



# ZINC CONDENSER ANODES

PRODUCT DATA SHEET

# ZINC CONDENSER ANODES

We manufacture a full product line of zinc anode slabs and blocks, suitable for use in heat exchangers, condenser water boxes, cooling towers, intercoolers and tank interiors. Our condenser anode is available as either bare or plastisol coated. The plastisol (polyvinyl chloride) coating on the sides, ends, and faying surfaces serves as an excellent current barrier shield.



## CHEMICAL COMPOSITION

Our anode is made from special high grade (SHG) zinc ingots with 99.995% purity. The high-purity composition ensures the anode material is more resistant to passive films. Type I is generally used in seawater or brackish water, while Type II is used in fresh water.

### ■ ASTM – B418 Type I

| Element          |      | Content (%)   |
|------------------|------|---------------|
| Aluminum         | (Al) | 0.100 ~ 0.500 |
| Lead             | (Pb) | 0.006 max.    |
| Iron             | (Fe) | 0.005 max.    |
| Copper           | (Cu) | 0.005 max.    |
| Cadmium          | (Cd) | 0.025 ~ 0.070 |
| Other Impurities |      | 0.100 max.    |
| Zinc             | (Zn) | Remainder     |

### ■ ASTM – B418 Type II

| Element          |      | Content (%) |
|------------------|------|-------------|
| Aluminum         | (Al) | 0.005 max.  |
| Lead             | (Pb) | 0.003 max.  |
| Iron             | (Fe) | 0.0014 max. |
| Copper           | (Cu) | 0.002 max.  |
| Cadmium          | (Cd) | 0.003 max.  |
| Other Impurities |      | 0.100 max.  |
| Zinc             | (Zn) | Remainder   |

## ELECTROCHEMICAL PROPERTIES

Being a high voltage conductor, zinc has a greater negative electro-chemical potential than other metals. As such, it does not easily cause overprotection which leads to coating disbondment and hydrogen damage of high strength steel. There comes a time and place where no other material beats zinc as a sacrificial anode – when it is docked or anchored in seawater or brackish water for long periods of time.

### ■ ASTM – B418 Type I

| Technical Measurement  | Performance               |
|------------------------|---------------------------|
| Open Circuit Voltage   | -1.05 Volts (min.)        |
| Closed Circuit Voltage | -1.00 Volts (min.)        |
| Current Capacity       | 780 A.h/kg(354 A.h/lbs)   |
| Current Efficiency     | 95%                       |
| Consumption Rate       | 11.2 kg/A.y(24.8 lbs/A.y) |

### ■ ASTM – B418 Type II

| Technical Measurement  | Performance               |
|------------------------|---------------------------|
| Open Circuit Voltage   | -1.10 Volts (min.)        |
| Closed Circuit Voltage | -1.05 Volts (min.)        |
| Current Capacity       | 740 A.h/kg(335 A.h/lbs)   |
| Current Efficiency     | 90%                       |
| Consumption Rate       | 11.9 kg/A.y(26.2 lbs/A.y) |

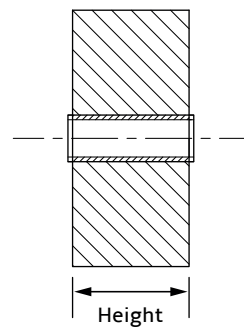
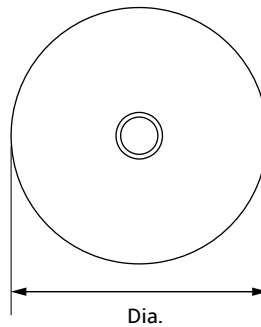
\* The open/closed circuit voltage is with respect to a saturated calomel electrode.



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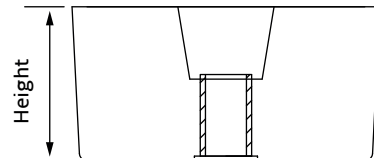
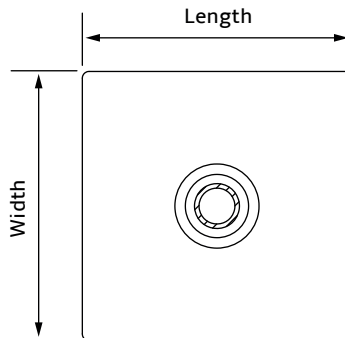
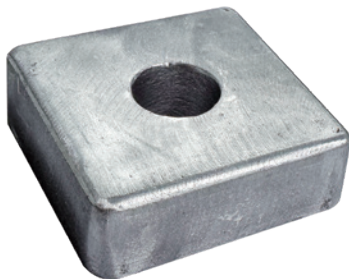
## SPECIFICATIONS

### ■ Round Shape Anode with Cast-in Steel Pipe Core



| Item No.       | Diameter       | Height       | Pipe Core Size | Weight           |
|----------------|----------------|--------------|----------------|------------------|
| YX-ZN-CP50/25  | 50.8 mm (2")   | 25.4 mm (1") | 1-3/8"         | 0.4 kg (0.8 lbs) |
| YX-ZN-CP76/25  | 76.2 mm (3")   | 25.4 mm (1") | 1-3/8"         | 0.8 kg (1.8 lbs) |
| YX-ZN-CP101/25 | 101.6 mm (4")  | 25.4 mm (1") | 1-3/8"         | 1.4 kg (3 lbs)   |
| YX-ZN-CP127/25 | 127 mm (5")    | 25.4 mm (1") | 1-3/8"         | 2.2 kg (4.9 lbs) |
| YX-ZN-CP152/25 | 152.4 mm (6")  | 25.4 mm (1") | 1-1/2"         | 3.3 kg (7.2 lbs) |
| YX-ZN-CP228/25 | 228.6 mm (9")  | 25.4 mm (1") | 2-1/2"         | 7.3 kg (16 lbs)  |
| YX-ZN-CP279/25 | 279.4 mm (11") | 25.4 mm (1") | 2-1/2"         | 10.9 kg (24 lbs) |
| YX-ZN-CP381/25 | 381 mm (15")   | 25.4 mm (1") | 2-1/2"         | 10.4 kg (23 lbs) |

### ■ Square Shape Anode with Cast-in Steel Pipe Core

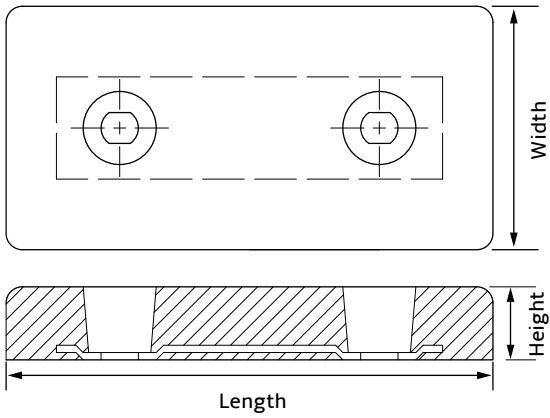


| Item No.        | Length        | Width         | Height       | Pipe Core Size | Weight             |
|-----------------|---------------|---------------|--------------|----------------|--------------------|
| YX-ZN-SP152/25  | 152.4 mm (6") | 152.4 mm (6") | 25.4 mm (1") | 1-1/2"         | 4.1 kg (9 lbs)     |
| YX-ZN-SP203/102 | 203mm (8")    | 203mm (8")    | 102mm (4")   | —              | 27.9 kg (61.5 lbs) |



# ZINC CONDENSER ANODES

■ Rectangular Shape Anode



| Item No.     | Length        | Width        | Height      | Bolted Hole | Weight              |
|--------------|---------------|--------------|-------------|-------------|---------------------|
| YX-ZN-DR7926 | 300mm (11.8") | 200mm (7.9") | 65mm (2.6") | Double      | 26.67 kg (58.8 lbs) |

Note: All dimensions and weights shown above are nominal. The information provided is subject to change without notice.







## Industrial Corrosion Control Solutions Provider

Established in 2003, YUXI has over a 20-year heritage of innovation in corrosion control science and technology. We're a spirited team of ambitious thinkers and pioneer sheep with a common goal in mind: protect our clients' assets from corrosion with cost-saving measures.

We have the most comprehensive catalog of cathodic protection materials including anodes, transformer rectifiers, backfills, coatings, etc. Our anodes and supplies are manufactured to strict quality standards through an ISO 9001 quality management system and are guaranteed to offer excellent performance in the industry.



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