

**NEW** ENERGY SAVING MODEL  
ROTARY ROOTS BLOWER (AIR APPLICATION)



# TBS

energy saving  
**BLOWER**

Maximum more than 30%  
Average more than 10%  
Compared with SSR series



**大晃機械工業株式会社**  
TAIKO KIKAI INDUSTRIES CO., LTD.

# Newly Developed Blower Model Most Appropriate to Water Treatment & Air Conveying Application



■What are outstanding features of TBS?

Designed by  
**Mr.KUMA**

## 1 Thorough Development and Design for the best energy saving!

*Comparison with SSR Series: Saving more than 30% as maximum, 10% as average in each model.*

As Fig. 1 shows, rotary blower transfer the gas by progressing the cavities between casing and impeller. There is little backflow of gas from discharge to suction end because of pressure stall. In TBS model, to prevent this backflow, the clearance between casing and impellers is minimized to secure the best volumetric efficiency. And the widest cavities by specially designed impeller, high rotating speed, and energy-saving V-belt achieve the better energy saving.



## 2 Compact Design!

Specially designed impellers and high rotating speed of TBS achieve more than 120% of maximum capacity compared with our previous model, SSR, with same bore. We have much possibility to supply one more smaller model with newly designed suction silencer shortened its height to downsize the total blower package.



## 3 Designed for Lower Noise and Vibration!

Not only newly designed 3 lobe impellers, but also mechanical function of the new casing to reduce the pulsation is refined from the previous, shall reduce the pulsation pressure while compressing gas. Moreover, new designed suction silencer reduce the pneumatic noise efficiently. Into the bargain, stiffer structure of blower shaft lead to further lower noise and vibration !



■Are there any other differences between TBS and SSR?

## 4 Compatibility for Replacement and Easy Maintenance!

In case of the same bore as previous model SSR, the foundation works and modification of piping will not be required for the replacement from SSR to TBS. Also, for your easy maintenance, bearing lubricated by grease at pulley end is installed. No check, complement, and change of the grease will be required. Also, for easy replacement of the air filter, there are lifting handles on the filter cover in detail, please refer to Fig. 2.



Fig.1

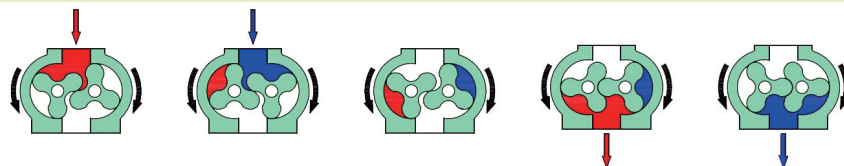
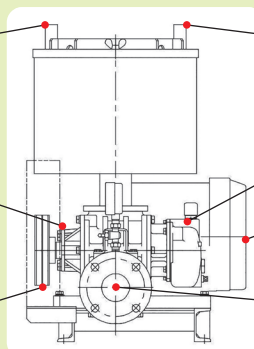


Fig.2

Height 70 ~ 80% from previous Model

Grease lub bearing at pulley end

Energy-saving V-belt



Lifting handles on filter cover.

Name plate For easy check

IE3 High Efficiency Motor

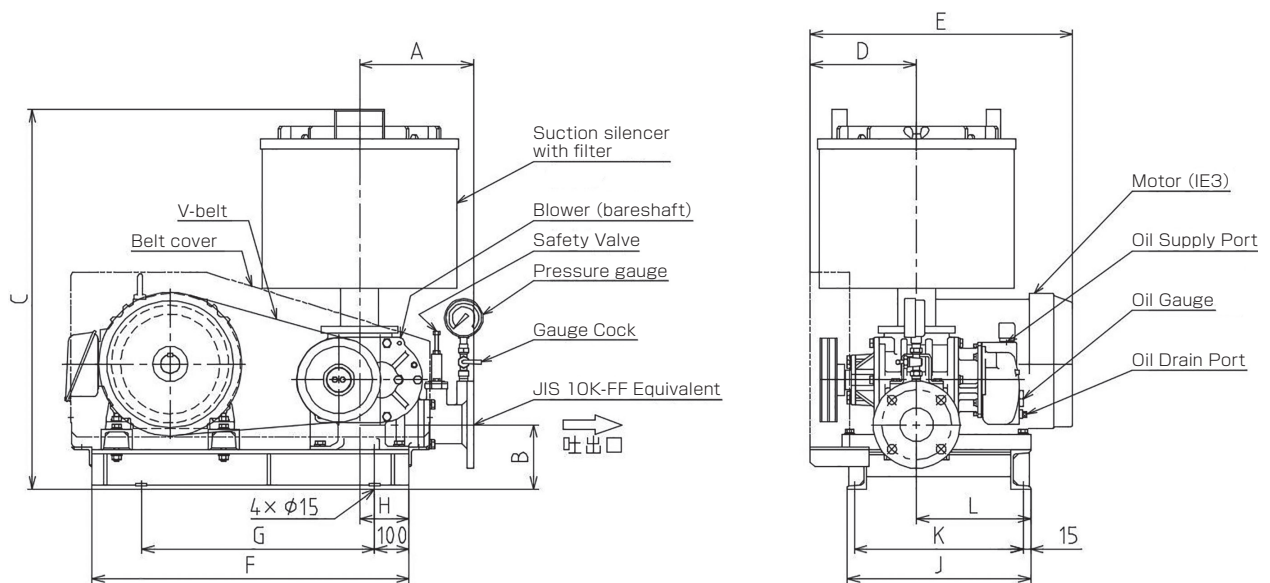
More than 120% of max. capacity compared with SSR, our previous model



## Performance Table

Type	Diameter	Rotational Speed (min <sup>-1</sup> )	Suction Volume Qs (m <sup>3</sup> /min) for each discharge pressure and required power La (kW)																							
			10kPa		15kPa		20kPa		25kPa		30kPa		35kPa		40kPa		45kPa		50kPa		55kPa		60kPa			
			Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La		
TBS-50	50A	1030	1.13	0.4	1.08	0.4	1.05	0.5	1.02	0.6	0.99	0.8	0.96	0.9	0.93	1.0	0.90	1.1	0.88	1.2	0.86	1.3	0.84	1.4		
		1220	1.36	0.5	1.31	0.5	1.28	0.7	1.25	0.8	1.22	0.9	1.19	1.1	1.16	1.2	1.13	1.3	1.11	1.5	1.09	1.6	1.07	1.7		
		1430	1.62	0.6	1.57	0.6	1.53	0.8	1.50	0.9	1.48	1.1	1.45	1.3	1.42	1.4	1.39	1.6	1.37	1.7	1.35	1.9	1.33	2.0		
		1630	1.87	0.7	1.82	0.7	1.78	0.9	1.75	1.1	1.72	1.3	1.69	1.5	1.66	1.6	1.63	1.8	1.61	2.0	1.59	2.2	1.57	2.4		
		1740	2.02	0.7	1.97	0.8	1.93	1.0	1.89	1.2	1.86	1.4	1.83	1.6	1.81	1.8	1.78	1.9	1.76	2.1	1.73	2.3	1.72	2.5		
		1960	2.29	0.8	2.24	0.9	2.20	1.1	2.17	1.4	2.14	1.6	2.11	1.8	2.08	2.0	2.05	2.2	2.03	2.4	2.01	2.6	1.99	2.9		
		2180	2.49	0.9	2.45	1.0	2.42	1.3	2.39	1.5	2.37	1.8	2.34	2.0	2.32	2.2	2.30	2.5	2.28	2.7	2.26	3.0	2.25	3.2		
		2450	2.83	1.0	2.78	1.2	2.75	1.4	2.72	1.7	2.70	2.0	2.67	2.3	2.65	2.5	2.63	2.8	2.61	3.1	2.59	3.4	2.58	3.6		
		2580	2.99	1.1	2.94	1.2	2.91	1.5	2.88	1.8	2.86	2.1	2.83	2.4	2.81	2.7	2.79	3.0	2.77	3.2	2.75	3.5	2.74	3.8		
		2730	3.14	1.1	3.10	1.3	3.07	1.6	3.04	1.9	3.02	2.3	3.00	2.6	2.98	2.9	2.96	3.1	2.94	3.4	2.92	3.8	2.90	4.1		
3060	3.54	1.3	3.50	1.5	3.47	1.8	3.45	2.2	3.43	2.6	3.41	2.9	3.39	3.2	3.37	3.5	3.35	3.9	3.33	4.2	3.31	4.6				
TBS-65	65A	1750	2.84	0.8	2.78	1.0	2.73	1.3	2.70	1.5	2.68	1.8	2.65	2.1	2.63	2.4	2.60	2.7	2.58	3.0	2.55	3.3	2.53	3.6		
		1970	3.23	0.9	3.17	1.2	3.13	1.5	3.10	1.8	3.07	2.1	3.04	2.4	3.02	2.7	2.99	3.1	2.97	3.4	2.94	3.7	2.92	4.1		
		2180	3.57	1.1	3.52	1.3	3.48	1.7	3.46	2.0	3.43	2.4	3.40	2.7	3.38	3.1	3.35	3.5	3.33	3.8	3.31	4.2	3.29	4.5		
		2450	4.06	1.2	4.01	1.5	3.97	1.9	3.94	2.3	3.91	2.7	3.87	3.1	3.86	3.5	3.83	3.9	3.81	4.3	3.79	4.8	3.77	5.2		
		2580	4.28	1.3	4.23	1.6	4.19	2.0	4.16	2.5	4.13	2.9	4.10	3.3	4.08	3.7	4.05	4.2	4.03	4.6	4.01	5.0	3.99	5.5		
		2730	4.47	1.4	4.43	1.7	4.40	2.2	4.37	2.6	4.35	3.1	4.32	3.5	4.30	4.0	4.27	4.4	4.25	4.9	4.23	5.3	4.21	5.8		
3060	5.07	1.6	5.02	2.0	4.99	2.5	4.96	3.0	4.94	3.5	4.91	4.0	4.89	4.5	4.86	5.0	4.84	5.5	4.82	6.0	4.80	6.6				
TBS-80	80A	1350	3.63	0.7	3.56	1.1	3.51	1.4	3.47	1.8	3.43	2.1	3.38	2.5	3.35	2.9	3.32	3.2	3.29	3.6	3.26	4.0	3.24	4.3		
		1550	4.21	1.0	4.14	1.4	4.09	1.8	4.04	2.2	4.00	2.6	3.96	3.1	3.92	3.5	3.89	3.9	3.86	4.3	3.83	4.7	3.81	5.2		
		1750	4.82	1.3	4.75	1.7	4.70	2.2	4.65	2.7	4.61	3.1	4.57	3.6	4.53	4.1	4.50	4.6	4.47	5.0	4.45	5.5	4.43	6.0		
		1940	5.41	1.5	5.34	2.0	5.29	2.6	5.24	3.1	5.20	3.6	5.16	4.1	5.12	4.7	5.09	5.2	5.06	5.7	5.03	6.3	5.01	6.8		
		2190	6.11	1.9	6.05	2.4	6.01	3.0	5.97	3.6	5.94	4.2	5.90	4.8	5.87	5.4	5.83	6.0	5.80	6.6	5.77	7.2	5.75	7.9		
		2450	6.87	2.2	6.81	2.9	6.77	3.5	6.73	4.2	6.70	4.9	6.66	5.5	6.63	6.2	6.59	6.9	6.56	7.6	6.53	8.3	6.51	9.0		
		2750	7.60	2.6	7.55	3.4	7.51	4.1	7.48	4.9	7.45	5.6	7.43	6.4	7.40	7.1	7.37	7.9	7.35	8.7	7.33	9.5	7.31	10.2		
		2940	8.19	2.9	8.14	3.7	8.10	4.5	8.07	5.3	8.04	6.1	8.01	6.9	7.98	7.7	7.95	8.6	7.93	9.4	7.91	10.3	7.89	11.1		
TBS-100	100A	1220	5.31	1.0	5.21	1.5	5.12	2.0	5.06	2.6	5.00	3.1	4.94	3.6	4.88	4.1	4.83	4.6	4.79	5.1	4.76	5.7	4.73	6.2		
		1400	6.14	1.3	6.04	1.9	5.95	2.5	5.89	3.1	5.83	3.7	5.77	4.3	5.71	4.9	5.66	5.5	5.61	6.1	5.58	6.7	5.55	7.3		
		1580	7.12	1.6	7.02	2.3	6.93	2.9	6.86	3.6	6.80	4.3	6.74	5.0	6.68	5.6	6.63	6.3	6.59	7.0	6.56	7.7	6.53	8.4		
		1760	7.99	1.9	7.89	2.7	7.81	3.4	7.74	4.2	7.68	4.9	7.62	5.7	7.56	6.4	7.51	7.2	7.47	7.9	7.44	8.7	7.42	9.5		
		1970	8.89	2.3	8.81	3.1	8.75	3.9	8.68	4.8	8.61	5.6	8.55	6.5	8.49	7.3	8.44	8.2	8.41	9.0	8.37	9.9	8.33	10.8		
		2200	10.02	2.7	9.94	3.6	9.87	4.5	9.80	5.5	9.73	6.4	9.67	7.4	9.62	8.3	9.57	9.2	9.53	10.2	9.49	11.2	9.45	12.2		
		2470	11.29	3.1	11.21	4.2	11.14	5.2	11.07	6.3	11.00	7.3	10.94	8.4	10.89	9.5	10.84	10.5	10.80	11.6	10.76	12.7	10.72	13.8		
		2650	11.99	3.4	11.91	4.5	11.85	5.7	11.78	6.8	11.72	7.9	11.67	9.1	11.62	10.2	11.58	11.4	11.54	12.5	11.50	13.7	11.46	14.9		
2780	12.62	3.7	12.54	4.8	12.48	6.0	12.41	7.2	12.36	8.4	12.31	9.6	12.26	10.8	12.22	12.0	12.18	13.2	12.14	14.4	12.10	15.7				

## Outline Drawings (Standard)



Type	Diameter	A	B	C	D	E	F	G	H	J	K	L	Weight(kg)
TBS-50	50A	230	120	675	195	500	640	440	100	330	300	210	84
TBS-65	65A	230	130	765	215	530	640	440	100	370	340	230	113
TBS-80	80A	280	145	850	230	650	780	580	130	480	450	335	170
TBS-100	100A	280	155	870	270	670	780	580	125	480	450	295	209

Note : 1. Unit of dimension is millimeter (mm). 2. The weight of motor is excluded in the above value. 3. Dimension E is referential maximum value based on our standard motor.



To: Taiko Kikai Industries Co., Ltd. Tokyo Branch Office

Please fill up the information the below list.

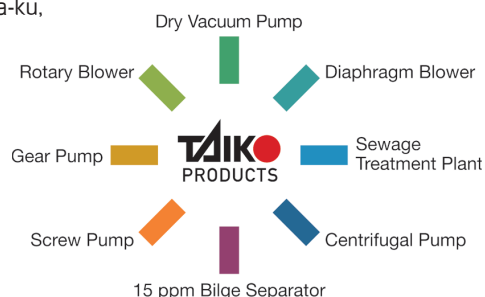
For Inquiry of TBS series Blowers

Company Name			
Department		Person in charge	
Address	Postal Code		
TEL		FAX	
E-mail		Application	
Location	Indoor · Outdoor	Q'ty	units
Handling Gas	Air	Suction Temp	°C
Suction Capacity	m <sup>3</sup> /min ( 20°C /ATM ) / In case of operation by VVVF, please indicate the operational range.		
Suction Pressure	kPaG	Discharge Pressure	kPaG
Motor	Indoor / Outdoor · TEFC / Exe / Exd / Others ( )		
	Supplied by Taiko / Yourselves, or using existing motor at site		
	Your preferable vendor : Yes ( ) / TAIKO STANDARD		
Power Supply	V × 3 Ph × Hz	Motor start	DOL / Star Delta / VVVF
Painting	Standard: Munsell 7.5BG4/1.5	Requirement (if you have) ( )	
Request for Accessories · Spare Parts			
Standard Accessory: Common Base, V-belt cover, V-pulley, V-belt, Suction Silencer (with filter) , Safe Valve, Pressure Gauge			
Remarks (If you have any other requirement for us)			

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- With ISO 9001 certification
- Please accept the possibilities to change the technical information in this catalogue ; the performance table, dimensions, or weight, for letting our products more better ones.

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