

SACRIFICIAL ANODES

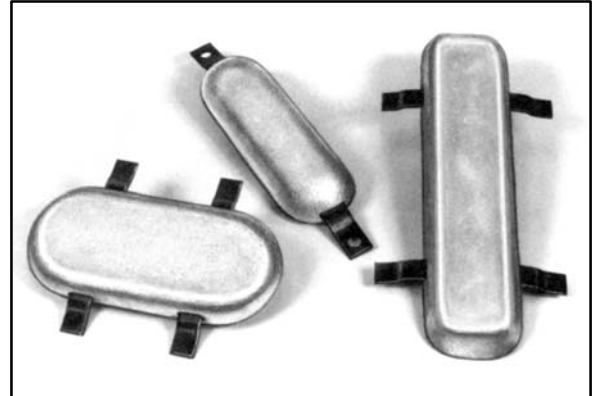
Hull and Special Application

Cast Aluminum Anodes

Economical Marine Vessel Protection

In saltwater environments, where electrical resistivities are usually quite low, aluminum anodes are the most economical choice for corrosion protection. These anodes offer higher current efficiency and lower anode consumption than both magnesium and zinc in aqueous saline areas, making aluminum ideal for the protection of ship hulls on oceangoing vessels. Corrpro casts an entire line of hull anodes made to two alloying standards. Alloy I produces an open circuit potential of 1.05 volts (with respect to an Ag/AgCl reference cell), and realizes a 95% current efficiency. Alloy II generates a voltage potential of 1.10, and has a lower current efficiency rating of 87% in free-flowing water. This anode material also performs better in saline mud and lower-chloride water. Because Alloy II has a more powerful driving voltage, fewer anodes are necessary to protect a given structure when elongated shapes are employed.

Both hull anodes are cast with steel core brackets for bolt or weld mounting. They are molded with tapered ends to minimize water turbulence. To ensure quality, each production run of these anodes is inspected for correct chemical composition through a variety of tests. Electrochemical tests are also employed to verify performance characteristics.



Typical Applications

Corrpro hull anodes are manufactured for the hulls of oceangoing vessels. They are also applicable for use on any other saltwater structure. Because Alloy I contains nominal amounts of mercury, it is not recommended for areas where water flow is restricted. Alloy II, which contains small amounts of indium, silicon, and zinc, is especially effective in saline mud and lower chloride water. This alloy is also the recommended protective material for produced water and treatment tanks.

CHEMICAL COMPOSITION

Element	Content %	
	Alloy I	Alloy II
Zn	0.35-0.50	2.8-3.5
Si	0.14-0.21 max.	0.08-0.2 max
Hg	0.035-0.048	–
In	–	0.01-0.02
Aluminum	Remainder	Remainder



Corrpro Companies Europe Limited

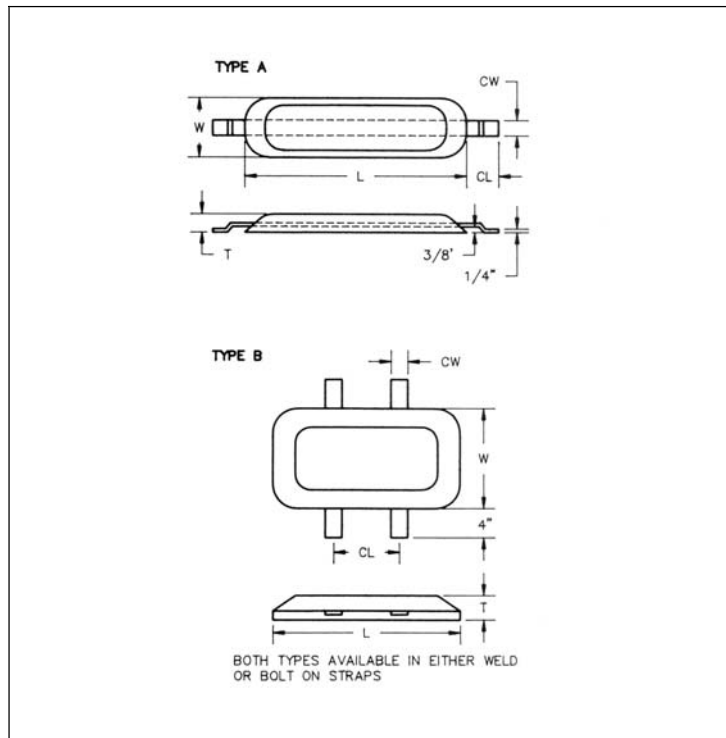
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Ordering Procedure

There are a number of different types of hull anodes that are readily available from Corpro's manufacturing warehouses. To order the required anode for your structure, indicate that you need an aluminum hull anode, and specify the quantity desired, alloy grade, anode type, and configuration type. All anodes are shipped with welded-style mounting brackets unless otherwise specified. An example is provided to help illustrate this process.

Ordering Procedure Example	
ITEM	EXAMPLE
Quantity	200
Anode Material	Aluminum Hull
Alloy Composition	Alloy II
Anode Type	AA-2-10H



Standard Dimensions & Shipping Weights

ANODE TYPE	CONFIG. TYPE	NOMINAL DIMENSIONS in. (mm)					NOMINAL ANODE NET WT. lbs. (kg)
		L	W	T	CL	CW	
AA-2-10H	B	14 (356)	6.5 (165)	1.25 (32)	6 (152)	1.25 (32)	10 (4.5)
AA-1-12H	A	14 (356)	4.5 (114)	2.25 (57)	2.5 (64)	1.5 (38)	12 (5.4)
A-2-15H	B	21.5 (546)	5 (127)	1.5 (38)	11.5 (292)	1.25 (32)	15.5 (7.0)
AA-1-20H	A	24 (610)	4.5 (114)	2.25 (57)	2.5 (64)	1.5 (38)	20 (9.1)
A-1-23H	A	24 (610)	5 (127)	2 (51)	2.5 (64)	1.25 (32)	23 (10.4)
A-1-29H	A	24 (610)	5 (127)	2.5 (64)	2.5 (64)	1.5 (38)	29 (13.2)
AA-2-32H	B	20 (508)	10 (254)	2 (51)	10 (254)	1.5 (38)	32 (14.5)

