

Roots Vacuum Pumps

RUVAC

Roots Vacuum Pumps

230.00.02

Excerpt from the Leybold Full Line Catalog (Edition 09/2019)

Catalog Part Roots Vacuum Pumps

www.famcocorp.com

E-mail: info@famcocorp.com

@famco_group

Tel: ۰۲۱-۴۸۰۰۰۰۴۹

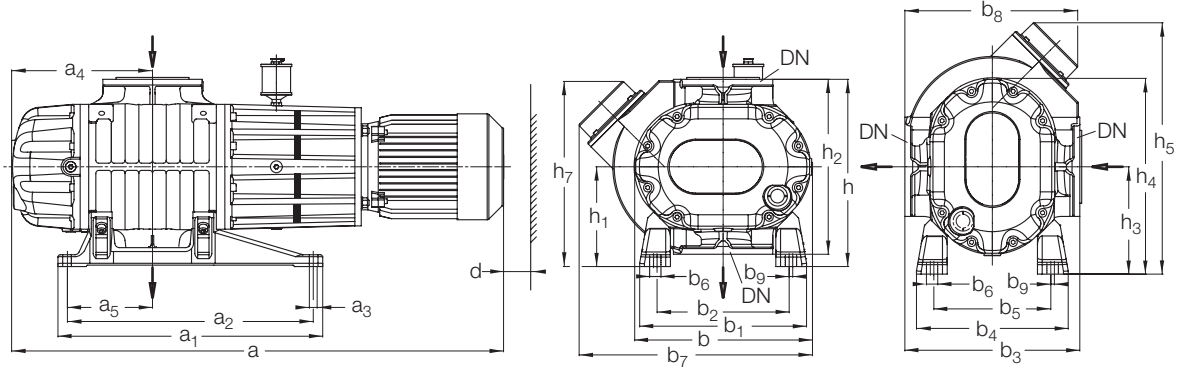
Fax: ۰۲۱-۴۴۹۹۴۶۴۲

تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲

FAMCO

هایپر صنعت



Type		DN	a ¹⁾	a ₁	a ₂	a ₃	a ₄	a ₅	a ₆	b
WA/WAU 251	mm	63	732	405	365	14	209	120	194	250
	in.		28.82	15.94	14.37	0.55	8.23	4.72	7.64	9.84
WA/WAU 501	mm	63	830	486	450	14	237	155	218	310
	in.		32.68	19.13	17.72	0.55	9.33	6.10	8.58	12.20
WA/WAU 501H	mm	63	830	486	450	14	237	155	218	310
	in.		32.88	19.13	17.72	0.55	9.33	6.10	8.58	12.20
WA/WAU 1001	mm	100	1054	560	520	16.5	298	180	262	376
	in.		41.50	22.05	20.47	0.65	11.73	6.10	10.31	14.80
WA/WAU 1001H	mm	100	1054	560	520	16.5	298	180	262	376
	in.		41.50	22.05	20.47	0.65	11.73	6.10	10.31	14.80
WA/WAU 2001	mm	160	1275	800	740	18	367	220	310	463
	in.		50.20	31.50	29.13	0.71	14.45	8.66	12.20	18.23
WA/WAU 2001H	mm	160	1275	800	740	18	367	220	310	463
	in.		50.20	31.50	29.13	0.71	14.45	8.66	12.20	18.23

		b ₁	b ₂	b ₃	b ₄	b ₅	b ₆	b ₇ ²⁾	b ₈	b ₉	d
WA/WAU 251	mm	270	210	280	230	170	24	305	285	7.5	50
	in.	10.63	8.27	11.02	9.06	6.69	0.94	12.01	11.22	0.30	2.00
WA/WAU 501	mm	299	229	320	271	201	24	390	313	7.5	50
	in.	11.77	9.02	12.60	10.67	7.91	0.94	15.35	12.32	0.30	2.00
WA/WAU 501H	mm	299	229	320	271	201	24	414	330	7.5	50
	in.	11.77	9.02	12.60	10.67	7.91	0.94	16.30	12.99	0.30	2.00
WA/WAU 1001	mm	352	278	370	320	246	24	494	366	7.5	50
	in.	13.86	10.94	14.57	12.60	7.91	0.94	19.45	14.41	0.30	2.00
WA/WAU 1001H	mm	352	278	370	320	246	24	524	398	7.5	50
	in.	13.86	10.94	14.57	12.60	7.91	0.94	20.63	15.67	0.30	2.00
WA/WAU 2001	mm	518	388	460	422	292	24	638	456	7.5	50
	in.	20.39	15.28	18.11	16.61	11.50	0.94	25.12	17.95	0.30	2.00
WA/WAU 2001H	mm	518	388	460	422	292	24	642	460	7.5	50
	in.	20.39	15.28	18.11	16.61	11.50	0.94	25.28	18.11	0.30	2.00

		h	h ₁	h ₂	h ₃	h ₄	h ₅ ²⁾	h ₆	h ₇
WA/WAU 251	mm	300	160	280	180	306	360	330	307
	in.	11.81	6.30	11.02	7.09	12.05	14.17	12.99	12.09
WA/WAU 501	mm	340	180	320	194	348	430	370	332
	in.	13.39	7.09	12.60	7.48	13.70	16.93	14.57	13.07
WA/WAU 501H	mm	340	180	320	194	348	450	370	350
	in.	13.39	7.09	12.60	7.48	13.70	17.72	14.57	13.78
WA/WAU 1001	mm	396	211	370	227	414	532	425	392
	in.	15.59	8.31	14.57	8.94	16.30	20.94	16.69	15.43
WA/WAU 1001H	mm	396	211	370	227	414	564	425	424
	in.	15.59	8.31	14.57	8.94	16.30	22.20	16.69	16.69
WA/WAU 2001	mm	530	300	460	351	578	753	541	523
	in.	20.87	11.81	18.11	13.82	22.76	29.65	21.3	20.59
WA/WAU 2001H	mm	530	300	460	351	578	760	541	530
	in.	20.87	11.81	18.11	13.82	22.76	29.92	21.3	20.87

¹⁾ This dimension "a" relates to pumps with the IEC motor used as standard by Leybold

²⁾ For RUVAC WAU only

DN = PN 6 pump flange in accordance with DIN 2501

Outside dimensions ±3 mm (0.12 in.)

Dimensional drawing for the RUVAC WA/WAU(H) pumps
www.famcocorp.com

E-mail: info@famcocorp.com

@famco_group

Tel: ۰۲۱-۴۸۰۰۰۰۰۴۹

Fax: ۰۲۱-۴۴۹۹۴۶۴۲

تهران، کیلومتر ۲۱ بزرگراه لشکری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲

Technical Data

WA/WAU 251

WA/WAU(H) 501

		WA/WAU 251		WA/WAU(H) 501	
		50 Hz	60 Hz	50 Hz	60 Hz
Nominal pumping speed ¹⁾	m ³ /h (cfm)	253.0 (149.0)	304.0 (179.0)	505.0 (297.4)	606.0 (357.0)
Max. effective pumping speed with backing pump	m ³ /h (cfm)	210.0 (123.7)	251.0 (148.0)	410.0 (241.0)	530.0 (312.0)
	TRIVAC 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 (60.0)			
Leak rate, integral	mbar x l/s	< 5 x 10 ⁻⁴			
Mains supply	V	200–240			
	V	380–400			
Thermal class		F			
Permissible ambient temperatures	°C (°F)	+5 to +40 (+ 41 to +104)			
Motor power	kW (hp)	1.1 (1.5)	1.1 (1.5)	2.2 (3.0)	2.2 (3.0)
Energy efficiency class		IE 3			
Nominal speed, approx.	rpm	3000	3600	3000	3600
Max. permissible speed	rpm	3600			
Type of protection	IP	55			
ATEX protection category ⁴⁾		Category 3i	–	Category 3i	–
Lubricant for the bearing chamber ⁵⁾	vertical pumping action, approx.	0.6 (0.63)	0.6 (0.63)	0.8 (0.85)	0.8 (0.85)
	horizontal pumping action, approx.	0.45 (0.48)	0.45 (0.48)	0.7 (0.74)	0.7 (0.74)
Lubricant of the shaft sealing ring housing	l (qt)	0.6 (0.63)	0.6 (0.63)	1.0 (1.06)	1.0 (1.06)
Connection flanges	DN	63 ISO-K			
Materials (materials in contact with the gas)		C steel, CrNi steel, grey cast iron, FPM (FKM)			
Weight WA / WAU	kg (lbs)	85.0 / 89.0 (187.4 / 196.2)	85.0 / 89.0 (187.4 / 196.2)	128.0 / 133.0 (187.4 / 196.2)	128.0 / 133.0 (187.4 / 196.2)
Noise level ⁶⁾	dB(A)	< 62	< 64	< 65	< 67

¹⁾ To DIN 28 400 and subsequent numbers

²⁾ With double-stage rotary vane vacuum pump TRIVAC, resp. 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⁾ For ATEX category 3o a appropriate motor has to be used.

Please contact Leybold (System)

⁵⁾ Authoritative, however, is the oil level at the oil-level glass

⁶⁾ Valid under ultimate pressure conditions. Pressures over 10 mbar (7.5 Torr) produce a higher operating noise

Technical Data

		WA/WAU (H) 1001		WA/WAU(H) 2001	
		50 Hz	60 Hz	50 Hz	60 Hz
Nominal pumping speed ¹⁾	m ³ /h (cfm)	1000 (589)	1200 (707)	2050 (1207.5)	2460 (1449)
Max. effective pumping speed with backing pump	m ³ /h (cfm) SOGEVAC	800 (470) SV 300 B	1000 (588) SV 300 B	1850 (1089) SV 630 BF	2100 (1236) SV 630 BF
Ultimate total pressure ²⁾	mbar (Torr)	< 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)	50.0 (37.5)	50.0 (37.5)
Leak rate, integral	mbar x l/s	< 5 · 10 ⁻⁴			
Mains supply	V V	200–240 380–400			
Thermal class		F			
Permissible ambient temperatures	°C (°F)	+5 to +40 (+ 41 to +104)			
Motor power	kW (hp)	4.0 (5.4)	4.0 (5.4)	7.5 (10.0)	7.5 (10.0)
Energy efficiency class		IE 3			
Nominal speed, approx.	rpm	3000	3600	3000	3600
Max. zulässige Drehzahl	rpm	3600			
Type of protection	IP	55			
ATEX protection category ⁴⁾		Category 3i	–	Category 3i	–
Lubricant for the bearing chamber ⁵⁾					
vertical pumping action, approx.	l (qt)	1.8 (1.90)	1.8 (1.90)	3.6 (3.81)	3.6 (3.81)
horizontal pumping action, approx.	l (qt)	1.1 (1.16)	1.1 (1.16)	2.4 (2.54)	2.4 (2.54)
Lubricant of the shaft sealing ring housing	l (qt)	1.3 (1.37)	1.3 (1.37)	1.6 (1.69)	1.6 (1.69)
Connection flanges	DN	100 ISO-K	100 ISO-K	160 ISO-K	160 ISO-K
Materials (materials in contact with the gas)		C-Stahl, CrNi-Stahl, Grauguss, FPM			
Weight WA / WAU	kg (lbs)	220 / 225 (485.1 / 496.1)	220 / 225 (485.1 / 496.1)	400 / 406 (882.0 / 895.2)	400 / 406 (882.0 / 895.2)
Noise level ⁶⁾	dB(A)	< 70	< 73	< 72	< 77

¹⁾ To DIN 28 400 and subsequent numbers

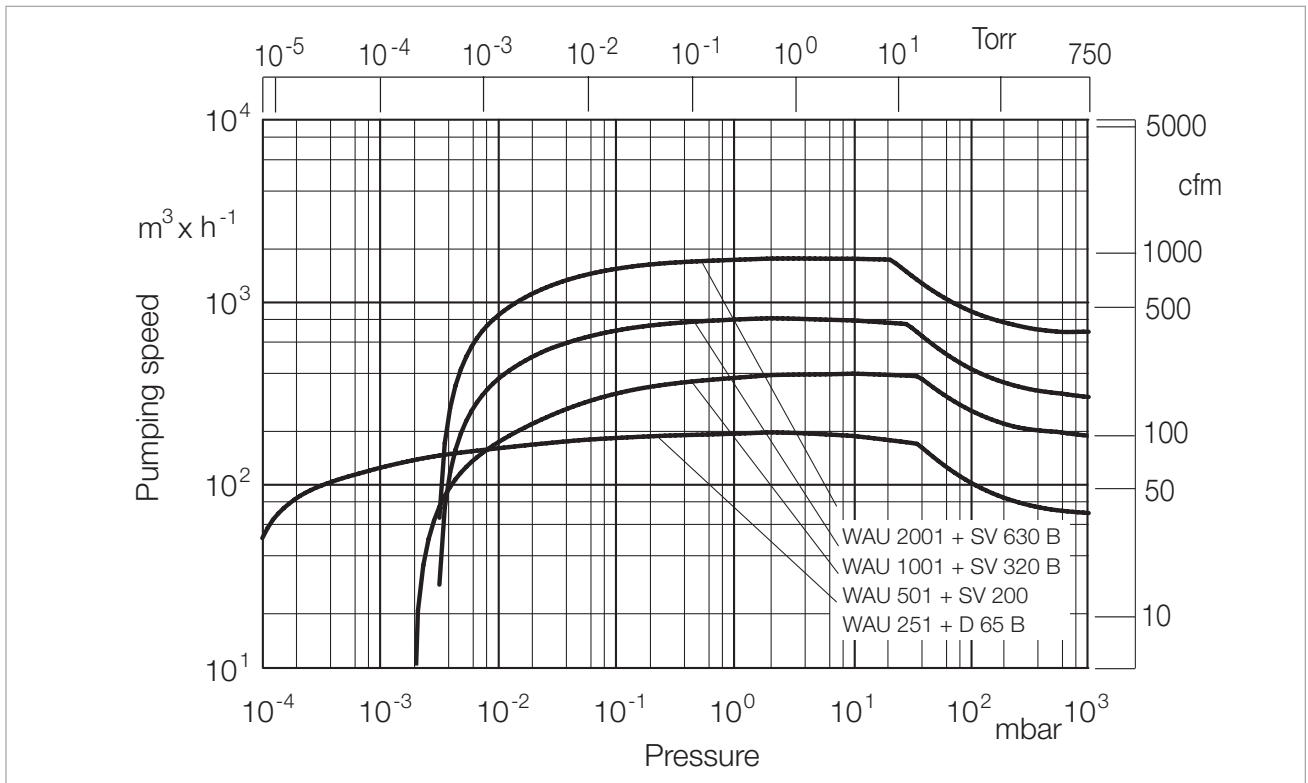
²⁾ With single-stage rotary vane vacuum pump SOGEVAC (Type of backing pump look at max. pumping speed).
When using 2-stage backing pumps the ultimate pressures will be correspondingly lower

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

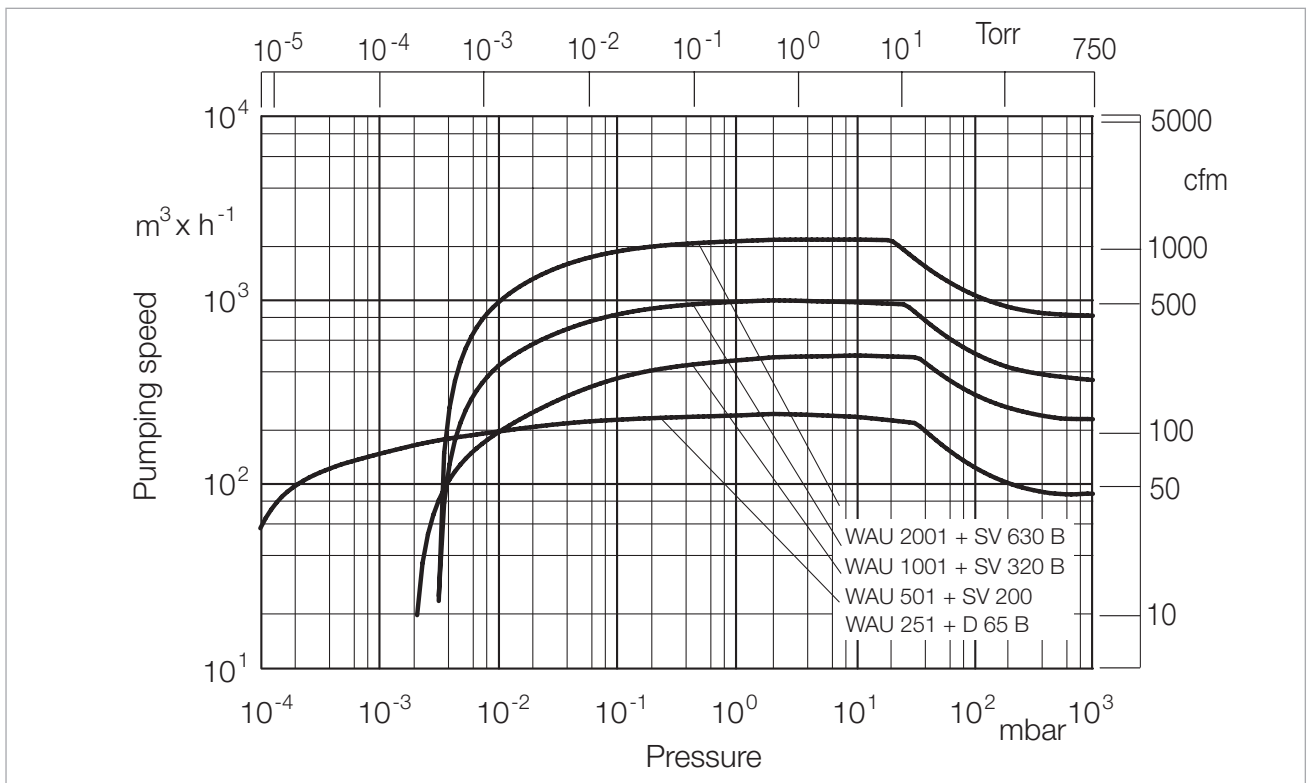
⁴⁾ For ATEX category 3o a appropriate motor has to be used.
Please contact Leybold (System)

⁵⁾ Authoritative, however, is the oil level at the oil-level glass

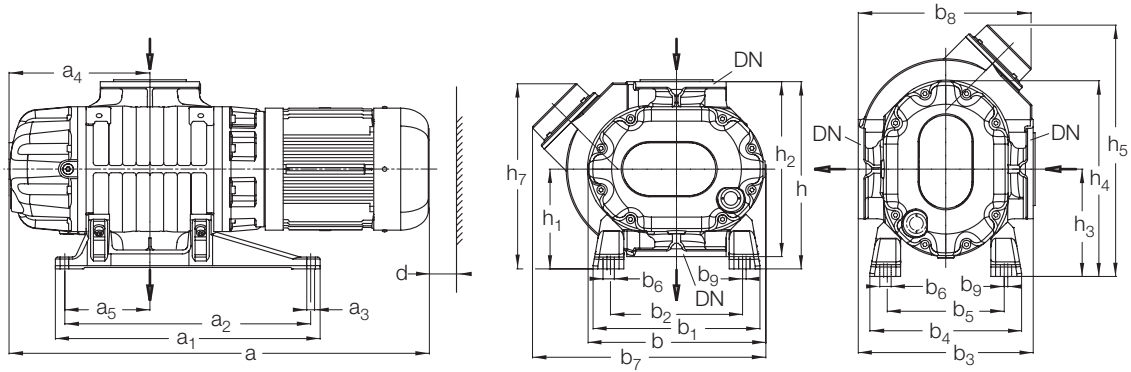
⁶⁾ Valid under ultimate pressure conditions. Pressures over 10 mbar (7.5 Torr) produce a higher operating noise



Pumping speed of the RUVAC WA/WAU, 50 Hz



Pumping speed of the RUVAC WA/WAU, 60 Hz



Type		DN	a	a ₁	a ₂	a ₃	a ₄	a ₅
WS/WSU 251	mm	63	694	405	365	14	212	120
	in.		27.32	15.94	14.37	0.55	8.35	4.72
WS/WSU 501	mm	63	752	486	450	14	237	155
	in.		29.61	19.13	17.72	0.55	9.33	6.10
WS/WSU 501H	mm	63	752	486	450	14	237	155
	in.		29.61	19.13	17.72	0.55	9.33	6.10
WS/WSU 1001	mm	100	885	560	520	16,5	298	180
	in.		34.84	22.05	20.47	0.65	11.73	7.09
WS/WSU 1001H	mm	100	885	560	520	16,5	298	180
	in.		34.84	22.05	20.47	0.65	11.73	7.09
WS/WSU 2001	mm	160	1042	800	740	18	367	220
	in.		41.02	31.50	29.13	0.71	14.45	8.66
WS/WSU 2001H	mm	160	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
WS/WSU 251	mm	250	270	210	280	230	170	24	305	285
	in.	9.84	10.63	8.27	11.02	9.06	6.69	0.94	12.01	11.22
WS/WSU 501	mm	310	299	229	320	271	201	24	390	313
	in.	12.20	11.77	9.02	12.60	10.67	7.91	0.94	15.35	12.32
WS/WSU 501H	mm	310	299	229	320	271	201	24	414	330
	in.	12.20	11.77	9.02	12.60	10.67	7.91	0.94	16.30	12.99
WS/WSU 1001	mm	376	352	278	370	320	246	24	494	366
	in.	14.80	13.86	10.94	14.57	12.60	9.69	0.94	19.45	14.41
WS/WSU 1001H	mm	376	352	278	370	320	246	24	524	398
	in.	14.80	13.86	10.94	14.57	12.60	9.69	0.94	20.63	15.67
WS/WSU 2001	mm	463	518	388	460	422	292	24	638	456
	in.	18.23	20.39	15.28	18.11	16.61	11.50	0.94	25.12	17.95
WS/WSU 2001H	mm	463	518	388	460	422	292	24	642	460
	in.	18.23	20.39	15.28	18.11	16.61	11.50	0.94	25.28	18.11

		b ₉	d	h	h ₁	h ₂	h ₃	h ₄	h ₅ ¹⁾	h ₆
WS/WSU 251	mm	7.5	50	300	160	280	180	306	360	307
	in.	0.30	2.00	11.81	6.3	11.02	7.09	12.05	14.17	12.09
WS/WSU 501	mm	7.5	50	340	180	320	194	348	430	332
	in.	0.30	2.00	13.39	7.09	12.60	7.48	13.70	16.93	13.07
WS/WSU 501H	mm	7.5	50	340	180	320	194	348	450	350
	in.	0.30	2.00	13.39	7.09	12.60	7.48	13.70	17.72	13.78
WS/WSU 1001	mm	7.5	50	396	211	370	227	414	532	392
	in.	0.30	2.00	15.59	8.31	14.57	8.94	16.30	20.94	15.43
WS/WSU 1001H	mm	7.5	50	396	211	370	227	414	564	424
	in.	0.30	2.00	15.59	8.31	14.57	8.94	16.30	22.20	16.69
WS/WSU 2001	mm	7.5	50	530	300	460	351	578	760	523
	in.	0.30	2.00	20.87	11.81	18.11	13.82	22.76	29.92	20.59
WS/WSU 2001H	mm	7.5	50	530	300	460	351	578	753	530
	in.	0.30	2.00	20.87	11.81	18.11	13.82	22.76	29.65	20.87

¹⁾ For RUVAC WSU only
 Outside dimensions ±3 mm (0.12 in.)

DN₁ = PN 6 pump flange in accordance with DIN 2501

Dimensional drawing for the RUVAC WS/WSU(H) pumps
www.famcocorp.com

E-mail: info@famcocorp.com

@famco_group

Tel: ۰۲۱-۴۸۰۰۰۰۰۴۹

Fax: ۰۲۱-۴۴۹۹۶۴۲

تهران، کیلومتر ۲۱ بزرگراه لشکری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲

Technical Data

WS/WSU 251

WS/WSU(H) 501

		WS/WSU 251		WS/WSU(H) 501		
		50 Hz	60 Hz	50 Hz	60 Hz	
Nominal pumping speed ¹⁾	m ³ /h (cfm)	253 (149)	304 (179)	505 (297.4)	606 (357)	
Max. effective pumping speed with backing pump	m ³ /h (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)				
Leak rate, integral	mbar x l/s	< 1 x 10 ⁻⁴				
Mains supply	V	200 / 230 / 400	200–208 / 265 / 460	200 / 230 / 400	200–208 / 265 / 460	
Thermal class		F				
Permissible ambient temperatures	°C (°F)	+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				
Type of protection	IP	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				
Weight WS / WSU	kg	90 / 95	90 / 95	130 / 135	130 / 135	
	(lbs)	(198.5 / 209.5)	(198.5 / 209.5)	(286.7 / 297.7)	(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

Technical Data

		WS/WSU(H) 1001		WS/WSU(H) 2001	
		50 Hz	60 Hz	50 Hz	60 Hz
Nominal pumping speed ¹⁾	m ³ /h (cfm)	1000 (589)	1200 (707)	2050 (1207.5)	2460 (1449)
Max. effective pumping speed with backing pump	m ³ /h (cfm) SOGEVAC	800 (470) SV 300 B	1000 (588) SV 300 B	1850 (1089) SV 630 BF	2100 (1236) SV 630 BF
Ultimate total pressure ²⁾	mbar (Torr)	< 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)	50.0 (37.5)	50.0 (37.5)
Leak rate, integral	mbar x l/s	< 1 x 10 ⁻⁴			
Mains supply	V	200 / 230 / 400	200-208 / 265 / 460	200 / 230 / 400	200-208 / 265 / 460
Thermal class		F			
Permissible ambient temperatures	°C (°F)	+5 to +40 (+41 to +104)			
Motor power	kW (hp)	4.0 (5.4)	4.4 (6.0)	7.5 (10.0)	8.5 (11.6)
Nominal speed, approx.	rpm	3000	3600	3000	3600
Max. permissible speed	rpm	6000	6000	4200 ⁴⁾	4200 ⁴⁾
Type of protection	IP	20			
Lubricant for the bearing chamber ⁵⁾ LVO 400					
vertical pumping action, approx.	l (qt)	1.75 (1.85)	1.75 (1.85)	2.7 (2.85)	2.7 (2.85)
horizontal pumping action, approx.	l (qt)	1.1 (1.16)	1.1 (1.16)	1.9 (2.00)	1.9 (2.00)
other oils					
vertical pumping action, approx.	l (qt)	1.8 (1.90)	1.8 (1.90)	3.6 (3.81)	3.6 (3.81)
horizontal pumping action, approx.	l (qt)	1.1 (1.16)	1.1 (1.16)	2.4 (2.54)	2.4 (2.54)
Connection flanges	DN	100 ISO-K	100 ISO-K	160 ISO-K	160 ISO-K
Weight WS / WSU	kg (lbs)	228 / 233 (502.7 / 513.8)	228 / 233 (502.7 / 513.8)	458 / 465 (1009.9 / 1025.3)	458 / 465 (1009.9 / 1025.3)
Noise level ⁶⁾	dB(A)	< 60	< 60	< 65	< 67

¹⁾ To DIN 28 400 and subsequent numbers

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

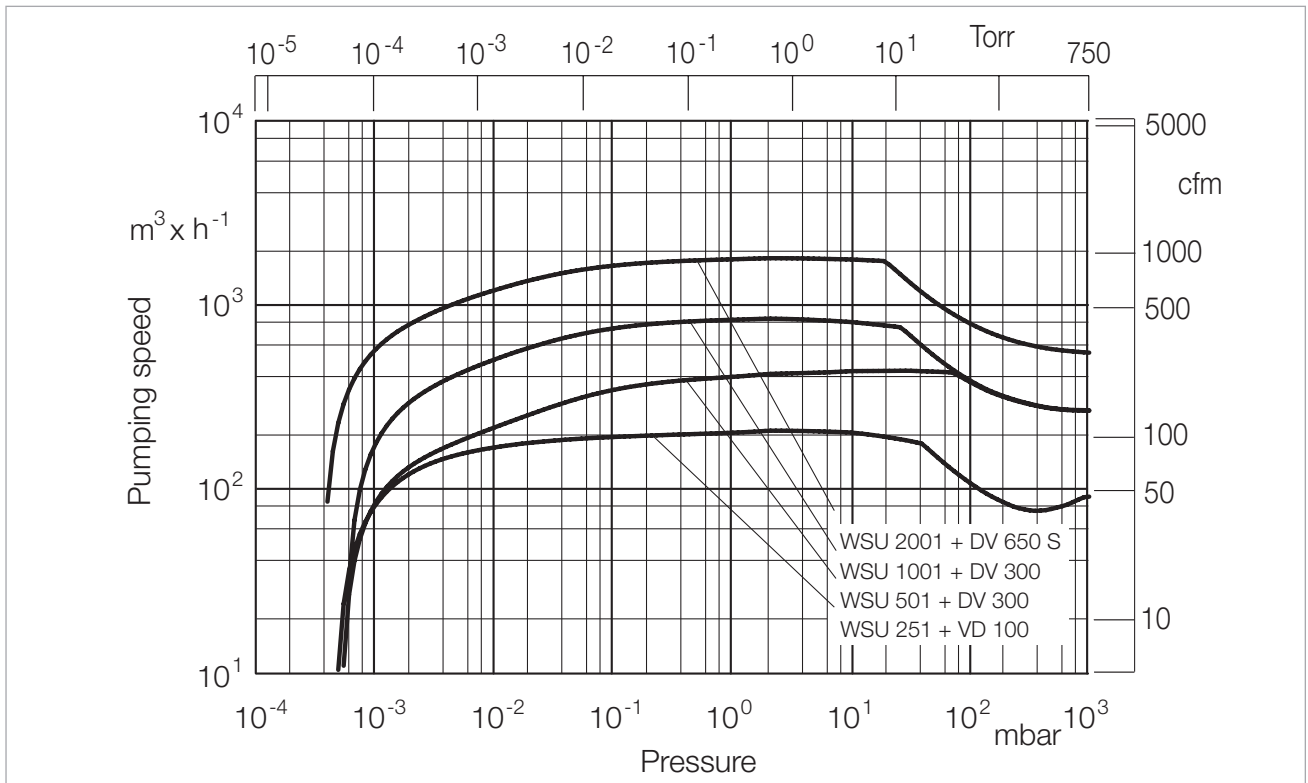
When using 2-stage backing pumps the ultimate pressures will be correspondingly lower

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

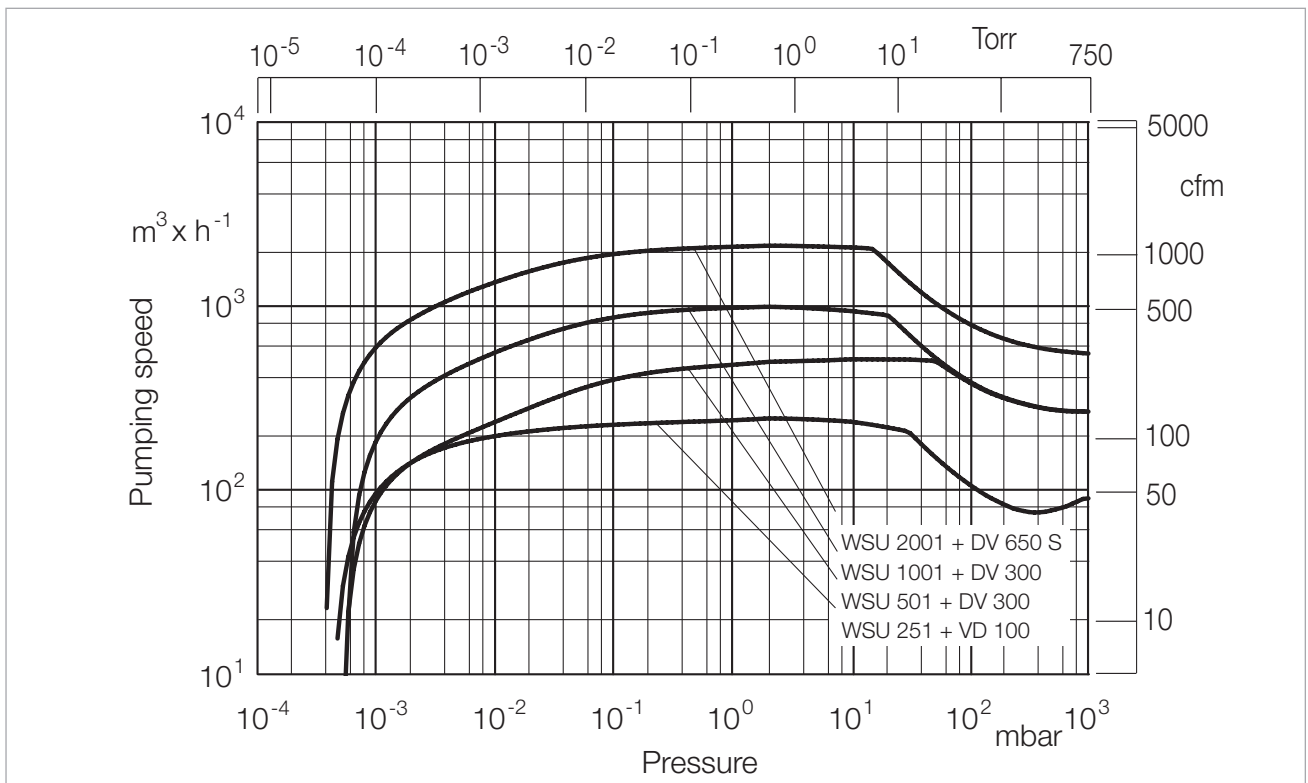
⁴⁾ Also 6000 rpm upon order

⁵⁾ Authoritative, however, is the oil level at the oil-level glass

⁶⁾ Valid under ultimate pressure conditions. Pressures over 10 mbar (7.5 Torr) produce a higher operating noise



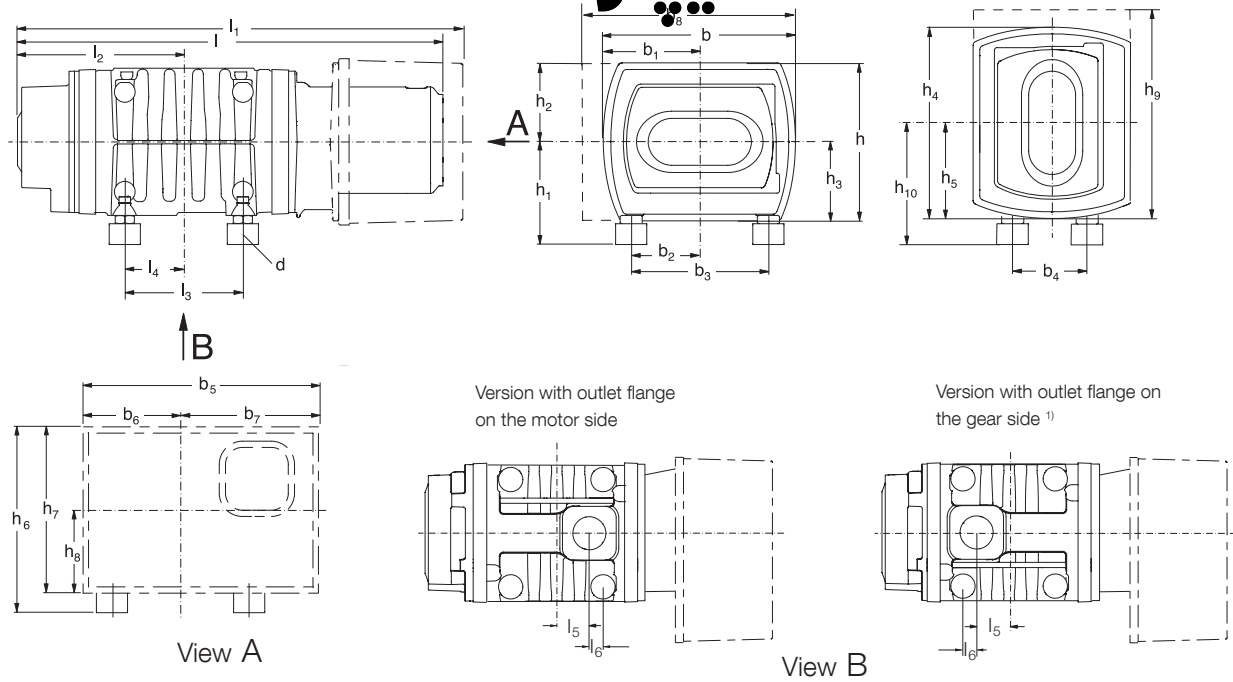
Pumping speed of the RUVAC WS/WSU, 50 Hz



Pumping speed of the RUVAC WS/WSU, 60 Hz

FAMCO

هانس صنعت



Type		Inlet flange	Outlet flange	l	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	d
WH 700	mm	100 ISO-K	63 PN 6	705	-	259	276	138	-	-	M 8
	in.			27.76	-	10.20	10.87	5.43	-	-	M 8
WH 2500	mm	250 ISO-K	100 ISO-K	1015	1076	400	284	142	100	42	M 12
	in.			39.96	42.36	15.75	11.18	5.59	3.94	1.65	M 12
WHU 2500	mm	250 ISO-K	100 ISO-K	1015	-	400	284	142	100	42	M 12
	in.			39.96	-	15.75	11.18	5.59	3.94	1.65	M 12
WH 4400	mm	250 ISO-K	160 ISO-K	1183	-	457	310	155	-	-	M 12
	in.			46.58	-	17.99	12.21	6.10	-	-	M 12
WHU 4400	mm	250 ISO-K	160 ISO-K	1183	-	457	310	155	-	-	M 12
	in.			46.58	-	17.99	12.21	6.10	-	-	M 12
WH 7000	mm	320 ISO-K	160 ISO-K	1433	-	582	560	280	-	-	M 12
	in.			56.42	-	22.91	22.05	11.02	-	-	M 12
WHU 7000	mm	320 ISO-K	160 ISO-K	1433	-	582	560	280	-	-	M 12
	in.			56.42	-	22.91	22.05	11.02	-	-	M 12

Type		b	b ₁	b ₂	b ₃	b ₄	b ₅	b ₆	b ₇	b ₈	h
WH 700	mm	269	129	100	200	-	-	-	-	-	270
	in.	10.59	5.08	3.94	7.87	-	-	-	-	-	10.63
WH 2500	mm	428	214	165	330	-	570	236	334	-	-
	in.	16.85	8.43	6.50	12.99	-	22.44	9.29	13.15	-	-
WHU 2500	mm	-	214	165	330	-	-	-	-	508	354
	in.	-	8.43	6.50	12.99	-	-	-	-	20.00	13.94
WH 4400	mm	540	330	155	310	260	-	-	-	-	419
	in.	21.26	12.99	6.10	12.21	10.24	-	-	-	-	16.50
WHU 4400	mm	-	330	238	393	260	-	-	-	600	419
	in.	-	12.99	9.37	15.47	10.24	-	-	-	23.62	16.50
WH 7000	mm	540	330	155	310	260	-	-	-	-	419
	in.	21.26	12.99	6.10	12.21	10.24	-	-	-	-	16.50
WHU 7000	mm	-	330	238	393	260	-	-	-	600	419
	in.	-	12.99	9.37	15.47	10.24	-	-	-	23.62	16.50

Type		h ₁	h ₂	h ₃	h ₄	h ₅	h ₆	h ₇	h ₈	h ₉	h ₁₀
WH 700	mm	176	114	156	-	-	-	-	-	-	-
	in.	6.93	4.49	6.14	-	-	-	-	-	-	-
WH 2500	mm	247	177	177	-	-	447	400	200	-	-
	in.	9.72	6.97	6.97	-	-	17.60	15.75	7.87	-	-
WHU 2500	mm	247	177	177	-	-	447	400	200	-	-
	in.	9.72	6.97	6.97	-	-	17.60	15.75	7.87	-	-
WH 4400	mm	298	207	212	540	315	-	-	-	645	315
	in.	11.73	8.15	8.35	21.26	12.40	-	-	-	25.39	12.40
WHU 4400	mm	298	207	212	540	315	-	-	-	645	315
	in.	11.73	8.15	8.35	21.26	12.40	-	-	-	25.39	12.40
WH 7000	mm	298	207	212	540	315	-	-	-	645	315
	in.	11.73	8.15	8.35	21.26	12.40	-	-	-	25.39	12.40
WHU 7000	mm	298	207	212	540	315	-	-	-	645	315
	in.	11.73	8.15	8.35	21.26	12.40	-	-	-	25.39	12.40

1) The outlet flange for WH 700/4400/7000 is centric of the housing. For WH 2500 the outlet flange is peripheral arbitrary

www.famcocorp.com

Tel: 021-48000049

تهران، کیلومتر ۲۱ بزرگراه لشکری، (جاده مخصوص کرج)

Email: info@famcocorp.com

Fax: 021-44994642

روبروی پالایشگاه نفت پارس، پلاک ۱۲

@famco_group

Technical Data

WH 700

		50 Hz	60 Hz	50 Hz	60 Hz
Nominal pumping speed ²⁾	m ³ /h (cfm)	710 (418)	860 (507)	1150 (677)	1730 (1019)
Max. effective pumping speed with backing pump SOGEVAC SV 300 B	m ³ /h (cfm)	620 (365)	740 (436)	950 (560)	1310 (772)
Max. permissible pressure difference during continuous operation ^{3), 4), 5)}	mbar (Torr)	75.0 (56.3)	65.0 (48.8)	50.0 (37.5)	30.0 (22.5)
Leak rate, integral	mbar x l/s	< 1 x 10 ⁻⁵			
Mains voltage					
FC operation	V	340 to 530 180 to 260	340 to 530 180 to 260 ⁶⁾	340 to 530 180 to 260	340 to 530 180 to 260
Mains operation	V	360 to 440 180 to 260	410 to 500 210 to 260 ⁶⁾	– –	– –
Max. permissible pressure difference at mains voltage ⁵⁾					
200 V	mbar (Torr)	50.0 (37.5)	50.0 (37.5)	40.0 (30.4)	40.0 (30.4)
400 V	mbar (Torr)	60.0 (45.6)	60.0 (45.6)	45.0 (34.2)	45.0 (34.2)
Permissible ambient temperatures	°C (°F)	+5 to +45 (+41 to +113)			
Nominal power consumption					
FC operation	kW (hp)	3.5 (4.7)	3.5 (4.7)	3.5 (4.7)	3.5 (4.7)
Mains operation	kW (hp)	2.2 (2.9)	2.2 (2.9)	–	–
Idle mode power consumption	kW (hp)	0.5 (0.7)			
Energy efficiency class		IE 2			
Nominal speed	rpm	3000	3600	4800	7200
Max. permissible speed ⁷⁾	rpm ¹	7200			
Type of protection	IP	55			
Water connection (4 pcs.)	G	1/4", female			
Cooling water quantity ⁸⁾	l/min	1 to 3			
Cooling water admission temperature	°C (°F)	5 to 35 (+41 to +95)			
Permissible cooling water pressure	bar	2 to 6			
Lubricant ⁹⁾					
gear side	l (qt)	0.6 (0.63)			
motor side	l (qt)	0.3 (0.31)			
Connection flange					
Inlet	ISO-K	100			
Outlet	ISO-K	63			
Weight	kg (lbs)	125 (276)			
Dimension (W x B x H)	mm (in.)	709 x 265 x 270 (27.91 x 10.43 x 10.63)			
Noise level ¹⁰⁾	dB(A)	< 56	< 56	< 60	< 60

¹⁾ Only possible with frequency converter motor and external frequency converter

²⁾ To DIN 28 426 and subsequent numbers

³⁾ Higher pressure differences are possible. Please contact Leybold (LV)

⁴⁾ Gas temperatures over 40 °C (104 °F) can result in a reduction of the pressure difference values; please consult LV on this

⁵⁾ The optional frequency converter automatically reduces the rotational speed of the rotors so as to compensate for overloads. During operation do not expose the pump to sudden pressure increases like shock venting to atmospheric pressure, for example

⁶⁾ Requires 200 V FC variant and 200 V motor

⁷⁾ Min. permissible speed: 1200 rpm if run for more than 1 hour

⁸⁾ The cooling water quantity can be reduced provided the temperature of the discharged water does not exceed 45 °C (113 °F)

⁹⁾ Authoritative, however, is the oil level at the oil-level glass

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

Technical Data

WH/WHU 2500

		50 Hz	60 Hz	80 Hz ¹⁾	100 Hz ¹⁾
Nominal pumping speed ²⁾	m ³ /h (cfm)	2500 (1473)	3000 (1767)	4000 (2356)	5000 (2945)
Max. effective pumping speed with backing pump DRYVAC DV 650	m ³ /h (cfm)	2200 (1296)	2500 (1473)	3200 (1885)	3900 (2297)
Max. permissible pressure difference ^{3), 4), 5)} during continuous operation (WH) for short-cycle operation < 2 min. (WHU)	mbar (Torr)	50 to 75 (37.5 to 56.3)	40 to 60 (30.0 to 45.0)	30 to 40 (22.5 to 30.0)	20 (15.0)
	mbar (Torr)	160 (120)	160 (120)	–	–
Leak rate, integral	mbar x l/s	< 1 x 10 ⁻⁵			
Mains voltage FC operation	V	340 to 530	340 to 530	340 to 530	340 to 530
	V	180 to 260	180 to 260	180 to 260	180 to 260
Mains operation	V	360 to 440	410 to 500	–	–
Permissible ambient temperatures	°C (°F)	+5 to +50 (+41 to +122)			
Nominal power rating FC operation (WH)	kW (hp)	11.0 (14.8)	11.0 (14.8)	11.0 (14.8)	11.0 (14.8)
	Mains operation				
WH	kW (hp)	6.2 (8.4)	7.4 (10.1)	–	–
WHU	kW (hp)	6.2 (8.4)	7.4 (10.1)	–	–
Idle mode power consumption	kW (hp)	1.1 (1.5)	1.2 (1.6)	1.5 (2.0)	1.7 (2.3)
Energy efficiency class		IE 2			
Nominal speed	rpm	3000	3600	4800	6000
Max. permissible speed with FC ⁶⁾	rpm	6000			
Type of protection (int. FC/ext. FC)	IP	54/55			
Cooling water connection (2 pcs.)	G	1/4", female			
Cooling water quantity ⁷⁾	l/min	1 to 3			
Cooling water admission temperature	°C (°F)	5 to 35 (+41 to +95)			
Permissible cooling water pressure	bar	2 to 6			
Lubricant ⁸⁾	l (qt)	1.2 (1.27)			
Connection flange Inlet	ISO-K	250			
	Outlet	100			
Weight WH/ WHU	kg (lbs)	390/410 (861/905)			
	kg (lbs)	430 (946)			
Dimension (W x B x H) WH/ WHU	mm (in.)	1015 x 428 x 354 (39.96 x 16.85 x 13.94)			
	mm (in.)	(42.36 x 22.44 x 13.94)			
Noise level ⁹⁾	dB(A)	< 63			

¹⁾ Only possible with frequency converter motor or external frequency converter

²⁾ To DIN 28 426 and subsequent numbers

³⁾ Higher pressure differences are possible. Please contact Leybold (LV)

⁴⁾ Gas temperatures over 40 °C (104 °F) can result in a reduction of the pressure difference values; please consult LV on this

⁵⁾ The optional frequency converter automatically reduces the rotational speed of the rotors so as to compensate for overloads. During operation do not expose the pump to sudden pressure increases like shock venting to atmospheric pressure, for example

⁶⁾ Min. permissible speed: 1200 rpm if run for more than 1 hour

⁷⁾ The cooling water quantity can be reduced provided the temperature of the discharged water does not exceed 45 °C (113 °F)

⁸⁾ Authoritative, however, is the oil level at the oil-level glass

⁹⁾ Valid under ultimate pressure conditions. Pressures over 10 mbar (7.5 Torr) produce a higher operating noise

Technical Data

WH/WHU 4400

WH/WHU 7000

		50 Hz	60 Hz	80 Hz ¹⁾	50 Hz	60 Hz	70 Hz ¹⁾
Nominal pumping speed ²⁾	m ³ /h (cfm)	4400 (2592)	5280 (3100)	7040 (4147)	7000 (4123)	8400 (4948)	9800 (5772)
Max. effective pumping speed with backing pump DRYVAC DV 650 and RUVAC WH 2500	m ³ /h (cfm)	3300 (1944)	3900 (2297)	4800 (2827)	4700 (2768)	5300 (3122)	5800 (3416)
	m ³ /h (cfm)	3700 (2179)	4400 (2592)	5800 (3416)	5700 (3357)	6800 (4005)	7800 (4594)
Max. permissible pressure difference ^{3), 4), 5)} during continuous operation (WH)	mbar (Torr)	30 to 45 (22.5 to 33.75)	20 to 30 (15.0 to 22.5)	8 to 12 (6.0 to 9.0)	0 to 30 (15.0 to 22.5)	14 to 21 (10.5 to 15.75)	11 to 14 (8.25 to 10.5)
	for short-cycle operation < 2 min. (WHU)	mbar (Torr)	120 (90)	120 (90)	–	60 (45)	60 (45)
Leak rate, integral	mbar x l/s	< 1 x 10 ⁻⁵					
Mains voltage FC operation	V	340 to 530 180 to 260	340 to 530 180 to 260 ⁶⁾	340 to 530 180 to 260	340 to 530 180 to 260	340 to 530 180 to 260 ⁶⁾	340 to 530 180 to 260
	Mains operation	V	360 to 440 180 to 220	410 to 500 210 to 260 ⁶⁾	– –	360 to 440 180 to 220	410 to 500 210 to 260 ⁶⁾
Permissible ambient temperatures	°C (°F)	+5 to +40 (+41 to +104)					
Nominal power consumption (alternatively) FC operation	kW (hp)	11.0 / 15.0 (14.75 / 20.12)	11.0 / 15.0 (14.75 / 20.12)	11.0 / 15.0 (14.75 / 20.12)	11.0 / 15.0 (14.75 / 20.12)	11.0 / 15.0 (14.75 / 20.12)	11.0 / 15.0 (14.75 / 20.12)
	Mains operation	kW (hp)	11.0 / 18.5 (14.75 / 24.81)	11.0 / 18.5 (14.75 / 24.81)	– –	11.0 / 18.5 (14.75 / 24.81)	11.0 / 18.5 (14.75 / 24.81)
Idle mode power consumption	kW (hp)	0.7 (1.0)	0.8 (1.1)	1.0 (1.4)	0.9 (1.2)	1.0 (1.4)	1.2 (1.6)
Energy efficiency class		IE 2					
Nominal speed	rpm	3000	3600	4800	6000	3600	4200
Max. permissible speed ⁷⁾	rpm	4800	4800	4800	4200	4200	4200
Type of protection	IP	54					
Cooling water connection (2 pcs.)	G	1/4", female					
Cooling water quantity ⁸⁾	l/min	1 to 3					
Cooling water admission temperature	°C (°F)	5 to 35 (+41 to +95)					
Permissible cooling water pressure	bar	2 to 6					
Lubricant ⁹⁾	l (qt)	4.75 (5.0)					
Connection flange Inlet Outlet	ISO-K ISO-K	250 160	250 160	250 160	320 160	320 160	320 160
	Weight WH WHU	kg (lbs) kg (lbs)	590 (1301) 620 (1369)	590 (1301) 620 (1369)	590 (1301) 620 (1369)	650 (1433) 715 (1578)	650 (1433) 715 (1578)
Dimension (W x B x H)	mm (in.)	1183 x 540 x 415 (46.57 x 21.26 x 16.34)	1183 x 540 x 415 (46.57 x 21.26 x 16.34)	1183 x 540 x 415 (46.57 x 21.26 x 16.34)	1433 x 540 x 415 (46.57 x 21.26 x 16.34)	1433 x 540 x 415 (46.57 x 21.26 x 16.34)	1433 x 540 x 415 (46.57 x 21.26 x 16.34)
Noise level ¹⁰⁾	dB(A)	< 63					

¹⁾ Only possible with external frequency converter

²⁾ To DIN 28 400 and subsequent numbers

³⁾ Higher pressure differences are possible. Please contact Leybold (LV)

⁴⁾ Gas temperatures over 40 °C (104 °F) can result in a reduction of the pressure difference values; please consult LV on this

⁵⁾ The optional frequency converter automatically reduces the rotational speed of the rotors so as to compensate for overloads. During operation do not expose the pump to sudden pressure increases like shock venting to atmospheric pressure, for example

⁶⁾ Requires 200 V FC variant and 200 V motor

⁷⁾ Min. permissible speed: 1200 rpm if run for more than 1 hour

⁸⁾ The cooling water quantity can be reduced provided the temperature of the discharged water does not exceed 45 °C (113 °F)

⁹⁾ Minimum oil level is the oil level at the oil-level glass

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