

Spherical Aluminum Anode

The spherical aluminum anode is a high-performance cathodic protection solution designed for equipment such as condenser water boxes, heater treaters, and pressure vessels. It is widely used to protect steel components in brackish water, produced brines, and seawater environments. Its spherical geometry ensures uniform current distribution, and the aluminum-zinc-indium alloy system provides excellent resistance to passivation in high-temperature and moderate chloride environments.

This anode delivers stable protection for more than ten years and is suitable for typical industrial applications including heat exchangers, condensers, heater treaters, and seawater handling systems.



KEY FEATURES

1. Uniform Current Distribution
2. High-Temperature Performance
3. Easy Installation & Maintenance
4. Long Service Life
5. Compact Design

PRODUCT SPECIFICATIONS

Typical Sphere Diameter: 100mm (4") / 150mm (6") / 200mm (8") (custom sizes available)

Mounting Shaft: 3/4" NPT threaded steel core (standard)

Installation: Direct screw-in to pre-drilled vessel wall ports (no welding required)

Weight Range: 4kg (9 lbs) to 30kg (66 lbs), depending on sphere diameter

Surface Finish: As-cast aluminum surface, no coating

Operating Temperature Range: Up to 90°C (194°F)

Open Potential: -1.10 to -1.18 V (vs. SCE)

Closed Potential: -1.05 to -1.12 V (vs. SCE)

Actual Capacity: ≥2500A.h/kg

Current Efficiency: ≥90%

Anode Chemical composition(%): Zn:2.0-6.0, In:0.01-0.02, Si:0.08-0.2, Cu:≤0.006, Fe:≤0.13, Cd:≤0.002, Other impurities:≤0.10, Al:Remainder

APPLICATIONS

1. Condenser water boxes and tube sheet protection in power plants
2. Heater treaters and production separators in oil and gas facilities
3. Pressure vessels and storage tanks containing brackish water or produced brines
4. Heat exchangers and seawater handling systems