



VD series is a direct-drive oil rotary pump with high efficiency (IE3) multi-voltage motor fully developed by ULVAC. This dual stage rotary vane mechanical vacuum achieves lower ultimate pressure. Design optimization realized quiet operation and so this pump is suitable for a wide range of applications.

Features

- High efficiency (IE3) multiple voltage motor fully developed by ULVAC
A single motor can cover a wide range voltage, 200 to 240V / 380 to 460V.
- Forced oil circulation system
Pumping speed is stable even around atmospheric pressure. It is suitable for repeat and continuous running between atmospheric pressure and vacuum.
- Various options are available for special application
3 types, type A, B and H, are available in addition to standard type for special application.

Applications

- Evaporation, sputtering, and ion plating
- Analytical instrument and leak test system
- Gas exchange, liquid filling
- Vacuum dry, freeze dry, vacuum deaeration, and vacuum insulation
- Vacuum chuck and vacuum molding
- Other vacuum equipments

Specifications

Model		VD30C	VD40C	VD60C	VD90C	
Designed pumping speed m ³ /h / L/min / cf m	50 Hz	30/500/17.66	40/670/23.54	60/1000/35.31	90/1500/52.97	
	60 Hz	36/600/21.29	48/800/28.25	72/1200/42.38	108/1800/63.57	
Ultimate pressure Pa/Torr/mbar * 1	GP close	$0.67/5 \times 10^{-3} / 6.7 \times 10^{-3}$				
	GP open	$6.7/5 \times 10^{-2} / 6.7 \times 10^{-2}$				
Maximum water vapor or tolerance Pa/Torr/ mbar	GP open	50 Hz	1300/9.8/13.0	1360/10.2/13.6	1320/9.9/13.2	970/7.3/9.7
		60 Hz	1400/10.5/14.0	1760/13.2/17.6	2800/21.0/28.0	2820 *2/21.2/28.2
Maximum water vapor or capacity g/h	GP open	50 Hz	190	270	430	480
		60 Hz	250	410	1100	1650 *2
Motor	Type	Totally enclosed fan cooled 3 phase induction motor				
	Energy efficiency class	IE3				
	kw/HP(number of poles)	1.5(4)	1.5(4)	2.2(4)	3.7(4)	
	Voltage *4	50 Hz	200 ~ 240 / 380 ~ 415			
60 Hz		200 ~ 240 / 380 ~ 460				
Oil	ULVOIL R-7					
Oil capacity L	1.0 ~ 2.5			2.5 ~ 4.0		
Cooling method	Air cooled					
Inlet	VG40 equivalency / KF40 (optional)			VG50 equivalency / KF50 (optional)		
Outlet	VG40 equivalency / KF40 (optional)					
Weight kg	58	60	90	113		
External dimensions W ×D×H mm	210×660×324	210×680×324	280×761×371	280×831×371		
Applicable standard	CE					
Standard accessory	A dose of oil, a set of manual					
Recommended oil mist trap (Optional) *5	TM201: for low load operation TM401: for high load operation			TM401: for low load operation TM-2: for high load operation		
Options	Oil mist trap, other oil types, gas ballast valve, ISO flange, explosion-resistant motor, special type for special application (spec A, B and H)					

*1 Measured with a Pirani gauge. (Apprx. 6.7×10^{-2} Pa when measured with a McLeod vacuum gauge.)

*2 VD90C is not allowed the continuous operation in the inlet pressure at 1,000Pa or more. VD90C maximum water vapor tolerance / maximum water vapor capacity (in the continuous operation) : 1000Pa / 600g/h

*3 Increased safety explosion-resistant motor and pressure proof explosion-resistant motor are available as an option.

*4 Factory shipment setup is 200V class Δ delta connection. Please change it to Y connection if working voltage is 400V class.

*5 High load operation means repeat pumping down between atmospheric pressure and vacuum in short term or long time operation at 10,000 Pa (75 Torr) or higher.

Contact Us

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ULVAC SHOWCASE