

NTRV Series

Two-Stage Oil-Flooded Rotary Vane Vacuum Pumps

Models: NTRV05, NTRV10, NTRV20, NTRV40, NTRV60, NTRV80, NTRV100, NTRV180



OVERVIEW

Introducing the NES Company Inc. NTRV series of rotary vane vacuum pumps. These compact two-stage vacuum pumps are capable of achieving up to 1×10^{-3} torr, with flow rates ranging from 2 to 64 CFM and power ratings between 0.16 and 5 HP. Crafted with precision machining and stringent tolerances, the NTRV Series ensures minimal noise and vibration, prioritizing both operator safety and comfort during operation.

UNIQUE FEATURES

- The NTRV Series offers a **maximum vacuum pressure of 1×10^{-3} torr**.
- Its emphasis on **low noise and minimal vibration** enhances operational stability and operator comfort.
- The pump features a **simple design** with sparse parts, facilitating internal access and maintenance procedures.
- The inclusion of an **inlet port wire mesh dirt trap** sieves coarse particles for the cleanliness and efficiency of the system.
- Constructed with either cast iron or die-cast aluminum, the pump boasts a **robust and compact build**, ideal for settings where durability and space efficiency are paramount considerations.
- The **oil lubrication mechanism** acts as a protective barrier, safeguarding the chamber and vanes against friction and the adverse effects of harsh process gases, thereby prolonging the lifespan and reliability of the equipment in demanding operating environments.

BASIC SPECIFICATION

MODELS	NTRV 05, 10, 20, 40, 60, 80, 100, 150, 180
CAPACITY RANGE	1.76 – 63.6 CFM
POWER	0.16 – 5 HP
ULTIMATE VACUUM LEVEL	NTRV 05: 3×10^{-3} torr NTRV 10-180: 1×10^{-3} torr



COMMON APPLICATION

Our NTRV Two-Stage Oil-Flooded Rotary Vane vacuum pumps find widespread application in Anesthetic Gas Extraction, Distillation & Fractionation, Gel Drying, Lab Top Bench, Vacuum Ovens & Furnaces, Prosthetic Raw Material Degassing, Resin Degassing, Sputter & Deposition Systems, Thin Film Coating, and Turbo Pump Backing to meet the demanding needs of industrial processes across the globe.

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GENERAL PERFORMANCE PARAMETER

		NTRV05	NTRV10	NTRV20	NTRV40
Pumping Speed [CFM]		1.8	3.5	7.1	14.1
Ultimate Pressure [Torr]	Gas Ballast Closed	≤3X10 ⁻³	≤1X10 ⁻³		
	Gas Ballast Open	5X10 ⁻²			
Power Input [ϕ/Hz/VAC]	Standard	1/60/220			
	Options	1/60/110	3/60/220,380		
Full Load Power [hp]		0.16	0.5	0.5	1
Motor Speed [rpm]		1700			
Inlet & Outlet Connection Size	Standard	NW16 (NW25 available)	NW25	NW25	NW25
	For more information on available inlet/outlet connection sizing options, please contact an NES representative.				
Oil Capacity (qts.)		0.21	0.52	0.64	1.59
Weight (ϕ /lbs.)		1/31.3	1/50 3/42.4	1/51 3/44	1/77 3/70
Ambient Temperature [°F]		45-104			
Length (inch)		15.4	16.6	16.6	19
Width (inch)		4.7	5.9	5.9	6.7
Height (inch)		7.9	9.8	9.8	11.3

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		NTRV60	NTRV80	NTRV100	NTRV180
Pumping Speed [CFM]		21.2	28.3	35.3	63.6
Ultimate Pressure [Torr]	Gas Ballast Closed	$\leq 1 \times 10^{-3}$			
	Gas Ballast Open	5×10^{-2}			
Power Input [ϕ /Hz/VAC]	Standard	3/60/220,380			
	Options	1/60/220			
Full Load Power [hp]		2	2	2	5
Motor Speed [rpm]		1700			
Inlet & Outlet	Standard	NW40 (NW25 available)	NW40 (NW25 available)	NW40 (NW25 available)	NW40
	<i>For more information on available inlet/outlet connection sizing options, please contact an NES representative.</i>				
Oil Capacity (qts.)		2.43	2.85	4.76	6.55
Weight (lbs.)		1/118 3/110.5	1/150 3/143.5	1/180 3/174	3/235
Ambient Temperature		45-104			
Length (inch)		24	24.6	26.1	30.6
Width (inch)		8.1	8.9	10.4	10.4
Height (inch)		12.3	13.6	7.9	17.4

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