

Aluminum Anode Rod For Water Heater

The aluminum anode rod for water heaters is a sacrificial anode that prevents corrosion of the inner tank through electrochemical principles. The aluminum rod and the steel inner tank form a galvanic cell. Since the potential of aluminum is much lower than that of steel, aluminum preferentially loses electrons and undergoes oxidation, gradually dissolving and sacrificing itself, thereby protecting the inner tank as the cathode. Its main application is in storage-type electric water heaters, especially in areas with hard water or where magnesium rods deplete too quickly. It offers advantages such as long service life and stable protection performance. Additionally, it is widely used in solar water heaters, heat pump water tanks, and various industrial water storage vessels for cathodic protection systems.



KEY FEATURES

1. Long service life, slow consumption
2. Low cost
3. Suitable for hard water areas
4. Interchangeable installation (compatible with standard magnesium anode threads/sizes)

APPLICATIONS

1. Solar water heater
2. Heat pump water tank
3. Various industrial water storage vessel

PRODUCT GUIDE

Water Heater Capacity	Anode Diameter(mm)	Anode Length(mm)	Connector
30-40L	Φ14-16	150-200	3/4"NPT/M8
50-60L	Φ19-22	250-350	3/4"NPT
80L+	Φ22-25	350-450	3/4"NPT

PRODUCT SPECIFICATIONS

Type	Chemical Composition(%)												
	Si	Fe	Cu	Mn	Mg	Zn	Sn	Bi	B	Ga	Other		Al
											Each	Total	
8C02	0.10	0.10	0.005	0.005	0.03	0.005	1.10-0.25	0.001-0.015	0.001-0.015	0.01-0.10	0.03	0.10	Remainder
741Z.1	0.25	0.25	/	/	/	4.0-5.0	0.05-0.25	/	/	/	0.03	0.30	Remainder
781Z.1	0.35	0.15	0.005	/	/	12.0-16.0	0.10-0.05	/	/	/	0.03	0.30	Remainder

Electrochemical Properties				
Type	Open Potential(-V,vs SCE)	Closed Potential(-V,vs SCE)	Actual Capacitance(A·h/kg)	Current Efficiency(%)
8C02	1.38-1.58	1.28-1.50	≥1192	≥40
741Z.1	0.98-1.28	0.88-1.18	≥1440	≥50
781Z.1	0.93-1.23	0.83-1.13	≥1729	≥65