



# Fan & Blowers

## Motorized Impellers and Centrifugal Blowers



Backward & Forward Curved • 2 & 4 Pole Motors • Single & Dual Inlet





# *HVAC Air Movers Designed for Hard Work and Long Service*

## **MOTOR DESIGN CONSIDERATIONS**

To assure optimum performance of an air moving device, proper and careful motor design is critical. Soler & Palau's (S&P) state-of-the-art proprietary engineering and manufacturing programs produce external rotor motors that overcome inertia, achieve the specified operation speed, and operate at that speed without excessive power consumption or heat generation.

S&P fans and motors are dynamically balanced in two planes in accordance with the VDI 2060 standard. Ball bearings, with protective metal rings on both sides, are used to provide maintenance free operation with an average life of 40,000 hours. These motors can be operated with the shaft aligned with either the vertical or horizontal axis. All motors are manufactured with UL Class B insulation. UL Class F can be supplied upon request. A bimetallic self-resetting thermal protection design that prevents damage caused by a short circuit of the capacitor, locked rotor or over voltage is standard. These motors are designed to meet UL, CSA, VDE and TUV standards; many models are currently approved.

S&P motors can be speed controlled through the use of fixed or variable resistances, auto-transformers or electronic controllers. For specific applications, special motors can be supplied with 3-speed step windings. All fans and motors feature an IP44 rating for protection against dust and water. For special applications motors with IP20 or IP00 are also available. All S&P products are manufactured in modern ISO 9002 certified facilities.

## **QUIET, LOW PROFILE, HIGH PERFORMANCE**



Soler & Palau's motorized impellers and centrifugal blowers are designed for installation in compact spaces and feature airflow over the motor for excellent heat dissipation and extended reliability. This one-piece assembly eliminates rotational vibration problems experienced with traditional blowers, where the impeller is mechanically affixed to the shaft with a hub and set screw. These innovative products are available in 115VAC or

230VAC and operate at 50HZ or 60HZ.

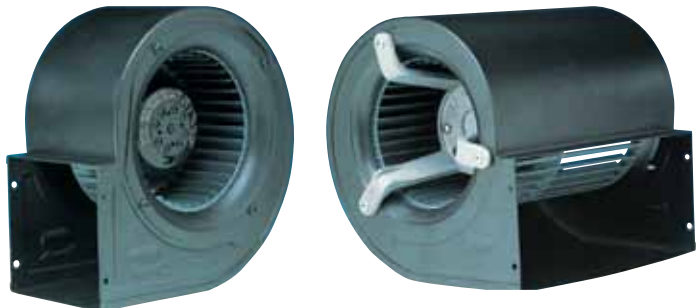
Typical uses include a variety of HVAC venting, exhausting and filtering applications where long hours and harsh conditions are usually found. Ultra-quiet and ultra-efficient, these units are the newest addition to an extensive product line of air moving devices designed and manufactured by S&P; a global pioneer in motor, fan, blower and ventilation technology.



## **TYPICAL APPLICATIONS**

- Exhausting Industrial Processes • Roof and Building Ventilation • Radon Evacuation • Cleanroom and Other Sensitive HEPA Filtering Applications • Laboratory and Research Facility Ventilation • Air Conditioners, Heat Exchangers • In-Line Duct Blowers • Range Hoods, Fire Place Inserts
- Humidifiers/Dehumidifiers • Hand Dryers

## Forward Curved Blowers

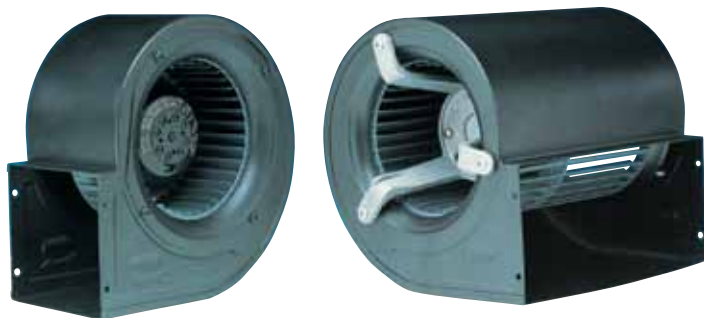


### **DESCRIPTION**

*S&P Forward Curved Centrifugal Blowers use the same versatile external rotor motor as our motorized impellers. The forward curved motorized impellers are designed to provide optimal performance when operated with a scroll housing designed by S&P.*

# Forward Curved Blowers

## Single Inlet Blowers



### **DESCRIPTION**

*S&P Forward Curved Centrifugal Blowers use the same versatile external rotor motor as our motorized impellers. The forward curved motorized impellers are designed to provide optimal performance when operated with a scroll housing designed by S&P.*

### **Product Features**

- Sealed Ball Bearings
- 20" (500 mm) Standard Lead Length
- Clockwise Rotation Viewing Inlet (Single Inlet Only)
- UL and cUL listed for Electrical Safety
- All models have been independently tested for safety by Underwriters Laboratories, Inc.
- All models are fitted with an internal Thermal Overload Protection Device.

### **Optional Accessories**

- Outlet Flanges

### **Models**

- Single Inlet
- Dual Inlet

# Forward Curved Blowers

## Single Inlet Blowers

### 2 and 4 Pole Motors

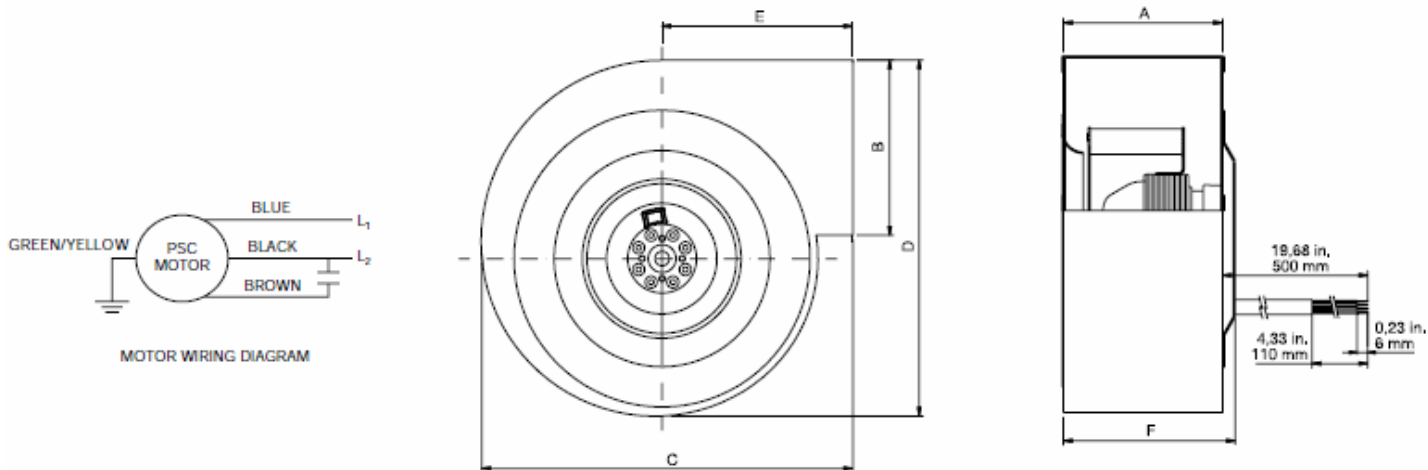


Single Inlet Forward Curved Centrifugal Blowers are compact units that can be used to either pressurize or evacuate in air moving applications. The impellers are permanently mounted to the external rotors for ease of installation and maintenance-free operation. These units may be mounted in any orientation to provide maximum airflow in minimum areas.

### Product Features

- Sealed Ball Bearings
- 20" (500 mm) Standard Lead Length
- Clockwise Rotation Viewing Inlet (Single Inlet Only)
- UL and cUL listed for Electrical Safety
- All models have been independently tested for safety by Underwriters Laboratories, Inc.
- All models are fitted with an internal Thermal Overload Protection Device.

### Dimensions





# Forward Curved Blowers

## Single Inlet Blowers

### 2 and 4 Pole Motors

## Dimensions

### 2 Pole Motors

MODEL	A		B		C		D		E		F	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
RF2C-120/062 K064 S	3.07	78	2.71	69	6.89	175	7.12	181	3.46	88	3.89	99
RF2C-120/062 K010 S	3.07	78	2.71	69	6.89	175	7.12	181	3.46	88	3.89	99
RF2C-140/059 K000 S	3.85	98	3.7	94	8.82	224	9.60	224	4.05	103	3.86	98
RF2C-140/059 K172 S	3.85	98	3.7	94	8.82	224	9.60	224	4.05	103	3.86	98
RF2C-140/059 K000 S	3.85	98	3.7	94	8.82	224	9.60	224	4.05	103	3.86	98
RF2C-140/059 K147 S	3.85	98	3.7	94	8.82	224	9.60	224	4.05	103	3.86	98
RF2C-146/062 K000 S	3.85	98	3.7	94	8.82	224	9.60	224	4.05	103	3.86	98
RF2C-146/062 K124 S	3.85	98	3.7	94	8.82	224	9.60	224	4.05	103	3.86	98
RF2C-160/062 K179 S	3.85	98	3.7	94	8.82	224	9.60	224	4.06	103	4.21	107
RF2C-160/062 K117 S	3.85	98	3.7	94	8.82	224	9.60	224	4.06	103	4.21	107

### 4 Pole Motors

MODEL	A		B		C		D		E		F	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
RF4C-160/062 K000 S	3.85	98	3.70	94	8.82	224	9.60	244	4.06	103	3.86	98
RF4C-160/062 K040 S	3.85	98	3.70	94	8.82	224	9.60	244	4.06	103	3.86	98
RF4C-180/075 K000 S	4.33	110	4.80	122	10.43	265	10.24	260	5.70	145	4.33	110
RF4C-180/075 K069 S	4.33	110	4.80	122	10.43	265	10.24	260	5.70	145	4.33	110
RF4C-180/092 K000 S	5.23	133	5.35	136	11.65	296	13.07	332	5.24	133	5.24	133
RF4C-180/092 K107 S	5.23	133	5.35	136	11.65	296	13.07	332	5.24	133	5.24	133
RF4C-200/074 K000 S	4.37	111	5.82	148	12.59	320	14.56	370	5.35	136	4.37	111
RF4C-200/074 K114 S	4.37	111	5.82	148	12.59	320	14.56	370	5.35	136	4.37	111



# Forward Curved Blowers

## Single Inlet Blowers

2 and 4 Pole Motors

### Technical Data

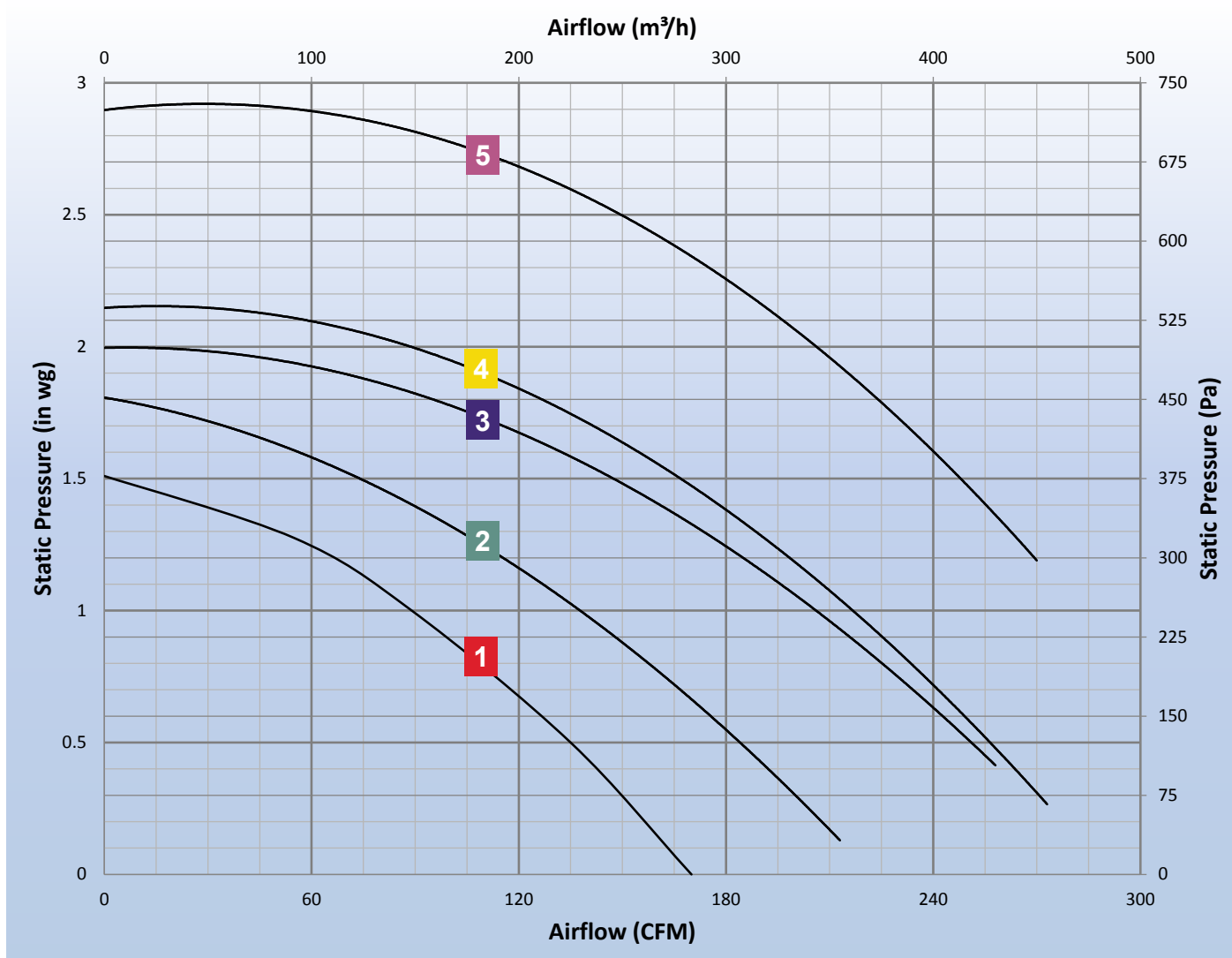
#### 2 Pole Motors



MODEL	N°	V	Hz	CFM	W	RPM	dBA	μF	Lim. In. Wg.	Impeller Material
RF2C-120/062 K064 S	1	115	60	168	80	2350	70	8	0	Metallic
RF2C-120/062 K010 S	1	230	60	168	80	2350	70	2	0	Metallic
RF2C-140/059 K000 S	2	115	60	206	105	1500	57	8	0.2	Metallic
RF2C-140/059 K172 S	2	230	60	206	105	1500	57	2	0.2	Metallic
RF2C-140/059 K000 S	3	115	60	256	160	2000	65	12	0.4	Metallic
RF2C-140/059 K147 S	3	230	60	256	160	2000	65	3	0.4	Metallic
RF2C-146/062 K000 S	4	115	60	272	155	1900	62	10	0.2	Metallic
RF2C-146/062 K124 S	4	230	60	272	155	1900	62	2.5	0.2	Metallic
RF2C-160/062 K179 S	5	115	60	265	250	2360	73	20	1.2	Metallic
RF2C-160/062 K117 S	5	230	60	265	250	2360	73	5	1.2	Metallic

All data taken at the Lim In. Wg point indicated at the table for each model (name plate rating may vary from data).

### Technical Curves



# Forward Curved Blowers

## Single Inlet Blowers

2 and 4 Pole Motors

### Technical Data

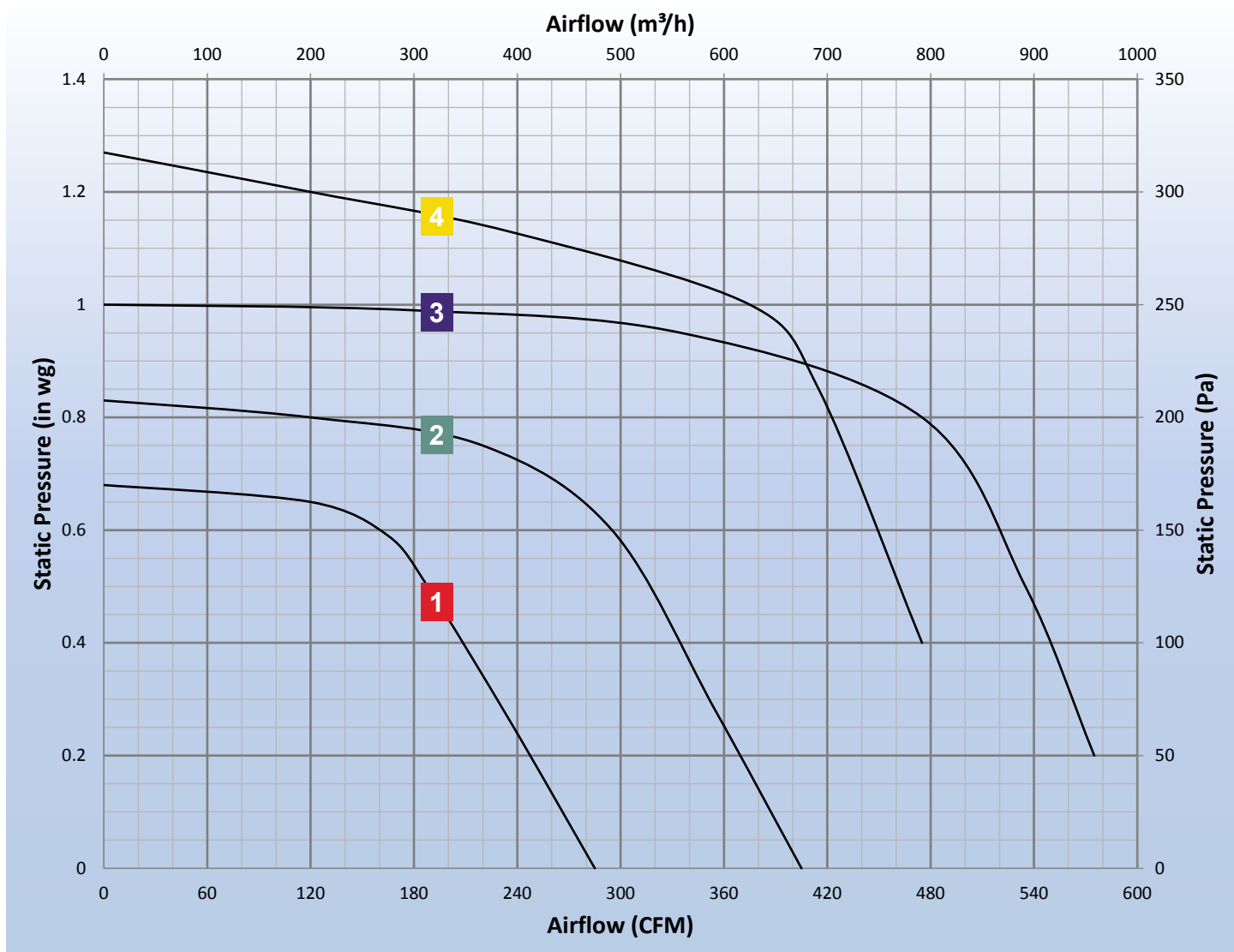
#### 4 Pole Motors



MODEL	N°	V	Hz	CFM	W	RPM	dBA	μF	Lim. In. Wg.	Impeller Material
RF4C-160/062 K000 S	1	115	60	282	80	1450	68	10	0	Metallic
RF4C-160/062 K040 S	1	230	60	282	80	1450	68	2.5	0	Metallic
RF4C-180/075 K000 S	2	115	60	397	155	1400	66	12	0	Metallic
RF4C-180/075 K069 S	2	230	60	397	155	1400	66	3	0	Metallic
RF4C-180/092 K000 S	3	115	60	565	220	1350	66	16	0.2	Metallic
RF4C-180/092 K107 S	3	230	60	565	220	1350	66	4	0.2	Metallic
RF4C-200/074 K000 S	4	115	60	470	190	1350	68	20	0.4	Metallic
RF4C-200/074 K114 S	4	230	60	470	190	1350	68	5	0.4	Metallic

All data taken at the Lim In.Wg point indicated at the table for each model (name plate rating may vary from data).

### Technical Curves

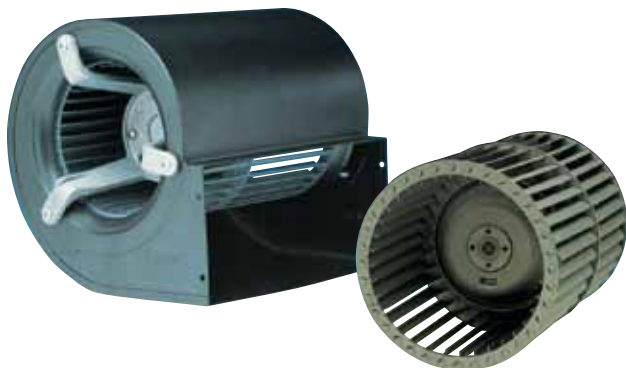




# Forward Curved Blowers

## Double Inlet Blowers

### 2 and 4 Pole Motors

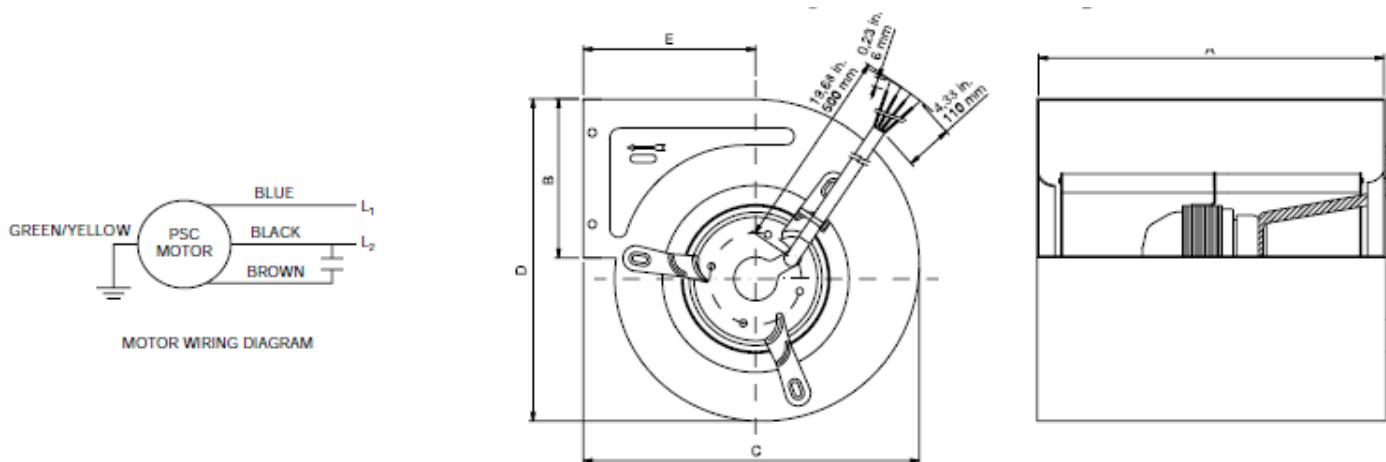


Dual Inlet Forward Curved Centrifugal Blowers are designed for use where space limitations are a problem. The impellers are permanently mounted to the external rotors for ease of installation and maintenance-free operation. These units may be mounted in any orientation for effective air movement. Optional configuration includes different size scroll housing and impellers mounted on either end of the motor, airflow aimed at any angle and various output characteristics.

### Product Features

- Sealed Ball Bearings
- 20" (500 mm) Standard Lead Length
- Clockwise Rotation Viewing Inlet (Single Inlet Only)
- UL and cUL listed for Electrical Safety
- All models have been independently tested for safety by Underwriters Laboratories, Inc.
- All models are fitted with an internal Thermal Overload Protection Device.

### Dimensions



# Forward Curved Blowers

## Single Inlet Blowers

### 2 and 4 Pole Motors

## Dimensions

### 2 Pole Motors

MODEL	A		B		C		D		E	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
RF2C-133/190 K194 S	9.13	232	3.94	100	7.88	200	8.07	205	3.94	100
RF2C-133/190 K097 S	9.13	232	3.94	100	7.88	200	8.07	205	3.94	100
RF2C-146/180 K000 S	9.13	232	3.94	100	7.88	200	8.07	205	3.94	100
RF2C-146/180 K102 S	9.13	232	3.94	100	7.88	200	8.07	205	3.94	100
RF2C-133/190 K000 SS	8.46	215	2.71	69	6.89	175	7.12	181	3.46	88
RF2C-133/190 K093 SS	8.46	215	2.71	69	6.89	175	7.12	181	3.46	88

### 4 Pole Motors

MODEL	A		B		C		D		E	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
RF4C-133/190 K222 SS	8.46	215	2.71	69	6.89	175	7.12	181	3.46	88
RF4C-133/190 K109 SS	8.46	215	2.71	69	6.89	175	7.12	181	3.46	88
RF4C-133/190 K000 S	9.13	232	3.94	100	7.88	200	8.07	205	3.94	100
RF4C-133/190 K030 S	9.13	232	3.94	100	7.88	200	8.07	205	3.94	100
RF4C-133/190 K251 S	9.13	232	3.94	100	7.88	200	8.07	205	3.94	100
RF4C-133/190 K040 S	9.13	232	3.94	100	7.88	200	8.07	205	3.94	100
RF4C-146/180 K000 S	9.13	232	3.94	100	7.88	200	8.07	205	3.94	100
RF4C-146/180 K040 S	9.13	232	3.94	100	7.88	200	8.07	205	3.94	100
RF4C-160-150 K000 S	6.92	176	4.13	105	8.81	224	9.44	240	4.48	114
RF4C-160-150 K048 S	6.92	176	4.13	105	8.81	224	9.44	240	4.48	114
RF4C-180/184 K136 S	8.81	224	4.84	123	10.5	267	10.27	261	5.70	145
RF4C-180/184 K107 S	8.81	224	4.84	123	10.5	267	10.27	261	5.70	145

# Forward Curved Blowers

## Double Inlet Blowers

2 and 4 Pole Motors

### Technical Data

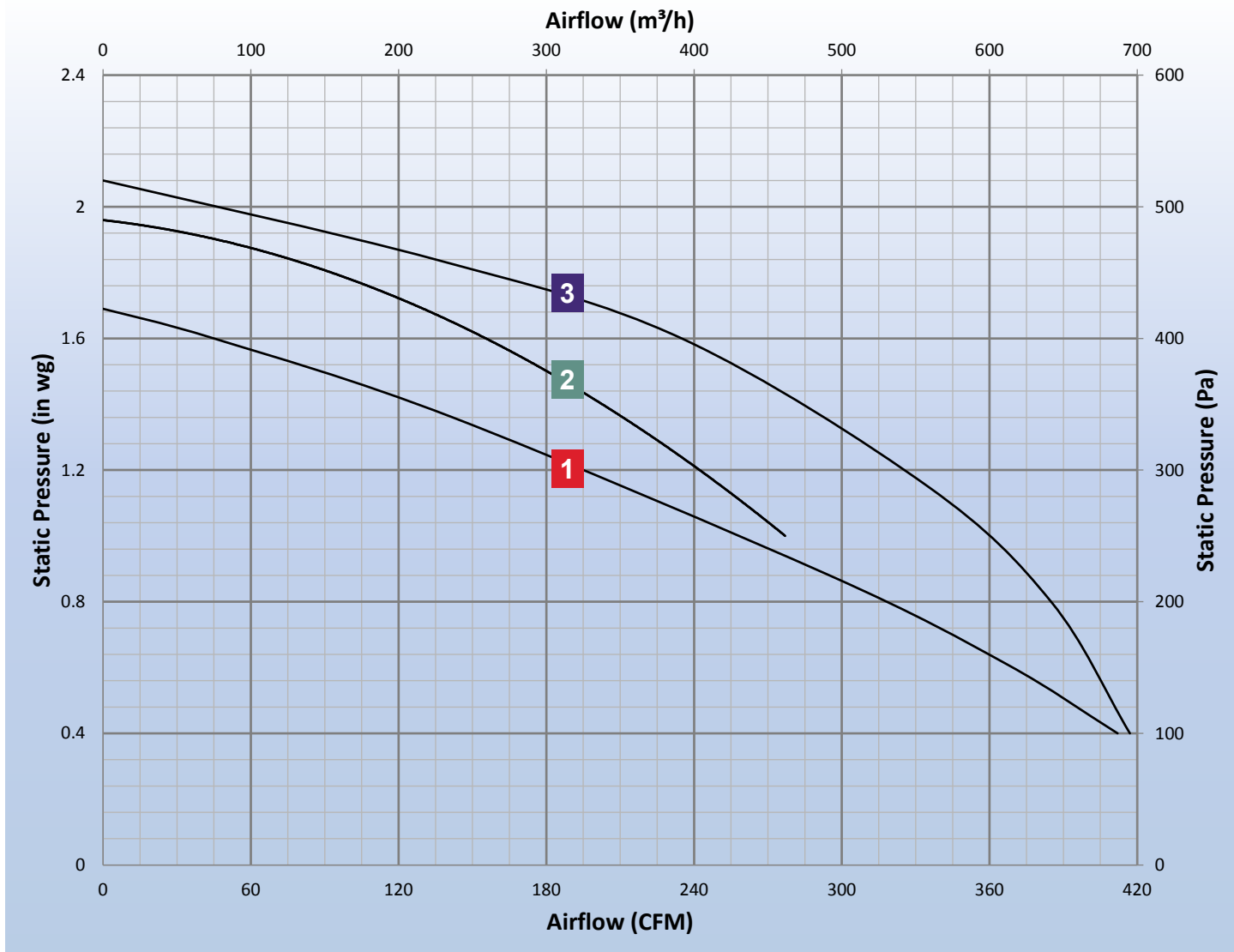
#### 2 Pole Motors



MODEL	N°	V	Hz	CFM	W	RPM	dBA	μF	Lim. In. Wg.
RF2C-133/190 K194 S	1	115	60	403	205	1800	56	24	0.4
RF2C-133/190 K097 S	1	230	60	403	205	1800	56	6	0.4
RF2C-146/180 K000 S	2	115	60	277	250	2340	63	20	1.0
RF2C-146/180 K102 S	2	230	60	277	250	2340	63	5	1.0
RF2C-133/190 K000 SS	3	115	60	412	260	1850	57	20	0.4
RF2C-133/190 K093 SS	3	230	60	412	260	1850	57	5	0.4

All data taken at the Lim In. Wg point indicated at the table for each model (name plate rating may vary from data).

### Technical Curves



# Forward Curved Blowers

## Double Inlet Blowers

2 and 4 Pole Motors

### Technical Data

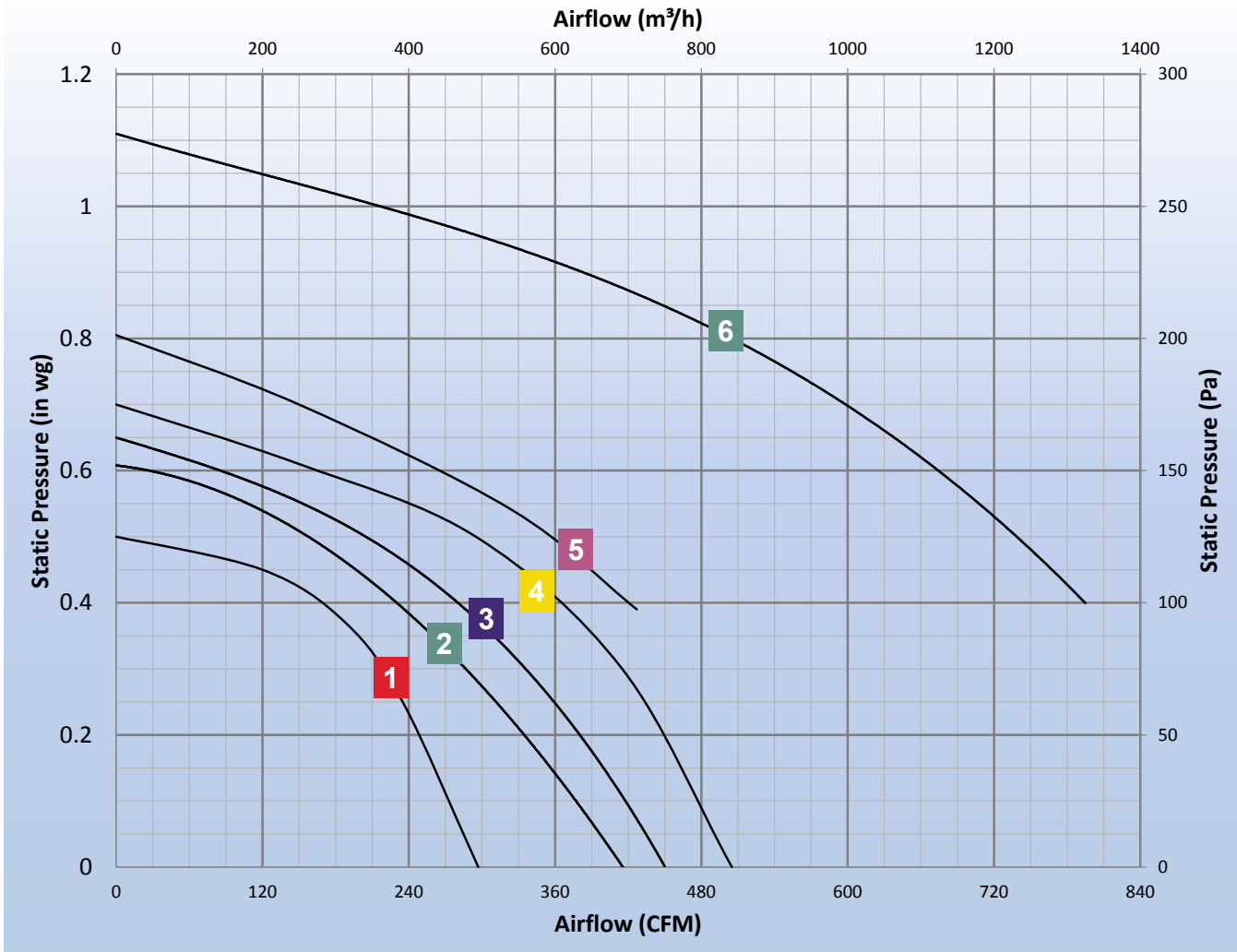
#### 4 Pole Motors



MODEL	N°	V	Hz	CFM	W	RPM	dBA	μF	Lim. In. Wg.
RF4C-133/190 K222 SS	1	115	60	295	70	1200	53	8	0
RF4C-133/190 K109 SS	1	230	60	295	70	1200	53	2	0
RF4C-133/190 K000 S	2	115	60	406	85	1000	53	8	0
RF4C-133/190 K030 S	2	230	60	406	85	1000	53	2	0
RF4C-133/190 K251 S	3	115	60	500	85	1100	53	10	0
RF4C-133/190 K040 S	3	230	60	500	85	1100	53	2.5	0
RF4C-146/180 K000 S	4	115	60	447	120	1025	55	12	0
RF4C-146/180 K040 S	4	230	60	447	120	1025	55	3	0
RF4C-160-150 K000 S	5	115	60	424	140	1225	58	12	0.2
RF4C-160-150 K048 S	5	230	60	424	140	1225	58	3	0.2
RF4C-180/184 K136 S	6	115	60	750	250	1350	61	20	0.4
RF4C-180/184 K107 S	6	230	60	750	250	1350	61	5	0.4

All data taken at the Lim In.Wg point indicated at the table for each model (name plate rating may vary from data).

### Technical Curves





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