Turbo Pressure -
Chemical Resistant Centrifugal Fan

CHEM ... Series: Direct Driven & Belt Driven

Air in Motion.

Wolter Fans.

R08.T

Turbo Pressure Fans

Fan code

CHEM 250 ST - 400 - 100 ST

- Material:
  - ST = Steel
  - PP = PP Plastic
  - GRP = Fiber Glass
- Inlet Size
- Impeller Size
- Material:
  - ST = Steel
  - PP = PP Plastic
  - GRP = Fiber Glass
- Casing Size
- Turbo pressure type
- Chemical resistant fan

Applications

Wolter CHEM Turbo Pressure Fan Series single stage pressure blower is designed for combustion, air, fluid bed aeration, cooling, drying and many process system applications. It is also commonly used in pneumatic conveying systems and to handle heavy corrosive fumes, vapours, contaminated air and aggressive gases.

An extremely wide performance range is provided by a variety of wheel / housing combinations.

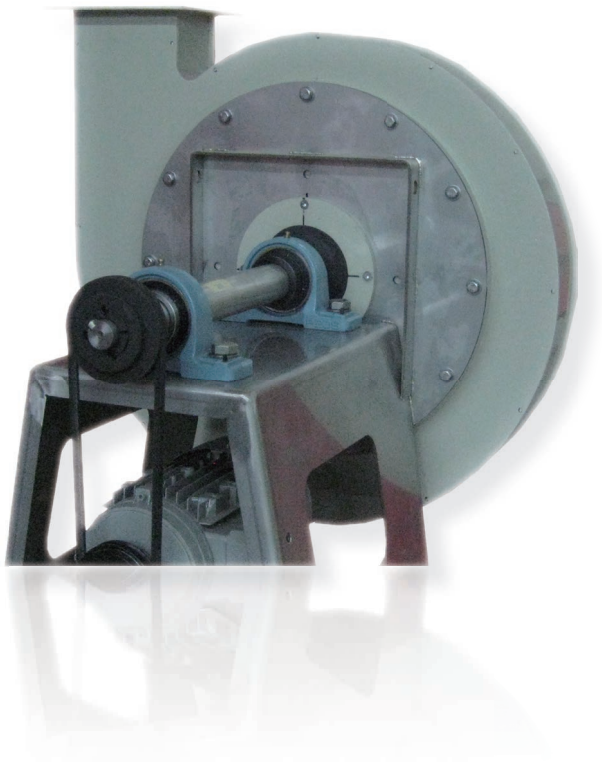
The CHEM Turbo Pressure Fan Series is available in 16 discharge positions to suit most every application. In addition to direct drive, the CHEM Turbo Pressure Fan Series is also available in belt drive.

The most common application standard to provide combustion air. This model has a flanged inlet for attachment of inlet filter, silencer or piping.

To handle process air in a refinery. It is fitted with optional shaft and bearing guard and extended lubrication lines. Customer specified corrosion resistant epoxy coating was applied to all internal and external surfaces.

The belt driven pressure series is used on the clean side of a dust collector. It is shown with optional flanged inlet.

These series can be either direct or belt drive for service in a chemical plant. Depend on its application, the casing, impeller and steel stand can be manufactured in steel, stainless steel, polypropylene, GRP etc and phenolic coating on the exterior steel.



Turbo Pressure Fans

Advanced Design Features

Rugged Housings

Casing and pedestals are fabricated of heavy gauge material, continuously welded and rigidly braced. They will stand up to the rigors of strenuous duty, delivering smooth vibration-free performance. Removable inlet cover plate provides access to the wheel.

Slip-Fit Inlets

The standard slip-fit inlet facilitates-field mounting of either sleeves or flexible connectors. Flanged inlets and venture inlets are optional.

Shaft & Bearings

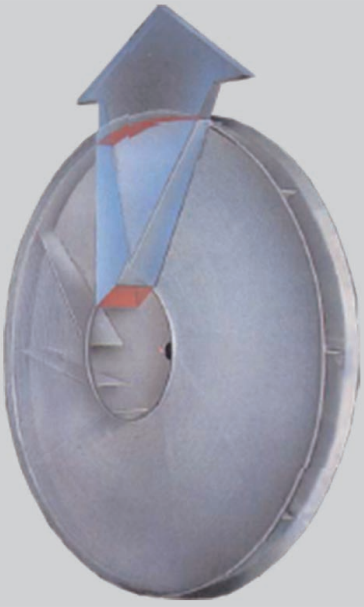
Oversized shafts with a critical speed at least 1.35 times maximum RPM. Bearings are heavy, industrial duty ball or roller in cast iron pillow blocks.

Lightweight Impeller

Exclusive “constant velocity” impellers substantially reduce loads on the motor. The wheels are mounted to the shaft with taperlock bushings.

Flanged Outlets

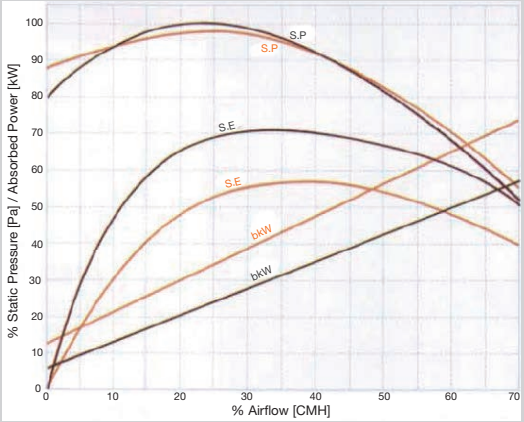
Standard flanged outlets have 125/150 pipe flange bolt holes and bolt circle dimensions to provide easy connection to flanged pipe. Outlets are continuously welded to the housing.

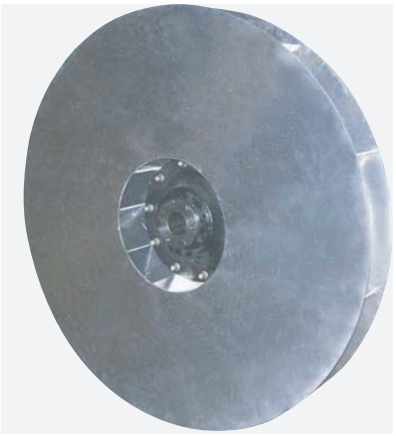


Increased Efficiency With New “Constant Velocity” Wheel Design

As air enters the blower the convex wheel sides and precisely shaped air chamber between the blades combine the wheel. Not only is the “Constant Velocity” wheel up to 16% more efficient, it provides smooth, stable flow across the entire performance range and reduces sound levels.

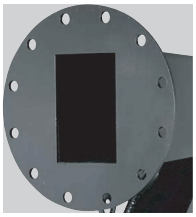
Comparison of “Constant Velocity” Pressure Blower vs. Typical Pressure Blower





Lightweight Wheel

Slip-Fit Inlet



Flanged Outlet

Optional

Inlet Filters

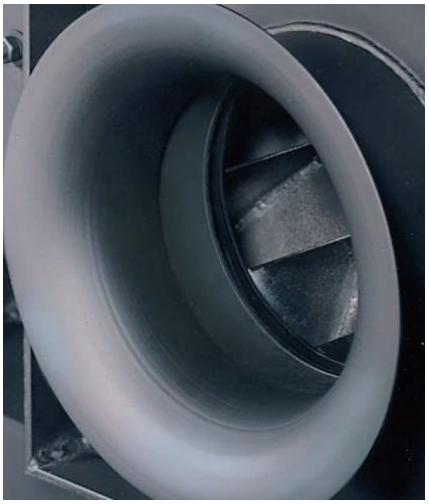
Efficient inlet filters are available in two types-paper and reusable wire mesh. Filter consists of an element, a base welded directly on the fan inlet and a lid held in place with wing nuts. Rain hoods and filter silencers are available.

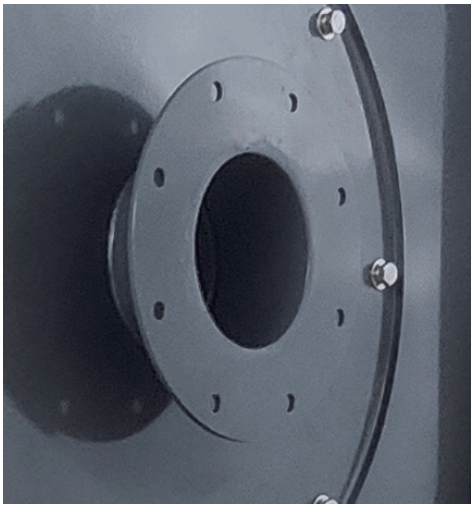
Butterfly Valve

Butterfly blast gate valves are used to fine tune performance or to vary the flow. The standard lug type shown mounts to the flanged inlet/outlet. A wafer type valve mounts between two matching flanges. Both types are controlled manually or with various actuators.

Outlet Slip Tube

Slip tubes bolted to the outlet flange are standard schedule 40 pipe. Tubes with dimensions for flexible hose are available.





Flexible Connector

specifically designed rubber flexible connector forms a flexible connection to help isolate the fan from vibration elsewhere in the system. The 140 mm long connector is backed with a tough corded rubber cover held with stainless steel clamps.

Vibratiln Pads

Vibratiln pads are designed to be mounted to be mounted between the fan pedestal and the floor to reduce transmission of vibration.

Inlet Guard

The inlet guard is fabricated of concentric rings and mounts on inlet venturi.

Venturi Inlet

The venturi inlet provides smooth flow into the wheel for optimum performance. Inlet venturi is required on open inlet blowers to meet catalog performance.

Flanged Inlet

The use of a flanged inlet simplifies connection to flanged piping. Flanges have ANSI Class 125/150 pipe flange bolt holes and bolt circle dimensions. The inlet flange is continuously welded to the inlet.

Guards / Extended Fittings

Both options can be furnished on enclose shaft, bearings and coupling. The extended grease fittings permit bearing lubrication without removing the guards.

Discharge Elbows

Elbows are needed on some downblast discharge models to allow the discharge to clear the pedestal. The affected models can be noted on the discharge position layout.

Special Coatings

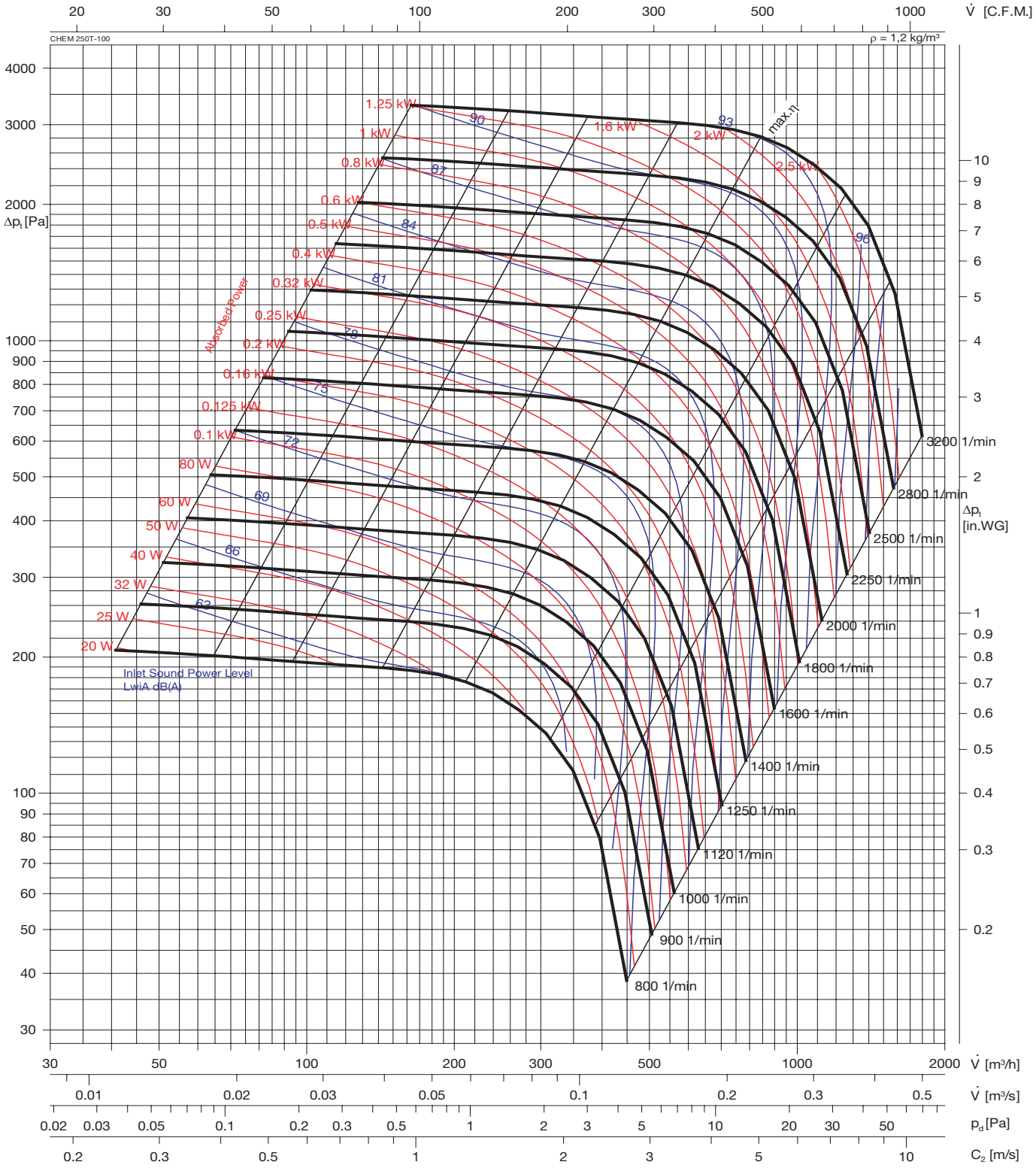
Several special purpose paints and corrosion resistant coatings can be factory applied.

Shaft Seals

Shaft seals reduce leakage around the shaft where it passes through the casing. Seals should not be considered

Turbo Pressure Fans

CHEM 250PP-400-100PP



A-weighted Sound power level L_{wiA} is quoted in the diagram

A-sound pressure level LPA at 1 meter distance

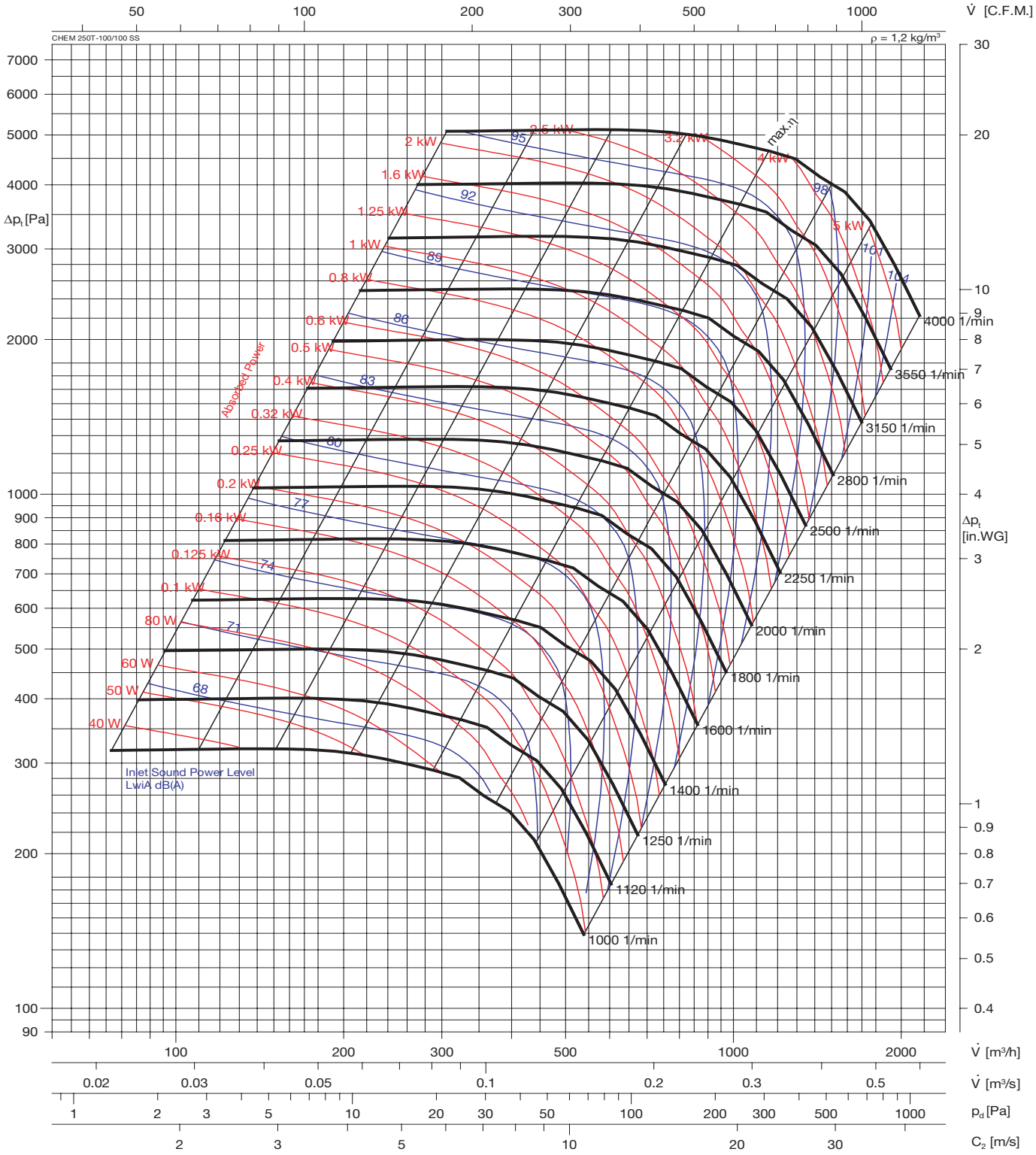
$$L_{PA}\ [dB] = L_{wiA}\ [dB(A)] - 11\ [dB(A)]$$

Relative frequency spectrum ΔL in dB/Okt

n [1 / min]	Octave b. midfreq. [Hz]							
rpm	63	125	250	500	1K	2K	4K	8K
1120 - 1800	-8	-5	2	4	7	3	1	-3
2000 - 3200	-19	-16	-9	-7	-4	-8	-10	-14

Unit was tested in an accredited laboratory by AMCA according to AMCA Standard 210 and AMCA Standard 300.
Power rating (kW) does not include transmission losses, Performance ratings do not include the effects of appurtenances (accessories).
The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet LwiA sound power levels for installation Type B: free inlet, ducted outlet.

CHEM 250ST-400-100ST



A-weighted Inlet Sound power level L_{wiA} is quoted in the diagram

A-sound pressure level L_{PA} at 1 meter distance

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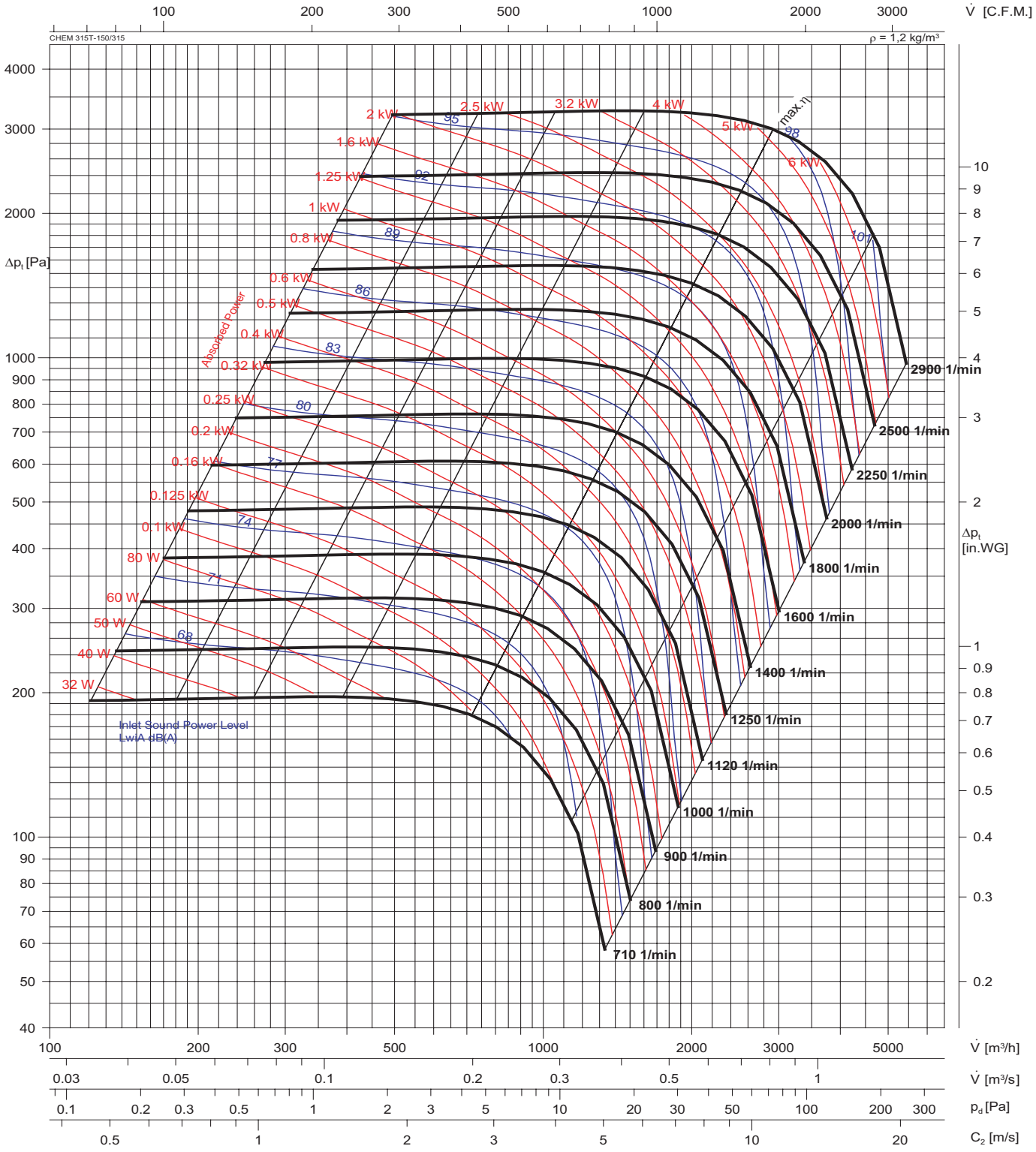
Turbo Pressure Fans

CHEM 315PP-450-200PP



A-weighted Sound power level L_{wiA} is quoted in the diagram

A-sound pressure level LPA at 1 meter distance

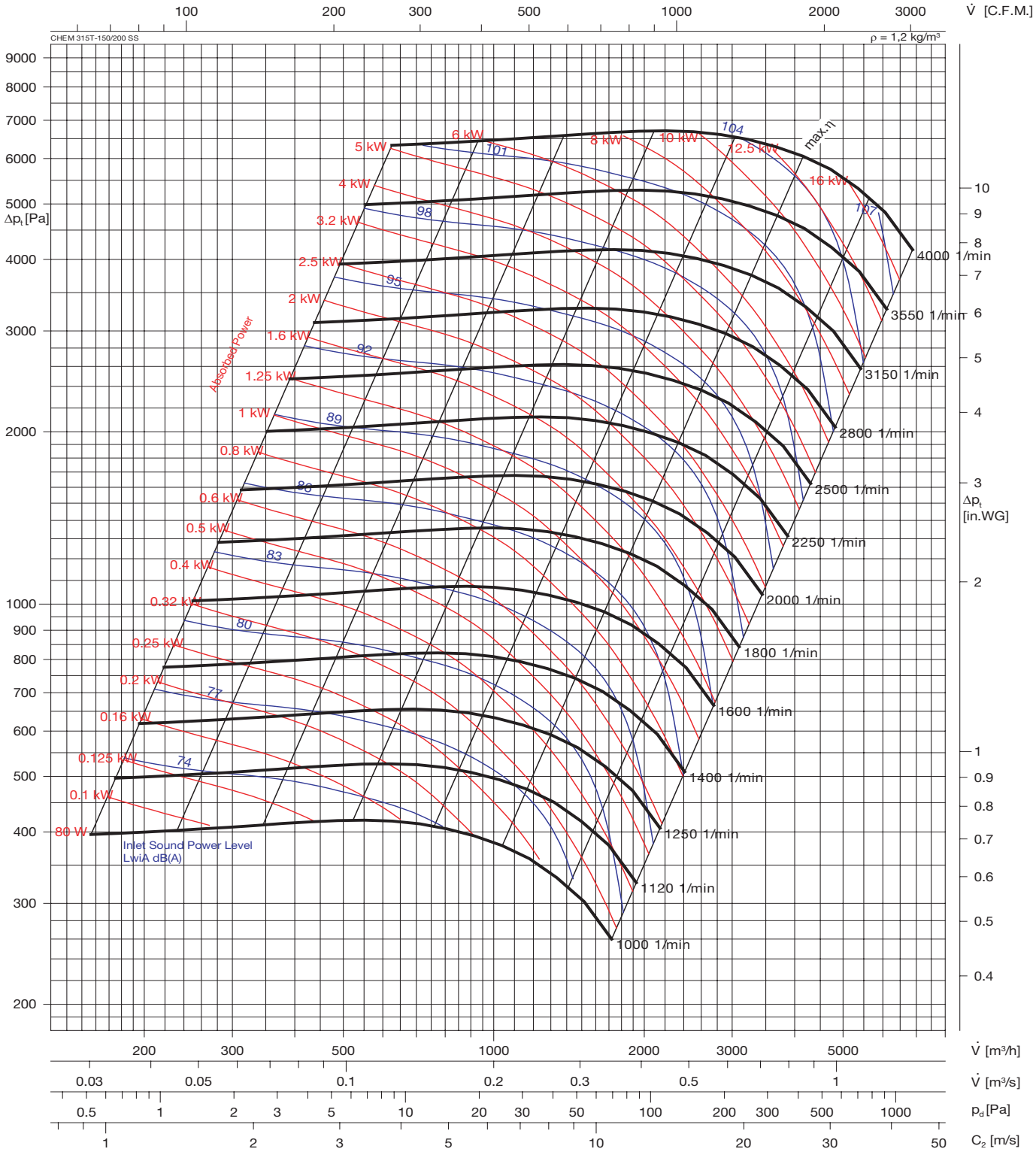
$$L_{PA}\ [dB] = L_{wiA}\ [dB(A)] - 11\ [dB(A)]$$

Relative frequency spectrum ΔL in dB/Okt

n [1 / min]	Octave b. midfreq. [Hz]							
rpm	63	125	250	500	1K	2K	4K	8K
1000 - 1800	-8	-4	-8	-9	-12	-13	-14	-29
2000 - 2900	-13	-9	-4	-8	-9	-12	-14	-15

Unit was tested in an accredited laboratory by AMCA according to AMCA Standard 210 and AMCA Standard 300.
Power rating (kW) does not include transmission losses, Performance ratings do not include the effects of appurtenances (accessories).
The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet LwiA sound power levels for installation Type B: free inlet, ducted outlet.

CHEM 315ST-450-200ST



A-weighted Inlet Sound power level L_{wiA} is quoted in the diagram

A-sound pressure level L_{PA} at 1 meter distance

$$L_{PA}\ [dB] = L_{wiA}\ [dB(A)] - 11\ [dB(A)]$$

Relative frequency spectrum ΔL in dB/Okt

n [1 / min]	Octave b. midfreq. [Hz]							
rpm	63	125	250	500	1K	2K	4K	8K
1000 - 1800	-8	-4	-8	-9	-12	-13	-14	-29
2000 - 4000	-13	-9	-4	-8	-9	-12	-14	-15

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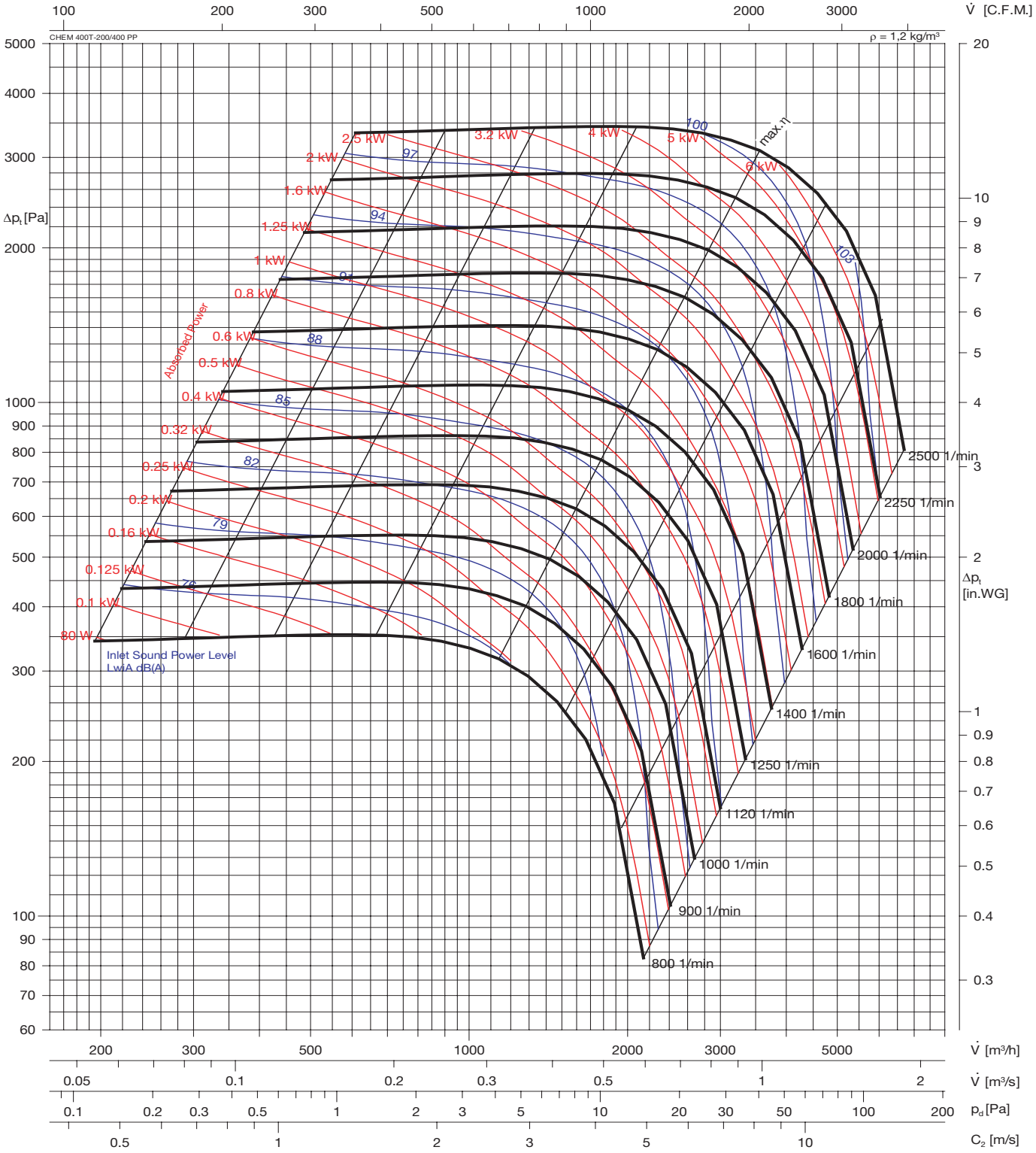
Turbo Pressure Fans

CHEM 400PP-560-250PP



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Relative frequency spectrum ΔL in dB/Okt

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rpm	63	125	250	500	1K	2K	4K	8K
1000 - 1800	-8	-4	-8	-9	-12	-13	-14	-29
2000 - 2900	-13	-9	-4	-8	-9	-12	-14	-15

Unit was tested in an accredited laboratory by AMCA according to AMCA Standard 210 and AMCA Standard 300.
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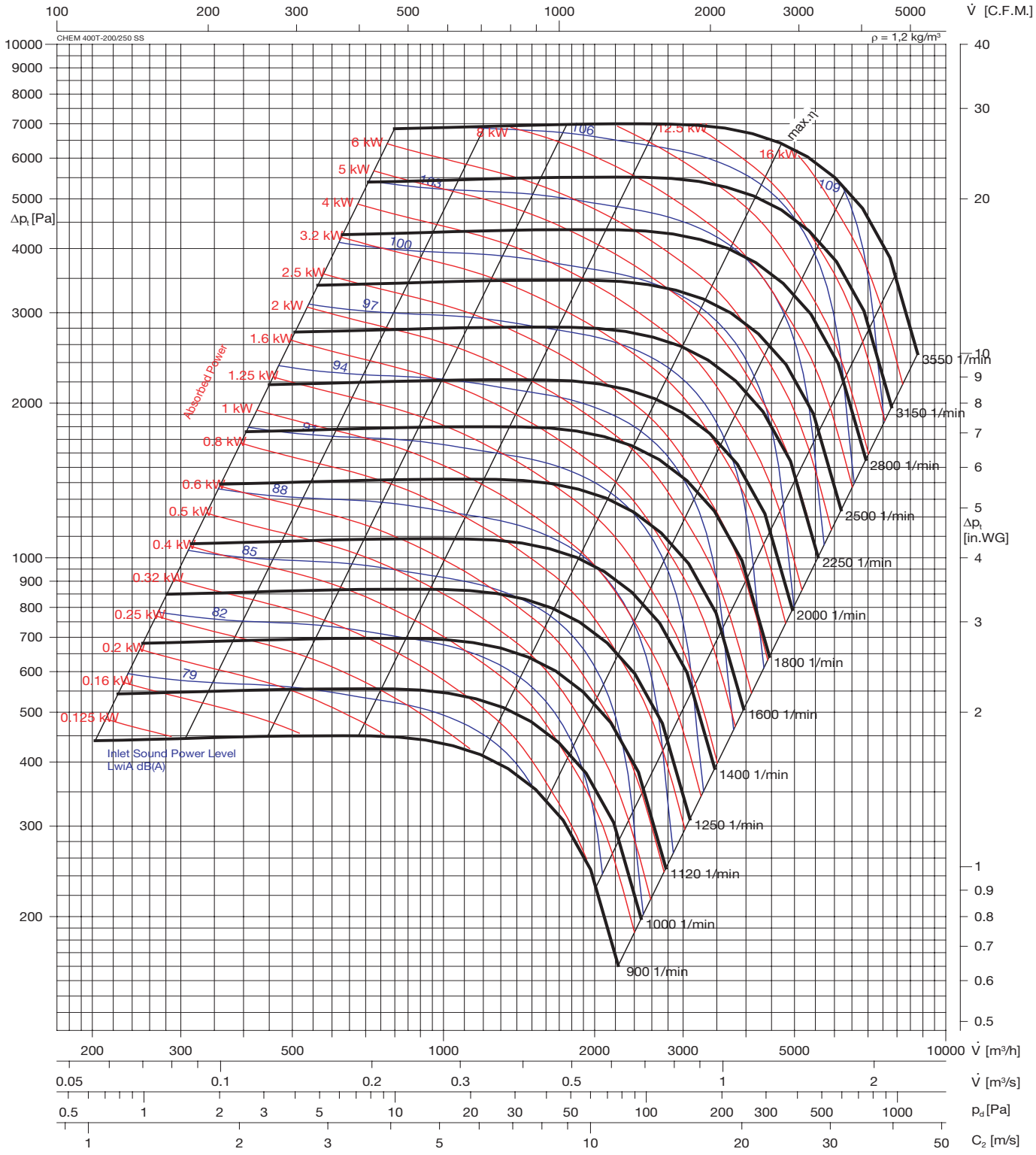
Turbo Pressure Fans

CHEM 400ST-560-250ST



A-weighted Inlet Sound power level L_{wiA} is quoted in the diagram

A-sound pressure level L_{PA} at 1 meter distance

$$L_{PA}\ [dB] = L_{wiA}\ [dB(A)] - 11\ [dB(A)]$$

Relative frequency spectrum ΔL in dB/Okt

n [1 / min]	Octave b. midfreq. [Hz]							
rpm	63	125	250	500	1K	2K	4K	8K
1000 - 1800	-8	-4	-8	-9	-12	-13	-14	-29
2000 - 4000	-13	-9	-4	-8	-9	-12	-14	-15

Unit was tested in an accredited laboratory by AMCA according to AMCA Standard 210 and AMCA Standard 300.
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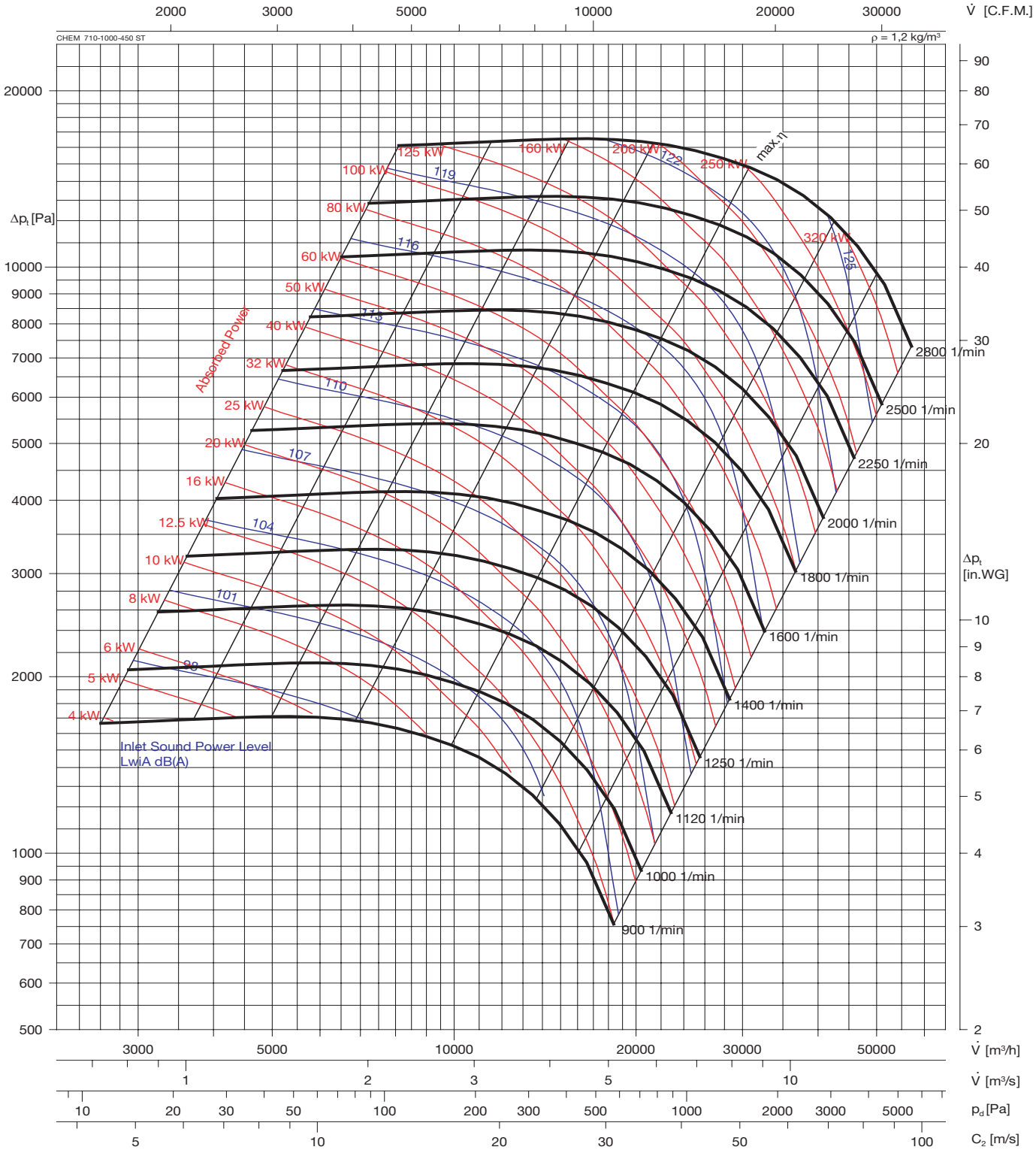
Turbo Pressure Fans

CHEM 710ST-1000-450ST



A-weighted Sound power level L_{wiA} is quoted in the diagram

A-sound pressure level LPA at 1 meter distance

$$L_{PA}\ [dB] = L_{wiA}\ [dB(A)] - 11\ [dB(A)]$$

Relative frequency spectrum ΔL in dB/Okt

n [1 / min]	Octave b. midfreq. [Hz]							
rpm	63	125	250	500	1K	2K	4K	8K
900 - 1800	-8	-4	-8	-9	-12	-13	-14	-29
2000 - 2800	-13	-9	-4	-8	-9	-12	-14	-15

Unit was tested in an accredited laboratory by AMCA according to AMCA Standard 210 and AMCA Standard 300.
Power rating (kW) does not include transmission losses, Performance ratings do not include the effects of appurtenances (accessories).
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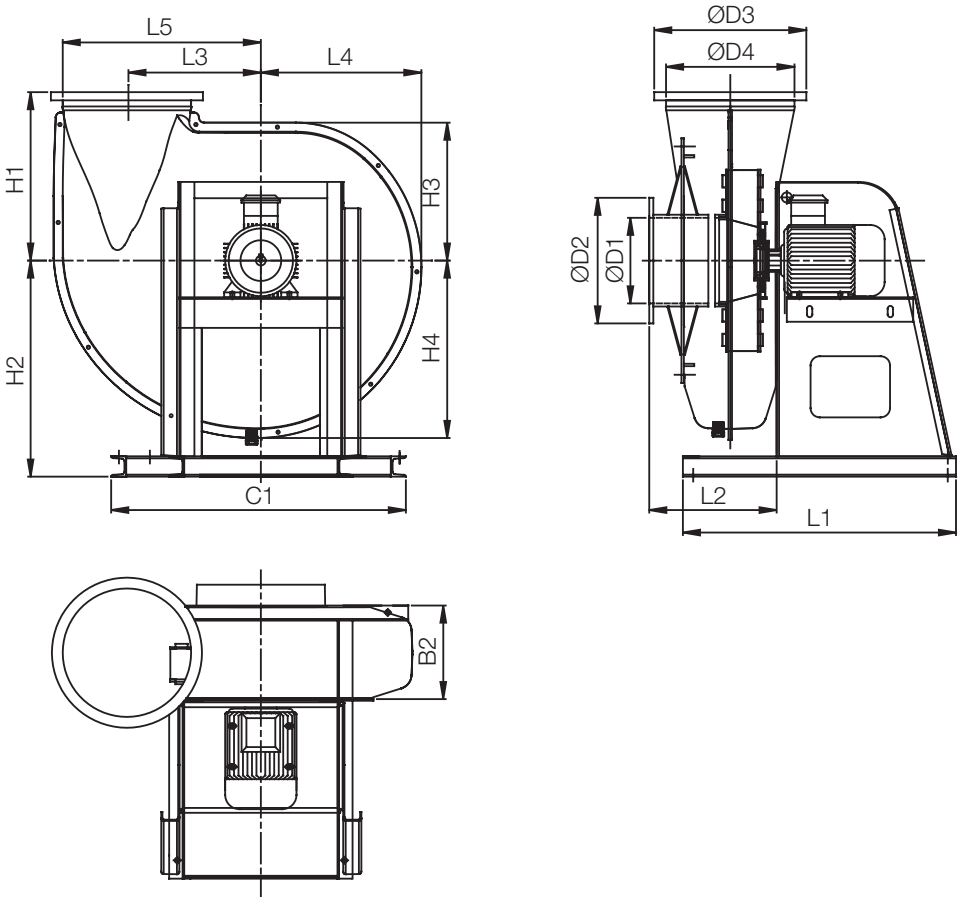
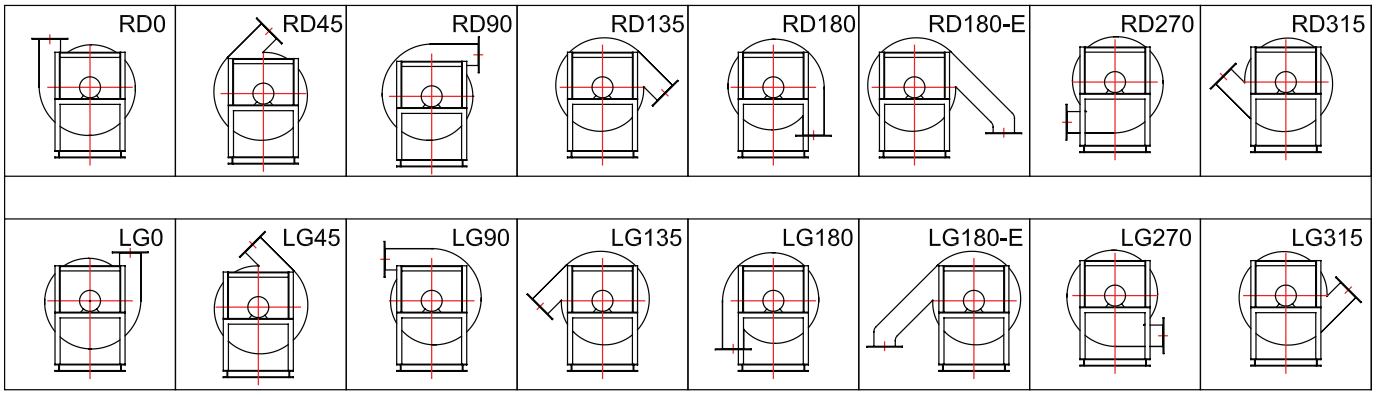
Turbo Pressure Fans

CHEM ... PP Series

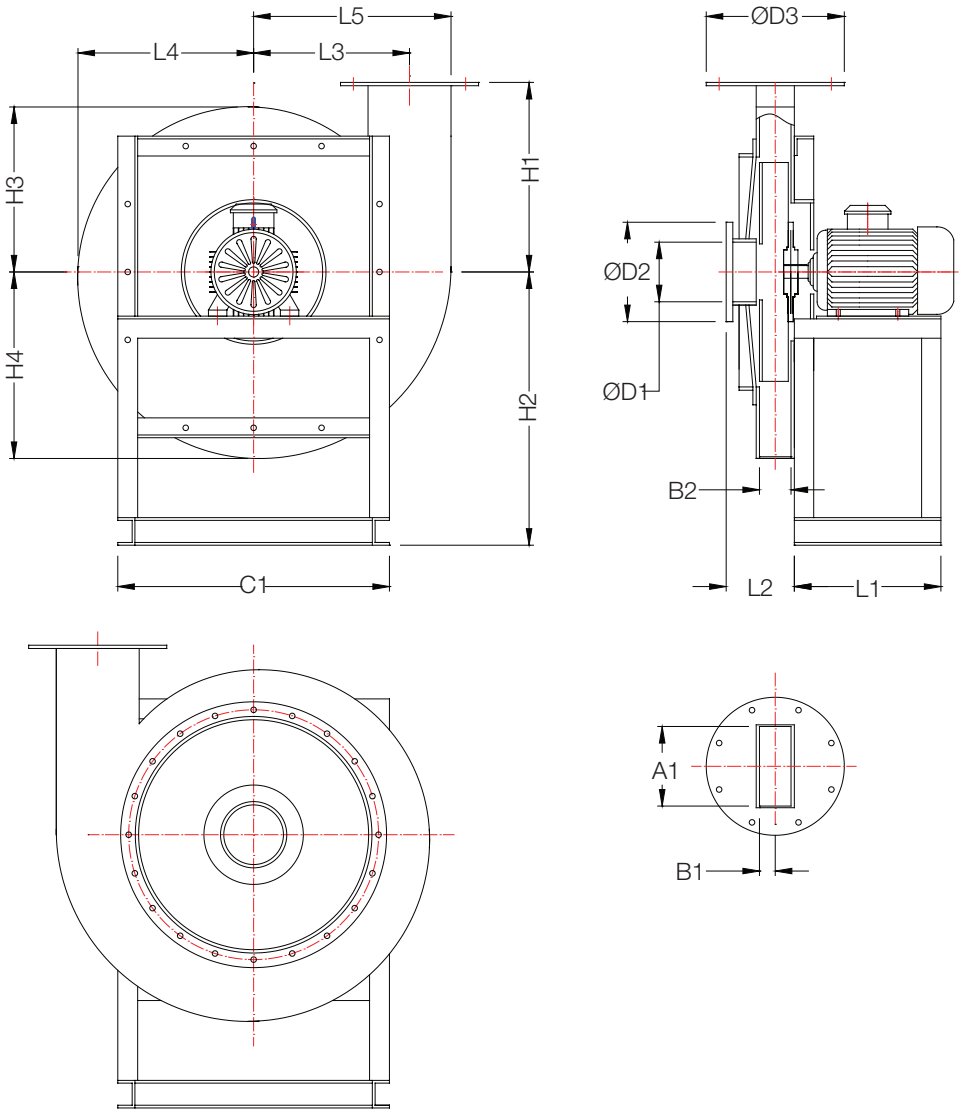


Model	B2	C1	D1	D2	D3	D4	H1	H2	H3	H4	L1	L2	L3	L4	L5
Size	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
CHEM 250T-100/250	178	518	108	180	310	243	326	502	272	349	618	232	261	316	389
CHEM 315T-150/315	230	605	203	310	375	306	413	530	338	435	670	315	325	394	486
CHEM 400T-200/400	248	671	250	375	480	392	463	637	382	527	960	335	356	472	556

Note: We reserve the right to alter measurements without notice in case of technical improvements.

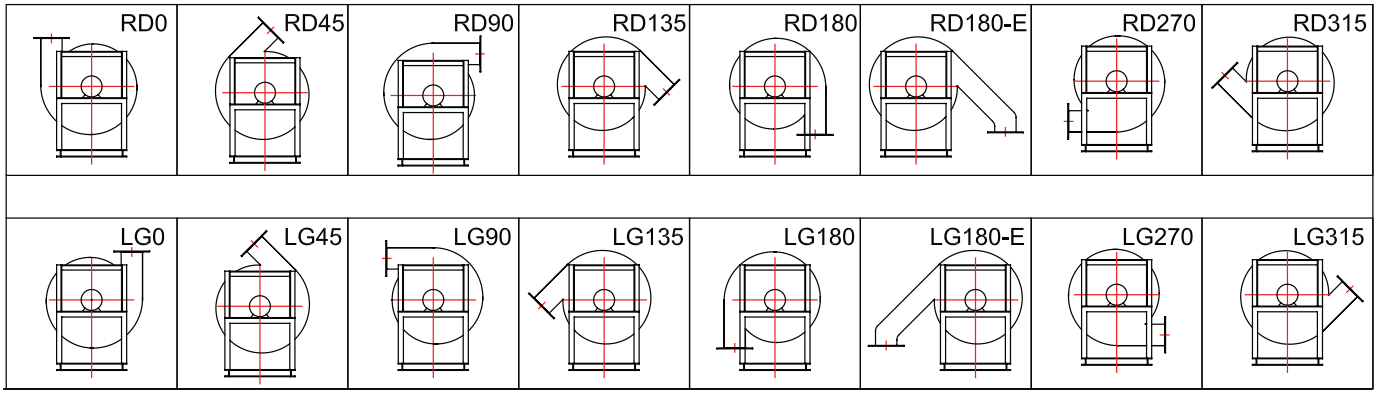


CHEM ... Steel Series



Model	A1	B1	B2	C1	D1	D2	D3	H1	H2	H3	H4	L1	L2	L3	L4	L5
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
CHEM 250...	100	60	120	410	108	180	250	306	392	260	332	380	196	307	296	352
CHEM 315...	150	90	180	410	203	311	327	380	508	324	413	400	250	383	368	458
CHEM 400...	235	116	232	597	250	350	350	451	562	381	432	445	315	340	406	457
CHEM 710...	431	191	382	1450	459	700	740	858	1077	714	807	1250	550	638	761	854

Note: We reserve the right to alter measurements without notice in case of technical improvements.



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