

Turbo Molecular Pump Unit [YTP Series]

The YTP series is an pumping unit consists of turbo molecular pump UTM series that adopts [Pivot bearing and permanent magnetic bearing] and can evacuate from atmospheric pressure to high vacuum. The series has two type of models, SA type with automatic operation by operating start/ stop button and M type with manual operation.



YTP-50SA

YTP-150SA-DRY

Features

- ▶ **Various Specifications are Available According to Application**
Standard pumping unit comes with oil rotary pump and dry scroll pump configuration is also available.
- ▶ **Clean High Vacuum**
Saturation vapor pressure of the fluorine oil used in turbo-molecular pump is on the order of 10^{-11} Pa, 10^{-13} Torr, 10^{-13} mbar (at 20°C, 68°F) and it becomes boundless clean when selecting dry fore pump.
- ▶ **Excellent Power Outage Countermeasures**
A solenoid fore valve is equipped as standard configuration, to prevent back flow and accident in case of black out.
- ▶ **Roughing Evacuation Condition can be Monitored**
Pirani vacuum gauge equipped as standard accessory can monitor pressure during roughing evacuation.
- ▶ **Pumping to the Ultra-High Vacuum is Possible**
Pumping to ultra-high vacuum range is possible with an optional bake jacket and by degassing a turbo pump. (*guaranteed performance within a pumping unit)

▶ Low Running Cost

Troublesome oil exchange and refill, and bearing replacements are unnecessary in the case of pivot bearing of turbo molecular pump and it reduces running cost.

Applications

- ▶ Evacuation system from atmospheric pressure to high vacuum
- ▶ Evacuation system of various experiment and R&D equipments
- ▶ Vacuum substitution of high-purity gas
- ▶ Roughing evacuation system of UHV system
- ▶ Evacuation system of analytical equipment

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Specifications

Model		YTP-50M/SA (-DRY)	YTP-150M/SA (-DRY)	YTP-300M/SA (-DRY)	YTP-500M/SA (-DRY)	
TMP suction port flange	ICF	114		152	203	
	VG	65		100	150	
TMP ultimate pressure *1 *2 *3	Pa	10 ⁻⁷		10 ⁻⁸		
	Torr	10 ⁻⁹		10 ⁻¹⁰		
	mbar	10 ⁻⁹		10 ⁻¹⁰		
TMP pumping speed *2 *4	L/s	N ₂	50	190	300	550
		H ₂	40	160	260	500
Fore-pump pumping speed	L/m	50Hz	50 (90)	135 (250)	200 (250)	200 (250)
		60Hz	60 (100)	162 (300)	240 (300)	240 (300)
	CFM	50Hz	1.76 (3.18)	4.77 (8.83)	7.06 (8.83)	7.06 (8.83)
		60Hz	2.12 (3.53)	5.72 (10.59)	8.48 (10.59)	8.48 (10.59)
TMP back pressure and rough pressure monitoring		Pirani vacuum gauge (2.7×10 ³ to 10 ⁻¹ Pa, 2.0 to 10 ⁻³ Torr, 2.7 to 10 ⁻³ mbar)				
Fore valve		Solenoid valve for rotary pump automatic vent system (Solenoid valve)				
Input voltage		Single phase AC100V 50/60 Hz				
Input cable length		5m with 3P outlet				
Power capacity	kVA	1.3 (1.0)	1.8 (1.7)		2.1 (2.0)	
Power consumption during stable operation	kVA	0.7 (0.5)	1.0 (0.9)		1.2 (1.2)	
Weight	kg	Apporox.55 (Apporox.57)	Apporox.72 (Apporox.71)	Apporox.86 (Apporox.85)	Apporox.99 (Apporox.98)	

*1 Value after baking out only TMP.

*2 Values obtained by using JVIS 005 standards or based on measurements using JVIS 005 standards.

*3 Order

*4 Pumping speeds obtained with no protective metal net installed.

Dimensions

YTP-DRY

YTP

Unit: mm

	YTP-50-DRY	YTP-150-DRY	YTP-300-DRY
A	580	600	650
B	450	500	500
C	430	420	440
D	311	311	311
E	65	65	65
F	70	90	100
G	160	90	100
H	463	576	576
I	532	480	455
J	ICF114 VG65	ICF152 VG100	
K		NW16	

	YTP-50	YTP-150	YTP-300	YTP-500
A	580	600	650	750
B	400	400	450	450
C	430	420	440	543
D	311	311	311	311
E	65	65	65	68
F	70	90	100	120
G	160	90	100	120
H	470	450	450	453
I	530	480	455	510
J	ICF114 VG65	ICF152 VG100	ICF203 VG150	
K	Rc3/4		Rc1	

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