



Minimal Vibration and Lowes Noise



TRUNDEAN MACHINERY INDUSTRIAL CO., LTD.



Professional Manufacturer of Roots Blower



TH Type Roots Blower



THD Type
Direct Drive Roots Blower



THV Type Roots Vacuum Blower



TV Type Vertical Roots Blower



TSW Type Submersible Roots Blower



THL Type
Two Section Roots Blower



THVE Type(European Style)
Roots Vacuum Blower



TS Type Ring Blower



THW Type
Water-Cooled Roots Blower



THS Type
Partial Water-Cooled Roots Blower



TMD Type Magnetic Drive Pump



Diffusers Tubes



Trundean OverviewIntroduction / Operating Principles

Trundean Machinery Industrial Co., Ltd. was founded in 1982. We insist on seeking high-quality talented acquisition of overseas new concepts, to set up a business reputation of excellence and perfection. Trundean Machinery Industrial Co., Ltd. has intensified our spirit and attitude in our quest for perpetual betterment, to seek sustained research and improvement, to persist in aggressively adhering to the policy of "customer first, quality first, service first" to ensure customers with quality after-sale services.

In the past years, with the upgrading of domestic industrial standards, and in view of the imperativeness to enhance market competitiveness, we have passed ISO 9001 in 2002, and passed CE certification in 2005. In this competitive market, we have been seeking product stability, standardized production processes, and continued to renew installation of production equipment and inspection equipment, so that our products are not inferior to those in advanced countries. And we have actively invested in research and development and made improvement on all our products, including Roots Blower, Vertical Blower, Submersible Blower, and Magnetic Drive Pump.

Besides developing the Taiwanese market, Trundean Machinery Industrial Co., Ltd. has actively developed overseas markets, and produced the "TRUNDEAN" brand for sales in overseas markets. Export markets have been extended to more than 60 countries, and our products have been highly recommended by local users. Based on firm and stable quality, Trundean Machinery Industrial Co., Ltd. enthusiastically develops new products and provides sincere and prompt service, providing better service to our customers and establishing excellent cornerstones for our sustainable business operation.

Patent is to approve our R & Dachievement and the glory of leading the industry.



Patent for Roots Blower Series



Patent for THW Type



Patent for TV Type



Patent for TMD Type



Patent for Roots Blower Series



Patent for THW Type



Patent for TV Type



Patent for TMD Type

Certification is to decide our position in the market and the bridge to the world.













ISO 9001:2000



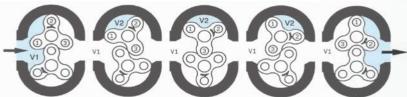


Features of TRUNDEAN Roots Blower:

- 1. The air compartment and the side cover of our blower has a flange and groove rim, which can not only strengthen the blower's operational functions but also prevent eccentric phenomenal resulting from the fastening of the stud, which may shorten the life of the blower.
- 2. To reduce man-made errors, enhance the precision of the leave wheel, and to higher the blower efficiency, our rotor uses the most advanced one time work process Four-Shaftmethod.
- 3. Appropriate clearance between the rotors and the rotors with the casing ensure no direct operational contact, hence no lubrication is necessary. The synchronous gear drive system and the shaft bearings are the only parts which require lubrication. Separate lateral chambers are designed to house these moving parts with proper seals to prevent oil leakage to the main chamber.
- 4. Computerized CNC machines are used to produce components and parts of high quality and precision also saves the user both time and labor during maintenance and replacement.
- 5. Low Noise & Minimal Vibration: Noise and vibration reduction are the main emphasis in developing the new series of roots blower. The TRUNDEAN Blower rotor concept was adopted based on its flow char-

acteristics which are very stable and even compared to the 2 lobes type, also coupled with the fact that it shows a considerable reduction of both noise and vibration. The ext ent of reduction can even allow the smaller unit to operate without the need of a silencer.

Principle of Blower Operation:



There are two rotors in the compartment of the blower body, when the rotors operate in opposite direction, they suck air in to balance the pressure created due to the volume V1 change on the inlet side. And the air of the volume V2 will be sent out thru the discharge side and the high pressure will be created thru the discharge.

There is no need to supply any lubrication between two rotors because of the existing clearance between them which gives no worry about the possibility of friction. The blower runs well at high speed and produces clean air, it is also applied to vacuum purpose.

Usage of Performance Table:

The performance table shows relationships among blower type, bore, rpm., discharge pressure, theoretical air capacity and shaft power.

- 1. The air volume shown in the performance table represents a suction volume under standard suction condition (temp. 20 °C, absolute pressure 1.0332 kg/cm2, relative humidity 65%).
- 2. In case an air flow under the normal condition (0 °C 1.0332 1.0332 kg/cm2 ABS) is equivalent to a suction pressure, it can be converted to an air flow under the standard condition by means of following formula:

Qs=Qn
$$\frac{\gamma n}{\gamma}$$
 γ =0.465 $\frac{P-0.378 \phi x \ Ps}{273+t}$ ϕ : Humidity(%) P: Pressure(

Qn: Air flow under normal condition Nm³/min Qs: Air flow under standard condition (indicated in the performance table,m³/min)

 Υ : Air ratio weight(kg/m³) Ps: Water vapor saturation pressure of the temperature(mmHg) T: Absolute Temperature(273+t)°C

3. An air flow under discharge condition can be converted to an air flow under standard condition:

- 4. Seek blower type, bore, rpm., and shaft power of the performance table based on the air flow and required discharge pressure obtained as a result of the aforementioned results.
- 5. The selective range is duplicated depending on blower types. However, as a selective criterion, choose blowers of the smaller type from a economical viewpoint and those of the larger type from a viewpoint of noise level.



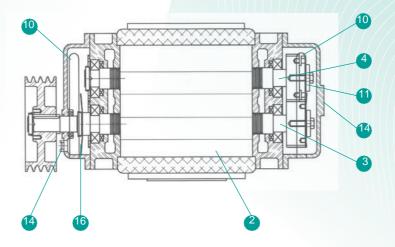
THW Type Structural Drawing

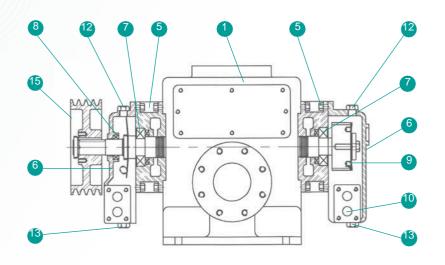


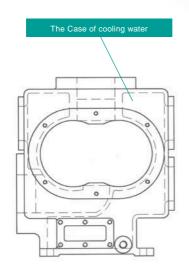
THW Type (Pressure Conveyance)

Pressure: 0~10000 mmAq

Power: 15~300 HP







NO.	Name	Material	Q'ty	NO.	Name	Material	NO.
1	Main body	FC25	1	9	Gear	SNCM220	2
2	Rotor	FC25	2	10	"S"Ring	Brass	2
3	Drive Shaft	S45C	1	11	Washer	S45C	2
4	Driven Shaft	S45C	1	12	Lubriction Plug	PP	2
5	Bearing Base	FC25	2	13	Drain Plug	FCMB28	2
6	Oil Box	FC25	2	14	Oil Gauge	BRASS	2
7	Bearing	SUJ2	4	15	Pulley	FC20	1
8	Oil Seal	NBR	1	16	Oil Splasher	SS41	1

[※] Could be manufactured by special material

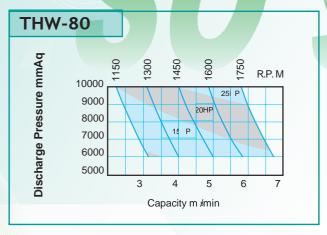


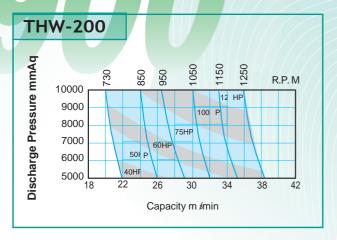
THW Type Performance Table (Pressure Conveyance)

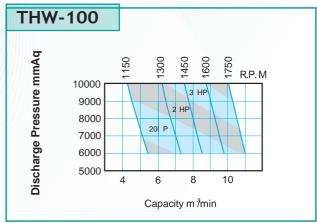
Models	Speed	6000	mmAq	7000 ı	mmAq	8000	mmAq	9000 ı	mmAq	10000	mmAq	Cooling water
Models	R.P.M	m ³ /min	kw	m ³ /min	kw	m ³ /min	kw	m³/min	kw	m ³ /min	kw	L/min
	1150	3.61	7.1	3.41	8.2	3.18	9.2	2.95	10.5	2.75	11.4	
	1300	4.51	8.0	4.30	9.2	4.08	10.4	3.84	11.6	3.65	12.8	
THW-80	1450	5.41	9.0	5.20	10.3	4.98	11.6	4.64	13.0	4.44	14.3	8
	1600	6.30	9.9	6.09	11.4	5.87	12.8	5.43	14.3	5.33	15.9	
	1750	7.20	10.8	6.99	12.4	6.77	14.0	6.33	15.6	6.23	17.2	
	1150	5.52	10.1	5.16	11.6	4.92	13.1	3.92	12.6	3.76	14.1	
	1300	7.31	11.4	7.00	13.1	6.79	14.8	6.43	16.5	6.27	18.2	
THW-100	1450	8.57	12.7	8.25	14.6	8.04	16.5	7.86	18.4	7.51	20.3	10
	1600	9.82	14.1	9.51	16.2	9.30	18.2	8.94	20.4	8.78	22.3	
	1750	11.00	15.4	10.70	17.7	10.55	19.9	10.20	22.3	10.10	24.0	
	970	10.6	18.5	10.1	21.4	9.8	24.2	9.1	27.1	8.9	29.9	
	1150	13.8	22.0	13.3	25.4	13.0	28.7	12.3	32.2	12.1	35.4	
THW-125A	1300	16.5	24.8	16.0	28.7	15.6	32.4	15.0	36.4	14.8	40.0	15
	1450	19.1	27.7	18.6	32.0	18.3	36.2	17.6	40.6	16.5	44.7	
1	1600	21.8	30.6	21.3	35.3	20.9	39.9	20.3	44.7	20.1	49.2	
	850	16.1	26.7	16.0	28.2	15.7	31.8	14.2	43.7	13.6	43.2	
	1000	20.3	31.4	20.1	33.4	19.8	37.7	18.4	46.0	17.9	50.9	
THW-150A	1150	24.5	36.1	23.6	37.8	23.2	42.6	22.7	52.9	22.1	58.5	18
	1250	27.3	39.3	27.0	42.1	26.7	47.5	25.5	57.5	24.9	63.6	
	1400	31.6	44.0	30.4	46.5	30.1	52.5	29.7	64.4	29.1	71.3	
	850	22.9	34.6	22.3	39.7	21.7	45.1	21.0	50.2	20.6	55.6	
	950	26.7	38.7	26.1	44.4	25.5	50.5	24.8	56.2	24.4	62.3	
THW-200	1050	30.5	42.8	29.9	49.1	29.3	55.9	28.6	62.2	28.2	69.0	20
	1150	34.2	46.8	33.6	53.8	33.1	61.2	32.3	68.1	32.0	75.6	
	1250	38.0	50.9	37.4	58.5	36.9	66.6	36.1	74.1	35.8	82.3	
	850	37.1	52.3	36.2	60.3	35.3	68.6	34.5	77.0	33.6	85.0	
	950	42.9	58.4	42.0	67.4	41.1	76.7	40.3	86.0	39.4	95.0	
THW-250	1050	48.7	64.5	47.8	74.5	46.9	84.8	46.1	95.0	45.2	105.0	25
	1150	54.4	70.6	53.5	81.6	52.6	92.8	51.8	104.0	50.9	115.0	
	1250	60.2	76.7	59.3	88.7	58.4	101.0	57.6	113.0	56.7	125.0	
	650	64.8	97.8	63.2	123.0	61.8	139.2	60.4	156.4	59.0	173.6	
	730	75.3	118.5	73.7	138.0	72.4	156.4	70.9	176.0	69.6	185.2	
THW-300A	800	84.5	130.0	82.9	150.7	81.5	171.4	80.2	192.1	78.9	212.8	35
	880	95.1	143.8	93.5	165.6	92.1	188.6	90.8	211.6	89.5	234.6	
	980	108.1	159.9	106.6	185.2	105.2	210.5	103.9	235.8	102.6	261.1	

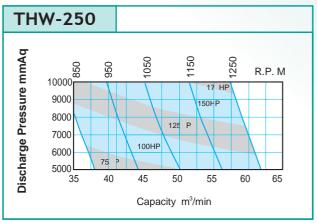


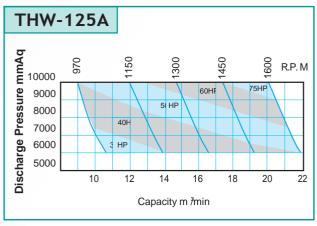
THW Type Performance Curve (Pressure Conveyance)

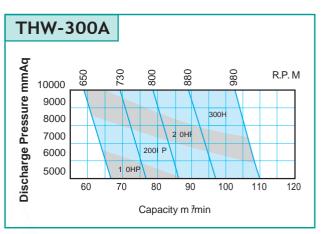


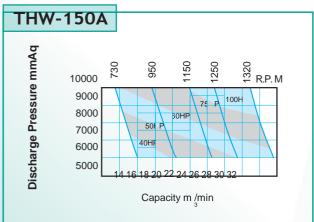






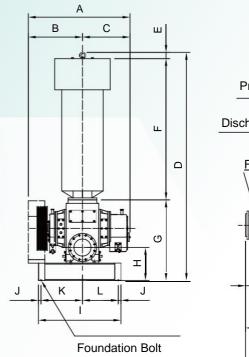


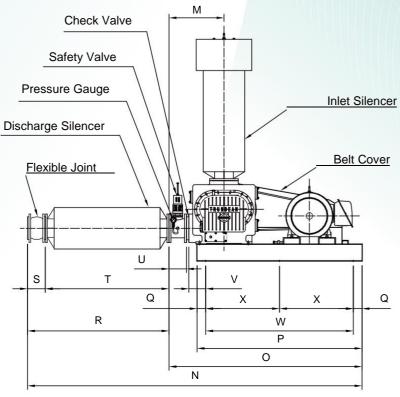






THW Type Dimension Drawing





Models	А	В	С	D	Е	F	G	Н	1	J	К	L	М	N	0	Р	Q	R	S	Т	U	٧	W	Х	W1	W2
THW-80	705	390	315	1383	51	782	550	245	470	18	247	187	411	2083	1161	900	100	923	130	793	185	160	700		237	320
THW-100	799	435	365	1442	51	841	550	245	470	18	292	142	411	2165	1161	900	100	933	135	797	185	160	700		254	356
THW-125A	963	480	483	2182	60	1492	630	275	600	22	288	268	496	3096	1399	1100	100	1592	170	1422	200	183	900	850	498	673
THW-150A	1066	555	511	2282	60	1492	730	310	600	25	395	155	556	3396	1716	1400	100	1606	180	1426	200	200	1200		717	914
THW-200	1171	624	547	2633	71	1632	930	380	950	30	477	413	633	3854	2223	1900	100	1631	205	1426	200	195			896	1310
THW-250	1352	710	642	2633	71	1632	930	430	950	30	563	327	683	3943	2273	1900	100	1670	240	1430	250	195		850	1217	1683

W1 : Weight of main body only. (Kg)

W2: Weight of main body and all accessories which include Inlet & Discharge Silencer, Base Plate, T-Joint, Safety Valve, Check Valve, Belt Cover and Flexible Joint, doesn't include motor. (Kg)

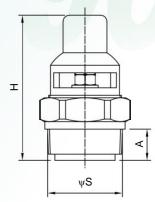


Accessories Dimension



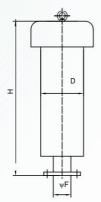
Discharge Silencer

	•			
Туре	Н	D	ψF	Wt.(kg)
DS-40	527	114	40	8
DS-50	787	168	50	13
DS-65	791	216	65	19
DS-80	791	216	80	20
DS-100	796	268	100	27
DS-125	1420	321	125	55
DS-150	1424	321	150	52
DS-200	1424	478	200	78
DS-250	1428	478	250	100
DS-300	1428	628	300	130



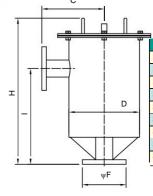
Vacuum Safety Valve

Туре	Н	ψS	А	Wt.(kg)
VB-50	116	PT 2"	25	1



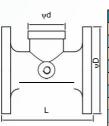
Inlet Silencer

Type	Н	D	ψF	Wt.(kg)
SS-40	525	114	40	3
SS-50	740	168	50	14
SS-65	780	216	65	18
SS-80	780	216	80	19
SS-100	840	268	100	24
SS-125	1490	321	125	46
SS-150	1490	321	150	49
SS-200	1630	478	200	99
SS-250	1630	478	250	105
SS-300	1630	628	300	143



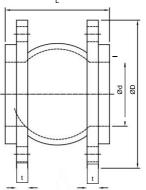
Vacuum Inlet Filter

-	Туре	С	D	ψF	Н		Wt.(kg)
	SR-50	221	250	155	519	340	16
	SR-65	223	250	175	621	430	20
	SR-80	223	250	185	721	500	22
	SR-100	243	290	210	721	500	25
	SR-125	285	370	250	813	560	42
	SR-150	287	370	280	815	562	45
	SR-200	337	470	330	845	592	73
	SR-250	339	470	400	1137	824	73
	SR-300	339	470	445	1137	824	102



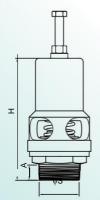
T-Joint

Type	L	ψd	ψD	Wt.(kg)
SP-40	85	0.5"	90	1
SP-50	160	1.5"	155	5
SP-65	160	1.5"	175	7
SP-80	185	2"	185	8
SP-100	185	2"	210	8
SP-125	200	2"	250	12
SP-150	200	3"	280	17
SP-200	200	3"	330	22
SP-250	250	3"	400	37
SP-300	300	3"	445	



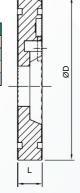
Flexible Joint

Type	L	ψd	ψD	t	Wt.(kg)
FJ-50	105	50	155	13	3
FJ-65	115	65	175	14	5
FJ-80	130	80	185	14	5
FJ-100	135	100	210	14	6
FJ-125	170	125	250	17	8
FJ-150	180	150	280	18	10
FJ-200	205	200	330	19	15
FJ-250	240	250	400	20	19
FJ-300	260	300	445	24	26



Safety Valve

Туре	Н	ψS	Α	適用機型	Wt.(kg)
SV-12	95	PT 0.5"	17	TH-40	0.5
SV-38	132	PT 1.5"	26	TH-50,65	1
SV-50	180	PT 2"	28	TH-80,100,125	3
SV-80	260	PT 3"	36	TH-150,200,250,300	7



Check Valve

Type	ψD	L	Wt.(kg)
DS-40	65	88	1
DS-50	106	16	1
DS-65	125	16	2
DS-80	133	16	2
DS-100	158	16	2
DS-125	189	16	3
DS-150	218	19	4
DS-200	265	28	8
DS-250	332	28	13
DS-300	375	32	21



Application

Pressure Conveyance



Waste Water Treatment	Oxygen Supply for Farming Ponds
	Roots Blower
Roots Blower The blower is for aeration and stir purpose in the waste water treatment plant.	The blower is for underwater enzyme supply in comparatively shallow ponds.
Barnyard Manure, Composted Manure Fertilizing	Conveyance of Grain
Roots Blower	Wheat Roots Blower Rotary valve
Outlet The blower promotes the fermentation of domestic animal's excreta, etc	The blower is for pneumatic transport of wheat or other grain separated by a rotary valve.
Electroplating Tank	Molding Press
Roots Blower	Moldings Roots Blower
	1,000 2,0110
The blower supply air to tank to stir the liquid for high-quality electroplating.	The blower helps take out the pressed products.
Paper-Feeding for Printer	Drying the Conveying-Belts
Roots Blower Paper	Roots Blower Roots Blower
The blower helps printer to separate, align and feed papers.	The blower is applied to dry the conveying-belts.
Incinerator	Therapeutic Bath Tub
Roots Blower Incinerator	Roots Blower
The blower enhances the combustion efficiency and promotes the exhaust gas removal.	Bath The blower is widely applied to health bath aeration in hospital and hotel.

		211111111111111111111111111111111111111		
Conveyance Particles		Dehydration		
Storagetank	Roots Blower	Paper or cloth		
		Roots Vacuum Blower		
The vacuum blower is a convey soybean, rice an		The vacuum blower is applied to paper and fiber industry.		
Paper-Feed for Printe	ing r	Smog Testing		
Printing roller Paper		Car Rolany valve		
Roots Vacu		Roots Vacuum Blower The blower is applied to inspect exhaust gas from car.		
Filter		Vacuum Cleaner		
Liquid Filter Vac	Roots uum Blower	Roots Vacuum Blower Filter		
	Filter			
A strong vacuum shortens liquid passing the		The vacuum blower is applied to dust collector for general industry.		
Reprocess G Absorption-Mainte		Vacuum Mud- Sucking Truck Roots Vacuum Blower		
Roots Vacuum Blower				
Fix non-magnetic mate worktable by vac		The vacuum blower is applied to clean colloidal sludge.		
Nuclear Fac	tory	Absorption Transporter		
Roots Vacuum Blov	urnace	Roots Vacuum Blower		
The vacuum blower is ap collect the radiation from furnace.		The vacuum blower is applied to transport heavy material such as iron plate and breakable glass.		



Units Conversion Table

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	9.87X10 ⁻⁶	1.45X10 ⁻⁴	1.02X10⁻⁵	2.953X10 ⁻⁴	0.102
1 atm	1.013X10 ³	1.013X10⁵	1	14.7	1.033	29.92	1.033X10 ⁴
1 lbf/in ²	68.95	68.95X10 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	14.223	1	28.96	10 ⁴
1 in Hg	33.86	33.86X10 ²	3.342X10 ⁻²	0.491	3.45X10 ⁻²	1	3.45X10 ²
1 mmAq	9.806X10 ⁻²	9.806	9.678X10 ⁻⁵	1.42X10 ⁻³	10-4	2.896X10 ⁻³	1

Common formulas for pressure conversion

1Pa=0.102mmAq 1psi=703mmAq 1mbar=10.197mmAq 1Torr=133.3Pa 1mmHg=13.6mmAq 1Torr=1.333mbar

		M	
			P
47			

1m³/min	1	60	1000	35.31
1m³/hr	0.017	1	16.67	0.589
1 ₀ /min	0.001	0.06	1	0.035
1ft³/min	0.028	1.699	28.32	1

	kg-m/sec	KW	HP	PS
1 kg-m/sec	1	0.001	0.0013	0.0013
1 KW	1000	1	1.341	1.360
1 HP	745.699	0.746	1	1.014
1 PS	735.498	0.736	0.986	1

Usage Instruction for Roots Blower:

- Before starting the blower, check the following to make sure they are all normal.
- 1. Distribution Pipes
 - Make sure insides of the pips are clean and all connecting part are tightly secured.
 - Make sure all valves are opened to avoid the pressure going up.
- 2. Power Supply
 - Motor wiring, voltage, frequency, etc. must be normal.
- 3. Direction of Rotation
 - Please follow the instruction on the safety cover. If rotation reversed, modified the motor wiring .
- 4、Safety Valve
 - ♦ Adjust the safety valve to 1.5~2.5 times than operation pressure.
- 5 Lubricating oil
 - Make sure that oil level stays at middle of oil gauge. Change the oil three months a time.
 - Before turn blower on, check if it runs smoothly by hand.

The Initial Noise

Because of viscosity of oil, there would be some noise when blower runs at very beginning. It would be normal approx. 10~20 minutes later

Attention

Please pay attention to the sounds, pressure, current and temperature, etc. when the blower is running. If there is any abnormal circumstance, turn off the blower immediately and find the cause out.



Sincere Enthusiasm Professional Innovative





Office Lobby



CNC Machine Area



Testing Area for MD Pump



Container Port



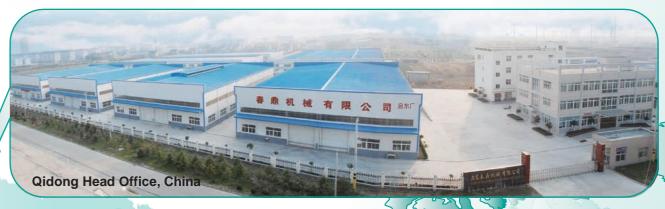
Testing area for Roots Blower



Finished Product Storage Area













Dormitory for Trundean's Staff



Qidong Head Office



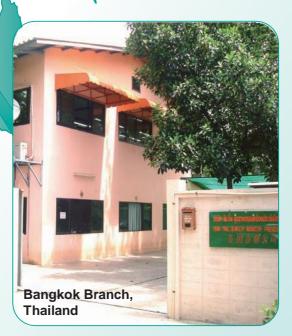
Product Storage Area

Advantages Products Aspect:

- TH Series: The compartment and the side cover of TRUNDEAN Roots Blower has a flange and groove rim, which can not only strengthen the blower's operational functions but also prevent eccentric phenomenal resulting from the fastening of the stud, which may shorten the life of blower.
- TV Series: The Vertical Roots Blower uses direct-drive, reducing wear and tear on the belt, reducing the amount of maintenance needed, and reducing the risk of oil leaks.
- TSW Series: Because it is submersible under water, there wouldn't be much noise when the blower is running.
- TMD Series: Magnetic Drive Pump materials comprise mainly GFR-PP and PVDF. Therefore, almost all chemical solutions can be safely transmitted. Abandoning the traditional design of shaft seal, the no shaft seal pump can be completely sealed, so there is no risk of damage to the pump which may result in leaks.

Service Aspect:

- Technical Consultancy Service: To enable customers to accurately choose from product specifications, Trundean Machinery Industrial Co., Ltd. provides technical consultancy service to solve customers' technical problems when choosing products, thereby effectively reducing customers' business costs.
- Innovation R&D Service: R&D is the motivation for Trundean Machinery Industrial Co., Ltd. on our way to carry forward the past and forging ahead to future prosperity, to seek sustained improvement and perfection. Our well trained production groups can at all times meet the customer requirements for any specifications, so that customers can rest assured.
- Quality Delivery Service: In addition to smooth operation under perfect ISO 9001 system, and complete test and inspection assurance, product delivery is also our acknowledgement and responsibility, so that our service personnel can support every customer at any time and location.
- After-sales Maintenance Service: To ensure maneuverability and stability for customers in the use of products, we shall provide the most efficient and highest quality services. As well as providing customers with a one-year warranty, we guarantee the supply and replacement of parts for future maintenance.





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