

Rotron Model L Multistage Blowers

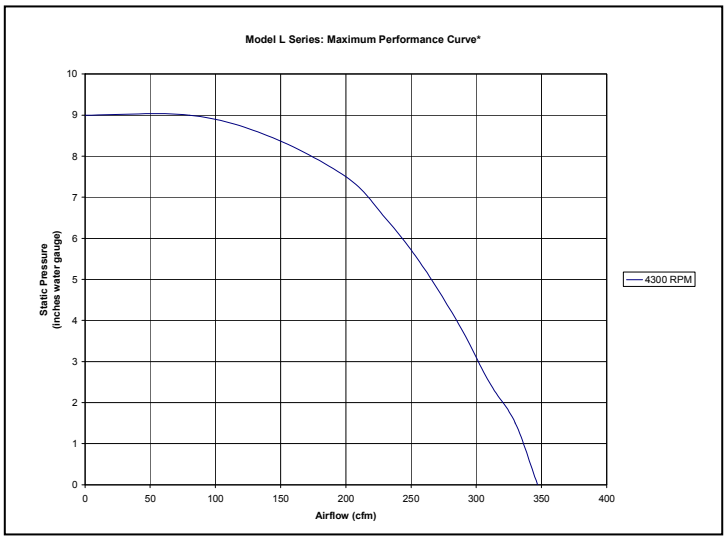
General Multistage Blower Information

Rotron M and L Multistage Blowers are unusually compact and light in comparison to conventional multistage turbines. These blowers operate quietly and efficiently and contain no sliding or reciprocating parts. They can be provided as motor or belt driven blowers.

Multistage Blowers have uniquely large pressure-to-volume rations and thus are ideal for applications requiring relatively small volumes of air to be moved against large pressure heads. Typical applications include cooling of U.H.F. radio transmitter tube seals and microwave cavities, sampling of air for nuclear radiation and use in artificial lungs and in computer-tape slack control. These blowers can be used for suction, for pressure and in closed air circuit systems.

Multistage Blowers come in a variety of voltages and frequencies and are available with a variety of inlet and outlet configurations. Most units are available with an optional internal Fan Performance Sensor (FPS) or external Low Speed Warning Device (LSWD).

Rotron Model L





*Individual Performance Curve Characteristics Available Upon Request

General

- Physical envelope: 14.00” Dia. x 17.62”L [1].
- Weight: 57 lbs.
- Suitable for cooling UHF radio transmitter tube seals and microwave cavities, sampling of air for nuclear radiation, and use in artificial lungs and in computer-tape slack control.

[1] See specific part-number drawing for complete product dimensions.

Materials and Finishes

- Aluminum components finished with a chemical conversion coating per MIL-C-5541, top coat of lusterless black enamel, color #37038, per Federal Standard 595 conforming to TT-E-489 Type B.
- Steel housing is primed and top coated.
- Cascaded blower stages mounted on a single, hollow stainless steel shaft that runs on two double-shielded, double-width ball bearings that are greased for life.

Options/Accessories

- LSWD (Low Speed Warning Device)
- FPS (Fan Performance Sensor)

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AC Line Powered Units[1]

- 3-phase and 1-phase permanent-split capacitor motor designs.
- Fixed speeds (performance) based on input frequency.
- Meets or exceeds the requirements of MIL-B-23071 and other applicable U.S. military and commercial aerospace specifications [2].
- Max free delivery airflow of 332 CFM at 50, 351 CFM at 60 Hz and 395 CFM at 400 Hz.
- Ambient temperature range: -54 °C to 100 °C.

DC Line Powered Units - E.C.D.C.®

- Not available with this model blower.

[1] Airflow, maximum ambient and acoustic levels will vary depending on design parameters

[2] Please call for further information concerning applicable U.S. military and commercial aerospace specifications

Optional DC-AC Inverters and AC-AC Converters for AC Powered Models[1]

BATAC® Inverter Driven Units

- AC square wave fans driven from a DC power source through a BATAC® Inverter.

DELTAC® Converter Driven Units

- DELTAC® converters allow high frequency (typically 400 Hz) fans to be driven by variable frequency (typically 360-800 Hz) power or low frequency 50/60 Hz power to obtain the higher frequency performance.

[1] See Accessories: Power Conversion

Unit Description Key

The unit description key is for reference only and should not be confused with a part number. While most units are custom configurations, not all variations of the key shown below are possible. Please contact the Application Engineering department for more information regarding possible custom configurations.

L = MULTISTAGE, 100020 & 120005 SERIES

AIRFLOW: "L" = FROM MOTOR TOWARD BLOWER (MOTOR IS CCW)
"R" = FROM BLOWER TOWARD MOTOR (MOTOR IS CW)

COVER END
AIR PASSAGE: S = AIR IN OR OUT THRU PLAIN OPENING WITH SCREEN
P = AIR IN OR OUT THRU NOZZLE WITH HOSE CLAMP
Z = AIR IN THRU OIL WETTED FILTER

MOTOR END
AIR PASSAGE: P = AIR IN OR OUT OVER MOTOR SURFACE THRU SLOTS, NO COLLAR
M = AIR IN OR OUT OVER MOTOR SURFACE THRU SLOTS, UNDER MACHINED COLLAR (HOSE CLAMP & O-RING GROOVE
Z = AIR IN THRU OIL WETTED FILTER
U = AIR OUT THRU TANGENTIAL NOZZLE(S)

LRPP / K4 - 100020 MTG. DETAIL2 ← FOR COMPLETE DESCRIPTION ADD MOTOR DESCRIPTION & MTG. DETAIL

TYPE NO. 100020 = 10" DIA. IMPELLER 1.25 WIDE
120005 = 12" DIA. IMPELLER .31 WIDE

NO. OF STAGES

"X" IN ANY POSITION DENOTES SPECIAL FOR THAT FEATURE

EXAMPLE: LRPP/K4 100020

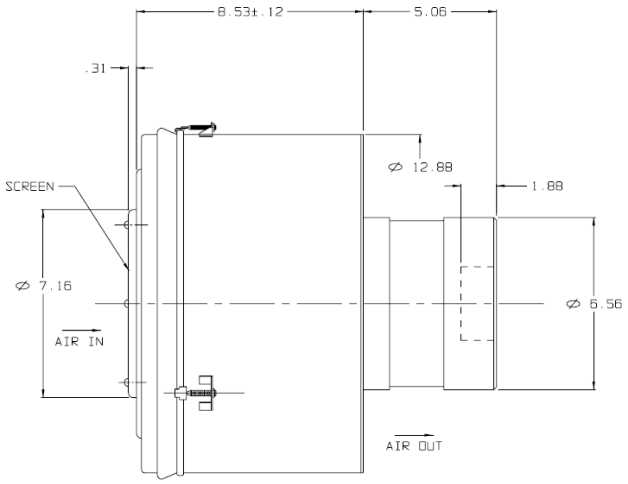
	NO. POLES	NO. PHASES	APPROX. SPEED - NO LOAD (REF.) 50 Hz	60 Hz	400 Hz
A	2	3	2900	3500	-
B	4	3	1450	1750	-
E	6	1 OR 3	950	1150	-
F	8	1 OR 3	700	850	-
K	2	1	2900	3500	-
L	4	1	1450	1450	-
M	6	1 OR 3	-	-	7500
N	8	1 OR 3	-	-	5500
P	12	1 OR 3	-	-	3900
Q	4	1 OR 3	-	-	11000
R	2	1 OR 3	-	-	23000

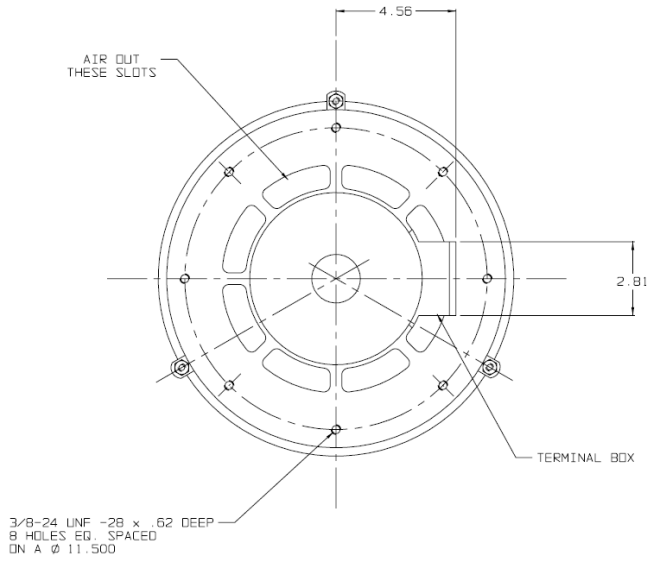
NOTE: DUAL FREQUENCY OR DUAL POLE MOTORS DESIGNATED BY USING 2 DIGITS. EX: KM = 2 POLE 1Φ 50/60 Hz, 6 POLE 1Φ 400 Hz

Ordering Information

When ordering, please specify the specific Rotron part number listed on the model table below. Further ordering information, based on the configuration and motor series, may be obtained by contacting customer service. Please refer to the Unit Description Key explanation.

MODEL L – AC





*Part Number Specific Drawings Available Upon Request

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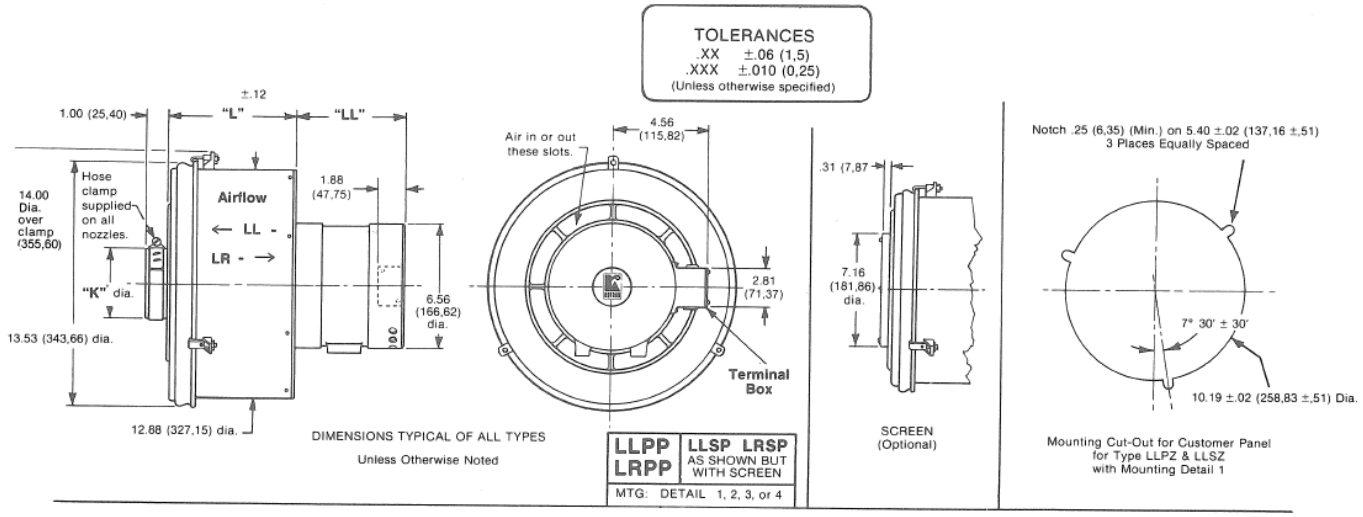
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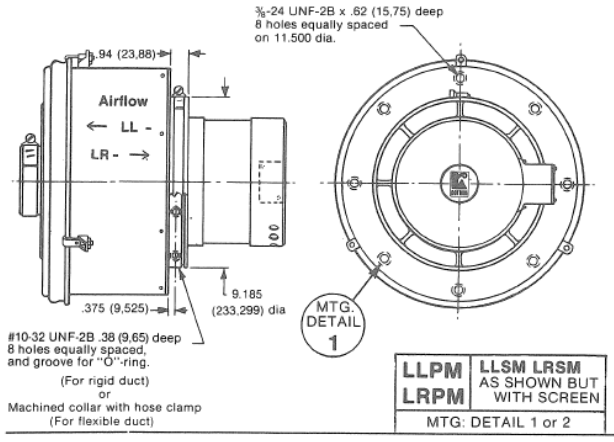
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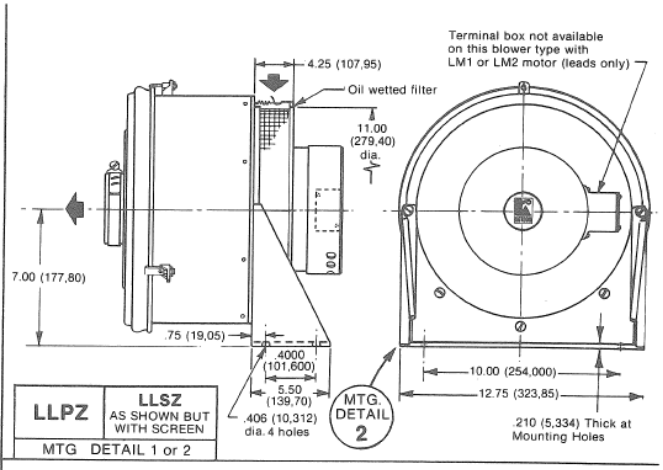


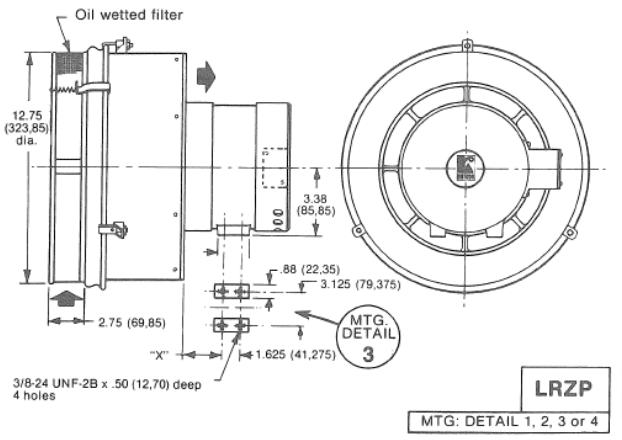
MULTISTAGE BLOWERS

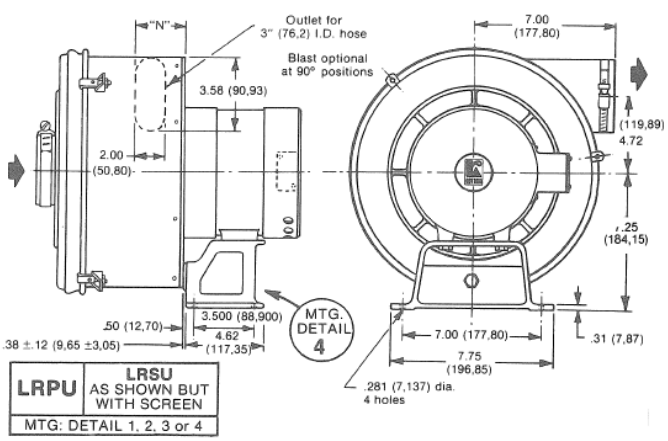
MODEL L MULTISTAGE











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MODEL L BLOWERS

ELECTRICAL SPECIFICATIONS

See Hookup Section for Motor Wiring

Type	Frame	Series	Volts	Phase	Hz	Cap. † Mfd.	Nom. RPM	Full Load Watts	Line Amps	Lock. Rotor Amps	Air CFM at Free Del.	Motor Motor Series	Variant Line Voltag
K2-120005	LM-1	250AF	115	1	60	8.0	3350	320	3.0	10.4	117	236AF	230*
A2-120005	LM-1	285JF	115	3	50	-	2925	185	1.7	-	108	280JF	220
					60		3450	270	1.7	9.5	130	319JF	440
N2-120005	LM-2	579JF	115	3	400	-	5800	1080	9.0	28.0	215	524JF	208
K3-120005	LM-1	250AF	115	1	60	8.0	3200	420	3.9	10.4	120	236AF	230*
A3-120005	LM-1	285JF	115	3	60	-	3350	450	2.5	9.5	120	280JF	220
												319JF	440
P3-120005	LM-2	313JF	200	3	400	-	3800	555	3.3	9.2	115		
K4-120005	LM-1	250AF	115	1	60	8.0	3120	500	4.4	10.4	125	236AF	230*
A4-120005	LM-3	204JF	200	3	60	-	3530	615	2.4	22.0	110		
P6-120005	LM-2	313JF	200	3	400	-	3800	920	4.4	9.2	145		
K2-100020	LM-3	452AF	115	1	50	15.0	2900	600	10.5	36.0	290	531CF	230
A2-100020	LM-1	285JF	115	3	60	-	3270	550	3.2	9.5	330	280JF	220
												319JF	440
P2-100020	LM-2	209JF	115	3	400	-	3800	950	7.7	14.5	385	325JF	220
												203JF	440
K3-100020	LM-3	452AF	115	1	50	15.0	2860	760	10.2	36.0	300	531CF	230
					60	15.0	3370	970	9.4	33.0	350		
A3-100020	LM-3	714JF	380	3	50	-	2800	530	0.9	5.0	295		
A3-100020	LM-3	469JF	115	3	60	-	3400	900	5.0	23.0	350	291JF	220
												248JF	440
P3-100020	LM-3	317JF	115	3	400	-	3890	1300	15.5	38.0	395	352JF	208

* CAP. 4.0 mfd.

MECHANICAL SPECIFICATIONS

Type	"K"	"L"	"LL"	"N"	"X"
	Lbs. (Kg.)	Inches (mm)			
K2-120005	4	3.94	5.06		1.22
	(101,60)	(100,08)	(128,52)		(30,99)
A2-120005	4	3.94	5.06	-	1.22
	(101,60)	(100,08)	(128,52)		(30,99)
N2-120005	4	3.94	6.06	-	1.72
	(101,60)	(100,08)	(153,92)		(43,69)
K3-120005	4	5.34	5.06	3.06	1.22
	(101,60)	(135,64)	(128,52)	(77,72)	(30,99)
A3-120005	4	5	6.06		1.72
	(101,60)	(127,00)	(153,92)		(43,69)
P3-120005	4	5	6.06	1.72	
	(101,60)	(127,00)	(153,92)		(43,69)
K4-120005	4	6.4	5.06	3.06	1.22
	(101,60)	(162,56)	(128,52)	(77,72)	(30,99)
A4-120005	4	6.4	7.06	3.06	2.22
	(101,60)	(162,56)	(179,32)	(77,72)	(56,39)
P6-120005	4	8.53	6.06	3.06	1.72
	(101,60)	(216,66)	(153,92)	(77,72)	(43,69)
K2-100020	5	8.62	7.06	-	2.22
	(127,00)	(218,95)	(179,32)		(56,34)
A2-100020	5	8.62	5.06	-	1.22
	(127,00)	(218,95)	(128,52)		(30,99)
P2-100020	5	8.62	6.06	-	1.72
	(127,00)	(218,95)	(153,92)		(43,69)
K3-100020	5	11.59	7.06	-	2.22
	(127,00)	(239,62)	(179,32)		(56,34)
A3-100020	5	11.56	7.06	-	2.22
	(127,00)	(293,62)	(179,32)		(56,34)
A3-100020	5	11.56	7.06	-	2.22
	(127,00)	(293,62)	(179,32)		(56,34)
P3-100020	5	11.56	7.06	-	2.22
	(127,00)	(293,62)	(179,32)		(56,34)

† Running capacitors not normally supplied by Rotron
For 3-phase motors all voltages are phase-to-phase

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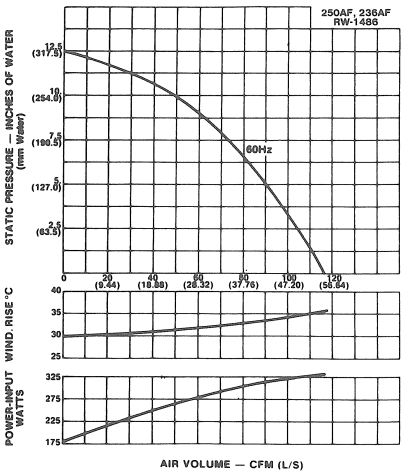
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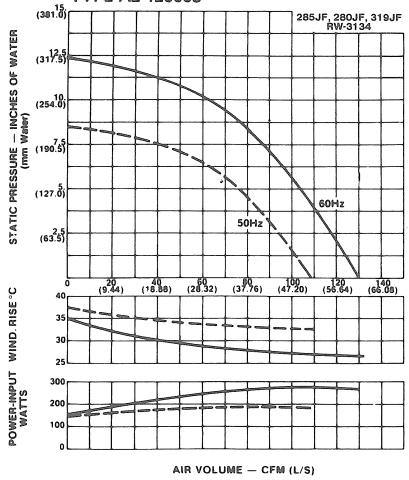
MULTISTAGE BLOWERS

MODEL L BLOWERS

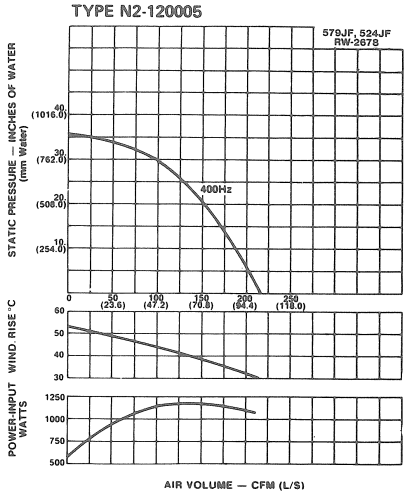
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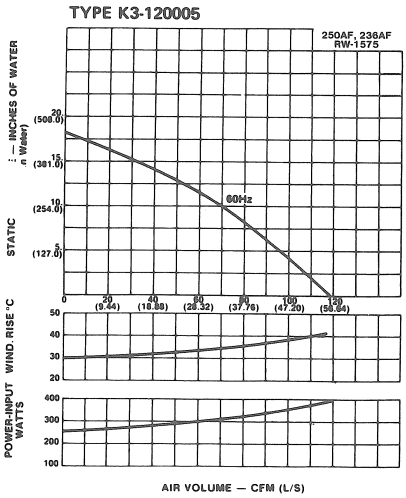
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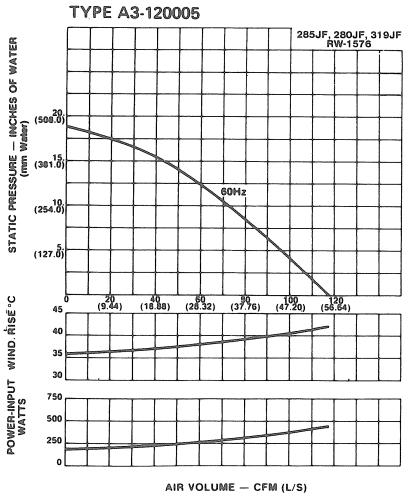
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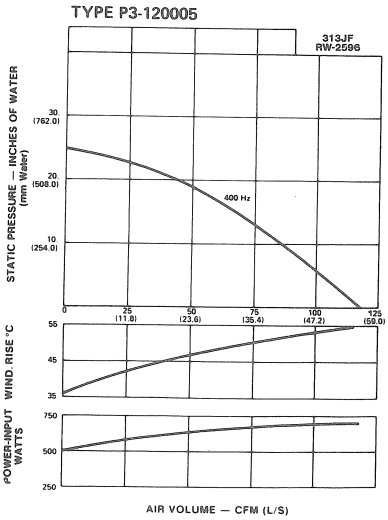
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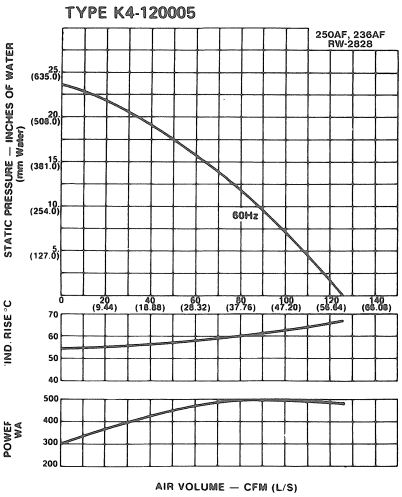
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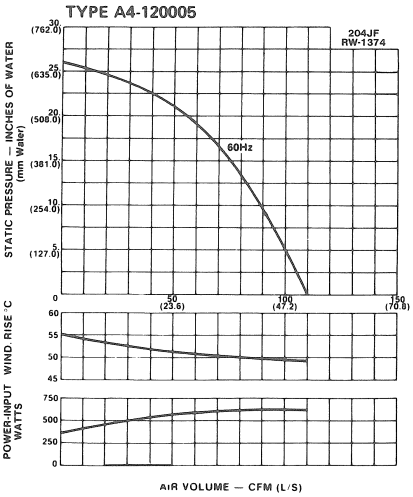
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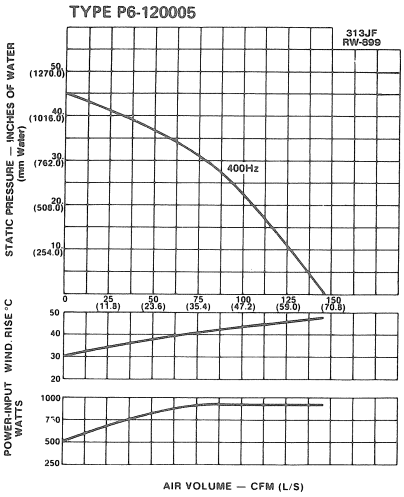
TYPE K4-120005



TYPE A4-120005



TYPE P6-120005



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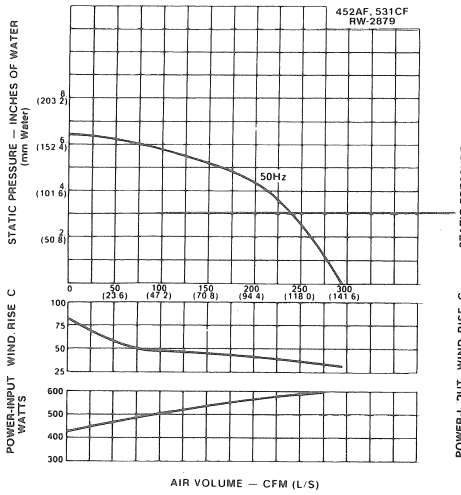
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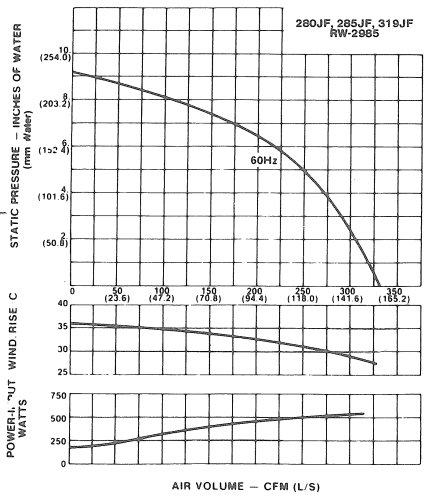
MULTISTAGE BLOWERS

MODEL L BLOWERS

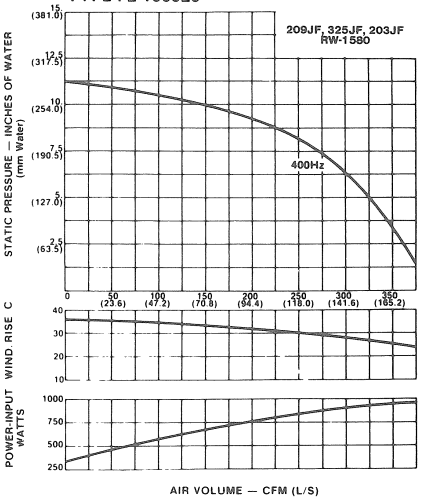
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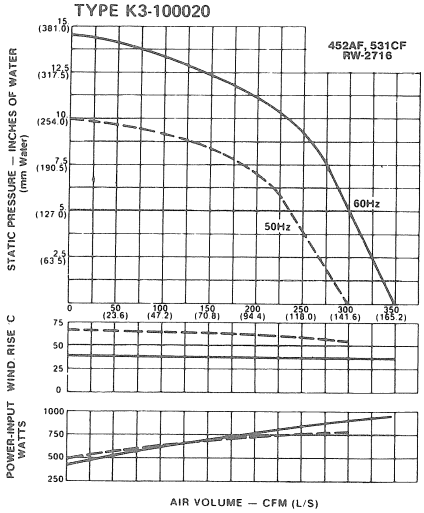
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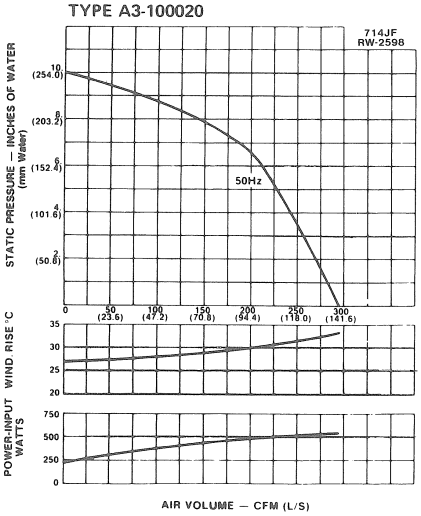
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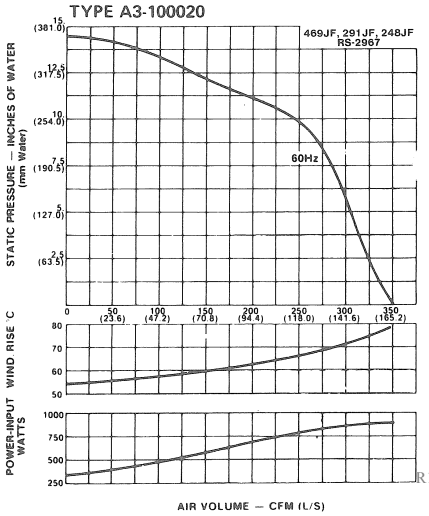
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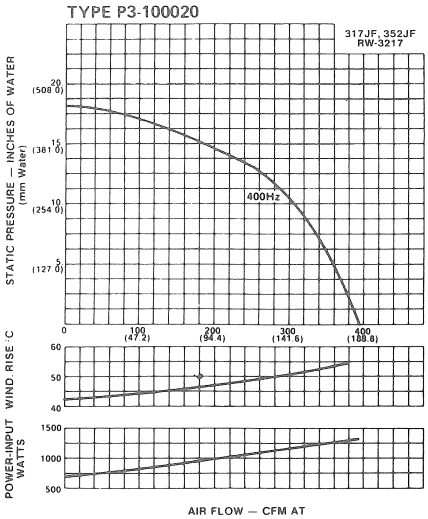
TYPE A3-100020



TYPE A3-100020



TYPE P3-100020



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