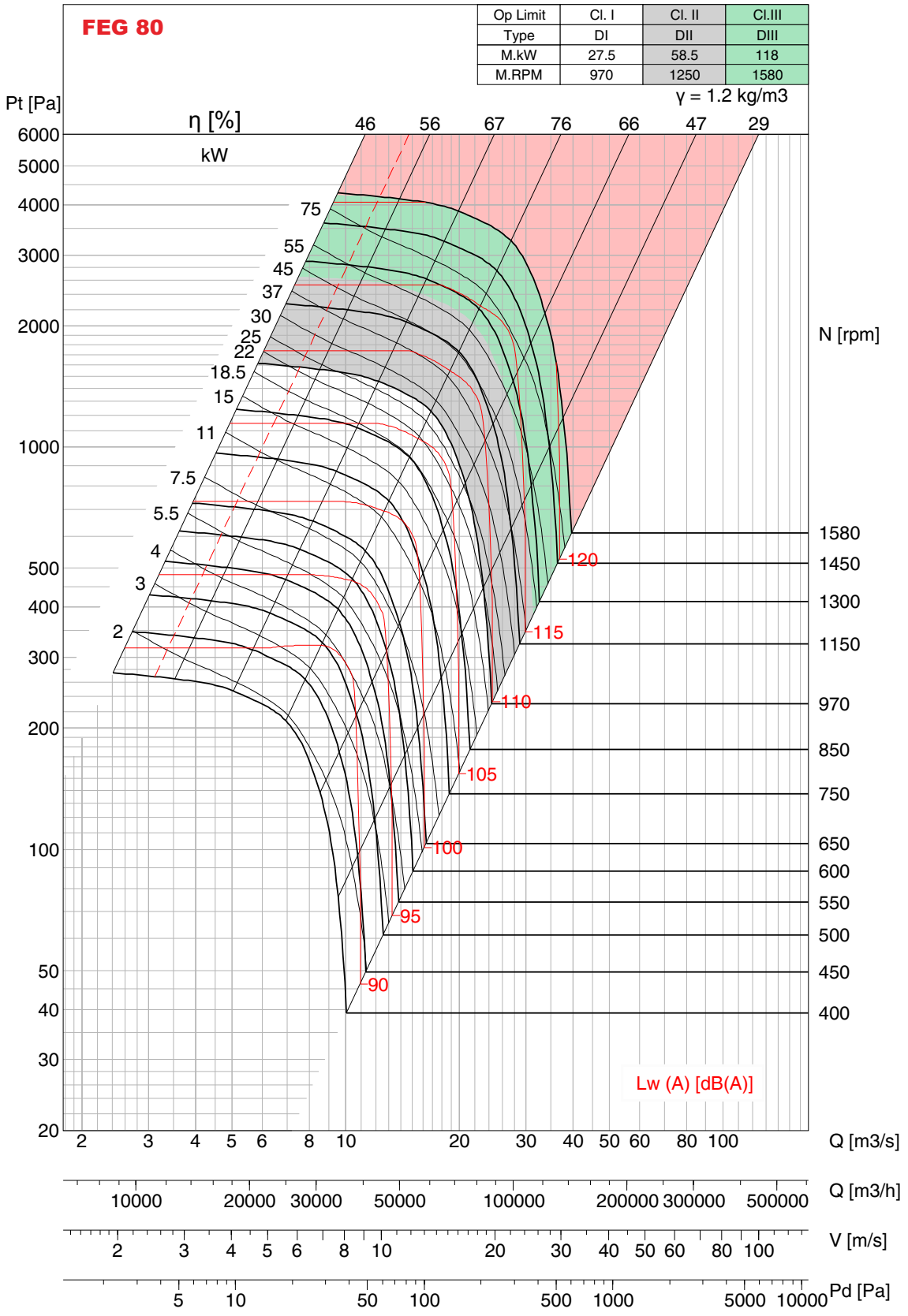
BNC-P 1120



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

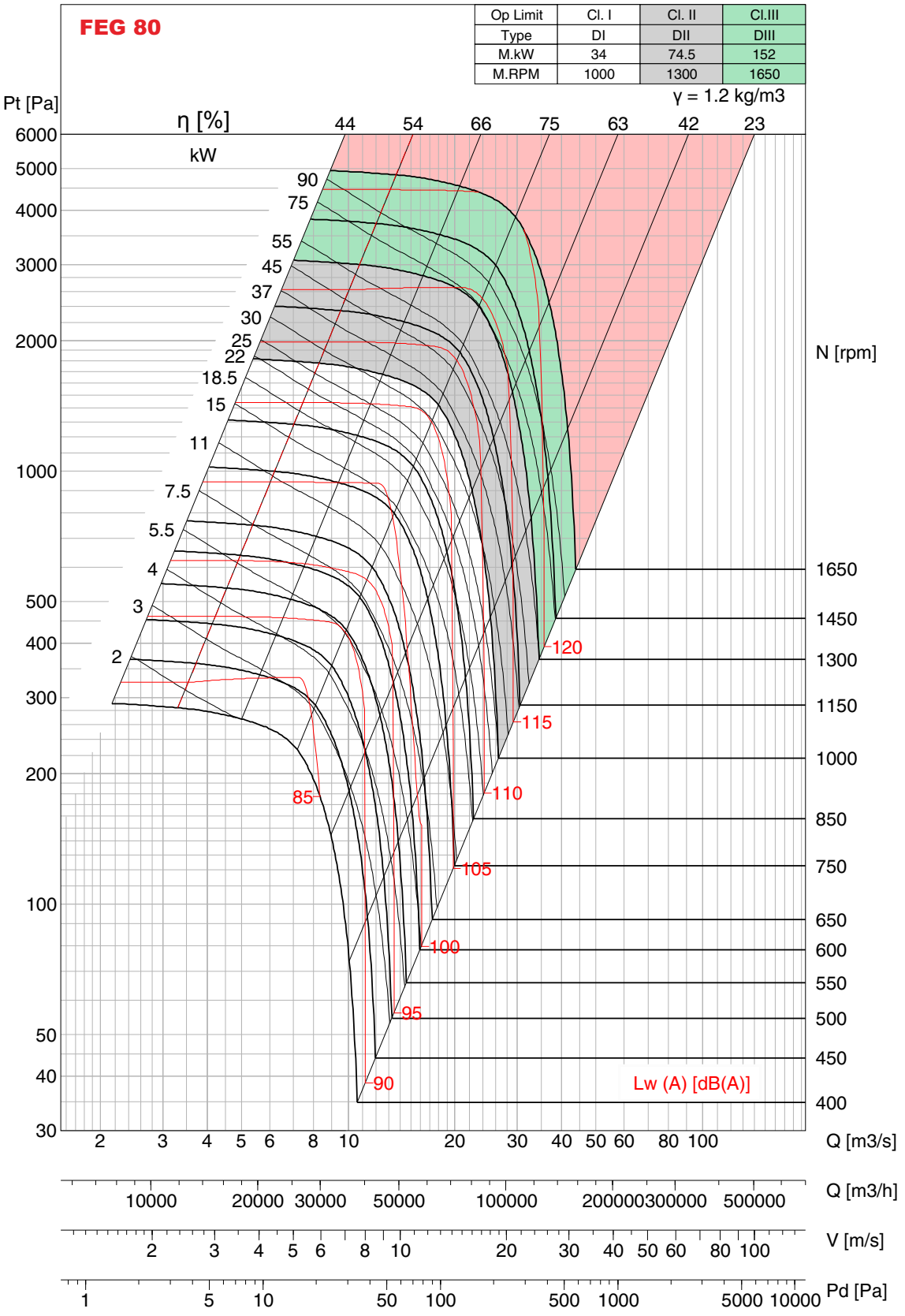
BNC-R 1120



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

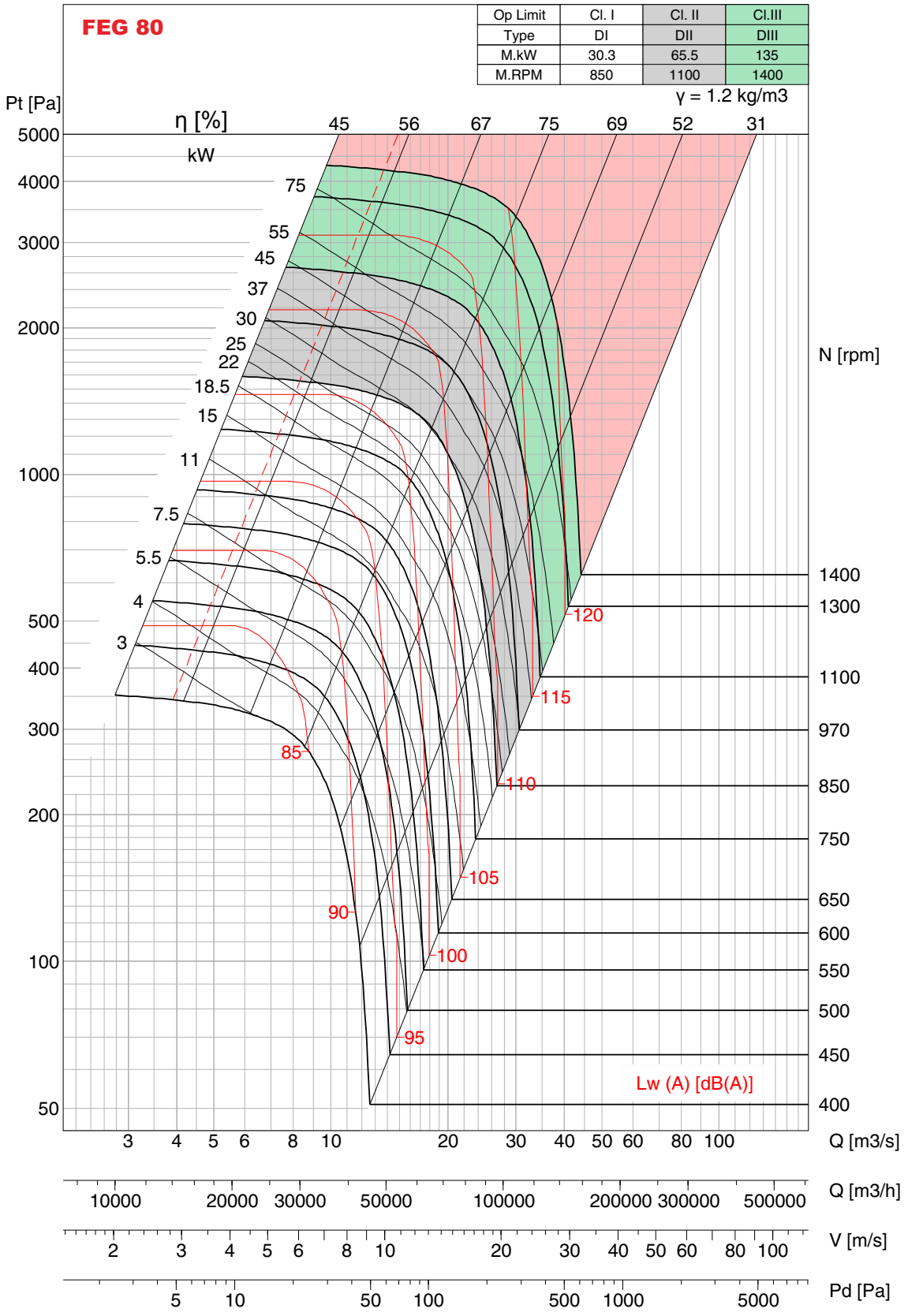
BNC-Q 1120



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

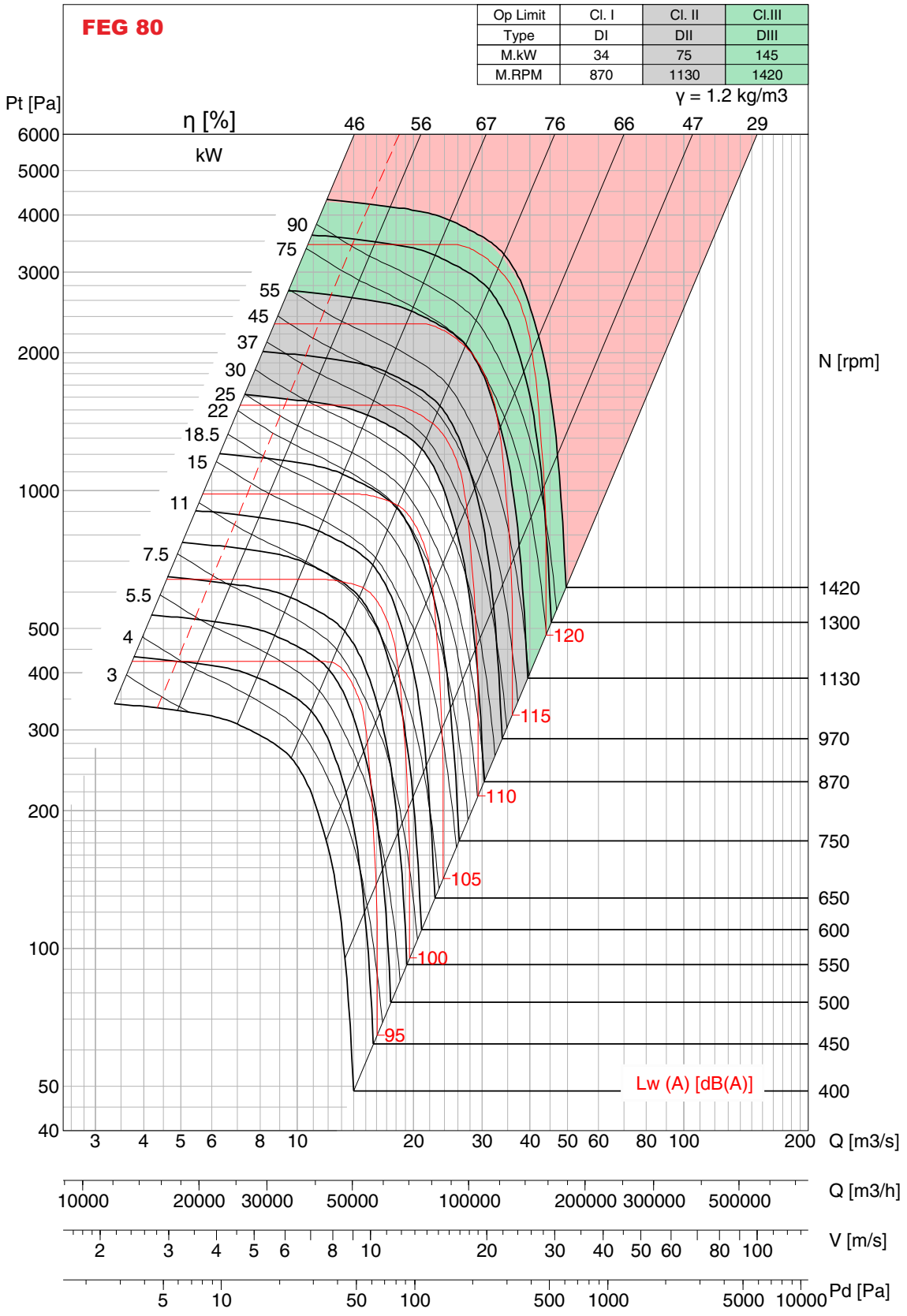
KRUGER

BNC-P 1250



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

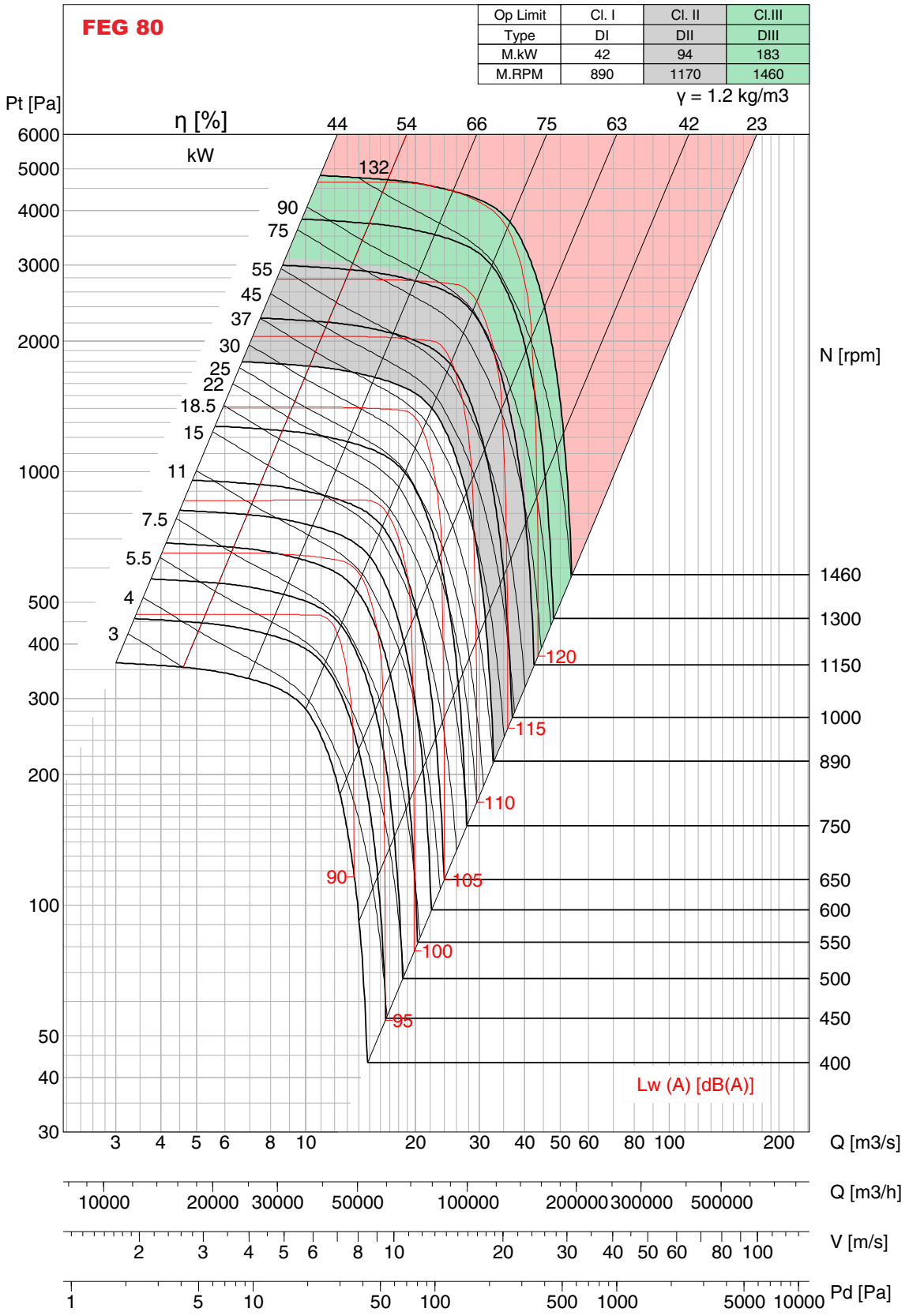
BNC-R 1250



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

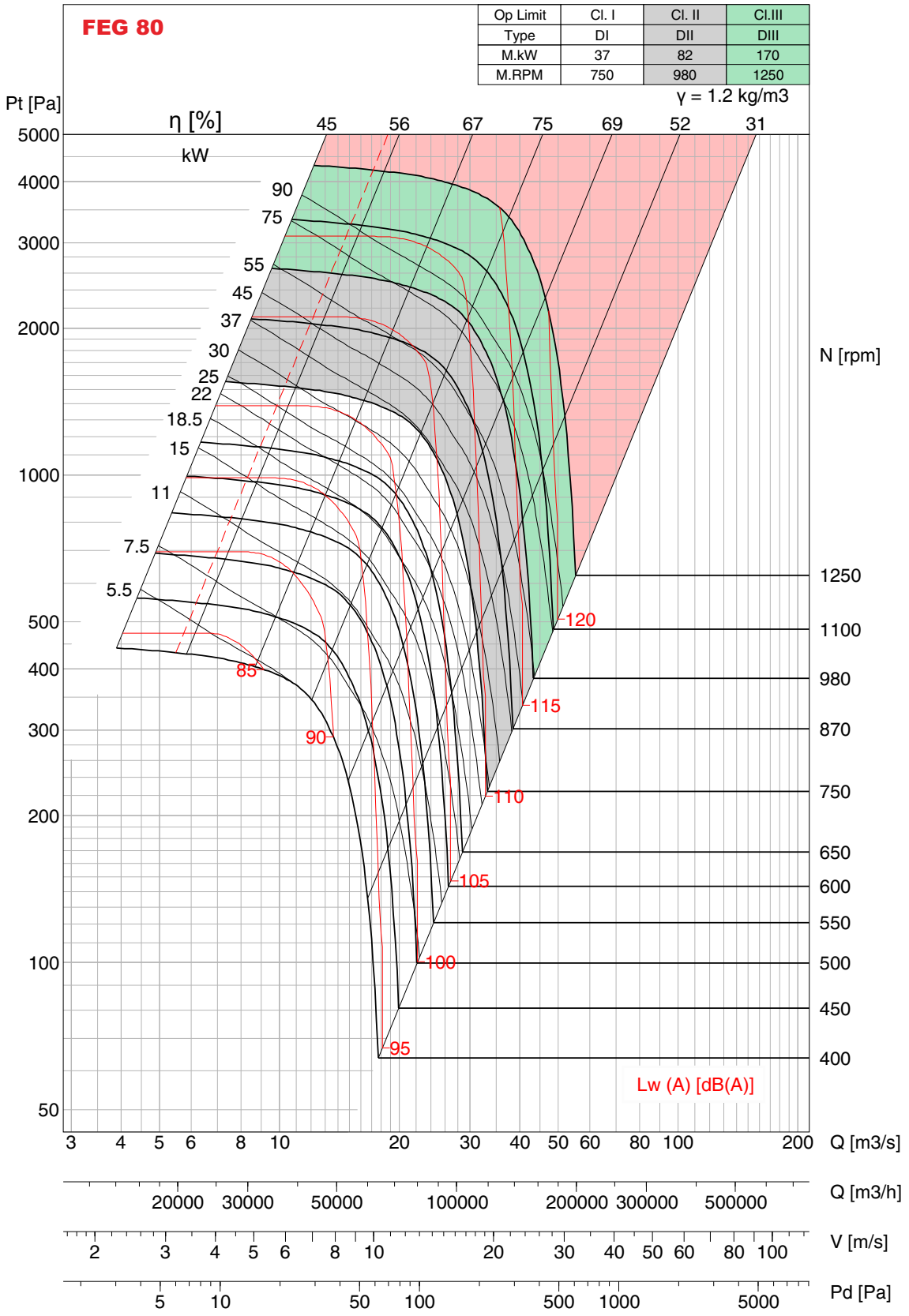
BNC-Q 1250



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

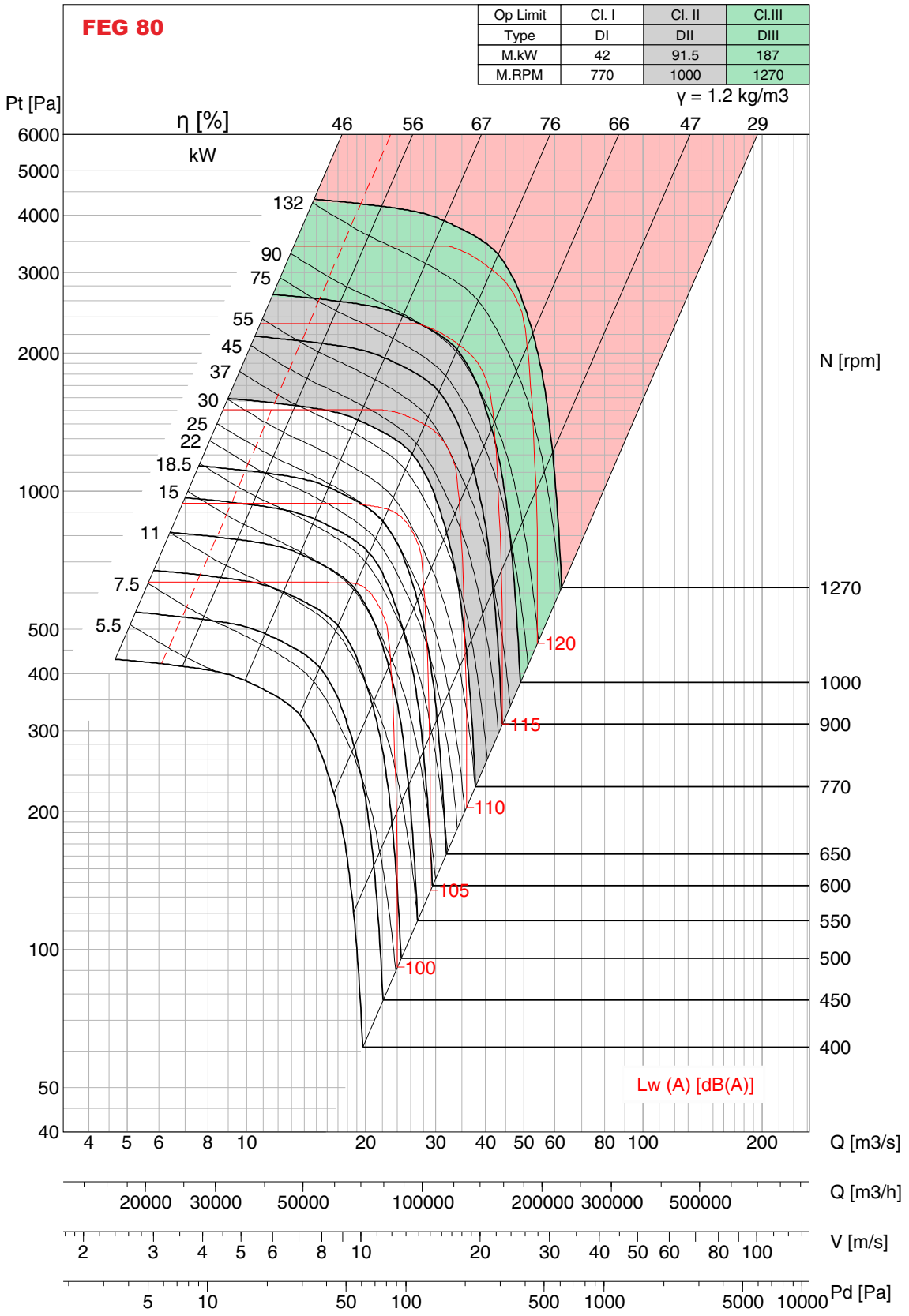
BNC-P 1400



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

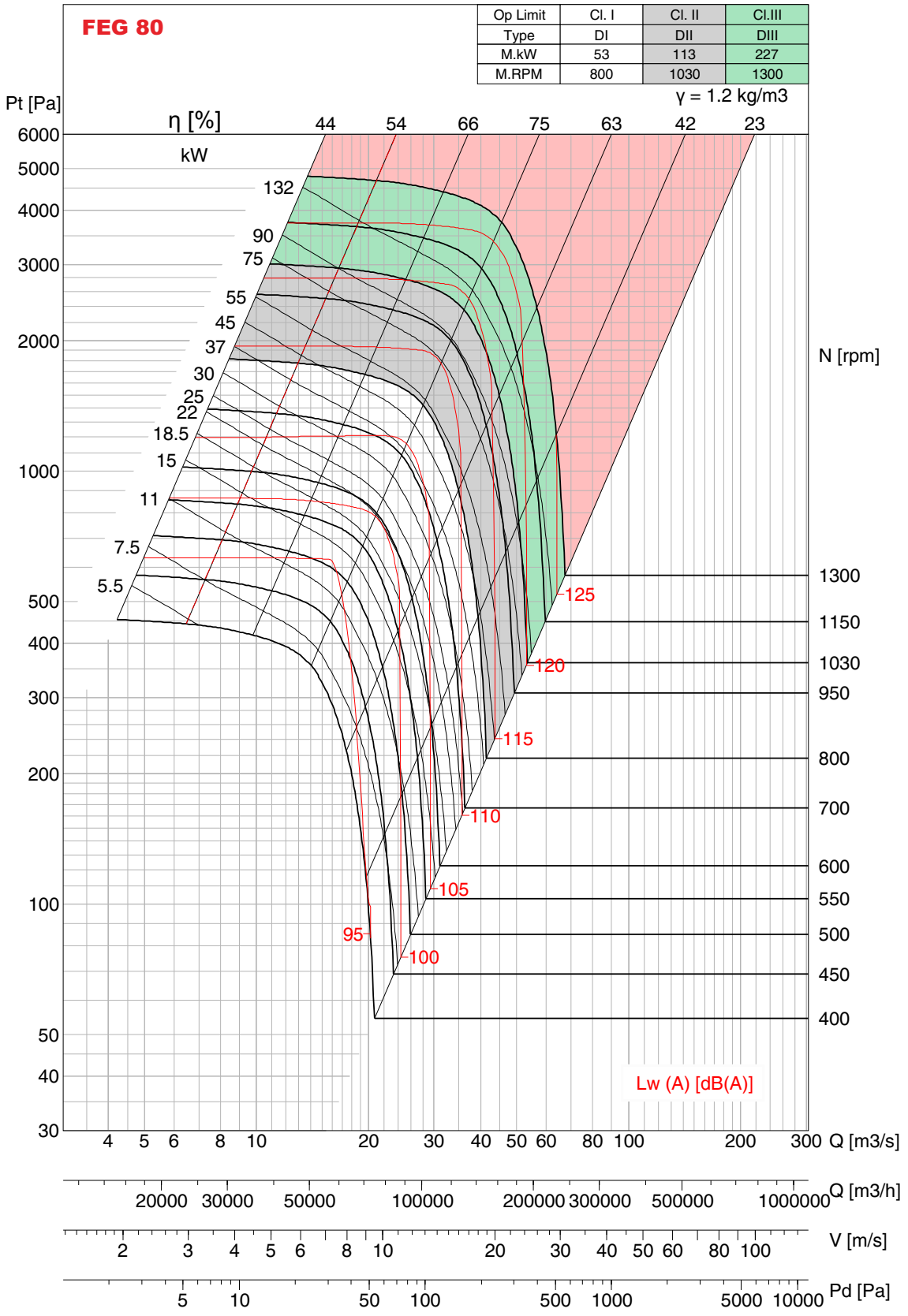
BNC-R 1400



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

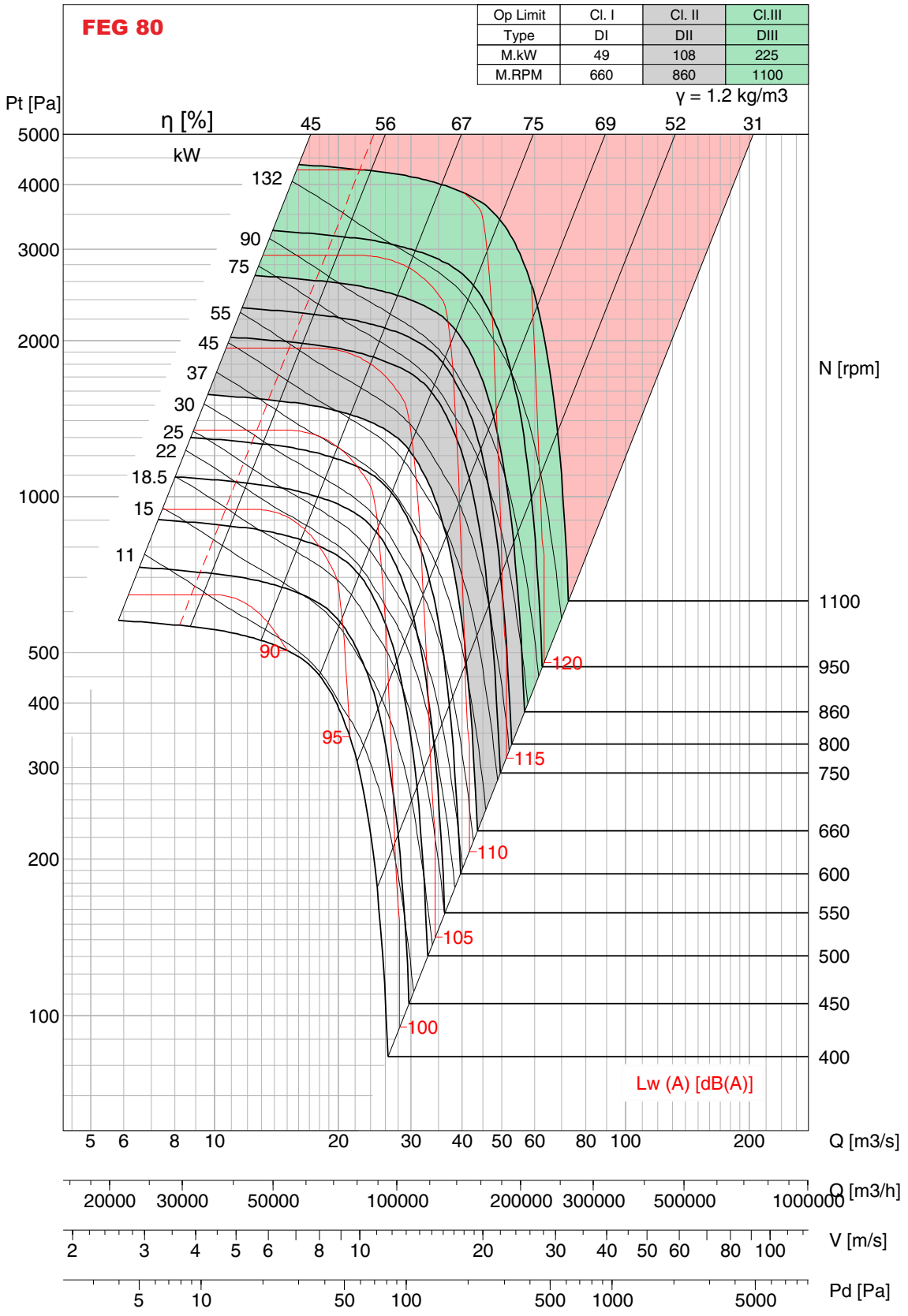
BNC-Q 1400



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

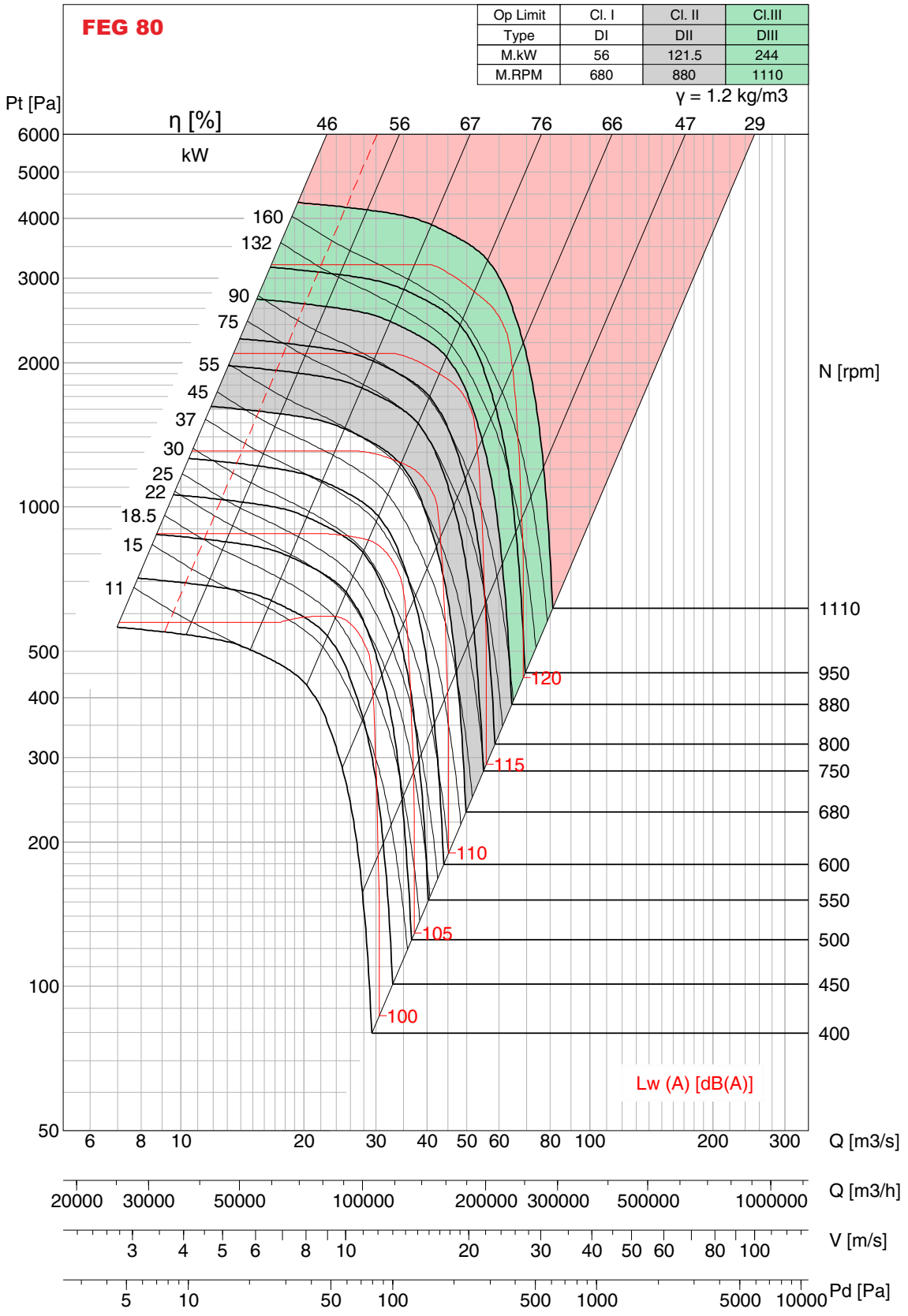
BNC-P 1600



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

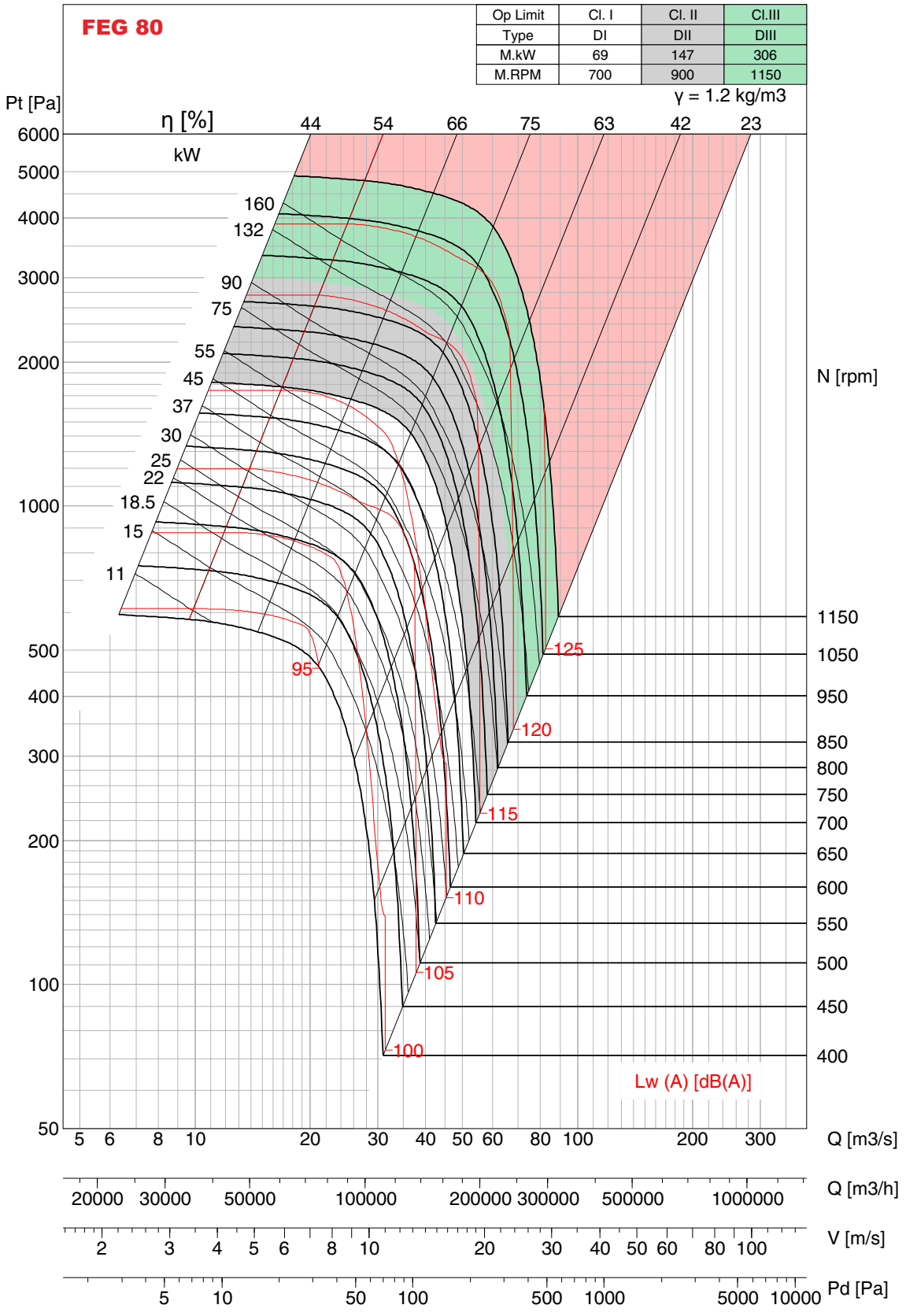
BNC-R 1600



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

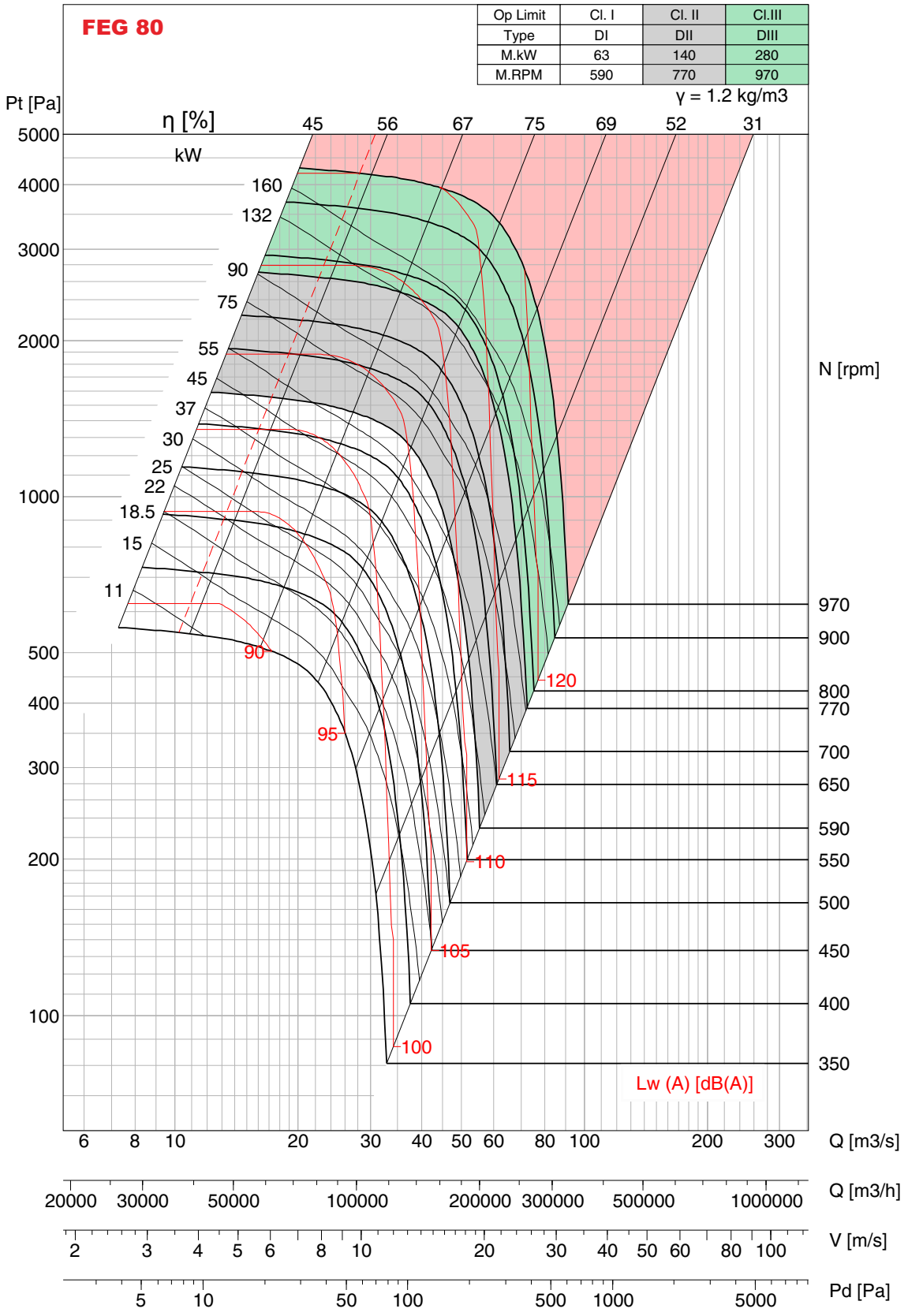
BNC-Q 1600



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

KRUGER

BNC-P 1800



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

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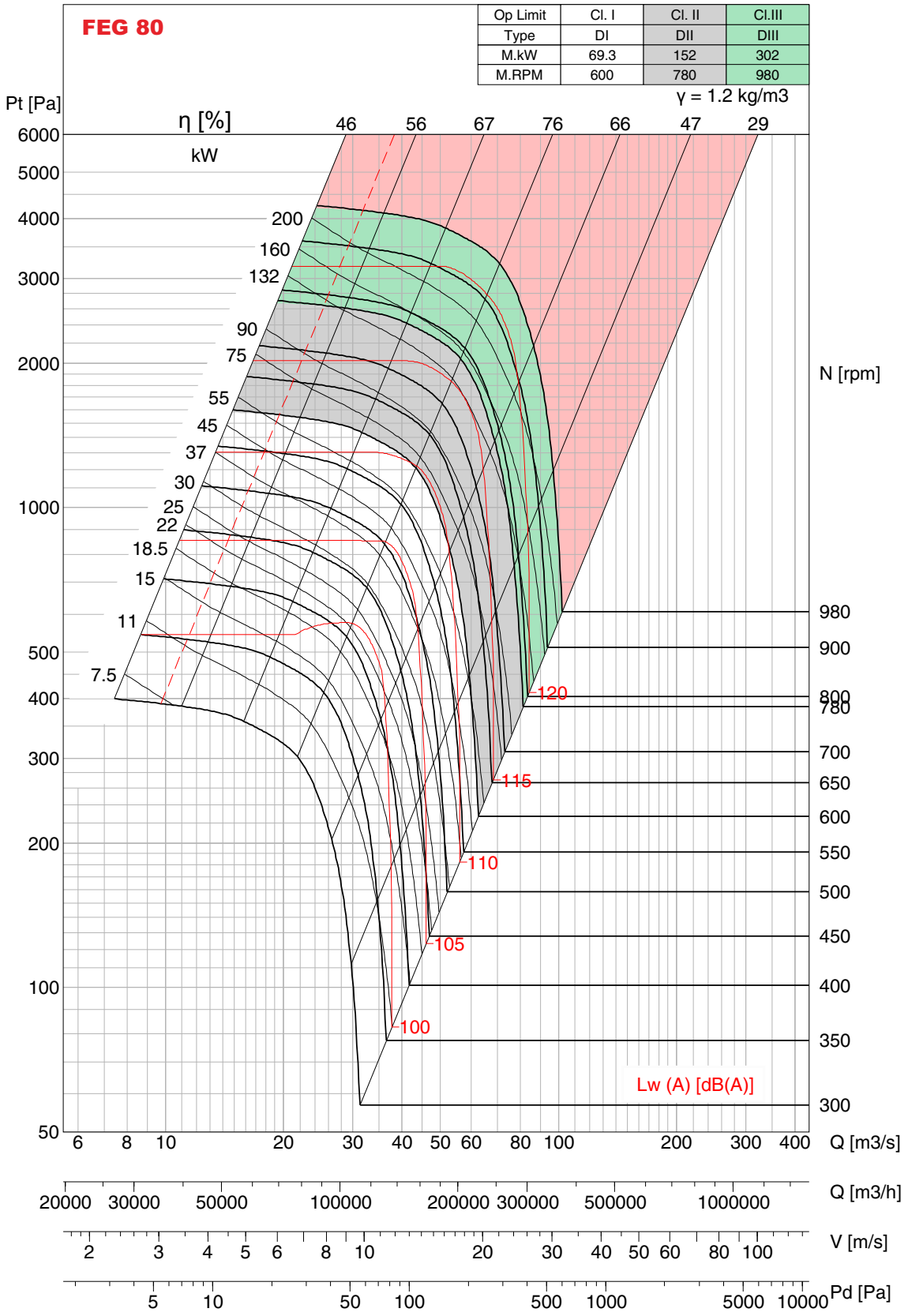
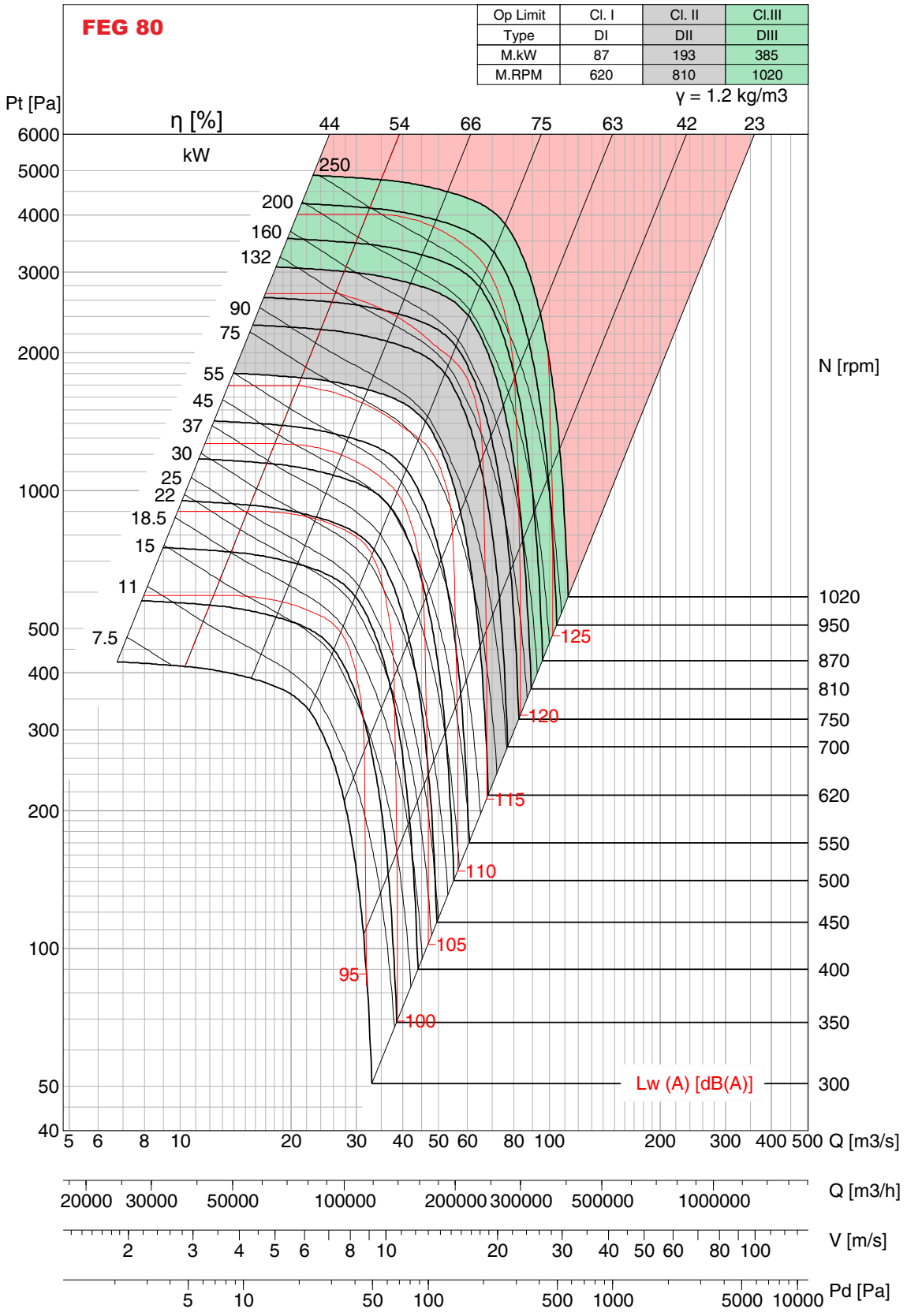
BNC-R 1800



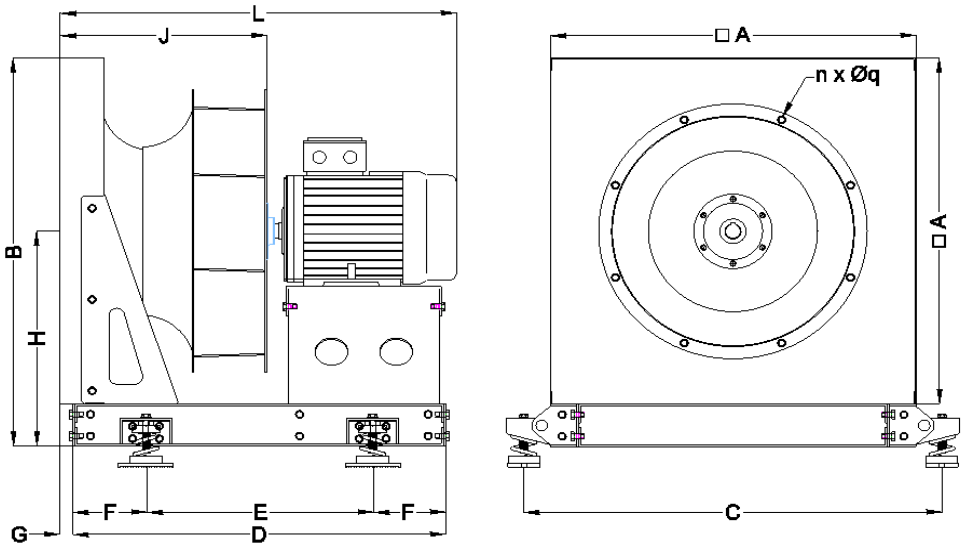
- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

BNC-Q 1800



- Performance certified is for installation type A – free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- Outlet Velocity of Model BNC is calculated in accordance with the fan outlet area as defined in AMCA 210 Annex H, Figure H.4.
- Values shown are for outlet Lwo A sound power levels for Installation Type A: free inlet, free outlet.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.
- Fan Efficiency Grade (FEG) is based on peak total efficiency in accordance with ISO 12759/ AMCA 205.
- **Please consult Kruger for fan selection of class III**.

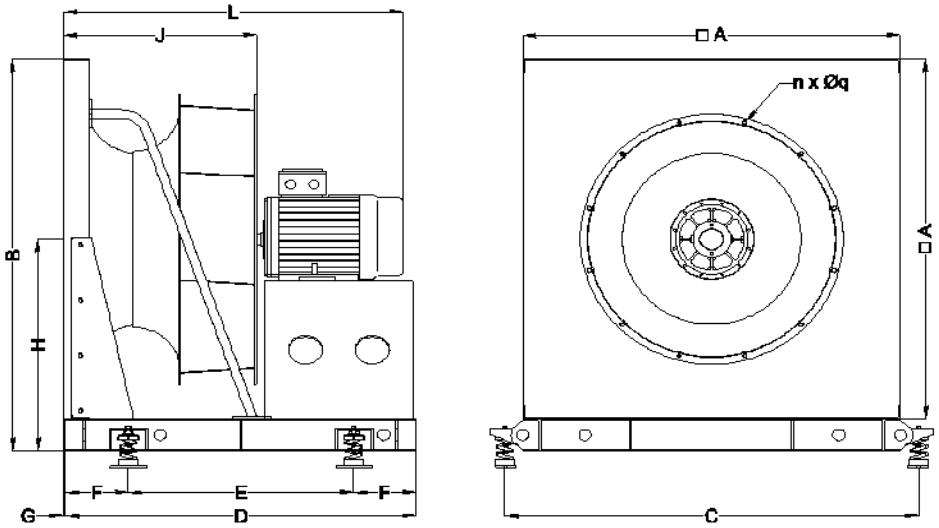
BNC 315~630'D'



Model	A	B	C	D	E	n x Øq	L			Frame Size	F	G	H	J			Wt (Kg) w/o
							Fan Type							Fan Type			
							P	R	Q					P	R	Q	
315	490	555	588	525	325	6 x 9	513	526	536	71	100	28	310	266	279	289	20
							543	556	566	80							
							588	601	611	90							
				565	365		603	616	626	100							
							643	656	666	112							
355	530	595	628	580	340	6 x 9	562	575	587	80	120	28	330	289	303	315	29
							607	620	632	90							
							622	635	647	100							
				650	410		707	720	732	112							
							867	880	892	132							
400	580	645	678	613	353	8 x 9	629	645	658	90	130	28	355	322	338	351	38
							674	690	703	100							
							684	700	713	112							
				803	543		779	795	808	132							
							939	955	968	160							
450	630	715	730	673	393	8 x 12	667	685	703	90	140	28	400	358	376	394	50
							712	730	748	100							
							727	745	763	112							
				863	583		797	815	833	132							
							972	990	1008	160							
500	700	785	800	714	434	8 x 12	706	725	747	90	140	28	435	392	412	434	60
							746	765	787	100							
							766	785	807	112							
				904	624		861	880	902	132							
							1021	1040	1062	160							
560	790	875	890	820	500	8 x 12	768	790	813	100	160	28	480	431	452	476	76
							783	805	828	112							
							883	905	928	132							
				990	670		1033	1055	1078	160							
							1063	1085	1108	180							
630	890	990	1000	865	545	8 x 12	825	850	870	100	160	28	545	471	496	517	95
							840	865	885	112							
							925	950	970	132							
				1035	715		1065	1090	1110	160							
							1090	1115	1135	180							

All Dimensions in mm

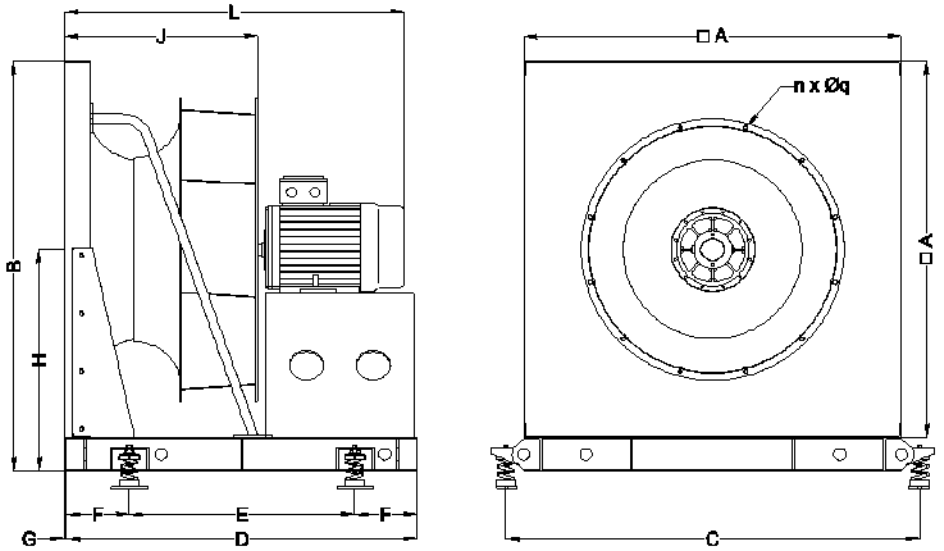
BNC 710~1000'D'



Model	A	B	C	D	E	n x Øq	L			Frame Size	F	G	H	J			Wt (Kg) w/o
							Fan Type							Fan Type			
							P	R	Q					P	R	Q	
710	1000	1100	1100	938	618	8 x 12	888	916	939	112	160	28	600	522	550	573	112
							983	1011	1034	132							
				1128	808		1123	1151	1174	160							
							1148	1176	1199	180							
							1223	1251	1274	200							
800	1120	1220	1230	1130	810	8 x 12	1024	1056	1082	132	160	28	660	575	607	633	151
							1159	1191	1217	160							
							1194	1226	1252	180							
				1230	910		1248	1280	1307	200							
							1267	1299	1326	225							
900	1240	1340	1350	1252	912	12 x 12	1225	1259	1289	160	170	28	720	630	665	695	209
							1255	1289	1319	180							
							1325	1359	1389	200							
				1342	1002		1390	1424	1454	225							
							1455	1489	1519	250							
1000	1390	1515	1520	1334	874	12 x 12	1291	1329	1362	160	230	28	820	713	751	784	261
							1321	1359	1392	180							
							1391	1429	1462	200							
				1434	974		1446	1484	1517	225							
							1516	1554	1587	250							

All Dimensions in mm

BNC 1120~1800'D'



Model	A	B	C	D	E	n x Øq	L			Frame Size	F	G	H	J			Wt (Kg) w/o
							Fan Type							Fan Type			
							P	R	Q					P	R	Q	
1120	1550	1700	1660	1450	900	12 x 12	1410	1454	1491	180	275	28	925	807	851	888	333
							1480	1524	1561	200							
				1600	1050		1515	1559	1596	225							
							1604	1639	1676	250							
							1705	1749	1786	280							
1250	1700	1850	1810	1540	940	14 x 12	1494	1544	1585	180	300	28	1000	872	922	963	530
							1564	1614	1655	200							
				1690	1090		1599	1649	1690	225							
							1664	1714	1755	250							
							1789	1839	1880	280							
1400	1900	2050	2010	1612	1012	16 x 16	1563	1617	1666	180	300	28	1100	952	1006	1052	670
							1633	1687	1736	200							
				1780	1180		1678	1732	1781	225							
							1743	1797	1846	250							
							1868	1922	1971	280							
1600	2204	2354	2354	1882	1252	18 x 16	1695	1768	1821	200	315	28	1252	1100	1173	1226	512
							1740	1813	1866	225							
				2000	1370		1805	1878	1931	250							
							1895	1968	2021	280							
							2175	2248	2301	315							
1800	2480	2630	2630	2117	1487	32 x 16	1912	1983	2043	225	315	28	1390	1272	1343	1403	570
							1977	2048	2108	250							
				2250	1620		2067	2138	2198	280							
							2347	2418	2478	315							
							2722	2793	2853	355							

All Dimensions in mm

Operational Limits - BNC-P

			315	355	400	450	500	560	630	710	800	900	1000	1120	1250	1400	1600	1800
Maximum Absorbed Power	CL.I	kW	2.2	3	3.3	4.3	5.3	6.4	7.4	9.7	12.3	15.3	19.3	24.5	30.3	37	49	63
	CL.II	kW	5	6	7.2	9.5	11.5	13.4	16	21.3	26.7	33.5	42.4	53	65.5	82	108	140
	CL.III	kW	9.7	11.5	14	19	23.2	26.7	33	42.3	53	67.4	86.5	106	135	170	225	280
Maximum Fan Speed	CL.I	rpm	3500	3100	2750	2450	2200	1950	1700	1520	1350	1170	1060	950	850	750	660	590
	CL.II	rpm	4600	4000	3550	3170	2850	2500	2200	1980	1750	1520	1380	1230	1100	980	860	770
	CL.III	rpm	5800	5000	4450	4000	3600	3150	2800	2490	2200	1920	1750	1550	1400	1250	1100	970
Temperature Range/ Min. -20°C	CL.I-CL.III	Max.°C	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
Wheel	Diameter	mm	315	355	400	450	500	560	630	710	800	900	1000	1120	1250	1400	1600	1800
	$J = PD^2/4$	kgm^2	0.13	0.22	0.34	0.62	1.07	1.88	2.99	5.27	9.52	14.7	24.7	45.1	72.4	117	234	405

Operational Limits - BNC-R

			315	355	400	450	500	560	630	710	800	900	1000	1120	1250	1400	1600	1800
Maximum Absorbed Power	CL.I	kW	2.4	3	4.6	4.6	6	7.1	9	11	14.6	18	21.4	27.5	34	42	56	69.3
	CL.II	kW	5.2	6.8	10	10.6	13	15.6	19	25	31.5	39	47	58.5	75	91.5	121.5	152
	CL.III	kW	10.4	13.3	20	21.5	27	31.5	38	49	62	78	94	118	145	187	244	302
Maximum Fan Speed	CL.I	rpm	3550	3180	3000	2470	2220	1950	1720	1530	1370	1210	1080	970	870	770	680	600
	CL.II	rpm	4600	4150	3890	3200	2880	2540	2230	1990	1770	1570	1400	1250	1130	1000	880	780
	CL.III	rpm	5800	5200	4900	4050	3650	3200	2800	2500	2220	1980	1770	1580	1420	1270	1110	980
Temperature Range/ Min. -20°C	CL.I-CL.III	Max.°C	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
Wheel	Diameter	mm	315	355	400	450	500	560	630	710	800	900	1000	1120	1250	1400	1600	1800
	$J = PD^2/4$	kgm^2	0.13	0.23	0.36	0.64	1.12	1.95	3.11	5.53	10.0	15.4	26.0	47.0	75.5	122	244	420

Operational Limits - BNC-Q

			315	355	400	450	500	560	630	710	800	900	1000	1120	1250	1400	1600	1800
Maximum Absorbed Power	CL.I	kW	3	4	5	6.1	7.6	9	11	13.8	18.7	22.2	27	34	42	53	69	87
	CL.II	kW	6.5	8.6	11	13.6	16.7	20.5	24	31.2	38.8	46.5	59	74.5	94	113	147	193
	CL.III	kW	13	17	22	27.5	33.5	40.8	50	62.7	79.4	97.7	122	152	183	227	306	385
Maximum Fan Speed	CL.I	rpm	3700	3370	2900	2600	2350	2050	1800	1600	1450	1250	1120	1000	890	800	700	620
	CL.II	rpm	4800	4370	3750	3400	3050	2700	2350	2100	1850	1600	1450	1300	1170	1030	900	810
	CL.III	rpm	6100	5500	4750	4300	3850	3400	3000	2650	2350	2050	1850	1650	1460	1300	1150	1020
Temperature Range/ Min. -20°C	CL.I-CL.III	Max.°C	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
Wheel	Diameter	mm	315	355	400	450	500	560	630	710	800	900	1000	1120	1250	1400	1600	1800
	$J = PD^2/4$	kgm^2	0.14	0.24	0.37	0.67	1.16	2.01	3.21	5.75	10.3	15.9	27.0	48.7	78.1	126	253	434

NOTES

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