



ROOTTECH

REDESIGNING EVOLUTION...

Marketed by : Actinic Aqua Engineers



PRODUCT CATALOGUE

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ROOTECH ROOTS BLOWER

ROOTECH Roots Blower/Pumps means reliability, availability and maintainability. ROOTECH is committed to supplying customers with reliable products manufactured with state of the art technologies. Production and inventory are being scheduled and controlled to ensure these units will be available when you need them. ROOTECH blowers are heavy duty rotary blowers designed with vertical and horizontal installation requirements. The compact study design is engineered for continuous service when operated in accordance with speed and pressure ratings. Antifriction bearings are used with roller bearings at the drive shaft to withstand v-belt pull.

A complete range of standard Air blowers is available for flow rates from 18 m³/hr to 10,000 m³/hr in single stage and parallel configuration for working pressure range up to 1 kg/cm². They are available as total package units, ready to install or as bare blower units for replacement.

THE ROOTS MECHANISM

The Roots mechanism is a valve less positive displacement device in which a pair of lobed rotors, interlocked and synchronized, rotate in opposite directions moving past each other and the stator wall with small clearance. Gas is trapped in front of each lobe and swept around the stator periphery from inlet to outlet. Very large displacement (above 20000 m³/h) and the mechanism has proven very effective in the pressure region from 10 to 10⁻³ mbar, but only when delivering against low pressure differentials. The attainable pressure ratio for this mechanism varies as a function of outlet pressure. A maximum pressure ratio of 25:1 is obtained at an outlet pressure of above 1 mbar. The fall off in pressure ratio either side of the peak can be attributed to conductance effects and to back-leakage of a proportion of the pumped gases. This latter effect increases with increasing outlet pressure. As a displacement machine and not a true compressor, the Roots mechanism is not suited to discharging to near atmospheric pressure (i.e with significant differential pressure). The low pressure ratio possible results in a large amount of work being done on is pumped gas, which leads to problems of over heating.

It is possible to obtain operation at higher pressure by providing a pressure relief valve / hydrokinetic drive/ Variable frequency drive such that a maximum pressure differential is not exceeded.

WHY ROOTECH?

Rootech Blowers are available as total package units ready to install or as bare blower units for replacement.

Standard designs and construction features include:

- ❖ Advance Manufacturing Process
- ❖ Sound of 80 dB+/-5 dB (A)
- ❖ High Speed Alloy, Gears used, which provides a wide rpm usage. (RPM goes up to 3000)
- ❖ Special Sealing guaranteed, 100% oil free Air Delivery
- ❖ FG-260, FG-200, Splash Oil Lubrication ensures longer bearing life
- ❖ Spheroidal iron 450/10 Casting as MOC
- ❖ Performance Testing as per IS 01217 Standards
- ❖ **Best Economics**
- ❖ Improved volumetric efficiency and reduced operating temperature
- ❖ Thrust control splashed oil lubricated spur timing gears
- ❖ Balanced precision machined twin lobe impellers
- ❖ Low noise level, less operating power required
- ❖ Connections in standard pipe sizes
- ❖ Rigid one-piece case iron casting
- ❖ Heavy duty anti friction bearings
- ❖ Superior Quality
- ❖ Very Low Noise & Vibration
- ❖ Prompt Pre & Post sale service
- ❖ Delivery redefined-Ex stock up to 600m³/hr
- ❖ **5000 blowers installation all over India**
- ❖ State of the art VNC & CNC Machining & Testing Facility (BS 1571 & ISO 1217 Standard)
- ❖ Application Engineering Support
- ❖ Experienced & Energetic Team
- ❖ Fast growing & dedicated company in the field of Roots Blower & Roots Pump Manufacturing

APPLICATIONS

Rootech Air Blowers can be extensively used in various industrial Applications & Process Plants for positive and negative conveying, boosting and exhausting of Air & Gases.

- WASTE WATER TREATMENT
 - For diffused Aeration & Agitation of Effluent/ Sewage.
 - For Backwashing (Air Scouring) of Filters, UF Membranes and Mixed Bed.
- AQUACULTURE
- AUTOMOBILES, POWER PLANTS
- CEMENT, POWDER, SUGAR, DISTILLERY

ROOTECH ROOTS BLOWERS PERFORMANCE TABLE

		Pressure Range (kg/cm ²)														
MODEL	SPEED	0.1		0.2		0.3		0.4		0.5		0.6		0.7		OPENING
	RPM	m ³ /hr	BKW	m ³ /hr	BKW	m ³ /hr	BKW	m ³ /hr	BKW	m ³ /hr	BKW	m ³ /hr	BKW	m ³ /hr	BKW	mm NB
BB33	1000	32	0.2	27	0.3	24	0.5	21	0.6	18	0.7					40
Roots Blower	1500	53	0.3	49	0.5	45	0.7	42	0.9	39	1.1					
BB-42M	1000	77	0.5	67	0.8	59	1.1	52	1.4	46	1.4	40	1.9	35	2.2	40
Roots Design	1200	98	0.7	87	1.0	79	1.3	72	1.7	66	2.0	61	2.3	56	2.7	
	1500	128	0.8	118	1.2	110	1.7	103	2.1	97	2.5	92	2.9	87	3.3	40
BB-42	1000	77	0.5	67	0.8	59	1.1	52	1.4	46	1.7	40	1.9	35	2.2	
Roots Design	1200	98	0.7	87	1.0	79	1.3	72	1.7	66	2.0	61	2.3	56	2.7	40
	1500	128	0.8	118	1.2	110	1.7	103	2.1	97	2.5	92	2.9	87	3.3	
BB-44	1000	112	0.7	97	1.1	85	1.5	75	1.9	66	2.3	59	2.7	51	3.1	65
Roots Design	1200	142	0.8	126	1.3	115	1.8	105	2.3	96	2.8	88	3.3	81	3.8	
	1500	187	1.1	171	1.7	159	2.3	149	2.9	141	3.5	133		125	4.7	80
BB-47	1000	208	1.2	182	2.0	162	2.7	145	3.4							
Roots Design	1200	262	1.5	236	2.4	216	3.2	199	4.1							80
	1500	344	1.8	318	2.9	298	4.1	281	5.2							
BB-53	1000	186	1.2	171	1.8	159	2.4	149	3.0	140	3.6	132		125	4.8	80
Roots Design	1200	231	1.4	216	2.1	204	2.9	194	3.6	185	4.3	177		170	5.8	
	1500	298	1.8	283	2.7	271	3.6	261	4.5	252	5.4	244		237	7.2	80
BB-55	1000	233	1.3	210	2.1	193	2.9	178	3.7	165	4.4	154	5.2	143	6.0	
Roots Design	1200	291	1.6	268	2.5	251	3.5	236	4.4	223	5.3	211	6.3	200	7.2	80
	1500	377	2.0	355	3.1	337	4.3	322	5.5	309	7.2	298	7.8	287	9.0	
BB-57	1000	326	1.6	295	2.7	270	3.8	250	4.9	231	6.0	215	7.1	200	8.2	80
Roots Design	1200	407	1.9	375	3.3	351	4.6	330	5.9	312	7.2	296	8.5	281	9.9	
	1500	528	2.4	496	4.1	472	5.7	451	7.4	433	9.0	417	10.7	402	12.3	80
BB-59	1000	446	2.2	404	3.7	372	5.2	345	6.7							
Roots Design	1200	556	2.7	514	4.5	482	6.3	455	8.1							80
	1500	720	3.4	678	5.6	646	7.8	619	10.1							
BB-65	1000	233	1.3	210	2.1	193	2.9	178	3.7	165	4.4	154	5.2	143	6.0	80
Roots Design	1200	291	1.6	268	2.5	251	3.7	236	4.4	223	5.9	211	7.1	200	5.8	
	1500	377	2.0	355	3.1	337	4.3	322	5.5	309	7.2	298	7.8	287	7.2	125
BB-67	1000	453	2.3	409	3.8	375	5.3	346	6.8	321	7.4	298		277		
Roots Design	1200	565	2.7	520	4.6	486	6.4	458	8.2	433	10.0	410	11.9	389		125
	1500	732	3.4	688	5.7	654	8.0	626	10.3	601	12.6	578	14.8	557	17.1	
BB-610	1000	605	2.8	546	4.8	501	6.9	462	8.9	429	10.9	398	13.0	370	15.0	150
Roots Design	1200	754	3.3	695	5.8	650	8.2	612	10.7	578	13.1	548	15.6	520	18.0	
	1500	979	4.2	920	7.2	874	10.3	836	13.3	803	16.4	772	19.5	744	22.5	150
BB-615	1000	919	3.9	836	6.9	772	10.0	719	13.0							
Roots Design	1200	1142	4.6	1060	8.3	996	12.0	942	15.6							150
	1500	1478	5.8	1395	10.4	1332	14.9	1278	19.5							
BB-76	1000	601	2.8	565	4.7	538	6.6	515	8.5	494	10.3	476	12.2	459	14.1	100
Roots Design	1200	738	3.4	702	5.7	675	7.9	652	10.1	632	12.4	613	14.6	596	16.9	
	1500	944	4.3	908	7.1	881	9.9	858	12.7	838	15.5	819	18.3	802	21.1	125
BB-78	1000	601	2.8	565	4.7	538	6.6	515	8.5	494	10.3	476	12.2	459	14.1	
Roots Design	1200	738	3.4	702	5.7	675	7.9	652	10.1	632	12.4	613	14.6	596	16.9	125
	1500	944	4.3	908	7.1	881	9.9	858	12.7	838	15.5	819	18.3	802	21.1	
BB-710	1000	997	4.1	936	7.2	889	10.3	850	13.4	815	16.6	783	19.7	755	22.8	150
Roots Design	1200	1226	4.9	1165	8.6	1118	12.4	1078	16.1	1044	19.9	1012	23.6	983	27.4	
	1500	1569	6.1	1508	10.8	1461	15.5	1422	20.2	1387	24.8	1355	29.5	1327	34.2	150
BB-713	1000	1292	5.0	1211	9.1	1149	13.1	1097	17.2	1051	21.2	1009	25.3	971	29.3	
Roots Design	1200	1589	6.0	1508	10.9	1446	15.7	1394	20.6	1348	25.5	1306	30.3	1268	35.2	150
	1500	2035	7.5	1954	13.6	1892	19.7	1840	25.8	1794	31.8	1752	37.9	1714	44.0	
BB-717	1000	1691	6.6	1585	11.9	1504	17.2	1436	22.5							150
Roots Design	1200	2080	7.9	1974	14.2	1893	20.6	1825	27.0							
	1500	2664	9.9	2558	17.8	2477	25.8	2409	33.7							100
BB-89	900	955	5.6	908	8.5	872	9.0	842	11.9	815	17.2	791	20.1	769	23.1	
Roots Design	1100	1192	6.8	1145	10.4	1109	11.0	1079	14.6	1052	21.1	1028	24.6	1006	28.2	100
	1500	1667	9.3	1620	14.2	1584	15.0	1553	19.8	1527	28.7	1503	33.6	1480	38.4	
BB-812	700	959	5.1	897	8.1	849	11.2	808	14.2	772	17.2	740	20.2	710	23.3	125
Roots Design	900	1277	6.6	1214	10.5	1166	14.4	1125	18.2	1090	22.1	1057	26.0	1028	29.9	
	1500	2228	11.0	2166	17.4	2118	23.9	2077	30.4	2041	36.9	2009	43.4	1980	49.9	200
BB-816	700	1279	6.1	1196	10.2	1131	14.2	1077	18.2	1030	22.3	987	26.3			
Roots Design	900	1702	7.9	1619	13.1	1554	18.2	1500	23.4	1453	28.6	1410	33.8			200
	1500	2971	13.1	2888	21.8	2824	30.4	2770	39.1	2722	47.7	2679	56.4			
BB-820	700	1599	7.1	1494	12.2	1414	17.2	1347	22.3							200
Roots Design	900	2128	9.2	2023	15.7	1943	22.1	1876	28.6							
	150	3714	15.3	3610	26.1	3530	36.9	3462	47.7							

All specifications are subject to change without notice
 (Conversions : 1m³/hr, 0.588 cfm, 0.1 kg/cm² = 1000 mmwg)

Marketed by : Actinic Aqua Engineers

Also Dealing in :
Air Diffusers, Centrifuge, Filter Press, Evaporators,
Level Indicator / Controllers, Ozonator etc.



ACTINIC
CREATING AN INNOVATION CULTURE...

Actinic Aqua Engineers

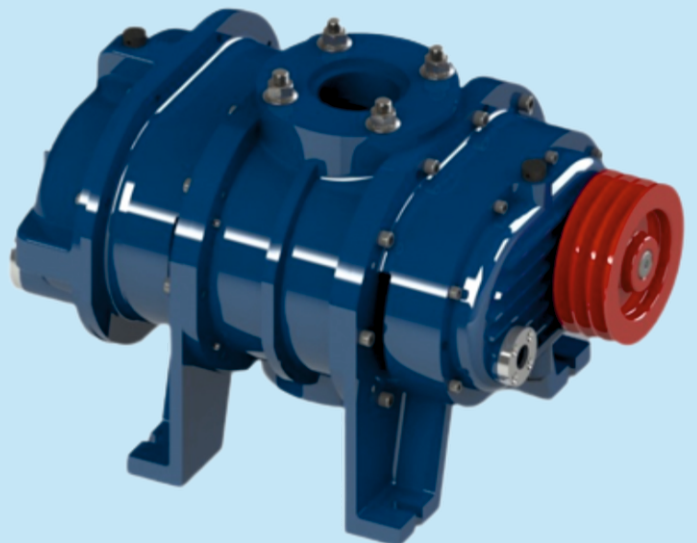
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ISO 9001 : 2015 Certified.



(Manufactured by : Rootech Services)