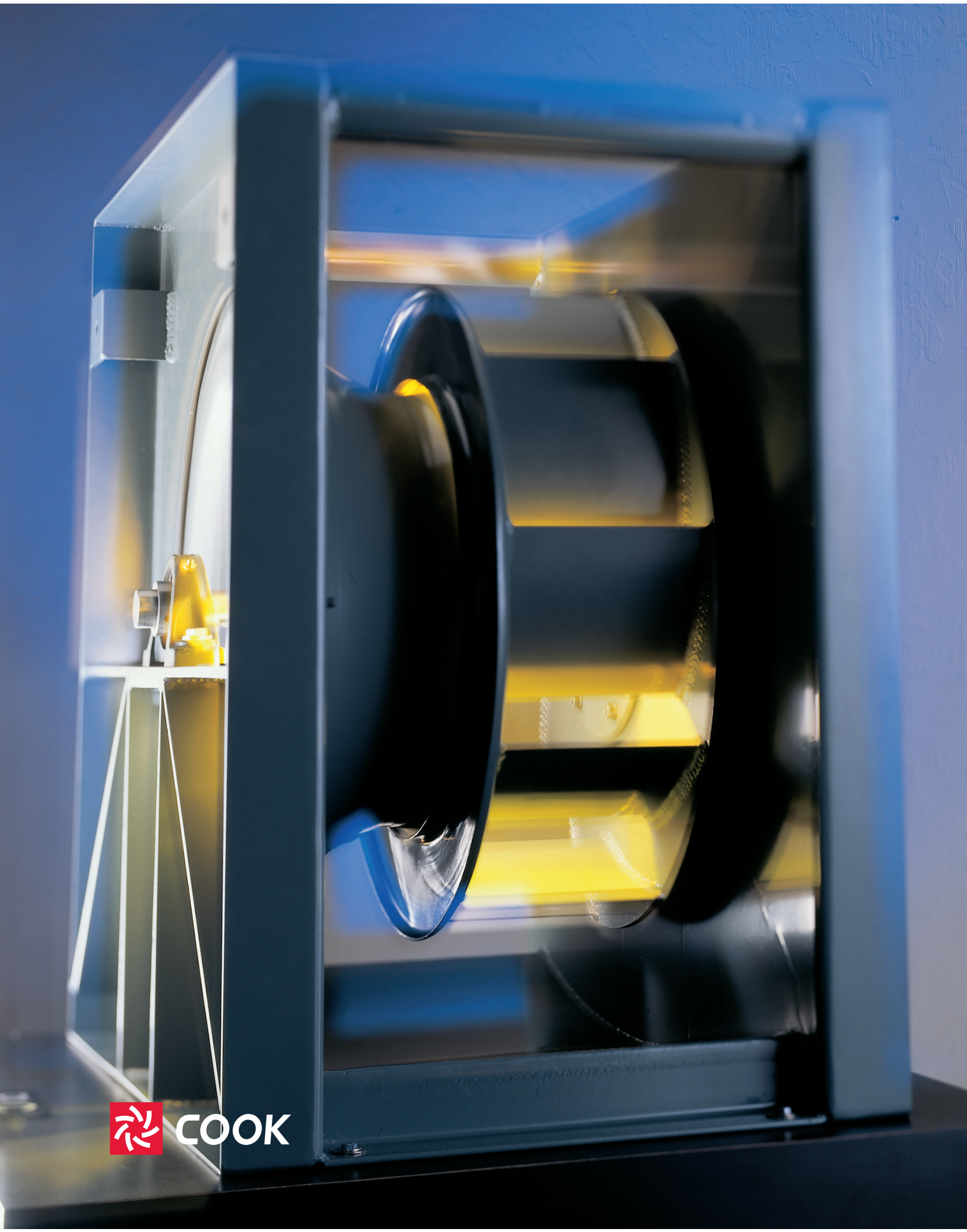
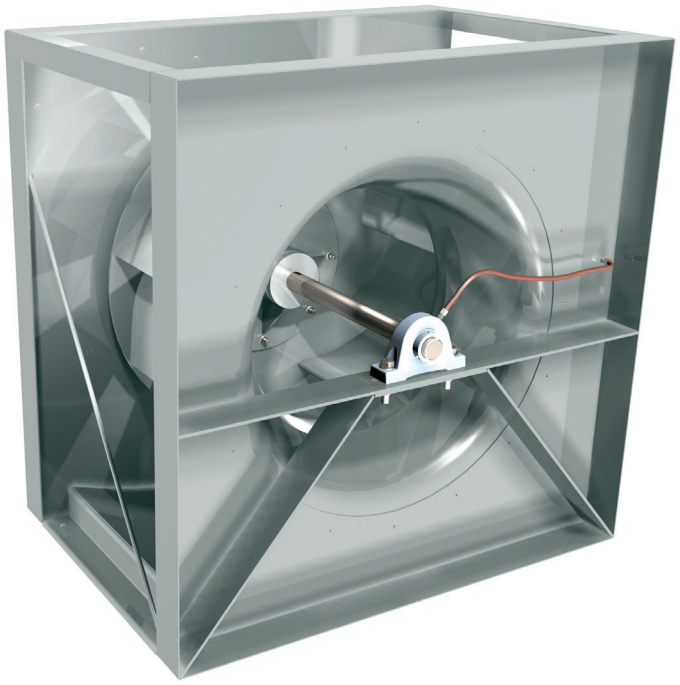

COOK

PLC

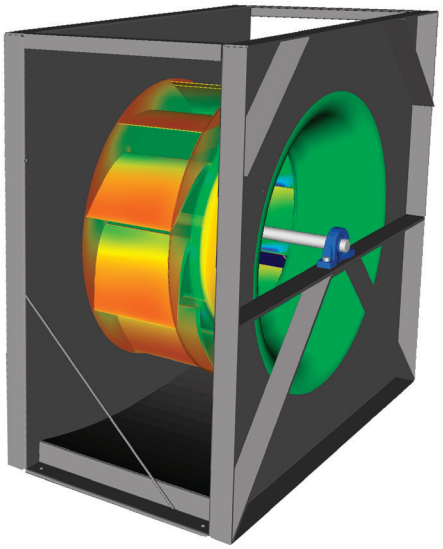
Centrifugal Plenum Fan

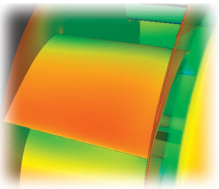
INTRODUCTION

Loren Cook Company's Centrifugal Plenum Fan is an unhoused fan designed for operation in plenum installations such as air handling units. The fan pressurizes the plenum in which it operates so ductwork can be connected directly to the plenum. The fan's design saves space by eliminating the fan housing and ductwork transition to the fan discharge. The PLC is available in aluminum and steel construction with wheel sizes of 12 to 73 inches diameter and in Class I, II, and III.



- PLC is licensed to bear AMCA Certified Ratings Seal for Sound and Air Performance.
- Performance is licensed for both inlet and outlet sound.
- UL/cUL 705 listing is standard on all PLC models.
- The PLC has a true airfoil wheel optimized for maximum efficiency. All blades are continuously welded to the wheel shroud and backplate.
- Optimized housing for weight savings while maintaining structural integrity.
- Extended lube line standard on inlet side bearing to allow for lubrication from drive side.
- Top braces designed to provide lifting points to aid in installation.

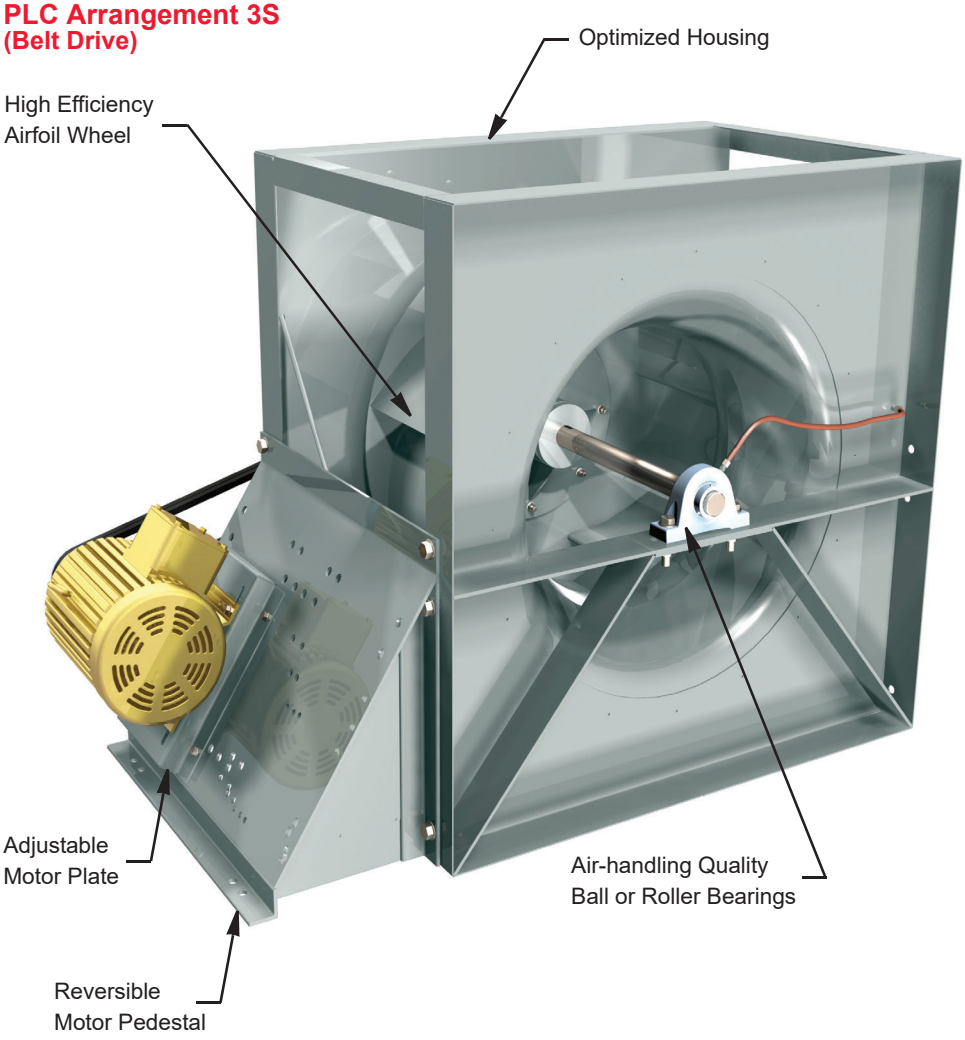




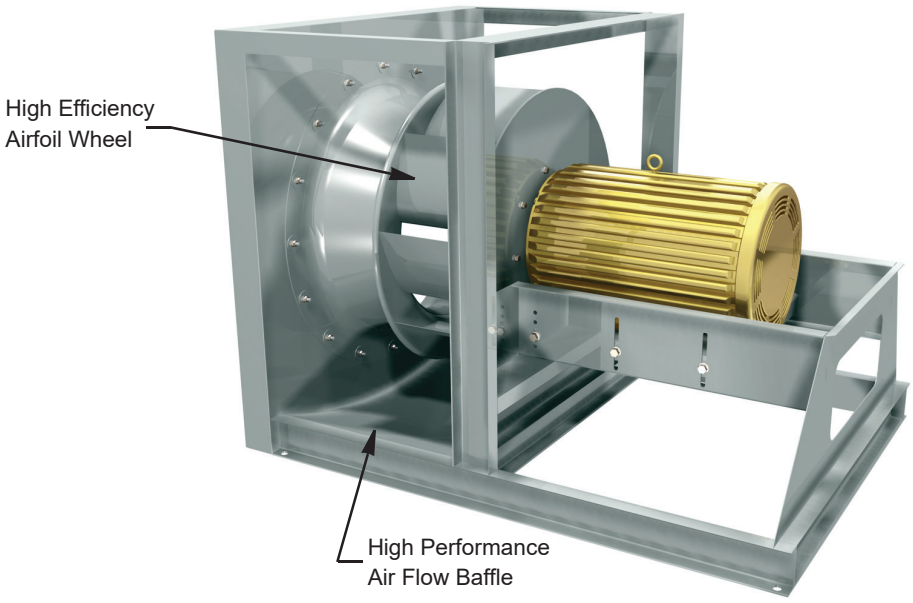
The PLC was designed using the latest Computational Fluid Dynamics (CFD) and Finite Element Analysis (FEA) software. This allowed our engineers to optimize the inlet, wheel and housing through design iterations. Once the design was optimized, physical prototypes verified the performance and durability of the design.

The result is the most efficient plenum fan in the industry.

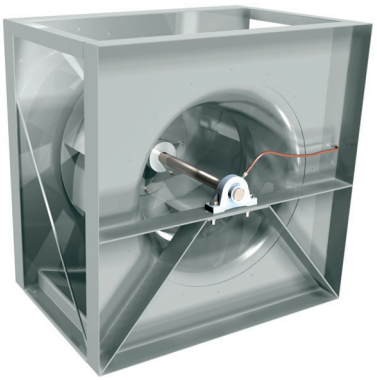
PLC Arrangement 3S
(Belt Drive)



PLC Arrangement 4
(Direct Drive)



Centrifugal Plenum Fan



Loren Cook Company certifies that the PLC shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Type PLC is furnished standard with UL 705 listing (cUL 705) when furnished with factory supplied motor.

Description - Fan shall be a single width, single inlet backward inclined centrifugal airfoil, belt or direct driven plenum blower as specified.

Certifications - Fan shall be manufactured at an ISO 9001 certified facility.

Construction - The fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. The inlet panel shall be constructed from heavy gauge reinforced steel with an integral rectangular formed duct connection. High performance airflow baffle shall be standard to reduce under unit turbulence and improve efficiency. Integral lifting points shall be standard. Unit shall bear an engraved aluminum nameplate. Nameplate shall indicate design CFM, static pressure and maximum fan RPM. Unit shall be shipped in ISTA Certified Transit Tested Packaging.

Coating - Steel fan components shall be ***LORENIZED***™ with an electrostatically applied, baked polyester powder coating. Each component shall be subject to a five stage environmentally friendly wash system, followed by a minimum 2 mil thick baked powder finish. Paint must exceed 1,000 hour salt spray under ASTM B117 test method.

Wheel - Wheel shall be 12-bladed steel, non-overloading, centrifugal backward inclined, high efficiency, airfoil type. Blades on all sizes shall be continuously welded to the backplate and inlet shroud. All sizes shall be securely keyed to the fan shaft. Wheel shall overlap an aerodynamic aluminum inlet cone to provide maximum performance and efficiency. Wheel shall be balanced in accordance with AMCA Standard 204-05, Balance Quality and Vibration Levels for Fans.

Motor - Motor shall be Nema design B with class B insulation rated for continuous duty and furnished at the specified voltage, phase and enclosure.

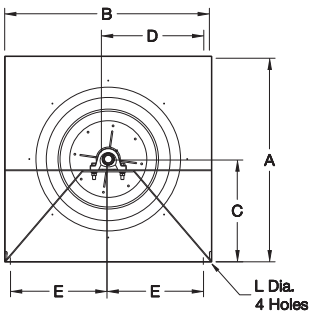
Blower Shaft - Blower shaft shall be AISI C-1045 hot rolled and accurately turned, ground and polished. Shafting shall be sized for a critical speed of at least 125% of maximum RPM.

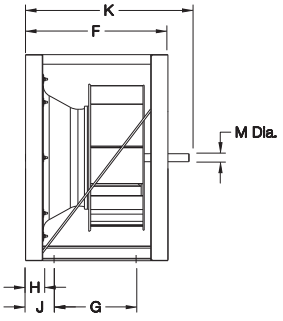
Bearings - Bearings shall be designed and tested specifically for use in air handling applications. Construction shall be heavy duty regreasable ball or roller type in a cast iron pillow block housing selected for a minimum L50 life in excess of 200,000 hours at maximum cataloged operating speed.

Belts and Drives - Belts shall be oil and heat resistant, non-static type. Drives shall be precision machined cast iron type, keyed and securely attached to the wheel and motor shafts. Drives shall be sized for 150% of the installed motor horsepower. The variable pitch motor drive must be factory set to the specified fan RPM.

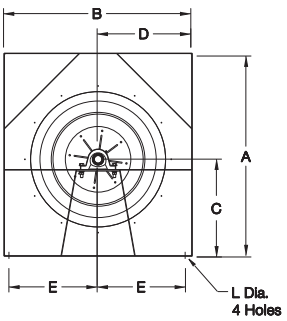
Product - Fan shall be model PLQ as manufactured by Loren Cook Company of Springfield, Missouri.

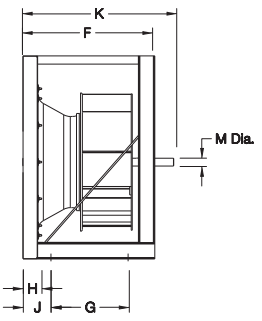
Size 120-300





Size 330-730





PLQ Dimension Data

Size	A	B	C	D	E			F		
					Class I	Class II	Class III	Class I	Class II	Class III
120	17-1/4	17-1/4	8-5/8	8-5/8	7-15/16	7-15/16	-	13-1/16	13-1/16	-
135	19-1/2	19-1/2	9-3/4	9-3/4	9-1/16	9-1/16	-	14-5/8	14-5/8	-
150	21-1/2	21-1/2	10-3/4	10-3/4	9-13/16	9-13/16	-	15-9/16	15-9/16	-
165	23-3/4	23-3/4	11-7/8	11-7/8	10-15/16	10-15/16	-	16-3/4	16-3/4	-
180	25-3/4	25-3/4	12-7/8	12-7/8	11-15/16	11-15/16	11-9/16	19-7/8	19-7/8	20-5/16
195	28	28	14	14	13-1/16	13-1/16	12-11/16	21	21	22-1/16
210	30	30	15	15	14-1/8	14-1/8	13-11/16	22-1/16	22-1/16	23-1/8
225	32-1/4	32-1/4	16-1/8	16-1/8	15-1/4	15-5/16	14-13/16	23-1/16	23-1/16	24-1/8
245	35	35	17-1/2	17-1/2	16-3/8	16-7/16	16-3/16	24-1/2	24-1/2	25-9/16
270	38-3/4	38-3/4	19-3/8	19-3/8	18-1/4	18-5/16	18-1/16	27-7/16	27-7/16	29
300	43	43	21-1/2	21-1/2	20-3/16	20-3/16	20-3/16	29-1/2	29-1/2	31-1/16
330	49-1/2	46	23-5/8	23	22-5/16	22-1/4	22-1/4	32-3/16	34-3/16	34-3/16
365	53-1/2	49	26-1/8	24-1/2	23-13/16	23-3/4	23-3/4	34-9/16	36-5/8	36-5/8
402	60	54	28-3/4	27	26-1/4	26-1/8	26-1/8	39-7/16	40-15/16	41
445	64	58-1/2	31-7/8	29-1/4	28-1/2	28-3/8	28-3/8	43	45	45
490	70	63	35	31-1/2	30-5/8	30-1/2	30-1/2	47-1/4	50-11/16	50-11/16
540	75	69	38-5/8	34-1/2	33-5/8	33-1/2	33-1/2	50-7/8	54-3/8	54-3/8
600	82	75	42-7/8	37-1/2	36-5/8	36-1/2	36-1/2	56-1/4	59-1/4	59-1/4
660	90	82	47-1/4	41	40	39-11/16	39-11/16	63-11/16	64-11/16	64-11/16
730	92	92	52-1/4	46	45	44-11/16	44-11/16	69-11/16	69-3/4	69-3/4

All dimensions in inches.

PLQ Dimension Data Continued

Size	G			H			J		
	Class I	Class II	Class III	Class I	Class II	Class III	Class I	Class II	Class III
120	7-15/16	7-15/16	-	1-13/16	1-13/16	-	2-13/16	2-13/16	-
135	9	9	-	1-13/16	1-13/16	-	2-13/16	2-13/16	-
150	9-7/16	9-7/16	-	2-1/16	2-1/16	-	3-1/16	3-1/16	-
165	10-5/8	10-5/8	-	2-1/16	2-1/16	-	3-1/16	3-1/16	-
180	11-3/4	11-3/4	10-3/4	3-1/16	3-1/16	3-1/16	4-1/16	4-1/16	4-9/16
195	12-7/8	12-7/8	11-7/8	3-1/16	3-1/16	3-1/16	4-1/16	4-1/16	4-9/16
210	13-15/16	13-15/16	12-15/16	3-1/16	3-1/16	3-1/16	4-1/16	4-1/16	4-9/16
225	14-15/16	14-15/16	13-15/16	3-1/16	3-1/16	3-1/16	4-1/16	4-1/16	4-9/16
245	15-7/8	15-7/8	15-3/8	3-9/16	3-9/16	3-1/16	4-5/16	4-5/16	4-9/16
270	17-13/16	17-13/16	17-5/16	3-9/16	3-9/16	3-9/16	4-13/16	4-13/16	5-1/16
300	19-3/8	19-3/8	19-3/8	3-9/16	3-9/16	3-9/16	5-1/16	5-1/16	5-1/16
330	26-3/8	27-3/8	27-3/8	3-9/16	4-9/16	4-9/16	4-11/16	5-11/16	5-11/16
365	28-3/4	29-13/16	29-13/16	3-9/16	4-9/16	4-9/16	4-11/16	5-11/16	5-11/16
402	32-5/8	33-5/8	33-5/8	4-1/8	5-1/16	5-1/8	5-1/4	6-3/16	6-1/4
445	35-5/8	36-5/8	36-5/8	5-1/8	6-1/8	6-1/8	6-1/4	7-1/4	7-1/4
490	39-7/8	41-7/8	41-7/8	5-1/8	6-9/16	6-9/16	6-1/4	7-11/16	7-11/16
540	43-1/2	45-1/2	45-1/2	5-1/8	6-5/8	6-5/8	6-1/4	7-3/4	7-3/4
600	47-7/8	49-7/8	49-7/8	6-1/8	7-1/8	7-1/8	7-1/4	8-1/4	8-1/4
660	54-5/16	54-5/16	54-5/16	7-1/8	8-1/8	8-1/8	8-1/4	9-1/4	9-1/4
730	59-5/16	59-3/8	59-3/8	8-1/8	8-1/8	8-1/8	9-1/4	9-1/4	9-1/4

All dimensions in inches.

PLQ Dimension Data Continued

Size	K			L			M			Shipping Weight in lbs.*		
	Class I	Class II	Class III	Class I	Class II	Class III	Class I	Class II	Class III	Class I	Class II	Class III
120	16-15/16	17-5/16	-	5/8	5/8	-	1-3/16	1-7/16	-	112	117	-
135	18-1/2	18-7/8	-	5/8	5/8	-	1-3/16	1-7/16	-	127	132	-
150	19-1/2	19-7/8	-	5/8	5/8	-	1-3/16	1-7/16	-	139	147	-
165	20-11/16	21-1/16	-	5/8	5/8	-	1-3/16	1-7/16	-	159	165	-
180	24-1/16	24-3/16	25-11/16	5/8	5/8	5/8	1-7/16	1-7/16	1-15/16	212	212	247
195	25-1/8	25-1/4	26-15/16	5/8	5/8	5/8	1-7/16	1-7/16	1-15/16	228	233	280
210	26-3/16	26-7/16	28	5/8	5/8	5/8	1-7/16	1-7/16	1-15/16	245	252	301
225	27-3/16	27-7/16	29-1/8	5/8	5/8	5/8	1-7/16	1-11/16	1-15/16	273	292	334
245	28-13/16	29-1/16	30-9/16	5/8	5/8	5/8	1-7/16	1-15/16	2-3/16	328	366	366
270	31-11/16	32-1/16	34-1/4	5/8	5/8	5/8	1-7/16	1-15/16	2-7/16	407	441	449
300	33-15/16	34-5/16	36-9/16	5/8	5/8	5/8	1-11/16	2-3/16	2-7/16	513	553	571
330	36-13/16	39-1/16	39-13/16	15/16	15/16	15/16	1-15/16	2-3/16	2-7/16	599	633	684
365	39-3/8	41-5/8	42-1/2	15/16	15/16	15/16	1-15/16	2-3/16	2-11/16	650	713	840
402	44-7/16	46-1/4	47-3/8	15/16	15/16	15/16	2-7/16	2-3/16	2-15/16	946	950	1118
445	48-1/8	50-3/4	51-7/8	15/16	15/16	15/16	2-7/16	2-7/16	3-7/16	1220	1258	1469
490	52-5/8	56-13/16	58-1/16	15/16	1-1/16	1-1/16	2-7/16	2-11/16	3-7/16	1489	1597	1754
540	56-1/2	61	62-3/8	1-1/16	1-1/16	1-1/16	2-7/16	2-15/16	3-7/16	1584	1776	1947
600	62-1/4	66-5/8	68-1/8	1-1/16	1-1/16	1-1/16	2-11/16	3-7/16	3-15/16	1982	2216	2452
660	70-5/16	72-13/16	74-7/16	1-1/16	1-1/16	1-1/16	2-15/16	3-7/16	3-15/16	2547	2824	3234
730	76-15/16	78-7/8	80-5/8	1-1/16	1-1/16	1-1/16	3-7/16	3-7/16	4-7/16	3094	3265	3886

All dimensions in inches. *Less motor, Arr. 3.

Airfoil Steel and Aluminum Wheel

PLC Size	Airfoil Steel Wheel PLC						Airfoil Aluminum Wheel PLC					
	Class I		Class II		Class III		Class I		Class II		Class III	
	Wheel Wt.	Wk^2	Wheel Wt.	Wk^2	Wheel Wt.	Wk^2	Wheel Wt.	Wk^2	Wheel Wt.	Wk^2	Wheel Wt.	Wk^2
120	17.1	2.6	18.6	2.9	-	-	8.2	0.9	8.6	1.0	-	-
135	19.9	3.6	21.8	4.1	-	-	9.7	1.4	10.2	1.6	-	-
150	23.1	5.1	27.5	6.7	-	-	11.4	2.1	11.4	2.3	-	-
165	29.2	7.8	32.0	9.3	-	-	12.4	3.0	15.7	4.0	-	-
180	47.6	11.7	50.9	13.8	51.9	13.3	19.5	4.5	23.5	5.8	28.8	7.9
195	52.3	15.4	56.1	18.1	57.3	17.6	21.6	6.0	26.2	7.8	32.5	10.8
210	57.4	20.0	61.8	23.3	63.1	23.0	23.8	7.9	29.3	10.4	36.6	14.3
225	62.9	25.7	67.9	29.9	76.7	33.3	30.4	12.4	32.2	13.6	38.4	17.5
245	70.7	35.3	85.6	45.6	86.6	45.9	34.7	17.2	39.2	20.5	43.9	24.5
270	82.4	58.6	99.7	66.3	101	66.7	43.5	27.4	46.1	30.1	58.3	40.5
300	136	92.7	146	104	153	114	61.6	42.5	64.8	46.6	71.5	56.8
330	168	151	182	174	181	169	66.5	59.9	71.5	67.2	84.1	83.5
365	195	223	210	256	249	309	77.5	88.5	90.2	107	104	132.3
402	276	416	301	480	318	488	106	155	137	203	142	218.8
445	410	648	436	743	464	773	155	242	189	312	204	353.6
490	469	933	509	1075	535	1116	177	348	220	451	237	511.9
540	555	1403	641	1716	676	1850	209	519	260	671	293	812.9
600	762	2550	836	2993	909	3199	300	977	333	1133	369	1314
660	1007	3939	1108	4587	1205	4887	401	1526	444	1755	484	2020
730	1184	5836	1307	6807	1429	7256	472	2262	525	2605	574	3000

Motor Selection Guidelines

For proper motor selection, consideration must be given to starting torque requirements along with operating BHP. The Airfoil Steel and Aluminum Wheel and Flatblade Steel and Aluminum Wheel tables (above) lists the WK^2 factor for different wheel sizes and types.In some cases it may be necessary to provide a larger horsepower motor, even though it may not be indicated by operating BHP, in order to bring the fan to speed. The following formula can be applied to determine the required motor starting torque.

$$WK^2_m = WK^2_f (FRPM / MRPM)^2 \quad (1.1)$$

WK^2_m = the moment of inertia required at the motor shaft, Lb. - ft^2.
WK^2_f = the moment of inertia of the fan, Lb. - ft^2.
FRPM = Fan RPM.
MRPM = Motor RPM.

Motor starting torque can vary greatly among motor manufacturers, the available WK^2_m of the motor should be obtained from the motor manufacturer.

Standard Coatings

LORENIZED™ is an electrostatically applied, baked polyester powder coating. Each component shall be subject to a five stage environmentally friendly wash system, followed by a minimum 2 mil thick baked powder finish. Coating must exceed 1,000 hour salt spray under ASTM B117 test method.

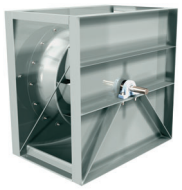
Optional Coatings

Cook Epoxy Powder is an electrostatically applied, baked epoxy powder coating. Final coating thickness is 2.5 – 3.5 mils. For outdoor applications an optional UV resistant topcoat is available to prevent cosmetic chalking of the coating.

Cook Phenolic Epoxy Powder is an electrostatically applied, baked phenolic epoxy powder coating. Final coating thickness is 2 – 4 mils. For outdoor applications an optional UV resistant topcoat is required to prevent deterioration of the coating.

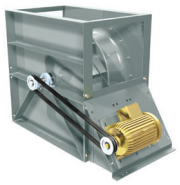
Air Dry Phenolic (Heresite VR-504) is a conventional spray applied phenolic resin coating. Final coating thickness is 4 – 6 mils. For outdoor applications an optional UV resistant topcoat (Heresite UC-5500) is required to prevent deterioration of the coating.

Refer to the corrosion resistance guide in the ***Compute-A-Fan®*** software for a listing of the coatings above and their resistance to a variety of chemicals. Additional special coatings are available.



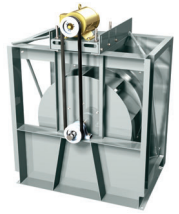
Horizontal Arrangement 3

PLC Horizontal Arrangement 3 is available in sizes 120 to 730 and in Class I, II and III construction. This arrangement does not provide for motor mounting on the unit. The fan and motor should be mounted on a common isolation base in one of the four standard motor positions (W, X, Y, Z) as illustrated in the motor position chart shown below.



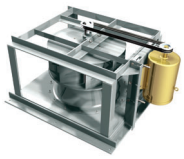
Horizontal Arrangement 3 with Side Mounted Motor

PLC Horizontal Arrangement 3 with side-mounted motor is available in sizes 120 to 730 and in Class I & II only. This arrangement can be used for applications where space limitations are critical. Due to uneven weight distribution, special care must be taken to ensure correct selection of isolators is made. Motor is located on right side as standard to provide clearance and access to motor wiring compartment. Left side motor arrangement is made easy by a universal motor base.



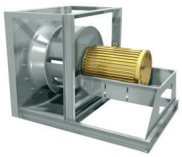
Horizontal Arrangement 3 with Top Mounted Motor

PLC Horizontal Arrangement 3 with top-mounted motor is available in sizes 270 to 730 and in Class I only. This arrangement can be used for applications where floor space limitations are critical. This arrangement also includes additional bracing for the adjustable motor mount as well as for a more centralized motor location.



Vertical Arrangement 3 with Side Mounted Motor

PLC Vertical Arrangement 3 is available in sizes 120 to 730 and in Class I and II construction only. This arrangement includes an adjustable motor mount and a structural angle flange around the inlet panel for mounting on isolators or a isolation base.

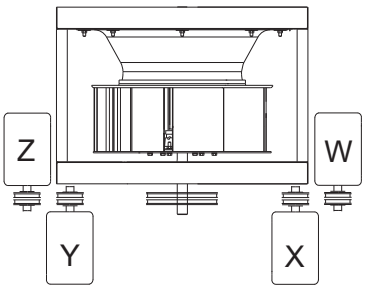


Arrangement 4 Direct Drive

PLC Arrangement 4 is available for applications requiring direct drive in Class I, II and III construction. This arrangement is desirable for applications where belt residue would contaminate the air stream. Wheel width modifications are available to achieve desired performance at direct drive motor speeds. See page 9 for performance ranges.

Arrangement 1

PLC Arrangement 1 is available in sizes 120 to 730 in Class I, II and III construction. This arrangement is best suited for applications where floor space is not critical and a ducted inlet connection is desired. Since this arrangement does not have a bearing in the inlet air stream, the inlet connection is much cleaner. Arrangement 1 does not provide for motor mounting on the unit. The fan and motor should be mounted on a separate common isolation base in one of the four standard motor positions (W, X, Y, Z) as illustrated in the motor position chart shown below.



Motor Position Chart

- The fan shaft drive end is normally opposite the inlet side. Where fan is to be driven from the inlet side, specify inlet side drives.
- Standard rotation is counterclockwise. If opposite rotation is required, specify clockwise rotation.
- When two fans are used in parallel in a common plenum, opposite rotation designs are recommended.
- Rotation is always determined from the drive side.

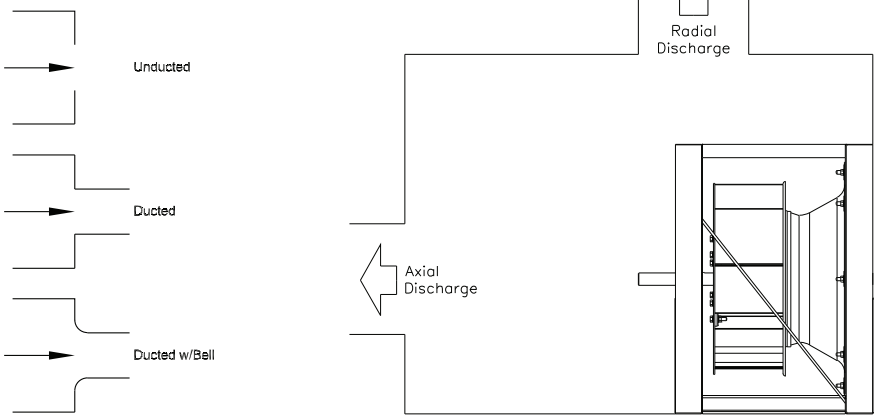
Duct Entrance Losses from Plenum Fan Cabinet

In order to compensate for the losses associated with the air entering the ductwork, additional resistance must be added to the external static pressure requirements for the fan. The corrections required vary based on type of entrance and the location of the entrance relative to the fan. The attached chart can be used to define the loss coefficient required for standard air applications. On fans with mulitple discharges, choose the discharge with the highest loss coefficient to calculate the correction.

Formula:

Duct Entrance Pressure Loss = C_d x [(CFM/Duct Area)/4005]^2

Duct Entrance Loss Coefficients	C_d	
	Radial	Axial
Unducted	2.0	2.3
Ducted	1.5	1.5
Ducted w/bell	1.1	1.4



Wall Proximity Factors

In cases where walls are placed in close proximity to the plenum fan corrections are necessary. The corrections can be made using the following procedure:

Step 1: Calculate the %WOV "M" factor from chart below.

%WOV = CFM/(M x Fan RPM)

Step 2: Determine Ci/Di wall proximity factor. Ci is the clearance between wheel tip and wall and Di is the wheel diameter, both in inches.

Factor = Ci/Di

Step 3: Use chart below to obtain correction factors for BHP and RPM and correct both using appropriate factor.

Unhoused Wall Proximity Factors

%WOV	RPM/ BHP	One Wall Ci/Di			Two Wall Ci/Di			Three Wall Ci/Di		
		.25	.50	.75	.25	.50	.75	.25	.50	.75
100	RPM	0.99	0.99	0.99	0.99	0.99	0.99	1.06	1.01	1.00
	BHP	1.01	0.96	1.00	0.97	0.98	1.00	1.28	1.10	1.05
95	RPM	0.99	1.00	0.99	0.99	0.99	0.99	1.05	1.01	1.00
	BHP	1.01	0.94	1.00	0.94	0.97	1.01	1.20	1.09	1.04
90	RPM	0.99	1.00	0.99	0.99	0.99	0.99	1.04	1.01	1.01
	BHP	1.00	0.95	1.01	0.94	0.97	1.01	1.15	1.08	1.04
85	RPM	0.99	1.00	1.00	0.99	0.99	0.99	1.04	1.01	1.01
	BHP	1.00	0.97	1.03	0.98	1.00	1.01	1.12	1.08	1.06
80	RPM	1.00	1.00	1.00	0.99	1.00	0.99	1.04	1.01	1.01
	BHP	1.01	0.99	1.03	0.99	1.00	1.02	1.11	1.07	1.06
75	RPM	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.01	1.02
	BHP	1.01	1.00	1.03	0.99	1.00	1.02	1.11	1.06	1.06
70	RPM	1.00	1.01	1.00	1.00	1.00	1.00	1.04	1.01	1.01
	BHP	1.01	1.00	1.02	1.00	1.00	1.03	1.10	1.04	1.04
65	RPM	1.00	1.01	1.00	1.01	1.00	1.00	1.04	1.01	1.01
	BHP	1.02	1.00	1.02	1.01	1.00	1.03	1.09	1.03	1.04
60	RPM	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.01	1.01
	BHP	1.01	0.99	1.00	1.01	0.99	1.02	1.08	1.02	1.04
55	RPM	1.00	1.00	0.99	1.00	1.00	0.99	1.03	1.00	1.01
	BHP	1.00	0.99	1.00	1.01	0.99	1.01	1.05	1.01	1.02
50	RPM	1.00	1.00	0.99	1.00	1.00	0.99	1.03	1.00	1.01
	BHP	0.99	1.00	0.98	0.99	0.99	1.02	1.04	1.02	1.02
45	RPM	1.00	1.00	0.99	1.00	1.00	1.00	1.02	1.00	1.01
	BHP	0.99	1.00	0.97	0.98	0.99	1.02	1.04	1.02	1.02

"Di" is the wheel diameter in inches. "Ci" is the clearance between wheel tip and wall in inches. For multiple wall conditions, there may be several values for "Ci." In this case calculate for all Ci values and use the highest resulting RPM and BHP factors. AMCA Certified Ratings Seal does not apply when these factors are used.

PLC "M" Factors

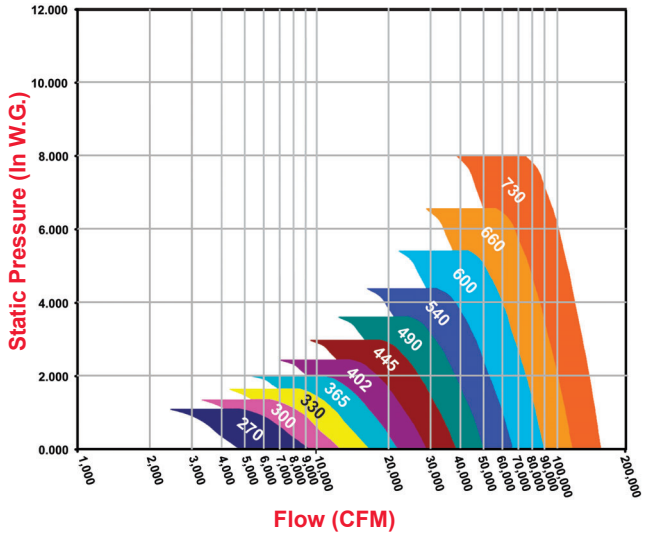
Size	M
120	1.0
135	1.4
150	1.9
165	2.6
180	3.4
195	4.3
210	5.4
225	6.7
245	9.5
270	13
300	17
330	23
365	31
402	41
445	56
490	75
540	100
600	137
660	183
730	247

PLC is available in direct drive, Arrangement 4 configuration, for sizes 150 to 730. The charts below represent the recommended selections for each available motor speed. Each fan size is represented by a colored band that indicates the performance range for the given motor RPM.

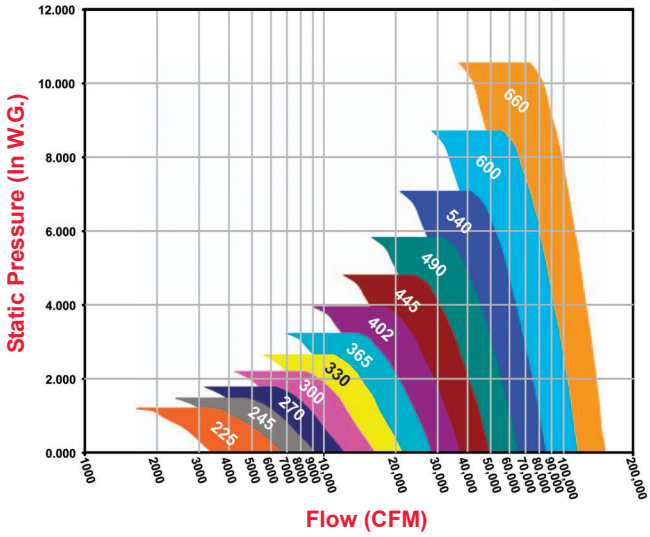
The performance ranges for each size are created through the use of partial width wheels. In order to vary the fan performance with a fixed RPM, the physical width of the wheel is adjusted and therefore change the amount of air the blower is capable of moving. The PLC direct drives are available from 50 to 100% air performance based on the full width performance at each motor RPM.

For exact performance, consult the ***Compute-A-Fan***® selection software.

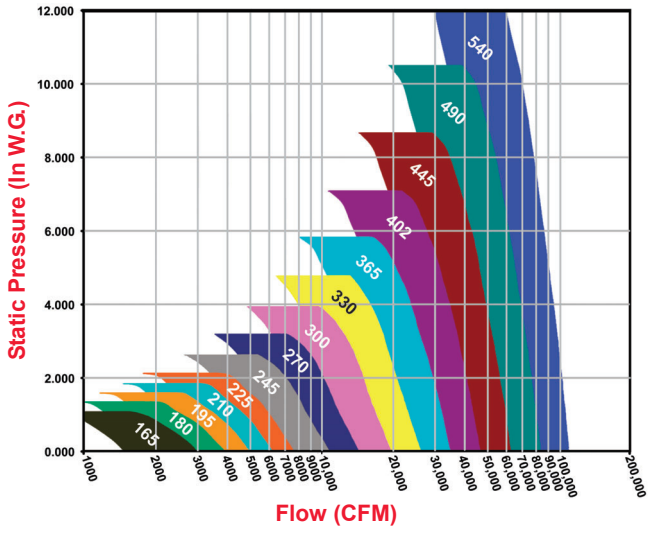
690 RPM



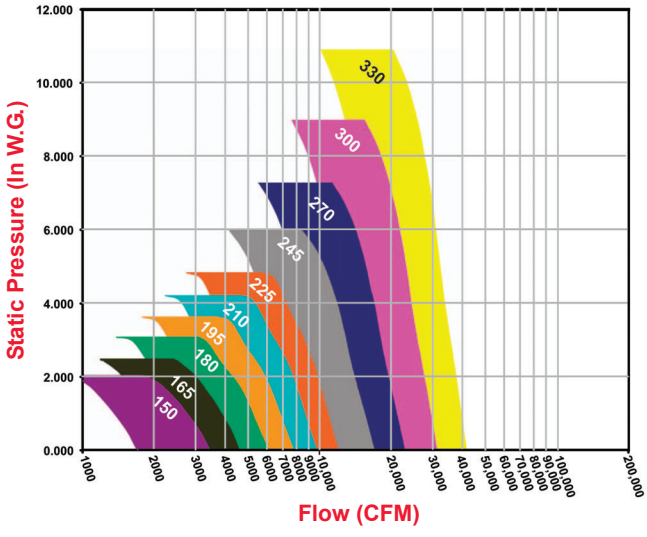
870 RPM



1170 RPM

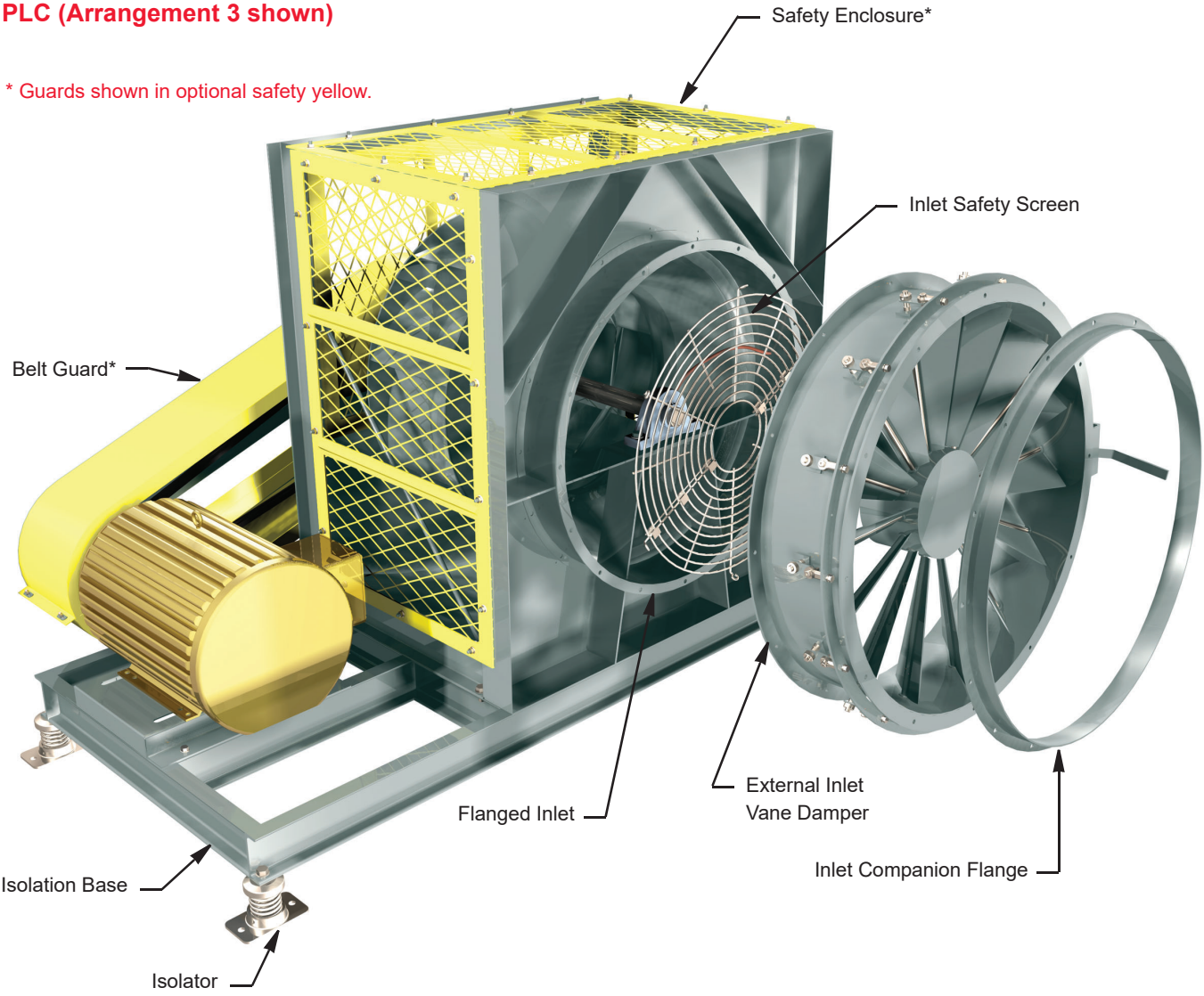


1770 RPM



PLC (Arrangement 3 shown)

* Guards shown in optional safety yellow.



Inlet Safety Screen
A removable safety screen is available to protect personnel and prevent debris from entering non-ducted inlets. Catalog performance is based on fans without inlet safety screens.

Isolation Base
Isolation bases are available for PLC Arrangement 3 fans. The isolation base is constructed of heavy duty structural channel. Specify one of the four standard motor positions as illustrated in the motor position chart (page 7), optional height saving brackets are available for use with spring isolators.

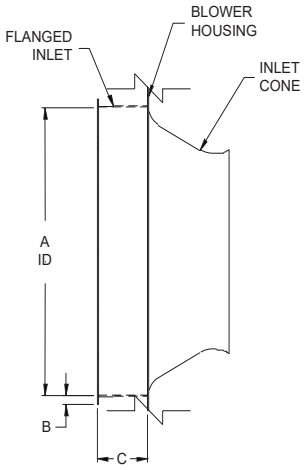
Safety Enclosure
The safety enclosure is an expanded motor screen with a heavy steel frame that completely encloses the fan wheel. Available in optional safety yellow. Catalog performance is based on fans without safety enclosures.

Inlet Companion Flange
A companion flange is available for use with the optional flange inlet. A flange inlet must be ordered separately and is required when ordering a companion flange.

Belt Guard
A belt guard is available to enclose the belts and drives. Available in both solid construction or optional expanded metal. Available in optional safety yellow.

Flanged Inlet

Flanged inlet connections are available for applications requiring flanged inlet duct connections. Flanged inlets are available on all arrangements. Flanged inlet connection is required when using external inlet vane dampers on Arrangement 3 fans.

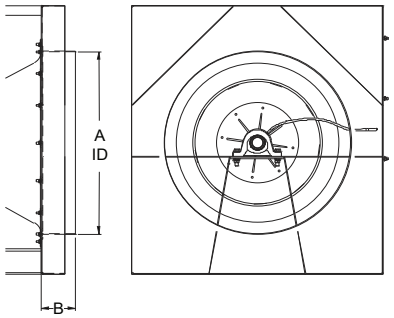


PLC Size	A	B	C
120	12-5/8	1-1/2	5-3/4
135	14-1/8	1-1/2	5-3/4
150	15-5/8	1-1/2	5-3/4
165	17	2	5-3/4
180	18-1/2	2	5-3/4
195	19-3/4	2	6-1/4
210	21-1/2	2	6-1/4
225	23	2	6-1/4
245	25	2	6-1/4
270	27-1/4	2	6-1/4
300	30-1/4	2	6-1/4
330	33-1/4	2	6-1/4
365	36-3/4	2	6-1/4
402	40-1/2	2	6-1/4
445	44-3/4	2	6-1/4
490	50-1/4	2	6-3/4
540	55-1/4	2	7-3/4
600	61-1/4	2	7-3/4
660	67-1/4	2	7-3/4
730	74-1/4	2	8-3/4

All dimensions in inches.

Inlet Collar

Inlet collars are available to provide for a round slip fit inlet connection.



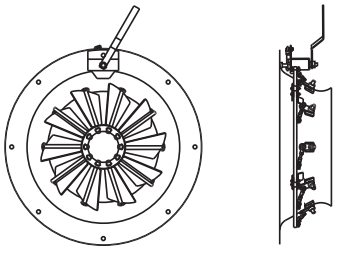
PLC Size	A	B
120	12-7/8	3-3/4
135	14-3/8	3-3/4
150	15-7/8	3-3/4
165	17-3/8	3-3/4
180	18-7/8	3-3/4
195	20	4-5/16
210	21-3/4	4-5/16
225	23-1/4	4-5/16
245	25-1/4	4-5/16
270	27-1/4	4-3/16
300	30-3/4	4-1/4
330	33-3/4	4-1/4
365	37-1/4	4-1/4
402	41	3-1/4
445	45-1/4	3-1/4
490	50-3/4	3-3/4
540	56	4-5/8
600	62	4-5/8
660	68	4-3/8
730	75	5-3/8

All dimensions in inches.

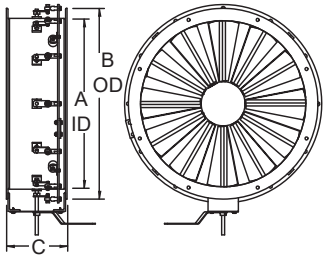
Inlet Vane Damper

Inlet vane dampers are available in nested or external type. Inlet vane dampers are used to provide precise air volume control while maintaining maximum efficiency and stable operation at part load conditions. Nested type Inlet Vane Dampers are typically used in non-ducted applications, while external Inlet Vane Dampers are use in ducted applications. Nested type is available on sizes 245 to 730. External type is available on sizes 120 to 730. External inlet vane dampers used on Arrangement 3 fans require optional flanged inlet connection and should only be used when a direct inlet duct connection is required. Cataloged performance is based on fans without inlet vane dampers.

Nested



External



PLC Size	A	B	C	Approx. Ship Wt. Lbs.
				Alum. Ext.
120	12-7/8	15-7/8	10	20
135	14-3/8	17-3/8	10	23
150	15-7/8	18-7/8	10	26
165	17-3/8	20-3/8	10	30
180	18-7/8	21-7/8	10	33
195	20	23	10	36
210	21-3/4	24-3/4	10	39
225	23-1/4	26-1/4	10	42
245	25-1/4	28-1/4	10	47
270	27-1/4	31-1/4	10	54
300	30-1/4	34-1/4	10	62
330	33-1/4	37-1/4	10	70
365	36-3/4	40-3/4	10	79
402	40-1/2	44-1/2	11	89
445	44-3/4	48-3/4	11	100
490	50-1/4	54-1/4	11	112
540	55-1/4	59-1/4	12	126
600	61-1/4	65-1/4	12	142
660	67-1/4	71-1/4	12	158
730	74-1/4	78-1/4	12	176

All dimensions in inches.

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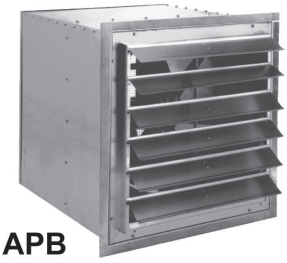
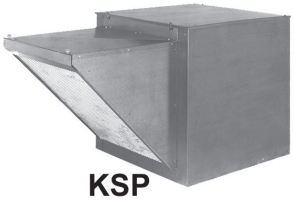
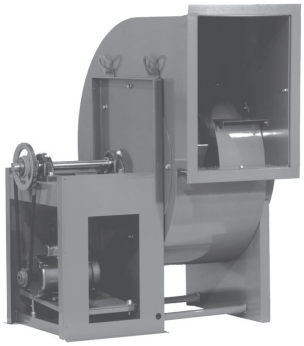


APB

IMH



KSP



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LOREN COOK COMPANY

2015 E. DALE STREET

SPRINGFIELD, MO 65803-4637

417.869.6474

FAX 417.862.3820

lorencook.com

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