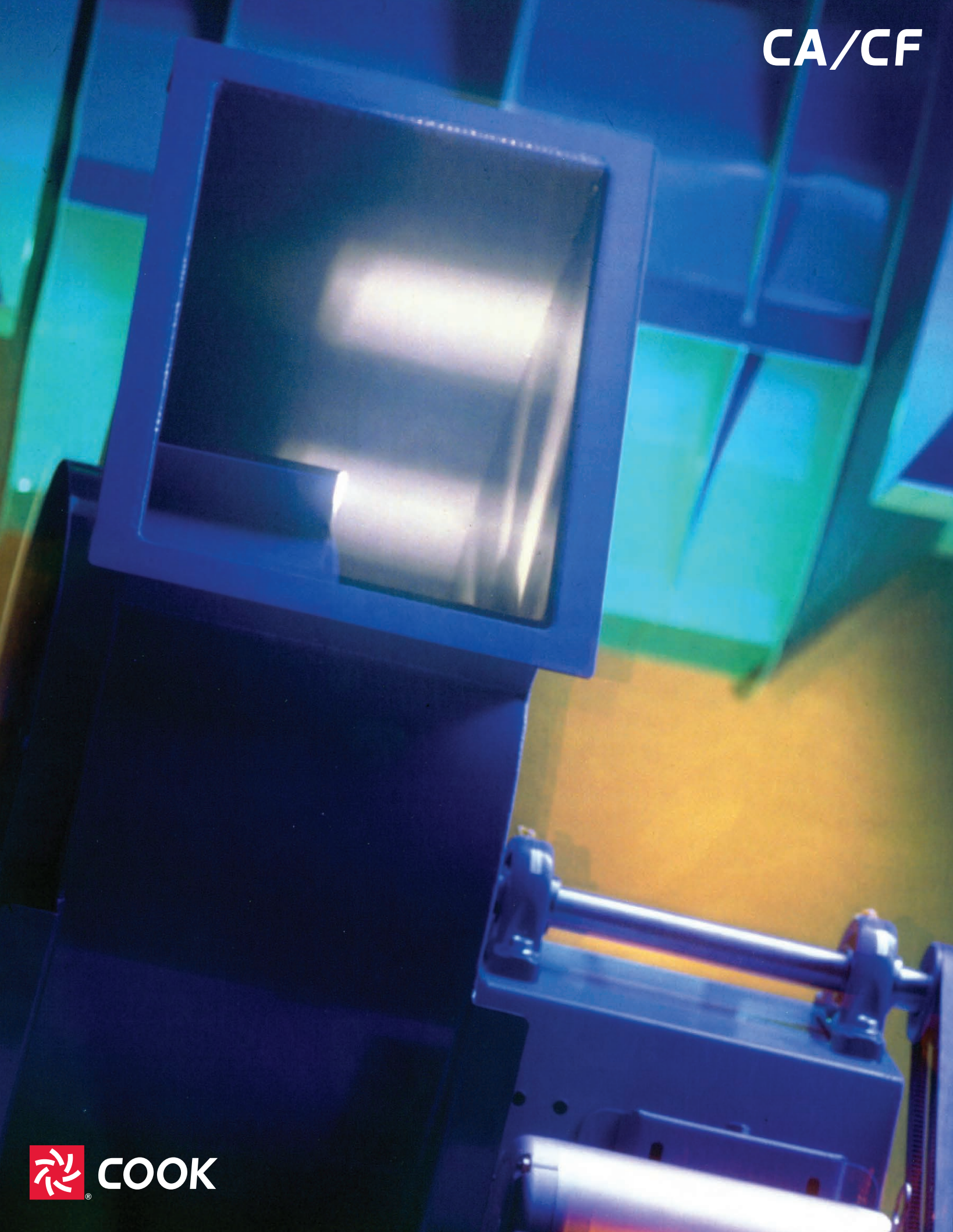
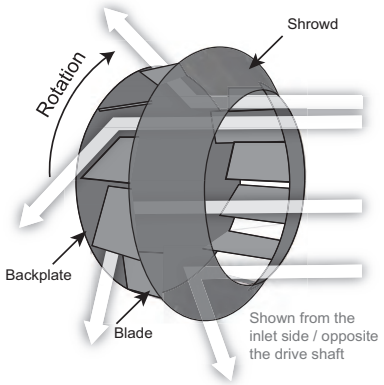

CA/CF
COOK

CA/CF

Steel Centrifugal Blowers

INTRODUCTION

The CA & CF centrifugal blowers are designed for heavy duty supply, exhaust or return air applications.



About Centrifugal Fans: A centrifugal wheel brings air in parallel to the axis of rotation and discharges air perpendicular to the axis of rotation. As a general rule, it is preferred for higher pressure exhaust and ducted systems.

CA centrifugal blowers are standard with a steel backward inclined, **airfoil** wheel. They are available in single and double width configurations. **CF centrifugal** blowers are standard with a steel backward inclined, **flat** blade wheel. They are available in single width configurations.

SWSI single width single inlet fans features one wheel, as shown to right. **DWDI double width double inlet** fans essentially have two wheels, with two inlets facing away from each other.

- Continuously welded housing to ensure a leak-proof enclosure and an all welded steel support structure for dependable, long lasting operational life.
- Outlet flanges standard.
- Lifting lugs are standard, to assist in handling and positioning of the fan.
- Available in up to seven AMCA standard discharges, in both clockwise and counter clockwise rotations.
- Produced in an ISO 9001 Certified facility.
- Licensed to bear AMCA Certified Ratings Seal for Sound & Air Performance.
- Listed by Underwriters Laboratory (UL 705) & UL Listed for Canada (cUL 705).
- UL/cUL 762 listing for restaurant applications and UL/cUL listing for "Power Ventilator for Smoke Control Systems" are available for CA SWSI & CF SWSI (Available on arrangements 1, 8, 9, & 10).

CA & CF SWSI

With 7 Standard Discharge Positions:

CA SWSI & CF

- Belt Drive
- Arrangements 1, 3, 9 & 10
- Inlet collars standard on Arrangements 1, 9 & 10 for easy connections to duct systems.
- 20 wheel sizes: 12 - 73"
- Static Pressure: 1 - 12"

Airfoil Wheel (CA SWSI)

- Capacity: 700 - 209,000 CFM

Flat Blade Wheel (CF)

- Capacity: 950 - 198,000 CFM

CA SWSI Arr. 9

CA SWSI Arr. 10

With 4 Discharge Positions:

CA-4 & CF-4 SWSI

- Belt Drive
- More compact construction
- Arrangements 1, 2 and 3
- Inlet collars standard on Arrangement 1 & 2 for easy connections to duct systems.
- 18 wheel sizes: 12 - 60"
- Static Pressure: 1 - 12"

Airfoil Wheel (CA-4 SWSI)

- Capacity: 700 - 144,000 CFM

Flat Blade Wheel (**CF-4 SWSI**)

- Capacity: 950 - 127,000 CFM

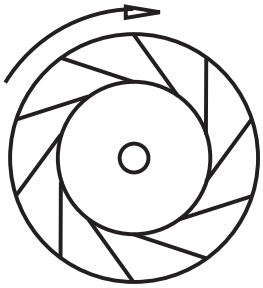
CA-4 SWSI Arr. 2

CA-4 Swing Out Arr. 2

Also Available (consult factory)

- **Direct drive**
- **Swing out construction** (on CA-4 SWSI & CF-4 SWSI) Arrangement 2 where the wheel and power assembly are mounted to a hinged door, for applications where frequent inspection and/or cleaning are required. Available on sizes 210 to 490.
- **Spark Resistant Construction**
- **Arrangements 4, 7 & 8**
- **Class IV**

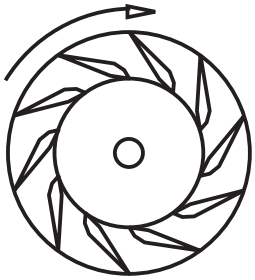
Flat blades vs Airfoil



Inlet side view

Backward Inclined Flat blades

Efficiency is slightly less than that of the airfoil design. Blades are single thickness metal inclined away from the direction of rotation. Air leaves the impeller at a velocity less than its tip speed. Relatively deep blades provide efficient expansion with the blade passages.



Inlet side view

Backward Inclined Airfoil

Has the highest efficiency of all of the centrifugal impeller designs with blades of airfoil contour curved away from the direction of rotation. Air leaves the impeller at a velocity less than its tip speed. Relatively deep blades provide for efficient expansion with the blade passages. For the given duty, the airfoil impeller design will provide for the highest speed of the centrifugal fan designs.

CA DWDI

With 7 Standard Discharge Positions:
CA DWDI & CAF-DW

- Belt Drive
- Arrangement 3
- 20 Wheel Sizes: 12 - 73”
- Capacity: 900 - 375,000 CFM
- Static Pressure: 1 - 12”
- **Industrial Airfoil Wheel (CA DWDI)**
- **Commercial Airfoil Wheel (CAF-DW)**
  - More compact construction

CAF DW Arr. 3

With 4 Discharge Positions:
CA-4 DWDI

- **Airfoil Wheel (CA-4 DWDI)**
  - Belt Drive
  - More compact construction
  - Arrangement 3
  - 18 Wheel Sizes: 12 - 60”
  - Capacity: 900 - 261,000 CFM
  - Static Pressure: 1 - 12”

Also Available (consult factory)

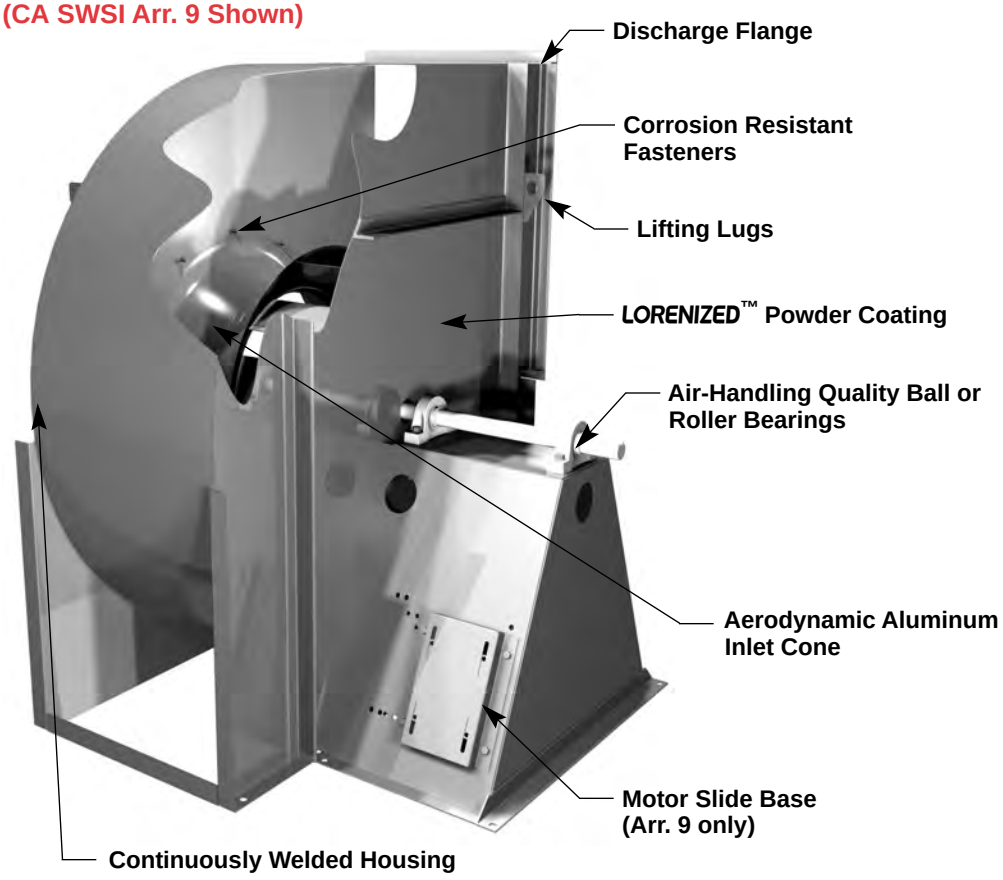
- **Direct drive**
- **Arrangement 7**
- **Flat blade (CF-DW)**

CA DWDI Arr. 3

CA-4 DWDI Arr. 3

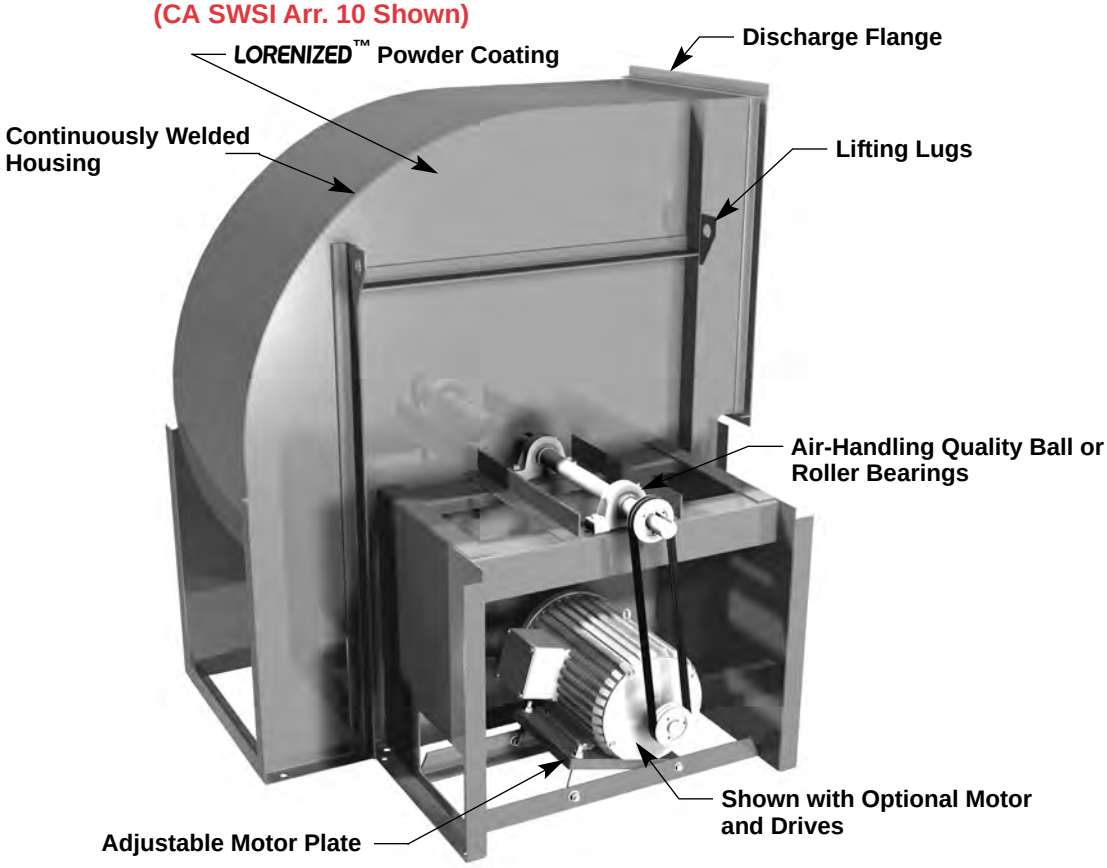
STANDARD CONSTRUCTION FEATURES

SWSI Arr. 1, 9
(CA SWSI Arr. 9 Shown)



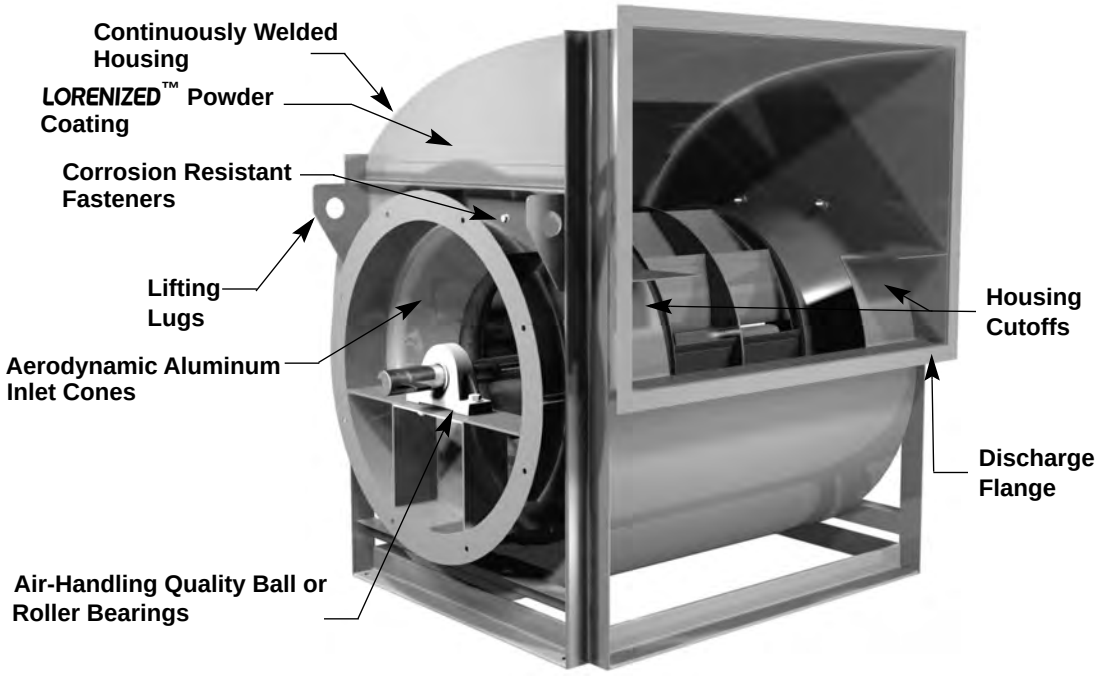
Standard Features Not Shown
Housing Cutoff
Inlet Collar
Engraved Aluminum Nameplate

SWSI
(CA SWSI Arr. 10 Shown)

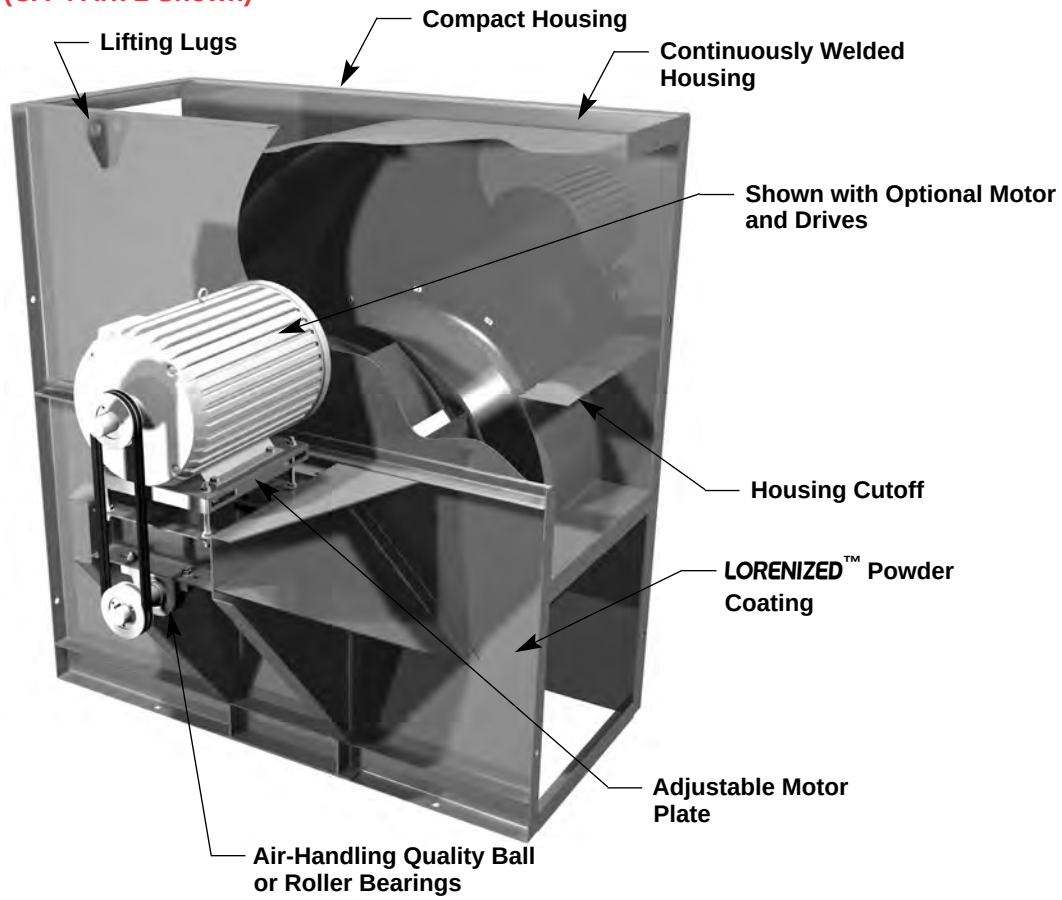


Standard Features Not Shown
Engraved Aluminum Nameplate

DWDI
(CAF-DW Shown)



CA-4
(CA-4 Arr. 2 Shown)



Airfoil Centrifugal Blower
Backward Inclined
Belt Drive
Single Width, Single Inlet

Loren Cook Company certifies that the CA SWSI shown herein are 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 CA SWSI is furnished standard with UL 705 & cUL 705 listing (Power Ventilator/ZACT) when furnished with factory supplied motor.

Type CA SWSI is available with UL 762 and cUL 762 listing (Power Ventilator for Restaurant Exhaust Appliances/Y2HW).

Type CA SWSI is available with UL listing for "Power Ventilator for Smoke Control Systems."

Description - Fan shall be a single width, single inlet backward inclined airfoil blade steel wheel, belt driven centrifugal blower.

Certifications: Fan shall be manufactured at an ISO 9001 certified facility. Fan shall be listed by Underwriters Laboratories (UL 705) and UL listed for Canada (cUL 705). Fan shall bear the AMCA Certified Ratings Seal for Sound and Air Performance.

Construction: The fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. The scroll wrapper and scroll side panels shall be a minimum 12 gauge steel. The entire fan housing shall have continuously welded seams for leak-proof operation and shall have a minimum 1-1/2" outlet discharge flange. A performance cut-off shall be furnished to prevent the recirculation of air in the fan housing. Bearing support shall be minimum 10 ga. welded steel. Lifting eyes shall be provided for ease of installation. 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: All 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 steel, non-overloading, centrifugal backward inclined, airfoil type. Blades on all sizes shall be continuously welded to the backplate and deep spun inlet shroud. All sizes shall be keyed and securely attached 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.

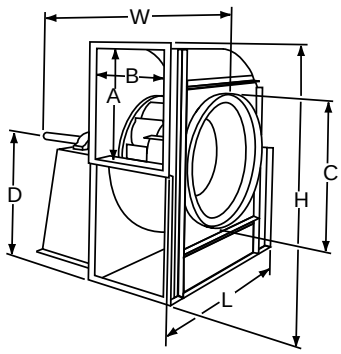
Motor: Motor shall be NEMA Design B with Class B insulation rated for continuous duty and furnished at the specified voltage, phase and enclosure.

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 percent of maximum RPM.

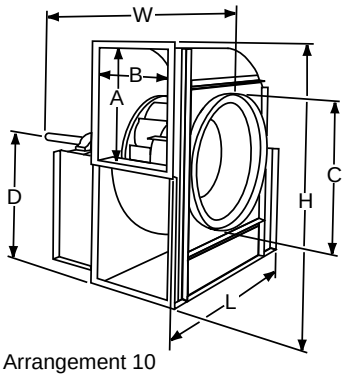
Bearings: Bearings shall be designed and tested specifically for use in air handling applications. Construction shall be heavy duty regreasable ball or roller type in a cast iron pillow block housing and selected for a minimum L50 life in excess of 200,000 hours at maximum cataloged operating speed.

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

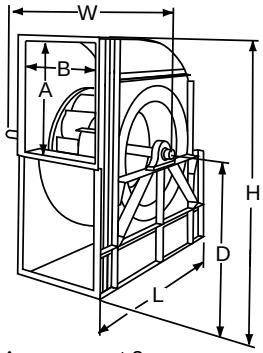
Product: Fan shall be model CA SWSI as manufactured by Loren Cook Company of Springfield, Missouri.



Arrangement 1 & 9



Arrangement 10



Arrangement 3

H and L are overall dimensions, including lift lugs, angle bracing and / or flanges.

CA SWSI Arrangement 1, 9 & 10 (7 Discharges) Dimensions

Size	A-I.D.	B-I.D.	C-O.D.	D		H						
				THD, DBD, TAD, UBD, TAU	BHD BAU	THD	UBD	BHD	DBD	BAU	TAU	TAD
120	13-1/8	9-3/16	16-1/8	13	16	30-3/16	25-1/8	29-7/8	28-9/16	29-1/16	30-3/4	29-3/8
135	14-3/4	10-5/16	17-5/8	14	17	32-13/16	27-1/8	32-1/8	30-15/16	31-3/16	33-15/16	31-7/8
150	16-7/16	11-7/16	19-1/8	15	19	35-7/16	29-1/8	35-5/16	33-3/8	34-5/16	36-7/8	34-7/16
165	18-1/16	12-5/8	21-3/16	17	21	39-1/16	32-1/8	38-9/16	36-13/16	37-3/8	40-15/16	37-15/16
180	19-11/16	13-3/4	22-11/16	18	22	41-11/16	34-1/4	40-3/4	39-1/4	39-9/16	44	40-9/16
195	21-5/16	14-15/16	24-3/16	20	24	45-5/16	37-1/16	44-1/16	38-1/2	38-5/8	48-1/16	39-15/16
210	23	16-1/16	25-5/16	21	26	46-1/16	39-3/8	47-1/4	40-15/16	41-3/4	51-3/16	42-3/8
225	24-5/8	17-3/16	27-7/16	23	28	49-5/8	42-5/8	46-1/4	44-3/8	44-7/8	55-3/16	45-15/16
245	26-13/16	18-3/4	29-7/16	25	30	53-3/4	46-3/8	49-7/8	48-1/4	48-3/8	59-15/16	49-15/16
270	29-9/16	20-5/8	31-15/16	27	33	58-1/2	50-1/2	54-15/16	52-13/16	53-1/4	65-7/16	54-5/8
300	32-13/16	22-15/16	34-15/16	30	36	64-3/4	56-1/8	60-3/8	58-1/2	58-7/16	72-9/16	60-9/16
330	36-1/8	25-1/4	37-15/16	33	39	71	61-5/8	65-13/16	64-3/8	63-11/16	80	66-11/16
365	39-15/16	27-7/8	41-7/16	36	43	77-7/8	67-11/16	72-5/8	70-5/8	70-5/16	87-7/8	73-5/16
402	44-1/16	30-3/4	45-3/16	40	47	87-7/16	74-15/16	79-5/8	78-1/4	77-1/8	97	81-1/8
445	48-11/16	34	49-7/16	44	52	96	82-9/16	88-1/8	86-1/4	85-1/4	106-13/16	89-5/16
490	53-5/8	37-7/16	55	48	57	104-7/8	90-7/16	96-3/4	94-1/2	93-5/8	117	97-7/8
540	59-1/16	41-1/4	60	53	62	115-7/16	99-3/4	105-13/16	104-1/4	102-5/16	128-15/16	108
600	65-5/8	45-13/16	66	59	69	129-3/8	110-15/16	117-11/16	116	113-13/16	143-3/16	120-1/16
660	72-3/16	50-7/16	72	65	75	141-15/16	122-1/8	128-9/16	127-13/16	124-1/4	157-1/2	132-3/16
730	79-7/8	55-3/4	79	72	83	156-1/2	135-1/8	142-1/4	141-5/16	137-1/2	174-3/8	146-7/16

Size	L					W	Max Motor Frame Size **	Approximate Shipping Weight *
	THD, BHD	DBD, UBD	BAU	TAU	TAD			
120	24-3/4	25-3/4	29-3/4	24	33-3/8	26-1/4	145T	215
135	27-1/4	28-3/4	32-3/4	27	36-5/16	27-3/8	145T	271
150	29-1/4	31-5/8	35-13/16	29	39-7/8	30-1/2	184T	331
165	31-3/4	34-3/8	39-7/8	32	43-1/2	32-5/8	184T	395
180	34	37-1/8	42-15/16	35	46-7/16	36-1/4	215T	462
195	36-1/2	40	46	37	51-1/2	37-1/2	215T	533
210	41-1/4	42-7/8	50-1/8	40	54-3/4	41-1/8	256T	608
225	43-1/4	45-3/4	53-3/16	42	58-3/8	42-1/4	256T	687
245	46-1/4	49-1/2	57-15/16	46	63-3/16	46-1/4	286T	797
270	50-1/4	54-3/4	63-5/16	50	68-1/8	48-5/8	286T	945
300	55-5/8	60	70-1/2	56	74-11/16	53-1/2	326T	1135
330	61	65-3/4	77-15/16	61	82-1/4	56-1/4	326T	1341
365	67-1/4	72-3/8	85-13/16	67	89-5/8	63-1/4	326T	1600
402	74-1/8	80-3/8	94	73	99-9/16	67-11/16	326T	1895
445	81-3/4	88-1/2	104-3/8	81	108-1/4	75-7/16	326T	2268
490	90	97	114	89	118-11/16	79-7/16	404T	2690
540	99	106-5/8	124-15/16	97	131-1/2	87-11/16	404T	3199
600	109 7/8	118	138-1/4	108	143-1/8	92-11/16	404T	3864
660	120 7/8	129-3/8	152-7/16	119	159	101-15/16	404T	4589
730	133 1/2	142-5/8	169-1/4	131	173	107-11/16	404T	5510

CA SWSI Arrangement 3 (7 Discharges) Dimensions

Size	A-I.D., B-I.D., D,H,L	W	Approximate Shipping Weight *
120	Same as Arrangement 1, 9 & 10	19-7/16	161
135		20-9/16	200
150		21-11/16	242
165		23-7/8	288
180		25-1/2	337
195		26-11/16	390
210		28-5/16	446
225		29-7/16	505
245		32-1/2	590
270		34-7/8	704
300		37-11/16	853
330		40-1/2	1014
365		43-5/8	1218
402		47-1/8	1452
445		50-7/8	1747
490		55-13/16	2081
540		62-1/8	2484
600		67-5/16	3008
660		74-7/16	3577
730		80-1/4	4297

*Weight in pounds. Class I only. For Class II add 10%. For Class III add 20% **Maximum motor frame for Arrangement 9 & 10; based on single speed ODP motor.

Dimension Notes:
I.D. = Inner Dimension
O.D. = Outer Dimension
Discharges (See Page 23)**:**
THD = Top Horizontal
TAU = Top Angular Up
TAD = Top Angular Down
BHD = Bottom Horizontal
BAU = Bottom Angular Up
DBD = Downblast
UBD = Upblast

Airfoil Centrifugal Blower
Backward Inclined
Belt Drive
Single Width, Single Inlet

Loren Cook Company certifies that the CA-4 SWSI shown herein are 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 CA-4 SWSI is furnished standard with UL 705 & cUL 705 listing (Power Ventilator/ZACT) when furnished with factory supplied motor.

Type CA-4 SWSI is available with UL 762 and cUL 762 listing (Power Ventilator for Restaurant Exhaust Appliances/Y2HW).

Type CA SWSI is available with UL listing for “Power Ventilator for Smoke Control Systems.”

Description: Fan shall be a rectangular, single width, single inlet backward inclined airfoil blade steel wheel, belt driven centrifugal blower.

Certifications: Fan shall be manufactured at an ISO 9001 certified facility. Fan shall be listed by Underwriters Laboratories (UL 705) and UL listed for Canada (cUL 705). Fan shall bear the AMCA Certified Ratings Seal for Sound and Air Performance.

Construction: The fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. The scroll wrapper and scroll side panels shall be a minimum 12 gauge steel. The entire fan housing shall have continuously welded seams for leak-proof operation and shall have a minimum 2" outlet discharge flange. A performance cut-off shall be furnished to prevent the recirculation of air in the fan housing. Bearing support shall be minimum 10 ga. welded steel. Lifting eyes shall be provided for ease of installation. 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: All 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 steel, non-overloading, centrifugal backward inclined, airfoil type. Blades on all sizes shall be continuously welded to the backplate and deep spun 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.

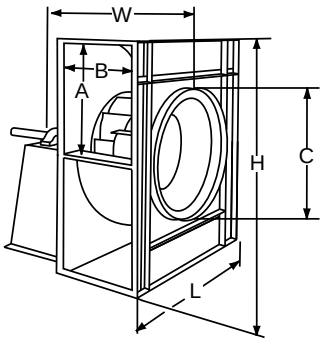
Motor: Motor shall be NEMA Design B with Class B insulation rated for continuous duty and furnished at the specified voltage, phase and enclosure.

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 percent of maximum RPM.

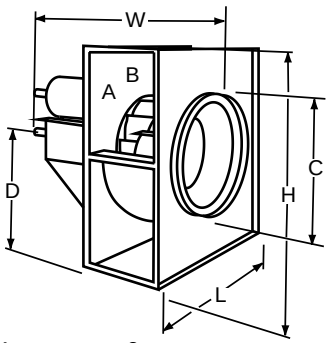
Bearings: Bearings shall be designed and tested specifically for use in air handling applications. Construction shall be heavy duty regreasable ball or roller type in a cast iron pillow block housing and selected for a minimum L50 life in excess of 200,000 hours at maximum cataloged operating speed.

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

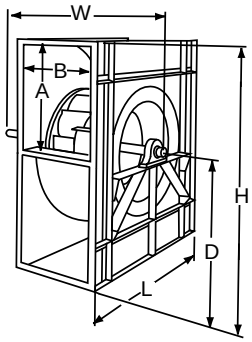
Product: Fan shall be model CA-4 SWSI as manufactured by Loren Cook Company of Springfield, Missouri.



Arrangement 1



Arrangement 2



Arrangement 3

CA-4 SWSI Dimension Data Arrangement 1

Size	A-I.D.	B-I.D.	C-O.D.	D			H		L		W	Approximate Shipping Weight *
				THD/DBD	UBD	BHD	THD, BHD	DBD, UBD	THD, BHD	DBD, UBD		
120	13-1/8	9-3/16	16-1/4	10-3/4	12-3/8	15	25-3/4	22-3/4	22-3/4	25-3/4	34-13/16	226
135	14-3/4	10-5/16	17-3/4	12	13-7/8	16-3/4	28-3/4	25-1/2	25-1/2	28-3/4	35-15/16	285
150	16-7/16	11-7/16	19-1/4	13-1/4	15-1/4	18-3/8	31-5/8	28-1/8	28-1/8	31-5/8	37-1/16	348
165	18-1/16	12-5/8	21-1/4	14-3/8	16-5/8	20	34-3/8	30-7/8	30-7/8	34-3/8	38-1/4	415
180	19-11/16	13-3/4	22-3/4	15-5/8	18-1/8	21-1/2	37-1/8	33-5/8	33-5/8	37-1/8	42-1/8	485
195	21-5/16	14-15/16	24-1/4	16-3/4	19-1/2	23-1/4	40	36-1/4	36-1/4	40	43-5/16	560
210	23	16-1/16	26	18	21	24-7/8	42-7/8	39-1/8	39-1/8	42-7/8	46-7/16	638
225	24-5/8	17-3/16	27-1/2	19-1/4	22-3/8	26-1/2	45-3/4	41-3/4	41-3/4	45-3/4	47-9/16	721
245	26-13/16	18-3/4	29-1/2	20-7/8	24-1/4	28-5/8	49-1/2	45-3/8	45-3/8	49-1/2	50-9/16	837
270	29-9/16	20-5/8	32	23-3/8	26-5/8	31-3/8	54-3/4	49-7/8	49-7/8	54-3/4	52-7/16	992
300	32-13/16	22-15/16	35	25-3/8	29-1/2	34-5/8	60	55-3/8	55-3/8	60	57-11/16	1192
330	36-1/8	25-1/4	38	27-7/8	32-3/8	37-7/8	65-3/4	60-3/4	60-3/4	65-3/4	60	1408
365	39-15/16	27-7/8	41-1/2	30-5/8	35-5/8	41-3/4	72-3/8	67	67	72-3/8	64-7/8	1680
402	44-1/16	30-3/4	45-1/4	33-5/8	39-1/4	46-3/4	80-3/8	73-7/8	73-7/8	80-3/8	68-1/16	1990
445	48-11/16	34	49-1/2	37-1/8	43-1/4	51-3/8	88-1/2	81-1/2	81-1/2	88-1/2	73-1/16	2381
490	53-5/8	37-7/16	55	40-3/4	47-1/2	56-1/4	97	89-3/4	89-3/4	97	76-1/2	2824
540	59-1/16	41-1/4	60	44-7/8	52-1/4	61-3/4	106-5/8	98-3/4	98-3/4	106-5/8	81-5/8	3359
600	65-5/8	45-13/16	66	49-3/4	58	68-1/4	118	109-5/8	109-5/8	118	86-3/16	4057

* Weight in pounds. Class I only. For Class II add 10%. For Class III add 20%.

CA-4 SWSI Dimension Data Arrangement 2

Size	A-I.D.	B-I.D.	C-O.D.	D				H		L		W	Max Motor Frame Size **	Approximate Shipping Weight *
				THD	UBD	BHD	DBD	THD, BHD	UBD, DBD	THD, BHD	UBD, DBD			
120	13-1/8	9-3/16	16-1/4	10-3/4	12-3/8	15	10-3/8	25-3/4	22-3/4	22-3/4	25-3/4	34-13/16	145T	226
135	14-3/4	10-5/16	17-3/4	12	13-7/8	16-3/4	11-5/8	28-3/4	25-1/2	25-1/2	28-3/4	35-15/16	145T	285
150	16-7/16	11-7/16	19-1/4	13-1/4	15-1/4	18-3/8	12-7/8	31-5/8	28-1/8	28-1/8	31-5/8	37-1/16	182T	348
165	18-1/16	12-5/8	21-1/4	14-3/8	16-5/8	20	14-1/4	34-3/8	30-7/8	30-7/8	34-3/8	38-1/4	182T	415
180	19-11/16	13-3/4	22-3/4	15-5/8	18-1/8	21-1/2	15-1/2	37-1/8	33-5/8	33-5/8	37-1/8	42-1/8	184T	485
195	21-5/16	14-15/16	24-1/4	16-3/4	19-1/2	23-1/4	16-3/4	40	36-1/4	36-1/4	40	43-5/16	184T	560
210	23	16-1/16	26	18	21	24-7/8	18-1/8	42-7/8	39-1/8	39-1/8	42-7/8	47-7/16	184T	638
225	24-5/8	17-3/16	27-1/2	19-1/4	22-3/8	26-1/2	19-3/8	45-3/4	41-3/4	41-3/4	45-3/4	48-9/16	213T	721
245	26-13/16	18-3/4	29-1/2	20-7/8	24-1/4	28-5/8	21-1/8	49-1/2	45-3/8	45-3/8	49-1/2	50-9/16	213T	837
270	29-9/16	20-5/8	32	23-3/8	26-5/8	31-3/8	23-1/4	54-3/4	49-7/8	49-7/8	54-3/4	52-7/16	215T	992
300	32-13/16	22-15/16	35	25-3/8	29-1/2	34-5/8	25-7/8	60	55-38	55-3/8	60	57-11/16	254T	1192
330	36-1/8	25-1/4	38	27-7/8	32-3/8	37-7/8	28-3/8	65-3/4	60-3/4	60-3/4	65-3/4	60	254T	1408
365	39-15/16	27-7/8	41-1/2	30-5/8	35-5/8	41-3/4	31-3/8	72-3/8	67	67	72-3/8	64-7/8	256T	1680
402	44-1/16	30-3/4	45-1/4	33-5/8	39-1/4	46-3/4	34-5/8	80-3/8	73-7/8	73-7/8	80-3/8	68-1/16	256T	1990
445	48-11/16	34	49-1/2	37-1/8	43-1/4	51-3/8	38-1/4	88-1/2	81-1/2	81-1/2	88-1/2	73-1/16	286T	2381
490	53-5/8	37-7/16	55	40-3/4	47-1/2	56-1/4	42-1/4	97	89-3/4	89-3/4	97	76-1/2	286T	2824
540	59-1/16	41-1/4	60	44-7/8	52-1/4	61-3/4	46-1/2	106-5/8	98-3/4	98-3/4	106-5/8	81-5/8	324T	3359
600	65-5/8	45-13/16	66	49-3/4	58	68-1/4	51-5/8	118	109-5/8	109-5/8	118	86-3/16	324T	4057

* Weight in pounds. Class I only. **Max Motor Frame is based on ODP single speed motor.

CA-4 SWSI Dimension Data Arrangement 3

Size	A-I.D.	B-I.D.	D				H		L		W	Approximate Shipping Weight *
			THD	UBD	BHD	DBD	THD, BHD	UBD, DBD	THD, BHD	UBD, DBD		
120	13-1/8	9-3/16	10-3/4	12-3/8	15	10-3/8	25-3/4	22-3/4	22-3/4	25-3/4	18-7/8	169
135	14-3/4	10-5/16	12	13-7/8	16-3/4	11-5/8	28-3/4	25-1/2	25-1/2	28-3/4	20	210
150	16-7/16	11-7/16	13-1/4	15-1/4	18-3/8	12-7/8	31-5/8	28-1/8	28-1/8	31-5/8	21-1/8	254
165	18-1/16	12-5/8	14-3/8	16-5/8	20	14-1/4	34-3/8	30-7/8	30-7/8	34-3/8	23-15/16	302
180	19-11/16	13-3/4	15-5/8	18-1/8	21-1/2	15-1/2	37-1/8	33-5/8	33-5/8	37-1/8	24-15/16	354
195	21-5/16	14-15/16	16-3/4	19-1/2	23-1/4	16-3/4	40	36-1/4	36-1/4	40	27-3/16	409
210	23	16-1/16	18	21	24-7/8	18-1/8	42-7/8	39-1/8	39-1/8	42-7/8	28-13/16	468
225	24-5/8	17-3/16	19-1/4	22-3/8	26-1/2	19-3/8	45-3/4	41-3/4	41-3/4	45-3/4	29-15/16	531
245	26-13/16	18-3/4	20-7/8	24-1/4	28-5/8	21-1/8	49-1/2	45-3/8	45-3/8	49-1/2	32	620
270	29-9/16	20-5/8	23-3/8	26-5/8	31-3/8	23-1/4	54-3/4	49-7/8	49-7/8	54-3/4	34-3/8	739
300	32-13/16	22-15/16	25-3/8	29-1/2	34-5/8	25-7/8	60	55-38	55-3/8	60	37-3/16	896
330	36-1/8	25-1/4	27-7/8	32-3/8	37-7/8	28-3/8	65-3/4	60-3/4	60-3/4	65-3/4	40	1065
365	39-15/16	27-7/8	30-5/8	35-5/8	41-3/4	31-3/8	72-3/8	67	67	72-3/8	43-1/8	1279
402	44-1/16	30-3/4	33-5/8	39-1/4	46-3/4	34-5/8	80-3/8	73-7/8	73-7/8	80-3/8	46-5/8	1525
445	48-11/16	34	37-1/8	43-1/4	51-3/8	38-1/4	88-1/2	81-1/2	81-1/2	88-1/2	50-3/8	1834
490	53-5/8	37-7/16	40-3/4	47-1/2	56-1/4	42-1/4	97	89-3/4	89-3/4	97	55-5/16	2186
540	59-1/16	41-1/4	44-7/8	52-1/4	61-3/4	46-1/2	106-5/8	98-3/4	98-3/4	106-5/8	61-5/8	2608
600	65-5/8	45-13/16	49-3/4	58	68-1/4	51-5/8	118	109-5/8	109-5/8	118	66-11/16	3159

* Weight in pounds. Class I only. For Class II add 10%. For Class III add 20%.

Airfoil Centrifugal Blower Backward Inclined Belt Drive Double Width, Double Inlet

Loren Cook Company certifies that the CAF-DW shown herein are 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 CAF-DW is furnished standard with UL 705 & cUL 705 listing (Power Ventilator/ZACT) when furnished with factory supplied motor.

Description: Fan shall be a double width, double inlet backward inclined airfoil, belt driven centrifugal blower.

Certifications: Fan shall be manufactured at an ISO 9001 certified facility. Fan shall be listed by Underwriters Laboratories (UL 705) and UL listed for Canada (cUL 705). Fan shall bear the AMCA Certified Ratings Seal for Sound and Air Performance.

Construction: The fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. The scroll wrapper and scroll side panels shall be a minimum 16 gauge steel. The entire fan housing shall have continuously welded seams for leak-proof operation and shall have a minimum 1" outlet discharge flange. A performance cut-off shall be furnished to prevent the recirculation of air in the fan housing. Bearing support shall be minimum 12 gauge steel. Lifting lugs shall be provided for ease of installation. 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 steel, non-overloading, centrifugal backward inclined, airfoil type. Blades on all sizes shall be continuously welded to the backplate and deep spun inlet shrouds. All sizes shall be keyed and securely attached to the fan shaft. Wheel shall overlap aerodynamic aluminum inlet cones to provide maximum performance and efficiency. Wheel shall be balanced in accordance with AMCA Standard 204-05, Balance Quality and Vibration Levels for Fans.

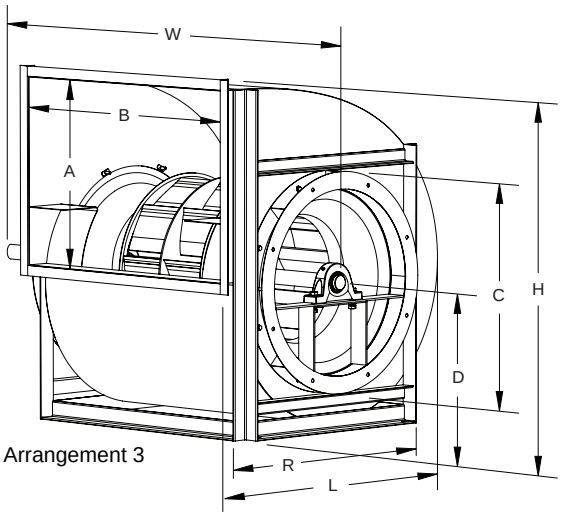
Motor: Motor shall be NEMA Design B with Class B insulation rated for continuous duty and furnished at the specified voltage, phase and enclosure.

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

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



Arrangement 3

CAF-DW Dimension Data Arrangement 3

Size	A	B	C	D						H							
				THD	UBD	BHD			DBD	THD			UBD	BHD			DBD
				All	All	Class I	Class II	Class III	All	Class I	Class II	Class III	All	Class I	Class II	Class III	All
120	12-1/8	17-11/16	16-1/8	10-3/16	11-7/16	14-3/4	14-3/4	15-3/4	9-5/8	23-15/16	23-15/16	23-15/16	21-1/16	24	24	25	20-1/16
135	13-5/8	19-15/16	17-7/8	11-5/16	12-3/4	16-5/16	16-7/16	17-3/8	10-13/16	26-11/16	26-11/16	26-11/16	23-9/16	26-11/16	26-13/16	27-3/4	22-9/16
150	15-1/4	22	19-3/8	12-7/16	14-1/16	17-15/16	17-15/16	18-15/16	12	29-3/8	29-3/8	29-3/8	26-1/16	29-7/16	29-7/16	30-7/16	25-1/16
165	16-15/16	24	21-1/8	13-9/16	15-3/8	19-1/2	19-1/2	20-1/2	13-1/8	32-1/16	32-1/16	32-1/16	28-1/2	32-3/16	32-3/16	33-3/16	27-1/2
180	18-1/2	26-1/16	22-5/8	14-3/4	16-11/16	21-1/8	21-1/8	22-1/8	14-5/16	34-7/8	34-7/8	34-15/16	31	34-15/16	34-15/16	35-15/16	30
195	19-1/2	28-7/16	24-3/8	15-7/8	17-15/16	22-3/4	22-3/4	23-11/16	15-1/2	37-5/8	37-5/8	38-9/16	33-7/16	37-11/16	37-11/16	38-5/8	32-7/16
210	21-5/8	30-3/8	25-7/8	17	19-1/4	24-3/8	24-3/8	25-5/16	16-11/16	40-3/8	40-3/8	41-5/16	35-15/16	40-1/2	40-7/16	41-7/16	34-15/16
225	23-3/16	32-1/2	27-5/8	18-3/16	20-9/16	26-7/16	26-7/16	26-7/8	17-13/16	43-5/8	43-5/8	44-1/8	38-3/8	43-11/16	43-11/16	44-1/8	37-3/8
245	25-1/2	35-1/16	29-5/8	19-11/16	22-5/16	28-9/16	28-9/16	30	19-3/8	47-1/4	47-1/4	47-3/4	41-11/16	47-5/16	47-5/16	48-3/4	40-11/16
270	27-1/2	39-7/16	32-3/8	21-5/8	24-1/2	31-3/16	31-3/16	32-5/8	21-5/16	51-13/16	51-13/16	52-5/16	45-13/16	51-7/8	51-7/8	53-5/16	44-13/16
300	31-3/16	43	35-3/8	23-7/8	27-1/16	34-3/8	34-3/8	35-13/16	23-11/16	57-1/4	57-1/4	57-3/4	50-3/4	57-5/16	57-5/16	58-3/4	49-3/4
330	34-1/2	47-1/16	38-5/8	26-3/16	29-11/16	38-1/16	38-1/16	40	26-1/16	63-1/4	63-1/4	63-1/4	55-11/16	63-5/16	63-5/16	65-1/4	54-11/16
365	38-11/16	52-3/16	42-3/8	28-7/8	32-3/4	41-13/16	41-13/16	43-3/4	28-3/4	69-5/8	69-5/8	70-3/16	61-1/2	69-11/16	69-11/16	71-11/16	60-1/2
402	41-3/4	57-13/16	46-3/8	31-11/16	35-15/16	46-5/8	46-5/8	48-5/8	31-5/8	76-3/8	76-3/8	76-7/8	67-9/16	77-3/8	77-3/8	79-7/16	66-5/8
445	45-15/16	64-1/4	50-5/8	34-15/16	39-11/16	51-3/16	51-3/16	53-1/4	35	84-3/16	84-3/16	84-3/4	74-11/16	85-1/4	85-1/4	87-5/16	73-11/16
490	51	70-1/8	55-3/8	38-3/8	43-9/16	55-15/16	56-15/16	60	38-9/16	92-3/8	92-3/8	92-15/16	82-1/8	93-7/16	94-7/16	97-1/2	81-1/8
540	55-3/4	77-15/16	60-3/8	42-5/16	47-15/16	61-1/4	62-5/16	65-5/16	42-7/16	101-5/8	102-3/16	102-3/16	90-3/8	102-9/16	103-11/16	106-11/16	89-3/8
600	62-3/16	86-1/4	66-3/8	47	53-3/16	68-5/8	69-5/8	71-11/16	47-1/8	112-11/16	113-3/16	113-1/4	100-5/16	114-9/16	115-9/16	117-5/8	99-5/16
660	68-7/16	94-7/8	72-3/8	51-11/16	58-3/8	76	76	-	51-13/16	123-3/4	124-1/4	-	110-3/16	126-1/2	126-1/2	-	109-3/16
730	75-13/16	104-3/4	79-3/8	57-3/16	64-7/16	83-3/8	83-7/16	-	57-5/16	137-1/8	137-3/16	-	121-11/16	139-3/16	139-5/16	-	120-3/4

Size	L									R					
	THD,BHD			UBD			DBD			THD, UBD, BHD			DBD		
	Class I	Class II	Class III	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	20-1/16	20-1/16	20-1/16	23-1/16	23-1/16	23	23-3/8	23-3/8	23-5/16	19-1/4	19-1/4	19-1/16	23-3/8	23-3/8	23-5/16
135	22-9/16	22-9/16	22-9/16	25-3/4	25-3/4	25-3/4	25-7/8	25-7/8	25-3/4	21	21	20-3/4	25-7/8	25-7/8	25-3/4
150	25-1/16	25-1/16	25-1/16	28-7/16	28-7/16	28-7/16	28-7/16	28-11/16	28-7/16	22-1/2	23-1/2	22-1/4	28-3/16	28-11/16	28-1/8
165	27-1/2	27-1/2	27-1/2	31-3/16	31-3/16	31-3/16	31-3/16	31-3/16	31-3/16	24-1/4	25-1/4	24	30-5/8	31-5/8	30-9/16
180	30	30	30	34	34	33-15/16	33-15/16	33-15/16	33-15/16	26-3/4	26-3/4	25-1/2	33-1/2	33-1/2	32-7/8
195	32-7/16	32-7/16	32-7/16	36-11/16	36-11/16	37-11/16	36-5/8	36-5/8	37-11/16	28-1/2	28-1/2	27-1/4	35-15/16	35-15/16	36-3/8
210	34-15/16	34-15/16	34-15/16	39-7/16	39-7/16	40-3/8	39-3/8	39-3/8	40-3/8	30	30	28-3/4	38-5/16	38-5/16	38-11/16
225	37-3/8	37-3/8	37-7/16	42-11/16	42-11/16	43-3/16	42-5/8	42-5/8	43-1/8	31-3/4	31-3/4	30-1/2	41-1/4	41-1/4	41-3/16
245	40-11/16	40-11/16	40-11/16	46-5/16	46-5/16	46-13/16	46-1/4	46-1/4	46-3/4	33-3/4	33-3/4	32-15/16	44-3/8	44-3/8	44-7/16
270	44-13/16	44-13/16	44-13/16	50-7/8	50-7/8	51-3/8	50-13/16	50-13/16	51-5/16	37-1/2	37-1/2	35-11/16	48-7/8	48-7/8	48-1/2
300	49-3/4	49-3/4	49-3/4	56-5/16	56-5/16	56-7/8	56-1/4	56-1/4	56-13/16	40-1/2	40-1/2	38-11/16	53-9/16	53-9/16	53-3/16
330	54-11/16	54-11/16	54-3/4	62-5/16	62-5/16	62-3/8	62-1/4	62-1/4	62-5/16	41-9/16	41-9/16	42-1/4	57-13/16	57-13/16	58-3/16
365	60-1/2	60-1/2	60-1/2	68-11/16	68-11/16	69-1/4	68-5/8	68-5/8	69-3/16	45-5/16	45-5/16	46	63-3/8	63-3/8	64-1/4
402	66-9/16	66-5/8	66-5/8	75-7/16	75-1/2	76	75-3/8	75-7/16	75-15/16	49-11/16	49-11/16	50-9/16	69-7/16	69-1/2	70-7/16
445	73-11/16	73-11/16	73-3/4	83-5/16	83-5/16	83-7/8	83-1/4	83-1/4	83-13/16	53-15/16	53-15/16	54-13/16	76-3/16	76-3/16	77-1/8
490	81-1/8	81-1/8	81-1/8	91-1/2	91-1/2	92-1/16	91-7/16	91-7/16	92	58-11/16	59	60	83-5/16	83-7/16	84-1/2
540	89-3/8	89-3/8	89-7/16	100-5/8	101-3/16	101-1/4	100-9/16	101-1/8	101-3/16	63-11/16	64	65	91-1/16	91-13/16	92-5/16
600	99-5/16	99-5/16	99-5/16	111-5/8	112-1/8	112-3/16	111-9/16	112-1/6	112-1/8	70	70-9/16	71	100-5/8	101-7/16	101-11/16
660	109-3/16	109-3/16	-	122-9/16	123-1/16	-	122-1/2	123	-	76-9/16	76-9/16	-	110-1/4	110-3/4	-
730	120-11/16	120-3/4	-	135-13/16	135-7/8	-	135-3/4	135-13/16	-	83-9/16	83-9/16	-	121-11/16	121-3/4	-

Size	W			Approximate Shipping Weight *		
	Class I	Class II	Class III	Class I	Class II	Class III
120	26-11/16	28-3/16	31-7/16	182	199	263
135	28-15/16	30-9/16	33-11/16	204	223	311
150	31-5/8	33-1/8	35-3/4	246	277	346
165	33-11/16	35-3/16	38-5/16	293	313	391
180	36-1/8	37-1/4	40-3/8	335	333	400
195	38-1/2	39-5/8	42-3/4	367	399	511
210	41-7/16	42-7/16	45-3/16	403	447	560
225	44-1/16	44-9/16	47-5/16	495	544	626
245	46-5/8	47-1/4	50-13/16	547	615	741
270	51-1/2	51-5/8	55-5/16	663	720	956
300	55-1/8	56-1/8	58-7/8	820	916	1043
330	59-5/16	60-5/16	64	948	1108	1336
365	65-5/16	65-15/16	70-1/8	1148	1329	1680
402	71-15/16	73	80-3/4	1453	1839	2280
445	79-5/16	79-11/16	87-1/4	1879	2119	2853
490	85-5/16	87-15/16	98-1/2	2238	2486	3469
540	93-1/2	98-11/16	110-11/16	2492	3431	4729
600	102-7/8	108	118-5/8	3501	4147	5642
660	117-1/8	116-5/8	-	4528	4962	-
730	127	126-3/4	-	5548	6737	-

* Weight in pounds.

Airfoil Centrifugal Blower Backward Inclined Belt Drive Double Width, Double Inlet

Loren Cook Company certifies that the CA DWDI shown herein are 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 CA DWDI is furnished standard with UL 705 & cUL 705 listing (Power Ventilator/ZACT) when furnished with factory supplied motor.

Description: Fan shall be a double width, double inlet backward inclined airfoil blade steel wheel, belt driven centrifugal blower.

Certifications: Fan shall be manufactured at an ISO 9001 certified facility. Fan shall be listed by Underwriters Laboratories (UL 705) and UL listed for Canada (cUL 705). Fan shall bear the AMCA Certified Ratings Seal for Sound and Air Performance.

Construction: The fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. The scroll wrapper and scroll side panels shall be a minimum 12 gauge steel. The entire fan housing shall have continuously welded seams for leak-proof operation and shall have a minimum 1-1/2" outlet discharge flange. A performance cut-off shall be furnished to prevent the recirculation of air in the fan housing. Bearing support shall be minimum 1/4" steel. Lifting lugs shall be provided for ease of installation. 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: All 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 steel, non-overloading, centrifugal backward inclined, airfoil type. Blades on all sizes shall be continuously welded to the backplate and deep spun inlet shrouds. All sizes shall be keyed and securely attached to the fan shaft. Wheel shall overlap aerodynamic aluminum inlet cones to provide maximum performance and efficiency. Wheel shall be balanced in accordance with AMCA Standard 204-05, Balance Quality and Vibration Levels for Fans.

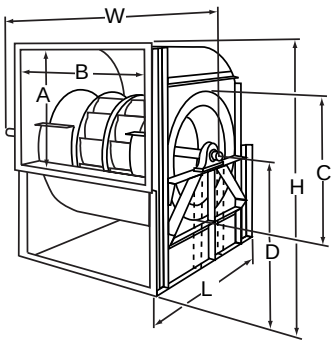
Motor: Motor shall be NEMA Design B with Class B insulation rated for continuous duty and furnished at the specified voltage, phase and enclosure.

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

Product: Fan shall be model CA DWDI as manufactured by Loren Cook Company of Springfield, Missouri.



Arrangement 3

CA DWDI Dimension Data Arrangement 3

Size	A-I.D.	B-I.D.	D			H			
			THD,UBD	BHD	DBD	THD	UBD	BHD	DBD
120	12-1/8	17-11/16	13	16	13	27-9/16	23-3/8	25-3/4	24-3/8
135	13-5/8	19-15/16	14	17	14	30-3/16	25-5/8	28	25-9/16
150	15-1/4	22	15	19	15	32-13/16	27-15/16	31-3/16	29-1/4
165	16-15/16	24	17	21	17	36-7/16	31-1/4	34-3/8	32-5/8
180	18-1/2	26-1/16	18	22	18	39-1/16	33-1/2	36-5/8	35-1/8
195	19-1/2	28-7/16	20	24	20	42-11/16	36-13/16	39-13/16	38-1/2
210	21-5/8	30-3/8	21	26	21	45-3/8	39-1/8	43-1/16	40-15/16
225	23-3/16	32-1/2	23	28	23	49	42-3/8	46-1/4	44-3/8
245	25-1/2	35-1/16	25	30	25	53-1/8	46-1/8	49-7/8	48-1/4
270	27-1/2	39-7/16	27	33	27	57-7/8	50-1/4	54-15/16	50-1/8
300	31-3/16	43	30	36	30	64-1/8	55-7/8	60-3/8	58-1/2
330	34-1/2	47-1/16	33	39	33	70-7/8	61-3/8	65-13/16	64-3/8
365	38-11/16	52-3/16	36	43	36	77-3/4	67-7/16	72-5/8	70-5/8
402	41-3/4	57-13/16	40	47	40	85-3/4	74-11/16	79-5/8	78-1/4
445	45-15/16	64-1/4	44	52	44	94-5/8	82-5/16	88-1/8	86-1/4
490	51	70-1/8	48	57	48	103-1/4	90-3/16	96-3/4	94-1/2
540	55-3/4	77-15/16	53	62	53	113-3/4	99-1/2	105-13/16	104-1/4
600	62-3/16	86-1/4	59	69	59	126-1/4	110-11/16	117-11/16	116
660	68-7/16	94-7/8	65	75	65	138-3/4	121-7/8	128-9/16	121-5/8
730	75-13/16	104-3/4	72	83	72	153-3/8	134-7/8	142-1/4	141-5/16

Size	L		W			Approximate Shipping Weight *		
	THD,BHD	DBD,UBD	Class I	Class II	Class III	Class I	Class II	Class III
120	24-1/2	25-3/4	28-11/16	29-7/16	29-15/16	252	277	302
135	27	28-3/4	30-15/16	31-11/16	32-11/16	346	380	415
150	29	31-5/8	34-1/4	34-3/4	35-1/2	444	488	532
165	31-1/2	34-3/8	36-1/4	36-3/4	37-1/2	546	600	655
180	33-3/4	37-1/8	38-13/16	39-5/16	40-1/16	652	717	782
195	36-1/4	40	42-11/16	42-3/16	42-15/16	762	839	915
210	41	42-7/8	44-1/8	44-5/8	45-3/8	877	965	1053
225	43	45-3/4	46-1/4	47	47-1/2	996	1096	1195
245	46	49-1/2	49-13/16	50-1/16	50-11/16	1161	1277	1393
270	50	54-3/4	54-3/16	54-15/16	55-1/16	1378	1515	1653
300	55-3/8	60	58-1/2	59	59-3/8	1653	1818	1984
330	60-3/4	65-3/4	63-9/16	63-11/16	63-15/16	1945	2140	2334
365	67	72-3/8	69-5/16	69-9/16	70-1/16	2307	2538	2769
402	73-7/8	80-3/8	75-11/16	75-11/16	76-3/16	2715	2986	3258
445	81-1/2	88-1/2	82-5/8	83-1/2	83-1/2	3220	3543	3865
490	89-3/4	97	89-1/2	90-3/8	90-5/8	3787	4165	4544
540	98-3/4	106-5/8	98-5/16	99-15/16	100-3/16	4460	4906	5352
600	109-5/8	118	107-1/2	108-3/4	110-3/4	5329	5862	6395
660	120-5/8	129-3/8	117-7/8	118-5/8	119-7/8	6265	6892	7518
730	133-1/4	142-5/8	129-1/4	130-3/4	131-1/4	7442	8186	8930

* Weight in pounds.

Airfoil Centrifugal Blower Backward Inclined Belt Drive Double Width, Double Inlet

Loren Cook Company certifies that the CA-4 DWDI 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 CA-4 DWDI is furnished standard with UL 705 & cUL 705 listing (Power Ventilator/ZACT) when furnished with factory supplied motor.

Description: Fan shall be a rectangular, double width, double inlet backward inclined airfoil blade steel wheel, belt driven centrifugal blower.

Certifications: Fan shall be manufactured at an ISO 9001 certified facility. Fan shall be listed by Underwriters Laboratories (UL 705) and UL listed for Canada (cUL 705). Fan shall bear the AMCA Certified Ratings Seal for Sound and Air Performance.

Construction: The fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. The scroll wrapper and scroll side panels shall be a minimum 12 gauge steel. The entire fan housing shall have continuously welded seams for leak-proof operation and shall have a minimum 2" outlet discharge flange. A performance cut-off shall be furnished to prevent the recirculation of air in the fan housing. Bearing support shall be minimum 1/4” steel. Lifting eyes shall be provided for ease of installation. 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: All 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 steel, non-overloading, centrifugal backward inclined, airfoil type. Blades on all sizes shall be continuously welded to the backplate and deep spun inlet shrouds. All sizes shall be securely keyed to the fan shaft. Wheel shall overlap aerodynamic aluminum inlet cones to provide maximum performance and efficiency. Wheel shall be balanced in accordance with AMCA Standard 204-05, Balance Quality and Vibration Levels for Fans.

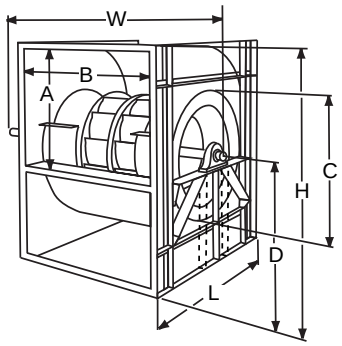
Motor: Motor shall be NEMA Design B with Class B insulation rated for continuous duty and furnished at the specified voltage, phase and enclosure.

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

Product: Fan shall be model CA-4 DWDI as manufactured by Loren Cook Company of Springfield, Missouri.



Arrangement 3

CA-4 DWDI Dimension Data Arrangement 3

Size	A-I.D.	B-I.D.	D				H	
			THD	UBD	BHD	DBD	THD, BHD	UBD, DBD
120	12-1/8	17-11/16	10-3/4	12-3/8	15	10-3/8	25-15/16	22-3/4
135	13-5/8	19-15/16	12	13-7/8	16-3/4	11-5/8	28-13/16	25-1/2
150	15-1/4	22	13-1/4	15-1/4	18-3/8	12-7/8	31-11/16	28-1/8
165	16-15/16	24	14-3/8	16-5/8	20	14-1/4	34-7/16	30-7/8
180	18-1/2	26-1/16	15-5/8	18-1/8	21-1/2	15-1/2	37-5/16	33-5/8
195	19-1/2	28-7/16	16-3/4	19-1/2	23-1/4	16-3/4	40-1/16	36-1/4
210	21-5/8	30-3/8	18	21	24-7/8	18-1/8	42-15/16	39-1/8
225	23-3/16	32-1/2	19-1/4	22-3/8	26-1/2	19-3/8	45-13/16	41-3/4
245	25-1/2	35-1/16	20-7/8	24-1/4	28-5/8	21-1/8	49-5/8	45-3/8
270	27-1/2	39-7/16	23-3/8	26-5/8	31-3/8	23-1/4	54-7/8	49-7/8
300	31-3/16	43	25-3/8	29-1/2	34-5/8	25-7/8	60-1/8	55-3/8
330	34-1/2	47-1/16	27-7/8	32-3/8	37-7/8	28-3/8	65-15/16	60-3/4
365	38-11/16	52-3/16	30-5/8	35-5/8	41-3/4	31-3/8	72-1/2	67
402	41-3/4	57-13/16	33-5/8	39-1/4	46-3/4	34-5/8	80-9/16	73-7/8
445	45-15/16	64-1/4	37-1/8	43-1/4	51-3/8	38-1/4	88-11/16	81-1/2
490	51	70-1/8	40-3/4	47-1/2	56-1/4	42-1/4	97-3/16	89-3/4
540	55-3/4	77-15/16	44-7/8	52-1/4	61-3/4	46-1/2	106-3/4	98-3/94
600	62-3/16	86-1/4	49-3/4	58	68-1/4	51-5/8	118-1/8	109-5/8

Size	L		W			Approximate Shipping Weight *		
	THD, BHD	DBD, UBD	Class I	Class II	Class III	Class I	Class II	Class III
120	22-3/4	25-15/16	28-11/16	29-7/16	29-15/16	265	291	318
135	25-1/2	28-13/16	30-15/16	31-11/16	32-11/16	363	399	436
150	28-1/8	31-11/16	34-1/4	34-3/4	35-1/2	466	512	559
165	30-7/8	34-7/16	36-1/4	36-3/4	37-1/2	573	630	688
180	33-5/8	37-5/16	38-13/16	39-5/16	40-1/16	685	753	822
195	36-1/4	40-1/16	41-11/16	42-3/16	42-15/16	801	881	961
210	39-1/8	42-15/16	44-1/8	44-5/8	45-3/8	921	1013	1105
225	41-3/4	45-13/16	46-1/4	47	47-1/2	1046	1150	1255
245	45-3/8	49-5/8	49-13/16	50-1/16	50-11/16	1219	1341	1463
270	49-7/8	54-7/8	54-3/16	54-15/16	55-1/16	1447	1591	1736
300	55-3/8	60-1/8	58-1/2	59	59-3/8	1736	1909	2083
330	60-3/4	65-15/16	63-9/16	63-11/16	63-15/16	2043	2247	2451
365	67	72-1/2	69-5/16	69-9/16	70-1/16	2423	2665	2907
402	73-7/8	80-9/16	75-11/16	75-11/16	76-3/16	2851	3136	3421
445	81-1/2	88-11/16	82-5/8	83-1/2	83-1/2	3382	3720	4058
490	89-3/4	97-3/16	89-1/2	90-3/8	90-5/8	3976	4373	4771
540	98-3/4	106-3/4	98-5/16	99-15/16	100-3/16	4683	5151	5619
600	109-5/8	118-1/8	107-1/2	108-3/4	110-3/4	5595	6155	6714

* Weight in pounds.

Flatblade Steel Centrifugal Blower Backward Inclined Belt Drive Single Width, Single Inlet

Loren Cook Company certifies that the CF 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 CF is furnished standard with UL 705 & cUL 705 listing (Power Ventilator/ ZACT) when furnished with factory supplied motor.

Type CF is available with UL 762 and cUL 762 listing (Power Ventilator for Restaurant Exhaust Appliances/Y2HW).

Type CF is available with UL listing for "Power Ventilator for Smoke Control Systems."

Description: Fan shall be a single width, single inlet backward inclined flat blade, belt driven centrifugal blower.

Certifications: Fan shall be manufactured at an ISO 9001 certified facility. Fan shall be listed by Underwriters Laboratories (UL/cUL 705) for US and Canada. For restaurant applications, fan shall be listed by Underwriters Laboratories (UL/cUL 762) for US and Canada. For smoke control applications, fan shall be listed by Underwriters Laboratories (Power Ventilator for Smoke Control Systems) for US and Canada. Fan shall bear the AMCA Certified Ratings Seal for Sound and Air Performance.

Construction: The fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. The scroll wrapper and scroll side panels shall be a minimum 12 gauge steel. The entire fan housing shall have continuously welded seams for leak-proof operation and shall have a minimum 1 ½" outlet discharge flange. A performance cut-off shall be furnished to prevent the recirculation of air in the fan housing. Bearing support shall be minimum 10 gauge welded steel. Lifting eyes shall be provided for ease of installation. 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 steel, non-overloading, centrifugal backward inclined, flat blade type. Blades shall be continuously welded to the backplate and deep spun inlet shroud. All sizes shall be keyed and securely attached 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.

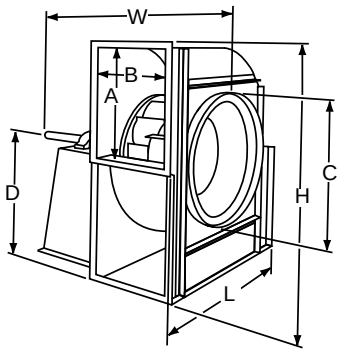
Motor: Motor shall be NEMA Design B with Class B insulation rated for continuous duty and furnished at the specified voltage, phase and enclosure.

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.

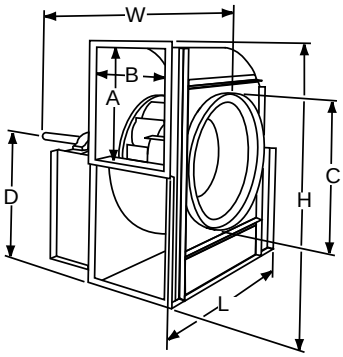
Blower Shaft: Blower shaft shall be AISI C-1045 hot rolled and accurately turned, ground and polished. Shafting shall be sized for a critical speed of at least 125% of maximum RPM.

Belts and Drives: Belts shall be oil and heat resistant, static conducting. 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.

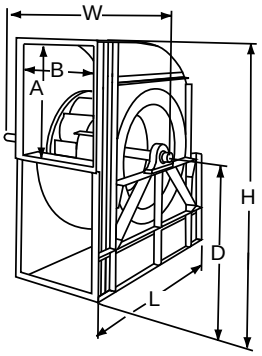
Product: Fan shall be model CF as manufactured by Loren Cook Company of Springfield, Missouri.



Arrangement 1 & 9



Arrangement 10



Arrangement 3

CF SWSI Data Arrangement 1, 9 & 10 Dimension

Size	A-I.D.	B-I.D.	C-O.D.	D		H						
				THD, DBD, TAD, UBD, TAU	BHD BAU	THD	UBD	BHD	DBD	BAU	TAU	TAD
120	13-1/8	9-3/16	16-1/8	13	16	30-3/16	25-1/8	29-7/8	28-9/16	29-1/16	30-3/4	29-3/8
135	14-3/4	10-5/16	17-5/8	14	17	32-13/16	27-1/8	32-1/8	30-15/16	31-3/16	33-15/16	31-7/8
150	16-7/16	11-7/16	19-1/8	15	19	35-7/16	29-1/8	35-5/16	33-3/8	34-5/16	36-7/8	34-7/16
165	18-1/16	12-5/8	21-3/16	17	21	39-1/16	32-1/8	38-9/16	36-13/16	37-3/8	40-15/16	37-15/16
180	19-11/16	13-3/4	22-11/16	18	22	41-11/16	34-1/4	40-3/4	39-1/4	39-9/16	44	40-9/16
195	21-5/16	14-15/16	24-3/16	20	24	45-5/16	37-1/16	44-1/16	38-1/2	38-5/8	48-1/16	39-15/16
210	23	16-1/16	25-5/16	21	26	46-1/16	39-3/8	47-1/4	40-15/16	41-3/4	51-3/16	42-3/8
225	24-5/8	17-3/16	27-7/16	23	28	49-5/8	42-5/8	46-1/4	44-3/8	44-7/8	55-3/16	45-15/16
245	26-13/16	18-3/4	29-7/16	25	30	53-3/4	46-3/8	49-7/8	48-1/4	48-3/8	59-15/16	49-15/16
270	29-9/16	20-5/8	31-15/16	27	33	58-1/2	50-1/2	54-15/16	52-13/16	53-1/4	65-7/16	54-5/8
300	32-13/16	22-15/16	34-15/16	30	36	64-3/4	56-1/8	60-3/8	58-1/2	58-7/16	72-9/16	60-9/16
330	36-1/8	25-1/4	37-15/16	33	39	71	61-5/8	65-13/16	64-3/8	63-11/16	80	66-11/16
365	39-15/16	27-7/8	41-7/16	36	43	77-7/8	67-11/16	72-5/8	70-5/8	70-5/16	87-7/8	73-5/16
402	44-1/16	30-3/4	45-3/16	40	47	87-7/16	74-15/16	79-5/8	78-1/4	77-1/8	97	81-1/8
445	48-11/16	34	49-7/16	44	52	96	82-9/16	88-1/8	86-1/4	85-1/4	106-13/16	89-5/16
490	53-5/8	37-7/16	55	48	57	104-7/8	90-7/16	96-3/4	94-1/2	93-5/8	117	97-7/8
540	59-1/16	41-1/4	60	53	62	115-7/16	99-3/4	105-13/16	104-1/4	102-5/16	128-15/16	108
600	65-5/8	45-13/16	66	59	69	129-3/8	110-15/16	117-11/16	116	113-13/16	143-3/16	120-1/16
660	72-3/16	50-7/16	72	65	75	141-15/16	122-1/8	128-9/16	127-13/16	124-1/4	157-1/2	132-3/16
730	79-7/8	55-3/4	79	72	83	156-1/2	135-1/8	142-1/4	141-5/16	137-1/2	174-3/8	146-7/16

Size	L					W	Max Motor Frame Size **	Approximate Shipping Weight *
	THD, BHD	DBD, UBD	BAU	TAU	TAD			
120	24-3/4	25-3/4	29-3/4	24	33-3/8	26-1/4	145T	211
135	27-1/4	28-3/4	32-3/4	27	36-5/16	27-3/8	145T	266
150	29-1/4	31-5/8	35-13/16	29	39-7/8	30-1/2	184T	325
165	31-3/4	34-3/8	39-7/8	32	43-1/2	32-5/8	184T	387
180	34	37-1/8	42-15/16	35	46-7/16	36-1/4	215T	453
195	36-1/2	40	46	37	51-1/2	37-1/2	215T	523
210	41-1/4	42-7/8	50-1/8	40	54-3/4	41-1/8	256T	599
225	43-1/4	45-3/4	53-3/16	42	58-3/8	42-1/4	256T	677
245	46-1/4	49-1/2	57-15/16	46	63-3/16	46-1/4	286T	786
270	50-1/4	54-3/4	63-5/16	50	68-1/8	48-5/8	286T	931
300	55-5/8	60	70-1/2	56	74-11/16	53-1/2	326T	1118
330	61	65-3/4	77-15/16	61	82-1/4	56-1/4	326T	1320
365	67-1/4	72-3/8	85-13/16	67	89-5/8	63-1/4	326T	1575
402	74-1/8	80-3/8	94	73	99-9/16	67-11/16	326T	1858
445	81-3/4	88-1/2	104-3/8	81	108-1/4	75-7/16	326T	2223
490	90	97	114	89	118-11/16	79-7/16	404T	2636
540	99	106-5/8	124-15/16	97	131-1/2	87-11/16	404T	3190
600	109 7/8	118	138-1/4	108	143-1/8	92-11/16	404T	3852
660	120 7/8	129-3/8	152-7/16	119	159	101-15/16	404T	4576
730	133 1/2	142-5/8	169-1/4	131	173	107-11/16	404T	5495

CF SWSI Arrangement 3 (7 Discharges) Dimensions

Size	A-I.D., B-I.D., D,H,L	W	Approximate Shipping Weight *
120	Same as Arrangement 1, 9 & 10	19-7/16	157
135		20-9/16	195
150		21-11/16	236
165		23-7/8	280
180		25-1/2	328
195		26-11/16	379
210		28-5/16	437
225		29-7/16	496
245		32-1/2	579
270		34-7/8	690
300		37-11/16	836
330		40-1/2	994
365		43-5/8	1193
402		47-1/8	1415
445		50-7/8	1702
490		55-13/16	2028
540		62-1/8	2475
600		67-5/16	2997
660		74-7/16	3565
730		80-1/4	4282

*Weight in pounds. Class I only. For Class II add 10%. For Class III add 20% **Maximum motor frame for Arrangement 9 & 10; based on single speed ODP motor.

Flatblade Steel Centrifugal Blower Backward Inclined Belt Drive Single Width, Single Inlet

Loren Cook Company certifies that the CF-4 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 CF-4 is furnished standard with UL 705 & cUL 705 listing (Power Ventilator/ ZACT) when furnished with factory supplied motor.

Type CF-4 is available with UL 762 and cUL 762 listing (Power Ventilator for Restaurant Exhaust Appliances/Y2HW).

Type CA SWSI is available with UL listing for "Power Ventilator for Smoke Control Systems."

Description: Fan shall be a rectangular single width, single inlet backward inclined flat blade steel wheel belt driven centrifugal blower.

Certifications: Fan shall be manufactured at an ISO 9001 certified facility. Fan shall be listed by Underwriters Laboratories (UL 705) and UL listed for Canada (cUL 705). Fan shall bear the AMCA Certified Ratings Seal for Sound and Air Performance.

Construction: The fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. The scroll wrapper and scroll side panels shall be a minimum 12 gauge steel. The entire fan housing shall have continuously welded seams for leakproof operation and shall have a minimum 2" outlet discharge flange. A performance cut-off shall be furnished to prevent the recirculation of air in the fan housing. Bearing support shall be minimum 10 ga. welded steel. Lifting eyes shall be provided for ease of installation. 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: All 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 steel, non-overloading, centrifugal backward inclined, flat blade type. Blades on all sizes shall be continuously welded to the backplate and deep spun 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.

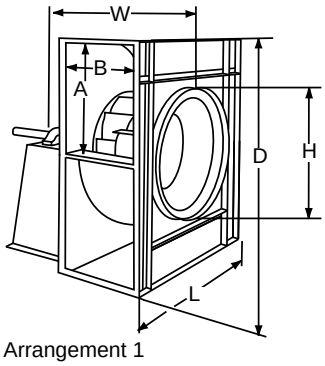
Motor: Motor shall be NEMA Design B with Class B insulation rated for continuous duty and furnished at the specified voltage, phase and enclosure.

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 percent of maximum RPM.

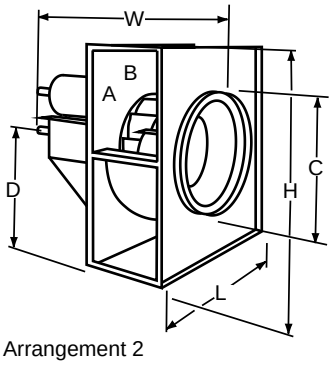
Bearings: Bearings shall be designed and tested specifically for use in air handling applications. Construction shall be heavy duty regreasable ball or roller type in a cast iron pillow block housing selected for a minimum L50 life in excess of 200,000 hours at maximum cataloged operating speed.

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

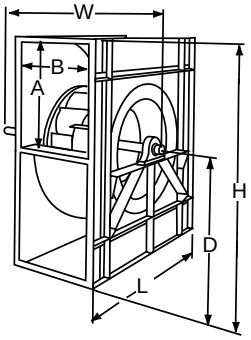
Product: Fan shall be model CF-4 as manufactured by Loren Cook Company of Springfield, Missouri.



Arrangement 1



Arrangement 2



Arrangement 3

CF-4 SWSI Dimension Data Arrangement 1

Size	A-I.D.	B-I.D.	C-O.D.	D			H		L		W	Approximate Shipping Weight *
				THD,DBD	UBD	BHD	THD,BHD	DBD,UBD	THD,BHD	DBD,UBD		
120	13-1/8	9-3/16	16-1/4	10-3/4	12-3/8	15	25-3/4	22-3/4	22-3/4	25-3/4	34-13/16	222
135	14-3/4	10-5/16	17-3/4	12	13-7/8	16-3/4	28-3/4	25-1/2	25-1/2	28-3/4	35-15/16	280
150	16-7/16	11-7/16	19-1/4	13-1/4	15-1/4	18-3/8	31-5/8	28-1/8	28-1/8	31-5/8	37-1/16	341
165	18-1/16	12-5/8	21-1/4	14-3/8	16-5/8	20	34-3/8	30-7/8	30-7/8	34-3/8	38-1/4	407
180	19-11/16	13-3/4	22-3/4	15-5/8	18-1/8	21-1/2	37-1/8	33-5/8	33-5/8	37-1/8	42-1/8	476
195	21-5/16	14-15/16	24-1/4	16-3/4	19-1/2	23-1/4	40	36-1/4	36-1/4	40	43-5/16	549
210	23	16-1/16	26	18	21	24-7/8	42-7/8	39-1/8	39-1/8	42-7/8	46-7/16	630
225	24-5/8	17-3/16	27-1/2	19-1/4	22-3/8	26-1/2	45-3/4	41-3/4	41-3/4	45-3/4	47-9/16	711
245	26-13/16	18-3/4	29-1/2	20-7/8	24-1/4	28-5/8	49-1/2	45-3/8	45-3/8	49-1/2	50-9/16	825
270	29-9/16	20-5/8	32	23-3/8	26-5/8	31-3/8	54-3/4	49-7/8	49-7/8	54-3/4	52-7/16	978
300	32-13/16	22-15/16	35	25-3/8	29-1/2	34-5/8	60	55-3/8	55-3/8	60	57-11/16	1175
330	36-1/8	25-1/4	38	27-7/8	32-3/8	37-7/8	65-3/4	60-3/4	60-3/4	65-3/4	60	1387
365	39-15/16	27-7/8	41-1/2	30-5/8	35-5/8	41-3/4	72-3/8	67	67	72-3/8	64-7/8	1655
402	44-1/16	30-3/4	45-1/4	33-5/8	39-1/4	46-3/4	80-3/8	73-7/8	73-7/8	80-3/8	68-1/16	1953
445	48-11/16	34	49-1/2	37-1/8	43-1/4	51-3/8	88-1/2	81-1/2	81-1/2	88-1/2	73-1/16	2336
490	53-5/8	37-7/16	55	40-3/4	47-1/2	56-1/4	97	89-3/4	89-3/4	97	76-1/2	2771
540	59-1/16	41-1/4	60	44-7/8	52-1/4	61-3/4	106-5/8	98-3/4	98-3/4	106-5/8	81-5/8	3350
600	65-5/8	45-13/16	66	49-3/4	58	68-1/4	118	109-5/8	109-5/8	118	86-3/16	4045

* Weight in pounds. Class I only. For Class II add 10%. For Class III add 20%.

CF-4 SWSI Dimension Data Arrangement 2

Size	A-I.D.	B-I.D.	C-O.D.	D				H		L		W	Max Motor Frame **	Approximate Shipping Weight *
				THD	UBD	BHD	DBD	THD/BHD	UBD,DBD	THD,BHD	UBD,DBD			
120	13-1/8	9-3/16	16-1/4	10-3/4	12-3/8	15	10-3/8	25-3/4	22-3/4	22-3/4	25-3/4	34-13/16	145T	222
135	14-3/4	10-5/16	17-3/4	12	13-7/8	16-3/4	11-5/8	28-3/4	25-1/2	25-1/2	28-3/4	35-15/16	145T	280
150	16-7/16	11-7/16	19-1/4	13-1/4	15-1/4	18-3/8	12-7/8	31-5/8	28-1/8	28-1/8	31-5/8	37-1/16	182T	341
165	18-1/16	12-5/8	21-1/4	14-3/8	16-5/8	20	14-1/4	34-3/8	30-7/8	30-7/8	34-3/8	38-1/4	182T	407
180	19-11/16	13-3/4	22-3/4	15-5/8	18-1/8	21-1/2	15-1/2	37-1/8	33-5/8	33-5/8	37-1/8	42-1/8	184T	476
195	21-5/16	14-15/16	24-1/4	16-3/4	19-1/2	23-1/4	16-3/4	40	36-1/4	36-1/4	40	43-5/16	184T	549
210	23	16-1/16	26	18	21	24-7/8	18-1/8	42-7/8	39-1/8	39-1/8	42-7/8	47-7/16	184T	630
225	24-5/8	17-3/16	27-1/2	19-1/4	22-3/8	26-1/2	19-3/8	45-3/4	41-3/4	41-3/4	45-3/4	48-9/16	213T	711
245	26-13/16	18-3/4	29-1/2	20-7/8	24-1/4	28-5/8	21-1/8	49-1/2	45-3/8	45-3/8	49-1/2	50-9/16	213T	825
270	29-9/16	20-5/8	32	23-3/8	26-5/8	31-3/8	23-1/4	54-3/4	49-7/8	49-7/8	54-3/4	52-7/16	215T	978
300	32-13/16	22-15/16	35	25-3/8	29-1/2	34-5/8	25-7/8	60	55-38	55-3/8	60	57-11/16	254T	1175
330	36-1/8	25-1/4	38	27-7/8	32-3/8	37-7/8	28-3/8	65-3/4	60-3/4	60-3/4	65-3/4	60	254T	1387
365	39-15/16	27-7/8	41-1/2	30-5/8	35-5/8	41-3/4	31-3/8	72-3/8	67	67	72-3/8	64-7/8	256T	1655
402	44-1/16	30-3/4	45-1/4	33-5/8	39-1/4	46-3/4	34-5/8	80-3/8	73-7/8	73-7/8	80-3/8	68-1/16	256T	1953
445	48-11/16	34	49-1/2	37-1/8	43-1/4	51-3/8	38-1/4	88-1/2	81-1/2	81-1/2	88-1/2	73-1/16	286T	2336
490	53-5/8	37-7/16	55	40-3/4	47-1/2	56-1/4	42-1/4	97	89-3/4	89-3/4	97	76-1/2	286T	2771
540	59-1/16	41-1/4	60	44-7/8	52-1/4	61-3/4	46-1/2	106-5/8	98-3/4	98-3/4	106-5/8	81-5/8	324T	3350
600	65-5/8	45-13/16	66	49-3/4	58	68-1/4	51-5/8	118	109-5/8	109-5/8	118	86-3/16	324T	4045

* Weight in pounds. Class I only. **Max Motor Frame is based on ODP single speed motor.

CF-4 SWSI Dimension Data Arrangement 3

Size	A-I.D.	B-I.D.	D				H		L		W	Approximate Shipping Weight *
			THD	UBD	BHD	DBD	THD,BHD	UBD,DBD	THD,BHD	UBD,DBD		
120	13-1/8	9-3/16	10-3/4	12-3/8	15	10-3/8	25-3/4	22-3/4	22-3/4	25-3/4	18-7/8	165
135	14-3/4	10-5/16	12	13-7/8	16-3/4	11-5/8	28-3/4	25-1/2	25-1/2	28-3/4	20	205
150	16-7/16	11-7/16	13-1/4	15-1/4	18-3/8	12-7/8	31-5/8	28-1/8	28-1/8	31-5/8	21-1/8	248
165	18-1/16	12-5/8	14-3/8	16-5/8	20	14-1/4	34-3/8	30-7/8	30-7/8	34-3/8	23-15/16	294
180	19-11/16	13-3/4	15-5/8	18-1/8	21-1/2	15-1/2	37-1/8	33-5/8	33-5/8	37-1/8	24-15/16	345
195	21-5/16	14-15/16	16-3/4	19-1/2	23-1/4	16-3/4	40	36-1/4	36-1/4	40	27-3/16	399
210	23	16-1/16	18	21	24-7/8	18-1/8	42-7/8	39-1/8	39-1/8	42-7/8	28-13/16	460
225	24-5/8	17-3/16	19-1/4	22-3/8	26-1/2	19-3/8	45-3/4	41-3/4	41-3/4	45-3/4	29-15/16	521
245	26-13/16	18-3/4	20-7/8	24-1/4	28-5/8	21-1/8	49-1/2	45-3/8	45-3/8	49-1/2	32	608
270	29-9/16	20-5/8	23-3/8	26-5/8	31-3/8	23-1/4	54-3/4	49-7/8	49-7/8	54-3/4	34-3/8	726
300	32-13/16	22-15/16	25-3/8	29-1/2	34-5/8	25-7/8	60	55-38	55-3/8	60	37-3/16	878
330	36-1/8	25-1/4	27-7/8	32-3/8	37-7/8	28-3/8	65-3/4	60-3/4	60-3/4	65-3/4	40	1044
365	39-15/16	27-7/8	30-5/8	35-5/8	41-3/4	31-3/8	72-3/8	67	67	72-3/8	43-1/8	1254
402	44-1/16	30-3/4	33-5/8	39-1/4	46-3/4	34-5/8	80-3/8	73-7/8	73-7/8	80-3/8	46-5/8	1487
445	48-11/16	34	37-1/8	43-1/4	51-3/8	38-1/4	88-1/2	81-1/2	81-1/2	88-1/2	50-3/8	1790
490	53-5/8	37-7/16	40-3/4	47-1/2	56-1/4	42-1/4	97	89-3/4	89-3/4	97	55-5/16	2132
540	59-1/16	41-1/4	44-7/8	52-1/4	61-3/4	46-1/2	106-5/8	98-3/4	98-3/4	106-5/8	61-5/8	2599
600	65-5/8	45-13/16	49-3/4	58	68-1/4	51-5/8	118	109-5/8	109-5/8	118	66-11/16	3147

* Weight in pounds. Class I only. For Class II add 10%. For Class III add 20%.

Material Gauges and Shaft Diameters for CA / CF SWSI Blowers

Size	All Arrangements						Arrangement 3			Arrangement 1, 9, 10				
	Class I		Class II		Class III		Shaft Diameter			Shaft Diameter			Arr. 9 Max Motor Frame **	Arr. 10 Max Motor Frame **
	Scroll	Side Panel	Scroll	Side Panel	Scroll	Side Panel	Class I	Class II	Class III	Class I	Class II	Class III		
120	12 Ga.	12 Ga.	12 Ga.	12 Ga.	10 Ga.	10 Ga.	1	1	1-3/16	1-3/16	1-7/16	1-11/16	145T	56
135													145T	145T
150								1-3/16	1-7/16				184T	145T
165													184T	184T
180							1-3/16	1-7/16	1-11/16	1-7/16	1-11/16		215T	184T
195	10 Ga.	10 Ga.	10 Ga.	10 Ga.			1-7/16						215T	184T
210												1-15/16	256T	184T
225													256T	215T
245								1-11/16	1-15/16	1-11/16	1-15/16	2-3/16	286T	256T
270													286T	284T
300							1-11/16	1-15/16	2-3/16	1-15/16	2-3/16	2-7/16	326T	326T
330					7 Ga.	7 Ga.	1-11/16	2-3/16					326T	365T
365							1-15/16	2-7/16	2-7/16	2-3/16	2-7/16	2-15/16	326T	404T
402									2-11/16				326T	404T
445								2-11/16	2-15/16	2-7/16	2-15/16	3-7/16	326T	404T
490							2-3/16						404T	404T
540							2-7/16	2-15/16	3-7/16	2-15/16	3-7/16	3-15/16	404T	404T
600			7 Ga.	7 Ga.			2-11/16	3-7/16	3-15/16				404T	404T
660							3-7/16	3-15/16	4-7/16	3-7/16	3-15/16	4-7/16	404T	404T
730													404T	404T

Material Gauges and Shaft Diameters for CA-4 / CF-4 SWSI Blowers

Size	All Arrangements				Arrangement 1			Arrangement 2 with Motor Mount		Arrangement 2 Swing Out		Arrangement 3		
	Scroll			Side Panel	Shaft Diameter			Shaft Diameter	Max Motor Frame *	Shaft Diameter	Max Motor Frame *	Shaft Diameter		
	Class I	Class II	Class III	All	Class I	Class II	Class III	Class I		Class I		Class I	Class II	Class III
120	12 Ga.	12 Ga.	10 Ga.	12 Ga.	1-3/16	1-7/16	1-7/16	1-3/16	145T	-	-	1	1	1-3/16
135									145T					
150									182T				1-3/16	1-7/16
165									182T					
180							1-11/16		184T			1-3/16	1-7/16	1-11/16
195		10 Ga.		10 Ga.					184T					
210					1-7/16	1-11/16	1-15/16	1-7/16	184T	1-7/16	256T	1-7/16		
225									213T		256T			
245					1-11/16	1-15/16	2-7/16	1-11/16	213T	1-11/16	284T		1-11/16	1-15/16
270									215T		284T			
300					1-15/16	2-3/16		1-15/16	254T	1-15/16	324T	1-11/16	1-15/16	2-3/16
330									254T		324T		2-3/16	
365	10 Ga.		7 Ga.	7 Ga.	2-3/16	2-7/16	2-15/16	2-3/16	256T	2-3/16	326T	1-15/16	2-7/16	2-7/16
402									256T		326T			2-11/16
445					2-7/16	2-15/16	3-7/16	2-7/16	286T	2-7/16	364T		2-11/16	2-15/16
490									286T		364T	2-3/16		
540					2-15/16	3-7/16	3-15/16	2-15/16	324T	-	-	2-7/16	2-15/16	3-7/16
600		7 Ga.		1/4”					324T			2-11/16	3-7/16	3-15/16

Dimensions are in inches. * Max motor frame is based on single speed ODP motor.

Material Gauges and Shaft Diameters for CAF-DW Blowers

<table>
<tr><th rowspan="2">Size</th><th colspan="3">Scroll</th><th colspan="3">Side Panel</th><th colspan="3">Shaft Diameter*</th></tr>
<tr><th>Class I</th><th>Class II</th><th>Class III</th><th>Class I</th><th>Class II</th><th>Class III</th><th>Class I</th><th>Class II</th><th>Class III</th></tr>
<tr><td>120</td><td rowspan="10">16 Ga.</td><td rowspan="10">16 Ga.</td><td rowspan="5">16 Ga.</td><td rowspan="12">14 Ga.</td><td rowspan="12">14 Ga.</td><td rowspan="12">14 Ga.</td><td rowspan="3">1-7/16</td><td rowspan="2">1-7/16</td><td>1-11/16</td></tr>
<tr><td>135</td><td rowspan="2">1-15/16</td></tr>
<tr><td>150</td><td rowspan="4">1-15/16</td></tr>
<tr><td>165</td><td rowspan="3">1-11/16</td><td rowspan="5">2-3/16</td></tr>
<tr><td>180</td></tr>
<tr><td>195</td><td rowspan="5">14 Ga.</td></tr>
<tr><td>210</td><td rowspan="2">2-3/16</td></tr>
<tr><td>225</td><td>1-15/16</td></tr>
<tr><td>245</td><td rowspan="3">2-7/16</td><td rowspan="6">2-7/16</td></tr>
<tr><td>270</td><td rowspan="2">2-3/16</td></tr>
<tr><td>300</td><td>2-11/16</td></tr>
<tr><td>330</td><td rowspan="3">14 Ga.</td><td rowspan="3">14 Ga.</td><td rowspan="3">12 Ga.</td><td rowspan="4">12 Ga.</td><td>2-7/16</td><td>2-15/16</td></tr>
<tr><td>365</td><td>2-11/16</td><td rowspan="2">3-7/16</td><td>2-15/16</td></tr>
<tr><td>402</td><td rowspan="3">12 Ga.</td><td rowspan="3">12 Ga.</td><td rowspan="3">12 Ga.</td><td rowspan="2">2-15/16</td><td rowspan="2">3-7/16</td></tr>
<tr><td>445</td><td rowspan="3">12 Ga.</td><td rowspan="3">10 Ga.</td><td rowspan="3">12 Ga.</td><td rowspan="3">10 Ga.</td><td>2-7/16</td></tr>
<tr><td>490</td><td>3-7/16</td><td>2-15/16</td><td>3-15/16</td></tr>
<tr><td>540</td><td rowspan="3">10 Ga.</td><td rowspan="2">7 Ga.</td><td rowspan="3">10 Ga.</td><td rowspan="3">7 Ga.</td><td rowspan="3">2-15/16</td><td rowspan="3">3-7/16</td><td>4-7/16</td></tr>
<tr><td>600</td><td rowspan="3">10 Ga.</td><td rowspan="2">10 Ga.</td><td rowspan="2">4-15/16</td></tr>
<tr><td>660</td><td rowspan="2">-</td><td rowspan="2">-</td><td rowspan="2">-</td></tr>
<tr><td>730</td><td>7 Ga.</td><td>7 Ga.</td><td>3-15/16</td></tr>
</table>

* Drive end. Shaded area indicates turned down shafting.

Material Gauges and Shaft Diameters for CA/CA-4 DWDI Blowers

<table>
<tr><th rowspan="3">Size</th><th colspan="3">All Arrangements</th><th colspan="6">CA DWDI Arrangement 3</th><th colspan="4">CA-4 DWDI Arrangement 3</th></tr>
<tr><th colspan="3">Scroll</th><th colspan="3">Side Panel</th><th colspan="3">Shaft Diameter*</th><th>Side Panel</th><th colspan="3">Shaft Diameter*</th></tr>
<tr><th>Class I</th><th>Class II</th><th>Class III</th><th>Class I</th><th>Class II</th><th>Class III</th><th>Class I</th><th>Class II</th><th>Class III</th><th>All</th><th>Class I</th><th>Class II</th><th>Class III</th></tr>
<tr><td>120</td><td rowspan="13">12 Ga.</td><td rowspan="13">12 Ga.</td><td rowspan="13">10 Ga.</td><td rowspan="5">12 Ga.</td><td rowspan="5">12 Ga.</td><td rowspan="13">10 Ga.</td><td rowspan="2">1-7/16</td><td rowspan="2">1-11/16</td><td>1-15/16</td><td rowspan="7">12 Ga.</td><td rowspan="2">1-7/16</td><td rowspan="2">1-11/16</td><td>1-15/16</td></tr>
<tr><td>135</td><td>2-3/16</td><td>2-3/16</td></tr>
<tr><td>150</td><td rowspan="3">1-11/16</td><td rowspan="3">1-15/16</td><td rowspan="3">2-7/16</td><td rowspan="3">1-11/16</td><td rowspan="3">1-15/16</td><td rowspan="3">2-7/16</td></tr>
<tr><td>165</td></tr>
<tr><td>180</td></tr>
<tr><td>195</td><td rowspan="10">10 Ga.</td><td rowspan="10">10 Ga.</td><td rowspan="3">1-15/16</td><td rowspan="3">2-3/16</td><td rowspan="2">2-11/16</td><td rowspan="3">1-15/16</td><td rowspan="3">2-3/16</td><td rowspan="2">2-11/16</td></tr>
<tr><td>210</td></tr>
<tr><td>225</td><td rowspan="2">2-7/16</td><td>2-15/16</td><td rowspan="2">2-7/16</td><td>2-15/16</td></tr>
<tr><td>245</td><td rowspan="3">2-3/16</td><td rowspan="3">2-3/16</td><td rowspan="3">2-3/16</td><td rowspan="3">2-3/16</td></tr>
<tr><td>270</td><td rowspan="2">2-11/16</td><td rowspan="2">2-7/16</td></tr>
<tr><td>300</td><td rowspan="2">2-7/16</td><td rowspan="2">2-11/16</td><td rowspan="2">2-7/16</td></tr>
<tr><td>330</td><td rowspan="8">7 Ga.</td><td rowspan="8">7 Ga.</td><td>2-11/16</td><td>2-3/16</td><td>2-11/16</td><td>2-3/16</td></tr>
<tr><td>365</td><td rowspan="3">10 Ga.</td><td rowspan="3">10 Ga.</td><td>2-3/16</td><td>2-7/16</td><td rowspan="2">2-11/16</td><td>2-3/16</td><td>2-7/16</td><td rowspan="2">2-11/16</td></tr>
<tr><td>402</td><td rowspan="2">2-7/16</td><td rowspan="2">2-11/16</td><td rowspan="3">7 Ga.</td><td rowspan="2">2-7/16</td><td rowspan="2">2-11/16</td></tr>
<tr><td>445</td><td rowspan="2">2-11/16</td><td rowspan="2">2-15/16</td></tr>
<tr><td>490</td><td rowspan="3">10 Ga.</td><td rowspan="3">7 Ga.</td><td>2-15/16</td><td>3-7/16</td><td>3-7/16</td><td>2-15/16</td><td>3-7/16</td><td>3-7/16</td></tr>
<tr><td>540</td><td rowspan="3">3-7/16</td><td rowspan="3">3-15/16</td><td>3-15/16</td><td rowspan="3">3-7/16</td><td rowspan="3">3-15/16</td><td>3-15/16</td></tr>
<tr><td>600</td><td rowspan="2">7 Ga.</td><td rowspan="2">7 Ga.</td><td rowspan="2">4-7/16</td><td>1/4”</td><td rowspan="2">4-7/16</td></tr>
<tr><td>660</td><td>3-15/16</td><td rowspan="2">4-7/16</td></tr>
<tr><td>730</td><td>4-7/16</td><td>4-15/16</td></tr>
</table>

* Drive end. Shaded area indicates turned down shafting.

Approximate Wheel Weights (lbs.) and Wk^2(lbs.-ft^2)

For proper motor selection you must give consideration to starting torque requirements along with operating BHP. The following tables lists the WK^2 factors for different wheel sizes. Steel or aluminum is available in most fans (see below). 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:

$$WK^2_M = WK^2_F \left(\frac{FRPM}{MRPM}\right)^2 \quad (1.1)$$

WHERE: 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 revolutions per minute
MRPM = motor revolutions per minute

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

CA SWSI

Size	Steel Wheel						Aluminum Wheel			
	Class I		Class II		Class III		Class I		Class II	
	Weight	Wk^2	Weight	Wk^2	Weight	Wk^2	Weight	Wk^2	Weight	Wk^2
120	18	2	18	2	19	2	7	1	7	1
135	20	3	20	3	22	4	8	1	8	1
150	24	5	26	5	28	6	9	2	9	2
165	30	7	30	7	32	8	11	3	11	3
180	48	12	48	12	51	13	17	4	17	4
195	53	15	53	15	57	18	19	6	20	6
210	58	20	58	20	63	23	21	7	22	8
225	67	28	67	28	80	36	26	11	26	11
245	76	39	85	45	91	50	30	17	30	17
270	99	64	98	65	107	73	35	24	34	24
300	146	102	147	102	160	119	53	38	56	40
330	172	153	171	154	189	179	60	55	63	57
365	197	225	218	264	237	287	72	84	80	100
402	253	362	279	420	300	454	83	122	94	146
445	380	570	413	659	438	709	129	195	143	231
490	430	817	472	949	504	1022	145	278	174	356
540	495	1185	586	1483	580	1484	175	439	209	552
600	630	1948	688	2238	784	2568	220	713	244	832
660	829	2907	905	3338	1020	3820	293	1067	348	1327
730	978	4378	1071	5026	1214	5747	338	1570	405	1960

CF SWSI

Size	Steel Wheel						Aluminum Wheel			
	Class I		Class II		Class III		Class I		Class II	
	Weight	Wk^2	Weight	Wk^2	Weight	Wk^2	Weight	Wk^2	Weight	Wk^2
120	17	2	20	3	22	3	6	1	6	1
135	20	3	24	4	27	5	7	1	7	1
150	23	4	30	6	33	7	8	1	8	2
165	29	7	35	9	39	11	9	2	10	2
180	48	11	59	16	64	19	15	3	18	5
195	51	14	66	22	72	25	17	5	21	7
210	60	21	73	29	81	33	18	6	23	9
225	65	27	81	37	97	47	21	8	25	11
245	74	37	101	57	111	66	24	12	29	16
270	96	62	118	83	131	96	28	18	34	24
300	143	98	188	151	187	151	47	31	61	47
330	168	148	221	225	221	225	53	44	70	67
365	193	217	258	335	277	358	63	69	80	99
402	266	390	327	523	349	557	82	120	94	145
445	396	613	473	815	498	866	128	192	143	231
490	451	882	546	1180	577	1254	143	273	173	355
540	577	1495	679	1832	673	1833	173	434	210	554
600	731	2421	802	2772	898	3102	218	706	245	834
660	953	3606	1044	4129	1159	4611	315	1195	349	1333
730	1129	5429	1241	6212	1384	6934	366	1763	406	1968

CA-DWDI & CAF-DW

Size	Steel Wheel						Aluminum Wheel			
	Class I		Class II		Class III		Class I		Class II	
	Weight	Wk^2	Weight	Wk^2	Weight	Wk^2	Weight	Wk^2	Weight	Wk^2
120	24	3	30	3	31	3	14	2	14	2
135	29	5	35	5	37	5	16	2	16	2
150	41	7	43	8	53	8	18	4	18	4
165	48	11	49	11	59	12	22	6	22	6
180	54	16	57	16	71	18	34	8	34	8
195	65	22	65	23	78	25	38	12	40	12
210	73	29	77	32	87	33	42	14	44	16
225	88	43	105	47	120	48	52	22	52	22
245	110	65	120	66	135	67	60	34	60	34
270	130	95	142	96	159	97	70	48	68	48
300	168	145	225	147	203	148	106	76	112	80
330	196	209	271	213	243	215	120	110	126	114
365	249	331	329	353	302	360	144	168	160	200
402	318	525	402	572	412	587	166	244	188	292
445	402	845	462	938	532	969	258	390	286	462
490	496	1308	570	1,474	656	1529	290	556	348	712
540	668	2005	768	2288	883	2382	350	878	418	1104
600	880	3138	1012	3618	1,164	3778	440	1426	488	1664
660	1070	4644	1231	5398	1415	5649	586	2134	696	2654
730	1325	6947	1524	8131	1752	8525	676	3140	810	3920

Consider Air Density

Air Density Factors for Various Temperatures and Altitudes:
Unity Basis = Standard Air Density of .075 lb/ft^3. At sea level (29.92 in. Hg barometric pressure) this is equivalent to dry air at 70° F

Find SP & HP on the performance data pages.
See Density Factors, to the right.

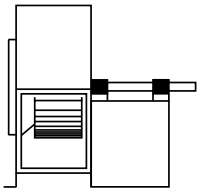
$SP_{standard}$ =$SP_{operating}$ / Density Factor

$HP_{standard}$ =$HP_{operating}$ * Density Factor

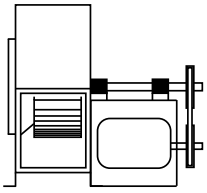
WHERE: SP = Static pressure
HP = Horse power

Air Temp. °F	Altitude in Feet Above Sea Level					
	0	2000	4000	6000	8000	10000
	Barometric Pressure in Inches of Mercury					
	29.92	27.82	25.84	23.98	22.22	20.58
70	1.000	.930	.864	.801	.743	.688
100	.964	.880	.818	.758	.703	.651
200	.803	.747	.694	.643	.596	.552
300	.697	.648	.604	.558	.518	.480
400	.616	.573	.532	.493	.458	.424
500	.552	.513	.477	.442	.410	.380
600	.500	.465	.432	.400	.372	.344
700	.457	.425	.395	.366	.340	.315

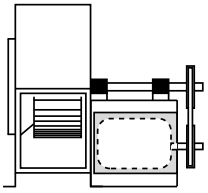
Arrangements



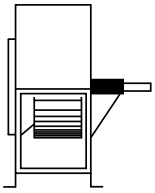
Arr. 1 SWSI
Impeller overhung, two bearings on base.



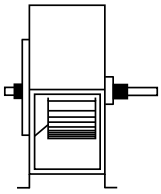
Arr. 9 SWSI
Impeller overhung, two bearings with motor outside base.



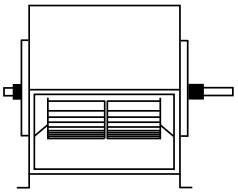
Arr. 10 SWSI
Impeller overhung, two bearings, with motor inside base.



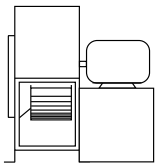
Arr. 2 SWSI
Impeller overhung, bearings in bracket supported by fan housing.



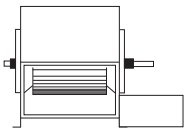
Arr. 3 SWSI
One bearing on each side and supported by fan housing.



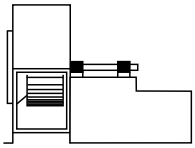
Arr. 3 DWDI
One bearing on each side and supported by fan housing.



Arr. 4 SWSI
For direct drive. Impeller over-hung on prime mover shaft. No bearings on fan. Prime mover base mounted or integrally directly connected. *



Arr. 7 DWDI, SWSI
For belt drive or direct connection. Arrangement 3 plus base for prime *

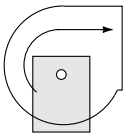


Arr. 8 SWSI
For belt drive or direct connection. Arrangement 1 plus extended base for prime mover. *

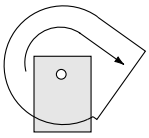
Rotation and Discharge

The direction of rotation is determined from the drive side of the fan. On single inlet fans, drive side is always considered as the side opposite the fan inlet. The angle of the discharge is based on the horizontal axis of the fan and is designated in degrees (45° standard) above or below the standard reference axis.

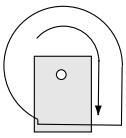
Clockwise Rotation



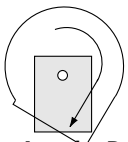
Top Horizon-



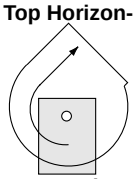
Top Angular Down



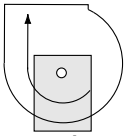
Down Blast



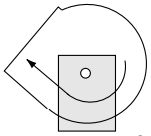
Bottom Angular Down *



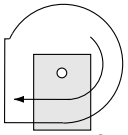
Top Angular Up



Up Blast

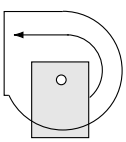


Bottom Angular Up

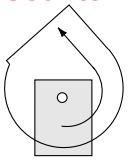


Bottom Horizontal

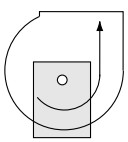
Counter Clockwise Rotation



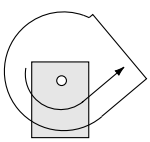
Top Horizontal



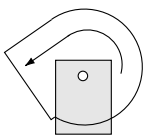
Top Angular Up



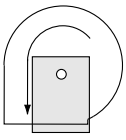
Up Blast



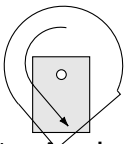
Bottom Angular Up



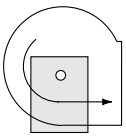
Top Angular Down



Down Blast



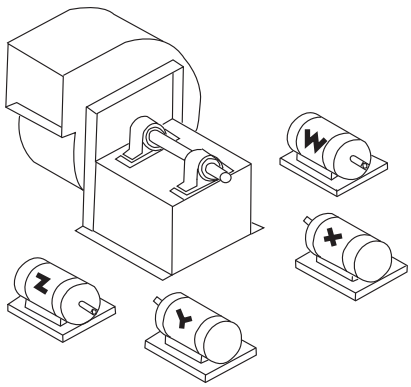
Bottom Angular Down *



Bottom Horizontal

Motor Positions for Belt Drive Centrifugal Fans

To determine the location of the motor, face the drive side of the fan and pick the proper motor position designated by the letters W, X, Y or Z as shown in the drawing.



*Consult factory for availability

UL 762 Listed for Restaurant Exhaust Appliances

COOK products with a UL 762 listing are designed to eject contaminated or grease-laden air. These products are UL listed to operate continuously at elevated temperatures and continue operation during grease flare-up. All of these units are intended for installation in accordance with the National Fire Protection Association (NFPA) Standard 96: Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations.

UL Listed to Operate Continuously to 500°F

- CA / CA-SWSI Arrangement 1, 8, 9 and 10
- CA-4 / CA-4 SWSI Arrangement 1 and 2
- CF / CF Arrangement 1, 8, 9 and 10
- CF-4 / CF-4 Arrangement 1 and 2

These COOK products must be ordered with drain and access door to comply with UL requirements. Weather covers are required for outdoor applications. When airstream temperatures are expected to exceed 180°F, high temperature accessories may be required.

Two Grease Collection Options

The Grease Terminator 2 is a grease-capture and containment system. It uses the same material that oil companies use to clean catastrophic oil spills on the ocean. It lasts about 30 to 45 days and is then replaced.

The grease trough is constructed of continuously welded .064 aluminum and includes a pan, lid and mounting hardware. Both the curb and non-curb mounted versions feature a baffled design for extended capacity. The lid and pan are removable for easy cleaning.

UL Listing Power Ventilator for Smoke Control Systems

The UL listing “Power Ventilator for Smoke Control Systems” is a test procedure and category which was initiated by Loren Cook Company and developed in a joint effort with UL in 1990. Several different sources were used in the definition of this test procedure. These sources include UL Standards 705, 762, 793, Southern Building Code Congress International (SBCCI) Standard Fire Prevention Code/1988, and Industrial Risk Insurers (IRI) Document E2. The requirements for the UL listing “Power Ventilator for Smoke Control Systems” are summarized as follows.

- The unit must withstand a specified elevated airstream temperature for a specified duration.
- The unit must be listed under UL 705.
- Fans with integral butterfly dampers shall meet the following requirements:
  - Fans shall be fitted with spring loaded damper actuator arms which will open the dampers automatically when the airstream temperature reaches 165°F.
  - The dampers must activate with or without electrical power connected to the fan.
  - The damper actuators must meet the requirements in UL 793 for Snow and Dust Load Testing of Butterfly Dampers (10 pounds per square foot).

Model	Sizes	Maximum Pressure	Duration at Specified Airstream Temp.			
			302°F	500°F	572°F	1000°F
CA / CF	120 thru 730	12.0”	-	4 HOURS	-	2 HOURS

High Temperature Operation Notes

Temperature Range (°F)	Fan Arrangement	Construction Requirements
-20 to 180	All	Standard Construction
181 to 230	1, 2, 8, 9 & 10	Standard Construction
	3	High Temperature Bearings
231 to 300	1, 2, 8, 9 & 10	High Temperature Paint
	3	High Temperature Paint High Temperature Bearings
301 to 500	1, 2, 8, 9 & 10	High Temperature Paint Special Louvered Weather Cover (if WC required) Shaft Cooler No Aluminum Wheel Construction Motor Heat Shield required on Arr. 2, 9 & 10
501 to 800	1, 2, 8 & 9	High Temperature Paint High Temperature Bearings Shaft Cooler No Aluminum Construction Motor Heat Shield required on Arr. 2 & 9
800 and up	1 & 8	Consult Factory

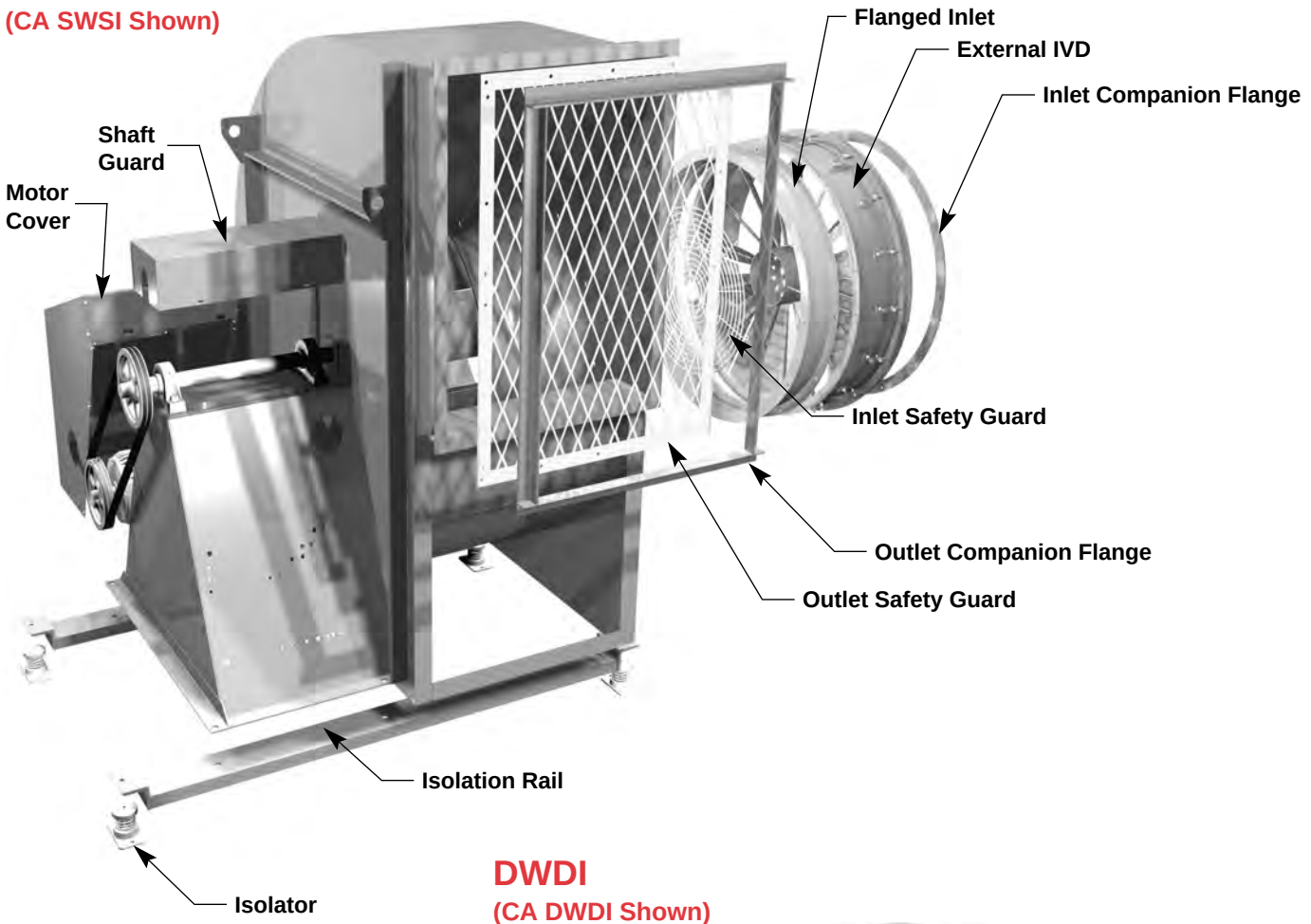
Special Notes:

1. For each degree that the Ambient temperature is above 100°F, the maximum airstream temperature is reduced by 5.5°F.

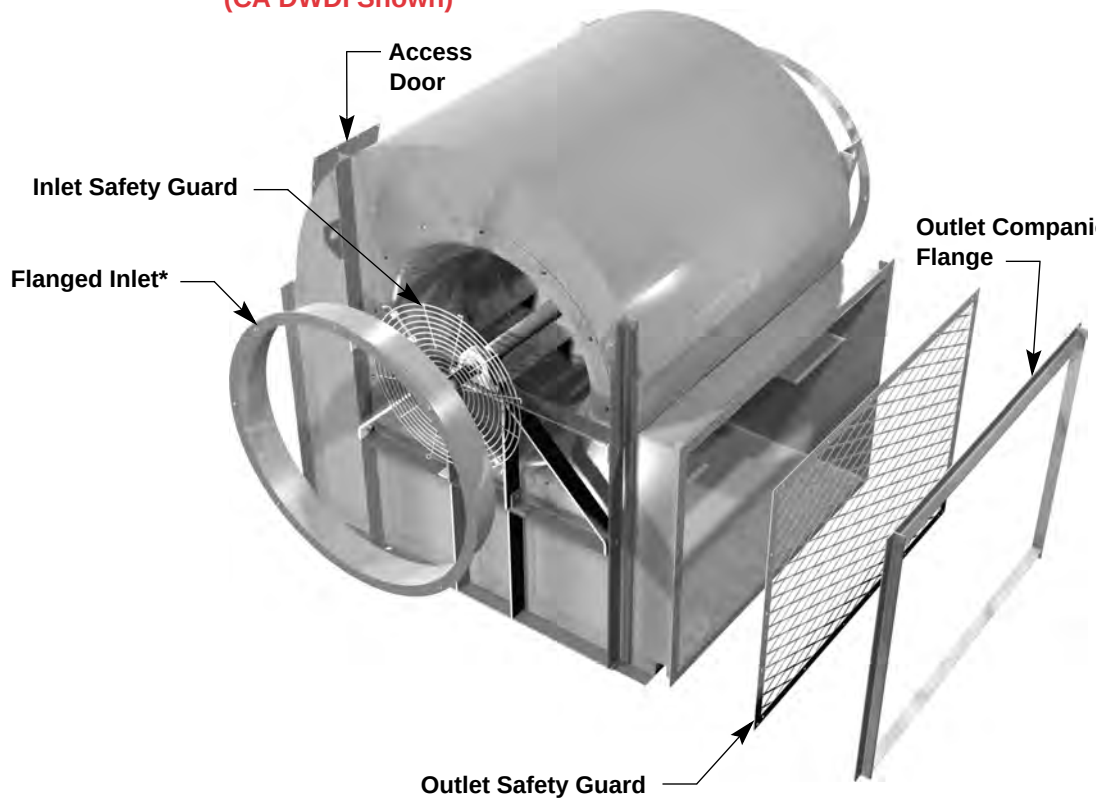
For elevated airstream temperatures, the maximum fan speed limits must be derated by the factors below.

Material	Operating Temperature (°F)	Speed Limit Factor
Carbon Steel	70	1.00
	200	0.98
	300	0.96
	400	0.94
	500	0.91
	600	0.87
	700	0.81
	800	0.75
Aluminum	70	1.00
	200	0.93
	300	0.79

SWSI
(CA SWSI Shown)



DWDI
(CA DWDI Shown)



*Only Available with External IVD.

Access Door
An access door is available in a bolted or hinged configuration. The door provides access for cleaning and inspection and is constructed from the same material as the fan housing. A gasket is also utilized to minimize leakage.

Belt Guard
Belt guards are available which cover the shaft and drive components. The guard is constructed of minimum 16 gauge LORENIZED™ steel and is factory installed. OSHA belt guards are also available to completely enclose the shaft and drive components. Optional expanded metal construction is also available; please consult factory.

Shaft Guard, Arr. 1, 2 & 9 available in steel & alum.
A shaft guard is available that covers the bearings and shaft to protect personnel during fan operation.

Inlet/Outlet Safety Guards
Inlet/Outlet safety guards are available to protect personnel and prevent debris from entering the fan. Safety guards are constructed of either expanded metal or wound spiral rings and are factory installed. Available in optional safety yellow. Cataloged performance is based on fans without safety guards.

Shaft Cooler
A shaft cooler is required for air temperature above 300°F. The shaft cooler is an aluminum casting with radial vanes mounted on the shaft between the inboard bearing and the fan housing. It is designed to dissipate heat which is conducted along the shaft. In addition, it prevents excessive bearing temperatures.

Weather Cover / OSHA Belt Guard
Weather covers are available to completely enclose the motor, shaft and drive components. The weather cover is constructed of minimum 16 gauge LORENIZED™ steel. A weather cover also functions as an effective OSHA belt guard.

Shaft Seal
The shaft seal reduces air leakage around fan shaft in high discharge pressure applications. It is constructed of aluminum and nitrile rubber.

Rub Ring
The rub ring lines the hole through which the shaft passes to prevent the shaft and wheel from contacting the housing. The rub ring is constructed of aluminum.

Drain
A drain coupling can be located in the bottom of the scroll housing. The coupling is continuously welded to the scroll and is threaded for a 3/4 inch pipe connection.

Horizontal Split Housing
CA/CF housings may be split and disassembled in the field to allow the unit to fit through smaller openings when required. The blower should be balanced prior to being put into service if the wheel and/or shaft were removed in the field.

Extended Life Bearings
Extended life bearings are available that provide L10 life in excess of 200,000 hours. Ratings are calculated per AFBMA Standards and based on maximum operating conditions.

Grease Trough
A grease trough provides for collection of grease from the CP unit. The grease trough is constructed of .064 aluminum and includes a pan, lid and mounting hardware. The pan is continuously welded and slides out for easy removal and cleaning and features a baffled design for extended capacity.

Coatings

Standard LORENIZED™ Fan Finish
LORENIZED is an electrostatically applied, baked polyester powder coating. This coating technology offers good chemical resistance, excellent mechanical performance and excellent protection from outdoor elements. Steel components go through an environmentally friendly five stage pretreatment process before the powder is applied. They are washed and treated until all surfaces are perfectly clean, chemically prepared and electrostatically charged - ready to bond with the powder. This insures excellent adhesion, uniformity and consistent coverage. The coating is a minimum 2 mil thick. The standard color is gray. LORENIZED Fan Finish exceed 1,000 hour salt spray under ASTM B117 test method.

Polyester Powder Testing Information

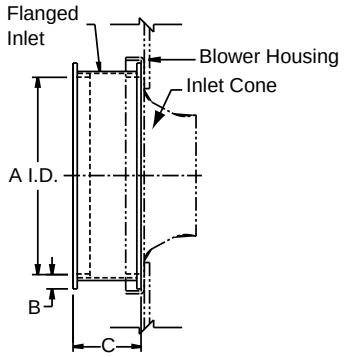
Impact Resistance	Test - ASTM D2794	Value - 100 inch-pounds
Pencil Hardness	Test - ASTM D3363	Value - 2H (Mar or Gouge)
Crosshatch Adhesion	Test - ASTM D3359 Method B	Value - 100%
Humidity Resistance	Test - ASTM D2247	Value - 1000+ Hours
Salt Spray	Test - ASTM B117	Value - 1000+ Hours
Continuous Service Temperature	Test - N/A	Value - 230°F (110°C)

Other Coatings
Cook Epoxy Powder is an electrostatically applied, baked epoxy powder coating. Coating thickness is 2.5 – 3.5 mils. *
Cook Phenolic Epoxy Powder is an electrostatically applied, baked phenolic epoxy powder coating. Coating thickness is 2 – 4 mils. *
Cook Easy Clean Powder is an electrostatically applied, baked modified epoxy silicone powder producing a high temperature **"**non-stick" coating. Coating thickness is 1.3 - 1.7 mils.
Air Dry Phenolic (Heresite VR-504) is a conventional spray applied phenolic resin coating. Coating thickness is 4 – 6 mils. *

***For outdoor applications an optional UV resistant topcoat is required to prevent deterioration of the coating. Heresite UC-5500 is used on the Air Dry Phenolic.

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. Flanged Inlet is not available with Nested Inlet Vane Damper.



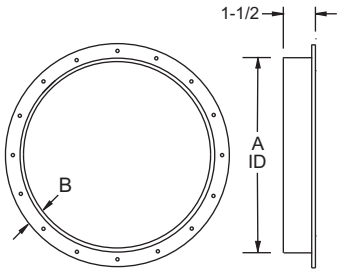
Size	A	B	C
120	12-5/8	1-1/2	5-3/4
135	14-1/8	1-1/2	5-3/4
150	15-5/8	1-1/2	5-3/4
165	17	2	5-3/4
180	18-1/2	2	5-3/4
195	19-3/4	2	6-1/4
210	21-1/2	2	6-1/4
225	23	2	6-1/4
245	25	2	6-1/4
270	27-1/4	2	6-1/4
300	30-1/4	2	6-1/4
330	33-1/4	2	6-1/4
365	36-3/4	2	6-1/4
402	40-1/2	2	6-1/4
445	44-3/4	2	6-1/4
490	50-1/4	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	9-3/4

All dimensions in inches.

Inlet/Outlet Companion Flanges

Inlet/outlet companion flanges are available for use in conjunction with the flanged inlet/outlet. The companion flanges are attached to the adjacent ductwork to provide an exact mate to the flanged connection on the fan.

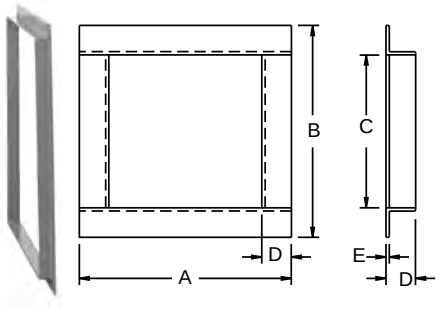
Inlet Companion Flange



Size	A	B
60-100	10-5/8	1-1/2
120	12-5/8	1-1/2
135	14-1/8	1-1/2
150	15-5/8	1-1/2
165	17	2
180	18-1/2	2
195	19-3/4	2
210	21-1/2	2
220-225	23	2
245-250	25	2
270	27-1/4	2
300	30-1/4	2
330	33-1/4	2
365	36-3/4	2
402	40-1/2	2
445	44-3/4	2
490	50-1/4	2
540	55-1/4	2
600	61-1/4	2
660	67-1/4	2
730	74-1/4	2

All dimensions in inches.

Outlet Companion Flange



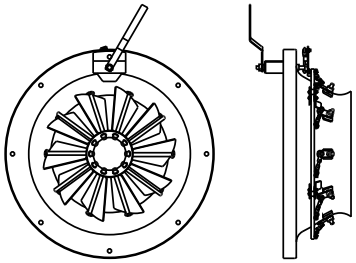
	CA/CF SWSI					CA DWDI				
Size	A	B	C	D	E	A	B	C	D	E
120	12-3/8	16-5/16	13-5/16	1-1/2	1/8	21-1/16	15-1/2	12-3/8	1-1/2	1/8
135	13-1/2	17-15/16	14-15/16	1-1/2	1/8	23-5/16	17	13-7/8	1-1/2	1/8
150	14-5/8	19-5/8	16-5/8	1-1/2	1/8	25-3/8	18-5/8	15-1/2	1-1/2	1/8
165	15-13/16	21-1/4	18-1/4	1-1/2	1/8	27-3/8	20-5/16	17-3/16	1-1/2	1/8
180	16-15/16	22-7/8	19-7/8	1-1/2	1/8	29-7/16	21-7/8	18-3/4	1-1/2	1/8
195	18-3/16	24-1/2	21-9/16	1-1/2	1/4	31-13/16	22-7/8	19-3/4	1-1/2	1/4
210	19-5/16	26-3/16	23-1/4	1-1/2	1/4	33-3/4	25	21-7/8	1-1/2	1/4
225	20-7/16	27-13/16	24-7/8	1-1/2	1/4	35-7/8	26-9/16	23-7/16	1-1/2	1/4
245	22	30	27	1-1/2	1/4	38-7/16	28-7/8	25-3/4	1-1/2	1/4
270	23-7/8	32-3/4	29-3/4	1-1/2	1/4	42-13/16	30-7/8	27-3/4	1-1/2	1/4
300	26-3/16	36	33-1/16	1-1/2	1/4	46-7/16	34-5/8	31-7/16	1-1/2	1/4
330	29-1/2	40-5/16	36-3/8	2	1/4	51-1/2	38-15/16	34-7/8	2	1/4
365	32-1/8	44-3/16	40-3/16	2	1/4	56-5/8	43-1/8	39-1/16	2	1/4
402	35	48-5/16	44-5/16	2	1/4	62-1/4	46-3/16	42-1/8	2	1/4
445	38-1/4	52-15/16	48-15/16	2	1/4	68-11/16	50-3/8	46-5/16	2	1/4
490	41-11/16	57-7/8	53-7/8	2	1/4	74-9/16	55-7/16	51-3/8	2	1/4
540	45-1/2	63-5/16	59-5/16	2	1/4	82-3/8	60-3/16	56-1/8	2	1/4
600	50-1/16	70	65-7/8	2	1/4	90-11/16	66-5/8	62-9/16	2	1/4
660	54-11/16	76-9/16	72-7/16	2	1/4	99-5/16	72-7/8	68-13/16	2	1/4
730	60	84-1/4	80-1/8	2	1/4	109-3/16	80-1/4	76-3/16	2	1/4

All dimensions in inches.

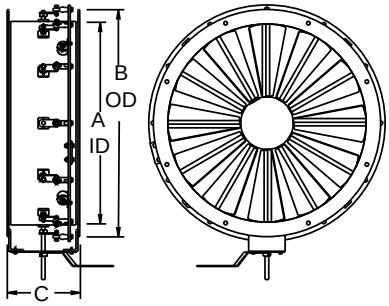
Inlet Vane Damper

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.** External inlet vane dampers used on DWDI fans will lower the class speed limit by as much as 50 percent. Please consult factory for details. Cataloged performance is based on fans without inlet vane dampers.

Nested



External



Size	A	B	C
120	12-7/8	15-7/8	10
135	14-3/8	17-3/8	10
150	15-7/8	18-7/8	10
165	17-3/8	20-3/8	10
180	18-7/8	21-7/8	10
195	20	23	10
210	21-3/4	24-3/4	10
225	23-1/4	26-1/4	10
245	25-1/4	28-1/4	10
270	27-1/4	31-1/4	10

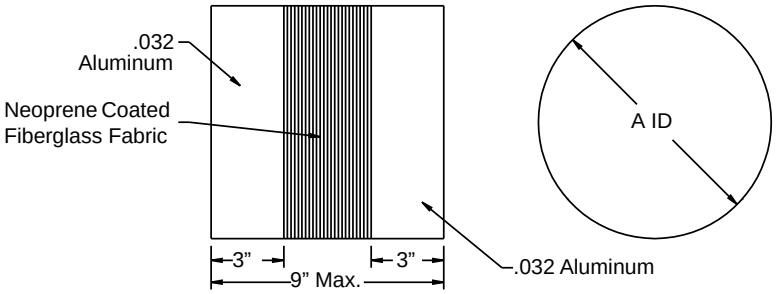
Size	A	B	C
300	30-1/4	34-1/4	10
330	33-1/4	37-1/4	10
365	36-3/4	40-3/4	10
402	40-1/2	44-1/2	11
445	44-3/4	48-3/4	11
490	50-1/4	54-1/4	11
540	55-1/4	59-1/4	12
600	61-1/4	65-1/4	12
660	67-1/4	71-1/4	12
730	74-1/4	78-1/4	12

All dimensions in inches.

Inlet/Outlet Flexible Duct Connector

Flexible Duct Connectors provide a flexible connection between the fan and the attached ductwork. This reduces the transmission of noise and vibration to the ductwork as well as allowing for slight misalignment and easy removal of the fan without disturbing the rigid ductwork. Flex Duct Connectors are constructed of reinforced neoprene fabric and aluminum bands; not to be used for UL762 (Restaurant Exhaust) or smoke control units, or temperatures in excess of 250°F.

Inlet - (CA/CF SWSI, Class I only)

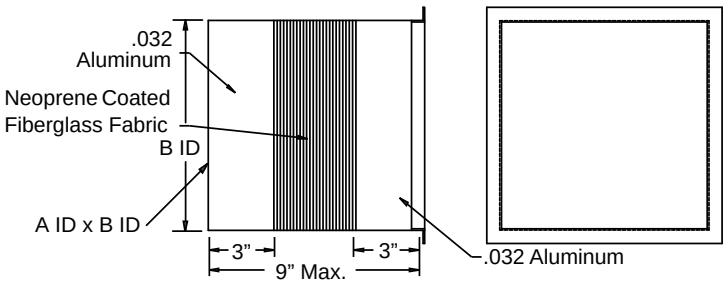


Size	A
120	16-1/4
135	17-3/4
150	19-1/4
165	21-1/4
180	22-3/4
195	24-1/4
210	26
225	27-1/2
245	29-1/2
270	32

Size	A
300	35
330	38
365	41-1/2
402	45-1/4
445	49-1/2
490	55
540	60
600	66
660	72
730	79

All dimensions in inches.

Outlet - (CA/CF SWSI, Class I only)



Outlet Flexible Duct Connector includes Outlet Companion Flange.

Size	A	B
120	9-5/8	13-9/16
135	10-3/4	15-3/16
150	11-7/8	16-7/8
165	13-1/16	18-1/2
180	14-3/16	20-1/8
195	15-11/16	22-1/16
210	16-13/16	23-3/4
225	17-15/16	25-3/8
245	19-1/2	27-1/2
270	21-3/8	30-1/4

Size	A	B
300	23-11/16	33-9/16
330	26	36-7/8
365	28-5/8	40-11/16
402	31-1/2	44-13/16
445	34-3/4	49-7/16
490	38-3/16	54-3/8
540	42	59-13/16
600	46-9/16	66-3/8
660	51-3/16	72-15/16
730	56-1/2	80-5/8

All dimensions in inches.

Aluminum

Galvanized

Shutters

Shutters are available in aluminum or galvanized, gravity or motorized

Standard duty shutter for discharge velocities up to 2000 FPM.heavy duty shutter for discharge velocities of 2000 FPM to 3000 FPM. Gravity units not available on downblast and top angular down discharges. Consult factory for speeds above 3000 FPM. On motorized shutters, size 490 and up, 2 motors are require.

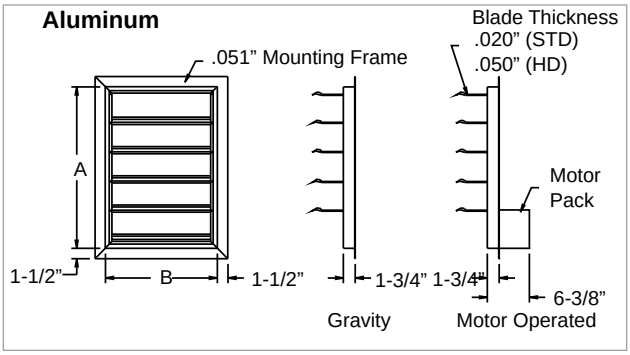
The model names are the following acronym, plus a dash and the size. (like: ADSS-120)

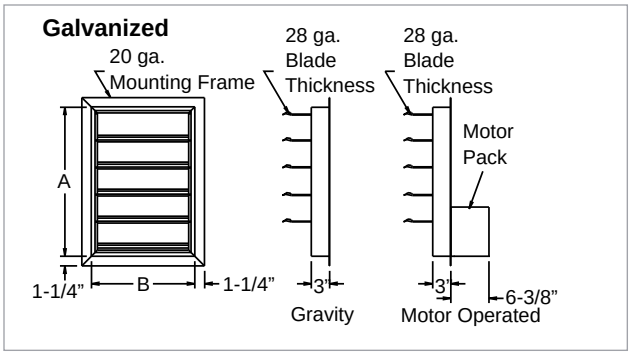
Aluminum
- Gravity:
  - ADSS for standard
  - ADSH for heavy duty
- Motorized:
  - MDSS for standard
  - MDSH for heavy duty

Galvanized
- Gravity: ADSG
- Motorized: MDSG

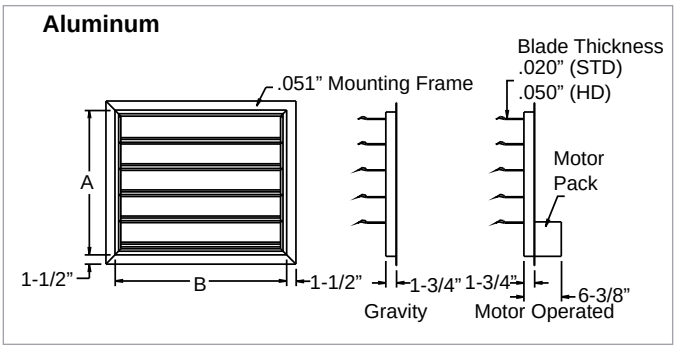
For CA/CF DWDI Add a D on the end (like: ADSS-120D)

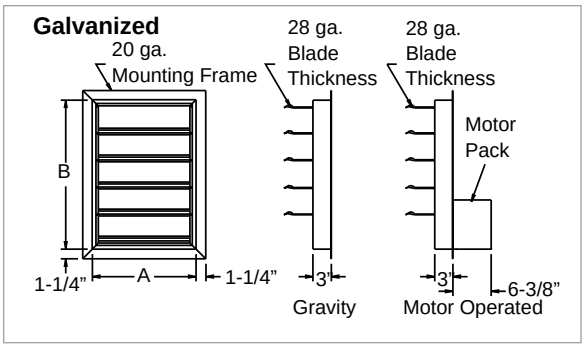
SWSI shutters





DWDI shutters





SWSI

Size	A	B	Size	A	B
120	12-15/16	9	300	32-13/16	22-15/16
135	14-9/16	10-1/8	330	36-1/8	25-1/4
150	16-1/4	11-1/4	365	39-15/16	27-7/8
165	17-13/16	12-3/8	402	44-1/16	30-3/4
180	19-7/16	13-1/2	445	48-11/16	34
195	21-1/16	14-11/16	490	53-5/8	37-7/16
210	22-3/4	15-13/16	540	59-1/16	41-1/4
225	24-3/8	16-15/16	600	65-5/8	45-13/16
245	26-9/16	18-1/2	660	72-3/16	50-7/16
270	29-9/16	20-5/8	730	79-7/8	55-3/4

All dimensions in inches.

DWDI

Size	A	B	Size	A	B
120	12-1/8	17-11/16	300	31-3/16	43
135	13-5/8	19-15/16	330	34-1/2	47-1/16
150	15-1/4	22	365	38-11/16	52-3/16
165	16-15/16	24	402	41-3/4	57-13/16
180	18-1/2	26-1/16	445	45-15/16	64-1/4
195	19-1/2	28-7/16	490	51	70-1/8
210	21-5/8	30-3/8	540	55-3/4	77-15/16
225	23-3/16	32-1/2	600	62-3/16	86-1/4
245	25-1/2	35-1/16	660	68-7/16	94-7/8
270	27-1/2	39-7/16	730	75-13/16	104-3/4

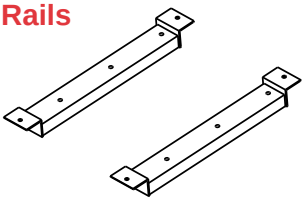
Isolators

Loren Cook Company offers a full line of vibration isolation products. This offering includes: rubber-in-shear and spring isolators, isolation rails and bases, and inertia bases. By purchasing this isolation equipment and the fan directly from Loren Cook, the customer is assured of proper fit and coordinated delivery.

Isolation bases purchased with the fan are normally tested and shipped with the fan pre-mounted. Isolators are shipped loose.

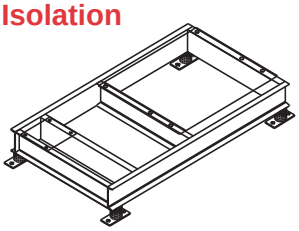
For more information consult COOK's Vibration Isolation Brochure.

Isolation Rails



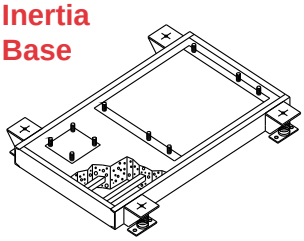
Isolation rails are recommended for all Arrangement 2 fans with motor mounted, and are required for isolating any Arrangement 9 or 10 fan with a centrifugal wheel diameter of 30 inches or more, unless the fan is supplied with an isolation or inertia base (see below). Smaller fans may benefit from isolation rails if fan attachment points do not coincide with desired mounting locations. Isolation rails, supplied in pairs, are designed to run the full length of the supported equipment (parallel to shafts) and can only be used on fans where the motor is an integral part of the fan. Each rail is constructed of rigid structural steel components coated with the standard factory finish, and are intended to be used in conjunction with two RIS Floor, Spring Floor, or Restrained Spring isolators depending on the needs of the application. They can also be used in ceiling mount applications with RIS Ceiling or Spring Ceiling Isolators. **Isolators are not included with the rails unless otherwise specified.** Optional seismic type isolators are also available; consult factory for more information.

Isolation



An isolation base is used to provide a single integral support for the fan and motor in cases where the motor is not an integral part of the fan such as Arrangements 1 and 3. Isolation bases are designed to run the full length of the supported equipment and motor. The base is constructed of structural steel channel (ASTM-A36) sized to resist belt pull and maintain proper alignment between the fan and motor. All connections are fully welded. The isolation base requires an adjustable motor slide base for motor mounting. Isolation bases are provided with mounting holes at each of the four corners and are available with optional rubber-in-shear (RF), spring floor (SF) or housed spring floor (HF) isolators (set of four required). Optional height saving brackets are also available.

Inertia Base

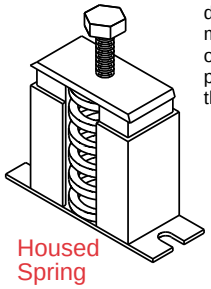


Inertia bases are used where additional mass is required to help dampen and dissipate vibration on large or high velocity fan equipment. The added weight allows the use of stiffer springs which further limits movement. The base is designed as a form for concrete which is poured on-site. The base consists of structural steel channel perimeter frame, with angle stiffeners on the interior of the base running in two directions. Height saving brackets are provided standard. Inertia bases are special quoted on request. An adjustable motor slide base is required for motor mounting and optional spring floor (SF) or housed spring floor (HF) isolators are also available.

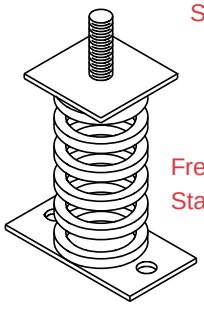
Floor Mounted

Model			Rated Load	Spring Rate
Housed Spring	Free Standing Spring	Restrained Spring		
	SF-70	RS-70	70	51
HF-120	SF-120	RS-120	120	98
HF-220	SF-220	RS-220	220	196
HF-320	-	-	320	302
HF-370	SF-370	RS-370	370	366
HF-500	-	-	500	500
-	SF-625	RS-625	625	419
HF-700	-	-	700	700
HF-800	-	-	800	588
HF-1000	-	-	1000	826
HF-1250	SF-1250	RS-1250	1250	1096
HF-1700	SF-1700	RS-1700	1700	1700
HF-2200	SF-2200	RS-2200	2200	2200
HF-3500	SF-3500	RS-3500	3500	3500

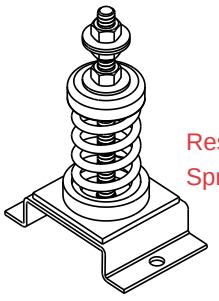
Isolators listed are designed to provide a minimum of 50 percent of overload. A single hole is provided at the center of the plate.



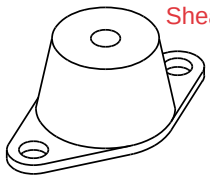
Housed Spring



Free Standing



Restrained Spring



Rubber-in-Shear

Rubber-in-Shear	Rated Load (lbs.)
RF-55	55
RF-120	120
RF-220	220
RF-375	375
RF-600	600
RF-1100	1100
RF-2250	2250

CP

Loren Cook Company CP centrifugal utility vent sets offer durability and reliability in a self-contained package.

CP's are ideal for low to medium volume and pressure applications. They are available in a number of wheel options for maximum performance flexibility.

- •Produced in an ISO 9001 Certified facility
- •Listed by Underwriters Laboratory (UL 705) and UL Listed for Canada (cUL 705).
- •Rotatable housing is standard on all models. Discharge flanges are standard on all belt drive models, except in downblast or bottom angular down discharge positions (see page 17).

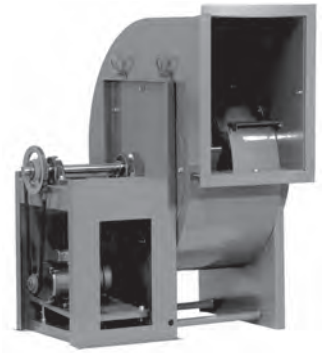
Belt Drives

Backward Inclined Flat Blade Wheel: CPS, CPA & CPV

Licensed to bear AMCA Certified Ratings Seals for Air and Sound Performance.
UL/cUL 762 listing for restaurant applications available.

Steel Wheel / Steel Scroll (CPS)
Aluminum Wheel / Aluminum Scroll (CPA)
- •Wheel Sizes: 10 - 49"
- •Capacity: 70 - 49,150 CFM
- •Static Pressure: 1 - 8"
- •Class I or Class II (size 120 - 365)
- •CPA is Spark Resistant Type A construction (see page 20)

Aluminum Wheel / Steel Scroll (CPV)
- •Wheel Sizes: 10 - 49"
- •Capacity: 50 - 43,400 CFM
- •Static Pressure: 0.25 - 2.5"



CPV shown. All belt drive units use this body style.

Backward Inclined Airfoil Wheel: CPS-A & CPA-A

Licensed to bear AMCA Certified Ratings Seals for Air and Sound Performance.
UL/cUL 762 listing for restaurant applications available.

Steel Wheel / Steel Scroll (CPS-A)
Aluminum Wheel / Aluminum Scroll (CPA-A)
- •Wheel Sizes: 12 - 49"
- •Capacity: 700 - 53,550 CFM
- •Static Pressure: 1 - 8"
- •Class I or Class II (size 120 - 365)
- •CPA-A is Spark Resistant Type A construction. (see page 20)
- •CPS-A is available with UL/cUL listing for "Power Ventilator for Smoke Control Systems".

Forward Curved Wheel: CPFB

Licensed to bear AMCA Certified Ratings Seal for Air and Sound Performance.

Steel Wheel / Steel Scroll (CPFB)
- •Wheel Sizes: 10 - 30"
- •Capacity: 500 - 25,000 CFM
- •Static Pressure: 0.125 - 2"

Direct Drives

Forward Curved Wheel: CPFD

Steel Wheel / Steel Scroll (CPFD)
- •Wheel Sizes: 6 - 12"
- •Capacity: 203 - 2,635 CFM
- •Static Pressure: 0.125 - 2"

The Wheels

CPV uses a riveted aluminum wheel, with backward inclined flat blades.

CPS uses a welded, Lorenized™ steel wheel, with backward inclined flat blades. CPA uses a welded, aluminum wheel.

CPS-A uses a welded, Lorenized™ steel wheel, with backward inclined airfoil blades. CPA-A uses a welded, aluminum wheel.

CPFB & CPFB use a steel wheel, with forward curved blades.

FCP

Why Fiberglass?

Fiber-Reinforced Plastic (FRP) provides excellent corrosion resistance and weight saving when compared to carbon steel.

Fiberglass fans can weigh up to 25% less than traditional steel fans.

Cook fiberglass products are constructed of corrosion resistant fiberglass resin, which is formulated to achieve a Class I flame spread of 25 or less. All resin is protected with a chemical, flame and ultraviolet top coating. A neoprene seal protects the shaft. Motors and drives are enclosed in a compartment, protected from corrosion and weather.

Cook's FRP was successfully tested with more than 90 corrosive materials, in environments 150 to 210^{o}F.

See Fiberglass catalog for a full list of corrosion and temperature ratings.

Typical Applications

Water Treatment Plants
Wastewater Treatment Plants
Pumping Stations
Indoor Swimming Pools
Aquariums
Laboratory Exhaust Systems
Chemical Process Facilities
Pulp and Paper Mills
Fertilizer Manufacturing
Chemical Storage Facilities
Battery Charging Stations

FCP: Utility Set

FCP is a centrifugal utility vent set for higher pressure applications.

- 9 belt drive sizes, with either standard or high pressure wheels
- 10 discharge rotation choices
- Arrangement 10, class II construction
- Motor, drives, and bearings are easily accessible, in OSHA motor compartment / weather cover
- Airstream hardware 304 Stainless steel and encapsulated, no metal parts in the airstream
- Heavy duty ball or roller bearings with extended lube lines
- Shaft with fiberglass sleeve in airstream and sized to operate well below critical speed
- Outlet flange

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