

THE BATTERY THAT GOES TO EXTREMES

EnerSys

Power/Full Solutions



ODYSSEY[®]
THE EXTREME BATTERY

EXTREME POWER.

Phenomenal starting power and massive deep cycle reserve power in one battery!

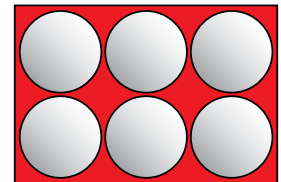
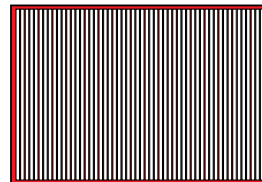
Some batteries provide enormous cranking power. Others, deep cycle reserve power. The revolutionary ODYSSEY® battery is designed to do both.

How is this possible? The answer begins with flat plates made of 99.99% pure virgin lead - not lead alloy. Pure lead plates can be made thinner, so we can fit more of them in the battery. More ODYSSEY battery plates mean more plate surface area. And that means more power – twice as much as conventional batteries.

In fact, ODYSSEY batteries are capable of providing engine cranking pulses in excess of 2250 amps for 5 seconds – double to triple that of equally sized conventional batteries, even at very low temperatures. And they can handle 400 charge-discharge cycles to 80% depth of discharge.

This extreme combination of power and performance makes ODYSSEY batteries perfect for a range of applications, including automotive/LTV, marine, commercial, and powersports – see the examples inside.

ODYSSEY® batteries vs. spiral-wound designs: 15% more plate surface area!



■ Unused battery space

Like many popular spiral-wound batteries, ODYSSEY batteries employ dry cell AGM technology to contain acid, allowing the battery to be installed even on its side. But the densely packed flat plates in an ODYSSEY battery avoid the “dead space” between cylinders in a “six-pack” design. The result is 15% more plate surface area — and that translates to more power!



ODYSSEY
THE EXTREME BATTERY

www.odysseybattery.com

INDESTRUCTIBILITY.

Designed and built to last up to 3 times as long.

Thanks to rugged construction and AGM (Absorbed Glass Mat) design, ODYSSEY® batteries have an 8-12 year design life and a 3-10 year service life. Welded intercell connections enable

it to withstand extreme vibration, and AGM design holds acid in place to prevent spills, even when installed on its side. And unlike conventional batteries, ODYSSEY batteries can be stored for up to 2 years and still be returned to full power.*

Pure Lead Plates

Constructed from 99.99% pure virgin lead, ODYSSEY battery plates are extremely thin, so more of them can fit into the battery. More lead plates equals more power.

Tin Alloy Coated Brass Terminals

Brass terminals coated with a high-quality tin alloy ensure secure, corrosion-free cable connections.♦

Compressed AGM Plate Separators

Before being inserted into the case, the Absorbed Glass Mat plate separators are compressed for extreme vibration resistance.

Robust Intercell Connections

Built to stringent specifications, cell connectors are casted to the plates, and bonded to resist vibration and eliminate internal sparking.



Available Metal Case

Selected ODYSSEY batteries are available with metal casing for high heat applications.



Optional height adapter may be used on 34-PC1500 models for installations where a group 24 or group 27 is required. Snap the adapter securely into place on the bottom of the 34-PC1500 battery. In some installations, the 34-PC1500 model with this adapter may be used to replace a group 24F or 27F depending on required cable length.

Ready out of the box

ODYSSEY batteries are shipped fully charged. If the ODYSSEY battery's voltage is 12.65V or greater, simply install the battery in your vehicle and you are ready to go! If below 12.65V, boost charge following the instructions in the ODYSSEY battery Owner's Manual and/or Technical Manual. Putting a boost on the battery will not damage it, even if its voltage reads higher than 12.65V.

* At 25°C (77°F). Storage times will be even longer at lower temperatures.

♦ PC1220 and PC1350 excluded. See table for details.

VERSATILITY AND FLE



Emergency Response

The ODYSSEY® battery protects, serves and saves with maintenance-free starting power plus massive deep cycle reserve power for on-board accessories.

- Police cruisers
- Fire trucks
- Ambulances



4X4 & Off-Road

The ODYSSEY battery's rugged construction and non-spillable, dry cell design ensure extreme shock and vibration resistance for the toughest off-road applications.

- SUVs
- Light trucks
- Off-road vehicles



Heavy Duty/Commercial

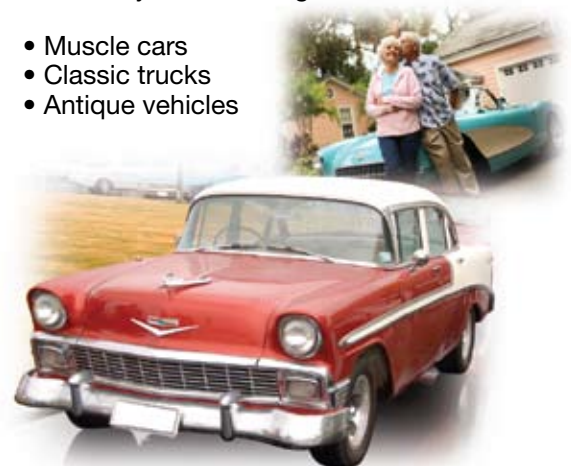
The ODYSSEY battery gives truckers, farmers and construction vehicle operators what they need: the superior cranking power and deep cycle ability to get the job done.

- Tractor trailers
- Farm, lawn and garden equipment
- Earth-moving/construction equipment

Classic & Antique Cars

Classic and restored cars are often kept in storage for months. The ODYSSEY battery's deep cycle reserve power ensures that they'll start reliably, even after two years of sitting idle.

- Muscle cars
- Classic trucks
- Antique vehicles



XIBILITY.



Marine

ODYSSEY® Trolling Thunder™/Marine Dual Purpose batteries have enough starting, reserve and deep cycle power for any vessel. Plus, an ODYSSEY battery holds a charge for long periods ensuring quick starts even after long storage periods.

- Pleasure cruisers
- Commercial vessels
- Trolling motors



High Performance & Modified Vehicles

From starting high-compression engines to powering high-intensity discharge lights, the non-spillable ODYSSEY battery can handle any upgrade, and can be mounted in almost any position.

- Tuner cars
- Race cars
- Dragsters



Sound and Video Packages

The deep cycle, non-spillable ODYSSEY battery offers the extreme power and extreme mounting flexibility that today's high-wattage, in-car sound and video systems demand.

- Audio systems
- Video systems
- Auxiliary amplifiers



Motorcycles & Powersports

The ODYSSEY battery delivers the power and durability that powersport vehicles demand. Rugged construction and non-spillable, dry cell design provides extreme shock and vibration resistance.

- Motorcycles and ATVs
- Personal watercraft
- Snowmobiles
- Ultralight and Gyrocopter™ aircraft

ODYSSEY® BATTERY POWER

*Cold Start Performance S.A.E. J537 JUNE 82. **Pulse Current. † Can be fitted with brass automotive terminal
 Optional metal jackets available on PC545, PC680, PC925, PC1200, PC1700 and 31-PC2150
 Operating Temperature Range = PC310 and PC1800-FT: -40°C (-40°F) to 50°C (122°F), PC535 and PC625: -40°C (-40°F) to 45°C (113°F),
 PC545, PC680, PC925, PC1200 and PC1700 without metal jacket: -40°C (-40°F) to 45°C (113°F),
 PC545, PC680, PC925, PC1200 and PC1700 with metal jacket: -40°C (-40°F) to 80°C (176°F),
 PC1220, PC1350 and PC2250: -40°C (-40°F) to 40°C (104°F). All other models: -40°C (-40°F) to 80°C (176°F)

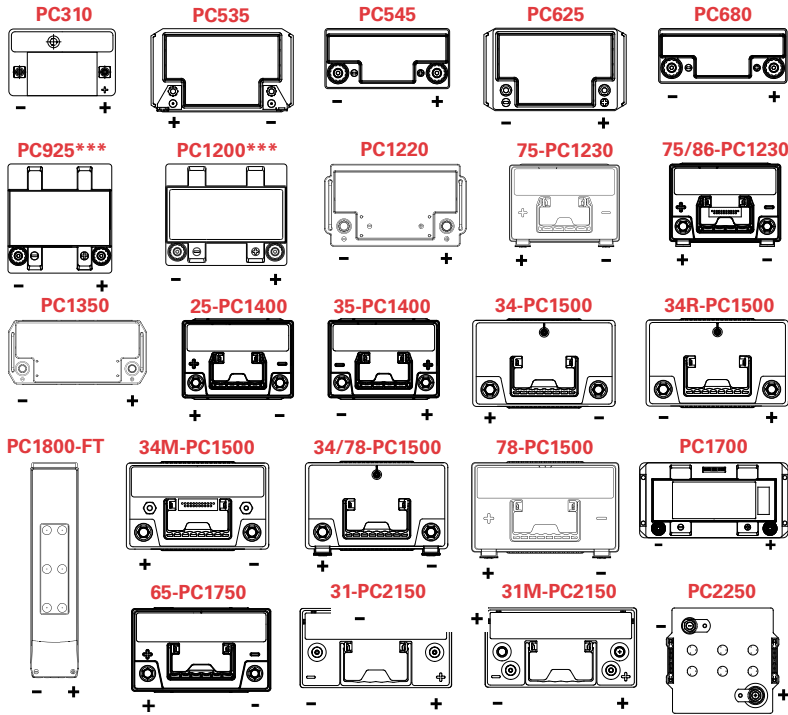


Model	Voltage	PHCA** (5 sec)	CCA*	HCA	MCA	Nominal Capacity		Reserve Capacity Minutes	Length inches (mm)	Width inches (mm)	Height inches (mm)	Weight lbs (kg)	Terminal	Torque Specs in-lbs (Nm max)	Internal Resistance (mΩ)	Short Circuit Current
						(20 Hr Rate-Ah)	(10 Hr Rate-Ah)									
PC310	12	310	100	200	155	8	7	9	5.43 (138.0)	3.39 (86.0)	3.98 (101.0)	5.9 (2.7)	M4 Receptacle	8.9 (1.0)	27.1	455A
PC535	12	535	200	300	265	14	13	21	6.70 (170.2)	3.90 (99.1)	6.18 (157.0)	12.0 (5.4)	M6 Stud	40 (4.5)	8	1000A
PC545	12	545	185	300	240	13	12	18	7.00 (177.8)	3.38 (85.9)	5.17 (131.3)	11.4 (5.2)	M6 Receptacle	50 (5.6)	10	1200A
PC625	12	625	265	440	350	18	17	27	6.70 (170.2)	3.90 (99.1)	6.89 (175.0)	13.2 (6.0)	M6 Stud	40 (4.5)	7	1800A
PC680	12	680	220	370	300	16	16	24	7.15 (181.5)	3.00 (76.3)	6.65 (167.8)	15.4 (7.0)	M6 Receptacle† or SAE 3/8" Receptacle	50 (5.6)	7	1800A
PC925	12	925	380	625	500	28	27	52	6.64 (168.6)	7.05 (179.0)	5.04 (128.0)	26.0 (11.8)	M6 Receptacle† or SAE 3/8" Receptacle	60 (6.8)	5	2400A
PC1200	12	1200	550	860	725	42	40	78	7.87 (199.9)	6.66 (169.1)	6.80 (172.7)	38.2 (17.4)	M6 Receptacle† or SAE 3/8" Receptacle	60 (6.8)	4.5	2600A
PC1220	12	1220	680	960	860	70	64.8	135	11.89 (302.0)	6.88 (175.0)	7.48 (190.0)	45.6 (20.7)	DIN Lead Post	N/A	5.7	2200A
75-PC1230	12	1230	730	1050	815	55	50	100	9.46 (240.3)	6.99 (177.5)	7.22 (183.4)	45.5 (20.6)	SIDE 3/8" Receptacle	60 (6.8)	2.5	3100A
75/86-PC1230	12	1230	730	1050	815	55	50	100	9.46 (240.3)	6.99 (177.5)	7.92 (201.2)	45.5 (20.6)	TOP SAE SIDE 3/8" Receptacle	60 (6.8)	2.5	3100A
PC1350	12	1350	770	1080	960	95	88.5	195	14.84 (377.0)	6.88 (175.0)	7.48 (190.0)	60.4 (27.4)	DIN Lead Post	N/A	4.2	2900A
25-PC1400	12	1400	820	1150	850	65	55	125	9.46 (240.3)	6.84 (173.7)	8.69 (220.7)	50.0 (22.7)	SAE	70 (7.9)	2.5	3100A
35-PC1400	12	1400	820	1150	850	65	55	125	9.46 (240.3)	6.84 (173.7)	8.69 (220.7)	50.0 (22.7)	SAE	70 (7.9)	2.5	3100A
34-PC1500	12	1500	880	1250	1050	68	62	135	10.85 (275.6)	6.76 (171.7)	7.82 (198.6)	49.5 (22.4)	SAE	60 (6.8)	2.5	3100A
34R-PC1500	12	1500	880	1250	1050	68	62	135	10.85 (275.6)	6.76 (171.7)	7.82 (198.6)	49.5 (22.4)	SAE	60 (6.8)	2.5	3100A
34M-PC1500	12	1500	880	1250	1050	68	62	135	10.85 (275.6)	6.76 (171.7)	7.82 (198.6)	49.5 (22.4)	SAE and 3/8" Stud (Pos.), 5/16" Stud (Neg.)	70 (7.9)	2.5	3100A
34/78-PC1500	12	1500	880	1250	1050	68	62	135	10.85 (275.6)	6.99 (177.5)	7.82 (198.6)	49.5 (22.4)	TOP SAE SIDE 3/8" Receptacle	60 (6.8)	2.5	3100A
78-PC1500	12	1500	880	1250	1050	68	62	135	10.85 (275.6)	6.99 (177.5)	7.12 (180.8)	49.5 (22.4)	SIDE 3/8" Receptacle	60 (6.8)	2.5	3100A
PC1700	12	1700	875	1325	1175	68	65	142	13.02 (330.7)	6.62 (168.2)	6.93 (176.0)	60.9 (27.6)	M6 Receptacle† or SAE 3/8" Receptacle	60 (6.8)	3.5	3500A
65-PC1750	12	1750	930	1350	1070	74	65	135	11.83 (300.5)	7.20 (182.9)	7.43 (188.7)	58.0 (26.3)	SAE	70 (7.9)	2.0	5000A
PC1800-FT	12	1800	1300	1600	1450	214	190	475	22.75 (577.9)	4.9 (125.0)	12.44 (316.0)	132.3 (60.0)	3/8" Stud	80 (9.0)	3.3	3800A
31-PC2150	12	2150	1150	1545	1370	100	92	205	13.00 (330.2)	6.80 (172.7)	9.41 (239.0)	77.8 (35.3)	3/8" Stud or SAE†	150-220 (16.9-22.6)	2.2	5000A
31M-PC2150	12	2150	1150	1545	1370	100	92	205	13.00 (330.2)	6.80 (172.7)	9.47 (240.5)	77.8 (35.3)	SAE and 3/8" Stud (Pos.), 5/16" Stud (Neg.)	150-220 (16.9-22.6)	2.2	5000A
PC2250	12	2250	1225	1730	1550	126	114	240	11.26 (286.0)	10.59 (269.0)	9.17 (233.0)	86.0 (39.0)	SAE Terminal and 3/8" Stud	100 (11.0) For 3/8" Stud Only	2.1	5000A

FOR EVERY APPLICATION.

ODYSSEY® BATTERY TECHNOLOGY COMPARISON

TERMINAL LAYOUTS



Drawing sizes are for terminal position reference only; diagrams are not proportionate to each other.
 ***Optional Reversed Polarity (L)

	ODYSSEY® BATTERIES	CONVENTIONAL BATTERIES
DESIGN LIFE	8-12 years (Float) @ 25° C (77° F)	5 years
SERVICE LIFE	3 to 10 years	1 to 5 years
ELECTROLYTE	Drycell ("starved electrolyte") no external leakage or corrosion	Most are acid flooded (causing acid burns and spills); some wet sealed or "gelled"
STORAGE LIFE	2 years before needing charge @ 25°C (77°F)	6-12 weeks before needing charge
SHIPPING	Air transportable; US Department of Transportation classified non-spillable (less expensive)	Ground transport; classified as hazardous material (more expensive)
END OF LIFE	Battery slowly loses power at end of life; no catastrophic failure	Immediate and catastrophic loss of power (can leave you stranded)

WARRANTY:

EnerSys Energy Products Inc. ("Manufacturer") warrants its ODYSSEY® batteries (hereafter referred to as "Battery") to be free of defects in material and workmanship for the earlier of (a) the Applicable Warranty Period or (b) within 400 cycles to 80% depth of discharge, whichever occurs first. The Applicable Warranty Period is two (2) years for power sports applications; three (3) years in automotive, marine, commercial, and industrial applications; and four (4) years in the case of the PC1220, 75-PC1230, 75/86-PC1230, PC1350, 25-PC1400, 35-PC1400, 34-PC1500, 34M-PC1500, 34R-PC1500, 34/78-PC1500, 78-PC1500, 65-PC1750, 31-PC2150, 31M-PC2150 and PC2250 batteries. The Applicable Warranty Period begins from the date of purchase with original receipt, or, if no receipt is available, from Manufacturer's shipping date. Within the Applicable Warranty Period, the Battery will be replaced free of charge if, at the discretion of Manufacturer, adjustment is necessary due to defect in material or workmanship (not merely discharged). Batteries for warranty replacement consideration are to be returned to the original supplying distributor/dealer. If not truly feasible, other ODYSSEY distributors/dealers can be approached but a warranty processing fee may be applied. This warranty may vary from country to country; contact your authorized ODYSSEY battery wholesaler or dealer for the applicable warranty.

GENERAL PROVISIONS

A. Manufacturer has no obligation under the limited warranty set forth above in the event the Battery is damaged or destroyed as a result of one or more of the following:

- Willful abuse or neglect or if the top decorative cover has been removed.
- Natural forces such as wind, lightning, hail; damage due to fire, collision, explosion, vandalism, theft, penetration or opening of the Battery case in any manner.
- Overcharging, undercharging, charging or installing in reverse polarity, improper maintenance, allowing the Battery to be deeply discharged via a parasitic load or mishandling of the Battery such as but not limited to using the terminals for lifting or carrying the Battery. Trickle chargers that do not have a regulated trickle charge voltage between 13.5V and 13.8V (no lower than 13.5V and no higher than 13.8V) will cause early failure of the Battery. Use of such chargers with the Battery will also void the Battery's warranty. For applications where an alternator is present, the alternator must deliver between 14.0V and 14.7V when measured at the battery's terminals. Alternators that do not have a regulated charge between 14.0V and 14.7V (no lower than 14.0V and no higher than 14.7V) will cause early failure of the Battery. Use of such alternators with the Battery will also void the Battery's warranty.
- Failure to properly install the Battery or lack of metal jacket for high temperature or vibration applications.
- Normal deterioration in the electrical qualities or the acceleration of such deterioration due to conditions that accelerate such deterioration.

- If the Battery is used for an application that requires higher cranking power or a greater reserve rating than the Battery is designed to deliver, or the Battery capacity is less than the Battery capacity specified by the vehicle manufacturer, or the Battery is otherwise used in applications for which it was not designed.
- Prolonged storage of vehicles with fuel injection computers, alarms, GPS and other electrical devices that require continuous battery power to support active memories; this power drain must be offset with a maintenance-float charger, periodic charging or disconnecting the battery to prevent the establishment of irreversible crystallized sulphation in the battery plate oxide. Failure to address this destroys battery capacity and voids the warranty, as this is not a warranted defect in materials or workmanship. A battery with an open circuit voltage (OCV) of equal to or less than 10.0V will be deemed as overdischarged and void from warranty due to misuse and/or neglect.
- **WARNING** - Do NOT use any type of oil, organic solvent, alcohol, detergent, strong acids, strong alkalis, petroleum-based solvent or ammonia solution to clean the jars or covers. These materials may cause permanent damage to the battery jar and cover and will void the warranty.

B. To obtain warranty service:

1. Return the Battery to any authorized ODYSSEY battery wholesaler or dealer.
2. If the battery is determined by Manufacturer, in its sole discretion, to be defective for material or workmanship under terms of this limited warranty, it will be replaced.
3. Manufacturer's acceptance of any items shipped to Manufacturer shall not be deemed an admission that the items so shipped are defective. Any items shipped back to Manufacturer, shall in Manufacturer's sole discretion, become Manufacturer's sole property.

THIS LIMITED WARRANTY IS IN LIEU OF, AND MANUFACTURER DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, STATUTORY, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. MANUFACTURER'S EXCLUSIVE LIABILITY FOR BREACH OF WARRANTY SHALL BE TO REPLACE THE BATTERY WITHIN THE EFFECTIVE WARRANTY PERIOD. IN NO EVENT SHALL MANUFACTURER BE LIABLE FOR ANY LOSS OR DAMAGES OF ANY OTHER KIND, WHETHER DIRECT, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY, SPECIAL OR OTHERWISE. NOR SHALL MANUFACTURER BE LIABLE FOR ANY REMOVAL OR INSTALLATION EXPENSE, OR THE LOSS OF TIME OR PROFITS.

Some countries and/or states do not allow limitation on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you. This warranty gives you specific legal rights, which may vary from country to country and/or state to state.

About EnerSys®

EnerSys® is a global leader in stored energy solutions for automotive, military, and industrial applications. With manufacturing facilities in 17 countries, sales and service locations throughout the world, and over 100 years of battery experience, EnerSys is a powerful partner for automotive service and parts providers.

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