

Turbo Molecular Pump Selection Guide

A complete line of turbo molecular pumps is available from ULVAC, which meet a broad range of vacuum applications ranging from simple vacuum generation for analytical instrumentation to the demanding pumping requirements encountered in corrosive processes for the semiconductor industry.

Model Comparison Chart

Model series	Model type	Bearing type	Rotor type
UTM Series UTM-C Series*¹	Ultra-high vacuum type	Upper section : Permanent magnet bearing : Pivot bearing	Fins on all stages
UTM-M Series*²	Ultra-high vacuum /medium vacuum type	Upper section : Permanent magnet bearing Lower section : Pivot bearing	Fins on all stages
UTM-FW Series*³	Wide range · High throughput	Digital controlled active magnetic bearing	Upper stages : Fins
UTM-FH Series*⁴	High back pressure · High compression		Lower stage : Screw type design

* 1 UTM-C series models are corrosive series pumps, which have a special surface treatment on the internal pumping surfaces, (rotor and stator). Additionally, there is a nitrogen exhaust port on the UTM-C series. This special surface treatment on the rotor and stator fins and the nitrogen exhaust port are included as standard equipment on the UTM-M and UTM-FW series models.

* 2 UTM-M series models extend the operating range of the UTM series pumps to the low vacuum region by providing special surface treatment, water-cooling of the pump housing, and a larger power supply. These models were made primarily for use in sputtering processes utilizing Ar gas.

* 3 UTM-FW series models have the following additional features that make them suitable for use in difficult processing situations:

- System to maintain a high internal pump temperature
- Specially coated parts
- Variable speed system

* 4 UTM-FH: Performance such as high back pressure and high compression reduces back flow of fluid which flow to upper side of suction port even if high back pressure is high, and is able to downsize the backing pump, keeping conventional process condition boundlessly.

