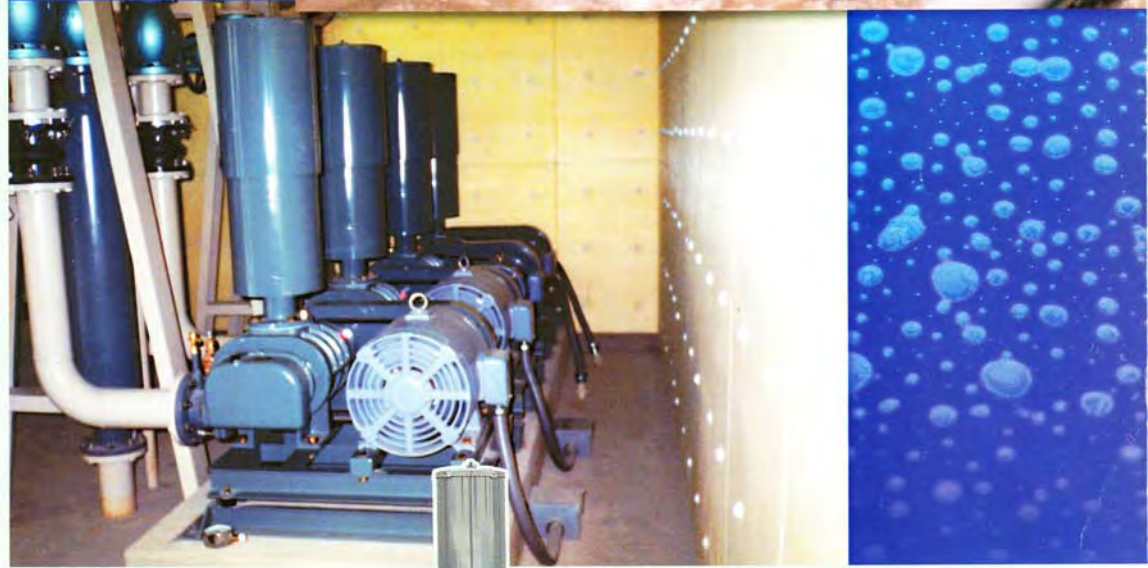




Rotary Blowers & Submersible Blowers

RS (S, A, R) NR



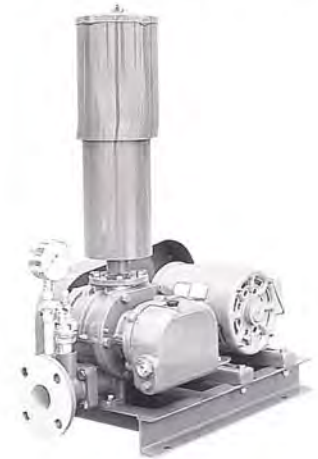
Horizontal type — Works as it should for a wide variety of applications.



RSS
(Discharge Bore 20, 25, 32mm)



RSA
(Discharge Bore 40, 50, 65mm)



RSR
(Discharge Bore 50, 65, 80, 100, 125, 150mm)

Application

- Aeration at water treatment facilities;
- Stirring of various waste liquids and sewage to prevent putrefaction and scum;
- Oxygen supply at aquariums and fish farms.

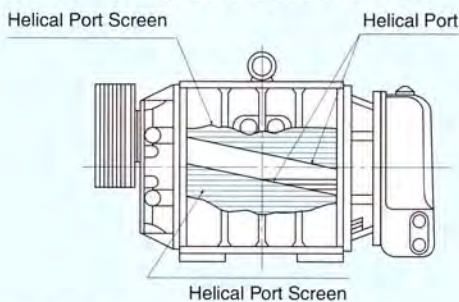
Virtues

- The rush of suction or discharge has been tamed resulting in greatly reduced impact noise and pulsation noise.
- Minimized operation noise, even and stable performance plus outstanding durability.
- Compact design for space economy and effortless maintenance services.

Structural features

● Innovative helical intake / outlet

Conventional blowers were designed to discharge the air from the casing in a gust. This caused violent impact and pulsation and resultant noise. Tsurumi blowers have helical structure at the intake and the outlet. This makes the air virtually pass through a gradually closing suction port or gradually opening discharge port. The result is remarkably reduced pulsation noise.

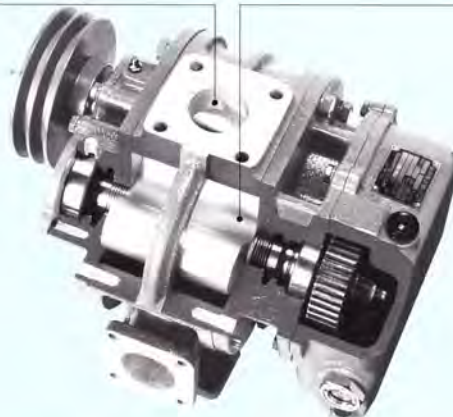


● Special silencer and 3-lobe rotor

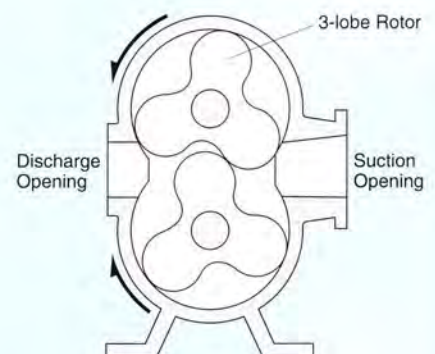
A specially prepared silencer absorbs a broad range of noise frequencies from low to high. The air flow rate and pressure characteristics have been greatly upgraded by the adoption of a 3-lobe rotor with each blade deliberately displaced as to thrust direction to avoid mutual contact.



Helical Port



Rotor



Major Standard Specifications

Item	Discharge bore (mm)										
	20	25	32	40	50	65	80	100	125	150	
Pumping fluid	Type of fluid	Air									
	Fluid temperature	0~40°C									
Pump	Components	Rotor	3-blade helical port								
		Shaft seal	Labyrinth								
		Bearing	Shielded ball bearing								
	Materials	Rotor	Gray iron casting								
		Casing	Gray iron casting								
		Shaft	Carbon steel								
Motor	Type, Poles	Horizontal, 4 poles									
	Phase / Voltage	Single-phase / 110V, 200V, 220V, 230V, 240V Three-phase / 220V, 380V, 400V, 415V, 440V, 460V									
	Type	Drip-proof									
Discharge connection		RSS & RSA / Tapoured pipe thread RSR / JIS 10K flange									

Standard Accessories

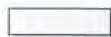
- Pump base..... 1 pc.
- Silent air cleaner (RSS, RSA)..... 1 set
- Suction silencer (with air filter)..... 1 set
- Safety valve..... 1 set
- Pressure gauge (RSA, RSR)..... 1 set
- Foundation bolts..... 1 set

Optional Accessories

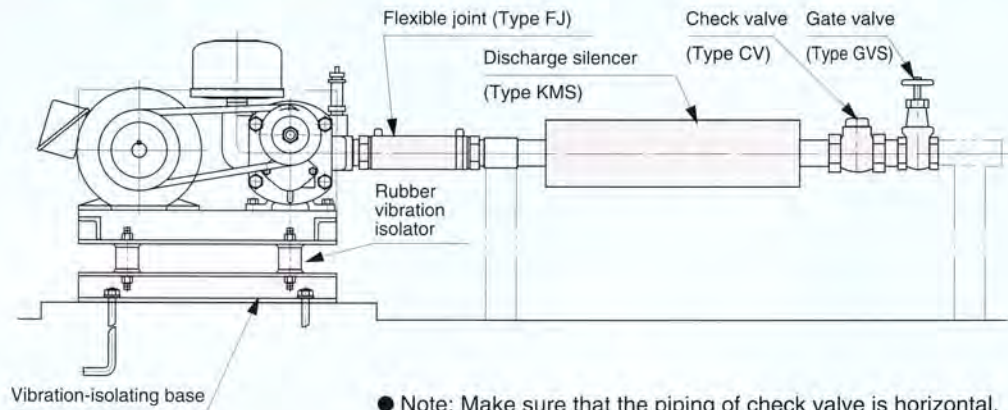
- Discharge silencer
- Flexible joint
- Gate valve
- Check valve
- Rubber Vibration - isolator
(with Vibration - isolating base)
- Totally - enclosed, outdoor motor

Reference drawing for piping (example)

RSS · RSA



Optional accessories



● Note: Make sure that the piping of check valve is horizontal.

HOW TO USE THE PERFORMANCE TABLE

Information about 50/60Hz Standard Specification Tables

These tables indicate the relationships among blower models, bores, rpm, discharge pressure, actual air flow rates, and shaft power.

1. The amounts of air indicated in the tables represent suction amounts under the following standard suction conditions: temperature, 20°C; absolute pressure, 101.3kPa {1.033kgf / cm²}, relative humidity, 65%.
2. The amounts of air under reference suction conditions (temperature, 0°C; absolute pressure, 101.3kPa {1.033kgf / cm²}) can be converted into the amounts of air under the standard suction conditions by the formula below if the suction pressures are the same:

$$Q_s = Q_n \times \frac{273 + t_s}{273}$$

where

Q_s, amount of air (m³ / min) under standard suction conditions indicated on Standard Specification Tables;
Q_n, amount of air (m³ / min) under reference suction conditions;
Suction pressure is ambient pressure, 101.3kPa; t_s, suction temperature in °C.

3. To convert the amounts of air under discharge conditions into the amounts of air under the standard suction conditions indicated on the Standard Specification Tables, use the following formula:

$$Q_s = Q_d \times \frac{101.3 + P_d}{101.3} \times \frac{273 + t_s}{273 + t_d}$$

where

Q_d, amount of air (m³ / min) under discharge conditions;
P_d, discharge pressure (kPa);
t_s, suction temperature in °C;
t_d, discharge temperature in °C.

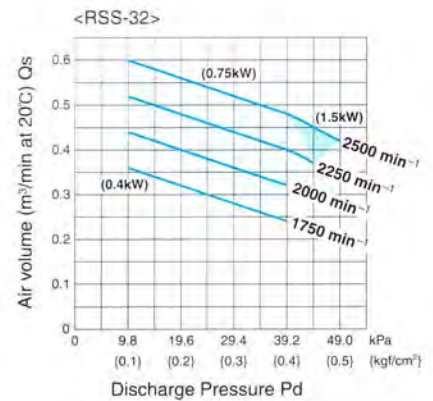
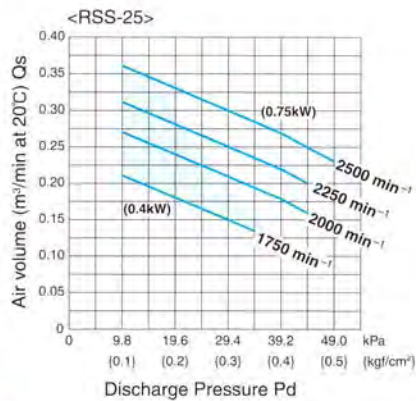
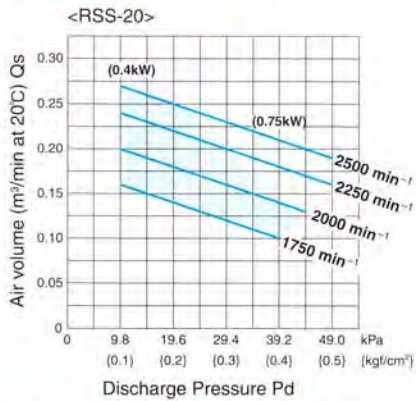
4. Using the amount of air and the necessary discharge pressure obtained from the above mathematics, determine your blower model, bore, rpm, and shaft power in reference to a Standard Specification Table.
5. Your selectable range can be overlapped over several models. It is recommended that the one with a younger model number for cost economy, or with a larger model number for lower noise, be selected.
6. Motor output is identified by color on the Standard Specification Tables. Select a suitable color motor from these tables.

RSS SERIES

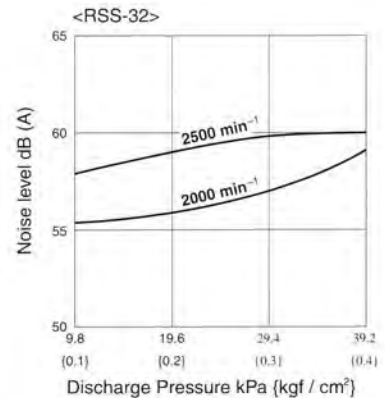
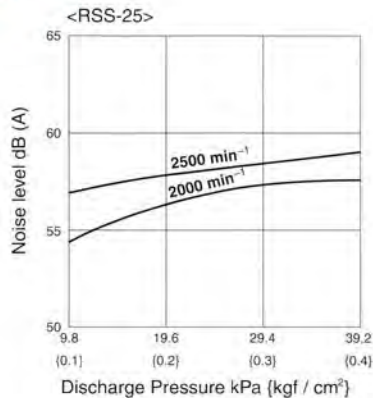
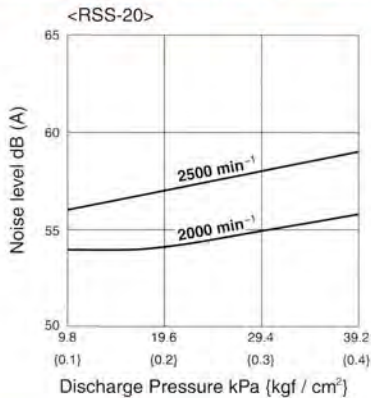
Specifications 50/60Hz

Model (Discharge bore mm)	Revolutions (min ⁻¹)	Suction air volume at 20°C(Qs, m ³ /min) and required power (La, kW)										
		9.8kPa {0.1kgf/cm ² }		19.6kPa {0.2kgf/cm ² }		29.4kPa {0.3kgf/cm ² }		39.2kPa {0.4kgf/cm ² }		49.0kPa {0.5kgf/cm ² }		
		Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	
RSS-20 (20)	1750	0.16	0.20	0.14	0.24	0.12	0.28	0.10	0.32	—	—	
	2000	0.20	0.23	0.18	0.27	0.16	0.31	0.14	0.35	—	—	
	2250	0.24	0.26	0.22	0.31	0.20	0.35	0.18	0.40	0.16	0.46	
	2500	0.27	0.29	0.25	0.34	0.23	0.39	0.21	0.44	0.19	0.50	
Corresponding motor output		0.4kW					0.75kW					
RSS-25 (25)	1750	0.21	0.23	0.18	0.27	0.15	0.32	—	—	—	—	
	2000	0.27	0.26	0.24	0.31	0.21	0.37	0.18	0.43	—	—	
	2250	0.31	0.30	0.28	0.35	0.25	0.42	0.22	0.49	—	—	
	2500	0.36	0.33	0.33	0.39	0.30	0.46	0.27	0.54	0.23	0.62	
Corresponding motor output		0.4kW					0.75kW					
RSS-32 (32)	1750	0.36	0.27	0.32	0.34	0.28	0.42	0.24	0.50	—	—	
	2000	0.44	0.31	0.40	0.39	0.36	0.48	0.32	0.57	—	—	
	2250	0.52	0.35	0.48	0.44	0.44	0.54	0.40	0.64	—	—	
	2500	0.60	0.39	0.56	0.49	0.52	0.60	0.48	0.71	0.42	0.86	
Corresponding motor output		0.4kW					0.75kW					1.5kW

Performance curves



Noise level (1.0m on machine side)



Outside dimensions Unit : mm

RSS-20
RSS-25
RSS-32

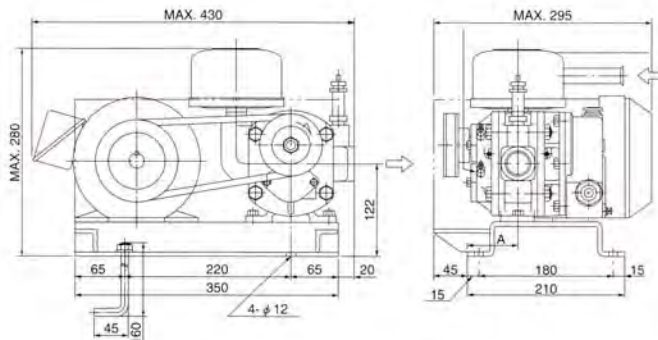


Table of dimensions Unit : mm

Model	A	Weight kgs
RSS-20	60	19
RSS-25	67	20
RSS-32	80	22

● Weight of blower itself not including motor. Please see the motor weight table for motor weight including standard accessories.

Motor weight table Unit : kgs

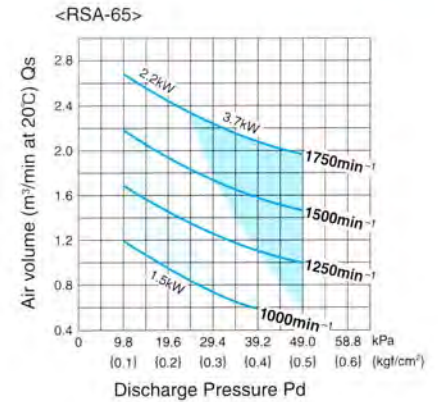
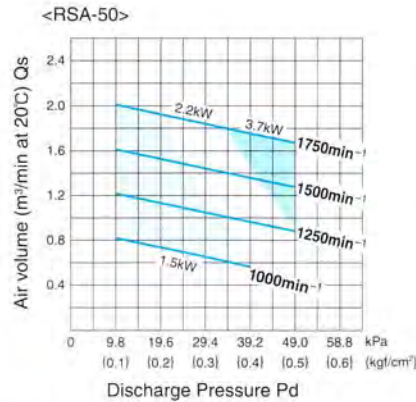
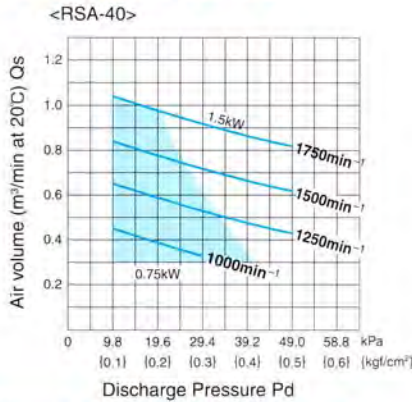
Motor output (kW)	0.4	0.75
Drip-proof(single phase)	7	—
Drip-proof(three phase)	—	10
Totally enclosed (three phase)	8	—

RSA SERIES

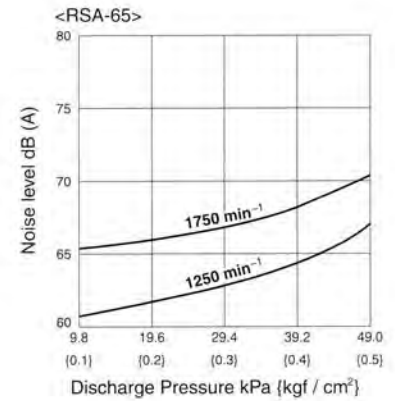
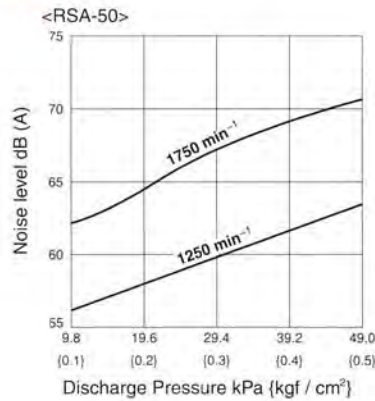
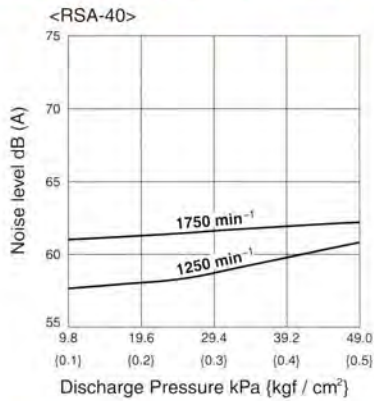
Specifications 50/60Hz

Model (Discharge bore mm)	Revolutions (min ⁻¹)	Suction air volume at 20°C(Qs, m ³ /min) and required power (La, kW)									
		9.8kPa		19.6kPa		29.4kPa		39.2kPa		49.0kPa	
		{0.1kgf/cm ² }	{0.2kgf/cm ² }	{0.3kgf/cm ² }	{0.4kgf/cm ² }	{0.5kgf/cm ² }	Qs	La	Qs	La	Qs
RSA-40 (40)	1000	0.45	0.32	0.39	0.40	0.33	0.52	—	—	—	—
	1250	0.65	0.40	0.59	0.50	0.53	0.65	0.48	0.80	0.43	0.99
	1500	0.84	0.48	0.78	0.60	0.72	0.78	0.67	0.96	0.62	1.18
	1750	1.04	0.56	0.98	0.70	0.92	0.91	0.87	1.11	0.82	1.38
Corresponding motor output		0.75kW				1.5kW					
RSA-50 (50)	1000	0.82	0.64	0.73	0.80	0.65	1.04	0.57	1.28	—	—
	1250	1.22	0.80	1.13	1.00	1.05	1.30	0.97	1.60	0.89	1.97
	1500	1.61	0.96	1.52	1.20	1.44	1.56	1.36	1.92	1.28	2.36
	1750	2.01	1.12	1.92	1.40	1.84	1.82	1.76	2.22	1.68	2.76
Corresponding motor output		1.5kW			2.2kW			3.7kW			
RSA-65 (65)	1000	1.19	0.80	0.94	1.00	0.75	1.30	0.59	1.60	—	—
	1250	1.69	1.00	1.45	1.25	1.26	1.63	1.10	2.00	0.99	2.45
	1500	2.18	1.20	1.93	1.50	1.74	1.95	1.58	2.40	1.47	2.95
	1750	2.68	1.40	2.43	1.75	2.24	2.28	2.08	2.78	1.97	3.45
Corresponding motor output		1.5kW			2.2kW			3.7kW			

Performance curves



Noise level (1.0m on machine side)



Outside dimensions Unit : mm

RSA-40
RSA-50
RSA-65

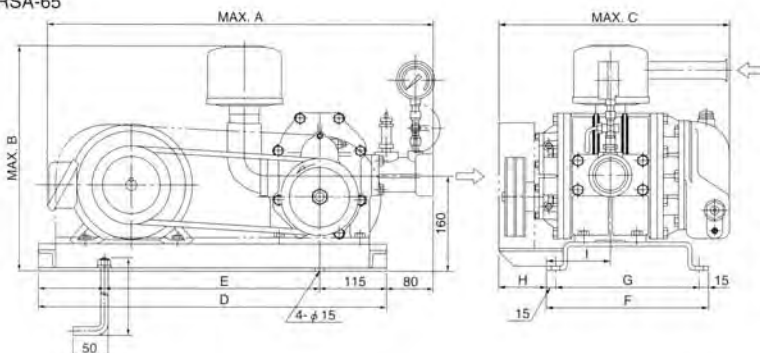


Table of dimensions Unit : mm

Model	A	B	C	D	E	F	G	H	I	Weight kgs
RSA-40	670	340	320	550	350	250	220	60	85	42
RSA-50	700	380	370	600	405	280	250	80	110	61
RSA-65	700	380	370	600	440	280	250	80	130	64

● Weight of blower itself not including motor. Please see the motor weight table for motor weight including standard accessories.

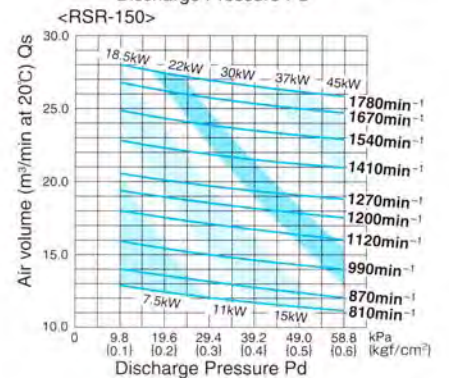
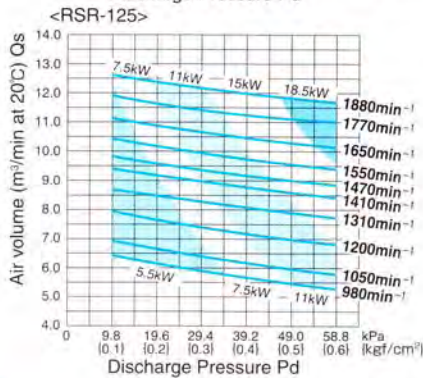
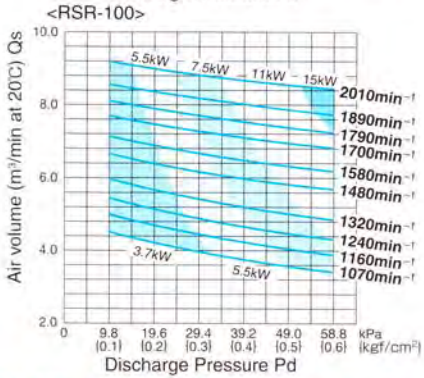
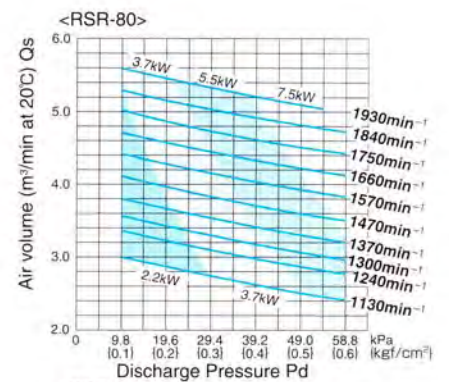
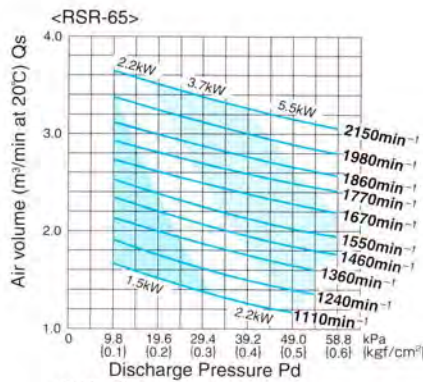
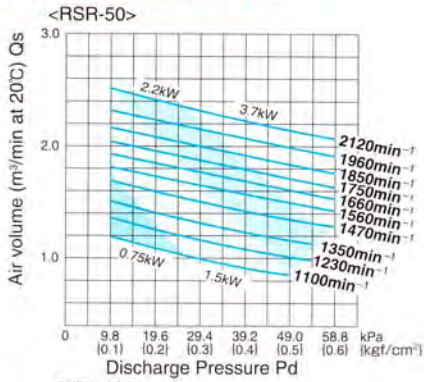
Motor weight table Unit : kgs

Motor output (kW)	0.75	1.5	2.2	3.7
Drip-proof	10	17	22	32

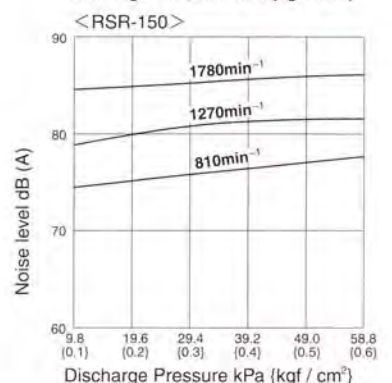
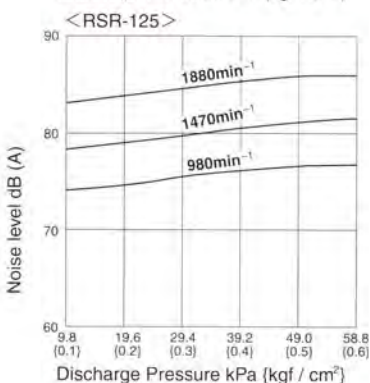
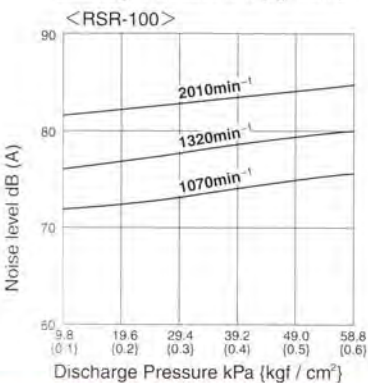
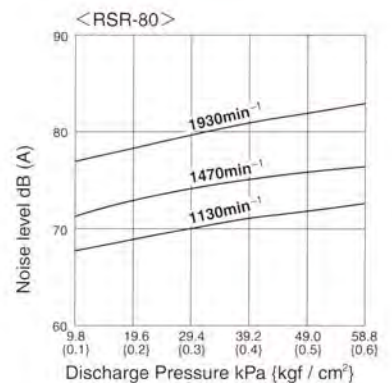
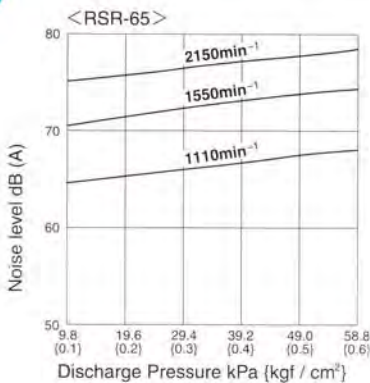
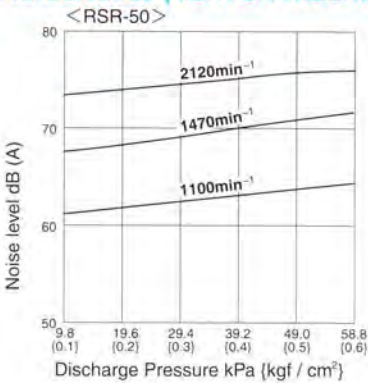
Specifications 50/60Hz

Model (Discharge bore mm)	Revolutions (min ⁻¹)	Suction air volume at 20°C(Qs, m ³ /min) and required power (La, kW)																							
		9.8kPa		14.7kPa		19.6kPa		24.5kPa		29.4kPa		34.3kPa		39.2kPa		44.1kPa		49.0kPa		53.9kPa		58.8kPa			
		{0.10kgf/cm ² }		{0.15kgf/cm ² }		{0.20kgf/cm ² }		{0.25kgf/cm ² }		{0.30kgf/cm ² }		{0.35kgf/cm ² }		{0.40kgf/cm ² }		{0.45kgf/cm ² }		{0.50kgf/cm ² }		{0.55kgf/cm ² }		{0.60kgf/cm ² }			
		Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La
RSR-50 (50)	1100	1.19	0.26	1.13	0.40	1.08	0.54	1.03	0.68	0.99	0.82	0.95	0.96	0.92	1.10	0.89	1.24	0.86	1.38	—	—	—	—		
	1230	1.36	0.36	1.30	0.51	1.25	0.66	1.20	0.81	1.16	0.96	1.12	1.11	1.08	1.26	1.05	1.41	1.02	1.56	0.99	1.71	—	—		
	1350	1.51	0.47	1.46	0.63	1.41	0.79	1.36	0.95	1.32	1.11	1.28	1.27	1.24	1.43	1.20	1.59	1.17	1.75	1.13	1.91	—	—		
	1470	1.68	0.63	1.63	0.79	1.59	0.95	1.54	1.11	1.50	1.28	1.46	1.44	1.43	1.60	1.39	1.76	1.35	1.93	1.32	2.09	1.29	2.26		
	1560	1.81	0.75	1.77	0.91	1.73	1.08	1.69	1.24	1.65	1.41	1.61	1.57	1.58	1.74	1.54	1.90	1.50	2.07	1.47	2.23	1.43	2.40		
	1660	1.93	0.80	1.89	0.98	1.85	1.16	1.81	1.33	1.77	1.51	1.73	1.69	1.69	1.87	1.65	2.05	1.61	2.23	1.58	2.40	1.54	2.58		
	1750	2.04	0.85	2.00	1.04	1.96	1.23	1.92	1.42	1.88	1.61	1.84	1.80	1.80	1.99	1.76	2.18	1.72	2.37	1.68	2.56	1.64	2.75		
	1850	2.17	0.99	2.13	1.18	2.09	1.37	2.05	1.57	2.01	1.76	1.97	1.95	1.93	2.14	1.89	2.34	1.85	2.53	1.81	2.71	1.77	2.91		
	1960	2.32	1.14	2.28	1.34	2.24	1.53	2.20	1.73	2.16	1.92	2.12	2.12	2.08	2.31	2.04	2.51	2.00	2.70	1.96	2.90	1.92	3.09		
	2120	2.52	1.41	2.47	1.62	2.42	1.82	2.38	2.03	2.33	2.23	2.29	2.44	2.24	2.64	2.20	2.85	2.16	3.05	2.12	3.26	2.08	3.46		
Corresponding motor output		0.75kW				1.5kW				2.2kW				3.7kW											
RSR-65 (65)	1100	1.67	0.63	1.58	0.80	1.50	0.97	1.43	1.14	1.37	1.31	1.32	1.48	1.27	1.65	1.22	1.82	1.17	1.99	—	—	—	—		
	1240	1.91	0.70	1.84	0.89	1.76	1.08	1.68	1.27	1.62	1.46	1.56	1.65	1.51	1.84	1.46	2.03	1.41	2.22	1.36	2.41	—	—		
	1360	2.14	0.80	2.07	1.01	2.00	1.22	1.93	1.43	1.87	1.64	1.81	1.85	1.76	2.06	1.70	2.27	1.65	2.48	1.60	2.69	—	—		
	1460	2.35	0.88	2.27	1.11	2.20	1.33	2.13	1.55	2.07	1.78	2.01	2.00	1.96	2.22	1.90	2.45	1.85	2.67	1.80	2.90	1.76	3.13		
	1550	2.54	0.96	2.46	1.20	2.39	1.43	2.32	1.67	2.25	1.90	2.19	2.14	2.14	2.37	2.08	2.61	2.03	2.84	1.98	3.08	1.94	3.31		
	1670	2.75	1.05	2.68	1.31	2.62	1.56	2.56	1.82	2.49	2.07	2.43	2.33	2.38	2.58	2.33	2.83	2.28	3.08	2.23	3.34	2.19	3.59		
	1770	2.94	1.13	2.88	1.40	2.82	1.67	2.76	1.94	2.70	2.21	2.64	2.63	2.59	2.75	2.54	3.02	2.49	3.29	2.45	3.56	2.41	3.83		
	1860	3.13	1.24	3.07	1.52	3.00	1.80	2.94	2.08	2.88	2.36	2.82	2.85	2.76	2.93	2.71	3.22	2.66	3.50	2.61	3.78	2.57	4.07		
	1980	3.39	1.38	3.32	1.68	3.25	1.98	3.18	2.28	3.12	2.57	3.06	2.87	3.00	3.18	2.94	3.48	2.89	3.78	2.84	4.08	2.80	4.38		
	2150	3.65	1.60	3.58	1.93	3.52	2.25	3.46	2.58	3.40	2.90	3.34	3.23	3.28	3.55	3.22	3.88	3.17	4.20	3.12	4.53	3.08	4.85		
Corresponding motor output		1.5kW				2.2kW				3.7kW				5.5kW											
RSR-80 (80)	1130	2.99	0.77	2.93	1.10	2.86	1.43	2.80	1.76	2.73	2.09	2.67	2.42	2.61	2.75	2.55	3.08	2.50	3.41	2.45	3.74	2.41	4.07		
	1240	3.36	0.89	3.29	1.28	3.22	1.63	3.16	1.99	3.09	2.34	3.03	2.70	2.97	3.05	2.92	3.41	2.86	3.76	2.81	4.12	2.76	4.47		
	1300	3.56	1.03	3.49	1.40	3.42	1.77	3.36	2.14	3.29	2.50	3.23	2.88	3.17	3.24	3.12	3.62	3.06	3.98	3.01	4.35	2.96	4.72		
	1370	3.80	1.16	3.74	1.55	3.67	1.93	3.60	2.32	3.53	2.70	3.47	3.09	3.41	3.47	3.36	3.86	3.30	4.24	3.25	4.63	3.20	5.01		
	1470	4.12	1.30	4.04	1.72	3.97	2.13	3.90	2.55	3.83	2.96	3.77	3.38	3.71	3.79	3.66	4.21	3.60	4.62	3.55	5.04	3.50	5.45		
	1570	4.42	1.51	4.35	1.94	4.28	2.37	4.22	2.80	4.15	3.23	4.10	3.66	4.04	4.09	3.99	4.52	3.93	4.95	3.89	5.38	3.84	5.81		
	1660	4.72	1.69	4.65	2.14	4.58	2.59	4.52	3.04	4.45	3.49	4.40	3.94	4.34	4.39	4.29	4.84	4.23	5.29	4.18	5.74	4.13	6.19		
	1750	5.04	1.90	4.96	2.36	4.88	2.82	4.81	3.28	4.74	3.74	4.69	4.20	4.63	4.66	4.58	5.12	4.52	5.58	4.48	6.04	4.44	6.50		
	1840	5.31	2.07	5.24	2.56	5.17	3.05	5.11	3.54	5.07	4.03	4.99	4.52	4.93	5.01	4.88	5.50	4.82	5.99	4.78	6.48	4.73	6.97		
	1930	5.61	2.27	5.54	2.78	5.46	3.29	5.40	3.80	5.33	4.31	5.28	4.82	5.22	5.33	5.17	5.84	5.11	6.35	5.06	6.86	—	—		
Corresponding motor output		2.2kW				3.7kW				5.5kW				7.5kW											
RSR-100 (100)	1070	4.51	1.20	4.37	1.70	4.22	2.20	4.09	2.70	3.96	3.20	3.83	3.70	3.75	4.20	3.67	4.70	3.58	5.20	3.50	5.70	3.42	6.20		
	1160	5.00	1.42	4.85	1.95	4.69	2.49	4.56	3.03	4.43	3.56	4.33	4.10	4.23	4.64	4.15	5.17	4.06	5.71	3.98	6.25	3.90	6.78		
	1240	5.45	1.56	5.29	2.13	5.12	2.70	4.99	3.27	4.86	3.84	4.76	4.41	4.66	4.98	4.57	5.55	4.48	6.12	4.40	6.69	4.32	7.26		
	1320	5.97	1.64	5.82	2.27	5.66	2.89	5.54	3.52	5.41	4.14	5.31	4.77	5.21	5.39	5.12	6.02	5.02	6.64	4.94	7.27	4.86	7.89		
	1480	6.67	1.77	6.53	2.47	6.39	3.13	6.28	3.86	6.17	4.49	6.08	5.25	5.99	5.85	5.92	6.64	5.84	7.21	5.77	8.03	5.70	8.57		
	1580	7.14	1.92	7.01	2.66	6.88	3.37	6.77	4.13	6.66	4.83	6.58	5.60	6.49	6.28	6.42	7.07	6.34	7.74	6.27	8.54	6.20	9.19		
	1700	7.71	2.09	7.59	2.88	7.47	3.66	7.37	4.45	7.26	5.23	7.19	6.02	7.11	6.80	7.03	7.59	6.94	8.37	6.88	9.16	6.82	9.93		
	1790	8.12	2.24	8.01	3.12	7.90	3.89	7.80	4.71	7.70	5.53	7.63	6.36	7.55	7.13	7.48	8.00	7.40	8.82	7.33	9.65	7.26	10.46		
	1890	8.58	2.41	8.48	3.28	8.38	4.14	8.29	5.01	8.19	5.87	8.12	6.74	8.05	7.60	7.98	8.47	7.90	9.33	7.83	10.20	7.76	11.06		
	2010	9.19	2.56	9.09	3.49	9.00	4.41	8.91	5.34	8.82	6.26	8.76	7.19	8.70	8.11	8.64	9.04	8.58	9.96	8.53	10.89	8.47	11.81		
Corresponding motor output		3.7kW				5.5kW				7.5kW				11kW				15kW							
RSR-125 (125)	980	6.41	1.80	6.26	2.46	6.12	3.12	5.98	3.78	5.86	4.44	5.74	5.10	5.63	5.76	5.52	6.42	5.43	7.08	5.34	7.74	5.26	8.40		
	1050	6.93	2.10	6.77	2.79	6.63	3.48	6.50	4.17	6.37	4.86	6.25	5.55	6.14	6.24	6.04	6.93	5.94	7.62	5.86	8.31	5.78	9.00		
	1200	7.94	2.70	7.79	3.48	7.65	4.25	7.53	5.03	7.40	5.80	7.29	6.58	7.18	7.35	7.07	8.13	6.98	8.90	6.89	9.68	6.81	10.45		
	1310	8.70	3.10	8.58	3.95	8.47	4.80	8.37	5.65	8.27	6.50	8.17	7.35	8.07	8.20	7.98	9.05	7.89	9.90	7.81	10.75	7.73	11.60		
	1410	9.40	3.39	9.28	4.31	9.17	5.22	9.06	6.13	8.96	7.04	8.86	7.95	8.76	8.86	8.67	9.77	8.58	10.68	8.50	11.59	8.42	12.50		
	1470	9.83	3.69	9.71	4.64	9.60	5.59	9.50	6.53	9.40	7.48	9.30	8.42	9.21	9.36	9.12	10.31	9.03	11.25	8.95	12.19	8.88	13.14		
	1550	10.44	3.90	10.31	4.90	10.19	5.90	10.07	6.90	9.96	7.90	9.86	8.90	9.76	9.90	9.67	10.90	9.58	11.90	9.50	12.90	9.43	13.90		
	1650	11.13	4.40	11.00	5.48	10.87	6.56	10.76	7.64	10.65	8.72	10.55	9.80	10.45	10.88	10.36	11.96	10.28	13.04	10.20	14.12	10.14	15.20		
	1770	11.92	4.90	11.79	6.02	11.68	7.14	11.57	8.26	11.47	9.38	11.37	10.50	11.28	11.62	11.20	12.74	11.13	13.86	11.06	14.98	11.00	16.10		
	1880	12.63	5.40	12.50	6.58	12.39	7.76	12.28	8.94	12.18	10.12	12.08	11.30	11.99	12.48	11.91	13.66	11.83	14.84	11.76	16.02	11.70	17.20		
Corresponding motor output		5.5kW				7.5kW				11kW				15kW				18.5kW							
RSR-150 (150)	810	12.90	2.91	12.65	3.75	12.42	4.59	12.21	5.54	12.02	7.50	11.85	8.89	11.69	10.27	11.53	11.60	11.38	12.93	11.25	14.06	11.14	15.19		
	870	14																							

Performance curves



Noise level (1.0m on machine side)



Outside dimensions Unit : mm

RSR-50
RSR-65
RSR-80
RSR-100
RSR-125
RSR-150

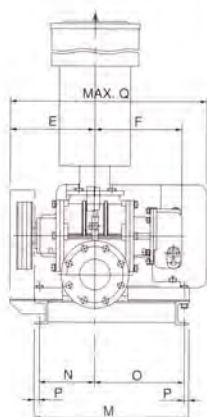
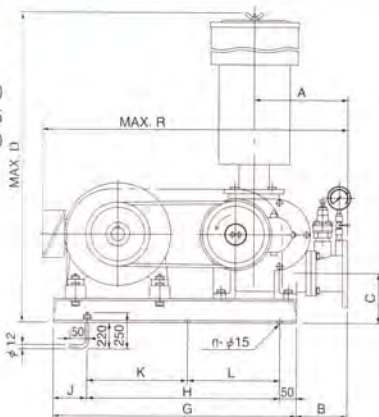


Table of dimensions Unit : mm

Model	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	n	Weight kgs
RSR-50	230	130	120	890	185	179	560	410	100	-	-	300	115	155	15	450	730	4	74
RSR-65	230	130	130	965	205	202	600	450	100	-	-	340	135	175	15	500	780	4	85
RSR-80	280	170	145	1125	220	225	650	500	100	-	-	360	130	200	15	530	860	4	125
RSR-100	280	155	155	1250	260	265	730	580	100	-	-	470	170	270	15	600	930	4	155
RSR-125	355	205	190	1510	295	294	860	700	110	350	350	480	185	255	20	710	1230	6	260
RSR-150	400	235	210	1730	380	377	960	750	160	400	350	590	255	295	20	820	1335	6	400

● Weight of blower itself not including motor. Please see the motor weight table for motor weight including standard accessories.

Motor weight table Unit : kgs

Motor output (kW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37
Drip-proof	10	17	22	32	43	57	100	120	130	170	170	200
Totally enclosed	12	20	26	40	52	65	100	120	170	170	200	295

NR SERIES

Submersible type ——— **Features minimal noise and a superb cooling effect by ideally taking advantage of the submersible pump.**



Application

- Aeration and preliminary aeration at combined waste liquid treatment plants;
- Supplying oxygen at fish farms;
- Aeration at sewage treatment facilities.

Virtues

- Installation expenses are saved a great deal because no land space for noise insulation structure or other facilities is necessary.
- The blower section and motor section are cooled in the water. This keeps the lubricant of such wearing parts as toothed wheels and bearings at the optimal temperature, resulting in reinforced wearproofness and durability.
- Maintained only by an annual inspection for the advantage of labor-saving blower management.

Structural features

- These blowers produce little noise because they are installed in the tank water which absorbs noise. Two 2-lobe rotors are mounted with their shafts aligned in parallel so that they turn in the opposite direction to each other to pressurize the air for transfer. The air is trapped in the casing by the rotors, compressed by the air on the discharge side, and then discharged by the rotation of the rotors. This process makes these blowers ideal for demanding underwater applications with overall heat-insulating efficiency.

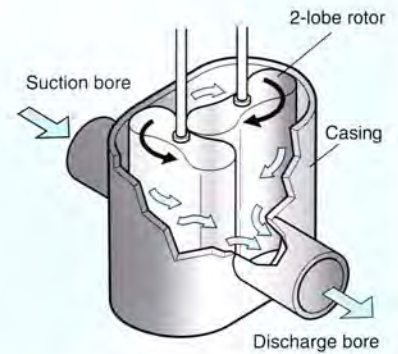
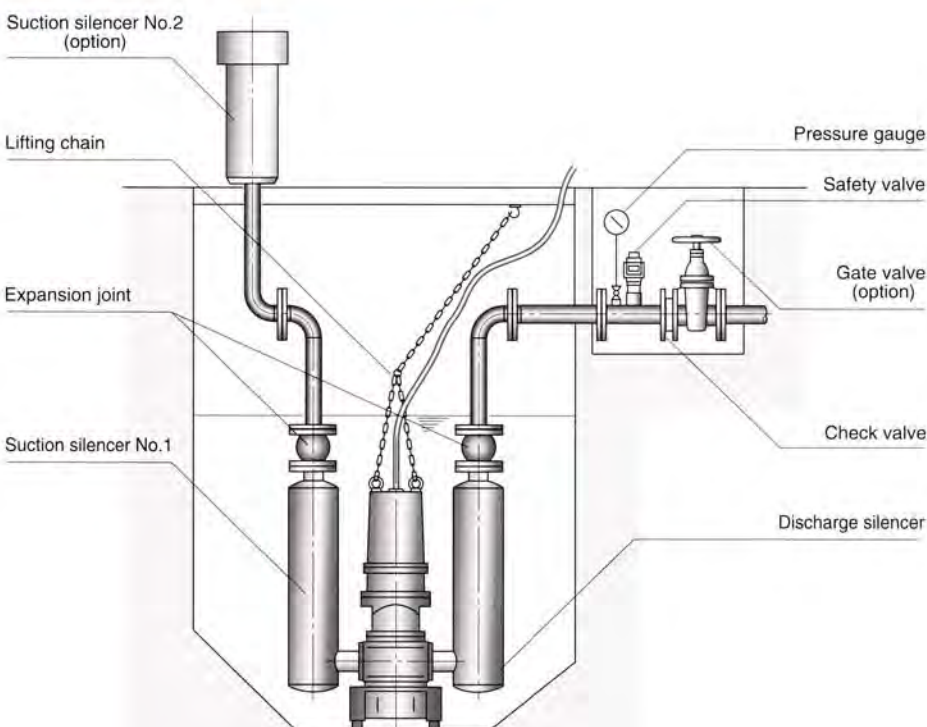


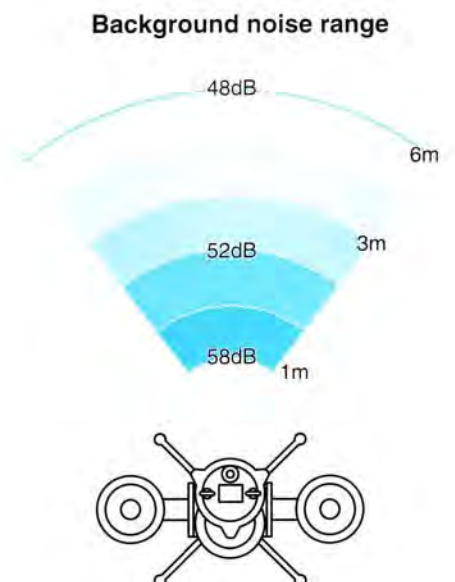
Image drawing for installation



Noise measurement example

<In case of one blower installation>

- Note: No background noise compensation performed.
Background noise: 48dB(A)



Major Standard Specifications

Item		Suction pipe bore (mm)							
		25	32	40	50	65	80	100	125
Pumping fluid	Type of fluid	Air							
	Fluid Temperature	0~40°C							
Blower	Materials	Rotor	Gray iron casting						
		Casing	Gray iron casting						
	Lubricant (Gear)	Gear oil (VG220)							
Motor	Type, Poles	Dry-type submersible induction, 2 and 4 poles							
	Insulation	Class E, F							
	Phase / Voltage	Three-phase / 220V, 380V, 400V, 415V, 440V, 460V							
	Motor protector (Built-in)	Circle thermal protector (7.5kW or under) Miniature protector (11kW or over)							
	Materials	Frame	Gray iron casting						
		Shaft	Stainless steel #403 (2 poles, 0.4~1.5kW) Stainless steel #420 (4 poles, 1.5kW or over)						
Cable		PVC or Chloroprene sheath							
Discharge connection		JIS 10K flange							

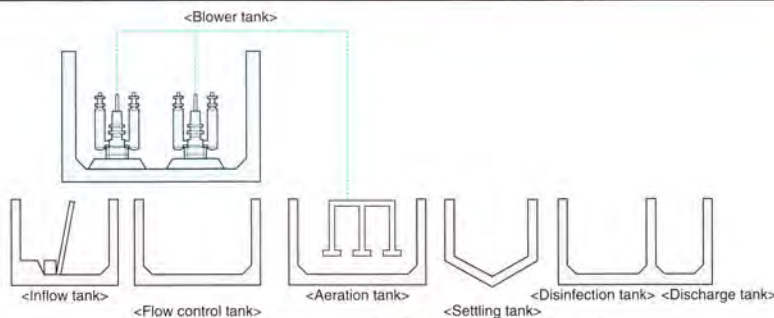
Standard Accessories

- Cabtyre cable 1 pc.
- Lifting chain (with shackle, 5m) 1 pc.
- Suction silencer 1 set
- Discharge silencer 1 set
- Safety valve 1 set
- Expansion joint 2 pc.
- Check valve 1 pc.
- Pressure gauge (with gauge cock, pipe 2kgf/cm²) 1 set



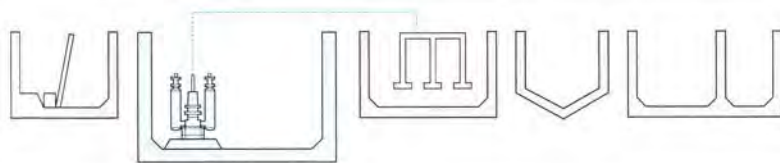
● The portion above water.

Suitable for a variety of tanks



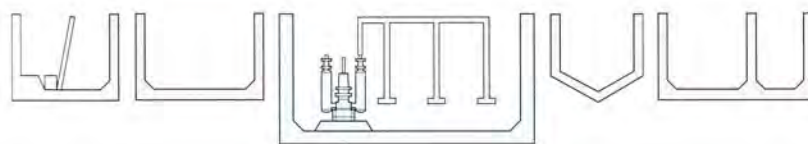
● Blower tank

It is recommended that an aeration tank and a blower tank are installed side by side so that water is readily removed from the blower tank for maintenance services.



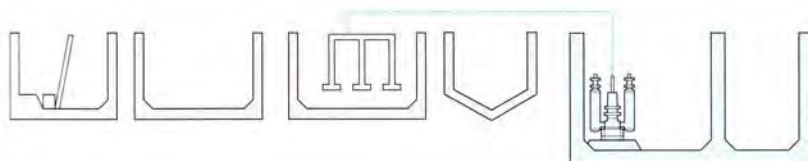
● Flow control tank

Used to install a blower where no specific tank is prepared for it. The virtue is a short piping distance.



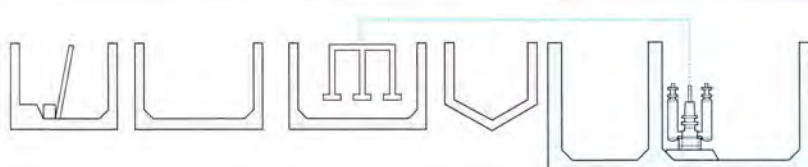
● Aeration tank

The advantage is installation cost economy thanks to short air piping, whereas a shortcoming is that the tank is deep and needs special consideration for maintenance convenience. So, this method is only used in rare cases.



● Disinfection tank

Ideal for simple maintenance work because the tank is shallow and located near the aeration tank.

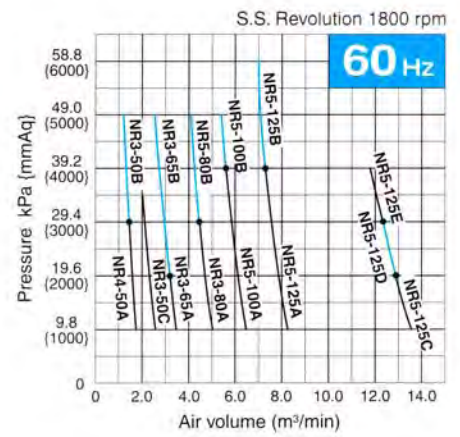
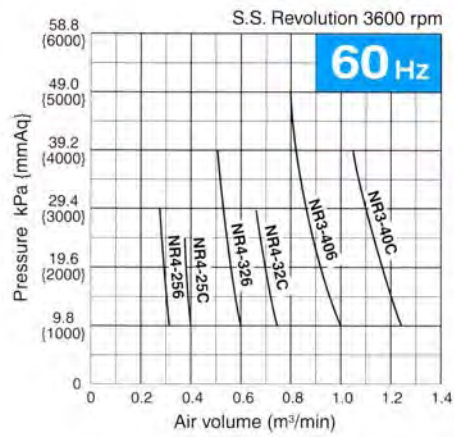


● Discharge tank

The shallow tank facilitates both the monitoring of the installed blower from top of the tank and maintenance activities.

Performance curves

- Suction air volume refer to standard intake conditions: temperature, relative humidity, specific weight; with $\pm 5\%$ tolerance.



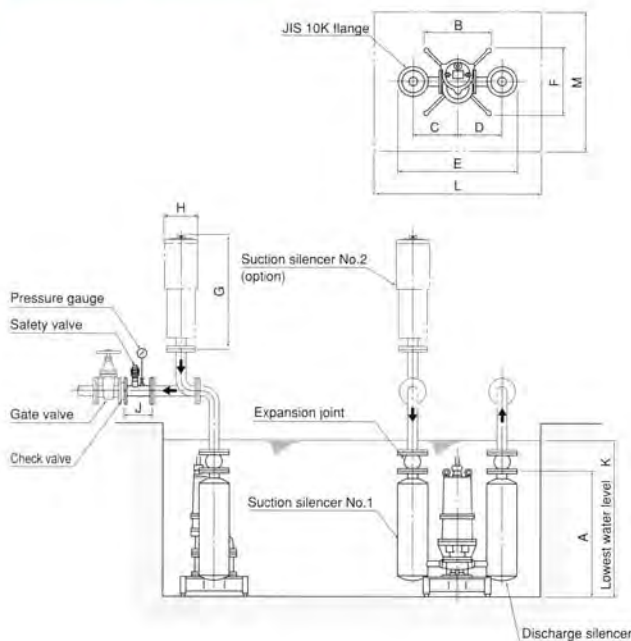
Cabtyre Cables

Phase	Motor output kW	Cores \times mm ²	Dia. mm	Material	Length m
Three-phase	0.45	4 \times 1.25	11.1	PVC sheath	6
	0.75				
	1.5				
	2.2	4 \times 2	11.8	PVC sheath	6
	3.7				
	3.7 (220V only)	4 \times 3.5	13.9	Chloroprene sheath	8
	5.5	4 \times 3.5	14.1		
	7.5	4 \times 5.5	16.8		
		4 \times 3.5	14.1		
		3 \times 3.5	12.9		
11	2 \times 2	10.6			
	4 \times 5.5	16.8			
		3 \times 5.5	15.2		
	15	2 \times 2	10.6		

- Note : Cable diameter may vary to voltage.

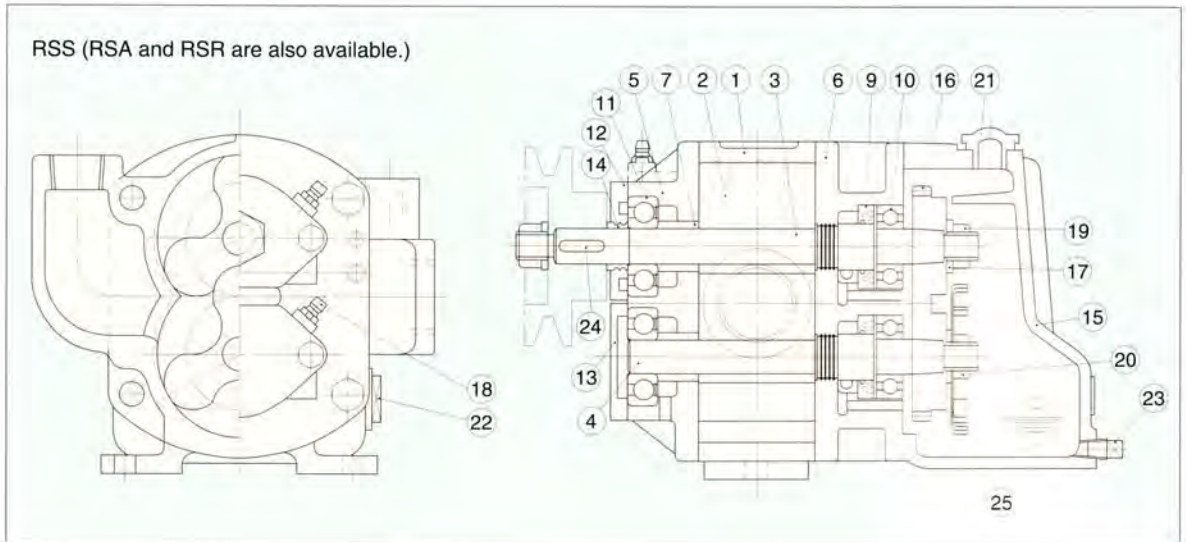


Outside dimensions Unit:mm



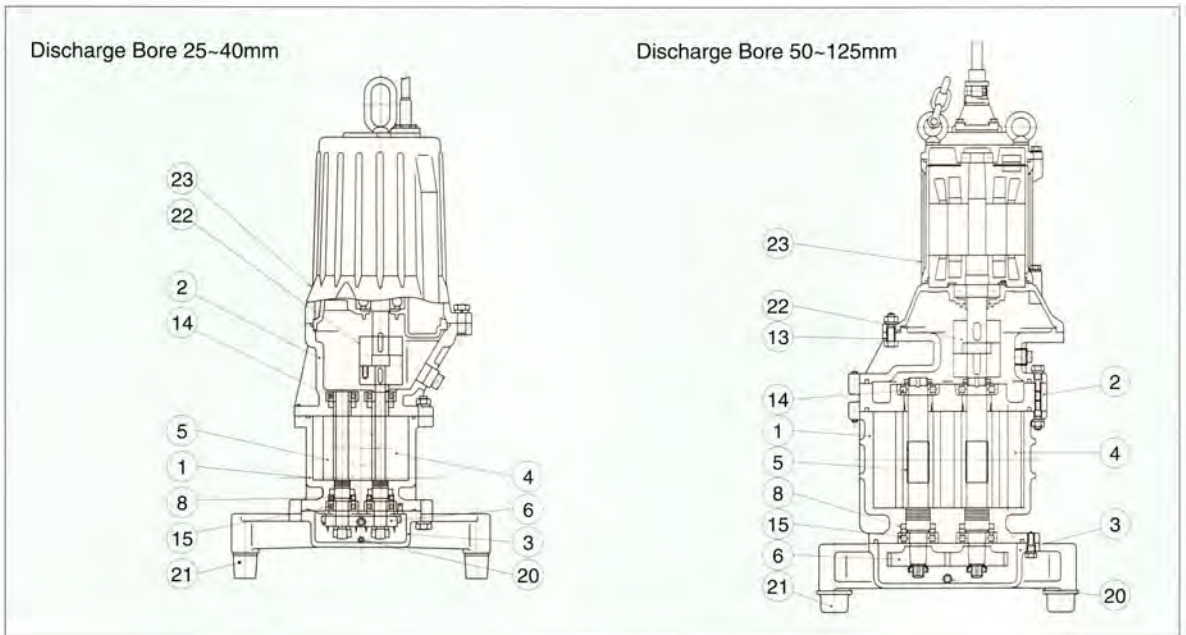
Model	A	B	C	D	E	F	G	H	J	K	L	M
NR4-255-256,25C	462	222	165	165	455	232	585	170	150	650	700	450
NR4-325-326,32C	519	222	165	165	465	232	585	170	170	700	700	450
NR3-405,40C	531	275	210	210	560	323	585	170	180	730	900	700
NR3-406	523	275	210	210	560	323	585	170	180	730	900	700
NR4-50A, NR3-50B	670	425	210	210	575	425	650	195	200	900	1100	900
NR3-50C	685	425	210	210	575	425	650	195	200	900	1100	900
NR3-65A-65B	695	425	245	245	645	425	740	245	200	930	1100	900
NR3-80A, NR5-80B	810	485	280	280	745	485	850	275	200	1100	1200	1000
NR5-100A-100B	905	485	320	320	856	485	1025	325	200	1200	1200	1000
NR5-125A-125B	927	510	340	340	930	510	1160	360	200	1300	1200	1000
NR5-125C-D-E	1093	580	420	420	1090	580	1160	360	200	1400	1300	1100

Construction



No.	Descriptions	No.	Descriptions	No.	Descriptions
1	Casing	10	Bearing	18	Grease nipple
2	Impeller	11	Bearing	19	Hexagon nut
3	Drive shaft	12	Bearing cover (Drive side)	20	Hexagon nut
4	Driven shaft	13	Bearing cover (Driven side)	21	Air breather
5	Side cover (Drive side)	14	Collar	22	Oil gauge
6	Side cover (Gear side)	15	Gear case	23	Drain plug
7	Bearing sleeve	16	Gear	24	Parallel key
9	Oil seal	17	Plain washer		

Construction



No.	Descriptions	No.	Descriptions	No.	Descriptions
1	Casing	6	Gear	20	Oil plug
2	Upper cover	8	Oil seal	21	Rubber foot
3	Gear cover	13	Coupling case	22	Coupling
4	Drive rotor	14	Bearing	23	Submersible motor
5	Driven rotor	15	Bearing		

We reserve the right to change specifications and designs herein for improvement without prior notice.

**TSURUMI
MANUFACTURING CO.,LTD.**

PT. LUKES INDONESIA

Lindeteves Trade Center Lt UG, Blok B1 No. 6
Jalan Hayam Wuruk, Jakarta - Indonesia
Phone : 021 - 6231 7842, 628 5144
Fax : 021 - 6231 0499
email : lukes@cbn.net.id

