

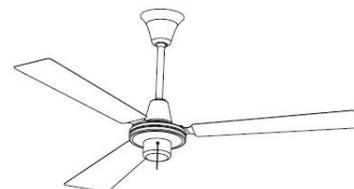
# INDUSTRIAL CEILING FAN MANUAL

INDA364L	INDA484L	INDA564L	INDA56P	INDA483S3L	INDA563S3L	INDB56240V4L
INDB56277V4L	INDB564L	INDB604L	INDB56MR4LP*	INDB60MR4LP*	INDC60ODP	

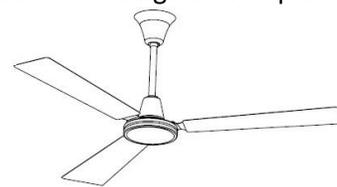
**IMPORTANT:** READ AND SAVE THESE INSTRUCTIONS. Read carefully before you assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instruction could result in personal injury damage. Retain instructions for future reference.

## DESCRIPTION

Each high efficiency ceiling fan is designed to create air velocity and to de-stratify air. All models are ETL / CETL certified. Model INDA483S4L and INDA563S3L are 3 speed downdraft ceiling fans controlled by the attached pull chain. Model INDA56P is our cord and plug option (Plug & Play). All other models are variable speed which can be controlled by a wall mount control (sold separately). INDB56MR4LP/INDB60MRP4LP are designed to go into damp locations or high moisture applications with use of a GFI outlet. INDC60ODP is suitable for use in wet locations when installed in a GFI protected branch circuit.



Industrial ceiling fan with pull chain



Industrial ceiling fan with variable speed downdraft

## UNPACKING

1. After opening the carton, please look for concealed damaged.
2. If concealed damage is found, immediately file a claim with the carrier.

## SPECIFICATION

MODEL	SIZE	VOLTAGE / HZ	AMPS	WATTAGE	RPM
INDA364L	36"	120V / 60HZ	0.35	40	400
INDA484L	48"	120V / 60HZ	0.50	50	320
INDA483S3L	48"	120V / 60HZ	0.50	50	320
INDA564L	56"	120V / 60HZ	0.55	65	280
INDA563S3L	56"	120V / 60HZ	0.55	65	280
INDB564L	56"	120V / 60HZ	0.70	85	320
INDB604L*	60"	120V / 60HZ	0.70	90	320
INDB56240VL	56"	240V / 60HZ	0.40	85	320
INDB56277V4L	56"	277V / 60HZ	0.36	85	320
INDB56MR4LP*	56"	120V / 60HZ	0.70	85	290
INDB60MR4LP*	60"	120V / 60HZ	0.70	90	260
INDC60ODP	60"	120V / 60HZ	0.70	95	250

\*Color variations available

## **GENERAL SAFETY INFORMATION**

**WARNING:** Disconnect the power supply before wiring connections are made to prevent possible electric shock or damage to equipment.

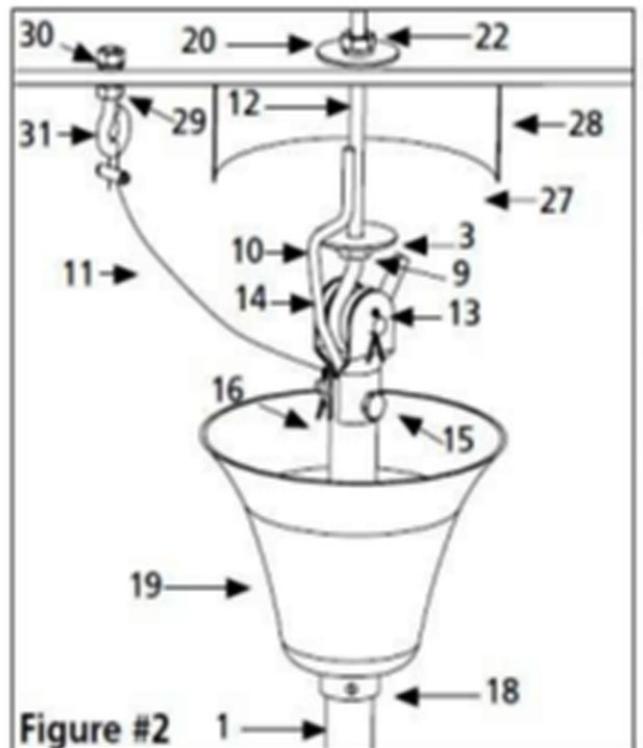
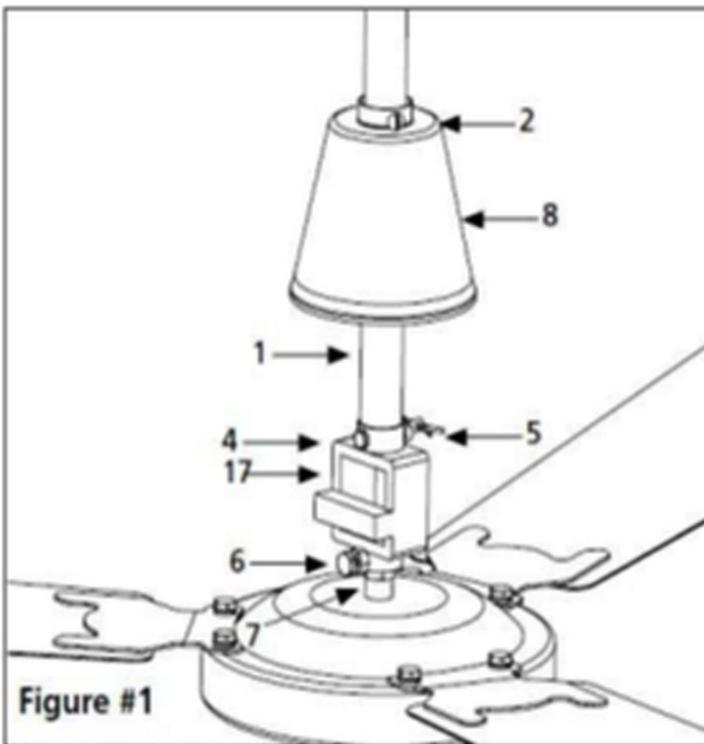
**WARNING:** Read and follow instructions carefully. Failure to comply with instructions could result in fire, electric shock, injury to persons and / or damage to equipment.

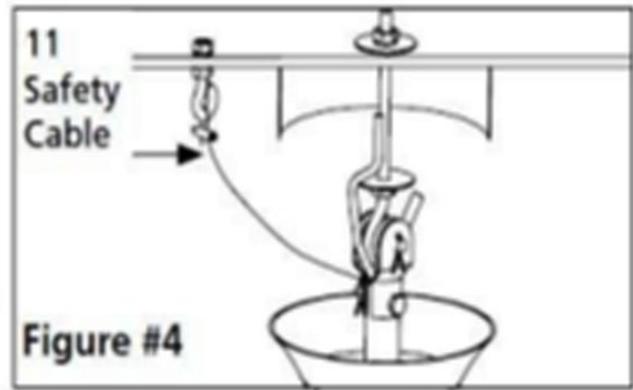
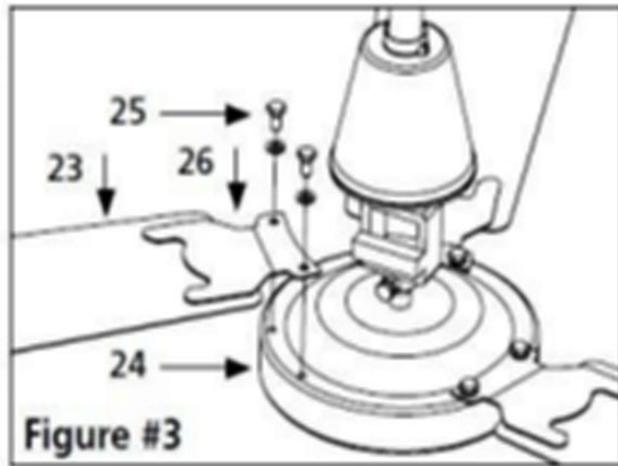
**CAUTION:** Follow all maintenance procedures enclosed.

**DANGER:** Failure to properly ground unit could result in severe electrical shock or death.

## **ASSEMBLY**

1. Remove all ceiling fan parts from the box. Please note, #28 in Figure #2 references the end user's existing junction box, if applicable.
2. Tools and supplies needed: Flat and Philips screwdriver, 9/16" and 3/8" open wrench or adjustable wrench, 2-4 wires nuts.
3. Install a junction box to contain the wiring of the fan. A qualified electrician may be required to install the outlet box keeping with local electrical codes or to meet the NEC, CEC and local regulations.
4. For installation to open web steel joist – use the threaded J-hook as supplied. For wood joist construction, use J hook with lag threads. For attachment in concrete, drill concrete anchors into the concrete as specification applicable to NEC, CEC and local regulation.





## **INSTALLATION**

Figures #1-#4 depict part assembly and installation.

**WARNING:** To reduce the risk of personal injury, do not bend the blade brackets when installing the brackets, balancing the blades or cleaning the fan. Do not insert foreign objects in between rotating fan blades.

1. Make certain set screw (4) is tight to ascertain wobble free operation.
2. Make certain cotter pin (5) is in place and secure.
3. Make certain lock-nut (7) is tight and set screw (6) is in place and secure.
4. Slide lower canopy (8) down over rubber gasket (21) to create a tight seal.
5. Make certain lower canopy set screw (2) are tight on downrod (1).
6. Make certain cotter pin (13) is in place and secure.
7. Make certain bolt, cotter pin and nut (16) are tight.

## **HANGING THE FAN (FIGURE #1 AND # 2)**

1. Wind one nut (9) down to the bottom of the J-hook (12) towards the curve. Add a lock washer and then a flat washer (3) on top of the nut (9).

**WARNING:** Make certain crimps on the safety loop is secure (See Figure #4). Make certain the safety cable is attached properly to the hook or a structural member. Failure to comply with instructions could result in personal injury and / or property damage.

2. Drill a 5/32" pilot hole for the safety hook (31) within a 12" radius of the J-hook (12) as support for the fan. Wind one nut (29) down to the bottom of the safety hook towards the loop. Add a lock washer (29) and slide the safety hook through pilot hole. Slide the lock washer (30) on the top side of the safety hook and add a nut (30). Tighten so the lock washer on the top and bottom of the structure are secure.
3. Drill a 1/2" pilot hole for the J-hook. Put the J-hook (12) through the pilot hole in the joist. Add a flat washer and then a lock washer (20) and a nut (22). Do not tighten completely until the fan is put in place on the J-hook. A lubricant should not be used on the single mounting screw and the pilot hole should not be drilled larger than the diameter of the mounting screw thread. At least 38mm (1-1/2") of the threaded part of the mounting screw should be secured into a structural joist to provide secure mounting.
4. Loosen the set screw (18) on the top canopy (19) on the fan's downrod (1) and lower the canopy to make room to place the rubber grommet (14) onto the mounting hook.

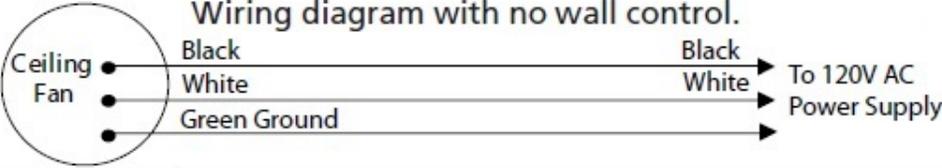
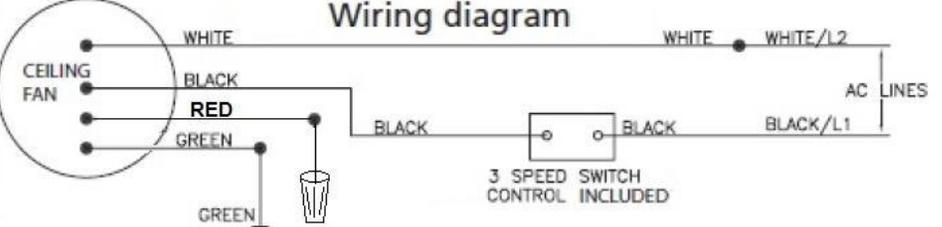
5. Tighten the top nut (22) on the J-hook to raise the fan into the proper installation position.
6. Ensure power to the outlet box is off before hooking up the wiring (10). Wire the fan according to NEC, CEC and local electrical codes.
7. After making the wire connections as outlined in Figure #5-8, the wire should be spread apart with the grounded conductor and the equipment-grounding conductor on one side of the outlet box and the ungrounded conductor on the other side of the outlet box. Splices should be turned upward and pushed carefully up into the outlet box.
8. Raise the top canopy (19) up the downrod to cover the hook. Leave 1/8" gap between the top canopy (19) and the hanging surface while maintain the downrod's centered position. The gap between the canopy and mounting surface ensures the fan's vibrations are not transferred to the mounting surface. Tighten the set screw (18).
9. Attach blades (23) to the motor (24) with the blade bolts (25) (Figure #3). The blade (24) should be positioned below the blade arm bracket (26) when attaching to the motor to ensure proper air flow and direction.

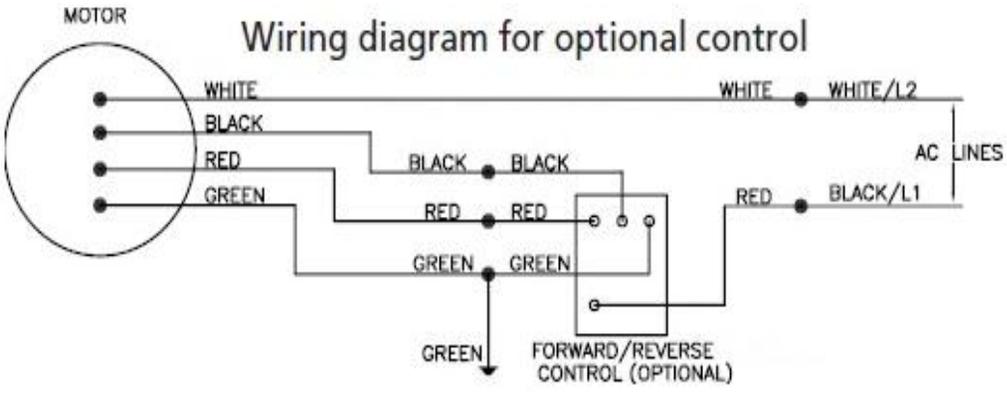
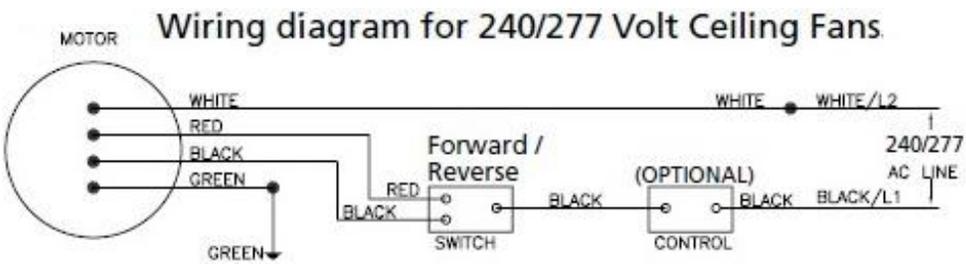
**WARNING:** When installed properly, the blades will hang 10' above the floor level. It is critical that the J- hook and nut adjustment is done so that the blades will be a minimum 12" from the ceiling. If your ceiling is less than 12' then the hook and downrod must be recessed into the ceiling so that the blades are mounted 10' above the floor level to meet OSHA standards. These fans are designed to have the blades at a height greater than 10' from the floor and should never be mounted with the blades lower than the 7' OSHA standard for unguarded fans.

**IMPORTANT:** In the event a different length downrod is required, read the following additional instructions:

#### **WIRING**

1. All wiring should conform to the National Electrical Code ANSI / NFPA 70-1999 (NEC) in the United States, CEC and local regulations.
2. Do not mount in an area which will allow the ceiling fan to come in contact with moisture except for INDB56MR4LP\* and INDB60MR4LP\*, as they are designed to go into damp locations or high moisture applications.
3. Make certain the entire installation is grounded as a precaution against possible electrical shock.
4. Do not exceed maximum amperage rating of the ceiling fan as overloading can result in damage to ceiling fan and control.
5. When wiring an electrical appliance or device, follow all electrical and safety codes as well as the most recent NEC, CEC and local regulations and the Occupational Safety and Health Act (OSHA).
6. Fans suitable for use with solid state speed control include the following models: INDA364L, INDA484L, INDA564L, INDB564L, INDB604L, INDB56MR4LP, INDB60MR4LP, INDB56240V4L, and INDB56277V4L.
7. For models INDB56MR4LP\*, INDB60MR4LP\*, and INDC60ODP, use a compatible VES controller which allows fans to run within DOE Energy Guide parameters.

<p><b>Wiring diagram with no wall control.</b></p>  <p>Figure #5</p>	<p>For Models with pull chain: INDA483S3L INDA563S3L</p>
<p><b>Wiring diagram</b></p>  <p>Figure #6</p>	<p>For Model: INDC600DP with 3 speed wall control (included)</p>

<p><b>Wiring diagram for optional control</b></p>  <p>Figure #7</p>	<p>For Models: INDA364L INDA484L INDA564L INDB564L INDB604L INDB56MR4LP INDB60MR4LP Forward / reverse control (optional), Reversible operation is achieved only on special wired fans with EXTRA RED LEAD</p>
<p><b>Wiring diagram for 240/277 Volt Ceiling Fans</b></p>  <p>Figure #8</p>	<p>For Models: INDB56240V4L INDB56277V4L Forward / reverse control (optional). Reversible operation is achieved only on special wired fans with EXTRA RED LEAD</p>

### **CHANGING TO A DIFFERENT LENGTH DOWNROD:**

1. Loosen and remove the bolt, cotter pin, and nut (16).
2. Slide the top canopy (19) and the lower canopy off of the downrod (1) and over the wires and safety cable.
3. Loosen the set screw (4), remove the cotter pin (5), and slide the downrod (1) over the wires and safety cable.
4. Take the replacement downrod and complete the previous three steps in reverse order.
5. Slide the replacement downrod over the wire and safety cable and insert into yoke (17).
6. Insert cotter pin (5) through the yoke and downrod making certain you do not damage the wires. Once the cotter pin is in place, re-insert the split pin and bend the longer side backwards so the cotter pin will not slide out.
7. Tighten the set screws (4) to 10 foot/lbs of torque.
8. Slide the lower canopy (8) over the wires, safety cable (11) and downrod (1) until it sits on top of the yoke (17) and tighten the set screw (2).
9. Slide the top canopy (19) over the wires, safety cable, and downrod. Do not tighten the set screw (18).
10. Attach the rubber grommet (14) and support bracket (15) to the top of the downrod using the bolt, cotter, and nut (16). Make certain you do not damage the wires inside the downrod. Tighten the nut to 10 foot/lbs of torque and then re-insert the split pin and bend the longer side backwards so the pin will not slide out.
11. Return to the assembly and installation instructions to complete installation.

*It is critical that the J-hook and nut adjustment is done so that the blades will be a minimum 12" from the ceiling. If your ceiling is less than 12' then the hook and downrod must be recessed into the ceiling so that the blades are mounted 10' above the floor level to meet OSHA standards. These fans are designed to have the blades at a height greater than 10' from the floor and should never be mounted with the blades lower than the 7' OSHA standard for unguarded fans.*

### **OPERATION**

1. **Model INDA483S3L / INDA563SL:** After installation, the fan can be operated by pulling gently on the chain until it clicks and selects the next speed option. Starting in "Off", the speed selection sequence is: High, Medium, Low, Off.
2. **Model INDA364L / INDA484L / INDA564L / INDB564L / INDB604L / INDB56MR4LP and INDB60MR4LP:** For optimum performance, use the ETL / CETL Approved speed control to adjust speed and direction of your fan (see figure #7 for wiring). Follow the instruction from the control for minimum speed setting and operation. The forward/reverse control will allow you to adjust the speed and direction of the fan. On the forward or downdraft direction you can blow air down on high speed for cooling or low speed for heat de-stratification. The reverse mode is idle for heat de-stratification or creating air movement without direct air flow.
3. **Model INDB56240V4L and INDB56277V4L:** Fan model INDB56240V4L and INDB277V4L (see figure #8) have the forward/reverse switch separate to the variable speed control. For the model INDB56240V4L control, use the approved 240 Volt adjustable fan controls with the SPDT switch to change the direction of the fan. On the INDB56277V4L control, use the approved 277 Volt adjustable fan control with the SPDT switch to change the direction of the fan.

## **MAINTENANCE**

**DANGER!** Always disconnect the power supply before servicing the ceiling fan or working with the unit for any reason.

**WARNING:** Parts replacement and troubleshooting to be performed only by qualified personnel.

**WARNING:** Do not place fingers or objects in the ceiling fan while the motor is connected to the power source.

**WARNING:** Do not attach foreign objects to the blades of the ceiling fan.

**WARNING:** Do not use gasoline, benzene, thinner, harsh cleaners, etc., which are dangerous and will damage the ceiling fan.

**CAUTION!** If you see noticeable vibration, wobbling or wear, the fan should be removed from service and repaired or replaced by a qualified maintenance technician or electrician.

## **TROUBLESHOOTING CHART**

Each VES Ceiling Fan is tested before it leaves the factory, resulting in an extremely low rate of returns. However, due to shipping and installation procedures, occasionally a fan will need a minor adjustment to run satisfactorily. If this should happen, we recommend that you identify the problem and try the simple suggestions listed below.

***Turn off power at the main circuit breaker before checking!***

<b>SYMPTOM</b>	<b>CORRECTIVE ACTION</b>
Fan will not start	A. Check fuses and circuit breakers. B. Check wire connections to fan. C. Check wiring connection in lower canopy. D. Check voltage at fan connection.
Fan too fast / slow	A. Adjust the trim set screw in fan wall control if using optional wall control. If minimum setting is too low the fan may shut off with voltage fluctuations. Increase minimum. B. Check voltage at fan connection. C. Blades must be attached to motor to reduce the speed.
Fan makes noise	A. Check motor case to make certain all visible screws are snug. B. Check to make certain that all blade bracket screws are tight. C. Check for labels or wire nuts that could be rubbing. D. All ceiling fans may have a slight motor noise known as the "60 cycle hum" when used with solid state infinite speed controls. Especially on lower speeds. This hum will not affect the fan performance. E. Make certain upper canopy is at least 1/8" from ceiling. F. Allow a 30 days break-in period which normally eliminates any Residual noise other than a), b), c), d) or e).
Fan wobble	A. Check that all blade brackets are screwed firmly to motor case. B. Check distance from tip of blades to ceiling. If blades get bent during installation, you must re-adjust them so that all blades travel on same plane. Gently bend up or down until all distance are the same. C. Make certain upper canopy is 1/8" from ceiling. D. Make certain that hanging hooks are secured tightly to ceiling. E. Run fan without blade, if motor does not wobble, then motor is not defective but the blade may be bent.