

Howden ROOTS* EasyAir® 8000 Factory Blower Package System



ROOTS* EasyAir® 8000 Factory Blower Package System is a skid-mounted noise abatement enclosure containing a blower, all piping, valves, and instrumentation. It is produced for vacuum or pressure applications, enabling simple, on-site installation.

Howden Roots offers conventional factory blower package systems with optional equipment detailed below. Howden also provides fully-engineered, packaged blower units specifically designed to meet exacting customer requirements

Design features

Roots-engineered noise abatement enclosure with power ventilation to optimize equipment life and extend reliability

- Patented automatic belt tension system
- Minimized footprint for easy installation
- Panel-mounted gauges for easy viewing
- Up to 22dBA free field noise attenuation with enclosure
- Integrated forklift access

Howden Roots advantages

- Dual-splash lubrication on units up to 6" (15.24cm) gear diameter
- Removable locking panels for easy access
- Integrated safety guard for maintenance inspection without dismantling
- Intake volumes from 18 cfm (30 m³/hr) to 2115 cfm (3590 m³/hr)
- Pressures to 15 psig (1.034 Bargs)
- Motor horsepower to 500 hp (372 kw)
- Short installation cycle time
- Low installation and operation cost

Standard equipment

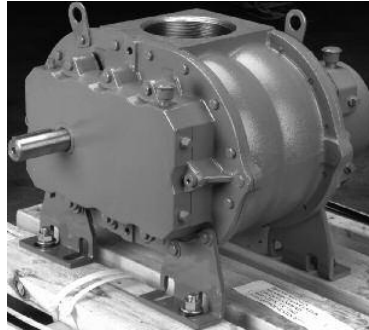
- ROOTS Dual Splash Lubricated Universal RAI® or
- RAM™-J rotary positive displacement blowers
- TEFC EPACT motor
- Inlet filter silencer with paper element
- Discharge pressure gauge (dual scale), filter restriction gauge, and temperature gauge
- Discharge base frame/discharge silencer
- Spring relief valve
- Discharge check valve
- Vibration pads
- Manufacturer's standard paint on internal components
- Powder-coated finish on noise enclosure

ROOTS* Universal RAI® DSL Dual Splash Lubricated Rotary Positive Displacement Blowers

Frames 22, 33, 36, 42, 45, 47, 53, 56, 59, 65, 68, 615

URAI DSL (Dual Splash Lubricated) blowers are heavy-duty rotary blowers designed with detachable, rugged steel mounting feet. The compact, sturdy design is engineered for continuous service when operated in accordance with speed and pressure ratings.

This model consists of a cast iron casing, carburized and ground alloy steel spur timing gears secured to steel shafts with a taper mounting and locknut, and cast iron involute impellers.



Oversized antifriction bearings are used, with a cylindrical roller bearing at the drive shaft to withstand V-belt pull.

The URAI DSL blower features splash oil lubrication on both the gear end AND drive end. Roots' exclusive "figure-eight" gearbox design improves oil distribution to maximize gear and bearing life. Sight glasses (3/8") are provided for accurate oil level confirmation. After testing, the unit is sprayed with a protective paint, and boxed or skid mounted for delivery.

PERFORMANCE TABLE: ROOTS* EasyAir® 8000 Universal RAI® DSL Blower

Frame Size	Speed RPM	1 PSI		6 PSI		7 PSI		10 PSI		12 PSI		13 PSI		14 PSI		15 PSI		Max. Vacuum		
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	"HG	CFM	BHP
22*	1160	10	0.1															4	6	0.2
	3600	49	0.3	38	1.6	36	1.8	32	2.6	29	3.1							14	28	1.8
	5275	76	0.5	64	2.4	63	2.7	59	3.8	56	4.6							15	53	2.8
33	1160	55	0.3	31	1.9	28	2.2											10	27	1.5
	2800	156	0.9	132	4.6	129	5.4	120	7.7	116	9.2							14	113	5.2
	3600	205	1.2	181	6.1	178	7.0	170	9.9	165	11.9							15	159	7.3
36	1160	95	0.5	61	3.1	57	3.6											10	55	2.5
	2800	262	1.5	229	7.7	224	8.9											12	213	7.5
	3600	344	2.1	310	10.1	306	11.7											15	278	12.1
42	860	38	0.2	18	1.4	15	1.6											8	19	0.9
	1760	92	0.5	72	2.8	69	3.3	62	4.7	58	5.6							14	56	3.2
	3600	204	1.4	183	6.1	181	7.1	173	9.9	169	11.8	167	12.8	165	13.7	163	14.7	16	160	7.7
45	860	79	0.5	42	2.7	37	3.2											8	46	1.8
	1760	188	1.0	151	5.7	146	6.6	133	9.4									12	134	5.5
	3600	410	2.7	374	12.2	369	14.1	356	19.8									16	332	15.4
47	860	105	0.6	59	3.6	53	4.2											8	63	2.4
	1760	249	1.3	203	7.5	196	8.7											12	181	7.3
	3600	542	3.5	496	16.1	490	18.6											15	452	19.1
53	700	72	0.4	42	2.4	38	2.8											10	36	2.0
	1760	211	1.2	181	6.3	177	7.3	167	10.3	160	12.3	157	13.3	155	14.4			14	158	7.1
	2850	355	2.5	325	10.7	321	12.3	310	17.2	304	20.5	301	22.1	298	23.8	295	25.4	16	291	13.4
56	700	123	0.7	78	4.1	72	4.7											10	70	3.3
	1760	358	2.0	312	10.5	306	12.2	290	17.3	280	20.6	276	22.3					14	276	11.8
	2850	598	4.0	553	17.7	547	20.5	531	28.7	521	34.2	517.0	37.0					16	501	22.4
59	700	187	1.0	130	5.9													8	135	3.9
	1760	529	2.9	472	15.3	464	17.8											12	445	14.9
	2850	881	5.9	824	26.0	816	30.0											15	770	30.8
65	700	140	0.8	93	4.5	86	5.3	70	7.5									12	71	4.4
	1760	400	2.4	353	11.9	347	13.8	330	19.4	320	23.2	316	25.1	311	27.0	307	28.9	16	300	15.2
	2350	546	3.8	499	16.4	492	19.0	475	26.5	466	31.6	461	34.1	457	36.6	452	39.1	16	445	20.6
68	700	224	1.2	149	7.3	139	8.5											10	135	5.9
	1760	643	3.7	567	18.9	557	21.9	530	31.0	515	37.0	507	40.1	500	43.1			15	495	22.7
	2350	876	5.6	801	25.9	790	29.9	763	42.1	748	50.2	740	54.2	733	58.3			16	715	32.8
615	700	420	2.3	279	13.6	260	15.9											8	292	8.9
	1760	1205	6.6	1063	34.9	1044	40.6											12	997	33.9
	2350	1641	9.7	1500	47.6	1481	55.2											14	1389	53.4

* Not a DSL blower

NOTES: 1. Performance based on inlet air at standard pressure of 14.7 psia, standard temperature of 68° F, and specific gravity of 1.0.
2. Vacuum ratings based on inlet air at standard temperature of 68° F, discharge pressure of 30" Hg and specific gravity of 1.0.

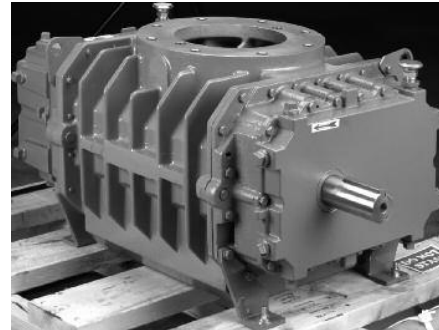
ROOTS RAM™ WHISPAIR™ Rotary Positive Displacement Blowers

Frames 404J, 406J, 409J, 412J, 418J, 616J

RAM™ WHISPAIR™ rotary blowers are heavy-duty units designed with integral-shaft ductile iron impellers having an involute profile for maximum efficiency. WHISPAIR blowers reduce noise and power loss by utilizing an exclusive wrap-around plenum and proprietary WHISPAIR jet to control pressure equalization-feeding backflow in the direction of impeller movement, thereby aiding rotation.

The headplates and rigid, one-piece cylinder are grey iron, while the drive end cover and gear cover are aluminum. Carburized and ground alloy steel spur timing gears are taper mounted on the shafts, secured with a locknut. Cylindrical roller bearings are used.

Piston rings reduce air leakage through the shaft openings in the headplates, and lip-type oil seals prevent lubricant from entering the air chamber. RAM rotary blowers incorporate thrust control, with splash oil lubrication at both ends of the blower. A hydrodynamic seal on the drive shaft prevents shaft seal oil leaks.



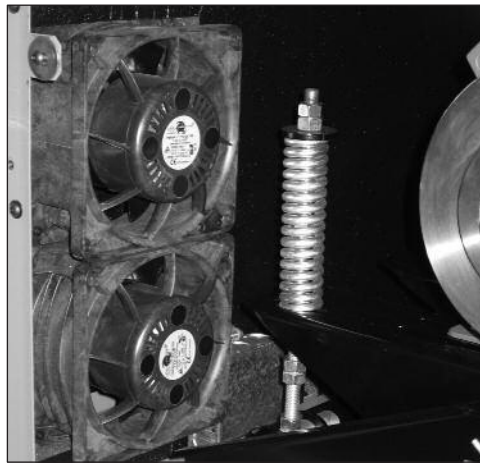
PERFORMANCE TABLE: ROOTS* EasyAir® 8000 RAM J Blower

FRAME SIZE	SPEED RPM	4 PSI		6 PSI		8 PSI		10 PSI		12 PSI		15 PSI		18 PSI		MAX. VACUUM		
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	“Hg	CFM	BHP
404J	1750	149	3.6	139	5.3	130	7.0	123	8.7	116	10.4					14.0	115	5.9
	2950	281	7.0	271	9.8	262	12.6	255	15.4	248	18.2	239	22.4			15.0	240	11.2
	4000	396	8.3	386	14.2	378	17.9	370	21.6	364	25.3	355	30.9	347	37.0	16.0	353	15.9
406J	1750	225	5.4	210	8.0	198	10.5	187	13.0	177	15.6					14.0	173	9.0
	2950	426	10.5	411	14.7	398	18.9	387	23.1	377	27.3	363	33.6			15.0	365	16.9
	4000	601	15.0	586	20.1	574	26.0	562	31.9	552	37.0	539	46.5	526	54.0	16.0	531	23.6
409J	1750	338	8.5	315	12.0	296	15.8	279	20.0	264	23.5					14.0	259	13.5
	2950	638	15.2	615	21.5	596	27.8	579	34.1	564	40.4	544	49.8			15.0	546	24.8
	4000	900	24.0	878	30.0	859	38.1	842	46.8	827	55.0	806	67.9	788	79.0	16.0	795	35.1
412J	1750	450	11.0	420	16.0	394	21.0	372	26.0	352	32.0					14.0	343	17.9
	2950	849	19.9	819	28.3	794	36.6	772	45.0	752	53.4	724	66.0			15.0	728	32.7
	4000	1199	28.8	1169	39.9	1144	51.0	1121	62.2	1101	73.3	1074	90.0			16.0	1059	46.5
418J	1750	675	16.5	630	24.0	592	31.7	559	39.0							14.0	515	26.8
	2950	1275	29.5	1230	42.1	1192	54.7	1159	67.3							15.0	1092	48.9
	4000	1800	42.9	1755	59.7	1717	73.4	1684	93.1							16.0	1590	69.7
616J	1170	718	16.9	672	24.9	633	32.9	599	40.9	568	49.0					13.0	579	25.9
	1750	1176	26.2	1130	38.2	1091	50.1	1056	62.0	1025	73.9					14.0	1013	42.0
	3000	2162	48.9	2116	68.7	2077	88.5	2043	108.3	2012	128.0	1970	157.7			16.0	1946	81.7

Notes: 1. Pressure ratings based on inlet air at standard pressure of 14.7 psia, standard temperature of 68° F, and specific gravity of 1.0.
2. Vacuum ratings based on inlet air at standard temperature of 68°F, discharge pressure of 30" Hg and specific gravity of 1.0.



Discharge pressure, filter restriction, and temperature gauges are standard.



Roots patented automatic V-belt drive tensioning system and powerful cross-ventilation system for superior cooling.



Oil fill level site glass.

SUPERIOR FIELD SERVICES

Roots provides superior field services, control systems, and fastest repair turnaround. We provide full job-site troubleshooting services and capabilities and state-of-the-art diagnostic tools delivered and utilized on-site for thorough diagnosis prior to removal. Because we maintain the world's largest network of service representatives, we provide a 24-hour delivery for most parts and repair kits and enable the right response for your level of urgency.

ROOTS Control Systems services include Revamp, Upgrade, Replacement and Conversions (analog to touch-screen and gauges to transmitters).

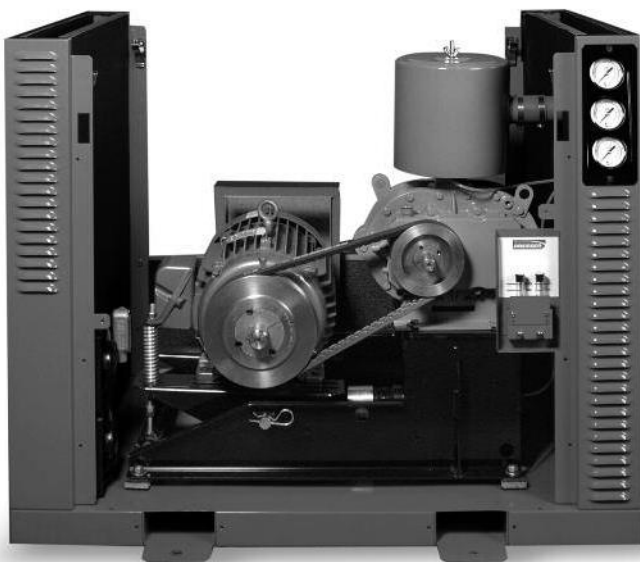
We offer an exchange program covering a wide range of ROOTS rotary equipment to keep your repair downtime to an absolute minimum. Our Service Centers maintain a complete inventory of genuine ROOTS parts for fastest turnaround. All competitor parts are available for any repair need.

TESTING

All serviced units are mechanically tested to assure compliance to rated specifications. Only Roots provides the quality assurance of unit testing on each blower or compressor rebuilt or repaired.

SERVICE CENTER LOCATIONS

Howden Roots operates strategically located blower repair facilities: Connersville, Indiana, Houston, Texas, Skelmersdale, UK, Mexico City, Mexico, and Shanghai, China. and has additional authorized service centers throughout the world. Each facility is staffed with factory-trained service personnel. All Howden service centers are equipped to handle maintenance and repair service for almost every brand of small and large rotary blowers, gas pumps and vacuum pumps.



WARRANTY

Universal RAI and RAM-J blowers come with twenty-four (24) month warranties on all parts and workmanship. Warranty begins from the date of original unit start-up or 30 months from date of original shipment, whichever occurs first.

Howden Roots backs all maintenance and repair work performed at Roots facilities or in the field with one year parts and workmanship, including competitor's parts, competitive pricing and SC ISO-9001 Certified.