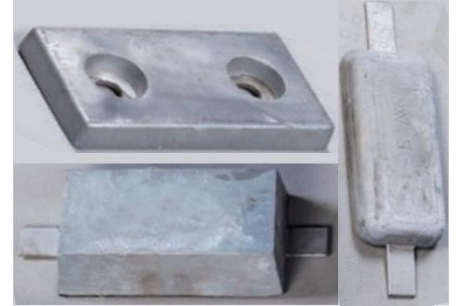


PRODUCT DESCRIPTION

TECNOLOGIA TOTAL SeaZinc zinc anodes are primarily used for the prevention of corrosion in seawater. They can also be used as prepackaged anodes in grounding cells in electric motor panels, and through pipe insulators to limit dangerous high voltages.

TECNOLOGIA TOTAL SeaZinc zinc anodes provide the lowest voltage conduction compared to aluminum and magnesium anodes, so they do not easily cause overprotection leading to coating peeling and hydrogen damage from high hardness steels.

TECNOLOGIA TOTAL zinc anodes conform to ASTM B418 and the US Military Specification MIL-A-18001K. using 99.995% high purity zinc ingots and other high-quality materials, rigid inspection and production procedures, to ensure that our zinc anodes meet or exceed the requirements of international standards.



TYPICAL APPLICATIONS

Zinc anodes are used as:

- Prepackaged anodes in grounding cells in electric motor panels.
- Prepackaged anodes through pipe insulators to limit dangerous voltages.
- Sacrificial anodes for steel and aluminum equipment and structures in contact with seawater, such as:
 - Boat hulls.
 - Ballast tanks.
 - Heat exchangers.
 - Capacitors.
 - Docks.

CHEMICAL COMPOSITION

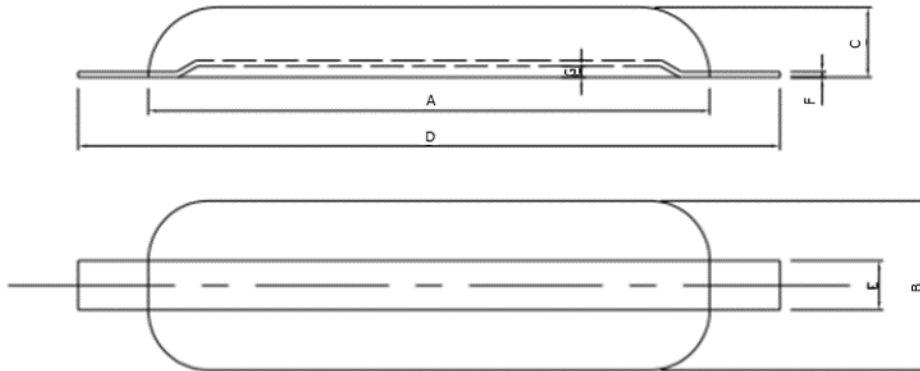
Compound	ASTM B-418 type I	ASTM B-418 type II	MIL-A-18001K
Al%	0.1 – 0.5	0.005 max	0.1 – 0.5
Cd%	0.02 – 0.07	0.003 max	0.02 – 0.07
Fe%	0.005 max	0.0014 max	0.005
Pb%	0.006 max	0.003 max	0.006
Cu%	0.006 max.	0.002 max.	0.005
Zn%	Balance	Balance	Balance

ELECTROCHEMICAL PROPERTIES

Property	ASTM B-418 type I	ASTM B-418 type II
Open voltage (-V)	1.05 min	1.10 min
Closed voltage (-V)	1.00 min	1.05 min
Capacity A.h/kg	780	780
Efficiency %min	95%	90%

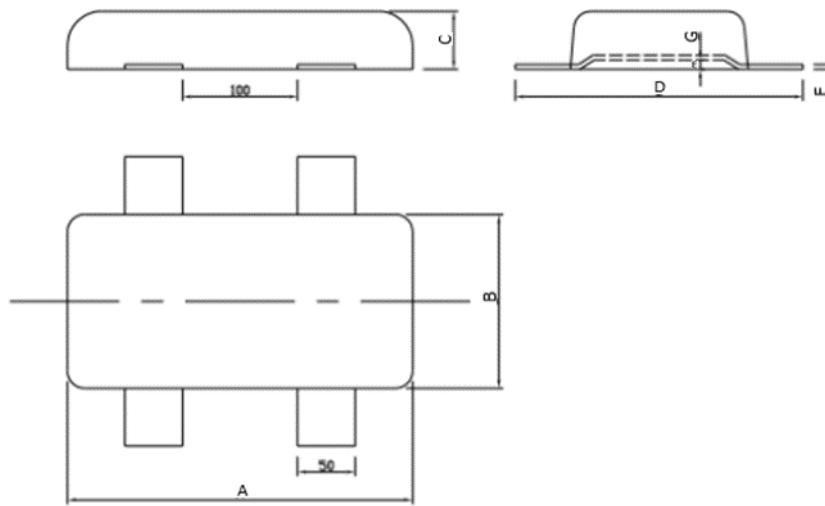
ZINC ANODES DIMENSIONS FOR SHIP HULLS (SH) (WELD ON TYPE WITH SINGLE INSERT)

TYPE	Specifications (mm)	Steel insert (mm)				Net weight kg	Gross weight kg
	A x B x C	D	E	F	G		
SH-1	800 x 140 x 60	900	45	5-6	8-10	45.4	47.0
SH-2	800 x 140 x 50	900	45	5-6	6-8	37.4	39.0
SH-3	800 x 140 x 40	900	45	5-6	5-6	29.5	31.0
SH-4	600 x 120 x 50	700	40	5-6	6-8	24.0	25.0
SH-5	400 x 120 x 50	470	35	4-5	6-8	16.3	16.0
SH-6	500 x 100 x 40	580	40	4-5	5-6	12.7	13.6
SH-7	400 x 100 x 40	460	30	4-5	5-6	10.6	11.0
SH-8	300 x 100 x 40	360	30	3-4	5-6	7.20	7.50
SH-9	250 x 100 x 40	310	30	3-4	5-6	6.20	6.50
SH-10	180 x 70 x 40	230	25	3-4	5-6	3.30	3.50



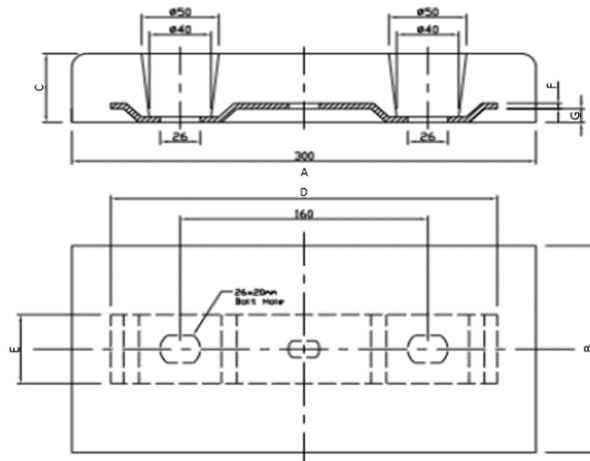
ZINC ANODES DIMENSIONS FOR SHIP HULLS (SHD) (WELD ON TYPE WITH DOUBLE INSERT)

TYPE	Specifications (mm)	Steel insert (mm)				Net Weight kg	Gross Weight kg
	A x B x C	D	E	F	G		
SHD-1	300 x 150 x 50	360	30	4-5	5-6	13.70	14.50
SHD-2	300 x 150 x 40	360	30	4-5	5-6	10.70	11.50



ZINC ANODES DIMENSIONS ANODES FOR SHIP HULLS (SHB) (BOLT ON TYPE)

TYPE	Specifications (mm)	Steel insert (mm)				Net Weight kg	Gross Weight kg
	A x B x C	D	E	F	G		
SHB-1	300 x 150 x 50	250	50	3-4	8-10	11.6	12.0
SHB-2	300 x 150 x 40	250	50	3-4	8-10	8.60	9.00



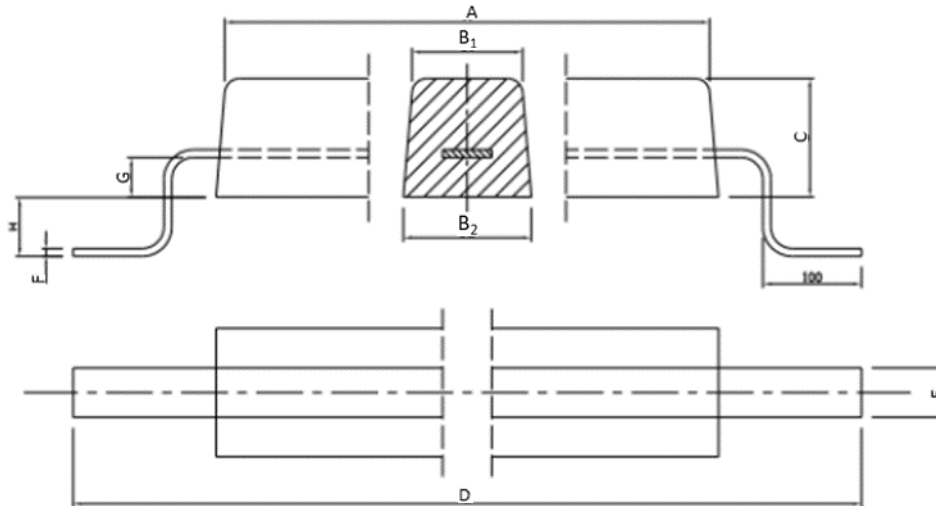
ZINC ANODES DIMENSIONS FOR BALLAST TANKS

TYPE	Specifications (mm)	Steel insert (mm)					H	Net weight kg	Gross Weight kg
	$A \times (B_1 + B_2) \times C$	D	E	F	G				
TL-1	500 x (115+135) x 130	800	50	6	40	60	53.5	56.0	
TL-2	1500 x (65+ 75) x 70	1800	-	Φ16	20	40	48.3	50.0	
TL-3	500 x (110+130) x 120	800	50	6	40	60	48.0	50.0	
TL-4	1000 x (58.5+78.5) x 68	1300	-	Φ16	20	40	31.8	33.0	
TL-5	800 x (56+74) x 65	1100	-	Φ16	20	40	24.0	25.0	
TL-6	1150 x (48+54) x 51	1450	-	Φ12	15	35	18.3	20.0	
TL-7	250 x (80+100) x 85	310	30	4	6-8	0	12.8	13.0	
TL-8	200 x (70+90) x 70	260	30	3	6-8	0	7.30	7.50	

Clarifications:

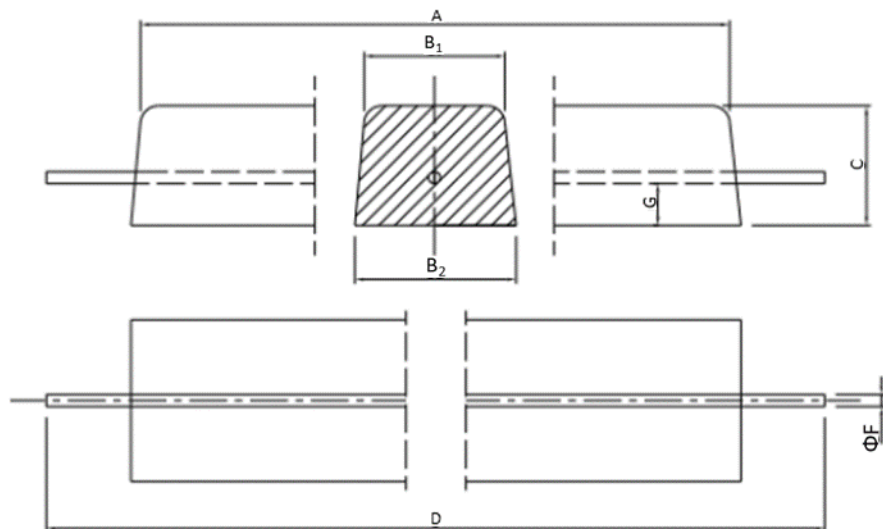
TL-7, TL-8 are flat bar anodes;

TL-2, TL-4, TL-5, TL-6 inserts are solid bars.



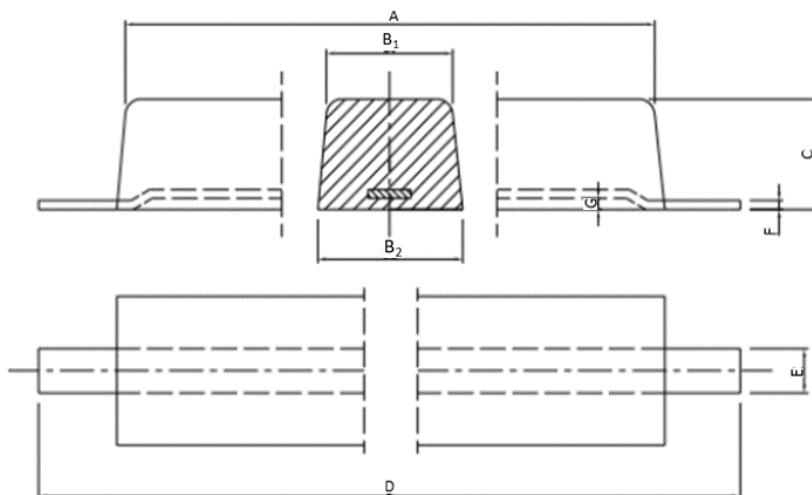
ZINC ANODES DIMENSIONS FOR PORTS AND MARINE STRUCTURES

TYPE	Specifications (mm)	Steel bar mm			Flat bar mm			Net Weight kg	Gross Weight kg	
	$A \times (B_1 + B_2) \times C$	D	F	G	D	E	F			G
PEM-1	1000 x (115+135) x 130	1250	18	45	1250	40	8	45	111.6	115.0
PEM-2	50 x (115+135) x 130	1000	16	45	1000	40	8	45	83.00	85.00
PEM-3	500 x (115+135) x 130	750	16	45	750	40	6	45	55.00	56.00
PEM-4	500 x (105+135) x 100	750	16	35	750	40	6	35	38.60	40.00



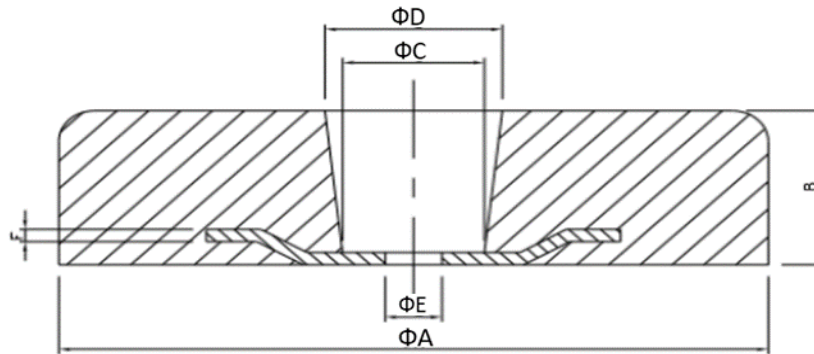
ZINC ANODES DIMENSIONS FOR SEAWATER COOLING SYSTEM (STRIP TYPE)

TYPE	Specifications (mm)	Steel insert (mm)				Net Weight kg	Gross Weight kg
	$A \times (B_1 + B_2) \times C$	D	E	F	G		
SRT-1	500 x (115 + 135) x 130	620	50	6	8-10	54.5	56.0
SRT-2	1000 x (80 + 100) x 80	1200	30	6	6-8	49.0	50.0
SRT-3	500 x (105 + 135) x 100	620	40	6	8-10	39.2	40.0
SRT-4	500 x (80 + 100) x 80	620	30	6	6-8	24.4	25.0
SRT-5	400 x (110 + 160) x 40	500	35	4	5-6	15.4	16.0
SRT-6	300 x (140 + 160) x 40	360	60	4	5-6	12.0	12.5
SRT-7	200 x (90 + 110) x 40	250	30	4	5-6	5.30	5.50



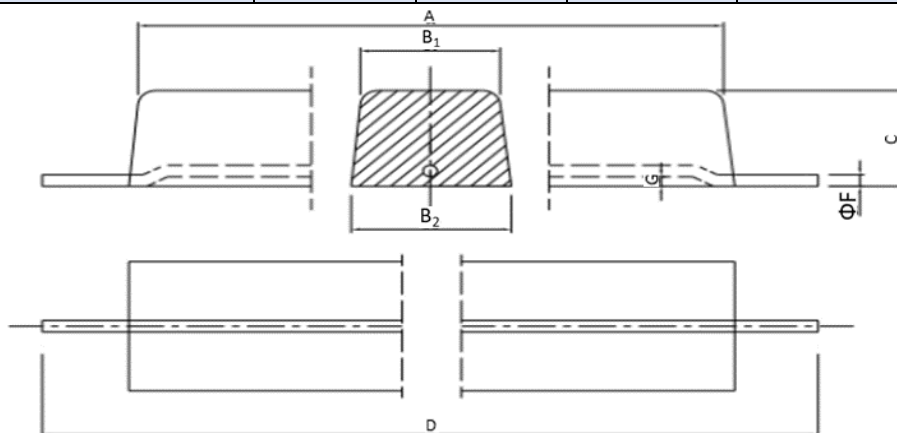
ZINC ANODES DIMENSIONS FOR SEAWATER COOLING SYSTEM (DISC TYPE)

TYPE	Specifications (mm)	Steel insert (mm)				Net Weight kg	Gross Weight kg
	A x B	ΦC	ΦD	E	F		
SRD-1	300 x 60	40	50	22	4	29.8	30.0
SRD-2	360 x 40	40	50	26	4	28.3	28.5
SRD-3	300 x 40	40	50	22	4	19.8	20.0
SRD-4	200 x 50	40	50	16	4	10.3	10.5
SRD-5	180 x 50	30	40	14	4	8.30	8.50
SRD-6	120 x 100	30	40	14	4	7.30	7.50



ZINC ANODES DIMENSIONS FOR INTERNAL STORAGE TANK

TYPE	Specifications (mm)	Steel insert (mm)			Net Weight kg	Gross Weight kg
	A x (B ₁ + B ₂) x C	D	F	G		
TAI-1	750 x (115 + 135) x 130	900	16	8-10	82.0	85.0
TAI-2	500 x (115 + 135) x 130	650	16	8-10	55.0	56.0
TAI-3	500 x (105 + 135) x 100	650	16	8-10	39.0	40.0
TAI-4	300 x (105 + 135) x 100	400	12	8-10	24.6	25.0



ZINC ANODES DIMENSIONS FOR GROUNDING CELL

TYPE	Specifications (mm)	Steel insert (mm)				Net Weight kg	Gross Weight kg
	$A \times (B_1 + B_2) \times C$	D	E	F	G		
LTS-1	1000 x (78 + 88) x 85	700	100	16	30	49.0	50.0
LTS-2	1000 x (65 + 75) x 65	700	100	16	25	32.0	33.0
LTS-3	800 x (60 + 80) x 65	600	100	12	25	24.5	25.0
LTS-4	800 x (55 + 64) x 60	500	100	12	20	21.5	22.0
LTS-5	650 x (58 + 64) x 60	400	100	12	20	17.6	18.0
LTS-6	550 x (58 + 64) x 60	400	100	12	20	14.6	15.0
LTS-7	600 x (52 + 56) x 54	460	100	12	15	12.0	12.5
LTS-8	600 x (40 + 48) x 45	360	100	12	15	8.70	9.00



- All dimensions and weight shown are nominal.

WARRANTY AND LIMITATION OF LIABILITY

TECNOLOGIA TOTAL will not be in any case responsible for damages of any nature that could be derived from an inadequate use of the product. Before using the product, the user must determine if the product is suitable for its intended use, taking all risks and liability that could be derived from its use.

If it's proved that a product is faulty due to manufacturing or its material at the time of sale, or that it does not fulfill during its warranty period the indicated properties in this technical sheet, the only responsibility of TECNOLOGIA TOTAL will consist of replacing the buyer with the quantity of product that is found to be defective. TECNOLOGIA TOTAL does not take any responsibility for any additional cost such as manufacturing cost, withdrawal or re-application of the products. If TECNOLOGIA TOTAL offers a warranty to their clients, express or implicit, or a compensation that differs from the established in this section, this stipulation can not be altered unless a signed agreement by the parties.

