

Positive Displacement Blowers
Twin Lobe Design & Tri Lobe Design





Looking over the upcoming demand of market, we are an able and agile Team of Mechanical Engineers dedicated to launching their Product with a brand name A1 Blower. We are having a well settled team having an experience of 40+ years in the field of Roots Type Blowers & Boosters. A1 launches an innovative blower with superior Quality, higher reliability factor, with very competitive price.



Why A1

At A1 we assure you to provide best Quality product with higher Reliability factor.



Our Soul of Work

1. Trust: We believe over our client
2. Quality: Superior Quality
3. Integrity: Believe in working together
4. Solution: Provide you peace of mind in every aspect.



Features of Our Blowers

Solid design : Our compact, sturdy design is engineered for continuous service when operated in accordance with speed and pressure ratings. Timing Gears are secured to the shaft with taper mountings and locknuts. This eliminates the need for unreliable taper pins, aiding field maintenance. Spherical roller bearings are engineered for reliable and long service life. All rotating parts like Impellers and Pulleys are dynamically balanced to avoid undue load on the bearings.

Efficiency and reliability: Each A1 Compressor has computer calculated impeller profiles and is precision machined on the latest CNC equipment assuring close tolerance between the impellers, casing and side plates to minimize, "back slippage" of air, improving efficiency and reliability.

Smooth operation : Precision hardened and ground helical steel gears are used to ensure smooth, silent running and accurate timing of the rotating impellers. A controlled lubrication system is provided to ensure efficient operation without wastage of energy in the gear case.

Stringent tests : Measurement of characteristics (flow, pressure, power) and vibration measurement analysis is taken and recorded. Noise level measurements can be conducted after the installation of the compressor at site. We also offer quality control program, technical documentation, special calculations, or certificates of compliance to ASTM, DIN and ISI codes, if required.

A complete solution: A1 compressors may be supplied as a self-contained package unit consisting of base frame, safety valve, suction filter, suction silencer, non-return valve, pressure gauge, anti-vibration pads, v-belts, v-belt guard, drive and driven pulleys, set of special tools, foundation bolts and interconnecting piping with flange or alternately with any of the above items, specified as optional equipment.

TWIN LOBE SERIES BLOWERS



Performance Data (Air Cooled Blowers)

MODEL	IN./OUT. (MM)	SPEED (RPM)	1000 MMWG		2000 MMWG		3000 MMWG		4000 MMWG		5000 MMWG		6000 MMWG		7000 MMWG		STANDARD ORIENTATION
			M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	
A1-40	40	1000	51	0.43	42	0.70	35	0.96	29	1.23	24	1.49					
		1200	65	0.52	56	0.84	49	1.16	44	1.47	38	1.79					
		1440	83	0.62	74	1.00	67	1.39	61	1.77	56	2.15					
A1-42	40	1000	77	0.73	67	1.10	60	1.47	53	1.85	48	2.22	42	2.59	38	2.96	
		1200	98	0.88	88	1.32	80	1.77	74	2.22	68	2.66	63	3.11	58	3.55	
		1440	122	1.05	112	1.59	104	2.12	98	2.66	92	3.19	87	3.73			
A1-44	80	1000	120	0.90	107	1.45	98	1.99	90	2.54	83	3.08	77	3.63	71	4.17	
		1200	149	1.09	137	1.74	128	2.39	120	3.05	113	3.70	107	4.35			
		1440	185	1.30	173	2.09	164	2.87	156	3.66	149	4.44					
A1-47	80	1000	208	1.59	182	2.58	162	3.57	145	4.56	130	5.55					
		1200	262	1.91	236	3.10	216	4.29	199	5.47	185	6.66					
		1400	317	2.23	291	3.61	271	5.00	254	6.39							
A1-53	80	1000	181	1.82	163	2.63	150	3.45	138	4.27	128	5.09	119	5.90	111	6.72	
		1200	226	2.18	208	3.16	195	4.14	183	5.12	173	6.10	164	7.08	156	8.06	
		1440	280	2.62	262	3.79	248	4.97	237	6.15	227	7.32	218	8.50			
A1-55	80	1000	233	2.05	210	3.11	193	4.16	178	5.21	165	6.26	154	7.32	143	8.37	
		1200	291	2.46	268	3.73	251	4.99	236	6.25	223	7.52	211	8.78	200	10.04	
		1400	348	2.87	326	4.35	308	5.82	294	7.29	281	8.77	269	10.24			
A1-57	80	1000	326	2.47	295	3.95	270	5.42	250	6.89	231	8.37	215	9.84			
		1200	407	2.97	375	4.74	351	6.50	330	8.27	312	10.04	296	11.81			
		1400	488	3.46	456	5.53	432	7.59	411	9.65	393	11.71					
A1-59	100	1000	450	3.30	409	5.30	378	7.30	352	9.30	329	11.30					
		1200	559	3.96	519	6.36	487	8.76	461	11.16	438	13.56					
		1400	669	4.62	628	7.42	597	10.22	571	13.02							
A1-67	125	1000	453	3.04	409	5.09	375	7.13	346	9.17	321	11.22	298	13.26	277	15.30	
		1200	565	3.65	520	6.10	486	8.56	458	11.01	433	13.46	410	15.91	389	18.36	
		1400	676	4.26	632	7.12	598	9.98	570	12.84	545	15.70	522	18.56			
A1-610	125	1000	605	3.73	546	6.46	501	9.19	462	11.92	429	14.65	398	17.38	370	20.11	
		1200	754	4.48	695	7.75	650	11.03	612	14.31	578	17.58	548	20.86	520	24.13	
		1400	904	5.22	845	9.04	800	12.87	761	16.69	728	20.51					
A1-615	150	1000	919	5.19	836	9.27	772	13.36	719	17.44	672	21.53					
		1200	1142	6.22	1060	11.13	996	16.03	942	20.93	895	25.84					
		1400	1366	7.26	1283	12.98	1220	18.70	1166	24.42							
A1-78	125	1000	795	4.34	746	7.69	707	11.03	675	14.37	647	17.72	621	21.06	598	24.40	
		1200	978	5.21	929	9.22	891	13.24	858	17.25	830	21.26	804	25.27	781	29.28	
		1400	1161	6.08	1112	10.76	1074	15.44	1041	20.12	1013	24.80	987	29.48			
A1-710	150	1000	994	5.18	932	9.36	884	13.54	844	17.72	809	21.90	777	26.07	747	30.25	
		1200	1223	6.21	1161	11.23	1113	16.24	1073	21.26	1038	26.27	1006	31.29	976	36.30	
		1400	1452	7.25	1390	13.10	1342	18.95	1302	24.80	1266	30.65	1234	36.50			
A1-713	150	1000	1292	6.43	1211	11.86	1149	17.29	1097	22.72	1051	28.15	1009	33.58	971	39.01	
		1200	1589	7.72	1508	14.23	1446	20.75	1394	27.26	1348	33.78	1306	40.29			
		1400	1886	9.00	1805	16.60	1744	24.20	1691	31.81	1645	39.41					
A1-717	200	1000	1691	8.61	1585	15.71	1504	22.82	1436	29.93	1375	37.04					
		1200	2080	10.33	1974	18.86	1893	27.39	1825	35.92	1765	44.44					
		1400	2469	12.05	2363	22.00	2282	31.95	2214	41.90							
A1-812	200	1000	1435	9.79	1373	15.59	1324	21.38	1284	27.18	1248	32.97	1216	38.77	1186	44.56	
		1200	1752	11.75	1690	18.71	1642	25.66	1601	32.62	1566	39.57	1533	46.52	1504	53.48	
		1400	2070	13.71	2007	21.83	1959	29.94	1919	38.05	1883	46.16	1851	54.28			
A1-816	250	1000	1914	11.73	1830	19.45	1766	27.18	1712	34.91	1664	42.63	1621	50.36			
		1200	2337	14.07	2253	23.34	2189	32.62	2135	41.89	2087	51.16	2044	60.43			
		1400	2760	16.42	2676	27.23	2612	38.05	2558	48.87	2510	59.69					
A1-820	250	1000	2392	13.66	2288	23.32	2207	32.97	2140	42.63	2080	52.29					
		1200	2921	16.39	2816	27.98	2736	39.57	2669	51.16	2609	62.75					
		1400	3450	19.12	3345	32.64	3265	46.16	3198	59.69	3138	73.21					
A1-1012	250	1000	2453	14.91	2346	24.81	2264	34.72	2195	44.62	2134	54.53	2079	64.44	2028	74.34	
		1200	2996	17.89	2889	29.77	2806	41.66	2737	53.55	2676	65.44	2621	77.32	2570	89.21	
		1400	3538	20.87	3431	34.74	3349	48.60	3280	62.47	3219	76.34	3163	90.21	3113	104.08	
A1-1016	300	1000	3297	18.31	3153	31.62	3042	44.93	2949	58.24	2867	71.56	2793	84.87	2725	98.18	
		1200	4025	21.97	3882	37.95	3771	53.92	3678	69.89	3596	85.87	3522	101.84	3454	117.81	
		1400	4754	25.64	4610	44.27	4500	62.91	4407	81.54	4325	100.18	4251	118.81			
A1-1020	350	1000	4217	22.03	4033	39.05	3891	56.08	3772	73.10	3667	90.13	3573	107.15			
		1200	5149	26.43	4965	46.86	4824	67.29	4705	87.72	4600	108.15	4505	128.59			
		1400	6081	30.84	5897	54.67	5756	78.51	5637	102.34	5532	126.18	5437	150.02			
A1-1024	350	1000	4953	25.00	4737	45.00	4571	64.99	4431	84.99	4308	104.99					
		1200	6048	30.00	5831	53.99	5666	77.99	5526	101.99	5402	125.99					
		1400	7143	35.00	6926	62.99	6760	90.99	6621	118.99	6497	146.98					

Note : 1. The above ratings are based on inlet air temperature of 104 D F, ambient pressure 1 kg/cm2, specific gravity of 1.0.
 2. Performance testing as per BS 1571, part-II 3. All specifications are subject to change without notice.

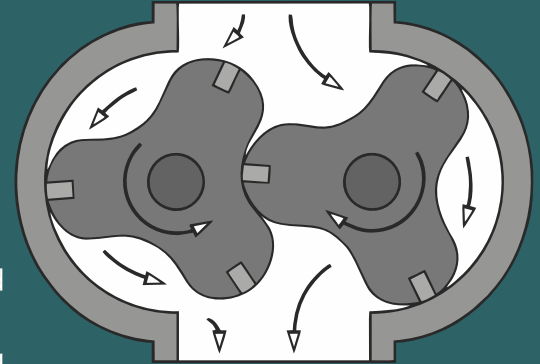
A1 TRI LOBE SERIES BLOWERS

A1 offers a wide range of positive displacement, three lobe blowers for use in compressions and vacuum application for air and other natural gases. The a1 TRI LOBE series can deliver pressures upto 1 kg/cm² with flow rate from 15 m³/h to 11000 m³/h.

The blower for high section pressure are with mechanical seal and pressurized lubrication and other design changes.

BENEFITS

- High Mechanical and volumetric efficiency
- Reliability in operation
- Air-cooled, oil free operation
- Fast and easy maintenance
- Dynamically balanced impellers
- Cast iron construction with a damper system to reduce noise and in-pipe pulsation
- Direct-drive or V-belt drive available throughout the operating range



Performance Data of TRILOBE Series (Air Cooled Blowers)

MODEL	OPENING (MM)	SPEED (RPM)	1000 MMWG		2000 MMWG		3000 MMWG		4000 MMWG		5000 MMWG		6000 MMWG		7000 MMWG		8000 MMWG		
			M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR
A1-TL40	40	1200	22	0.25	16	0.38	12	0.51	8	0.64	5	0.77	2	0.90					
		1450	29	0.30	24	0.46	19	0.62	16	0.77	12	0.93	9	1.09					
		2850	71	0.59	65	0.90	61	1.21	57	1.52	54	1.83	51	2.14					
A1-TL50	50	1000	92	1.06	78	1.53	67	1.99	57	2.46	49	2.92	42	3.39	35	3.85	29	4.31	
		1200	118	1.28	103	1.83	92	2.39	83	2.95	75	3.51	67	4.06	60	4.62	54	5.18	
		1400	143	1.49	129	2.14	118	2.79	108	3.44	100	4.09	93	4.74	86	5.39	79	6.04	
		1600	169	1.70	154	2.45	143	3.19	134	3.93	125	4.67	118	5.42					
A1-TL60	60	1000	154	1.31	138	2.01	125	2.72	115	3.42	106	4.13	97	4.83	90	5.54	83	6.25	
		1200	193	1.57	177	2.41	164	3.26	154	4.11	144	4.95	136	5.80	128	6.65			
		1440	239	1.88	223	2.90	210	3.91	200	4.93	191	5.95	182	6.96	175	7.98			
		1600	270	2.09	254	3.22	241	4.35	231	5.48	222	6.61	213	7.74	206	8.86			
A1-TL80	80	1000	279	2.29	249	3.58	225	4.87	206	6.16	188	7.45	173	8.73	158	10.02	145	11.31	
		1200	350	2.75	319	4.29	296	5.84	276	7.39	259	8.93	243	10.48	229	12.03	215	13.57	
		1400	420	3.20	390	5.01	367	6.81	347	8.62	329	10.42	314	12.23	299	14.03	286	15.84	
		1600	491	3.66	461	5.72	437	7.79	417	9.85	400	11.91	384	13.97	370	16.04			
A1-TL100	100	1000	404	2.80	367	4.59	339	6.39	316	8.18	295	9.98	276	11.77	259	13.57			
		1200	502	3.35	466	5.51	438	7.66	414	9.82	393	11.97	375	14.13	357	16.28			
		1440	620	4.03	584	6.61	556	9.20	532	11.78	511	14.37							
		1600	699	4.47	662	7.35	634	10.22	611	13.09	590	15.96							
A1-TL125	125	1000	828	4.72	778	8.20	739	11.67	706	15.14	677	18.62	651	22.09	627	25.56	605	29.04	
		1200	1019	5.67	968	9.84	929	14.00	896	18.17	867	22.34	841	26.51	817	30.68	795	34.84	
		1440	1247	6.80	1196	11.80	1157	16.80	1124	21.81	1096	26.81	1069	31.81	1045	36.81	1023	41.81	
		1600	1399	7.56	1348	13.11	1309	18.67	1277	24.23	1248	29.79							
A1-TL150	150	1000	1106	5.73	1056	10.20	1018	14.68	986	19.15	958	23.63	932	28.11	909	32.58	887	37.06	
		1200	1351	6.87	1301	12.24	1263	17.61	1231	22.99	1203	28.36	1177	33.73	1154	39.10			
		1440	1645	8.25	1595	14.69	1557	21.14	1525	27.58	1497	34.03	1471	40.47					
		1600	1841	9.16	1791	16.32	1753	23.49	1721	30.65	1693	37.81							
A1-TL200	200	1000	1806	10.93	1712	18.36	1639	25.79	1578	33.22	1524	40.65	1476	48.08	1431	55.51	1390	62.94	
		1200	2213	13.12	2118	22.03	2046	30.95	1985	39.86	1931	48.78	1883	57.69	1838	66.61	1796	75.52	
		1400	2620	15.30	2525	25.70	2453	36.10	2392	46.50	2338	56.91	2289	67.31	2245	77.71			
		1600	3026	17.49	2932	29.37	2860	41.26	2799	53.15	2745	65.04	2696	76.92					
A1-TL250	250	1000	2806	14.83	2684	26.16	2590	37.49	2510	48.82	2441	60.15	2377	71.48					
		1200	3426	17.80	3304	31.39	3210	44.99	3131	58.58	3061	72.18	2998	85.78					
		1400	4047	20.76	3924	36.62	3830	52.49	3751	68.35	3681	84.21							
		1600	4667	23.73	4545	41.86	4451	59.98	4371	78.11	4302	96.24							
A1-TL300	300	1000	6232	30.39	6048	54.79	5906	79.18	5787	103.57	5682	127.97	5586	152.36	5499	176.75	5418	201.15	
		1200	7568	36.47	7383	65.74	7242	95.02	7122	124.29	7017	153.56	6922	182.83	6835	212.10	6753	241.38	
		1400	8904	42.55	8719	76.70	8577	110.85	8458	145.00	8353	179.15	8258	213.30	8170	247.45	8089	281.61	
		1600	10239	48.63	10055	87.66	9913	126.69	9793	165.72	9688	204.75	9593	243.78					

Note : 1. The above ratings are based on inlet air temperature of 104D F, ambient pressure 1 kg/cm², specific gravity of 1.0.
 2. Performance testing as per BS 1571, part-II
 3. All specifications are subject to change without notice.

A1 DIRECT DRIVE 1HP BLOWER

A1, leading manufacturer of Roots Blowers in India, introduce 1HP Direct Drive Horizontal Twin-Lobe Roots Blowers. These blowers have been designed keeping the specific demands of the industry of compact & sturdy machine, reduced noise, minimal space requirements, least vibrations, longer bearing life & minimal maintenance, in mind.

Complete package units are shipped with all essential accessories & electric motor, ready to install on plug & play concept. These blowers are designed for continuous duty service & require minimal maintenance. A1 Horizontal Twin-Lobe Blowers come with built-in safety and monitoring equipment such as safety relief valve & pressure gauge.

These blowers provide 100% Oil Free Air & are extensively used in Sewage Treatment Plants, Effluent Treatment Plants, Aquaculture, Chemical Plants and Electroplating Plants.



FEATURES

Operation : A1 Twin-Lobe rotor enables smooth air output, with less pulsations. This results in a significant reduction of emitted sound.

A convenient sight glass makes it easy to check oil levels. Drain valve is mounted in the front of the unit, hence easily accessible.

Direct coupled drive resulting in increased drive efficiency, reduced noise and longer service life.



SPECIFICATIONS

Anti-friction Bearings

Rotary Oil Sealing

Orientation : Vertical Flow

Noise level : 60dB(A) From the distance of 1 mtr

Unit Weight : 52 Kg , (with 1 HP/ 1.5 HP, 2 Pole/ 4 Pole motor)



PERFORMANCE TABLE TWIN-LOBE 1HP DIRECT DRIVE PRESSURE DUTY BLOWER :-

MODEL	IN./OUT. SPEED		1000 MMWG		2000 MMWG		3000 MMWG		4000 MMWG		5000 MMWG		6000 MMWG		7000 MMWG	
	(MM)	(RPM)	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP	M3/HR	BHP
A1-315 1 HP/ 1000	25	940	25	0.54	24	0.60	22	0.69	19	0.81	16	0.95				
1.5HP/ 1440	25	1400	50	0.61	46	0.74	42	0.91	39	1.04	36	1.25				

Conversions: 1 M³ /Hr~0.588 CFM~16.67 LPM | 1000 mm WG~1.42 PSI~0.1 Kg/cm²

- Note :
- The above ratings are based on inlet air temperature of 104 D F, ambient pressure 1 kg/cm², specific gravity of 1.0.
 - Performance testing as per BS 1571, part-II
 - All specifications are subject to change without notice.

ACOUSTIC HOODS ENCLOSURES

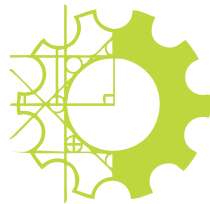
A1 Acoustic enclosures are made from high quality raw material with combination of rock wool / foams of different combinations to suit customer requirements. These enclosures are designed with CAD/CAM techniques for minimum insertion loss or for meeting ambient noise standards.



FEATURES :

Noise Control : Noise level reduction to the tune of 25-30% is achieved

Elimination of Civil Work : Enclosures are suitable for open installation and hence require no separate building or shed.



SPECIFICATION

Design: The sound reduction enclosures are specially designed to reduce noise pollution to suit the local environment. These are engineered to take care of air intake & outlet, resulting in a pleasing & attractive design.

Air Circulation : Sufficient cooling air inlet acoustic louvers and exhaust fans are provided in the enclosure for efficient air circulation avoiding derating of the machine.

Construction : The robust body work of sound reduction enclosures is due to its construction from preformed heavy gauge sheet steel section and its reinforcement with fabricated superstructure. Rubber gaskets are provided to all doors and external joints to resist weathering. The bolted superstructure provides easy removal of panels for maintenance or servicing of blowers.

Installation : The sound reduction enclosures are preassembled on a support frame and can be easily & quickly assembled at site.



A1 TWIN LOBE ROTARY AIR BLOWERS

A1 has introduced its new range of AQUA Series Twin Lobe Rotary Air Blowers (Roots Blowers) to meet the electroplating & aqua culture requirements which essentially demand 100% Oil Free Air. These blowers are totally dry machines where lubricating chambers are physically isolated from the main gas chamber ensuring 100 % Oil Free Air delivery. For ease of operation and maintenance, the inlet and discharge connections are modified with Suction Top and Discharge Horizontal reducing cumbersome piping. These blowers have a major advantage over centrifugal and regenerative blowers as they are more power efficient, can handle high flow rates and are insensitive to water depth variations. They deliver, practically, a constant flow rate irrespective of back pressures thereby maintaining dissolved oxygen levels. These machines are very versatile and can be run by electric motors or gensets. They have low maintenance and no internal adjustments resulting in prolonged trouble free operation.

Our technology is so flexible, we can custom manufacture "Special Air Blowers" by alloying and cross linking diverse designs to suit individual requirements and import substitutes.

STANDARD DESIGN AND CONSTRUCTION FEATURES

- ⊙ 100% oil free air delivery.
- ⊙ Factory engineered, factory guaranteed, superior product.
- ⊙ Alloy steel hardened and ground timing gears.
- ⊙ Anti-friction bearings.
- ⊙ Rotary oil sealings.
- ⊙ Rigid one piece CI casing and side plates.
- ⊙ Easy rotor timing setting.
- ⊙ Alloy steel toughened shafts ground to close tolerances.



MODEL	REC. MOTOR	FLOW RATE M3/HR	MAX. PR. MMWG	SPEED OF BLOWER (RPM)	MIN. REC. DISCH. LINE SIZE (mm NB)	ORIENTATION
A1 AQUA A	3 HP	160	2000	1200	80	
A1 AQUA B	5 HP	250	2000	1200	100	
A1 AQUA C	7.5 HP	540	2000	1200	100	
A1 AQUA D	10 HP	750	2000	1200	125	
A1 AQUA 6	15 HP	1200	2000	1200	150	

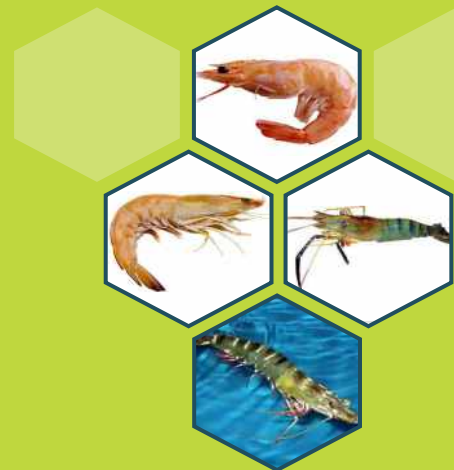
The above chart gives average displacement (FAD Conditions) & Maxm. Pressures for recommended motors. Actual flow rates may vary marginally depending upon discharge pressures.

PRECAUTION :-

- m Check the quality of all resources that are used in the farm.
- m Quality of water must be checked periodically.
- m Disinfection of vehicles accessing the farm.
- m Disinfection of equipment used in handling prawn or shrimps.
- m Hygiene of employee must be maintained in the plant.

For Fast Growth of Prawn or Shrimps :-

- m Proper aeration should be done so that proper BOD is maintained.
- m Clean the tank water periodically .
- m Maintain moderate temperature condition around 20 to 30 degree.
- m High quality feeds should be used.



APPLICATIONS

- Water Treatment Plants For back washing of filter/mixed beds.
- Effluent Treatment Plants For diffused aeration and agitation of effluent.
- Cement Plants For Blending, Aeration, Fluidization, Conveying.
- Aquaculture For maintaining the dissolved Oxygen level.
- Chemicals Plants For supplying of process air.
- Electroplating Plants For Oil Free air agitation of electrolyte.
- Paper Plants knife edge coating, Drying, Conveying, Vacuum pickup.
- Yarn Drying Vacuum/Pressure Drying of Yarn.
- Vacuum Moulding For creating quick vacuum.
- Polyester Chip Conveying & drying For transfer of polyester Chips and other similar materials.
- Bag Filters For reverse cleaning of Filter bags.
- Pneumatic Conveying Vacuum, Pressure and Combination Conveying of cereals cement, husk, baggage, granules, powders and other similar material.
- Regeneration of Dryers & Molecular Sieves.

OUR PRODUCT :

- ✦ Twin- Lobe Rotary Air Blowers
- ✦ Tri- Lobe Rotary Air Blowers
- ✦ Twin Lobe Rotary Gas Blowers
- ✦ Twin Lobe Aqua Culture Blowers
- ✦ Acoustic Hoods
- ✦ Mechanical Vacuum Boosters



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