

General Technical Data for all Models

| System Requirement | Data |
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| Chamber | |
| Surface Finish | $Ra \leq 0.8 \mu\text{m}$ |
| System Leak Rate (Applicable to the Total Freeze Dryer with Chamber, Condenser, Piping etc.) | $\leq 0.01 \text{ mbar}^* \text{l}^* \text{s}^{-1}$ |
| Shelves | |
| Flatness in the Usable Area | $\leq 1 \text{ mm/m}$ |
| Surface Finish on Top Side | $Ra \leq 0.8 \mu\text{m}$ |
| Surface Finish on Bottom Side | $Ra \leq 0.8 \mu\text{m} / Ra = 1.6 \text{ to } 2.2 \mu\text{m}$ |
| Shelf Cooling Rate from +20 to -40°C | 45 minutes (no load) |
| Shelf Heating Rate | $> 1.5 \text{ K per minute}$ (no load) |
| Regulating Temperature Range During Drying | - 50°C to +60°C |
| Condenser | |
| Inner Surface Finish of the Condenser | $Ra \leq 0.8 \mu\text{m}$ |
| Surface Finish of the Condenser Coils | Cold drawn |
| Final Temperature (measured at the pipe surface) | $\leq -75^\circ\text{C}$ |
| Defrosting of Ice | 40-60 minutes at maximum ice capacity |
| Vacuum | |
| Final Vacuum of the Vacuum Pump Set | $< 0.005 \text{ mbar}$ |
| Final Vacuum of the Freeze Dryer | $< 0.01 \text{ mbar}$ (cold condenser) |
| Pump Time from 1000 to 0.1 mbar | $\leq 30 \text{ minutes}$ (cold condenser) |
| Sterile Piping and Valves | |
| Surface Finish | $Ra \leq 0.6 \mu\text{m}$ |