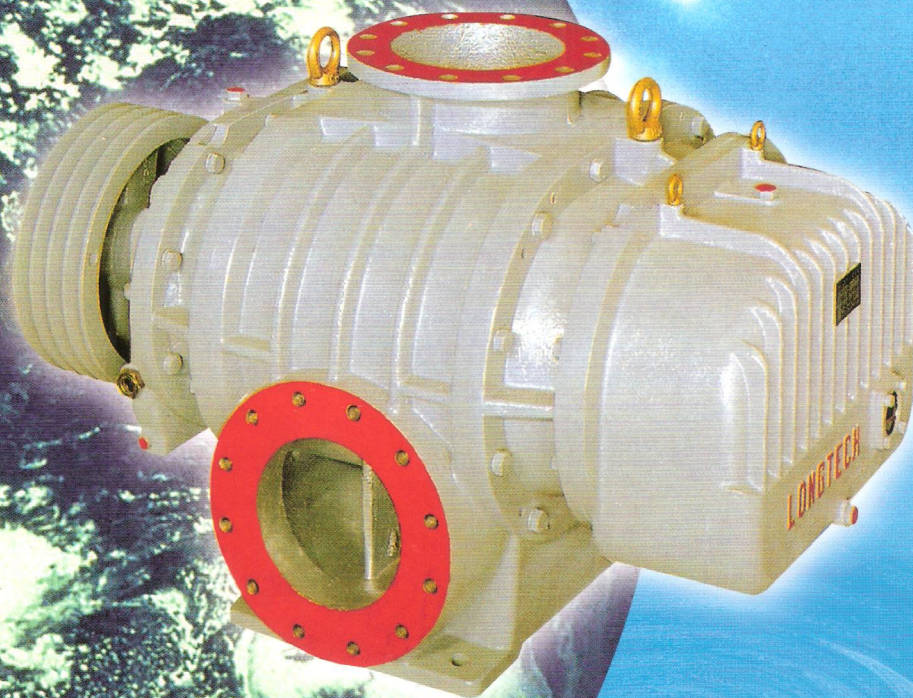


龍鐵魯氏鼓風機

LONGTECH ROOTS BLOWER

ROOTS TYPE BLOWER & VACUUM PUMP CATALOG



高品質/低噪音三葉魯氏鼓風機

THREE LOBES REDUCE VIBRATION AND NOISE!

龍鐵三葉式鼓風機是魯氏系列中的一種新產品。本公司以最新的 CNC 加工技術，製造精確的轉子，所以能提高性能、降低噪音及震動。

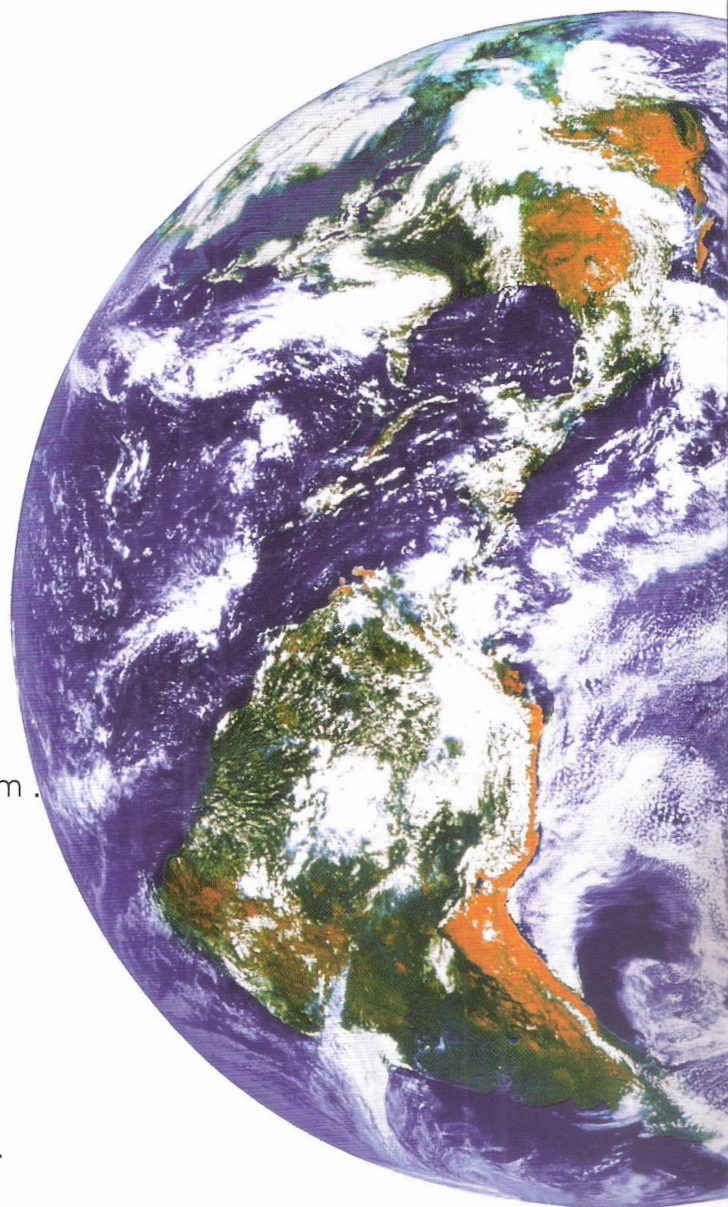
LONGTECH three lobes blowers are new series roots type blowers. By cnc machine , we made precise rotors to promote performance , lower noise and vibration .

特 長

- ◆ 風量、壓力、真空度範圍廣。
 1. □ 徑 : 25A ~ 350A (1" ~ 14")
 2. 風 量 : 0.1 ~ 250 m³/min
 3. 壓 力 : 0 ~ 8000 mmAq
 4. 真空度:- 5000 mmAq
- ◆ 風量穩定、壓力變化小。
- ◆ 排出氣體潔淨、不含油污。
- ◆ 構造堅實簡單、保養維護容易。
- ◆ 軸承為機油潤滑、散熱佳、壽命長。

FEATURE

- ◆ Wide range for air volume , pressure and vacuum .
 1. Bore : 25A ~ 350A (1" ~ 14")
 2. Capacity : 0.1 ~ 250 m³/min
 3. Pressure : 0 ~ 8000 mmAq
 4. Vacuum : - 5000 mmAq
- ◆ Stable air flow and less pressure variation .
- ◆ Clean air not with oil moist .
- ◆ Construction simple and easy maintenance .
- ◆ Bearings are all lubricated by oil moist .



Why You Select LONGTECH New Three

Lobes Roots Blower ?

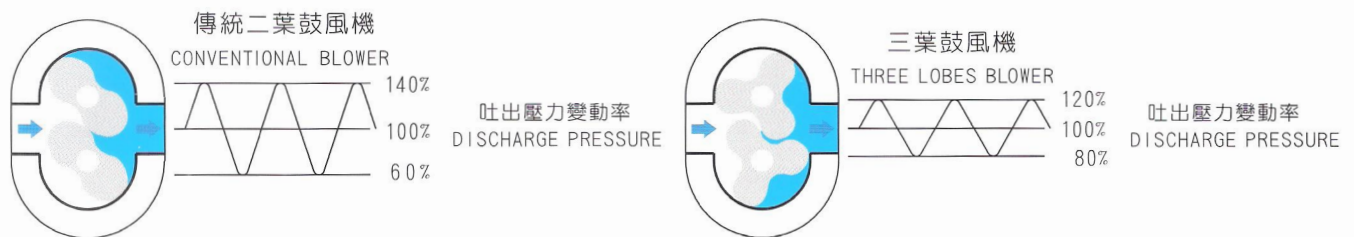
為何選擇龍鐵三葉魯氏鼓風機 ?

■ 較低的能源損耗

三葉式的設計能減少逆流對轉子的壓力，相對地也減少能源的損耗。

■ LOWER ENERGY CONSUMPTION

Three lobes' design control backflow pressure to rotor so reduce energy consumption.



■ 較低的噪音

壓力脈衝是主要的噪音源，三葉式鼓風機能有效地降低噪音達5dB。

■ LOWER NOISE

Pressure pluses are the major noise source of blower.
Three lobes' design can efficiently reduce noise by approximately 5dB.

■ 軸承壽命延長

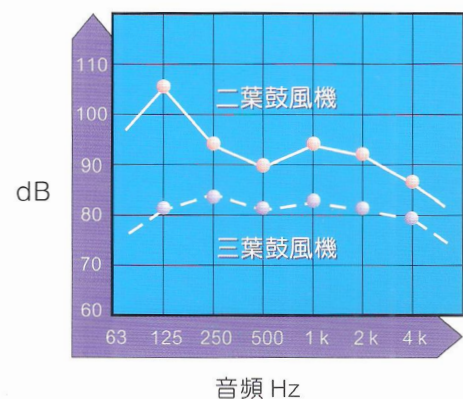
由於葉輪傳遞的振動減少，得以延長軸承壽命達20%。

■ LONGER BEARING LIFE

Less vibration transmitted through the lobe results approximately 20% longer bearing life.

傳統二葉式鼓風機壓力震幅大，造成震動及噪音縮短軸承、齒輪及其他傳動元件的壽命。

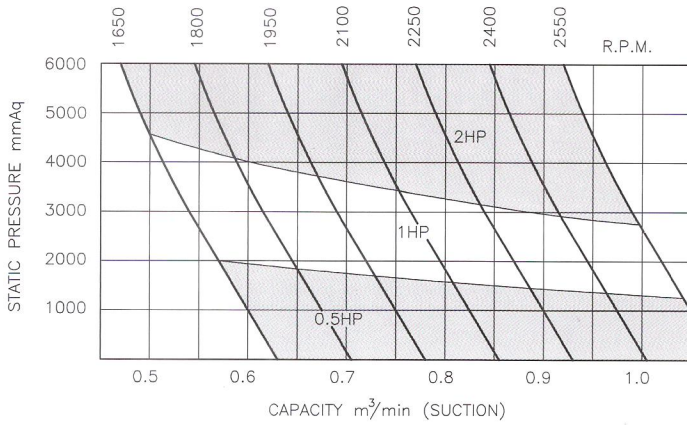
Conventional blowers result pressure pluses and vibration rob power and shorten the life of every bearing, gear and other drive train components.



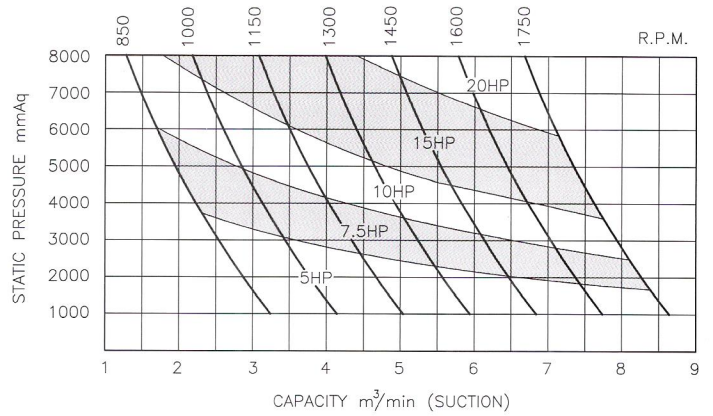


LT 壓送式性能曲線 PRESSURE PERFORMANCE CURVE

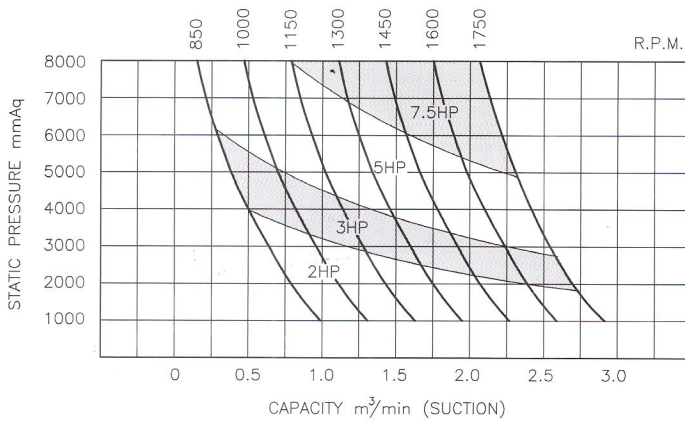
LT-040



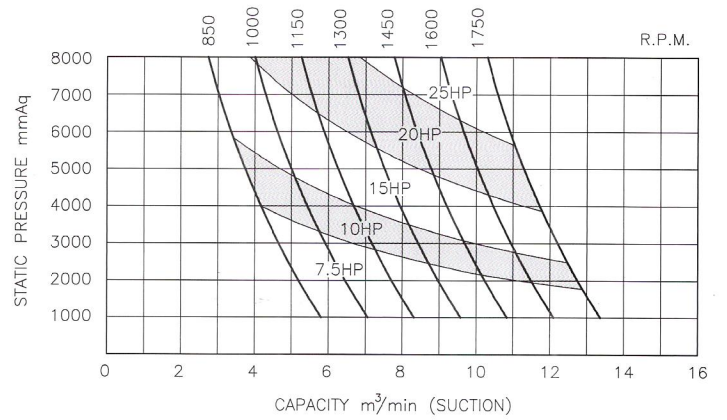
LT-080



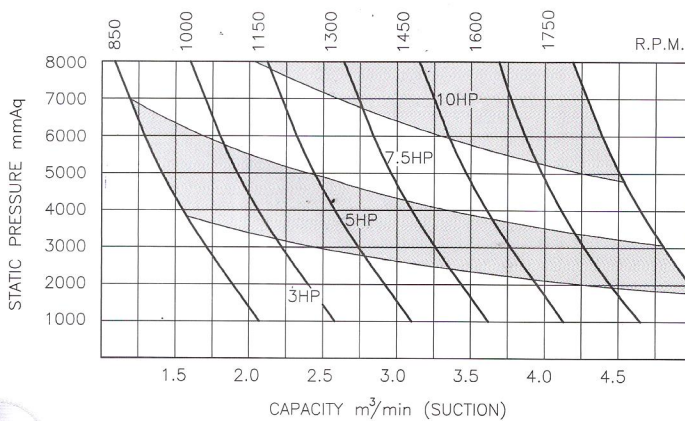
LT-050



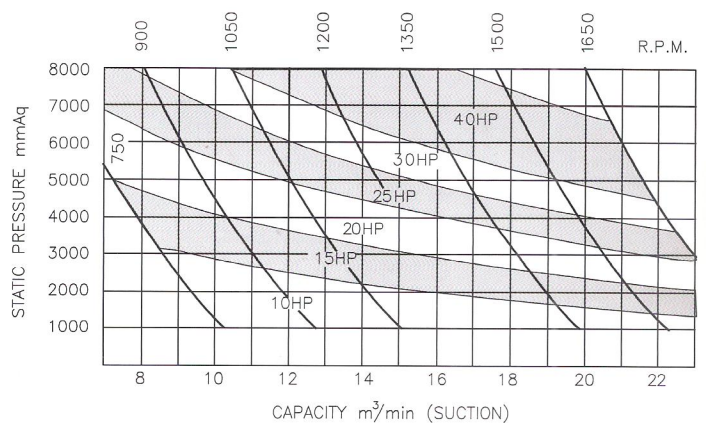
LT-100



LT-065

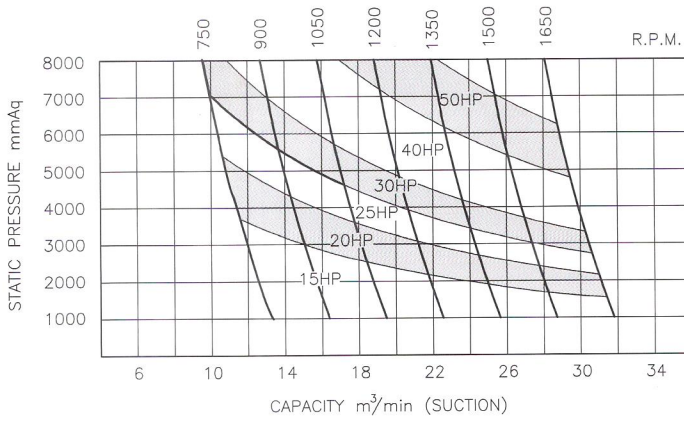


LT-125

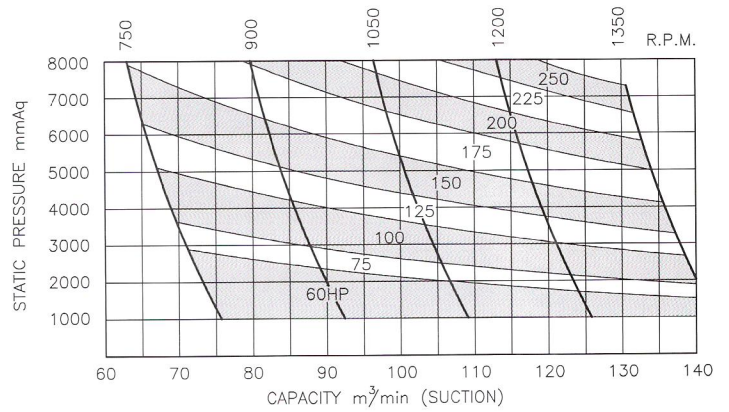




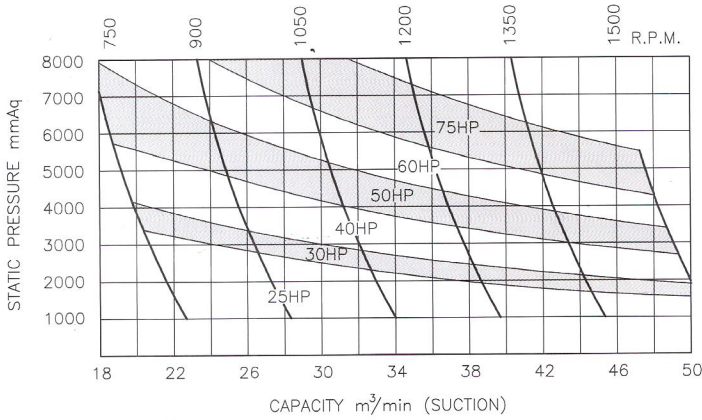
LT-150



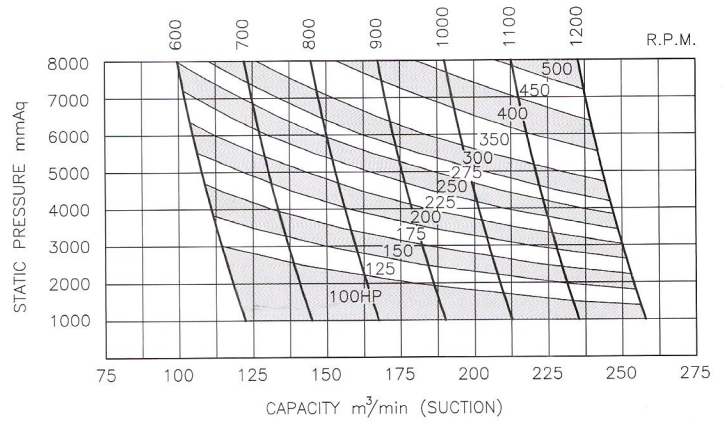
LT-300



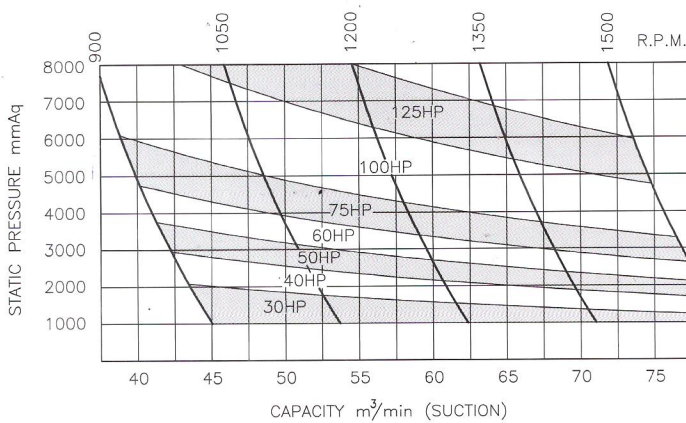
LT-200



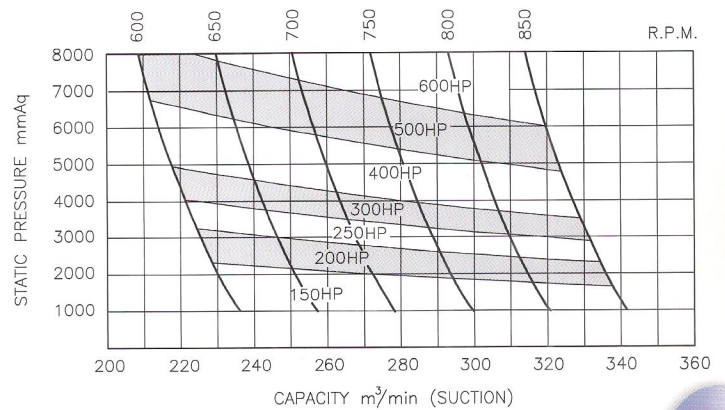
LT-350



LT-250



LT-400

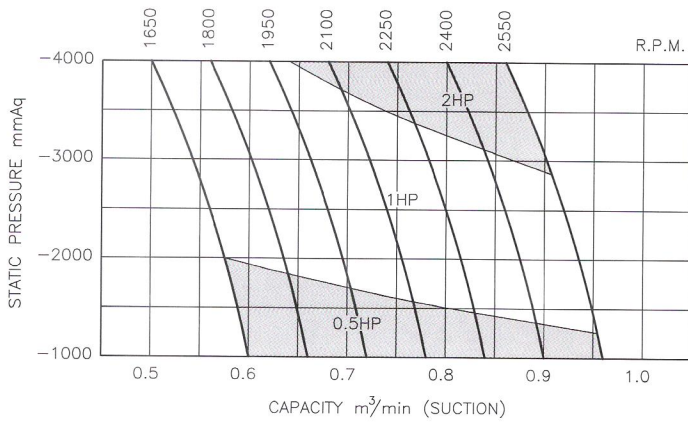




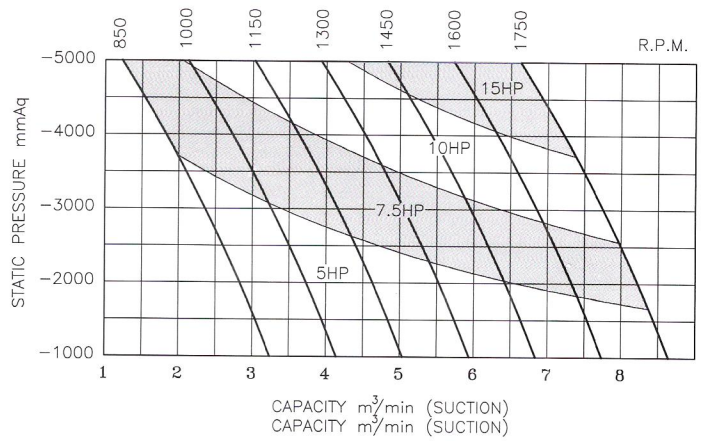
LTV 真空型性能曲線

VACUUM PERFORMANCE CURVE

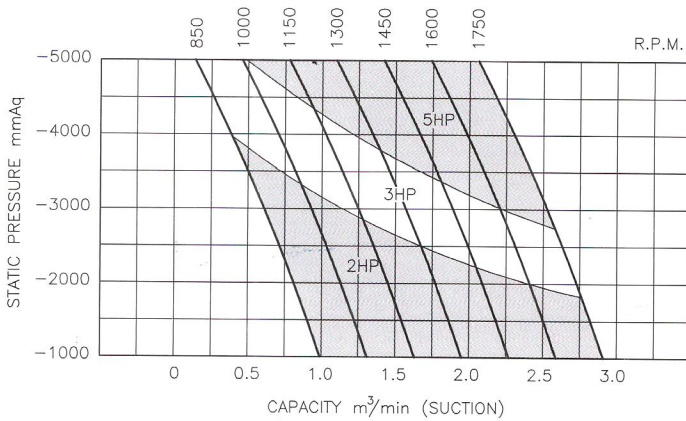
LTV-040



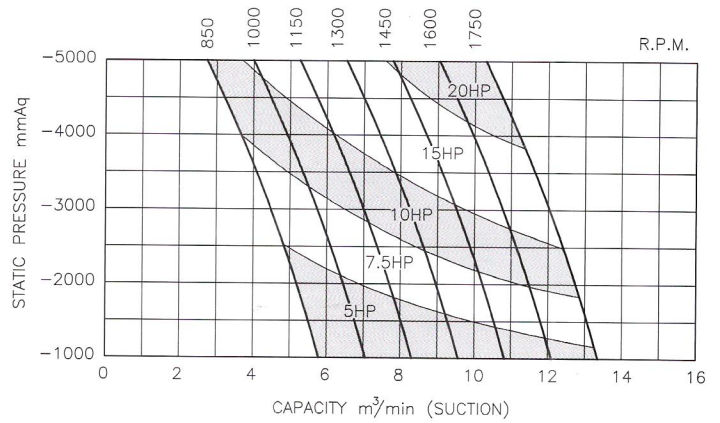
LTV-080



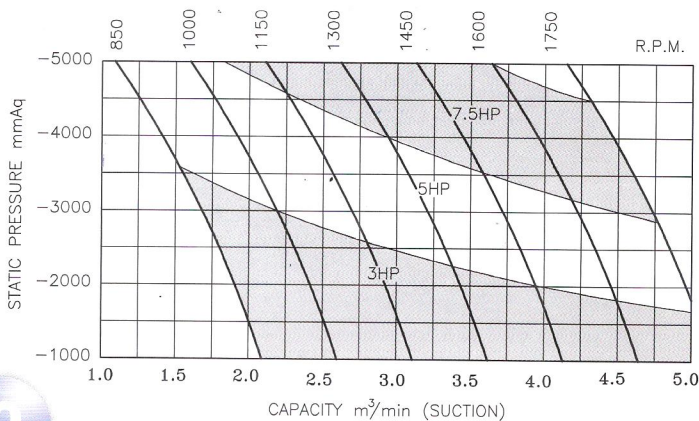
LTV-050



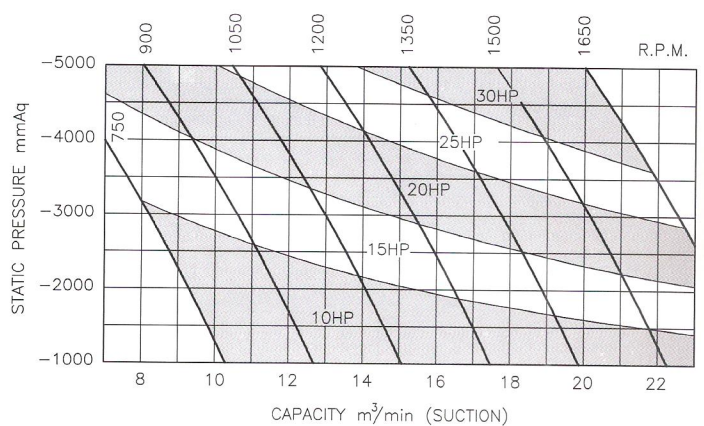
LTV-100



LTV-065

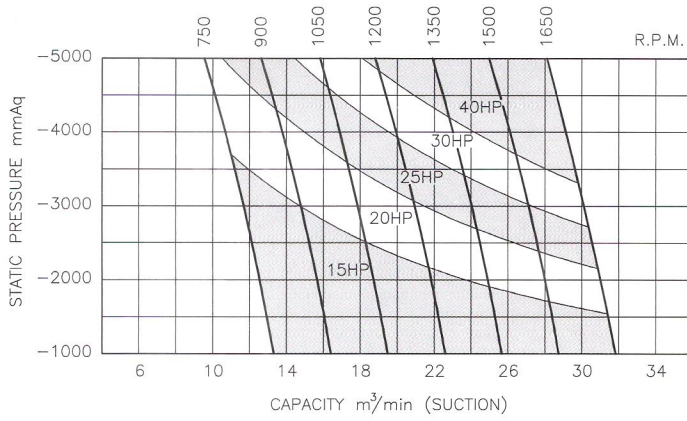


LTV-125

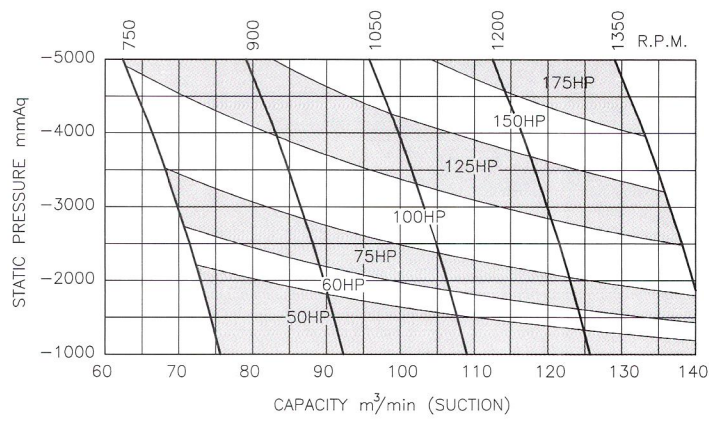




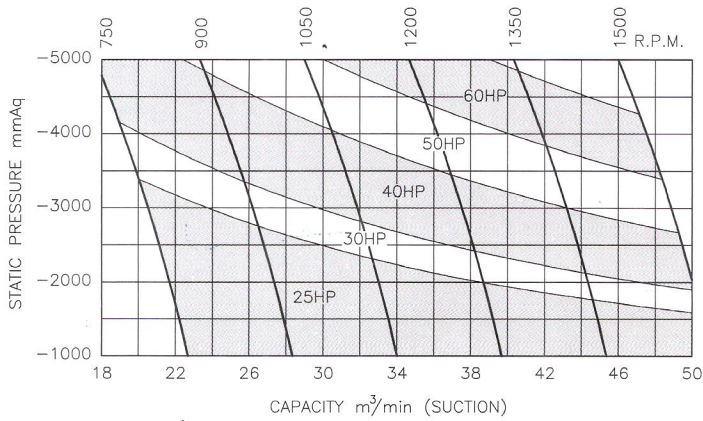
LTV-150



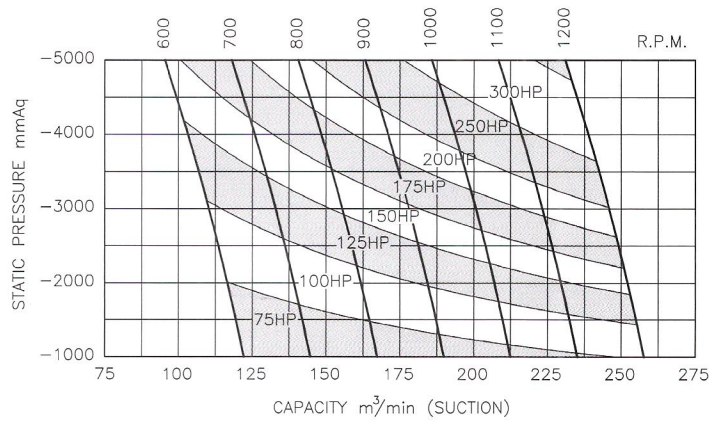
LTV-300



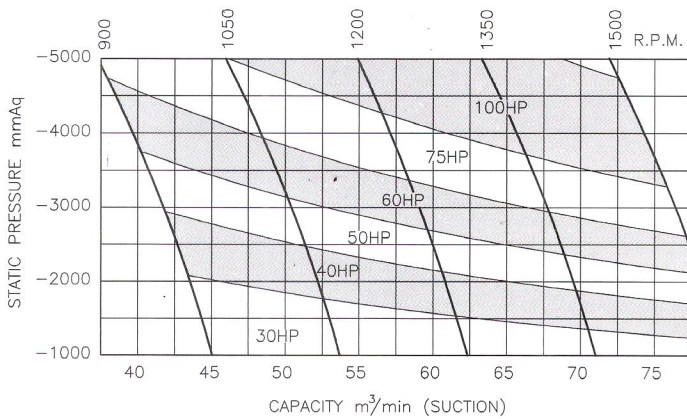
LTV-200



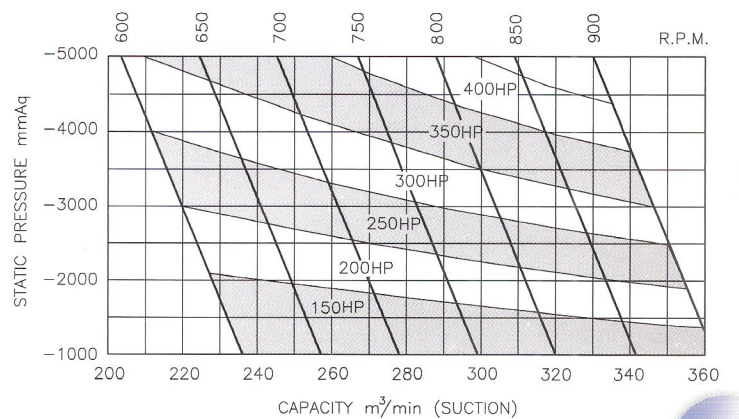
LTV-350



LTV-250



LTV-400





風量計算及性能曲線使用方法

HOW TO USE PERFORMANCE CHART

1. 鼓風機的風量可以下列型式表示：

- (1) 標準狀態STP風量(Qs)：溫度20°C，絕對壓力10332mmAq，相對濕度65%。
- (2) 基準狀態NTP風量(Qn)：溫度0°C，絕對壓力10332mmAq，相對濕度0%。

2. 性能表所示風量是標準狀態STP之吸入風量。

3. 性能表所示壓力是指鼓風機之靜壓。

4. 風量在不同壓力、溫度下的轉換公式

$$Q_2 = Q_1 \cdot \frac{P_1}{P_2} \cdot \frac{T_2}{T_1}$$

Q₁ (m³/min)：在絕對壓力P₁(mmAq)，絕對溫度T₁(°K)下之風量。

Q₂ (m³/min)：在絕對壓力P₂(mmAq)，絕對溫度T₂(°K)下之風量。

5. 靜壓的換算

(1) 壓送的場合

$$P_s = \left(\frac{10332 + P_2}{10332 + P_1} - 1 \right) \cdot 10332$$

(2) 真空的場合

$$P_s = \left(\frac{10332 + P_1}{10332 + P_2} - 1 \right) \cdot 10332$$

P₁：入口靜壓 P₂：出口靜壓 P_s：型錄之靜壓

6. 範例

操作條件：風量 5.16 m³/min
入口靜壓 -500 mmAq
出口靜壓 +4260 mmAq
入口溫度 40°C

選用：入口風量5.16 m³/min，必需換算成標準狀態(STP)時的風量。

$$Q = 5.16 \cdot \frac{10332 - 500}{10332} \cdot \frac{273 + 20}{273 + 40} = 4.60 \text{ m}^3/\text{min}$$

靜壓換算

$$P_s = \left(\frac{10332 + 4260}{10332 - 500} - 1 \right) \cdot 10332 = 5000 \text{ mmAq}$$

查性能曲線，可選擇LT-80、轉速1300RPM，馬力10HP。

7. 相同風量涵蓋二機種時，小機種具有經濟性，大機種則有較低的轉速及低噪音的優點，請參看噪音表。

1. AIR VOLUME IS GENERAL SHOWN IN TERMS OF

- (1) STANDARD STATE (Qs): AT 20°C, 10332mmAq, AND RH. 65%.
- (2) NORMAL STATE (Qn): AT 0°C, 10332mmAq, AND RH. 0%.

2. PERFORMANCE TABLE SHOWN THE CAPACITY AT THE STANDARD SUCTION STATE.

3. PERFORMANCE TABLE SHOWN THE PRESSURE AT THE STATIC PRESSURE.

4. VOLUME CONVERSION FORMULA

$$Q_2 = Q_1 \cdot \frac{P_1}{P_2} \cdot \frac{T_2}{T_1}$$

Q₁ (m³/min)：AIR VOLUME IN P₁(mmAq), T₁(°K)。

Q₂ (m³/min)：AIR VOLUME IN P₂(mmAq), T₂(°K)。

5. PRESSURE CONVERSION FORMULA

(1) FOR PRESSURE

$$P_s = \left(\frac{10332 + P_2}{10332 + P_1} - 1 \right) \cdot 10332$$

(2) FOR VACUUM

$$P_s = \left(\frac{10332 + P_1}{10332 + P_2} - 1 \right) \cdot 10332$$

P₁：SUCTION STATIC PRESSURE

P₂：DISCHARGE STATIC PRESSURE

P_s：STATIC PRESSURE IN CATALOG

6. EXAMPLE

OPERATING SPECIFICATIONS：

AIR VOLUME 5.16 m³/min
SUCTION STATIC PRESSURE -500 mmAq
DISCHARGE STATIC PRESSURE +4260 mmAq
SUCTION TEMPERATURE 40°C

CHOICE：AIR VOLUME(5.16 m³/min) CONVERTS TO STP STATE

$$Q = 5.16 \cdot \frac{10332 - 500}{10332} \cdot \frac{273 + 20}{273 + 40} = 4.60 \text{ m}^3/\text{min}$$

STATIC PRESSURE CHANGED TO

$$P_s = \left(\frac{10332 + 4260}{10332 - 500} - 1 \right) \cdot 10332 = 5000 \text{ mmAq}$$

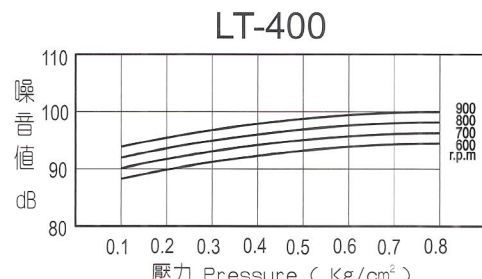
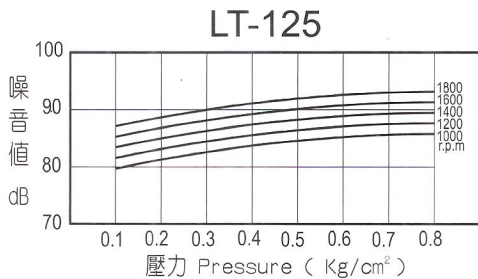
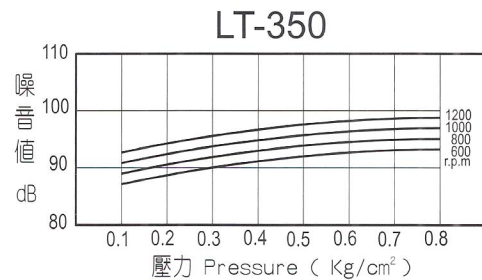
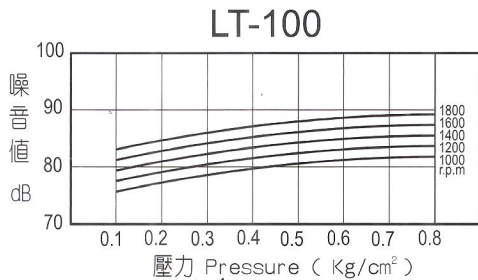
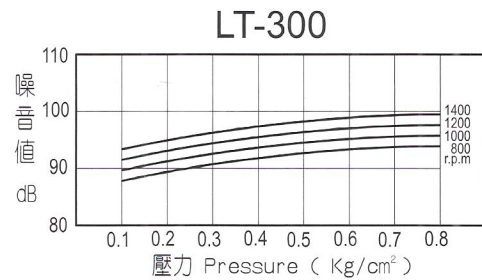
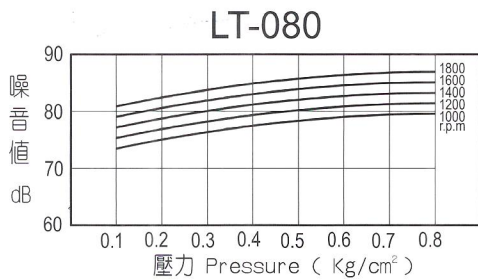
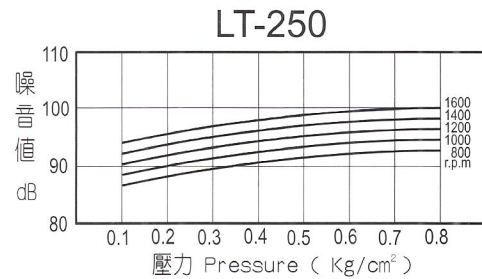
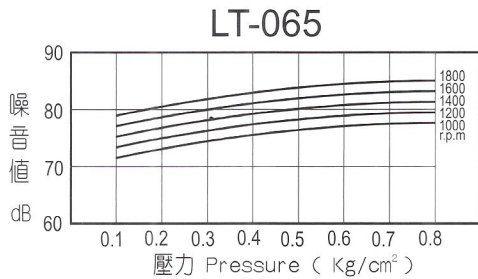
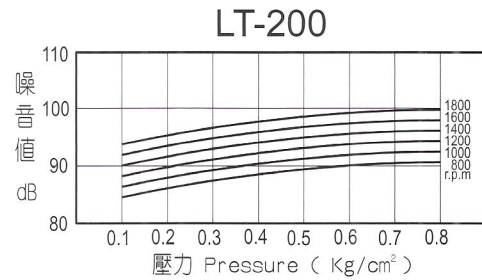
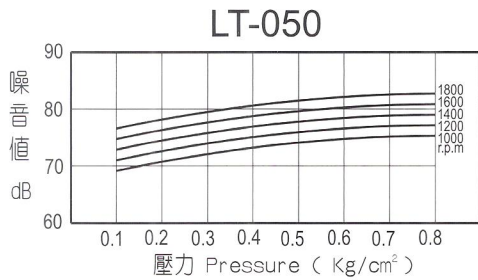
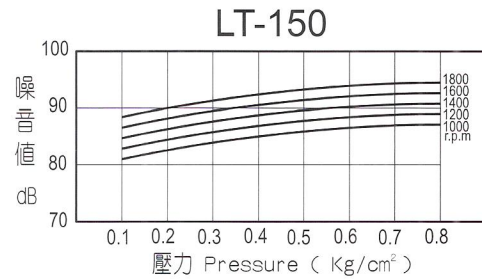
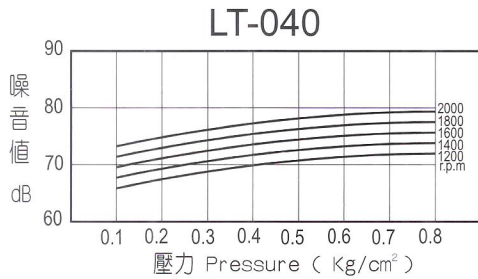
SEE THE PERFORMANCE TABLE ,YOU COULD FIND LT-80、1300RPM、10HP FITS THE SPECIFICATIONS。

7. AS THE SELECTION COVERS TWO MODELS , YOU MAY SELECT THE SMALLER FOR ECONOMIC , BUT YOU CHOICE THE BIGGER WITH THE ADVANTAGE OF LOWER RPM. PLEASE REFER TO NOISE CHART IN THE FOLLOWING PAGE。



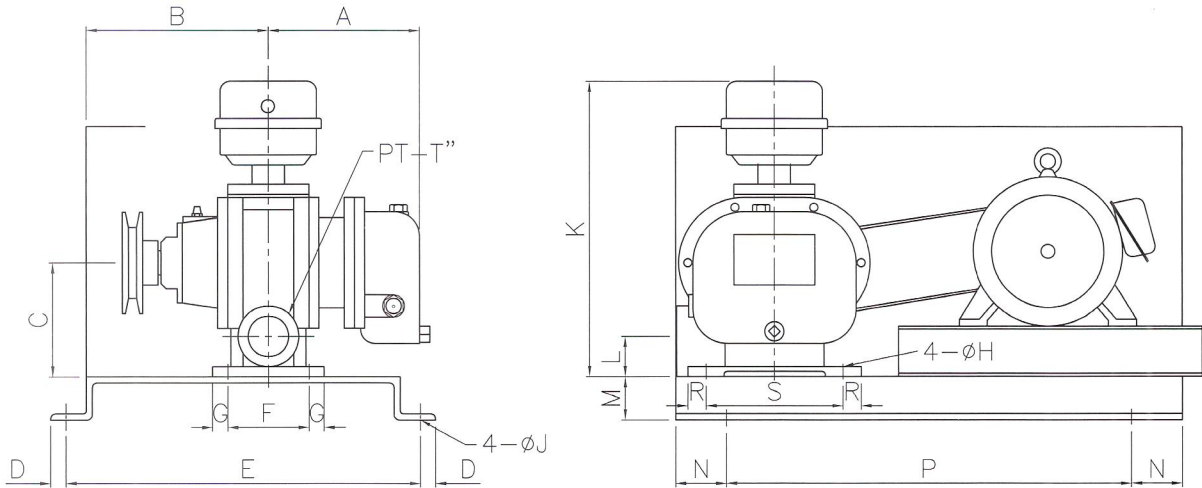
噪音表 NOISE LEVEL OF BLOWER

- ◆ 噪音資料係距離鼓風機1m及附標準消音器所測量的平均值。
- ◆ NOISE LEVEL MEASURED AT DISTANCE 1 METER FOR THE BLOWER FITTED WITH STANDARD SILENCER.
- ◆ 噪音值因加裝管路的長度及周圍的環境狀況而有所改變。
- ◆ NOISE LEVEL MAY BE DIFFERENT ACCORDING TO THE EXTEND PIPE LENGTH AND AMBIENT CONDITION.



外形尺寸圖 OUTLINE DIMENSIONS

LT-025.LT-040

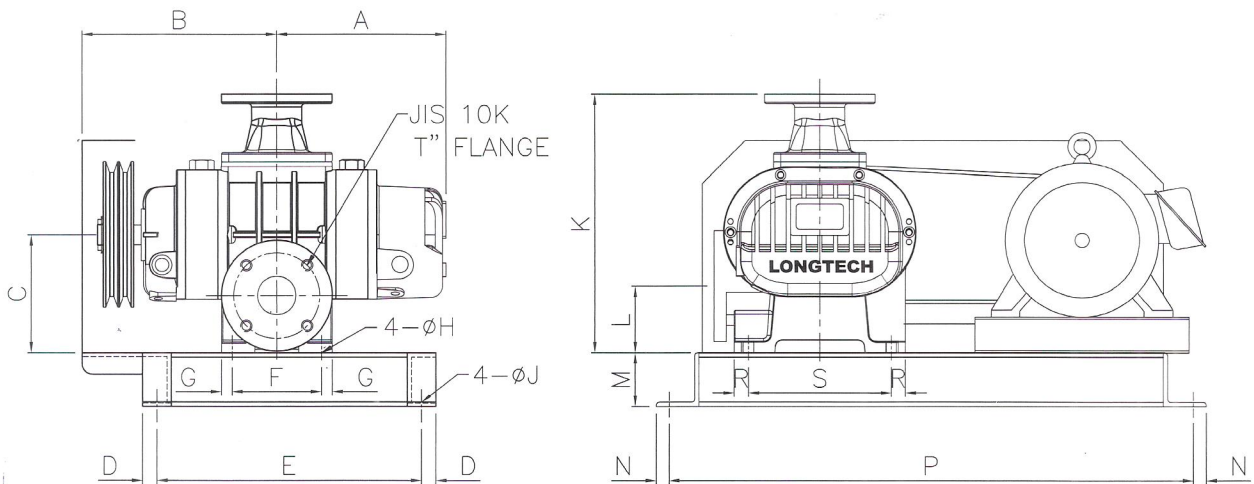


UNITS : mm

MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	Wt. (Kg)
LT-025	135	145	120	15	350	54	13	10	12	340	40	43	50	400	15	135	1	20
LT-040	160	190	120	15	350	80	15	10	12	340	40	43	50	400	15	135	1.5	25

◆ 表列重量僅為主機重量 (WT. FOR MAINBODY)

LT-050.LT-065

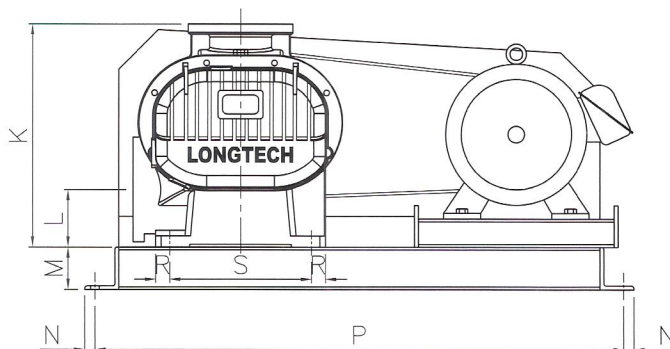
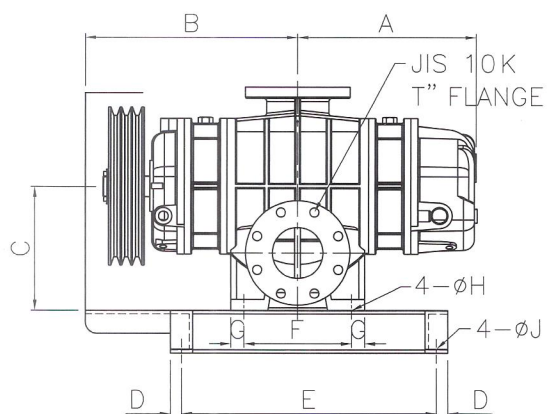


UNITS : mm

MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	Wt. (Kg)
LT-050	240	270	168	20	370	125	15	15	15	356	90	75	18	734	15	200	2	76
LT-065	280	290	173	20	370	210	15	15	15	356	95	75	18	734	15	200	2.5	94

◆ 表列重量僅為主機重量 (WT. FOR MAINBODY)

LT-080.LT-150

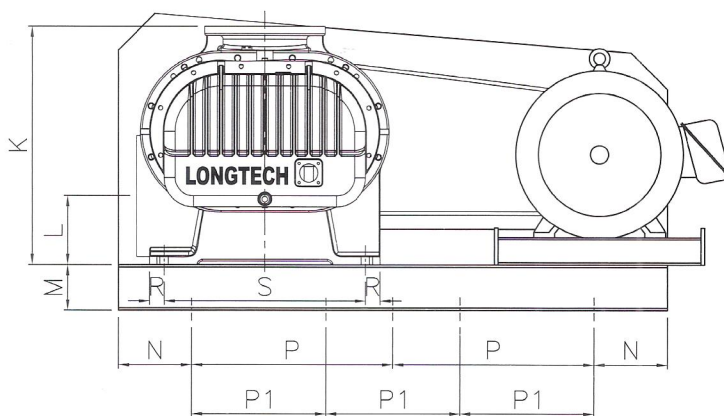
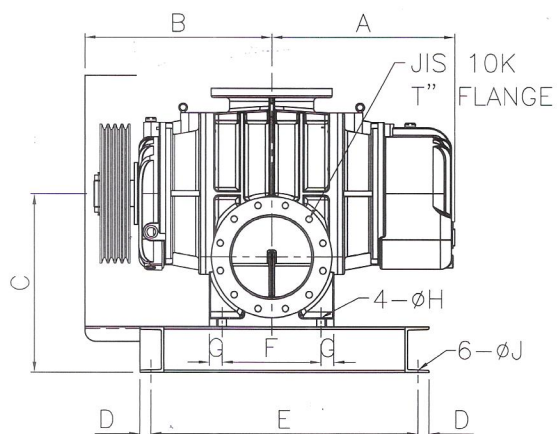


UNITS : mm

MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	Wt. (Kg)
LT-080	315	375	220	20	450	190	25	19	15	395	102	75	18	934	25	250	3	167
LT-100	365	425	220	20	450	290	25	19	15	395	115	75	18	934	25	250	4	193
LT-125	445	485	300	25	605	320	25	19	19	515	155	100	20	1190	25	350	5	353
LT-150	500	540	300	25	605	425	25	19	19	515	155	100	20	1190	25	350	6	418

◆ 表列重量僅為主機重量 (WT. FOR MAINBODY)

LT-200.LT-400



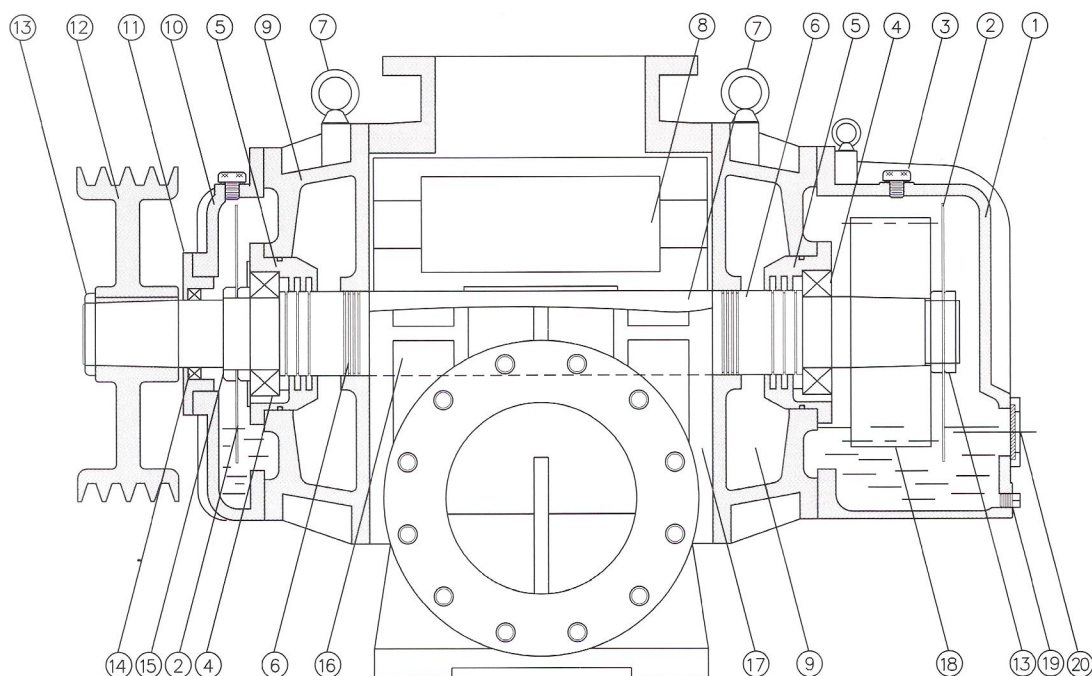
UNITS : mm

MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N	P	P1	R	S	T	Wt. (Kg)
LT-200	515	495	363	30	730	270	35	23	19	650	190	125	200	550	40	550	8	720	
LT-250	605	595	388	30	730	460	35	23	19	675	225	125	200	550	40	550	10	913	
LT-300	865	805	500	40	1120	650	65	27	24	875	250	200	200	800	55	620	12	2010	
LT-350	1000	1100	505	40	1400	960	60	27	*24	930	258	250	100	600	60	680	14	3850	
LT-400	1008	1180	945	40	1405	930	60	35	*24	1215	315	250	400	600	60	900	16	4610	

註:LT-350座底孔數為8-Ø24,特以*星號區別 ◆ 表列重量僅為主機重量 (WT. FOR MAINBODY)

構造圖 & 材質表

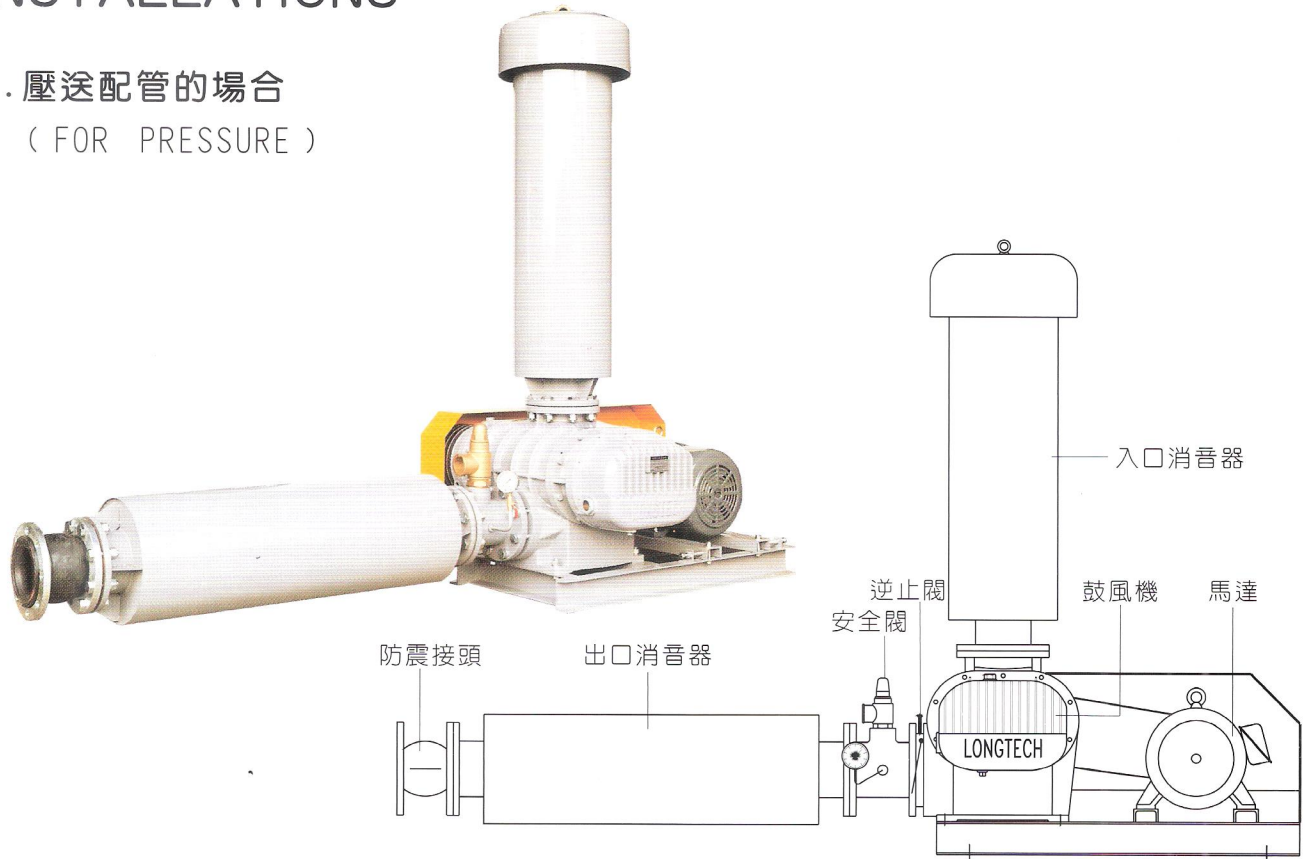
STRUCTURE & MATERIAL LIST



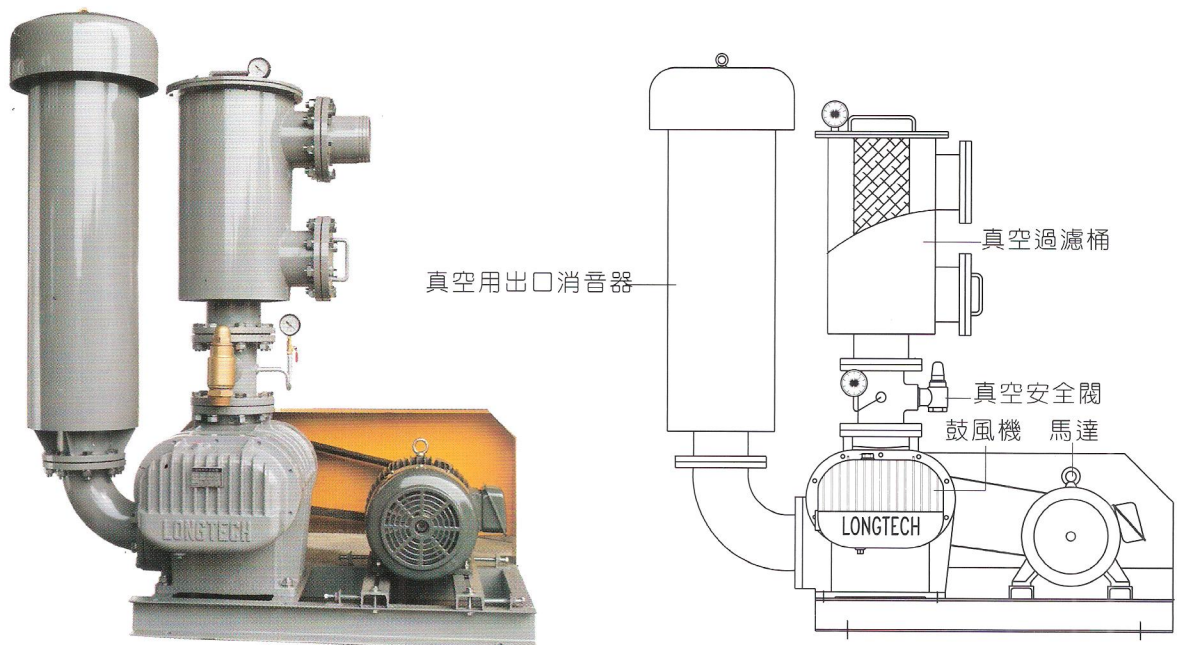
NO.	NAME	MATERIAL	NO.	NAME	MATERIAL
1.	Gearcase 齒輪箱	FC250	11.	Seal case 油封座	FC250
2.	Oil splash 甩油片	SS400	12.	Pulley 皮帶輪	FC250
3.	Oil plug 加油塞	S45C	13.	Nut 螺帽	SS400
4.	Bearing 軸承	SUJ2	14.	Seal 油封	NBR
5.	Bearing case 軸承座	FC250	15.	Nut 螺帽	SS400
6.	Labyrinth seal 軸封	SS400	16.	Shaft 主軸	SCM440
7.	Eye bolt 吊環	S45C	17.	Main casing 主體	FC250
8.	Rotor 葉輪	FC250	18.	Spur gear 正齒輪	SCM415
9.	Side cover 側蓋	FC250	19.	Oil drain 洩油塞	S45C
10.	Oil case 油箱	FC250	20.	Oil gauge 油鏡	S45C

安裝圖 INSTALLATIONS

A. 壓送配管的場合 (FOR PRESSURE)



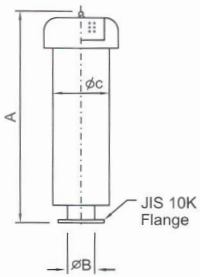
B. 真空配管的場合 (FOR VACUUM)



附屬配件 ACCESSORIES

室外入口消音器 OUTDOOR SILENCER

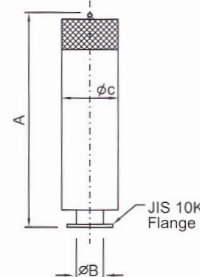
UNITS : mm



MODEL	A	B	C	適用機型
O-050	680	50	165	LT-050
O-065	680	65	165	LT-065
O-080	800	80	216	LT-080
O-100	820	100	267	LT-100
O-125	1300	125	350	LT-125
O-150	1300	150	350	LT-150
O-200	2030	200	525	LT-200
O-250	2030	250	600	LT-250
O-300	2240	300	700	LT-300
O-350	2570	350	800	LT-350
O-400	2570	400	800	LT-400

室內入口消音器 INDOOR SILENCER

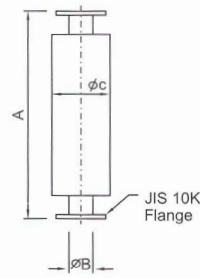
UNITS : mm



MODEL	A	B	C	適用機型
I-050	680	50	165	LT-050
I-065	680	65	165	LT-065
I-080	800	80	216	LT-080
I-100	820	100	267	LT-100
I-125	1300	125	350	LT-125
I-150	1300	150	350	LT-150
I-200	2030	200	525	LT-200
I-250	2030	250	600	LT-250
I-300	2240	300	700	LT-300
I-350	2570	350	800	LT-350
I-400	2570	400	800	LT-400

出口消音器 DISCHARGE SILENCER

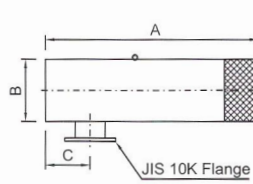
UNITS : mm



MODEL	A	B	C	適用機型
D-050	660	50	165	LT-050
D-065	660	65	165	LT-065
D-080	760	80	216	LT-080
D-100	760	100	267	LT-100
D-125	1190	125	350	LT-125
D-150	1190	150	350	LT-150
D-200	1735	200	525	LT-200
D-250	1735	250	600	LT-250
D-300	1735	300	700	LT-300
D-350	2230	350	800	LT-350
D-400	2230	400	800	LT-400

臥式消音器 HORIZONTAL SILENCER

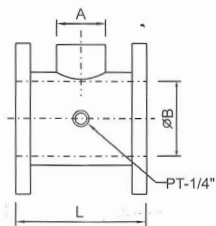
UNITS : mm



MODEL	A	B	C	適用機型
RO-050	580	165	120	LT-050
RO-065	580	165	120	LT-065
RO-080	700	216	150	LT-080
RO-100	700	267	150	LT-100
RO-125	1200	350	150	LT-125
RO-150	1200	350	150	LT-150
RO-200	1880	525	400	LT-200
RO-250	1880	600	400	LT-250
RO-300	2090	700	400	LT-300
RO-350	2420	800	400	LT-350
RO-400	2420	800	400	LT-400

三通管 "T" JOINT

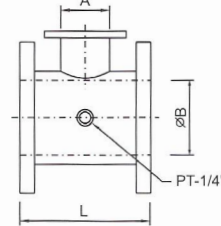
UNITS : mm



MODEL	A	B	L	適用機型
T-050	40	50	150	LT-050
T-065	40	65	150	LT-065
T-080	40	80	165	LT-080
T-100	40	100	165	LT-100
T-125	50	125	205	LT-125
T-150	50	150	210	LT-150
T-200	50	200	265	LT-200

三通管 "T" JOINT

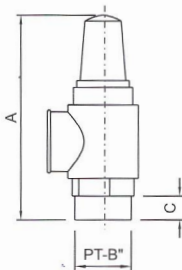
UNITS : mm



MODEL	A	B	L	適用機型
T-250	80	250	295	LT-250
T-300	125	300	350	LT-300
T-350	125	350	400	LT-350
T-400	125	400	500	LT-400

安全閥 RELIEF VALVE

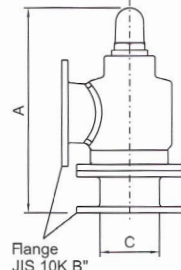
UNITS : mm



MODEL	A	B	C	適用機型
R-038	132	1.5"	26	LT-050-100
R-050	150	2"	28	LT-125-200

安全閥 RELIEF VALVE

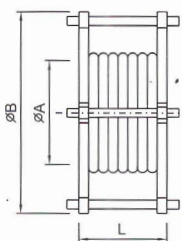
UNITS : mm



MODEL	A	B	C	適用機型
R-080	485	3"	80	LT-250-300
R-125	485	5"	125	LT-350-400

伸縮接頭 FLEXIBLE JOINT

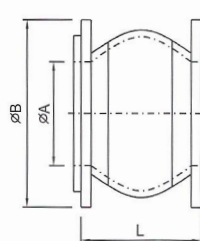
UNITS : mm



MODEL	A	B	L	適用機型
JF-050	50	155	150	LT-050
JF-065	65	175	150	LT-065
JF-080	80	185	150	LT-080
JF-100	100	210	150	LT-100
JF-125	125	250	150	LT-125
JF-150	150	280	150	LT-150
JF-200	200	330	200	LT-200
JF-250	250	400	200	LT-250
JF-300	300	445	200	LT-300
JF-350	350	490	230	LT-350
JF-400	400	560	250	LT-400

防震接頭 FLEXIBLE JOINT

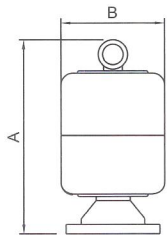
UNITS : mm



MODEL	A	B	L	適用機型
F-050	50	155	105	LT-050
F-065	65	175	115	LT-065
F-080	80	185	130	LT-080
F-100	100	210	135	LT-100
F-125	125	250	170	LT-125
F-150	150	280	180	LT-150
F-200	200	330	205	LT-200
F-250	250	400	240	LT-250
F-300	300	445	260	LT-300
F-350	350	490	265	LT-350
F-400	400	560	265	LT-400

附屬配件 ACCESSORIES

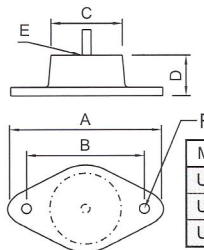
入口消音器 SHORT SILENCER



UNITS : mm

MODEL	A	B	適用機型
S-50	320	176	LT-50
S-65	320	176	LT-65

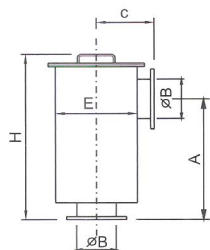
避震器 ABSORBER



UNITS : mm

MODEL	A	B	C	D	E	F	適用機型(Kg)
UJ-200J	142	110	65	55	3/8"	∅12	0~150
UJ-500J	214	166	100	57	1/2"	∅14	140~450
UJ-800J	285	220	130	80	1/2"	∅17	400~750

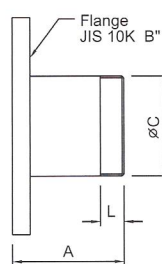
真空過濾筒 FILTER TANK



UNITS : mm

MODEL	A	B	C	E	H
B-050	395	50	180	210	530
B-065	395	65	180	210	530
B-080	480	80	210	270	670
B-100	480	100	210	270	670
B-125	760	125	270	330	770
B-150	760	150	270	330	770
B-200	920	200	370	492	1140
B-250	1092	250	350	492	1340
B-300	1200	300	420	612	1540
B-350	1300	350	515	777	1645
B-400	1300	400	515	777	1645

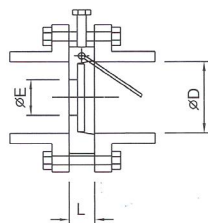
管接頭 TUBE CONNECTOR



UNITS : mm

MODEL	A	B	C	L	適用機型
V-050	95	2"	50	40	LT-050
V-065	95	2.5"	65	40	LT-065
V-080	95	3"	80	40	LT-080
V-100	95	4"	100	40	LT-100
V-125	155	5"	125	50	LT-125
V-150	155	6"	150	50	LT-150
V-200	155	8"	200	60	LT-200
V-250	155	10"	250	60	LT-250
V-300	155	12"	300	60	LT-300
V-350	160	14"	350	70	LT-350
V-400	160	16"	400	70	LT-400

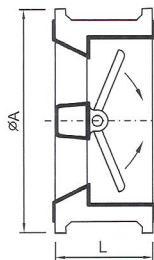
逆止閥 CHECK VALVE



UNITS : mm

MODEL	D	E	L	適用機型
C-050	50	25	17	LT-050
C-065	65	36	19	LT-065
C-080	80	46	20	LT-080
C-100	100	66	20	LT-100
C-125	125	88	23	LT-125
C-150	150	108	24	LT-150
C-200	200	138	28	LT-200
C-250	250	185	28	LT-250

逆止閥 CHECK VALVE



UNITS : mm

MODEL	A	L	適用機型
C-300	377	181	LT-300
C-350	420	184	LT-350
C-400	483	191	LT-400

單位換算 UNITS CONVERSION

壓力 PRESSURE

	mbar	Pa	atm	lbf/in ²	kgf/cm ²	in-Hg	mmAq
1 mbar	1	10 ²	9.869x10 ⁻⁴	1.45x10 ⁻²	1.02x10 ⁻³	2.953x10 ⁻²	10.197
1 Pa	0.01	1	9.869x10 ⁻⁶	1.45x10 ⁻⁴	1.02x10 ⁻⁵	2.953x10 ⁻⁴	0.102
1 atm	1.013x10 ³	1.013x10 ⁵	1	14.7	1.033	29.92	1.033x10 ⁴
1 lbf/in ²	68.95	6.895x10 ⁻²	6.805x10 ⁻²	1	7.03x10 ⁻²	2.036	7.03x10 ²
1 kgf/cm ²	9.807x10 ²	9.807x10 ⁴	0.968	14.22	1	28.96	10 ⁴
1 in-Hg	33.86	3.386x10 ³	3.342x10 ⁻²	0.491	3.45x10 ⁻²	1	3.45x10 ²
1 mmAq	9.807x10 ⁻²	9.807	9.677x10 ⁻⁵	1.42x10 ⁻³	10 ⁻⁴	2.896x10 ⁻³	1

風量 CAPACITY

	m ³ /min	m ³ /hr	l/min	ft ³ /min
1 m ³ /min	1	60	1000	35.31
1 m ³ /hr	0.017	1	16.67	0.589
1 l/min	0.001	0.06	1	0.035
1 ft ³ /min	0.028	1.699	28.32	1

功率 POWER

	kg-m/sec	kW	HP	PS
1 kg-m/sec	1	0.01	0.013	0.013
1 kW	101.97	1	1.341	1.360
1 HP	76.038	0.746	1	1.014
1 PS	75	0.736	0.986	1

龍鐵魯氏鼓風機

LONGTECH ROOTS BLOWER ROOTS TYPE BLOWER & VACUUM PUMP

訂製資料 INQUIRY

當訂製龍鐵三葉魯氏鼓風機時，請告知以下事項：

1. 用途：例如廢水處理、氣體輸送、電鍍攪拌。
2. 規格：說明風量、出入口狀態（溫度、壓力、濕度）。
3. 驅動方式：馬達型式、轉速、頻率。
4. 安裝情況：室內或室外，週圍的溫度及落塵狀態等。
5. 輸送氣體種類：氣體名稱、化學性質、比重、及是否具有腐蝕性或爆炸性。
6. 附件：說明選用之附件。

When inquiring about LONGTECH three lobes rotary blowers, please inform us as followings:

1. Applications : water aeration pneumatic conveying etc.
2. Specifications : suction capacity temperature pressure and humidity
3. Drive : motor type r.p.m. and frequency.
4. Installations : whether indoors or outdoors, ambient temperature.
5. Type of gas : name character corrosiveness specific gravity.
6. Accessories : remark accessories which to be used.



ISO 9001 認證通過