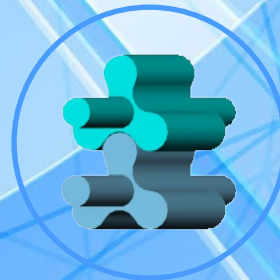
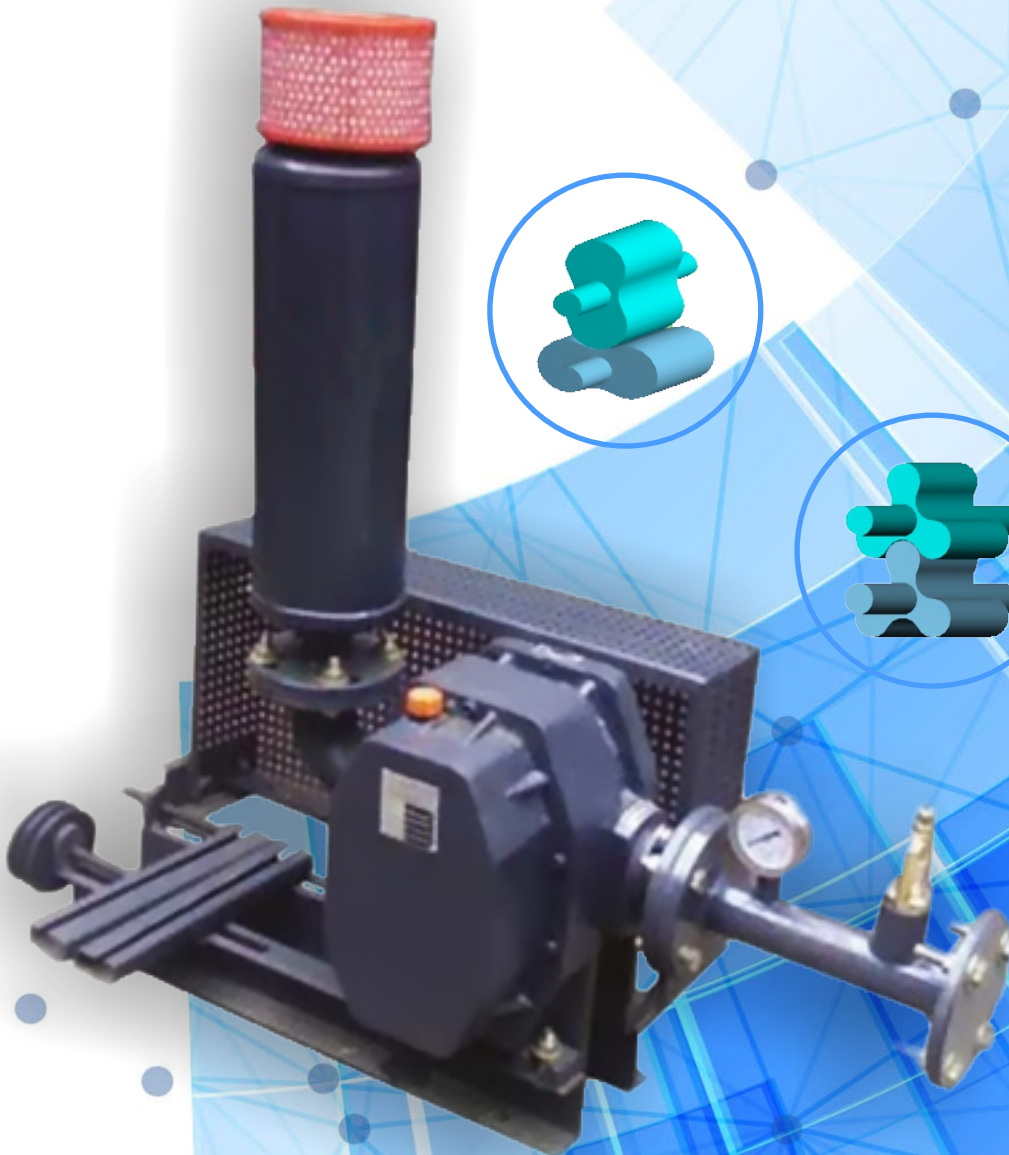




**ROOTECH**  
REDESIGNING EVOLUTION....

# **ROOTECH SERVICES**



**PRODUCT  
CATALOGUE**



# ROOTECH ROOTS BLOWERS

## (TWIN LOBE TYPE 100% OIL FREE)



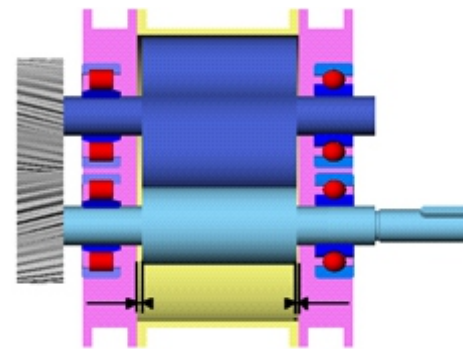
**ROOTECH** Roots Blower/Pumps means reliability, availability and maintainability. “**ROOTECH**” is committed to supplying our customers with reliable products manufactured with state of the art technologies. Production and inventory are being scheduled and controlled to ensure these units will be available when you need them.

**ROOTECH** blowers are heavy duty rotary blowers designed with vertical and horizontal installation requirements. The compact sturdy 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 with stand v-belt pull.

A complete range of standard Air blowers is available for flow rates from 25 m<sup>3</sup>/hr to 10,000 m<sup>3</sup>/hr in single stage and parallel configuration for working pressure range up to 1 kg/cm<sup>2</sup>. They are available as total package units , ready to install or as bare blower units for replacement.

### DESIGN AND CONSTRUCTION FEATURES

- ▶ 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 cast iron casting
- ▶ Design for gas services
- ▶ Anti friction bearings



(ROOTECH MECHANICAL BOOSTER)

### 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 m<sup>3</sup>/h) and the mechanism has proven very effective in the pressure region from 10 to 10<sup>-3</sup> mbar, but only when delivering against low pressure differentials.

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 the pumped gas, which leads to problems of overheating.

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 ROOTS TWIN LOBE TYPE BLOWERS?

- 01.) Superior Quality
- 02.) Very Low Noise & Vibration
- 03.) Prompt Pre & post sale service
- 04.) Capable to provide any make blower maintenance support
- 05.) Economical Price
- 06.) Two years onsite warranty
- 07.) Delivery redefined-Ex stock up to 600 m<sup>3</sup>/hr
- 08.) 4000 blower's installation all over India
- 09.) State of the art VMC & CNC Machining & Testing Facility (BS1571 & ISO1217Standard)
- 10.) Application Engineering Support
- 11.) Experienced & Energetic Team
- 12.) Fast growing & dedicated company in the field of Roots Blower & Roots Pump Manufacturing

**Rootech Services** specialises in the manufacture of industrial Roots Twin lobe type blowers (Rootech Roots Blowers), based on the renowned Roots design, which have been in production for over 10 years and have a reputation for reliability and long service life.

Our engineers have a combined experience of over 50 years in the manufacture of Roots type blowers, most of whom worked originally at Busch, Edwards, Everest, SMT & KAY who then became Rootech Services in Haryana & New Delhi.

There's our expert staff who knows about Roots type blowers very well and they are pleased to discuss your requirements and assist you with product selection.

In addition to the manufacture of blowers, we carry out specialist sub-contract machining on large cast components, including CNC, VMC, planing, boring and grinding.





ROOTECH ROOTS BLOWERS PERFORMANCE TABLE																	
		PRESSURE RANGE (kg/cm2)															
MODEL	SPEED	0.1		0.2		0.3		0.4		0.5		0.6		0.7		OPENING	STANDARD
	RPM	m/hr	BKW	m/hr	BKW	m/hr	BKW	m/hr	BKW	m/hr	BKW	m/hr	BKW	m/hr	BKW	mm NB	ORIENTATION
EVB01	1000	32	0.2	27	0.3	24	0.5	21	0.6	18	0.7					40	→
Vane Design	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	1.7	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		
BB-42	1000	77	0.5	67	0.8	59	1.1	52	1.4	46	1.7	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		
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	4.1	125	4.7		
BB-47	1000	208	1.2	182	2.0	162	2.7	145	3.4							80	→
Roots Design	1200	262	1.5	236	2.4	216	3.2	199	4.1								
	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	4.2	125	4.8	80	→
Roots Design	1200	231	1.4	216	2.1	204	2.9	194	3.6	185	4.3	177	5.1	170	5.8		
	1500	298	1.8	283	2.7	271	3.6	261	4.5	252	5.4	244	6.3	237	7.2		
BB-55	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	3.5	236	4.4	223	5.3	211	6.3	200	7.2		
	1500	377	2.0	355	3.1	337	4.3	322	5.5	309	6.7	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		
BB-59	1000	446	2.2	404	3.7	372	5.2	345	6.7							80	→
Roots Design	1200	556	2.7	514	4.5	482	6.3	455	8.1								
	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	3.5	236	4.4	223	5.3	211	6.3	200	5.8		
	1500	377	2.0	355	3.1	337	4.3	322	5.5	309	6.7	298	7.8	287	7.2		
BB-67	1000	453	2.3	409	3.8	375	5.3	346	6.8	321	8.4	298	9.9	277	11.4	125	↓
Roots Design	1200	565	2.7	520	4.6	486	6.4	458	8.2	433	10.0	410	11.9	389	13.7		
	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		
BB-615	1000	919	3.9	836	6.9	772	10.0	719	13.0							150	↓
Roots Design	1200	1142	4.6	1060	8.3	996	12.0	942	15.6								
	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		
BB-78	1000	601	2.8	565	4.7	538	6.6	515	8.5	494	10.3	476	12.2	459	14.1	125	↓
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		
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		
BB-713	1000	1292	5.0	1211	9.1	1149	13.1	1097	17.2	1051	21.2	1009	25.3	971	29.3	150	↓
Roots Design	1200	1589	6.0	1508	10.9	1446	15.7	1394	20.6	1348	25.5	1306	30.3	1268	35.2		
	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								
BB-89	900	955	5.6	908	8.5	872	9.0	842	11.9	815	17.2	791	20.1	769	23.1	100	↓
Roots Design	1100	1192	6.8	1145	10.4	1109	11.0	1079	14.6	1052	21.1	1028	24.6	1006	28.2		
	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		
BB-816	700	1279	6.1	1196	10.2	1131	14.2	1077	18.2	1030	22.3	987	26.3			200	↓
Roots Design	900	1702	7.9	1619	13.1	1554	18.2	1500	23.4	1453	28.6	1410	33.8				
	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								
	1500	3714	15.3	3610	26.1	3530	36.9	3462	47.7								
BB-1012	700	1640	7.8	1533	13.0	1451	18.1	1381	23.3	1320	28.5	1265	33.6	1265	33.6	150	↓
Roots Design	900	2182	10.0	2075	16.7	1993	23.3	1924	30.0	1863	36.6	1807	43.3	1807	43.3		
	1500	3809	16.7	3702	27.8	3620	38.8	3551	49.9	3490	61.0	3435	72.1	3435	72.1		
BB-1016	700	2203	9.6	2060	16.5	1949	23.5	1856	30.4	1774	37.4	1700	44.3	1700	44.3	200	↓
Roots Design	900	2932	12.3	2788	21.2	2678	30.2	2585	39.1	2503	48.0	2429	57.0	2429	57.0		
	1500	5119	20.5	4975	35.4	4864	50.3	4771	65.2	4689	80.1	4615	95.0	4615	95.0		
BB-1020	700	2818	11.5	2634	20.4	<											



# SERVICE AND REPAIRS

We provide a full repair and reconditioning service for Roots type blowers, including:

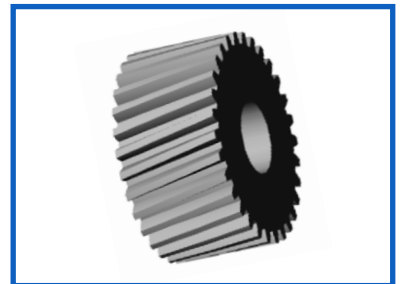
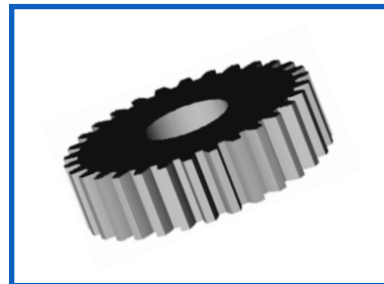
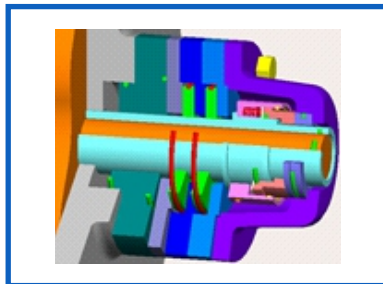
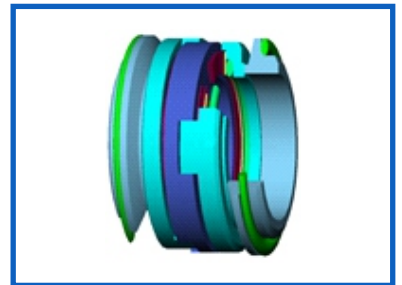
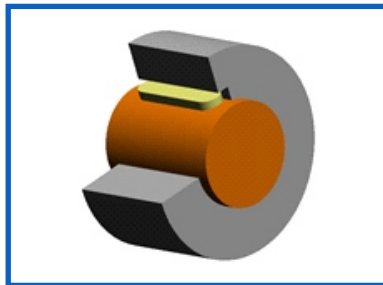
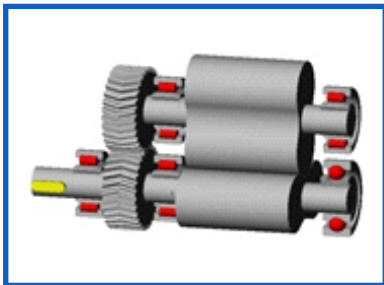
- ▶ Bearing and seal replacement
- ▶ Rotor repair and re-machining
- ▶ Gears
- ▶ Casings

All our work carries 18 month warranty.

Spares in stock and to order

We carry replacement parts for Roots Blowers and vacuum boosters blowers, including

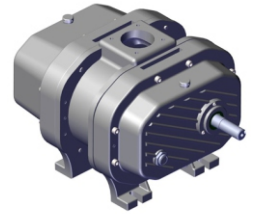
- ▶ Impellers
- ▶ Gears
- ▶ Bearings
- ▶ Casings





# ANNUAL ROUTINE & COMPREHENSIVE MAINTENANCE CONTRACT

- 01.) Routine / Proactive Checkup
- 02.) Safety checks during health checkup
- 03.) Training for operators during health checkup on operation & maintenance of utilities
- 04.) Inventor planning and guidance in procurement of genuine spare parts
- 05.) Complete guidance for overhauling of equipment
- 06.) Quick response to breakdown calls, if any



## BENEFITS TO CUSTOMER

- 01.) Improved overall equipment performance
- 02.) Reduced unscheduled breakdown, thereby improving overall availability of equipments
- 03.) Safe & trouble free operation
- 04.) Regular monitoring of utilities by qualified and experienced representatives
- 05.) Periodic reporting which includes root cause analysis of problems
- 06.) Analysis of reports and data by experienced back -end team and recommendation of improvement.





# APPLICATION OF ROOTECH ROOTS BLOWERS

## FOR ROOTECH AIR & GAS BLOWERS

**Milling & Baking :** Blending & Conveying

**Resin & Plastic :** Processing & Conveying

**Power Generation :** Fly Ash Conveying & Aeration

**Chemical :** Vacuum Processing & Conveying

**Wastewater :** Aeration & Backwashing

**Pulp & Paper :** Chip Conveying, & Process Vacuum

**Cement & Lime :** Fluidization & Conveying

**Oil & Gas :** Gas Collection & Sparging

**Soil Remediation :** Vacuum Extraction & Sparging

**Dry Bulk Handling :** Trailer Unloading & Extraction

**Glass :** Burner Air & Mould Cooling

**Vacuum Loader :** For emptying Septic Tanks

**Aquaculture :** Aeration for fish farm

**Electroplating :** Aeration of plating tanks

## FOR ROOTECH MECHANICAL VACUUM BOOSTERS (ROOTS PUMP)

### **Industrial Processing:**

Filling Automotive Fluid Systems, Impregnating Windings, Drying Textiles, Sterilizers Evacuating Refrigeration Systems, Holding & Chucking, Central Systems for Electronic Assembly, Light Bulbs Manufacture, TV Tubes Manufacture

### **Chemical & Pharmaceutical:**

Degassers, Vacuum Distillation, Vaporators, Crystallizers, Vacuum Filters, Vacuum Dryers.

### **Vacuum Furnace Industry:**

Heat Treating, Hardening, Melting, Optica Coating, Metallizing, Degreasers

### **Food Processing Industry:**

Vacuum Packaging Fresh & Cooked Meats, Freeze Drying, Vegetable Oil Processing, Sugar Refining, Poultry Evisceration, Vacuum Cooling

### **Semiconductor Industry & Solar Application:**

Crystal Growing, PCVDIon, Implantation, Sputtering, Plasma Deposition Si wafer solar cells, Thin Film Solar cells, Si/Ge wafer ingot, Solar Metrology & Inspection

### **Electrical Industry:**

Transformer Drying & Service, Transformer Oil Purifiers, Vapor Phase Drying





**ROOTECH**  
REDESIGNING EVOLUTION....

### **ROOTECH SERVICES (HARYANA)**

📍 Computer Palace, New Nazafgarh Road, Near Shiv Chowk,  
Bahadurgarh-Haryana-124507

### **ROOTECH SERVICES (DELHI)**

📍 Plot NO:110/7, Near Vardhman Dharam Kanta (Firni Road)  
Mundka, Delhi-110041

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