

KENTALBOX PLUS



VENTILATION BOX WITH BACKWARD IMPELLER

MANUFACTURING FEATURES:

- Ventilation box with 30 mm aluminum profile structure, nylon corners, galvanized sandwich panels with internal insulation rockwool (25mm thickness) class A1 (non-combustible) of 90kg/m3 density. All panels are equipped with "fastening system" for the quick assembly and disassembly whenever required, either for cleaning, maintenance or exchanging of panels.
- Centrifugal fan with motor coupled directly to the impeller, plugfan type.
- Circular inlet to facilitate duct connection. Open outlet.
- Models with AC motor inside the air flow. Standard asynchronous squirrel cage motor with IP-55 protection and Class F insulation. Standard voltages of 230V 50Hz for single phase motors, 230/400V 50Hz for three phase motors up to 4kW and 400/690V 50Hz for higher powers 1 speed and 400V for 2 speed motors.
- Backward curved single inlet impeller of high performance with self-cleaning system made of steel. Balanced statically and dynamically at origin.
- Exchangeable panels.

Accessories



**BOX
FILTER**



CFF



CFGF



CHEF



INT



SFC



**TBIC
KENTALBOX
PLUS**



**TEJ
KENTALBOX
PLUS**



**TIC
KENTALBOX
PLUS**

APPLICATIONS:

Designed for inline installation, they are suitable for:

- Air renewal in buildings and industries.
- Smoke extraction.
- Maximum working temperature (ambient and airflow): 50°C for single phase motors and 60°C for three phase motors.

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 kg	Connect. diagram
249314103	KENTALBOX PLUS 315 M4 0,25kW	1410	1,6	0,25	2.400	-	37	1
249354103	KENTALBOX PLUS 355 M4 0,25kW	1410	1,6	0,25	3.230	-	44	1
249404103	KENTALBOX PLUS 400 M4 0,55kW	1400	3,98	0,55	4.650	-	59	1

Three-phase motor / 2 poles

Code	Model	R.P.M.	Rated I. A		Rated power kW	Max. Airflow m³/h	Sound db (A)**	Weight kg	Connect. diagram
			230V	400V					
249312106	KENTALBOX PLUS 315 T2 1,5kW	2865	5,83	3,14	1,50	4.880	-	38	2

Three-phase motor / 4 poles

Code	Model	R.P.M.	Rated I. A		Rated power kW	Max. Airflow m³/h	Sound db (A)**	Weight kg	Connect. diagram
			230V	400V					
249314106	KENTALBOX PLUS 315 T4 0,25kW	1400	1,38	0,79	0,25	2.400	-	37	2
249354106	KENTALBOX PLUS 355 T4 0,25kW	1400	1,38	0,79	0,25	3.230	-	44	2
249404106	KENTALBOX PLUS 400 T4 0,55kW	1440	2,57	1,49	0,55	4.650	-	59	2
249454106	KENTALBOX PLUS 450 T4 1,1kW	1450	4,33	2,49	1,10	7.290	-	80	2
249504106	KENTALBOX PLUS 500 T4 1,5kW	1450	5,67	3,26	1,50	9.665	-	105	2
249564106	KENTALBOX PLUS 560 T4 3kW	1420	10,7	6,17	3,00	13.685	-	122	2
249634106	KENTALBOX PLUS 630 T4 7,5kW	1455	-	14,1	7,50	19.765	-	151	2

Three-phase motor / 6 poles

Code	Model	R.P.M.	Rated I. A		Rated power kW	Max. Airflow m³/h	Sound db (A)**	Weight kg	Connect. diagram
			230V	400V					
249506106	KENTALBOX PLUS 500 T6 0,55kW	900	3,00	1,8	0,55	6.350	-	102	2
249566106	KENTALBOX PLUS 560 T6 1,1kW	925	4,83	2,78	1,10	9.110	-	120	2
249636106	KENTALBOX PLUS 630 T6 2,2kW	965	10,3	5,94	2,20	13.050	-	151	2

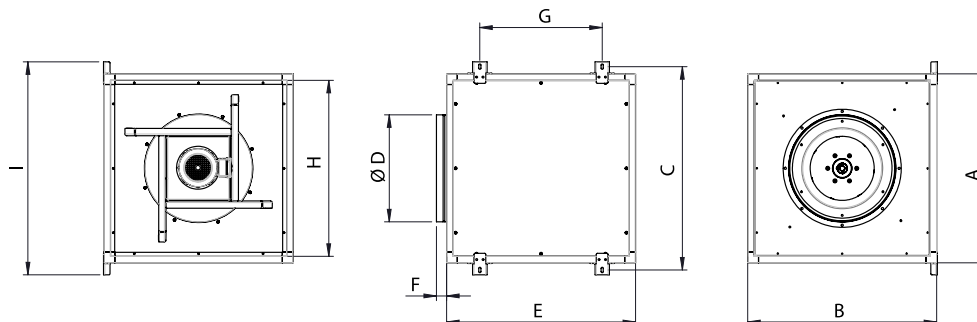
2 speed motor / 4/8 poles

Code	Model	R.P.M.	Rated I. A 400V	Rated power kW	Max. Airflow m³/h	Sound db (A)**	Weig ht kg	Connect. diagram
2493141062V	KENTALBOX PLUS 315 T4/T8 0,25/0,03kW	1370	1,13/0,37	0,25	2.400	-	37	3
2493541062V	KENTALBOX PLUS 355 T4/T8 0,25/0,03kW	1370	1,13/0,37	0,25	3.230	-	44	3
2494041062V	KENTALBOX PLUS 400 T4/T8 0,75/0,12kW	1400	2,03/0,68	0,75	4.650	-	59	3
2494541062V	KENTALBOX PLUS 450 T4/T8 1,1/0,18kW	1400	2,67/1,08	1,10	7.290	-	80	3
2495041062V	KENTALBOX PLUS 500 T4/T8 1,5/0,25kW	1400	3,46/1,27	1,50	9.665	-	105	3
2495641062V	KENTALBOX PLUS 560 T4/T8 3/0,55kW	1430	6,53/2,33	3,00	13.685	-	122	3
2496341062V	KENTALBOX PLUS 630 T4/T8 7,5/1,5kW	1450	14,47/5,11	7,50	19.765	-	151	3

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

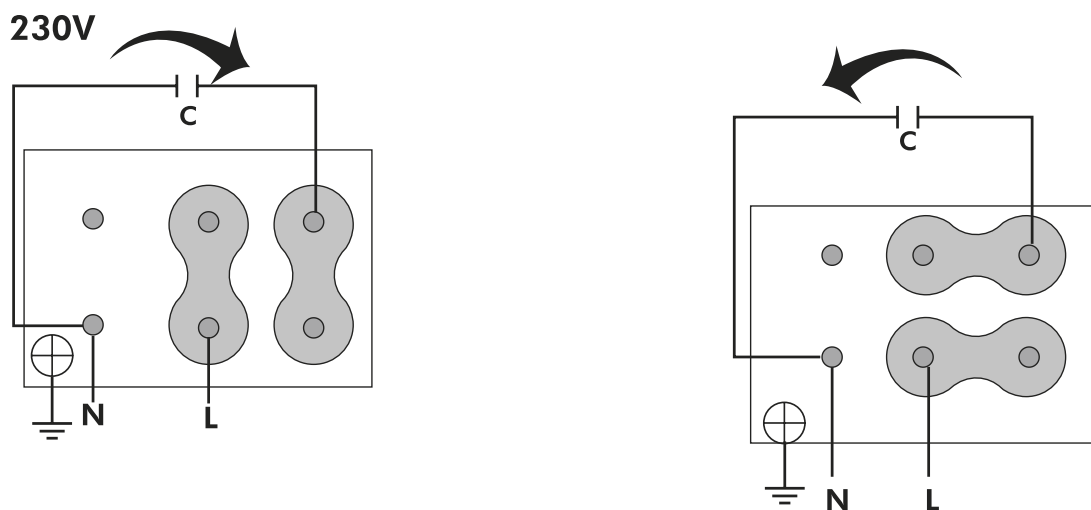
Dimensions



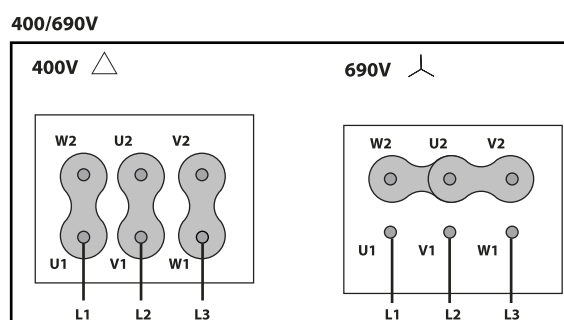
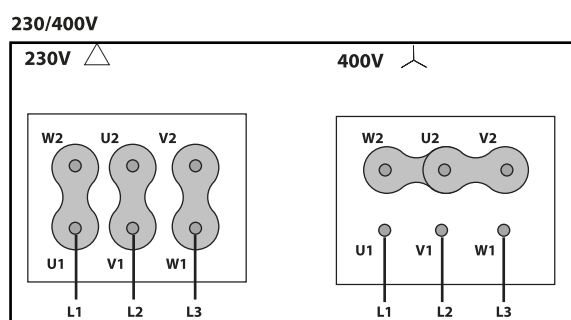
Model	A	B	C	D	E	F	G	H	I
KENTALBOX PLUS 315 M4 0,25kW	585	585	652	353	585	47	275	525	697
KENTALBOX PLUS 315 T2 1,5kW	585	585	652	353	585	47	275	525	697
KENTALBOX PLUS 315 T4 0,25kW	585	585	652	353	585	47	275	525	697
KENTALBOX PLUS 315 T4/T8 0,25/0,03kW	585	585	652	353	585	47	275	525	697
KENTALBOX PLUS 355 M4 0,25kW	650	650	717	398	650	47	340	590	762
KENTALBOX PLUS 355 T4 0,25kW	650	650	717	398	650	47	340	590	762
KENTALBOX PLUS 355 T4/T8 0,25/0,03kW	650	650	717	398	650	47	340	590	762
KENTALBOX PLUS 400 M4 0,55kW	730	730	797	448	730	47	420	670	842
KENTALBOX PLUS 400 T4 0,55kW	730	730	797	448	730	47	420	670	842
KENTALBOX PLUS 400 T4/T8 0,75/0,12kW	730	730	797	448	730	47	420	670	842
KENTALBOX PLUS 450 T4 1,1kW	880	880	947	498	880	47	570	820	992
KENTALBOX PLUS 450 T4/T8 1,1/0,18kW	880	880	947	498	880	47	570	820	992
KENTALBOX PLUS 500 T4 1,5kW	940	940	1007	558	940	47	630	880	1052
KENTALBOX PLUS 500 T6 0,55kW	940	940	1007	558	940	47	630	880	1052
KENTALBOX PLUS 500 T4/T8 1,5/0,25kW	940	940	1007	558	940	47	630	880	1052
KENTALBOX PLUS 560 T4 3kW	1030	1030	1097	628	1030	47	720	970	1142
KENTALBOX PLUS 560 T6 1,1kW	1030	1030	1097	628	1030	47	720	970	1142
KENTALBOX PLUS 560 T4/T8 3/0,55kW	1030	1030	1097	628	1030	47	720	970	1142
KENTALBOX PLUS 630 T4 7,5kW	1120	1120	1187	708	1120	47	810	1060	1232
KENTALBOX PLUS 630 T6 2,2kW	1120	1120	1187	708	1120	47	810	1060	1232
KENTALBOX PLUS 630 T4/T8 7,5/1,5kW	1120	1120	1187	708	1120	47	810	1060	1232

Wiring diagram

Wiring diagram N° 1

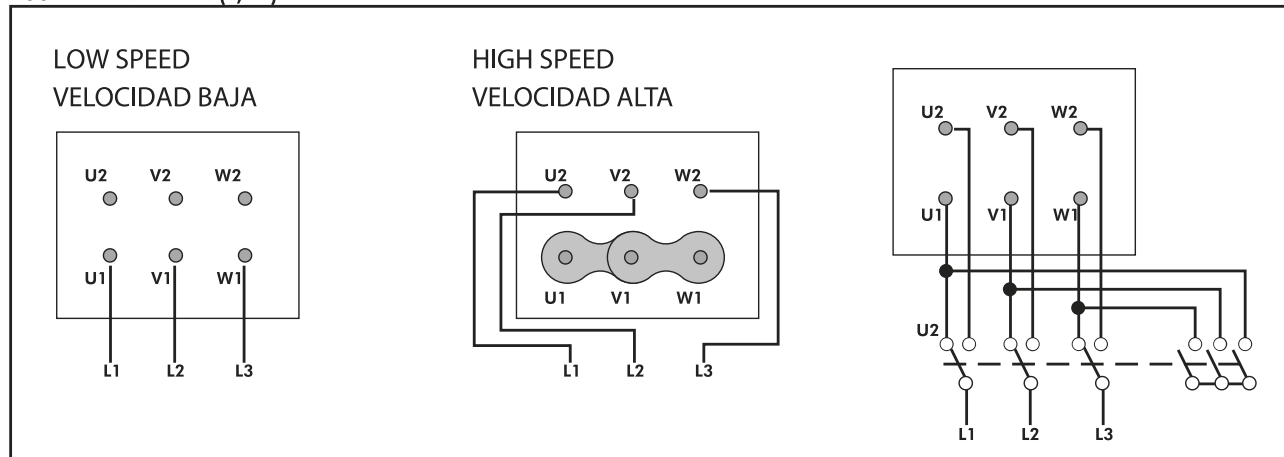


Wiring diagram N° 2



Wiring diagram Nº 3

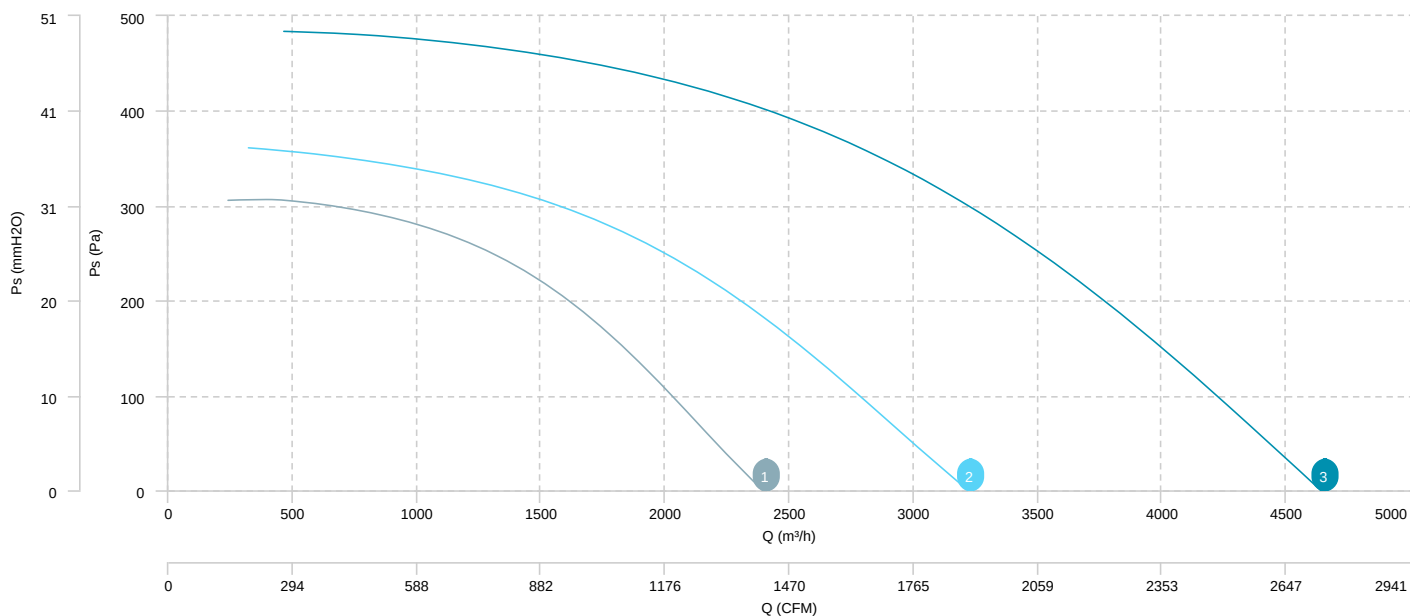
400V DAHLANDER (Y,YY)



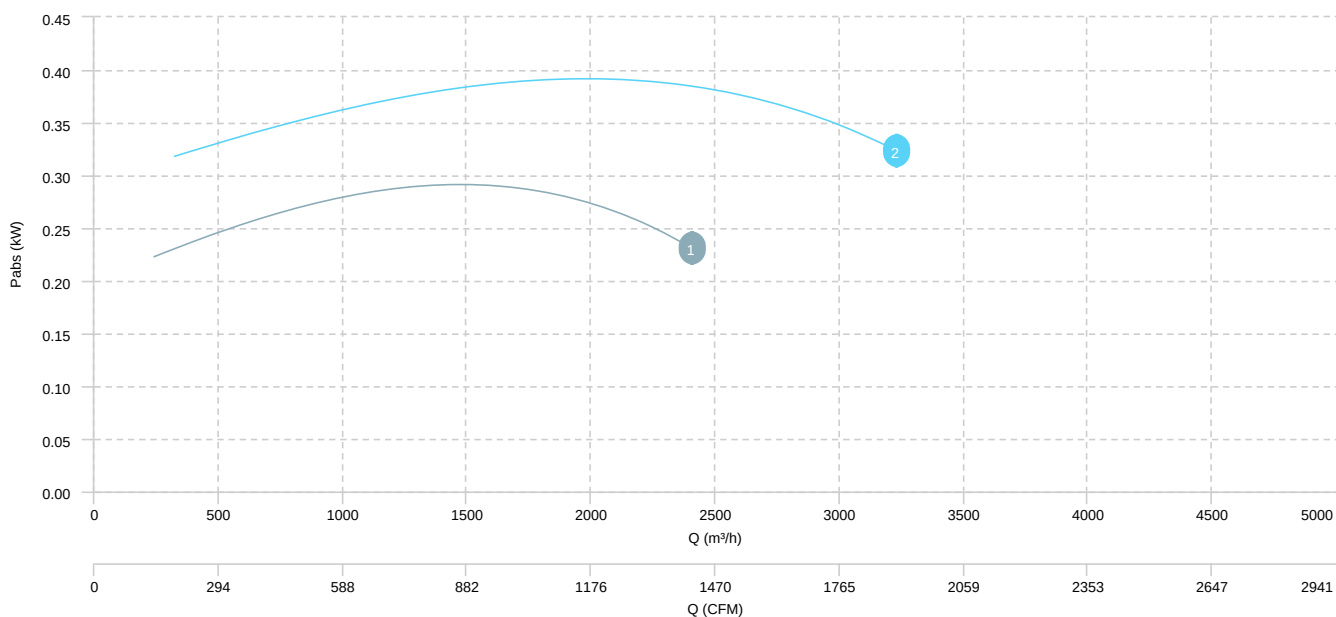
CHARACTERISCTIC CURVE

- | | | | | | |
|---|---------------------------------|---|---------------------------------|---|---------------------------------|
| 1 | KENTALBOX PLUS 315 M4
0,25kW | 2 | KENTALBOX PLUS 355 M4
0,25kW | 3 | KENTALBOX PLUS 400 M4
0,55kW |
|---|---------------------------------|---|---------------------------------|---|---------------------------------|

AIR FLOW - PRESSURE

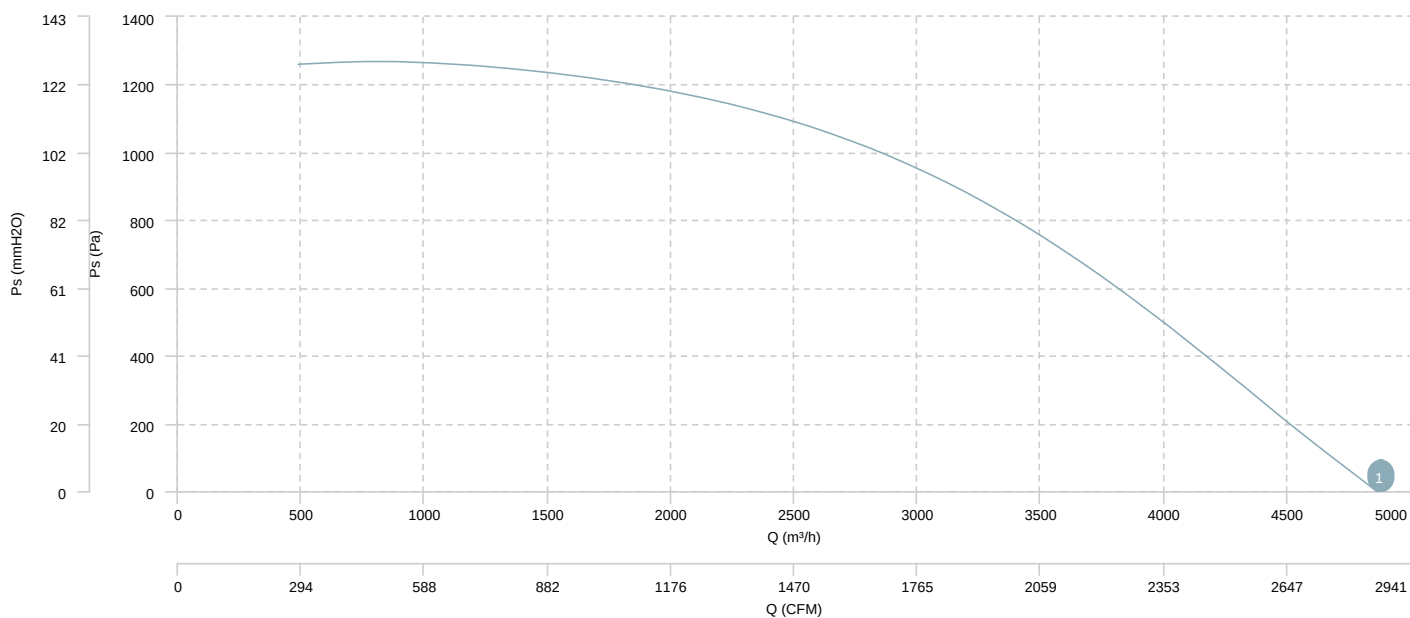


AIR FLOW - ABSORBED POWER

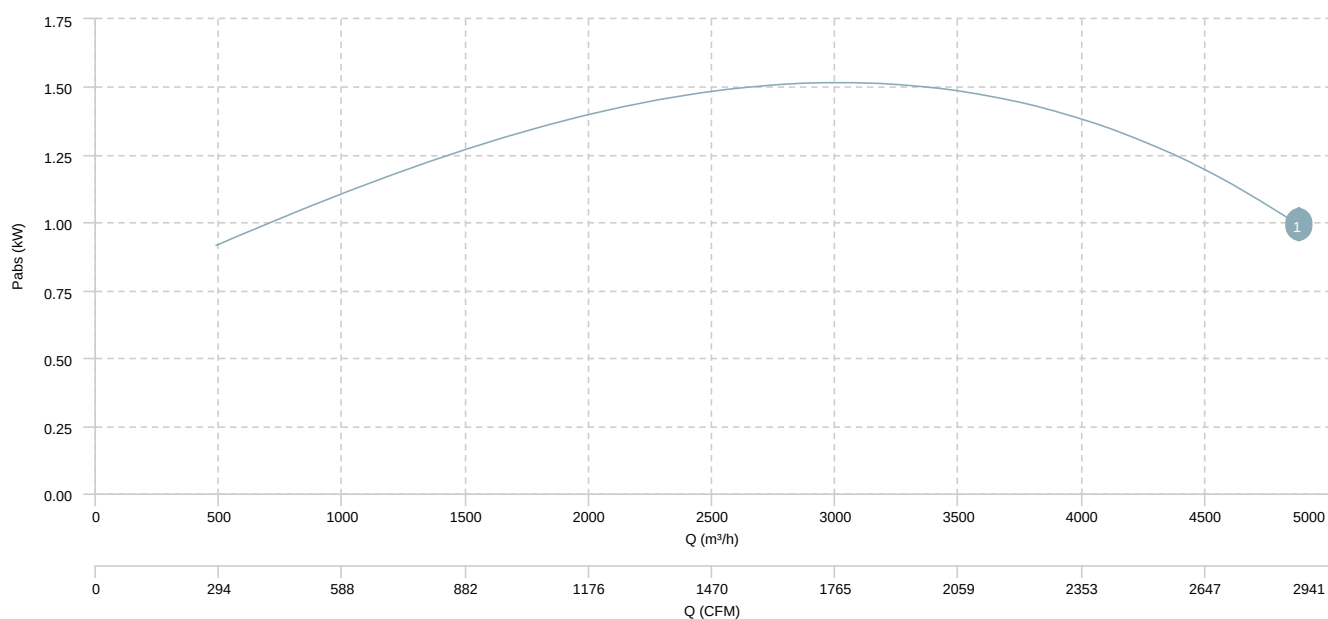


1 KENTALBOX PLUS 315 T2
1,5kW

AIR FLOW - PRESSURE

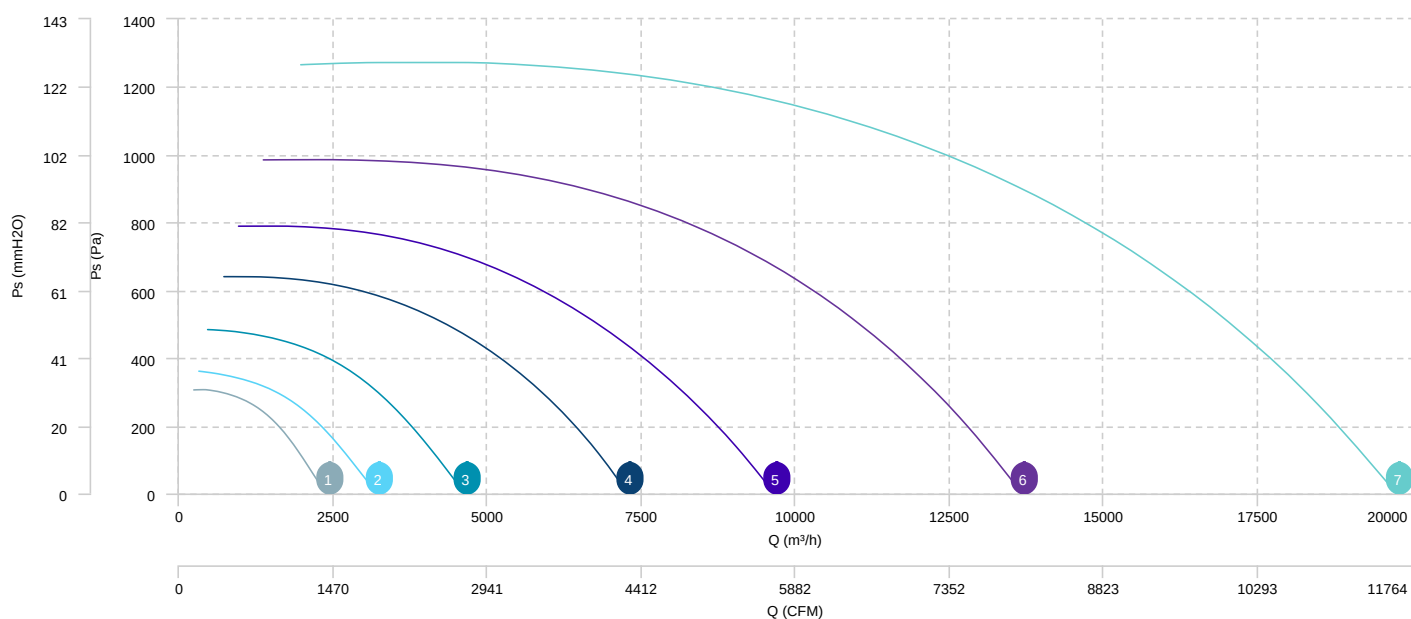


AIR FLOW - ABSORBED POWER

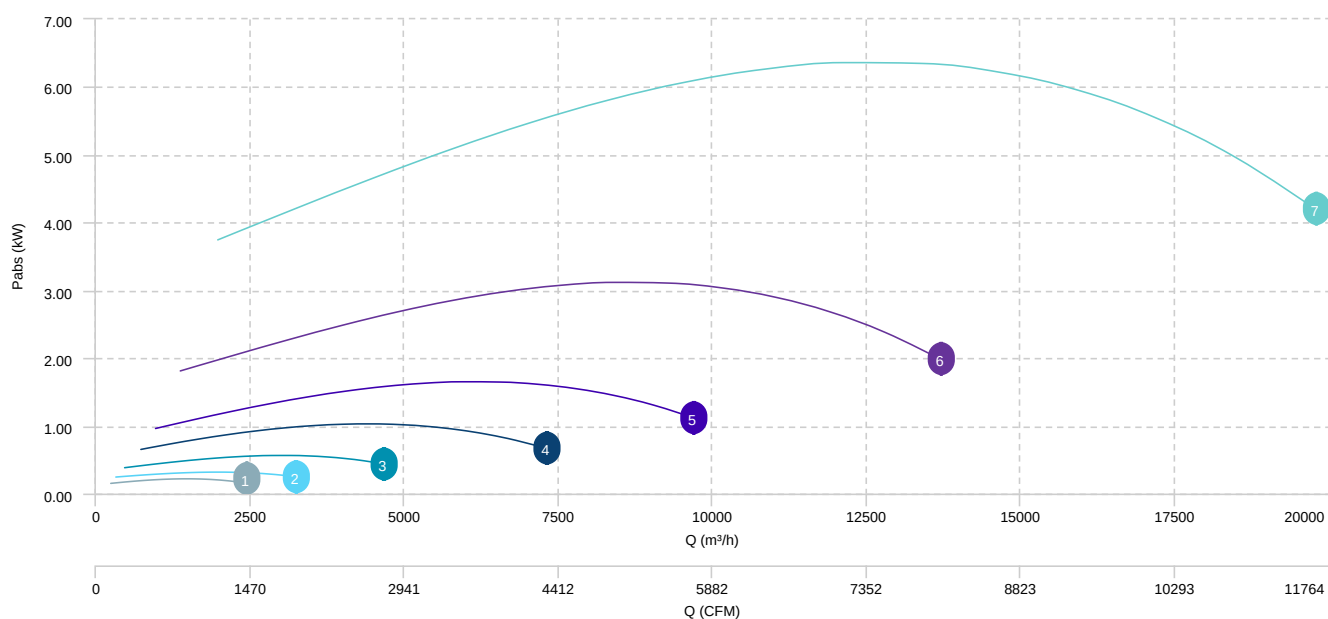


1	KENTALBOX PLUS 315 T4 0,25kW	2	KENTALBOX PLUS 355 T4 0,25kW	3	KENTALBOX PLUS 400 T4 0,55kW	4	KENTALBOX PLUS 450 T4 1,1kW
5	KENTALBOX PLUS 500 T4 1,5kW	6	KENTALBOX PLUS 560 T4 3kW	7	KENTALBOX PLUS 630 T4 7,5kW		

AIR FLOW - PRESSURE



AIR FLOW - ABSORBED POWER

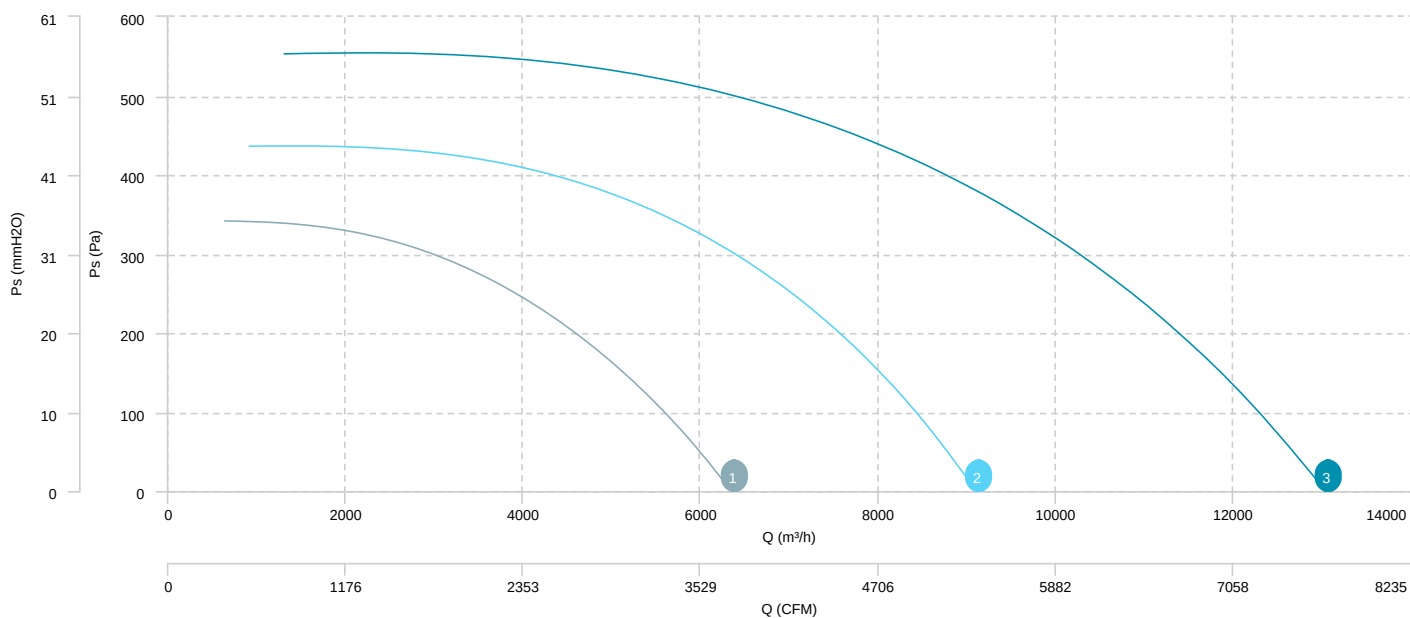


1 KENTALBOX PLUS 500 T6
0,55kW

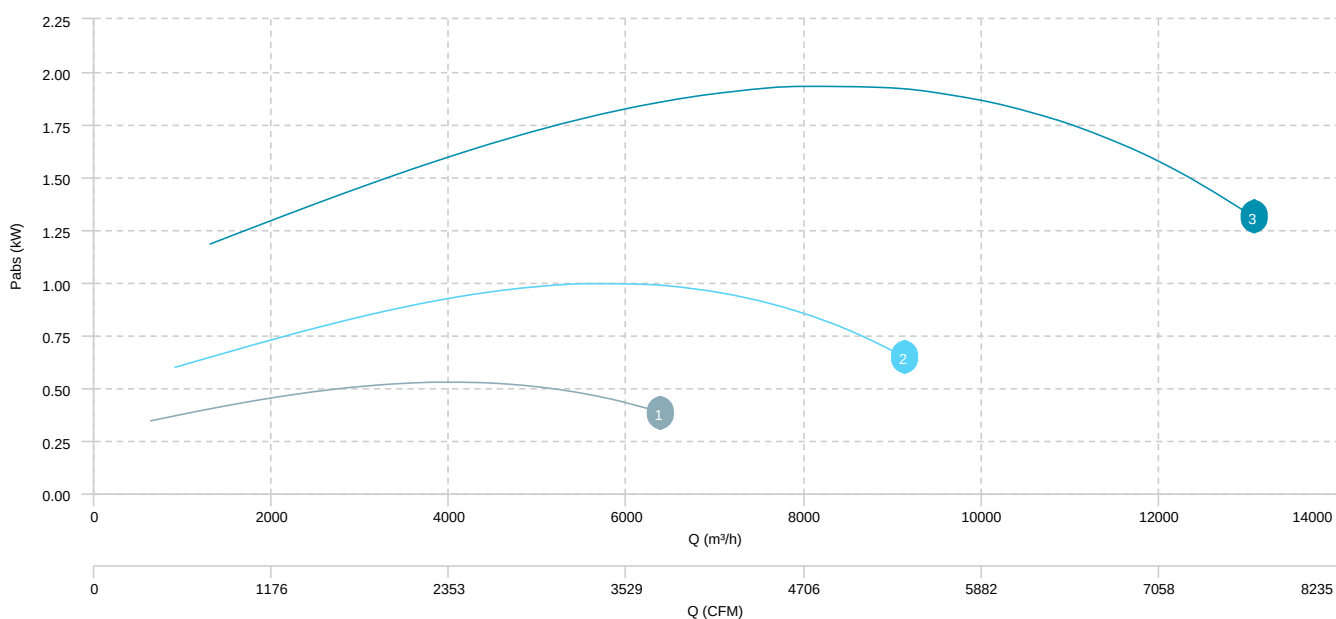
2 KENTALBOX PLUS 560 T6
1,1kW

3 KENTALBOX PLUS 630 T6
2,2kW

AIR FLOW - PRESSURE



AIR FLOW - ABSORBED POWER



1	KENTALBOX PLUS 315 T4/T8 0,25/0,03kW	2	KENTALBOX PLUS 355 T4/T8 0,25/0,03kW	3	KENTALBOX PLUS 400 T4/T8 0,75/0,12kW	4	KENTALBOX PLUS 450 T4/T8 1,1/0,18kW
5	KENTALBOX PLUS 500 T4/T8 1,5/0,25kW	6	KENTALBOX PLUS 560 T4/T8 3/0,55kW	7	KENTALBOX PLUS 630 T4/T8 7,5/1,5kW		

AIR FLOW - PRESSURE (4 poles)

1	KENTALBOX PLUS 315 T4/T8 0,25/0,03kW	2	KENTALBOX PLUS 355 T4/T8 0,25/0,03kW	3	KENTALBOX PLUS 400 T4/T8 0,75/0,12kW	4	KENTALBOX PLUS 450 T4/T8 1,1/0,18kW
5	KENTALBOX PLUS 500 T4/T8 1,5/0,25kW	6	KENTALBOX PLUS 560 T4/T8 3/0,55kW	7	KENTALBOX PLUS 630 T4/T8 7,5/1,5kW		

AIR FLOW - PRESSURE (8 poles)

Sound data

Sound / 2 poles

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
KENTALBOX PLUS 315 T2 1,5kW	Radiated	65	69	79	76	73	76	77	62	82

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
KENTALBOX PLUS 315 M4 0,25kW	Radiated	49	53	63	60	56	60	60	45	66
KENTALBOX PLUS 315 T4 0,25kW	Radiated	49	53	63	60	56	60	60	45	66
KENTALBOX PLUS 355 M4 0,25kW	Radiated	53	63	61	61	59	66	53	47	68
KENTALBOX PLUS 355 T4 0,25kW	Radiated	53	63	61	61	59	66	53	47	68
KENTALBOX PLUS 400 M4 0,55kW	Radiated	56	67	65	64	63	69	56	51	71
KENTALBOX PLUS 400 T4 0,55kW	Radiated	56	67	65	64	63	69	56	51	71
KENTALBOX PLUS 450 T4 1,1kW	Radiated	60	68	67	68	67	73	59	53	75
KENTALBOX PLUS 500 T4 1,5kW	Radiated	64	71	71	72	70	76	63	57	78
KENTALBOX PLUS 560 T4 3kW	Radiated	84	78	78	77	77	73	61	59	78
KENTALBOX PLUS 630 T4 7,5kW	Radiated	89	82	82	81	81	78	65	63	83

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
KENTALBOX PLUS 500 T6 0,55kW	Radiated	59	66	66	67	65	71	58	52	74
KENTALBOX PLUS 560 T6 1,1kW	Radiated	69	63	63	62	62	58	46	44	64
KENTALBOX PLUS 630 T6 2,2kW	Radiated	79	72	72	71	71	68	55	53	73

Sound / 4/8 poles

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
KENTALBOX PLUS 315 T4/T8 0,25/0,03kW (4p)	Radiated	49	53	63	60	56	60	60	45	66
KENTALBOX PLUS 355 T4/T8 0,25/0,03kW (4p)	Radiated	53	63	61	61	59	66	53	47	68

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
KENTALBOX PLUS 400 T4/T8 0, 75/0,12kW (4p)	Radiated	56	67	65	64	63	69	56	51	71
KENTALBOX PLUS 450 T4/T8 1, 1/0,18kW (4p)	Radiated	60	68	67	68	67	73	59	53	75
KENTALBOX PLUS 500 T4/T8 1, 5/0,25kW (4p)	Radiated	64	71	71	72	70	76	63	57	78
KENTALBOX PLUS 560 T4/T8 3/0, 55kW (4p)	Radiated	84	78	78	77	77	73	61	59	78
KENTALBOX PLUS 630 T4/T8 7, 5/1,5kW (4p)	Radiated	89	82	82	81	81	78	65	63	83

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	-

ERP / 2 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)
KENTALBOX PLUS 315 T2 1,5kW	1,50	-	53,68	1,51	2.866,03	995,16	10.22	1.900,50

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)
KENTALBOX PLUS 315 T4 0,25kW	0,25	-	43,05	0,22	1.405,22	235,75	5.01	556,22
KENTALBOX PLUS 355 T4 0,25kW	0,25	-	44,48	0,32	1.886,28	265,31	5.29	602,95
KENTALBOX PLUS 400 T4 0,55kW	0,55	-	50,93	0,56	2.723,53	368,37	6.02	739,45
KENTALBOX PLUS 450 T4 1,1kW	1,10	-	61,80	1,03	4.521,50	481,33	7.9	818,37
KENTALBOX PLUS 500 T4 1,5kW	1,50	-	62,25	1,65	5.796,58	608,47	8.2	1.023,04
KENTALBOX PLUS 560 T4 3kW	3	-	62,33	3,12	8.510,93	778,30	9.6	1.319,37
KENTALBOX PLUS 630 T4 7,5kW	7,50	-	57,35	6,37	12.307,69	1.009,96	10.97	1.862,22

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)
KENTALBOX PLUS 500 T6 0,55kW	0,55	-	53,57	0,53	3.799,53	257,56	5.38	499,22
KENTALBOX PLUS 560 T6 1,1kW	1,10	-	57,40	1	5.667,83	344,31	6.39	632,50
KENTALBOX PLUS 630 T6 2,2kW	2,20	-	53,27	1,93	8.096,34	434,64	7.21	859,20