



# CONTRA-FOIL™ contra-rotating cased axial flow fans (aluminium impellers)

TCBBX2/4-450 (230V50HZ)

V3



Range of cylindrical cased axial fans fitted with aluminium impellers and manufactured from high grade rolled galvanised steel and protected against corrosion by cataforesis primer and black polyester paint finish.  
Fitted with 2 contra rotating complementary impellers manufactured from die-cast aluminium.  
All models are supplied with pre-wired wiring junction box located on the outside of the fan casing for easy wiring access.  
Available with single or three phase 4 poles motors.

## Motors

All the motors are IP65, Class F insulation (1), equipped with thermal protection.  
Single phase motors are variable voltage (Excepted TCBBX2/4-630).  
Three phase motors suitable for inverter control.

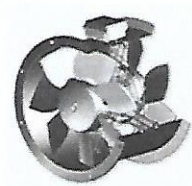
Electrical supplies:

Single phase 230V-50Hz (Capacitor located inside the wiring terminal box)

Three phase 230/400V-50Hz.

(1) Working temperatures from -40°C up to 70°C.

## + Attributes



### Contra-rotating: High pressure

Contra-rotating system with two complementary impellers allowing the duplication of the pressure with the same air volume



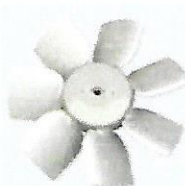
### Corrosion resistance

Rolled steel casings and motor support protected by cataforesis primer and black polyester paint finish.  
Stainless steel screws.



### Terminal box

Wiring terminal box with cable gland PG-11.



### Impeller dynamically balanced

Impellers are dynamically balanced, according to ISO 1940 standard, giving vibration free operation.

## + Acoustic characteristics

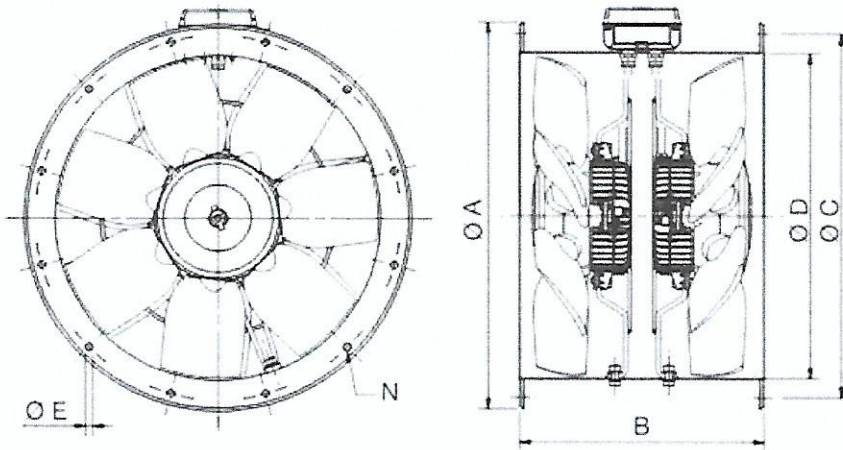
Hz	63	125	250	500	1k	2k	4k	8k	Overall
Inlet (LwA)	46	73	85	82	85	79	72	64	90
Inlet LpA @ 1.5m	31	58	70	67	70	64	57	49	75
Outlet (LwA)	63	75	86	85	87	82	74	67	92
Outlet LpA @ 1.5m	48	60	71	70	72	67	59	52	77

## + Technical characteristics

CONSTRUCTION

MOTOR CHARACTERISTICS

## + Dimensions



A	B	C	D	E	N
537	375	500	450	12	8

## + Curve - Example of selection

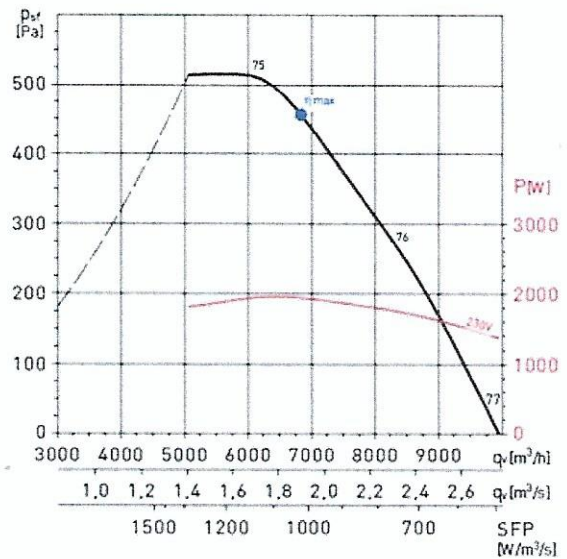
### PERFORMANCE CURVES TCBBx2 / TCBTx2

- $q_v$ : Air volume in  $m^3/h$  and  $m^3/s$ .
- $p_{st}$ : Static pressure in Pa.
- SFP: Specific fan power in  $W/m^3/s$ .
- P: Input power in W.
- Measurement category: D.
- Efficiency category: total.
- Fan efficiency without VSD.
- Air flow data in accordance with ISO 5801.
- Sound pressure level dB(A), measured in a free field distance equal to 3 times the diameter, with a minimum of 1,5 m.

MC	Measurement category
EC	Efficiency category
VSD	Speed control: supplied with the fan
SR	Specific ratio
$\eta$ [%]	Efficiency
N	Efficiency grade
[kW]	Absorbed power
[ $m^3/h$ ]	Air volume
[Pa]	Static pressure
[RPM]	Speed

### EXAMPLE CURVE

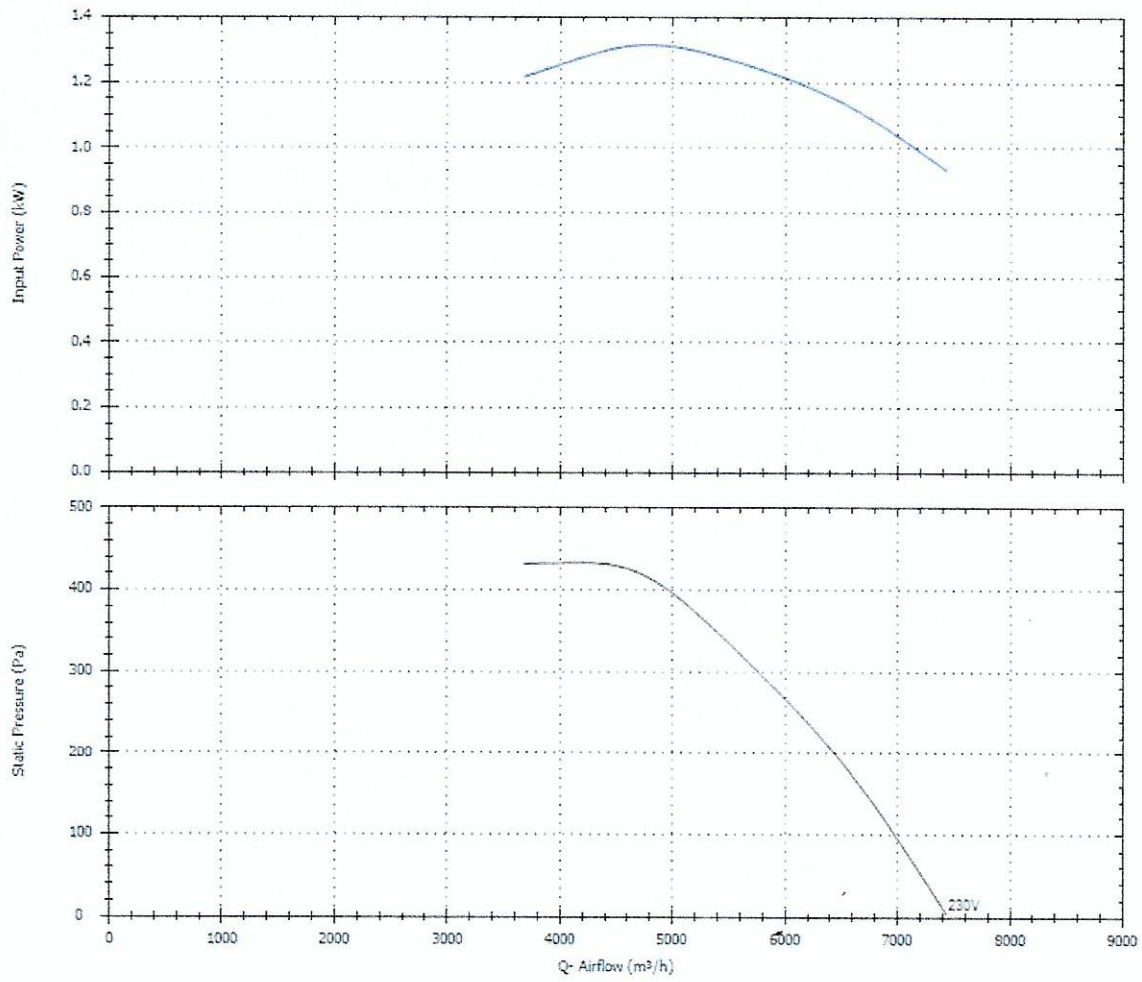
TCBBx2/4-500



MC*	EC*	VSD*	SR*	$\eta$ [%]*	N*	[kW]	[ $m^3/h$ ]	[Pa]	[RPM]
D	Total	No	1	50,0	54,5	1,939	6832	514	1393

\* See example curve

## + Curves



## + Mounting Accessories

