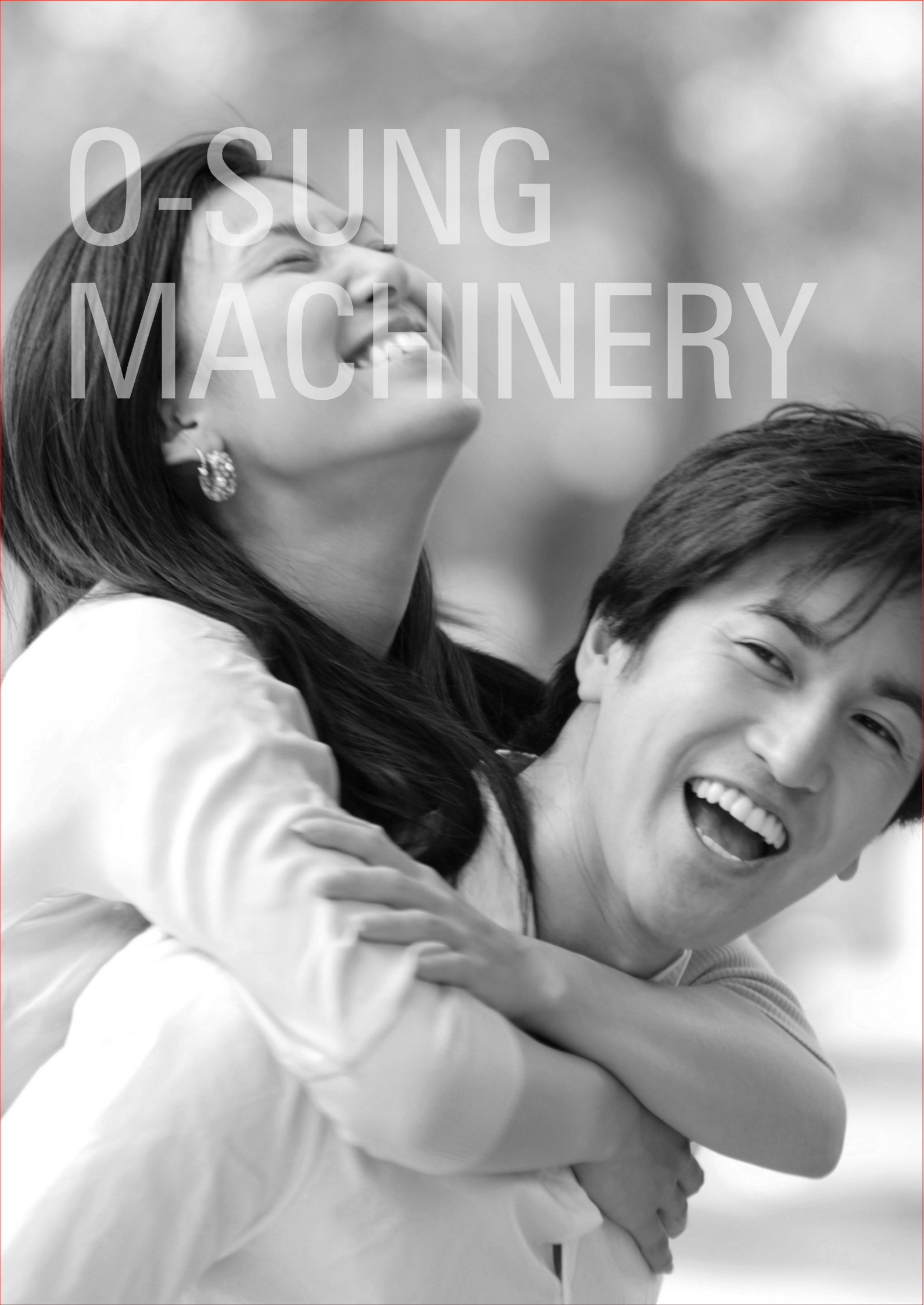
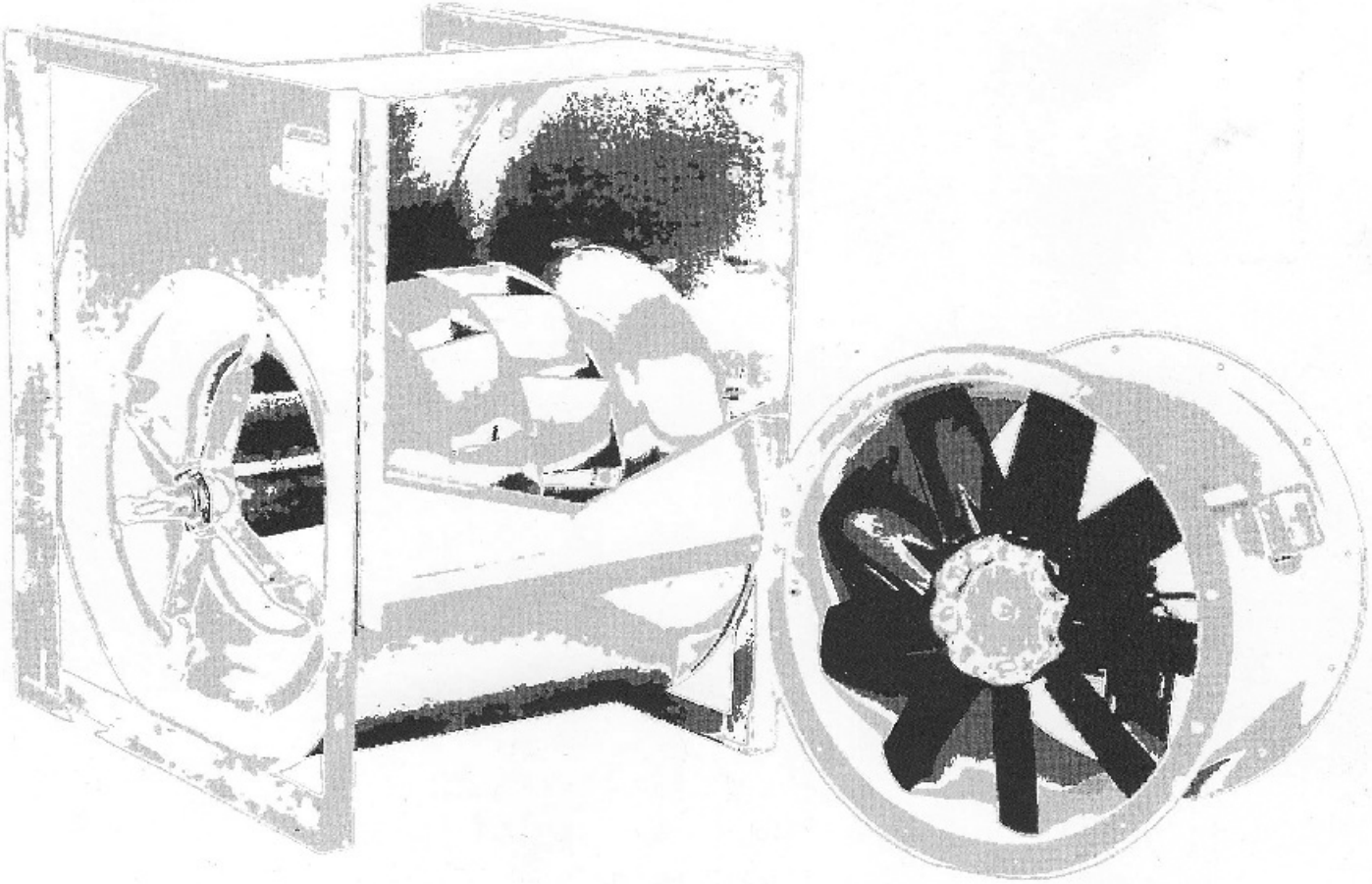
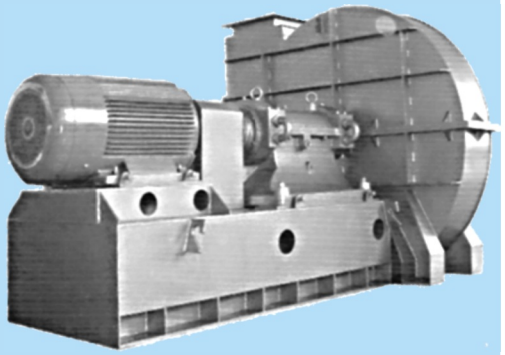
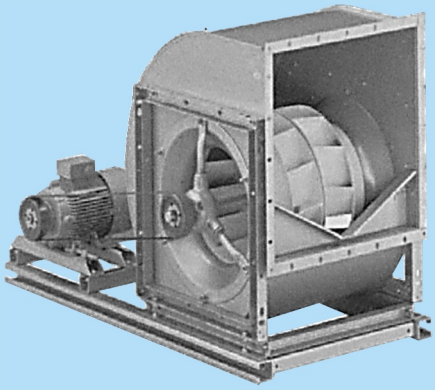


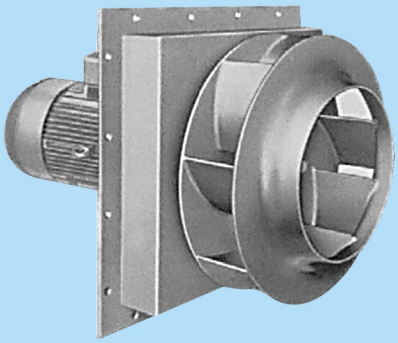
O-SUNG MACHINERY

FAN & BLOWER









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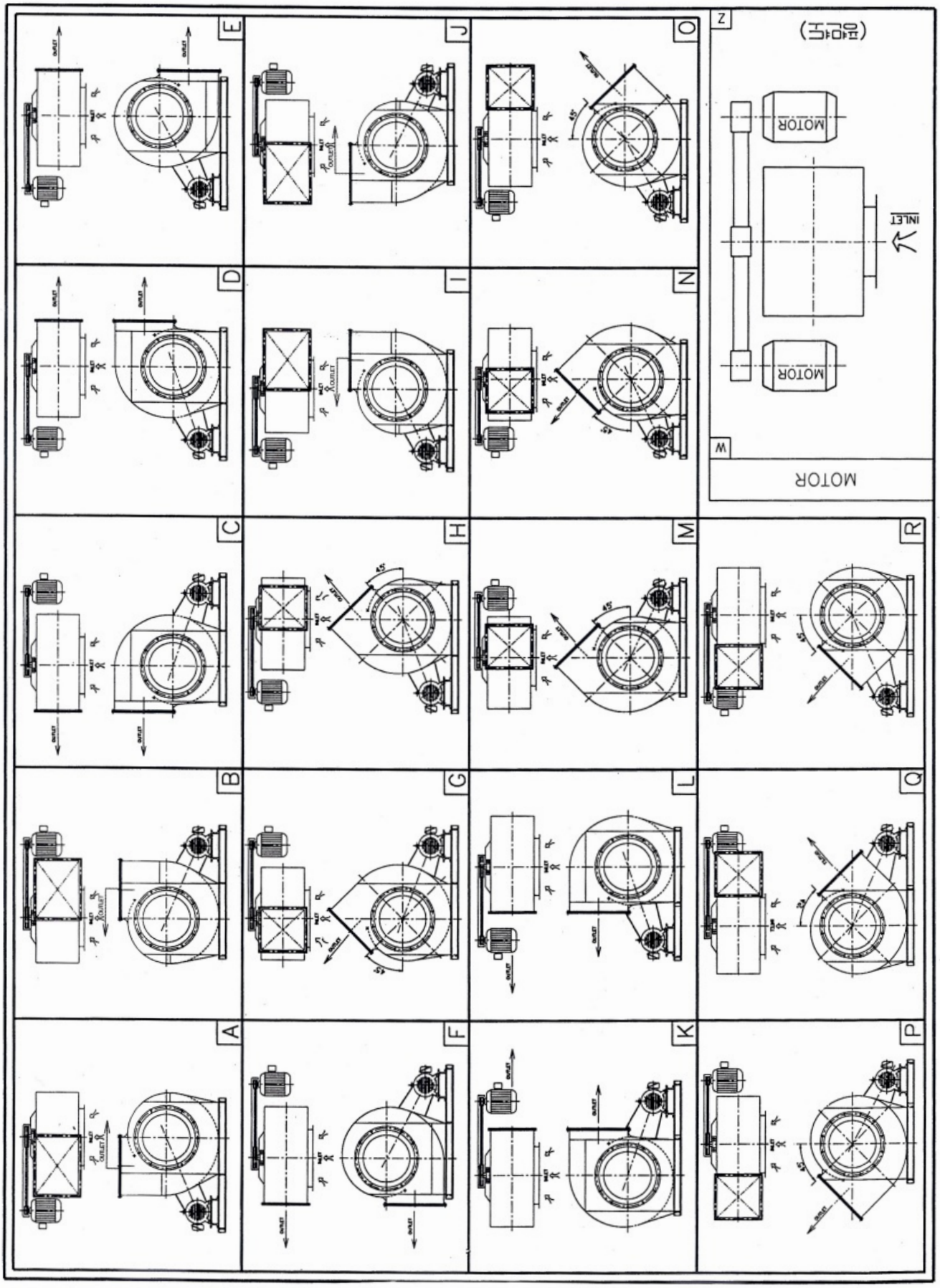


송풍기의 용어정의 및 단위

가. 풍량:Q

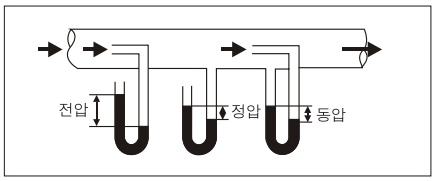
송풍기의 풍량이란 토출측에서 요구되는 경우라도 흡입상태(표준상태)로 환산하는 것을 말한다.
이것은 풍량이 압력, 온도에 따라 변화가 심해 어떤 일정한 기준으로 되지 않기 때문이다.
단, 압력비가 1.03 이하일 경우는 토출풍량을 흡입풍량으로 봐도 지장이 없다.
단위는 m^3/sec(CMS), m^3/min(CMM), m^3/Hr(CMH)
ft^3/sec(CFS), ft^3/min(CFM), ft^3/Hr(CFH) (1m^3/min=35.3ft^3/min)
단, 기준상태(0℃, 760mmHg)로 표시된 경우는
표준상태(20℃, 760mmHg, 65% 습도)로 환산하는 식은 다음과 같다.

$$Q = QN \times \frac{273+t}{273} \times \frac{10332}{10332+P_1}$$

Q : 표준상태의 흡입풍량(m^3/min)
QN : 기준상태의 흡입풍향(Nm^3/min)
t : 흡입 Gas 온도 (℃)
P_1 : 흡입풍압 (mmAq)

나. 정압(Ps=Static Pressure)

정압 Ps는 기체의 흐름에 평행인 물체의 표면에
기체가 수직으로 미치는 압력이고 그 표면에
수직 Hole을 통에 측정한다



다. 동압(Pd=Dynamic Pressure=Velocity Pressure)

동압은 속도에너지를 압력에너지로 환산한 값
송풍기의 동압은 50mmAq(약30m/s)를 넘지 않은 것이 바람직함.

$$Pd = \frac{V^2}{2g} r$$

V : Velocity (m/s)
r : Specific weight(kg/m^3)
g : Acc Velocity (m/s)

$$v = \sqrt{2g \cdot pd/r}$$

라. 전압(Pt=Total Pressure)

전압은 정압과 동압의 절대압의 합이다.

Pt=Ps+Pd

단위는 mmAq(Aqure), mmWG, mmH_2O, mAq
kg/cm^2, kg/m^2, Pa, Kapa(1Pa=9.8mmAq)
1kg/cm^2=10,000×(mmAq, kg/m^2, mmH_2O)

마. 수두(Head)m

송풍기의 흡입구와 배출구 사이의 압축과정에서 임페라에 의하여 단위중량의 기체에 가하여지는 가역적 일당량(kg.m/kg)을 말하며 기체의 기둥의 높이로 나타내고 이것을 수두(H)m라고 부른다.

이론수두 $H = \frac{Pt}{r}$

단열수두 $H = \frac{K}{K-1} \cdot \frac{P_1}{r_1} \left\{ \left(\frac{P_1}{P_2} \right)^{\frac{K-1}{K}} - 1 \right\}$

압력비 = $\frac{\text{토출구 절대압력}(P_2)}{\text{흡입구 절대압력}(P_1)}$

H : Head (m)
Pt : 전 압 (kg/m^2)
r : 비중량 (kg/m^3)
k : 비열비 (공기=1.4)
P_1 : 흡입 절대압력 (kg/m^2)
P_2 : 토출 절대압력 (kg/m^2)

※압력비1.03(310mmAq) 이하일 때는 이론수두식, 이상일 때는 단열수두식을 적용

바. 비속도 혹은 비교회전도(Ns)

비속도란 송풍기의 기하학적으로 닮은 송풍기를 생각해서 풍량 1㎥/min, 풍압을 Head 1m 생기게한 경우의 가상회전속도이고 송풍기의 크기에 관계없이 송풍기의 형식(임페라의 형식으로도 된다)에 의해 변하는 값이다.

$$Ns = \frac{N \times Q^{\frac{1}{2}}}{H^{\frac{3}{4}}}$$

N : 송풍기의 회전속도 (R.P.M)
Q : 풍량 (㎥/min or ㎥/sec)
H : Head (kg/㎥)

※양흡입형의 경우 풍량을 Q/2로 함
※다단의 경우는 Head를 H/단수로 함.

사. 공기의 성질

흡입 상태의 공기 비중량은 다음 식으로 나타낸다.

$$r = 1.2931 \times \frac{273}{273 + t℃} \times \frac{10332 - 0.378\varphi Ps}{10332} \ (kg/㎥)$$

$$r = 1.2931 \times \frac{273}{273 + t℃} \times \frac{(10332 + P_1) - 0.378\varphi Ps}{10332}$$

φ : 관계습도 (%)
Ps : 포화수증기 압력
P_1 : 흡입압력(mmAq)

아. 효율 및 동력

a) 효율

Fan의 효율은 전압효율, 정압효율로 구분하는데 특별히 규정이 없는 한 전압효율을 말한다. 현재 국내 Fan Maker의 대부분은 전압 및 정압효율을 구분하여 사용하지 않고 있는 실정이다.
Fan의 효율은 형식별로 보면(Maker에 따라 차이가 있음), 다음과 같다.

기 종	효 율	기 종	효 율
Turbo Blower	40~70%	Axial Flow Fan	40~85%
Turbo Fan	60~80%	Roof Ventilator	40~50%
Air Foil Fan	70~85%	Wall Ventilator	30~50%
Sirocco Fan	40~60%	Plate Fan	40~70%

b) 동력계산

(1)이론공기동력

$$La = \frac{Q \times Pt}{6,120} \ (KW), \quad \frac{Q \times Pt}{4,500} \ (HP)$$

Q :풍량(㎥/min)
Pt :전압(mmAq)

(2)축동력(Black Horse Power)

$$Lb = \frac{Q \times Pt}{6,120 \times \eta} \ (KW), \quad \frac{Q \times Pt}{4,500 \times \eta} \ (HP)$$

η :송풍기 효율

(3)실제사용동력

$$Lk = Lb \times \chi$$

χ — 25HP 이하 20%
25~60HP 이하 15%
60HP 이상 10%

송풍기의 분류

가. 배출압력에 의한 분류

일반적으로 송풍기는 압력에 따라 저압용 팬(fan)과 고압용의 불로어(blower)로 구분한다.

송 풍 기		압 축 기	
FAN	BLOWER	COMPRESSOR	• Aq=Aqua(희랍어)로 물이란 뜻 • Aq=H_2O=Water=(Hg) • 1mmAq=1kg/㎡ • 1mmHg=13.6mmAq
1,000mmAq미만 (0.1kg/㎠)	1,000~10,000mmAq미만 (0.1kg/㎠~1.0kg/㎠미만)	10,000mmAq이상 (1kg/㎠이상)	

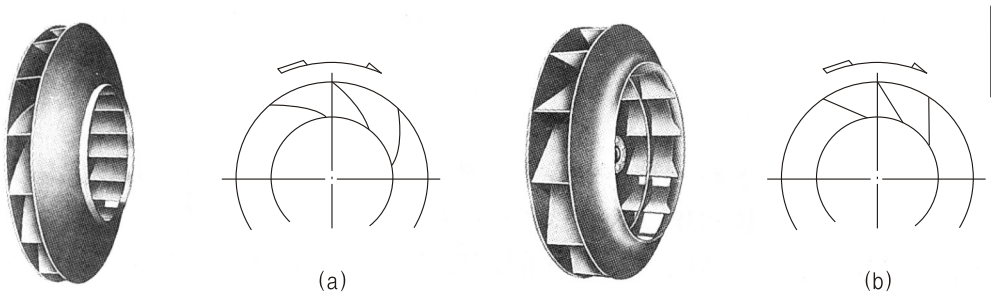
나. 날개(blade)의 형상에 따른 분류

기체의 수송 및 압축작용을 하는 회전날개의 형식에 따라 송풍기는 다음과 같이 구분한다.

- 날개의 형식에 의한 분류
  - 팬
    - 遠心形
      - 後曲形
      - 翼形
      - 放射形
      - 多翼形
      - 管流形
    - 斜流形
    - 軸流形
    - 模流形
  - 블로어
    - 遠心形
    - 斜流形
    - 軸流形
      - 프로펠러形
      - 튜브形
      - 베인形

a) 後曲形(TURBO FAN)

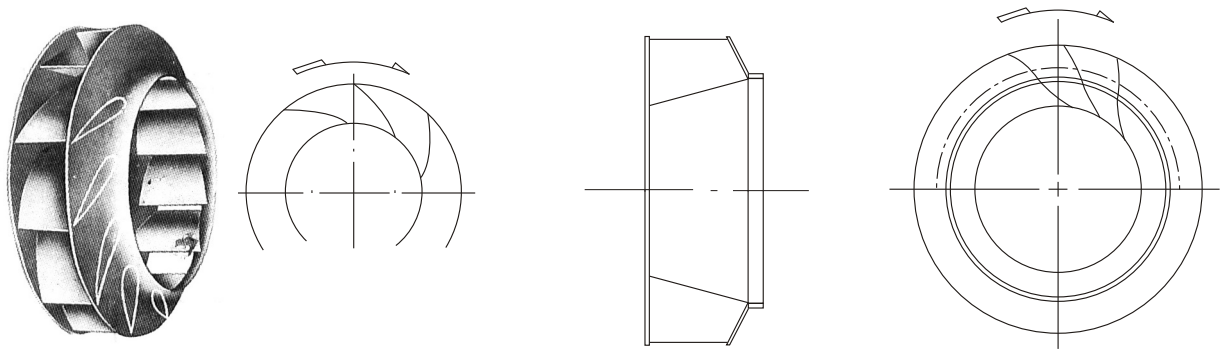
브레이드(blade)의 끝 부분이 회전방향의 뒤쪽으로 굽은 後曲形으로 (a)와 같이 날개가 곡선으로 된것과, (b)와 같이 직선으로 된것이 있다. 후곡형은 효율이 높고 논오버로드(nonover load:중량증가에 따른 소요동력의 급상승이 없음) 특성이 있으며, 고속에서도 비교적 정숙한 운전을 할 수 있는 것으로 터보형 송풍기(turbo fan)에 적용된다.



—후곡형 팬(fan)—

b) 翼形(AIR FOIL, LIMIT LOAD FAN)

후곡형과 다익형을 개량한 것이다. (a)는 翼形송풍기로, 박판을 접어서 유선형의 날개를 형성했다. 따라서, 고속회전이 가능하며 소음이 적다. (b)는 날개를 S字 모양으로 구부린 것으로 리미트로드팬(limit load fan)이라 한다. 다익형은 풍량이 증가하면 축동력이 급격히 증가하여 오버로드가 된다. 따라서, 이를 보완한 것이 익형 또는 리미트로드형이다.



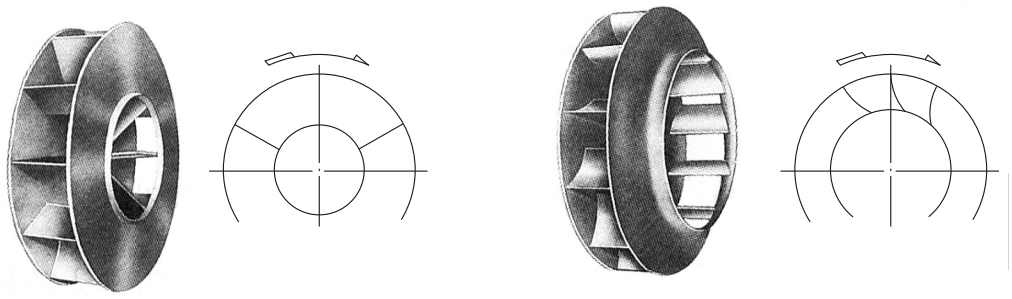
(a) (b)

－익형 팬(fan)－

c) 放射形(PLATE FAN)

방사형의 날개로서 (a)는 平板으로, (b)는 前曲(forward)으로 되어 있다.

방사형은 자기청소(self cleaning)의 특성이 있다. 따라서, 분진의 누적이 심하고, 이로 인해 송풍기 날개의 손상이 우려되는 공장용 송풍기에 적합하다. 그러나, 효율이나 소음면에서는 다른 송풍기에 비해 좋지 못하다.

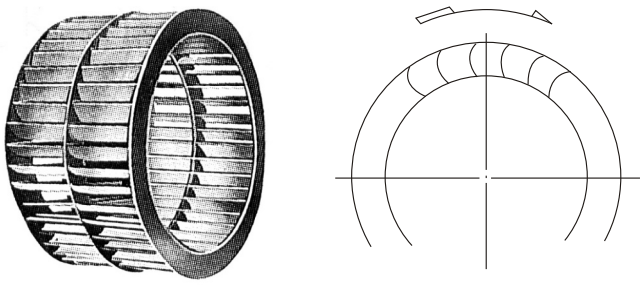


(a)평판형 (b)전곡형(forward)

－방사형 팬(fan)－

d) 多翼形(SIROCCO FAN)

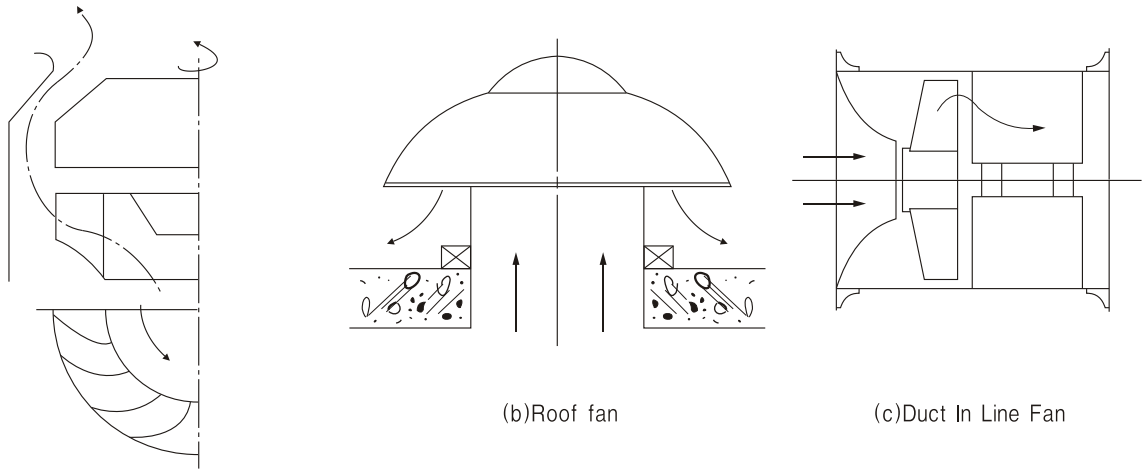
날개의 끝부분이 회전방향으로 굽은 전곡형으로 동일용량에 대해서 다른 형식에 비해 회전수가 상당히 적다. 동일용량에 대해서 송풍기 크기가 적고, 특히 팬코일유닛(FCU)에 적합하며, 저속덕트용 송풍기로 다익형송풍기(sirocco fan)라 한다.



－다익형 팬(fan)－

e) 管流形(TUBULAR FAN)

관류송풍기(tubular fan)로 회전날개는 후곡형이며, 원심력으로 빠져나간 기류는 그림에서와 같이 축방향으로 안내되어 나간다. 관류송풍기는 정압이 비교적 낮고, 송풍량도 적은 환기팬으로 옥상에 많이 설치된다. 이를 응용한 Duct In Line fan도 있다.



(a)cen. Roof (b)Roof fan (c)Duct In Line Fan

—관류형 팬(tubular fan)—

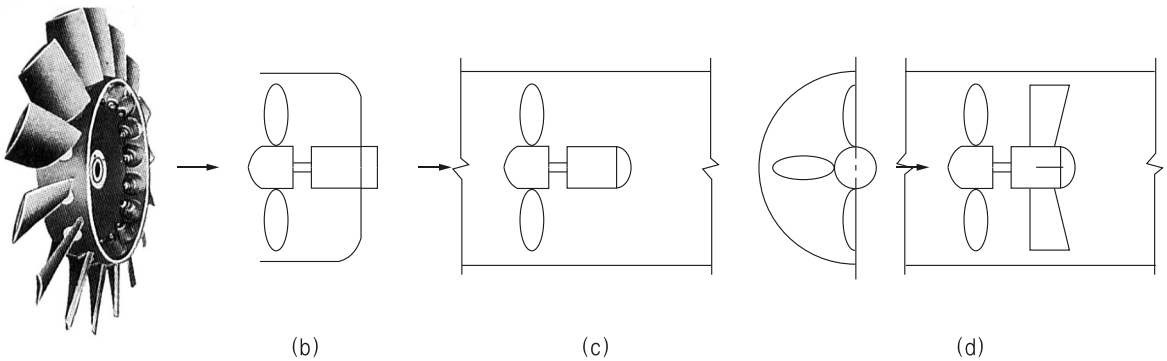
f) 軸流形(AXIAL FAN)

(a)와 같이 프로펠러형의 브레이드가 기체를 축방향으로 송풍한다. 축류송풍기는 낮은 풍압에 많은 풍량을 송풍하는데 적합하다.

덕트시스템이 없고, 공기 기류에 대한 저항이 적은 경우인 환기팬, 소형냉각탑, 유닛 히터에는 그림(b)와 같은 프로펠러팬(propeller fan)이 사용된다.

(c)는 튜브 축류팬(tube axial fan)으로 管모양의 하우징(housing)內에 송풍기가 들어 있다. 이 형식의 송풍기는 덕트 도중에 설치하여 송풍압력을 높히거나 국소 통기 또는 대형 냉각탑에 사용된다.

(d)는 축류팬의 전후에 가이드 베인(guide vane)을 설치한 것으로, 기류를 정류하는 역할도 갖는다. 따라서, 국소통풍이나 터널의 환기에 사용된다.



(a) (b) (c) (d)

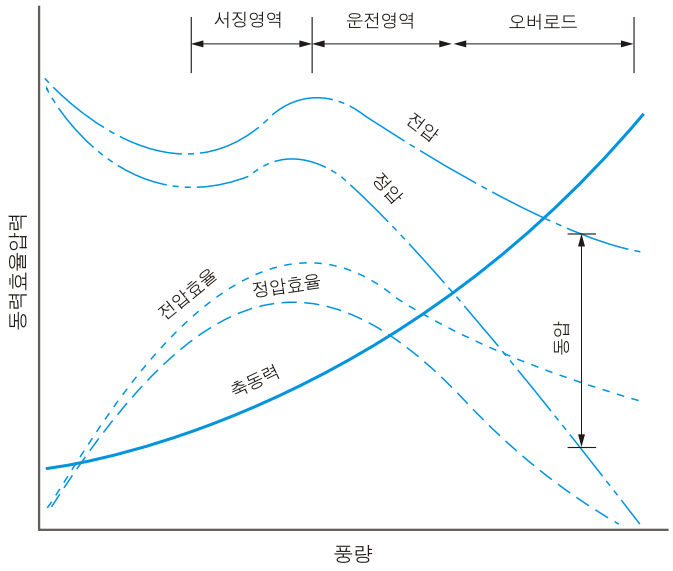
—축류형 팬(fan)—

가. 특성곡선의 구성

각종 송풍기는 고유의 특성이 있다. 이러한 특성을 하나의 선도로 나타낸 것을 송풍기의 특성 곡선이라 한다.

즉, 어떠한 송풍기의 특성을 나타내기 위하여 일정한 회전수에서 횡축을 풍량Q[㎥/min], 종축을 압력(정압 Ps, 전압 Pt)[mmAq], 효율[%], 소요동력L[kw]로 놓고 풍량에 따라 이들의 변화 과정을 나타낸 것을 말하며, 그림은 그 한 예이다.

그림에 의하면, 일정속도로 회전하는 송풍기의 풍량조절댐퍼을 열어서 송풍량을 증가시키면 축동력(실선)은



–송풍기의 특성곡선–

점차 급상승하고, 전압(1점쇄선)과 정압(2점쇄선)은 山形을 이루면서 강하한다. 여기서 전압과 정압의 差가 동압이다. 한편, 효율은 전압을 기준으로 하는 전압효율(점선)과 정압을 기준으로 하는 정압효율(은선)이 있는데 포물선 형식으로 어느 한계까지 증가후 감소한다.

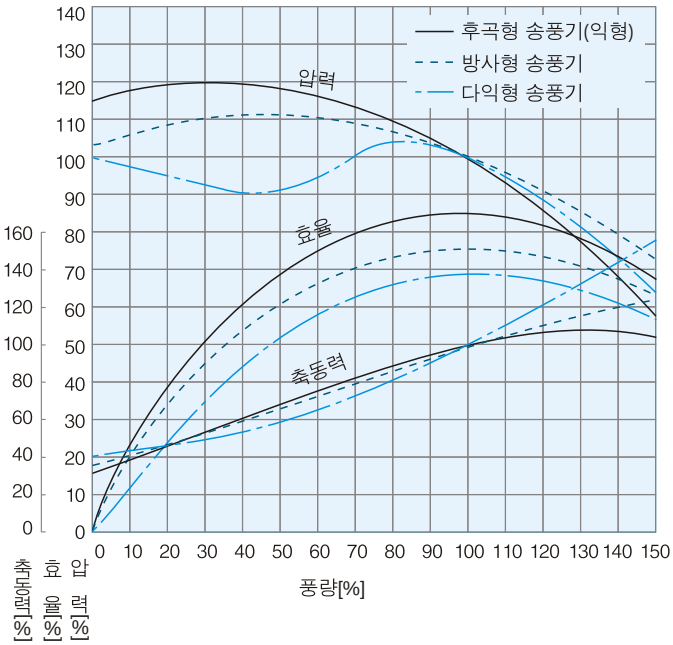
따라서, 풍량이 어느 한계 이상이 되면 축동력이 급증하고, 압력과 효율은 낮아지는 오버로드 현상이 있는 영영과, 정압곡선에서 左下向곡선부분은 송풍기 동작이 불안정한 서징(surging)현상이 있는 곳으로서 이 두 영영에서의 운전은 좋지 않다.

※서징(surging)의 대책

(1) 시방 풍량이 많고, 실사용 풍량이 적을 때 바이패스 또는 방풍한다.
(2) 흡입댐퍼, 토출댐퍼, R.P.M으로 조정한다.
(3) 축류식송풍기는 동 · 정익의 각도를 조정한다.

나. 각종 송풍기의 특성곡선과 특성비교

후곡형 송풍기, 방사형 송풍기, 다익형 송풍기에 대한 특성곡선 이다.
이 곡선은 최고효율점에 대한 풍량, 압력 및 축동력을 백분율로 표시하여 비교하였다.

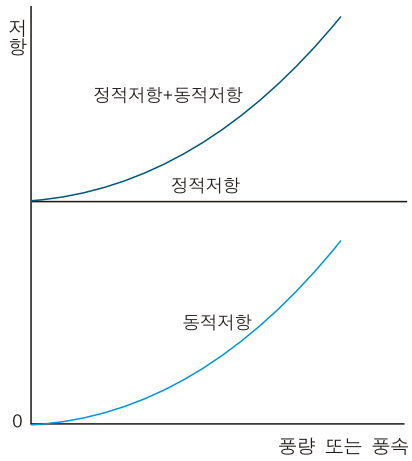


–특성곡선 비교–

다. 저항곡선

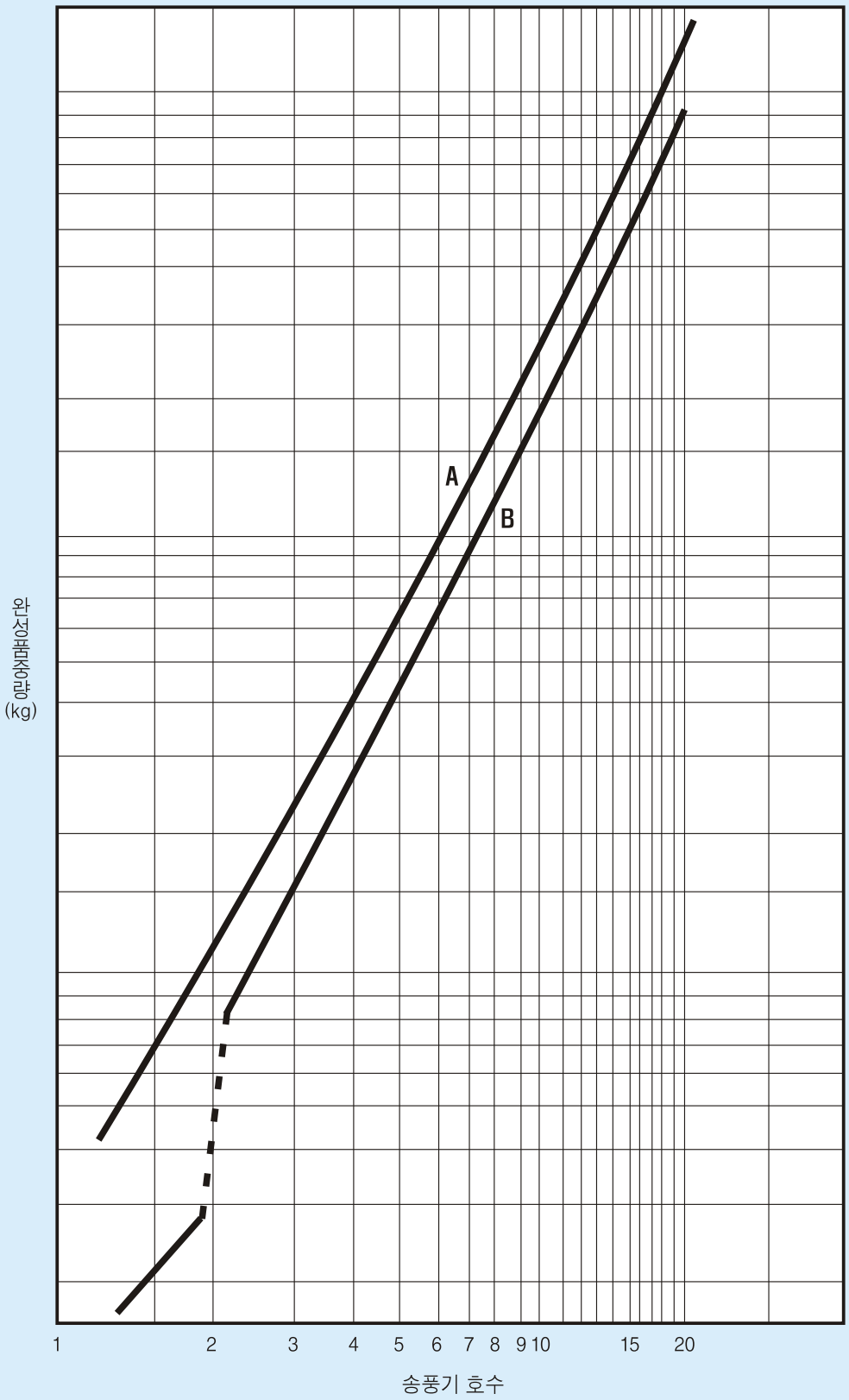
송풍기로 덕트를 통하여 공기 또는 가스를 보내는 장치 등의 경우에 그 덕트 또는 장치고유의 저항이 있다. 이 저항은 저항곡선과 같이 가스 속도의 2승에 비례한다(덕트의 단면적이 일정하면 풍량이 2승). 또, 저항 과 속도, 풍량에는 무관하게 일정한 저항이 2개가 있다. 전자는 동적 저항이라 하고, 후자는 정정각저항이라 한다.

예를 들면 수조에 저장된 물의 밑으로부터 공기를 흡출하도록 되어 있는 경우의 물의 깊이가 정적 저항이다.



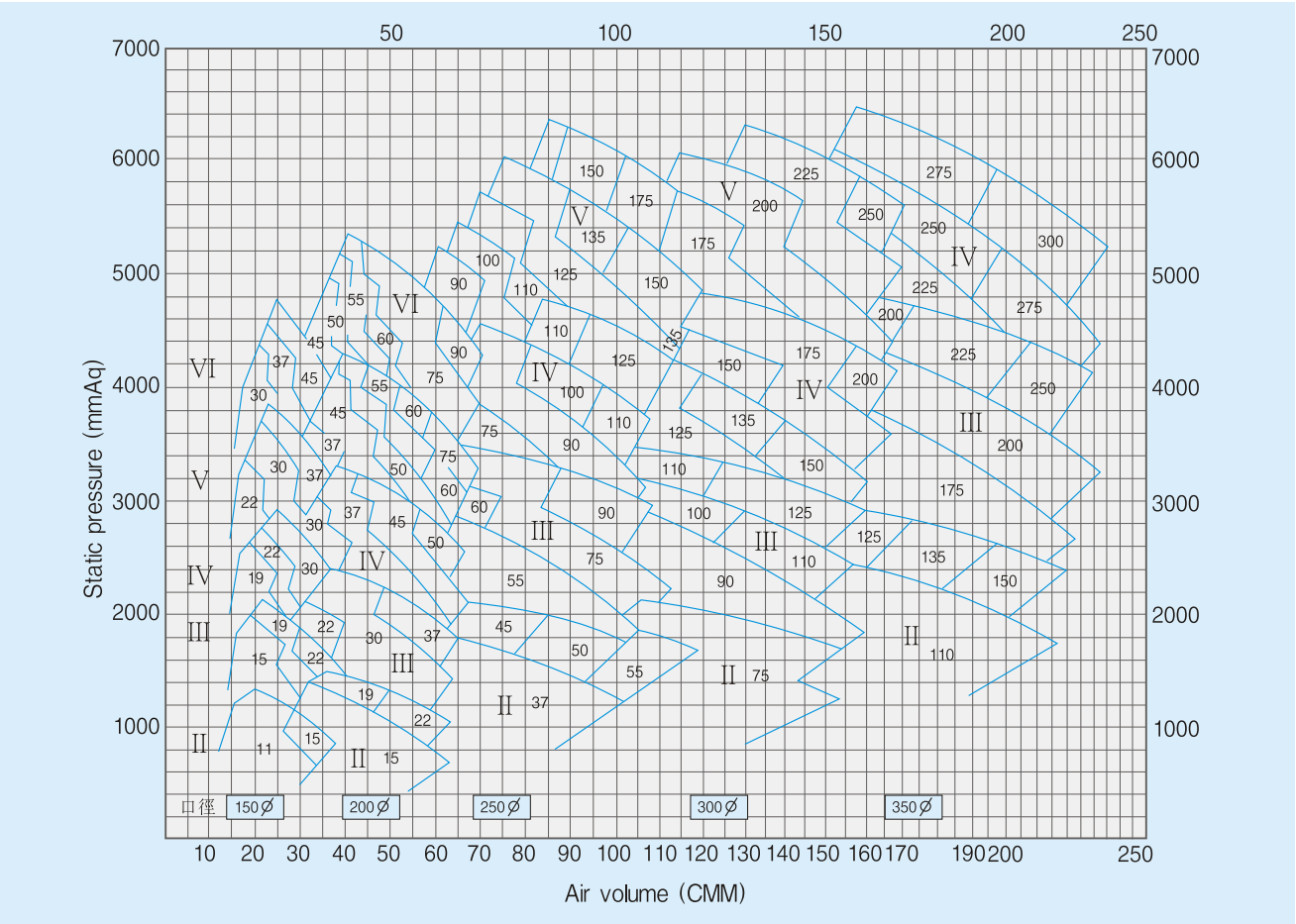
송풍기 완성품 중량곡선도

(주) 1. 원심송풍기인 다익형 송풍기와 익형송풍기 공히 아래 중량 곡선도를 적용하면 완성조립품의 중량을 알 수 있습니다.
2. 벨트 풀리 중량이 포함된 중량곡선도입니다.
3. 구동용 전동기 무게는 제외된 상태입니다.

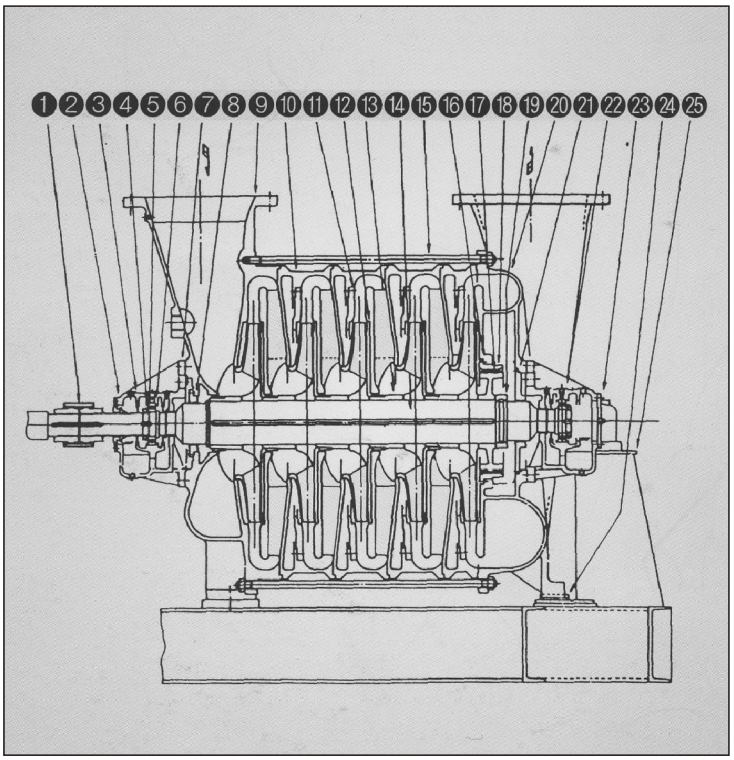


A : 양흡입식 원심송풍기　　B : 편흡입식 원심송풍기

Selection Chart

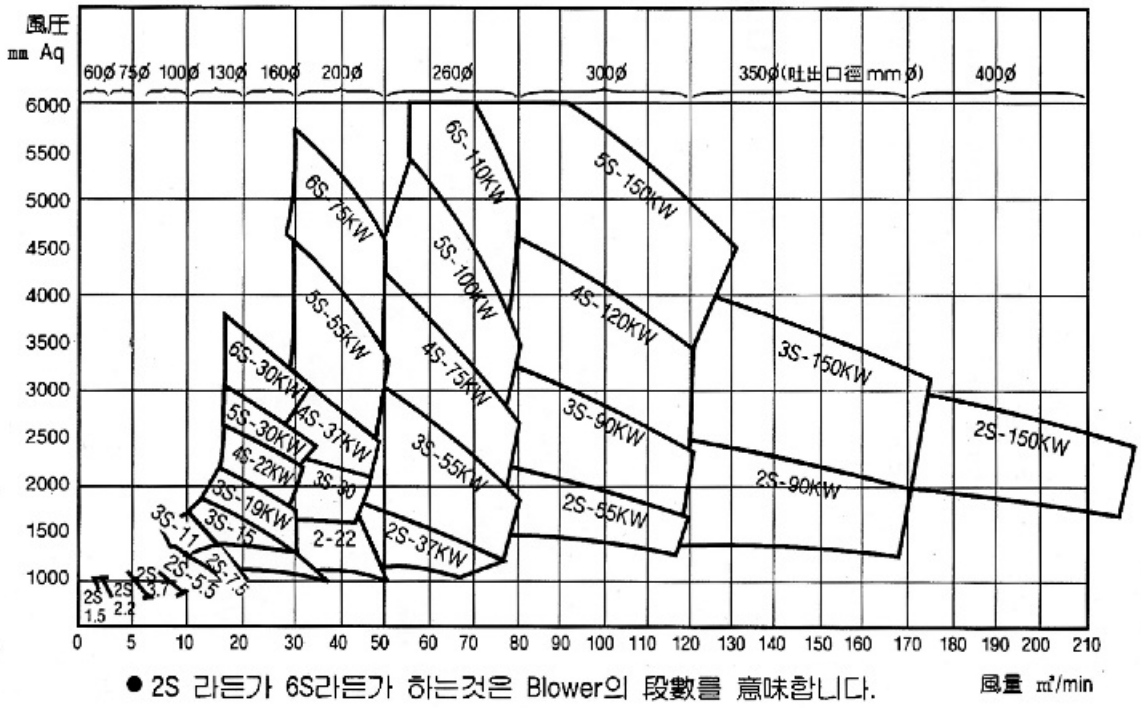


Dimensions



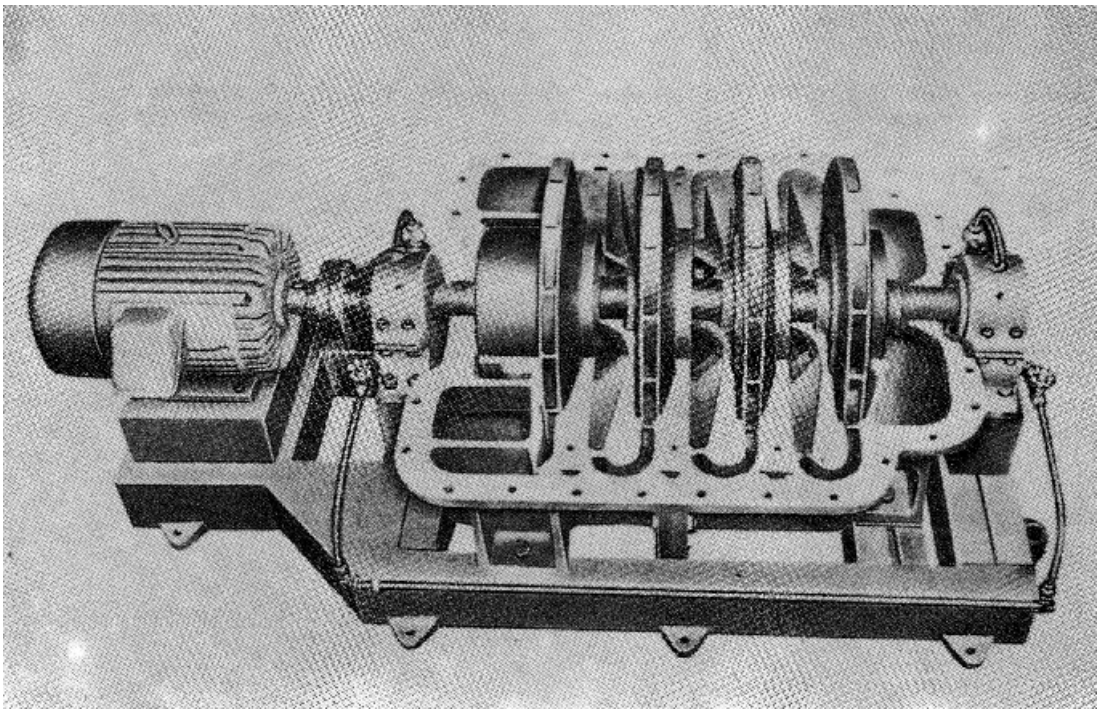
번호	부 품 명	재 료(KS)
1	Coupling	SM45C
2	Packing Gland(B/H)	GC20
3	Oil Cutter	Cu-Alloy
4	Lock Nut	SS400
5	Lock Washer	SS400
6	Bearing	-
7	Bearing Housing	GC20
8	Packing Gland(Casing)	Al-Alloy
9	Suction Cone	GC25
10	Casing	GC25
11	Labyrinth	Gc20
12	Impeller	Al-Alloy
13	Shaft Sleeve	SGP+Al-Alloy
14	Shaft	SM45C
15	Hex Bolt	SS400
16	Seal Ring	GC20+WJ9
17	Seal Disk	Al-Alloy
18	Seam Plate	Cu-Alloy
19	Lock Nut	SS400
20	Discharge Cone	GC25
21	Packing Gland(B/H)	Al-Alloy
22	Bearing Housing	GC25
23	Blind Flange Cover	SS400
24	Fan Base	SS400
25	Bearing Base	SS400

다단 TURBO BLOWER 용량선정도(60Hz)

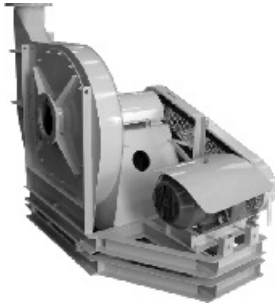


BRMC형

다수 TURBO BLOWER는 일반적으로 2극 전동기에 직결하며 2~8단이 보통이고 원료 GAS압송, 공기수송에 주로 많이 사용합니다



TURBO BLOWER



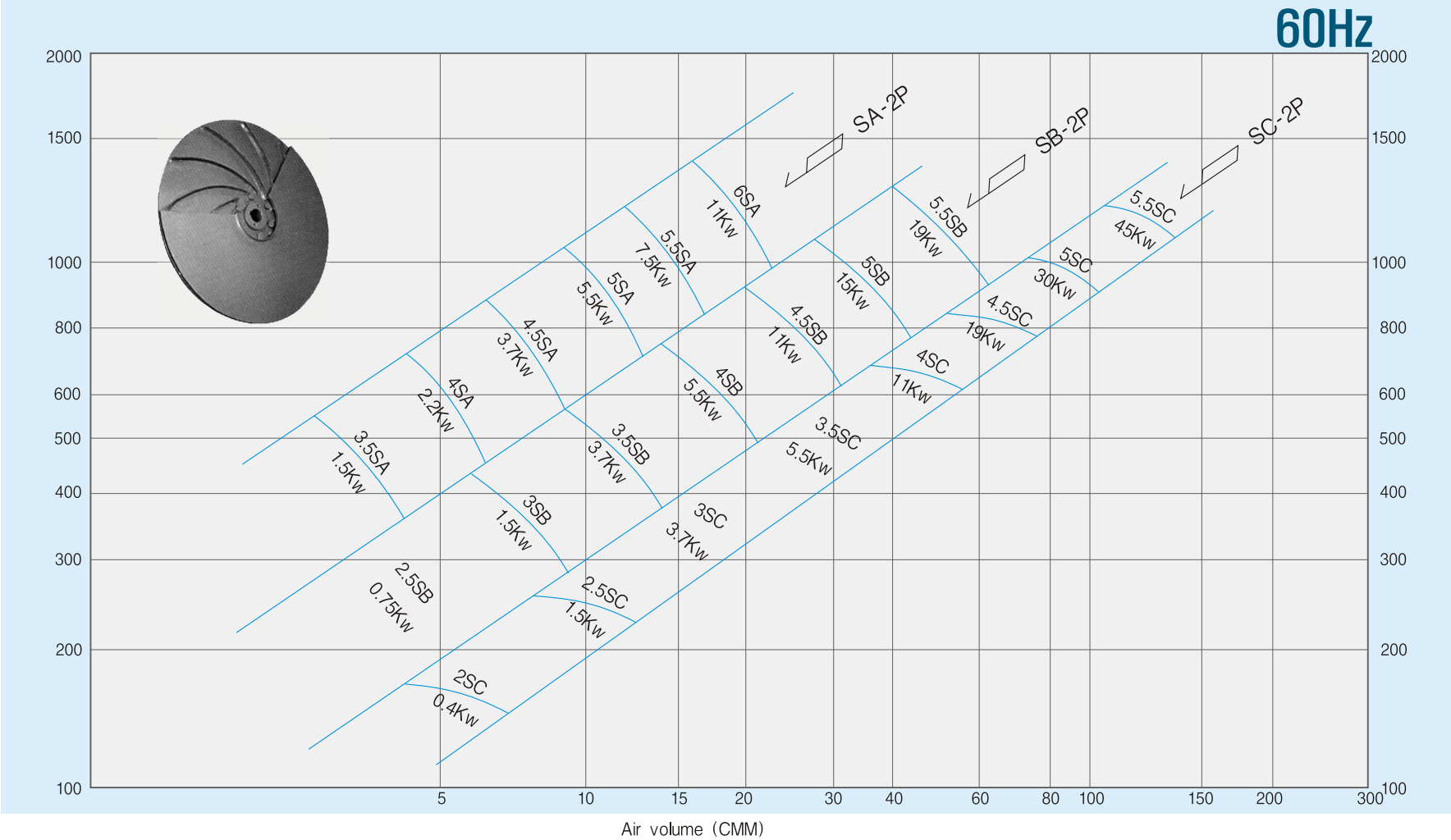
Characteristics

1) High-efficiency & high speed
2) Common structure
3) High pressure

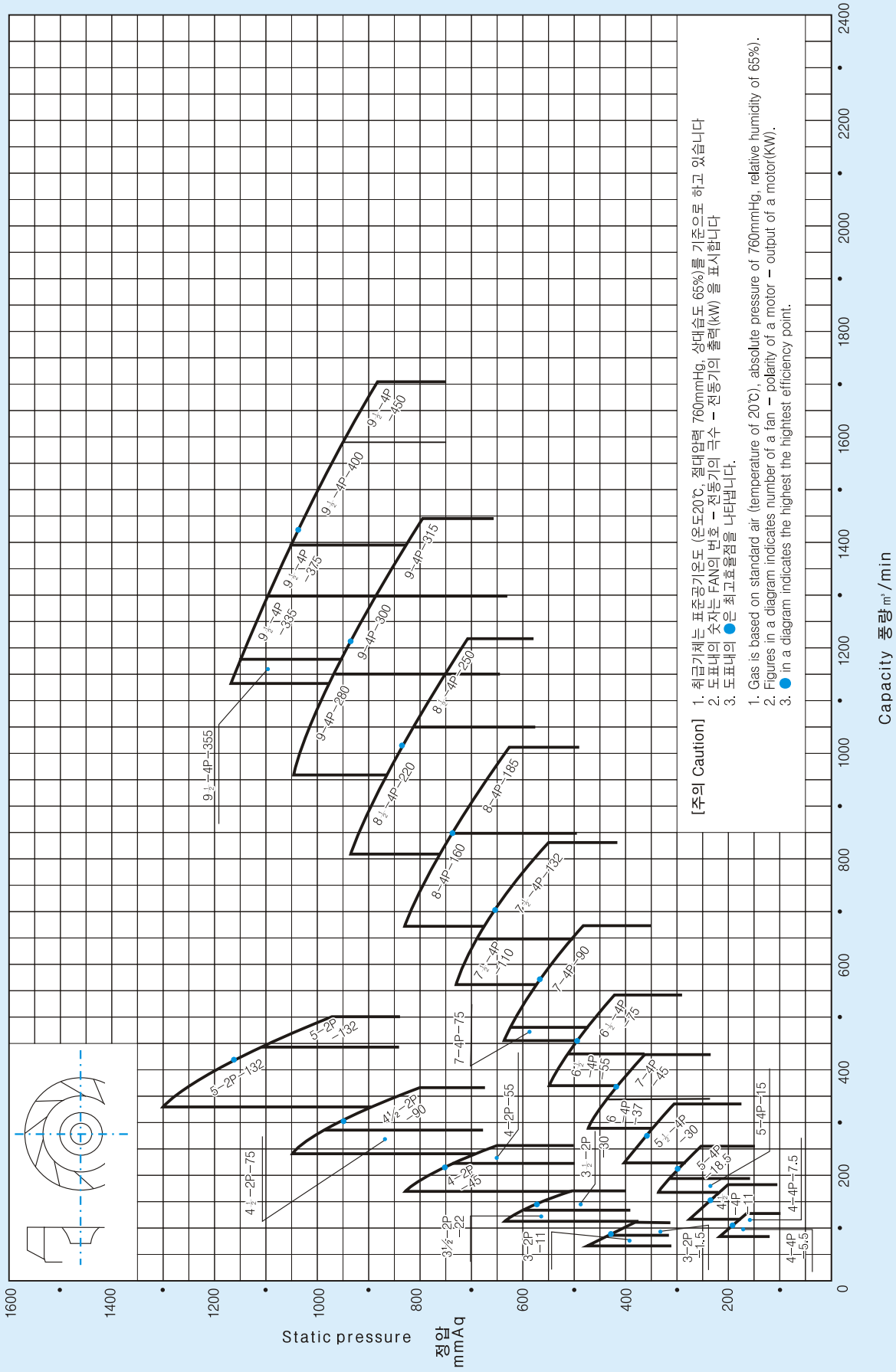
End use

for Burner, Cement, Shot brast, Dust collection, Pneumatic conveyor, etc.

Selection Chart

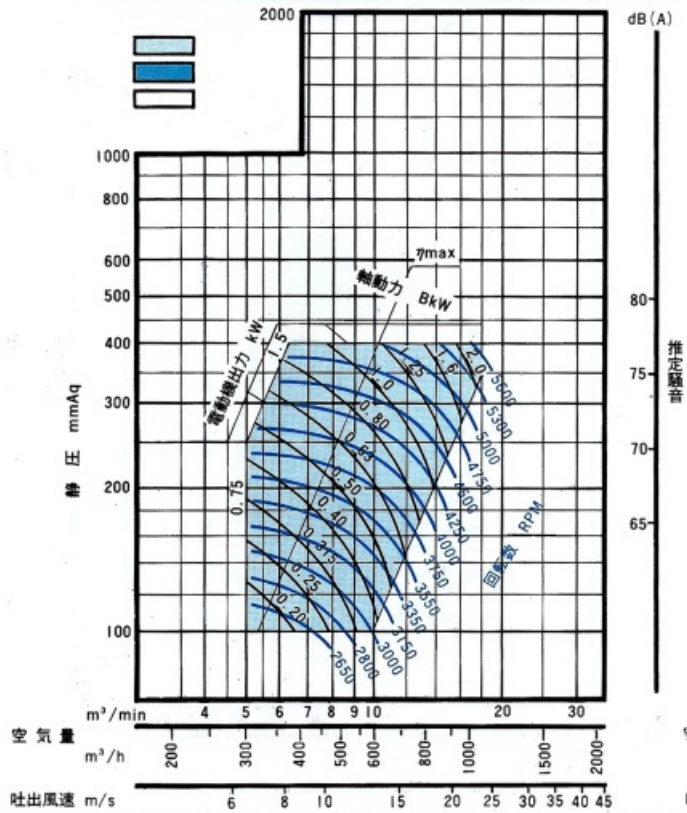


예상성능 특성도 Estimated performance characteristics



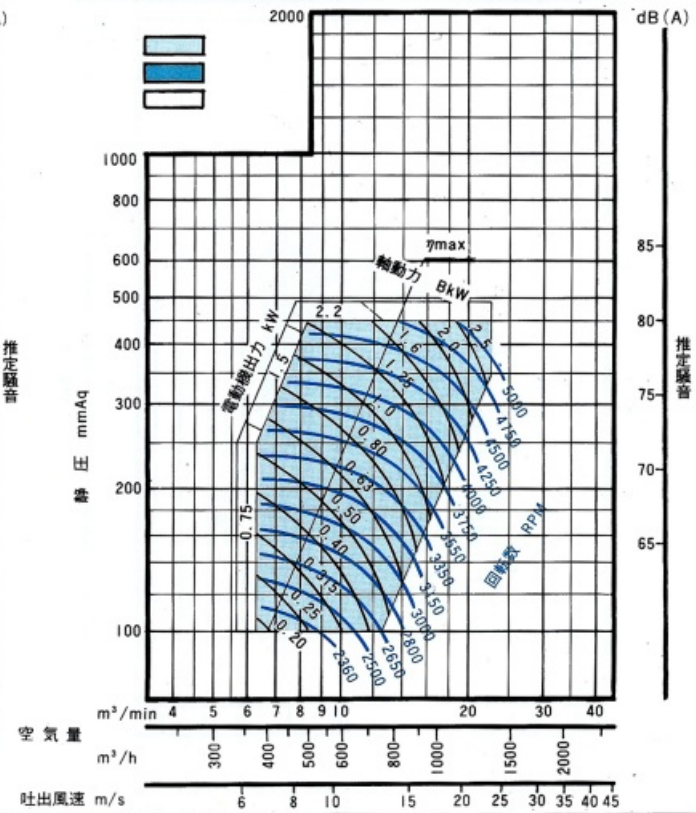
OSTB 2 片吸込式

吸込口面積 0.013 m²
吐出口面積 0.012 m²
羽根車直径 0.300 m²



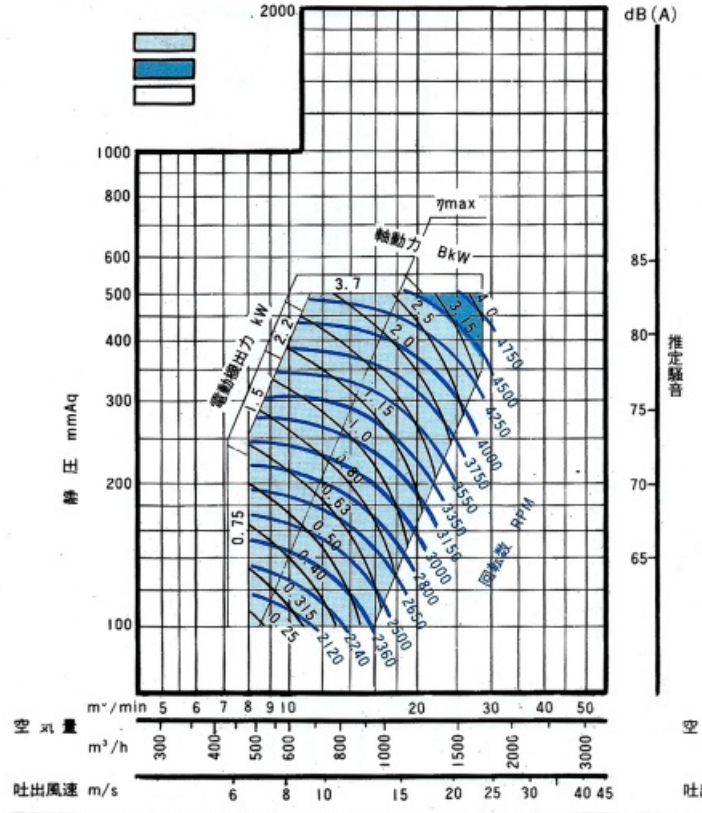
OSTB 2 1/4 片吸込式

吸込口面積 0.016 m²
吐出口面積 0.015 m²
羽根車直径 0.335 m



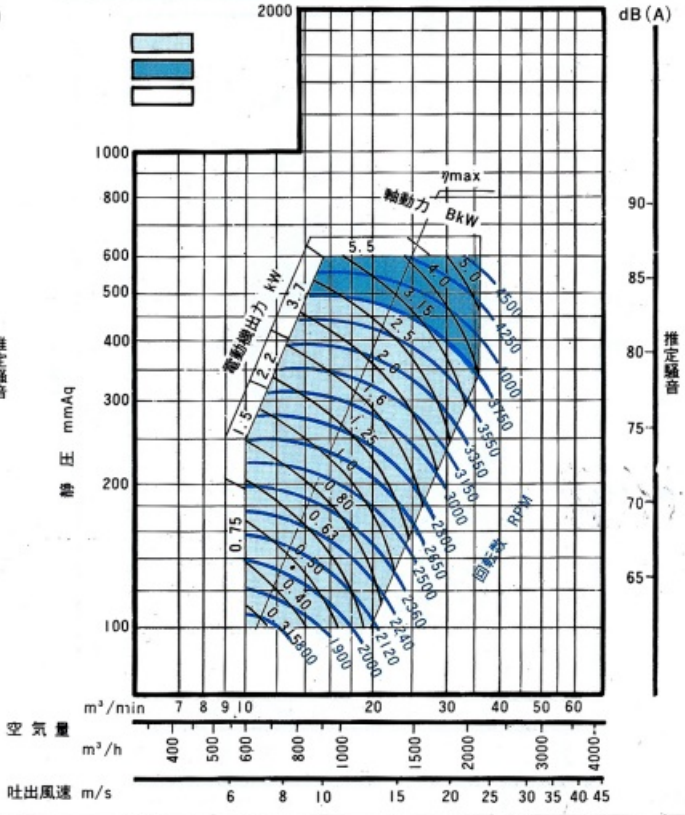
OSTB 2 1/2 片吸込式

吸込口面積 0.020 m²
吐出口面積 0.018 m²
羽根車直径 0.375 m



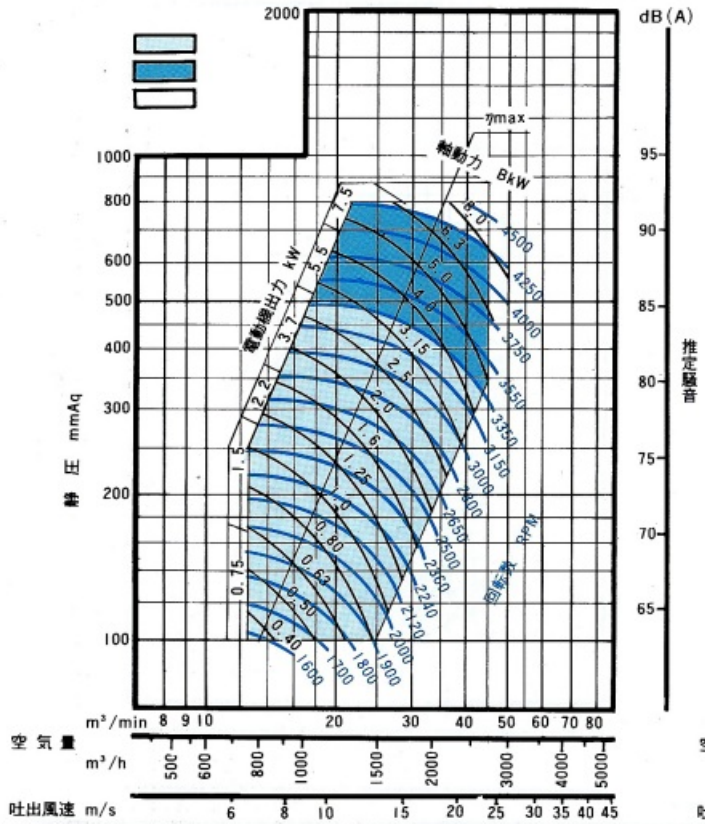
OSTB 2 3/4 片吸込式

吸込口面積 0.025 m²
吐出口面積 0.023 m²
羽根車直径 0.425 m



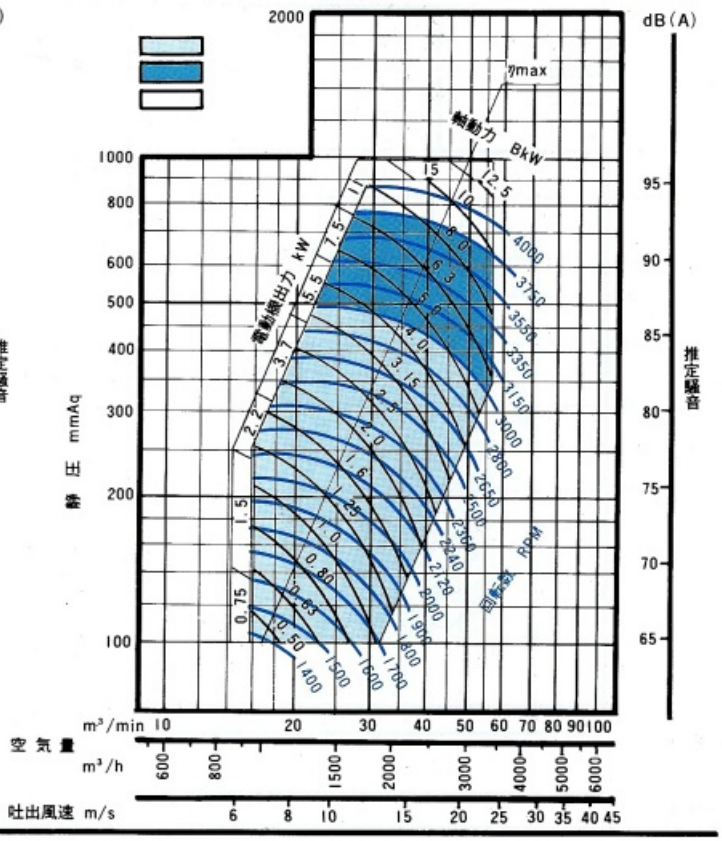
OSTB 3 片吸込式

吸込口面積 0.031 m²
吐出口面積 0.029 m²
羽根車直径 0.475 m



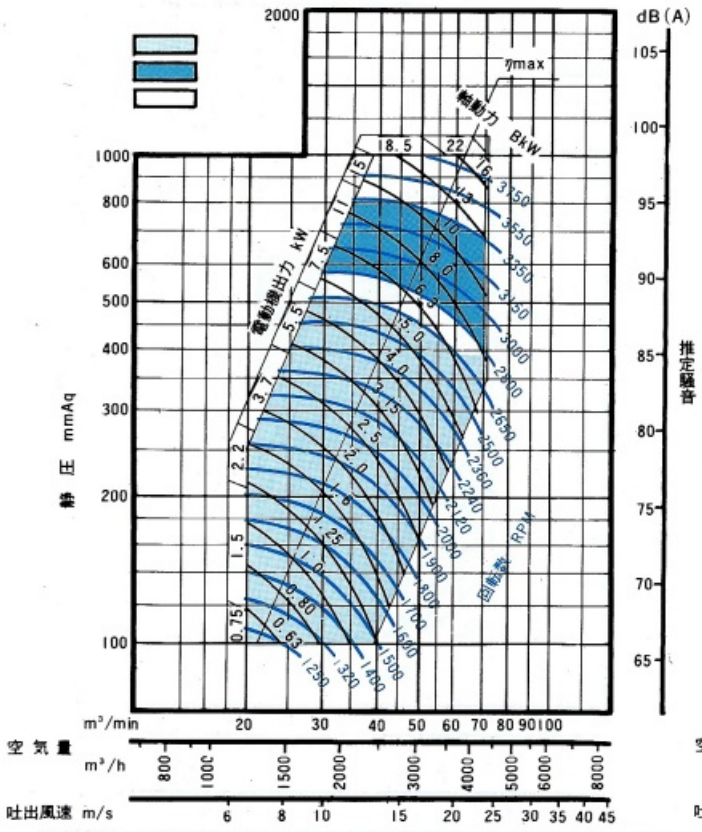
OSTB 3½ 片吸込式

吸込口面積 0.039 m²
吐出口面積 0.036 m²
羽根車直径 0.530 m



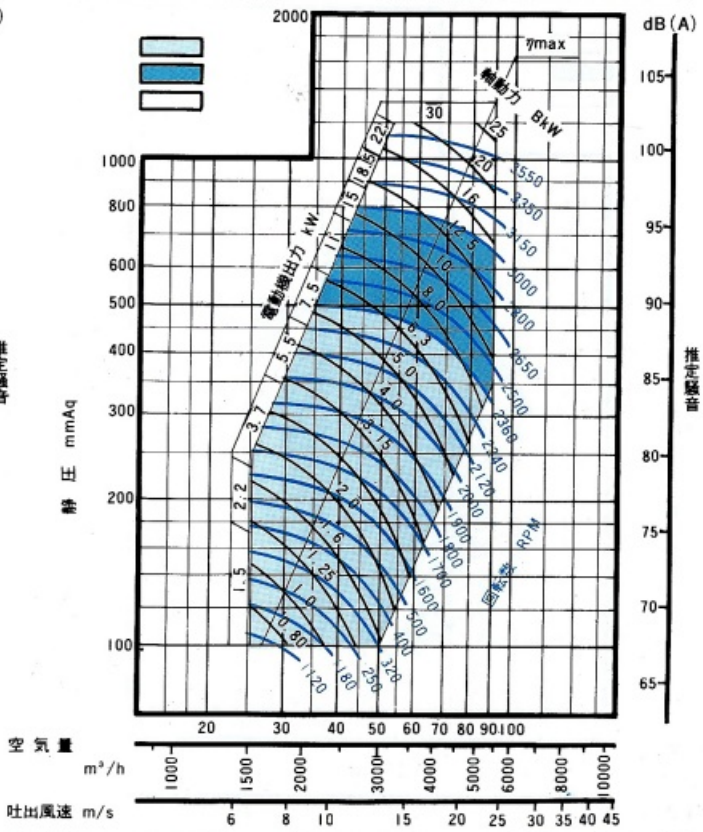
OSTB 4 片吸込式

吸込口面積 0.048 m²
吐出口面積 0.044 m²
羽根車直径 0.600 m



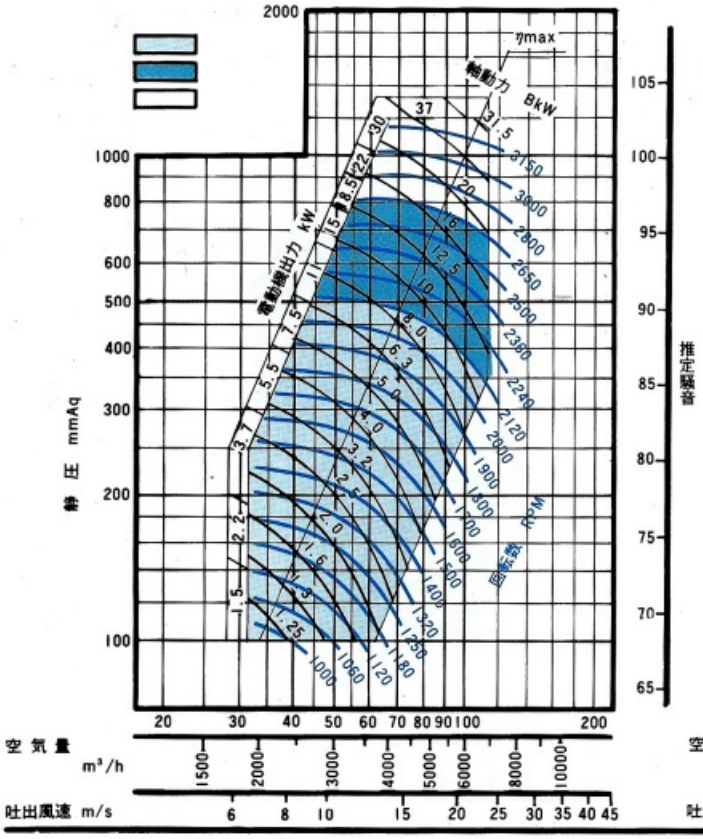
OSTB 4½ 片吸込式

吸込口面積 0.059 m²
吐出口面積 0.055 m²
羽根車直径 0.670 m



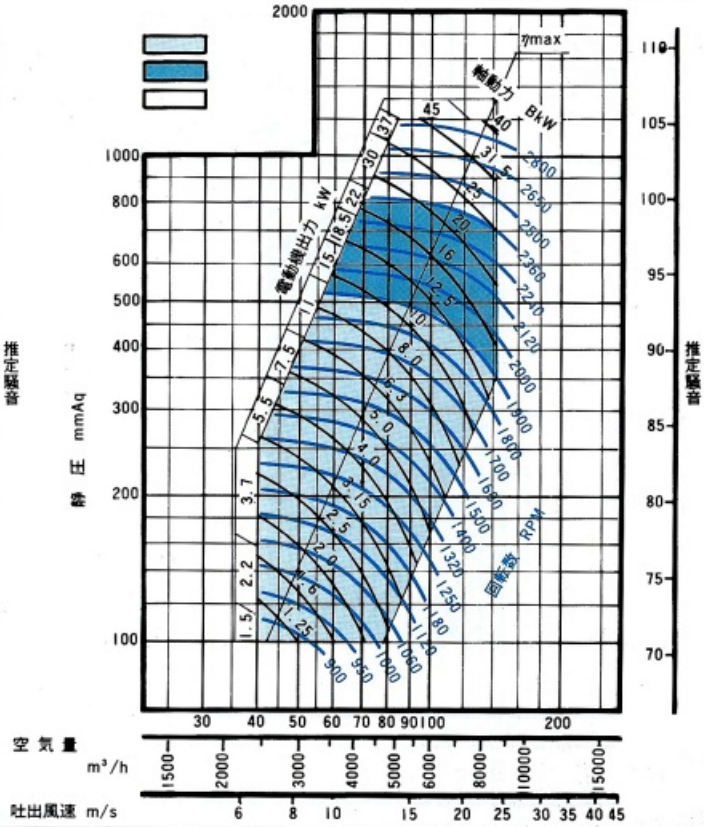
OSTB 5 片吸込式

吸込口面積 0.075 m²
吐出口面積 0.068 m²
羽根車直径 0.750 m



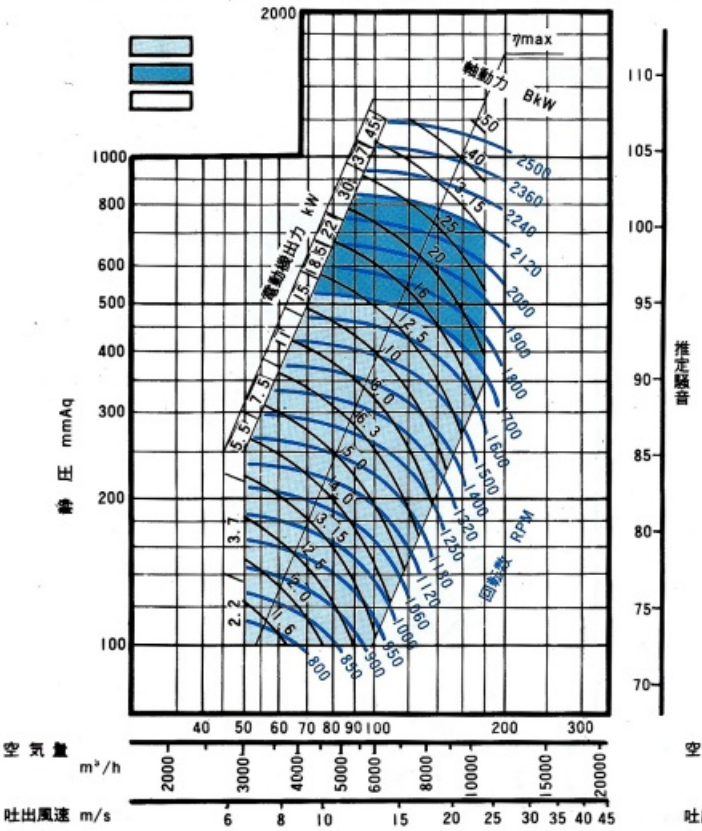
OSTB 5½ 片吸込式

吸込口面積 0.093 m²
吐出口面積 0.085 m²
羽根車直径 0.850 m



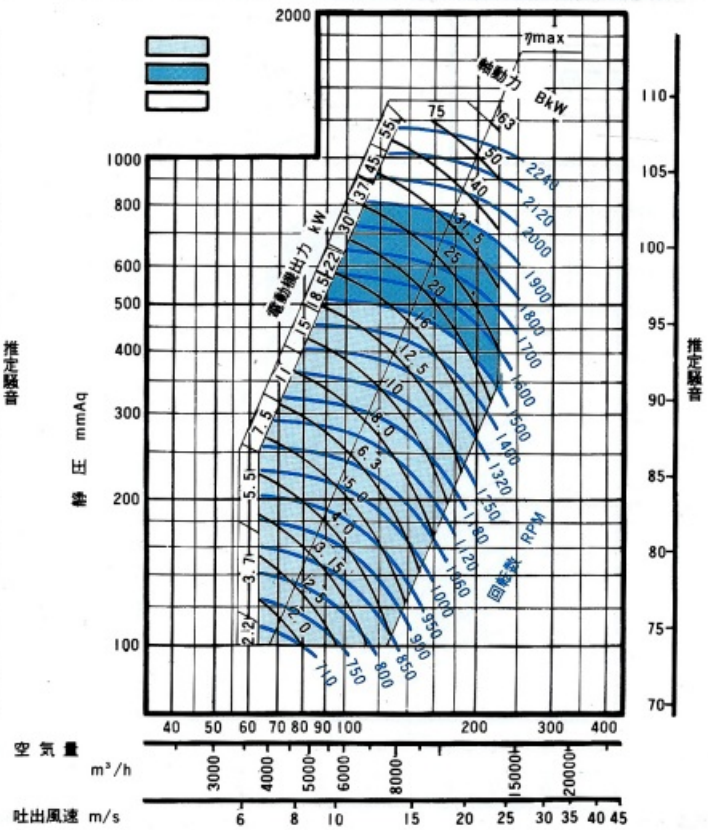
OSTB 6 片吸込式

吸込口面積 0.116 m²
吐出口面積 0.106 m²
羽根車直径 0.950 m



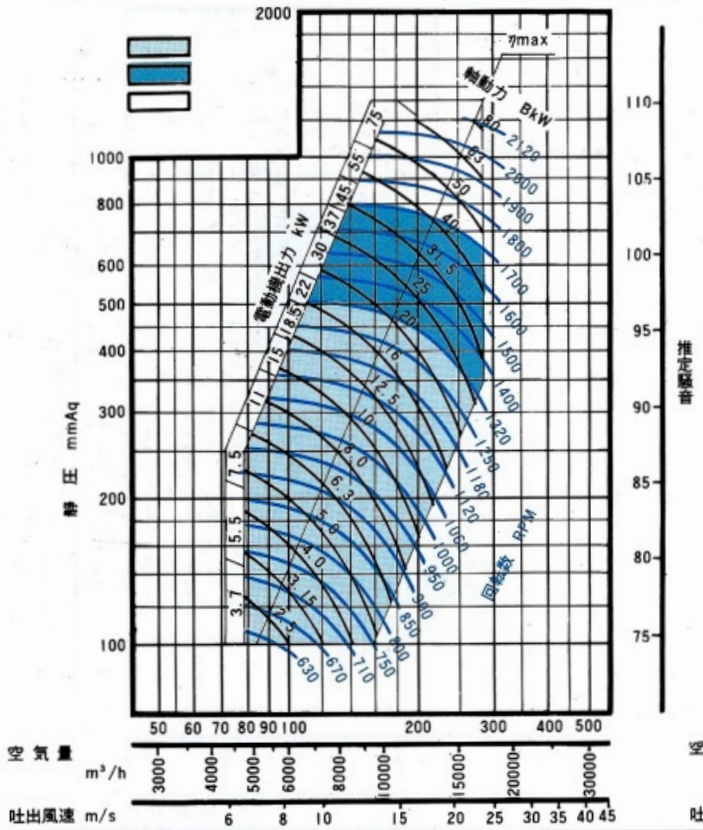
OSTB 7 片吸込式

吸込口面積 0.149 m²
吐出口面積 0.133 m²
羽根車直径 1.060 m



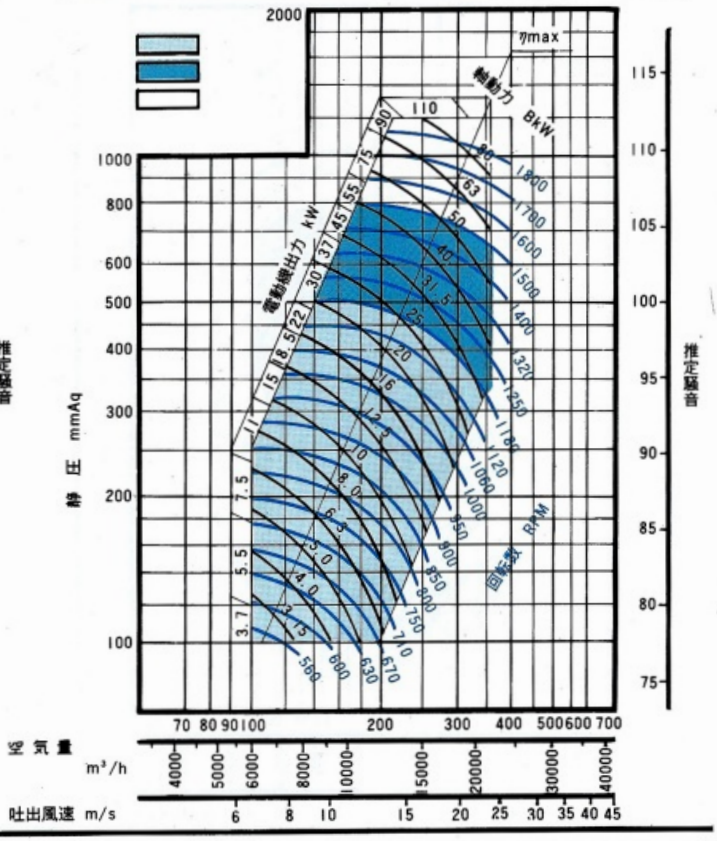
OSTB 8 片吸込式

吸込口面積 0.185 m²
吐出口面積 0.168 m²
羽根車直径 1.180 m



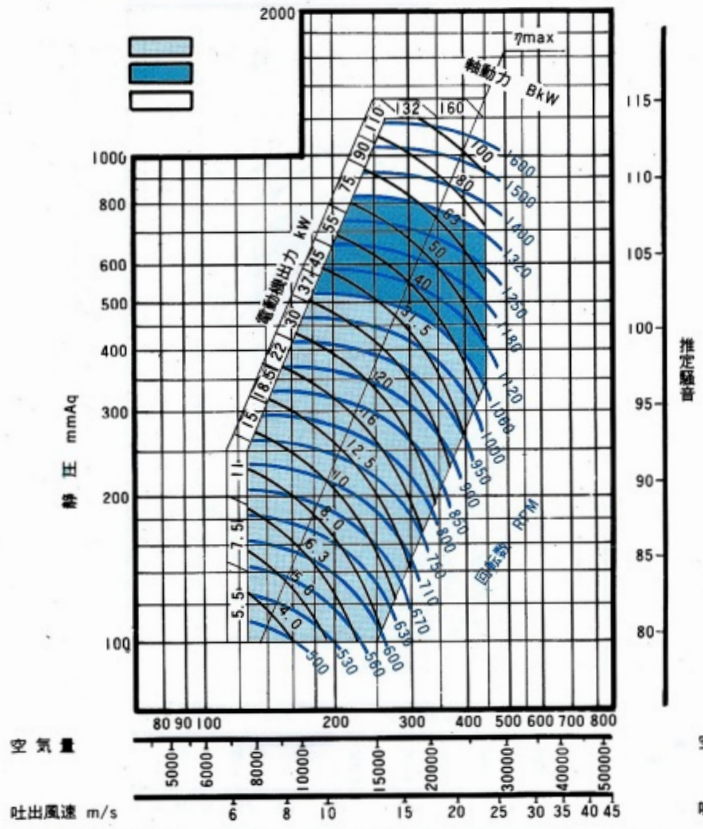
OSTB 9 片吸込式

吸込口面積 0.229 m²
吐出口面積 0.209 m²
羽根車直径 1.320 m



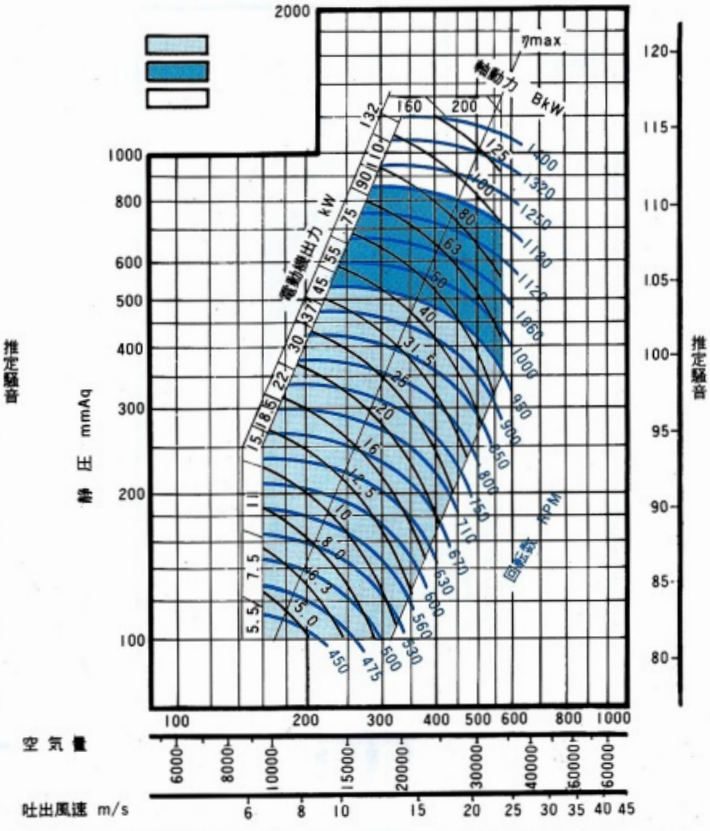
OSTB 10 片吸込式

吸込口面積 0.292 m²
吐出口面積 0.262 m²
羽根車直径 1.500 m

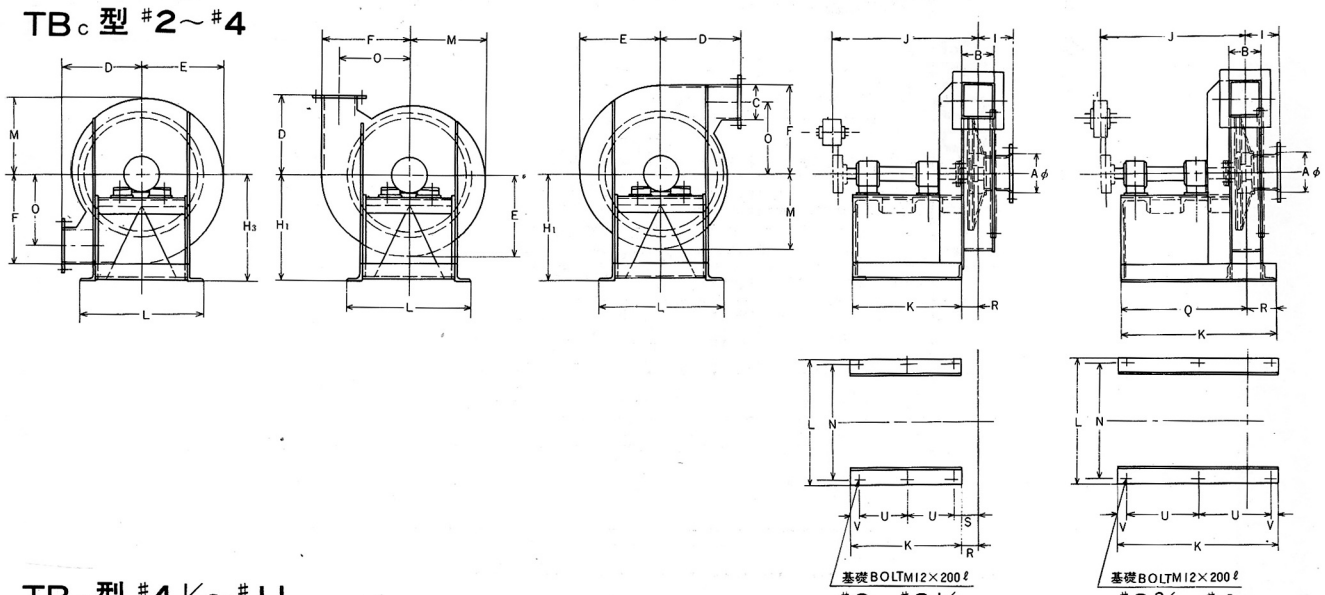


OSTB 11 片吸込式

吸込口面積 0.363 m²
吐出口面積 0.326 m²
羽根車直径 1.700 m



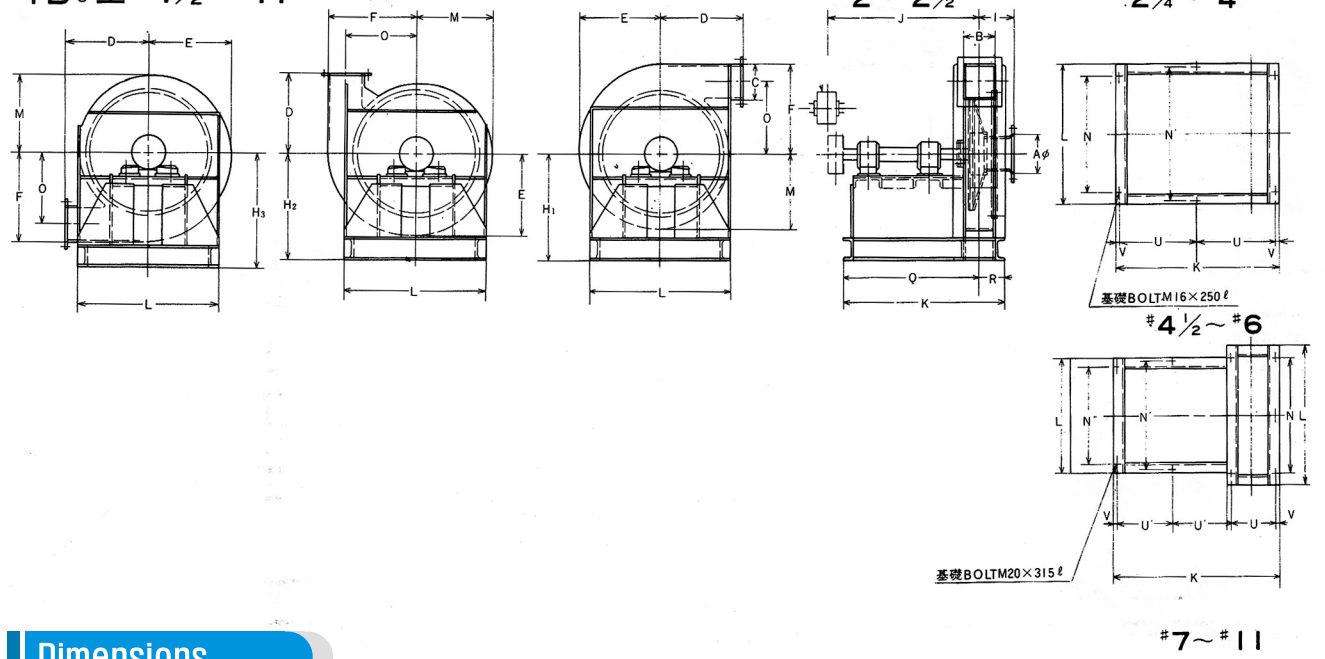
TBc 型 #2～#4



#2～#2½

#2¾～#4

TBc 型 #4½～#11

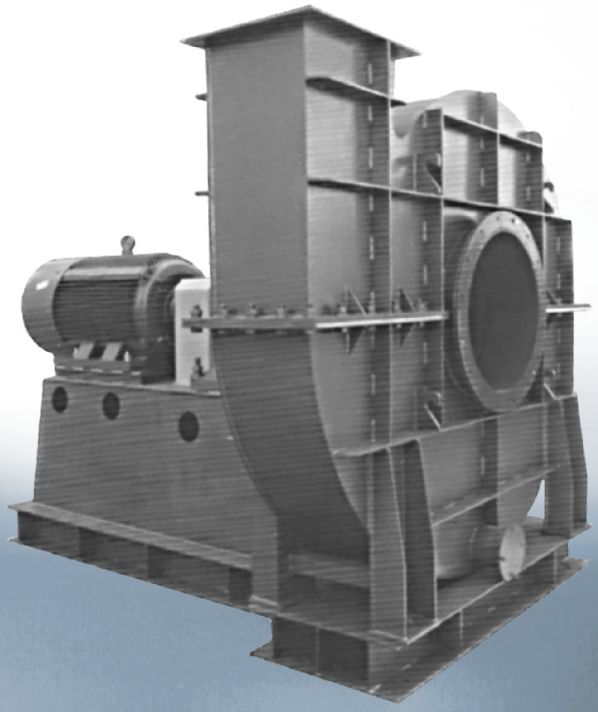


#4½～#6

#7～#11

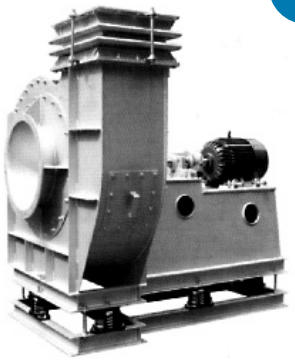
Dimensions

	A	B	C	D	E	F	M	H_1	H_2	H_3	O	I	J	K	L	R	Q	L'	N	N'	N"	S	U	U'	V	L - ㄷ	
2	128	100	122	224	228	250	206	250	-	300	189	95	510	350	400	50	-	-	360	-	-	70	155	-	20	L-50x6	70
2 1/4	142	110	135	250	255	280	230	280	-	335	213	106	515	350	400	55	-	-	360	-	-	75	155	-	20	L-50x6	80
2 1/2	160	122	150	280	287	315	259	315	-	375	240	118	551	380	500	61	-	-	460	-	-	81	170	-	20	L-50x6	110
2 3/4	180	135	170	300	323	355	291	355	-	425	270	125	578	586	560	118	468	-	500	-	-	-	273	-	20	L-50x6	140
3	200	150	190	335	364	400	328	400	-	475	305	140	615	630	600	125	505	-	540	-	-	-	295	-	20	L-50x6	190
3 1/2	222	170	210	375	408	450	366	425	-	530	345	160	665	680	630	135	545	-	570	-	-	-	320	-	20	L-50x6	220
4	246	190	234	425	456	500	412	475	-	600	383	180	695	720	630	145	575	-	570	-	-	-	340	-	20	L-50x6	300
4 1/2	275	210	260	475	510	560	460	475	530	710	430	200	792	840	800	170	670	-	650	740	-	-	390	-	30	L-50x6	400
5	310	234	290	530	572	630	514	530	600	800	485	224	850	910	900	182	728	-	750	840	-	-	425	-	30	ㄷ-125x65x6	500
5 1/2	345	260	325	600	646	710	582	600	670	850	548	250	930	1010	1000	195	815	-	850	940	-	-	475	-	30	ㄷ-125x65x6	680
6	385	290	365	630	726	800	652	670	750	950	618	265	995	1090	1120	210	880	-	970	1060	-	-	515	-	30	ㄷ-125x65x6	860
7	435	325	410	710	816	900	732	750	850	1060	695	300	1123	1210	1250	238	972	1000	1100	930	850	-	406	367	35	ㄷ-150x75x6.5	960
8	485	365	460	800	906	1000	812	850	950	1180	770	335	1228	1340	1400	258	1082	1060	1250	990	910	-	446	412	35	ㄷ-150x75x6.5	1350
9	540	410	510	900	1015	1120	910	950	1060	1320	865	375	1330	1460	1600	280	1180	1180	1450	1110	1030	-	490	450	35	ㄷ-150x75x6.5	1600
10	610	460	570	1000	1138	1250	1026	1060	1180	1450	965	425	1450	1610	1800	305	1305	1250	825x2	1180	1100	-	540	500	35	ㄷ-180x75x7	2200
11	680	640	640	1120	1279	1400	1158	1180	1320	1600	1080	475	1575	1760	2000	330	1430	1400	925x2	1330	1250	-	590	550	35	ㄷ-180x75x7	2700



TURBO FAN

TURBO FAN



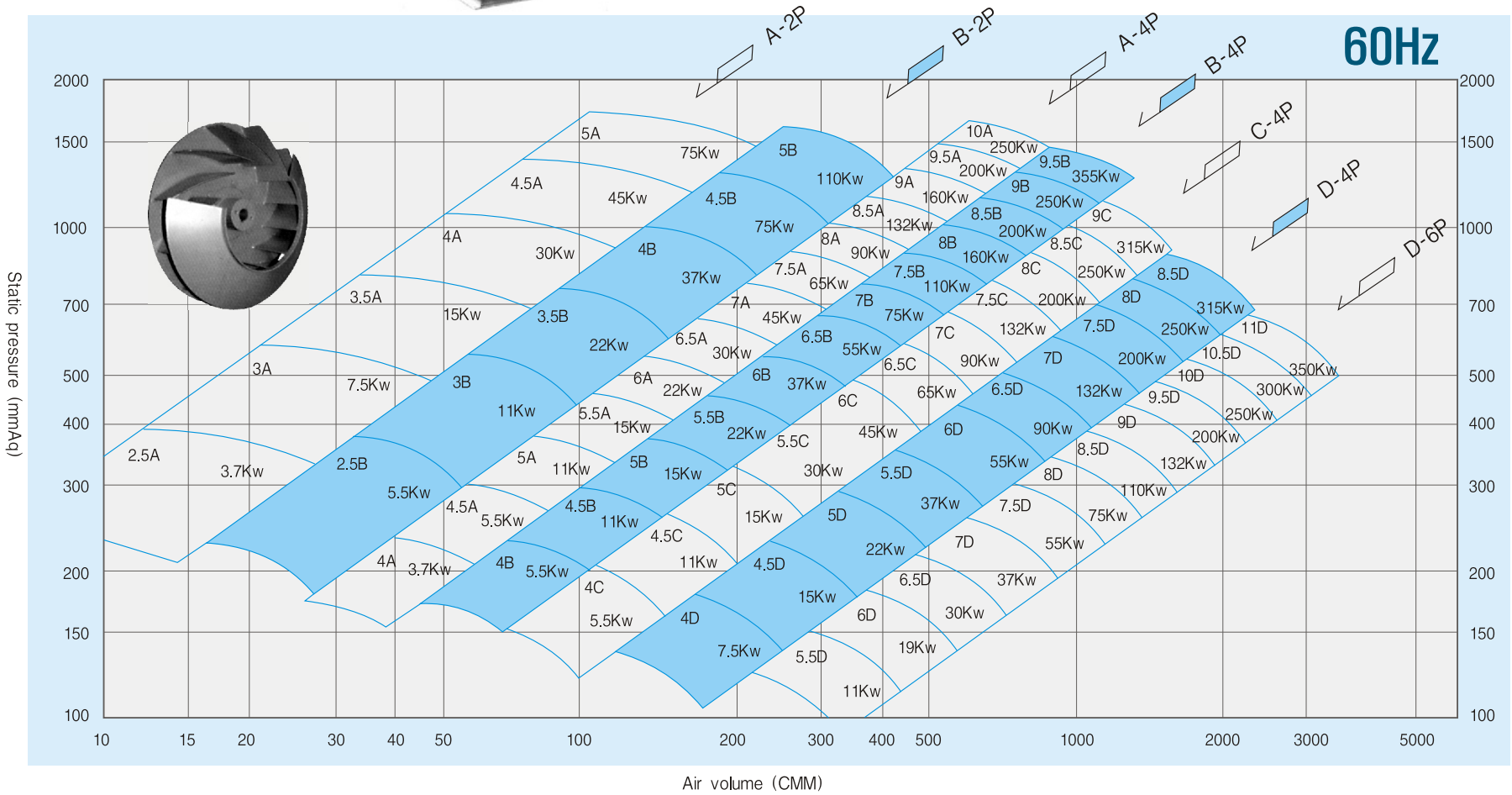
Characteristics

1) High-efficiency & high speed
2) solid structure
3) Super capacity
4) Easy readjustment of revolution frequency

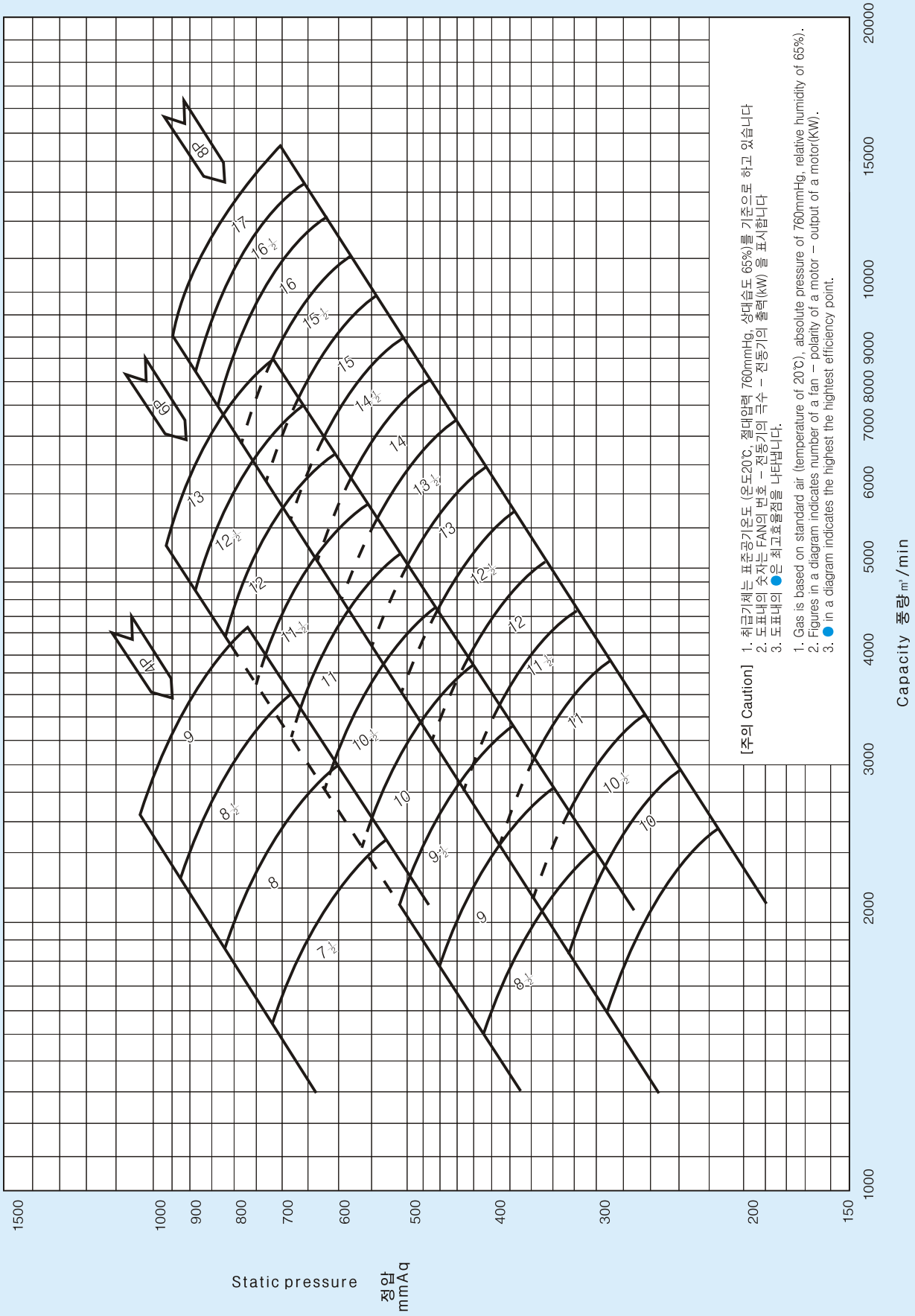
End use

for Boilers, Cement, Steel, Petro-Chemical plants.
Dust collection devices, etc.

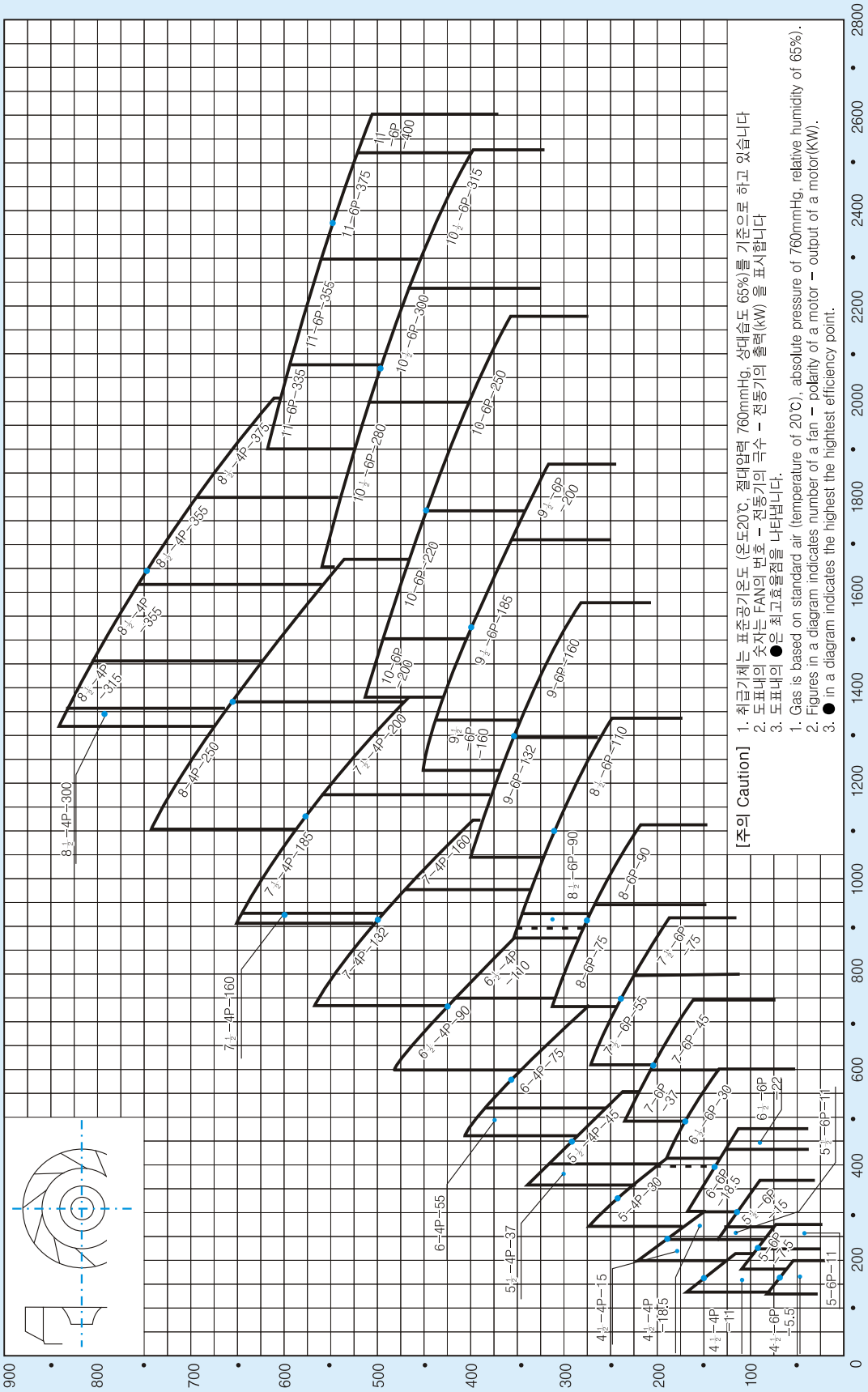
Selection Chart



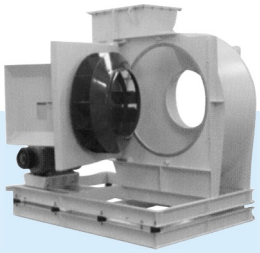
용량 선정도

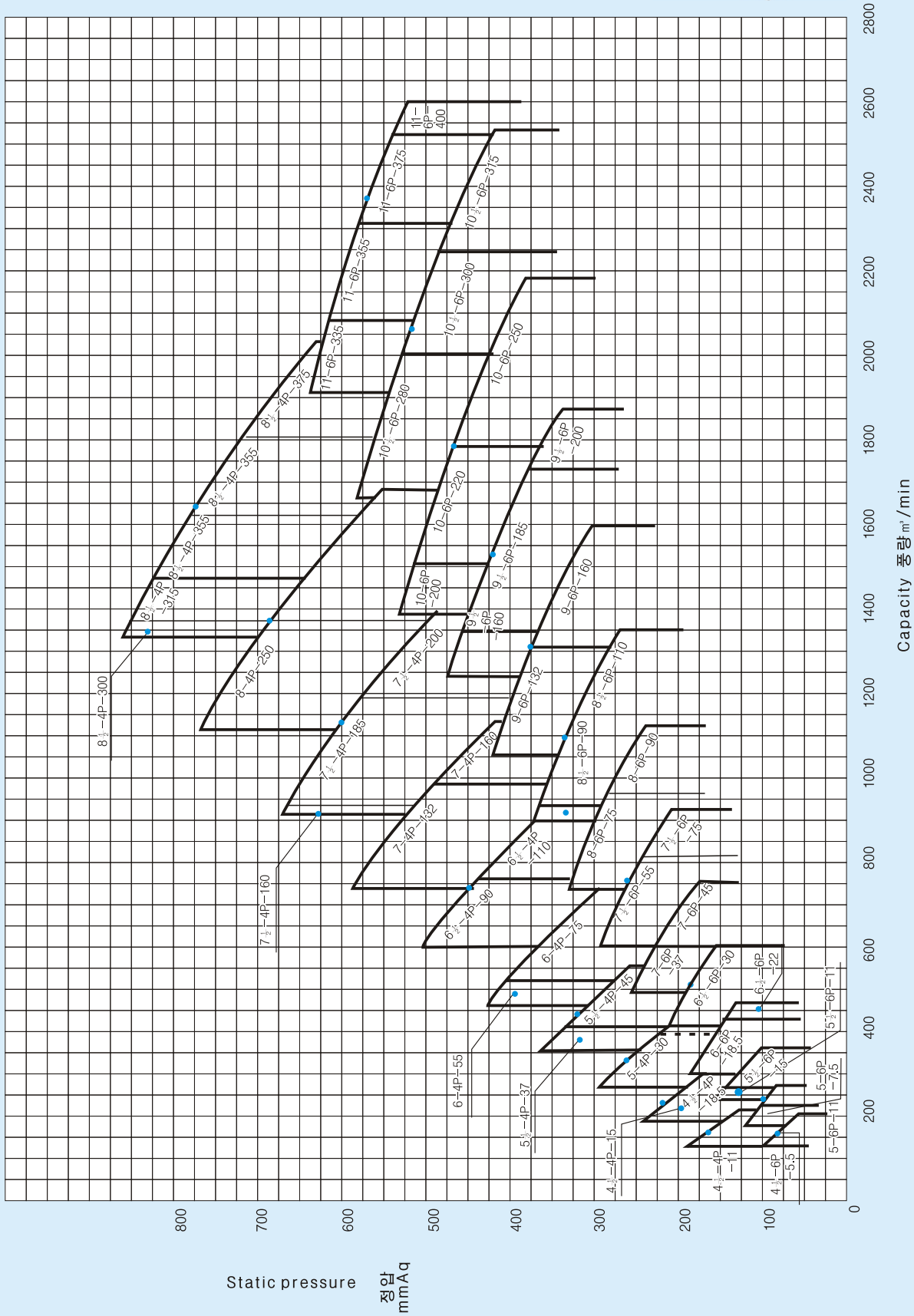

4P
6P
8P
Static pressure 정압 mmAq
1500
1000
900
800
700
600
500
400
300
200
150
Capacity 풍량 m³/min
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
15000
20000
[주의 Caution]
1. 취급기체는 표준공기온도 (온도20℃, 절대압력 760mmHg, 상대습도 65%)를 기준으로 하고 있습니다
2. 도표내의 숫자는 FAN의 번호 – 전동기의 극수 – 전동기의 출력(kW) 을 표시합니다
3. 도표내의 ●은 최고효율점을 나타냅니다.
1. Gas is based on standard air (temperature of 20℃), absolute pressure of 760mmHg, relative humidity of 65%).
2. Figures in a diagram indicates number of a fan – polarity of a motor – output of a motor(KW).
3. ● in a diagram indicates the highest the hightest efficiency point.

예상성능 특성도 Estimated performance characteristics



예상성능 특성도

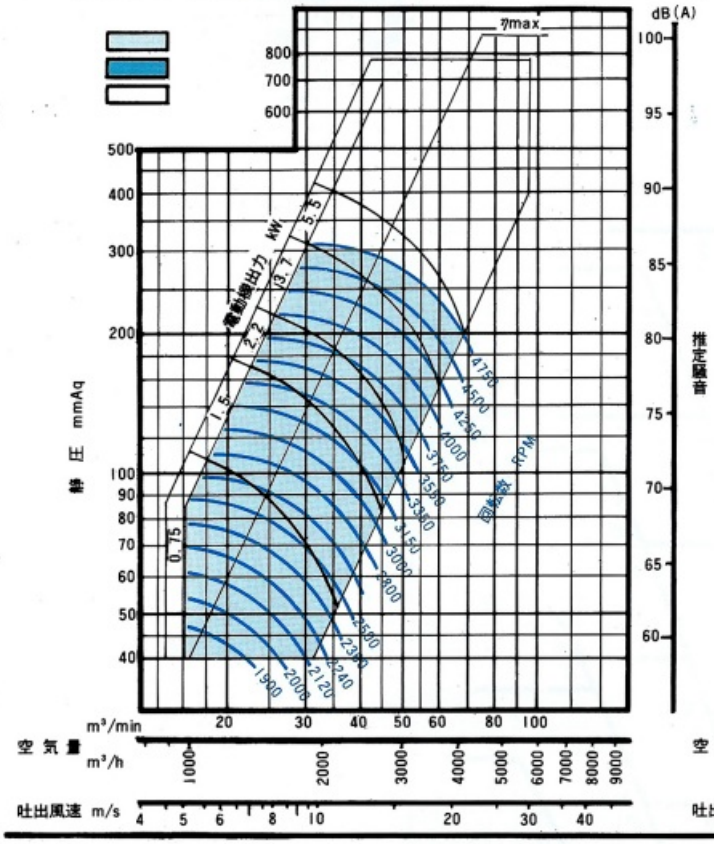



Static pressure
정압
mmAq
800
700
600
500
400
300
200
100
0
Capacity 풍량㎥/min
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
2600
2800
8½-4P-300
8½-4P-315
8½-4P-355
8½-4P-355
8½-4P-375
8-4P-250
7½-4P-160
7½-4P-185
7½-4P-200
7-4P-132
7-4P-160
6½-4P-90
6½-4P-110
6-4P-55
6-4P-75
5½-4P-37
5½-4P-45
5-4P-30
4½-4P-15
4½-4P-18.5
4½-4P-11
4½-6P-5.5
5-6P-11
5-6P-7.5
5½-6P-11
5½-6P-15
6½-6P-22
6½-6P-30
7-6P-37
6-6P-18.5
7½-6P-55
7½-6P-75
7-6P-45
8½-6P-90
8½-6P-110
8-6P-75
8-6P-90
9½-6P-132
9½-6P-160
9½-6P-185
9½-6P-200
9-6P-160
10½-6P-200
10½-6P-220
10½-6P-250
10½-6P-280
10½-6P-300
10½-6P-315
11-6P-335
11-6P-355
11-6P-375
11-6P-400

OSTF #2

片吸込式

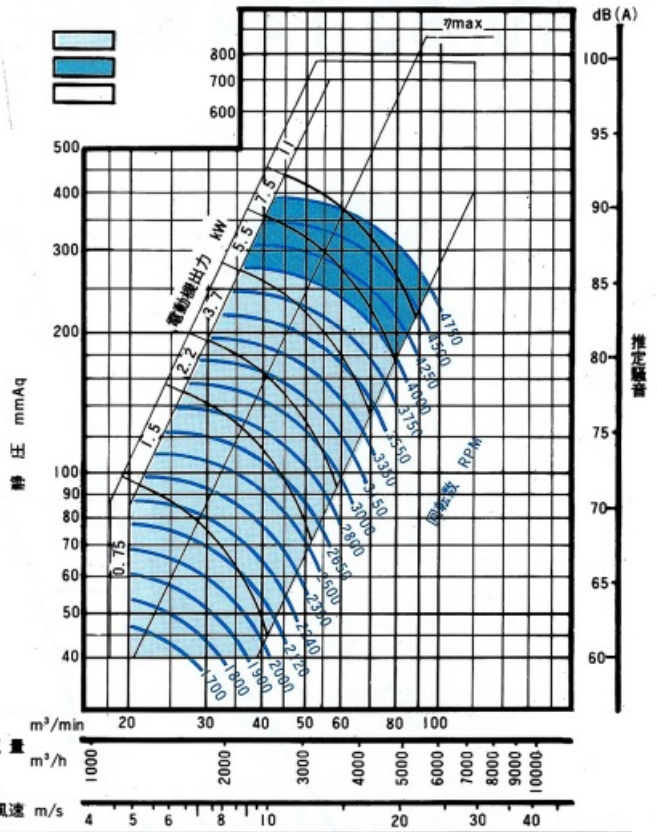
吸込口面積 0.059 m²
吐出口面積 0.054 m²
羽根車直径 0.300 m²



OSTF #2 1/4

片吸込式

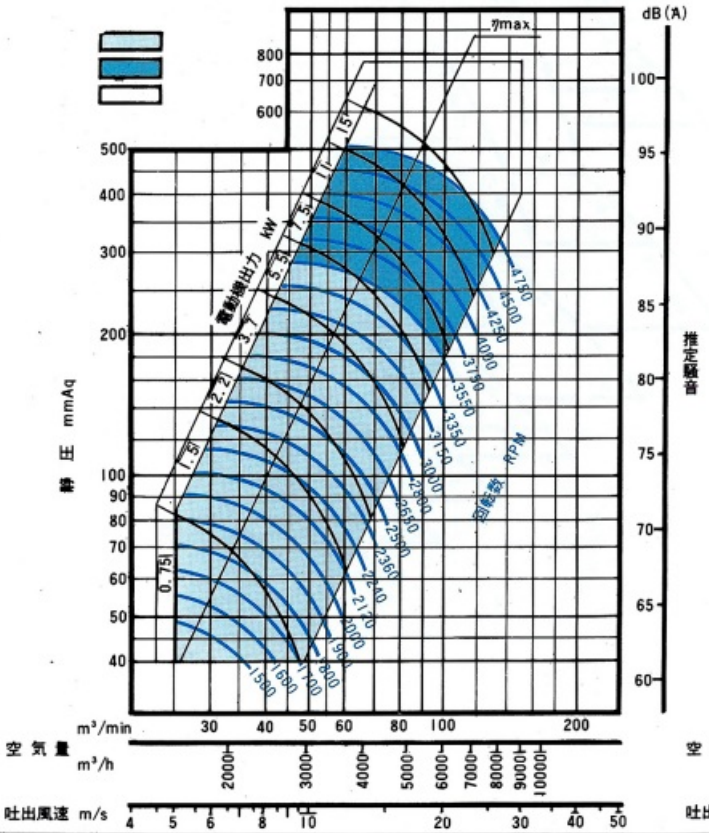
吸込口面積 0.075 m²
吐出口面積 0.068 m²
羽根車直径 0.335 m



OSTF #2 1/2

片吸込式

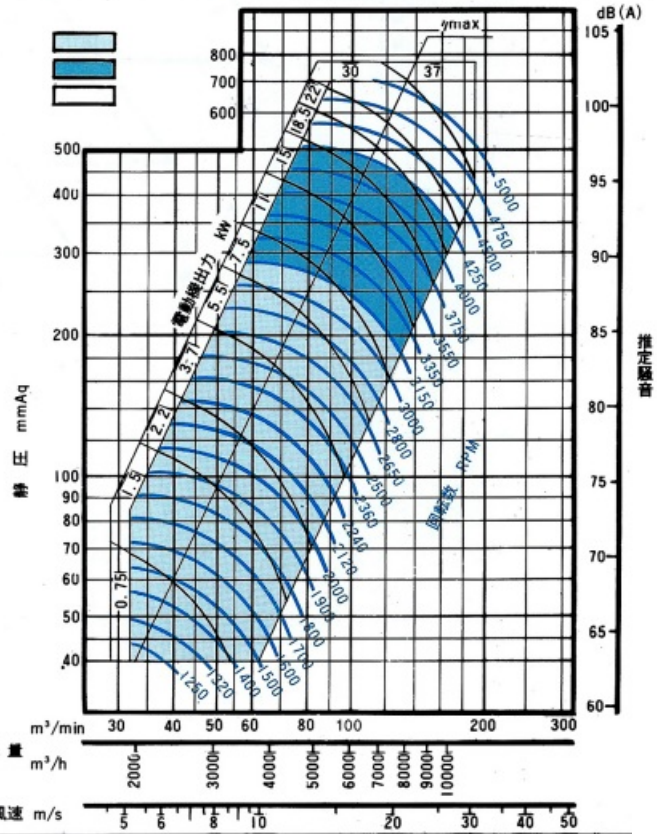
吸込口面積 0.093 m²
吐出口面積 0.084 m²
羽根車直径 0.375 m



OSTF #2 3/4

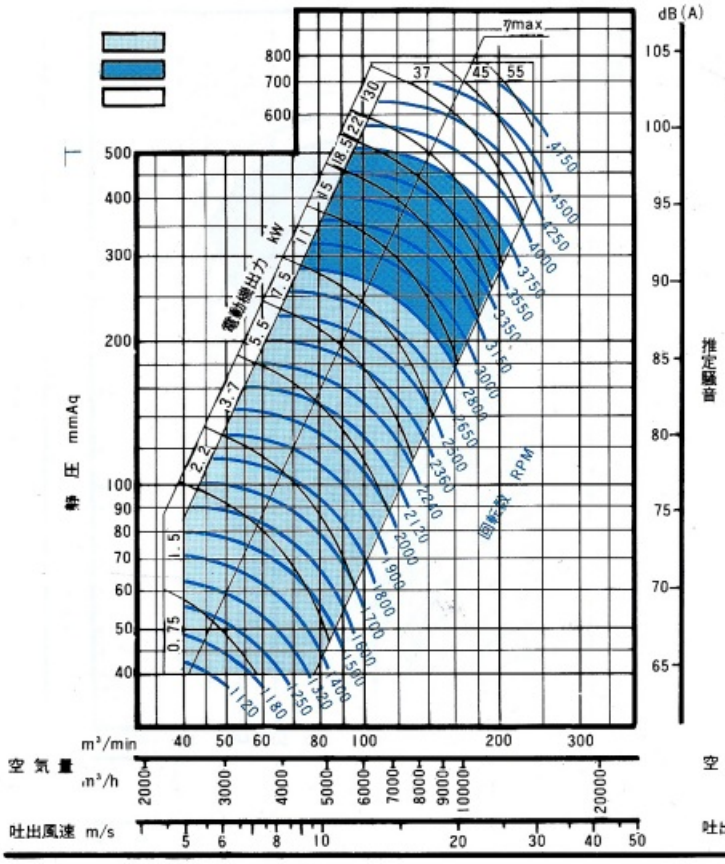
片吸込式

吸込口面積 0.116 m²
吐出口面積 0.106 m²
羽根車直径 0.424 m



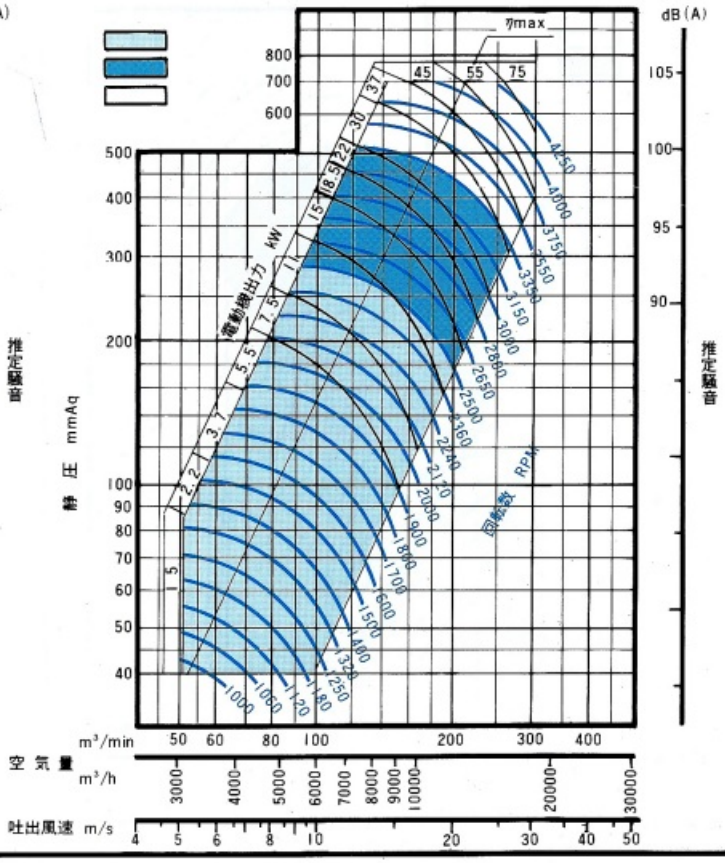
OSTF #3

吸込口面積 0.148 m²
吐出口面積 0.133 m²
片吸込式 羽根車直径 0.475 m



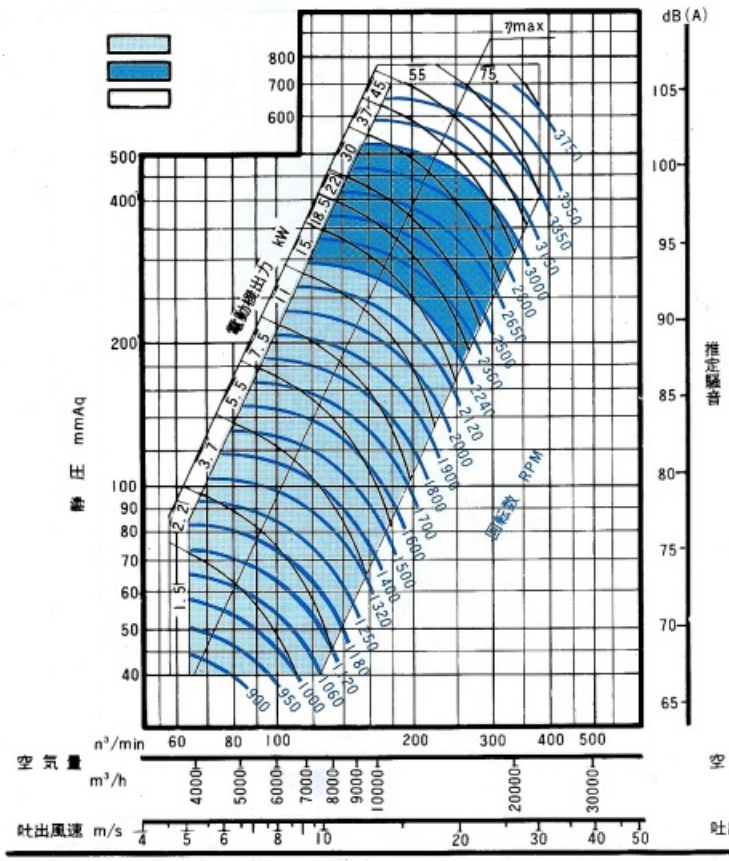
OSTF #3 1/2

吸込口面積 0.185 m²
吐出口面積 0.168 m²
片吸込式 羽根車直径 0.530 m



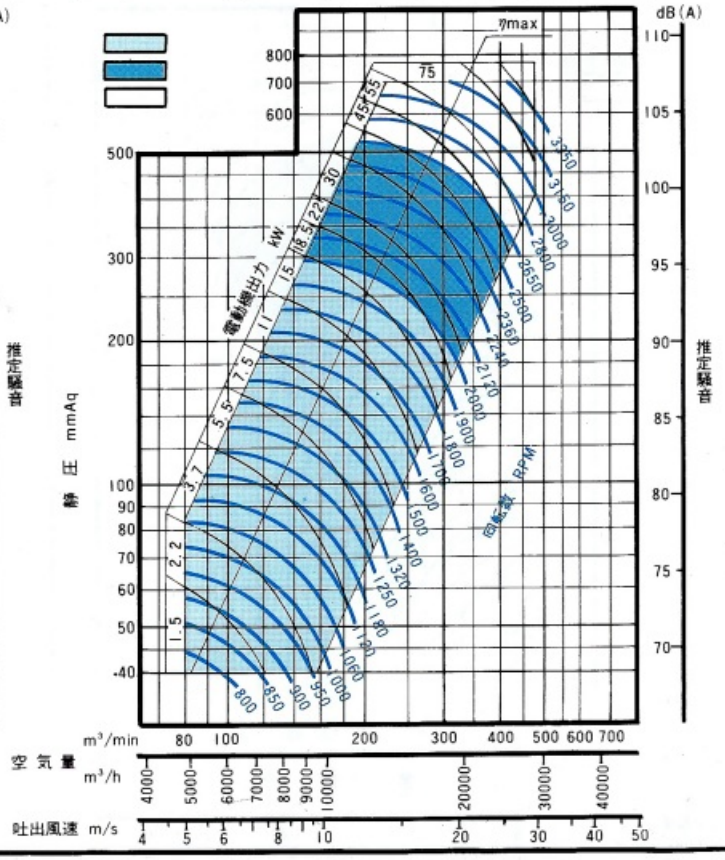
OSTF #4

吸込口面積 0.229 m²
吐出口面積 0.209 m²
片吸込式 羽根車直径 0.600 m



OSTF #4 1/2

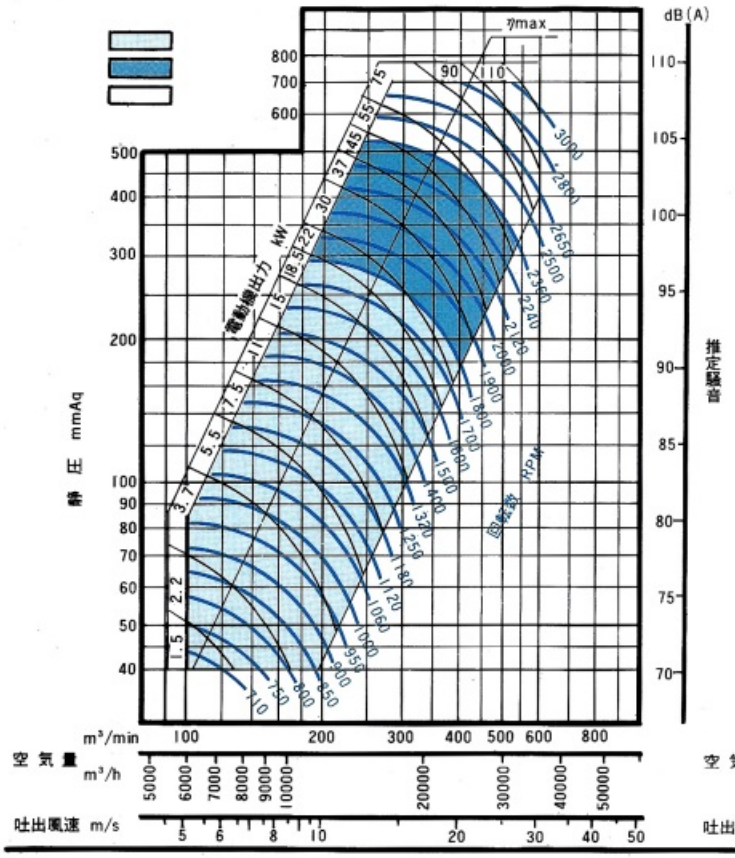
吸込口面積 0.292 m²
吐出口面積 0.262 m²
片吸込式 羽根車直径 0.670 m



OSTF #5

片吸込式

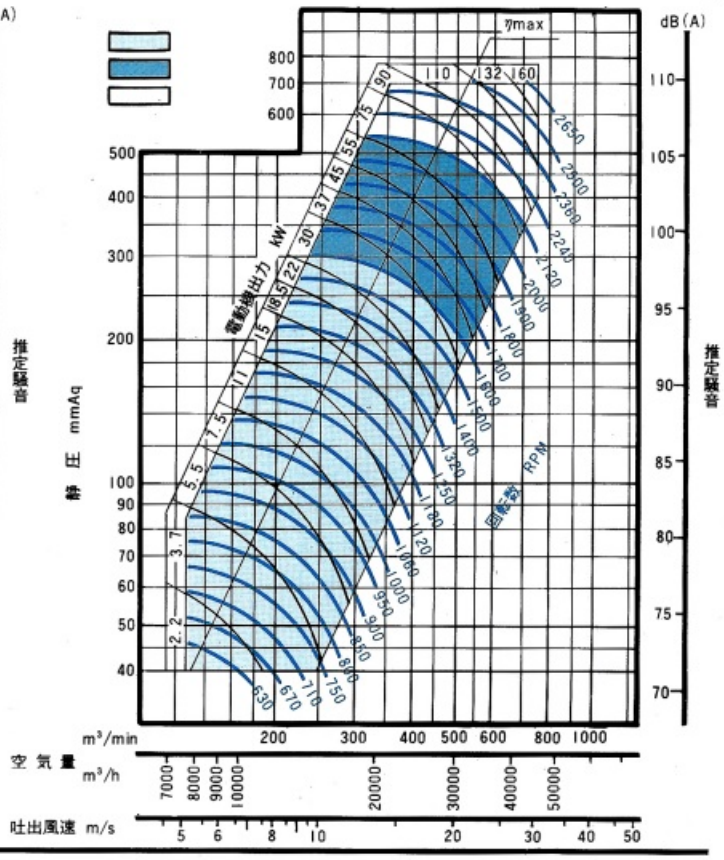
吸込口面積 0.363 m²
吐出口面積 0.326 m²
羽根車直径 0.750 m



OSTF #5 1/2

片吸込式

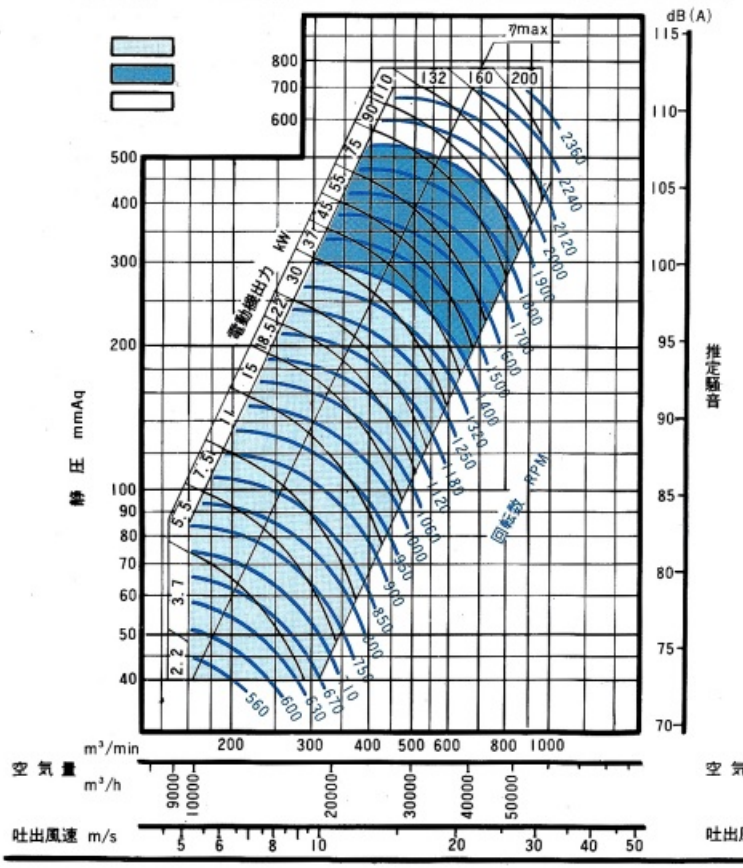
吸込口面積 0.453 m²
吐出口面積 0.410 m²
羽根車直径 0.850 m



OSTF #6

片吸込式

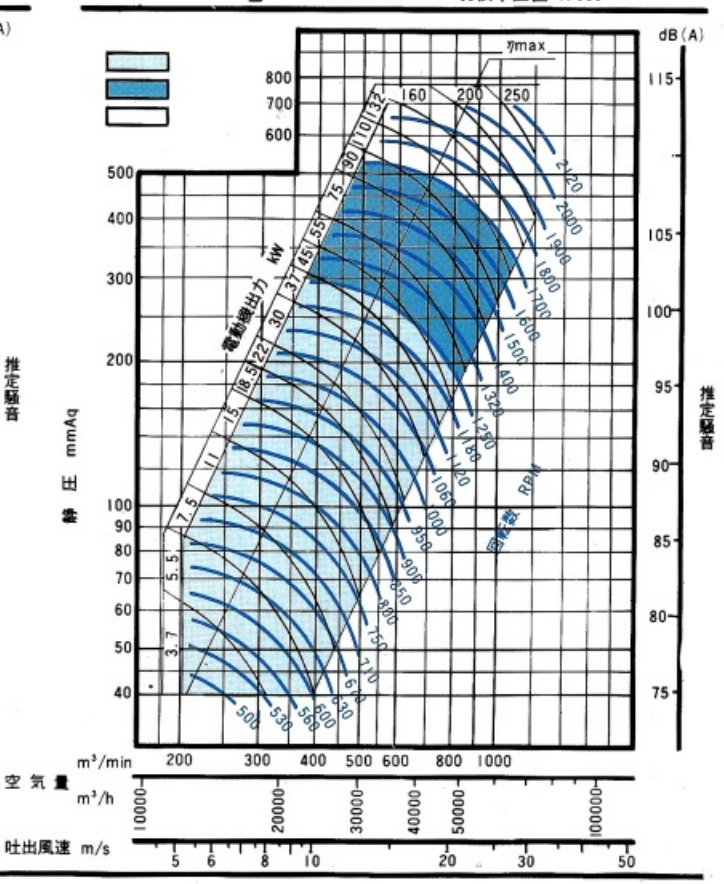
吸込口面積 0.580 m²
吐出口面積 0.518 m²
羽根車直径 0.950 m



OSTF #7

片吸込式

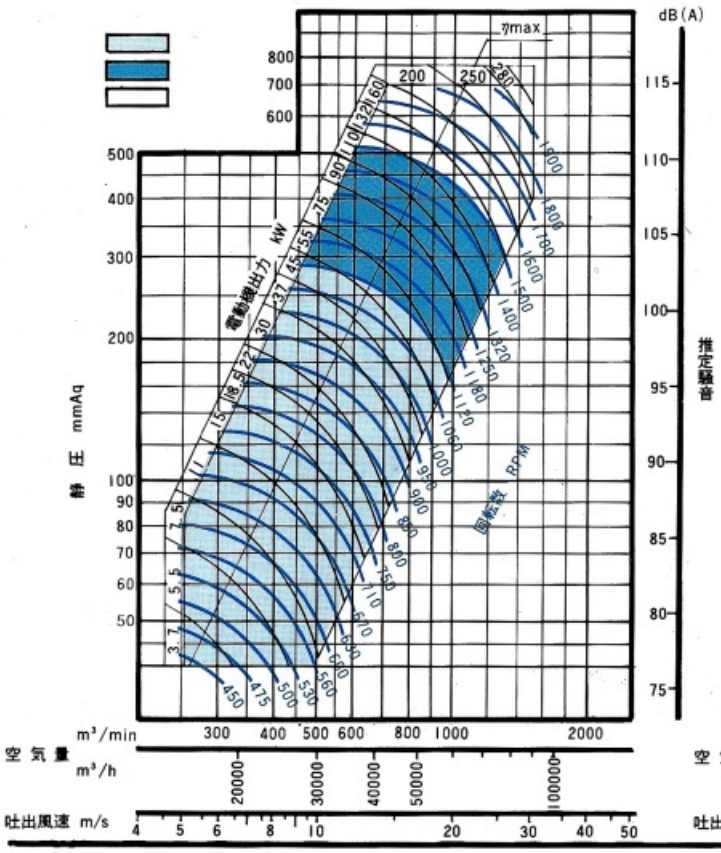
吸込口面積 0.723 m²
吐出口面積 0.655 m²
羽根車直径 1.060 m



OSTF #8

片吸込式

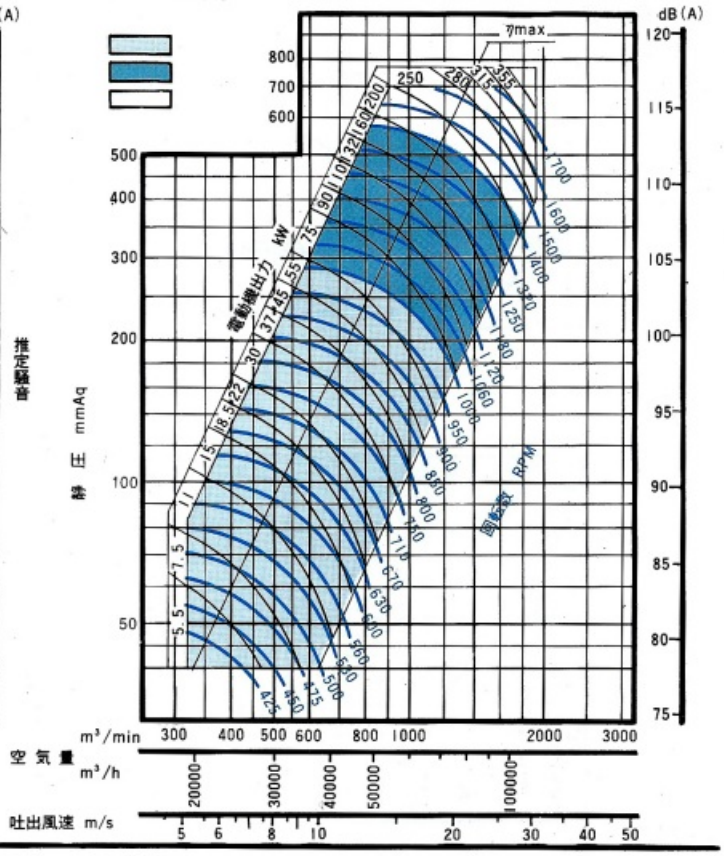
吸込口面積 0.909 m²
吐出口面積 0.829 m²
羽根車直径 1.180 m



OSTF #9

片吸込式

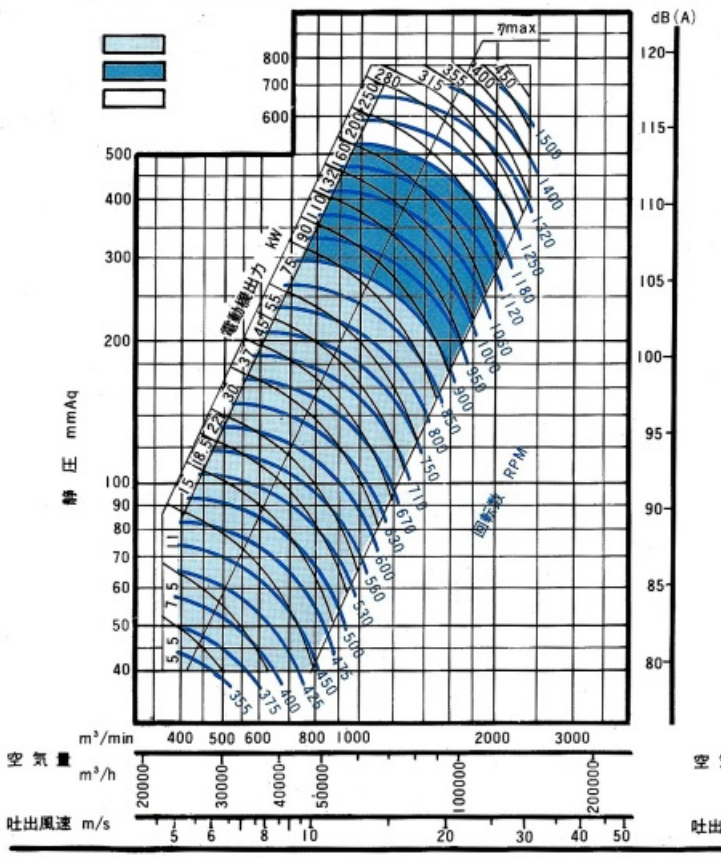
吸込口面積 1.123 m²
吐出口面積 1.040 m²
羽根車直径 1.320 m



OSTF #10

片吸込式

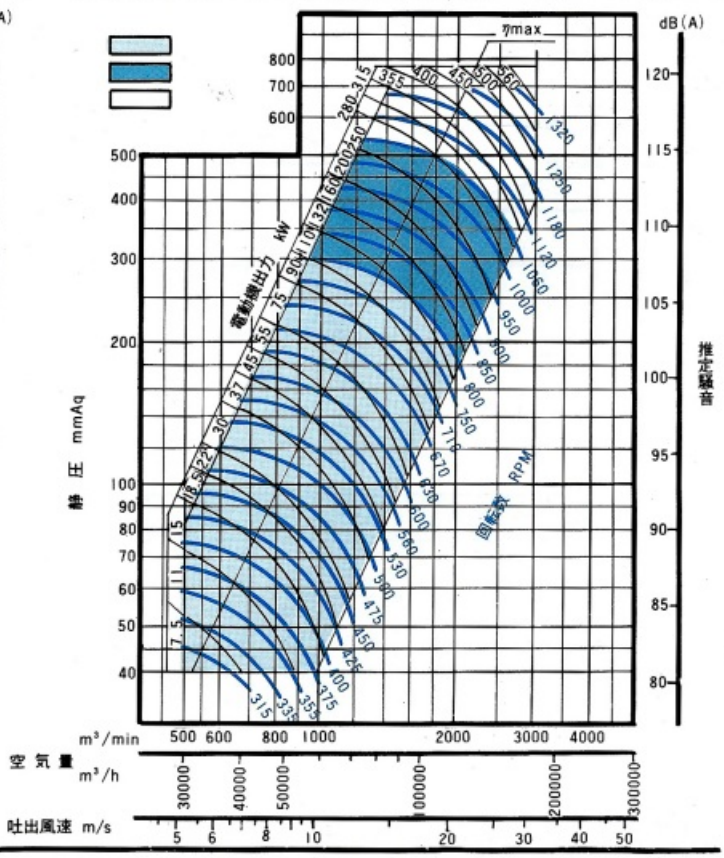
吸込口面積 1.401 m²
吐出口面積 1.286 m²
羽根車直径 1.500 m



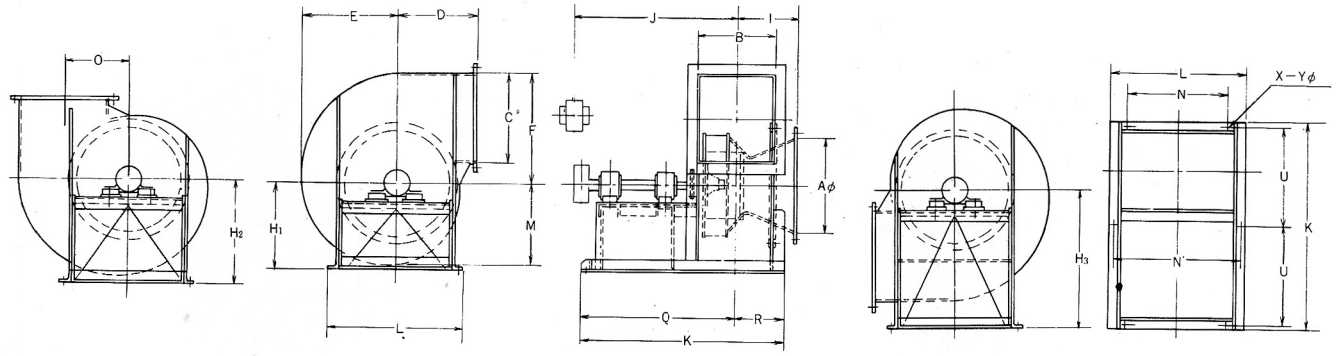
OSTF #11

片吸込式

吸込口面積 1.805 m²
吐出口面積 1.608 m²
羽根車直径 1.700 m



TBC #2~ #11



	A	B	C	D	E	F	M	H_1	H_2	H_3	O	I	J	K	L	R	Q	L'	N	N'	N"	S	U	U'	V	L · ㄷ	
2	128	100	122	224	228	250	206	250	-	300	189	95	510	350	400	50	-	-	360	-	-	70	155	-	20	L-50x6	70
2 1/4	142	110	135	250	255	280	230	280	-	335	213	106	515	350	400	55	-	-	360	-	-	75	155	-	20	L-50x6	80
2 1/2	160	122	150	280	287	315	259	315	-	375	240	118	551	380	500	61	-	-	460	-	-	81	170	-	20	L-50x6	110
2 3/4	180	135	170	300	323	355	291	355	-	425	270	125	578	586	560	118	468	-	500	-	-	-	273	-	20	L-50x6	140
3	200	150	190	335	364	400	328	400	-	475	305	140	615	630	600	125	505	-	540	-	-	-	295	-	20	L-50x6	190
3 1/2	222	170	210	375	408	450	366	425	-	530	345	160	665	680	630	135	545	-	570	-	-	-	320	-	20	L-50x6	220
4	246	190	234	425	456	500	412	475	-	600	383	180	695	720	630	145	575	-	570	-	-	-	340	-	20	L-50x6	300
4 1/2	275	210	260	475	510	560	460	475	530	710	430	200	792	840	800	170	670	-	650	740	-	-	390	-	30	L-50x6	400
5	310	234	290	530	572	630	514	530	600	800	485	224	850	910	900	182	728	-	750	840	-	-	425	-	30	ㄷ-125x65x6	500
5 1/2	345	260	325	600	646	710	582	600	670	850	548	250	930	1010	1000	195	815	-	850	940	-	-	475	-	30	ㄷ-125x65x6	680
6	385	290	365	630	726	800	652	670	750	950	618	265	995	1090	1120	210	880	-	970	1060	-	-	515	-	30	ㄷ-125x65x6	860
7	435	325	410	710	816	900	732	750	850	1060	695	300	1123	1210	1250	238	972	1000	1100	930	850	-	406	367	35	ㄷ-150x75x6.5	960
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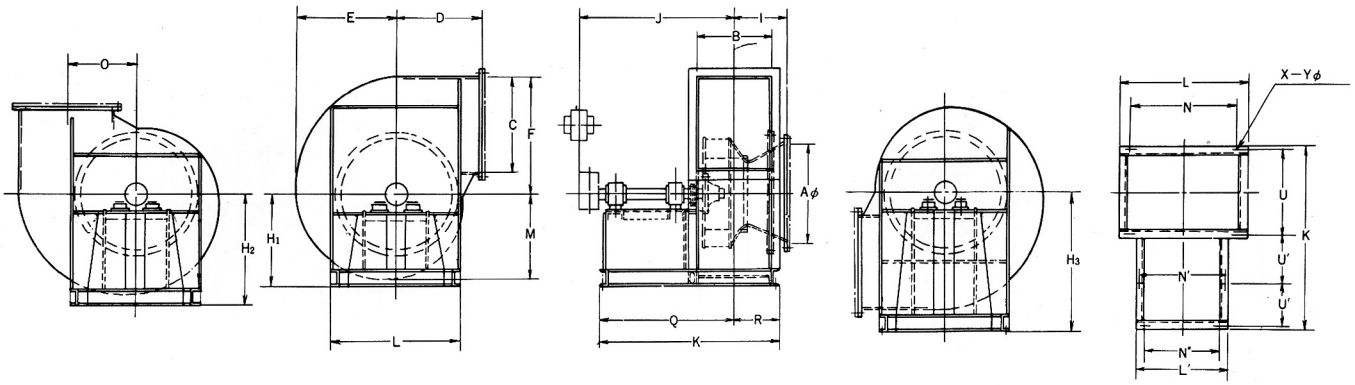
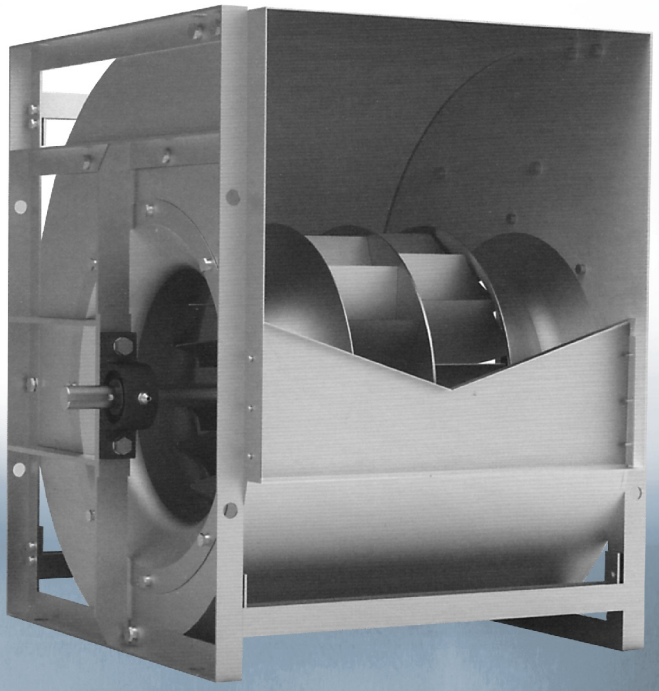
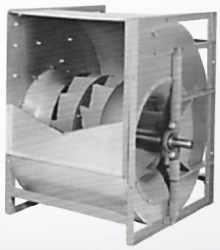
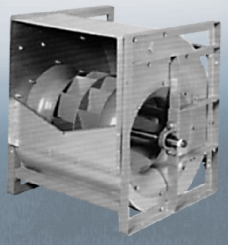
9	540	410	510	900	1015	1120	910	950	1060	1320	865	375	1330	1460	1600	280	1180	1180	1450	1110	1030	-	490	450	35	ㄷ-150x75x6.5	1600
10	610	460	570	1000	1138	1250	1026	1060	1180	1450	965	425	1450	1610	1800	305	1305	1250	825x2	1180	1100	-	540	500	35	ㄷ-180x75x7	2200
11	680	640	640	1120	1279	1400	1158	1180	1320	1600	1080	475	1575	1760	2000	330	1430	1400	925x2	1330	1250	-	590	550	35	ㄷ-180x75x7	2700

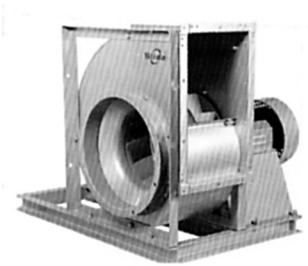


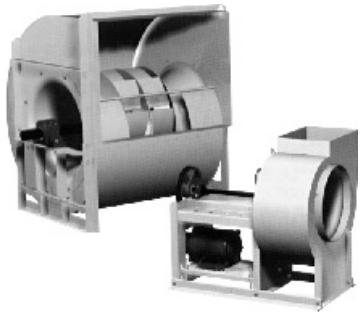






CENTRIFUGAL AIR FOIL FAN

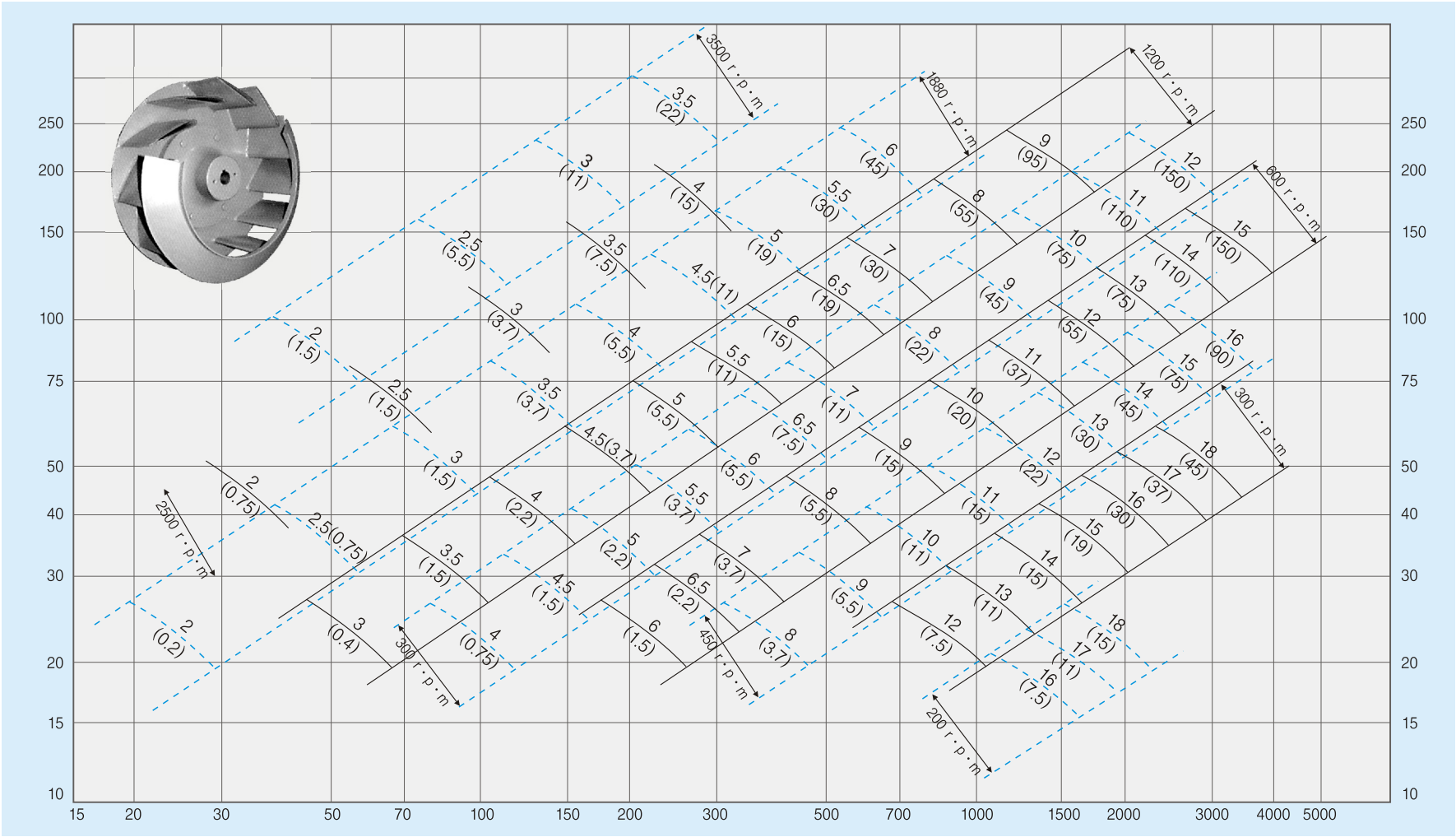




AIR FOIL FAN

Characteristics	1) High-efficiency & noise control
End use	for Various ventilators, Air-conditioning equipment, Dryers, etc.

Selection Chart

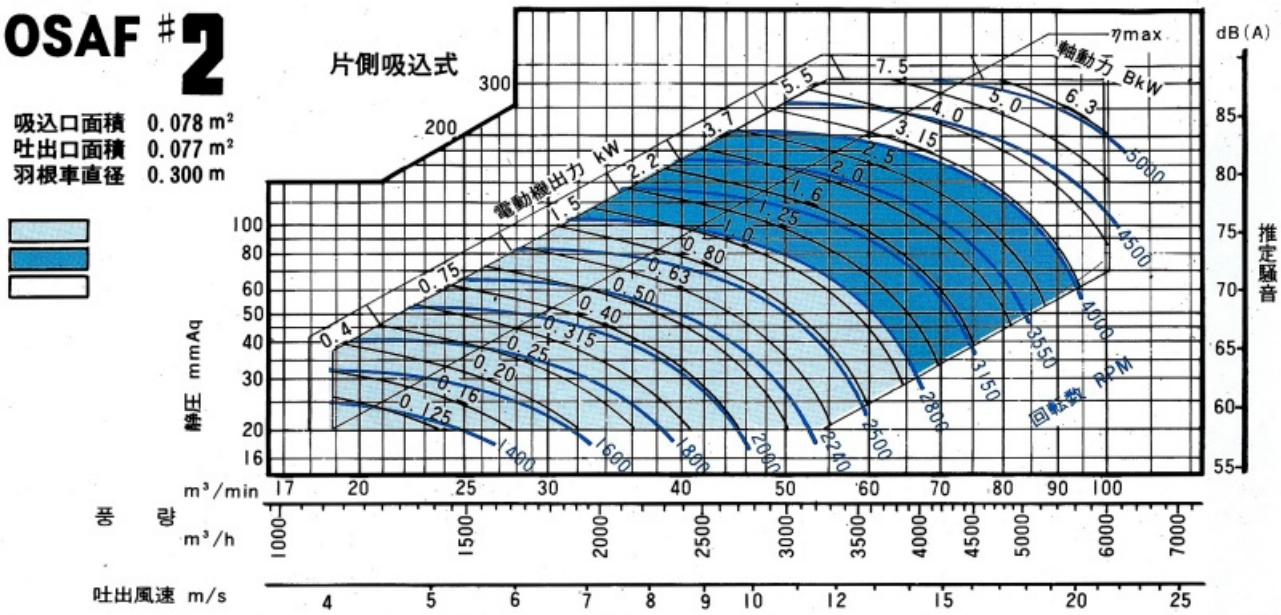


※Air volume will be a double in case of double suction
( ) : Motor power (Kw)

OSAF #2

片側吸込式

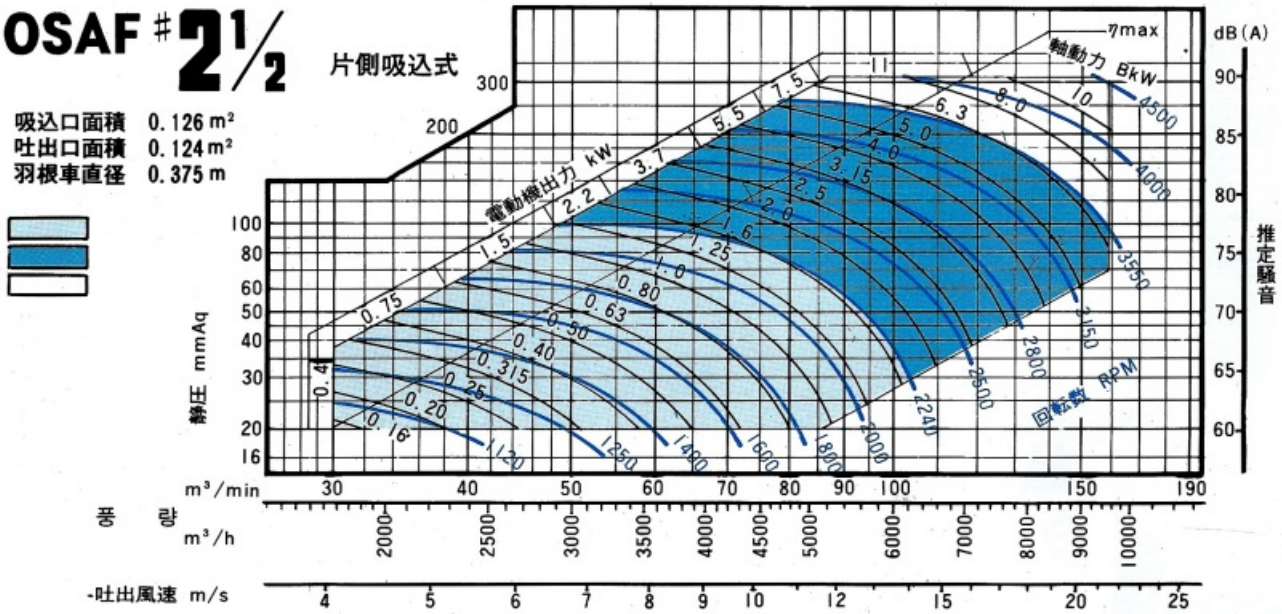
吸込口面積 0.078 m²
吐出口面積 0.077 m²
羽根車直径 0.300 m



OSAF #2 1/2

片側吸込式

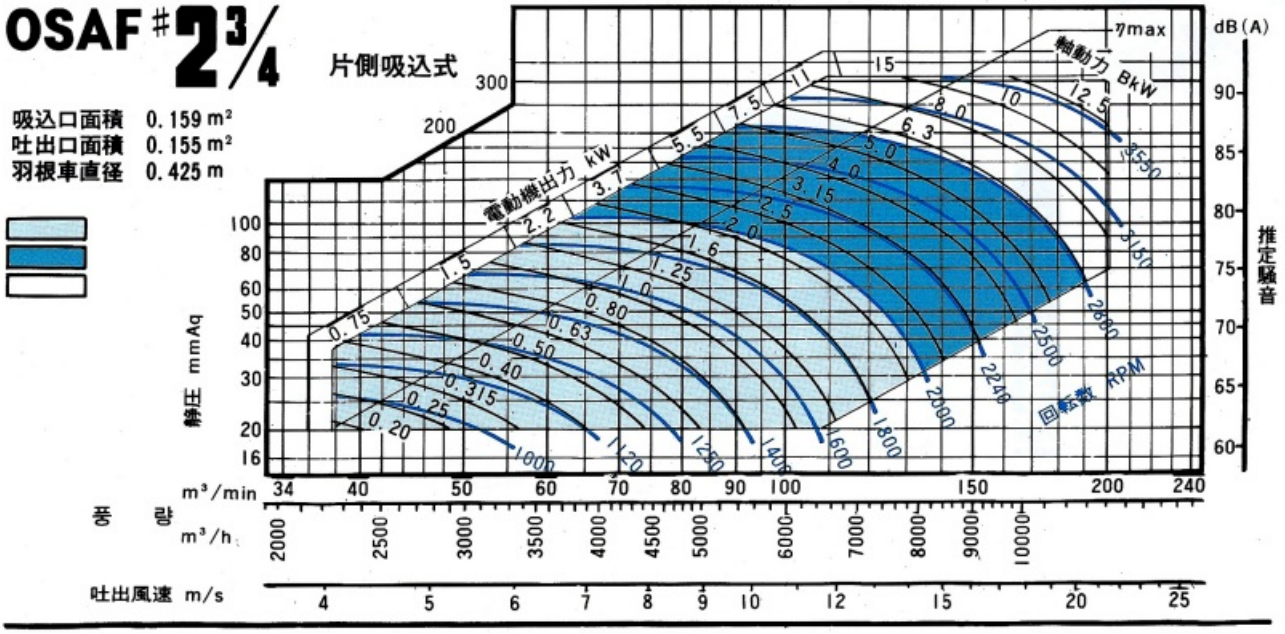
吸込口面積 0.126 m²
吐出口面積 0.124 m²
羽根車直径 0.375 m



OSAF #2 3/4

片側吸込式

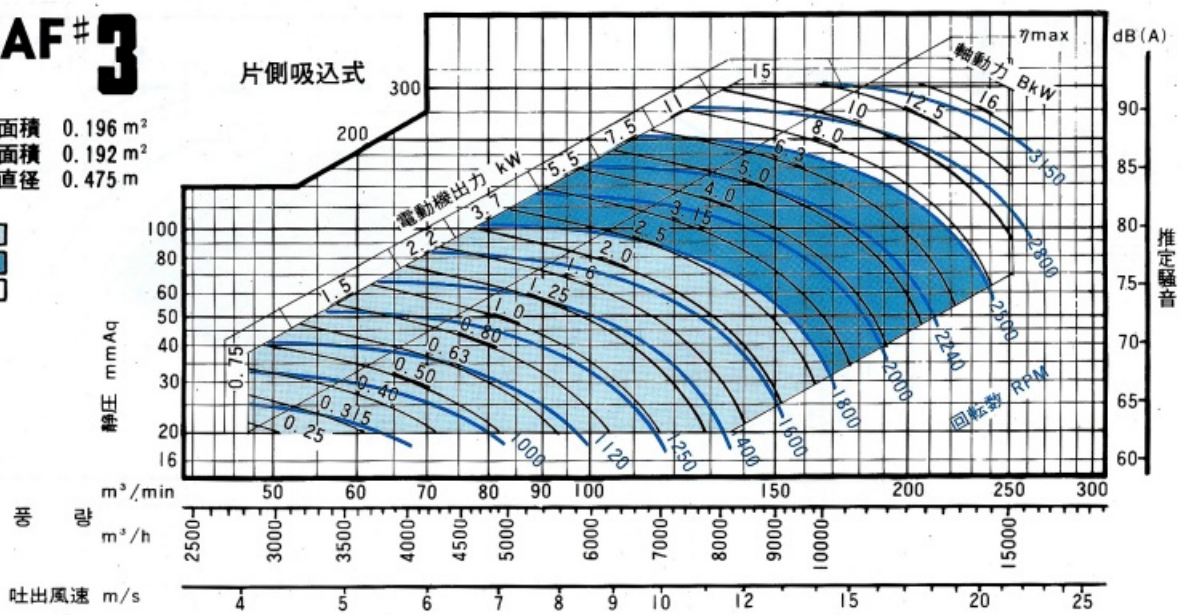
吸込口面積 0.159 m²
吐出口面積 0.155 m²
羽根車直径 0.425 m



OSAF #3

片側吸込式

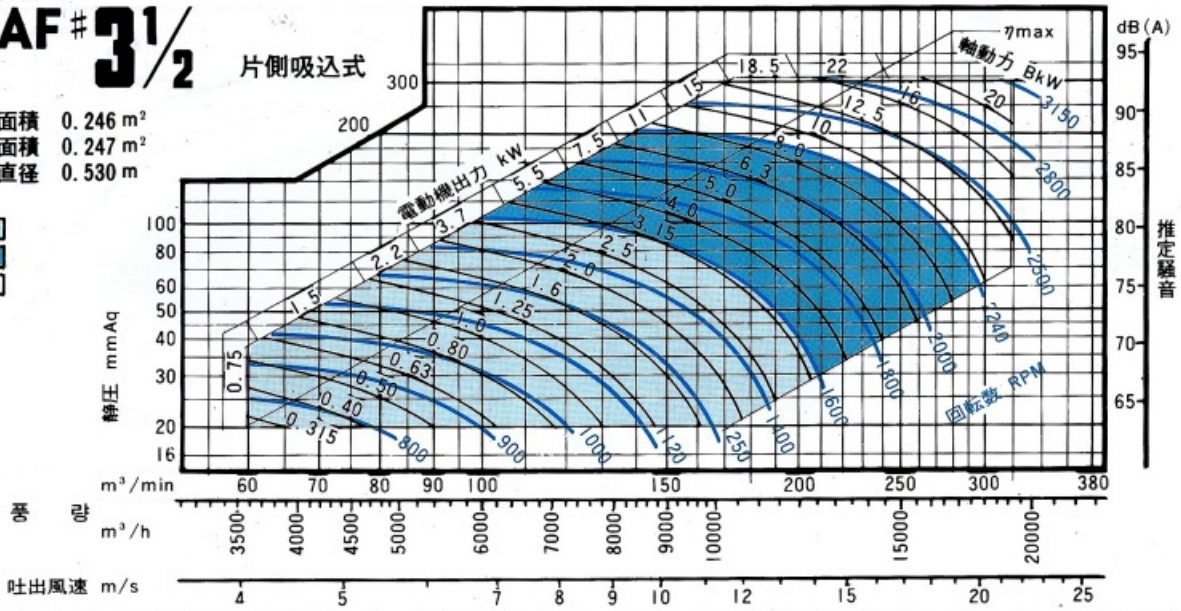
吸込口面積 0.196 m²
吐出口面積 0.192 m²
羽根車直径 0.475 m



OSAF #3½

片側吸込式

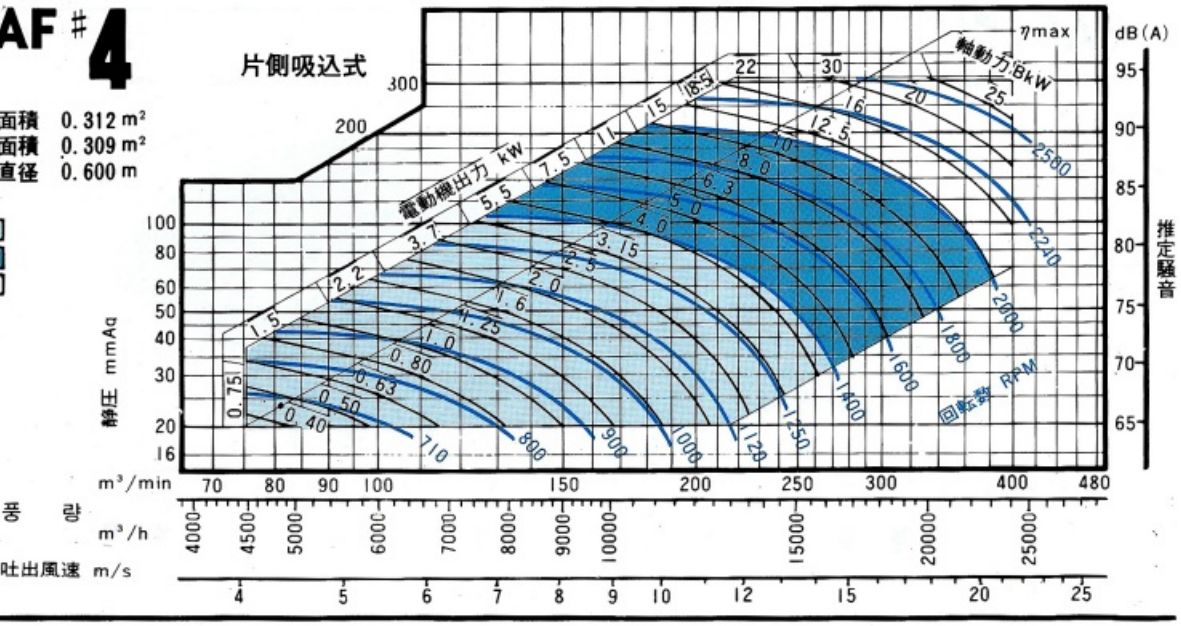
吸込口面積 0.246 m²
吐出口面積 0.247 m²
羽根車直径 0.530 m



OSAF #4

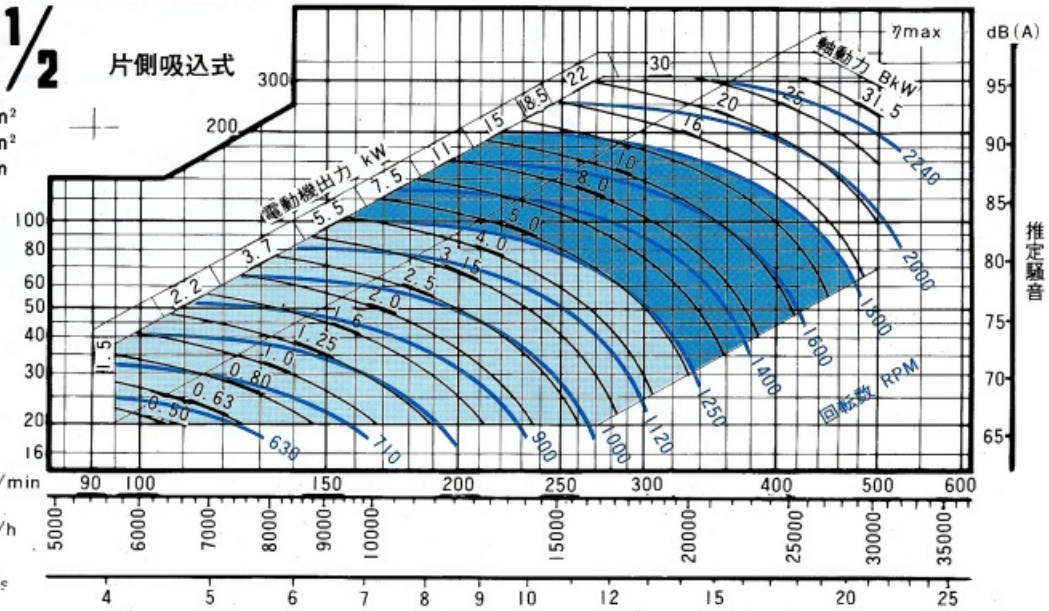
片側吸込式

吸込口面積 0.312 m²
吐出口面積 0.309 m²
羽根車直径 0.600 m



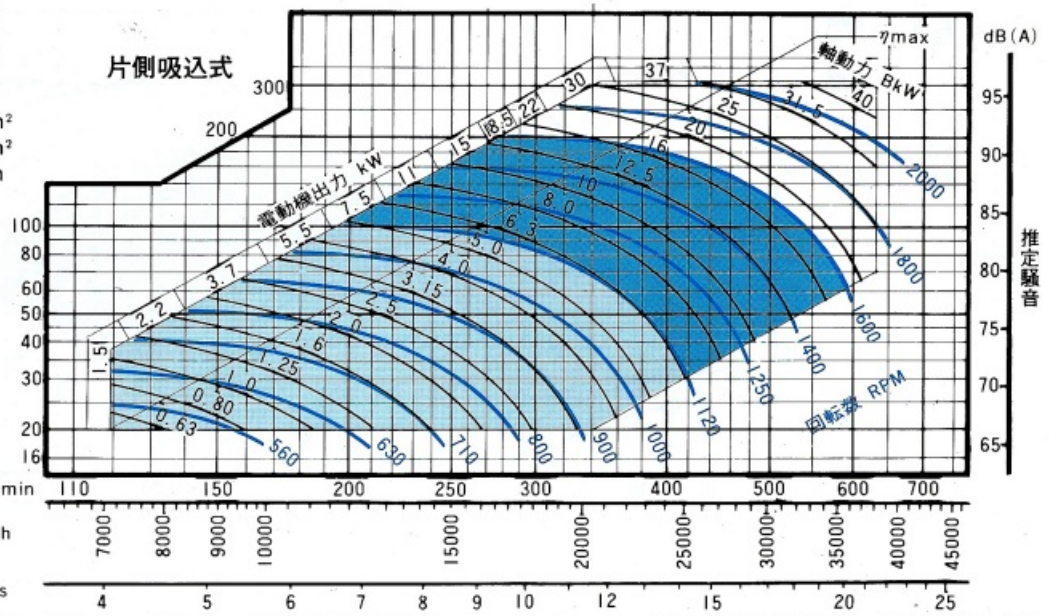
OSAF #4½ 片側吸込式

吸込口面積 0.396 m²
吐出口面積 0.387 m²
羽根車直径 0.670 m



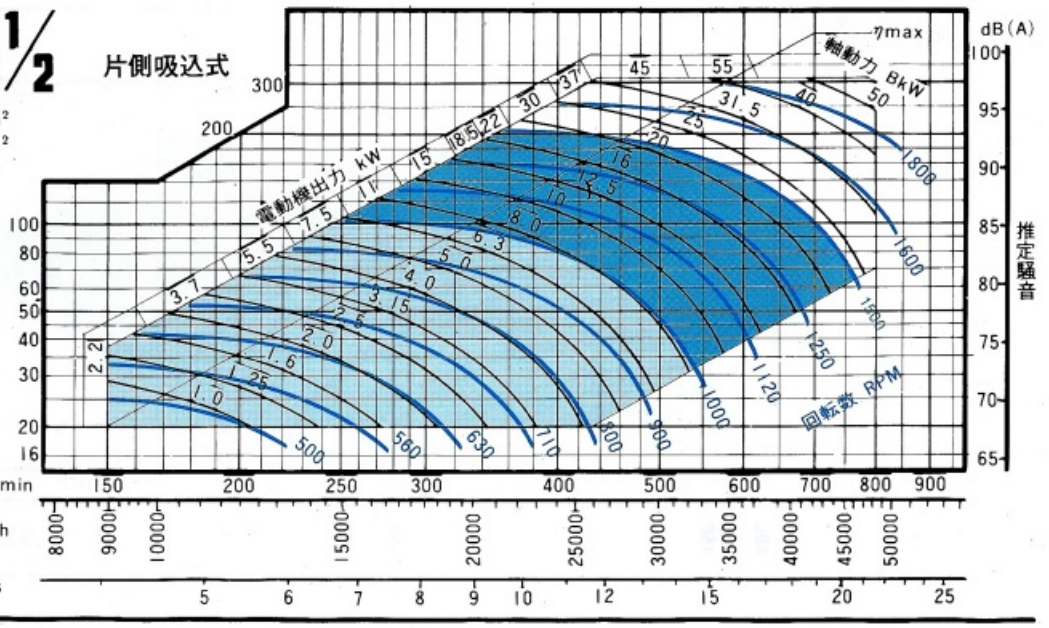
OSAF #5 片側吸込式

吸込口面積 0.502 m²
吐出口面積 0.495 m²
羽根車直径 0.750 m



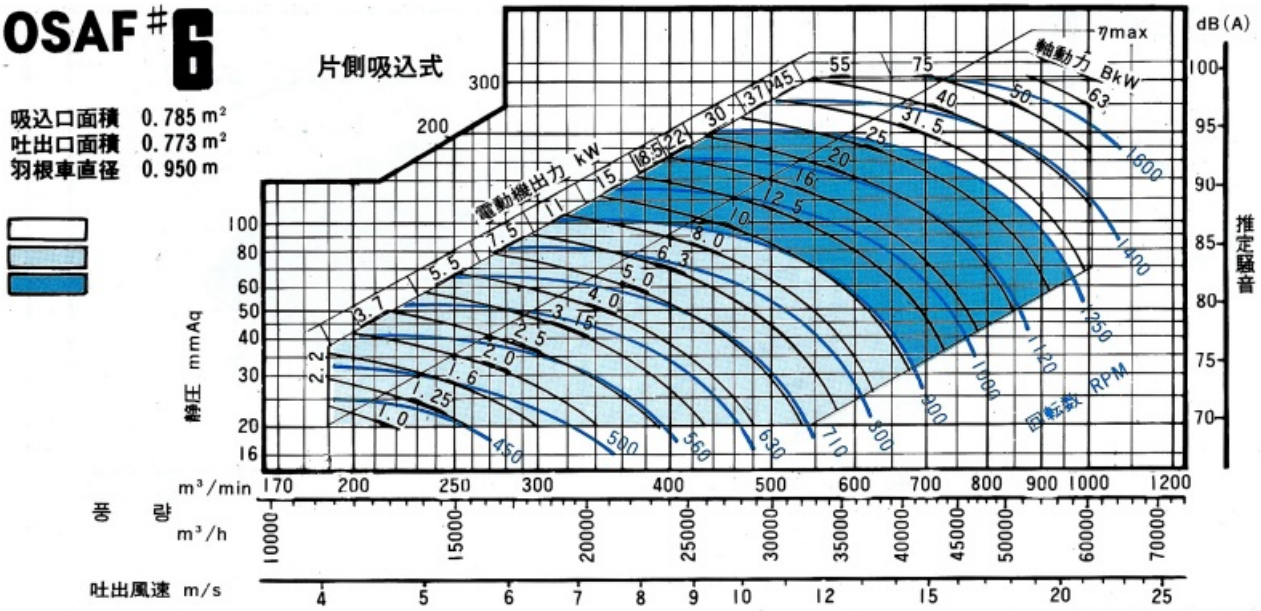
OSAF #5½ 片側吸込式

吸込口面積 0.636 m²
吐出口面積 0.620 m²
羽根車直径 0.850 m



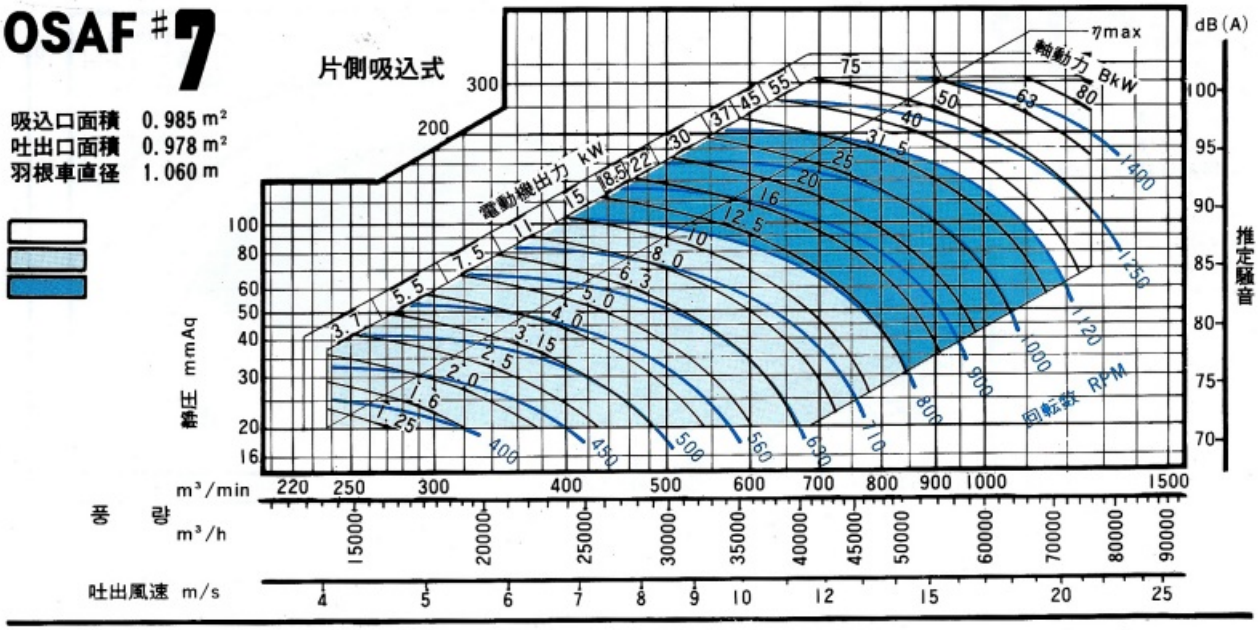
OSAF #6

吸込口面積 0.785 m²
吐出口面積 0.773 m²
羽根車直径 0.950 m



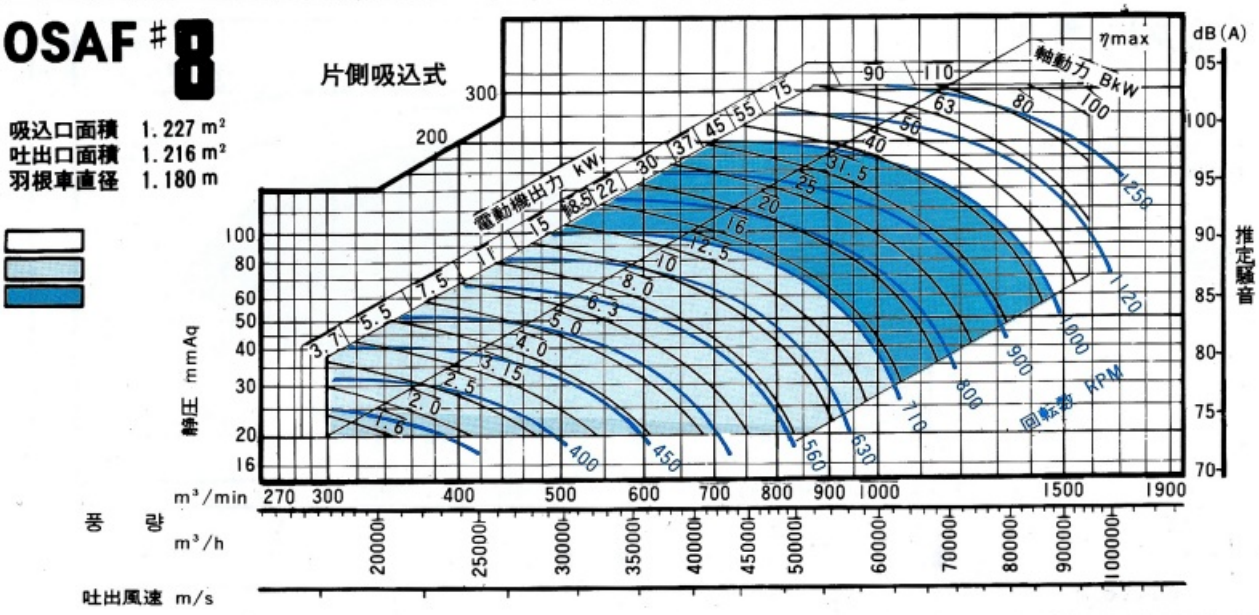
OSAF #7

吸込口面積 0.985 m²
吐出口面積 0.978 m²
羽根車直径 1.060 m



OSAF #8

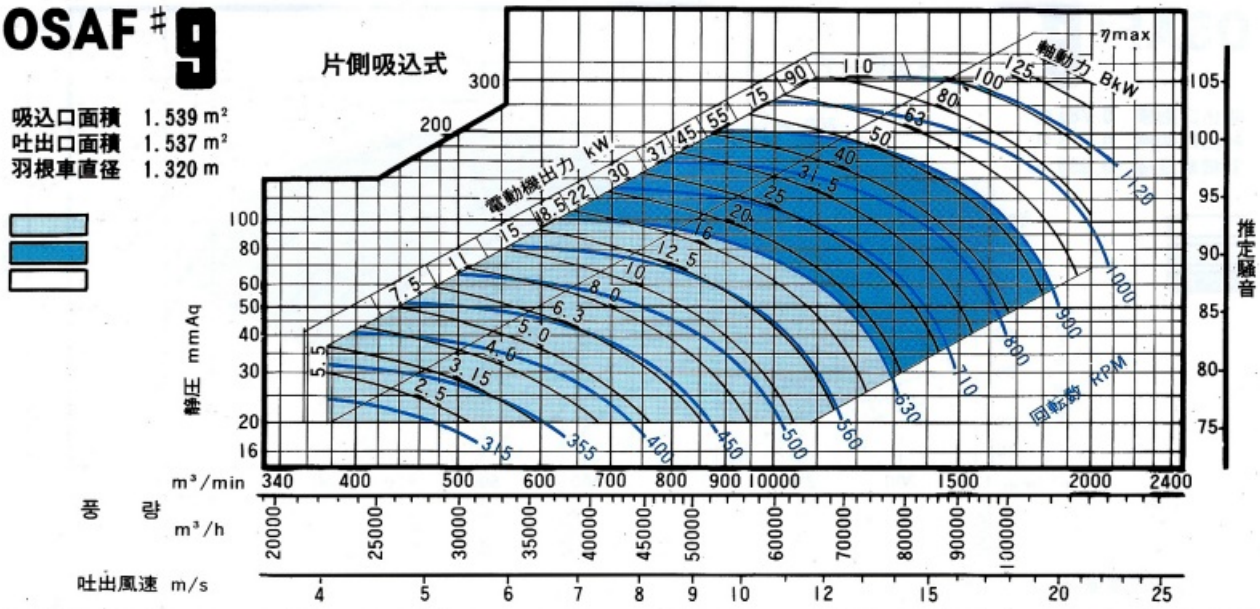
吸込口面積 1.227 m²
吐出口面積 1.216 m²
羽根車直径 1.180 m



OSAF #9

片側吸込式

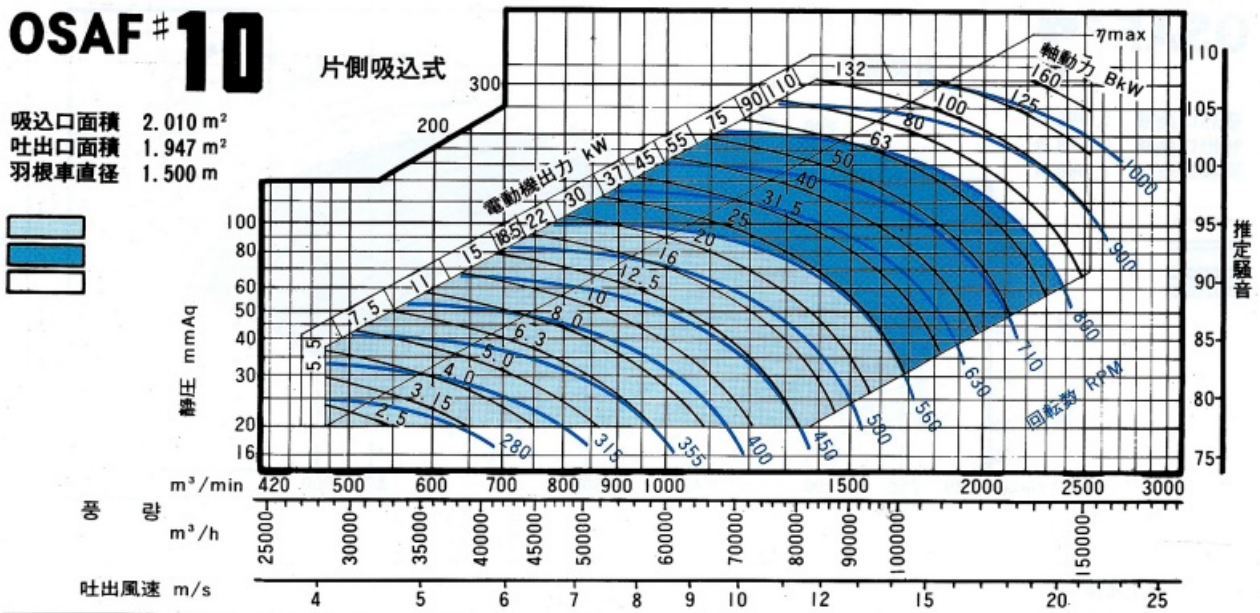
吸込口面積 1.539 m²
吐出口面積 1.537 m²
羽根車直径 1.320 m



OSAF #10

片側吸込式

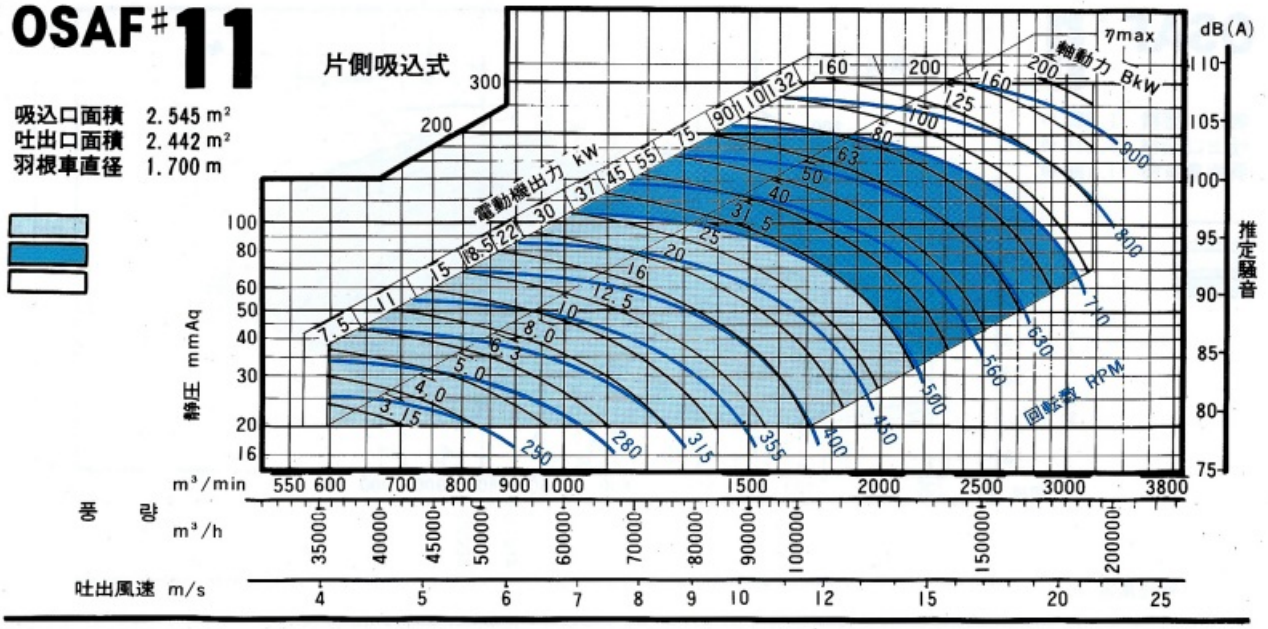
吸込口面積 2.010 m²
吐出口面積 1.947 m²
羽根車直径 1.500 m



OSAF #11

片側吸込式

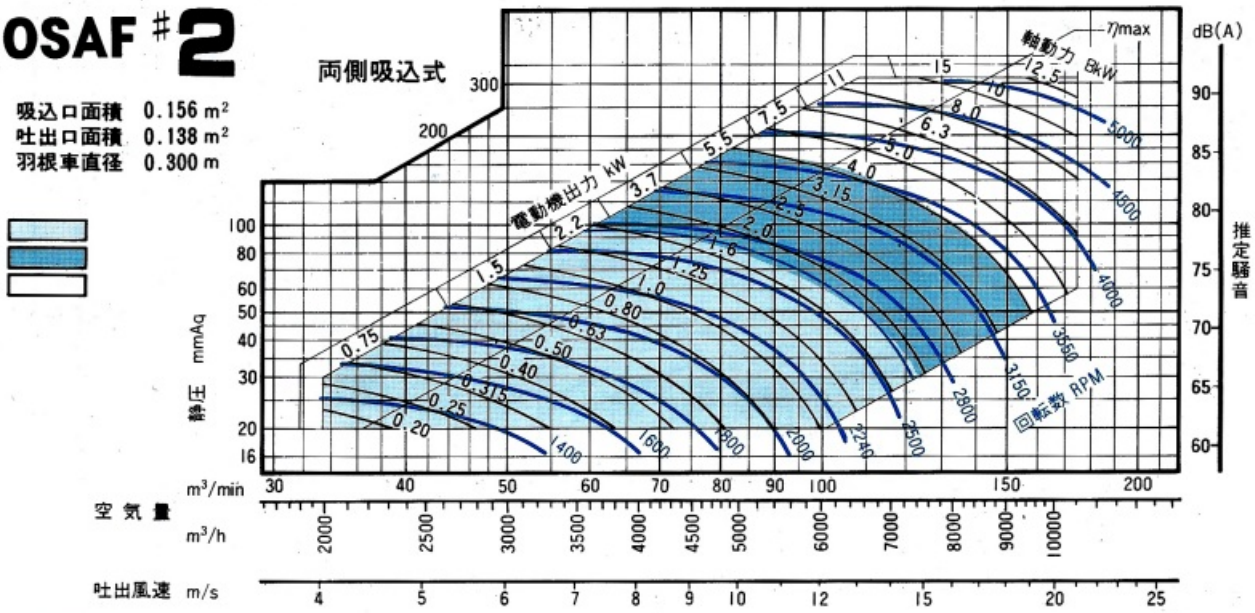
吸込口面積 2.545 m²
吐出口面積 2.442 m²
羽根車直径 1.700 m



OSAF #2

両側吸込式

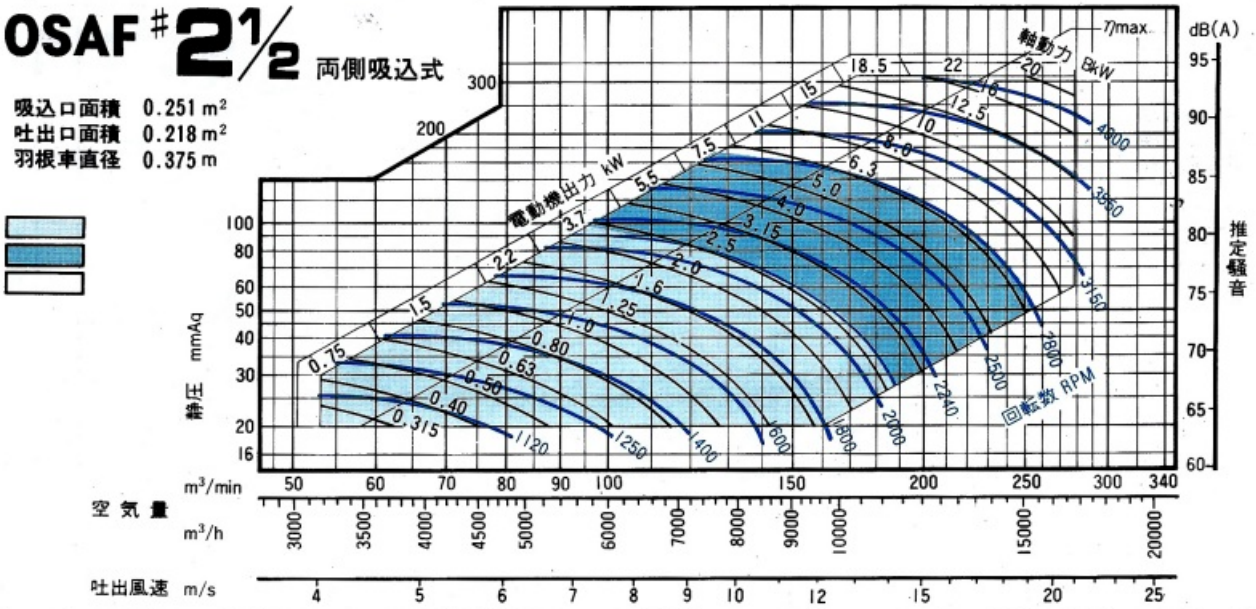
吸込口面積 0.156 m²
吐出口面積 0.138 m²
羽根車直径 0.300 m



OSAF #2½

両側吸込式

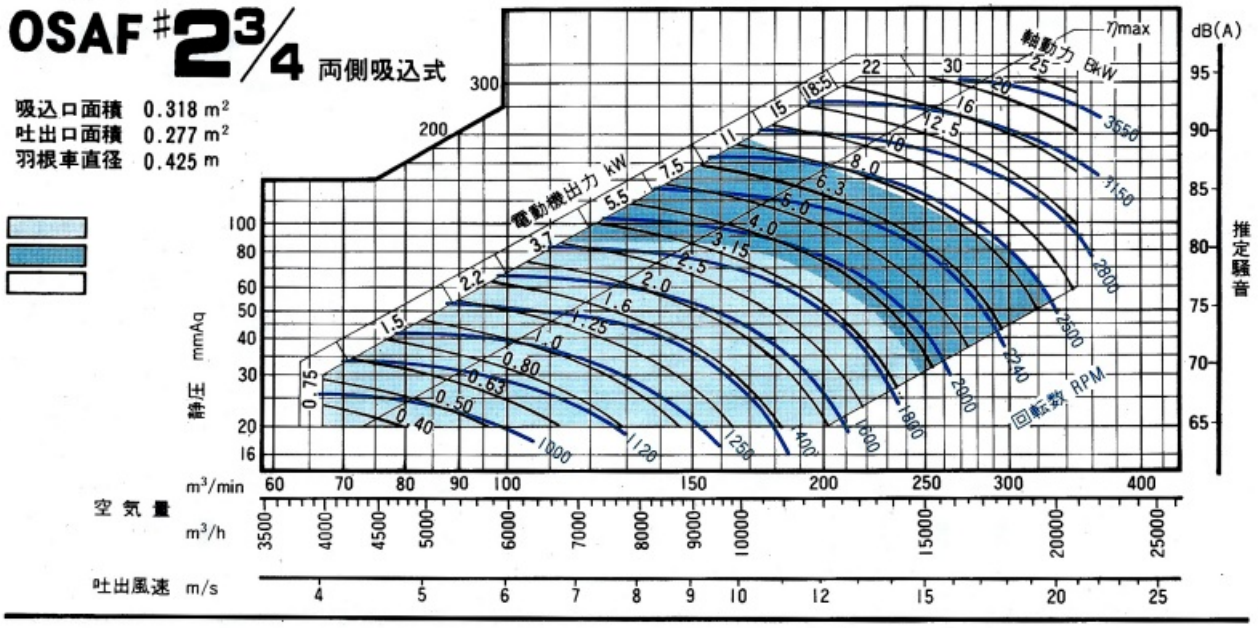
吸込口面積 0.251 m²
吐出口面積 0.218 m²
羽根車直径 0.375 m



OSAF #2¾

両側吸込式

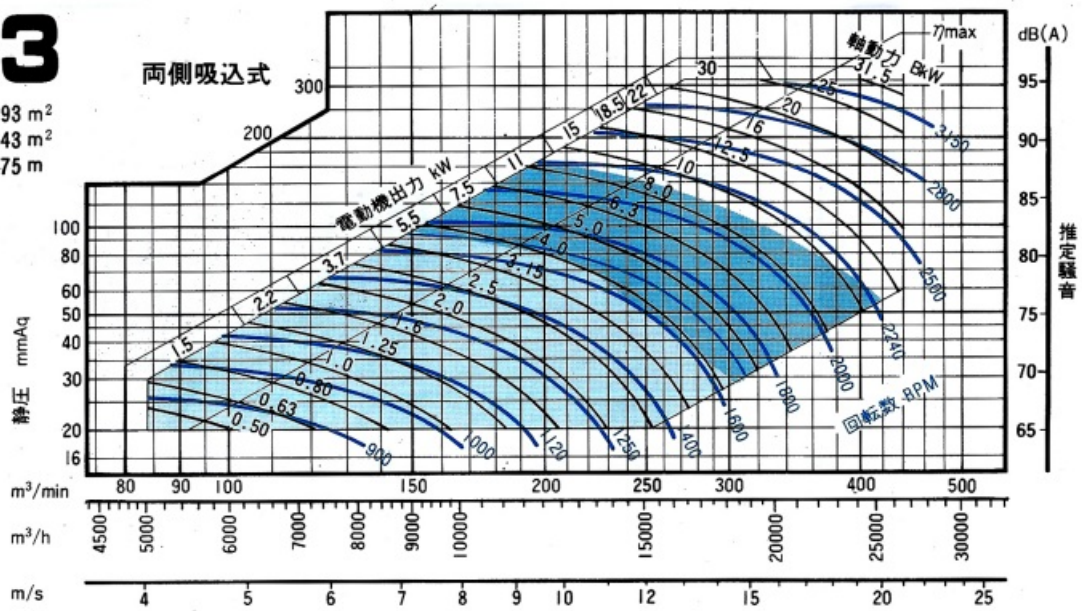
吸込口面積 0.318 m²
吐出口面積 0.277 m²
羽根車直径 0.425 m



OSAF #3

両側吸込式

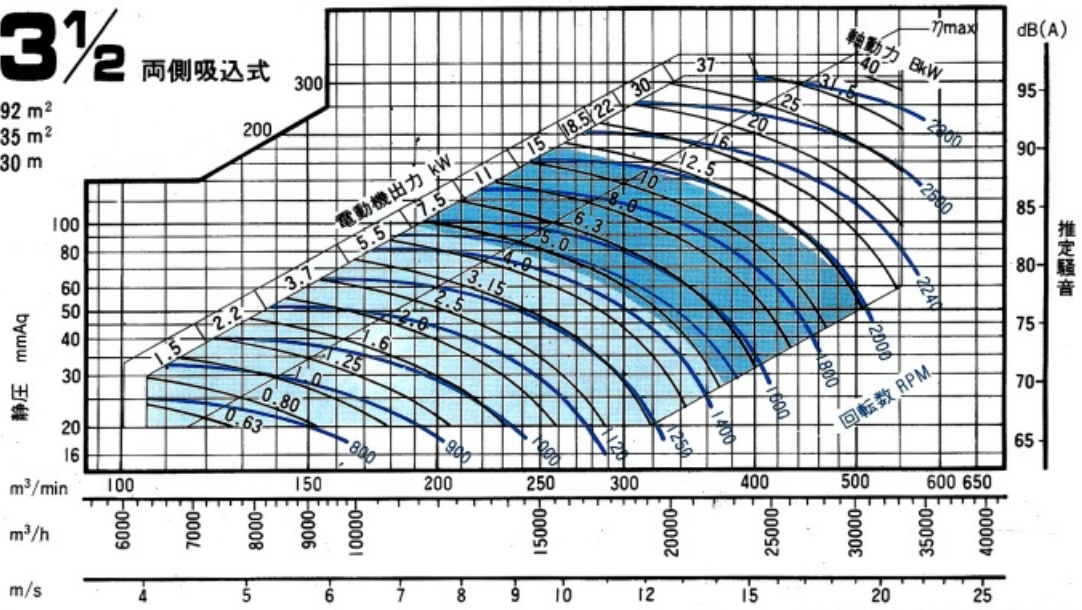
吸込口面積 0.393 m²
吐出口面積 0.343 m²
羽根車直径 0.475 m



OSAF #3½

両側吸込式

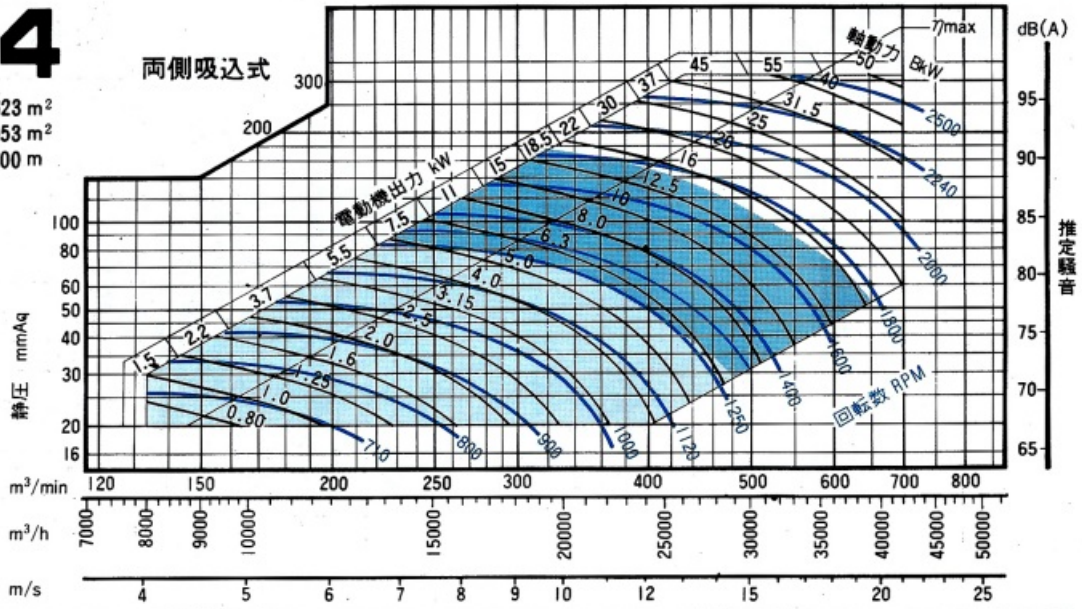
吸込口面積 0.492 m²
吐出口面積 0.435 m²
羽根車直径 0.530 m



OSAF #4

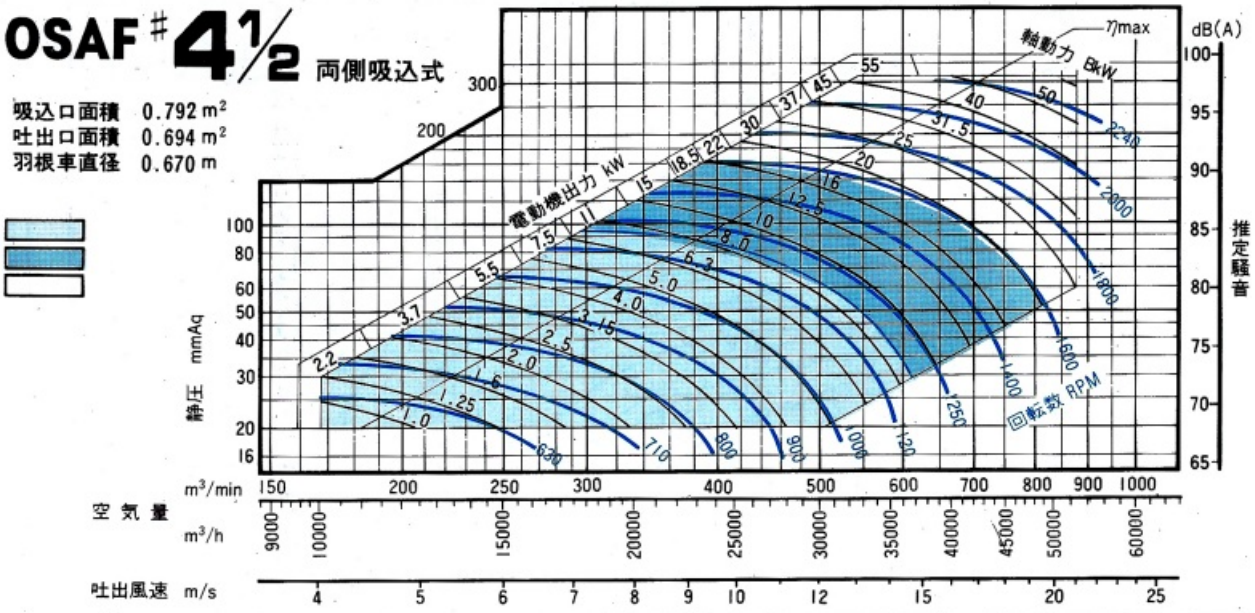
両側吸込式

吸込口面積 0.623 m²
吐出口面積 0.553 m²
羽根車直径 0.600 m



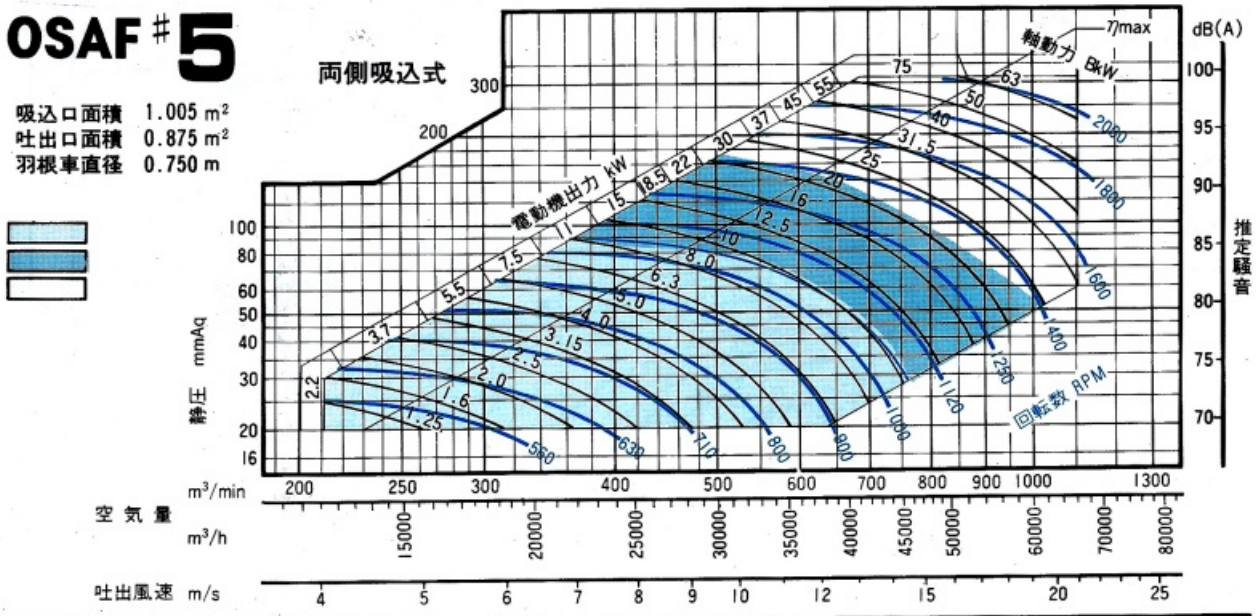
OSAF #4½ 両側吸込式

吸込口面積 0.792 m²
吐出口面積 0.694 m²
羽根車直径 0.670 m



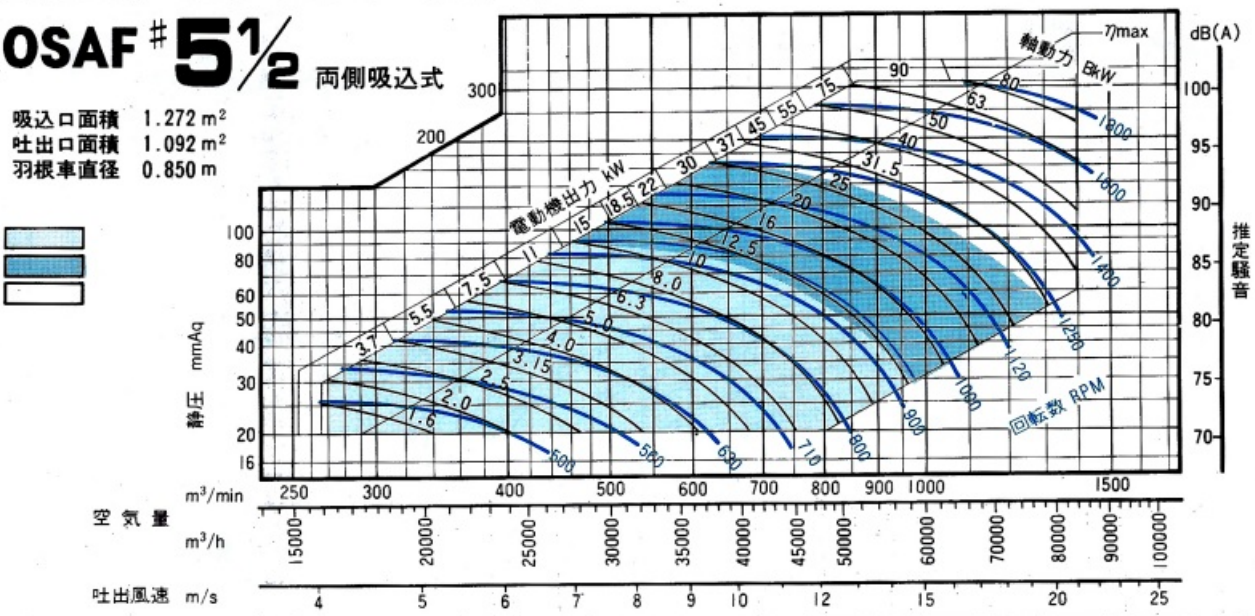
OSAF #5 両側吸込式

吸込口面積 1.005 m²
吐出口面積 0.875 m²
羽根車直径 0.750 m



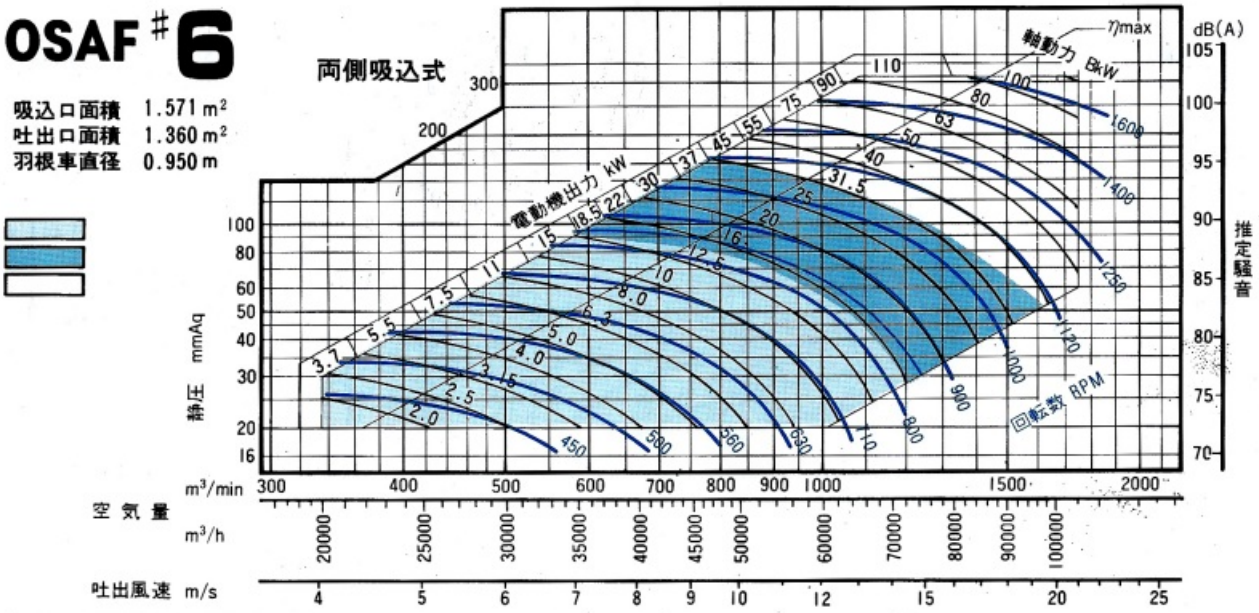
OSAF #5½ 両側吸込式

吸込口面積 1.272 m²
吐出口面積 1.092 m²
羽根車直径 0.850 m



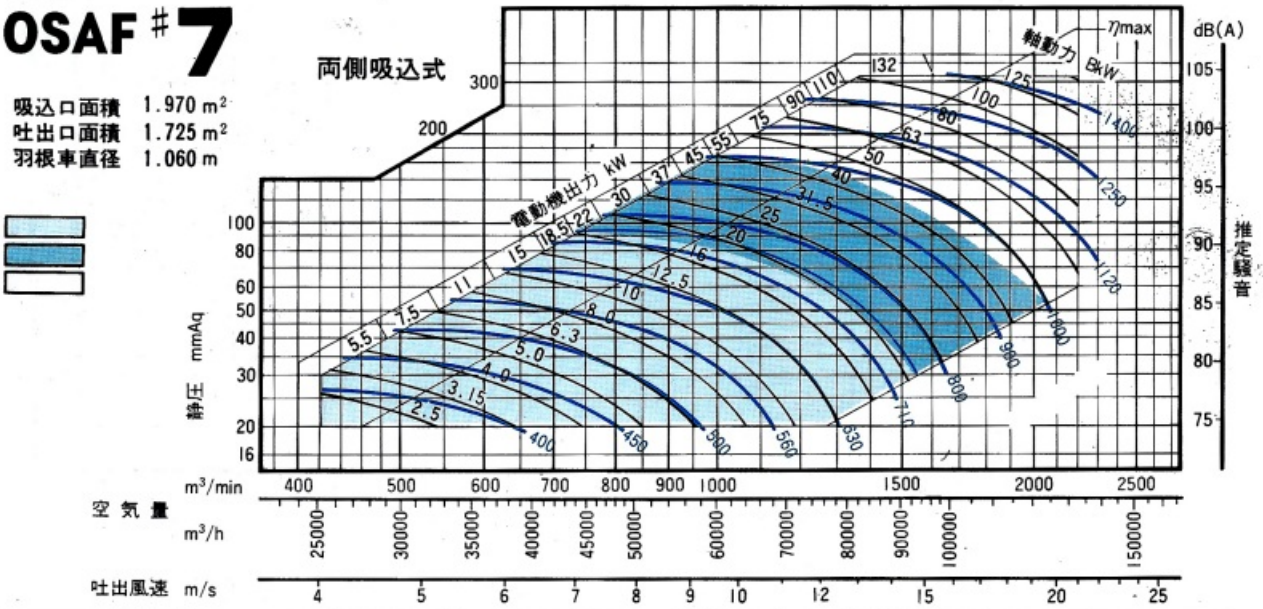
OSAF #6

吸込口面積 1.571 m²
吐出口面積 1.360 m²
羽根車直径 0.950 m



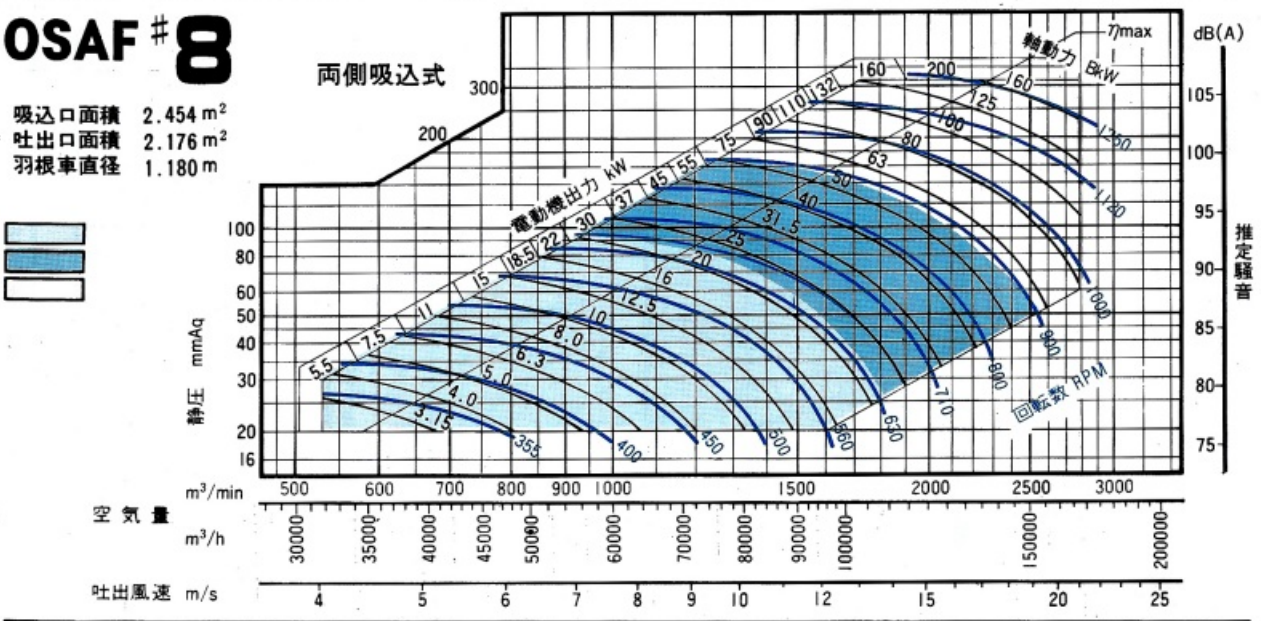
OSAF #7

吸込口面積 1.970 m²
吐出口面積 1.725 m²
羽根車直径 1.060 m



OSAF #8

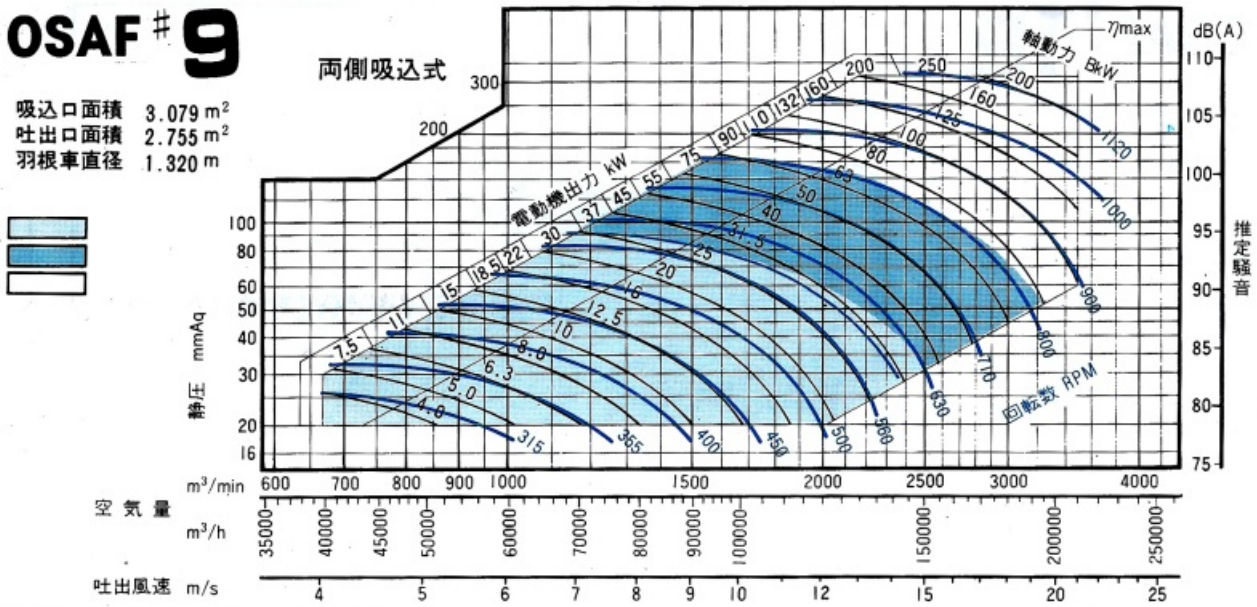
吸込口面積 2.454 m²
吐出口面積 2.176 m²
羽根車直径 1.180 m



OSAF #9

両側吸込式

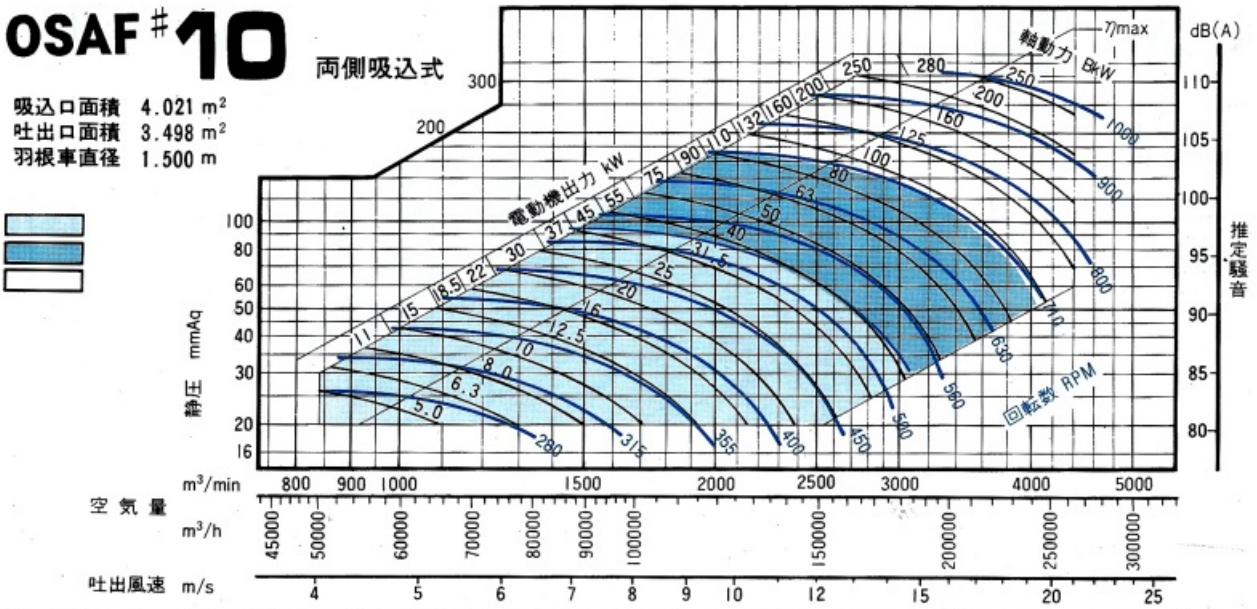
吸込口面積 3.079 m²
吐出口面積 2.755 m²
羽根車直径 1.320 m



OSAF #10

両側吸込式

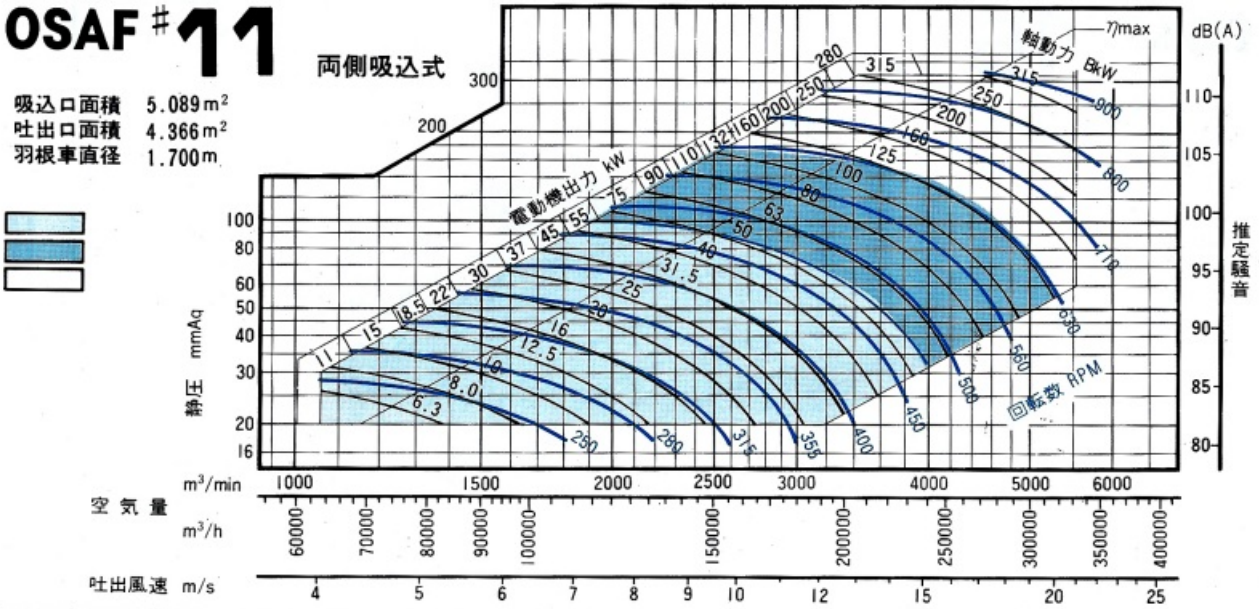
吸込口面積 4.021 m²
吐出口面積 3.498 m²
羽根車直径 1.500 m



OSAF #11

両側吸込式

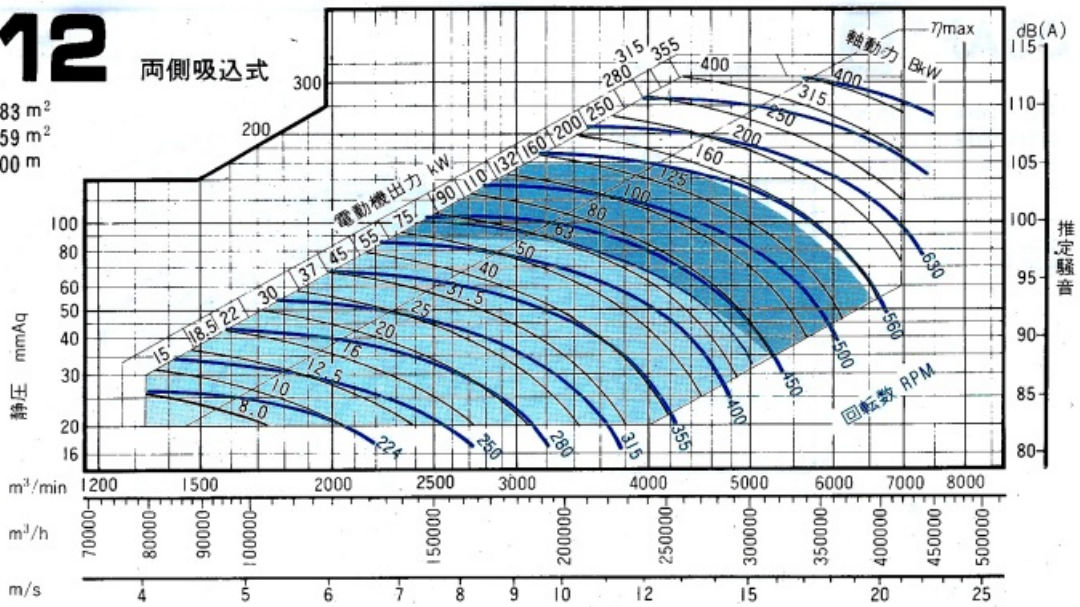
吸込口面積 5.089 m²
吐出口面積 4.366 m²
羽根車直径 1.700 m



OSAF #12

両側吸込式

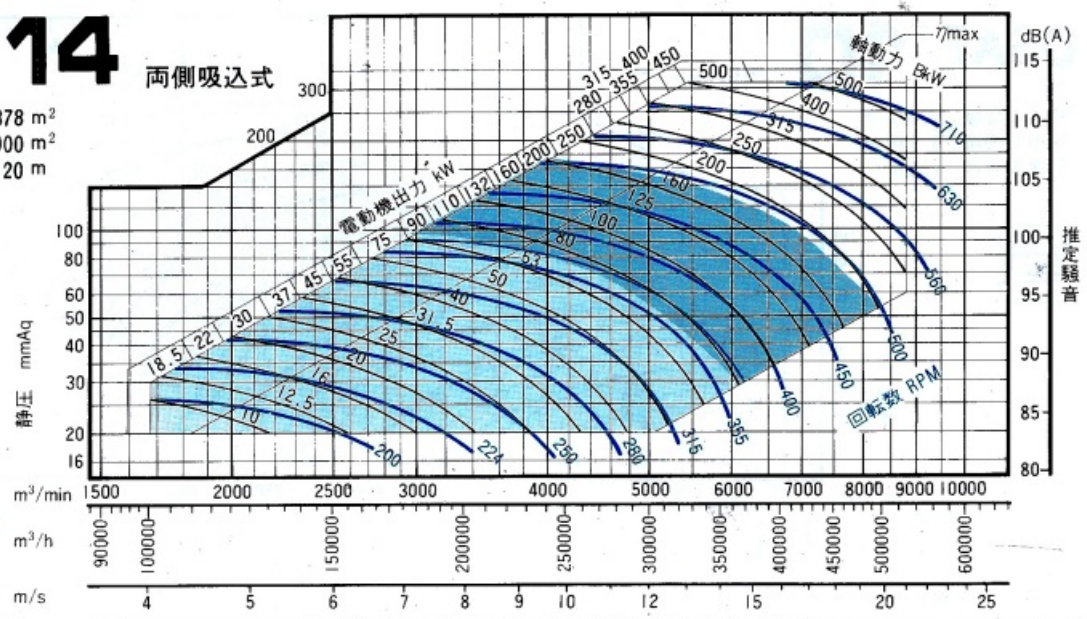
吸込口面積 6.283 m²
吐出口面積 5.459 m²
羽根車直径 1.900 m



OSAF #14

両側吸込式

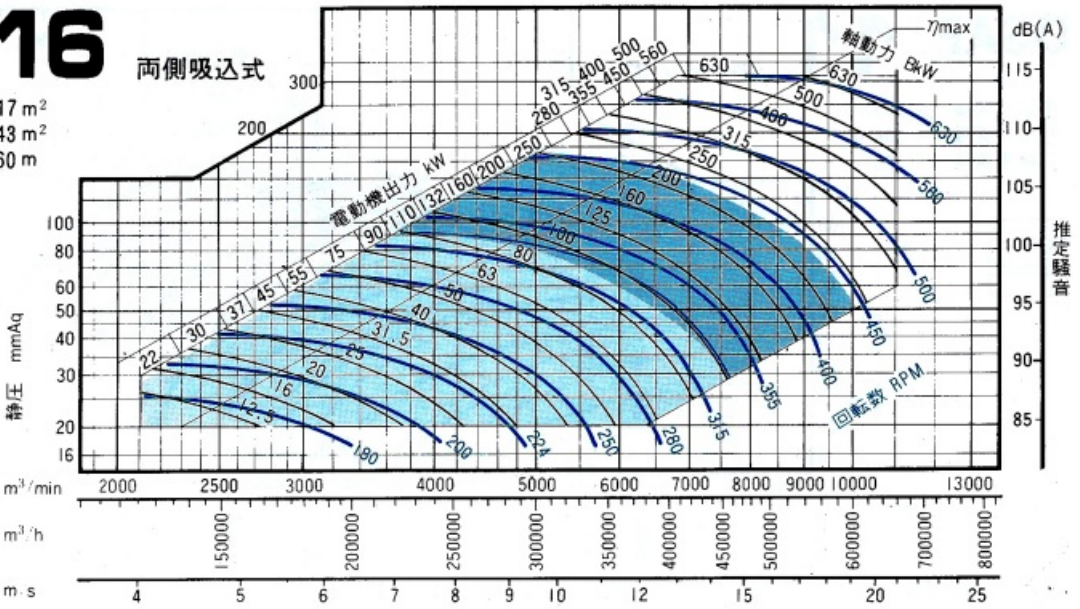
吸込口面積 7.878 m²
吐出口面積 6.900 m²
羽根車直径 2.120 m

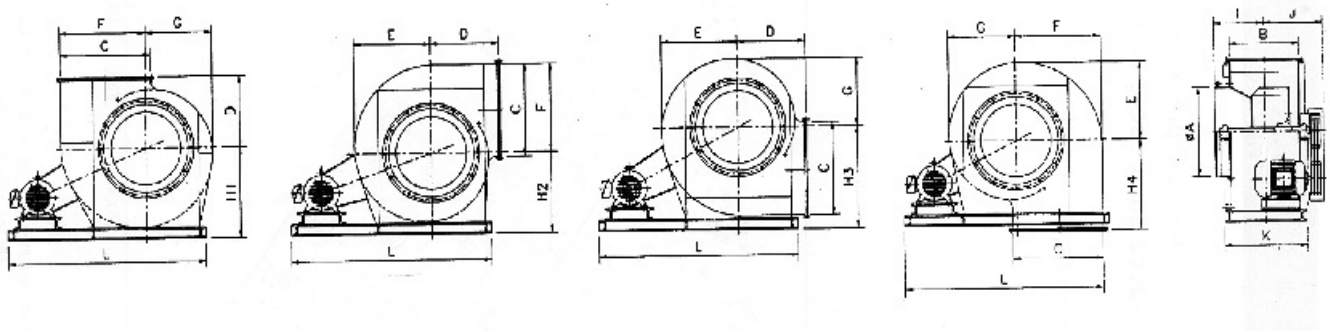


OSAF #16

両側吸込式

吸込口面積 9.817 m²
吐出口面積 8.643 m²
羽根車直径 2.360 m





Dimensions

NO	∅A	B		C	D	E	F	G	H_1	H_2	H_3	H_4	I	J	K	L	REMARK
		S.S	D.S														
2	370	260	450	355	285	302	340	262	345	305	380	365	220	320	340	950	S.S :
2 1/2	430	300	540	405	300	336	385	288	390	340	355	380	240	350	380	1000	SINGLE SUCTION
3	490	360	660	485	360	402	460	346	480	425	535	480	270	380	440	1150	DS :
3 1/2	580	410	770	580	415	484	554	416	560	495	630	535	305	420	490	1250	DOUBLE SUCTION
4	645	460	870	645	470	540	616	462	615	535	695	590	330	450	540	1350	
4 1/2	715	530	970	720	515	600	685	514	675	590	760	635	365	520	610	1470	
5	790	590	1090	800	560	666	760	570	745	645	835	680	405	550	670	1650	
5 1/2	890	610	1160	875	610	730	836	626	805	705	915	730	425	580	690	1750	
6	930	700	1220	955	670	796	910	682	875	760	985	790	470	630	780	1890	
7	1140	790	1470	1060	785	934	1058	808	1035	910	1160	935	525	690	890	2100	
8	1300	870	1620	1170	855	1030	1170	892	1130	995	1270	1010	565	730	970	2260	
9	1400	960	1790	1290	965	1140	1292	986	1240	1090	1395	1120	620	800	1060	2500	
10	1540	1060	1990	1435	1055	1264	1432	1094	1390	1220	1560	1210	700	900	1190	2900	

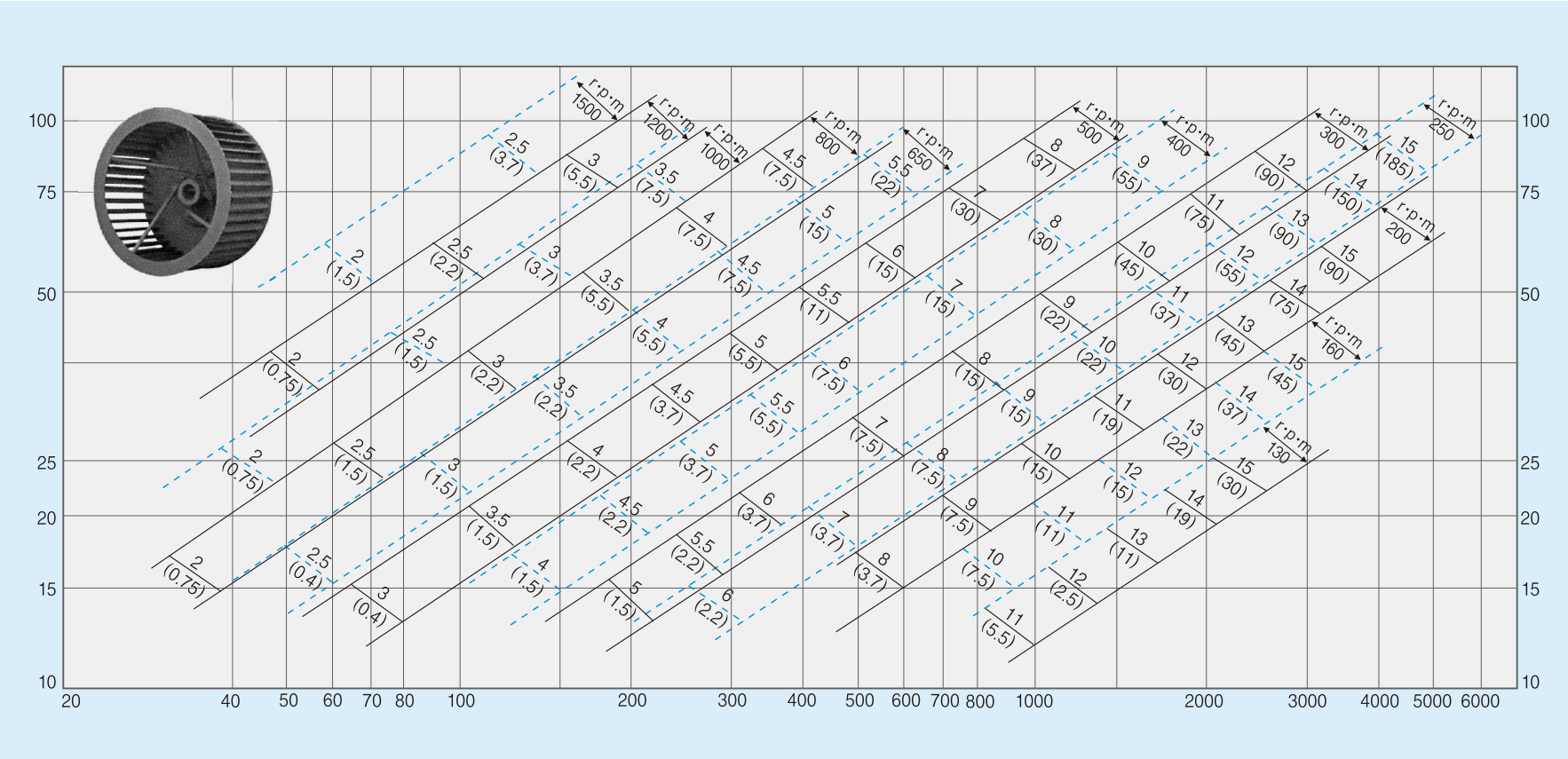
※ NOTE : "L" 칫수는 MOTOR HP에 따라 변경될 수 있음

SIROCCO FAN

SIROCCO FAN

Characteristics	Large air volume, low-pressure (10-100mmAq) and low-speed quiet operationl
End use	for Ventilators, Air-conditioning , etc.

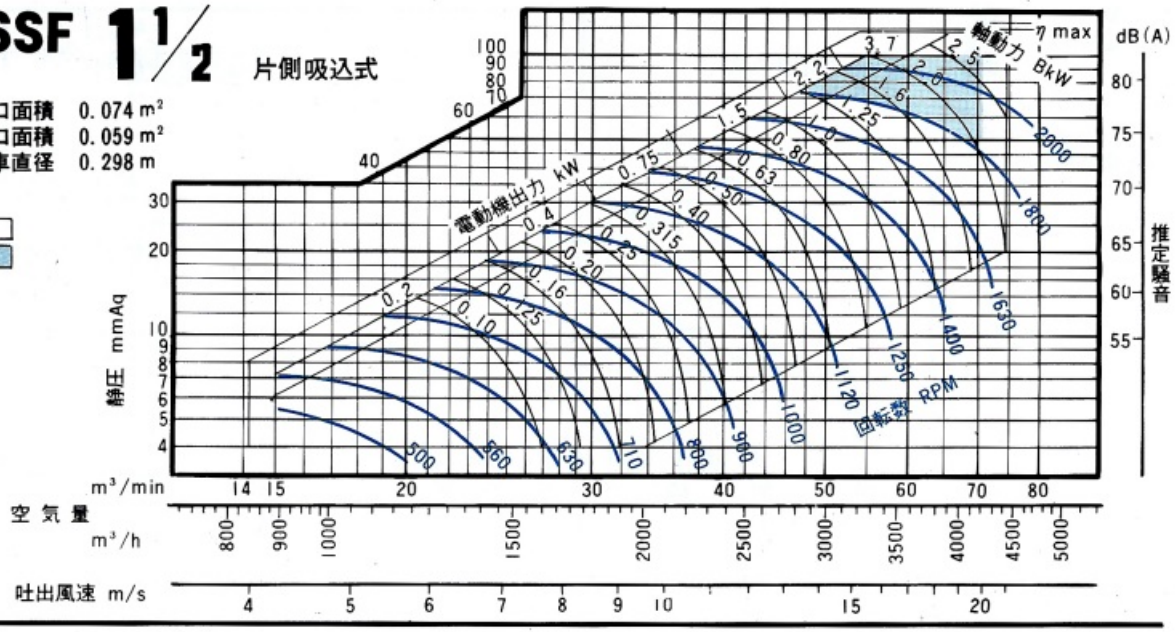
Selection Chart



※Air volume will be a double in case of double suction
( ) : Motor power (Kw)

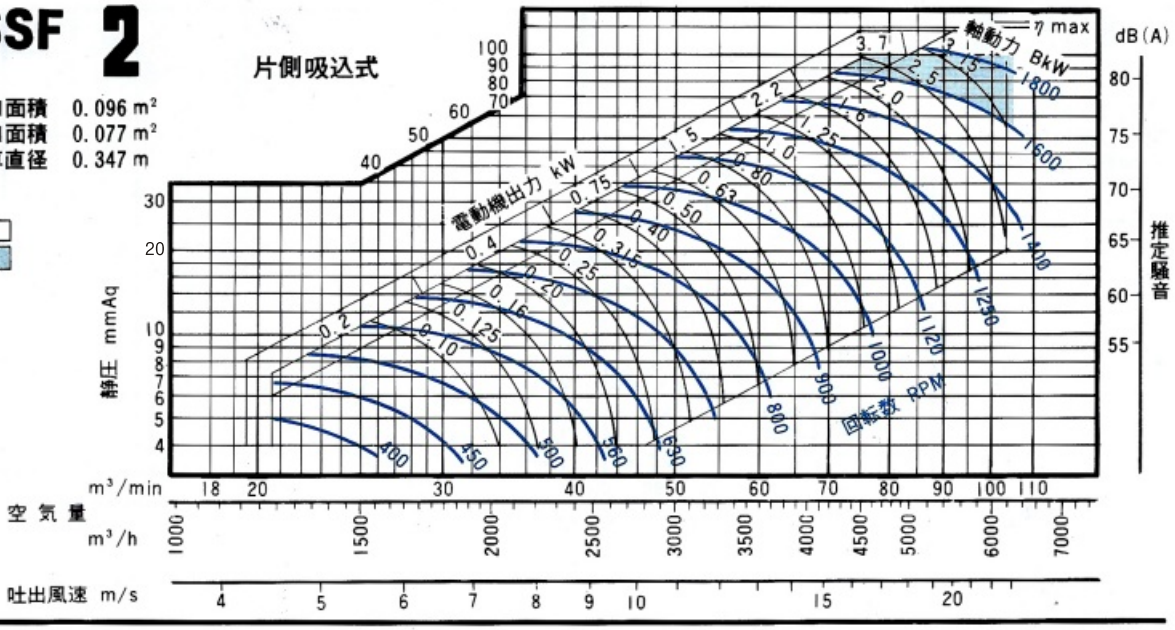
OSSF 1 1/2 片側吸込式

吸込口面積 0.074 m²
吐出口面積 0.059 m²
羽根車直径 0.298 m



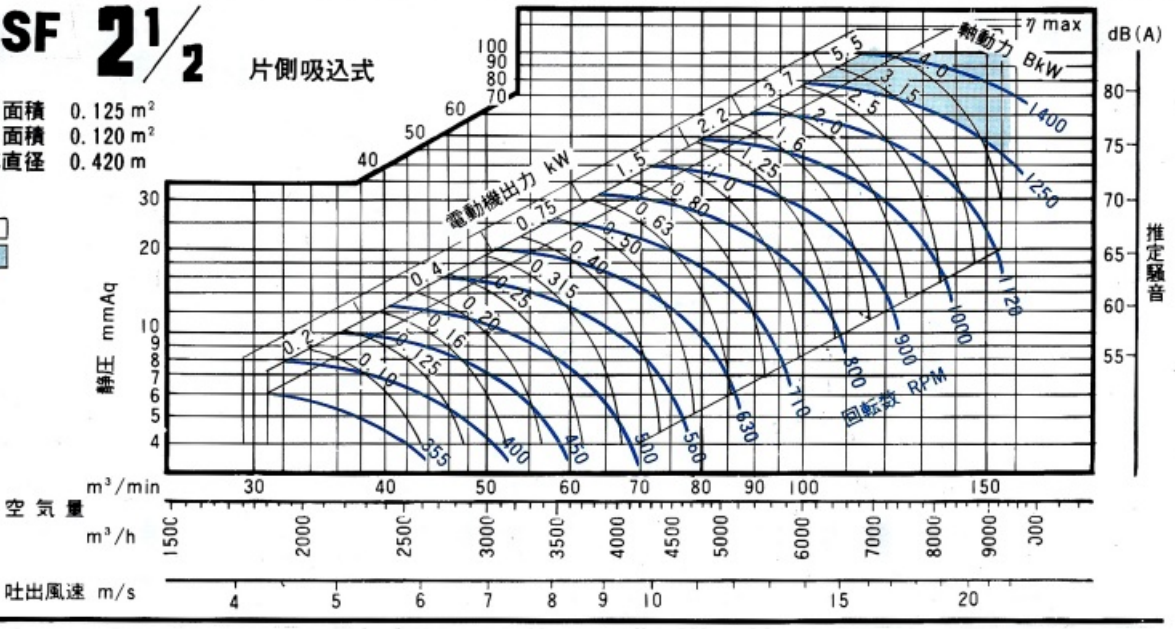
OSSF 2 片側吸込式

吸込口面積 0.096 m²
吐出口面積 0.077 m²
羽根車直径 0.347 m



OSSF 2 1/2 片側吸込式

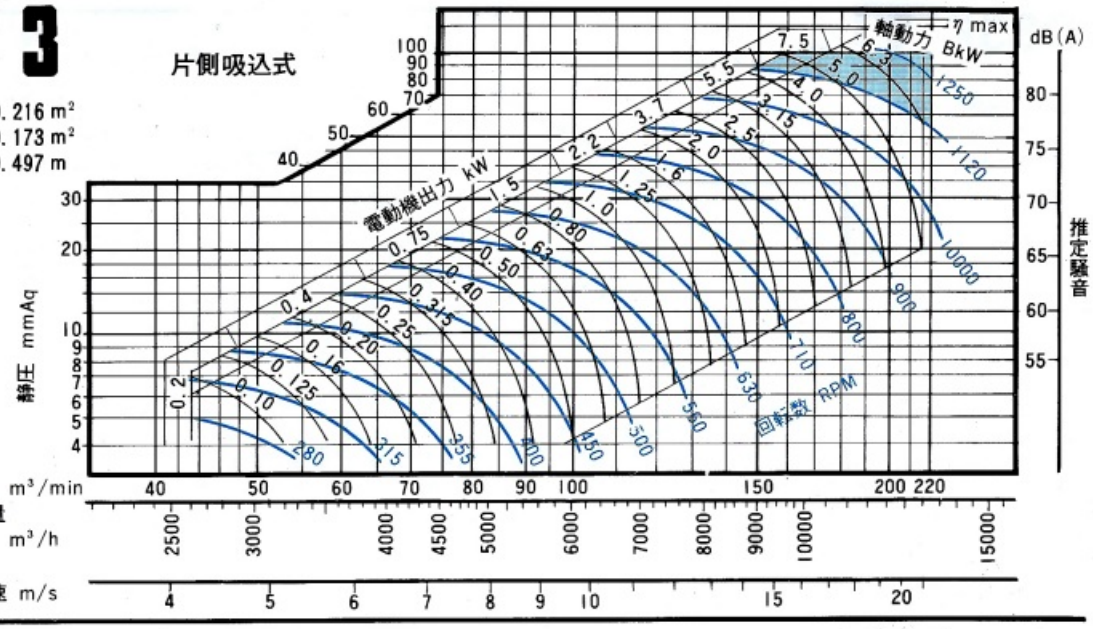
吸込口面積 0.125 m²
吐出口面積 0.120 m²
羽根車直径 0.420 m



OSSF 3

片側吸込式

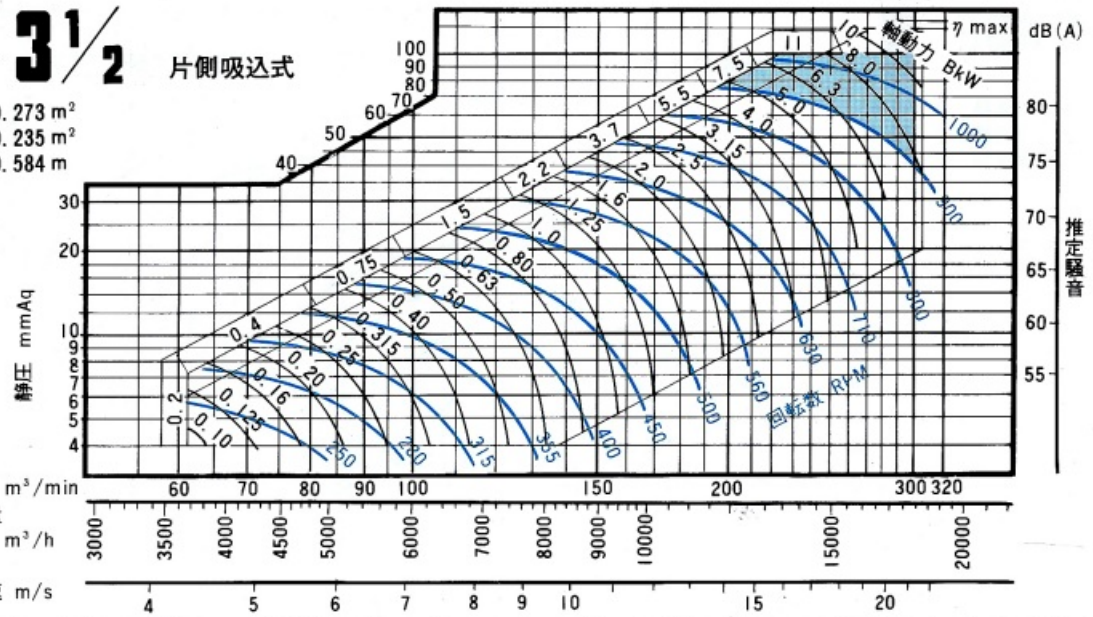
吸込口面積 0.216 m²
吐出口面積 0.173 m²
羽根車直径 0.497 m



OSSF 3 1/2

片側吸込式

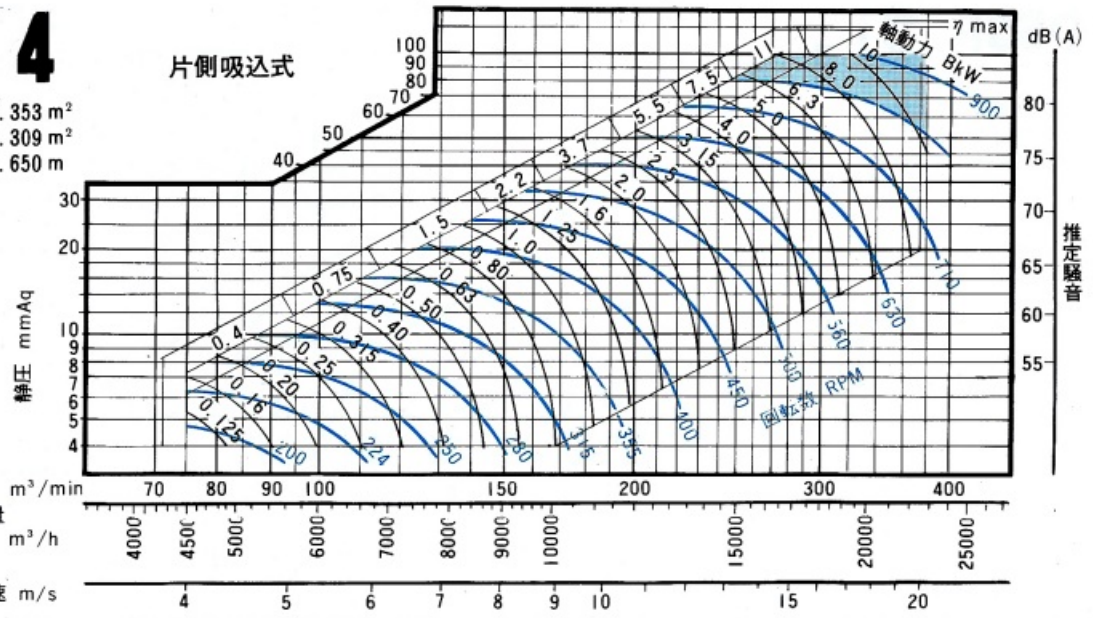
吸込口面積 0.273 m²
吐出口面積 0.235 m²
羽根車直径 0.584 m



OSSF 4

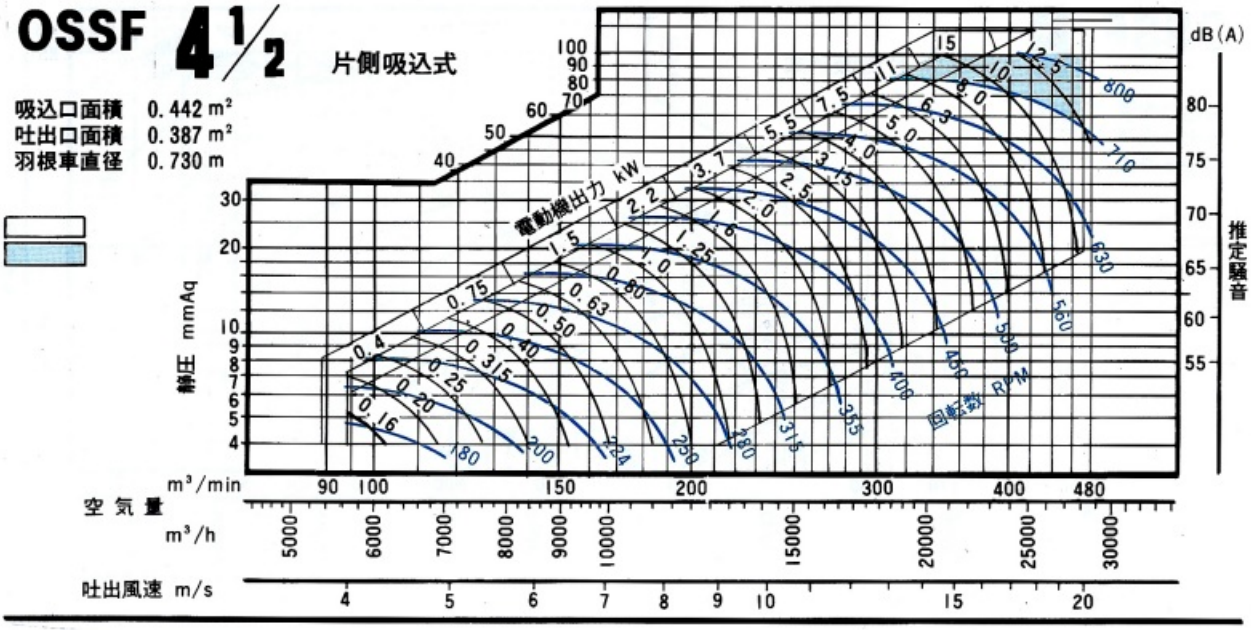
片側吸込式

吸込口面積 0.353 m²
吐出口面積 0.309 m²
羽根車直径 0.650 m



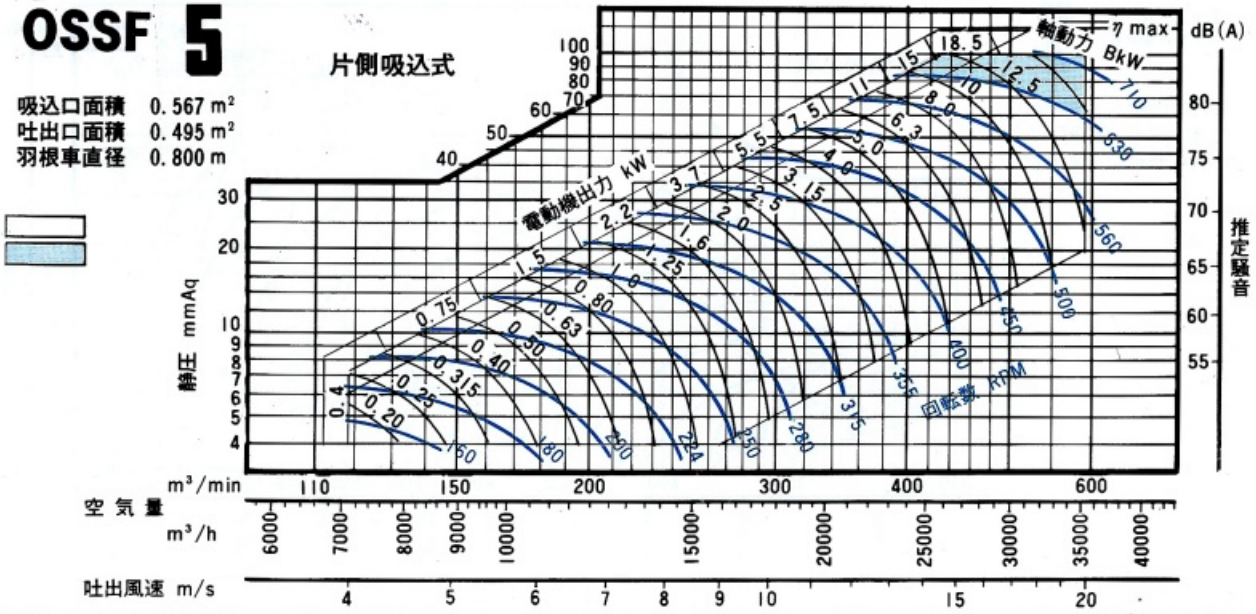
OSSF 4 1/2 片側吸込式

吸込口面積 0.442 m²
吐出口面積 0.387 m²
羽根車直径 0.730 m



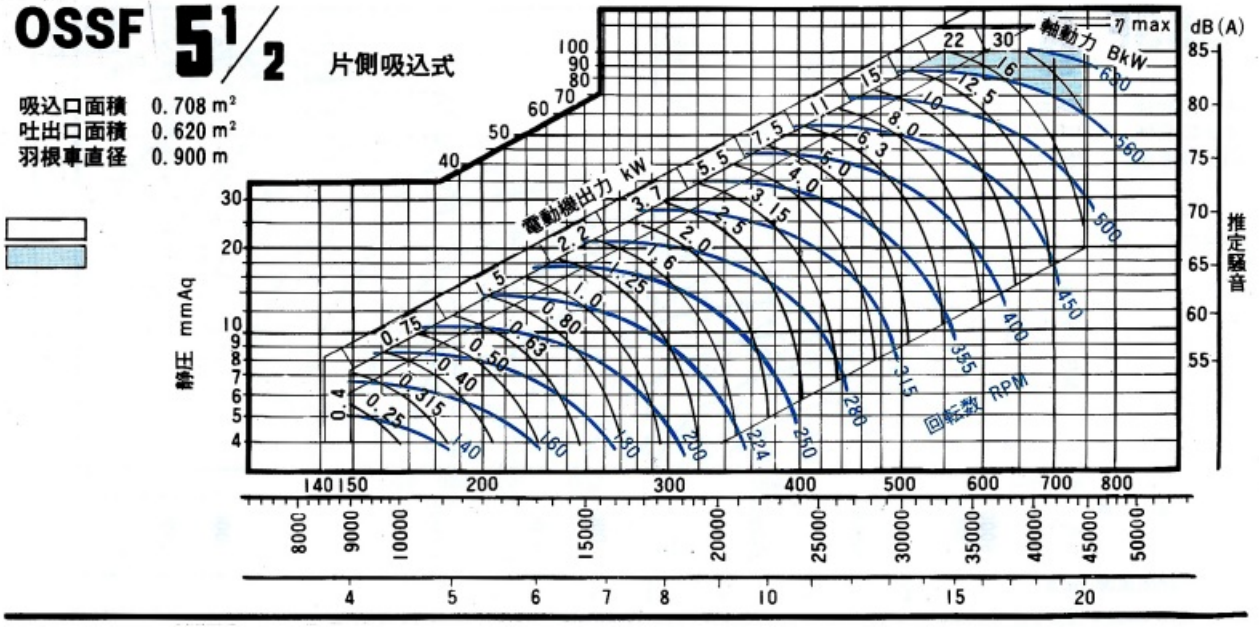
OSSF 5 片側吸込式

吸込口面積 0.567 m²
吐出口面積 0.495 m²
羽根車直径 0.800 m



OSSF 5 1/2 片側吸込式

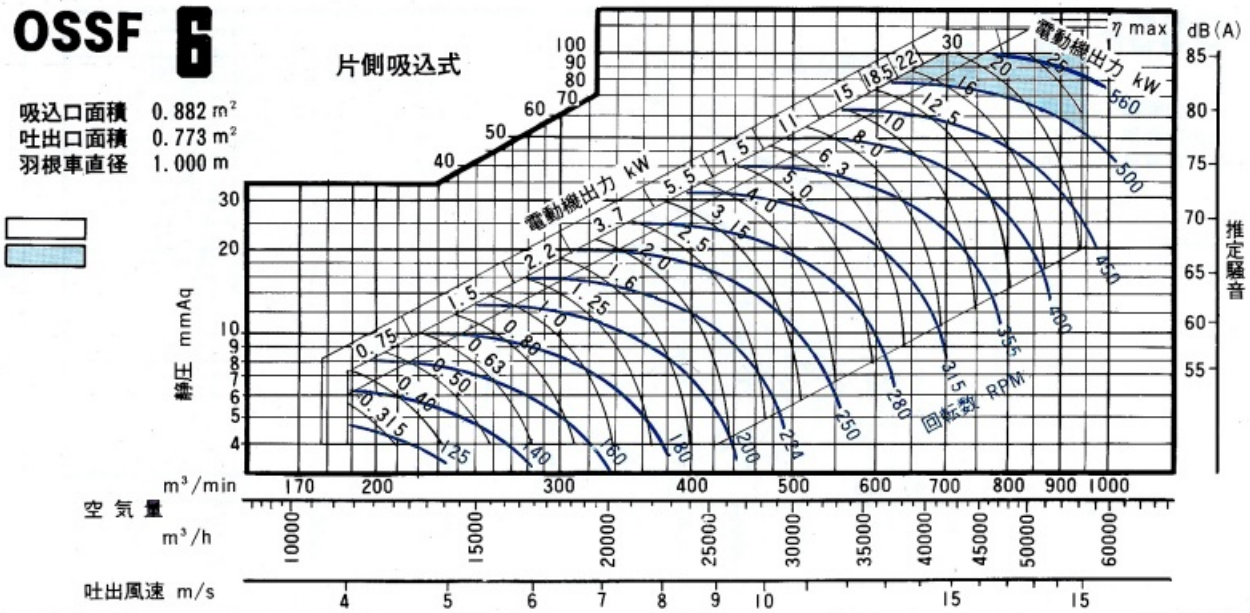
吸込口面積 0.708 m²
吐出口面積 0.620 m²
羽根車直径 0.900 m



OSSF 6

片側吸込式

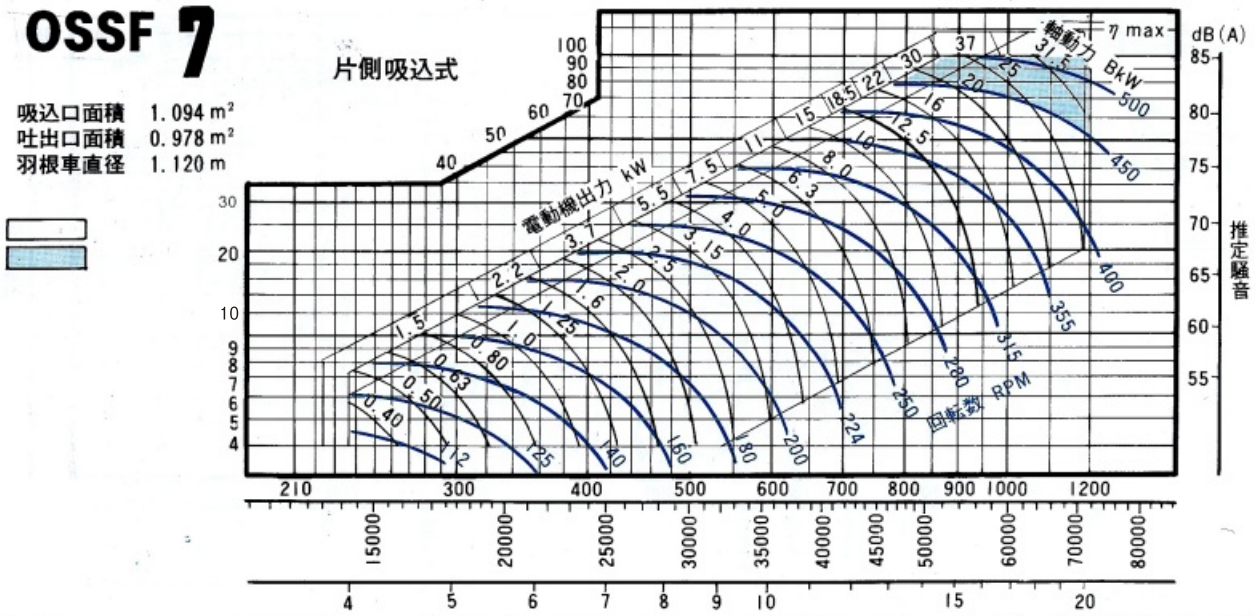
吸込口面積 0.882 m²
吐出口面積 0.773 m²
羽根車直径 1.000 m



OSSF 7

片側吸込式

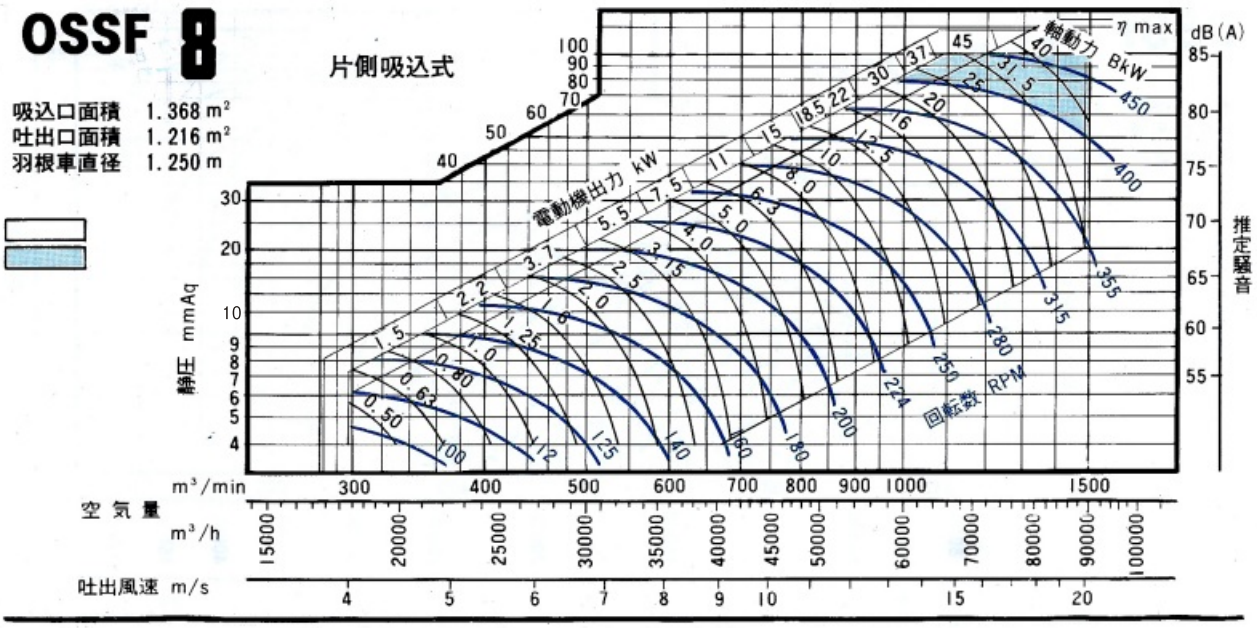
吸込口面積 1.094 m²
吐出口面積 0.978 m²
羽根車直径 1.120 m



OSSF 8

片側吸込式

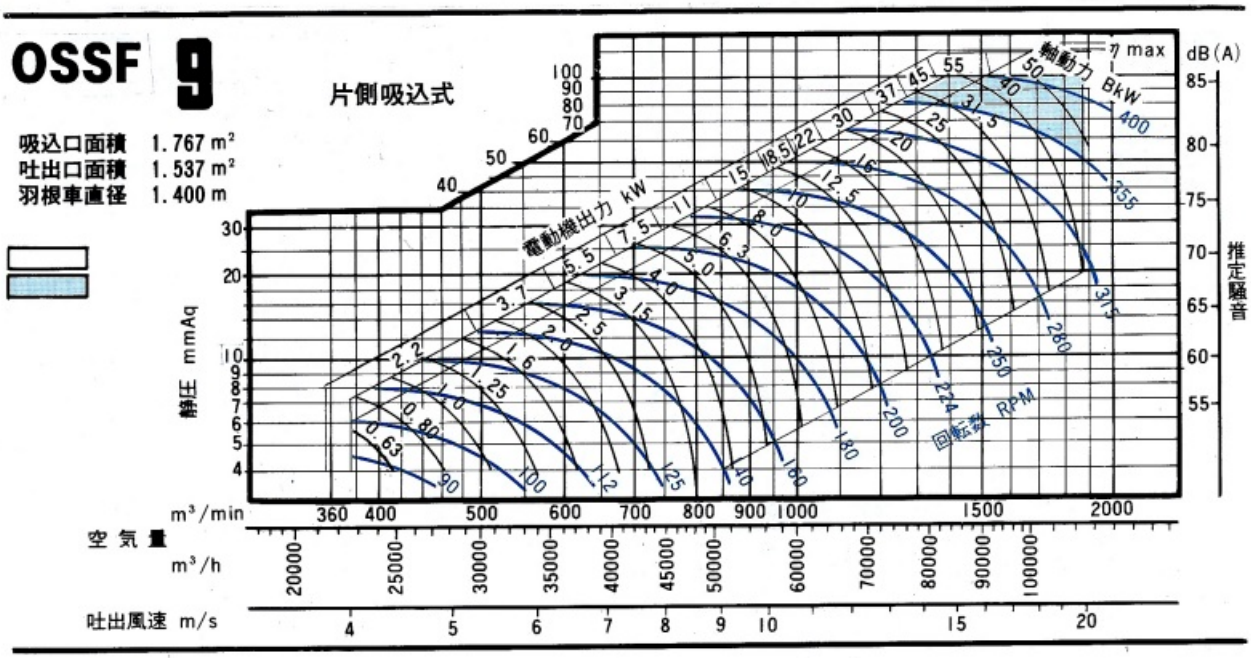
吸込口面積 1.368 m²
吐出口面積 1.216 m²
羽根車直径 1.250 m



OSSF 9

片側吸込式

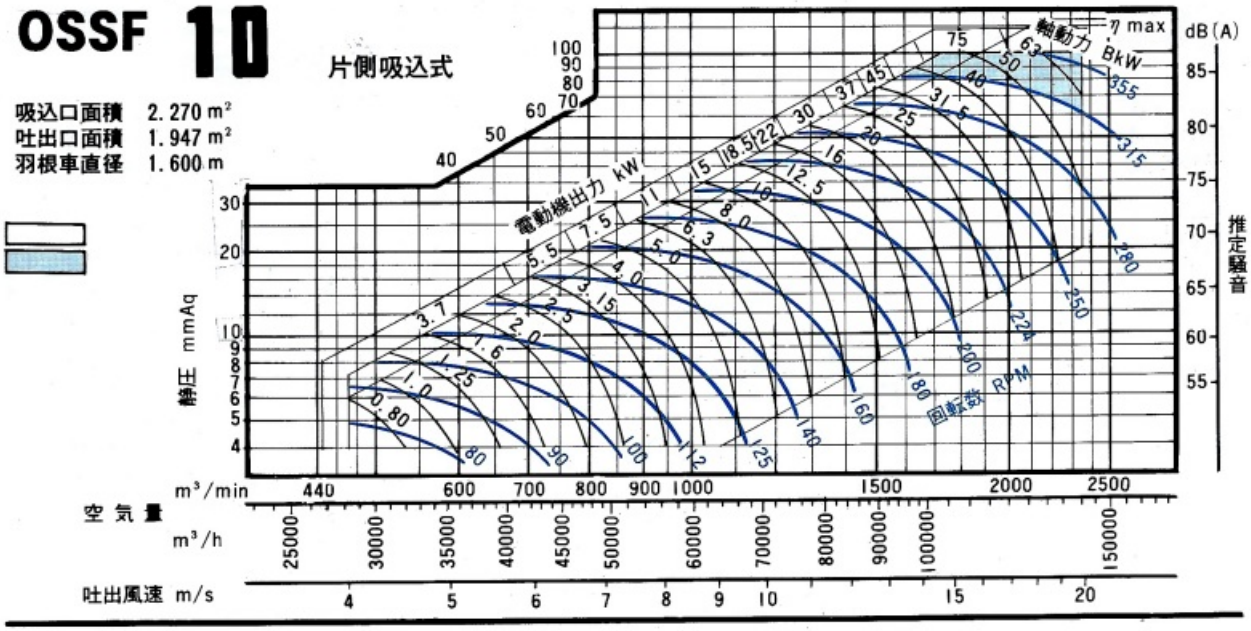
吸込口面積 1.767 m²
吐出口面積 1.537 m²
羽根車直径 1.400 m



OSSF 10

片側吸込式

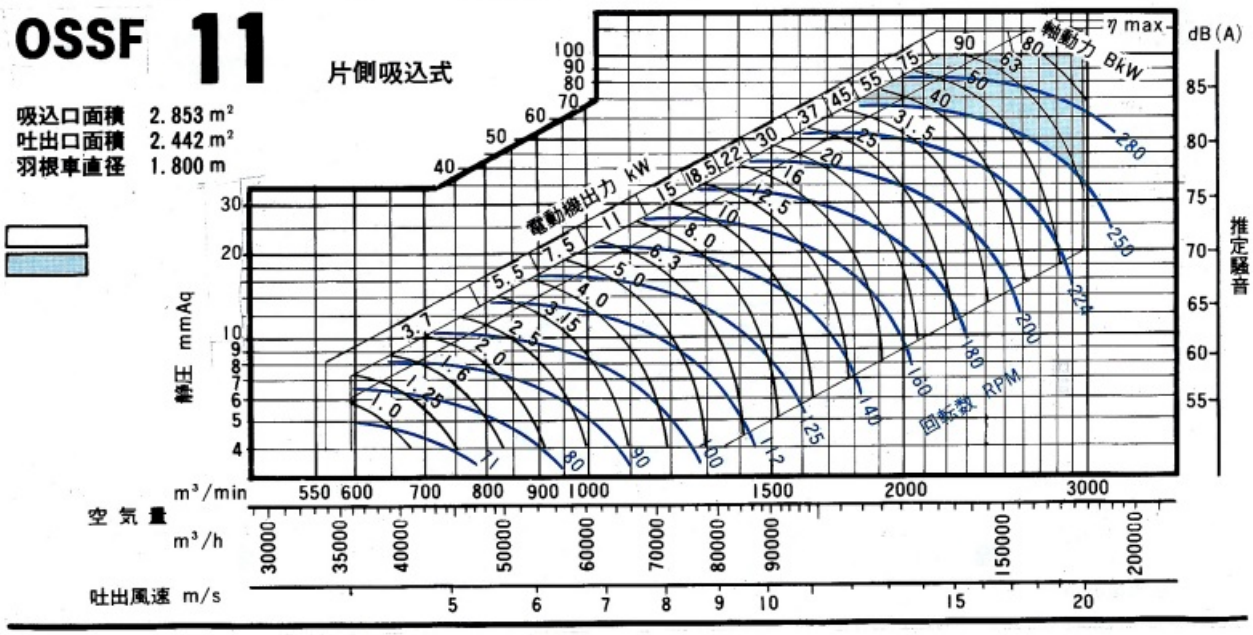
吸込口面積 2.270 m²
吐出口面積 1.947 m²
羽根車直径 1.600 m



OSSF 11

片側吸込式

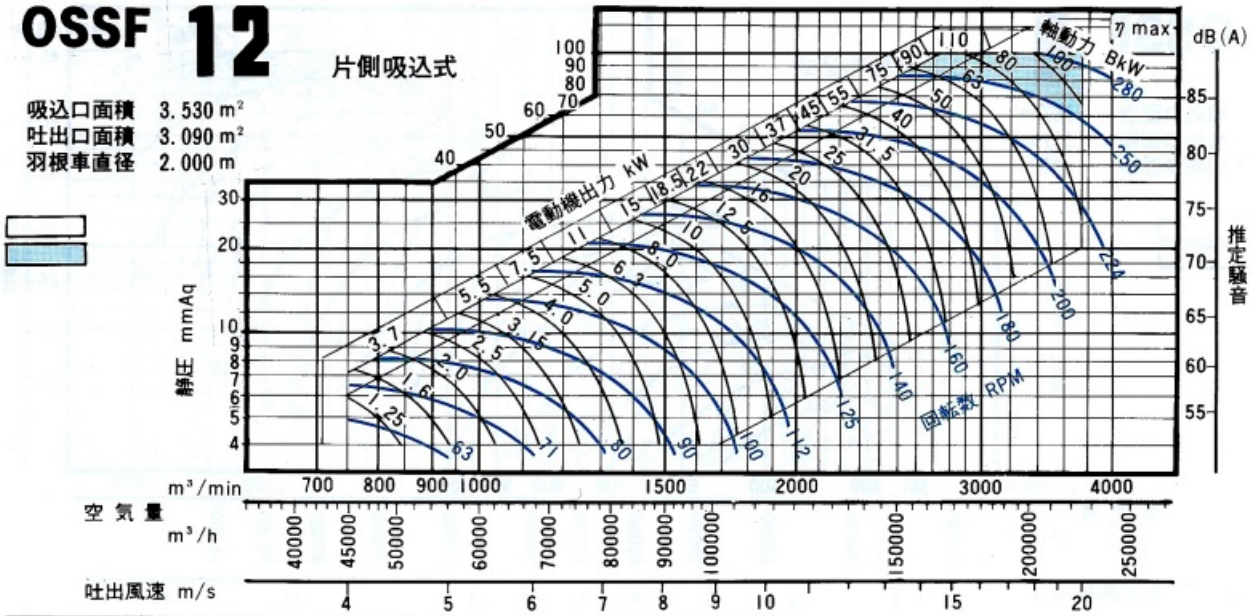
吸込口面積 2.853 m²
吐出口面積 2.442 m²
羽根車直径 1.800 m



OSSF 12

片側吸込式

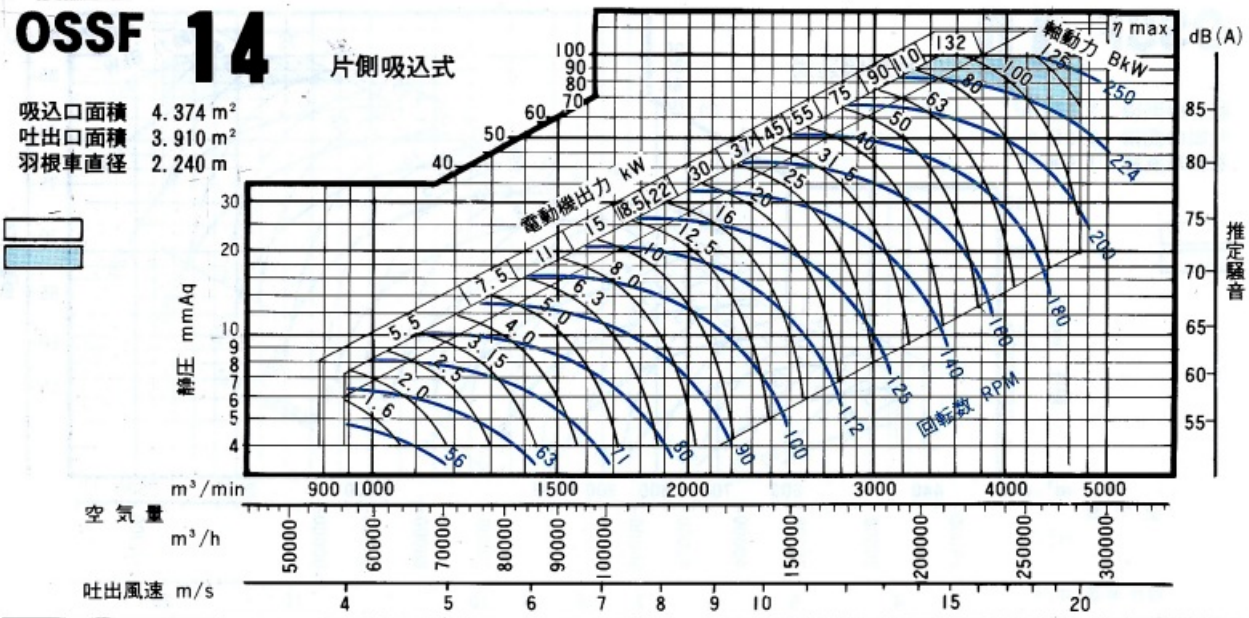
吸込口面積 3.530 m²
吐出口面積 3.090 m²
羽根車直径 2.000 m



OSSF 14

片側吸込式

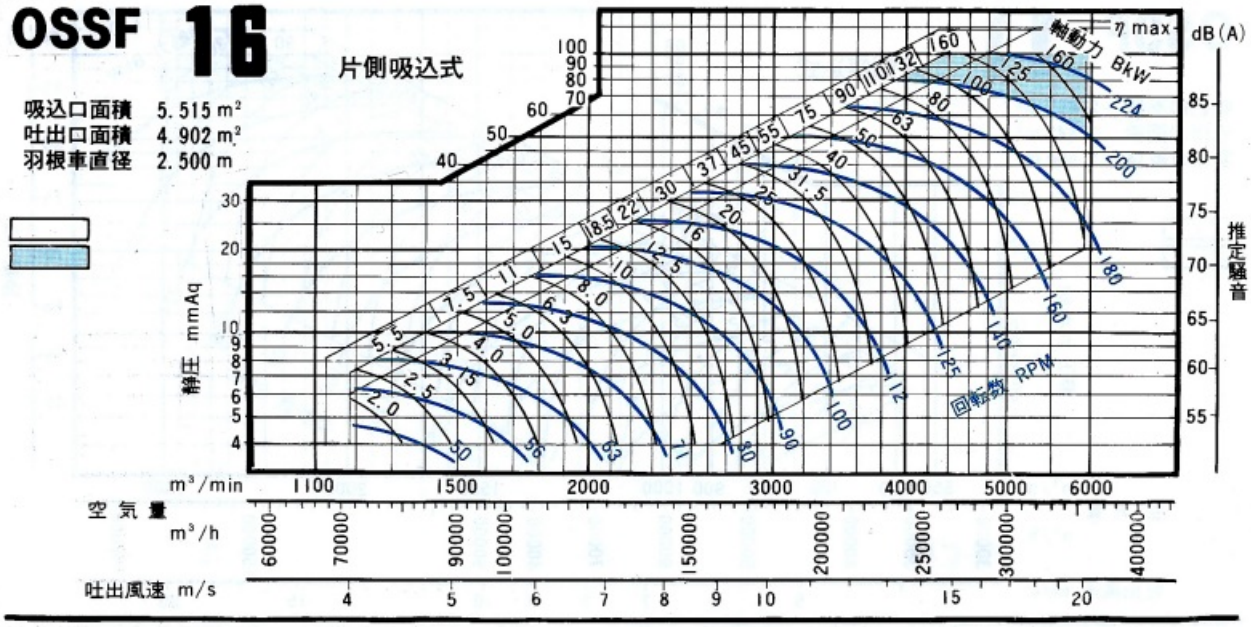
吸込口面積 4.374 m²
吐出口面積 3.910 m²
羽根車直径 2.240 m



OSSF 16

片側吸込式

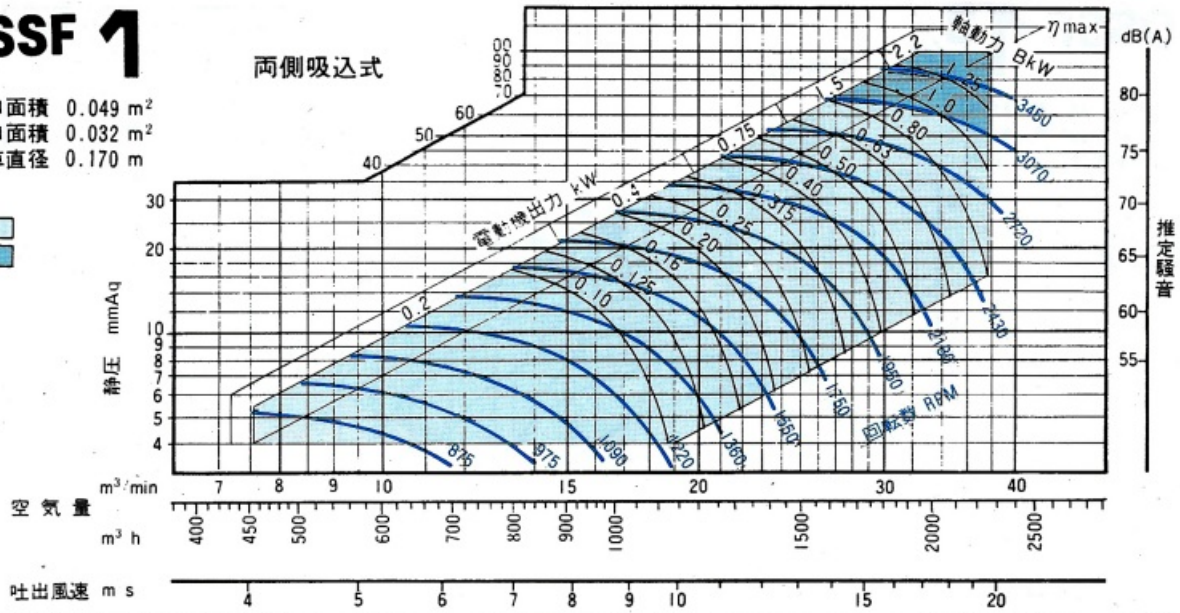
吸込口面積 5.515 m²
吐出口面積 4.902 m²
羽根車直径 2.500 m



OSSF 1

両側吸込式

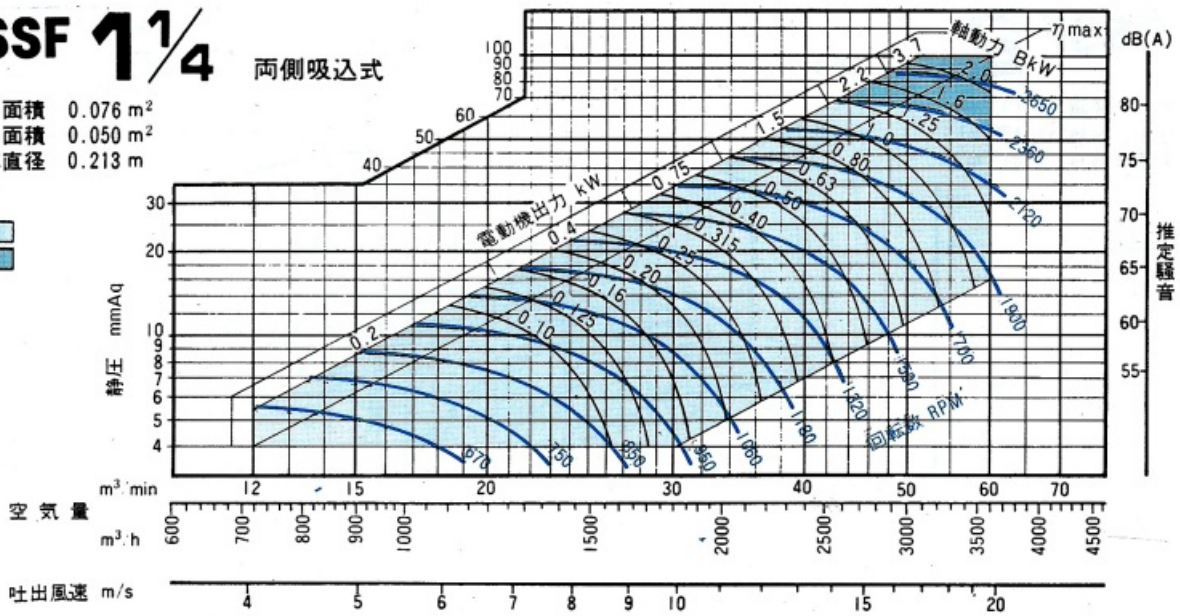
吸込口面積 0.049 m²
吐出口面積 0.032 m²
羽根車直径 0.170 m



OSSF 1 1/4

両側吸込式

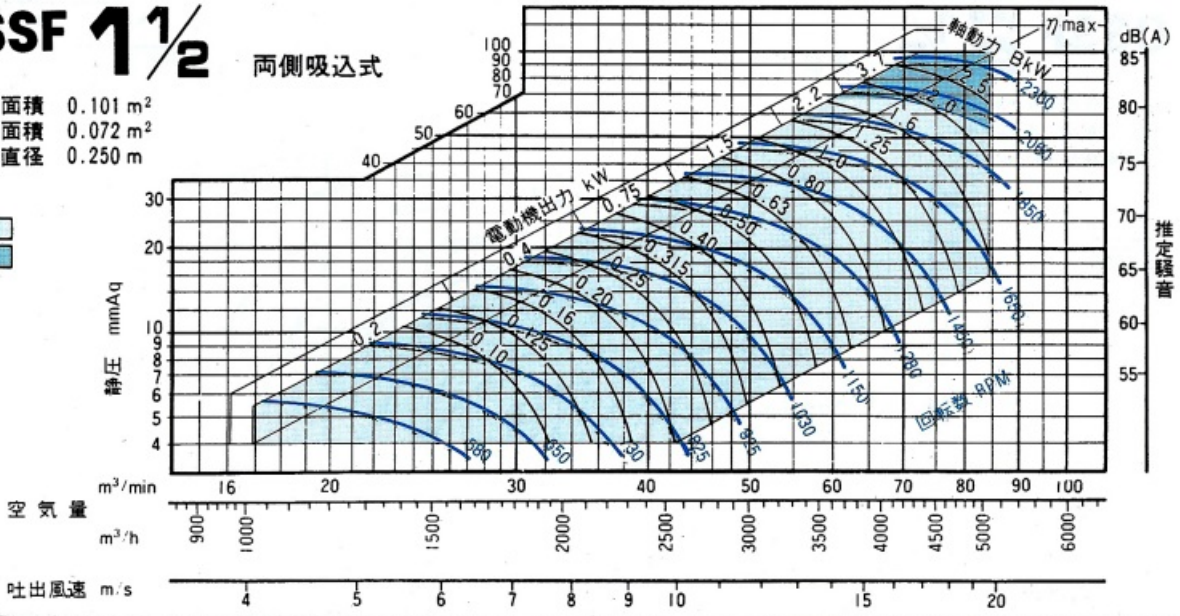
吸込口面積 0.076 m²
吐出口面積 0.050 m²
羽根車直径 0.213 m



OSSF 1 1/2

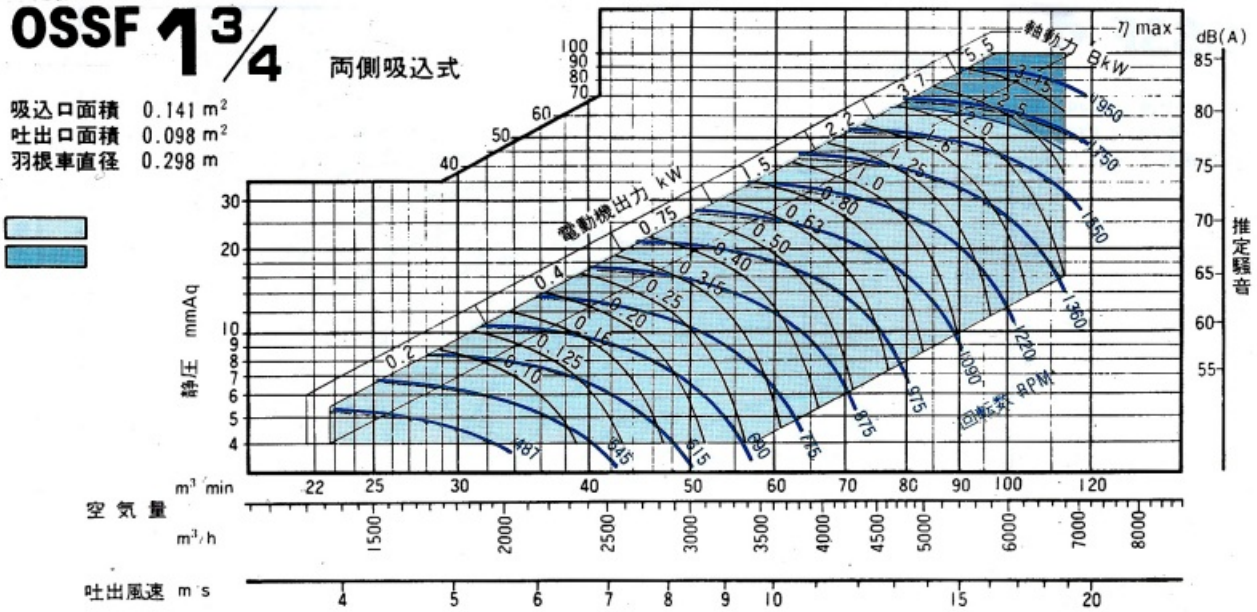
両側吸込式

吸込口面積 0.101 m²
吐出口面積 0.072 m²
羽根車直径 0.250 m



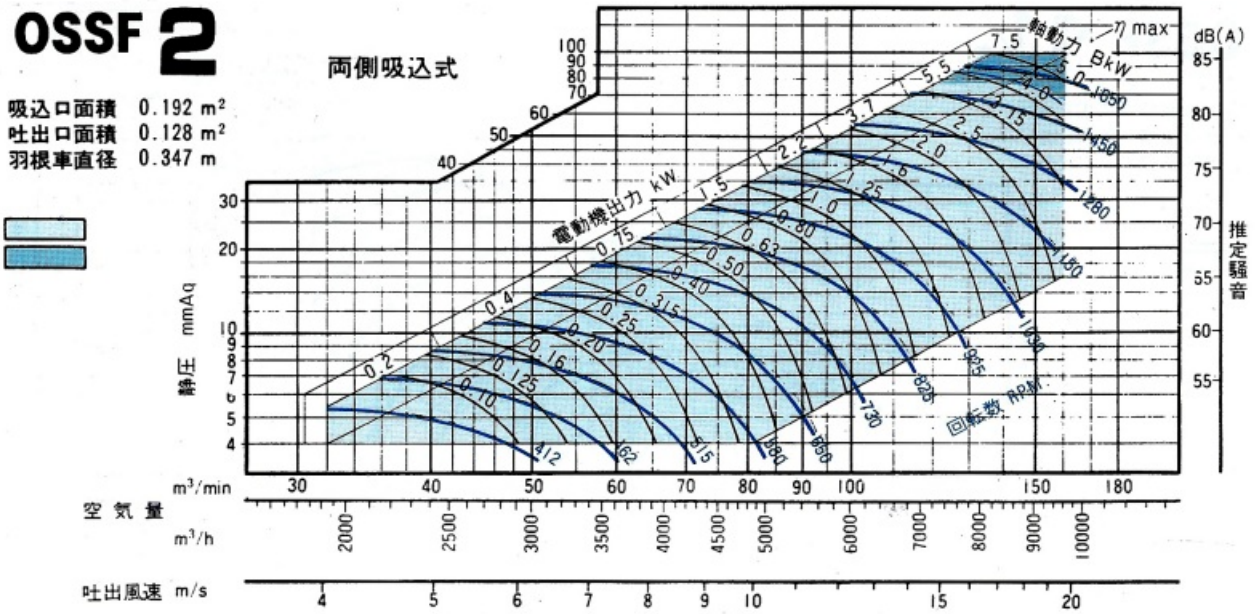
OSSF 1 3/4 両側吸込式

吸込口面積 0.141 m²
吐出口面積 0.098 m²
羽根車直径 0.298 m



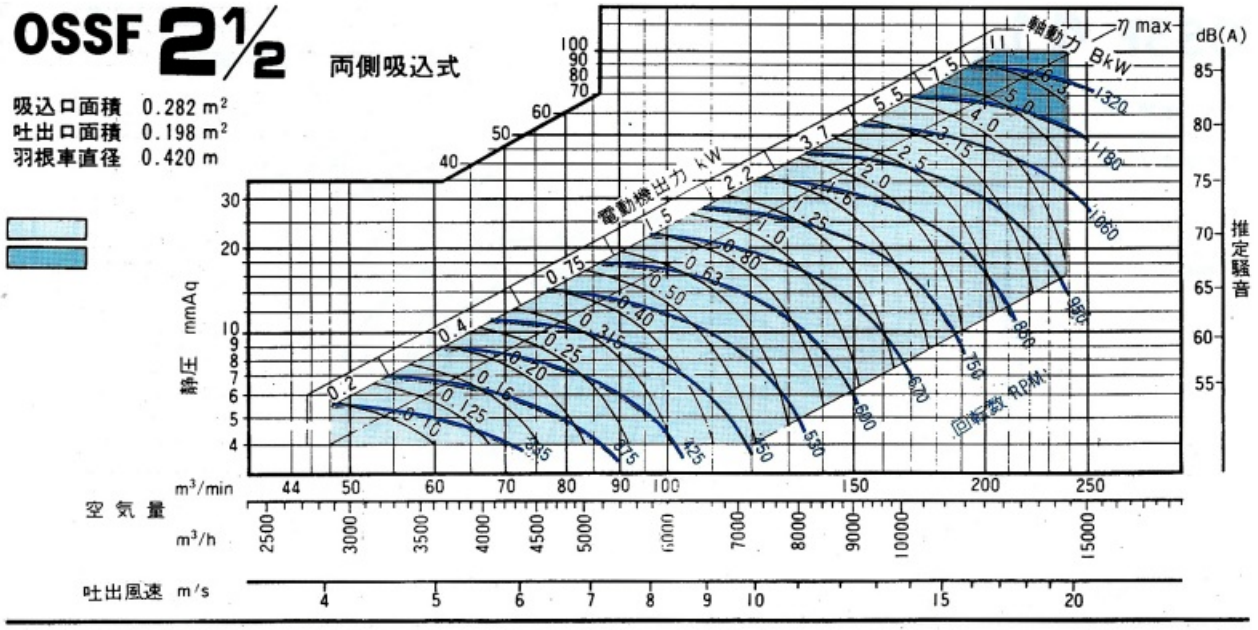
OSSF 2 両側吸込式

吸込口面積 0.192 m²
吐出口面積 0.128 m²
羽根車直径 0.347 m



OSSF 2 1/2 両側吸込式

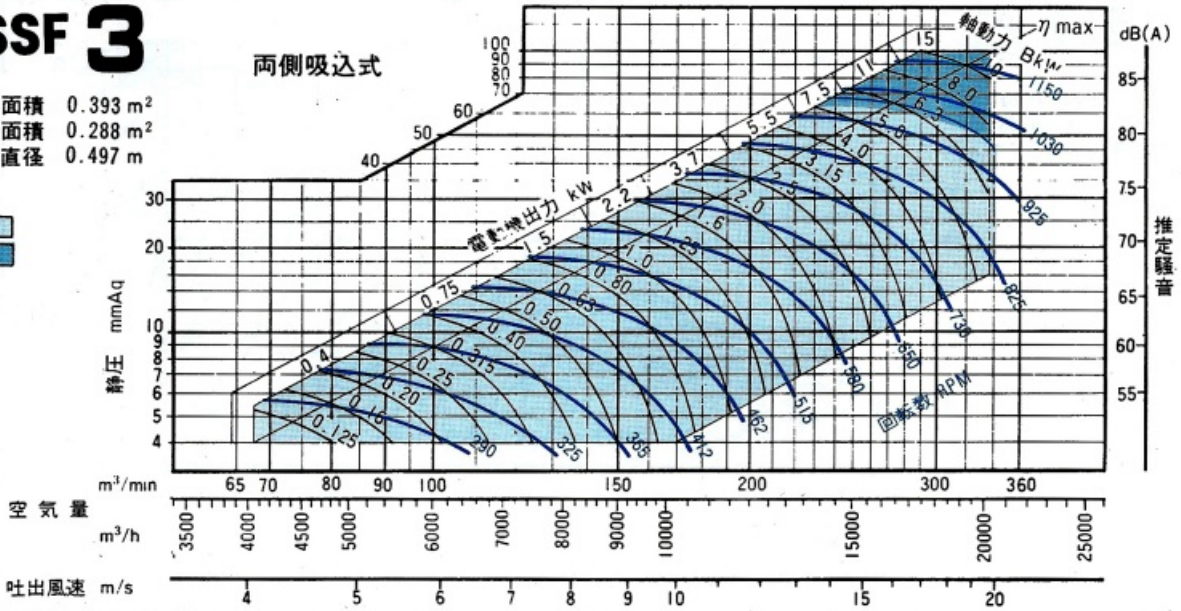
吸込口面積 0.282 m²
吐出口面積 0.198 m²
羽根車直径 0.420 m



OSSF 3

両側吸込式

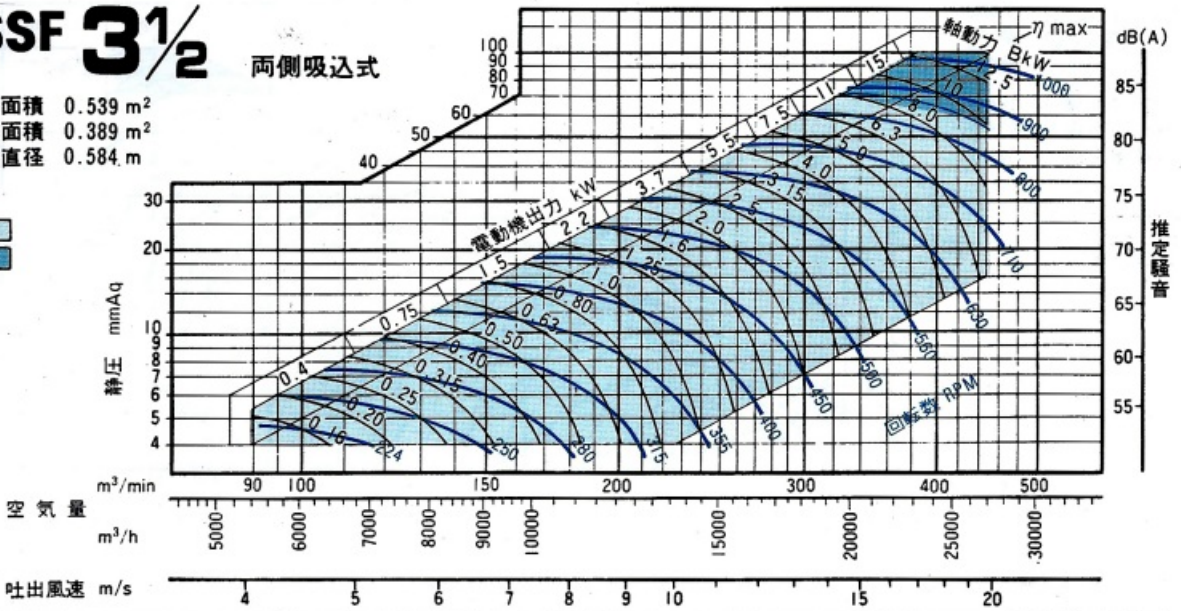
吸込口面積 0.393 m²
吐出口面積 0.288 m²
羽根車直径 0.497 m



OSSF 3½

両側吸込式

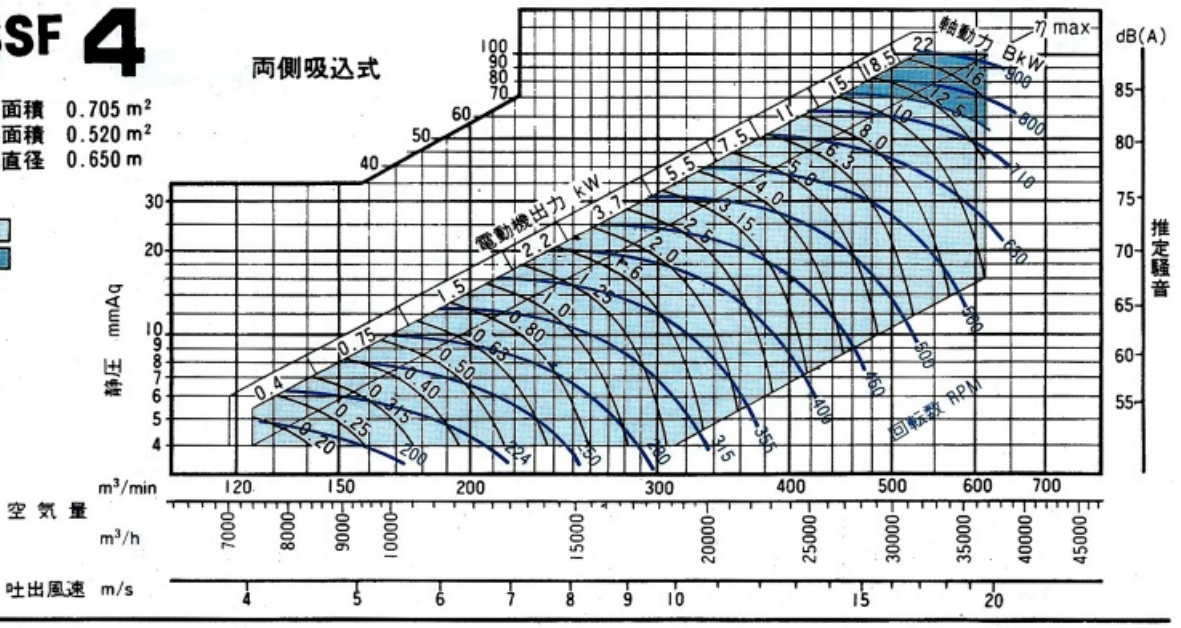
吸込口面積 0.539 m²
吐出口面積 0.389 m²
羽根車直径 0.584 m



OSSF 4

両側吸込式

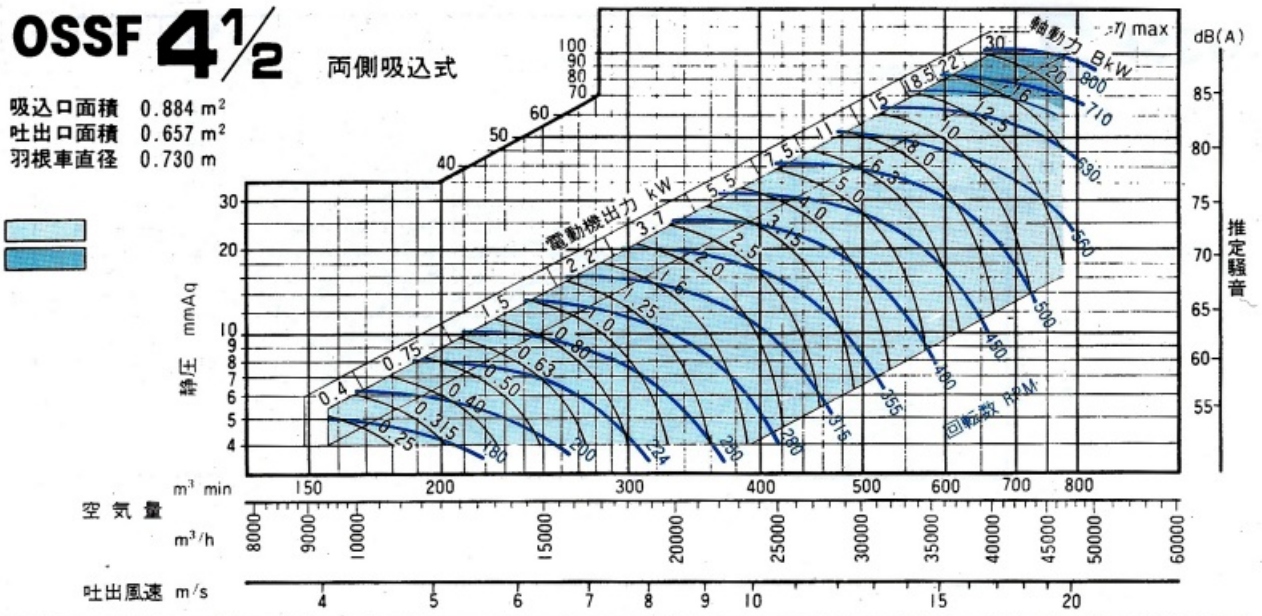
吸込口面積 0.705 m²
吐出口面積 0.520 m²
羽根車直径 0.650 m



OSSF 4½

両側吸込式

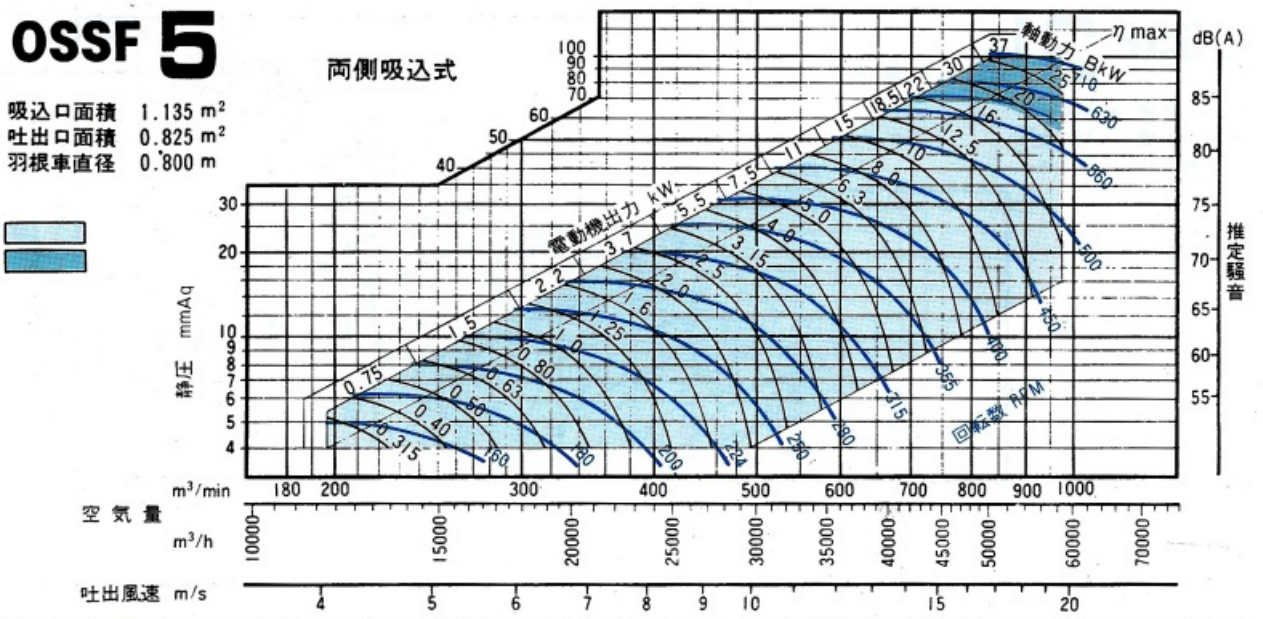
吸込口面積 0.884 m²
吐出口面積 0.657 m²
羽根車直径 0.730 m



OSSF 5

両側吸込式

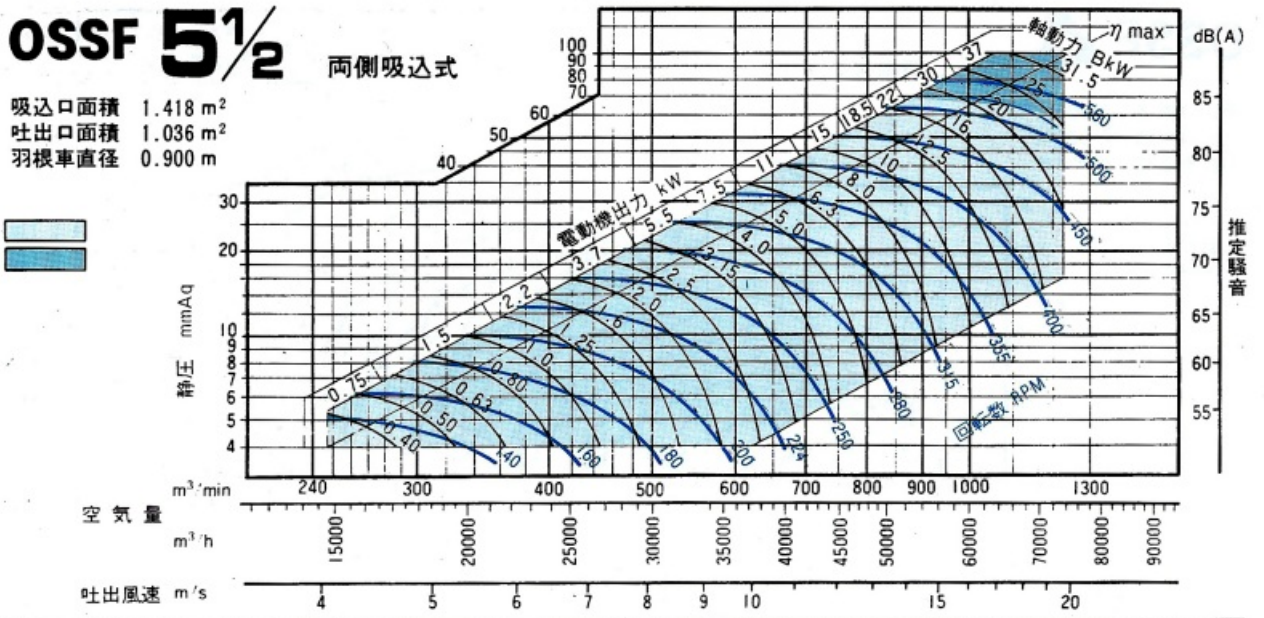
吸込口面積 1.135 m²
吐出口面積 0.825 m²
羽根車直径 0.800 m



OSSF 5½

両側吸込式

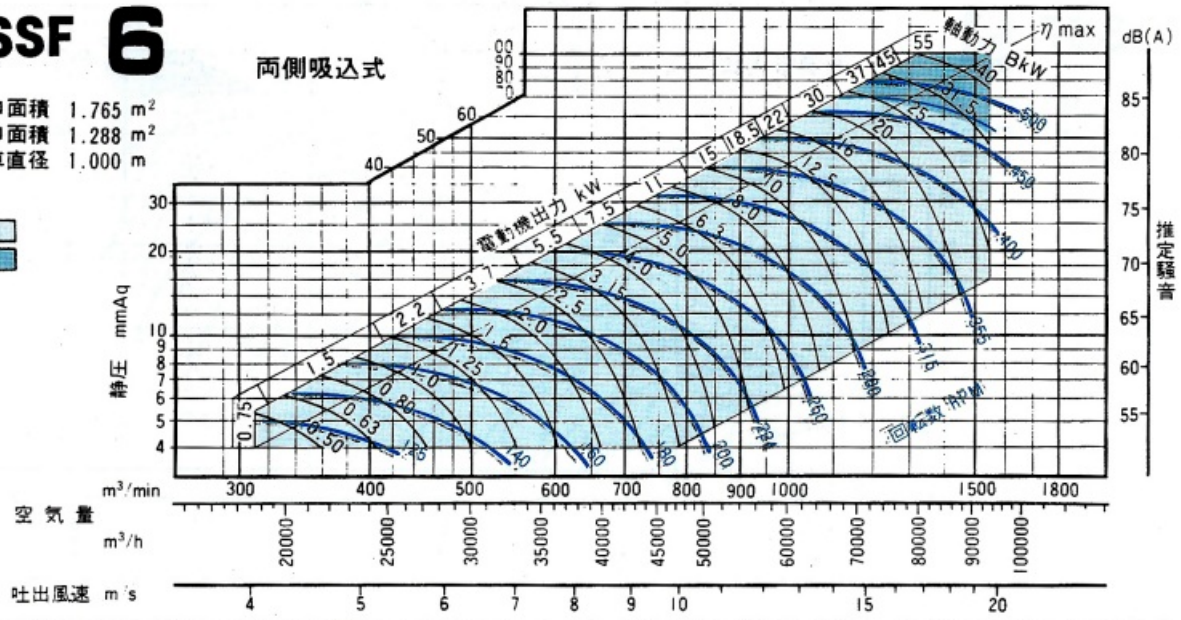
吸込口面積 1.418 m²
吐出口面積 1.036 m²
羽根車直径 0.900 m



OSSF 6

両側吸込式

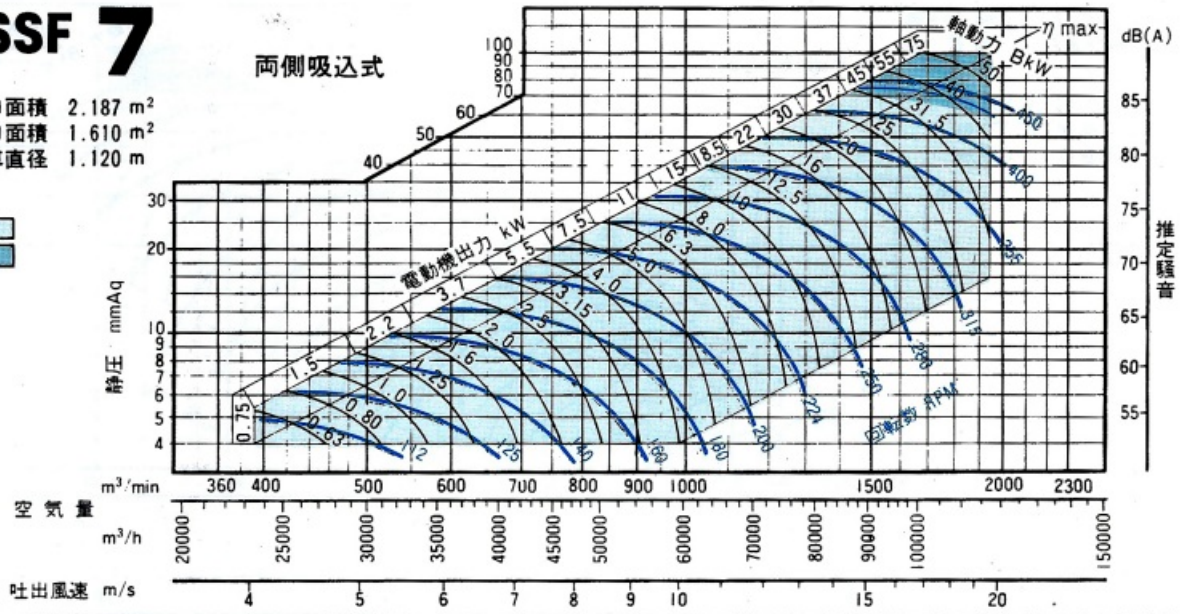
吸込口面積 1.765 m²
吐出口面積 1.288 m²
羽根車直径 1.000 m



OSSF 7

両側吸込式

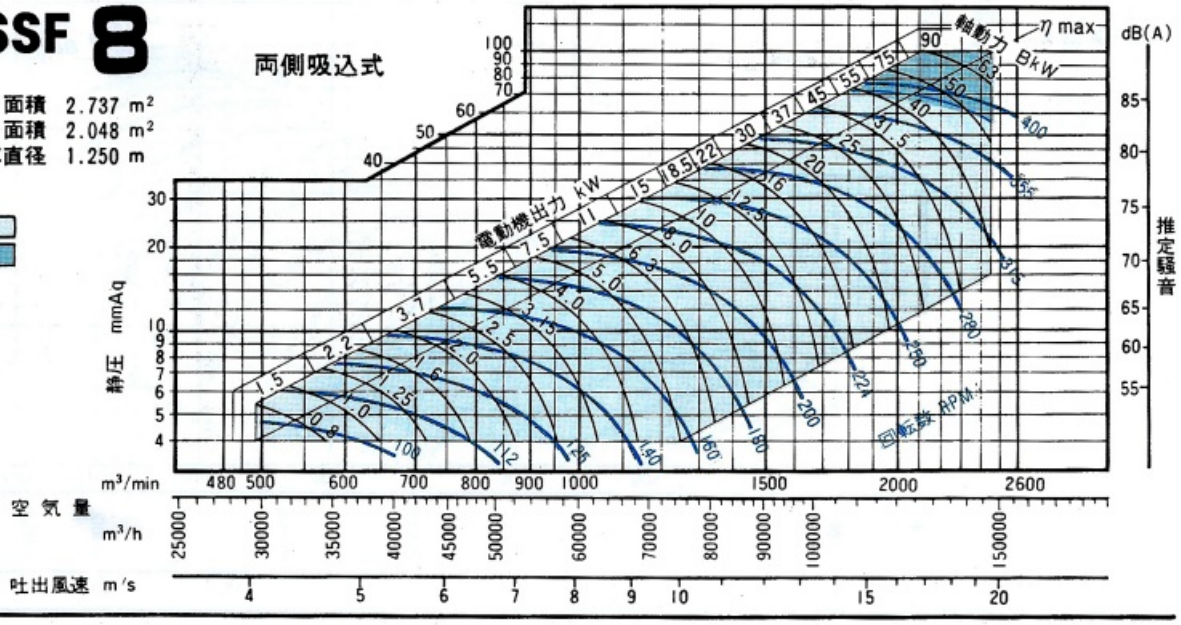
吸込口面積 2.187 m²
吐出口面積 1.610 m²
羽根車直径 1.120 m



OSSF 8

両側吸込式

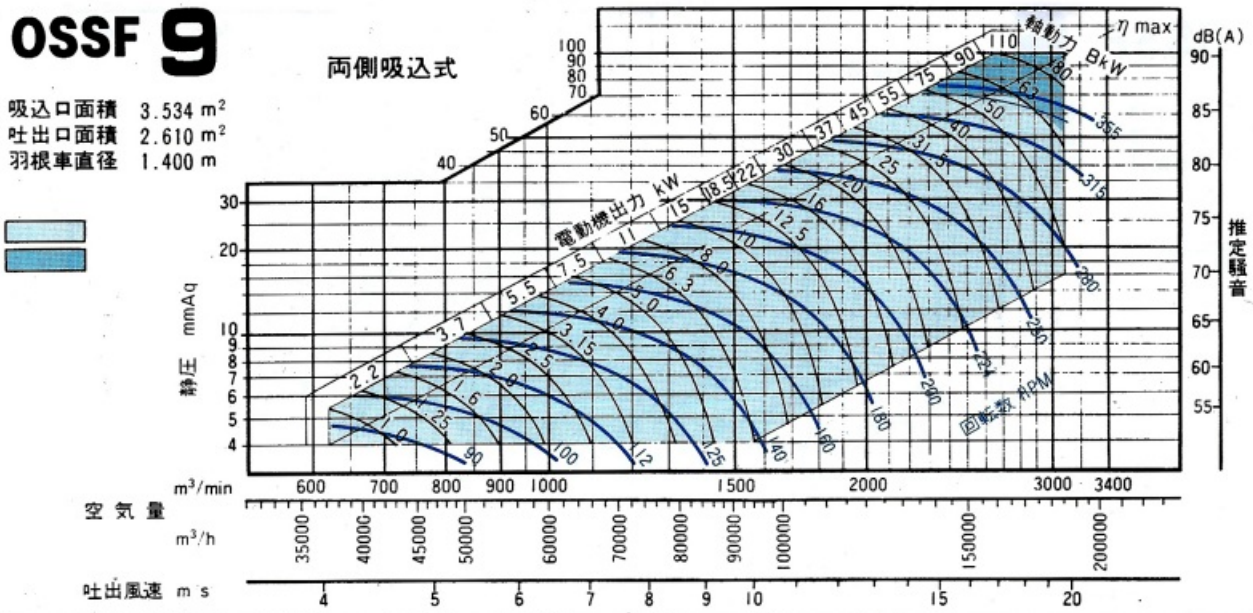
吸込口面積 2.737 m²
吐出口面積 2.048 m²
羽根車直径 1.250 m



OSSF 9

両側吸込式

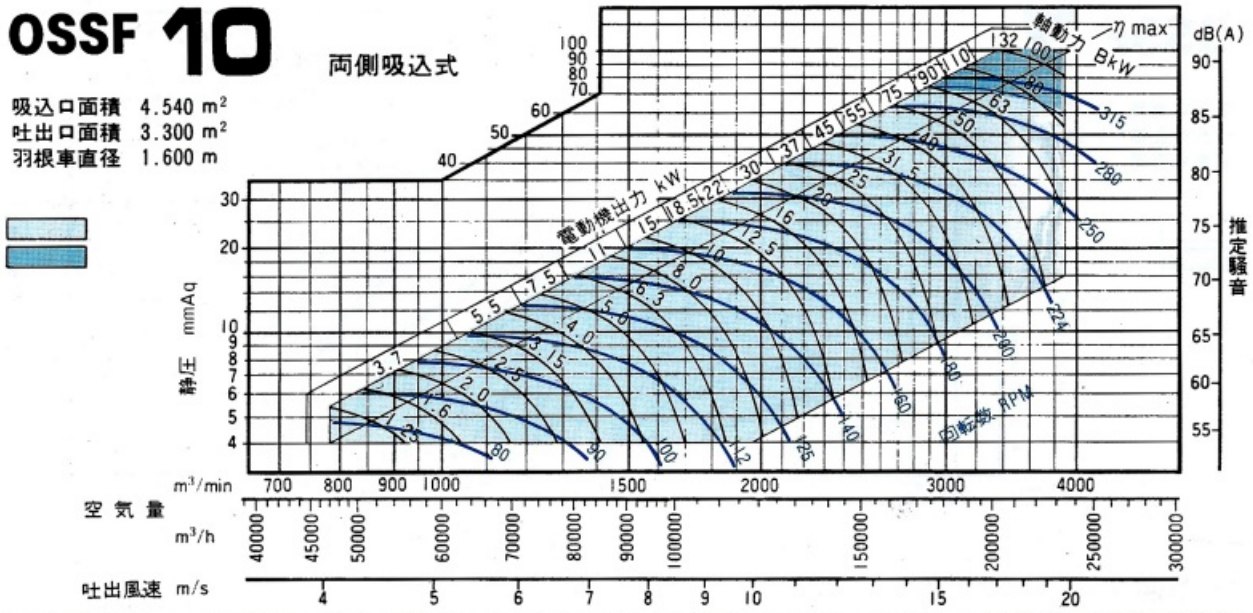
吸込口面積 3.534 m²
吐出口面積 2.610 m²
羽根車直径 1.400 m



OSSF 10

両側吸込式

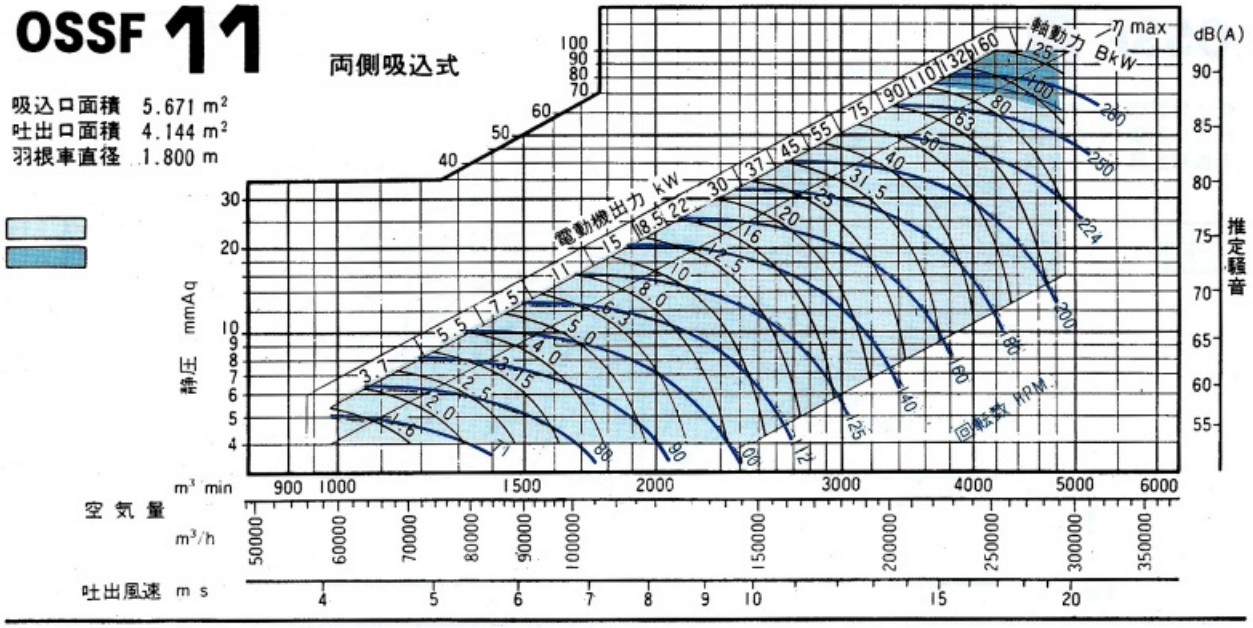
吸込口面積 4.540 m²
吐出口面積 3.300 m²
羽根車直径 1.600 m



OSSF 11

両側吸込式

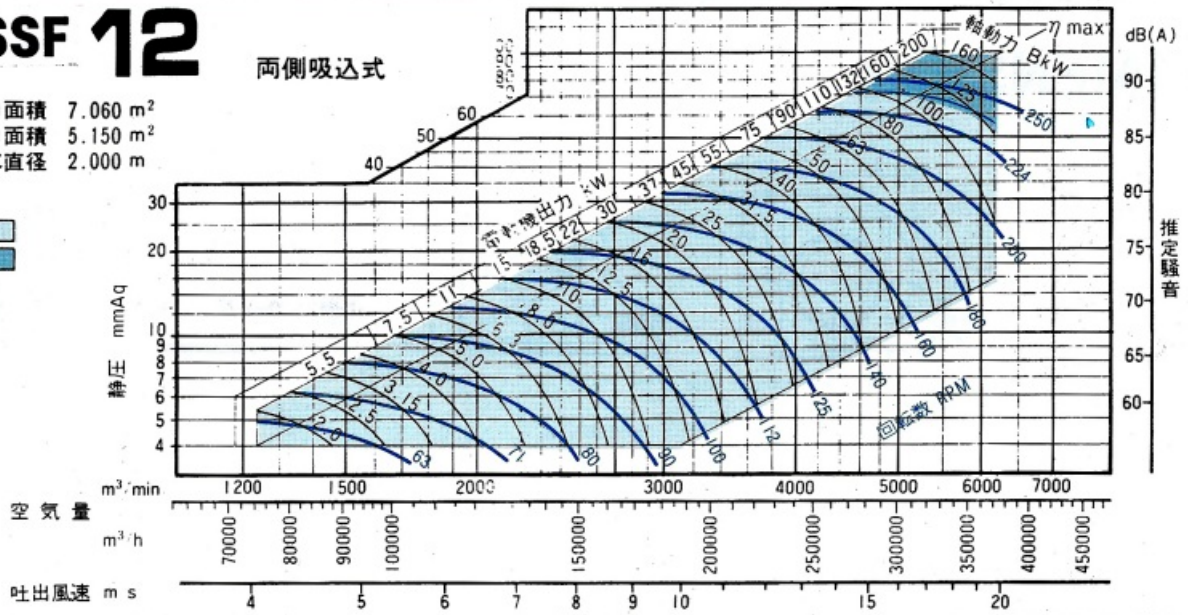
吸込口面積 5.671 m²
吐出口面積 4.144 m²
羽根車直径 1.800 m



OSSF 12

両側吸込式

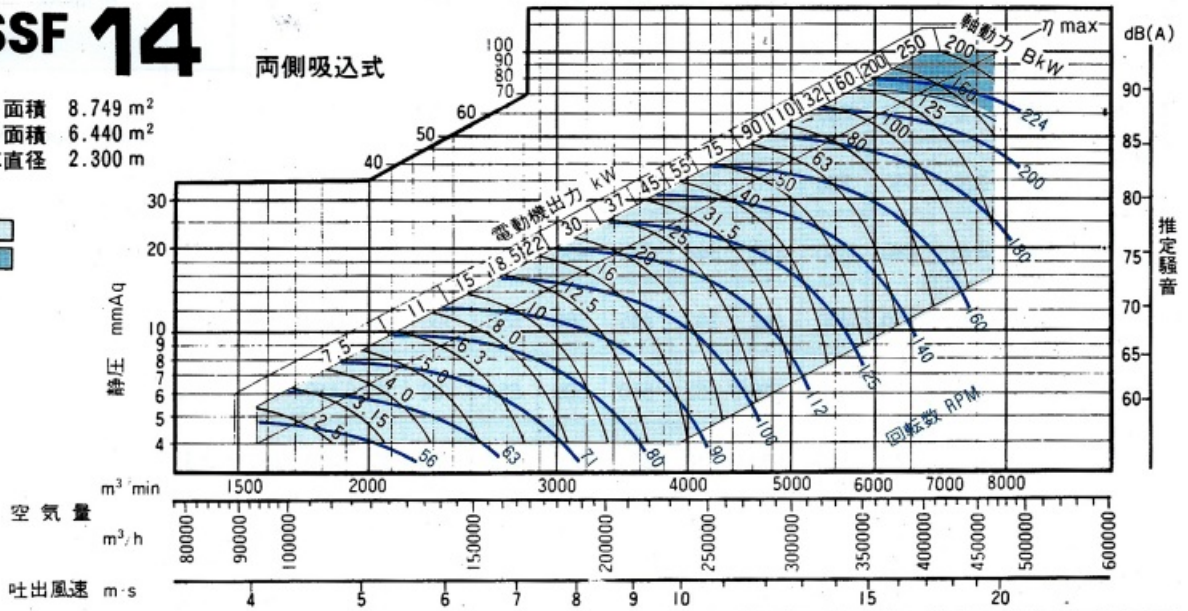
吸込口面積 7.060 m²
吐出口面積 5.150 m²
羽根車直径 2.000 m



OSSF 14

両側吸込式

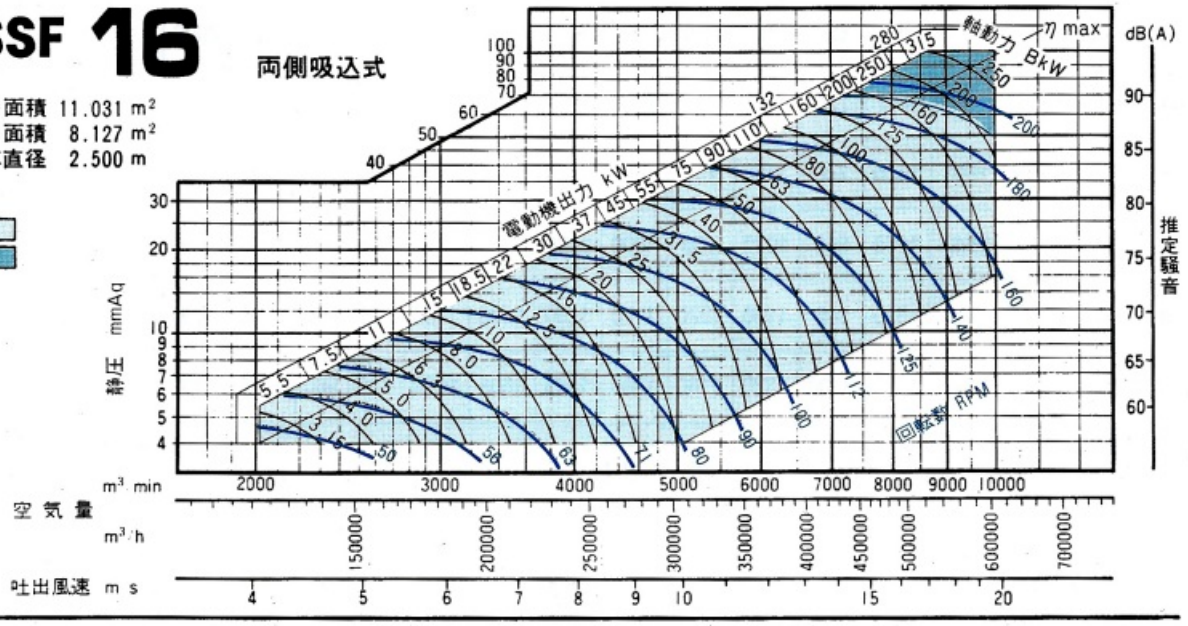
吸込口面積 8.749 m²
吐出口面積 6.440 m²
羽根車直径 2.300 m

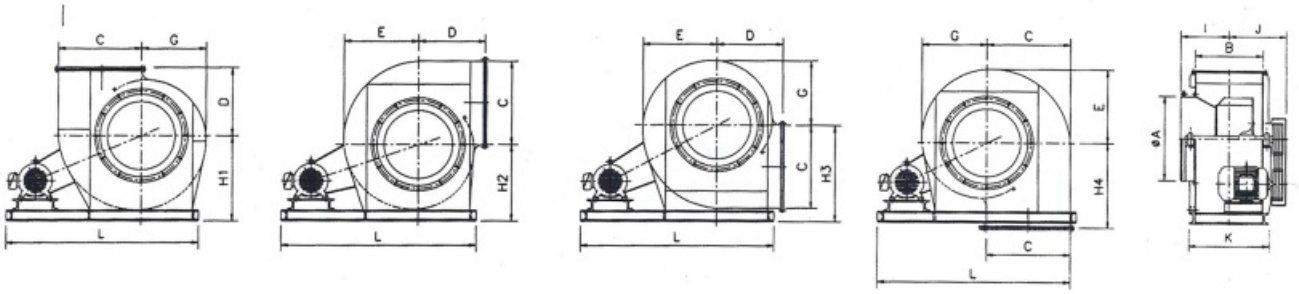


OSSF 16

両側吸込式

吸込口面積 11.031 m²
吐出口面積 8.127 m²
羽根車直径 2.500 m





Dimensions

NO	ØA	B		C	D	E	F	G	H_1	H_2	H_3	H_4	I	J	K	L	REMARK
		S.S	D.S														
2	370	260	450	355	285	302	340	262	345	305	380	365	220	320	340	950	S.S :
2 1/2	430	300	540	405	300	336	385	288	390	340	355	380	240	350	380	1000	SINGLE SUCTION
3	490	360	660	485	360	402	460	346	480	425	535	480	270	380	440	1150	DS :
3 1/2	580	410	770	580	415	484	554	416	560	495	630	535	305	420	490	1250	DOUBLE SUCTION
4	645	460	870	645	470	540	616	462	615	535	695	590	330	450	540	1350	
4 1/2	715	530	970	720	515	600	685	514	675	590	760	635	365	520	610	1470	
5	790	590	1090	800	560	666	760	570	745	645	835	680	405	550	670	1650	
5 1/2	890	610	1160	875	610	730	836	626	805	705	915	730	425	580	690	1750	
6	930	700	1220	955	670	796	910	682	875	760	985	790	470	630	780	1890	
7	1140	790	1470	1060	785	934	1058	808	1035	910	1160	935	525	690	890	2100	
8	1300	870	1620	1170	855	1030	1170	892	1130	995	1270	1010	565	730	970	2260	
9	1400	960	1790	1290	965	1140	1292	986	1240	1090	1395	1120	620	800	1060	2500	
10	1540	1060	1990	1435	1055	1264	1432	1094	1390	1220	1560	1210	700	900	1190	2900	

※ NOTE : "L" 칫수는 MOTOR HP에 따라 변경될 수 있음

RADIAL FAN

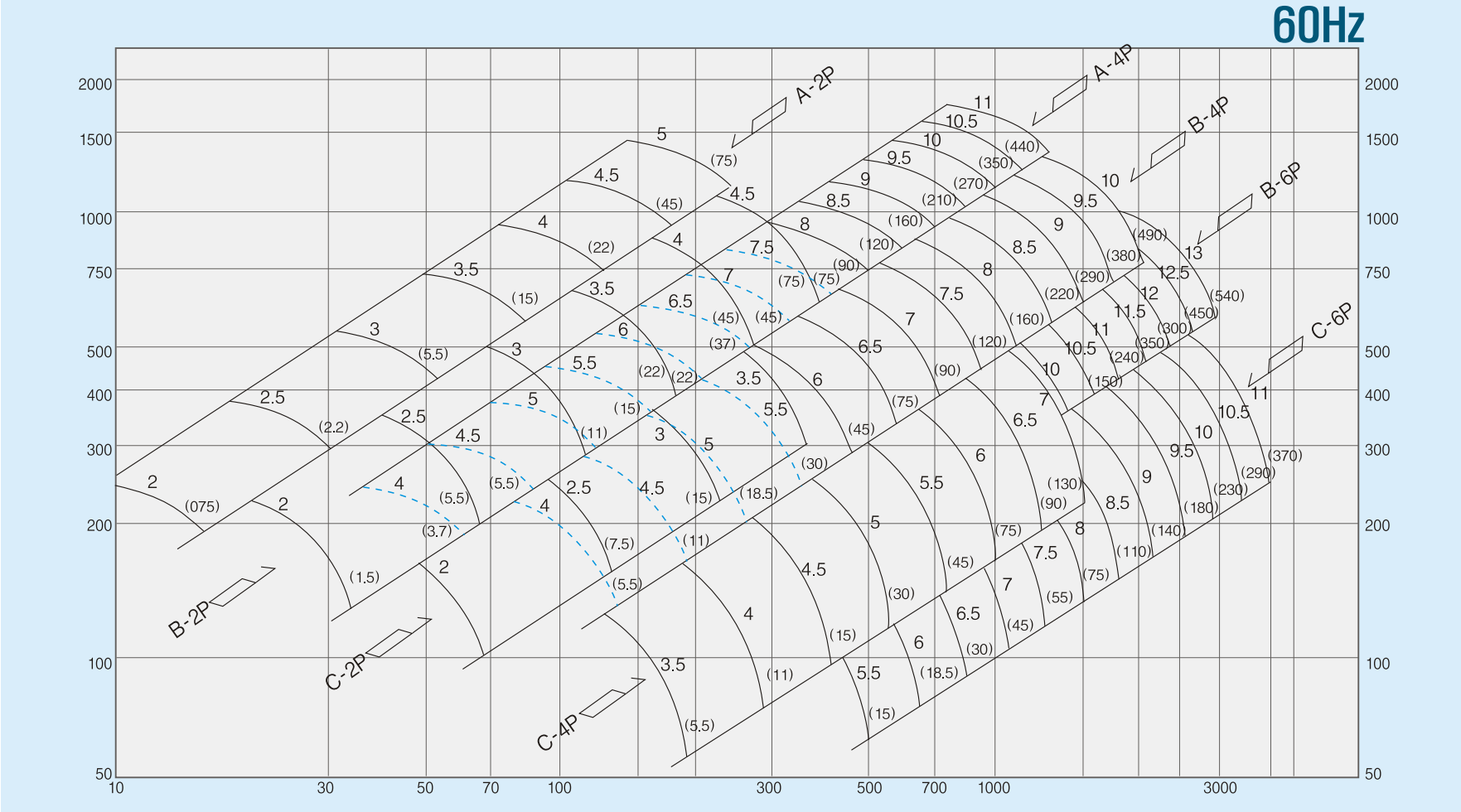
Characteristics

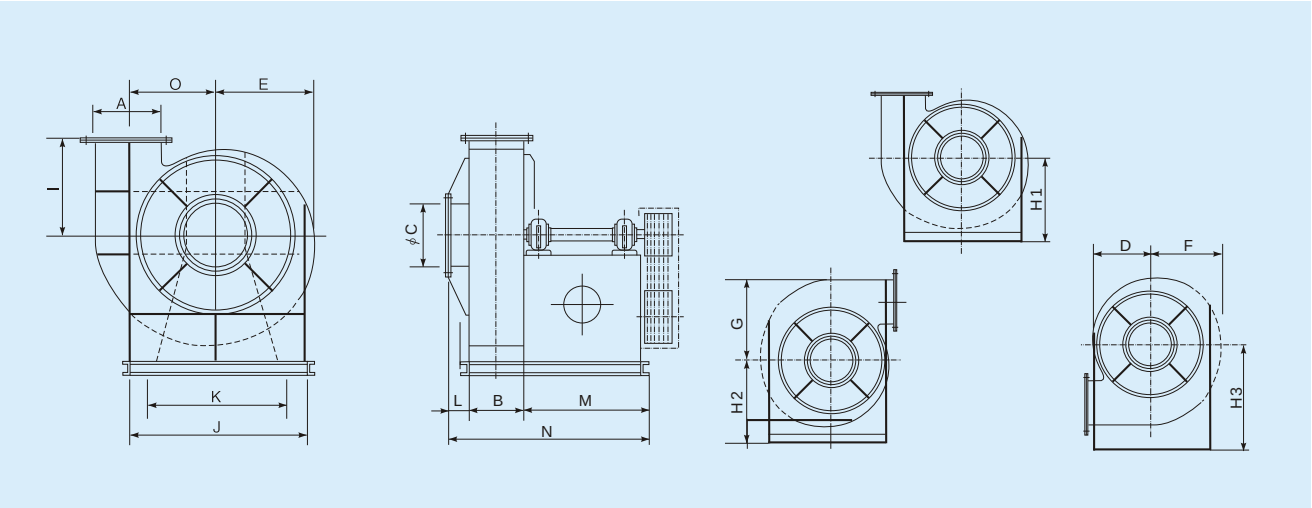
1) Solid structure & Simple operations
2) Suitable for high-temperature gas-fueled establishment
3) Suitable for handling corrosive gas and / or dust-containing gas

End use

for Cement, Steel, Petro-Chemical paants, Air supply devices, etc.

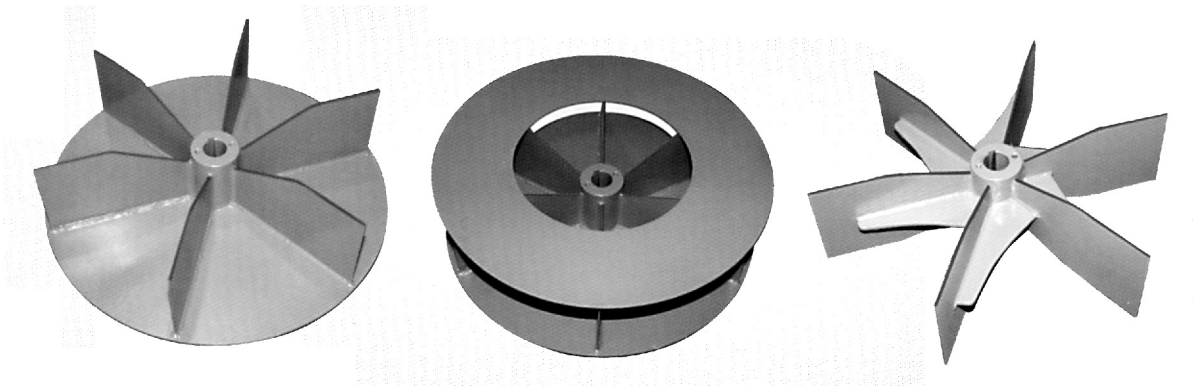
Selection Chart

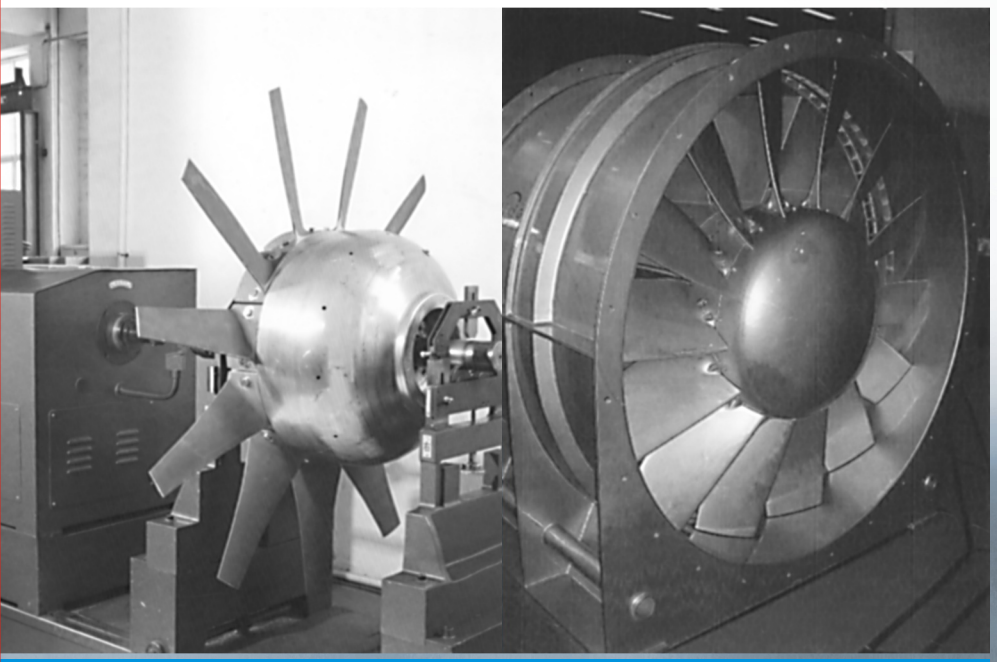




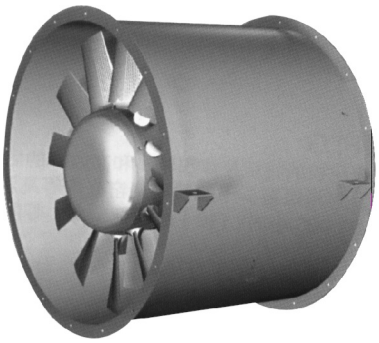
Dimensions

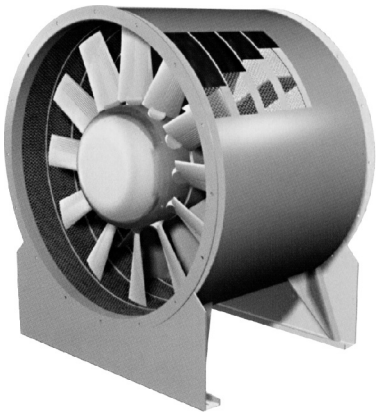
Model No	A	B	C	D	E	F	G	H1	H2	H3	I	J	K	L	M	N	O	Weight (kg)
OSRF-2	175	160	200	197	241	289	363	380	330	450	277	380	380	100	335	595	276	95
OSRF-2.5	210	185	250	246	301	362	413	450	390	500	326	460	420	100	370	655	308	140
OSRF-3	240	210	300	295	361	434	495	530	450	590	375	540	470	100	425	735	375	185
OSRF-3.5	270	240	355	344	422	506	578	600	510	670	424	680	540	120	480	840	443	255
OSRF-4	330	280	400	394	482	578	660	690	600	780	464	760	590	120	550	950	495	345
OSRF-4.5	370	330	455	443	542	651	743	770	600	860	523	860	640	120	595	1045	558	460
OSRRF-5	420	375	510	492	602	723	825	840	720	940	592	940	680	120	630	1125	615	575
OSRF-5.5	470	415	560	541	662	795	908	910	780	1020	641	1020	730	130	690	1235	673	720
OSRF-6	515	460	610	590	723	868	990	980	840	1110	690	1090	780	130	720	1310	773	960
OSRF-6.5	560	500	660	640	783	940	1073	1060	900	1190	740	1210	830	130	765	1395	793	1080
OSRF-7	600	540	710	689	843	1012	1155	1150	990	1300	789	1290	880	130	800	1470	855	1200
OSRF-8	675	600	815	787	964	1157	1320	1300	1110	1460	907	1440	990	140	895	1635	983	1650
OSRF-9	760	680	915	886	1084	1301	1485	1470	1250	1650	1006	1590	1100	140	1020	1840	1105	2150
OSRF-10	850	755	1000	984	1205	1446	1650	1610	1370	1820	1104	1770	1200	140	1090	1985	1225	2650
OSRF-11	930	830	1100	1082	1325	1591	1815	1760	1490	1980	1202	1920	1310	140	1160	2130	1350	3250
OSRF-12	1000	900	1200	1181	1445	1735	1980	1900	1610	2150	1321	2070	1420	150	1240	2290	1480	4000
OSRF-13	1080	965	1300	1279	1566	1880	2145	2050	1730	2310	1419	2280	1530	150	1320	2435	1605	4800
OSRF-14	1150	1030	1400	1378	1686	2024	2310	2240	1900	2530	1518	2430	1590	150	1360	2540	1735	5500
OSRF-15	1225	1090	1500	1476	1807	2169	2475	2390	2020	2690	1616	2580	1640	150	1400	2640	1863	6250



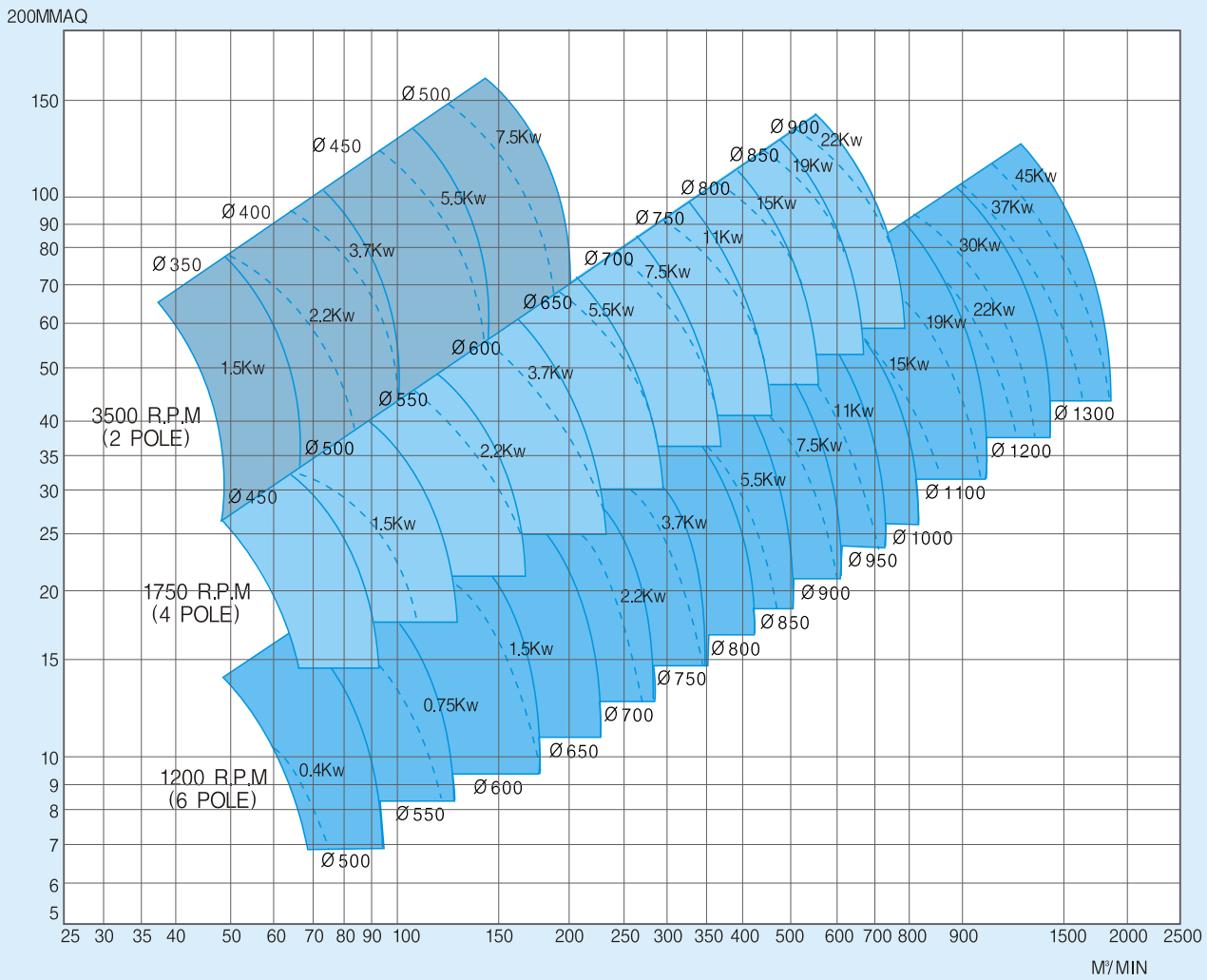


AXIAL FAN

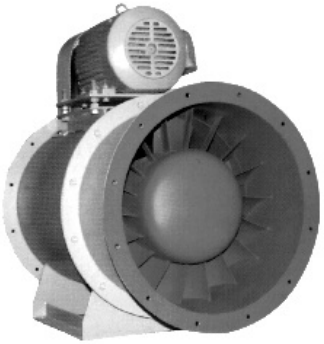




Selection Chart



AXIAL FLOW FAN(V-BELT DRIVE)



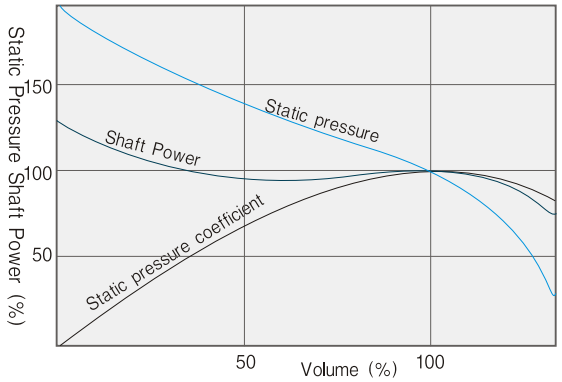
Where the air volume is 450 CMM and static pressure 25mmAq

1) The value 5.5kw is obtained from the crossing point 「ⓐ」 of the air volume and the static pressure.
2) The diameter 900 is obtained by drawing a parallel line from the crossing point 「a」 to the right-upper oblique line.
3) The revolution coefficient $K=1134\times10^3$ is obtained by drawing a parallel line from the crossing point 「a」 to the right.

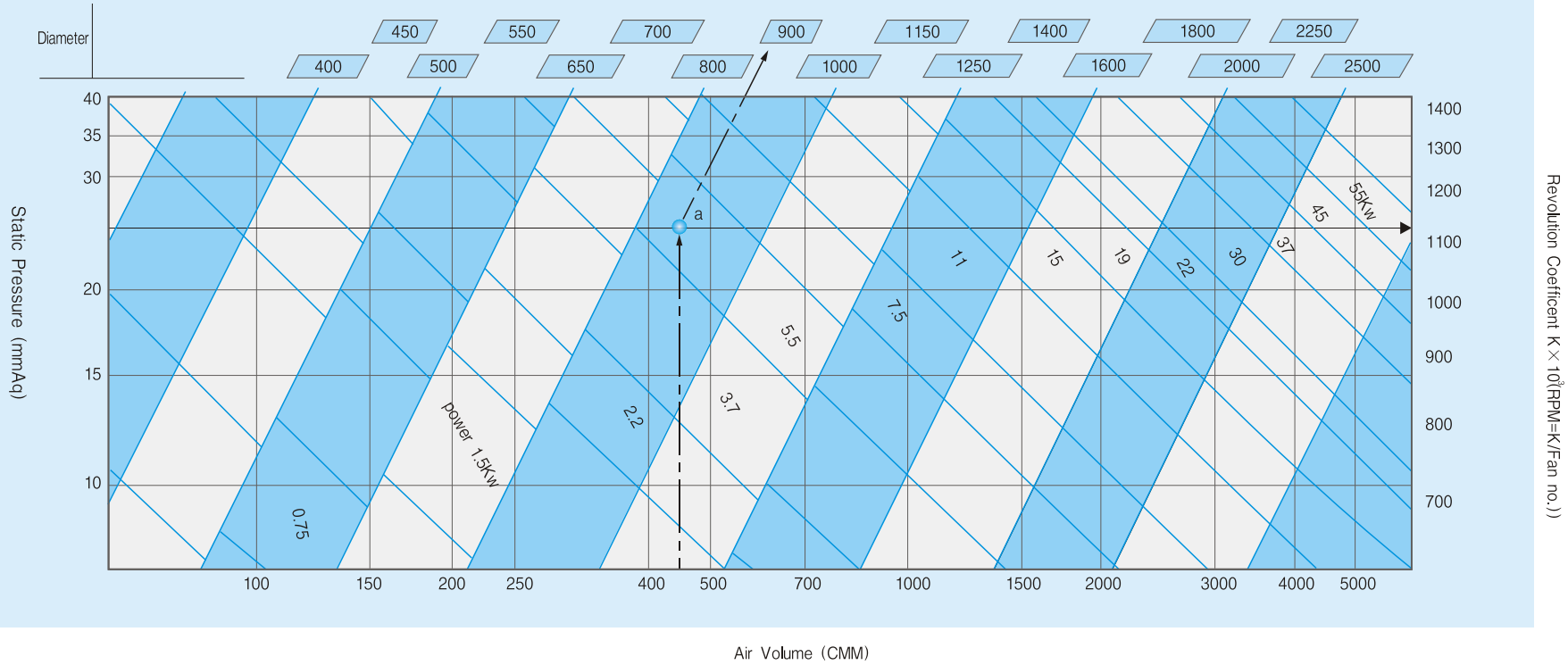
$$\text{Revolution} = \frac{K}{\text{Fan diameter}} = \frac{1134000}{900} = 1260\text{rpm}$$

4) Conclusion :
AXIAL FLOW FAN EAF-900
400 cmm×25mmaq×1260rpm×5.5kw

Character curves

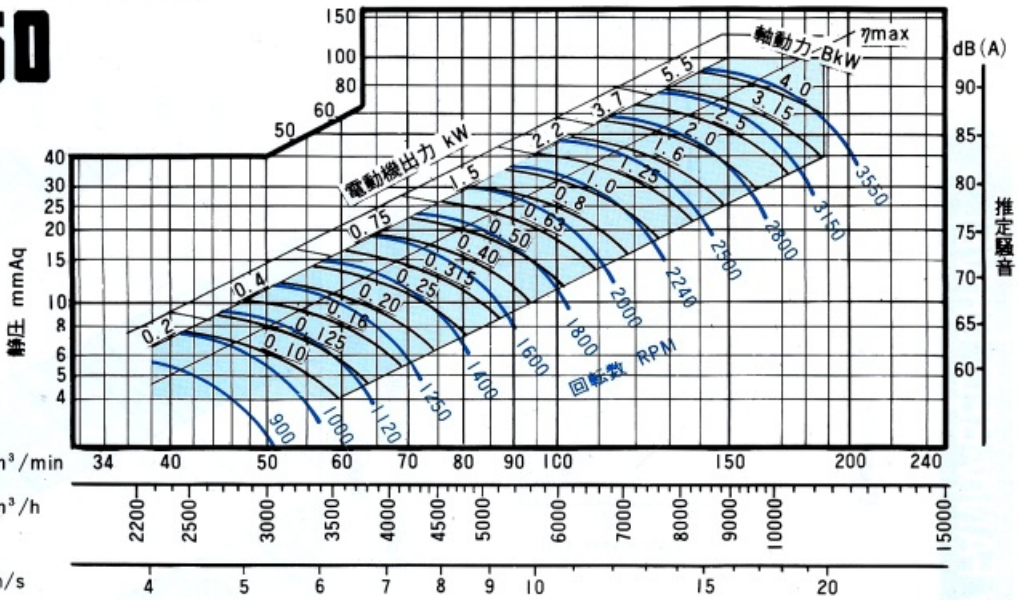


Selection Chart



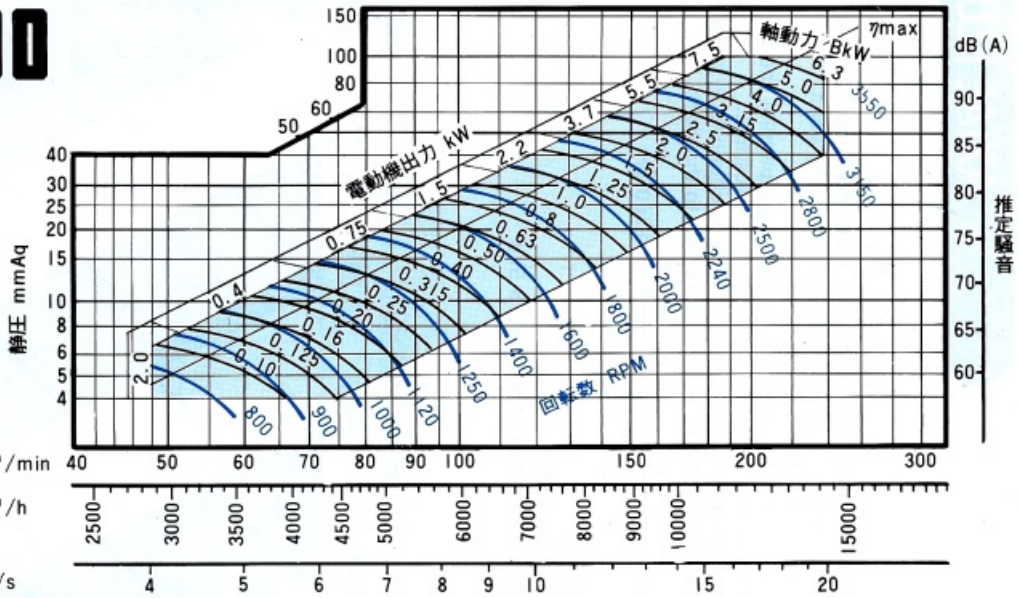
OSAF #450

羽根車直径 0.450 m
吐出口面積 0.163 m²



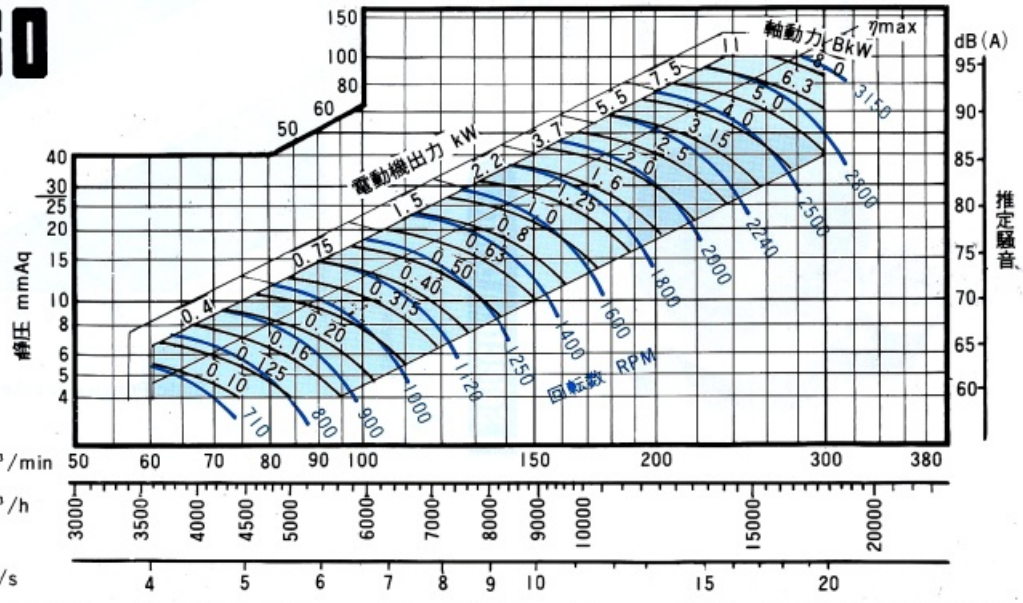
OSAF #500

羽根車直径 0.500 m
吐出口面積 0.201 m²



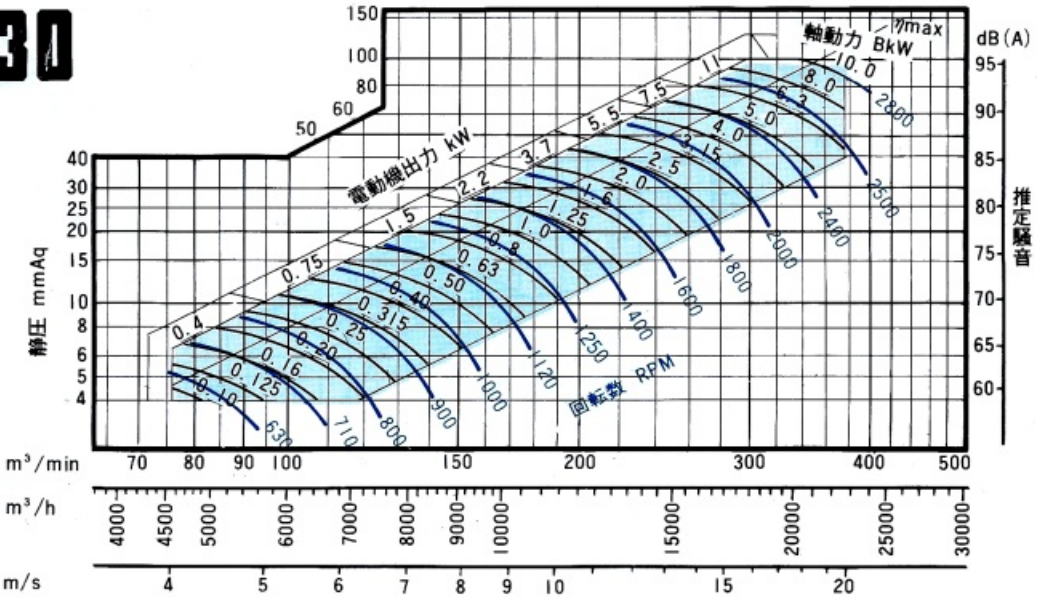
OSAF #560

羽根車直径 0.560 m
吐出口面積 0.252 m²



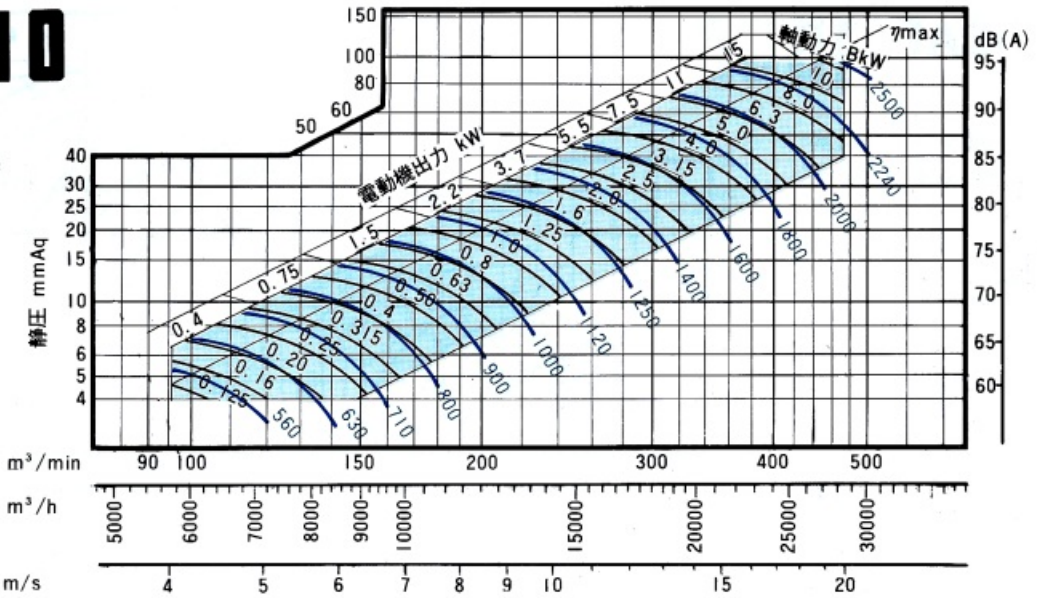
OSAF #630

羽根車直径 0.630 m
吐出口面積 0.318 m²



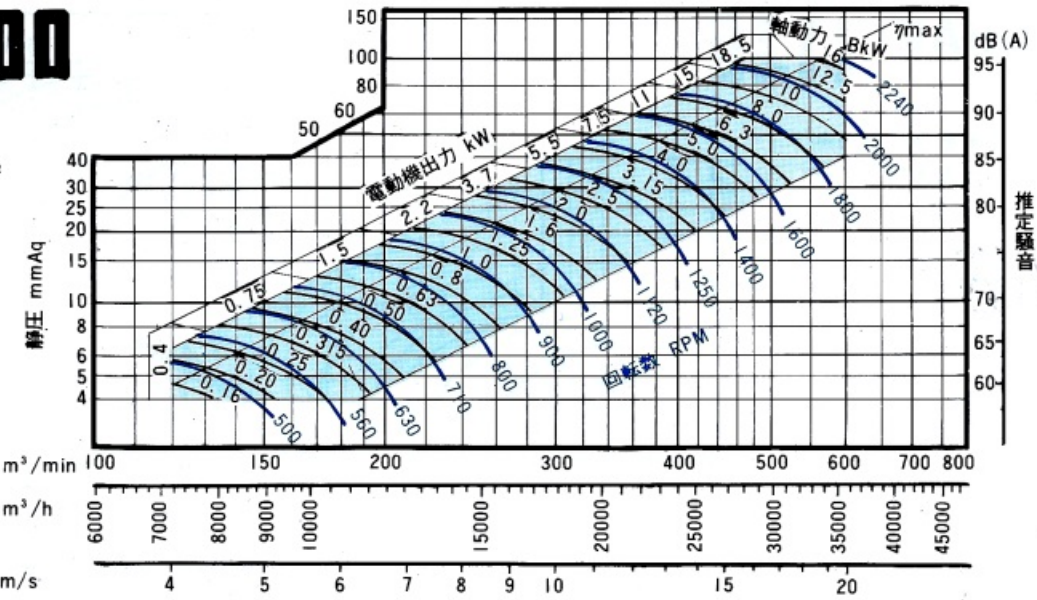
OSAF #710

羽根車直径 0.710 m
吐出口面積 0.403 m²



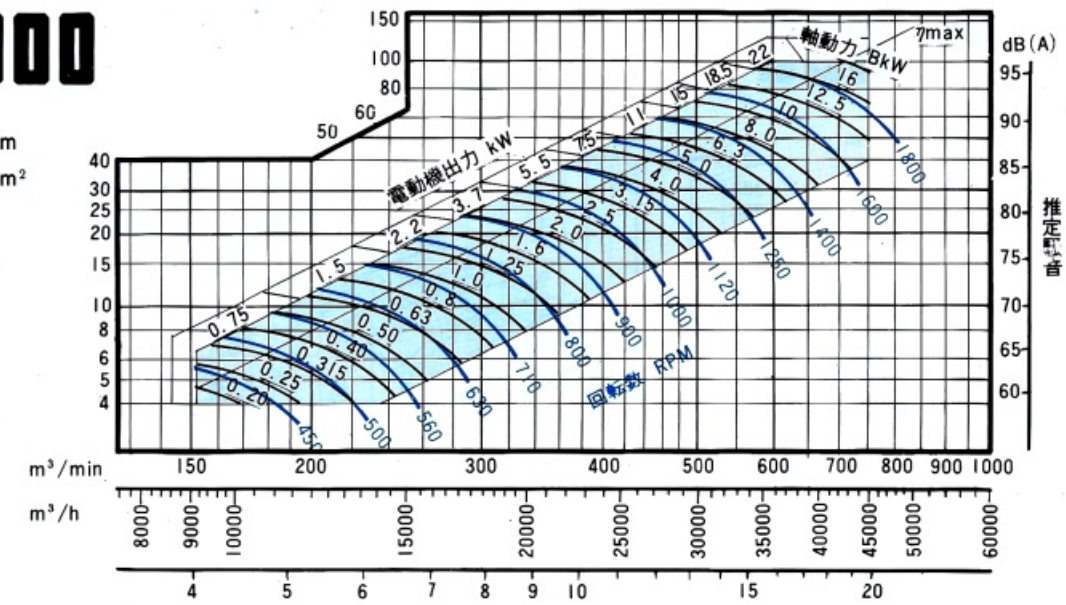
OSAF #800

羽根車直径 0.800 m
吐出口面積 0.510 m²



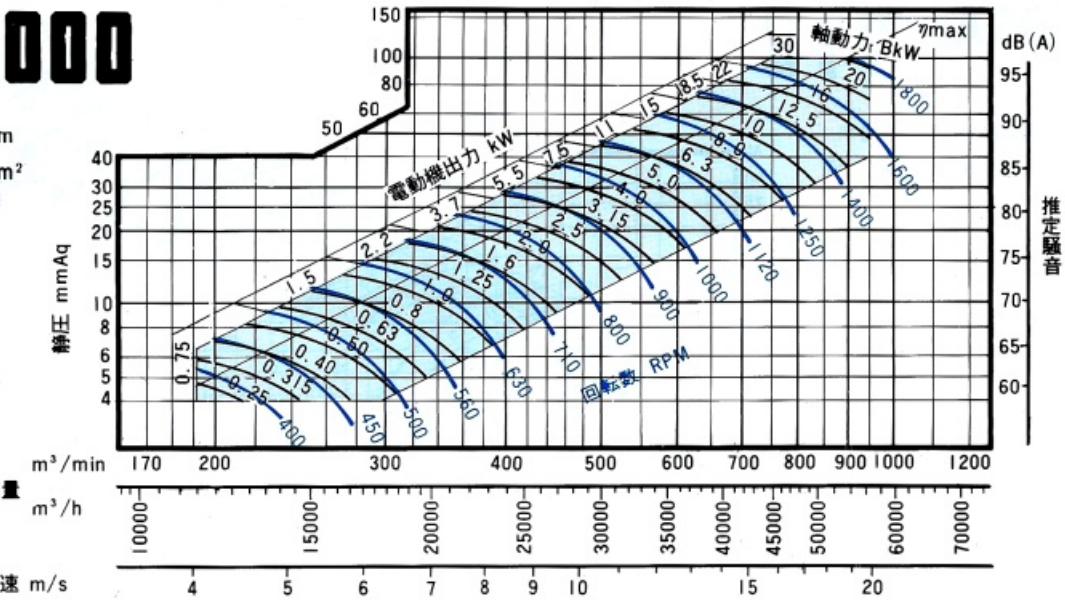
OSAF #900

羽根車直径 0.900 m
吐出口面積 0.648 m²



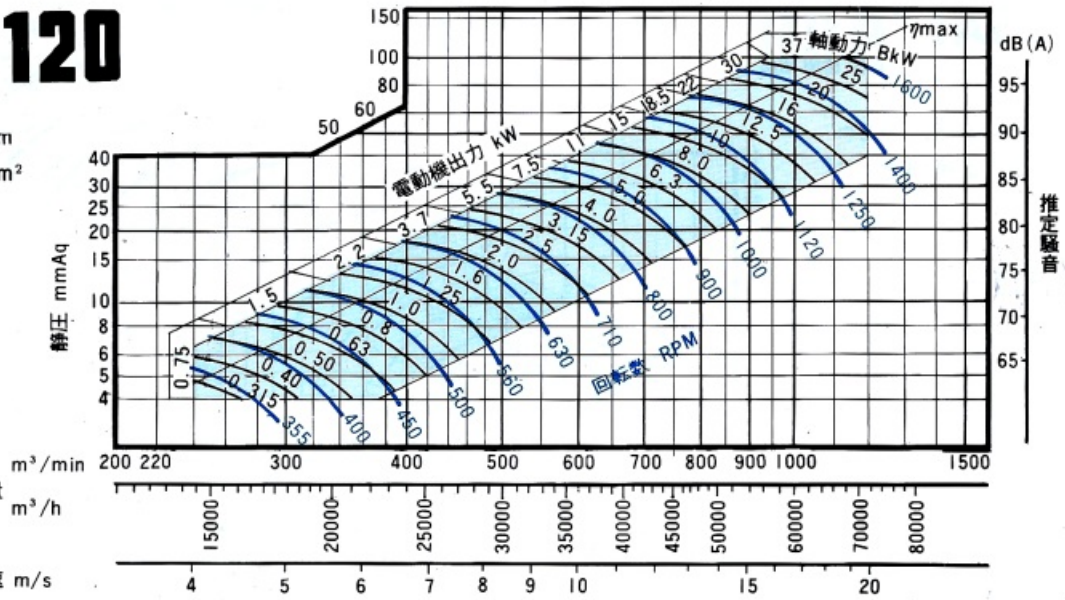
OSAF #1000

羽根車直径 1.000 m
吐出口面積 0.648 m²



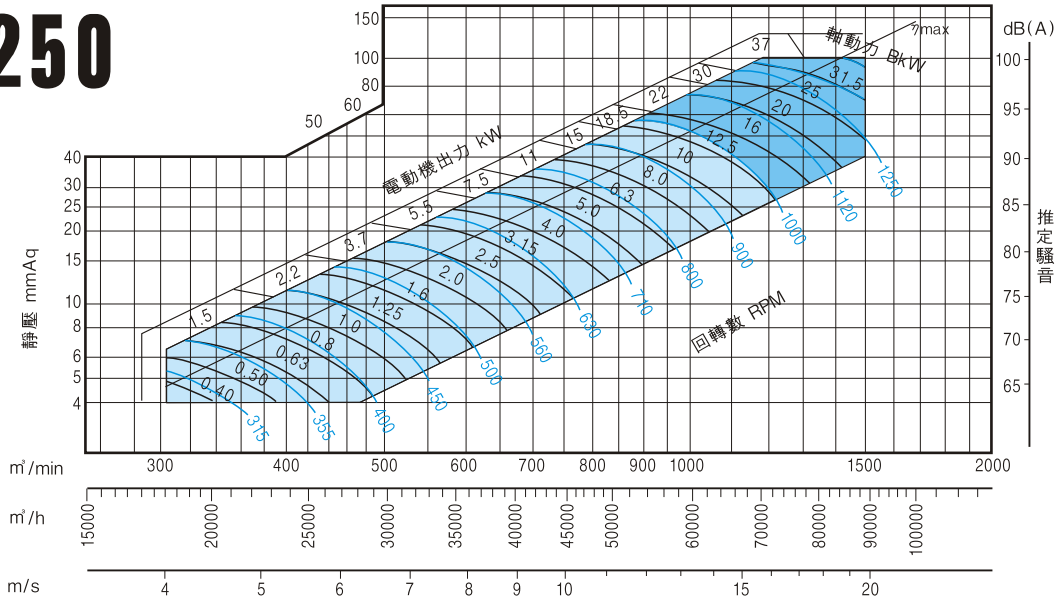
OSAF #1120

羽根車直径 1.120 m
吐出口面積 1.000 m²



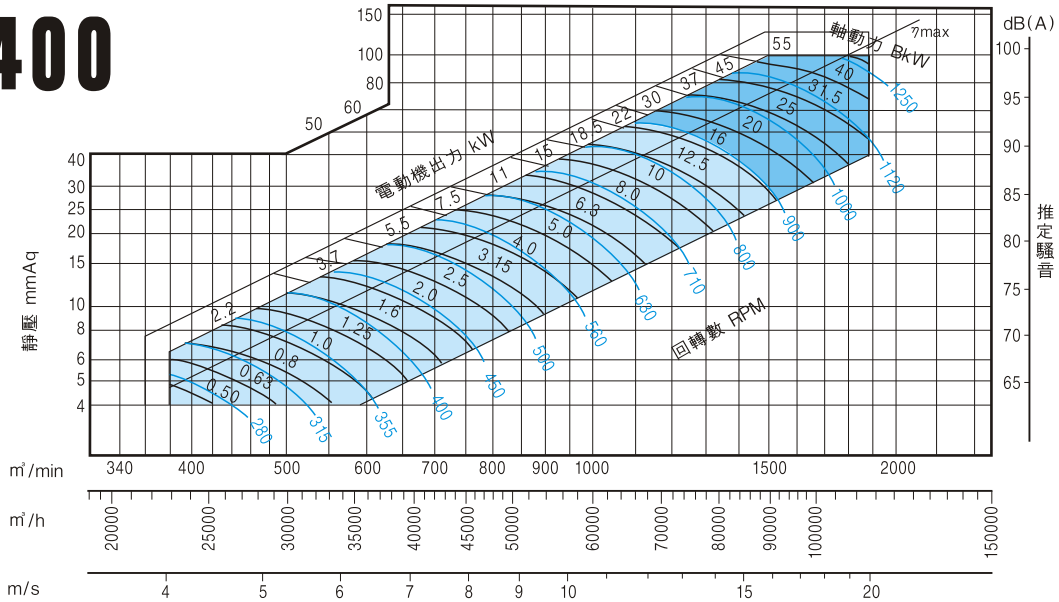
OSAF # 1250

羽根車直徑 1.250m
吐出口面積 1.243㎡



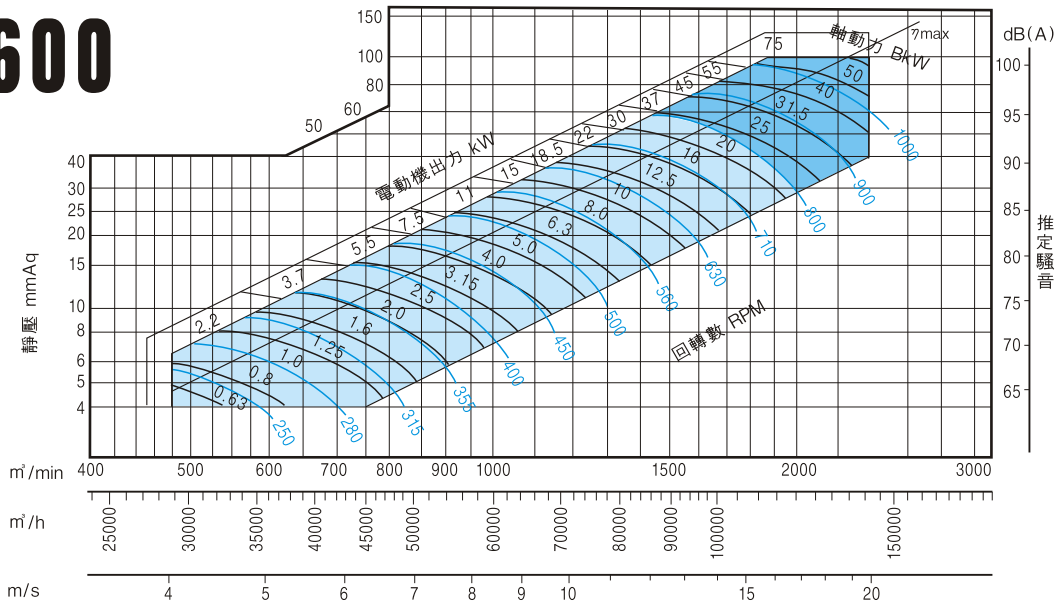
OSAF # 1400

羽根車直徑 1.400m
吐出口面積 1.561㎡



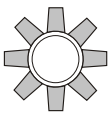
OSAF # 1600

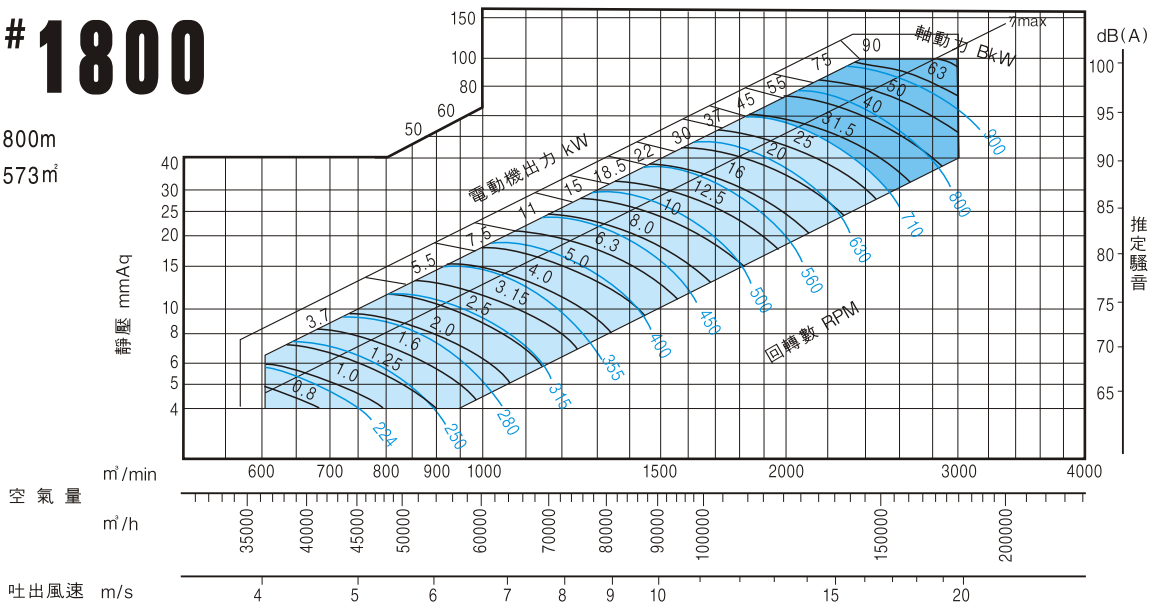
羽根車直徑 1.600m
吐出口面積 2.036㎡



OSAF #1800

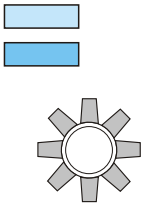
羽根車直徑 1.800m
吐出口面積 2.573㎡

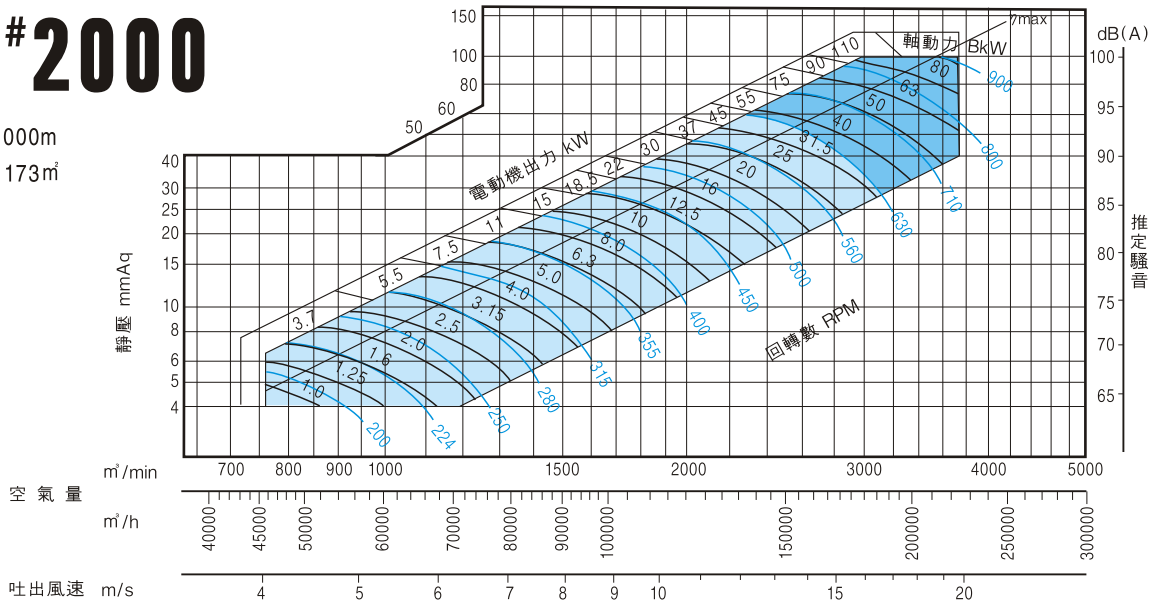




OSAF #2000

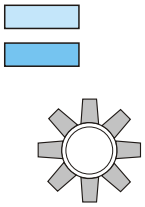
羽根車直徑 2.000m
吐出口面積 3.173㎡

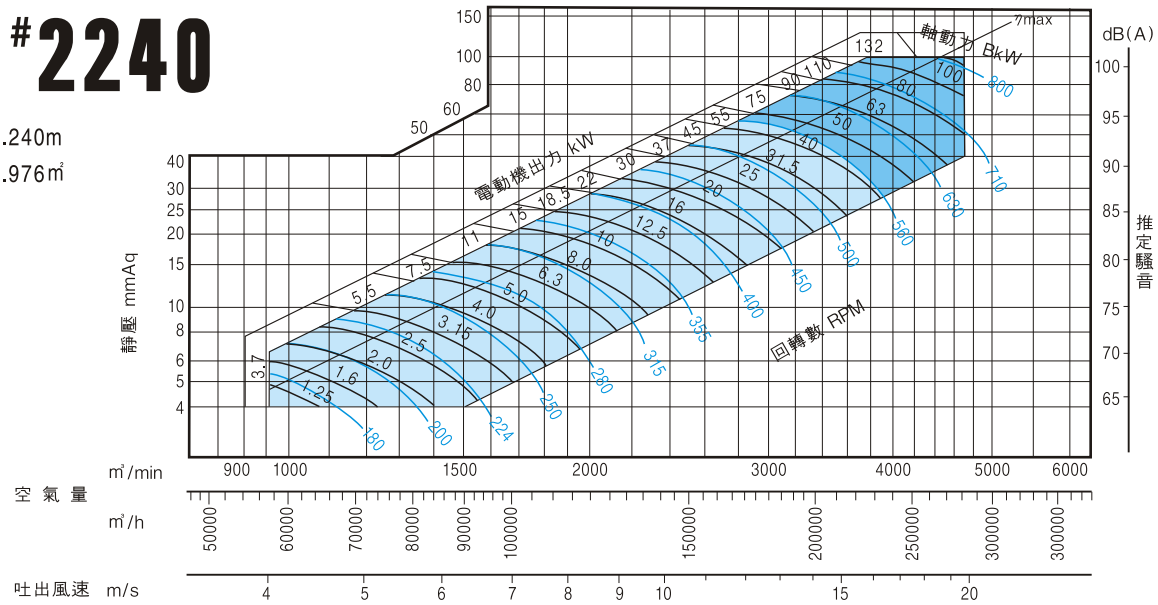




OSAF #2240

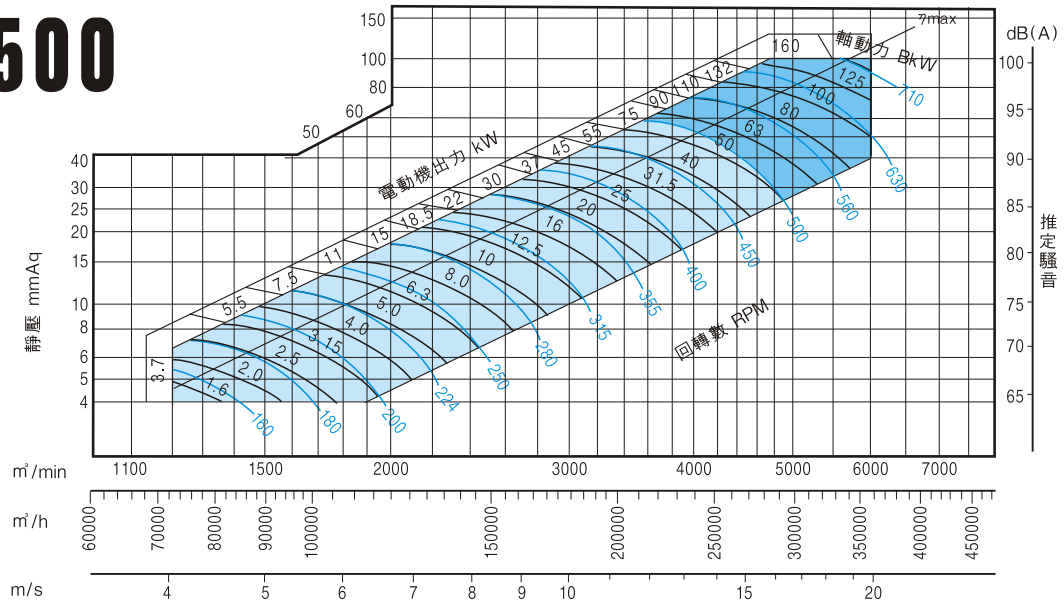
羽根車直徑 2.240m
吐出口面積 3.976㎡





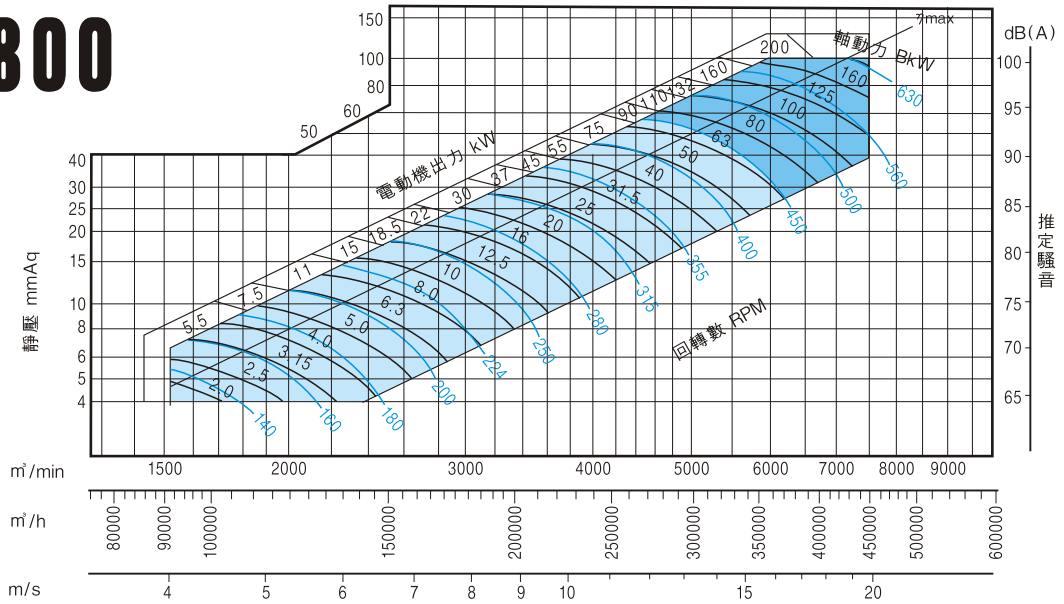
OSAF #2500

羽根車直徑 2.500m
吐出口面積 4.956㎡



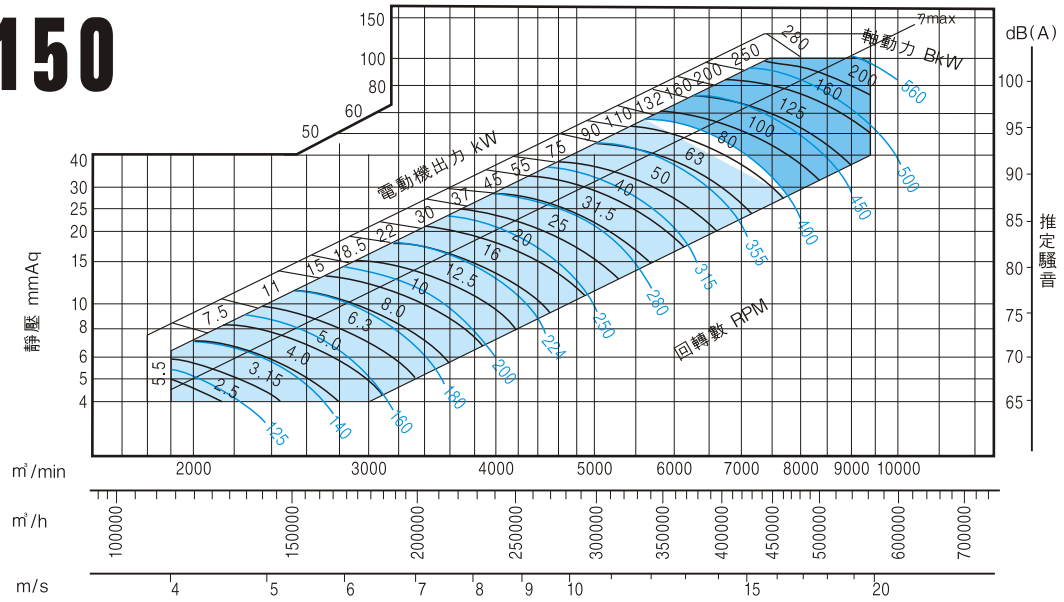
OSAF #2800

羽根車直徑 2.800m
吐出口面積 6.210㎡

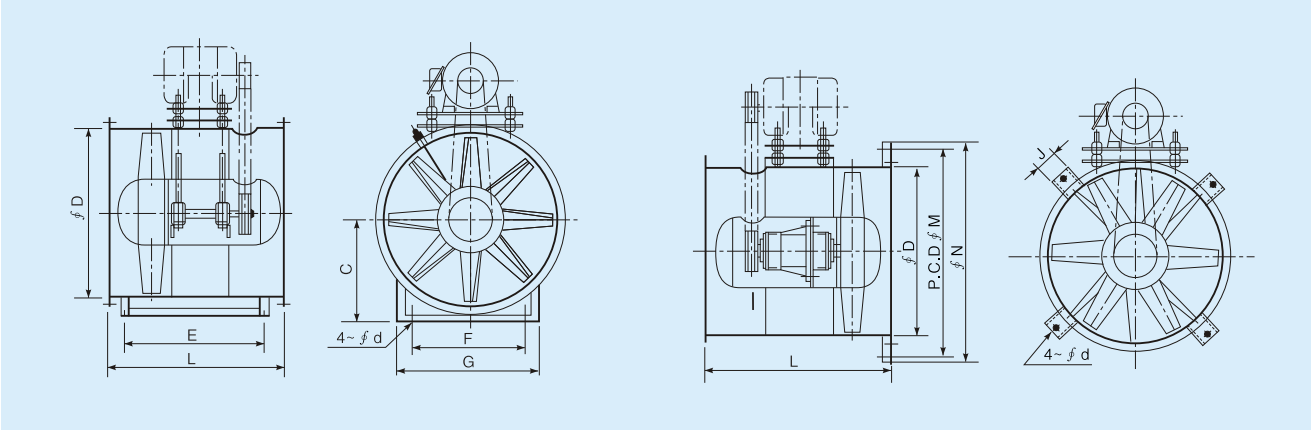


OSAF #3150

羽根車直徑 3.150m
吐出口面積 7.853㎡

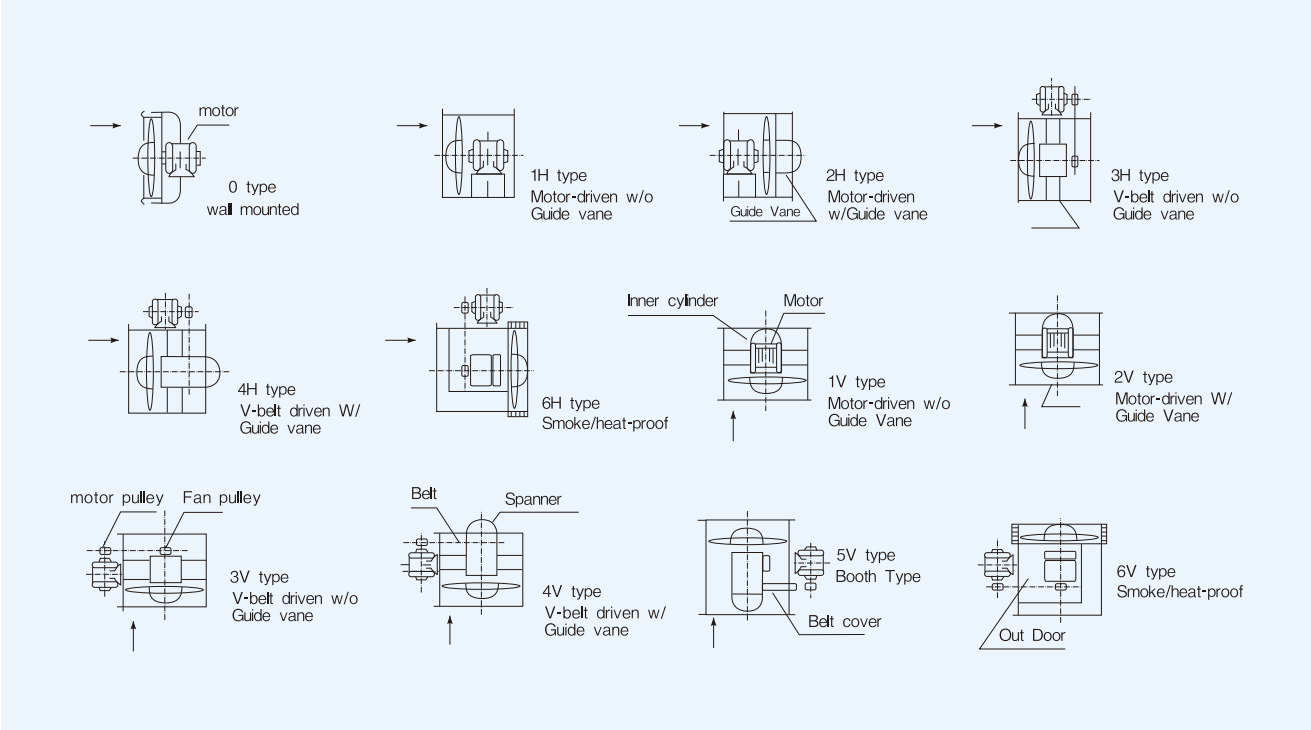


AXIAL FAN (V-BELT형)



Dimensions

Model No	Common		H Type					V Type			
	D	L	C	E	F	G	ϕd	J	M	N	ϕd
OAF-400	400	400	260	365	280	340	11	50	520	570	11
OAF-450	450	450	285	410	320	380	11	50	570	620	11
OAF-500	500	500	315	460	340	420	11	50	620	670	11
OAF-550	550	600	340	560	380	460	15	75	700	750	15
OAF-650	650	650	390	600	470	550	15	75	800	850	15
OAF-700	700	700	425	625	500	580	15	75	850	900	15
OAF-800	800	800	475	725	560	660	15	100	950	1000	15
OAF-900	900	900	525	825	640	740	19	100	1040	1100	19
OAF-1000	1000	900	590	825	700	800	19	100	1150	1200	19
OAF-1150	1150	900	670	825	700	800	19	125	1290	1360	19
OAF-1250	1250	1000	750	900	800	950	19	125	1450	1550	19
OAF-1400	1400	1000	800	900	860	1060	19	150	1600	1700	19
OAF-1600	1600	1100	900	1000	900	1180	19	150	1800	1900	19
OAF-1800	1800	1200	1030	1000	1020	1320	19	150	2030	2130	19
OAF-2000	2000	1200	1130	1075	1200	1500	24	150	2230	2230	24
OAF-2250	2250	1200	1250	1075	1400	1700	24	200	2500	2580	24
OAF-2500	2500	1200	1400	1075	1600	1900	24	200	2750	2830	24

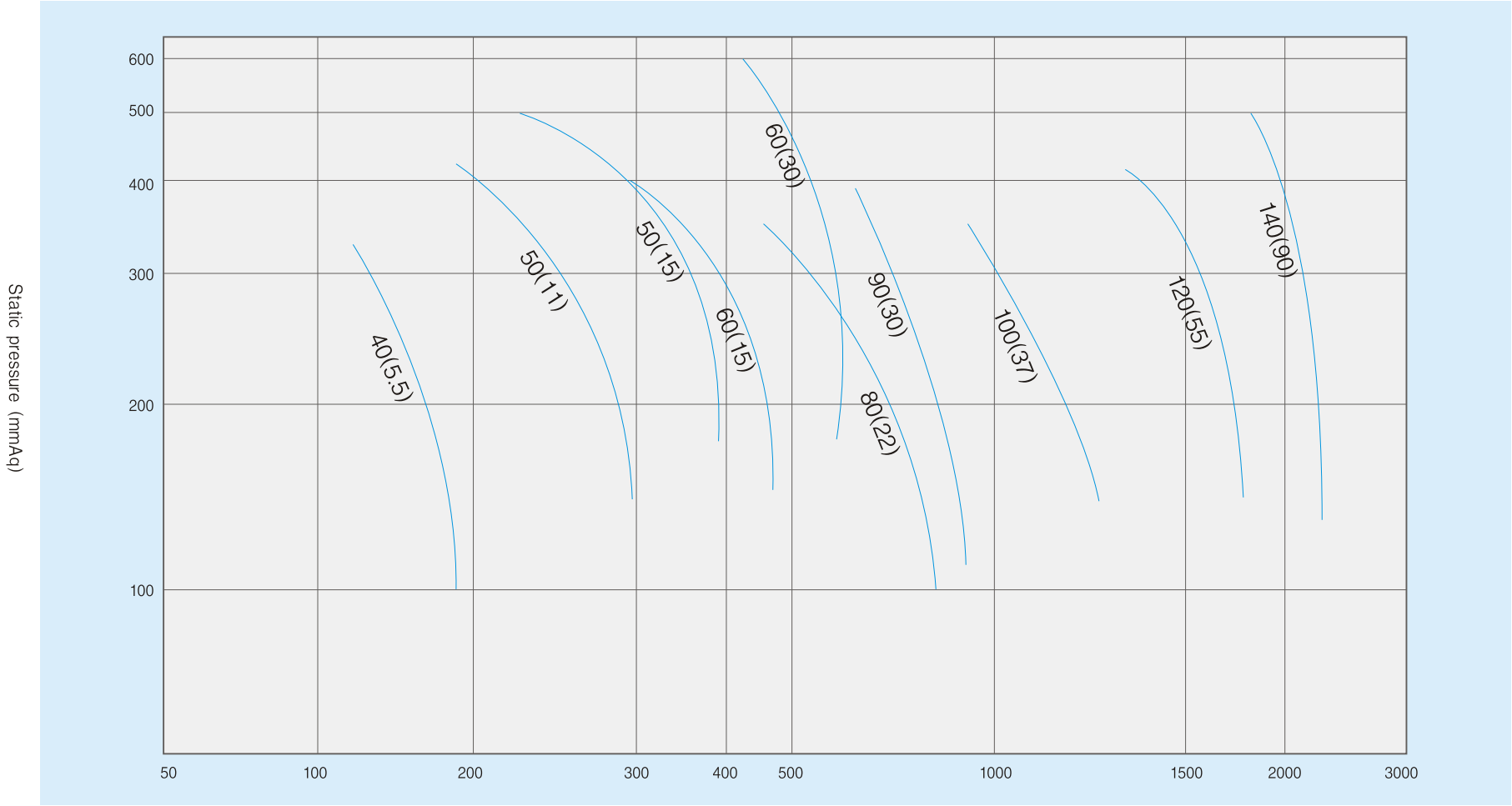


CONTRAROTATING FAN

Characteristics
1) High-efficiency & high speed
2) High-pressure & super capacity
3) Solid structure

End use for Tunnel air conditioning

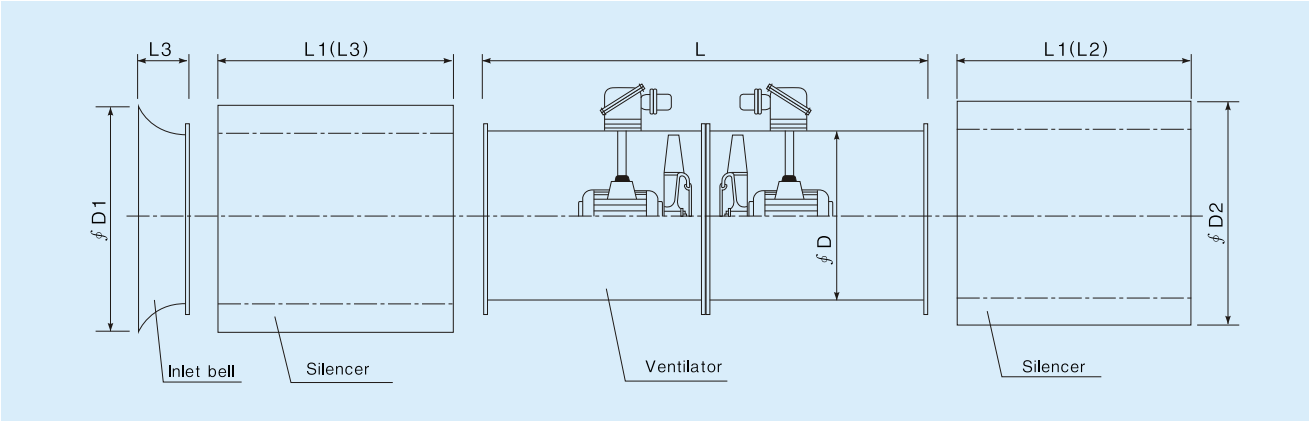
Selection Chart



CONTRAROTATING FAN

Speccifications

Model No	Air volume CMM	T. Pressure mmAq	Revolution R.P.M	Motor kw(p) X Q'ty
OSFC-40(5.5)	150	250	3500	5.5(2)X2
OSFC-50(11)	250	300	3500	11(2)X2
OSFC-50(15)	300	400	3500	15(2)X2
OSFC-60(15)	400	300	3500	15(2)X2
OSFC-60(30)	500	500	3500	30(2)X2
OSFC-80(22)	550	300	1750	22(4)X2
OSFC-90(30)	700	350	1750	30(4)X2
OSFC-100(37)	1000	300	1750	37(4)X2
OSFC-120(55)	1350	400	1750	55(4)X2
OSFC-140(90)	1900	400	1750	90(4)X2

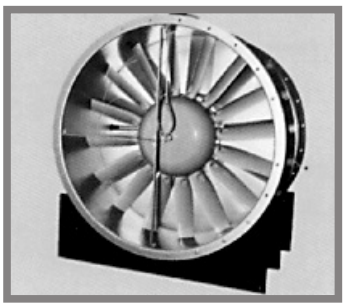


Dimensions

Model No	ϕD	ϕD1	ϕD2	L	L1	L2	L3	Weight
OSFC-40	400	540	600	1000	1200	600	140	500
OSFC-50	500	700	700	1100	1200	600	155	800
OSFC-60	600	810	800	1240	1200	600	190	1200
OSFC-80	800	1090	1000	1420	1200	600	240	1700
OSFC-90	900	1220	1200	1600	1200	600	260	2000
OSFC-100	1000	1350	1300	1700	1200	600	300	2200
OSFC-120	1200	1600	1500	1700	1200	600	330	2700
OSFC-140	1400	1800	1700	2400	1200	600	300	3400

AXIAL JETFOIL FAN

- (400~1600)mm Diameter
- 풍량범위 : 62㎥/sec
- Unidirectional & 100% Reversible Flow
- 100% X-Ray Impeller 검사
- Casing : Hot Dipped Galvanised Finish
- Class F, (Option:H, Up to 400℃/2Hr)
- 도로, 철도, 지하철터널, 주차장 환기
- Silencer : 1D, 2D/Jet Fan Dia



AXIAL VAROFOIL FAN (Controllable Pitch)

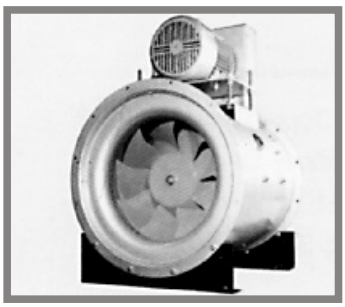
- (630~2800)mm Diameter
- 풍량범위 : 9000㎥/min
- 정압범위 : 300mmAq
- 100% X-Ray Impeller 검사
- Casing : Hot Dipped Galvanised Finish
- 도로/지하철 터널, 공항, 빌딩, 반도체공장
- 에너지 절약 : 공기압을 이용한 Actuator작동으로 System이 요구하는 성능을 만족시키고 최소 에너지 소비를 위해 연속적으로 Blade의 Pitch를 변환시킵니다.
- 가장 효율적이고 저렴한 비용으로 풍량을 조절합니다.

AXIAL AEROFOIL FAN (Adjustable Pitch)

- (315~3150)mm Diameter
- 풍량범위 : 180,000㎥/min
- 정압범위 : 400mmAq
- 정/역 방향 풍량 100%
- 고효율, 고정압 축류송풍기
- 100% X-ray Impeller 검사
- 도로, 철도, 지하철터널, 역사, 공항, 대형주차장 환기설비에 적용
- 배연시 : ~400℃ X 2Hr 가능

AXIAL HT-SERES FAN (Smoke Venting & Roof Unit)

- (315~3150)mm Diameter
- 풍량범위 : 180,000㎥/min
- 정압범위 : 400mmAq
- 100% X-ray Impeller 검사
- 고정압(2단), 고효율, 축류송풍기
- 도로, 철도, 지하철, 대형주차장 환기설비
- 배연시 : ~600℃X1.5Hr 가능

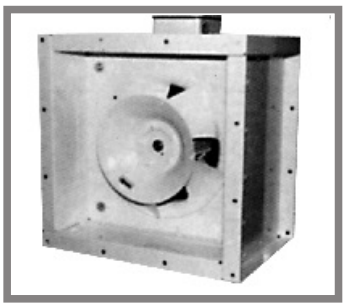


AXCENT-2 FAN

- (315~1250)mm Diameter
- 풍량범위 : 1260㎥/min
- 정압범위 : 200mmAq
- Compact형 : (Axial+Centrifugal)의 장점을 적용한 Mixed Fan
- 고정압/저소음/저체적/고효율
- 정숙운전(Quieter Solution)
- Casing : Hot Dipped Galvanised Finish
- A.H.U 내장 FAN(급기, 환기) 산업용급・배기

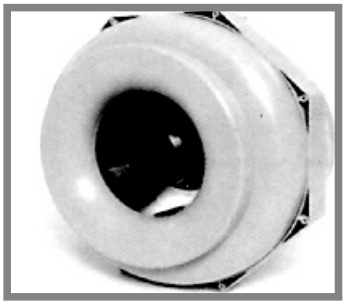
JM AEROFOIL FAN

- (315~1000)mm Diameter
- 풍량범위 : 1200㎥/min
- 정압범위 : 150mmAq
- 100% X-ray Impeller검사
- Motor Protection IP55
- 공조형 환기・배기/산업용 급・배기
- Adjustable pitch aerofoil Impeller
- Casing : Hot Dipped Galvanised Finish
- Flameproof Motor : BS5501 Pts 1&5
- 2A&2B Gas Group에 적용
- Lower Installed Noise Level
- Impeller : Al Die Castl



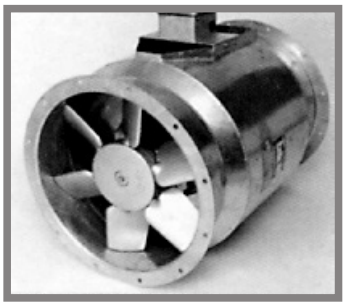
AXCENT-3 FAN(Duct In Line)

- (200~760)mm Diameter
- 풍량범위 : 504㎥/min
- 정압범위 : 90mmAq
- Motor Protection IP55
- 속도제어 기능
- 저소음
- 낮은 동력비
- 공조용 환기・배기
- (Axial+Centrifugul)FAN의 혼합형
- Al-plate Impeller



ILC & ILCM FANS (Duct In Line)

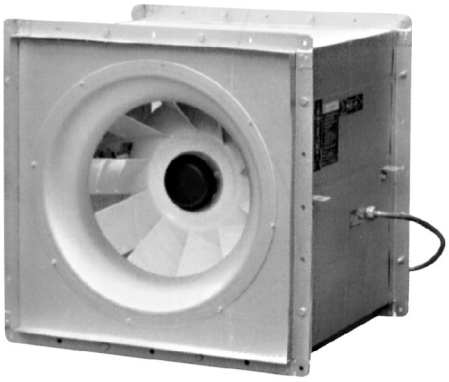
- (100~315)mm Diameter
- 풍량범위 : 27㎥/min
- 정압범위 : 62mmAq
- 설치가 쉽다
- 분기닥트에 설치(공조용)
- 속도제어 기능
- 낮은 소음 레벨
- 공조용 환기・배기
- 220V 60Hz 1Ψ (only)

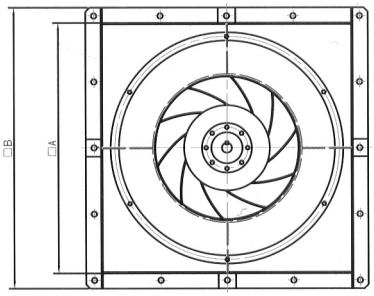


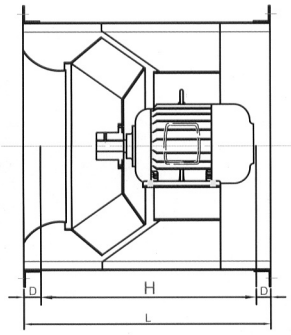
BOX FAN (Duct In Line)

- (125~500)mm Diameter
- 풍량범위 : 55㎥/min
- 정압범위 : 40mmAq
- 저소음 (Low noise Levels)
- Compact Construction
- Operation : (-20℃~50℃), RH 95%
- 220V 60Hz 2Ψ (only)
- Motor : Class B
- 속도제어 기능
- 분기닥트와 연결사용(공조용)

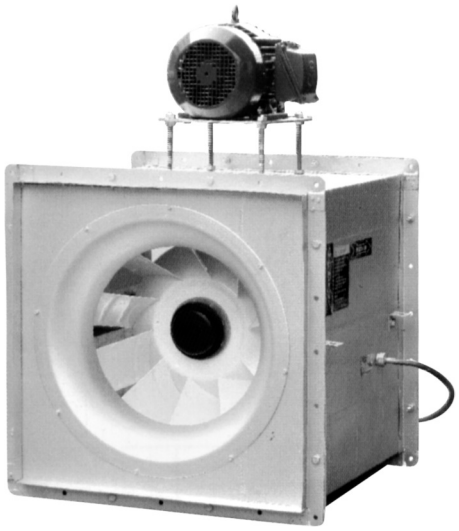
OS-SB형

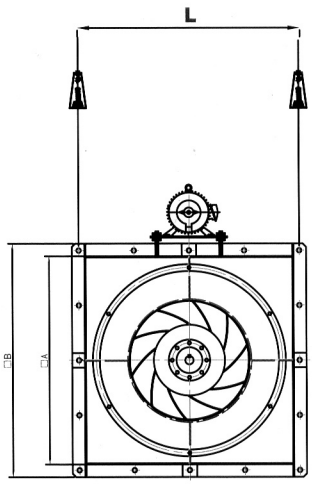


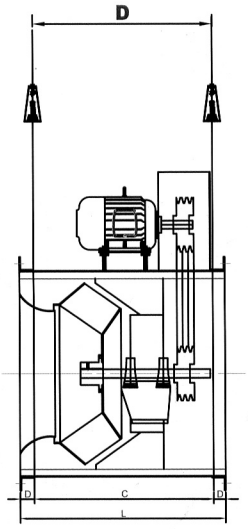




OS-SBV형



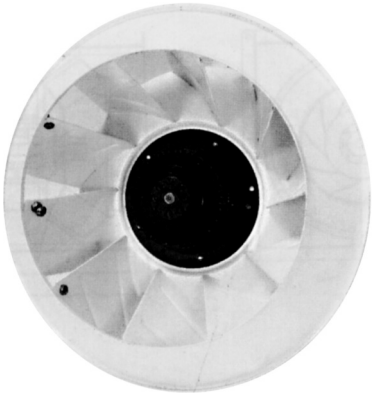


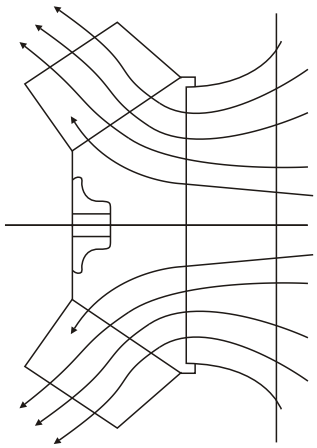


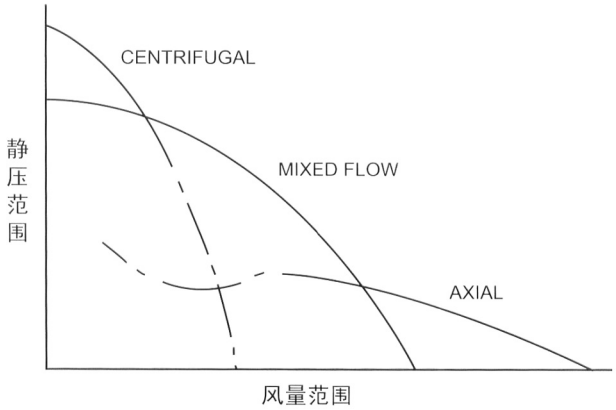
규격표(Dimension)

CODE NO	□A	□B	C	D	L
OS-SB / OS-SBV - 275	400	480	320	40	400
OS-SB / OS-SBV - 375	500	580	420	40	500
OS-SB / OS-SBV - 475	600	680	520	40	600
OS-SB / OS-SBV - 575	700	780	620	100	700
OS-SB / OS-SBV - 675	800	880	720	100	800
OS-SB / OS-SBV - 775	900	980	820	100	900
OS-SB / OS-SBV - 875	1000	1100	920	100	1000

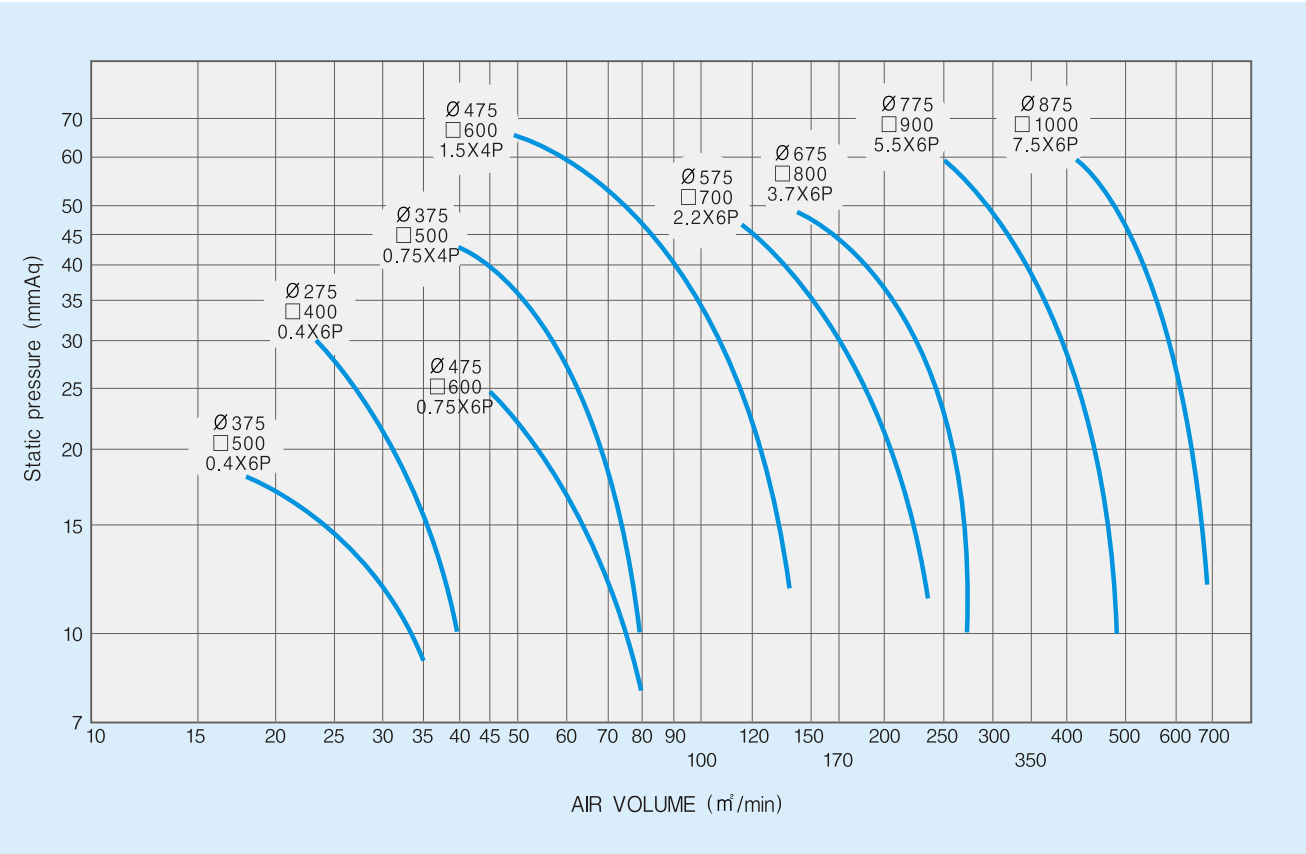
MIXED FLOW FAN







성능곡선



MODEL : OF315-37°

RPM : 1763

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	10.09	0.05	0.00
2	950	7.34	9.29	0.05	22.64
3	950	11.95	8.23	0.05	31.66
4	950	17.67	6.68	0.05	39.20
5	950	22.38	5.44	0.05	39.21
1	1160	0.00	15.05	0.10	0.00
2	1160	8.96	13.84	0.09	22.64
3	1160	14.59	12.27	0.09	31.66
4	1160	21.57	9.96	0.09	39.20
5	1160	27.33	8.11	0.09	39.21
1	1450	0.00	23.51	0.19	0.00
2	1450	11.20	21.63	0.17	22.64
3	1450	18.23	19.17	0.18	31.66
4	1450	26.97	15.56	0.17	39.20
5	1450	34.16	12.67	0.18	39.21
1	1730	0.00	33.47	0.32	0.00
2	1730	13.37	30.79	0.30	22.64
3	1730	21.76	27.28	0.31	31.66
4	1730	32.18	22.15	0.30	39.20
5	1730	40.75	18.04	0.31	39.21

MODEL : OF315-27°

RPM : 1776

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	8.06	0.05	0.00
2	950	6.13	7.52	0.04	16.85
3	950	12.37	5.92	0.05	25.87
4	950	16.71	4.33	0.05	25.55
5	950	18.61	3.25	0.05	21.37
1	1160	0.00	12.01	0.08	0.00
2	1160	7.49	11.21	0.08	16.85
3	1160	15.11	8.82	0.08	25.87
4	1160	20.40	6.45	0.08	25.55
5	1160	22.73	4.84	0.08	21.37
1	1450	0.00	18.77	0.16	0.00
2	1450	9.36	17.52	0.16	16.85
3	1450	18.88	13.79	0.16	25.87
4	1450	25.51	10.08	0.16	25.55
5	1450	28.41	7.57	0.16	21.37
1	1730	0.00	26.71	0.28	0.00
2	1730	11.16	24.94	0.27	16.85
3	1730	22.53	19.62	0.28	25.87
4	1730	30.43	14.35	0.28	25.55
5	1730	33.90	10.77	0.28	21.37

MODEL : OF315-22°

RPM : 1782

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	7.96	0.04	0.00
2	950	4.89	6.85	0.04	13.42
3	950	11.52	5.54	0.04	23.83
4	950	13.43	4.17	0.04	22.47
5	950	15.71	2.54	0.04	17.26
1	1160	0.00	11.86	0.07	0.00
2	1160	5.97	10.21	0.07	13.42
3	1160	14.06	8.26	0.08	23.83
4	1160	16.40	6.22	0.07	22.47
5	1160	19.18	3.78	0.07	17.26
1	1450	0.00	18.54	0.13	0.00
2	1450	7.46	15.95	0.14	13.42
3	1450	17.58	12.91	0.16	23.83
4	1450	20.50	9.72	0.14	22.47
5	1450	23.97	5.91	0.13	17.26
1	1730	0.00	26.93	0.23	0.00
2	1730	8.90	22.70	0.25	13.42
3	1730	20.97	18.38	0.26	23.83
4	1730	24.45	13.84	0.25	22.47
5	1730	28.60	8.42	0.23	17.26

※ 상기데이터는 KS B 6311의 의거 시험한 데이터입니다

MODEL : OF350-37°

RPM : 1778

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	13.79	0.09	0.00
2	950	10.15	11.97	0.09	23.32
3	950	18.98	11.14	0.09	40.62
4	950	28.70	10.26	0.09	56.54
5	950	37.63	7.31	0.09	52.81
1	1160	0.00	20.56	0.16	0.00
2	1160	12.39	17.84	0.15	23.32
3	1160	23.18	16.61	0.15	40.62
4	1160	35.04	15.29	0.15	56.54
5	1160	45.94	10.89	0.15	52.81
1	1450	0.00	32.12	0.32	0.00
2	1450	15.49	27.88	0.30	23.32
3	1450	28.98	25.95	0.30	40.62
4	1450	43.80	23.90	0.30	56.54
5	1450	57.43	17.02	0.30	52.81
1	1730	0.00	45.72	0.54	0.00
2	1730	18.48	39.69	0.51	23.32
3	1730	34.57	36.94	0.51	40.62
4	1730	52.26	34.02	0.51	56.54
5	1730	68.52	24.23	0.51	52.81

MODEL : OF350-27°

RPM : 1778

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	12.96	0.06	0.00
2	950	8.02	12.48	0.06	26.82
3	950	16.52	11.60	0.06	55.20
4	950	24.86	7.83	0.06	56.08
5	950	30.44	5.96	0.06	48.59
1	1160	0.00	19.32	0.11	0.00
2	1160	9.79	18.60	0.11	26.82
3	1160	20.17	17.29	0.10	55.20
4	1160	30.35	11.68	0.10	56.08
5	1160	37.17	8.88	0.11	48.59
1	1450	0.00	30.19	0.22	0.00
2	1450	12.24	29.07	0.22	26.82
3	1450	25.22	27.02	0.20	55.20
4	1450	37.94	18.24	0.20	56.08
5	1450	46.46	13.88	0.22	48.59
1	1730	0.00	42.98	0.37	0.00
2	1730	14.60	41.38	0.37	26.82
3	1730	30.09	38.46	0.34	55.20
4	1730	45.26	25.97	0.34	56.08
5	1730	55.43	19.75	0.37	48.59

MODEL : OF350-22°

RPM : 1778

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	11.83	0.05	0.00
2	950	6.72	10.54	0.06	19.96
3	950	12.27	9.57	0.05	36.51
4	950	18.75	9.25	0.05	53.90
5	950	24.55	4.14	0.05	31.59
1	1160	0.00	17.64	0.10	0.00
2	1160	8.21	15.71	0.11	19.96
3	1160	14.99	14.27	0.10	36.51
4	1160	22.89	13.79	0.10	53.90
5	1160	29.97	6.17	0.10	31.59
1	1450	0.00	27.57	0.19	0.00
2	1450	10.26	24.55	0.21	19.96
3	1450	18.73	22.30	0.19	36.51
4	1450	28.62	21.55	0.19	53.90
5	1450	37.47	9.65	0.19	31.59
1	1730	0.00	39.24	0.32	0.00
2	1730	12.24	34.94	0.35	19.96
3	1730	22.35	31.75	0.32	36.51
4	1730	34.14	30.68	0.32	53.90
5	1730	44.70	13.73	0.32	31.59

MODEL : OF350-17°

RPM : 1778

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	10.22	0.05	0.00
2	950	5.01	10.25	0.05	15.56
3	950	10.02	9.79	0.05	30.48
4	950	15.03	7.50	0.05	35.04
5	950	20.66	3.15	0.05	20.20
1	1160	0.00	15.24	0.10	0.00
2	1160	6.12	15.28	0.10	15.56
3	1160	12.23	14.59	0.10	30.48
4	1160	18.35	11.19	0.10	35.04
5	1160	25.22	4.69	0.10	20.20
1	1450	0.00	23.81	0.19	0.00
2	1450	7.65	23.87	0.19	15.56
3	1450	15.29	22.80	0.19	30.48
4	1450	22.94	17.48	0.19	35.04
5	1450	31.53	7.33	0.19	20.20
1	1730	0.00	33.89	0.32	0.00
2	1730	9.13	33.98	0.33	15.56
3	1730	18.24	32.46	0.32	30.48
4	1730	27.37	24.88	0.32	35.04
5	1730	37.62	10.43	0.32	20.20

※ 상기데이터는 KS B 6311의 의거 시험한 데이터입니다

MODEL : OF400-37°

RPM : 1772

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	18.60	0.18	0.00
2	950	15.84	17.32	0.17	26.52
3	950	28.55	14.24	0.17	38.03
4	950	43.37	11.66	0.18	46.91
5	950	58.19	6.50	0.17	35.35
1	1160	0.00	27.73	0.32	0.00
2	1160	19.34	25.83	0.31	26.52
3	1160	34.87	21.23	0.32	38.03
4	1160	52.96	17.38	0.32	46.91
5	1160	71.05	9.69	0.32	35.35
1	1450	0.00	43.33	0.63	0.00
2	1450	24.17	40.36	0.60	26.52
3	1450	43.58	33.18	0.62	38.03
4	1450	66.20	27.16	0.63	46.91
5	1450	88.82	15.13	0.62	35.35
1	1730	0.00	61.68	1.07	0.00
2	1730	28.84	57.45	1.02	26.52
3	1730	52.00	47.23	1.06	38.03
4	1730	78.98	38.67	1.06	46.91
5	1730	105.97	21.54	1.06	35.35

MODEL : OF400-27°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	19.39	0.17	0.00
2	950	13.70	16.43	0.15	24.30
3	950	28.52	14.21	0.15	44.19
4	950	41.10	12.38	0.15	54.96
5	950	55.93	5.26	0.15	31.79
1	1160	0.00	28.91	0.31	0.00
2	1160	16.73	24.49	0.28	24.30
3	1160	34.83	21.19	0.27	44.19
4	1160	50.19	18.46	0.28	54.96
5	1160	68.30	7.85	0.28	31.79
1	1450	0.00	45.17	0.60	0.00
2	1450	20.91	38.27	0.54	24.30
3	1450	43.53	33.10	0.53	44.19
4	1450	62.73	28.84	0.54	54.96
5	1450	85.37	12.26	0.54	31.79
1	1730	0.00	64.30.	1.02	0.00
2	1730	24.95	54.47	0.91	24.30
3	1730	51.94	47.12	0.91	44.19
4	1730	74.85	41.06	0.91	54.96
5	1730	101.86	17.45	0.91	31.79

MODEL : OF400-22°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	18.28	0.15	0.00
2	950	12.00	17.51	0.14	24.79
3	950	23.73	15.21	0.14	42.15
4	950	35.38	10.80	0.14	44.64
5	950	46.80	4.57	0.14	24.73
1	1160	0.00	27.26	0.28	0.00
2	1160	14.65	26.11	0.25	24.79
3	1160	28.97	22.67	0.25	42.15
4	1160	43.20	16.11	0.25	44.64
5	1160	57.14	6.81	0.26	24.73
1	1450	0.00	42.59	0.54	0.00
2	1450	18.31	40.80	0.49	24.79
3	1450	36.22	35.43	0.50	42.15
4	1450	53.99	25.17	0.50	44.64
5	1450	71.43	10.65	0.50	24.73
1	1730	0.00	60.62	0.92	0.00
2	1730	21.84	58.08	0.84	24.79
3	1730	43.21	50.43	0.84	42.15
4	1730	64.42	35.82	0.84	44.64
5	1730	85.22	15.16	0.85	24.73

MODEL : OF400-17°

RPM : 1770

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	17.25	0.15	0.00
2	950	11.21	14.52	0.14	18.70
3	950	20.21	12.70	0.14	30.73
4	950	30.71	11.83	0.14	43.46
5	950	40.43	4.06	0.13	20.75
1	1160	0.00	25.72	0.27	0.00
2	1160	13.69	21.66	0.26	18.70
3	1160	24.68	18.94	0.25	30.73
4	1160	37.49	17.63	0.25	43.46
5	1160	49.36	6.06	0.24	20.75
1	1450	0.00	40.19	0.53	0.00
2	1450	17.11	33.84	0.51	18.70
3	1450	30.85	29.59	0.49	30.73
4	1450	46.87	27.55	0.49	43.46
5	1450	61.70	9.46	0.46	20.75
1	1730	0.00	57.21	0.89	0.00
2	1730	20.42	48.17	0.86	18.70
3	1730	36.81	42.12	0.82	30.73
4	1730	55.92	39.22	0.82	43.46
5	1730	73.62	13.47	0.78	20.75

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MODEL : OF450-37°

RPM : 1740

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	23.84	0.29	0.00
2	950	21.18	22.05	0.28	27.33
3	950	40.83	20.04	0.30	45.24
4	950	62.02	16.46	0.29	57.03
5	950	83.60	11.61	0.29	54.21
1	1160	0.00	35.55	0.52	0.00
2	1160	25.87	32.88	0.51	27.33
3	1160	49.85	29.88	0.54	45.24
4	1160	75.73	24.55	0.53	57.03
5	1160	102.08	17.31	0.53	54.21
1	1450	0.00	55.55	1.01	0.00
2	1450	32.33	51.38	0.99	27.33
3	1450	62.32	46.69	1.05	45.24
4	1450	94.67	38.35	1.04	57.03
5	1450	127.60	27.05	1.04	54.21
1	1730	0.00	79.07	1.72	0.00
2	1730	38.58	73.14	1.69	27.33
3	1730	74.35	66.46	1.78	45.24
4	1730	112.95	54.60	1.77	57.03
5	1730	152.24	38.50	1.77	54.21

MODEL : OF450-27°

RPM : 1736

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	28.24	0.32	0.00
2	950	18.61	24.22	0.29	25.40
3	950	39.03	20.76	0.30	44.03
4	950	58.85	18.29	0.29	60.27
5	950	74.43	8.66	0.28	37.02
1	1160	0.00	42.10	0.59	0.00
2	1160	22.73	36.12	0.53	25.40
3	1160	47.66	30.95	0.55	44.03
4	1160	71.86	27.27	0.53	60.27
5	1160	90.89	12.92	0.52	37.02
1	1450	0.00	65.78	1.15	0.00
2	1450	28.41	56.43	1.03	25.40
3	1450	59.58	48.36	1.07	44.03
4	1450	89.82	42.61	1.04	60.27
5	1450	113.61	20.18	1.01	37.02
1	1730	0.00	93.64	1.96	0.00
2	1730	33.89	80.33	1.75	25.40
3	1730	71.08	68.84	1.82	44.03
4	1730	107.17	60.65	1.76	60.27
5	1730	135.55	28.73	1.72	37.02

MODEL : OF450-22°

RPM : 1736

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	26.98	0.29	0.00
2	950	16.65	19.75	0.25	21.21
3	950	34.31	18.00	0.24	41.25
4	950	50.62	17.08	0.25	57.35
5	950	65.00	6.47	0.24	28.90
1	1160	0.00	40.23	0.54	0.00
2	1160	20.33	29.44	0.46	21.21
3	1160	41.90	26.84	0.45	41.25
4	1160	61.82	25.46	0.45	57.35
5	1160	79.37	9.65	0.43	28.90
1	1450	0.00	62.86	1.05	0.00
2	1450	25.41	46.00	0.90	21.21
3	1450	52.37	41.93	0.87	41.25
4	1450	77.27	39.79	0.88	57.35
5	1450	99.21	15.07	0.85	28.90
1	1730	0.00	89.48	1.78	0.00
2	1730	30.31	65.48	1.53	21.21
3	1730	62.48	59.69	1.48	41.25
4	1730	92.19	56.64	1.49	57.35
5	1730	118.37	21.46	1.44	28.90

MODEL : OF450-27°

RPM : 1736

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	23.75	0.23	0.00
2	950	14.01	22.09	0.21	23.67
3	950	25.58	18.53	0.20	37.88
4	950	38.79	11.67	0.21	35.91
5	950	50.51	5.18	0.20	21.57
1	1160	0.00	35.40	0.43	0.00
2	1160	17.10	32.94	0.39	23.67
3	1160	31.23	27.63	0.37	37.88
4	1160	47.36	17.40	0.38	35.91
5	1160	61.67	7.73	0.36	21.57
1	1450	0.00	55.32	0.84	0.00
2	1450	21.38	51.47	0.76	23.67
3	1450	39.04	43.18	0.73	37.88
4	1450	59.20	27.19	0.73	35.91
5	1450	77.09	12.08	0.71	21.57
1	1730	0.00	78.75	1.42	0.00
2	1730	25.51	73.27	1.29	23.67
3	1730	46.58	61.46	1.23	37.88
4	1730	70.64	38.70	1.24	35.91
5	1730	91.97	17.19	1.20	21.57

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MODEL : OF500-37°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	28.36	0.58	0.00
2	950	28.82	26.65	0.56	22.32
3	950	57.14	24.01	0.58	38.54
4	950	85.27	18.56	0.58	44.84
5	950	114.28	10.34	0.57	33.75
1	1160	0.00	42.28	1.05	0.00
2	1160	35.20	39.73	1.02	22.32
3	1160	69.77	35.80	1.06	38.54
4	1160	104.12	27.67	1.05	44.84
5	1160	139.54	15.41	1.04	33.75
1	1450	0.00	66.07	2.05	0.00
2	1450	43.99	62.07	2.00	22.32
3	1450	87.21	55.94	2.07	38.54
4	1450	130.15	43.24	2.05	44.84
5	1450	174.42	24.08	2.03	33.75
1	1730	0.00	94.05	3.48	0.00
2	1730	52.49	88.36	3.39	22.32
3	1730	104.05	79.63	3.51	38.54
4	1730	155.29	61.55	3.48	44.84
5	1730	208.10	34.28	3.45	33.75

MODEL : OF500-27°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	26.72	0.53	0.00
2	950	22.95	23.10	0.50	17.20
3	950	45.26	20.32	0.50	29.84
4	950	68.42	17.77	0.48	41.00
5	950	90.51	7.95	0.48	24.51
1	1160	0.00	39.83	0.96	0.00
2	1160	28.02	34.44	0.92	17.20
3	1160	55.26	30.29	0.92	29.84
4	1160	83.54	26.49	0.88	41.00
5	1160	110.52	11.86	0.87	24.51
1	1450	0.00	62.24	1.87	0.00
2	1450	35.03	53.81	1.79	17.20
3	1450	69.08	47.33	1.79	29.84
4	1450	104.43	41.39	1.72	41.00
5	1450	138.15	18.53	1.71	24.51
1	1730	0.00	88.59	3.18	0.00
2	1730	41.79	76.60	3.04	17.20
3	1730	82.42	67.37	3.04	29.84
4	1730	124.59	58.92	2.93	41.00
5	1730	164.82	26.37	2.90	24.51

MODEL : OF500-22°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	25.21	0.51	0.00
2	950	21.79	22.16	0.50	15.83
3	950	42.20	19.28	0.50	26.67
4	950	62.11	15.31	0.50	30.87
5	950	84.40	7.81	0.51	21.20
1	1160	0.00	37.59	0.93	0.00
2	1160	26.61	33.04	0.91	15.83
3	1160	51.53	28.75	0.91	26.67
4	1160	75.84	22.83	0.92	30.87
5	1160	103.06	11.65	0.93	21.20
1	1450	0.00	58.73	1.81	0.00
2	1450	33.26	51.62	1.77	15.83
3	1450	64.41	44.93	1.77	26.67
4	1450	94.81	35.68	1.79	30.87
5	1450	128.82	18.21	1.81	21.20
1	1730	0.00	83.60	3.07	0.00
2	1730	39.68	73.48	3.01	15.83
3	1730	76.85	63.95	3.01	26.67
4	1730	113.11	50.79	3.04	30.87
5	1730	153.70	25.92	3.07	21.20

MODEL : OF500-17°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	25.21	0.50	0.00
2	950	18.07	23.39	0.47	14.56
3	950	36.14	21.07	0.47	26.25
4	950	53.10	15.72	0.47	28.77
5	950	71.03	6.11	0.46	15.28
1	1160	0.00	37.59	0.91	0.00
2	1160	22.06	34.87	0.86	14.56
3	1160	44.13	31.42	0.86	26.25
4	1160	64.84	23.44	0.86	28.77
5	1160	86.73	9.11	0.85	15.28
1	1450	0.00	58.73	1.77	0.00
2	1450	27.58	54.48	1.69	14.56
3	1450	55.16	49.10	1.69	26.25
4	1450	81.05	36.63	1.69	28.77
5	1450	108.42	14.24	1.65	15.28
1	1730	0.00	83.60	3.01	0.00
2	1730	32.91	77.56	2.86	14.56
3	1730	65.81	69.89	2.86	26.25
4	1730	96.70	52.14	2.86	28.77
5	1730	129.35	20.27	2.80	15.28

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MODEL : OF500-37°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	28.36	0.58	0.00
2	950	28.82	26.65	0.56	22.32
3	950	57.14	24.01	0.58	38.54
4	950	85.27	18.56	0.58	44.84
5	950	114.28	10.34	0.57	33.75
1	1160	0.00	42.28	1.05	0.00
2	1160	35.20	39.73	1.02	22.32
3	1160	69.77	35.80	1.06	38.54
4	1160	104.12	27.67	1.05	44.84
5	1160	139.54	15.41	1.04	33.75
1	1450	0.00	66.07	2.05	0.00
2	1450	43.99	62.07	2.00	22.32
3	1450	87.21	55.94	2.07	38.54
4	1450	130.15	43.24	2.05	44.84
5	1450	174.42	24.08	2.03	33.75
1	1730	0.00	94.05	3.48	0.00
2	1730	52.49	88.36	3.39	22.32
3	1730	104.05	79.63	3.51	38.54
4	1730	155.29	61.55	3.48	44.84
5	1730	208.10	34.28	3.45	33.75

MODEL : OF500-27°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	26.72	0.53	0.00
2	950	22.95	23.10	0.50	17.20
3	950	45.26	20.32	0.50	29.84
4	950	68.42	17.77	0.48	41.00
5	950	90.51	7.95	0.48	24.51
1	1160	0.00	39.83	0.96	0.00
2	1160	28.02	34.44	0.92	17.20
3	1160	55.26	30.29	0.92	29.84
4	1160	83.54	26.49	0.88	41.00
5	1160	110.52	11.86	0.87	24.51
1	1450	0.00	62.24	1.87	0.00
2	1450	35.03	53.81	1.79	17.20
3	1450	69.08	47.33	1.79	29.84
4	1450	104.43	41.39	1.72	41.00
5	1450	138.15	18.53	1.71	24.51
1	1730	0.00	88.59	3.18	0.00
2	1730	41.79	76.60	3.04	17.20
3	1730	82.42	67.37	3.04	29.84
4	1730	124.59	58.92	2.93	41.00
5	1730	164.82	26.37	2.90	24.51

MODEL : OF500-22°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	25.21	0.51	0.00
2	950	21.79	22.16	0.50	15.83
3	950	42.20	19.28	0.50	26.67
4	950	62.11	15.31	0.50	30.87
5	950	84.40	7.81	0.51	21.20
1	1160	0.00	37.59	0.93	0.00
2	1160	26.61	33.04	0.91	15.83
3	1160	51.53	28.75	0.91	26.67
4	1160	75.84	22.83	0.92	30.87
5	1160	103.06	11.65	0.93	21.20
1	1450	0.00	58.73	1.81	0.00
2	1450	33.26	51.62	1.77	15.83
3	1450	64.41	44.93	1.77	26.67
4	1450	94.81	35.68	1.79	30.87
5	1450	128.82	18.21	1.81	21.20
1	1730	0.00	83.60	3.07	0.00
2	1730	39.68	73.48	3.01	15.83
3	1730	76.85	63.95	3.01	26.67
4	1730	113.11	50.79	3.04	30.87
5	1730	153.70	25.92	3.07	21.20

MODEL : OF500-17°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	25.21	0.50	0.00
2	950	18.07	23.39	0.47	14.56
3	950	36.14	21.07	0.47	26.25
4	950	53.10	15.72	0.47	28.77
5	950	71.03	6.11	0.46	15.28
1	1160	0.00	37.59	0.91	0.00
2	1160	22.06	34.87	0.86	14.56
3	1160	44.13	31.42	0.86	26.25
4	1160	64.84	23.44	0.86	28.77
5	1160	86.73	9.11	0.85	15.28
1	1450	0.00	58.73	1.77	0.00
2	1450	27.58	54.48	1.69	14.56
3	1450	55.16	49.10	1.69	26.25
4	1450	81.05	36.63	1.69	28.77
5	1450	108.42	14.24	1.65	15.28
1	1730	0.00	83.60	3.01	0.00
2	1730	32.91	77.56	2.86	14.56
3	1730	65.81	69.89	2.86	26.25
4	1730	96.70	52.14	2.86	28.77
5	1730	129.35	20.27	2.80	15.28

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MODEL : OF500-37°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	28.36	0.58	0.00
2	950	28.82	26.65	0.56	22.32
3	950	57.14	24.01	0.58	38.54
4	950	85.27	18.56	0.58	44.84
5	950	114.28	10.34	0.57	33.75
1	1160	0.00	42.28	1.05	0.00
2	1160	35.20	39.73	1.02	22.32
3	1160	69.77	35.80	1.06	38.54
4	1160	104.12	27.67	1.05	44.84
5	1160	139.54	15.41	1.04	33.75
1	1450	0.00	66.07	2.05	0.00
2	1450	43.99	62.07	2.00	22.32
3	1450	87.21	55.94	2.07	38.54
4	1450	130.15	43.24	2.05	44.84
5	1450	174.42	24.08	2.03	33.75
1	1730	0.00	94.05	3.48	0.00
2	1730	52.49	88.36	3.39	22.32
3	1730	104.05	79.63	3.51	38.54
4	1730	155.29	61.55	3.48	44.84
5	1730	208.10	34.28	3.45	33.75

MODEL : OF500-27°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	26.72	0.53	0.00
2	950	22.95	23.10	0.50	17.20
3	950	45.26	20.32	0.50	29.84
4	950	68.42	17.77	0.48	41.00
5	950	90.51	7.95	0.48	24.51
1	1160	0.00	39.83	0.96	0.00
2	1160	28.02	34.44	0.92	17.20
3	1160	55.26	30.29	0.92	29.84
4	1160	83.54	26.49	0.88	41.00
5	1160	110.52	11.86	0.87	24.51
1	1450	0.00	62.24	1.87	0.00
2	1450	35.03	53.81	1.79	17.20
3	1450	69.08	47.33	1.79	29.84
4	1450	104.43	41.39	1.72	41.00
5	1450	138.15	18.53	1.71	24.51
1	1730	0.00	88.59	3.18	0.00
2	1730	41.79	76.60	3.04	17.20
3	1730	82.42	67.37	3.04	29.84
4	1730	124.59	58.92	2.93	41.00
5	1730	164.82	26.37	2.90	24.51

MODEL : OF500-22°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	25.21	0.51	0.00
2	950	21.79	22.16	0.50	15.83
3	950	42.20	19.28	0.50	26.67
4	950	62.11	15.31	0.50	30.87
5	950	84.40	7.81	0.51	21.20
1	1160	0.00	37.59	0.93	0.00
2	1160	26.61	33.04	0.91	15.83
3	1160	51.53	28.75	0.91	26.67
4	1160	75.84	22.83	0.92	30.87
5	1160	103.06	11.65	0.93	21.20
1	1450	0.00	58.73	1.81	0.00
2	1450	33.26	51.62	1.77	15.83
3	1450	64.41	44.93	1.77	26.67
4	1450	94.81	35.68	1.79	30.87
5	1450	128.82	18.21	1.81	21.20
1	1730	0.00	83.60	3.07	0.00
2	1730	39.68	73.48	3.01	15.83
3	1730	76.85	63.95	3.01	26.67
4	1730	113.11	50.79	3.04	30.87
5	1730	153.70	25.92	3.07	21.20

MODEL : OF500-17°

RPM : 1774

Num	rpm(N)	Q(㎥/M)	Pt(mmAq)	H(kW)	etat(%)
1	950	0.00	25.21	0.50	0.00
2	950	18.07	23.39	0.47	14.56
3	950	36.14	21.07	0.47	26.25
4	950	53.10	15.72	0.47	28.77
5	950	71.03	6.11	0.46	15.28
1	1160	0.00	37.59	0.91	0.00
2	1160	22.06	34.87	0.86	14.56
3	1160	44.13	31.42	0.86	26.25
4	1160	64.84	23.44	0.86	28.77
5	1160	86.73	9.11	0.85	15.28
1	1450	0.00	58.73	1.77	0.00
2	1450	27.58	54.48	1.69	14.56
3	1450	55.16	49.10	1.69	26.25
4	1450	81.05	36.63	1.69	28.77
5	1450	108.42	14.24	1.65	15.28
1	1730	0.00	83.60	3.01	0.00
2	1730	32.91	77.56	2.86	14.56
3	1730	65.81	69.89	2.86	26.25
4	1730	96.70	52.14	2.86	28.77
5	1730	129.35	20.27	2.80	15.28

※ 상기데이터는 KS B 6311의 의거 시험한 데이터입니다

BOX형 DUCT IN FAN

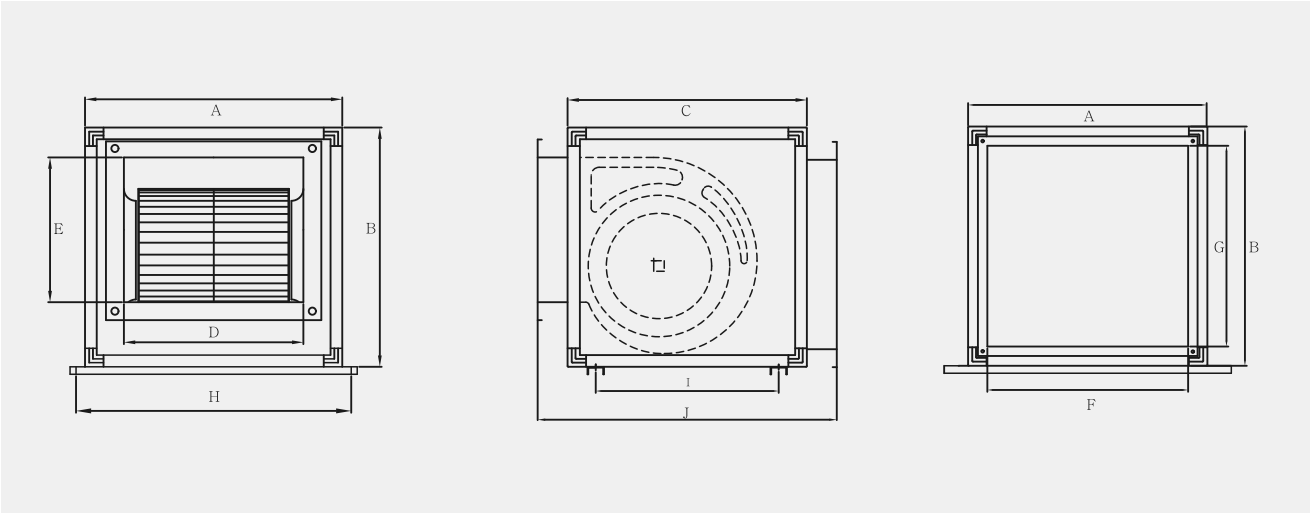
특징(Characteristics)

- 최적설계의 케이스 일체형으로 소음과 진동을 최소화
- 전면 특수 도장 처리로 내식성이 뛰어나고, 외관이 고급스러우며 제품 수명이 연장
- 시공 및 설치가 편리하여 공사시간을 최대한 단축
- AIR조절장치에 의하여 모터에 습기가 부착되는 것을 방지하며, 냉각효과가 우수하여 모터수명을 최대한 연장
- 단 하나의 COVER분리로 A/S와 청소가 손쉽고 빠르게 해결
- 흡입구 설치 시 방향에 관계없이 설치할 수 있으며, 다중 흡입 장치도 가능해 작업성이 탁월함.
- 토출구는 원형으로 설치되어 있으며, 사각토출구도 설치가 가능

용 도

- 공기조화용, 일반환기용, 급배기용 시스템.

외형도(Outward Drawing)



규격표(Dimension)

	일반MOTOR								고효율MOTOR				
모델명	OSB17S	OSB19S	OSB20ST	OSB25ST	OSB28ST	OSB30ST	OSB38FT	OSB38HT	OSB28T	OSB30T	OSB35T	OSB38T	OSB39T
극 수	2P	4P	4P	6P	6P	6P	8P	6P	6P	6P	6P	6P	6P
소비전력	0.1kw	0.2kw	0.4kw	0.4kw	0.75kw	1.5kw	1.5kw	2.2kw	0.75kw	0.75kw	1.5kw	2.2kw	3.7kw
A	300	350	400	515	515	560	725	725	710	750	842	900	1120
B	300	350	400	515	515	560	725	725	515	580	632	750	750
C	300	350	400	515	515	560	655	655	460	530	562	680	680
D	185	220	235	320	320	360	600	600	550	550	600	650	700
E	120	123	165	270	270	328	450	450	400	450	450	500	550
F	185	238	290	400	400	450	600	600	550	550	600	650	700
G	185	238	290	400	400	450	450	450	400	450	450	500	550
H	350	400	450	565	565	630	840	840	765	800	940	1040	1260
I	150	200	350	365	365	405	465	465	260	339	360	486	486
J	410	460	519	635	635	668	780	780	580	650	682	800	800

Characteristics

- Oprimized design of case in one type. Minimized the noise and vibration.
- Corrosion resistance with special painting in all surface. Elegant appearance and longer life time.
- Easy set-up and installation. Minimize construction time.
- Prevent motor from humidity with air control device. Excellent cooling effect for longer motor life.
- Easy and fast A/S and cleaning with detach of one cover.
- Can install ventilation opening in any direction. Possible to make multi ventilation system.
- Round type ventilation exit. Possible to make rectangular type as well.

Applications

- Air conditioner system,
  Air supply and ventilation system,
  General ventilation equipment.

특성 및 사양 Property and Specification

일반MOTOR

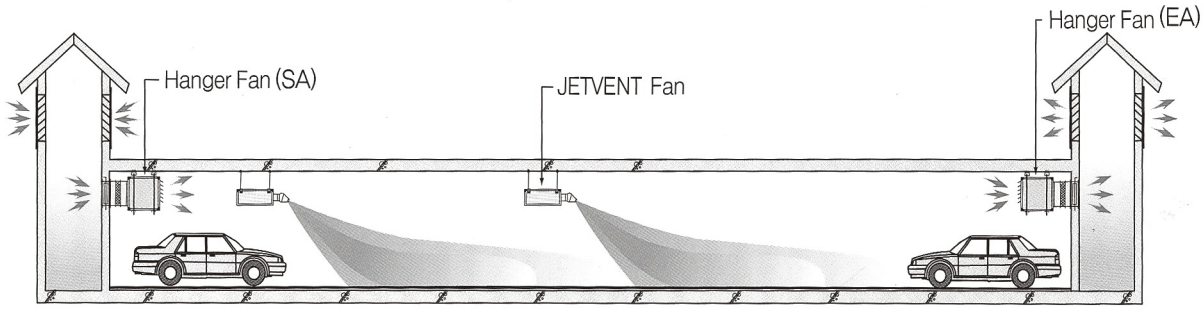
형명 Model NO.	상/전압 Phase.Volt	극수 Pols (P)	입력 Input(W)	최대풍량 Air Volume(㎥/h)	회전수 Revolution(RPM)	중량 Weight(kg)
OSB-17S	220	2	120	614	2,200	15
OSB-19S	220	4	300	1,293	1,700	16
OSB-20S	220	4	400	1,800	1,700	16.8
OSB-25S	220	6	600	3,200	1,100	29
OSB-25T	220/380	6	400	3,200	1,100	29.4
OSB-28S	220	6	750	3,800	1,100	29
OSB-28T	220/380	6	700	3,800	1,100	29.4
OSB-30S	220	6	1,100	5,800	1,100	38.4
OSB-30T	220/380	6	1,100	6,000	1,100	38.4
OSB-38FS	220	8	1,700	8,200	845	62.1
OSB-38FT	220/380	8	1,500	8,200	845	64.8
OSB-38HT	220/380	6	3,200	9,000	1,100	76.8

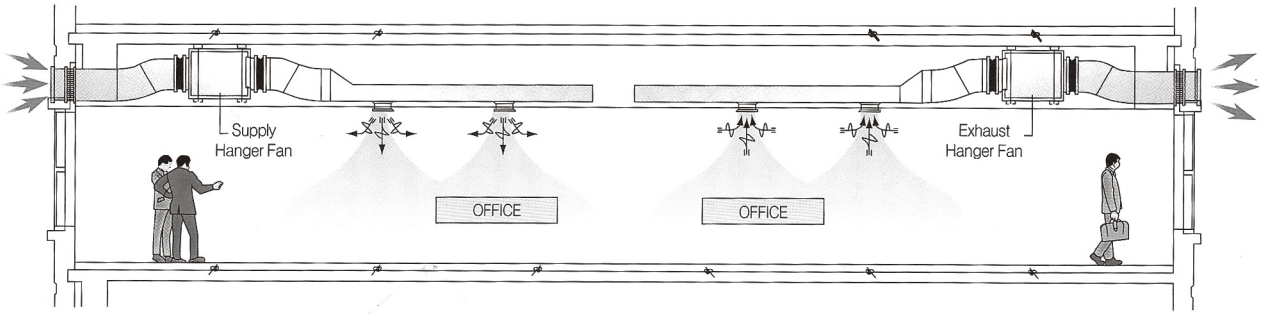
고효율MOTOR

형명 Model NO.	상/전압 Phase.Volt	극수 Pols (P)	입력 Input(W)	최대풍량 Air Volume(㎥/h)	회전수 Revolution(RPM)	중량 Weight(kg)
OSB-28T	220/380	6	750	3,500	1,160	50
OSB-30T	220/380	6	750	5,200	1,160	57
OSB-35T	220/380	6	1,500	6,600	1,160	82.8
OSB-38T	220/380	6	2,200	8,200	1,160	125
OSB-39T	220/380	6	3,700	11,000	1,160	153.7

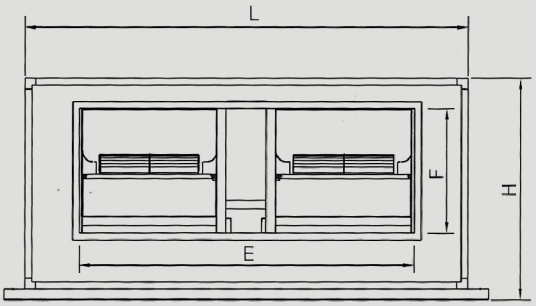
HANGER FAN

System Flow



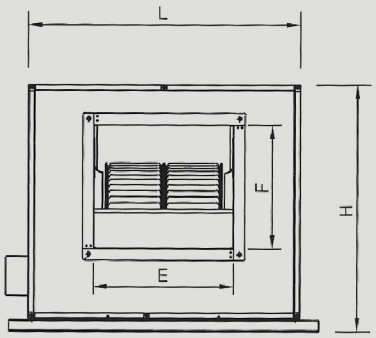


Twin Type



Section View

Single Type



Section View

지하 주차장 HANGER FAN

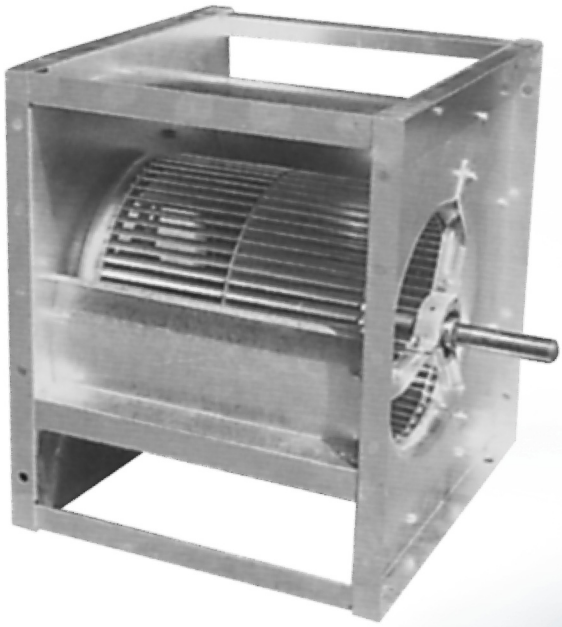
제품의 특징 Characteristics

- Fan Room 불필요
- 층고의 제약이 적어 설치가 용이
- 천정에 설치하므로 주차공간이 많아짐
- 초기투자비가 저렴하다

사 양 Property and Specification

형명 Model NO.	풍량 (CHM)	정압 (mmAq)	규격 (LXWXH)	동력 (W)	전원 (V/ϕ/Hz)	소음 (dB(A))	중량 (kg)
OSHF-83	5,000	20	1200X500X500	0.75	380/3/60	60	68
OSHF-125	7,500	20	1200X550X550	0.75	380/3/60	61	78
OSHF-167	10,000	20	1300X650X600	1.5	380/3/60	63	87
OSHF-250	15,000	20	1400X750X650	2.2	380/3/60	64	112
OSHF-333	20,000	20	1600X850X800	3.7	380/3/60	64	169
OSHF-416	25,000	20	1740X940X800	5.5	380/3/60	65	195
OSHF-500	30,000	20	1740X940X800	5.5	380/3/60	65	195
OSHF-583	35,000	20	2000X1150X800	5.5	380/3/60	65	210
OSHF-666	40,000	20	2200X1200X1100	7.5	380/3/60	65	250
OSHF-750	45,000	20	2300X1200X1100	11	380/3/60	65	270
OSHF-833	50,000	20	2400X1200X1100	11	380/3/60	65	290

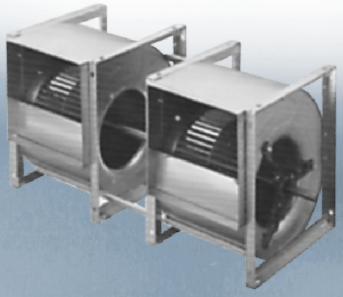
※본 제품의 사양은 품질개선을 위하여 사전예고 없이 칫수가 변경될 수 있습니다.

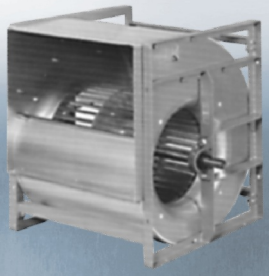


특징 Characteristics

구동축과 종동축의 폴리크기에 따라 각요구 사양에 맞도록 선택할 수 있고, 제품의 경량화로 설치 및 수리가 용이하다.

V-belt drive single type blowers can be made suitable Customer's request by changing pulley size of motor side and Fans side. It's easy to install, check and repair as its light weight.

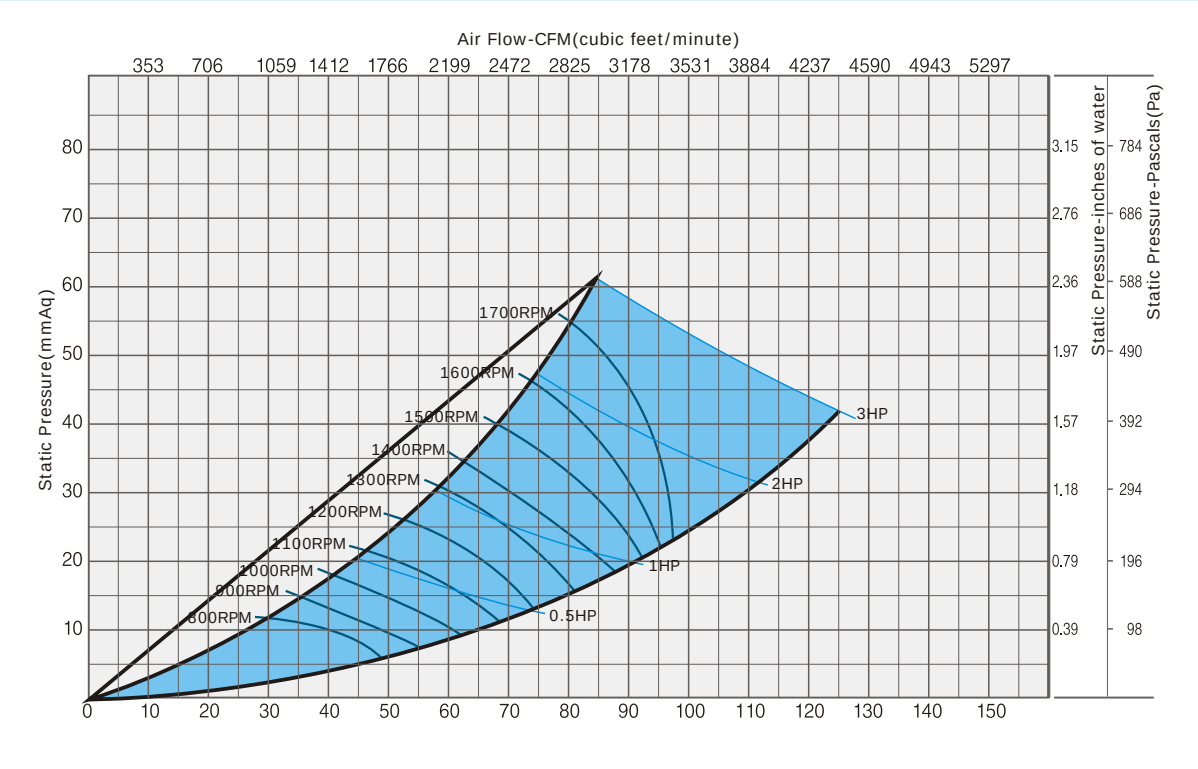




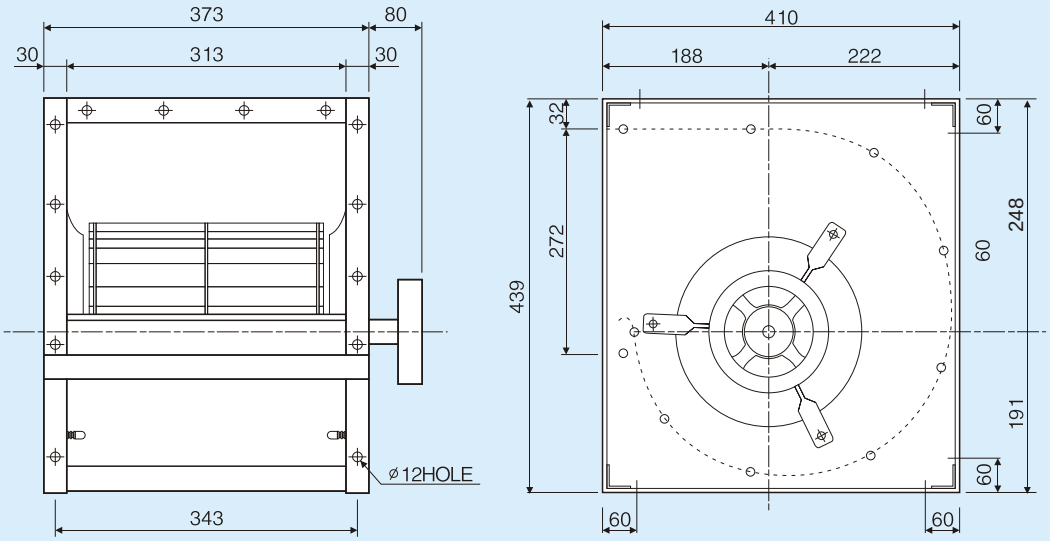
V-BELT DRIVE SINGLE & TWIN TYPE BLOWERS

OS-110D*1 TYPE

성능곡선 Performance Curve



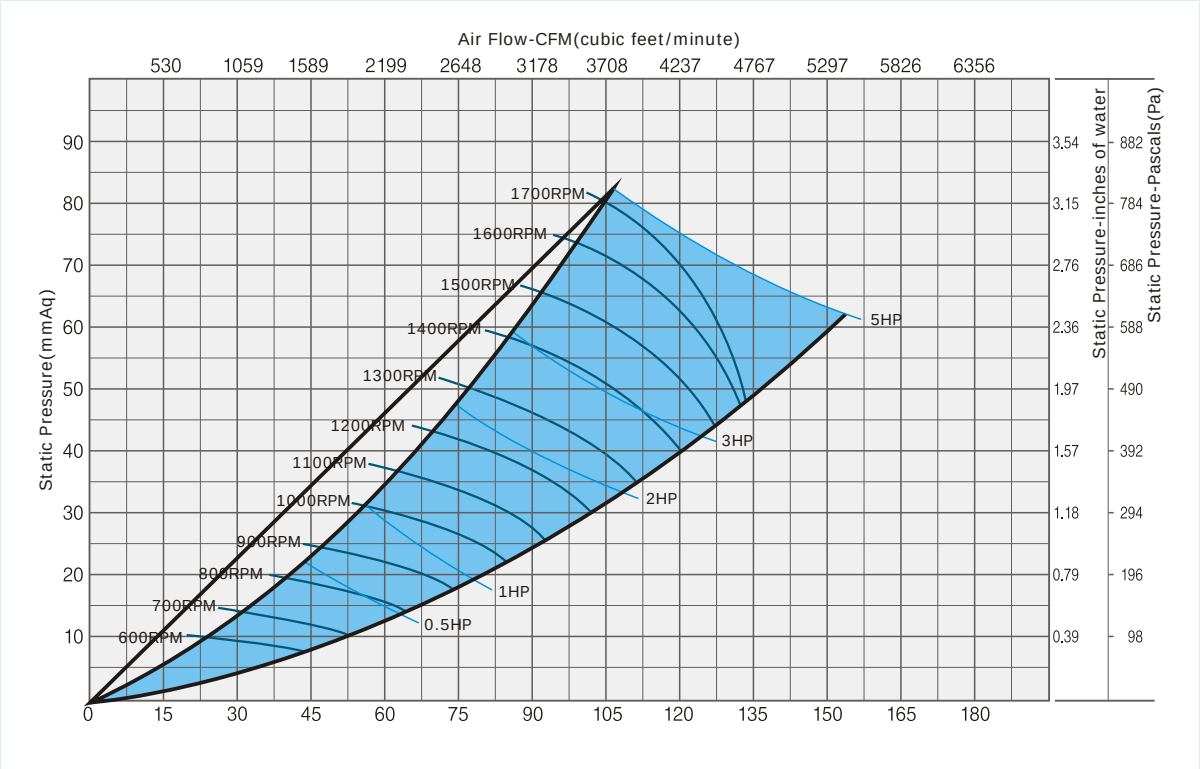
외형도 (규격이 예고없이 변경될 수 있음)



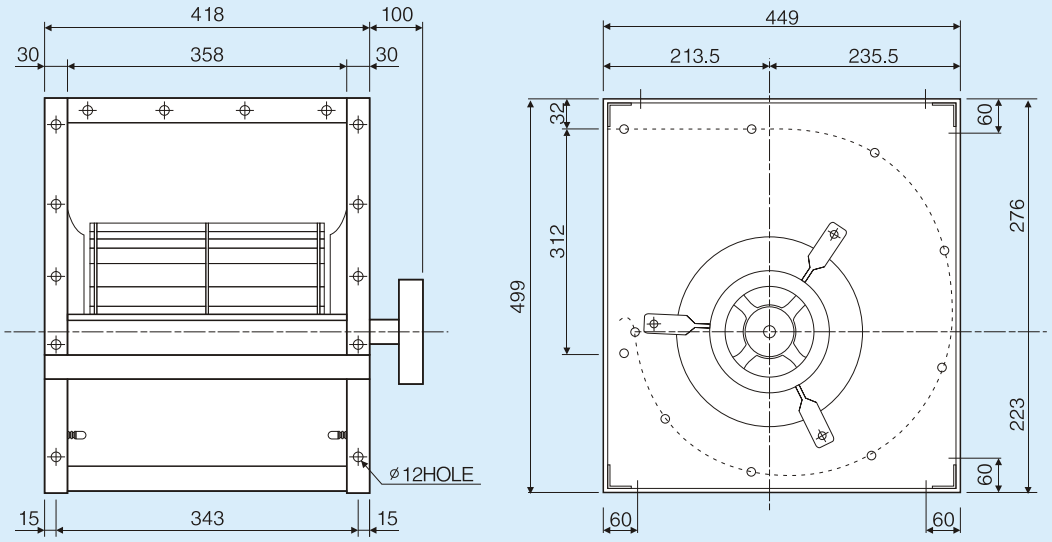
※ FAN 사양 결정시 본사와 협의 바람
Please contact us if you make a fan

OS-122D*1 TYPE

성능곡선 Performance Curve



외형도 (규격이 예고없이 변경될 수 있음)



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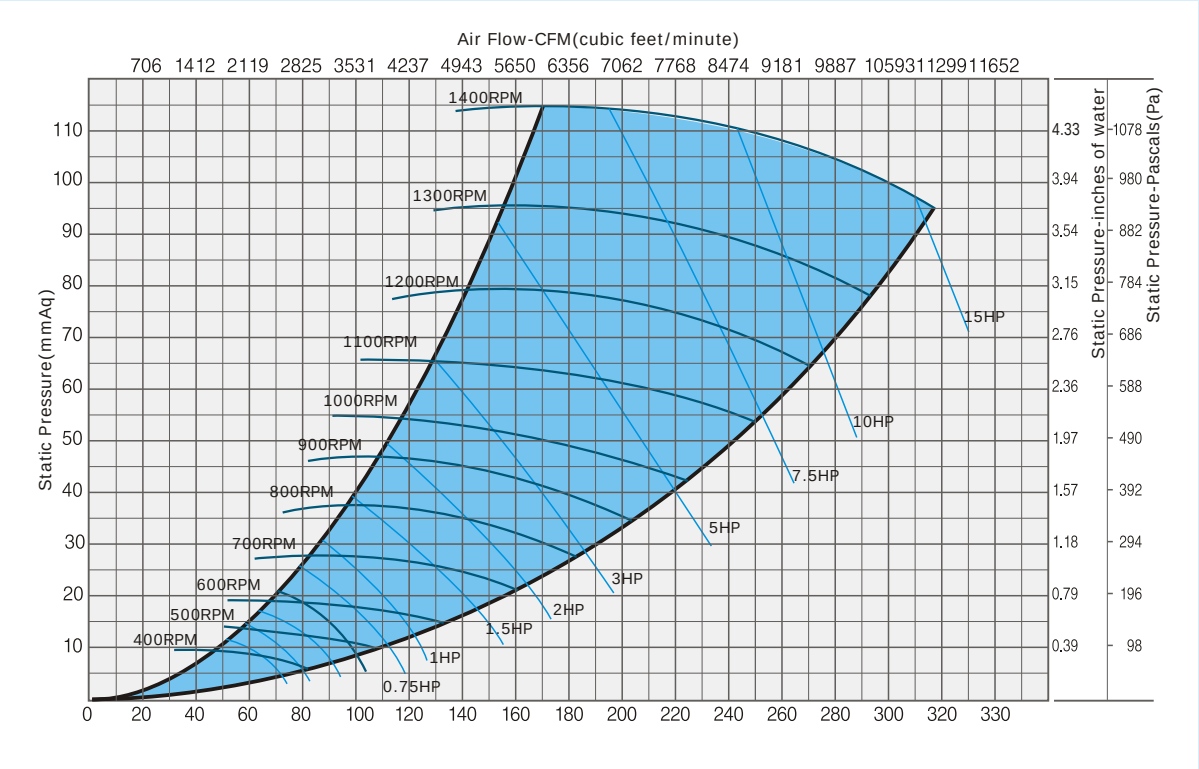
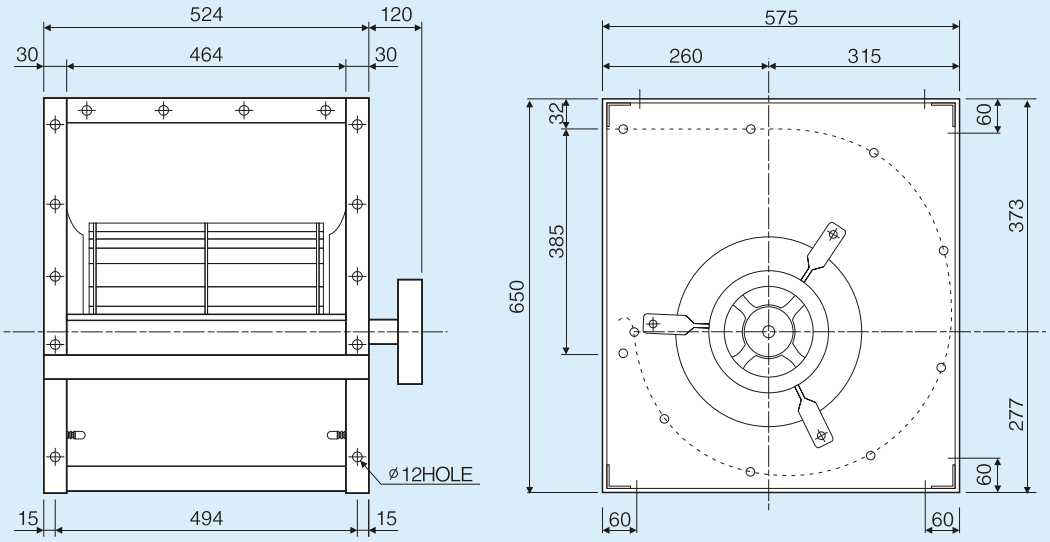
OS-155D*1 TYPE

성능곡선 Performance Curve



외형도 (규격이 예고없이 변경될 수 있음)



※ FAN 사양 결정시 본사와 협의 바람
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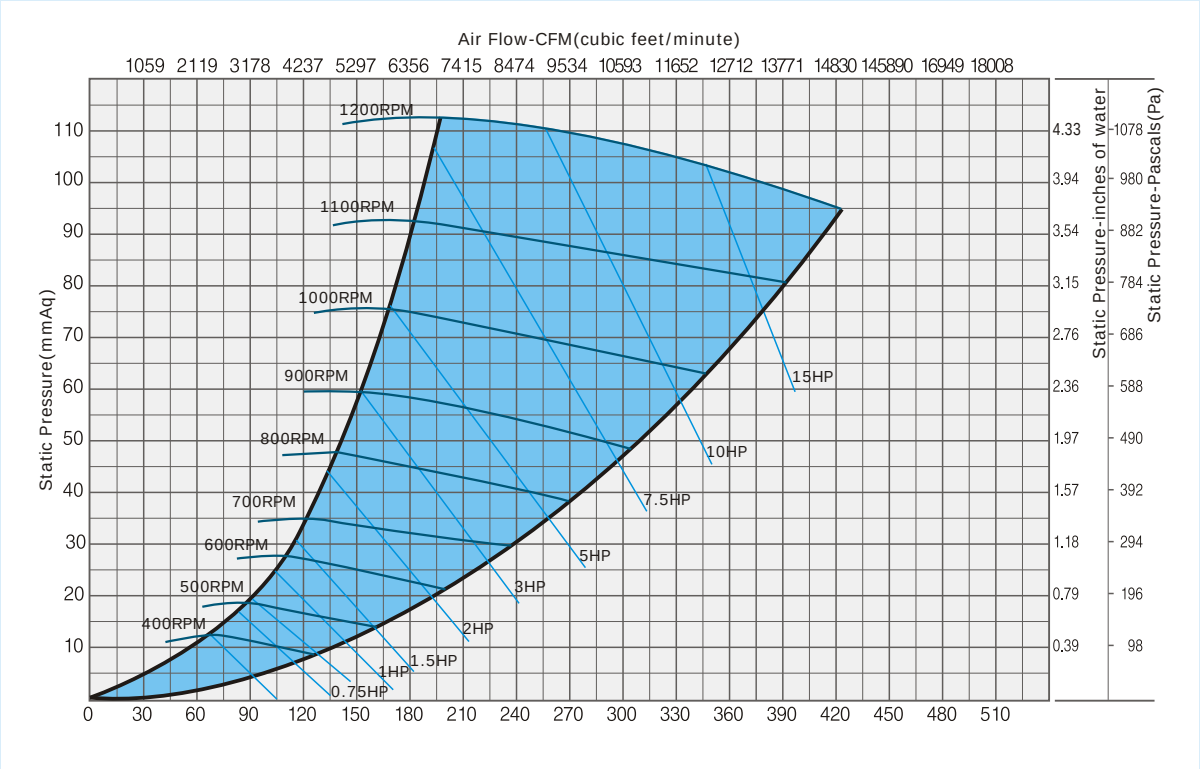
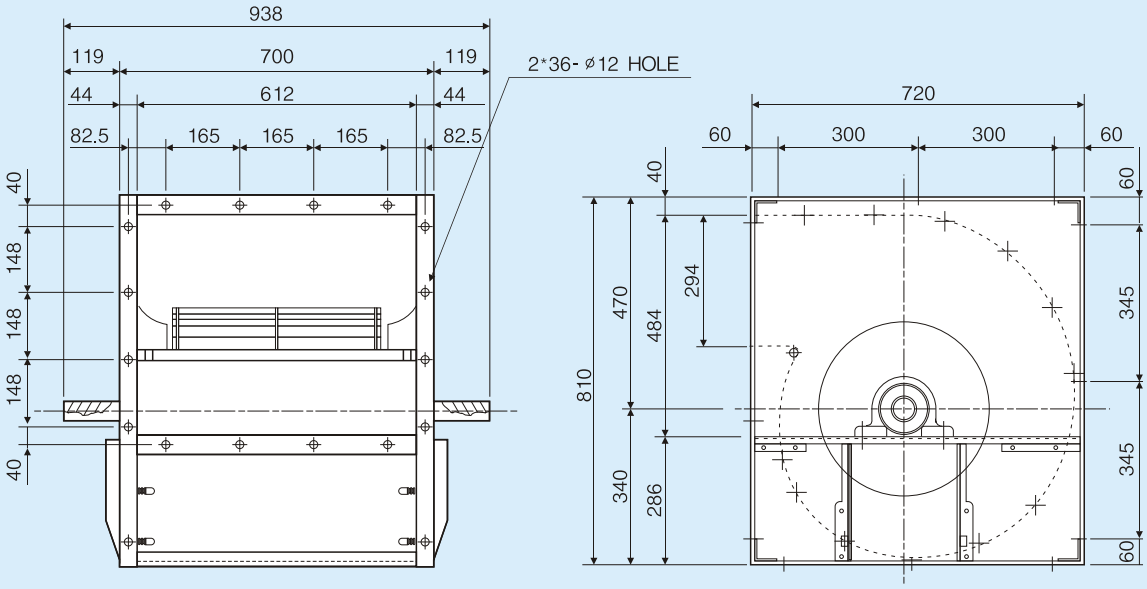
OS-188D*1 TYPE

성능곡선 Performance Curve



외형도 (규격이 예고없이 변경될 수 있음)



※ FAN 사양 결정시 본사와 협의 바람
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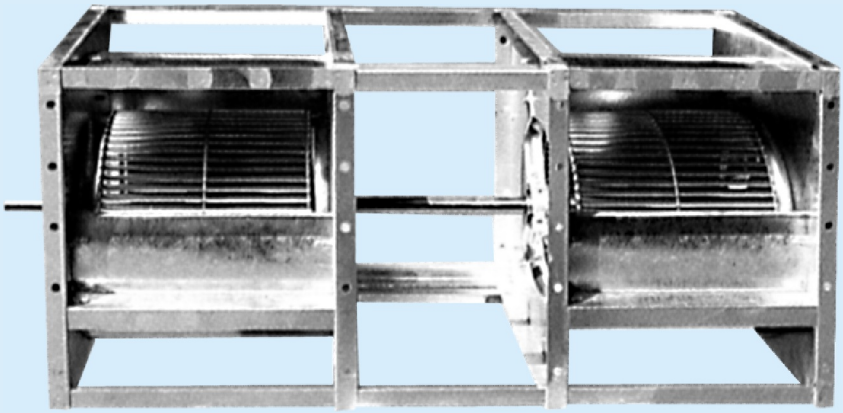
HANGER용 TWIN FAN



■ 트윈형 사용시 풍량, 회전수, 축동력 구하는 공식
(Formula for air volume, RPM, shaft power with twin type blowers)

풍량의 증가로 트윈형으로 사용시. 싱글형의 성능곡선표를 기준으로 아래 공식에 의거하여
풍량, 회전수, 축동력을 구할 수 있다
Air volume, RPM and shaft power with twin type blowers can be calculated through below formula in collation with performance curve of single type blowers.

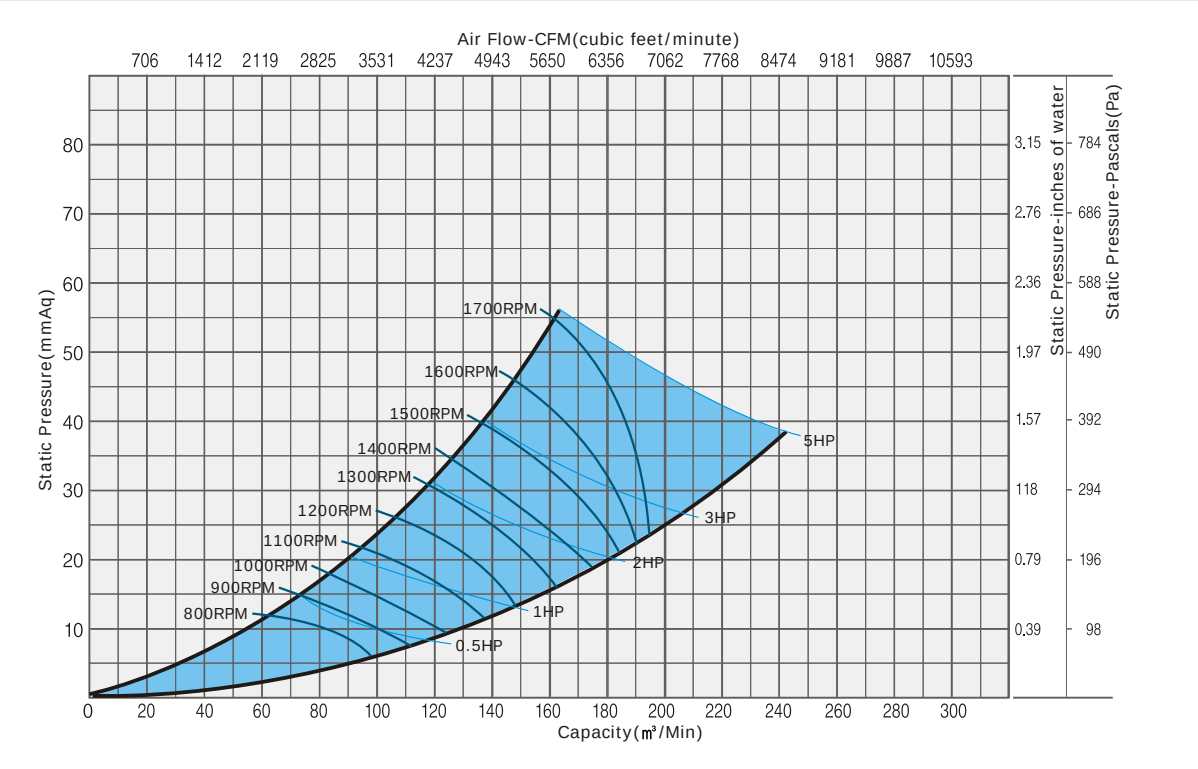
풍 량	:	Air Volum (㎥/min) =	X 2.0
회전수	:	Revolution (R.P.M) =	X 1.05
축동력	:	Shaft Power (Kw) =	X 2.05

예를 들면 싱글(SINGLE) 형 송풍기 사양의 풍량이 50㎥/min, 회전수 1000RPM,
축동력이 1.0Kw일때, 트윈(TWIN)형 송풍기로 교체시에는 상기 식에 의거하여
풍량이 100㎥/min, 회전수 1050RPM, 축동력이 2.15Kw로 구할 수 있다.
For example, when using single type blowers the specification is as follows. air volume is 50㎥/min, 1000RPM, and shaft power is 1.0KW.
If the fans is changed with twin type, you can find out 100/min, RPM 1050, and shaft power is 2.15Kw.

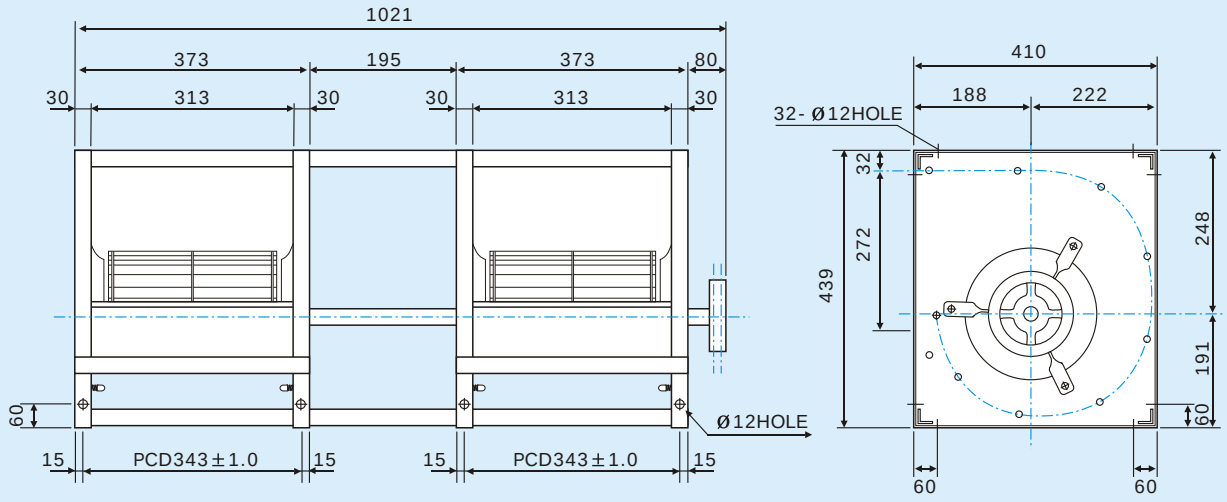
단 압력(정압)은 송풍기가 싱글(SINGLE)형에서 트윈(TWIN)형으로 바뀌어도 정압은 일정하다.
But, static pressure is constant whatever single or twin type.

OS-110D*2 TYPE

성능곡선 Performance Curve



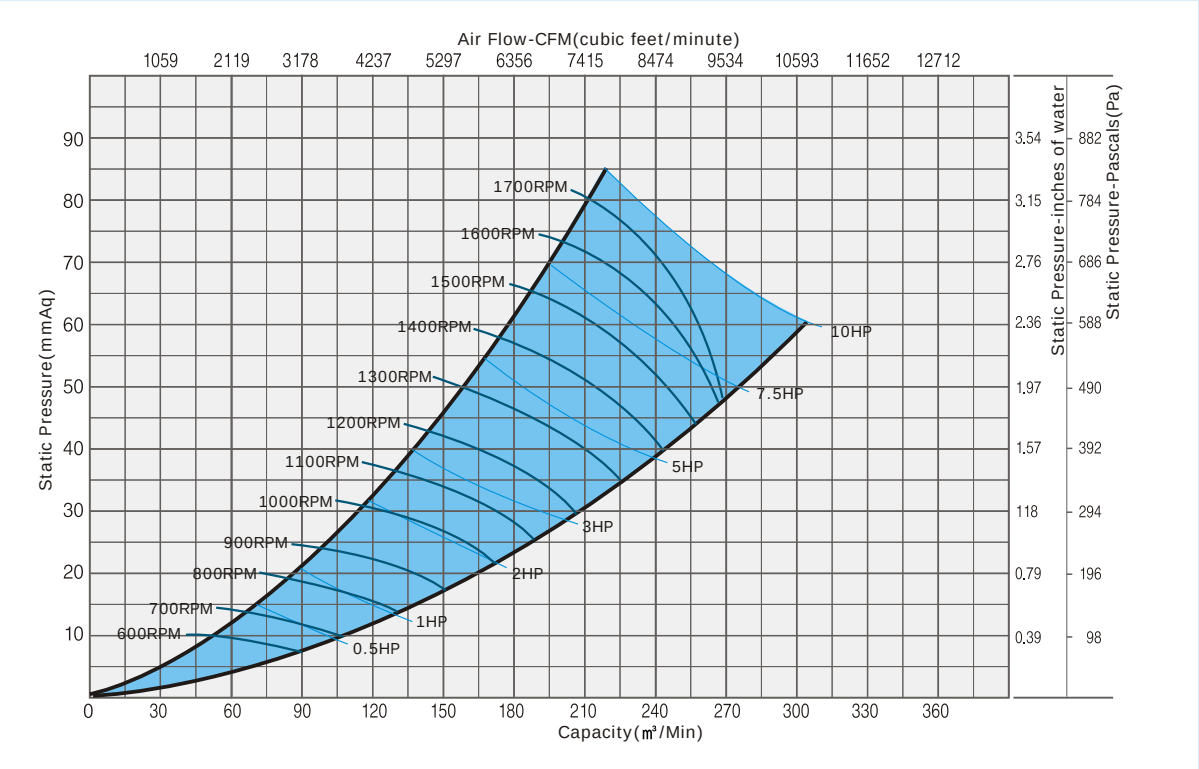
외형도 (규격이 예고없이 변경될 수 있음)



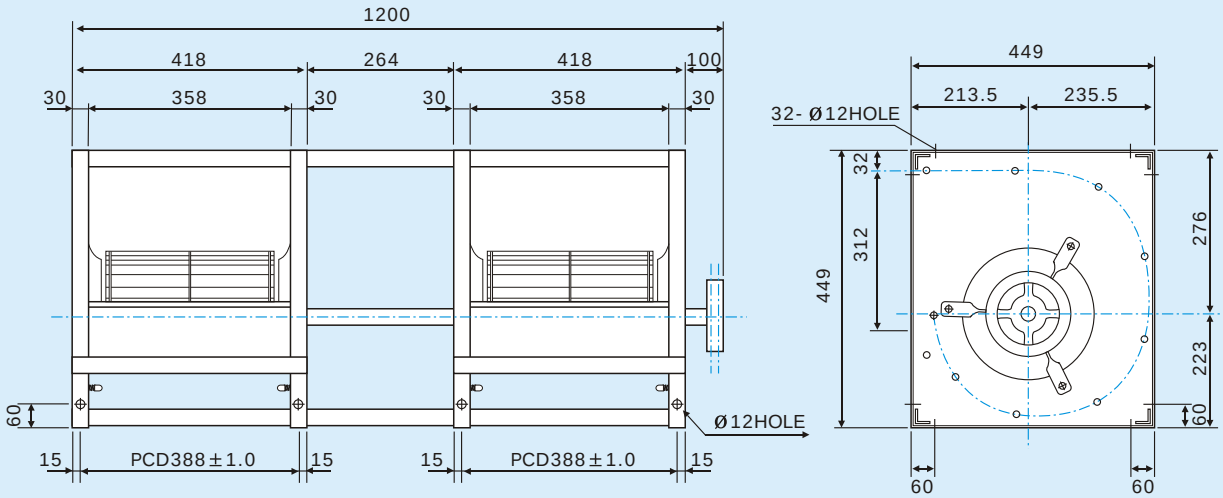
※ FAN 사양 결정시 본사와 협의 바람
Please contact us if you make a fan

OS-122D*2 TYPE

성능곡선 Performance Curve



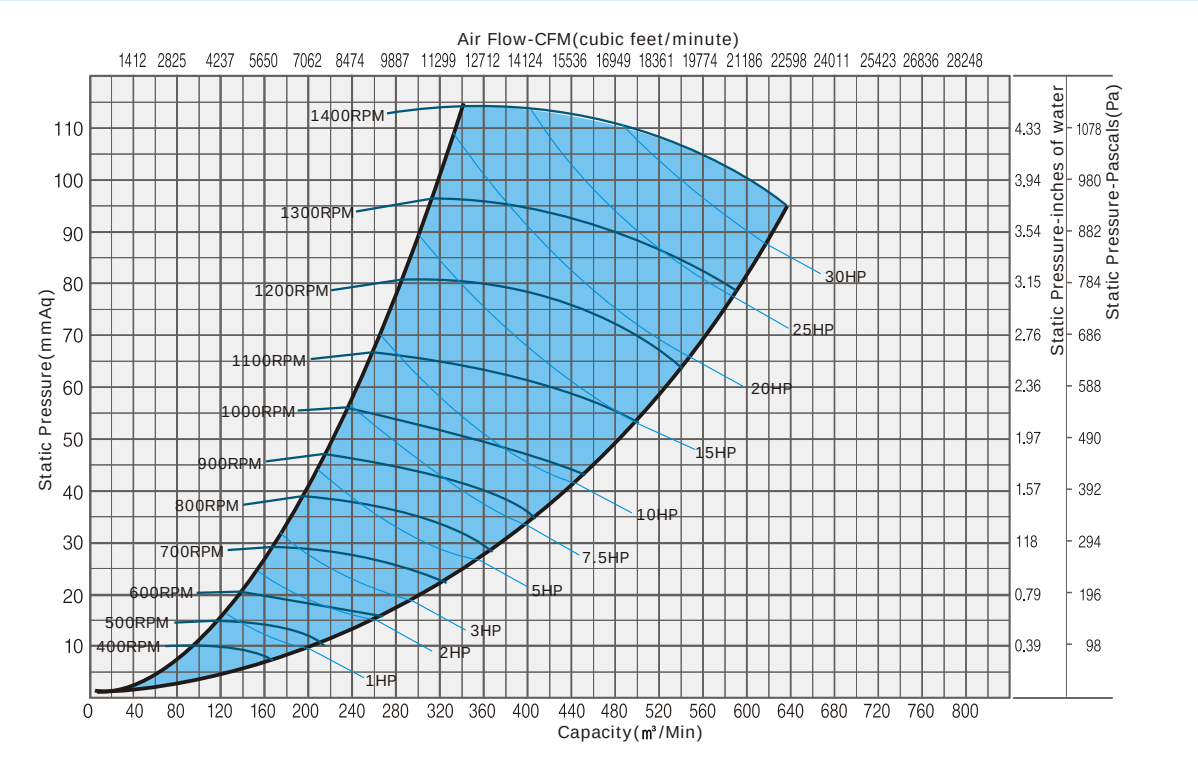
외형도 (규격이 예고없이 변경될 수 있음)



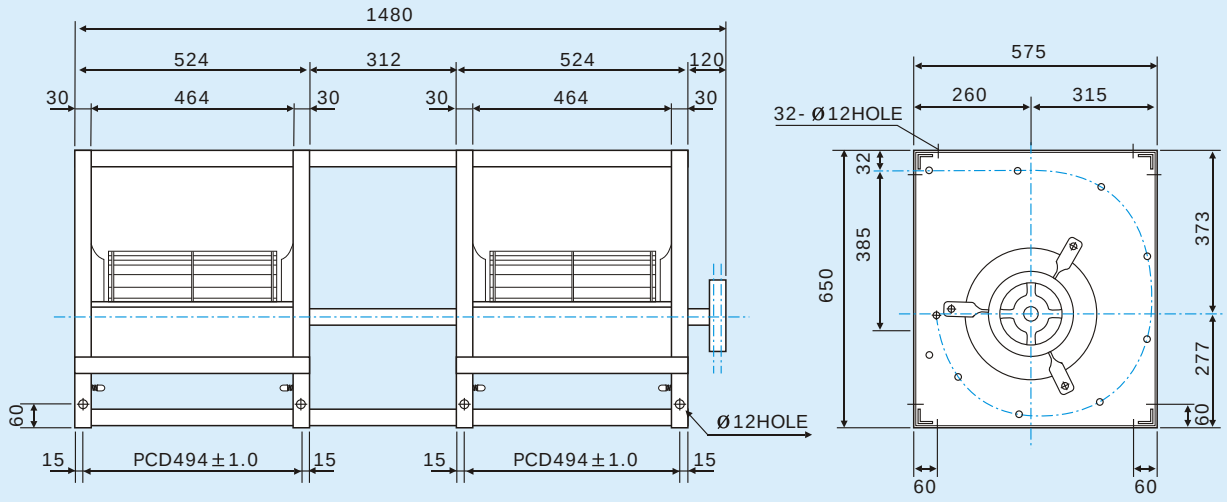
※ FAN 사양 결정시 본사와 협의 바람
Please contact us if you make a fan

OS-155D*2 TYPE

성능곡선 Performance Curve



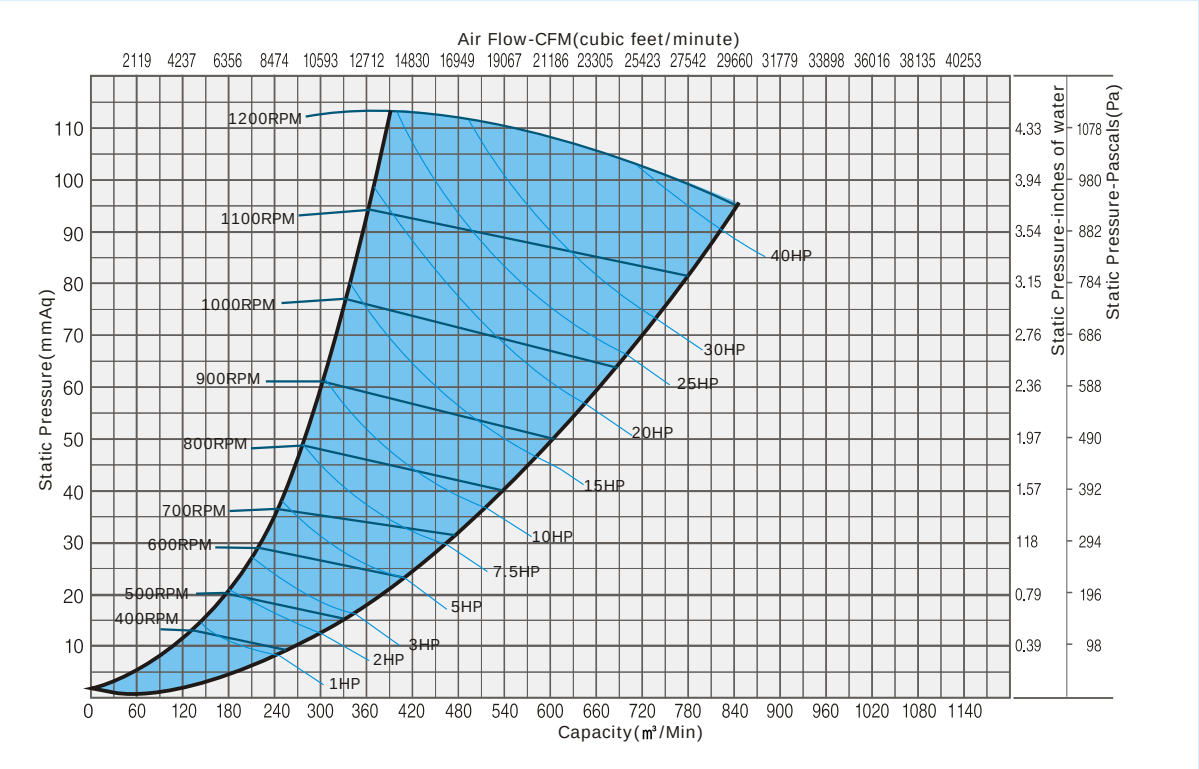
외형도 (규격이 예고없이 변경될 수 있음)



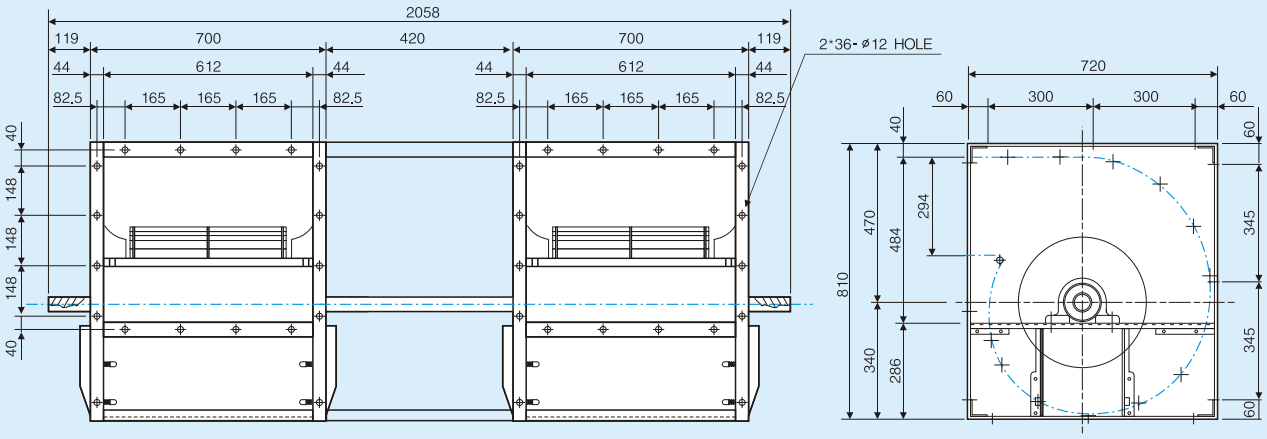
※ FAN 사양 결정시 본사와 협의 바람
Please contact us if you make a fan

OS-188D*2 TYPE

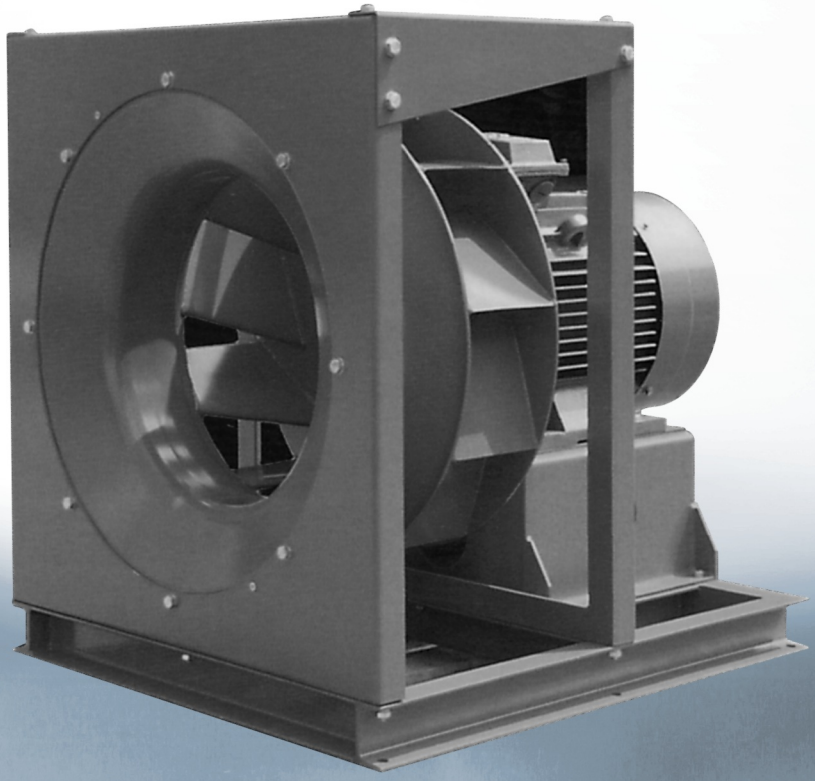
성능곡선 Performance Curve



외형도 (규격이 예고없이 변경될 수 있음)



※ BASE가 별도로 필요한 구조이므로 FAN 사양 결정시 본사와 협의 바람
Please contact us if you make a fan

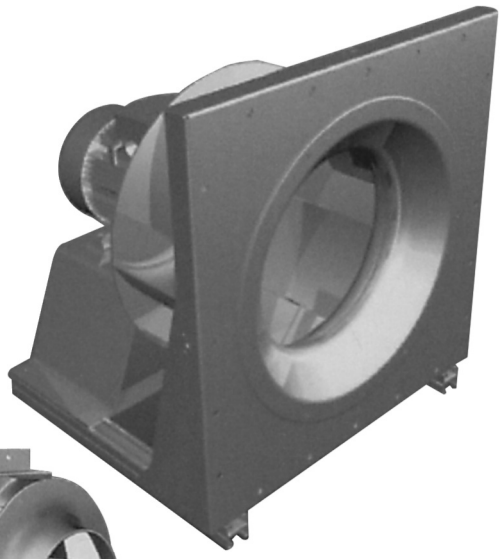


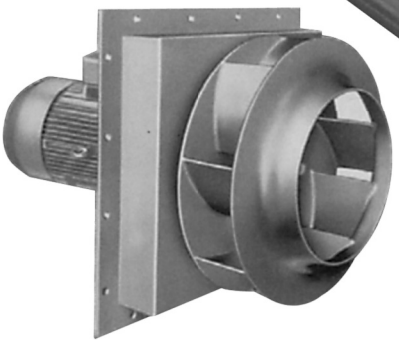
PLUG FAN

특징(Characteristics)

I Plug fan in optimised design.

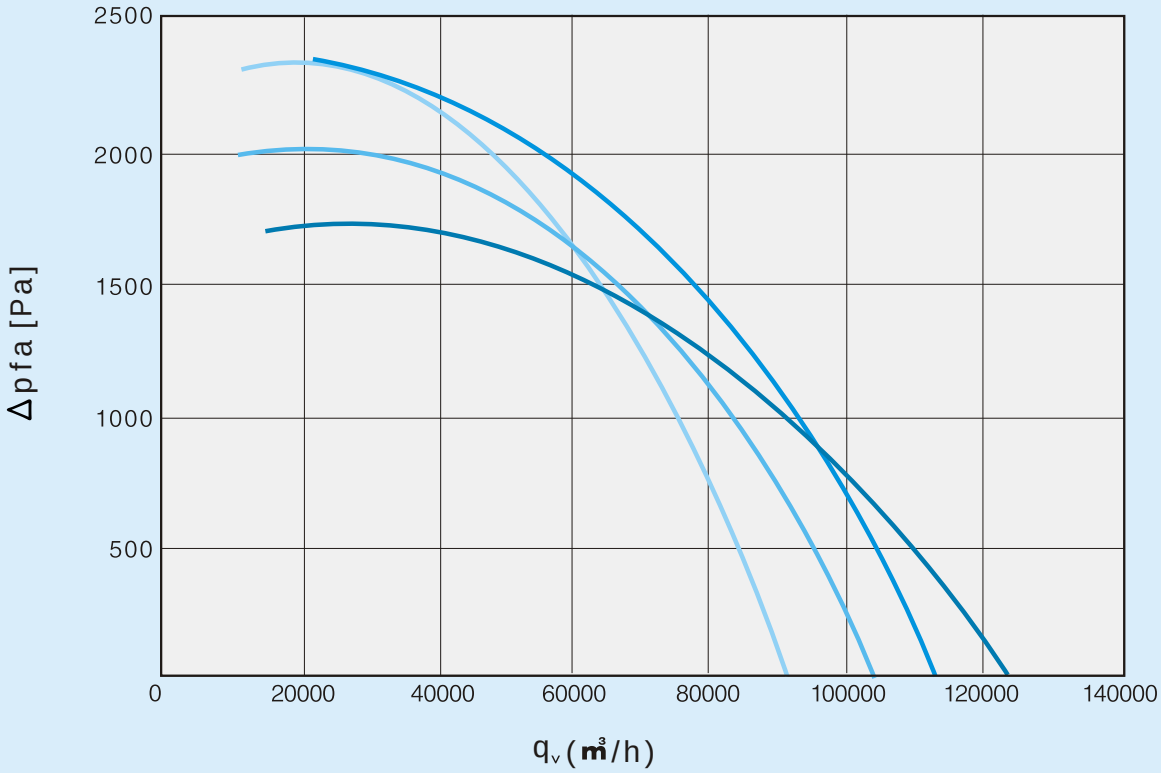
- Rigid steel sheet construction
- Welded frame base at size 1120
- Inlet ring with measuring device for determination of volume flow rate
- Max. Motor power 45kW
- Motor with PTC thermistors for frequency converter operation

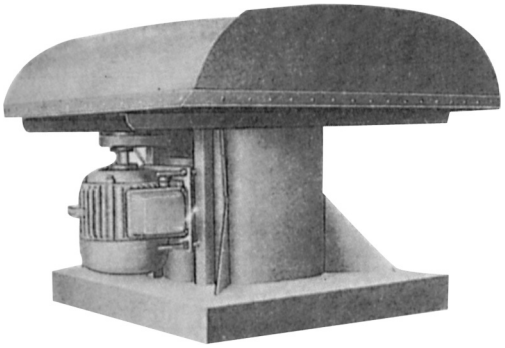


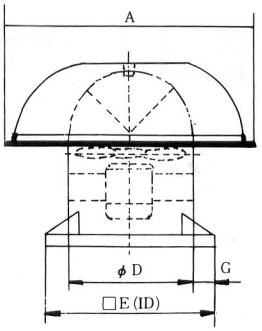


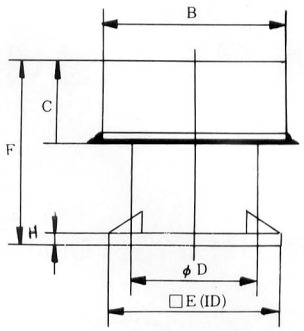
성능곡선 Performance Curve

Comparison fan curve at max. Speed









옥상환기/옥상환풍기 성능표

형 식	동 력 kw-pole	풍 량 m³/min					외 형 치 수							
		0mmAq	5mmAq	10mmAq	20mmAq	A	A	B	C	D	E	F	G	H
RF-300	0.1－ 4	30	22				600	500	200	310	400	500	45	40
RF-400	0.2－ 4	90	75	65			760	600	290	410	520	650	60	40
RF-500	0.4－ 4	120	110	95			960	750	350	510	650	750	70	40
RF-600	0.75－6	230	210	185	150		1100	840	380	610	760	850	75	40
RF-700	1.5－ 6	270	252	236	210		1400	940	400	710	900	950	95	50
RF-800	2.2－ 6	485	456	420	370		1500	1000	450	810	1000	1050	95	50
RF-900	2.2－ 6	590	545	502	440	418	1600	1200	500	910	1150	1250	120	50
RF-1000	3.7－ 8	720	640	580	500	440	1900	1400	550	1010	1300	1500	145	50

기종대수 선정방법

- Roof Ventilator 기종 선정급 소요수의 결정은 건물의 레이아웃 총발열량 공기비중 인원의 다소 기타 제조건의 조합에 따라 각각 Planning이 다르므로 다음 방식에 준한여 정한다.

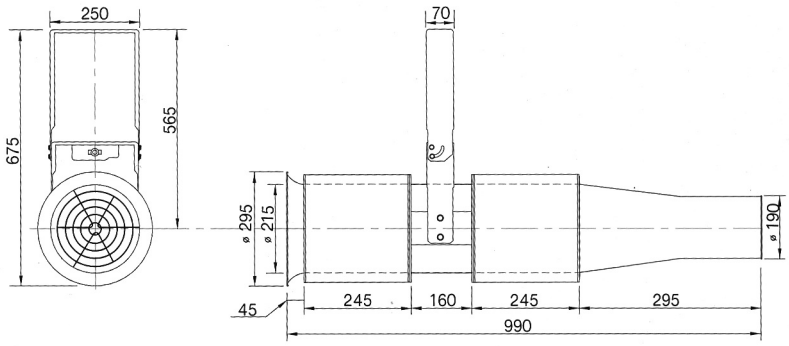
1) 환기를 요하는 장소의 조건에 따라 표를 참조하여 환기회수를 정한다
2) 건물의 용적(㎥)=가로(m)X세로(m)X높이(m)를 계산한다.
3) 환기구의 크기, 동력 외기상태 등을 고려하여 기종 1대당의 환기 능력을 성능표에서 구한다.
4) $$\text{소요대수} = \frac{\text{필요환기회수(회)} \times \text{건물용적(㎥)}}{60(\text{min}) \times \text{1대당환기능력(㎥/min)}}$$

필요환기 회수표

작업장	1시간당 환기회수(회)	작업장	1시간당 환기회수(회)	작업장	1시간당 환기회수(회)
기계공장	10~15	식품공장	12~20	보라이실	20~60
주조공장	30~60	양조공장	20~30	사무실	5~10
단조공장	40~60	제분공장	6~12	창고	6~12
용접공장	15~20	인쇄공장	5~15	갱의실	5~15
자동차 정비공장	10~15	방직공장	5~10	병원	6~12
도금공장	15~30	도장공장	30~60	극장	8~20
화학 공장	10~30	목공공장	15~20	식당	8~10
염색공장	15~30	발전소	20~30	조리실	20~30
제지공장	15~30	변전실	30~50		

지하 주차장 유인 FAN

OSFV-020/025

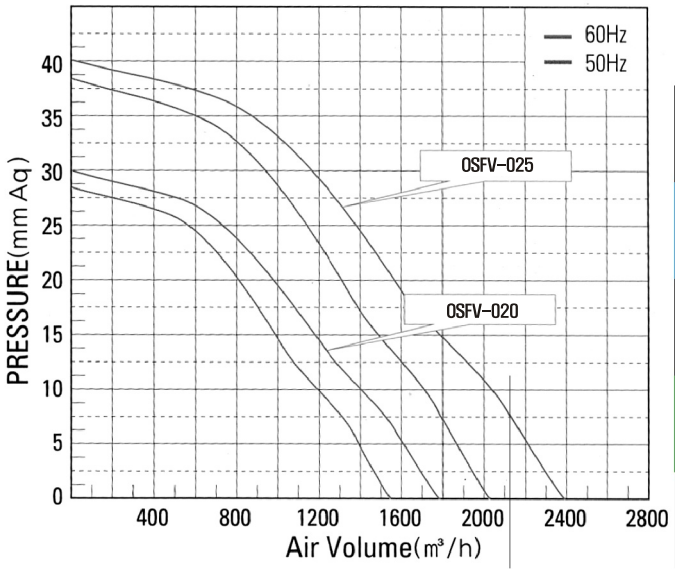


특징 및 용도 Characteristics

- Duct 미설치로 공간활용 효과가 크다.
- 시공 및 유지관리가 용이하다.
- 자유로운 설치구조로 최적의 환기설계가 용이하다.
- 시공비가 저렴하다.

지하주차장, 상가, 공장, 창고 등의 환기

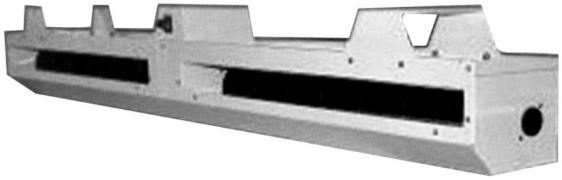
성능곡선 Performance Curve

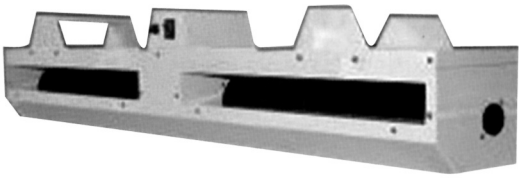


사 양 Property and Specification

구분 / MODEL	날개크기(mm)	전원(φ/V/Hz)	극수(P)	소비전력(W)	풍량(㎥/h)	정압(mmAg)	중량(kg)	소음(dB)
OSFV-020	Ø205	1/220/60	2	185	1,800	30	18	59
OSFV-025	Ø205	1/220/60	2	220	2,400	40	18	60

지하 주차장 LONG FAN





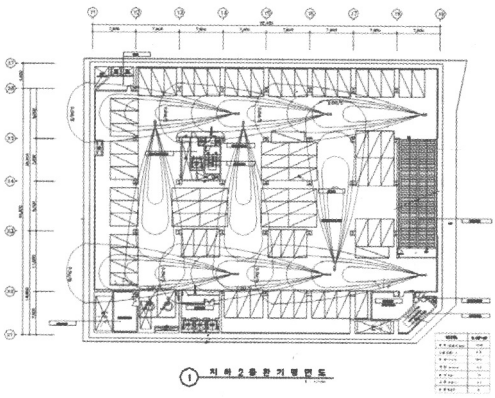
특성 및 사양

Property and Specification

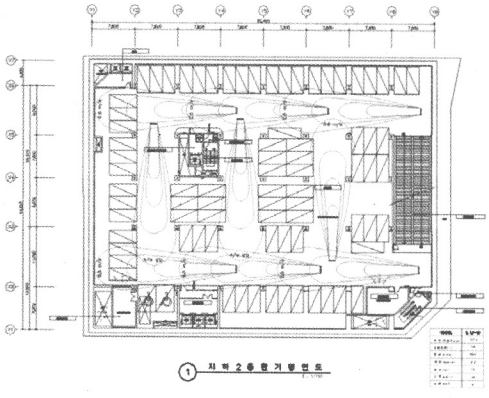
형명 Model NO.	풍량 (CHM)	정압 (mmAq)	규격 (LXWXH)	동력 (W)	전원 (V/ϕ/Hz)	소음 (dB(A))	중량 (kg)
OSLF-30	1,800	2.5	1175X180X160	132	220/1/60	59	15.0
OSLF-40	2,400	3.0	1450X180X160	168	220/1/60	60	16.4
OSLF-50	3,000	2.5	1450X180X160	200	220/1/60	62	16.4

※본 제품의 사양은 품질개선을 위하여 사전예고 없이 변경될 수 있습니다.

설계사례

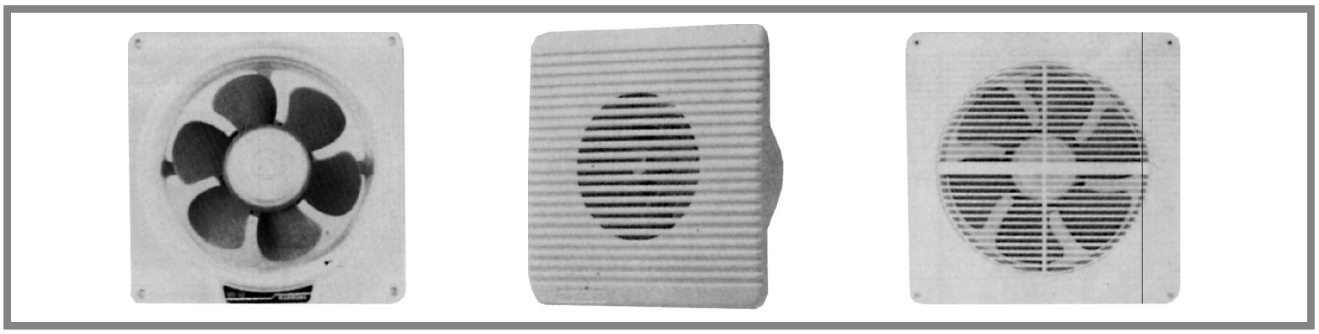


Circle Fan



Long Fan

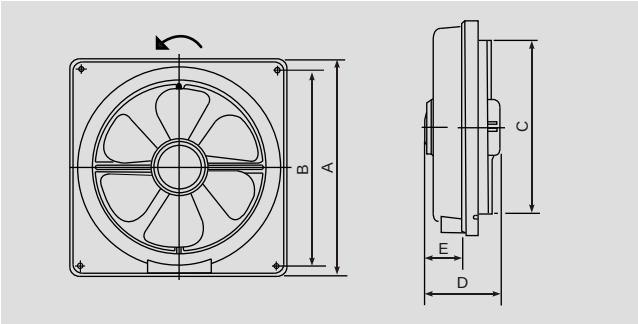
천정형 및 벽형 FAN



製原 \ 品名	MV-30	MV-50
FAN SIZE (mm)	ø200	ø250
電　源 (V)	單相220V	單相220V
極　數 (P)	4	4
周 波 數 (Hz)	60	60
消費電力 (W)	32	35
最大風量 (㎥/h)	540	720
回 轉 數 (r.p.m)	1350	1400
T Y P E	SLEEVE	SLEEVE
重　量 (kg)	1.27	1.5

製原 \ 品名	MV-10G	MV-15G	MV-20G	MV-25G
FAN SIZE (mm)	ø80	ø120	ø200	ø250
電　源 (V)	單相220V	單相220V	單相220V	單相220V
極　數 (P)	2	2	4	4
周 波 數 (Hz)	60	60	60	60
消費電力 (W)	18	22	30	33
最大風量 (㎥/h)	60	72	360	540
回 轉 數 (r.p.m)	1900	1900	1100	1100
T Y P E	SLEEVE	SLEEVE	SLEEVE	SLEEVE
重　量 (kg)	0.70	0.86	1.4	1.6

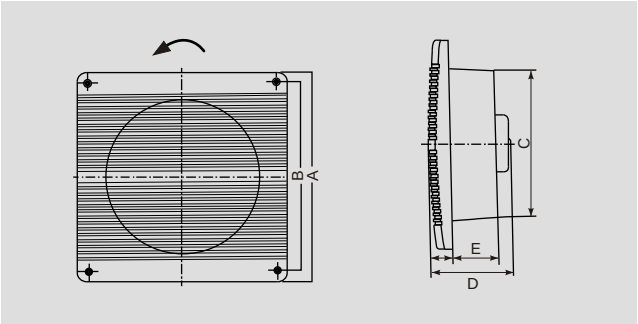
■ DIMENSIONS



(單位:mm)

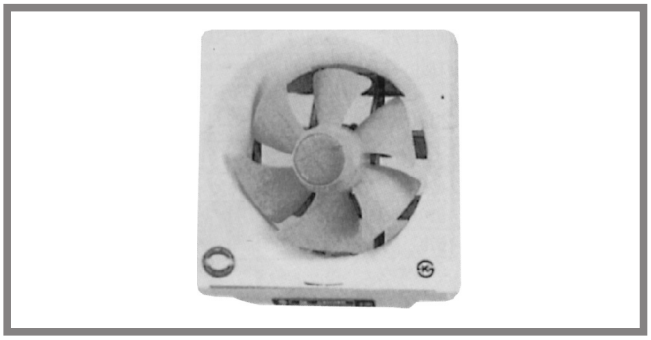
品　名	A	B	C	D	E
MV-30	300	270	225	120	74
MV-50	350	320	278	120	74

■ DIMENSIONS



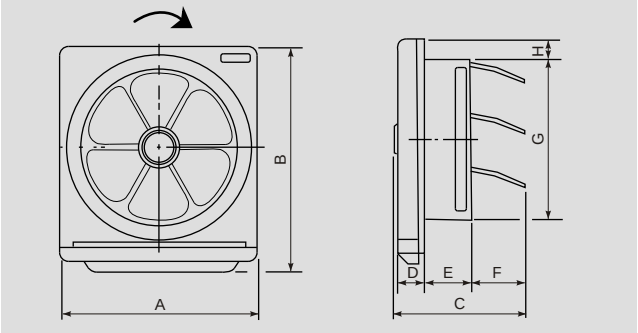
(單位:mm)

品　名	A	B	C	D	E	F
MV-10G	160	140	ø92	122.5	106	16.5
MV-15G	210	182	ø134	129.5	108.5	21
MV-20G	300	270	210	116	64	33
MV-25G	350	320	260	115	64	32



製原 \ 品名	VS-15M7	VS-20M7	VS-25M7	VS-30M7
FAN SIZE (mm)	ø150	ø200	ø250	ø300
電　源 (V)	單相220V	單相220V	單相220V	單相220V
極　數 (P)	4	4	4	4
周 波 數 (Hz)	60	60	60	60
消費電力 (W)	30	35	38	45
最大風量 (㎥/h)	420	540	720	1100
回 轉 數 (r.p.m)	1550	1350	1400	1100
T Y P E	SLEEVE	SLEEVE	SLEEVE	SLEEVE
重　量 (kg)	1.8	2.3	2.81	3.35

■ DIMENSIONS



(單位:mm)

品　名	A	B	C	D	E	F	G	H
VS-15M7	233.6	283.6	247	47	75	122	170	31.8
VS-20M7	299	324	222	50	90	75	240	30.5
VS-25M7	349	374	204	50	90	60	290	30.5
VS-30M7	399	425	209	50	90	65	340	30.5

OSN-081/101/121

■ OSN-081 / 101 / 121 / 141 / 161

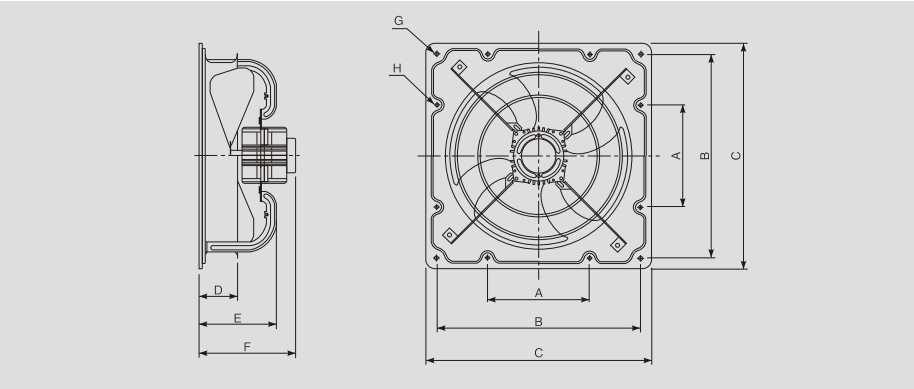
品名 \ 製原	電 源 (V)	FAN SIZE (mm)	周 波 數 (Hz)	電 流 (A)	消費電力 (W)	出 力 (KW)	回轉數 (r.p.m)	極 數 (P)	最大風量 (CMM)	最大靜壓 (mmAq)	重 量 (kg)
OSN-081	單相 220	200	60	0.20	43	–	1,680	4	15	7	2.8
OSN-101	單相 220	250	60	0.24	53	–	1,520	4	21	9	3.2
OSN-121	單相 220	300	60	0.25	55	–	1,495	4	30	13	3.7
OSN-141	單相 220	350	60	0.36	90	–	1,640	4	50	16	5.8
OSN-161	單相 220	400	60	0.70	165	–	1,690	4	75	18	7.7

■ Dimension : OSN-081 101/121/141/161

(單位:mm)

品 名	A	B	C	D	E	F	G	H
OSN-081	–	275	300	55	131	135	4-ø6HOLE	–
OSN-101	–	325	350	70	147	151	4-ø6HOLE	–
OSN-121	–	370	400	70	147	151	4-ø6HOLE	–
OSN-141	200	400	444	76	153	193	4-ø8HOLE	8-ø7HOLE
OSN-161	240	450	490	96	178	205	4-ø8HOLE	8-ø7HOLE

OSN-141 / 161



OSN-183/203/205

■ OSN-183 / 183Q / 203 / 203Q / 205 / 205Q

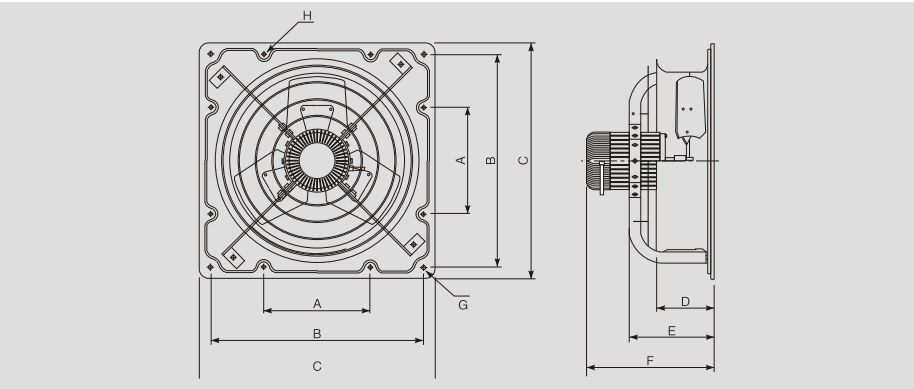
品名 \ 製原	電 源 (V)	FAN SIZE (mm)	周 波 數 (Hz)	電 流 (A)	消費電力 (W)	出 力 (KW)	回轉數 (r.p.m)	極 數 (P)	最大風量 (CMM)	最大靜壓 (mmAq)	重 量 (kg)
OSN-183/183Q	單相 220	450	60	1.70	350	0.25	1,620	4	125	26	16
	三相 220/380	450	60	0.20/1.70	330	0.25	1,685	4	125	26	15.6
OSN-203/203Q	單相 220	500	60	2.98	640	0.40	1,680	4	135	29	17
	三相 220/380	500	60	2.00/1.20	530	0.40	1,675	4	135	29	16.6
OSN-205/205Q	單相 220	500	60	4.10	785	0.75	1,750	4	170	60	22.8
	三相 220/380	500	60	2.80/1.60	665	0.75	1,750	4	170	60	22.5

■ Dimension : OSN-183 / 183Q / 203 / 203Q / 205 / 205Q

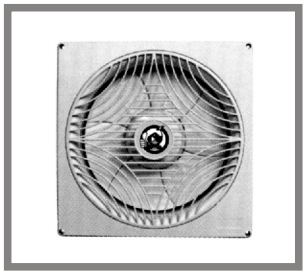
(單位:mm)

品 名	A	B	C	D	E	F	G	H
OSN-183/183Q	280	560	620	150	223	322	4-ø13HOLE	8-ø12HOLE
OSN-203/203Q	280	560	620	150	223	335	4-ø13HOLE	8-ø12HOLE
OSN-205/205Q	280	560	620	150	223	328	4-ø13HOLE	8-ø12HOLE

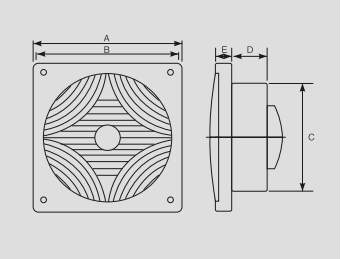
OSN-183Q/203Q/205Q



고압자동팬



외형도

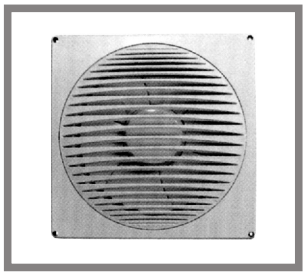


특징 및 사양

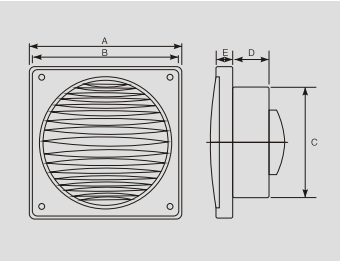
MODEL	날개치수 (mm)	상.전압 (φ.V)	극수 (P)	입력 (W)	최대풍량 (㎥/h)	설치규격 (mm)
OST-F20BS	200	1φ.220V	4	34	480	□240×240
OST-F25BS	250	1φ.220V	4	38	780	□300×300
OST-F30BS	300	1φ.220V	4	45	1,080	□350×350

MODEL	A	B	C	D	E
OST-F20BS	288	268	216	68	38
OST-F25BS	332	314	260	87	40
OST-F30BS	408	380	315	95	46

고압자동팬



외형도

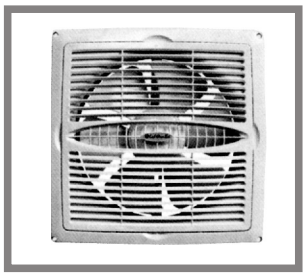


특징 및 사양

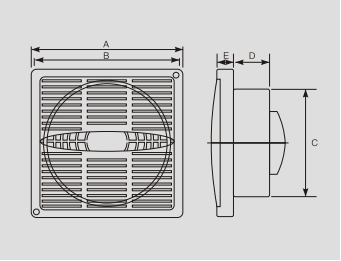
MODEL	날개치수 (mm)	상.전압 (φ.V)	극수 (P)	입력 (W)	최대풍량 (㎥/h)	설치규격 (mm)
OST-F20BS	200	1φ.220V	4	34	480	□240×240
OST-F25BS	250	1φ.220V	4	38	780	□300×300

MODEL	A	B	C	D	E
OST-F200S	288	268	216	68	38
OST-F250S	332	314	260	87	40

고압자동팬



외형도

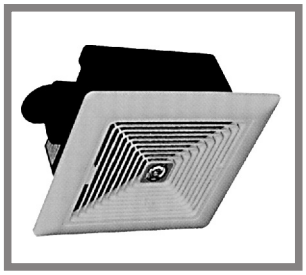


특징 및 사양

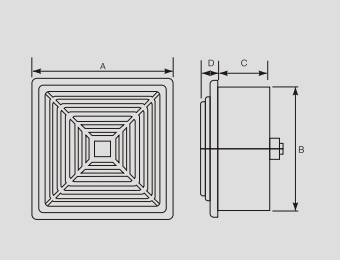
MODEL	날개치수 (mm)	상.전압 (φ.V)	극수 (P)	입력 (W)	최대풍량 (㎥/h)	설치규격 (mm)
OST-F20PS	200	1φ.220V	4	35	360	□250×250
OST-F25PS	250	1φ.220V	4	38	600	□300×300

MODEL	A	B	C	D	E
OST-F20PS	304	270	195	90	11
OST-F25PS	348	320	260	90	11

고압자동팬



외형도

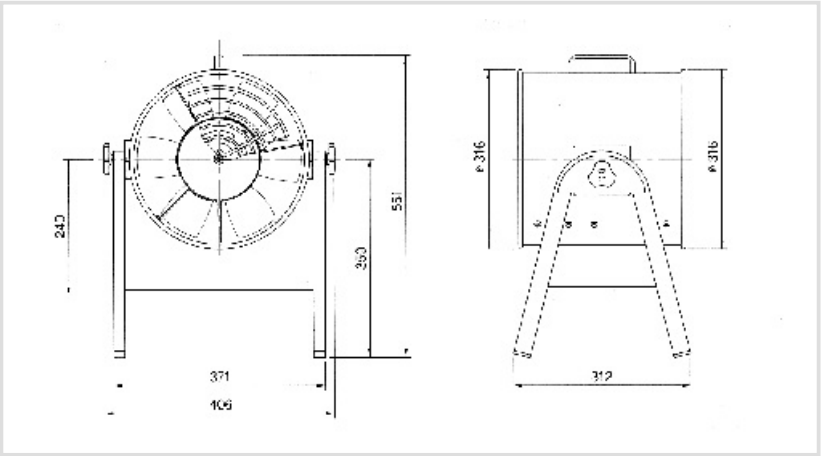


특징 및 사양

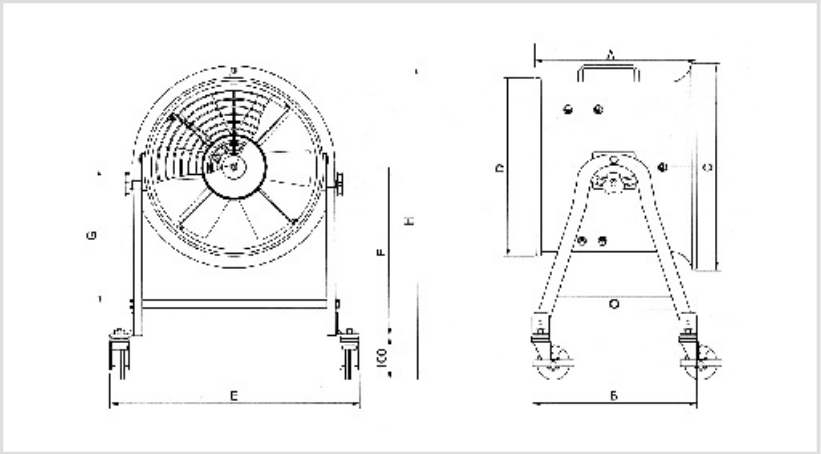
MODEL	날개치수 (mm)	상.전압 (φ.V)	극수 (P)	입력 (W)	최대풍량 (㎥/h)	설치규격 (mm)
OST-F150AS	150	1φ.220V	4	30	240	□150×170

MODEL	A	B	C	D
OST-F150AS	322	233	145	145

OSP-300(단상)



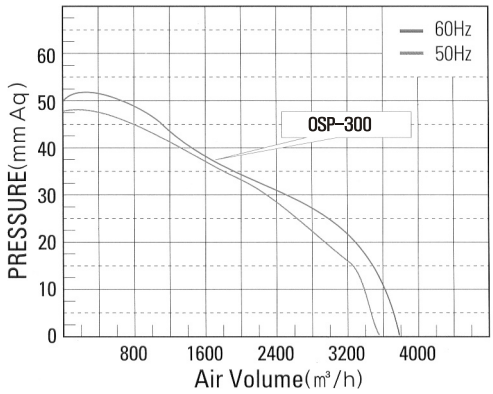
OSP-400/500(단상)



규격표(Dimension)

구분 / Model	A	B	C	D	E	F	G	H
OSP-300	360	475	Ø475	Ø398	500	430	405	735
OSP-400	390	585	Ø585	Ø498	575	450	425	930

성능곡선Performance Curve

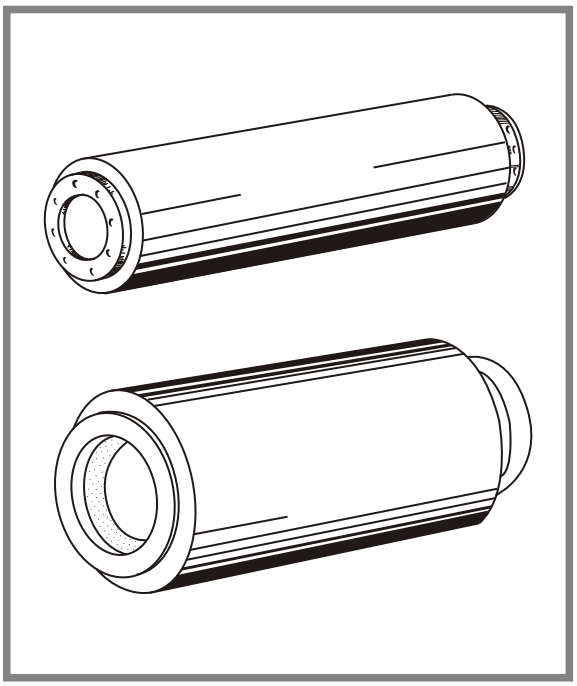


사 양

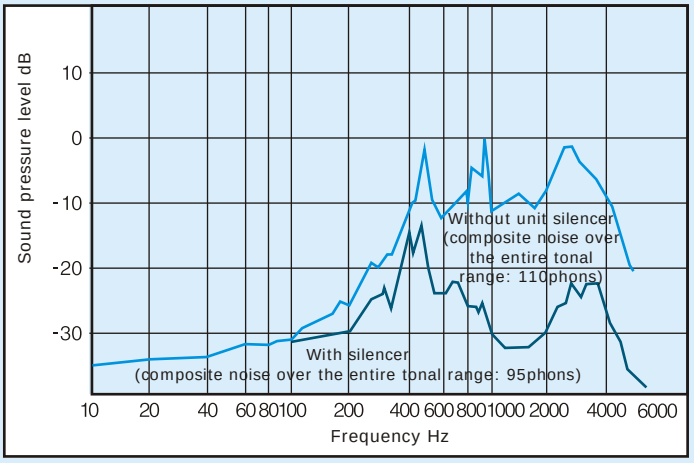
Property and Specification

구분 / MODEL	날개크기(mm)	전원(φ/V/Hz)	극수(P)	소비전력(W)	풍량(㎥/h)	정압(mmAg)	중량(kg)	소음(dB)
OSP-300	Ø270	1/220/60	2	440	3,780	50	11.0	67
OSP-400	Ø370	1/220/60	4	400	6,060	30	24.2	66
OSP-500	Ø470	1/220/60	4	990	10,560	39	34.6	69

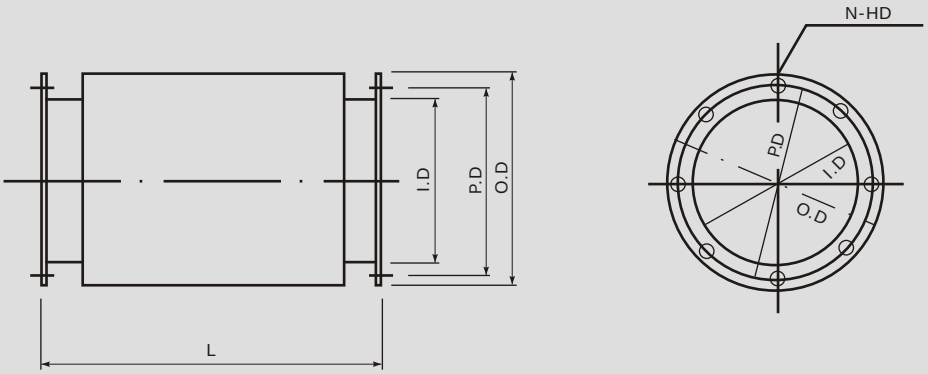
TUBULAR DUCT SILENCERS



Noise Spectrum



Deok Hwa Silencer noise-pollution-proof as it was manufactured according to special precision designs



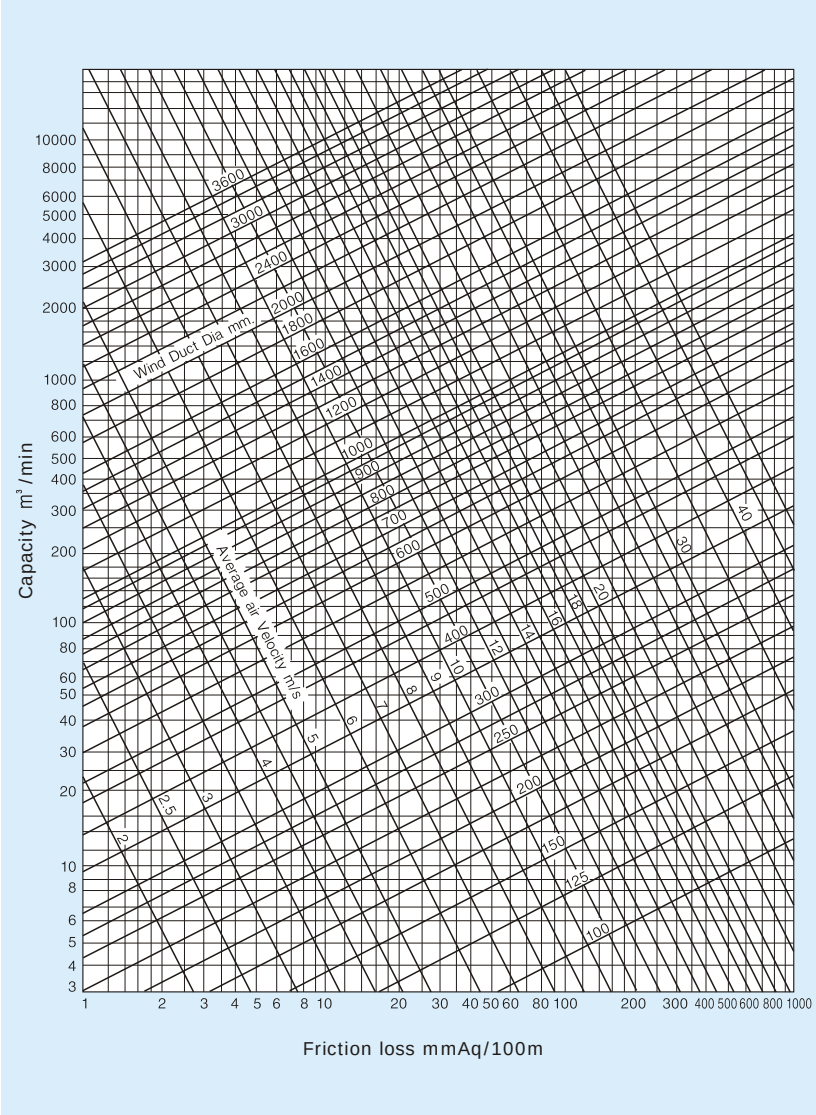
Dimensions

MODEL	I.D	P.D	O.D	L	N-HD
DHSR-30	300	335	374	370	8-M 9.5
DHSR-35	350	385	424	370	8-M 9.5
DHSR-40	400	442	484	430	8-M11.5
DHSR-45	450	492	535	430	12-M11.5
DHSR-50	500	542	585	430	12-M11.5
DHSR-55	550	606	655	500	12-M11.5
DHSR-60	600	656	707	500	12-M11.5
DHSR-65	650	706	757	500	12-M11.5
DHSR-70	700	756	807	500	16-M13.5
DHSR-75	750	806	857	500	16-M13.5
DHSR-80	800	871	940	580	20-M17.5
DHSR-90	900	971	1040	580	20-M17.5
DHSR-95	950	1024	1090	580	20-M17.5
DHSR-100	1000	1074	1140	580	20-M17.5

Cylindrical wind duct's friction loss table

$$h = \lambda \cdot \frac{L}{D} \cdot \frac{v^2}{2g} \cdot \gamma \text{ (mmAq)}$$

λ = 0.02
L = Straight length(m)
D = Wind duct diameter(m)
v = Average air velocity(m/s)
g = Accelerated gravity velcocity 9.8 m/s²
γ = 1.2kg/m³



Power Calculation

$$Kw = \frac{P \times Q \times \alpha}{6120 \times \eta}$$

Capacity variance influenced by revolution

The correlations of air volume, air accor-ure and power to changes in revolution are estimated in accordance with the follwing format, provided that air pressure is 500mmAq or less and the projected revolution frequency change is 20 percent more or less:

$$Q' = \left(\frac{N'}{N}\right)Q$$

$$P' = \left(\frac{N'}{N}\right)^2 P$$

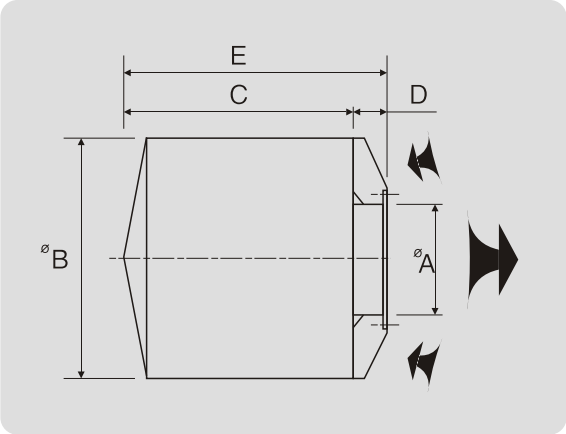
$$kw' = \left(\frac{N'}{N}\right)^3 kw$$

Q : Air volume (m³/min)
P : Air pressure(mmAq)
kw: Power(kw)
N : Revolution(rpm)
η : Efficiency rate(%)
α : Reserve rate 1.1~1.3

Recommended Air Velocity for Ventilation and Air Supply

Classification	Air velocity(m/s)	Classification	Air velocity(m/s)
Air conditioning(low-speed duct)	2.5~11	Air conditioning(low-speed duct)	12~30
Steam, gas and smoke	10	Fine dust	18~22
Air containing fine dust	15	Moist pellets	22
Saw dust	10~15	Fine coal powder	20~27.5
Saw dust(dry)	15~20	limestone	30~48
Wood scrap(wet)	20~22	sand/cement	30~45
wood scrap(heavy)	17.5~22.5	Synthetic resin billet	25~35
Raw wool	25~28	Wheat/barley	25~35
Salt/Sand/Sugar	28~33	Cereal powder	10~15
Grinder dust	17.5~22.5	Rubber dust	10~15
Sand blast dust	17.5~22.5	Raw cotton	20~25
Bakelite dust	10~12.5	Cotton dust	7.5~10

SUCTION SILENCER



SUCTION SILENCER는 흡입 CHAMBER내에 흡음재를 붙혀 방음효과(5dB ~ 12dB)를 도모하였고 구조가 간단하나 압력손실은 15mmAq ~ 30mmAq로 비교적 압력손실이 크다는 점을 감안하여 설계에 반영해야 한다.

(흡입구 DUCT 연결이 되지 않을경우 사용)

形　式	ØA	ØB	C	D	E	風量㎥/min
OS SS-ø200	200	500	450	150	600	50
OS SS-ø250	250	600	500	150	650	70
OS SS-ø300	300	700	600	150	750	100
OS SS-ø350	350	800	650	150	800	135
OS SS-ø400	400	850	700	200	900	175
OS SS-ø450	450	950	750	200	950	220
OS SS-ø500	500	1050	800	200	1000	270
OS SS-ø600	600	1150	900	200	1100	350
OS SS-ø700	700	1400	900	200	1100	410
OS SS-ø800	800	1600	1000	250	1250	500
OS SS-ø900	900	1800	1200	250	1450	600
OS SS-ø1000	1000	2000	1500	250	1750	700

전동기

전동기는 사용전원에 의하여 크게는 단상 2선식과 삼상 3선식으로 구분된다. 또한 단상 또는 삼상의 경우도 각각 설치장소와 조건에 따라 사용 전압, 절연등급, 냉각방법 등이 바뀌므로 취급가스의 성질, 온도, 전동기 설치장소 등에 적절한 형의 전동기를 선택해야 한다. 그리고 국내가 아닌 외국에 수출될 경우 해당 지역의 주파수(Hz) 및 사용전압(Voltage)을 확인해볼 필요가 있다.

가.유도 전동기의 분류

a)부하의 변동범위에 따라서 부하의 변동이 비교적 적은 경우(전부하의 80-100%)는 정속도 유도전동기를 사용하고, 부하의 변동이 심할 경우는 정속도 유도에 따라서 전동기와 흡입 VANE DAMPER나 흡입, 토출 DAMPER를 교축 조작하여 사용한다. 이런 교축장치는 제어시 운전효율이 떨어져 경제적 손실이 커지므로 가변속도 전동기나 권선형 유도전동기 또는 가변속 유체계수, STEAM TURBINE등을 적절히 선정 사용하여야 한다. 또한, 부하가 단계적으로 변동될 경우는 극수변환유도 전동기가 적당하다.

- 유도전동기
  - 3상 전동기
    - 농형 전동기
      - 보통 농형 전동기
      - 특수 농형 전동기
        - 2중 농형 전동기
        - 깊은 홈 농형 전동기
    - 권선형 전동기
  - 단상 전동기
    - 분상 시동식 전동기
    - 콘덴서 시동식 전동기
    - 반발 시동식 전동기
    - 콘덴서 전동기

나.전동기 보호 형식(KSC4402)

설치환경에 따라 외부로부터의 손상을 방지하기 위함이나, 설치조건에 따라 방적형, 전폐형, 옥외형, 방수형, 방폭형, 저소음형 등으로 분류한다.

보호방식에 따른 분류(IEC 및 Ks분류) [표1]

분류 / 등급	첫 번째 숫자 인체 및고형 이물질에 관한 보호영식	두 번째 숫자 물의침입에대한보호방식	일반적 명칭
IP22	손가락등이 기기내 회전부분 또는 도전부분에 닿지 않도록 한 구조. 지름 12mm보다 큰 고형 이물질이 침입하지 않도록 한 구조.	수직에서 15° 이내의 방향에 떨어지는 물방울에 해로운 영향을 받지 않는 구조	DRIP PROOF 방적 보호형(반폐)
IP23	손가락등이 기기내 회전부분 또는 도전부분에 닿지 않도록 한 구조. 지름 12mm보다 큰 고형 이물질이 침입하지 않도록 한 구조.	수직에서 60℃ 이내의 방향에 떨어지는 물방울에 해로운 영향을 받지 않는 구조.	DRIP PROOF 방적 보호형(반폐)
IP44	공구 전선등 최소 두께가 1mm보다 큰 것이 기기내의 회전부분 또는 도전부분에 닿지 않도록 한 구조. 지름 1mm보다 큰 고형 이물질이 침입하지 않도록 한 구조. 다만 배수구멍 및 통풍구멍은 기호 2의 구조이어도 좋다.	어떠한 방향에서도 떨어지는 물방울에 해로운 영향을 받지 않는 구조.	TOTAL ENCLOSE 방우형(전폐)
IP54	어떤 물체도 기기내 회전부분 또는 도전부분에 닿지 않도록 한 구조. 먼지의 침입을 적극 방지하고 가령 침입하여도 정상운전에 지장이 없도록 한 구조	어떠한 방향에서도 떨어지는 물방울에 해로운 영향을 받지 않는 구조.	WEATHER PROOF 방말형(방수)
IP55	어떤 물체도 기기내 회전부분 또는 도전부분에 닿지 않도록 한 구조. 먼지의 침입을 적극 방지하고 가령 침입하여도 정상운전에 지장이 없도록 한 구조.	어떠한 방향에서도 물을 분사하더라도 이에 의하여 해로운 영향을 받지 않는 구조.	HOSE PROOF 방분류형(방수)

다. 방폭구조의 표시방법

[표2]

내용	기호
폭발등급 1급 발화도 G4에속하는폭발성가스를대상으로하는내(耐)압방폭형	d2G4
발화도 G3에 속하는 폭발성 가스를 대상으로 하는 안전증 방폭형	eG3
아세치렌 계열(폭발등급3)의 내(耐)압 방폭형	fG3

방폭구조의 종류및 기호

[표3]

방폭구조	기호	내용
내(耐)	d	밀폐구조로 용기내부에서 폭발성 Gas가폭발하였을때 용기가 그 압력에 견디며 또한 외부의 폭발성 Gas에 인화될 우려가 없도록 한 구조
유압	o	전기기기의 불꽃 또는 아아크를 발생하는 부분을 기름속에 넣고 기름면위에 존재하는 폭발성 Gas에 인화될 우려가 없도록한 구조
내(內)압	f	용기내부에 보호기체를(신선한 공기 또는 Gas) 압입함으로서 폭발성 Gas가 침입하는 것을 방지한 구조
안전증	e	상시 운전중에 불꽃 아아크 또는 과열이 되어서는 안될 부분에 이런것의 발생을 방지하기 위하여 구조상 또는 온도상승에 대해서 특히 안전도를 증가한 구조
특수	s	폭발성 Gas의 인화를 방지할 수 없음이 시험 또는 다른 방법에 의해서 확인된 구조
본질안전	i	정상시 및 사고시에 발생하는 전기불꽃 또는 고온부에 의하여 폭발성 가스에 점화할 수 없는 것이 확인된 구조

폭발성 Gas의 분류와 방폭구조의 적용(KSC 0906, JISC 0903)

[표4]

발화도	G1	G2	G3	G4	G5
외피표면온도, 상승온도	320℃	200℃	320℃	320℃	320℃
폭발등급	450℃초과	300℃~450℃	450℃초과	450℃초과	450℃초과
1급	아서톤, 암모니아, 에탄, 톨루엔프로판, 벤젠, 메탄올, 메탄, 초산, 초산에칠, 일산화탄소,	에탄올, 이소아밀, 아세테이트 부탄, 1-부탄올, 무수초산	가솔린 핵산	아세트 알레히드 에칠에텔	
2급	석탄가스	에틸렌, 에티렌옥사이드			
2급	수성가스, 수소	아세틸렌			이황화탄소

폭발등급의 분류

[표5]

폭발등급	틈새의 깊이 25mm에서 화염일주 발생 틈새의 최소값
1	0.6mm초과
2	0.4mm초과 0.6mm이하
3	0.4mm이하

라. 절연의 종류와 허용 최고 온도

[표1]

절여종류	인체 및 고형 이물질에 관한 보호형식	허용최고온도 (℃)	용도
A종	예를 들면 목면, 면, 종이, 등의 재료로 구성되며 와니스류를 함침하거나 기름속에 침적한 것을 말한다 기둥회전력은 낮으나 최대 회전력이 높다	105	원심력펌프, 드릴, 프레스, 공각기계, Fan, Blower
B종	예를 들면 마이카, 석면, 유리, 섬유 등의 재료를 접착재료와 함께 사용하여 구성한 것을 말한다	130	원심력펌프, 드릴, 프레스, 공각기계, Fan, Blower
C종	예를 들면 생(生)마이카, 석면, 자기 등을 단독으로 사용하여 구성된것. 또한 접착 재료와 함께 사용하여 구성한 것을 말한다.	180초과	분무기, 컴퓨레서, 콘베어, 전기계단
F종	예를 들면 마이카, 석면, 유리, 섬유 등의 재료를 실리콘 알키드 수지 에폭시 수지 등의 접착재료와 함께 사용하여 구성한 것을 말한다 기동전류가 적고, 적은 회전력이 요구되는 제품이다.	155	대형선풍기, 회전펌프
H종	예를 들면 마이카, 석면, 유리, 섬유등의 재료를 실리콘 수지 또는 이와 동등한 성질을 가진 재료를 이루어진 접착재료와 함께 사용되는 것을 말한다. 고무상 및 고체상의 실리콘 수지 또는 이와 동등한 성질을 가진재료를 단독으로 사용하는 경우도 포함	180	

마. 전동기 출력 및 전압 전류 관계식

[표7]

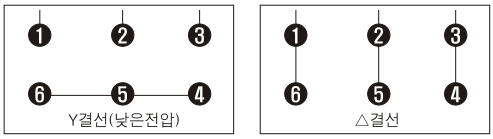
구분	단상(1Ø)	단상(1Ø)
전동기 출력(kw)	$\frac{AxVx\eta xØ}{1000}$	$\frac{1.73xAxVx\eta xØ}{1000}$
전동기 전류(A)	$\frac{AxVx\eta xØ}{1000}$	$\frac{1000xkw}{1.73xVx\eta xØ}$

[단위]

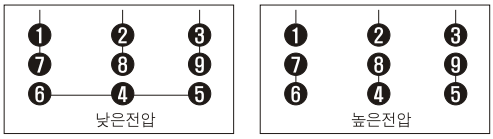
환산비율:HP=0.746kw 기준적용
전압(V) : Voltage
전류(A) : Ampere
효율(η) : Moter 효율
역율(Ø) : Moter 효율

바. 전기적 결선도

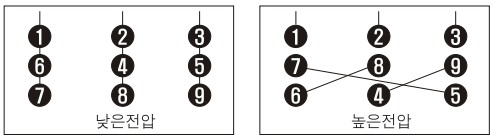
Y-△기동(6리드선)



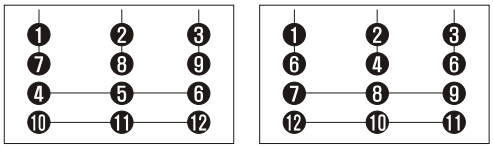
2전압용(Y결선시 : 9리드선)



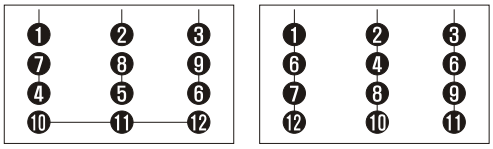
2전압용(△결선시 : 9리드선)



2전압용(12리드선)



Y-△기동(6리드선)



사. 허용출력 환산표(사용온도에 따른 출력)

[표8]

냉매온도(℃)	표준정격에 대한 허용출력
30℃미만	107%
30℃ ~ 40℃	100%
40℃초과 ~ 45℃	96%
45℃초과 ~ 50℃	92%
50℃초과 ~ 55℃	87%
55℃초과 ~ 60℃	82%

[표9]

표고(해면기준)	표준정격에 대한 허용출력
1000m이하	100%
1000m초과 ~ 1500m	97%
1500m초과 ~ 2000m	94%
2000m초과 ~ 2500m	90%
2500m초과 ~ 3000m	86%
3000m초과 ~ 3500m	82%
3500m초과 ~ 4000m	77%

아. 설치

a) 주위 조건을 감안하여 보호형 및 전폐형의 선택
b) 건조하고 통풍이 잘 되는 곳에 설치
c) 기초 볼트(Mounting Bolt)는 전동기 베이스(Base)구멍에 맞는 한 큰 것을 사용
d) 표준 볼 베어링(Ball Bearing)으로된 전동기는 어떠한 각도로도 설치할 수 있으나 슬리브 베어링으로 된 전동기는 수평선상 10℃를 초과하지 못합니다.

자. Motor 기술자료집

a)송풍기의 기동

회전체의 관성 Moment가 전동기 기동 Torque에 비해 작을 경우 기동은 원활하나, 클 경우는 기동이 불가능하다.
송풍기의 관성 Moment GD^2이 크고 회전수가 빠를 경우에는 기동 Torque가 큰 전동기를 선정하여야 한다.
고온 Gas나 비중량이 작은 기체를 취급하는 송풍기는 가동시 출력이 작고 기동 Torque가 부족하여 기동불능의 문제가 생기므로 특히 주의를 요한다.

b)기동과 GD^2

전동기가 이상없이 순조롭게 기동하여 정상운전이 되게 하려면 기동 횟수, GD2, Torque, Speed Torque Curve 등을 충분히 검토, 확인하여야 한다.

· GD^2 (kg-m^2) 송풍기의 GD^2는 Impeller, Shaft,, Puley등 회전체의 필요로 하는 관성 2차Moment로서 전동기 선정에 필수적인 요소이다.
즉 송풍기 회전체를 돌려줄수 있는 힘

· $GD^2 = WD^2 / 2$(KG-m^2) 단위-W : 회전체의 중량(kg) D : 회전체의 직경(m)

예를 들어 전동기의 허용GD^2가 송풍기 회전에 GD^2보다 클때 전동기는 안전하고 정상적인 기동을 할 수 있는 것이다.
만일 전동기 허용GD^2가 송풍기 회전체 GD^2보다 적을 때는 웅 하는 소리와 함께 모타가 타버리거나 과부하 현상이 생긴다.
Gd를 식으로 표시하면

c)전동기 허용GD^2(GDm^2)과 전동기축환산 송풍기 회전체의 GD^2을(GDf^2)라 할때

· $GDm^2 > GDf^2$이어야 하고,
· $GDf^2 = GDb^2 \times (Nf/Nm)^2$ · (kg-m^2)

단위-GDb^2 : 송풍기 회전체의 GD^2 GDb^2: 실제 송풍기 회전체의GD^2
Nf : 송풍기 회전수(rpm) Nm : 전동기의 회전수(rpm) GDf^2: Motor Gd^2

Gd^2의 계산 [표10]

도형 및 계산식				비고
				Ps : 재질별비중(kg/m) R : 회전체수 기타 모든 치수의 단위 : m
$GD^2 = 3.92 \cdot Ps \cdot L \cdot D^4 \, 10^3$	$GD^2 = 3.92 \cdot Ps \cdot L \cdot (D^2 - d^2) \cdot 10^3$	$GD^2 = 3.3 \cdot Ps \cdot A \cdot B \cdot L(D^2 - d^2) \cdot 10^3$	$GD^2 = A \cdot B \cdot L \cdot R \cdot (\frac{(A^2+B^2)}{3} + D^2) \cdot Ps \cdot 10^3$	

저압 Motor 허용부하GD^2표 [표11]

Pole / HP	TEFC(전폐형)			
	2P	4P	6P	8P
1	0.513	2.248	6.391	11.03
1.5	0.783	2.983	9.413	14.23
2	0.951	4.033	11.03	19.36
3	1.212	8.161	14.23	28.37
5	2.147	10.49	23.74	47.31
7.5	4.631	16.84	39.66	70.55
10	5.843	23.24	45.57	103.5
15	6.198	27.62	61.71	126.3
20	7.097	39.24	80.48	170.5
25	10.20	42.01	121.6	214.4
30	12.21	50.77	136.3	275.2
40	13.05	54.21	191.2	362.6
50	16.08	72.82	263.5	441.2
60	16.33	75.5	334.8	528.1
75	18.77	91.48	372.9	657.9
100	30.11	189.5	420.2	831.1
125	33.62	210.8	517.0	1003
150	40.65	259.0	679.0	1141
200	47.77	370.6	743.0	-
250	65.1	463.3	-	-

고압 Motor 허용부하GD^2표 [표12]

Pole / HP	TEFC(전폐형)			
	2P	4P	6P	8P
60	10	50	120	250
75	12	56	150	300
100	16	75	200	400
125	19	89	230	470
150	23	100	280	570
200	28	130	370	750
250	34	170	450	920
300	40	200	540	1090
400	52	250	700	1420
450	58	280	780	1580
500	63	310	860	1740
600	75	360	1000	2000
700	84	420	1150	2350
800	93	470	1300	2650
900	100	520	1440	2940
1000	110	570	1580	3230
1250	130	680	1910	3920
1500	150	800	2250	4650
1750	160	890	2520	-
2000	180	980	2810	-

농형 삼상 유도전동기는 정격부하에서 전동기축으로 환산한 부하의 Gd^2가 표11(저압 Motor)표12(고압 Motor)의 값을 초과하지 않을 때 전동기의 무리 없는 기동을 보장할 수 있습니다.

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