Kanalventilator-
In-Line Mixed Fan

General Information

WMX 250PF to 1000PF
c/w 25 or 50mm acoustic as optional 11 diameters - 250, 315, 400, 450, 500,560, 630, 710, 800, 900 and 1000mm

In-line Mixed Fans

Performance

The in-line mixed flow fan has all the advantages of axial flow and centrifugal fans. i.e. straight airflow, light weight, compact, space saving design, easy installation, high-pressure stability, low noise level and low running costs. The fans are specially designed with built-in inlet cone to achieve high static efficiency and high volume flow. The performance range is up to 70,000 m3/hrs on air volume, at static pressure up to 3000 Pa.

Fan Casing

Fan casings are hot-dip galvanised. Flanges are rolled, the pitch circles of holes are in accordance with DIN 24154, R2.

Fan inlet and outlet can be fitted with matching flanges suitable for direct connection with flexible connectors that are designed for easy removal and installation. The fan casing design facilitates easy maintenance with convenient access to the impeller and motor drive. All steel components are supplied with zinc plated surface finishing as standard. For special applications, motors can be installed externally on the fan casing.

Acoustic Housing - Optional 50mm Acoustic Panel

Frame housing is made from extruded Aluminium profiles with flame retardant plastic or aluminium corners. The external side plates are made from pre-galvanized sheet metal with internal perforated galvanized sheet as standard. Epoxy coating as optional. Access panels are provided on each enclosure so that all removable parts can be assessed for maintenance purpose.

Cabinet housing is insulated to ensure low running noise levels. The 32 kg/m3 fibreglass internal acoustic lining has inert, non-hygroscopic, vermin moisture proof as well as asbestos and CFC free properties and does not support growth of bacteria. Servicing side door can be provided upon request. For weatherproof version, side plates are made of aluminium and a weather-hood is included.

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General Information

Fan Impeller

Wolter Mixed flow impellers are manufactured from sheet steel as standard.
Surface finish in epoxy paint as optional. The special design blade configuration guarantees high volume flow and static efficiency with low noise operation. Impellers are statically and dynamically balanced in accordance to AMCA 204 BV level 4 Standard.

Motor

Wolter uses standard closed squirrel cage motor with airstreams rated to IEC 34, if required also in accordance to EPACT. The standard motors have Class F and enclosure IP54 or IP55. Continuous operating ranges from –40°C to +40°C, other operating condition on demand. Multi speed versions with 2 or 3 speeds as optional, TAB or DUAL wounded are also available. The motor bearings have a L10 life. The motors are single/three phase, 50/60 Hz suitable for 220~240 or 380~415 volts. All other voltage can be supplied upon request.

Model with suffix “R” come with external rotor motors are in protection class IP44, IP54 available upon request.
The winding insulation corresponds to insulation Class F with thermal contacts, wired in series suitable for 5-step or 100% speed controllers. Maximum allowed voltage tolerance of plus and minus 10% is valid. Flying leads as standard. Special cable lengths and fans with mounted terminal box on request.

Accessories (optional)

The following accessories are available:

- Flexible connection
  The flexible connection consists of a gas-tight canvas.

- Inlet and outlet matching flange
  The hot dipped galvanized inlet and outlet matching flange can be ordered to suit fan casing and for easy connection to flexible connector.

- Dampers
  The self-working dampers with blades made of weatherproof plastic and aluminium frames has to be mounted at the suction side. Motor driven volume control dampers “JK” made of strong extruded aluminium profile are also available at Wolter with any dimension.

- Motor with 100% speed controllable.
- Motor with protection through thermal contact
- Protective guard
- Anti-vibration mounting isolators

Sound Levels

In order to make possible an assessment of sound projection adequate to human ear the A-assessed description of sound levels according to DIN 45635 has been chosen.

The ascertaining of the sound power level follows the enveloping surfaces method according to DIN 45635 section 38 or the channel technique DIN 45635, section 9.

The sound power level at the different octave band mid-frequencies relevant for the interpretation of sound absorbers can be calculated by means of an equation.

Kanalventilator-
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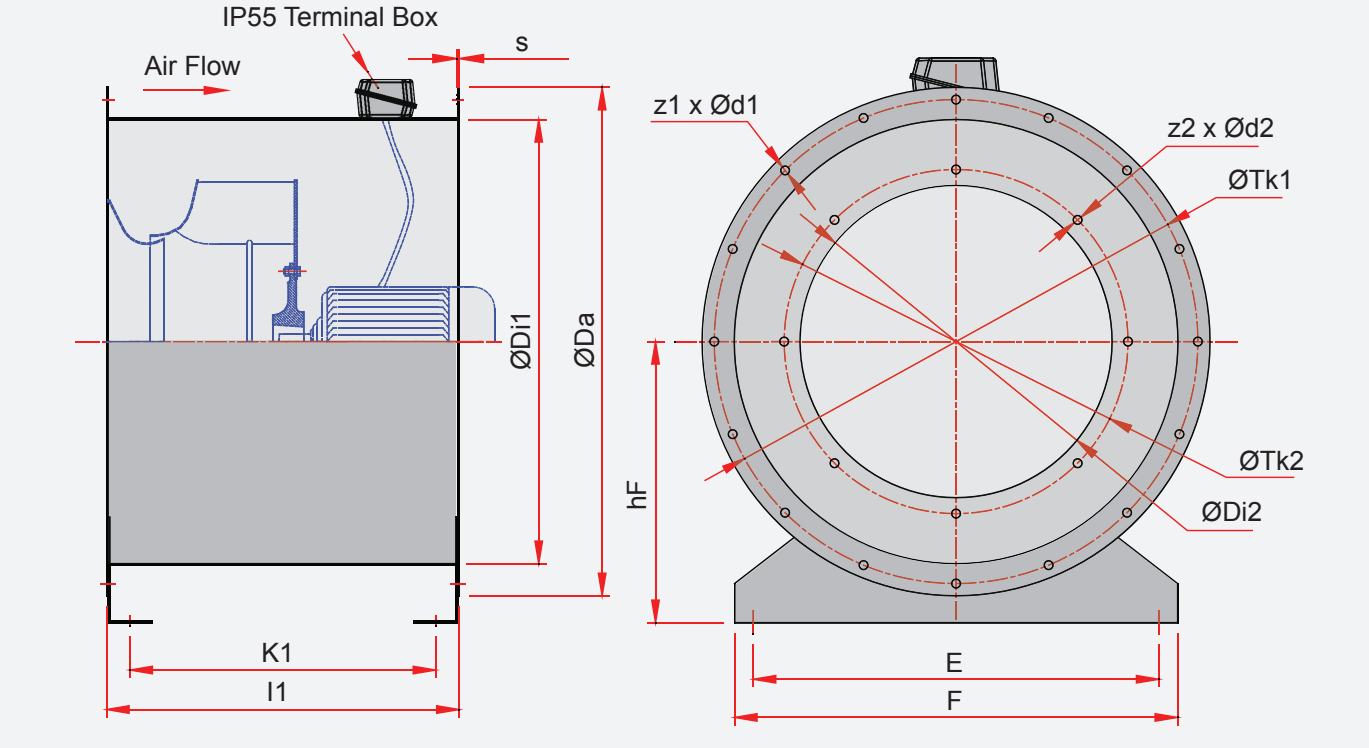
Dimensions



Baugröße size	Da [mm]	Di1 [mm]	Di2 [mm]	hF [mm]	z1 x d1 [mm]	z2 x d2 [mm]	Tk1 [mm]	Tk2 [mm]	E [mm]	F [mm]
250	438	359	250	225	8 x 12	8 x 12	405	277	305	355
280	484	401	280	250	12 x 12	8 x 12	448	322	350	400
315	534	450	315	280	12 x 12	8 x 12	497	366	400	450
355	584	504	355	315	12 x 12	8 x 12	551	405	440	500
400	664	565	400	345	16 x 14	12 x 12	629	448	500	560
450	734	634	450	400	16 x 14	12 x 12	698	497	570	630
500	814	711	500	450	16 x 14	12 x 12	775	551	650	710
560	904	797	560	500	12* x 14	16 x 14	861	629	730	800
630	1004	894	630	580	12* x 14	16 x 14	958	698	830	900
710	1105	1003	710	630	12* x 14	16 x 14	1067	775	930	990
800	1245	1125	800	690	16* x 18	12* x 14	1200	861	1050	1110
900	1370	1250	900	750	16* x 18	12* x 14	1337	958	1180	1240
1000	1525	1405	1000	830	16* x 18	12* x 14	1475	1067	1330	1390

	LH/1			LH/2			
Baugröße size	s [mm]	k1 [mm]	l1 [mm]	s [mm]	k1 [mm]	l1 [mm]	
250	2	356	420				
280	2	371	435				
315	2	371	435				
355	2	396	470				
400	2	396	470	3	624	700	
450	2	396	470	3	624	700	
500	2,5	395	470	2,5	490	565	
560	2,5	385	470	3	614	700	
630	3	479	565	4	612	700	
710	3	479	565	4	692	780	
800	4	592	700	4	892	1000	
900	4	592	700	4	892	1000	
1000				4	892	1000	

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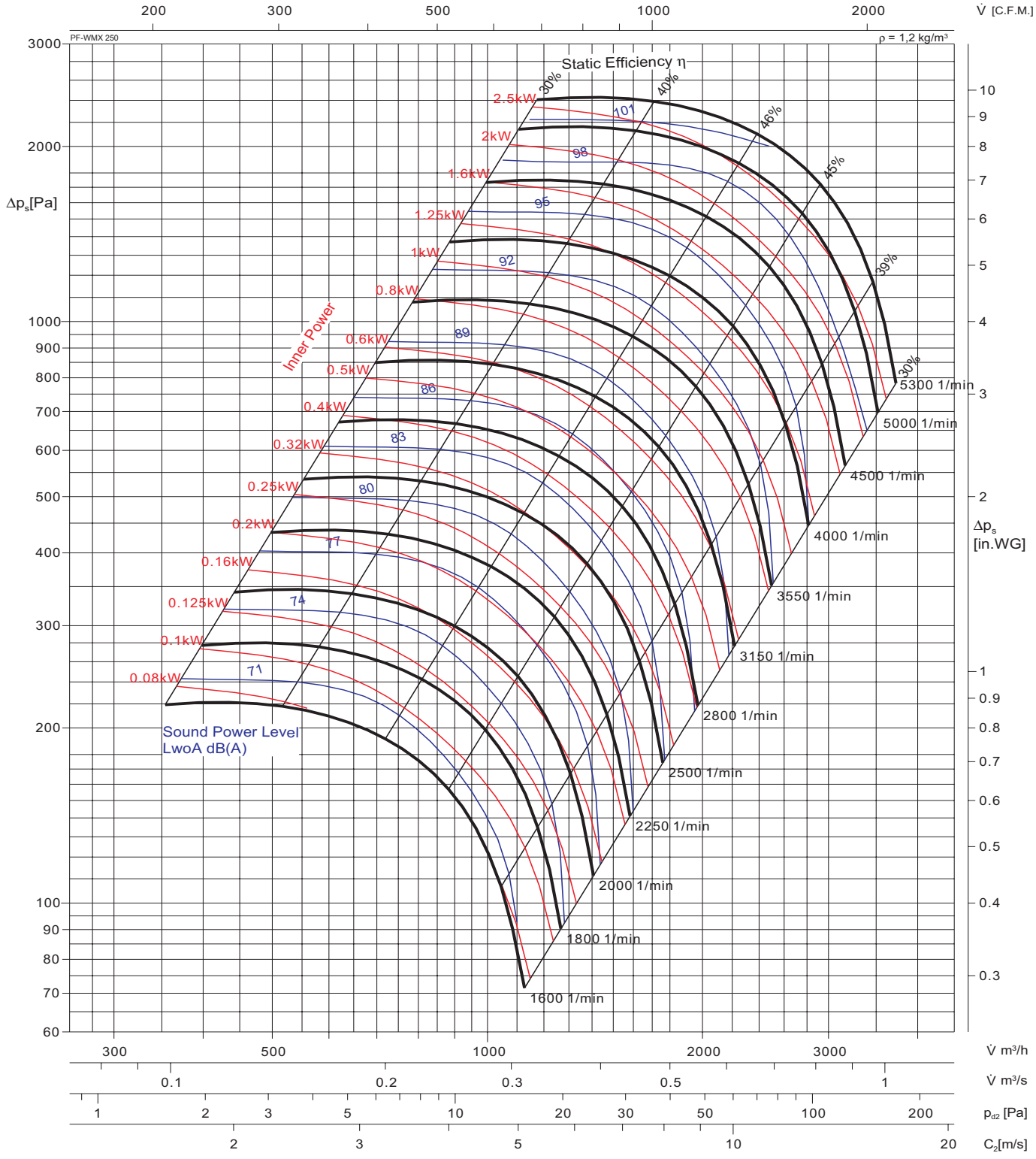
Kanalventilator-
In-Line Mixed Fan

PF-WMX 250



Drehzahl max.	n_{max}	= 5300 min^{-1}
Laufraddurchmesser	D_3	= 252 mm
Schaufelzahl	z	= 8

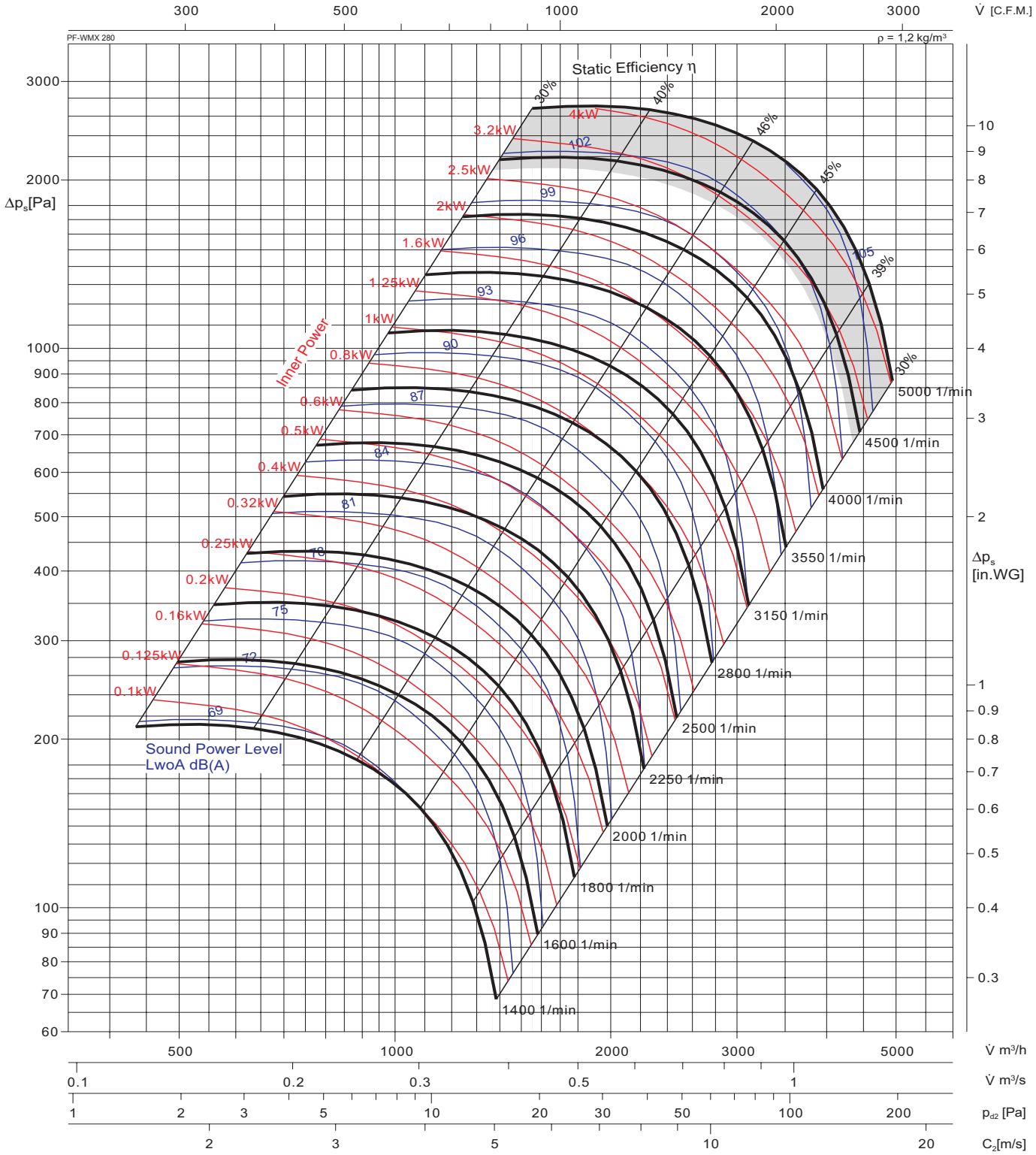
*Test Method per AMCA 210 with one side open.

Relative Frequenzspektren
relative frequency spectrumΔL in dB/Okt

Oktavb. -Mittenfreq. / Octave b. midfreq. [Hz]							
63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
-2	-7	-8	-13	-15	-19	-25	-28

Kanalventilator-
In-Line Mixed Fan

PF-WMX 280



Drehzahl max.	n_{max}	= 4400 min^{-1}
Drehzahl max. verst.	n_{mv}	= 5000 min^{-1}
Laufraddurchmesser	D_3	= 284 mm

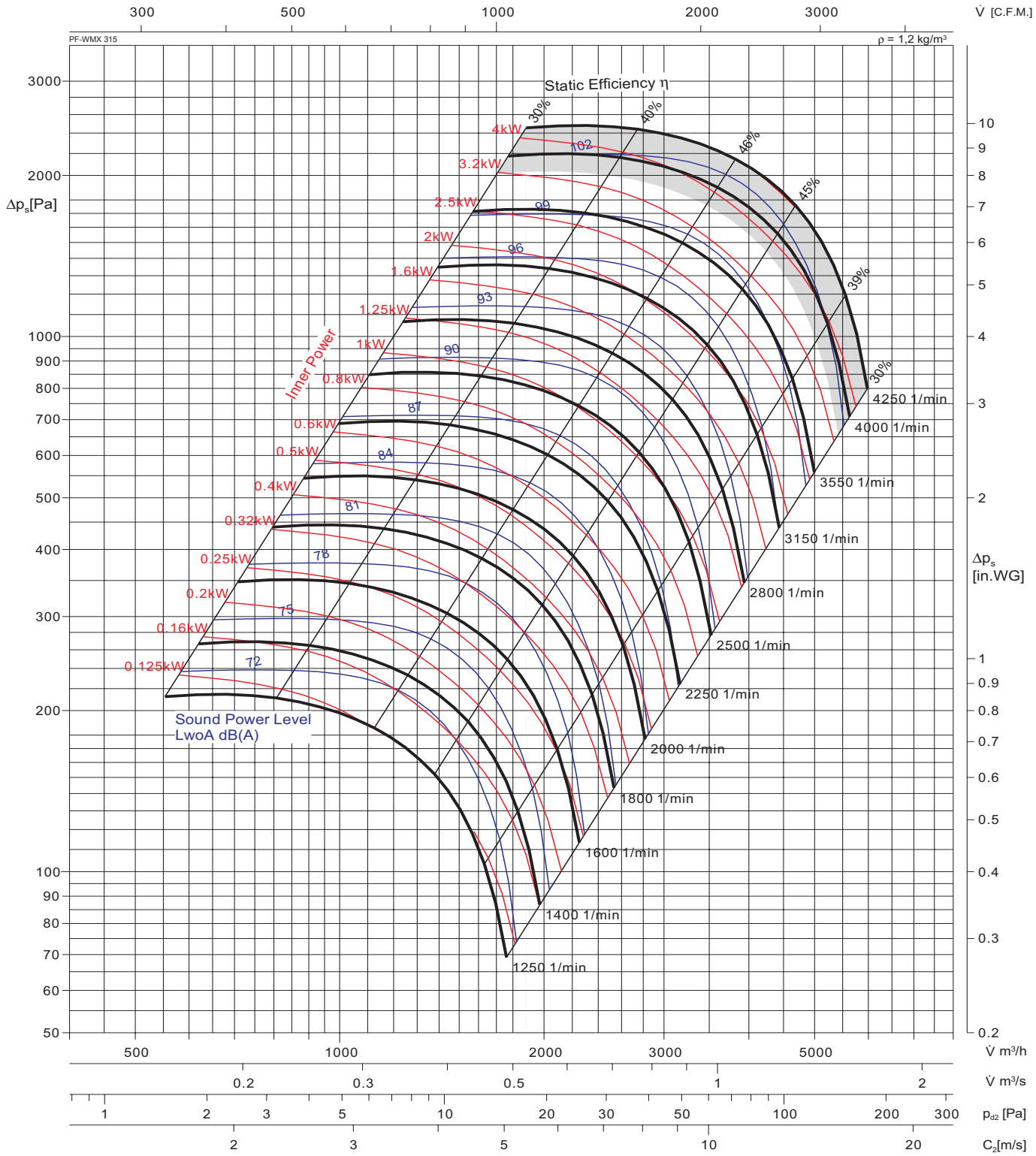
*Test Method per AMCA 210 with one side open.

Relative Frequenzspektren
relative frequency spectrumΔL in dB/Okt

Oktavb. -Mittenfreq. / Octave b. midfreq. [Hz]							
63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
-2	-7	-8	-13	-15	-19	-25	-28

Kanalventilator-
In-Line Mixed Fan

PF-WMX 315



Drehzahl max.	n_{max}	= 3850 min^{-1}
Drehzahl max. verst.	n_{mv}	= 4250 min^{-1}
Laufraddurchmesser	D_3	= 319 mm

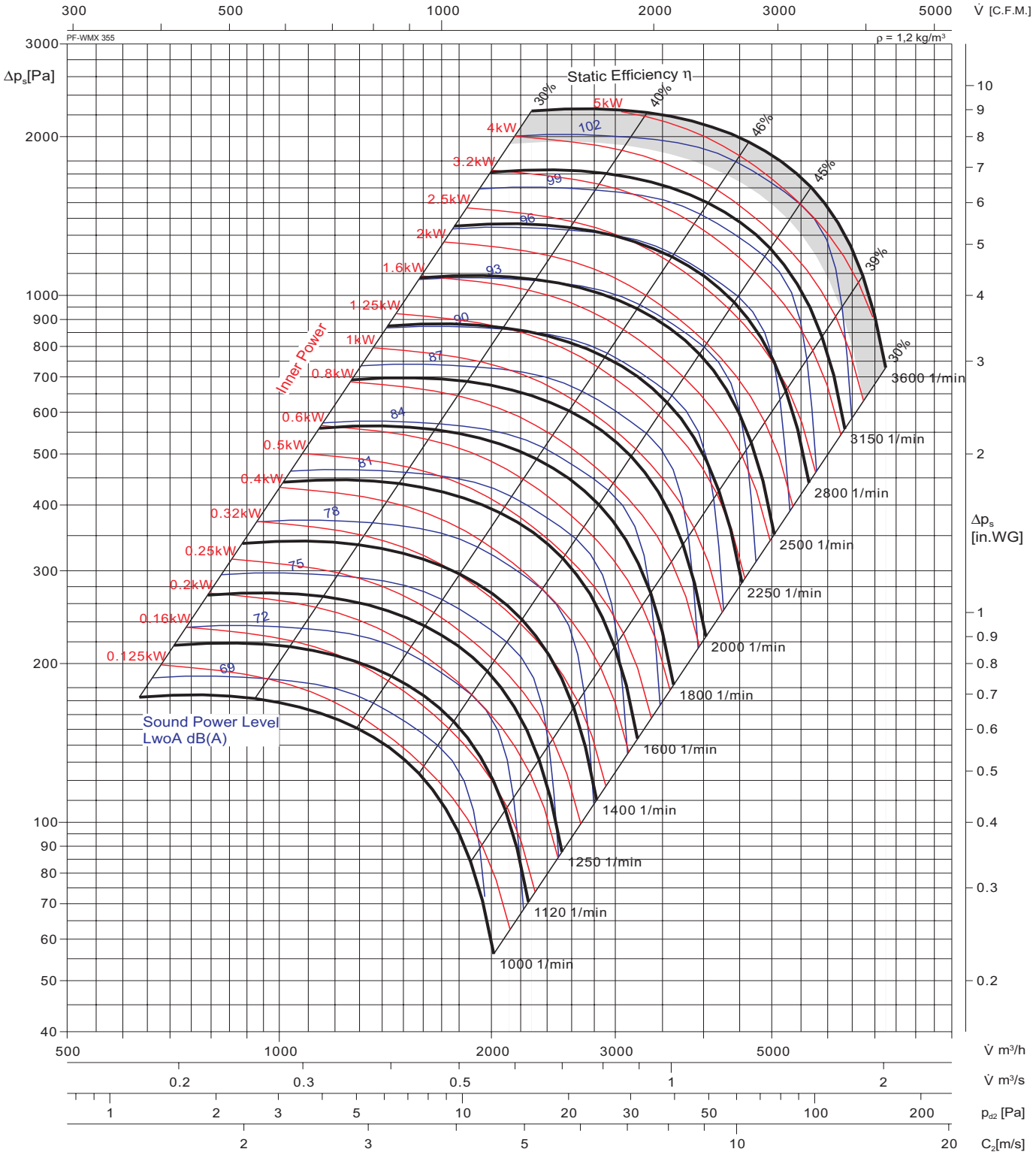
*Test Method per AMCA 210 with one side open.

Relative Frequenzspektren
relative frequency spectrumΔL in dB/Okt

Oktavb. -Mittenfreq. / Octave b. midfreq. [Hz]							
63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
-3	-7	-8	-13	-15	-19	-25	-28

Kanalventilator-
In-Line Mixed Fan

PF-WMX 355



Drehzahl max.	n_{max}	= 3360 min^{-1}
Drehzahl max. verst.	n_{mv}	= 3600 min^{-1}
Laufraddurchmesser	D_3	= 359 mm

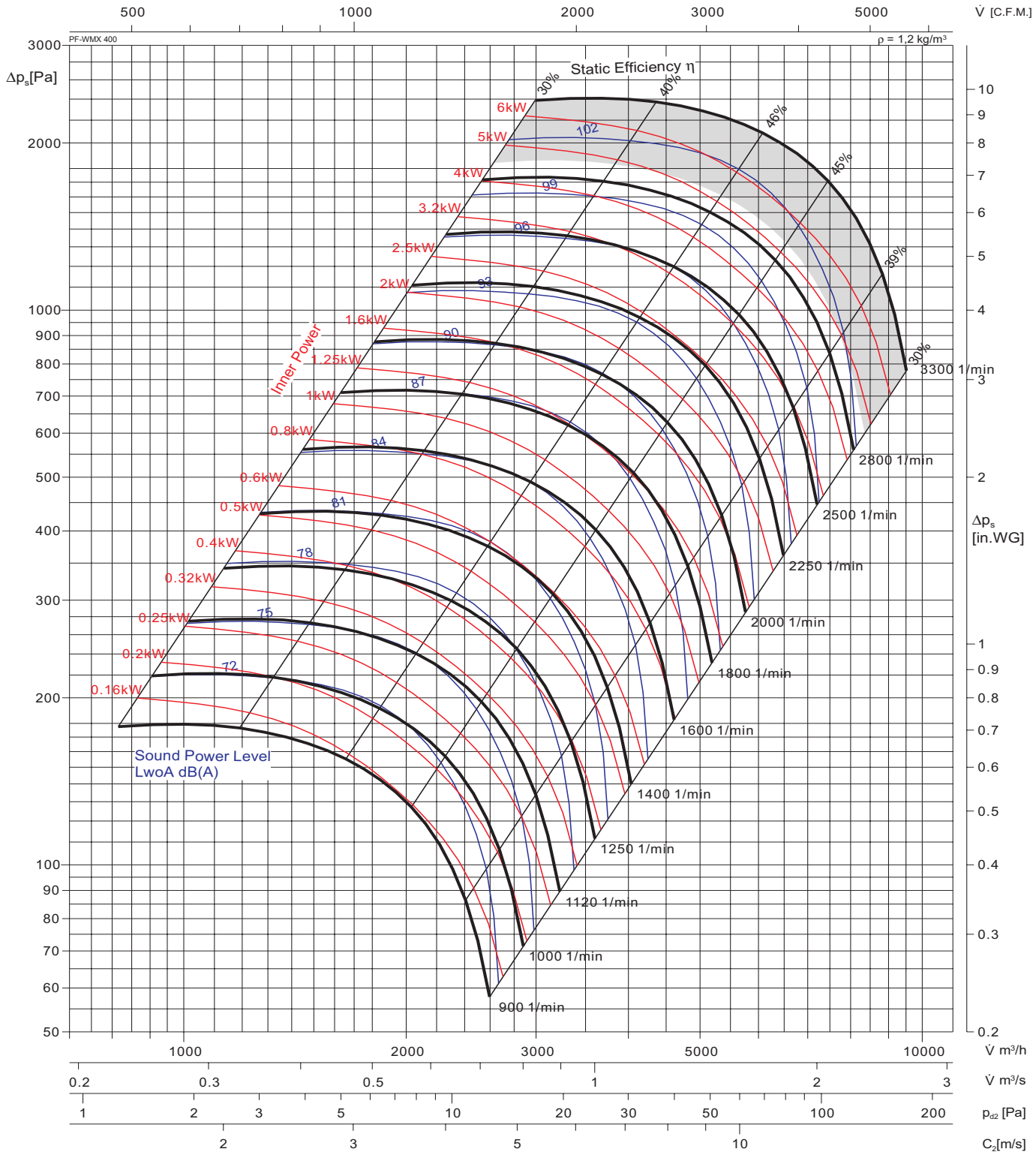
*Test Method per AMCA 210 with one side open.

Relative Frequenzspektren
relative frequency spectrumΔL in dB/Okt

Oktavb. -Mittenfreq. / Octave b. midfreq. [Hz]							
63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
-3	-7	-8	-13	-15	-19	-25	-28

Kanalventilator-
In-Line Mixed Fan

PF-WMX 400



Drehzahl max.	n_{max}	= 2870 min^{-1}
Drehzahl max. verst.	n_{mv}	= 3300 min^{-1}
Laufraddurchmesser	D_3	= 404 mm

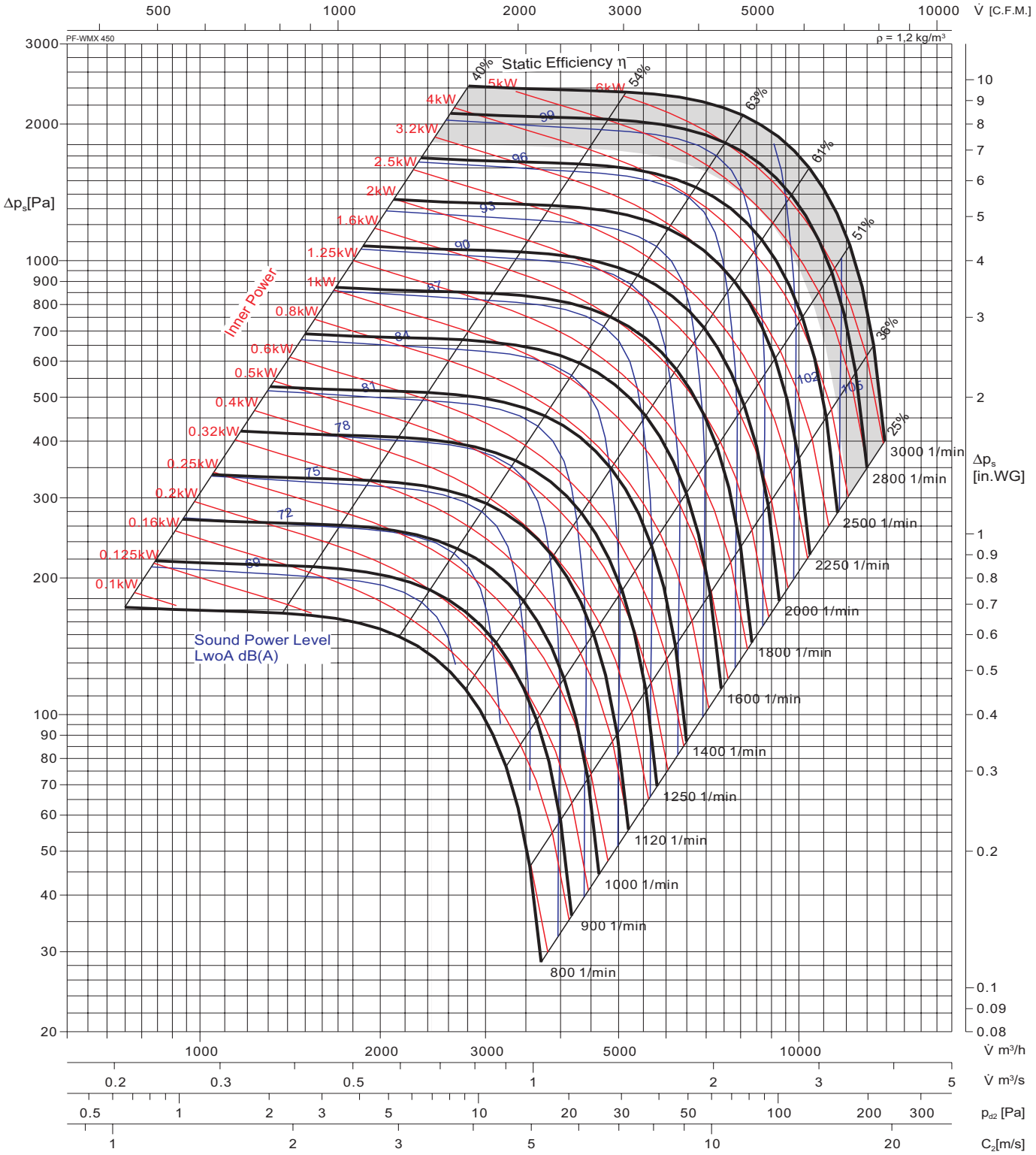
*Test Method per AMCA 210 with one side open.

Relative Frequenzspektren
relative frequency spectrumΔL in dB/Okt

Oktavb. -Mittenfreq. / Octave b. midfreq. [Hz]							
63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
-3	-7	-8	-13	-15	-19	-25	-28

Kanalventilator-
In-Line Mixed Fan

PF-WMX 450



Drehzahl max.	n_{max}	= 2620 min^{-1}
Drehzahl max. verst.	n_{mv}	= 3000 min^{-1}
Laufraddurchmesser	D_3	= 454 mm

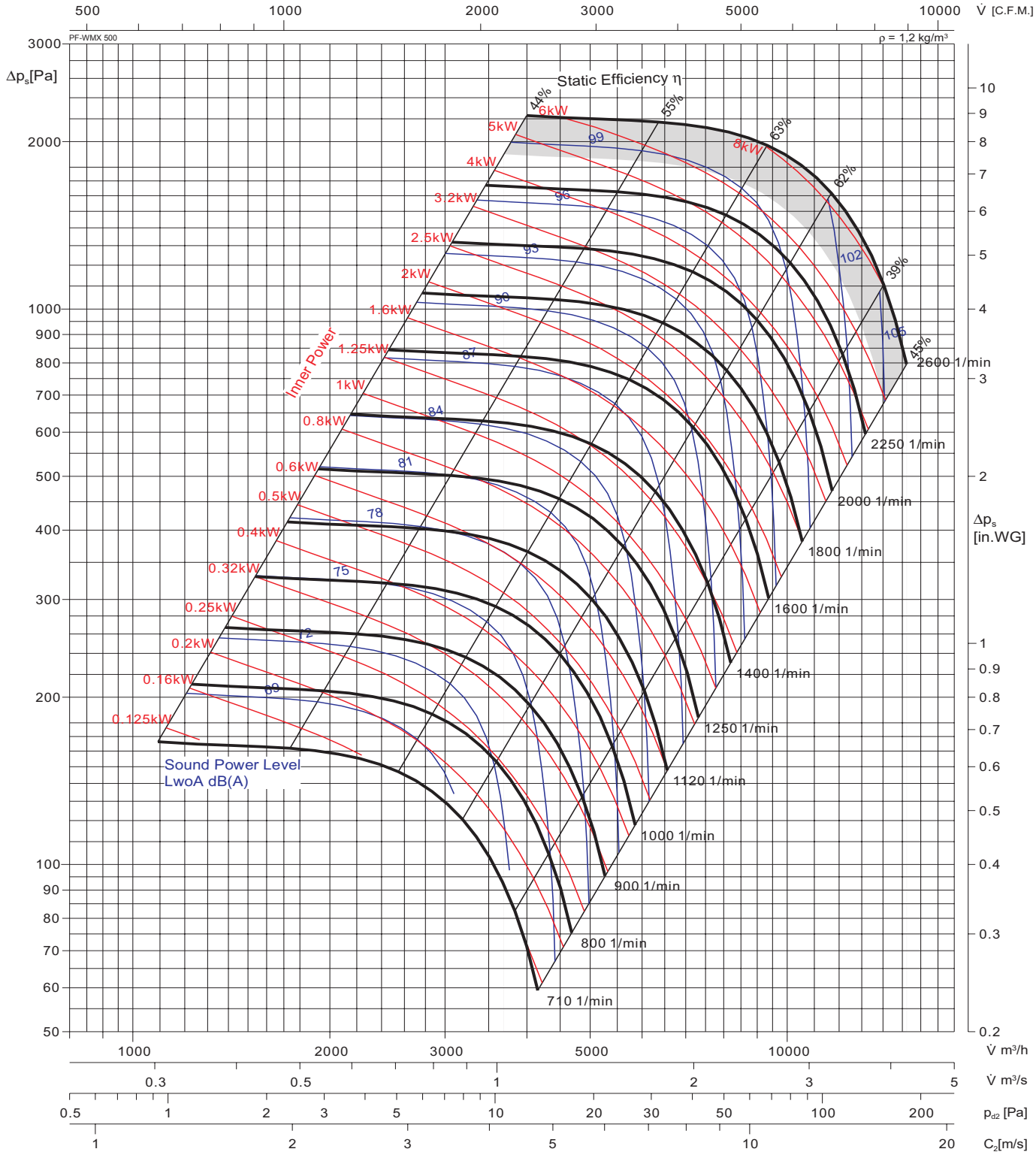
*Test Method per AMCA 210 with one side open.

Relative Frequenzspektren
relative frequency spectrumΔL in dB/Okt

Oktavb. -Mittenfreq. / Octave b. midfreq. [Hz]							
63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
-3	-7	-8	-13	-15	-19	-25	-28

Kanalventilator-
In-Line Mixed Fan

PF-WMX 500



Drehzahl max.	n_{max}	= 2420 min^{-1}
Drehzahl max. verst.	n_{mv}	= 2600 min^{-1}
Laufraddurchmesser	D_3	= 510 mm

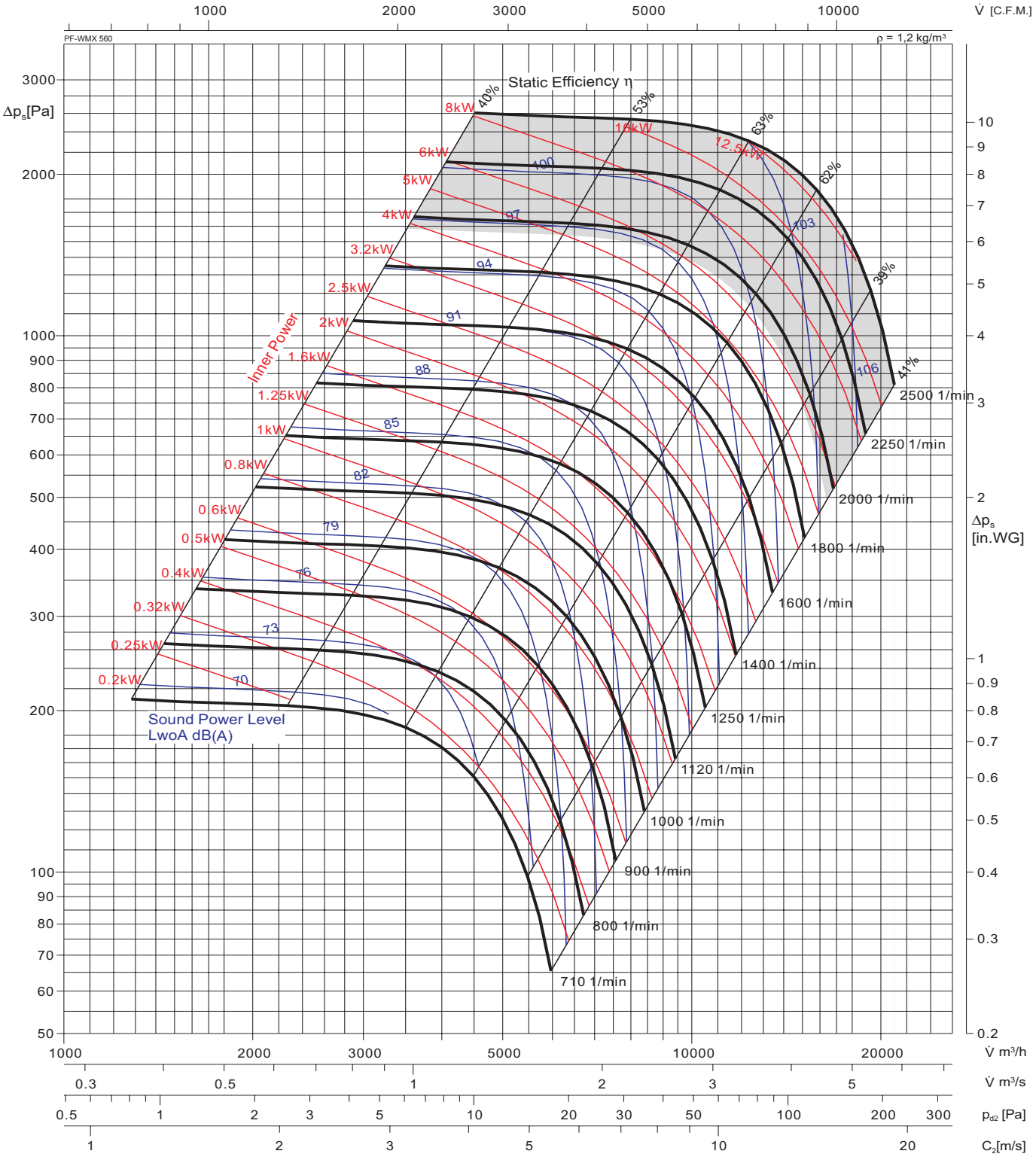
*Test Method per AMCA 210 with one side open.

Relative Frequenzspektren
relative frequency spectrumΔL in dB/Okt

Oktavb. -Mittenfreq. / Octave b. midfreq. [Hz]							
63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
-2	-9	-7	-12	-14	-18	-24	-27

Kanalventilator-
In-Line Mixed Fan

PF-WMX 560



Drehzahl max. n_{max} = 1950 min^{-1}

Drehzahl max. verst. n_{mv} = 2500 min^{-1}

Laufraddurchmesser D_3 = 570 mm

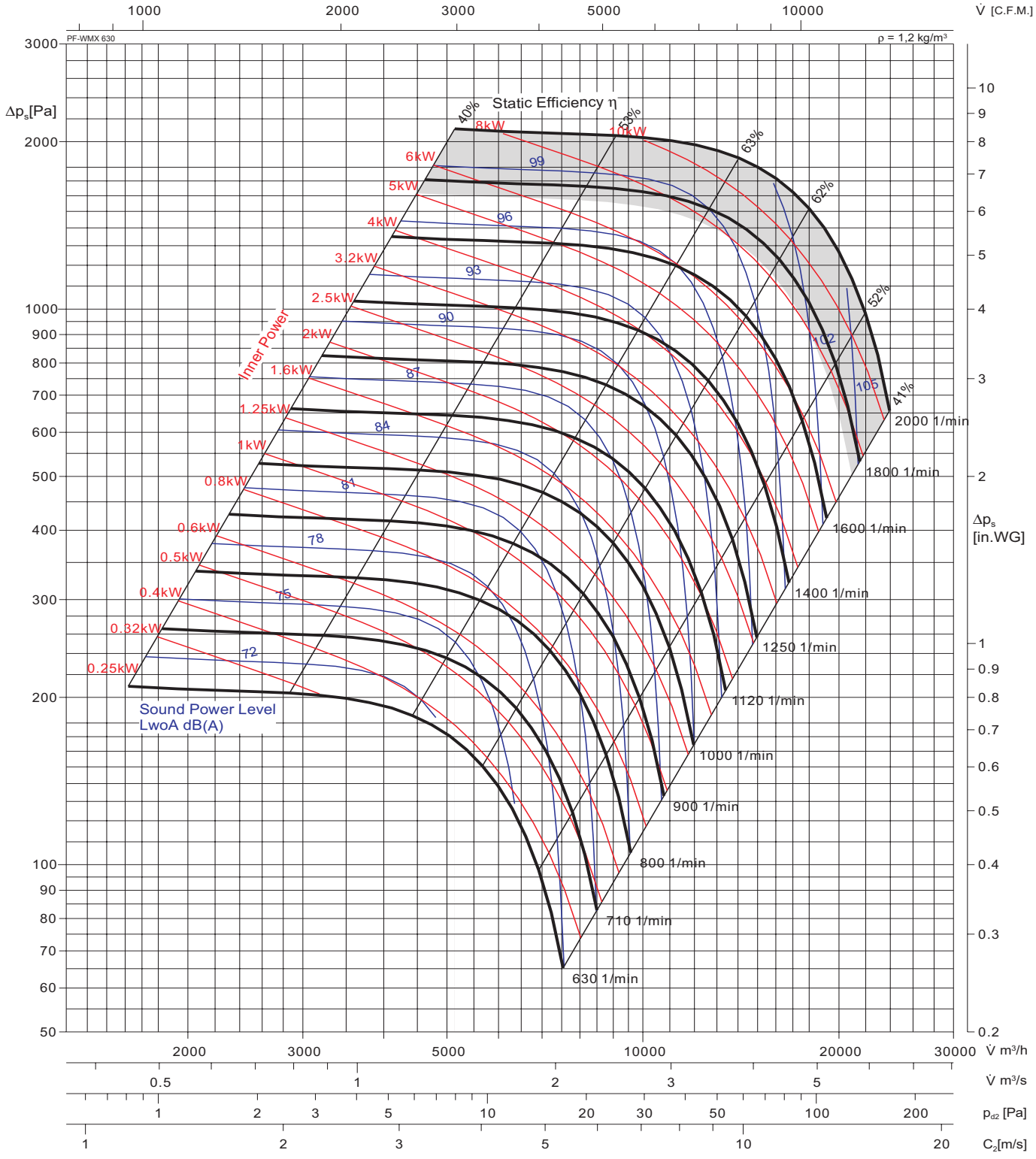
*Test Method per AMCA 210 with one side open.

Relative Frequenzspektren
relative frequency spectrumΔL in dB/Okt

Oktavb. -Mittenfreq. / Octave b. midfreq. [Hz]							
63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
-2	-7	-8	-13	-15	-19	-25	-28

Kanalventilator-
In-Line Mixed Fan

PF-WMX 630



Drehzahl max.	n_{max}	= 1750 min^{-1}
Drehzahl max. verst.	n_{mv}	= 2000 min^{-1}
Laufraddurchmesser	D_3	= 640 mm

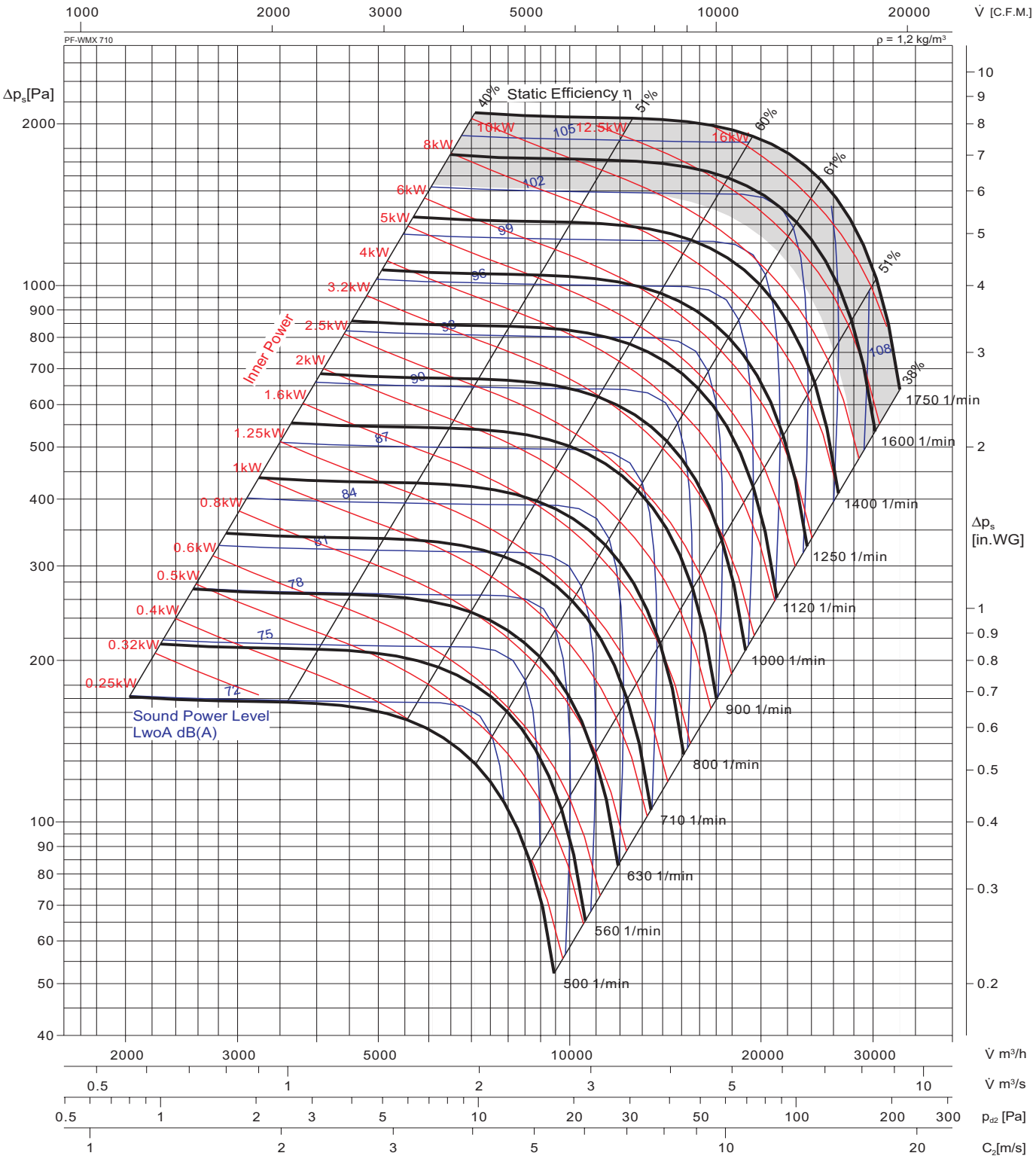
*Test Method per AMCA 210 with one side open.

Relative Frequenzspektren
relative frequency spectrumΔL in dB/Okt

Oktavb. -Mittenfreq. / Octave b. midfreq. [Hz]							
63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
-2	-7	-8	-13	-15	-19	-25	-28

Kanalventilator-
In-Line Mixed Fan

PF-WMX 710



Drehzahl max.	n_{max}	= 1500 min^{-1}
Drehzahl max. verst.	n_{mv}	= 1750 min^{-1}
Laufraddurchmesser	D_3	= 718 mm

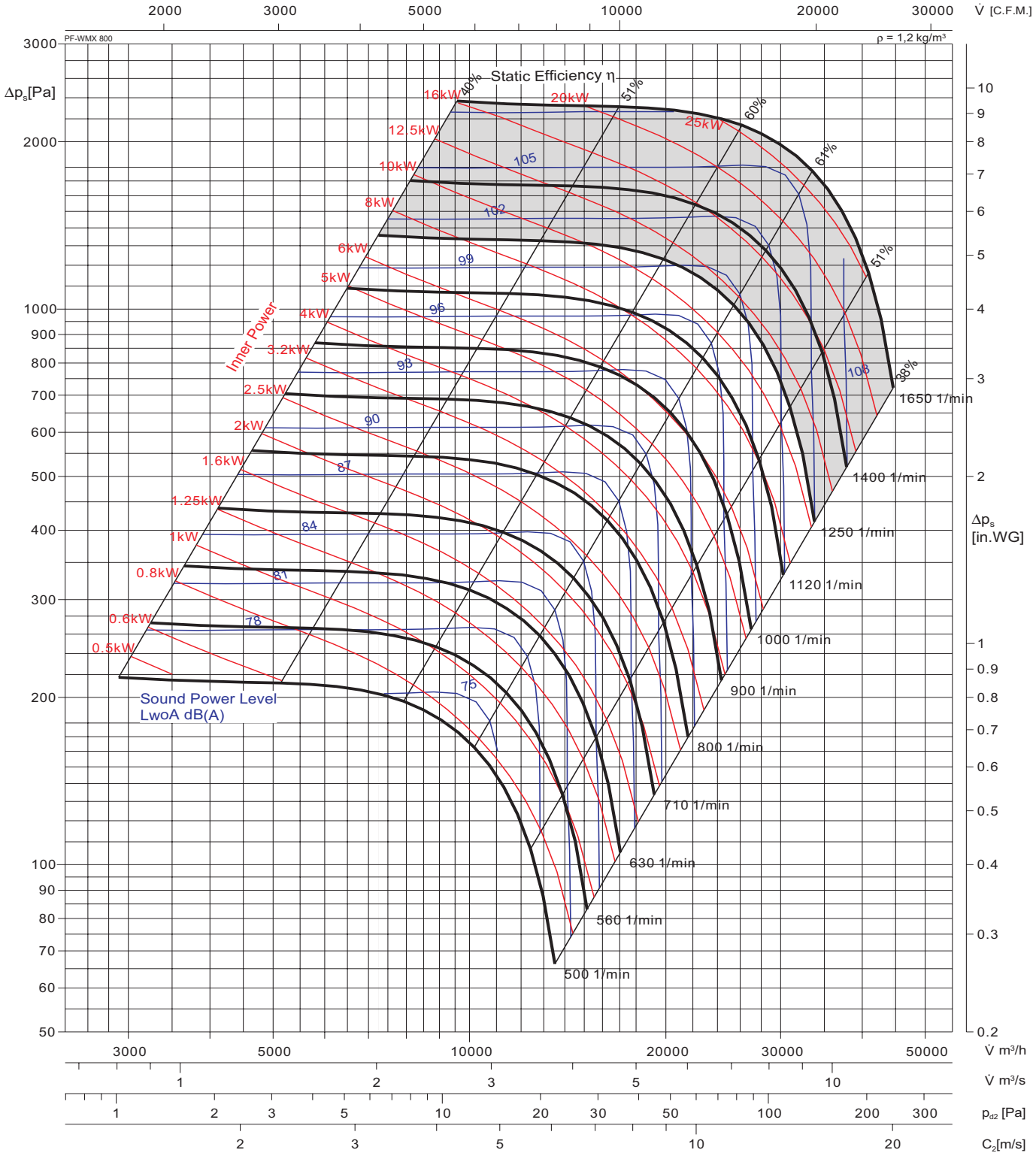
*Test Method per AMCA 210 with one side open.

Relative Frequenzspektren
relative frequency spectrumΔL in dB/Okt

Oktavb. -Mittenfreq. / Octave b. midfreq. [Hz]							
63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
-2	-7	-8	-13	-15	-19	-25	-28

Kanalventilator-
In-Line Mixed Fan

PF-WMX 800



Drehzahl max.	n_{max}	= 1250 min^{-1}
Drehzahl max. verst.	n_{mv}	= 1650 min^{-1}
Laufraddurchmesser	D_3	= 808 mm

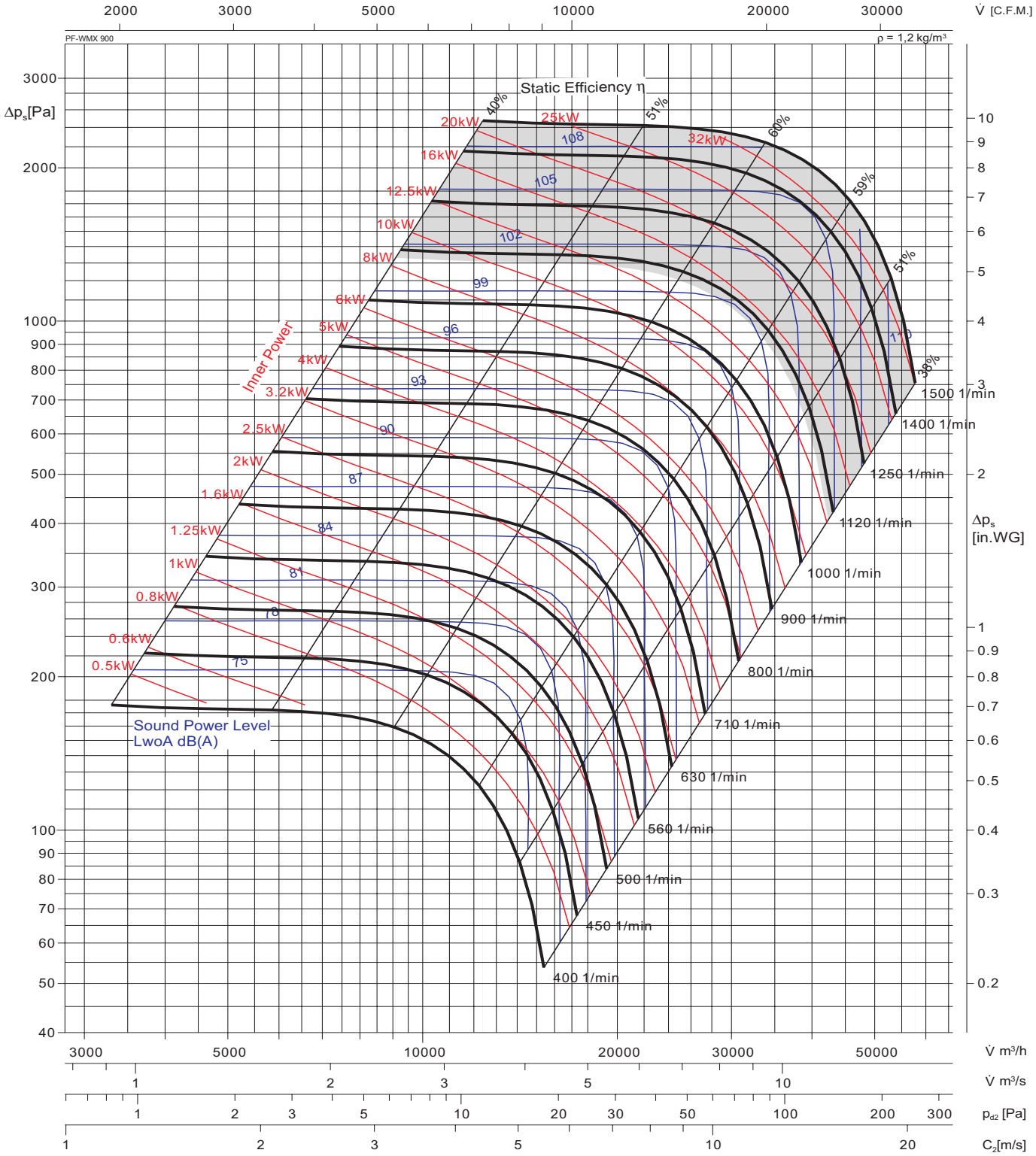
*Test Method per AMCA 210 with one side open.

Relative Frequenzspektren
relative frequency spectrumΔL in dB/Okt

Oktavb. -Mittenfreq. / Octave b. midfreq. [Hz]							
63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
-2	-7	-8	-13	-15	-19	-25	-28

Kanalventilator-
In-Line Mixed Fan

PF-WMX 900



Drehzahl max.	n_{max}	= 1100 min^{-1}
Drehzahl max. verst.	n_{mv}	= 1500 min^{-1}
Laufraddurchmesser	D_3	= 905 mm

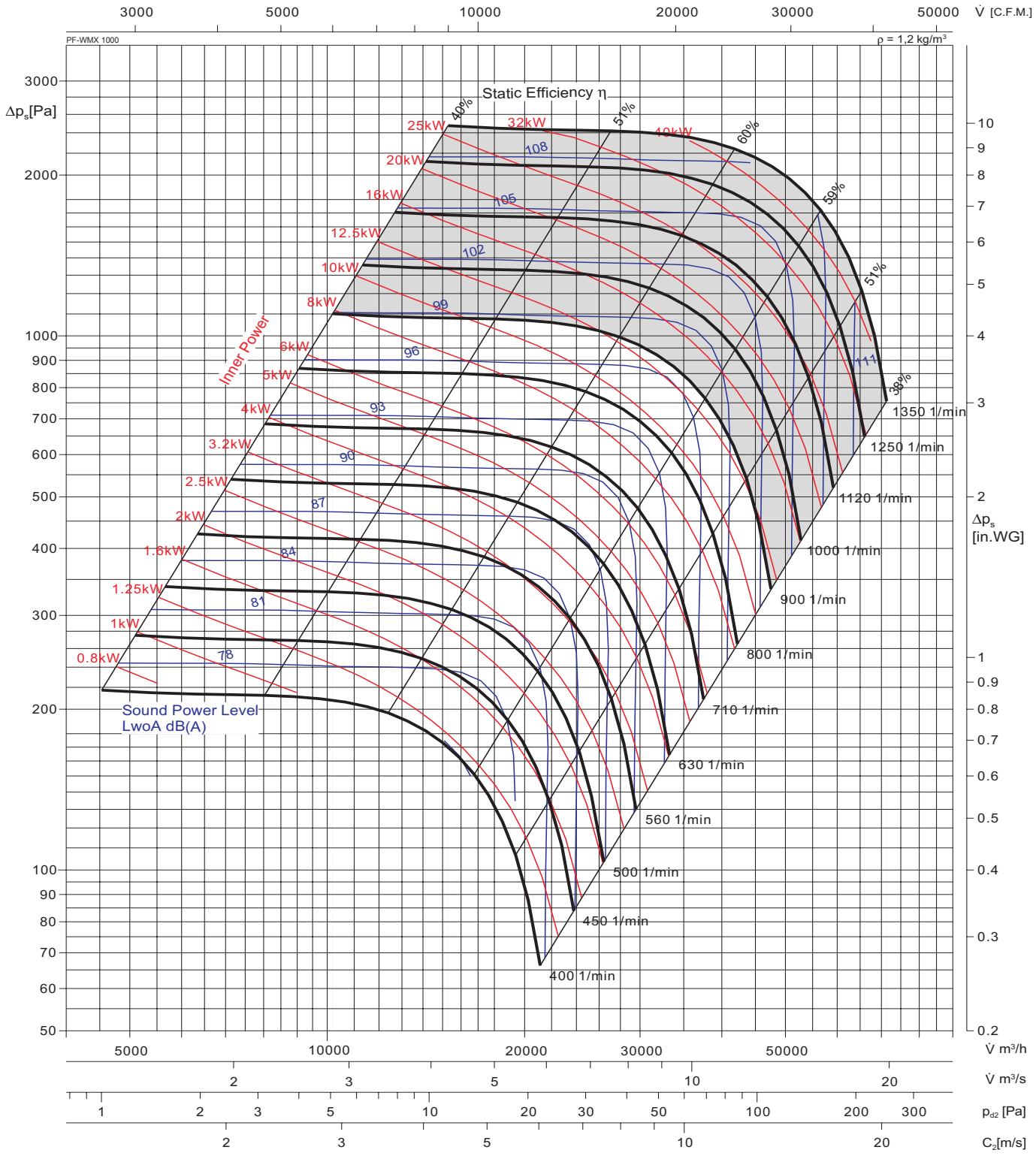
*Test Method per AMCA 210 with one side open.

Relative Frequenzspektren
relative frequency spectrumΔL in dB/Okt

Oktavb. -Mittenfreq. / Octave b. midfreq. [Hz]							
63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
-2	-7	-8	-13	-15	-19	-25	-28

Kanalventilator-
In-Line Mixed Fan

PF-WMX 1000



Drehzahl max.	n_{max}	= 900 min^{-1}
Drehzahl max. verst.	n_{mv}	= 1350 min^{-1}
Laufraddurchmesser	D_3	= 1000 mm

*Test Method per AMCA 210 with one side open.

Relative Frequenzspektren
relative frequency spectrumΔL in dB/Okt

Oktavb. -Mittenfreq. / Octave b. midfreq. [Hz]							
63	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
-2	-7	-8	-13	-15	-19	-25	-28

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