YUASA

PRO-SPEC

Power with Advanced Charge Technology

Multiple purpose
deep cycle batteries

www.yuasaeurope.com
Introduction

Yuasa are one of the world’s largest battery manufacturers and leaders in the design, manufacture and supply of valve regulated lead-acid batteries, with global manufacturing plants and an extensive marketing and distribution network throughout the UK and Europe.

The Yuasa Pro-Spec range of batteries have been specifically designed for durability and long life in deep discharge use. Unique, state of the art plate barrier prevention and separator systems minimise self discharge and maximise both the out of use storage period and the number of recharge cycles, providing more power and reliability and prolonging the service life of the battery.

Features
- Vibration Resistant
- Maintenance Free
- Deep Cycle
- Extended Service Life

Applications
- Electric Vehicles including:
  - Golf Carts
  - Mobility Vehicles
- Warehouse Equipment including:
  - Fork Lifts
  - Access Platforms
  - Floor Cleaners
Technical Features

1. **Case/Lid:**
   a. Less weight, shock-resistant and acid-resistant by PP Resin
   b. Special-designed structure to prevent short-circuit from active-material shedding in the bottom

2. **Terminal:**
   a. Cast with special lead alloy
   b. Special plating to minimize heat generation and electric resistance
   c. Designed to vibration resistance
   d. Easily detachable with standard & bolt/nut structure

3. **Cap:**
   a. Engineering structure to vent gas out
   b. Easy to refill and maintain

4. **Separator:**
   a. Porous Rubber material against acid and corrosion
   b. Excellent physical characteristics and lower electric resistance
   c. Using micro-fibre Glass-mat against active-material shedding

5. **Plates:**
   a. Negative – 99.9% pure lead with hard paste feature, specific additives for deep cycle purpose
   b. Positive corrosion-resistant grid with hard paste feature, specific additives for deep cycle purpose

Terminal Configurations

Embedded Terminal (ET)  
Dual Fit Terminal (DT)  
Standard Terminal (ST)

**PRO-SPEC Batteries**

<table>
<thead>
<tr>
<th>Type</th>
<th>Capacity</th>
<th>Dimensions (mm)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>@25A (Mins)</td>
<td>@75A (Mins)</td>
<td>5HR (Ah)</td>
</tr>
<tr>
<td>Deep Cycle 6V</td>
<td>DCB 605-6</td>
<td>383</td>
<td>105</td>
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<td></td>
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<td>447</td>
<td>115</td>
</tr>
<tr>
<td></td>
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<td>132</td>
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<tr>
<td></td>
<td>DCB 145-6</td>
<td>530</td>
<td>145</td>
</tr>
<tr>
<td>Deep Cycle 8V</td>
<td>DCB 875-8</td>
<td>295</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>DCB 890-8</td>
<td>340</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>DCB 8125-8</td>
<td>425</td>
<td>110</td>
</tr>
<tr>
<td>Deep Cycle 12V</td>
<td>DCB 1275-12</td>
<td>290</td>
<td>70</td>
</tr>
</tbody>
</table>

Independent cycle life test

Improved Paste and 4BS (Tetra Basic lead sulphate) application to longer life cycle and capacity maximization

Unified and embedded terminal application to prevent terminal damage in event of high rate discharging

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Recommended Charge Profile

**Phase 1 (Constant-current)**
constant current charge at 20.5~26.6 amperes until the battery voltage measures between 7.14~7.29V/Battery (25°C) on charge voltage.

**Phase 2 (Constant-voltage)**
constant voltage charge at 7.14~7.29V/Battery (25°C) until the current measures between 2.05~6.15 amperes.

**Phase 3 (Constant-current)**
constant current charge at 2.05~6.15 amperes until the battery voltage measures between 7.5~8.1V/Battery (25°C) or until dV/dt reaches to less than 0.035.

*END OF CHARGE at 110~120% of AH returned.

*Note: Charging condition (Voltage, Current, Time) will vary depending on battery size, charger (Charging Type, Output) depth of discharge and temperature.

### Specifications

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<tr>
<th>Nominal Voltage</th>
<th>6V</th>
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<tr>
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<td>261mm</td>
</tr>
<tr>
<td>Width</td>
<td>181mm</td>
</tr>
<tr>
<td>Height (Embedded Terminal)</td>
<td>279mm</td>
</tr>
<tr>
<td>Weight (With Electrolyte)</td>
<td>27kg</td>
</tr>
<tr>
<td>Terminal Options</td>
<td>ET, DT and ST</td>
</tr>
</tbody>
</table>

### Capacity

| 20Hr | 210Ah |
| 5Hr  | 175Ah |
| 75A  | 105mins |
| 25A  | 383mins |

### 5Hr Capacity by temperature

| 40°C | 105% |
| 30°C | 100% |
| 0°C  | 80% |

### Material specifications

<table>
<thead>
<tr>
<th>Cover Style</th>
<th>Individual Fitting Structure</th>
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<tr>
<td>Cover vent style</td>
<td>Gang style</td>
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<td>Container &amp; cover material</td>
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<tr>
<td>Case to cover seal method</td>
<td>Heat sealing</td>
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<tr>
<td>Inner-cell connector type</td>
<td>Through the partition weld</td>
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<tr>
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<td>Automated cast-on process</td>
</tr>
<tr>
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<td>Antimony lead alloy</td>
</tr>
<tr>
<td>Negative grid material</td>
<td>Antimony lead alloy</td>
</tr>
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<td>Separator type</td>
<td>Microporous rubber with glass mat</td>
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**Recommended Charge Profile**

**Phase 1 (Constant-current)**
constant current charge at 22.5~29.3 amperes until the battery voltage measures between 7.14~7.29V/Battery (25°C) on charge voltage.

**Phase 2 (Constant-voltage)**
constant voltage charge at 7.14~7.29V/Battery (25°C) until the current measures between 2.25~6.75 amperes.

**Phase 3 (Constant-current)**
constant current charge at 2.25~6.75 amperes until the battery voltage measures between 7.5~8.1V/Battery (25°C) or until dV/dt reaches to less than 0.035.

*END OF CHARGE at 110~120% of AH returned.

*Note: Charging condition (Voltage, Current, Time) will vary depending on battery size, charger (Charging Type, Output) depth of discharge and temperature.

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<td>29kg</td>
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<td>Terminal Options</td>
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### Capacity

| 20Hr | 225Ah |
| 5Hr  | 185Ah |
| 75A  | 115mins |
| 25A  | 447mins |

### 5Hr Capacity by temperature

| 40°C | 105% |
| 30°C | 100% |
| 0°C  | 80% |

### Material specifications

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<td>Separator type</td>
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**Recommended Charge Profile**

**PRO-SPEC DCB 125-6**

Phase 1 (Constant-current)
constant current charge at 24~31.2 amperes until the battery voltage measures between 7.14~7.29V/Battery (25°C) on charge voltage.

Phase 2 (Constant-voltage)
constant voltage charge at 7.14~7.29V/Battery (25°C) until the current measures between 2.4~7.2 amperes.

Phase 3 (Constant-current)
constant current charge at 2.4~7.2 amperes until the battery voltage measures between 7.5~8.1V/Battery (25°C) or until dV/dt reaches to less than 0.035.

*END OF CHARGE at 110~120% of AH returned.*

*Note: Charging condition (Voltage, Current, Time) will vary depending on battery size, charger (Charging Type, Output) depth of discharge and temperature.*

**Specifications**
- **Nominal Voltage**: 6V
- **Length**: 261mm
- **Width**: 181mm
- **Height (Embedded Terminal)**: 279mm
- **Weight (With Electrolyte)**: 31kg
- **Terminal Options**: ET, DT and ST

**Capacity**
- **20Hr**: 240Ah
- **5Hr**: 195Ah
- **75A**: 132mins
- **25A**: 488mins

**5Hr Capacity by temperature**
- **40°C**: 105%
- **30°C**: 100%
- **0°C**: 80%

**Material specifications**
- **Cover Style**: Individual Fitting Structure
- **Cover vent style**: Gang style
- **Container & cover material**: Black polypropylene plastic
- **Case to cover seal method**: Heat sealing
- **Inner-cell connector type**: Through the partition weld
- **Plate lug weld method**: Automated cast-on process
- **Positive grid material**: Antimony lead alloy
- **Negative grid material**: Antimony lead alloy
- **Separator type**: Microporous rubber with glass mat

**PRO-SPEC DCB 145-6**

Phase 1 (Constant-current)
constant current charge at 26~33.8 amperes until the battery voltage measures between 7.14~7.29V/Battery (25°C) on charge voltage.

Phase 2 (Constant-voltage)
constant voltage charge at 7.14~7.29V/Battery (25°C) until the current measures between 2.6~7.8 amperes.

Phase 3 (Constant-current)
constant current charge at 2.6~7.8 amperes until the battery voltage measures between 7.5~8.1V/Battery (25°C) or until dV/dt reaches to less than 0.035.

*END OF CHARGE at 110~120% of AH returned.*

*Note: Charging condition (Voltage, Current, Time) will vary depending on battery size, charger (Charging Type, Output) depth of discharge and temperature.*

**Specifications**
- **Nominal Voltage**: 6V
- **Length**: 261mm
- **Width**: 181mm
- **Height (Embedded Terminal)**: 298mm
- **Weight (With Electrolyte)**: 33kg
- **Terminal Options**: ET, DT and ST

**Capacity**
- **20Hr**: 260Ah
- **5Hr**: 215Ah
- **75A**: 145mins
- **25A**: 530mins

**5Hr Capacity by temperature**
- **40°C**: 105%
- **30°C**: 100%
- **0°C**: 80%

**Material specifications**
- **Cover Style**: Individual Fitting Structure
- **Cover vent style**: Gang style
- **Container & cover material**: Black polypropylene plastic
- **Case to cover seal method**: Heat sealing
- **Inner-cell connector type**: Through the partition weld
- **Plate lug weld method**: Automated cast-on process
- **Positive grid material**: Antimony lead alloy
- **Negative grid material**: Antimony lead alloy
- **Separator type**: Microporous rubber with glass mat
**Recommended Charge Profile**

**Phase 1 (Constant-current)**
constant current charge at 17~22.1 amperes until the battery voltage measures between 9.52~9.72V/Battery (25°C) on charge voltage.

**Phase 2 (Constant-voltage)**
constant voltage charge at 9.52~9.72V/Battery (25°C) until the current measures between 1.7~5.1 amperes.

**Phase 3 (Constant-current)**
constant current charge at 1.7~5.1 amperes until the battery voltage measures between 10~10.8V/Battery (25°C) or until dV/dt reaches to less than 0.035.

*END OF CHARGE at 110~120% of AH returned.

*Note: Charging condition (Voltage, Current, Time) will vary depending on battery size, charger (Charging Type, Output) depth of discharge and temperature.

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**Specifications**

- **Nominal Voltage**: 8V
- **Length**: 264mm
- **Width**: 183mm
- **Height (Embedded Terminal)**: 279mm
- **Weight (With Electrolyte)**: 29kg
- **Terminal Options**: ET, DT and ST

**Capacity**

- **20Hr**: 170Ah
- **5Hr**: 145Ah
- **75A**: 75mins
- **25A**: 295mins

**5Hr Capacity by temperature**

- **40°C**: 105%
- **30°C**: 100%
- **0°C**: 80%

**Material specifications**

- **Cover Style**: Individual Fitting Structure
- **Cover vent style**: Gang style
- **Container & cover material**: Black polypropylene plastic
- **Case to cover seal method**: Heat sealing
- **Inner-cell connector type**: Through the partition weld
- **Plate lug weld method**: Automated cast-on process
- **Positive grid material**: Antimony lead alloy
- **Negative grid material**: Antimony lead alloy
- **Separator type**: Microporous rubber with glass mat
**Recommended Charge Profile**

**Phase 1 (Constant-current)**
constant current charge at 24~31.2 amperes until the battery voltage measures between 9.52~9.72V/Battery (25°C) on charge voltage.

**Phase 2 (Constant-voltage)**
constant voltage charge at 9.52~9.72V/Battery (25°C) until the current measures between 2.4~7.2 amperes.

**Phase 3 (Constant-current)**
constant current charge at 2.4~7.2 amperes until the battery voltage measures between 10~10.8V/Battery (25°C) or until dV/dt reaches to less than 0.035.

*END OF CHARGE at 110~120% of AH returned.

*Note: Charging condition (Voltage, Current, Time) will vary depending on battery size, charger (Charging Type, Output) depth of discharge and temperature.

**Specifications**

- **Nominal Voltage**: 8V
- **Length**: 264mm
- **Width**: 183mm
- **Height (Embedded Terminal)**: 319mm
- **Weight (With Electrolyte)**: 37kg
- **Terminal Options**: ET, DT and ST

**Capacity**

- **20Hr**: 240Ah
- **5Hr**: 190Ah
- **75A**: 110mins
- **25A**: 415mins

**5Hr Capacity by temperature**

- **40°C**: 105%
- **30°C**: 100%
- **0°C**: 80%

**Material specifications**

- **Cover Style**: Individual Fitting Structure
- **Container & cover material**: Black polypropylene plastic
- **Case to cover seal method**: Heat sealing
- **Inner-cell connector type**: Through the partion weld
- **Plate lug weld method**: Automated cast-on process
- **Positive grid material**: Antimony lead alloy
- **Negative grid material**: Antimony lead alloy
- **Separator type**: Microporous rubber with glass mat

**Recommended Charge Profile**

**Phase 1 (Constant-current)**
constant current charge at 15~19.5 amperes until the battery voltage measures between 14.28~14.58V/Battery (25°C) on charge voltage.

**Phase 2 (Constant-voltage)**
constant voltage charge at 14.28~14.58V/Battery (25°C) until the current measures between 1.5~4.5 amperes.

**Phase 3 (Constant-current)**
constant current charge at 1.5~4.5 amperes until the battery voltage measures between 15~16.2V/Battery (25°C) or until dV/dt reaches to less than 0.035.

*END OF CHARGE at 110~120% of AH returned.

*Note: Charging condition (Voltage, Current, Time) will vary depending on battery size, charger (Charging Type, Output) depth of discharge and temperature.

**Specifications**

- **Nominal Voltage**: 12V
- **Length**: 331mm
- **Width**: 183mm
- **Height (Embedded Terminal)**: 281mm
- **Weight (With Electrolyte)**: 38kg
- **Terminal Options**: ET

**Capacity**

- **20Hr**: 150Ah
- **5Hr**: 120Ah
- **75A**: 70mins
- **25A**: 280mins

**5Hr Capacity by temperature**

- **40°C**: 105%
- **30°C**: 100%
- **0°C**: 80%

**Material specifications**

- **Cover Style**: Individual Fitting Structure
- **Container & cover material**: Black polypropylene plastic
- **Case to cover seal method**: Heat sealing
- **Inner-cell connector type**: Through the partion weld
- **Plate lug weld method**: Automated cast-on process
- **Positive grid material**: Antimony lead alloy
- **Negative grid material**: Antimony lead alloy
- **Separator type**: Microporous rubber with glass mat