PT. MASA JAYA PERKASA

MASA JAYA

TSURUMI PUMP

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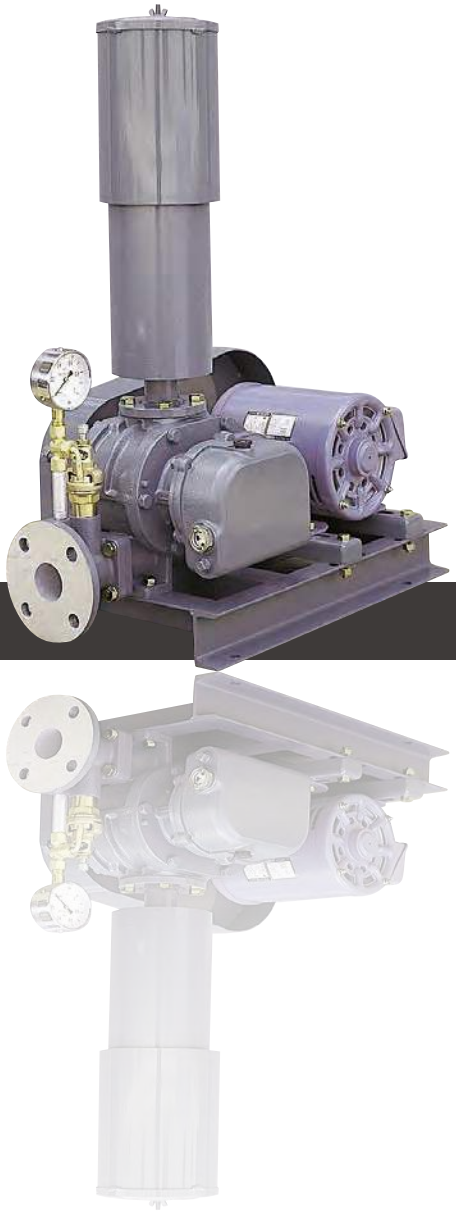
SERIES

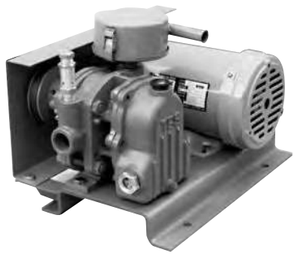
RS

ROTARY AIR BLOWERS

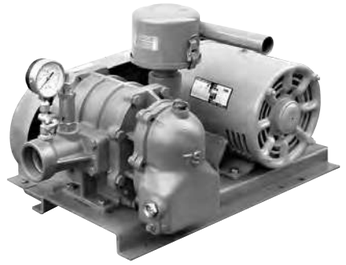


RS SERIES

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)

Applications

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

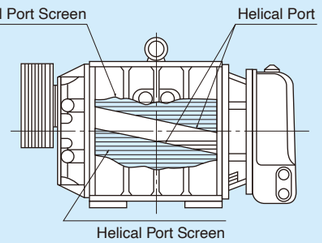
Virtues

- 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

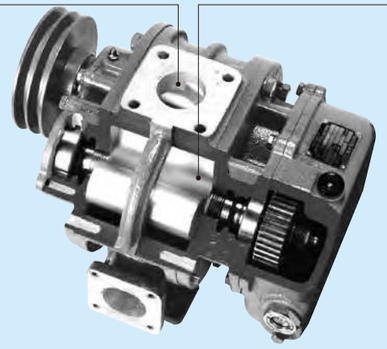
Conventional blowers were designed to discharge the air from the casing in a gust. This caused violent impact and pulsation and resultant noise.
Tsurumi blowers have helical structure at the intake and the outlet. This makes the air virtually pass through a gradually closing suction port or gradually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

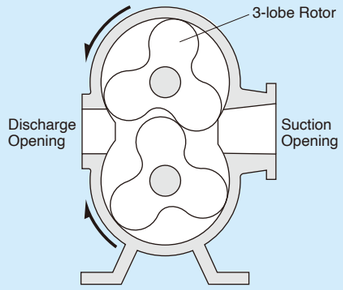


● Special silencer and 3-lobe rotor

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 Components & Specifications

Item			Discharge bore (mm) 20	25	32	40	50	65	80	100	125	150
Treating fluid	Type of fluid		Air									
	Fluid temperature		0~40℃									
Blower	Structure	Rotor	3-lobe rotor									
		Shaft seal	Labyrinth									
		Bearing	Shielded ball bearing									
	Materials	Rotor	Gray Cast Iron									
		Casing	Gray Cast Iron									
		Shaft	Carbon steel									
Motor	Type, Pole		Drip-proof / Totally enclosed motor, 4-pole									
	Insulation		E									
	Phase		Single-phase (0.4kW only) Three-phase									
Discharge connection			RSS & RSA / Screw (ISO Rc-type) RSR / JIS 10kg/cm² flange									

Standard Accessories

- Common base ····· 1 pc.
- Silent Air Cleaner (RSS, RSA) ····· 1 set
- Suction silencer (with air filter, RSR) ····· 1 set
- Safety valve ····· 1 set
- Pressure gauge (RSA, RSR) ····· 1 set

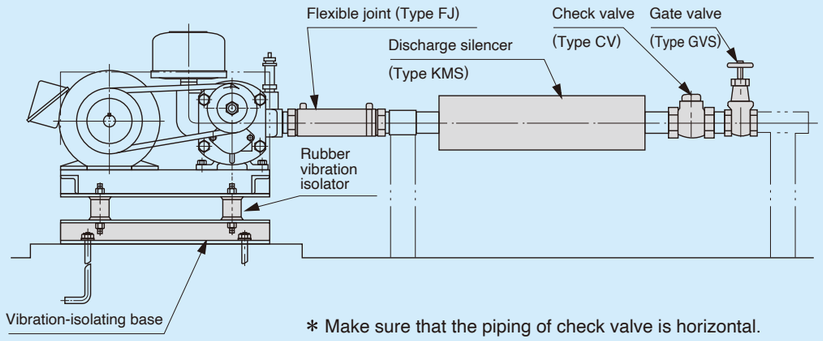
Optional Accessories

- Discharge silencer
- Flexible joint
- Gate valve
- Check valve
- Rubber vibration isolator
  (with vibration-isolating base)

Reference Drawing for Piping (Example)

RSS · RSA

Optional accessories



∗ Make sure that the piping of check valve is horizontal.

HOW TO USE THE SELECTION TABLE

Information about 50/60Hz Selection 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℃; absolute pressure, 101.3kPa {1.033kgf / cm²}, relative humidity, 65%.
2. The amounts of air under reference suction conditions (temperature, 0℃; 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:

$$Qs = Qn \times \frac{273 + ts}{273}$$

where
Qs, amount of air (m³ / min) under standard suction conditions indicated on the Selection Tables;
Qn,amount of air (m³ / min) under reference suction conditions;
Suction pressure is ambient pressure, 101.3kPa; ts, suction temperature in ℃.

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

$$Qs = Qd \times \frac{101.3 + Pd}{101.3} \times \frac{273 + ts}{273 + td}$$

where
Qd, amount of air (m³ / min) under discharge conditions;
Pd, discharge pressure (kPa);
ts, suction temperature in ℃;
td, discharge temperature in ℃.

4. Using the amount of air and the necessary discharge pressure obatained from the above mathematics, determine your blower model, bore, rpm, and shaft power in reference to the Selection Tables.
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 Selection Tables. Select a suitable color motor from these tables.

RSS SERIES

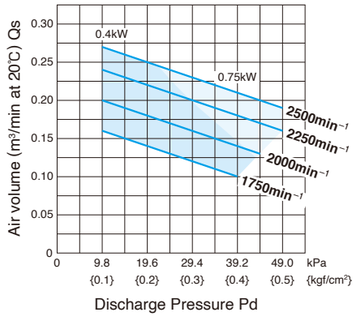
Selection Table

Model (Discharge bore mm)	Speed (min⁻¹)	Suction air volume at 20℃ (Qs, m³/min) and required power (La, kW)									
		9.8kPa {0.1kgf/cm²}		19.6kPa {0.2kgf/cm²}		29.4kPa {0.3kgf/cm²}		39.2kPa {0.4kgf/cm²}		49.0kPa {0.5kgf/cm²}	
		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	

• The above motors have been selected with minimum 5% margin.

Performance curves

<RSS-20>



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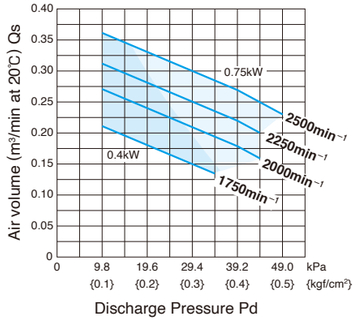

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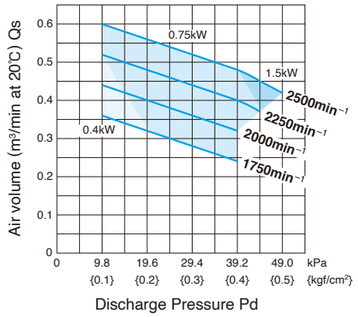
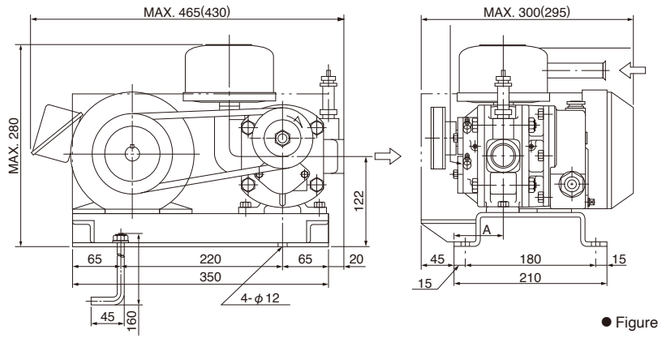


Dimensions Unit : mm

RSS-20
RSS-25
RSS-32



● Figure in ( ) shows the dimensions of 0.4 kW.

Table of dimensions Unit : mm

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

● Weight excluding motor

Motor weight table Unit : kg

Motor output (kW)	0.4	0.75	1.5
Drip-proof (single-phase)	11.6	—	—
Drip-proof (three-phase)	7	—	—
Totally-enclosed (three-phase)	8	16	22

RSA SERIES

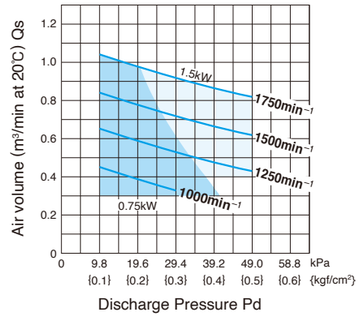
Selection Table

Model (Discharge bore mm)	Speed (min⁻¹)	Suction air volume at 20℃ (Qs, m³/min) and required power (La, kW)									
		9.8kPa {0.1kgf/cm²}		19.6kPa {0.2kgf/cm²}		29.4kPa {0.3kgf/cm²}		39.2kPa {0.4kgf/cm²}		49.0kPa {0.5kgf/cm²}	
		Qs	La	Qs	La	Qs	La	Qs	La	Qs	La
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	

• The above motors have been selected with minimum 5% margin.

Performance curves

<RSA-40>



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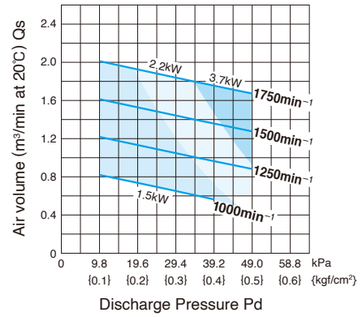
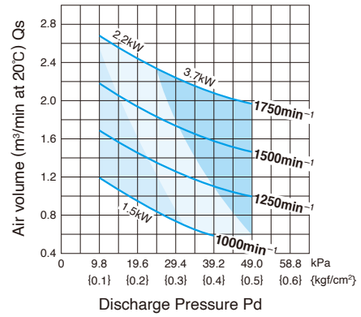


<RSA-65>



Dimensions Unit : mm

RSA-40
RSA-50
RSA-65

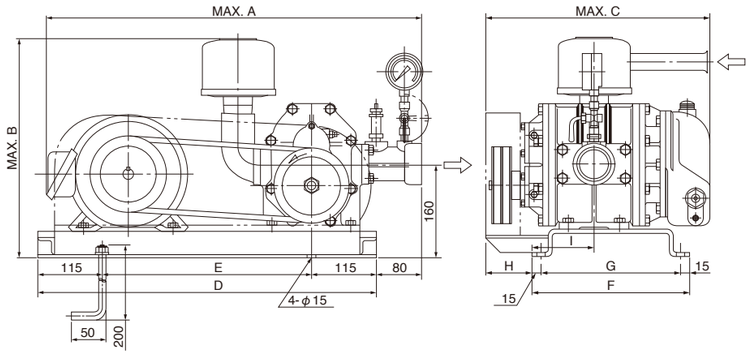


Table of dimensions Unit : mm

Model	A	B	C	D	E	F	G	H	I	Weight kg
RSA-40	685	360	350	550	320	250	220	60	85	42
RSA-50	745	380	410	600	370	280	250	80	110	61
RSA-65	745	380	410	600	370	280	250	80	130	64

● Weight excluding motor

Motor weight table Unit : kg

Motor output (kW)	0.75	1.5	2.2	3.7
Totally-enclosed	16	22	30	40

RSR SERIES

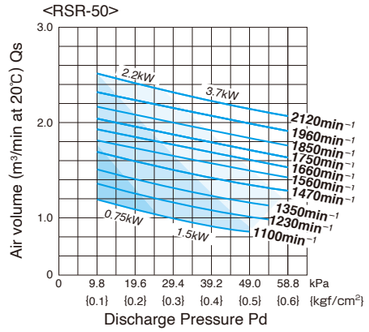
Selection Table

Model (Discharge bore mm)	Speed (min⁻¹)	Suction air volume at 20℃ (Qs, m³/min) and required power (La, kW)																					
		9.8kPa {0.10kgf/cm²}		14.7kPa {0.15kgf/cm²}		19.6kPa {0.20kgf/cm²}		24.5kPa {0.25kgf/cm²}		29.4kPa {0.30kgf/cm²}		34.3kPa {0.35kgf/cm²}		39.2kPa {0.40kgf/cm²}		44.1kPa {0.45kgf/cm²}		49.0kPa {0.50kgf/cm²}		53.9kPa {0.55kgf/cm²}		58.8kPa {0.60kgf/cm²}	
		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)	1110	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	2.48	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	2.65	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	14.13	3.13	13.84	4.51	13.58	5.90	13.33	7.12	13.10	8.67	12.89	10.05	12.69	11.43	12.51	12.82	12.34	14.20	12.19	15.59	12.05	16.97
	990	15.92	3.34	15.67	4.90	15.44	6.46	15.22	8.02	15.01	9.58	14.81	11.14	14.63	12.70	14.46	14.26	14.30	15.82	14.15	17.38	14.02	18.94
	1120	18.03	5.38	17.77	7.10	17.53	8.81	17.30	10.53	17.08	12.24	16.87	13.96	16.68	15.67	16.50	17.39	16.33	19.10	16.17	20.82	16.03	22.53
	1200	19.39	6.32	19.14	8.06	18.91	9.80	18.69	11.53	18.49	13.27	18.29	15.01	18.12	16.75	17.95	18.49	17.79	20.23	17.65	21.97	17.52	23.71
	1270	20.58	7.14	20.35	8.90	20.13	10.66	19.92	12.42	19.73	14.18	19.55	15.94	19.38	17.70	19.22	19.46	19.08	21.22	18.95	22.98	18.83	24.74
	1410	22.81	9.01	22.57	11.01	22.35	13.01	22.14	15.01	21.94	17.01	21.75	19.01	21.58	21.01	21.42	23.01	21.27	25.01	21.13	27.01	21.01	29.01
	1540	24.89	10.99	24.63	13.11	24.40	15.23	24.17	17.35	23.95	19.47	23.75	21.59	23.56	23.71	23.39	25.83	23.22	27.95	23.08	30.07	22.94	32.19
	1670	26.84	12.71	26.57	14.96	26.32	17.21	26.08	19.46	25.85	21.71	25.63	23.96	25.43	26.21	25.24	28.46	25.06	30.71	24.91	32.96	24.76	35.21
	1780	28.06	14.19	27.79	16.61	27.53	19.02	27.28	21.44	27.05	23.85	26.83	26.27	26.62	28.68	26.42	31.10	26.24	33.51	26.07	35.93	25.91	38.34
Corresponding motor output		7.5kW				11kW		15kW			18.5kW			22kW			30kW			37kW		45kW	

• The above motors have been selected with minimum 5% margin.

Performance curves

<RSR-50>



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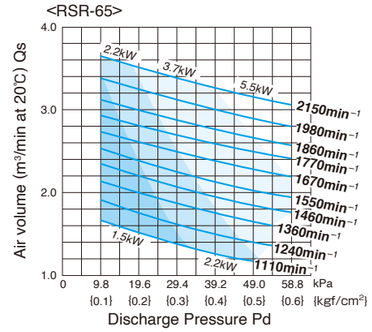

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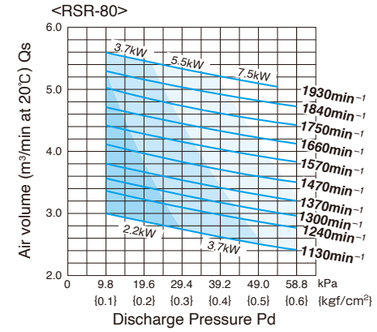

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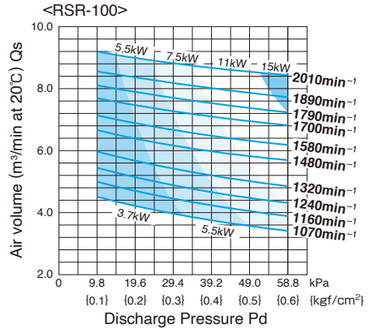

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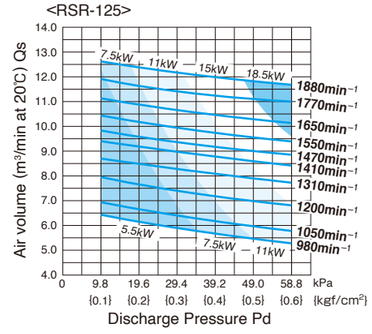

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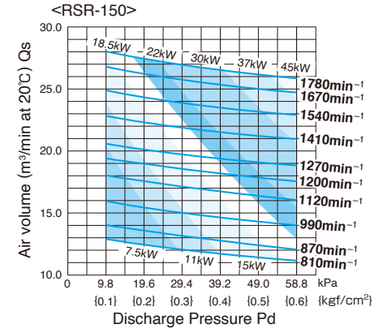


Dimensions Unit : mm

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

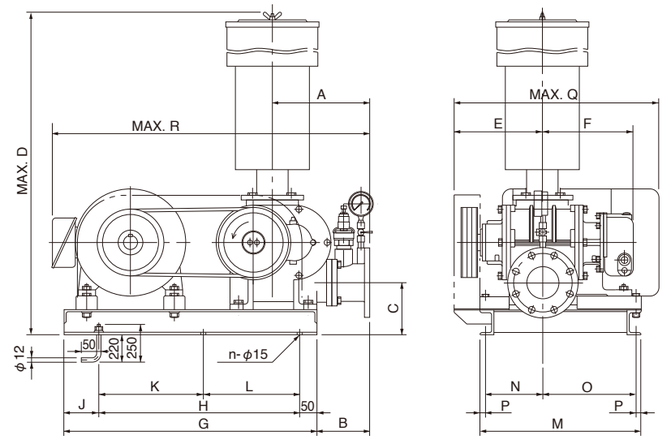


Table of dimensions Unit : mm

Model	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	n	Weight kg
RSR-50	230	130	120	890	185	179	560	410	100	—	—	300	115	155	15	430	735	4	74
RSR-65	230	130	130	965	205	202	600	450	100	—	—	340	135	175	15	495	830	4	85
RSR-80	280	170	145	1125	220	225	650	500	100	—	—	360	130	200	15	535	915	4	125
RSR-100	280	155	155	1250	260	265	730	580	100	—	—	470	170	270	15	680	985	4	155
RSR-125	355	205	190	1510	295	294	860	700	110	350	350	480	185	255	20	725	1235	6	260
RSR-150	400	235	210	1730	380	377	960	750	160	400	350	590	255	295	20	920	1380	6	400

● Weight excluding motor

Motor weight table Unit : kg

Motor output (kW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45
Totally-enclosed	16	22	30	40	61	72	103	120	185	190	245	330	370

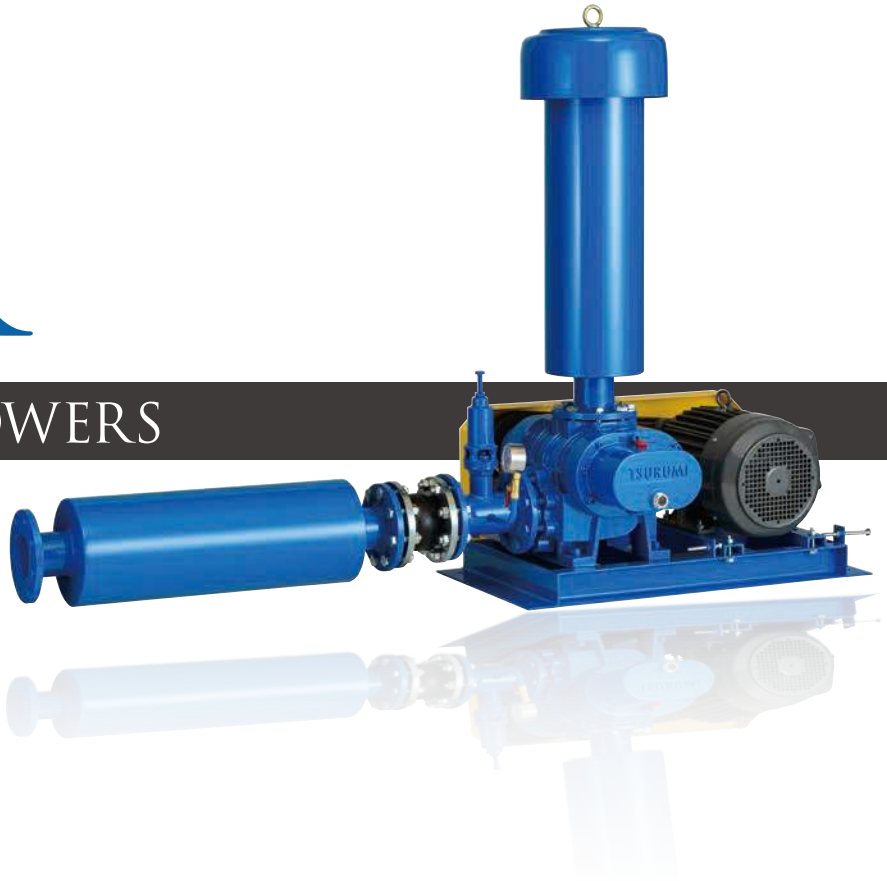
PT. MASA JAYA PERKASA

TSURUMI PUMP
For The **Earth**, For All The **People**

SERIES

TSR

ROTARY AIR BLOWERS



Major Components & Specifications

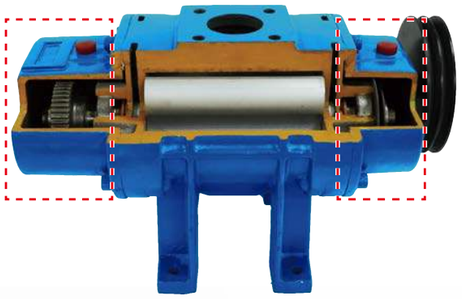
Discharge Bore mm			50	65	80	100	125	150	200
Treating fluid	Type		Air						
	Temperature		0 to 40°C						
Blower	Structure	Rotor	3-lobe rotor						
		Shaft Seal	Labyrinth						
		Bearing	Shielded ball bearing						
	Material	Casing	Gray cast iron						
		Shaft	Chromium molybdenum steel						
		Rotor	Gray cast iron						
		Gear	Nickel chromium molybdenum steel						
Discharge Connection			JIS 10kg/cm² flange						

Standard Accessories

- Common base
- Silencer (Suction & Discharge)
- Filter
- Safety valve
- Check valve
- Pressure gauge
- T-joint
- Belt cover
- V-belt
- Pulley
- Anti-vibration joint
- Anti-vibration rubber

Optional Accessories

- Acoustic hood



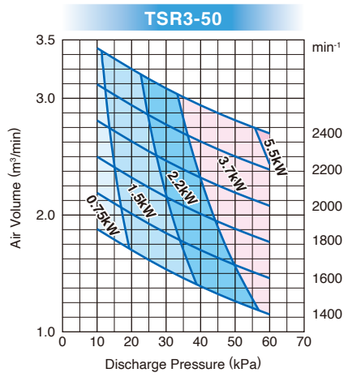
Structural Features

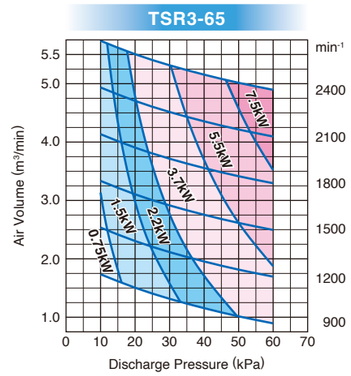
The double-sided oil chamber design effectively maintains lower temperatures during high-pressure and high-speed operations in comparison to traditional models.

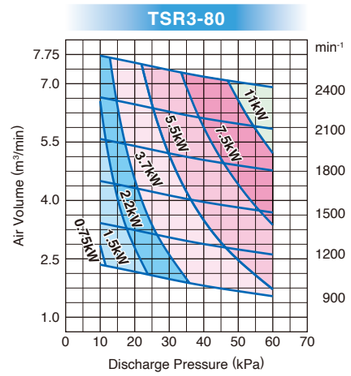
High pressure (70 to 80kPa) is available as a air-cooled type (discharge bore diameter : 150 and 200mm).

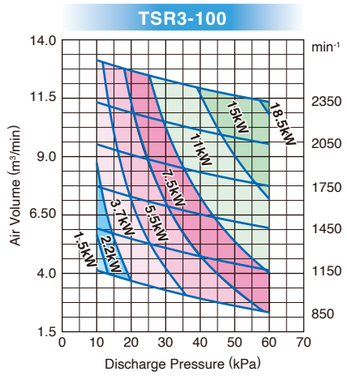
Tsurumi TSR-series is a V-belt driven, roots type blower designed for compressing air or creating vacuum. The precisely machined, well-balanced 3-lobe rotor reduces the pulsating noise and vibration, and also it ensures stable performance.
The TSR-series is suited for various applications, such as for aeration at wastewater treatment facilities, agitation of wastewater and sewage, decomposition and scum prevention, and oxygen supply at fish farms.

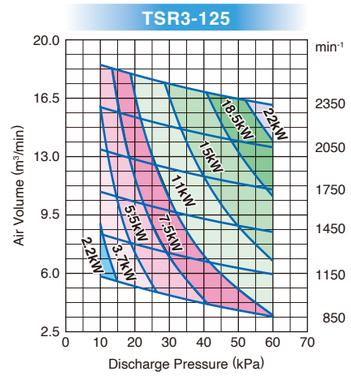
Performance Curves

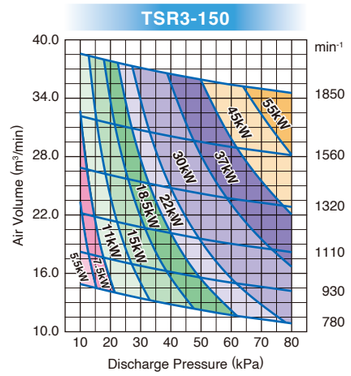


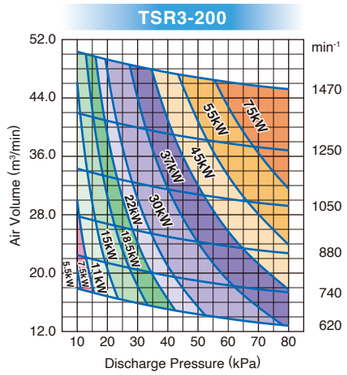












How To Select The Blower Model

The Selection Chart indicates the relationships between blower model, bores, revolutions, discharge pressures, actual air flow rates, and the shaft powers.

1. The amount of air indicated in the Selection Chart represents the suction amount under the following standard conditions: temperature 20°C, absolute pressure 101.3kPa, and relative humidity 65%.
2. The amount of air under reference conditions (0°C, absolute pressure 101.3kPa, dry) can be converted to amounts of air under standard suction conditions by the formula below if the suction pressures are the same:

$$Qs = Qn \times \frac{273 + t\,s}{273}$$

where
Qs, amount of air (m³/min) under standard suction conditions indicated on the Selection Chart;
Qn, 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 amounts of air under discharge conditions to amounts of air under standard suction conditions indicated on the Selection Chart, use the following formula:

$$Qs = Qd \times \frac{101.3 + Pd}{101.3} \times \frac{273 + t\,s}{273 + t\,d}$$

Qd, amount of air (m³/min.) under discharge conditions;
Pd, discharge pressure (kPa)
ts, suction temperature in °C
td, discharge temperature in °C

4. Using the amount of air and the necessary discharge pressure obtained from the above calculations, determine your blower model, bore, revolution, and shaft power referring to the Selection Chart.
5. Your selectable range can overlap several models. It is recommended that one with a smaller model number be selected for cost economy, or one with a larger model number be selected for lower noise.
6. For necessary motor output, refer to required power (La) in the Selection Chart.

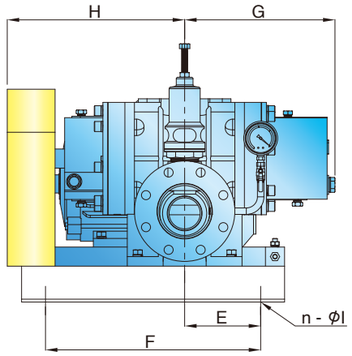
Selection Table

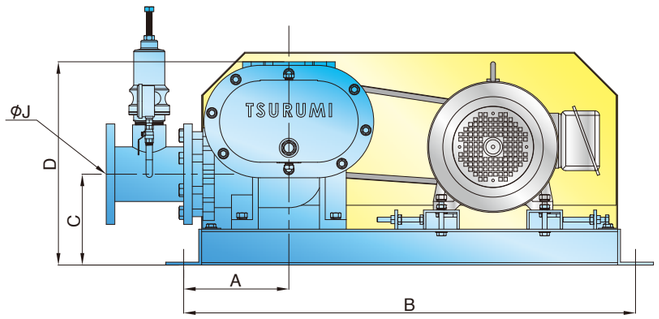
Model	RPM	Suction air volume at standard condition (Qs in m³/min) and required power (La in kW)															
		10kPa		20kPa		30kPa		40kPa		50kPa		60kPa		70kPa		80kPa	
		Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La
TSR3-50	1400	1.88	0.39	1.70	0.78	1.54	1.16	1.39	1.55	1.26	1.94	1.15	2.32				
	1600	2.19	0.44	2.01	0.89	1.85	1.33	1.70	1.77	1.57	2.21	1.46	2.66				
	1800	2.50	0.50	2.32	1.00	2.16	1.49	2.01	1.99	1.88	2.49	1.77	2.99				
	2000	2.81	0.55	2.63	1.11	2.47	1.66	2.32	2.21	2.19	2.77	2.08	3.32				
	2200	3.12	0.61	2.94	1.22	2.78	1.82	2.63	2.43	2.50	3.05	2.39	3.65				
	2400	3.43	0.66	3.25	1.33	3.09	1.99	2.94	2.65	2.81	3.32	2.70	3.99				
TSR3-65	900	1.74	0.47	1.51	0.93	1.32	1.37	1.16	1.80	1.02	2.22	0.90	2.63				
	1200	2.54	0.63	2.31	1.24	2.12	1.83	1.96	2.40	1.82	2.96	1.70	3.51				
	1500	3.34	0.79	3.11	1.55	2.92	2.29	2.76	3.00	2.62	3.70	2.50	4.38				
	1800	4.14	0.95	3.91	1.86	3.72	2.75	3.56	3.60	3.42	4.44	3.30	5.26				
	2100	4.94	1.11	4.71	2.17	4.52	3.21	4.36	4.20	4.22	5.18	4.10	6.13				
	2400	5.74	1.27	5.51	2.48	5.32	3.67	5.16	4.80	5.02	5.92	4.90	7.01				
TSR3-80	900	2.35	0.65	2.17	1.28	1.98	1.86	1.81	2.44	1.67	2.98	1.54	3.51				
	1200	3.42	0.87	3.24	1.70	3.05	2.48	2.88	3.24	2.74	3.97	2.61	4.68				
	1500	4.50	1.09	4.32	2.12	4.13	3.11	3.96	4.06	3.82	4.96	3.69	5.85				
	1800	5.58	1.30	5.40	2.54	5.21	3.73	5.04	4.87	4.90	5.96	4.77	7.02				
	2100	6.65	1.52	6.47	2.96	6.28	4.35	6.11	5.68	5.97	6.95	5.84	8.19				
	2400	7.72	1.74	7.54	3.39	7.35	4.98	7.18	6.50	7.04	7.95	6.91	9.36				
TSR3-100	850	4.13	1.16	3.68	2.21	3.28	3.18	2.92	4.06	2.61	4.88	2.33	5.64				
	1150	5.93	1.56	5.48	2.98	5.09	4.30	4.73	5.49	4.42	6.61	4.13	7.63				
	1450	7.73	1.97	7.28	3.76	6.89	5.42	6.53	6.93	6.22	8.33	5.94	9.62				
	1750	9.53	2.38	9.08	4.54	8.69	6.53	8.33	8.36	8.02	10.04	7.74	11.61				
	2050	11.33	2.79	10.88	5.32	10.49	7.65	10.13	9.80	9.82	11.76	9.54	13.60				
	2350	13.13	3.21	12.68	6.10	12.29	8.77	11.93	11.24	11.62	13.49	11.34	15.59				
TSR3-125	850	5.83	1.50	5.22	2.92	4.69	4.15	4.20	5.36	3.79	6.43	3.41	7.42				
	1150	8.36	2.07	7.76	3.93	7.22	5.66	6.74	7.25	6.32	8.74	5.95	10.16				
	1450	10.90	2.61	10.29	4.94	9.76	7.11	9.27	9.13	8.86	11.04	8.48	12.84				
	1750	13.43	3.13	12.83	5.96	12.29	8.55	11.81	11.01	11.39	13.32	11.02	15.41				
	2050	15.97	3.68	15.37	6.98	14.83	10.02	14.35	12.90	13.93	15.62	13.56	18.08				
	2350	18.50	4.24	17.90	7.99	17.36	11.49	16.88	14.78	16.46	17.92	16.09	20.74				
TSR3-150	780	14.90	3.69	14.14	7.05	13.44	10.14	12.81	12.99	12.24	15.62	11.71	18.06	11.29	20.33	10.86	22.41
	930	18.22	4.40	17.46	8.42	16.77	12.10	16.15	15.50	15.56	18.64	15.05	21.55	14.62	24.27	14.19	26.78
	1110	22.21	5.25	21.45	10.04	20.76	14.44	20.14	18.49	19.55	22.24	19.04	25.72	18.61	28.97	18.18	31.94
	1320	26.86	6.26	26.10	11.94	25.41	17.18	24.78	22.00	24.20	26.47	23.68	30.62	23.26	34.33	22.83	38.02
	1560	32.17	7.38	31.41	14.12	30.72	20.30	30.09	26.00	29.51	31.28	28.99	36.15	28.56	40.71	28.14	44.93
	1850	38.58	8.76	37.82	16.75	37.12	24.07	36.49	30.85	35.92	37.09	35.39	42.90	34.97	48.30	34.54	53.28
TSR3-200	620	17.89	4.94	16.82	9.52	15.89	13.73	15.05	17.59	14.36	21.19	13.75	24.56	13.21	27.67	12.79	30.55
	740	22.47	5.91	21.40	11.37	20.47	16.39	19.63	21.02	18.94	25.30	18.33	29.33	17.79	33.06	17.37	36.52
	880	27.82	7.04	26.75	13.54	25.82	19.50	24.98	25.03	24.29	30.09	23.68	34.89	23.14	39.33	22.72	43.49
	1050	34.31	8.41	33.24	16.16	32.31	23.28	31.47	29.89	30.78	35.91	30.17	41.64	29.63	46.96	29.21	51.93
	1250	41.95	10.07	40.87	19.30	39.94	27.76	39.10	35.65	38.41	42.93	37.79	49.74	37.25	56.00	36.82	61.81
	1470	50.34	11.90	49.26	22.75	48.33	32.70	47.49	41.99	46.80	50.63	46.18	58.55	45.64	65.88	45.21	72.70

0.75kW	3.7kW	11kW	22kW	45kW
1.5kW	5.5kW	15kW	30kW	55kW
2.2kW	7.5kW	18.5kW	37kW	75kW

Note The above motors have been selected with minimum 5% margin.
The standard condition is difined as the temperature of 20°C, absolute pressure of 101.3kPa, and relative humidity of 65%.

Dimensions





Unit: mm

Model	A	B	C	D	E	F	G	H	n-φI	J	Weight (kg)
TSR3-50	207.5	795	179	360	182	375	219.4	233	4-φ14	50	66
TSR3-65	207.5	795	178.5	367	141	375	259.4	274	4-φ14	65	80
TSR3-80	207.5	795	185	375	112	375	289.4	303	4-φ14	80	88
TSR3-100	220	945	190	425	159	450	314.4	371	4-φ14	100	152
TSR3-125	220	945	220	455	109	450	363.4	431	4-φ14	125	175
TSR3-150	137.5	900	263.5	553	209	550	504.6	558	4-φ19	150	347
TSR3-200	313	1300	323	755	583	935	489.5	559.5	6-φ20	200	717

• Weight excluding motor and silencer

TSURUMI PUMP

For The **Earth**, For All The **People**

MASA JAYA

PT. MASA JAYA PERKASA

info@masajayaperkasa.com

Jl. Hayam Wuruk No. 76,
Jakarta Barat,DKI Jakarta 11160

(+62)21-649-6496

(+62)852-1116-7713