

Guidelines for the application of anodes

To determine the number and type of anodes you will need, it is important to take the water and mooring place of the vessel into account. The electric current of an anode depends on the water conduction. For example, an anode in salt water has a higher electric current than the same kind of anode in fresh water. As a result the anode in fresh water has a longer life span.

The electric current is modified by the surface area of the anode, so in brackish and fresh water it is better to apply several small anodes than one large anode. The electric current also depends on the material. Magnesium has the highest electric current and zinc the lowest. The electric current of aluminium is somewhat higher than the current of zinc.

Anode material in relation to waters and mooring places

If a vessel is to be found in fresh waters only, magnesium anodes can best be used. If a ship mainly sails in salt water and every once in a while in brackish water, zinc is the right anode material. When the vessel has varying waters and mooring places, aluminium can best be used. Aluminium anodes are also the most environmental friendly anodes. Aluminium is suitable for either salt, brackish or fresh water.

Life span of the anodes

The anode protection must at least be enough for the period between two slip services. The anode consumption depends on a lot of factors. In general, replacement of the anodes is advised when the anodes are consumed for 70 upto 80%.

Place of the anodes on the vessel

In the picture the place of the anodes is calculated as followed: seen from the stern an interval is taken equal to: $\frac{\text{length of the water line}}{\text{number of anodes}}$.

Don't forget to protect your rudder with anodes as well!

Magnesium anodes

MGD Magnesium anodes

The backside of the magnesium anodes can be painted. We advise to apply extra paint on the surroundings of the anodes. Anode MD78B (not shown in the picture) has two holes for the use of M10 studs, instead of a welding strip.

Suitable for use in fresh water.



Type	Weight (kg)	Overall length (mm)	Length anode (mm)	Width anode (mm)	Cat. no.
MD76*	0.35	160	114	76	1795
MD77**	0.74	230	157	83	1796
MD79**	0.90	230	171	83	1798
MD78	1.50	385	305	76	1797
MD78B**	1.30	-	305	76	MD78B

*Pitch: 140 mm

**Pitch: 200 mm



MGD Magnesium anodes

The shape of these anodes reduces the resistance in the water to a minimum. These anodes are very suitable for rudder blades and for hull application on fast going vessels.

Suitable for use in fresh water.

Type	Weight (kg)	Height (mm)	Diam. (mm)	Cat. no.
MD56	0.27	25	100	1786

Aluminium anodes

MME Aluminium anodes

These aluminium anodes are suitable for almost all purposes. With steel welding strips for general use or aluminium welding strips for ships with aluminium hulls.

Suitable for use in fresh, brackish and salt water.



Type	Weight (kg)	Overall length (mm)	Length anode (mm)	Width anode (mm)	Cat. no.
Steel welding strip:					
MME 02A	0.25	200	120	40	1735
MME 04A	0.50	260	180	60	1736
MME 08A	0.90	300	220	75	1737
MME 12A	1.30	300	200	95	1738
MME 17A	2.10	440	290	100	1739
Aluminium welding strip:					
MME 02AA	0.22	200	120	40	1725
MME 04AA	0.44	260	180	60	1726
MME 08AA	0.85	300	220	75	1727
MME 17AA	1.85	440	290	100	1729

MGD Aluminium anodes

These aluminium anodes have been used in the marine and offshore industry for many years now due to their superior material. The aluminium alloy guarantees a constant consumption, this influences the lifetime and reliability of the vessel in a positive way. Safe and universal to use! Anode AD78B (not shown in the picture) has two holes for the use of M10 studs.

Suitable for use in fresh, brackish and salt water.

Note: the design of the anode can be different than shown in the picture. This has no effect on the specifications as mentioned in the table or on the functionality of the product.



Type	Weight (kg)	Overall length (mm)	Length anode (mm)	Width anode (mm)	Cat. no.
AD76	0.45	165	114	76	593141
AD77*	0.85	230	157	83	593142
AD79**	1.50	230	171	83	593143
AD78	2.00	385	305	76	593144
AD78B**	1.70	-	305	76	AD78B
AD60	2.50	380	320	125	593145
AD73	5.00	456	356	152	593146

*Pitch: 200 mm



MGD Aluminium anodes

The shape of these anodes reduces the resistance in the water to a minimum. This makes these anodes very suitable for rudder blades and for hull application on fast going vessels. Suitable for use in fresh, brackish and salt water.

Note: the design of the anode can be different than shown in the picture. This has no effect on the specifications as mentioned in the table or on the functionality of the product.

Type	Weight (kg)	Height (mm)	Diam. (mm)	Cat. no.
AD56	0.4	25	100	593156
AD58	0.9	35	150	593158
AD55	2.8	25	225	593155



MGD Aluminium shaft anodes

This new generation of shaft anodes has a steel core, which makes sure the anode will not loosen. Suitable for use in fresh, brackish and salt water.

Shaft diam. (mm)	Length anode (mm)	O.D. (mm)	Cat. no.
20	78	68	592020
22	78	68	592022
25	78	68	592025
30	78	68	592030
35	78	68	592035
40	98	85	592040
45	98	85	592045
50	98	85	592050

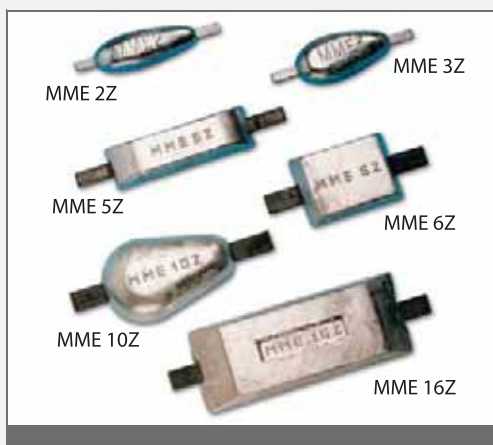


MGD Aluminium shaft ring anodes

Ring anodes are to be fitted on the shaft against the propeller hub. Suitable for use in brackish and salt water.

Shaft diam. (mm)	Length anode (mm)	Thickness (mm)	Cat. no.
25	60	15.5	ASC22T
25	60	15.5	ASC25T
30	60	15.5	ASC30T
35	73	18.0	ASC35T
40	74	18.0	ASC40T
45	81	18.0	ASC45T
50	81	18.0	ASC50T

Zinc anodes



MME Zinc anodes

The zinc anodes comply with the U.S.A. Mil Specification type A-1800 1J. Suitable for use in salt water.

Type	Weight (kg)	Overall length (mm)	Length anode (mm)	Width (mm)	Cat. no.
MME 0Z	0.55	200	120	40	1791
MME 1Z	1.25	260	180	60	1792
MME 2Z	2.30	300	220	75	1793
MME 3Z	3.20	300	200	95	1799
MME 5Z	5.50	440	300	90	1752
MME 6Z	6.50	330	200	150	1753
MME 10Z	10.50	405	275	175	1754
MME 16Z	16.80	550	425	165	1755



MGD Zinc anodes

These zinc anodes have proven their quality many times, especially in salt water. The anodes comply with the U.S.A. Mil Specification type A-18001K. The anodes ZD77, ZD79 and ZD78B (not shown) have holes for use with M10 studs. The anodes ZD72B and ZD72BM have holes for use with M16 studs. All other anodes have welding strips.

Suitable for use in salt water.

Note: the design of the anode can be different than shown in the picture. This has no effect on the specifications as mentioned in the table or on the functionality of the product.

Type	Weight (kg)	Overall length (mm)	Length anode (mm)	Width anode (mm)	Cat. no.
ZD72B*	12.0	-	457	102	ZD72B
ZD72BM*	7.0	-	457	102	ZD72BM
ZD75	0.5	155	100	45	593061
ZD76	1.0	160	114	76	593062
ZD77**	2.1	230	157	83	593063
ZD79**	3.0	230	171	83	593064
ZD78	4.5	385	305	76	593065
ZD78B**	4.0	-	305	76	ZD78B
ZD60	6.0	380	320	125	593066
ZD73	10.0	456	356	152	593067

*Pitch: 225 mm

**Pitch: 200 mm



MGD Zinc anodes

The 12 mm wide slots in the steel strips provide ease of installation and allow mounting on existing bolts/studs. No damage to the paint as there is no need for welding. The anodes comply with the U.S.A. Mil Specification type 18001K.

Suitable for use in salt water.

Type	Weight (kg)	Length (mm)	Width (mm)	Height (mm)	Centre distance (mm)	Cat. no.
ZD76E	1.3	200	65	32	0 - 110	593070
ZD77E	2.5	318	65	32	100 - 210	593077



MGD Zinc anodes

The shape of these anodes reduces the resistance in the water to a minimum. This makes these anodes very suitable for rudder blades and for hull application on fast going vessels. Hole centres for use with M10 studs. The anodes comply with the U.S.A. Mil Specification type 18001K.

Suitable for use in salt water.

Note: the design of the anode can be different than shown in the picture. This has no effect on the specifications as mentioned in the table or on the functionality of the product.

Type	Weight (kg)	Height (mm)	Diam. (mm)	Cat. no.
ZD56	1.0	25	100	593056
ZD58	2.3	35	150	593058
ZD55	7.0	25	225	593055



MGD Zinc shaft anodes

This robust shaft anode has a steel core, which makes sure the anode will not loosen.
Suitable for use in salt water.

Shaft diam. (mm)	Length anode (mm)	O.D. (mm)	Cat. no.
19	62	55	591019
22	62	55	591022
25	62	55	591025
25.4	62	55	591026
28	62	55	591028
30	62	55	591030
31.7	78	68	591032
35	78	68	591035
38	78	68	591038
40	78	68	591040
45	100	72	591045
50	100	83	591050
60	100	85	591060
70	100	110	591070



Zinc shaft ring anodes

Ring anodes are to be fitted on the shaft against the propeller hub.
Suitable for use in salt water.

I.D. (mm)	O.D. (mm)	Thickness (mm)	Cat. no.	Shaft diam. (mm)	O.D. (mm)	Thickness (mm)	Cat. no.
22	59	15	5930	70	130	30	5940
25	59	15	5931	75	140	30	5941
30	59	15	5932	80	163	40	5942
35	67	15	5933	85	163	40	5943
40	74	18	5934	90	163	40	5944
45	74	18	5935	100	180	40	5945
50	100	29	5936	110	190	40	5946
55	100	30	5937	120	200	40	5947
60	120	30	5938	125	200	40	5948
65	120	30	5939	130	210	60	5949



Zinc shaft ball anodes

The ball anodes are usually fitted on the "free" shaft, between the shaft bracket and the stern tube.

Suitable for use in salt water.

Shaft diam. (mm)	Length (mm)	O.D. (mm)	Cat. no.
22	40	49	5911
25	40	49	5901
30	55	58	5902
35	63	64	5903
40	86	82	5904
45	89	93	5905
50	70	89	5906
55	89	94	5907
60	98	98	5908
65	129	108	5909
70	129	108	5910

Zinc anodes for nuts



MGD Backing pads

It's not good practice to have anodes fitted directly on the ship's hull. We now offer a wide range of backing pads for all MGD anodes. This is a rubber pad that eliminates direct contact between anode and hull. The risk on alkalinity is herewith reduced drastically.

For anode	For anode	Cat. no.
ZD56	AD56	B56
ZD58	AD58	B58
ZD72 / ZD72BMLP		B72
ZD72B	AD72B	B72B
ZD76	AD76	B76EURO
ZD77	AD76	B77
ZD77 Euro	AD77 Euro	B77EURO
ZD78B	AD78B	B78B

Anode packs

Aluminium anode pack

For Mercruiser sterndrive Bravo I / Bravo II and III

To make replacement of anodes on the Mercruiser sterndrives easier, a complete aluminium anode pack is compiled for the Bravo I for 1988 till present. Now you cannot forget changing an anode! The pack comes complete with mounting materials.

The pack consists of:
for Bravo I

- anodic plate (CM821630C2A)
- bearing carrier anode (CM806188A, not shown in picture)
- trimcylinderanode (CM806190A)
- trim tab anode (CM762145A)

for Bravo II en III:

- anodic plate(CM821630C2A)
- trim cylinder anode (CM806190A)
- trimanode (CM722145A)



For	Cat. no.
Bravo I, 1988 - present	CMBRAVO1KITA
Bravo II en III, 1989 - present	CMBRAVO23KITA

Aluminium anode pack

For Mercruiser sterndrive Alpha I gen II

This anode pack is specially compiled for the Mercruiser Alpha I generation II (1991 - present) to make replacement of your sterndrive anodes easier. The pack comes complete with mounting materials.

This anode pack consists of:

- anodic plate (CM821629CA)
- bearing carrier anode (CM806105A)
- trim cylinder anode (CM806189A)
- trim tab anode (CM762145A)
- gimbal housing anode (CM821631A)



For	Cat. no.
1991 - present	CMALPHAKITA