



# Fantech

## FADE SERIES

SIDEWALL PROPELLER FANS

100% Speed Controllable  
Three Year Warranty



# FarmTek Stock Numbers

FADE 8

FADE 10

109292, 109286 = FADE 12

109293, 109287 = FADE 14

109294, 109288 = FADE 16

109295, 109289 = FADE 18

FADE 20-6

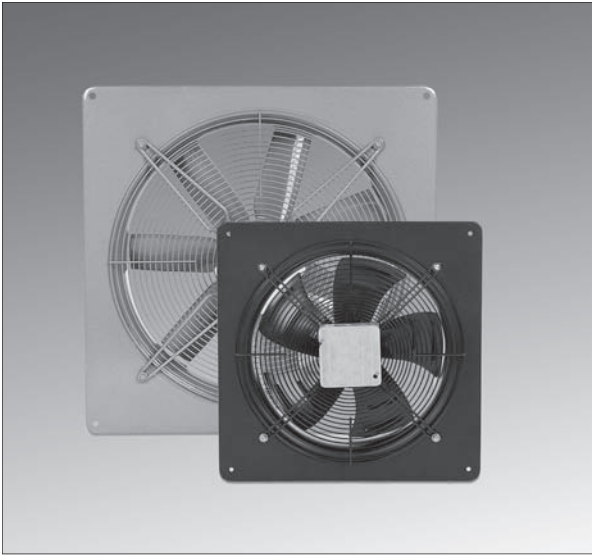
109290 = FADE 20-4

109297, 109291 = FADE 22

109285, 109300 = FADE 25

# FADE SERIES

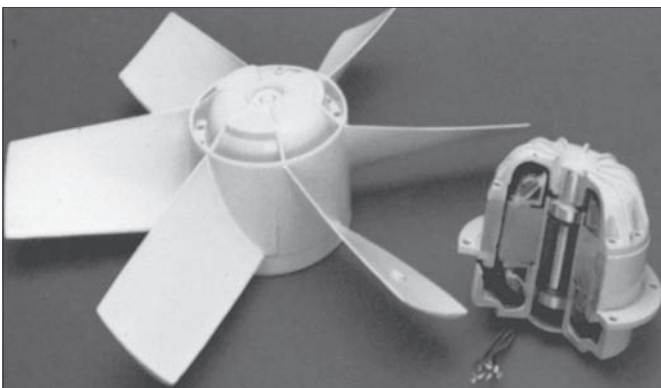
## SIDEWALL PROPELLER FANS



### Description

A series of sidewall propeller fans designed for structural stability with a slim profile for conservation of space and safety. All FADE Series fans have aerodynamically designed propeller blades and motor rotor assembled as one integral unit. All fans are statically and dynamically balanced for vibration free operation. Fans arrive fully assembled and are ready for immediate installation. All FADE fans include motor-side guards as standard. FADE Series motors are a totally enclosed Class B, direct drive external rotor type with sealed self lubricating bearings and automatic reset thermal overload protection. Motors are capable of operating in ambient air or air stream temperatures of up to 100°F. FADE Series fans are 100% speed controllable through a decrease in voltage by using either a solid state or transformer type control.

**All FADE Series fans are backed by Fantech's Three Year Warranty.**



All FADE Series fans are powered by an external rotor motorized propeller. This design provides excellent heat dissipation even at low rpm. All of the FADE Series fans 100% speed controllable through voltage reduction allowing for precision balancing of systems. Standard models are provided with 115/1/60 motors. Optional 230-460/3/60 motors available for models 20-4, 22-6 and 25-6 available.

### Features

- **100% Speed Controllable**
- Air Flows up to 7850 cfm
- Integral Blades and External Rotor allowing precision balancing
- Formed steel wall panel with Venturi
- Shallow profile with no protruding motor
- External rotor motor. Sufficient service factor provided to ensure long and maintenance free operation over maximum load conditions.
- Automatic Reset Thermal Overload Protection
- Electrostatically applied polyester/epoxy urethane powder- coat finish
- Self lubricating/sealed for life precision ball bearings
- Terminal box with prewired electrical strip
- **Three Year Warranty**

### Typical Specifications for Model FADE Sidewall Propeller Fans

Sidewall propeller fans shall be of the direct driven type.

### Construction

Fan wall panel shall be constructed of heavy gauge galvanized steel and shall incorporate a well designed inlet venturi for maximum air performance and fan efficiency. Fan motorized propeller assembly shall be mounted directly to the wall panel. Fan shall include integral motor-side inlet guard. Fan panel, guard, blades and motor shall be finished with two coats of corrosion resistant polyester/epoxy urethane powder coat finish.

Motorized propeller assembly shall be a external rotor type. Motor shall be permanent split capacitor type. Motor shall include permanently sealed self lubricating ball bearings. Motor shall be equipped with automatic reset thermal overload protection. Motor shall be acceptable for continuous duty. Sufficient service factor shall be provided to ensure long maintenance free operation over maximum load conditions.

Fan propeller blades shall incorporate an airfoil design. Propellers shall be constructed of die-cast aluminum and shall be an integral part of the motor rotor. Motorized propeller assembly shall be both statically and dynamically balanced as one integral unit to provide for vibration free performance.

### Performance

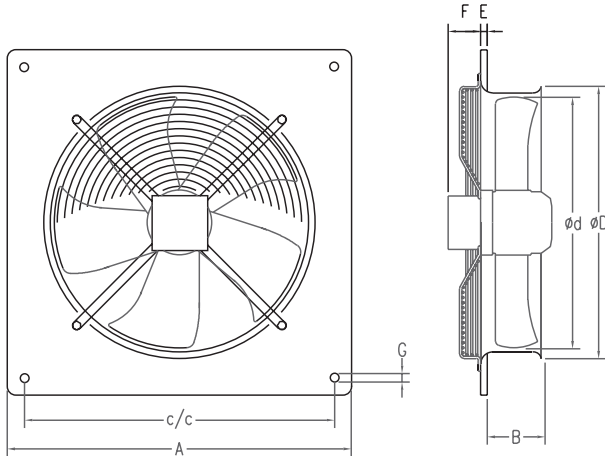
Fan performance shall be based on tests conducted in accordance with AMCA Standards 210, 300 and 301 and shall be licensed to bear the AMCA Certified Ratings label for both sound and air.

### Code Approval

Fan shall be tested and approved by UL (or equal) for safety.

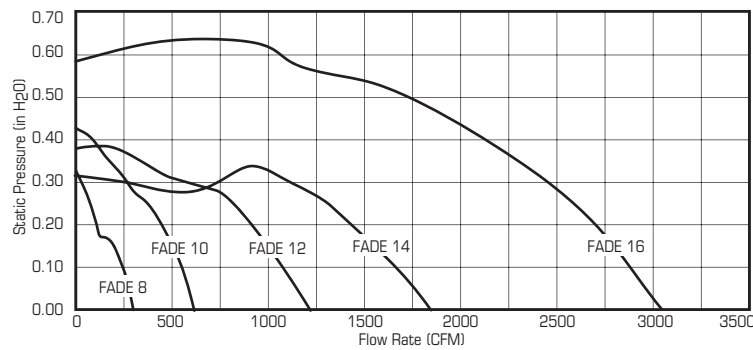
FADE Series shall be manufactured under the authority of Fantech, Inc., Sarasota, FL.

# FADE 8-16



Fan Size	Fan Dimensional Data								Shipping Weight
	A	B	c/c	d	D	E	F	G	
8	12 5/16	2	10 1/4	7 3/4	8 1/16	1/4	1 1/2	1/4	15
10	14 9/16	2	12 5/8	10	10 5/16	1/4	1 1/2	1/4	15
12	17	3	15	12	12 7/8	1/2	1 1/2	9/16	20
14	19 3/16	3 1/8	17 1/8	14	15 3/8	1/2	2	5/16	20
16	22 3/4	3 1/2	21	16 1/2	17 1/4	1/2	2	3/8	25

Dimensions in inches.



Model	Nom. RPM	Max. Watts	Nom. Hp	Static Pressure in Inches WG					
				0.0"	0.10"	0.125"	0.25"	0.375"	0.50"
8	1530	45	1/25	304	246	224	74	-	-
10	1500	68	1/15	624	558	533	377	132	-
12	1410	130	1/8	1208	1069	1030	797	-	-
14	1185	245	1/4	1839	1654	1599	1295	-	-
16	1410	458	1/3	3054	2882	2839	2570	2198	1699



Fantech, Inc. certifies that the FADE Series 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.

Speed (RPM) shown is nominal. Performance ratings include the effect of inlet guard. Performance certified is for installation type A: free inlet, free outlet.

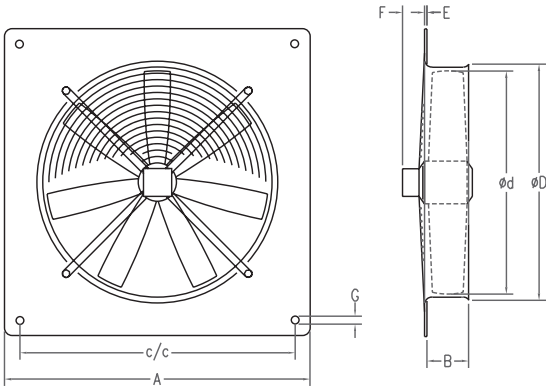
Model	Nom. RPM	SP	Sound Power re 10 <sup>-12</sup> Watts								L <sub>wi</sub> dB(A)	'Sones
			Octave Bands, Hz									
			63	125	250	500	1000	2000	4000	8000		
8	1530	0.100	60	60	55	52	52	51	48	38	57	4.1
		0.125	60	61	54	52	53	50	47	38	58	4.2
		0.250	63	65	61	56	51	53	45	38	59	4.6
10	1500	0.100	60	62	67	64	63	62	59	50	68	7.9
		0.125	60	62	67	64	63	61	59	50	68	7.8
		0.250	63	67	67	62	59	58	55	47	66	6.9
12	1410	0.100	59	67	69	65	66	65	61	54	71	9.4
		0.125	58	67	68	65	65	65	61	54	71	9.2
		0.250	60	65	62	62	62	63	58	49	68	7.7
14	1185	0.100	61	74	66	67	67	65	61	55	71	9.6
		0.125	61	74	65	67	67	64	60	55	71	9.5
		0.250	63	67	67	66	65	63	59	53	70	8.6
16	1410	0.100	60	74	68	73	69	68	66	59	75	12.0
		0.125	60	75	68	73	68	68	66	59	75	11.9
		0.250	60	73	67	71	67	67	66	58	74	11.5
		0.375	62	72	68	69	66	67	66	57	73	11.3

The sound ratings shown are loudness values in fan sones at 5ft. (1.5m) in hemispherical free field calculated per AMCA Standard 301.

Values shown are for installation Type A: Free inlet hemispherical fan sone levels. All sone values shown are calculated at 0.1" (static pressure in inches W.G.).

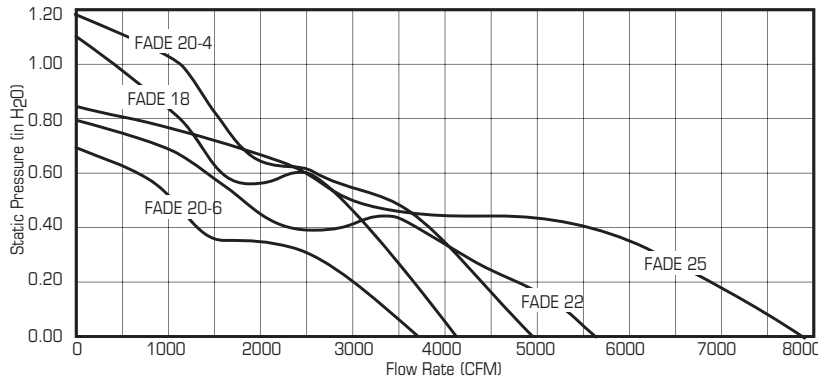
The sound power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts calculated per AMCA Standard 301. Values shown are for inlet L<sub>wi</sub> and inlet L<sub>wiA</sub> sound power levels for installation type A: Free inlet, Free outlet. Ratings include the effects of duct end correction for inlet duct.

# FADE 18-25



Fan Size	Fan Dimensional Data								Shipping Weight
	A	B	c/c	d	D	E	F	G	
18	22 5/16	4 1/4	21	18	18 1/2	1/2	2	3/8	30
20-6	25 3/16	4 1/2	24 1/4	20	20 1/2	1/2	2	3/8	45
20-4	25 3/16	4 1/2	24 1/4	20	20 1/2	1/2	2	3/8	45
22	28 5/8	5 1/4	26 5/16	22	22 1/2	3/4	2	3/8	55
25	31 3/4	6	29 1/2	25	25 1/2	3/4	2	3/8	65

Dimensions in inches.



Model	Nom. RPM	Max. Watts	Nom. Hp	Static Pressure in Inches WG					
				0.0"	0.10"	0.125"	0.25"	0.375"	0.50"
18-4	1525	245	1/3	4115	3895	3840	3549	3239	2908
20-6	1080	435	1/2	3693	3368	3279	2775	1429	-
20-4	1450	916	1	4949	4682	4615	4274	3917	3445
22-6	990	756	3/4	5629	5248	5153	4432	-	-
25-6	975	1134	1 1/2	7858	7355	7230	6557	-	-



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Speed (RPM) shown is nominal. Performance ratings include the effect of inlet guard. Performance certified is for installation type A: free inlet, free outlet.

Model	Nom. RPM	SP	Sound Power re 10 <sup>-12</sup> Watts								L <sub>wi</sub> dB(A)	'Sones
			Octave Bands, Hz									
			63	125	250	500	1000	2000	4000	8000		
18-4	1530	0.100	64	70	75	72	70	71	69	64	77	14.3
		0.125	64	71	75	72	70	71	69	64	77	14.2
		0.250	64	73	75	72	71	72	70	65	78	14.7
		0.375	64	74	75	72	71	72	70	65	78	14.8
20-6	1080	0.100	61	69	71	68	66	67	65	57	73	10.7
		0.125	62	68	71	68	66	67	64	56	73	10.7
		0.250	70	74	73	70	68	67	64	57	74	11.7
20-4	1450	0.100	66	76	72	73	73	74	73	65	79	16.4
		0.125	66	76	72	73	73	74	72	65	79	16.4
		0.250	68	78	72	73	73	74	72	66	80	16.6
		0.375	72	83	77	76	75	74	72	65	81	17.8
22-6	990	0.100	61	74	69	68	70	69	66	59	75	12.0
		0.125	60	74	69	68	71	69	66	59	75	12.0
		0.250	62	71	70	69	69	68	66	60	74	11.7
25-6	975	0.100	64	77	75	73	72	72	69	63	78	14.8
		0.125	65	76	75	73	72	72	69	63	78	14.7
		0.250	68	76	75	73	73	72	69	63	78	14.9

The sound ratings shown are loudness values in fan sones at 5ft. (1.5m) in hemispherical free field calculated per AMCA Standard 301.

Values shown are for installation Type A: Free inlet hemispherical fan sone levels. All sone values shown are calculated at 0.1" (static pressure in inches W.G.).

The sound power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts calculated per AMCA Standard 301. Values shown are for inlet L<sub>wi</sub> and inlet L<sub>wiA</sub> sound power levels for installation type A: Free inlet, Free outlet. Ratings include the effects of duct end correction for inlet duct.

# ACCESSORIES

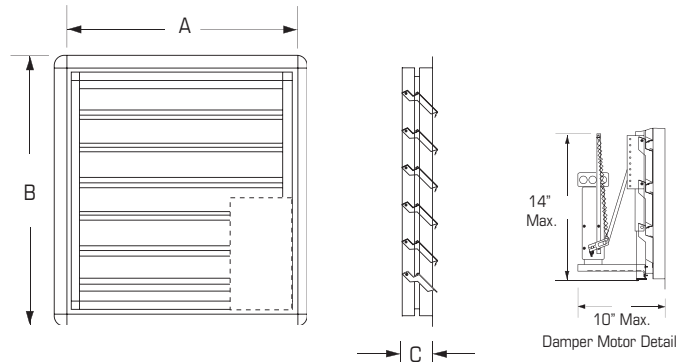
## Exterior Mount Louvered Dampers Models GDV and MDV



### Standard Specifications:

Maximum Face Velocity: 3000 fpm  
 Temperature Limits: -40°F to 200°F (-40°C to 94°C)  
 Minimum Size: 8" x 8"  
 Frame: 20 gauge galvanized steel  
 Front Flange: 1.25 inches wide  
                   20 gauge galvanized steel  
 Blades: 0.025 inch thick aluminum  
                   HD 28 gauge galvanized steel  
 Seals: Extruded vinyl, mechanically locked into blades  
 Axles: Stainless steel  
 Linkage: Stainless steel pins, galvanized steel tie bar  
 Finish: Mill

Fan Model	Louvered Dampers		Actuator 120V	Dimensions Loose Damper		
	Loose	w/Collar		A	B	C
8	GDV 9			9	11 1/2	3
10	GDV 10			10	12 1/2	3
12	GDV 12	GDV 18	MP2781A	12	14 1/2	3
14	GDV 16	GDV 18	MP2781A	16	18 1/2	3
16	GDV 18	GDV 21	MP2781A	18	20 1/2	3
18	GDV 18	GDV 18	MP2781A	18	20 1/2	3
20	GDV 21	GDV 21	MP2781A	21	23 1/2	3
22	GDV 26	GDV 26	MP2781A	26	28 1/2	3
25	GDV 26	GDV 26	MP2781A	26	28 1/2	3

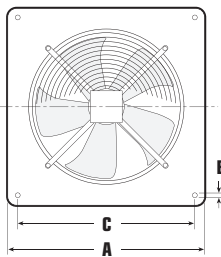


### NOTES:

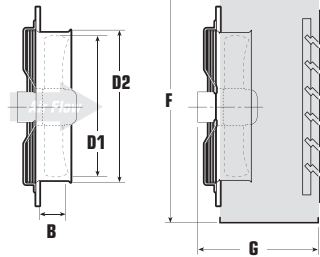
- (1) Fan should be mounted no closer to shutter than 1/3 propeller diameter or 4 inches for propellers less than 12 inches in diameter.
- (2) Standard motors are supplied as 120V single phase.
- (3) Dampers are shipped in individual cartons. Motors and mounting hardware shipped separately.
- (4) Multiple section dampers may require bracing to support the weight of the assembly and to hold against system pressure. BRACING SUPPLIED BY OTHERS.
- (5) **CAUTION:** Motor kits are not suitable for use in potentially explosive or flammable applications or areas.

# DIMENSIONAL DATA

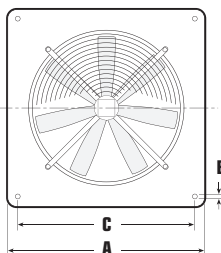
**Fade S-Type**  
"Fan Only" Model



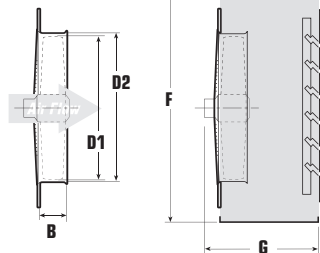
**Fade S-Type**  
"Fully Assembled" Model



**Fade A-Type**  
"Fan Only" Model



**Fade A-Type**  
"Fully Assembled" Model



Model	A	B	C	D1	D2	E	F	G	Blade Type
FADE 8	12 5/16	2	10 1/4	7 3/4	8 1/16	1/4	-	-	S
FADE 10	14 5/16	2	12 5/8	10	10 5/16	1/4	-	-	S
FADE 12	17	3	15	12	12 7/8	5/16	21	15 1/2	S
FADE 14	19 5/16	3 1/8	17 1/8	14	15 3/8	5/16	21	15 1/2	S
FADE 16	22 3/4	3 1/2	21	16 1/2	17 1/4	3/8	24	16 1/2	S
FADE 18	22 9/16	4 1/4	21	18	18 1/2	3/8	24	16 1/2	A
FADE 20-6	25 5/16	4 1/2	24 1/4	20	20 1/2	3/8	26	17 1/2	A
FADE 20-4	25 5/16	4 1/2	24 1/4	20	20 1/2	3/8	26	17 1/2	A
FADE 22	28 5/8	5 1/4	26 9/16	22	22 1/2	3/8	32	18 3/4	A
FADE 25	31 3/4	6	29 1/2	25	25 1/2	3/8	32	18 3/4	A



## Three (3) Year Warranty

This warranty supersedes all prior warranties

### **DURING ENTIRE WARRANTY PERIOD:**

FANTECH will repair or replace any part which has a factory defect in workmanship or material. Product may need to be returned to the Fantech factory, together with a copy of the bill of sale and identified with RMA number.

### **FOR FACTORY RETURN YOU MUST:**

- Have a Return Materials Authorization (RMA) number. This may be obtained by calling FANTECH either in the USA at 1.800.747.1762 or in CANADA at 1.800.565.3548. Please have bill of sale available.
- The RMA number must be clearly written on the outside of the carton, or the carton will be refused.
- All parts and/or product will be repaired/replaced and shipped back to buyer; no credit will be issued.

### **OR**

The Distributor may place an order for the warranty part and/or product and is invoiced. The Distributor will receive a credit equal to the invoice only after product is returned prepaid and verified to be defective.

FANTECH WARRANTY TERMS DO NOT PROVIDE FOR REPLACEMENT WITHOUT CHARGE PRIOR TO INSPECTION FOR A DEFECT. REPLACEMENTS ISSUED IN ADVANCE OF DEFECT INSPECTION ARE INVOICED, AND CREDIT IS PENDING INSPECTION OF RETURNED MATERIAL. DEFECTIVE MATERIAL RETURNED BY END USERS SHOULD NOT BE REPLACED BY THE DISTRIBUTOR WITHOUT CHARGE TO THE END

USER, AS CREDIT TO DISTRIBUTOR'S ACCOUNT WILL BE PENDING INSPECTION AND VERIFICATION OF ACTUAL DEFECT BY FANTECH.

### **THE FOLLOWING WARRANTIES DO NOT APPLY:**

- Damages from shipping, either concealed or visible. Claim must be filed with freight company.
- Damages resulting from improper wiring or installation.
- Damages or failure caused by acts of God, or resulting from improper consumer procedures, such as:
  1. Improper maintenance
  2. Misuse, abuse, abnormal use, or accident, and
  3. Incorrect electrical voltage or current.
- Removal or any alteration made on the FANTECH label control number or date of manufacture.
- Any other warranty, expressed, implied or written, and to any consequential or incidental damages, loss or property, revenues, or profit, or costs of removal, installation or reinstallation, for any breach of warranty.

### **WARRANTY VALIDATION**

- The user must keep a copy of the bill of sale to verify purchase date.
- These warranties give you specific legal rights, and are subject to an applicable consumer protection legislation. You may have additional rights which vary from state to state.

## **Limitation of Warranty and Liability**

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This warranty does not apply to any FANTECH INC. product or part which has failed as a result of faulty installation or abuse, incorrect electrical connections or alterations made by others, or use under abnormal operating conditions or misapplication of the product or parts. We will not approve for payment any repair not made by us or our authorized agent without prior written consent. The foregoing shall constitute our sole and exclusive warranty and our sole exclusive liability, and is in lieu of any other warranties, whether written, oral, implied or statutory. There are no warranties which extend beyond the description on the page hereof. In no event, whether as a result of breach of contract, or warranty or alleged negligence, defect incorrect advice or other causes, shall FANTECH be liable for special or consequential damages, including, but not limited to, loss of profits or revenue, loss of use of equipment or any other associated equipment, cost of capital, cost of substitute equipment, facilities or services, downtime costs, or claims of customers of purchase for such damages. FANTECH neither assumes or authorizes any person to assume for it any other liability in connection with the sale of product(s) or part(s). Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages so the above limitations and exclusions may not apply to you.

## **Warning**

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FANTECH, INC. products are designed and manufactured to provide reliable performance, but they are not guaranteed to be 100% free from defects. Even reliable products will experience occasional failures and this possibility should be recognized by the user. If these products are used in a life support ventilation system where failure could result in loss or injury, the user should provide adequate backup ventilation, supplementary natural ventilation, failure alarm system, or acknowledge willingness to accept the risk of such loss or injury.

## FADE SERIES AXIAL FANS

Fantech's FADE Series axial fans are designed to effectively and quietly handle major ventilation challenges in locations such as large warehouses without taking up a lot of valuable space.

All FADE Series fans combine aerodynamically designed propeller blades and rotor motor into one expertly integrated unit. Fans feature heavy gauge galvanized steel, baked powdercoat finish. Propeller options are formed steel blades featuring an 'S' blade design or die-cast aluminum with an 'A' blade design.

With fan sizes ranging from 8" to 25", Fantech's FADE Series fans move a lot of air, yet are statically and dynamically balanced for vibration-free operation. The external rotor motorized propeller provides excellent heat dissipation, even at low RPM. Rated for continuous duty.

### Simplified Ordering

Now Fantech offers two ways to order the FADE Series. Use the "Fan Only" model numbers to order fan alone or use the new "Fully Assembled" model numbers and you'll receive the Fan fully assembled with wall collar and backdraft damper.

### Easy Set-Up

In most installations, no extras are required.  
Note: Assembled units will require bracing (by others) if installed in a metal building.



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**THREE  
YEAR  
WARRANTY**



### External Rotor Motor Key to Power and Performance

FADE Series motors are a totally enclosed Class B direct driven external rotor type and are 100% speed controllable. To change the speed, simply decrease the voltage with either a solid state or transformer-type control. All FADE fans include motor-side guards as standard.

The external rotor motor at the heart of FADE fans has automatic reset thermal overload protection, and is capable of operating in ambient air or airstream temperatures of up to 100° F.

### EASY TO INSTALL. LOADED WITH FEATURES:

- Permanently lubricated sealed ball bearings
- 100% speed controllable for highly efficient and economical airflow
- Suitable for airstream temperatures up to 100° F
- Airflow up to 7858 CFM
- Integral blades and external rotor for precision balancing
- Formed galvanized steel wall panel with venturi features baked powdercoat finish
- Shallow profile with no protruding motor
- Terminal box with prewired electrical strip
- Three-year warranty



# FADE SERIES

## AXIAL FANS

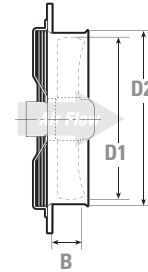
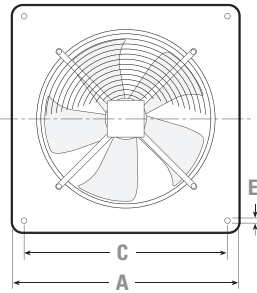


**FADE S-TYPE**  
Shown as "Fully Assembled" Model

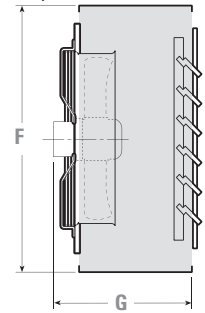
**FADE A-TYPE**  
Shown as "Fan Only" Model

## DIMENSIONAL DATA

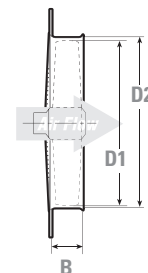
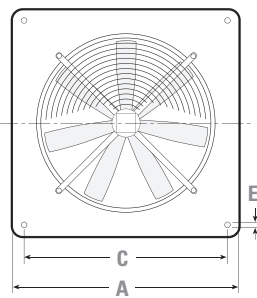
**FADE S-TYPE**  
"Fan Only" Model



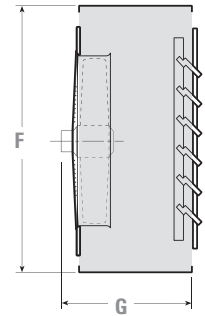
**FADE S-TYPE**  
"Fully Assembled" Model



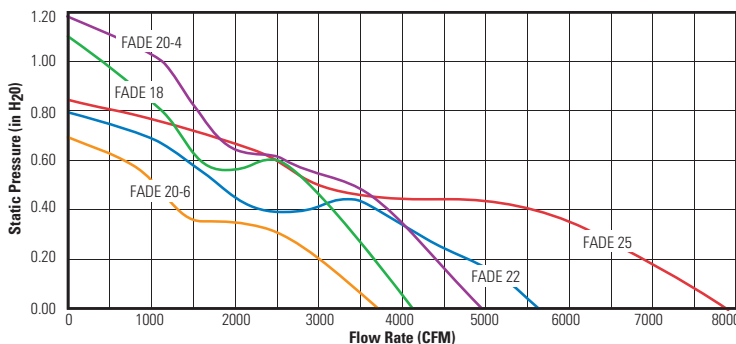
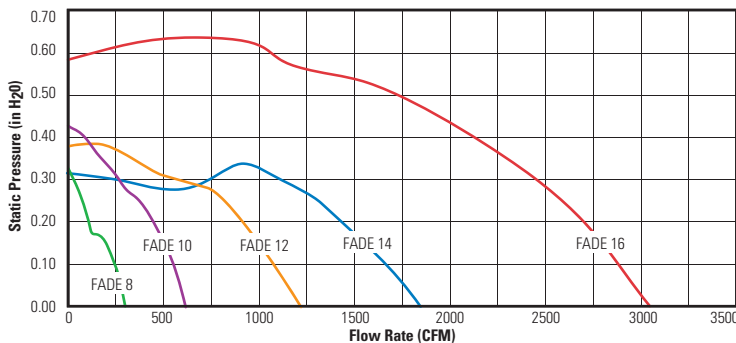
**FADE A-TYPE**  
"Fan Only" Model



**FADE A-TYPE**  
"Fully Assembled" Model



## AIR PERFORMANCE GRAPHS



Model	A	B	C	D1	D2	E	F	G	Blade Type
FADE 8	12 <sup>5</sup> / <sub>16</sub>	2	10 <sup>1</sup> / <sub>4</sub>	7 <sup>3</sup> / <sub>4</sub>	8 <sup>1</sup> / <sub>16</sub>	1/4	—	—	S
FADE 10	14 <sup>9</sup> / <sub>16</sub>	2	12 <sup>5</sup> / <sub>8</sub>	10	10 <sup>5</sup> / <sub>16</sub>	1/4	—	—	S
FADE 12	17	3	15	12	12 <sup>7</sup> / <sub>8</sub>	5/16	21	15 <sup>1</sup> / <sub>2</sub>	S
FADE 14	19 <sup>3</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>8</sub>	17 <sup>1</sup> / <sub>8</sub>	14	15 <sup>3</sup> / <sub>8</sub>	5/16	21	15 <sup>1</sup> / <sub>2</sub>	S
FADE 16	22 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub>	21	16 <sup>1</sup> / <sub>2</sub>	17 <sup>1</sup> / <sub>4</sub>	3/8	24	16 <sup>1</sup> / <sub>2</sub>	S
FADE 18	22 <sup>9</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>4</sub>	21	18	18 <sup>1</sup> / <sub>2</sub>	3/8	24	16 <sup>1</sup> / <sub>2</sub>	A
FADE 20-6	25 <sup>3</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>2</sub>	24 <sup>1</sup> / <sub>4</sub>	20	20 <sup>1</sup> / <sub>2</sub>	3/8	26	17 <sup>1</sup> / <sub>2</sub>	A
FADE 20-4	25 <sup>3</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>2</sub>	24 <sup>1</sup> / <sub>4</sub>	20	20 <sup>1</sup> / <sub>2</sub>	3/8	26	17 <sup>1</sup> / <sub>2</sub>	A
FADE 22	28 <sup>5</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>4</sub>	26 <sup>9</sup> / <sub>16</sub>	22	22 <sup>1</sup> / <sub>2</sub>	3/8	32	18 <sup>3</sup> / <sub>4</sub>	A
FADE 25	31 <sup>3</sup> / <sub>4</sub>	6	29 <sup>1</sup> / <sub>2</sub>	25	25 <sup>1</sup> / <sub>2</sub>	3/8	32	18 <sup>3</sup> / <sub>4</sub>	A

All dimensions in inches. FADE12 through FADE 25 Fans can be ordered fully assembled with housing and damper. See Fantech Price List for detailed descriptions and model numbers.

## PERFORMANCE DATA

Fan Model	RPM	Volts	Max. Watts	Max. Amps	Static Pressure in Inches W.G.						Sones
					0"	.100"	.125"	.25"	.375"	.5"	
FADE 8	1550	115	45	0.41 <sup>1</sup>	304	246	224	74	—	—	4.1
FADE 10	1500	115	68	0.62 <sup>1</sup>	624	558	533	377	132	—	7.9
FADE 12	1400	115	130	1.19 <sup>1</sup>	1208	1069	1030	797	—	—	9.4
FADE 14	1200	115	245	2.24 <sup>1</sup>	1839	1654	1599	1295	—	—	9.6
FADE 16	1400	115	458	4.19 <sup>2</sup>	3054	2882	2839	2570	2198	1699	12.0
FADE 18	1550	115	698	6.39 <sup>2</sup>	4115	3895	3840	3549	3239	2908	14.3
FADE 20-6	1100	115	435	3.98 <sup>1</sup>	3693	3368	3279	2775	1429	—	10.7
FADE 20-4	1450	115 <sup>3</sup>	916	8.39 <sup>2</sup>	4949	4682	4615	4274	3917	3445	16.4
FADE 22	1000	115 <sup>3</sup>	756	6.92 <sup>2</sup>	5629	5248	5153	4432	—	—	12.0
FADE 25	1000	115 <sup>3</sup>	1134	10.38 <sup>3</sup>	7858	7355	7230	6557	—	—	14.8

Performance certified is for installation type A - Free inlet, Free outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings include the effects of intake guard.

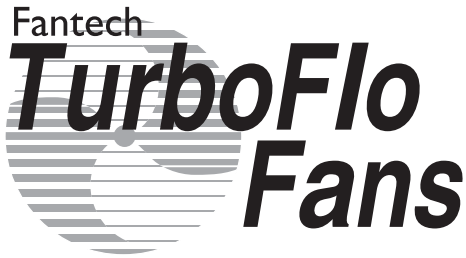
<sup>1</sup> Also available with dual voltage 230/460 three phase motors.

<sup>2</sup> The sound ratings shown are loudness values in fan sones at 5ft. (1.5m) in hemispherical free field calculated per AMCA Standard 301.

Values shown are for installation Type A: Free inlet hemispherical fan sone levels. All sone values shown are calculated at 0.1" (static pressure in inches W.G.). <sup>1</sup> Recommended speed control rating 5A. <sup>2</sup> Recommended speed control rating 10A. <sup>3</sup> Recommended speed control rating 15A.



Fantech, Inc. certifies that the FADE Series 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.



# INSTALLATION, OPERATION AND MAINTENANCE MANUAL FOR FADE, TABE & THDAB

## READ & SAVE THESE INSTRUCTIONS!

**READ THESE INSTRUCTIONS COMPLETELY BEFORE INSTALLING THE FAN AND SAVE THE INSTRUCTIONS FOR FUTURE REFERENCE. IT IS RECOMMENDED THAT THESE FANS BE INSTALLED BY LICENSED PROFESSIONAL TRADESPERSONS.**

Upon receiving the unit, check for any damage and report it immediately to the shipper. Also insure all accessory items are accounted for.

Move fan to desired location and determine the method by which the fan is to be mounted as shown in the illustrations below. Optional Wall Housings and Wall Mounting Collars provide a convenient means of mounting sidewall fans while maintaining the proper distance between the propeller and damper.

Attach the fan by inserting a suitable fastener through each of the pre-punched mounting holes in the fan panel. Care should be taken not to bend or distort the fan panel or damage drive components during installation. belt-drive fans mounted direct to walls will require suitable attachment holes drilled around the perimeter of the fan panel.

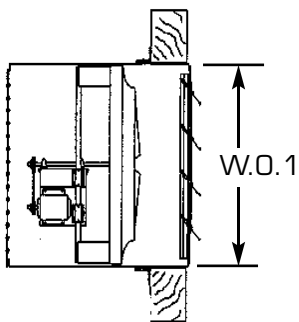
The motor voltage and amperage must be checked for compatibility with the electrical supply. Supply wiring to the unit must be properly fused and conform to local and national electrical codes.

### TYPICAL INSTALLATIONS

Wall opening size and propeller-to-damper distance are two important dimensions for fan installation. Fans mounted to the wall require a different opening (W.O.) than those mounted in wall housings or wall collars. Propeller-to-damper distance is important to reduce turbulence and damper flutter which may lead to premature damper failure.

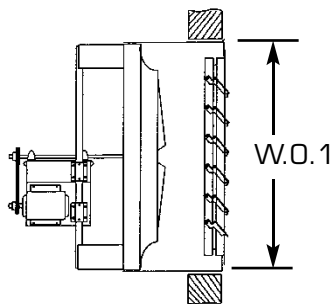
Illustrations #1 and #2 show the wall opening (W.O.1) required for installations with either wall housing or a wall collar. Illustration #3 shows the recommended wall opening (W.O.2) and the minimum (M) distance suggested between the fan and damper for direct to wall installations. *Additional support or bracing (by others) may be required to support mounted fans.*

### WALL OPENING REQUIREMENTS



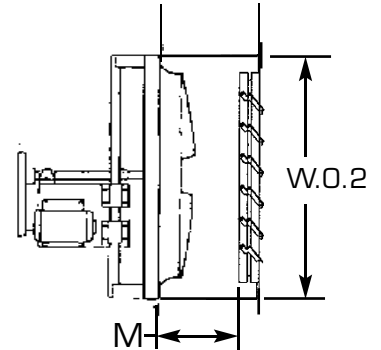
#1

Wall Housing Installation



#2

Wall Collar Installation



#3

Direct to Wall Installation

FADE	Fan Model TABE	THDAB	W.O. 1 Sq	Damper Sq	W.O. 2 Sq	Damper Sq	Minimum Distance
8			N/A	N/A	9 1/2	9	6
10			N/A	N/A	11	10	7
12			21 1/2	18	13 1/2	12	7
14			21 1/2	18	16 1/2	16	8
16			24 1/2	21	18 1/2	18	9
18			24 1/2	21	21 1/2	21	9
20			26 1/2	21	21 1/2	21	10
22			32 1/2	26	26 1/2	26	11
25			32 1/2	26	26 1/2	26	12
	20		25 1/2	20	22	20	10
	24	24	31 1/2	26	28	26	11
	30	30	37 1/2	32	34	32	14
	36	36	43 1/2	38	40	38	14
	42	42	49 1/2	44	46	44	15
	48	48	55 1/2	50	52	50	16
	54	54	61 1/2	56	58	56	19
	60	60	67 1/2	62	64	62	20
		72	81 1/2	76	78	76	26

## PRE-STARTING CHECKS

Check all fasteners and set-screws for tightness, this is especially important for bearing set-screws.

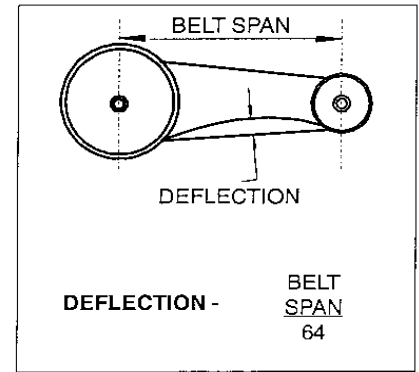
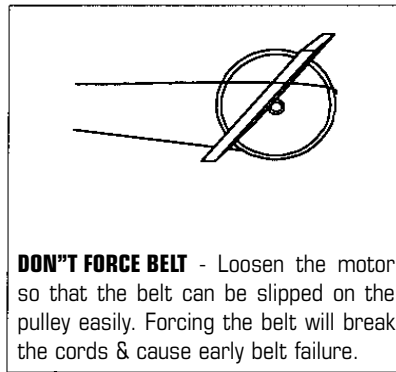
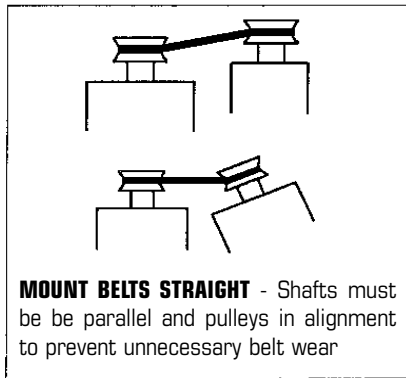
The propeller should rotate freely and not rub on the fan panel venturi. Rotation should be in the same direction as the decal affixed to the unit. For 3-phase installations, fan rotation can be reversed by simply interchanging any two of the three electrical supply leads. For single phase installations follow the wiring diagram located on the motor. *See page 4 for special wiring instructions for models FADE.*

## BELT-DRIVE FANS

The adjustable motor pulley is preset at the factory for the specified fan RPM. Fan speed can be increased by closing or decreased by opening the adjustable pulley. Two-groove or three-groove variable pitch pulleys must be adjusted an equal number of turns open or closed. Any increase in the fan speed represents a substantial increase in the horsepower required from the motor. Always check the motor load amperage and compare it to the name plate rating when changing fan speed.

## BELTS

Proper tensioning and alignment of belts will give years of trouble free service. The proper tension for operating a V-belt is the lowest tension at which the belts will not slip at peak loading conditions. For initial tensioning, the proper belt deflection half way between pulley centers is 1/64" for each inch of belt span. Check belt tension two times during the first 24 hours of operation and periodically thereafter. To adjust belt tension, loosen the four fasten-



ers (two each side of the motor plate) and slide the motor away from the fan shaft until proper belt tension is achieved.

It is very important that the drive pulleys remain in proper alignment after adjustments are made. Misalignment of pulleys will result in premature belt wear, noise, vibration and power loss.

## BEARINGS (BELT-DRIVE FANS ONLY)

All Fantech belt-drive fans have self-aligning cast iron pillow block type bearings with re-lube fittings of the air handler type, L50 200,000 hour average life. Bearings should be inspected at periodic intervals. Locking collars and set-screws in addition to fasteners attaching the bearings to the bearing plate or mounting frame, must be checked for tightness. Selection of the correct bearing grease and lubrication intervals depends on several things. Extreme high or low temperatures, dirty or damp conditions and vibration exceeding 1 or 2 mils are all things that will require more frequent lubrication or special greases. For standard servicing, use good quality lithium based grease that conforms to NLIG grade 2 consistency.

With the unit running, add grease very slowly with a manual grease gun until a slight bead of grease forms at the seal. Be careful not to unseat the seal by over lubricating or using excessive pressure.

## MOTORS

The motor bearings should be lubricated at the intervals recommended by the motor manufacturer in accordance with the instructions printed on the motor plate. **DO NOT OVER LUBRICATE.** Many fractional horsepower motors have sealed for life bearings and do not require lubrication. Motors on the FADE series are sealed for life and require no maintenance.

## REMOVAL OF DIRT AND DUST

Dirt clogs cooling openings on the motor housing, contaminates bearing lubricant and collects on propeller blades causing severe imbalance if left unchecked. The exterior surfaces of the motor, fan panel and propeller should be thoroughly cleaned periodically. Use caution and do not allow water or solvents to enter the motor or bearings. Under no circumstances should motors or bearings be sprayed with steam or water.

**WARRANTY LIMITATION OF LIABILITY.**

Fantech warrants fans to be free from defects in design, materials and workmanship (exclusive of abrasion, corrosion or erosion) for two (2)\* years from date of shipment to the original buyer of a product from Fantech or Fantech's authorized distributor or the date of notification of readiness to ship. Motor warranty is one (1) year. In order to claim the benefit of this warranty, buyer must notify Fantech in writing of the claimed defect within ten (10) days after discovering it and return this equipment or parts to the factory with transportation prepaid. In the event of on-site repair, no service technician will be dispatched until manufacturer receives your written purchase order. If any of the following conditions exist, the warranty will be null and void: (1) Buyer has permitted other persons not approved or authorized by manufacturer to alter, adjust, replace or repair the equipment or any part thereof. (2) Buyer has not followed instructions or other directions given in the contract documents or our maintenance manual. (3) When breakage or other loss or damage is the result of any negligence, misuse or fault on the part of any operator or other person not under our supervision or control. (4) The defect is the result of designs or drawings made, furnished or specified by others. (5) In the case of goods not manufactured or supplied by the manufacturer as part of a contract, manufacturer shall only be liable to the same extent that our supplier is to manufacturer, not to exceed any liability manufacturer would have for warranty on our own equipment. (6) Buyer has not paid in full any invoices submitted to buyer which are due for payment. (7) Unusual wear and tear of the equipment.

\*(3) years on FADE Series

Statements relating to the product, its use or installation made prior to the execution of the agreement, are not warranties except to the extent that the contrary is expressly set forth herein. It is understood that such statements were not intended to, and did not, form a part of the agreement; they were merely made in the course of negotiations of the parties.

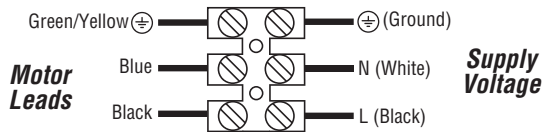
THIS WARRANTY IS IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. OUR SOLE AND EXCLUSIVE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE DEFECTIVE EQUIPMENT OR PARTS OR, AT OUR OPTION, TO PAY THE REASONABLE COST OF REPAIR OR REPLACEMENT. BUYER AGREES THAT NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES, FOR LOST PROFITS OR SALES, OR DAMAGES FOR INJURIES TO PERSON OR PROPERTY) SHALL BE AVAILABLE. NOTWITHSTANDING THE ABOVE, THE TOTAL AMOUNT THAT MAY IN ANY EVENT BE PAYABLE IN SETTLEMENT OR LIABILITY, HOWEVER INCURRED, SHALL NOT EXCEED THE CONTRACT PRICE.

**WARRANTY VALIDATION** - The user must keep a copy of bill of sale to verify purchase date. These warranties give you specific legal rights and are subject to any applicable consumer protection legislation. You may have additional rights that vary from state to state.

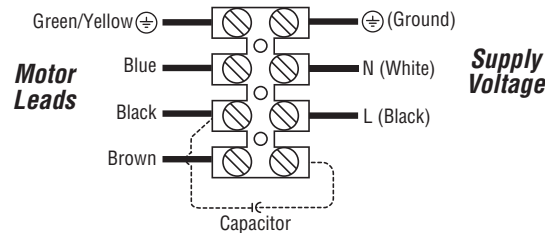
<b>TROUBLESHOOTING</b>		
<b>PROBLEM</b>	<b>CAUSE</b>	<b>CORRECTIVE ACTION</b>
Reduced Airflow	System resistance is too high	Check backdraft damper for proper operation. Remove obstructions in ductwork. Clean dirty filters. Check for adequate supply air for exhaust fans or exhaust air for supply fans.
	Fan too close to damper	Increase distance between fan and damper.
	Unit running backwards	See pre-starting checks.
	Fan speed too low	Increase fan speed.
	Excessive dirt on propeller V-belt-drive	Clean propeller
	Bearings	Tighten bearing collars and set-screws. Lubricate bearings. Replace defective bearings.
	V-belt-drive	Tighten pulleys on motor and fan shaft. Adjust belt tension. Align pulleys. Replace worn belts or pulleys.
Excessive Noise	Excessive vibration	Clean all dirt build-up from propeller. Check all set-screws and fasteners for tightness. Check for worn bearings. Correct propeller imbalance. Check for loose damper, guards, housing or ductwork.
	Defective Motor	Replace motor.

# WIRING DIAGRAM FOR FADE SERIES

## Models: FADE 8-4 115 Volt Single Phase Fans



## Models: FADE 10-4, 12-4, 14-4, 16-4 120 Volt Single Phase Fans



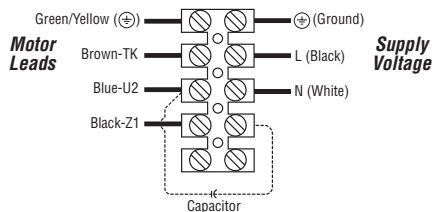
## Models: FADE 18-4, 20-4, 22-6, 25-6

### 115 Volt Single Phase Fans

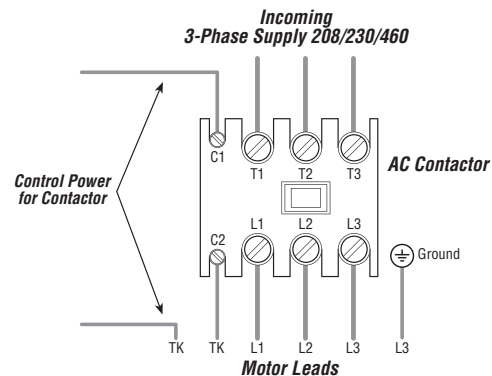
Wiring schematic for 4 lead motors, single phase

#### Notes:

- All leads are color coded as well as identified with an Alpha / Alpha or Alpha / Numeric code (i.e. TK or Z2). This code may be shown as a band on the wire or on a schematic on the motor hub. Colors should be verified against code band. If code band and color do not correspond to schematics above, wire according to the code on the band.
- Color of capacitor leads may be reversed. Fan operation will not be affected.



## Contactor for 3-Phase Fans, 208-230/460v

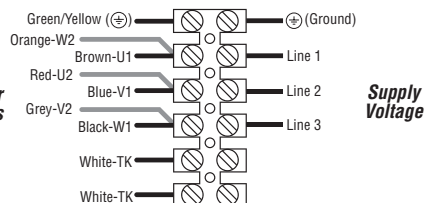


## 230 Volt Three Phase Fans

### Models: FADE 20-4, 22-6, 25-6 (Dual voltage)

#### Notes:

- Contactor should be used. Control coil should be wired in series with motor thermal contacts (TK leads) as shown in diagram to provide thermal motor protection.
- All leads are color coded as well as identified with a band containing an Alpha/Alpha or Alpha/Numeric code (i.e. TK or Z2). Colors should be verified against code band. If code band and color do not correspond to schematics above, wire according to the code on the band.



## 460 Volt Three Phase Fans

### Models: FADE 20-4, 22-6, 25-6 (Dual voltage)

**Important note:** For 460 volt operation, Orange (W2), Red (U2) and Grey (V2) wires must be spliced together.

#### Notes:

- Contactor should be used. Control coil should be wired in series with motor thermal contacts (TK leads) as shown in diagram to provide thermal motor protection.
- All leads are color coded as well as identified with a band containing an Alpha/Alpha or Alpha/Numeric code (i.e. TK or Z2). Colors should be verified against code band. If code band and color do not correspond to schematics above, wire according to the code on the band.

