

## DHUMAT



### SMOKE EXTRACTION BACKWARD CASING FAN 400°C/2h

#### MANUFACTURING FEATURES

##### CASING:

- Made of galvanized steel sheet with connection flanges and inspection door.
- Changeable panels.

##### MOTOR SUPPORT:

- Galvanised steel plate, motor with flanges fixed on 2 supports. Removable plate / support / impeller set.

##### IMPELLER:

- Backward centrifugal impeller, made of galvanised steel, dynamically balanced and sel-cleaning.
- 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 400V 50Hz

##### APPLICATIONS

- Smoke extraction in high buildings and establishments with people.
- Ventilation and smoke exhaust in covered parkings.
- Ventilation in technical, industrial or commercial facilities.
- Maximum continuous working temperature: carried air 110°C, environment 60°C.

Official homologation by the European laboratory APPLUS according to EN 12101-3:2015  
Certification Nr: 0370-CPR-2681

## Accessories



AVR



AVS



DKF



EI  
DHUM  
AT



INT



INT  
400



SFC



VIS  
DHUM  
AT

## Technical data

### Three-phase motor / 2 poles

Code	Model	R.P.M.	Rated I. A		Rated power kW	Max. Airflow m <sup>3</sup> /h	Sound db (A)**	Weight kg	Connect. diagram
			230V	400V					
245310182	DHUMAT 315 T2 1,1KW	2800	4,05	2,33	1,10	4.410	57	64	1
245350182	DHUMAT 355 T2 2,2KW	2840	7,97	4,58	2,20	6.830	62	73	1

### Three-phase motor / 4 poles

Code	Model	R.P.M.	Rated I. A		Rated power kW	Max. Airflow m <sup>3</sup> /h	Sound db (A)**	Weight kg	Connect. diagram
			230V	400V					
245310181	DHUMAT 315 T4 0,25KW	1400	1,38	0,79	0,25	2.220	42	60	1
245350181	DHUMAT 355 T4 0,55KW	1440	2,57	1,49	0,55	3.420	47	68	1
245400181	DHUMAT 400 T4 0,75KW	1410	2,83	1,63	0,75	4.890	50	84	1
245450181	DHUMAT 450 T4 1,1KW	1450	4,33	2,49	1,10	6.960	54	120	1
245500181	DHUMAT 500 T4 1,5KW	1450	5,67	3,26	1,50	9.540	58	153	1
245560181	DHUMAT 560 T4 3KW	1420	10,7	6,17	3,00	13.400	61	194	1
245630181	DHUMAT 630 T4 4KW	1440	14,5	8,32	4,00	19.080	64	246	1

### Three-phase motor / 6 poles

Code	Model	R.P.M.	Rated I. A		Rated power kW	Max. Airflow m <sup>3</sup> /h	Sound db (A)**	Weight kg	Connect. diagram
			230V	400V					
245400182	DHUMAT 400 T6 0,37KW	900	2,2	1,27	0,37	3.170	41	81	1
245450182	DHUMAT 450 T6 0,75KW	925	3,39	1,95	0,75	4.510	45	114	1
245500182	DHUMAT 500 T6 0,75KW	925	3,39	1,95	0,75	6.300	48	146	1
245560182	DHUMAT 560 T6 0,75KW	925	3,39	1,95	0,75	8.680	51	183	1
245630182	DHUMAT 630 T6 1,5KW	940	6,45	3,71	1,50	12.360	55	229	1
245710181	DHUMAT 710 T6 2,2KW	965	10,3	5,94	2,20	17.700	58	303	1
245800181	DHUMAT 800 T6 4KW	960	16,5	9,46	4,00	25.310	62	363	1

### 2 speed motor / 4/8 poles

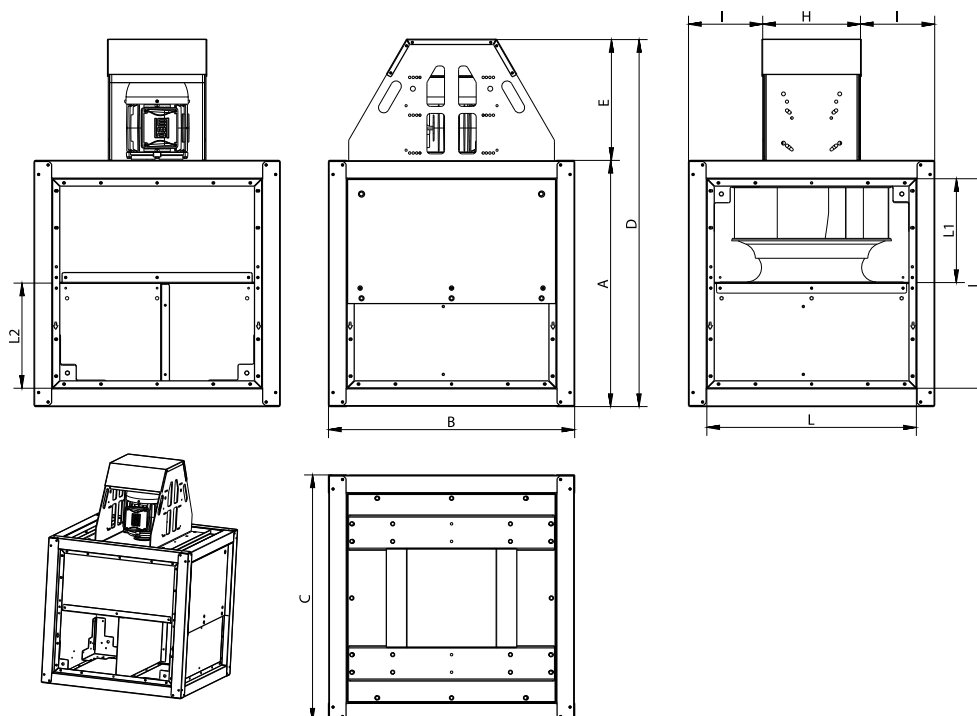
Code	Model	R.P.M.	Rated I. A 400V	Rated power kW	Max. Airflow m <sup>3</sup> /h	Sound db (A)**	Weight kg	Connect. diagram
2453101812V	DHUMAT 315 T4/T8 0,25/0,03kW	1370	1,13/0,37	0,25	2.220	42	60,60	1
2453501812V	DHUMAT 355 T4/T8 0,55/0,09kW	1410	1,77/0,61	0,55	3.420	47	68,30	1

Code	Model	R.P.M.	Rated I. A 400V	Rated power kW	Max. Airflow m <sup>3</sup> /h	Sound db (A)**	Weig ht kg	Connect. diagram
2454001812V	DHUMAT 400 T4/T8 0,75/0,12KW	1400	2,03/0,68	0,75	4.890	50	83	2
2454501812V	DHUMAT 450 T4/T8 1,1/0,18KW	1400	2,67/1,08	1,10	6.960	54	115	2
2455001812V	DHUMAT 500 T4/T8 1,5/0,25KW	1400	3,46/1,27	1,50	9.540	58	149	2
2455601812V	DHUMAT 560 T4/T8 3/0,55KW	1430	6,53/2,33	3,00	13.400	61	187	2
2456301812V	DHUMAT 630 T4/T8 4/0,75KW	1440	8,15/2,74	4,00	19.080	64	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



Model	A	B	C	D	E	H	I	K	L
DHUMAT 315 T2 1,1KW	600	600	600	912	312	278	161	26	495,7
DHUMAT 315 T4 0,25KW	600	600	600	912	312	278	161	26	495,7
DHUMAT 315 T4/T8 0,25/0,03kW	600	600	600	912	312	278	161	26	495,7
DHUMAT 355 T2 2,2KW	600	600	600	912	312	278	161	26	495,7
DHUMAT 355 T4 0,55KW	600	600	600	912	312	278	161	26	495,7
DHUMAT 355 T4/T8 0,55/0,09kW	600	600	600	912	312	278	161	26	495,7
DHUMAT 400 T4 0,75KW	700	700	700	1043,5	343,5	278	211	26	595,7
DHUMAT 400 T6 0,37KW	700	700	700	1043,5	343,5	278	211	26	595,7
DHUMAT 400 T4/T8 0,75/0,12kW	700	700	700	1043,5	343,5	278	211	26	595,7
DHUMAT 450 T4 1,1KW	700	700	700	1043,5	343,5	278	211	26	595,7
DHUMAT 450 T6 0,75KW	700	700	700	1043,5	343,5	278	211	26	595,7
DHUMAT 450 T4/T8 1,1/0,18kW	700	700	700	1043,5	343,5	278	211	26	595,7
DHUMAT 500 T4 1,5KW	900	900	900	1243,5	343,5	338	281	26	795,7
DHUMAT 500 T6 0,75KW	900	900	900	1243,5	343,5	338	281	26	795,7
DHUMAT 500 T4/T8 1,5/0,25kW	900	900	900	1243,5	343,5	338	281	26	795,7
DHUMAT 560 T4 3KW	900	900	900	1293,5	343,5	338	281	26	795,7
DHUMAT 560 T6 0,75KW	900	900	900	1243,5	343,5	338	281	26	795,7
DHUMAT 560 T4/T8 3/0,55kW	900	900	900	1293,5	343,5	338	281	26	795,7
DHUMAT 630 T4 4KW	1000	1000	1000	1376	376	340	330	26	895,7
DHUMAT 630 T6 1,5KW	1000	1000	1000	1426	426	340	330	26	895,7

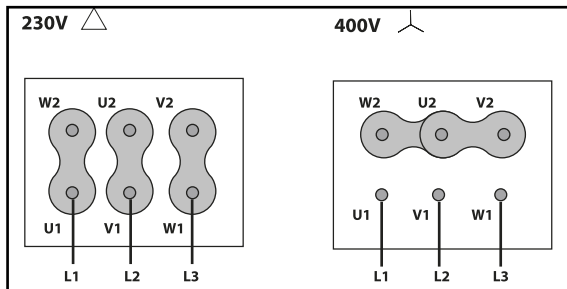
Model	A	B	C	D	E	H	I	K	L
DHUMAT 630 T4/T8 4/0,75KW	1000	1000	1000	1376	376	340	330	26	895,7
DHUMAT 710 T6 2,2KW	1200	1200	1200	1656,5	456,5	374	413	26	1095,7
DHUMAT 800 T6 4KW	1200	1200	1200	1656,5	456,5	374	413	26	1095,7

Model	L1	L2
DHUMAT 315 T2 1,1KW	181,1	313,1
DHUMAT 315 T4 0,25KW	181,1	313,1
DHUMAT 315 T4/T8 0,25/0,03kW	181,1	313,1
DHUMAT 355 T2 2,2KW	181,1	313,1
DHUMAT 355 T4 0,55KW	181,1	313,1
DHUMAT 355 T4/T8 0,55/0,09kW	181,1	313,1
DHUMAT 400 T4 0,75KW	264,9	329,6
DHUMAT 400 T6 0,37KW	264,9	329,3
DHUMAT 400 T4/T8 0,75/0,12KW	264,9	329,3
DHUMAT 450 T4 1,1KW	264,9	329,3
DHUMAT 450 T6 0,75KW	264,9	329,3
DHUMAT 450 T4/T8 1,1/0,18KW	264,9	329,3
DHUMAT 500 T4 1,5KW	314,3	479,9
DHUMAT 500 T6 0,75KW	314,3	479,9
DHUMAT 500 T4/T8 1,5/0,25KW	314,3	479,9
DHUMAT 560 T4 3KW	314,3	479,9
DHUMAT 560 T6 0,75KW	314,3	479,9
DHUMAT 560 T4/T8 3/0,55KW	314,3	479,9
DHUMAT 630 T4 4KW	366,8	527,4
DHUMAT 630 T6 1,5KW	366,8	527,4
DHUMAT 630 T4/T8 4/0,75KW	366,8	527,4
DHUMAT 710 T6 2,2KW	440,5	653,7
DHUMAT 800 T6 4KW	440,5	653,7

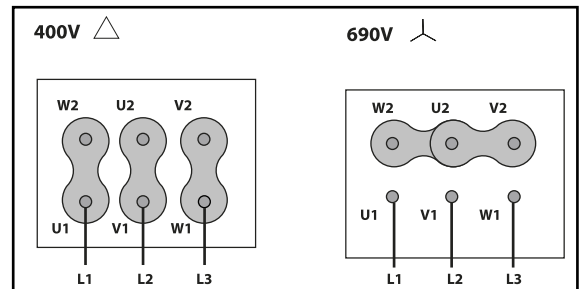
## Wiring diagram

### Wiring diagram Nº 1

230/400V

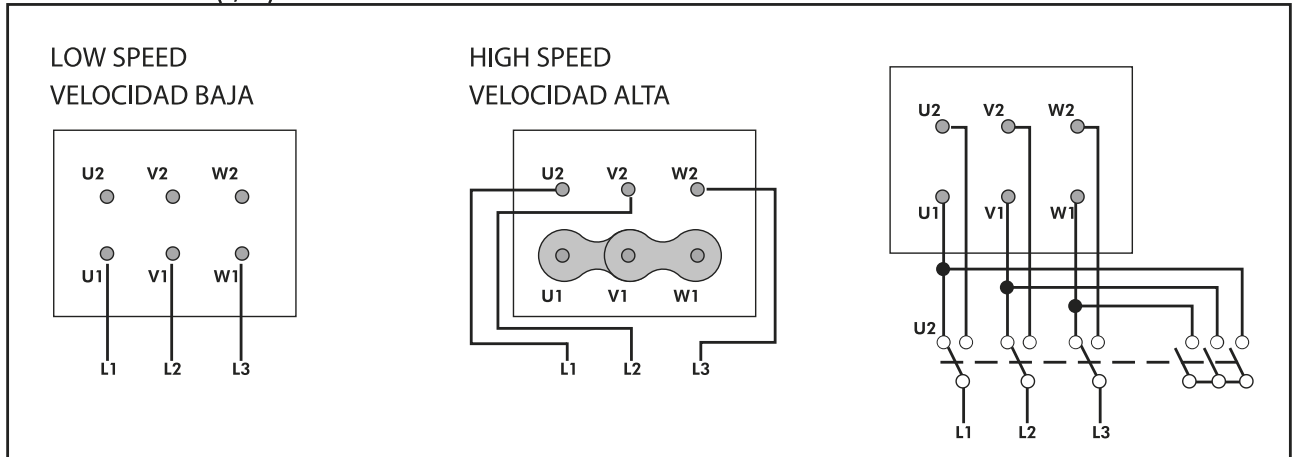


400/690V



### Wiring diagram Nº 2

400V DAHLANDER (Y,YY)

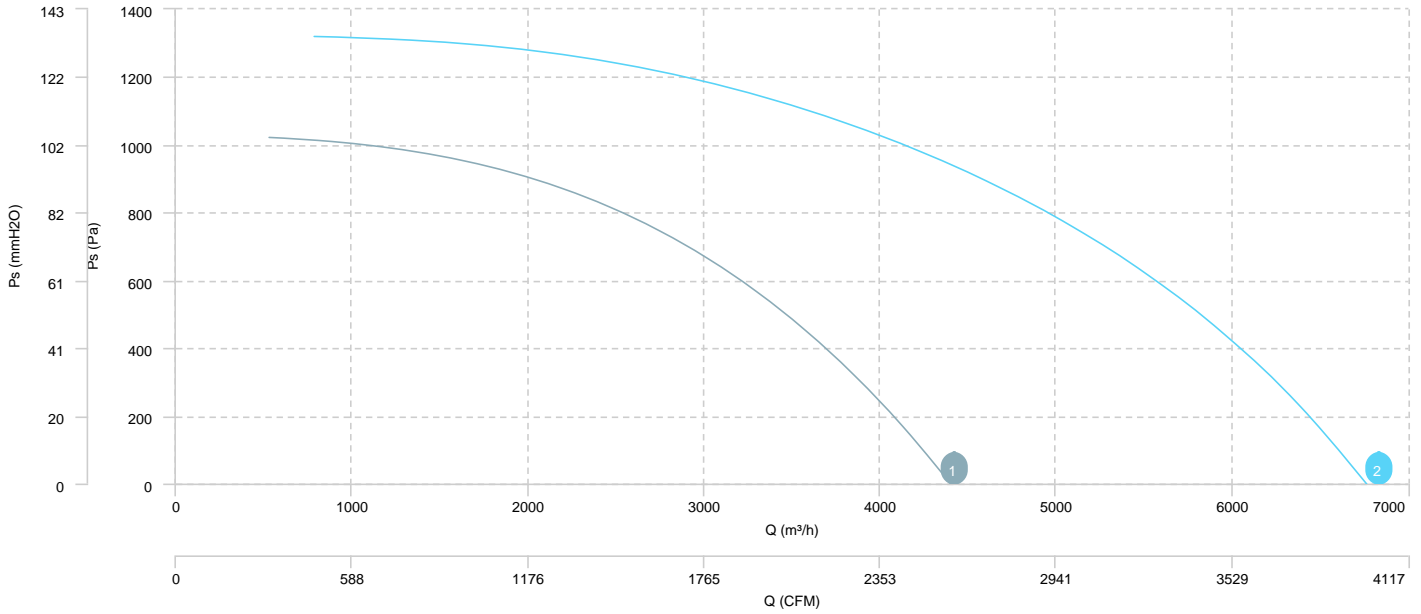


# CHARACTERISCTIC CURVE

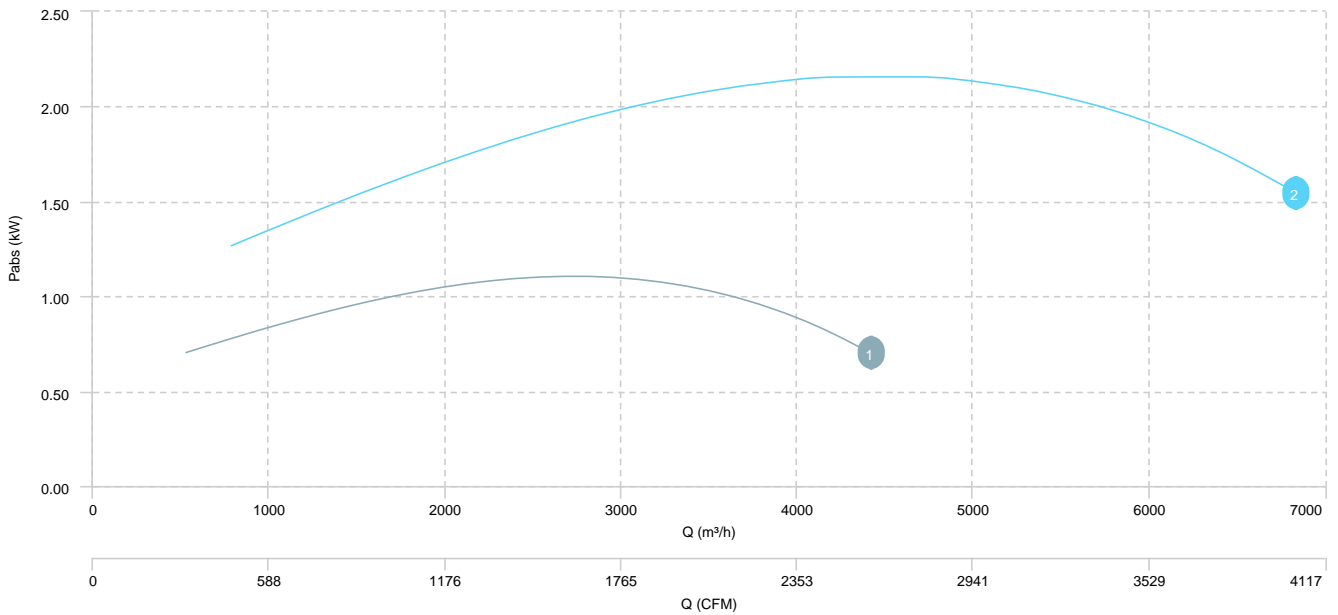
1 DHUMAT 315 T2 1,1KW

2 DHUMAT 355 T2 2,2KW

## AIR FLOW - PRESSURE

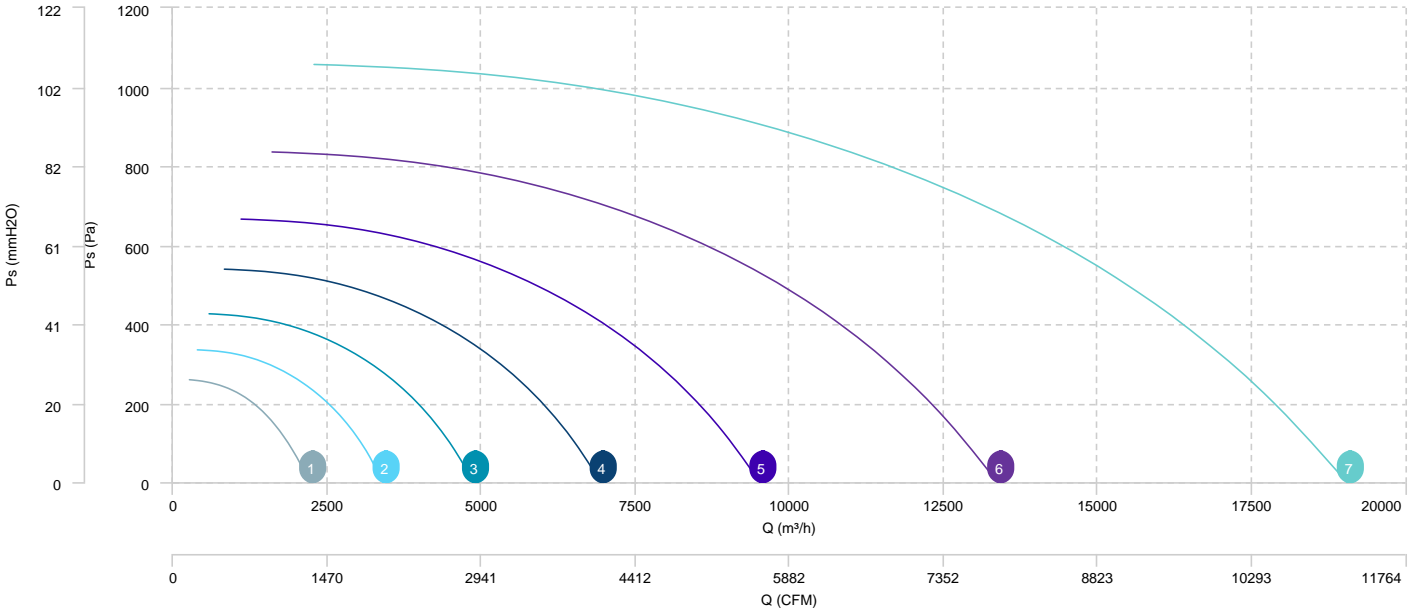


## AIR FLOW - ABSORBED POWER

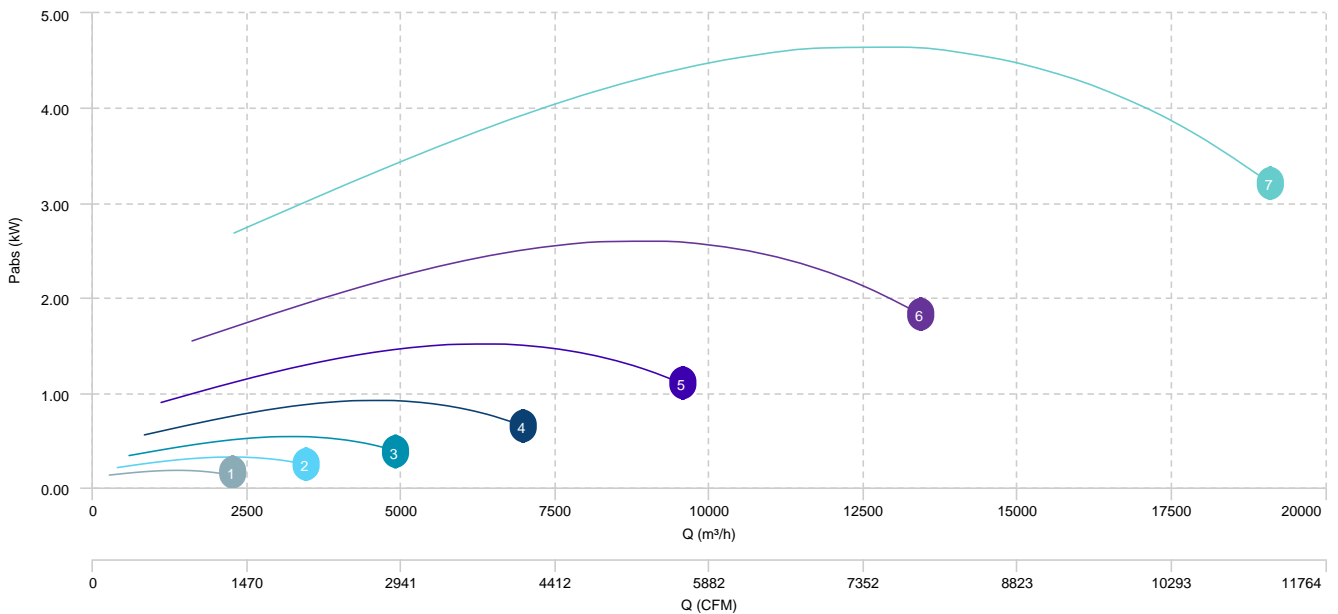


- |                        |                        |                        |                       |
|------------------------|------------------------|------------------------|-----------------------|
| 1 DHUMAT 315 T4 0,25KW | 2 DHUMAT 355 T4 0,55KW | 3 DHUMAT 400 T4 0,75KW | 4 DHUMAT 450 T4 1,1KW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

**AIR FLOW - PRESSURE**



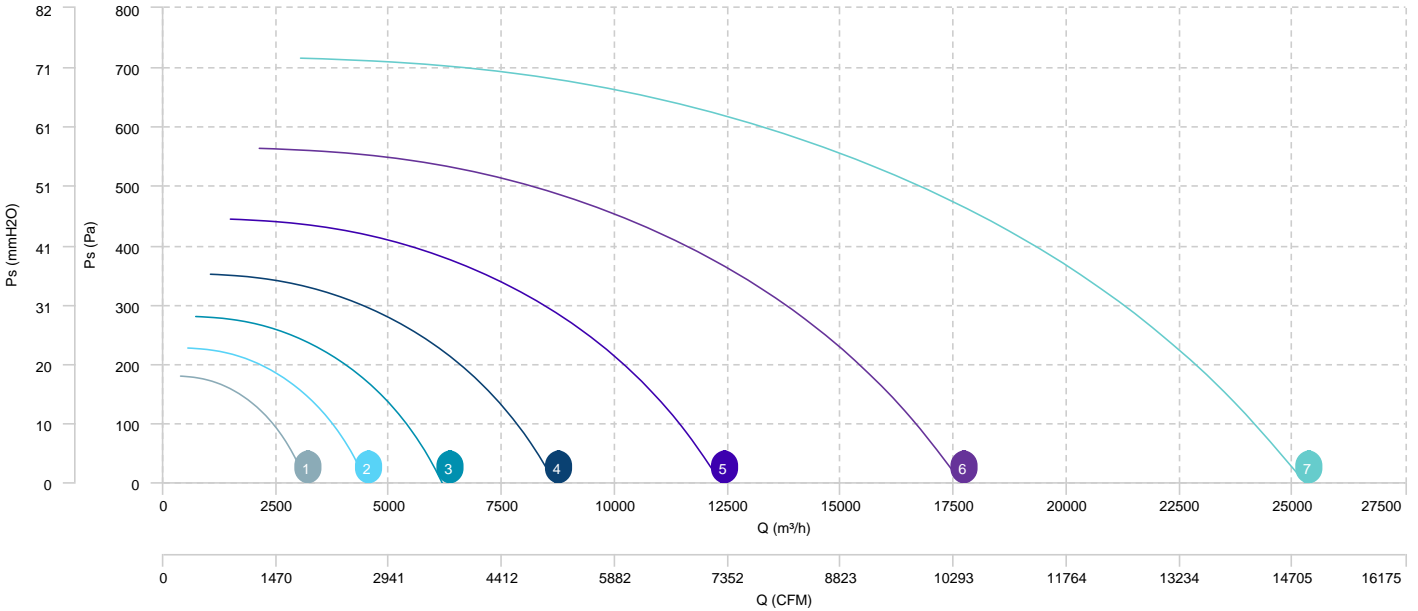
**AIR FLOW - ABSORBED POWER**



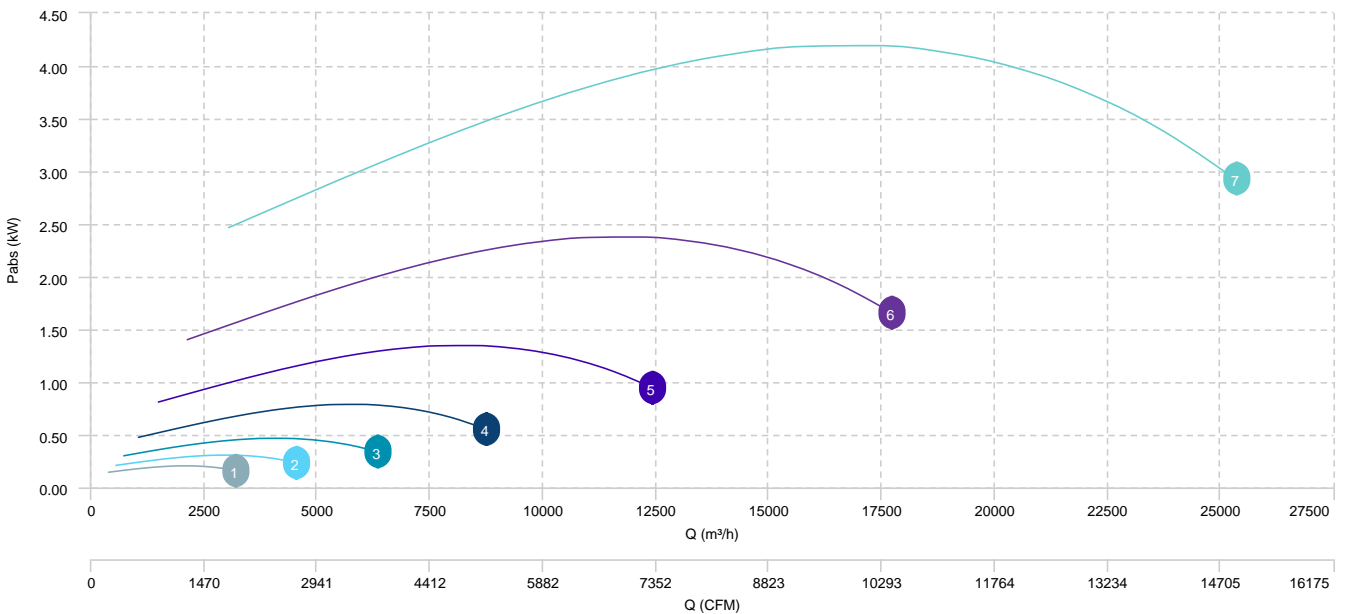


- |                        |                        |                        |                        |
|------------------------|------------------------|------------------------|------------------------|
| 1 DHUMAT 400 T6 0,37KW | 2 DHUMAT 450 T6 0,75KW | 3 DHUMAT 500 T6 0,75KW | 4 DHUMAT 560 T6 0,75KW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

**AIR FLOW - PRESSURE**

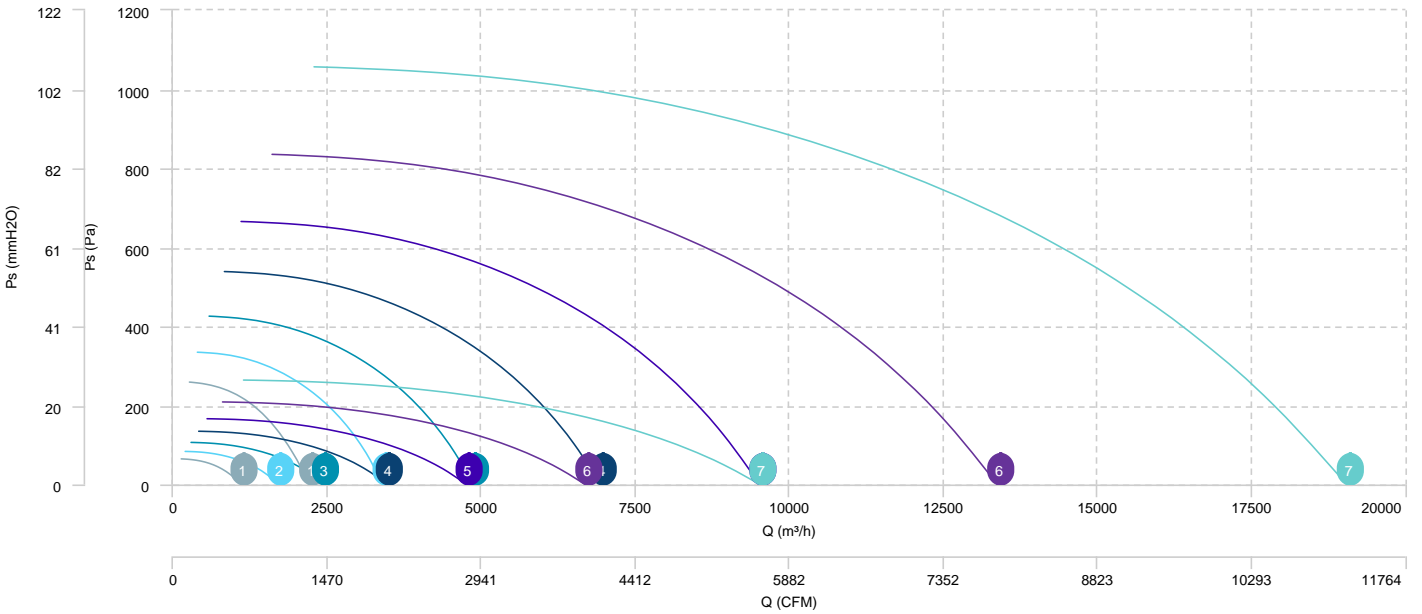


**AIR FLOW - ABSORBED POWER**



1	DHUMAT 315 T4/T8 0, 25/0,03kW	2	DHUMAT 355 T4/T8 0, 55/0,09kW	3	DHUMAT 400 T4/T8 0, 75/0,12KW	4	DHUMAT 450 T4/T8 1,1/0, 18KW
5	DHUMAT 500 T4/T8 1,5/0, 25KW	6	DHUMAT 560 T4/T8 3/0, 55KW	7	DHUMAT 630 T4/T8 4/0, 75KW		

**AIR FLOW - PRESSURE (4 poles)**



1	DHUMAT 315 T4/T8 0, 25/0,03kW	2	DHUMAT 355 T4/T8 0, 55/0,09kW	3	DHUMAT 400 T4/T8 0, 75/0,12KW	4	DHUMAT 450 T4/T8 1,1/0, 18KW
5	DHUMAT 500 T4/T8 1,5/0, 25KW	6	DHUMAT 560 T4/T8 3/0, 55KW	7	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	61	69	73	76	78	76	73	70	83
DHUMAT 355 T2 2,2KW ( )	Inlet	66	74	78	82	83	81	78	75	88

### 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	46	54	58	62	63	61	58	55	68
DHUMAT 355 T4 0,55KW ( )	Inlet	51	59	64	67	68	66	63	60	73
DHUMAT 400 T4 0,75KW ( )	Inlet	54	62	67	70	71	69	66	63	76
DHUMAT 450 T4 1,1KW ( )	Inlet	58	66	70	73	75	73	70	67	80
DHUMAT 500 T4 1,5KW ( )	Inlet	61	69	74	77	78	77	73	71	84
DHUMAT 560 T4 3KW ( )	Inlet	64	72	77	80	81	79	76	73	87
DHUMAT 630 T4 4KW ( )	Inlet	68	76	80	84	85	83	80	77	90

### 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	45	53	57	60	62	60	57	54	67
DHUMAT 450 T6 0,75KW ( )	Inlet	48	56	61	64	65	63	60	57	71
DHUMAT 500 T6 0,75KW ( )	Inlet	52	60	65	68	69	67	64	61	74
DHUMAT 560 T6 0,75KW ( )	Inlet	55	63	67	71	72	70	67	64	77
DHUMAT 630 T6 1,5KW ( )	Inlet	58	66	71	74	75	74	70	68	81
DHUMAT 710 T6 2,2KW ( )	Inlet	62	70	75	78	79	77	74	71	84
DHUMAT 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
DHUMAT 315 T4/T8 0,25/0,03KW (8p (±750rpm) - )	Inlet	29	37	42	45	46	44	41	38	52

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/T8 0,25/0,03kW (4p (±1500rpm) - )	Inlet	46	54	58	62	63	61	58	55	68
DHUMAT 355 T4/T8 0,55/0,09kW (8p (±750rpm) - )	Inlet	34	42	47	50	51	50	46	44	57
DHUMAT 355 T4/T8 0,55/0,09kW (4p (±1500rpm) - )	Inlet	51	59	64	67	68	66	63	60	73
DHUMAT 400 T4/T8 0,75/0,12KW (4p (±1500rpm) - )	Inlet	54	62	67	70	71	69	66	63	76
DHUMAT 400 T4/T8 0,75/0,12KW (8p (±750rpm) - )	Inlet	37	45	50	53	54	53	49	47	60
DHUMAT 450 T4/T8 1,1/0,18KW (4p (±1500rpm) - )	Inlet	58	66	70	73	75	73	70	67	80
DHUMAT 450 T4/T8 1,1/0,18KW (8p (±750rpm) - )	Inlet	41	49	54	57	58	56	53	50	63
DHUMAT 500 T4/T8 1,5/0,25KW (4p (±1500rpm) - )	Inlet	61	69	74	77	78	77	73	71	84
DHUMAT 500 T4/T8 1,5/0,25KW (8p (±750rpm) - )	Inlet	45	53	57	61	62	60	57	54	67
DHUMAT 560 T4/T8 3/0,55KW (4p (±1500rpm) - )	Inlet	64	72	77	80	81	79	76	73	87
DHUMAT 560 T4/T8 3/0,55KW (8p (±750rpm) - )	Inlet	48	56	60	64	65	63	60	57	70
DHUMAT 630 T4/T8 4/0,75KW (4p (±1500rpm) - )	Inlet	68	76	80	84	85	83	80	77	90
DHUMAT 630 T4/T8 4/0,75KW (8p (±750rpm) - )	Inlet	51	59	64	67	68	66	63	60	74

## 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 (m <sup>3</sup> /h)	Ps (Pa)	Speed (m/s)	SFP (W/m <sup>3</sup> /s)
DHUMAT 315 T2 1,1KW ()	1,10	-	54,02	1,11	2.708,64	756,62	8.38	1.468,55
DHUMAT 355 T2 2,2KW ()	2,20	-	56,61	2,15	4.151,88	996,77	10.75	1.865,66

### ERP / 4 poles

Model	Motor power (kW)	Maximum efficiency point data						
		Eff.Heat recovery (%)	Max. efficiency (%)	Pabs (kW)	Air Flow (m <sup>3</sup> /h)	Ps (Pa)	Speed (m/s)	SFP (W/m <sup>3</sup> /s)
DHUMAT 315 T4 0,25KW ()	0,25	-	41,97	0,18	1.365,04	191,70	4.22	474,42
DHUMAT 355 T4 0,55KW ()	0,55	-	48,23	0,32	2.096,54	252,12	5.43	548,47
DHUMAT 400 T4 0,75KW ()	0,75	-	52,63	0,54	2.994,39	321,25	5.28	642,97
DHUMAT 450 T4 1,1KW ()	1,10	-	55,61	0,91	4.251,47	407,55	6.63	773,91
DHUMAT 500 T4 1,5KW ()	1,50	-	57,05	1,51	5.818,97	503,85	6.46	931,86
DHUMAT 560 T4 3KW ()	3	-	58,65	2,59	8.186,43	631,34	8.61	1.137,60
DHUMAT 630 T4 4KW ()	4	-	59,19	4,62	11.637,73	799,29	9.64	1.430,29

### ERP / 6 poles

Model	Motor power (kW)	Maximum efficiency point data						
		Eff.Heat recovery (%)	Max. efficiency (%)	Pabs (kW)	Air Flow (m <sup>3</sup> /h)	Ps (Pa)	Speed (m/s)	SFP (W/m <sup>3</sup> /s)
DHUMAT 400 T6 0,37KW ()	0,37	-	37,26	0,20	1.953,80	134,01	3.44	376,24
DHUMAT 450 T6 0,75KW ()	0,75	-	44,94	0,31	2.774,57	169,99	4.33	396,70
DHUMAT 500 T6 0,75KW ()	0,75	-	50,64	0,47	3.821,08	209,01	4.24	438,30
DHUMAT 560 T6 0,75KW ()	0,75	-	52,52	0,79	5.304,94	264,97	5.58	532,81
DHUMAT 630 T6 1,5KW ()	1,50	-	55,38	1,34	7.556,35	334,89	6.26	639,14
DHUMAT 710 T6 2,2KW ()	2,20	-	57,17	2,37	10.795,10	426,66	6.17	789,28

Model	Maximum efficiency point data							
	Motor power (kW)	Eff.Heat recovery (%)	Max. efficiency (%)	Pabs (kW)	Air Flow (m <sup>3</sup> /h)	Ps (Pa)	Speed (m/s)	SFP (W/m <sup>3</sup> /s)
DHUMAT 800 T6 4KW ()	4	-	58,85	4,18	15.437,27	541,52	8.32	973,66