

NB Series

Roots Vacuum Pumps

Models: NB100, NB200, NB400, NB540, NB720, NB850, NB1200, NB1600, NB2000, NB2700, NB2900, NB3600, NB4500, NB5400, NB7300, NB7900, NB10000, NB27000, NB60000



OVERVIEW

The NES company offers NB Roots vacuum pump a cost-effective solution with a pumping speed suitable for the high vacuum range of 50 Torr to 0.1 μm Hg vac.

- Seamlessly integrated with different vacuum pumps to create versatile vacuum units.
- All products undergo dynamic balance, leakage testing prior to delivery.
- Application of NB Roots vacuum pumps extends across petrochemical, chemical and pharmaceutical processes, plastics, semiconductors, vacuum furnaces, and vacuum melting.

CHARACTERISTICS

- Innovative five-point bearing design and dual oil tanks for enhanced stability.
- Nitrogen gas barrier effectively prevents gas from entering the oil tank, extending the pump's service life.
- Available in standard materials with a variety of coatings.
- Internal coating that resists corrosion, suited for petrochemical, chemical, and pharmaceutical industries.
- Optional single-point mechanical seal and oil slinger ring reduce oil contamination and consumption.
- Optional five-point mechanical seal and labyrinth seal for complete elimination of cross-contamination, further reducing oil consumption.



FEATURES

- **Cost-Effective:** Comparative low cost without compromising on performance.
- **Global Quality Standards:** Stringent testing procedures guarantee product reliability.
- **Versatility:** Adaptable to diverse industrial vacuum booster applications.
- **Efficiency:** Ensures optimal pumping speed for high vacuum conditions at lower horsepower.

COMMON APPLICATION



Polycarbonate



Semiconductor



Tail Gas

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GENERAL PERFORMANCE PARAMETERS

GENERAL TECHNICAL DATA

Model	Unit	NB100	NB200	NB400	NB540	NB720	NB850	NB1200
Max. Pumping Speed	CFM	100	200	400	540	720	850	1200
	GPM	745	1490	2996	4058	5373	6388	8987
Nominal Pumping Speed	CFM	79	160	320	435	575	650	965
	GPM	602	1189	2378	3265	4311	4850	7228
Ultimate full pressure	Torr	7.5x10 ⁻⁴						
	mbar	1x10 ⁻⁴						
Motor power	HP	2.95	2.95	2.95	5.36	5.36	10	10
Suggested Rotation Speed	RPM	1450	2900	2900	2900	2900	2900	2900
Max. Rotation Speed	RPM	3600	3600	3600	3600	3600	3600	3600
Inlet Flange	ANSI	3"	3"	4"	4"	4"	6"	6"
Outlet Flange	ANSI	3"	3"	4"	4"	4"	6"	6"
Cooling Water Flow	GPM (15°C)	0.211	0.211	0.25	0.25	0.396	0.396	0.501
Cooling Water Connection	NPT	¼ NPT	¼ NPT	¼ NPT	¼ NPT	¼ NPT	¼ NPT	¼ NPT
Lubricant Volume	Gallon	0.25	0.25	0.25	0.375	0.375	1.001	1.001
Total Length	Inches	23.89	23.89	27.79	28.26	31.25	30.11	33.62
Total Height	Inches	14.84	14.84	14.84	14.96	14.96	20	20
Width	Inches	11.22	11.22	11.22	13.26	13.26	17	17
Pump Weight	Lbs	160	160	195	260	300	450	520

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Model	Unit	NB1600	NB2000	NB2700	NB2900	NB3600	NB4500
Max. Pumping Speed	CFM	1600	2000	2700	2900	3600	4600
	GPM	11983	14963	20209	21699	26943	34427
Nominal Pumping Speed	CFM	1288	1600	2178	2796	3478	4450
	GPM	9637	11983	16294	20907	26026	33286
Ultimate Full Pressure	Torr	7.5x10 ⁻⁴					
	mbar	1x10 ⁻⁴					
Motor Power	HP	10	10	15	20	20	25
Suggested Rotation Speed	RPM	2900	2900	2900	2900	2900	2900
Max. Rotation Speed	RPM	3600	3600	3600	3000	3000	3000
Inlet Flange	ANSI	6"	8"	10"	10"	12"	12"
Outlet Flange	ANSI	6"	8"	10"	10"	12"	12"
Cooling Water Flow	GPM (15°C)	0.501	0.501	0.739	1.003	1.003	1.003
Cooling Water Connection	NPT	¼ NPT	¼ NPT	¼ NPT	¼ NPT	¼ NPT	¼ NPT
Lubricant Volume	Gallon	1.001	1.001	1.001	1.981	1.981	1.981
Total Length	Inches	36.61	40.59	46.57	50.39	54.33	59.33
Total Height	Inches	20	20	20	25.62	25.62	25.62
Width	Inches	17	17	17	23.03	23.03	23.03
Pump Weight	Lbs	580	685	790	1275	1275	1600

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Model	Unit	NB5400	NB7300	NB7900	NB10000	NB27000	NB60000
Max. Pumping Speed	CFM	5503	7298	9417	12713	27916	68499
	GPM	41163	54589	70439	95102	208845	512411
Pumping Speed	CFM	3319	4414	7569	10229	23249	57092
	GPM	24838	33016	56618	76526	174037	427009
Ultimate Full Pressure	Torr	7.5x10 ⁻⁴					
	mbar	1x10 ⁻⁴					
Motor Power	HP	30	30	40	40	74	148
Suggested Rotation Speed	RPM	1450	1450	1450	1450	1000	1000
Max. Rotation Speed	RPM	2400	2400	1800	1800	1200	1200
Inlet Flange	ANSI	14"	16"	14"	20"	24"	32"
Outlet Flange	ANSI	14"	16"	14"	20"	24"	32"
Cooling Water Flow	GPM (15°C)	1.505	1.505	2.007	2.509	8.717	13.208
Cooling Water Connection	NPT	3/8 NPT	3/8 NPT	3/4 NPT	3/4 NPT	G1	G1
Lubricant Volume	Gallon	7.925	7.925	10.038	10.038	15.85	26.421
Total Length	Inches	61.41	70.07	80.59	98.62	85.67	119.64
Total Height	Inches	30.74	30.74	29.4	29.4	55.9	70.87
Width	Inches	28.34	28.34	37.55	37.55	59.76	64.56
Pump Weight	Lbs	2560	3250	5400	6855	11177	22928

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