

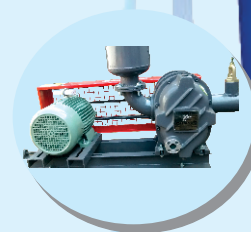


AIRVAK

# "AIRVAK" Leaders in Blower & Vacuum Technology



- Twin / Tri Lobe Air Blower
- Twin / Tri Lobe Water Cooled Blower
- Twin / Tri Lobe Gas Blower
- Twin / Tri Lobe Vacuum Blower
- Twin / Tri Lobe Aquaculture Blower
- Acoustics Enclosure
- Mechanical Vacuum Booster
- Package Blower Systems



## AIRVAK BLOWERS PVT LTD

Manufacturing of Twin Lobe Rotary Air Blowers, Water cooled Blowers, Gas Blowers, Vacuum Blowers, Vacuum Boosters and acoustic enclosures. The company has consistently strengthened its manufacturing base, producing a wide range of products. These wide-ranging products and the technical

expertise gained over the years have enabled AIRVAK to serve various segments of industry such as water treatment plants, effluent treatment plants, cement plants, aquaculture Plant ,chemical & pharmaceutical plants, food processing units, waste oil re-refining units, paper plants, vacuum plants and systems and pneumatic conveying systems.

The blowers find use in applications requiring medium pressure air such as aeration in sewage treatment and effluent treatment plants, filter backwash, agitation of electrolyte, pneumatic conveying, regeneration of dryers & molecular sieves, maintaining BOD of water etc.

The mechanical vacuum booster developed by the company, finds use in chemical and pharmaceutical processes, bulb and tube light production, waste oil re-refining, roll and object metallizing, vegetable oil deodorization, solvent recovery, vacuum drying, tray drying, vacuum distillation, thin film deposition, molecular distillation, vacuum furnace, transformer oil dehumidification, chemical laser, evaporative cooling etc.

We are concentrating more on application engineering and in helping our customer's save on their processes. This innovation has not only compensated on our general sales but even helped us to outperform on our targets. Our application oriented R&D has made it possible to cover wider areas of application, offering cost effective and energy efficient solutions thus creating larger market demand for our product.

A focus on innovative design and high quality machined parts has earned AIRVAK a reputation for excellent workmanship amongst its users.

AIRVAK has offered its customers quality, cost-effective machines necessary to meet the changing technology. Our commitment to total quality in both our products and services is the foundation upon which our future business is based.

Design & manufacture of mechanical vacuum boosters for replacement of steam jet ejectors.

We know that performance of the OEM's design ultimately depends on the quality and dependability of its components. That's why so many manufacturers of Water Treatment Plants, Effluent Treatment Plants, Cement Plants, Aquaculture Farms, Chemical Plants, Paper Plants, Vacuum Plants and Systems, and Pneumatic Conveying Systems have entrusted their reputation to Airvak. Our broad product line of Roots Blowers/Compressors (Bi-lobe & Tri-lobe) (Air/Gas Duty), Mechanical Vacuum Boosters & Acoustic Hoods consists of standard and custom models that fall into major product group.

The hallmark of our commitment to quality is our International Standards Organization (ISO) registration. This ensures that our OEM customers receive products of highest quality.

AIRVAK is Manufacturing all Parts on Imported CNC Machines which Gives High quality with close Tolerances to make a super quality Machines. We have Automatic Digital Dynamical Balancing Machines for Balancing of Rotors to Make Long life of Bearings.

## AIRVAK TWIN LOBE COMPRESSORS/ROOTS BLOWERS

A complete range of Standard Blowers is available for flow rates from 10 m<sup>3</sup>/hr to 10,000 m<sup>3</sup>/hr in single stage and upto any capacity in parallel configurations, for working pressures upto 1 kg/cm<sup>2</sup>. They are available as total package units, ready to install or as bare blower units for replacement.

**AIR COOLED BLOWERS:** Air Cooled blowers are suitable from pressure of 0.1kg/cm<sup>2</sup> to 0.7kg/cm<sup>2</sup>. AIRVAK Blowers have a unique design where the Oil chambers is physically isolated with main chamber with air gap Between hence it is more effective in air cooled construction for high pressure also. These are available in different orientation flow and with Different MOC to suit customers specific requirements.

**WATER COOLED BLOWERS:** Water Cooled blowers are suitable from pressure of 0.6kg/cm<sup>2</sup> to 1 kg/cm<sup>2</sup>. These are similar to air cooled type in construction and performance except in the change of cooling arrangement. In water cooled blowers end plates have water jackets around them, where water is circulated, which dissipates the heat of compression generated and keeps the internals cool. AIRVAK Blowers have a unique design of single inlet and single outlet for cooling water and require no cumbersome water pipe connections externally. Internal circulation of water to various areas is through inbuilt channels. This unique design makes the operations very simple, yet very effective. The cooling water inlet is at the bottom so that the water rises up against gravity, reaching all the corners before it comes out from the outlet. The flow rates of cooling water are low.

**GAS BLOWERS:** Gas blowers are used for boosting of Bio Gas, Nitrogen, Flue gas, Co<sub>2</sub> gas and many more. These blowers are suitable for pressure from 0.1kg/cm<sup>2</sup> to 1 kg/cm<sup>2</sup>. BIOGAS BLOWERS generally used in Biogas lines to boost the gas pressures to meet the burner input demand. These are generally vertical in construction, that is suction top and discharge bottom, so as to prevent any accumulation of corrosive matter inside the casing. Since they operate in closed loop, suction and discharge silencers are generally not required. Special material of construction, lubrication and sealing arrangements make them ideal choice for Biogas applications.

**VACUUM BLOWERS:** Vacuum blowers are used for negative pressure up to 0.5kg/cm<sup>2</sup>.

**AQUA BLOWERS:** These blowers are mainly used in hatcheries, aquaculture and electroplating. This blowers are available absolutely Oil Free in Air Cooled construction.

**ACOUSTIC ENCLOSURES:** AIRVAK Acoustic enclosure are used for reduction of sound .

**VACUUM BOOSTER:** Used for High Vacuum Applications.

## 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.

Horizontal and vertical configurations available.

Easy rotor timing setting.

No vanes, valves or rings to wear.

Large inlet and outlet connections for minimum loss.

Improved volumetric efficiency and reduced operating temperatures.

Alloy steel toughened shafts ground to close tolerances.

## APPLICATIONS

**Water Treatment Plants** For backwashing of filter/mixed beds.

**Effluent/sewage Treatment Plants** For diffused aeration and agitation of effluent/sewage.

**Cement Plants** For Blending, Aeration, Fluidization, Conveying.

**Aquaculture** For maintaining the dissolved Oxygen level.

**Chemical 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.

**Polyster Chip Conveying & drying** For transfer of polyster Chips and other similar materials.

**Bag Filters** For reverse cleaning of Filter bags.

**Pneumatic Conveying** Vacuum, Pressure and Combination Conveying of cereals, cement, husk, baggase, granules, powders and other similar material.

**Regeneration of Dryers & Molecular Sieves.**



# ROOTS BLOWERS

## Direct Drive Roots Blower



### AIRVAK DIRECT DRIVE ROOTS BLOWER

*Our  
technology  
is so  
flexible,  
we can  
custom  
manufacture*

AIRVAK, leading manufacturer of Roots Blowers in India, introduces the all new Direct drive 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. Airvak blowers are produced on latest state-of-art CNC machines ensuring quality product. 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. Airvak Direct drive Blowers come with built-in safety & monitoring equipment such as NRV, Filter safety relief valve & pressure gauge. Direct Drive technology means blowers consume less power due to no transmission losses.

#### SALIENT FEATURES

- 100% oil free air delivery.
- Factory engineered, factory guaranteed, superior product.
- Alloy steel hardened and ground timing gears.
- Anti-friction bearings.
- Direct coupled drive.
- Rigid one piece CI casing and side plates.
- Improved volumetric efficiency and reduced operating temperatures.
- Easy rotor timing setting.
- No vanes, valves or rings to wear.
- Alloy steel toughened shafts ground to close tolerances.
- Larger inlet & outlet connections for minimal loss.

MODEL	SPEED	1000 MMWG		2000 MMWG		3000 MMWG		4000 MMWG		STANDARD
365 AC	RPM	M <sup>3</sup> /hr	HP	M <sup>3</sup> /hr	HP	M <sup>3</sup> /hr	HP	M <sup>3</sup> /hr	HP	ORIENTATION
1.5 HP MOTOR	935	42	0.6	30	0.70	23	0.96	16	1.2	Verticle
2 HP MOTOR	1415	77	0.75	67	1.1	60	1.50	52	1.65	

**BLOWER IS SUITABLE FOR 18 M3/HR AT THE PRESSURE OF 0.25KG/CM2 WITH 1 HP MOTOR ALSO.**

#### SPECIFICATION

- Noise Level - < 80 db (A) [Subject to Load conditions.
- Variable Frequency Drive (VFD) can be provided for speed / capacity regulation.



#### LONGERLIFE

*Longer Life - The Direct power drives means no “bendin load” and results in longer bearing and unit  
Built-in monitoring & safety equipment such as pressure gauge & safety relief valve*

Conversions: 1 Cubic Mtr/Hour = 0.588 CFM; 1000 mmWG = 1.42 PSIG = 0.1 Kg/Sq cm; 1HP = 0.746 KW



# PERFORMANCE CHART

# WATER COOLED SERIES

MODEL	SPEED	5000 MMWG		6000 MMWG		7000 MMWG		8000 MMWG		9000 MMWG		10000 MMWG		COOLING WATER	OPENING mm NB	STANDARD ORIENTATION
	(RPM)	m3 / hr	BHP	m3 / hr	BHP	m3 / hr	BHP	m3 / hr	BHP	m3 / hr	BHP	m3 / hr	BHP			
53WC	960	132	4.6	124	5.4	116	6.2	110	7	103	7.8	97	8.6	4-5 LPM	80	VF
	1200	186	5.8	178	6.8	170	7.8	163	8.7	157	9.7	151	10.7			
	1500	253	7.3	245	8.5	238	9.7	231	10.9	224	12.2	218	13.4			
55WC	960	154	5.7	142	6.7	132	7.7	122	8.8	112	9.8	103	10.8	4-5 LPM	80	VF
	1200	224	7.2	212	8.4	201	9.7	191	10.9	181	12.2					
	1440	293	8.6	281	10.1	270	11.6	260	13.1							
65WC	1000	210	7.8	194	9.2	179	10.5	166	11.9	153	13.3	141	14.6	5-6 LPM	80	VF
	1300	322	10.2	306	11.9	292	13.7	278	15.5	266	17.2	254	19			
	1600	434	12.5	418	14.7	404	16.9	390	19	378	21.2	366	23.4			
67WC	1000	322	11.2	299	13.3	278	15.3	258	17.3	240	19.4	223	21.4	5-6 LPM	100	VF
	1300	490	14.6	467	17.2	446	19.9	427	22.5	408	25.2	391	27.9			
	1600	658	17.9	635	21.2	615	24.5	595	27.8	577	31	559	34.3			
610WC	1000	430	14.7	400	17.4	371	20.1	345	22.8	321	25.6	298	28.3	6-8 LPM	125	VF
	1300	655	19	624	22.6	596	26.1	570	29.7	546	33.2					
	1500	805	22	774	26.1	746	30.2	720	34.3							
78WC	1000	649	18	623	21.4	600	24.7	578	28	557	31.4	537	34.7	6-8 LPM	125	VF
	1300	924	23.4	898	27.8	875	32.1	853	36.5	832	40.8	813	45.2			
	1600	1200	28.8	1174	34.2	1150	39.5	1128	44.9	1108	50.2	1088	55.6			
710WC	1000	817	22.2	786	26.4	757	30.6	730	34.7	704	38.9	680	43.1	8-10 LPM	125	VF
	1300	1161	28.9	1130	34.3	1101	39.7	1074	45.2	1049	50.6	1025	56			
	1600	1506	35.5	1474	42.2	1445	48.9	1418	55.6							
812WC	1000	1252	33	1219	38.8	1190	44.6	1162	50.4	1136	56.2	1111	61.9	10-12 LPM	150	VF
	1200	1570	39.6	1538	46.5	1508	53.5	1480	60.4	1454	67.4	1430	74.3			
	1440	1952	47.5	1919	55.8	1890	64.2	1862	72.5							
1012WC	1000	2140	54.5	2084	64.4	2034	74.3	1986	84.2	1942	94.2	1900	104.1	10-12 LPM	200	VF
	1200	2684	65.4	2628	77.3	2578	89.2	2530	101.1	2486	113	2444	124.9			
	1440	3336	78.5	3281	92.8	3230	107.1	3183	121.3	3138	135.6	3096	149.8			
1016WC	1000	2875	71.6	2801	84.9	2733	98.2	2669	111.5	2609	124.8	2553	138.1	16-18 LPM	250	VF
	1200	3606	85.9	3532	101.8	3464	117.8	3400	133.8	3340	149.8	3284	165.7			
	1440	4483	103	4409	122.2	4341	141.4	4277	160.5							

Conversion: 1m3/hr = 0.588 CFM; 1000 MMWG = 1.42 PSIG = 0.1 Kg/cm2 = 100 Mbar  
 Avg. Line Friction losses of 0.5 PSI per 100 ft length of Pipe.  
 Estimated rise of discharge air temperature may be taken as 12°C per 0.1 Kg/cm2 pressure.

www.airvakblowers.com



# PERFORMANCE CHART

# VACUUM BLOWERS

Model No.	SPEED (RPM)	0.1Kg/cm2		0.2Kg/cm2		0.3Kg/cm2		0.4Kg/cm2		0.5Kg/cm2		OPENING MM NB	Standard Orientation
		M3/hr	BHP	M3/hr	BHP	M3/hr	BHP	M3/hr	BHP	M3/hr	BHP		
M42VAC	800	57	0.6	46	0.9	38	1.2	31	1.5	25	1.8	40	HF
	1100	88	0.8	77	1.2	69	1.6	62	2.0	56	2.5		
	1400	118	1.3	108	1.6	100	2.1	93	2.6				
42VAC	1000	77	0.7	67	1.1	59	1.5	52	1.9	46	2.2	40	HF
	1200	98	0.9	87	1.3	79	1.8	72	2.2	66	2.7		
	1500	129	1.1	118	1.7	110	2.2	103	2.8	97	3.4		
44VAC	900	97	0.9	82	1.3	70	1.8	60	2.3	81	2.8	80	HF
	1200	142	1.1	127	1.8	115	2.4	105	3.1	96	3.8		
	1500	187	1.4	172	2.2	160	3.1	150	3.9	141	4.7		
47VAC	900	135	1.12	115	1.8	100	1.8	85	3.11	75		80	HF
	1200	196	1.5	176	2.4	160	2.4	148	4.2	136			
	1500	257	1.9	237	3.0	222	3.0	208	5.2	197			
53VAC	900	165	1.4	150	2.2	137	2.9	127	3.6	118	4.4	80	VF
	1200	232	1.9	216	2.9	205	3.8	194	4.8	185	5.8		
	1500	300	2.4	283	3.6	272	4.8	262	6.0	253	7.3		
55VAC	900	205	1.6	182	2.5	165	3.5	150	4.4	137	5.4	80	VF
	1200	291	2.1	269	3.4	251	4.6	236	5.9	223	7.2		
	1500	378	2.6	355	4.2	338	5.8	323	7.4	310	9.0		
57VAC	900	287	2.0	255	3.3	230	4.6	210	5.9	192	7.3	100	RA
	1200	408	2.6	376	4.4	350	6.1	331	7.9	313	9.7		
	1500	530	3.3	497	5.5	473	7.7	452	9.9	434	12.1		
59VAC	900	402	2.7	364	4.5	335	6.3	310	8.0			100	VF
	1200	567	3.6	529	6.0	500	8.4	475	10.8				
	1500	731	4.5	693	7.5	664	10.5						
65VAC	900	263	2.1	232	3.4	209	4.6	190	5.8	172	7.0	80	VF
	1200	375	2.8	345	4.5	321	6.1	302	7.7	284	9.4		
	1500	487	3.5	457	5.6	433	7.6	414	9.7	396	11.7		
67VAC	900	398	2.7	353	4.6	319	6.4	291	8.3	266	10.1	100	VF
	1200	566	3.6	521	6.1	488	8.6	459	11.0	434	13.5		
	1500	734	4.6	690	7.6	656	10.7	627	13.8	602	16.8		
610VAC	900	531	3.4	472	5.8	427	8.3	388	10.7	355	13.2	125	VF
	1200	756	4.5	697	7.8	651	11.0	613	14.3	579	17.6		
	1500	980	5.6	921	9.7	876	13.8	838	17.9	804	22.0		
615VAC	900	808	4.7	725	8.3	662	12.0	604	15.7			150	VF
	1200	1144	6.2	1061	11.1	998	16.0	944	20.9				
	1500	1480	7.8	1400	13.9	1334	20.0	1280	26.2				
78VAC	900	705	4.2	655	7.2	617	10.2	585	13.2	556	16.2	125	VF
	1200	980	5.6	930	9.6	892	13.6	860	17.6	831	21.6		
	1500	1255	7.0	1205	12.0	1167	17.0	1135	22.0	1107	27.0		
710VAC	900	884	4.9	823	8.7	776	12.5	736	16.2	702	20.0	125	VF
	1200	1228	6.6	1167	11.6	1120	16.6	1080	21.6	1045	26.6		
	1500	1572	8.2	1511	14.5	1464	20.8	1424	27.0	1389	33.3		
713VAC	900	1145	6.1	1064	10.9	1002	15.8	950	20.7	904	25.6	150	VF
	1200	1591	8.1	1510	14.6	1448	21.1	1396	27.6	1350	34.1		
	1500	2039	10.1	1958	18.2	1895	26.4	1843	34.5	1797	42.7		
717VAC	900	1499	7.9	1393	14.3	1312	20.7	1244	27.1			200	VF
	1200	2084	10.6	1978	19.1	1897	27.6	1828	36.2				
	1500	2668	13.2	2562	23.9	2481	34.5	2413	45.2				
812VAC	900	1279	8.8	1216	14.0	1168	19.2	1127	24.5	1091	29.7	150	VF
	1200	1755	11.8	1693	18.7	1645	25.7	1604	32.6	1568	39.6		
	1500	2232	14.7	2170	23.4	2122	32.1	2080	40.8	2045	49.5		
816VAC	900	1705	10.6	1621	17.5	1557	24.5	1502	31.4	1456	38.4	200	VF
	1200	2340	14.1	2256	23.3	2192	32.6	2138	41.9	2090	51.1		
	1500	2976	17.6	2892	29.2	2828	40.8	2775	52.4	2727	64.0		
820VAC	900	2130	12.3	2027	21.0	1880	38.4					200	VF
	1200	2925	16.4	2822	28.0	2673	51.2						
	1500	3720	20.5	3615	35.0	3468	64.0						
1012VAC	900	2185	13.4	2078	22.3	1995	31.2	1927	40.2	1867	49.1	200	VF
	1200	3000	17.9	2893	29.8	2810	41.6	2743	53.6	2680	65.4		
	1450	3680	21.6	3573	36.0	3490	50.3	3420	64.7	3360	79.1		
1016VAC	900	2937	16.5	2793	28.5	2683	40.4	2590	52.4	2507	64.4	250	VF
	1200	4032	22.0	3890	38.0	3778	53.9	3683	69.9	3602	85.9		
	1450	4945	26.6	4800	45.8	4690	65.2	4598	84.5	4515	104.0		
1020VAC	900	3755	19.8	3573	35.1	3430	50.5	3310	65.8	3205	81.1	250	VF
	1200	5157	26.4	4759	46.9	4830	67.3	4713	87.7	4608	108.0		
	1450	6325	31.9	6140	56.6	6000	81.3	5880	106.0	5775	131.0		
1024VAC	900	4415	22.5	4195	40.5	4030	58.5	3890	76.5	3765	94.5	300	VF
	1200	6060	30.0	5840	54.0	5675	78.0	5535	102.0	5410	126.0		
	1450	7430	36.3	7210	65.2	7045	94.2	6905	123.0	6780	152.0		

Conversion: 1m3/hr = 0.588 CFM; 1000 MMWG = 1.42 PSIG = 0.1 Kg/cm2 = 100 Mbar  
 Avg. Line Friction losses of 0.5 PSI per 100 ft length of Pipe.  
 Estimated rise of discharge air temperature may be taken as 12°C per 0.1 Kg/cm2 pressure.



# AIRVAK TWIN LOBE ROTARY AQUACULTURE BLOWERS

AIRVAK 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. 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 genset & Diesel engines. They have low maintenance and no internal adjustments resulting in prolonged trouble free operation.

## DESIGN & CONSTRUCTION FEATURES:

- 100% oil free air delivery.
- Factory engineered, factory guaranteed, superior product.
- Alloy steel hardened and ground timing gears.
- Anti-friction bearings.

## Imported Substitute

- Rotary oil sealings.
- Rigid one piece CI casing and side plates.
- Easy rotor timing setting.
- Alloy steel toughened shafts ground to close tolerances.



MODEL	CAPACITY	PRESSURE	SPEED	MOTOR	DIS. SIZE	ORIENTATION
	M3/HR	MMWC	RPM	1440 RPM		
AQUA 47	200	2500	1100	5 HP	80 MM	HORIZONTAL
	255	2500	1500	7.5 HP	80 MM	
AQUA 59	450	2500	1100	7.5 HP	100 MM	VERTICAL
	570	2500	1300	10 HP	100 MM	
AQUA 615	950	2500	1100	15 HP	150 MM	VERTICAL
	1200	2500	1800	20 HP	150 MM	

## APPLICATIONS:

AQUACULTURE PLANTS  
 HATCHERIES PLANTS  
 ELECTROPLATING INDUSTRIES  
 CONVEYING OF MILK POWDER & BULK DRUGS INDUSTRIES  
 CONVEYING OF SUGARS, MAIDA FOR FOOD & BAKERY

# AIRVAK SOUND PROOF ACOUSTIC ENCLOSURES

**NOISE INSULATION ENCLOSURES :** AIRVAK acoustic enclosures are one of the most effective means for containment of excessive noise and for then insulation of the workers from the noise. Even where the silencers are used, they can only treat the air borne noise. The treatment of mechanical noise from the blower, motor etc. is beyond the scope of silencers. Thus, in order to achieve low noise levels, that are often statutory requirements, Noise enclosures/Acoustic Hoods are required.

AIRVAK acoustic design is so Flexible with multi door for smooth operation of the equipment. AIRVAK has developed four door acoustic with proper louvers along with inbuilt exhaust fan for proper heat transmission.

## MANY SPECIAL FEATURES OF AIRVAK ACOUSTIC ENCLOSURE.

- Easy To Operate
- Single Or Double Glazed Windows
- Louvers To Minimize Water Entry And Maximize Air Flow Through The Enclosure
- Rubber Mounted Vibration Isolation.
- Proper Ventilation & Cooling
- Hinged Or Lift Doors With Single Or Double Seals.



## NOISE CONTROL

- Noise can be effectively controlled within the acceptable levels by:
- Noise Control at Design Stage
- Noise Control at Source
- Control of Noise Transmission Path
- Protective Measures at the Receiver

**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 and outlet, resulting in a pleasing and attractive design.

**Construction** The robust bodywork 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 structure provides easy removal of panels for maintenance of servicing of Blowers.

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

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

# AIRVAK MECHANICAL VACUUM BOOSTERS



AIRVAK Mechanical Vacuum Booster Pumps, import substitutes, are used in growing number of applications where fast pump down times are required, and environment or energy usage concerns, rule out any alternative pump selection. Airvak Booster Pumps enhance the performance, ultimate vacuum and pumping speed of oil-sealed/water-ring/dry vacuum type of mechanical pumps, which are widely used in the industry

## OPERATING PRINCIPLE

AIRVAK Vacuum Boosters are positive displacement pumps with two figure eight shaped impellers rotating in opposite directions inside the casing. As each lobe of an impeller passes the blower inlet, it traps a quantity of air equal to exactly one fourth the displacement of the blower.

This entrapment occurs four times per revolution. The entrained air is forced around the case to the blower outlet. Timing gears accurately position the impellers in relation to each other to maintain the minute clearances so vital to the high volumetric efficiency of the pump.

## KEY FEATURES

Boosts vacuum levels of backing pumps, thereby reducing process temperature

Boosts volumetric displacement, Thereby reducing Process time.



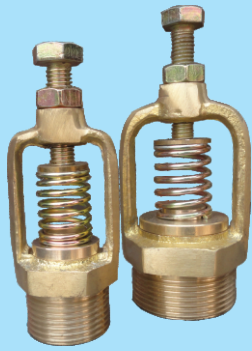
Model	Capacity (M3/Hr)	Maximum Differential Pressure (Mbar)	Rec. Motor HP/1440 RPM	Rec. Line Size
AVB1	260	90	1.5 HP	65
AVB5	400	120	3HP	65
AVB15	800	90	5HP	80
AVB30	1650	70	7.5HP	125
AVB50	2950	50	10HP	125
AVB60	3900	65	15HP	200
AVB70	5250	45	15HP	200

## Application:

Evaporative Concentration, Vacuum Distillation, Polymerization, Crystallization, Vacuum Impregnation, Vacuum Drying, Sterlization, Vacuum Cooling, Object Metallising, Roll Metallisation, Semi-conductor Processing, Manufacture of Vacuum & Microwave Tubes, Manufacture of GLS Automotive & Miniature Lamps, Tube Light Production, Sintering, Brazing, Electron Beam Welding, Heat Treatment, Ionic Nitriding, Tool Coating, Vacuum Casting, Degassing & Refining, Plasma Welding, Evaporation, Sputtering, Space Research and Development

**AIRVAK Boosters Advantages** High vacuum of the order of 0.001 Torr or better High pumping speeds at low pressures, capacity is boosted by 8 to 10 times or more Relatively low power consumption for such performance boosting Considerable reduction in pump down time of vacuum machine Prevents Oil back streaming from Rotary pumps Dry Pumping suitable for Gas/Vapour Loads

**AIRVAK Boosters Features** Entirely mechanical, light weight and compact design High operating speeds because of dynamically balanced rotors and helical ground gears for long life and quiet operation Can be mounted separately from the backing pump or directly on the inlet of the backing pump ISO Flanges Unique impeller design for high volumetric efficiency Compatible with all vacuum systems Efficient air-cooled design



PRV



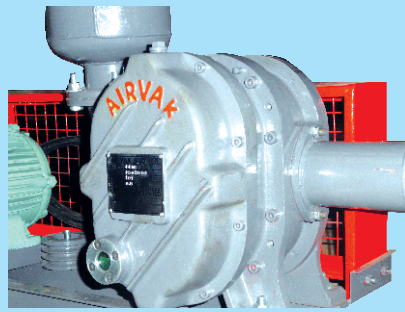
BALL BEARING



GEAR



OIL SEAL



PACKAGE BLOWER



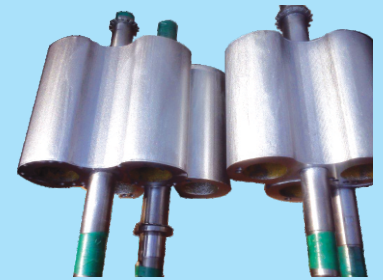
FILTER



PRESSURE GAUGE



NRV



ROTOR



AIRVAK

## AIRVAK BLOWERS PVT. LTD.

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