

THE FORCE - 58" POSITIVE PRESSURE FAN

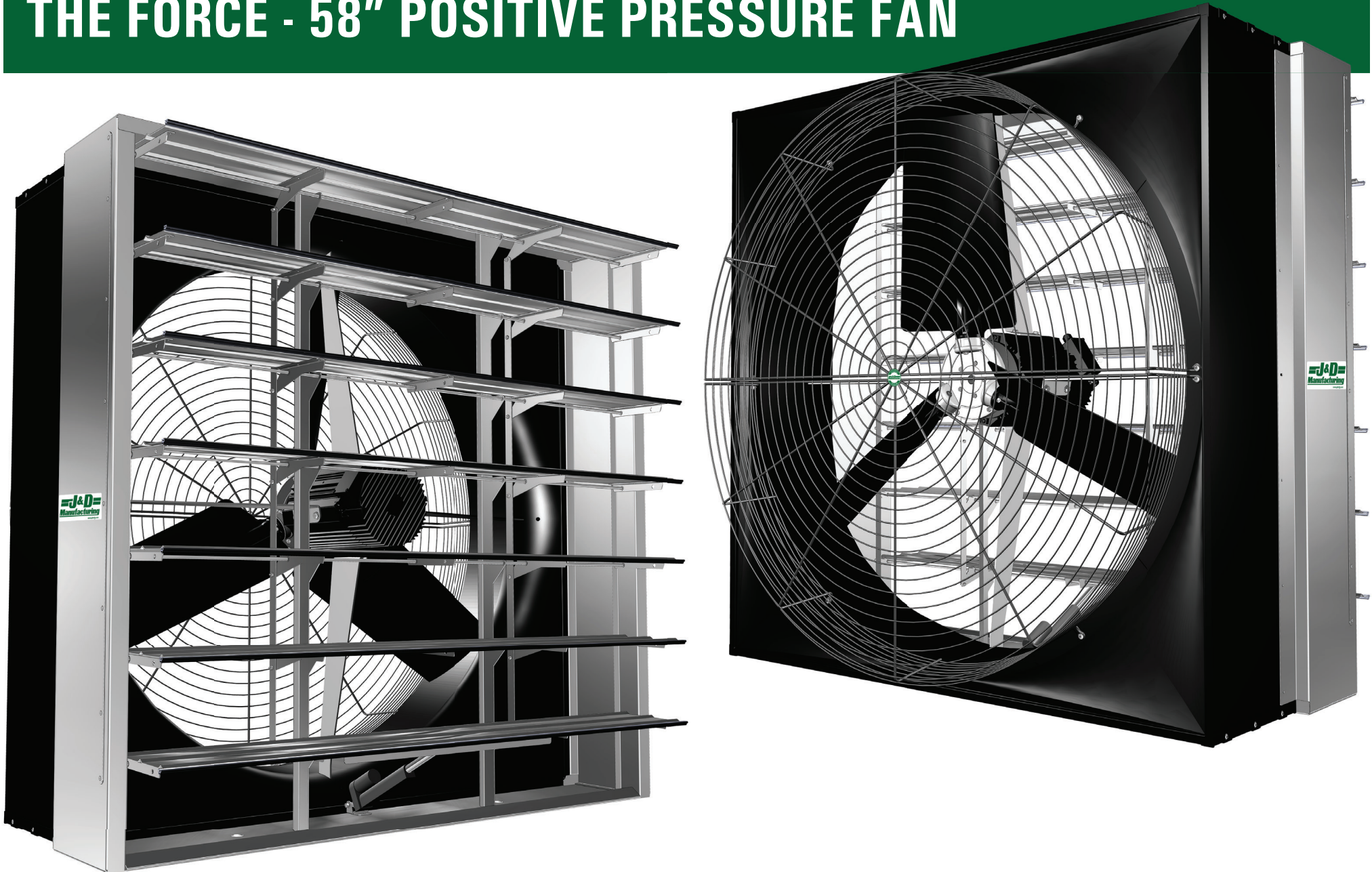


Table of Contents

Warranty	Page 2
Parts Legend	Page 3
Recommended Tools and Supplies	Page 3
Included Hardware	Page 3
Site Requirements	Page 4
Installing Fan In Rough Opening	Steps 1-3
Locate Actuator Control Box	Step 4
Wiring Access Recommendations	Step 5
Wiring Control Wire From <u>Single Phase</u> Motor & Speed Control to Actuator Control	Step 6
Wiring Junction Box for <u>Single Phase</u>	Step 7
Connecting <u>Single Phase</u> Power to Actuator Control	Steps 8-9
Wiring Control Wire From <u>Three Phase</u> Motor & Speed Control to Actuator Control	Step 10
Wiring Junction Box for <u>Three Phase</u>	Step 11
Connecting <u>Three Phase</u> Power to Actuator Control	Steps 12-13
Installing Guard	Steps 14-16
Maintenance Instructions	Page 12
Exploded View	Page 13

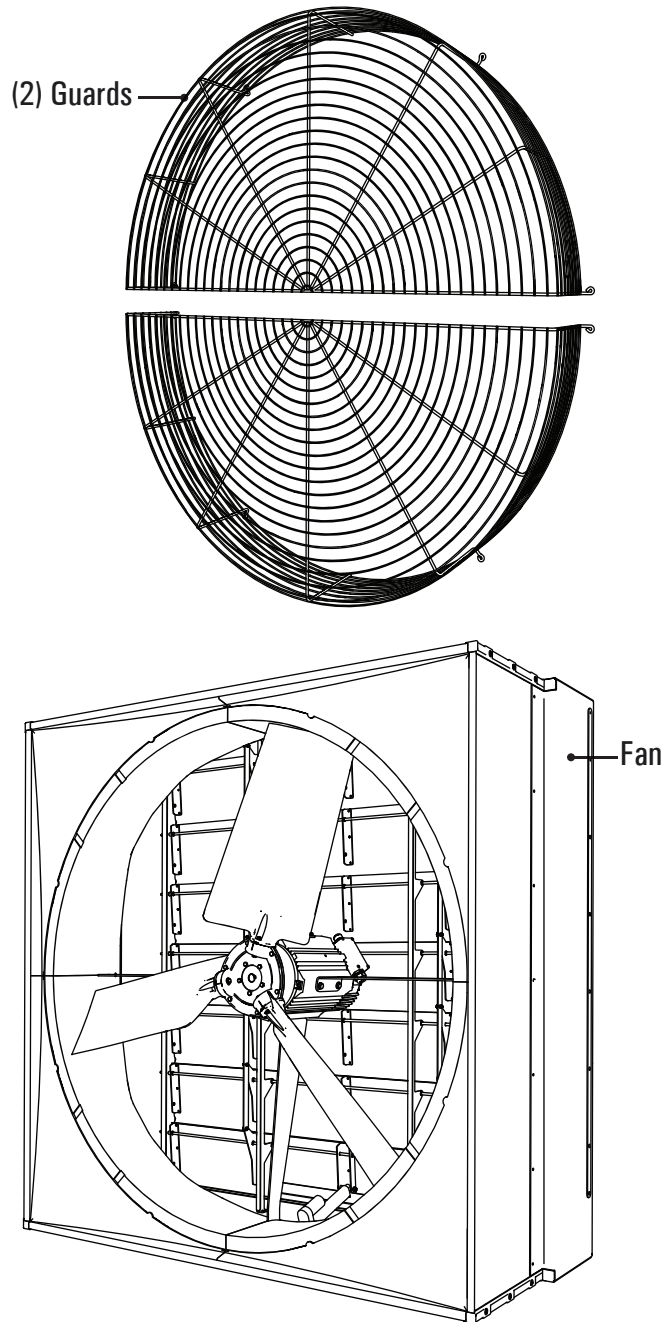
WARRANTY

J&D Mfg. warrants this products is free from defects in materials and workmanship under normal use for the period of three years from date of purchase. Our warranty does not cover ordinary wear and tear. J&D Mfg can repair or replace at our option, any product or part of the product that is found to be defective. Our warranty applies to materials only and does not include return freight, delivery, loss or damage to personal property, cost of removal or installation, any incidental or consequential damages or labor. This warranty does not apply to products which are misused, abused, altered, improperly installed or subject to negligence. All warranties must be approved through our warranty department. The original purchaser must present a copy of the invoice for the defective product.

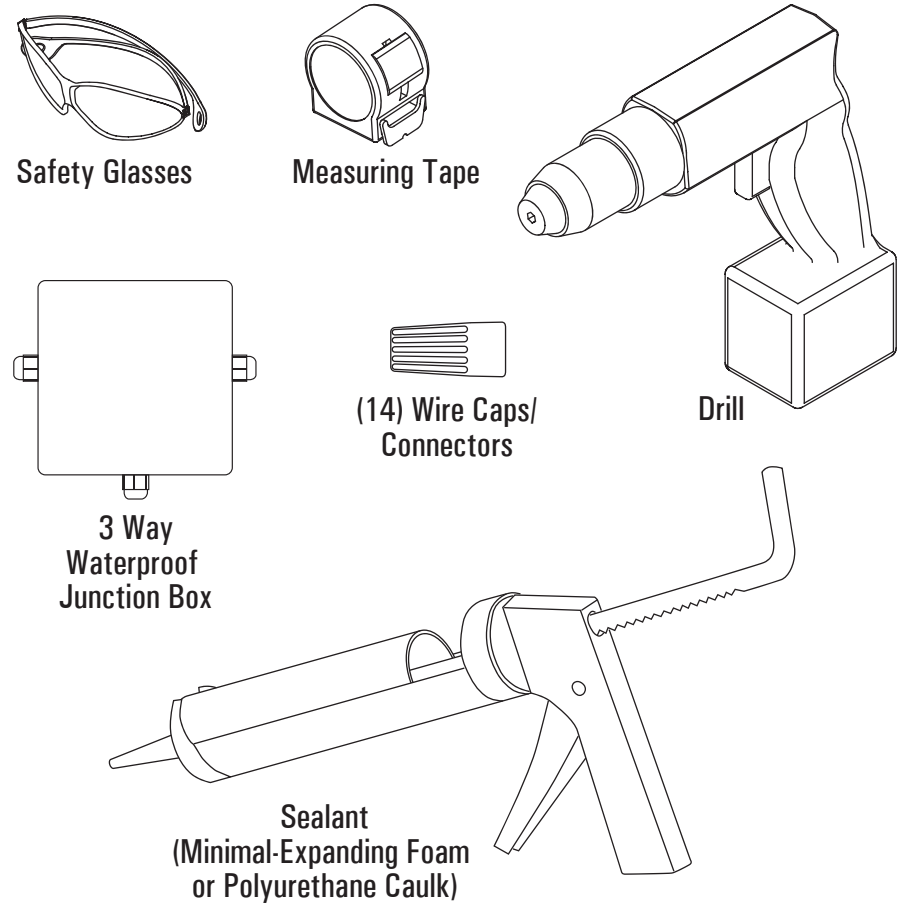
INSTALLATION

Please read over ALL instructions carefully before you begin.
If you have any questions please call your local dealer, or contact J&D Manufacturing at
1-800-998-2398.

PARTS LEGEND



RECOMMENDED TOOLS & SUPPLIES FOR INSTALLATION AND ASSEMBLY (NOT PROVIDED)



INCLUDED HARDWARE FOR ASSEMBLY & INSTALLATION

- #3 Phillips Bit
- (8) #14-10 x 2" Screws (Use #3 Phillips Bit)
- (4) #12-11 x 3½" Screws (Use #3 Phillips Bit)
- (2) 11" Cable Ties
- (1) Front Guard Hub Sticker

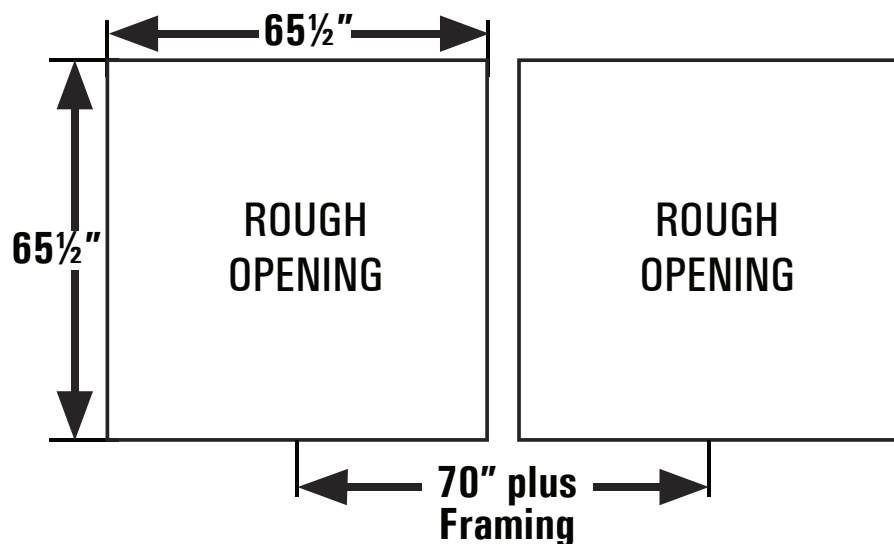
Site Requirements:

- **Rough Opening** - 65½" W x 65½"H
- **Side-By-Side Recommended OC Dimension** - Minimum 70" plus necessary framing based on the building requirements
- **Precautions should be taken in locations that receive winter precipitation accumulation to prevent damage to fans from roof avalanches. Damage to fans from ice, snow, or any other falling debris is not covered by warranty.**

Common industry standard solutions are

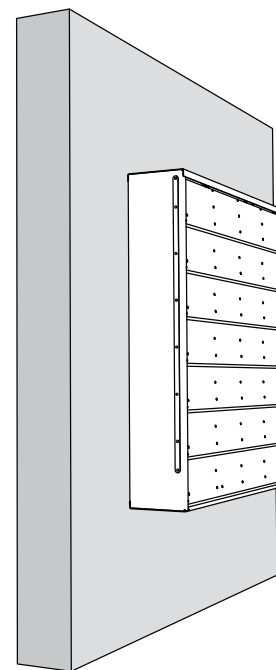
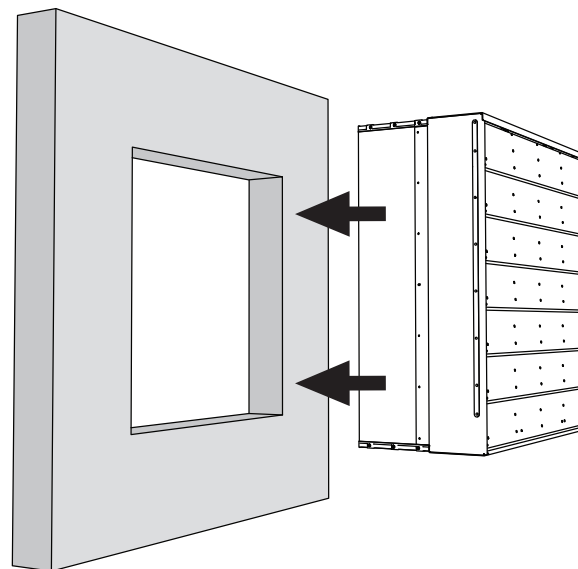
- > Extending roof eave beyond fan open shutters*
- > Create a shelter a minimum of 6" above fan that extends beyond the fan and open shutters*
- > Install snow guards according to manufacturers recommendations

* The depth of J&D's Force fan with open shutters is 20"



Installing Fan In Rough Opening

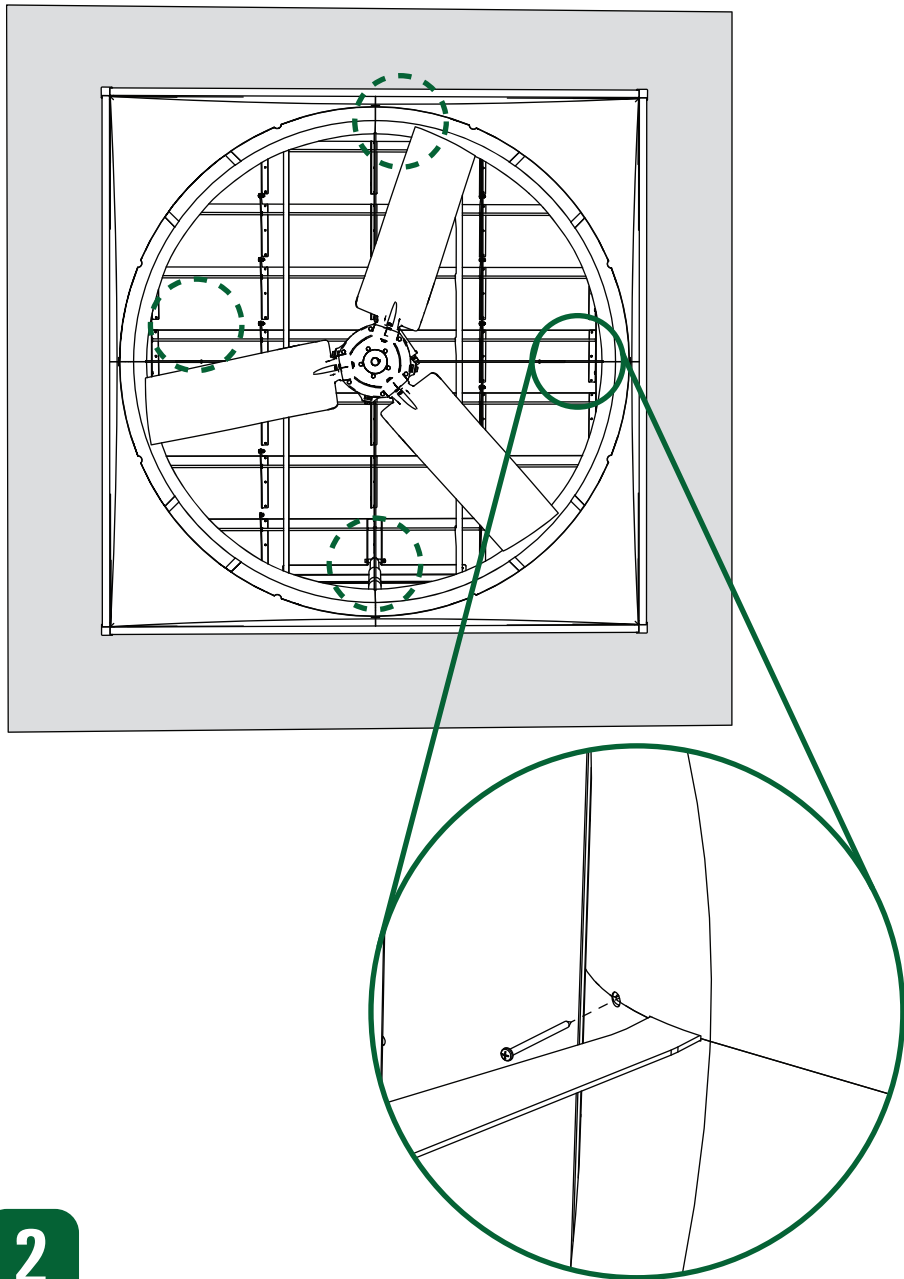
- Insert fan into prepared rough opening until the shutter housing lip rests snug against the building, as shown below.



1

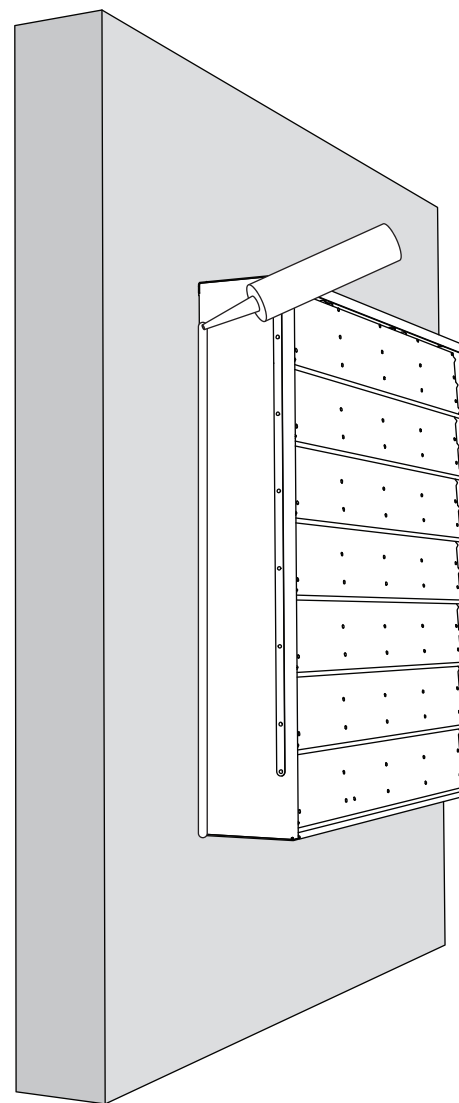
- Using the provided (4) #12-11 x 3½" **Screws** and included **#3 Phillips Bit** secure fan in rough opening as shown below.

NOTE: For steel frame applications we recommend the equivalent size hex head, self drilling, TEKS screw (not included).



2

- To further secure and prevent water, condensation, and ice from penetrating, use a sealant (Minimal-Expanding Foam / Polyurethane Caulk) on all four sides to fill the gaps between the housing and the rough opening.



3



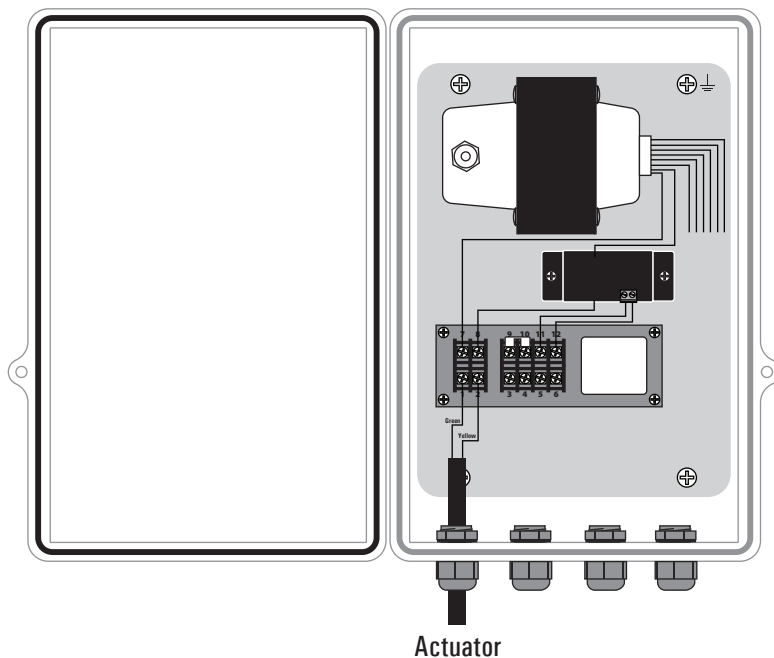
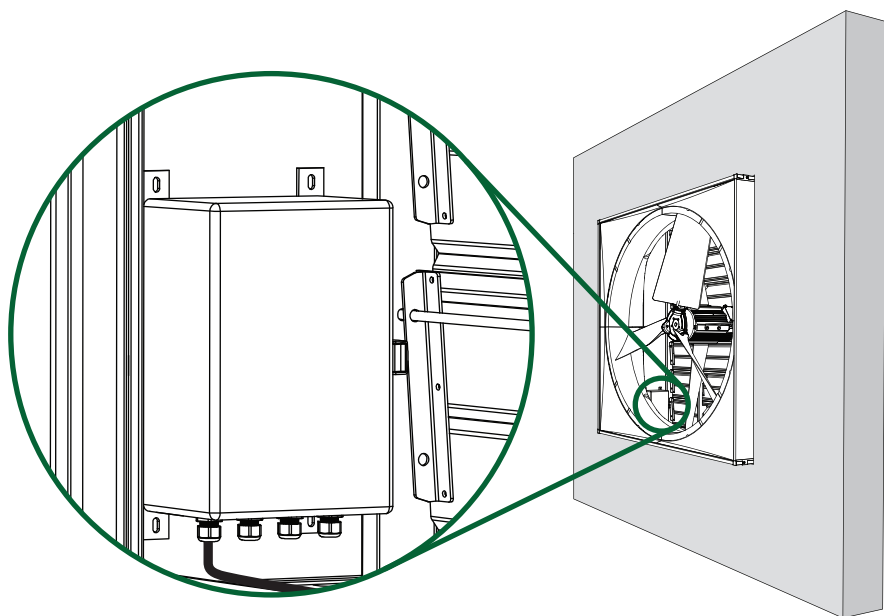
DISCONNECT POWER
BEFORE INSTALLING OR SERVICING.



**ALL ELECTRICAL WORK SHOULD BE COMPLETED BY QUALIFIED PERSONNEL
AND MEET NATIONAL (NEC), REGIONAL AND LOCAL ELECTRIC CODES.**

Locate Actuator Control Box :

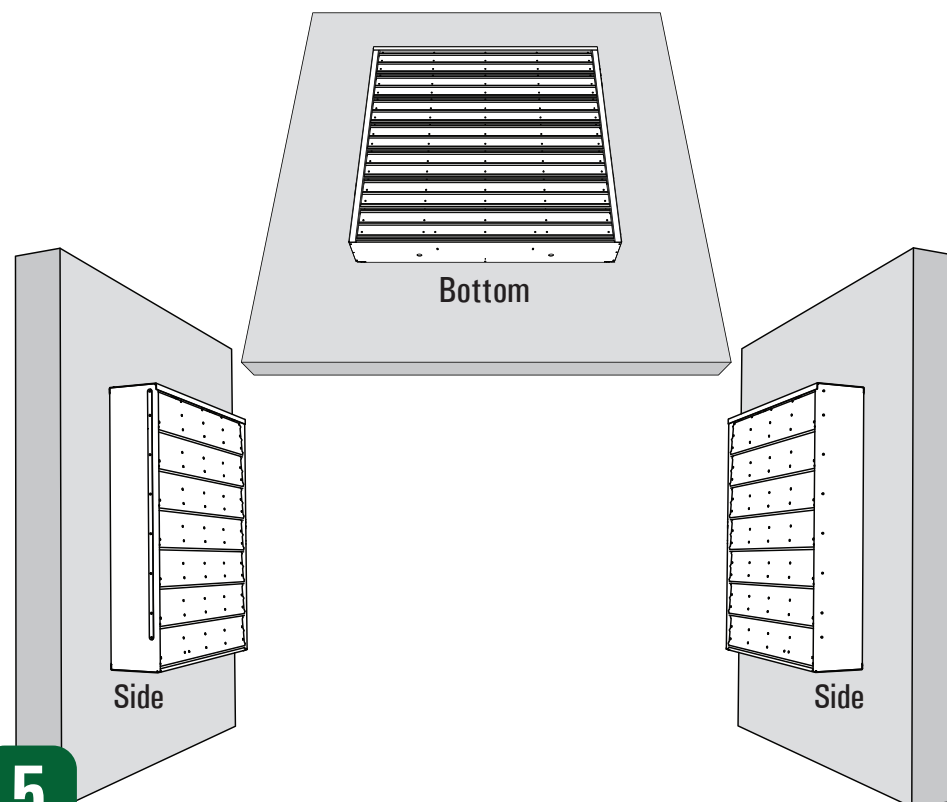
- Locate and open the actuator control box



4

Wiring Access Recommendations:

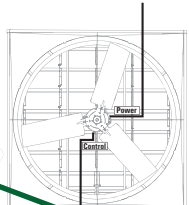
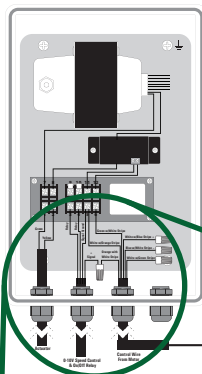
- Being sure to meet all national (NEC), regional and local electric codes required for the location, incoming wiring should be brought into the fan through the bottom or sides of the metal shutter housing.
- Precautions should be taken when placing hole and cord to
 - Prevent water infiltration and wire abrasion
 - Do not interfere with shutter or actuator
- **WARNING**
 - DO NOT drill through fan housing
 - DO NOT run wire through venturi or shutter louvers



5

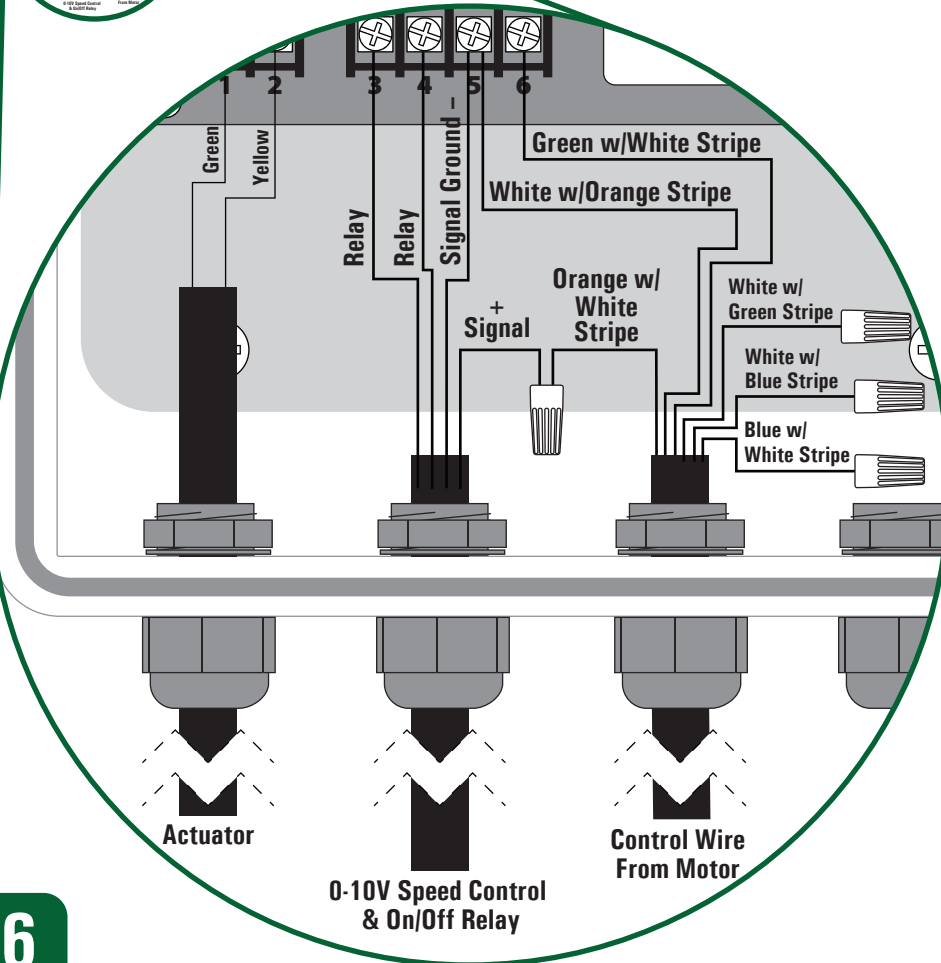
If wiring for Single Phase proceed to Step 6.
If wiring for Three Phase skip to Step 10.

Wiring Control Wire From Single Phase Motor & Speed Control to Actuator Control:



Actuator Control	Speed Control	Control Wire from Motor
3	Relay	--
4	Relay	--
5	Signal Ground-	White w/Orange Stripe
6	--	Green w/White Stripe
--	+ Signal	Orange w/White Stripe
--	--	White w/Green Stripe*
--	--	White w/Blue Stripe*
--	--	Blue w/White Stripe*

* Unused wires must be capped



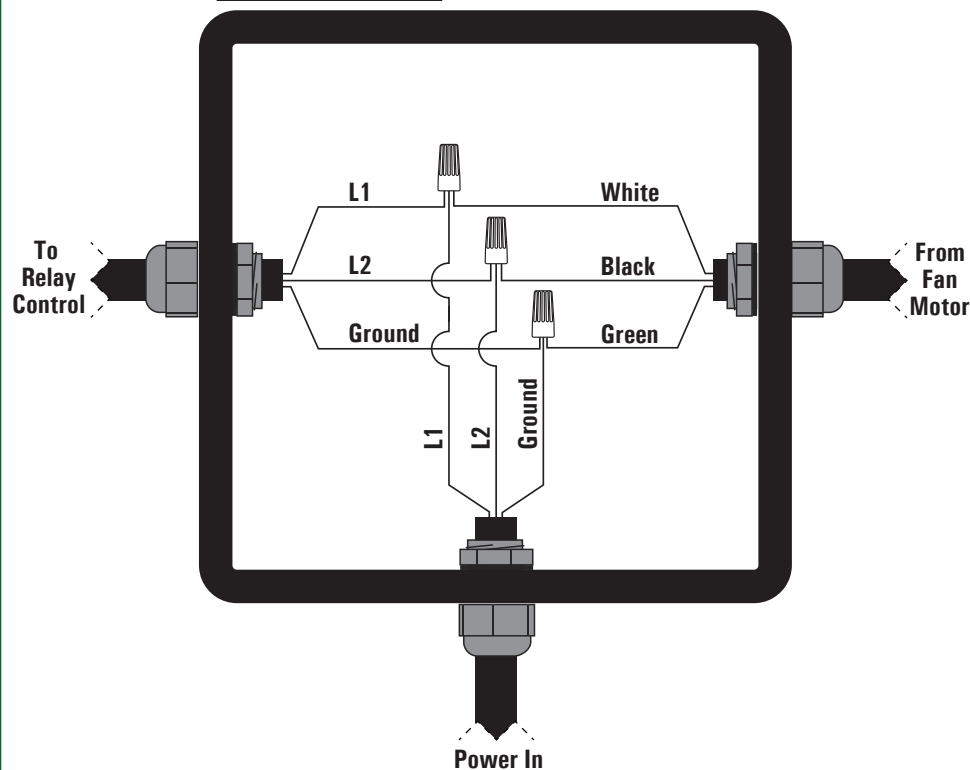
6

Wiring Junction Box for Single Phase:

- Using a junction box (not provided) and fittings (not provided) that meets all national (NEC), regional and local electric codes required for the location, connect Power In wire, Relay Control wire (not provided), and Fan Motor wire, as shown below.

Power In	Relay Control	Fan Motor
L1	L1	White
L2	L2	Black
Ground	Ground	Green

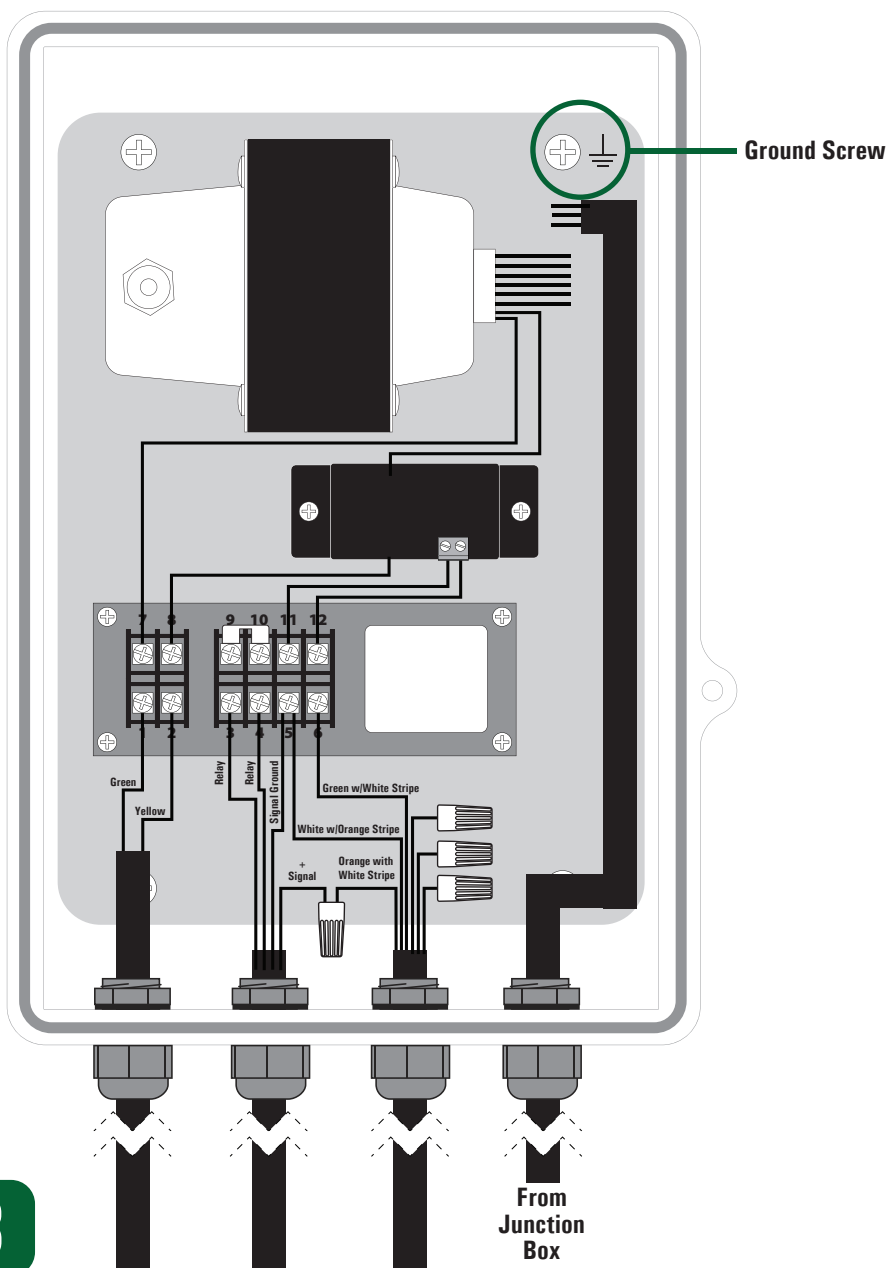
Single Phase Wired for 190-240v



7

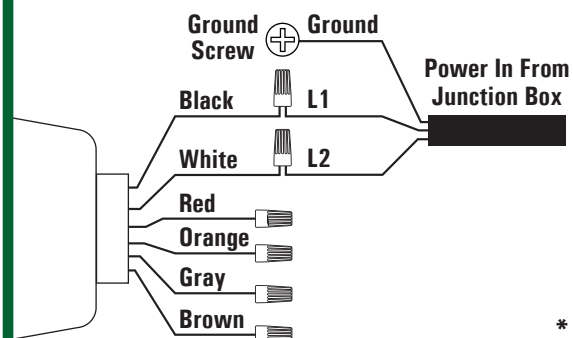
Connecting Single Phase Power to Actuator Control:

- From the junction box run power cord to Actuator Control
- Utilize cord grip and bring cord up into control box far enough that wire can be secured to ground screw.



- Follow diagram and table for voltage provided

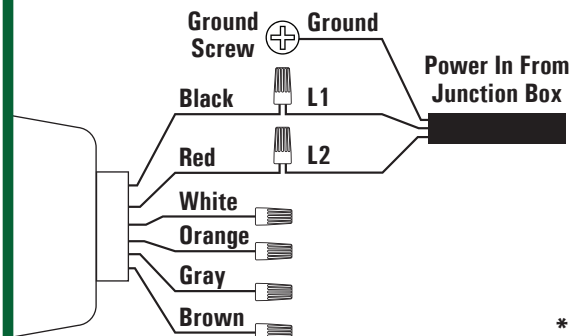
Single Phase Wired for 120v



Relay Control	Power In
Ground Screw	Ground
Black	L1
White	L2
Red*	--
Orange*	--
Gray*	--
Brown*	--

* Unused wires must be capped

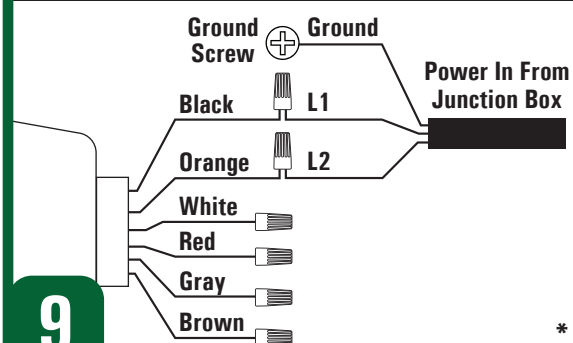
Single Phase Wired for 208v



Relay Control	Power In
Ground Screw	Ground
Black	L1
Red	L2
White*	--
Orange*	--
Gray*	--
Brown*	--

* Unused wires must be capped

Single Phase Wired for 240v



Relay Control	Power In
Ground Screw	Ground
Black	L1
Orange	L2
White*	--
Red*	--
Gray*	--
Brown*	--

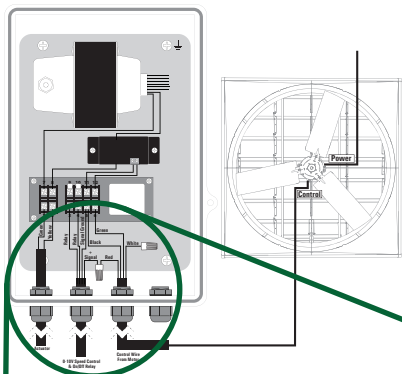
* Unused wires must be capped

9

Once done wiring for Single Phase skip to Step 13.

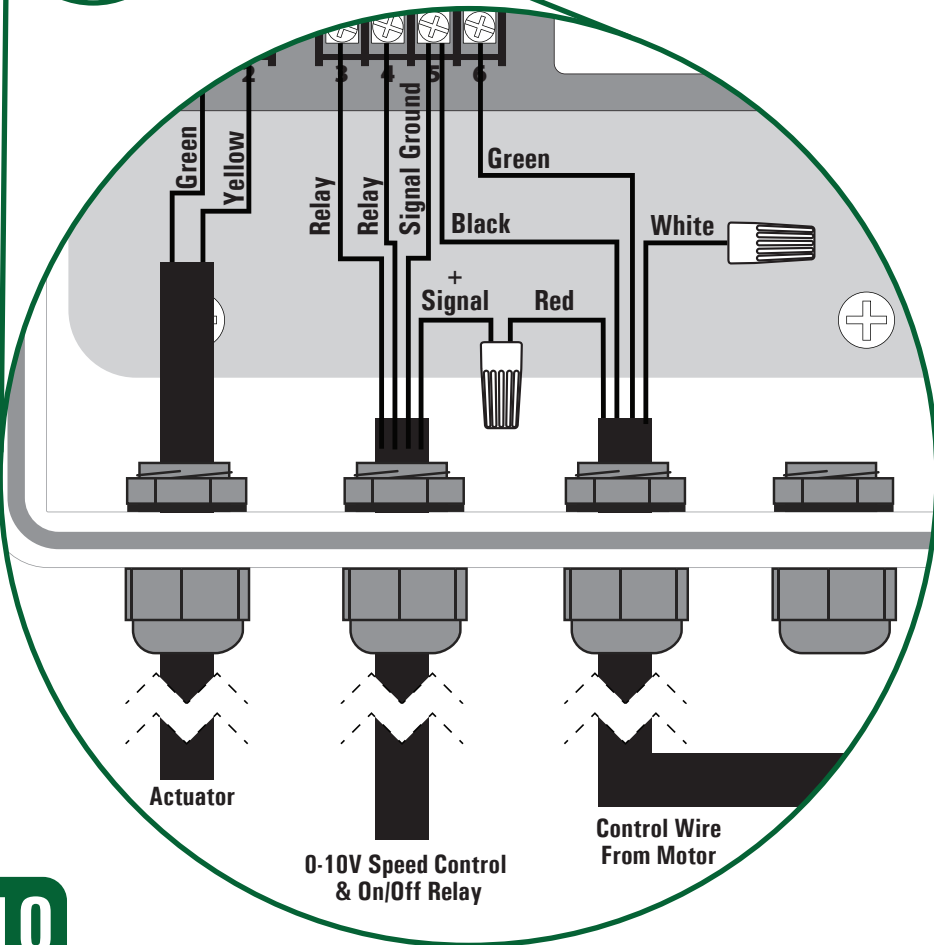
8

Wiring Control Wire From Three Phase Motor & Speed Control to Actuator Control:



Actuator Control	Speed Control	Control Wire from Motor
3	Relay	--
4	Relay	--
5	Signal Ground--	Black
6	--	Green
--	+ Signal	Red
--	--	White*

* Unused wires must be capped



10

IMPORTANT:

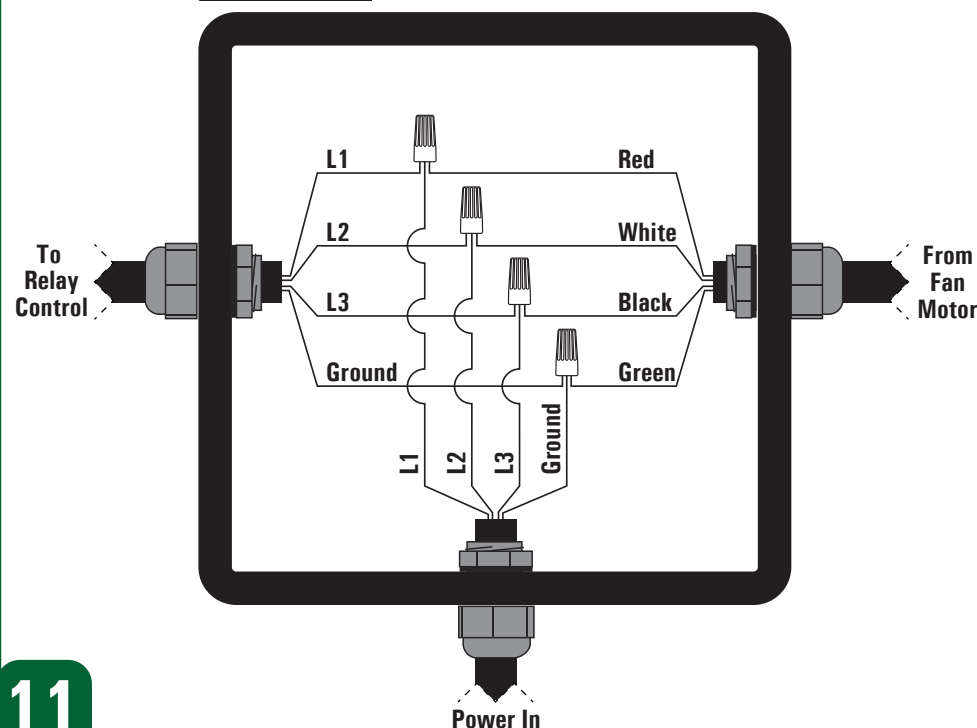
- When wiring the Junction Box and the Actuator Control, all Three Phase Fans on the same Fan Control Stage must use the same phase/line and polarity configuration.
- To eliminate issues J&D recommends following the tables and diagrams as listed for your voltage in Steps 11 thru 13 for every Three Phase Force Fan.

Wiring Junction Box for Three Phase:

- Using a junction box (not provided) and fittings (not provided) that meets all national (NEC), regional and local electric codes required for the location, connect Power In wire, Relay Control wire (not provided), and Fan Motor wire, as shown below.

Power In	Relay Control	Fan Motor
L1	L1	Red
L2	L2	White
L3	L3	Black
Ground	Ground	Green

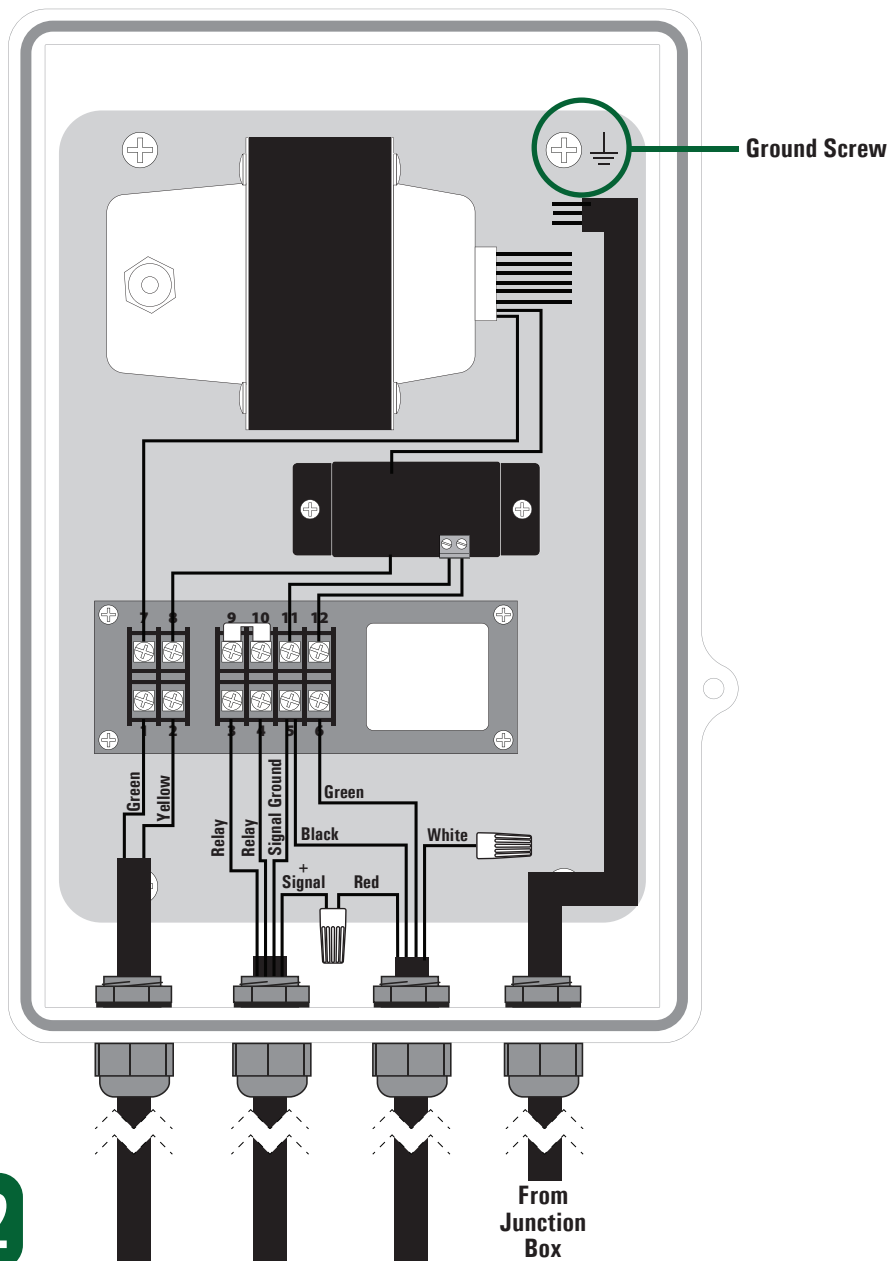
Three Phase Wired for 190-240v / 380-460v



11

Connecting Three Phase Power to Actuator Control:

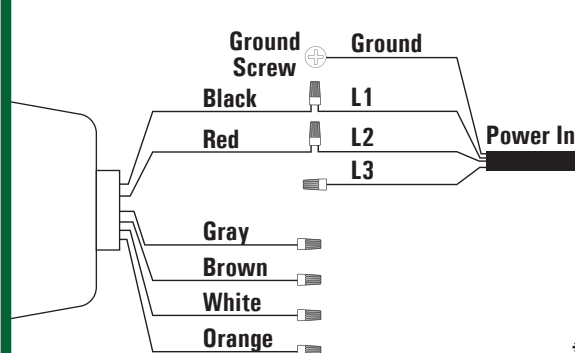
- From the junction box run power cord to Actuator Control
- Utilize cord grip and bring cord up into control box far enough that wire can be secured to ground screw.



12

- Follow diagram and table for voltage provided

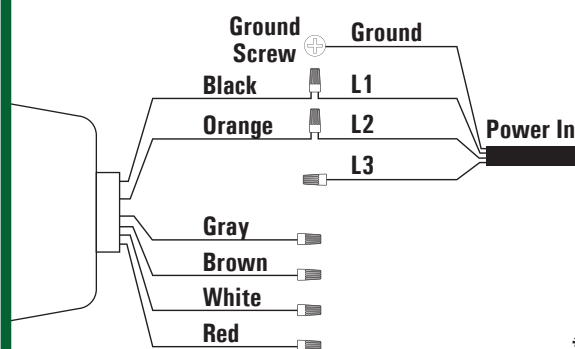
Three Phase Wired for 208v



Relay Control	Power In
Ground Screw	Ground
Black	L1
Red	L2
--	L3*
Gray*	--
Brown*	--
White*	--
Orange*	--

* Unused wires must be capped

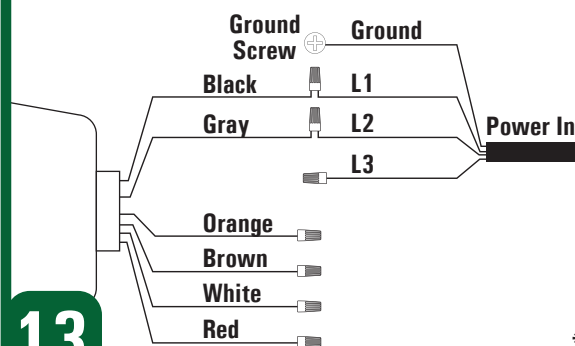
Three Phase Wired for 240v



Relay Control	Power In
Ground Screw	Ground
Black	L1
Orange	L2
--	L3*
Gray*	--
Brown*	--
White*	--
Red*	--

* Unused wires must be capped

Three Phase Wired for 480v



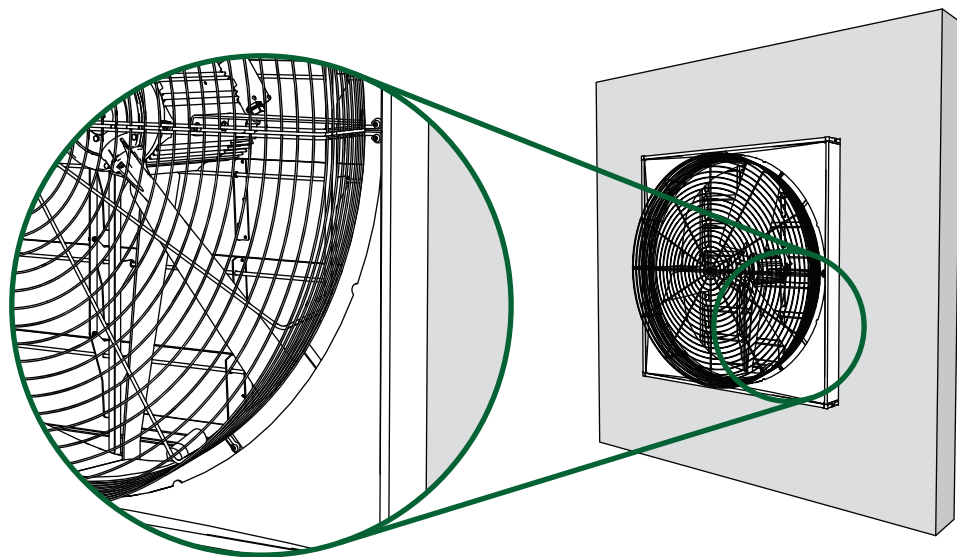
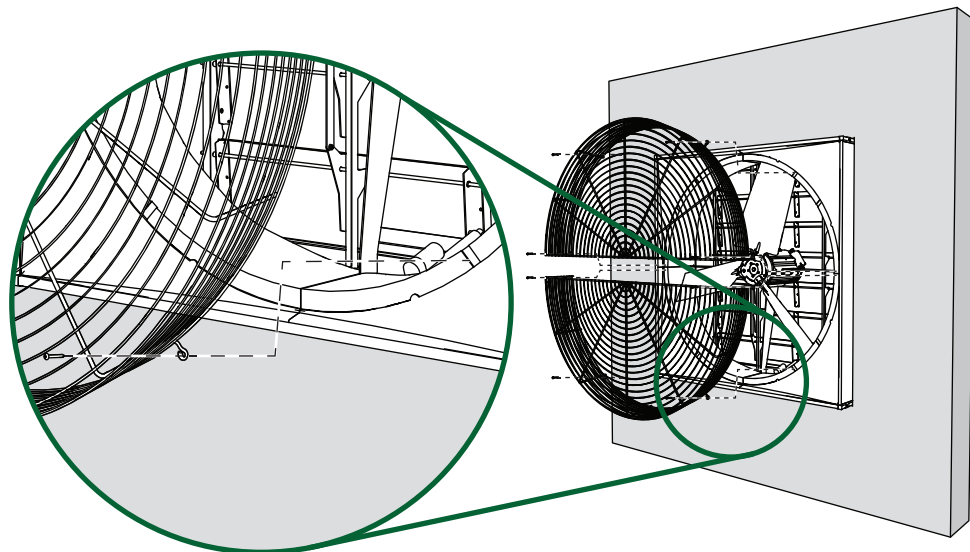
Relay Control	Power In
Ground Screw	Ground
Black	L1
Gray	L2
--	L3*
Orange*	--
Brown*	--
White*	--
Red*	--

* Unused wires must be capped

13

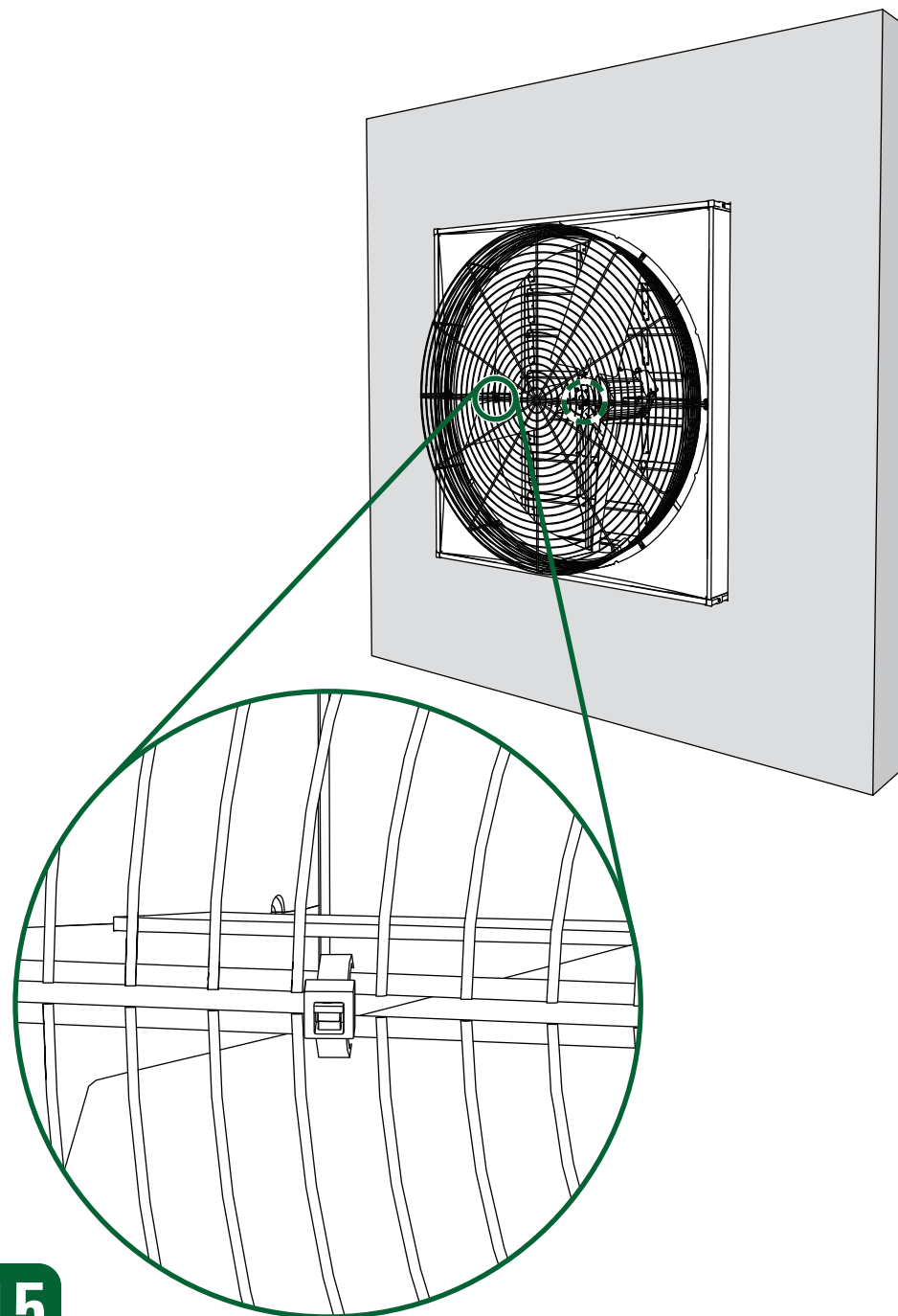
Installing Guard:

- Using the provided (8) #14-10 x 2" **Screws** and included **#3 Phillips Bit** secure guard sections to venturi rim, as shown below.



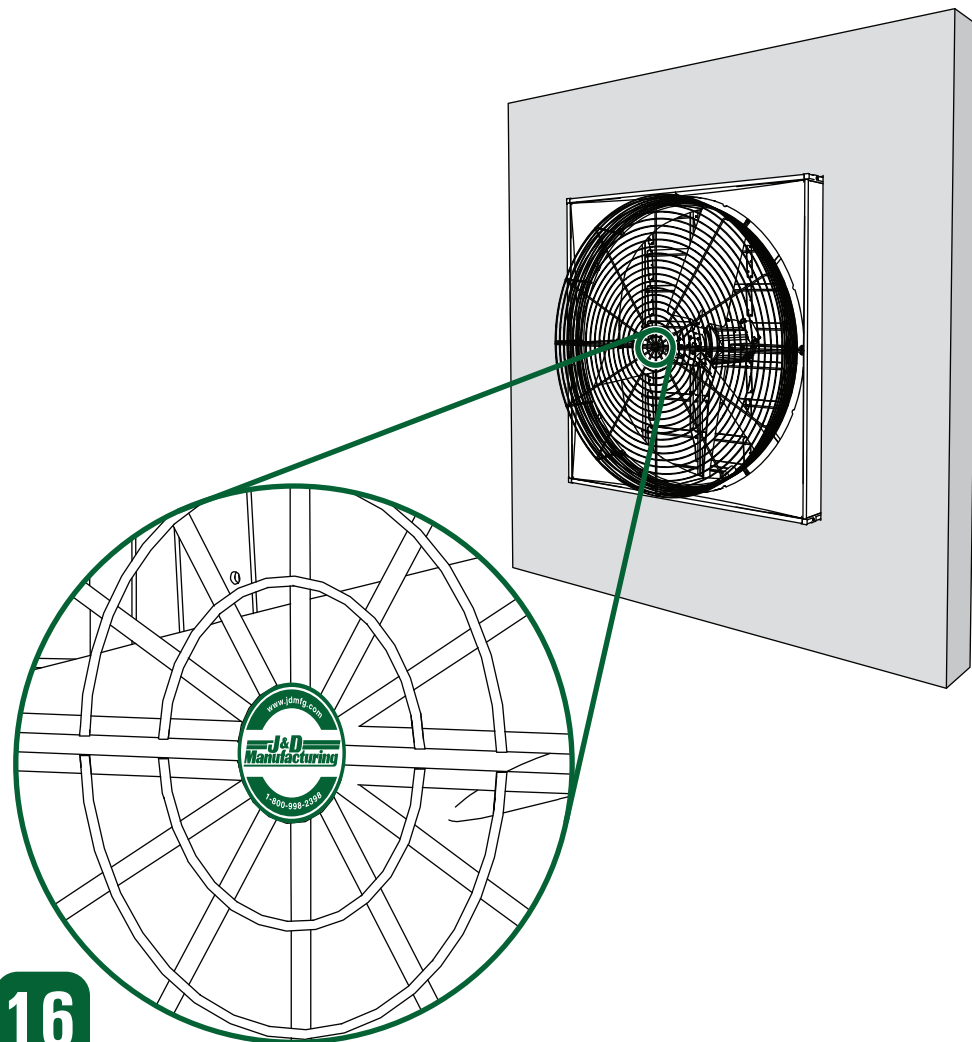
14

- Secure guard sections to each other using (2) 11" **Cable Ties**, as shown below.



15

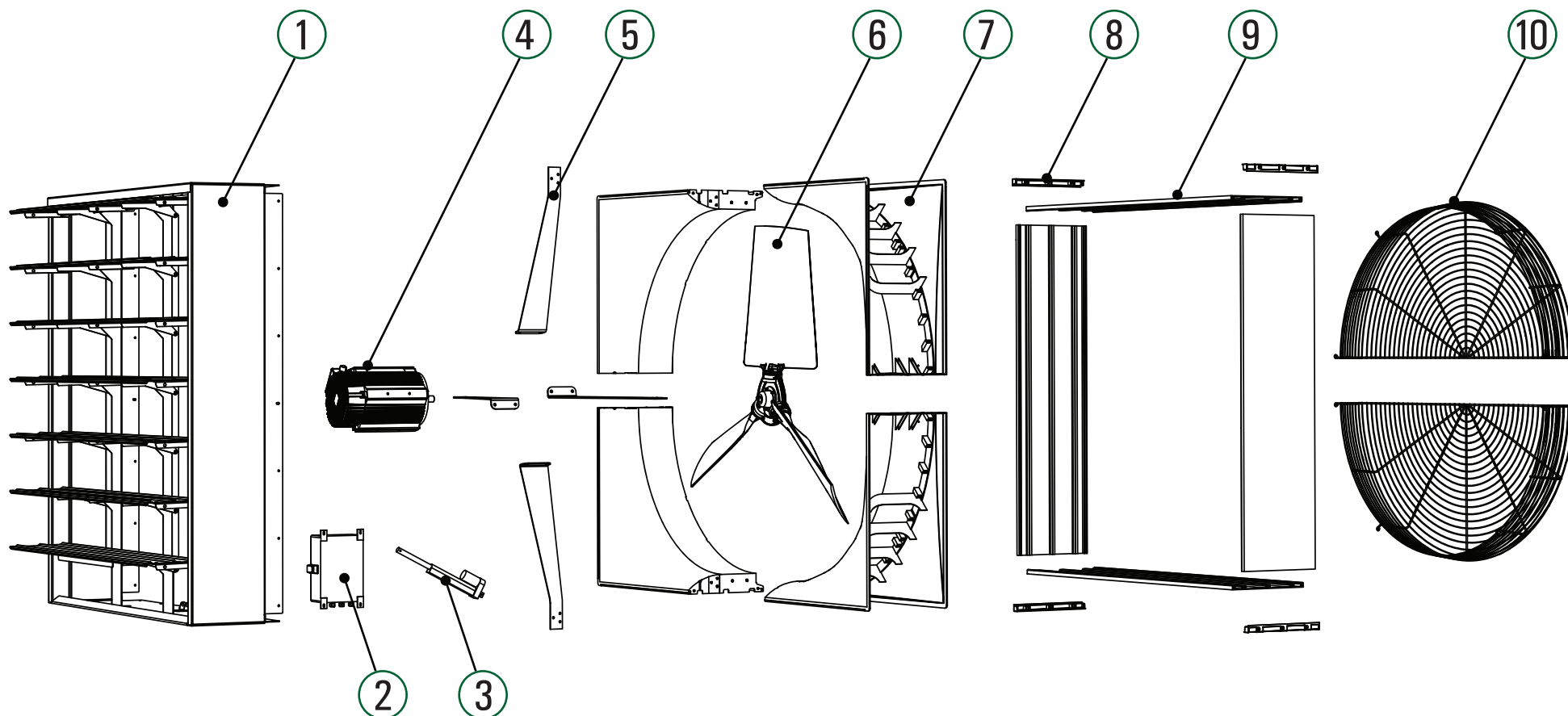
- Apply J&D Front Guard Hub **Sticker** to guard center as shown below.



16

Maintenance Instructions:

- Disconnect power before cleaning or maintaining your fan in order to prevent serious injury or death.
- Service and repair of fan should only be completed by a qualified technician.
- For maximum efficiency and fan life, keep the following free from dirt and dust: blades, louvers, motor and guard.
- The totally enclosed air over motor has sealed ball bearings and does not require additional oil.



#	(Qty) Description
1	(1) Shutter Assem. & Housing
2	(1) Actuator Control
3	(1) Actuator
4	(1) Motor

#	(Qty) Description
5	(4) Motor Mount Brackets
6	(1) Prop
7	(4) Venturi Sections
8	(4) Housing Corners

#	(Qty) Description
9	(4) Housing Panels
10	(2) Guard Sections