

WING TON FAN INDUSTRY LIMITED



AD SERIES AXIAL FLOW FAN
CATA-AMCA-AD AUGUST ,2016
<http://www.wington.com>

AD SERIES AXIAL FLOW FAN



- Available in 305, 380, 480, 610 and 760 mm 5 models
- The casing is constructed from rolled plate with completed flanges. Electro welded protected with hot-dipped galvanised.
- Wing Ton impeller is made of die cast aluminum The angle of the impeller can be adjusted . Impeller is balanced to ensure smooth operation
- For normal duty, the motor is Class F insulation,IP54 Protection.
- Maximum ambient temperature 40°C.
- Suitable for relative humidity levels up to 95%.

AD SERIES METRIC AXIAL FLOW FAN



For AD 305



For AD 380,
480, 610, 760

Wing Ton Fan Industry Limited certifies that the Axial Flow Fan – AD305, 380, 480, 610 and 760 shown herein are 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.

The AMCA Certified Ratings Seal applies to FEG for Models AD380, 480, 610 and 760 .

The achieved fan performances can differ from the test performances shown on the subsequent due to two main effects:-

- A.) The encroachment of irregular or abrupt changes within the system close to the fan. If good design practice is followed, then the fan will receive nearly uniform air into its inlet and discharge its air flow in an almost ideal pattern. If this is achieved the fan will perform to its expected level.
- B.) Changes to the internal elements of the fan: e.g. large junction boxes on motors, belt drive stacks or excessive blade tip clearances.

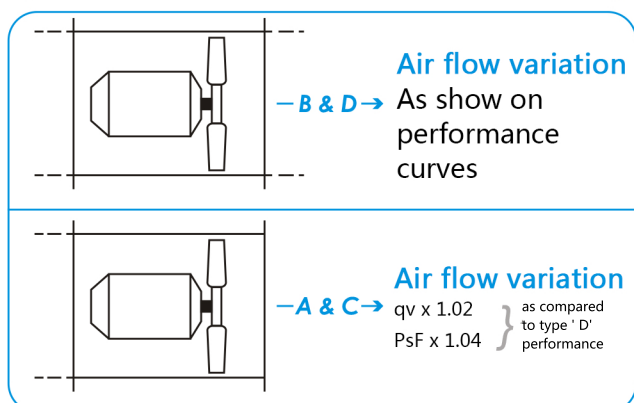
Tests were conducted to assess these effects and the generalised impact is shown below for fan selections made within the normal operating region over a wide blade-angle range.

Forms of Running

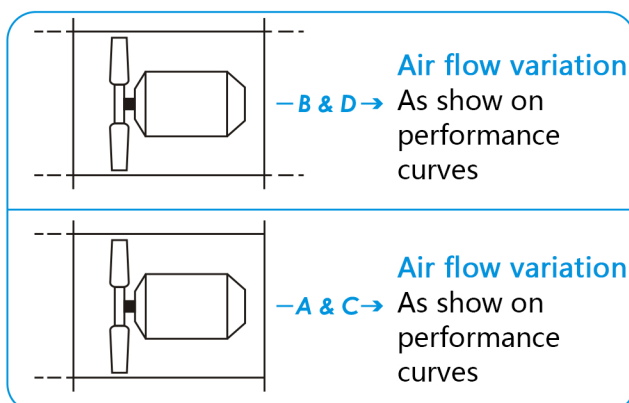
The main series of test were conducted on Form B units and comparative tests were carried out on Form A units.

Resultant performance differences occur mainly on the outlet side of the fan, as correct practice should result in the presence of the duct inlet cone on the fan inlet.

Installation Form A



Installation Form B

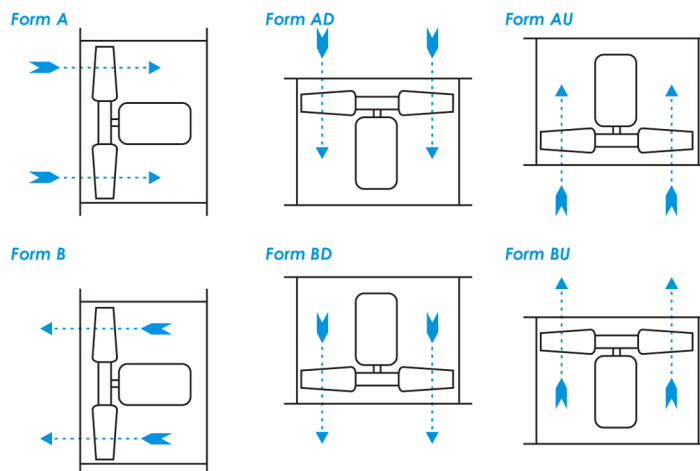


Performance of Form A units are not licensed by AMCA International.

AD SERIES METRIC AXIAL FLOW FAN

Direction Of Air Flow

The standard direction of air flow is Form 'A', 'AD' or 'AU'. However, Form 'B', 'BD' or 'BU' flow can be supplied if required. These forms of running are as follows :



Other Fan Arrangement

Some required duty pressure should be adjusted to account for the below gains / losses before making a selection on the standard performance curves.

Fan Arrangement	Effect on pressure capability	Effect on Total sound level
Single stage fan unit with downstream guide vanes	$\times 1.25$	$+ 1 \text{ dB}$
Two stage fan unit with intermediate straightener	$\times 2.00$	$+ 3 \text{ dB}$
Contra-rotating two stage fan unit	$\times 2.4$	$+ 8 \text{ to } 10 \text{ dB}$
Bifurcated fan unit Belt driven fan unit	$\times 0.7$	$+ 2 \text{ dB}$

* Performance for single stage fan unit with downstream guide vanes, two stage fan unit with intermediate straightener, contra-rotating two stage fan unit and Bifurcated fan unit are not licensed by AMCA International.

Multi-Stage Axial Flow Fan

A two stage fan will develop approximately two times the pressure of a single-stage fan of equal diameter and speed.

This is an economical system because the component stages are standard fans independently driven by standard motors.

There are two ways to design a two-stage axial-flow fan:

A two-stage contra-rotating fan comprises assembling in series two (or more single-stage) non-guide-vane fans with impellers rotating in opposite direction. The contra-rotation of the impellers recovers rotational losses and converts the rotational energy into fan pressure.



Belt driven fan unit



Bifurcated fan unit

Standard Accessory Losses

Low loss inlet cone		k'loss 0.2 Form 'A' 0.38 Form B
Flat 'finger type' guard		k'loss 0.75
Coned motor side guard		k'loss 0.4
Non return dampers (airstream) operated		k'loss 0.3 ~ 0.4

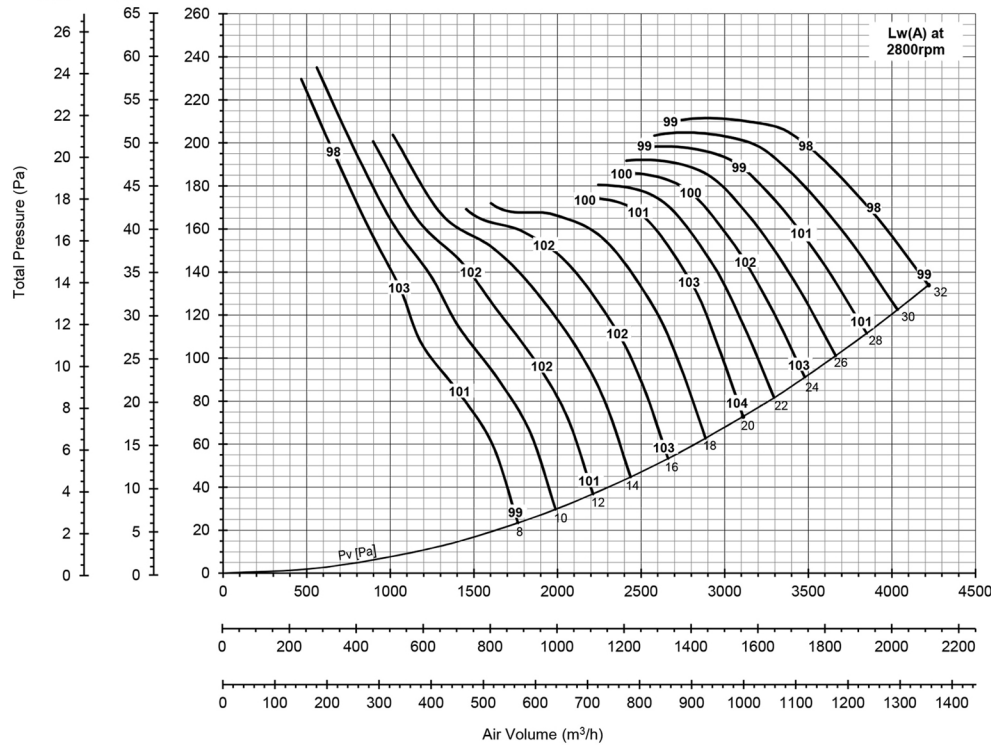
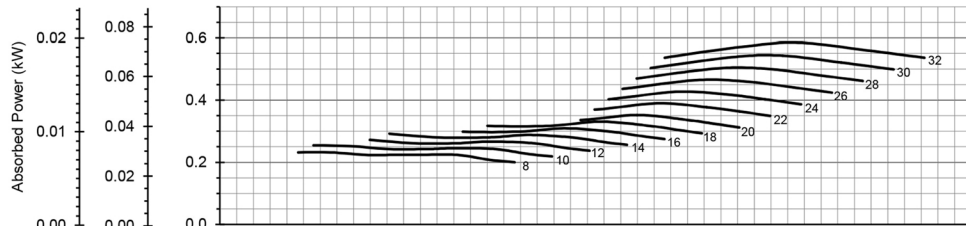
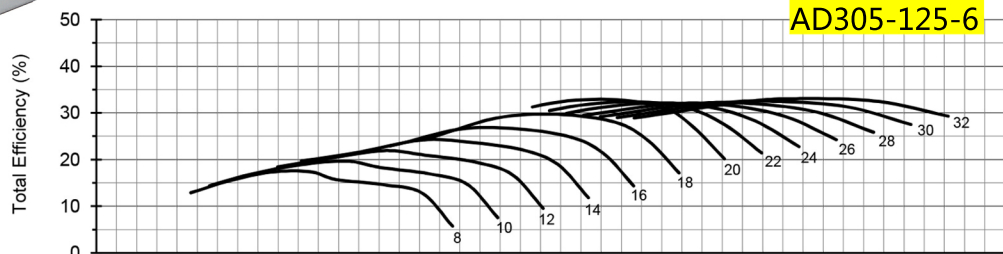
* Performance for accessory losses are not licensed by AMCA International.



AD Direct Drive Axial Flow Fans



www.wington.com



Speed

2800
2P

1400
4P

900
6P

At 900 RPM			
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD305-3-6	8	0.18	0.008
	10		0.008
	12		0.009
	14		0.01
	16		0.01
	18		0.011
	20		0.012
	22		0.013
	24		0.014
	26		0.015
	28		0.017
	30		0.018
	32		0.019
LwA dB(A)		-30	

At 1400 RPM			
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD305-3-4	8	0.18	0.029
	10		0.032
	12		0.034
	14		0.037
	16		0.039
	18		0.042
	20		0.044
	22		0.049
	24		0.053
	26		0.058
	28		0.063
	30		0.068
	32		0.073
LwA dB(A)		-18	

At 2800 RPM			
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD305-3-2-37	8	0.37	0.232
	10		0.256
	12		0.272
	14		0.292
	16		0.309
	18		0.336
AD305-3-2-0.55	20	0.55	0.352
	22		0.389
	24		0.427
	26		0.464
	28		0.501
	30		0.543
AD305-3-2-0.75	32	0.75	0.584
LwA dB(A)		0	

* Performance certified for installation type D - Ducted inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).

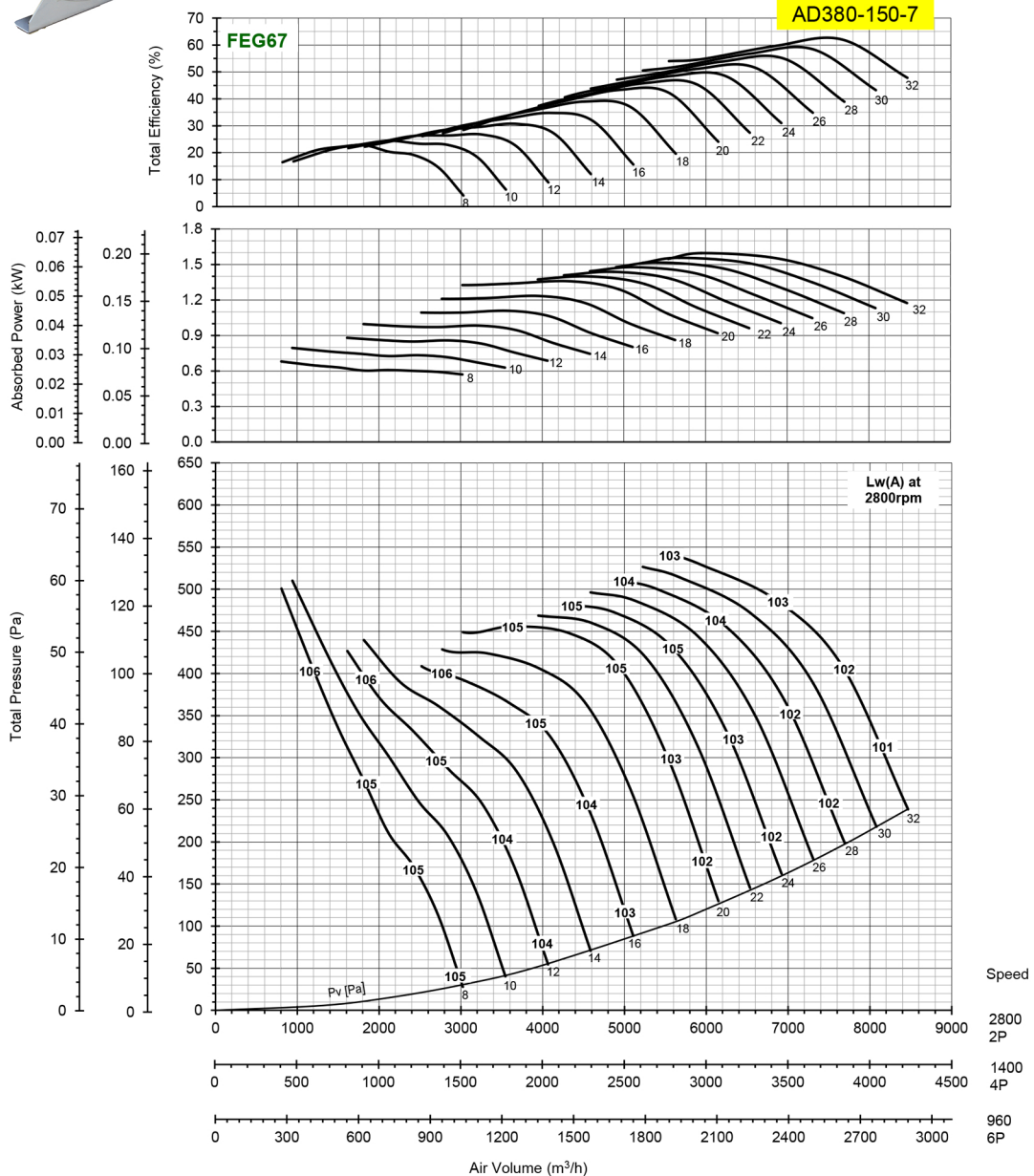
* The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet LwA sound power levels for installation type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.



AD Direct Drive Axial Flow Fans



www.wington.com



	At 960 RPM		
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD380-3-6	8	0.18	0.027
	10		0.032
	12		0.035
	14		0.04
	16		0.045
	18		0.05
	20		0.055
	22		0.056
	24		0.058
	26		0.06
	28		0.061
	30		0.063
	32	0.064	
LwA dB(A)	-30		

At 1400 RPM			
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD380-3-4	8	0.18	0.085
	10		0.099
	12		0.11
	14		0.125
	16		0.139
	18		0.154
	20		0.17
	22		0.175
AD380-3-4-0.37	24	0.37	0.18
	26		0.185
	28		0.19
	30		0.195
	32		0.2
LwA d(B(A)	-20		

	At 2800 RPM		
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD380-3-2-.75	8	0.75	0.681
AD380-3-2-1.1	10	1.1	0.795
	12		0.88
	14		0.997
AD380-3-2-1.5	16	1.5	1.109
	18		1.234
	20		1.359
	22		1.398
	24		1.438
	26		1.477
AD380-3-2-2.2	28	2.2	1.517
	30		1.556
	32		1.596
LwA dB(A)	0		

* Performance certified is for installation type D - Ducted inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).

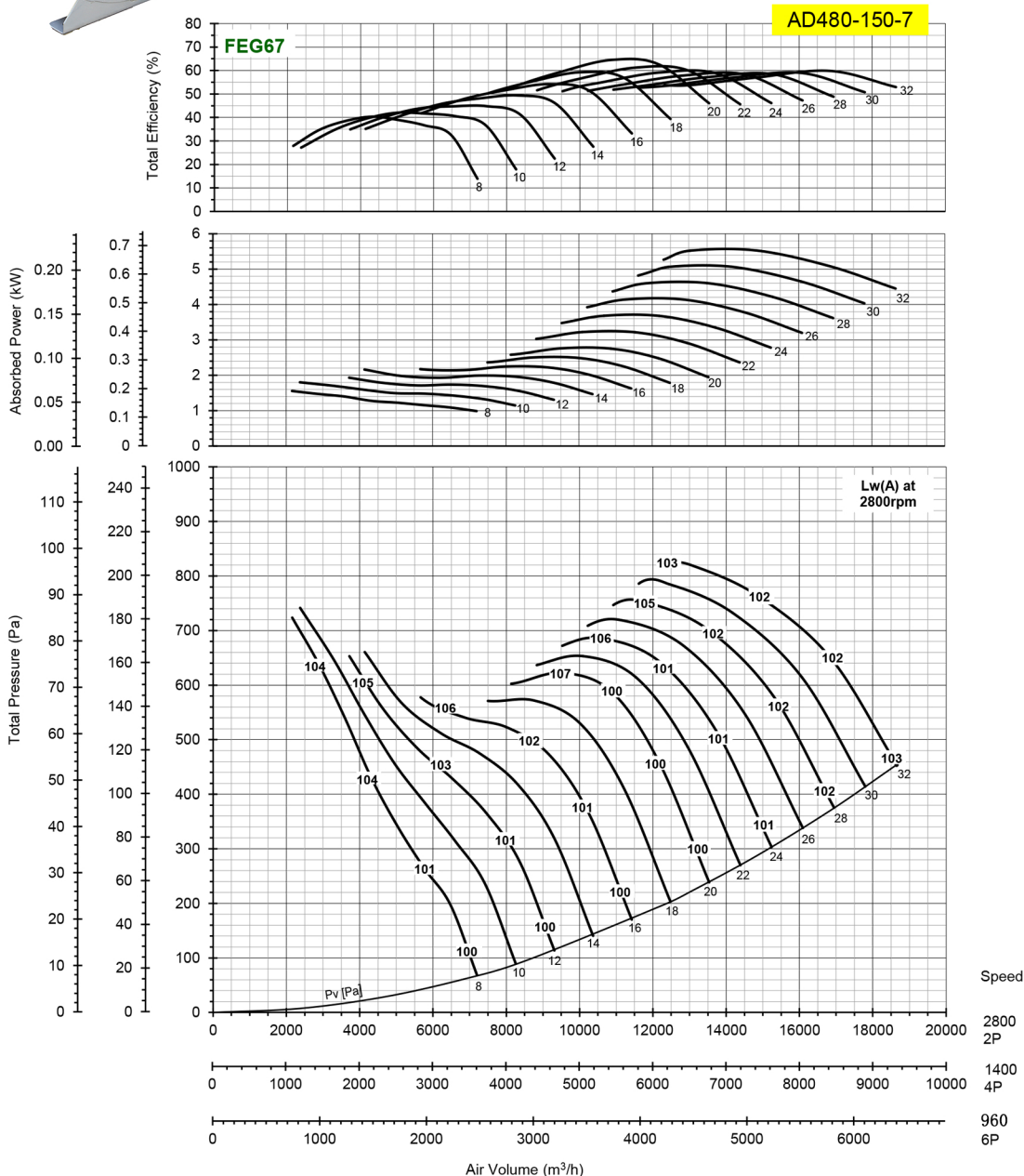
* The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet LwA sound power levels for installation type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.



AD Direct Drive Axial Flow Fans



www.wington.com



At 960 RPM			
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD480-3-6-0.18	8	0.18	0.063
	10		0.073
	12		0.078
	14		0.087
	16		0.091
	18		0.101
	20		0.111
	22		0.13
	24		0.148
	26		0.167
AD480-3-6-0.37	28	0.37	0.186
	30		0.204
	32		0.223
LwA dB(A)	-26		

At 1400 RPM			
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD480-3-4-0.37	8	0.37	0.195
	10		0.225
	12		0.241
	14		0.27
	16		0.281
	18		0.313
	20		0.345
AD480-3-4-0.55	22	0.55	0.403
	24		0.46
	26		0.518
	28		0.575
AD480-3-4-1.5	30	0.75	0.633
	32		0.691
LwA dB(A)	-17		

At 2800 RPM			
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD480-3-2-2.2	8	2.2	1.556
	10		1.802
	12		1.931
	14		2.162
AD480-3-2-3	16	3	2.249
	18		2.505
	20		2.761
	22		3.221
AD480-3-2-4	24	4	3.681
	26		4.141
AD480-3-2-5.5	28	5.5	4.603
	30		5.066
	32		5.529
AD480-3-2-7.5	32	7.5	5.529
LwA dB(A)	0		

* Performance certified is for installation type D - Ducted inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).

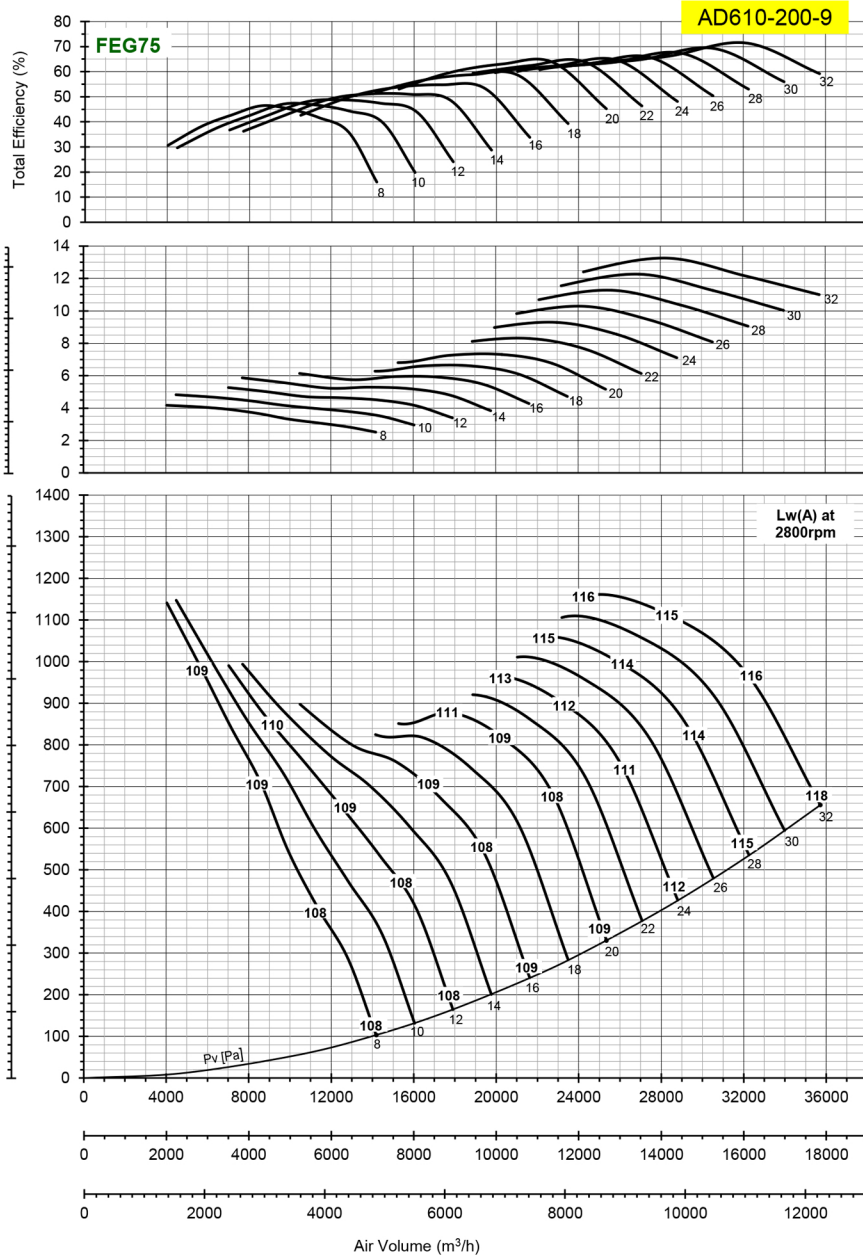
* The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet LwA sound power levels for installation type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.



AD Direct Drive Axial Flow Fans



www.wington.com



At 960 RPM			
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD610-3-6-0.18	8	0.18	0.168
AD610-3-6-0.37	10	0.37	0.194
	12		0.212
	14		0.236
	16		0.247
	18		0.266
	20		0.294
AD610-3-6-0.55	22	0.55	0.334
	24		0.374
	26		0.414
	28		0.454
	30		0.494
	32		0.534
LwA dB(A)	-27		

	At 1400 RPM		
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD610-3-4-0.55	8	0.55	0.522
	10		0.603
AD610-3-4-0.75	12	0.75	0.658
	14		0.733
AD610-3-4-1.1	16	1.1	0.767
	18		0.826
	20		0.913
	22		1.037
AD610-3-4-1.5	24	1.5	1.161
	26		1.285
	28		1.409
AD610-3-4-2.2	30	2.2	1.533
	32		1.657
LwA dB(A)	-17		

At 2800 RPM			
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD610-3-2-5.5	8	5.5	4.174
	10		4.824
	12		5.267
AD610-3-2-7.5	14	7.5	5.867
	16		6.138
	18		6.604
	20		7.307
AD610-3-2-11	22	11	8.299
	24		9.29
	26		10.282
AD610-3-2-15	28	15	11.273
	30		12.265
	32		13.256
	LWA dB(A)		0

* Performance certified for installation type D - Ducted inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).

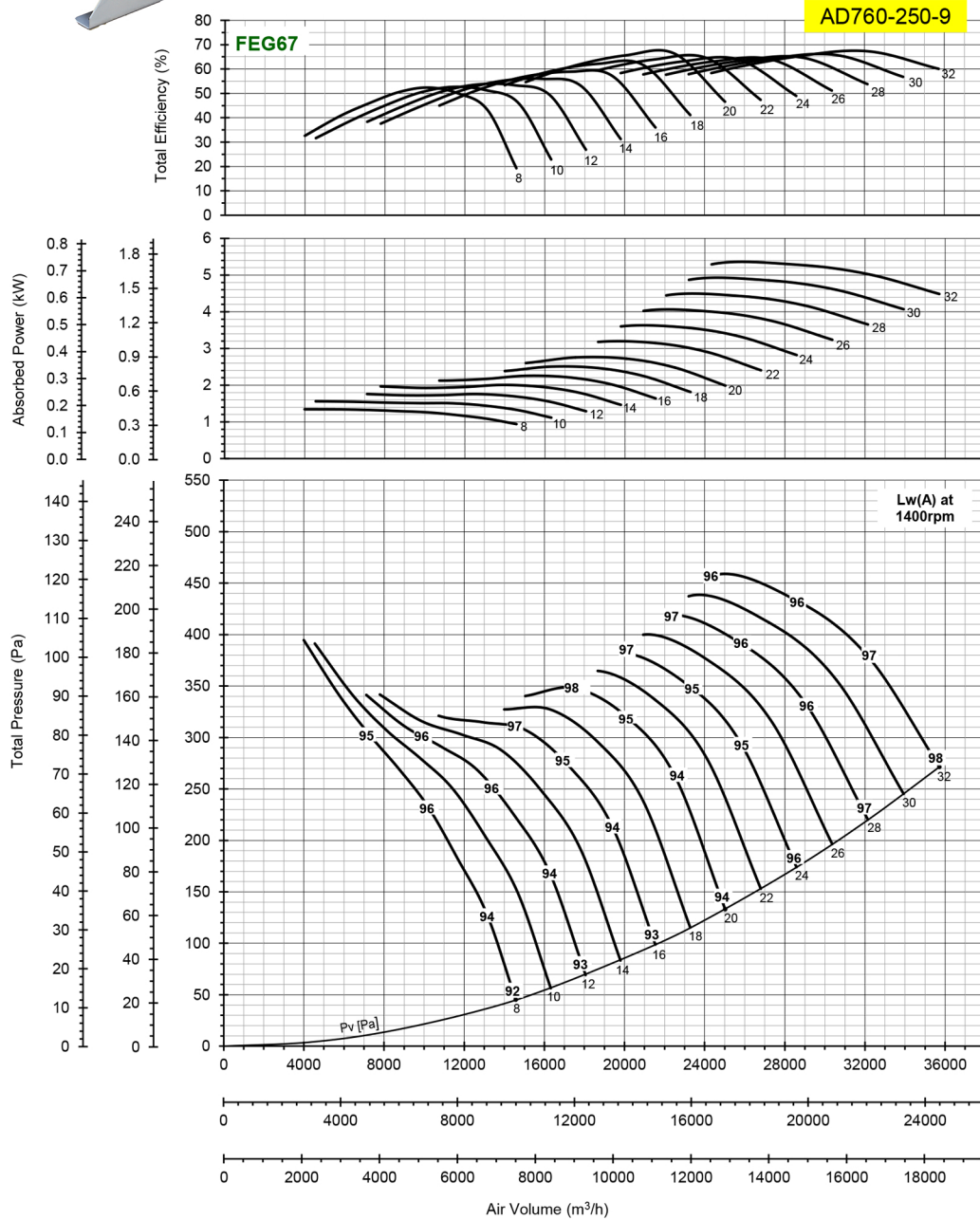
* The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet LwA sound power levels for installation type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.



AD Direct Drive Axial Flow Fans



www.wington.com



Speed
1400
4P
960
6P
720
8P

At 720 RPM			
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD760-3-8-0.37	8	0.37	0.183
	10		0.212
	12		0.239
	14		0.273
	16		0.307
	18		0.341
AD760-3-8-0.55	20	0.55	0.375
	22		0.432
	24		0.49
	26		0.547
AD760-3-8-0.75	28	0.75	0.605
	30		0.662
	32		0.72
LwA dB(A)	-16		

At 960 RPM			
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD760-3-6-0.55	8	0.55	0.433
	10		0.504
	12		0.567
AD760-3-6-0.75	14	0.75	0.647
	16		0.728
	18		0.808
AD760-3-6-1.1	20	1.1	0.889
	22		1.025
	24		1.161
AD760-3-6-1.5	26	1.5	1.297
	28		1.434
	30		1.57
AD760-3-6-2.2	32	2.2	1.706
LwA dB(A)	-9		

	At 1400 RPM			
Model No	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)	
AD760-3-4-1.5	8	1.5	1.343	
	10		1.562	
	12		1.759	
AD760-3-4-2.2	14	2.2	2.007	
	16		2.257	
	18		2.507	
AD760-3-4-3	20	3	2.756	
	22		3.179	
	24		3.601	
AD760-3-4-4	26	4	4.024	
	28		4.447	
	30		4.869	
AD760-3-4-5.5	32	5.5	5.292	
LWA	0			
dB(A)				

* Performance certified is for installation type D - Ducted inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).

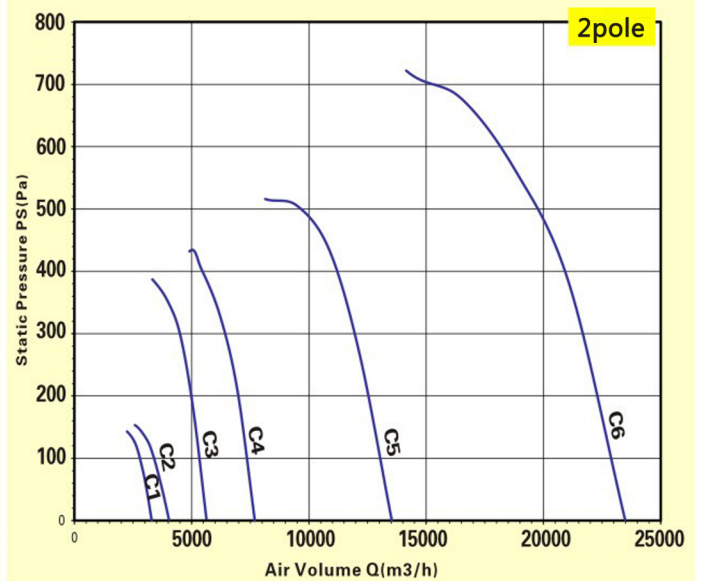
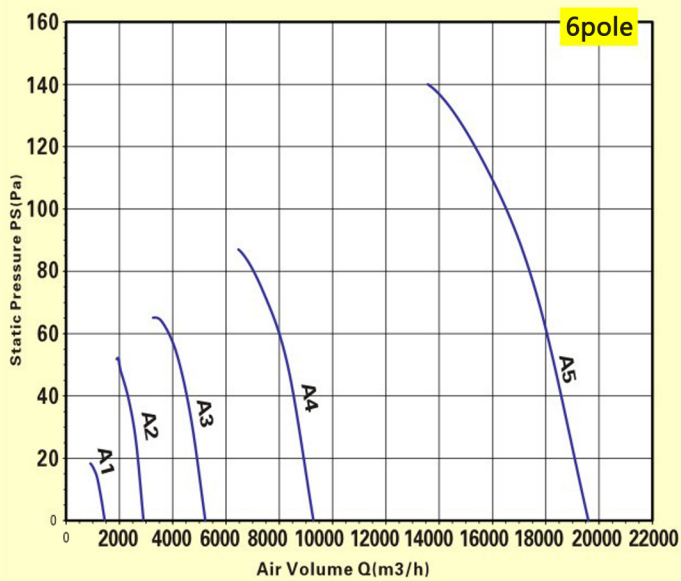
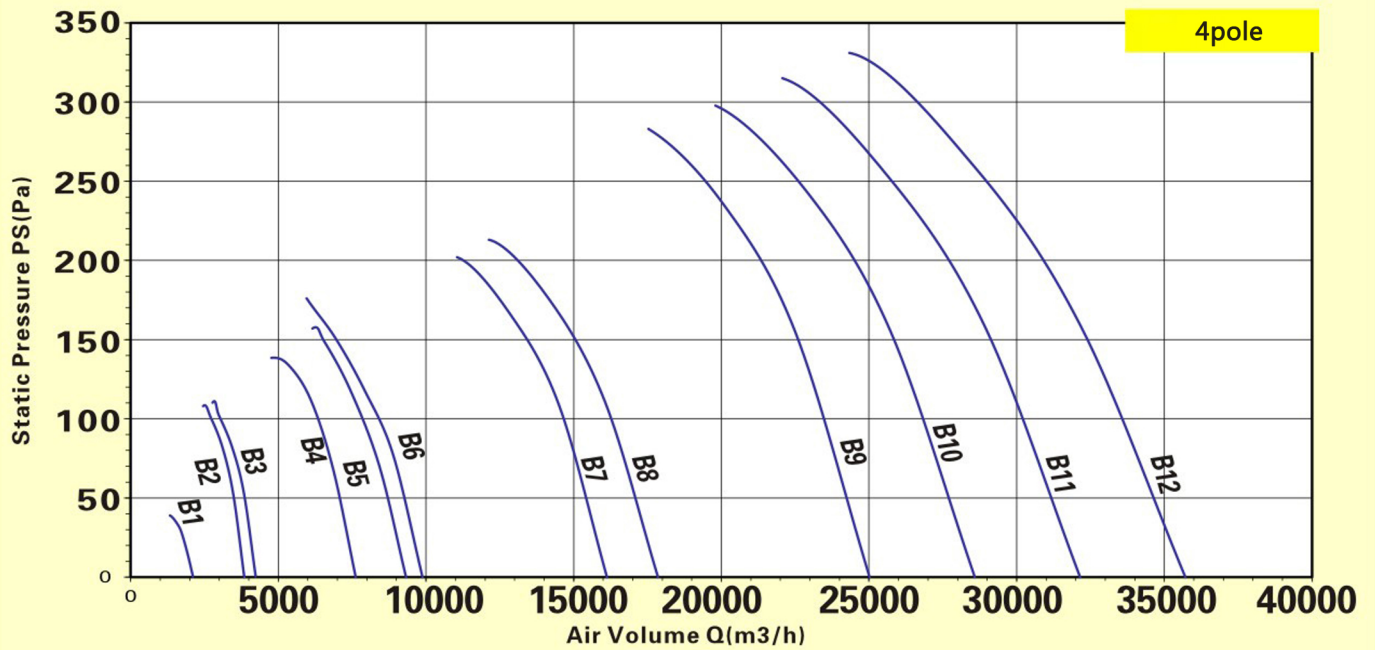
* The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet LwA sound power levels for installation type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.



AD Direct Drive Axial Flow Fans



www.wington.com





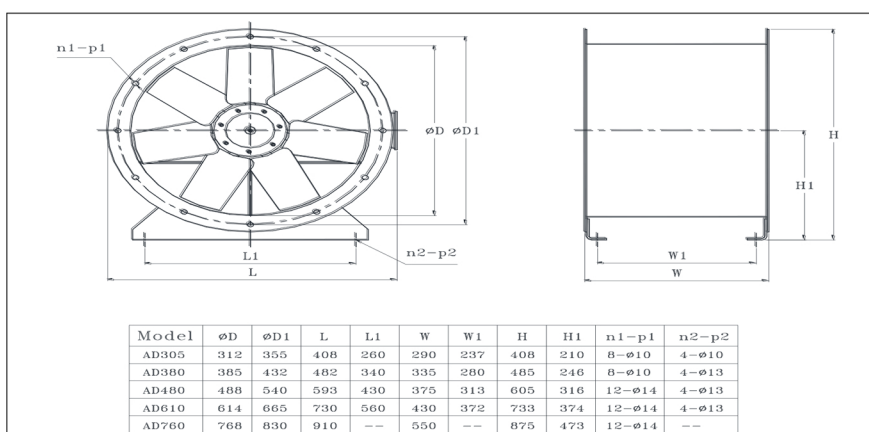
AD Direct Drive Axial Flow Fans



www.wington.com

STANDARD MODEL FOR "AD" SERIES DIRECT DRIVE AXIAL FLOW FANS

FAN CURVE	STANDARD MODEL NUMBER	DIAMETER		Voltage (V/Ph/Hz)	MOTOR POWER (KW)	TRANSIENT CURRENT (A)	MAX MOTOR SPEED (RPM)	AIRFLOW (M³/H)	St.Pressure (Pa)
		INCH	(mm)						
A1	AD305-1-6	12"	305	220-240 V / 1 / 50	0.125	1.8	900	1100	15
B1	AD305-1-4				0.125	1.8	1400	1700	37
C1	AD305-1-2				0.37	5.5	2800	2700	110
A1	AD305-3-6			380-415V / 3 / 50	0.125	1	900	1100	15
B1	AD305-3-4				0.125	1.2	1400	1700	37
C2	AD305-3-2				0.75	3	2800	3200	130
A2	AD380-1-6	15"	380	220-240 V / 1 / 50	0.125	1.8	960	2200	43
B2	AD380-1-4				0.25	3.5	1400	3400	62
C3	AD380-1-2				0.75	8.5	2800	4800	240
A2	AD380-3-6			380-415V / 3 / 50	0.125	1	960	2200	43
B3	AD380-3-4-0.75				0.75	5	1400	3600	75
C4	AD380-3-2-1.5				1.5	8.5	2800	7000	200
A3	AD480-1-6	19"	480	220-240 V / 1 / 50	0.18	3	960	4000	54
B4	AD480-1-4				0.55	6	1400	6400	100
A3	AD480-3-6				0.18	2	960	4000	54
B5	AD480-3-4-1.5			380-415V / 3 / 50	1.5	8	1400	8000	92
C5	AD480-3-2-3				3	15	2800	12000	300
A4	AD610-1-6	24"	610	220-240 V / 1 / 50	0.37	6	960	7700	65
B6	AD610-1-4				0.75	12	1400	9000	75
A4	AD610-3-6				0.37	4	960	7700	65
B7	AD610-3-4-2.2			380-415V / 3 / 50	2.2	12	1400	14000	130
B8	AD610-3-4-4				4	20	1400	15600	135
C6	AD610-3-2-7.5				7.5	30	2800	20000	490
A5	AD760-3-6-2.2	30"	760	380-415V / 3 / 50	2.2	14	960	16000	110
B9	AD760-3-4-3				3	17	1400	18000	270
B10	AD760-3-4-4				4	22	1400	23000	245
B11	AD760-3-4-5.5				5.5	29	1400	26000	250
B12	AD760-3-4-7.5				7.5	30	1400	30000	230



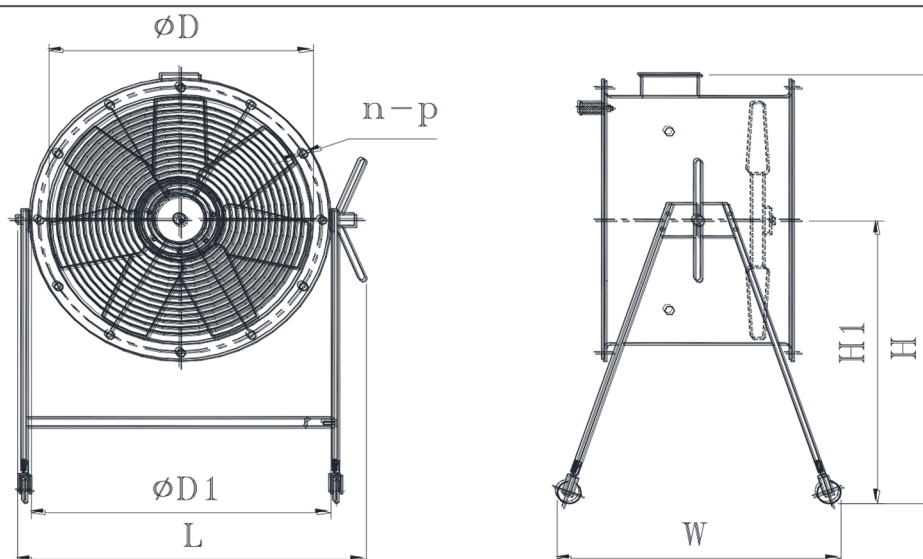


AD Direct Drive Axial Flow Fans



STANDARD MODEL FOR "AM" SERIES MOVABLE AXIAL FLOW FANS (MANCOOLER)

FAN CURVE	STANDARD MODEL NUMBER	DIAMETER		Ph / Hz	BLADE ANGLE	MOTOR POWER (KW)	MAX FAN SPEED (RPM)	AIRFLOW	ST PRESSURE
		(INCH)	(MM)					(M3 / HR)	(PA)
B1	AM305-1-4	12"	305	1Ph, 50 Hz	28	0.125	1400	1700	37
C1	AM305-1-2				28	0.37	2800	2700	110
B1	AM305-3-4			3 Ph, 50Hz	28	0.125	1400	1700	37
C2	AM305-3-2				28	0.75	2800	3200	130
B2	AM380-1-4	15"	380	1Ph, 50 Hz	28	0.25	1400	3400	62
C3	AM380-1-2				18	0.75	2800	4800	240
B3	AM380-3-4			3 Ph, 50Hz	32	0.75	1400	3600	75
C4	AM380-3-2				26	1.5	2800	7000	200
B4	AM480-1-4	19"	480	1Ph, 50 Hz	24	0.55	1400	6400	100
B5	AM480-3-4			3 Ph, 50Hz	32	1.5	1400	8000	92
B6	AM610-1-4	24"	610	1Ph, 50 Hz	24	0.75	1400	9000	75
B7	AM610-3-4-2.2			3 Ph, 50Hz	28	2.2	1400	14000	130



Model	øD	øD1	L	H	H1	W	n-p
AM305	312	355	550	735	345	670	8-ø10
AM380	385	432	630	770	388	670	8-ø10
AM480	488	540	730	900	424	718	12-ø14
AM610	614	665	860	960	491	718	12-ø14



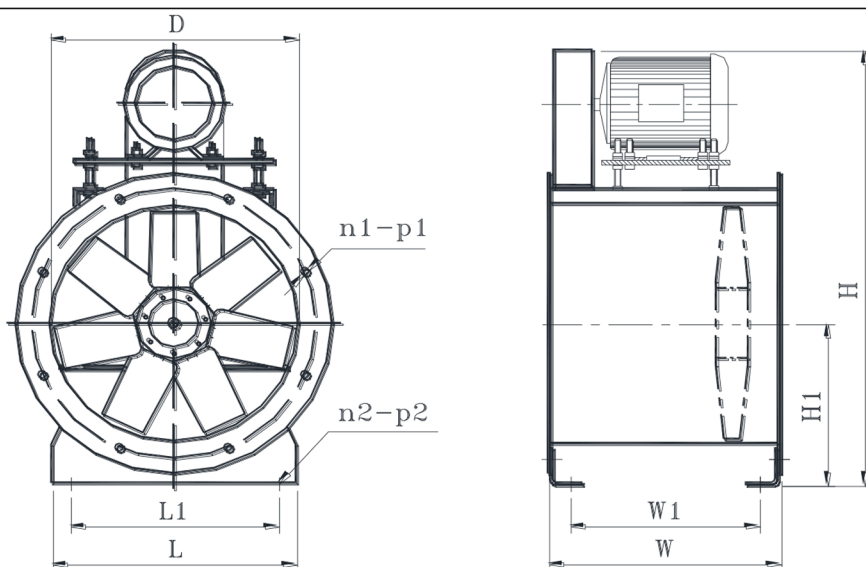
AD Direct Drive Axial Flow Fans



www.wington.com

STANDARD MODEL FOR " AP " SERIES BELT DRIVEN AXIAL FLOW FANS

FAN CURVE	STANDARD MODEL NUMBER	DIAMETER		Ph / Hz	BLADE ANGLE	MOTOR POWER (KW)	MAX FAN SPEED (RPM)	AIRFLOW (M3 / HR)	ST PRESSURE (PA)
		(INCH)	(MM)						
NIL	AP305-3-4	9.5"	240	3 Ph, 50Hz	28	0.37	1400	900	10
	AP305-3-2				28	0.55	2800	1100	55
B1	AP305-3-4	12"	305		28	0.55	1400	1700	37
C2	AP305-3-2				28	0.75	2800	3400	130
B3	AP380-3-4-.75	15"	380		32	0.75	1400	3600	75
C4	AP380-3-2-1.5				18	1.5	2800	7000	200
B5	AP480-3-4-1.5	19"	480		32	1.5	1400	8000	92
C5	AP480-3-2-3				20	3	2800	12000	300
B7	AP610-3-4-2.2	24"	610		28	2.2	1400	14000	130
B8	AP610-3-4-4				32	4	1400	15600	135



Model	D	H	H1	L	L1	W	W1	n1-p1	n2-p2
AP240	243	445	172	280	205	230	180	6-10	4-10
AP305	312	570	210	355	260	290	237	8-10	4-13
AP380	385	670	246	432	340	335	280	8-10	4-13
AP480	488	795	316	540	430	375	313	12-14	4-13
AP610	614	950	374	665	560	430	372	12-14	4-13
AP760	768	1240	473	830	695	550	450	12-14	4-13

WING TON FAN INDUSTRY LIMITED



Address: 3C Kam Shing Industrial Building 1-11 Kwai Wing Road Kowloon, Hong Kong.
Tel: 852-2410 9038
Fax: 852-2487 7317
E-mail: wtfans@netvigator.com
gary @wington.net
<http://www.wington.com>

Distributed By:

