



FANS

# "AD" Series Duct Fan

In-Line Mixed-Flow Fan  
For Residential or Commercial Applications

INSTALLATION  
OPERATION  
MAINTENANCE

## READ AND SAVE THESE INSTRUCTIONS

1. The compactness and adaptability of the "AD" Series fans make for easy installation. The fans are shipped fully assembled and can be mounted at any angle. **See Page 2** for various mounting diagrams.
2. Because this unit has rotating parts, safety precautions should be exercised during all phases of installation, operation, and maintenance.
3. **CAUTION: For General Ventilation Use Only. DO NOT USE TO EXHAUST HAZARDOUS OR EXPLOSIVE MATERIALS AND VAPORS. For indoor use only.**
4. Remove unit from package and inspect within fifteen (15) days after receipt. If damaged, report damage to carrier. **DO NOT operate this unit with visible damage to the blower or impeller assembly.**
5. **CAUTION:** This unit has an unguarded impeller. Do not use in locations readily accessible to people or animals. **WEAR HAND PROTECTION AND STAY CLEAR OF SHARP EDGES!**
6. Screen guards must be installed within reach of personnel, within seven (7) feet of the working area, or when advisable for safety.
7. Please read entire manual before installing.

**WARNING! DO NOT CONNECT POWER SUPPLY until fan is completely installed. Make sure electrical service to the fan is in the locked "OFF" position.**

All fans are suitable for use with solid-state speed control. Three-phase units must be wired through a motor contactor.

**WARNING! TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:**

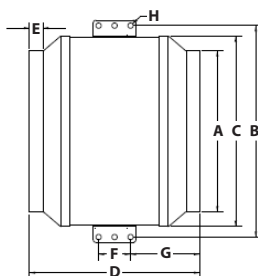
1. Use this unit in the manner intended by the manufacturer. If you have any questions, contact your manufacturer's representative or contact us directly.
2. **CAUTION:** Before installing, servicing or cleaning unit, switch power off at service panel and lock the service disconnection means to prevent power from being switched on accidentally. When the service disconnection means cannot be locked, securely fasten a prominent warning device, such as tag, to the panel.
3. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.

4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel-burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guidelines and safety standards, such as those published by the National Fire Association (NFPA) and the American Society for Heating Refrigeration and Air-Conditioning Engineers (ASHRAE), and the local code authorities.
5. When cutting or drilling into walls and ceilings, do not damage electrical wiring and other hidden utilities.
6. Ducted fans must always be vented to the outdoors.
7. If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to GFCI-protected (Ground Fault Circuit Interrupter) branch circuit.
8. **NEVER** place a switch where it can be reached from a tub or shower.

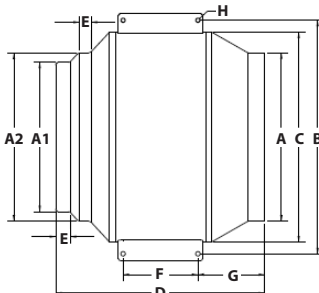
**WARNING! Check voltage at the fan to see if it corresponds to the motor name plate.**



MODELS  
AD-8HP  
THROUGH  
AD-12



MODELS  
AD-12HP  
THROUGH  
AD-18

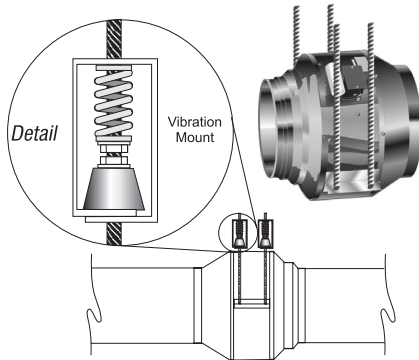


DIMENSIONS (INCHES)

PART NUMBER	MODEL	A	A1	A2	B	C	D	E	F	G	H	WEIGHT (lbs)
99 650	AD-8HP	8	--	--	14	12-1/2	15-1/2	3/4	2-3/8	6-1/8	3/8	15
99 651	AD-10	10	--	--	14	12-1/2	15-1/2	3/4	2-3/8	5	3/8	15
99 652	AD-10HP	10	--	--	15-5/8	14	15	3/4	2-3/8	6-3/8	3/8	21
99 654	AD-12	12	--	--	15-5/8	14	12-1/2	3/4	2-3/8	5-1/8	3/8	20
99 655	AD-12HP	12	12	14	20-1/4	17-7/8	18-7/8	7/8	4	8-3/4	3/8	38
99 657	AD-14	14	12	14	20-1/4	17-7/8	17-1/4	1	1	6-3/4	3/8	37
99 658	AD-14HP	14	14	16	22-1/8	19-3/4	20-1/4	1-1/2	1-1/2	8-3/4	3/8	45
99 659	AD-16	16	14	16	22-1/8	19-3/4	18-3/4	1-1/2	1-1/2	7-1/8	3/8	44
99 660	AD-16HP	16	16	18	24-3/8	22-1/8	23-1/4	1-1/4	1-1/4	8-1/2	1/2	75
99 661	AD-18	18	16	18	24-3/8	22-1/8	21-3/4	1-1/4	7-7/8	7	1/2	74

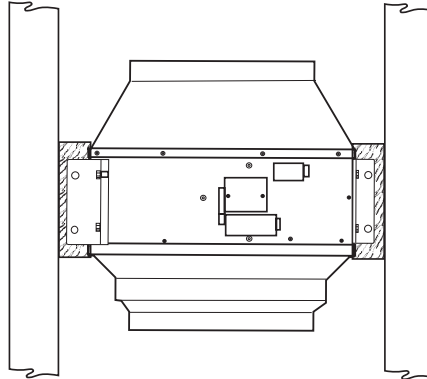
Please follow all applicable codes when installing this unit

### MOUNTING ILLUSTRATION 1



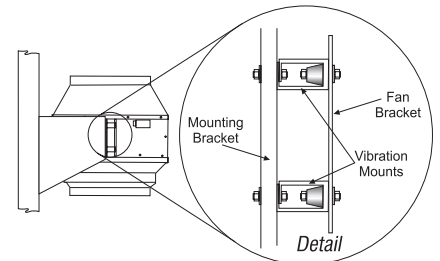
1. Equipment should be hung at its proper elevation by using temporary fixtures that can be removed after vibration hangers are installed.
2. Hanger may be fastened directly to the structure or somewhere between suspended unit (be sure not to over tighten the neoprene element).
3. Install hangers.
4. Turn nuts on rod assembly clockwise one complete turn on each hanger. Repeat this procedure until temporary hanging fixtures are loose and load of piping or equipment is suspended completely on the vibration hangers.
5. Remove temporary hanger fixtures and level piping or equipment by taking additional turns on the spring/top hanger rod nut – clockwise to raise, counterclockwise to lower as required.
6. If equipping fan with Vibration Isolation Fan Clamps\*, they should be attached at this time.
7. See wiring section to complete installation.

### MOUNTING ILLUSTRATION 2



1. Install wood supports to structure for fan mounting.
2. If equipping with vibration mounts, attach to supports.
3. Attach fan to vibration mounts (be sure not to overtighten the neoprene element).
4. If equipping fan with Vibration Isolation Fan Clamps\*, they should be attached at this time.
5. See wiring section to complete installation.

### MOUNTING ILLUSTRATION 3

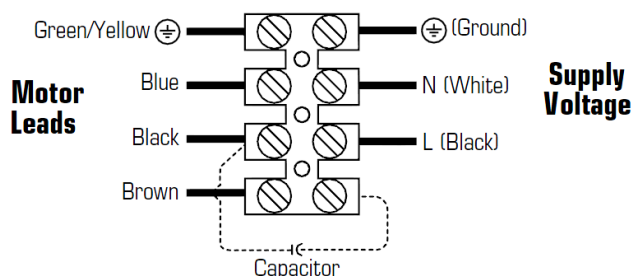


1. Create/install angle wood supports to structure for fan mounting.
2. If equipping with vibration mounts, attach to supports.
3. Attach fan to vibration mounts (be sure not to overtighten the neoprene element).
4. If equipping fan with Vibration Isolation Fan Clamps\*, attach at this time.
5. See wiring section to complete installation.

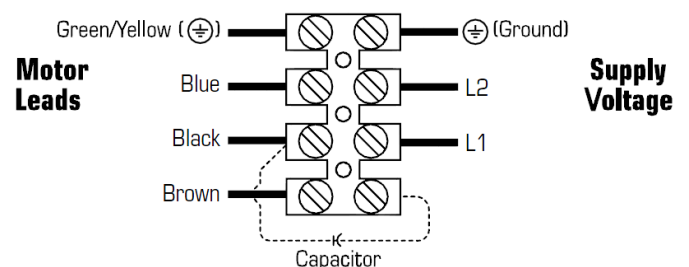
**\*Note: Vibration mounts and hardware are not supplied with fan. Vibration Isolation Fan Clamps are sold separately.**

### WIRING DIAGRAMS: Models AD-8HP, AD-10, AD-10HP, & AD-12

#### 120V Single-Phase Fans



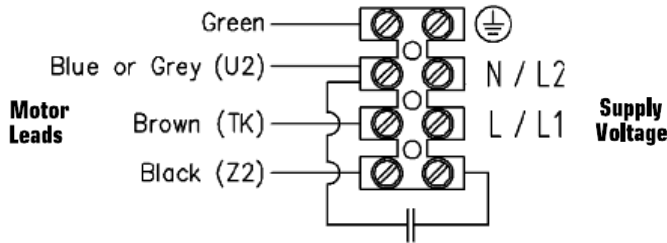
#### 230V Single-Phase Fans



## WIRING DIAGRAMS:

### Models AD-12HP, AD-14, AD-14HP, AD-16, AD-16HP, & AD-18

#### 120/230V Single-Phase Fans

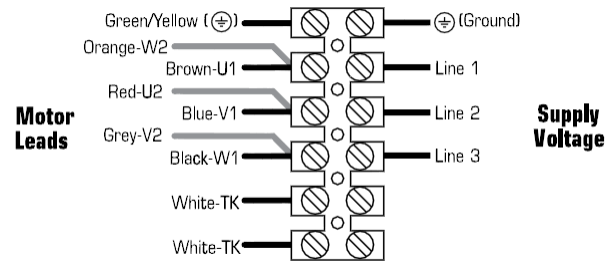


**WARNING:** Wiring schematic for 4 lead motors, single phase

#### NOTES:

1. 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.
2. Color of capacitor leads may be reversed. Fan operation will not be affected.

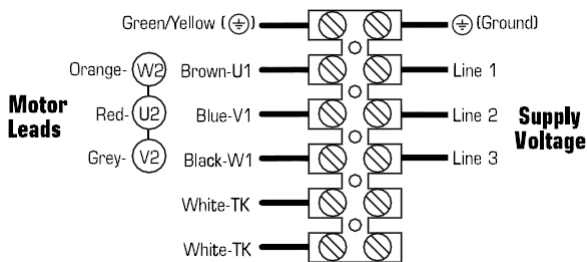
#### 208/230V Three-Phase Fans



#### NOTES:

1. 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.
2. 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.

#### 460V Three-Phase Fans

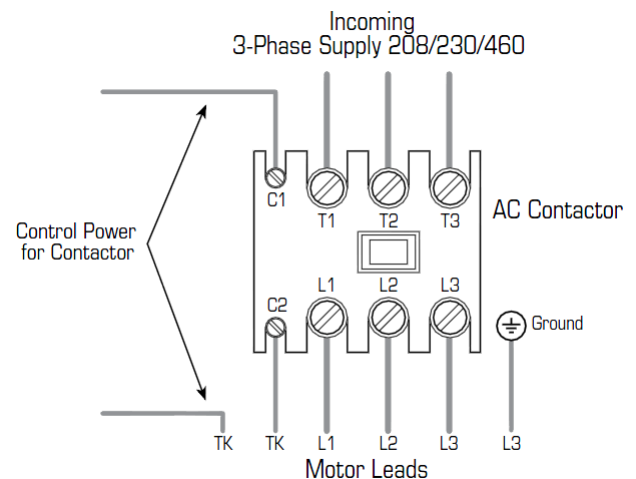


**WARNING:** For 460V operation, Orange (W2), Red (U2) and Grey (V2) wires must be spliced together.

#### NOTES:

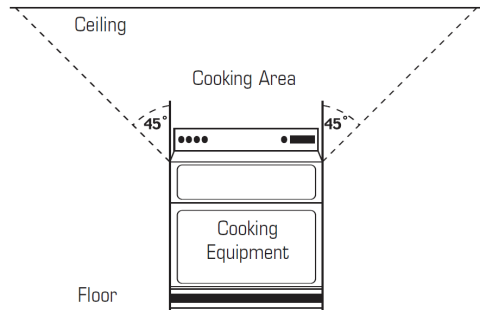
1. Contactor should be used. Control coil should be wired in series with motor thermal contacts (TK leads) as shown in diagram to provide thermal motor protection.
2. All leads are color coded as well as identified with a band containing an Alpha/Alpha or Alpha/Numeric code (i.e., TK or Z2). Colors should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

#### Contactor for 208/230/460V Three-Phase Fans



## USE OVER RESIDENTIAL COOKING SURFACES\*

For installations in which the fan is connected to a range hood, or if an exhaust grille connected to the fan is located above or near the cooking surface (as shown below), be sure to observe the following safety warnings:



### WARNING

**TO REDUCE THE RISK OF FIRE, USE ONLY METAL DUCT.**

Use only galvanized steel ductwork, in accordance with all applicable codes.

NOTE: If the fan is not connected to a range hood or a grille in the vicinity of the cooking surface, other approved ducting may be used.

### WARNING

**TO REDUCE THE RISK OF A RANGE-TOP GREASE FIRE:**

- A. Never leave surface units unattended at high settings. Boilovers cause smoking and greasy spillovers that may ignite. Heat oils slowly on low or medium settings.
- B. Always turn range hood ON when cooking at high heat or flambeing food.
- C. Clean ventilating fans frequently. Grease should not be allowed to accumulate on fan or filter.
- D. Use proper pan size. Always use cookware appropriate for the size of the surface element.

\*Based on "Kitchen Fire Safety Tips" published by NFPA.

### WARNING

**TO REDUCE THE RISK OF INJURY TO PERSONS IN THE EVENT OF A RANGE-TOP GREASE FIRE, OBSERVE THE FOLLOWING:**

- A. SMOTHER FLAMES with a close-fitting lid, cookie sheet, or metal tray, then turn off the burner. BE CAREFUL TO PREVENT BURNS. If the flames do not go out immediately, EVACUATE AND CALL THE FIRE DEPARTMENT.
- B. NEVER PICK UP A FLAMING PAN - You may be burned.
- C. DO NOT USE WATER, including wet dishcloths or towels, because a violent steam explosion could result.
- D. Use an extinguisher ONLY if:
  1. You know you have a Class ABC extinguisher, and you already know how to operate it.
  2. The fire is small and contained in the area where it started.
  3. The fire department is being called.
  4. You can fight the fire with your back to an exit.

**\*These fans are not acceptable for use over commercial cooking equipment.**

## THREE (3) YEAR WARRANTY

### THIS WARRANTY SUPERSEDES ALL PRIOR WARRANTIES

#### DURING THE FIRST THIRTY (30) DAYS:

American ALDES will repair or replace any product that has a factory defect in workmanship or material. Product(s) may be returned to point of purchase or the American ALDES factory, with Bill of Sale, for an immediate replacement.

#### DURING THE FIRST THREE (3) YEARS:

(Excluding the 30-day period above) American ALDES will repair or replace any product that has a factory defect in workmanship or material. Product(s) must be returned to the American ALDES factory, with Bill of Sale and identified with a RMA number, within three (3) years of purchase. The warrantee assumes all costs to and from the factory.

#### WARRANTY DOES NOT APPLY TO THE FOLLOWING:

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

#### WARRANTY VALIDATION

The end user must keep a copy of the Bill of Sale to verify purchase date. Valid proof of the date of installation may also serve as a verification of commencement of warranty period.

#### AMERICAN ALDES RETURN POLICY

Claims for damages or order shortages must be reported within ten (10) days of receipt of product(s). For any product(s) received damaged by the forwarding agent, the following instructions MUST BE followed:

1. For product(s) delivered by UPS:
  - Concealed Damages: Keep all cartons; call UPS for an inspection and notify American ALDES immediately.
  - Visible Damages: Save all cartons and file a complaint directly with UPS.
2. For product(s) delivered by Common Carrier: File damaged goods claim directly with the freight company.
3. Shortages: Only sign for the total number of pieces received and contact American ALDES immediately.

#### FOR FACTORY RETURN

AMERICAN ALDES WILL NOT ACCEPT THE RETURN OF ANY SPECIAL, NON-STOCK, OBSOLETE, OR UNSALABLE PRODUCT(S). AMERICAN ALDES MAY, AT ITS DISCRETION, ACCEPT RETURN OF SALABLE PRODUCT(S) SUBJECT TO A 25% RESTOCKING CHARGE.

1. No product(s) will be accepted without a Return Materials Authorization (RMA) number. This number can be obtained by calling American ALDES at 1-800-255-7749. Please have the Bill of Sale or proof of date of installation available.
2. RMA must be clearly marked on outside of carton or delivery will be refused. All product(s) must be returned freight prepaid.
3. Product(s) will be repaired/replaced and shipped back to buyer; no credits will be issued.
4. Any out-of-warranty product will be evaluated and buyer will be notified of cost. Repair cost will be charged to customer. Buyer will be responsible for return freight, or product may be returned to the buyer, freight collect, without action. No credit will be issued.

#### LIMITATIONS OF WARRANTY AND LIABILITY

This warranty does not apply to any American ALDES product or part which has failed as a result of faulty installation or abuse, incorrect electrical connections or alterations made by others, use under abnormal operating conditions, or misapplication of the product or parts. American ALDES 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 that extend beyond the description herein. In no event, whether as a result of breach of contract or warranty, or alleged negligence, defect, incorrect advice or other causes, shall American ALDES 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 purchases for such damages. American ALDES neither assumes nor 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

AMERICAN ALDES products are designed and manufactured to provide reliable performance, but they are not guaranteed to be 100% free of 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 back-up ventilation, supplementary natural ventilation, a failure alarm system, or willingly acknowledge the risk of such loss or injury.