

## CTH3-A



ROOF FAN, AL COWL F400

### MANUFACTURING FEATURES

- Roof cowl made of aluminium
- 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 operation temperature: 110°C (fluide).
- Maximum ambient temperature: 50°C

## Accessories



BTI



CMP  
CTH3



FILTRO  
EMC



INT



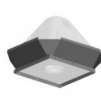
INT 400



KB



KF



KV  
CTH3



SFC

### UNDER REQUEST

- 60Hz and special voltages.
- Sparking proof fan with EEx\_d certified motor.

Official homologation by the European laboratory APPLUS according to EN 12101-3:2002, EN 12101-3:2002/AC:2005  
Certification Nr: 0370-CPR-2656

## 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	Connect. diagram
279220103A	CTH3-A 225 M4 0,12kW	1380	1,15	0,12	730	36	9	1
279250103A	CTH3-A 250 M4 0,12kW	1380	1,15	0,12	870	39	10	1
279280103A	CTH3-A 280 M4 0,12kW	1380	1,15	0,12	1.510	44	11	1
279310103A	CTH3-A 315 M4 0,25KW	1400	1,93	0,25	2.180	48	15	1

### Single-phase motor / 6 poles

Code	Model	R.P.M.	Rated I. (A) 230V	Rated power kW	Max. Airflow m3/h	Sound db (A)**	Weight	Connect. diagram
279410103A	CTH3-A 400 M6 0,37KW	890	2,9	0,37	3.420	47	21	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	Connect. diagram
279220106A	CTH3-A 225 T4 0,12kW	1400	0,46	0,12	730	36	9	2
279250106A	CTH3-A 250 T4 0,12kW	1400	0,46	0,12	870	39	10	2
279280106A	CTH3-A 280 T4 0,12kW	1400	0,46	0,12	1.510	44	11	2
279310106A	CTH3-A 315 T4 0,25KW	1400	0,79	0,25	2.180	48	15	2
279350106A	CTH3-A 355 T4 0,55KW	1400	1,49	0,55	3.590	52	19	2
279400106A	CTH3-A 400 T4 0,75KW	1390	1,63	0,75	5.310	56	21	2
279450106A	CTH3-A 450 T4 1,1KW	1400	2,49	1,10	7.530	60	38	2
249500106A	CTH3-A 500 T4 1,5KW	1400	3,26	1,50	10.000	63	50	2
279560106A	CTH3-A 560 T4 3KW	1430	6,17	3	12.950	65	55	2

### 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	Connect. diagram
279410106A	CTH3-A 400 T6 0,37KW	900	1,27	0,37	3.420	47	21	2
279460106A	CTH3-A 450 T6 0,37KW	910	1,27	0,37	4.890	51	38	2
279510106A	CTH3-A 500 T6 0,75KW	910	1,95	0,75	6.490	53	50	2
279570106A	CTH3-A 560 T6 0,75KW	910	1,95	0,75	8.430	56	55	2
279630106A	CTH3-A 630 T6 1,5KW	940	3,71	1,50	12.170	60	70	2

Code	Model	R.P.M.	Rated I. (A) 400V	Rated power kW	Max. Airflow m3/h	Sound db (A)**	Weight	Connect. diagram
279710106A	CTH3-A 710 T6 2,2KW	940	5,94	2,20	18.980	64	101	2
279800106A	CTH3-A 800 T6 4KW	960	9,46	4	24.950	67	118	2

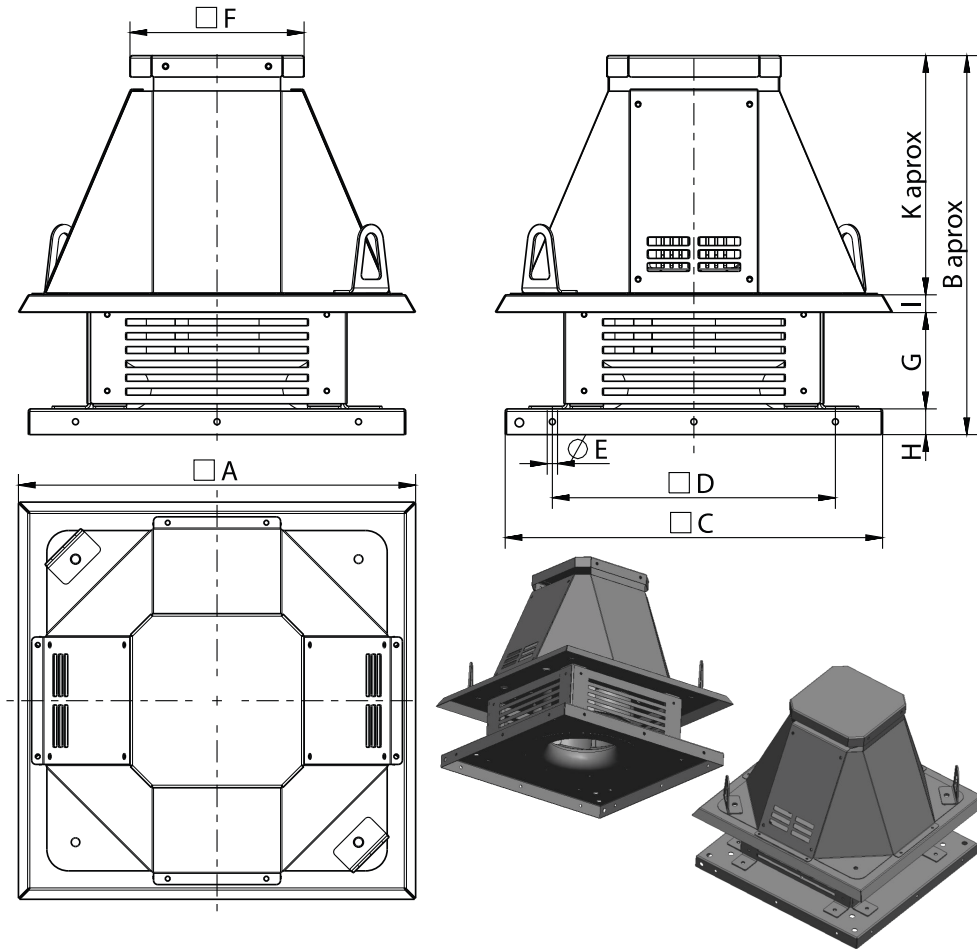
## 2 SPEED MOTOR / 6/12 poles

Code	Model	R.P.M.	Rated I. (A) 400V	Rated power kW	Max. Airflow m3/h	Sound db (A)**	Weight	Connect. diagram
279710106A2V	CTH3-A 710 T6/T12 2,2/0,55KW	940	-	2.2/0.55	19.000	64	101	3
279800106A2V	CTH3-A 800 T6/T12 4/1KW	960	-	3/1	25.000	67	118	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
CTH3-A 225 M4 0,12kW	463	441,9	440	330	12	203	112,25	30	20,75
CTH3-A 225 T4 0,12kW	463	441,9	440	330	12	203	112,25	30	20,75
CTH3-A 250 M4 0,12kW	463	441,9	440	330	12	203	112,25	30	20,75
CTH3-A 250 T4 0,12kW	463	441,9	440	330	12	203	112,25	30	20,75
CTH3-A 280 M4 0,12kW	583	500	560	450	12	203	140,75	40	20,75
CTH3-A 280 T4 0,12kW	583	500	560	450	12	203	140,75	40	20,75
CTH3-A 315 M4 0,25KW	583	544,6	560	450	12	203	185,25	40	20,75
CTH3-A 315 T4 0,25KW	583	544,6	560	450	12	203	185,25	40	20,75
CTH3-A 355 T4 0,55KW	664,6	644,6	630	535	12	253	210,8	40	30,75
CTH3-A 400 M6 0,37KW	664,4	702,75	630	535	12	253	268,75	40	30,75
CTH3-A 400 T4 0,75KW	664,4	702,75	630	535	12	253	268,75	40	30,75
CTH3-A 400 T6 0,37KW	664,4	702,75	630	535	12	253	268,75	40	30,75
CTH3-A 450 T4 1,1KW	774,6	758,15	710	590	14	253	304,25	40	30,75
CTH3-A 450 T6 0,37KW	774,6	758,15	710	590	14	253	304,25	40	30,75

Model	A	B	C	D	E	F	G	H	I
CTH3-A 500 T4 1,5KW	939,6	863,65	905	750	14	353	319,5	50	31
CTH3-A 500 T6 0,75KW	939,6	863,65	905	750	14	353	319,5	50	31
CTH3-A 560 T4 3KW	939,6	880,65	905	750	14	353	336,5	50	31
CTH3-A 560 T6 0,75KW	939,6	880,65	905	750	14	353	336,5	50	31
CTH3-A 630 T6 1,5KW	939,6	922,65	905	750	14	353	378,5	50	31
CTH3-A 710 T6 2,2KW	1134,6	1116,22	1100	940	14	453	441,5	50	31
CTH3-A 710 T6/T12 2,2/0,55KW	1134,6	1116,22	1100	940	14	453	441,5	50	31
CTH3-A 800 T6 4KW	1134,6	1142,72	1100	940	14	453	468	50	31
CTH3-A 800 T6/T12 4/1KW	1134,6	1142,72	1100	940	14	453	468	50	31

Model	K
CTH3-A 225 M4 0,12kW	278,9
CTH3-A 225 T4 0,12kW	278,9
CTH3-A 250 M4 0,12kW	278,9
CTH3-A 250 T4 0,12kW	278,9
CTH3-A 280 M4 0,12kW	298,5
CTH3-A 280 T4 0,12kW	298,5
CTH3-A 315 M4 0,25KW	298,5
CTH3-A 315 T4 0,25KW	298,5
CTH3-A 355 T4 0,55KW	363,25
CTH3-A 400 M6 0,37KW	363,25
CTH3-A 400 T4 0,75KW	363,25
CTH3-A 400 T6 0,37KW	363,25
CTH3-A 450 T4 1,1KW	383,15
CTH3-A 450 T6 0,37KW	383,15
CTH3-A 500 T4 1,5KW	463,15
CTH3-A 500 T6 0,75KW	463,15
CTH3-A 560 T4 3KW	463,15
CTH3-A 560 T6 0,75KW	463,15
CTH3-A 630 T6 1,5KW	463,15
CTH3-A 710 T6 2,2KW	593,72
CTH3-A 710 T6/T12 2,2/0,55KW	593,72
CTH3-A 800 T6 4KW	593,72
CTH3-A 800 T6/T12 4/1KW	593,72

# Wiring diagram

DIAGRAM Nº 1

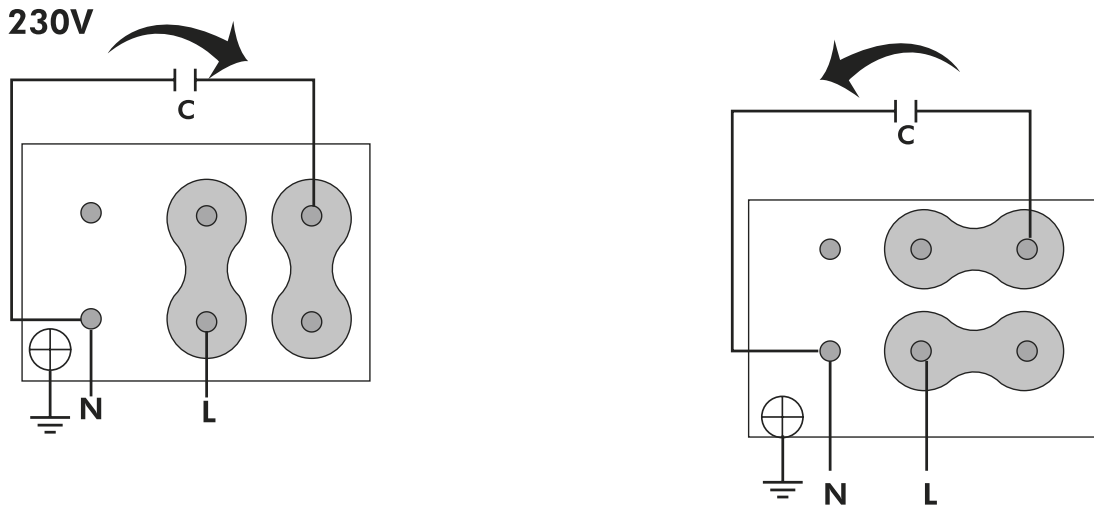


DIAGRAM Nº 2

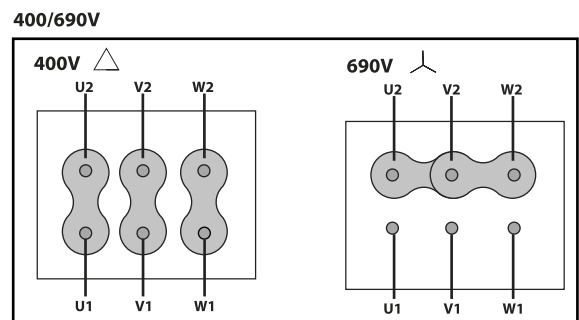
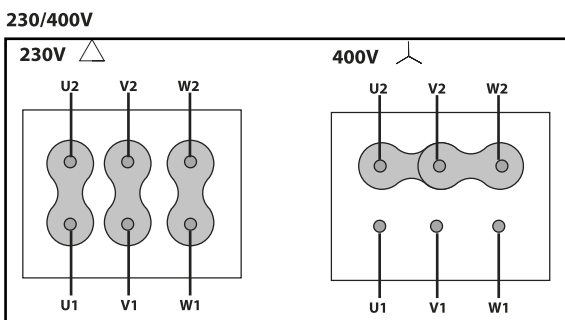
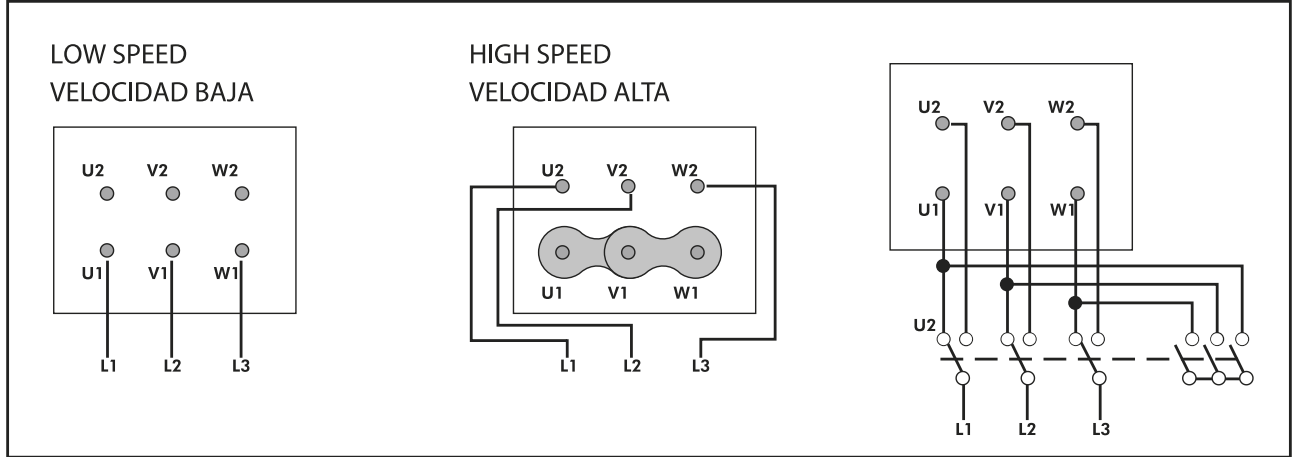


DIAGRAM Nº 3

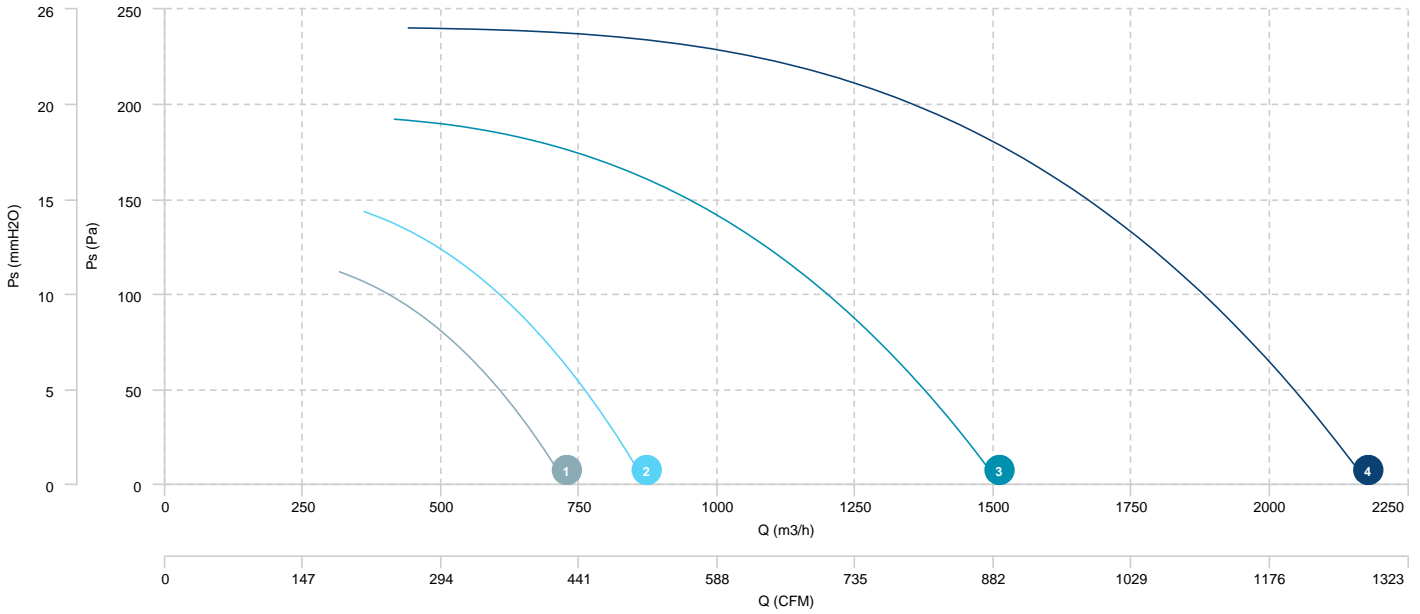
400V DAHLANDER (Y,YY)



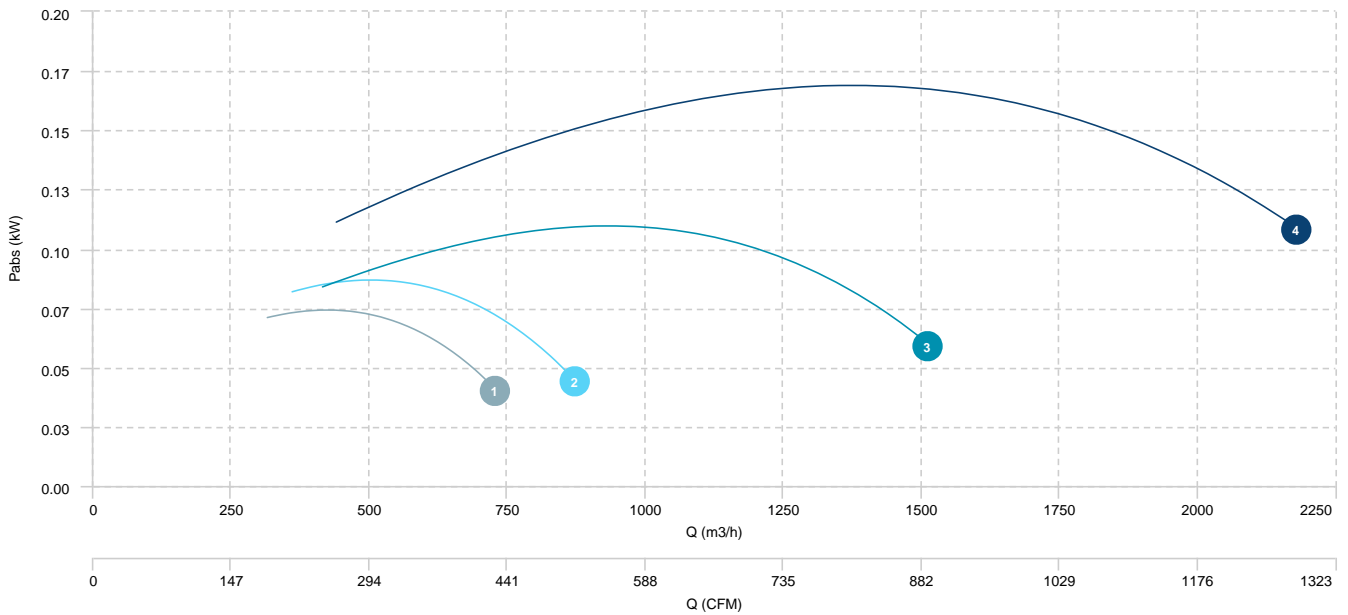
# CHARACTERISCTIC CURVE

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

## AIR FLOW - PRESSURE



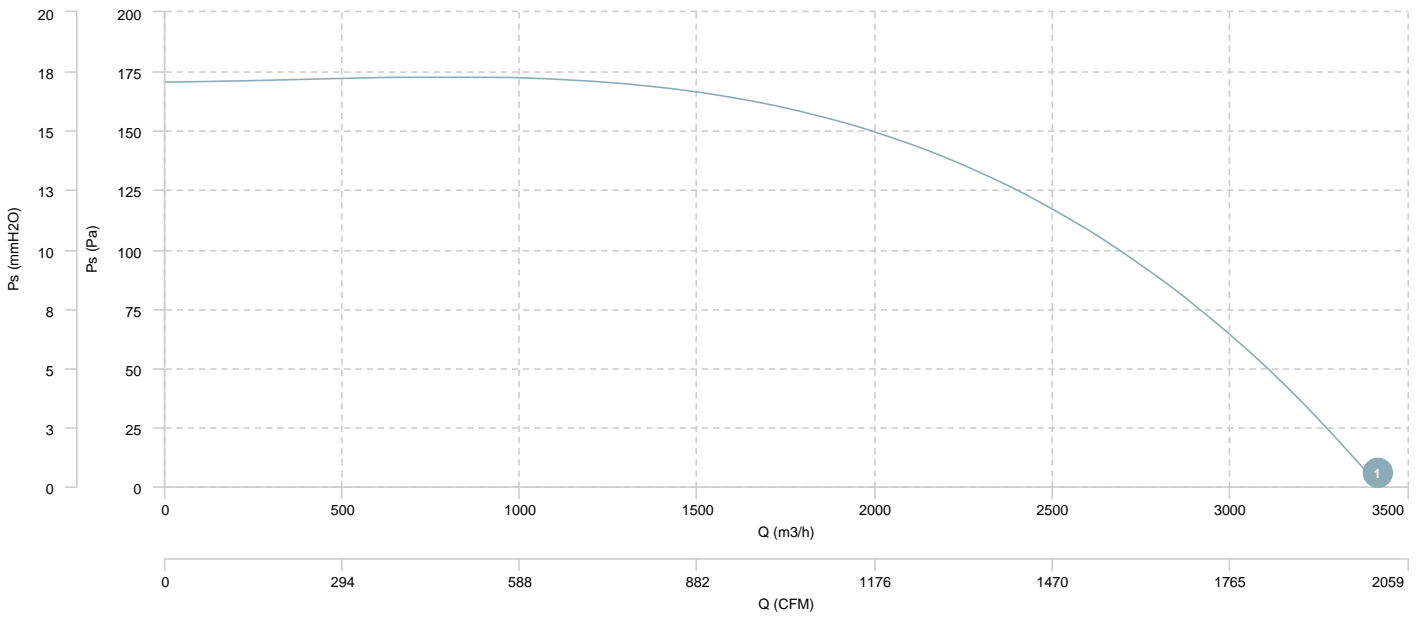
## AIR FLOW - ABSORBED POWER



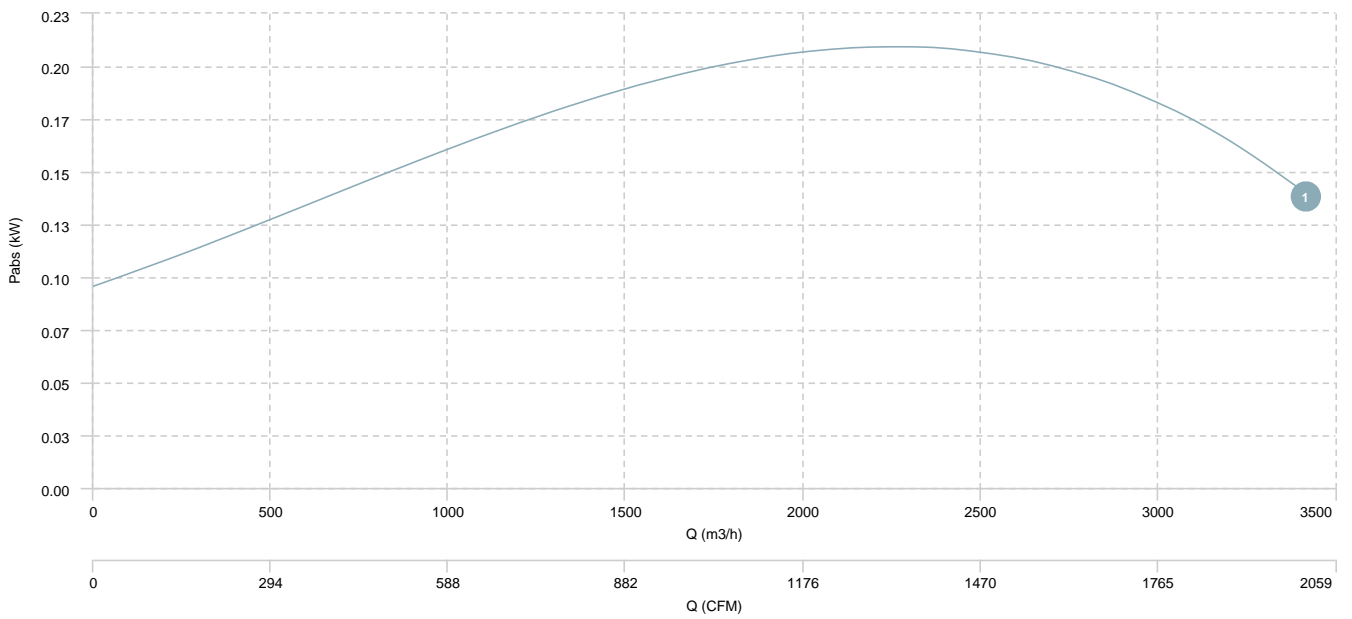


1 CTH3-A 400 M6 0,37KW

AIR FLOW - PRESSURE

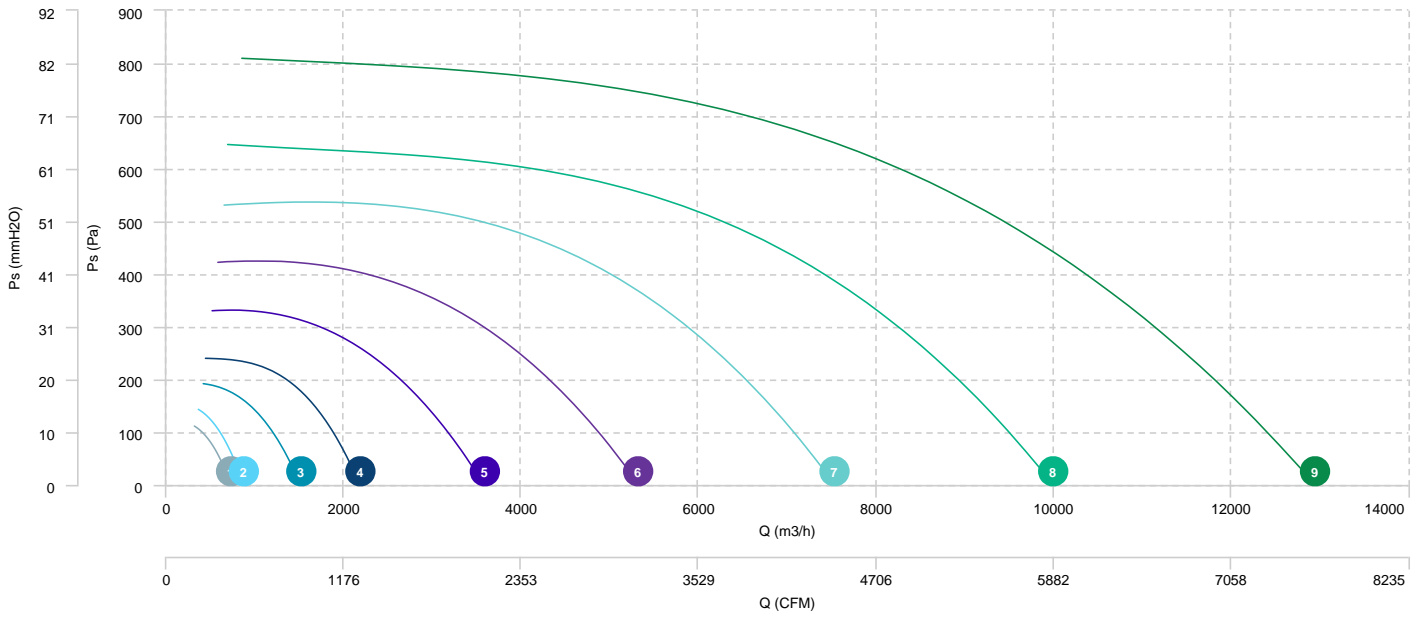


AIR FLOW - ABSORBED POWER

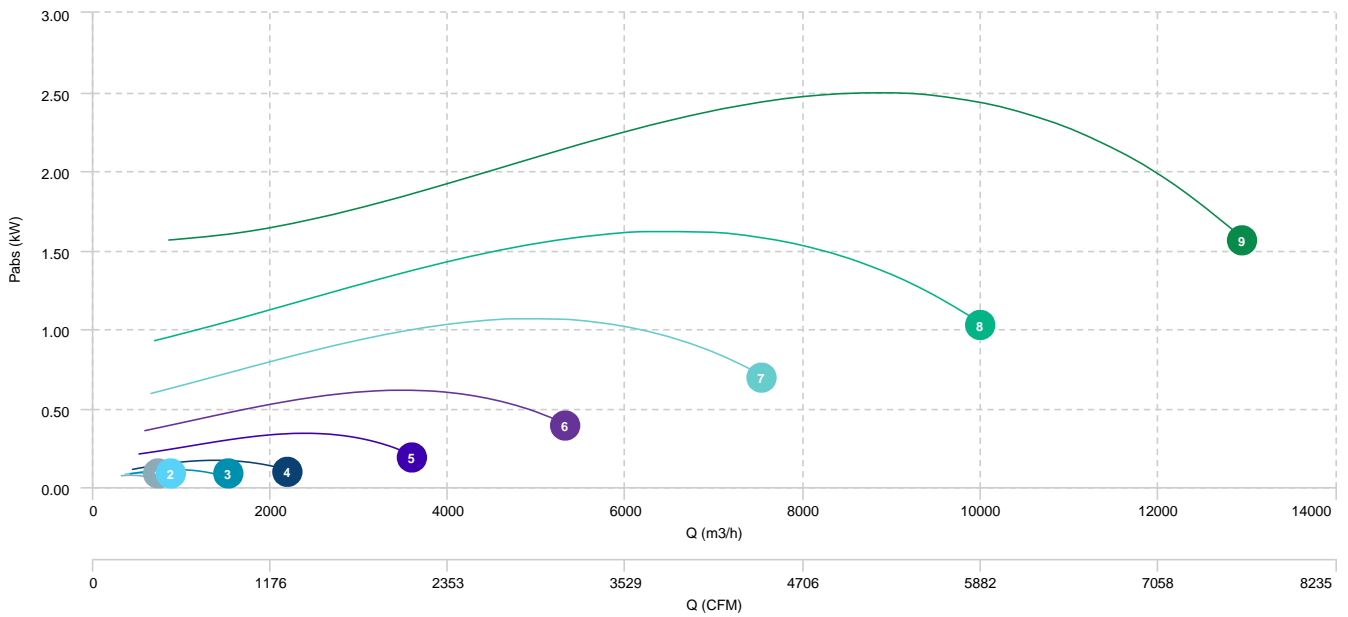


1	CTH3-A 225 T4 0,12kW	2	CTH3-A 250 T4 0,12kW	3	CTH3-A 280 T4 0,12kW	4	CTH3-A 315 T4 0,25KW
5	CTH3-A 355 T4 0,55KW	6	CTH3-A 400 T4 0,75KW	7	CTH3-A 450 T4 1,1KW	8	CTH3-A 500 T4 1,5KW
9	CTH3-A 560 T4 3KW						

## AIR FLOW - PRESSURE

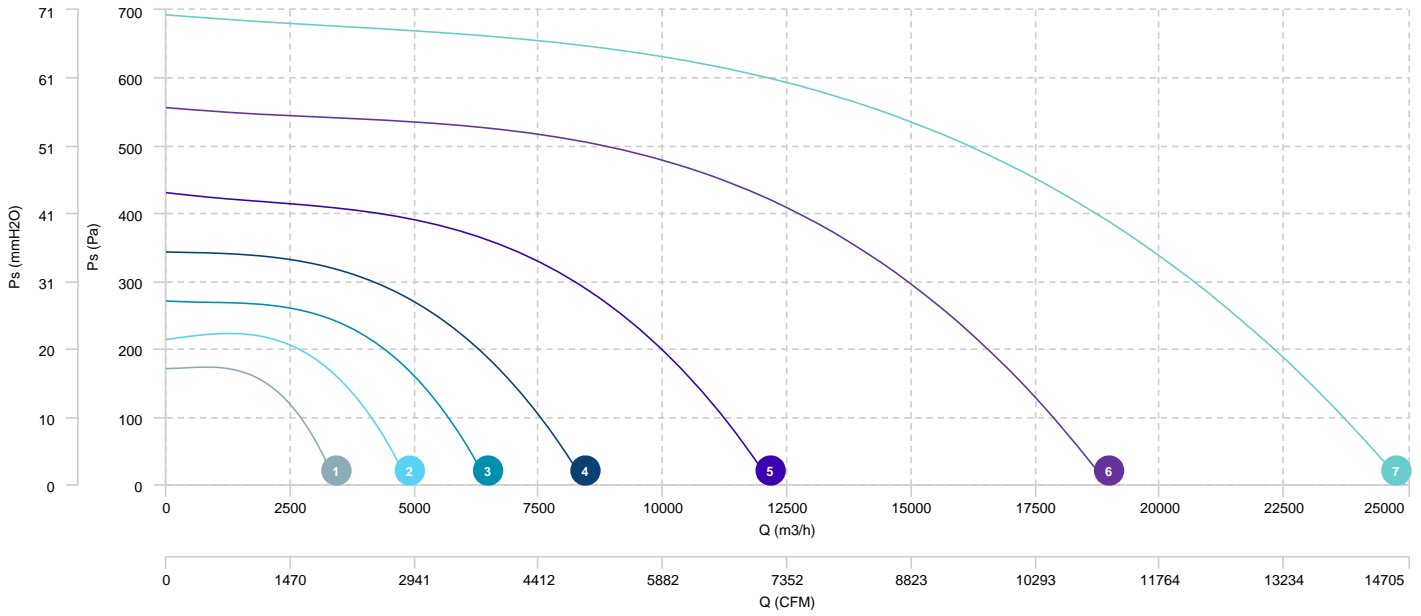


## AIR FLOW - ABSORBED POWER

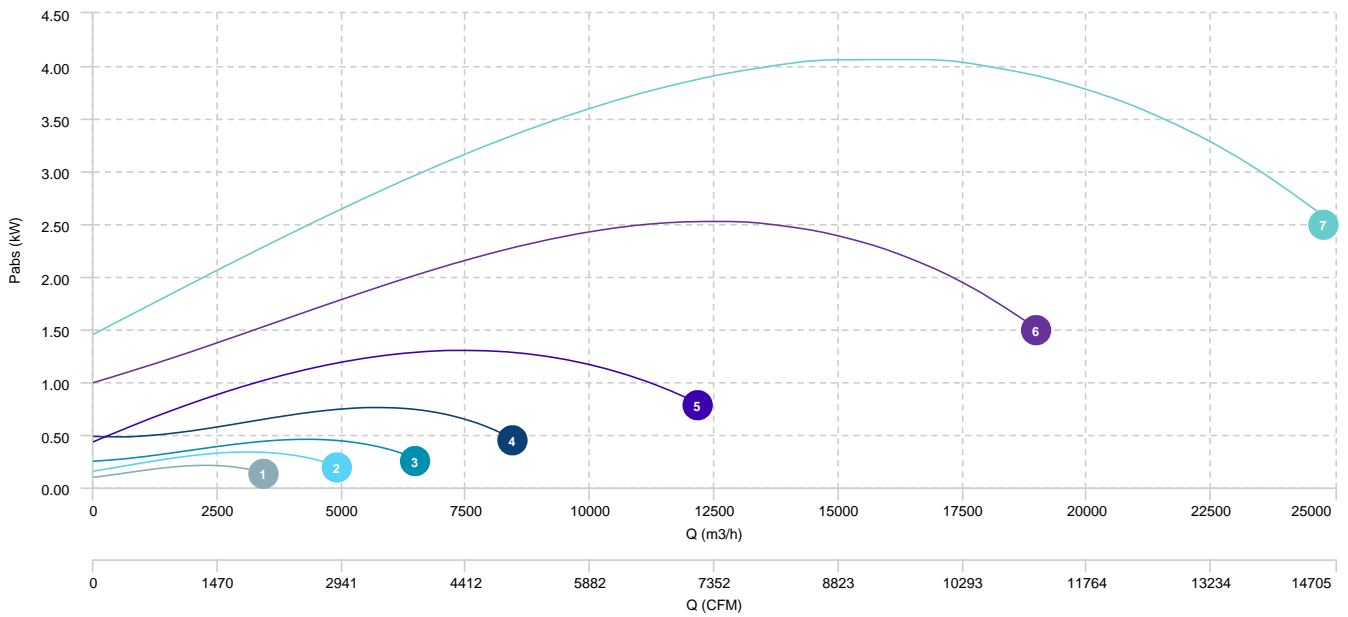


1	CTH3-A 400 T6 0,37KW	2	CTH3-A 450 T6 0,37KW	3	CTH3-A 500 T6 0,75KW	4	CTH3-A 560 T6 0,75KW
5	CTH3-A 630 T6 1,5KW	6	CTH3-A 710 T6 2,2KW	7	CTH3-A 800 T6 4KW		

## AIR FLOW - PRESSURE



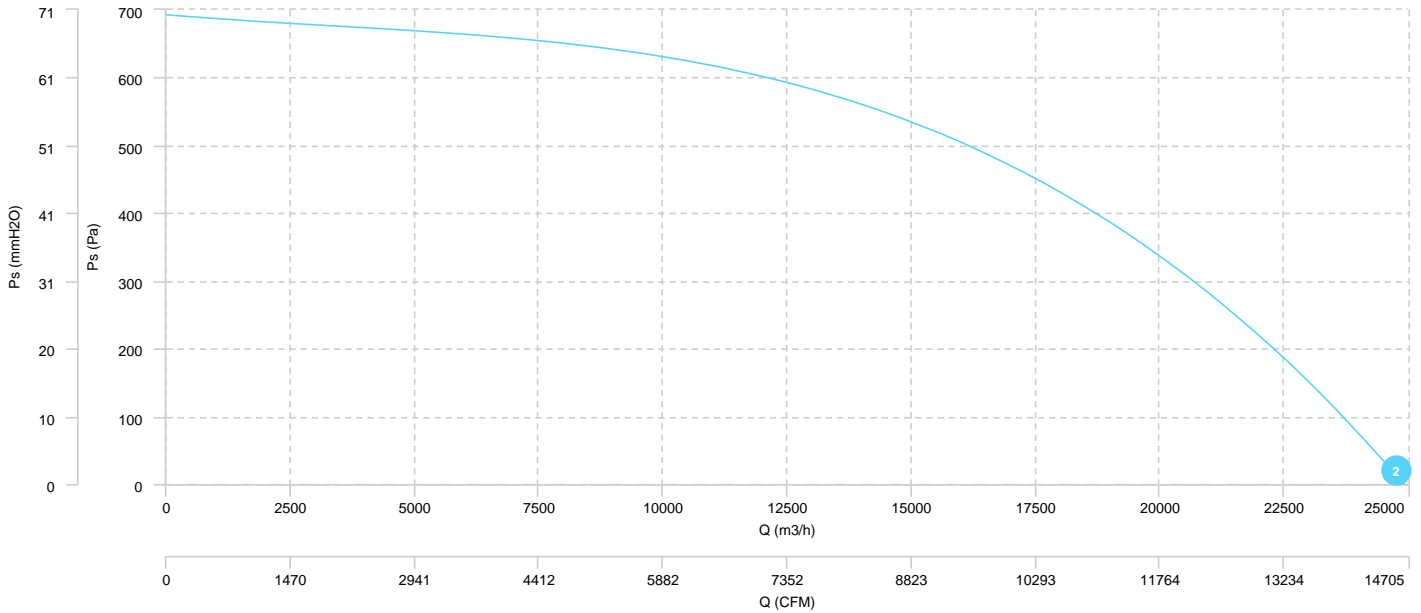
## AIR FLOW - ABSORBED POWER



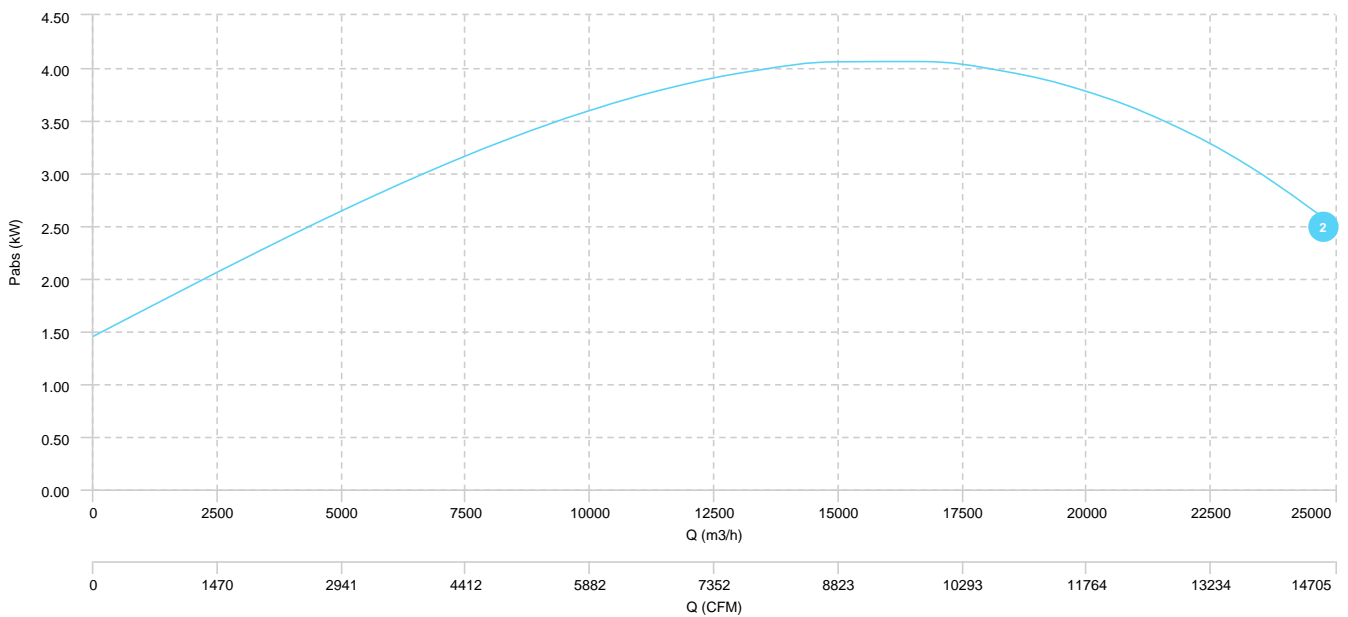
1 CTH3-A 710 T6/T12 2,2/0, 55KW

2 CTH3-A 800 T6/T12 4/1KW

## AIR FLOW - PRESSURE (6 poles)



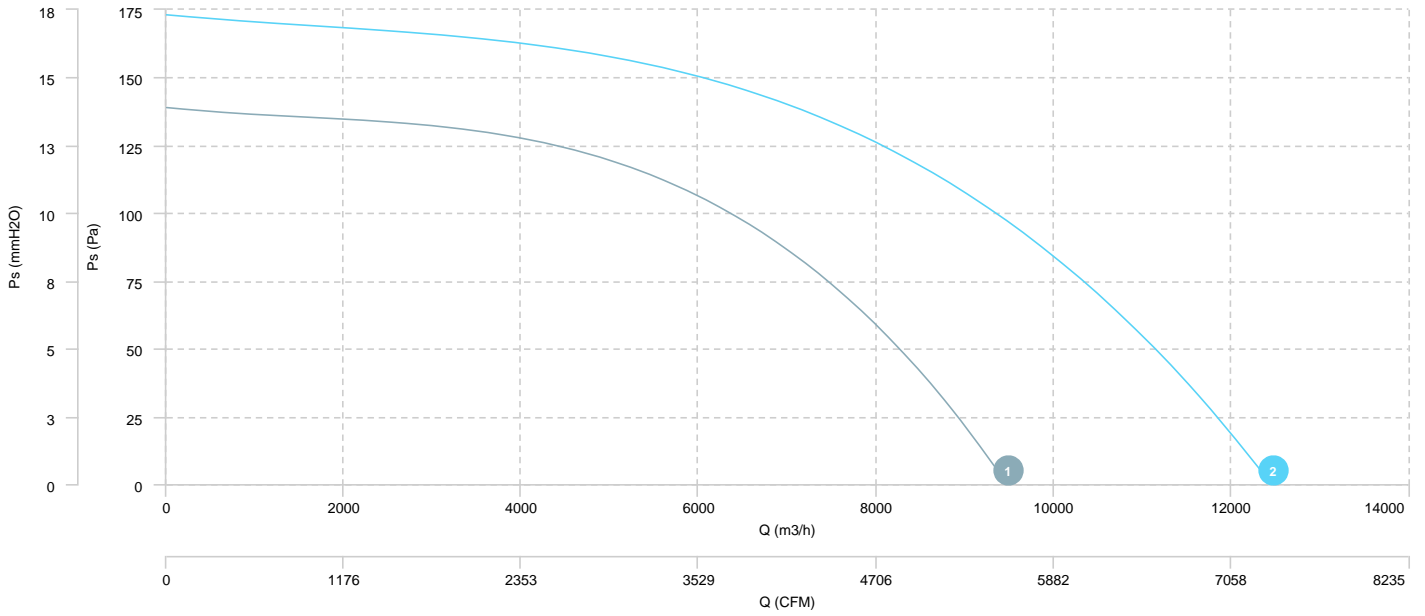
## AIR FLOW - ABSORBED POWER (6 poles)



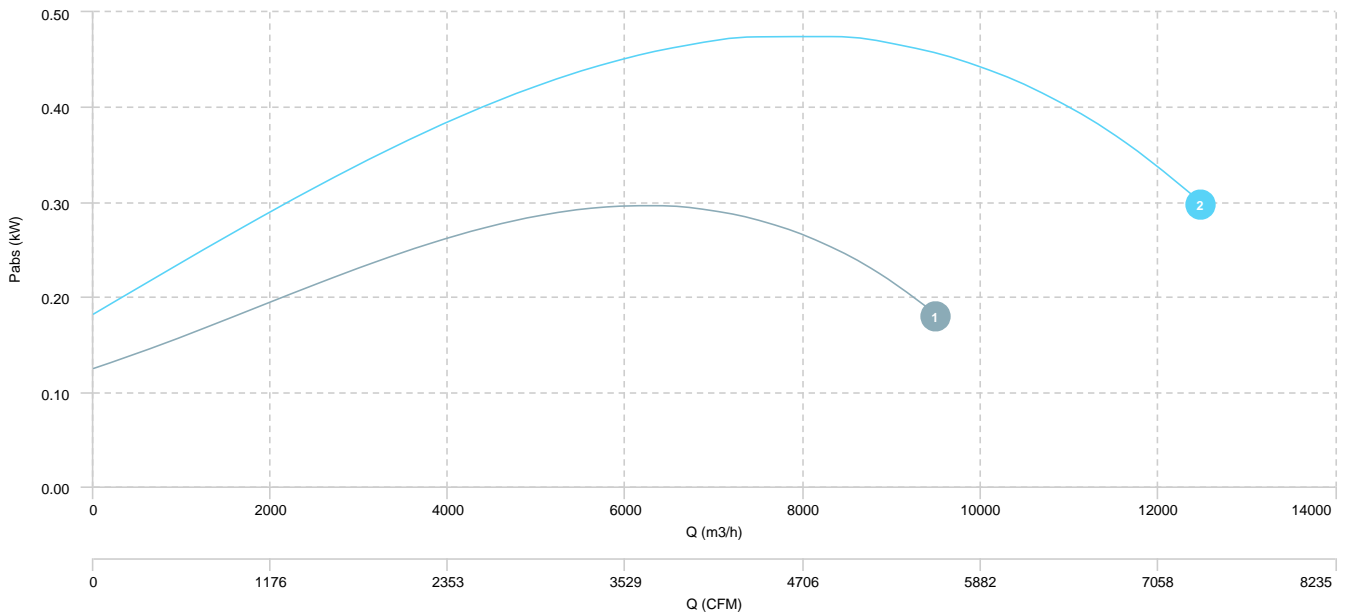
1 CTH3-A 710 T6/T12 2,2/0, 55KW

2 CTH3-A 800 T6/T12 4/1KW

## AIR FLOW - PRESSURE (12 poles)



## AIR FLOW - ABSORBED POWER (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-A 225 M4 0,12kW	Inlet	40	48	53	56	57	55	52	47	62
CTH3-A 225 T4 0,12kW	Inlet	40	48	53	56	57	55	52	47	62
CTH3-A 250 M4 0,12kW	Inlet	43	51	55	59	60	58	55	50	65
CTH3-A 250 T4 0,12kW	Inlet	43	51	55	59	60	58	55	50	65
CTH3-A 280 M4 0,12kW	Inlet	48	56	60	63	65	63	60	55	70
CTH3-A 280 T4 0,12kW	Inlet	48	56	60	63	65	63	60	55	70
CTH3-A 315 M4 0,25KW	Inlet	52	60	64	68	69	67	64	59	74
CTH3-A 315 T4 0,25KW	Inlet	52	60	64	68	69	67	64	59	74
CTH3-A 355 T4 0,55KW (1410 RPM)	Inlet	56	64	68	72	73	71	68	63	78
CTH3-A 400 T4 0,75KW (1430 RPM)	Inlet	60	68	72	76	77	75	72	67	82
CTH3-A 450 T4 1,1KW	Inlet	64	72	76	79	81	79	76	71	86
CTH3-A 500 T4 1,5KW	Inlet	66	74	79	82	83	82	78	73	89
CTH3-A 560 T4 3KW	Inlet	69	77	82	85	86	84	81	76	91

### 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-A 400 M6 0,37KW	Inlet	51	59	63	67	68	66	63	58	73
CTH3-A 400 T6 0,37KW	Inlet	51	59	63	67	68	66	63	58	73
CTH3-A 450 T6 0,37KW	Inlet	54	62	67	70	71	70	66	61	77
CTH3-A 500 T6 0,75KW	Inlet	57	65	70	73	74	72	69	64	79
CTH3-A 560 T6 0,75KW	Inlet	60	68	72	76	77	75	72	67	82
CTH3-A 630 T6 1,5KW	Inlet	63	71	76	79	80	79	75	70	86
CTH3-A 710 T6 2,2KW	Inlet	68	76	80	84	85	83	80	75	90
CTH3-A 800 T6 4KW	Inlet	71	79	83	86	88	86	83	77	93

### 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-A 710 T6/T12 2,2/0,55KW (0 RPM)	Inlet	68	76	80	84	85	83	80	75	90
CTH3-A 800 T6/T12 4/1KW (470 RPM)	Inlet	54	62	66	70	71	69	66	61	76



**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	Centrifugal fan backward blades without casing
Installation category	A
Efficiency category	Static
The fan has to be installed with FSC	No

## ERP / 4 poles

Model	Motor power (kW)	Maximum efficiency point data						
		Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m3/h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio
CTH3-A 315 M4 0,25KW	0,25	47,65	66,26	1.440,76	188,93	0,17	1400	1,00
CTH3-A 315 T4 0,25KW	0,25	47,65	66,26	1.440,76	188,93	0,17	1400	1,00
CTH3-A 355 T4 0,55KW	0,55/0,09	50,49	65,96	2.135,10	265,26	0,34	1410	1,00
CTH3-A 400 T4 0,75KW	0,75/0,15	53,05	65,82	3.197,50	338,17	0,61	1430	1,00
CTH3-A 450 T4 1,1KW	1,1	57,07	67,29	4.662,32	430,90	1,06	1400	1,00
CTH3-A 500 T4 1,5KW	1,5	58,36	66,67	6.256,73	501,03	1,62	1400	1,00
CTH3-A 560 T4 3KW	3	60,74	67,12	7.997,61	619,22	2,47	1430	1,00

## ERP / 6 poles

Model	Motor power (kW)	Maximum efficiency point data						
		Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m3/h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio
CTH3-A 400 M6 0,37KW	0,37	43,51	61,16	2.117,08	143,42	0,21	890	1,00
CTH3-A 400 T6 0,37KW	0,37	43,51	61,16	2.117,08	143,42	0,21	900	1,00
CTH3-A 450 T6 0,37KW	0,75	49,51	64,99	3.055,87	181,68	0,34	910	1,00
CTH3-A 500 T6 0,75KW	0,75	57,69	71,76	4.227,80	207,80	0,46	910	1,00
CTH3-A 560 T6 0,75KW	0,75	54,35	66,17	5.143,46	262,55	0,75	910	1,00
CTH3-A 630 T6 1,5KW	1,5	57,73	67,03	7.440,49	330,34	1,30	940	1,00
CTH3-A 710 T6 2,2KW	2,2	59,82	66,14	11.282,88	446,60	2,50	940	1,00
CTH3-A 800 T6 4KW	4	60,59	64,70	15.313,01	525,47	4,07	960	1,00

## ERP / 6/12 poles

Model	Motor power (kW)	Maximum efficiency point data						
		Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m3/h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio



Model	Motor power (kW)	Maximum efficiency point data						
		Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m3/h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio
CTH3-A 710 T6/T12 2,2/0,55KW	2,2	59,82	66,14	11.282,88	446,60	2,50	940	1,00
CTH3-A 710 T6/T12 2,2/0,55KW	2.2/0.55	57,66	75,92	9.488,69	-0,52	0,18	480	1,00
CTH3-A 800 T6/T12 4/1KW	3/1	57,28	73,26	12.475,42	-0,74	0,30	470	1,00
CTH3-A 800 T6/T12 4/1KW	4	60,59	64,70	15.313,01	525,47	4,07	940	1,00