



ElectroGuard

galvanic corrosion control





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ElectroGuard

ELECTROGUARD QUALITY AND CONSISTENCY

For over 60 years, **ElectroGuard** has designed and manufactured quality anodes for a precision fit, thus ensuring the greatest underwater protection. Our expertise in pressure die casting produces solid products -- a necessity for maximum effectiveness.

ElectroGuard anodes are manufactured using the latest US-MIL-SPEC alloys. All of our inserts are made from either galvanized or stainless steel to ensure maximum protection. The contact between the anode and the metal it is protecting is vitally important. Therefore, never paint an anode or the area where the anode is in contact with the metal it is protecting.

ElectroGuard fasteners are made with matching stainless steel screws, bolts nuts and washers. All screw holes and tapped parts are made to fit perfectly onto outdrives. The nuts in our shaft collars are staked into the anode for easier underwater installation, and every part is inspected at least three times during the manufacturing process to insure consistent quality.

Millions of boat owners worldwide protect their investments with the best anodes available --

ElectroGuard Anodes.

All **Electro-Guard** products comply to US-MIL-SPEC A-18001-K zinc alloy.

Tel: 877-EGZINCS (340-4627)
Fax: 866-578-6072
Web: www.EGZINCS.com
Email: sales@EGZINCS.com

ENGINE ANODES

ElectroGuard engine anodes, also referred to as pencil anodes, are made to protect your engine block and heat exchangers. As with all our anodes, they are manufactured to the highest standards using the latest US-MIL-SPEC alloy. Our brass plugs are double-threaded so that the anode may be replaced; reusing the brass plug, and saving money and resources.



PART #	BRASS PLUG SIZE PIPE THREAD (NPT)	DIAMETER x LENGTH (in.)	THREAD (in.)	WEIGHT (kg)	WEIGHT (lbs.)
00	1/8	1/4 x 2	1/4 - 20	0.01	0.02
0	1/4	5/16 x 2	1/4 - 20	0.02	0.03
0-A	1/4	11/32 x 1-3/4	5/16 - 18	0.02	0.04
1	3/8	3/8 x 1-3/4	3/8 - 16	0.02	0.05
1-A	3/8	1/2 x 2	3/8 - 16	0.04	0.10
1-A-DD	3/8	1/2 x 1-1/2	3/8 - 16	0.03	0.07
1-A-S	3/8	1/2 x 1-1/4	3/8 - 16	0.03	0.06
2	1/2	5/8 x 2	7/16 - 14	0.07	0.15
2-A	1/2	5/8 x 1	7/16 - 14	0.04	0.09
2-B	1/2	5/8 x 1-5/8	7/16 - 14	0.06	0.13
2-C	1/2	5/8 x 3	7/16 - 14	0.10	0.22
3	3/4	3/4 x 2	1/2 - 13	0.10	0.21
3-A	3/4	3/4 x 3/4	1/2 - 13	0.04	0.09
4	3/4	3/4 x 3-1/4	1/2 - 13	0.15	0.33
479	3/4	3/4 x 3-1/4	5/8 - 11	0.16	0.36
5	1	7/8 x 5-1/4	3/4 - 10	0.37	0.81
6	1-1/4	1-1/4 x 6	3/4 - 10	0.82	1.81

Material: US-MIL-SPEC A-18001-K ZINC ALLOY

Please add the following letter designations to part numbers when ordering:

- For complete anode (assembled brass plug and zinc): (Part #) **-C** (example: 00-C)
- For spare anode only: (Part #) **-S** (example: 00-S)
- For brass plug only: (Part #) **-B** (example: 00-B)



HULL PLATES

Boats with all underwater fittings bonded together electrically are usually fitted with one or more zinc plates bolted to the hull. The mounting bolts are connected by heavy-gauge electrical cable to the bonding circuit. If these anodes are allowed to deplete or if the electrical connection deteriorates, other underwater metal, such as bronze fittings, will begin to corrode. Zinc hull plates also protect the hulls of metal boats.



ZP-EZ12



ZP-EZMN

PART #	DESCRIPTION	SIZE (in.)	WEIGHT (kg)	WEIGHT (lbs.)
ZP-EZ12	Eazy Plate 1/2" Slots	12 x 6 x 1/2	3.18	7.00
ZP-EZ38	Eazy Plate 3/8" Slots	12 x 6 x 1/2	3.18	7.00
ZP-EZMN	Mini Eazy Plate	6 x 4 x 1/2	1.41	3.11
ZP-406	406	8-1/2 x 4 x 1	2.45	5.40
ZP-T	Taiwan Plate	5-3/4 x 2-3/4 x 3/4	1.02	2.25

Material: US-MIL-SPEC A-18001-K ZINC ALLOY



ZP-406



ZP-T

IMPORTANT: Never paint a sacrificial anode or the area where the anode comes in contact with other metals.



LIMITED CLEARANCE COLLARS

Limited Clearance Collars are made to fit onto the driveshafts where space is limited, such as on sail drives. They are precision die cast to fit tightly around the entire propeller shaft. Water between the collar and driveshaft can lead to the anode degrading from the inside, causing the collar to loosen and spin, losing all metal contact and becoming useless. Other manufacturers may use small BB's to make up for a poor fit, lifting the collar off the drive shaft and creating the same effect.



PART #	SHAFT SIZE (in.)	LENGTH (in.)	WIDTH (in.)	WEIGHT (kg)	WEIGHT (lbs.)
LC-0750	3/4	1	2- 1/8	0.34	0.75
LC-0875	7/8	1	2-1/8	0.33	0.72
LC-1000	1	1-1/8	2- 5/8	0.50	1.10
LC-1125	1-1/8	1-1/8	2-5/8	0.46	1.00
LC-1250	1-1/4	1-1/8	2-5/8	0.41	0.91
LC-1375	1-3/8	1-1/8	2-5/8	0.68	1.50
LC-1375-H	1-3/8	1-1/4	3-1/4	0.82	1.80
LC-1500	1-1/2	1-1/4	3-1/8	0.59	1.30
LC-1750	1-3/4	1-1/4	3-3/4	1.14	2.50
LC-2000	2	1-1/4	3-3/4	0.91	2.00
LC-2250	2-1/4	1-1/4	4-1/4	1.13	2.50
LC-2500	2-1/2	1-1/4	4-1/4	1.02	2.25
LC-M18	18mm	1	2-5/8	0.34	0.75
LC-M20	20mm	1	2-5/8	0.32	0.70
LC-M25	25mm	1-1/8	2-5/8	0.51	1.12
LC-M30	30mm	1-1/8	2-5/8	0.48	1.06
LC-M35	35mm	1-1/8	2-5/8	0.43	0.95
LC-M40	40mm	1-1/4	3-1/4	0.77	1.70
LC-M50	50mm	1-1/4	3-3/4	0.91	2.00
LC-M60	60mm	1-1/4	4-1/4	1.02	2.25

Material: US-MIL-SPEC A-18001-K ZINC ALLOY



PROPELLER NUTS

Propeller Nuts add extra protection to both your propeller and drive shaft. They can also be added to your outdrive or outboard. Propeller nuts screw to the end of the propeller drive shaft and are held in place with a cotter pin. The zinc anode is then screwed to the nut and can be easily replaced when needed.



Part #	Propeller Shaft Threads per inch	Shaft Size (in.)	Zinc Letter	Outside Dia. of Zinc	Total Part Wt. (lbs.)	Total Part Wt. (kg)	Spare Zinc Only Wt. (lbs.)	Total Part Wt. (kg)
2001	3/8 - 16 NC	3/4	A	1-1/4	0.34	0.15	0.20	0.09
2002	7/16 - 14 NC	3/4	A	1-1/4	0.34	0.15	0.20	0.09
2003	1/2 - 3 NC	3/4	A	1-1/4	0.34	0.15	0.20	0.09
2004	5/8 - 11 NC	7/8	B	1-5/8	0.82	0.37	0.50	0.23
2005	5/8 - 18 NF	7/8	B	1-5/8	0.82	0.37	0.50	0.23
2006	3/4 - 10 NC	1 or 1-1/8	C	2	1.55	0.70	1.06	0.48
2007	3/4 - 16 NF	1 or 1-1/8	C	2	1.55	0.70	1.06	0.48
2008	7/8 - 9 NC	1-1/4	D	2-5/16	2.20	1.00	1.50	0.68
2009	7/8 - 14 NF	1-1/4	D	2-5/16	2.20	1.00	1.50	0.68
2010	1 - 8 NC	1-3/8	E	2-1/2	2.55	1.16	1.70	0.77
2011	1 - 14 NF	1-3/8	E	2-1/2	2.55	1.16	1.70	0.77
2012	1-1/8 - 7 NC	1-1/2	F	2-3/4	3.20	1.45	2.00	0.91
2013	1-1/8 - 12 NF	1-1/2	F	2-3/4	3.20	1.45	2.00	0.91
2014	1-1/4 - 7 NC	1-3/4	G	3-1/8	4.60	2.09	3.20	1.45
2015	1-1/4 - 12 NF	1 3/4	G	3-1/8	4.60	2.09	3.20	1.45
2016	1-1/2 - 6 NC	2	H	3-3/8	5.75	2.61	3.60	1.63
2017	1-1/2 - 12 NF	2	H	3-3/8	5.75	2.61	3.60	1.63

Material: US-MIL-SPEC A-18001-K ZINC ALLOY

Complete Propeller Nuts include bronze nut, zinc anode and hardware. Complete Propeller Nuts are available in right and left hand thread - see below for ordering. Replacement zincs are also available and include hardware.

Please add the following designations to part numbers when ordering:

- For complete left hand thread propeller nut : (Part #) **-L** (example: 2001-L)
- For complete right hand thread propeller nut: (Part #) **-R** (example: 2001-R)
- For replacement zincs only, order by letter size: (example: 2001-A)



RUDDER PLATES

Rudder Plates are designed with a shallow dome shape in order to streamline them and minimize drag and turbulence. They are most commonly used to protect your rudder and trim tabs, however, they can also be easily installed in other areas where protection is needed.



PART #	DIAMETER (in.)	THICKNESS (ea. half)	WEIGHT (kg)	WEIGHT (lbs.)
RP-185	1-7/8	1/4	0.11	0.25
RP-275	2-3/4	3/4	0.48	1.06
RP-380	3-3/4	5/8	0.77	1.70
RP-500	5	1/2	1.25	2.76

Material: US-MIL-SPEC A-18001-K ZINC ALLOY

IMPORTANT: Never paint a sacrificial anode or the area where the anode comes in contact with other metals.



STREAMLINED COLLARS

Streamlined collars are made to fit tightly around the entire propeller shaft. Water between the collar and shaft can lead to the anode degrading from the inside which causes it to loosen and spin, losing all metal contact and becoming useless. Other manufacturers may use small BB's to make up for a poor fit. This lifts the collar off the driveshaft creating the same effect. Insist only on ElectroGuard anodes and ensure a proper fit! The nuts on all our collars are also stacked into the anode so they will not fall out during installation.



PART #	SHAFT SIZE (in.)	WIDTH (in.)	LENGTH (in.)	WEIGHT (kg)	WEIGHT (lbs.)
SL-0750	3/4	2	2	0.34	0.75
SL-0875	7/8	2	2	0.33	0.72
SL-1000	1	2-1/4	2-1/4	0.50	1.10
SL-1125	1-1/8	2-1/4	2-1/4	0.46	1.00
SL-1250	1-1/4	2-1/4	2-1/4	0.41	0.91
SL-1375	1-3/8	2-3/4	2-1/2	0.68	1.50
SL-1500	1-1/2	2-3/4	2-1/2	0.59	1.30
SL-1750	1-3/4	2-7/8	3-1/4	1.14	2.51
SL-2000	2	2-7/8	3-1/4	0.91	2.00
SL-2250	2-1/4	3-1/2	3-11/16	1.81	4.00
SL-2750	2-3/4	3-1/2	4-1/4	2.27	5.00
SL-3000	3	3-1/2	4-9/16	2.50	5.50
SL-3500	3-1/2	3-1/2	5	2.72	6.00
SL-4000	4	3-1/2	5-7/16	2.99	6.50

Material: US-MIL-SPEC A-18001-K ZINC ALLOY



TEARDROP ANODES

All our products are precision die cast as it is extremely important for zincs to fit tightly. Pressure die casting also produces solid products. Other casting can become hollow, leading to pockets of air that cause the anode to degrade more quickly.



TEAR-7



TEAR-18

PART #	ALT #	LENGTH (in.)	WIDTH (in.)	WEIGHT (kg)	WEIGHT (lbs.)
TEAR-7	T-20	3-5/8	1-5/8	0.18	0.40
TEAR-18	T-21	5-1/4	2-5/8	0.50	1.10

Material: US-MIL-SPEC A-18001-K ZINC ALLOY

IMPORTANT: Never paint a sacrificial anode or the area where the anode comes in contact with other metals.



MERCURY / MERCURISER

ElectroGuard anodes are precision die cast which means they fit right every time. It is important to know where every anode is located, and to check and replace any that are more then half depleted.



PART #	CROSS REF. PART #	DESCRIPTION	WEIGHT (kg)	WEIGHT (lbs.)
M-105	806105Q 1	Bearing Carrier Anode	0.22	0.49
M-127	34127T 2	Trim Tab, 4" Fin	0.61	1.34
M-189	806189Q 1	Trim Cylinder Anode	0.09	0.20
M-190	806190Q 1	Trim Cylinder Anode	0.32	0.70
M-214	76214Q 5	Trim Tab, no Fin	0.32	0.69
M-298	818298 1	Outboard Anode	0.59	1.30
M-396	43396	Outboard Anode	0.52	1.14
M-399	822777Q 1	Trim Tab, Extra Clearance Fin	0.41	0.90
M-629	821629Q 1	Driveshaft Housing Anode	0.75	1.65
M-630	821630Q 1	Driveshaft Housing Anode	0.10	2.20
M-640	31640Q 4	Trim Tab, 2.25" Fin	0.44	0.98
M-762	34762A 1	2.5" sq. Anodic Plate	0.23	0.50
M-989	55989Q 9	Bolt Anode	0.10	0.22
M-994	821631Q 1	Gimbal Housing Anode	0.87	1.92

Material: US-MIL-SPEC A-18001-K ZINC ALLOY



OMC / JOHNSON OUTDRIVES

Outdrives and outboards particularly prone to galvanic corrosion because of the use of different exposed metals. For this reason, many are fitted with multiple anodes. It is important to know where every anode is located, and check and replace any that are more than half depleted.



OMCO-023



OMCO-160



OMCO-438

PART #	CROSS REF. PART #	DESCRIPTION	WEIGHT (kg)	WEIGHT (lbs.)
OMC-023	393023	Cube	0.19	0.42
OMC-160	392123	Transom Bar	0.71	1.56
OMC-438	982438	Waffle Exhaust Anode	1.05	2.31
OMC-669	976669	Transom Bar	0.36	0.80
OMC-712	392462	Horseshoe Anode	0.60	1.32
CBR-513	984513	Cobra Outdrive	0.82	1.81

Material: US-MIL-SPEC A-18001-K ZINC ALLOY



OMCO-669



OMC-712



CBR-513

IMPORTANT: Never paint a sacrificial anode or the area where the anode comes in contact with other metals.



VOLVO OUTDRIVES/OUTBOARDS

Outdrives and outboards particularly prone to galvanic corrosion because of the use of different exposed metals. Consult engine manual in order to know where every anode is located, and check and renew any that are more than half depleted.



V-339



V-388



V-524

PART #	CROSS REF. PART #	DESCRIPTION	WEIGHT (kg)	WEIGHT (lbs.)
V-339	875805-4	Ring Anode	0.17	0.38
V-388	875815-3	Ring Anode	0.74	1.63
V-524	875807-4	Ring Anode	0.27	0.60
V-598	832598-7	Bar	0.57	1.25
V-661	838929-8	Engine Anode	0.14	0.32
V-821	875821-1	Ring Anode	0.54	1.19
V-835	852834-8	Bar	0.68	1.50

Material: US-MIL-SPEC A-18001-K ZINC ALLOY



V-598



V-661



V-821



V-835



YAMAHA OUTDRIVES

It is important to know where every anode is located, and to check and renew any that are more than half depleted. A fin is intended to warn of depletion by a change in steering.



Y-251



Y-371



Y-537

PART #	CROSS REF. PART #	DESCRIPTION	WEIGHT (kg)	WEIGHT (lbs.)
Y-251	6G54525101	Bar Anode	0.91	2.01
Y-371	6K14537100	Universal Fin	0.42	0.93
Y-537	6J94537100	Universal Fin	0.50	1.10

Material: US-MIL-SPEC A-18001-K ZINC ALLOY

IMPORTANT: Never paint a sacrificial anode or the area where the anode comes in contact with other metals.



THE NEED FOR SACRIFICIAL ANODES

A highly anodic metal such as zinc will corrode much more quickly than a highly cathodic metal such as stainless steel when the two are in contact with each other. The purpose of the zinc anode is to sacrifice itself in order to protect the more valuable metals on your boat, such as the propeller, drive shaft and outdrive.

This corrosion is called "galvanic corrosion" and is rapidly accelerated when stray current is introduced. This stray current can come from many sources including shore power at your dock or faulty wiring on your or even your neighbors boat.

Galvanic corrosion occurs when two dissimilar metals are in close contact with an electrolyte, a medium through which an electrical current can flow such as water. The rate of corrosion depends upon the differences in electrical potential, or the anodic-cathodic relationship, of the metals as defined by the "Galvanic Series of Metals & Alloys" shown here.

When these metals are placed in a conductive liquid such as salt water, current will flow. This is also sometimes referred to as electrolysis. This current removes metal from the most anodic metal which is therefore "sacrificing" itself to the more cathodic metal.

Galvanic series relationships are useful as a guide for selecting metals to be joined, and help with the selection of metals having the least tendency to interact galvanically, and indicates the degree of protection needed. To reduce the likelihood of galvanic corrosion,

it is recommended that metals are grouped per the Galvanic Series chart. If it is not possible to do so, other recommendations are:

- Use **ElectroGuard** anodes on all metals exposed to galvanic corrosion and electrolysis
- Select metals which are as close together as possible on the chart
- Provide a barrier between the metals, such as paint, non-metallic washer, gaskets or jointing compound
- **IMPORTANT: Never paint a sacrificial anode or the area where the anode comes in contact with other metals**

GALVANIC SERIES OF METALS AND ALLOYS

Any one of these metals and alloys will theoretically corrode while protecting any other that is lower in the series as long as both form part of an electrical circuit.

CORRODED END - ANODIC

(Electronegative)

MAGNESIUM

ZINC

ALUMINUM

CADMIUM

IRON or STEEL

STAINLESS STEELS (active)

LEAD

TIN

COPPER

GOLD

PROTECTED END - CATHODIC

(Electropositive)

CUSTOMER SERVICE

ElectroGuard is dedicated to serve our customers' needs. We do not simply sell sacrificial anodes; we provide quality products at competitive prices with the integrity that brings clients back again and again. Our products have been protecting marine equipment for over 60 years, and you can be assured we have the experience to provide you with the galvanic corrosion protection and information you desire.

ElectroGuard anodes are distributed worldwide. We have sales representatives throughout the United States, Canada and internationally. Please contact us for the representative in your area.

In addition to the stock items found in this catalog, we can also manufacture custom anodes to fit your specific needs. We have a complete, in-house design team to help you get your concept to a finished product. Please contact us for details.

ORDERING INFORMATION

Our ordering system is set up to meet your needs. For your convenience you may order in the following ways:

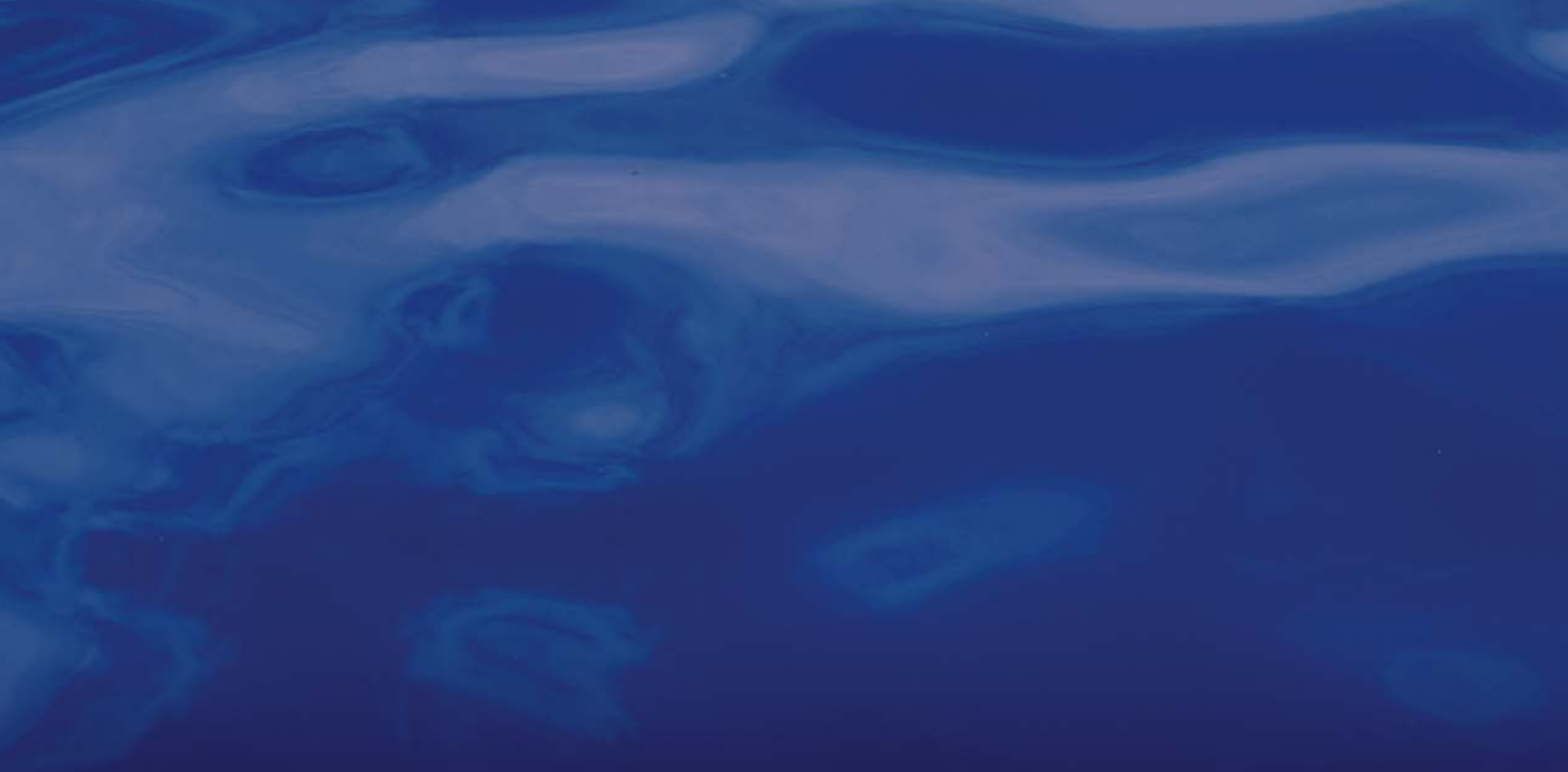
Tel: **877-EGZINCS (340-4627)**

Fax: **866-578-6072**

Web: **www.EGZINCS.com**

Email: **sales@EGZINCS.com**





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