



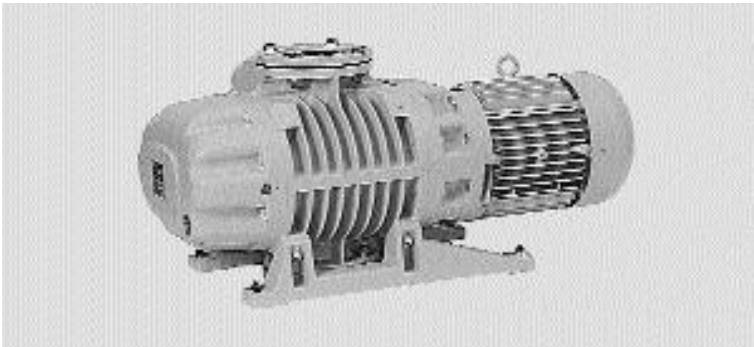
Product-Illustration

Product-Description

Product-Information

RUVAC WS / WSU 2001

Roots vacuum pumps with
air-cooled canned motors
Cat. Nr.: 11752



Roots vacuum pumps from LEYBOLD have been designed to specially meet the requirements of the fine vacuum range. They are normally used in connection with backing pumps (exception RAV) or in closed gas cycles (WSLF series).

The pumps are driven by canned motors. The oiled radial sealing rings for sealing the shaft against the atmosphere are made of FPM (fluor caoutchouc).

Pumps from these series are supplied with a vertical pumping action as standard.

Advantages to the User

- Two series, each with four models
- Highly leak-tight air-cooled pumps driven by a air-cooled canned motor
- Lubricated with mineral oil. RUVAC WS/WSU PFPE with perfluoropolyether (PFPE)
- WS and WS PFPE pumps are identical except for the lubricant and the shipping package
- No thermal problems due to the speed independent cooling arrangement using a separately connected fan, thus no thermal problems at low speeds
- Over-temperature switch in the stator coil of the motor
- All elastomer seals made of FPM/Viton
- For use with a frequency converter for a wide frequency range
- No shaft feedthrough to the atmosphere, thus particularly leaktight
- Pumping direction may be changed asrequired

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Typical Applications

- For applications which require a high pumping speed at pressures between 10 E-2 and 10 E-4 mbar (0.75 x 10 E-2 and 0.75 x 10 E-4 Torr)
- Used where the possibility of contamination due air ingress or pumped media leakage must be avoided
- Suction or pumping of high-purity or radio-active gases
- Is used in clean rooms were the air must not be recirculated by the motor's fan

Supplied Equipment

- The required oil or PFPE filling is included in separate bottle
- Purged with nitrogen for corrosion protection
- Gasket in the intake flange with integrated dirt sieve

RUVAC WS

Description	Unit	Value
Nominal pumping speed (50 Hz/60 Hz) 1)	m E3 x h E-1 (cfm)	2050 (1207.5)/2460 (1449)
Max. pumping speed with backing pump SOGEVAC SV 630 F(50 Hz/60 Hz)	m E3 x h E-1 (cfm)	1850 (1089)/1210 (1236)
Ultimate partial pressure 2)	mbar (Torr)	< 8 x 10 E-3 (<6 x 10 E-3)
Ultimate total pressure 2)	mbar (Torr)	< 4 x 10 E-2 (<3 x 10 E-2)
Permissible cut-in pressure (50 Hz/60 Hz)	mbar (Torr)	30/25 (22.5/18.5)
Max. permissible pressure difference during continuous operation 3)	mbar (Torr)	50 (37.5)
Main supply -/Y (50 Hz/60 Hz)	VV	200/- / 200-208/-230/4400 / 265/460
Thermal class		F
Motor power (50 Hz/60 Hz)	kW (hp)	7.5 (10) / 8.5(11.6)

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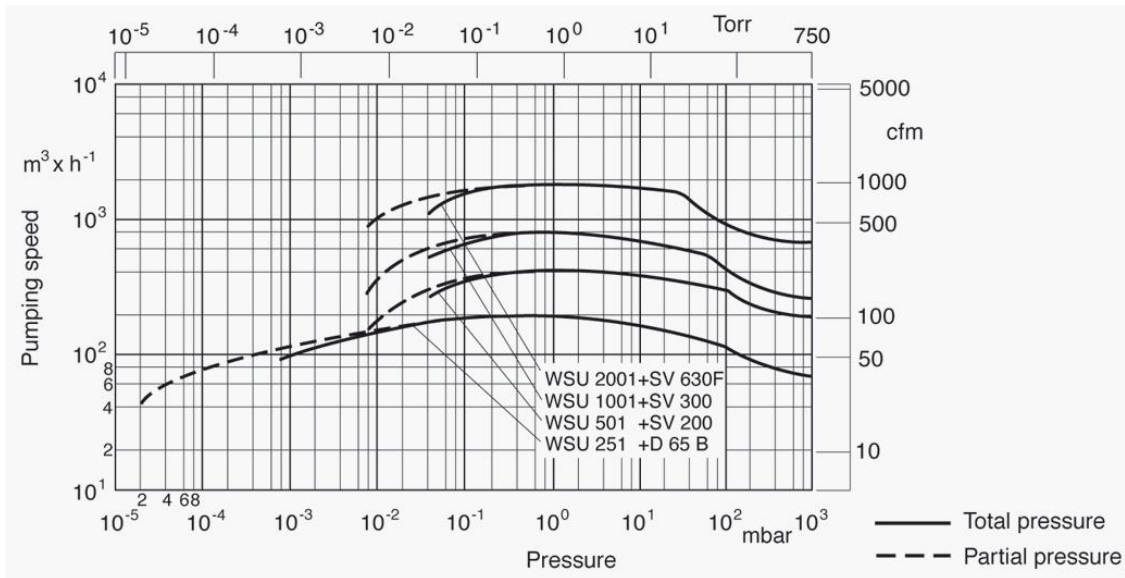
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Nominal speed, approx. (50 Hz/60 Hz)	rpm	3000/3600
Max. permissible speed	rpm	4200
Type of protection	IP	20
Oil filling for the bearing chamber PFPE 4) vertical pumping action, approx.	l (qt)	1. Filling 5) 3.0 (3.17) / 2. Filling 2.7 (2.85)
Oil filling for the bearing chamber PFPE 4) horizontal pumping action, approx.	l (qt)	1. Filling 5) 2.1 (2.22) / 2. Filling 1.9 (2.0)
Oil filling for the bearing chamber other Oils 4) vertical pumping action, approx.	l (qt)	1. Filling 5) 3.85 (4.07) / 2. Filling 3.6 (3.81)
Oil filling for the bearing chamber other Oils 4) horizontal pumping action, approx.	l (qt)	1. Filling 5) 2.6 (2.75) / 2. Filling 2.4(2.54)
Connection flanges	DN	160 ISO-K
Weight	kg (lbs)	458 (1009.9)
Noise level 6)	dB(A)	< 72
1) To DIN 28 400 and subsequent numbers		
2) With single-stage rotary vane vacuum pump SOGEVAC or reapp. dry compressing screw pump ScrewLine(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) After a complete disassembly		
6) At an operating pressure below < 10 E-1 mbar (< 0.75 x 10 E-1 Torr)		

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Illustrations



		d	h	h ₁	h ₂	h ₃	h ₄	h ₅ ¹⁾	h ₆
WS/WSU 2001	mm	50	530	300	460	351	578	760	523
	in.	2.00	20.87	11.81	18.11	13.82	22.76	29.92	20.59
WS/WSU 2001H	mm	50	530	300	460	351	578	753	530
	in.	2.00	20.87	11.81	18.11	13.82	22.76	29.65	20.87

¹⁾ For RUVAC WSU only
 Outside dimensions +/- 3mm

DN = ND 6 pump flange in accordance with DIN 2501
 DN₁ = Collar flange with gasket for connecting ISO-K standard components

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Type		DN/DN1	DN ₁	a	a ₁	a ₂	a ₃	a ₄	a ₅
WS/WSU 2001	mm	50	160 ISO-K	1042	800	740	18	367	220
	in.			41.02	31.50	29.13	0.71	14.45	8.66
WS/WSU 2001H	mm	150	160 ISO-K	1042	800	740	18	367	220
	in.			41.02	31.50	29.13	0.71	14.45	8.66

		b	b ₁	b ₂	b ₃	b ₄	b ₅	b ₆	b ₇ ¹⁾	b ₈	b ₉
WS/WSU 2001	mm	463	518	388	460	422	292	24	638	456	7.5
	in.	18.23	20.39	15.28	18.11	16.61	11.50	0.94	25.12	17.95	0.30
WS/WSU 2001H	mm	463	518	388	460	422	292	24	642	460	7.5
	in.	18.23	20.39	15.28	18.11	16.61	11.50	0.94	25.28	18.11	0.30

