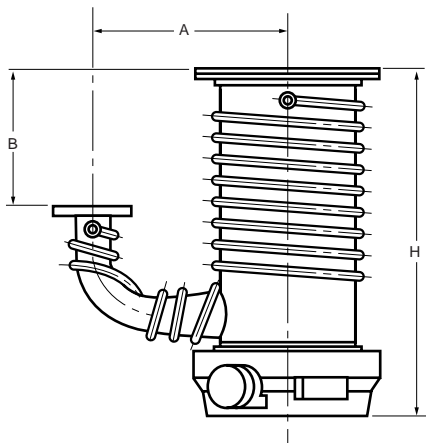


Oil Diffusion Vacuum Pump **ULK Series**

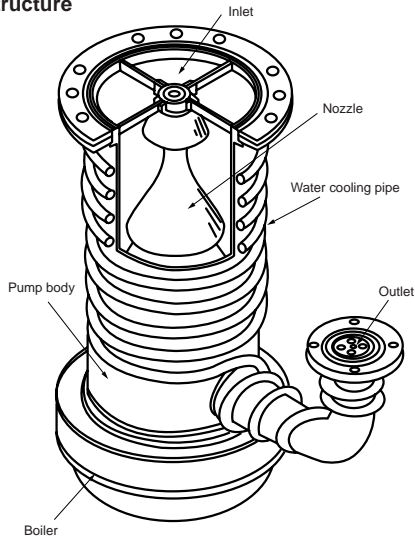


ULK-10A

External Dimension Diagram (unit: mm)



Structure



ULVAC's diffusion pumps ULK Series have been developed not only for superior performance, but also for extremely low operating cost.

Features

- Shorter pump body height
Loose flange system adopted (Except the outlet port flange for ULK-04A and 06A)
- Loose flange system allows specification and installation of an arbitrary size flange, like ISO, ANSI, IMSI, etc. (Except the outlet port flange for ULK-04A and 06A)
- Easy to clean due to simple disassembly of the pump
- Check mechanism prevents the working fluid from flowing to the fore pump side.
- Stable operation at the 10^{-2} Pa level.
- High critical backing pressure (see below list)

* Please specify the model, type of flange, working fluid, voltage and quantity when ordering.

Item		Model				
		ULK-04A	ULK-06A	ULK-10A	ULK-14A	
Dimensions	A	mm	175	250	340	340
	B	mm	150	180	240	240
	H	mm	341	449	650	670
Inlet diameter	Flange		Corresponds to VG100	Corresponds to VG150	Corresponds to VG250	Corresponds to VG350
	Outside diameter	mm	185	235	350	450
	Bolt holes	No. - dia.	8-dia. 12	8-dia. 12	12-dia. 15	12-dia. 15
	P.C.D	mm	160	210	320	420
	Gasket groove diameter (Inside diameter x Width x Depth)		120 x 4 x 3	175 x 4 x 3	275 x 7.5 x 4.2	380 x 7.5 x 4.2
	*Gasket groove diameter (Inside diameter x Width x Depth)		120 x 4 x 4	175 x 4 x 4	275 x 8 x 8	380 x 8 x 8
Outside diameter	Flange		Corresponds to VG25	Corresponds to VG40	Corresponds to VG80	Corresponds to VG80
	Outside diameter	mm	90	105	160	160
	Bolt holes	No. - dia.	4-dia. 10	4-dia. 10	4-dia. 12	4-dia. 12
	P.C.D	mm	70	85	135	135
	Gasket groove diameter (Inside diameter x Width x Depth)		40 x 5 x 3	55 x 5 x 3	100 x 5 x 2.8	100 x 5 x 2.8
	*Gasket groove diameter (Inside diameter x Width x Depth)		V-40	V-55	V-100	V-100
Cooling water connection			RC $\frac{1}{4}$	RC $\frac{1}{4}$	RC $\frac{3}{8}$	RC $\frac{3}{8}$
			(PT $\frac{1}{4}$)	(PT $\frac{1}{4}$)	(PT $\frac{3}{8}$)	(PT $\frac{3}{8}$)
Materials	Pump body		Stainless steel			
	Nozzle		Aluminum			
	Cooling method		Water cooling pipe			
	Oil level gauge		None	None	Optional	Attached
	Weight	kg	7.5	13.5	47	56
	Shipping measurement (Height x Width x Length)		550 x 330 x 400	580 x 420 x 580	730 x 550 x 700	750 x 550 x 700
	Shipping weight	kg	10.5	17.5	54	64

* A NBR gasket is attached for inlet port as a standard accessory. Please use a fluorinated rubber gasket when pressure is needed below 10^{-5} Pa.

Specifications

Item \ Model	ULK-04A		ULK-06A		ULK-10A		ULK-14A	
Working fluid	ULVOIL® D-11	ULVOIL® D-31	ULVOIL® D-11	ULVOIL® D-31	ULVOIL® D-11	ULVOIL® D-31	ULVOIL® D-11	ULVOIL® D-31
Ultimate pressure Pa	$< 2.6 \times 10^{-5}$	$< 2.6 \times 10^{-6}$	$< 2.6 \times 10^{-5}$	$< 2.6 \times 10^{-6}$	$< 2.6 \times 10^{-5}$	$< 2.6 \times 10^{-6}$	$< 2.6 \times 10^{-5}$	$< 2.6 \times 10^{-6}$
Critical backing (foreline) pressure Pa	40	60	40	60	35	40	31	40
Pumping speed L/s	550	500	1200	1100	3400	3000	5400	4900
Maximum throughput Pa·m ³ /s	0.086	0.13	0.15	0.20	0.35	0.43	0.35	0.47
Warm up time min	9.0	8.5	16.5	15	20	20	24	25
Power required* ¹ kW	0.55	0.73	0.90	1.2	2.0	2.4	2.25	3.15
Fluid capacity L	0.15	0.15	0.35	0.35	0.8	0.8	1.5	1.5
Cooling water consumption* ² L/min	1.0	1.0	1.0	1.5	2.5	3.0	2.5	3.5
Recommended fore pump	D-330K/D-240DK PVD-180		D-950K/D-650K/D-330K VD301/VD401		PKS-030/VS1501 PKS-016/EC803		PKS-030/VS1501 VS2401	

* 1 Please specify power line voltage when ordering.

* 2 Cooling water temperature: inlet 19 °C, outlet 29 °C

Pumping Speed Curve

