

# **ODYSSEY™**

**THE EXTREME BATTERY**

## **Heavy Duty/Commercial**

*A guide to the industry's best starting and deep cycle battery*



**Twice the overall power  
and three times the life  
of conventional batteries.  
Up to 400 cycles at 80%  
depth of discharge!**



**EnerSys®**  
Power/Full Solutions

# Built to power the toughest jobs

## **Better warranty**

Limited 3- and 4-year full replacement warranty – not pro rata.

## **Longer service life**

With 3-10 years of service life, ODYSSEY™ batteries save time, money, and aggravation.

## **Longer cycle life**

70% longer cycle life compared to conventional deep cycle batteries – up to 400 cycles at 80% depth of discharge – high stable voltage for longer periods of time.

## **Longer shelf life**

Can be stored on open circuit (nothing connected to the terminals) without the need for recharging up to 2 years or down to 12.00V, whichever occurs first.

## **Faster recharge**

The highest recharge efficiency of any sealed lead battery on the market – capable of 100% recharge in 4 - 6 hours.

## **Mounting flexibility**

Non-spillable design – can be mounted on any side in any position except inverted.

## **Vibration resistance**

Design protects against high impact shock and mechanical vibration – a common cause of premature battery failure.

## **Extreme temperature tolerant**

Operating temperatures from -40°C (-40°F) to 80°C (176°F) for PC1200 to 31-PC2150.

## **Totally maintenance free**

No need to add water, ever!  
Drycell design with resealable venting system.

## **Improved safety**

US Department of Transportation classified as a 'non-spillable' battery. No acid spills, no escaping gases.



### **Tractor trailers**

With today's no-idling laws, big rigs need a battery that can keep everything in the cab running when the engine isn't. The ODYSSEY™ battery can power a range of on-board accessories and still deliver reliable starts.



### **Construction equipment**

Along with dusty, dirty jobsites, building equipment has to endure repeated shock and vibration. With its rugged, sealed construction, ODYSSEY batteries are built to take a pounding and perform in the toughest conditions.



### **Farming equipment**

Farm vehicles have to perform in harsh environments, often after sitting idle for months. With the ODYSSEY battery they'll start reliably for up to two years (when stored at 25°C (77°F) from a fully charged state).



### **Buses/RVs**

The electronics in today's RVs and charter buses require deep cycle reserve power. The ODYSSEY battery delivers it while providing massive starting and up to 3X the service life of conventional commercial batteries.



### **Box trucks/Cargo vans**

Big delivery vehicles need big starting power, even after hours of starts and stops with little recovery time. With its massive deep cycle reserve power, the ODYSSEY battery can handle the most demanding routes.



### **Emergency Response**

With its maintenance-free starting power and massive deep cycle reserve power for on-board accessories, the ODYSSEY battery protects and serves when it matters most.

- Police cruisers
- Fire trucks
- Ambulances



***Designed to change what you can expect from a heavy duty battery***

Today's commercial vehicles have to power a range of accessories, both inside the cab and out. And whether on the road, the farm, or the jobsite, they also need a battery with the power to start any job, and the durability to last until it's finished. Not so easy when the job involves constant vibration, extreme loads, long idle periods, and harsh environments. The ODYSSEY™ battery can handle it.

Featuring rugged construction and packed tightly with pure lead plates, the non-spillable AGM design ODYSSEY battery protects against the shock and vibration that can quickly destroy other batteries. And the pure lead plates mean more power—twice the overall power and three times the life of conventional batteries—up to 400 cycles at 80% depth of discharge!

Bottom line? The ODYSSEY battery delivers massive starting power, rapid recovery, and extreme durability that heavy duty and commercial vehicles demand.

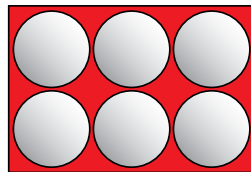
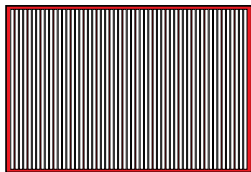
## Construction

- Pure virgin lead plates for maximum surface area, optimized recycling
- AGM (absorbed glass mat) design eliminates acid spills
- High conductivity, corrosion-resistant tin-plated brass terminals
- High integrity terminal seal
- Sealed design — gases recycled internally during operation or charging
- Safety relief valve per cell
- Robust intercell connections prevents vibration damage



## ODYSSEY™ batteries beat spiral-wound

Compared to spiral-wound batteries of equal size, ODYSSEY™ batteries pack 15% more plate surface area into the case. Avoiding the “dead space” between cylinders in “six-pack” designs means ODYSSEY batteries deliver more power and 40% more reserve capacity.



### ■ Unused battery space

## ODYSSEY™ Ultimizer™ Chargers

ODYSSEY batteries are complemented by ULTIMIZER™ Chargers – lightweight and compact 12V chargers featuring a 3-step charge profile for fast, complete and safe charging.

Models include 25amp, 40amp (3 bank), 50amp (3 bank), and 50amp (single bank).



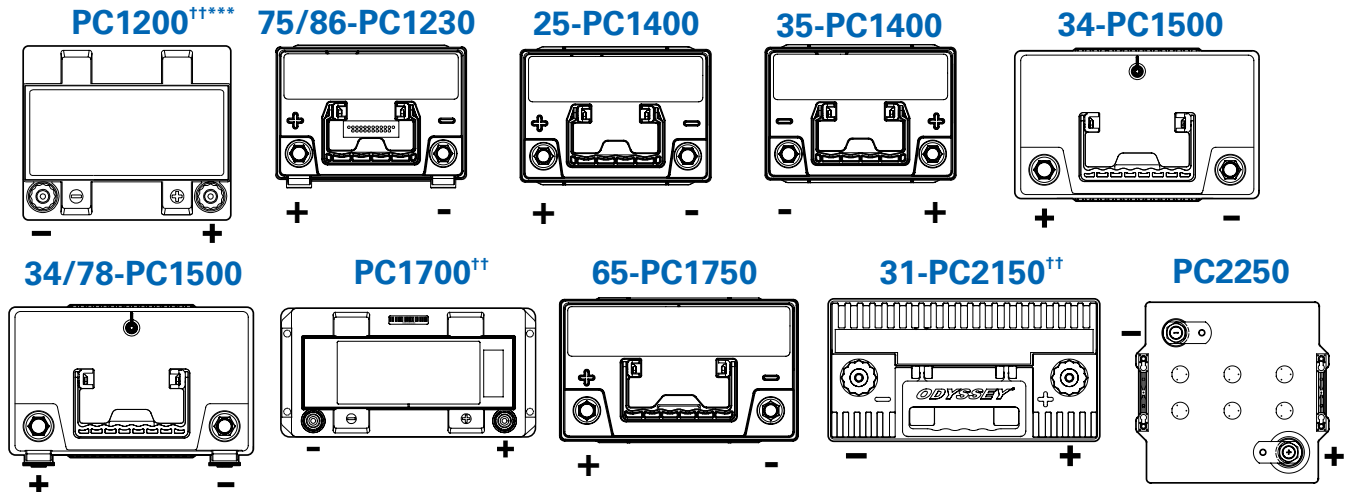
Optional height adapter may be used on the 34-PC1500 for installations where a group 24 or group 27 is required. Snap the adapter securely into place on the bottom of the 34-PC1500 battery. In some installations, a 34-PC1500 with this adapter may be used to replace a group 24F or 27F depending on required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



## ODYSSEY™ battery technology comparison

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

## Terminal layouts



Drawing sizes are for terminal position reference only; diagrams are not proportionate to each other.

†† Optional Metal Jacket (MJ)

\*\*\* Optional Reversed Polarity (L)

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)									
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
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
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
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
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
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
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)	Dual SAE/DIN Terminal and 3/8" Stud	100 (11.0) For 3/8" Stud Only	2.1	5000A

\*Cold Start Performance S.A.E J537 JUNE 82

\*\*Pulse Current

† Can be fitted with brass automotive terminal

Operating temperature range:

-40°C (-40°F) to 80°C (176°F)

-30°C (-22°F) to 40°C (104°F) for PC2250

### Constant voltage portable charger parameters:

Standby, per 12V battery

13.5-13.8V no current limit required

Cyclic, per 12V battery (16-hour recharge)

14.4-14.8V no current limit required

Typical deep-cycle life at 25°C/77°F at a 5-hour rate

400 cycles at 80% DOD

Typical service life at 25°C/77°F

Medium to heavy duty usage - 3+ years  
Light duty usage - 5+ years

## 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**

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

### **Regional Sales**

#### **EnerSys Energy Products Inc.**

617 North Ridgeview Drive  
Warrensburg, MO 64093-9301, USA  
Tel: +1-660-429-2165  
Fax: +1-660-429-1758

#### **EnerSys Australia Pty Ltd.**

54-58 Derby Street  
Silverwater, NSW 2128  
Australia  
Tel: + 61 (0) 2 9739 9999  
Fax: + 61 (0) 2 9739 9900

**[www.odysseybattery.com](http://www.odysseybattery.com)**

#### **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, 34/78-PC1500, 65-PC1750, 31-PC2150 and PC2250 batteries, except Trolling Thunder™/Marine Dual Purpose labeled batteries, for which the Applicable Warranty Period is three (3) years. 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 authorized ODYSSEY battery dealer with the original receipt for a replacement. This warranty may vary from country to country; contact your authorized ODYSSEY battery wholesaler or dealer for the applicable warranty

#### **GENERAL PROVISIONS:**

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.

#### **To obtain warranty service:**

1. Return the Battery to any authorized 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.