



Leybold WS/WSU-251, 501

Technical Specifications

		WS/WSU 251		WS/WSU(H) 501	
		50 Hz	60 Hz	50 Hz	60 Hz
Nominal pumping speed ¹⁾	m ³ x h ⁻¹ (cfm)	253 (149)	304 (179)	505 (297.4)	606 (357)
Max. effective pumping speed with backing pump	m ³ x h ⁻¹ (cfm)	210.0 (123.7)	251.0 (148.0)	410.0 (241.0)	530.0 (312.0)
	TRIVAC	D 65 B	D 65 B	–	–
	SOGEVAC	–	–	SV 200	SV 200
Ultimate total pressure ²⁾	mbar (Torr)	< 8 x 10 ⁻⁴ (< 6 x 10 ⁻⁴)	< 8 x 10 ⁻⁴ (< 6 x 10 ⁻⁴)	< 4 x 10 ⁻² (< 3 x 10 ⁻²)	< 4 x 10 ⁻² (< 3 x 10 ⁻²)
Max. permissible pressure difference during continuous operation ³⁾	mbar (Torr)	80.0 (60.0)	80.0 (60.0)	80.0 (60.0)	80.0 (60.0)
Leak rate, integral	mbar x l x s ⁻¹	< 1 x 10 ⁻⁴	< 1 x 10 ⁻⁴	< 1 x 10 ⁻⁴	< 1 x 10 ⁻⁴
Mains supply					
Δ / Y	V	200 / 230 / 400	200-208 / 265 / 460	200 / 230 / 400	200-208 / 265 / 460
Thermal class		F	F	F	F
Permissible ambient temperatures	°C (°F)	+5 to +40 (+ 41 to +104)	+5 to +40 (+ 41 to +104)	+5 to +40 (+ 41 to +104)	+5 to +40 (+ 41 to +104)
Motor power	kW (hp)	1.1 (1.5)	1.4 (1.9)	2.2 (3.0)	2.4 (3.3)
Nominal speed, approx.	rpm	3000	3600	3000	3600
Max. permissible speed	rpm	6000	6000	6000	6000
Type of protection	IP	20	20	20	20
Lubricant for the bearing chamber ⁴⁾					
LVO 400					
vertical pumping action, approx.	l (qt)	0.55 (0.58)	0.55 (0.58)	0.75 (0.79)	0.75 (0.79)
horizontal pumping action, approx.	l (qt)	0.45 (0.48)	0.45 (0.48)	0.7 (0.74)	0.7 (0.74)
other oils					
vertical pumping action, approx.	l (qt)	0.6 (0.63)	0.6 (0.63)	0.8 (0.85)	0.8 (0.85)
horizontal pumping action, approx.	l (qt)	0.45 (0.48)	0.45 (0.48)	0.7 (0.74)	0.7 (0.74)
Connection flanges	DN	63 ISO-K	63 ISO-K	63 ISO-K	63 ISO-K
Weight WS / WSU	kg (lbs)	90.0 / 95.0 (198.5 / 209.5)	90.0 / 95.0 (198.5 / 209.5)	130.0 / 135.0 (286.7 / 297.7)	130.0 / 135.0 (286.7 / 297.7)
Noise level ⁵⁾	dB(A)	< 58	< 60	< 52	< 56

¹⁾ To DIN 28 400 and subsequent numbers

²⁾ With double-stage rotary vane vacuum pump TRIVAC or single-stage rotary vane vacuum pump SOGEVAC
(Type of backing pump look at max. pumping speed)

When using 2-stage backing pumps the ultimate pressures will be correspondingly lower

³⁾ Applicable for ratio up to 1 : 10 between backing pump and Roots vacuum pump at 3000 rpm

⁴⁾ Authoritative, however, is the oil level at the oil-level glass

⁵⁾ Valid under ultimate pressure conditions. Pressures over 10 mbar (7.5 Torr) produce a higher operating noise



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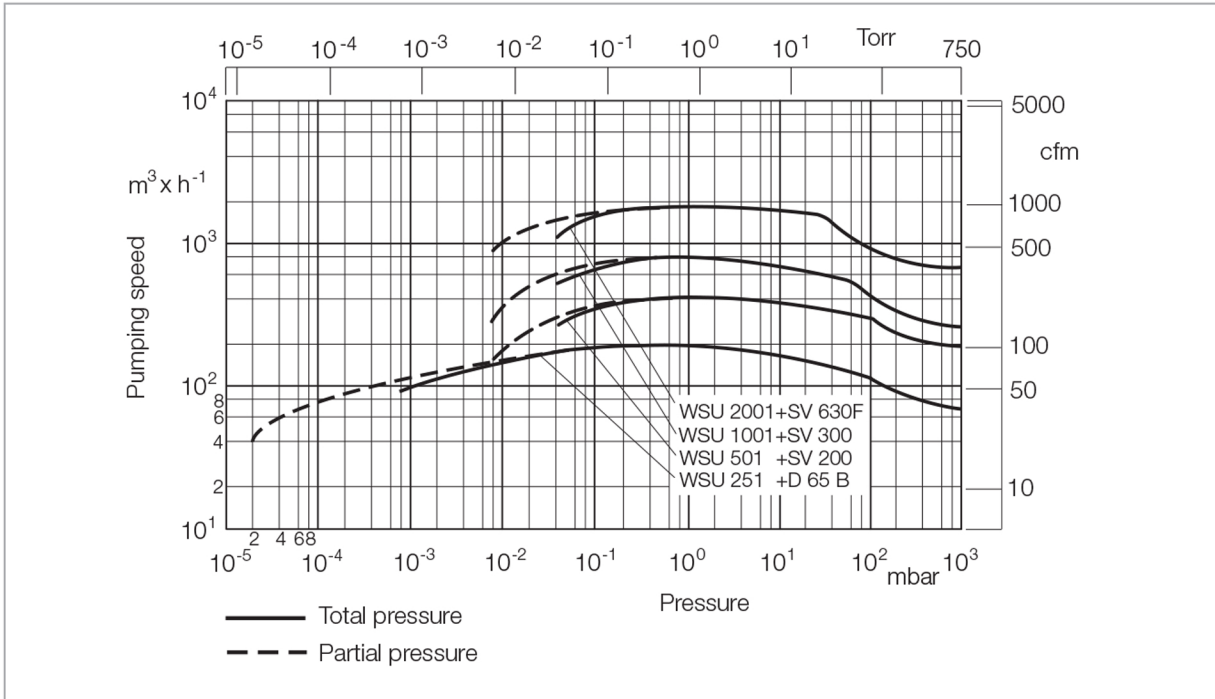
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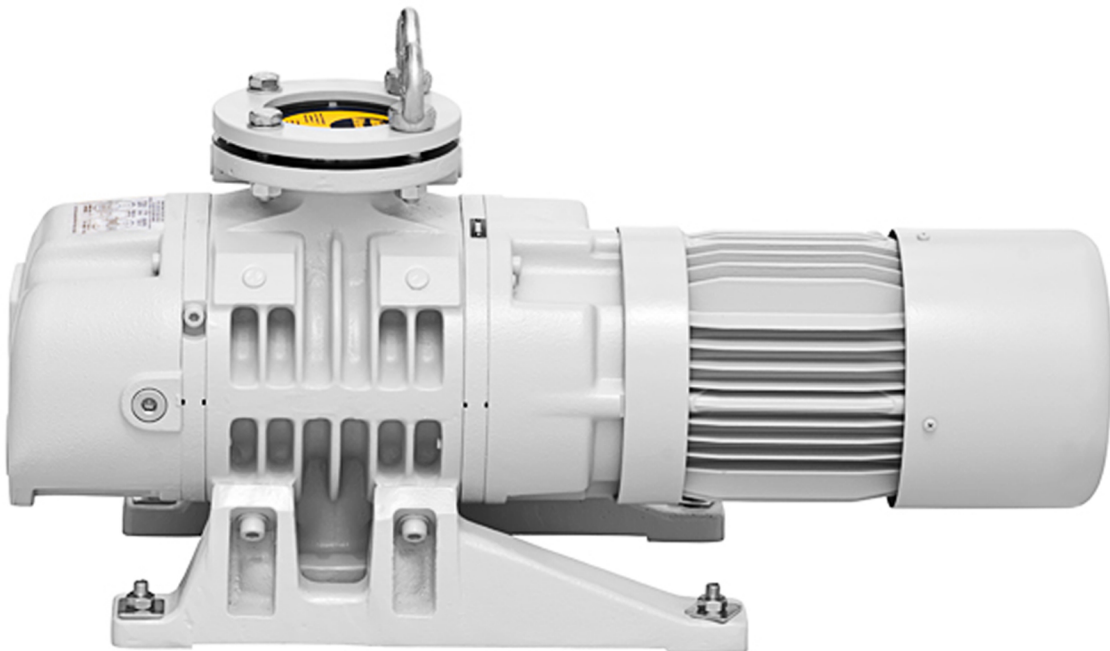
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Leybold WS/WSU-251, 501 Pumping Curves



Pumping speed of the RUVAC WS/WSU, 50 Hz





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Features & Benefits

- 2 air-cooled lines WS/WSU, each with four pump sizes
- highly leak-tight air-cooled pumps driven by an air-cooled canned motor
- lubricated with mineral oil (alternatively with LVO 400)
- over-temperature switch in the stator coil of the motor
- all elastomer seals made of FPM (FKM)/Viton
- integrated pressure equalization line with differential pressure valve prevents overloading on WSU model (optional)
- a frequency converter can be used to operate the RUVAC WS 251 to 2001 pumps between 20 and 100 Hz
- no shaft feedthrough to the atmosphere, making it leak-tight

Applications

- for applications requiring a high pumping speed at pressures between 0.75×10^{-2} and 0.75×10^{-4} Torr
- suction or pumping of high-purity gases
- used in clean rooms where air can't be recirculated by the motor's fan
- large scale research • metallurgy / furnaces • lamps and tubes manufacturing • central vacuum supply systems • freeze drying • leak testing systems • electrical / mechanical engineering • automotive