

SB-3 FILTER EEC



CENTRIFUGAL FAN IN LOW PROFILE BOX WITH RECTANGULAR FLANGES AND FILTER(S), WITH EXTERNAL ROTOR EC MOTOR

MANUFACTURING FEATURES

Inline ventilation box made of galvanized steel with rectangular connection flanges.

Self-cleaning impeller with back curved (reaction) blades of high performance and single inlet, direct drive. Dynamically balanced to minimize noise and vibration. Polyamide reinforced impeller for models 3015 and 4020 and aluminum plate for the rest.

High efficiency (IE4 for three phase motors and IE5 for single motors), low noise external rotor EC motor. Speed control through a 0-10V or PWM signal. Single-phase 230V 50/60Hz power supply for models 3015 to 6040 and three-phase 400V 50/60Hz for sizes 7050 and 8060. IP44 motor and class B insulation.

Supplied with a filtration stage ISO COARSE $\geq$ 60% (G4) or 2 stages ISO COARSE $\geq$ 60% (G4) and ISO ePM1 $\geq$ 50% (F7).

Easily accessible inspection and cleaning register.

Accessories



BID



CFF



CFGF



CHEF



INT



**OP
SB-3**



PMR



REGC



**TEJ
SB-3**



**VIS
SB-3**

APPLICATIONS

Designed for installation in ducts, they are indicated for:

- Air renovations in bathrooms and small rooms.
- Perfect for false ceiling mounting.

Working temperature range from -20°C to 60°C

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
240150242G4	SB-3 FILTER (ISO Coarse≥60%) 3015 EEC	3950	0,25	0,06	405	-	6	1
240190242G4	SB-3 FILTER (ISO Coarse≥60%) 4020 EEC	3570	0,6	0,09	660	-	9,50	1
240250242G4	SB-3 FILTER (ISO Coarse≥60%) 5035 EEC	2500	1,00	0,15	1.520	-	16	1
240310242G4	SB-3 FILTER (ISO Coarse≥60%) 6040 EEC	2350	1,7	0,36	2.970	-	24,50	2
240150242G4F7	SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 3015 EEC	3950	0,25	0,06	305	-	8	1
240190242G4F7	SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 4020 EEC	3570	0,6	0,09	530	-	13,50	1
240250242G4F7	SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 5035 EEC	2500	1,00	0,15	1.130	-	22	1
240310242G4F7	SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 6040 EEC	2350	1,7	0,36	2.450	-	32,50	2

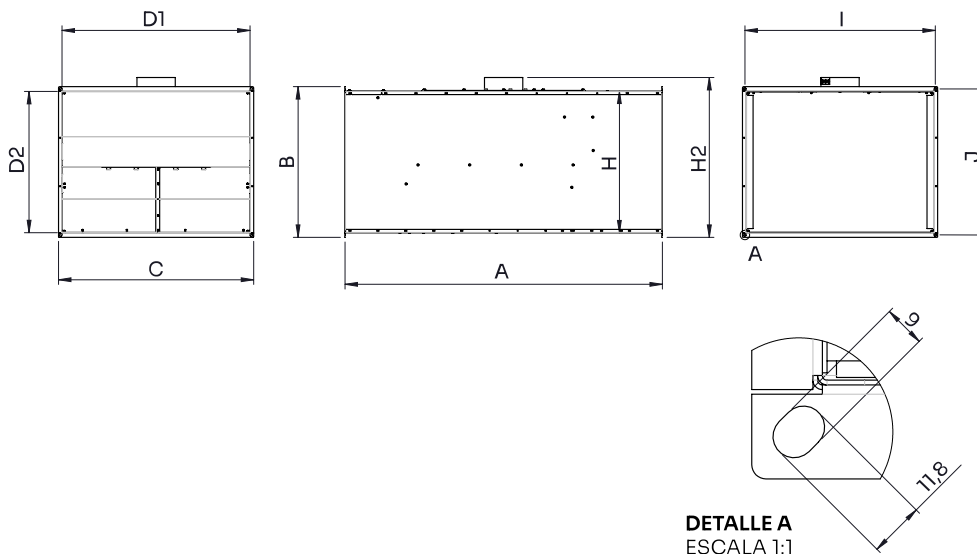
Three-phase motor

Code	Model	R.P.M.	Rated I. A 400V	Rated power kW	Max. Airflow m³/h	Sound db (A)**	Weight kg	Connect. diagram
240350242G4	SB-3 FILTER (ISO Coarse≥60%) 7050 EEC	2100	1,63	0,99	4.750	-	39	3
240450242G4	SB-3 FILTER (ISO Coarse≥60%) 8060 EEC	1450	1,67	1,01	6.440	-	48	3
240350242G4F7	SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 7050 EEC	2100	1,63	0,99	4.100	-	49	3
240450242G4F7	SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 8060 EEC	1450	1,67	1,01	5.440	-	60	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	D1	D2	H	H2	I	J
SB-3 FILTER (ISO Coarse $\geq$ 60%) 3015 EEC	520	190	330	300	150	154	180	310	170
SB-3 FILTER (ISO Coarse $\geq$ 60%) 4020 EEC	620	240	430	400	200	204	230	410	220
SB-3 FILTER (ISO Coarse $\geq$ 60%) 5035 EEC	750	393	530	500	353	357	387	510	373
SB-3 FILTER (ISO Coarse $\geq$ 60%) 6040 EEC	900	440	630	600	400	405	447	610	420
SB-3 FILTER (ISO Coarse $\geq$ 60%) 7050 EEC	1050	540	730	700	500	505	560	710	520
SB-3 FILTER (ISO Coarse $\geq$ 60%) 8060 EEC	1350	641	830	800	601	606	661	810	621
SB-3 FILTER (ISO Coarse $\geq$ 60%+ePM1 $\geq$ 50%) 3015 EEC	520	190	330	300	150	154	180	310	170
SB-3 FILTER (ISO Coarse $\geq$ 60%+ePM1 $\geq$ 50%) 4020 EEC	620	240	430	400	200	204	230	410	220
SB-3 FILTER (ISO Coarse $\geq$ 60%+ePM1 $\geq$ 50%) 5035 EEC	750	393	530	500	353	357	387	510	373
SB-3 FILTER (ISO Coarse $\geq$ 60%+ePM1 $\geq$ 50%) 6040 EEC	900	440	630	600	400	405	447	610	420
SB-3 FILTER (ISO Coarse $\geq$ 60%+ePM1 $\geq$ 50%) 7050 EEC	1050	540	730	700	500	505	560	710	520
SB-3 FILTER (ISO Coarse $\geq$ 60%+ePM1 $\geq$ 50%) 8060 EEC	1350	641	830	800	601	606	661	810	621

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 Nº 3

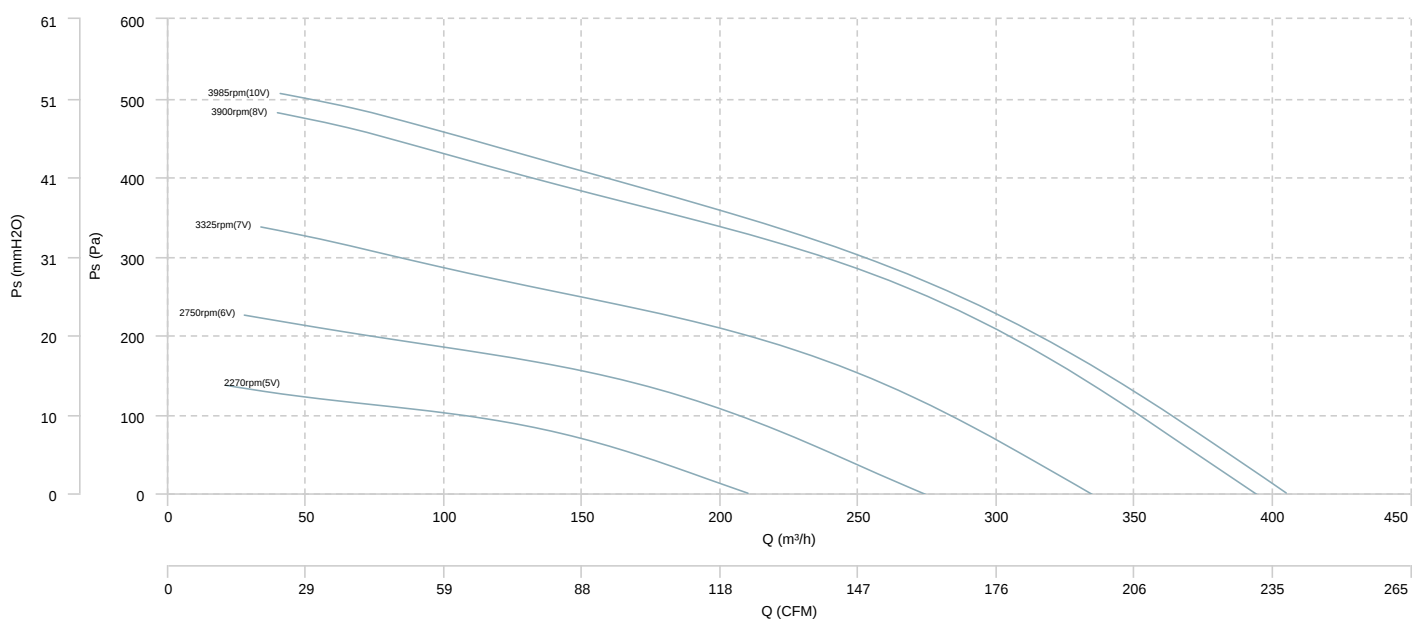
Nº	Signal Señal	Colour Color	Specification Especificación
1	L1	Black Negro	AC380V-50/60Hz
2	L2	Black Negro	AC380V-50/60Hz
3	L3	Black Negro	AC380V-50/60Hz
4	Pe	Yellow-Green Amarillo-Verde	

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

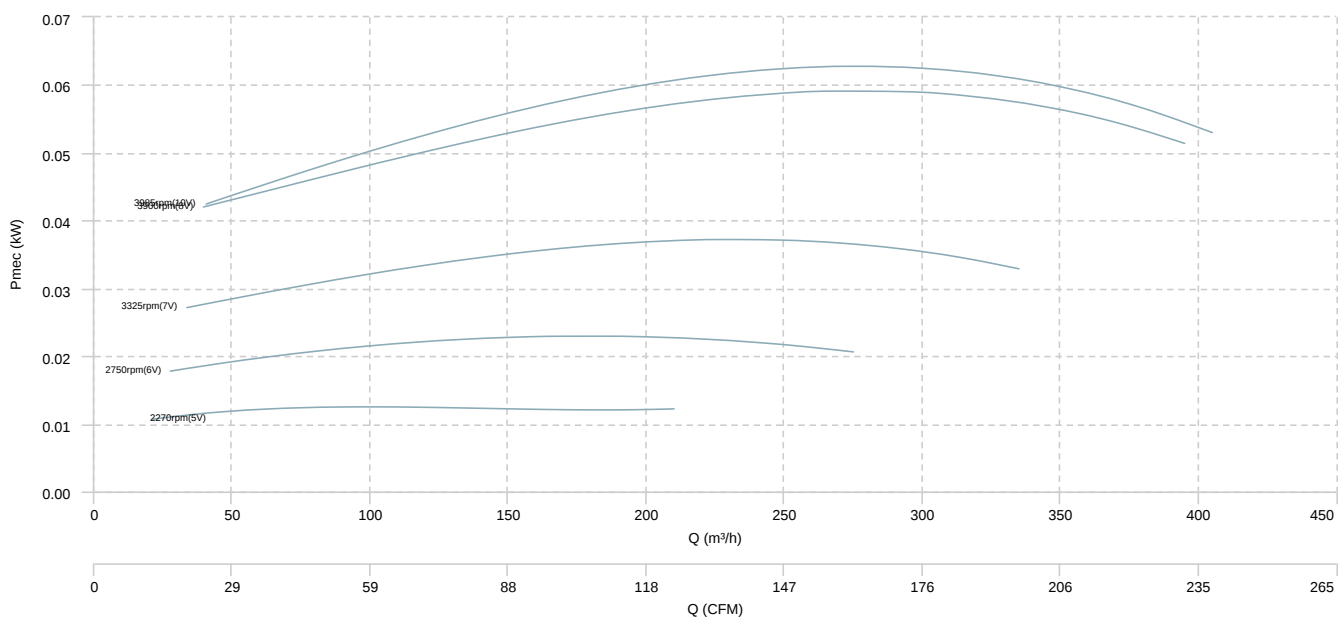
CHARACTERISCTIC CURVE

SB-3 FILTER (ISO
Coarse $\geq$ 60%) 3015 EEC

AIR FLOW - PRESSURE

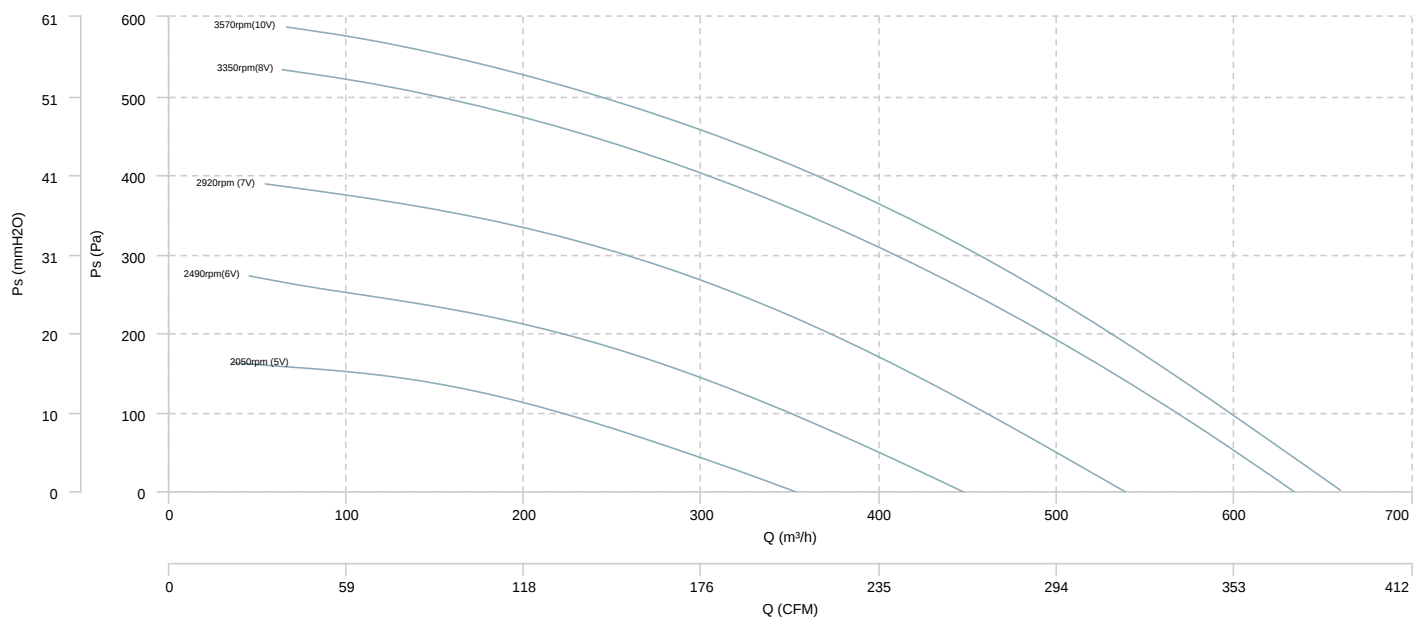


AIR FLOW - MECHANICAL POWER

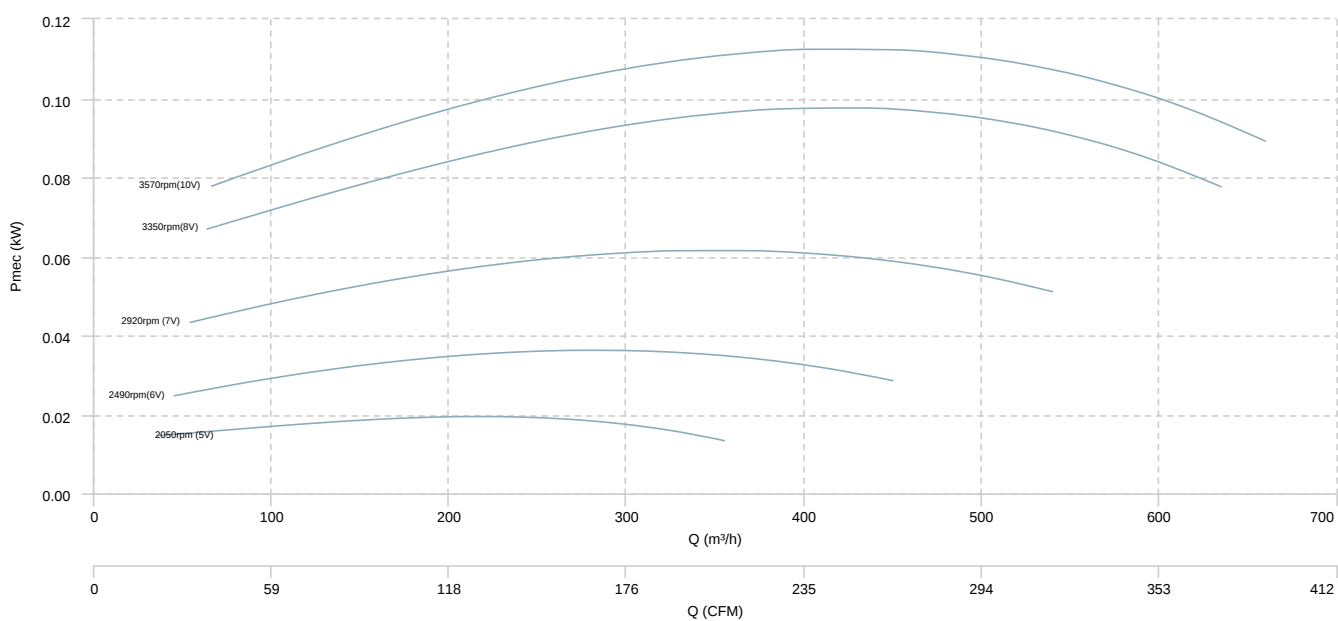


SB-3 FILTER (ISO
Coarse $\geq$ 60%) 4020 EEC

AIR FLOW - PRESSURE

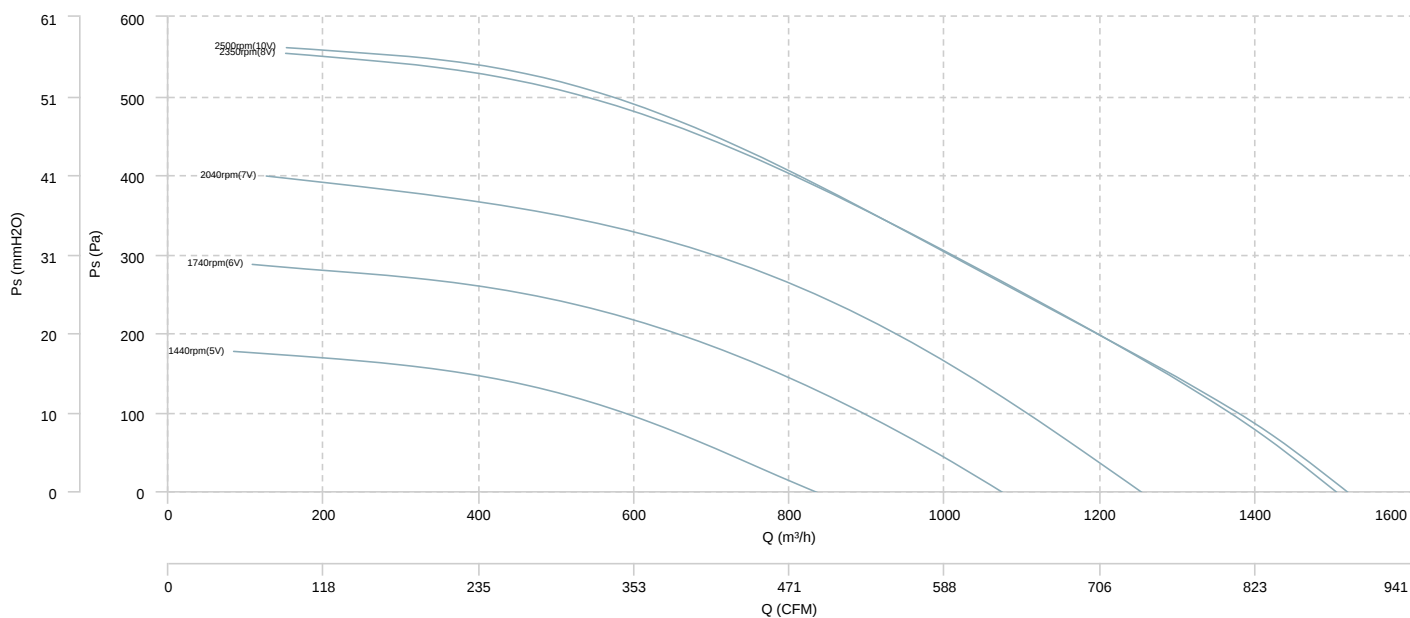


AIR FLOW - MECHANICAL POWER

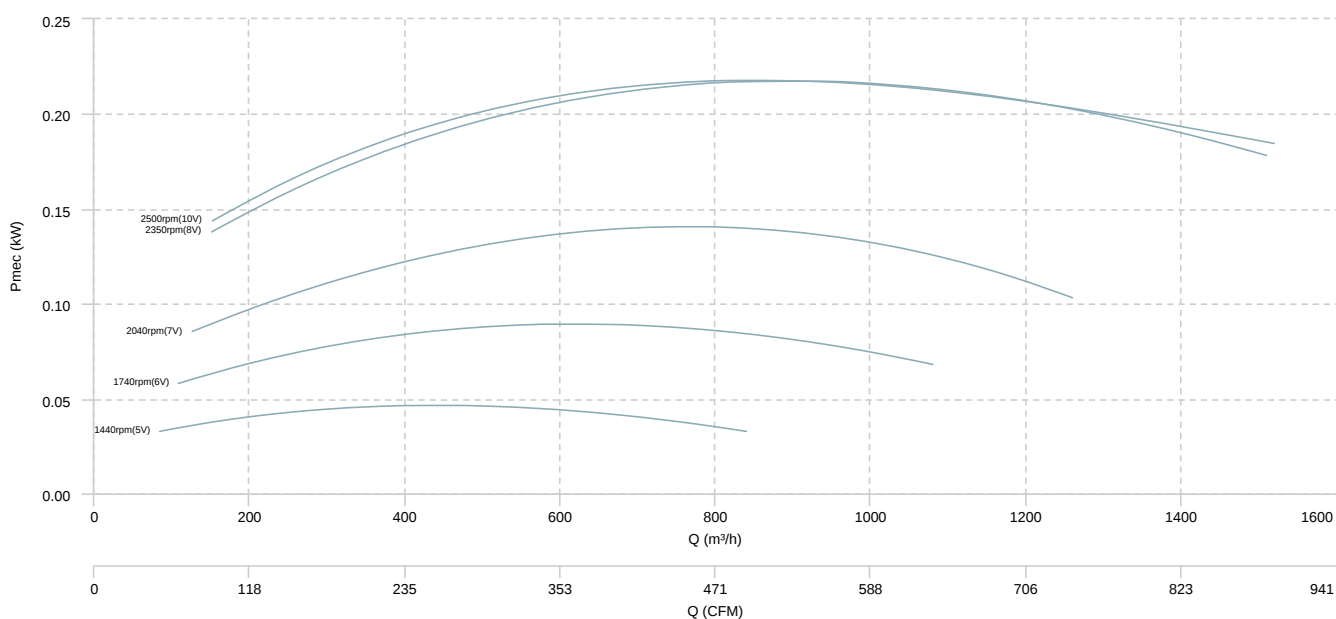


SB-3 FILTER (ISO
Coarse $\geq$ 60%) 5035 EEC

AIR FLOW - PRESSURE

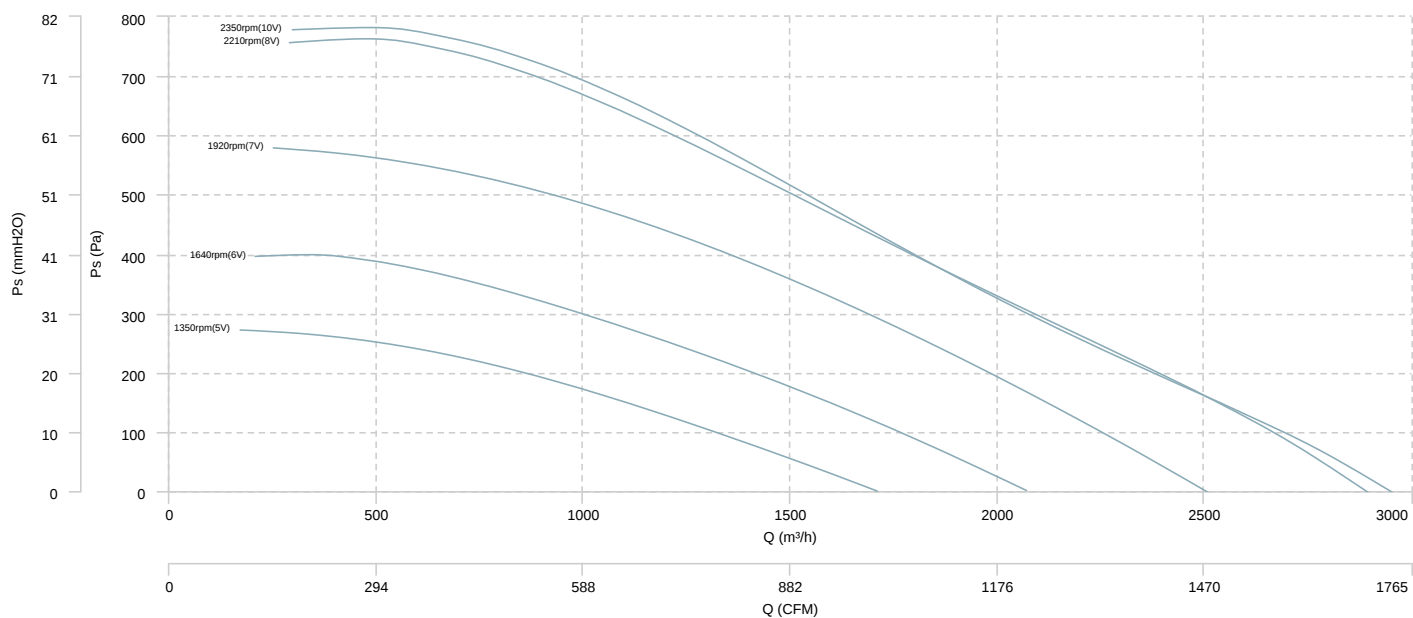


AIR FLOW - MECHANICAL POWER

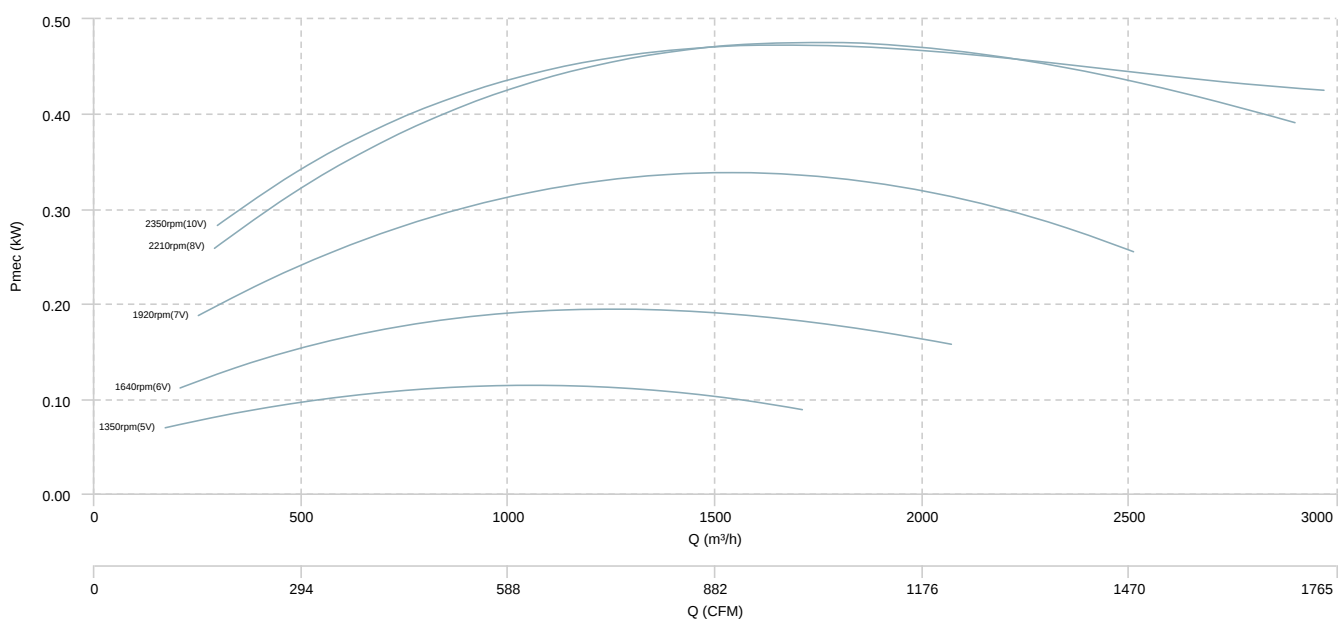


SB-3 FILTER (ISO
Coarse $\geq$ 60%) 6040 EEC

AIR FLOW - PRESSURE

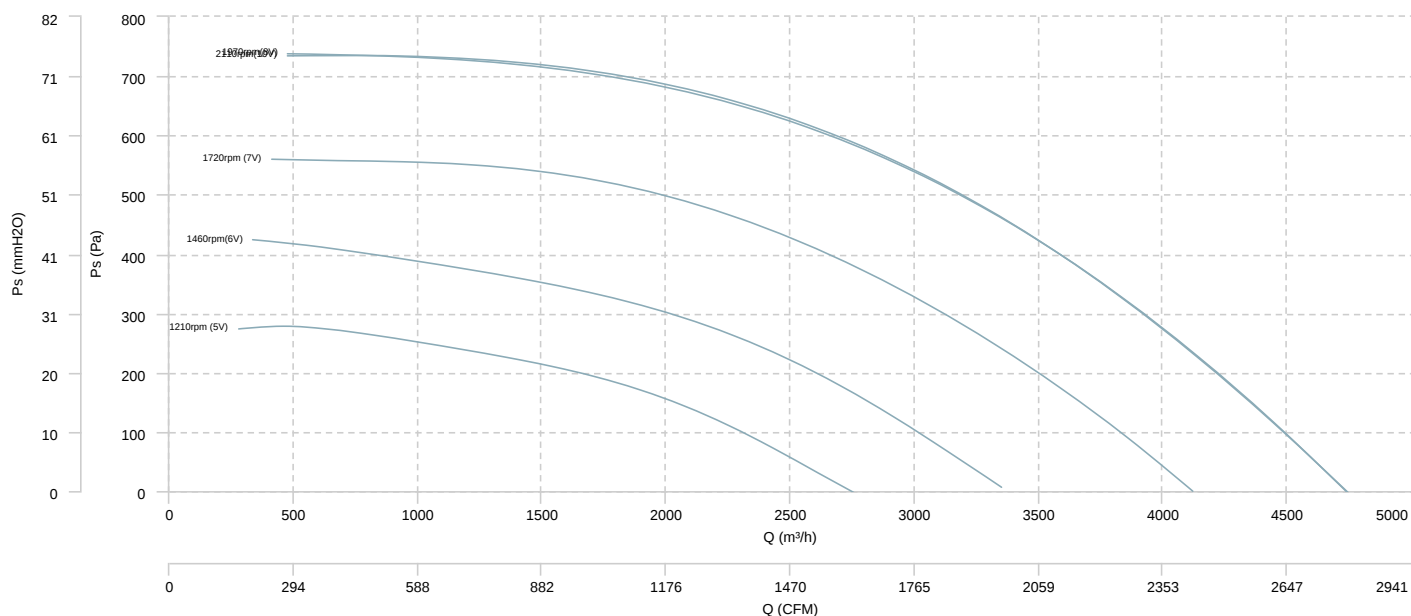


AIR FLOW - MECHANICAL POWER

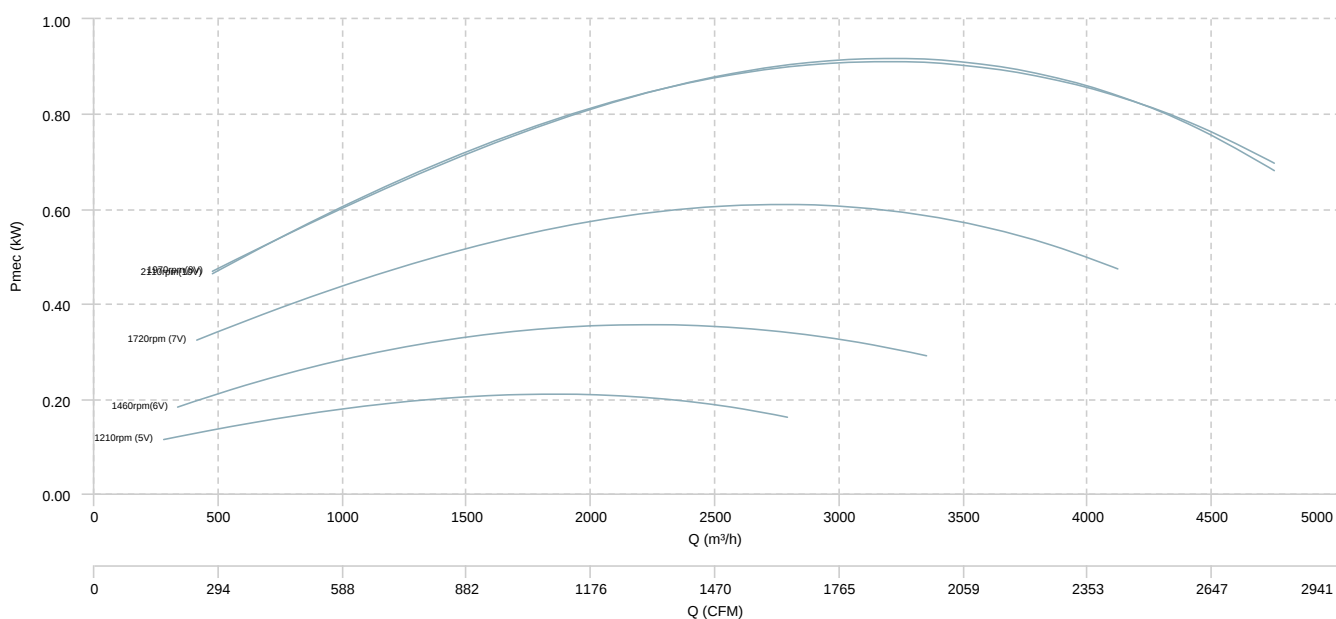


SB-3 FILTER (ISO
Coarse $\geq$ 60%) 7050 EEC

AIR FLOW - PRESSURE

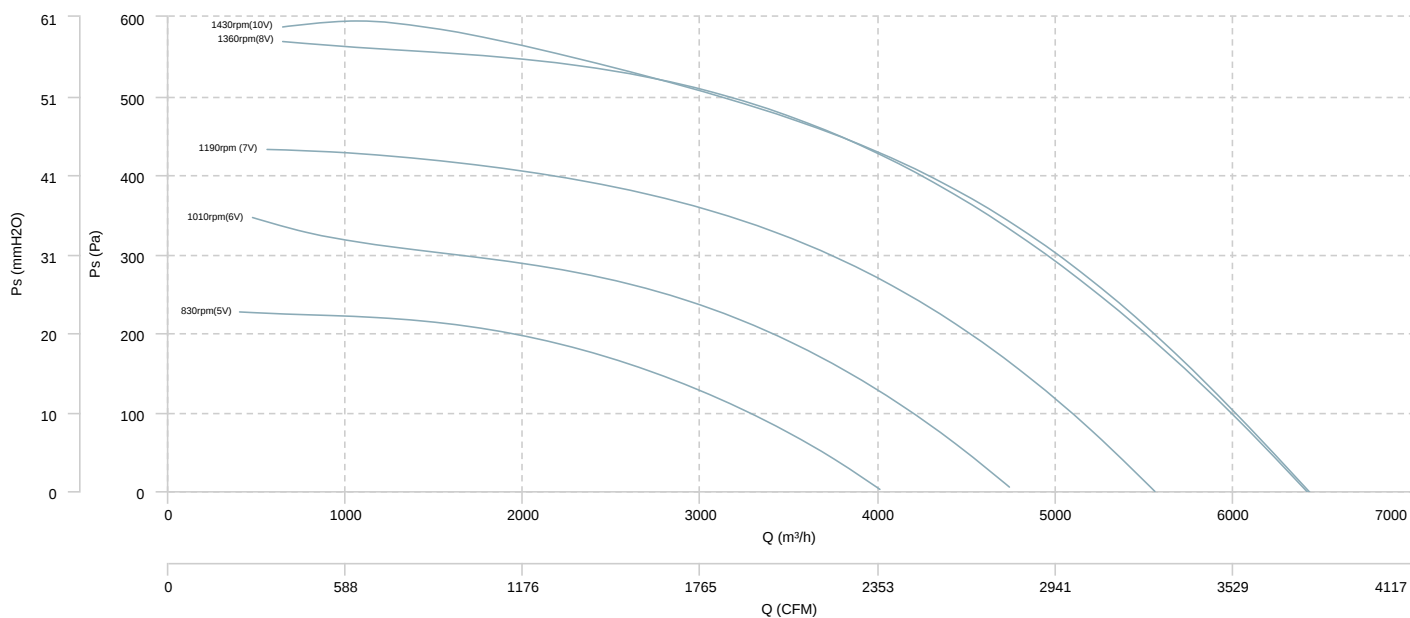


AIR FLOW - MECHANICAL POWER

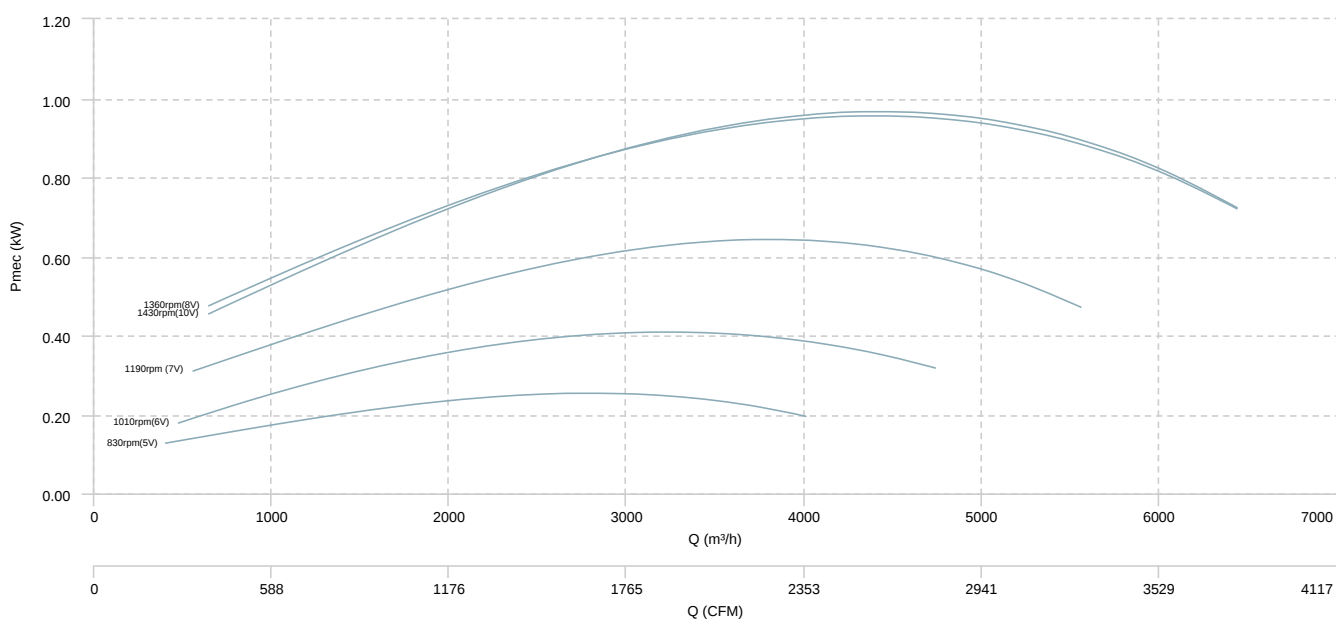


SB-3 FILTER (ISO
Coarse $\geq$ 60%) 8060 EEC

AIR FLOW - PRESSURE

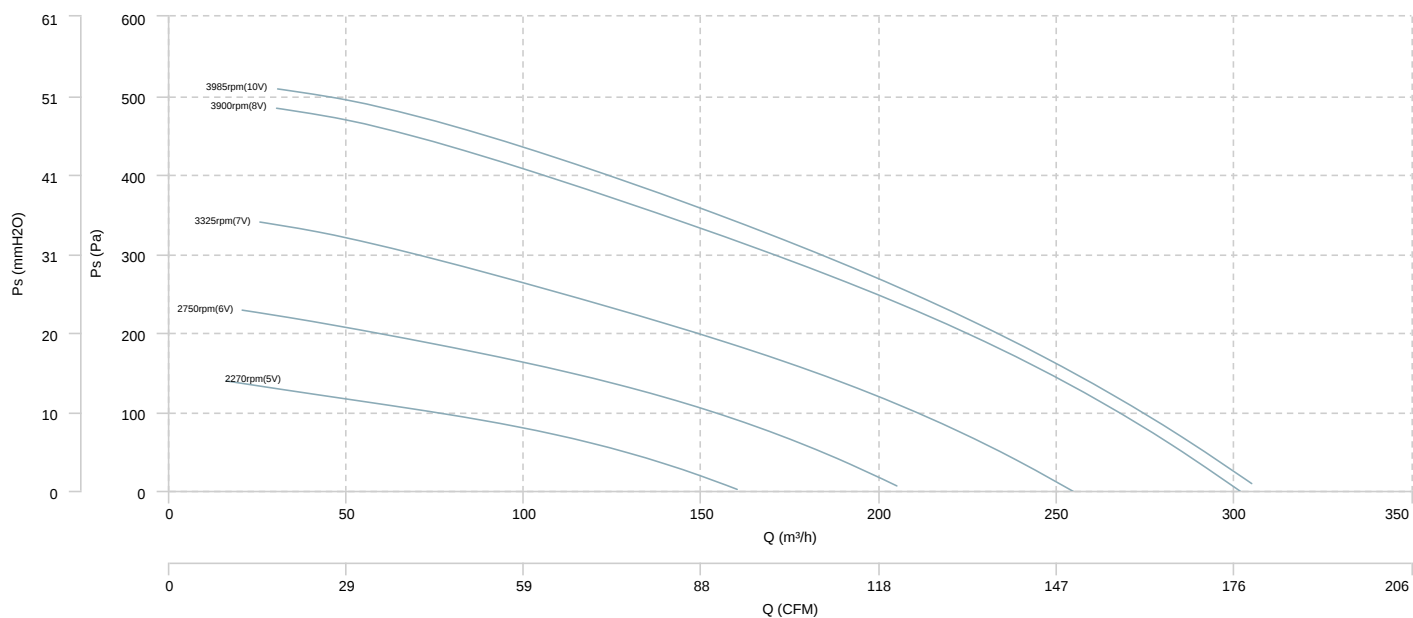


AIR FLOW - MECHANICAL POWER

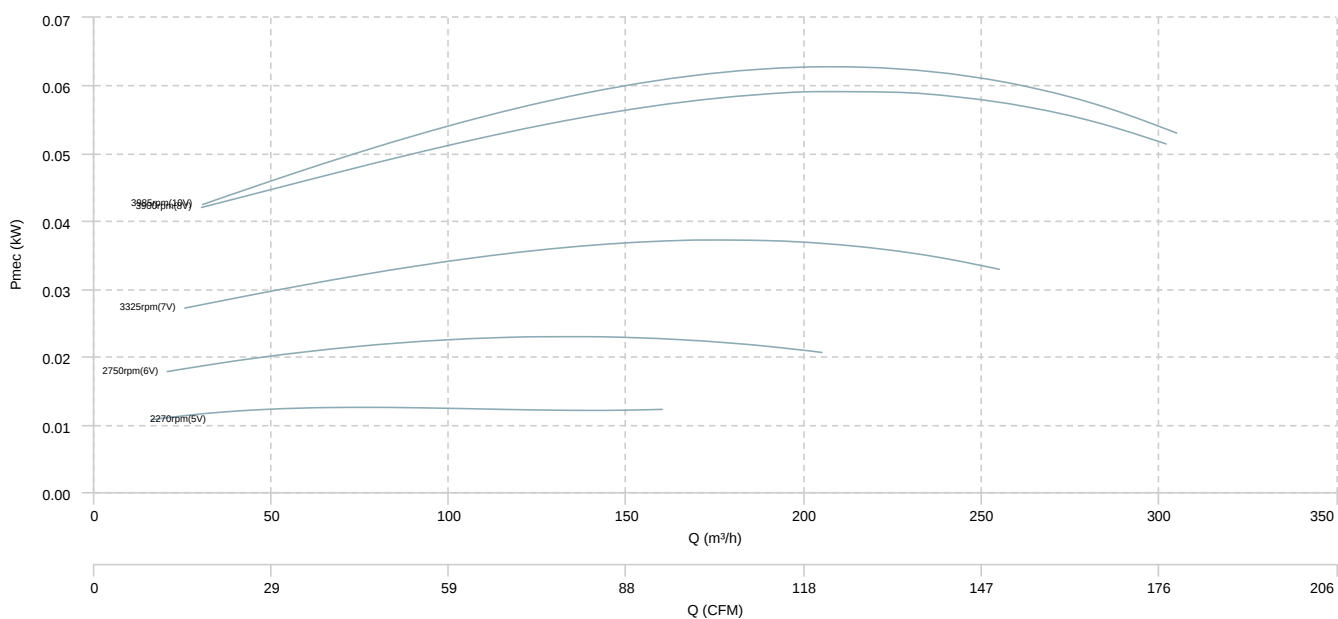


SB-3 FILTER (ISO
Coarse $\geq$ 60%+ePM1 $\geq$ 50%
) 3015 EEC

AIR FLOW - PRESSURE

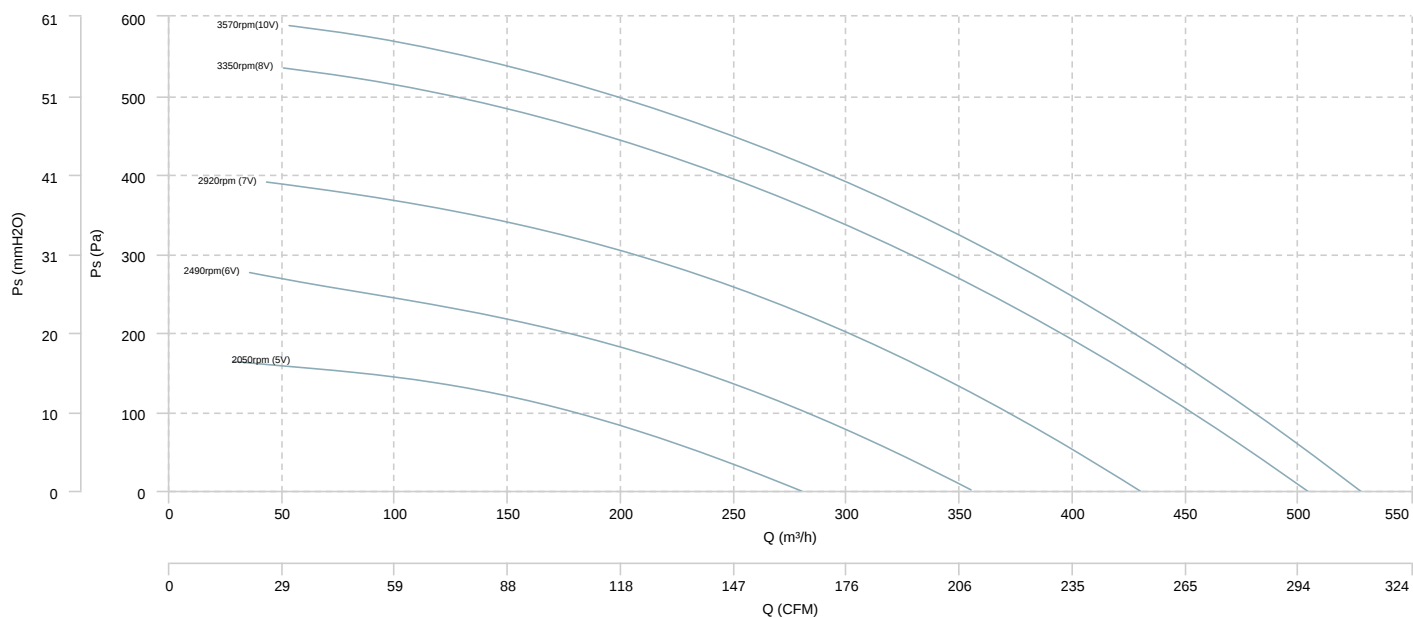


AIR FLOW - MECHANICAL POWER

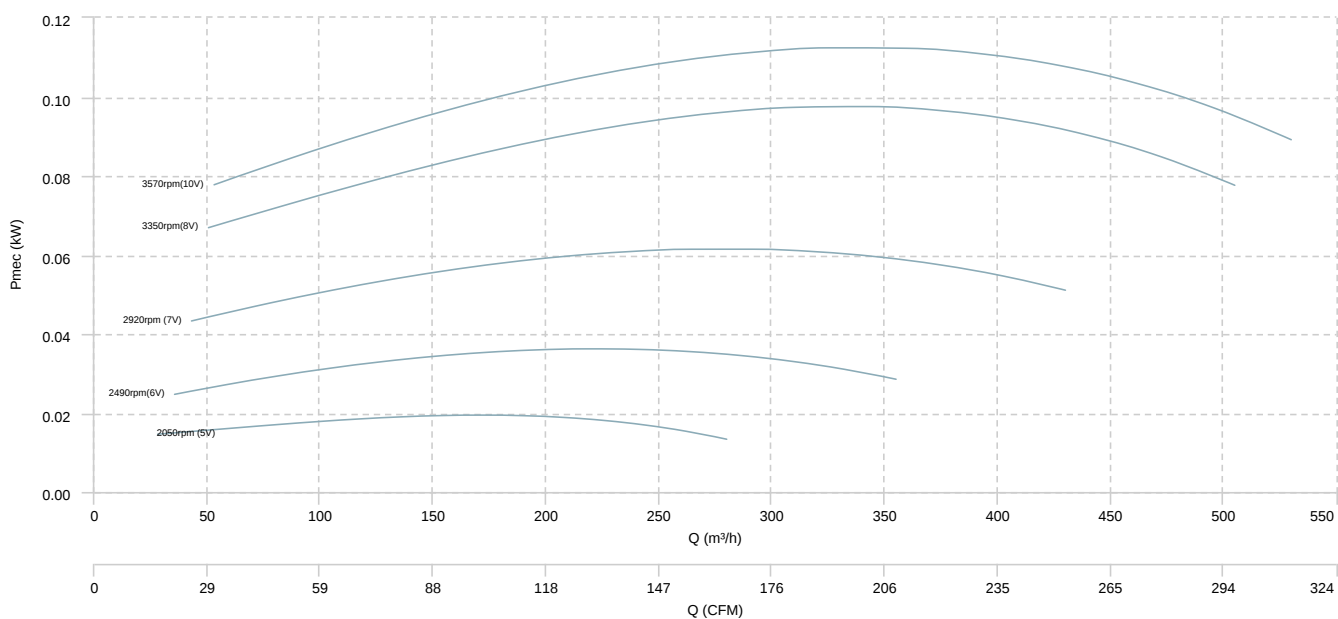


SB-3 FILTER (ISO
Coarse $\geq$ 60%+ePM1 $\geq$ 50%
) 4020 EEC

AIR FLOW - PRESSURE

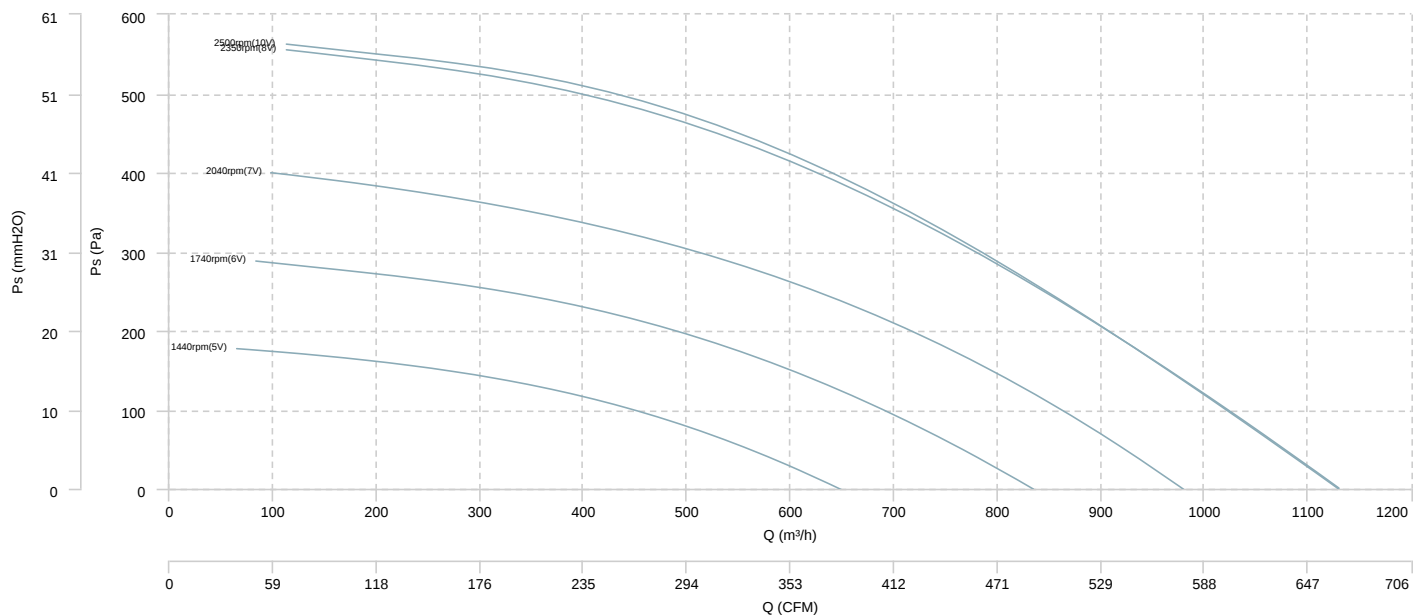


AIR FLOW - MECHANICAL POWER

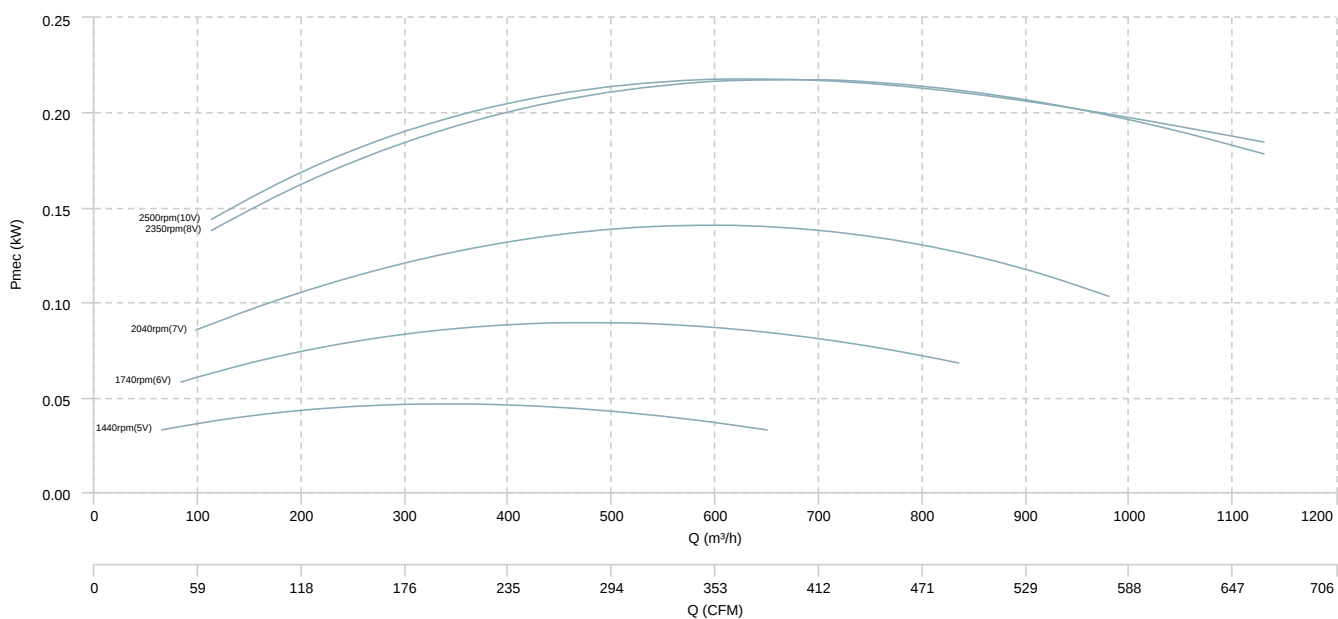


SB-3 FILTER (ISO
Coarse $\geq$ 60%+ePM1 $\geq$ 50%
) 5035 EEC

AIR FLOW - PRESSURE

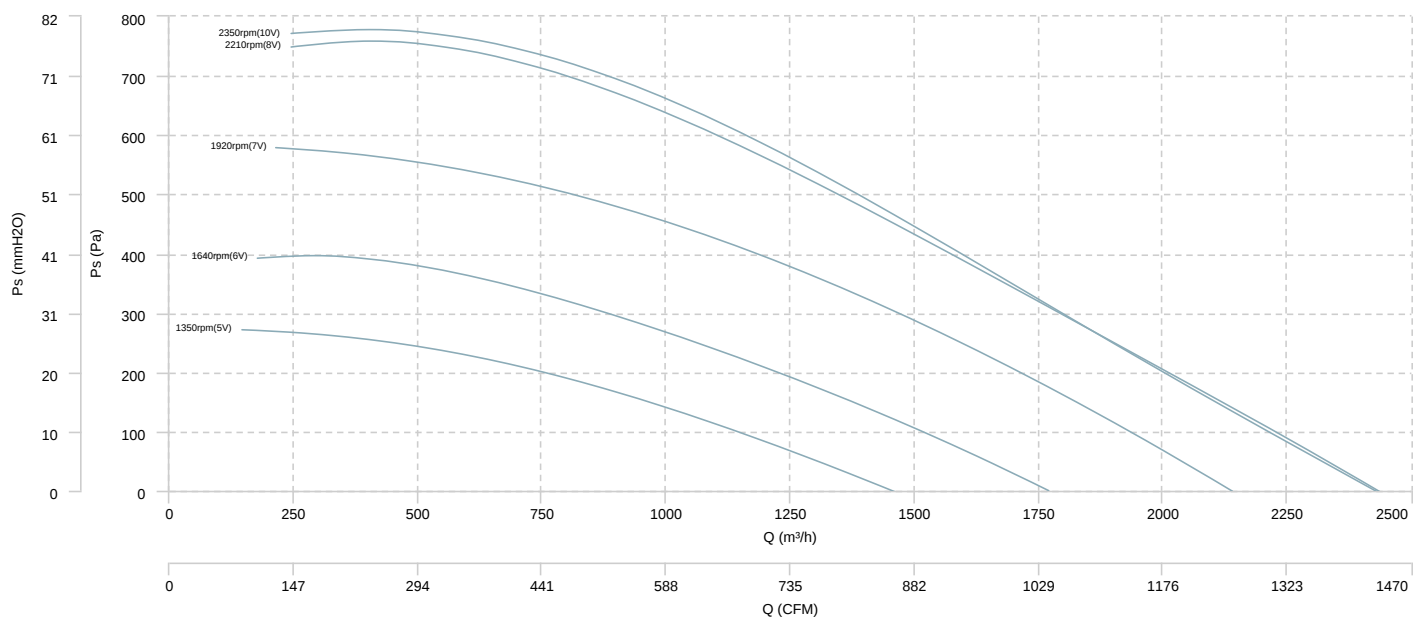


AIR FLOW - MECHANICAL POWER

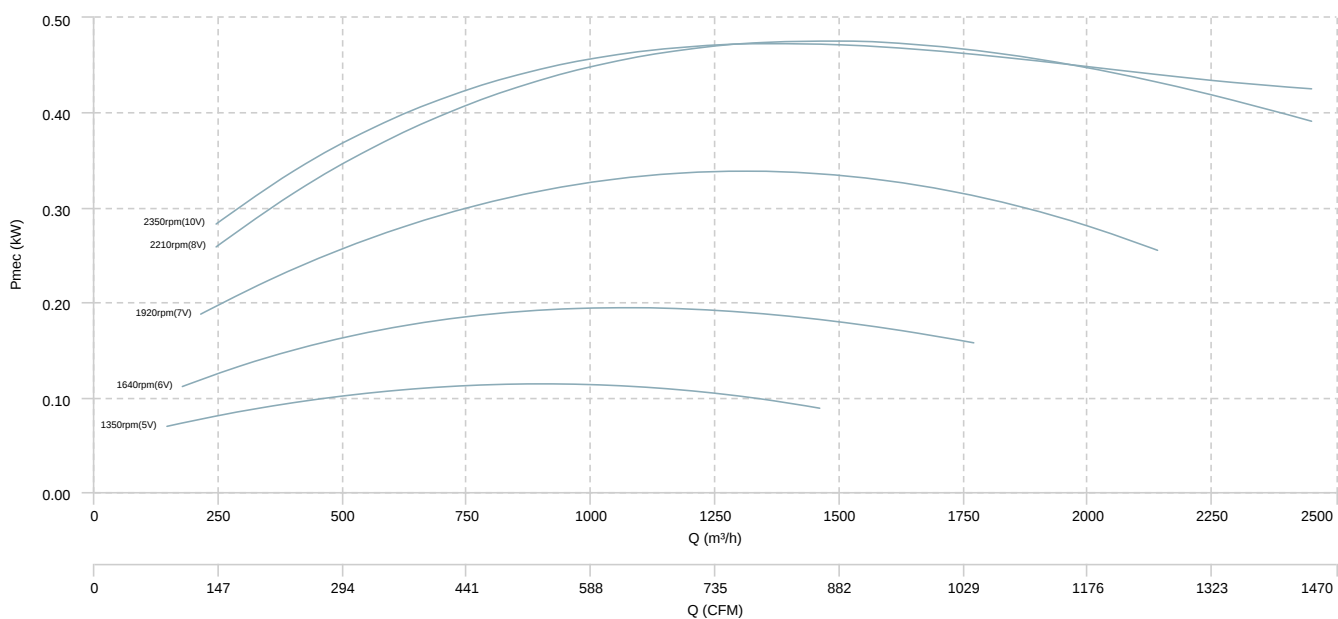


SB-3 FILTER (ISO
Coarse $\geq$ 60%+ePM1 $\geq$ 50%
) 6040 EEC

AIR FLOW - PRESSURE

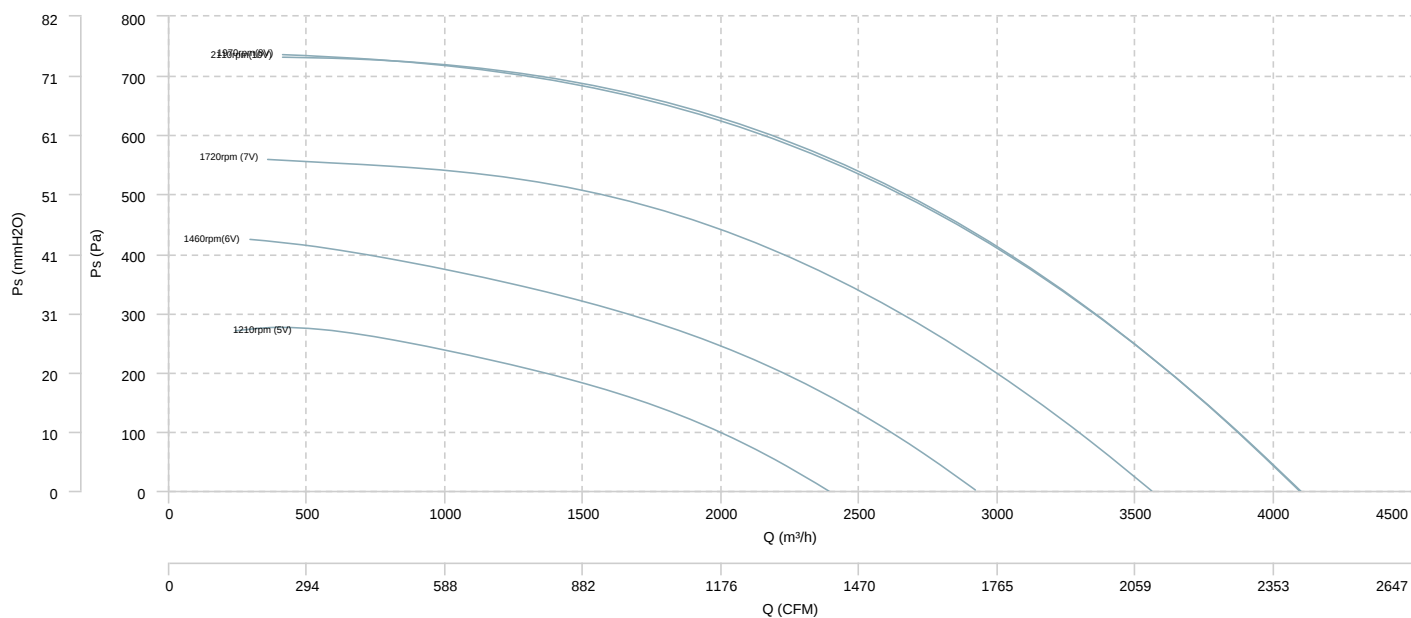


AIR FLOW - MECHANICAL POWER

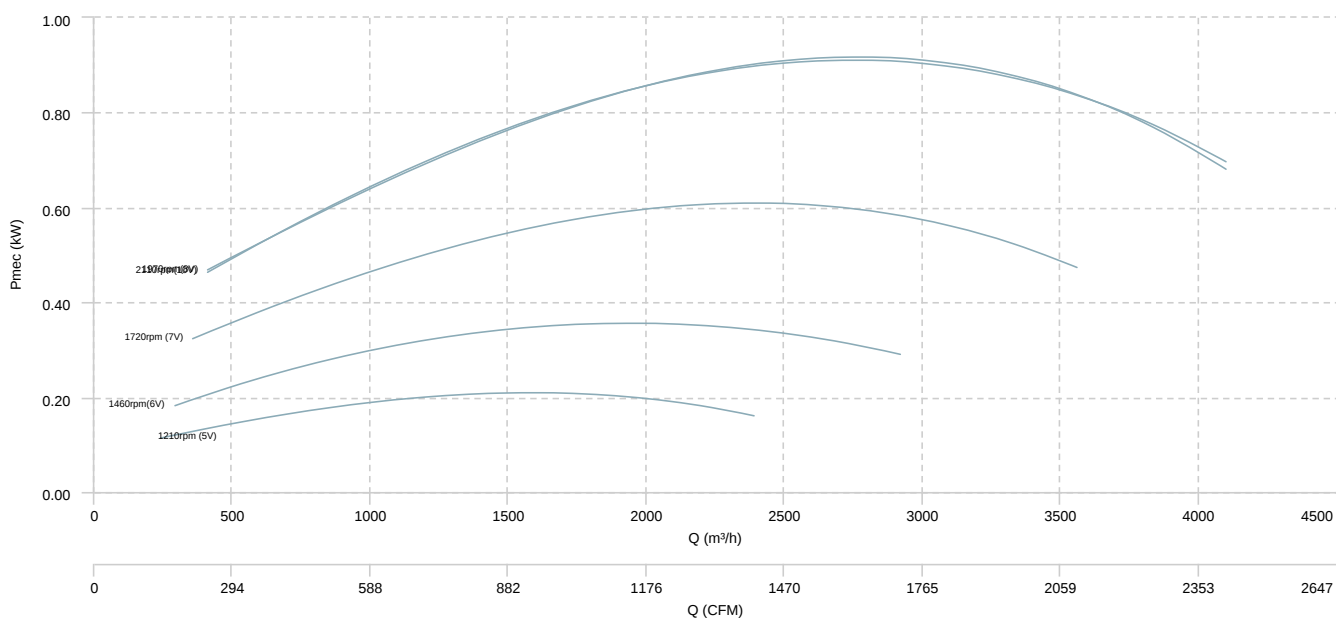


SB-3 FILTER (ISO
Coarse $\geq$ 60%+ePM1 $\geq$ 50%
) 7050 EEC

AIR FLOW - PRESSURE

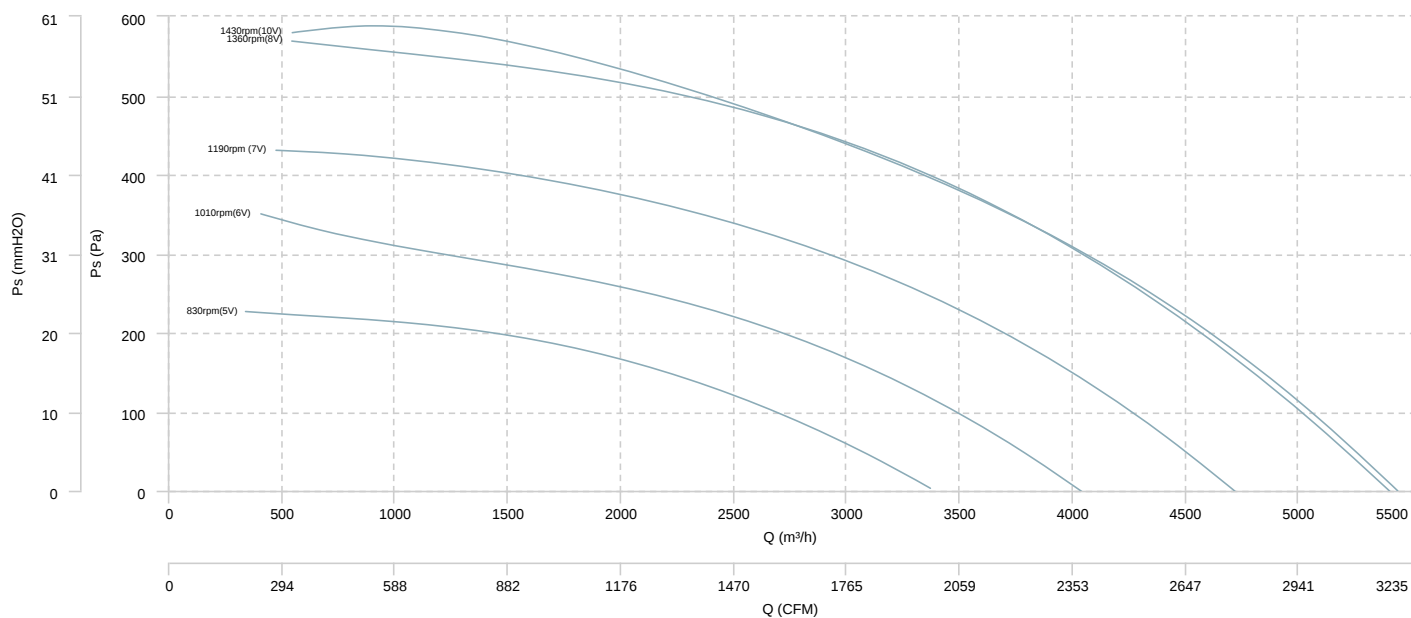


AIR FLOW - MECHANICAL POWER

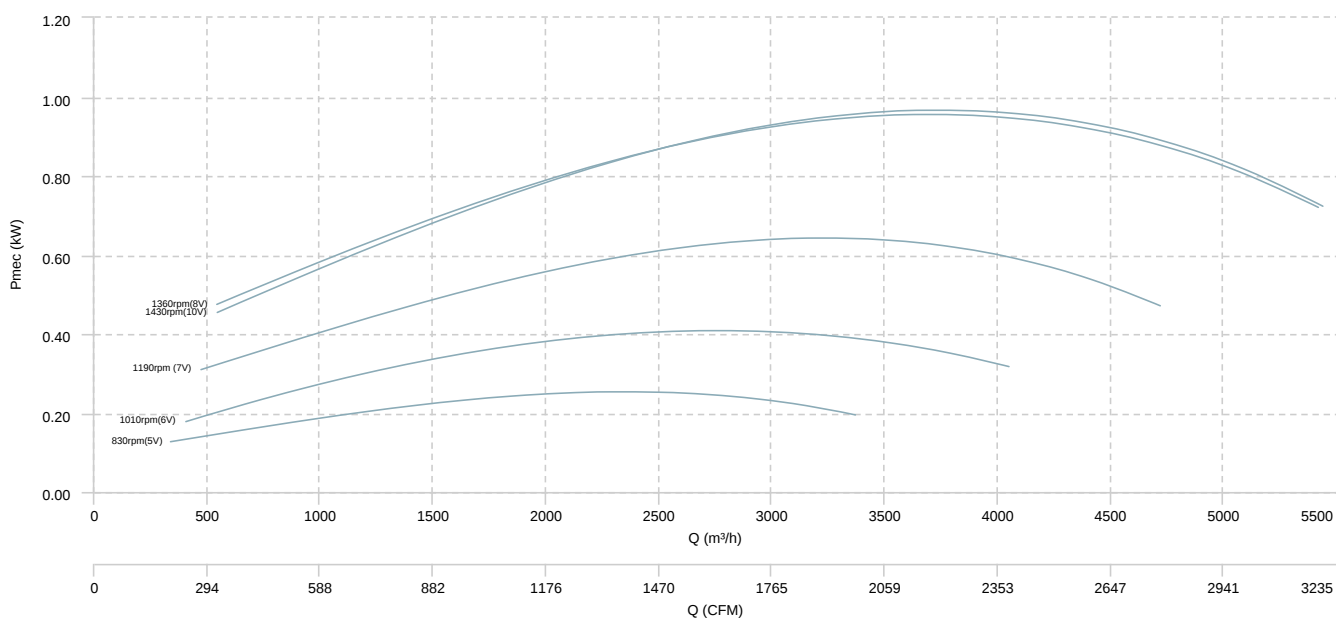


SB-3 FILTER (ISO
Coarse $\geq$ 60%+ePM1 $\geq$ 50%
) 8060 EEC

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
SB-3 FILTER (ISO Coarse≥60%) 3015 EEC (1760rpm (4V))	Radiated	22	12	29	41	46	51	41	34	53
SB-3 FILTER (ISO Coarse≥60%) 4020 EEC (1630rpm (4V))	Radiated	6	13	28	41	49	52	45	37	54
SB-3 FILTER (ISO Coarse≥60%) 5035 EEC (1130rpm (4V))	Radiated	4	18	42	49	52	51	43	29	56
SB-3 FILTER (ISO Coarse≥60%) 6040 EEC (1050rpm (4V))	Radiated	2	21	37	47	48	43	35	27	51
SB-3 FILTER (ISO Coarse≥60%) 7050 EEC (970rpm (4V))	Radiated	17	33	50	55	57	51	43	33	60
SB-3 FILTER (ISO Coarse≥60%) 8060 EEC (650rpm (4V))	Radiated	19	35	39	49	51	44	34	26	53
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 3015 EEC (1760rpm (4V))	Radiated	22	12	29	41	46	51	41	34	53
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 4020 EEC (1630rpm (4V))	Radiated	6	13	28	41	49	52	45	37	54
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 5035 EEC (1130rpm (4V))	Radiated	4	18	42	49	52	51	43	29	56
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 6040 EEC (1050rpm (4V))	Radiated	2	21	37	47	48	43	35	27	51
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 7050 EEC (970rpm (4V))	Radiated	17	33	50	55	57	51	43	33	60
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 8060 EEC (650rpm (4V))	Radiated	19	35	39	49	51	44	34	26	53

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	Static
Others	Outlet and Inlet free discharge
Type of driver	-

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)
SB-3 FILTER (ISO Coarse≥60%) 5035 EEC (2040rpm(7V))	0,15	-	42,98	0,14	740,83	285,72	1.18	940,14
SB-3 FILTER (ISO Coarse≥60%) 5035 EEC (2350rpm(8V))	0,15	-	42,22	0,22	835,18	385,49	1.33	940,14
SB-3 FILTER (ISO Coarse≥60%) 5035 EEC (2500rpm(10V))	0	-	42,12	0,22	833,71	388,59	1.32	940,14
SB-3 FILTER (ISO Coarse≥60%) 6040 EEC (1640rpm(6V))	0	-	45	0,19	1.096,44	276,85	1.27	1.201,05
SB-3 FILTER (ISO Coarse≥60%) 6040 EEC (1920rpm(7V))	0,36	-	45,91	0,34	1.334,47	404,42	1.54	1.201,05
SB-3 FILTER (ISO Coarse≥60%) 6040 EEC (2210rpm(8V))	0	-	46,01	0,47	1.435,67	525,34	1.66	1.201,05
SB-3 FILTER (ISO Coarse≥60%) 6040 EEC (2350rpm(10V))	0,36	-	46,51	0,47	1.401,47	554,08	1.62	1.201,05
SB-3 FILTER (ISO Coarse≥60%) 7050 EEC (1210rpm (5V))	0,99	-	45,90	0,21	1.587,85	205,87	1.26	1.179,91
SB-3 FILTER (ISO Coarse≥60%) 7050 EEC (1460rpm(6V))	0	-	48,68	0,35	1.959,19	306,50	1.55	1.179,91
SB-3 FILTER (ISO Coarse≥60%) 7050 EEC (1720rpm (7V))	0,99	-	50,68	0,60	2.368,59	448,80	1.88	1.179,91
SB-3 FILTER (ISO Coarse≥60%) 7050 EEC (1970rpm(8V))	0	-	51,39	0,90	2.728,63	588,46	2.17	1.179,91
SB-3 FILTER (ISO Coarse≥60%) 7050 EEC (2110rpm(10V))	0	-	51,70	0,90	2.732,58	591,69	2.17	1.179,91
SB-3 FILTER (ISO Coarse≥60%) 8060 EEC (830rpm(5V))	1,01	-	48,61	0,25	2.284,83	181,52	1.32	914,96
SB-3 FILTER (ISO Coarse≥60%) 8060 EEC (1010rpm(6V))	0	-	50,01	0,40	2.814,26	248,70	1.63	914,96
SB-3 FILTER (ISO Coarse≥60%) 8060 EEC (1190rpm (7V))	1,01	-	51,25	0,63	3.257,72	340,48	1.89	914,96
SB-3 FILTER (ISO Coarse≥60%) 8060 EEC (1360rpm(8V))	0	-	52,10	0,93	3.721,62	455,02	2.15	914,96
SB-3 FILTER (ISO Coarse≥60%) 8060 EEC (1430rpm(10V))	0	-	52,36	0,94	3.699,04	455,92	2.14	914,96

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)
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 5035 EEC (2040rpm(7V))	0,15	-	32,19	0,14	576,05	272,64	0.91	1.221,56
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 5035 EEC (2500rpm(10V))	0	-	32,93	0,22	641,76	398,75	1.02	1.221,56
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 6040 EEC (1640rpm(6V))	0	-	39,49	0,19	949,03	281,64	1.1	1.389,83
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 6040 EEC (1920rpm(7V))	0,36	-	40,14	0,34	1.165,38	405,51	1.35	1.389,83
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 6040 EEC (2210rpm(8V))	0	-	40,68	0,47	1.212,34	556,51	1.4	1.389,83
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 6040 EEC (2350rpm(10V))	0,36	-	41,58	0,47	1.217,73	575,91	1.41	1.389,83
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 7050 EEC (1210rpm (5V))	0,99	-	38,32	0,21	1.358,32	198,99	1.08	1.373,82
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 7050 EEC (1460rpm(6V))	0	-	40,76	0,35	1.676,62	296,01	1.33	1.373,82
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 7050 EEC (1720rpm (7V))	0,99	-	42,20	0,60	2.030,04	435,23	1.61	1.373,82
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 7050 EEC (1970rpm(8V))	0	-	42,52	0,90	2.327,25	568,67	1.85	1.373,82
SB-3 FILTER (ISO Coarse≥60%+ePM1≥50%) 7050 EEC (2110rpm(10V))	0	-	42,94	0,89	2.343,90	570,29	1.86	1.373,82