



勝豐送風機

SHENG FOON VENTILATORS

隨著科技的進步，台灣已積極步向精密工業時代，大工廠、高樓大廈，四處林立，在這高密度的空間裡，排風設備已是不可或缺之物。

煤、炭、瓦斯等乃是工業動之源，其所排出之廢氣，使得居住環境、工作環境、污煙障氣，嚴重地危害人體健康，影響了工作效率。

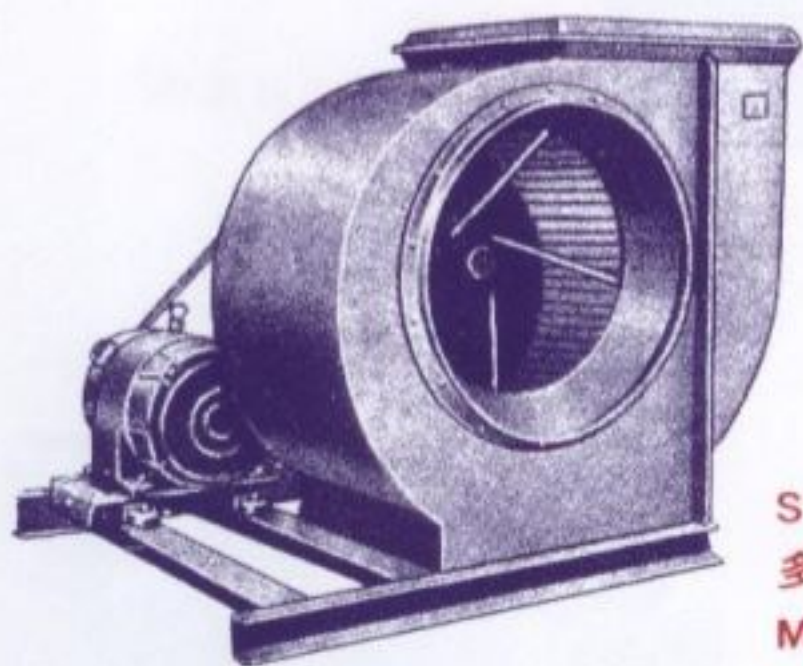
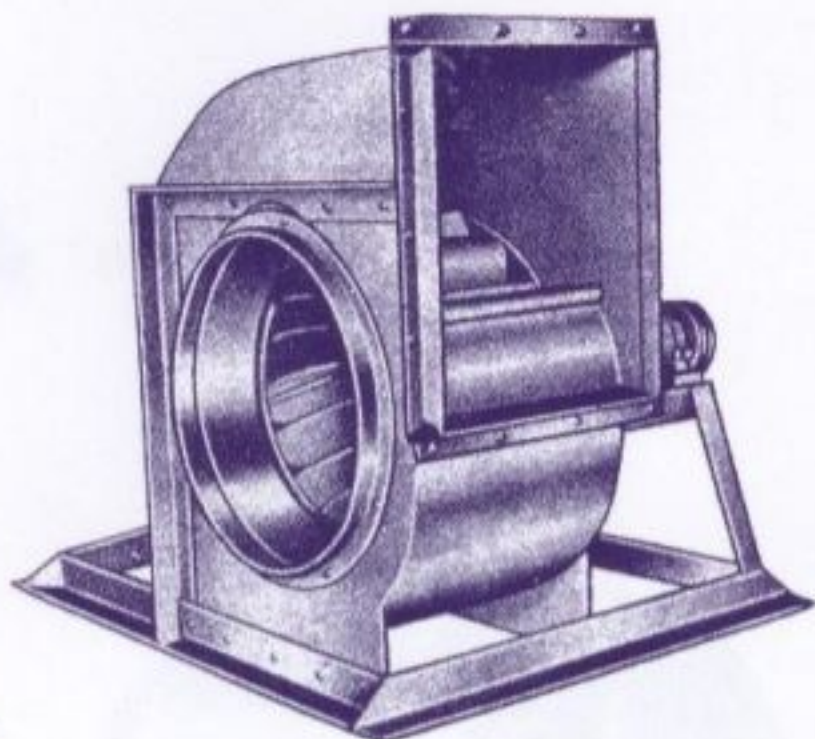
敝公司有鑑於此，乃本著服務社會，積極最高人力技術人才，及多年研磨流體力學之心得，精心研究，創出各式精密送排風機，讓人人有個清爽的生活環境，以維護人體健康，提高工作效率，更促進台灣精密工業之躍昇。

Along with the development of the technology, Taiwan has been moving forward to the era of precise industry. Big factories and buildings stand up like a forest; in the close packed space, ventilation equipment has become needful equipment.

Coal and gas is the origin of today's industry. The exhaust pollutions that have pollutes the living environment, working environment, also seriously endangers people's health and, their working efficiency.

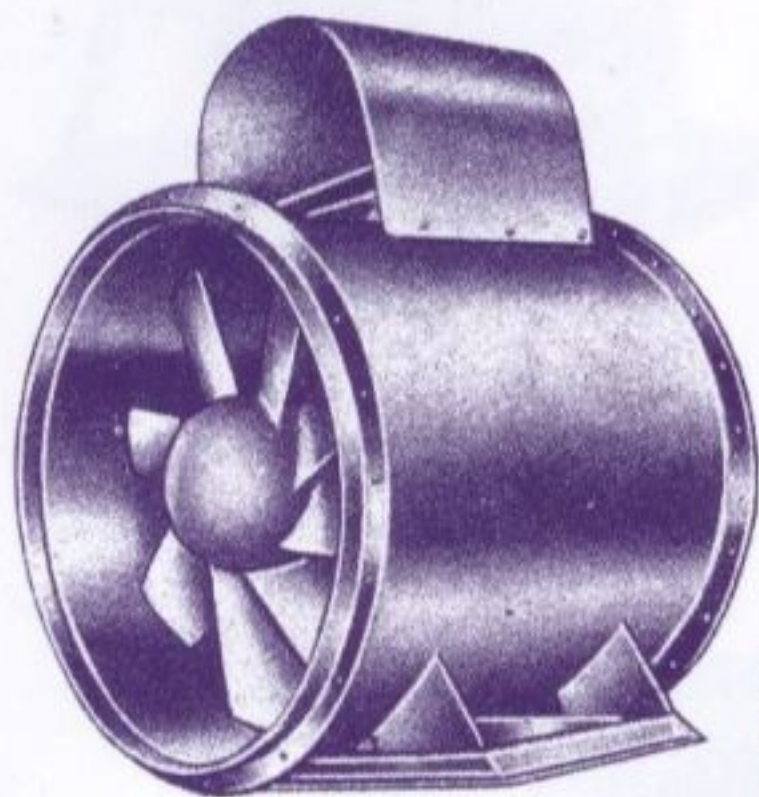
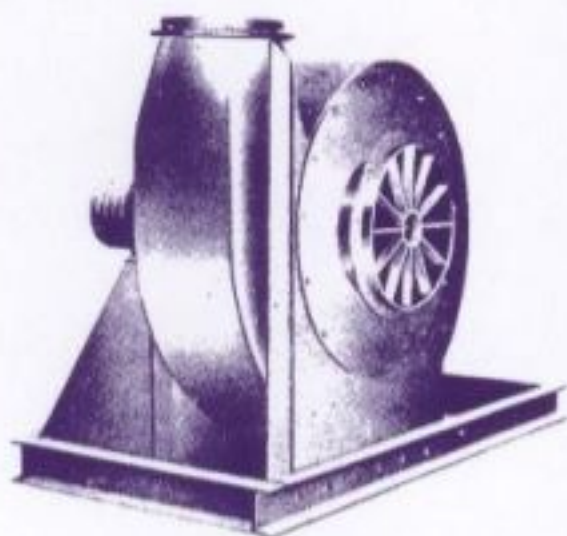
In view of this, and basing the spirit of serving society, our company has gathered talented technical personnel and our long experience of researching the Fluid mechanics to create multiform Precise Ventilators. Our purpose is to make everybody have a clear dry living environment, keep them healthy and rise their working efficiency. Further more, we hope it will promote the upgrade of the whole precise industry in Taiwan.

SFL 型
定載式送風機
LIMIT LOAD FAN



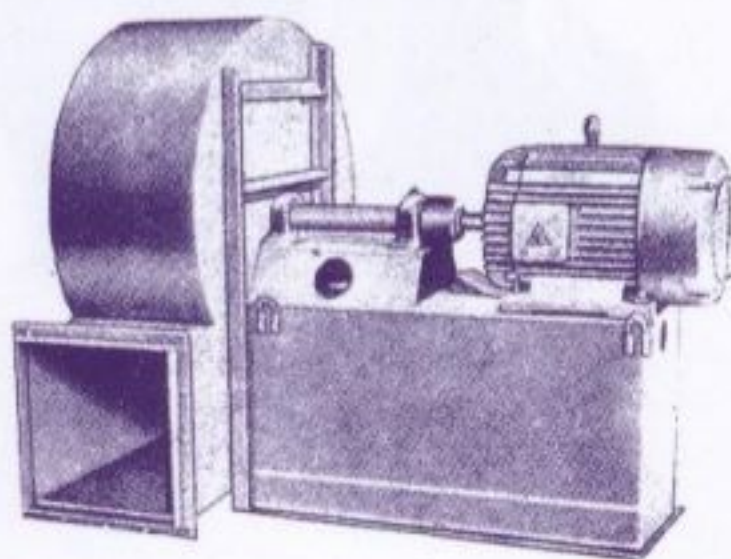
SFS 型
多翼式送風機
MULTI-BLADE FAN

STF 型
透浦送風機
TURBO FAN

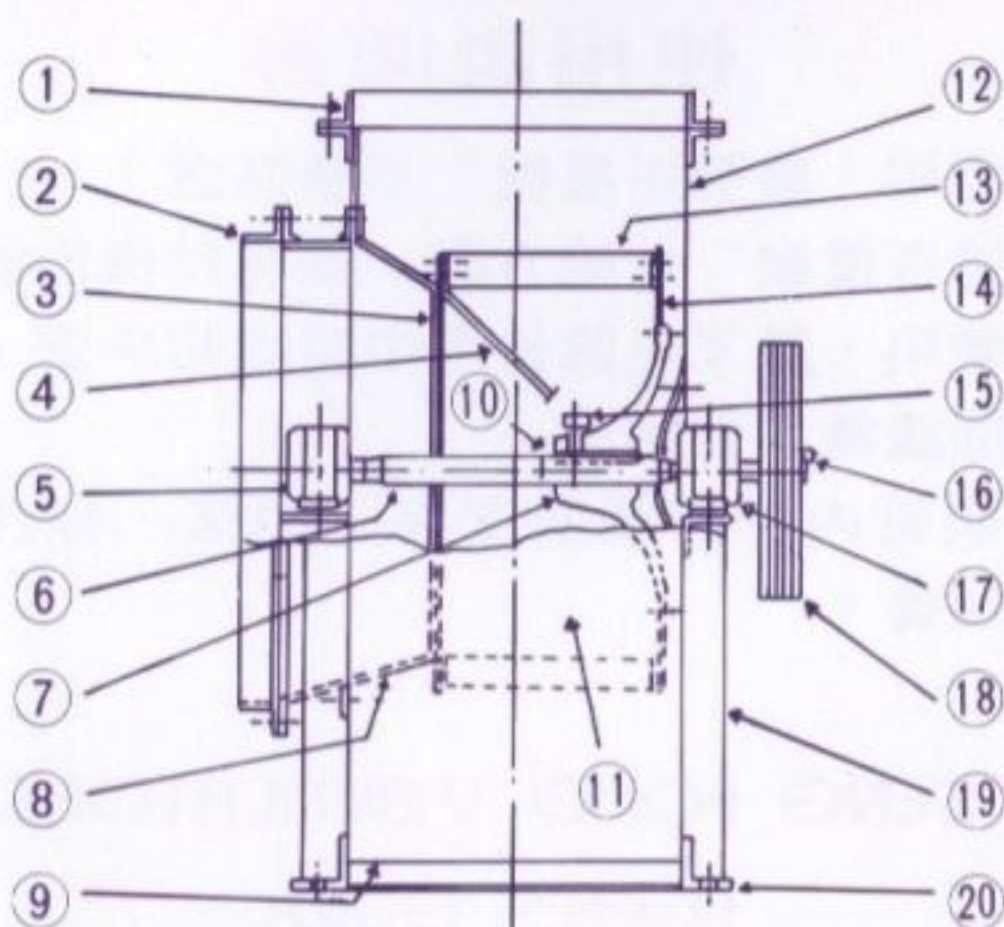


SAV 型
軸流皮帶式送風機
AXIAL FAN

SFP 型
直翼式送風機
PLATE FAN



SFS 型 多翼送風機各部名稱



- | | |
|--|---|
| <p>1. 出風法蘭</p> <p>2. 入風法蘭</p> <p>3. 輪葉側框</p> <p>4. 控制螺絲</p> <p>5. 第一軸承座</p> <p>6. 軸心</p> <p>7. B O S S</p> <p>8. 吸風口</p> <p>9. 補強底盤座</p> <p>10. 鍵</p> <p>11. 機身外殼</p> <p>12. 機身外殼</p> <p>13. 葉片</p> <p>14. 輪葉主板</p> <p>15. 輪葉固定螺絲</p> <p>16. 鍵</p> <p>17. 第二軸承座</p> <p>18. V 型皮帶輪</p> <p>19. 補強座</p> <p>20. 基礎</p> | <p>1. Air outlet flange</p> <p>2. Air inlet flange</p> <p>3. Side frame of blade</p> <p>4. Control screw</p> <p>5. First Housing Bearing</p> <p>6. Shaft</p> <p>7. Boss</p> <p>8. Air suction port</p> <p>9. Reinforcement chassis base</p> <p>10. Key</p> <p>11. Casing</p> <p>12. Casing</p> <p>13. Blades</p> <p>14. Main board of wheel blade</p> <p>15. Fixed screw of wheel blade</p> <p>16. Key</p> <p>17. Second Housing Bearing</p> <p>18. V belt pulley</p> <p>19. Reinforcement base</p> <p>20. Foundation</p> |
|--|---|

勝豐送風機

使用說明書

承蒙惠用「勝豐送風機」不勝感激！

「勝豐送風機」性能方面，機械結構均能讓妳安心使用，爲了免除使用中錯誤和失當，敬請詳細閱讀後才使用。

本說明書內詳加說明安裝，用法，操作，檢查，保養。

SENG FONG VENTILATORS

USER'S GUIDE

We greatly appreciate your use of 「SENG FONG」 product series.

In order to avoid error and improper usage. Important information about installation, using method, operation, inspection and maintenance are explained in details in the user's guide. Please read the user's guide carefully before using.

目錄

1. 檢查
2. 安裝
 - (a) 安裝的場所
 - (b) 基礎
 - (c) 安裝的方向
 - (d) 防震
3. 送風機和馬達的接結
 - (a) 掛V型皮帶時
 - (b) 直結時
4. 掛V型皮帶的方法
5. 運轉
6. 運轉的狀況
 - (a) 震動
 - (b) 軸承的溫度
 - (c) 異常的電流
7. 送風機性能低落
8. 保養
 - (a) 清洗
 - (b) 軸承的潤滑
9. 有關送風機問題如何詢問

Table of Content

- Inspection
- Installation
- (a) Install place
 - (b) Foundation
 - (c) Installation direction
 - (d) Shake-proof
- Fan and Motor Connection
- (a) V belet connection
 - (b) Direct connection
- Hanging V belt method
- Running
- Running Condition
- (a) Shaking
 - (b) Temperature of bearing
 - (c) Abnormal current
- Low performance of fan
- Maintenance
- (a) Cleaning
 - (b) Bearing lubrication
- Inquire related to fan problems

檢 查

送風機安裝時應注意檢查
下面幾點：

(a) 送風機的型式，送
風方向均照定貨標
準

(b) 風量，風壓是否照
規格及指定標準

(c) 風翼在旋轉時是否
會受外來障礙

(d) 輪葉或 V 型皮帶輪
用手輕輕轉動去試
試

(e) 送風機內部是否有
雜物在內

Inspection

Should inspect the
following points carefully
while installing the fan

(a) Whether fan model and
fan direction are accord-
ing to specification of
the order

(b) Whether air volume and
static pressure are
according to specifica-
tion of the order

(c) Whether the rotation of
blades will be obstructed

(d) The blade or V belt
pulley in running slowly
by hand

(e) Whether there is any
impurity inside the fan

其他有不適合情形，請
向本公司連絡

安 裝

(a) 安裝場所

送風機本身是耐用，
性能優良但安裝場所
是否易保養，檢查，
有酸性，高溫，潮濕
之場所儘量避免。

(b) 基礎

一般強固混凝土上是最適合，但因場所關係如無強固混凝土使用之時，也可用鐵架及木架用螺絲鎖緊使用，基座如不穩時會產生震動及噪音更影響建築物及送風機的鞏固，敬請注意。

If there are any problem
Please contact us

Installation

(a) Install place

Avoid put the fan in a place where it is difficult to maintenance, inspect, acidic, high temperature, and humid.

(b) Foundation

It is most suitable on ordinary strong and durable concrete. But if there was no durable concrete on the location, may also use iron frame and wooden bench screwed tightly. If the foundation was not stable, it will generate vibration and noise which will affect the building and stability of fan. Pay special attention to this.

(c) 安裝方向和水平線

普通一般送風機主軸均照水平製作安裝，但應著顧客的需要或安裝方向及場所限制，送風機的水平可不必太過於精密，但敬請注意主軸兩旁軸承座的磨損及荷重，安裝送風機普通可用水平器量測軸心的水平，簡單的方法也可利用線垂重物，在V型皮帶輪的側面量出它的垂直度及水平。（水平線的調整，不平時為顧及兩邊的平衡請用鐵板作為墊物）

(c) Installation direction and level

In general, the shaft of fan is installed level. But due to the requirement of the customer, installation direction, and restriction of location, it is not necessary for the level of fan to be too precise but should pay attention to the abrasion and load of bearing blocks at both side of shaft. In general, when installing the fan, may use a precision spirit level to measure the level of shaft. For simple method, may also use heavy suspension to measure its vertical angle and level at the side of V-pulley. (Adjustment of level, use an iron plate to adjust the level.

(d) 防震

爲了防止送風機及馬達的震動，在送風機的底盤和基座中間要墊入防震材料，一般用橡皮墊及彈簧。爲了防止振動，送風機及馬達須安裝在同一塊架子上，架子和基座間再墊入防震材料。

(d) Shake-proof

In order to prevent the shaking of fan and motor, between the fan chassis and foundation base should be cushioned with a shake-proof material. Ordinarily, may use rubber washer and spring as shake-proof material to prevent shaking. The fan and motor should be installed on the same trestle.

Between the trestle and foundation base should again be cushioned with a shake-proof material.

馬達的接連

(a) 掛 V 型皮帶

如圖 1 先平行送風機及馬達兩方的軸心，再安裝 V 型皮帶和兩軸心成直角，然後在 V 型皮帶輪及馬達軸

Fan and Motor connection

(a) V belt connection

As show in figure 1, shaft of fan and shaft of motor should be parallel. then install the v belt so that the parallel line of

心輪的側面用絲線側
出成一直線。

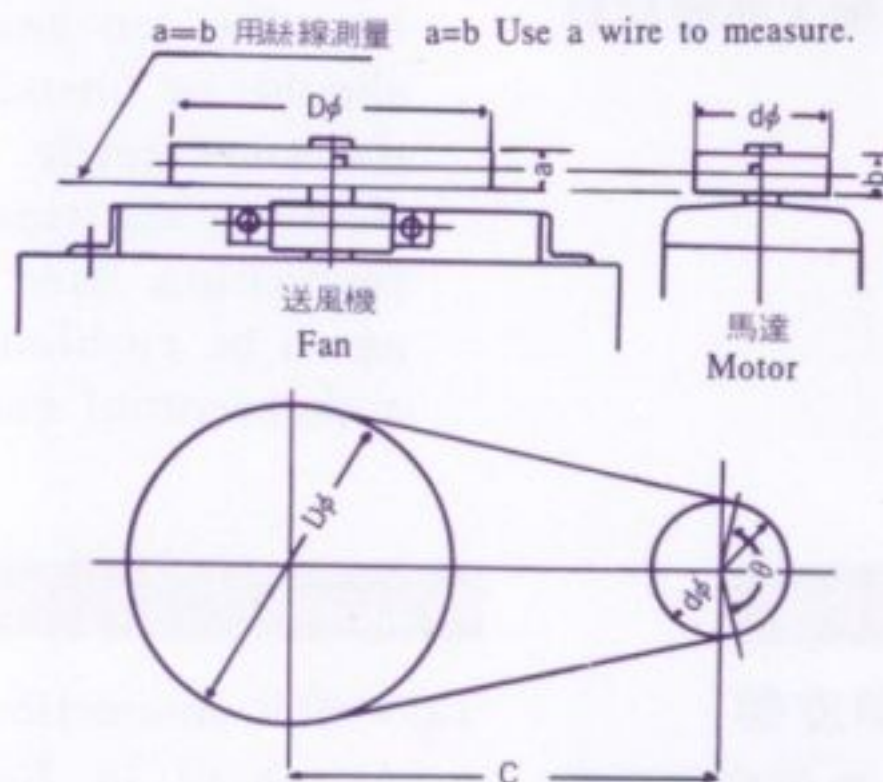
the two shaft will form
a rectangle.

照圖示 C 既是兩軸心的距
離

Then use a wire to
measure the straight line
formed at both side of
V pulley and center
wheel of motor.

$$0.87(D-d) < C < 2(D+d)$$

圖 1 測軸心 (Figure 1 Measuring shaft Center)



(b) 馬達直接連接之時
送風機與馬達軸心
要成爲一直線。

(b) Direct connection

The shaft center of fan
and motor should form a
straight line.

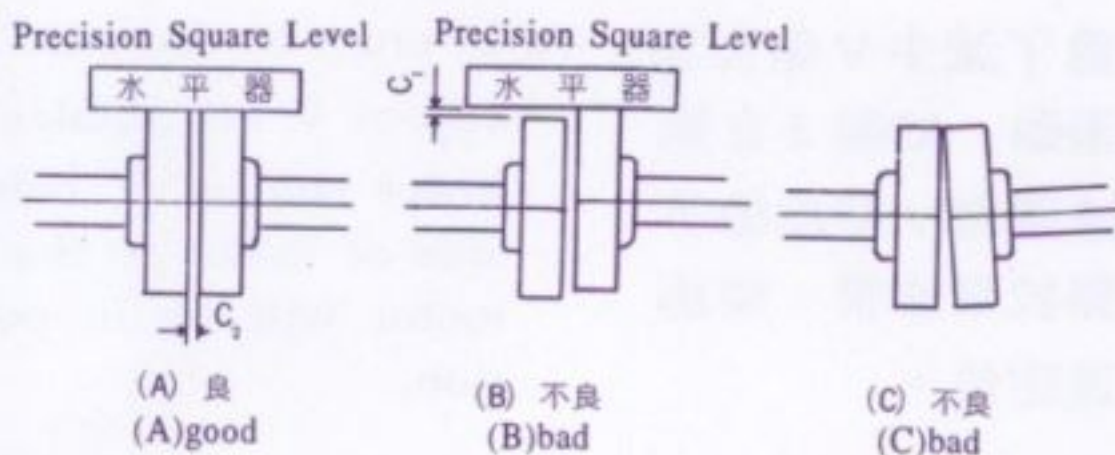
圖 2 所示 (A) 良 (B) 不良
(C) 不良

In figure 2 is shown
(A)Good (B)Bad (C)Bad

連接器如圖 2 之 (A)(B) 的
C1,C2 值不超過 0.05mm.

The connector is as
shown in C1 and C2 of
figure 2 (A) and (B),
maximum deviation
should not exceed
0.05mm.

圖 2 測軸心水平 (Figure 2 Measuring the Level of Shaft)



V 型皮帶掛法

Hanging V belet method

(a) V 型皮帶過緊軸承
座易受損，過鬆時
皮帶會滑動，敬請
注意。

(a) If the V belt was too
tight, the bearing block
will be damage. If it
was too loose, the belt
will be slip. Pay special
attention to it .

(b) 掛好 V 型皮帶之時
請用手在中央位置
彈打試試，如太緊
時請調鬆到適當位
置。

(c) 新皮帶在第一個月
內其伸縮性較強，
必要時可調整馬達
下座的螺絲。

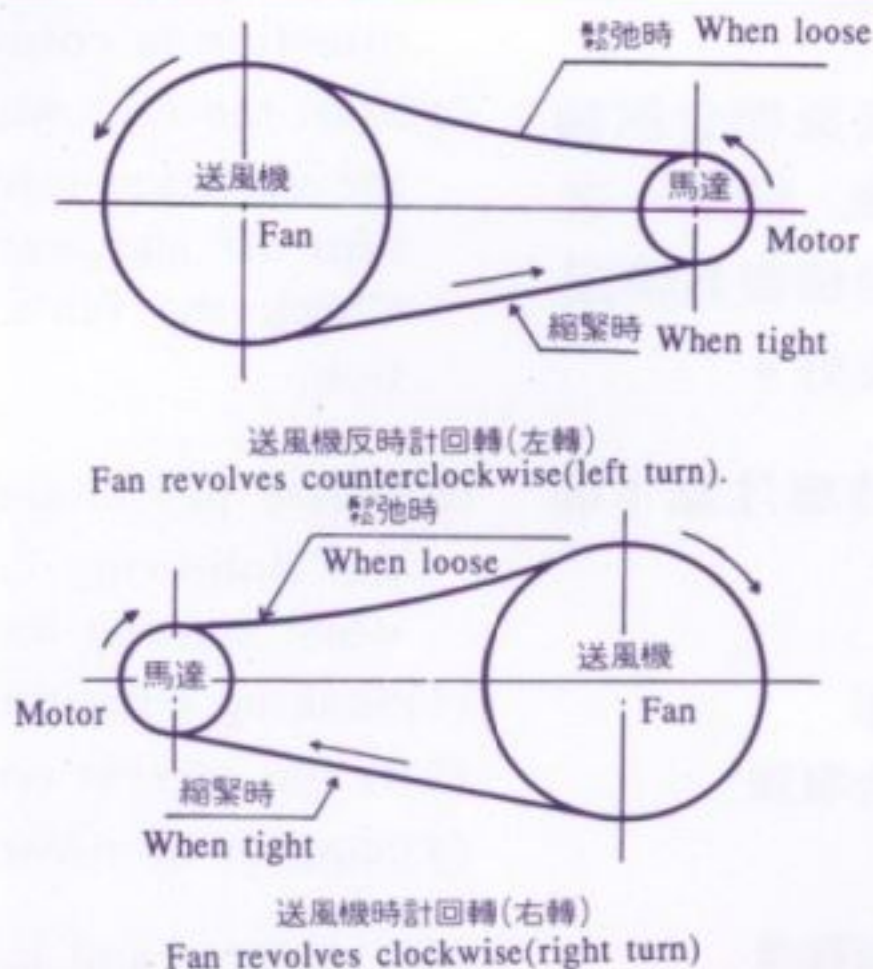
(d) 爲了減少 V 型皮帶
滑動，如圖 3 在馬
達邊側 V 型皮帶下
側拉緊皮帶，使馬
達定位。

(b) When the V belt is
already hung, flick the
center by hand. If it was
too tight, loosen it so
that it will run properly.

(c) Tensile strength of new
belt during the first
month is stronger,
adjust the screw at the
base of motor if neces-
sary.

(d) In order to decrease the
slip of V belt, tighten the
lower side of V belt at
side of motor so that the
motor will be in posi-
tion.

圖 3 V 型皮帶掛法 (Figure 3 Hanging Method of V-Belt)



運 轉

(a) 開始轉動之前請認識以下幾點：

- (1) V 型皮帶是否掛好？
- (2) 先用手試轉是否良好？
- (3) 送風機之內是否有雜物阻礙？

Running

(a) Check the following points before start running.

- (1) Was the V belt hung properly?
- (2) Try to rotate it with your hand, looking fan running condition
- (3) Check if there was any impurity inside the fan

(b) 注意轉動方向是否正確

(c) 起動送風機全部轉動之後，關閉一次再開動檢查其情況是否良好。

(d) 啓動時應注意下面情況：

(1) 震動情形

(2) 是否符合電流

(3) 回轉數

(4) 皮帶緊鬆程度

(5) 軸承的溫度與異常聲音

(b) Make sure its running direction is correct

(c) Start the fan. when all the parts are running, turn off and start again. Check the fan's condition.

(d) Please pay attention to the following condition when starting the fan:

(1) Shaking condition

(2) Is the current conforming

(3) Number of revolution

(4) Tightness and looseness of belt

(5) Temperature of bearing and abnormal sound

運轉狀況

(a) 震動

震動的級量，送風機的用途、構造、安裝狀況、回轉數等一切不能隨意決定，原則上軸心最大震度照圖4良線以下為最佳。

送風機發生震動，主要原因：

- (1) 回轉體不平衡（風量吸不入或送不出）？
- (2) 基座不穩固，螺絲鬆弛？
- (3) 輪葉內有雜物？
- (4) 機身內積水？
- (5) 送風機機身不堅固？

Running condition

(a) Shaking

Do not decide arbitrarily the degree of vibration, the purpose, configuration, installation status, and number of revolution of fan. In principle, optimum maximum vibration of shaft should be below fair line as shown in figure 4.

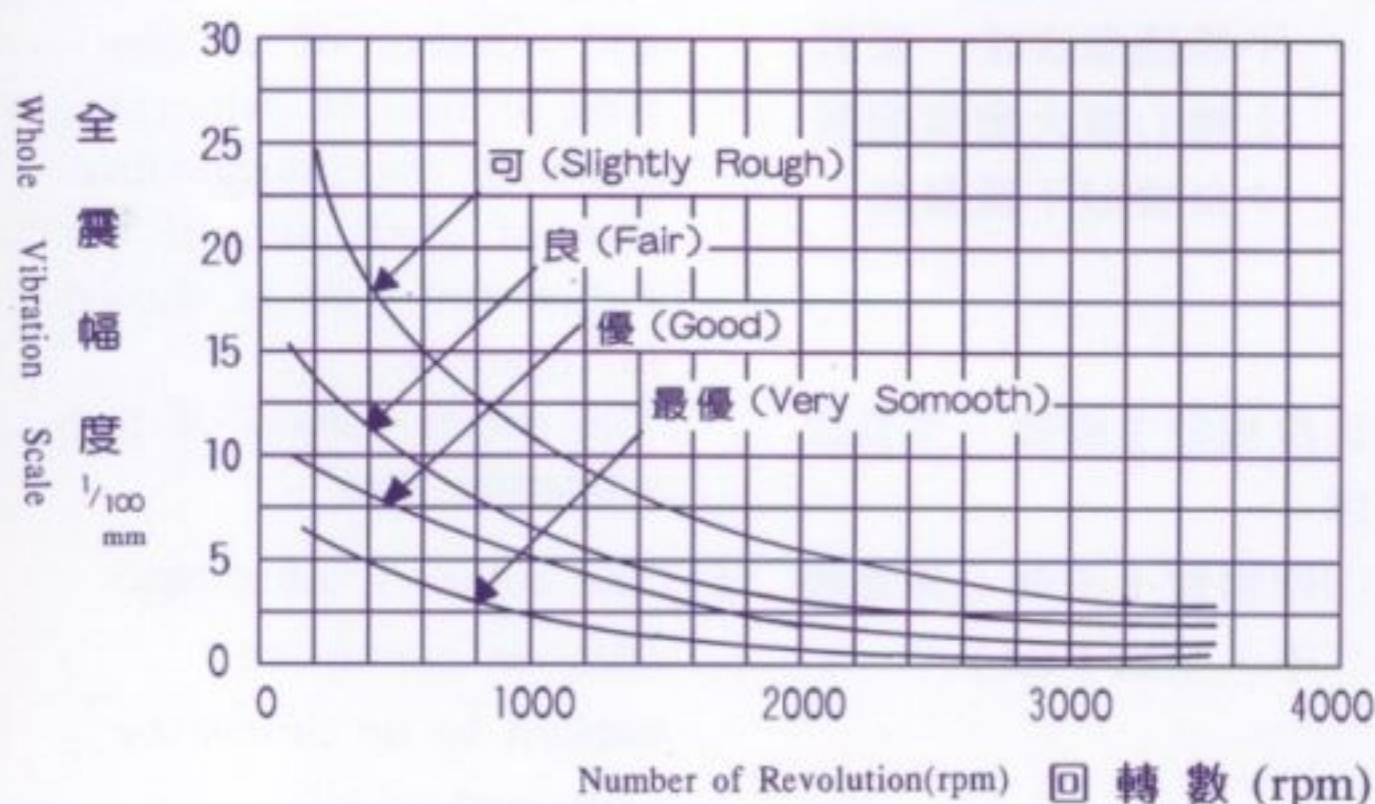
The major causes of fan vibration are:

- (1) The rotor is imbalance (the air cannot be sucked in or cannot be sent out)
- (2) Foundation base is unstable, fixed screw is too loose.
- (3) Impurities inside wheel blades.
- (4) Water accumulated inside the machine.
- (5) Fan body is not strong

(6) 軸承座與軸心裝配不適
合？

(6) Bearing block and shaft
are not properly assem-
bled?

圖 4 對軸承座震動狀態比較表 (Figure 4 Comparison of Bearing Vibration Status)



(b) 軸承座溫度

送風機的軸承座溫度，因周圍環境及吸入空氣有關，最高溫度是 70℃ 限度，如有不正常應注意下列事項：

(b) Temperature of bearing block

The temperature of fan bearing is related to its surrounding and intake air.

Maximum limit of temperature is 70℃.

If there was any abnormality, please pay attention to the following matters:

- (1) V 型皮帶過緊
- (2) 潤滑劑不足，不適當或過多
- (3) 軸承座不平或螺絲鎖過緊
- (4) 軸承座本體不正常

- (1) V belt is too tight
- (2) Insufficient, inappropriate, or excess lubricant
- (3) Bearing block not level or Nut screw are too tight.
- (4) The bearing block itself is not normal

(c) 異常電流

電流表的指針擺動不停就是送風機或馬達發生不正常現象

(c) Abnormal current

When the indicating needle of galvanometer can not stop swinging. This means something is wrong with the fan or motor.

- (1) V 型皮帶過鬆
- (2) 輪葉內有雜物
- (3) 送風機吸入口氣流不正常 (吸入風管型狀不良)
- (4) 馬達本身不正常

- (1) V belt is too loose
- (2) There is impurities inside the wheel blades.
- (3) Air flow at intake port of fan is not normal (the shape of air intake pipe is defective).
- (4) The motor is abnormal.

送風機性能低落

Low performance of fan

送風機對現場風量不足
所發生事項

The reasons of insufficient
air volume from the fan

(a) 風管系裝置及送風
機老化・破損原因

(a) Air pipe system device
and fan are aged and
broken

(1) 送風機本身腐蝕或機內
堆積塵埃

(1) The fan is already
corroded or dust accumu-
lated inside the fan

(2) 風管內堆積塵埃有甚大
影響

(2) Accumulation of dust
inside the air pipe is a
big effect.

(3) 濾淨器內塞住

(3) The filter is blocked

(4) 各部開關・開度不良

(4) Switching of each
switch is defective

(5) 設計製造不良

(5) Design and manufactory
are bad

(b) 送風機本身各種原
因

(b) Causes from the fan
itself

(1) 回轉數低落・(電壓・
周波數低落)

(1) Low count of revoluton
(low voltage, low
fequency count.)

(2) 輪葉內雜物或碎布附著

(3) 氣體比重減輕

(4) 計測方法誤差

(2) Impurities inside the wheel blades

(3) Gas specific weight has lightened

(4) Wrong measuring method

保 養

(a) 清洗

1 年 2 回以上清洗機身內部或必要塗裝防銹

(b) 軸承座的潤滑

潤滑是爲了確保軸承運轉順暢必備條件

(1) 潤滑劑的補給期間

如下圖軸承工作溫度低於 70℃ 時，軸承運轉多少小時需補給潤滑劑

Maintenance

(a) Cleaning

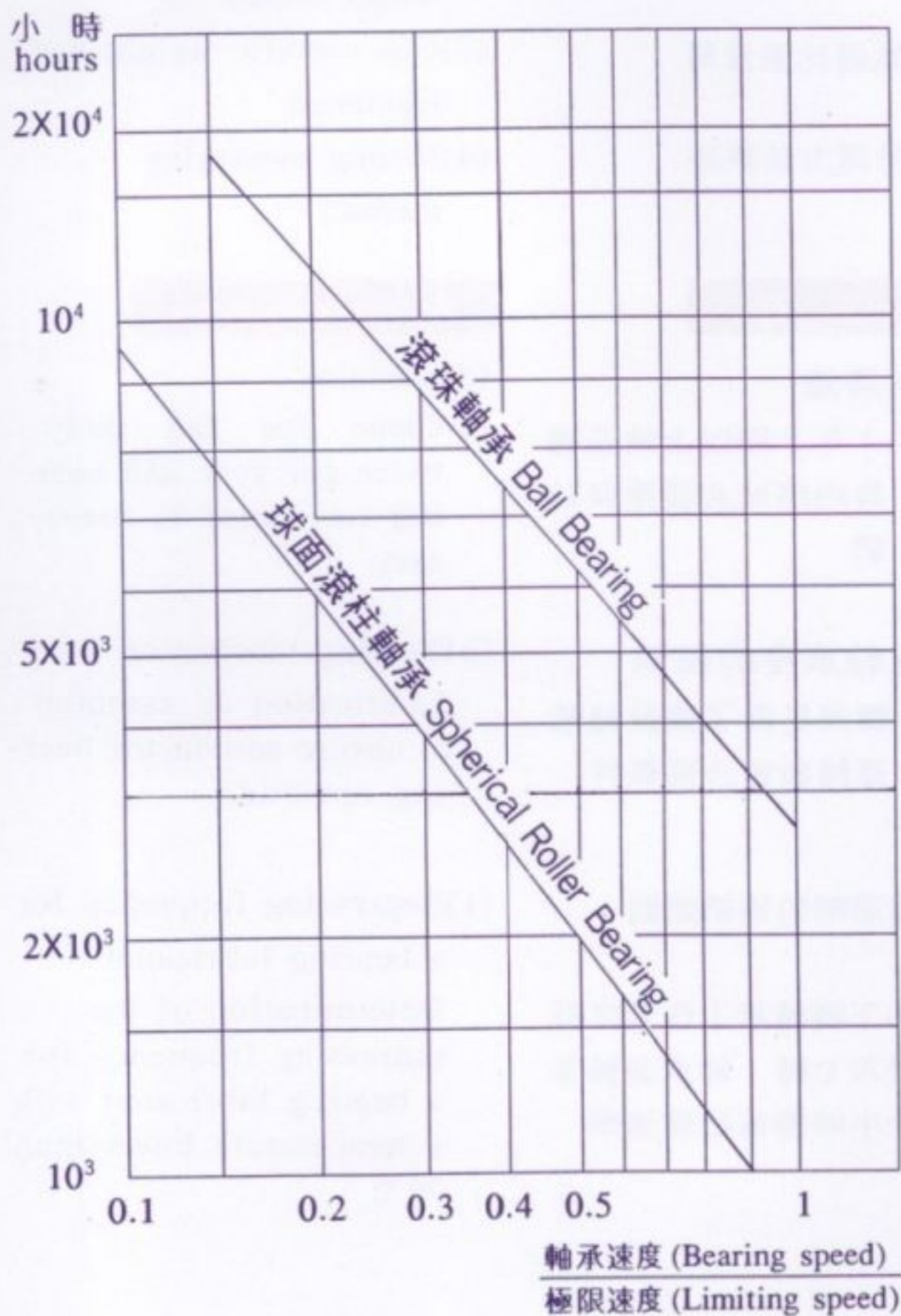
Clean the fan body twice per year and coating rust-proof is necessary

(b) Bearing lubrication

Lubrication is essential to ensure satisfactor bearing operation

(1) Regreasing frequency for a bearing lubricated

Determination of the regreasing frequency for a bearing lubricated with a temperature lower than 70℃



軸承工作溫度超過 70℃時
· 每增加 15℃潤滑劑的操作時數必減半

It may be said that the service life of a general purpose grease is halved for every 15℃ increment above 70℃

(2)潤滑劑的補給法

把潤滑劑注入補給孔，把潤滑劑注入軸承內部，使其內部的舊劑排出促進新陳代謝

(2)Replenishing method of lubricant

Pour grease into the supply hole, pour lubricant inside the bearing so that the old grease will be discharged naturally.

(3)潤滑劑的填充量

填充量在軸承箱內空間的 20 %~ 30 %

(3)The quantity of grease

The quantity of grease necessary to ensure that the bearing operate well should be equal to approximately 20 %~ 30 % of its free internal volume.

(4)補給潤滑劑時應注意事項： 選擇正確的潤滑劑

(4)Before supply grease must pay attention choice correct of lubricant

潤滑劑填充適當量

supply suitable quantity
of lubricant

注意潤滑劑再補給的時間

attention adequate re-lubrication time

勿混合不相同的潤滑劑

don't mix different lubricant

勿將髒物落入潤滑劑內

don't put dust into the
lubricant

(5)潤滑劑的種類

(5)type of lubricant

一般送風機

(Ordinary fan) MOBIL UX
GREASE NO.1

耐熱送風機

(Heat-resistance fan)
MOBIL TEMP. GREASE

使用潤滑劑

	使用品名	油種
一般送風機	MOBIL	MOBILUX GREACE
耐熱送風機	MOBIL	MOBIL TEMP GREACE

Lubricant

	Brand	Type
Ordinary Fan	MOBIL	Mobil UX Grease No. 1
Heat-resistance Fan	MOBIL	Mobil Temp. Grease No. 1

製品故障請注意部位，查看銘板通知本公司

- a. 型式
- b. 性能
- c. 製造日期
- d. 製造號碼

如銘板上還有不清楚請記入以下各點

- a. 送風機出風口的尺寸
- b. 送風機出風口的方向
- c. 輪葉的型狀
- d. 其它

對送風機不解之處，敬請詢問。

Specify the part of fault,
Check the nameplate,
contact us

- a.model
- b.performance
- c.manufacturing date
- d.manufacturing number

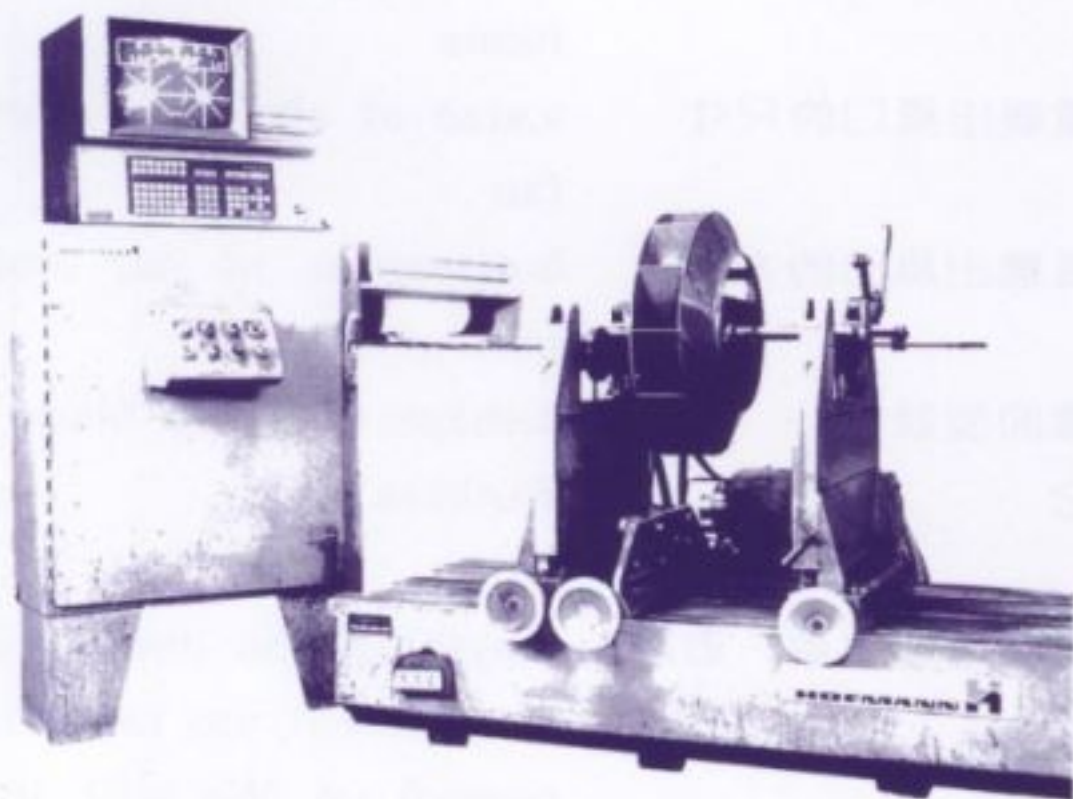
If there was anything unclear on the nameplate
Please record the folling items

- a.size of air outlet port of fan
- b.direction of air outlet port of fan
- c.shape of wheel blade
- d.others

Anything you don't understand about the fan, Please contact us. We will do the best to serve you.

送風機之輪葉，乃是送風機壽命之關鍵，本公司使用美國名牌、HOFMANN " 動力平衡機，精密校正輪葉，絕無震動，性能優越，歷久不衰，保證耐用。

The service life of fan depends on the quality of blade. So we use " HOFMANN " balance calibrator made in U.S.A to perform precision calibration on the blades. To achieve no vibration and maintain excellent and increase user confidence.



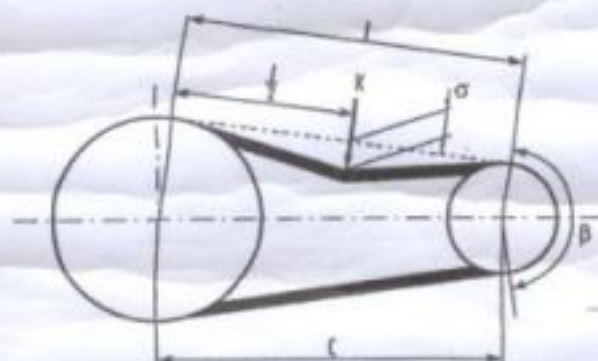
如何檢查張力

當皮帶安裝後可以依下列方法簡單來檢視是否達到適當張力值。

於皮帶跨距中央垂直向下施以一 K 值的力量此 K 值需足以在每 1000mm 上的跨距造成 15mm 的彎曲量

$$K = 0.06 \times T [N]$$

T = 單條皮帶之靜態張力值[N] (見前頁)



$$l = C \times \sin \beta / 2 [mm]$$

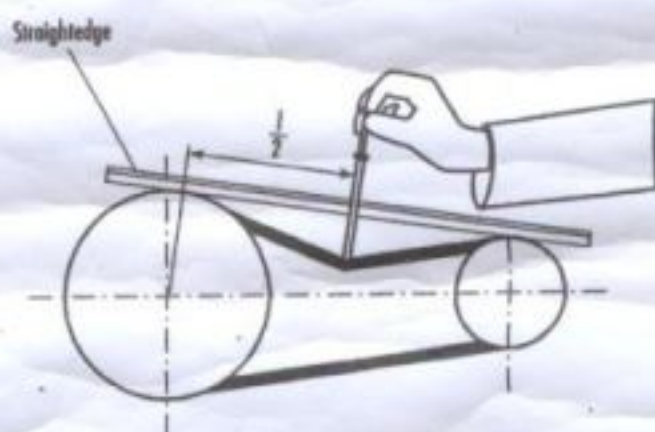
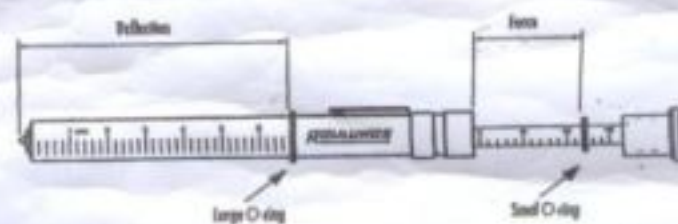
C = 中心軸距 [mm]

beta = 接觸角度 [°]

sigma = 曲折量 [mm]

$$\sigma = \frac{l \times 15}{1000}$$

使用張力計依所計算出之 K 值或依下表所列之 K 值範圍搭配曲折量 sigma 值來調整張力直到適當。



* Deflection Force K [N]

小皮帶輪徑	高張力三角皮帶 (Narrow V-Belt)									
dd (mm)	SPZ/3V		SPA		SPB/5V		SPC		8V	
	Kmin	Kmax	Kmin	Kmax	Kmin	Kmax	Kmin	Kmax	Kmin	Kmax
63	9	13								
71	11	15								
80	12	17								
90	14	19	14	20						
100	15	21	17	23						
112	16	22	20	26						
125	17	23	22	30						
140	18	24	24	32	27	37				
160	19	26	26	35	32	43				
180	20	26	28	38	37	49				
200	20	27	30	40	40	53				
224	21	28	31	41	43	57	53	71		
250			32	43	46	60	61	80		
280			33	44	48	63	68	89		
315			34	45	51	66	75	97	88	117
355					53	68	81	104	100	132
400					55	71	87	110	110	145
450					57	72	92	115	120	156
500					59	74	96	119	127	165
560							99	129	134	173
630							103	132	142	181
710							106	135	148	187
800							110	137	155	192

如蒙訂購，請將下列諸項告訴我們至為感謝
When inquiring for the tenders, please furnish us with full particulars including

一、用途：使用場所、使用狀況——連續使用或
管制使用。

二、輸送氣體性質：重量、種類、比重、成分。

三、溫度：吸入溫度及其變化（正常狀態 20°C ）

四、壓力：絕對壓力差及溫之關係（靜壓 m/mag）

五、風量：容量及溫度之關係（風量 C.F.M
或 M.M.）。

六、原動機：型式、馬力、極數。

七、出口方向及回轉數：運轉方向及每分鐘飛輪
之回轉數。

八、其他：如可能繪出裝置場之大概圖。

1. Purpose: How to be used—continuance or control.

2. Gas Transferred: Weight kind, composition, specific gravity to air.

3. Temperature: At suction side and subsequent change if any.

4. Pressure: Absolute pressure difference in, relation to the temperature.

5. Quantity: Volume in relation to temperature.

6. Motor: Type, HP, poles.

7. Outlet Direction RPM: Revolution direction and R.P.M.

8. Others: As much as possible, outline of the plant
Where the blowers are intended including the details of the site will be helpful and appreciated.

Plant where the blowers are intended including the details of the site will be helpful and appreciated.



信鋒機電有限公司

SEN HON ELECTRONIC MANUFACTURING
CO., LTD.

台北市環河北路3段213號3樓
3F, NO.213, SEC.3, HUAN HO N RD,
SHIH-LIN DIST,
TAIPEI, TAIWAN, R.O.C.
TEL:886-2-8102955,8103285,8103361
FAX:886-2-8102956

經銷商：