

BOX RL



BACKWARD CENTRIFUGAL IN SOUNDPROOF CABINET

MANUFACTURING FEATURES

- Box manufactured in galvanised steel sheet.
- Centrifugal fan with self-cleaning system and backward blade impeller. Direct coupling motor to the impeller.
- Standard asynchronous squirrel-cage motor with IP-55 protection and Class F insulation.
- Manufactured with standard voltages: 230/400V 50Hz in three phase motors up to 4kW, and 400/690V 50Hz for higher powers.
- Exchangeable pannels.
- Open outlet.

APPLICATIONS

Designed for inline installation, they are suitable for:

- Air renewal in buildings and industries.
- Maximum working temperature: 60°C.

UNDER REQUEST

- Special voltages.
- Double skin insulation.

Accessories



BA-400



INT



JE 45



SFC



**SIL-C /
SIL-CN**



TIAC

Technical data

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					
241390106	BOX RL 400 T4 0,75kW	1410	2,83	1,63	0,75	4.890	50	110	1
241460106	BOX RL 450 T4 1,1kW	1450	4,33	2,49	1,10	6.960	54	137	1
241520106	BOX RL 500 T4 1,5kW	1450	5,67	3,26	1,50	9.540	58	142	1
241600106	BOX RL 560 T4 2,2kW	1435	8,07	4,64	2,20	13.400	61	182	1
241670106	BOX RL 630 T4 4kW	1440	14,5	8,32	4,00	19.080	64	213	1
241770106	BOX RL 710 T4 7,5kW	1455	-	14,1	7,50	27.310	68	268	1

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					
241440106	BOX RL 400 T6 0,55kW	900	3,00	1,8	0,55	3.170	41	110	1
241470106	BOX RL 450 T6 0,55kW	900	3,00	1,8	0,55	4.510	45	136	1
241540106	BOX RL 500 T6 0,55kW	900	3,00	1,8	0,55	6.300	48	141	1
241620106	BOX RL 560 T6 0,75kW	925	3,39	1,95	0,75	8.680	51	171	1
241660106	BOX RL 630 T6 1,5kW	940	6,45	3,71	1,50	12.360	55	193	1
241760106	BOX RL 710 T6 2,2kW	965	10,3	5,94	2,20	17.700	58	258	1
241840106	BOX RL 800 T6 4kW	960	16,5	9,46	4,00	25.310	62	334	1

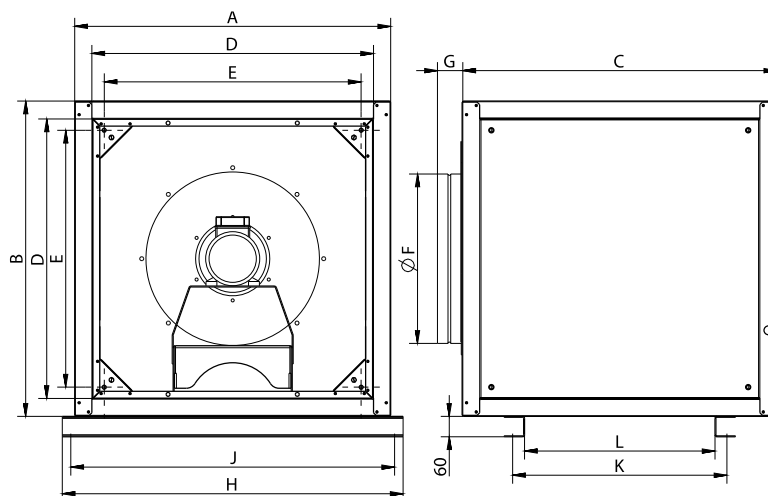
2 speed motor / 4/8 poles

Code	Model	R.P.M.	Rated I. A 400V	Rated power kW	Max. Airflow m³/h	Sound db (A)**	Weight kg	Connect. diagram
2415201062V	BOX RL 500 T4/T8 1,5/0,3kW	1400	3,46/1,27	1,50	9.540	58	142	2
2416001062V	BOX RL 560 T4/T8 2,2/0,37kW	1430	4,96/1,86	2,20	13.400	61	182	2
2416701062V	BOX RL 630 T4/T8 4/0,75kW	1440	8,15/2,74	4,00	19.080	64	193	2
2417701062V	BOX RL 710 T4/T8 7,5/1,5kW	1450	14,47/5,11	7,50	27.310	68	268	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	G	H	J	K
BOX RL 400 T4 0,75kW	800	800	800	696	628,5	74	1002	952	628,5
BOX RL 400 T6 0,55kW	800	800	800	696	628,5	74	1002	952	628,5
BOX RL 450 T4 1,1kW	800	800	800	696	628,5	74	1002	952	628,5
BOX RL 450 T6 0,55kW	800	800	800	696	628,5	74	1002	952	628,5
BOX RL 500 T4 1,5kW	925	925	925	821	753	74	1127	1077	753
BOX RL 500 T6 0,55kW	925	925	925	821	753	74	1127	1077	753
BOX RL 500 T4/T8 1,5/0,3kW	925	925	925	821	753	74	1127	1077	753
BOX RL 560 T4 2,2kW	925	925	925	821	753	74	1127	1077	753
BOX RL 560 T6 0,75kW	925	925	925	821	753	74	1127	1077	753
BOX RL 560 T4/T8 2,2/0,37kW	925	925	925	821	753	74	1127	1077	753
BOX RL 630 T4 4kW	1000	1000	1000	892	828	74	1203	1153	828
BOX RL 630 T6 1,5kW	1000	1000	1000	892	828	74	1203	1153	828
BOX RL 630 T4/T8 4/0,75kW	1000	1000	1000	892	828	74	1203	1153	828
BOX RL 710 T4 7,5kW	1000	1000	1000	892	828	74	1203	1153	828
BOX RL 710 T6 2,2kW	1000	1000	1000	892	828	74	1203	1153	828
BOX RL 710 T4/T8 7,5/1,5kW	1000	1000	1000	892	828	74	1203	1153	828
BOX RL 800 T6 4kW	1060	1060	1060	952	887	74	1262	1212	887

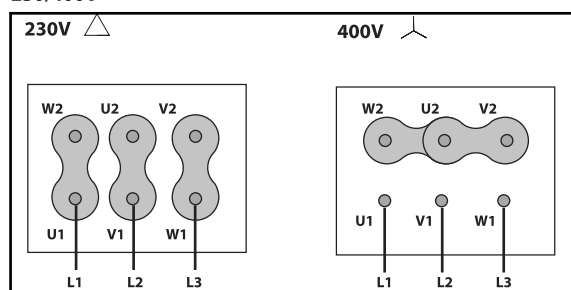
Model	L	ØF
BOX RL 400 T4 0,75kW	558,5	398
BOX RL 400 T6 0,55kW	558,5	398
BOX RL 450 T4 1,1kW	558,5	448
BOX RL 450 T6 0,55kW	558,5	448
BOX RL 500 T4 1,5kW	683	498
BOX RL 500 T6 0,55kW	683	498

Model	L	ØF
BOX RL 500 T4/T8 1,5/0,3kW	683	498
BOX RL 560 T4 2,2kW	683	548
BOX RL 560 T6 0,75kW	683	548
BOX RL 560 T4/T8 2,2/0,37kW	683	548
BOX RL 630 T4 4kW	758	628
BOX RL 630 T6 1,5kW	758	628
BOX RL 630 T4/T8 4/0,75kW	758	628
BOX RL 710 T4 7,5kW	758	698
BOX RL 710 T6 2,2kW	758	698
BOX RL 710 T4/T8 7,5/1,5kW	758	698
BOX RL 800 T6 4kW	817	798

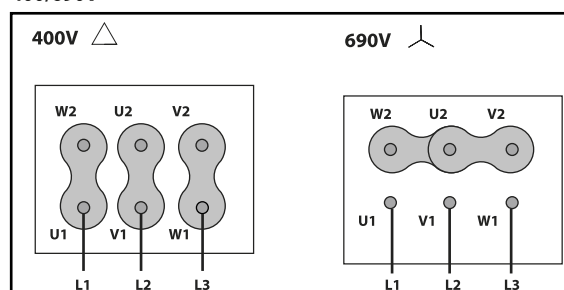
Wiring diagram

Wiring diagram N° 1

230/400V

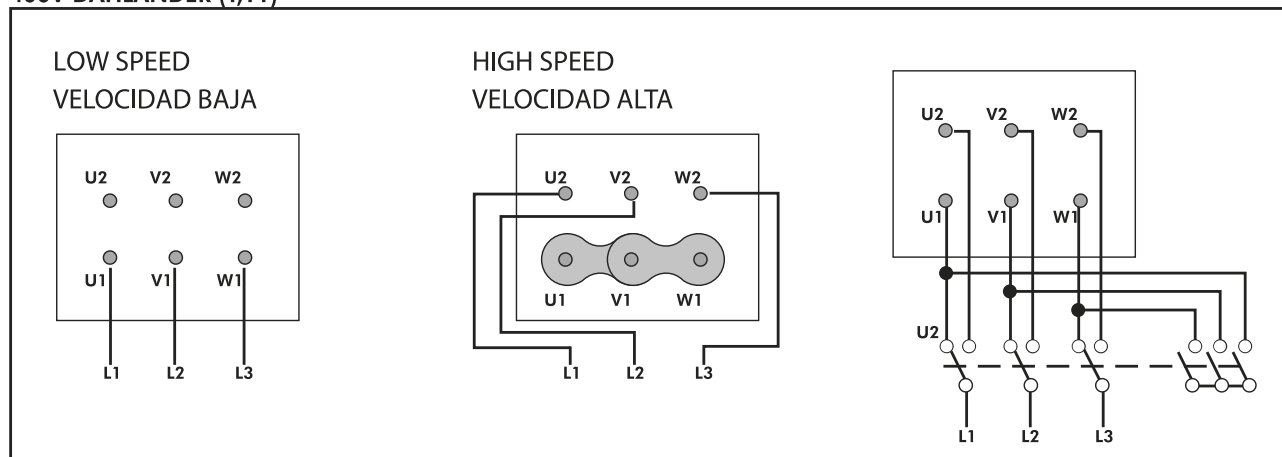


400/690V



Wiring diagram N° 2

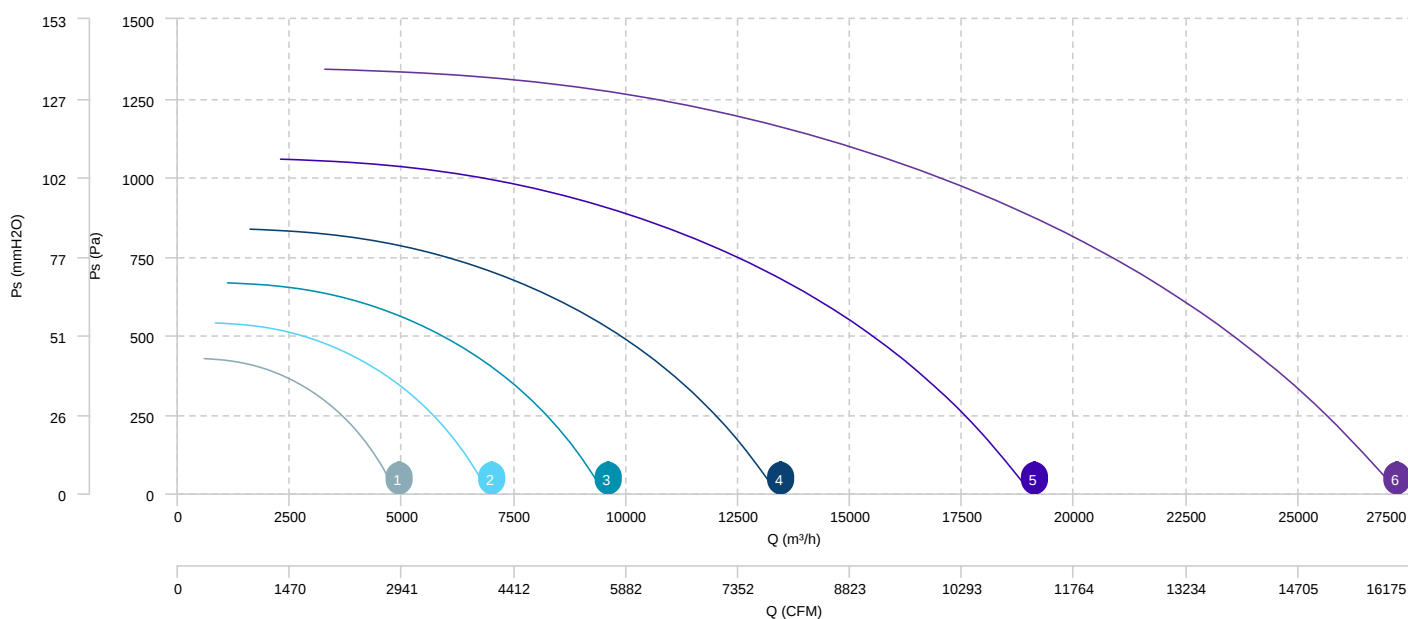
400V DAHLANDER (Y,YY)



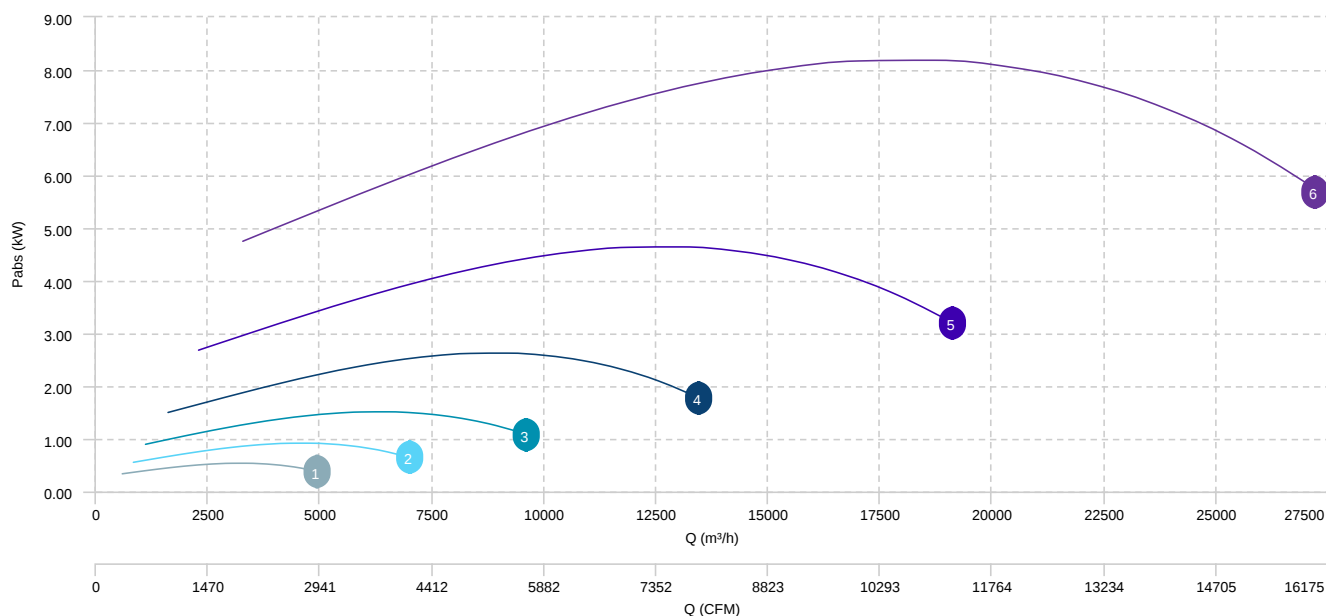
CHARACTERISTIC CURVE

1	BOX RL 400 T4 0,75kW	2	BOX RL 450 T4 1,1kW	3	BOX RL 500 T4 1,5kW	4	BOX RL 560 T4 2,2kW
5	BOX RL 630 T4 4kW	6	BOX RL 710 T4 7,5kW				

AIR FLOW - PRESSURE

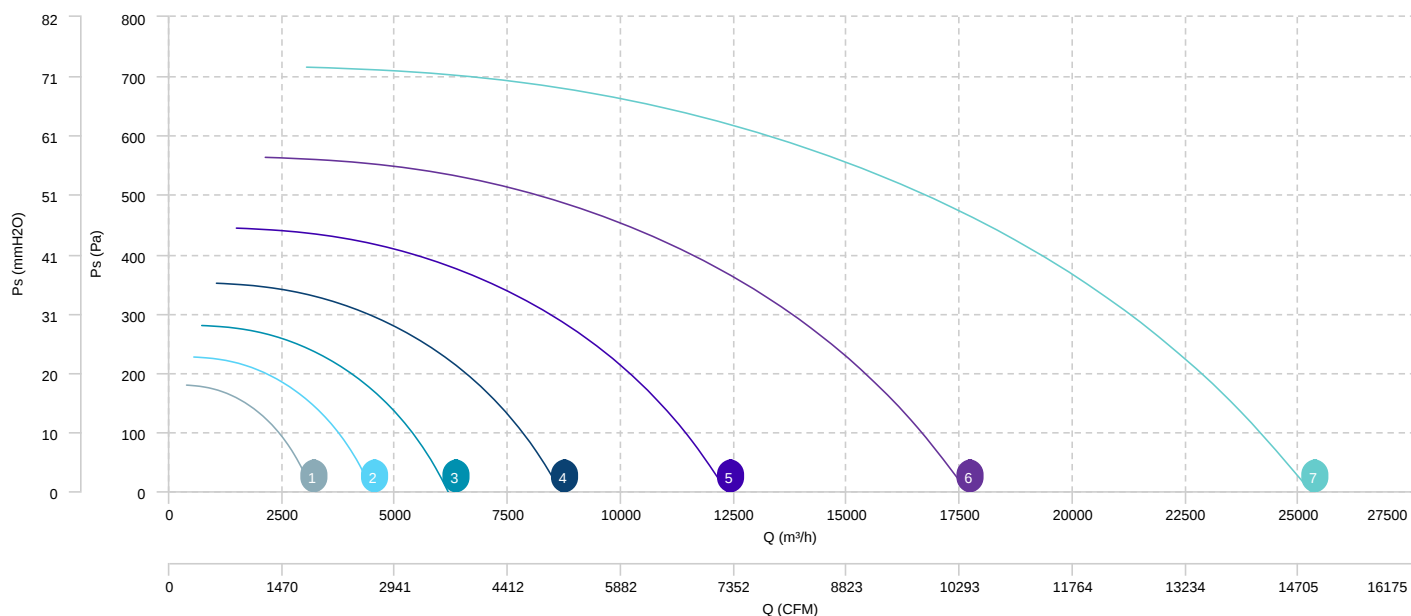


AIR FLOW - ABSORBED POWER

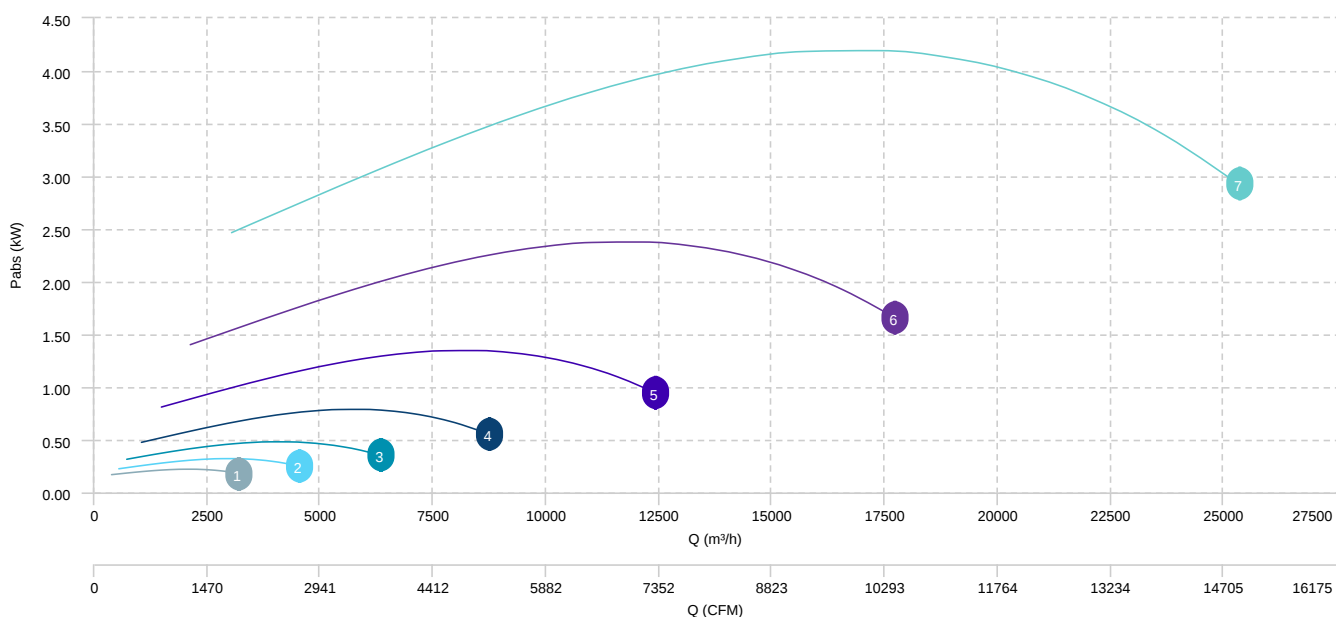


1	BOX RL 400 T6 0,55kW	2	BOX RL 450 T6 0,55kW	3	BOX RL 500 T6 0,55kW	4	BOX RL 560 T6 0,75kW
5	BOX RL 630 T6 1,5kW	6	BOX RL 710 T6 2,2kW	7	BOX RL 800 T6 4kW		

AIR FLOW - PRESSURE



AIR FLOW - ABSORBED POWER



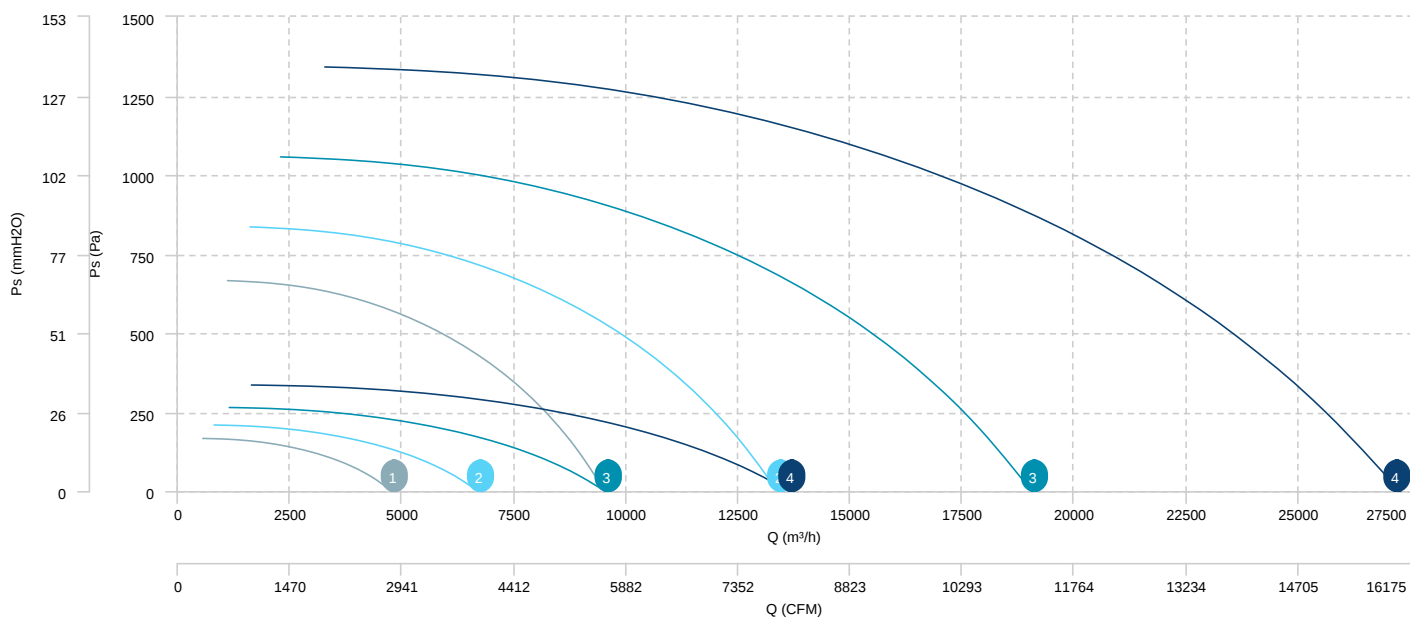
1 BOX RL 500 T4/T8 1,5/0,
3kW

2 BOX RL 560 T4/T8 2,2/0,
37kW

3 BOX RL 630 T4/T8 4/0,
75kW

4 BOX RL 710 T4/T8 7,5/1,
5kW

AIR FLOW - PRESSURE (4 poles)



1	BOX RL 500 T4/T8 1,5/0, 3kW	2	BOX RL 560 T4/T8 2,2/0, 37kW	3	BOX RL 630 T4/T8 4/0, 75kW	4	BOX RL 710 T4/T8 7,5/1, 5kW
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AIR FLOW - PRESSURE (8 poles)

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 RL 400 T4 0,75kW	Inlet	54	62	67	70	71	69	66	63	76
BOX RL 450 T4 1,1kW	Inlet	58	66	70	73	75	73	70	67	80
BOX RL 500 T4 1,5kW	Inlet	61	69	74	77	78	77	73	71	84
BOX RL 560 T4 2,2kW	Inlet	64	72	77	80	81	79	76	73	87
BOX RL 630 T4 4kW	Inlet	68	76	80	84	85	83	80	77	90
BOX RL 710 T4 7,5kW	Inlet	71	79	84	87	88	87	83	81	94

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 RL 400 T6 0,55kW	Inlet	45	53	57	60	62	60	57	54	67
BOX RL 450 T6 0,55kW	Inlet	48	56	61	64	65	63	60	57	71
BOX RL 500 T6 0,55kW	Inlet	52	60	65	68	69	67	64	61	74
BOX RL 560 T6 0,75kW	Inlet	55	63	67	71	72	70	67	64	77
BOX RL 630 T6 1,5kW	Inlet	58	66	71	74	75	74	70	68	81
BOX RL 710 T6 2,2kW	Inlet	62	70	75	78	79	77	74	71	84
BOX RL 800 T6 4kW	Inlet	66	74	78	81	83	81	78	75	88

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
BOX RL 500 T4/T8 1,5/0,3kW (8p (±750rpm))	Inlet	45	53	57	61	62	60	57	54	67
BOX RL 560 T4/T8 2,2/0,37kW (8p (±750rpm))	Inlet	48	56	60	64	65	63	60	57	70
BOX RL 630 T4/T8 4/0,75kW (8p (±750rpm))	Inlet	51	59	64	67	68	66	63	60	74
BOX RL 710 T4/T8 7,5/1,5kW (8p (±750rpm))	Inlet	55	63	67	71	72	70	67	64	77

Notes:

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

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

erp data

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

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 RL 400 T4 0,75kW	0,75	-	52,63	0,54	2.994,39	321,25	6.69	642,97
BOX RL 450 T4 1,1kW	1,10	-	55,61	0,91	4.251,47	407,55	7.49	773,91
BOX RL 500 T4 1,5kW	1,50	-	57,05	1,51	5.818,97	503,85	8.3	931,86
BOX RL 560 T4 2,2kW	2,20	-	58,16	2,61	8.151,46	633,65	9.6	1.153,99
BOX RL 630 T4 4kW	4	-	59,19	4,62	11.637,73	799,29	10.44	1.430,29
BOX RL 710 T4 7,5kW	7,50	-	61,08	8,15	16.653,51	1.016,87	12.09	1.762,24

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 RL 400 T6 0,55kW	0,55	-	34,42	0,22	1.961,38	133,55	4.38	403,78
BOX RL 450 T6 0,55kW	0,55	-	42,86	0,32	2.778,10	169,79	4.9	414,86
BOX RL 500 T6 0,55kW	0,55	-	49,09	0,48	3.823,35	208,90	5.45	451,38
BOX RL 560 T6 0,75kW	0,75	-	52,52	0,79	5.304,94	264,97	6.25	532,81
BOX RL 630 T6 1,5kW	1,50	-	55,38	1,34	7.556,35	334,89	6.78	639,14
BOX RL 710 T6 2,2kW	2,20	-	57,17	2,37	10.795,10	426,66	7.84	789,28
BOX RL 800 T6 4kW	4	-	58,85	4,18	15.437,27	541,52	8.57	973,66