

## TWIN BOX BD EEC



### CENTRIFUGAL IN SOUNDPROOF CABINET (DOUBLE)

#### MANUFACTURING FEATURES

- Impellers made of reinforced polyamide with fiber glass.
- BD EEC range fans assembled in soundproof cabinets with thermo-acoustic insulation, Bs1d0 fire class.
- Fan assembled on antivibration mountings.
- Connection gland included.
- Equipped with inlet deflector wing, minimizing the turbulence and optimizing efficiency.
- Brushless motor made of high efficiency and permanent magnet and low noise level. Specially designed for fans with electronics and control on backside of the motor.
- Switching frequency of 16 KHz.
- Operating range: from 400 to 1200 or 2000rpm (depending on the models).
- Power supply: 220V + - 10%.
- Power Frequency: 50/60Hz.
- Operating temperature range: -20°C +60°C.
- Enclosed motor IP 55.
- Insulation class F.
- Speed ??control through:
  - 22 kOhms Trimmer.
  - 0-10V external sensor.
- Fans can run separately or simultaneously.

#### APPLICATIONS

Designed for inline installation, indoor or outdoor assembly, they are suitable for:

- Air renewal in buildings and industries.
- Industrial and professional kitchen hood.
- Maximum working temperature: 50°C.

#### UNDER REQUEST

- LG0 position.
- Impeller made of galvanized sheet.
- Aluminium box up to size 12/12.

\* All data are referred to a single working fan. If both fans are working at the same time, data should be twice (x2) except for weight.

## Technical data

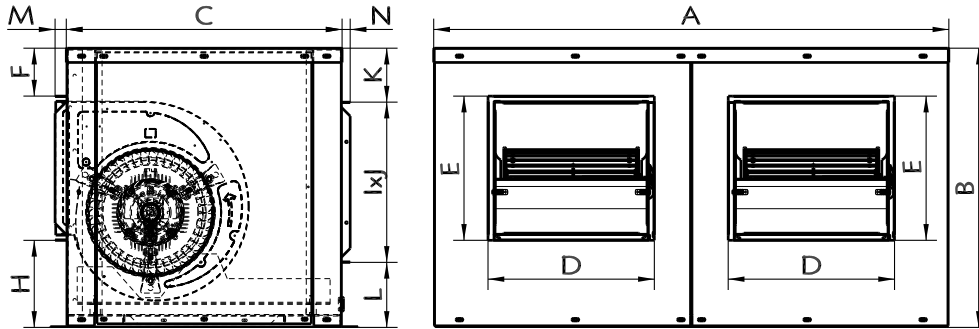
### Single-phase motor

Code	Model	R.P.M.	Rated I. (A) 230V	Rated power kW	Max. Airflow m3/h	Sound db (A)**	Weight	Connect. diagram
-	TWIN BOX BD 7/7 EEC	2000	7	0,37	2.860	41	36	1
-	TWIN BOX BD 9/9 EEC	2000	9,5	0,75	4.280	46	51	1
-	TWIN BOX BD 10/10 EEC	1800	14	1,50	5.820	47	65	1
-	TWIN BOX BD 12/12 EEC	1200	12,5	1,50	7.420	47	93	1

**Notes:**

\*\* Total sound pressure level at the point of maximum flow measured in dB(A) in the suction measured in free field at a distance of 6m from the source

## Dimensions

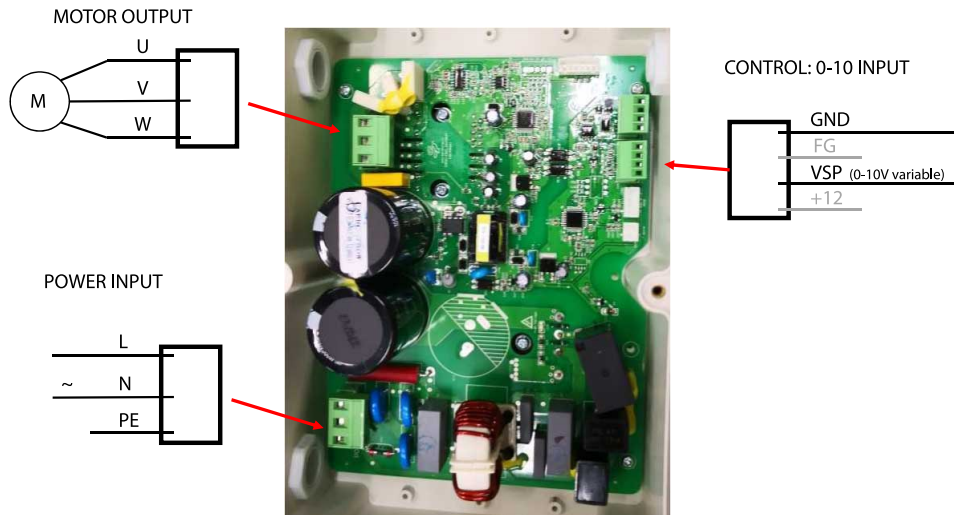


Model	A	B	C	D	E	F	H	I	J
TWIN BOX BD 7/7 EEC	850	450	450	254	228	76	147	596	280
TWIN BOX BD 9/9 EEC	1000	535	535	323	280	91	165	658	311
TWIN BOX BD 10/10 EEC	1085	580	580	354	311	79	191	790	361
TWIN BOX BD 12/12 EEC	1220	651	651	419	361	79	211	940	423

Model	K	L	M	N
TWIN BOX BD 7/7 EEC	76	94	23	17
TWIN BOX BD 9/9 EEC	103	121	23	17
TWIN BOX BD 10/10 EEC	100	119	23	17
TWIN BOX BD 12/12 EEC	104	123	23	17

## Wiring diagram

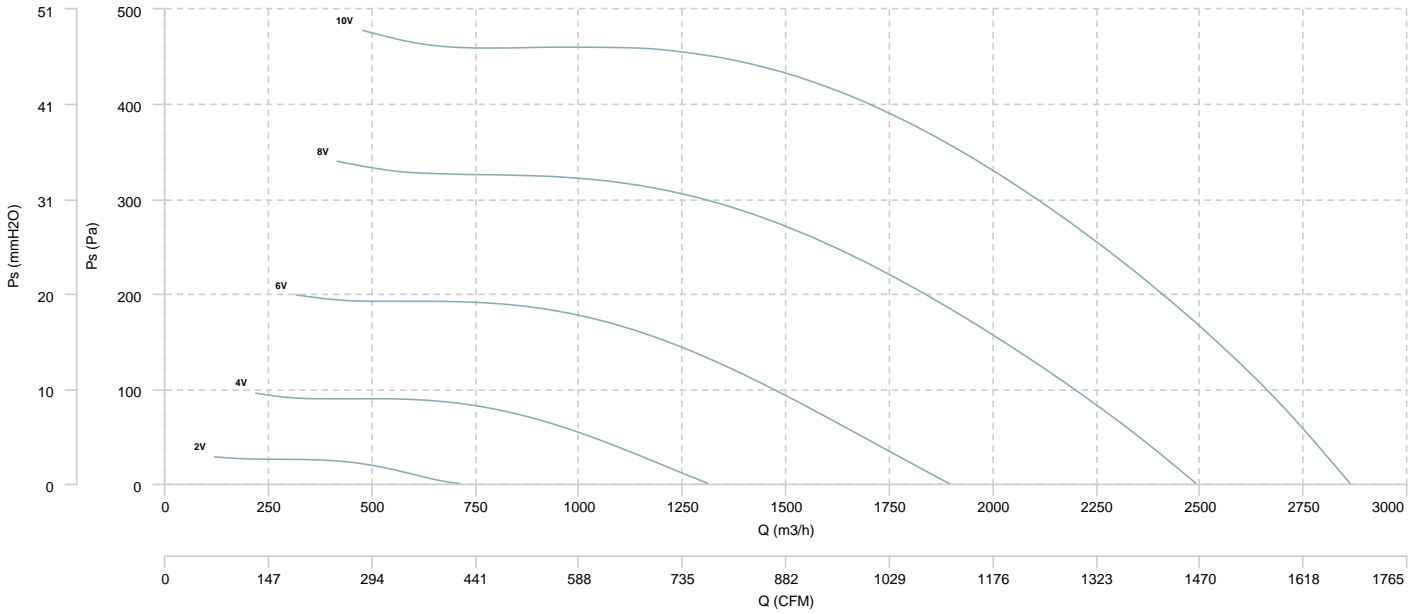
DIAGRAM N° 1



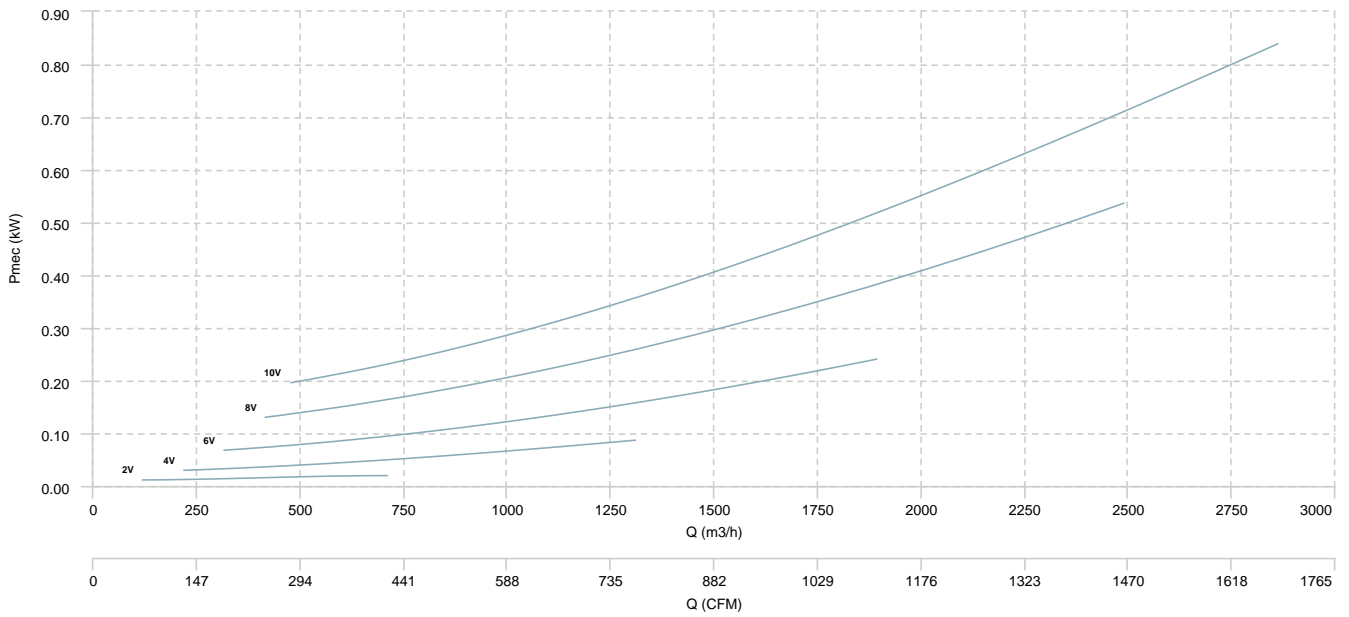
# CHARACTERISCTIC CURVE

TWIN BOX BD 7/7 EEC

## AIR FLOW - PRESSURE

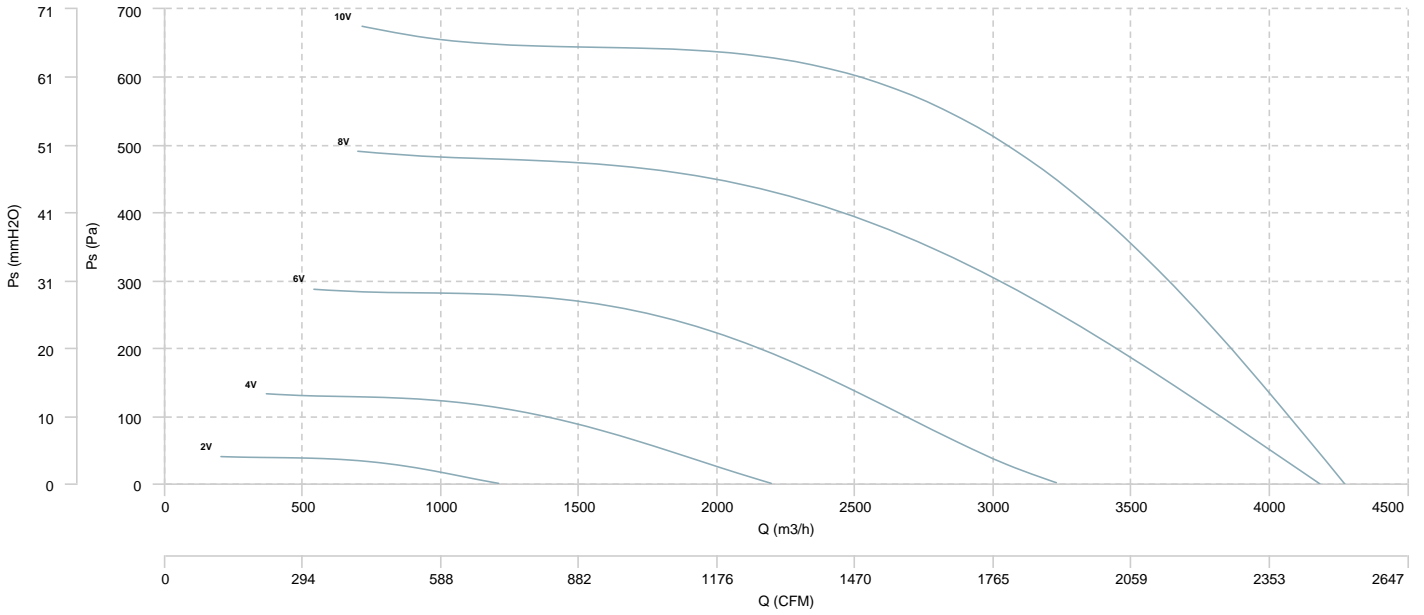


## AIR FLOW - MECHANICAL POWER

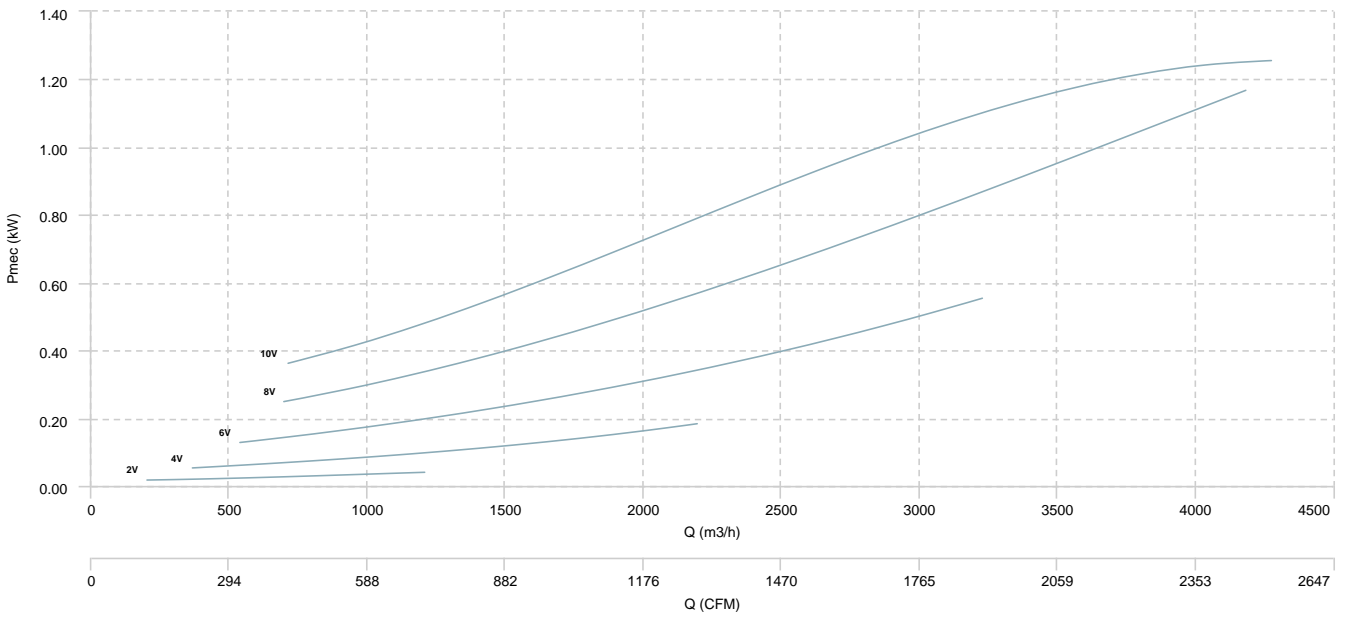


**TWIN BOX BD 9/9 EEC**

**AIR FLOW - PRESSURE**

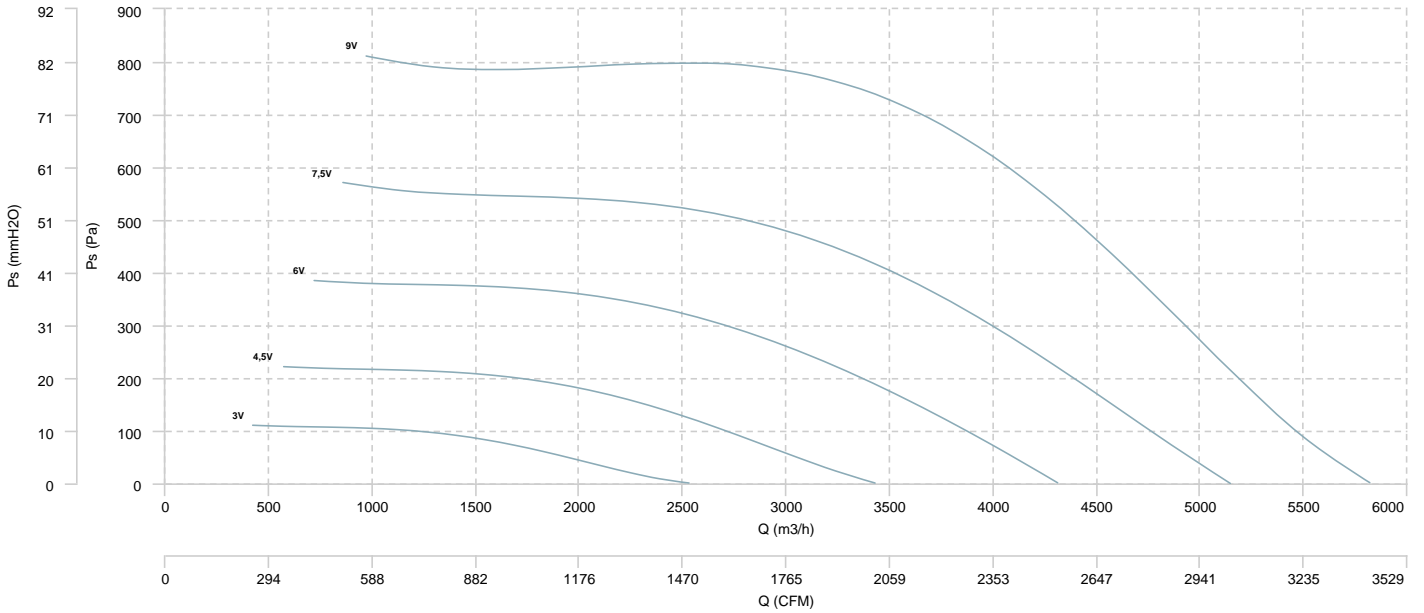


**AIR FLOW - MECHANICAL POWER**

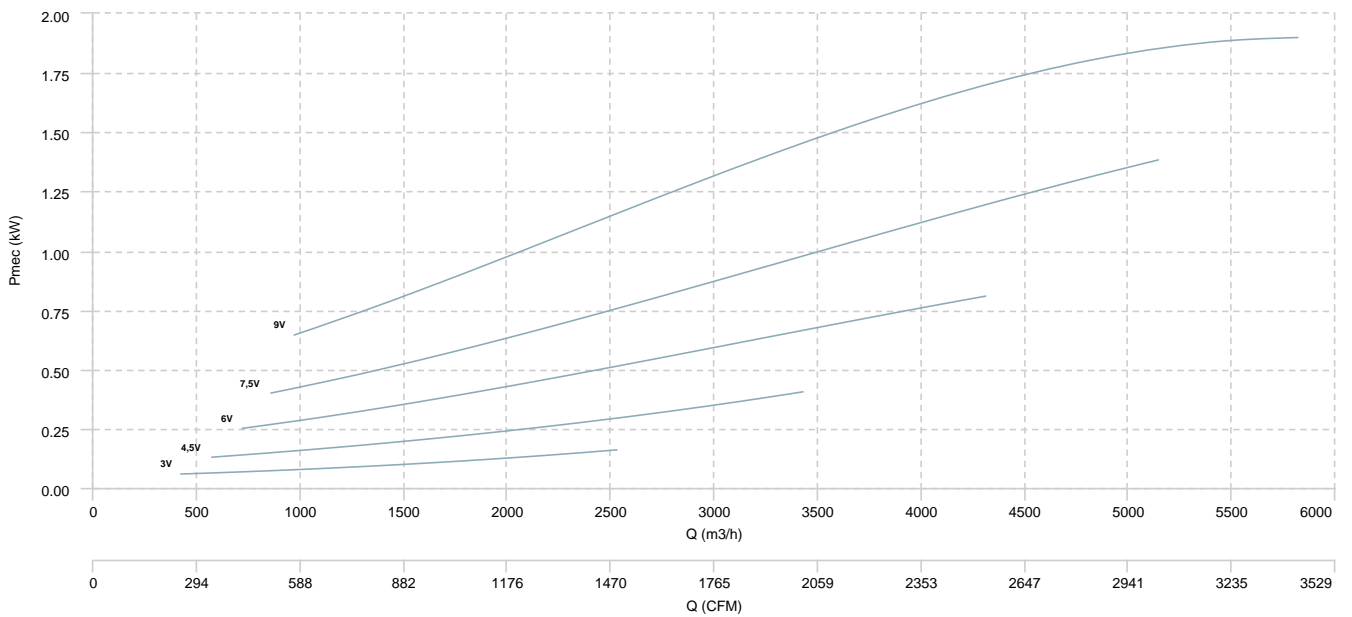


TWIN BOX BD 10/10 EEC

AIR FLOW - PRESSURE

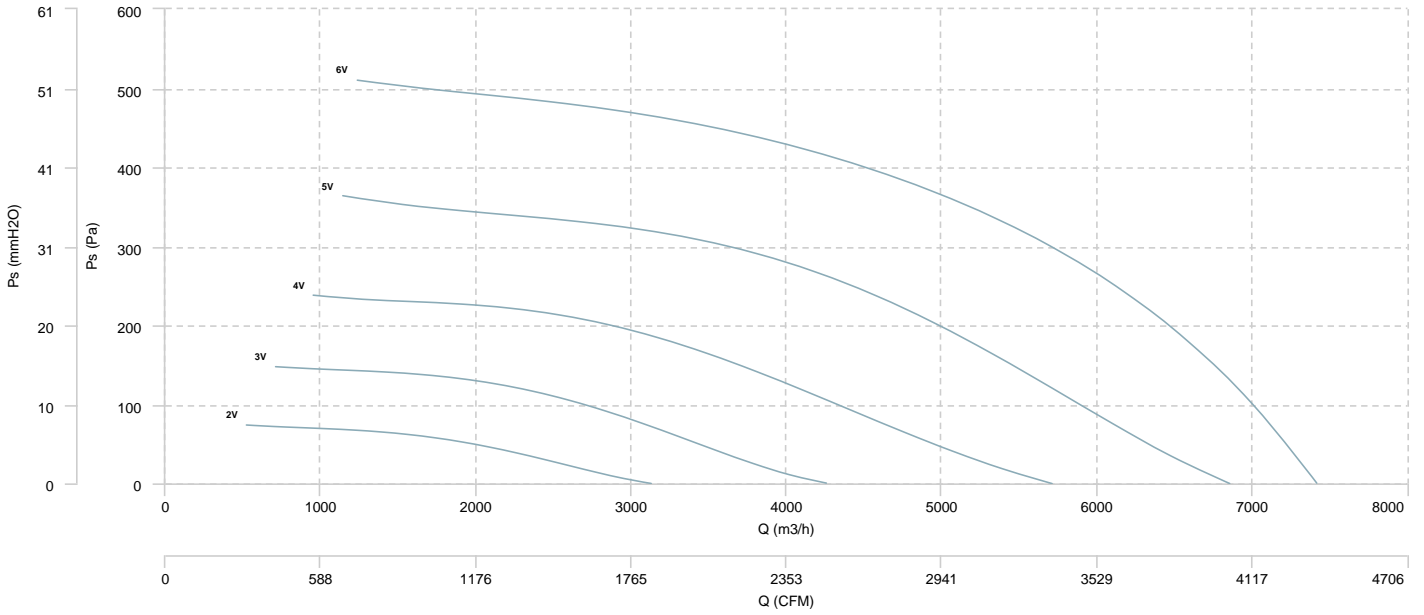


AIR FLOW - MECHANICAL POWER

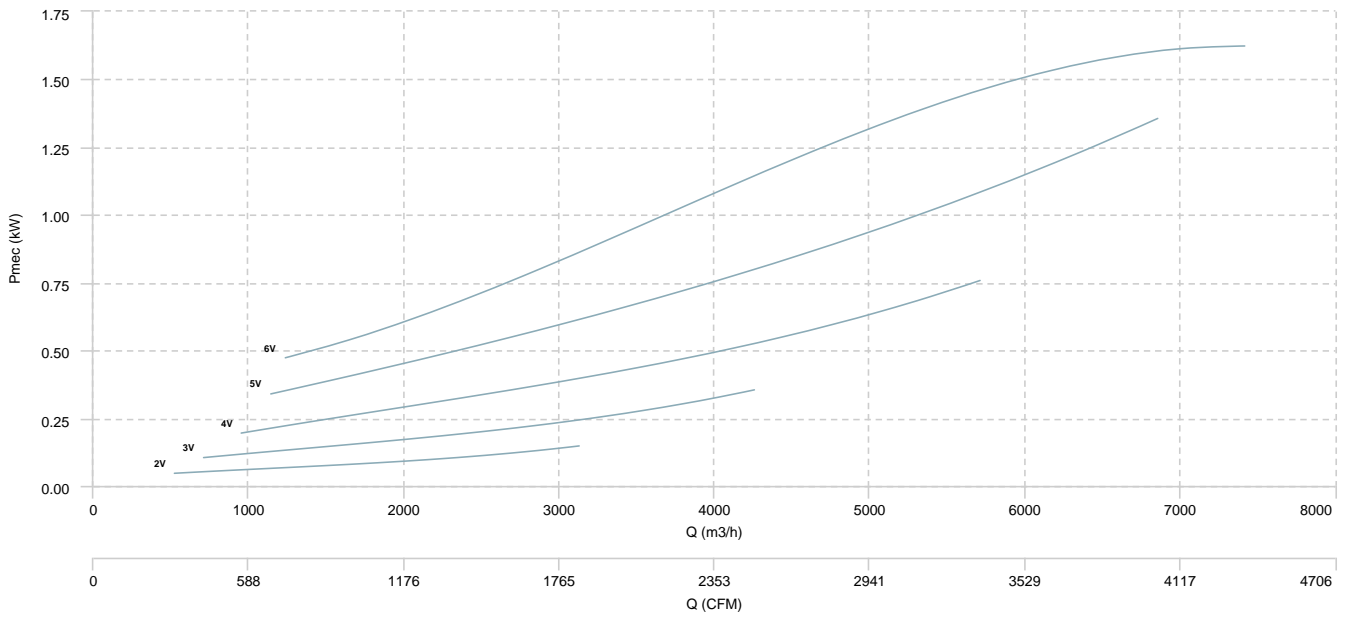


TWIN BOX BD 12/12 EEC

AIR FLOW - PRESSURE



AIR FLOW - MECHANICAL POWER





## Sound data

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
TWIN BOX BD 7/7 EEC (2000 RPM)	Inlet	52	58	58	59	61	60	56	51	67
TWIN BOX BD 9/9 EEC (2000 RPM)	Inlet	57	63	62	64	66	64	61	56	72
TWIN BOX BD 10/10 EEC (1800 RPM)	Inlet	59	65	64	65	68	66	63	58	73
TWIN BOX BD 12/12 EEC (1200 RPM)	Inlet	58	64	64	65	67	65	62	57	73

**Notes:**

\* To calculate the sound power level at different rpm from those indicated above, use the following formula:

$$Lw \text{ dB(A)}_{rpmA} = Lw \text{ dB(A)}_{rpmB} + 52.5 \cdot \log_{10} \frac{rpmA}{rpmB}$$

**erp data**
**ERP**

Fan type	Unit for non-residential ventilation (LOT 6)
Typology	Unidirectional
Others	None
Type of driver	VSD (multiple speed)

Model	Motor power (kW)	Maximum efficiency point data						
		Eff.Heat recovery (%)	Max. efficiency (%)	Pabs (kW)	Air Flow (m3/h)	Ps (Pa)	Speed (m/s)	SFP (W/m3/s)
TWIN BOX BD 7/7 EEC (2000 RPM)	0,37	-	45,75	0,34	1.222,32	456,43	5.86	989,73
TWIN BOX BD 7/7 EEC (1600 RPM)	0,37	-	43,30	0,21	1.052,97	319,81	5.05	989,73
TWIN BOX BD 9/9 EEC (2000 RPM)	0,75	-	51,08	0,71	1.959,62	638,44	6.02	1.308,75
TWIN BOX BD 9/9 EEC (1600 RPM)	0,75	-	50,68	0,43	1.645,96	468,69	5.06	1.308,75
TWIN BOX BD 9/9 EEC (1200 RPM)	0,75	-	48,07	0,21	1.280,64	277,16	3.93	1.308,75
TWIN BOX BD 10/10 EEC (1800 RPM)	1,50	-	49,67	1,22	2.711,36	795,93	6.84	1.619,15
TWIN BOX BD 10/10 EEC (1500 RPM)	1,50	-	48,89	0,70	2.281,97	533,21	5.76	1.619,15
TWIN BOX BD 10/10 EEC (1200 RPM)	1,50	-	47,08	0,42	1.945,95	362,35	4.91	1.619,15
TWIN BOX BD 10/10 EEC (900 RPM)	1,50	-	43,78	0,20	1.524,74	207,23	3.85	1.619,15
TWIN BOX BD 12/12 EEC (1200 RPM)	1,50	-	49,19	0,90	3.298,74	459,41	6.04	986,73
TWIN BOX BD 12/12 EEC (1000 RPM)	1,50	-	46,59	0,56	2.737,34	329,67	5.01	986,73
TWIN BOX BD 12/12 EEC (800 RPM)	1,50	-	44,21	0,31	2.193,44	222,25	4.02	986,73
TWIN BOX BD 12/12 EEC (600 RPM)	1,50	-	41,93	0,16	1.750,81	135,91	3.21	986,73