

## TMP-1503 Series

### Standard Specifications

#### Pump Main Unit

Turbo molecular pump		TMP-1503LM	TMP-1503LMC
Inlet flange		VG250 / ICF305 / ISO250B	
Outlet flange		KF40	
Cooling method		Water	
Ultimate pressure (after baking) (Note1)		10 <sup>-8</sup> Pa order	10 <sup>-7</sup> Pa order
Maximum allowable Argon gas flow rate		500 mL/min (Note 2)	800 mL/min
Maximum allowable inlet pressure (N <sub>2</sub> continuous exhaust)		133 Pa	
Maximum allowable outlet pressure		270 Pa	
Pumping speed (Note 2)	N <sub>2</sub>	1500 L/s	
	He	1200 L/s	
	H <sub>2</sub>	800 L/s	
Compression ratio	N <sub>2</sub>	6 x 10 <sup>8</sup>	
	He	1 x 10 <sup>4</sup>	
	H <sub>2</sub>	1 x 10 <sup>3</sup>	
Rated speed		30300 rpm	
Start-up time		7 minutes or less	
Mounting position		In any desired direction	
Bake-out temperature at an inlet flange		120 degrees C. or less	

Vibration level (by Shimadzu's method)		0.01 $\mu\text{m}$ or less (0-peak)
Recommended flow rate of purge gas		20 to 30 mL/min (Note 3)
Recommended pumping speed of backing pump in case of gas purge		600 L/min or more
Environmental Temperatures		0 to 40 degrees C.
Admissible ambient magnetic field	Radial direction	3 mT
	Axial direction	15 mT
Water	Flow rate	1 to 3 L/min
	Pressure	0.2 to 0.5 MPa
	Temperature	5 to 30 degrees C.
Mass		42 kg

(Note 1)When using a metal gasket at the inlet flange. When using an o-ring gasket, the ultimate pressure is  $10^{-7}$  Pa order.

(Note 2)mL/min : volume flow rate at 0 degrees C., 1 atm. (Compatible with SCCM.)

(Note 3)Without a protective net. Pumping speed for  $\text{N}_2$  is 1380 L/s with a protective net.

## Power Supply Unit

Power supply unit		EI-R04M
Battery		Not Necessary
Exchangeable compatibility		The control cable and the motor cable are interchangeable between any pump and power supply unit.
Speed variation		Speed is variable between 25 % and 100 % of the rated speed. (set as 0.1 %)
Communication	Contact	REMOTE (MR-34) Input : START / STOP / RESET / LOW SPEED Output : ROTATION / ACC. / BRAKE / NORMAL / REMOTE / ALARM / WARNING

	Serial	Front panel : RS-232C (D-sub 9 pin male, Screw lock size : M2.6) Rear panel : RS-485 (D-sub 9 pin female, Screw lock size : M2.6)
Environmental conditions	Temperature	Operation 0 to 45 degrees C. (No dew condensation)
	Relative humidity	40 to 80 %RH
Input electric power	Voltage	Single phase 200 to 240 VAC $\pm$ 10 % (50/60 Hz $\pm$ 2 Hz)
	Maximum power	1.0 kVA
Mass		8 kg