

ENKELROOF-A EEC



ROOF FAN WITH ELECTRONIC MOTOR AND ALUMINIUM COWL

MANUFACTURING FEATURES:

- Protection cowl made of anticorrosive treated aluminum easily removable for motor and impeller maintenance (integrated folding system in models 500, 560 and 630).
- The design of the cowl with a rounded shape is specific to minimize the risk of water ingress due to rain.
- Structure in anticorrosive galvanized steel and support frame for adaptation to the roof with anti-bird protection grid.
- High-efficiency backward-curved blade impeller with self-cleaning system. Reinforced polyamide impeller for models 155, 190 and 220. The rest of the models in aluminum.
- EC technology uses integral electronic control to ensure that the motor always runs at optimal load and ensures efficient energy utilization. It incorporates an external rotor EC motor with high efficiency (IE4 for three phase motors and IE5 for single motors) and low noise level. Speed control through a 0-10V or PWM signal. 230V 50/60Hz single-phase power supply for models 155 to 310 and 400V 50/60Hz three-phase power supply for sizes 355 and 630. IP54 and motor class B insulation.

APPLICATIONS

Designed for deck or roof mounting, they are indicated for:

- Smoke extraction.
- Air renewal in all types of buildings and industries.
- Working temperature range from -20°C to 60°C for models size 155-310, -25°C to 60°C for 355-450 sizes, -30°C to 50°C for size 500 and -30°C to 40°C for 560 and 630 models.

UNDER REQUEST

- Fan (size between 250 and 450) with k-factor reading.

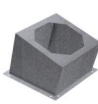
Accessories



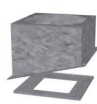
AC



BAD



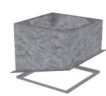
BTI



BTI+AC
MP



BTI+AC
MP+A
MC



BTI+A
MC



CMP-H
UT



INT



KV
ENKEL
ROOF



PMR



REGC



SIL C
MINI C



SIL-C /
SIL-CN

Technical data

Single-phase motor

Code	Model	R.P.M.	Rated I. A 230V	Rated power kW	Max. Airflow m³/h	Sound db (A)**	Weight kg	Connect. diagram
ENKRAEC155	ENKELROOF-A 155 EEC	3950	0,25	0,06	460	-	5	1
ENKRAEC190	ENKELROOF-A 190 EEC	3570	0,6	0,09	760	-	5	1
ENKRAEC220	ENKELROOF-A 220 EEC	2600	0,6	0,08	870	-	7	1
ENKRAEC250	ENKELROOF-A 250 EEC	2500	1,00	0,15	1.640	-	9	1
ENKRAEC310	ENKELROOF-A 310 EEC	2350	1,7	0,36	3.160	-	16	2

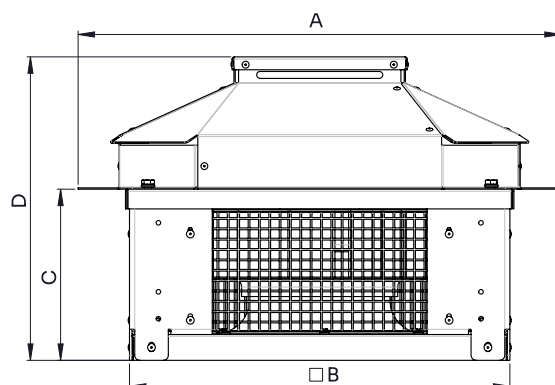
Three-phase motor

Code	Model	R.P.M.	Rated I. A 400V	Rated power kW	Max. Airflow m³/h	Sound db (A)**	Weight kg	Connect. diagram
ENKRAEC355	ENKELROOF-A 355 EEC	2100	1,63	0,99	4.890	-	17,50	3
ENKRAEC450	ENKELROOF-A 450 EEC	1450	1,67	1,01	6.955	-	19	3
ENKRAEC500	ENKELROOF-A 500 EEC	1800	4,95	3,00	13.850	-	73	4
ENKRAEC560	ENKELROOF-A 560 EEC	1520	4,4	2,77	16.100	-	85	4
ENKRAEC630	ENKELROOF-A 630 EEC	1250	4,4	2,70	18.600	-	100	4

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 (int)	C	D
ENKELROOF-A 155 EEC	435	333	96	211
ENKELROOF-A 190 EEC	435	333	86.5	206.5
ENKELROOF-A 220 EEC	565	433	113.5	273,5
ENKELROOF-A 250 EEC	565	433	198,5	350
ENKELROOF-A 310 EEC	760	593	194	559
ENKELROOF-A 355 EEC	760	593	280.5	645.5
ENKELROOF-A 450 EEC	760	593	337.5	702.5
ENKELROOF-A 500 EEC	1227	936	460.5	930.5
ENKELROOF-A 560 EEC	1227	936	480.5	950.5
ENKELROOF-A 630 EEC	1347	1035	480.5	1000.5

Wiring diagram

Wiring diagram N° 1

Nº	Signal Señal	Colour Color	Specification Especificación
1	L	Brown Marrón	AC 220V/50Hz
2	N	Blue Azul	AC 220V/50Hz
3	Pe	Yellow-Green Amarillo-Verde	

Nº	Signal Señal	Colour Color	Specification Especificación
1	GND	Blue Azul	
2	Vsp	Yellow Amarillo	0-10 V/PWM
3	Vcc	Red Rojo	DC 10V
4	FG	White Blanco	1 Pulse/R

Wiring diagram N° 2

Nº	Signal Señal	Colour Color	Specification Especificación
1	L	Brown Marrón	AC 220V-50/60 Hz
2	N	Blue Azul	AC 220V-50/60 Hz
3	Pe	Yellow-Green Amarillo-Verde	

Nº	Signal Señal	Colour Color	Specification Especificación
1	GND	Blue Azul	
2	Vsp	Yellow Amarillo	0-10 V/PWM
3	Vcc	Red Rojo	DC 10V
4	FG	White Blanco	12 Pulse/R

Wiring diagram N° 3

Nº	Signal Señal	Colour Color	Specification Especificación
1	L1	Black Negro	AC380V-50/60Hz
2	L2	Black Negro	AC380V-50/60Hz
3	L3	Black Negro	AC380V-50/60Hz
4	Pe	Yellow-Green Amarillo-Verde	

Nº	Signal Señal	Colour Color	Specification Especificación
1	Vcc	Red Rojo	DC10V
2	Vsp	Yellow Amarillo	0-10VDC/PWM
3	GND	Blue Azul	
4	FG	White Blanco	12 Pulse/R

Wiring diagram N° 4

Line / Línea

Nº	Signal Señal	Colour Color	Specification Especificación
1	L1	Black Negro	AC380V-50/60Hz
2	L2	Black Negro	AC380V-50/60Hz
3	L3	Black Negro	AC380V-50/60Hz
4	Pe	Yellow-Green Amarillo-Verde	

Control / Control

Nº	Signal Señal	Colour Color	Specification Especificación
1	Vcc	Red Rojo	DC10V
2	Vsp	Yellow Amarillo	0-10VDC/PWM
3	GND	Blue Azul	
4	FG	White Blanco	12 Pulse/R

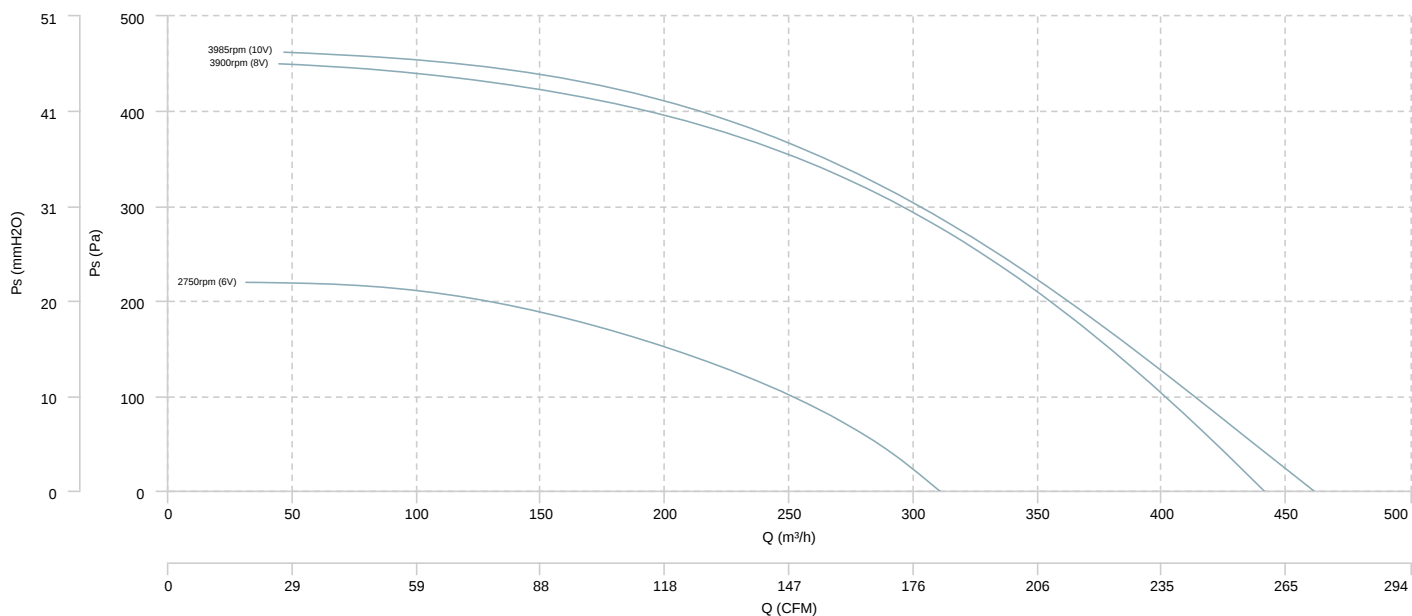
Auxiliary contacts (Alarm) / Contactos auxiliares (Alarma)

Nº	Signal Señal	Colour Color	Specification Especificación
1	NO	Brown Marrón	NO
2	COM	Black Negro	COM
3	NC	Orange Naranja	NC

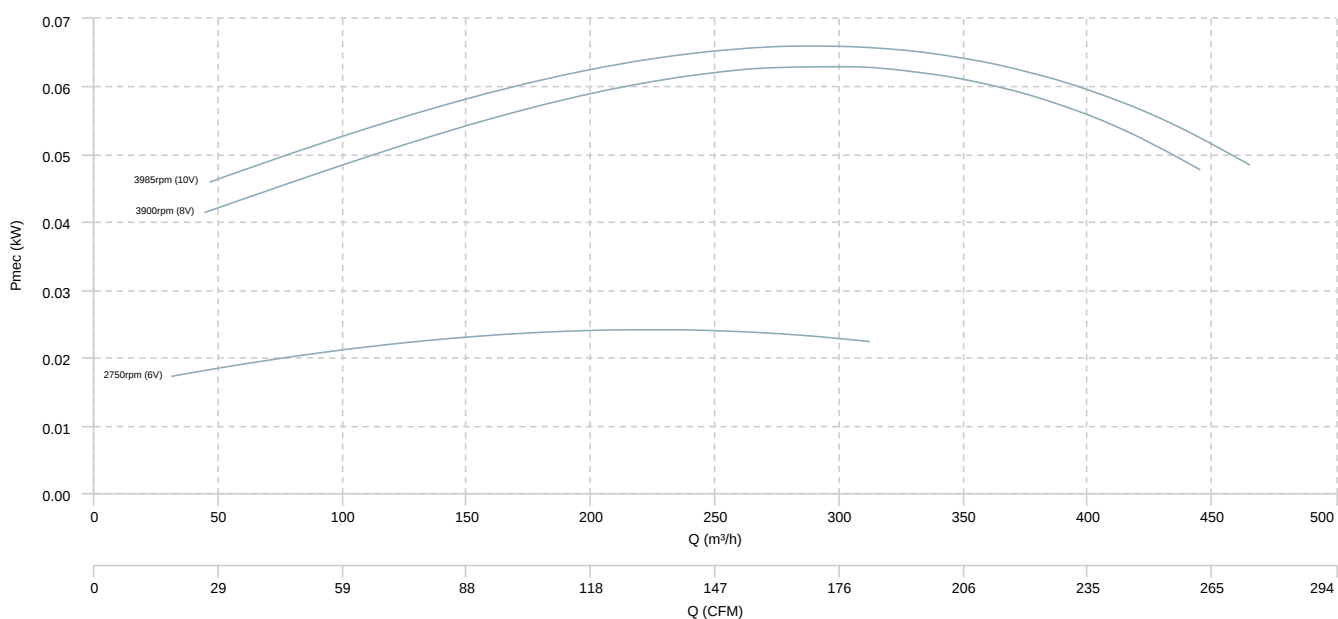
CHARACTERISCTIC CURVE

ENKELROOF-A 155 EEC

AIR FLOW - PRESSURE

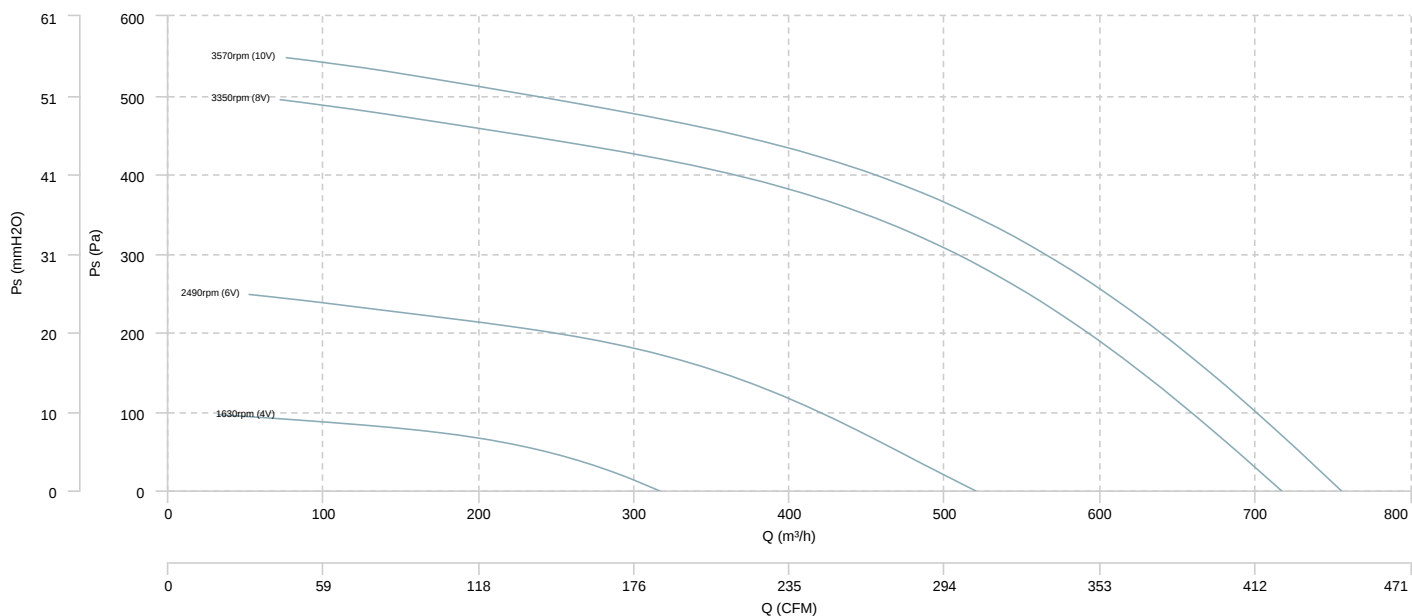


AIR FLOW - MECHANICAL POWER

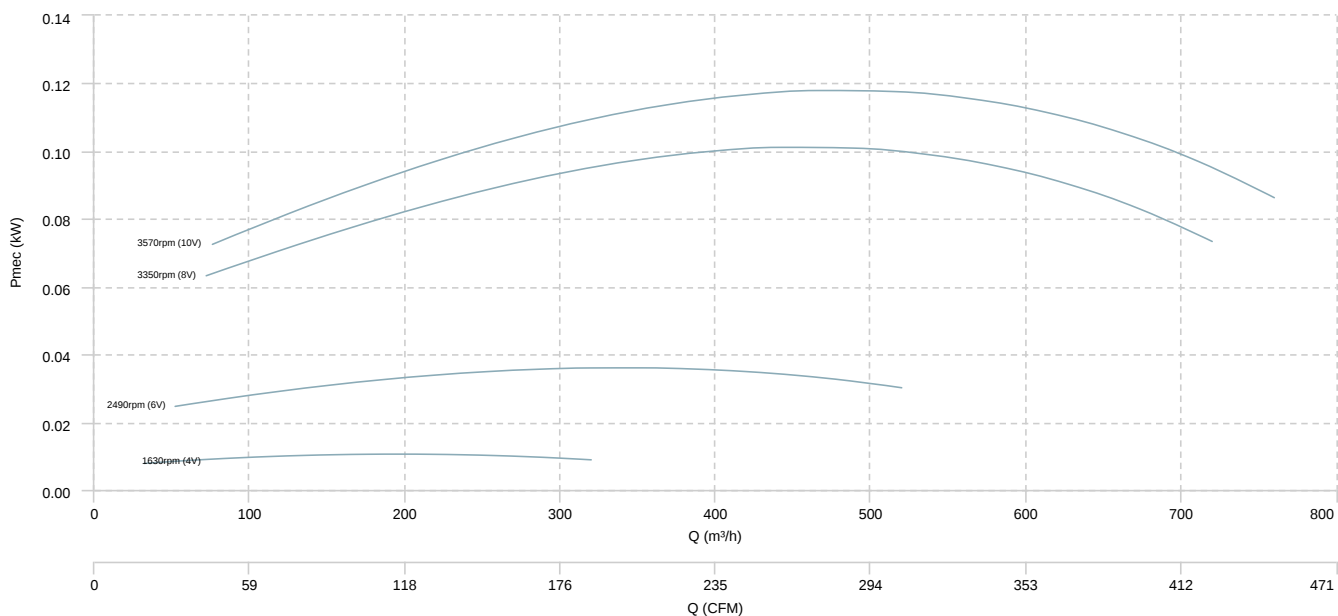


ENKELROOF-A 190 EEC

AIR FLOW - PRESSURE

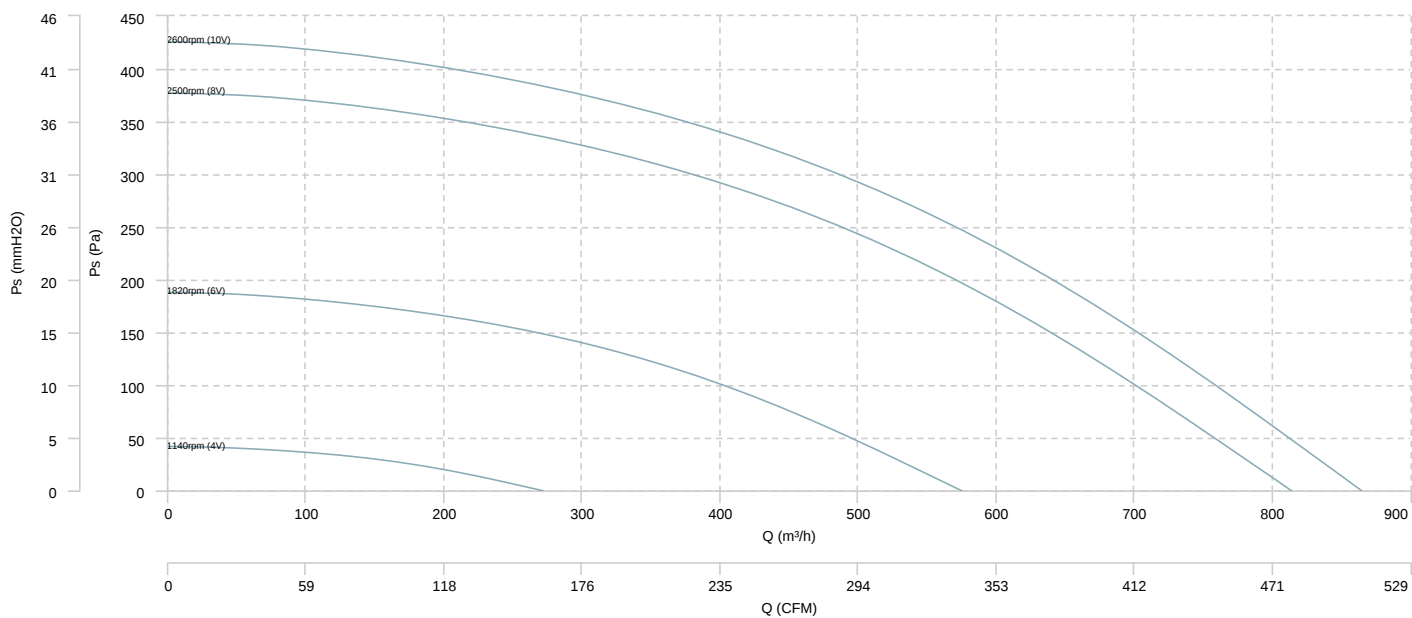


AIR FLOW - MECHANICAL POWER

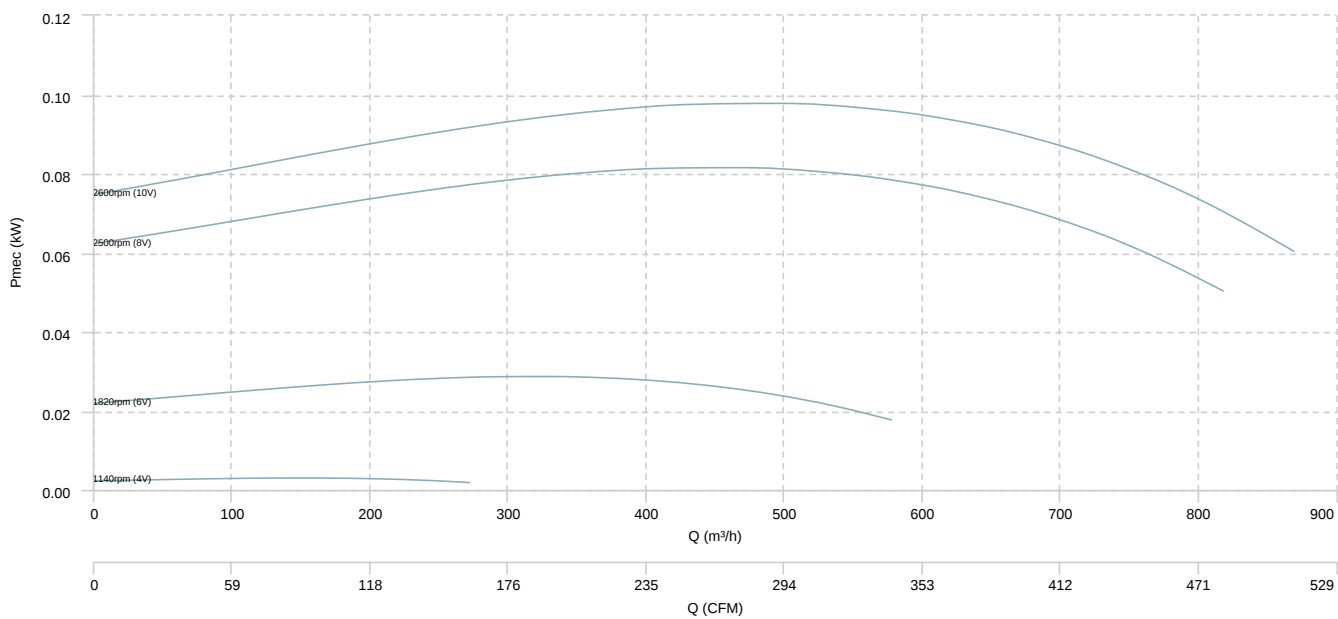


ENKELROOF-A 220 EEC

AIR FLOW - PRESSURE

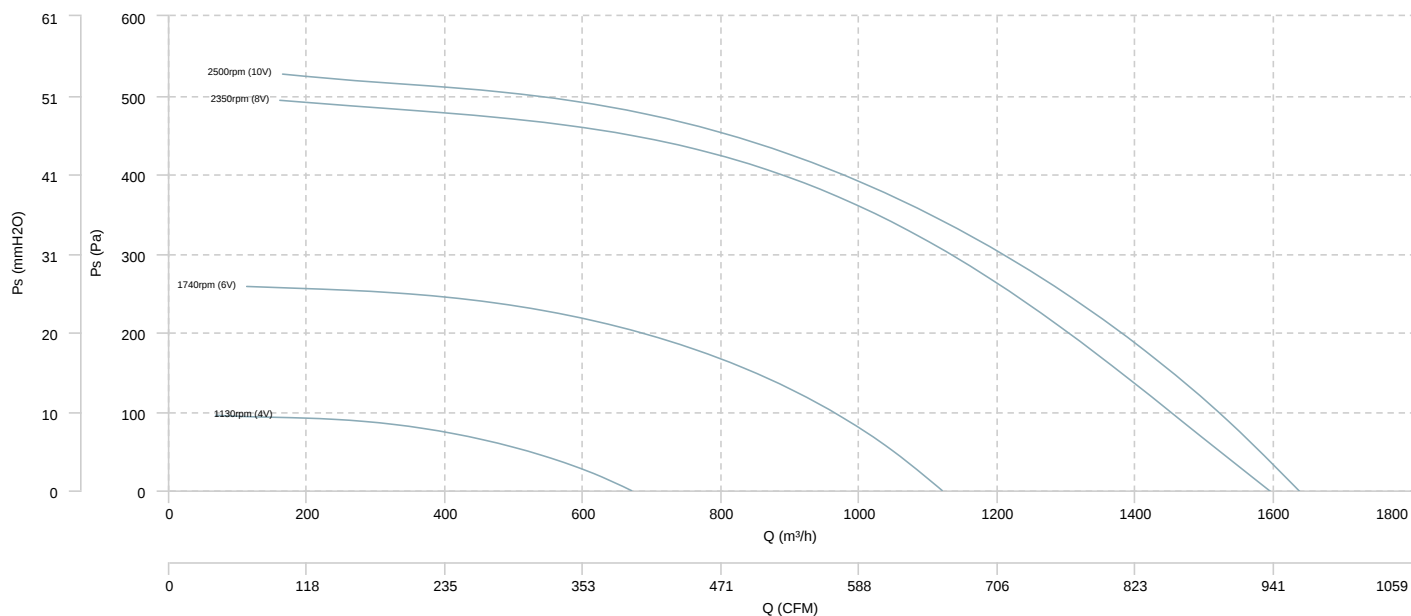


AIR FLOW - MECHANICAL POWER

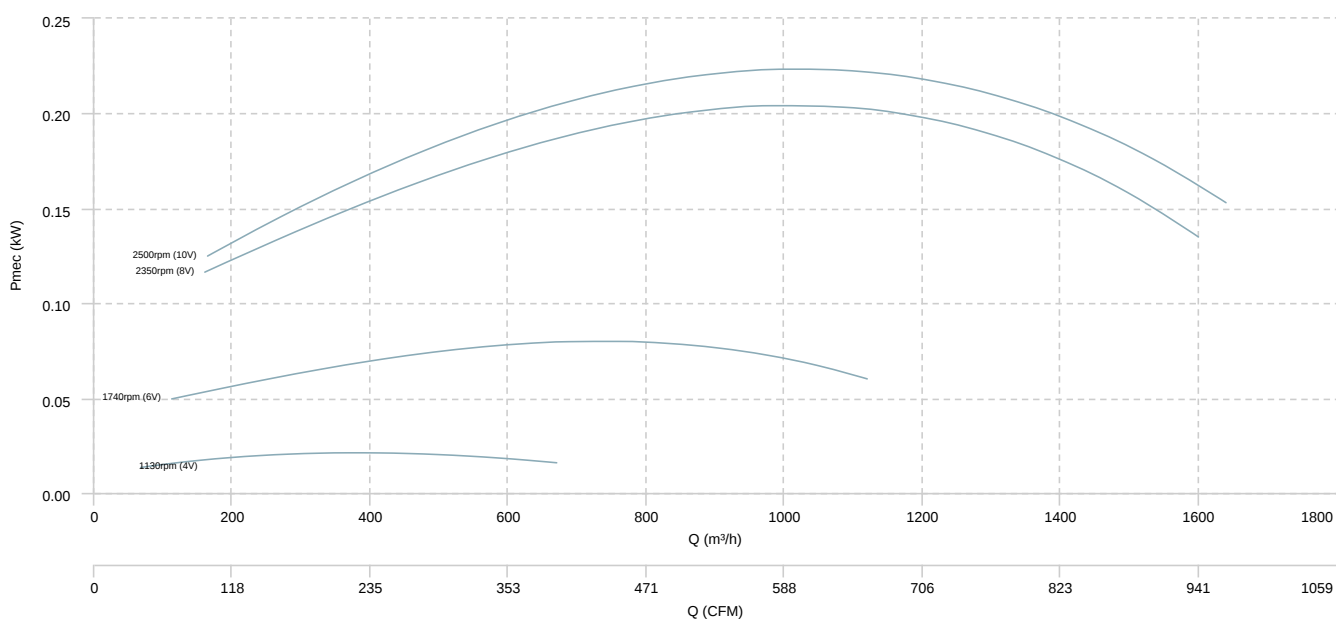


ENKELROOF-A 250 EEC

AIR FLOW - PRESSURE

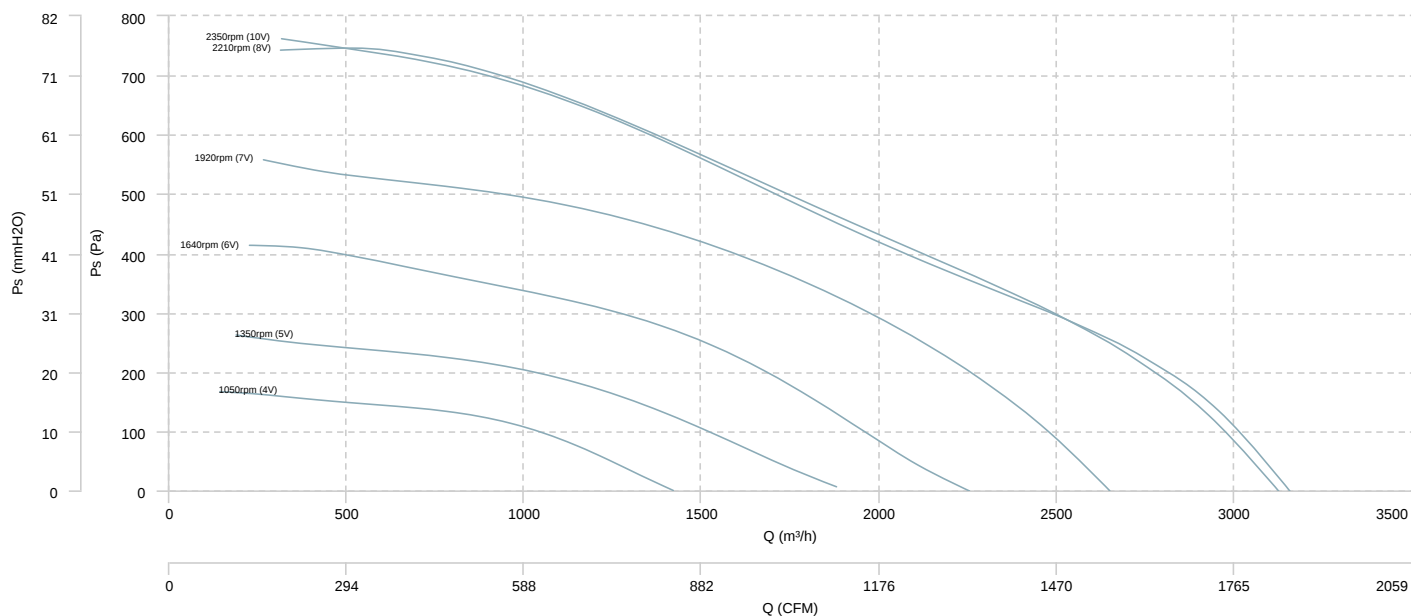


AIR FLOW - MECHANICAL POWER

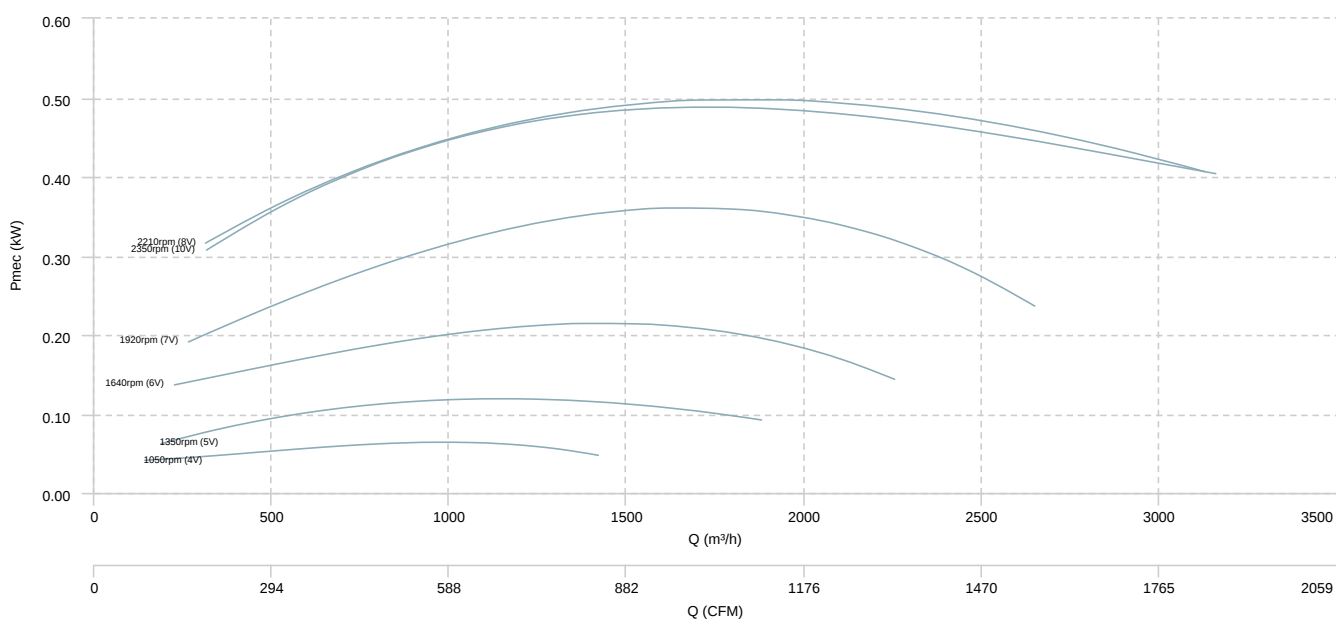


ENKELROOF-A 310 EEC

AIR FLOW - PRESSURE

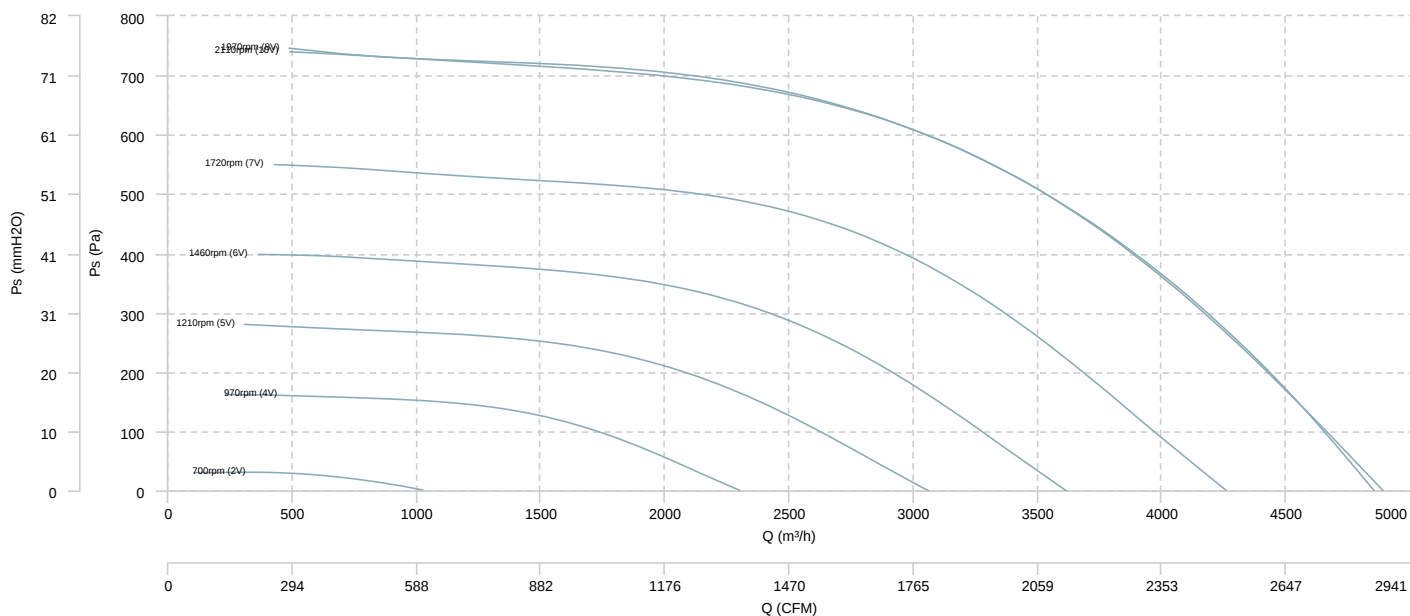


AIR FLOW - MECHANICAL POWER

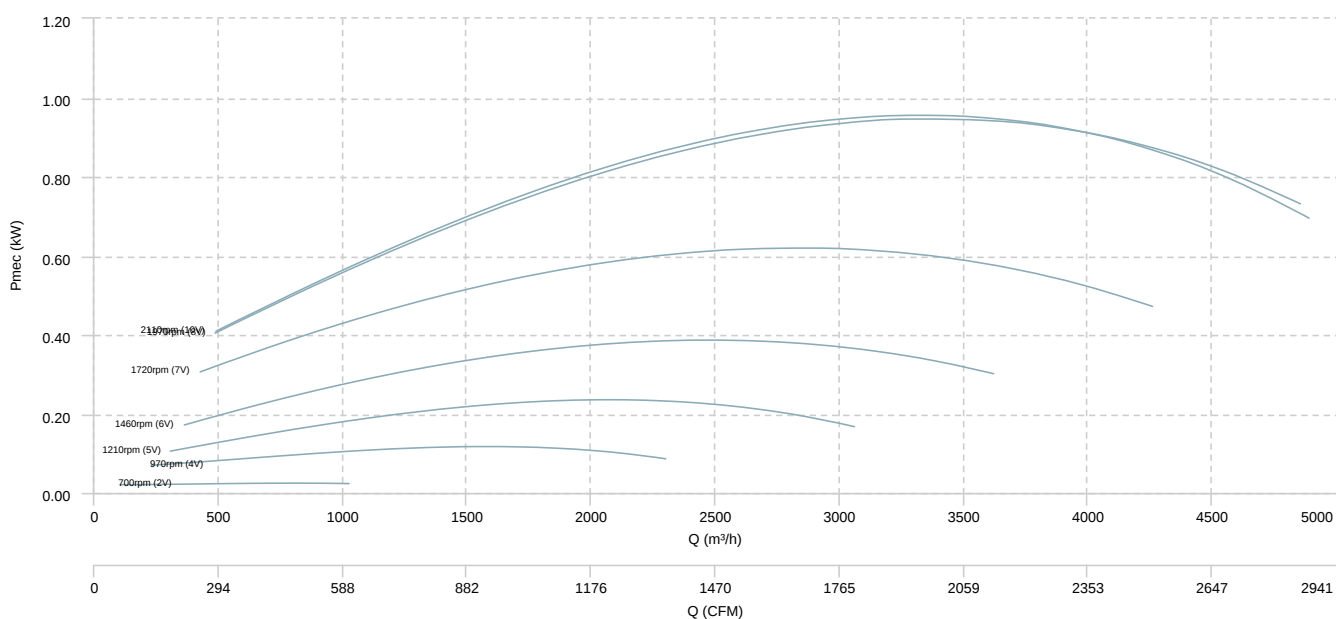


ENKELROOF-A 355 EEC

AIR FLOW - PRESSURE

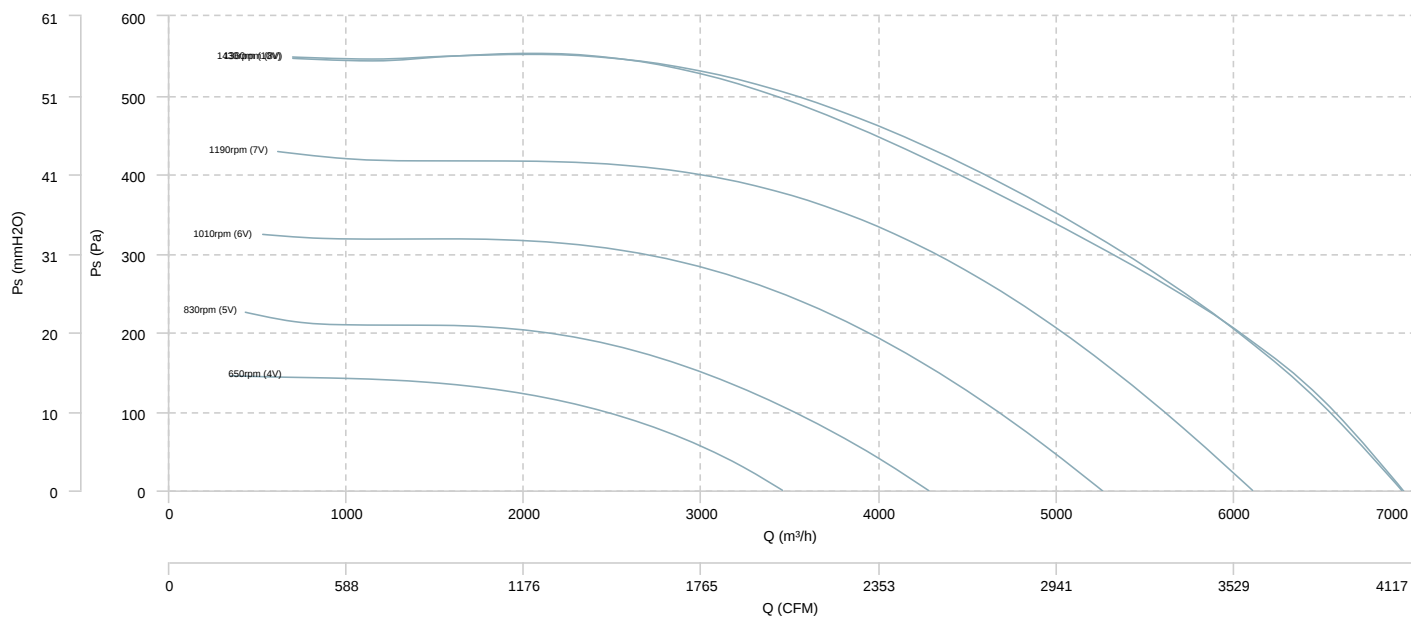


AIR FLOW - MECHANICAL POWER

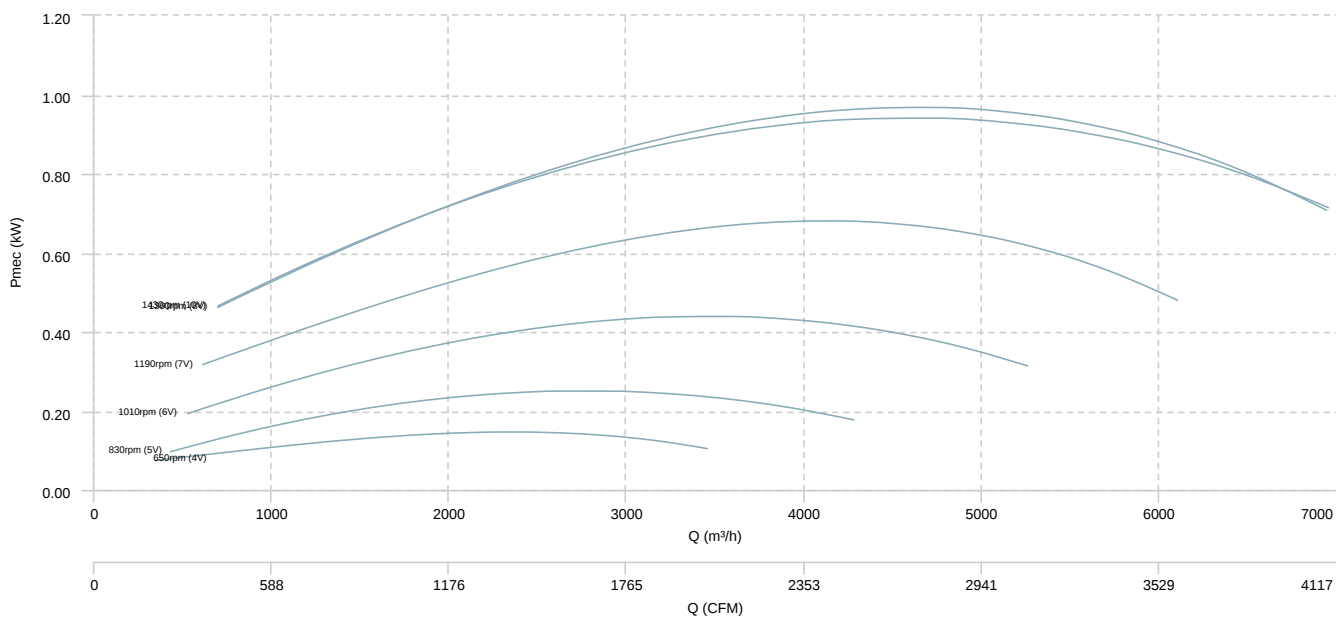


ENKELROOF-A 450 EEC

AIR FLOW - PRESSURE

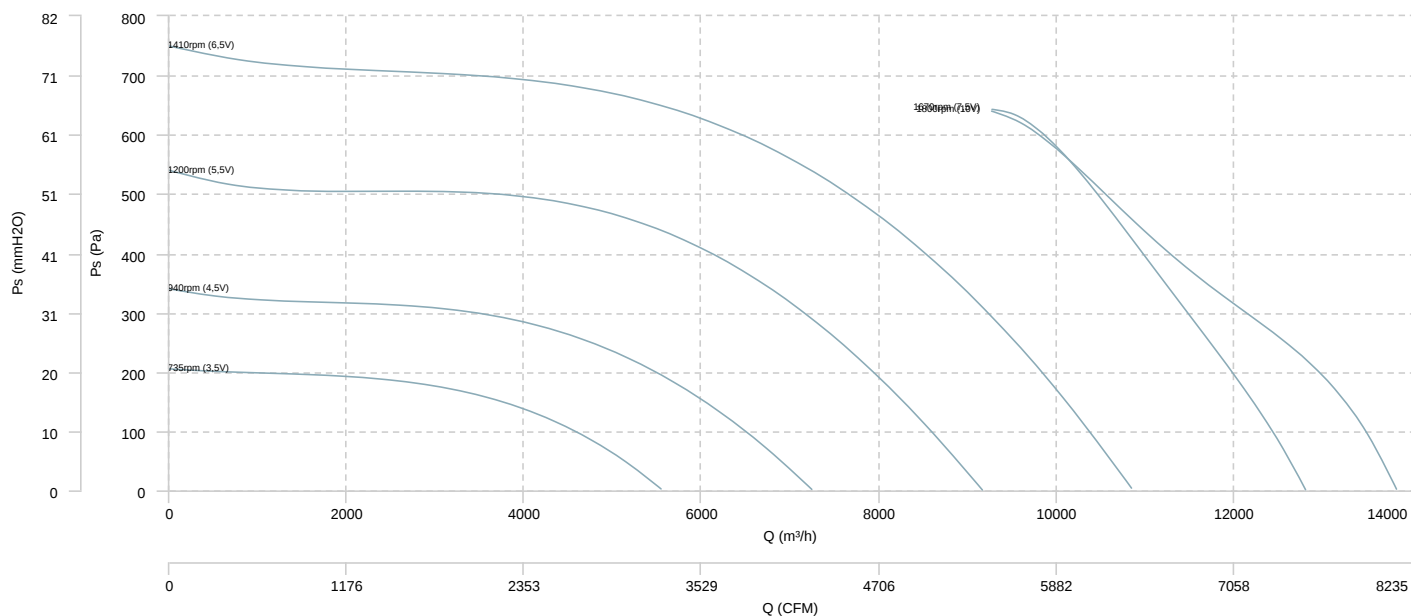


AIR FLOW - MECHANICAL POWER

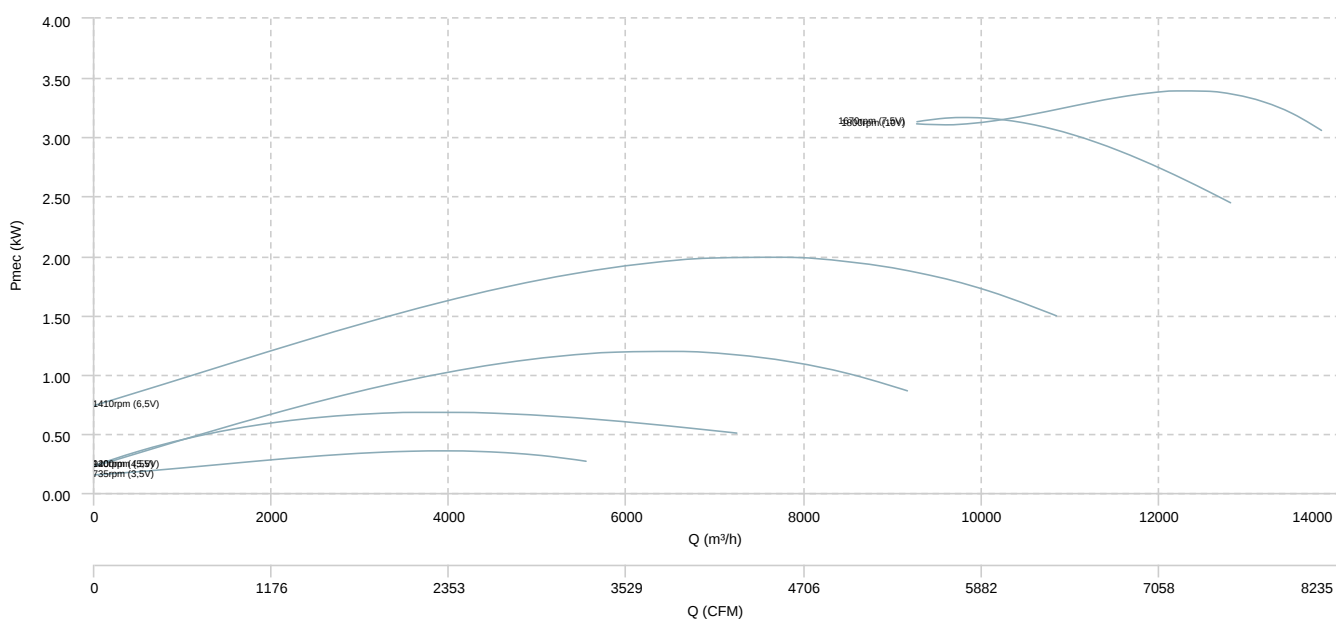


ENKELROOF-A 500 EEC

AIR FLOW - PRESSURE

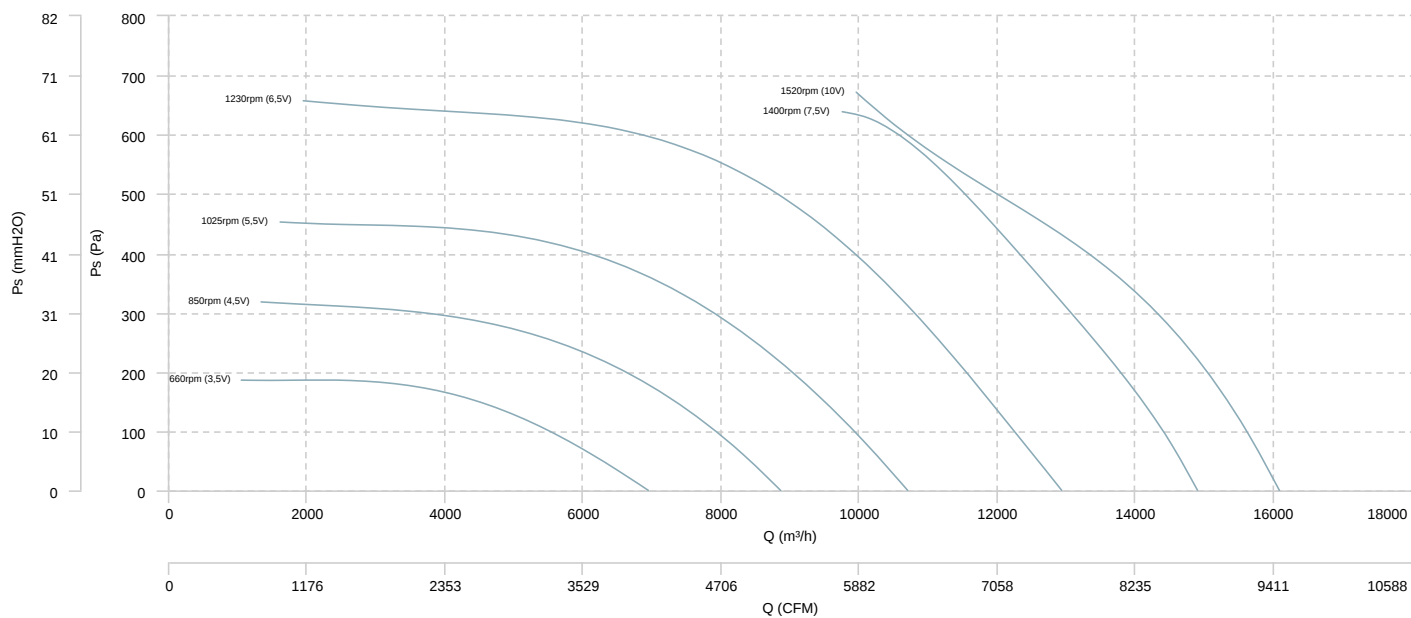


AIR FLOW - MECHANICAL POWER

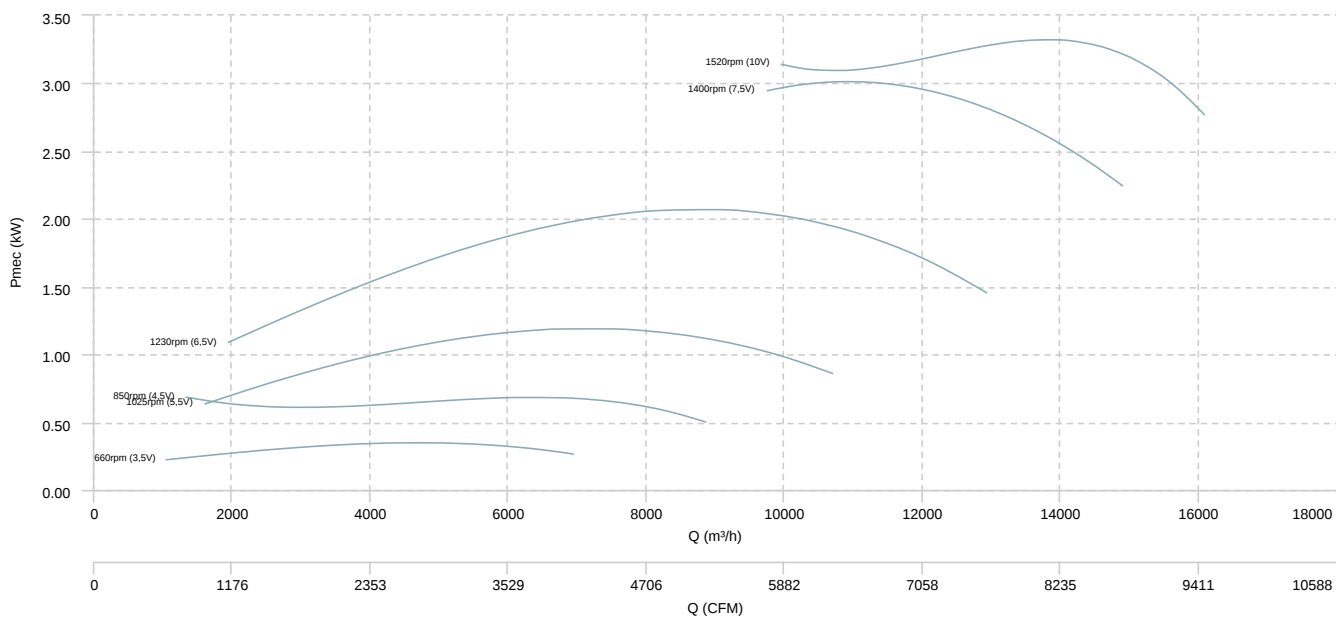


ENKELROOF-A 560 EEC

AIR FLOW - PRESSURE

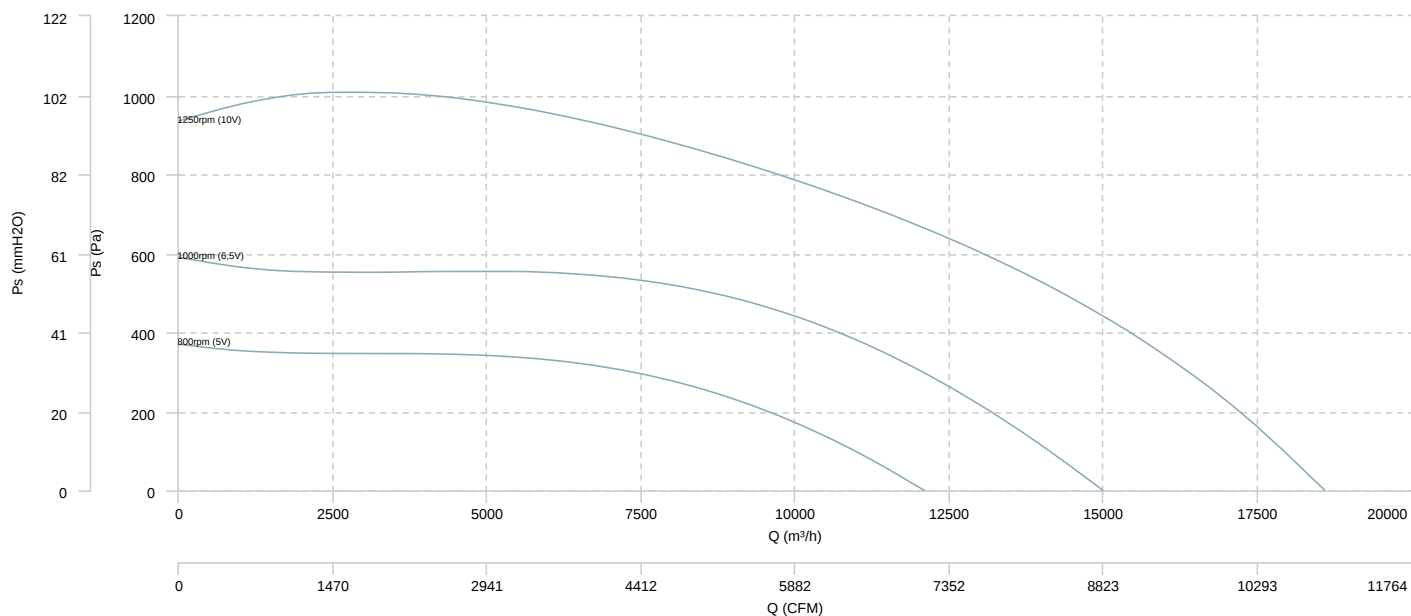


AIR FLOW - MECHANICAL POWER

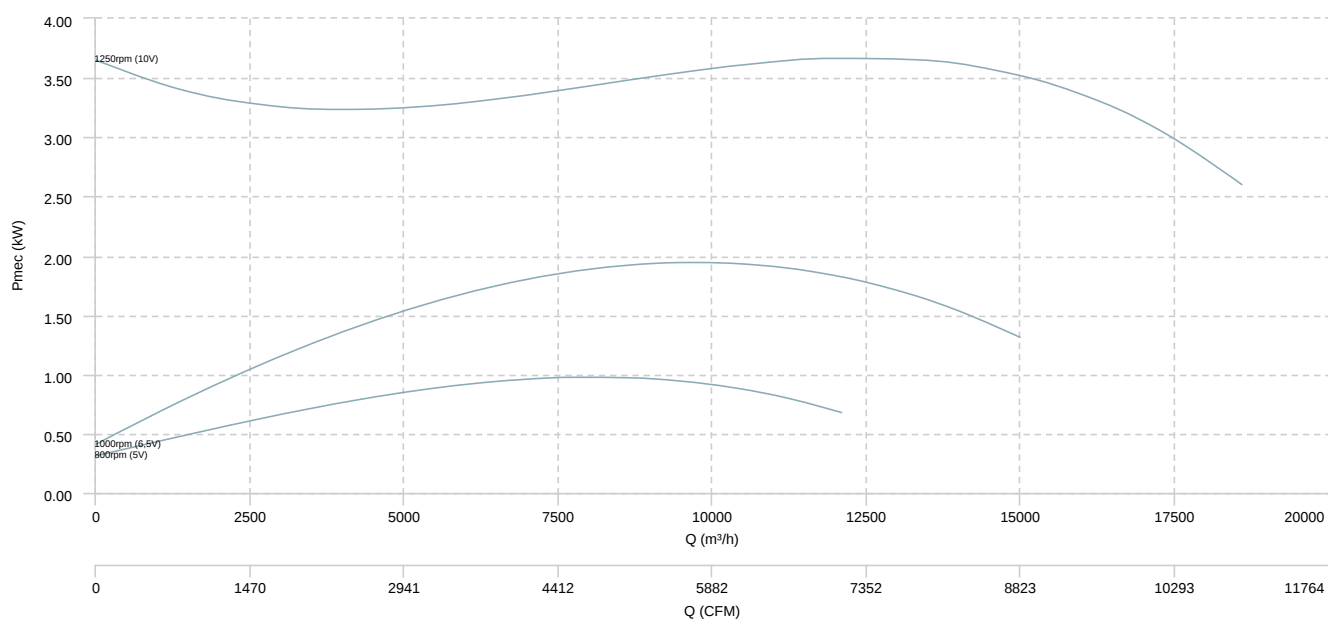


ENKELROOF-A 630 EEC

AIR FLOW - PRESSURE



AIR FLOW - MECHANICAL POWER



Sound data

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
ENKELROOF-A 155 EEC (2750rpm (6V))	Radiated	32	22	39	51	56	61	51	44	63
ENKELROOF-A 190 EEC (1630rpm (4V))	Radiated	8	15	30	43	51	54	47	39	56
ENKELROOF-A 220 EEC (1140rpm (4V))	Radiated	7	18	37	47	53	54	46	-	57
ENKELROOF-A 250 EEC (1130rpm (4V))	Radiated	6	20	44	51	54	53	45	31	58
ENKELROOF-A 310 EEC (1050rpm (4V))	Radiated	4	23	39	49	50	45	37	29	53
ENKELROOF-A 355 EEC (700rpm (2V))	Radiated	11	27	44	49	51	45	37	27	55
ENKELROOF-A 450 EEC (650rpm (4V))	Radiated	21	37	41	51	53	46	36	28	55
ENKELROOF-A 500 EEC (735rpm (3,5V))	Radiated	45	46	53	57	61	65	54	41	67
ENKELROOF-A 560 EEC (660rpm (3,5V))	Radiated	40	42	45	50	55	58	42	30	61
ENKELROOF-A 630 EEC (800rpm (5V))	Radiated	2	28	46	65	71	68	60	50	74

Notes:

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

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