

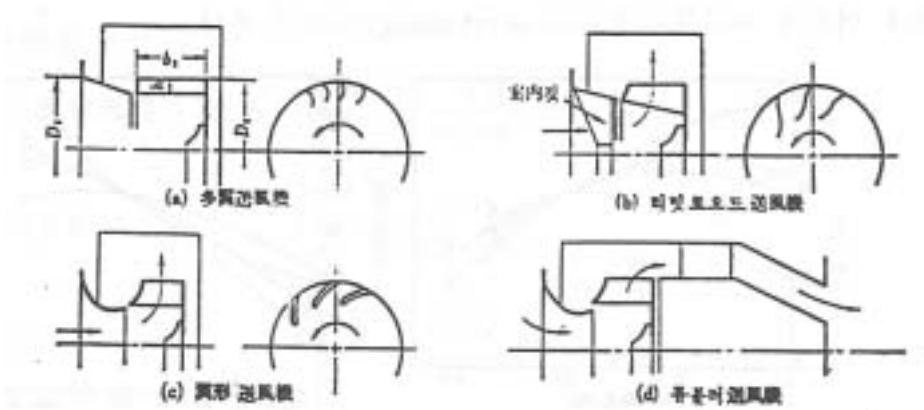
(4)

5. ((空調設備))
- 1) (送風機)
- 가.

< 1>

((高前秋一))

		(m^3/min)	(mmAq)	(%)	(比) (dBA)	(%)
(遠心)	(多翼) ((前曲型))	10~3000	10~110	45~60	40	100
	Turbo ((後曲型))	20~1500	100~300	65~80	35	135
	Limit load ()	20~3000	60~180	55~65	42	115
	(翼形)	100~3000	100~200	70~85	30	135
	Tubular ()	100~1500	10~110	60~75	35	-
(軸流)	Vane	40~1000	10~80	75~85	40	
	Tube	500~5000	5~15	55~65	45	
	Propeller	20~500	0~10	10~50	45	
	(斜流)	10~100	0~60	70~80	35	
	Cross Flow	5~250	0~30	-	-	



< 1>

(fan) < 1>

(概略構造) < 1>

(遠心送風機) 가 (多翼送風機)

機) , < 1> 가 가 가(安價) ,

(靜壓) 가 110mmAq

100mmAq (翼形)

가 가

(軸心上)

가 , < 1>(d)

(遠心式) , (軸流式)

가

(排氣)

(冷却塔)

가

< 2> S-S

, N-N , L-L , A-A (略號)

< 2> (S-S) 100%

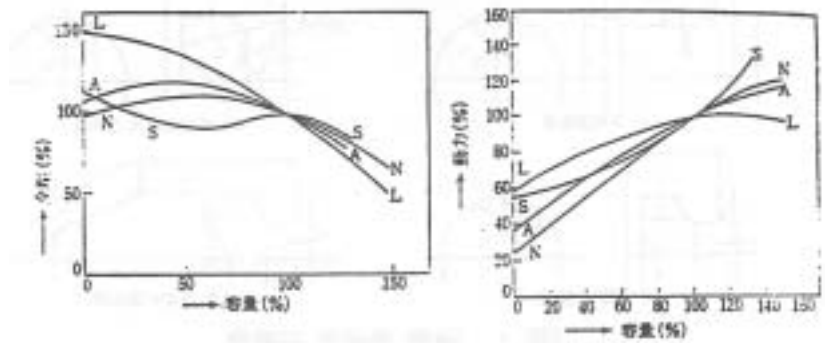
가 , 가 가

(overloading)

(固定抵抗)

(L-L) 100%

(non-overloading)



< 2>

가

< 2>

(吐出風速)

(形番)

< 2>

(推奨速度)

(水柱))		(多翼形)				(軸流形)
(mm)	(in)	(吐出風速)(m/s)	(先端速度)(m/s)	(m/s)	(先端速度)(m/s)	(m/s)
6.5	1/4	5~5.5	7.6~8.5	4~5.5	13~15.5	5.5~7.5
9.5	3/8	5~5.5	8.8~9.5	4~5.75	15~17.5	6.3~8.5
13	1/2	5~6	9.8~10.7	4.5~6.5	17~20	7~9.5
16	5/8	6~7	11.1~12.3	5~7.5	19~22.5	7.5~10.5
19	3/4	6.5~7.5	12.4~13.5	5.5~8.3	21~25	8.3~11.8
22	7/8	7~8.5	13.3~14.5	6~8.8	22.5~26.5	9~12.5

25	1	7.5~9	14.1~15.6	6~9.5	24~29	9.5~13.5
32	1 ¹ / ₄	8~9.5	15.8~17.2	6.5~10.5	26.5~32	10.8~15
38	1 ¹ / ₂	9~10.5	17.4~19	7~11.5	29~35	11.8~16.5
45	1 ³ / ₄	9.5~11	18.7~21	7.5~12.5	31~38	12.5~18
51	2	10~12	20~22.5	8~13.5	33~40	13.5~19
57	2 ¹ / ₄	11~13	21.3~23.7	8.5~14	35~43	
63	2 ¹ / ₂	11.5~13	22.4~24.8	9~14.7	37~45	
76	3	12.5~14	24.5~26.8	10~16	41~49	

$$: \text{No.} = \frac{(mm)}{150(mm)} \quad (1.1)$$

$$: \text{kW} = \frac{Q \times P_T}{102\eta_T \times 3600} \quad (1.2)$$

$$\text{kW} = \frac{Q \times P_s}{102\eta_s \times 3600} \quad (1.3)$$

$$P_T = P_S + \left(\frac{V_D}{4.04}\right)^2 \quad (1.4)$$

, Q : (m³/h), P_T : (全壓)(mmAq), P_S : (靜壓)(mmAq), v_D :

(吐出風速)(m/s), η_r : , η_s : < 1>

$$(\text{運轉動力})(3 \text{ (相)}) : \text{kW} = \frac{\sqrt{3} \times E \times I \times \phi}{1000} \quad (1.5)$$

$$(\text{運轉動力})(\text{ (單相)}) : \text{kW} = \frac{E \times I \times \phi}{1000} \quad (1.6)$$

, E : (電壓)(V), I : (電流)(I), φ : (力率) = 0.60~0.85

, < 3>

< 3> (fan laws)

N → N ₁ (=)	Q ₁ = $\frac{N_1}{N} Q$	d → d ₁ (N =)	Q ₁ = $\left(\frac{d_1}{d}\right)^3 Q$
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	$P_1 = \left(\frac{N_1}{N}\right)^2 P$ $kW_1 = \left(\frac{N_1}{N}\right)^3 kW$		$P_1 = \left(\frac{d_1}{d}\right)^2 P$ $kW_1 = \left(\frac{d_1}{d}\right)^5 kW$
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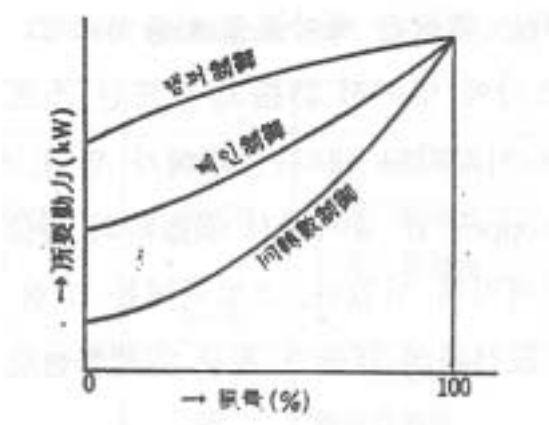
() Q : (m³/h), P : (mmAq), N : (回轉數), d :
(車)

(變風量)(VAV) (空調方式)

(省) (的) ,

4가 가 .

- a. ((回轉數制御))
- b. ()
- c.
- d. ()

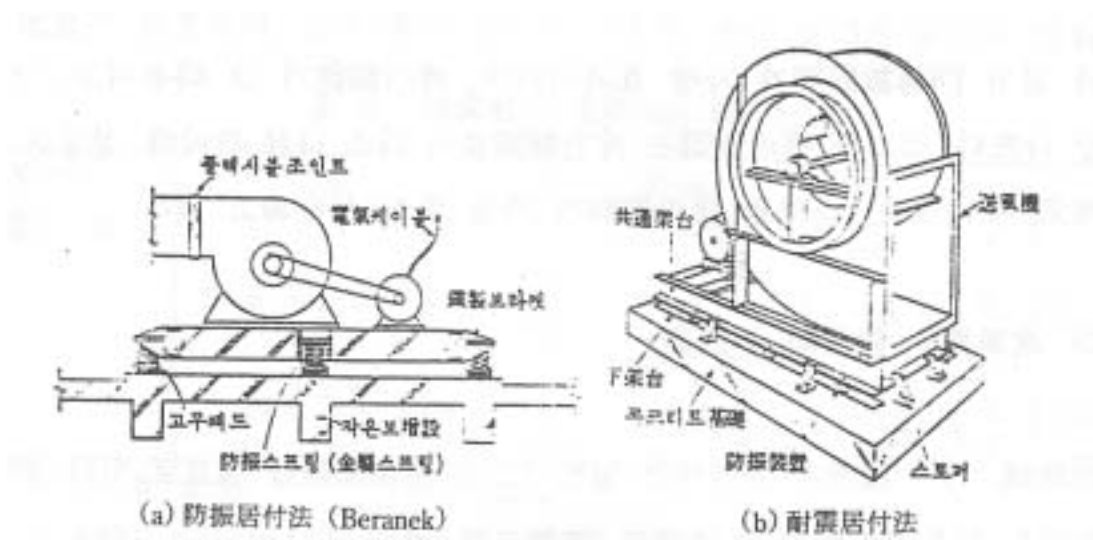


(概略) < 3>
(圖示) 가 가 , 가
, 가 가 .
(設備費)
가 가 .

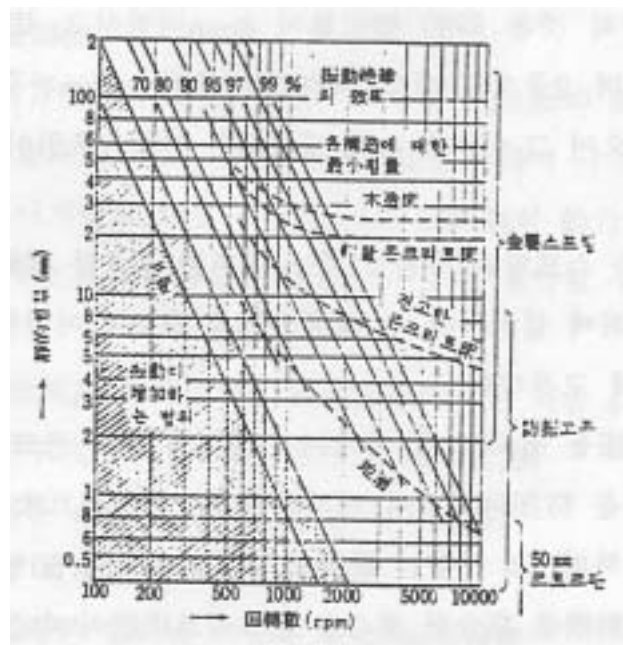
(防振法)
,
,
1 (靜的) (變位量) 8mm ,
(固有振動數)(n_0)가 6Hz , 2
15mm , $n_0 = 4.5$ Hz n_0

(電動機)
(形鋼) (共通床板) ,
(共通床板) (防振材料)

< 4>
,
2~3 , (鐵製)
50% .
30cm
< 4> (下部)



< 4 >



< 5 > (振動絶縁効率)

(防振)

가 (防振架臺上) 가 (轉倒) 가
가 (防振架臺) (STOPPER)
(強振時) (變位) 가
< 4>(b) 가
가 (空調學會誌上)

< 4> (振動絶線効率) η_l

	$\eta_l(\%)$		$\eta_l(\%)$
()800rpm	90~95	(往復式壓縮機) 11kW	85
()350~800rpm	70~90	(往復式壓縮機) 15~45kW	90
(8)200~350		(往復式壓縮機) 55~150kW	95
(9)200~350	70~80		
(西管)	95		98
	95	(吸收冷凍機)	95
(空調機)	90	(冷却塔)	85
(蒸氣發生器)	95		80
			80

() $\eta_l = 70\%$

(防振材料) (靜的) (變位) δ (靜止
時) (床板) ,
< 4> . < 5>
(斜線) η_l , (床構造)
90% ,
90% , 10% .

< 4>

η_1

.