

CTH3 F400



ROOF FAN, ABS COWL 400°C/2h

MANUFACTURING FEATURES

- Roof cowl made of ABS
- Structure, roof base support and bird protection guard made of galvanised steel.
- High efficiency backward impeller with self-cleaning system of steel.
- Standard asynchronous motor with IP-55 protection and Class F insulation. Manufactured with standard voltages: 230V 50Hz in single phase motors, 230/400V 50Hz in three phase motors and 400V 50Hz in 2 speed motors.

APPLICATIONS

Specially designed for roof installation, they are suitable for:

- Smoke extraction.
- Smoke emergency exhaust with motor outside the hazardous area.
- Air renewal in buildings and industries.
- Industrial and professional kitchen hoods.
- Maximum continuous working temperature: carried air 80°C, environment 60°C for three phase and 50°C for single phase motors.

UNDER REQUEST

- 60Hz and special voltages.
- Sparking proof fan with EEx_d certified motor.

Official homologation by the European laboratory APPLUS according to EN 12101-3:2015
 Certification Nr: 0370-CPR-2656

Accessories



Technical data

Single-phase motor / 4 poles

Code	Model	R.P.M.	Rated I. (A) 230V	Rated power kW	Max. Airflow w m3/h	Sound db (A)**	Weight	Connect. diagram
279220103	CTH3 225 M4 0,12kW	1380	1,15	0,12	730	36	9	1
279250103	CTH3 250 M4 0,12kW	1380	1,15	0,12	880	39	10	1
279280103	CTH3 280 M4 0,12kW	1380	1,15	0,12	1.520	44	11	1
279310103	CTH3 315 M4 0,25KW	1400	1,93	0,25	2.190	43	15	1

Single-phase motor / 6 poles

Code	Model	R.P.M.	Rated I. (A) 230V	Rated power kW	Max. Airflow w m3/h	Sound db (A)**	Weight	Connect. diagram
279410103	CTH3 400 M6 0,37KW	890	2,9	0,37	3.320	41	21	1

Three-phase motor / 4 poles

Code	Model	R.P.M.	Rated I. (A) 400V	Rated power kW	Max. Airflow w m3/h	Sound db (A)**	Weight	Connect. diagram
279220106	CTH3 225 T4 0,12kW	1400	0,46	0,12	730	36	9	2
279250106	CTH3 250 T4 0,12kW	1400	0,46	0,12	880	39	10	2
279280106	CTH3 280 T4 0,12kW	1400	0,46	0,12	1.520	44	11	2
279310106	CTH3 315 T4 0,25KW	1400	0,79	0,25	2.190	43	15	2
279350106	CTH3 355 T4 0,55KW	1400	1,49	0,55	3.590	48	19	2
279400106	CTH3 400 T4 0,75KW	1390	1,63	0,75	5.130	51	21	2
279450106	CTH3 450 T4 1,1KW	1400	2,49	1,1	7.300	54	38	2
279500106	CTH3 500 T4 1,5KW	1400	3,26	1,5	10.010	57	50	2
279560106	CTH3 560 T4 3KW	1430	6,17	3	14.060	61	55	2

Three-phase motor / 6 poles

Code	Model	R.P.M.	Rated I. (A) 400V	Rated power kW	Max. Airflow w m3/h	Sound db (A)**	Weight	Connect. diagram
279410106	CTH3 400 T6 0,37KW	900	1,27	0,37	3.320	41	21	2
279460106	CTH3 450 T6 0,37KW	910	1,27	0,37	4.730	45	38	2

Code	Model	R.P.M.	Rated I. (A) 400V	Rated power kW	Max. Airflow w m3/h	Sound db (A)**	Weight	Connect. diagram
279510106	CTH3 500 T6 0,75KW	910	1,95	0,75	6.490	48	50	2
279570106	CTH3 560 T6 0,75KW	910	1,95	0,75	9.110	51	55	2
279630106	CTH3 630 T6 1,5KW	940	3,71	1,5	13.230	55	70	2
279710106	CTH3 710 T6 2,2KW	940	5,94	2,2	18.940	59	170	2
279800106	CTH3 800 T6 4KW	960	9,46	4	27.090	62	205	2

2 SPEED MOTOR / 4/8 poles

Code	Model	R.P.M.	Rated I. (A) 400V	Rated power kW	Max. Airflow w m3/h	Sound db (A)**	Weight	Connect. diagram
2793101062V	CTH3 315 T4/T8 0,25/0,03KW	1370	1,13/0,37	0,25/0,03	2.190	43	15	3
2793501062V	CTH3 355 T4/T8 0,55/0,09KW	1410	1,77/0,61	0,55/0,09	3.590	48	19	3
2794001062V	CTH3 400 T4/T8 0,75/0,12KW	1400	2,03/0,68	0,75/0,12	5.130	51	21	3
2794501062V	CTH3 450 T4/T8 1,1/0,18KW	1400	2,67/1,08	1,1/0,18	7.300	54	38	3
2795001062V	CTH3 500 T4/T8 1,5/0,25KW	1400	3,46/1,27	1,5/0,25	10.010	57	50	3
2795601062V	CTH3 560 T4/T8 3/0,55KW	1430	6,53/2,33	3/0,55	14.060	61	55	3

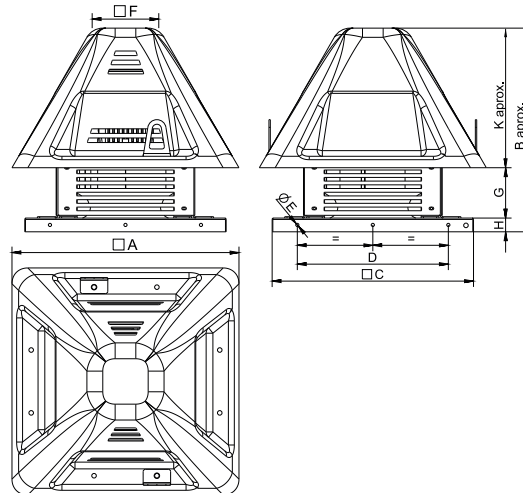
2 SPEED MOTOR / 6/12 poles

Code	Model	R.P.M.	Rated I. (A) 400V	Rated power kW	Max. Airflow w m3/h	Sound db (A)**	Weight	Connect. diagram
2795101062V	CTH3 500 T6/T12 0,75/0,15KW	910	2,11/0,59	0,75/0,15	6.490	48	50	3
2795701062V	CTH3 560 T6/T12 0,75/0,15KW	910	2,11/0,59	0,75/0,15	9.110	51	55	3
2796301062V	CTH3 630 T6/T12 1,5/0,25KW	940	14,97/3,97	1,5/0,25	10.210	55	70	3
2797101062V	CTH3 710 T6/T12 2,2/0,55KW	930	5,98/1,65	2,2/0,55	18.940	59	170	3
2798001062V	CTH3 800 T6/T12 4/1KW	960	11,77/3,39	4/1	27.090	62	205	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 aprox	C	D	E	F	G	H	K aprox
CTH3 225 M4 0,12kW	496	445	435	330	9	145,5	110	30	305
CTH3 225 T4 0,12kW	496	445	435	330	9	145,5	110	30	305
CTH3 250 M4 0,12kW	496	445	435	330	9	145,5	110	30	305
CTH3 250 T4 0,12kW	496	445	435	330	9	145,5	110	30	305
CTH3 280 M4 0,12kW	616	503,5	595	450	9	240,2	138,5	40	325
CTH3 280 T4 0,12kW	616	503,5	595	450	9	240,2	138,5	40	325
CTH3 315 M4 0,25KW	616	548	595	450	9	240,2	183	40	325
CTH3 315 T4 0,25KW	616	548	595	450	9	240,2	183	40	325
CTH3 315 T4/T8 0,25/0,03KW	616	548	595	450	9	240,2	183	40	325
CTH3 355 T4 0,55KW	698,5	647	665	520	9	240,2	208,5	40	398,5
CTH3 355 T4/T8 0,55/0,09KW	698,5	647	665	520	9	240,2	208,5	40	398,5
CTH3 400 M6 0,37KW	698,5	705	665	520	9	240,2	266,5	40	398,5
CTH3 400 T4 0,75KW	698,5	705	665	520	9	240,2	266,5	40	398,5
CTH3 400 T6 0,37KW	698,5	705	665	520	9	240,2	266,5	40	398,5
CTH3 400 T4/T8 0,75/0,12KW	698,5	705	665	520	9	240,2	266,5	40	398,5
CTH3 450 T4 1,1KW	777	760	665	520	9	295,6	302	40	418
CTH3 450 T6 0,37KW	777	760	665	520	9	295,6	302	40	418
CTH3 450 T4/T8 1,1/0,18KW	777	760	665	520	9	295,6	302	40	418
CTH3 500 T4 1,5KW	972,75	865,5	939	710	9	388	317,5	50	498
CTH3 500 T6 0,75KW	972,75	865,5	939	710	9	388	317,5	50	498
CTH3 500 T4/T8 1,5/0,25KW	972,75	865,5	939	710	9	388	317,5	50	498
CTH3 500 T6/T12 0,75/0,15KW	972,75	865,5	939	710	9	388	317,5	50	498
CTH3 560 T4 3KW	972,75	882,5	939	710	9	388	334,5	50	498
CTH3 560 T6 0,75KW	972,75	882,5	939	710	9	388	334,5	50	498
CTH3 560 T4/T8 3/0,55KW	972,75	882,5	939	710	9	388	334,5	50	498

Model	A	B aprox	C	D	E	F	G	H	K aprox
CTH3 560 T6/T12 0,75/0,15KW	972,75	882,5	939	710	9	388	334,5	50	498
CTH3 630 T6 1,5KW	972,75	924,5	939	710	9	388	376,5	50	498
CTH3 630 T6/T12 1,5/0,25KW	972,75	924,5	939	710	9	388	376,5	50	498
CTH3 710 T6 2,2KW	1168,5	1118,5	1035	840	9	429,6	439,5	50	629
CTH3 710 T6/T12 2,2/0,55KW	1168,5	1118,5	1035	840	9	429,6	439,5	50	629
CTH3 800 T6 4KW	1168,5	1145	1035	840	9	429,6	466	50	629
CTH3 800 T6/T12 4/1KW	1168,5	1145	1035	840	9	429,6	466	50	629

Wiring diagram

DIAGRAM Nº 1

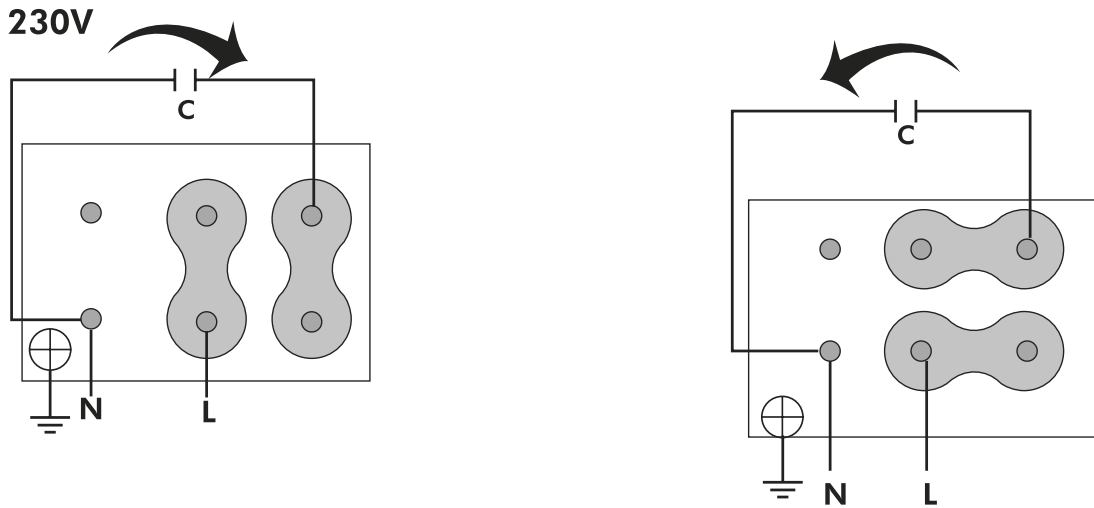


DIAGRAM Nº 2

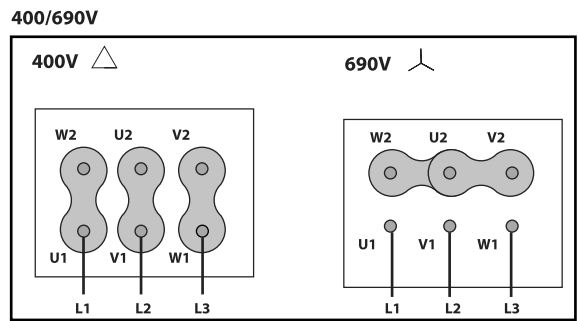
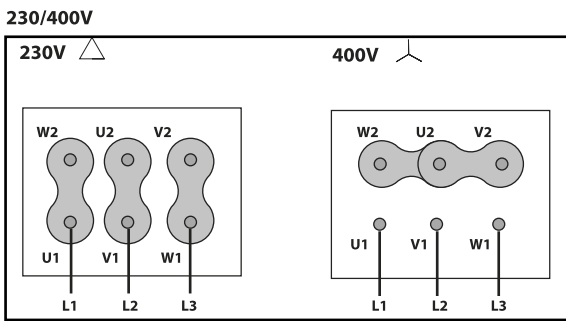
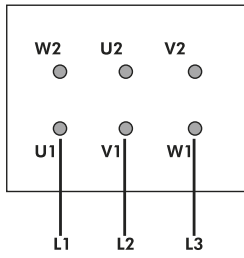
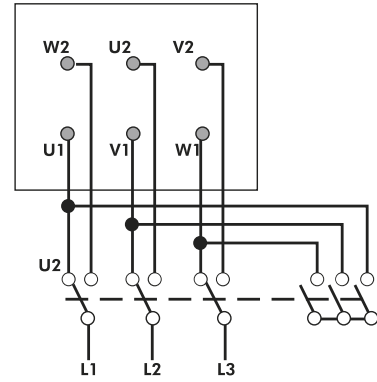
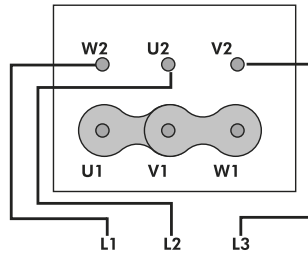


DIAGRAM N° 3

LOW SPEED
VELOCIDAD BAJA



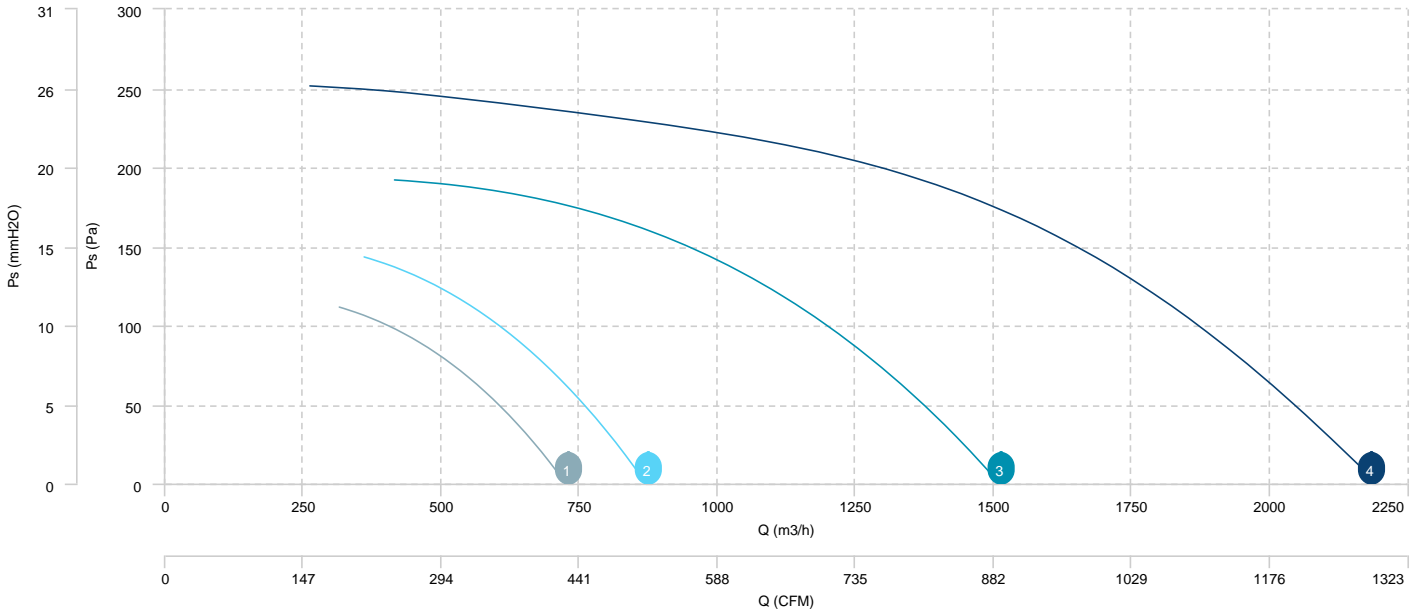
HIGH SPEED
VELOCIDAD ALTA



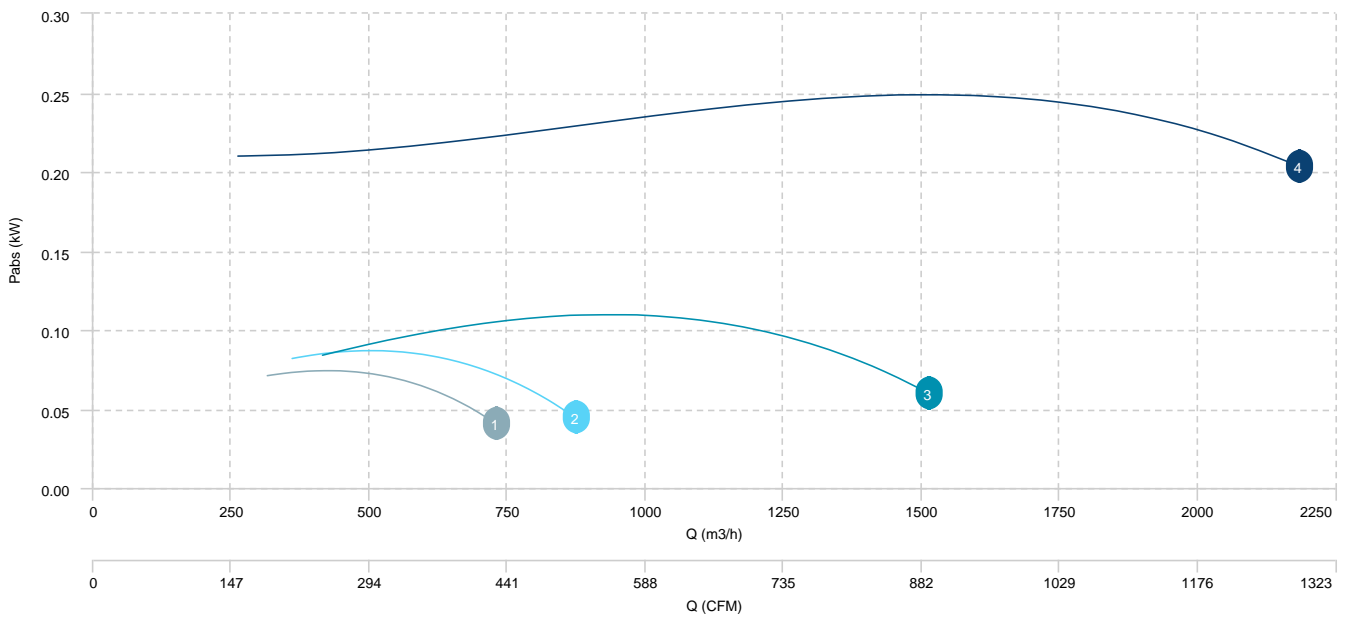
CHARACTERISTIC CURVE

- 1 CTH3 225 M4 0,12kW
- 2 CTH3 250 M4 0,12kW
- 3 CTH3 280 M4 0,12kW
- 4 CTH3 315 M4 0,25KW

AIR FLOW - PRESSURE

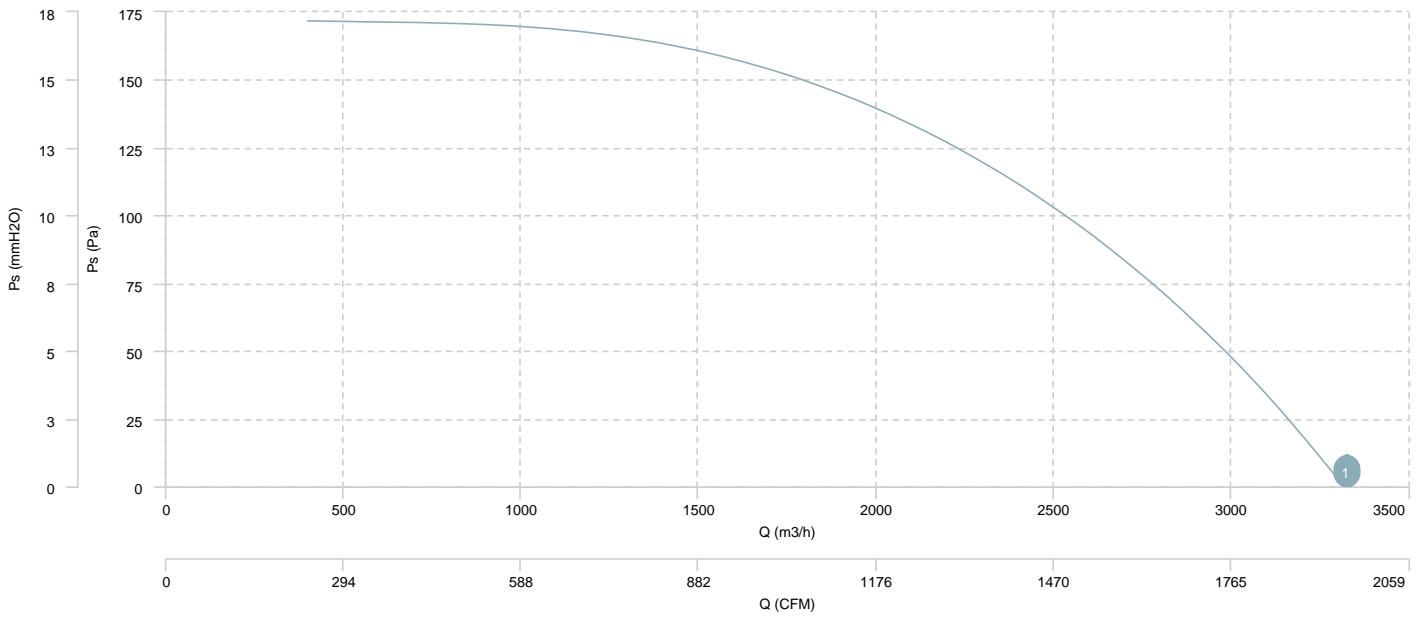


AIR FLOW - ABSORBED POWER



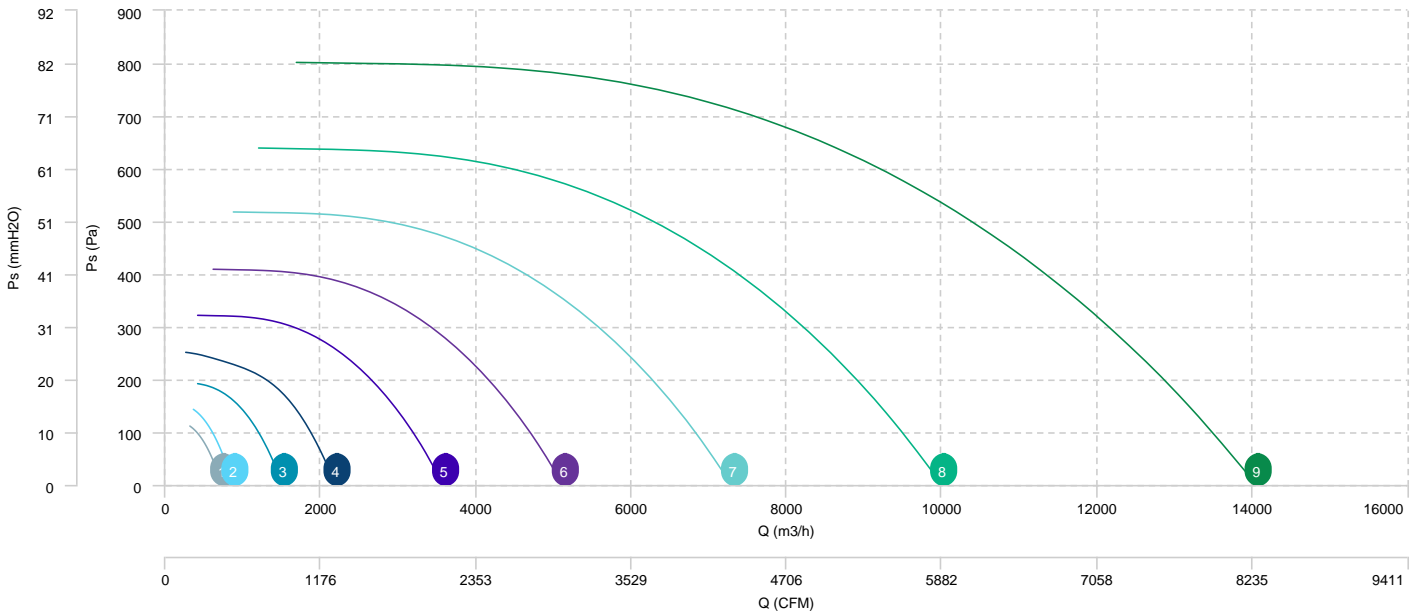
1 CTH3 400 M6 0,37KW

AIR FLOW - PRESSURE

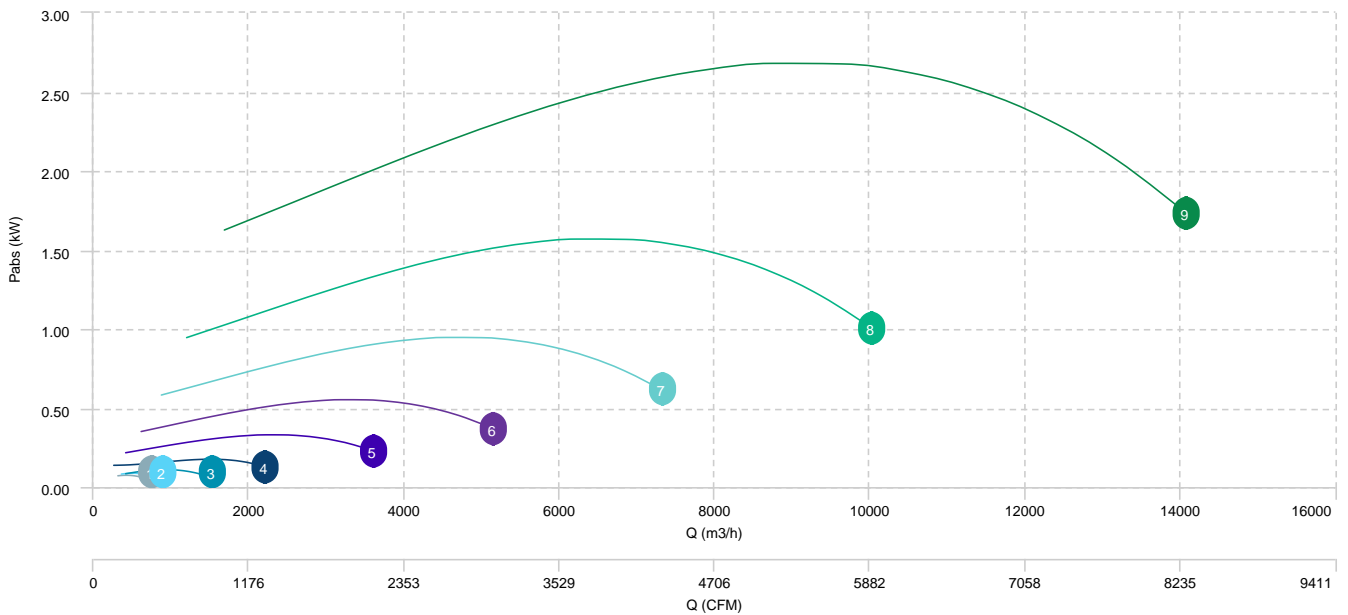


1	CTH3 225 T4 0,12kW	2	CTH3 250 T4 0,12kW	3	CTH3 280 T4 0,12kW	4	CTH3 315 T4 0,25KW
5	CTH3 355 T4 0,55KW	6	CTH3 400 T4 0,75KW	7	CTH3 450 T4 1,1KW	8	CTH3 500 T4 1,5KW
9	CTH3 560 T4 3KW						

AIR FLOW - PRESSURE

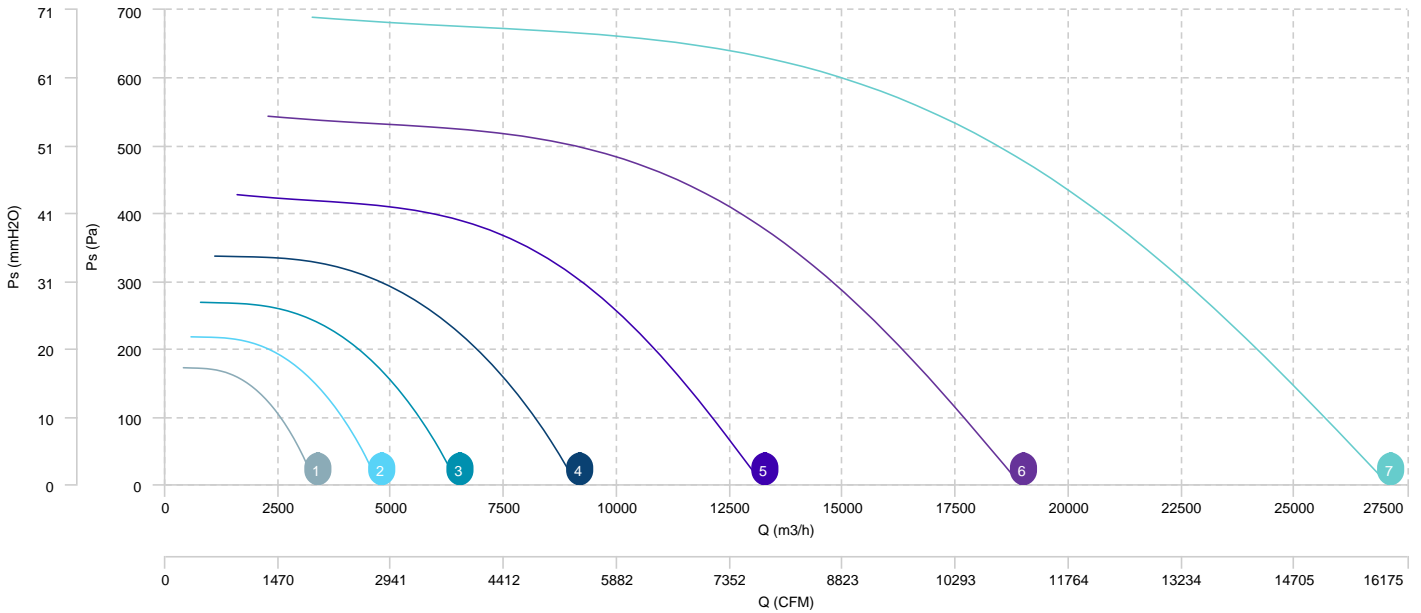


AIR FLOW - ABSORBED POWER

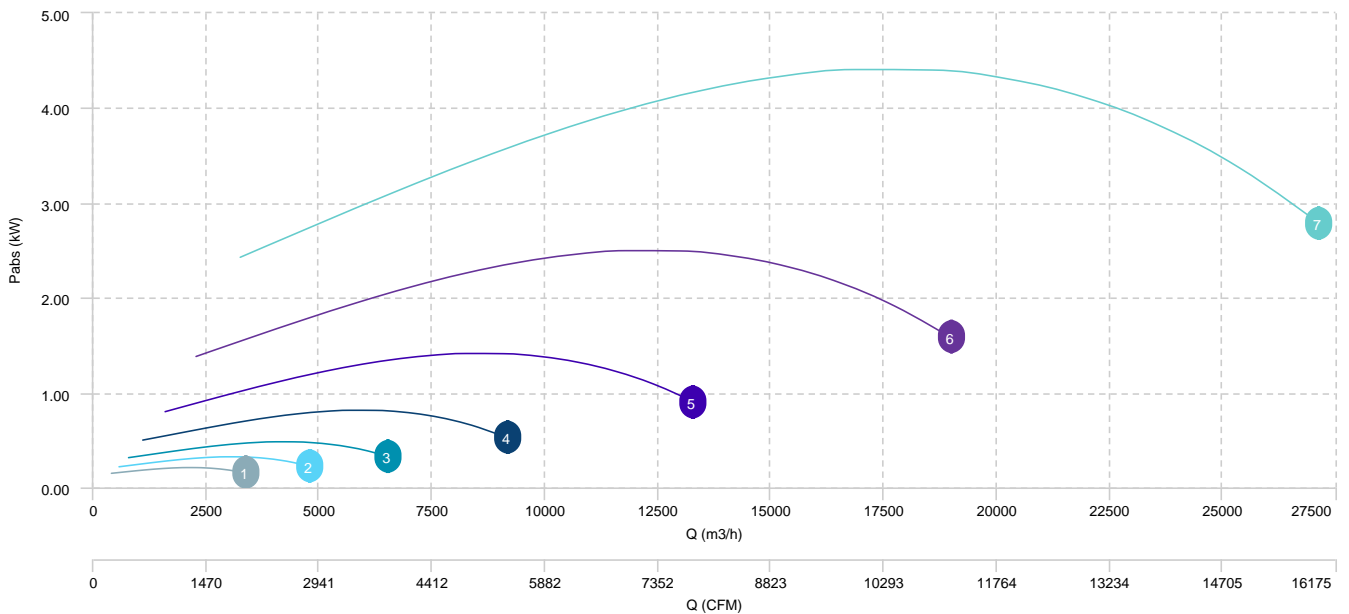


1	CTH3 400 T6 0,37KW	2	CTH3 450 T6 0,37KW	3	CTH3 500 T6 0,75KW	4	CTH3 560 T6 0,75KW
5	CTH3 630 T6 1,5KW	6	CTH3 710 T6 2,2KW	7	CTH3 800 T6 4KW		

AIR FLOW - PRESSURE

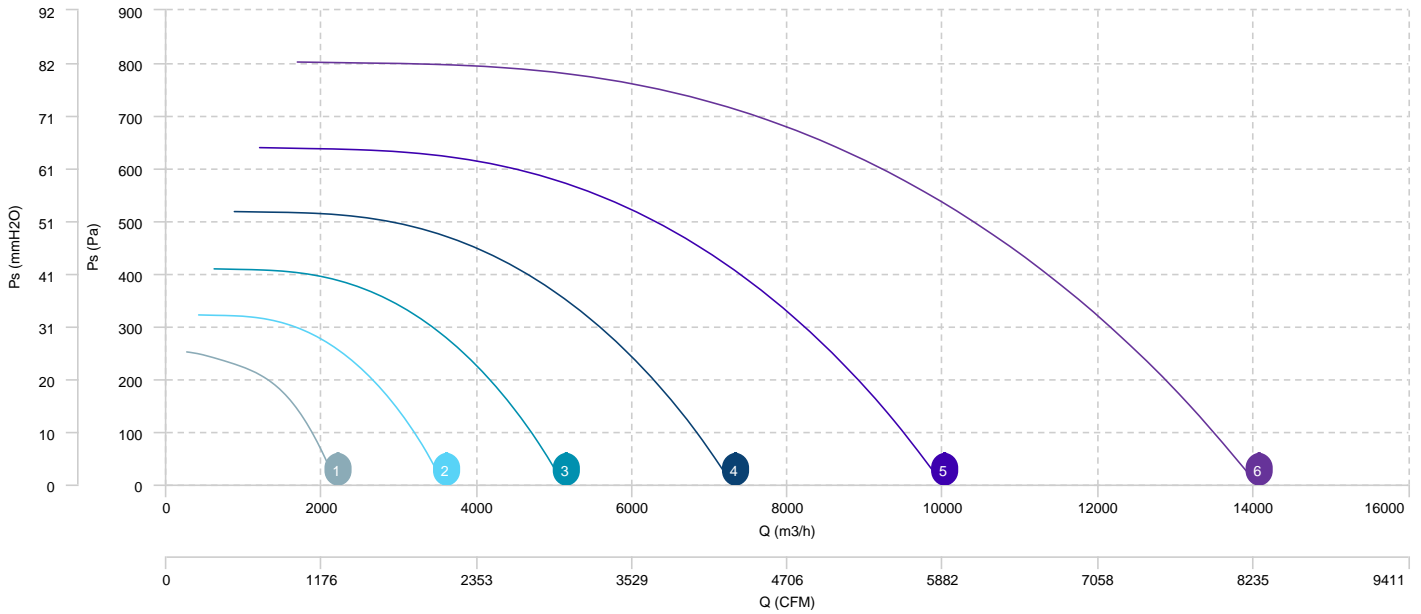


AIR FLOW - ABSORBED POWER



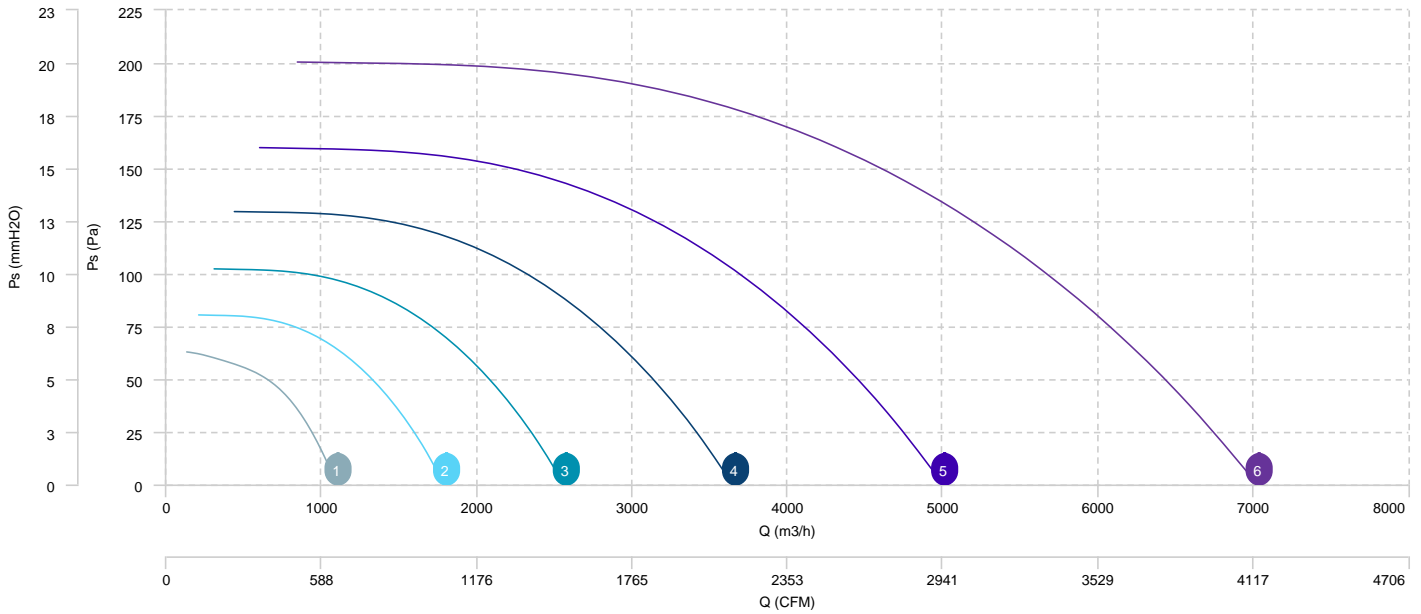
1	CTH3 315 T4/T8 0,25/0, 03KW	2	CTH3 355 T4/T8 0,55/0, 09KW	3	CTH3 400 T4/T8 0,75/0, 12KW	4	CTH3 450 T4/T8 1,1/0, 18KW
5	CTH3 500 T4/T8 1,5/0, 25KW	6	CTH3 560 T4/T8 3/0,55KW				

AIR FLOW - PRESSURE (4 poles)



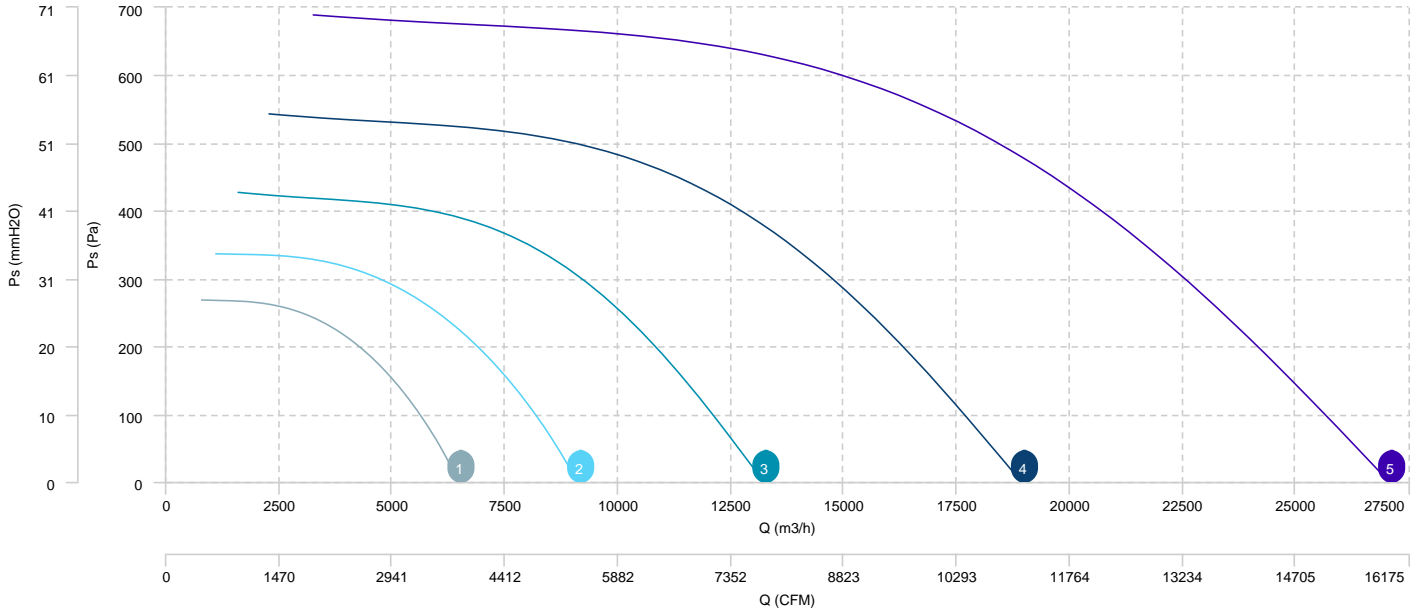
1	CTH3 315 T4/T8 0,25/0, 03KW	2	CTH3 355 T4/T8 0,55/0, 09KW	3	CTH3 400 T4/T8 0,75/0, 12KW	4	CTH3 450 T4/T8 1,1/0, 18KW
5	CTH3 500 T4/T8 1,5/0, 25KW	6	CTH3 560 T4/T8 3/0,55KW				

AIR FLOW - PRESSURE (8 poles)



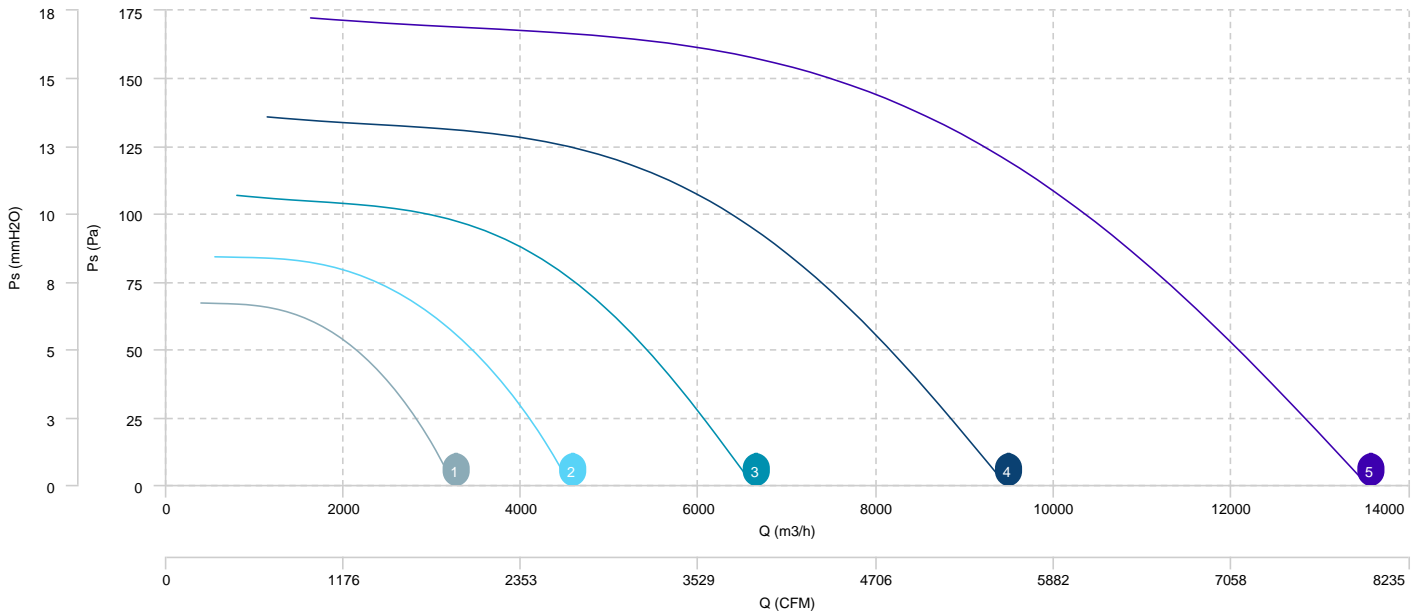
1	CTH3 500 T6/T12 0,75/0, 15KW	2	CTH3 560 T6/T12 0,75/0, 15KW	3	CTH3 630 T6/T12 1,5/0, 25KW	4	CTH3 710 T6/T12 2,2/0, 55KW
5	CTH3 800 T6/T12 4/1KW						

AIR FLOW - PRESSURE (6 poles)



1	CTH3 500 T6/T12 0,75/0, 15KW	2	CTH3 560 T6/T12 0,75/0, 15KW	3	CTH3 630 T6/T12 1,5/0, 25KW	4	CTH3 710 T6/T12 2,2/0, 55KW
5	CTH3 800 T6/T12 4/1KW						

AIR FLOW - PRESSURE (12 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
CTH3 225 M4 0,12kW	Inlet	40	48	53	56	57	55	52	47	62
CTH3 225 T4 0,12kW	Inlet	40	48	53	56	57	55	52	47	62
CTH3 250 M4 0,12kW	Inlet	43	51	55	59	60	58	55	50	65
CTH3 250 T4 0,12kW	Inlet	43	51	55	59	60	58	55	50	65
CTH3 280 M4 0,12kW	Inlet	48	56	60	63	65	63	60	55	70
CTH3 280 T4 0,12kW	Inlet	48	56	60	63	65	63	60	55	70
CTH3 315 M4 0,25KW	Inlet	46	54	59	62	63	62	58	55	69
CTH3 315 T4 0,25KW	Inlet	46	54	59	62	63	62	58	55	69
CTH3 355 T4 0,55KW	Inlet	51	59	64	67	68	66	63	60	74
CTH3 400 T4 0,75KW	Inlet	54	62	67	70	71	69	66	63	77
CTH3 450 T4 1,1KW	Inlet	58	66	70	74	75	73	70	67	80
CTH3 500 T4 1,5KW	Inlet	61	69	74	77	78	76	73	70	83
CTH3 560 T4 3KW	Inlet	64	72	77	80	81	80	76	74	87

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
CTH3 400 M6 0,37KW	Inlet	45	53	57	61	62	60	57	54	67
CTH3 400 T6 0,37KW	Inlet	45	53	57	61	62	60	57	54	67
CTH3 450 T6 0,37KW	Inlet	48	56	61	64	65	64	60	57	71
CTH3 500 T6 0,75KW	Inlet	52	60	64	67	69	67	64	61	74
CTH3 560 T6 0,75KW	Inlet	55	63	68	71	72	70	67	64	77
CTH3 630 T6 1,5KW	Inlet	59	67	71	74	76	74	71	68	81
CTH3 710 T6 2,2KW	Inlet	62	70	75	78	79	77	74	71	85
CTH3 800 T6 4KW	Inlet	66	74	78	82	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
CTH3 315 T4/T8 0,25/0,03KW (710 RPM)	Inlet	30	38	42	46	47	45	42	39	52

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
CTH3 355 T4/T8 0,55/0,09KW (710 RPM)	Inlet	35	43	47	50	52	50	47	44	57
CTH3 400 T4/T8 0,75/0,12KW (710 RPM)	Inlet	38	46	50	53	55	53	50	47	60
CTH3 450 T4/T8 1,1/0,18KW (710 RPM)	Inlet	41	49	54	57	58	56	53	50	64
CTH3 500 T4/T8 1,5/0,25KW (710 RPM)	Inlet	44	52	57	60	61	60	56	54	67
CTH3 560 T4/T8 3/0,55KW (710 RPM)	Inlet	48	56	60	64	65	63	60	57	70

Sound / 6/12 poles

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
CTH3 500 T6/T12 0,75/0,15KW (460 RPM)	Inlet	35	43	48	51	52	50	47	44	57
CTH3 560 T6/T12 0,75/0,15KW (460 RPM)	Inlet	38	46	51	54	55	54	50	48	61
CTH3 630 T6/T12 1,5/0,25KW (460 RPM)	Inlet	42	50	55	58	59	57	54	51	64
CTH3 710 T6/T12 2,2/0,55KW (460 RPM)	Inlet	46	54	58	62	63	61	58	55	68
CTH3 800 T6/T12 4/1KW (460 RPM)	Inlet	49	57	62	65	66	65	61	58	72

Notes:

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

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

erp data

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

ERP / 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)
CTH3 315 T4 0,25KW	0,25	-	43,40	0,17	1.356,94	193,59	4.84	462,06
CTH3 355 T4 0,55KW	0,55	-	49,66	0,33	2.208,28	256,01	6.2	538,02
CTH3 400 T4 0,75KW	0,75	-	54,21	0,55	3.160,61	325,76	6.99	628,63
CTH3 450 T4 1,1KW	1,1	-	57,12	0,95	4.488,43	412,88	7.84	758,22
CTH3 500 T4 1,5KW	1,5	-	58,39	1,57	6.150,26	510,35	8.7	917,17
CTH3 560 T4 3KW	3	-	60,19	2,68	8.643,34	639,43	9.75	1.115,20

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)
CTH3 400 T6 0,37KW	0,37	-	38,62	0,21	2.058,74	136,08	4.55	365,76
CTH3 450 T6 0,37KW	0,37	-	45,24	0,32	2.921,54	172,59	5.1	397,71
CTH3 500 T6 0,75KW	0,75	-	51,50	0,48	4.000,09	213,49	5.66	432,83
CTH3 560 T6 0,75KW	0,75	-	53,91	0,81	5.600,23	268,39	6.32	522,27
CTH3 630 T6 1,5KW	1,5	-	57,39	1,41	8.111,90	346,68	7.23	625,87
CTH3 710 T6 2,2KW	2,2	-	59,15	2,49	11.598,63	441,16	8.14	773,68
CTH3 800 T6 4KW	4	-	60,85	4,40	16.576,11	560,53	9.16	955,36