

# NRB Series Roots Blower

Models: NRB3206, NRB3210, NRB4009, NRB4012, NRB5507, NRB5511, NRB5514, NRB5518, NRB7017, NRB7021, NRB7026, NRB9027, NRB1230, NRB1248



## OVERVIEW

The NRB Series blowers represent a line of premium heavy-duty Roots-type blowers with a comprehensive range of models and a lengthy production history. This series has earned a reputation for its high-quality, reliability, and exceptional performance. Each unit within the series can achieve a single unit:

- pressure of up to 18PSI(g)
- vacuum level of up to 16" Hg(a).

Characterized by high speed and efficiency, the NRB series blowers leverage these attributes to enhance reliability. The elevated rotation speed allows for increased intake of fresh air, extending the lifespan of the shaft, rotor, bearing, and seal through cooling.

## CHARACTERISTICS

- Enhanced by a five-point bearing design, the NRB blower is optimized for stability.
- The dual oil tank configuration delivers superior cooling and lubrication to both ends of the bearings, maintaining low operating temperatures.
- Synchronous gears on the drive side eliminate torsional stresses along the drive shaft.
- Nitrogen gas barrier protects and preserves the oil tanks from process gasses that can hinder the performance and lifespan of the blower oil.
- The helical gear design ensures synchronized, silent, and reliable operation.
- Multiple seal options provide versatility according to the application, from labyrinth seals to oil slinger seals and one-point mechanical seals.
- Optionally, a gas-tight design is available to guarantee the tightest restrictions on oil contamination of discharge gas.



## FEATURES

- **Powerful Performance:** Handles demanding applications with ease.
- **Energy Efficiency:** Optimized design for maximum energy savings.
- **Reliability:** Robust construction, including five-point bearing for long-lasting and consistent operation.
- **Versatility:** Adaptable to various industrial needs with a wide range of CFM and HP.
- **Optional Features:** Customize with gas-tight design or various coating selection for specific requirements.

## COMMON APPLICATIONS



Tail gas conveying



Steam recompression



Material handling

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## GENERAL PERFORMANCE PARAMETERS

Model	Unit	NRB3206	NRB3210	NRB4009	NRB4012	NRB5507	NRB5511	NRB5514
Flow Range	CFM	21 – 220	37 – 368	49 – 497	87 – 682	99 – 795	150 – 1172	490 - 1522
Shaft power	HP	1.07 – 4.02	1.20 – 28.16	1.79 – 45.59	2.01 – 50.95	2.54 – 69.73	2.95 – 83.14	3.48 – 95.21
Max. Rotation Speed	RPM	4000	4000	4000	4000	3800	3800	3800
Max. Vacuum Degree	In. Hg	15	15	17	15	17	17	15
Max. Pressure	PSIG	15	15	18	15	18	17	13
Inlet Flange	ANSI	3"	4"	4"	4"	6"	6"	6"
Outlet Flange	ANSI	3"	4"	4"	4"	6"	6"	6"
Cooling Water Flow	GPM (15°C)	0.21	0.25	0.25	0.39	0.39	0.5	0.5
Cooling Water Connection	NPT	1/4 NPT	1/4 NPT	1/4 NPT	1/4 NPT	1/4 NPT	1/4 NPT	1/4 NPT
Lubricant Volume	Gallon	0.25	0.25	0.37	0.37	1	1	1
Total Length	Inches	19.8	23.8	25	28	27.9	31.4	34.4
Total Height	Inches	14.8	14.8	15	15	20	20	20
Width	Inches	9.8	9.8	12.67	12.67	16.75	16.75	16.75
Pump Weight	Lbs.	160	194	260	300	450	520	580
Model	Unit	NRB5518	NRB7017	NRB7021	NRB7026	NRB9027	NRB1230	NRB1248
Flow Range	CFM	350 – 1963	602 – 2809	783 – 3480	105 – 24317	620 – 5318	772 – 9021	1305 - 9278
Shaft power	HP	4 – 9.4	7.2 – 226.6	8.3 – 244	1.74 – 241.4	8 – 370.1	12 – 385	14.75 - 269
Max. Rotation Speed	RPM	3800	3000	3000	3000	2400	1800	1400
Max. Vacuum Degree	In. Hg	15	15	15	15	15	12	10
Max. Pressure	PSIG	10	15	15	12	15	9	6
Inlet Flange	ANSI	8"	10"	12"	12"	14"	14"	20"
Outlet Flange	ANSI	8"	10"	12"	12"	14"	14"	20"
Cooling Water Flow	GPM (15°C)	0.5	1	1	1	1.5	2	2.5
Cooling Water Connection	NPT	1/4 NPT	1/4 NPT	1/4 NPT	1/4 NPT	3/8 NPT	3/8 NPT	G 1/4
Lubricant Volume	Gallon	1	2	2	2	8	10	10
Total Length	Inches	34.4	50	54	54	61.4	80.6	98.6
Total Height	Inches	20	25.6	25.6	25.6	30.7	29.4	29.4
Width	Inches	16.75	14.5	14.5	14.5	18.1	27.7	27.7
Pump Weight	Lbs.	683	1274	1450	1600	2560	5400	6856.4