

BNC Q 250/280

PLENUM FAN

With Backward Curved Wheels

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Kruger Ventilation Industries (India) Pvt. 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.



Why Kruger

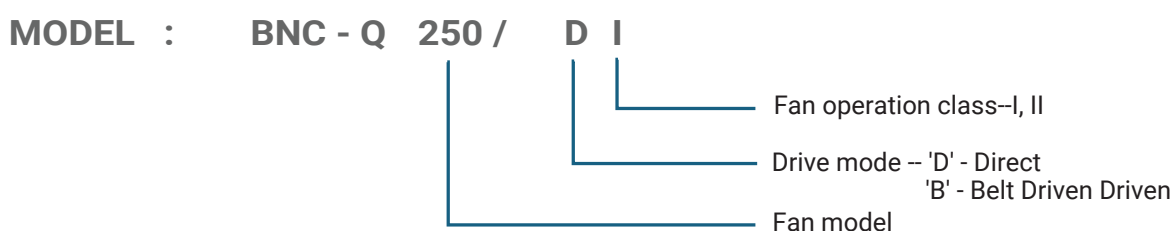
KRUGER has been a leading innovator and manufacturer of residential, commercial and industrial fan application solutions across Asia since 1985. Today with a direct presence in over 18 regions throughout Asia, world class R&D and manufacturing facilities, KRUGER are able to offer their customers unparalleled service and support at a local level. Our customers placed their trust in KRUGER.

BNC Q 250 / 280

PLENUM FAN – 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 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 makes it an excellent selection for new AHU, retrofit AHU as well as replacement application and for variable air volume systems.

NOMENCLATURE



TYPE / OPERATING LIMIT

Each fan type has its maximum operating speed and power due to its mechanical design. The operating limit of the BNC 250/280 is set according to the requirement of class I and II limit as defined in AMCA Standard 99.

For BNC 250, both Class I and II will be available.

For BNC 280, only Class I will be available.

TECHNICAL SPECIFICATION

Wheel

The wheels of BNC 250/280 have backward curved blades manufactured in hot rolled steel with polyester power 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 applications.

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 operation limits.

Balancing Quality

- All wheels are statically and dynamically balanced to ISO 1940 and AMCA 204-G2.5 standards.
- All fans, after assembly, are also trim-balanced to ISO 1940 and AMCA 204-G2.5 standards.
- Other balancing grades, apart from G2.5, are available upon request.

ACCESSORIES

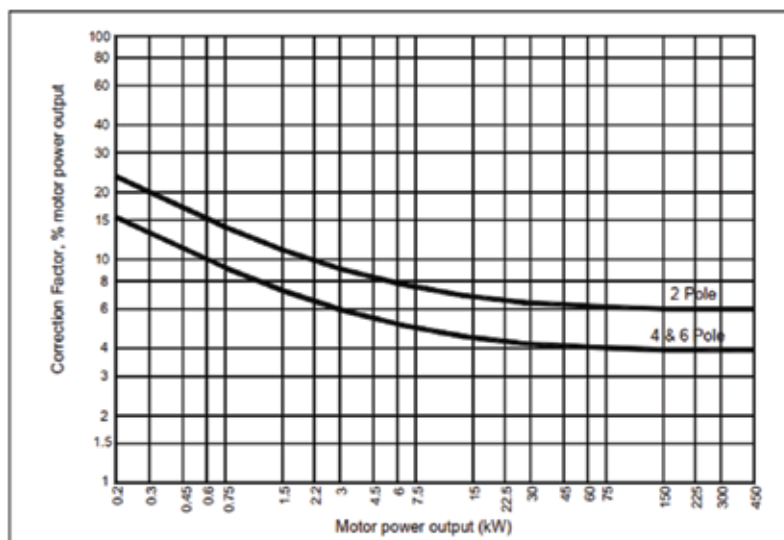
Inlet Guard

Inlet guards may be a requirement in some industrial safety regulations. This is 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.



PERFORMANCE

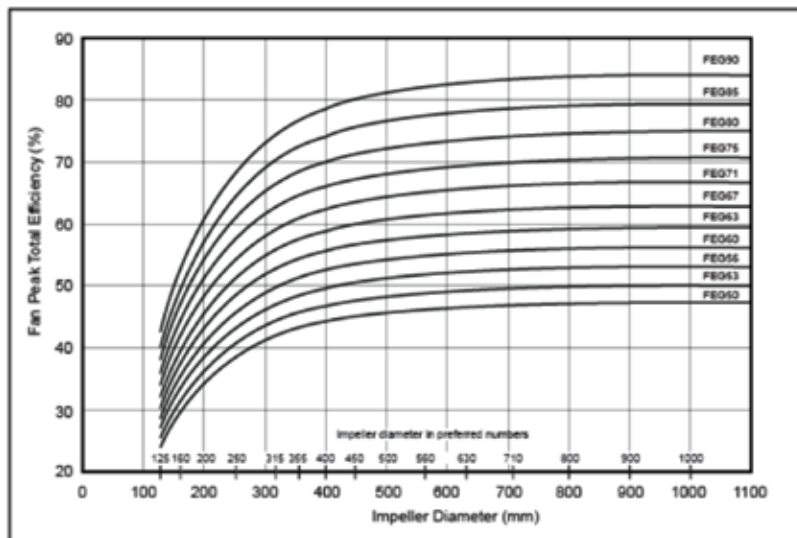
The air performance data shown on the fan curve is derived from tests conducted in accordance with AMCA Standard 210 Fig 15 installation Type A (free inlet and free outlet conditions).

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 always used, when comparing fan performance.

The fan FEG is classified in accordance with ISO 12759/AMCA 205.

Fan Efficiency Grades (FEG) for Fans without Drives (SI) – ISO 12759/AMCA205



NOISE

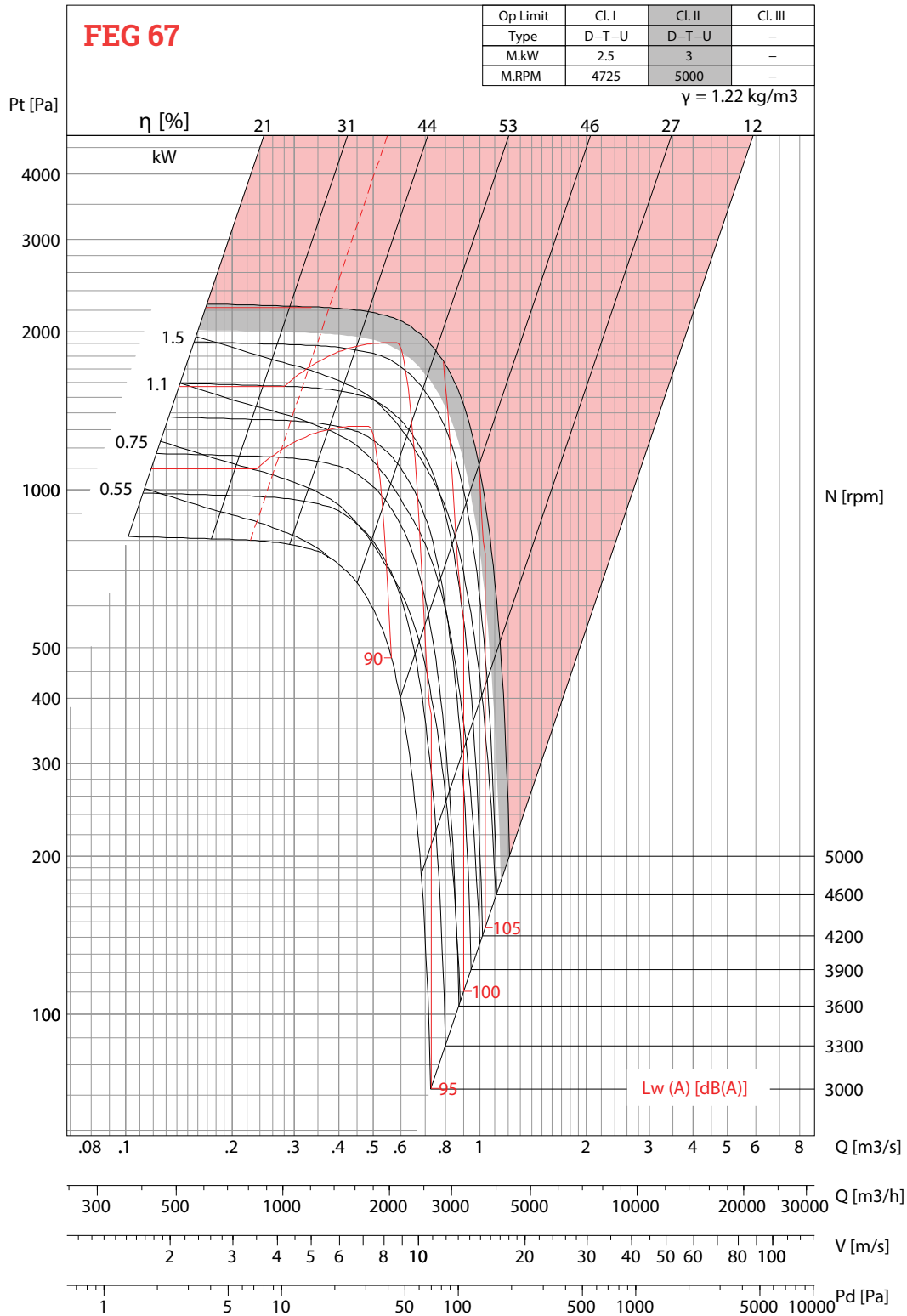
The noise levels shown on each diagram refers to the sound power, "A-weighted" values and the data are obtained at the outlet side from the tests conducted in accordance to AMCA 300. The noise levels are determined as follows:

- ✓ Sound power level – ("A" scale: $L_w(A)$ as catalogue.
- ✓ Octave band spectrum: $L_w = L_w(A) + L_w \text{ rel. dB}$ (refer to Kruger for more details).
- ✓ Sound pressure level:
 - a) Free field

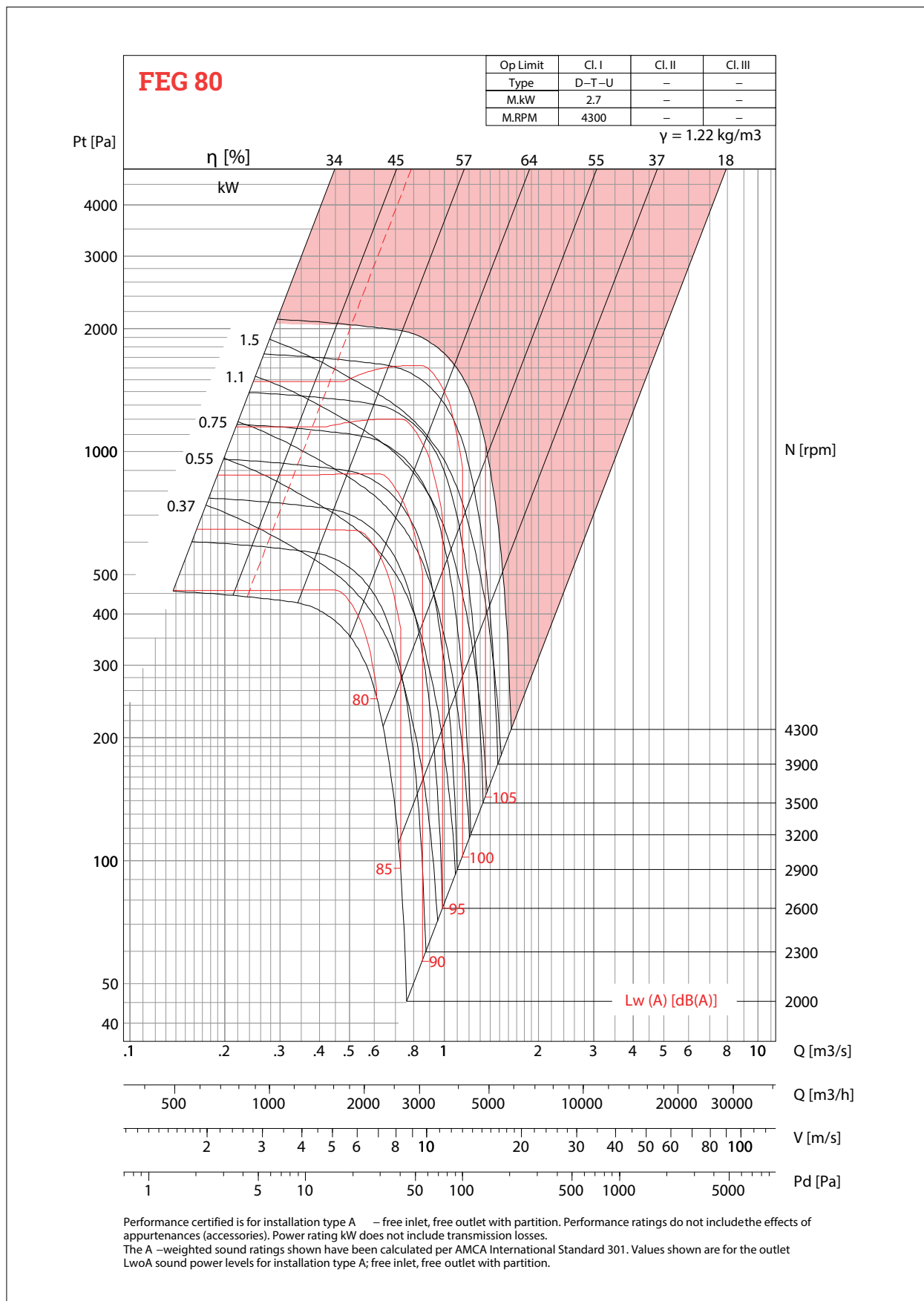
$$L_p(A) = L_w(A) - (20 \log_{10} d) - 11$$
 - b) Room conditions

$$L_p(A) = L_w(A) - (20 \log_{10} d) - 7$$

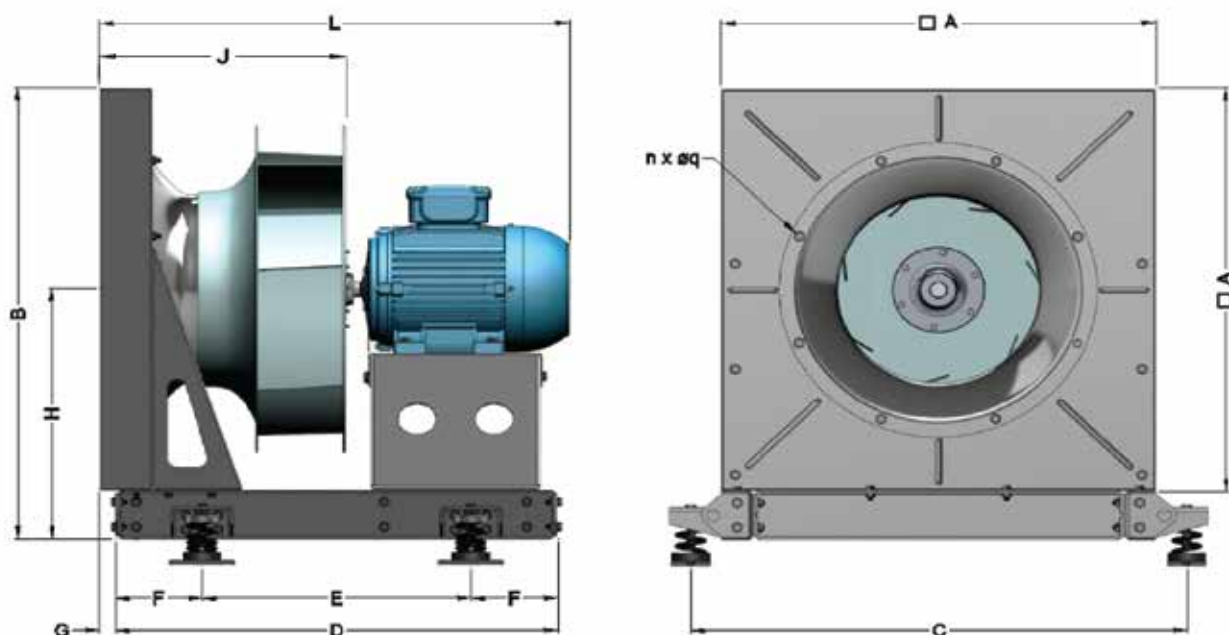
Where d =distance of fan (m)



Performance certified is for installation type A — free inlet, free outlet with partition. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
 The A —weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for the outlet Lw(A) sound power levels for installation type A; free inlet, free outlet with partition.



BNC Q 250/280 Dimensions



Model	A	B	C	D	E	n x øq	L			Frame size	F	G	H	J			Weight w/o Motor (Kg)
							Fan Type							Fan Type			
							P	R	Q					P	R	Q	
250	410	475	508	454	304	6 x 8			489	71	75	28	205			241	22
									518	80							
									563	90							
									578	100							
280	450	515	548	486	316	6 x 8			517	71	85	28	225			269	25
									546	80							
									591	90							
									606	100							

OPERATIONAL LIMITS

			250	280
Maximum Absorbed Power	CL. I	kW	2.2	2.7
	CL. II	kW	2.5	NA
	CL. III	kW	NA	NA
Maximum Fan Speed	CL. I	rpm	4725	4300
	CL. II	rpm	5000	
	CL. III	rpm	NA	
Temperature Range/Min. -20° C	All Classes	Max °C	55	55
Wheel	Diameter	mm	250	280
	$J=PD^2/4$	kgm ²	0.035	0.055
Weight	CL. I	kg	22	24.5
	CL. II	kg	22	NA
	CL. III	kg	NA	NA

KRUGER VENTILATION GROUP

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CAT078.ED0.KAG July 2026

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