

# DATA SHEET: HR-OSS-500 Ozone Standard Generator

High-Precision Ozone Calibration Source for Analytical Instrumentation

## 1. PRODUCT OVERVIEW

The **HR-OSS-500** is a high-precision ozone standard generator engineered to provide a stable and accurate ozone source for the verification, calibration, and testing of ozone analytical instruments. Utilizing advanced PID control algorithms and high-precision mass flow controllers, it addresses the challenges of "on-site preparation" for ozone. The system allows users to set any concentration within the 1–500 PPM range, delivering exceptional repeatability and rapid response times that meet internationally advanced performance standards.

## 2. KEY FEATURES

- Advanced Processing:** Powered by a 32-bit ultra-low power microprocessor for high-speed data processing and system stability.
- Precise Concentration Control:** Employs sophisticated PID algorithms combined with high-precision mass flow controllers for accurate gas ratios.
- High-Efficiency Generation:** Equipped with ultra-pure ceramic ozone tubes ensuring high conversion efficiency and an extended service life.
- Stable UV Source:** Uses imported high-performance UV light sources for consistent ozone production.
- Integrated Safety:** Features a built-in catalytic decomposition device to safely process excess ozone and prevent environmental pollution.
- Robust Hardware Protection:** Includes comprehensive safeguards against over-voltage, over-current, electrostatic interference, and electromagnetic fields.
- Self-Sufficient Design:** No oxygen source or consumables are required for ozone generation.

## 3. TECHNICAL SPECIFICATIONS

Feature	Specification
Target Gas	Ozone (O <sub>3</sub> )
Calibration Range	1 - 500 PPM (μmol/mol)
Maximum Error	≤ 5%
Repeatability	≤ 2%
Linearity	R <sup>2</sup> > 0.999
Response Time	≤ 5 min

Feature	Specification
Resolution	0.01 PPM
Output Gas Flow	> 7 L/min
Max. Detector Inhalation	< 3 L/min
External Zero Air Needs	Flow > 30 L/min, Pressure 0.2 MPa, Temp 10-35°C
Operating Environment	Temp: 10 ~ 35°C / Humidity: ≤ 85% RH
Power Supply	AC 220V ± 10%, 50Hz
Dimensions (LWH)	600 × 600 × 1166 mm
Net Weight	120 kg

---

## 4. APPLICATIONS

- **Metrology & Certification:** Periodic verification and calibration of ozone analyzers.
- **R&D Testing:** Performance evaluation of new ozone detection technologies.
- **Environmental Monitoring:** Providing standard reference gases for air quality monitoring stations.
- **Industrial Safety:** Calibration of ozone leak detection systems in treatment plants.

---

## 5. STANDARD ACCESSORIES

- Power Cord & Cabinet Keys
- **Factory Calibration Report**
- User Manual & Certificate of Quality

---

**Manufactured by:**  
**Honri Airclean Technology (Suzhou) Co., Ltd.**