

**FM**

# FLOOR MACHINE



**Trojan**<sup>®</sup>  
BATTERY COMPANY

*Clean energy for life™*

**Made in the USA**



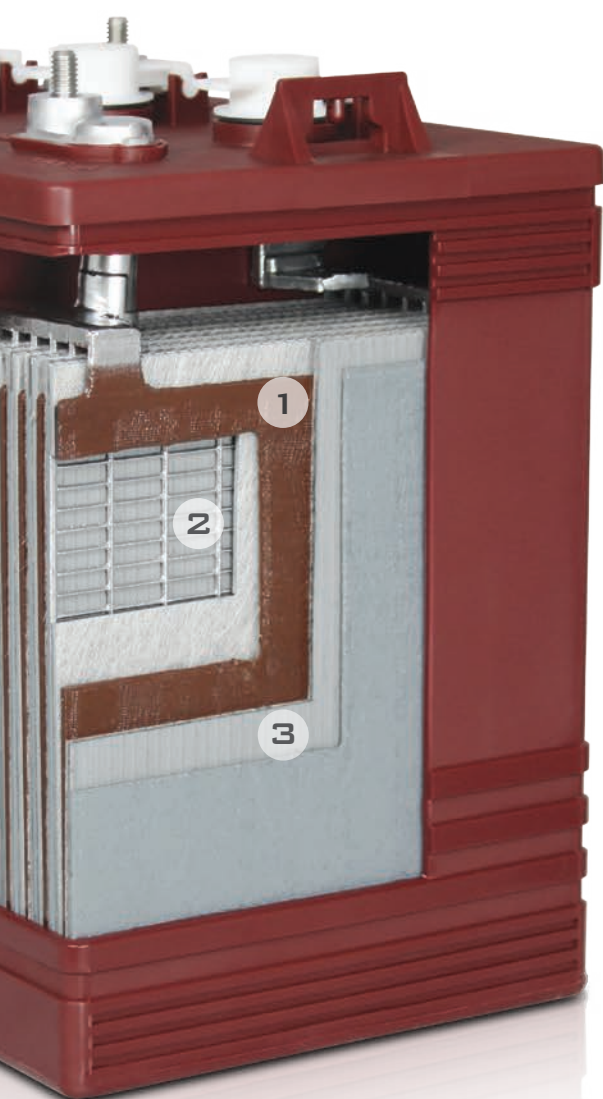
## *Maximum Productivity... Worry Free Operation*

TODAY FACILITIES MAINTENANCE MANAGEMENT TEAMS FACE A MULTITUDE OF CHALLENGES. FROM MAINTENANCE BACKLOGS, AND BALANCING MAINTENANCE BUDGETS TO LIMITED STAFF, LACK OF TIME TO COMPLETE WORK AND INCREASING ENVIRONMENTAL REGULATIONS... THE LAST THING YOU NEED TO WORRY ABOUT IS THE PERFORMANCE OF THE BATTERY IN YOUR FLOOR MACHINES. AT TROJAN BATTERY WE UNDERSTAND THE CHALLENGES YOU FACE AND THAT IS WHY FOR OVER 85 YEARS WE HAVE FOCUSED OUR EXPERIENCE AND EXPERTISE IN DEEP-CYCLE TECHNOLOGY ON MANUFACTURING THE HIGHEST QUALITY, LEAD ACID BATTERIES AVAILABLE IN THE INDUSTRY. IF THERE'S ONE THING WE'VE LEARNED OVER THE YEARS IT'S THAT A TRULY OUTSTANDING BATTERY MUST PROVIDE RUGGED DURABILITY, LONG LIFE AND CONSISTENT PERFORMANCE DAY IN AND DAY OUT. AS THE WORLD'S LEADING SUPPLIER OF DEEP-CYCLE BATTERIES, WE UNDERSTAND THE IMPORTANCE OF THESE PERFORMANCE FEATURES IN YOUR DAILY OPERATIONS AND THAT IS WHY WE OFFER THE BROADEST PORTFOLIO OF HIGH-QUALITY, DEEP-CYCLE FLOODED, GEL AND AGM PRODUCTS AVAILABLE FOR FLOOR MACHINE APPLICATIONS.

# Deep-Cycle Flooded Batteries...

## *Rugged Durability and Long Life*

Trojan's deep-cycle flooded batteries are the flagship of Trojan's product portfolio. Engineered to provide rugged durability, outstanding performance and long life, Trojan's deep-cycle flooded batteries are perfectly suited for use in a variety of floor machines. An all-around power house, the deep-cycle flooded batteries feature Trojan's historically-proven engineering with T2 Technology™, an advanced battery technology for maximum sustained performance, longer life and increased total energy.



### 1 **Alpha Plus® Paste with T2 Technology™** *Maximum Operating Performance*

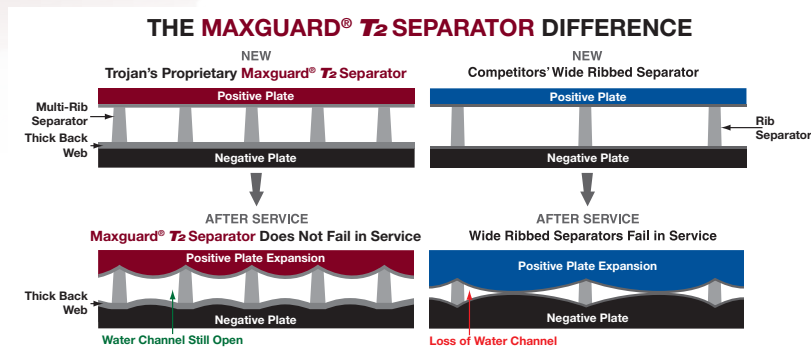
Trojan's Alpha Plus Paste is a proprietary, high density paste formulation engineered to deliver outstanding battery performance. It optimizes porosity development in the active material utilizing the active material more effectively resulting in sustained battery performance over a longer period of time. Trojan's T2 Technology introduces a patent-pending T2 metal agent into Alpha Plus Paste strengthening its electrochemical processing capabilities. Alpha Plus Paste with T2 Technology increase both sustained capacity and total overall ampere-hours resulting in more operating power. It's a key reason why Trojan batteries consistently outperform the competition.

### 2 **Trojan Grid Technology** *Reduced Downtime*

Trojan's grid technology is a lead antimony alloy grid mixture formulated specifically for use with Trojan's Alpha Plus Paste with T2 Technology. The grid formulation provides exceptional structural adhesion between the Alpha Plus Paste and the grid frame. Thick grids reinforce the strength of the frame and reduce overall corrosion. The grid configuration is optimized to enhance current flow through the grid network providing exceptional battery performance, reducing downtime and lowering overall maintenance costs.

### 3 **Maxguard® T2 Separator** *Longer Battery Life*

Exclusively available in Trojan batteries is our Maxguard T2 advanced separator. Its multi-rib geometry design keeps acid channels open longer enhancing electrochemical processing while reducing the risk of stratification. Maxguard's proprietary rubber-based material formulation inhibits antimony transfer between the positive grids and negative plates; a protection not available in many other competitor batteries. A newly fortified, thick back web provides even greater separator strength resulting in a more robust battery with increased protection against failures caused by separator degradation. Trojan's Maxguard T2 advanced separator sustains performance, provides longer battery life and significantly lowers operating costs.



# HydroLink™ Watering System



## Battery Watering Made Easy

Proper maintenance and periodic watering are important factors in maximizing the performance and life of Trojan deep-cycle, flooded batteries. Battery maintenance can be a costly, time-consuming and messy job. With Trojan's HydroLink™ advanced, single-point watering system, precise battery watering is made easy saving valuable time and money.

## Convenient Installation

Trojan's HydroLink watering system is specifically designed to work with Trojan's 6-volt, 8-volt and 12-volt flooded batteries\* and takes the guess work out of properly watering flooded batteries. In addition, the design of the HydroLink watering system prevents direct access to a battery's electrolyte and reduces acid splash, enhancing safety during the battery watering process. With a simple installation of the HydroLink manifolds and tubing, the system is ready for use. Once installed, a complete set of batteries can be filled in less than 30 seconds.

## HydroLink™ Vent Assembly

The HydroLink™ vent assembly is unique and features an independent water level indicator, valve shut off and dual flame arrestors.

### Independent Water Level Indicator

Maintaining the proper electrolyte level can extend the performance and life of Trojan flooded batteries. However, determining the correct level can be a challenge. Trojan's HydroLink vent features an independent water level indicator that accurately displays whether a battery needs watering. A white indicator signals that the battery needs water. A black indicator signals that the battery has enough water...it's that simple.

### Valve Shut Off

The valve shut off accurately controls cell electrolyte levels. Using a balanced valve design, the shut off valves automatically cut the water flow into the individual cells eliminating the potential of overflow or acid splash caused by overfilling. HydroLink's valve shut off works in conjunction with the hose end assembly and flow indicator to provide precise battery watering.

### Dual Flame Arrestors

The HydroLink system is equipped with dual flame arrestors, an important safety feature not standard on many other watering systems. The internal flame arrestors prevent internal sparks from passing through the watering system to neighboring cells while the external flame arrestor prevents external sparks from entering the Trojan battery.

## Snake™ or Clampless Tubing

The HydroLink system offers a patented Snake™ tubing assembly. This one-piece unit eliminates the need for multi connections resulting in fewer parts and quicker watering. HydroLink is also available with clampless tubing for customizable configurations.

## Warranty

HydroLink™ watering system comes with a four-year, limited warranty.

Independent Water Level Indicator



Water Indicator Signal



Snake™ Tubing



Clampless Tubing



Coupler Connection with Water Flow Indicator



# Sealed Maintenance-Free Batteries... Outstanding Performance and Reliability

For public facilities such as hospitals, schools, airports and other facilities impacted by indoor environmental quality and other health, safety and environmental regulations, sealed maintenance free batteries provide an ideal solution for battery operated floor machines. Trojan offers a full-line of non-spillable, sealed deep cycle gel and AGM products engineered for optimum performance in environmentally regulated floor machine applications.

## Deep-Cycle AGM Batteries



Trojan's deep cycle absorbent glass mat (AGM) sealed, maintenance free batteries feature a number of design elements to provide optimum performance. Robust plates extend the life cycle of Trojan's deep cycle AGM batteries. A separator of glass fibers serves to isolate the positive and negative plates while acting as a blotter to absorb the electrolyte. The separator is maintained under compression between plates to assure contact with plate surfaces. A computer-generated grid design is optimized for high power density. Low calcium grid alloy reduces gas emissions and a flame arresting, one-way pressure relief vent prevent buildup of excessive pressure. Trojan's deep cycle AGM batteries are low temperature tolerant, shock and vibration resistant and have a low internal resistance for higher discharge current and higher charging efficiency.

## Deep-Cycle Gel Batteries



Trojan deep cycle gel batteries are sealed, maintenance free batteries that deliver superior power in demanding floor machines applications. Engineered for rugged durability, outstanding performance and long battery life, Trojan's deep cycle gel batteries feature a number of important design characteristics that provide significant advantages over competing gel products. The gelled electrolyte is a proprietary formulation containing sulfuric acid, fumed silica, pure demineralized, deionized water and a phosphoric acid additive. This exclusive formulation produces a homogenous gel that delivers consistent performance and dramatically long cycle life. The heavy duty thick grids lock active material onto the grid network to efficiently deliver more concentrated energy to the terminals. Premium grade, double-insulated separators allow maximum charge flow between the plates for optimum performance.

# Product Specification Guide

BCI GROUP SIZE	TYPE	CAPACITY <sup>A</sup> Minutes		CAPACITY <sup>B</sup> Amp-Hours (AH)				ENERGY (kWh)	TERMINAL Type <sup>G</sup>	DIMENSIONS <sup>C</sup> Inches (mm)			WEIGHT lbs. (kg)	HydroLink™ or Single-Point Watering Kit <sup>H</sup>
		@25 Amps	@75 Amps	5-Hr Rate	10-Hr Rate	20-Hr Rate	100-Hr Rate			100-Hr Rate	Length	Width		
<b>6 VOLT DEEP-CYCLE BATTERIES - with T2 TECHNOLOGY™</b>														
GC2	T-605	383	105	175	193	210	232	1.39	1, 2, 3, 4	10.30 (262)	7.11 (181)	11.07 (281)	58 (26)	HydroLink
GC2	T-105	447	115	185	207	225	250	1.50	1, 2, 3, 4	10.30 (262)	7.11 (181)	11.07 (281)	62 (28)	HydroLink
GC2	T-105 Plus	447	115	185	207	225	250	1.50	1, 2, 3	10.30 (262)	7.11 (181)	11.07 (281)	62 (28)	Single-Point
GC2	T-125	488	132	195	221	240	266	1.60	1, 2, 3, 4	10.30 (262)	7.11 (181)	11.07 (281)	66 (30)	HydroLink
GC2	T-125 Plus	488	132	195	221	240	266	1.60	1, 2, 3	10.30 (262)	7.11 (181)	11.07 (281)	66 (30)	Single-Point
GC2H	T-145	530	145	215	239	260	287	1.72	1, 2, 3, 4	10.30 (262)	7.11 (181)	11.90 (302)	72 (33)	HydroLink
GC2H	T-145 Plus	530	145	215	239	260	287	1.72	1, 2, 3	10.30 (262)	7.11 (181)	11.90 (302)	72 (33)	Single-Point
DIN	TE35	500	135	201	225	245	270	1.63	8	9.60 (244)	7.50 (191)	10.60 (269)	68 (31)	N/A
901	J250G	475	130	195	216	235	261	1.57	7	12.17 (309)	6.85 (174)	11.43 (290)	67 (30)	HydroLink
901	J250P*	540	135	215	230	250	278	1.67	6	11.66 (296)	6.94 (176)	11.54 (293)	72 (33)	Single-Point
902	J305E-AC	645	160	250	280	305	339	2.03	7	12.27 (312)	6.85 (174)	14.41 (366)	83 (38)	HydroLink
902	J305G-AC	678	175	258	290	315	350	2.10	7	12.27 (312)	6.85 (174)	14.41 (366)	88 (40)	HydroLink
902	J305P-AC*	711	195	271	304	330	367	2.20	6	11.66 (296)	6.94 (176)	14.42 (366)	96 (44)	Single-Point
902	J305H-AC*	781	215	295	331	360	400	2.40	6	11.66 (296)	6.94 (176)	14.42 (366)	98 (45)	Single-Point
902	J305HG-AC*	781	215	295	331	360	400	2.40	7	12.27 (312)	6.85 (174)	14.41 (366)	98 (45)	HydroLink
903	L16E-AC	766	185	303	340	370	411	2.47	7	12.25 (311)	6.85 (174)	16.41 (417)	100 (46)	HydroLink
903	L16G-AC	789	200	320	359	390	433	2.60	7	12.25 (311)	6.85 (174)	16.41 (417)	103 (47)	HydroLink
903	L16P-AC*	850	220	344	386	420	467	2.80	6	11.66 (296)	6.94 (176)	16.74 (425)	114 (52)	Single-Point
903	L16H-AC*	935	245	357	400	435	483	2.89	6	11.66 (296)	6.94 (176)	16.74 (425)	125 (57)	Single-Point
903	L16HG-AC	935	245	357	400	435	483	2.89	7	12.25 (311)	6.85 (174)	16.41 (417)	125 (57)	HydroLink
<b>12 VOLT DEEP-CYCLE BATTERIES - with T2 TECHNOLOGY™</b>														
24	24TMX	140	36	70	78	85	94	1.13	5, 7, 8, 9	10.92 (277)	6.62 (168)	9.25 (235)	47 (21)	N/A
27	27TMX	175	45	85	97	105	117	1.40	5, 9	12.72 (323)	6.60 (168)	9.24 (235)	55 (25)	N/A
27	27TMH	200	51	95	106	115	128	1.54	5, 7, 8, 9	12.72 (323)	6.60 (168)	9.24 (235)	61 (28)	N/A
30H	30XHS	225	57	105	120	130	144	1.73	5, 7, 8, 9	14.00 (355)	6.73 (171)	10.07 (256)	66 (30)	N/A
30H	31XHS	225	57	105	120	130	144	1.73	11	12.97 (329)	6.75 (171)	9.58 (243)	67 (30)	N/A
N/A	J150	280	70	120	134	150	166	1.99	1, 2	13.70 (348)	7.13 (181)	11.13 (283)	84 (38)	HydroLink
N/A	J150 Plus	280	70	120	134	150	166	1.99	1, 2, 3	13.70 (348)	7.13 (181)	11.13 (283)	84 (38)	Single-Point
921	J185E-AC	312	82	144	160	175	194	2.33	7, 9	15.52 (394)	6.90 (175)	15.20 (386)	102 (46)	HydroLink
921	J185G-AC	324	93	152	170	185	205	2.46	7, 9	15.52 (394)	6.90 (175)	15.20 (386)	106 (48)	HydroLink
921	J185P-AC*	380	104	168	189	205	226	2.71	6	14.97 (380)	6.91 (176)	14.71 (374)	114 (52)	Single-Point
921	J185H-AC*	440	121	185	207	225	249	2.99	6	14.97 (380)	6.91 (176)	14.71 (374)	128 (58)	Single-Point
921	J185HG-AC*	440	121	185	207	225	249	2.99	7	15.52 (394)	6.90 (175)	14.65 (372)	128 (58)	HydroLink
N/A	DC-500ML**	1050	272	361	410	450	500	6.00	5, 8	19.25 (489)	10.62 (270)	16.73 (425)	332 (151)	Single-Point
<b>36 VOLT DEEP-CYCLE BATTERIES</b>														
N/A	18DC-500ML**	1050	272	361	410	450	500	18.00	5, 12	35.20 (895)▲	19.10 (486)	16.73 (425)	986 (447)	Single-Point



# Product Specification Guide

BCI GROUP SIZE	TYPE	CAPACITY <sup>A</sup> Minutes		CAPACITY <sup>B</sup> Amp-Hours (AH)				ENERGY (kWh)	TERMINAL Type <sup>G</sup>	DIMENSIONS <sup>C</sup> Inches (mm)			WEIGHT lbs. (kg)	HydroLink™ or Single-Point Watering Kit <sup>H</sup>
		@25 Amps	@75 Amps	5-Hr Rate	10-Hr Rate	20-Hr Rate	100-Hr Rate			100-Hr Rate	Length	Width		
<b>6 VOLT DEEP-CYCLE GEL BATTERIES</b>														
GC2	6V-GEL	394	-	154	167	189	198	1.19	6	10.25 (260)	7.08 (180)	10.82 (275)	68 (31)	N/A
DIN	TE35-GEL	479	-	180	193	210	220	1.32	8	9.62 (244)	7.49 (190)	10.70 (272)	69 (31)	N/A
<b>12 VOLT DEEP-CYCLE GEL BATTERIES</b>														
24	24-GEL	147	-	66	72	77	85	1.02	6	10.92 (277)	6.61 (168)	9.26 (235)	52 (24)	N/A
27	27-GEL	179	-	76	84	91	100	1.20	7	12.73 (323)	6.38 (162)	9.26 (235)	63 (29)	N/A
31	31-GEL	200	-	85	94	102	108	1.30	7	12.94 (329)	6.82 (173)	9.64 (245)	70 (32)	N/A
DIN	5SHP-GEL	250	-	110	115	125	137	1.64	8	13.53 (344)	6.72 (171)	10.99 (279)	83 (39)	N/A

BCI GROUP SIZE	TYPE	CAPACITY <sup>A</sup> Minutes		CRANKING Performance		CAPACITY <sup>B</sup> Amp-Hours (AH)				ENERGY (kWh)	TERMINAL Type <sup>G</sup>	DIMENSIONS <sup>C</sup> Inches (mm)			WEIGHT lbs. (kg)	HydroLink™ or Single-Point Watering Kit <sup>H</sup>
		@25 Amps	@75 Amps	C.C.A. <sup>D</sup> @0°F	C.A. <sup>E</sup> @32°F	5-Hr Rate	10-Hr Rate	20-Hr Rate	100-Hr Rate			100-Hr Rate	Length	Width		
<b>12 VOLT DEEP-CYCLE AGM BATTERIES</b>																
GC12	12-AGM	280	-	825	900	112	127	140	144	1.72	13	13.54 (344)	6.76 (172)	10.88 (276)	100 (45)	N/A
22	22-AGM	79	-	280	336	43	47	50	52	0.624	13	8.96 (228)	5.49 (139)	8.04 (204)	40 (18)	N/A
24	24-AGM	137	-	500	600	67	70	76	84	1.01	6	10.77 (274)	6.84 (174)	8.62 (219)	54 (24)	N/A
27	27-AGM	158	-	550	660	77	82	89	99	1.19	6	12.05 (306)	6.84 (174)	9.32 (237)	64 (29)	N/A
31	31-AGM	177	-	600	720	82	92	100	111	1.33	6	13.73 (349)	6.80 (173)	9.16 (233)	69 (31)	N/A
<b>6 VOLT DUAL PURPOSE AGM BATTERIES</b>																
GC2	6V-AGM	385	-	1100	1400	154	184	200	221	1.33	6	10.28 (261)	7.08 (180)	10.74 (273)	65 (29)	N/A
<b>12 VOLT DUAL PURPOSE AGM BATTERIES</b>																
8D	8D-AGM	460	-	1450	1850	179	210	230	254	3.05	6	20.47 (520)	10.64 (270)	9.08 (231)	167 (76)	N/A

\* Polyon™ Case



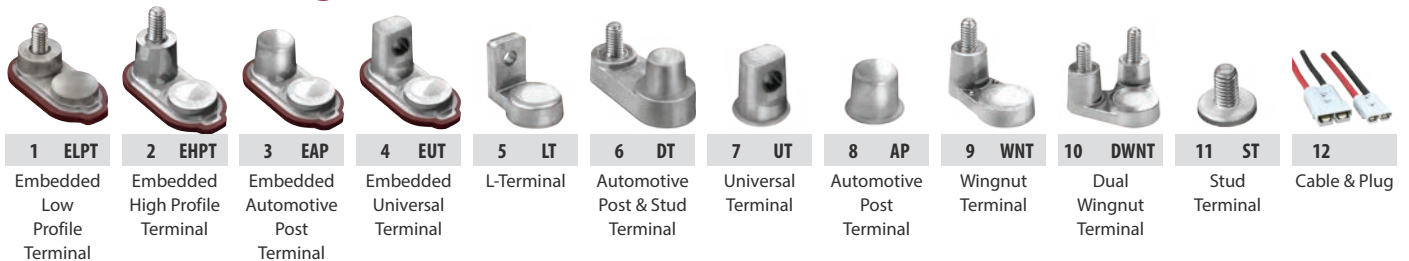
- A. The number of minutes a battery can deliver when discharged at a constant rate at 80°F (27°C) and maintain a voltage above 1.75 V/cell. Capacities are based on peak performance.  
 B. The amount of amp-hours (AH) a battery can deliver when discharged at a constant rate at 80°F (27°C) for the 20-Hour and 86°F (30°C) for the 5-Hour rate and maintain a voltage above 1.75 V/cell. Capacities are based on peak performance.  
 C. Dimensions are based on nominal size. Dimensions may vary depending on type of handle or terminal. Batteries to be mounted with .5 inches (12.7mm) spacing minimum.  
 D. C.C.A. (Cold Cranking Amps) - the discharge load in amperes which a new, fully charged battery can maintain for 30 seconds at 0°F at a voltage above 1.2 V/cell.  
 E. C.A. (Cranking Amps) - the discharge load in amperes which a new, fully charged battery can maintain for 30 seconds at 32°F at a voltage above 1.2 V/cell. This is sometimes referred to as marine cranking amps @ 32°F or M.C.A. @ 32°F.  
 F. Dimensions taken from bottom of the battery to the highest point on the battery. Heights may vary depending on type of terminal.  
 G. Terminal images are representative only.  
 H. N/A = Not Available. For more information on the Single-Point Watering Kit (SPWK), please contact your Trojan Battery representative. Trojan's battery testing procedures adhere to both BCI and IEC test standards.

\*\* Unavailable with T2 Technology

▲ Also available at 30-1/4

■ TE35-GEL and 5SHP-GEL are not UN2800 certified

## Terminal Configurations





## Experience The Trojan Difference – Reputation Built on Quality, Leadership and Innovation

### Leadership

Founded in 1925 by co-founders George Godber and Carl Speer, Trojan Battery Company is the world's leading manufacturer of deep-cycle batteries. From deep-cycle flooded batteries to deep-cycle AGM and gel batteries, Trojan has shaped the world of deep-cycle battery technology with over 85 years of battery manufacturing experience. With the invention of the golf car battery for the Autoette vehicle in 1952, Trojan pioneered the development of deep-cycle battery technology for the golf industry; successfully introducing mobilization to the game of golf. For Trojan, this began a legacy of leadership and innovation that prevails today in the global, deep-cycle markets spanning applications for aerial work platforms, transportation, renewable energy, golf, floor machines, marine and recreational vehicles. Today, Trojan batteries are available worldwide through our global network of master distributors.

Headquartered in Santa Fe Springs, CA, Trojan's operations include ISO 9001:2008 certified manufacturing plants in California and Georgia, two advanced research and development centers dedicated exclusively to deep-cycle battery technologies and international offices located in Europe, UAE and Asia. Trojan is a proud member of the Battery Council International (BCI) and a technical research partner with the Bulgarian Academy of Sciences.

### Research and Development

Quality and innovation are the cornerstones of our product development. Engineering teams, backed by over 200 years of deep-cycle development expertise, work together to innovate and bring to market advanced battery technologies that exceed our customers' expectations for outstanding battery performance.

To ensure the quality and superior performance of our batteries, Trojan applies the most rigorous testing procedures in the industry to test for cycle life, capacity, charger algorithms and both physical and mechanical integrity. Trojan's battery testing procedures adhere to both BCI and IEC test standards. Trojan's state-of-the-art R&D facilities include charger characterization and analytical labs, battery prototype and evaluation labs and battery autopsy centers all dedicated to providing you with a superior battery that you can rely on.



Prototype development and evaluation

### Environmental Stewardship

At Trojan Battery, when we say, "Clean energy for life™," we mean every word. As proactive supporters of environmental sustainability, our environmental stewardship focuses on clean energy initiatives and recycling programs.

- Trojan batteries are 97% recyclable. The container plastic, battery lead and electrolyte from old deep-cycle batteries can be recycled to produce new Deep-Cycle batteries.
- Through its partnership with Southern California Edison (SCE) Trojan saves over 8 million kilowatt hours and cuts CO2 emissions by over 12 million pounds significantly reducing our annual energy consumption and carbon foot print.



**TROJAN BATTERY  
COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV  
=ISO 9001:2008=**



Your Local Trojan Battery Representative:

**For more information,  
call 800.423.6569  
or + 1.562.236.3000  
or visit [www.trojanbattery.com](http://www.trojanbattery.com)**

