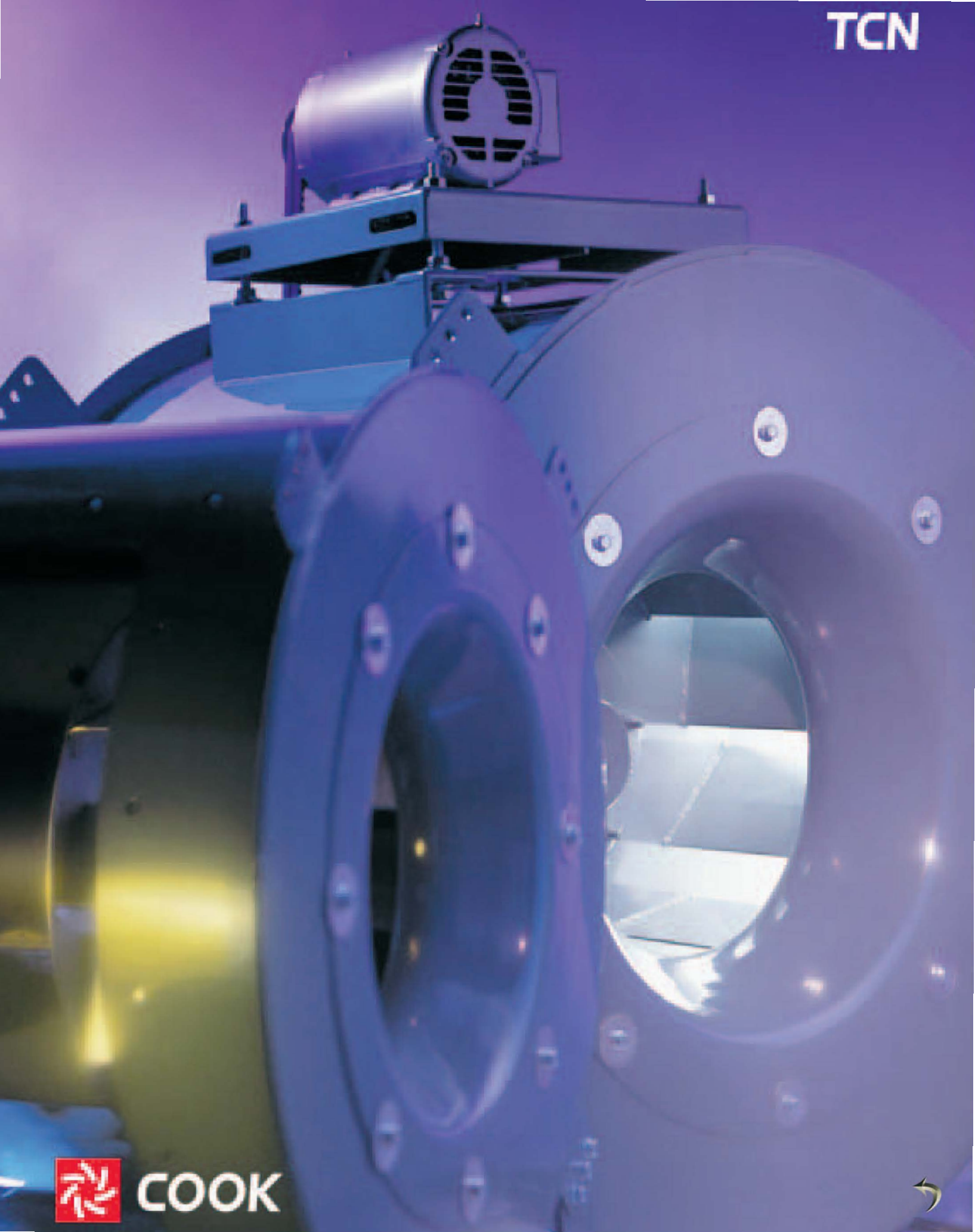


TCN



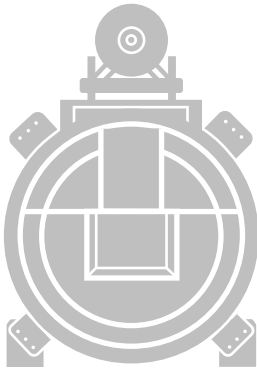
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# TCN

Tubular Centrifugal Inline Fans

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# Introduction

Loren Cook Company's Tubular Centrifugal Inline fans are available in direct drive sizes from 60 to 165, and belt drive sizes from 60 to 490 in both standard and heavy duty construction. TCN performance ranges from 50 CFM to 52,000 CFM and static pressures up to 5 inches. With a full range of mounting options and accessories, the TCN is an effective alternative for round duct installations requiring high flow rates at low to moderate static pressures.

## TCN-D

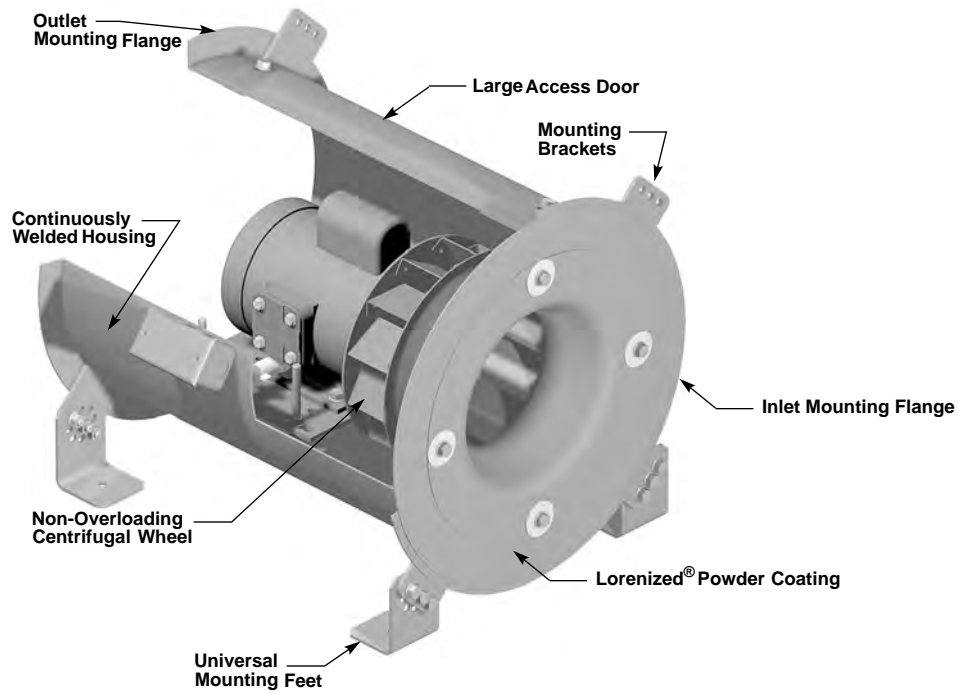


- All TCN units are licensed to bear the AMCA Certified Ratings Seal for Sound and Air Performance.
- UL/cUL 705 listing is standard on all TCN units.
- Integral inlet and outlet flanges are provided for easy duct connection.
- A large access door is standard on direct drive models. This large access door allows for removal of the motor and the wheel without removing the fan from the ductwork.
- An inspection door is standard on belt drive models. It is oriented 180° from the motor providing access to the fan for cleaning and inspection.
- On belt drive models, the optional large access door allows removal of the bearings, shaft, and wheel for cleaning and maintenance without removing the fan from the ductwork.
- Bearings and drives are isolated from the airstream. Removable bearing and drive covers provide easy access for inspection and service.
- Extended lubrication lines are standard on belt drive units for ease in bearing maintenance.

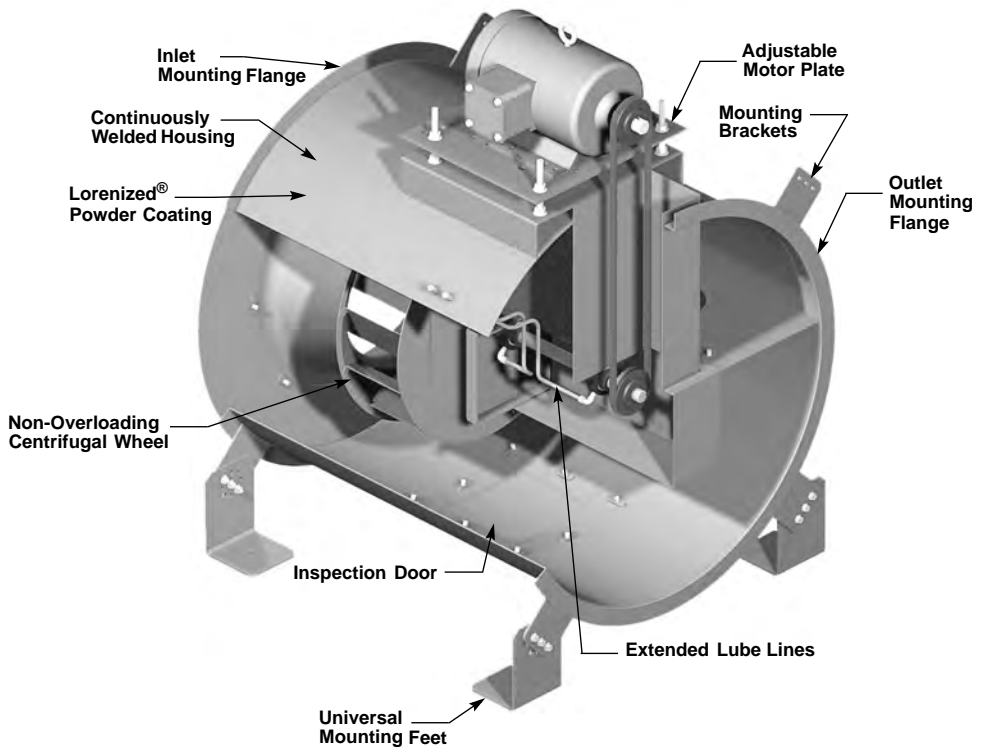
## TCN-B



## Direct Drive (TCN-D shown)



## Belt Drive (TCN-B shown)



# TCN-D Specifications and Dimension Data

## Tubular Centrifugal Inline Fan Direct Drive



Loren Cook Company certifies that the TCN-D 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 TCN-D is furnished standard with UL 705 and cUL 705 listings (Power Ventilator/ZACT).

**Description** - Fan shall be duct mounted, direct drive tubular centrifugal inline.

**Certifications** - 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.

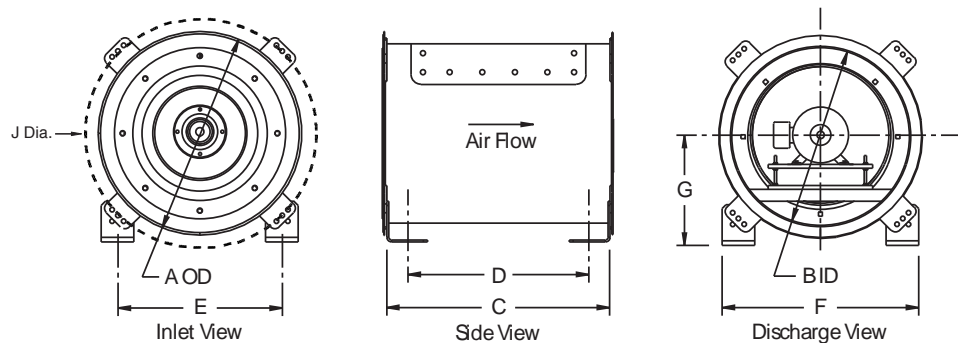
**Construction** - Fan shall be of welded and bolted construction utilizing corrosion resistant fasteners. Housing shall be minimum 12 gauge Lorenized™ steel with integral inlet and outlet flanges. The fan housing shall include an access door that provides unrestricted access to the motor and wheel. Mounting brackets shall be welded to the outer housing to accommodate universal mounting feet for vertical or horizontal installation. Unit shall bear an engraved aluminum nameplate and shall be shipped in ISTA Certified Transit Tested Packaging.

**Wheel** - Wheel shall be centrifugal backward inclined, non-overloading flatblade type. Wheel shall be constructed of 100 percent aluminum, including a precision machined cast aluminum hub. Wheel hub shall be keyed and securely attached to the fan shaft. Wheel inlet shall overlap an aerodynamically efficient 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.

**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.

**Motor** - Motor shall be heavy duty type TEFC motor with permanently lubricated sealed ball bearings and furnished at the specified voltage, phase and enclosure.

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



## TCN-D Dimension Data

Size	A	B	C	D	E	F	G	J	Max. Motor Frame	Approx. Ship Wt.*
60	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	20-15/16	145T	80
70	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	20-15/16	145T	80
80	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	20-15/16	145T	80
100	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	20-15/16	145T	80
120	21	18	23	19-1/2	16-1/8	19-1/8	10-7/8	22-15/16	184T	105
135	24	21	24-1/2	20	18-1/4	21-1/4	13-3/8	26	184T	130
150	27	24	27-1/4	22-1/2	20-3/8	23-3/8	14-1/2	29	215T	155
165	29	26	28-3/4	23	22-3/4	26-7/8	15-3/4	32-3/8	215T	185

All dimensions in inches. \*Weight in pounds, based on heaviest standard motor.

**Description** - Fan shall be duct mounted, belt driven tubular centrifugal inline.

**Certifications** - 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** - Fan shall be of welded and bolted construction utilizing corrosion resistant fasteners. Housing shall be minimum 12 gauge Lorenized™ steel with integral inlet and outlet flanges. The fan housing shall include an inspection door, oriented 180° from the motor, that provides access to the fan for cleaning or inspection. Adjustable motor plate shall utilize threaded studs for positive belt tensioning. Extended lube lines shall be furnished for lubrication of fan bearings. Mounting brackets shall be welded to the outer housing to accommodate universal mounting feet for vertical or horizontal installation. Unit shall bear an engraved aluminum nameplate and shall be shipped in ISTA Certified Transit Tested Packaging.

**Wheel** - Wheel shall be centrifugal backward inclined, non-overloading flatblade type. Wheel shall be constructed of 100 percent aluminum, including a precision machined cast aluminum hub. Wheel hub shall be keyed and securely attached to the fan shaft. Wheel inlet shall overlap an aerodynamically efficient 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.

**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.

**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 regreasable ball type in a cast iron pillowblock housing selected for a minimum L10 life in excess of 80,000 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 TCN-B as manufactured by Loren Cook Company of Springfield, Missouri.

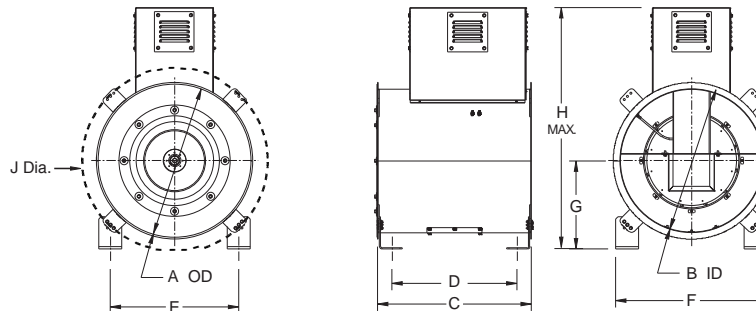
## Tubular Centrifugal Inline Fan Belt Drive



Loren Cook Company certifies that the TCN-B 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 TCN-B is furnished standard with UL 705 and cUL 705 listings (Power Ventilator/ZACT) when furnished with factory supplied motor.



### TCN-B Dimension Data

Size	A	B	C	D**	E	F	G	H	J	Max. Motor Frame	Approx. Ship Wt.*
60	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	30-5/8	20-15/16	143T	125
70	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	30-5/8	20-15/16	143T	125
80	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	30-5/8	20-15/16	143T	125
100	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	30-5/8	20-15/16	143T	125
120	21	18	23	19-1/2	16-1/8	19-1/8	10-7/8	32-3/16	22-15/16	145T	167
135	24	21	24-1/2	20	18-1/4	21-1/4	13-3/8	36-3/4	26	145T	206
150	27	24	27-1/4	22-1/2	20-3/8	23-3/8	14-1/2	43-1/4	29	145T	250
165	29	26	28-3/4	23	22-3/4	26-7/8	15-3/4	45-3/4	32-3/8	182T	295
180	31	28	31-1/4	26-1/2	24-13/16	28-3/16	16-3/8	47-3/4	34-7/16	182T	340
195	34	31	33-1/2	27-3/4	27-3/4	32-3/4	19-1/8	52-3/16	39-7/16	182T	390
210	37	34	34-3/4	29	29-7/8	37-7/8	20-3/16	55-1/8	42-7/16	182T	440
225	40-1/4	36	35-1/2	40-7/8	34-1/4	42-1/16	22-7/8	62-1/8	48-7/16	184T	500
245	44-1/4	40	41	46-3/8	37-1/8	44-15/16	24-5/16	65-7/8	52-1/2	213T	580
270	48-1/4	44	46-1/2	51-13/16	40	47-3/4	25-3/4	71-5/8	56-9/16	213T	690
300	52-1/4	48	48-1/4	53-9/16	42-7/8	50-5/8	29-3/16	75-7/8	60-9/16	215T	840
330	56-1/4	52	52	57-3/16	45-3/4	53-1/2	30-9/16	80-1/2	64-5/8	215T	990
365	58-1/4	54	54	59-3/16	47-1/8	54-15/16	33-5/16	83-5/16	66-5/8	215T	1160
402	64-1/4	60	59-1/2	64-13/16	51-3/8	59-3/16	35-7/16	92-5/8	72-5/8	215T	1360
445	70-1/4	66	66	71-5/16	55-11/16	63-7/16	39-9/16	99-1/16	78-5/8	254T	1630
490	77-1/4	73	72-1/2	77-13/16	60-5/8	68-7/16	42-1/16	106-1/4	85-3/4	254T	1900

All dimensions in inches. \*Weight in pounds, less motor. \*\*Feet turned out on sizes 225-490.

# TCNH-D Specifications and Dimension Data

## Tubular Centrifugal Inline Fan Heavy Duty Direct Drive



Loren Cook Company certifies that the TCNH-D 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 TCNH-D is furnished standard with UL 705 and cUL 705 listings (Power Ventilator/ZACT).

**Description** - Fan shall be duct mounted, direct drive tubular centrifugal inline.

**Certifications** - 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.

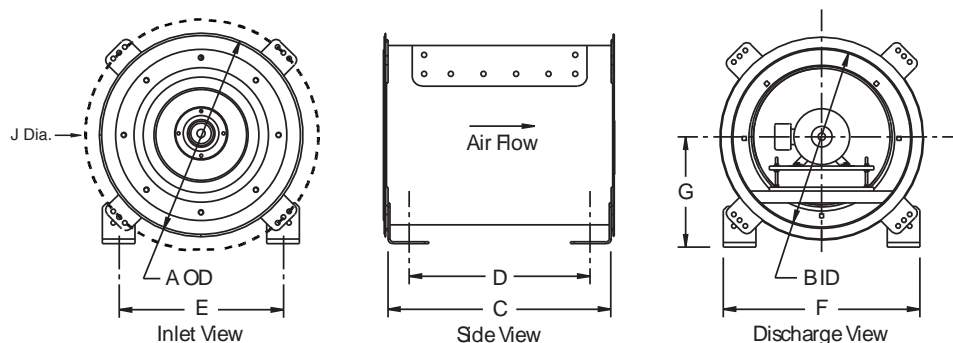
**Construction** - Fan shall be of welded and bolted construction utilizing corrosion resistant fasteners. Housing shall be minimum 12 gauge Lorenized™ steel with integral inlet and outlet flanges. The fan housing shall include an access door that provides unrestricted access to the motor and wheel. Mounting brackets shall be welded to the outer housing to accommodate universal mounting feet for vertical or horizontal installation. Unit shall bear an engraved aluminum nameplate and shall be shipped in ISTA Certified Transit Tested Packaging.

**Wheel** - Wheel shall be steel centrifugal backward inclined, non-overloading flat blade type. Blades shall be continuously welded to the backplate and deep spun inlet shroud. Wheel hub shall be keyed and securely attached to the fan shaft. Wheel inlet shall overlap an aerodynamically efficient 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.

**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.

**Motor** - Motor shall be heavy duty type TEFC motor with permanently lubricated sealed ball bearings and furnished at the specified voltage, phase and enclosure.

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



## TCNH-D Dimension Data

Size	A	B	C	D	E	F	G	J	Max. Motor Frame	Approx. Ship Wt.-Lbs.*
60	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	20-15/16	145T	87
70	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	20-15/16	145T	87
80	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	20-15/16	145T	87
100	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	20-15/16	145T	87
120	21	18	23	19-1/2	16-1/8	19-1/8	10-7/8	22-15/16	184T	120
135	24	21	24-1/2	20	18-1/4	21-3/4	13-3/8	26	184T	148
150	27	24	27-1/4	22-1/2	20-3/8	23-3/8	14-1/2	29	215T	186
165	29	26	28-3/4	23	22-3/4	26-7/8	15-3/4	32-3/8	215T	210

All dimensions in inches. \*Weight in pounds, based on heaviest standard motor.

**Description** - Fan shall be duct mounted, belt driven tubular centrifugal inline.

**Certifications** - 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** - Fan shall be of welded and bolted construction utilizing corrosion resistant fasteners. Housing shall be minimum 12 gauge Lorenized™ steel with integral inlet and outlet flanges. The fan housing shall include an inspection door, oriented 180° from the motor, that provides access to the fan for cleaning or inspection. Adjustable motor plate shall utilize threaded studs for positive belt tensioning. Extended lube lines shall be furnished for lubrication of fan bearings. Mounting brackets shall be welded to the outer housing to accommodate universal mounting feet for vertical or horizontal installation. Unit shall bear an engraved aluminum nameplate and shall be shipped in ISTA Certified Transit Tested Packaging.

**Wheel** - Wheel shall be steel centrifugal backward inclined, non-overloading flat blade type. Blades shall be continuously welded to the backplate and deep spun inlet shroud. Wheel hub shall be keyed and securely attached to the fan shaft. Wheel inlet shall overlap an aerodynamically efficient 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.

**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.

**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 regreasable ball or roller type in a cast iron pillowblock housing selected for a minimum L10 life in excess of 80,000 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 TCNH-B as manufactured by Loren Cook Company of Springfield, Missouri.

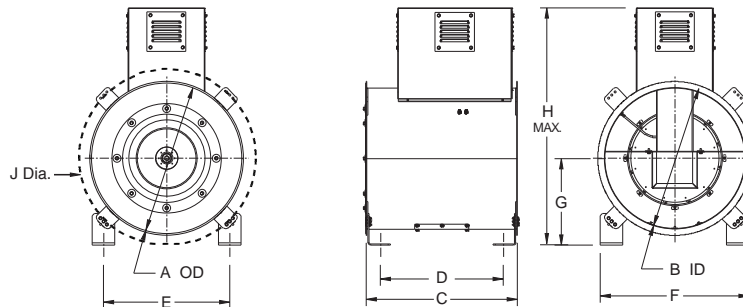
## Tubular Centrifugal Inline Fan Heavy Duty Belt Drive



Loren Cook Company certifies that the TCNH-B 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 TCNH-B is furnished standard with UL 705 and cUL 705 listings (Power Ventilator/ZACT) when furnished with factory supplied motor.



**TCNH-B Dimension Data**

Size	A	B	C	D**	E	F	G	H	J	Max. Motor Frame	Approx. Ship Wt.*
60	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	30-5/8	20-15/16	143T	125
70	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	30-5/8	20-15/16	143T	125
80	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	30-5/8	20-15/16	143T	125
100	19	16	22	18-1/2	14-11/16	17-11/16	10-1/8	30-5/8	20-15/16	143T	125
120	21	18	23	19-1/2	16-1/8	19-1/8	10-7/8	32-3/16	22-15/16	145T	167
135	24	21	24-1/2	20	18-1/4	21-1/4	13-3/8	36-3/4	26	145T	206
150	27	24	27-1/4	22-1/2	20-3/8	23-3/8	14-1/2	43-1/4	29	145T	250
165	29	26	28-3/4	23	22-3/4	26-7/8	15-3/4	45-3/4	32-3/8	182T	295
180	31	28	31-1/4	26-1/2	24-13/16	28-3/16	16-3/8	47-3/4	34-7/16	182T	340
195	34	31	33-1/2	27-3/4	27-3/4	32-3/4	19-1/8	52-3/16	39-7/16	182T	390
210	37	34	34-3/4	29	29-7/8	37-7/8	20-3/16	55-1/8	42-7/16	182T	440
225	40-1/4	36	35-1/2	40-7/8	34-1/4	42-1/16	22-7/8	62-1/8	48-7/16	184T	500
245	44-1/4	40	41	46-3/8	37-1/8	44-15/16	24-5/16	65-7/8	52-1/2	213T	580
270	48-1/4	44	46-1/2	51-13/16	40	47-3/4	25-3/4	71-5/8	56-9/16	213T	690
300	52-1/4	48	48-1/4	53-9/16	42-7/8	50-5/8	29-3/16	75-7/8	60-9/16	215T	840
330	56-1/4	52	52	57-3/16	45-3/4	53-1/2	30-9/16	80-1/2	64-5/8	215	990
365	58-1/4	54	54	59-3/16	47-1/8	54-15/16	33-5/16	83-5/16	66-5/8	215T	1160
402	64-1/4	60	59-1/2	64-13/16	51-3/8	59-3/16	35-7/16	92-5/8	72-5/8	215T	1360
445	70-1/4	66	66	71-5/16	55-11/16	63-7/16	39-9/16	99-1/16	78-5/8	254T	1630
490	77-1/4	73	72-1/2	77-13/16	60-5/8	68-7/16	42-1/16	106-1/4	85-3/4	254T	1900

All dimensions in inches. \*Weight in pounds, less motor. \*\*Feet turned out on sizes 225-490.

# Construction Information

## Material Gauges and Shaft Diameters for TCN Fans

Unit	Outer Housing	Shaft Dia.	
		TCN-B	TCNH-B
60-100	12 ga.	3/4"	1"
120			1-3/16"
135			
150			
165		1"	1-7/16"
180			
195			
210	10 ga.	1-3/16"	1-11/16"
225			
245		1-7/16"	2-3/16"
270			
300		1-15/16"	2-7/16"
330			
365			
402		1-15/16"	2-7/16"
445			
490			

## AMCA Spark Resistant Construction

Type	Description	Required Options		
		TCN-B	TCNH-B	TCN-D / TCNH-D
A	All parts of the Air Moving Device (AMD) in contact with the air or gas being handled shall be made of non-ferrous material.	All Aluminum Construction S.S. Shaft and Hardware Shaft Seal	All Aluminum Construction S.S. Shaft and Hardware Shaft Seal	All Aluminum Construction S.S. Hardware Explosion-Proof Motor Required
B	The AMD shall have an entirely non-ferrous wheel or impeller and non-ferrous ring about the opening through which the shaft passes.	Shaft Seal	Aluminum Wheel Shaft Seal	Explosion-Proof Motor Aluminum Wheel (TCNH-D)
C	The AMD shall be so constructed that a shift of the wheel or impeller or shaft will not permit two ferrous parts of the AMD to rub or strike.	Shaft Seal	Shaft Seal	

NOTES: (1) Bearings shall not be placed in the air or gas stream. (2) The user shall electrically ground all AMD parts.

## Wheel Weights and WK<sup>2</sup> for TCN Steel and Aluminum Flatblade Wheels

Unit Size	Aluminum Wheel				Steel Wheel	
	TCN		TCN-H		TCN-H	
	Wheel Wt.	WK <sup>2</sup>	Wheel Wt.	WK <sup>2</sup>	Wheel Wt.	WK <sup>2</sup>
60-100	2.68	0.21	-	-	12.9	1.03
120	3.44	0.42	6.7	0.82	17.0	1.89
135	4.07	0.66	7.9	1.27	19.7	2.91
150	4.77	1.00	9.1	1.89	22.7	4.32
165	5.53	1.44	10.5	2.73	28.7	6.90
180	6.32	2.02	17.2	4.27	47.1	10.9
195	7.22	2.76	18.6	5.65	51.1	14.4
210	9.35	4.22	20.5	7.40	59.7	20.9
225	12.5	5.66	25.5	11.4	65.3	26.9
245	14.1	7.83	29.5	16.5	73.7	37.4
270	18.0	12.4	34.5	23.9	96.3	61.9
300	27.9	21.5	53.2	38.2	143	98.0
330	32.1	31.0	60.1	54.6	168	148
365	37.4	45.5	71.8	83.9	193	217
402	55.3	83.2	83.3	122	266	390
445	68.3	130	129	195	396	613
490	93.8	216	145	278	451	882

For proper motor selection you must give consideration to starting torque requirements along with the operating BHP. The above chart lists the WK<sup>2</sup> factor for different wheel sizes. In some cases it may be necessary to provide a larger horsepower motor in order to bring the fan to speed, even though it may not be indicated by operating BHP.

The following formula can be applied to determine the required motor starting torque.

$$WK_M^2 = WK_F^2 (FRPM/MRPM)^2 (1.1)$$

Where

WK<sub>M</sub><sup>2</sup> - Is the moment of inertia required at the motor shaft, LB-Ft<sup>2</sup>

WK<sub>F</sub><sup>2</sup> - Is the moment of inertia of the fan, LB-Ft<sup>2</sup>

FRPM - Is the fan RPM

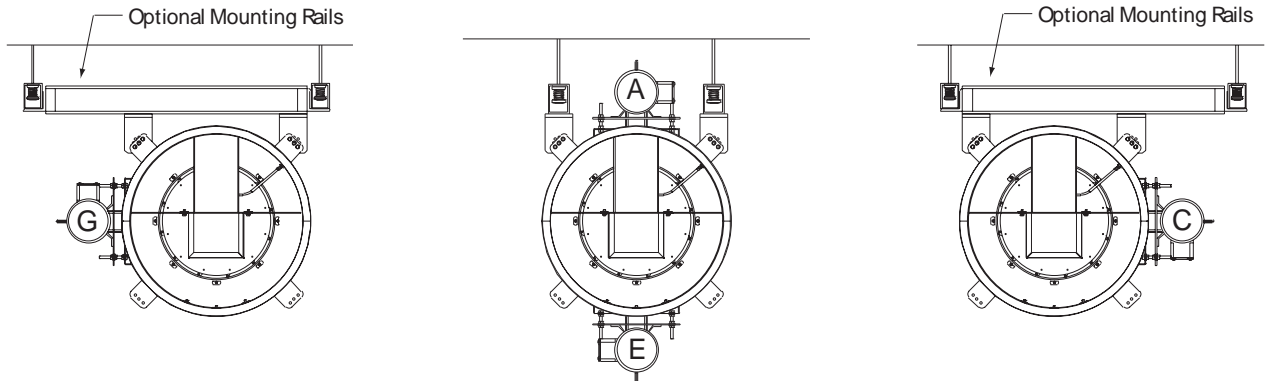
MRPM - Is the motor RPM

Motor starting torque can vary greatly among motor manufacturers, the available WK<sub>M</sub><sup>2</sup> at the motor should be obtained from the motor manufacturer.

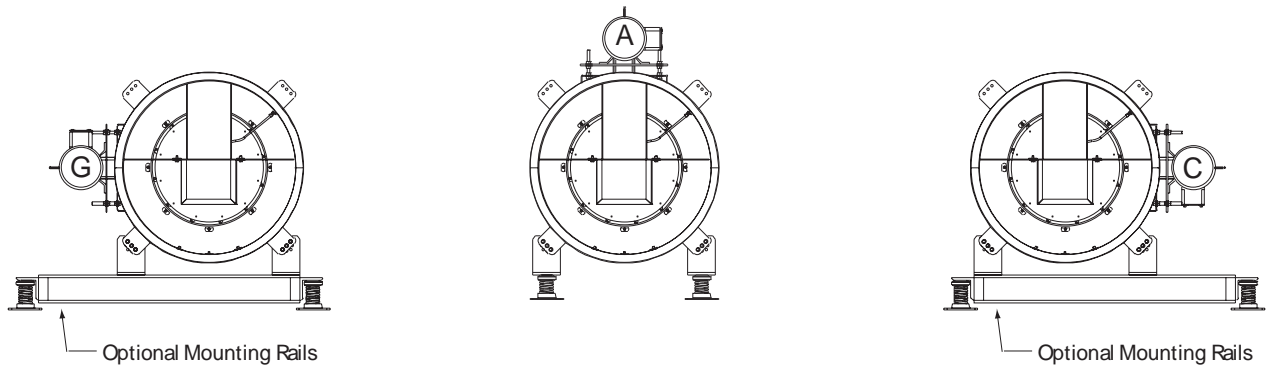
## Horizontal Mounting

Horizontal mounting configurations are provided with standard mounting feet for both ceiling and floor applications. The mounting configuration and the motor position can be changed in the field. Mounting rails are recommended for horizontal configurations with motor positions 'C' and 'G'. All units are shipped with the motor in position 'A'. Motor position is determined by viewing fan outlet.

### Ceiling



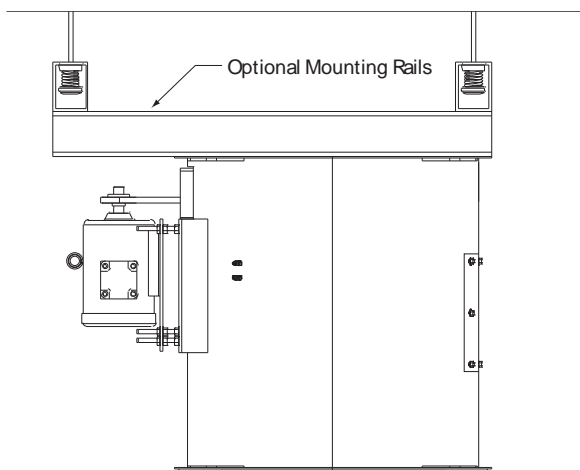
### Floor



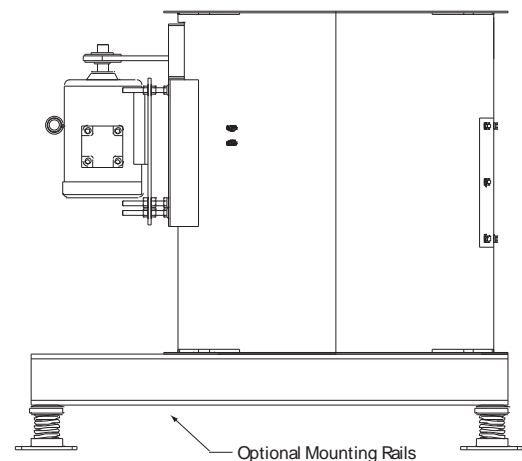
## Vertical Mounting

Vertical mounting configurations are provided with standard mounting brackets welded to each end. The brackets allow a unit to be installed in either ceiling or floor configuration, in both upblast and downblast applications. Mounting rails are suggested for any vertical installation. Figures below reflect an upblast configuration.

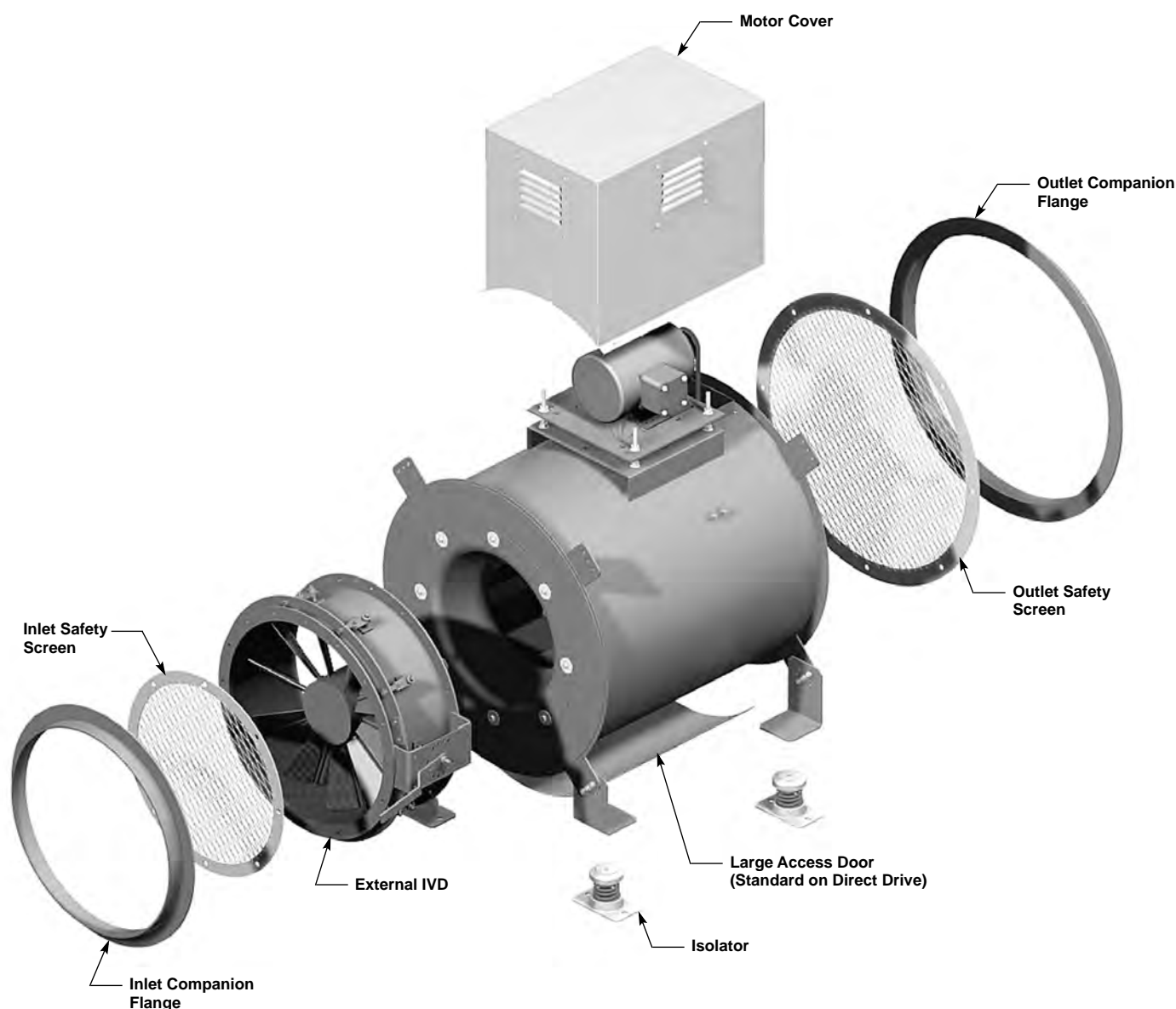
### Ceiling



### Floor



## Accessories



### Large Access Door

A large access door is an available option on the TCN-B and is standard on the TCN-D. This door provides unrestricted access to the bearings, shaft, and wheel of the TCN-B for ease of maintenance and cleaning without removing the fan from the surrounding ductwork.

### Belt Guard

A Belt Guard is designed to cover the top, front and sides of the drive assembly. The belt guard has an open back to allow for inspection or belt tightening and is factory installed.

### Motor Cover

The motor cover encloses the motor and drive assembly and serves as an OSHA belt guard. The motor cover is factory installed.

### Inlet/Outlet Safety Screens

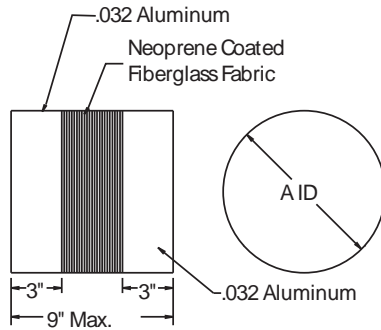
Inlet/Outlet safety screens are available to protect personnel and prevent debris from entering the fan. Safety screens are constructed of expanded metal and are factory installed. Cataloged performance is based on fans without safety screens.

### Mounting Rails

Mounting rails are available for applications where the motor center of gravity is offset with respect to the fan center of gravity. The mounting recommendations are shown page 9.

## Flexible Duct Connector

The flexible duct connector provides a flexible connection between the fan and the attached ductwork. This flexible connection 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. The connector is constructed of reinforced neoprene fabric and aluminum bands.

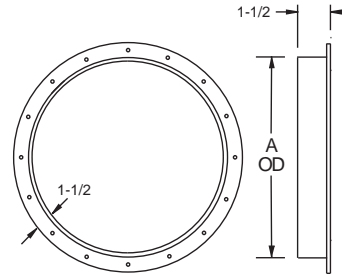


Size	A
60	16-1/4
70	16-1/4
80	16-1/4
100	16-1/4
120	18-1/4
135	21-1/4
150	24-1/4
165	26-1/4
180	28-1/4
195	31-1/4
210	34-1/4
225	36-1/2
245	40-1/2
270	44-1/2
300	48-1/2
330	52-1/2
365	54-1/2
402	60-1/2
445	66-1/2
490	73-1/2

All dimensions in inches.

## Inlet/Outlet Companion Flange

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

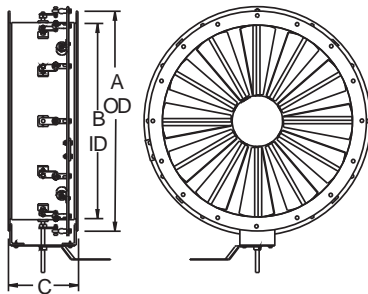


Size	A
60	16
70	16
80	16
100	16
120	18
135	21
150	24
165	26
180	28
195	31
210	34
225	36
245	40
270	44
300	48
330	52
365	54
402	60
445	66
490	73

All dimensions in inches.

## External IVD

An external inlet vane damper, IVD, is used to provide precise air volume control while maintaining maximum efficiency and stable operation at reduced load conditions. The IVD may be used with a maximum airstream temperature of 200° F. An external IVD is factory mounted and provided with an adjustment lever for manual or actuated control.



Size	A	B	C
120	15-7/8	12-7/8	10
135	17-3/8	14-3/8	
150	18-7/8	15-7/8	
165	20-3/8	17-3/8	
180	21-7/8	18-7/8	
195	23	20	
210	24-3/4	21-3/4	
225	26-1/4	23-1/4	
245	28-1/4	25-1/4	
270	31-1/4	27-1/4	
300	34-1/4	30-1/4	11
330	37-1/4	33-1/4	
365	40-3/4	36-3/4	
402	44-1/2	40-1/2	
445	48-3/4	44-3/4	
490	54-1/4	50-1/4	

All dimensions in inches.

## Disconnect Switches

NEMA 1 (Lockable) - Indoor, general purpose with lockable switch.  
 NEMA 1 - Indoor, general purpose.  
 NEMA 3R - Exterior mount, weather resistant.  
 NEMA 4 - Water tight, dust tight.  
 NEMA 1 (Heavy Duty) - Indoor heavy duty.



**NEMA 1  
(Lockable)**



**NEMA 1**



**NEMA 3R**



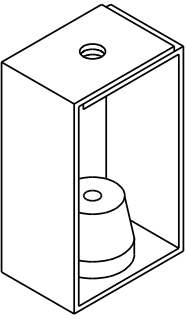
**NEMA 4**



**NEMA 1  
(Heavy Duty)**

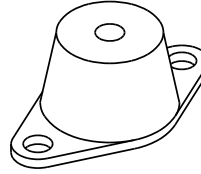
## Accessories

### Rubber-in-Shear Isolator – Ceiling Mounted



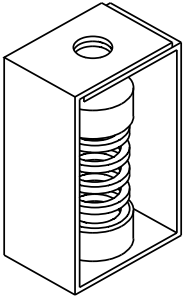
Unit	Rated Load
RC-75	75
RC-125	125
RC-175	175
RC-300	300
RC-450	450
RC-700	700
RC-1100	1100
RC-2000	2000

### Rubber-in-Shear Isolator – Floor Mounted



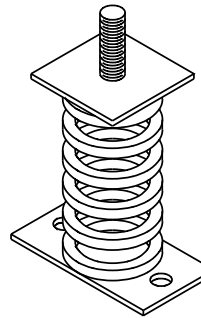
Unit	Rated Load
RF-55	55
RF-120	120
RF-220	220
RF-375	375
RF-600	600
RF-1100	1100
RF-2250	2250

### Spring Isolator – Ceiling Mounted



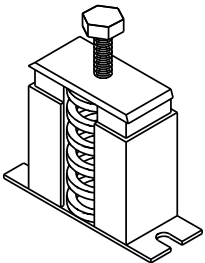
Unit	Rated Load	Spring. Rate (lbs./in.)
SC-35	35	23
SC-70	70	51
SC-125	125	100
SC-245	245	206
SC-370	370	370
SC-500	500	500
SC-1000	1000	870
SC-1700	1700	1700

### Free Standing Spring Isolator – Floor Mounted



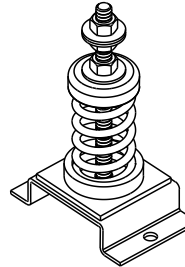
Unit	Rated Load	Spring. Rate (lbs./in.)
SF-70	70	51
SF-120	120	98
SF-220	220	196
SF-370	370	366
SF-625	625	419
SF-1250	1250	1096
SF-1700	1700	1700

### Housed Spring Isolator – Floor Mounted



Unit	Rated Load	Spring. Rate (lbs./in.)
HF-120	120	98
HF-220	220	196
HF-320	320	302
HF-370	370	366
HF-500	500	500
HF-700	700	700
HF-800	800	588
HF-1000	1000	826
HF-1250	1250	1098
HF-1700	1700	1700

### Restrained Spring Isolator – Floor Mounted



Unit	Rated Load	Spring. Rate (lbs./in.)
RS-70	70	51
RS-120	120	98
RS-220	220	196
RS-370	370	366
RS-625	625	419
RS-1250	1250	1096
RS-1700	1700	1700

## Standard Coatings

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

## Optional Coatings

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

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

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

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

## Alternate Construction Materials

Aluminum and stainless steel constructions are available. Contact factory for additional information.



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