



BELT DRIVEN CABINET FANS

KDTR Series - F400 120 rated cabinet fans

NEW



Approved to
EN12101-3
standard

Range of belt drive cabinet fans designed for smoke extraction in fire conditions and certified F400 120 (CE marked). The casings are manufactured from heavy gauge galvanised sheet steel. All models incorporate double inlet backward curved centrifugal impellers. Belt driven motor mounted within the fan cabinet (motor outside the air stream). Side panels are removable on both sides to ease access to motor, pulley and belt assembly, supplied as standard on the right hand side of the unit when viewed from the discharge end. Horizontal discharge version: KDTR/H; vertical discharge version: KDTR/V. Transmission by trapezoid belts and pulley.

Performance ranges:

Air volume performance
range in ventilation
applications: 1000 to
40.000 m³/h.

Air volume performance range in smoke
extraction applications: 1000 to 55.000 m³/h.
Static pressure developments from 240 up to
3.000 Pa.

**Motors:**

All motors are IP55, class F insulation.
Electrical supply.

Three phase 230/ 400V-50Hz, up to 3 kW.
400V-50Hz, for higher motor powers.
(See characteristics chart).

On request

Motor, pulley and belt assembly fitted on the
left hand side of the unit when viewed from the
discharge end (TI version).

Kitchen extraction applications with inspection
door on the fan casing scroll and condensation
drain hole at the bottom of the cabinet casing.
Double thickness (double skin) panels internally
lined with sound and thermal fibre glass
insulation (25 mm).

Epoxy paint finish.

Two speed motors (4/8 and 4/6 poles).



A P P L I C A T I O N S



Warehouses



Workshops

Commercial
premises

Offices

Restaurants
and cafes

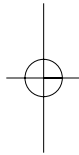
Parkings

Commercial
and industrial
kitchens

F400-120

KDTR

Acoustic cabinet fans



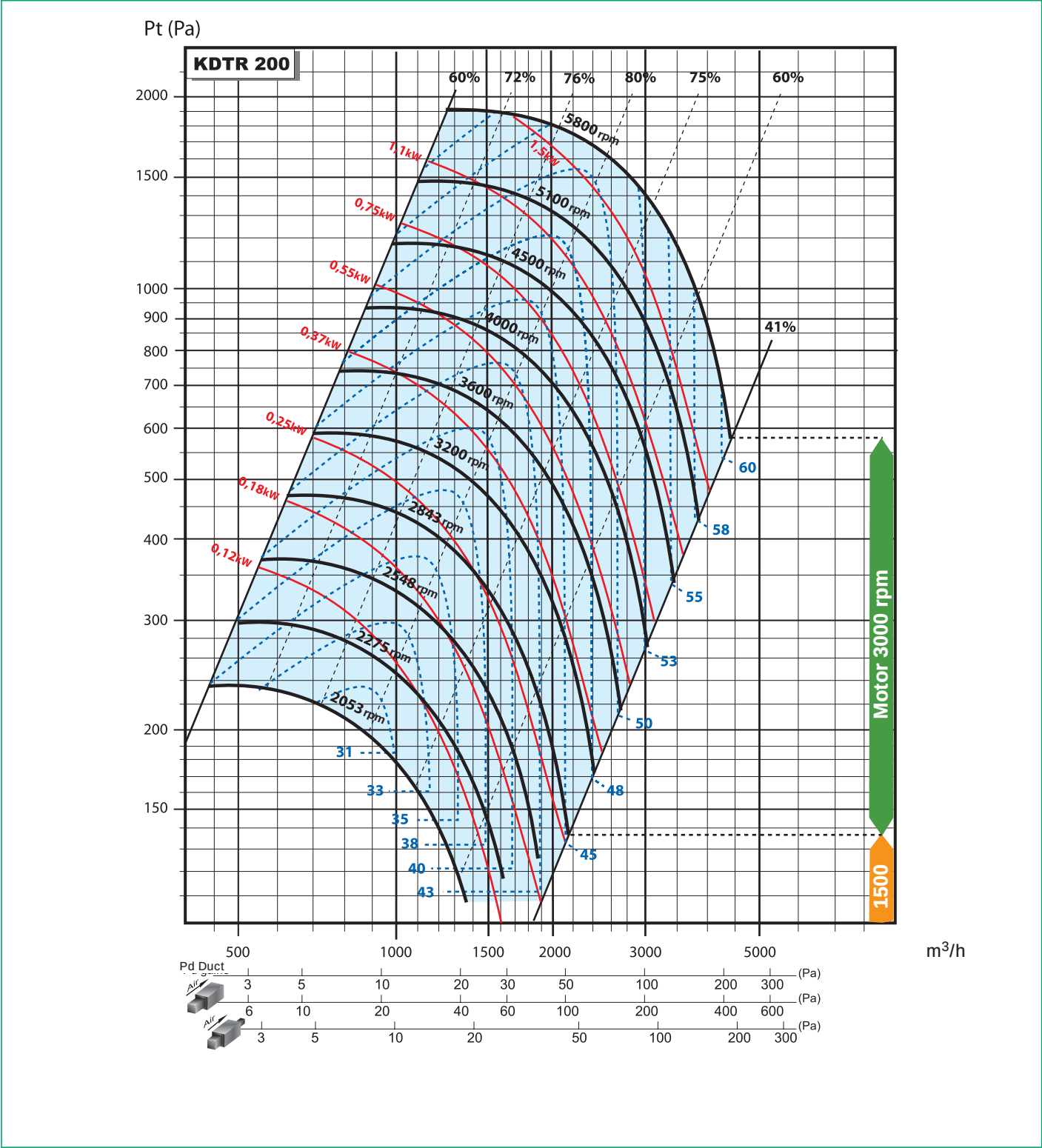
KDTR

457



■ Performance curves

- Q = Air volume in, m³/hr
- Pt = Total pressure in Pa
- Normal dry air at 20°C and 760 mm Hg
- Air flow data in accordance with the following standards: UNE 100-212-89, BS 848, Part 1, AMCA 210-85 and ASHRAE 51-1985.
- Sound pressure levels, measured at 6 metres in dB(A), in hemispherical fields.

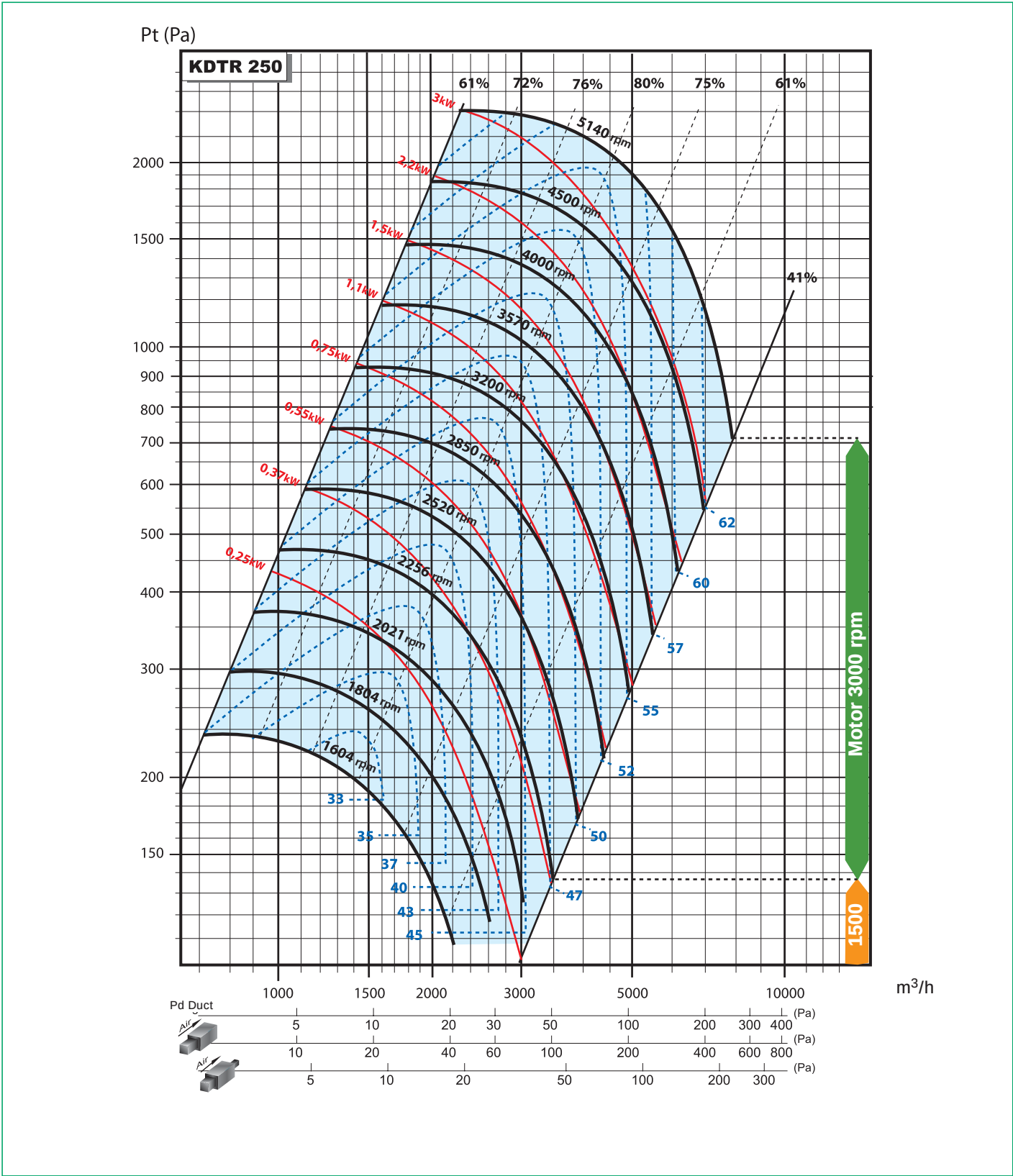


KDTR

Acoustic cabinet fans



■ Performance curves

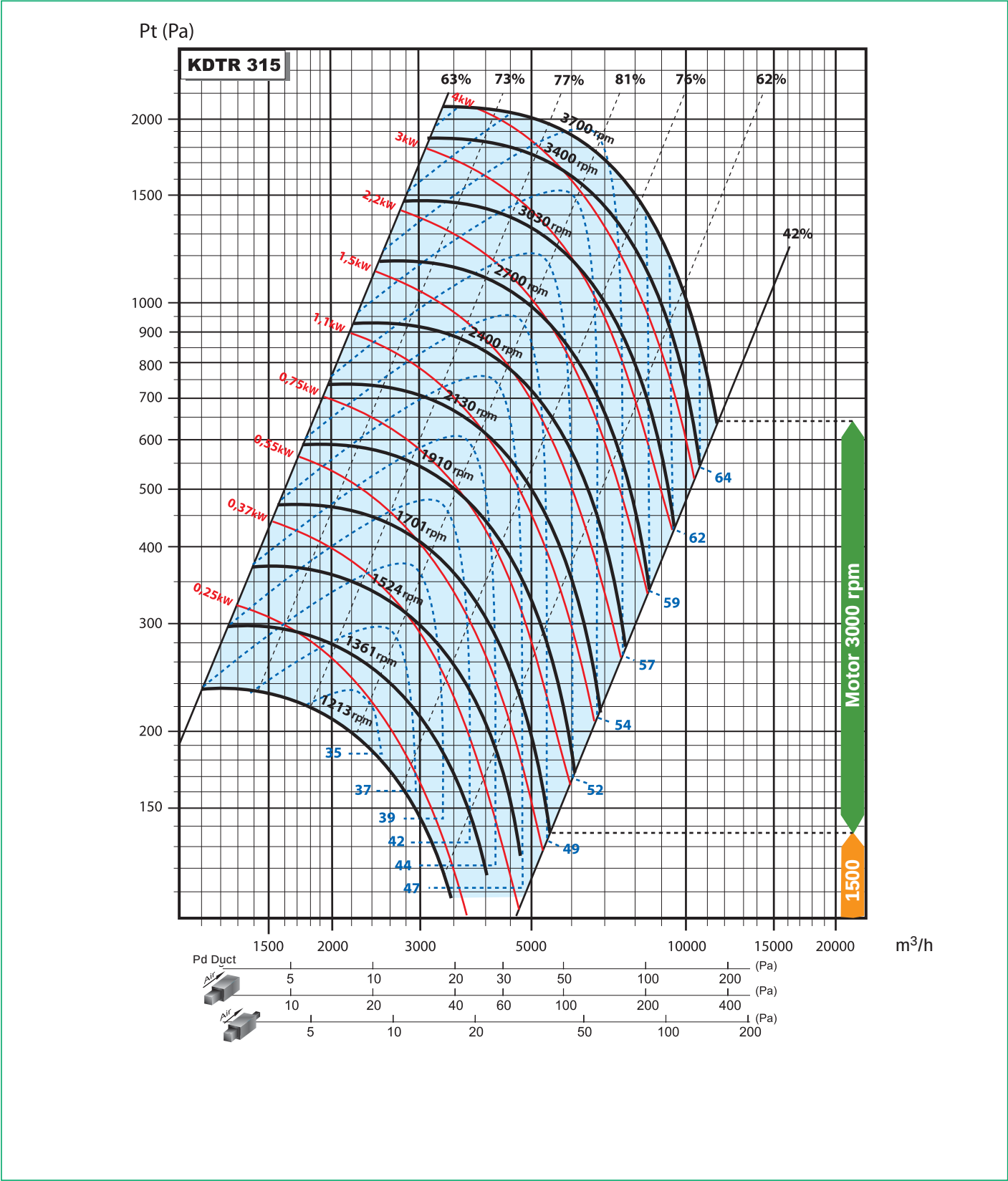


KDTR

Acoustic cabinet fans



■ Performance curves

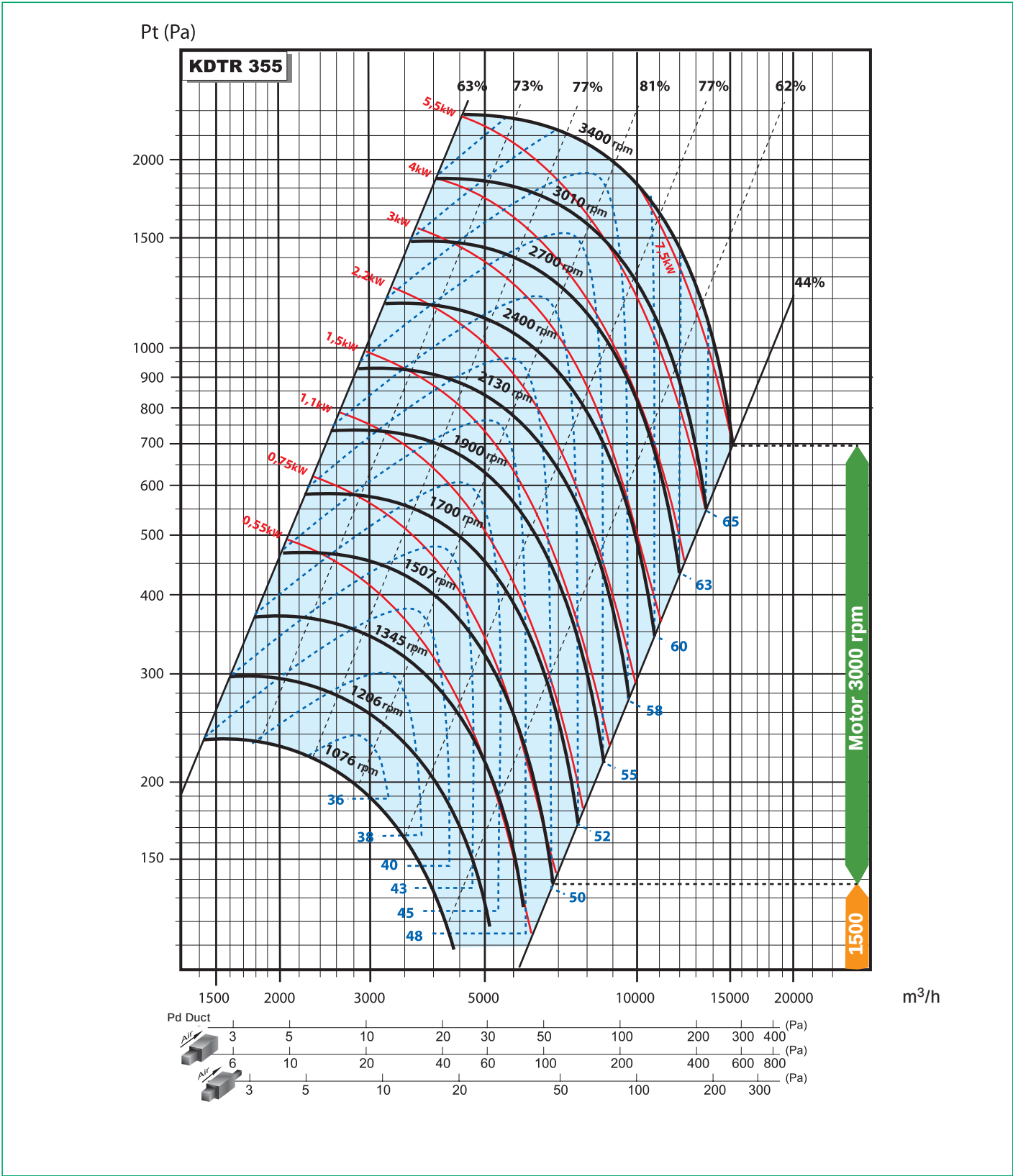


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Acoustic cabinet fans

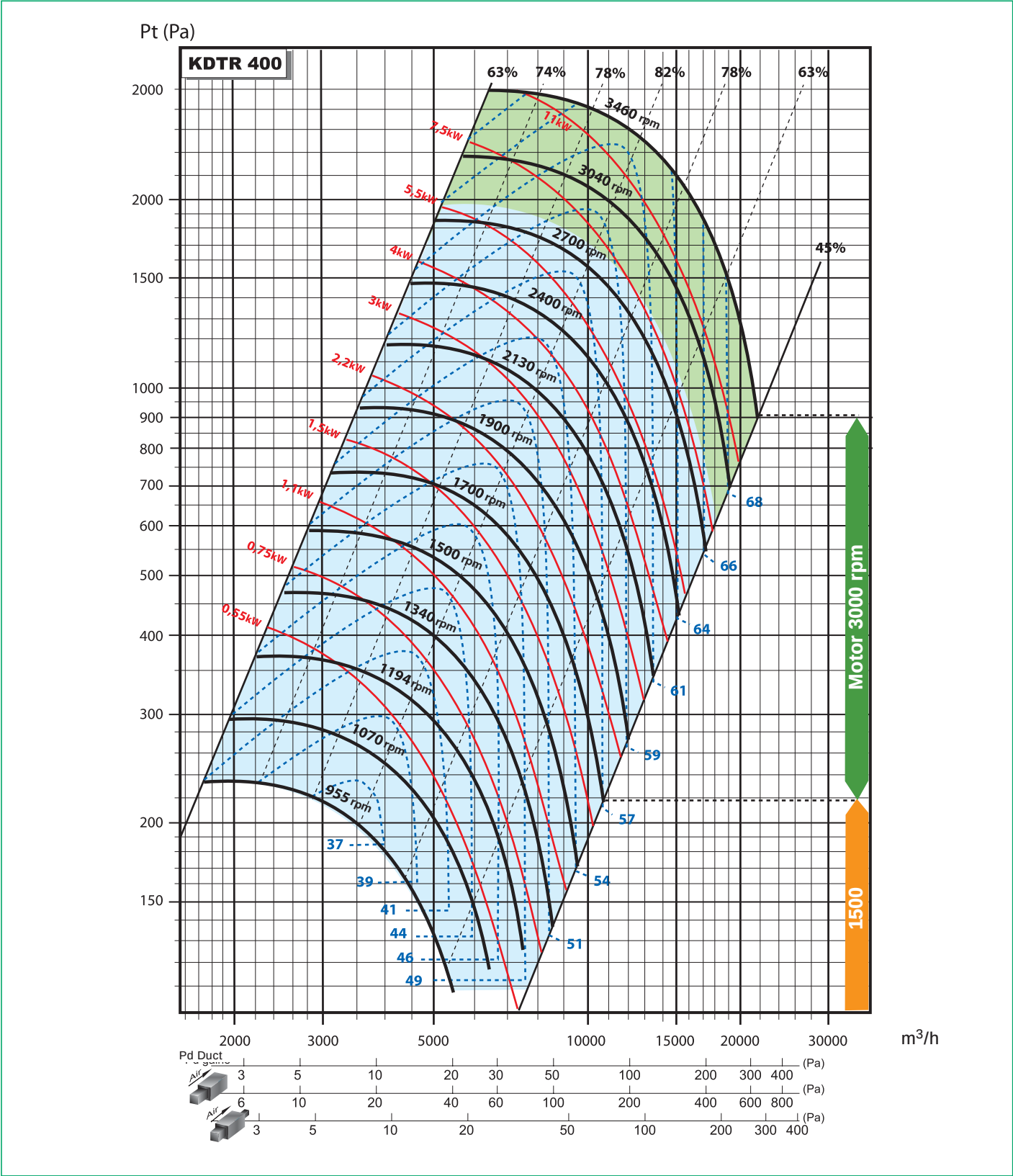


■ Performance curves





■ Performance curves

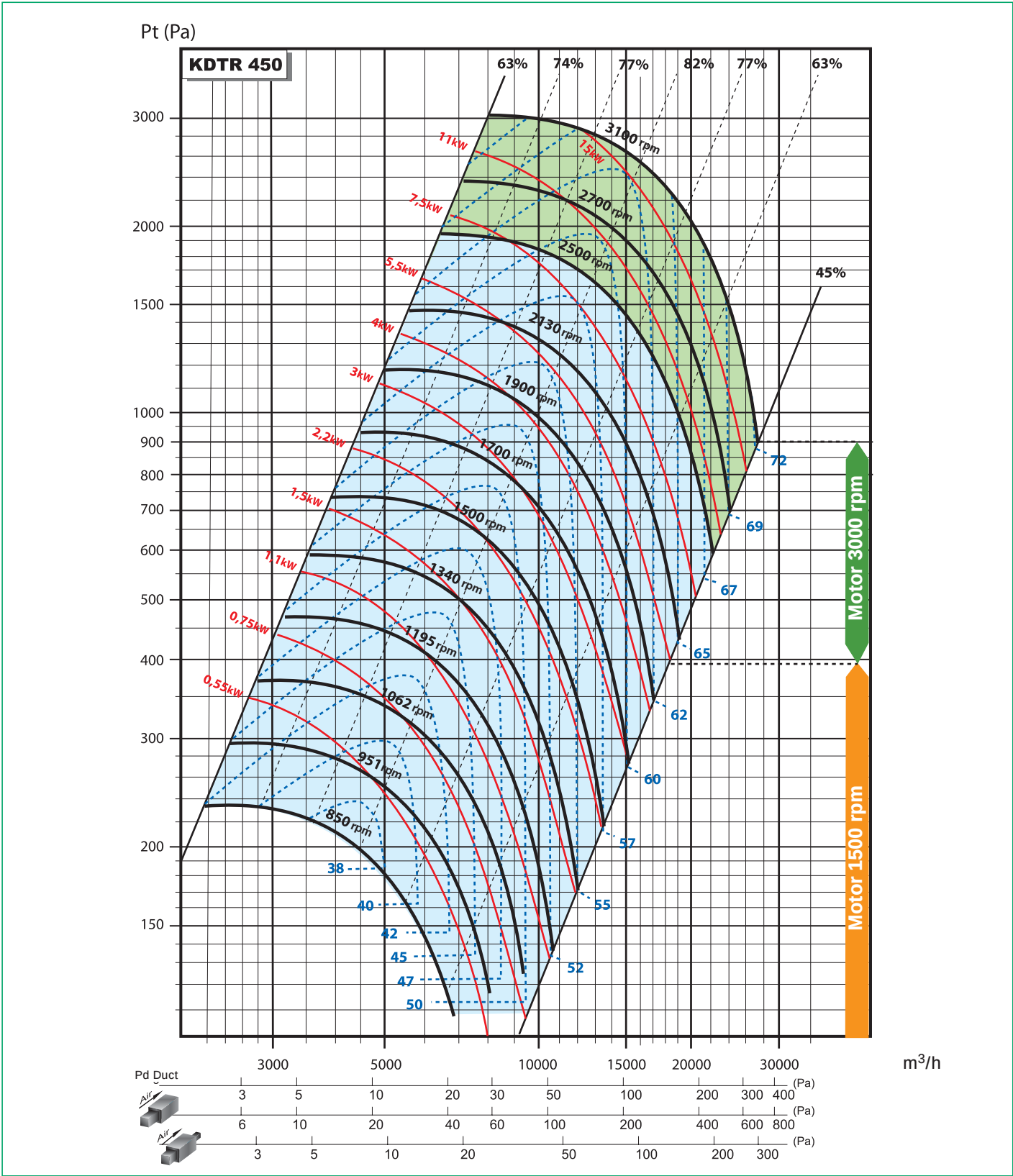


KDTR

Acoustic cabinet fans



■ Performance curves

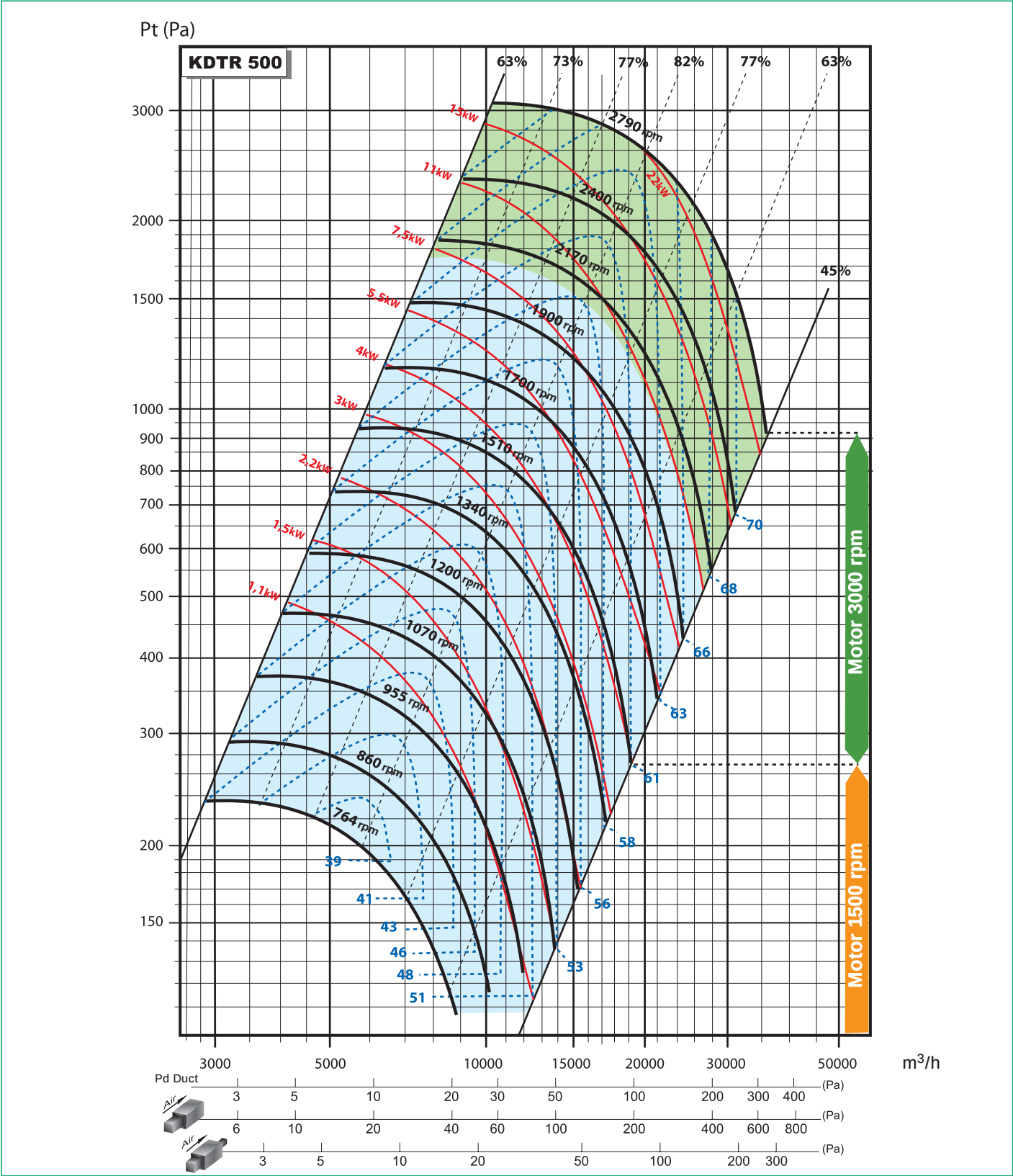


KDTR

Acoustic cabinet fans



■ Performance curves



KDTR 560

The chart displays the performance of the KDTR 560 ducted fan. The vertical axis represents static pressure (Pt) in Pascals (Pa), ranging from 150 to 3000. The horizontal axis represents volumetric flow rate in cubic meters per hour (m³/h), ranging from 5000 to 50000. A secondary horizontal axis at the bottom shows pressure drops for different duct configurations: a straight duct (Pd Duct), a duct with two 90° bends, and a duct with four 90° bends, each with its own scale in Pascals (Pa).

Performance curves are provided for various motor speeds (rpm) and power ratings (kW):

- 2435 rpm, 22 kW, 15 kW:** Shaded green region.
- 2150 rpm, 11 kW:** Shaded blue region.
- 1930 rpm, 7.5 kW:** Shaded blue region.
- 1700 rpm, 5.5 kW:** Shaded blue region.
- 1530 rpm, 4 kW:** Shaded blue region.
- 1340 rpm, 3 kW:** Shaded blue region.
- 1200 rpm, 2.2 kW:** Shaded blue region.
- 1060 rpm, 1.5 kW:** Shaded blue region.
- 955 rpm, 1.1 kW:** Shaded blue region.
- 853 rpm:** Shaded blue region.
- 764 rpm:** Shaded blue region.
- 682 rpm:** Shaded blue region.

Efficiency lines are marked with percentages: 64%, 74%, 78%, 82%, 78%, 63%, and 45%.

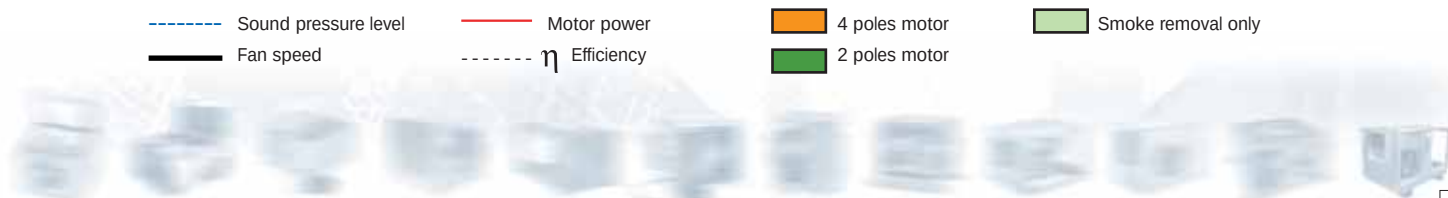
Motor speed ranges are indicated on the right side:

- Motor 3000 rpm:** Indicated by a green arrow pointing to the upper part of the chart.
- Motor 1500 rpm:** Indicated by an orange arrow pointing to the lower part of the chart.

Specific performance points are labeled with numbers: 71, 69, 67, 64, 62, 59, 57, 54, 49, 47, 44, 42, 40, and 52.

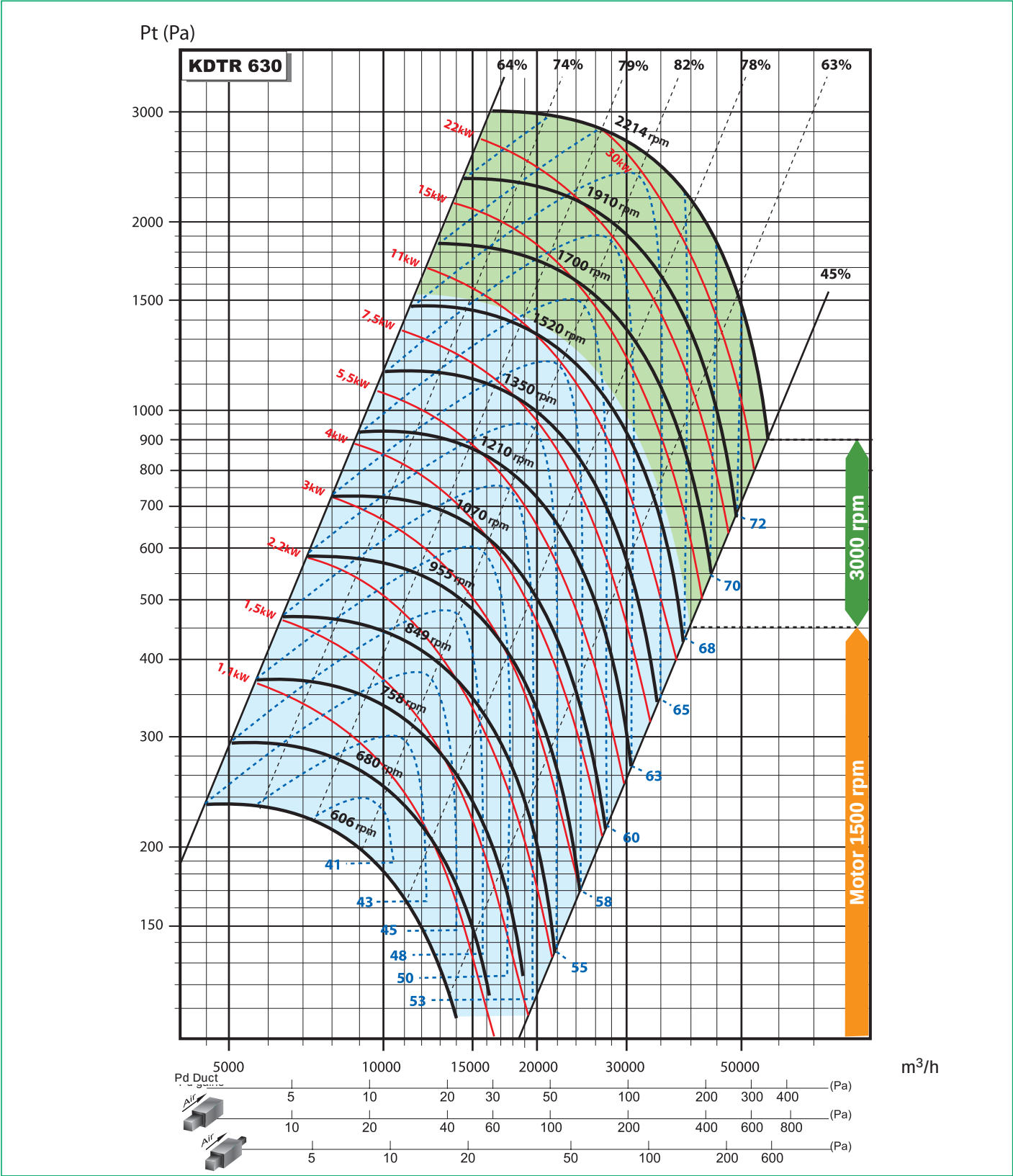
Figure 1

Acoustic cabinet fans





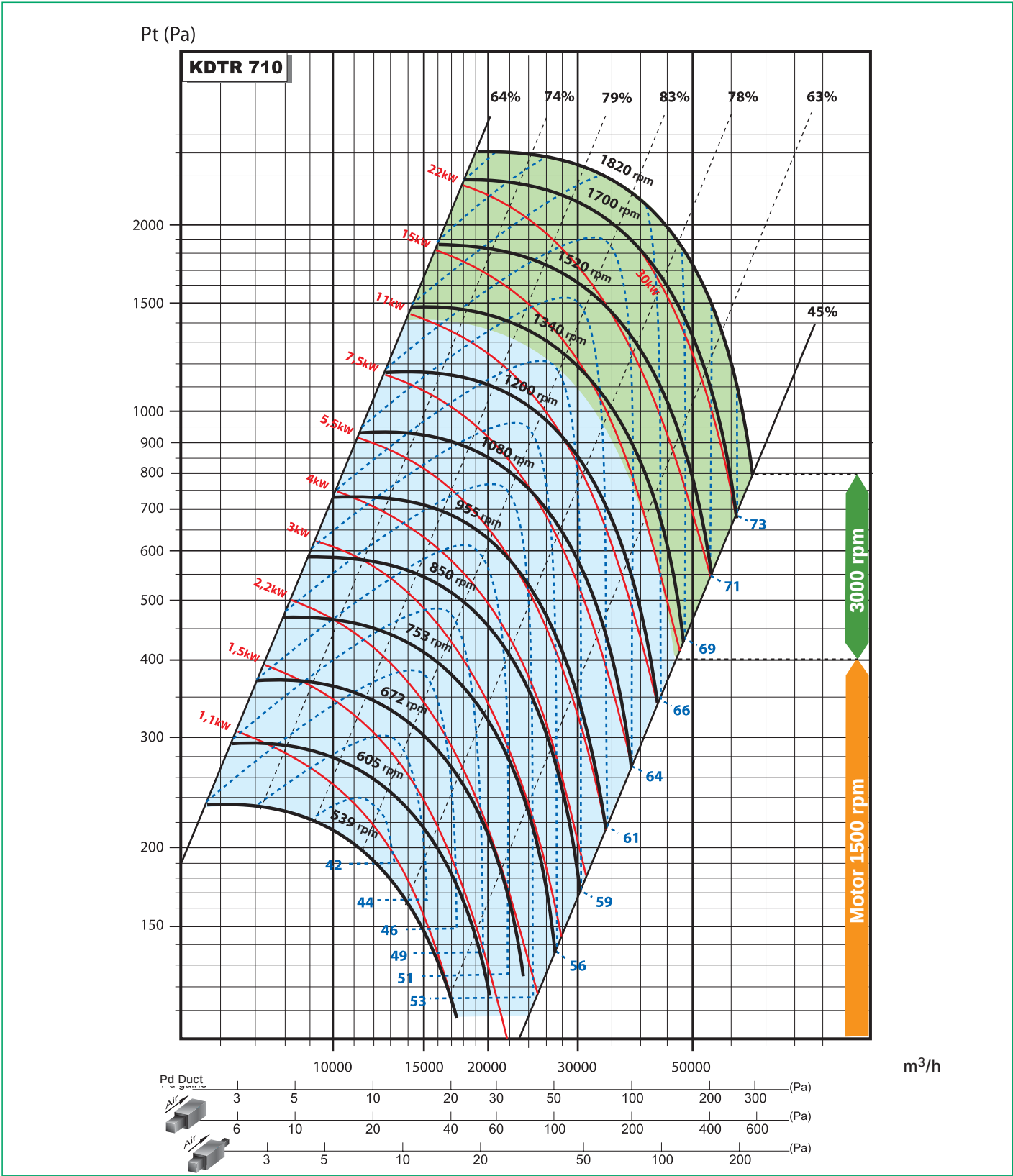
■ Performance curves



- Sound pressure level
- Motor power
- η Efficiency
- 4 poles motor
- 2 poles motor
- Smoke removal only



■ Performance curves



KDTR

Acoustic cabinet fans



■ Acoustic characteristics

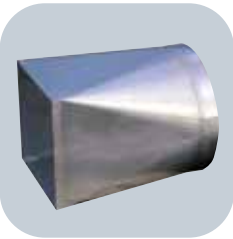
To obtain the sound pressure spectrum, add the correction values (dB(A)) show in the table below at the corresponding octave average frequencies, from the value provided in the product performance curves.
The sound pressure levels shown on the curves have been measured at 6m in dB(A) in free hemispherical field.

Sound spectrum KDTR	Frequency Band Hz							
	63	125	250	500	1000	2000	4000	8000
Correction values for standard KDTR	-15	-8	-6	-5	-8	-13	-17	-28
Correction values for double thickness panel versions	-18	-13	-10	-10	-13	-17	-22	-33

■ Accessories



Inlet circular duct connector
RCAZ



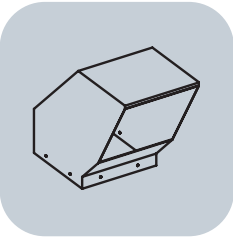
Outlet circular duct connector
RCRZ



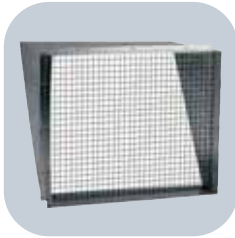
Circular flexible coupling
MSO



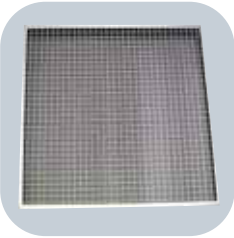
Rectangular flexible coupling
MSCZ



Rain cap for vertical version
PPVZ



Rain cap for horizontal version
KSTZ



Outlet bird proof guard
AVRZ



Set of 4 anti-vibration mounts
PAVZ



Circuit breaker
INTZ



Differential pressure switch
BDEZ

ΔP (Pa)	Model
40 to 300 Pa	BDEZ 40.2
100 to 1000 Pa	BDEZ100.2
1000 to 5000 Pa	BDEZ 1000.2

KDTR

Acoustic cabinet fans