

# Mechanical Booster Pump Unit YM-VD/YM-VS Series

ULVAC mechanical booster pump units contain an oil-sealed rotary vacuum pump and a mechanical booster pump in a compact bench with all the connection piping and a control panel.

The units are useful in vacuum pumping operations at production and research facilities.

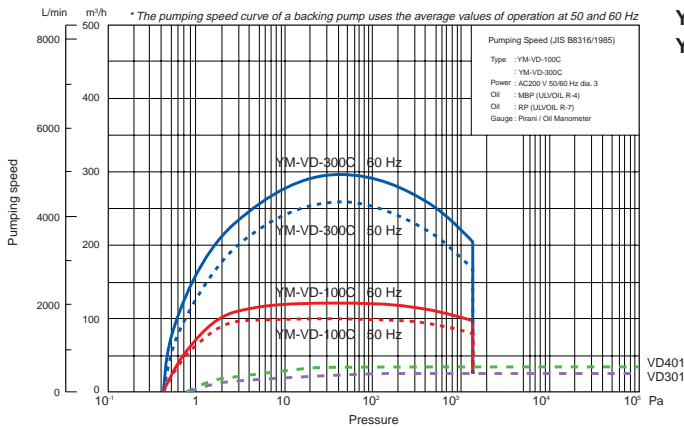
### Applications

- Evaporation, sputtering, and ion plating
- Vacuum packing, vacuum transport, vacuum molding, and vacuum casting
- Vacuum heat furnace, sintering furnace, and Blazing furnace
- Vacuum drying, freeze drying, and vacuum air removal
- Gas replacement, packing, vacuum heat insulation, leak tester, etc.



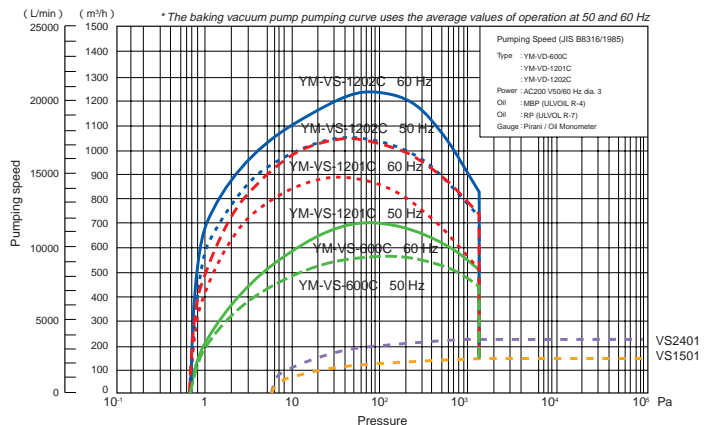
YM-VD-100C, YM-VS-1202C

### Pumping Speed Curve



YM-VD-100C  
YM-VD-300C

YM-VS-600C  
YM-VS-1201C  
YM-VS-1202C



Specifications

Item		Model	YM-VD-100C	YM-VD-300C	YM-VS-600A	YM-VS-1201A	YM-VS-1202A	
Pump combination	Mechanical booster pump		PMB-001C (M)	PMB-003C (M)	PRC-006A	PRC-012A		
	Oil-sealed rotary vacuum pump		VD301	VD401	VS1501		VS2401	
Maximum pumping speed m <sup>3</sup> /h (L/min)	50 Hz		95 (1580)	250 (4100)	550 (9200)	850 (14200)	1000 (16700)	
	60 Hz		115 (1900)	290 (4800)	660 (11000)	1000 (16700)	1200 (20000)	
Ultimate pressure* <sup>1</sup>	Pa		4.0 x 10 <sup>-1</sup>		6.7 x 10 <sup>-1</sup>			
Motor* <sup>2</sup> kW (number of poles)	Mechanical booster pump		0.4 (2)	0.75 (2)	2.2 (2)	3.7 (2)		
	Oil-sealed rotary vacuum pump		1.5 (4)		5.5 (4)		7.5 (4)	
Oil capacity* <sup>3</sup> L	Mechanical booster pump		0.35	0.7	1.5		1.9	
	Standard oil		ULVOIL® R-4					
	Oil-sealed rotary vacuum pump		1.0-2.5		8.0-10.5			
Cooling water	Cooling method	Mechanical booster pump	Air cooled		Water cooled			
		Oil-sealed rotary vacuum pump	Air cooled		Water cooled			
	Primary pressure/Pressure differential between outlet and inlet MPa		—		0.3 or larger (Gauge pressure) /0.05			
	Cooling water temperature °C		—		5-30			
	Water capacity L/min		Air cooled* <sup>4</sup>		4		5	
Suction port diameter	JIS B2290	VG50	VG80		VG100			
Exhaust port diameter	JIS B2290	VG40		G3		G4		
Weight	kg	130	155	515	550	630		
Option	1 Vacuum switch: Unnecessary for YM-VD-CM 2 Vacuum release valve, 3 Oil mist trap: YM-VD only							

Note) SI units are used in this catalog. The following conversion can be used for non-SI units.

Ultimate pressure: 4.0 x 10<sup>-1</sup>/6.7 x 10<sup>-1</sup> Pa = 3.0 x 10<sup>-3</sup>/5.0 x 10<sup>-3</sup> Torr

Cooling pressure 0.3/0.05 MPa = 3/0.5 kgf/cm<sup>2</sup>

\* 1 Measured with a Pirani gauge

\* 2 The standard motor is the drip-proof protected flange motor. The unit is also applicable with a

fully sealed external fan motor and a pressure resistant explosion-resistant flange motor.

\* 3 Other oil types are available, please inquire with the maker.

\* 4 Use water cooling when continuous operation will be done using a suction pressure of 530 Pa or more. (2 L/min)

External Dimension Diagram

(unit: mm)

