SYSTRONICS (INDIA) LIMITED

ATOMIC ABSORPTION SPECTROPHOTOMETER

SYSTRONICS Type SYS 999D
True Double Beam. Fully Automated. Research-Grade Precision

ISO 9001:2015 CERTIFIED COMPANY

AAS SYS 999D – Smart Technology for Serious Elemental Analysis

The SYSTRONICS Type 999D Atomic Absorption Spectrophotometer is designed for advanced research and routine lab analysis. Built with a true double beam optical system, high-sensitivity detection, and intelligent gas flow optimization, it ensures accurate, reproducible results even in the most complex matrices. This system meets modern compliance and validation needs, while supporting future upgradability to Graphite Furnace and Hydride modes — all without manual switching.

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📊 **Specification Table – Feature-by-Feature Overview**

🖊 Feature	📌 Specification / Description
Optics	True double beam optics with Czerny–Turner monochromator (aberration corrected); focal length 300 mm
Grating	High-resolution grating, 1800 lines/mm
Wavelength Range	190 – 900 nm
Bandwidth Selection	Automatic 6-step: 0.1, 0.2, 0.4, 0.7, 1.0, 2.0 nm
Detector	High-sensitivity PMT (Photo Multiplier Tube)
Lamp Turret	8-lamp motorized turret; software-controlled; supports 2 simultaneously lit lamps (one for measurement, one pre-warm)
Boosted Lamp Support	In-built power supply for 8 Super Lamps
Background Correction	Dual: Deuterium (D_2) as standard + Self-Reversal (optional)
Burner Head	100 mm solid Titanium burner (Air–C_2H_2); auto ignition & extinction
Nebulizer	Engineering plastic body with Pt-Ir orifice and ceramic impact bead; acid and HF resistant
Gas Flow Control	Fully computerized with auto optimization; real-time absorbance difference used to determine best gas mix

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🔧 Feature	📌 Specification / Description
Performance Guarantee	0.82 Abs for 5 mg/L Copper solution with RSD < 0.5%
Safety Features	Flame monitoring, leak detection, interlock for burner head, auto flame shutdown, pressure sensors, fan stop, flame retardant body
Gas Switching	Auto switch between Air–C_2H_2 and N_2O–C_2H_2 with optical flow sensor
Software	Windows 10 Professional-based; full control, method dev., QA/QC tools, validation, and secure data management
Supplied Lamps	Fe, Mn, Cu, Zn Single Hollow Cathode Lamps
Included Utilities	Exhaust hood, filled acetylene cylinder, double stage SS regulator, oil-free compressor, 2x gas control boxes, air filters, SS tubing with PVC casing
Installation Requirements	All PIR (Pre-Installation Requisites) provided as per tender
Warranty	1 year from date of installation
Installation & Training	Free, on-site at customer's lab
Delivery Time	8–10 weeks from purchase order
Future Upgradability	Auto Sampler (Flame, Furnace, Hydride), Auto Dilution, Graphite Furnace, Computer-controlled flame furnace switching
Manual Intervention	Not required for mode change (fully automated)
Service Support Location	Dedicated service centre & office in **Kolkata (Eastern India)**

🎁 **What's Included in the Standard Package?**

- ✅ **Single HCLs:** Fe, Mn, Cu, Zn

- ✅ **Pre-Filled Acetylene Cylinder**

- ✅ **Double-Stage SS Regulator (1x)**

- ✅ **Oil-Free Air Compressor (1x)**

- ✅ **Gas Control Boxes (2x)** – for Acetylene & Air

- ✅ **Exhaust Hood Assembly**

- ✅ **Air Filters** – Dust, Oil, Moisture

- ✅ **Dedicated PC**

- ✅ **SS Tubing with Color-Coded Sleeves & PVC Casing**
- ✅ **All Standard Fittings and Hose Connectors**

🚀 **Why Choose SYSTRONICS Type 999D?**

✅ Advantage	💡 How It Benefits You
True Double Beam – No Simulation	Real-time reference correction ensures highly accurate readings
Dual Background Correction	Handles complex sample matrices using D_2 & Self-Reversal options
Rugged Burner + Nebulizer System	Durable and corrosion-resistant; designed for harsh lab environments
Smart Gas Flow Optimization	Auto-adjusts fuel/oxidant mix to maximize signal sensitivity
Intelligent Safety Suite	Ensures lab protection with sensors, interlocks & power fail-safety
Software Driven	Complete system control with Windows 10 Pro & built-in validation/compliance tools
Future Proof Design	Seamless upgradability to advanced modes & accessories – no manual switching needed
Trusted Local Support	Dedicated service centre in **all states** ensures fast and reliable assistance

📦 **Logistics & After-Sales**

Service	📋 Details
Delivery Timeline	8–10 weeks from Purchase Order
Installation	Free at your lab by certified engineers
Training	Included; On-site
Warranty	1 Year from date of installation