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**RAILROAD & DIESEL STARTER**





8 NS 33P



16 CH 35P



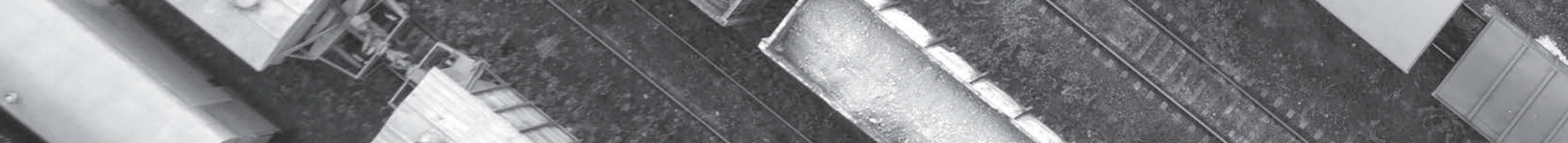
8 NS 23P

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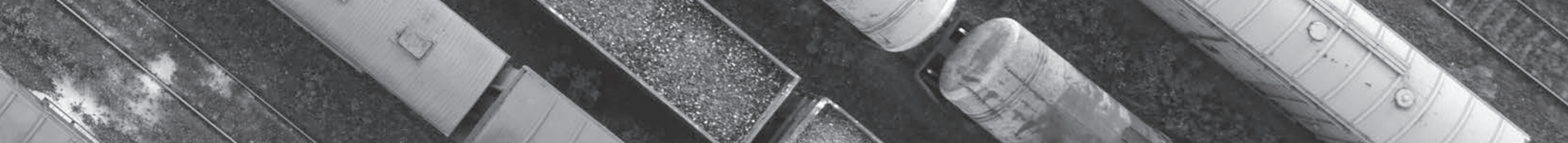
## FLOODED RAILROAD & DIESEL STARTER BATTERIES

Rolls Railroad & Diesel Starter 4-volt & 6-volt flooded battery models offer heavy-duty plate construction in dual container design. Each modular 2-volt cell is securely bolted and fully protected in the high temperature-retardant and moisture-tight outer container.

SERIES	MODEL	8 HR RATE	20 HR RATE	CCA @ -17°C (0°F)	CCA @ 0°C (32°F)	LENGTH IN   CM	WIDTH IN   CM	HEIGHT IN   CM	WEIGHT LBS   KG
<b>ROLLS BATTERY 4000 SERIES: 4 VOLT</b>									
4000	4 CH 23P	472	605	1893	2367	14.38in   36.5cm	8.25in   21.0cm	18.25cm   46.4cm	128.0lbs   58.0kg
<b>ROLLS BATTERY 4000 SERIES: 6 VOLT</b>									
4000	6 HHG 31P	296	344	1337	1671	20.75in   52.7cm	8.00in   20.3cm	11.88in   30.2cm	124.5lbs   56.5kg
4000	6 EHG 31P	353	410	1549	1936	20.75in   52.7cm	8.00in   20.3cm	12.75in   32.4cm	132.5lbs   60.0kg

Special orders and discontinued models available upon request.  
 All capacities based on specific gravities of 1.280. Reduce capacity 5% for 1.256 specific gravity and 10% for 1.250 specific gravity.





6 HHG 31P

## FEATURES

- Non-breakable dual-container construction
- Modular, bolted 2 volt cells
- Computer-controlled formation
- Environmentally friendly; moisture-tight outer cover
- Load and capacity tested prior to shipping
- 5 year warranty



4 CH 23P



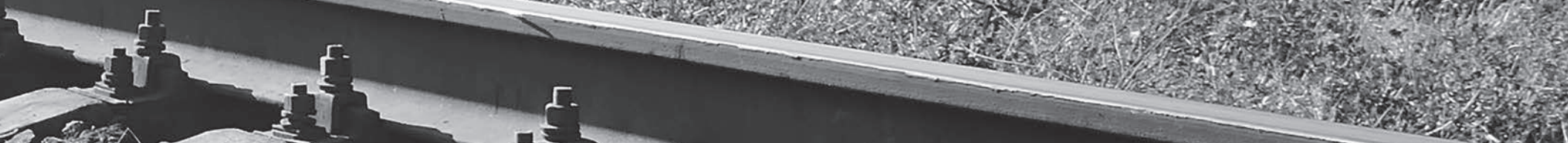


## 8 VOLT MODELS

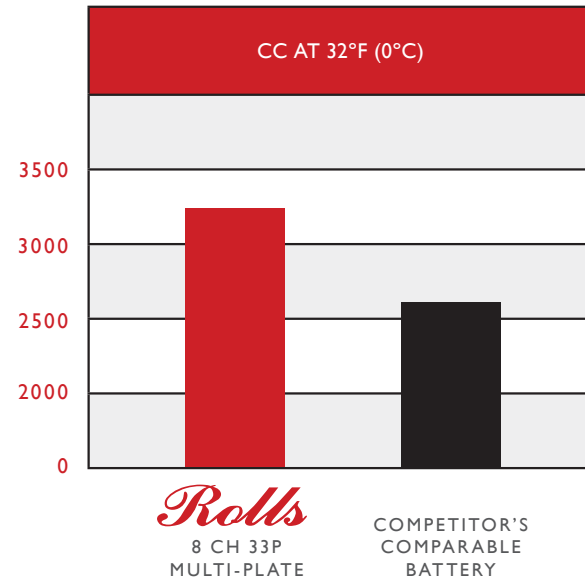
SERIES	MODEL	8 HR RATE	20 HR RATE	CCA @ -17°C (0°F)	CCA @ 0°C (32°F)	LENGTH IN   CM	WIDTH IN   CM	HEIGHT IN   CM	WEIGHT LBS   KG
<b>ROLLS BATTERY 4000 &amp; 5000 SERIES: 8 VOLT</b>									
4000	8 HHG 31P	296	344	1337	1671	27.00in   68.6cm	8.00in   20.3cm	11.88in   30.2cm	166.5lbs   75.5kg
4000	8 EHG 31P	353	410	1549	1936	27.00in   68.6cm	8.00in   20.3cm	12.75in   32.4cm	177.5lbs   80.5kg
5000	8 CH 17SP	343	440	1357	1697	20.75in   52.7cm	8.25in   21.0cm	17.5in   44.5cm	216lbs   147.0kg
5000	8 NS 23P	351	450	1559	1949	28.25in   109.2cm	8.25in   21.0cm	18.25in   46.4cm	241.5lbs   109.5kg
5000	8 CH 23P	405	605	1559	2333	28.25in   109.2cm	8.25in   21.0cm	18.25in   46.4cm	255.5lbs   116.0kg
5000	8 CH 23P-QR	351	605	1866	2333	28.25in   109.2cm	11.25in   28.6cm	18.25in   46.4cm	255.5lbs   116.0kg
5000	8 NS 33P	511	655	2268	2835	28.25in   109.2cm	11.25in   28.6cm	18.25in   46.4cm	351.5lbs   159.5kg
5000	8 CH 33P	694	890	2754	3443	28.25in   109.2cm	11.25in   28.6cm	18.25in   46.4cm	413.5lbs   187.5kg

Special orders and discontinued models available upon request.  
 All capacities based on specific gravities of 1.280. Reduce capacity 5% for 1.256 specific gravity and 10% for 1.250 specific gravity.





8 CH 33P



## FEATURES

- 33% higher cranking capacity at 0°C (32°F)





## 32 VOLT MODELS

SERIES	MODEL	8 HR RATE	20 HR RATE	CCA @ -17°C (0°F)	CCA @ 0°C (32°F)	LENGTH IN   CM	WIDTH IN   CM	HEIGHT IN   CM	WEIGHT LBS   KG
<b>ROLLS BATTERY 5000 SERIES: 32 VOLT</b>									
5000	16 CS 15P	373	478	2027	2534	26.95in   68.5cm	27.00in   68.6cm	20.50in   52.1cm	1040lbs   471.50kg
5000	16 CH 25P	515	660	2027	2534	33.67in   85.5cm	27.00in   68.6cm	20.50in   52.1cm	1238lbs   561.50kg
5000	16 CH 33P	687	881	2648	3310	43.00in   109.2cm	27.50in   69.9cm	20.25in   51.4cm	1608lbs   729.50kg
5000	16 CH 35P	730	936	2814	3518	43.00 in   109.2cm	27.50in   69.9cm	20.25in   51.4cm	1672lbs   758.50kg

Special orders and discontinued models available upon request.  
 All capacities based on specific gravities of 1.280. Reduce capacity 5% for 1.256 specific gravity and 10% for 1.250 specific gravity.

### OPTIONAL CELL CONNECTION

If a cell replacement is necessary, Rolls Railroad & Diesel Starter models offer a quick solution. As an option, individual modular 2 volt cells can be bolted together, allowing straight-forward replacement or assembly to be done on location.







16 CH 33P

## FEATURES

- Widest range of specifications available
- Industry's largest liquid reserve
- Higher crank Amps
- Non-breakable dual-container construction
- Computer-controlled formation
- Environmentally friendly; moisture-tight outer cover
- Load and capacity tested prior to shipping
- 5 year warranty

## SAFETY, DURABILITY AND ENVIRONMENTALLY-FRIENDLY DESIGN

Rolls non-breakable dual-container construction virtually eliminates breakage due to rough handling or high stress installations. Individual heat-sealed, modular 2-volt cells are securely connected and self-contained in a high temperature-retardant moisture-tight polypropylene outer case & cover, eliminating the potential for short circuits from water, dirt or falling objects. Should the outer container become punctured or damaged, the protected cells would remain operable with no sulfuric acid spills.

## RUGGED PLATE CONSTRUCTION

Rolls tough positive plates are the thickest in the industry and are double insulated for durability & protection. Each plate and its matting are sealed in a non-destructible micro-porous polyethylene envelope, eliminating the possibility of misalignment, cracked separators, or shorting at the bottom or sides.

Rolls superior heavy-duty Rezistox plate design uses fewer but heavier members in the grid structure, offering increased resistance to positive grid corrosion and a higher percentage of oxide paste material and resulting capacity in each plate.

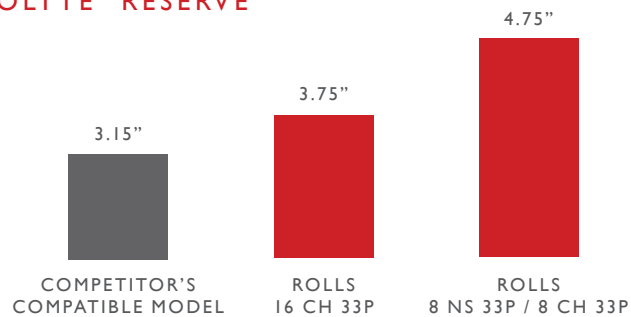
## DISTILLED WATER

All flooded lead acid batteries, in the course of normal operation, off-gas hydrogen and oxygen from water in the electrolyte during routine charging. It is important to maintain adequate electrolyte levels in each cell as battery plates must be completely submerged when charging to prevent cell damage. To prevent cell damage, electrolyte levels must be monitored regularly and distilled water should be added as necessary. Each cell should be filled to 1/2" – 1/4" below the vent tube to prevent overflow when the battery is placed on charge.

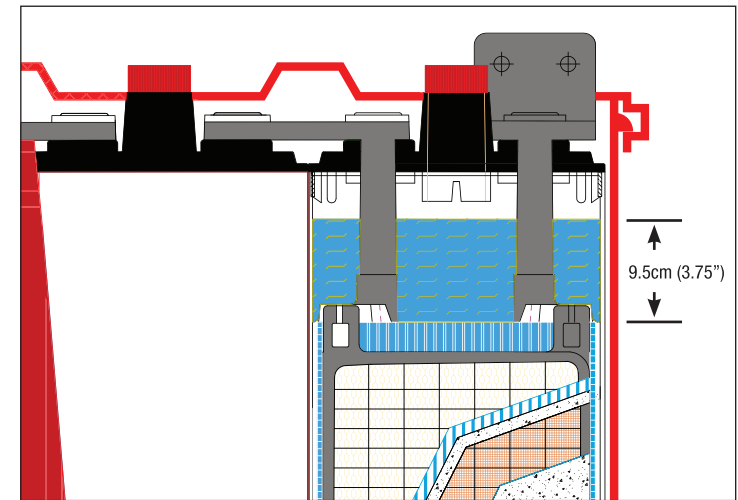
Cold temperatures and extended open circuit stands will cause electrolyte levels to drop. Under these conditions, where electrolyte levels are still above the plates, it is recommended that the batteries be placed on charge for 3 – 6 hours before filling.

Note: If routine specific gravity readings note a gradual decrease or consistently remain 0.10 to 0.020 points below a fully charged state, the programmed charge voltage or time may be too low for the locomotive's work schedule and should be increased. Excessive water consumption indicates the charge voltage may be too high. Charge adjustments should be made in 0.5 volt increments, monitoring the state of charge and specific gravity after each adjustment to determine if an additional changes are necessary.

## ELECTROLYTE RESERVE



## DESIGNED FOR 180 DAY WATERING INTERVALS



Extended liquid reserves safeguard against cell damage.

Rolls trusted heavy-duty models offer ample liquid reserves to safely meet a 180 day maintenance schedule. Dual-container construction virtually eliminates breakage, cell damage or acid leaks typically caused by rough handling or high-stress installations. Each modular 2 volt cell is securely welded or fully protected in the high temperature-retardant and moisture-tight outer container, preventing short circuits from water, dirt or falling objects.





## AUTOMATIC WATERING SYSTEMS

Frequent locomotive starts demand aggressive charging of the locomotive batteries, resulting in increased water use. To avoid damage and ensure cranking amps are available, it is important that the proper electrolyte level is maintained in each cell.

Rolls Locomotive Single-Point Watering Systems by Flow-Rite will automatically top up the correct amount of distilled water in each cell in 1-2 minutes is the only single point watering system designed specifically for locomotives. Designed to eliminate the need to lift or remove a battery for watering, the Rolls Locomotive Single-Point Watering System is the only watering system with internal flame arrestors and includes a de-gas chamber to allow normal release of gasses. This system has been specifically designed to allow for electrolyte expansion to avoid dangerous acid spills.



- Installs on all major brands of locomotive starting batteries
- Low profile design fits in locomotive battery compartments
- Acid resistant, polypropylene components and tubing
- Designed to survive extreme temperatures and vibrations

**NOTE:** To ensure proper operation, routine inspection of watering systems is recommended.

Contact your Rolls Battery distributor or dealer for more information. When requesting pricing, indicate the battery make, model and preferred water supply.



# LOCOMOTIVE SMART BATTERY MONITORING SYSTEM

To operate efficiently, locomotives rely on dependable deep cycle batteries for engine starting. Proper charging and maintenance is key to maximizing battery performance including capacity, starting crank Amps and cycle life. Utilizing a simple and easy-to-read LED visual indicator and audible alerts, Rolls integrated Locomotive Smart Battery Monitor offers maintenance crews supportive information relating to battery health as well as state-of-charge and engine starting ability.

Select Rolls 32-volt locomotive models (16 CH 25R-MON, 16 CH 33R-MON) are equipped with an integrated Rolls proprietary Locomotive Smart Battery Monitor to track and provide real-time undercharge monitoring, discharge monitoring, impedance monitoring as well as performance & maintenance alerts with simple audio & visual communication.

Rolls SMART BATTERY MONITOR		
NORMAL OPERATION		
• •		NORMAL OPERATION
• • • •		BATTERY UNDERCHARGE INDICATOR*
• • • • •		CHARGE COMPLETE
*SUGGESTED: MAINTENANCE CHARGE & BATTERY TEST		
MAINTENANCE ALERTS		
• • • • •		SERVICE HOURS REACHED
• • • • •		LOW STARTING PERFORMANCE*
• • • • •		BATTERY OVER DISCHARGED*
*SUGGESTED: MAINTENANCE CHARGE & BATTERY TEST		



## FEATURES:

**BATTERY UNDERCHARGE INDICATOR:** Chronic undercharging reduces cycle life and is a specific concern with automatic engine start/stop (AESS) control systems. Rolls Locomotive Smart Battery Monitor alerts where incidents of undercharge may be occurring, helping guide operators to perform regular and restorative maintenance charges to avoid capacity loss and maintain starting performance.

**CHARGE COMPLETE:** Accurately tracking charge current and battery voltage, Rolls Locomotive Smart Battery Monitor assists in identifying when the battery has reached full state-of-charge and charging may be terminated. A unique LED sequence helps to confirm the charge is complete and the battery is now ready to be put into service.

**SERVICE HOURS:** Tracking battery age and charge cycles, Rolls Locomotive Smart Battery Monitor features a visual LED & audible alarm to identify batteries in service which have reached their specified or expected end-of-life period. This audio/visual indicator helps to ensure timely battery replacement and safeguard against unexpected fail-to-start events.

**LOW STARTING PERFORMANCE:** Rolls Locomotive Smart Battery Monitor continually monitors battery starting capability. Using a rising audible alert & LED, the monitor notifies operators of below specification starting performance due to increased battery impedance, suggesting a restorative maintenance charge & testing should be completed.

**OVER DISCHARGE ALERT:** Unintentional deep discharges reduce battery life and create fail-to-start conditions. Ensuring adequate charging and avoiding heavy discharge will maintain battery capacity and cranking performance. Using a combined LED indicator and continuous audible alarm, Rolls Locomotive Smart Battery Monitor alerts operators during incidents of abnormally low discharge which may lead to a fail-to-start event, suggesting a restorative maintenance charge & testing be performed before use.



## MODEL CROSS REFERENCE

ROLLS		REPLACES							
MODEL	DESCRIPTION	GE	EXIDE	GNB	CROWN	JMA	EAST PENN	EMD	FIRST NATIONAL
8 HHG 21P	8HHG21PR 8V BATTERY				LP-817				
8 HHG 25P	8HHG25PR 8V BATTERY				LP-819				
8 HHG 29P	8HHG29PR 8V BATTERY				LP-821				
8 HHG 31P	8HHG31PR 8V BATTERY				LP-825				
8 CH 17SP	8CH17SPR 8V BATTERY		4-LMS-11			JMA-M4513	DL-3000S		4 DS 280
8 CH 17ER	8CH17ER 8V BATTERY						DL-3000L		
8 NS 23P	8NS23PR 8V BATTERY		4-LMS-325				DL-4000		4 DS 390
8 CH 23P	8CH23PR 8V BATTERY	3X9540	4=LMS-420 4=LMS-450	KDZ-2701	MD-517	JMA-M4517	DL-4500		4MIL15DS
8 CH 23P-QR	8CH23P-QR 8V BATTERY								
8 NS 33P	8NS33PR 8V BATTERY	40090224					DL-5000 DL-6000		
8 CH 33P	8CH33PR 8V BATTERY	84C612573ABPI 3X7884		KDZ-3001	MD-525	JMA-M4525	DL-6500		4MIL25DS
16 CS 15P	16CSI5R 32V BATTERY							40125224 40105253	
16 CH 25P	16CH25R 32V BATTERY		LMUD-500 16-LMUD-530	KDZ-EM500 KDZ-501	UD-519	JMA-U519	DL-U500	40020109	
16 CH 33P	16CH33R 32V BATTERY		LMUD-660	KDZ651	UD-525	JMA-U525	DL-U650	40084033	
16 CH 35P	16CH35R 32V BATTERY		16-LUMD-725			JMA-U531			

Verify dimensions of battery compartment.

## CONTACTS

### **Surrette Battery Company Ltd.**

PO Box 2020  
1 Station Road, Springhill  
Nova Scotia, Canada  
B0M 1X0

#### **Phone**

1-902-597-3767 | 1-800-681-9914

#### **Fax**

1-902-597-8447 | 1-800-681-9915

#### **Customer Service**

1-902-597-4005  
[customerservice@rollsbattery.com](mailto:customerservice@rollsbattery.com)

#### **Sales**

1-902-597-3767 | 1-800-681-9914  
[sales@rollsbattery.com](mailto:sales@rollsbattery.com)

#### **Technical Service**

1-902-597-3767 | 1-800-681-9914  
[support@rollsbattery.com](mailto:support@rollsbattery.com)

#### **Technical Support Ticket**

[support.rollsbattery.com](http://support.rollsbattery.com)

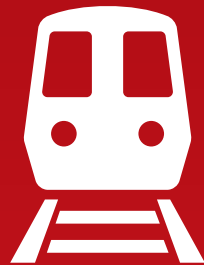




**NOTES**

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## RAILROAD & DIESEL STARTER SERIES

Designed to meet and exceed the performance requirements of the Railroad Industry, Rolls heavy-duty models deliver heavy-duty plate construction, 180+ day liquid reserves and superior cycle life in durable high-temperature retardant & moisture-tight cases.

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