

The original ROOTS blower still leads the way™



Exclusive WHISPAIR™ Design Reduces Stress, Vibration and Noise

Conventional blowers are buffeted up to 120 times a second with shock waves traveling at the speed of sound. The resulting pulses and vibrations steal power and shorten the life of every bearing, gear and other drive train component.

ROOTS RAS-J air blowers and RGS-J gas blowers have a solution to your problem. ROOTS' exclusive WHISPAIR™ jet design is proven to equalize pressure pulses, reducing shock wave intensity by up to 40%. Here's what this means to you:



Longer bearing life

Less shock transmitted through the impellers means approximately 20% longer bearing life. Other components such as timing gears, drive couplings, v-belts and motor bearings suffer less stress, too.

Lower energy consumption

The patented ROOTS WHISPAIR's jet design precisely meters backflow and channels air pressure in the direction of impeller rotation. The result is an extra "push" that reduces the power required to drive the impellers.

Lower Noise

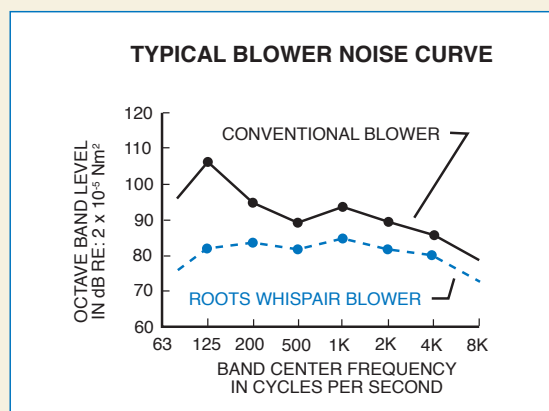
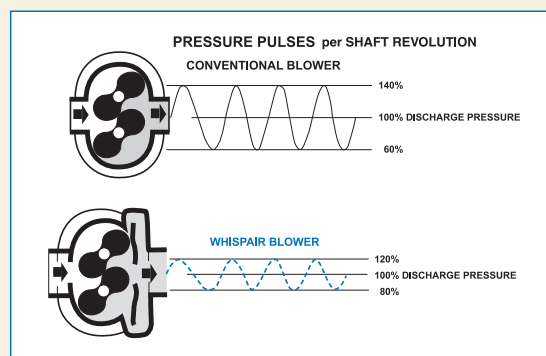
Pressure pulses are also the major source of blower and gas blower noise. The pressure equalizing effect of the Whispair™ design reduces noise by approximately 5 dBA, while reducing wear on your piping valves and sensitive instrumentation.

Testing

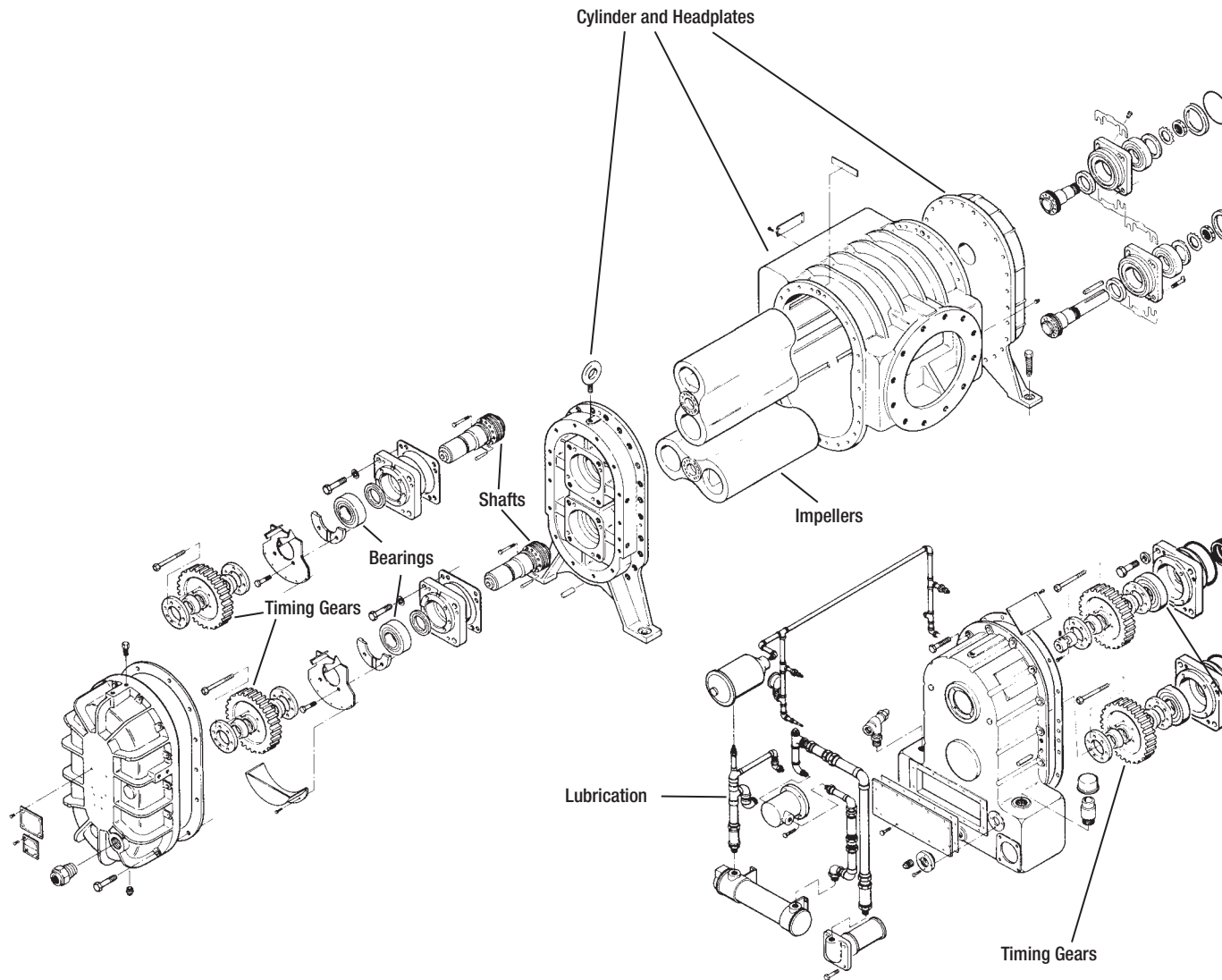
Every Roots blower is mechanically tested to design extremes of speed, pressure and temperature. Roots validates the flow capacity as well as major critical factors such as vibration, oil circulation and operating clearances. This ensure your blower is manufactured to the highest standards with performance proven to meet your process needs. Special testing requirements are welcome.

Cylinder and headplates

All units are configureable to horizontal or vertical flows. Cylinders and headplates are precision machined grey iron, with cast ribs for improved strength and heat transfer. All RAS-J and RGS-J blowers incorporate



a wrap-around plenum design and feature ROOTS' exclusive WHISPAIR™ jet. Castings may be subjected to strenuous pressure and leak testing to ensure integrity in the most demanding applications.



Impellers

Made from ductile iron with a tensile strength of 60,000 PSI, impellers are statically and dynamically balanced to industry accepted standards, providing you with years of trouble free performance and durability.

Shafts

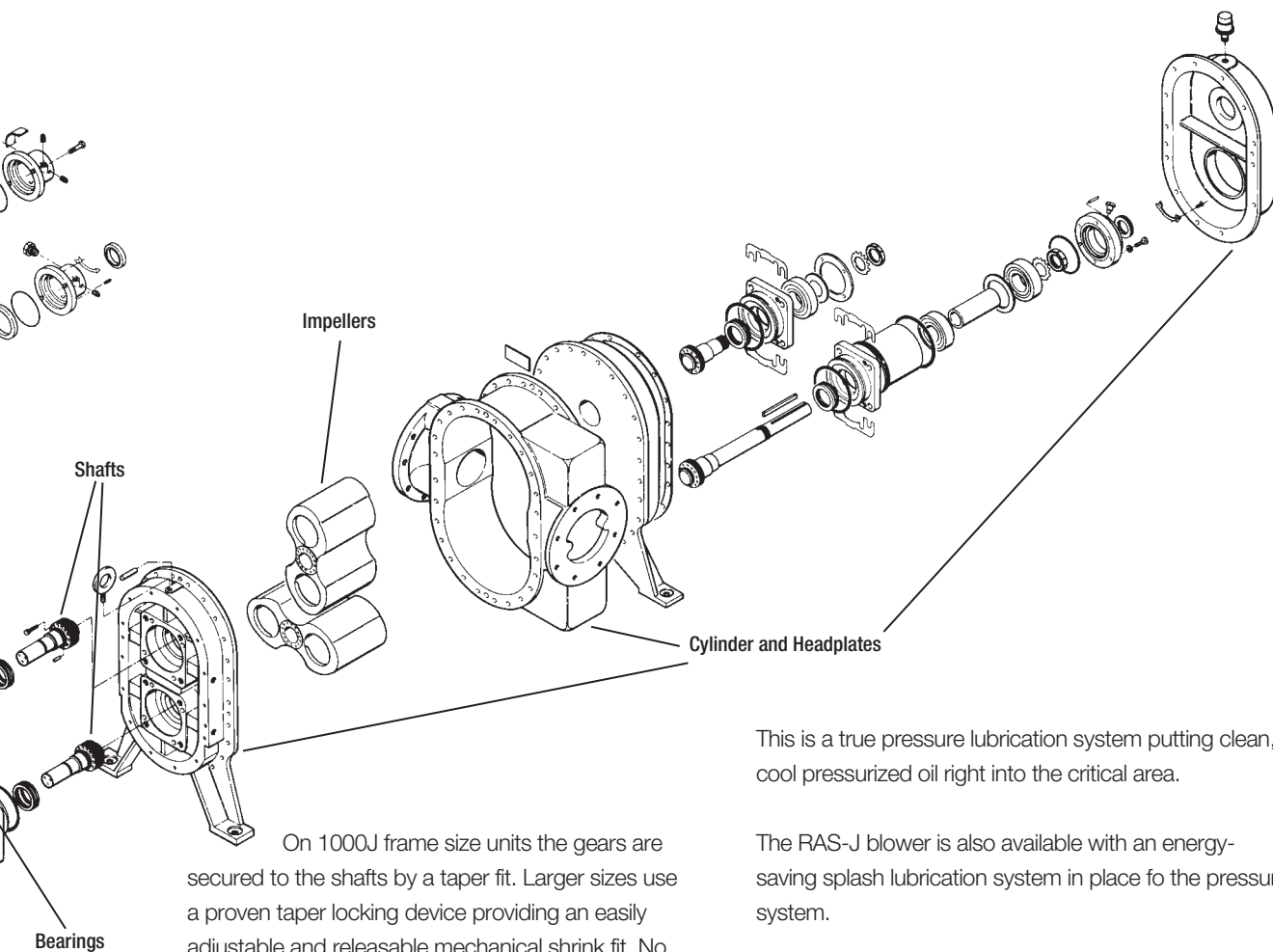
Impeller shafts are alloy steel forgings, flange connected to the impeller bodies with high-tensile socket head capscrews. Standard blowers have precision machined labyrinth seals where the shaft passes the casing headplate. A single piston ring or multiple piston rings may also be employed with various purge gas configurations to meet customer specific requirements.

Bearings

Long-life, double -row spherical roller bearings support the shaft assemblies and control axial location of the impellers at the thrust end. An inboard 5th bearing minimizes drive shaft stress on 1000J through 1400J frame size, V-belt driven blowers and gas blowers.

Timing Gears

The impellers rotation is timed by a pair of precision machined, forged steel gears. These wide-faced spur gears are manufactured to AGMA standards and are carburized and ground with a hardness of 58-60 Rc. Spur gears do not transmit harmful axial loads to bearings and motors.



Lubrication

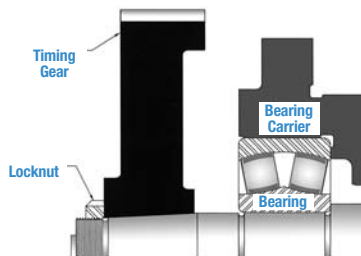
Both RAS-J blowers and RGS-J blowers offer a positive pressure lubrication system which can extend bearing life by up to 50%. This system is entirely self-contained and includes an integral drive oil pump, distribution piping. Gearbox oil sump, filter oil cooler, pressure gauge, relief valve and low oil pressure safety switch.

Each unit tested, certified.

Every RAS-J blower and RGS-J gas blower is tested at the factory to guarantee that each unit meets performance specifications. Test procedures include a complete flow test at full speed and pressure, as well as vibration measurement at three different performance levels.

RAS-J Air Blower

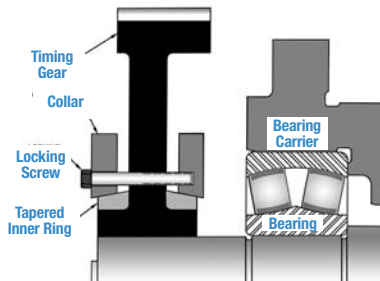
Timing gear locking arrangement for 1000J frame sizes



Taper Fit

RAS-J Air Blower

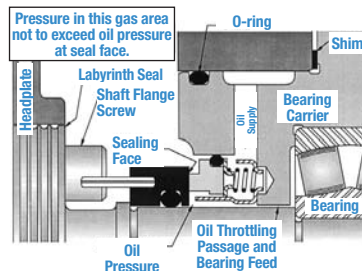
Timing gear locking arrangement for 1200J – 2000J frame sizes



Locking Ring

RGS-J Gas Blower

Detail Mechanical Seal



Detail Options

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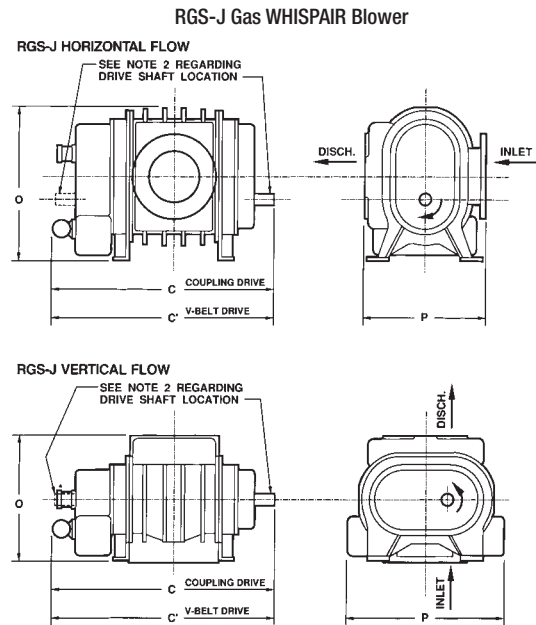
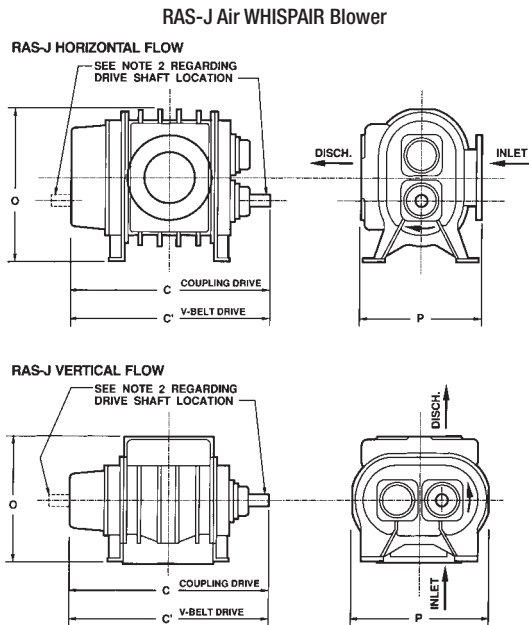
Note: BHP/G is the brake horsepower for the mechanically sealed RGS-J blower.

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Dimensions

	PRESSURE LUBE							SPLASH LUBE								
FRAME SIZE	HORIZONTAL FLOW		VERTICAL FLOW		BOTH		MAX WGT.	HORIZONTAL FLOW		VERTICAL FLOW		BOTH		MAX WGT.	INLET	DISCH.
	O	P	O	P	C	C¹		O	P	O	P	C	C¹			
1006J	34.75	28.50	28.75	36.00	39.56	48.44	2000	34.75	28.50	28.75	30.75	30.50	39.38	1940	6	6
1009J	34.75	28.50	28.75	36.00	42.56	51.44	2110	34.75	28.50	28.75	30.75	33.50	42.38	2050	10	8
1012J	34.75	28.50	28.75	36.00	45.56	54.44	2280	34.75	28.50	28.75	30.75	36.50	45.38	2200	10	8
1016J	34.88	28.50	28.75	36.00	50.56	58.94	2510	34.88	28.50	28.75	30.75	41.00	49.88	2400	12	10
1018J	34.88	28.50	28.75	36.00	52.31	61.19	2590	34.88	28.50	28.75	30.75	43.25	52.13	2450	12	10
1021J	34.88	28.50	28.75	36.00	54.56	63.44	2690	34.88	28.50	28.75	30.75	45.50	54.38	2550	14	12
1024J	34.88	28.50	28.75	36.00	57.56	66.44	3110	34.88	28.50	28.75	30.75	48.50	57.38	3000	14	12
1030J	34.88	28.50	28.75	36.00	63.56	72.44	3660	34.88	28.50	28.75	30.75	45.50	63.38	3500	16	14
1212J	40.50	33.30	33.13	40.00	46.56	49.88	3165	40.50	33.00	33.13	36.75	40.06	44.38	3100	12	10
1216J	40.50	33.30	33.13	40.00	49.56	53.88	3575	40.50	33.00	33.13	36.75	44.06	48.38	3400	14	12
1220J	40.50	33.30	33.13	40.00	53.56	57.88	3790	40.50	33.00	33.13	36.75	48.06	52.38	3650	16	14
1222J	40.50	33.30	33.13	40.00	56.06	60.38	3990	40.50	33.00	33.13	36.75	50.56	54.38	3800	16	14
1225J	40.50	33.30	33.13	40.00	58.56	62.88	4185	40.50	33.00	33.13	36.75	53.06	57.38	4000	16	14
1228J	40.50	33.30	33.13	40.00	62.06	66.38	4345	40.50	33.00	33.13	36.75	56.56	60.88	4150	18	16
1236J	40.50	33.30	33.13	40.00	69.56	73.88	4875	40.50	33.00	33.13	36.75	64.06	68.38	4650	20	18
1414J	47.25	38.50	38.00	45.25	53.38	59.19	4820	47.25	38.50	38.00	43.00	45.13	50.94	4600	14	12
1418J	47.25	38.50	38.00	45.25	57.38	63.19	5130	47.25	38.50	38.00	43.00	49.13	54.94	4900	14	12
1422J	47.25	38.50	38.00	45.25	61.38	67.19	5460	47.25	38.50	38.00	43.00	53.13	58.94	5200	16	14
1425J	47.25	38.50	38.00	45.25	63.38	69.69	5700	47.25	38.50	38.00	43.00	55.63	61.44	5300	18	16
1428J	47.25	38.50	38.00	45.25	66.38	72.69	5950	47.25	38.50	38.00	43.00	58.63	64.44	5650	18	16
1431J	47.25	38.50	38.00	45.25	70.38	76.19	6220	47.25	38.50	38.00	43.00	62.13	67.94	5900	18	16
1435J	47.25	38.50	38.00	45.25	73.38	79.69	6500	47.25	38.50	38.00	43.00	65.53	71.44	6200	20	18
1442J	47.25	38.50	38.00	45.25	80.88	86.69	7090	47.25	38.50	38.00	43.00	72.63	78.44	6750	24	20

Table continued on next page



Dimensions

	PRESSURE LUBE							SPLASH LUBE								
FRAME SIZE	HORIZONTAL FLOW		VERTICAL FLOW		BOTH		MAX WGT.	HORIZONTAL FLOW		VERTICAL FLOW		BOTH		MAX WGT.	INLET	DISCH.
	O	P	O	P	C	C'		O	P	O	P	C	C'			
1616J	53.75	44.50	43.25	51.00	48.31	—	6185	53.75	44.50	43.25	49.50	48.31	—	5700	14	12
1620J	53.75	44.50	43.25	51.00	52.31	—	6465	53.75	44.50	43.25	49.50	52.31	—	6000	16	14
1625J	53.75	44.50	43.25	51.00	57.31	—	6800	53.75	44.50	43.25	49.50	57.31	—	6300	20	18
1627J	53.75	44.50	43.25	51.00	59.31	—	7135	53.75	44.50	43.25	49.50	59.31	—	6600	20	18
1630J	53.75	44.50	43.25	51.00	62.31	—	7480	53.75	44.50	43.25	49.50	62.31	—	6850	20	18
1633J	53.75	44.50	43.25	51.00	65.31	—	7830	53.75	44.50	43.25	49.50	65.31	—	7250	24	20
1639J	53.75	44.50	43.25	51.00	71.31	—	8370	53.75	44.50	43.25	49.50	71.31	—	7800	24	20
1643J	53.75	44.50	43.25	51.00	75.31	—	8580	53.75	44.50	43.25	49.50	75.31	—	8000	30	24
1648J	53.75	44.50	43.25	51.00	80.31	—	8790	53.75	44.50	43.25	49.50	80.31	—	8200	30	24
1821J	59.25	49.50	48.00	56.00	57.31	—	8440	59.25	49.50	48.00	54.00	57.31	—	7800	18	16
1824J	59.25	49.50	48.00	56.00	57.31	—	8770	59.25	49.50	48.00	54.00	60.31	—	8100	20	16
1827J	59.25	49.50	48.00	56.00	57.31	—	9190	59.25	49.50	48.00	54.00	63.31	—	8400	20	16
1830J	59.25	49.50	48.00	56.00	57.31	—	9610	59.25	49.50	48.00	54.00	66.31	—	8850	24	20
1833J	59.25	49.50	48.00	56.00	57.31	—	10030	59.25	49.50	48.00	54.00	69.31	—	9300	24	20
1838J	59.25	49.50	48.00	56.00	57.31	—	10300	59.25	49.50	48.00	54.00	74.31	—	9600	24	20
1841J	59.25	49.50	48.00	56.00	57.31	—	10450	59.25	49.50	48.00	54.00	77.31	—	9750	30	24
1845J	59.25	49.50	48.00	56.00	57.31	—	10870	59.25	49.50	48.00	54.00	81.31	—	10100	30	24
1849J	59.25	49.50	48.00	56.00	57.31	—	11170	59.25	49.50	48.00	54.00	85.31	—	10400	30	26
1854J	59.25	49.50	48.00	56.00	57.31	—	11470	59.25	49.50	48.00	54.00	90.31	—	10650	30	26
2022J	66.13	54.50	52.75	61.25	61.13	—	10660	66.13	54.50	52.75	61.25	61.13	—	9800	20	16
2026J	66.13	54.50	52.75	61.25	65.13	—	11120	66.13	54.50	52.75	61.25	65.13	—	10250	20	18
2033J	66.13	54.50	52.75	61.25	72.13	—	12130	66.13	54.50	52.75	61.25	72.13	—	11200	24	20
2037J	66.13	54.50	52.75	61.25	76.13	—	13130	66.13	54.50	52.75	61.25	76.13	—	11800	30	24
2040J	66.13	54.50	52.75	61.25	78.63	—	13630	66.13	54.50	52.75	61.25	78.63	—	12450	30	24
2047J	66.13	54.50	52.75	61.25	85.63	—	13900	66.13	54.50	52.75	61.25	85.63	—	12800	30	24
2050J	66.13	54.50	52.75	61.25	88.63	—	14130	66.13	54.50	52.75	61.25	88.63	—	13100	30	24
2057J	66.13	54.50	52.75	61.25	95.63	—	14500	66.13	54.50	52.75	61.25	95.63	—	13450	30	24
2060J	66.13	54.50	52.75	61.25	98.63	—	14850	66.13	54.50	52.75	61.25	98.63	—	13800	30	26
2062J	66.13	54.50	52.75	61.25	100.63	—	15000	66.13	54.50	52.75	61.25	100.63	—	14000	30	26
2064J	66.13	54.50	52.75	61.25	102.63	—	15300	66.13	54.50	52.75	61.25	102.63	—	14300	30	26

Dimensions (RAS-J Forty PSL)

	PRESSURE LUBE					SPLASH LUBE						
FRAME SIZE	HORIZONTAL FLOW		BOTH		MAX WGT.	HORIZONTAL FLOW		BOTH		MAX WGT.	INLET	DISCH.
	O	P	C	C'		O	P	C	C'			
2047	67.38	54.50	94.38	31.50	14820	67.38	54.50	94.38	31.50	14820	30	24
2050	67.38	54.50	97.38	33.00	15000	67.38	54.50	97.38	33.00	15000	30	26
2055	67.38	54.50	102.38	35.50	15300	67.38	54.50	102.38	35.50	15300	36	30
2057	67.38	54.50	104.38	36.50	15450	67.38	54.50	104.38	36.50	15450	36	30
2060	67.38	54.50	107.38	38.00	15750	67.38	54.50	107.38	38.00	15750	36	30
2062	67.38	54.50	109.88	39.25	16250	67.38	54.50	109.88	39.25	16250	36	30
2064	67.38	54.50	111.38	40.00	16750	67.38	54.50	111.38	40.00	16750	36	30
2070	77.50	69.00	117.38	43.00	20750	77.50	69.00	117.38	43.00	20750	42	42
2072	77.50	69.00	119.38	44.00	21000	77.50	69.00	119.38	44.00	21000	42	42
2080	77.50	69.00	127.38	48.00	23000	77.50	69.00	127.38	48.00	23000	42	42

Contact Dresser Roots for details on other available blower sizes.

Application Engineering

Roots may have the largest & most experienced product support network in the industry. Around the world, we have an office or a service center where you need it. Dresser Roots supports your business by delivering products and services designed, built and delivered to perform in your unique process environment. We have the desire to work with you and develop a detailed solution configured to meet and, ideally to exceed your requirements. Roots has been “the quiet leader” in the blower business since 1854 providing long-lasting performance in the worlds toughest applications.

Global Presence

- 55 Distributors with 95 locations in North and South America
- 35 Agents and Reps locations in North America
- Direct Sales Offices located in Asia, Europe, South America and North America
- 4 Authorized Distributors in China
- 2 Authorized Distributors in Australia
- 2 Authorized Distributors India
- 1 each Authorized Distributors in Saudi Arabia, Egypt, South Africa, Thailand, Pakistan, Japan, Taiwan, Philippines, Malaysia, New Zealand, South Korea, U.A.E, Turkey and Kuwait.
- 1 each Authorized Distributors in Major EU countries except France, Switzerland and Belgium

Service

Seven (7) Factory Authorized and Trained Service Centers

- Houston, Texas
- Connersville, Indiana
- Mexico City, Mexico
- Skelmersdale, UK
- Dubai, U.A.E
- Shanghai, China



About Dresser Roots

Dresser Roots, a major product brand of Dresser, Inc., is the manufacturer of the original ROOTS™ blower, centrifugal compressors and control systems. ROOTS® air and gas moving equipment is used in a wide variety of applications, including MVR (Mechanical Vapor ecompression), water and wastewater treatment, flue gas desulphurization, petrochemical and chemical processes, conveying, and other general industrial applications.

About Dresser, Inc.

Dresser, Inc. is a leader in providing highly engineered infrastructure products for the global energy industry. The company has leading positions in a broad portfolio of products, including valves, actuators, meters, switches, regulators, piping products, natural gas-fueled engines, retail fuel dispensers and associated retail point-of-sale systems, and air and gas handling equipment. Leading brand names within the Dresser portfolio include Dresser Wayne® retail fueling systems, Waukesha® natural gas-fired engines, Masoneilan® control valves, Consolidated® pressure relief valves, and Roots® blowers. It has manufacturing and customer service facilities located strategically worldwide and a sales presence in more than 100 countries.

Dresser Roots

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