

# 導流散熱立式魯氏鼓風機

Re-circulated and Cooling Vertical -type Roots Blower



GTB65 1080



## 導流散熱立式 魯氏鼓風機之特色



- **低噪音**：入口採用二段式消音及增加緩衝隔音室設計，出口並增加豎立出口消音器，可有效降低空氣壓縮之迴流噪音。
- **高效率**：葉輪採用高效率之二葉圓滑對稱設計，並經CNC專用鉋床精密加工，使葉輪間之間隙極小，更加提高鼓風機之效率。
- **震動小壽命長**：鼓風機採豎軸直立式設計，葉輪經極精密之動平衡校正，及特殊之碟型彈簧片固定軸承設計，使鼓風機之震動值小於 $15\mu\text{m}$ 。（當鼓風機全載運轉時，可將五十元硬幣豎立而不倒）
- **節省空間**：導流散熱立式魯氏鼓風機之整體構造，為直立式馬達直接聯結鼓風機，出入口消音器皆採直立設計，可節省鼓風機之佔地空間。
- **逆轉保護裝置**：鼓風機特別加裝逆轉保護裝置，在鼓風機不慎馬達逆轉時，亦不會造成鼓風機之損壞。
- **可自行調整風量大小**：當有調整風量大小之需要時，可特別訂製風量調整裝置，風量之大小可隨時自行調整。（選購品）
- **軸承以冷空氣導流散熱強制冷卻**：利用鼓風機之入口冷空氣，將其導入軸承四周可迅速冷卻軸承，因此軸承不過熱，潤滑油脂不變質，可延長更換油脂之時間。
- **採用全密閉屋外型馬達**：即使將鼓風機放置室外亦不怕風吹日曬雨淋。（戶外使用）
- **永久免更換皮帶**：鼓風機與馬達採用連軸器直接傳動，可節省更換皮帶之費用，並可避免皮帶粉屑對環境之污染。
- **免固定**：特殊防震腳設計，重心穩機身不晃動，免固定配管及施工容易。

## Features of Re-circulated and Cooling Vertical-type Roots Blower

- **Low Noise:** The inlet adopts The design of two-stage muffling, added by the buffering acoustic encloures. The erect outlet muffleris additionally installed on the outlet, so that the recurrent noise form air compression can be effectively reduced.
- **High Efficiency:** The lobe wheel uses the two-lobe round and symmetrical design, which, undergoing the precise processing by the planing machine exclusively for CNC, can minimize the space between the lobe wheels so as to enhance the efficiency of the blower.
- **Small Vibration & Long Durability:** The blower is of the erect axle vertical design. Its lobe wheels are calibrated by extremely precise dynamic balancing with the fixed bearing design of the special disk-shape spring lamination, which leads to less than 15  $\mu$ m engine vibration. (When the blower operates with full load, it can hold 50 \$ coin so standing that it would not fall down.)
- **Save Space:** The entire structure of re-circulated cooling vertical-type Roots Blower is directly connected by the vertical motor to the blower with the adoption of the vertical design on the muffler of both the outlet and inlet, so that the space where the blower occupies can be saved.
- **Reverse Rotation Protection Device:** The bolwer is especially installed with one more reverse rotation protection device which can protect the blower form being damaged even when its motor happens to be rotated in reverse direction.
- **Self Adjustment of Air Flow :** By the specially tailored air flow adjuster, the operator can adjust the volume of air flow by himself at any time whenever the need for adjustment of air flow comes up. (optional accessory )
- **Mandatory Cooling by using the cool air to re-circulate and cool the bearing:** Make use of the cool air in the inlet of the blower and induct it around the bearing for cooling. therefore the bearing will not be over-heated and the lubrication grease will not change its quality, so the grease replacement time can be lengthened.
- **Adoption of Full Close Outdoor Motor:** Even if the blower is placed outdoors, you don't worry that it will suffer form weather. (for blower to be installed in outdoor)
- **Permanent Exemption of Belt Replacement:** The blower and the motor adopt the axle connector for direct driving, which can save the expenses of the blet replacement and prevent form the environment pollution caused by the belt powder.
- **Exemption form Fixation:** The special anti-vibration device can stabilize the machine's center of gravity and avoid its body form being shaky. No fixed piping is required and the installation is easy.



## GTB型(導流散熱立式魯氏鼓風機) 性能表60Hz

Performance Chart 60 Hz of GTB Model (Re-circulated and Cooling Vertical-type Roots Blower)

型式 Model	口徑 Bore	馬達 Motor	0.1kgf/cm <sup>2</sup>		0.2kgf/cm <sup>2</sup>		0.3kgf/cm <sup>2</sup>		0.4kgf/cm <sup>2</sup>		0.5kgf/cm <sup>2</sup>		0.6kgf/cm <sup>2</sup>		噪音 noise db	重量 weight Kg
			1000mmAq		2000mmAq		3000mmAq		4000mmAq		5000mmAq		6000mmAq			
			CMM	Kw	CMM	Kw	CMM	Kw	CMM	Kw	CMM	Kw	CMM	Kw		
GTB4075	1.5B	1Hp	0.97	0.69	0.85	0.75								54	99	
GTB4015	1.5B	2Hp	0.97	0.83	0.85	0.89	0.74	0.96	0.63	1.05	0.52	1.15		56	106	
GTB40A15	1.5B	2Hp	2.1	0.9	1.8	1.11	1.5	1.31	1.3	1.53				58	144	
GTB40A22	1.5B	3Hp	2.1	0.9	1.8	1.11	1.5	1.31	1.3	1.53	1.1	1.75	0.9	1.96	59	157
GTB5022	2B	3Hp	2.9	1.6	2.6	1.76	2.4	1.89	2.2	2.09				62	165	
GTB5037	2B	5Hp	2.9	1.85	2.6	1.99	2.4	2.12	2.2	2.27	2	2.47	1.8	2.69	63	174
GTB6522	2.5B	3Hp	4.1	1.58	3.9	1.85	3.6	2.18						64	180	
GTB6537	2.5B	5Hp	4.1	1.85	3.9	2.06	3.6	2.34	3.3	2.64	3.1	2.93	2.8	3.29	67	190
GTB65A37	2.5B	5Hp	5.4	2.97	5.1	3.43	4.7	3.72						68	230	
GTB65A55	2.5B	7.5Hp	5.4	2.97	5.1	3.43	4.7	3.72	4.5	4.2	4.3	4.8	4.1	5.3	69	243
GTB8037	3B	5Hp	6.7	3.23	6.4	3.61								68	250	
GTB8055	3B	7.5Hp	6.7	3.23	6.4	3.61	6	4.09	5.7	4.73	5.3	5.5		69	263	
GTB8075	3B	10Hp	6.7	3.45	6.4	3.88	6	4.41	5.7	4.93	5.3	5.6	5	6.2	72	274
GTB10055	4B	7.5Hp	9.4	3.79	9	4.55	8.6	5.37						73	295	
GTB10075	4B	10Hp	9.4	4	9	4.67	8.6	5.41	8.2	6.63	7.8	7.3		75	300	
GTB10011	4B	15Hp	9.4	4	9	4.67	8.6	5.41	8.2	6.63	7.8	7.3	7.4	7.97	77	346
GTB12511	5B	15Hp	11.5	5.7	11	6.7	10.5	7.8	10.1	8.8	9.6	10.6	9.1	11.8	80	370
GTB125A15	5B	20Hp	14.4	7.8	14.2	9.5	14.1	11.2	14	13				82	505	
GTB125A18	5B	25Hp	14.4	7.8	14.2	9.5	14.1	11.2	14	13	13.9	15.2	13.8	17.5	85	560
GTB15022	6B	30Hp	20.2	10.6	20	12.7	19.8	15.1	19.4	17.9	19.3	21.5		88	741	
GTB15030	6B	40Hp	20.2	10.6	20	12.7	19.8	15.1	19.4	17.9	19.1	21.5	18.8	24.5	89	770
GTB150A30	6B	40Hp	28.8	13.2	28.1	15.4	27.5	18.5	26.9	23.6	26.2	28.2	25.7	32.5	90	849
GTB20037	8B	50Hp	34.1	16.5	32.9	20.2	32.1	24.4	31.2	30.5	30.1	35.7		91	1165	
GTB20045	8B	60Hp	34.1	16.5	32.9	20.2	32.1	24.4	31.2	30.5	30.1	35.7	29.2	41.5	92	1165
GTB200A45	8B	60Hp	46.3	21	45.6	27	44.7	33	43.9	41				94	1658	
GTB200A55	8B	75Hp	46.3	21	45.6	27	44.7	33	43.9	41	43.2	54		95	1746	
GTB200A75	8B	100Hp	46.3	21	45.6	27	44.7	33	43.9	41	43.2	54	42.3	60	96	1842

## GTB型(導流散熱立式魯氏鼓風機) 性能表50Hz

Performance Chart 50 Hz of GTB Model (Re-circulated and Cooling Vertical-type Roots Blower)

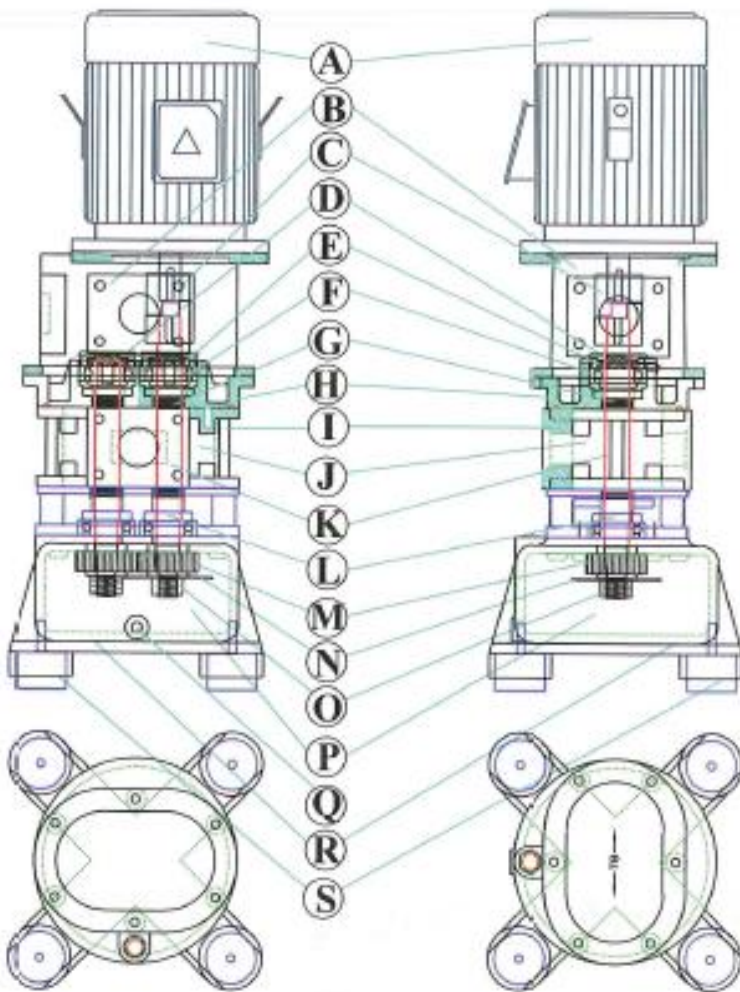
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GTB4075	1.5B	1Hp	0.8	0.58	0.7	0.62								54	99	
GTB4015	1.5B	2Hp	0.81	0.69	0.71	0.74	0.62	0.8	0.53	0.87	0.43	0.96		56	106	
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GTB8055	3B	7.5Hp	5.5	2.7	5.3	3.1	5	3.7	4.7	4.2	4.4	4.7		69	263	
GTB8075	3B	10Hp	5.5	2.7	5.3	3.1	5	3.7	4.7	4.2	4.4	4.7	4.1	5.2	72	274
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GTB10075	4B	10Hp	7.8	3.4	7.5	3.9	7.1	4.5	6.8	5.6	6.5	6.1		75	300	
GTB10011	4B	15Hp	7.8	3.4	7.5	3.9	7.1	4.5	6.8	5.6	6.5	6.1	6.1	6.7	77	346
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GTB125A15	5B	20Hp	12	6.5	11.5	7.9	11.1	9.3	10.5	10.8				82	505	
GTB125A18	5B	25Hp	12	6.5	11.5	7.9	11.1	9.3	10.5	10.8	10.1	12.7	9.5	14.6	85	560
GTB15022	6B	30Hp	16.8	8.8	16.5	10.6	16.1	12.6	15.5	14.9	15	17.9		88	741	
GTB15030	6B	40Hp	16.8	8.8	16.5	10.6	16.1	12.6	15.5	14.9	15	17.9	14.5	20.4	89	770
GTB150A30	6B	40Hp	24	11	23.4	12.8	22.9	15.4	22.4	19.7	21.8	23.5	21.4	27.1	90	849
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GTB200A45	8B	60Hp	38.5	17.5	38	22.5	37.2	27.5	36.6	34.2				94	1658	
GTB200A55	8B	75Hp	38.5	17.5	38	22.5	37.2	27.5	36.6	34.2	36	39.2	35.2	44.2	95	1746

## 導流散熱立式魯氏鼓風機結構圖

Material List of Re-circulated and Cooling Vertical-type Roots Blower

## 導流散熱立式魯氏鼓風機材質表

Structure Diagram of Re-circulated and Cooling Vertical-type Roots Blower



序 Sequence	名 稱 Name	材 質 Material	量 Quantity	指定材質 Specified Material
A	直立式馬達 Motor	FC200	1	
B	導流散熱連結座 Re-circulated base	FC250	1	
C	連結器 Coupling	FCD500	1	
D	軸承固定片 Bearing Washer	S45C	4	
E	碟型彈簧片 Disc Springs	N63CA	4	
F	軸承 Bearing	SUJ2	4	
G	軸心襯套 Shaft Link	S45C	2	
H	軸承座 Bearing Base	FC250	2	
I	本體 Main Casing	FC250	1	
J	葉片 Rotor	FCD500	2	
K	轉軸 Shaft	SCM440	2	
L	軸封 Oil Seal	NBR	2	
M	齒輪 Gear	SCM415	2	
N	甩油片 Front Oil splash	SS41	1	
O	固定螺絲帽 Nut	S45C	2	
P	油箱 Oil Case	FC250	1	
Q	油栓 Oil plug	SUS304	2	
R	支撐腳 Base	FC250	4	
S	防震墊 Vibration Isolator	SBR	4	



導流散熱室設計  
Design of Re-circulated and Cooling Chamber

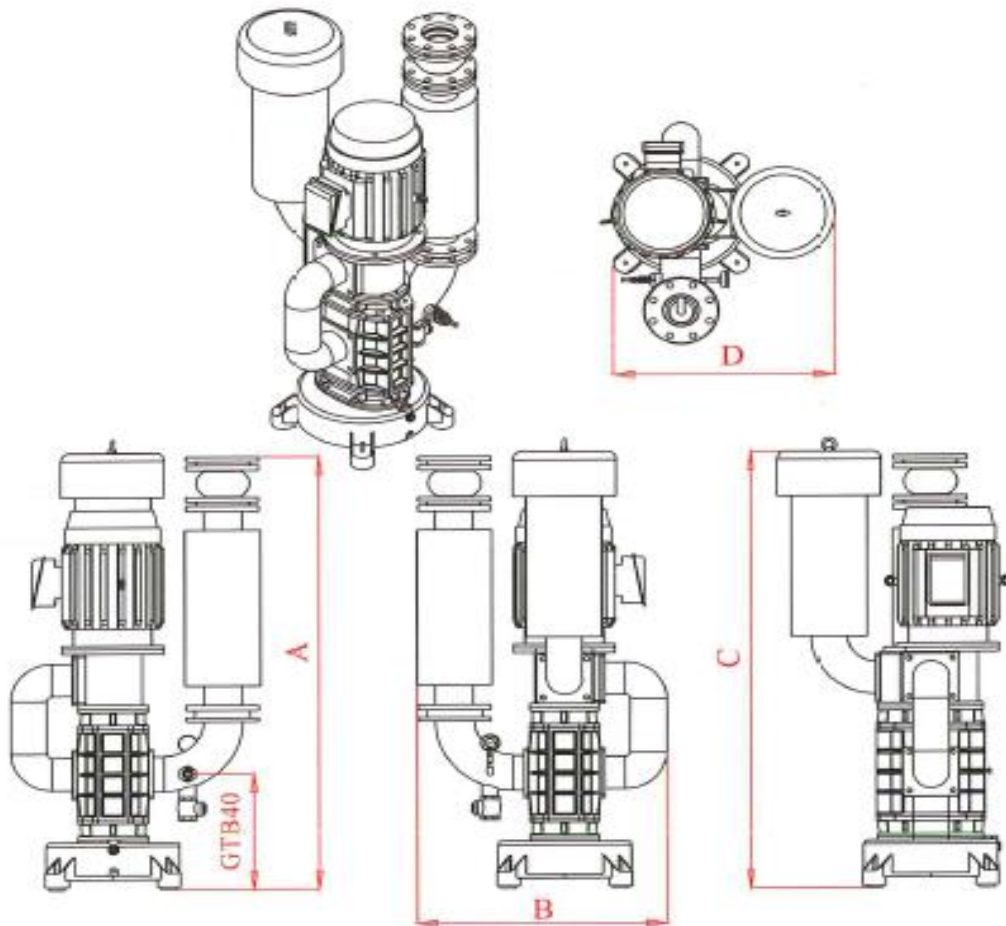


特殊風量調整裝置  
Special Air Flow Adjustment Device



入口二段式消音  
Two-stage Inlet Muffling

# 外觀尺寸圖 Appearance Dimensional

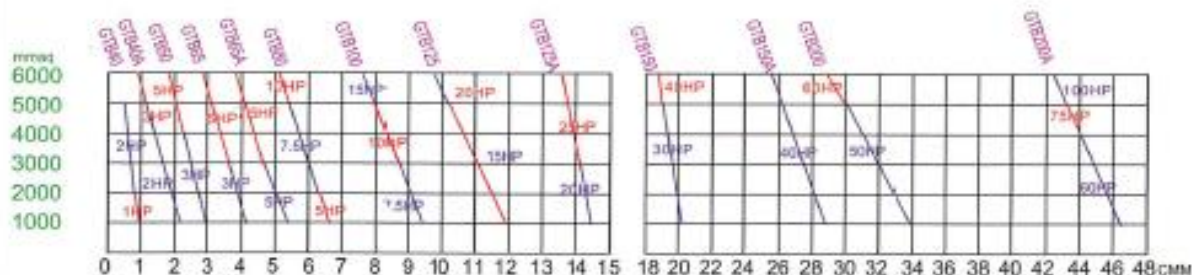


單位：mm

Type	GTB40	GTB40A	GTB50	GTB65	GTB65A	GTB80	GTB100	GTB125	GTB125A	GTB150	GTB150A	GTB200	GTB200A
A	275	1020	1050	1130	1120	1335	1350	1665	1670	2140	2182	2288	2862
B	535	550	550	590	630	685	755	835	855	1132	1132	1132	1418
C	930	984	1040	1090	1080	1420	1470	1625	1685	2180	2269	2379	3290
D	480	480	480	480	550	620	620	695	755	946	946	946	1520

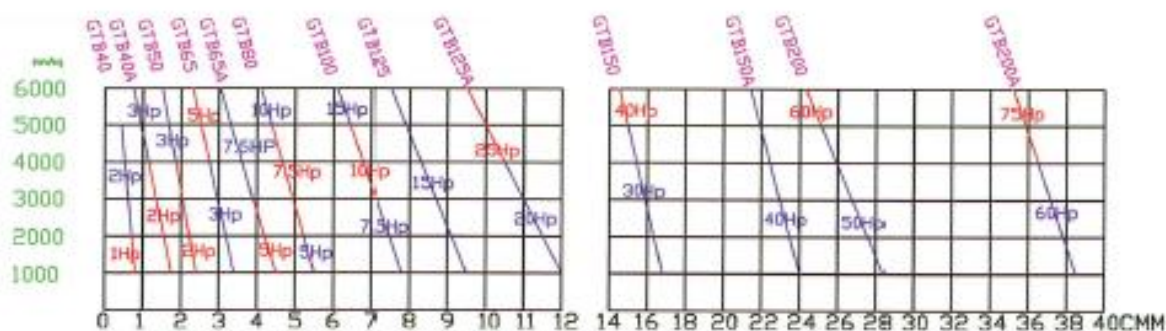
## GTB型導流散熱立式魯氏鼓風機性能曲線圖 60Hz

Performance Curve Drawing 60 Hz of GTB Type Re-circulated and Cooling Vertical-type Roots Blower



## GTB型導流散熱立式魯氏鼓風機性能曲線圖 50Hz

Performance Curve Drawing 50 Hz of GTB Type Re-circulated and Cooling Vertical-type Roots Blower



逆轉保護裝置  
Reverse Rotation Protection Device



採用屋外型馬達  
Adoption of Outdoor motor



運轉時硬幣可豎立  
Coin is erectile during rotation

## 導流散熱立式魯氏鼓風機

Air Current Conduction Radiating Heat Full-Length Roots Blower

使用場所：社區、大樓、學校、醫院、餐廳、飯店、休憩場所、畜牧廢水

- 1 節省空間
- 2 免換皮帶
- 3 高效率
- 4 軸承冷空氣強制冷卻免保養
- 5 壽命長
- 6 低噪音



## 沉水式魯氏鼓風機

Submersible Roots Blower

使用場所：大樓、學校、醫院、社區

- 1 無噪音
- 2 省空間
- 3 高效率
- 4 免換皮帶

## 皮帶式魯氏鼓風機

Traditional Belt Roots Blower

使用場所：工廠、養殖、學校、社區、大樓、畜牧廢水

- 1 效率高
- 2 壽命長
- 3 各種尺寸齊全



GTB40A930

GTB40275

Features of R