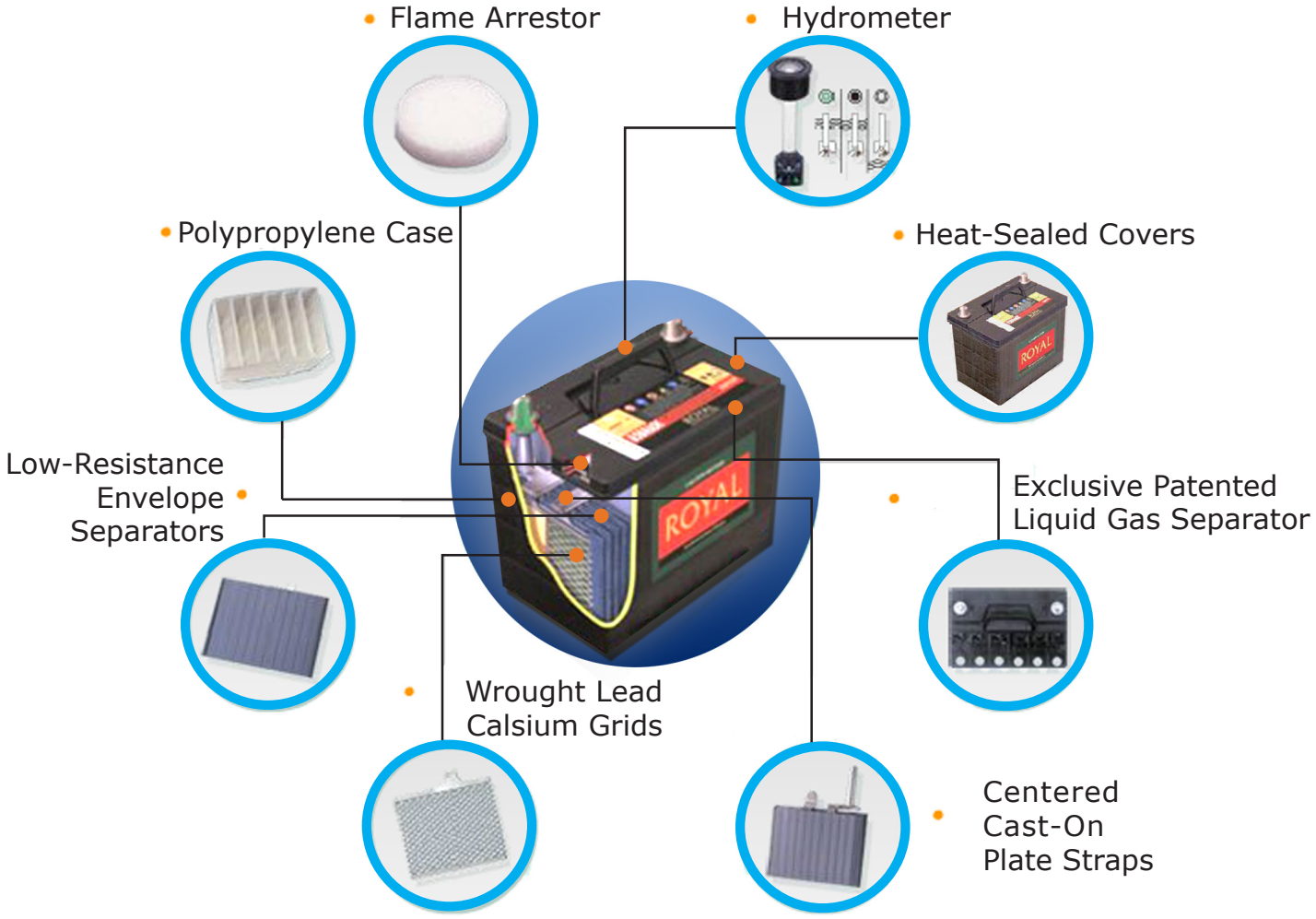
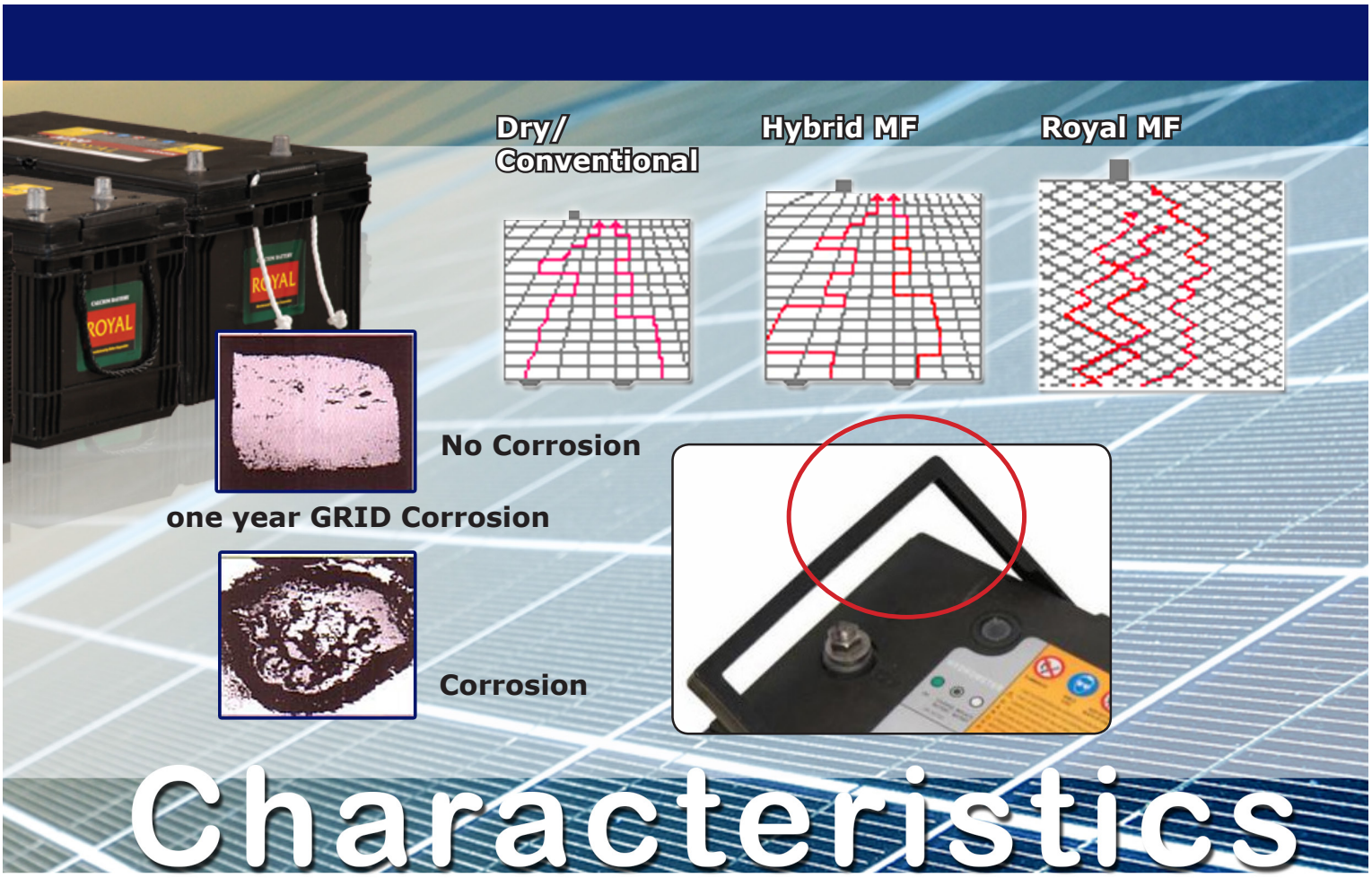
- **Flame Arrestor:** Prevents outside spark from causing explosions
- **Hydrometer:** At full charge the electrolyte specific gravity is 1,280 while at 50% of charge considered the minimum servicable condition, the specific gravity is typically 1,220. In a typical situation when the specific gravity drops to 1,100, the battery is fully discharged.
- **Heat Sealed Covers:** Prevents leakage and contamination.
- **Exclusive Pateneted Liquid Gas Separator:** Prevents Electrolyte loss by collecting and returning liquid to the reservior.
- **Heat Sealed Covers:** Prevents leakage and contamination.
- **Centered Cast-on Plate Straps:** Stronger than the thinner gas-burned conventional connectors.
- **Wrought Lead-Calcium Grids:** Over charge resistance. Less self discharge.
- **Low-Resistance Envelope Separators:** Improve vibration durability.
- **Polypropylene Case:** Leight weight and easy to handle.

Structure &





Characteristics

Product Characteristics
No Need for Distilled Water
Delkor batteries use special alloy calcium lead for minimal fluid loss (less than 1/10 of other batteries) meaning that there is no need to replenish distilled water throughout the life of the battery.

Strong Charge
The use of calcium alloy grids and low resistance envelope separators means that Delkor batteries have 20% improved charging ability compared to other batteries, even during intense heat or cold.

Low Rates of Self-Discharge
Calcium alloy grids provide prompt turnover even after long periods of standing.

Mounted Hydrometer
A mounted hydrometer allows you to check the status of the battery.

Long Life
pecial alloy grids prevent corrosion and extend the life of the battery (with) making it the economically practical choice.

Cast Grid Technology		Wrought GRID technology	
Type	**Cat Antimony(Dry/ Conventional)**	**Cast Calsium (Hybrid MF)**	**Wrought Expanded Lead Calsium alloy ROYAL MF**
Technology	• Large Grain Size • Poor Resistance to Deep Corrosion • Poor Resistance to "Buckling" • Loss of physical & Electrical Integrity • Poor High Temperature Performance		• Fine Grain Structure • High Resistance to Corrosion • High Resistance to "Buckling" • Retain physical & electrical integrity • Eliminates Electro chemical effect of Arsenic-Antimony (Gassing, Water loss. Self-Discharge • Improved High Temperature Performance

one year GRID Comparison	
• Deep Penetrating Corrosion • Reduced Electrical Performance • Reduced Physical Strength (broken Grid Wire-Loss of Electrical Contact)	• No deep intergranuiar Corrosion • No loss in performance

1150K-battery

Features

- Complete protection against reduction of sulfuric acid
- Preventing electrolyte losses by collecting and returning liquid to the reservoir
- Consistent starting performance
- High durability achieved by adoption of special wrought lead calcium grids
- Low resistance envelope separator

1150K-Battery

12V, NUT, 102AH, 240mm (H) 335mm (l), 175mm (w)


SAE post clamp


SAE post & Wing Nut


1150K Nut


1150K to 1111K Converter


J Post

SABMA Code	Item Code	Capacity 20HR Rate	CCA -18°C EN	Dimensions L x W x H mm	Weight Kg	Terminal Layout Type	Terminal Layout
674/Stud	1150K	105A/H	735	331 x 173 x 241	25.9	LHP (Centre)	+ -

LHP: Left hand positive RHP: Right hand positive

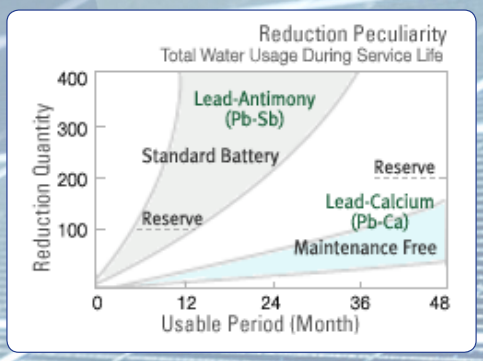
The Royal calcium battery is a general purpose **semi-sealed battery** with a **design life up 3 to 5 years** in standby service.

Royal batteries uses specially **alloyed calcium-lead, which leads to extrememly low levels of "electrolyte decrease"**. Therefore there is no need to supplement distilled water if the charging system remains error-free.

Special liquid-gas separators keeps the electrolyte inside. An electrolyte is any substance containing free ions that behaves as an electrically conductive medium. These separators are also used between the positive and negative plates of a lead acid battery **to prevent a short circuit through physical contact**.

No filler caps are required therefore there is no electrolyte contamination, overwatering or damage in use. Unique wrought **lead-calcium grid design means less internal corrosion and efficient current conductivity for more power and longer life**. It also cuts gassing, resists overcharge,heat and thermal runaway.

Benefits



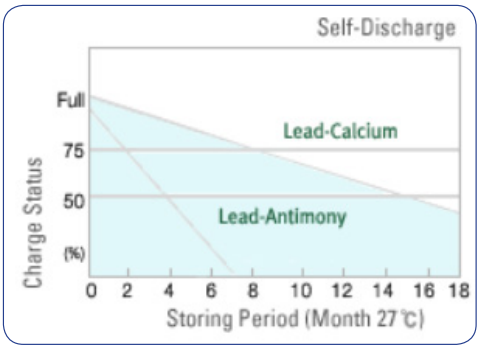
Benefit 1: No need to replenish Distilled Wated

The local action of conventional lead-antimony batteries, due to the effects of the antimony ions during battery use, electrolyzes battery fluid (electrolytes) into oxygen and hydrogen to deplete the battery of fluid. In such conventional batteries, users need to replenish the battery with distilled water or risk the deterioration of battery performance and life Delkor batteries, however, use a special alloy calcium-lead, which leads to extremely low levels of fluid loss. As long as the charging system of the car remains error-free throughout the life of the battery, there is no need to supplement the battery with distilled water.

benefits of calcium LEAD GRID technology

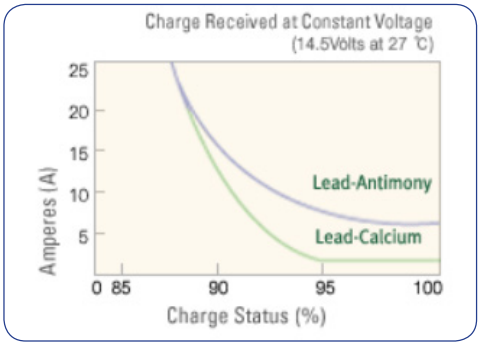
Benefit 2: No Need to Recharge

The phenomenon of self-discharge causes lead-acid batteries to consume charged power, even when the battery is not in use (i.e. during storage). This is due to the impurities contained in the lead alloy, which induces local action and, thus, consumption of electrical energy. Delkor batteries, on the other hand, uses highly-refined, hand-selected lead alloys that render extremely low rates of self-discharge and maintains high battery performance even after long periods of disuse.



Benefit 3: Prevent Risk of Overcharge

Car batteries can be charged even when the car is in motion. In general, the charged current is adjusted to high or low levels by the voltage regulator. Given the preset voltage in the voltage regulator (14.5V), when a battery is nearly charged to full, the charged current must be reduced to prevent overcharging, which can diminish battery performance. As shown on the graph, the charged current of Delkor calcium batteries are reduced to an extremely low level when the battery is nearly charged to full, thereby minimizing (almost eliminating) the risk of overcharging.



Benefit 4: Thermal Runway

When using the nearly fully charged battery in high temperatures (approximately 70 degrees Celsius), the charged current must be decreased to prevent overcharging and subsequent battery damage. However, in lead-acid batteries, due to the contents of the grid alloy, the charging current decreases during the initial stage, but increases soon thereafter, leading to damages to the gird and deteriorated performance. However, Delkor batteries do not contain such substances and thus, the charged current remains at extremely low levels when the nearly fully charged battery is used in high temperatures to prevent overcharging.