

ROOTS

Blowers Compressors Exhausters



ROOTS™ RAM X™ Tri-Lobe Rotary Positive Displacement Blowers

The ROOTS™ RAM X™ tri-lobe positive displacement blower has been designed to incorporate the latest technology for reduced noise and vibration and minimal downstream pulse. This range is based upon the field operation success of ROOTS RAM™ blower range and features state-of-the-art engineering based on tri-lobe principles originally designed by Roots.

BLOWER DESCRIPTION

RAM X tri-lobe rotary blowers are heavy-duty units with high strength integral-shaft ductile iron impellers designed with an involute profile for maximum efficiency. The blowers feature ROOTS WHISPAIR™ discharge for even quieter operation.

The headplates and rigid, one-piece cylinder are cast iron, while the drive-end and gear covers are aluminum. Carburized and ground alloy steel spur timing gears are taper mounted on the shafts and are secured with a locknut. Cylindrical roller bearings are used to accept side loads from v-belt drives.

Piston rings reduce air leakage through the shaft openings in the headplates and hydrodynamic oil seals prevent lubricant from entering the air chamber. RAM X blowers incorporate thrust control, with splash oil lubrication at both ends of the blower.

All model sizes are designed with detachable rugged steel mounting feet which permit in-field adaptability to either vertical or horizontal installation requirements.

The top shaft is adaptable for drive on side outlet blowers, and either shaft can be extended for drive on top or bottom outlet blowers.



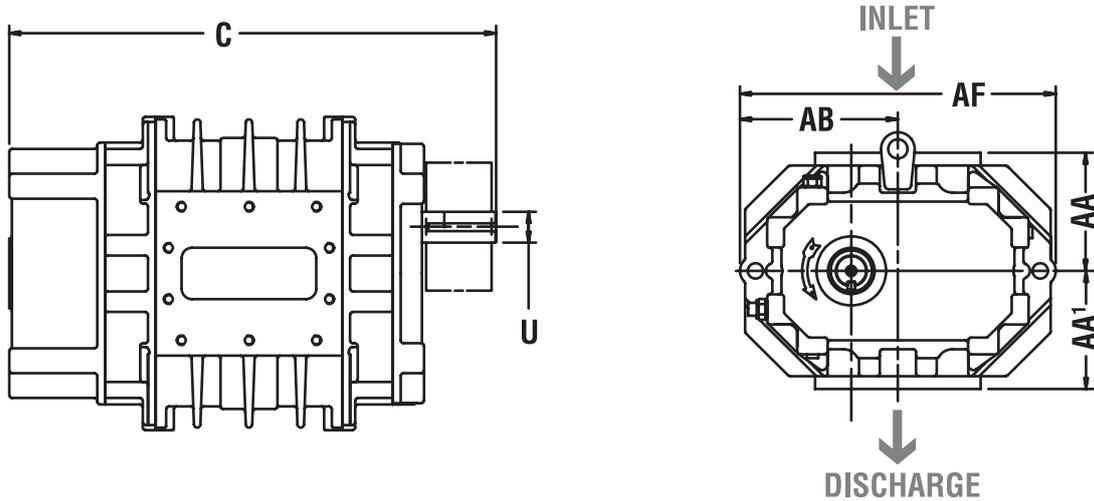
DESIGN FEATURES AND BENEFITS

- Tri-lobe impeller for quieter operation, less vibration and minimal downstream pulse
- WHISPAIR discharge for even quieter operation
- Carburized and ground alloy steel timing gears for long life and consistent performance
- Cylindrical roller bearings for longer bearing life
- Piston ring seals for less air leakage
- Splash lubrication from oil sumps with sight glasses on each end for easy maintenance
- Detachable feet and drive shaft extension to adapt to horizontal or vertical configuration

WARRANTY PERIOD

Twenty-four (24) months from date of original unit start-up or 30 months from date of original shipment, whichever occurs first.

OUTLINE DRAWING & DIMENSIONS



Dimensions are in mm, weight is in kg

Size	C	U	Keyway	AA	AA'	AB	AF	Approx. Wt.
155	597	35	10 x 5.0	146	146	194	387	136
225	699	35	10 x 5.0	146	146	194	387	164
280	781	35	10 x 5.0	146	146	194	387	191
400	852	50	14.0 x 5.5	184	184	254	508	332
500	958	50	14.0 x 5.5	184	184	254	508	386

PERFORMANCE TABLE

SIZE	SPEED RPM	300 MBAR		400 MBAR		500 MBAR		700 MBAR		800 MBAR		1034 MBAR		MAX. VACUUM		
		M ³ /HR	KW	M ³ /HR	KW	M ³ /HR	KW	M ³ /HR	KW	M ³ /HR	KW	M ³ /HR	KW	MBAR	M ³ /HR	KW
155	2000	533	5.8	514	7.6	497	9.4	468	13.1	455	14.9	427	19.2	500	432	9.2
	3560	1044	11.8	1025	15.1	1008	18.3	979	24.8	966	28	939	35.6	535	928	18.3
	4750	1435	18	1416	22.3	1399	26.7	1370	35.3	1357	39.6	1329	49.7	535	1318	25.5
225	2000	772	8.3	744	11	720	13.6	678	18.9	659	21.5	619	27.7	500	626	13.4
	3560	1513	16.7	1485	21.4	1461	26.1	1419	35.5	1400	40.1	1360	51.1	535	1344	26.3
	4750	2078	25	2051	31.3	2026	37.5	1984	50.1	1965	56.3	1925	71	535	1910	36.4
280	2000	965	10.5	930	13.8	900	17.1	847	23.6	824	26.9			500	783	16.7
	3560	1891	21	1857	26.9	1826	32.8	1773	44.5	1750	50.4			535	1681	33
	4750	2598	31.7	2563	39.5	2533	47.3	2480	63	2457	70.8			535	2387	45.7
400	1500	1347	14.7	1294	19.4	1248	24	1167	33.4	1132	38.1			500	1070	23.7
	2500	2472	26.5	2419	34.3	2373	42.1	2292	57.7	2256	65.5	2180	83.8	535	2151	43.2
	3560	3664	42.3	3612	53.4	3565	64.5	3485	86.7	3449	97.8	3373	123.8	535	3343	63.6
500	1500	1673	18.6	1607	24.4	1550	30.25	1450	41.8	1405	47.6			500	1329	29.6
	2500	3069	34.5	3004	44.2	2946	53.8	2846	73.2	2802	82.9			535	2670	54.4
	3560	4550	57.1	4484	70.9	4427	84.7	4327	112.3	4282	126.1			535	4151	81.2

Notes: 1. Pressure ratings are based on inlet air at standard pressure of 1013 mbarA, standard temperature of 20° C.
2. Vacuum ratings are based on inlet air at 20° C discharging to atmosphere at 1013mbarA.



Roots

www.rootsblower.com Visit "Contact Us" page for your nearest location
Houston, Texas Headquarters • U.S. Toll Free Phone: 1-877-363-ROOT(S) (7668) • Direct Phone: 832-590-2600
Connersville, Indiana Operations • U.S. Toll Free Phone: 1-877-442-7910 • Direct Phone: 765-827-9285
United Kingdom Operations • Phone: +44 (0) 1484 422 222
USA/Canada Sales • Phone: 773-444-3360
Houston, Texas Factory Service • Phone: 713-896-4810
Mexico City Sales and Factory Service • Phone: +52 55 5889 5811
Dubai Sales and Factory Service • Phone: +971 4-8830831
Malaysia Sales • Phone: +60 3 2163 0480
China Sales • Phone: +86 10 8486 2440
Shanghai Factory Service • Phone: +86 21 5858 7638

S-RAM X metric rev.0507