

DHUMAT



SMOKE EXTRACTION BACKWARD CASING FAN

MANUFACTURING FEATURES

- Casing:
 - Made of galvanised steel sheet with upstream and downstream connecting flanges and access doors.
- Motor support:
 - Galvanised steel plate, motor with flanges fixed on 2 poles. Removable plate/support/impeller set.
- Impeller:
 - Backward type centrifugal, in galvanised steel, dynamically balanced.
 - Direct drive on the motor shaft.
- Motor:
 - Three phase motor with IP-55 protection and F class insulation. Manufactured with standard voltages for one speed motors: 230/400V 50Hz up to 4 Kw and 400/690V 50Hz for higher powers of 4 and 6 poles.
 - 2 speed motors: Dahlander

ACCESSORIES



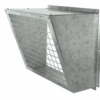
INT



CPM



SFC



VIS
DHUMAT



EI
DHUMAT



DKF

x2

APPLICATIONS

- Smoke extraction in high buildings and establishments with people.
- Ventilation and smoke exhaust in covered parkings.
- Ventilation in technical, industrial or commercial facilities.

TECHNICAL DATA

THREE-PHASE MOTOR / 2 poles

Code	Model	R.P.M.	Rated I. (A) 400V	Rated power kW	Max. Airflow m3/h	Sound db (A)*	Weight Kg	Connect. diagram
245310182	DHUMAT 315 T2 1,1KW	2800	2,33	1,1	4.400	54	64	1
245350182	DHUMAT 355 T2 2,2KW	2800	4,58	2,2	6.740	57	73	1

THREE-PHASE MOTOR / 4 poles

Code	Model	R.P.M.	Rated I. (A) 400V	Rated power kW	Max. Airflow m3/h	Sound db (A)*	Weight Kg	Connect. diagram
245310181	DHUMAT 315 T4 0,25KW	1400	0,79	0,25	2.220	49	60	1
245350181	DHUMAT 355 T4 0,55KW	1400	1,49	0,55	3.400	52	68	1
245400181	DHUMAT 400 T4 0,75KW	1390	1,63	0,75	5.040	55	84	1
245450181	DHUMAT 450 T4 1,1KW	1400	2,49	1,1	6.940	59	120	1
245500181	DHUMAT 500 T4 1,5KW	1400	3,26	1,5	9.520	62	153	1
245560181	DHUMAT 560 T4 3KW	1430	6,17	3	12.450	65	194	1
245630181	DHUMAT 630 T4 4KW	1440	8,32	4	17.900	66	246	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 Kg	Connect. diagram
245400182	DHUMAT 400 T6 0,37KW	900	1,27	0,37	3.300	48	81	1
245450182	DHUMAT 450 T6 0,75KW	910	1,95	0,75	4.620	51	114	1
245500182	DHUMAT 500 T6 0,75KW	910	1,95	0,75	6.150	55	146	1
245560182	DHUMAT 560 T6 0,75KW	910	1,95	0,75	8.300	58	183	1
245630182	DHUMAT 630 T6 1,5KW	940	3,71	1,5	11.750	62	229	1
245710181	DHUMAT 710 T6 2,2KW	940	5,94	2,2	18.060	66	303	1
245800181	DHUMAT 800 T6 4KW	960	9,46	4	24.140	69	363	1

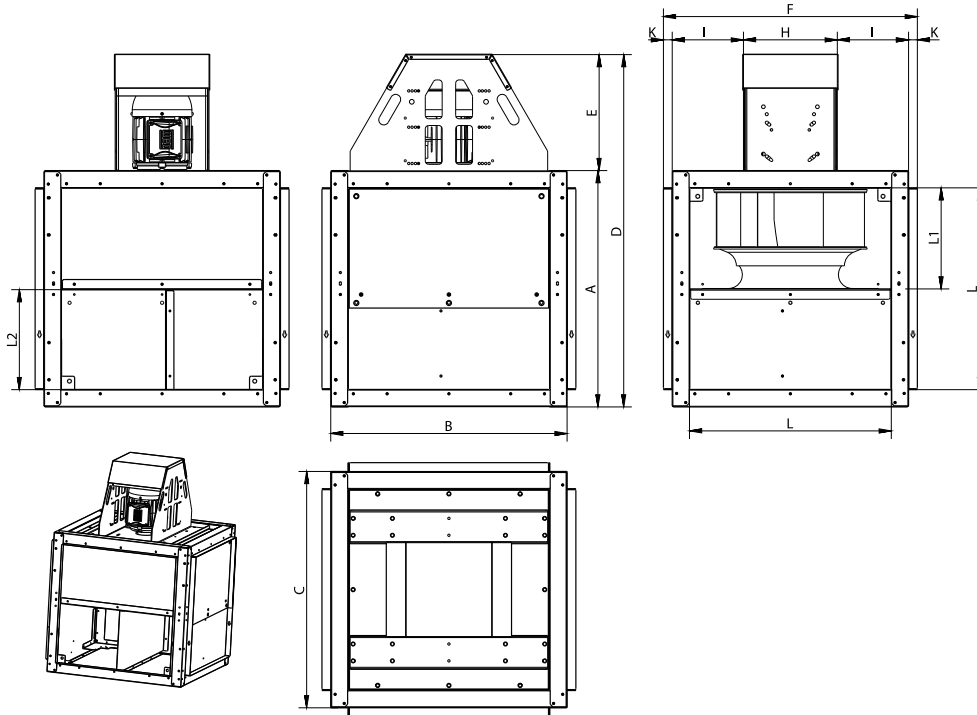
2 SPEED MOTOR / 4/8 poles

Code	Model	R.P.M.	Rated I. (A) 400V	Rated power kW	Max. Airflow m3/h	Sound db (A)*	Weight Kg	Connect. diagram
2454001812V	DHUMAT 400 T4/T8 0,75/0,12KW	1430/710	1,8/1	0,75/0,12	5040/2520	55	83	2
2454501812V	DHUMAT 450 T4/T8 1,1/0,18KW	1400/710	3/0,8	1,1/0,18	6940/3470	59	115	2

Code	Model	R.P.M.	Rated I. (A) 400V	Rated power kW	Max. Airflow m3/h	Sound db (A)*	Weight Kg	Connect. diagram
2455001812V	DHUMAT 500 T4/T8 1,5/0,25KW	1380/700	4/1,5	1,5/0,25	9520/4760	62	149	2
2455601812V	DHUMAT 560 T4/T8 3/0,55KW	1420/710	6,6/18	3/0,55	12450/6225	65	187	2
2456301812V	DHUMAT 630 T4/T8 4/0,75KW	1440/720	8,5/21,8	4/0,75	18060/9030	66	238	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 DIAGRAM



Model	A	B	C	D	E	F	H	I	K
DHUMAT 315 T2 1,1KW	600	600	600	912	312	652	278	161	26
DHUMAT 315 T4 0,25KW	600	600	600	912	312	652	278	161	26
DHUMAT 355 T2 2,2KW	600	600	600	912	312	652	278	161	26
DHUMAT 355 T4 0,55KW	600	600	600	912	312	652	278	161	26
DHUMAT 400 T4 0,75KW	700	700	700	1043,5	343,5	752	278	211	26
DHUMAT 400 T6 0,37KW	700	700	700	1043,5	343,5	752	278	211	26
DHUMAT 400 T4/T8 0,75/0,12KW	700	700	700	1043,5	343,5	752	278	211	26
DHUMAT 450 T4 1,1KW	700	700	700	1043,5	343,5	752	278	211	26
DHUMAT 450 T6 0,75KW	700	700	700	1043,5	343,5	752	278	211	26
DHUMAT 450 T4/T8 1,1/0,18KW	700	700	700	1043,5	343,5	752	278	211	26
DHUMAT 500 T4 1,5KW	900	900	900	1243,5	343,5	952	338	281	26
DHUMAT 500 T6 0,75KW	900	900	900	1243,5	343,5	952	338	281	26
DHUMAT 500 T4/T8 1,5/0,25KW	900	900	900	1243,5	343,5	952	338	281	26
DHUMAT 560 T4 3KW	900	900	900	1243,5	343,5	952	338	281	26
DHUMAT 560 T6 0,75KW	900	900	900	1243,5	343,5	952	338	281	26
DHUMAT 560 T4/T8 3/0,55KW	900	900	900	1243,5	343,5	952	338	281	26
DHUMAT 630 T4 4KW	1000	1000	1000	1376	376	1052	340	330	26
DHUMAT 630 T6 1,5KW	1000	1000	1000	1376	376	1052	340	330	26
DHUMAT 630 T4/T8 4/0,75KW	1000	1000	1000	1376	376	1052	340	330	26

Model	A	B	C	D	E	F	H	I	K
DHUMAT 710 T6 2,2KW	1200	1200	1200	1656,5	456,5	1252	374	413	26
DHUMAT 800 T6 4KW	1200	1200	1200	1656,5	456,5	1252	374	413	26

Model	L	L1	L2
DHUMAT 315 T2 1,1KW	497,7	182,1	313,1
DHUMAT 315 T4 0,25KW	497,7	182,1	313,1
DHUMAT 355 T2 2,2KW	497,7	182,1	313,1
DHUMAT 355 T4 0,55KW	497,7	182,1	313,1
DHUMAT 400 T4 0,75KW	597,7	265,6	330,6
DHUMAT 400 T6 0,37KW	597,7	265,6	330,6
DHUMAT 400 T4/T8 0,75/0,12KW	597,7	265,6	330,6
DHUMAT 450 T4 1,1KW	597,7	265,6	330,6
DHUMAT 450 T6 0,75KW	597,7	265,6	330,6
DHUMAT 450 T4/T8 1,1/0,18KW	597,7	265,6	330,6
DHUMAT 500 T4 1,5KW	797,7	314,3	480,9
DHUMAT 500 T6 0,75KW	797,7	314,3	480,9
DHUMAT 500 T4/T8 1,5/0,25KW	797,7	314,3	480,9
DHUMAT 560 T4 3KW	797,7	314,3	480,9
DHUMAT 560 T6 0,75KW	797,7	314,3	480,9
DHUMAT 560 T4/T8 3/0,55KW	797,7	314,3	480,9
DHUMAT 630 T4 4KW	897,7	375,3	519,9
DHUMAT 630 T6 1,5KW	897,7	375,3	519,9
DHUMAT 630 T4/T8 4/0,75KW	897,7	375,3	519,9
DHUMAT 710 T6 2,2KW	1097,7	444,5	651,7
DHUMAT 800 T6 4KW	1097,7	444,5	651,7

WIRING DIAGRAM

DIAGRAM Nº 1

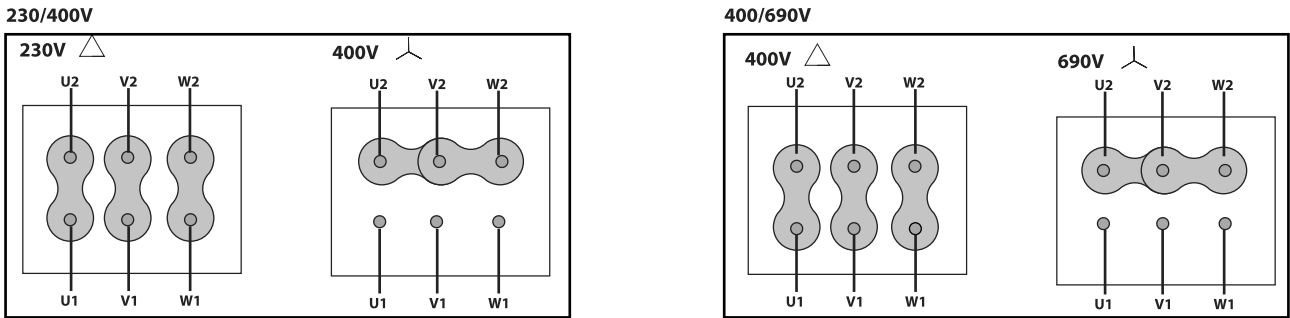
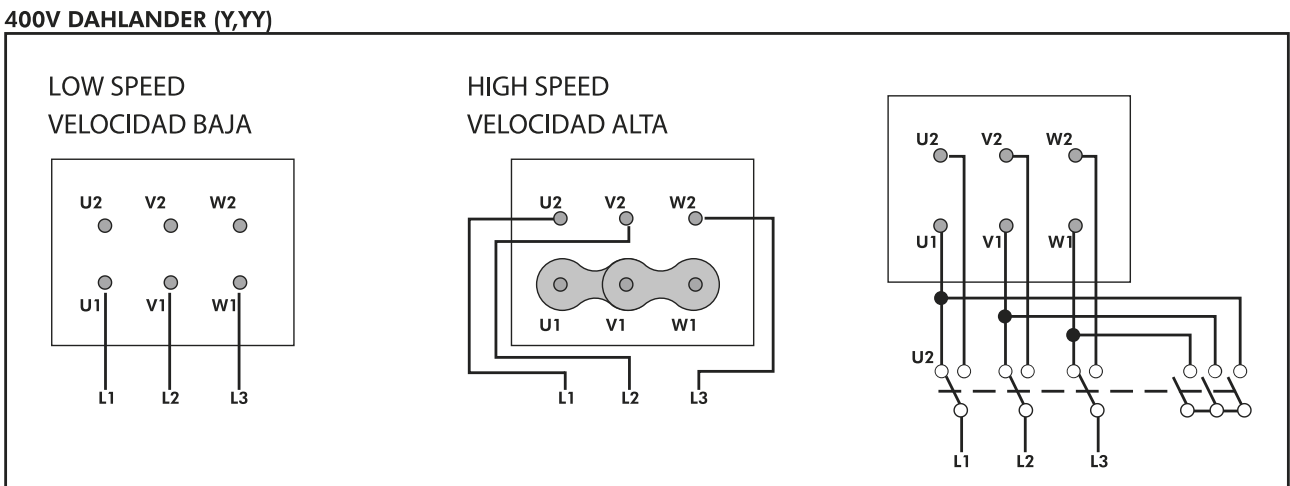


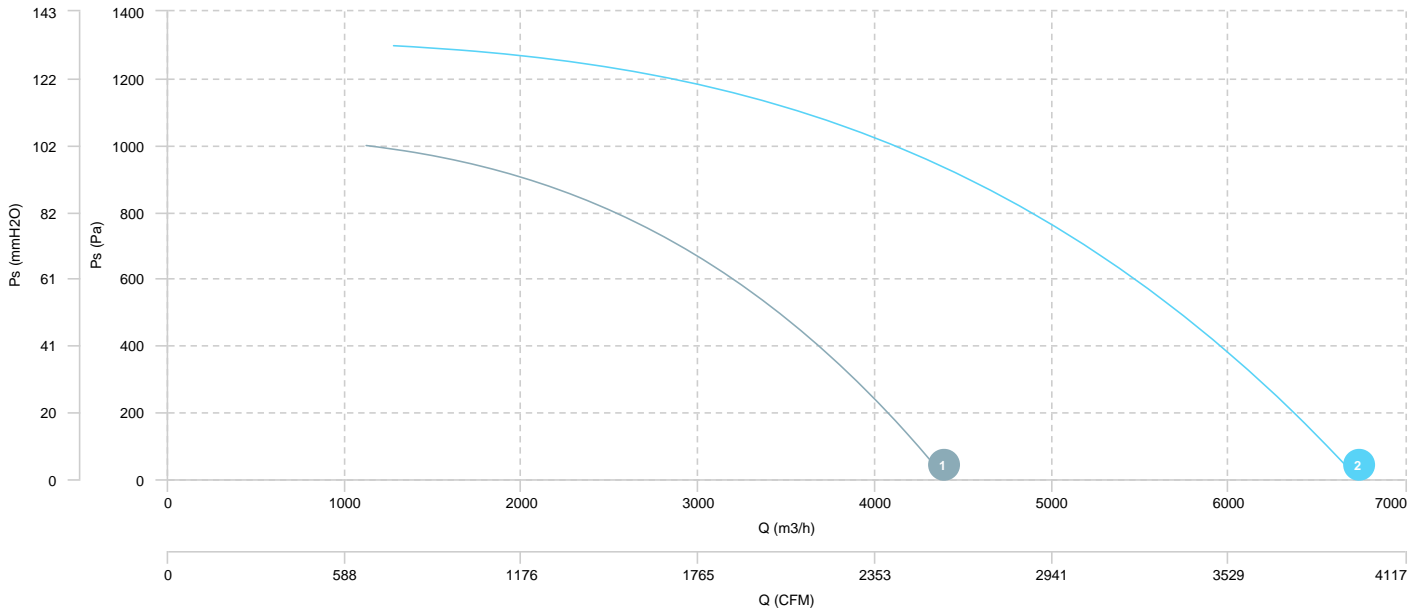
DIAGRAM Nº 2



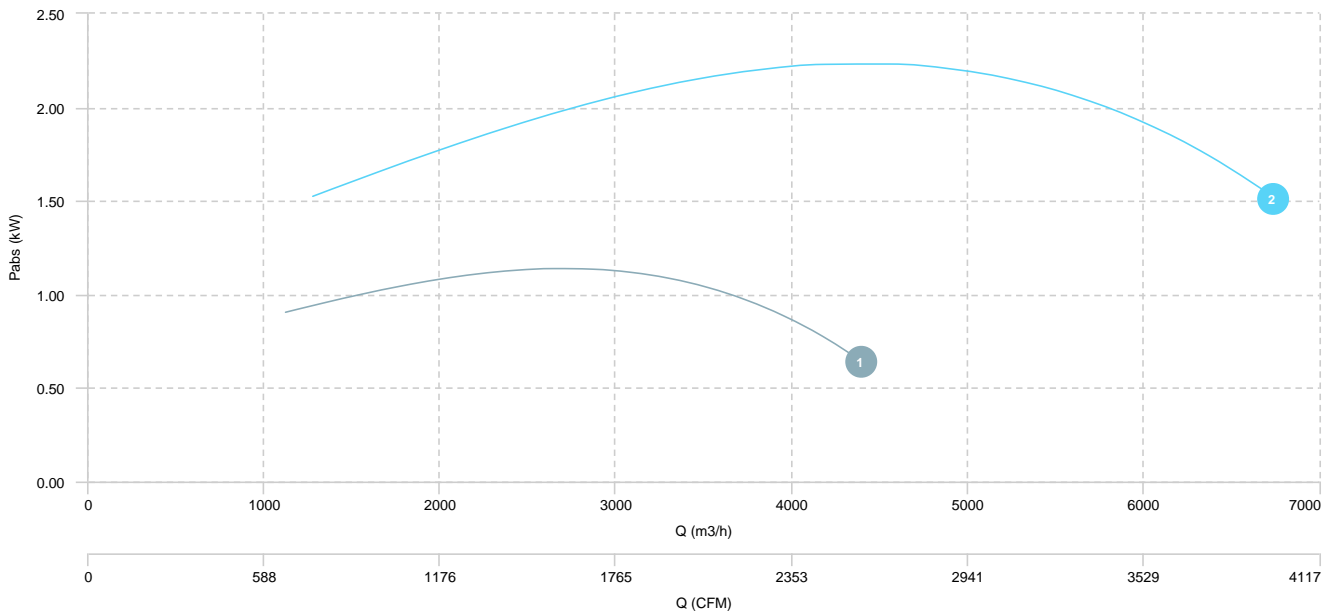
CHARACTERISCTIC CURVE

- 1 DHUMAT 315 T2 1,1KW
- 2 DHUMAT 355 T2 2,2KW

AIR FLOW - PRESSURE

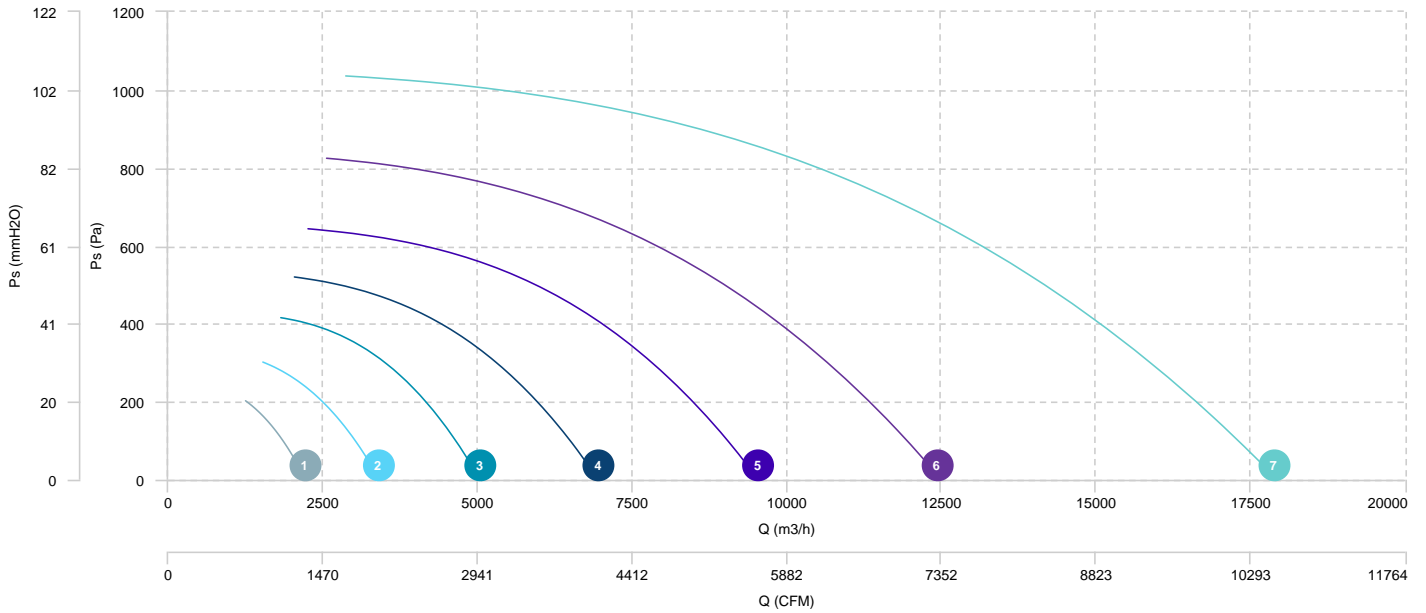


AIR FLOW - ABSORBED POWER

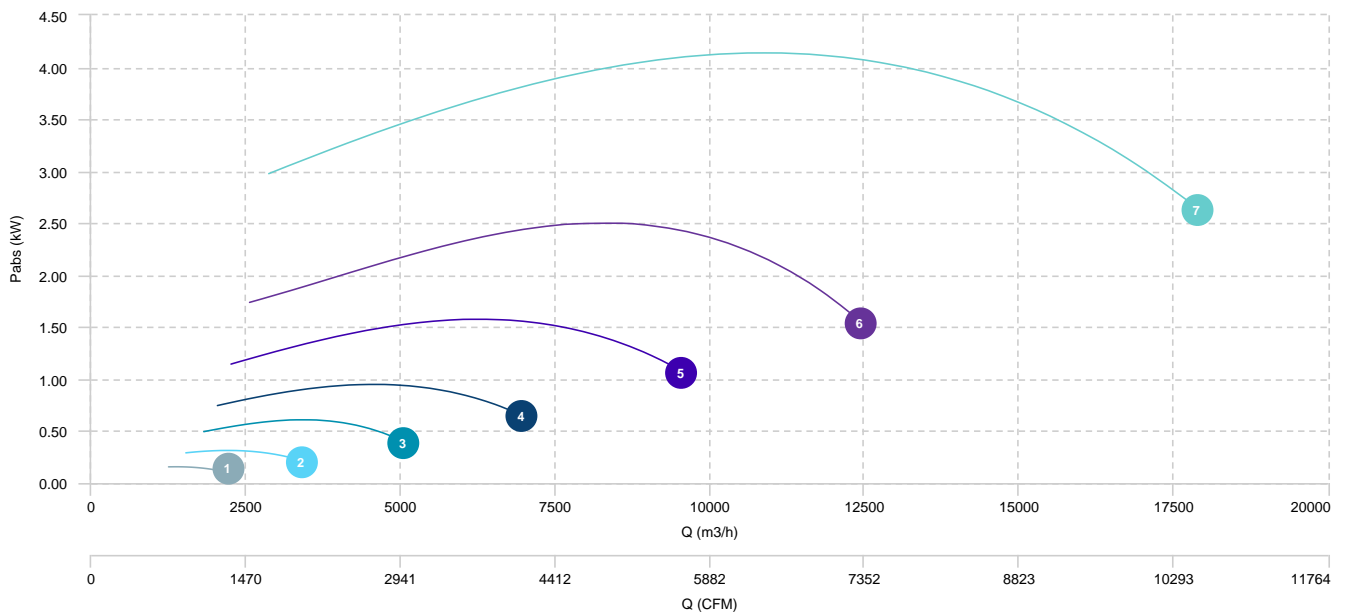


1	DHUMAT 315 T4 0,25KW	2	DHUMAT 355 T4 0,55KW	3	DHUMAT 400 T4 0,75KW	4	DHUMAT 450 T4 1,1KW
5	DHUMAT 500 T4 1,5KW	6	DHUMAT 560 T4 3KW	7	DHUMAT 630 T4 4KW		

AIR FLOW - PRESSURE

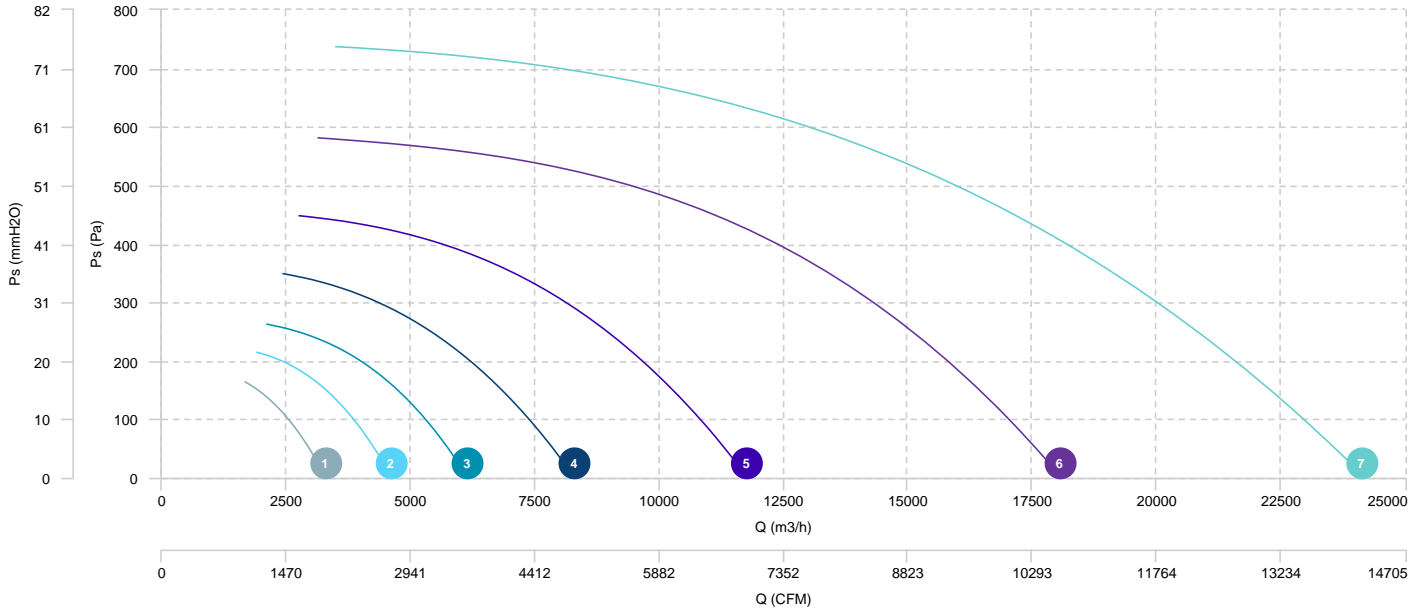


AIR FLOW - ABSORBED POWER

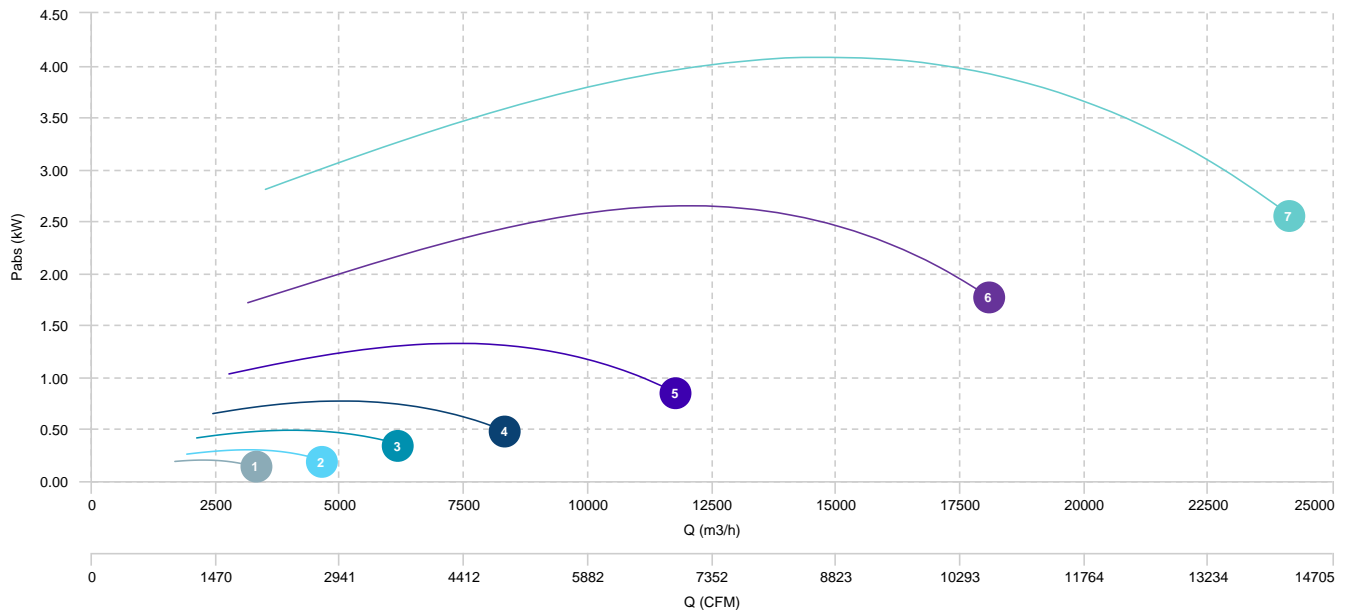


1	DHUMAT 400 T6 0,37KW	2	DHUMAT 450 T6 0,75KW	3	DHUMAT 500 T6 0,75KW	4	DHUMAT 560 T6 0,75KW
5	DHUMAT 630 T6 1,5KW	6	DHUMAT 710 T6 2,2KW	7	DHUMAT 800 T6 4KW		

AIR FLOW - PRESSURE

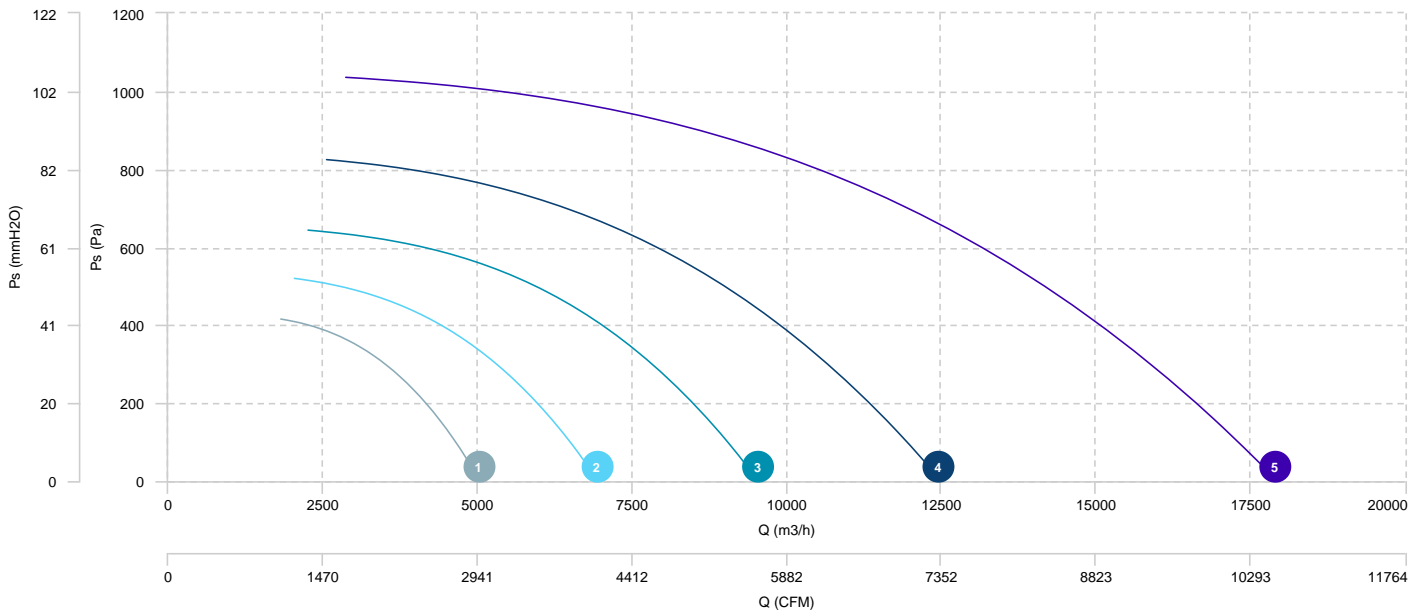


AIR FLOW - ABSORBED POWER

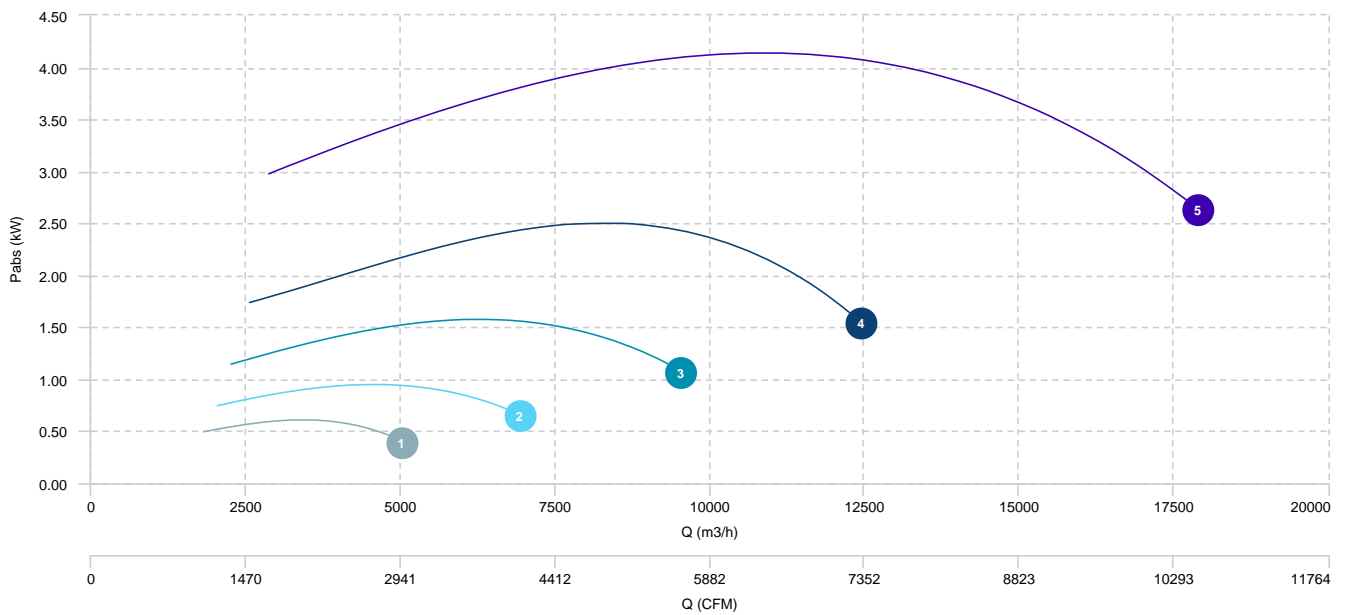


1	DHUMAT 400 T4/T8 0,75/0, 12KW	2	DHUMAT 450 T4/T8 1,1/0, 18KW	3	DHUMAT 500 T4/T8 1,5/0, 25KW	4	DHUMAT 560 T4/T8 3/0, 55KW
5	DHUMAT 630 T4/T8 4/0, 75KW						

AIR FLOW - PRESSURE (4 POLES)

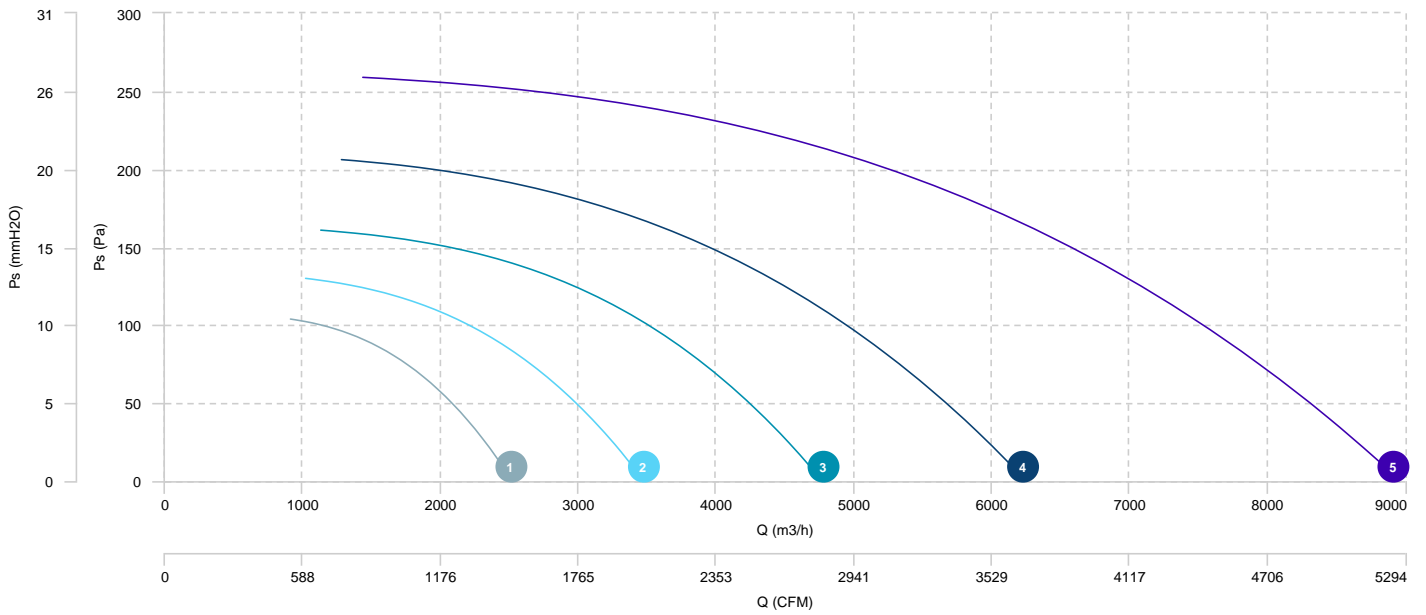


AIR FLOW - ABSORBED POWER (4 POLES)



1	DHUMAT 400 T4/T8 0,75/0, 12KW	2	DHUMAT 450 T4/T8 1,1/0, 18KW	3	DHUMAT 500 T4/T8 1,5/0, 25KW	4	DHUMAT 560 T4/T8 3/0, 55KW
5	DHUMAT 630 T4/T8 4/0, 75KW						

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
DHUMAT 315 T2 1,1KW	Inlet	53	72	73	71	72	73	71	57	80
DHUMAT 355 T2 2,2KW	Inlet	56	75	76	74	75	76	74	60	83

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
DHUMAT 315 T4 0,25KW	Inlet	48	67	68	66	67	68	66	52	75
DHUMAT 355 T4 0,55KW	Inlet	51	70	71	69	70	71	69	55	78
DHUMAT 400 T4 0,75KW	Inlet	54	73	74	72	73	74	72	58	81
DHUMAT 450 T4 1,1KW	Inlet	58	77	78	76	77	77	76	62	85
DHUMAT 500 T4 1,5KW	Inlet	61	82	79	84	79	77	69	65	88
DHUMAT 560 T4 3KW	Inlet	65	86	83	87	83	80	72	68	91
DHUMAT 630 T4 4KW	Inlet	68	89	86	72	86	83	75	71	92

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
DHUMAT 400 T6 0,37KW	Inlet	47	66	67	65	66	66	65	51	74
DHUMAT 450 T6 0,75KW	Inlet	50	69	71	69	70	70	69	55	77
DHUMAT 500 T6 0,75KW	Inlet	54	75	72	76	72	70	62	57	81
DHUMAT 560 T6 0,75KW	Inlet	57	78	75	80	76	73	65	61	84
DHUMAT 630 T6 1,5KW	Inlet	61	82	79	83	79	77	69	64	88
DHUMAT 710 T6 2,2KW	Inlet	69	87	84	84	83	78	84	25	92
DHUMAT 800 T6 4KW	Inlet	73	91	87	87	87	81	88	28	95

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
DHUMAT 400 T4/T8 0,75/0,12KW (1500 RPM)	Inlet	54	73	74	72	73	74	72	58	81
DHUMAT 450 T4/T8 1,1/0,18KW (1500 RPM)	Inlet	58	77	78	76	77	77	76	62	85

SOUND POWER Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
DHUMAT 500 T4/T8 1,5/0,25KW (1500 RPM)	Inlet	61	82	79	84	79	77	69	65	88
DHUMAT 630 T4/T8 4/0,75KW (1500 RPM)	Inlet	68	89	86	72	86	83	75	71	92

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	None

ERP / 2 poles

Model	Mot. 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)
DHUMAT 315 T2 1,1KW	1,1	-	53,90	1,14	2.780,16	732,49	8.6	1.473,09
DHUMAT 355 T2 2,2KW	2,2	-	54,85	2,23	4.094,03	1.001,50	10.6	1.956,29

ERP / 4 poles

Model	Mot. 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)
DHUMAT 315 T4 0,25KW	0,25	-	49,24	0,16	1.397,01	183,91	4.32	403,20
DHUMAT 355 T4 0,55KW	0,55	-	50,44	0,31	2.075,92	255,49	5.38	541,76
DHUMAT 400 T4 0,75KW	0,75	-	53,05	0,60	3.046,42	349,22	5.37	709,61
DHUMAT 450 T4 1,1KW	1,1	-	55,52	0,95	4.259,02	413,57	6.64	798,71
DHUMAT 500 T4 1,5KW	1,5	-	56,24	1,57	5.853,58	506,59	6.5	965,18
DHUMAT 560 T4 3KW	3	-	57,40	2,48	7.602,69	623,09	8	1.176,08
DHUMAT 630 T4 4KW	4	-	60,97	4,13	11.228,50	753,30	9.3	1.325,56

ERP / 6 poles

Model	Mot. 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)
DHUMAT 400 T6 0,37KW	0,37	-	43,79	0,20	1.937,61	149,65	3.41	367,10
DHUMAT 450 T6 0,75KW	0,75	-	51,79	0,30	2.790,08	182,76	4.35	382,23
DHUMAT 500 T6 0,75KW	0,75	-	48,44	0,49	3.741,20	213,09	4.15	468,35
DHUMAT 560 T6 0,75KW	0,75	-	52,90	0,77	5.233,79	259,67	5.5	528,84
DHUMAT 630 T6 1,5KW	1,5	-	55,40	1,32	7.303,97	340,42	6.05	652,67
DHUMAT 710 T6 2,2KW	2,2	-	56,60	2,64	11.161,25	447,81	6.38	849,94

Model	Mot. 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)
DHUMAT 800 T6 4KW	4	-	58,80	4,08	15.068,68	533,96	8.12	973,89

ERP / 4/8 poles

Model	Mot. 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)
DHUMAT 400 T4/T8 0,75/0,12KW (1500 RPM)	0,75/0,12	-	53,05	0,60	3.046,42	349,22	5.37	709,61
DHUMAT 450 T4/T8 1,1/0,18KW (1500 RPM)	1,1/0,18	-	55,52	0,95	4.259,02	413,57	6.64	798,71
DHUMAT 500 T4/T8 1,5/0,25KW (1500 RPM)	1,5/0,25	-	56,24	1,57	5.853,58	506,59	6.5	965,18
DHUMAT 560 T4/T8 3/0,55KW (1500 RPM)	3/0,55	-	57,40	2,48	7.602,69	623,09	8	1.176,08
DHUMAT 630 T4/T8 4/0,75KW (1500 RPM)	4/0,75	-	60,97	4,13	11.228,50	753,30	9.3	1.325,56