

Technical specifications of Turbo molecular pump

1. Turbo molecular pump without integrated drive unit. Turbo pump should withstand at high voltage operation and electromagnetic radiation.
2. All drive unit and control unit of the Turbo Pump should 10 meter away from the Turbo Pump.
3. All cables should be shielded one.
4. Inlet flange: - DN 200ISO-F
5. Outlet flange: - DN 25 ISO-KF,
6. Pumping speed for:
 - a. Nitrogen:780 l/s or higher,
 - b. Argon: 780 l/s or higher
 - c. Helium: 700 l/s or higher
 - d. Hydrogen: 550 l/s or higher
7. Compression ratio for:
 - a. Nitrogen: - $>1 \times 10^{11}$,
 - b. Argon: - $> 1 \times 10^{11}$
 - c. Helium: - $>1 \times 10^7$,
 - d. Hydrogen: - $> 1 \times 10^5$
8. Cooling method: Water cooling and Air cooling kit
9. Ultimate pressure: $<1 \times 10^{-7}$ mbar
10. Gas throughput for N₂: - higher than 5mbar l/s,
11. Protection – Against Water Spillage i.e. IP 54
12. Continuous backing vacuum pressure for N₂: -higher than 10 mbar
13. Rotation Speed Variation : 60 – 100%
14. Weight should be less than 15 k.g
- 15 **Display parameters of Control Unit for the above pump**
 - a) Speed of the pump in terms of revolutions per seconds(Hz) and revolutions per minute(rpm)
 - b) Current drawn by the pump.
 - c) Operating hours
 - d) Temperatures of bearing, motor and electronics etc.
16. The turbo pump should have maintenance free, permanent magnetic bearing at High Vacuum Side, and oil lubricated ceramic bearing.
17. The turbo pump should be supplied with all essential accessories such as automatic vent valve, splinter shield, Y-connector for connecting all accessories, air cooling kit, all inter connecting cables,etc.

After Sale Service Facility: - In case of break down, complete repairs of the Turbo Pump, viz. bearing replacement, motor part replacement, complete cleaning of the pump etc. should be possible at site. The vendor should have Service Centre/Facility and complete infrastructure within India to handle complete repairs of the turbo pump, such as, changing of stator / rotor assembly, repairs of electronics, etc and availability of critical spares off the shelf, from Indian office.