



Leybold WH, WHU-4400, 7000

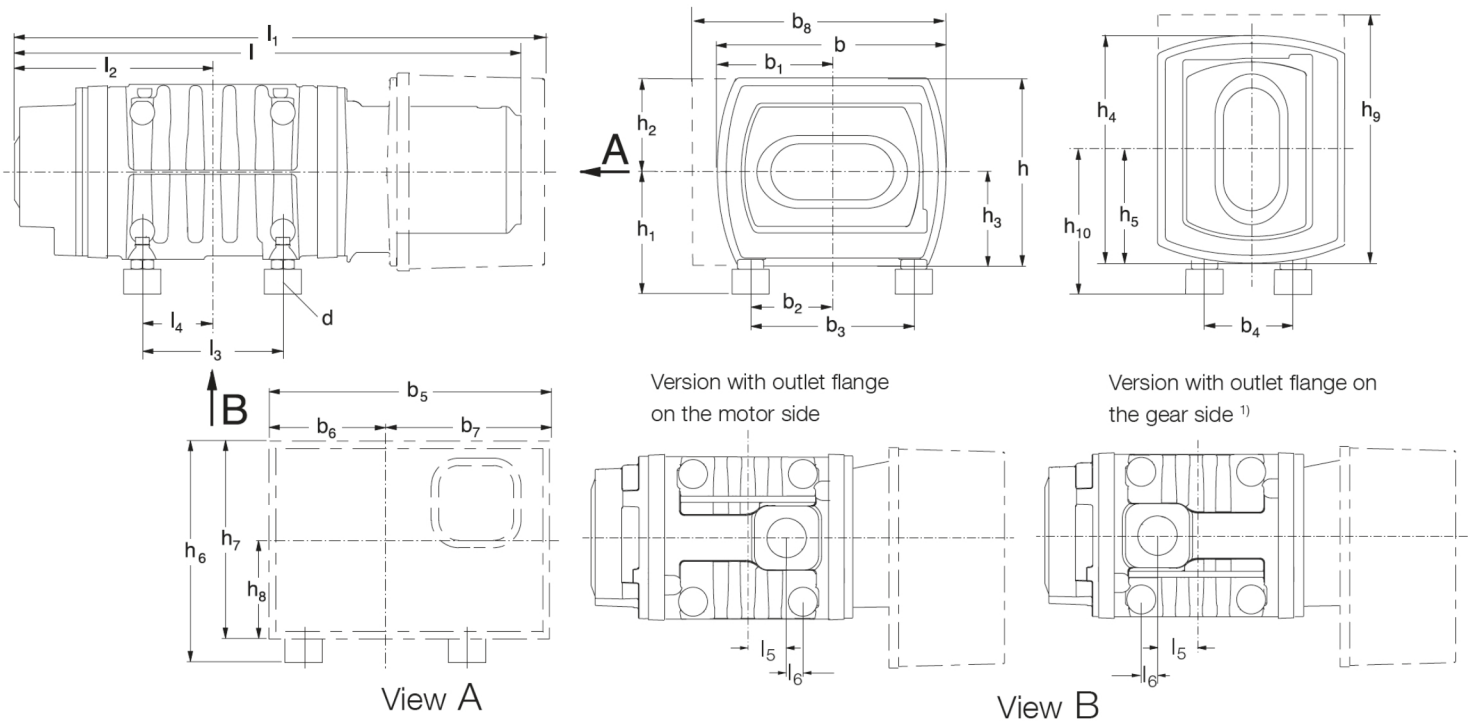
Technical Specifications

		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 x h ⁻¹ (cfm)	4400 (2592)	5280 (3100)	7040 (4147)	7000 (4123)	8400 (4948)	9800 (5772)
Max. effective pumping speed with backing pump							
DRYVAC DV 650	m ³ x h ⁻¹ (cfm)	3300 (1944)	3900 (2297)	4800 (2827)	4700 (2768)	5300 (3122)	5800 (3416)
and RUVAC WH 2500	m ³ x h ⁻¹ (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)	20 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 x s ⁻¹	1 x 10 ⁻⁵	1 x 10 ⁻⁵	1 x 10 ⁻⁵	1 x 10 ⁻⁵	1 x 10 ⁻⁵	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)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)	+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)	1.2 (1.6)	1.4 (1.9)	2.0 (2.7)	1.2 (1.6)	1.4 (1.9)	2.0 (2.7)
Energy efficiency class		IE 2	IE 2	IE 2	IE 2	IE 2	IE 2
Nominal speed	rpm	3000	3600	4800	3000	3600	4200
Max. permissible speed ⁷⁾	rpm	4800	4800	4800	4200	4200	4200
Type of protection	IP	54	54	54	54	54	54
Water connection (2 pcs.)	G	1/4", female	1/4", female	1/4", female	1/4", female	1/4", female	1/4", female
Cooling water quantity ⁸⁾	l/min	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3
Cooling water admission temperature	°C (°F)	5 to 35 (+41 to +95)	5 to 35 (+41 to +95)	5 to 35 (+41 to +95)	5 to 35 (+41 to +95)	5 to 35 (+41 to +95)	5 to 35 (+41 to +95)
Permissible cooling water pressure	bar	2 to 6	2 to 6	2 to 6	2 to 6	2 to 6	2 to 6
Lubricant ⁹⁾	l (qt)	4.75 (5.0)	4.75 (5.0)	4.75 (5.0)	4.75 (5.0)	4.75 (5.0)	4.75 (5.0)
Connection flange							
Inlet	ISO-K	250	250	250	320	320	320
Outlet	ISO-K	160	160	160	160	160	160
Weight							
WH	kg (lbs)	590 (1301)	590 (1301)	590 (1301)	650 (1433)	650 (1433)	650 (1433)
WHU	kg (lbs)	620 (1369)	620 (1369)	620 (1369)	715 (1578)	715 (1578)	715 (1578)
Dimension (W x B x H)	mm (in.)	1183 x 540 x 415 (46.57x21.26x16.34)	1183 x 540 x 415 (46.57x21.26x16.34)	1183 x 540 x 415 (46.57x21.26x16.34)	1433 x 540 x 415 (56.427x21.26x16.34)	1433 x 540 x 415 (56.427x21.26x16.34)	1433 x 540 x 415 (56.427x21.26x16.34)
Noise level ¹⁰⁾	dB(A)	< 63	< 63	< 63	< 63	< 63	< 63



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Dimensions



Type		Inlet flange	Outlet flange	l	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	d
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	-	237	310	155	-	-	M 12
	in.			46.58	-	9.33	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 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 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



PROVAC

SALES

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Leybold WH, WHU-4400, 7000 Features & Benefits

- lower energy costs through innovative motor technology
- minimized space requirements due to compact design
- easy system integration
- optimum price-to-performance ratio
- integrated water cooling system for installation within closed systems
- parts in contact with cooling water are corrosion-free
- hermetically sealed motor
- long service intervals and no oil leaks
- easy conversion from vertical to horizontal pumping action

Applications

- vacuum coating • large scale research • metallurgy • furnaces
- central vacuum supply systems • leak testing systems • electrical engineering • high purity gases, closed refrigerant cycles
- mechanical engineering • automotive industry

Pumping Curves

