

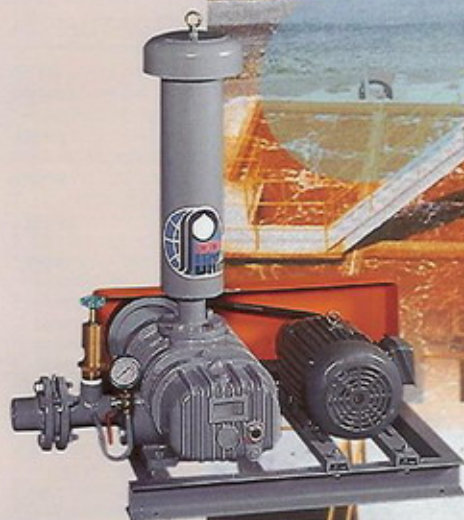


SINCE 1976

SHOWFOU



ISO-9001/CNS12681



SHOWFOU ELECTRIC MACHINE CO., LTD.

SHOWFOU

Roots Blowers Membrane Disc Diffuser

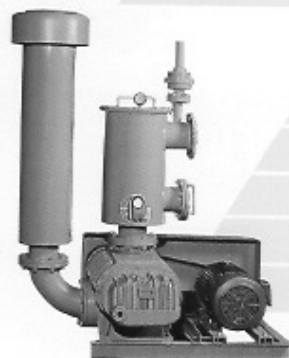
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ROOTS BLOWERS (3 lobes design)**RL**

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THREE LOBES ROOTS BLOWER

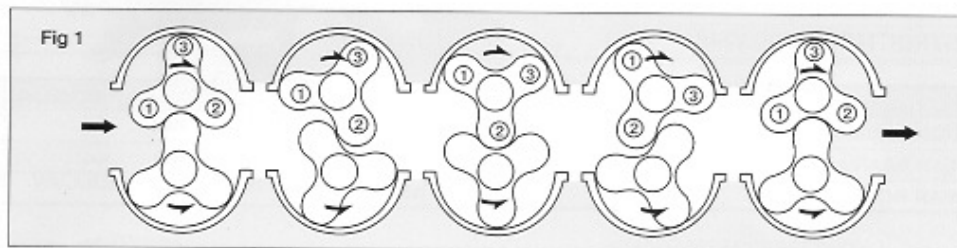
GENERAL

SHOWFOU 3 LOBES ROOTS BLOWERS, known also as POSITIVE DISPLACEMENT ROTARY LOBE PUMPS, are used in conditions ranging from strong vacuum to high pressure in all branches of industry, especially in waste water treatment plant. The simple design, easy handling, and stable performance make possible a wide range of applications. Their main characteristic is to produce a constant flow of gas at different pressure and efficiencies are normally high. Another important feature is that the pumped gas does not get contaminated because there are no lubricants in the area in which the compression occurs.

The blowers consist of a cast-iron casing in which two rotors with conjugate shape rotate and are synchronized by a set of timing gears. During the rotation, there is no contact either between the lobes or between the lobes and the casing. Two front and rear side covers close each casing; the bearing of the shafts and the sealing devices to avoid gas leakage are located there.

OPERATING PRINCIPLE

The two three-lobe rotors rotate one opposite to the other; their movement is synchronized by a set of timing gears. The geometric configuration of the lobes allows them to have, at any moment, a generatrix in common; due to very low machine tolerance, this common generatrix acts also as a seal device for both rotors. During the operation, one or two lobes of each rotor come into contact with the internal surface of the casing; this creates a chamber in which the gas is trapped. As the rotation continues, the trapped gas moves along until it reaches the position of discharging port. The two rotors make six intake and exhaust cycles per revolution; therefore the capacity of the SHOWFOU roots blower is determined by its operating speed and increases proportionally with the speed, but is independent from the pressure differential between inlet and outlet ports.



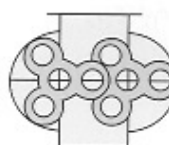
ADVANTAGES OF 3 LOBES DESIGN

Owing to new 3 lobes' rotor design, the reverse flow pressure variation period is only 2/3 of that of a conventional 2 lobes' rotor, the peak pressure value is also lower. So the noise and pressure pulsation are greatly limited.

Advantages of SHOWFOU 3 LOBES ROOTS BLOWER are as follows:

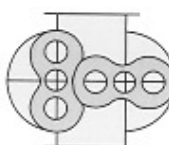
1. Less back flow, steady air flow rate, lower vibration and noise.
2. Discharge pressure pulsation are reduced, so lighter loading of bearings and timing gears ensures the long servicing life.
3. Running on the same operating speed, the 3 lobes blower can deliver large air flow and volume than conventional 2 lobes type.
4. Adequate clearance between the rotors and the rotors with the casing ensure no contact during operation, and this makes the efficiency even higher.
5. The precision of rotors is fully controlled and variation of precision between blowers is almost nil because the rotors are produced by utilizing a precision NC machine.
6. The rotors are dynamically balanced in the fabrication stage already, so these rotors are almost free from vibrations.

3-Lobes Cylinder



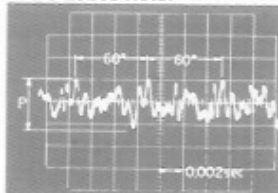
(Fig.1)

2-Lobes Cylinder

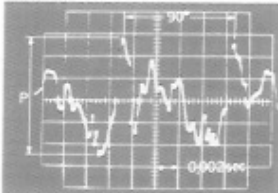


(Fig.2)

Discharge Pressure Variation in a 3-Lobes Rotor



Discharge Pressure Variation in a 2-Lobes Rotor



Note: Under the condition of Discharge Pressure at 5000 mmHg and Revolution of 1500 r.p.m., for both blowers.

CHARACTERISTICS

RL



RW



RECOMMENDED PRESSURE OPERATION RANGE :
RL: 1000~8000mmAq RW: 8000~10000mmAq

■ MAXIMUM PERFORMANCE

1 atm = 10333mmAq = 760 mmHg

TYPE	SINGLE STAGE		DOUBLE STAGE	
	RL	RW	RL	RW
MAXI. PRESSURE	10,000mmAq (1.0kg/cm ²)	12,000mmAq (1.2kg/cm ²)	15,000mmAq (1.5kg/cm ²)	20,000mmAq (2.0kg/cm ²)
MAXI. VACUUM	-6,700mmAq (-500mmHg)	-8,100mmAq (-600mmHg)	-8,100mmAq (-600mmHg)	-8,800mmAq (-650mmHg)

■ STRUCTURE ANALYSIS

	GREASE LUBRICATION	OIL LUBRICATION	WATER JACKET FOR COOLING
FRONT BEARING	RW	RL	RW
REAR BEARING	-	RL - RW	RW
GEAR BOX	-	RL - RW	RW

SPECIFICATIONS

RL / RW : Blower Body ONLY.

RLC/RWC : Complete Set. - Blower Body With Standard Accessories For Pressure Operation.

RLV/ RWV : Complete Set. - Blower Body With Standard Accessories For Pressure Operation.

Please refer to page 3 for the picture of complete set.

TYPE	BORE (mm)	BLOWER BODY	COMPLETE SET FOR PRESSURE OPERATION	COMPLETE SET FOR VACUUM OPERATION
RL	40	RL-40	RLC-40	-
	50	RL-50	RLC-50	RLV-50
	65	RL-65	RLC-65	RLV-65
	80	RL-80	RLC-80	RLV-80
	100	RL-100	RLC-100	RLV-100
	125	RL-125	RLC-125	RLV-125
	150	RL-150	RLC-150	RLV-150
	200	RL-200	RLC-200	RLV-200
	250	RL-250	RLC-250	RLV-250
	300	RL-300	RLC-300	RLV-300
RW	50	RW-50	RWC-50	RWC-50
	65	RW-65	RWC-65	RWV-65
	80	RW-80	RWC-80	RWV-80
	100	RW-100	RWC-100	RWV-100
	125	RW-125	RWC-125	RWV-125
	150	RW-150	RWC-150	RWV-150
	200	RW-200	RWC-200	RWV-200
	250	RW-250	RWC-250	RWV-250
	300	RW-300	RWC-300	RWV-300

COMPLETE SET ROOTS BLOWER INSTALLATION : with standard accessories

■ PRESSURE OPERATION (RLC 、 RWC)

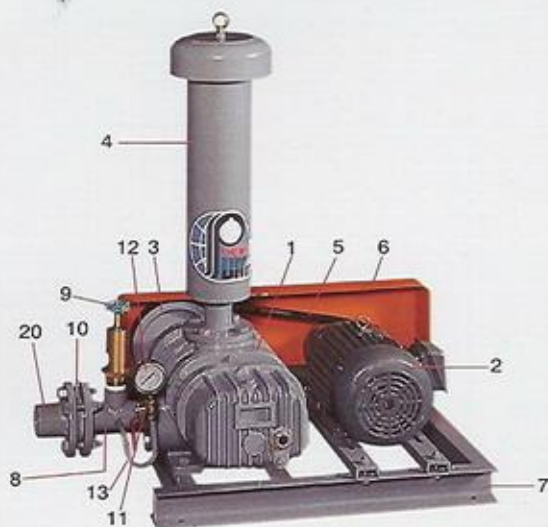


Fig 1

STANDARD ACCESSORIES

NO	NOAME
1	BLOWER BODY
2	MOTOR
3	BLOWER PULLEY
4	SUCTION SILENCER SET (WITH AIRFILTER & COVER)
5	V-BELT
6	BELT COVER
7	BASE PLATE
8	T-TYPE REDUCER
9	PRESSURE SAFETY VALVE
10	CHECK VALVE
11	BALL VALVE
12	PRESSURE GAUGE
13	GAUGE PIPE
20	DISCHARGE FLANGE(OPTIONAL)

■ VACUUM OPERATION (RLV 、 RWV)

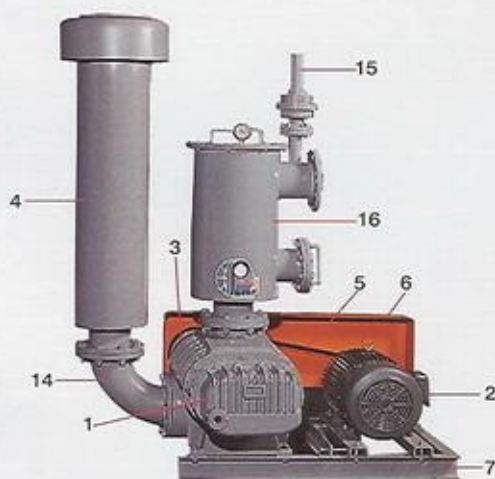


Fig 2

STANDARD ACCESSORIES

NO	NOAME
1	BLOWER BODY
2	MOTOR
3	BLOWER PULLEY
4	SUCTION SILENCER SET (WITH AIRFILTER & COVER)
5	V-BELT
6	BELT COVER
7	BASE PLATE
14	90° ELBOW
15	VACUUM SAFETY VALVE
16	SUCTION FILTER TANK (with VACUUM GAUGE)

Note :

Suction silencer set(in Fig 1) and discharge silencer set (in Fig 2) are the same.

RLC (RL) PERFORMANCE TABLE

(FOR PRESSURE OPERATION)

■ RLC - Complete Set ■ RL - Blower Body only

TYPE	Bore Inch(mm)	Revolution R.P.M.	1000mmAq		2000mmAq		3000mmAq		4000mmAq		5000mmAq		6000mmAq		7000mmAq		8000mmAq	
			9.8kpa		19.6kpa		29.4kpa		39.4kpa		49.0kpa		58.8kpa		68kpa		78.4kpa	
			m ³ /min	kw	m ³ /min	kw	m ³ /min	kw	m ³ /min	kw	m ³ /min	kw	m ³ /min	kw	m ³ /min	kw	m ³ /min	kw
40	1½(40)	800	0.70	0.25	0.56	0.50	0.45	0.77	0.35	0.94	0.26	1.14	0.21	1.34	0.15	1.52	0.10	1.70
		900	0.85	0.28	0.71	0.56	0.61	0.81	0.50	1.05	0.42	1.27	0.36	1.50	0.30	1.71	0.26	1.91
		1000	1.01	0.31	0.87	0.62	0.75	0.90	0.67	1.16	0.58	1.43	0.50	1.67	0.46	1.90	0.40	2.12
		1100	1.17	0.35	1.03	0.68	0.82	0.99	0.82	1.34	0.73	1.57	0.67	1.84	0.61	2.09	0.56	2.34
		1200	1.32	0.36	1.19	0.74	1.08	1.08	0.98	1.40	0.88	1.71	0.83	2.01	0.77	2.29	0.72	2.45
		1300	1.48	0.41	1.34	0.80	1.23	1.17	1.14	1.52	1.05	1.86	0.98	2.18	0.93	2.47	0.88	2.56
		1400	1.64	0.44	1.51	0.86	1.40	1.26	1.29	1.63	1.22	1.99	1.14	2.34	1.08	2.66	1.04	2.66
		1500	1.80	0.47	1.66	0.92	1.56	1.35	1.45	1.75	1.36	2.14	1.30	2.51	1.24	2.85	1.20	2.98
		1600	1.96	0.50	1.82	0.98	1.72	1.44	1.61	1.87	1.52	2.28	1.46	2.67	1.41	3.04	1.36	3.30
		1700	2.13	0.57	1.98	1.05	1.87	1.53	1.77	1.99	1.68	2.42	1.61	2.84	1.55	3.23	1.52	3.67
		1800	2.29	0.57	2.14	1.11	2.03	1.62	1.93	2.11	1.83	2.56	1.77	3.01	1.71	3.42	1.67	3.93
		1900	2.45	0.60	2.30	1.20	2.19	1.71	2.09	2.23	1.99	2.70	1.92	3.18	1.86	3.61	1.82	4.26
50	2(50)	800	1.16	0.42	0.92	0.83	0.75	1.29	0.58	1.56	0.44	1.90	0.34	2.22	0.24	2.53	0.17	2.83
		900	1.42	0.47	1.18	0.93	1.00	1.35	0.84	1.75	0.70	2.12	0.60	2.50	0.50	2.85	0.43	3.19
		1000	1.68	0.52	1.45	1.03	1.26	1.50	1.10	1.94	0.96	2.38	0.85	2.78	0.76	3.17	0.68	3.54
		1100	1.94	0.58	1.72	1.13	1.53	1.65	1.37	2.24	1.21	2.62	1.11	3.06	1.02	3.49	0.94	3.90
		1200	2.21	0.63	1.99	1.23	1.80	1.79	1.63	2.33	1.48	2.85	1.37	3.34	1.29	3.81	1.20	4.08
		1300	2.47	0.69	2.26	1.33	2.06	1.95	1.90	2.53	1.74	3.09	1.64	3.62	1.55	4.11	1.46	4.27
		1400	2.73	0.74	2.51	1.44	2.33	2.10	2.15	2.72	2.01	3.32	1.90	3.89	1.81	4.44	1.74	4.44
		1500	3.00	0.79	2.78	1.54	2.59	2.25	2.42	2.92	2.27	3.56	2.17	4.17	2.07	4.76	2.00	4.96
		1600	3.27	0.84	3.04	1.64	2.86	2.40	2.69	3.12	2.54	3.80	2.43	4.45	2.34	5.08	2.27	5.46
		1700	3.55	0.90	3.30	1.75	3.12	2.55	2.94	3.32	2.80	4.03	2.69	4.73	2.59	5.39	2.53	6.12
		1800	3.81	0.95	3.57	1.85	3.39	2.70	3.21	3.52	3.06	4.26	2.95	5.01	2.85	5.70	2.78	6.56
		1900	4.08	1.00	3.84	1.95	3.65	2.85	3.48	3.72	3.31	4.49	3.21	5.29	3.11	6.01	3.04	7.09
65	2½(65)	800	1.95	0.58	1.78	1.14	1.61	1.66	1.46	2.16	1.33	2.62	1.21	3.07	1.12	3.49	1.03	3.91
		900	2.28	0.79	2.11	1.28	1.94	1.86	1.79	2.42	1.65	2.95	1.54	3.45	1.45	3.93	1.35	4.40
		1000	2.63	1.14	2.46	1.42	2.29	2.06	2.12	2.69	1.99	3.28	1.89	3.83	1.78	4.35	1.69	4.89
		1100	2.97	1.29	2.80	1.57	2.62	2.28	2.47	2.96	2.34	3.61	2.23	4.22	2.12	4.81	2.03	5.38
		1200	3.27	1.44	3.14	1.71	2.96	2.49	2.80	3.23	2.68	3.93	2.56	4.60	2.46	5.24	2.36	5.86
		1300	3.63	1.54	3.48	1.85	3.29	2.70	3.14	3.50	3.01	4.26	2.90	4.98	2.80	5.68	2.70	6.35
		1400	3.99	1.64	3.82	1.99	3.64	2.91	3.50	3.77	3.36	4.59	3.24	5.37	3.15	6.12	3.04	6.84
		1500	4.34	1.74	4.16	2.13	3.98	3.11	3.83	4.04	3.70	4.91	3.58	5.75	3.48	6.55	3.38	7.32
		1600	4.67	1.84	4.51	2.27	4.32	3.32	4.17	4.31	4.03	5.24	3.92	6.13	3.82	6.98	3.72	8.28
		1700	5.02	1.94	4.86	2.42	4.66	3.53	4.52	4.57	4.37	5.57	4.26	6.51	4.17	7.42	4.07	8.30
		1800	5.36	2.04	5.20	2.56	5.00	3.73	4.86	4.85	4.71	5.89	4.60	6.89	4.50	7.85	4.41	8.78
		1900	5.71	2.14	5.53	2.70	5.34	3.94	5.19	5.12	5.05	6.22	4.94	7.27	4.84	8.28	4.75	9.27
80	3(80)	800	2.91	1.40	2.55	2.12	2.23	2.81	1.93	3.51	1.67	4.31	1.42	5.43	1.21	6.55	1.02	7.67
		900	3.51	1.50	3.25	2.32	2.93	3.14	2.63	3.84	2.36	4.64	2.12	5.76	1.89	6.88	1.70	8.00
		1000	4.21	1.60	3.95	2.53	3.63	3.47	3.33	4.25	3.06	5.52	2.82	6.64	2.61	7.06	2.42	8.18
		1100	4.91	1.70	4.65	2.75	4.33	3.80	4.03	4.70	3.76	5.71	3.52	6.83	3.31	7.95	3.12	9.07
		1200	5.40	1.80	5.14	2.91	4.82	4.03	4.52	5.04	4.29	6.05	4.07	7.17	3.84	8.29	3.65	9.41
		1300	6.05	1.90	5.75	3.20	5.43	4.25	5.13	5.60	4.95	6.72	4.69	7.84	4.48	8.96	4.29	10.08
		1400	6.53	2.00	6.27	3.47	5.95	4.59	5.65	5.82	5.38	7.05	5.14	8.28	4.93	9.56	4.74	10.81
		1500	7.00	2.10	6.74	3.50	6.42	5.04	6.12	6.27	5.85	7.50	5.61	8.96	5.40	10.42	5.21	11.88
		1600	7.76	2.20	7.50	3.92	7.18	5.26	6.86	6.66	6.61	8.06	6.37	9.52	6.16	10.98	5.97	12.44
		1700	8.26	2.32	8.00	4.15	7.67	5.53	7.36	7.04	7.08	8.53	6.83	10.04	6.61	11.54	6.42	13.04
		1800	8.83	2.42	8.52	4.37	8.17	5.87	7.86	7.49	7.59	8.98	7.33	10.59	7.12	12.21	6.92	13.82
		1900	9.32	2.52	8.97	4.83	8.64	6.20	8.33	7.82	8.06	9.43	7.81	11.15	7.59	12.63	7.39	14.14
100	4(100)	800	5.08	1.37	4.51	2.65	4.00	3.80	3.54	4.88	3.14	5.68	2.79	6.78	2.48	7.62	2.20	8.43
		900	5.91	1.55	5.33	3.00	4.82	4.31	4.36	5.52	3.96	6.55	3.60	7.67	3.29	8.63	3.01	9.54
		1000	7.08	1.83	6.47	3.52	5.93	5.06	5.44	6.48	5.02	7.79	4.64	9.00	4.31	10.13	4.02	11.18
		1100	7.92	2.01	7.31	3.87	6.77	5.56	6.28	7.12	5.86	8.67	5.48	9.90	5.15	11.14	4.75	12.29
		1200	8.76	2.19	8.15	4.22	7.61	6.07	7.12	7.77	6.70	9.55	6.32	10.80	5.99	12.15	5.03	13.41
		1300	9.60	2.38	8.99	4.57	8.45	6.58	7.96	8.42	7.54	10.43	7.16	11.70	6.83	13.17	6.54	14.53
		1400	10.44	2.56	9.83	4.92	9.29	7.08	8.86	9.07	8.38	11.31	8.00	12.60	7.67	14.18	7.38	15.69
		1500	11.34	2.67	10.75	4.93	10.23	7.59	9.75	9.72	9.25	12.22	8.88	13.50	8.56	15.19	8.28	16.75
		1600	12.17	2.89	11.58	5.45	11.05	8.09	10.58	10.37	10.17	12.73	9.80	14.40	9.48	16.20	9.20	17.87
		1700	13.00	3.12	12.41	5.97	11.88	8.60	11.40	11.01	11.00	13.23	10.63	15.30	10.31	17.21	10.03	18.99
		1800	13.83	3.34	13.42	6.50	13.01	9.10	12.53	11.66	12.12	13.87	11.70	16.20	11.37	18.22	11.06	20.11
		1900	14.65	3.57	14.15	7.03	13.75	9.61	13.32	12.31	12.91	14.25	12.54	17.10	12.22	19.23	11.94	21.23

Note: 1. The values are expressed as required power including drive power for the transmission unit.
 2. The rated range for the air volume at specified $\pm 5\%$.
 3. When the design pressure is 8000 mmAq and above, shall be applied RW type (water-cooling design)

RLC (RL) PERFORMANCE TABLE

(FOR PRESSURE OPERATION)

■ RLC - Complete Set ■ RL - Blower Body only

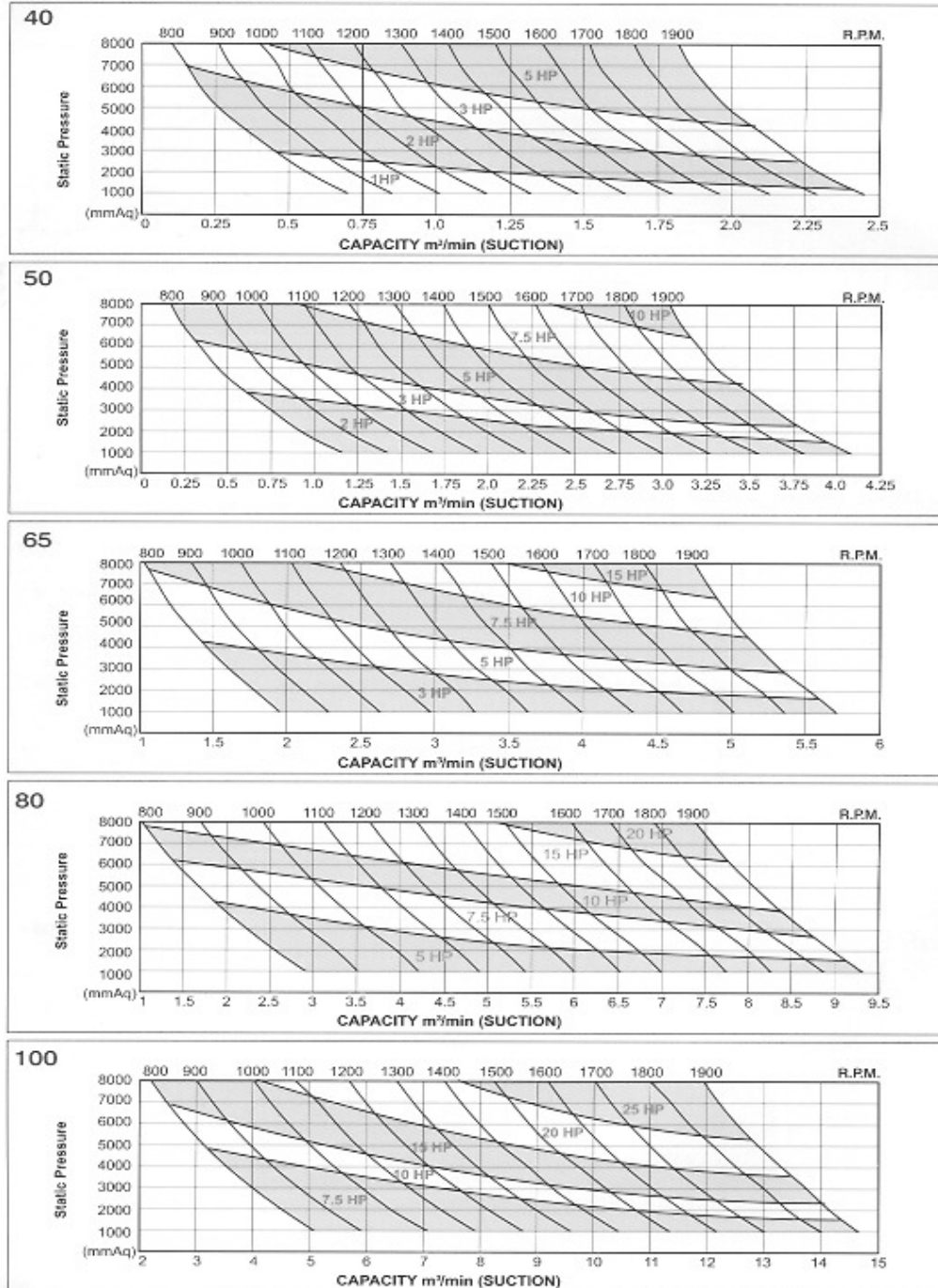
TYPE			Bore	Revolution	1000mmAq		2000mmAq		3000mmAq		4000mmAq		5000mmAq		6000mmAq		7000mmAq		8000mmAq	
					9.8kpa		19.6kpa		29.4kpa		39.4kpa		49.0kpa		58.8kpa		68kpa		78.4kpa	
			inch(mm)	R.P.M.	m³/min	kw	m³/min	kw	m³/min	kw	m³/min	kw	m³/min	kw	m³/min	kw	m³/min	kw	m³/min	kw
125	5(125)	700	9.94	3.31	9.06	5.36	8.38	7.31	7.90	9.35	7.40	11.31	8.91	13.35	6.55	15.31	6.19	17.27		
		800	11.52	3.78	10.57	6.07	9.84	8.38	9.32	10.68	8.79	12.98	8.27	15.29	7.86	17.59	7.52	19.89		
		900	13.14	4.20	12.29	6.73	11.56	9.36	10.93	11.98	10.40	14.61	9.99	17.13	9.56	19.65	9.19	22.18		
		1000	15.05	4.55	14.02	7.45	13.34	10.34	12.74	13.24	12.20	16.03	11.72	18.92	11.79	21.92	10.67	24.82		
		1100	16.72	5.10	15.80	8.25	15.10	11.29	14.42	14.55	13.90	17.81	13.38	21.07	12.92	24.98	12.40	28.90		
		1200	18.45	5.32	17.51	8.86	16.79	12.31	16.23	15.74	15.74	19.18	15.26	22.93	14.80	26.69	14.30	30.44		
		1300	20.11	5.77	19.15	9.62	18.40	13.27	17.87	17.32	17.32	20.75	16.79	24.81	16.37	28.88	15.86	32.19		
		1400	21.77	6.23	20.78	10.28	20.01	14.22	19.47	18.27	18.93	22.97	18.38	27.35	17.94	30.63	17.42	33.91		
		1500	23.49	6.65	22.50	10.97	21.73	15.30	21.05	19.50	20.51	24.38	20.06	28.82	19.61	35.46	19.08	37.69		
		1600	25.27	7.06	24.33	11.59	23.70	16.21	23.06	20.74	22.54	26.33	21.98	30.54	21.59	34.75	21.24	38.97		
150	6(150)	700	27.01	7.38	26.05	12.35	25.32	17.19	24.79	23.21	24.27	27.43	23.73	32.71	23.31	36.92	22.93	41.43		
		800	28.74	8.17	27.79	13.11	27.05	18.18	26.52	24.30	26.00	29.59	25.46	34.87	25.08	39.04	24.71	43.20		
		900	13.09	3.99	11.97	6.65	11.25	9.21	10.54	11.77	9.93	14.42	9.41	16.98	8.98	19.54	8.66	22.09		
		800	15.06	4.62	13.96	7.59	13.19	10.44	12.41	13.41	11.76	16.38	11.21	19.45	10.71	22.53	10.36	25.60		
		900	17.32	4.96	16.22	8.38	15.34	11.81	14.56	15.12	14.01	18.43	13.35	22.06	12.89	25.70	12.35	29.34		
		1000	19.54	5.65	18.46	9.33	17.59	13.03	16.93	16.72	16.29	20.41	15.64	23.89	15.09	27.36	14.80	30.95		
		1100	21.89	6.15	20.75	10.26	19.84	14.36	19.04	18.47	18.47	22.57	17.78	27.38	17.31	32.20	16.94	37.00		
		1200	23.97	6.67	22.88	11.05	21.99	15.53	21.34	19.92	20.69	25.17	20.14	29.55	19.69	33.93	19.33	38.30		
		1300	26.16	7.19	24.93	12.58	24.14	16.73	23.35	21.56	22.79	26.95	22.12	31.44	21.67	35.93	21.33	40.42		
		1400	28.24	7.69	27.09	12.86	26.18	18.03	25.49	24.07	24.80	28.71	24.22	34.45	23.79	40.19	23.41	46.94		
200	8(200)	1500	30.48	8.26	29.32	13.72	28.39	19.31	27.57	25.59	26.99	31.41	26.41	37.22	25.93	43.04	25.57	48.86		
		1600	32.83	8.74	31.73	14.59	30.85	20.56	30.07	27.64	29.52	33.16	28.96	37.73	28.52	43.26	28.17	48.79		
		1700	34.99	9.19	33.88	15.50	33.00	21.85	32.34	28.79	31.67	35.44	31.11	40.97	30.61	46.41	30.26	52.05		
		1800	37.26	9.20	36.16	16.41	35.27	23.29	34.49	29.95	33.94	36.60	33.26	43.26	32.75	49.91	32.39	56.57		
		900	23.52	6.77	21.87	11.52	20.52	16.26	19.45	21.29	18.58	25.16	17.37	20.97	16.84	35.81	16.16	40.55		
		700	27.90	7.90	26.20	13.40	24.90	18.90	23.80	24.00	22.80	30.00	21.90	37.00	23.00	44.00	22.30	47.00		
		800	32.67	9.06	31.04	15.33	29.69	22.17	28.63	27.95	27.66	35.66	26.89	41.45	26.12	47.23	25.45	53.01		
		900	37.26	10.06	36.61	17.13	34.26	24.19	33.19	30.97	32.32	38.71	31.45	45.48	30.68	52.26	30.00	59.03		
		1000	41.90	11.05	40.29	19.05	38.95	26.67	37.90	35.24	37.05	42.86	36.19	50.48	35.43	58.10	34.76	65.71		
		1100	46.70	12.20	45.00	21.00	43.70	30.00	42.60	39.00	41.60	48.00	40.70	56.00	39.90	65.00	39.20	74.00		
250	10(250)	1200	50.98	13.25	49.34	23.04	48.10	31.68	47.04	42.24	46.08	50.88	45.22	60.48	44.45	69.12	43.78	79.68		
		1300	55.45	14.28	53.77	24.62	52.49	34.47	51.41	45.30	50.42	55.15	49.54	65.00	48.75	75.83	48.06	86.67		
		1400	59.93	15.31	58.22	26.19	56.91	38.27	55.80	48.35	54.79	59.42	53.99	70.50	53.08	81.58	52.05	92.66		
		600	31.94	8.82	30.00	15.15	28.55	21.78	27.29	29.05	26.13	34.24	25.06	41.50	24.37	46.68	23.71	51.87		
		700	37.80	10.29	35.90	17.69	34.30	25.73	33.00	32.16	32.00	40.74	30.90	48.24	29.90	54.67	29.20	61.10		
		800	44.24	11.57	42.22	20.14	40.67	28.92	39.52	37.20	38.46	46.50	37.40	53.73	36.43	62.00	35.93	70.27		
		900	50.32	12.97	48.39	22.82	46.94	31.12	45.77	41.50	44.52	50.84	43.45	60.17	42.77	69.50	42.10	78.83		
		1000	56.48	14.29	54.67	24.50	53.05	34.71	51.90	45.94	50.76	56.19	49.81	66.55	48.95	77.59	48.19	88.03		
		1100	63.00	15.75	61.00	27.87	59.40	39.66	58.10	51.46	57.00	62.18	56.00	73.97	55.00	85.76	54.20	97.55		
		1200	68.64	17.09	66.82	29.85	65.28	43.22	64.03	56.46	62.88	66.89	61.92	80.28	61.06	92.62	60.19	104.93		
300	12(300)	1300	74.65	18.48	72.78	31.67	71.20	46.46	69.92	59.09	68.74	72.85	67.76	86.57	66.87	99.94	66.08	113.36		
		1400	80.68	19.86	78.56	34.55	77.05	49.66	75.90	63.71	74.63	78.82	73.63	93.93	72.52	109.08	71.71	124.19		
		600	71.2	18.1	68.0	33.8	65.3	48.1	62.6	61.4	60.5	73.6	58.5	84.9	56.8	95.5	55.3	105.2		
		700	85.5	20.8	81.4	39.2	78.7	55.9	76.0	71.4	73.9	85.6	71.9	98.8	70.2	111.1	68.7	122.5		
		800	98.5	23.7	94.8	44.7	92.1	63.8	89.4	81.4	87.3	97.7	85.3	112.7	83.0	126.8	82.1	139.8		
		900	111.5	26.6	108.2	50.1	105.6	71.6	102.9	91.4	100.8	109.7	98.8	126.7	97.1	142.4	95.6	157.1		
		1000	124.5	29.6	121.6	57.0	118.9	80.9	116.2	102.9	114.1	123.3	112.1	142.1	110.4	159.6	108.9	176.0		
		1100	138.1	34.5	135.1	63.9	132.4	90.2	129.7	114.4	127.6	136.8	125.6	157.6	123.9	176.9	122.4	194.8		
		1200	151.7	39.5	148.5	70.8	145.8	99.5	143.1	125.9	141.0	150.4	139.0	171.9	137.3	194.1	135.8	213.7		
		1300	165.3	44.5	162.1	83.6	159.4	108.8	156.7	137.4	154.6	164.0	152.6	188.4	150.9	211.3	149.4	232.6		
1400	178.0	47.9	174.6	90.0	171.7	117.2	168.8	148.0	166.5	176.6	164.3	202.9	162.5	227.6	160.9	250.5				

RLC

RLC (RL) PERFORMANCE CURVE

(FOR PRESSURE OPERATION)

■ RLC - Complete Set ■ RL - Blower Body only



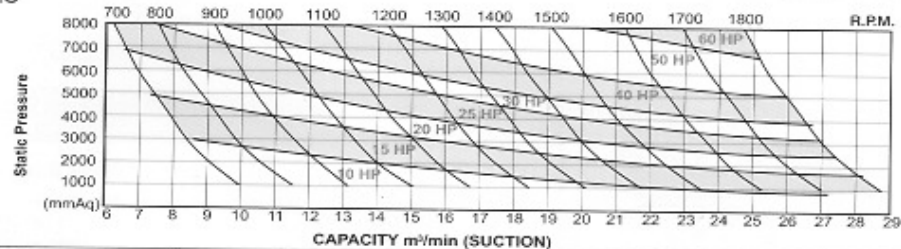
RLC

RLC (RL) PERFORMANCE CURVE

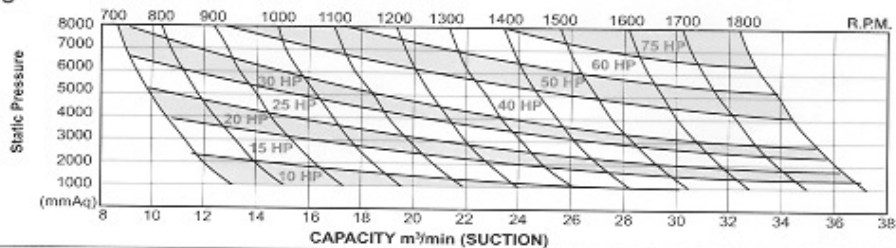
(FOR PRESSURE OPERATION)

■ RLC - Complete Set ■ RL - Blower Body only

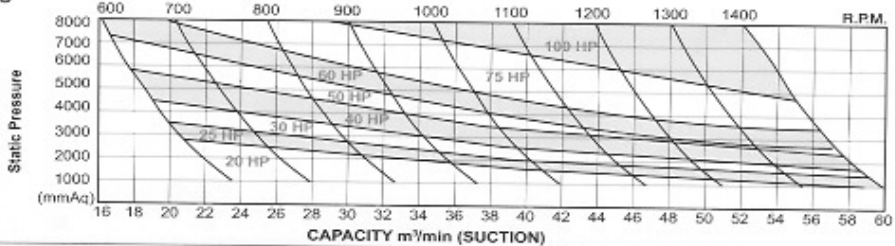
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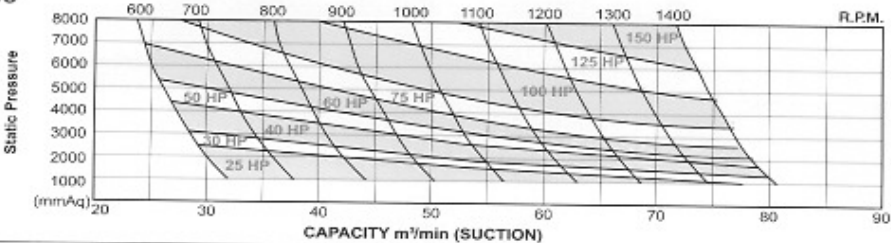
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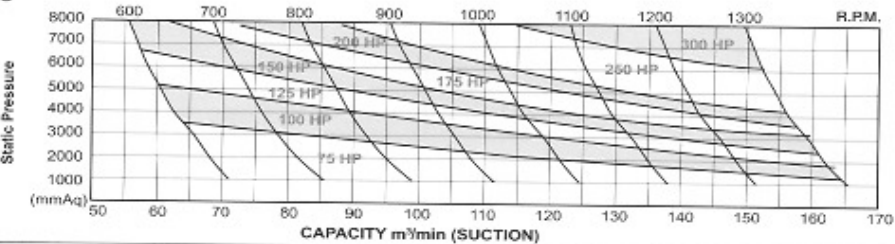
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250



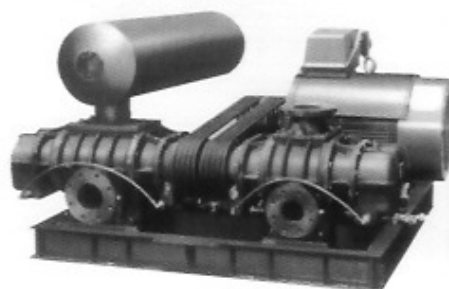
300



RW TYPE (water-cooling design)

FEATURES :

1. Equipped with water-jacket passing through gear box and bearing.
2. Applied for high pressure 8,000~10,000 mmAq and high vacuum -500~-600 mmHg on single stage installation.
3. The pressure can be reached 20,000 mmAq and the vacuum can be reached -650 mmHg on two stage installation.



RWC (RW) PERFORMANCE TABLE

(FOR PRESSURE OPERATION)

■ RWC - Complete Set ■ RW - Blower Body only

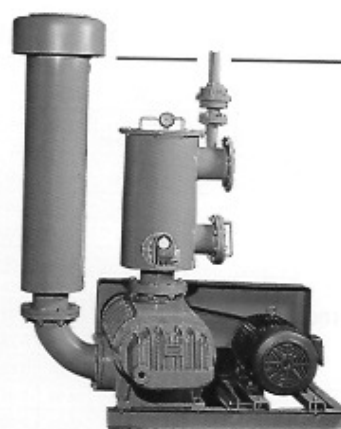
TYPE	Bore inch(mm)	Revolution RPM	8000mmAq		9000mmAq		10000mmAq		Cooling Water Volume ℓ/min
			m ³ /min	kw	m ³ /min	kw	m ³ /min	kw	
50	2 (50)	1000	0.60	3.5	0.51	3.9	0.42	4.3	4
		1200	1.10	3.9	1.01	4.3	0.92	4.7	
		1400	1.52	4.3	1.43	4.7	1.35	5.1	
65	2½ (65)	1000	1.53	5.2	1.41	5.8	1.29	6.5	6
		1200	2.31	5.8	2.22	6.3	2.13	6.9	
		1400	3.00	6.4	2.94	6.9	2.88	7.4	
80	3 (80)	900	2.25	10.1	2.05	11.6	1.86	13.1	8
		1100	3.21	10.7	3.01	12.3	2.81	13.9	
		1300	4.17	11.3	3.96	12.9	3.76	14.5	
100	4 (100)	900	2.56	12.0	2.27	13.7	2.00	15.4	10
		1100	4.28	14.0	4.01	15.7	3.75	17.4	
		1300	6.00	16.0	5.75	17.7	5.50	19.4	
125	5 (125)	800	6.00	25.2	5.60	27.7	6.20	30.2	12
		1000	9.40	27.2	9.00	30.1	8.60	32.6	
		1200	12.80	30.0	12.40	30.0	12.00	35.0	
150	6 (150)	800	11.80	30.0	11.30	34.0	10.80	38.0	15
		1000	17.30	38.0	16.80	42.0	16.30	46.0	
		1200	22.70	47.0	22.20	51.0	21.70	55.0	
200	8 (200)	800	25.40	59.0	24.80	65.0	24.20	71.0	20
		900	30.30	66.0	29.70	72.0	29.10	78.0	
		1200	35.20	73.0	34.60	79.0	34.00	85.0	
250	10 (250)	800	46.30	90.0	45.30	101.0	44.50	112.0	25
		900	53.60	103.6	52.70	105.6	51.80	117.6	
		1200	60.90	117.2	60.10	129.2	59.30	141.2	
300	12 (300)	800	84.20	200.2	83.70	215.0	83.20	230.0	30
		900	97.50	210.0	97.00	226.0	96.50	242.0	
		1200	112.70	220.0	110.20	236.0	109.80	252.0	

RLV (RL) VACUUM OPERATION

■ MAXIMUM VACUUM

1 atm = 10333mmAq = 760 mmHg

	RL	RW
SINGLE STAGE	-6,700mmAq (-500mmHg)	-8,100mmAq (-600mmHg)
DOUBLE STAGE	-8,100mmAq (-600mmHg)	-8,800mmAq (-650mmHg)



RLV (RL) PERFORMANCE TABLE

(FOR VACUUM OPERATION)

■ RLV - Complete Set ■ RL - Blower Body only

TYPE	Bore inch(mm)	Revolution R.P.M.	-2000mmAq -19.6kpa		-3000mmAq -29.4kpa		-4000mmAq -39.4kpa		-5000mmAq -49.0kpa		-5500mmAq -53.9kpa		-6000mmAq -58.8kpa		-6500mmAq -63.7kpa	
			m³/min	kw	m³/min	kw	m³/min	kw	m³/min	kw	m³/min	kw	m³/min	kw	m³/min	kw
50	2(50)	900	1.08	1.06	0.80	1.42	0.49	1.99	0.18	2.44						
		1000	1.42	1.17	1.16	1.71	0.86	2.21	0.57	2.70						
		1100	1.75	1.29	1.49	1.87	1.21	2.44	0.94	2.97						
		1200	1.91	1.41	1.63	2.05	1.33	2.66	1.02	3.23						
		1300	2.23	1.52	1.97	2.22	1.67	2.88	1.38	3.51						
		1400	2.54	1.64	2.29	2.38	2.00	3.10	1.72	2.81						
		1500	2.72	1.76	2.45	2.56	2.14	3.32	1.84	3.01						
		1600	3.03	1.87	2.77	2.73	2.47	3.55	2.18	4.32						
		1700	3.33	1.99	3.08	2.89	2.79	3.77	2.53	4.59						
		1800	3.53	2.11	3.26	3.07	2.95	3.99	2.67	4.85						
65	2½(65)	1900	3.83	2.23	3.57	3.13	3.27	4.21	2.98	5.12						
		1700	3.91	2.20	3.63	2.96	3.32	3.85	3.00	4.61	2.80	5.05				
		1800	4.20	2.31	3.91	3.19	3.62	4.07	3.28	4.95	3.09	5.39				
		1900	4.50	2.43	4.21	3.30	3.91	4.30	3.57	5.17	3.38	5.61				
		2000	4.80	2.54	4.50	3.52	4.19	4.52	3.86	5.40	3.66	5.95				
		2100	5.08	2.63	4.79	3.73	4.48	4.73	4.15	5.72	3.97	6.26				
		2200	5.37	2.77	5.07	3.87	4.77	4.98	4.43	5.96	4.24	6.52				
80	3(80)	2300	5.75	2.99	5.44	4.09	5.15	5.20	4.80	6.30	4.61	6.97				
		1300	6.08	3.37	5.57	4.68	5.08	5.99	4.52	7.29	4.19	7.95	3.84	8.51	3.45	9.26
		1400	6.65	3.71	6.14	5.05	5.62	6.48	5.05	7.90	4.72	8.57	4.37	9.14	3.96	9.90
		1500	7.22	3.85	6.72	5.38	6.19	6.83	5.62	8.48	5.29	9.13	4.93	9.90	4.52	10.58
		1600	7.81	4.17	7.30	5.72	6.77	7.37	6.19	9.02	5.86	9.70	5.49	10.57	5.08	11.44
		1700	8.40	4.37	7.88	6.12	7.36	7.77	6.78	9.52	6.45	10.30	6.07	11.17	5.67	12.05
		1800	8.99	4.67	8.47	6.42	7.96	8.27	7.36	10.12	7.05	10.99	6.66	11.77	6.29	12.75
		1900	9.59	4.87	9.07	6.82	8.52	8.77	7.97	10.62	7.64	11.59	7.27	12.57	6.85	13.54
		2000	10.19	5.27	9.67	7.22	9.15	9.17	8.57	11.22	8.22	12.20	7.85	13.17	7.44	14.15
		2100	10.84	5.47	10.31	7.62	9.80	9.67	9.21	11.82	8.88	12.80	8.51	13.97	8.10	14.94

Note :

1. The values are expressed as required power including drive power for the transmission unit.
2. The rated range for the air volume at specified $\pm 5\%$.

RLV (RL) PERFORMANCE TABLE

(FOR VACUUM OPERATION)

■ RLV - Complete Set ■ RL - Blower Body only

TYPE	Bore inch(mm)	Revolution R.P.M.	-2000mmAq -19.6kpa		-3000mmAq -29.4kpa		-4000mmAq -39.4kpa		-5000mmAq -49.0kpa		-5500mmAq -53.9kpa		-6000mmAq -58.8kpa		-6500mmAq -63.7kpa	
			m ³ /min	kw	m ³ /min	kw	m ³ /min	kw	m ³ /min	kw	m ³ /min	kw	m ³ /min	kw	m ³ /min	kw
100	4(100)	1300	8.62	4.49	7.97	6.36	7.30	8.23	6.55	9.91	6.12	10.94	5.67	11.78	5.13	12.63
		1400	9.43	4.86	8.76	6.76	8.07	8.76	7.30	10.76	6.88	11.71	6.40	12.67	5.86	13.71
		1500	10.23	5.29	9.56	7.31	8.87	9.42	8.11	11.54	7.06	12.60	7.18	13.58	6.64	14.71
		1600	11.05	5.53	10.38	7.85	9.68	10.08	8.89	12.22	8.47	13.38	7.98	14.45	7.43	15.61
		1700	11.90	5.93	11.20	8.26	10.50	10.69	9.72	13.02	9.30	14.28	8.81	15.45	8.26	16.51
		1800	12.72	6.23	12.04	8.76	11.34	11.29	10.56	13.82	10.12	15.08	9.63	16.35	9.07	17.61
		1900	13.53	6.63	12.85	9.35	12.17	11.89	11.47	14.52	10.95	15.88	10.46	17.25	9.91	18.51
		2000	14.34	6.93	13.66	9.76	12.98	12.49	12.19	15.41	11.76	16.78	11.30	18.15	10.74	19.51
		2100	15.28	7.33	14.59	10.26	13.91	13.19	13.11	16.21	12.65	17.68	12.20	19.14	11.62	20.61
		2200	16.23	7.73	15.54	10.76	14.84	14.47	14.04	17.00	13.54	18.60	13.10	20.13	12.50	21.71
125	5(125)	1100	15.50	7.90	14.60	11.20	13.60	14.40	12.79	17.70	12.10	19.30	11.50	21.00	10.80	23.00
		1200	17.42	8.61	16.55	12.19	15.58	15.77	14.61	19.35	13.94	21.29	13.45	23.23	12.87	25.16
		1300	19.36	9.35	18.42	13.19	17.58	17.02	16.65	20.58	16.09	22.45	15.53	25.25	14.87	27.12
		1400	21.05	10.00	20.19	14.19	19.24	18.38	18.29	22.86	17.71	24.76	17.14	26.67	16.48	28.57
		1500	22.79	10.77	21.92	15.19	20.96	20.19	20.00	24.04	19.42	25.96	18.85	28.85	18.17	30.77
		1600	24.53	11.44	23.66	16.19	22.69	21.33	21.72	26.18	21.14	28.12	20.56	30.06	19.88	32.97
		1700	26.33	12.24	25.35	17.29	24.48	22.34	23.51	27.20	22.93	29.40	22.34	32.06	21.66	34.97
150	6(150)	1100	20.00	10.20	18.80	14.40	17.50	18.60	16.45	24.90	15.60	24.90	14.80	27.10	13.90	29.60
		1200	22.45	11.13	21.29	15.68	20.03	19.35	18.87	27.48	18.19	27.48	17.32	29.90	16.65	32.42
		1300	24.97	12.06	23.76	17.02	22.63	21.96	21.42	28.90	20.76	28.90	20.01	32.55	19.17	34.96
		1400	27.14	12.86	26.00	18.29	24.76	23.71	23.52	31.90	22.86	31.90	22.10	34.38	21.24	36.86
		1500	29.33	13.85	28.27	19.62	27.02	26.06	25.77	33.46	25.00	33.46	24.33	37.21	23.46	39.62
		1600	31.61	14.74	30.55	20.85	29.28	27.54	28.02	36.27	27.25	36.27	26.47	38.79	25.60	42.47
		1700	33.90	15.74	32.64	22.25	31.57	28.75	30.31	38.86	29.53	38.86	28.75	41.29	27.88	45.07
200	8(200)	800	31.55	14.91	30.09	20.91	28.55	27.27	27.00	33.64	26.09	37.27	25.18	40.00	24.09	43.64
		900	36.28	16.81	34.71	23.88	33.24	31.22	31.59	38.57	30.67	41.33	29.76	45.00	28.65	48.67
		1000	40.67	18.65	39.04	26.92	37.50	34.62	35.87	42.31	34.90	46.15	33.85	50.00	32.69	53.85
		1100	45.10	21.00	43.50	29.00	41.90	38.00	40.10	47.00	39.10	51.00	38.10	55.00	36.90	60.00
		1200	50.13	22.26	48.48	31.94	46.94	41.61	45.19	51.29	44.32	55.16	43.26	60.00	42.10	64.84
		1300	55.09	24.32	53.50	34.60	52.00	44.89	50.32	55.18	49.47	59.86	48.45	65.47	47.32	70.14
250	10(250)	800	42.36	19.45	40.55	28.27	38.64	36.09	36.55	44.82	35.45	48.73	34.18	51.82	32.82	57.45
		900	48.67	21.67	46.74	31.50	44.82	42.70	42.70	50.23	41.51	55.10	40.41	60.06	39.03	64.84
		1000	54.62	24.71	52.60	35.00	50.48	48.37	48.37	56.73	47.21	61.83	45.87	67.02	44.42	72.12
		1100	60.60	26.80	58.60	38.60	56.40	54.10	54.10	62.20	52.80	67.50	51.50	72.90	50.00	79.30
		1200	67.26	29.03	65.13	42.58	63.10	60.87	60.87	67.45	59.81	73.65	58.45	79.84	57.00	86.13
		1300	73.79	32.08	71.83	45.08	69.86	67.81	67.81	73.23	66.59	80.24	65.28	87.26	63.88	93.24
		1400	79.47	34.55	77.36	48.55	75.23	73.02	73.02	78.86	71.71	86.41	70.30	93.97	68.79	100.41
		1500	85.15	37.01	82.88	52.01	80.61	78.24	78.24	84.50	76.83	92.59	75.32	100.70	73.71	107.60
300	12(300)	800	93.1	41.0	89.2	58.0	85.1	77.0	80.5	98.0	77.3	110.0	73.0	122.0	68.6	135.0
		900	107.0	46.0	103.0	67.0	99.4	85.9	95.1	106.0	91.5	118.0	88.0	129.0	83.9	141.0
		1000	120.4	51.0	116.3	74.0	113.3	96.0	108.9	117.0	105.0	129.0	101.0	140.0	96.9	152.0
		1100	133.8	56.0	129.8	81.0	127.1	105.9	122.3	128.3	118.4	140.0	114.4	151.0	110.0	163.0
		1200	147.5	62.0	143.4	88.0	139.9	116.0	135.6	139.5	132.0	151.0	128.5	162.0	124.4	174.0
		1300	161.7	68.0	156.6	95.0	151.9	126.0	147.3	150.0	144.0	162.0	139.7	173.0	135.5	185.0

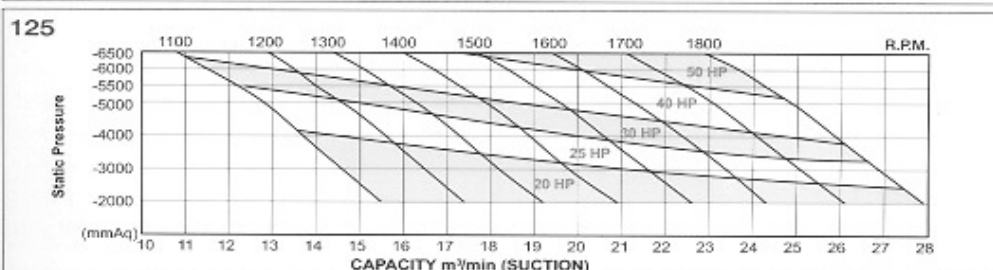
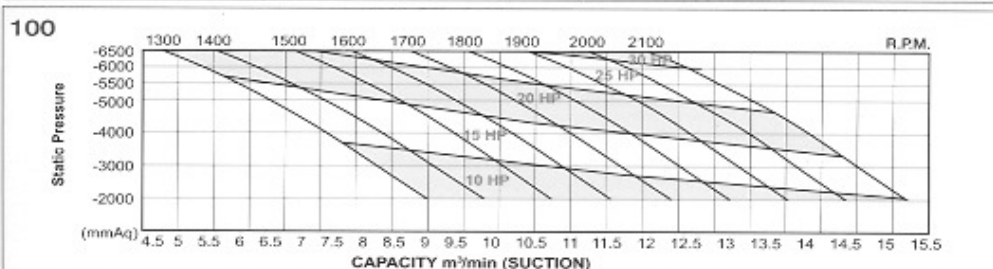
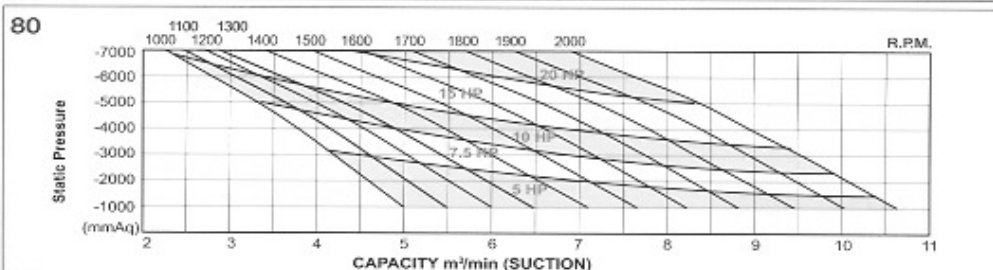
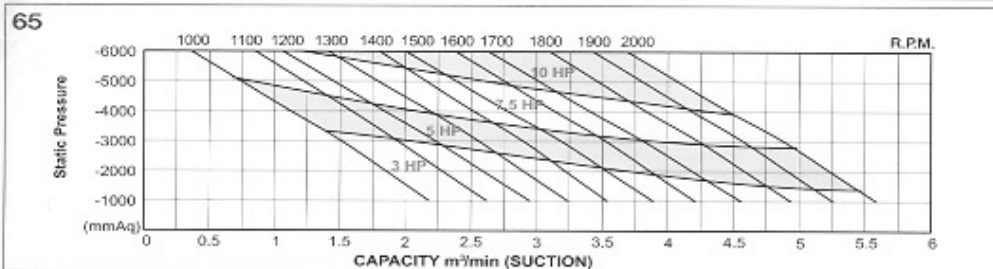
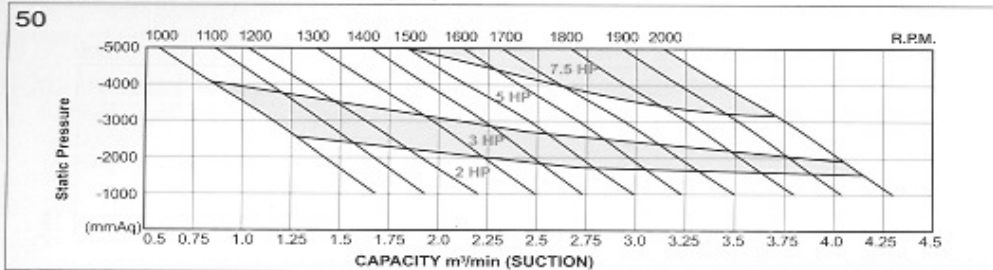
Note :

- The values are expressed as required power including drive power for the transmission unit.
- The rated range for the air volume at specified $\pm 5\%$.

RLV (RL) PERFORMANCE CURVE

(FOR VACUUM OPERATION)

■ RLV - Complete Set ■ RL - Blower Body only



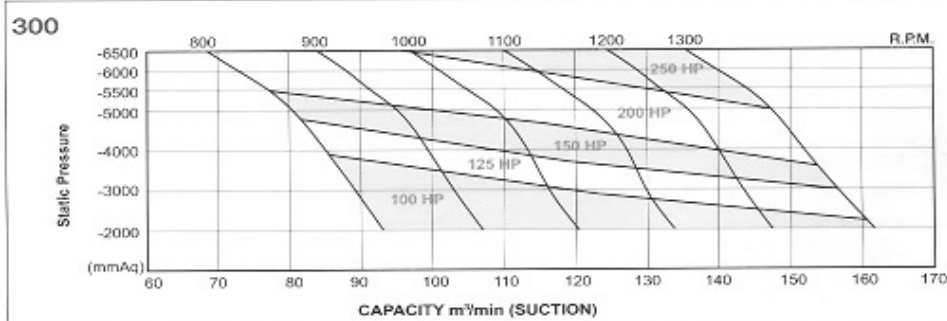
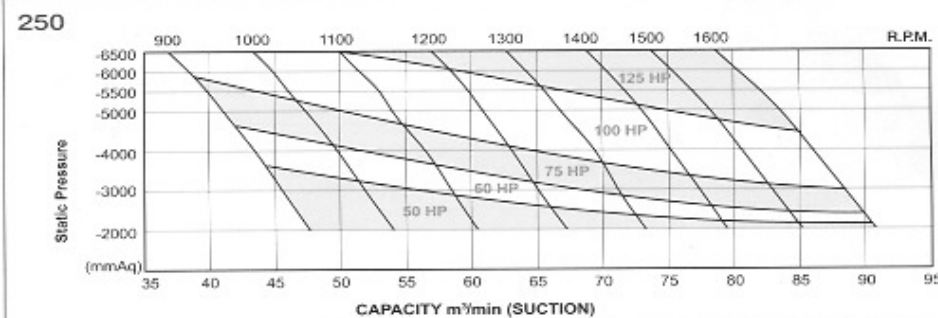
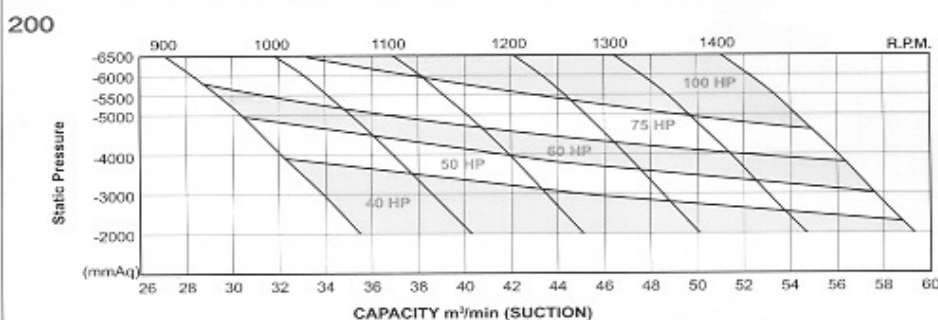
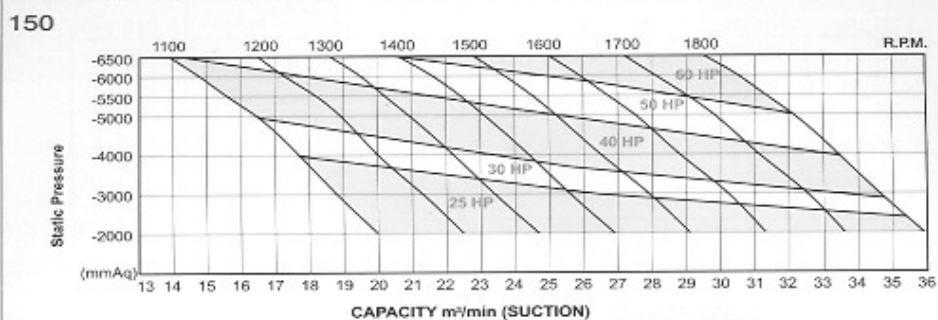
RLV

RLV (RL) PERFORMANCE CURVE

(FOR VACUUM OPERATION)

■ RLV - Complete Set ■ RL - Blower Body only

RLV



HOW TO USE PERFORMANCE TABLES

The performance tables give the model number, bore, r.p.m., static pressure, air volume and required power of the motor.

- The air volume in the performance table are the volume of air intake under standard conditions. Standard conditions are temperature 20 °C, absolute pressure 1 atm (1033mmAq) and relative humidity 65%.
- Air volume is generally shown in terms of following three modes. Values can be converted between them.
 - Air volume at **suction condition**
Shown in terms of suction pressure, temperature and humidity.
 - Air volume at **standard condition**
 - Air volume at **base condition**
When the temperature is 0 °C, absolute pressure 1 atm and when the air is dry.
- The air volume conversion formula is as follows :

$$Q_2 = Q_1 \times P_1 / P_2 \times T_2 / T_1$$

$$Q_1$$
 : air volume(m³/min)at absolute pressure of P_1 (mmAq) and absolute temperature of T_1 (K).

$$Q_2$$
 : air volume(m³/min)at absolute pressure of P_2 (mmAq) and absolute temperature of T_2 (K).
- According to the air volume and static pressure as calculated above, the model number, bore, r.p.m. and required power can be found in the performance table.
- The choice is overlapped depending upon the type of blower. For reference, however, selection should be lower number blowers for the economy and higher number for the sound level.
- The values for power displayed in the performance table are expressed as required power including drive power for the transmission unit, so there is no need to create a margin when selecting a motor.
 power (output) can be calculated using the following formula

$$kW = \sqrt{3} \times V \times A \times \cos \theta \times \text{Eff.} \times 10^{-3}$$

$$V$$
 : voltage A : current $\cos \theta$: motor power factor
 Eff. : motor efficiency

PRESSURE	atm	kpa	mbar	lbf/in ² (psi)	kgf/cm ²	in Hg	ft Aq	mmHg(Torr)	mmAq
1 atm	1	101.325	1013.25	14.696	1.0333	29.921	33.914	760	10333
1 kpa	0.0099	1	10	0.145	0.0102	0.295	0.335	7.5	102
1 mbar	0.00099	0.1	1	0.0145	0.00102	0.0295	0.0335	0.75	10.198
1 lbf/in ² (psi)	0.069	6.894	68.965	1	0.0703	2.036	2.308	51.71	703
1 kgf/cm ²	0.968	98.062	980.392	14.228	1	28.96	32.82	735.53	10000
1 inHg	0.0334	3.3863	33.898	0.491	0.0345	1	1.133	25.4	345.3
1 ftAq	0.0295	2.99	29.851	0.434	0.0305	0.882	1	22.42	304.8
1 mmHg(Torr)	0.013	0.1338	1.333	0.019	0.0014	0.04	0.045	1	13.6
1 mmAq	0.000097	0.0098	0.09803	0.0014	0.0001	0.003	0.003	0.074	1

CAPACITY	m ³ /min	l/min	cm ³ /sec	in ³ /sec	ft ³ /min(CFM)	U.S. GPM
1m ³ /min	1	1000	16667	1016	35.288	264.172
1l/min	0.001	1	16.67	1.02	0.0353	0.2641
1cm ³ /sec	0.00006	0.06	1	0.061	0.002	0.0158
1in ³ /sec	0.00098	0.983	16.39	1	0.035	0.2589
1ft ³ /min(CFM)	0.028	28.32	471.957	28.8	1	7.4836
1U.S. GPM	0.003785	3.4785	63.0915	3.8460	0.13360	1

Pressure Conversion Formula

1 kpa=1000 pa=1000 N/M²

1 bar=1000 mbar=100 kpa

1 mbar=100 N/M²

NOISE LEVEL - RL、RW TYPE

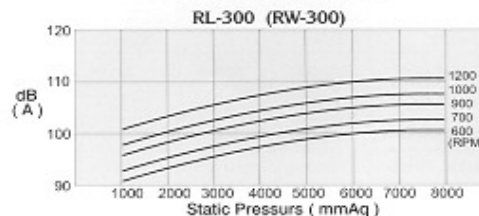
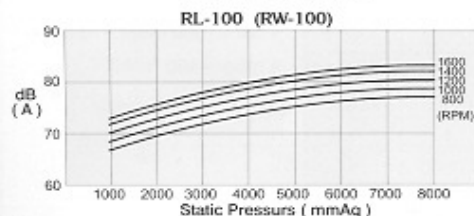
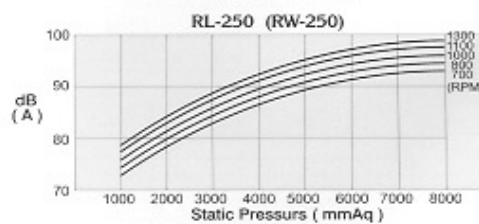
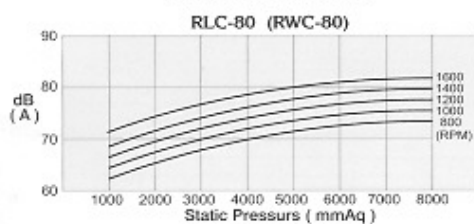
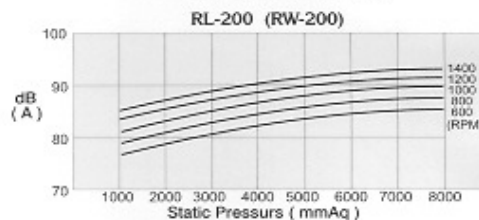
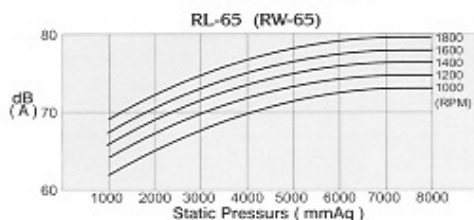
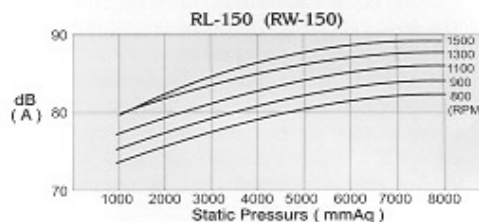
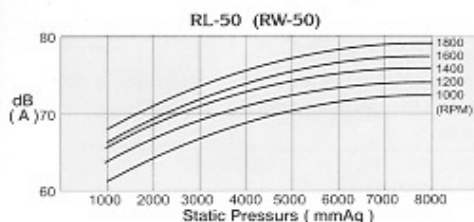
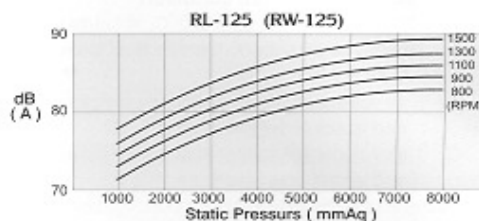
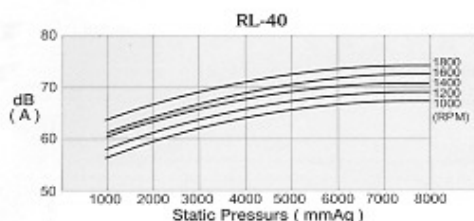
1. Measure method (1.0m On Machine Side)

For your information, the following noise reading are the average value measured at a distance 1m from the SHOWFOU blowers under standard condition.

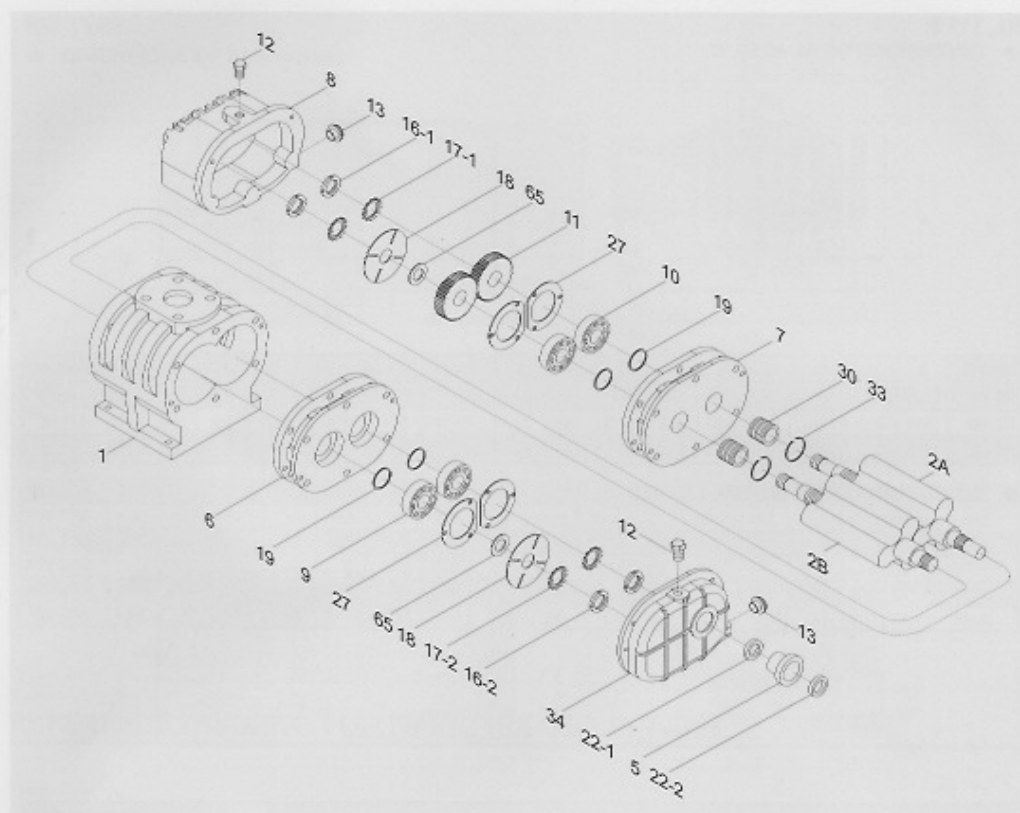
2. Noise prevention method

The noise of SHOWFOU blower has direct relationship with the factors such as blower size, discharge pressure and R.P.M. To get even greater effectiveness in noise reduction, please refer to some methods as follow :

1. Establish the silencer to inlet and outlet to prevent the noise of air flow.
2. Decrease the revolution of blower to reduce the noise of it.
3. Use the expansion joint or the rubber vibration isolator to prevent the surging and vibration.



RL STRUCTURAL DRAWING



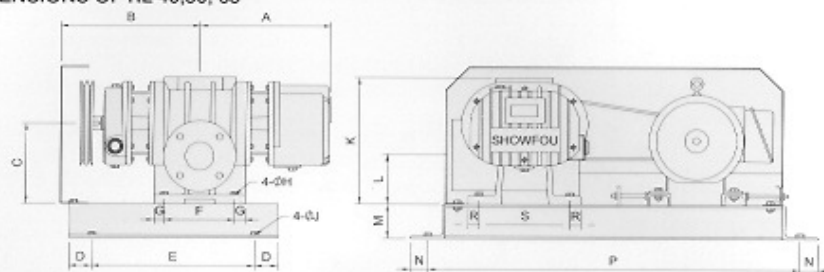
PARTS LIST

NO.	NAME	MATERIAL	Q'ty	FITTING MODEL	NO.	NAME	MATERIAL	Q'ty	FITTING MODEL
1	CASING	FC25	1		16-1	LOCK NUT	S45C	2	
2A	ROTOR+DRIVE SHAFT	FC25+SCM440	1		16-2	LOCK NUT	S45C	2	
2B	ROTOR+DRIVEN SHAFT	FC25+SCM440	1		17-1	SPRING WASHER	SS41	2	
5	LABYRINTH SEAL	FC25	4	RL-80~300	17-2	SPRING WASHER	SS41	2	
6	FRONT SIDE COVER	FC25	1		18	OIL SPLASH	SS41	2	
7	REAR SIDE COVER	FC25	1		19	V SEAL	VITON	4	
8	GEAR BOX	FC25	1		22-1	OIL SEAL	VITON	1	RL-80,RL-100
9	FRONT BEARING	SUJ2	2		22-2	OIL SEAL	VITON	1	RL-125~300
10	REAR BEARING	SUJ2	2		27	BEARING COVER	SS41	4	
11	TIMING GEAR	SNM220	2		30	BEARING HOLDER	SCM440	2	RL-150,RL-300
12	LUBRICATION PLUG	S45C	2		33	PISTON RING	FC25	2	(OPTIONAL)
13	OIL GAUGE	GLASS	2		34	FRONT COVER	FC25	1	
					65	WASHER	SS41	2	

OUTLINE DIMENSIONS

RL TYPE

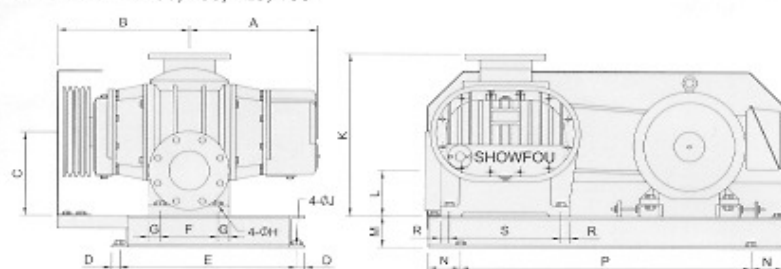
◆ DIMENSIONS OF RL-40,50, 65



UNIT : mm

TYPE	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	Wt.(kg)	RLC(kg)
RL-40	238	260	180	20	340	80	15	14	14	290	104	46	41.5	517	23	196	65	103
RL-50	278	302	175	50	350	150	22.5	14	14	276	103.5	75	37.5	795	22	196	70	136
RL-65	308	323	173	50	350	195	30.5	14	14	276	104	75	37.5	795	25	200	75	155

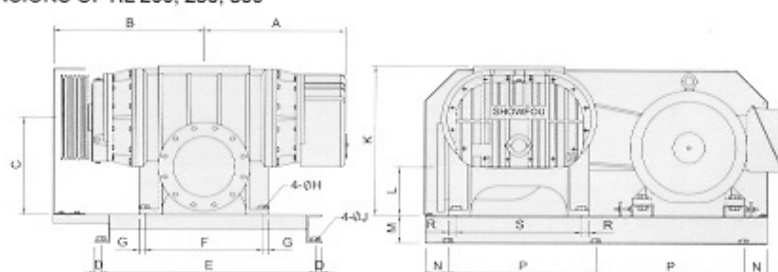
◆ DIMENSIONS OF RL-80, 100, 125, 150



UNIT : mm

TYPE	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	Wt.(kg)	RLC(kg)
RL-80	320	406	213	50	450	195	22.5	16	14	341	106.5	75	37.5	945	20	200	143	250
RL-100	320	467	225	25	550	282	20.5	16	19	354	114.5	100	100	760	30	232	166	330
RL-125	455	500	265	25	550	310	30	19	19	498	157.5	100	100	900	22.5	355	296	485
RL-150	510	566	295	25	550	428	26	19	19	457	163	100	100	900	22.5	355	352	525

◆ DIMENSIONS OF RL-200, 250, 300



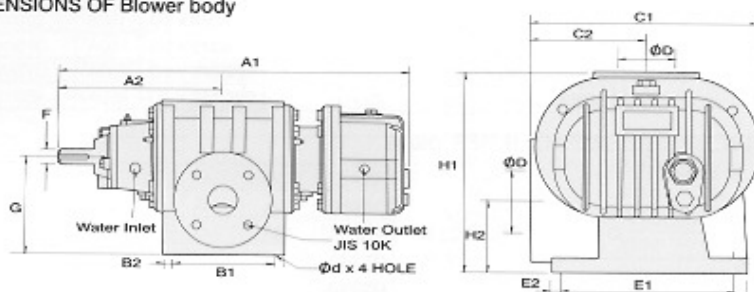
UNIT : mm

TYPE	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	Wt.(kg)	RLC(kg)
RL-200	547	620	405	32.5	935	400	40	23	24	705	194	125	100	650	33	550	880	1155
RL-250	622	680	435	32.5	935	520	25	23	24	675	216	125	100	650	35	550	1050	1500
RL-300	685	828	550	35	1035	510	30	23	24	1010	300	250	235	1000	35	780	2000	2800

OUTLINE DIMENSIONS

RW TYPE

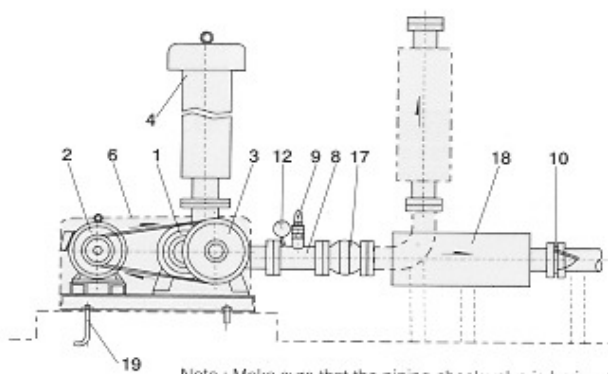
◆ DIMENSIONS OF Blower body



UNIT : mm

TYPE	A1	A2	B1	B2	C1	C2	ΦD	Φd	E1	E2	F	G	H1	H2	Wt. (kg)	RWC(kg)
RW-50	582	277	150	22.5	294	158	50	14	196	22	28	175	276	104	70	136
RW-65	642	307	195	30.5	288	152	65	14	200	25	28	175	276	104	75	155
RW-80	705	305	195	22.5	358	180	80	16	200	20	38	213	341	107	143	250
RW-100	805	355	282	20.5	364	186	100	16	232	30	38	225	354	115	166	330
RW-125	900	437	310	30	483	250	125	19	355	22.5	48	265	498	158	296	485
RW-150	1010	492	428	26	483	250	150	19	355	22.5	48	295	457	163	352	525
RW-200	1137	590	400	40	685	345	200	23	550	33	65	405	705	194	880	1155
RW-250	1287	665	520	25	715	356	250	23	550	35	65	435	675	216	1050	1500
RW-300	1330	645	510	30	1060	560	300	33	780	35	95	550	1010	300	2000	2800

REFERENCE DRAWING FOR PIPING (EXAMPLE)



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

NO	ACCESSORIES
1	Blower body
2	Motor
3	Blower pulley
4	Suction silencer set
6	Belt cover
8	T-type reducer
9	Pressure safety valve
10	Check valve
12	Pressure gauge
17	Expansion joint
18	Discharge silencer
19	Anchor bolt

An example of piping arrangement around the blower is shown. Make the most suitable installation from the viewpoint of space, piping schedule, vibration prevention, etc. It is effective to use rubber vibration isolator and to provide an expansion joint to the blower outlet for the prevention of vibration. A silencer may be used to either laterally or vertically. Install the check valve on the horizontal piping. Use a suitable support to the piping to avoid applying a piping load to the blower nozzle.

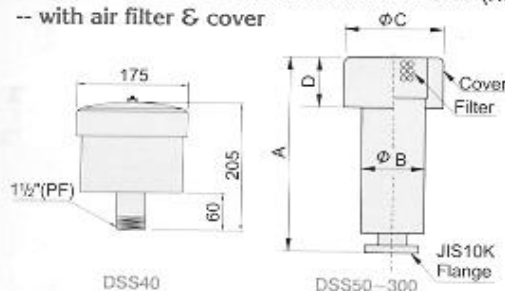
DIMENSIONS OF ACCESSORIES

BLOWER PULLEY (No.3)

TYPE	BORE	DIMENSION(O.D.)	TYPE	BORE	DIMENSION(O.D.)
SPB170 x 1G	40A	170mm	SPB280 x 4G	125A	280mm
SPB180 x 2G	50A	180mm	SPB280 x 4G	150A	280mm
SPB180 x 2G	65A	180mm	SPB375 x 5G	200A	375mm
SPB200 x 3G	80A	200mm	SPB375 x 6G	250A	375mm
SPB200 x 4G	100A	200mm	SPC450 x 4G	300A	450mm

SUCTION & DISCHARGE SILENCER SET (No.4)

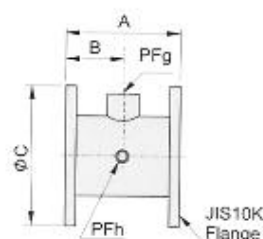
-- with air filter & cover



UNIT : mm

TYPE	BORE	A	B	C	D	WT.(kg)
DSS50	50A	548	140	220	80	10
DSS65	65A	548	165	235	85	14
DSS80	80A	818	210	310	145	22
DSS100	100A	818	240	350	160	26
DSS125	125A	1310	280	400	15	30
DSS150	150A	1310	300	450	190	36
DSS200	200A	1500	400	500	210	85
DSS250	250A	1700	400	500	210	110
DSS300	300A	1824	500	650	350	130

T-TYPE REDUCER (No.8)



UNIT : mm

TYPE	BORE	A	B	C	PFg	PFh	WT.(kg)
TTR50	40A,50A	150	75	155	PF 1 1/2"	PF 1/4"	5
TTR65	65A	150	75	175	PF 1 1/4"	PF 1/4"	7
TTR80	80A	180	90	185	PF 1 1/2"	PF 1/4"	9
TTR100	100A	180	90	210	PF 1 1/2"	PF 1/4"	11
TTR125	125A	250	125	250	PF 1 1/2"	PF 1/4"	18
TTR150	150A	250	125	280	PF 1 1/2"	PF 1/4"	19
TTR200	200A	250	125	330	PF 3"	PF 1/4"	26
TTR250	250A	250	125	400	PF 3"	PF 1/4"	31
TTR300	300A	300	150	450	PF 3"	PF 1/4"	36

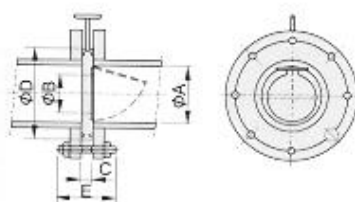
PRESSURE SAFETY VALVE (No.9)



UNIT : mm

TYPE	φA	B	φd	Fitting Model	WT.(kg)
PSV 32	71.5	182	PF 1 1/4"	RLC/RWC -40,50,65,80	2
PSV 50	85	197	PF 2"	RLC/RWC -100,125,150	3
PSV 80	115	221	PF 3"	RLC/RWC -200,250,300	5.5

CHECK VALVE (No.10)

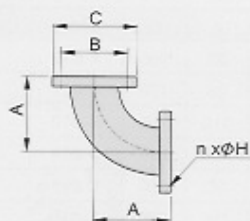


UNIT : mm

TYPE	BORE	A	B	C	D	E	WT.(kg)
NRV50	40A,50A	52.7	25	18	104	86	1
NRV65	65A	69.9	36	19	124	108	1.5
NRV80	80A	78.1	46	20	134	108	2
NRV100	100A	102.3	67	22	159	108	2.5
NRV125	125A	126.6	88	25	190	115	3.5
NRV150	150A	151.0	108	25	220	115	5
NRV200	200A	200.0	138	25	270	127	7
NRV250	250A	251.4	185	26	331	127	10
NRV300	300A	300.0	220	30	370	150	15

DIMENSIONS OF ACCESSORIES

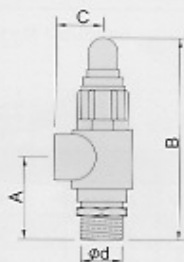
90° ELBOW (No.14)



UNIT : mm

TYPE	BORE	A	B	C	WT.(kg)
NDE50	40A,50A	95.3	120	155	4- ϕ 19
NDE65	65A	95.3	140	175	4- ϕ 19
NDE80	80A	114.3	150	185	8- ϕ 19
NDE100	100A	152.4	175	210	8- ϕ 19
NDE125	125A	190.5	210	250	8- ϕ 19
NDE150	150A	228.6	240	280	8- ϕ 19
NDE200	200A	304.8	290	330	12- ϕ 19
NDE250	250A	381.0	355	400	12- ϕ 19
NDE300	300A	457.2	400	445	12- ϕ 19

VACUUM SAFETY VALVE (No.15)

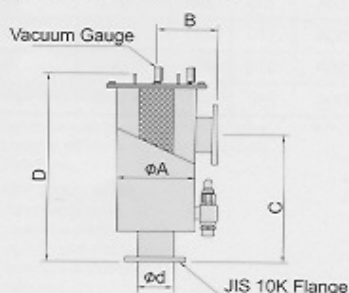


UNIT : mm

TYPE	A	B	C	ϕ d	E	Wt (kg)	FITTING MODEL
VSV 32	83	208	51	32	PT 1 1/4"	1.87	RLV,RWW -40,50,65,80
VSV 50	103	266	67	50	PT 2"	3.91	RLV,RWW-100,125,150,200,250,300

SUCTION FILTER TANK (No.16)

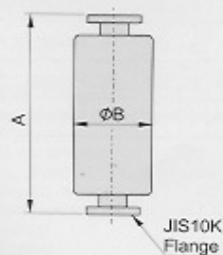
-- vacuum gauge included



UNIT : mm

TYPE	BORE	A	B	C	D	ϕ d
SFT50	50A	244	222	340	530	60
SFT65	65A	244	222	440	630	76
SFT80	80A	244	222	525	730	89
SFT100	100A	285	240	525	730	114
SFT125	125A	360	280	505	730	139
SFT150	150A	360	280	595	880	165
SFT200	200A	470	335	650	1000	216
SFT250	250A	470	335	800	1200	267
SFT300	300A	600	405	1000	1400	319

DISCHARGE SILENCER (No.18)



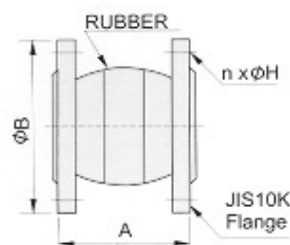
UNIT : mm

TYPE	BORE	A	B	WT.(kg)
DSF50	40A,50A	560	140	12
DSF65	65A	640	165	16
DSF80	80A	850	210	20
DSF100	100A	950	240	28
DSF125	125A	1150	280	33
DSF150	150A	1350	300	41
DSF200	200A	1600	400	90
DSF250	250A	1700	400	120
DSF300	300A	1800	500	140

DIMENSIONS OF ACCESSORIES

EXPANSION JOINT (No.17)

EJA TYPE - RUBBER

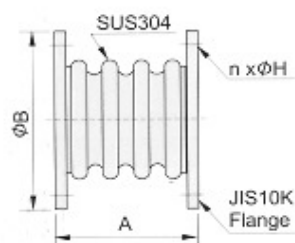


UNIT : mm

TYPE	BORE	A	B	n- ϕH	EJA WT.(kg)
EJA50	40A,50A	85	155	4- $\phi 19$	4
EJA65	65A	95	175	4- $\phi 19$	5
EJA80	80A	110	185	8- $\phi 19$	6
EJA100	100A	115	210	8- $\phi 19$	6
EJA125	125A	140	250	8- $\phi 19$	10
EJA150	150A	150	280	8- $\phi 19$	13
EJA200	200A	170	330	12- $\phi 19$	16
EJA250	250A	210	400	12- $\phi 19$	18
EJA300	300A	240	445	16- $\phi 19$	21

EJB TYPE - SUS 304

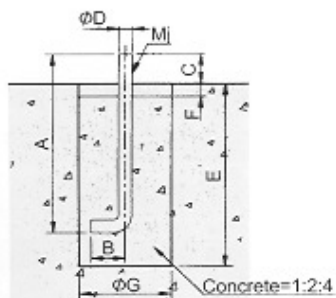
THE EJB TYPE IS RECOMMENDED FOR PRESSURE OVER 5000 mmAq



UNIT : mm

TYPE	BORE	A	B	n- ϕH	EJB WT.(kg)
EJB50	40A,50A	85	155	4- $\phi 19$	4
EJB65	65A	95	175	4- $\phi 19$	5
EJB80	80A	110	185	8- $\phi 19$	6
EJB100	100A	115	210	8- $\phi 19$	6
EJB125	125A	140	250	8- $\phi 19$	10
EJB150	150A	150	280	8- $\phi 19$	13
EJB200	200A	170	330	12- $\phi 19$	16
EJB250	250A	210	400	12- $\phi 19$	18
EJB300	300A	240	445	16- $\phi 19$	21

ANCHOR BOLT (No.19)



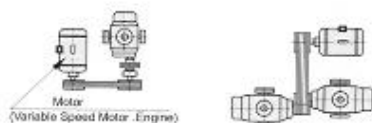
UNIT : mm

TYPE	Mj	A	B	C	D	E	F	G	FITTING TYPE
AB1	M12	165	30	25	12	165	5	100	RL, RW-50,65,80
AB2	M16	245	45	40	16	245	5	120	RL, RW-100,125
AB3	M20	325	55	55	20	325	5	150	RL, RW-150,200,250,300

DRIVING METHOD

Motor and V-belt drive is a standard. Blowers with direct coupling to the motor, engine driven blowers with decelerator, or with speed change gear driving may also be adopted. For power in excess of 90 KW(120 HP), the V-belt driving with a counter shaft becomes a standard.

V-belt Driven



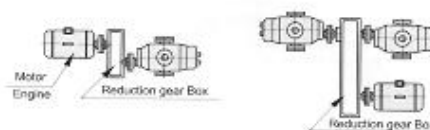
V-belt Counter Shaft Driven



Direct Coupling



Direct Coupling with Reduction Gear Box



APPLICATION GUIDE

The following applications are typical of many uses for SHOWFOU blowers. This is a general listing and does not include all type of applications.

PRESSURE OPERATION

- Combustion air for burners, gas burners, coke-fired forges, small foundry cupolas in:

- iron & steel industries
- food processing
- chemical plants
- non-ferrous metal refineries
- smelters & foundries
- bakeries
- glass, ceramics, brick
- oil, tar & asphalt heaters
- on road machinery
- pipe, wrapping machines

- Drying:

- air and sand blasting
- grain conditioning in elevator storage
- supercharging
- dusting and spraying
- washing, drying and cleaning drums
- blending and mixing
- sand filter regeneration
- dust blowing
- cake blowing
- pressurizing paper mill headboxes

- Aerating and agitating liquids in:

- waste treatment plants
- waste treatment
- electrotyping & engraving
- oyster washing
- oil blending
- ice manufacture
- chemical processes
- preventing ice formation in power plants
- fish ponds, lakes
- flotation
- blending vinegars
- asphalt refining
- food washing

- Pneumatic conveying:

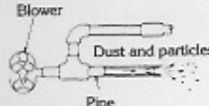
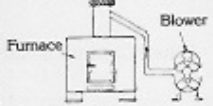
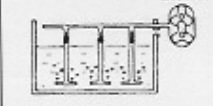
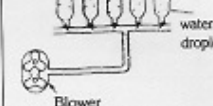
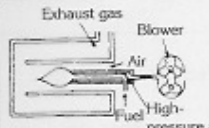
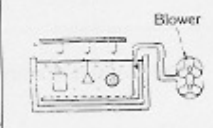
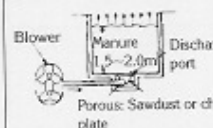
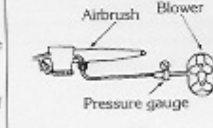
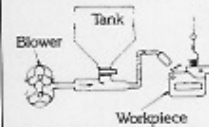
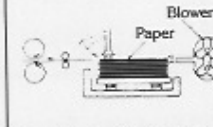
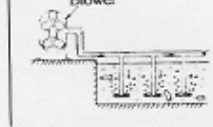
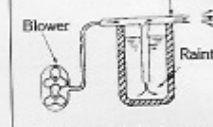
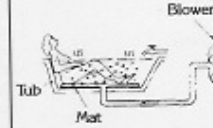
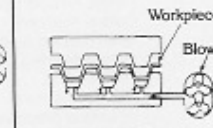
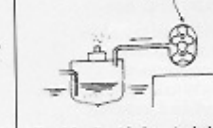
- granular materials
- insulation blowing
- liquid transfer
- fluidizing
- pulp conveying
- wood and metal chip conveying
- rock dusting
- flour and powder

VACUUM OPERATION

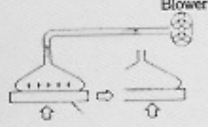
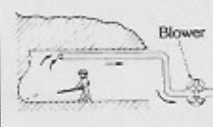
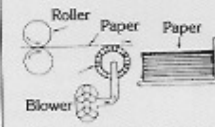
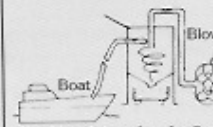
- industrial and commercial vacuum cleaning
- paper folding machinery
- garment presses
- bottle and tube filling machines
- drying
- mat formers
- pump priming
- dust collecting

APPLICATIONS

FOR PRESSURE OPERATION

PIPE CLEANING	FURNACE	PURIFICATION TANK	BOTTLE WASHER
 Used to remove dust and rust when replacing piping or conducting periodic inspections.	 The blower can help boost burn performance and promote exhaust gas removal.	 Used to agitate sediment and for purification at water treatment plants.	 Used to remove water droplets remaining inside bottles after washing.
GAS BURNER	PLATING TANK	FERTILIZER PRODUCTION USING MANURE FERMENTATION	AIRBRUSH
 High-pressure discharge air can be used to disperse the fuel.	 To improve the quality of plating, air is fed into the tank to recirculate the electrolyte. The Roots blower is used as the air source.	 Used to hasten fermentation by feeding air.	 High-pressure discharge air containing no oil is extremely well-received for airbrush applications.
SANDBLASTING	PRINTING PRESS PAPER FEED	FISHERY POND ENZYME SUPPLY	SPRAYING
 Used as the air source for sandblasting.	 Operations are simplified by using discharge air to separate, align, and feed the paper.	 Used for underwater enzyme supply in comparatively shallow ponds.	 Used to supply high-pressure discharge air containing no oil to the sprayer.
BACKWASH	THERAPEUTIC BATH	STAMPING DIE	BALLAST PUMP
 Used as a backwash for filters.	 Widely used in hospitals and hotels for healthy bath aeration.	 Used to remove the stamped workpiece from the die.	 Used for liquid chemical ship lowering and other types of ballast pumping.

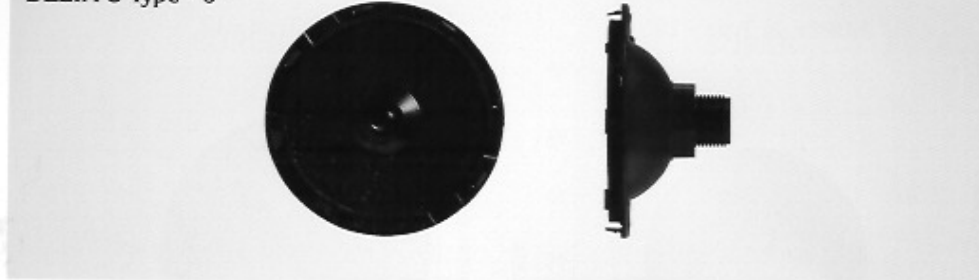
FOR VACUUM OPERATION

ABSORBING CONVEYANCE	CONSTRUCTION SITE	CONVEYING PAPER	PARTICLES TRANSPORT
 It can convey relatively light materials by absorbing them.	 Can be used for partial disposal of powders or poisonous gases.	 Conveying paper in printing machines.	 Used for air transfer of pellet material.

SHOWFOU - Coarse Bubble Disc Diffuser

Unique snap-cap design provide extra backflow protection for easy operation

DELTA-S Type - 6"



FEATURES:

- Single membrane
- Snap-cap design with backflow protection
- Durable material for chemical resistance
- Low maintenance, ease of installation

APPLICATIONS:

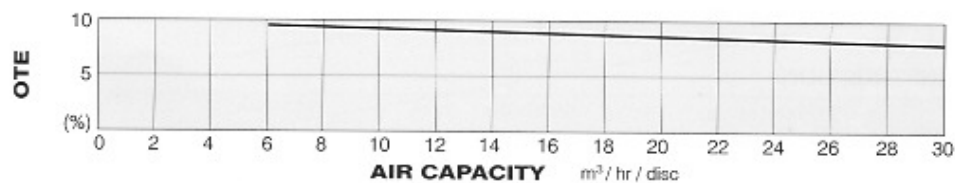
- Reoxygenation
- Wastewater and water
- Mixing basins
- Equalization basins

CONSTRUCTION:

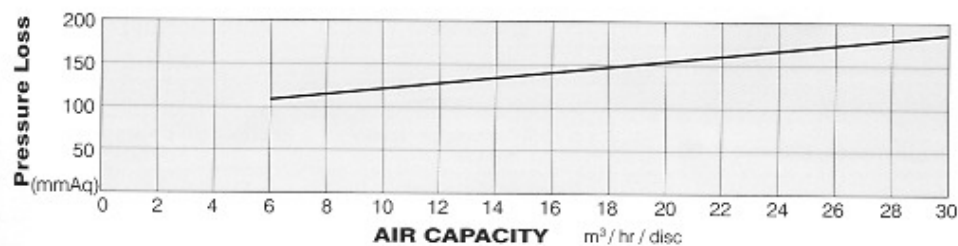
PT Thread (male)		Disc Dia (mm)	Bubble Dia (mm)	Base	MATERIAL			Weight (g)
mm	Inch				Ring	Upper Cover	Membrane	
25	1	145	6 - 12	ABS	PU	PU	PU	136

SPECIFICATIONS:

Design Capacity	Oxygen Transfer Efficiency	Pressure Loss
0.10 ~ 0.45 m ³ /min (3.52 ~ 15.9 CFM)	9% at 4 m depth and air capacity 15 m ³ /min	140 mmAq at air capacity 15 m ³ /min

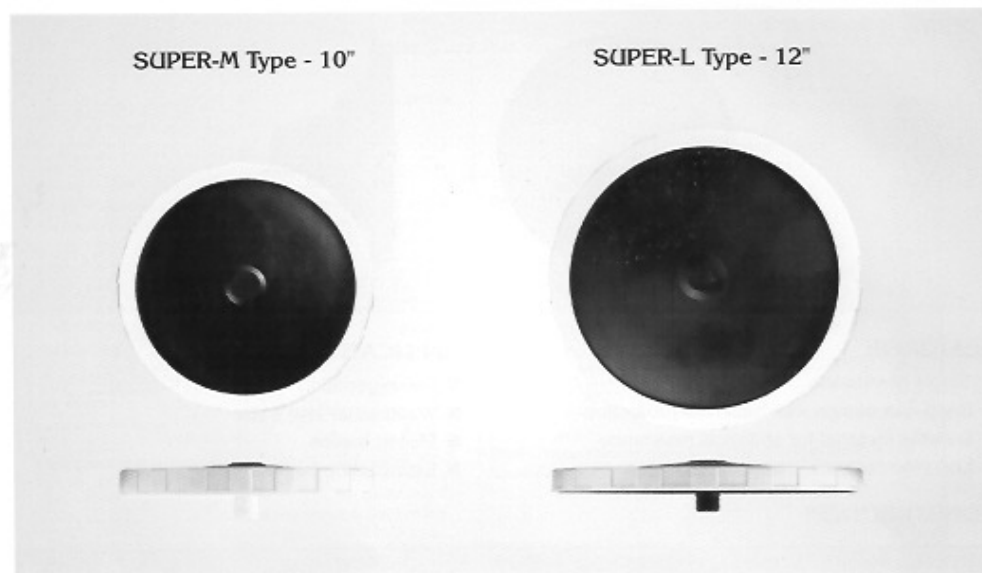


- OTE = OXYGEN TRANSFER EFFICIENCY
- Guideline values of OTE are tested in standard condition at 4 M submergence, and the diffuser density is 3% per basin bottom area.



SHOWFOU - Fine Bubble Disc Diffuser

Advanced self-sealing design prevents clogging and highly resistant to fouling



FEATURES:

- High oxygen transfer efficiency
- Self-sealing design
- Rugged heavy duty construction
- Low operating cost
- Ease of installation
- Backflow protection
- Micro bubble openings for maximum efficiency

APPLICATIONS:

- Wastewater Treatment
- Aquaculture
- Mixing basins
- Aeration basins

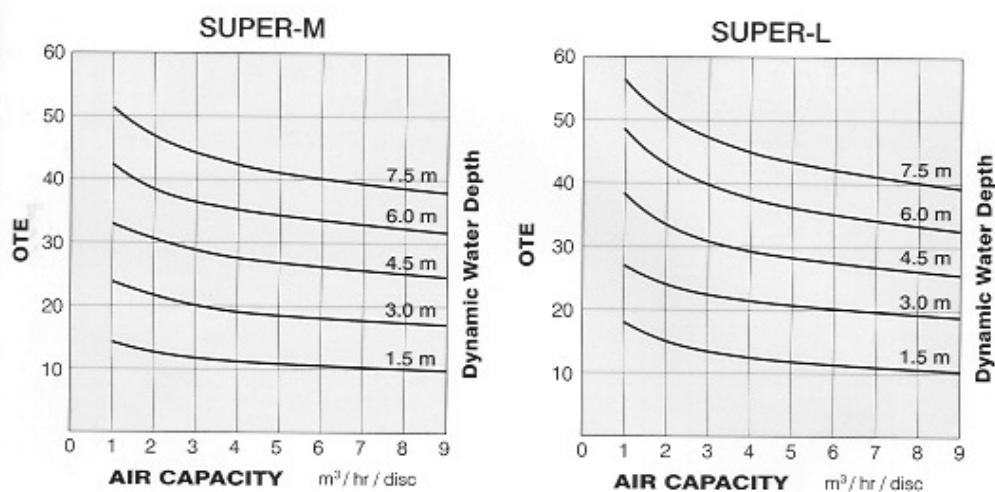
CONSTRUCTION:

TYPE	PT Thread (male)		Disc Dia (mm)	Bubble Dia (mm)	Base	MATERIAL			Weight (g)
	mm	Inch				Ring	Upper Cover	Membrane	
SUPER-M	20	3/4	246	1 - 3	ABS	ABS	ABS	EPDM	600
SUPER-L	20	3/4	330	1 - 3	ABS	ABS	ABS	EPDM	850

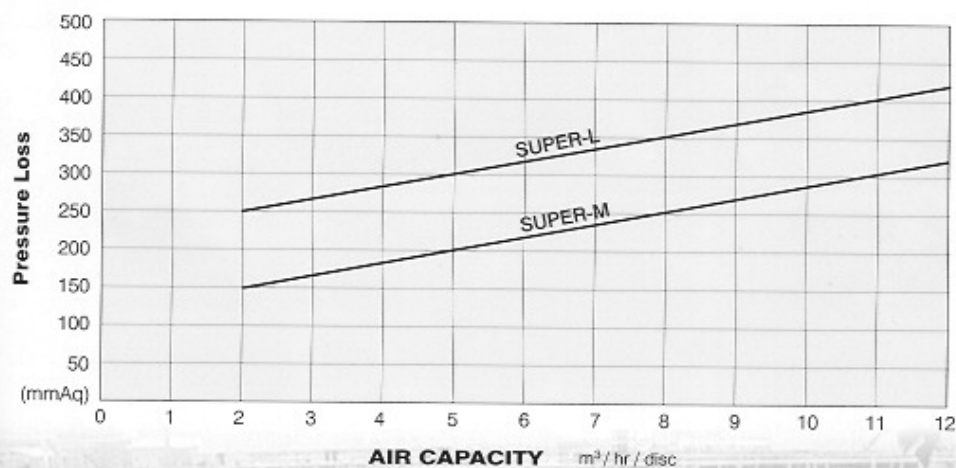
SPECIFICATIONS:

TYPE	SUPER-M	SUPER-L
Active Surface Area	330 cm ²	660 cm ²
Design Air Capacity	0.016 ~ 0.12 m ³ /min	0.016 ~ 0.20 m ³ /min
Oxygen Transfer Efficiency (OTE)	27% at 4.5 M depth and air capacity 5 m ³ /hr	29% at 4.5 M depth and air capacity 5 m ³ /hr
Pressure Loss	200 mmAq at air capacity 5 m ³ /hr	300 mmAq at air capacity 5 m ³ /hr

■ OXYGEN TRANSFER EFFICIENCY (OTE) PERFORMANCE

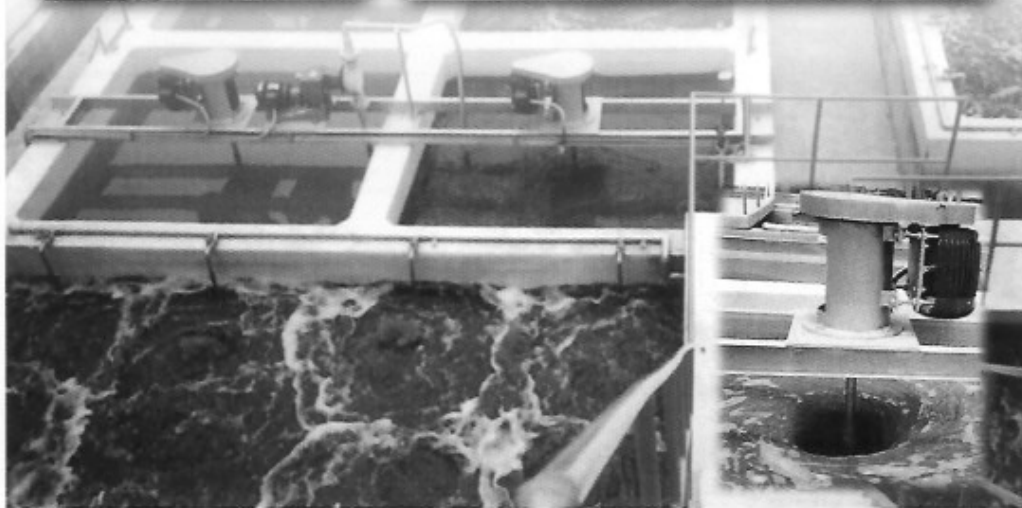


■ PRESSURE LOSS CURVE





3 Lobes Roots Blowers



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