

TRIVAC E, Two-Stage, Oil-Sealed Rotary Vane Vacuum Pump



TRIVAC D 2.5 E

The TRIVAC E pump is an oil-sealed vacuum pump operating according to the rotary vane principle. Oil which is injected into the pump chamber is used for sealing, lubrication and cooling purposes.

New customers' requirements as well as increased environmental requirements gave rise to the further development of the successful range of TRIVAC B pumps.

The result is the new TRIVAC E rotary vane vacuum pump.

Beyond the usual quality and reliability of the B series pumps, the TRIVAC E pump offers improvements in the area of quieter operation, smaller size and improved service-friendliness.

The intake and exhaust ports are equipped with small flanges. Besides standard voltages and frequencies, LEYBOLD offers world motors, which are specially required by OEMs.

The new TRIVAC E pump includes also a set of accessories which also fits to the TRIVAC D 4 - 16 B.

Advantages to the User

- ◆ Highly reliable
- ◆ Small and compact
- ◆ Quiet operation
- ◆ Environmentally compatible (low oil consumption, EMI compatible; IP 54 protection)
- ◆ Process quality (little backstreaming of oil)
- ◆ Motors for all standard supply voltages and frequencies
- ◆ Safe and intelligent vacuum protection (hermetically sealed)
- ◆ Free of yellow metals
- ◆ Compliance with international standards (CE, UL and CSA)
- ◆ Suitable for continuous operation at 1000 mbar (750 Torr)
- ◆ Low power consumption
- ◆ Better individual performance given by 3 stage gas ballast device
- ◆ High water vapor tolerance
- ◆ Simplified customizing ability

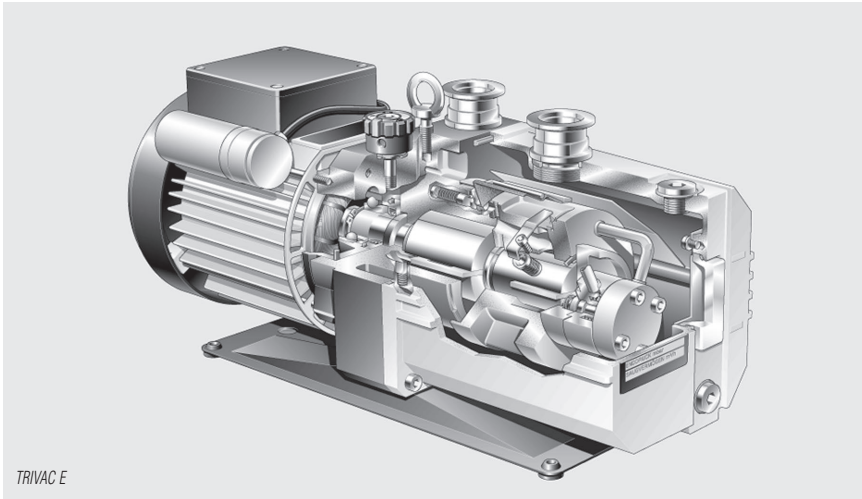
Typical Applications

- ◆ Mass spectrometers
- ◆ Electron beam microscopes
- ◆ Sterilizers
- ◆ Freeze-drying systems
- ◆ Chemical and research labs
- ◆ TV tube
- ◆ General vacuum engineering
- ◆ Backing pump for high vacuum pump systems

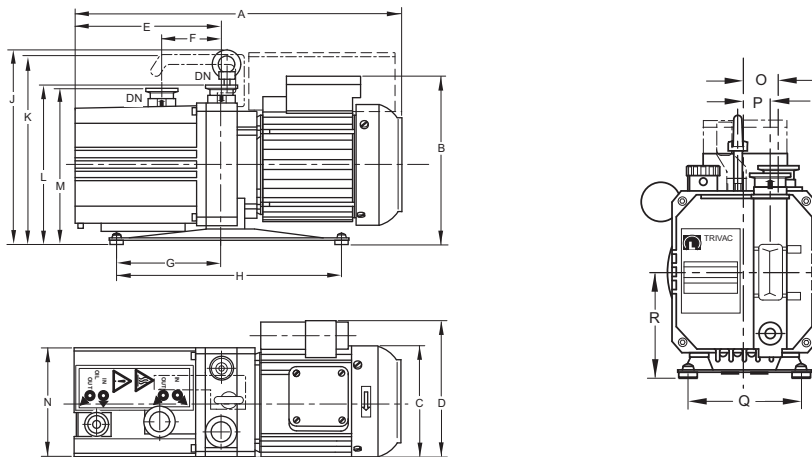
Supplied Equipment

- ◆ Dirt trap
- ◆ Oil filling included separately (standard N 62)
- ◆ Gas ballast device
- ◆ Main cord with the specific plug for Euro, USA and Japan motors
- ◆ Optional: Main cord with country specific plug for the world motor
- ◆ With handle

ALL PUMPS ARE SUBJECTED TO A VACUUM TEST BEFORE DELIVERY!



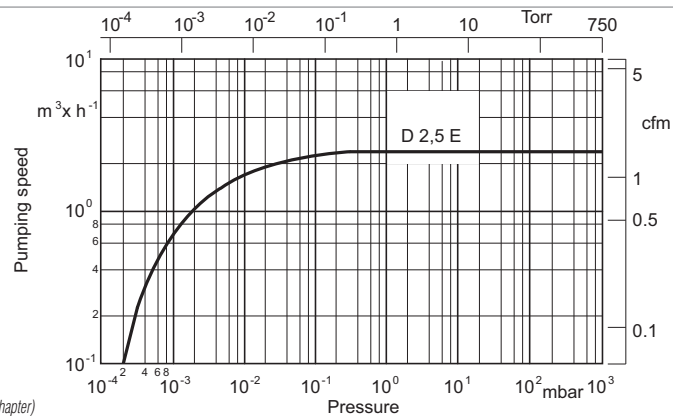
TRIVAC E



	A		B		C		D			E	F	G	H	J	K	L	M	N	O	P	Q	R	DN	
	EURO	World	EURO	World	EURO	World	EURO	JAP	USA	World														
	JAP, USA	1~	JAP, USA	1~	JAP, USA	1~				1~														
mm	388.5	393.5	210.5	227.5	127	127	148.5	153.5	153.5	*	162.5	75.5	119.5	225	231.5	225	182	177	113	27	15	83	84.5	16 KF
in	15.3	15.7	8.29	8.96	5	5	5.85	6.04	6.04		6.40	2.97	4.70	8.86	9.90	8.86	7.16	6.97	4.45	1.06	.59	3.27	3.33	16 KF

Dimensional drawing for the TRIVAC D 2.5 E

* Condensers in the connection box



Pumping speed of the TRIVAC D 2.5 E at 50 Hz. (60 Hz curves at the end of the chapter)

Technical Data		D 2.5 E	
		50 Hz	60 Hz
Nominal pumping speed *	m ³ x h ⁻¹ (cfm)	3.2 (1.9)	3.6 (2.1)
Pumping speed *	m ³ x h ⁻¹ (cfm)	2.7 (1.6)	3.3 (1.9)
Ultimate partial pressure without gas ballast	mbar (Torr)	≤ 5 x 10 ⁻⁴ (≤ 3.8 x 10 ⁻⁴)	
Ultimate total pressure without gas ballast **	mbar (Torr)	≤ 2 x 10 ⁻³ (≤ 1.5 x 10 ⁻³)	
Ultimate total pressure with gas ballast Step 2**	mbar (Torr)	≤ 3 x 10 ⁻² (≤ 2.3 x 10 ⁻²)	
Water vapor tolerance			
Step 1	mbar (Torr)	10 (7.5)	
Step 2	mbar (Torr)	20 (15)	
Step 3	mbar (Torr)	30 (22.5)	
Water vapor capacity			
Step 1	gm/h	20	
Step 2	gm/h	40	
Step 3	gm/h	60	
Oil filling, max./min.	l (qt)	0.7/0.4 (0.7/0.4)	
Noise level	dB(A)	≤ 47	
Admissible ambient temperature	°C (°F)	10 to 50 (50 - 122) (EURO motor) / 10 to 40 (50 - 104) (USA/Japan motor)	
Motor rating 50/60 Hz	W (HP)	250 (0.34)	300 (0.41)
Nominal speed 50/60 Hz	rpm	1400	1600
Type of protection	IP	54	
Weight (with oil filling)	kg (lbs)	15.3 (33.7)	
Dimensions (W x H x D)	mm (in.)	127 x 225 x 383 (5 x 8.86 x 15)	
Connections (Intake and Exhaust)	DN	16 KF	

* To DIN 28 426 T1

** To DIN 28 400 and following numbers

Motor Dependent Data

Motors for D 2.5 E	Voltage V	Frequency Hz	Voltage tolerance	Power consumption W (HP)	Nominal current A	Protection	Nominal speed rpm
Euro 1 ~	220-240/230	50/60	+/- 5 %	250/300 (0.34/0.41)	1.8/1.4	IP 54	1400/1600
Japan 1 ~	100	50/60	+/- 5 %	250/300 (0.34/0.41)	5.5/4.0	IP 54	1400/1600
USA 1 ~	110-120	60	+/- 5 %	300 (0.41)	3.3	IP 54	1600
World 1 ~	100-120; 200-240	50/60	+/- 5 %	250/300 (0.34/0.41)	4.4/3.0 2.2/1.5	IP 54	1400/1600