

THE BATTERY THAT GOES TO EXTREMES

EnerSys

Power/Full Solutions



TPPL
THIN PLATE PURE LEAD

ODYSSEY[®]
THE EXTREME BATTERY

EXTREME POWER.

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

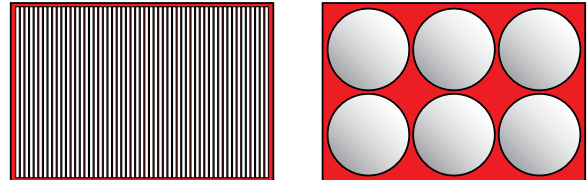
Some batteries provide enormous cranking power. Others, deep cycle reserve power. The revolutionary ODYSSEY® battery is designed to do both.

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, 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
www.enersys-emea.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 by 28% for extreme vibration resistance.

Not All AGM Batteries are the Same

To maximise the advantage of AGM separation, we use 99.9% pure lead plates. This affords us the enviable distinction of massive cranking power combined with deep cyclic characteristics of 400 cycles to 80% DOD.

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 the 34-PC1500 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, a 34-PC1500 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.

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 vehicles
- 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.

- 4 x 4 vehicles/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.

- Classic trucks
- Antique vehicles



XIBILITY.



Marine

ODYSSEY® 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
- Hybrid electric propulsion



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
- Muscle 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. Deep cyclic ability handles parasitic loads caused by Alarm systems and electric ABS systems on bikes.

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

ODYSSEY® BATTERY POWER

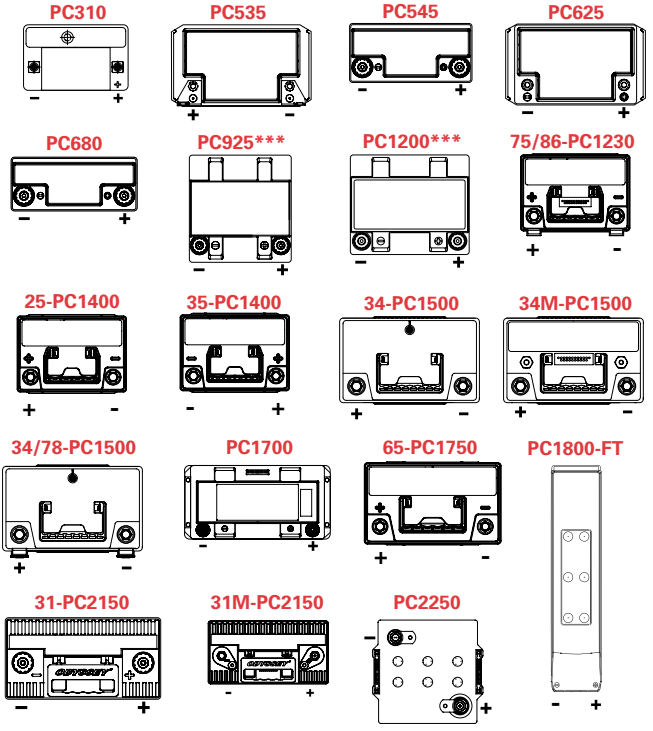
Cold Start Performance S.A.E. J537, JUNE 82 and EN50342 -1 :2006 **Pulse Current † Can be fitted with brass automotive terminal
 All batteries available with metal jackets, except PC310, PC535, PC625, 75/86-PC1230, 25-PC1400, 35-PC1400, 34-PC1500,
 34M-PC1500, 34/78-PC1500, 65-PC1750, 31M-PC2150 and PC2250
 Operating temperature range: -40°C (-40°F) to 30°C (-22°F) to 40°C (104°F) for PC2250



MODEL	Voltage	PHCA** (5 sec) A	CCA* (SAE) A	CCA* (EN) A	HCA	MCA	Nominal Capacity		Reserve Capacity Minutes	Length mm	Width mm	Height mm	Weight kg	Terminal	Torque Specs Nm max	Internal Resistance (mΩ)	Short Circuit Current
							(20 Hr Rate-Ah)	(10 Hr Rate-Ah)									
 PC310	12	310	100	100	200	155	8	7	9	138.0	86.0	101.0	2.7	M4 Receptacle	1.0	27.1	455A
 PC535	12	535	200	230	300	265	14	13	21	170.2	99.1	157.0	5.4	M6 Stud	4.5	8	1000A
 PC545	12	545	185	210	300	240	13	12	18	177.8	85.9	131.3	5.7	M6 Receptacle	5.6	10	1200A
 PC625	12	625	265	310	440	350	18	17	27	170.2	99.1	175.0	6.0	M6 Stud	4.5	7	1800A
 PC680	12	680	220	250	370	300	16	16	24	184.7	79.0	169.4	7.0	M6 Receptacle [†] or SAE 3/8" Receptacle	5.6	7	1800A
 PC925	12	925	380	460	625	500	28	27	52	168.6	179.0	128.0	11.8	M6 Receptacle [†] or SAE 3/8" Receptacle	6.8	5	2400A
 PC1200	12	1200	550	680	860	725	42	40	78	199.9	169.1	172.7	17.4	M6 Receptacle [†] or SAE 3/8" Receptacle	6.8	4.5	2600A
 PC1230	12	1230	730	920	1050	815	55	50	100	240.3	177.5	201.2	20.6	TOP SAE SIDE 3/8" Receptacle	6.8	2.5	3100A
 PC1400	12	1400	820	1040	1150	850	65	55	125	240.3	173.7	220.7	22.7	SAE	7.9	2.5	3100A
 PC1400	12	1400	820	1040	1150	850	65	55	125	240.3	173.7	220.7	22.7	SAE	7.9	2.5	3100A
 PC1500	12	1500	880	1120	1250	1050	68	62	135	275.6	171.7	198.6	22.4	SAE	6.8	2.5	3100A
 PC1500	12	1500	880	1120	1250	1050	68	62	135	275.6	171.7	198.6	22.4	SAE and 3/8" Stud (Pos.), 5/16" Stud (Neg.)	7.9	2.5	3100A
 PC1500	12	1500	880	1120	1250	1050	68	62	135	275.6	177.5	198.6	22.4	TOP SAE SIDE 3/8" Receptacle	6.8	2.5	3100A
 PC1700	12	1700	875	1110	1325	1175	68	65	142	330.7	168.2	176.0	27.6	M6 Receptacle [†] or SAE 3/8" Receptacle	6.8	3.5	3500A
 PC1750	12	1750	930	1180	1350	1070	74	65	135	300.5	182.9	188.7	26.3	SAE	7.9	2.0	5000A
 PC1800-FT	12	1800	1300	1660	1600	1450	214	190	475	582.0	125.0	317.0	60.0	3/8" Stud	9.0	3.3	3800
 PC2150	12	2150	1150	1470	1545	1370	100	92	205	330.2	172.7	239.0	35.3	3/8" Stud or SAE	16.9-22.6	2.2	5000A
 PC2150	12	2150	1150	1470	1545	1370	100	92	205	330.2	172.7	240.5	35.3	SAE and 3/8" Stud (Pos.), 5/16" Stud (Neg.)	16.9-22.6	2.2	5000A
 PC2250	12	2250	1225	1570	1730	1550	126	114	240	286.0	269.0	233.0	39.0	Dual SAE/DIN Terminal and 3/8" Stud	11.0 For 3/8" Stud Only	2.1	5000A

FOR EVERY APPLICATION.

TERMINAL LAYOUTS



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

ODYSSEY® BATTERY TECHNOLOGY COMPARISON

	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 75/86-PC1230, 25-PC1400, 35-PC1400, 34-PC1500, 34M-PC1500, 34/78-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 adjustment is necessary due to defect in material or workmanship (not merely discharged). Simply return the Battery to any authorised ODYSSEY battery dealer with the original receipt for a replacement. This warranty may vary from country to country; contact your authorised 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.

- 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.

- B. To obtain warranty service:
1. Return the Battery to any authorised ODYSSEY battery wholesaler or dealer.
 2. If the Battery is determined to be defective for material or workmanship under terms of this limited warranty, it will be replaced.

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.

EnerSys

Global Headquarters
P.O. Box 14145
Reading, PA 19612-4145, USA
Tel: +1-610-208-1991
+1-800-538-3627
Fax: +1-610-372-8613

EnerSys Europe

Lowenstrasse 32
8001 Zurich
Switzerland

EnerSys Asia

No. 49, Yanshan Road
Shekou, Shenzhen
518066 China
Tel: +86-755-2689-3639
Fax: +86-755-2689-8013

EnerSys Ltd.

Rake Lane,
Clifton Junction, Swinton
Manchester M27 8LR, UK
Tel: +44 (0)161 727 3952
Fax: +44 (0)161 727 3809

www.odysseybattery.com

www.enersys-emea.com



© 2009 EnerSys. All rights reserved.

Trademarks and logos are the property of EnerSys and its affiliates, except Gyrocopter™, which is not the property of EnerSys.

Publication No. EN-ODY-RS-007 – May 2009 Subject to revisions without prior notice. E.&O.E.