

SPECIFICATIONS

ROOTS™ RGS-HVB High Vacuum Boosters

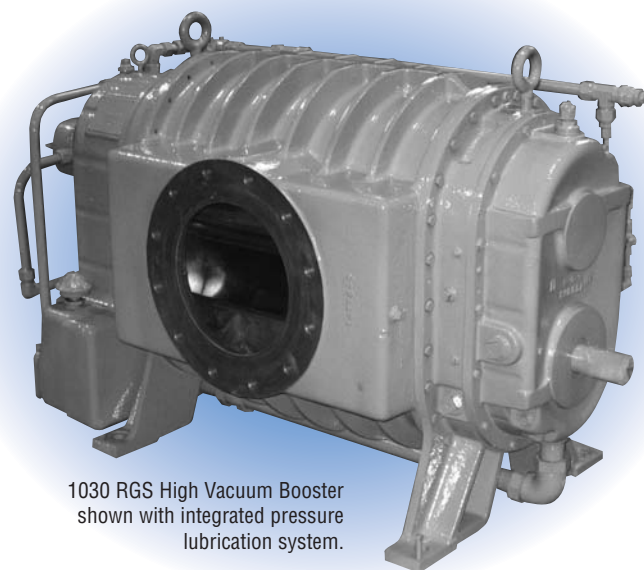
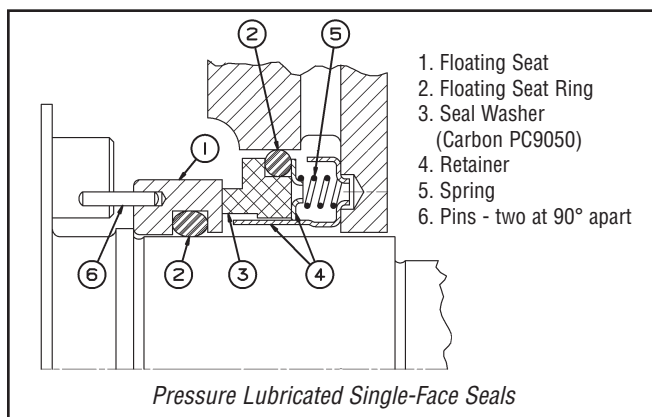
Frames 1009 thru 2060

BASIC BLOWER DESCRIPTION

RGS High Vacuum Boosters are continuous duty units designed for applications to the single digit micron range when used in series with a backing pump.

The basic high vacuum booster is constructed with a close-grained grey iron cylinder, alloy steel timing gears, ductile iron impellers and anti-friction bearings.

RGS High Vacuum Boosters have four pressure lubricated single-face seals, one at each shaft, between the bearing and pumping compartment. Gears and bearings are under atmospheric pressure. A shaft driven oil pump supplies clean, cool lubricating oil to gears, bearings and seals.

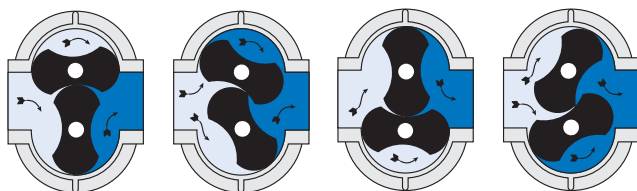


1030 RGS High Vacuum Booster shown with integrated pressure lubrication system.

PERFORMANCE TABLE

Size	Max. Speed RPM	Gross Displ. CFM	Inlet Flange Inches	Disch. Flange Inches	Unit Wt. Lbs.
1009	1900	2276	8	8	1840
1012	1900	3034	8	8	2010
1016	1900	4170	10	10	2240
1018	1900	4740	10	10	2300
1021	1900	5310	12	10	2400
1024	1900	6061	12	10	2740
1030	1900	7581	14	12	3390
1225	1600	7792	14	12	3900
1228	1600	8704	14	12	4060
1236	1600	11008	16	14	4590
1431	1350	11097	16	14	5800
1435	1350	12339	18	16	6050
1442	1350	14796	20	18	6640
1639	1200	15960	18	16	8170
1648	1200	19620	24	20	8590
1841	1060	18741	20	18	10230
1845	1060	20564	20	18	10600
1854	1060	24634	24	20	11200
2040	1000	21280	24	20	12750
2050	1000	26600	24	20	13700
2060	1000	31920	30	24	15480

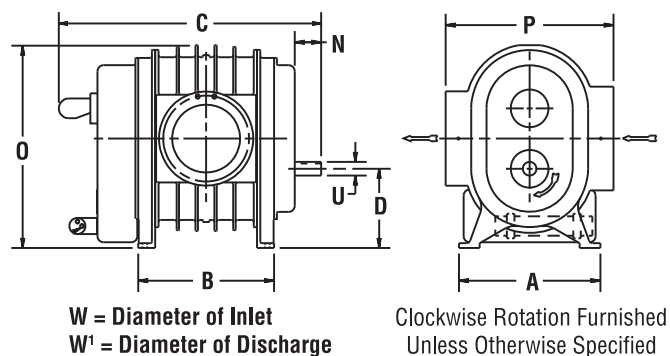
BI-LOBE OPERATING PRINCIPLE



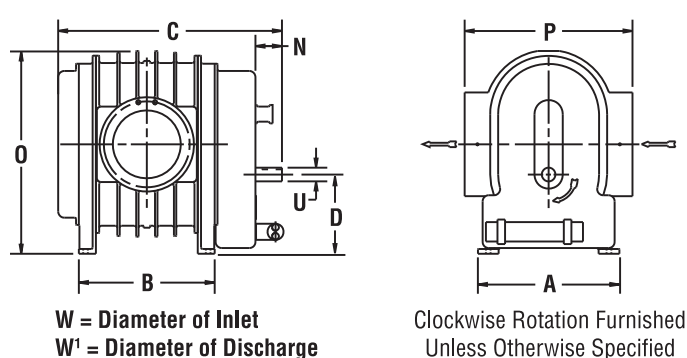
Two figure-eight lobe impellers mounted on parallel shafts rotate in opposite directions. As each impeller passes the blower inlet, it traps a finite volume of air and carries it around the case to the blower outlet, where the air is discharged. With constant speed operation, the displaced volume is essentially the same regardless of pressure, temperature or barometric pressure. Timing gears control the relative position of the impellers to each other and maintain small but finite clearances. This allows operation without lubrication being required inside the lobe cavity.

OUTLINE DRAWINGS & DIMENSIONS

Frame Sizes 1009 - 1442



Frame Sizes 1639 - 2060



Frame Size	Inlet A	Disch. B	Approx. C	D	N	O	P	U	W	W'	Weight
1009	27	15.75	40.812	14.500	4.625	34.625	28.000	2.250	8	8	1840
1012	27	18.75	43.812	14.500	4.625	34.625	28.000	2.250	8	8	2010
1016	27	23.25	48.312	14.500	4.625	35.625	28.000	2.250	10	10	2240
1018	27	25.50	50.562	14.500	4.625	35.625	28.000	2.250	10	10	2300
1021	27	27.75	52.812	14.500	4.625	35.625	28.000	2.250	12	10	2400
1024	27	30.75	55.812	14.500	4.625	35.625	28.000	2.250	12	10	2740
1030	27	36.75	61.812	14.500	4.625	35.625	28.000	2.250	14	12	3390
1225	30.50	32.50	59.312	16.625	5.500	41.375	30.500	2.625	14	12	3900
1228	30.50	36.00	62.812	16.625	5.500	41.375	30.500	2.625	14	12	4060
1236	30.50	43.50	70.312	16.625	5.500	41.375	30.500	2.625	16	14	4590
1431	34	39.75	69.000	18.750	6.250	47.687	34.625	3.000	16	14	5800
1435	34	43.25	72.500	18.750	6.250	47.687	34.625	3.000	18	16	6050
1442	34	50.25	79.500	18.750	6.250	47.687	34.625	3.000	20	18	6640
1639	37.5	48.0	78.937	21.00	7.00	54.000	38.375	3.562	18	16	8170
1648	37.5	57.0	87.937	21.00	7.00	54.000	38.375	3.562	24	20	8590
1841	41.0	51.0	85.687	23.25	7.75	59.750	42.375	4.188	20	18	10230
1845	41.0	55.0	89.687	23.25	7.75	59.750	42.375	4.188	20	18	10600
1854	41.0	64.0	98.687	23.25	7.75	59.750	42.375	4.188	24	20	11200
2040	45.0	51.0	87.000	25.50	8.75	66.937	46	4.500	24	20	12750
2050	45.0	61.0	97.000	25.50	8.75	66.937	46	4.500	24	20	13700
2060	45.0	71.0	107.000	25.50	8.75	66.937	46	4.500	30	24	15480

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