

TRUMBULL INDUSTRIES, INC.

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TRUMBULL ANODE CAPS

SACRIFICIAL ZINC ANODES

Trumbull Anode Caps are designed for fighting corrosion of underground bolts and nuts, and iron pipe and fittings.

These threaded, hex head caps, when secured to a bolt or stud, form a galvanic cell, similar to a battery. As part of this cell, the Zinc cap becomes the sacrificial anode, corroding, while the remaining metal parts are protected.

This corrosion protection continues until the Zinc is consumed.

THEORY OF OPERATION:

Corrosion is an electrochemical process in which metal parts form a galvanic cell when they are in contact with moisture. Using the common battery as an example, moisture becomes the electrolyte while the different metals in the system (such as bolts, nuts, fittings, etc.) become the positive and negative ends of the battery. The composition of the materials determines which is the more negative, Zinc being much more negative than most other materials.

The "more negative" component loses material thru corrosion while protecting the "positive" component, which becomes shielded; the protected component is essentially immune to corrosion as long as there is Zinc remaining to consume.

Zinc Anode Caps offer protection for other system components made of steel, cast iron, ductile iron, brass and copper.

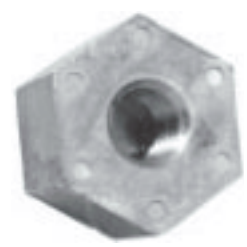
The quantity of Zinc Anode Caps used determines the service life of the protected component.

Trumbull Zinc Anode Caps are made from high grade Zinc that conforms to the chemical requirements of both ASTM B418-88, "Galvanic Zinc Anodes", and, U.S. Navy Specification Mil-18001 H.



SMALL ZINC ANODE CAP, 2.5 oz.

<u>Trumbull No.</u>	<u>Description</u>
364-1004	5/8"-11, N.C.
364-1006	3/4"-10, N.C.



LARGE ZINC ANODE CAP, 6 oz.

<u>Trumbull No.</u>	<u>Description</u>
364-1008	5/8"-11, N.C.
364-1010	3/4"-10, N.C.
364-1012	1"-8, N.C.

For heavier Anode Caps, please inquire.

Typical installation of Zinc Anode Caps.

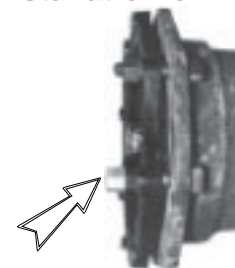


Table 1 – Practical Galvanic Series

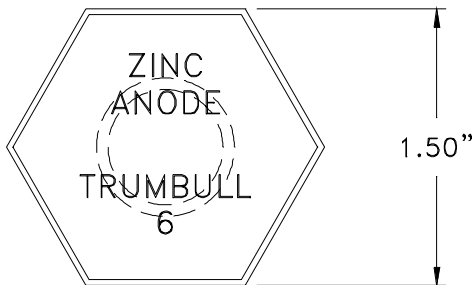
Metal	Volts
Zinc (Mill Spec Anodes)	-1.1
Commercially Pure Aluminum	-0.8
Mild Steel (Clean)	-0.5 to -0.8
Mild Steel (Rusted)	-0.2 to -0.5
Cast Iron	-0.5
Lead	-0.5
Mild Steel in concrete	-0.2
Copper, Brass, Bronze	-0.2
High silicon cast iron	-0.2

See reverse side for drawing.

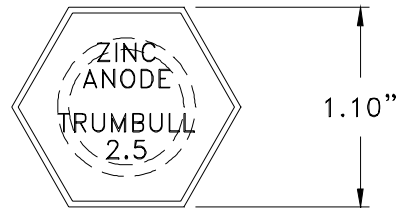
Material: High Grade Zinc
 Conforms to chemical requirements of,
 ASTM B418-88, "Galvanic Zinc Anodes", and,
 U.S. Navy Specification, Mil-18001 H

Item No.	Tapped	Weight (oz.)
364-1004	5/8"-11 NC	2-1/2
364-1006	3/4"-10 NC	2-1/2
364-1008	5/8"-11 NC	6
364-1010	3/4"-10 NC	6
364-1012	1"- 8 NC	6

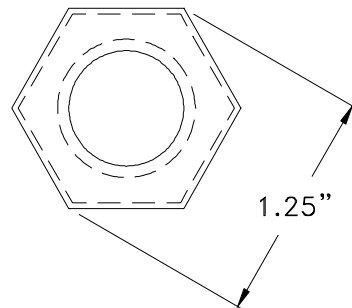
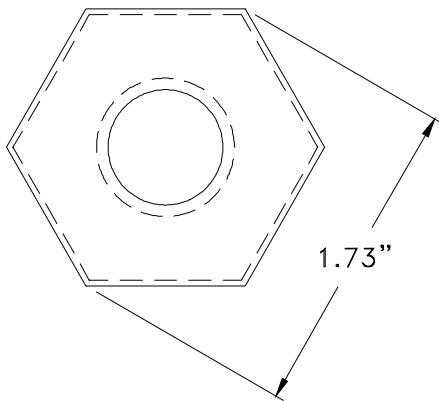
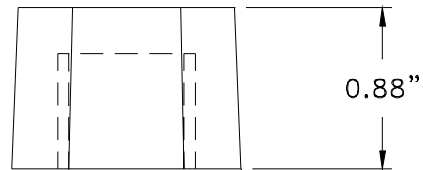
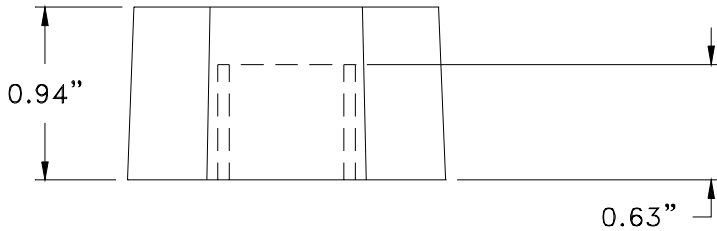
Large Anode Cap
 6 ounces



Small Anode Cap
 2-1/2 ounces



2° Taper, typical



Drawn: Date 6/28/94	Drawing Revision: Rev. J Date 12/11/01	TRUMBULL INDUSTRIES P.O. Box 1556 1040 N. Meridian Rd. Youngstown, Ohio 44501	Drawn to Scale ZINC ANODE CAPS
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