

# Quadurupole Mass Spectrometer with Differential Pumping Kit [Qulee with YTP]

A variation of Qulee, adding new features in response to customer needs.

By adding a differential pumping unit, the Qulee provides measurement and analysis capabilities for process management and residual gas analysis.



#### Features

➤ Excellent Cost Performance

Provides gas analysis with an optional differential pumping unit

Compact Design

Utilizes standard vacuum unit model YTP-50M

- ➤ Integrated Display Unit Design
  Provides visual data without need for a PC
- ➤ Easy to Operate
  One-click function for easy operation, no complex procedures
- ➤ Atmospheric Pressure Analysis
  Selectable maximum measurable pressures 3000Pa, 500Pa, 100Pa, 10Pa and 1Pa
  (22.5Torr, 3.75Torr, 0.75Torr, 7.5×10°2Torr and 7.5×10°3Torr/30mbar, 5mbar, 1mbar, 0.1mbar and 1.0×10°2mbar)
- ➤ Select a Model Depending on your Application Select from the mass numbers 1 to 100 (BGM-101/102), 1 to 200 (BGM-201/202), 1 to 300 (HGM-302)
- ➤ 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.

#### ➤ Clean High Vacuum

Saturation vapor pressure of the fluorine oil used in turbo-molecular pump is on the order of 10<sup>-11</sup> Pa, 10<sup>-13</sup> Torr, 10<sup>-13</sup> mbar (at 20°C, 68°F) and it becomes boundless clean when selecting dry fore pump.

- Complete Leak Test Function

  Helium leak test, air leak test, leak up test
- Qulee QCS Software included (Windows 7/8)

#### Applications

- > Various types of gas analysis for research and development
- > Gas monitoring of PVD system during processing
- > Residual gas analysis in PVD system
- > Residual gas analysis for high vacuum pumping equipment, etc.
- ➤ Atmospheric pressure (10+5Pa, 760Torr, 1013mbar) of gas analysis (Atmospheric pressure type)
- Analysis of endpoint monitoring at vacuum furnace process and oxygen density.
- > Analysis of dring point at freeze-dry system and impurity check.

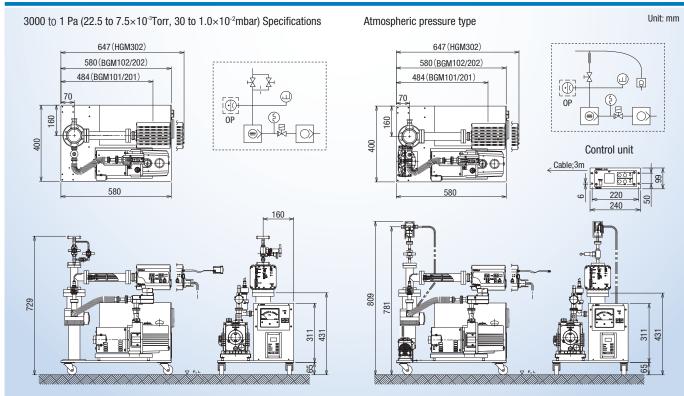




## **Quadurupole Mass Spectrometer with Differential Pumping Kit [Qulee with YTP]**

Specifications		
Qulee main body		Select from BGM-101/102/201/202, HGM-302
Max sampling pressure		Select from atmospheric pressure 3000Pa/500Pa/100Pa/10Pa/1Pa
		Select from atmospheric pressure 22.5Torr/3.75Torr/0.75Torr/7.5×10°2Torr/7.5×10°3Torr
		Select from atmospheric pressure 30mbar/5mbar/1mbar/0.1mbar/1.0×10°2mbar
Gas induction (500 to 1Pa type/3.75 to 7.5×10 <sup>-3</sup> Torr type/5 to 1.0×10 <sup>-2</sup> mbar type)		Manual bellows valve-Flange UFC070
Atmospheric unit	Dry pump	Pumping speed 6L/min
APS-001 (Atmospheric pressure type)	Ultimate pressure	6700Pa (50Torr, 67mbar)
	Control unit	Power cable 3m
	Capillary tube unit	Manual bellow valve ∙Coupling 1/4" Swagelock
	Input voltage	Single phase AC100V, 5A
Pump unit YTP-50M	TMP	Pumping speed 50L/s (N₂)
	Roughing pump	Select rotary pump or dry pump
	Ultimate pressure	Below 1.0×10 <sup>-7</sup> Pa (7.5×10 <sup>-10</sup> Torr, 1.0×10 <sup>-9</sup> mbar) (value after TMP bake out)
	Pirani gauge	GP-1G
	Input voltage	Singple phase AC100V, 14A
Software		Qulee QCS Ver. 3.1 (Windows 7/8)
Optional accessories		Ionization gauge package (GI-M2, M-13, Sensor head cable 2m, Cross tube [IFX070], Conversion flange [UFC070/034], Bolts,
		Gaskets), USB-RS232C Micro converter

#### **Dimensions**



<sup>\*</sup> Pump unit, Qulee main body, gas inlet, and other parts will be packaged separately. Please refer to the assembly manual for set up.

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