ECOANODE

TECHNICAL DATA SHEET

POWERED WATER HEATER ANODE STICK

ECOANODE's powered water heater anode sticks represent a significant advancement in water heater protection technology. Unlike traditional sacrificial anodes that rely on galvanic corrosion, this system utilizes an external electrical current to actively inhibit tank corrosion. The core component is a titanium substrate coated with a highly durable Ir-Ta (Iridium-Tantalum) mixed metal oxide catalyst. When connected to a low-voltage DC power source, this assembly functions as a permanent, electrochemically active anode.

This innovative approach completely eliminates the hydrogen sulfide production responsible for the characteristic "rotten egg" foul odors in hot water. It also effectively prevents scale accumulation on tank surfaces and heating elements. A key advantage is its consistent performance across a wide range of water chemistries, unlike magnesium or aluminum anodes whose efficacy varies with water hardness.

PERMANENT CORROSION PROTECTION

Because the titanium substrate is naturally passivated by an oxidizing film, the rod anode remains dimensionally stable over time. Relying on infinite source of impressed current, this powered anode rod can provide maximum corrosion protection regardless of water hardness.



ODOR ELIMINATION

Once the system is operational, the powered anode rod will remove the "rotten egg" smell caused by hydrogen sulfide within 24 hours.

LIMESCALE REDUCTION

By destabilizing the calcium molecule found within the water, it can improve the water quality and reduce mineral accumulation on the tank which may cause significant energy losses.

AUTOMATIC ADAPTION

The embedded potentiostat can measure the returning current and adjust the output voltage automatically to avoid overprotection of the water heater tank. No matter if water comes from the city or a well, it adapts to the type of water present in the tank for optimal protection. No maintenance required, even if used with a water softener.

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