

NRV Series

Oil-Flooded Single-Stage Rotary Vane

Models: NRV06, NRV08, NRV10, NRV16, NRV20, NRV31, NRV41, NRV64, NRV161, NRV201, NRV251, NRV301, NRV400, NRV630



OVERVIEW

NES Company Inc. is proud to offer the NRV Series oil-circulated single-stage rotary vane pumps are designed for smaller-scale applications.

They operate by leveraging the oil's sealing properties within the pump chamber, effectively sealing incoming gases between the vanes on the rotor.

An essential feature of NRV pumps is their vanes, which are pressed against the pump chamber. These vanes oscillate within the rotor during pump operation, spreading oil around the pump chamber and completing the seal.

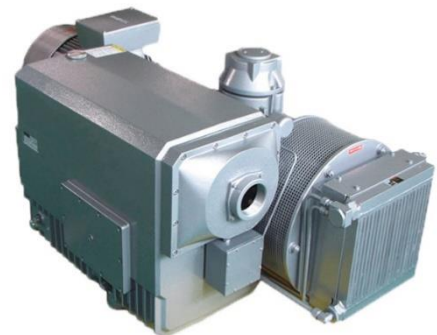
The oil within a rotary vane pump undergoes recycling during operation, ensuring an extended service life with minimal maintenance requirements. As the pump operates, it circulates its oil by initially discharging it alongside the pressurized process gas into an oil mist trap or discharge filter. This separation process occurs within a separator attached to the side of the rotary vane pump, establishing a closed circulation loop for the oil.

Consequently, the pump can function without the need for additional process hardware, depending on the process gas. After separation, the oil undergoes filtration through an oil filter, enabling the pump to tolerate a certain level of fine particulates without experiencing damage or performance degradation.

This inherent robustness and reliability make NRV pumps a dependable choice for a vast array of applications and industries worldwide.

CHARACTERISTICS

- **Environmentally Friendly:** With no unnecessary emissions and minimal contamination of pumped materials through filtration and oil separation, the pump is able to perform environmentally sustainable practices, contributing to a cleaner and safer working environment.
- **Simple Maintenance:** The pump system boasts minimal maintenance requirements, necessitating only simple oil changes at regular, extended intervals. This low maintenance demand translates to reduced downtime and enhanced operational efficiency.
- **Access to Parts:** NES Company distinguishes itself in the industry by providing access to spare parts, facilitating do-it-yourself repairs and maintenance.
- **Reliability:** Engineered to withstand harsh pumping loads and operating conditions, the NRV Series rotary vane pumps ensure consistent performance and reliability, providing peace of mind to operators in especially demanding industrial environments.



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FEATURES

- **High Vacuum Performance:** Achieve superior vacuum levels with our rotary vane pumps, ensuring efficient and reliable operation in demanding applications.
- **Quiet Operation:** Engineered for low noise levels, our rotary vane pumps provide a quiet working environment without compromising performance.
- **Compact Design:** With a compact footprint, NRV Series rotary vane pumps are easy to install and integrate into existing systems, saving valuable space in your facility.
- **Easy Installation & Operation:** Designed for user-friendly installation and operation, our rotary vane pumps come with clear instructions and intuitive controls for hassle-free use.



COMMON APPLICATION

Vacuum Forming, Packaging, Degassing and Dehydration, Printing, HVAC Systems, Vacuum Lifting Systems, etc.

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GENERAL PERFORMANCE PARAMETER

Parameter		Units	NRV-06	NRV-08	NRV-10	NRV-16	NRV-20	NRV-31	NRV-41	NRV-64
Exhaust Vol.		CFM	4.24	5.65	7.06	11.18	14.13	21.19	28.25	44.73
Ultimate Vacuum	W/ float valve	mbar	2	0.5		2		0.5		
	W/O float valve	mbar	20							
Motor Specs		ϕ, V	3, 220/380 1, 220						3, 220/380	3, 220/380 1, to order
		ϕ /Hz/HP	3/60/0.5 1/60/0.5	3/60/0.4 1/60/0.5	3/60/0.74 1/60/0.74	3/60/0.6 1/60/0.74	3/60/1 1/60/1.15	3/60/1.48 1/60/2.01	3/6/2.01	3/60/3.39
		RPM	1720	1720	1680	3600	3400	7800	1710	1760
Operating Temperature		°F	104	104	104	104	104	104	104	104
Oil Volume		qt	0.24	0.32	0.42	0.32	0.42	1.06	1.06	2.11
Weight		lbs.	26.5	40	44	40	44	75	84	141.1
Length (bare)		inches	8.2	8	10	8	10.5	17.5	18	21.5
Width		inches	6.3	9.2	9	9.2	9	9	9	16.5
Height		inches	7.4	6.3	8.5	6.3	8.5	10	10	12
Sound Level		dBA	50	59	58	60	61	64	67	68

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Parameter		Units	NRV- 101	NRV-161	NRV-201	NRV-251	NRV-301	NRV-400	NRV-630
Exhaust Vol.		CFM	70.63	111.83	141.26	176.57	211.89	282.52	447.32
Ultimate Vacuum	W/ float valve	mbar	0.5						
	W/O float valve	mbar	20						
Motor Specs		φ, V	3, 220/380 1, to order	3, 220/380				3, to order	
		φ /Hz/HP	3/60/4.63	3/60/7.5	3/60/7.5	3/60/10	3/60/15	3/60/20	3/60/25
		RPM	1760	1800	1800	1800	1800	1200	1200
Operating Temperature		°F	104	104	104	104	104	104	104
Oil Volume		qt	2.11	7.25	7.25	7.25	7.25	13.7	15.85
Weight		lbs.	165.4	385	408	445	480	1210	1474
Length (bare)		inches	29	32	34	32	34	41.3	49
Width		inches	16.5	23	24.5	23	24.5	32.9	32.9
Height		inches	12	16.5	16.5	16.5	16.5	26.3	26.3
Sound Level		dB	70	72	74	74	76	72	74

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