

Rotary Vane Pumps

New TRIVAC NT

The Cool Generation.

171.51.02



TRIVAC NT

Simply convincing.

As specialists for vacuum engineering, Oerlikon Leybold Vacuum has many years of experience in the development and manufacture of oil-sealed rotary vane vacuum pumps. These are used in all areas of vacuum engineering and are suited for many tasks in research and industrial applications.

TRIVAC NT series pumps are oil sealed vacuum pumps based on the rotary vane principle. The oil injected into the pump chamber is used for sealing, lubrication and cooling purposes.

Features at a Glance

- Habitual TRIVAC quality and reliability
- Excellent performance data
- Optimized thermal profile
- Significantly enhanced oil lifespan resulting in reduced oil consumption
- Low oil back streaming
- Increased service life
- Reduced spare part requirements
- High system compatibility

TRIVAC NT Product Range

The dual stage rotary vane vacuum pumps of the TRIVAC NT line are modern pumps developed on the basis of the well proven TRIVAC A and TRIVAC B series setting latest technology standards.

The performance scope and the operating characteristics have been optimized to match increasing market requirements.

Besides the customary quality and reliability, the TRIVAC NT pumps offer an improved thermal profile, a lower noise level, low oil back streaming and relevantly fewer components. The low operating temperatures lead to an increased service life of the components due to stress reduction of the parts. Together with the reduced spare parts requirements and enhanced oil service life, significant benefits result regarding maintenance and service-friendliness.

The rotary vane pumps of the TRIVAC NT line have almost the same size as their TRIVAC predecessors, thus allowing an easy substitution on a 1:1 basis without problems. Already existing TRIVAC accessories can be fitted directly (TRIVAC NT 16) or via an ISO-KF connection adapter.

Applications

Oil sealed rotary vane vacuum pumps are used in all areas of vacuum technology and are particularly well-suited to many applications in production and research.

Rotary vane pumps serve the purpose of generating a vacuum in the rough and medium vacuum pressure range or are used as backing pumps in combination with roots, diffusion, turbomolecular and cryogenic pumps.

Typical application examples:

- Vacuum coating
- Research and development
- Chemistry/pharmaceuticals
- Metallurgy/furnaces
- Lamps and tubes manufacture
- Automotive industry
- Space simulation
- Analytical engineering
- Environment engineering
- Cooling and air-conditioning
- Electrical engineering
- Mechanical engineering
- Medicine technology
- Vacuum drying cabinets
- Chemistry and research labs
- Freeze-drying systems
- High vacuum pump systems



The sophisticated ventilation results in a longer component and oil lifetime leading to an increased process uptime

The cool generation

from the specialists for rotary vane vacuum pumps.

Customer Benefits

TRIVAC NT 5 / NT 10

- High pumping speed from a small, compact pump
- Low noise operation
- Plug and Play (delivery with oil filling and ISO KF connection)
- Low oil backstreaming
- Continuous 1000 mbar operation
- Motors with all common voltage and frequency ratings
- Low energy and oil consumption
- High water vapor tolerance
- Integrated vacuum safety valve

TRIVAC NT 16 / NT 25

- High pumping speed
- Low operating temperature
- Low noise operation
- Plug and Play (delivery with oil filling and ISO KF connection)
- Low oil backstreaming
- Continuous 1000 mbar operation
- Anti-suckback valve controlled through the oil pressure
- Low oil consumption
- Motors with all common voltage and frequency ratings
- Low energy consumption
- High water vapor tolerance

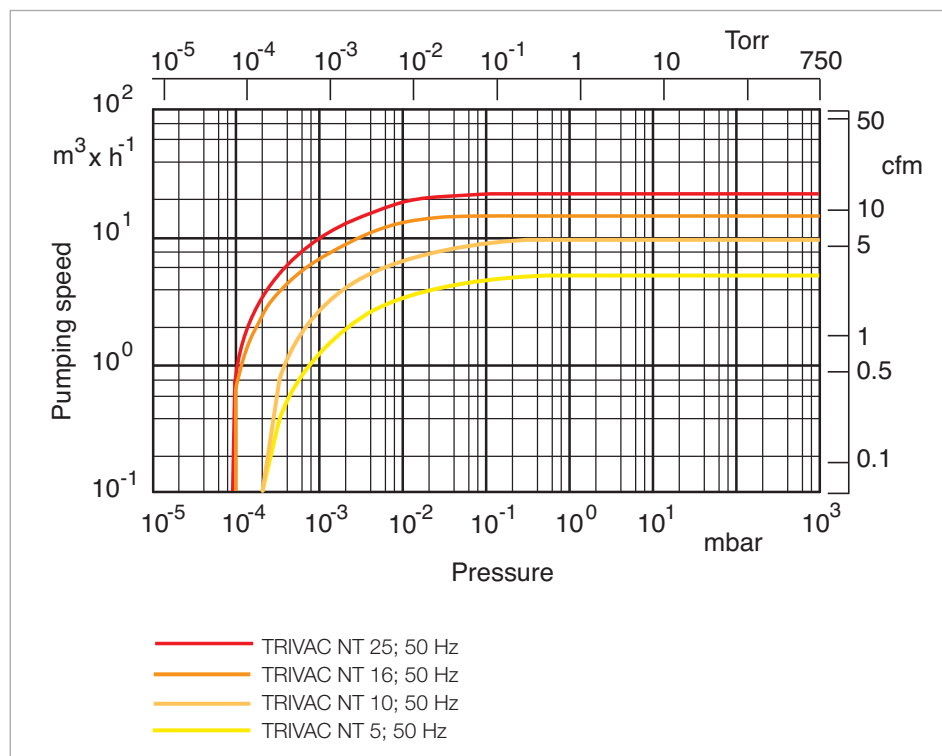


TRIVAC NT 5 and NT 10 with 3 phase motors



TRIVAC NT 25 and NT 16 with single phase motors

Pumping Speed Characteristics



Supplied Equipment

TRIVAC NT 5

TRIVAC NT 10

TRIVAC NT 16

TRIVAC NT 25

- Small flanges
- Centering and clamping rings
- Dirt trap
- Oil filling
- Main cord with the specific plug for Euro, USA and Japan motors
- Optional: Main cord with country specific plug for the dual voltage motor

Standard TRIVAC NT pumps come with a standard vacuum oil filling. Special oil fillings can be specified.

The new TRIVAC NT series - simply better.

Technical Data

Ordering Information

Rotary vane vacuum pump		TRIVAC NT 5	TRIVAC NT 10	TRIVAC NT 16	TRIVAC NT 25	
Nominal pumping speed*	m ³ /h	6	12	18.9	29.9	
	cfm	3.5	7.1	11.1	17.5	
Pumping speed*	m ³ /h	5.2	9.9	16.5	25.7	
	cfm	3.1	5.8	9.7	15.1	
Ultimate partial pressure w/o gas ballast*	mbar	< 5 x 10 ⁻⁴	< 5 x 10 ⁻⁴	10 ⁻⁴	10 ⁻⁴	
	Torr	< 3.8 x 10 ⁻⁴	< 3.8 x 10 ⁻⁴	0.75 x 10 ⁻⁴	0.75 x 10 ⁻⁴	
Ultimate total pressure*	without gas ballast	mbar	< 2 x 10 ⁻³	< 2 x 10 ⁻³	< 2 x 10 ⁻³	
		Torr	< 1.5 x 10 ⁻³	< 1.5 x 10 ⁻³	< 1.5 x 10 ⁻³	
	with gas ballast (stage 2)	mbar	< 3 x 10 ⁻²	< 3 x 10 ⁻²	< 5 x 10 ⁻³	< 5 x 10 ⁻³
		Torr	< 2.25 x 10 ⁻²	< 2.25 x 10 ⁻²	< 3.8 x 10 ⁻³	< 3.8 x 10 ⁻³
Water vapor capacity	g/h	148	219	305	476	
Oil filling min./max.	l	0.75 / 1.25	0.75 / 1.25	0.7 / 1.0	1.1 / 1.5	
Noise level	dB(A)	< 49	< 49	< 54	< 54	
Motor rating	W	550	550	550	550	
	HP	0.75	0.75	0.75	0.75	
Nominal speed of the pump	rpm	1500	1500	1500	1500	
Motor protection type	IP	54	54	44	44	
Connections, intake and exhaust	DN	25 KF	25 KF	25 KF	25 KF	
Connection adapter, horizontal (optional)	DN	16 KF	16 KF	25 KF	25 KF	
Weight (incl. oil filling)	kg	22.1	24.2	35	41	
	lbs	48.8	53.4	77.2	90.4	

* in accordance with DIN 28 400 as well as further German and international standards.

Ordering Information

		TRIVAC NT 5	TRIVAC NT 10	TRIVAC NT 16	TRIVAC NT 25
with single phase Euro motor	Part No.	140 214	140 314	140 231	140 336
with single phase World motor	Part No.	-	-	140 220	140 330
220-240 / 230 V, 50/60 Hz					
with 3-phase World motor					
V 200-240 V / Y 346/415 V, 50 Hz;					
V 200-266 V / Y 346-460 V, 60 Hz	Part No.	140 213	140 214	140 221	140 331

All pumps are supplied with standard vacuum oil filling.

This ordering information represents just a small selection of our TRIVAC NT program range. For further information on motor variations, oils and the complete range of accessories please refer to our main Oerlikon Leybold Vacuum catalog, chapter rotary vane vacuum pumps.

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