

**BOX BD**



**CENTRIFUGAL IN SOUNDPROOF CABINET**

**MANUFACTURING FEATURES:**

- Impellers made of polyamide reinforced with fiberglass up to size 33/33 (12/12). Rest of models made of galvanized steel sheet.
- BD range fans assembled in soundproof cabinets with thermo-acoustic insulation, Bs1d0 fire class.
- Fan assembled on antivibration mountings.
- Connection gland included.
- Closed motors specially designed by Casals with extruded aluminum housing, which make the whole connection is protected within the integrated terminal box on the motor with IP65 protection and Class F insulation standard voltages: 230V 50Hz in single phase and 230/400V 50Hz three-phase.

**APPLICATIONS:**

- Designed for inline installation, indoor or outdoor assembly, they are suitable for:
- Air renewal in buildings and industries.
  - Industrial and professional kitchen hoods.
  - Maximum working temperature: 50°C.

**UNDER REQUEST:**

- LG0 position.
- Impellers made of galvanised steel sheet.
- 3 speed fans.

**Accessories**



**BAC**



**INT**



**PI**



**REG**



**REG VMC**



**REGD-1**



**SFC**



**TCA**



**TIAC**



**VIS**

## Technical data

### Single-phase motor / 4 poles

Code	Model	R.P.M.	Rated I. (A) 230V	Rated power kW	Max. Airflow m3/h	Sound db (A)*	Weight	Connect. diagram
251100550	BOX BD 7/7 M4 0,12kW	1370	1,5	0,12	1.725	50	19	1
251100551	BOX BD 7/7 M4 0,13kW	1370	1,55	0,13	1.850	55	19	1
251220550	BOX BD 9/9 M4 0,35kW	1375	2,7	0,35	2.670	57	30	1
251320550	BOX BD 10/10 M4 0,59kW	1340	4,5	0,59	3.790	60	34	1

### Single-phase motor / 6 poles

Code	Model	R.P.M.	Rated I. (A) 230V	Rated power kW	Max. Airflow m3/h	Sound db (A)*	Weight	Connect. diagram
251160550	BOX BD 7/7 M6 0,04kW	885	0,6	0,04	1.020	40	20	1
251280550	BOX BD 9/9 M6 0,12kW	925	1,2	0,12	2.030	50	28	1
251280551	BOX BD 9/9 M6 0,13kW	940	1,3	0,13	2.130	49	28	1
251370550	BOX BD 10/10 M6 0,19kW	880	2,1	0,19	2.870	56	32	1
251370551	BOX BD 10/10 M6 0,21kW	945	2,1	0,21	2.720	53	34	1
251520551	BOX BD 12/12 M6 0,76kW	950	6,7	0,76	5.960	56	49	1
251520550	BOX BD 12/12 M6 0,79kW	945	6,2	0,79	6.170	63	49	1

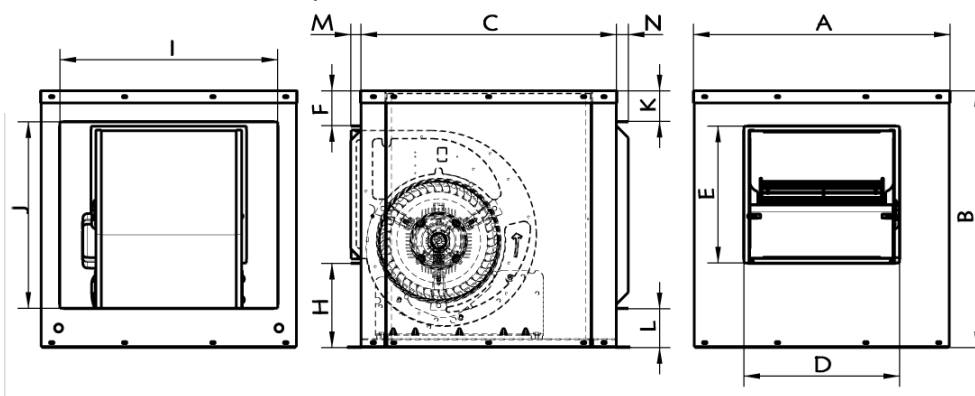
### Three-phase motor / 6 poles

Code	Model	R.P.M.	Rated I. (A) 400V	Rated power kW	Max. Airflow m3/h	Sound db (A)*	Weight	Connect. diagram
251520153	BOX BD 12/12 T6 1,1kW	945	3,78	1,10	6.090	55	51	2
252370157	BOX BD 15/15 T6 2,2kW	900	6,31	2,20	10.450	60	71	2

**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
BOX BD 7/7 M4 0,12kW	450	450	450	252	226	76	145	352	309
BOX BD 7/7 M4 0,13kW	450	450	450	252	226	76	145	352	309
BOX BD 7/7 M6 0,04kW	450	450	450	252	226	76	145	352	309
BOX BD 9/9 M4 0,35kW	535	535	535	321	278	91	164	418	359
BOX BD 9/9 M6 0,12kW	535	535	535	321	278	91	164	418	359
BOX BD 9/9 M6 0,13kW	535	535	535	321	278	91	164	418	359
BOX BD 10/10 M4 0,59kW	580	580	580	352	308	79	190	493	421
BOX BD 10/10 M6 0,19kW	580	580	580	352	308	79	190	493	421
BOX BD 10/10 M6 0,21kW	580	580	580	352	308	79	190	493	421
BOX BD 12/12 M6 0,76kW	650	650	650	418	359	78	211	576	500
BOX BD 12/12 M6 0,79kW	650	650	650	418	359	78	211	576	500
BOX BD 12/12 T6 1,1kW	650	650	650	418	359	78	211	576	500
BOX BD 15/15 T6 2,2kW	775	775	775	493	421	113	239	650	650

Model	K	L	M	N
BOX BD 7/7 M4 0,12kW	60	78	23	27
BOX BD 7/7 M4 0,13kW	60	78	23	27
BOX BD 7/7 M6 0,04kW	60	78	23	27
BOX BD 9/9 M4 0,35kW	78	96	23	27
BOX BD 9/9 M6 0,12kW	78	96	23	27
BOX BD 9/9 M6 0,13kW	78	96	23	27
BOX BD 10/10 M4 0,59kW	69	88	23	27
BOX BD 10/10 M6 0,19kW	69	88	23	27
BOX BD 10/10 M6 0,21kW	69	88	23	27
BOX BD 12/12 M6 0,76kW	65	83	23	27
BOX BD 12/12 M6 0,79kW	65	83	23	27

Model	K	L	M	N
BOX BD 12/12 T6 1,1kW	65	83	23	27
BOX BD 15/15 T6 2,2kW	52	71	23	27

# Wiring diagram

DIAGRAM Nº 1

SINGLE PHASE MOTOR  
MOTOR MONOFÁSICO

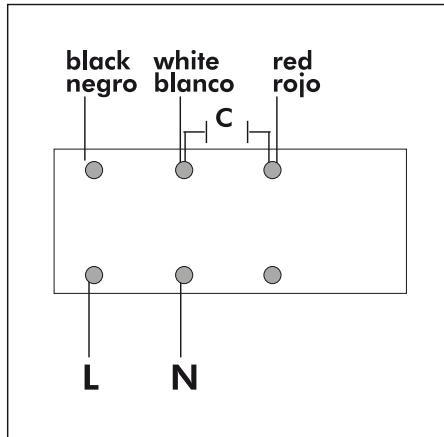
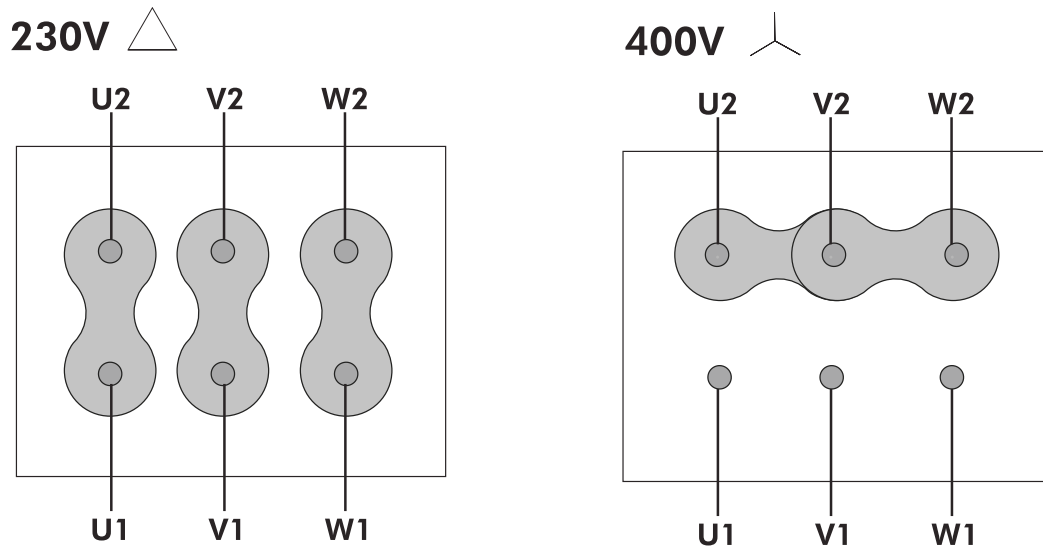


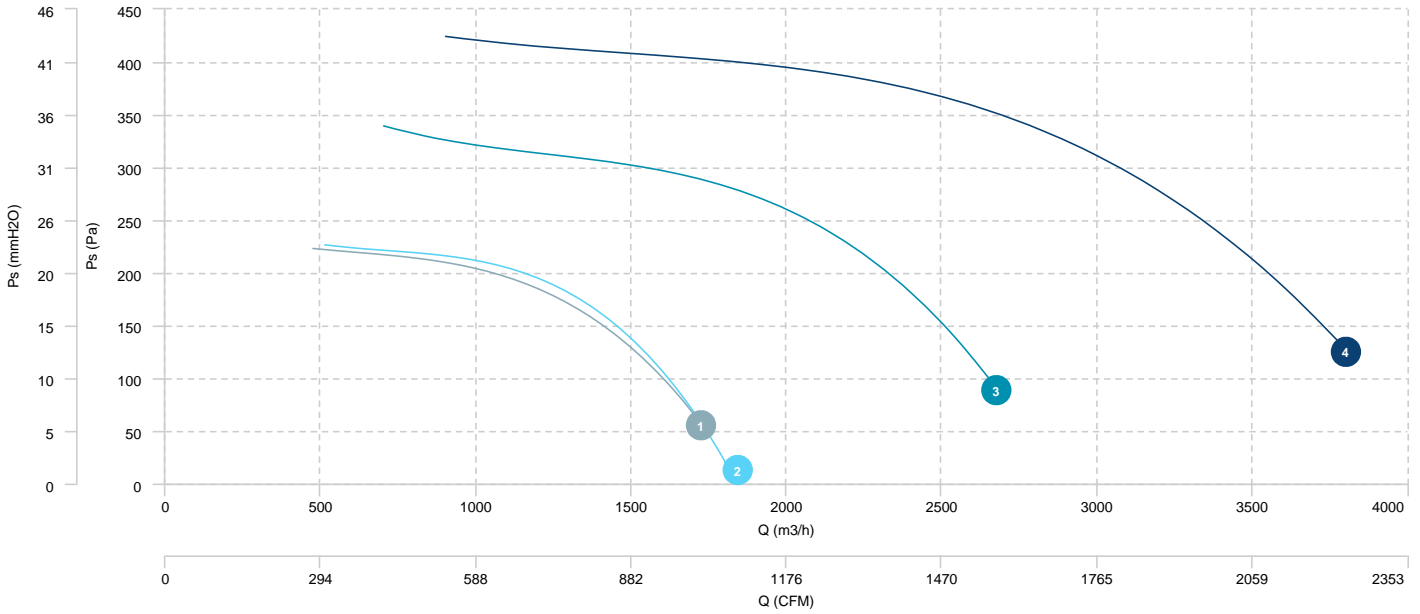
DIAGRAM Nº 2



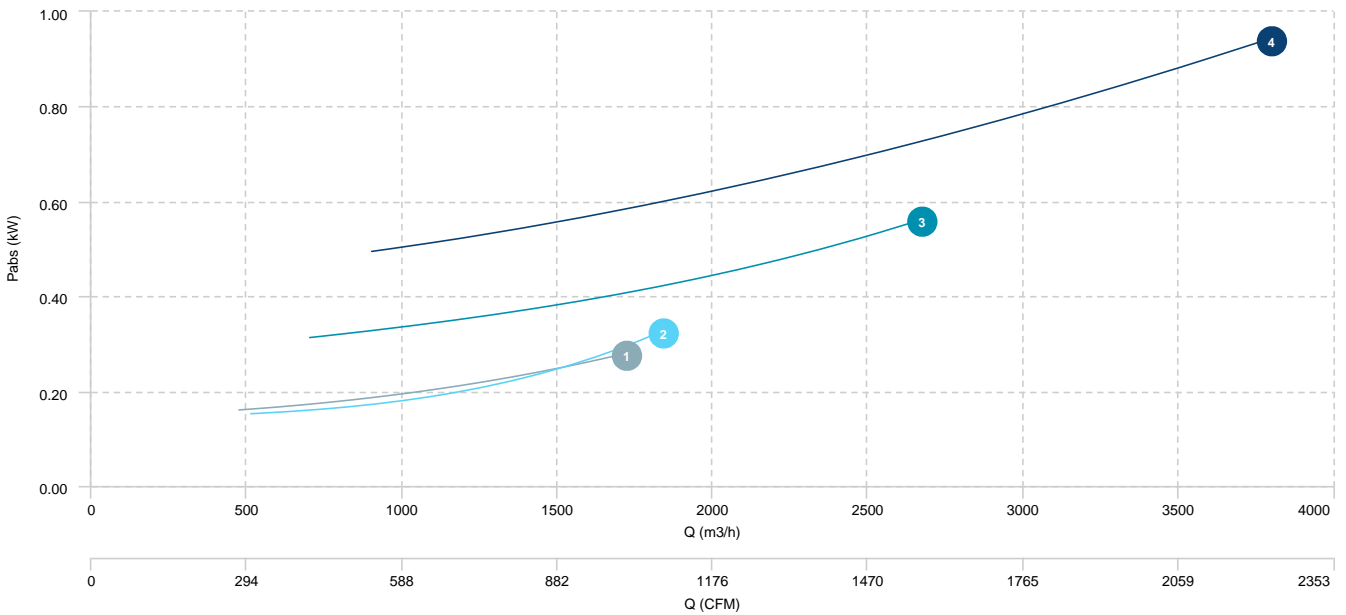
# CHARACTERISCTIC CURVE

- 1 BOX BD 7/7 M4 0,12kW
- 2 BOX BD 7/7 M4 0,13kW
- 3 BOX BD 9/9 M4 0,35kW
- 4 BOX BD 10/10 M4 0,59kW

## AIR FLOW - PRESSURE

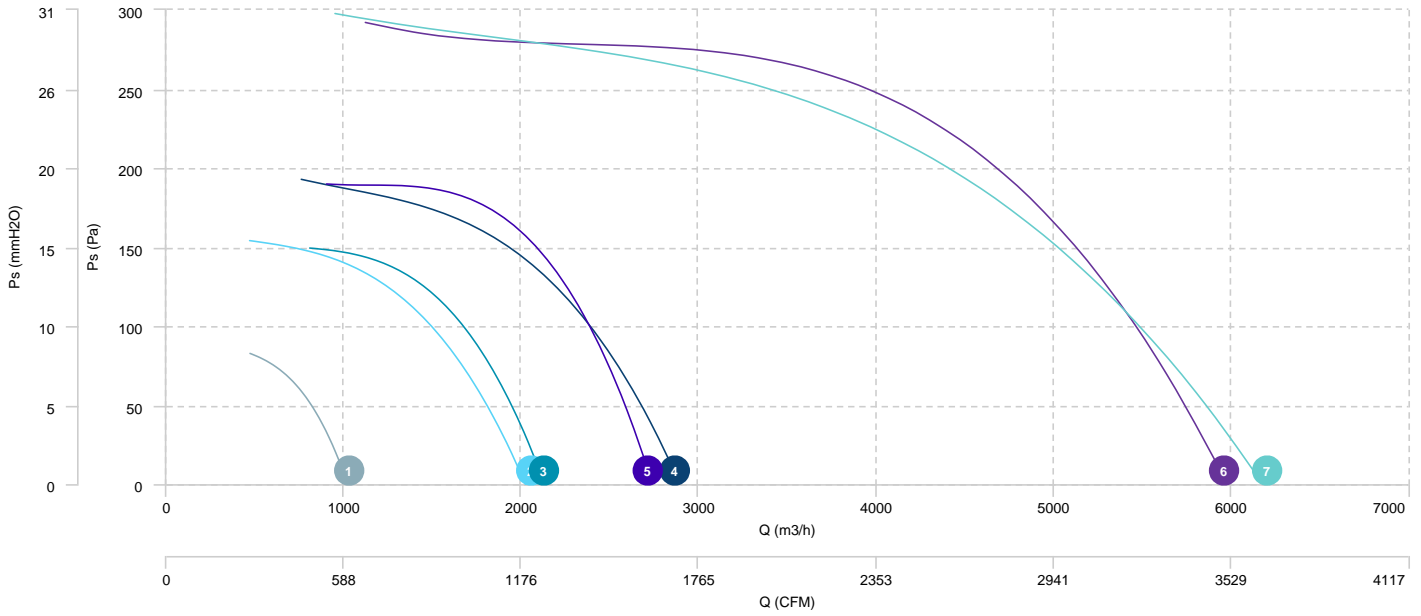


## AIR FLOW - ABSORBED POWER

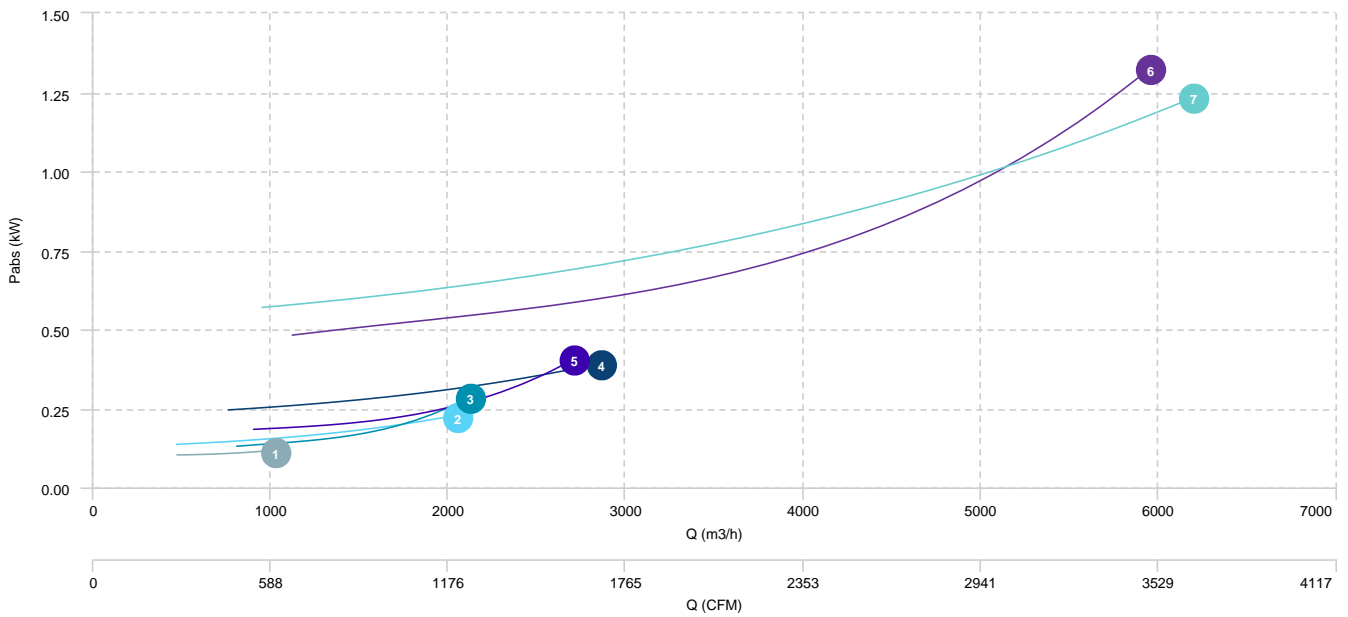


1	BOX BD 7/7 M6 0,04kW	2	BOX BD 9/9 M6 0,12kW	3	BOX BD 9/9 M6 0,13kW	4	BOX BD 10/10 M6 0,19kW
5	BOX BD 10/10 M6 0,21kW	6	BOX BD 12/12 M6 0,76kW	7	BOX BD 12/12 M6 0,79kW		

## AIR FLOW - PRESSURE



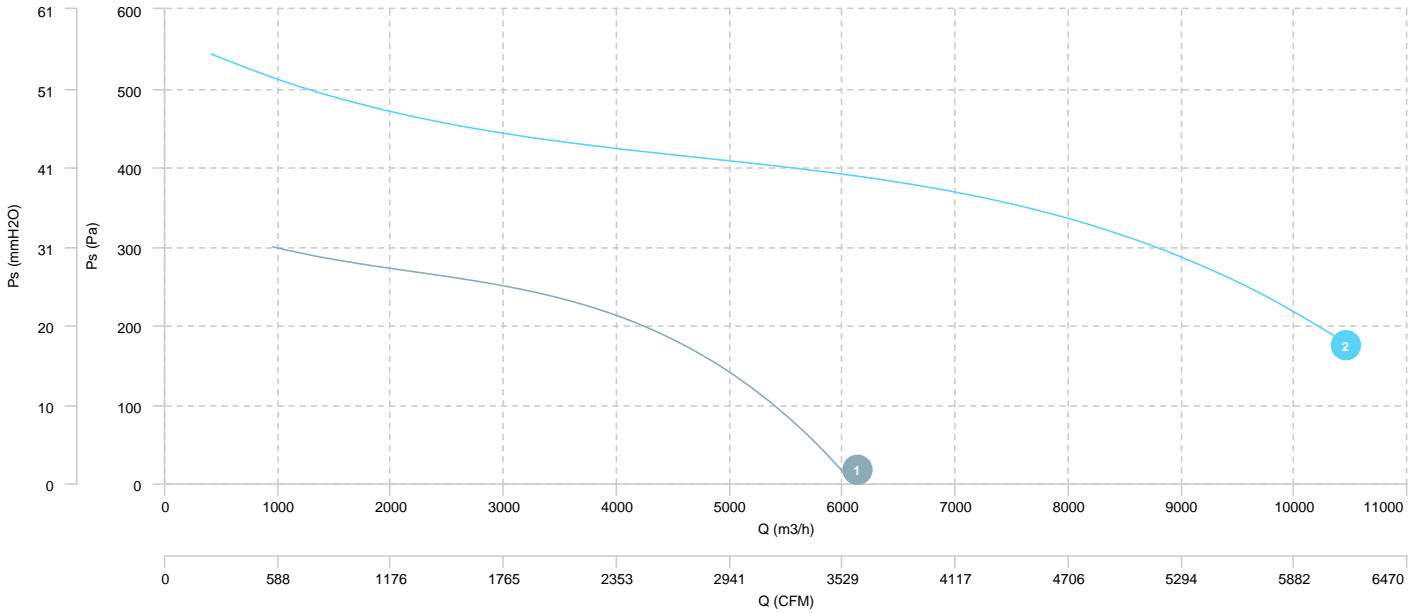
## AIR FLOW - ABSORBED POWER



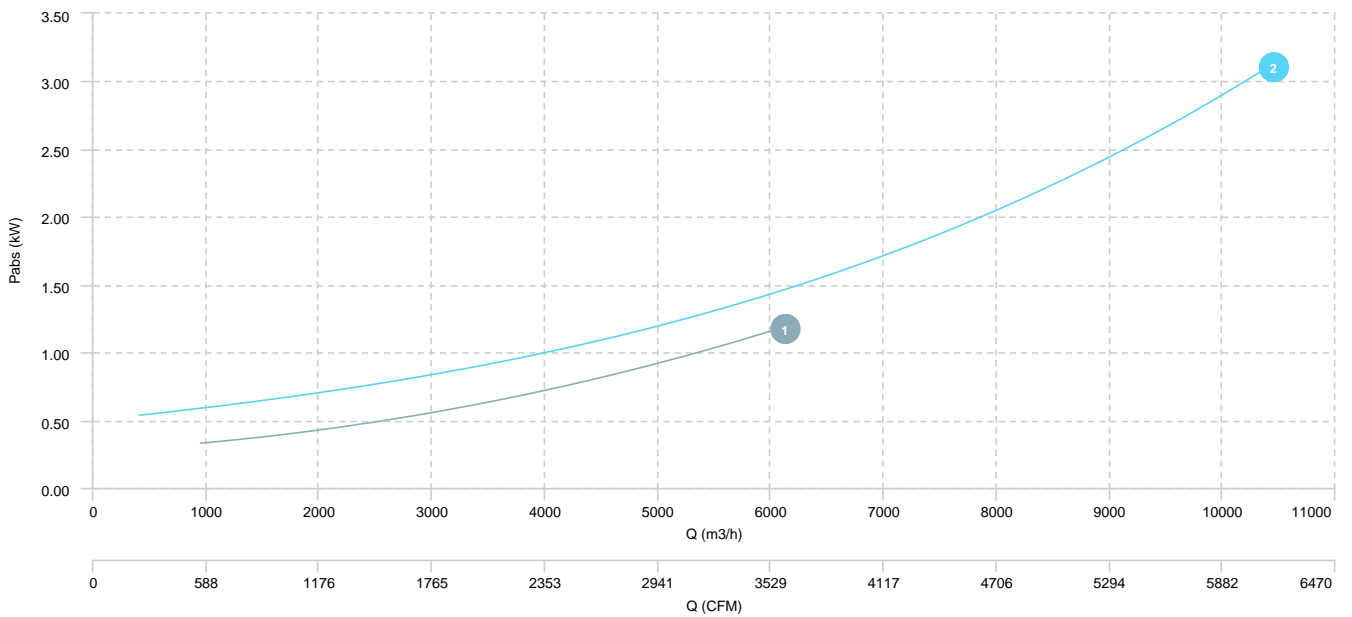
1 BOX BD 12/12 T6 1,1kW

2 BOX BD 15/15 T6 2,2kW

## AIR FLOW - PRESSURE



## AIR FLOW - ABSORBED POWER





## Sound data

### Sound / 4 poles

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
BOX BD 7/7 M4 0,12kW	Inlet	55	57	65	67	71	71	66	57	76
BOX BD 7/7 M4 0,13kW	Inlet	60	62	71	73	77	76	72	62	81
BOX BD 9/9 M4 0,35kW	Inlet	62	64	73	75	79	78	74	64	83
BOX BD 10/10 M4 0,59kW	Inlet	65	67	76	78	82	81	77	67	86

### Sound / 6 poles

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
BOX BD 7/7 M6 0,04kW	Inlet	45	47	56	58	62	61	57	47	66
BOX BD 9/9 M6 0,12kW	Inlet	55	57	65	67	71	70	66	57	76
BOX BD 9/9 M6 0,13kW	Inlet	54	56	65	67	71	70	66	56	75
BOX BD 10/10 M6 0,19kW	Inlet	61	63	71	73	77	76	72	63	82
BOX BD 10/10 M6 0,21kW	Inlet	58	60	69	70	74	74	69	60	79
BOX BD 12/12 M6 0,76kW	Inlet	61	63	72	73	77	77	72	63	82
BOX BD 12/12 M6 0,79kW	Inlet	68	70	78	80	84	83	79	70	89
BOX BD 12/12 T6 1,1kW	Inlet	60	62	71	73	77	76	72	62	81
BOX BD 15/15 T6 2,2kW	Inlet	65	67	76	78	82	81	77	67	86

## erp data

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

### ERP / 4 poles

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)
BOX BD 7/7 M4 0,12kW	0,12	-	26,10	0,19	998,80	204,21	4.79	699,19
BOX BD 7/7 M4 0,13kW	0,13	-	32,01	0,19	1.104,78	204,54	5.3	618,38
BOX BD 9/9 M4 0,35kW	0,35	-	33,71	0,42	1.790,28	283,45	5.5	836,25
BOX BD 10/10 M4 0,59kW	0,59	-	36,49	0,69	2.454,37	370,83	6.19	1.013,09

### ERP / 6 poles

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)
BOX BD 9/9 M6 0,12kW	0,12	-	26,09	0,17	1.219,44	126,97	3.75	486,43
BOX BD 9/9 M6 0,13kW	0,13	-	31,01	0,15	1.243,12	138,90	3.82	433,15
BOX BD 10/10 M6 0,21kW	0,21	-	36,51	0,22	1.713,03	180,33	4.32	465,94
BOX BD 12/12 M6 0,76kW	0,76	-	36,78	0,66	3.479,52	266,56	6.37	686,45
BOX BD 12/12 T6 1,1kW	1,10	-	37,19	0,53	2.847,62	253,74	5.22	675,25
BOX BD 15/15 T6 2,2kW	2,20	-	46,74	1,18	4.932,79	409,21	6.54	861,45