



Aluminum Anode Compositions



Galvotec's accomplishment regarding on time deliveries and quality workmanship is due to our competent staff with many years of experience in manufacturing anodes of all types.

Galvotec's laboratory is fully equipped with state-of-the-art equipment. All products are tested and inspected prior to shipping. Chemical analyses are run on each heat prior to casting.

Galvotec aluminum anodes can be manufactured with a wide variety of core configurations, to accommodate different anode specifications and applications. If your requirements are for a new structure, or to retrofit an existing platform, Galvotec can manufacture any anode to your requirements.

Compositions of Aluminum Alloys

ELEMENT	GALVOTEC III ¹	GALVOTEC CW III ²	MIL-A-24779 (SH)
Zn	2.80 - 6.50%	4.75 - 5.75%	4.0 - 6.5
In	0.010 - 0.02%	0.016 - .020%	0.014 - 0.020
Si	0.08 - 0.2%	0.080 - .12%	0.08 - 0.20
Cu	0.006% Max.	0.003% Max.	0.004 Max.
Fe	0.120% Max.	0.060% Max.	0.090 Max.
Hg	-	-	0.001 Max.
Cd	0.002% Max.	0.002% Max.	-
OTHERS EA.	0.02% Max.	0.02% Max.	0.020 Max.
OTHERS TOTAL	0.05% Max.	0.05% Max.	0.10 Max.
Aluminum	BALANCE	BALANCE	BALANCE

Electrochemical Properties

	GALVOTEC III	GALVOTEC CW III
Electrode Potential (Cu/Cu SO ₄)	-1.15v	-1.15v
Nominal Efficiency	85%	85%
Nominal Ampere Hours/Pound	1150	1150

- NOTE:**
1. GALVOTEC III Alloy has been used in multiple projects around the world for over 20 years.
 2. GALVOTEC CW III has been the preferred composition of the major oil and offshore operator companies for deep and cold water applications..
 3. Refer to our website www.galvotec.com for project references.



Aluminum Hull Anodes



For use on hulls of ships, tugs, barges, etc., operating in seawater. All anodes are faired or tapered to minimize turbulence. Anodes are produced with mild steel core straps.

Note – Internal Cores are All Continuous Mild Steel.

GA-A-1-29H

Wt./Anode

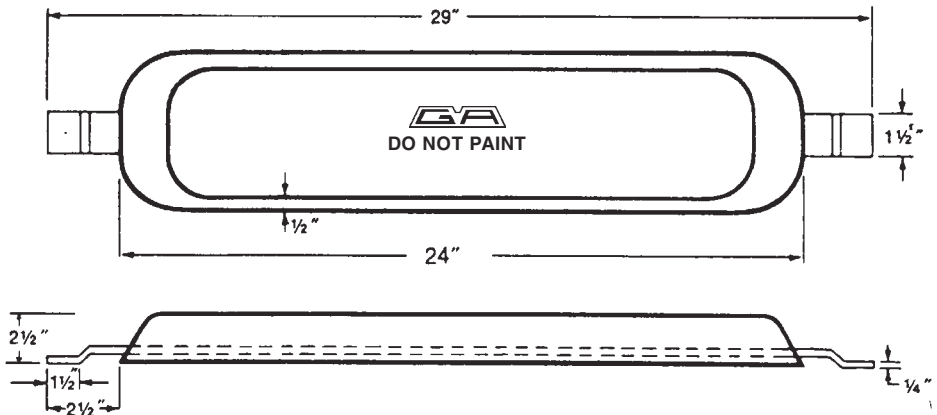
29 lbs.
13.2 Kg

Nom. Dimensions

5" x 2 1/2" x 24"
127mm x 64mm x 619mm

Current Rating

4 Ampere – Years



GA-A-1-23H

Wt./Anode

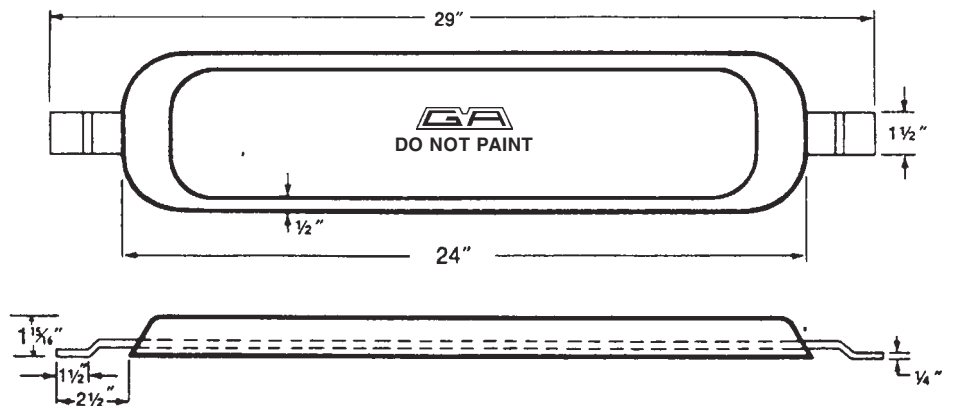
23 lbs.
10.4 Kg

Nom. Dimensions

5" x 1 15/16" x 24"
127mm x 49mm x 610mm

Current Rating

3 Ampere – Years



GA-A-2-15H

Wt./Anode

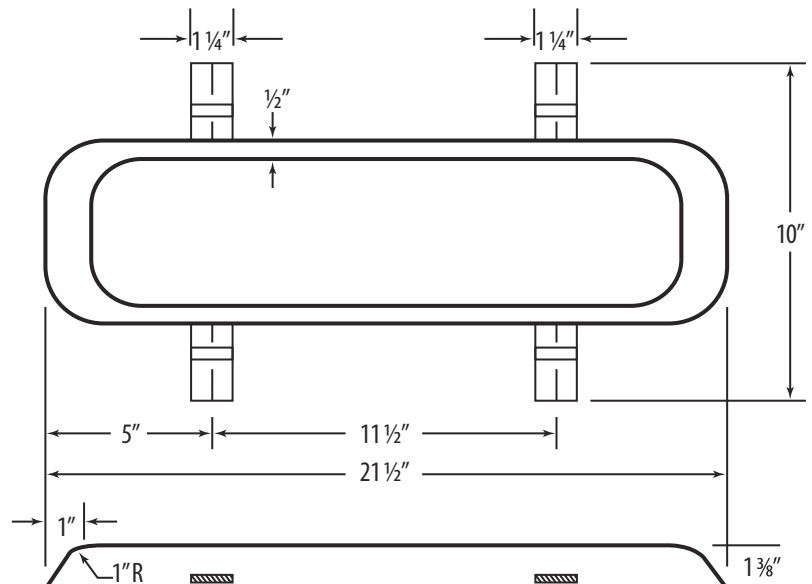
15 1/2 lbs.
7.0 Kg

Nom. Dimensions

5" x 13/8" x 21 1/2"
127mm x 35mm x 546mm

Current Rating

2 Ampere – Years



Note: Also available – GA-A-1-15H same as GA-A-2-15H except has single longitudinal strap. 3/16" x 1 1/4"



Aluminum Hull Anodes



For use on hulls of ships, tugs, barges, etc., operating in seawater. All anodes are faired or tapered to minimize turbulence. Anodes are produced with mild steel core straps.

Note – Internal Cores are All Continuous Mild Steel.

GA-A-2-10H

Wt./Anode

10 lbs.

4.5Kg

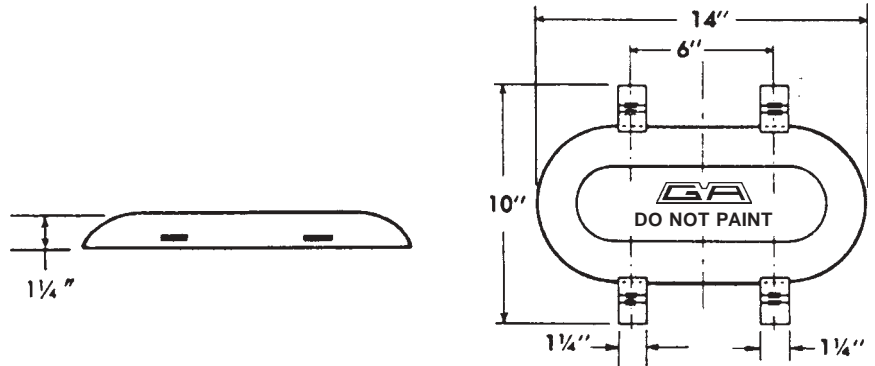
Nom. Dimensions

6 1/2" x 1 1/4" x 14"

165mm x 32mm x 356

Core Size

3/16" x 1 1/4"



GA-A-1-12H

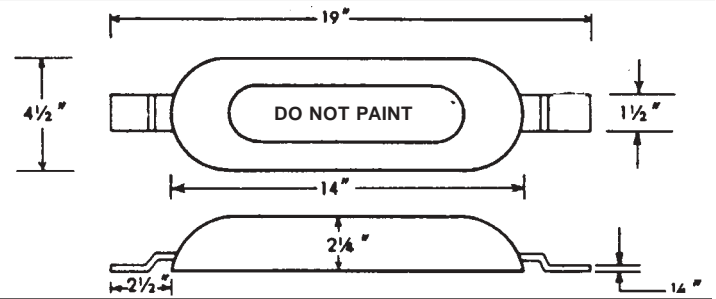
Wt./Anode

12 lbs. 5.4 Kg

Nom. Dimensions

4 1/2" x 2 1/4" x 14"

57mm x 114mm x 356mm



GA-A-1-20H

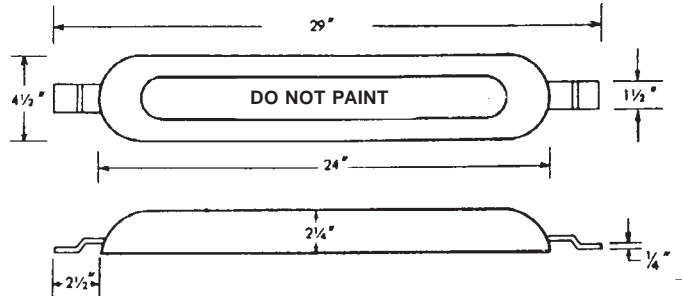
Wt./Anode

20 lbs. 9.1 Kg

Nom. Dimensions

4 1/2" x 2 1/4" x 24"

610mm x 57mm x 114mm



GA-A-2-32H

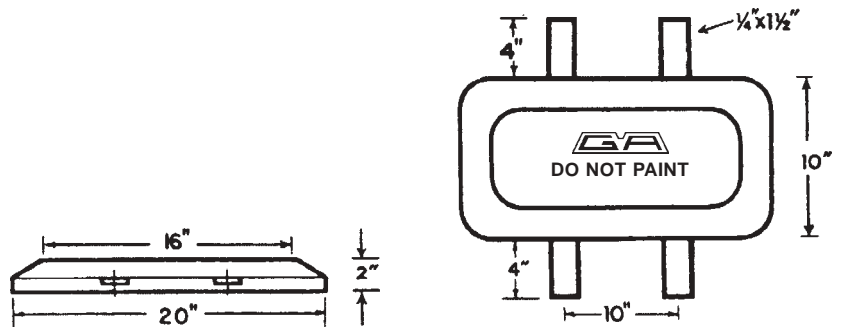
Wt./Anode

32 lbs. 14.5 Kg

Nom. Dimensions

10" x 2" x 20"

254mm x 51mm x 508mm



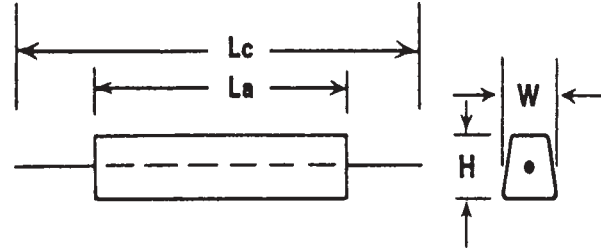


Aluminum Ballast Tank Anodes

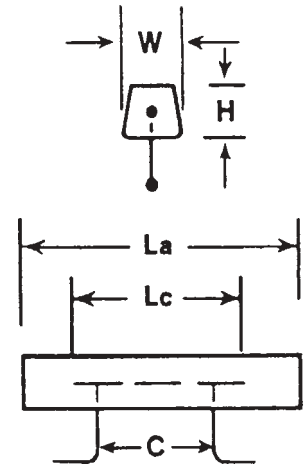


Anode and core arrangements approved by the American Bureau of Shipping, and Lloyd's Register.
Special anode sizes available on request.

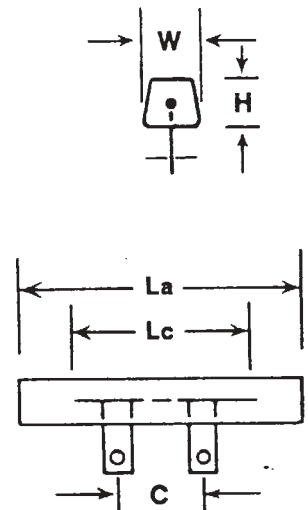
Product Number	Nom. Wt.		W		H		La		Lc	
	Lbs	Kg	in	mm	in	mm	in	mm	in	mm
GA-ABT-21	21	9.5	2	51	2	51	48	1219	60	1524
GA-ABT-26	26	11.8	2	51	2	51	60	1524	72	1829
GA-ABT-30	30	13.6	2 1/2	64	2 1/2	64	48	1219	60	1524
GA-ABT-39	39	17.7	2 1/2	64	2 1/2	64	60	1524	72	1829
GA-ABT-48	48	21.8	3	76	3	76	48	1219	60	1524



Product Number	Nom. Wt.		W		H		La		Lc		C	
	Lbs	Kg	in	mm	in	mm	in	mm	in	mm	in	mm
GA-ABT-B21	21	9.5	2	51	2	51	48	1219	36	914	24	610
GA-ABT-B26	26	11.8	2	51	2	51	60	1524	48	1219	30	762
GA-ABT-B30	30	13.6	2 1/2	64	2 1/2	64	48	1219	36	914	24	610
GA-ABT-B39	39	17.7	2 1/2	64	2 1/2	64	60	1524	48	1219	30	762
GA-ABT-B48	48	21.8	3	76	3	76	48	1219	36	914	24	610

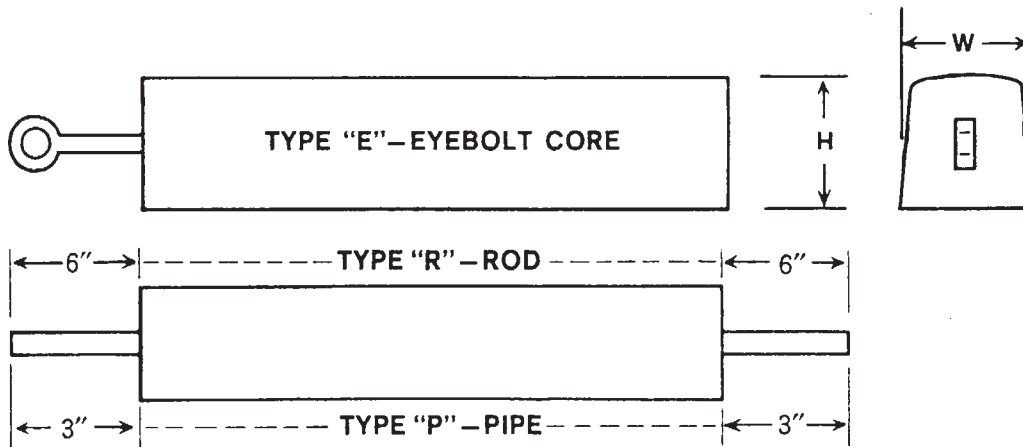


Product Number	Nom. Wt.		W		H		La		Lc		C	
	Lbs	Kg	in	mm	in	mm	in	mm	in	mm	in	mm
GA-ABT-C21	21	9.5	2	51	2	51	48	1219	36	914	24	610
GA-ABT-C26	26	11.8	2	51	2	51	60	1524	48	1219	36	914
GA-ABT-C30	30	13.6	2 1/2	64	2 1/2	64	48	1219	36	914	24	610
GA-ABT-C39	39	17.7	2 1/2	64	2 1/2	64	60	1524	48	1219	36	914
GA-ABT-C48	48	21.8	3	76	3	76	48	1219	36	914	24	610





Aluminum Pier & Piling Anodes



Unless otherwise specified, the following steel core size will be supplied:

- Type "E" – 1/2" Eyebolt
- Type "P" – STD 3/4" Pipe
- Type "R" – 1/2" Dia. Rod

Product Number	Nom. Wt.		W		H		L		Core Type
	Lbs.	Kg	in	mm	in	mm	in	mm	
GA-A-P-240	240	108.9	10	254	10	254	24	610	E,P, or R
GA-A-P-175	175	79.4	7	178	7	178	36	914	"
GA-A-P-120	120	54.4	10	254	10	254	12	305	"
GA-A-P-120-1	120	54.4	7	178	7	178	24	610	"
GA-A-P-120-2	120	54.4	5	127	5	127	48	1219	"
GA-A-P-100	100	45.4	4	107	4	107	60	152	"
GA-A-P-90	90	40.8	7	178	7	178	18	457	"
GA-A-P-90-1	90	40.8	5	127	5	127	36	914	"
GA-A-P-60	60	27.2	7	178	7	178	12	305	"
GA-A-P-60-1	60	27.2	5	127	5	127	24	610	"
GA-A-P-60-2	60	27.2	4	107	4	107	38	965	"
GA-A-P-30	30	13.6	3	76	3	76	34	864	"

Other anodes for seawater applications can be furnished with a wide variety of steel cores, and to the following range of dimensions:

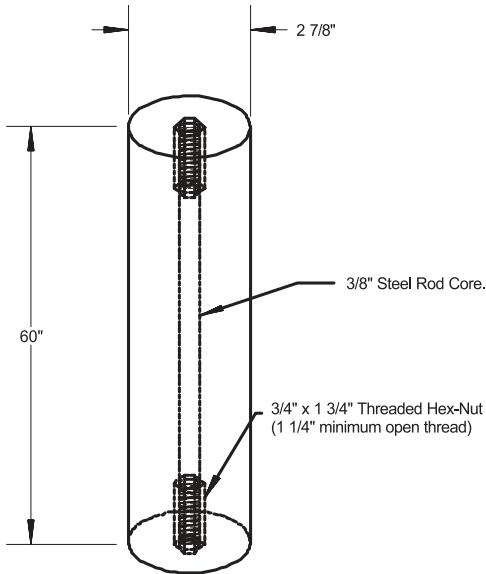
Cross-Section		Length		Approx. Wt/Length	
in	m	in	m	lb./ft.	Kg/m
2 x 2	0.05 x 0.05	12 - 60	0.3 - 1.5	4.8	7.1
2 1/2 x 2 1/2	0.06 x 0.06	12 - 60	0.3 - 1.5	7.5	11.2
3 x 3	0.08 x 0.08	12 - 60	0.3 - 1.5	10.8	16.1
4 x 4	0.10 x 0.10	12 - 66	0.3 - 1.7	19.2	28.6
5 x 5	0.13 x 0.13	12 - 72	0.3 - 1.8	30.0	44.6
12 x 12	0.30 x 0.30	12 - 24	0.3 - 0.6	172.8	257.1

Special anode sizes available on request.

Note – Internal Cores are All Continuous Mild Steel.



Aluminum Heater Treater Anodes



Core Type
3/4" Threaded Rod
1/2" Eyebolt
3/4" Coupling

Special anode sizes available on request.

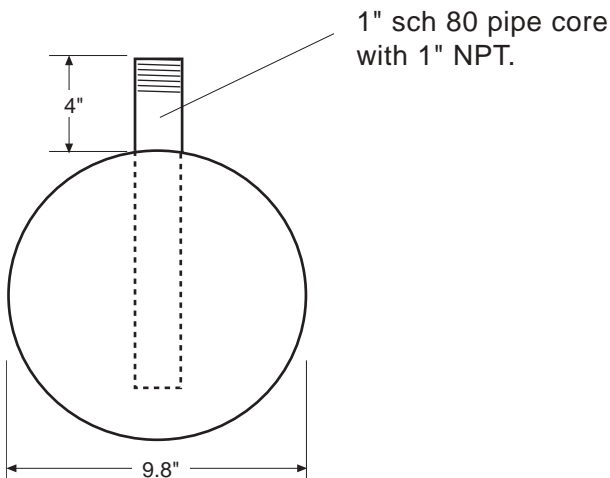
Anode Type	"L" Dimension		Anode Weight	
	in	mm	lbs	Kg
GA-A 3" Dia. x 30	30	762	18.5	8.4
GA-A 3" Dia. x 60	60	1524	37	16.8
GA-A 3.625" Dia. x 60	60	1524	55.0	25.0

GA-A-HS-47

Bowling Ball

Anode supplied with 1" sch 80 Half Collar.

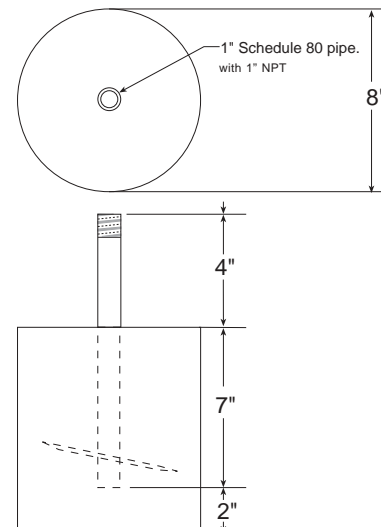
Anode Weight	
lbs	Kg
47	21.3



GA-A-HFT-44

Anode supplied with 1" sch 80 Half Collar.

Anode Weight	
lbs	Kg
44	20





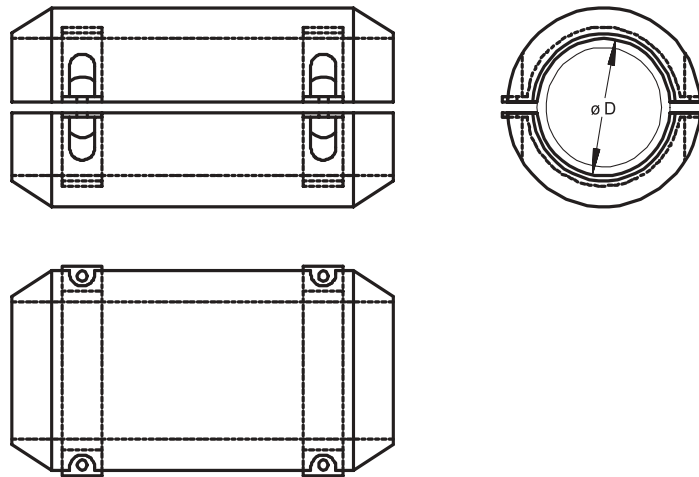
Aluminum Bracelet Anodes



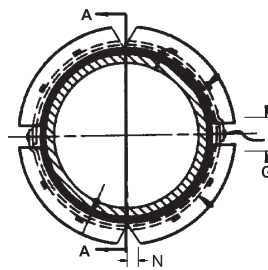
Galvotec has produced all sizes of aluminum bracelets ranging from 11/2" O.D. to 48" O.D. including cast-on bracelet sizes with great success. Galvotec's accomplishment regarding on time deliveries and quality workmanship is due to our competent staff with many years of experience in manufacturing anodes of all types.

Galvotec's laboratory is fully equipped with state-of-the-art equipment. All products are tested and inspected prior to shipping. Chemical analyses are run on each heat prior to casting.

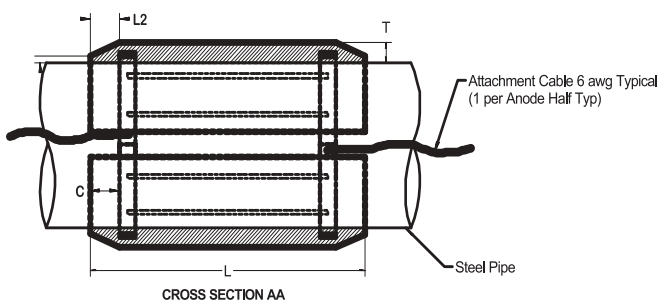
Bolt-on



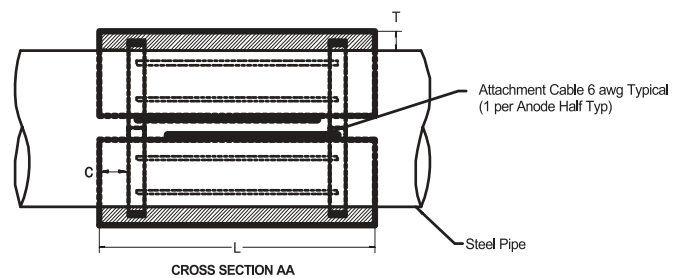
Weld-on



Tapered

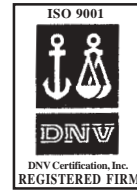


Square End

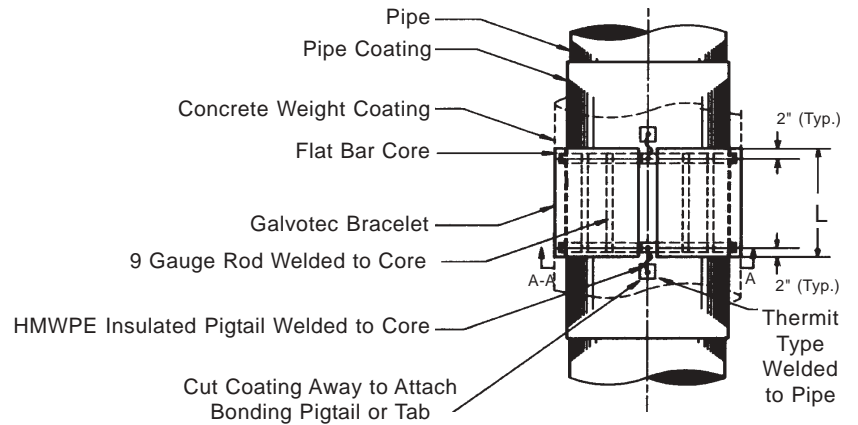
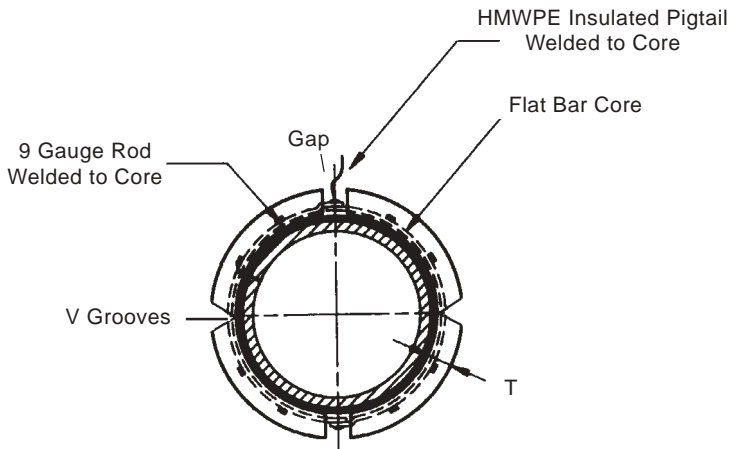
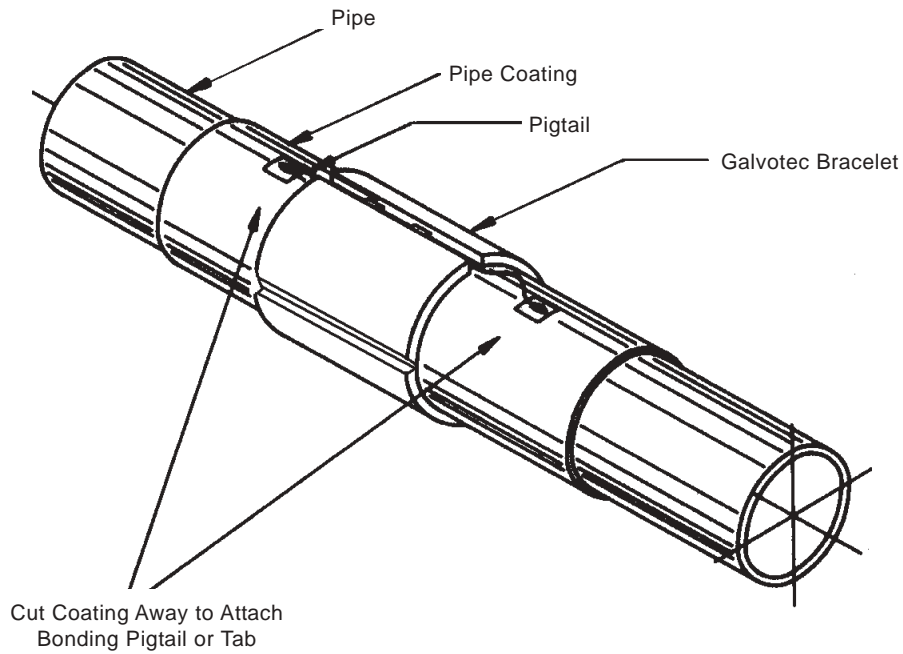




Aluminum Bracelet Anodes



Semi-Cylindrical for Concrete Coated Pipe





Aluminum Bracelet Anodes



Tapered Bracelets

Bracelet I.D.		TYPE *	THICKNESS		LENGTH		GAP		NET WT.		GROSS WT.	
in	mm		in	mm	in	mm	in	mm	lbs	kg	lbs	kg
2 3/8	60	T	1 1/4	32	12	305	1	25	11	5.0	13	5.9
3 1/2	89	T	1 1/4	32	12	305	1	25	15	6.8	17	7.7
4 1/2	114	T	1 1/2	38	12	305	1 1/4	32	23	10.4	25	11.3
4 1/2	114	T	1 1/2	38	19 1/4	489	1 1/4	32	46	20.9	50	22.7
5 9/16	141	T	1 1/2	38	15 5/8	397	1 1/4	32	37	16.8	40	18.1
6 5/8	168	T	1 1/2	38	11 1/4	286	1 1/2	38	32	14.5	36	16.3
6 5/8	168	TB2	1 1/2	38	13 1/2	343	3/4	19	32	14.5	36	16.3
6 5/8	168	T	1 1/2	38	13 5/8	346	1 1/2	38	36	16.3	40	18.1
6 5/8	168	T	1 1/2	38	18	457	1 1/4	32	60	27.2	64	29.0
6 5/8	168	T	1 3/4	44	21 1/4	540	1 1/2	38	74	33.6	78	35.4
6 5/8	168	ST	1 3/4	44	21 3/4	553	1 1/2	38	79	35.8	83	37.7
7 3/8	187	TB2	2 1/4	57	9 1/2	241	1	25	44	20.0	46	20.9
8 5/8	219	T	1 1/2	38	11 1/4	286	1 1/2	38	39	17.7	44	20.0
8 5/8	219	T	1 1/2	38	14 1/3	364	1 1/2	38	50	22.7	55	25.0
8 5/8	219	T	1 1/2	38	19.8	503	1 1/2	38	82	37.2	87	39.5
8 5/8	219	TB1	2 1/4	57	26 5/8	676	-	-	82	37.2	87	39.5
8 5/8	219	T	2 1/2	64	16	406	1 1/2	38	97	44.0	101	45.8
9 3/8	238	ST w/sockets	1 1/2	38	13 1/2	343	3	76	71	32.2	75	34.0
9 1/2	241	TB2	2 1/2	64	10 1/2	267	2	51	65	29.5	67	30.4
10 3/4	273	T	1 1/2	38	12.7	323	2	51	50	22.7	57	25.9
10 3/4	273	T	1 1/2	38	17 3/4	451	2	51	76	34.5	81	36.7
10 3/4	273	T	1 3/8	35	18 3/4	476	1 1/2	38	81	36.7	86	39.0
10 3/4	273	T	1 3/4	44	22	559	2	51	118	53.5	123	55.8
10 3/4	273	ST	1 3/4	44	22 1/4	565	2	51	124	56.3	131	59.4
10 3/4	273	TB1	3 1/4	83	24 1/2	622	-	-	131	59.4	145	65.8
10 3/4	273	ST	1 3/4	44	40	1016	2 1/2	64	227	103.0	237	107.5
12 3/4	324	T	1 1/2	38	14 3/4	375	2	51	74	33.6	84	38.1
12 3/4	324	T	1 1/2	38	16 3/4	425	1 1/2	38	94	42.64	100	45.4
12 3/4	324	ST	1 1/2	38	21.2	539	2 1/4	57	119	54.0	131	59.4
12 3/4	324	T w/sockets	1 1/2	38	23	584	4	102	125	56.7	131	59.4
12 3/4	324	T	2	51	19 5/8	498	2	51	149	67.6	162	73.5
12 3/4	324	ST1	1 3/8	35	31 1/2	800	2	51	165	74.8	177	80.3
13 9/16	345	T w/sockets	1 1/2	38	14	356	4	102	69	31.3	75	34.0
14	356	ST	1 1/2	38	21.1	536	2 1/4	57	131	59.4	144	65.3
14	356	ST	1 3/4	44	21 3/4	553	2	51	154	69.9	167	75.8
16	406	ST	1 3/4	44	20	508	2 1/4	57	169	76.7	184	83.5
16	406	ST1	1 1/2	38	32	813	2	51	210	95.3	225	102.0
16	406	ST	2	51	23	584	2 1/2	64	211	95.7	226	102.5
32	813	T	2	51	15 1/2	394	3	76	234	516	261	575
36	914	T	2 3/4	70	16 7/8	429	3	76	425	937	460	1014
40	1016	T	2	51	15 3/8	390	3	76	291	642	326	719

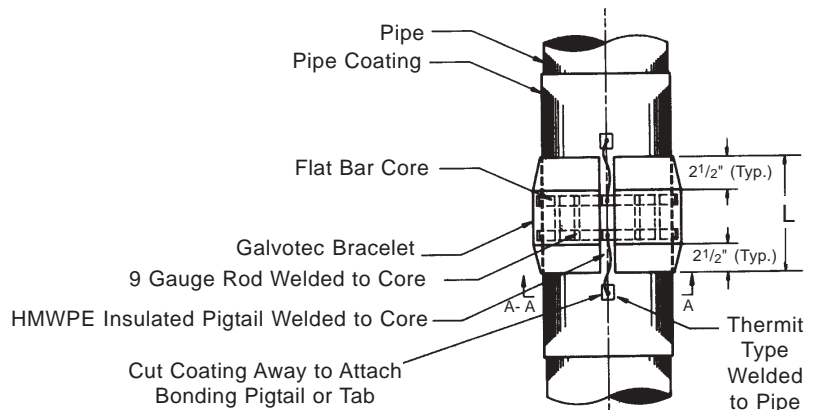
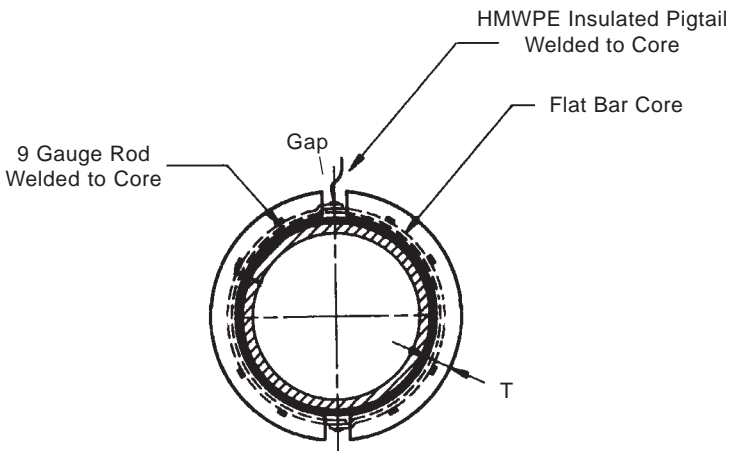
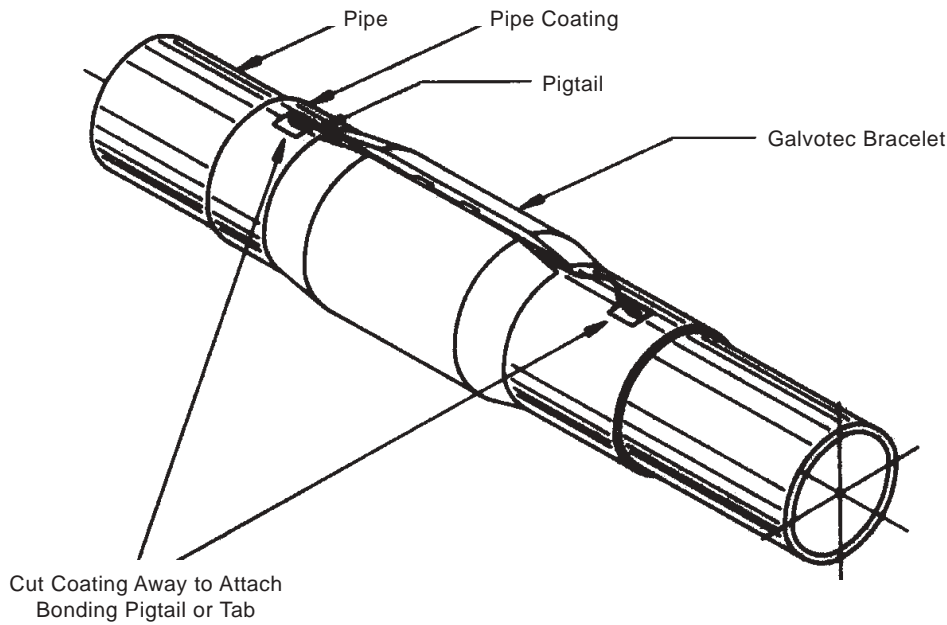
- * T=Tapered
- TB1=Tapered-Bolt-On (1 half only)
- TB2=Tapered-Bolt-On
- ST-Semi-Tapered
- ST1=Semi-Tapered (One End Only)



Aluminum Bracelet Anodes



Semi-Cylindrical Tapered Anodes





Aluminum Bracelet Anodes



Concrete Coated Pipe Bracelets

Bracelet I.D.		TYPE *	THICKNESS		LENGTH		GAP		NET WT.		GROSS WT.	
in	mm		in	mm	in	mm	in	mm	lbs	kg	lbs	kg
6 5/8	168	CC	1 1/2	38	14 1/2	368	3	76	41	18.6	45	20.4
6 7/8	175	IT	1 1/2	38	19 1/2	495	2	51	62	28.1	66	29.9
8 5/8	219	CC	1 1/2	38	8 1/2	216	2	51	30	13.6	33	15.0
8 5/8	219	CC	1 3/4	44	16 1/4	413	1 1/2	38	88	39.9	93	42.2
8 7/8	225	IT	1 1/2	38	16 1/2	419	2	51	63	28.6	67	30.4
10 3/4	273	CC	1 3/4	44	18 1/4	464	2 1/2	64	104	47.2	113	51.3
10 3/4	273	CC	1 3/4	44	22	559	2	51	118	53.5	128	58.1
10 3/4	273	CC	2	51	17 3/8	441	2	51	120	54.4	129	58.5
10 3/4	273	CC	2	51	21 3/4	553	2 1/2	64	136	61.7	146	66.2
11	279	IT	1 1/2	38	19 1/2	495	2	51	97	41.0	103	46.7
12	305	CC	1 1/2	38	16 3/8	416	2	51	90	40.8	100	45.4
12	305	CC	2	51	11 3/4	299	2	51	90	40.8	100	45.4
12 3/4	324	CC	1 1/8	29	16	406	2	51	68	30.8	81	36.7
12 3/4	324	CC	1 1/4	32	16	406	2	51	74	33.6	80	36.3
12 3/4	324	CC	1 1/8	29	21 1/2	546	1 1/2	38	96	43.6	109	49.4
12 3/4	324	CC	1 1/2	38	18.9	480	2	51	112	50.8	125	56.7
12 3/4	324	CC	1 3/4	44	18 1/2	470	3	76	130	59.0	143	64.9
12 3/4	324	CC	1 1/2	38	26 5/8	676	3	76	149	67.6	162	73.5
13	330	IT	1 1/2	38	16 1/2	419	2	51	91	41.3	96	43.6
14	356	CC	1 1/4	32	16 3/4	426	2	51	92	41.7	106	48.1
14	356	CC	2	51	21	533	3	76	177	90.3	190	86.2
16	406	CC	1 1/4	32	12	305	2	51	76	30.4	82	37.2
16	406	CC	1	25	24 3/4	629	1 1/2	38	128	58.1	144	65.3
16	406	CC	1 1/2	38	17 1/2	445	2	51	128	58.1	144	65.3
16	406	CC	1 1/4	32	25	635	1 1/2	38	155	70.3	171	77.6
16	406	CC	1 3/4	44	18 1/2	470	3	76	158	71.7	174	78.9
16	406	CC	1 1/2	38	21 3/4	553	2	51	168	76.2	184	83.5
16	406	CC	2 1/2	64	13.4	340	3	76	170	77.1	186	84.4
18	456	CC	1 5/8	41	17 3/16	437	4 3/8	111	138	62.6	155	70.3
18	457	CC	2 1/2	64	12 1/2	318	3	76	180	81.7	197	89.4
18	457	CC	1 3/4	44	19 1/2	495	2 1/2	64	188	85.3	205	93.0
18	457	CC	1 3/4	44	18.9	480	2	51	188	85.3	205	93.0
18	457	RT	2 3/4	70	24 7/8	632	4 3/8	111	216	98.0	233	105.7
18	457	CC	1 3/4	44	27 5/8	702	3	76	263	119.3	280	127.0
18	457	CC	2	51	21 1/4	540	2 1/2	64	238	108.0	256	116.1
20	508	CC	1 3/4	44	8 1/2	216	3 3/4	95	75	34.0	85	38.6
20	508	CC	1 3/4	44	9 1/2	241	2	51	100	45.4	119	54.0
20	508	CC	1 3/4	44	10 1/4	260	2	51	111	50.4	130	59.0
20	508	CC	1 1/2	38	16 1/2	419	3	76	143	65.0	161	73.0
20	508	CC	1 5/8	41	16	406	2 1/2	64	157	71.2	175	79.4
20	508	CC	2 1/2	64	10	254	2	51	160	72.6	178	80.7
20	508	CC	1 7/8	48	14 1/4	362	3	76	161	73.0	179	81.2
20	508	CC	2 1/4	57	12 3/4	324	2 1/2	64	172	78.0	190	86.2

Continued next page



Aluminum Bracelet Anodes



Concrete Coated Pipe Bracelets (Continued)

Bracelet I.D.		TYPE *	THICKNESS		LENGTH		GAP		NET WT.		GROSS WT.	
in	mm		in	mm	in	mm	in	mm	lbs	kg	lbs	kg
20	508	CC	1.9	48	16 1/4	413	3	76	189	85.7	207	93.9
20	508	CC	1 5/8	41	21 1/4	540	2 1/2	6.4	190	86.2	209	94.8
20	508	CC	2 1/2	64	14	356	2 1/2	64	206	93.4	225	102.0
20	508	CC	1 3/4	44	19 3/4	502	2 1/2	64	209	94.8	228	103.4
20	508	CC	2	51	28 5/8	727	3	76	352	159.7	370	167.8
24	610	CC	1 1/4	32	13	330	2	51	116	52.6	139	63.1
24	610	CC	1 3/4	44	11 1/8	283	3	76	141	64.0	164	74.4
24	610	CC	1 3/4	44	14 1/8	359	3	76	177	80.3	200	90.7
24	610	CC	2 3/4	44	8 3/4	222	3	76	177	80.3	189	90.7
24	610	CC	3 3/4	95	6	152	3 1/2	89	177	80.3	189	90.7
24	610	CC	1 1/2	38	17	432	2 1/2	64	186	84.4	209	94.8
24	610	CC	2 1/8	54	11 1/4	286	2 1/2	64	188	85.3	211	95.7
24	610	CC	2	51	13.1	333	2 1/2	64	193	87.5	216	98.0
24	610	CC	2 1/2	64	10 7/8	276	3	76	200	90.7	223	101.2
24	610	CC	1 3/4	44	18 1/2	470	3	76	233	105.7	256	116.1
24	610	CC	2	51	16	406	3	76	233	105.7	256	116.1
24	610	CC	3 1/8	79	10	254	2 1/2	64	240	106.9	263	119.3
24	610	CC	3	76	10 5/8	270	3	76	240	106.9	263	119.3
24	610	CC	2	51	17	432	3	76	254	115.2	277	125.7
24	610	CC	3 1/8	79	10 3/4	273	2	51	265	120.2	288	130.6
24	610	CC	1 7/16	36.5	28 3/4	730	3	76	298	135.2	321	145.6
24	610	CC	2	51	19.6	498	3	76	287	130.2	310	140.6
24	610	CC	1 3/4	44	24 1/4	616	3	76	315	142.9	338	153.3
24	610	CC	2	51	35 3/4	908	3	76	516	234.1	539	244.5
24	610	CC	2 3/8	60	33 1/4	845	3	76	595	270.4	618	280.3
25	635	CCB	3 1/2	89	4 1/2	114	2	51	123	55.8	¥	¥
25	635	CCB	4 1/2	114	5	127	2	51	187	84.8	¥	¥
26	635	CC	1 9/16	41	21 11/16	551	5	127	252	114.3	276	125.2
30	762	CC	2	51	10	254	3	76	180	81.7	205	93.0
30	762	CC	2 3/4	70	8 1/2	216	3	76	217	98.4	233	105.7
30	762	CC	2 1/4	57	10 3/4	273	4	102	220	99.8	249	113.0
30	762	CC	2	51	12 1/2	318	3	76	233	105.7	258	117.0
30	762	CC	2 1/2	64	13.50	340	3	76	310	140.6	335	152.0
30	762	CC	2 1/4	57	15 1/2	394	3	76	323	146.5	348	157.9
36	914	CC	2	51	15 1/4	387	3	76	342	155.1	377	171.0
36	914	CC	2 1/4	57	15 1/8	384	3	76	383	173.7	418	189.6
36	914	CC	3	76	12.6	320	4	102	420	190.5	455	206.4
36	914	CC	3	76	36 3/4	934	3	76	1264	573.4	1315	596.5
40	1016	CC	3 1/4	83	28 3/4	730	4	102	1168	529.8	1224	555.2
40	1016	CC	4 1/4	108	21 5/8	549	4	102	1179	534.8	1235	560.2

*CC=Concrete Coated (square Bracelet)

IT= Internally Tapered Bracelet

TR= Reversely Tapered Bracelet

CCB= Square Bolt-On Bracelet

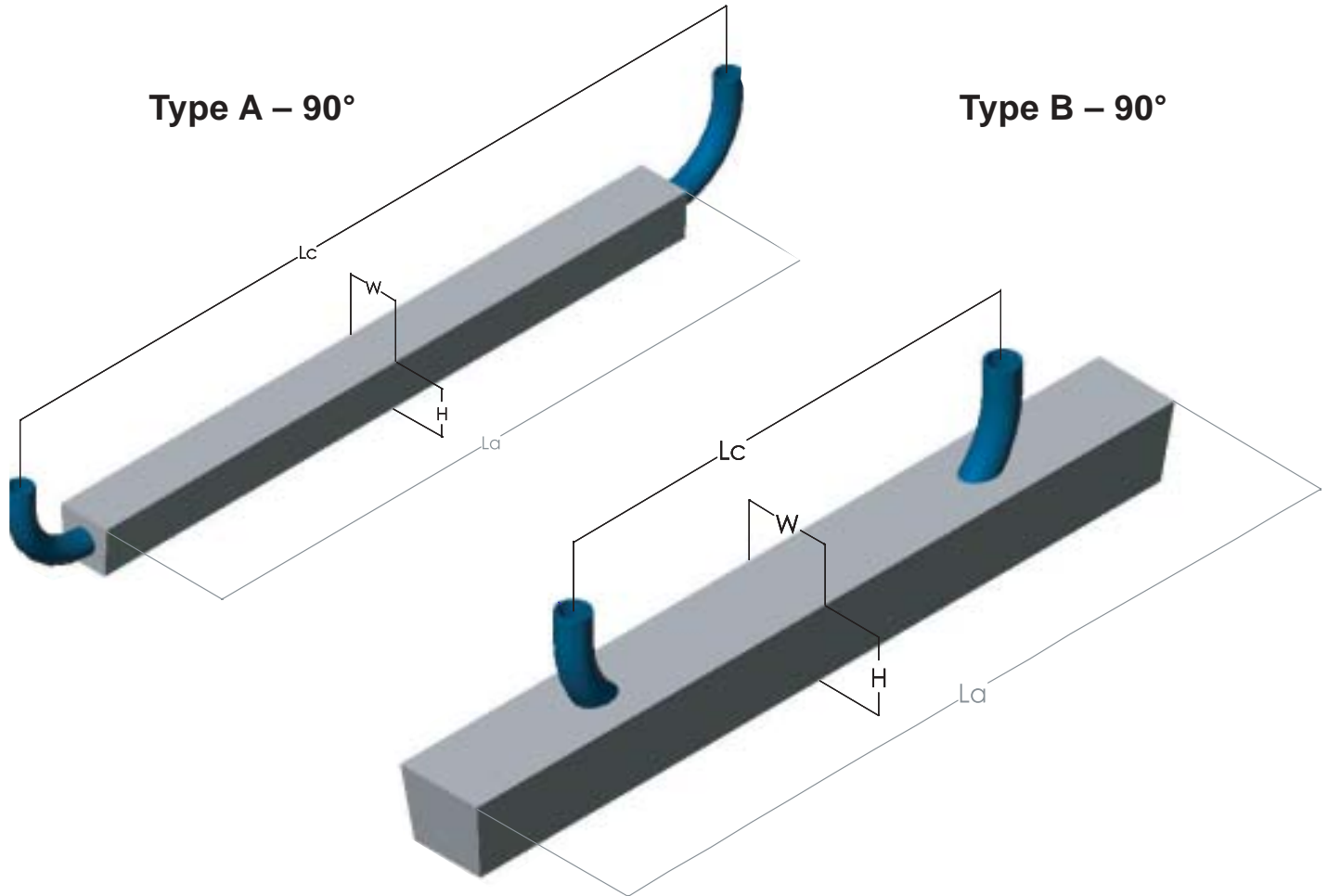
¥ Variable due to bolt-on assembly



Aluminum Platform/Structural Anodes



Platform Anode with 90° Bent Pipe Core



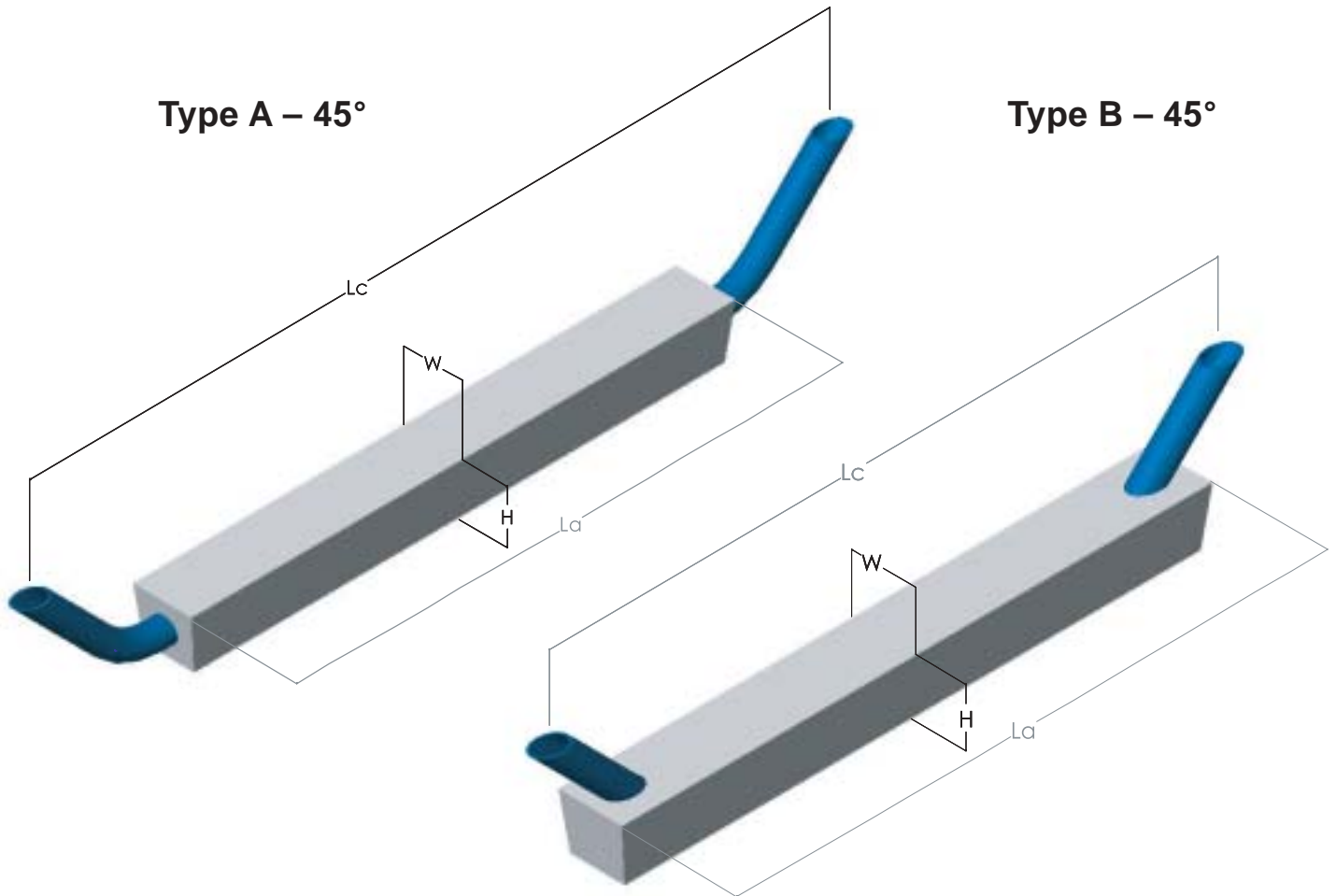
Net Wt.		W		H		La		Anode Type	Lc		Core Specification Pipe Size
lbs	Kg	in	mm	in	mm	ft.	mm		ft.	mm	
325	147.4	6	160	6	163	8	2438	A	10.0	3048	2" Schedule 80
								B	7.0	2134	2" Schedule 80
411	222.3	7	208	7	188	8	2438	A	11.0	3353	3" Schedule 80
								B	7.0	2134	3" Schedule 80
540	244.9	8	208	8	203	8	2438	A	11.0	3353	3" Schedule 80
								B	7.0	2134	3" Schedule 80
725	328.9	9	249	9	239	8	2438	A	10.7	3261	4" Schedule 80
								B	7.0	2134	4" Schedule 80
1050	476.3	9	229	9	249	12	3658	A	13.7	4176	4" Schedule 80
								B	10.0	3048	4" Schedule 80
1250	567.0	10	249	10	267	12	3658	A	13.7	4176	4" Schedule 80
								B	10.0	3048	4" Schedule 80



Aluminum Platform/Structural Anodes



Platform Anode with 45° Bent Pipe Core



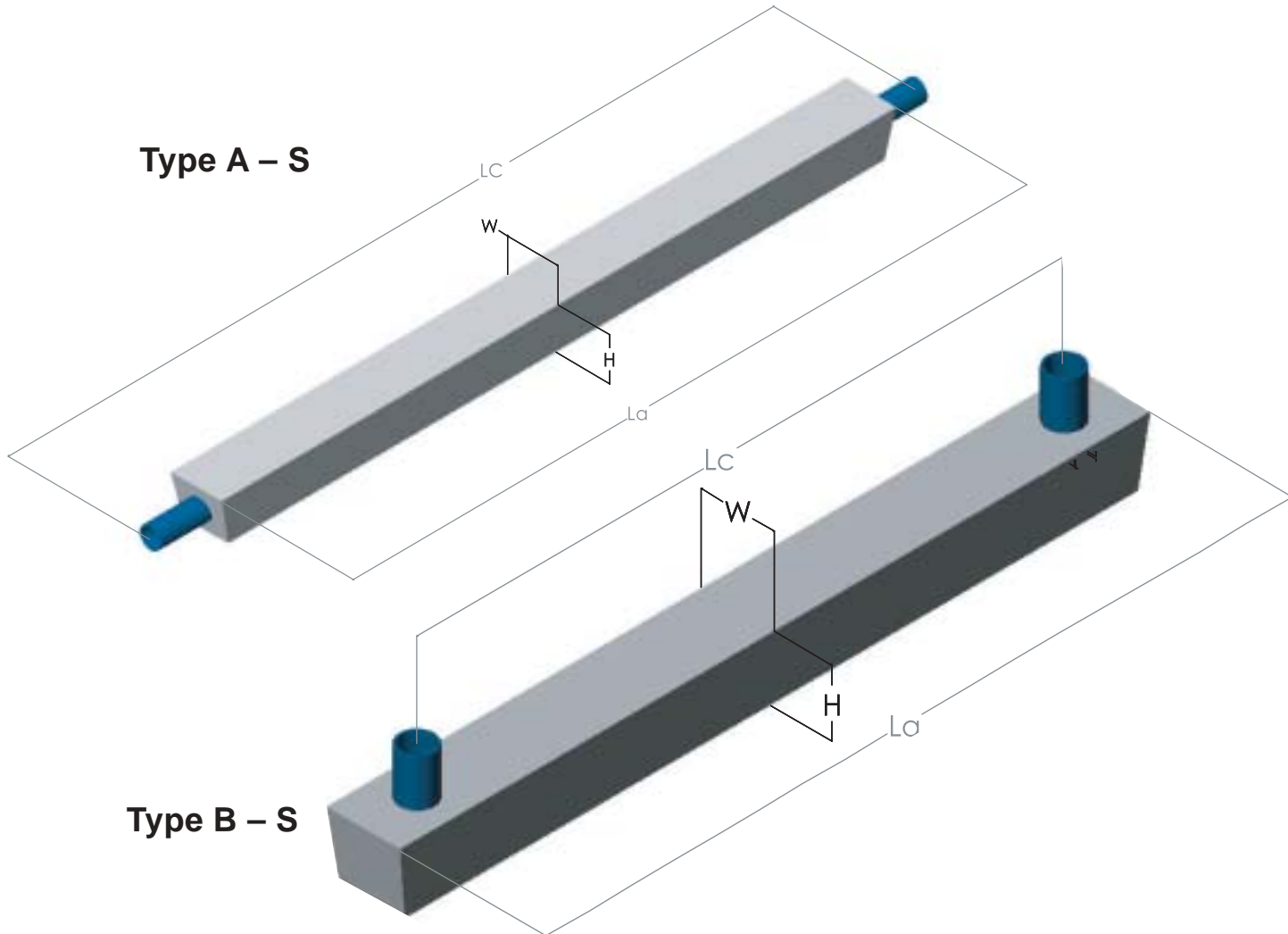
Net Wt.		W		H		La		Anode Type	Lc		Core Specification Pipe Size
lbs	Kg	in	mm	in	mm	ft.	mm		ft.	mm	
325	147.4	6	160	6	163	8	2438	A	11.0	3353	2" Schedule 80
								B	9.0	2743	2" Schedule 80
411	222.3	7	208	7	188	8	2438	A	11.5	3505	3" Schedule 80
								B	9.0	2743	3" Schedule 80
540	244.9	8	208	8	203	8	2438	A	11.5	3505	3" Schedule 80
								B	9.0	2743	3" Schedule 80
725	328.9	9	249	9	239	8	2438	A	12.0	3658	4" Schedule 80
								B	9.0	2743	4" Schedule 80
1050	476.3	9	229	9	248	12	3658	A	16.0	4877	4" Schedule 80
								B	13.0	3962	4" Schedule 80
1250	567.0	10	249	10.8	267	12	3658	A	16.0	4877	4" Schedule 80
								B	13.0	3962	4" Schedule 80



Aluminum Platform/Structural Anodes



Platform Anode with Straight Core



Net Wt.		W		H		La		Anode Type	Lc		Core Specification Pipe Size
lbs	Kg	in	mm	in	mm	ft.	mm		ft.	mm	
325	147.4	6	160	6.4	163	8	2438	A	10	3048	2" Schedule 80
								B	5	1524	3"x3"x1/4" Internal Angle + 2" Schedule 80
411	222.3	8	208	7.4	188	8	2438	A	10	3048	3" Schedule 80
								B	5	1524	3"x4"x1/4" Internal Angle + 2" Schedule 80
540	244.9	8	208	8.0	203	8	2438	A	10	3048	3" Schedule 80
								B	5	1524	3"x4"x1/4" Internal Angle + 3" Schedule 80
725	328.9	9	249	9.4	239	8	2438	A	10	3048	4" Schedule 80
								B	5	1524	3"x5"x1/4" Internal Angle + 4" Schedule 80
1050	476.3	9	229	9.75	248	12	3658	A	14	4267	4" Schedule 80
								B	8	2438	3"x5"x5/16" Internal Angle + 4" Schedule 80
1250	567.0	10	249	10.5	267	12	3658	A	14	4267	4" Schedule 80
								B	8	2438	3"x5"x5/16" Internal Angle + 4" Schedule 80



Magnesium™ Soil Anodes



High Potential Magnesium

SuperMag High Potential Magnesium Anodes from Galvotec Alloys, Inc. offers typical high working driving potentials of -1.70 volts or better vs. copper/copper sulfate reference electrode, providing more current output per pound than AZ-63 alloy magnesium anodes. This alloy is the best choice for engineered systems in high resistivity soils.



Laboratory- Testing

Our modern laboratory is equipped with the best state of the art equipment available. Our technicians and inspectors are well trained and experienced. A Chemical Analysis is provided for every heat. Each heat is analyzed throughout production to insure consistency. Electrochemical testing is performed routinely on randomly selected heats as a quality assurance procedure, utilizing the ASTM-G-97 test method.



Production - Quality Control

Our production facilities offer the best possible working environment available in the industry. Our personnel are experienced in all phases of the foundry operation. Quality Control in our foundry begins on the foundry floor, where the first line of inspection is the casting and molding crew, our lab technicians, inspectors and managers completes the quality team. Our quality control staff carefully monitors raw material, core materials, packaging and all aspects of production. Laboratory and field investigations prove that Galvotec SuperMag anodes perform consistently.

Packaging- Availability

Anodes are supplied in backfill to meet the customers' specifications. The typical backfill material consists of 75% gypsum, 20% bentonite and 5% sodium sulfate. Standard sizes and shapes are warehoused. Anodes are available packaged and unpackaged with or without leads as per customers' specifications.



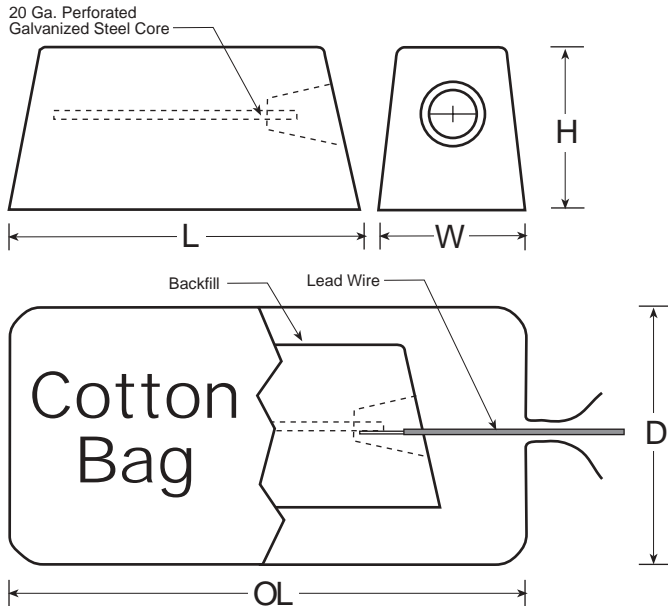
Magnesium H-1 Soil Anodes



Galvotec Alloys produces the H-1 Alloys, ASTM AZ63.
The standard sizes can be found in the following chart.

PRODUCT NO.	Weight				Anode Dimensions									
	BARE		PKDG.		Width (W)		Height (H)		Length (L)		Diameter (D)		Overall Length (OL)	
	lbs	kg	lbs	kg	in	mm	in	mm	in	mm	in	mm	in	mm
GA-MG-3 H-1	3	1.4	8	3.6	3	76	3	76	5.0	127	5.25	133	8.00	203
GA-MG-5 H-1	5	2.3	13	5.9	3	76	3	76	8.0	229	5.25	133	11.25	286
GA-MG-9 H-1	9	4.1	27	12.2	3	76	3	76	14.0	336	5.25	133	20.00	508
GA-MG-12 H-1	12	5.4	32	14.5	4	102	4	102	12.0	305	7.50	191	18.00	457
GA-MG-17 H-1	17	7.7	45	29.4	4	102	4	102	17.0	432	7.50	191	24.00	610
GA-MG-32 H-1	32	14.5	68	30.8	5	127	5	127	20.5	521	8.50	216	28.00	711
GA-MG-50 H-1	50	22.7	100	45.4	7	178	7	178	16.0	406	10.00	254	24.00	610

Other shapes, sizes and weights available on request.



Packaged Anodes are prepack in either bags or cardboard cartons in low resistivity, quick wetting, prepared backfill consisting of 75% hydratred gypsum, 20% bentonite, and 5% sodium sulphate.



Connecting Wire: Standard 10 feet of solid or stranded #12 AWG Copper Lead Wire/THWN/THNN.

Alloy Compositions			
	Grade "A"	Grade "B"	Grade "C"
Element	%	%	%
Aluminum	5.3 - 6.7	5.3 - 6.7	5.0 - 7.0
Zinc	2.5 - 3.5	2.5 - 3.5	2.0 - 4.0
Manganese (Min)	0.15	0.15	0.10
Impurities			
Iron (Max.)	0.003	0.003	0.003
Nickel (Max.)	0.002	0.003	0.003
Copper (Max.)	0.02	0.05	0.10
Silicon (Max.)	0.10	0.30	0.30
Other (Max.)	0.30	0.30	0.30
Magnesium	Balance	Balance	Balance

Typical Electrochemical Properties

Amps/Hrs./Lb.	500-540
Efficiency	50-54%
Closed Circuit Potential (Copper/Copper Sulfate)	-1.45 to -1.55v
Open Circuit Potential (Copper/Copper Sulfate)	-1.50 to -1.60v

NOTE: While statements contained herein are believed to be accurate, they are offered as suggestions only and no warranty or representation is intended. Galvotec Alloys products are sold subject to the terms and conditions appearing on our printed order acknowledgment.



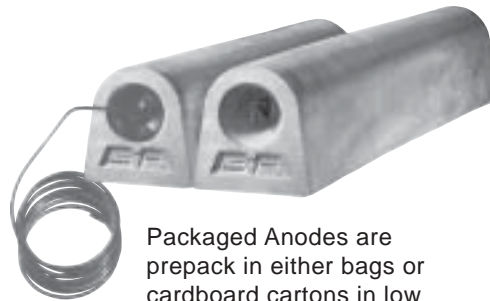
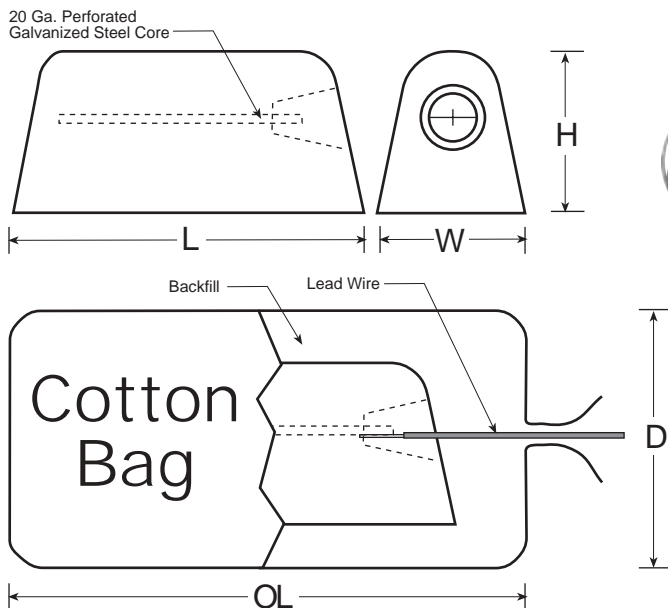
Magnesium SuperMAG™ High Potential Anodes



Galvotec Alloys produces High Potential anodes under our trademark SuperMAG™. Chemical analysis and potential tests are performed on every heat.

PRODUCT NO.	MODEL NO.	Weight				Anode Dimensions									
		BARE		PKDG.		Width (W)		Height (H)		Length (L)		Diameter (D)		Overall Length (OL)	
		lbs	kg	lbs	kg	in	mm	in	mm	in	mm	in	mm	in	mm
GA-MG-3 HP	3D3	3	1.4	8	3.6	3.50	89	3.75	95	5.00	127	6.0	152	10	254
GA-MG-5 HP	5D3	5	2.3	17	7.7	3.50	89	3.75	95	8.50	216	6.0	152	12	305
GA-MG-9 HP	9D3	9	4.1	27	12.2	3.50	89	3.75	95	14.00	356	6.0	152	17	432
GA-MG-17 HP	17D3	17	7.7	45	20.4	3.50	89	3.75	95	25.75	654	7.5	191	34	864
GA-MG-20 HP	20D2	20	9.1	70	31.8	2.75	70	3.00	76	59.75	1518	5.0	127	66	1676
GA-MG-32 HP	32D5	32	14.5	70	31.8	5.50	140	5.00	127	20.50	521	8.0	203	28	711
GA-MG-32 HP	32D3	32	14.5	91	41.3	3.50	89	3.75	95	45.25	1149	6.5	165	53	1346
GA-MG-40 HP	40D3	40	18.1	96	43.5	3.50	89	3.75	95	59.75	1518	6.5	165	66	1676
GA-MG-48 HP	48D5	48	21.8	100	45.4	5.50	140	5.75	146	31.00	787	8.0	203	38	965
GA-MG-60 HP	4x4x60	60	27.2	125	56.7	4.00	102	4.00	102	60.00	1524	7.0	178	64	1626

Other shapes, sizes and weights available on request.



Packaged Anodes are prepack in either bags or cardboard cartons in low resistivity, quick wetting, prepared backfill consisting of 75% hydrated gypsum, 20% bentonite, and 5% sodium sulphate.

Connecting Wire: Standard 10 feet of solid or stranded #12 AWG Copper Lead Wire/THWN/THNN.



Typical Electrochemical Properties

Amps/Hrs./Lb.	500-580
Efficiency	50-58%
Closed Circuit Potential	-1.50 to -1.75v
Open Circuit Potential	-1.70 to -1.78v

Alloy Compositions	
Element	%
Aluminum (Max.)	0.01
Manganese (Min)	0.50 - 1.30
Iron (Max.)	0.03
Nickel (Max.)	0.001
Copper (Max.)	0.02
Other (Max.)	0.30
Magnesium	Balance

For the very best in Magnesium Anodes – specify SuperMAG™.

NOTE: While statements contained herein are believed to be accurate, they are offered as suggestions only and no warranty or representation is intended. Galvotec Alloys products are sold subject to the terms and conditions appearing on our printed order acknowledgment.



Magnesium Hull Anodes



Our experience in producing galvanic anodes assures that you will receive top quality anodes that will effectively inhibit corrosion when used in a properly designed and maintained cathodic protection system.

Galvotec's magnesium anodes are produced in a variety of shapes and sizes for use in seawater, brackish water and fresh water cathodic protection systems.

Composition: Galvotec's magnesium anodes conform in composition to the requirements of U.S. Government Specification MIL-A-21412A (Ships). This 6% aluminum, 3% zinc alloy (AZ-63) usually provides the best combination of economy and operating characteristics in seawater or brackish water.

Galvanic Efficiency: The current efficiency of Galvotec's magnesium anodes is nominally 55% in seawater and the current capacity is about 550 amp-hr./lb. The open circuit potential of the magnesium alloy used is nominally -1.55 volts to a copper/copper sulfate half cell in seawater; the driving voltage to galvanized steel is about 0.70 volts providing a relatively high current output per anode. Both hull and condenser anodes are available with a plastisol (polyvinyl chloride) coating which serves as an excellent current barrier shield.

Applications: Magnesium anodes are effective and economical corrosion fighters that for over 25 years have been protecting a variety of steel structures in salt, brackish and fresh water, including:

- Hulls of ships, barges, tugs and boats
- Ballast tanks of ore carriers and similar vessels
- Bulkheads
- Water storage tanks
- Piers and pilings
- Pipelines
- Heat exchangers
- Travelling screens

This brochure contains general specifications on the wide variety of magnesium anodes produced by Galvotec. For further information, or to discuss your specific requirements, contact our sales office.



Magnesium

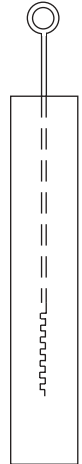


Pier Anodes

Pipe – 3/4" standard galvanized steel pipe core extending 1" beyond ends.

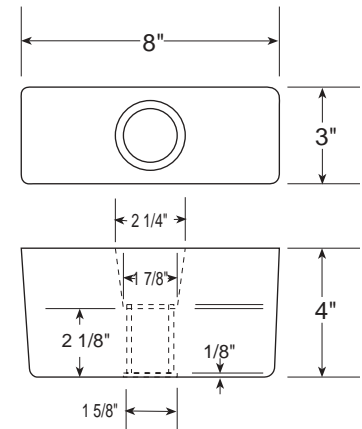
Eyebolt – 1/2" galvanized steel eyebolt core; 3/4" eyebolt in 200 lb. size.

Product Number	Nom. Wt.		Cylinder Dia.		Length		Core Type (Specify on order)
	lb.	kg	in	mm	in	mm	
GA-MG-P-50C	50	22.7	8	203	16	406	Pipe or Eyebolt
GA-MG-P-100C	100	45.4	8	203	32	813	Pipe or Eyebolt
GA-MG-P-200C	200	90.7	12	305	27	686	Pipe or Eyebolt

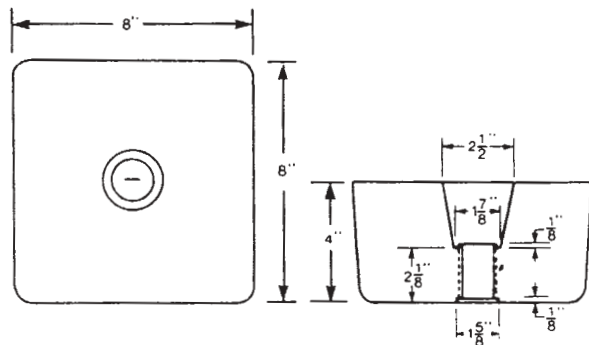


Condenser Anodes

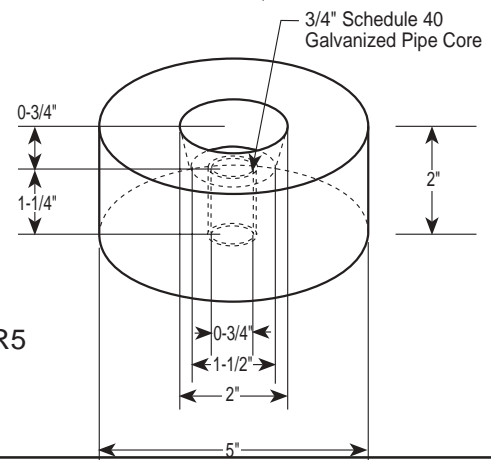
The GA-MG-15-S has a nominal weight of 15 pounds with a 3/4" galvanized steel pipe core. This anode can be furnished either bare or with a plastisol coating. When ordering, please specify with or without coating.



GA-MG-6SX



GA-MG-7.5-S
Same as above except 2" thick.



GA-MG-2R5

Product Number	Nom. Wt.		Cylinder Diam.		Length		Core Type
	lb.	kg	in	mm	in	mm	
GA-MG-2R5	2.5		5	127	2	51	Pipe Core
GA-MG-1R5	1.25		5	127	1	25	Pipe Core



Magnesium Hull Anodes



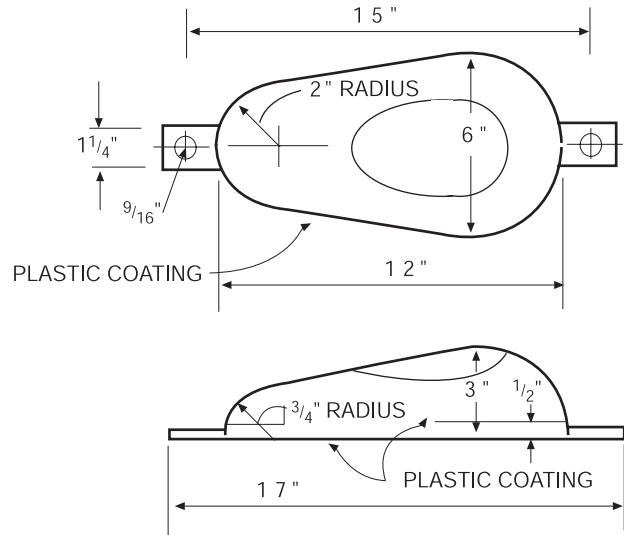
(With Plastisol Coating)

GA-MG-10 Launch

Weighs about 10 lbs. (4.5 kg)

Contains cast-in galvanized steel strap with $\frac{9}{16}$ " holes for mounting.

Straps $\frac{1}{4}$ " x $1\frac{1}{4}$ "
(6 mm x 32 mm)

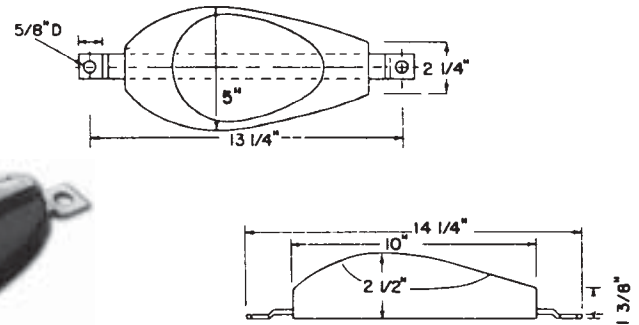


GA-MG-5 Launch

Weighs about 5 lbs. (2.3 kg)

Contains cast-in galvanized steel strap with $\frac{5}{8}$ " (16 mm) holes for mounting.

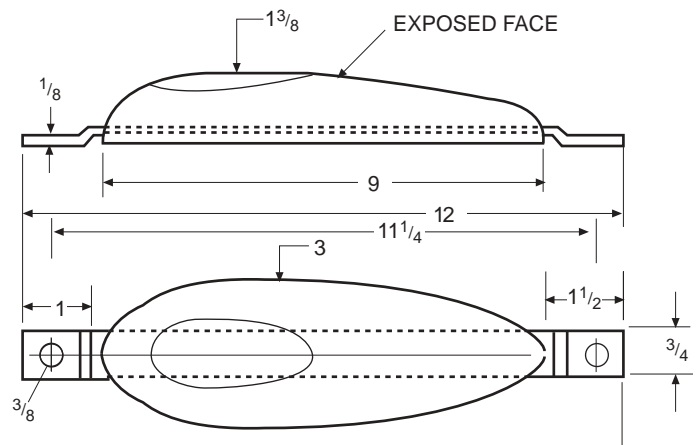
Widely used on steel hull service boats.



GA-MG-JR

A teardrop-shaped anode.

Weighs about 1.5 lbs. (0.7 kg)





Magnesium Hull Anodes



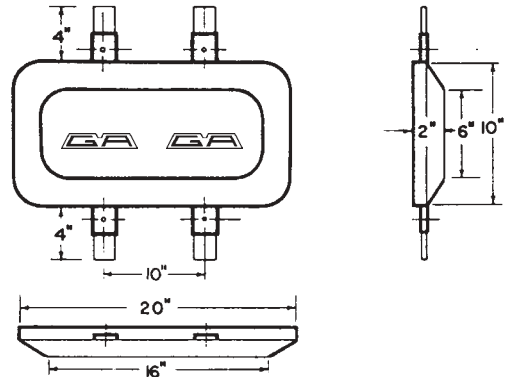
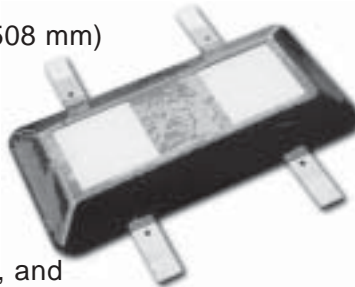
(With Plastisol Coating)

GA-MG-H-22

Popular barge anode weighing about 22 lbs (10.0 kg).
10" x 2" x 20" (254 mm x 50 mm x 508 mm)

Contains two cast-in 1/4" x 1 1/2" (6 mm x 38 mm) galvanized steel straps that are easily welded to the steel hull structure.

Plastisol coating on the sides, ends, and faying surfaces acts as a current barrier shield.

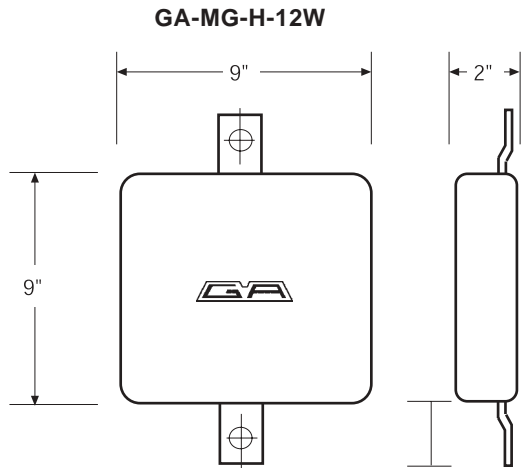


GA-MG-H-12W

Weighs about 12 lbs (5.4 kg).
9" x 2" x 9" (229 mm x 50 mm x 229 mm)

Contains one cast-in 1/4" x 2" (6 mm x 51 mm) galvanized steel strap with 3/4" (19 mm) mounting holes.

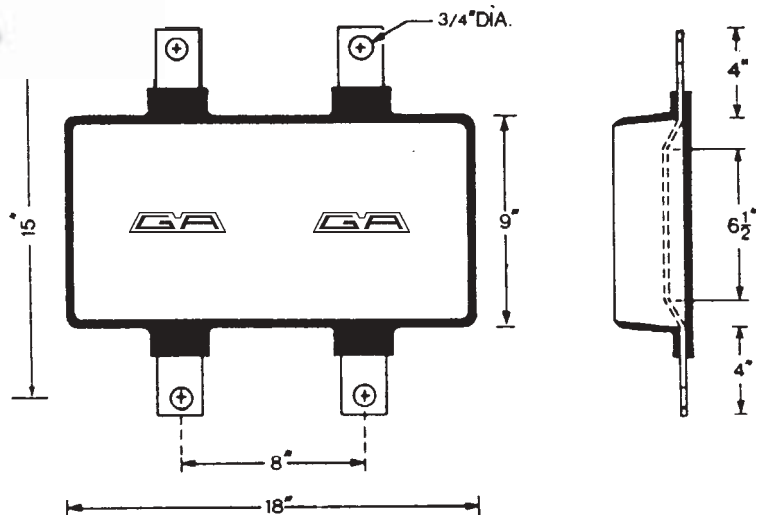
GA-MG-H-24W



GA-MG-H-24W

9" x 2" x 18"
(229 mm x 50 mm x 458 mm)
Weighs about 24 lbs (10.9 kg) and contains two cast-in 1/4" x 2" (6 mm x 51 mm) galvanized steel straps. Mounting holes 3/4" (19 mm) in diameter are provided. Plastisol coated.

GA-MG-H-24W



GA-MG-H-44W

9" x 4" x 18" (229 mm x 100 mm x 458 mm)
Weighs about 44 lbs (20.0 kg) and contains two cast-in 1/4" x 2" (6 mm x 51 mm) galvanized steel straps. Mounting holes 3/4" (19 mm) in diameter are provided. Plastisol coated.

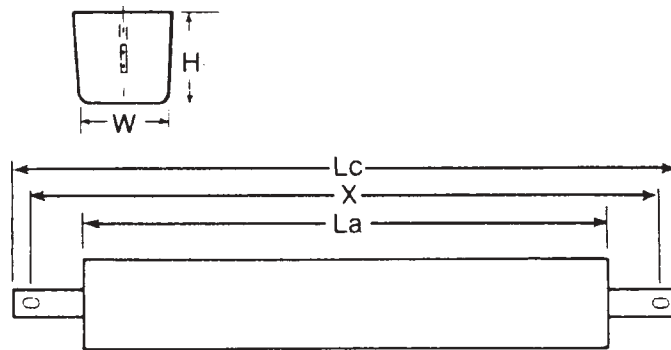


Magnesium Tank Anodes

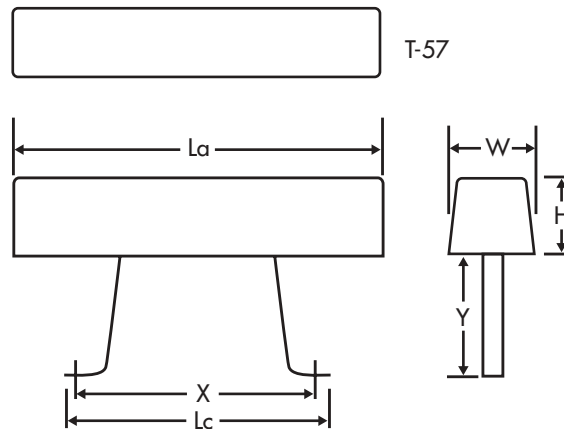


In this series the anodes contain cast-in, longitudinal, galvanized steel cores $1/4" \times 11/2"$. Two elongated mounting holes $11/16" \times 11/2"$ are provided.

Product Number	Nom. Wt.		W		H		La		Lc		X	
	lbs	kg	in	mm	in	mm	in	mm	in	mm	in	mm
GA-MG-T-36	36	16.3	4	102	4	102	28	711	38	965	36	914
GA-MG-T-52A	52	23.6	5	127	5	127	29	737	38	965	36	914
GA-MG-T-53	53	24.0	7	178	7	178	16	406	24	610	22	559



Product Number	Nom. Wt.		W		H		La		Lc		X		Y	
	lbs	kg	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
GA-MG-T-57	57	25.9	7	178	7	178	16	406	21	533	19	483	8	203



Data on other tank anode sizes, weights and core configurations available on request.



Zinc Anodes

Mil-Spec MIL-18001



Composition:

ASTM-B-418 TYPE I MIL-A-18001-K

Fe	0.005% Max.
Pb	0.006% Max.
Cu	0.005% Max.
Al	0.1 - 0.5%
Cd	0.025 - 0.07%
Zn	Remainder

ASTM-B-418 TYPE II

Fe	0.0014% Max.
Pb	0.003% Max.
Cu	0.002% Max.
Al	0.005% Max.
Cd	0.003% Max.
Zn	Remainder

Galvotec's Mil-Spec zinc anode meet the latest Mil-Spec revision. This alloy is also covered by ASTM-418-95 Type I. Galvotec's Mil-Spec zinc anodes are effective, economical corrosion fighters in applications where temperature exposures are limited up to 120 degrees F. (50° C) Galvotec's Mil-Spec zinc typical uses in seawater or saline mud:

- Hulls of ships, barges, boats and tugs
- Ballast tanks of tankers, ore carriers and freighters
- Bulkheads
- Piers and Pilings
- Pipelines
- Heat Exchangers

Galvotec Alloys, Inc. is an approved manufacturer for the US Government in addition to all of the major shipyards.

Galvanic Efficiency:

Galvotec's Mil-Spec anodes operate at a nominal 95% efficiency in seawater.

Galvanic efficiency relates directly to the anode's service life. Some commercial anodes develop dense corrosion products with high electrical resistance on their surface that restrict the current flow. In some cases, the anode's productive life ends before all of the available anode is consumed.

Galvotec's Mil-Spec anodes, however, resist the formation of hard, dense corrosion products and continue producing protective current until they are completely consumed. This longer life means fewer replacements and reduced overall operating costs.



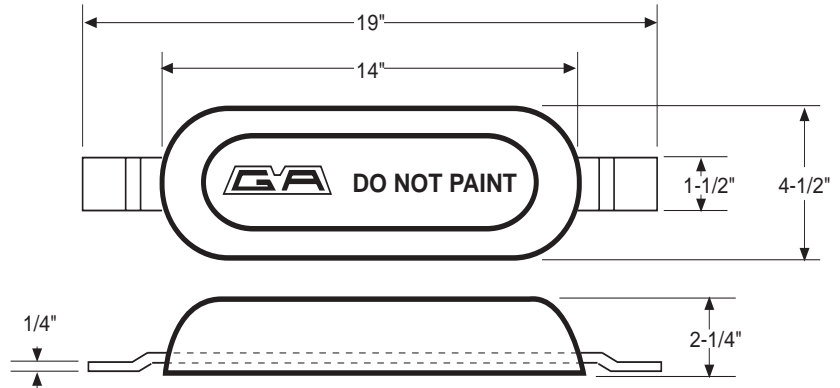
Zinc Hull Anodes



GA-26

Contains single galvanized steel longitudinal strap. Can be bolted or welded to hull. Particularly suited for smaller ships, coastal vessels, harbor tugs, etc.

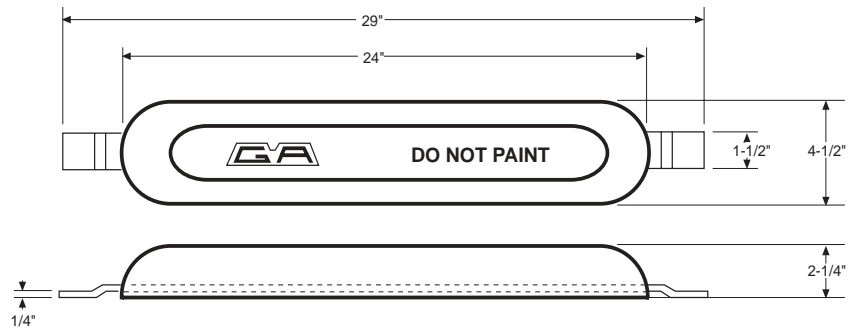
Weight	26 lbs	11.8 kg
Width	4 1/2"	114 mm
Height	2 1/4"	57 mm
Length	14"	356 mm
Current Rating	1 (amp-yrs)	



GA-48

Contains single longitudinal galvanized steel strap for welding to hull. Particularly suited for major ships, 10,000 DWT and upward.

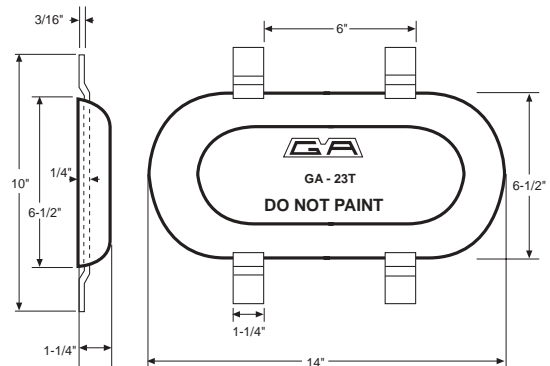
Weight	48 lbs	21.8 kg
Width	4 1/2"	114 mm
Height	2 1/4"	57 mm
Length	24"	61 mm
Current Rating	2 (amp-yrs)	



Tapered GA-23T

Contains two cast-in galvanized steel mounting straps.

Weight	22.5 lbs	10.2 kg
Width	6 1/2"	165 mm
Height	1 1/4"	32 mm
Length	14"	356 mm
Current Rating	1 (amp-yrs)	





Zinc Hull Anodes

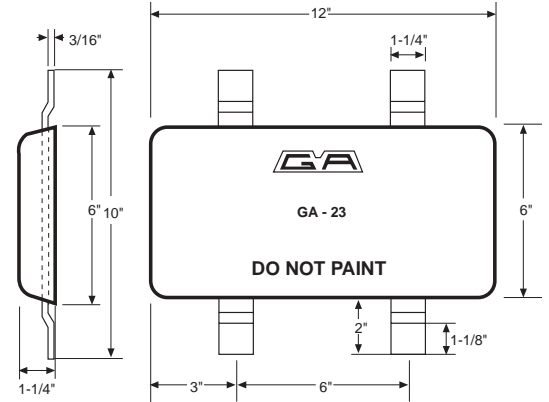


Military Anodes

The anodes shown here conform to the latest modification of MIL-A-18001.

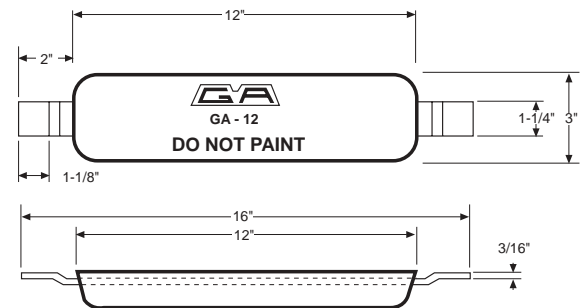
Anodes in this series contain two cast-in galvanized steel mounting straps (brass mounting straps are also available) or two cast-in cored holes on 6" centers. (GA-23C & GA-42C)

Product Number	Mil. Spec.	Wt.		W		H		L		Current Rating (amp-yrs)
		Lbs	Kg	in	mm	in	mm	in	mm	
GA-23	ZHS-23	22	10	6	152	1 1/4	32	12	30	1
GA-23C	ZHC-23	22	10	6	152	1 1/4	32	12	30	1
GA-42	ZHS-47	42	19	6	152	2 1/2	64	12	30	1
GA-42C	ZHC-47	40	18	6	152	2 1/2	64	12	30	1



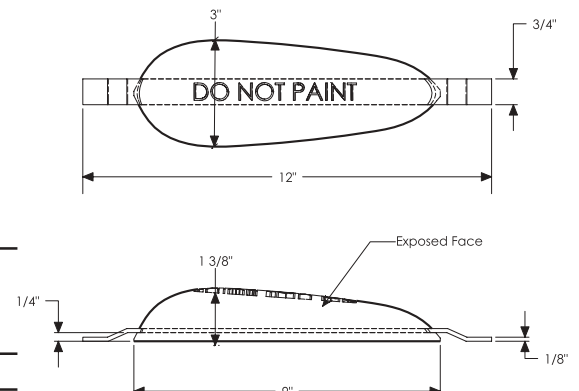
These anodes contain a single cast-in galvanized steel mounting strap measuring 3/16" x 1 1/4" x 16".
Option: Holes in straps

Product Number	Mil. Spec.	Wt.		W		H		L		Current Rating (amp-yrs)
		Lbs	Kg	in	mm	in	mm	in	mm	
GA-12	ZSS-12	11	5	3	76	1 1/4	3	12	30	0.5
GA-24	ZSS-24	22	10	3	76	2 1/2	6	12	30	1.0



A teardrop-shaped anode containing a single, cast-in galvanized steel strap.

Product Number	Mil. Spec.	Wt.		W		H		L		Current Rating (amp-yrs)
		Lbs	Kg	in	mm	in	mm	in	mm	
GA-TD6	ZTS	5	2.3	3	76	1 1/4	32	9	41	0.25





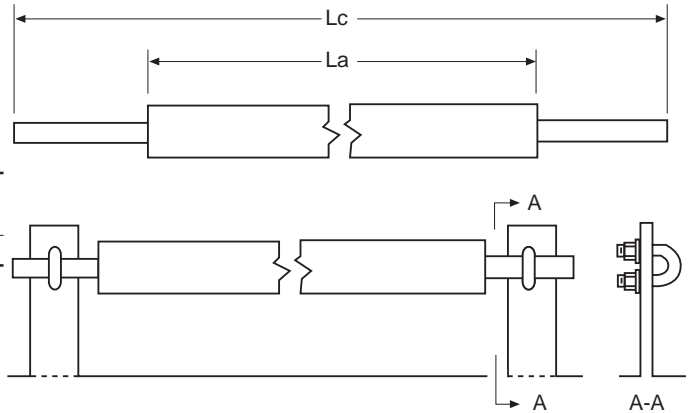
Zinc Ballast Tank Anodes



GA-TZ Series

Anodes contain straight galvanized steel core rod for direct welding or assembly to two flat bars with "U" bolts as shown.

Product Number	Wt.		W		H		La		LC		Current Rating (amp-yrs)
	Lbs	Kg	in	mm	in	mm	in	mm	in	mm	
GA-TZ-27	27	12.3	1.4	36	1.4	36	48	1219	60	1524	1
GA-TZ-50	50	22.7	2	51	2	51	48	1219	60	1524	1
GA-TZ-60	60	27.2	2	51	2	51	60	1524	72	1829	2.25
GA-TZ-70	70	31.8	2 1/2	64	2 1/2	64	48	1219	60	1524	2.5
GA-TZ-100	100	45.4	2 1/2	64	2 1/2	64	60	1524	72	1829	4

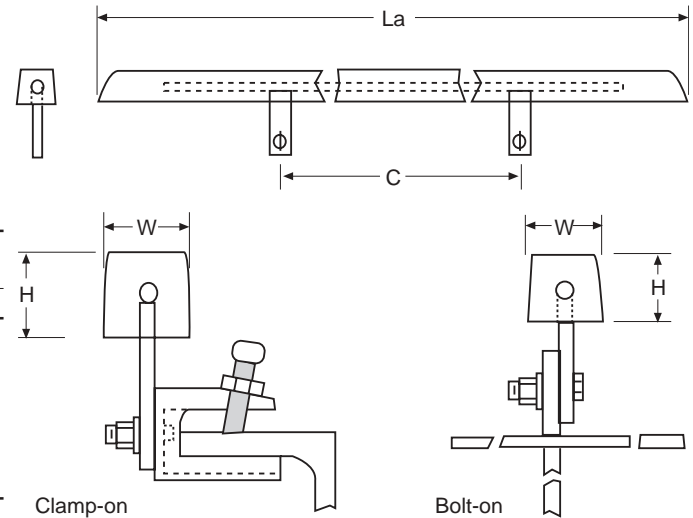


Hardware Sold Separately

GA-TZ Bolt-on Series

The core consists of two galvanized steel flat bars welded to a mild steel rod. Anodes can be clamped, welded or bolted to ballast tank structure.

Product Number	Wt.		W		H		La		C		Current Rating (amp-yrs)
	Lbs	Kg	in	mm	in	mm	in	mm	in	mm	
GA-TZB-27	27	12.3	1.4	36	1.4	36	48	1219	24	610	1
GA-TZB-50	50	22.7	2	51	2	51	48	1219	24	610	2
GA-TZB-60	60	27.2	2	51	2	51	60	1524	36	914	2.25
GA-TZB-70	70	31.8	2 1/2	64	2 1/2	64	48	1219	24	610	2.5
GA-TZB-100	100	45.4	2 1/2	64	2 1/2	64	60	1524	36	914	4

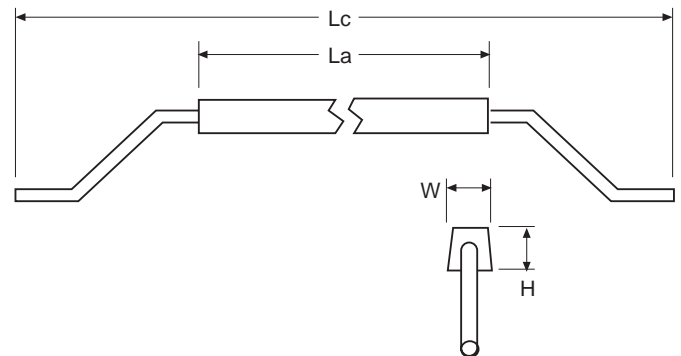


Hardware Sold Separately

GA-TZ Weld-on Series

Contains bent galvanized steel core rod on sizes up to 50 lbs. for direct welding to structure. Anodes over 50 lbs. have 5/8" diameter core rod.

Product Number	Wt.		W		H		La		LC		Current Rating (amp-yrs)
	Lbs	Kg	in	mm	in	mm	in	mm	in	mm	
GA-TZW-27	27	12.3	1.4	36	1.4	34	48	1219	69	1753	1
GA-TZW-50	50	22.7	2	51	2	51	48	1219	69	1753	2
GA-TZW-60	60	27.2	2	51	2	51	60	1524	81	2057	2.25
GA-TZW-70	70	31.8	2 1/2	64	2 1/2	64	48	1219	69	1753	2.5
GA-TZW-100	100	45.4	2 1/2	64	2 1/2	64	60	1524	81	2057	4





Zinc Pier & Piling Anodes

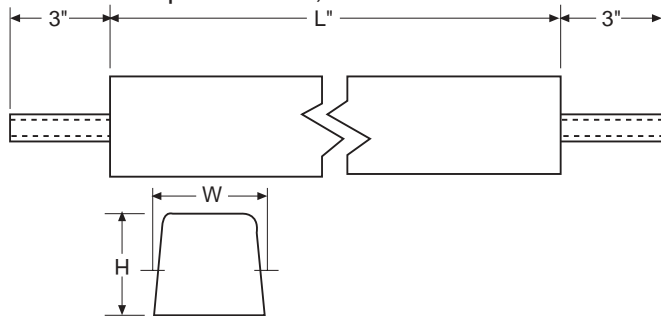
Condenser Anodes



GA-PZ Series

Several different steel cores are available in this anode series. When ordering specify which of the following cores is desired:

- Type "E"** – 1/2" diameter eyebolt in anodes weighing up to 200 lbs; 3/4" over 200 lbs.
- Type "P"** – 3/4" standard pipe in anodes weighing less than 250 lbs; 1" pipe 250 lbs. and up.
- Type "R"** – 1/2" diameter rod in anodes weighing up to 200 lbs; 1" over 200 lbs.



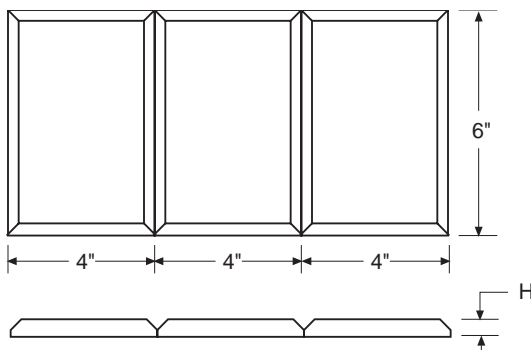
Product Number	Wt.		W		H		L		Current Core Type	Rating (amp-yrs)
	Lbs	Kg	in	mm	in	mm	in	mm		
GA-PZ-50	50	22.7	2	51	2	51	48	1219	E,R	2
GA-PZ-100	100	45.4	3	76	3	76	44	1118	E,P,R	4
GA-PZ-150	150	68.0	4	102	4	102	36	914	E,P,R	6
GA-PZ-250	250	113.4	9	229	9	229	12	305	E,P,R	10
GA-PZ-250A*	250	113.4	4	102	4	102	60	1524	E,P,R	10
GA-PZ-350	375	170.1	7	178	7	178	30	762	E,P,R	15
GA-PZ-500	500	226.8	9	229	9	229	24	610	E,P,R	20

* Pipe core for this anode is 3/4" standard pipe.

Cast Plates

Solid hull anodes are available without cast-in mounting straps.

Product Number	Wt.		W		H		L		Current Rating (amp-yrs)
	Lbs	Kg	in	mm	in	mm	in	mm	
GA-19	19	6.6	6	152	1	25	12	305	0.75
GA-10/Solid	10	4.5	6	152	1/2	13	12	305	0.5
GA-10/Section	10	4.5	6	152	1/2	13	12	305	0.5

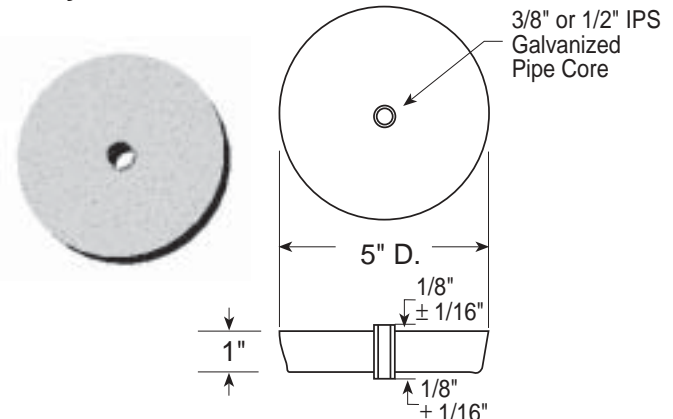


Nominal weights and dimensions

GA-ZEP Series

These circular anodes conform to the latest modification of MIL-A-18001 and are available with either of the following core configurations:

- Style A** – Square slab 6" x 6" x 1"
- Style B** – Circular slab
- Style C** – Semi-circular slab



Product Number	Wt.		Diameter		Core Type
	lbs	kg	in	mm	
GA-2	1	.5	2	51	A
GA-3	2	.9	3	76	A
GA-4	3	1.4	4	102	A
GA-5	5	2.3	5	127	A
GA-6	7	3.2	6	152	A
GA-9	16	7.3	9	229	B
GA-11	24	10.9	11	279	B
GA-15			15	381	C

Type "A" – one 3/8" or 1/2" IPS galvanized steel pipe.

Type "B" – two 3/8" or 1/2" IPS galvanized steel pipes on 3 1/2" centers (not shown).

Type "C" – two 3/8" or 1/2" IPS galvanized steel core.

Custom Line

For special requirements, Mil-Spec anodes for ballast tanks, piers and pilings can be furnished with a wide variety of cores and to the range of dimensions shown in the accompanying table:

Cross Section		Lengths		Nom. Wt.	
in	mm	in	mm	lbs/in	kg/mm
1.4 x 1.4	36 x 36	6-60	153-1524	0.5	0.01
2 x 2	51 x 51	6-60	153-1524	1.0	0.02
2.5 x 2.5	64 x 64	6-60	153-1524	1.5	0.03
3 x 3	76 x 76	6-60	153-1524	2.3	0.41
4 x 4	102 x 102	6-60	153-1524	4.2	0.08
5 x 5	127 x 127	6-48	153-1219	6.5	0.12
7 x 7	178 x 178	6-36	223-914	12.8	0.23
9 x 9	229 x 229	9-24	223-610	21.0	0.38
9 x 10	229 x 254	9-24	223-610	23.4	0.42
10 x 10	254 x 254	9-24	223-610	26.0	0.46



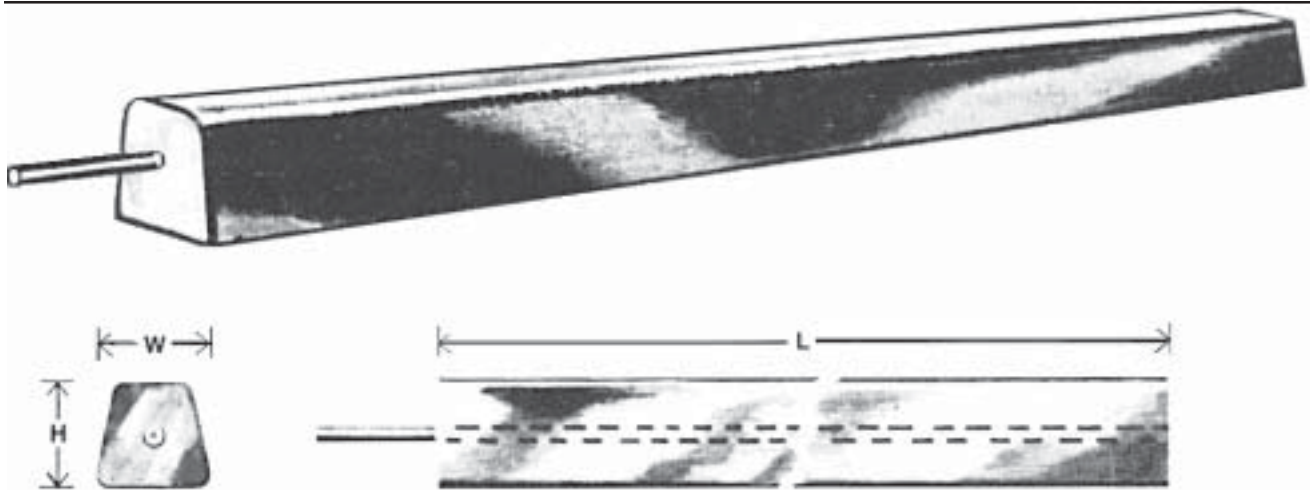
Zinc Soil Anodes



Composition: Soil zinc anodes are made from 99.99% pure Special High Grade Zinc. This alloy conforms to the composition of ASTM B-418-95 Type II.

Galvotec zinc anodes for underground use are produced in a variety of sizes and weights. All of the following anode sizes are supplied with 1/4" galvanized mild steel core. The standard core extends 4" out one end. Anode can be supplied bare or packaged with the standard 10' of #12 copper lead wire (THWN/THHN/TW) unless otherwise specified.

Product Number	Wt.		W		H		L		Pkg.		Diam.		L	
	lb	kg	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm
GA-S-5	5	2.3	1.4	36	1.4	36	9	223	20	9	5	127	15	381
GA-S-12	12	5.4	1.4	36	1.4	36	24	610	40	18	5	127	30	762
GA-S-15	15	6.8	2	51	2	51	15	381	36	16	6	127	21	533
GA-S-18	18	8.2	1.4	36	1.4	36	36	914	55	25	5	127	42	1067
GA-S-30	30	13.6	1.4	36	1.4	36	60	1524	86	39	5	127	66	1676
GA-S-30A	30	13.6	2	51	2	51	30	762	67	30	6	127	36	914
GA-S-45	45	20.4	2	51	2	51	45	1143	100	45	6	127	51	1295
GA-S-60	60	27.2	2	51	2	51	60	1524	120	55	6	127	66	1676



Custom Anodes

Cross Section		Length Range		Nominal Wt.	
in	mm	in	mm	lb./in.	kg/mm
3 x 3	76 x 76	6 - 60	152 - 152	2.3	0.04
4 x 4	102 x 102	6 - 60	152 - 152	4.2	0.08
5 x 5	127 x 127	6 - 48	152 - 122	6.5	0.12
7 x 7	178 x 178	6 - 36	152 - 914	12.8	0.23
9 x 9	229 x 229	12 - 24	305 - 610	21	0.38
10 x 10	254 x 254	9 - 24	229 - 610	26	0.46

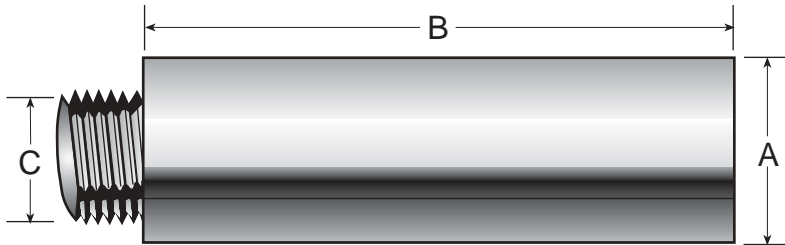


Zinc Pencil Anode



Custom Sizes Available

Type ZRN



SOLID ZINC PENCIL ANODES*				
Pencil Dimensions				
Product Number	A		B	C
	in	mm		
ZP-P375	3/8	10	Available	Specify
ZP-P500	1/2"	13	in	Thread
ZP-P625	5/8	16	1" - 6"	Size
ZP-P750	3/4	19	2.5cm-15.2cm	Desired
ZP-P1050	1	25	Lengths	

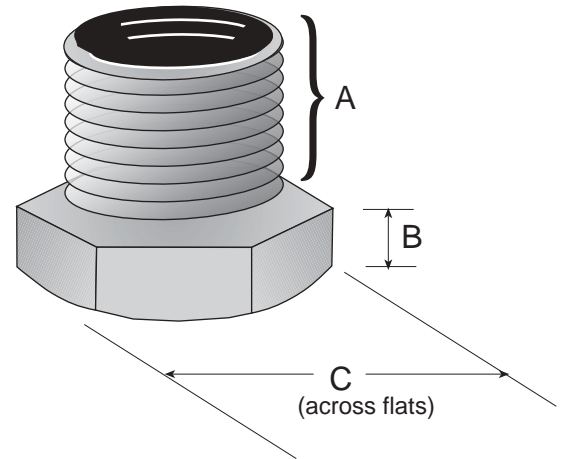
*Metal composition meets MIL-A-18001

PENCIL ANODE BRASS RETAINING PLUGS

Pencil Dimensions

Product Number	A (NPT Size)		B		C		* Internal Thread
	in.	cm	in	mm	in	mm	
BP 250-B	1/4	6	.3125	8	.625	16	3/8-16 NC
BP 375-B	3/8	10	.3125	8	.75	19	3/8-16 NC
BP-500-B	1/2	13	.375	10	1.00	25	3/8-16 NC
BP-750-B	3/4	19	.375	10	1.25	32	5/8 - 11 NC
BP-1000-B	1	25	.500	13	1.50	38	3/4-10 NC
BP-S-HEX	1 1/4	32					3/4" NC
BP-S-HEX	1 1/4	32					1" NC
BP-S-Sq.	1 1/2	38					3/4" NC
BP-S-Sq.							1" NC
BP-S-Sq.	2	51					3/4" NC
BP-S-Sq.							1" NC

*Other Internal Thread Sizes Available



ZINC RODS*

Product Number	Size (D x L)		Net Weight each	
	in.	mm	lb	kg
ZR-.375X72	ZR-3/8 x 72	10 x 1829	2	.9
ZR-.5X36	ZR-1/2 x 36	13 x 601	6	1.8
ZR-.625X72	ZR-5/8 x 72	16 x 1829	6	2.7
ZR-.75X36	ZR-3/4 x 36	19 x 914	4.5	1.4
ZR-1X36	ZR-1 x 36	25 x 914	7.5	2.3
ZR-1.25X36	ZR-1.25 x 36	32 x 914	12	3.6
ZR-1.5X36	ZR-1.5 x 36	38 x 914	18.75	5.7
ZR-2X36	ZR-2 x 36	51 x 914	33	10.0
ZR-2.5X36	ZR-2.5 x 36	64 x 914	51	15.4
ZR-3X36	ZR-3 x 36		60.75	18.4
ZR-3.5X36	ZR-3.5 x 36		86.25	26.1

*Metal composition meets the latest MIL-A-18001



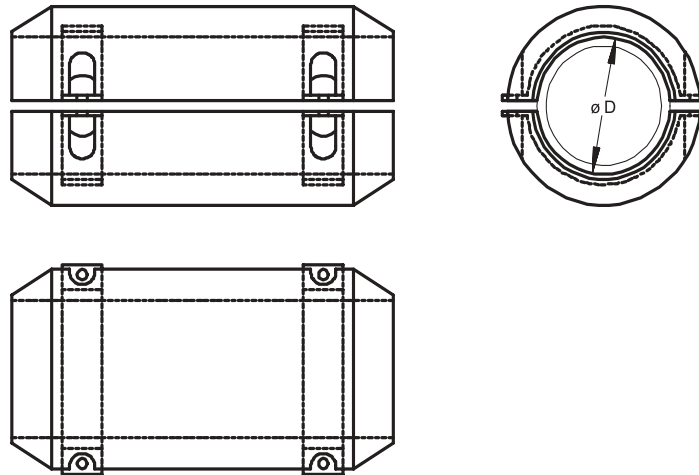
Zinc Bracelet Anodes



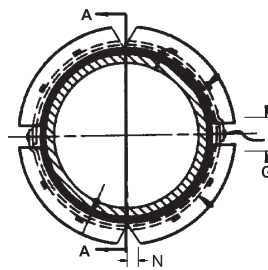
Galvotec has produced all sizes of zinc bracelets ranging from 1 1/2" O.D. to 48" O.D. including cast-on bracelet sizes with great success. Galvotec's accomplishment regarding on time deliveries and quality workmanship is due to our competent staff with many years of experience in manufacturing anodes of all types.

Galvotec's laboratory is fully equipped with state-of-the-art equipment. All products are tested and inspected prior to shipping. Chemical analyses are run on each heat prior to production.

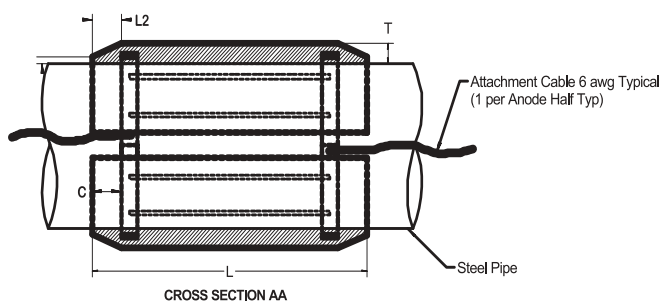
Bolt-on



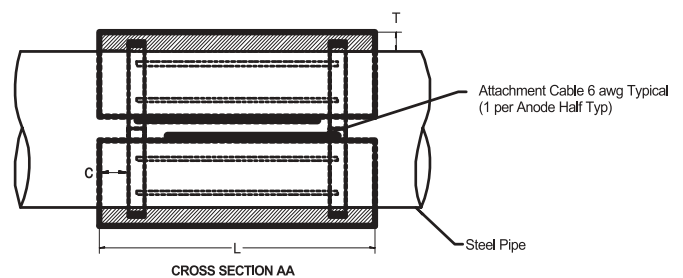
Weld-on



Tapered



Square End

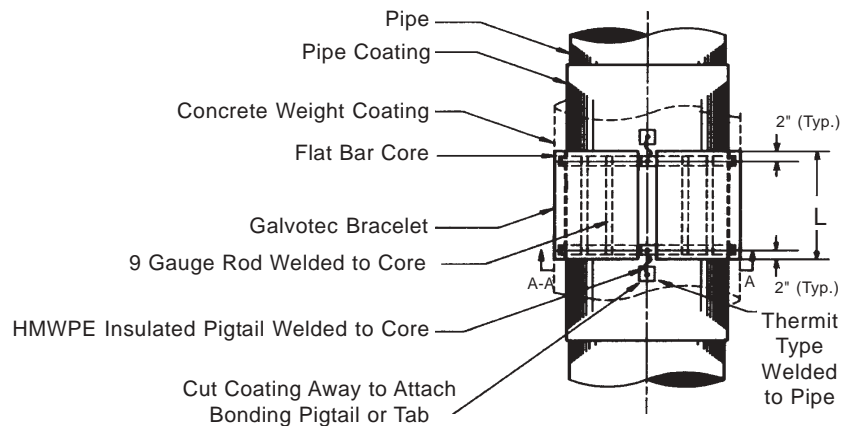
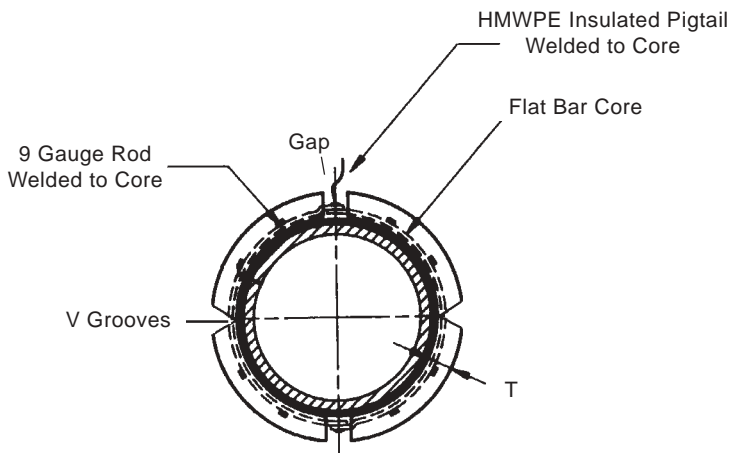
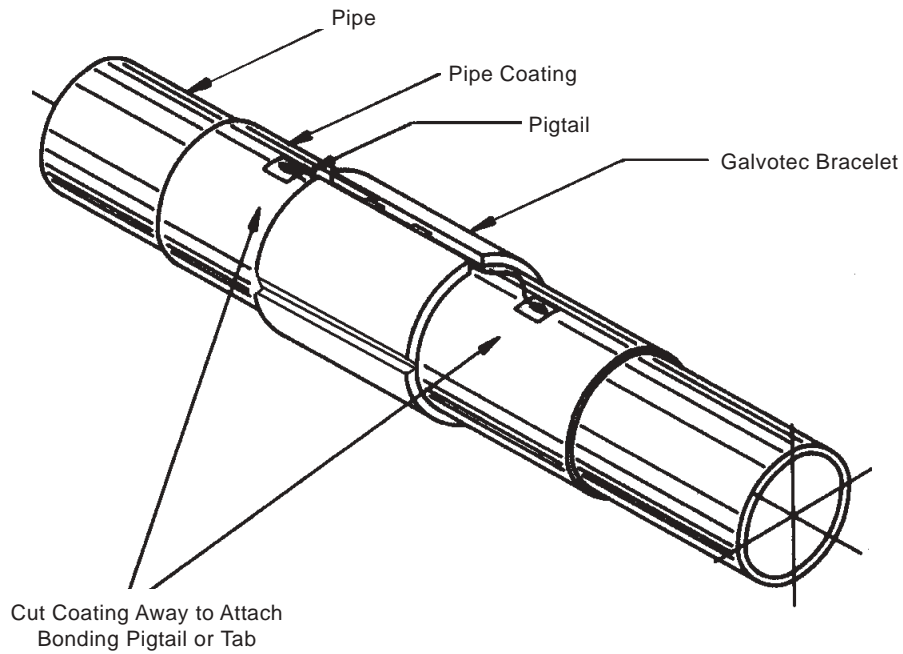




Zinc Bracelet Anodes



Semi-Cylindrical for Concrete Coated Pipe





Zinc Bracelet Anodes



Tapered Bracelets

Bracelet I.D.		TYPE *	THICKNESS		LENGTH		GAP		NET WT.		GROSS WT.	
in	mm		in	mm	in	mm	in	mm	lbs	kg	lbs	kg
2 3/8	60	T	1 1/4	32	12	305	1	25	29	13.2	31	14.1
3 1/2	89	T	1 1/4	32	12	305	1	25	39	17.7	41	18.6
4 1/2	114	T	1 1/2	38	12	305	1 1/4	32	62	28.1	64	29.0
4 1/2	114	T	1 1/2	38	19 1/4	489	1 1/4	32	119	54.0	122	55.3
5 9/16	141	T	1 1/2	38	15 5/8	397	1 1/4	32	95	43.1	98	44.5
6 5/8	168	T	1 1/2	38	11 1/4	286	1 1/2	38	83	37.7	87	39.5
6 5/8	168	TB2	1 1/2	38	13 1/2	343	3/4	19	83	37.7	87	39.5
6 5/8	168	T	1 1/2	38	13 5/8	346	1 1/2	38	83	37.7	87	39.5
6 5/8	168	T	1 1/2	38	18	457	1 1/4	32	155	70.3	159	72.1
6 5/8	168	T	1 3/4	44	21 1/4	540	1 1/2	38	190	86.2	194	88.0
6 5/8	168	ST	1 3/4	44	21 3/4	553	1 1/2	38	204	92.5	208	94.4
7 3/8	187	TB2	2 1/4	57	9 1/2	241	1	25	114	51.7	119	54.0
8 5/8	219	T	1 1/2	38	11 1/4	286	1 1/2	38	101	45.8	106	48.1
8 5/8	219	T	1 1/2	38	14 1/3	364	1 1/2	38	129	58.5	134	60.8
8 5/8	219	T	1 1/2	38	19.8	503	1 1/2	38	212	96.2	217	98.4
8 5/8	219	TB1	2 1/4	57	26 5/8	676	-	-	212	96.2	217	98.4
8 5/8	219	T	2 1/2	64	16	406	1 1/2	38	250	113.4	254	115.2
9 3/8	238	ST w/sockets	1 1/2	38	13 1/2	343	3	76	183	83.0	187	84.8
9 1/2	241	TB2	2 1/2	64	10 1/2	267	2	51	168	76.2	170	77.1
10 3/4	273	T	1 1/2	38	12.7	323	2	51	129	58.5	136	61.7
10 3/4	273	T	1 1/2	38	17 3/4	451	2	51	196	88.9	201	91.2
10 3/4	273	T	1 3/8	35	18 3/4	476	1 1/2	38	209	94.8	214	97.1
10 3/4	273	T	1 3/4	44	22	559	2	51	304	137.8	309	140.2
10 3/4	273	ST	1 3/4	44	22 1/4	565	2	51	320	145.2	326	147.9
10 3/4	273	TB1	3 1/4	83	24 1/2	622	-	-	338	153.3	352	159.7
10 3/4	273	ST	1 3/4	44	40	1016	2 1/2	64	586	265.8	596	270.3
12 3/4	324	T	1 1/2	38	14 3/4	375	2	51	191	86.6	201	91.2
12 3/4	324	T	1 1/2	38	16 3/4	425	1 1/2	38	269	122.0	275	124.7
12 3/4	324	ST	1 1/2	38	21.2	539	2 1/4	57	307	139.3	319	144.0
12 3/4	324	T w/sockets	1 1/2	38	23	584	4	102	323	146.5	329	149.2
12 3/4	324	T	2	51	19 5/8	498	2	51	385	174.6	398	180.5
12 3/4	324	ST1	1 3/8	35	31 1/2	800	2	51	426	193.2	438	198.7
13 9/16	345	T w/sockets	1 1/2	38	14	356	4	102	178	80.7	184	83.5
14	356	ST	1 1/2	38	21.1	536	2 1/4	57	338	153.3	351	159.2
14	356	ST	1 3/4	44	21 3/4	553	2	51	397	180.1	411	186.4
16	406	ST	1 3/4	44	20	508	2 1/4	57	436	197.8	451	204.6
16	406	ST1	1 1/2	38	32	813	2	51	542	245.9	557	252.7
16	406	ST	2	51	23	584	2 1/2	64	544	246.8	559	253.7
32	813	T	2	51	15 1/2	394	3	16	750	1654	785	1731
36	914	T	2 3/4	70	16 7/8	429	3	76	1096	2416	1131	2493
40	1016	T	2	51	15 3/8	390	3	76	604	1332	631	1391

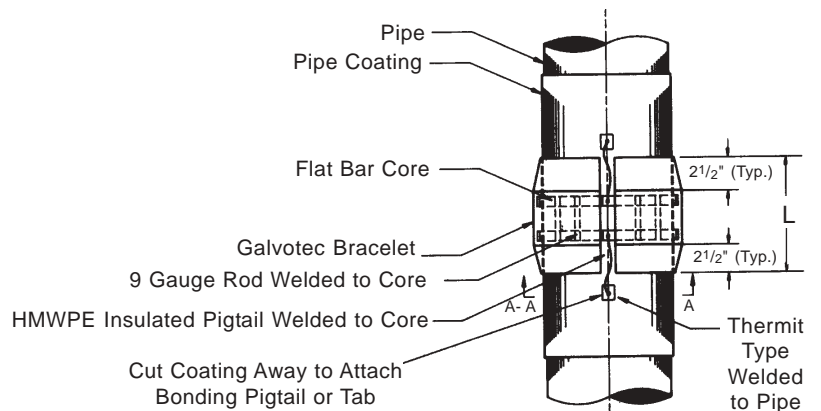
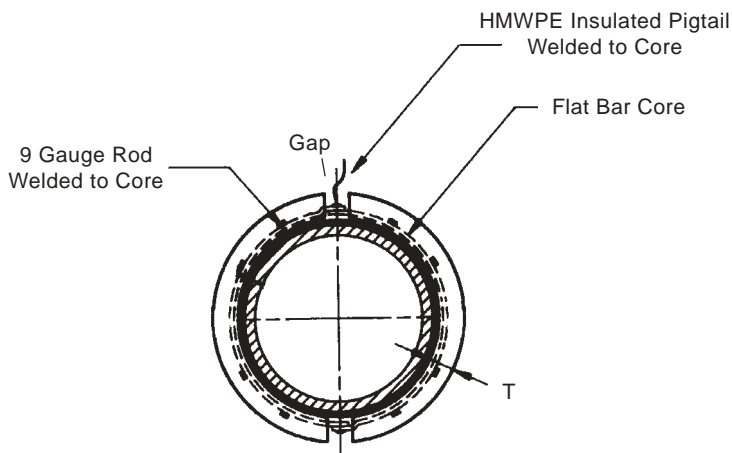
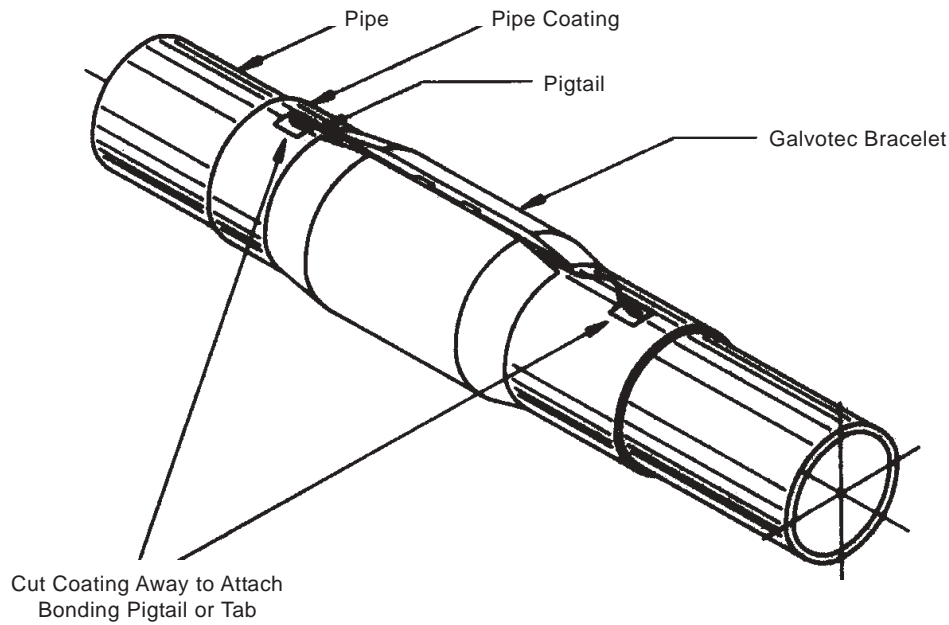
- * T=Tapered
- TB1=Tapered-Bolt-On (1 half only)
- TB2=Tapered-Bolt-On
- ST-Semi-Tapered
- ST1=Semi-Tapered (One End Only)



Zinc Bracelet Anodes



Semi-Cylindrical Tapered Anodes





Zinc Bracelet Anodes



Concrete Coated Pipe Bracelets

Bracelet I.D.		TYPE *	THICKNESS		LENGTH		GAP		NET WT.		GROSS WT.	
in	mm		in	mm	in	mm	in	mm	lbs	kg	lbs	kg
6 5/8	168	CC	1 1/2	38	14 1/2	368	3	76	107	48.5	111	50.3
6 7/8	175	IT	1 1/2	38	19 1/2	495	2	51	161	73.0	165	74.8
8 5/8	219	CC	1 1/2	38	8 1/2	216	2	51	78	35.4	81	36.7
8 5/8	219	CC	1 3/4	44	16 1/4	413	1 1/2	38	229	103.9	234	106.1
8 7/8	225	IT	1 1/2	38	16 1/2	419	2	51	164	74.4	168	76.20
10 3/4	273	CC	1 3/4	44	18 1/4	464	2 1/2	64	270	122.5	279	126.6
10 3/4	273	CC	1 3/4	44	22	559	2	51	304	137.9	316	143.3
10 3/4	273	CC	2	51	17 3/8	441	2	51	312	141.5	321	145.6
10 3/4	273	CC	2	51	21 3/4	553	2 1/2	64	354	160.6	364	165.1
11	279	IT	1 1/2	38	19 1/2	495	2	51	253	114.8	259	117.5
12	305	CC	1 1/2	38	16 3/8	416	2	51	234	106.1	244	110.7
12	305	CC	2	51	11 3/4	299	2	51	234	106.1	244	110.7
12 3/4	324	CC	1 1/8	29	16	406	2	51	177	80.3	190	106.1
12 3/4	324	CC	1 1/4	32	16	406	2	51	192	87.1	198	89.8
12 3/4	324	CC	1 1/8	29	21 1/2	546	1 1/2	38	250	113.4	264	119.8
12 3/4	324	CC	1 1/2	38	18.9	480	2	51	291	132.0	304	137.9
12 3/4	324	CC	1 3/4	44	18 1/2	470	3	76	338	153.3	351	159.2
12 3/4	324	CC	1 1/2	38	26 5/8	676	3	76	387	175.5	400	181.4
13	330	IT	1 1/2	38	16 1/2	419	2	51	237	107.5	242	109.8
14	356	CC	1 1/4	32	16 3/4	426	2	51	239	108.4	247	112.0
14	356	CC	2	51	21	533	3	76	406	184.2	473	214.6
16	406	CC	1 1/4	32	12	305	2	51	174	78.9	189	85.7
16	406	CC	1	25	21	533	2	51	270	122.5	286	129.7
16	406	CC	1	25	24 3/4	629	1 1/2	38	333	151.0	349	158.3
16	406	CC	1 1/2	38	17 1/2	445	2	51	333	151.0	349	158.3
16	406	CC	1 1/4	32	25	635	1 1/2	38	403	182.8	419	190.1
16	406	CC	1 3/4	44	18 1/2	470	3	76	411	186.4	422	191.4
16	406	CC	1 1/2	38	21 3/4	553	2	51	437	196.2	453	205.5
16	406	CC	2 1/2	64	13.4	340	3	76	442	200.5	458	207.7
18	456	CC	1 5/8	41	17 3/16	437	4 3/8	111	359	162.8	376	170.6
18	457	CC	2 1/2	64	12 1/2	318	3	76	468	212.3	485	220.0
18	457	CC	1 3/4	44	19 1/2	495	2 1/2	64	489	221.8	506	229.5
18	457	CC	1 3/4	44	18.9	480	2	51	489	221.8	506	229.5
18	457	RT	2 3/4	70	24 7/8	632	4 3/8	111	562	254.9	579	229.5
18	457	CC	1 3/4	44	27 5/8	702	3	76	684	310.3	701	318.0
18	457	CC	2	51	21 1/4	540	2 1/2	64	619	280.8	637	288.9
20	508	CC	1 3/4	44	8 1/2	216	3 3/4	95	195	88.5	205	114.5
20	508	CC	1 3/4	44	9 1/2	241	2	51	260	117.9	279	126.6
20	508	CC	1 3/4	44	10 1/4	260	2	51	289	131.1	308	139.7
20	508	CC	1 1/2	38	16 1/2	419	3	76	372	168.7	390	176.9
20	508	CC	1 5/8	41	16	406	2 1/2	64	408	185.1	426	192.2
20	508	CC	2 1/2	64	10	254	2	51	416	188.7	434	196.9
20	508	CC	1 7/8	48	14 1/4	362	3	76	419	190.1	437	198.2
20	508	CC	2 1/4	57	12 3/4	324	2 1/2	64	447	202.8	465	210.9

Continued next page



Zinc Bracelet Anodes



Concrete Coated Pipe Bracelets (Continued)

Bracelet I.D.		TYPE *	THICKNESS		LENGTH		GAP		NET WT.		GROSS WT.	
in	mm		in	mm	in	mm	in	mm	lbs	kg	lbs	kg
20	508	CC	1.9	48	16 1/4	413	3	76	492	223.2	510	231.3
20	508	CC	1 5/8	41	21 1/4	540	2 1/2	6.4	494	224.1	513	232.7
20	508	CC	2 1/2	64	14	356	2 1/2	64	536	243.1	555	251.8
20	508	CC	1 3/4	44	19 3/4	502	2 1/2	64	544	246.8	563	255.4
20	508	CC	2	51	28 5/8	727	3	76	915	415.0	933	423.2
24	610	CC	1 1/4	32	13	330	2	51	302	137.0	325	147.4
24	610	CC	1 3/4	44	11 1/8	283	3	76	367	166.5	390	176.9
24	610	CC	1 3/4	44	14 1/8	359	3	76	460	208.7	483	219.1
24	610	CC	2 3/4	44	8 3/4	222	3	76	460	208.7	472	214.1
24	610	CC	3 3/4	95	6	152	3 1/2	89	460	208.7	472	214.1
24	610	CC	1 1/2	38	17	432	2 1/2	64	484	219.5	507	230.0
24	610	CC	2 1/8	54	11 1/4	286	2 1/2	64	489	221.8	512	232.2
24	610	CC	2	51	13.1	333	2 1/2	64	502	227.7	524	237.7
24	610	CC	2 1/2	64	10 7/8	276	3	76	520	235.9	543	246.3
24	610	CC	1 3/4	44	18 1/2	470	3	76	606	274.9	629	285.3
24	610	CC	2	51	16	406	3	76	606	274.9	629	285.3
24	610	CC	3 1/8	79	10	254	2 1/2	64	624	283.0	647	293.5
24	610	CC	3	76	10 5/8	270	3	76	624	283.0	647	293.5
24	610	CC	2	51	17	432	3	76	660	299.4	683	310.0
24	610	CC	3 1/8	79	10 3/4	273	2	51	689	312.5	712	323.0
24	610	CC	1 7/16	36.5	28 3/4	730	3	76	7750	3515.4	798	362.0
24	610	CC	2	51	19.6	498	3	76	746	338.4	769	348.8
24	610	CC	1 3/4	44	24 1/4	616	3	76	819	371.5	842	381.9
24	610	CC	2	51	35 3/4	908	3	76	1342	608.7	1365	619.2
24	610	CC	2 3/8	60	33 1/4	845	3	76	1547	701.7	1570	712.2
25	635	CCB	3 1/2	89	4 1/2	114	2	51	320	145.2	¥	¥
25	635	CCB	4 1/2	114	5	127	2	51	486	220.4	¥	¥
26	635	CC	1 9/16	41	21 11/16	551	5	127	655	297.1	679	308.0
30	762	CC	2	51	10	254	3	76	468	212.3	493	223.6
30	762	CC	2 3/4	70	8 1/2	216	3	76	564	255.8	580	263.1
30	762	CC	2 1/4	57	10 3/4	273	4	102	572	259.5	601	272.6
30	762	CC	2	51	12 1/2	318	3	76	606	274.9	631	286.2
30	762	CC	2 1/2	64	13.50	340	3	76	806	365.6	831	376.9
30	762	CC	2 1/4	57	15 1/2	394	3	76	840	381.0	865	392.4
36	914	CC	2	51	15 1/4	387	3	76	889	403.3	924	419.1
36	914	CC	2 1/4	57	15 1/8	384	3	76	996	451.8	1031	467.7
36	914	CC	3	76	12.6	320	4	102	1092	495.3	1127	571.2
36	914	CC	3	76	36 3/4	934	3	76	3286	1490.5	3337	1513.7
40	1016	CC	3 1/4	83	28 3/4	730	4	102	3037	1377.6	3093	1403.0
40	1016	CC	4 1/4	108	21 5/8	549	4	102	3065	1390.3	3121	1415.7

*CC=Concrete Coated (square Bracelet)

IT= Internally Tapered Bracelet

TR= Reversely Tapered Bracelet

CCB= Square Bolt-On Bracelet

¥ Variable due to bolt-on assembly

SuperMAG™

HIGH POTENTIAL MAGNESIUM ANODES

Anodes
as good
as gold



that
always
perform



Galvotec Alloys, Inc.

SuperMAG™

Inspires Confidence

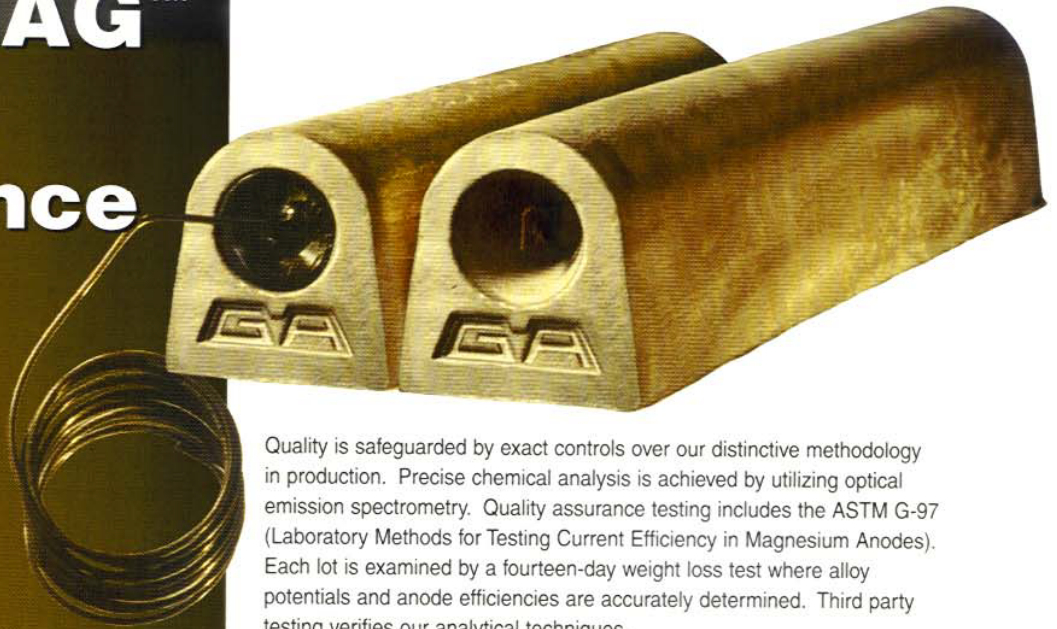
ISO 9002
Certified

The meticulous methods used in the production of SuperMAG™ Magnesium Anodes, will inspire your confidence in any type of anode produced by Galvotec Alloys. Our attention to detail guarantees you an unsurpassed anode from a company you can consistently rely on.

You can be assured, SuperMAG™ Magnesium Anodes made by Galvotec, will perform at peak efficiency and deliver the required potential to effectively protect your metal structure from the perils of corrosion.

SuperMAG™ anodes from Galvotec meet or exceed the ASTM B 843 grade M1C "High Potential".

Our superior standard potential anodes also meet or exceed ASTM B843 grade (AZ63B, AZ63C and AZ63D) H-1A, H-1B and H-1C alloys, respectively.



Quality is safeguarded by exact controls over our distinctive methodology in production. Precise chemical analysis is achieved by utilizing optical emission spectrometry. Quality assurance testing includes the ASTM G-97 (Laboratory Methods for Testing Current Efficiency in Magnesium Anodes). Each lot is examined by a fourteen-day weight loss test where alloy potentials and anode efficiencies are accurately determined. Third party testing verifies our analytical techniques.

Our dedication to reliable standards and controls throughout the testing process will inspire your confidence in each and every lot of Galvotec's SuperMAG™ Magnesium Anodes.



SuperMAG™ anodes can be supplied to you bare, or packaged as per your specifications. Typical backfill is composed of 75% gypsum, 20% bentonite

and 5% sodium sulphate. Anodes are supplied with a lead wire as specified by your requirements. Typical lead wire would consist of 10 ft. of #12 THHN solid. Personalized backfill requirements as well as customized wire dimensions are available upon request.

Galvotec SuperMAG™ High Potential Anodes have a minimum open circuit potential of -1.70 volts referenced to Cu/CuSO₄. Typical Current Capacities are 500 Amp-Hrs/Lb or better.

The H-1 series of Galvotec Magnesium Anodes will typically produce open circuit potential of 1.53-1.55 volts referenced to Cu/CuSO₄.

B 843

TABLE 1 Chemical Requirements^A

Element	Grade			
	AZ63B ^B	AZ63C ^B	AZ63D ^B	M1C
	UNS			
	M11632	M11634	M11638	M15102
Aluminum	5.3-6.7	5.3-6.7	5.0-7.0	0.01
Zinc	2.5-3.5	2.5-3.5	2.0-4.0	-
Manganese	0.15-0.7	0.15-0.7	0.15-0.7	0.50-1.3
Silicon	0.10	0.30	0.30	0.05
Copper	0.02	0.05	0.10	0.02
Nickel	0.002	0.003	0.003	0.001
Iron	0.003	0.003	0.003	0.03
Calcium	-	-	-	-
Other metallic impurities each	-	-	-	0.05
Others, total Magnesium	0.30 remainder	0.30 remainder	0.30 remainder	0.30 remainder

^ALimits are given as maximum weight percent unless shown as a range.
^BAlloys AZ63B, AZ63C, and AZ63D are commonly known as H1A, H1B, and H1C, respectively.

Chemical Compositions of Magnesium Anodes.

Agency

CAT MINH

TECHNOLOGY EQUIPMENT CO., LTD

SINCE 2000

Director : Mr. Nguyen Thanh Vinh

Hotline : 0903 1800 99

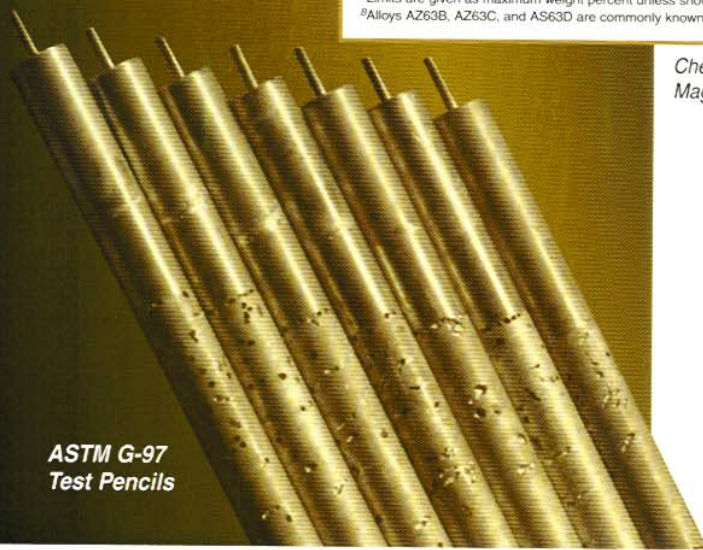
Fax : (+84 28) 6258 3348

Email : vinh@catminh.com

Office : Tedi Bulding, No 15A, Hoang Hoa Tham Street,

Ward 6, Binh Thanh District, Ho Chi Minh, Viet Nam

www.vietnamdiving.net



ASTM G-97
Test Pencils

SuperROD™

Extruded Magnesium Anodes by Galvotec



Anode Rods are available in diameters ranging from 0.500" to 2.562". Each rod has a steel core running lengthwise through its center. These anodes can be easily configured for various Cathodic Protection applications.

Water Heater Anodes are available in several configurations; with welded or unwelded Hex-Head and Anode Outlet Device (AOD). These anodes are typically used for the Cathodic Protection of Water Heaters, Tanks and Boilers. The linked style water heater anodes are typically for replacement applications.

Drive-in Anodes are used for the Cathodic protection of gas service entrance piping and other specialty applications. Also available with steel hex head caps.



SuperLINE™ Ribbon Anodes are used in higher resistivity soils where minimum resistance to earth per unit weight of Anode is important. **SuperLINE™** provides a uniform and efficient current distribution along a pipeline.



Galvotec Alloys, Inc.

ISO 9001 CERTIFIED

SuperROD™

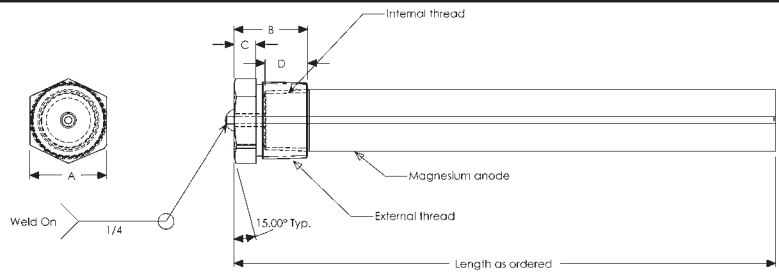
Extruded Magnesium Anode

Product ID	Diameter (inches)	Tolerance (inches)	Core Centering (within-inches)	Core Diameter (inches)	Straightness (inches)	Approximate Weight (lbs/ft)
GA-MG-R500	0.500	-0.020	0.0400	0.135	0.060 in 2 ft	0.180
GA-MG-R625	0.625	-0.020	0.0450	0.135	0.060 in 2 ft	0.216
GA-MG-R675	0.675	-0.020	0.0500	0.135	0.060 in 2 ft	0.300
GA-MG-R700	0.700	-0.020	0.0625	0.135	0.040 in 2 ft	0.324
GA-MG-R750	0.750	-0.020	0.0625	0.135	0.040 in 2 ft	0.372
GA-MG-R800	0.800	-0.020	0.0625	0.135	0.040 in 2 ft	0.420
GA-MG-R840	0.840	-0.020	0.0625	0.135	0.040 in 2 ft	0.456
GA-MG-R900	0.900	-0.020	0.0625	0.135	0.040 in 2 ft	0.516
GA-MG-R1.050	1.050	-0.020	0.0625	0.135	0.040 in 2 ft	0.684
GA-MG-R1.315	1.315	-0.020	0.0625	0.135	0.040 in 2 ft	1.068
GA-MG-R1.561	1.561	+/- 0.016	0.0625	0.188	0.250 in 10 ft	1.500
GA-MG-R2.024	2.024	+/- 0.024	0.1250	0.188	0.250 in 10 ft	2.500
GA-MG-R2.562	2.562	+/- 0.024	0.1250	0.188	0.250 in 10 ft	4.000



Chemical Composition %	Al	Mn	Zn	Ca max	Si max	Cu max	Ni max	Fe max	Other Max% Each	Other Max% Total	Mg
SuperROD™	2.5 3.5	0.20 1.0	0.7 1.3	0.04	0.05	0.01	0.001	0.002	0.01	0.30	Bal.

SuperROD™ Water Heater Anode				Welded screw-on caps			
Anode Diameter (in)	Cap PN	Internal Thread	External Thread	A (in)	B (in)	C (in)	D (in)
0.500	GA-SW1	1/4 - 18 NPT	3/4-14 NPT	1.060	0.81	0.19	0.63
0.675, 0.700, 0.750	GA-SW2	3/8 - 18 NPT	3/4-14 NPT	1.060	0.87	0.19	0.63
0.840, 0.900	GA-SW3	1/2-14 NPT	3/4-14 NPT	1.060	0.87	0.19	0.63
1.050	GA-SW4	3/4-14 NPT	1-11 1/2 NPT	1.310	1.19	0.38	1.00
1.315	GA-SW5	1-11 1/2 NPT	1 1/4-11 1/2 NPT	1.813	1.19	0.44	1.00



SuperROD™ Drive-In Anode

GA-MG-DR

Product ID	Product Description
GA-MG-0.5DR	0.5 lb. anode with 3 feet lead wire and clamp (0.840" dia. x 13.5 long)
GA-MG-1.0DR	1.0 lb. anode with 3 feet lead wire and clamp (1.315" dia. x 13.5 long)
GA-MG-1.5DR	1.5 lb. anode with 3 feet lead wire and clamp (1.315" dia. x 18 long)



Chemical Composition %	Al	Mn	Zn	Si max	Cu max	Ni max	Fe max	Other Max% Each	Other Max% Total	Mg
SuperLINE™	0.010 max	0.50 1.3	-	-	0.02	0.001	0.03	0.05	0.30	Bal.

SuperLINE™

Magnesium Ribbon Anode

Size	3/8" x 3/4" +/-0.015" rectangle, 1/8" radius corners
Core Wire Diameter	0.135"
Centrality Core Wire	<1/16"
Approx. Weight	0.243 lb./ft
Packaging Availability	1,000ft rolls or cut to length
Potential	-1.7V Cu/CuSO4
Capacity	500 Amp hrs/lb min
Typical current in seawater	0.73 amps/ft
Typical current in soil (5,000 ohm cm)	3 milliamps/ft
Typical current in water (15,000 ohm cm)	0.9 milliamps/ft

Agency
CAT MINH
 TECHNOLOGY EQUIPMENT CO., LTD
 SINCE 2000

Director : Mr. Nguyen Thanh Vinh
 Hotline : 0903 1800 99
 Fax : (+84 28) 6258 3348
 Email : vinh@catminh.com

Office : Tedi Bulding, No 15A, Hoang Hoa Tham Street,
 Ward 6, Binh Thanh District, Ho Chi Minh, Viet Nam
www.vietnamdiving.net