



# FANS

## "AD" Series Duct Fan

### In-line Mixed-Flow Fan

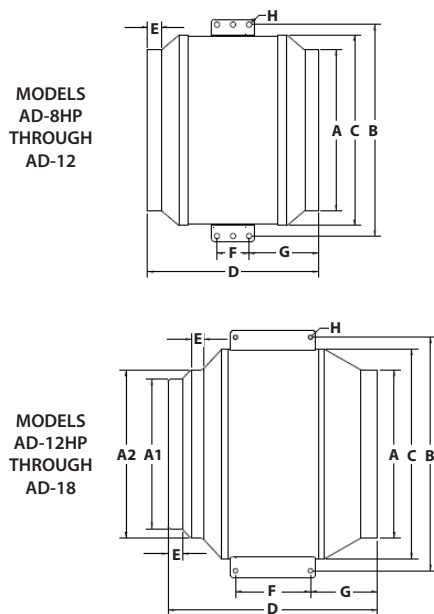
PRODUCT  
SPECIFICATIONS  
& TECHNICAL  
DATA



#### DESCRIPTION

The "AD" Series duct fan is a direct-drive, centrifugal exhaust/supply fan that is ideal for moderately sized ventilation applications. The mixed-flow impeller combines the compact size of axial fans with the higher-pressure characteristics of centrifugal blowers. Additionally, these fans offer substantially quieter operation and are easier to install than axial fans. "AD" fans can be mounted at any angle and in any point in the ductwork. Their straight-through airflow design configuration and the ease with which they can be removed facilitate both installation and service. Fans are capable of operating in conditioned airstreams with temperatures up to 140°F. Motor bearings are the permanently sealed, self-lubricating ball type. All fans are 100-percent speed controllable through a decrease in voltage with either a solid-state or transformer type of control.

## Dimensions



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

## Typical Specification

Supply, exhaust, or return air in-line fans shall be of the centrifugal, direct-driven type.

"AD" SERIES fans shall be manufactured under the authority of American ALDES Ventilation Corporation, Bradenton, FL.

#### CONSTRUCTION

Fan housing shall be constructed of heavy-gauge galvanized steel metal. Fan shall be supplied with externally mounted electrical terminal box with pre-wired terminal strip connections.

Motorized impeller shall be an enclosed, external-rotor type, Class B insulation. Single-phase motors (AD-8HP through AD-18) shall be 120 or 230V permanent-split-capacitor type. Three-phase motors (AD-18HP, AD-20) shall be dual wound for 230V or 440/460V. All motors shall be the permanently sealed, self-lubricating ball bearing type. Single-phase motors shall be equipped with automatic-reset thermal-overload protection. Three-phase motors shall be equipped with internal automatic-reset thermal-overload switch for interlock with contactor.

Motors shall be acceptable for continuous duty. Sufficient service factor shall be provided to ensure long, maintenance-free operation over maximum-load conditions.

Fan wheel shall be of the mixed-flow, centrifugal type with a well-designed inlet venturi for maximum performance. Motorized impeller shall be both statically and dynamically balanced as one integral unit to provide for vibration-free performance. Impellers for models AD-12HP through AD-18 shall be molded of high-impact polypropylene. Impeller for models AD-8HP through AD-12, AD-18HP, and AD-20 shall be constructed of aluminum.

#### PERFORMANCE

Fan airflow and sound performance shall be based on tests conducted in accordance with AMCA Standard 211 and 311.

#### CODE APPROVAL

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

\*\*For smaller applications, consider ALDES "A" Series Duct Fans.\*\*

# Performance

PERFORMANCE DATA														
FAN MODEL	RPM	VOLTS/ PHASE	MAX WATTS	MAX AMPS	CFM vs. STATIC PRESSURE (in inches W.G.)							MAX Ps.	DUCT DIAM.	SONES <sup>†</sup>
					0"	0.25"	0.5"	0.75"	1.0"	1.5"	2.0"			
AD-8HP	2700	120/1*	327	2.99 <sup>1</sup>	836	761	680	595	499	286	--	2.50"	8"	14.1
AD-10	2700	120/1*	329	3.01 <sup>1</sup>	910	836	752	653	547	342	--	2.60"	10"	15.3
AD-10HP	2850	120/1*	529	4.48 <sup>1</sup>	1266	1187	1100	1006	911	696	460	3.08"	10"	21.0
AD-12	2900	120/1*	531	4.86 <sup>2</sup>	1305	1228	1145	1054	948	712	479	3.08"	12"	23.0
AD-12HP	1700	120/1*	500	4.80 <sup>2</sup>	2016	1832	1649	1423	1066	--	--	1.52"	12"	18.7
AD-14	1700	120/1*	495	4.76 <sup>2</sup>	2156	1965	1764	1520	1193	--	--	1.52"	14"	18.4
AD-14HP	1550	120/1*	738	7.12 <sup>2</sup>	2619	2416	2180	1936	1662	843	0	1.94	14"	19.0
AD-16	1600	120/1*	742	6.39 <sup>2</sup>	2952	2707	2445	2144	1804	774	--	1.90"	16"	18.5
AD-16HP	1600	120/1*	1421	12.40 <sup>3</sup>	4274	4014	3743	3452	3137	2379	1242	2.42"	16"	25.0
AD-18	1600	120/1*	1411	12.04 <sup>3</sup>	4448	4130	3871	3583	3239	2380	1231	2.51"	18"	24.0

Performance shown is for Installation Type D (ducted inlet, ducted outlet). Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of accessories in the airstream.

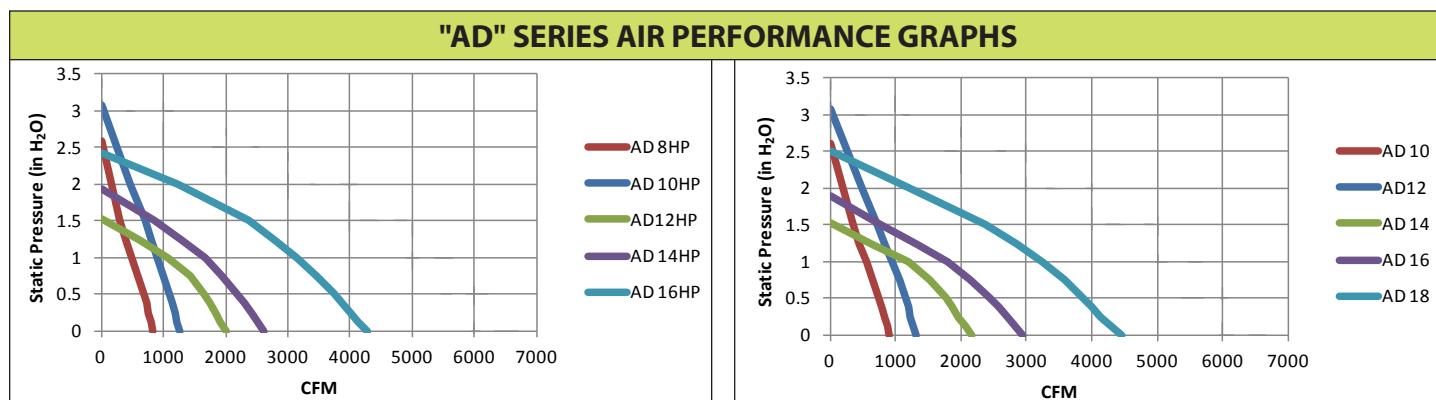
<sup>†</sup> The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation Type D (ducted inlet hemispherical fan sone levels.) Ratings do not include the effect of duct end correction. Performance certified is for installation type D (ducted inlet, ducted outlet). Performance is based on actual speed of test. Performance ratings do not include the effects of accessories.

Note: Three-phase motors are wound for 230 or 440/460V. Motors are pre-wired for 460V but may be delivered as 230V or may be re-wired in the field.

<sup>1</sup>Recommend speed-control rating 5 Amps. <sup>2</sup>Recommended speed-control rating 10 Amps. <sup>3</sup>Recommended speed-control rating 15 Amps.

\*Available as Single-Phase 230V.

\*\*Available as Three-Phase 230 or 440/460V.



**WARNING! DO NOT use in HAZARDOUS ENVIRONMENTS** where fan's electrical system could provide ignition to combustible or flammable materials, unless it is specifically built for hazardous environments. AMERICAN ALDES VENTILATION CORPORATION reserves the right to substitute material or change product specification.

## WARRANTY

*The entire unit is guaranteed for three (3) years, from date of shipment, against all manufacturing defects, provided the material has been installed and operated per manufacturer's instructions and under normal conditions. Warranty is limited to the repair or replacement of the material upon its return freight paid to our factory. This warranty is not transferable and is limited to the original end user.*

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