



Macro
—Air Technologies—



TWIN LOBES ROOTS BLOWER



TRI LOBES ROOTS BLOWER



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PRODUCT INTRODUCTION

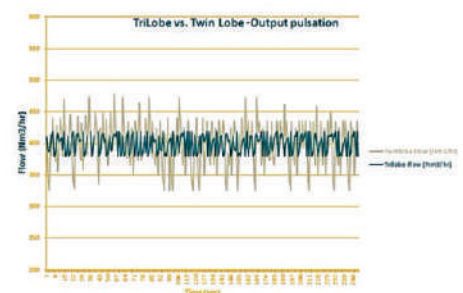
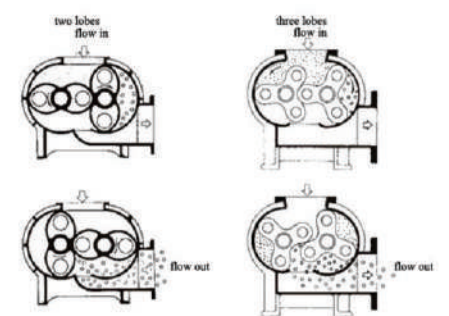
Roots blower are also called positive displacement blower. According to the rotor contour it can be divided as bi-lobe roots blower and tri-lobe roots blower. Roots blower operates by pumping a fluid with a pair of meshing lobes. Fluid is trapped in pockets surrounding the lobes and carried from the intake side to the exhaust. The most common application of the roots blower is as an air source in water treatment plant, smokedesulphurization, pneumatictransmission, aquaculture, paper making industry etc. Roots blower is more suitable for gas transportation and pressurization systems in low-pressure occasions. It can also be used as a vacuum pump, etc.

ROOTS BLOWER FEATURES

Our products adopt the brand-new design concept, and the part types are reduced by 30%, the appearance of the parts is exquisite, simple and capable. What's more, the actual strength is increased substantially. Due to the three-blade rotor structure and the reasonable structure of the air inlet and outlet in the casing, the blower has smaller vibration and lower noise. The rotor and shaft are precisely processed, and the rotor clearance is precisely maintained. The performance of the blower remains sturdy which can run continuously for a long time at various conditions. The blower has a large volume utilization rate, high volumetric efficiency, compact structure and flexible installation methods. Complete models can meet the needs of different users for different purposes.

ADVANTAGE OF TRI LOBES DESIGN

The tri-lobe Roots Blower design offers numerous advantages. The Tri-Lobe Roots Blower sweeps air six times per revolution, reducing noise and pressure pulsation, and is compatible with a range of pressures and speeds. The most important feature is that it is extremely efficient. The Tri-Lobe Roots Blowing system has high volumetric efficiency. Its positive-displacement rotors are used for several applications and are very stable. The Tri-Lobe Roots Blower has a unique design that reduces the amount of reverse flow pressure variation period. As a consequence, there is much less noise and pressure turbulence, and the motor has a longer life span. With six suction and exhaust cycles, the Tri-Lobe Roots Blower is also more energy-saving. Because of its high airflow and volume, it is an excellent choice for any business.



PERFORMANCE TABLE (FOR PRESSURE DUTY)

Capacity (FAD):(m3/hr)								Pressure(Mbar)								Shaft Power:(Kw)							
Mbar		100		200		300		400		500		600		700		800		900		1000			
Type	RPM	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw
MAT-10	1196	72	0.32	57	0.65	46	0.97	36	1.29	28	1.61	-	-	-	-	-	-	-	-	-	-	-	-
	3221	263	0.87	248	1.73	236	2.60	227	3.47	219	4.33	211	5.20	204	6.06	198	6.93	192	7.80	187	8.66	-	-
	3623	301	0.98	286	1.95	274	2.93	265	3.90	257	4.87	249	5.85	242	6.82	236	7.80	230	8.77	225	9.74	-	-
MAT-12	965	97	0.42	77	0.84	62	1.26	50	1.68	39	2.10	29	2.51	-	-	-	-	-	-	-	-	-	-
	3221	437	1.40	418	2.80	403	4.19	390	5.59	379	6.99	370	8.39	360	9.78	352	11.2	344	12.6	337	14.0	-	-
	3623	498	1.57	478	3.15	464	4.72	451	6.29	440	7.86	430	9.43	421	11.0	413	12.6	405	14.2	397	15.7	-	-
MAT-14	965	144	0.57	121	1.14	103	1.17	88	2.28	75	2.85	63	3.42	-	-	-	-	-	-	-	-	-	-
	3221	609	1.90	585	3.80	568	5.70	553	7.60	540	9.50	528	11.4	517	13.3	506	15.2	497	17.1	488	19.0	-	-
	3623	691	2.14	668	4.28	651	6.41	636	8.55	622	10.7	610	12.9	599	15.0	589	16.9	580	19.3	570	21.4	-	-
MAT-16	849	201	0.78	171	1.55	148	2.32	128	3.10	111	3.87	95	4.65	-	-	-	-	-	-	-	-	-	-
	2732	800	2.49	770	4.98	746	7.47	721	9.96	709	12.5	694	15.0	679	17.5	665	19.9	652	22.4	640	24.9	-	-
	2900	853	2.65	823	5.29	800	7.93	780	10.6	763	13.2	747	15.9	732	18.5	719	21.2	706	23.8	694	26.5	-	-
MAT-19	817	313	1.14	274	2.27	244	3.40	218	4.54	194	5.67	173	6.81	153	7.94	-	-	-	-	-	-	-	-
	2457	1110	3.41	1071	6.82	1041	10.3	1015	13.7	991	17.1	970	20.5	950	23.9	932	27.3	914	30.7	898	34.1	-	-
	2590	1175	3.60	1136	7.19	1106	10.8	1079	14.4	1056	18.0	1035	21.6	1015	25.2	997	28.8	979	32.4	962	36.0	-	-
MAT-22	765	507	1.76	454	3.51	412	5.27	376	7.02	343	8.78	312	10.6	284	12.3	-	-	-	-	-	-	-	-
	2035	1527	4.67	1474	9.34	1432	14.0	1395	18.7	1362	23.4	1332	28.0	1304	32.7	1278	37.4	1253	42.0	1229	46.7	-	-
	2165	1631	4.94	1579	9.93	1536	14.9	1500	19.9	1467	24.9	1437	29.8	1409	34.8	1382	39.8	1357	44.7	1333	49.7	-	-

- For blower speed higher or lower than indicated above, Please contact us.
- For vacuum duty performance chart, please contact us.
- The rated range for air volume at specified + 5%



PERFORMANCE TABLE (FOR PRESSURE DUTY)

Capacity (FAD):(m3/hr)								Pressure(Mbar)								Shaft Power:(Kw)							
Mbar		100		200		300		400		500		600		700		800		900		1000			
Type	RPM	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw	m3/hr	bkw
3MAT-32	1650	20.4	0.19	16.2	0.27	12.6	0.36	9.6	0.45	6.6	0.54	4.2	0.62										
	2100	29	0.24	25	0.35	21	0.46	18	0.57	16	0.68	13	0.79										
	2550	38.4	0.29	33.6	0.42	30	0.56	27	0.69	24	0.83	21.6	0.97										
3MAT-40	1650	36	0.19	34.2	0.37	32.4	0.53	90.6	0.67	29.4	0.81	28.8	0.94										
	2100	50	0.24	47	0.47	46	0.67	44	0.86	43	1.03	42	1.19										
	2550	63	0.30	60.6	0.57	58.8	0.81	57.6	1.04	56.4	1.25	55.2	1.45										
3MAT-45	1250	59	1.22	47	1.32	42	1.41	96	1.54	32	1.66	28	1.82	24	2								
	1650	91	1.45	80	1.5	73	1.65	67	1.78	61	2.05	59	2.24	55	2.48								
	2150	131	1.83	120	1.98	114	2.15	109	2.35	105	2.53	100	2.8	96	3.06								
3MAT-50	850	59.4	0.41	47.4	0.80	38.4	1.16	30	1.51	22.8	1.84	17.4	2.15	12.6	2.45	9	2.74						
	1300	117	0.63	106	1.22	97	1.78	88	2.31	80	2.81	75	3.29	71	3.75	67	4.19						
	1750	175.2	0.85	163.2	1.64	154.2	2.39	145.8	3.11	138.6	3.78	133.2	4.43	128.4	5.05	124.8	5.64						
3MAT-65	850	124.2	0.62	113.4	1.21	102.6	1.76	93	2.29	84.6	2.78	77.4	3.26	71.4	3.71	65.4	4.15						
	1300	217	0.95	207	1.85	196	2.69	186	3.5	178	4.26	170	4.99	164	5.68	158	6.35						
	1750	310.2	1.28	300	2.49	288.6	3.63	279	4.71	270.6	5.73	263.4	6.71	2574	7.65	2514	8.55						
3MAT-80	850	194.4	1.12	172.2	2.14	152.4	3.08	133.8	3.94	117	4.73	102	5.47	88.8	6.15	76.8	6.79	61.8	7.48	50.4	8.24		
	1300	356	1.71	334	3.27	314	4.71	296	6.02	279	7.24	264	8.37	251	9.41	239	10.39	224	11.44	212	12.61		
	1750	518.4	2.30	496.2	4.41	476.4	6.33	457.8	8.11	4412	9.75	426	11.26	412.8	12.67	400.8	13.98	385.8	15.39	374.4	16.97		
3MAT-100	850	348	1.57	311.4	3.00	279	4.31	249.6	5.51	24.4	6.63	201.6	7.66	181.8	8.62	164.4	9.51	149.4	10.88	126	11.85		
	1300	600	2.49	563	4.76	531	6.84	502	8.76	476	10.53	454	12.16	434	13.69	416	15.1	401	17.28	378	18.82		
	1750	801.6	3.23	765	6.17	732.6	8.87	703.24	11.35	678	13.64	655.2	15.77	635.4	17.74	618	19.57	6033	22.40	579.6	24.39		
3MAT-125	750	617.4	2.59	565.2	4.96	517.2	7.13	722.8	9.12	435	10.97	399.6	12.67	366.6	14.26	339	15.74	16.2	17.78	126	11.85		
	1200	1049	4.15	996	7.63	948	11.4	904	14.59	866	17.55	830	20.28	797	22.82	770	25.18	747	28.44	378	18.82		
	1650	1479.6	5.70	1426.8	10.90	1378.8	15.68	1335	20.07	1296.6	24.13	1261.2	27.88	1228.8	31.38	1200.6	34.63	1177.8	39.11	1158.6	42.57		
3MAT-150	750	799.2	3.34	757.2	6.39	718.8	9.19	684	11.76	652.2	14.14	655.8	16.34	600	18.39	576.6	20.30	549.6	22.92	523.8	24.95		
	1200	1355	5.53	1313	10.23	1274	14.7	1240	18.82	1208	22.62	1179	26.15	1156	29.42	1132	32.47	1105	36.67	1079	39.92		
	1650	1910.4	7.53	1868.4	14.06	1830	20.21	1795.2	25.88	1763.4	31.11	1734.6	35.96	1711.2	40.46	1687.8	44.65	1660.8	50.43	1635	54.89		
3MAT-200	600	1020.6	4.84	957	9.27	902.4	13.31	852.6	17.06	811.8	20.51	775.8	23.71	744	26.68	718.8	29.13	685.2	32.84	657.6	35.75		
	1050	2041	8.48	1978	16.22	1923	23.32	1873	29.85	1832	35.89	1796	41.49	1765	46.7	1739	51.55	1706	57.47	1678	62.55		
	1500	3061.8	12.11	2998.2	23.17	2943.6	33.31	2893.8	42.65	2853	51.28	2817	59.28	2785.2	66.71	2760	73.64	2726.4	82.09	2698.8	89.36		
3MAT-250	600	1663.2	7.40	1573.2	14.16	1493.4	20.35	1420.8	26.06	1354.8	31.34	1296	36.23	1243.8	40.77	1198.8	45.00	1126.2	50.17	1077.6	54.61		
	1050	3223	13	3133	25	3035	36	2980	46	2914	55	2855	63	2803	71	2758	79	2686	88	2637	96		
	1500	4782	18.50	4691.4	35.39	4612.2	50.89	4539	65.16	4473.6	78.34	4414.22	90.56	4362.6	101.9	4306.2	112.5	4244.4	125.42	4196.4	136.53		
3MAT-300	600	3536.4	14.44	3329.4	25.88	3222.6	37.23	3122.4	47.70	3028.8	58.83	2955.6	68.88	2855.4	79.49	2802	88.83	2735.4	103.04	2668.8	113.68		
	1050	6540	25	6330	45	6228	65	6126	83	6030	103	5958	121	5858	139	5804	156	5738	180	5671	199		
	1500	9540	36.11	9336	64.70	9228	93.08	9126	1193	9036	147.1	8958	172.2	8808	198.7	8808	222.1	8742	257.6	8676	284.2		

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- For vacuum duty performance chart, please contact us.
- The rated range for air vallume at specified + 5%



VACUUM DUTY



FEATURE

1. Anti-friction Bearings.
2. Tri Lobe Rotor Design, Suitable For Both Pressure Duty And Vacuum Duty.
3. 100 % Oil Free Air Delivery.
4. Extended Shaft Design For Cool Running.
5. Standard Orientation: Horizontal & Vertical Both Flow Available.
6. Large Inlet & Outlet Connections For Minimal Loss.
7. Factory Engineered, Factory Guaranteed, Superior Product.
8. Improved Volumetric Efficiency And Reduced Operating Temperatures.
9. Dynamically Balanced Rotor Shaft Assembly.
10. Performance Testing As Per Standard Test Procedure.
11. Tri-lobe Construction Having Low Pulsations And Low Noise.
12. All Blowers Are Manufactured On State Of The Part, Imported VMC Machines, Machined To Close Tolerances With High Degree Of Accuracy On Profile Matching, Ensuring High Volumetric Efficiency.
13. All Major Components Are Interchangeable.

TRI-LOBE ROOTS AIR BLOWER APPLICATION

- Water Treatment
- Sewage Treatment
- Biogas
- Cement
- Coal
- Chemical
- Textile
- Power
- Pneumatic Conveying
- Aerospace
- Agriculture
- Petrochemical
- Pharma
- Food Processing
- Sugar
- Metal Industries
- Paper
- Glass
- Plastics
- Construction
- Energy



PRESSURE DUTY

Machine are supplied either as bare shaft unit a complete set with

- Base Frame
- Motor (As per requirement)
- Filter / Silencer
- Discharge Silencer
- Pressure relief and non-return valves
- Coupling of vee belt drive
- Safety Guards

All are mounted a common base frame
Installation is simply a matter of bolting the unit securely to its base, wiring up the motor and connecting the discharge pipe work.

All machine are individually tested for test-bench data prior to dispatch.



141-RAGHUVIR INDUSTRIAL ESTATE PART-3, SLM MANEKAL COMPOUND, VATVA, AHMEDABAD-382445

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