

TWIN BOX BD



CENTRIFUGAL IN SOUNDPROOF CABINET

MANUFACTURING FEATURES

- Impellers made of reinforced polyamide with fiber glass up to size 12/12 (33/33). Size 15/15 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.
- Equipped with inlet deflector wing, minimizing the turbulence and optimizing efficiency.
- Closed motors specially designed by Casals. Extruded aluminium motor housing. Totally enclosed wiring box. IP-55 motor protection and rated class F insulation. Standard voltages 230V 50Hz for single phase and 230/400V 50Hz.
- Fans can run separately or simultaneously.

Accessories



INT



PI



REG



REG
VMC



REGD



SFC



VIS

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

- 3 speed fans.
- 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 / 4 poles

Code	Model	R.P.M.	Rated I. (A) 230V	Rated power kW	Max. Airflow m3/h	Sound db (A)**	Weight	Connect. diagram
TW251100550	TWIN BOX BD 7/7 M4 0,12kW	1370	1,5	0,12	1.725	50	36	1
TW251100551	TWIN BOX BD 7/7 M4 0,13kW	1370	1,55	0,13	1.850	55	36	1
TW251220550	TWIN BOX BD 9/9 M4 0,35kW	1375	2,7	0,35	2.670	57	57	1
TW251320550	TWIN BOX BD 10/10 M4 0,59kW	1340	4,5	0,59	3.800	60	65	1

Single-phase motor / 6 poles

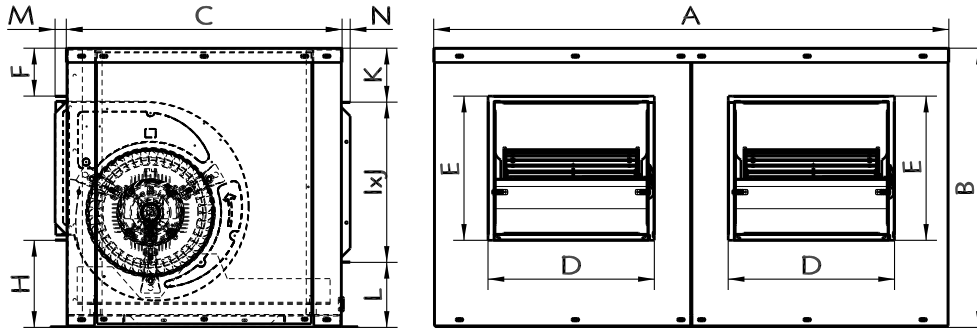
Code	Model	R.P.M.	Rated I. (A) 230V	Rated power kW	Max. Airflow m3/h	Sound db (A)**	Weight	Connect. diagram
TW251160550	TWIN BOX BD 7/7 M6 0,04kW	885	0,6	0,04	1.030	40	38	1
TW251280550	TWIN BOX BD 9/9 M6 0,12kW	925	1,2	0,12	2.050	50	51	1
TW251280551	TWIN BOX BD 9/9 M6 0,13kW	940	1,3	0,13	2.130	49	51	1
TW251370550	TWIN BOX BD 10/10 M6 0,19kW	880	2,1	0,19	2.870	56	61	1
TW251370551	TWIN BOX BD 10/10 M6 0,21kW	945	2,1	0,21	2.720	53	65	1
TW251520551	TWIN BOX BD 12/12 M6 0,76kW	950	6,7	0,76	5.960	56	93	1
TW251520550	TWIN BOX BD 12/12 M6 0,79kW	945	6,2	0,79	6.210	63	93	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
TW251520153	TWIN BOX BD 12/12 T6 1,1kW	945	3,78	1,10	6.130	55	97	2
TW252370157	TWIN BOX BD 15/15 T6 2,2kW	900	6,31	2,20	10.450	60	135	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
TWIN BOX BD 7/7 M4 0,12kW	850	450	450	254	228	76	147	596	280
TWIN BOX BD 7/7 M4 0,13kW	850	450	450	254	228	76	147	596	280
TWIN BOX BD 7/7 M6 0,04kW	850	450	450	254	228	76	147	596	280
TWIN BOX BD 9/9 M4 0,35kW	1000	535	535	323	280	91	165	658	311
TWIN BOX BD 9/9 M6 0,12kW	1000	535	535	323	280	91	165	658	311
TWIN BOX BD 9/9 M6 0,13kW	1000	535	535	323	280	91	165	658	311
TWIN BOX BD 10/10 M4 0,59kW	1085	580	580	354	311	79	191	790	361
TWIN BOX BD 10/10 M6 0,19kW	1085	580	580	354	311	79	191	790	361
TWIN BOX BD 10/10 M6 0,21kW	1085	580	580	354	311	79	191	790	361
TWIN BOX BD 12/12 M6 0,76kW	1220	651	651	419	361	79	211	940	423
TWIN BOX BD 12/12 M6 0,79kW	1220	651	651	419	361	79	211	940	423
TWIN BOX BD 12/12 T6 1,1kW	1220	651	651	419	361	79	211	940	423
TWIN BOX BD 15/15 T6 2,2kW	1432,5	777	777	494	423	113	239	1106	502

Model	K	L	M	N
TWIN BOX BD 7/7 M4 0,12kW	76	94	23	17
TWIN BOX BD 7/7 M4 0,13kW	76	94	23	17
TWIN BOX BD 7/7 M6 0,04kW	76	94	23	17
TWIN BOX BD 9/9 M4 0,35kW	103	121	23	17
TWIN BOX BD 9/9 M6 0,12kW	103	121	23	17
TWIN BOX BD 9/9 M6 0,13kW	103	121	23	17
TWIN BOX BD 10/10 M4 0,59kW	100	119	23	17
TWIN BOX BD 10/10 M6 0,19kW	100	119	23	17
TWIN BOX BD 10/10 M6 0,21kW	100	119	23	17
TWIN BOX BD 12/12 M6 0,76kW	104	123	23	17
TWIN BOX BD 12/12 M6 0,79kW	104	123	23	17
TWIN BOX BD 12/12 T6 1,1kW	104	123	23	17
TWIN BOX BD 15/15 T6 2,2kW	127	147	23	17

Wiring diagram

DIAGRAM Nº 1

SINGLE PHASE MOTOR
MOTOR MONOFÁSICO

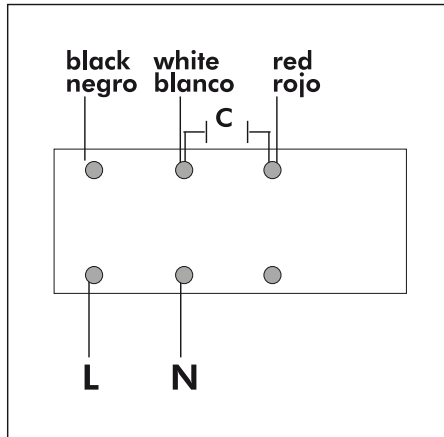
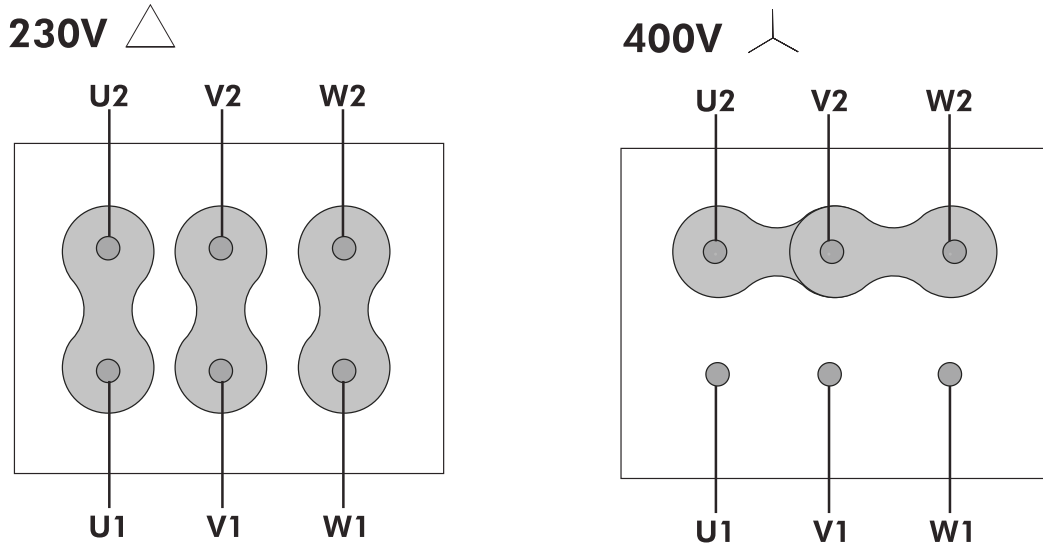


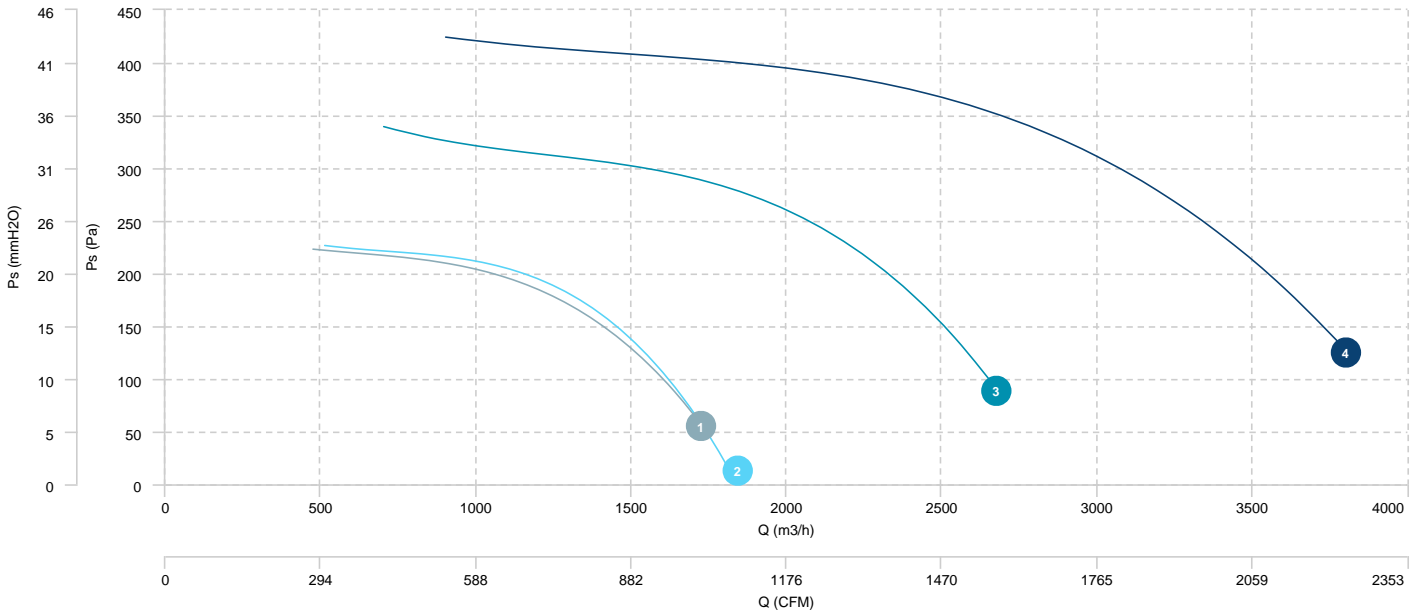
DIAGRAM Nº 2



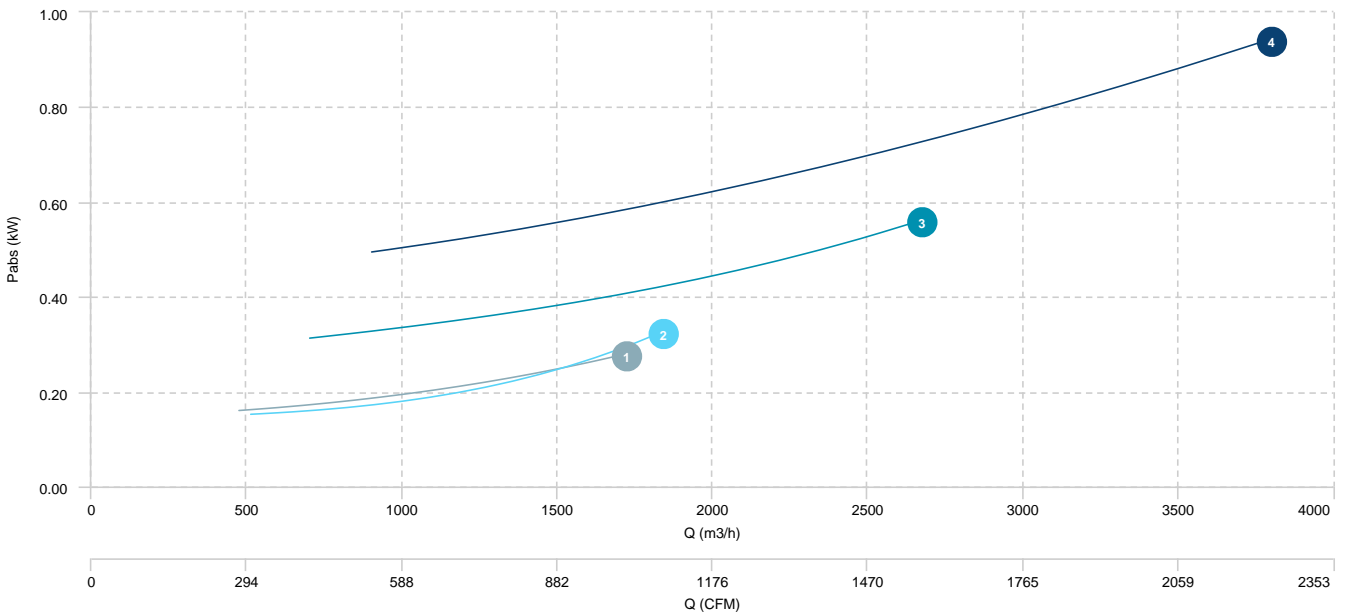
CHARACTERISTIC CURVE

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

AIR FLOW - PRESSURE

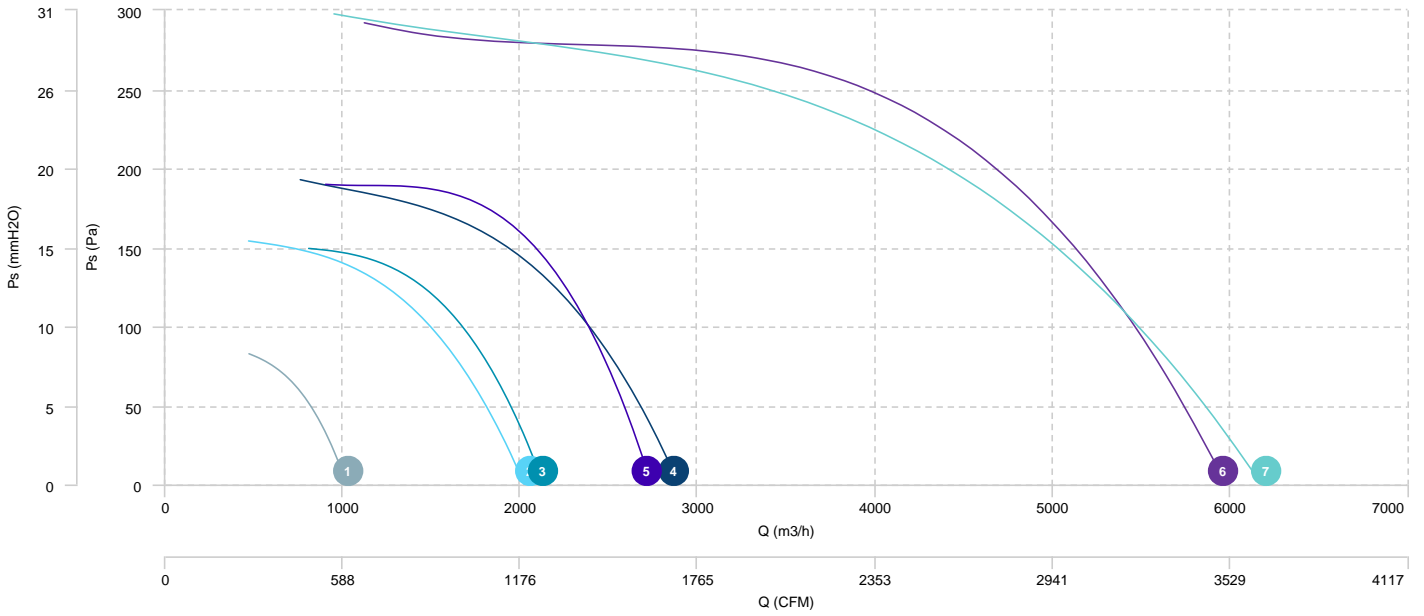


AIR FLOW - ABSORBED POWER

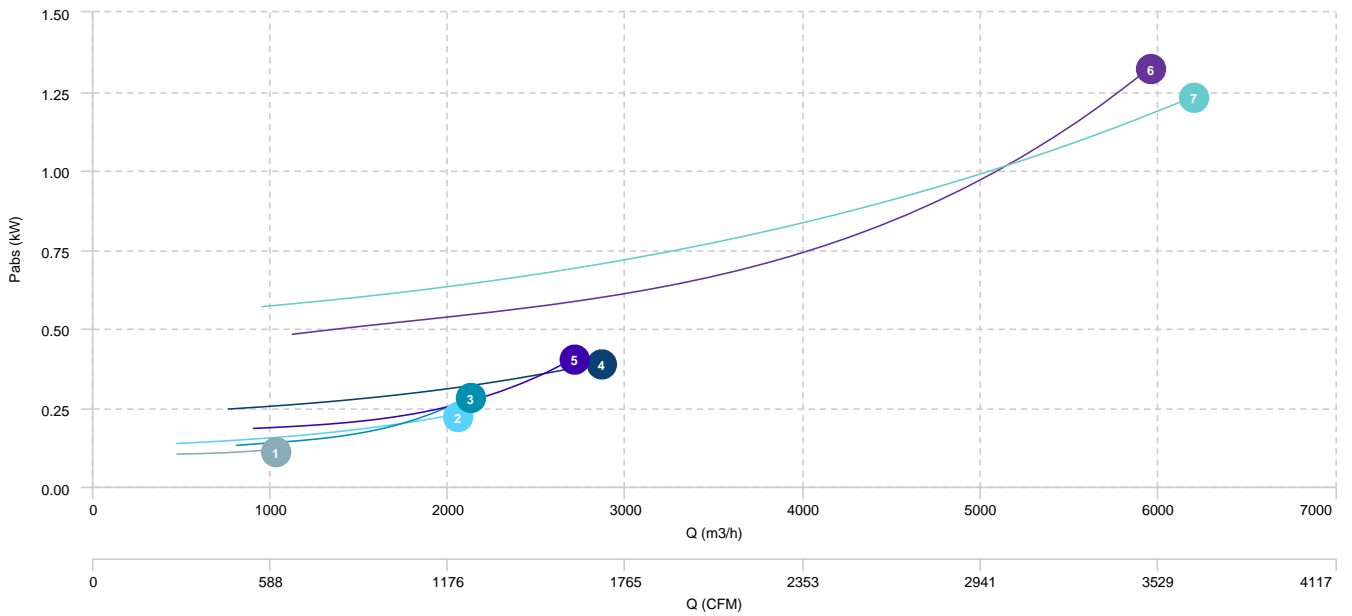


1	TWIN BOX BD 7/7 M6 0, 04kW	2	TWIN BOX BD 9/9 M6 0, 12kW	3	TWIN BOX BD 9/9 M6 0, 13kW	4	TWIN BOX BD 10/10 M6 0, 19kW
5	TWIN BOX BD 10/10 M6 0, 21kW	6	TWIN BOX BD 12/12 M6 0, 76kW	7	TWIN BOX BD 12/12 M6 0, 79kW		

AIR FLOW - PRESSURE



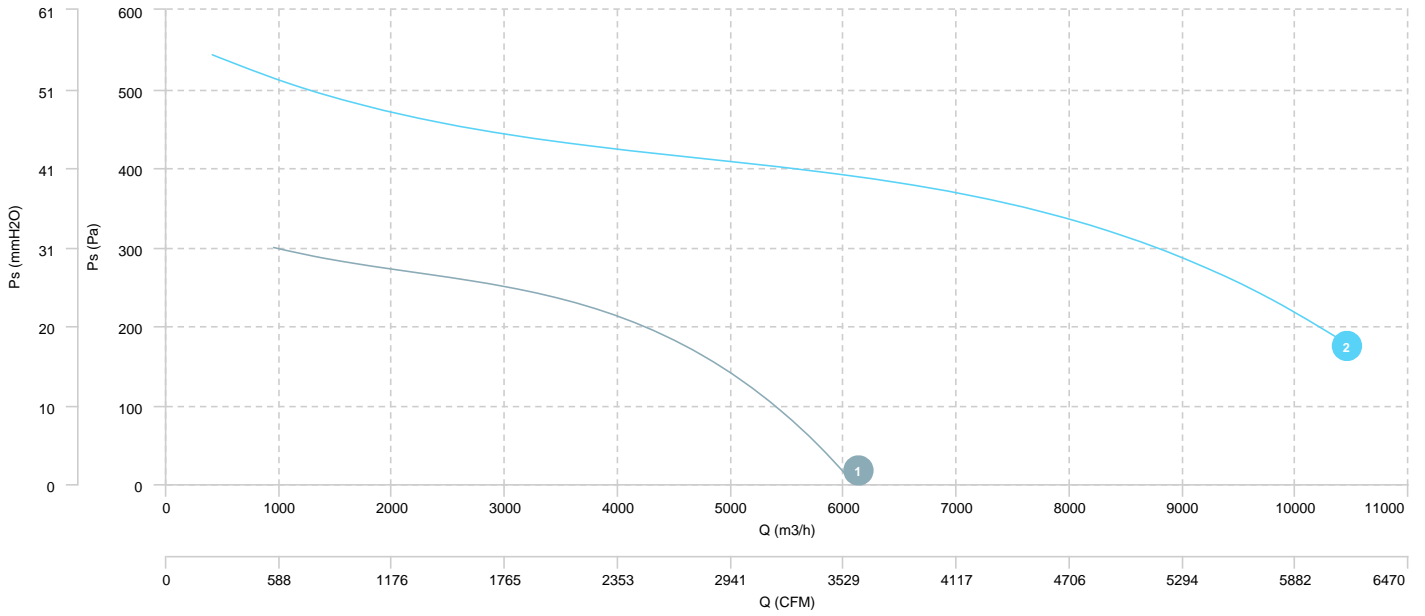
AIR FLOW - ABSORBED POWER



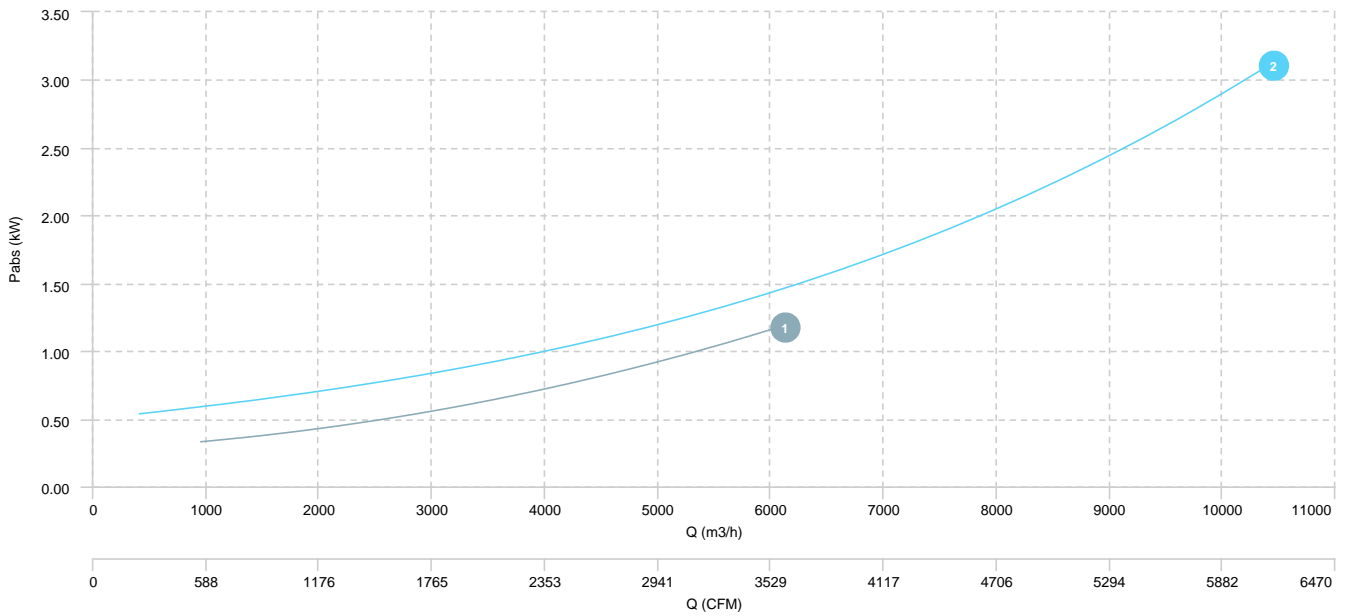
1 TWIN BOX BD 12/12 T6 1,
1kW

2 TWIN 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
TWIN BOX BD 7/7 M4 0,12kW	Inlet	55	57	65	67	71	71	66	57	76
TWIN BOX BD 7/7 M4 0,13kW	Inlet	60	62	71	73	77	76	72	62	81
TWIN BOX BD 9/9 M4 0,35kW	Inlet	62	64	73	75	79	78	74	64	83
TWIN 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
TWIN BOX BD 7/7 M6 0,04kW	Inlet	45	47	56	58	62	61	57	47	66
TWIN BOX BD 9/9 M6 0,12kW	Inlet	55	57	65	67	71	70	66	57	76
TWIN BOX BD 9/9 M6 0,13kW	Inlet	54	56	65	67	71	70	66	56	75
TWIN BOX BD 10/10 M6 0,19kW	Inlet	61	63	71	73	77	76	72	63	82
TWIN BOX BD 10/10 M6 0,21kW	Inlet	58	60	69	70	74	74	69	60	79
TWIN BOX BD 12/12 M6 0,76kW	Inlet	61	63	72	73	77	77	72	63	82
TWIN BOX BD 12/12 M6 0,79kW	Inlet	68	70	78	80	84	83	79	70	89
TWIN BOX BD 12/12 T6 1,1kW	Inlet	60	62	71	73	77	76	72	62	81
TWIN 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)
TWIN BOX BD 7/7 M4 0,12kW	0,12	-	26,10	0,19	998,80	204,21	4.79	699,19
TWIN BOX BD 7/7 M4 0,13kW	0,13	-	32,01	0,19	1.104,78	204,54	5.3	618,38
TWIN BOX BD 9/9 M4 0,35kW	0,35	-	33,71	0,42	1.790,28	283,45	5.5	836,25
TWIN 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)
TWIN BOX BD 9/9 M6 0,12kW	0,12	-	26,09	0,17	1.219,44	126,97	3.75	486,43
TWIN BOX BD 9/9 M6 0,13kW	0,13	-	31,01	0,15	1.243,12	138,90	3.82	433,15
TWIN BOX BD 10/10 M6 0,21kW	0,21	-	36,51	0,22	1.713,03	180,33	4.32	465,94
TWIN BOX BD 12/12 M6 0,76kW	0,76	-	36,78	0,66	3.479,52	266,56	6.37	686,45
TWIN BOX BD 12/12 T6 1,1kW	1,10	-	37,19	0,53	2.847,62	253,74	5.22	675,25
TWIN BOX BD 15/15 T6 2,2kW	2,20	-	46,74	1,18	4.932,79	409,21	6.54	861,45