

FLOOR MACHINE



Trojan[®]

BATTERY COMPANY

Clean energy for life™



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

The deep cycle flooded series 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 machine applications. 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 precisely engineered to deliver outstanding battery performance. This high density paste 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 features a patent-pending T2 metal agent which is incorporated into Trojan's Alpha Plus Paste further strengthening the electrochemical processing capabilities of Alpha Plus Paste. Together Alpha Plus Paste with T2 Technology increase both sustained capacity and total overall ampere-hours resulting in more operating power for your application. 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 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 overall 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's flooded batteries is our Maxguard T2 advanced separator. Trojan's Maxguard T2 separator features a multi-rib geometry which 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 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 providing exceptionally longer battery life and significantly lowering operating costs.

HYDROLINK™ - BATTERY WATERING MADE EASY



HYDROLINK - WATERING SYSTEM

Proper maintenance and periodic watering are important factors in maximizing the performance and life of your 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 you valuable time and money.

Convenient Installation

Trojan's HydroLink watering system is specifically designed to work with 6-volt and 12-volt Trojan flooded batteries*. HydroLink removes the guess work out of properly watering your batteries. With a simple installation of the HydroLink manifolds and the tubing, the system is ready for use. Once installed, you can fill a complete set of batteries in less than 30 seconds.

HydroLink™ Vent

The HydroLink™ vent assembly is a unique vent which 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 your battery. However, determining the correct level can be a challenge. Trojan's HydroLink vent features an independent water level indicator that accurately displays whether your 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 you with precise battery watering.

Dual Flame Arrestors

The HydroLink system is equipped with dual flame arrestors, an important safety feature not standard on 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 your Trojan battery.

Snake™ or Clampless Tubing

The HydroLink™ system offers a patent-pending 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



Coupler Connection with Water Flow Indicator

SEALED MAINTENANCE FREE BATTERIES

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 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.

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.

FLOOR MACHINE BATTERIES

BCI GROUP SIZE	TYPE	CAPACITY ^A Minutes			CAPACITY ^B Amp-Hours (AH)			ENERGY (kWh)	TERMINAL Type	DIMENSIONS ^C Inches (mm)			WEIGHT lbs. (kg)
		@25 Amps	@56 Amps	@75 Amps	5-Hr Rate	20-Hr Rate	100-Hr Rate			100-Hr Rate	Length	Width	
6 VOLT DEEP CYCLE BATTERIES - with T2 TECHNOLOGY™													
GC2	T-605	383	-	105	175	210	232	1.39	1, 2, 3, 4	10-3/8 (264)	7-1/8 (181)	10-7/8 (276)	58 (26)
GC2	T-105	447	-	115	185	225	250	1.50	1, 2, 3, 4, 5	10-3/8 (264)	7-1/8 (181)	10-7/8 (276)	62 (28)
GC2	T-105 Plus	447	-	115	185	225	-	-	1, 2, 3, 4	10-3/8 (264)	7-1/8 (181)	10-11/16 (272)	62 (28)
GC2	T-125	488	-	132	195	240	266	1.60	1, 2, 3, 4	10-3/8 (264)	7-1/8 (181)	10-7/8 (276)	66 (30)
GC2	T-125 Plus	488	-	132	195	240	-	-	1, 2, 3, 4	10-3/8 (264)	7-1/8 (181)	10-11/16 (272)	66 (30)
GC2H	T-145	530	-	145	215	260	287	1.72	1, 2, 3, 4	10-3/8 (264)	7-1/8 (181)	11-5/8 (295)	72 (33)
GC2H	T-145 Plus	530	-	145	215	260	-	-	1, 2, 3, 4	10-3/8 (264)	7-1/8 (181)	11-1/2 (292)	72 (33)
DIN	TE35	500	-	135	200	245	271	1.63	8	9-5/8 (244)	7-1/2 (191)	10-7/8 (276)	68 (31)
901	J250G	475	-	130	195	235	-	-	7	11-1/2 (292)	7 (178)	11-7/8 (302)	67 (30)
901	J250P*	540	-	135	215	250	-	-	6	11-11/16 (297)	7 (178)	11-1/2 (292)	72 (33)
902	J305E-AC	645	-	160	250	305	-	-	7	12-1/4 (311)	7 (178)	14-3/8 (365)	83 (38)
902	J305G-AC	678	-	175	258	315	-	-	7	12-1/4 (311)	7 (178)	14-3/8 (365)	88 (40)
902	J305P-AC*	711	-	195	271	330	367	2.20	6	11-5/8 (295)	7 (178)	14-3/8 (365)	96 (44)
902	J305H-AC*	781	-	215	295	360	400	2.40	6	11-5/8 (295)	7 (178)	14-3/8 (365)	98 (45)
903	L16E-AC	766	-	185	303	370	-	-	7	12-1/4 (311)	7 (178)	16-3/8 (417)	100 (46)
903	L16G-AC	789	-	200	320	390	-	-	7	12-1/4 (311)	7 (178)	16-3/8 (417)	107 (49)
903	L16P-AC*	850	-	220	344	420	467	2.80	6	11-5/8 (295)	7 (178)	16-3/4 (424)	114 (52)
903	L16H-AC*	935	-	245	357	435	483	2.89	6	11-5/8 (295)	7 (178)	16-3/4 (424)	125 (57)
12 VOLT DEEP CYCLE BATTERIES - with T2 TECHNOLOGY™													
24	24TMX	140	-	36	70	85	94	1.13	5, 9	11-1/4 (286)	6-3/4 (171)	9-3/4 (248)	47 (21)
27	27TMX	175	-	45	85	105	117	1.40	5, 9	12-3/4 (324)	6-3/4 (171)	9-3/4 (248)	55 (25)
27	27TMH	200	-	51	95	115	128	1.54	5, 7, 8, 9	12-3/4 (324)	6-3/4 (171)	9-3/4 (248)	61 (28)
30H	30XHS	225	-	57	105	130	144	1.73	5, 7, 8, 9	13-15/16 (355)	6-3/4 (171)	10-1/16 (256)	66 (30)
30H	31XHS	225	-	57	105	130	-	-	11	13 (330)	6-3/4 (171)	9-1/2 (241)	67 (30)
N/A	J150	280	-	70	120	150	166	1.99	1, 2	13-13/16 (351)	7-1/8 (181)	11-1/8 (283)	84 (38)
N/A	J150 Plus	280	-	70	120	150	-	-	1, 2, 3	13-13/16 (351)	7-1/8 (181)	11-1/8 (283)	84 (38)
921	J185E-AC	312	-	82	144	175	-	-	7, 9	15-1/2 (394)	7 (178)	14-5/8 (371)	102 (46)
921	J185G-AC	324	-	93	152	185	-	-	7, 9	15-1/2 (394)	7 (178)	14-5/8 (371)	106 (48)
921	J185P-AC*	380	-	104	168	205	226	2.71	6	15 (381)	7 (178)	14-5/8 (371)	114 (52)
921	J185H-AC*	440	-	121	185	225	249	2.99	6	15 (381)	7 (178)	14-5/8 (371)	128 (58)
N/A	DC-500ML**	1050	-	272	361	450	500	6.00	5, 8	19-1/4 (489)	10-5/8 (270)	16-3/4 (425)	332 (151)
36 VOLT DEEP CYCLE BATTERIES													
N/A	18DC-500ML**	1050	-	272	361	450	-	-	5, 12	35-1/4 (895)▲	19-1/8 (486)	16-3/4 (425)	986 (447)

BCI GROUP SIZE	TYPE	VOLTAGE	CAPACITY ^A Minutes		CAPACITY ^B Amp-Hours (AH)			ENERGY (kWh)		TERMINAL Type	DIMENSIONS ^C Inches (mm)			WEIGHT lbs. (kg)
			@25 Amps	@75 Amps	5-Hr Rate	20-Hr Rate	100-Hr Rate	100-Hr Rate	100-Hr Rate		Length	Width	Height ^F	
DEEP CYCLE GEL BATTERIES														
GC2	6V-GEL	6 VOLT	394	-	154	189	198	1.19	7	7	10-1/4 (260)	7-1/8 (181)	10-7/8 (276)	68 (31)
DIN	TE35-GEL*	6 VOLT	-	-	180	210	220	1.32	5, 8	5, 8	9-5/8 (244)	7-1/2 (190)	10-7/8 (276)	69 (31)
24	24-GEL	12 VOLT	147	-	66	77	85	1.02	6, 7	6, 7	10-7/8 (276)	6-3/4 (171)	9-5/16 (236)	52 (24)
27	27-GEL	12 VOLT	179	-	76	91	100	1.20	7	7	12-3/4 (324)	6-3/4 (171)	9-1/4 (234)	63 (29)
31	31-GEL	12 VOLT	200	-	85	102	108	1.30	7	7	12-15/16 (329)	6-3/4 (171)	9-5/8 (245)	69 (31)
DIN	5SHP-GEL*	12 VOLT	-	-	110	125	137	1.64	5, 8	5, 8	13-9/16 (345)	6-3/4 (171)	11-1/8 (283)	85 (39)

BCI GROUP SIZE	TYPE	VOLTAGE	CAPACITY ^A Minutes		CRANKING Performance		CAPACITY ^B Amp-Hours (AH)			ENERGY (kWh)		TERMINAL Type	DIMENSIONS ^C Inches (mm)			WEIGHT lbs. (kg)
			@25 Amps	@75 Amps	C.C.A. ^D @0°F	C.A. ^E @32°F	5-Hr Rate	20-Hr Rate	100-Hr Rate	100-Hr Rate	100-Hr Rate		Length	Width	Height ^F	
DEEP CYCLE AGM BATTERIES																
24	24-AGM	12 VOLT	137	-	500	600	67	76	84	1.01	6	6	10-3/4 (274)	6-13/16 (174)	8-11/16 (220)	54 (24)
27	27-AGM	12 VOLT	158	-	550	660	77	89	99	1.19	6	6	12-9/16 (318)	6-13/16 (174)	8-3/4 (221)	64 (29)
31	31-AGM	12 VOLT	177	-	600	720	82	100	111	1.33	6	6	13-7/16 (341)	6-13/16 (174)	9-3/16 (233)	69 (31)
DUAL PURPOSE AGM BATTERIES																
GC2	6V-AGM	6 VOLT	385	-	1100	1400	154	200	221	1.33	6	6	10-1/4 (260)	7-1/8 (181)	10-3/4 (274)	65 (29)
8D	8D-AGM	12 VOLT	460	-	1450	1850	179	230	254	3.05	6	6	20-1/2 (521)	10-9/16 (269)	9-3/16 (233)	167 (76)

* Polyon™ Case



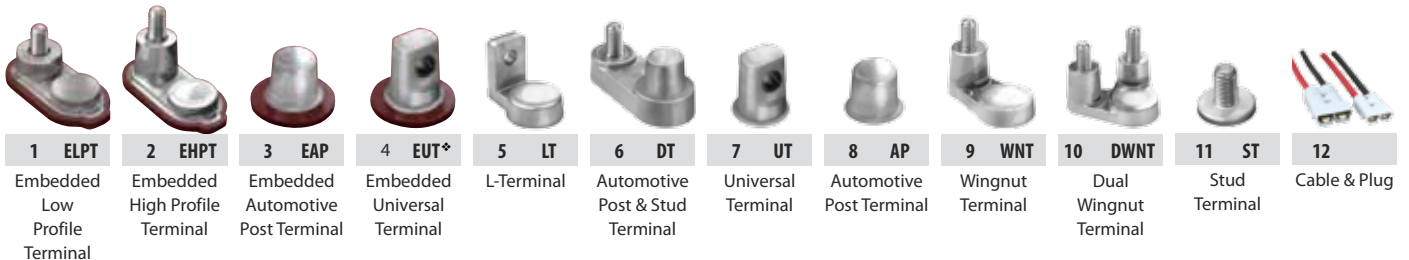
- A. The number of minutes a battery can deliver when discharged at a constant rate at 80°F (27°C) and maintain a voltage above 1.75 V/cell. Capacities are based on nominal performance.
- B. The amount of amp-hours (AH) a battery can deliver when discharged at a constant rate at 80°F (27°C) for the 20-Hour and 86°F (30°C) for the 5-Hour rate and maintain a voltage above 1.75 V/cell. Capacities are based on nominal 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.

** Unavailable with T2 Technology

▲ Also available at 30-1/4

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

TERMINAL CONFIGURATIONS



* EUT Terminal Available Spring 2011



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 gel and deep cycle AGM 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 floor machines, transportation, renewable energy, golf, aerial work platforms, 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. As the leading manufacturer of flooded, deep cycle batteries, Trojan retains two state-of-the-art research and development centers dedicated exclusively to battery technology and innovation. 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.



Prototype development and evaluation

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.

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 batteries are available worldwide through Trojan's Master Distributor Network. We offer outstanding technical support, provided by full-time application engineers.

**For a Trojan Master Distributor near you,
call 800.423.6569 or + 1.562.236.3000 or visit www.trojanbattery.com**

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