



Roots Type Blowers

TSR



ROOTS TYPE BLOWERS

TSR Series

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 applicable to a wide variety of applications.

Applications

- Wastewater Aeration
- Activated Sludge Process
- Aquaculture
- Combustion Furnace
- Pneumatic Conveyance
- Vacuum Packaging

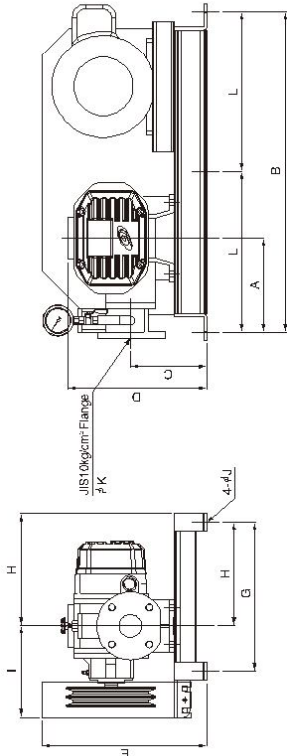
Accessories

- Silencer (Suction & Discharge)
- T-Joint
- Check Valve
- Safety Valve
- Pressure Gauge
- Anti-vibration Joint
- Vibration Rubber
- Anchor Bolt

Major Standard Specifications

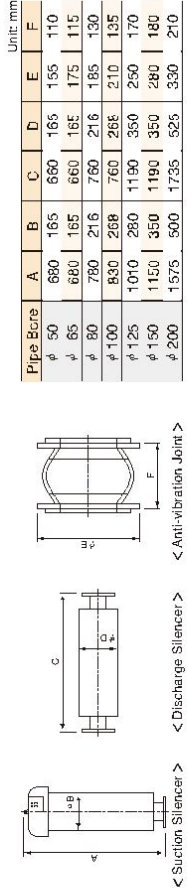
Discharge Bore	mm	50	65	80	100	125	150	200
Fluid	Air							
Type	Temperature							
Temperature	0 to 40°C							
Structure	Rotor 3-lobe Spur Type							
Blower	Shaft Seal Labyrinth							
	Ball Bearings							
	Casing Gray Cast Iron							
	Shaft Chrome-molybdenum Steel							
Material	Rotor Gray Cast Iron							
	Gear Nickel-chrome-molybdenum Steel							
Type	Drip-proof, Indoor Use							
Pole	4-pole							
Phase	3-phase							
Discharge Connection	JIS 10kg/cm ² Flange							

Dimensions

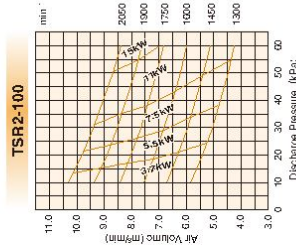
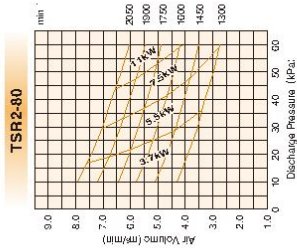
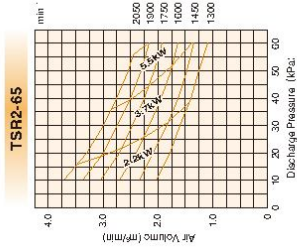
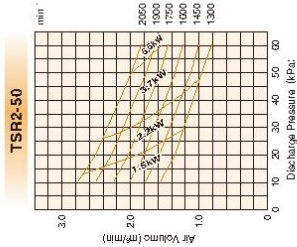


Model	A	B	C	D	E	F	G	H	I	J	K	L	Weight (kg)
TSR2-50	215	734	175	317	343	236	340	266	199	15	50	—	55
TSR2-65	215	734	175	317	343	214	340	234	222	15	65	—	58
TSR2-80	257	934	190	372	466	277	420	297	259	15	80	—	116
TSR2-100	257	934	190	385	466	254	420	274	281	15	100	—	131
TSR2-125	303	1060	235	445	530	292	450	317	314	19	125	—	223
TSR2-150	328	1190	250	521	570	341	600	366	385	19	150	—	362
TSR2-200	235	1100	305	646	703	439	730	469	464	19	200	550	547

* Weight excluding motor and silencer



Performance Curves



Selection Table

Model (Discharge Bore in mm)	Speed (min ⁻¹)	Suction air volume at standard condition (Qs in m ³ /min) and required power (La in kW)											
		10kPa (1020mmHzO)		20kPa (2040mmHzO)		30kPa (3060mmHzO)		40kPa (4080mmHzO)		50kPa (5100mmHzO)		60kPa (6120mmHzO)	
		Qs	La	Qs	La	Qs	La	Qs	La	Qs	La	Qs	La
TSR2-50 (50)	1300	1.56	0.76	1.35	1.11	1.21	1.43	1.08	1.76	0.95	2.13	0.81	2.45
	1450	1.79	0.88	1.58	1.25	1.42	1.60	1.27	1.97	1.12	2.35	1.00	2.73
	1600	2.02	0.95	1.80	1.38	1.65	1.79	1.49	2.21	1.35	2.64	1.23	3.06
	1750	2.25	1.03	2.03	1.50	1.87	1.98	1.72	2.44	1.57	2.93	1.45	3.40
	1900	2.51	1.13	2.27	1.66	2.10	2.18	1.94	2.71	1.77	3.25	1.64	3.77
	2050	2.77	1.24	2.51	1.81	2.32	2.39	2.15	2.97	1.97	3.56	1.83	4.14
TSR2-65 (65)	1300	2.04	1.00	1.79	1.42	1.59	1.79	1.39	2.18	1.25	2.53	1.08	2.80
	1450	2.35	1.11	2.08	1.59	1.84	2.01	1.63	2.48	1.46	2.91	1.34	3.42
	1600	2.70	1.24	2.39	1.77	2.15	2.28	1.94	2.86	1.77	3.41	1.63	4.05
	1750	3.04	1.37	2.70	1.95	2.46	2.55	2.25	3.24	2.07	3.91	1.92	4.67
	1900	3.38	1.49	3.00	2.13	2.73	2.79	2.50	3.55	2.30	4.29	2.15	5.15
	2050	3.71	1.62	3.29	2.31	3.00	3.02	2.75	3.86	2.54	4.66	—	—
TSR2-80 (80)	1300	4.32	1.56	3.92	2.40	3.56	3.09	3.27	3.77	2.97	4.37	2.74	5.24
	1450	5.09	1.80	4.68	2.79	4.33	3.65	4.04	4.58	3.75	5.45	3.52	6.32
	1600	5.77	1.96	5.36	3.05	5.02	4.04	4.72	5.11	4.43	6.15	4.20	7.18
	1750	6.46	2.12	6.05	3.31	5.70	4.43	5.40	5.64	5.12	6.85	4.88	8.05
	1900	7.20	2.31	6.74	3.62	6.36	4.84	6.04	6.17	5.72	7.49	5.46	8.82
	2050	7.94	2.51	7.44	3.93	7.02	5.25	6.68	6.69	6.33	8.14	6.04	9.60
TSR2-100 (100)	1300	5.83	1.98	5.42	3.13	5.06	4.20	4.75	5.36	4.48	6.51	4.25	7.67
	1450	6.71	2.21	6.31	3.50	5.96	4.72	5.65	5.93	5.37	7.22	5.13	8.52
	1600	7.56	2.39	7.16	3.83	6.81	5.23	6.50	6.62	6.22	8.01	5.98	9.44
	1750	8.41	2.58	8.01	4.15	7.66	5.74	7.35	7.31	7.07	8.80	6.83	10.37
	1900	9.35	2.81	8.91	4.52	8.53	6.25	8.19	7.98	7.88	9.59	7.62	11.32
	2050	10.29	3.04	9.81	4.89	9.39	6.76	9.03	8.66	8.69	10.39	8.40	12.27
TSR2-125 (125)	1150	7.97	2.58	7.49	4.16	7.06	5.72	6.69	7.29	6.45	8.87	6.15	10.45
	1300	9.22	2.96	8.75	4.78	8.32	6.60	7.95	8.43	7.71	10.29	7.40	12.24
	1450	10.61	3.34	10.10	5.41	9.73	7.48	9.34	9.56	9.02	11.70	8.77	14.04
	1600	11.87	3.68	11.36	5.97	10.99	8.25	10.60	10.55	10.28	12.96	10.03	15.48
	1750	13.13	4.03	12.63	6.52	12.26	9.02	11.88	11.53	11.57	14.23	11.32	16.92
	1900	14.66	4.42	14.16	7.13	13.79	9.90	13.42	12.70	13.12	15.74	—	—
TSR2-150 (150)	1150	21.65	6.05	20.52	10.01	19.48	14.10	18.77	18.32	18.06	22.48	17.34	26.58
	1300	24.79	6.88	23.66	11.38	22.62	16.02	21.91	20.88	21.19	25.62	20.48	30.42
	1450	27.97	7.70	26.86	12.74	25.94	17.94	25.23	23.45	24.52	28.77	23.91	34.26
	1600	31.11	8.50	30.00	14.20	29.08	20.00	28.37	26.16	27.66	32.13	27.05	38.14
	1750	34.81	9.30	33.71	15.65	32.81	22.06	32.11	28.86	31.40	35.49	30.71	42.03
	1900	38.71	10.15	37.55	17.09	36.59	24.08	35.86	31.56	35.15	38.89	—	—
TSR2-200 (200)	700	20.56	5.93	19.96	9.97	19.30	14.22	18.70	18.48	18.10	22.41	17.50	26.23
	850	25.53	7.04	24.80	12.08	24.16	17.25	23.43	22.43	22.90	27.18	22.46	31.82
	1000	30.93	8.39	30.06	14.32	29.30	20.68	28.60	26.82	27.93	32.53	27.53	38.38
	1150	35.93	9.74	35.06	16.38	34.30	23.78	33.60	30.85	32.93	37.41	32.53	44.14
	1300	40.93	10.75	40.06	18.43	39.30	26.60	38.60	34.59	37.93	42.12	37.53	49.92
	1450	47.19	11.76	46.33	20.47	45.23	29.43	44.33	38.33	43.76	46.83	—	—

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

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

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

TSURUMI
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