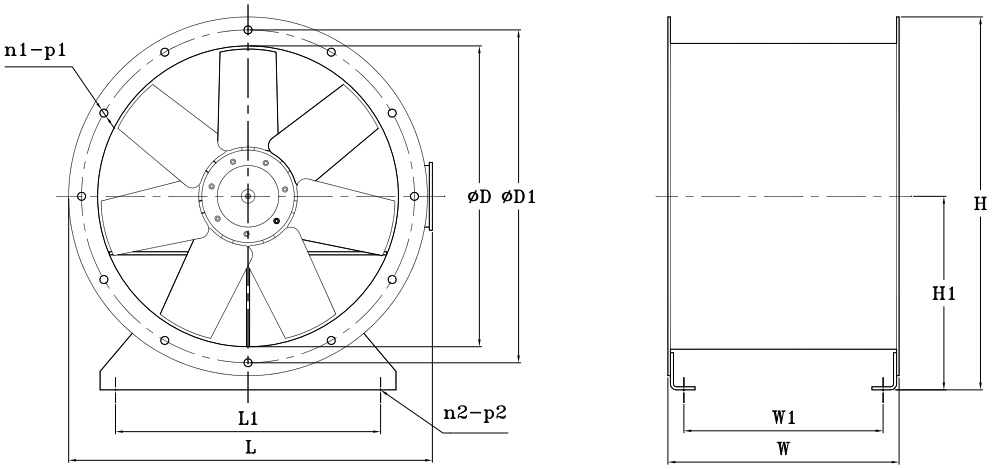
AD 系列標準式軸流風機

- 備有 240，300，305，380，480，610，760mm 七款尺寸。
- 外購馬達IP55，F級絕緣，能效級數IE2。
- 筒身選用優質鐵板制造，所有前後佛蘭整體翻邊成型。筒身經過噴粉處理。
- 所有榮通葉片均為鋁材壓鑄，成品葉片做動靜平衡，確保扇葉不會在運作期間產生震動。
- 建議使用溫度：室溫40℃。
- 建議使用濕度範圍：少於95%。

FOR AD240, 300, 305

FOR AD380, 480, 610 & 760

安裝尺寸（mm）



Model	øD	øD1	L	L1	W	W1	H	H1	n1-p1	n2-p2
AD240	240	280	305	205	230	180	325	172	6-ϕ10	4-ϕ10
AD300	300	355	408	260	290	237	408	210	8-ϕ10	4-ϕ10
AD305	312	355	408	260	290	237	408	210	8-ϕ10	4-ϕ10
AD380	385	432	482	340	335	280	485	246	8-ϕ10	4-ϕ13
AD480	488	540	593	430	375	313	605	316	12-ϕ14	4-ϕ13
AD610	614	665	730	560	430	372	733	374	12-ϕ14	4-ϕ13
AD760	768	830	910	--	550	--	875	473	12-ϕ14	--

Appendix to the License Agreement To Use The AMCA Certified Ratings Program Seal

Appendix No. : 8

In accordance with the License Agreement issued on November 14, 2013 by Air Movement and Control Association International, Inc., Wing Ton Fan Industry Ltd. is hereby authorized to use the AMCA Certified Ratings Seal on the specific air movement and control devices listed below. Such use shall in all respects be governed by and subject to the provisions of said License Agreement.

Axial Fans

Product Line	***Catalog ID***
"AD" Series Axial Flow Fan AD305	CATA-AMCA-AD,September 2016

Size	***Model No***
12.4	AD305-125-6

* License to Bear The AMCA Seal For Sound and Air Performance.

Please verify current certification status in the AMCA International Directory of Licensed Products located at www.amca.org.
Granted This 9/15/2016

Nazme Mohsina

Technical Director

AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.

Unit of Measure: mm

Revised :

Appendix to the License Agreement To Use The AMCA Certified Ratings Program Seal

Appendix No. : 7

In accordance with the License Agreement issued on November 14, 2013 by Air Movement and Control Association International, Inc., Wing Ton Fan Industry Ltd. is hereby authorized to use the AMCA Certified Ratings Seal on the specific air movement and control devices listed below. Such use shall in all respects be governed by and subject to the provisions of said License Agreement.

Axial Fans

Product Line	***Catalog ID***
"AD" Series Axial Flow Fans	CATA-AMCA-AD,September 2016

Size	***Model No***	***Size***	***Model No***	***Size***	***Model No***
378	**AD380-150-7***	**486**	**AD480-150-7***	**603**	**AD610-200-9***
760	**AD760-250-9***				

* License to Bear The AMCA Seal For FEG Sound & Air Performance.
Only models shown in bold and indicated with * are licensed for FEG.

Please verify current certification status in the AMCA International Directory of Licensed Products located at www.amca.org.
Granted This 9/15/2016

Nazme Mohsina

Nazme Mohsina

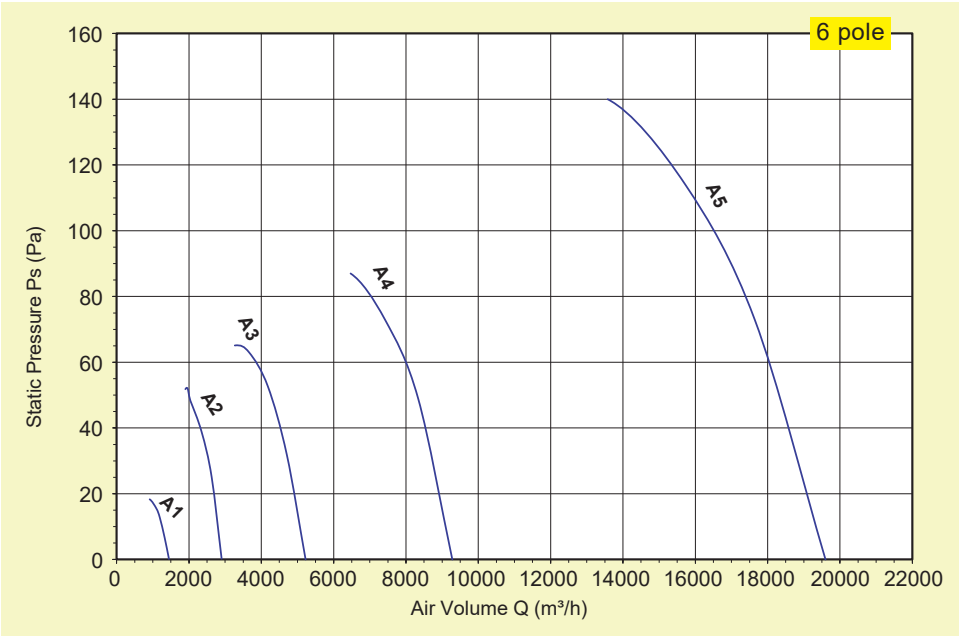
Technical Director

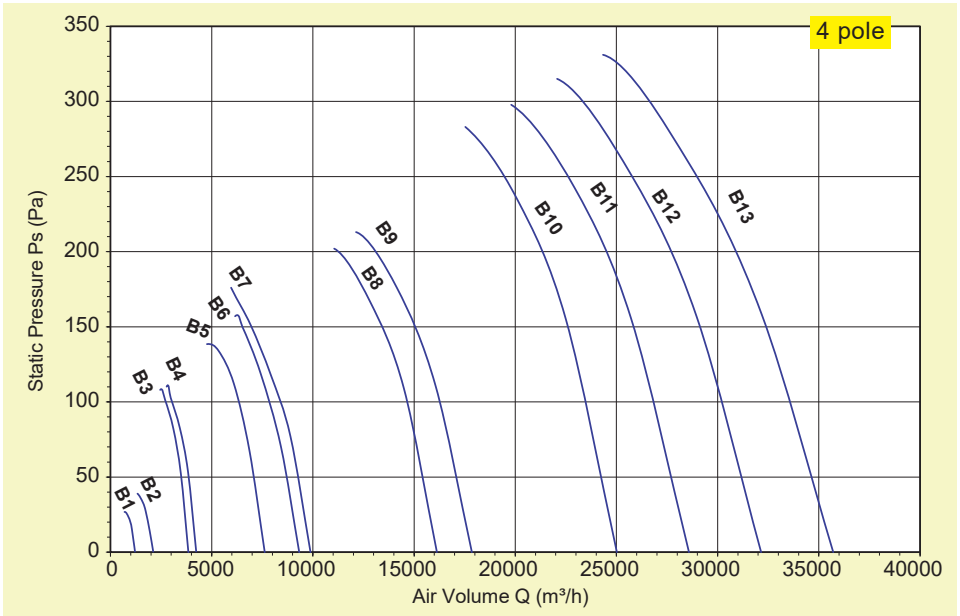
AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.

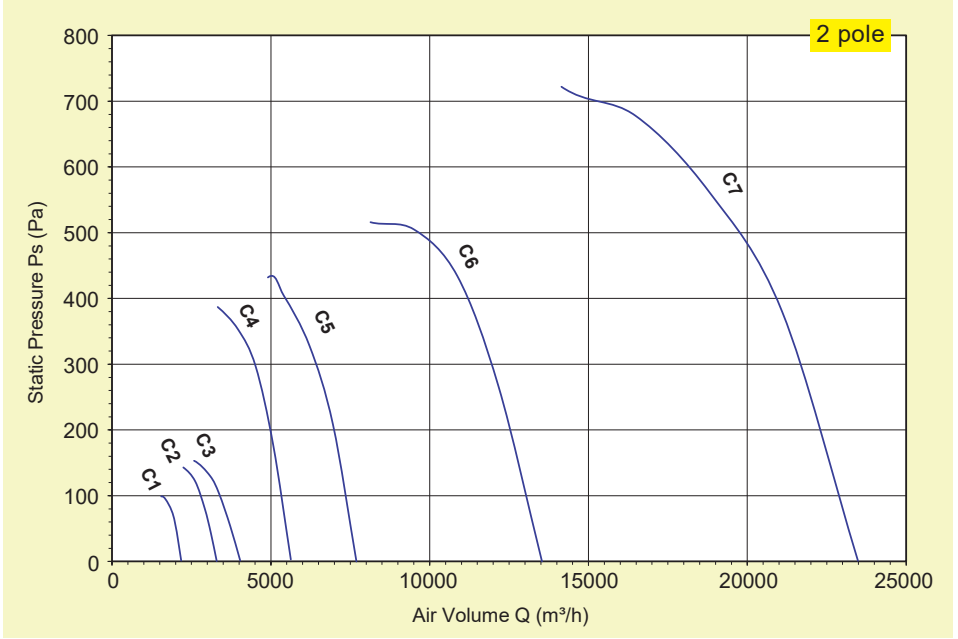
Unit of Measure: mm

Revised :

AD系列常規產品風量圖





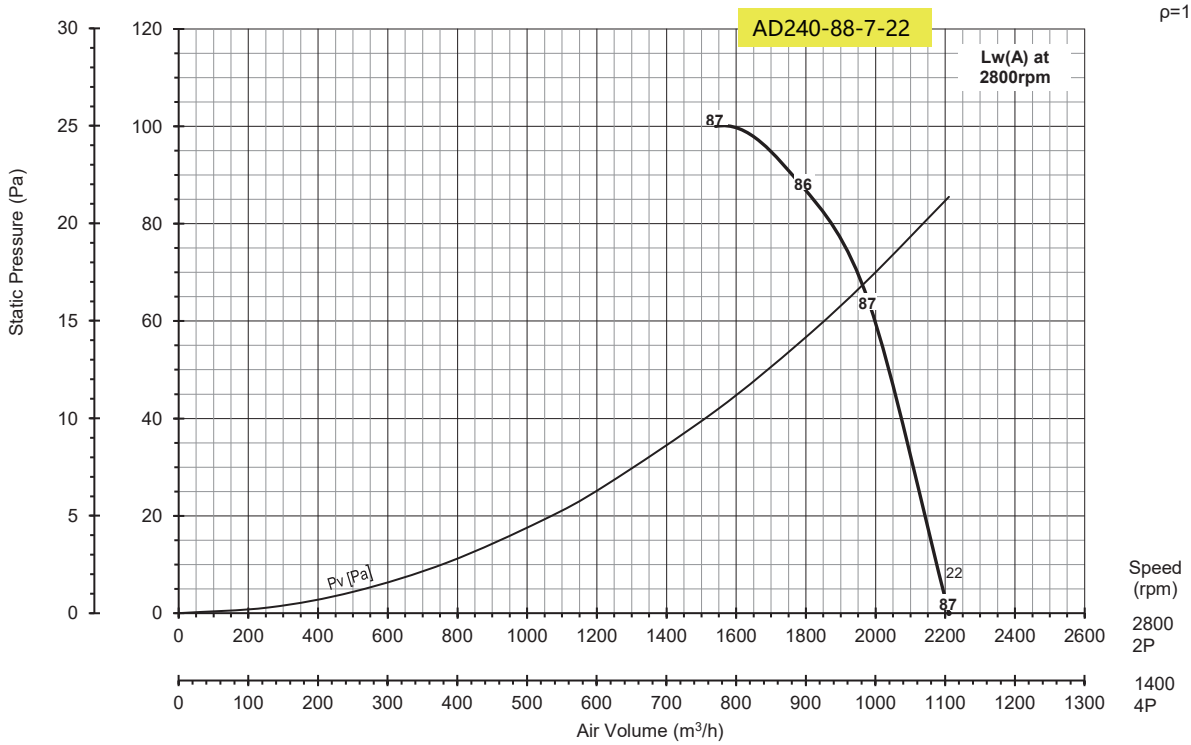


AD系列常規產品性能參數表

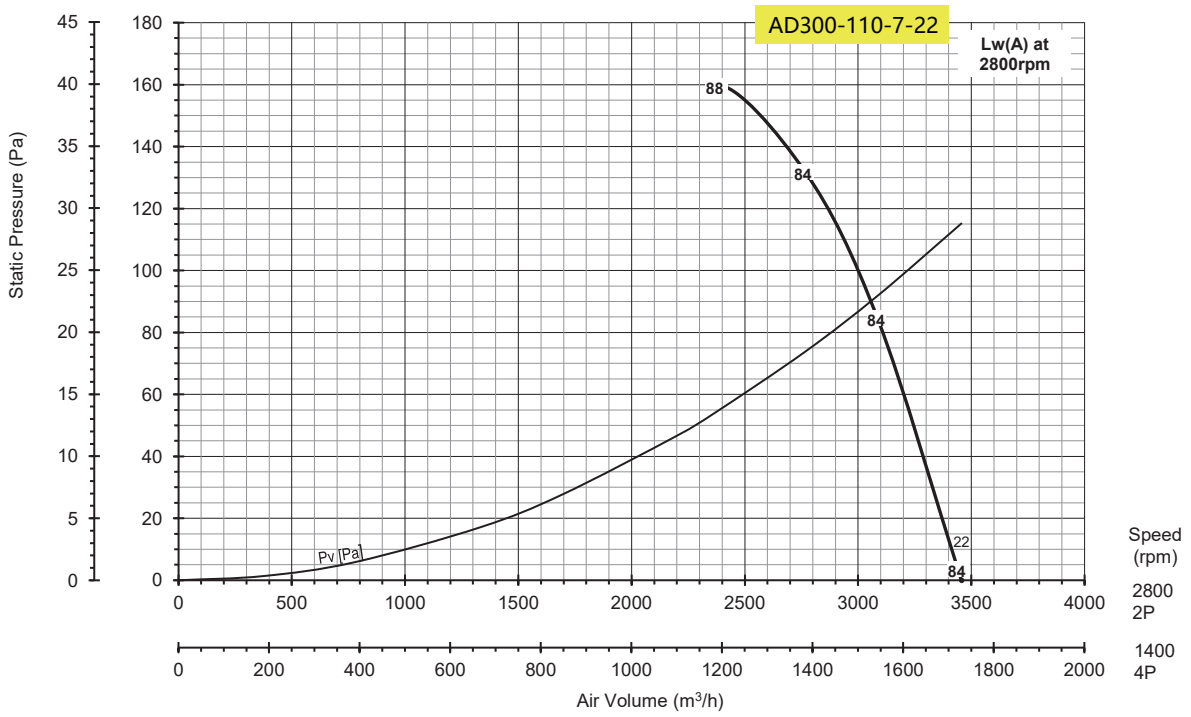
風量曲線	型號（香港規格）	扇葉直徑 Inch/mm	額定電壓 V/Ph/Hz	電機功率 KW	啟動電流 A	最高轉速 RPM	風量 m^3/h	靜壓 (Pa)	最高噪音 dB（A）
B1	**AD240-1-4**	9.5″ /240	220-240/1/50	0.05	0.6	1400	950	20	67
C1	**AD240-1-2**			0.37	2.0	2800	2000	60	87
B1	**AD240-3-4**		380-415/3/50	0.07	0.6	1400	950	20	67
C1	**AD240-3-2**			0.37	1.0	2800	2000	60	87
B1	**AD300-1-4**	11″ /300	220-240/1/50	0.09	1.8	1400	1700	27	50
C1	**AD300-1-2**			0.37	5.5	2800	3400	112	67
B1	**AD300-3-4**		380-415/3/50	0.09	1.8	1400	1700	27	50
C1	**AD300-3-2**			0.37	5.5	2800	3400	112	67
A1	**AD305-1-6**	12″ /305	220-240/1/50	0.125	1.8	960	1100	15	46
B2	**AD305-1-4**			0.125	1.8	1400	1700	37	61
C2	**AD305-1-2**			0.37	5.5	2800	2700	110	79
A1	**AD305-3-6**		380-415/3/50	0.125	1.0	960	1100	15	46
B2	**AD305-3-4**			0.125	1.2	1400	1700	37	61
C3	**AD305-3-2**			0.75	3.0	2800	3200	130	80
A2	**AD380-1-6**	15″ /380	220-240/1/50	0.125	1.8	960	2200	43	52
B3	**AD380-1-4**			0.25	3.5	1400	3400	62	61
C4	**AD380-1-2**			0.75	8.5	2800	4800	240	83
A2	**AD380-3-6**		380-415/3/50	0.125	1.0	960	2200	43	52
B4	**AD380-3-4-0.75**			0.75	5.0	1400	3600	75	62
C5	**AD380-3-2-1.5**			1.5	8.5	2800	7000	200	81
A3	**AD480-1-6**	19″ /480	220-240/1/50	0.18	3.0	960	4000	54	54
B5	**AD480-1-4**			0.55	6.0	1400	6400	100	63
A3	**AD480-3-6**		380-415/3/50	0.18	2.0	960	4000	54	54
B6	**AD480-3-4-1.5**			1.5	8.0	1400	8000	92	65
C6	**AD480-3-2-3**			3	15.0	2800	12000	300	79
A4	**AD610-1-6**	24″ /610	220-240/1/50	0.37	6.0	960	7700	65	62
B7	**AD610-1-4**			0.75	12.0	1400	9000	75	71
A4	**AD610-3-6**		380-415/3/50	0.37	4.0	960	7700	65	62
B8	**AD610-3-4-2.2**			2.2	12.0	1400	14000	130	76
B9	**AD610-3-4-4**			4	20.0	1400	15600	135	78
C7	**AD610-3-2-7.5**			7.5	30.0	2800	20000	490	88
A5	**AD760-3-6-2.2**	30″ /760	380-415/3/50	2.2	14.0	960	16000	110	65
B10	**AD760-3-4-3**			3	17.0	1400	18000	270	73
B11	**AD760-3-4-4**			4	22.0	1400	23000	245	74
B12	**AD760-3-4-5.5**			5.5	29.0	1400	26000	250	75
B13	**AD760-3-4-7.5**			7.5	30.0	1400	30000	230	76

AD SERIES AXIAL FLOW FAN

ρ=1.2kg/m³



Model No	Speed(RPM)	Blade Angle	Motor(Kw)	Peak Absorbed Power(Kw)	LwA dB(A)
AD240-88-7-22	1400	22	0.07	0.036	-19
	2800		0.37	0.288	0



Model No	Speed(RPM)	Blade Angle	Motor(Kw)	Peak Absorbed Power(Kw)	LwA dB(A)
AD300-110-7-22	1400	22	0.09	0.046	-18
	2800		0.37	0.368	0

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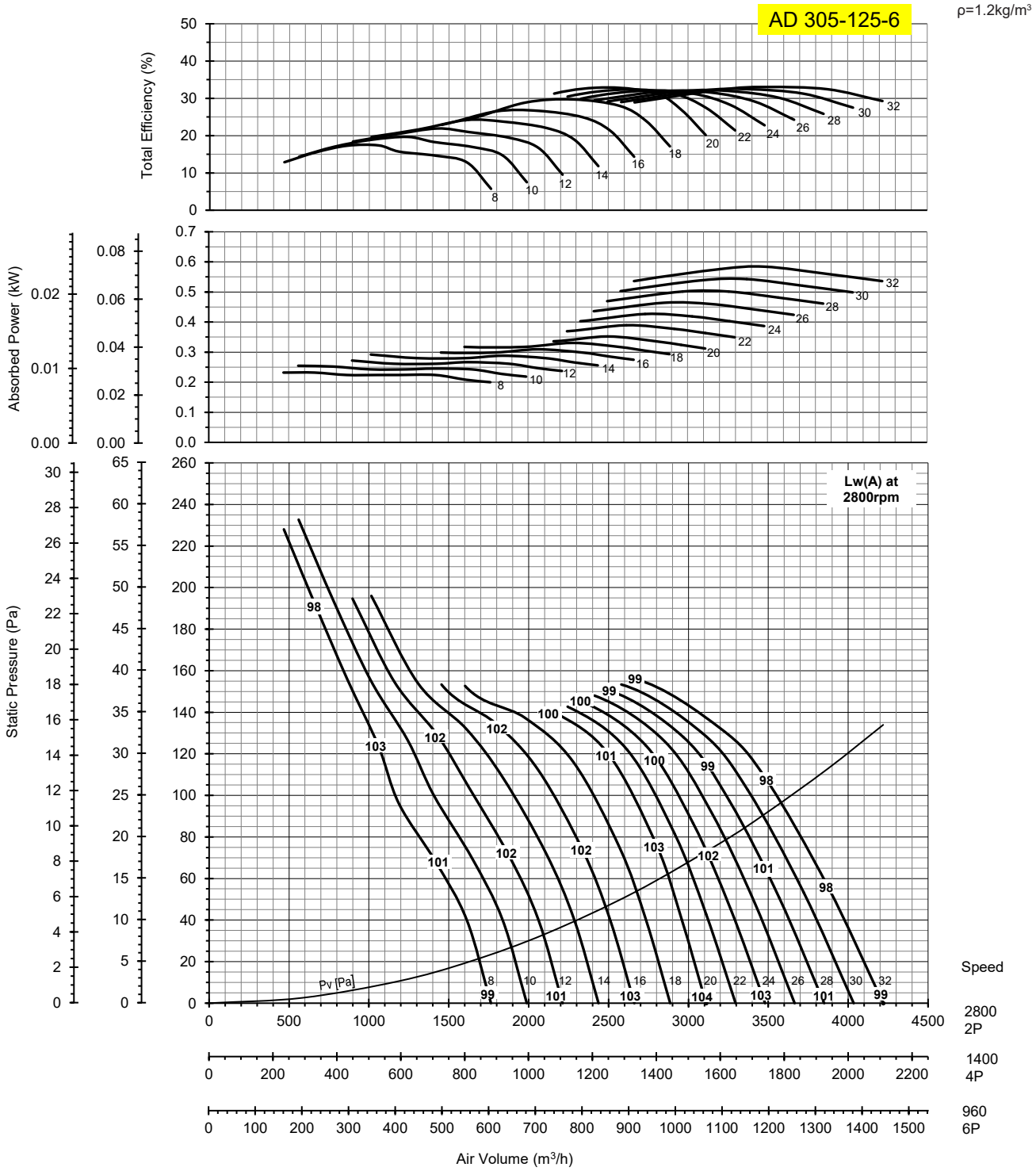
AD SERIES AXIAL FLOW FAN



Model No	At 960 RPM		
	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		

Model No	At 1400 RPM		
	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		

Model No	At 2800 RPM		
	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD305-3-2-0.37	8	0.37	0.232
	10		0.256
	12		0.272
	14		0.292
	16		0.309
	18		0.336
	20		0.352
AD305-3-2-0.55	22	0.55	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		

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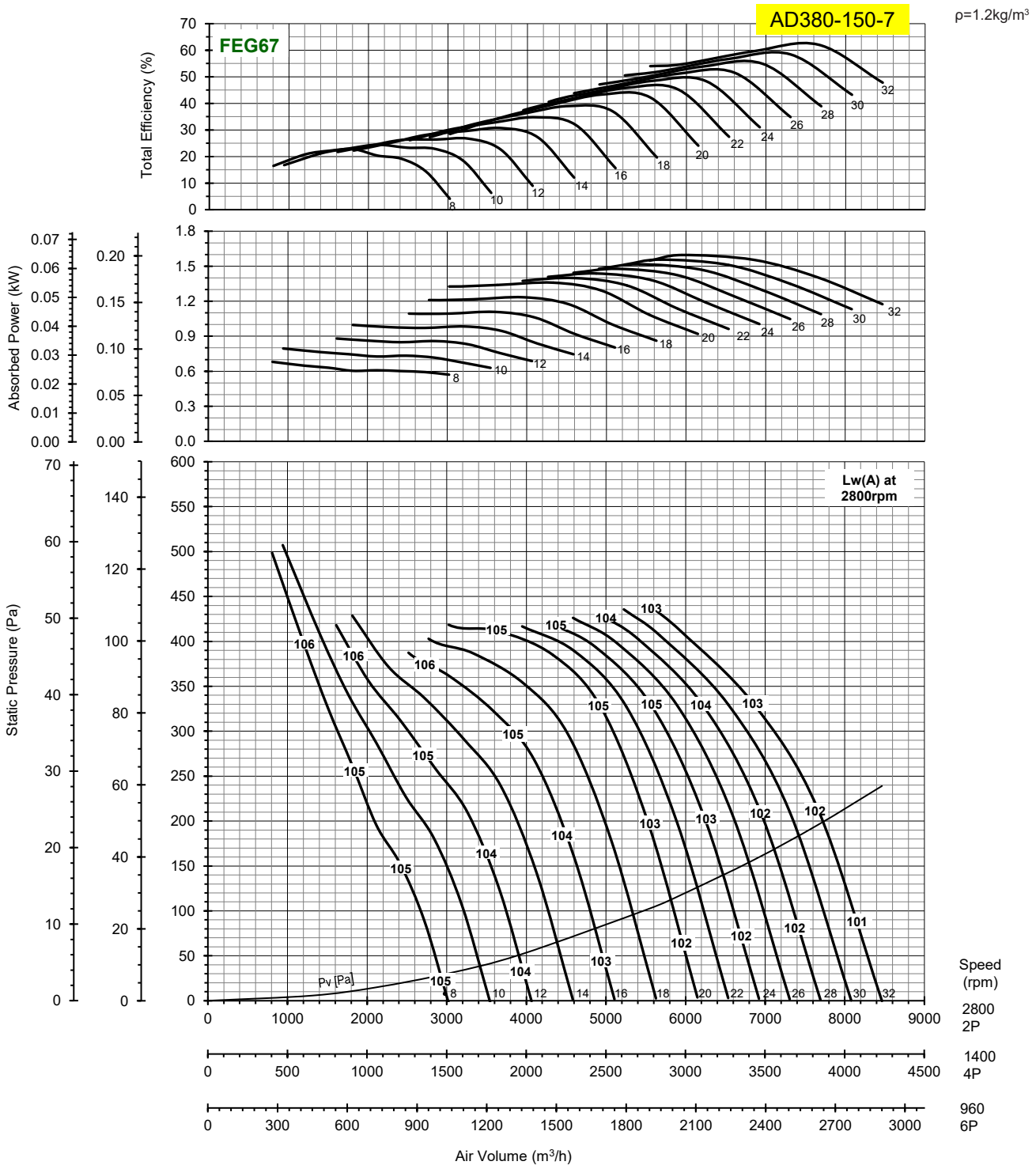
AD SERIES AXIAL FLOW FAN



Model No	At 960 RPM		
	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		

Model No	At 1400 RPM		
	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 dB(A)	-20		

Model No	At 2800 RPM		
	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD380-3-2-0.75	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		

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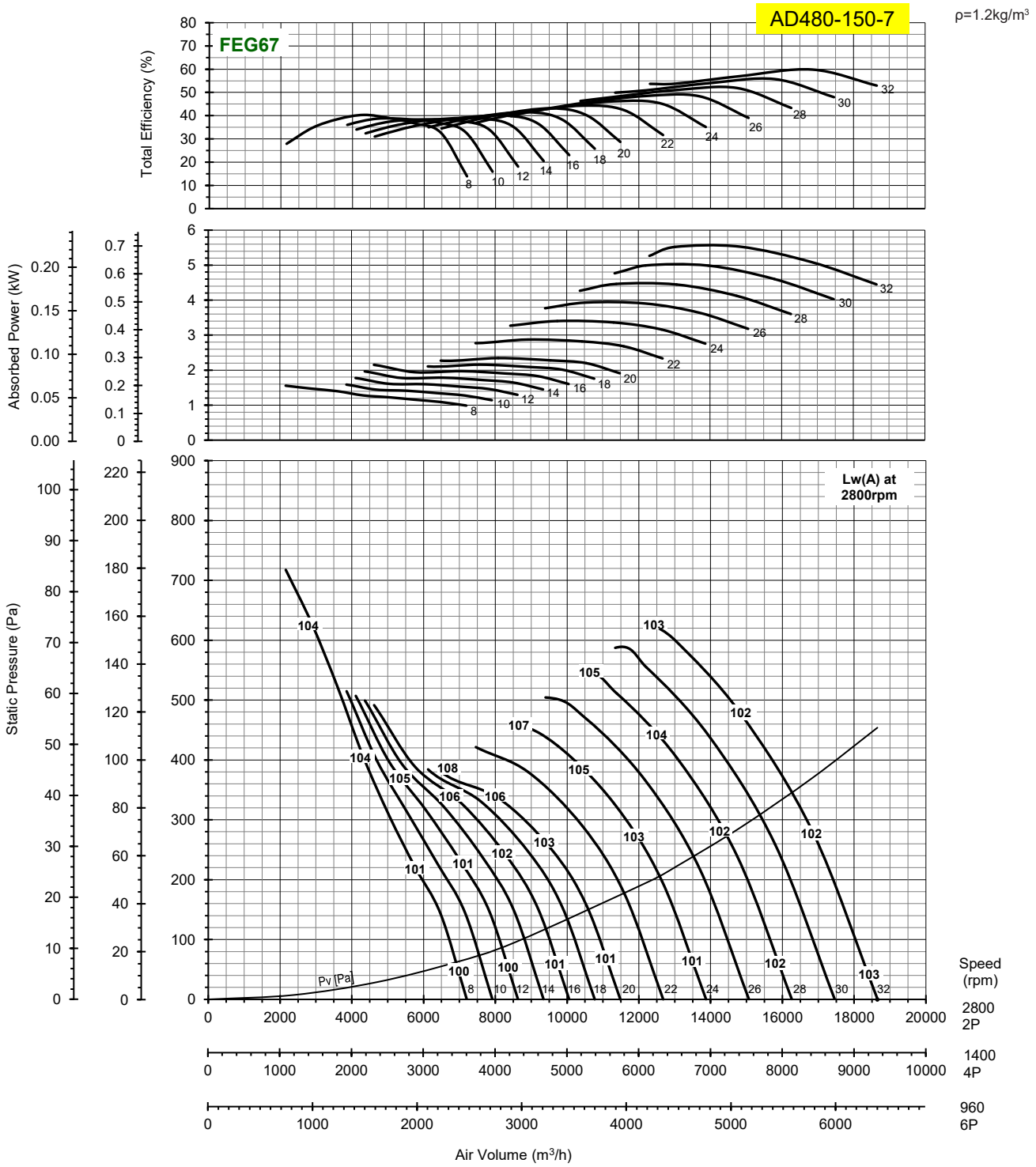
AD SERIES AXIAL FLOW FAN



Model No	At 960 RPM		
	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD480-3-6-0.18	8	0.18	0.063
	10		0.064
	12		0.072
	14		0.079
	16		0.087
	18		0.087
	20		0.094
	22		0.116
	24		0.137
	26		0.159
AD480-3-6-0.37	28	0.37	0.180
	30		0.201
	32		0.223
LwA dB(A)	-26		

Model No	At 1400 RPM		
	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD480-3-4-0.37	8	0.37	0.195
	10		0.198
	12		0.222
	14		0.246
	16		0.269
	18		0.270
	20		0.293
	22		0.359
AD480-3-4-0.55	24	0.55	0.425
	26		0.492
AD480-3-4-0.75	28	0.75	0.558
	30		0.624
	32		0.691
LwA dB(A)	-17		

Model No	At 2800 RPM		
	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD480-3-2-2.2	8	2.2	1.556
	10		1.587
	12		1.775
	14		1.964
	16		2.152
	18		2.157
AD480-3-2-3	20	3	2.344
	22		2.874
AD480-3-2-4	24	4	3.403
	26		3.933
AD480-3-2-5.5	28	5.5	4.462
	30		4.992
AD480-3-2-7.5	32	7.5	5.529
LwA dB(A)	0		

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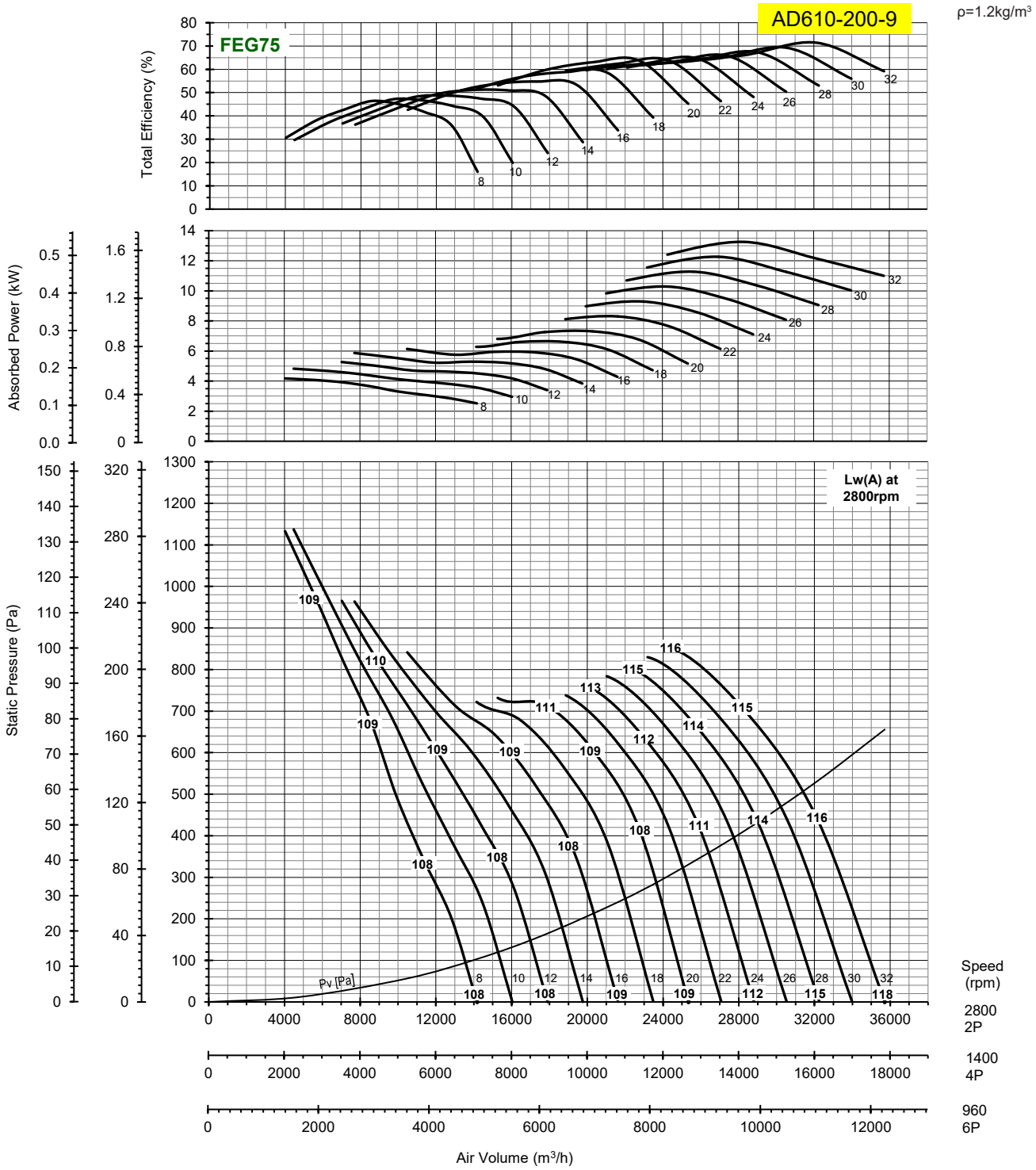
AD SERIES AXIAL FLOW FAN



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

Model No	At 1400 RPM		
	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD610-3-4-0.55	8	0.55	0.522
AD610-3-4-0.75	10	0.75	0.603
	12		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		

Model No	At 2800 RPM		
	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		

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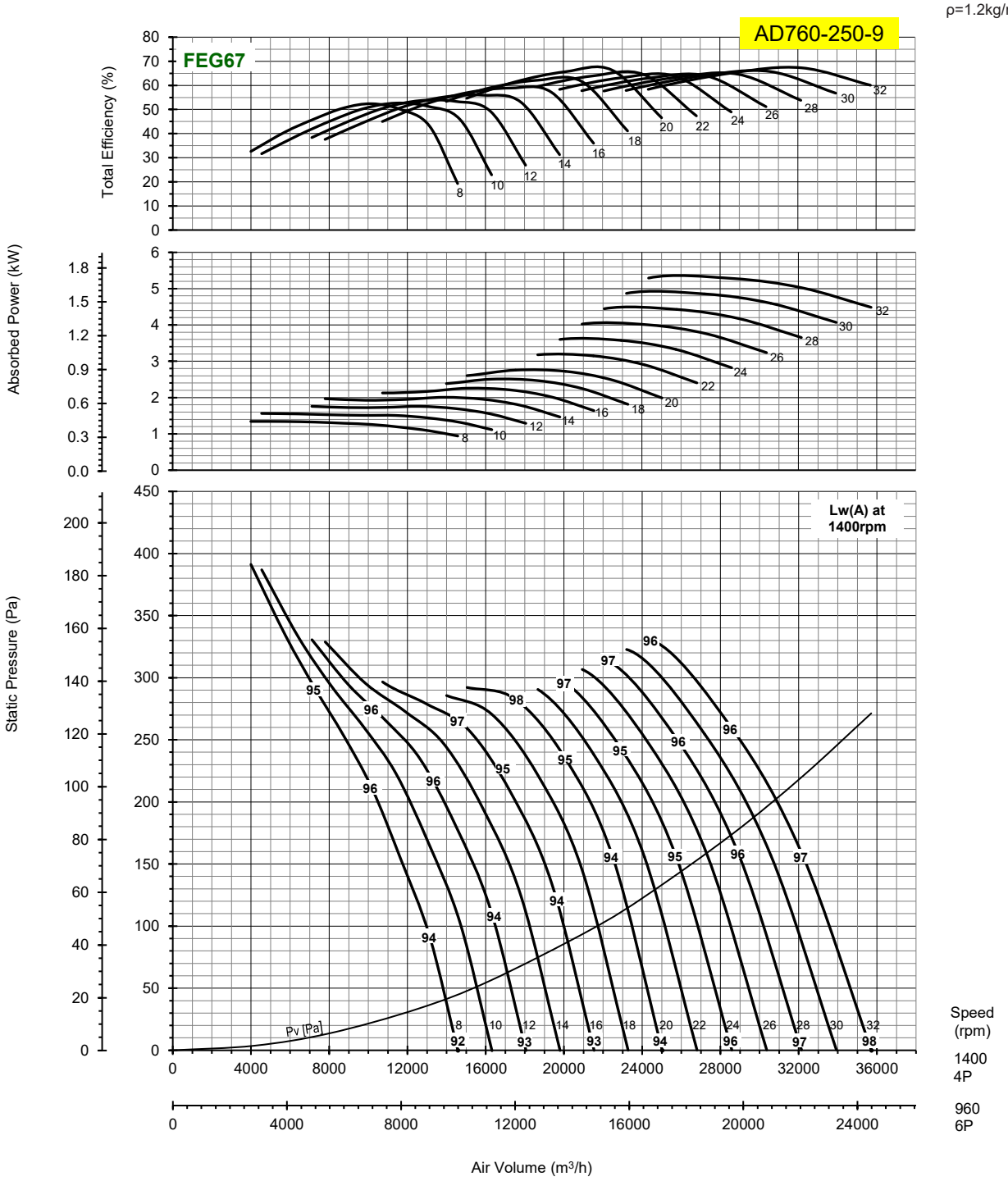
AD SERIES AXIAL FLOW FAN

ρ=1.2kg/m³



Model No	At 960 RPM		
	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD760-3-6-0.55	8	0.55	0.433
	10		0.504
AD760-3-6-0.75	12	0.75	0.587
	14		0.647
	16		0.728
AD760-3-6-1.1	18	1.1	0.808
	20		0.889
	22		1.025
AD760-3-6-1.5	24	1.5	1.161
	26		1.297
	28		1.434
AD760-3-6-2.2	30	2.2	1.57
	32		1.706
LwA dB(A)	-9		

Model No	At 1400 RPM		
	Blade Angle	Motor (Kw)	Peak Absorbed Power (Kw)
AD760-3-4-1.5	8	1.5	1.343
AD760-3-4-2.2	10	2.2	1.682
	12		1.759
	14		2.007
AD760-3-4-3	16	3	2.257
	18		2.507
	20		2.758
AD760-3-4-4	22	4	3.179
	24		3.801
AD760-3-4-5.5	26	5.5	4.024
	28		4.447
	30		4.889
	32		5.292
LwA dB(A)	0		

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dB(A) Information

Noise Levels - Calculation and use of the dB(A)

The human ear is more sensitive to some frequencies than others. In particular low frequency noises sound quieter than high frequency noises.

The ‘A’ frequency weighting or more commonly dB(A) is based on how loud various tones played at different frequencies sound compared to a tone of 40 dB, at 1000 Hz and it has become popular and is now used for many different noise sources at different levels.

In fact, most legislation regarding noise is written using dB(A)s, in addition nearly all manufacturers of fans and other noise generating machines quote their noise levels in dB(A)s at 1, 1.5, or 3 metres assuming spherical distribution. It is therefore important that we understand the ‘A’ frequency weighting and how dB(A)s are calculated.

Information on Fan Noise Test Standards

Where noted in the product data pages within this catalogue fan noise levels are tested to AMCA International Standard 301..

This test standard describes methods that may be applied to calculate the sound power level of fans. That is, the In-Duct method, the Reverberant Room method and the Free Field method. The sound pressure level of a product is measured using one of these test methods. A calculation is then used to convert the measured sound pressure levels to sound power levels.

A Cautious Word on the use of dB(A) Levels

The dB(A) sound pressure level is used almost universally to describe the noise level of many items of noise emitting machinery. However, published dB(A) sound pressure levels should be used for comparative purposes only, they are not designed to reflect actual installed noise levels. The assumptions that are used to calculate the dB(A) are rarely replicated in real life situations and, therefore, published dB(A) values will not necessarily represent the actual noise levels that may be experienced on site.

In order to determine the actual dB(A) sound pressure level that may be expected from an installation, an acoustic analysis of the system, using sound power levels and taking into account the surrounding acoustic environment, should be performed.

Calculating dB(A) Noise Levels

Published dB(A), or ‘A’ frequency weighted, sound pressure levels are theoretical values. These are, in fact, calculated from the sound power level data and are quoted at a specified distance i.e. 1, 1.5, or 3 metres.

Converting Sound Power to Sound Pressure

To convert this 'A' weighted sound "power" level to an 'A' weighted sound "pressure" level (which is calculated for a specified distance from the source) the following equation is used:

$$L_P = L_W - 20 \log_{10}(d) - 11$$

Where:

- Lw = Sound Power Level re 10-12W (dB)
- Lp = Sound Pressure Level re 20mPa (dB)
- d = Distance from fan in metres (m)

For Example, if an axial fan with Sound power level 98 dB, the dB(A) sound pressure level at a distance of 3m:

$$L_P = 98 - 20 \log_{10}(3) - 11$$
$$L_P = 98 - 10.5 - 11$$
$$L_P = 98 - 21$$
$$L_P = 77 \text{ dB(A) @ 3m}$$

Note that the above calculation assumes that the fan behaves as a point source of noise, that the noise radiates in all directions equally, and that no reflected sound is present.

Lp(A) = Lw(A)-20Log10(D)-11 D= distance in meter

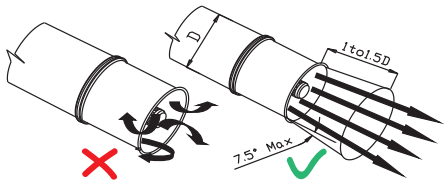
Lw(A)	D = 1	D = 2	D = 3
60	49	43	39
61	50	44	40
62	51	45	41
63	52	46	42
64	53	47	43
65	54	48	44
66	55	49	45
67	56	50	46
68	57	51	47
69	58	52	48
70	59	53	49
71	60	54	50
72	61	55	51
73	62	56	52
74	63	57	53
75	64	58	54
76	65	59	55
77	66	60	56
78	67	61	57
79	68	62	58

Lw(A)	D = 1	D = 2	D = 3
80	69	63	59
81	70	64	60
82	71	65	61
83	72	66	62
84	73	67	63
85	74	68	64
86	75	69	65
87	76	70	66
88	77	71	67
89	78	72	68
90	79	73	69
91	80	74	70
92	81	75	71
93	82	76	72
94	83	77	73
95	84	78	74
96	85	79	75
97	86	80	76
98	87	81	77
99	88	82	78

Lw(A)	D = 1	D = 2	D = 3
100	89	83	79
101	90	84	80
102	91	85	81
103	92	86	82
104	93	87	83
105	94	88	84
106	95	89	85
107	96	90	86
108	97	91	87
109	98	92	88
110	99	93	89
111	100	94	90
112	101	95	91
113	102	96	92
114	103	97	93
115	104	98	94
116	105	99	95
117	106	100	96
118	107	101	97
119	108	102	98

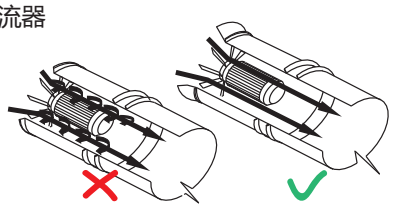
安裝使用說明

1. 安裝擴散筒



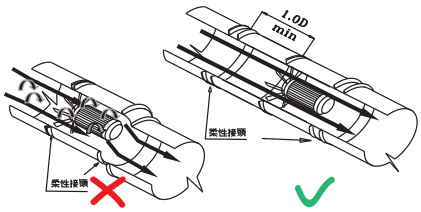
軸流風機的出風口,應裝一擴散筒(如左圖)其錐度≦15°，長度等于(1~1.5)倍管道直徑。這樣可以減少風機的壓力損失，提高風機的使用效率。

2. 安裝集流器



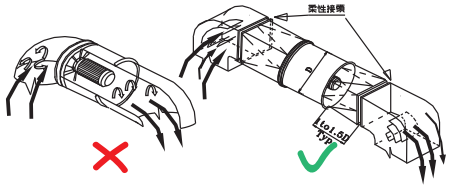
軸流風機的進風口，應裝一集流器（如左圖）這樣可以為軸流風機工作提供合理的氣流，提高風機的性能，降低噪聲。

3. 安裝柔性管道接頭



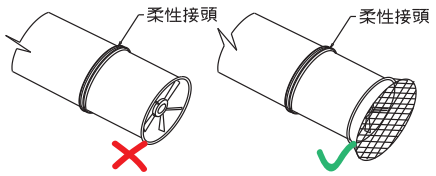
軸流風機兩端接管道，當管道與管道間采用柔性接頭時，要求進風口柔性接頭到風機距离至少為1倍管道直徑，而且柔性接頭要處于張緊狀態，這樣可以避免由于柔性接頭的變動使氣流面積減小而引起倒流、渦流，從而減少壓力損失而降低噪聲。

4. 安裝變截面的彎形管道



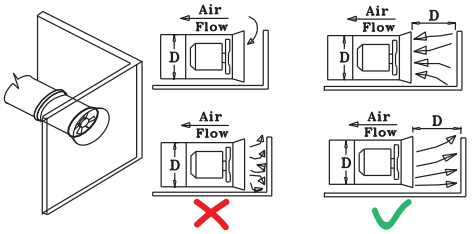
軸流風機兩端安裝變截面的彎形管道時，要求風機與變截面管道要有過度接頭其高度等于（1－1.5）倍風機葉直徑，這樣可以避免由于管道面積突然變化而引起倒流，從而減少壓力損失，提高風幾使用效率。

5. 安全網



軸流風機進風口直接露于大氣中，為了保證人的安全，以及防止雜物的吸入，應在進風口安裝如左圖的安全網。

6. 進出風口有障礙物



軸流風機進出風口有障礙物（如左圖），將會阻撓氣流流向風機,導致氣流撓動,從而使系統阻力增加，流量減少，噪聲增大,所以進出風口與障礙物之間至少保證1倍管道直徑的距離。

7. 電機接線: 按接線圖的方法接線。

使用注意事項:

1、風機在第一次使用之前必須詳細檢查產品銘牌標誌的電壓和頻率是否符合當地的要求,嚴格按照電機額定電壓運行。
2、風機運行前,必須先檢查風機葉與機殼之間有無碰撞磨擦,電機是否接地,絕緣是否良好。
3、風機運行前,必須先檢查葉輪旋轉方向是否正确, 無誤方可運轉,在試運轉中有异常聲和振動現象,應立即停機,切斷電源進行排除,正常后才可使用。
4、風機如要求向上或向下送氣時,電動機應更換壓力軸承方可使用。
5、風機輸送介子的溫度不應超過80℃。
6、風機不應在水易噴洒和直接淋雨雪之處使用。
7、風機不能在化學氣体易腐蝕、易燃、易爆環境中使用。

維修與保養:

1、只有風機設備完全正常的情況下方可運轉。
2、風機維修和保養時必須先切斷電源后進行。
3、風機應定期檢查清除風機內部積垢等雜質防止鏽蝕。
4、風機在維修后開動時,則需注意風機各部位是否正常。
5、除電機和電器外,可用沾有少許肥皂水的軟布進行擦其表面, 切不可用苯、汽油等有機溶剂清洗。

以下情況不列入保養范圍:

1、馬達缺相運行而導致產品損毀。
2、產品因長期擺放而導致外觀殘舊，功能受損。
3、使用環境含腐蝕性，氣體內含有雜質或硬物，溫度過高而導致產品損壞。
4、因整體抽風系統設計錯誤導致產品損壞。