

Technical description of the Subject of the Order

Detailed requirements for the components and parts for vacuum deposition line are given below. The requirements should be treated as minimum requirements. The contractor can offer components and parts with higher parameters.

	Name	Quality	Unit	Description
1	Turbomolecular Pump	48	pcs	Compression ratio for Ar: $> 1 \cdot 10^8$ Compression ratio for H2: $> 5 \cdot 10^2$ Compression ratio for He: $> 4 \cdot 10^4$ Compression ratio for N2: $> 1 \cdot 10^8$ Cooling method: Water Cooling water consumption: 60 l/h Cooling water consumption, max: 60 l/h Cooling water consumption, min: 60 l/h Cooling water temperature: 15 °C 59 °F 288 K Electronic drive unit: External drive electronics Flange (in): DN 200 ISO-F Flange (out): DN 40 ISO-KF Fore-vacuum max. for N2: 1.7 hPa 1.27 Torr 1.7 mbar Gas throughput for Ar: 20.3 hPa·l/s Gas throughput for H2: > 67.6 hPa·l/s Gas throughput for He: > 67.6 hPa·l/s Gas throughput for N2: 67.6 hPa·l/s Interfaces: Via External drive electronics Mounting orientation in any orientation Operating voltage: 50/60 Hz 200 – 240 / 200 – 240, 50/60 Hz V AC V AC Power consumption at ultimate pressure: 300 W Pumping speed for Ar: 1280 l/s Pumping speed for H2: 540 l/s Pumping speed for He: 940 l/s Pumping speed for N2: 1360 l/s Rotation speed ± 2 %: 39,000 rpm 39,000 min ⁻¹ Run-up time: < 6 min Separate electronic drive unit: YES Sound pressure level: ≤ 48 dB(A) Ultimate pressure: $< 6 \cdot 10^{-9}$ hPa $< 4.5 \cdot 10^{-9}$ Torr $< 6 \cdot 10^{-9}$ mbar