# POWER PS SONIC®

2017-2018 Battery Applications and Specifications

## Super Sport Series



## Ultra Sport Series

**Powerful stuff comin' at ya!**

## SEALED MAINTENANCE FREE BATTERY FEATURES


SEALED POST PREVENTS ACID LEAKAGE, REDUCES CORROSION, AND EXTENDS BATTERY LIFE

SAFETY VALVE FLAME/ARRESTOR RELIEVES EXCESS PRESSURE

THRU-PARTITION CONSTRUCTION PROVIDES SHORTER CURRENT PATH WITH LESS RESISTANCE FOR MORE CRANKING POWER

SPECIAL ACTIVE MATERIAL IN THE PLATES IS COMPOUNDED TO WITHSTAND VIBRATION, PROLONGING BATTERY LIFE AND DEPENDABILITY

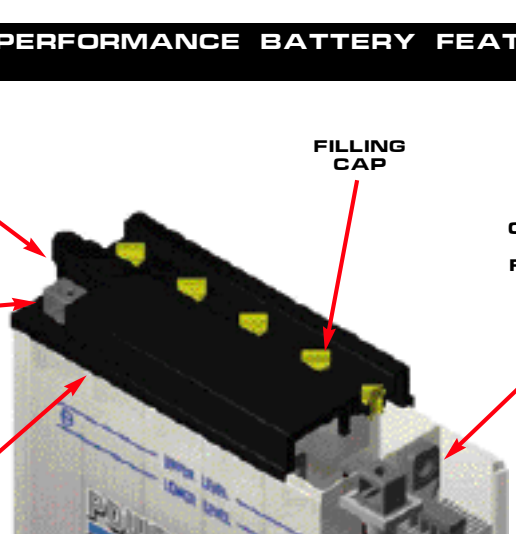
HEAT SEALED COVER TO CASE PROTECTS AGAINST LEAKAGE AND CORROSION. BONDED UNIT PROVIDING EXTRA STRENGTH

ABSORPTIVE GLASS FIBER MAT (AGM) SEPARATOR INCREASES BATTERY CELL LIFE AND REDUCES VIBRATION ON BATTERY PLATES

ABS COVER AND CONTAINER ASSURE RESERVE ELECTROLYTE CAPACITY FOR COOLER OPERATING TEMPERATURE AND GIVES GREATER RESISTANCE TO GAS, OIL, AND IMPACT IN EXTREME WEATHER CONDITIONS

SPECIAL SEPARATOR MAKES THE BATTERY SPILL-PROOF. VALVE REGULATED DESIGN ELIMINATES WATER LOSS AND THE NEED TO REFILL WITH ACID

## HIGH PERFORMANCE BATTERY FEATURES




SAFETY VALVE RELIEVES EXCESS PRESSURE

FILLING CAP

THRU-PARTITION CONSTRUCTION PROVIDES SHORTER CURRENT PATH WITH LESS RESISTANCE FOR MORE CRANKING POWER

SEALED POST PREVENTS ACID LEAKAGE, REDUCES CORROSION, AND EXTENDS BATTERY LIFE

SPECIAL GRID DESIGN WITHSTANDS SEVERE VIBRATION AND ASSURES MAXIMUM CONDUCTIVITY

HEAT SEALED COVER TO CASE PROTECTS AGAINST LEAKAGE AND CORROSION. THE BONDED UNIT PROVIDES EXTRA STRENGTH

SPECIAL ACTIVE MATERIAL IN THE PLATES IS COMPOUNDED TO WITHSTAND VIBRATION, PROLONGING BATTERY LIFE AND DEPENDABILITY

POLYPROPYLENE COVER AND CONTAINER ASSURE RESERVE ELECTROLYTE CAPACITY FOR COOLER OPERATING TEMPERATURE AND GIVES GREATER RESISTANCE TO GAS, OIL, AND IMPACT IN EXTREME WEATHER CONDITIONS

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## POWER-SONIC CORPORATE OFFICES - SAN DIEGO, CALIFORNIA

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**Please Note: Photos in this catalogue and on the cover depict highly skilled professional riders on closed courses. Do not try to attempt these maneuvers.**


### Conventional Batteries-

This type of batteries has flooded electrolyte and is very accessible. These batteries have to be carefully and periodically maintained. The conventional batteries are normally less expensive than the other types mentioned below; but with the cost savings come more maintenance. You will need to add distilled water from time to time to prevent the battery from sulfating. Water loss is a normal characteristic of this type of battery because of the high temperature inside, and the process of electrolysis and evaporation. This means the fluid level of the battery needs to be checked on a regular basis. Conventional batteries also tend to discharge more rapidly than AGM type batteries.

### AGM Sealed Maintenance Free Batteries-

Once these batteries are put into service, they become a completely sealed unit requiring a lot less maintenance than Conventional Batteries. Although the battery still needs to be charged on a regular basis if your vehicle is not in use, there is no need to monitor the fluid level in this battery type. Unlike the conventional battery listed above, once this type battery is sealed, it becomes spill proof, which can eliminate damage from battery acid that can occur from using a flooded battery.

### AGM Factory Activated Maintenance Free Batteries-

The same convenience and technology as the Sealed Maintenance Free Batteries, except this battery is sealed and activated at the time of manufacture. Very convenient to the point that all that needs to be done is put the battery into your vehicle and you are ready to ride. The only downside of this type of battery is that all batteries once activated have a shelf life, and if this battery is not going to be used right away, or be put in a vehicle that is not going to ridden on a regular basis, the battery will need to be kept charged on a battery maintainer.

The numbers & letters in the top halves of the tables are commonly used examples of motorcycle batteries.
Use the letters in the bottom halves of the table & the designation keys below each table to see what the letters & numbers represent.

## Maintenance Free Batteries (AGM)

| PTX | 14 | A | H | L | - | BS | - | 1 |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | - | 6 | - | 7 |

1 - High Performance AGM (PTX, PIX, PTZ)
2 - Performance classification
3 - Designates unique battery case size
4 - Higher CCA
5 - Polarity location
6 - Bottle supplied electrolyte
7 - Designates unique terminal

## High Performance Conventional

| CB | 16A | L | - | A2 |
|---|---|---|---|---|
| 1 | 2 | 3 | - | 4 |

1 - High Performance Conventional battery
2 - Size of battery case
3 - Polarity location
4 - Terminal and Exhaust location

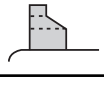
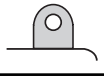
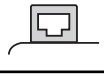
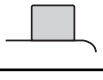
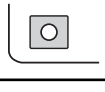
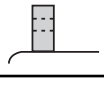
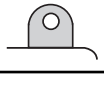
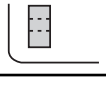
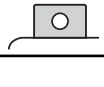
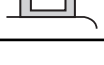
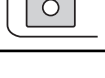
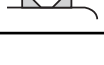
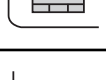
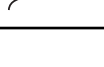
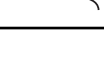
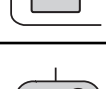
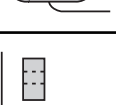
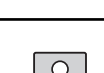
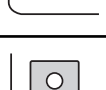
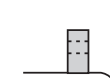
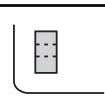
## Conventional

| 12 | N | 12A | - | 4 | A | - | 1 |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | - | 4 | 5 | - | 6 |

1 - Nominal voltage
2 - Conventional battery
3 - Size of battery case
4 - Polarity location
5 - Exhaust location
6 - Designates unique terminal

# TERMINAL CONFIGURATIONS

Terminal shapes vary from one battery to another. By identifying the correct replacement battery from the listing in this book, you are assured of the proper terminal configuration. For custom applications, refer to the following chart to identify terminal shape and corresponding batteries.

| TERMINAL TYPE | FRONT | SIDE | TOP | BATTERY TYPE |
|---|---|---|---|---|
| 1 |  |  |  | PTX16-BS-1, CB7C-A, CB14L-A1 |
| 2 |  |  |  | CB9L-A2, CB16AL-A2 |
| 3 |  |  |  | CB7L-B, C60-N24-A, C60-N24L-A, C60-N24AL-B, 12N24-3 |
| 4 |  |  |  | PTX14AHBS-FS, PTX14AHLBS-FS, PTX14BS-FS, PTX15LBS-FS, PTZ16H, PTX20BS-FS, PTX20LBS-FS, PIX50LBS-FS, PTX14AH-BS, PTX14AHL-BS, PTX14-BS, PTX14L-BS, PTX15L-BS, PTX16-BS, PTX20CH-BS, PTX20-BS, PTX20L-BS, PIX50-BS, PIX50L-BS, CB12C-A, CB16B-A, C50-N18L-A3, CB30L-B, CB30CL-B |
| 5 |  |  |  | PTX4LBS-FS, PTX5LBS-FS, PTZ5S, PTX7ABS-FS, PTX7LBS-FS, PTZ7S, PTZ8V, PTX9BS-FS, PTX12BS-FS, PTX19CLBS-FS, PIX30LBS-FS, PIX30CLBS-FS, PTX4L-BS, PTX5L-BS, PT6.5L-BS, PTX7A-BS, PTX7L-BS, PTX9-BS, PTX12-BS, PTX19CL-BS, PIX30L-BS, PIX30CL-BS, CB4L-A, CB4L-B, CB16CL-B |
| 6 |  |  |  | PTX12AABS-FS, PTX19BS-FS, PTX19LBS-FS, PTX19-BS, PTX19L-BS, PT9A-BS, CB16-B-LM, CB16HL-A-LM, CB3L-A, CB3L-B, CB5L-B, CB7-A, CB9-B, CB9A-A, CB9L-B, CB10L-B, CB12A-A, CB12AL-A, CB12A-B, CB14A-A, CB16-B, CB16L-B, 6N6-3B, 6N6-3B-1, 6CB8L-B, 6N11-2D, 6N11A-1B, 6N12A-2D, B38-6A, B39-6, B54-6, 12N5-3B, 12N5-4B, 12N5.5-3B, 12N5.5-4A, 12N5.5A-3B, 12N7-4A, 12N7-3B, 12N7D-3B, 12N7-4B, 12N9-3A-1, 12N9-3B, 12N9-4B-1, 12N10-3A, 12N10-3A-1, 12N12A-4A-1 |
| 7 |  |  |  | C50-N18L-A-LM, CB16B-A1, HCB16A-AB, CB18-A, CB18L-A, C50-N18A-A, SC50-N18L-AT |
| 8 |  |  |  | CB10A-A2, CB10L-A2, CB10L-B2, CB12AL-A2, CB12B-B2, CB14A-2, CB14A-A2, CB14B-2, CB14L-A2, CB14L-B2, SCB14L-A2, SCB14L-B2, 12N11-3A-1, 12N14-3A |
| 9 |  |  |  | CHD4-12 |
| 10 |  |  |  | 51913-FS, 51814, 51913, 53030 |
| 11 |  |  |  | PT6B-3, PT7B-4, PT9B-4, PTZ10S, PT12B-4, PTZ12S, PT14B-4, PTZ14S, PTX12ABS-FS, PTR9-BS, PTX12A-BS |
| 12 |  |  |  | PTR4A-BS |
| 13 |  |  |  | PTX4B-BS |
| 14 |  |  |  | P11U1LD-FS, U1(9), U1(9)R |
| 15 |  |  |  | PTX20HBS-FS, PTX20HLBS-FS, PIX30HLBS-FS, PIX32HLBS-FS |
| 16 |  |  |  | PTX14LBS-FS |
| 17 |  |  |  | P26RH-FS |

# BATTERY SPECIFICATIONS

## HIGH PERFORMANCE FACTORY ACTIVATED MAINTENANCE FREE (AGM) - ULTRA SPORT SERIES

| Type | Voltage (V) | Capacity at 10HR (Ah) | CCA @ 0° F (-18° C) | CA† | Apprx. Weight w/ Acid (Lbs.) | Acid Volume (Oz.) | Regular Charge Current (Ah) | Terminal Type (See Page 6) | Dimensions in Inches (+/- 1/16 In.) Length | Width | Height | Dimensions In Millimeters (+/- 2 mm.) Length | Width | Height | Assembly Figure (per cover polarity) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PTX14LBS-FS | 12 | 12 | 150 | 275 | 10.6 | _ | 1.4 | 16 | 6 | 3 7/16 | 5 3/4 | 150 | 87 | 145 | |
| PTX20HBS-FS | 12 | 20 | 290 | 460 | 14.6 | _ | 2.0 | 15 | 6 7/8 | 3 7/16 | 6 1/8 | 175 | 87 | 155 | |
| PTX20HLBS-FS | 12 | 20 | 290 | 460 | 14.6 | _ | 2.0 | 15 | 6 7/8 | 3 7/16 | 6 1/8 | 175 | 87 | 155 | |
| PIX30HLBS-FS | 12 | 30 | 400 | 530 | 21.6 | _ | 3.0 | 15 | 6 9/16 | 5 | 6 7/8 | 166 | 126 | 175 | |
| PIX32HLBS-FS | 12 | 32 | 420 | 560 | 22.9 | _ | 3.2 | 15 | 6 9/16 | 5 | 6 7/8 | 166 | 126 | 175 | |

## FACTORY ACTIVATED MAINTENANCE FREE (AGM)

| Type | Voltage (V) | Capacity at 10HR (Ah) | CCA @ 0° F (-18° C) | CA† | Apprx. Weight w/ Acid (Lbs.) | Acid Volume (Oz.) | Regular Charge Current (Ah) | Terminal Type (See Page 6) | Dimensions in Inches (+/- 1/16 In.) Length | Width | Height | Dimensions In Millimeters (+/- 2 mm.) Length | Width | Height | Assembly Figure (per cover polarity) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PTX4LBS-FS | 12 | 3 | 40 | 130 | 3.3 | _ | 0.4 | 5 | 4 1/2 | 2 13/16 | 3 3/8 | 114 | 71 | 86 | |
| PTX5LBS-FS | 12 | 4 | 65 | 150 | 4.4 | _ | 0.5 | 5 | 4 1/2 | 2 13/16 | 4 3/16 | 114 | 71 | 106 | |
| PTZ5S | 12 | 4 | 50 | 150 | 4.2 | _ | 0.3 | 5 | 4 7/16 | 2 3/4 | 3 1/3 | 113 | 70 | 85 | |
| PT6B-3 | 12 | 6 | 70 | 215 | 5.2 | _ | 0.6 | 11 | 4 7/16 | 2 3/4 | 4 5/8 | 113 | 70 | 117 | |
| PT7B-4 | 12 | 6 | 85 | 230 | 5.6 | _ | 0.6 | 11 | 6 | 2 9/16 | 3 11/16 | 150 | 65 | 93 | |
| PTX7ABS-FS | 12 | 6 | 85 | 175 | 5.9 | _ | 0.7 | 5 | 6 | 3 7/16 | 3 3/4 | 150 | 87 | 94 | |
| PTX7LBS-FS | 12 | 6 | 80 | 130 | 5.5 | _ | 0.6 | 5 | 4 1/2 | 2 13/16 | 5 3/16 | 114 | 71 | 131 | |
| PTZ7S | 12 | 6 | 75 | 210 | 5.2 | _ | 0.6 | 5 | 4 7/16 | 2 3/4 | 4 1/8 | 113 | 70 | 105 | |
| PTZ8V | 12 | 7 | 80 | 215 | 6.0 | _ | 0.7 | 5 | 4 1/2 | 2 13/16 | 5 3/16 | 114 | 71 | 131 | |
| PT9B-4 | 12 | 8 | 100 | 280 | 6.7 | _ | 0.8 | 11 | 6 | 2 3/4 | 4 1/8 | 150 | 70 | 105 | |
| PTX9BS-FS | 12 | 8 | 90 | 215 | 7.2 | _ | 0.9 | 5 | 6 | 3 7/16 | 4 3/16 | 150 | 87 | 105 | |
| PTZ10S | 12 | 8.5 | 130 | 285 | 7.4 | _ | 0.9 | 11 | 6 | 3 7/16 | 3 11/16 | 150 | 87 | 93 | |
| PT12B-4 | 12 | 10.5 | 115 | 280 | 8.4 | _ | 1.0 | 11 | 6 | 2 3/4 | 5 1/8 | 150 | 69 | 130 | |
| PTX12AABS-FS | 12 | 12 | 120 | 230 | 10.0 | _ | 1.2 | 6 | 5 5/16 | 3 3/16 | 6 5/16 | 134 | 80 | 160 | |
| PTX12ABS-FS | 12 | 10 | 120 | 225 | 7.5 | _ | 1.0 | 11 | 6 | 3 7/16 | 4 3/16 | 150 | 87 | 105 | |
| PTX12BS-FS | 12 | 10 | 120 | 260 | 9.1 | _ | 1.2 | 5 | 6 | 3 7/16 | 5 1/8 | 150 | 87 | 130 | |
| PTZ12S | 12 | 11 | 140 | 340 | 9.2 | _ | 1.1 | 11 | 6 | 3 7/16 | 4 3/8 | 150 | 87 | 110 | |
| PT14B-4 | 12 | 12 | 135 | 270 | 9.7 | _ | 1.2 | 11 | 6 | 2 3/4 | 5 3/4 | 150 | 70 | 145 | |
| PTX14BS-FS | 12 | 12 | 150 | 275 | 10.6 | _ | 1.4 | 4 | 6 | 3 7/16 | 5 3/4 | 150 | 87 | 145 | |
| PTX14AHBS-FS | 12 | 12 | 160 | 340 | 11.4 | _ | 1.4 | 4 | 5 5/16 | 3 9/16 | 6 3/8 | 135 | 90 | 161 | |
| PTX14AHLBS-FS | 12 | 12 | 160 | 340 | 11.4 | _ | 1.4 | 4 | 5 5/16 | 3 9/16 | 6 3/8 | 135 | 90 | 161 | |
| PTZ14S | 12 | 12 | 140 | 340 | 9.2 | _ | 1.2 | 11 | 6 | 3 7/16 | 4 3/8 | 150 | 87 | 110 | |
| PTX15LBS-FS | 12 | 13 | 180 | 320 | 11.1 | _ | 1.3 | 4 | 6 7/8 | 3 7/16 | 5 1/8 | 175 | 87 | 130 | |
| PTZ16H | 12 | 16 | 240 | 320 | 10.7 | _ | 1.6 | 4 | 6 | 3 7/16 | 5 3/4 | 150 | 87 | 145 | |
| PTX19BS-FS | 12 | 19 | 190 | 400 | 14.7 | _ | 1.9 | 6 | 6 7/8 | 4 | 6 1/8 | 175 | 101 | 157 | |
| PTX19LBS-FS | 12 | 19 | 190 | 400 | 14.7 | _ | 1.9 | 6 | 6 7/8 | 4 | 6 1/8 | 175 | 101 | 157 | |
| PTX19CLB-FS | 12 | 21 | 210 | 415 | 17.1 | _ | 2.1 | 5 | 6 7/8 | 4 | 6 7/8 | 175 | 101 | 175 | |
| PTX20BS-FS | 12 | 18 | 200 | 405 | 14.1 | _ | 1.8 | 4 | 6 7/8 | 3 7/16 | 6 1/8 | 175 | 87 | 155 | |
| PTX20LBS-FS | 12 | 18 | 200 | 405 | 14.1 | _ | 1.8 | 4 | 6 7/8 | 3 7/16 | 6 1/8 | 175 | 87 | 155 | |
| PIX30LBS-FS | 12 | 28 | 280 | 505 | 20.3 | _ | 2.8 | 5 | 6 9/16 | 5 | 6 7/8 | 166 | 126 | 175 | |
| PIX30CLBS-FS | 12 | 30 | 280 | 505 | 23.9 | _ | 3.0 | 5 | 6 9/16 | 5 | 7 5/8 | 166 | 126 | 194 | |
| PIX50LBS-FS | 12 | 21 | 230 | 400 | 17.4 | _ | 2.1 | 4 | 8 1/8 | 3 7/16 | 6 7/8 | 205 | 86 | 161 | |
| 51913-FS* | 12 | 19 | 170 | 325 | 13.9 | _ | 1.9 | 10 | 7 7/16 | 3 1/4 | 6 7/8 | 186 | 82 | 171 | |
| P11U1LD-FS | 12 | 32 | 300 | 495 | 22.7 | _ | 3.2 | 14 | 7 3/4 | 5 1/4 | 7 7/16 | 196 | 131 | 186 | |
| P26RH-FS | 12 | 40 | 540 | 595 | 32.8 | _ | 4.0 | 17 | 7 3/4 | 6 1/2 | 7 3/4 | 196 | 165 | 197 | |

*Maintenance Free Gel Technology

†Cranking value determined by the use of a hand held tester. Individual test results may vary.

**Due to the self-discharge characteristics of this type of battery, it is imperative that they be charged within 6 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation. To prolong shelf life without charging, store batteries at 50°F (10°C) or less.**

## SEALED MAINTENANCE FREE (AGM)

| Type | Voltage (V) | Capacity at 10HR (Ah) | CCA @ 0° F (-18°C) | Apprx. Weight w/o Acid (Lbs.) | Acid Volume (Oz.) | Regular Charge Current (Ah) | Terminal Type (See Page 6) | Dimensions in Inches (+/- 1/16 In.) Length | Width | Height | Dimensions In Millimeters (+/- 2 mm.) Length | Width | Height | Assembly Figure (per cover polarity) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PTR4A-BS | 12 | 2.3 | 30 | 2.2 | 4.7 | 0.3 | 12 | 4 1/2 | 1 15/16 | 3 3/8 | 114 | 49 | 86 | |
| PTX4B-BS | 12 | 2.3 | 30 | 2.0 | 4.1 | 0.3 | 13 | 4 1/2 | 1 9/16 | 3 7/16 | 114 | 39 | 86.5 | |
| PTX4L-BS | 12 | 3 | 40 | 3.1 | 6.1 | 0.4 | 5 | 4 1/2 | 2 13/16 | 3 3/8 | 114 | 71 | 86 | |
| PTX5L-BS | 12 | 4 | 55 | 3.8 | 8.1 | 0.5 | 5 | 4 1/2 | 2 13/16 | 4 3/16 | 114 | 71 | 106 | |
| PT6.5L-BS | 12 | 6.5 | 60 | 4.3 | 12.8 | 0.65 | 5 | 5 1/2 | 2 5/8 | 4 | 139 | 66 | 102 | |
| PTX7A-BS | 12 | 6 | 85 | 4.9 | 11.2 | 0.7 | 5 | 6 | 3 7/16 | 3 3/4 | 150 | 87 | 94 | |
| PTX7L-BS | 12 | 6 | 75 | 4.5 | 11.2 | 0.6 | 5 | 4 1/2 | 2 13/16 | 5 3/16 | 114 | 71 | 131 | |
| PT9A-BS | 12 | 9 | 90 | 6.0 | 18.9 | 0.9 | 6 | 5 5/16 | 3 | 5 1/2 | 135 | 76 | 140 | |
| PTR9-BS | 12 | 8 | 120 | 6.3 | 13.5 | 0.9 | 11 | 6 | 3 7/16 | 4 3/16 | 150 | 87 | 105 | |
| PTX9-BS | 12 | 8 | 90 | 5.9 | 13.5 | 0.9 | 5 | 6 | 3 7/16 | 4 3/16 | 150 | 87 | 105 | |
| PTX12-BS | 12 | 10 | 160 | 7.7 | 20.3 | 1.2 | 5 | 6 | 3 7/16 | 5 1/8 | 150 | 87 | 130 | |
| PTX12A-BS | 12 | 10 | 120 | 6.7 | 15.9 | 1.0 | 11 | 6 | 3 7/16 | 4 3/16 | 150 | 87 | 105 | |
| PTX14-BS | 12 | 12 | 180 | 9.1 | 23.3 | 1.4 | 4 | 6 | 3 7/16 | 5 3/4 | 150 | 87 | 145 | |
| PTX14AH-BS | 12 | 12 | 160 | 9.1 | 22.3 | 1.4 | 4 | 5 5/16 | 3 9/16 | 6 3/8 | 135 | 90 | 161 | |
| PTX14AHL-BS | 12 | 12 | 160 | 9.1 | 22.3 | 1.4 | 4 | 5 5/16 | 3 9/16 | 6 3/8 | 135 | 90 | 161 | |
| PTX14L-BS | 12 | 12 | 180 | 9.1 | 23.3 | 1.4 | 4 | 6 | 3 7/16 | 5 3/4 | 150 | 87 | 145 | |
| PTX15L-BS | 12 | 13 | 180 | 10.5 | 23.3 | 1.3 | 4 | 6 7/8 | 3 7/16 | 5 1/8 | 175 | 87 | 130 | |
| PTX16-BS | 12 | 14 | 200 | 10.8 | 26.4 | 1.4 | 4 | 6 | 3 7/16 | 6 3/8 | 150 | 87 | 161 | |
| PTX16-BS-1 | 12 | 14 | 200 | 10.8 | 26.4 | 1.4 | 1 | 6 | 3 7/16 | 6 3/8 | 150 | 87 | 161 | |
| PTX19-BS | 12 | 19 | 190 | 14.3 | 32.5 | 1.2 | 6 | 6 7/8 | 4 | 6 1/8 | 175 | 101 | 157 | |
| PTX19L-BS | 12 | 19 | 190 | 14.3 | 32.5 | 1.2 | 6 | 6 7/8 | 4 | 6 1/8 | 175 | 101 | 157 | |
| PTX19CL-BS | 12 | 21 | 210 | 16.5 | 32.5 | 1.2 | 5 | 6 7/8 | 4 | 6 7/8 | 175 | 101 | 175 | |
| PTX20CH-BS | 12 | 18 | 220 | 11.6 | 27.7 | 1.8 | 4 | 6 | 3 7/16 | 6 3/8 | 150 | 87 | 161 | |
| PTX20-BS | 12 | 18 | 210 | 12.7 | 31.4 | 1.8 | 4 | 6 7/8 | 3 7/16 | 6 1/8 | 175 | 87 | 155 | |
| PTX20L-BS | 12 | 18 | 210 | 12.7 | 31.4 | 1.8 | 4 | 6 7/8 | 3 7/16 | 6 1/8 | 175 | 87 | 155 | |
| PIX30L-BS | 12 | 28 | 280 | 18.9 | 55.5 | 2.8 | 5 | 6 9/16 | 5 | 6 7/8 | 166 | 126 | 175 | |
| PIX30CL-BS | 12 | 30 | 280 | 18.9 | 55.5 | 2.8 | 5 | 6 9/16 | 5 | 7 5/8 | 166 | 126 | 194 | |
| PIX50-BS | 12 | 21 | 240 | 15.6 | 33.5 | 2.1 | 4 | 8 1/8 | 3 7/16 | 6 7/8 | 205 | 86 | 161 | |
| PIX50L-BS | 12 | 21 | 240 | 15.6 | 33.5 | 2.1 | 4 | 8 1/8 | 3 7/16 | 6 7/8 | 205 | 86 | 161 | |

# BATTERY SPECIFICATIONS

## LOW MAINTENANCE

| Type | Voltage (V) | Capacity at 10HR (Ah) | CCA @ 0° F (-18° C) | Apprx. Weight w/o Acid (Lbs.) | Acid Volume (Oz.) | Regular Charge Current (Ah) | Terminal Type (See Page 6) | Dimensions in Inches (+/- 1/16 In.) Length | Width | Height | Dimensions In Millimeters (+/- 2 mm.) Length | Width | Height | Assembly Figure (per cover polarity) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CB16-B-LM | 12 | 19 | 230 | 10.6 | 40.6 | 1.9 | 6 | 6 7/8 | 4 | 6 1/8 | 175 | 100 | 155 |  |
| CB16HL-A-LM | 12 | 19 | 230 | 10.6 | 40.6 | 1.9 | 6 | 6 7/8 | 4 | 6 1/8 | 175 | 100 | 155 |  |
| C50-N18L-A-LM | 12 | 20 | 220 | 10.3 | 47.3 | 2.0 | 7 | 8 1/8 | 3 9/16 | 6 7/8 | 205 | 90 | 162 |  |

## HIGH PERFORMANCE

| Type | Voltage (V) | Capacity at 10HR (Ah) | CCA @ 0° F (-18° C) | Apprx. Weight w/o Acid (Lbs.) | Acid Volume (Oz.) | Regular Charge Current (Ah) | Terminal Type (See Page 6) | Dimensions in Inches (+/- 1/16 In.) Length | Width | Height | Dimensions In Millimeters (+/- 2 mm.) Length | Width | Height | Assembly Figure (per cover polarity) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CB2.5L-C | 12 | 2.5 | 20 | 1.9 | 8.1 | 0.3 | _ | 3 3/16 | 2 3/4 | 4 1/8 | 80 | 70 | 105 |  |
| CB2.5L-C-1 | 12 | 2.5 | 20 | 1.9 | 8.1 | 0.3 | _ | 3 3/16 | 2 3/4 | 4 1/8 | 80 | 70 | 105 |  |
| CB3L-A | 12 | 3 | 32 | 2.3 | 8.1 | 0.3 | 6 | 3 7/8 | 2 1/4 | 4 3/8 | 98 | 56 | 110 |  |
| CB3L-B | 12 | 3 | 32 | 2.3 | 8.1 | 0.3 | 6 | 3 7/8 | 2 1/4 | 4 3/8 | 98 | 56 | 110 |  |
| CB4L-A | 12 | 4 | 40 | 2.6 | 10.1 | 0.4 | 5 | 4 3/4 | 2 3/4 | 3 5/8 | 120 | 70 | 92 |  |
| CB4L-B | 12 | 4 | 40 | 2.6 | 10.1 | 0.4 | 5 | 4 3/4 | 2 3/4 | 3 5/8 | 120 | 70 | 92 |  |
| CB5L-B | 12 | 5 | 50 | 3.2 | 12.2 | 0.5 | 6 | 4 3/4 | 2 3/8 | 5 1/8 | 120 | 60 | 130 |  |
| CB7-A | 12 | 8 | 90 | 4.7 | 20.3 | 0.8 | 6 | 5 5/16 | 3 | 5 1/4 | 135 | 75 | 133 |  |
| CB7C-A | 12 | 8 | 80 | 5.2 | 20.3 | 0.8 | 1 | 5 1/8 | 3 9/16 | 4 1/2 | 130 | 90 | 114 |  |
| CB7L-B | 12 | 8 | 90 | 4.7 | 20.3 | 0.8 | 3 | 5 5/16 | 3 | 5 1/4 | 135 | 75 | 133 |  |
| CB9-B | 12 | 9 | 90 | 4.8 | 20.3 | 0.9 | 6 | 5 5/16 | 3 | 5 1/2 | 135 | 75 | 139 |  |
| CB9A-A | 12 | 9 | 90 | 5.0 | 20.3 | 0.9 | 6 | 5 5/16 | 3 | 6 1/8 | 135 | 75 | 155 |  |
| CB9L-A2 | 12 | 9 | 90 | 4.8 | 20.3 | 0.9 | 2 | 5 5/16 | 3 | 5 1/2 | 135 | 75 | 139 |  |
| CB9L-B | 12 | 9 | 90 | 4.8 | 20.3 | 0.9 | 6 | 5 5/16 | 3 | 5 1/2 | 135 | 75 | 139 |  |
| CB10A-A2 | 12 | 11 | 140 | 6.2 | 27.0 | 1.1 | 8 | 5 5/16 | 3 9/16 | 6 1/8 | 135 | 90 | 155 |  |
| CB10L-A2 | 12 | 11 | 140 | 6.2 | 27.0 | 1.1 | 8 | 5 5/16 | 3 9/16 | 5 3/4 | 135 | 90 | 145 |  |
| CB10L-B | 12 | 11 | 140 | 6.2 | 27.0 | 1.1 | 6 | 5 5/16 | 3 9/16 | 5 3/4 | 135 | 90 | 145 |  |
| CB10L-B2 | 12 | 11 | 140 | 6.2 | 27.0 | 1.1 | 8 | 5 5/16 | 3 9/16 | 5 3/4 | 135 | 90 | 145 |  |
| CB12A-A† | 12 | 12 | 135 | 7.0 | 27.0 | 1.2 | 6 | 5 5/16 | 3 3/16 | 6 5/16 | 134 | 80 | 160 |  |
| CB12AL-A | 12 | 12 | 135 | 7.0 | 25.4 | 1.2 | 6 | 5 5/16 | 3 3/16 | 5 5/16 | 134 | 80 | 160 |  |
| CB12AL-A2 | 12 | 12 | 135 | 7.0 | 25.4 | 1.2 | 8 | 5 5/16 | 3 3/16 | 6 5/16 | 134 | 80 | 160 |  |
| CB12A-B | 12 | 12 | 135 | 7.0 | 25.4 | 1.2 | 6 | 5 5/16 | 3 3/16 | 6 5/16 | 134 | 80 | 160 |  |
| CB12B-B2 | 12 | 13 | 145 | 7.5 | 27.0 | 1.2 | 8 | 6 5/16 | 3 9/16 | 5 1/8 | 160 | 90 | 130 |  |
| CB12C-A | 12 | 13 | 135 | 7.1 | 27.0 | 1.2 | 4 | 5 5/16 | 3 3/16 | 6 7/8 | 134 | 80 | 175 |  |
| CB14-A2 | 12 | 14 | 160 | 7.7 | 30.4 | 1.4 | 8 | 5 5/16 | 3 1/2 | 6 9/16 | 134 | 89 | 166 |  |
| CB14A-A | 12 | 14 | 160 | 7.8 | 30.4 | 1.4 | 6 | 5 5/16 | 3 1/2 | 6 15/16 | 134 | 89 | 176 |  |
| CB14A-A2 | 12 | 14 | 160 | 7.8 | 30.4 | 1.4 | 8 | 5 5/16 | 3 1/2 | 6 15/16 | 134 | 89 | 176 |  |
| CB14-B2 | 12 | 14 | 160 | 7.7 | 30.4 | 1.4 | 8 | 5 5/16 | 3 1/2 | 6 9/16 | 134 | 89 | 166 |  |
| CB14L-A1 | 12 | 14 | 160 | 7.7 | 30.4 | 1.4 | 1 | 5 5/16 | 3 1/2 | 6 9/16 | 134 | 89 | 166 |  |
| CB14L-A2 | 12 | 14 | 160 | 7.7 | 30.4 | 1.4 | 8 | 5 5/16 | 3 1/2 | 6 9/16 | 134 | 89 | 166 |  |
| CB14L-B2 | 12 | 14 | 160 | 7.7 | 30.4 | 1.4 | 8 | 5 5/16 | 3 1/2 | 6 9/16 | 134 | 89 | 166 |  |
| SCB14L-A2♦ | 12 | 14 | 160 | 7.7 | 30.4 | 1.4 | 8 | 5 5/16 | 3 1/2 | 6 9/16 | 134 | 89 | 166 |  |
| SCB14L-B2♦ | 12 | 14 | 160 | 7.7 | 30.4 | 1.4 | 8 | 5 5/16 | 3 1/2 | 6 9/16 | 134 | 89 | 166 |  |
| CB16-B | 12 | 19 | 230 | 10.6 | 40.6 | 1.9 | 6 | 6 7/8 | 4 | 6 1/8 | 175 | 100 | 155 |  |
| CB16B-A | 12 | 16 | 180 | 8.2 | 33.8 | 1.6 | 4 | 6 5/16 | 3 9/16 | 6 3/8 | 160 | 90 | 161 |  |
| CB16B-A1 | 12 | 16 | 180 | 8.2 | 33.8 | 1.6 | 7 | 6 5/16 | 3 9/16 | 6 3/8 | 160 | 90 | 161 |  |
| CB16AL-A2 | 12 | 16 | 190 | 8.7 | 37.2 | 1.6 | 2 | 8 1/8 | 2 13/16 | 6 7/16 | 207 | 71.5 | 164 |  |
| CB16CL-B | 12 | 19 | 230 | 10.8 | 40.6 | 1.9 | 5 | 6 7/8 | 4 | 6 7/8 | 175 | 100 | 175 |  |
| CB16L-B† | 12 | 19 | 230 | 10.6 | 40.6 | 1.9 | 6 | 6 7/8 | 4 | 6 1/8 | 175 | 100 | 155 |  |
| HCB16A-AB | 12 | 16 | 140 | 8.4 | 30.4 | 1.6 | 7 | 6 | 3 5/8 | 7 1/16 | 151 | 91 | 180 |  |
| CB18-A | 12 | 18 | 190 | 9.3 | 40.6 | 1.8 | 7 | 7 1/8 | 3 9/16 | 6 3/8 | 180 | 90 | 162 |  |
| CB18L-A | 12 | 18 | 190 | 9.3 | 40.6 | 1.8 | 7 | 7 1/8 | 3 9/16 | 6 3/8 | 180 | 90 | 162 |  |
| C50-N18A-A | 12 | 20 | 220 | 10.4 | 50.7 | 2.0 | 7 | 8 1/8 | 3 9/16 | 6 15/16 | 205 | 90 | 176 |  |
| C50-N18L-A3 | 12 | 20 | 220 | 10.4 | 47.3 | 2.0 | 4 | 8 1/8 | 3 9/16 | 6 3/8 | 205 | 90 | 162 |  |
| SC50-N18L-AT♦ | 12 | 20 | 220 | 10.4 | 47.3 | 2.0 | 7 | 8 1/8 | 3 9/16 | 6 3/8 | 205 | 90 | 162 |  |
| C60-N24-A | 12 | 28 | 280 | 13.1 | 57.5 | 2.8 | 3 | 7 1/4 | 4 7/8 | 6 7/8 | 184 | 124 | 175 |  |
| C60-N24L-A | 12 | 28 | 280 | 13.1 | 57.5 | 2.8 | 3 | 7 1/4 | 4 7/8 | 6 7/8 | 184 | 124 | 175 |  |
| C60-N24AL-B | 12 | 28 | 280 | 13.1 | 57.5 | 2.8 | 3 | 7 1/4 | 4 7/8 | 6 7/8 | 184 | 124 | 175 |  |
| CB30L-B | 12 | 30 | 300 | 15.8 | 57.5 | 3.0 | 4 | 6 5/8 | 5 3/16 | 6 15/16 | 168 | 132 | 176 |  |
| CB30CL-B | 12 | 30 | 300 | 15.9 | 57.5 | 3.0 | 4 | 6 5/8 | 5 3/16 | 7 9/16 | 168 | 132 | 192 |  |
| 51814 | 12 | 19* | 150 | 11.0 | 33.8 | 1.3 | 10 | 7 7/16 | 3 1/4 | 6 7/8 | 186 | 82 | 171 |  |
| 51913 | 12 | 19* | 150 | 11.0 | 33.8 | 1.9 | 10 | 7 7/16 | 3 1/4 | 6 7/8 | 186 | 82 | 171 |  |
| 53030 | 12 | 30* | 280 | 13.2 | 54.1 | 3.0 | 10 | 7 7/16 | 5 1/8 | 6 7/8 | 186 | 130 | 171 |  |

## CONVENTIONAL 6 VOLT

| Type | Voltage (V) | Capacity at 10HR (Ah) | CCA @ 0° F (-18° C) | Apprx. Weight w/o Acid (Lbs.) | Acid Volume (Oz.) | Regular Charge Current (Ah) | Terminal Type (See Page 6) | Dimensions in Inches (+/- 1/16 In.) Length | Width | Height | Dimensions In Millimeters (+/- 2 mm.) Length | Width | Height | Assembly Figure (per cover polarity) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6N2-2A | 6 | 2 | 20 | 1.0 | 3.4 | 0.2 | _ | 2 3/4 | 1 7/8 | 3 3/4 | 70 | 47 | 96 |  |
| 6N2-2A-1 | 6 | 2 | 20 | 1.0 | 3.4 | 0.2 | _ | 2 3/4 | 1 7/8 | 3 3/4 | 70 | 47 | 96 |  |
| 6N2-2A-3 | 6 | 2 | 20 | 1.0 | 3.4 | 0.2 | _ | 2 3/4 | 1 7/8 | 3 3/4 | 70 | 47 | 96 |  |
| 6N2-2A-4 | 6 | 2 | 20 | 1.0 | 3.4 | 0.2 | _ | 2 3/4 | 1 7/8 | 3 3/4 | 70 | 47 | 96 |  |
| 6N2-2A-8 | 6 | 2 | 20 | 1.0 | 3.4 | 0.2 | _ | 2 3/4 | 1 7/8 | 3 3/4 | 70 | 47 | 96 |  |
| 6N2A-2C | 6 | 2 | 20 | 1.0 | 3.4 | 0.2 | _ | 2 3/4 | 1 7/8 | 4 3/16 | 70 | 47 | 106 |  |
| 6N2A-2C-3 | 6 | 2 | 20 | 1.0 | 3.4 | 0.2 | _ | 2 3/4 | 1 7/8 | 4 3/16 | 70 | 47 | 106 |  |
| 6N4-2A | 6 | 4 | 25 | 1.4 | 6.8 | 0.4 | _ | 2 13/16 | 2 13/16 | 3 3/4 | 71 | 71 | 96 |  |
| 6N4-2A-2 | 6 | 4 | 25 | 1.4 | 6.8 | 0.4 | _ | 2 13/16 | 2 13/16 | 3 3/4 | 71 | 71 | 96 |  |
| 6N4-2A-3 | 6 | 4 | 25 | 1.4 | 6.8 | 0.4 | _ | 2 13/16 | 2 13/16 | 3 3/4 | 71 | 71 | 96 |  |
| 6N4-2A-4 | 6 | 4 | 25 | 1.4 | 6.8 | 0.4 | _ | 2 13/16 | 2 13/16 | 3 3/4 | 71 | 71 | 96 |  |
| 6N4-2A-5 | 6 | 4 | 25 | 1.4 | 6.8 | 0.4 | _ | 2 13/16 | 2 13/16 | 3 3/4 | 71 | 71 | 96 |  |
| 6N4-2A-8 (6) | 6 | 4 | 25 | 1.4 | 6.8 | 0.4 | _ | 2 13/16 | 2 13/16 | 3 3/4 | 71 | 71 | 96 |  |
| 6N4A-4D | 6 | 4 | 35 | 1.5 | 6.8 | 0.4 | _ | 2 3/8 | 2 1/4 | 5 1/8 | 61 | 57 | 131 |  |
| 6N4B-2A | 6 | 4 | 24 | 1.3 | 6.8 | 0.4 | _ | 4 | 1 7/8 | 3 3/4 | 102 | 48 | 96 |  |
| 6N4B-2A-3 | 6 | 4 | 24 | 1.3 | 6.8 | 0.4 | _ | 4 | 1 7/8 | 3 3/4 | 102 | 48 | 96 |  |

† Sensor available for this battery. ♦ This battery includes a sensor. * @ 20 hr. rate.

# BATTERY SPECIFICATIONS

## CONVENTIONAL 6 VOLT (Continued)

| Type | Voltage (V) | Capacity at 10HR (Ah) | CCA @ 0° F (-18° C) | Apprx. Weight w/o Acid (Lbs.) | Acid Volume (Oz.) | Regular Charge Current (Ah) | Terminal Type (See Page 6) | Dimensions in Inches (+/- 1/16 In.) Length | Width | Height | Dimensions In Millimeters (+/- 2 mm.) Length | Width | Height | Assembly Figure (per cover polarity) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6N4B-2A-5 | 6 | 4 | 24 | 1.3 | 6.8 | 0.4 | _ | 4 | 1 7/8 | 3 3/4 | 102 | 48 | 96 | |
| 6N4C-1B | 6 | 4 | 24 | 1.5 | 6.8 | 0.4 | _ | 2 13/16 | 2 13/16 | 4 1/8 | 71 | 71 | 105 | |
| 6N5.5-1D | 6 | 5.5 | 40 | 1.9 | 10.1 | 0.6 | _ | 3 9/16 | 2 3/4 | 3 15/16 | 90 | 70 | 100 | |
| 6N5.5-1D-1 | 6 | 5.5 | 40 | 1.9 | 10.1 | 0.6 | _ | 3 9/16 | 2 3/4 | 3 15/16 | 90 | 70 | 100 | |
| 6N6-1B | 6 | 6 | 48 | 1.9 | 10.1 | 0.6 | _ | 3 7/8 | 2 1/4 | 4 3/8 | 99 | 57 | 111 | |
| 6N6-1D-2 | 6 | 6 | 48 | 1.9 | 10.1 | 0.6 | _ | 3 7/8 | 2 1/4 | 4 3/8 | 99 | 57 | 111 | |
| 6N6-3B | 6 | 6 | 48 | 1.8 | 10.1 | 0.6 | 6 | 3 7/8 | 2 1/4 | 4 3/8 | 99 | 57 | 111 | |
| 6N6-3B-1 | 6 | 6 | 48 | 1.8 | 10.1 | 0.6 | 6 | 3 7/8 | 2 1/4 | 4 3/8 | 99 | 57 | 111 | |
| 6CB8L-B | 6 | 8 | 64 | 2.8 | 10.5 | 0.8 | 6 | 4 3/4 | 2 3/4 | 3 3/4 | 120 | 70 | 95 | |
| 6N11-2D | 6 | 11 | 88 | 3.4 | 13.5 | 1.1 | 6 | 5 7/8 | 2 3/4 | 3 15/16 | 150 | 70 | 100 | |
| 6N11A-1B | 6 | 11 | 88 | 2.8 | 13.5 | 1.1 | 6 | 4 13/16 | 2 7/16 | 5 1/8 | 122 | 62 | 131 | |
| 6N12A-2D | 6 | 12 | 96 | 3.2 | 15.2 | 1.2 | 6 | 6 1/8 | 2 1/4 | 4 9/16 | 156 | 57 | 116 | |
| B38-6A | 6 | 13 | 104 | 3.5 | 21.0 | 1.3 | 6 | 4 11/16 | 3 1/4 | 6 15/16 | 119 | 83 | 161 | |
| B39-6 | 6 | 7 | 60 | 2.2 | 10.1 | 0.7 | 6 | 4 15/16 | 1 7/8 | 4 15/16 | 126 | 48 | 126 | |
| B54-6 | 6 | 12 | 96 | 3.8 | 16.9 | 1.2 | 6 | 6 1/8 | 2 1/4 | 4 9/16 | 156 | 57 | 116 | |

## CONVENTIONAL 12 VOLT

| Type | Voltage (V) | Capacity at 10HR (Ah) | CCA @ 0° F (-18° C) | Apprx. Weight w/o Acid (Lbs.) | Acid Volume (Oz.) | Regular Charge Current (Ah) | Terminal Type (See Page 6) | Dimensions in Inches (+/- 1/16 In.) Length | Width | Height | Dimensions In Millimeters (+/- 2 mm.) Length | Width | Height | Assembly Figure (per cover polarity) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12N5-3B | 12 | 5 | 40 | 3.3 | 13.5 | 0.5 | 6 | 4 3/4 | 2 3/8 | 5 1/8 | 120 | 60 | 130 | |
| 12N5-4B | 12 | 5 | 40 | 3.3 | 13.5 | 0.5 | 6 | 4 3/4 | 2 3/8 | 5 1/8 | 120 | 60 | 130 | |
| 12N5.5-3B | 12 | 5.5 | 60 | 3.6 | 13.5 | 0.6 | 6 | 5 5/16 | 2 3/8 | 5 1/8 | 135 | 60 | 130 | |
| 12N5.5-4A | 12 | 5.5 | 60 | 3.6 | 13.5 | 0.6 | 6 | 5 5/16 | 2 3/8 | 5 1/8 | 135 | 60 | 130 | |
| 12N5.5A-3B | 12 | 5.5 | 44 | 4.0 | 16.9 | 0.6 | 6 | 4 1/16 | 3 9/16 | 4 1/2 | 103 | 90 | 114 | |
| 12N7-4A | 12 | 7 | 90 | 4.0 | 16.9 | 0.7 | 6 | 5 5/16 | 3 | 5 1/4 | 135 | 75 | 133 | |
| 12N7-3B | 12 | 7 | 90 | 4.0 | 16.9 | 0.7 | 6 | 5 5/16 | 3 | 5 1/4 | 135 | 75 | 133 | |
| 12N7D-3B | 12 | 7 | 75 | 4.2 | 20.3 | 0.7 | 6 | 5 5/16 | 3 | 5 15/16 | 135 | 75 | 150 | |
| 12N7-4B | 12 | 7 | 90 | 4.0 | 16.9 | 0.7 | 6 | 5 5/16 | 3 | 5 1/4 | 135 | 75 | 133 | |
| 12N9-3A-1 | 12 | 9 | 90 | 5.0 | 20.3 | 0.9 | 6 | 5 5/16 | 3 | 5 1/2 | 135 | 75 | 139 | |
| 12N9-3B | 12 | 9 | 90 | 4.8 | 20.3 | 0.9 | 6 | 5 5/16 | 3 | 5 1/2 | 135 | 75 | 139 | |
| 12N9-4B-1 | 12 | 9 | 90 | 4.8 | 20.3 | 0.9 | 6 | 5 5/16 | 3 | 5 1/2 | 135 | 75 | 139 | |
| 12N10-3A | 12 | 10 | 95 | 5.1 | 27.0 | 1.0 | 6 | 5 5/16 | 3 9/16 | 5 3/4 | 135 | 90 | 145 | |
| 12N10-3A-1 | 12 | 10 | 95 | 5.1 | 27.0 | 1.0 | 6 | 5 5/16 | 3 9/16 | 5 3/4 | 135 | 90 | 145 | |
| 12N11-3A-1 | 12 | 11 | 103 | 7.5 | 27.0 | 1.1 | 8 | 5 5/16 | 3 9/16 | 6 1/8 | 135 | 90 | 155 | |
| 12N12A-4A-1 | 12 | 12 | 113 | 6.3 | 23.7 | 1.2 | 6 | 5 5/16 | 3 3/16 | 6 15/16 | 134 | 80 | 160 | |
| 12N14-3A | 12 | 14 | 128 | 7.0 | 27.0 | 1.4 | 8 | 5 5/16 | 3 1/2 | 6 9/16 | 134 | 89 | 166 | |
| 12N24-3 | 12 | 24 | 218 | 11.1 | 40.6 | 2.4 | 3 | 7 1/4 | 4 7/8 | 6 7/8 | 184 | 124 | 175 | |
| CHD4-12 (H-12) | 12 | 30* | 280 | 14.1 | 74.4 | 3.0 | 9 | 8 1/8 | 5 1/4 | 6 1/2 | 206 | 133 | 165 | |

## LAWN & GARDEN

| Type | Voltage (V) | Capacity at 10HR (Ah) | CCA @ 0° F (-18° C) | Apprx. Weight w/o Acid (Lbs.) | Acid Volume (Oz.) | Regular Charge Current (Ah) | Terminal Type (See Page 6) | Dimensions in Inches (+/- 1/16 In.) Length | Width | Height | Dimensions In Millimeters (+/- 2 mm.) Length | Width | Height | Assembly Figure (per cover polarity) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| U1(9) | 12 | 24 | 200 | 11.3 | 60.9 | 2.4 | 14 | 7 3/4 | 5 1/4 | 7 1/8 | 196 | 131 | 181 | |
| U1(9)R | 12 | 24 | 200 | 11.3 | 60.9 | 2.4 | 14 | 7 3/4 | 5 1/4 | 7 1/8 | 196 | 131 | 181 | |

* @ 20 hr. rate

# COMPETITIVE CROSS REFERENCE CHART

## FACTORY SEALED/ SEALED MAINTENANCE FREE

| Power-Sonic | Deka | Exide | JSB (GSBat.) | GS Battery | Interstate | Motocross | Napa | Sears | Wal-Mart | Yacht | Yuasa |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **PTR4A-BS** | _ | _ | GTR4A-5 | _ | CYTR4A-BS | M62R4A | _ | _ | _ | CTR4A-BS | YTR4A-BS |
| **PTX4B-BS** | _ | _ | GT4B-5 | _ | CYT4B-BS | M62T4B | _ | _ | _ | CT4B-5 | YT4B-BS |
| **PTX4L-BS** | _ | 4LBS | GT4L-BS | GTX4L-BS | CYTX4L-BS | M62X4B | 740-1865 | 44015 | ES4L-BS | CT4L-BS | YTX4L-BS |
| **PTX5L-BS** | _ | 5LBS | GTX5L-BS | GTX5L-BS | CYTX5L-BS | M32X5B | 740-1830 | 44026 | ES5L-BS | CT5L-BS | YTX5L-BS |
| **PTZ5S** | _ | _ | GTZ5S | _ | _ | _ | _ | _ | _ | CTZ5S | YTZ5S |
| **PT6.5L-BS** | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| **PT7B-4** | _ | _ | GT7B-4 | _ | CYT7B-BS | M62T7B | _ | _ | _ | CT7B-4 | YT7B-BS |
| **PTX7A-BS** | _ | _ | GTX7A-BS | GTX7A-BS | CYTX7A-BS | M32X7A | _ | _ | _ | CTX7A-BS | YTX7A-BS |
| **PTX7L-BS** | _ | _ | GTX7L-BS | GTX7L-BS | CYTX7L-BS | M327BS | _ | _ | _ | CTX7L-BS | YTX7L-BS |
| **PTZ7S** | _ | _ | GTZ7S | _ | FAYTZ7S | M727ZS | _ | _ | _ | CTZ7S | YTZ7S |
| **PTZ8V** | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | YTZ8V |
| **PT9A-BS** | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| **PT9B-4** | _ | _ | GT9B-4 | _ | CYT9B-BS | M729B4 | _ | _ | _ | CT9B-4 | YT9B-4 |
| **PTR9-BS** | _ | _ | _ | _ | _ | M62R9B | _ | _ | _ | _ | YTR9-BS |
| **PTX9-BS** | ETX9 | 9BS | GTX9-BS | GTX9-BS | CYTX9-BS | M329BS/M429BS | 740-1825 | 44025 | ES9BS | CTX9-BS | YTX9-BS |
| **PTZ10S** | _ | _ | GTZ10S-BS | _ | FAYTZ10S | M7210A | _ | _ | _ | CTZ10S | YTZ10S |
| **PT12B-4** | _ | _ | GT12B-4 | GT12B-4 | CYT12B-BS | M6212B | _ | _ | _ | CT12B-4 | YT12B-BS |
| **PTX12AA-BS** | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| **PTX12A-BS** | _ | _ | _ | GT12A-BS | _ | M32ABS | _ | _ | _ | CT12A-BS | YT12A-BS |
| **PTX12-BS** | ETX12 | 12BS | GTX12-BS | GTX12-BS | CYTX12-BS | M3RH2S/M4RH2S | 740-1866 | 44016 | ES12BS | CTX12-BS | YTX12-BS |
| **PTZ12S** | _ | _ | GTZ12S | _ | FAYTZ12S | M7212A | _ | _ | _ | CTZ12S | YTZ12S |
| **PT14B-4** | _ | _ | GT14-B4 | _ | CYT14B-BS | M724B4 | _ | _ | _ | CT14B-4 | YT14B-4 |
| **PTX14-BS** | ETX14 | 14BS | _ | GTX14-BS | CYTX14-BS | M3RH4S/M4RH4S | 740-1886 | 44017 | ES14BS | CTX14-BS | YTX14-BS |
| **PTX14L-BS** | _ | _ | _ | _ | CYTX14L-BS | _ | _ | _ | _ | CTX14L-BS | YTX14L-BS |
| **PTX14AH-BS** | ETX15 | _ | _ | GTX14AH-BS | CYTX14AH-BS | M62H4A/M72H4A | _ | 44004 | ES14AH-BS | CTX14AH-BS | YTX14AH-BS |
| **PTX14AHL-BS** | ETX15L | _ | _ | GTX14AHL-BS | CYT14AHL-BS | M62H4L/M72H4L | _ | 44005 | _ | CTX14AHL-BS | YTX14AHL-BS |
| **PTZ14S** | _ | _ | GTZ14S | _ | FAYTZ14BS | M72Z14 | _ | _ | _ | CTZ14S | YTZ14S |
| **PTX15L-BS** | _ | _ | _ | _ | CYTX15L-BS | M6215L | _ | _ | _ | CTX15L-BS | YTX15L-BS |
| **PTX16-BS** | _ | _ | _ | _ | CYTX16-BS | M32X6S | _ | _ | _ | CTX16-BS | YTX16-BS |
| **PTX16-BS-1** | _ | _ | _ | _ | CYTX16-BS-1 | M32X61 | _ | _ | _ | CTX16-BS-1 | YTX16-BS-1 |

# COMPETITIVE CROSS REFERENCE CHART

## FACTORY SEALED/ SEALED MAINTENANCE FREE (Continued)

| Power-Sonic | Deka | Exide | JSB (GSBat.) | GS Battery | Interstate | Motocross | Napa | Sears | Wal-Mart | Yacht | Yuasa |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PTZ16H | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | GYZ16H |
| PTX19-BS | ETX16 | _ | _ | GT16-BS | _ | _ | 740-1887 | 44020 | _ | CTX19-BS | YTX20-BS |
| PTX19L-BS | ETX16L | _ | _ | GT16L-BS | _ | _ | 740-1888 | 44031 | ES16L-BS | CTX19L-BS | YTX20HL-PW |
| PTX19CL-BS | ETX16L | _ | _ | GT16L-BS | _ | _ | _ | 44031 | ES16L-BS | CTX19L-BS | YTX20HL-PW |
| PTX20-BS | _ | _ | _ | GTX20-BS | CYTX20-BS | M32RBS/M42RBS | 740-1824 | _ | _ | CTX20-BS | YTX20-BS |
| PTX20CH-BS | _ | _ | _ | _ | CYTX20CH-BS | M6220C | _ | _ | _ | CTX20CH-BS | YTX20CH-BS |
| PTX20L-BS | ETX20L | 20LBS | _ | GTX20L-BS | CYTX20L-BS | M320BS/M4220BS | 740-1890 | 44027 | ES20LBS | CTX20L-BS | YTX20L-BS |
| PTX20H-BS | _ | _ | _ | _ | _ | _ | _ | _ | _ | CTX20H | GYZ20H |
| PTX20HL-BS | ETX20L | _ | _ | _ | _ | M620BH/M720BH | _ | _ | _ | CTX20HL | GYZ20HL |
| PIX30L-BS | ETX30L | _ | _ | GIX30L | YIX30L | M7230L | _ | 44076 | ES30LBS | CTX30L | YIX30L |
| PIX30HL-BS | ETX30L | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| PIX30CL-BS | _ | _ | _ | _ | _ | _ | _ | _ | _ | CTX30CL-BS | _ |
| PIX32HL-BS | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | GYZ32L |
| PIX50-BS | _ | _ | _ | _ | _ | _ | _ | _ | _ | CTX18-BS | _ |
| PIX50L-BS | ETX18L | _ | _ | GTX18L-BS | CYTX24HL-BS | M6250H/M7250H | 740-1889 | 44006 | _ | CTX18L-BS/CTX24HL-BS | YTX24HL-BS |
| 51913-FS | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| P11U1LD-FS | _ | _ | _ | _ | _ | _ | _ | _ | _ | U1-32 | _ |

## HIGH PERFORMANCE

| Power-Sonic | Deka | Exide | JSB (GSBat.) | GS Battery | Interstate | Motocross | Napa | Sears | Wal-Mart | Yacht | Yuasa |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CB2.5L-C | _ | _ | GM2.5A-3C-3 | CB2.5L-C | YB2.5L-C | M225LC/M325LC | _ | _ | _ | CB2.5L-C | YB2.5L-C |
| CB2.5L-C-1 | _ | _ | GM2.5A-3C-1 | CB2.5L-C-1 | YB2.5L-C-1 | M22LC1/M32LC1 | _ | _ | _ | CB2.5L-C-1 | YB2.5L-C-1 |
| CB3L-A | _ | _ | GM3-3A | CB3L-A | YB3L-A | M223LA/M323LA | _ | _ | _ | CB3L-A | YB3L-A |
| CB3L-B | _ | _ | GM3-3B | CB3L-B | YB3L-B | M223LB | _ | _ | _ | CB3L-B | YB3L-B |
| CB4L-A | _ | _ | GM4A-3B | CB4L-A | YB4L-A | M224LA | _ | _ | _ | CB4L-A | YB4L-A |
| CB4L-B | _ | 4LB | GM4-3B | CB4L-B | YB4L-B | M224LB/M324LB | 740-1861 | _ | _ | CB4L-B | YB4L-B |
| CB5L-B | _ | _ | GM5Z-3B | CB5L-B | YB5L-B | M225LB/M325LB | 740-1868 | _ | _ | CB5L-B | YB5L-B |
| CB7-A | _ | _ | GM7Z-4A | CB7-A | YB7-A | M227AY | _ | _ | _ | CB7-A | YB7-A |
| CB7C-A | _ | _ | GM7CZ-3D | CB7C-A | YB7C-A | M227CY | _ | _ | _ | CB7C-A | YB7C-A |
| CB7L-B | _ | _ | GM7-3B-1 | CB7L-B | YB7L-B | M2273Y | _ | _ | _ | CB7L-B | YB7L-B |
| CB9A-A | _ | 9AA | GM9AZ-4A | CB9A-A | YB9A-A | M229AY/M329AY | 740-1872 | _ | _ | CB9A-A | YB9A-A |
| CB9L-A2 | _ | _ | _ | CB9L-A2 | YB9L-A2 | M2292Y | _ | _ | _ | CB9L-A2 | YB9L-A2 |
| CB9-B | _ | _ | GM9Z-4B | CB9-B | YB9-B | M229BY/M329BY | 740-1858 | 44356 | _ | CB9-B | YB9-B |
| CB9L-B | _ | 9LB | GM9Z-3B | CB9L-B | YB9L-B | M229LY/M329LY | 740-1837 | _ | _ | CB9L-B | YB9L-B |
| CB10A-A2 | _ | _ | _ | CB10A-A2 | YB10A-A2 | M221AY/M321AY | 740-1842 | _ | _ | CB10A-A2 | YB10A-A2 |
| CB10L-A2 | _ | 10LA2 | GM10Z-3A | CB10L-A2 | YB10L-A2 | M2210Y/M3210Y | 740-1857 | _ | ES10LA2 | CB10L-A2 | YB10L-A2 |
| CB10L-B | _ | _ | GM10-3B | CB10L-B | YB10L-B | M221LB/M321LB | 740-1831 | _ | _ | CB10L-B | YB10L-B |
| CB10L-B2 | _ | _ | _ | CB10L-B2 | YB10L-B2 | M221L2 | _ | _ | _ | CB10L-B2 | YB10L-B2 |
| CB12A-A | _ | 12AA | GM12AZ-4A-1 | CB12A-A | YB12A-A | M2212Y/M3212Y | 740-1854 | 44358 | ES12AA | CB12A-A | YB12A-A |
| CB12AL-A | _ | 12ALA | GM12AZ-3A-1 | CB12AL-A | YB12AL-A | M2221Y/M3221Y | 740-1873 | _ | _ | CB12AL-A | YB12AL-A |
| CB12AL-A2 | _ | _ | _ | CB12AL-A2 | YB12AL-A2 | M22212 | _ | _ | _ | CB12AL-A2 | YB12AL-A2 |
| CB12A-B | _ | _ | _ | _ | YB12A-B | M222AB | _ | _ | _ | CB12A-B | YB12A-B |
| CB12B-B2 | _ | _ | GM12B-4B | CB12B-B2 | YB12B-B2 | M221B2 | _ | _ | _ | CB12B-B2 | YB12B-B2 |
| CB12C-A | _ | _ | GM12CZ-4A-2 | CB12C-A | YB12C-A | M222CA | 740-1823 | _ | _ | CB12C-A | YB12C-A |
| CB14A-2 | _ | _ | GM14Z-4A | CB14A-2 | YB14A-2 | M2214H/M3214H | 740-1864 | _ | _ | CB14A-2 | YB14A-2 |
| CB14A-A | _ | 14AA1 | GM14AZ-4A | CB14A-A | YB14A-A1 | M224A1/M324A1 | 740-1826 | _ | _ | CB14A-A1 | YB14A-A1 |
| CB14A-A2 | _ | 14AA2 | GM14AZ-4A-1 | CB14A-A2 | YB14A-A2 | M2214A/M3214A | 740-1860 | 44361 | ES14AA2 | CB14A-A2 | YB14A-A2 |
| CB14L-A1 | _ | _ | GM14Z-3A-1 | CB14L-A1 | YB14L-A1 | M22141 | _ | _ | _ | CB14L-A1 | YB14L-A1 |
| CB14L-A2 | _ | 14LA2 | GM14Z-3A | CB14L-A2 | YB14L-A2 | M2214Y/M3214Y | 740-1851 | 44364 | ES14LA2 | CB14L-A2 | YB14L-A2 |
| CB14L-B2 | _ | _ | GM14Z-3B | CB14L-B2 | YB14L-B2 | M2214B | 740-1828 | _ | _ | CB14L-B2 | YB14L-B2 |
| CB14-B2 | _ | _ | _ | CB14-B2 | YB14B-2 | M224B2 | _ | _ | _ | CB14-B2 | YB14B-2 |
| SCB14L-A2 | _ | _ | _ | SCB14L-A2 | SYB14L-A2 | M2214S | _ | _ | _ | SCB14L-A2 | SYB14L-A2 |
| SCB14L-B2 | _ | _ | _ | SCB14L-B2 | SYB14L-B2 | M22B4S | _ | _ | _ | SCB14L-B2 | SYB14L-B2 |
| CB16AL-A2 | _ | 16ALA2 | GM16A-3A | CB16AL-A2 | YB16AL-A2 | M22162/M32162 | 740-1877 | _ | _ | CB16AL-A2 | YB16AL-A2 |
| HCB16A-AB | _ | 16AA | GM16-T | HCB16A-A | HYB16A-AB | M22H6B/M32H6B | 740-1867 | _ | _ | HCB16A-A/HCB16A-AB | HYB16A-AB |
| CB16-B | _ | 16B | GM16Z-4BH | CB16-B | YB16-B | M2216Y/M3216Y | 740-1852 | 44366 | ES16B | CB16-B | YB16-B |
| CB16L-B | _ | 16LB | GM16Z-3B | CB16L-B | YB16L-B | M2216K/M3216K | 740-1827 | _ | _ | CB16L-B | YB16L-B |
| CB16-B-LM | _ | _ | _ | _ | YB16-B-CX | M2216C/M3216C | _ | _ | _ | CB16-B-LM | YB16-B-CX |
| CB16HL-A-LM | _ | _ | _ | _ | YB16HL-A-CX | M2H16C/M3H16C | _ | _ | _ | CB16HL-A-LM | YB16HL-A-CX |
| CB16B-A | _ | _ | GM16B-4A | _ | YB16B-A | M2216B | _ | _ | _ | CB16B-A | YB16B-A |
| CB16B-A1 | _ | _ | _ | _ | YB16B-A1 | M22161 | _ | _ | _ | CB16B-A1 | YB16B-A1 |
| CB16CL-B | _ | 16CLB | GM16AZ-3B | CB16CL-B | YB16CL-B | M2S6CL/M3S6CL | 740-1862 | 44001 | ES16CLB | CB16CL-B | YB16CL |
| CB18-A | _ | _ | GM18A-4A | CB18-A | YB18-A | M2281Y/M3281Y | 740-1874 | _ | _ | CB18-A | YB18-A |
| CB18L-A | _ | 18LA | GM18A-3A | CB18L-A | YB18L-A | M2218L/M3218L | 740-1871 | _ | _ | CB18L-A | YB18L-A |
| C50-N18A-A | _ | _ | _ | _ | Y50-N18A-A | M228AY | _ | _ | _ | C50-N18A-A | Y50-N18A-A |
| C50-N18L-A3 | _ | 18LA2 | GM18Z-3A(S) | C50-N18L-A3 | Y50-N18L-A/ | M2218Y/M3218Y | 740-1855 | 44359 | ES50N18LA3 | C50-N18L-A/C50-N18L-A3 | Y50-N18L-A/ |
| C50-N18L-A3 | | | | | Y50-N18L-A3 | M228A3/M328A3 | | | | | Y50-N18L-A3 |
| C50-N18L-A-LM | _ | _ | _ | _ | Y50-N18L-A-CX | M2218C/M3218C | _ | _ | _ | C50-N18L-A-LM | Y50-N18L-A-CX |
| SC50-N18L-AT | _ | _ | _ | _ | SY50-N18L-AT | M22S8T | 740-1878 | _ | _ | SC50-N18L-AT | SY50-N18L-AT |
| C60-N24-A | _ | _ | _ | _ | Y60-N24-A | M2224A | _ | _ | _ | C60-N24-A | Y60-N24-A |
| C60-N24L-A | _ | _ | _ | C60-N24AL-A | _ | _ | 740-1880 | _ | _ | C60-N24L-A | _ |
| C60-N24AL-B | _ | _ | _ | _ | Y60-N24AL-B | M2224B | _ | _ | _ | C60-N24AL-B | Y60-N24AL-B |
| CB30L-B | _ | _ | _ | CB30L-B | YB30L-B | M22H30 | _ | _ | _ | CB30L-B | YB30L-B |
| CB30CL-B | _ | _ | _ | CB30CL-B | YB30CL-B | M2230C | _ | _ | _ | CB30CL-B | YB30CL-B |
| 51814 | _ | _ | _ | _ | 51814 | M2219B | _ | _ | _ | 51814 | 51814 |
| 51913 | _ | _ | _ | _ | 51913 | M2219A | _ | _ | _ | 51913 | 51913 |
| 53030 | _ | _ | _ | _ | 53030 | M2230B | _ | _ | _ | 53030 | 53030 |

## CONVENTIONAL

| Power-Sonic | Deka | Exide | JSB (GSBat.) | GS Battery | Interstate | Motocross | Napa | Sears | Wal-Mart | Yacht | Yuasa |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12N5-3B | _ | _ | 12N5-3B | 12N5-3B | 12N5-3B | M2253B/M3253B | 740-1883 | _ | _ | 12N5-3B | 12N5-3B |
| 12N5-4B | _ | 54B | _ | 12N5-4B | 12N5-4B | M2250B/M3250B | 740-1876 | _ | _ | 12N5-4B | 12N5-4B |
| 12N5.5-3B | _ | _ | 12N5.5-3B | 12N5.5-3B | 12N5.5-3B | M2255B/M3255B | _ | _ | _ | 12N5.5-3B | 12N5.5-3B |
| 12N5.5-4A | _ | _ | _ | 12N5.5-4A | 12N5.5-4A | M2254A/M3254A | _ | _ | _ | 12N5.5-4A | 12N5.5-4A |
| 12N5.5A-3B | _ | 55A3B | 12N5.5A-3B | 12N5.5A-3B | 12N5.5A-3B | M22A5B/M32A5B | 740-1875 | _ | _ | 12N5.5A-3B | 12N5.5A-3B |
| 12N7-3B | _ | 73B | 12N7-3B | 12N7-3B | 12N7-3B | M2273B/M3273B | 740-1881 | _ | _ | 12N7-3B | 12N7-3B |

## COMPETITIVE CROSS REFERENCE CHART

**CONVENTIONAL (Continued)**

| Power-Sonic | Deka | Exide | JSB (GSBat.) | GS Battery | Interstate | Motocross | Napa | Sears | Wal-Mart | Yacht | Yuasa |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **12N7-4A** | _ | 74A | 12N7-4A | 12N7-4A | 12N7-4A | M2274A/M3274A | 740-1870 | _ | _ | 12N7-4A | 12N7-4A |
| **12N7-4B** | _ | _ | 12N7-4B | 12N7-4B | 12N7-4B | M2270B/M3270B | 740-1882 | _ | _ | 12N7-4B | 12N7-4B |
| **12N7D-3B** | _ | _ | 12N7D-3B | 12N7D-3B | 12N7D-3B | M227DB | _ | _ | _ | 12N7D-3B | 12N7D-3B |
| **12N9-3A-1** | _ | _ | _ | 12N9-3A-1 | 12N9-3A-1 | M22931 | _ | _ | _ | 12N9-3A-1 | 12N9-3A-1 |
| **12N9-3B** | _ | _ | 12N9-3B | 12N9-3B | 12N9-3B | M2293B/M3293B | _ | _ | _ | 12N9-3B | 12N9-3B |
| **12N9-4B-1** | _ | 94B1 | 12N9-4B-1 | 12N9-4B-1 | 12N9-4B-1 | M2290B/M3290B | 740-1869 | _ | ES12N94B1 | 12N9-4B-1 | 12N9-4B-1 |
| **12N10-3A** | _ | _ | 12N10-3A | _ | 12N10-3A | M2210A | _ | _ | _ | 12N10-3A | 12N10-3A |
| **12N10-3A-1** | _ | _ | _ | _ | 12N10-3A-1 | M22101 | _ | _ | _ | 12N10-3A-1 | 12N10-3A-1 |
| **12N11-3A-1** | _ | _ | 12N11-3A-1 | _ | 12N11-3A-1 | M2211B/M3211B | _ | _ | _ | 12N11-3A-1 | 12N11-3A-1 |
| **12N12A-4A-1** | _ | 12A4A1 | 12N12A-4A-1 | 12N12A-4A-1 | 12N12A-4A-1 | M2221B/M3221B | 740-1853 | _ | _ | 12N12A-4A-1 | 12N12A-4A-1 |
| **12N14-3A** | _ | 143A | 12N14-3A | 12N14-3A | 12N14-3A | M2241B/M3241B | 740-1856 | _ | _ | 12N14-3A | 12N14-3A |
| **12N24-3** | _ | _ | 12N24-3 | _ | 12N24-3 | M2224D | _ | _ | _ | 12N24-3 | 12N24-3 |
| **CHD4-12** | _ | H12 | GM32-4A | CHD4-12 | YHD-12 | M22H12/M32H12 | 740-1859 | 44357 | _ | CHD4-12 | YHD-12 |

## BATTERY CROSS REFERENCE CHART

| HIGH PERFORMANCE FACTORY ACTIVATED MAINTENANCE FREE | FACTORY ACTIVATED MAINTENANCE FREE | SEALED MAINTENANCE FREE UPGRADE | SEALED MAINTENANCE FREE | LOW MAINTENANCE | HIGH PERFORMANCE | CONVENTIONAL |
|---|---|---|---|---|---|---|
| _ | PTX4LBS-FS | _ | PTX4L-BS | _ | CB4L-A | _ |
| _ | PTX4LBS-FS | _ | PTX4L-BS | _ | CB4L-B | _ |
| _ | _ | _ | _ | _ | CB5L-B | 12N5-3B |
| _ | PTX5LBS-FS | _ | PTX5L-BS | _ | _ | _ |
| _ | _ | _ | _ | _ | CB7L-B | 12N7-3B |
| _ | _ | _ | _ | _ | CB7-A | 12N7-4A |
| _ | PTX7ABS-FS | _ | PTX7A-BS | _ | _ | _ |
| _ | PTX7LBS-FS | _ | PTX7L-BS | _ | _ | _ |
| _ | _ | _ | PT9A-BS | _ | CB9-B | 12N9-4B-1 |
| _ | _ | _ | _ | _ | CB9L-B | 12N9-3B |
| _ | _ | _ | _ | _ | CB9L-A2 | 12N9-3A-1 |
| _ | PTX9BS-FS | _ | PTX9-BS | _ | _ | _ |
| _ | PTX12AABS-FS | _ | _ | _ | CB12A-A | 12N12A-4A-1 |
| _ | PTX12ABS-FS | _ | PTX12A-BS | _ | _ | _ |
| _ | PTX12BS-FS | _ | PTX12-BS | _ | _ | _ |
| _ | PTX14AHBS-FS | _ | PTX14AH-BS | _ | CB14-A2 | _ |
| _ | PTX14AHBS-FS | _ | PTX14AH-BS | _ | CB14-B2 | _ |
| _ | PTX14AHBS-FS | _ | PTX14AH-BS | _ | CB14A-A | _ |
| _ | PTX14AHBS-FS | _ | PTX14AH-BS | _ | CB14A-A2 | _ |
| _ | PTX14AHLBS-FS | _ | PTX14AHL-BS | _ | CB14L-A2 | 12N14-3A |
| _ | PTX14AHLBS-FS | _ | PTX14AHL-BS | _ | CB14L-B2 | _ |
| _ | PTX14AHLBS-FS† | _ | PTX14AHL-BS† | _ | SCB14L-A2 | _ |
| _ | PTX14AHLBS-FS† | _ | PTX14AHL-BS† | _ | SCB14L-B2 | _ |
| PTZ16H | PTX14BS-FS | _ | PTX14-BS | _ | _ | _ |
| _ | PTX14LBS-FS | _ | PTX14L-BS | _ | _ | _ |
| _ | PTX15LBS-FS | _ | PTX15L-BS | _ | _ | _ |
| _ | _ | PTX20CH-BS | PTX16-BS | _ | _ | _ |
| _ | PTX19BS-FS | _ | PTX19-BS | CB16-B-LM | CB16-B | _ |
| _ | PTX19LBS-FS | _ | PTX19L-BS | CB16HL-A-LM | _ | _ |
| _ | PTX19CLBS-FS | _ | PTX19CL-BS | _ | CB16CL-B | _ |
| _ | PTX19LBS-FS | _ | PTX19L-BS | _ | CB16L-B | _ |
| PTX20HBS-FS* | PTX20BS-FS* | _ | PTX20-BS* | _ | CB18-A | _ |
| PTX20HLBS-FS* | PTX20LBS-FS* | _ | PTX20L-BS* | _ | CB18L-A | _ |
| _ | _ | _ | PIX50-BS | _ | C50-N18A-A | _ |
| _ | PIX50LBS-FS# | _ | PIX50L-BS# | C50-N18L-A-LM≠ | C50-N18L-A3 | _ |
| _ | PIX50LBS-FS#† | _ | PIX50L-BS#† | _ | SC50-N18L-AT | _ |
| PIX30HLBS-FS/ PIX32HLBS-FS | PIX30LBS-FS | _ | PIX30L-BS | _ | CB30L-B | _ |
| _ | PIX30CLBS-FS | _ | PIX30CL-BS | _ | CB30CL-B | _ |
| PIX30HLBS-FS/ PIX32HLBS-FS | PIX30LBS-FS | _ | PIX30L-BS | _ | C60-N24AL-B | _ |
| _ | 51913-FS | _ | _ | _ | 51913 | _ |
| PIX30HLBS-FS/ PIX32HLBS-FS | PIX30LBS-FS | _ | PIX30L-BS | _ | 53030 | _ |

† Eliminates need for sensor (needs to be disabled).
* The PTX20 series batteries may be used as an optional upgrade, but some modification to the hold down may be necessary. See battery label for retrofit cautions.
# Top and front terminal mounts only.
≠ Top and side terminal mounts only.

## MOTORCYCLE BATTERY APPLICATIONS

### BUELL

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1200** | X1 Lightning | 99-02 | PTX20LBS-FS†• | _ | _ | _ |
| | S1 Lightning | 96-99 | PTX14BS-FS*• | PTX14-BS* | _ | _ |
| | S3,S3T Thunderbolt | 97-02 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | M2 Cyclone | 97-02 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | S2,S2T Thunderbolt | 94-96 | PTX19BS-FS | PTX19-BS | CB16-B-LM | _ |
| | RR1200 | 88-90 | PTX19BS-FS | PTX19-BS | CB16-B-LM | _ |
| | RS1200 | 89-93 | PTX19BS-FS | PTX19-BS | CB16-B-LM | _ |
| | RSS1200 | 91-93 | PTX19BS-FS | PTX19-BS | CB16-B-LM | _ |
| | XB12R Firebolt | 04-10 | PTX14BS-FS†• | _ | _ | _ |
| | XB125S Lightning | 04-10 | PTX14BS-FS†• | _ | _ | _ |
| | XB12X Ulysses | 06-10 | PTX14BS-FS†• | _ | _ | _ |
| **1125** | 1125R, 1125CR | 08-10 | PTX14LBS-FS† | _ | _ | _ |
| **1000** | RR1000 | 87 | PTX19BS-FS | PTX19-BS | CB16-B-LM | _ |

† Must use factory activated battery.

### BUELL (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **984** | XB9R Firebolt, XB9SX Lightening | 02-10 | PTX14BS-FS†• | _ | _ | _ |
| **500** | Blast | 00-09 | PTX14BS-FS• | PTX14-BS | _ | _ |

### CANNONDALE

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **440** | C440,E440,X440, X440S | 02-03 | PTX5LBS-FS† | _ | _ | _ |
| | EX400,MX400, XC400 | 00-01 | PTX5LBS-FS | PTX5L-BS | _ | _ |

• Please see battery cross reference chart for optional upgrades.
* Must use adaptor kit available from Buell.

# MOTORCYCLE BATTERY APPLICATIONS

## EXCELSIOR-HENDERSON

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1386** | SuperX | 99-00 | PTX20LBS-FS• | PTX20L-BS | _ | _ |

## HARLEY-DAVIDSON

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1803** | CVO FLH (Touring) | 07-16 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | CVO FXD Fat Bob (Dyna) | 07-15 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | CVO FLST (Softail) | 07-15 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | FLS (Softail Slim S, Fat Boy S) | 16-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **1690** | FLHTK (Touring) | 10-11 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | FLH, FLT (Touring) | 11-16 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | FLS (Softail) | 12-16 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | FXD (Dyna) | 12-16 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **1584** | FXD (Dyna) | 07-11 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | FXST, FLST (Softail) | 07-11 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | FL, FLH (Touring) | 07-10 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| **1450** | FXD (Dyna) | 99-06 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | FXST,FLST (Softail) | 00-06 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | FL,FLH (Touring) | 00-06 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |
| | FL,FLH (Touring) | 99 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |
| **1340** | FXD,FXST (Dyna) | 97-99 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | FXD,FXST (Dyna) | 91-96 | PTX19LBS-FS< | PTX19L-BS< | CB16HL-A-LM | _ |
| | FX,FXR (Dyna) | 79-94 | PTX19BS-FS< | PTX19-BS< | CB16-B-LM | CB16-B |
| | FXR (Dyna) | 99-00 | PTX19BS-FS | PTX19-BS | CB16-B-LM | CB16-B |
| | FLST (Softail) | 97-99 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | FLST (Softail) | 91-96 | PTX19LBS-FS | PTX19L-BS | CB16HL-A-LM | _ |
| | FXST,FLST (Softail) | 84-90 | PTX19BS-FS | PTX19-BS | CB16-B-LM | CB16-B |
| | FL,FLH (Touring) | 80-96 | PIX50LBS-FS | PIX50L-BS | CB16HL-A-LM | _ |
| | FL,FLH (Touring) | 97-98 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |
| | FL.FLH (Touring) | 78-84 | _ | _ | _ | CHD4-12 |
| **1250** | VRSC V-Rod | 08-16 | PTX20LBS-FS†• | _ | _ | _ |
| **1200** | XL,XLH (Sportster) | 04-16 | PTX14LBS-FS | PTX14L-BS | _ | _ |
| | XL,XLH (Sportster) | 97-03 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | XL,XLH (Sportster) | 87-96 | PTX19BS-FS | PTX19-BS | CB16-B-LM | _ |
| | XR1200X | 09-12 | PTX14LBS-FS | PTX14L-BS | _ | _ |
| | FX (Electric Start) | 71-78 | PTX19BS-FS | PTX19-BS | CB16-B-LM | CB16-B |
| | FX (Kick Start) | 71-72 | _ | _ | CB7-A | 12N7-4A |
| | FL/FLH Series (Touring) | 65-77 | _ | _ | _ | CHD4-12 |
| **1130** | VRSD (V-Rod) | 02-07 | PTX14BS-FS†• | _ | _ | _ |
| **1100** | XL Series(Sportster) | 87-93 | PTX19BS-FS | PTX19-BS | CB16-B-LM | CB16-B |
| **1000** | XL Series(Sportster) | 79-85 | PTX19BS-FS | PTX19-BS | CB16-B-LM | CB16-B |
| | XLCH Series (Sportster) | 70-78 | _ | _ | CB7-A | 12N7-4A |
| | XLCR Café Racer | 77-78 | PTX19BS-FS | PTX19-BS | CB16-B-LM | CB16-B |
| | XLH (Sportster) | 67-78 | _ | _ | _ | CHD4-12 |
| | XLX-61,XR1000 | 83-85 | PTX19BS-FS | PTX19-BS | CB16-B-LM | CB16-B |
| **883** | XL,XLH (Sportster) | 04-17 | PTX14LBS-FS | PTX14L-BS | _ | _ |
| | XL,XLH (Sportster) | 97-03 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | XLH (Sportster) | 86-96 | PTX19BS-FS | PTX19-BS | CB16-B-LM | CB16-B |
| **750** | Street | 14-17 | PTX14LBS-FS | PTX14L-BS | _ | _ |
| **500** | MT500 (Military) | All | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | Street | 14-17 | PTX14LBS-FS | PTX14L-BS | _ | _ |
| **350** | SS350 | All | _ | _ | _ | 6N11A-1B |
| **250** | SS250,SX250 | 75-78 | _ | _ | CB7L-B | 12N7-3B |
| **175** | SS175,SX175 | 74-78 | _ | _ | CB7L-B | 12N7-3B |
| **125** | SS125,SX125 | 74-78 | _ | _ | CB7L-B | 12N7-3B |
| | SXT125 | 75-78 | _ | _ | CB7L-B | 12N7-3B |
| | TX125 | 73-78 | _ | _ | CB7L-B | 12N7-3B |
| **90** | Z90 | 73-76 | _ | _ | CB7L-B | 12N7-3B |

## HONDA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1800** | GL1800 Gold Wing, F6B,F6C | 09-17 | PTX20HLBS-FS | _ | _ | _ |
| | GL1800 Gold Wing | 01-08 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | NRX1800 Valkyrie Rune | 04-05 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | VTX1800C | 02-11 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | VTX1800R Retro | 02-11 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **1500** | GL1500 Gold Wing | 88-00 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A3 | _ |
| | GL1500 Valkyrie | 97-03 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **1300** | CTX1300 | 14 | PTZ14S | _ | _ | _ |
| | ST1300, A, P | 03-14 | PTZ14S | _ | _ | _ |
| | VTX1300C,R,S, Retro | 03-12 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | VT1300CS,CR, CXA FURY | 09-17 | PTZ14S | _ | _ | _ |

< Requires use of cover/spacer kit.
† Must use factory activated battery.
• Please see battery cross reference chart on page 11 for optional upgrades.

## HONDA (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1300** | CB1300 Super Four | 01-13 | PTZ14S | _ | _ | _ |
| **1200** | VFR1200F | 10-14 | PTZ14S | _ | _ | _ |
| | VFR1200XD | 13 | PTZ14S | _ | _ | _ |
| | VFR1200X | 16-17 | PTZ14S | _ | _ | _ |
| | GL1200 Gold Wing | 84-87 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| **1100** | CB1100 | 10-14 | PTZ14S | _ | _ | _ |
| | CB1100F Super Sport | 83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | CBR1100XX | 01-04 | PTZ12S | _ | _ | _ |
| | CBR1100XX | 97-00 | PTX12BS-FS | PTX12-BS | _ | _ |
| | GL1100 Gold Wing | 80-83 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | ST1100,ABS-TCS, 1100A | 91-02 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | VF1100C V65 Magna | 83-86 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | VF1100S V65 Sabre | 84-85 | PTX20LBS-FS#• | PTX20L-BS# | CB18L-A | _ |
| | VT1100 Shadow, C2 Sabre | 00-07 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | VT1100C,C3, T Shadow (Spirit, Aero, A.C.E. Tourer) | 01-07 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | VT1100C,C3, T Shadow (Spirit, Aero, A.C.E. Tourer) | 98-00 | _ | _ | HCB16A-AB | _ |
| | VT1100C ShadowSpirit | 85-97 | _ | _ | HCB16A-AB | _ |
| | VT1100C2 Shadow A.C.E. | 95-99 | _ | _ | HCB16A-AB | _ |
| **1000** | CB1000 | 94-95 | PTX12BS-FS | PTX12-BS | _ | _ |
| | CB1000C Custom | 83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | CB1000F Hurricane | 87-96 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-B2 | _ |
| | CB1000R | 09-17 | PTZ10S | _ | _ | _ |
| | CBF1000F | 09-10 | PTZ10S | _ | _ | _ |
| | CBR1000RA(ABS) | 08-17 | PTZ10S | _ | _ | _ |
| | CBR1000RR | 08-17 | PTZ7S | _ | _ | _ |
| | CBR1000RR | 04-07 | PTZ10S | _ | _ | _ |
| | CBX1000 Super Sport | 79-82 | PTX20LBS-FS#• | PTX20L-BS# | CB18L-A | _ |
| | CBX1000 Super Sport (Opt) | 82 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | CRF1000L Africa Twin | 16-17 | PTZ14S | _ | _ | _ |
| | GL1000 Gold Wing | 75-79 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | RC213-V-S | 16-17 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | RVT1000R RC51 | 00-06 | PTZ12S | _ | _ | _ |
| | VTR1000F Super Hawk | 01-05 | PTZ12S | _ | _ | _ |
| | VTR1000 Super Hawk | 97-00 | PTX12BS-FS | PTX12-BS | _ | _ |
| | VF1000R,F | 84-86 | _ | _ | CB16B-A | _ |
| **954** | CBR954RR | 02-03 | PTZ10S | _ | _ | _ |
| **929** | CBR929RR,RE | 00-01 | PTZ10S | _ | _ | _ |
| **919** | CB900F (919) | 02-06 | PTZ10S | _ | _ | _ |
| **900** | CB900C,F | 80-82 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | CBR900,RR | 93-99 | PTX9BS-FS | PTX9-BS | _ | _ |
| **800** | PC800 Pacific Coast | 89-98 | PTX12BS-FS | PTX12-BS | _ | _ |
| | VFR800, A Interceptor, ABS | 02-12 | PTZ12S | _ | _ | _ |
| | VFR800 Interceptor | 14-16 | PTZ12S | _ | _ | _ |
| | VF800FI Interceptor | 98-01 | PTX12BS-FS | PTX12-BS | _ | _ |
| | VT800C Shadow | 88 | PTX14AHBS-FS | PTX14AH-BS | CB14-B2 | _ |
| **750** | CB750 Nighthawk | 91-03 | PTX14AHBS-FS | PTX14AH-BS | CB14A-2 | _ |
| | CB750AHondomatic | 76-78 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | CB750C Custom | 80-82 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | CB750F SuperSport | 75-82 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | CB750K Four | 69-82 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| | CB750C Limited Ed. | 79 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | CB750SC Nighthawk | 80-84 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | RVF750R (RC45) | 94 | PTX9BS-FS | PTX9-BS | _ | _ |
| | VF750C V45 Magna | 88 | PTX12AABS-FS | _ | CB12A-A | _ |
| | VF750C V45 Magna | 82-83 | PTX14AHBS-FS | PTX14AH-BS | CB14A-2 | _ |
| | VF750C,C2, D Magna | 94-03 | PTX12BS-FS | PTX12-BS | _ | _ |
| | VF750F V45 Interceptor | 83-84 | PTX14AHBS-FS | PTX14AH-BS | CB14A-2 | _ |
| | VF750S V45 Sabre | 82-83 | PTX14AHLBS-FS+ | PTX14AHL-BS+ | SCB14L-A2• | _ |
| | VF750F Interceptor | 86 | _ | _ | CB12A-B | _ |
| | VFR750F | 90-97 | PTX12BS-FS | PTX12-BS | _ | _ |
| | VFR750R (RC30) | 90 | PTX9BS-FS | PTX9-BS | _ | _ |
| | VT750C,DCA, DCB Shadow Spirit | 01-03 | PTZ14S | _ | _ | _ |

• This battery includes a sensor.
# The PTX20 series batteries may be used as an optional upgrade, but some modification to the hold down may be necessary. See battery label for retrofit cautions.
+ Eliminates need for sensor (needs to be disabled).

## HONDA (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **750** | VT750C,CA,C2 Shadow Spirit, Aero | 07-09 | PTZ12S | _ | _ | _ |
| | VT750C,C2,C2B, RS Shadow,Phantom, Areo | 10-17 | PTZ14S | _ | _ | _ |
| | VT750C,CA | 04-09 | PTZ12S | _ | _ | _ |
| | VT750C,CA, CD Shadow | 98-03 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | VT750CD,CD2 Shadow Deluxe | 98-02 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | VT750CDA,B,C, D Shadow A.C.E. Deluxe | 02-03 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | VT750C Shadow | 83 | _ | _ | HCB16A-AB | _ |
| | VT750DC Shadow Spirit | 01-07 | PTZ14S | _ | _ | _ |
| | VT750C,C2,C2B,RS Shadow | 10-14 | PTZ14S | _ | _ | _ |
| **700** | CTX700 | 14-17 | PTZ12S | _ | _ | _ |
| | CB700SC Nighthawk'S' | 84-86 | _ | _ | CB14L-A1 | _ |
| | NC700X | 12-17 | PTZ12S | _ | _ | _ |
| | NC700J(NM4) | 15-16 | PTZ12S | _ | _ | _ |
| | NT700V | 10-13 | PTZ14S | _ | _ | _ |
| | VF700C Magna | 87 | PTX12AABS-FS | _ | CB12A-A | _ |
| | VF700C Magna | 84-86 | PTX14AHBS-FS | PTX14AH-BS | CB14A-2 | _ |
| | VF700F Interceptor | 84-85 | PTX14AHBS-FS | PTX14AH-BS | CB14A-2 | _ |
| | VF700S Sabre | 84-85 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | VF700F Interceptor | 86-87 | _ | _ | CB12A-B | _ |
| | VT700C Shadow | 86-87 | PTX14AHBS-FS | PTX14AHL-BS | CB14-B2 | _ |
| | VT700C Shadow | 84-85 | _ | _ | HCB16A-AB | _ |
| **680** | DN-01 | 09-13 | PTZ14S | _ | _ | _ |
| **650** | CB650, Custom | 79-82 | PTX12AABS-FS | _ | CB12A-A | _ |
| | CB650SC Nighthawk | 83-85 | _ | _ | CB12AL-A | _ |
| | CB650SC Nighthawk | 82 | PTX12AABS-FS | _ | CB12A-A | _ |
| | CBR650F | 14-16 | PTZ10S | _ | _ | _ |
| | CX650C Custom | 83 | PTX14AHBS-FS | PTX14AH-BS | CB14A-2 | _ |
| | CX650T Turbo | 83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | GL650I Silver Wing Interstate | 83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | NT650 Hawk GT | 88-91 | PTX9BS-FS | PTX9-BS | _ | _ |
| | NT650V | | _ | PTR9-BS | _ | _ |
| | NX650 | 88-89 | PTX9BS-FS | PTX9-BS | _ | _ |
| | SLR650 | | _ | PTR9-BS | _ | _ |
| | Vigor 650 | | _ | PTR9-BS | _ | _ |
| | XR650L | 93-17 | PTX9BS-FS | PTX9-BS | _ | _ |
| **600** | CB600F | 04-06 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | CBR600 | 87-00 | PTX9BS-FS | PTX9-BS | _ | _ |
| | CBR600F4i, 600RR | 01-17 | PTZ10S | _ | _ | _ |
| | VT600C,CD Shadow Deluxe | 04-07 | PTZ10S | _ | _ | _ |
| | VT600C,CD Shadow Deluxe, VLX | 88-03 | PTX9BS-FS | PTX9-BS | _ | _ |
| | XL600R | 83-87 | _ | _ | CB3L-A | _ |
| | XL600V Transalp | 89-90 | _ | _ | CB12A-B | _ |
| **550** | CB550 Four, K, SS | 74-78 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | CB550SC Nighthawk | 83 | _ | _ | CB12AL-A | _ |
| **500** | CB500 Four, Twin | 71-76 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | CB500, C,D,T | 78-82 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | CB500X,F | 13-17 | PTZ10S | _ | _ | _ |
| | CBR500R | 13-17 | PTZ10S | _ | _ | _ |
| | FT500 Ascot | 82-83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | GB500 | 89-90 | _ | _ | CB12A-B | _ |
| | GL500,I Silver Wing | 81-82 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | VF500C V30 Magna | 84-85 | PTX12AABS-FS | _ | CB12A-A | _ |
| | VF500F Interceptor | 84-86 | PTX12AABS-FS | _ | CB12A-A | _ |
| | VF500C Shadow | 83-86 | PTX12AABS-FS | _ | CB12A-A | _ |
| | VF500T Ascot | 83-84 | PTX12AABS-FS | _ | CB12A-A | _ |
| | XL500R | 82 | _ | _ | CB3L-A | _ |
| | XL500S | 79-81 | _ | _ | _ | 6N4-2A-4 |
| **450** | CB450, SS | 67-74 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | CB400A | 78 | PTX12AABS-FS | _ | CB12A-A | _ |
| | CB450SC Nighthawk,T | 82-86 | PTX12AABS-FS | _ | CB12A-A | _ |
| | CL450 Scrambler | 67-74 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | CMX450C | 05-09 | PTZ7S | _ | _ | _ |
| | CRF450X | 05-17 | PTZ7S | _ | _ | _ |
| | Hondomatic,E | 82-83 | PTX12AABS-FS | _ | CB12A-A | _ |
| | CMX450C Rebel | 86-87 | PTX12AABS-FS | _ | CB12A-A | _ |
| **400** | CB400F CB-1 | 89-90 | PTX9BS-FS | PTX9-BS | _ | _ |
| | CB400F SuperSport | 75-77 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |

• Please see battery cross reference chart on page 11 for optional upgrades.

## HONDA (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **400** | CB400T Hawk, HawkII | 78-81 | PTX12AABS-FS | _ | CB12A-A | _ |
| | CB400TI Hawk I | 78-79 | _ | _ | CB9-B | 12N9-4B-1 |
| | CM400 (All) | 79-81 | PTX12AABS-FS | _ | CB12A-A | _ |
| **360** | CB360, G, T | 74-76 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | CJ360T | 76-77 | _ | _ | CB9-B | 12N9-4B-1 |
| | CL360 Scrambler | 74-75 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| **350** | CB350 Super Sport4 | 68-74 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | CL350 Scrambler | 68-73 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | SL350 Motosport | 70-73 | _ | _ | _ | 12N5-4B |
| | SL350 Motosport | 69-70 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | XL350 | 74-78 | _ | _ | _ | 6N6-3B |
| | XL350R | 84-85 | _ | _ | CB3L-A | _ |
| **305** | CA77 Dream Touring (late) | 63-69 | _ | _ | _ | 12N9-3A-1 |
| | CB77 Super hawk | 61-68 | _ | _ | _ | 12N9-3A-1 |
| | CL77 Scrambler | 65-68 | _ | _ | _ | 12N5-4B |
| **300** | CB300F | 15-17 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | CBR300R | 15-17 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| **250** | CBR250R | 11-13 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | CMX250C Rebel | 96-16 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | CA72 Dream Touring (late) | 63-66 | _ | _ | _ | 12N9-3A-1 |
| | CB250 Nighthawk | 91-09 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | CL72 Hawk | 61-66 | _ | _ | _ | 12N9-3A-1 |
| | CL72 Scrambler | 62-65 | _ | _ | _ | 12N5-4B |
| | CM250C Custom | 82-83 | _ | _ | CB9-B | _ |
| | CMX250C Rebel | 96-16 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | CMX250C Rebel, LTD | 85-87 | _ | _ | CB9L-B | _ |
| | CRF250X | 04-17 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | MT250 Elsinore | 74-76 | _ | _ | _ | 6N6-3B |
| | NX250 | 88-90 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | VTR250 Interceptor VTR | 88-90 | _ | _ | CB9-B | _ |
| | SM250 | 09-11 | PTZ12S | _ | _ | _ |
| | XL250 | 72-76 | _ | _ | _ | 6N6-3B |
| | XL250R | 82-87 | _ | _ | CB3L-A | _ |
| | XL250S | 78-81 | _ | _ | _ | 6N4-2A-4 |
| | XL250L | 91-96 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| **230** | CRF230L | 14 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | CRF230F,L (Exp.07) | 03-16 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | CRF230L | 08-10 | PTZ7S | _ | _ | _ |
| | CRF230L,M | 08-13 | PTZ7S | _ | _ | _ |
| **200** | CB200 | 74-76 | _ | _ | CB9-B | 12N9-4B-1 |
| | CL, CB200 Scrambler | 74 | _ | _ | CB9-B | 12N9-4B-1 |
| | CM200T Twinstar | 81-82 | _ | _ | CB9-B | 12N9-4B-1 |
| | CM200T Twinstar | 80 | _ | _ | _ | 6N12A-2D |
| | TLR200 Reflex | 86-87 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | TR200 Fat Cat | 87 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| | TR200 Fat Cat | 86 | PTX9BS-FS | PTX9-BS | _ | _ |
| | XL200R | 83-84 | _ | _ | CB3L-A | _ |
| **185** | CM185T Twinstar | 78-79 | _ | _ | _ | 6N12A-2D |
| | XL185S | 79-83 | _ | _ | _ | 6N4-2A-4 |
| **175** | CA175 Touring (CD175) | 68-69 | _ | _ | _ | B54-6 |
| | CA175 Touring (CD175K3) | 69-70 | _ | _ | _ | 6N12A-2D |
| | CB175, K Super Sport | 69-73 | _ | _ | CB9-B | 12N9-4B-1 |
| | CL175, K Scrambler | 68-73 | _ | _ | CB9-B | 12N9-4B-1 |
| | SL175 Motosport | 70-72 | _ | _ | _ | 12N5-4B |
| | XL175 | 73-78 | _ | _ | _ | 6N6-3B |
| **160** | CB160 Sport | 65-69 | _ | _ | CB9-B | 12N9-4B-1 |
| | CL160 Scrambler | 66-68 | _ | _ | CB9-B | 12N9-4B-1 |
| **150** | CRF150F,R | 06-17 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **125** | CRF125F | 14-16 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | MSX125 Grom | 14-17 | PTZ5S | _ | _ | _ |
| | CB125S | 81-82 | _ | _ | _ | 6N6-3B-1 |
| | CB125S | 73-80 | _ | _ | _ | 6N6-3B |
| | CL125A Scrambler (Twin) | 67-69 | _ | _ | _ | B54-6 |
| | CL125S Scrambler | 73-75 | _ | _ | _ | 6N4C-18 |
| | CT125 Trail | 77 | _ | _ | _ | 6N4C-18 |
| | MT125Elsinore | 74-76 | _ | _ | _ | 6N6-3B |
| | NX125 | 88-90 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | SL125 Motosport | 71-73 | _ | _ | _ | 6N6-3B |
| | SS125A Super Sport | 67-69 | _ | _ | _ | B54-6 |
| | XL125 | 74-78 | _ | _ | _ | 6N4C-1B |
| | XL125S | 79-84 | _ | _ | _ | 6N4-2A-4 |
| | XL125S | 85 | _ | _ | CB2.5L-C | _ |
| **110** | CRF110F | 13-16 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | C110 | 09-10 | PTZ7S | _ | _ | _ |

# MOTORCYCLE BATTERY APPLICATIONS

## HONDA (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **110** | CT110 Trail | 86 | _ | _ | _ | 6N4-2A-4 |
| | CT110 Trail | 80-84 | _ | _ | _ | 6N4-2A-8(6) |
| **100** | CB100 Super Sport | 70-72 | _ | _ | _ | 6N6-3B |
| | CL100, S Scrambler | 70-73 | _ | _ | _ | 6N6-3B |
| | SL100 Motosport | 70-73 | _ | _ | _ | 6N6-3B |
| | XL100 | 77-78 | _ | _ | _ | 6N4C-1B |
| | XL100 | 74-76 | _ | _ | _ | 6N6-3B |
| | XL100S | 83-85 | _ | _ | _ | 6N4-2A-4 |
| | XL100S | 81-82 | _ | _ | _ | 6N4C-1B |
| | XL100S | 79-80 | _ | _ | _ | 6N4-2A-4 |
| **90** | CA200 Honda (C200 Touring 90) | 63-66 | _ | _ | _ | 6N6-1D-2 |
| | CL90,L 5HP Scrambler | 67-70 | _ | _ | _ | 6N5.5-1D |
| | CM91 Honda90 (C90M) | 66-69 | _ | _ | _ | 6N5.5-1D |
| | CT200 Trail 90 | 64-66 | _ | _ | _ | 6N5.5-1D |
| | CT90 Trail | 66-79 | _ | _ | _ | 6N5.5-1D |
| | EZ90 Cub | 91-96 | PTX5LBS-FS | PTX5L-BS | _ | |
| | S90 Super (CS90) | 64-69 | _ | _ | _ | 6N6-1B |
| | SL90 Motosport | 69 | _ | _ | _ | 6N5.5-1D |
| **70** | C70 Passport | 82-83 | _ | _ | CB5L-B | _ |
| | C70 Passport | 80-81 | _ | _ | _ | 6N11-2D |
| | CM70 Honda | 70-73 | _ | _ | _ | 6N11-2D |
| | CL70 Scrambler | 69-73 | _ | _ | _ | 6N5.5-1D-1 |
| | CT70 | 91-94 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | CT70 Trail | 80-82 | _ | _ | _ | 6N4-2A-8(6) |
| | CT70 Trail | 74-79 | _ | _ | _ | 6N4C-1B |
| | CT70 Trail, 70H | 69-71 | _ | _ | _ | 6N2A-2C |
| | CT70, 70H | 72-73 | _ | _ | _ | 6N2A-2C-3 |
| | SL70 Motosport | 73 | _ | _ | _ | 6N2A-2C-3 |
| | SL70 Motosport | 71-72 | _ | _ | _ | 6N2A-2C |
| | XL70 | 74-76 | _ | _ | _ | 6N4C-1B |
| **65** | S65 Sport (CS65) | 65-69 | _ | _ | _ | 6N2-2A |
| **55** | C, CA 105T Trail | 62-65 | _ | _ | _ | 6N2-2A |
| **50** | C, 100, T, CA100, T, C110, CA110 | 59-69 | _ | _ | _ | 6N2-2A |
| | MB5 | 82 | _ | _ | CB2.5L-C | _ |
| | NA50 Express II | 80-81 | _ | _ | _ | 6N4-2A-8(6) |
| | NA50 Express II | 79 | _ | _ | _ | 6N2-2A |
| | NC50 Express | 80-83 | _ | _ | _ | 6N4-2A-8(6) |
| | NC50 Express | 78-79 | _ | _ | _ | 6N2-2A |
| | NC50 Express | 77 | _ | _ | _ | 6N2A-2C-3 |
| | NS50F | 90 | _ | _ | CB3L-A | _ |
| | NU50 Urban Express | 82-83 | _ | _ | CB2.5L-C-1 | _ |
| | NU50M Urban Express Dlx | 82-83 | _ | _ | CB4L-B | _ |
| | NX50M Express SR | 81-82 | _ | _ | CB4L-B | _ |
| | ZB50 | 88 | PTX4LBS-FS | PTX4L-BS | _ | _ |

## INDIAN

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1819** | Chief Classic,Roadmaster Vintage,Chieftain | 14-17 | PTX20HLBS-FS† | _ | _ | _ |
| | Chieftain,Roadmaster, Cheif, Dark Horse | 16-17 | PTX20HLBS-FS† | _ | _ | _ |
| **1720** | Chief Classic,Vintage, Darkhouse | 12-13 | PIX50LBS-FS | PIX50L-BS | _ | _ |
| **1638** | Chief | 02-03 | PIX50LBS-FS | PIX50L-BS | _ | _ |
| **1442** | Scout, Spirit | 02-03 | PTX20BS-FS• | PTX20-BS | _ | _ |
| | All Models | 99-01 | PTX20BS-FS | PTX20-BS | _ | _ |
| **1133** | Scout | 15-17 | PTX14AHBS-FS† | _ | _ | _ |
| **999** | Scout Sixty | 16-17 | PTX14AHBS-FS† | _ | _ | _ |

## KAWASAKI

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **2000** | VN2000-A Vulcan | 04-13 | _ | PTX16-BS• | _ | _ |
| **1700** | VN1700 Voyager, Nomad, Vaquero | 09-17 | _ | PTX20CH-BS | _ | _ |
| **1600** | VN1600 Vulcan Classic | 03-09 | _ | PTX16-BS• | _ | _ |
| | VN1600 Mean Streak | 04-09 | _ | PTX16-BS• | _ | _ |
| **1500** | VN1500 Vulcan 88, SE | 87-98 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |

† Must use factory activated battery.
• Please see battery cross reference chart on page 11 for optional upgrades.
+ Eliminates need for sensor (needs to be disabled).
# The PTX20 series batteries may be used as an optional upgrade, but some modification to the hold down may be necessary. See battery label for retrofit cautions.
** When ordering this battery, specify sensor.
♦ This battery includes a sensor.

## KAWASAKI (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1500** | VN1500-C Vulcan L | 96-97 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | VN1500-G,J,L,R, | 99-05 | _ | PTX16-BS• | _ | _ |
| | Vulcan Nomad, Drifter | 99-05 | _ | PTX16-BS• | _ | _ |
| | VN1500-D,E,N Vulcan Classic | 96-09 | _ | PTX16-BS• | _ | _ |
| | VN1500 P Vulcan Mean Streak | 02-03 | _ | PTX16-BS• | _ | _ |
| **1400** | ZG1400 Concours, ABS | 08-17 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | ZX14 Ninja,R,ABS | 06-17 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | Concours 14 ABS | 14 | PTZ14S | _ | _ | _ |
| **1300** | KZ1300 Touring | 79-82 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | ZN1300-A Voyager | 83-88 | _ | _ | _ | 12N24-3 |
| **1200** | ZG1200 Voyager XII | 86-03 | PIX50LBS-FS+ | PIX50L-BS+ | SC50-N18L-AT♦ | _ |
| | ZRX1200R | 01-05 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | ZRX1200 DAEG | 09-13 | PTX12BS-FS | PTX12-BS | _ | _ |
| | ZX-12R | 00-05 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | ZZR1200 | 02-05 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **1100** | KZ1100-A, LTD | 81-83 | PTX20LBS-FS#• | PTX20L-BS# | CB18L-A | _ |
| | KZ1100-B GP | 82 | PTX19LBS-FS+ | PTX19L-BS+ | CB16L-B** | _ |
| | KZ1100-B GP | 81 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| | ZN1100-B LTD | 84-85 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | ZR1100 | 92-95 | _ | PTX16-BS• | _ | _ |
| | ZRX1100 | 99-00 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | ZX1100-A GPZ | 83-84 | PTX19LBS-FS+ | PTX19L-BS+ | CB16L-B** | _ |
| | ZX1100-C Ninja ZX-11 | 90-93 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | ZX1100-D Ninja ZX-11 (CN) | 93-94 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | ZX1100-D Ninja ZX-11 | 95-01 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | ZX1100-E (GPz1100), ABS | 95-97 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **1000** | Ninja1000, ABS | 14 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| | Ninja1000 | 11-13 | PTX9BS-FS | PTX9-BS | _ | _ |
| | Ninja H-2,H2R | 15-17 | PTZ10S | _ | _ | _ |
| | Versys1000 | 15-17 | PTX9BS-FS | PTX9-BS | _ | _ |
| | KZ1000-P Police | 02-03 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | KZ1000-P Police | 05 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | KZ1000-P Police | 82-01 | PTX20LBS-FS#• | PTX20L-BS# | CB18L-A | _ |
| | KZ1000-C Police | 80-81 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| | KZ1000-C Police, Z1-R | 78-79 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | KZ1000,LTD | 77-80 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | KZ100-E ST,Shaft | 79-80 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| | KZ1000-G Classic | 80 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | KZ1000,LTD,CSR | 81-83 | PTX20LBS-FS#• | PTX20L-BS# | CB18L-A | _ |
| | KZ1000-R Replica | 82-83 | PTX20LBS-FS#• | PTX20L-BS# | CB18L-A | _ |
| | Z1000, ABS | 14-17 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| | Z1000 | 03-13 | PTX9BS-FS | PTX9-BS | _ | _ |
| | ZG1000A Concours | 86-06 | PTX20LBS-FS#• | PTX20L-BS# | CB18L-A | _ |
| | ZL1000-A | 87 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | ZX10R | 11-16 | PTZ7S | _ | _ | _ |
| | ZX10R ABS | 11-17 | PTZ10S | _ | _ | _ |
| | ZX10R | 86-90 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | ZX1000-A Ninja | 86-90 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | ZX1000-C Ninja (ZX10-R) | 04-10 | PT12B-4 | _ | _ | _ |
| | Ninja 1000,ABS | 14-17 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| **900** | KLE650 Versys | 08-14 | PTX12BS-FS | PTX12-BS | _ | _ |
| | KZ900, LTD | 76-77 | _ | _ | CB10L-A2 | _ |
| | Vulcan 900 Classic | 06-16 | PTX12BS-FS | PTX12-BS | _ | _ |
| | Z1 Series | 73-75 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| | ZL900-A Eliminator | 85-86 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | ZX900-A Ninja | 84-86 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | ZX900-B Ninja (ZX-9R) | 94-97 | PTX12BS-FS | PTX12-BS | _ | _ |
| | ZX900-C, E, F Ninja (ZX-9R) | 98-03 | PTX9BS-FS | PTX9-BS | _ | _ |
| **800** | VN800-A, B, E Vulcan, Classic, Drifter | 04-06 | PTX12BS-FS | PTX12-BS | _ | _ |
| | VN800-A,B,CVulcan | 95-03 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | Classic, Drifter | 95-03 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | Z800 | 13-16 | PTX9BS-FS | PTX9-BS | _ | _ |
| **750** | H2 Series | 72-75 | _ | _ | _ | 12N5.5-4A |
| | KZ750,LTD,CSR | 76-79 | PTX14AHLBS-FS+ | PTX14AHL-BS+ | SCB14L-A2♦ | _ |
| | KZ750-E,H,L,LTD | 80-83 | PTX12AABS-FS | _ | CB12A-A | _ |
| | KZ750-F,LTD, Spectre | 83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | KZ750-L Ninja | 93 | PTX9BS-FS | PTX9-BS | _ | _ |
| | KZ750-R GP | 82 | PTX12AABS-FS+ | _ | CB12A-A** | _ |

## KAWASAKI (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **750** | VN750-A Vulcan | 86-06 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | Z750 (EU) | 09-13 | PTX9BS-FS | PTX9-BS | _ | _ |
| | ZN750-A LTD | 84-85 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | ZR-7, S | 00-05 | PTX12BS-FS | PTX12-BS | _ | _ |
| | ZR750 | 05-06 | PTX9BS-FS | PTX9-BS | _ | _ |
| | ZR750-C Zephyr | 91-94 | PTX12BS-FS | PTX12-BS | _ | _ |
| | ZX750-E Turbo, GPz | 83-85 | PTX14AHLBS-FS+ | PTX14AHL-BS+ | SCB14L-A2♦ | _ |
| | ZX750-F Ninja | 87-90 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | ZX750-H Ninja ZX-7 | 90 | _ | _ | CB12AL-A++ | _ |
| | ZX750-H Ninja ZX-7 | 89 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | ZX750-J Ninja ZX-7 | 91-95 | PTX12BS-FS | PTX12-BS | _ | _ |
| | ZX750 Ninja ZX, 7RR | 91-97 | PTX9BS-FS | PTX9-BS | _ | _ |
| | ZX750-P Ninja ZX-7R | 96-03 | PTX12BS-FS | PTX12-BS | _ | _ |
| **700** | KZ700-A | 84 | PTX12AABS-FS | _ | CB12A-A | _ |
| | VN700-A Vulcan | 85 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | ZN700-A LTD | 84-85 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| **650** | ER6n | 09-12 | PTX12BS-FS | PTX12-BS | _ | _ |
| | KL650-A,E,KLR, KL650-B,Tengai | 87-17 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | KLE650 Versys | 08-17 | PTX12BS-FS | PTX12-BS | _ | _ |
| | KLX650C,R | 93-96 | PTX9BS-FS | PTX9-BS | _ | _ |
| | KZ650SR, LTD, Custom | 77-80 | _ | _ | CB10L-A2 | _ |
| | KZ650-H CSR | 81-83 | PTX12AABS-FS | _ | CB12A-A | _ |
| | Ninja 650R, ABS | 12-17 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| | Vulcan S ABS, CAFE, SE | 15-17 | PTZ10S | _ | _ | _ |
| | Ninja 650R | 06-11 | PTX12BS-FS | PTX12-BS | _ | _ |
| | W Series | 66-70 | _ | _ | CB7L-B | 12N7-3B |
| | W650 | 00-02 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **636** | ZX636-B Ninja ZX-6R | 03-17 | PTX9BS-FS | PTX9-BS | _ | _ |
| **600** | KL600-A KLR | 84 | _ | _ | CB4L-A | _ |
| | KL600-B KLR | 85-86 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | ZL600(All) | 86-97 | PTX12AABS-FS | _ | CB12A-A | _ |
| | ZX600-A,B,C, D Ninja | 85-96 | PTX12AABS-FS | _ | CB12A-A | _ |
| | ZX600-E,F Ninja ZX-6,6R | 93-02 | PTX12BS-FS | PTX12-BS | _ | _ |
| | ZX600-FA Ninja ZX-6R | 08-16 | PTX9BS-FS | PTX9-BS | _ | _ |
| | ZX600-G,J Ninja ZX-6R/ZZR | 98-08 | PTX9BS-FS | PTX9-BS | _ | _ |
| | ZX600-K,M Ninja ZX6RR | 03-06 | PTX9BS-FS | PTX9-BS | _ | _ |
| | ZZR600 | 05-09 | PTX9BS-FS | PTX9-BS | _ | _ |
| | ZZR600 | 02-04 | PTX12BS-FS | PTX12-BS | _ | _ |
| **550** | KZ550, LTD, GP | 80-83 | PTX12AABS-FS | _ | CB12A-A | _ |
| | KZ550-F LTD | 84 | PTX12AABS-FS++ | _ | CB12A-A++ | _ |
| | KZ550-F Spectre | 83 | PTX12AABS-FS++ | _ | CB12A-A++ | _ |
| | KZ550-H GP | 82-83 | PTX12AABS-FS+ | _ | CB12A-A** | _ |
| | ZR550-B Zephyr | 90-92 | PTX12AABS-FS | _ | CB12A-A | _ |
| | ZX550-A GPz | 84-86 | PTX12AABS-FS+ | _ | CB12A-A** | _ |
| **500** | EN500-A Vulcan | 90-96 | PTX12AABS-FS | _ | CB12A-A | _ |
| | EN500-C Vulcan LTD | 96-10 | _ | _ | CB12AL-A2 | _ |
| | EX500-A | 87-93 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | EX500-D Ninja500R | 94-10 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | H1 Series | 73-75 | _ | _ | CB9L-B | 12N9-3B |
| | H1 Series | 69-72 | _ | _ | CB9-B | 12N9-4B-1 |
| | KH500-A | 76 | _ | _ | CB9L-B | 12N9-3B |
| **450** | KLX450R | 08-10 | PTZ7S | _ | _ | _ |
| | EN450-A 454 LTD | 85-90 | PTX12AABS-FS | _ | CB12A-A | _ |
| **440** | KZ440 (All) | 80-83 | PTX12AABS-FS | _ | CB12A-A | _ |
| **400** | KH400-A | 76-78 | _ | _ | _ | 12N5.5-4A |
| | KLX400R, KLX400SR | 03-04 | PT7B-4 | _ | _ | _ |
| | KZ400 Deluxe | 77-79 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | KZ400-C | 78 | _ | _ | _ | 12N5.5-4A |
| | KZ400-D, H | 74-79 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | KZ400-S | 75-77 | _ | _ | _ | 12N5.5-4A |
| | S3 Series | 74-75 | _ | _ | _ | 12N5.5-4A |
| **350** | A7 Series | 66-71 | _ | _ | CB9-B | 12N9-4B-1 |
| | F5 Series | 70-71 | _ | _ | _ | 6N2-2A-3 |
| | F9 Sreies | 73-75 | _ | _ | _ | 6N4B-2A-3 |
| | F9 Sreies | 72 | _ | _ | _ | 6N2-2A-3 |
| | S2 Series | 72-73 | _ | _ | _ | 12N5.5-4A |
| **305** | EX305-B GP | 83 | _ | _ | CB9L-A2 | _ |
| | KZ305CSR, LTD | 81-88 | _ | _ | CB10L-A2 | _ |
| **300** | EX300 Ninja | 13-17 | PTX9BS-FS | PTX9-BS | _ | _ |

++ Must use existing terminal adaptor.
≠ G3SS & G3TR models having the engine production #235611 and above, use a 6N4-2A-5 battery.

## KAWASAKI (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **250** | A1 Series | 66-71 | _ | _ | CB9-B | 12N9-4B-1 |
| | EL250,HS | 88-93 | _ | _ | CB9L-A2 | _ |
| | EX250,Ninja 250R | 08 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| | EX250,Ninja 250R | 09-13 | PTX9BS-FS | PTX9-BS | _ | _ |
| | EX250 Ninja | 95-07 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | EX250 Ninja | 86-94 | _ | _ | CB9L-A2 | _ |
| | F4 Series | 69-70 | _ | _ | _ | 12N5.5-4A |
| | F8 Series | 71-72 | _ | _ | _ | 6N2-2A-3 |
| | F11 Series | 73-75 | _ | _ | _ | 6N4B-2A-3 |
| | KE250-B | 77-79 | _ | _ | _ | 6N6-1D-2 |
| | KH250-A | 76 | _ | _ | _ | 12N5.5-4A |
| | KL250 SuperSherpa | 00-10 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | KL250 | 78-84 | _ | _ | _ | 6N6-1D-2 |
| | KL250-D KLR | 85-05 | _ | _ | CB4L-A | _ |
| | KZ250 CSR, LTD | 80-83 | _ | _ | CB10L-A2 | _ |
| | KLX250S,SF | 06-14 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | S1 Series | 73-75 | _ | _ | _ | 12N5.5-4A |
| **200** | KZ200-A | 78-79 | _ | _ | CB10L-B | _ |
| **175** | F7 Series | 71-75 | _ | _ | _ | 6N4-2A-5 |
| | KE175-B | 76-78 | _ | _ | _ | 6N6-1D-2 |
| **140** | KLX140,G,L | 08-17 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| **125** | BN125 Eliminator | 01-10 | _ | _ | CB9-B | _ |
| | F6 Series | 71-73 | _ | _ | _ | 6N4-2A-5 |
| | KE125-A | 76-83 | _ | _ | _ | 6N6-1D-2 |
| | KS125 Series | 74-75 | _ | _ | _ | 6N6-1D-2 |
| **120** | C2SS RoadRunner | 67-69 | _ | _ | _ | 6N4-2A-3 |
| | C2TR RoadRunner | 67-69 | _ | _ | _ | 6N4-2A-3 |
| **110** | KLX110/L | 03-17 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| **100** | G3SS Series | 75 | _ | _ | _ | 6N4-2A-5 |
| | G3TR Series | 71 | _ | _ | _ | 6N4-2A-3≠ |
| | G4TR Series | 73-75 | _ | _ | _ | 6N4-2A-5 |
| | G4TR Series | 70-72 | _ | _ | _ | 6N4-2A-3 |
| | G5 Series | 74-75 | _ | _ | _ | 6N4-2A-5 |
| | G5 Series | 72-73 | _ | _ | _ | 6N4-2A-3 |
| | KE100-A | 79-81 | _ | _ | _ | 6N6-1D-2 |
| | KE100-A | 76-78 | _ | _ | _ | 6N4-2A-5 |
| | KE100-B | 82-01 | _ | _ | _ | 6N6-1D-2 |
| | KH100-B | 76-77 | _ | _ | _ | 6N4-2A-5 |
| | KM100-A | 79-81 | _ | _ | _ | 6N6-1D-2 |
| | KM100-A | 76-78 | _ | _ | _ | 6N4-2A-5 |
| | KV100-A | 76 | _ | _ | _ | 6N4-2A-5 |
| **90** | G3SS Series | 73-74 | _ | _ | _ | 6N4-2A-5 |
| | G3SS Series | 69-72 | _ | _ | _ | 6N4-2A-3≠ |
| | G3TR Series | 69-70 | _ | _ | _ | 6N4-2A-3≠ |
| | MC1 Series | 73-75 | _ | _ | _ | 6N4-2A-5 |

## POLARIS/VICTORY

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1731** | All Models | 08-17 | PTX20HLBS-FS | _ | _ | _ |
| **1507** | V92C,DC Classic | 98-04 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Deluxe, Cruiser | 98-04 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | V92SC | 00-01 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Sport Cruiser | 00-01 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | V92TC | 02-06 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Touring Cruiser | 02-06 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Vegas, Kingpin | 03-05 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | 8-ball, Hammer | 03-05 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **1200** | Octane | 16-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |

## SUZUKI

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1800** | VZR1800 (M109R) | 06-17 | _ | PTX20CH-BS | _ | _ |
| | VLR1800 (C109R) | 08-12 | _ | PTX20CH-BS | _ | _ |
| **1600** | Marauder | 04-05 | _ | PTX16-BS• | _ | _ |
| | Boulevard M95 | 04-05 | _ | PTX16-BS• | _ | _ |
| **1500** | VL1500 Intruder | 98-11 | _ | PTX16-BS-1 | _ | _ |
| | Boulevard C90, T | 98-11 | _ | PTX16-BS-1 | _ | _ |
| | VL1500 Boulevard | 14-17 | _ | PTX20CH-BS | _ | _ |
| | VZ1500 Boulevard | 09-17 | _ | PTX20CH-BS | _ | _ |
| | M90 | 09-13 | _ | PTX20CH-BS | _ | _ |
| **1400** | GV1400GC,D | 86-88 | PIX50LBS-FS+ | PIX50L-BS+ | SC50-N18L-AT♦ | _ |
| | T Cavalcade | 86-88 | PIX50LBS-FS+ | PIX50L-BS+ | SC50-N18L-AT♦ | _ |
| | VS1400GL Intruder | 87-11 | _ | PTX16-BS-1 | _ | _ |
| | GLP, S83 | 87-11 | _ | PTX16-BS-1 | _ | _ |
| **1300** | GSX1300BK B-King | 08-11 | PTX12BS-FS | PTX12-BS | _ | _ |
| | GSX1300R Z Hayabusa | 08-17 | PTX12BS-FS | PTX12-BS | _ | _ |

• Please see battery cross reference chart on page 11 for optional upgrades.
+ Eliminates need for sensor (needs to be disabled).
♦ This battery includes a sensor.
** When ordering this battery, specify sensor.

## SUZUKI (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1300** | GSX1300R Hayabusa | 99-07 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| **1250** | GSF1250F,A Bandit | 07-16 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| **1200** | GSF1200,S Bandit | 97-05 | PTX12BS-FS | PTX12-BS | _ | _ |
| | GV1200GL Madura | 85-86 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-B2 | _ |
| **1150** | GS1150E,S | 83-86 | PTX14AHLBS-FS+ | PTX14AHL-BS+ | SCB14L-B2♦ | _ |
| **1100** | GS1100E,S | 80-83 | PTX14AHLBS-FS+ | PTX14AHL-BS+ | SCB14L-A2♦ | _ |
| | GS1100G,K,L | 82-84 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | Katana | 82-84 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | GSX-R1100 | 86-92 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | GSX-R1100 | 93-98 | PTX12BS-FS | PTX12-BS | _ | _ |
| | GSX1100F Katana | 88-93 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-B2 | _ |
| | GSX1100G | 91-93 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **1000** | DL1000 V-Strom, Adventure | 02-16 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | GS1000 | 78-82 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | GSX-R1000 | 01-04 | PTX12BS-FS | PTX12-BS | _ | _ |
| | GSX-R1000 | 05-17 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| | SV1000,S | 03-07 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | TL1000R | 98-03 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| | TL1000S | 97-01 | PTX12BS-FS | PTX12-BS | _ | _ |
| **900** | RF900, R, S, ZS | 94-97 | PTX9BS-FS | PTX9-BS | _ | _ |
| **850** | GS850G,GL | 79-83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| **800** | VL800 Intruder Volusia, Boulevard C50, T, M50 | 01-14 | PTX12BS-FS | PTX12-BS | _ | _ |
| | VS800 GL S Intruder,S50 | 92-12 | _ | _ | CB16B-A1 | _ |
| | VX800 | 90-93 | _ | _ | CB16B-A | _ |
| | VZ800 Marauder | 97-08 | PTX12BS-FS | PTX12-BS | _ | _ |
| **750** | GS750, Katana | 77-83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | GSX750F Katana | 98-06 | PTX9BS-FS | PTX9-BS | _ | _ |
| | GSX750F Katana | 89-97 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-B2 | _ |
| | GSX-R750 | 00-17 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| | GSX-R750 | 96-99 | PTX9BS-FS | PTX9-BS | _ | _ |
| | GSX-R750 | 86-92 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | GSX-R750W | 93-95 | PTX9BS-FS | PTX9-BS | _ | _ |
| | GSX-S750 | 15-16 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| | GT750 LeMans | 72-77 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | VS750GLP Intuder | 88-91 | _ | _ | CB16B-A1 | _ |
| **700** | GS700E, GS700ES | 85 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | GV700GL Madura | 85 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-B2 | _ |
| | VS700GL Intruder | 85-87 | _ | _ | CB16B-A1 | _ |
| **650** | DL650 V-Strom, Adventure | 04-17 | PTX12BS-FS | PTX12-BS | _ | _ |
| | DL650 V-Strom | 04-13 | PTX12BS-FS | PTX12-BS | _ | _ |
| | DR650S ER, ES | 94-95 | PTX12BS-FS | PTX12-BS | _ | _ |
| | R650S, N, P | 92-93 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | DR650S | 90-91 | _ | _ | CB5L-B | 12N5-3B |
| | DR650SE | 98-14 | PTX9BS-FS | PTX9-BS | _ | _ |
| | DR650SE(CN) | 96-97 | PTX9BS-FS | PTX9-BS | _ | _ |
| | DR650SE | 96-97 | _ | _ | CB10L-B2 | _ |
| | GR650 Tempter, X | 83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | GSX650F | 08-11 | PTX9BS-FS | PTX9-BS | _ | _ |
| | GS650E | 81-82 | _ | _ | CB10L-A2 | _ |
| | CS650 (All) | 81-83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | LS650 Savage,S40 | 86-14 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-B2 | _ |
| | SV650 | 99-02 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| | SV650,A,SA | 03-11 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| | SV650,S | 03-13 | PTX12BS-FS | PTX12-BS | _ | _ |
| | SFV650 Gladius | 09-14 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| | XN85 Turbo | 83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| **620** | QUV620F | 05 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **600** | GSF600S Bandit | 96-03 | PTX9BS-FS | PTX9-BS | _ | _ |
| | GSX-R600 | 97-16 | PTX9BS-FS | PTX9-BS | _ | _ |
| | GSX-R600W | 92-93 | PTX9BS-FS | PTX9-BS | _ | _ |
| | GSX600F Katana | 98-06 | PTX9BS-FS | PTX9-BS | _ | _ |
| | GSX600F Katana | 88-97 | _ | _ | CB10L-B2 | _ |
| | SP600 | 85 | _ | _ | CB5L-B | 12N5-3B |
| | RF600R,S | 94-96 | PTX9BS-FS | PTX9-BS | _ | _ |
| **550** | GS550E,L,M,TX | 77-82 | _ | _ | CB10L-A2 | _ |
| | GS550E,ES,L | 83-86 | _ | _ | CB10L-B | _ |
| | GT550 Indy | 72-77 | _ | _ | _ | 12N11-3A-1 |
| **500** | GS500,F | 01-11 | _ | _ | CB10L-B2 | _ |
| | GS500E | 89-00 | _ | _ | CB10L-B2 | _ |
| | GT500 Titan | 76-77 | _ | _ | CB7-A | 12N7-4A |
| | SP500 | 81-83 | _ | _ | _ | 6N4B-2A |
| | T500 Titan | 68-75 | _ | _ | CB7-A | 12N7-4A |
| **450** | GS450 | 83-88 | _ | _ | CB12B-B2 | _ |
| | GS450 | 80-82 | _ | _ | CB10L-A2 | _ |
| **425** | GS425,GS425E,L | 79 | _ | _ | CB10L-A2 | _ |
| **400** | DR-Z400,E,S,SM | 00-17 | PT7B-4 | _ | _ | _ |
| | GN400T,X | 80-82 | _ | _ | _ | 6N4B-2A |
| | GS400 | 77-78 | _ | _ | CB10L-A2 | _ |

## SUZUKI (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **400** | GS400X | 77-78 | _ | _ | CB7-A | 12N7-4A |
| | GSF400 Bandit | 91-93 | PTX9BS-FS | PTX9-BS | _ | _ |
| | SP400 | 80 | _ | _ | _ | 6N4B-2A |
| | TS400 Apache | 76-77 | _ | _ | _ | 6N4B-2A |
| | TS400 Apache | 72-75 | _ | _ | CB5L-B | 12N5-3B |
| **380** | GS380 Sebring | 72-77 | _ | _ | CB7-A | 12N7-4A |
| **370** | SP370 | 78-79 | _ | _ | _ | 6N4B-2A |
| **350** | DR350S | 90-96 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | DR350SE | 94-99 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | T350 Series | 79 | _ | _ | CB5L-B | 12N5-3B |
| **305** | Scramble TC305 | 69 | _ | _ | CB5L-B | 12N5-3B |
| | T305 | 69 | _ | _ | CB5L-B | 12N5-3B |
| **300** | GS300L | 82-85 | _ | _ | CB12B-B2 | _ |
| **250** | DR250S | 90-92 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | DR250S EP, ER, ES | 93-95 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | DR-Z250 | 01-07 | PTZ7S | _ | _ | _ |
| | GN250 | 82-88 | _ | _ | CB10L-A2 | _ |
| | GS250T | 80-81 | _ | _ | CB10L-A2 | _ |
| | GT250 Hustler | 73-77 | _ | _ | CB5L-B | 12N5-3B |
| | GW250 | 13-17 | PTX9BS-FS | PTX9-BS | _ | _ |
| | GZ250 | 99-12 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | Model T20 | 69 | _ | _ | CB5L-B | 12N5-3B |
| | SP250 | 82-85 | _ | _ | _ | 6N4B-2A |
| | Scrambler TC250 | 69 | _ | _ | CB5L-B | 12N5-3B |
| | T250,T250II,T250J, T250R | 72 | _ | _ | CB5L-B | 12N5-3B |
| | TS250 Savage | 73-81 | _ | _ | _ | 6N4B-2A |
| | TS250 Savage | 69-72 | _ | _ | _ | 6N2-2A-4 |
| | TU250X | 09-17 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| **200** | DR200SE | 96-13 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | DR200S | 15-17 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | SP200 | 86-88 | _ | _ | CB4L-B | _ |
| | T200, TC200 | | _ | _ | CB5L-B | 12N5-3B |
| **185** | GT185 Adventurer | 73-77 | _ | _ | _ | 12N11-3A-1 |
| | TC185 Ranger | 74-77 | _ | _ | _ | 12N11-3A-1 |
| | TS185 Sierra | 77-81 | _ | _ | _ | 6N4B-2A |
| | TS185 Sierra | 71-76 | _ | _ | _ | 6N4-2A |
| **125** | DR125, SE, SES | 94-96 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | GN125, E | 91-96 | _ | _ | CB7-A | _ |
| | GN125, E | 82-83 | _ | _ | CB7-A | _ |
| | RV125 SE, R | 94 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | RV125 Tracker | 73-77 | _ | _ | _ | 6N4-2A |
| | SP125 | 86-88 | _ | _ | _ | 6N4-2A |
| | SP125 | 82-83 | _ | _ | _ | 6N4B-2A |
| | TC125 Prospector | 73-77 | _ | _ | _ | 6N4B-2A |
| | TS125 Duster | 71-81 | _ | _ | _ | 6N4B-2A |
| **120** | B120P | | _ | _ | _ | 6N4-2A |
| | TC120,TC120II, TC120R | 71 | _ | _ | _ | 6N4B-2A |
| **105** | B105P | | _ | _ | _ | 6N4-2A |
| **100** | A100 Go-fer | 76-77 | _ | _ | _ | 6N4-2A |
| | A100 Go-fer | 69 | _ | _ | _ | 6N4-2A |
| | B100P | | _ | _ | _ | 6N4-2A |
| | SP100 | 83 | _ | _ | _ | 6N4B-2A |
| | Scrambler AC100 | 69 | _ | _ | _ | 6N4-2A |
| | Sport AS100 | 69 | _ | _ | _ | 6N4-2A |
| | TC100 Blazer | 73-77 | _ | _ | _ | 6N4-2A |
| | TS100 Honcho | 78-81 | _ | _ | _ | 6N4B-2A |
| | TS100 Honcho | 73-77 | _ | _ | _ | 6N4-2A |
| **90** | RV90 Rover | 73-77 | _ | _ | _ | 6N4B-2A |
| | TC90 | | _ | _ | _ | 6N4-2A |
| | RV90 Rover | 72 | _ | _ | _ | 6N2-2A-4 |
| | TC90J, TC90R | | _ | _ | _ | 6N2-2A-4 |
| | Model K10, Model K10P | 68 | _ | _ | _ | 6N4-2A |
| **80** | Sport 80 (ModelsK11&K11P) | 68 | _ | _ | _ | 6N4-2A |
| | Trail 80 (ModelsK15&K15P) | 68 | _ | _ | _ | 6N4-2A |
| **75** | TS75 Colt | 75-77 | _ | _ | _ | 6N4-2A |
| **70** | DR-Z70 | 08-09 | _ | PTX4B-BS | _ | _ |
| | DR-Z70 | 15-17 | _ | PTX4B-BS | _ | _ |
| **55** | Model 31 | 68 | _ | _ | _ | 6N2-2A-4 |
| **50** | AC50, AS50 | 71 | _ | _ | _ | 6N4-2A |
| | OR50 | 79-80 | _ | _ | _ | 6N4B-2A |
| | Sport 50 (Model M12) | 68 | _ | _ | _ | 6N4-2A |
| | TS50J, TS50K | 74 | _ | _ | _ | 6N4-2A |
| | TS50L, TS50R | 74 | _ | _ | _ | 6N4-2A |

♦ This battery includes a sensor.
• Please see battery cross reference chart on page 11 for optional upgrades.
+ Eliminates need for sensor (needs to be disabled).

## YAMAHA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1854** | Roadliner,Stratoliner | 06-14 | PT14B-4 | _ | _ | _ |
| | Raider,Raider S | 08-17 | PT14B-4 | _ | _ | _ |
| **1700** | VMAX | 09-17 | PTZ14S | _ | _ | _ |
| | XV17P Road Star Warrior | 02-08 | PT14B-4 | _ | _ | _ |
| | XV1700A Road Star Silverado | 04-09 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | XV17AT Road Star Silverado | 08-14 | PT14B-4 | _ | _ | _ |
| | MT-01 (EU) | 05-12 | PT14B-4 | _ | _ | _ |
| **1600** | XV1600 Road Star (All) | 99-03 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **1300** | FJR1300, A, ES | 03-17 | PT14B-4 | _ | _ | _ |
| | XVZ13 Royal Star/ Venture (All) | 96-12 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | XVZ13 Venture/Royal | 86-93 | PIX50LBS-FS+ | PIX50L-BS+ | SC50-N18L-AT• | _ |
| | XJR1300 (EU) | 07-13 | PTZ14S | _ | _ | _ |
| | XVS13AY V-Star, Stryker | 09-16 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | V Star 1300 Tourer | 16-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **1200** | XT1200Z Super Tenere | 12-17 | PTZ12S | _ | _ | _ |
| | FJ1200 (All) | 91-93 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | FJ1200 | 86-90 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | VMX12 V-Max | 85-07 | _ | _ | CB16AL-A2 | _ |
| | XVZ12 Venture/Royale | 83-85 | PIX50LBS-FS+ | PIX50L-BS+ | SC50-N18L-AT• | _ |
| **1100** | FJ1100 | 84-85 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | XJ1100 Maxim | 82 | PIX50LBS-FS+ | PIX50L-BS+ | SC50-N18L-AT• | _ |
| | XS1100 (All) | 78-81 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | XV1100 Virago(All) | 86-99 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | XVS1100 V-Star(All) | 99-10 | PT14B-4 | _ | _ | _ |
| **1000** | FZR1000 | 91-95 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | FZR1000 | 87-90 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | FZS1000 FZ1 | 01-05 | PT14B-4 | _ | _ | _ |
| | FZS1000 FZ1 | 06-15 | PTZ14S | _ | _ | _ |
| | GTS1000 | 93-94 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | XV1000 Virago | 84-85 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | YZF-R1 | 99-03 | PT12B-4 | _ | _ | _ |
| | YZF-R1,M | 04-15 | PTZ10S | _ | _ | _ |
| | YZF-R1,M,S | 16-17 | PTZ7S | _ | _ | _ |
| | YZF1000R | 97-98 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **950** | XVS95CC | 09-16 | PTZ14S | _ | _ | _ |
| | XVS95CT,Y V-Star, 950 Tourer | 09-17 | PTZ14S | _ | _ | _ |
| | Bolt, R-SPEC | 14-17 | PTZ14S | _ | _ | _ |
| **920** | XV920 Virago | 82 | PIX50LBS-FS+ | PIX50L-BS+ | SC50-N18L-AT• | _ |
| | XV920M Midnight Virago | 83 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | XV920R Virago | 81-83 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| **900** | TDM900 (EU) | 02-13 | PT12B-4 | _ | _ | _ |
| | XJ900R Seca | 83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | XSR900 | 16-17 | PTZ10S | _ | _ | _ |
| **850** | FZ-09 | 14-17 | PTZ10S | _ | _ | _ |
| | FJ-09 | 15-17 | PTZ10S | _ | _ | _ |
| | TDM850 | 92-93 | PTX12BS-FS | PTX12-BS | _ | _ |
| | TRX850 | 95-99 | PTX12BS-FS | PTX12-BS | _ | _ |
| | XS850 (All) | 80-81 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| **800** | FZ8 | 11-13 | PTZ10S | _ | _ | _ |
| **750** | FZ750 | 85-88 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | FZR750 | 87-88 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | TX750 | 73-74 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| | XJ750 Maxim | 82-83 | PTX14AHLBS-FS+ | PTX14AHL-BS+ | SCB14L-A2• | _ |
| | XJ750M Midnight Maxim | 83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | XJ750R Seca | 81-83 | PTX14AHLBS-FS+ | PTX14AHL-BS+ | SCB14L-A2• | _ |
| | XS750 (All) | 77-79 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| | XV750 Virago (All) | 81-96 | _ | _ | CB16AL-A2 | _ |
| | YZF750R | 94-98 | PTX12BS-FS | PTX12-BS | _ | _ |
| **700** | YZF-R7 | 99 | PT9B-4 | _ | _ | _ |
| | FZ700 | 87 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | FZ-07 | 15-17 | PTZ10S | _ | _ | _ |
| | FZX700 Fazer | 86-87 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | XJ700 Maxim | 85-86 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | XJ700X | 85 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | XV700 Virago | 84-87 | _ | _ | CB16AL-A2 | _ |
| **660** | XT660X,R,Z, Tenere (EU) | 04-13 | PT9B-4 | _ | _ | _ |
| | MT-03 (EU) | 06-13 | PT9B-4 | _ | _ | _ |
| **650** | TX650 | 74 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| | TX650 | 73 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | XJ650 (All) | 80-83 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |

+ Eliminates need for sensor (needs to be disabled).
• Please see battery cross reference chart on page 11 for optional upgrades.

## YAMAHA (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **650** | XS1 | 70-71 | _ | _ | _ | 12N5.5-3B |
| | XS2 | 72 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | XS650 | 75-83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| | XVS650 V-Star (All) | 98-16 | PT12B-4 | _ | _ | _ |
| **600** | FJ600 | 84-85 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | FZ6,R | 05-17 | PT12B-4 | _ | _ | _ |
| | FZ600 | 86-88 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | FZR600/R | 89-99 | _ | _ | CB12AL-A2 | _ |
| | SRX600 | 86 | _ | _ | CB5L-B | 12N5-3B |
| | XJ600S Seca II | 92-98 | PTX9BS-FS | PTX9-BS | _ | _ |
| | XJ6,Deversion (EU) | 09-13 | PT12B-4 | _ | _ | _ |
| | XT600 | 84-89 | _ | _ | CB5L-B | _ |
| | XT600E | 90-95 | PTX9BS-FS | PTX9-BS | _ | _ |
| | YX600 Radian | 86-90 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | YZF-R6, R6S | 01-09 | PT9B-4 | _ | _ | _ |
| | YZF-R6 (Excl. R6S) | 06-17 | PTZ10S | _ | _ | _ |
| | YZF-R6 | 99-00 | PT12B-4 | _ | _ | _ |
| | YZF600R | 95-07 | PTX12BS-FS | PTX12-BS | _ | _ |
| **550** | XJ Maxim, R Seca | 81-83 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | XT550 | 82-83 | _ | _ | CB5L-B | 12N5-3B |
| | XZ550R Vision | 82-83 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| **535** | XV535 Virago | 87-99 | _ | _ | CB12AL-A2 | _ |
| **500** | SR500 | 78-81 | _ | _ | CB7L-B | 12N7-3B |
| | TX500 | 73-74 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| | XS500 | 75-78 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| | XT500 | 76-81 | _ | _ | _ | 6N6-3B-1 |
| | XVS500 Virago | 83 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| **450** | WR450F | 03-17 | PTZ7S | _ | _ | _ |
| | YZ450FX | 16-17 | PTZ7S | _ | _ | _ |
| **400** | DT400 Enduro | 77-78 | _ | _ | _ | 6N6-3B-1 |
| | DT400 Enduro | 75-76 | _ | _ | _ | 6N4B-2A-3 |
| | FZR400 (All) | 88-90 | _ | _ | CB12AL-A2 | _ |
| | RD400 | 76-79 | _ | _ | _ | 12N5.5A-3B |
| | SR400 | 78-00 | _ | _ | CB7L-B | _ |
| | SR400 | 15-17 | _ | PTX4B-BS | _ | _ |
| | SR400 (FI) | 10-13 | _ | PTX4B-BS | _ | _ |
| | XS400 (All) | 80-83 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| **360** | DT360 Enduro | 74 | _ | _ | _ | 6N4B-2A-3 |
| | RT1, RT1B 360 Enduro | 70-71 | _ | _ | _ | 6N2-2A-3 |
| | RT2, RT3 360 Enduro | 72-73 | _ | _ | _ | 6N4-2A-5 |
| | XS360 | 76-78 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | XS360-2 | 77 | _ | _ | CB7L-B | 12N7-3B |
| **350** | BW350 Big Wheel | 87-88 | _ | _ | CB12B-B2 | _ |
| | R3 | 69 | _ | _ | CB5L-B | 12N5-3B |
| | R5, R5B, R5C | 70-72 | _ | _ | _ | 12N5.5A-3B |
| | RD350 | 73-75 | _ | _ | _ | 12N5.5A-3B |
| | RZ350 | 84-85 | _ | _ | _ | 12N5.5-3B |
| | XT350 | 85-00 | _ | _ | CB3L-B | _ |
| | YR2/C | 68 | _ | _ | _ | 12N5.5-3B |
| **321** | YZF-R3 | 15-17 | PTZ8V | _ | _ | _ |
| **250** | DS6B, DS6C | 69-70 | _ | _ | CB5L-B | 12N5-3B |
| | DS7 | 72 | _ | _ | _ | 12N5.5A-3B |
| | DT1 250 Enduro | 68 | _ | _ | _ | 6N2-2A-3 |
| | DT1B,DT1C, DT1E 250 Enduro | 69-71 | _ | _ | _ | 6N2-2A-3 |
| | DT2 250 Enduro | 72 | _ | _ | _ | 6N4-2A-5 |
| | DT250 Enduro | 77-79 | _ | _ | _ | 6N6-3B-1 |
| | DT250 Enduro | 74-76 | _ | _ | _ | 6N4B-2A-3 |
| | DT3 250 Enduro | 73 | _ | _ | _ | 6N4-2A-5 |
| | RD250 | 73-75 | _ | _ | _ | 12N5.5A-3B |
| | SR250 Exciter | 80-82 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | SRX250 | 87 | PTX12AABS-FS | _ | CB12A-A | 12N12A-4A-1 |
| | TTR250 | 99-06 | PT7B-4 | _ | _ | _ |
| | WR250F | 03-09 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | WR250F,X,R | 08-17 | PTZ7S | _ | _ | _ |
| | XT250 | 08-17 | PTZ7S | _ | _ | _ |
| | XT250 | 84 | _ | _ | CB3L-B | _ |
| | XT250 | 80-83 | _ | _ | _ | 6N6-3B-1 |
| | XT250 Serow | 05-13 | PTZ7S | _ | _ | _ |
| | XV250 Virago | 95-03 | _ | _ | CB10L-A2 | _ |
| | XV250 Route 66 | 88-90 | _ | _ | CB10L-A2 | _ |
| | XV250YCR V-Star | 09-17 | _ | _ | CB10L-A2 | _ |
| | YZ250FX | 15-17 | PTZ7S | _ | _ | _ |
| | Tricker | -13 | PTZ7S | _ | _ | _ |
| **230** | TTR230E | 06-17 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **225** | TTR225 | 99-05 | PT7B-4 | _ | _ | _ |
| | XT225 | 01-07 | PTZ7S | _ | _ | _ |
| | XT225 Serow | 92-00 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| **200** | BW200E BigWheel (Elec.Start) | 86-88 | _ | _ | CB7C-A | _ |
| | CS3B, CS3C | 70-71 | _ | _ | CB9L-A2 | 12N9-3A-1 |
| | CS5 | 72 | _ | _ | CB9L-A2 | 12N9-3A-1 |

♦ This battery includes a sensor.

# MOTORCYCLE BATTERY APPLICATIONS

## YAMAHA (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **200** | RD200 | 74-76 | _ | _ | CB9L-A2 | 12N9-3A-1 |
| | TW200 Trailway | 87-17 | _ | _ | CB7C-A | _ |
| | XT200 | 82-83 | _ | _ | _ | 6N4A-4D |
| | YCS1 | 68 | _ | _ | CB9L-A2 | 12N9-3A-1 |
| **185** | SR185 Exciter | 81-82 | _ | _ | CB7L-B | _ |
| **175** | CT1,CT1B, CT1C 175 Enduro CT2, CT3 | 69-71 | _ | _ | _ | 6N2-2A-3 |
| | 175 Enduro | 72-73 | _ | _ | _ | 6N4A-4D |
| | DT175 Enduro | 78-81 | _ | _ | _ | 6N6-3B-1 |
| | DT175 Enduro | 74-76 | _ | _ | _ | 6N4B-2A-3 |
| **125** | AS2C | 69 | _ | _ | _ | 12N5.5-3B |
| | AT1E, AT1B, AT1C 125 Enduro AT2, AT3 | 69-71 | _ | _ | CB7L-B | 12N7-3B |
| | 125 Enduro | 72-73 | _ | _ | CB7L-B | 12N7-3B |
| | DT125 Enduro | 78-81 | _ | _ | CB7L-B | 12N7-3B |
| | DT125 Enduro | 74-76 | _ | _ | CB7L-B | 12N7-3B |
| | RD125 | 75-76 | _ | _ | _ | 12N5.5A-3B |
| | TTR125E/LE (Elec.) | 03-17 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | XT125 | 82-83 | _ | _ | _ | 6N4A-4D |
| | YAS1/C | 68 | _ | _ | _ | 12N5.5-3B |
| **110** | TTR125E/LE (Elec.) | 08-17 | _ | PTX4B-BS | _ | _ |
| **100** | DT100 Enduro | 77-83 | _ | _ | _ | 6N4-2A-5 |
| | DT100 Enduro | 74-76 | _ | _ | _ | 6N4B-2A-3 |
| | L5T, L5TA | 69-70 | _ | _ | CB7L-B | 12N7-3B |

## YAMAHA (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **100** | LS2 | 72 | _ | _ | _ | 12N5.5A-3B |
| | LT2, LT3 100Enduro | 72-73 | _ | _ | _ | 6N4A-4D |
| | RS100 | 75-76 | _ | _ | _ | 6N4A-4D |
| | YL2C/CM | 68 | _ | _ | CB7L-B | 12N7-3B |
| **90** | HS1, HS1B | 70-71 | _ | _ | _ | 12N5.5-3B |
| | HT1,HT1B90 Enduro | 70-71 | _ | _ | _ | 6N2-2A-3 |
| | TTR90E (Elec.Start) | 03-07 | _ | PTX4B-BS | _ | _ |
| **80** | DT80 Mini Enduro | 81-83 | _ | _ | _ | 6N4-2A-5 |
| | G65, G65B | 70-71 | _ | _ | _ | 6N4A-4D |
| | G7S | 72 | _ | _ | _ | 6N4A-4D |
| | GT1 Mini Enduro | 73 | _ | _ | _ | 6N4-2A-5 |
| | GT80 Mini Enduro | 74-80 | _ | _ | _ | 6N4-2A-5 |
| | LB80 Chappy | 76-78 | _ | _ | _ | 6N4-2A-5 |
| | YG1 | 62-66 | _ | _ | _ | 6N4A-4D |
| | YG5T, YG55 | 68-69 | _ | _ | CB7L-B | 12N7-3B |
| **60** | JT2 Mini Enduro | 72 | _ | _ | _ | 6N2-2A-3 |
| | RD60 | 73-75 | _ | _ | _ | 6N4A-4D |
| **50** | DT50 Enduro | 88-90 | _ | _ | _ | 6N4B-2A-3 |
| | LB50P Chappy | 78-82 | _ | _ | _ | 6N4-2A-5 |
| | LC50 Champ | 80-81 | _ | _ | _ | 6N4-2A-5 |
| | MJ50 Towny | 82 | _ | _ | _ | 6N4-2A-5 |
| | QT50 Yamahopper | 79-87 | _ | _ | _ | 6N4-2A-5 |
| | RX50 Special | 83-84 | _ | _ | _ | 6N4-2A-5 |
| | TTR50E | 06-17 | _ | PTX4B-BS | _ | _ |
| | YSR50 | 87-92 | _ | _ | _ | 6N4-2A-5 |

# ALL TERRAIN VEHICLE BATTERY APPLICATIONS

## AEON (BENZAI)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **100** | Cobra/CX-Sport 100 | All | PTX4LBS-FS | PTX4L-BS | _ | _ |
| **90** | Cobra/CX-Sport 90 | All | PTX4LBS-FS | PTX4L-BS | _ | _ |
| **50** | Cobra/CX-Sport 50 | All | PTX4LBS-FS | PTX4L-BS | _ | _ |

## ARCTIC CAT

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1000** | Thundercat | -10 | PTX20HBS-FS | _ | _ | _ |
| | Mudpro1000H2,TRV, 1000i,GT,XT | 10-17 | PTX20HBS-FS | _ | _ | _ |
| **700** | TRV700 | 06-08 | PTX14AHBS-FS | PTX14AH-BS | CB14-A2 | _ |
| | TRV,Mudpro,LTD, TBX,Diesel | 09-17 | PTX20HBS-FS | _ | _ | _ |
| | Alterra,XT,Core,TRV | 13-17 | PTX20HBS-FS | _ | _ | _ |
| **650** | 650H1, TBX650 | 05-12 | PTX14AHBS-FS | PTX14AH-BS | CB14-A2 | _ |
| | 4x4 Automatic | 04-06 | PTX14AHBS-FS | PTX14AH-BS | CB14-A2 | _ |
| **550** | 550,TRV,LTD,S, XT,Core | 10-15 | PTX20HBS-FS | _ | _ | _ |
| | Alterra | 16 | PTX20HBS-FS | _ | _ | _ |
| **500** | All Other Models | All | PTX14AHBS-FS | PTX14AH-BS | CB14-A2 | _ |
| | Alterra,TRV | 16-17 | PTX20HBS-FS | _ | _ | _ |
| **450** | XC450,TRV,Core | 11-17 | PTX20HBS-FS | _ | _ | _ |
| **400** | TRV400,Core | 10 | PTX14AHBS-FS | PTX14AH-BS | CB14-A2 | _ |
| | Alterra,Core,TRV | -17 | PTX14AHBS-FS | PTX14AH-BS | CB14-A2 | _ |
| | DVX400 | All | PTX9BS-FS | PTX9-BS | _ | _ |
| | All Other Models | All | PTX14AHBS-FS | PTX14AH-BS | CB14-A2 | _ |
| **366** | 366 | 08-12 | PTX14AHBS-FS | PTX14AH-BS | CB14-A2 | _ |
| **300** | DVX300 | 09-14 | PTX12BS-FS | PTX12-BS | _ | _ |
| | All Models | -09 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| **250** | 250 | -10 | PTX12BS-FS | PTX12-BS | _ | _ |
| | All Models | -05 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | DVX250, 2X4 | 06 | PTX12BS-FS | PTX12-BS | _ | _ |
| **150** | 150 | -17 | PTX9BS-FS | PTX9-BS | _ | _ |
| **90** | All Models | -06 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | DVX90 | 06-17 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | 90, 90 Utility | 16-17 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **50** | DVX50 | 06-10 | PTX5LBS-FS | PTX5L-BS | _ | _ |

## BOMBARDIER (CAN-AM)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1000** | Outlander1000, Renegade,6x6 | 12-17 | PTX20LBS-FS•† | _ | _ | _ |
| **850** | Outlander,Renegade | 16-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **800** | Outlander800 EFI, MAX, Renegade | 06-13 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **660** | Outlander660 EFI | 06 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **650** | Outlander,6x6 | -17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | DS650 | 00-06 | PTX15LBS-FS | PTX15L-BS | _ | _ |

## BOMBARDIER (CAN-AM) (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **650** | Quest | 02-05 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | Quest (Opt) | 02-05 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| **570** | Outlander,Renegade | 16-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **500** | Outlander, MAX, Renegade | -15 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Traxter, Quest | 99-05 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | Traxter, Quest (Opt) | 02-05 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| **450** | DS450 | -15 | PT7B-4 | _ | _ | _ |
| | Outlander | 16-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **400** | Outlander400XT,Max | 04-15 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Outlander400 | 03-04 | PTX15LBS-FS | PTX15L-BS | _ | _ |
| **330** | Outlander330 | 04-05 | PTX15LBS-FS | PTX15L-BS | _ | _ |
| **250** | DS250 | 06-17 | PTX12BS-FS | PTX12-BS | _ | _ |
| **200** | Rally | 03-06 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| **90** | DS90,DS90F,Quest | 02-17 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| **70** | DS70 | -17 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| **50** | DS50, Quest | 02-06 | PTX4LBS-FS | PTX4L-BS | _ | _ |

## CANNONDALE

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| | All Models | 01-03 | PTX9BS-FS | PTX9-BS | _ | _ |

## DRR

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| | All Models | | PTX4LBS-FS | PTX4L-BS | _ | _ |

## E-TON

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **250** | Vector250 | -13 | PTX12BS-FS | PTX12-BS | _ | _ |
| **150** | Viper150R | -13 | PTX9BS-FS | PTX9-BS | _ | _ |
| | CXL 150 Yukon II | 00-13 | PTX9BS-FS | PTX9-BS | _ | _ |
| | YXL150 Yukon | 00-01 | PTX9BS-FS | PTX9-BS | _ | _ |
| **90** | AXL,TXL,NXL,RXL | 99-03 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | All Models | 04-13 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | DXL90 Serria | 00-03 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **70** | Viper70 | -13 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **50** | AXL,TXL,NXL,RXL | 99-03 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | All Models | 04-05 | PTX5LBS-FS | PTX5L-BS | _ | _ |

† Must use factory activated battery.
• Please see battery cross reference chart on page 11 for optional upgrades.

# ALL TERRAIN VEHICLE BATTERY APPLICATIONS

## HONDA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **700** | TRX700XX | 08-13 | PTX9BS-FS | PTX9-BS | _ | _ |
| **680** | TRX680 FourTrax Rincon | 06-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **650** | TRX650 FourTrax Rincon (Std) | 03-05 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | (Optional Cold Starting) | 03-04 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **500** | TRX500FE,FPE,FM, FPM | 11-17 | PTZ16H | _ | _ | _ |
| | TRX500F FourTrax Rubicon | 01-11 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | TRX500FE, FM, TM FourTrax Foreman ES, 4x4 | 05-11 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **450** | TRX450ER, TRX450R | 06-13 | PTZ7S | _ | _ | _ |
| | TRX450, FourTrax Foreman S, ES | 98-04 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | TRX450ER | 06-09 | PTZ7S | _ | _ | _ |
| **420** | TRX420 Rancher 4x4 | 07-13 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | TRX420 Rancher 4x4 | 14-17 | PTZ16H | _ | _ | _ |
| | TRX420 Rancher 2x4 | -17 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **400** | FL400R Pilot | 89-90 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | TRX400EX, FourTrax, Sportrax | 99-13 | PTX9BS-FS | PTX9-BS | _ | _ |
| | TRX400 Rancher AT | 04-06 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | TRX400FW Foreman | 95-03 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **350** | FL350R Odyssey | 85 | PTX12BS-FS | PTX12-BS | _ | _ |
| | TRX350, D FourTrax 4x4 | 86-89 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | TRX350 Rancher | 00-06 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **300** | TRX300 FourTrax 300 | 88-00 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | TRX300X, EX, Sportrax | 93-12 | PTX9BS-FS | PTX9-BS | _ | _ |
| | TRX300FW FourTrax 300 4x4 | 88-00 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **250** | ATC250ES Big Red | 85-87 | PTX12BS-FS | PTX12-BS | _ | _ |
| | ATC250SX | 85-87 | PTX12BS-FS | PTX12-BS | _ | _ |
| | TRX250 FourTrax | 85-87 | PTX12BS-FS | PTX12-BS | _ | _ |
| | TRX250TE,TM, FourTrax Recon ES | 97-17 | PTX12BS-FS | PTX12-BS | _ | _ |
| | TRX250EX,TE,EM | 01-17 | PTX9BS-FS | PTX9-BS | _ | _ |
| **200** | ATC200 Big Red | 82-84 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | ATC200M | 84-85 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | TRX200 FourTrax | 90-97 | PTX12BS-FS | PTX12-BS | _ | _ |
| | TRX200 FourTrax | 84 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | TRX200SX FourTrax | 86-88 | PTX12BS-FS | PTX12-BS | _ | _ |
| **125** | ATC125M | 86-87 | PTX12BS-FS | PTX12-BS | _ | _ |
| | ATC125M | 84-85 | _ | _ | CB9A-A | _ |
| | TRX125 FourTrax | 87-88 | PTX9BS-FS | PTX9-BS | _ | _ |
| | TRX125 FourTrax | 85-86 | _ | _ | CB9A-A | _ |
| **90** | TRX90EX | 06-17 | PTX5LBS-FS | PTX5L-BS | _ | _ |

## HYOSUNG MOTORS

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **450** | TE450S | -13 | PTX9BS-FS | PTX9-BS | _ | _ |

## JOHN DEERE

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| | All Models | All | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |

## KASEA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **250** | Skyhawk 250 | All | PTX7ABS-FS | PTX7A-BS | _ | _ |
| **170** | Skyhawk 170 | All | PTX7ABS-FS | PTX7A-BS | _ | _ |
| **150** | Skyhawk 150, Adventure Buggy | All | PTX7ABS-FS | PTX7A-BS | _ | _ |
| **125** | KS,KU Models, Adventure Buggy | All | PTX7ABS-FS | PTX7A-BS | _ | _ |
| **90** | Skyhawk 90 | All | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | KS,KU Models | All | PTX7ABS-FS | PTX7A-BS | _ | _ |
| **65** | KS,KU Models | All | PTX7ABS-FS | PTX7A-BS | _ | _ |

## KASEA (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **50** | Mini Skyhawk | All | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | Skyhawk 50 | All | PTX5LBS-FS | PTX5L-BS | _ | _ |

## KAWASAKI

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **750** | KVF750-A, B Brute Force 750 4x4 | 05-17 | PTX14BS-FS†• | _ | _ | _ |
| **700** | KFX700 V-Force | 03-10 | PTX14BS-FS†• | _ | _ | _ |
| | KSV700-A, B (KFX700) | 04-08 | PTX14BS-FS†• | _ | _ | _ |
| | KSV700-A, B Prarie 700 4x4 | 04-06 | PTX14BS-FS†• | _ | _ | _ |
| **700** | KVF700-A, B, D Prarie 700, 4x4 | 04-06 | PTX14BS-FS†• | _ | _ | _ |
| **650** | KVF650 Brute Force | 02-13 | PTX14BS-FS†• | _ | _ | _ |
| | KV650-A,B,D, E Prarie 650, 4x4 | 02-11 | PTX14BS-FS†• | _ | _ | _ |
| **450** | KFX450R | 08-14 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | 4x4 Adv. Classic | 02-03 | PTX14BS-FS†• | _ | _ | _ |
| **400** | KLF400-B Bayou 400 4x4 | 93-00 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | KSF400-A (KFX400) | 03-06 | PTX9BS-FS | PTX9-BS | _ | _ |
| | KVF400-A Prarie 4x4 | 97-00 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | KVF400-A Prairie 400 4x4(CN) | 97-00 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | KVF400-B Prairie 400 4x4 | 98-00 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | KVF400-B Prairie 400 4x4(CN) | 98-00 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | KVF400-C Prairie 400, 4x4 | 99-02 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | KVF400-C Prairie 400 4x4(CN) | 99-02 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | KVF400-D Prairie 400, 4x4 | 99-02 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | KVF400-D Prairie 400 4x4(CN) | 99-01 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **360** | KVF360 Prairie | -13 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | KVF360-A,B, C Prarie 360, 4x4 | 03-11 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| **300** | KEF300-A Lakota | 95-00 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | KEF300-B Lakota Sport | 01-03 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | KLF300-A Bayou | 86-87 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | KLF300-B Bayou | 88-04 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | KLF300-B Bayou (CN) | 92-99 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | KLF300-C Bayou 300 4x4 | 89-04 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | KLF300-C Bayou 300 4x4(CN) | 92-05 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | KVF300 Brute Force | 13-17 | PTX12BS-FS | PTX12-BS | _ | _ |
| | KVF300-A Prairie 300, 4x4 | 99-02 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | KVF300-A Prairie 300, 4x4 (CN) | 99-01 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | KVF300-B Prairie 300, 4x4 | 99-02 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | KVF300-B Prairie 300, 4x4 (CN) | 99-02 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| **250** | KLF250-A Bayou | 03-12 | _ | _ | CB10A-A2 | _ |
| | KLF250-A Bayou (CN) | 03-05 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | KLT250-A | 82-83 | PTX12AABS-FS | _ | CB12A-A | _ |
| | KLT250-C Prairie | 84-85 | _ | _ | CB10L-B | _ |
| | KLT250-C Prairie | 83 | PTX12AABS-FS | _ | CB12A-A | _ |
| **220** | KLF220-A Bayou | 88-02 | _ | _ | CB10A-A2 | _ |
| | KLF220-A Bayou (CN) | 92-02 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| **200** | KLT200-A, C | 81-84 | _ | _ | CB10L-B | _ |
| | KLT200-B, C | 83 | PTX12AABS-FS | _ | CB12A-A | _ |
| **185** | KLF185-A Bayou | 85-88 | _ | _ | CB10L-B | _ |
| **110** | KLF110-B Mojove (Elec.Start) | 87-88 | _ | _ | CB9L-A2 | _ |
| **90** | KFX90 | 07-17 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **80** | KSF80-A (KFX80) | 03-05 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **50** | KFX50 | 07-17 | PTX5LBS-FS | PTX5L-BS | _ | _ |

† Must use factory activated battery.
• Please see battery cross reference chart on page 11 for optional upgrades.

# ALL TERRAIN VEHICLE BATTERY APPLICATIONS

## KTM

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **525** | SX ATV | 10-13 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | XC ATV | 10-11 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **505** | SX ATV | 08-13 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | XC ATV | 08-11 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **450** | SX ATV | 08-11 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | XC ATV | 08-09 | PTX5LBS-FS | PTX5L-BS | _ | _ |

## KYMCO

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **700** | MXU700 | -17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **500** | MXU500 | -17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **450** | Maxxer450,MXU450 | -17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **300** | Mongoose300 | All | PTX12BS-FS | PTX12-BS | _ | _ |
| | MXU300SD | All | PTX12BS-FS | PTX12-BS | _ | _ |
| **250** | Mongoose,MXU250 | All | PTX12BS-FS | PTX12-BS | _ | _ |
| **150** | MXU150 | All | PTX9BS-FS | PTX9-BS | _ | _ |
| **90** | Mongoose 90 | All | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **50** | Mongoose 50 | All | PTX5LBS-FS | PTX5L-BS | _ | _ |

## MANCO

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **260** | 8265L | 06 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | 8264L | 05-06 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | 8260E, L | 04-06 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| **72** | 8089L | 05-06 | PTX5LBS-FS | PTX5L-BS | _ | _ |

## PANDA MOTOR SPORTS

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **125** | KD125 | | _ | _ | CB7-A | _ |
| **80** | KD80 | | _ | _ | CB7-A | _ |
| **50** | KD50 | | _ | _ | CB7-A | _ |

## POLARIS

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1000** | Sportman,SP, Touring,XP,HL | 15-17 | PTX20HLBS-FS† | _ | _ | _ |
| | Scrambler | 14-17 | PTX20HLBS-FS† | _ | _ | _ |
| **900** | Ace SP | 16-17 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| **850** | Scrambler | 14-17 | PTX20HLBS-FS† | _ | _ | _ |
| | Sportsman(opt.) WV(std.) | 10-17 | PIX30LBS-FS†• | _ | _ | _ |
| | Sportsman,SP, Touring,XP,HL | 10-17 | PTX20HLBS-FS† | _ | _ | _ |
| **800** | Sportsman | 14 | PTX20HLBS-FS | _ | _ | _ |
| | Sportsman 6x6 | 14 | PIX30LBS-FS†• | _ | _ | _ |
| | Sportsman 6x6 | 05-14 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | Sportsman 4x4 | 11-13 | PTX20HLBS-FS | _ | _ | _ |
| **700** | Sportsman, Military | 02-10 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |
| **600** | Sportsman | 04-05 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |
| **570** | Sportsman | 14-17 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | Ace,Ace SP | 15-17 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| **550** | Sportsman | 09 | PTX20HLBS-FS | _ | _ | _ |
| | Sportsman EPS,X2, Touring | 10-14 | PTX14AHBS-FS† | – | _ | _ |
| | Sportsman Touring, XP,X2 | 09-10 | PTX20HLBS-FS | _ | _ | _ |
| | Sportsman X2 | 10-12 | PTX20HLBS-FS | _ | _ | _ |
| | Sportsman XP | 10 | PTX14AHBS-FS† | _ | _ | _ |
| **525** | Outlaw 525 | 08-12 | PTX9BS-FS | PTX9-BS | _ | _ |
| **500** | All Models (Excl.Predator, Sportsman) | 99-12 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | Predator | 03-06 | PTX9BS-FS | PTX9-BS | _ | _ |
| | Ace | -17 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | Sportsman | -09 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |
| | Sportsman HO | 96-13 | PTX14AHBS-FS | PTX14AH-BS | _ | _ |
| **450** | Outlaw 450 | 07-10 | PTX9BS-FS | PTX9-BS | _ | _ |
| | Diesel .445 Liter (primary) | 99-03 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |
| | (secondary) | 99-03 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | Sportsman HO | 16-17 | PTX14AHBS-FS | PTX14AH-BS | _ | _ |
| **425** | All models | 95-02 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| **400** | All models | 94-14 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| **335** | Sportsman | 98-01 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| **330** | Magnum Trail Boss | 03-13 | PTX14AHBS-FS | PTX14AH-BS | _ | _ |
| **330** | Sportsman | -10 | PTX14AHBS-FS | PTX14AH-BS | _ | _ |
| **325** | Ace | 14-16 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |

## POLARIS (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **325** | All models | 87-02 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| **300** | Hawkeye, Sportman 300 | 06-10 | PTX14AHBS-FS | PTX14AH-BS | CB14-B2 | _ |
| **250** | All models | 85-05 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| **200** | Phoenix, Sawtooth | 05-17 | PTX12BS-FS | PTX12-BS | _ | _ |
| **110** | Outlaw | -17 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | Sportsman | -17 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **90** | Predator, Sportsman, Outlaw | 03-14 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | Scrambler, Sportsman | 01-02 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| **50** | Scrambler | 03 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | Scrambler | 01-02 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | Predator, Outlaw(Except 07) | 04-16 | PTX5LBS-FS | PTX5L-BS | _ | _ |

## QIANJIANG

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **100** | ATV100 | All | PTX4LBS-FS | PTX4L-BS | _ | _ |
| **50** | ATV50 | All | PTX4LBS-FS | PTX4L-BS | _ | _ |

## SUZUKI

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **750** | LT-A750X King Quad | 07-17 | _ | PTX20CH-BS | _ | _ |
| **700** | LT-A700X King Quad | 05-07 | _ | PTX20CH-BS | _ | _ |
| | LT-V700F Twin Peaks | 04-05 | _ | PTX20CH-BS | _ | _ |
| **500** | LT-A500 King Quad | 06-17 | _ | PTX20CH-BS | _ | _ |
| | LT-A500F Vinson 4WD | 04-07 | _ | PTX20CH-BS | _ | _ |
| | LT-A500F Vinson 4WD | 02-03 | _ | PTX16-BS• | _ | _ |
| | LT-A500F QuadMaster | 00-01 | _ | PTX16-BS-1 | _ | _ |
| | LT-F500F QuadRunner | 98-02 | _ | PTX16-BS-1 | _ | _ |
| | LT-F500F Vinson Manual 4WD | 04-07 | _ | PTX20CH-BS | _ | _ |
| | LT-F500F Vinson Manual 4WD | 03 | _ | PTX16-BS• | _ | _ |
| **450** | LT-A450X King Quad | 07-11 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | LT-R450 QuadRacer | 06-11 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| **400** | LT-A400 Eiger 2WD, F Eiger 4WD | 02-07 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | LT-A400F KingQuad | -09 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | LT-A400F KingQuad | 13-14 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | LT-F400 Eiger 2WD, F Eiger 4WD | 02-07 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | LT-Z400 QuadSport | 03-16 | PTX9BS-FS | PTX9-BS | _ | _ |
| | LT-A400 King Quad | -17 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **300** | LT300E QuadRunner 300E | 87-89 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | LT-F300F KingQuad | 99-02 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | LT-F300F KingQuad (CN,Opt) | 99-02 | _ | PIX50-BS | C50-N18A-A | _ |
| **280** | LT-F4WDX KingQuad | 91-99 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | LT-F4WDX KingQuad (CN,Opt) | 91-99 | _ | PIX50-BS | C50-N18A-A | _ |
| **250** | LT-4WD QuadRunner | 87-99 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | LT-4WD QuadRunner (Opt) | 87-99 | _ | PIX50-BS | C50-N18A-A | _ |
| | LT-F250 QuadRunner | 88-01 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | LT-F250 QuadRunner(Opt) | 88-01 | _ | PIX50-BS | C50-N18A-A | _ |
| | LT-F250, Ozark | 02-16 | PTX12BS-FS | PTX12-BS | _ | _ |
| | LT-F250F QuadRunner | 99-02 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | LT-F250F QuadRunner (CN,Opt) | 99-02 | _ | PIX50-BS | C50-N18A-A | _ |
| | LT-Z250 QuadSport | 04-11 | PTX9BS-FS | PTX9-BS | _ | _ |
| | LT250EF QuadRunner | 85-86 | _ | PIX50-BS | C50-N18A-A | _ |
| **230** | LT-F230 QuadRunner | 86-87 | _ | _ | CB10A-A2 | _ |
| | LT230E QuadRunner | 88-93 | PTX12BS-FS | PTX12-BS | _ | _ |

† Must use factory activated battery.
• Please see battery cross reference chart on page 11 for optional upgrades.

# ALL TERRAIN VEHICLE BATTERY APPLICATIONS

## SUZUKI (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **230** | LT230GE QuadRunner | 85-86 | _ | _ | CB10A-A2 | _ |
| **160** | LT-F160 QuadRunner | 91-01 | _ | _ | CB9A-A | _ |
| | LT-F160 QuadRunner | 03-04 | _ | _ | CB9A-A | _ |
| | LT160E QuadRunner | 89-94 | _ | _ | CB9A-A | _ |
| **90** | LTZ90 QuadSport | 07-11 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| **80** | LT80 QuadSport 80 | 87-06 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **50** | QuadSport Z50 | 06-11 | PTX5LBS-FS | PTX5L-BS | _ | _ |

## YAMAHA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **700** | YFM7FG Grizzly | 07-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | YFM700R Raptor | 06-17 | PT9B-4 | _ | _ | _ |
| | Kodiak EPS | 16-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **660** | YFM660FW Grizzly | 02-08 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | YFM660R Raptor | 01-05 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **600** | YFM600FW Grizzly | 98-01 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **550** | YFM5FG Grizzly | -14 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **450** | YFM450FG Grizzly | 07-14 | PTX14AHBS-FS | PTX14AH-BS | _ | _ |
| | YTM450FW Kodiak/ Automatic | 03-09 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | YFM450FX Wolverine | 03-10 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | YZF450 | 04-13 | PT7B-4 | _ | _ | _ |
| | YZF450V | 09-17 | PT7B-4 | _ | _ | _ |
| | YXF450R,X | 09-17 | PTZ7S | _ | _ | _ |
| **400** | YFM400FG Grizzly | 07-11 | PTX14AHBS-FS | PTX14AH-BS | _ | _ |
| | YFM400FW Kodiak/ Automatic | 03-06 | PTX14AHBS-FS | PTX14AH-BS | _ | _ |
| | YFM400FW Kodiak/ Automatic | 96-02 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | YFM400FW Kodiak | 93-95 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A | _ |
| | YFM400FB BigBear | 00-12 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | YFM400FWN BigBear 4WD | 00-03 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **350** | Bruin | 04-06 | PTX14AHBS-FS | PTX14AH-BS | _ | _ |
| | YFM350ER Moto 4 | 87-95 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A | _ |

## YAMAHA (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **350** | YFM350FW BigBear 4WD | 87-99 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A | _ |
| | YFM350FX Wolverine | 95-05 | _ | _ | CB12C-A | _ |
| | YFM350U BigBear 2WD | 96-99 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A | _ |
| | YFM350X Warrior | 87-03 | _ | _ | CB12C-A | _ |
| | YFP350 TerraPro | 88 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A | _ |
| | YFM350FX Wolverine | 06-10 | PTX14AHBS-FS | PTX14AH-BS | _ | _ |
| | YFM350FG Grizzly | 07-14 | PTX14AHBS-FS | PTX14AH-BS | _ | _ |
| | YFM350R Raptor | 04-13 | PTZ10S | _ | _ | _ |
| **300** | Grizzly300 Auto. | 11-13 | PTX12BS-FS | PTX12-BS | _ | _ |
| **250** | YFM250B BigBear | 07-10 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | YFM250B Bruin | 05-06 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | YFM250R Raptor | 08-13 | PTZ7S | _ | _ | _ |
| | YFB250 Timber Wolf 2WD | 92-98 | _ | _ | CB12C-A | _ |
| | YFB250FW Timber Wolf 4WD | 94-00 | _ | _ | CB12C-A | _ |
| | YFM250 Bear Tracker | 99-04 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| | YFM250 Moto 4 | 89-91 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A | _ |
| **230** | YFU-I/T Pro-Hauler | 89 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A | _ |
| **225** | YFM225 Moto 4 | 86-88 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A | _ |
| | YTM225DR Tri-Moto | 85-86 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A | _ |
| | YTM225DX Tri-Moto | 83-85 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A | _ |
| **200** | YFM200 Moto 4 | 85 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A | _ |
| | YFM200DX Moto 4 | 86-89 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A | _ |
| | YTM200,E, ER Tri-Moto | 83-85 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A | _ |
| **125** | YFA-1 Breeze | 89-04 | _ | _ | CB12C-A | _ |
| | YFM125S Grizzly | 04-13 | _ | _ | CB12C-A | _ |
| | YFM125R Raptor | 11-13 | PTZ7S | _ | _ | _ |
| **100** | YFM100 Champ | 87-91 | _ | _ | _ | 12N7D-3B |
| **90** | YFM90R Raptor | 09-17 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **80** | YFM Grizzly | 05-08 | _ | _ | _ | 12N7D-3B |
| | YFM80 Badger | 85-01 | _ | _ | _ | 12N7D-3B |
| | YFM80R Raptor 80 | 02-08 | _ | _ | _ | 12N7D-3B |
| **50** | YFM50 Raptor | 04-09 | _ | _ | _ | 12N7D-3B |
| | YFZ50 | 17 | PTX5LBS-FS | PTX5L-BS | _ | _ |

• Please see battery cross reference chart on page 11 for optional upgrades.

# UTILITY VEHICLE BATTERY APPLICATIONS

## ARCTIC CAT

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1000** | Prowler 1000 | 16-17 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | Wildcat 1000, LTD | 16-17 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| **700** | Prowler 700 | 10-17 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |
| | Prowler 700 | -09 | PIX50LBS-FS | PIX50L-BS | _ | _ |
| | HDX | 11-17 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | Wildcat,Sport,Trail | 16-17 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| **650** | Prowler 650 | 06-09 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| **550** | Prowler 550 | 10-15 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |
| | Prowler 550 | -09 | PIX50LBS-FS | PIX50L-BS | _ | _ |
| **500** | Prowler 500 | 17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | HDX500 XT | 17 | PIX30LBS-FS• | PIX30L-BS | _ | _ |

## BRP (CAN-AM)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1000** | Commander 1000 | 11-17 | PTX20LBS-FS†• | _ | _ | _ |
| | Defender | 16-17 | PTX20LBS-FS†• | _ | _ | _ |
| | DefenderXT | 16-17 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | Maverick | 13-17 | PTX20LBS-FS†• | _ | _ | _ |
| **800** | Commander 800 | 11-17 | PTX20LBS-FS†• | _ | _ | _ |
| | Defender | 16-17 | PTX20LBS-FS†• | _ | _ | _ |
| | DefenderXT | 16-17 | PIX30LBS-FS• | PIX30L-BS | _ | _ |

## HONDA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1000** | Pioneer 1000 | 16 | PTZ16H | _ | _ | _ |
| **700** | SXS700 Pioneer | 15-16 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | MUV700 Big Red | 08-13 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **500** | Pioneer 500 | 15-16 | PTZ16H | _ | _ | _ |

• Please see battery cross reference chart on page 11 for optional upgrades.
† Must use factory activated battery.

## KAWASAKI

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **800** | Teryx All Model(US) | 08-15 | _ | _ | _ | U1(9) |
| | Teryx All Model(CN) | 08-15 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **750** | Teryx All Model(US) | 08-16 | _ | _ | _ | U1(9) |
| | Teryx All Model(CN) | 08-16 | PTX14BS-FS†• | _ | _ | _ |
| **650** | KAF650 Mule 4010 4x4 | 09 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **620** | Mule 4010 Trans 4x4, Diesel Mule 4000 | 09-16 | _ | _ | _ | U1(9) |
| | KAF620F, Mule 4010 4x4(US) | 09-16 | _ | _ | _ | U1(9) |
| | KAF620F, Mule 4010 4x4(CN) | 09-16 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Classic | 05-07 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | KAF620, Mule 3000, 3010, 3020 | | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | KAF620, Mule 2500, 2510, 2520 | | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| **540** | KAF540, Mule 2010, 2020, 2030 | | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| **450** | KAF450, Mule 1000 | | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| **400** | KAF400, Mule 600, 610 | 05-16 | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |
| **360** | Advantage Classic | 03-07 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **300** | KAF300, Mule 500, 520, 550 | | PTX14AHBS-FS | PTX14AH-BS | CB14A-A2 | _ |

## KYMCO

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **700** | UXV700 | -16 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **500** | UXV500 | -16 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **450** | UXV450 | -16 | PTX20LBS-FS• | PTX20L-BS | _ | _ |

# UTILITY VEHICLE BATTERY APPLICATIONS

## POLARIS

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1000** | RZRXP1000,Turbo4 | 14-17 | P26RH-FS | _ | _ | _ |
| | Ranger General | 16-17 | P26RH-FS | _ | _ | _ |
| | Ranger Diesel | 15-17 | P26RH-FS | _ | _ | _ |
| **900** | Ranger RZR | 11-17 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | Ranger Diesel | 11-14 | P26RH-FS | _ | _ | _ |
| | Ranger XP | 13-17 | P26RH-FS | _ | _ | _ |
| | Ranger Crew | 14-17 | P26RH-FS | _ | _ | _ |
| **800** | Ranger RZR | 08-14 | PTX20HLBS-FS | _ | _ | _ |
| | Ranger RZR 4,S | 10-14 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | Ranger | 10-14 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |
| | Ranger 6x6 | 14-16 | P26RH-FS | _ | _ | _ |
| **700** | Ranger 6x6, 4x4 | 06-10 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| **570** | RZR570 | 12-17 | PTX14AHBS-FS | PTX14AH-BS | CB14-B2 | _ |
| | RZR570 EPS | 13-17 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |
| | Ranger 4x4 | 14-16 | PTX14AHBS-FS | PTX14AH-BS | CB14-B2 | _ |
| **500** | Ranger 4x4 | 11-13 | PTX14AHBS-FS | PTX14AH-BS | CB14-B2 | _ |
| | Ranger 4x4 | 04-10 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |

## POLARIS (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **500** | Ranger 6x6, 4x4 | 98-04 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |
| **425** | Ranger 2x4 | 02-03 | PIX30LBS-FS• | PIX30L-BS | CB30L-B | _ |
| **400** | Ranger 400 | 11-14 | PTX14AHBS-FS | PTX14AH-BS | CB14-B2 | _ |
| **170** | Ranger RZR | 16-17 | PTX12BS-FS | PTX12-BS | _ | _ |

## SUZUKI

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **620** | QUV620F | 05 | PTX20LBS-FS• | PTX20L-BS | _ | _ |

## YAMAHA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| | All Models | All | P11U1LD-FS | _ | _ | _ |

• Please see battery cross reference chart on page 11 for optional upgrades.

# SNOWMOBILE BATTERY APPLICATIONS

## ARCTIC CAT

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1100** | Bearcat5000, 7000 | 15-17 | PTX20HBS-FS | _ | _ | _ |
| | M7000, 8000, 9000 | 14-17 | PTX20HBS-FS | _ | _ | _ |
| | Pantera 7000 | 15-17 | PTX20HBS-FS | _ | _ | _ |
| | XF7000, XF8000, XF9000, M9000 | 14-17 | PTX20HBS-FS | _ | _ | _ |
| | Z1, TX1, F1100, M1100, BearcatZ1 | 01-14 | PTX20HBS-FS | _ | _ | _ |
| | ZR5000, 7000, 8000, 9000 | 14-17 | PTX20HBS-FS | _ | _ | _ |
| **800** | F8 LXR, F800, M800, XF800 | 07-13 | PTX20HBS-FS | _ | _ | _ |
| | ZR8000 | 14-17 | PTX20HBS-FS | _ | _ | _ |
| **700** | Bearcat 3000 | 16-17 | PTX20HBS-FS | _ | _ | _ |
| | ZR8000 | 14-17 | PTX20HBS-FS | _ | _ | _ |
| **600** | M6000 | 16-17 | PTX20HBS-FS | _ | _ | _ |
| | XF6000 | 17 | PTX20HBS-FS | _ | _ | _ |
| | ZR6000 | 14-17 | PTX20HBS-FS | _ | _ | _ |
| **570** | F570, T570, Bearcat | 08-14 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| **565** | Bearcat 2000 | 17 | PTX20HBS-FS | _ | _ | _ |
| | Lynx 2000 | 15-17 | PTX20HBS-FS | _ | _ | _ |
| **500** | 4 Stroke Trail, Touring | 02-03 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | Bearcat 340, 440 | 95-00 | PTX14AHBS-FS | PTX14AHL-BS | CB14-A2 | _ |
| | Bearcat 570 | 04-07 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | Bearcat 570 | 08-09 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Bearcat 570 | 10-14 | PTX20HBS-FS | _ | _ | _ |
| | Bearcat WT | 95-02 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Bearcat WT | 03-04 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | Bearcat WT | 05-07 | PIX50LBS-FS | PIX50L-BS | _ | _ |
| | Bearcat WT Turbo | 06-07 | PIX50LBS-FS | PIX50L-BS | _ | _ |
| | Cheetah | 86-90 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| | Cheetah | 91-93 | PTX14AHLBS-FS | PTX14AH-BS | CB14L-A2 | _ |
| | Crossfire 500 | 07 | PTX20HBS-FS | _ | _ | _ |
| | Crossfire 600 | 06-07 | PTX20HBS-FS | _ | _ | _ |
| | Crossfire 700 | 06 | PTX20HBS-FS | _ | _ | _ |
| | Cougar | 85-90 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| | Cougar | 91-94 | PTX14AHLBS-FS | PTX14AH-BS | CB14L-A2 | _ |
| | Cougar | 95-98 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | El Tigre 5000 | 87-88 | PTX14AHLBS-FS | PTX14AH-BS | CB14L-A2 | _ |
| | EXT | 89-91 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| | EXT | 92-94 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | EXT Dix (EFI) | 97-98 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | EXT (EFI) | 95-97 | _ | _ | CB7-A | 12N7-4A |
| | EXT (EFI) | 98 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | EXT 600 | 97-98 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | EXT (Carb) | 95-96 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | EXT Special | 91-92 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | F5 LXR | 07-14 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | F6,F8,F1000 | 07-09 | PTX20HBS-FS | _ | _ | _ |
| | Firecat | 03-06 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | Jag AFS | 89-91 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | Jag AFS L/T | 89-93 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | Jag, Jag Dix | 85-93 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | Jag, Jag Dix | 94-99 | PTX14AHBS-FS | PTX14AHL-BS | CB14-A2 | _ |
| | Jag Liquid | 96 | PTX14AHBS-FS | PTX14AHL-BS | CB14-A2 | _ |
| | Jag Z | 93 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | Jag Z | 94 | PTX14AHBS-FS | PTX14AHL-BS | CB14-A2 | _ |
| | Jaguar | 07 | PTX20HBS-FS | _ | _ | _ |
| | King Cat 900 | 04-06 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | Lynx | 91-93 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |

## ARCTIC CAT (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| | M 5 | 06-07 | PTX20HBS-FS | _ | _ | _ |
| | M 6 | 05-07 | PTX20HBS-FS | _ | _ | _ |
| | M 7 | 05-06 | PTX20HBS-FS | _ | _ | _ |
| | Mountain Cat | 01 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Mountain Cat 500 | 02 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Mountain Cat 570 | 02-04 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | Mountain Cat 600 | 02-04 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Mountain Cat 800 | 02-04 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | Mountain Cat 900 | 03-04 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | Mountain Cat 1000 | 02 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Pantera | 80-85 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| | Pantera | 86-93 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | Pantera | 94 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Pantera | 95-98 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | Pantera | 99-01 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Pantera 550, 600 | 02-05 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Pantera 800 | 02-04 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | Panther | 80-88 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| | Panther | 89-93 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | Panther | 94-96 | PTX14AHBS-FS | PTX14AHL-BS | CB14-A2 | _ |
| | Panther 340 | 97-00 | PTX14AHBS-FS | PTX14AHL-BS | CB14-A2 | _ |
| | Panther 370 | 01-04 | PTX14AHBS-FS | PTX14AHL-BS | CB14-A2 | _ |
| | Panther 370 | 07 | PTX14AHBS-FS | PTX14AHL-BS | CB14-A2 | _ |
| | Panther 440 | 97-03 | PTX14AHBS-FS | PTX14AHL-BS | CB14-A2 | _ |
| | Panther 550 | 97-01 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Panther 570 | 02-07 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | Panther 660 | 06-07 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | Powder Extreme | 97-98 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Powder Special | 95-97 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Prowler | 90-93 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | Prowler | 94 | _ | _ | CB7-A | 12N7-4A |
| | Prowler 2-Up | 95 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Prowler Special | 91-92 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Puma | 94-96 | PTX14AHBS-FS | PTX14AHL-BS | CB14-A2 | _ |
| | Sabercat 500 | 04-06 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Sabercat 600, 700 | 04-06 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | Super Jag | 87-88 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| | Super Jag | 89-92 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | T660 Touring | 04-06 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | T660 Turbo | 04-07 | PIX50LBS-FS | PIX50L-BS | _ | _ |
| | T660 Turbo Touring | 04-07 | PIX50LBS-FS | PIX50L-BS | _ | _ |
| | T500, T570 | 09 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Thundrcat | 97-02 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | Wildcat (EFI) | 93 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | Wildcat (EFI) | 95-96 | _ | _ | CB7-A | 12N7-4A |
| | Wildcat MC | 94 | _ | _ | CB7-A | 12N7-4A |
| | Wildcat Touring | 95-96 | _ | _ | CB7-A | 12N7-4A |
| | Z | 98-01 | PTX14AHBS-FS | PTX14AHL-BS | CB14-A2 | _ |
| | Z 370, 440 | 02-07 | PTX14AHBS-FS | PTX14AHL-BS | CB14-A2 | _ |
| | Z 570 | 02-07 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | ZL | 01 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | ZL 500 | 02 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | ZL 550, 600 | 02-03 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | ZL 800 | 02-03 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | ZR (EFI) | 95-96 | _ | _ | CB7-A | 12N7-4A |
| | ZR 500, 600 | 01-02 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |
| | ZR 800 | 02-03 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |

• Please see battery cross reference chart on page 11 for optional upgrades.
# The PTX20 series batteries may be used as an optional upgrade, but some modification to the hold down may be necessary. See battery label for retrofit cautions.

## ARCTIC CAT (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| | ZR 900 | 03-06 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | _ |
| | ZRT | 97-02 | PTX20BS-FS#• | PTX20-BS# | CB18-A | _ |

## BOMBARDIER / SKI-DOO (BRP)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1200** | Grand Touring, Expedition | 10-17 | PTX20HLBS-FS† | _ | _ | _ |
| | Expedition SE | 15-17 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | Renegade, GSX, GTX, MX Z | 09-17 | PTX20HLBS-FS† | _ | _ | _ |
| **1000** | Expedition | 03-06 | PIX50LBS-FS† | _ | _ | _ |
| | Legend | 03-06 | PIX50LBS-FS† | _ | _ | _ |
| | Scandic | 03-06 | PIX50LBS-FS† | _ | _ | _ |
| **900** | Renegade,MX Z, Expedition, Grand Touring, Skandic | 14-17 | PTX20LBS-FS†• | _ | _ | _ |
| **850** | Renegade, X E-Tec, Adventure | 17 | PTX20LBS-FS†• | _ | _ | _ |
| | MXZ X E-Tec, Summit E-Tec | 17 | PTX20LBS-FS†• | _ | _ | _ |
| **800** | Expedition, Legend Skandic | 07-17 | PTX20LBS-FS†• | _ | _ | _ |
| | Renegade, Summit, Free Ride | 04-17 | PTX20LBS-FS†• | _ | _ | _ |
| | GSX, MXZ | 04-17 | PTX20LBS-FS†• | _ | _ | _ |
| **600** | Expedition, Skandic, Summit | 06-17 | PTX20LBS-FS†• | _ | _ | _ |
| | Expedition SE, Skandic Ace | 15-17 | PIX30LBS-FS• | PIX30L-BS• | _ | _ |
| | Grand Touring, Renegade | 04-17 | PTX20LBS-FS†• | _ | _ | _ |
| | Tundra, MXZ, GSX, GTX | 04-17 | PTX20LBS-FS†• | _ | _ | _ |
| **550** | Expedition, Freestyle, Skandic | 05-17 | PTX20LBS-FS†• | _ | _ | _ |
| | Grand Touring, Renegade, Tundra | -13 | PTX20LBS-FS†• | _ | _ | _ |
| | GSX, GTX, MXZ | 07-13 | PTX20LBS-FS†• | _ | _ | _ |
| **300** | Skandic | 05-17 | PTX20LBS-FS†• | _ | _ | _ |
| | All models | -98 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | All 4-stroke | 03 | PIX50LBS-FS | PIX50L-BS | _ | _ |
| | CK3 Types | 99-03 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | Elite | 04-06 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | ZX Types | 99-01 | PTX15LBS-FS | PTX15L-BS | _ | _ |
| | ZX Types | 02-03 | PTX20LBS-FS• | PTX20L-BS | _ | _ |

## KAWASAKI

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| | All Models | All | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |

## POLARIS

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **800** | Switchback, RMK | -10 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **750** | FS Wide Track | 10-11 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | Turbo, LX, IQ | 08-14 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Wide Track | 89-09 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | Wide Track | 10-16 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | FS/FST | 06-09 | PTX20LBS-FS | PTX20L-BS | _ | _ |
| **600** | IQ | 14 | PTX20LBS-FS†• | _ | _ | _ |
| | Wide Track | 14 | PIX30LBS-FS†• | _ | _ | _ |
| | Rush, IQ, Shift, Switchback | 09-13 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Turbo Switchback | 06-10 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Turbo Dragon | 06-10 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Turbo LX, IQ | 08-13 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | IQ Touring | -08 | PTX14AHBS-FS | PTX14AHL-BS | _ | _ |
| | Indy, Indy Trail | 84-91 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | All EFI (RXL, 500 EFI) | 93-97 | _ | _ | CB9A-A | _ |
| | FS/FST | 06-10 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Sprint (Electric Start) | 86-90 | _ | _ | C60-N24-A | _ |
| | Wide Track, FS | 10-16 | PIX30LBS-FS• | PIX30L-BS | _ | _ |
| | Wide Track | 14-17 | PIX30LBS-FS†• | _ | _ | _ |
| | Wide Track | 89-05 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | All Other Models | 92-05 | PTX14AHBS-FS | PTX14AHL-BS | CB14A-A2 | _ |
| | All Electric Start Kits | 85-93 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | All Electric Start Kits | 94-05 | PTX14AHBS-FS | PTX14AHL-BS | CB14A-A2 | _ |
| **550** | IQ, LXT, Shift | -13 | PTX20LBS-FS• | PTX20L-BS | _ | _ |

## POLARIS (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **544** | Trail, Trail Touring | -10 | PTX14AHBS-FS | PTX14AHL-BS | CB14A-A2 | _ |
| **500** | Wide Track | 89-14 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |

## YAMAHA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1049** | FX Nitro | 09-14 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | RS Venture | 09-14 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | RS Vector | 16-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | SR Viper L/M/R/S/X | 14-17 | PTX20HBS-FS | _ | _ | _ |
| | RS Viking Profess. | 09-13 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | VK Professional II | 16-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **1000** | RS1000S,GT,RS | | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Apex | 06-17 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | RX1000R RX (All Models) | 03-05 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **998** | Apex | 06-09 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **973** | Vector | 09-14 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Viking | 09 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **700** | SXV700ER SXViper ER | 02-05 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | VT700 Venture 700 | 98-04 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | VX700XTCD Vmax 700 XTC Deluxe | 98 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | VX700DX Vmax 700 Deluxe | 99-00 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | VX700ER Vmax 700 ER | 01-02 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| **600** | VT600 Venture 600 | 97-98 | _ | _ | CB16AL-A2 | _ |
| | VT600 Venture 600 | 99-06 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | VX600E/DX Vmax 600 LE/ DX | 94-96 | _ | _ | CB16AL-A2 | _ |
| | VX600ER Vmax 600 ER | 02-03 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | VX600XTC Vmax 600 XTC | 97-98 | _ | _ | CB16AL-A2 | _ |
| | VX600 DX Xmax 600 Deluxe | 99-01 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| **570** | EX570E Exciter | 88-90 | _ | _ | CB16AL-A2 | _ |
| | EX570E Exciter II LE | 91-93 | _ | _ | CB16AL-A2 | _ |
| **540** | EC540 Excel | 79-80 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | VK540E, II, III | 89-03 | _ | _ | CB16AL-A2 | _ |
| | XL540 XLV | 85-90 | _ | _ | CB16AL-A2 | _ |
| **500** | Phazer | 16-17 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | Venture Lite,MP,RS | 16-17 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | PZ500DX Phazer 500 Deluxe | 01 | _ | _ | CB16AL-A2 | _ |
| **500** | VT500 Venture 500 | 97-01 | _ | _ | CB16AL-A2 | _ |
| | VT500 Venture 500 XL | 99-00 | _ | _ | CB16AL-A2 | _ |
| | VX500E Vmax | 94-01 | _ | _ | CB16AL-A2 | _ |
| **499** | Phazer | 09 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | Venture Lite | 09 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **480** | PZ480E Phazer Deluxe | 84-89 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| | PZ480E Phazer II LE, SS | 90-98 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| | VT480 Venture GT | 92-93 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| | VT480 Venture XL | 91-97 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| | VT480TR Venture TR Electric | 98 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| **340** | CS340 Ovation Deluxe/ LE | 89-98 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| | EC340 Excel III | 81-88 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| | ET340E Enticer | 79 | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | ET340E Enticer | 80 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| **300** | CF300 Inviter | 86-90 | _ | _ | CB16AL-A2 | _ |
| **125** | SV125E Sno-Sport | 90-91 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | 12N14-3A |
| **80** | SV80E Sno-Scoot | 88-90 | _ | _ | CB7L-B | 12N7-3B |
| | Electric Start Kit 8DS Triple | All | PIX50LBS-FS | PIX50L-BS | C50-N18L-A-LM | C50-N18L-A3 |
| | Electric Start Kit 8CR Twin Vmax | All | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | Electric Start Kit 8DJ PZ500 | All | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| | Electric Start Kit 8BH PZ480 ST, ET410TR | All | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |

† Must use factory activated battery.
• Please see battery cross reference chart on page 11 for optional upgrades.

# PERSONAL WATEWRCRAFT BATTERY APPLICATIONS

## AQUA-JET CO.

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **432** | Aqua-Jet Sx1 | 89-90 | PTX19BS-FS | PTX19-BS | CB16-B | _ |
| **430** | Aqua-Jet Sx1 | 91 | PTX19BS-FS | PTX19-BS | CB16-B | _ |

## ARCTIC CAT

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **770** | Tiger Shark | 97-99 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| **640** | Tiger Shark | 97-99 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |

## BOMBARDIER / SEA-DOO (BRP)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1500** | GTI, GTR, GTS, GTX, RXT, RXP, Wake | 16-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | GTI, GTX, GTR, RXP, RXT, Wake | -15 | PIX30CLBS-FS | PIX30CL-BS | CB30CL-B | _ |
| | GTX 4-Tec, RXP | 03-07 | PIX30CLBS-FS | PIX30CL-BS | CB30CL-B | _ |
| | All other Models | 94-07 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | All Models | 88-93 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| **900** | Spark | 14-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **780** | 3D | -07 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |

## HONDA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1470** | Aqua Trax F-15, X | 03-13 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **1235** | Aqua Trax F-12, X | 02-09 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | Aqua Trax R-12, X | 02-09 | PTX20LBS-FS• | PTX20L-BS | _ | _ |

## KAWASAKI

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1500** | JT1500-A, C STX-15F | 04-13 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | JT1500B, C, Ultra LX, 250X, 260LX, 300LX | 07-17 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **1200** | JH1200-A, B Ultra 150 | 99-05 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | JT1200-A, B, C, STX-R, STX-12F | 02-07 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **1100** | JH1100-B Ultra 130 | 01-04 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | JH1100 ZXi | 96-03 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | JT1100 STX | 97-03 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **900** | JH900 ZXi | 95-97 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | JT900 STS, STX | 97-05 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **800** | JS800 SX-R | 03-13 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **750** | JH750 SS, ST, Xi, XiR | 92-99 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | JH750 ST, Zxi | 95-97 | PTX20LBS-FS• | PTX20L-BS | _ | _ |

• Please see battery cross reference chart on page 11 for optional upgrades.

## KAWASAKI (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **750** | JS750 SX, ZX | 92-95 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | JS750 SXi, SXi Pro | 95-02 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| | JT750 XiR, ST, STS | 94-95 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | JT750 STS, STX | 96-98 | PTX20LBS-FS• | PTX20L-BS | _ | _ |
| **650** | JF650 X2 | 86-95 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | JF650 TS | 89-96 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | JF650 SC | 91-95 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | JS650 SX | 87-95 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| **550** | JS550, SX | 86-95 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | JS550 | 82-85 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| **440** | JS440 | 87-92 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | JS440 | 77-86 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| **400** | JS400 | 76 | PTX19LBS-FS | PTX19L-BS | CB16L-B | _ |
| **300** | JS300 TS, SX | 86-91 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | |

## POLARIS

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| | All Models | All | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |

## S.O.S. MARINE MFG

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| | All Models | All | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |

## ULTRANAUTICS

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **800** | Sea Flash | 89-92 | _ | _ | C60-N24AL-B | _ |
| | Wet Bike | 87-92 | _ | _ | C60-N24AL-B | _ |
| | Wet Bike | 85-86 | _ | _ | _ | CHD4-12 |
| | Jet Star 1250 (Boat) | 88-90 | _ | _ | C60-N24AL-B | _ |
| | Jet Star 1260 (Boat) | 91 | _ | _ | C60-N24AL-B | _ |

## WET JET INTERNATIONAL

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| | All Models | All | PTX19BS-FS | PTX19-BS | CB16-B-LM | CB16-B |

## YAMAHA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **1800** | FX,FZR,FZS,VXS, VXR | 09-17 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| **1100** | VX,V1 | 09-17 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| **1049** | EX | 17 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| **700** | Superjet | 09-17 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |
| | All Waverunner Models | 87-09 | PTX19CLBS-FS | PTX19CL-BS | CB16CL-B | _ |

# SCOOTER BATTERY APPLICATIONS

## APRILLA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **850** | SRV850 | 12-13 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **500** | Scarabeo | 09-13 | PTX12BS-FS | PTX12-BS | _ | _ |
| **250** | Sport City | 09-13 | PTX12BS-FS | PTX12-BS | _ | _ |
| **200** | Scarabeo | 09-13 | _ | _ | CB12AL-A | _ |
| **150** | Mojito | 09-10 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| **125** | Sport City | 08-13 | _ | _ | CB9-B | _ |
| **100** | Scarabeo ST | 09-13 | _ | _ | CB9-B | _ |
| **50** | Sport City | 08-13 | _ | _ | CB9-B | _ |
| | SR50 | 09-15 | _ | _ | CB9-B | _ |

## BMW

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **650** | C650 GT, Sport | 11-16 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **600** | C600, Sport | 13-16 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | C600 | 11-12 | PTZ14S | _ | _ | _ |

## DDR

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| | All Models | | PTX4LBS-FS | PTX4L-BS | _ | _ |

## E-TON

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **150** | Beamer R4-150 | -11 | PTX9BS-FS | PTX9-BS | _ | _ |
| | Matrix R4-150 | -11 | PTX9BS-FS | PTX9-BS | _ | _ |
| | Sport 150 | -11 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| **50** | Beamer 50, III | 00-11 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | Matrix 50 | -11 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | Sport 50 | -11 | PTX7ABS-FS | PTX7A-BS | _ | _ |

## HONDA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **600** | FSC600 Silver Wing | 02-15 | PTZ12S | _ | _ | _ |
| **300** | NSS300 Forza | 14-16 | PTZ12S | _ | _ | _ |
| **250** | SM250 | 09-13 | PTZ12S | _ | _ | _ |
| | CH250 Elite | 85-90 | PTX12BS-FS | PTX12-BS | _ | _ |
| | CN250 Helix | 93-09 | PTX12BS-FS | PTX12-BS | _ | _ |
| | CN250 Helix | 86-87 | PTX12BS-FS | PTX12-BS | _ | _ |
| | NSS250 Reflex | 01-09 | PTZ12S | _ | _ | _ |
| | PS250 Big Ruckus | 05-08 | PTZ12S | _ | _ | _ |
| | PCX | 11-13 | PTZ7S | _ | _ | _ |
| **150** | NHX110 Elite | 10-11 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | PCX150 | 13 | PTZ7S | _ | _ | _ |

• Please see battery cross reference chart on page 11 for optional upgrades.

## HONDA (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **150** | PCX150 | 15-17 | PTZ8V | _ | _ | _ |
| | CH150 Elite | 87 | PTX9BS-FS | PTX9-BS | _ | _ |
| | CH150 Elite Deluxe | 85-86 | _ | _ | CB9-B | _ |
| | FES150 | | _ | PTR9-BS | _ | _ |
| | SH150 | 10-12 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | SH150 | 13 | PTZ7S | _ | _ | _ |
| **125** | CH125 Elite | 84 | _ | _ | CB9-B | _ |
| | FES125 | | _ | PTR9-BS | _ | _ |
| | NH125 Aero | 84 | _ | _ | CB5L-B | _ |
| | Pantheon 125 | | _ | PTR9-BS | _ | _ |
| | PCX125 | 11 | PTZ7S | _ | _ | _ |
| | SH125 | 10-12 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| | SH125 | 13 | PTZ7S | _ | _ | _ |
| **110** | NHX110 Elite | 10-13 | PTX7LBS-FS | PTX7L-BS | _ | _ |
| **80** | CH80 Elite | 93-09 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | NH80 Aero | 85 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | NH80MD Aero | 83-84 | _ | _ | CB5L-B | _ |
| **50** | CHF50 Metropolitan, II, SP | 02-13 | PTZ7S | _ | _ | _ |
| | NB50 Aero | 85-87 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | NB50M Aero | 83-84 | _ | _ | CB4L-B | _ |
| | NCH50 Metropolitan | 13-17 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | NN50MD Gyro | 84 | _ | _ | CB4L-B | _ |
| | NPS50, S, Ruckus | 03-17 | PTZ7S | _ | _ | _ |
| | NQ50 Spree,50D,SS | 86-87 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | NQ50 Spree | 84-85 | _ | _ | CB4L-B | _ |
| | P50 Little Honda | 67-68 | _ | _ | _ | 6N4-2A-4 |
| | PA50I Moped, PA50II | 78-83 | _ | _ | _ | 6N4B-2A-5 |
| | SA50 Elite LX, S, SR | 88-01 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | SB50 (All) | 88-90 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | SE50 Elite (All) | 87 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | TG50 Gyro S (All) | 85-86 | PTX4LBS-FS | PTX4L-BS | _ | _ |

## HYOSUNG MOTORS

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **250** | NS3-250 | 09-16 | PTX9BS-FS | PTX9-BS | _ | _ |
| **100** | EZ100 | All | PTX5LBS-FS | PTX5L-BS | _ | _ |
| **50** | SB50 Super Cab, SD50 Sense, SF50 Prima | All | PTX4LBS-FS | PTX4L-BS | _ | _ |

## KASEA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **50** | Sense, Prima | All | PTX5LBS-FS | PTX5L-BS | _ | _ |

## KYMCO

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **500** | Xciting 500i | 09-16 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **400** | Xciting 400i | 09 | PTX12BS-FS | PTX12-BS | _ | _ |
| **300** | Downtown 300 | -13 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| | People GT | -16 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| **250** | People 250 | 09-11 | PTX12BS-FS | PTX12-BS | _ | _ |
| | Xciting 250i | 10-11 | PTX12BS-FS | PTX12-BS | _ | _ |
| **200** | People S 200 | -11 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| | People GT | -13 | PTX12ABS-FS | PTX12A-BS | _ | _ |
| **150** | People S 150 | 09-13 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| | Super 8 150 | 09-16 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| **125** | Agility 125 | -16 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | People S 125 | 09-10 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| **50** | Super 8 | 09-16 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| | Super 9 | 09-10 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | People | 09-13 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | People S 50 | 09-10 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| | Agility 50 | 09-16 | PTX7ABS-FS | PTX7A-BS | _ | _ |

## MANCO

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **50** | 5049E | 02-06 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | 5051L | 06 | PTX5LBS-FS | PTX5L-BS | _ | _ |

## PIAGGIO

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **500** | MP3 500/Sport ABS | 08-16 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | BV500 | 08-13 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | Fuoco 500ie | 10-11 | _ | PTX16-BS• | _ | _ |
| | Nexus 500ie | 10 | PTX14AHLBS-FS | PTX14AHL-BS | CB14L-A2 | _ |
| **460** | X9 | 09 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **400** | MP3 400 | 08-13 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **350** | BV350 ABS | 13-16 | PTX12BS-FS | PTX12-BS | _ | _ |
| **300** | GTS300 | 10-11 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | Nexus 300ie | 10-11 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **250** | GTS250 | 10-11 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | GTV250 | 10-11 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | MP3 250 | 08-13 | PTX14BS-FS• | PTX14-BS | _ | _ |
| | BV250 | 08-11 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **200** | Runner 200 | 10-11 | PTX12BS-FS | PTX12-BS | _ | _ |
| **150** | FLY150 | 09-16 | _ | _ | CB9-B | _ |
| | LX150 | 10-11 | _ | _ | CB9-B | _ |
| **125** | Runner 125 | 10-11 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **50** | FLY50 | 09-16 | _ | _ | CB9-B | _ |
| | LX50 | 10-11 | _ | _ | CB9-B | _ |
| | SP50 | 10 | _ | _ | CB4L-B | _ |
| | Typhoon | 09-16 | _ | _ | CB9-B | _ |

## PIAGGIO-GILERA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **500** | Fuoco 500ie | 10-13 | _ | PTX16-BS• | _ | _ |
| **50** | SP50 | 10-13 | _ | _ | CB4L-B | _ |

## PIAGGIO-VESPA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **946** | Vespa 946 | 13-16 | PTX12BS-FS | PTX12-BS | _ | _ |
| **300** | GTS300, GTV300 | 10-16 | PTX14BS-FS• | PTX14-BS | _ | _ |
| **150** | LX150 4T | -16 | PTX12BS-FS | PTX12-BS | _ | _ |
| **50** | LX50 | 10-16 | _ | _ | CB9-B | _ |

## SUZUKI

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **650** | AN650 Burgman | 03-17 | PTX14BS-FS†• | _ | _ | _ |
| **400** | AN400 Burgman | 03-16 | PTX9BS-FS | PTX9-BS | _ | _ |
| **200** | UH200A Burgman | 14-17 | PTX9BS-FS | PTX9-BS | _ | _ |
| **50** | F50, F50R | 71 | _ | _ | _ | 6N4-2A |
| | FA50 Shuttle | 80-91 | _ | _ | _ | 6N2-2A-4 |
| | FS50 | 80-81 | _ | _ | _ | 6N4-2A |
| | FZ50 | 79-83 | _ | _ | _ | 6N4-2A |

## SYM

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **250** | RV250 | 10-11 | PTX12BS-FS | PTX12-BS | _ | _ |
| **200** | HD200 | 10-13 | PTX9BS-FS | PTX9-BS | _ | _ |
| **125** | HD125 | 10-11 | PTX9BS-FS | PTX9-BS | _ | _ |
| | Fiddlell125 | 10-11 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| **50** | DD | 09 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | Fiddlell50 | 10-11 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| | JetEuro 50 | 10-11 | PTZ7S | _ | _ | _ |
| | MIO50 | 10-13 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| | MIO50 | 09 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | RS50 | 10 | PTX4LBS-FS | PTX4L-BS | _ | _ |
| | SYMply50 | 10-11 | PTX7ABS-FS | PTX7A-BS | _ | _ |

## YAMAHA

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **530** | T-Max, XP500F | 13-16 | PTZ12S | _ | _ | _ |
| **500** | XP500T-Max | 09-13 | PTZ10S | _ | _ | _ |
| **400** | YP400 Majesty | 04-14 | PT9B-4 | _ | _ | _ |
| | Maxam | -13 | PTZ10S | _ | _ | _ |
| **250** | Morphous | 06-07 | PTZ10S | _ | _ | _ |
| **200** | XC200 Riva | 87-91 | _ | _ | CB10L-B2 | _ |
| **180** | XC180 Riva | 83-85 | _ | _ | CB10L-B | _ |
| **155** | Smax | 15-17 | PTZ7S | _ | _ | _ |
| **125** | YJ125T Vino 125 | 04-09 | PTX7ABS-FS | PTX7A-BS | _ | _ |
| | XC125 Riva | 85-01 | _ | _ | CB7C-A | _ |
| | Zuma 125 | 09-17 | PT7B-4 | _ | _ | _ |
| **80** | CV80 Riva | 83-87 | _ | _ | _ | 6N11-2D |
| **50** | JOG, ZR | -13 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | CA50 Riva | 83-86 | _ | _ | _ | 6CB8L-B |

† Must use factory activated battery.
• Please see battery cross reference chart on page 11 for optional upgrades.

# SCOOTER BATTERY APPLICATIONS

## YAMAHA (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **50** | CE50 Riva Jog | 86-87 | _ | _ | CB4L-B | _ |
| | CG50 Riva | 88-91 | _ | _ | CB4L-B | _ |
| | CV50 Riva | 84 | _ | _ | _ | 6CB8L-B |
| | CW50 Zuma | 89-90 | _ | _ | CB4L-B | _ |
| | CW50 Zuma II | 97-01 | _ | _ | CB4L-B | _ |
| | CV50 Riva Jog | 92-01 | PTX4LBS-FS | PTX4L-BS | _ | _ |

## YAMAHA (Continued)

| cc | Model | Year | Factory Sealed, Maintenance Free | Sealed Maintenance Free | High Performance | Conventional |
|---|---|---|---|---|---|---|
| **50** | SH50 Riva Razz | 87-01 | _ | _ | CB4L-B | _ |
| | XC50 Vino Classic | 06-17 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | XF50W (C3) | 07-13 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | Vino/Vino Classic | 01-09 | _ | PTX4B-BS | _ | _ |
| | YW50A,F,FX Zuma | 02-17 | PTX5LBS-FS | PTX5L-BS | _ | _ |
| | VOX | -13 | PTX5LBS-FS | PTX5L-BS | _ | _ |

# EUROPEAN AND OTHER MOTORCYCLE BATTERY APPLICATIONS

## APRILIA

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1200** | Dorsoduro, Caponordo | 11-16 | PTX14-BS• |
| | ETV Caponordo | 02-03 | PTX14-BS• |
| | RST Futura | 01-04 | PTX12-BS• |
| | RSV 1000 Mile SP | 99 | PTX12-BS• |
| | RSV 1000 Factory | 04-11 | PTX12-BS• |
| | RSV 1000 Mile R | 01-05 | PTX12-BS• |
| | RSV 1000 Mile | 01-09 | PTX12-BS• |
| | RSV 1000 Mile | 00 | PTX12-BS• |
| | TuonoV4R | 11-13 | PTZ10S |
| | Tuono1000R Factory | 03-11 | PTX12-BS• |
| **1100** | Tuono V4 1100 RR | 14-16 | PTX12A-BS• |
| **1000** | RSV4 R, Factory | 09-15 | PTZ10S |
| | SL Falco | 01-03 | PTX14-BS• |
| **850** | MANA850, GT | 09-13 | PTX14-BS• |
| **750** | Shiver | 09-16 | PTX14-BS• |
| | Dorsoduro | 09-16 | PTX14-BS• |
| | Pegaso Strada,Factory,Trail | 09-10 | PTX12-BS• |
| **650** | Pegaso | 00 | CB12AL-A |
| **600** | Tuareg, Wind | 87-88 | CB14L-A2• |
| **550** | RXV550 | -10 | PTX7A-BS• |
| | SVX550 | -10 | PTX7A-BS• |
| **500** | Scarabeo | 04-05 | CB14L-A2• |
| | Atlantic | 03-05 | CB14L-A2• |
| **450** | RXV450 | -10 | PTX7A-BS• |
| | SVX450 | -10 | PTX7A-BS• |
| **350** | Tuareg, Wind | 87-88 | CB14L-A2• |
| **250** | RS250 | 00-04 | CB4L-B• |
| **200** | Atlantic | 04-05 | CB12AL-A |
| **150** | Scarabeo | 00-04 | CB12AL-A |
| | Mojito | 04-05 | PTX7L-BS• |
| | Leonardo | 00-03 | CB12AL-A |
| **125** | Tuareg, Wind | 88 | CB9-B |
| | RS125 | -11 | CB9-B |
| | RS4 125 | 11-13 | PTX7L-BS• |
| **50** | RS50 | 00-05 | CB4L-B• |
| | RS4 50 | 11-13 | PTX5L-BS• |
| | SR50 | 00-01 | CB4L-B• |
| | SR50 Ditech | 01-05 | PTX5L-BS• |
| | Scarabeo | 00-03 | CB4L-B• |
| | Mojito | 04-05 | CB4L-B• |
| | Rally | 04-05 | CB4L-B• |

## ATK

| cc | Model | Year | Battery Type |
|---|---|---|---|
| | All Electric Start Models | 91-95 | PTX9-BS• |
| | All Electric Start Models | 96-01 | PTX7L-BS• |

## BENELLI

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **900** | 900 (6 Cilindri) | | C60-N24AL-B• |
| **650** | 650 Tornado U.T. | | CB12A-A• |
| **250** | 250 (4 Cilindri) | | CB12A-A• |
| | 250-2C | | 6N11A-1B |
| **125** | 125 Cross | | 6N11A-1B |
| | 125 Custom Guzzi | | 12N5.5-4A |
| | 125 Guzzi | | 12N5.5-4A |
| | 125 Jarno (c/avv.) | | CB9-B |
| | 125 Scooter Benelli | | CB9L-B |
| | 125-2 CSE | | 6N11A-1B |
| | 125CS | | CB9-B |
| | 125T Sport | | 6N11A-1B |
| **50** | Devil 50 (c/avv.) | | CB4L-B• |
| | KBX 50 Race | | CB4L-B• |
| | Scooty LX/DLX | | CB4L-B• |

## BIG DOG

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1750** | Boxer | 01-02 | PTX20L-BS• |
| | Bulldog | 98-02 | PTX20L-BS• |
| | Husky, Husky XT | 99-02 | PTX20L-BS• |

† Must use factory activated battery.
• Please see battery cross reference chart on page 11 for optional upgrades.

## BIG DOG (Continued)

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1750** | Mastiff | 01-02 | PTX20L-BS• |
| | Pitbull | 98-02 | PTX20L-BS• |
| | Prosport, Prosport 18 | 99-02 | PTX20L-BS• |
| | Vintage- Classic, Light, Sport | 99-01 | PTX20L-BS• |
| | Woft | 00-02 | PTX20L-BS• |
| **1570** | Vintage- Classic, Light, Sport | 99 | PTX20L-BS• |
| **1442** | Aeroglide, Aerosport | 98-99 | PTX20L-BS• |
| | Bulldog | 98 | PTX20L-BS• |
| | Pitbull | 98-99 | PTX20L-BS• |
| | Prosport, Prosport 18 | 98 | PTX20L-BS• |
| | Vintage- Classic, Light, Sport | 98 | PTX20L-BS• |
| **1340** | Aeroglide & Aerosport | 97 | PTX20L-BS• |
| | Coyote | 95-96 | PTX20L-BS• |
| | Proglide | 95-00 | PTX20L-BS• |
| | Vintage- Classic, Light, Sport | 95-97 | PTX20L-BS• |

## BIMOTA

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1100** | SB6, SB7 | 95-97 | PTX7L-BS(x2)• |
| | SB6R | 97-99 | PTX12-BS• |
| **1000** | YB8/ YB10 | 92-95 | CB14L-A2• |
| | YB11 | 96-99 | PTX12-BS• |
| **996** | SB8R, SB8RS | 98-00 | PTX12-BS• |
| **900** | DB2 | 93-95 | CB14A-2• |
| | DB2 Final Edition | 97 | CB14A-2• |
| | DB3 Mantra | 97-99 | PTX7L-BS(x2)• |
| | Tesi | 91-95 | CB14A-2• |

## BMW

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1600** | K1600GT,GTL | 11-16 | 51913• |
| **1300** | K1300GT | 09-11 | 51913• |
| | K1300R,S | 09-16 | PTX14-BS• |
| **1200** | K1200R,S | 05-16 | PTX14-BS• |
| | R1200GS,S,R | 05-13 | PTX14-BS• |
| | K1200LT | 05 | 51913• |
| | R1200LT,GT | 05-09 | 51913• |
| | K1200LT,GT,RS,S | 99-05 | 51913• |
| | K1200RS | 05-09 | 51913• |
| | K1200RS | 97-05 | 51913• |
| | R1200C | 98-05 | 51913• |
| | R1200RT | 05-13 | 51913• |
| | HP2 Sport/Megamoto | -10 | PTX14-BS• |
| | R1200GS Adventure | 09-16 | PTZ14S |
| | R1200GS | 13 | PTZ14S |
| **1170** | R nine T | 14-16 | PTX14-BS• |
| **1150** | R1150GS, R | 00-05 | 51913• |
| **1100** | R1100LT/RS | 90-95 | 51913• |
| | R1100GS | 94-00 | 51913• |
| | R1100R | 94-00 | 51913• |
| | R1100RS, RT | 93-00 | 51913• |
| | R1100S | 99-00 | 51913• |
| **1000** | HP4 (with Alarm) | 13-14 | PTZ10S |
| | HP4 (w/o Alarm) | 13-14 | PTZ7S |
| | S1000RR | 09-13 | PTZ10S |
| | S1000RR | 14-16 | PTZ7S |
| | S1000R | 14-16 | PTZ10S |
| | S1000RR DWA | 09-11 | PTZ12S |
| | S1000RR DWA | 14-16 | PTZ10S |
| | S1000XR | 16 | PTX9-BS• |
| | All "K" Models | 83-93 | 53030• |
| | R100/7 | 76-84 | 53030• |
| | R100GS,PD,R,RS,RT | 87-95 | 53030• |
| | R100CS | 76-84 | 53030• |
| **900** | R90/6, R90S | 69-76 | 53030• |
| **850** | R850R | 95-97 | 51913• |
| **800** | F800ST, GS, R | 08-16 | PTX14-BS• |
| | F800ST (aux. battery) | 13-16 | PTZ14S |

## BMW (Continued)

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **800** | R80, R80RT | 84-95 | 53030• |
| | R80GS, R80ST | 80-96 | 51814 |
| | R80/7, R80RT | 78-84 | 53030• |
| **750** | K75, RT | 85-95 | 53030• |
| | K75C, S | 85-95 | 51814 |
| | R75/5 | 70-73 | 51814 |
| | R75/7 | 76-84 | 53030• |
| | R75/6 | 69-76 | 53030• |
| **700** | F700GS | 11-16 | PTX14-BS• |
| | F700GS (aux. battery) | 11-16 | PTZ14S |
| | R69 - R69S | 55-69 | B38-6A |
| **650** | F650GS | 09-11 | PTX14-BS• |
| | F650, G650GS | 93-16 | CB12AL-A |
| | R65 | 84-95 | 53030• |
| | R65LS | 78-84 | 51814 |
| **600** | R60, R60/2 Twin Cylinders | 55-69 | B38-6A |
| | R60/5 | 70-73 | 51814 |
| | R60/6, R60/7 | 69-84 | 53030• |
| **500** | R60/2 Twin Cylinders | 55-69 | B38-6A |
| | R50/5 | 70-73 | 51814 |
| | R60/S Twin Cylinders | 55-69 | B38-6A |
| **450** | G450 | 09-11 | PTZ7S |
| **260** | R26, R27 Single Cylinder | 55-69 | 6N11A-1B |
| | R26 | | B39-6 |

## BSA

| cc | Model | Year | Battery Type |
|---|---|---|---|
| | 250,350,400,441,500(12V) | | CB7-A |
| | 600, 650, 750 (12V) | | CB7-A Type |
| | 250, 350, 650 (6V) | | B39-6 |
| | 500 Gold Star | | B38-6A |
| | Rocket 750, Thunderbolt | | CB9L-B |
| | Spitfire HK35, Starfire B25 | | CB9L-B |

## CAGIVA

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **900** | Elefant E900 | | CB16B-A1 |
| **750** | Elefant | 94-97 | CB16-B• |
| | Elefant Bifaro | 89 | CB14L-A2• |
| **500** | T4 E Elefant | 88- | CB14L-A2• |
| **350** | Elefant 2 Cyl. | 86- | CB14L-A2• |
| | T4 E Elefant, W12 | 87- | CB14L-A2• |
| | T4R | 87- | CB3L-A |
| **125** | Crouser | 87-88 | CB9-B |
| | Freccia C9/ C10R/ C12R | 87-90 | CB9-B |
| | Lawson | 90-97 | CB9-B |
| | Mito | 90-97 | CB9-B |
| | N 90 | 97 | CB9-B |
| | Roadster | 94-97 | CB9-B |
| | Supercity | 91-97 | CB9-B |
| **50** | City, Lucky, Explorer | 94-97 | PTX4L-BS• |
| | K3, W4 | -98 | CB4L-B• |

## CAN-AM

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1330** | Spyder | 14-17 | PIX50LBS-FS† |
| **990** | Spyder | 08-16 | PIX50LBS-FS† |
| **250** | Spyder | 08-09 | PIX50LBS-FS† |
| **250** | All Models | 96-01 | 12N5-4B |
| **175** | All Models | 96-01 | 12N5-4B |
| **125** | All Models (Except Roadster & Supercity) | 96-01 | 12N5-4B |

## CCM

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **600** | All Electric Start Models | 96-01 | PTX9-BS• |

## DAZON

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **150** | Raider-Adventure | 02-03 | 12N5-4B |
| | Raider- Classic | 04 | PTX9-BS• |
| | Raider-Max | 04 | PTX9-BS• |
| **125** | Scorpion | 04 | PTX9-BS• |
| **50** | Diamondback | 03-04 | PTX4L-BS• |
| | Stinger | 03-04 | CB7-A |

## DERBI

| cc | Model | Year | Battery Type |
|---|---|---|---|
| | All Models | | CB4L-B• |

## DUCATI

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1299** | Superbike 1299 Panigale S | 15-16 | PT7B-4 |
| **1262** | Diavel, S | 16 | PT12B-4 |
| **1200** | 12, S, Multistrada | 10-16 | PT12B-4 |
| | Monster 1200 | 14-16 | PT12B-4 |
| **1199** | 1199, Panigale S | 11-13 | PT7B-4 |
| **1198** | Diavel | 11-16 | PT12B-4 |
| | MY08 | 09-11 | PT12B-4 |
| **1100** | Monster 1100 | 09-13 | PT12B-4 |
| | 1100S, Multistrada | 07-09 | PT12B-4 |
| | Hypermotard | 07-13 | PT12B-4 |
| | Street Fighter, S | 09-11 | PT12B-4 |
| **1098** | 1098 | 07-09 | PT12B-4 |
| | All Other Models | 01-10 | PT12B-4 |
| **1000** | Desmosedici RR | 08-09 | PT12B-4 |
| | Biposto, GT, ST3 | 07 | PT12B-4 |
| | GT1000, Touring, Sport 1100S | -09 | PT12B-4 |
| **998** | 998, 999 | 02-07 | PT12B-4 |
| **996** | Monoposto, Biposto, S | 01-07 | PT12B-4 |
| | 996, S, SPS | 99-00 | CB16AL-A2 |
| **959** | 959 Panigale | 16 | PT7B-4 |
| **944** | ST2 | 01-07 | PT12B-4 |
| | Suport Touring 2 (ST2) | 97-00 | CB16AL-A2 |
| **939** | Hypermotard | 16 | PT12B-4 |
| | Hyperstrada | 16 | PT12B-4 |
| **916** | Biposto, Senna, Strada | 94-98 | CB16AL-A2 |
| | I.E., SP, SP S | 94-98 | CB16AL-A2 |
| | Monster S4 | 01-02 | PT12B-4 |
| | ST4 | 01-07 | PT12B-4 |
| | ST4 | 99-00 | CB16AL-A2 |
| **907** | I.E. Paso | 90-94 | CB16-B• |
| **906** | Paso | 90-92 | CB16-B• |
| **900** | Monster | 01-07 | PT12B-4 |
| | Monster | 94-00 | CB16AL-A2 |
| | SS Kick-Starter | -81 | CB12A-A• |
| | SS Replica | -81 | CB12A-A• |
| | SS Supersport, Replica | 82- | CB14L-A2• |
| | SS | 01-07 | PT12B-4 |
| | SL | 92-96 | CB16AL-A2 |
| | Supersport FE | 97-98 | CB16AL-A2 |
| **888** | SP, SP II, SP IV, SP V | 90-95 | CB16AL-A2 |
| **860** | GT, GTS | | C60-N24AL-B• |
| | Kick-Start | | CB12A-A• |
| **851** | Superbike | 90-91 | CB16AL-A2 |
| | S Superbike | 91-92 | CB16AL-A2 |
| **848** | 848, Corse SE | 08-13 | PT12B-4 |
| | Street Fighter | 13 | PT12B-4 |
| **821** | Monster | 14-16 | PT12B-4 |
| **803** | Scrambler | 15-16 | PT12B-4 |
| **800** | 800SS | 07 | PT12B-4 |
| **796** | Hypermotard | 10-13 | PT12B-4 |
| | Monster 796 | -13 | PT12B-4 |
| **750** | F1, Montijuich, Paso | 87-90 | CB14L-A2• |
| | GT, Laguna Seca | | C60-N24AL-B• |
| | Indiana | | CB14L-A2• |
| | Monster | 01-07 | PT12B-4 |
| | Sport | 89-90 | CB16AL-A2 |
| | SS Supersport Kick-Str. | | CB12A-A• |
| | SS | 01-07 | PT12B-4 |
| | SS | 90-00 | CB16AL-A2 |
| **748** | Monoposto, Biposto, S | 01-07 | PT12B-4 |
| | Strada Biposto, SP, SPS | 97-00 | CB16AL-A2 |
| **696** | Monster | 08-13 | PT12B-4 |
| **695** | Multistrada | 07 | PT12B-4 |
| **650** | Alazurra, Indiana, Pantah | | CB14L-A2• |
| **600** | Monster | 01-07 | PT12B-4 |
| | Pantah | | CB14L-A2• |
| | TL | | CB14L-A2• |
| **500** | GTL, GTV | | C50-N18L-A3• |
| | Pantah | | CB14L-A2• |
| | Sport | | C50-N18L-A3• |
| **399** | Scrambler Sixty2 | 16 | PT12B-4 |

• Please see battery cross reference chart on page 11 for optional upgrades.

## GAS GAS

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **450** | FSR450 | -08 | PTZ7S |
| **370** | Pampera | 97 | PTX4L-BS• |
| **320** | Pampera | 98-'01 | PTX4L-BS• |
| **250** | Pampera | 96-'01 | PTX4L-BS• |

## GILERA

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **600** | Nordwest | 93 | CB14L-A2• |
| | RC 600C | 93 | CB14L-A2• |
| | Top Rally, XRT | | CB14L-A2• |
| **500** | Dakota Kick-Start | | 12N5.5-3B |
| | Dakota E-Starter | | CB10L-A2 |
| **350** | Dakota Kick-Start | | 12N5.5-3B |
| | Dakota E-Starter | | CB10L-A2 |
| | ER Kick-Start | | 12N5.5-3B |
| | ER E-Starter | | CB10L-A2 |
| | XRT | | CB14L-A2• |
| **250** | Arizona Rally | | CB10L-B |
| | RV NGR Kick-Start | | 12N5.5-3B |
| | RV NGR E-Starter | | CB10L-B |
| **200** | Arizona | | 12N5.5-3B |
| | Arizona | | CB9-B |
| | Fast Bike | | 12N5.5-3B |
| | Fast Bike | | CB9-B |
| | RTX, RV, RX Kick-Start | | 12N5.5-3B |
| | RTX, RV, RX E-Starter | | CB9-B |
| | T4 | | 12N5.5-3B |
| | Motocarro | | B38-6A |
| **125** | Apache Kick-Start | | 12N5.5-3B |
| | Apache E-Starter | | CB9-B |
| | Arizona Kick-Start | | 12N5.5-3B |
| | Arizona E-Starter | | CB9-B |
| | Crona Kick-Start | | 12N5.5-3B |
| | Crona E-Starter | | CB9-B |
| | CX Kick-Start | | 12N5.5-3B |
| | CX E-Starter | | CB9-B |
| | Fast Bike Kick-Start | | 12N5.5-3B |
| | Fast Bike E-Starter | | CB9-B |
| | Freestyle Kick-Start | | 12N5.5-3B |
| | Freestyle E-Starter | | CB9-B |
| | GFR Kick-Start | | 12N5.5-3B |
| | GFR E-Starter | | CB9-B |
| | KK, KZ Kick-Start | | 12N5.5-3B |
| | KK, KZ E-Starter | | CB9-B |
| | MX1, MXRKick-Start | | 12N5.5-3B |
| | MX1, MXR E-Starter | | CB9-B |
| | Nebraska Kick-Start | | 12N5.5-3B |
| | Nebraska E-Starter | | CB9-B |
| | R1, R1S Kick-Start | | 12N5.5-3B |
| | R1, R1S E-Starter | | CB9-B |
| | RC Rally | | CB10L-B |
| | RTX,RV,RX Kick-Start | | 12N5.5-3B |
| | RTX,RV,RX E-Starter | | CB9-B |
| | SPO1, SPO2 Kick-Start | | 12N5.5-3B |
| | SPO1, SPO2 E-Starter | | CB9-B |
| | Top Rally Kick-Start | | 12N5.5-3B |
| | Top Rally E-Starter | | CB9-B |
| | Typhoon | | CB7-A |
| | XR1, XR2 Kick-Start | | 12N5.5-3B |
| | XR1, XR2 E-Starter | | CB9-B |
| **50** | Bullit, Easy Moving, Runner | -97 | CB4L-B• |
| | Eaglet | 95-97 | CB4L-B• |
| | GSA E-Starter | | CB4L-B• |
| | Runner | -97 | CB4L-B• |
| | Sioux E-Starter | | CB4L-B• |
| | Stalker, Storm, Top Rally | | CB4L-B• |
| | Typhoon | -97 | CB4L-B• |

## HUSABERG

| cc | Model | Year | Battery Type |
|---|---|---|---|
| | All Electric Start Models | 13 | PTX5L-BS• |
| | All FE, FX, FS | 09-10 | PTZ7S |
| | All Electric Start Models | 01-02 | PTX5L-BS• |
| | All Electric Start Models | 97-00 | PTX9-BS• |

## HUSQVARNA

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **900** | NUDA900 | 13 | PTX14-BS• |
| **580** | TE610E, SM610S | 00-01 | PTX14-BS• |
| **450** | TE450/TC450 | 09 | PTZ7S |
| **400** | TE410E | 00-01 | PTX14-BS• |

## HYOSUNG MOTORS

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **700** | ST7 | 10-13 | PT14B-4 |
| **650** | GT650,R,S | 09-13 | PTX14-BS• |

## HYOSUNG MOTORS (Continued)

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **650** | GV650,SE | 09-13 | PT14B-4 |
| **250** | GT250,R | 09-13 | PTX14-BS• |
| | GV250 | 09-13 | PTX9-BS |
| **125** | XRX125 | All | PTX7A-BS• |

## KASEA

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **125** | RX125 | All | PTX7A-BS• |

## KTM

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1290** | Super Duke, R | 14-16 | PTX14-BS• |
| | Super Adventure | 14-16 | PTZ14S |
| **1190** | Adventure | 13 | PTZ14S |
| | RC8 | 09-16 | PTZ14S |
| **1090** | RC8 | 09-11 | PTZ14S |
| **990** | Adventure | 03-13 | PTZ14S |
| | Super Duke | 03-13 | PTZ14S |
| | Supermoto, SMR | 09-13 | PTZ14S |
| **950** | Superenduro | 09-11 | PTZ14S |
| **690** | Duke | 13-16 | PTX9-BS• |
| | Duke | 09-12 | PTZ10S |
| | Enduro R | 09-13 | PTZ10S |
| | Supermoto, SMR | 09-13 | PTZ10S |
| | XC-W | 09-10 | PTX5L-BS• |
| | EXC Racing | 05-10 | PTX5L-BS• |
| | SX-F, XC-F, XC-W | 09-11 | PTX5L-BS• |
| **640** | Adventurer, Duke, RXC LC4 | | |
| | Super Moto | 99-02 | PTX9-BS• |
| | DUKE II, LC4, Adventure | 03-08 | PTZ10S |
| **625** | SMC, SXC | 03-09 | PTZ10S |
| **620** | Adventure,Duke,LC4 | 96-98 | PTX9-BS• |
| **530** | EXC Racing | 03-05 | PTZ5S |
| | EXC Racing(Late05) | 05-11 | PTX5L-BS• |
| | XC-W | 09-11 | PTX5L-BS• |
| **525** | 525 EXC Racing | 05 | PTZ5S |
| **520** | E/XC, M/XC Racing 4-Stroke | 00-02 | PTX4L-BS• |
| | E/XC, M/XC Racing 4-Stroke (Opt) | 00-02 | PTX5L-BS• |
| **450** | EXC Racing | 03-05 | PTZ5S |
| | EXC Racing(Late05) | 05-13 | PTX5L-BS• |
| | SX-F | 11-16 | PTX4L-BS• |
| | SX-F,XC-F,XC-W | 09-11 | PTX5L-BS• |
| | 450SMR | 13 | PTX4L-BS• |
| **400** | EXC Racing | 05-09 | PTX5L-BS• |
| | EXC Racing | 03-05 | PTZ5S |
| | XC-W | 09-10 | PTX5L-BS• |
| | EXC Racing 4-Stroke | 00-02 | PTX4L-BS• |
| | EXC Racing 4-Stroke (Opt) | 00-02 | PTX5L-BS• |
| | LC4 E/XC | 96-98 | PTX9-BS• |
| | RXC LC4 | 96-01 | PTX9-BS• |
| **350** | SX-F | 11-16 | PTX4L-BS• |
| | EXC-F | 13 | PTX4L-BS• |
| | EXC-F | 14 | PTZ5S |
| | Freeride | 13 | PTX5L-BS• |
| **300** | XC,XC-W, EXC-F | 11-14 | PTX4L-BS• |
| **250** | SX-F,EXC,EXC-F | 13-16 | PTX4L-BS• |
| | XC,XC-W | 11 | PTX4L-BS• |
| | XCF | 11 | PTX5L-BS• |
| | EXC Racing | 05-10 | PTX5L-BS• |
| | EXC Racing | 03-05 | PTZ5S |
| | EXF | 05-10 | PTX5L-BS• |
| **200** | Duke | 13 | PTX9-BS• |
| **125** | Duke | 13 | PTX7L-BS• |

## KYMCO

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **250** | Venox250 | 09-10 | PTX9-BS• |

## MBK

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **250** | Skyliner | 01 | CB7L-B |
| | Skyliner | 99-00 | PTZ7S |
| **150** | Vertex | 99-00 | PTX7A-BS• |
| **125** | Doodo | 01 | CB7L-B |
| | Flame, Flame R | 01 | CB7C-A |
| | Flame, Flame R | 95-97 | PTX7A-BS• |
| | Skyliner, Thunder | 01 | 12N7-3B• |
| **100** | Booster | 01 | CB4L-B• |
| | Booster | 99-00 | PTX5L-BS• |
| | Nitro, Ovetto | 01 | CB4L-B• |
| | Nitro, Ovetto | 99-00 | PTX5L-BS• |
| **80** | Evolis | 95-98 | CB4L-B• |
| **50** | Booster | 93-97 | CB4L-B• |
| | Evolis | 98 | CB4L-B• |
| | Flipper, Nitro, Ovetto, Stunt | 01 | CB4L-B• |

# EUROPEAN AND OTHER MOTORCYCLE BATTERY APPLICATIONS

## MOTO GUZZI

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1400** | Audace | -16 | PTX20CH-BS |
| **1380** | California | 13 | PTX20L-BS• |
| | Eldorado | -16 | PTX20CH-BS |
| **1200** | Stelvio | 09-16 | PTX20CH-BS |
| | Norge | 09-16 | PTX20CH-BS |
| | Sport, ABS | 09-13 | PTX20CH-BS |
| | Breva 1200 | 05-11 | PTX20CH-BS |
| | 1200 Sport | 09-13 | PTX20CH-BS |
| | Griso V8 | 13-16 | PTX20CH-BS |
| **1100** | Breva, Griso | 05-13 | PTX20CH-BS |
| | 1100 California(CA) | 03-05 | PTX15L-BS• |
| | 1100 California, Special, Jackal, Stone, EV | 94-05 | 53030• |
| | Quota 1100 ES | 99-02 | PTX15LBS-FS† |
| | Sport 1100i | 97-99 | PTX15LBS-FS† |
| | V11 Bassa | 99-00 | 53030• |
| | V11 EV | 98-99 | 53030• |
| | VII Le Mans, Sport | 99-05 | PTX15LBS-FS† |
| **1064** | California Classic, Vintage | -12 | PTX20L-BS• |
| **1000** | California III | 89-93 | C60-N24AL-B• |
| | Convert | | C60-N24AL-B• |
| | Daytona | | C60-N24AL-B• |
| | Le Mans | | C60-N24AL-B• |
| | Mille | | C60-N24AL-B• |
| | 1000NT | | C60-N24AL-B• |
| | Quota | | C60-N24AL-B• |
| | V10 Centauro Sport, GT | 99- | PTX15LBS-FS† |
| **936** | Bellagio | -10 | PTX20L-BS• |
| **850** | Le Man | | C60-N24AL-B• |
| | T3, T4, T5 | | C60-N24AL-B• |
| **750** | Breva 750 | 04-10 | PTX14AHL-BS• |
| | Nevada 750 | | CB18L-A• |
| | Nevada 750 Classic | 10 | PTX14AHL-BS• |
| | NTX | | CB18L-A• |
| | Strada | | CB18L-A• |
| | V7 Classic | 09-11 | PTX14AHL-BS• |
| | V7 | 12-13 | PTX14-BS• |
| | V7, Racer, Scrambler | 12-16 | PTX14-BS• |
| | V75 | | CB18L-A• |
| **650** | NTX | | CB18L-A• |
| | V65 | | C60-N24AL-B• |
| | V65 Florida | | CB18L-A• |
| **500** | Falcone | | B38-6A |
| | Falcone u.t. | | CB18L-A• |
| | V50 | | C60-N24AL-B• |

## MuZ

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **660** | Baghira, Mastiff | 98 | CB9L-A2 |
| | Skorpion | 95-01 | CB9L-A2 |
| **125** | All Models | All | CB9L-A2 |

## MV AGUSTA

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1000** | F4 | 05-16 | PTZ10S |
| | Brutale 1078RR, 1090 | 09-16 | PTZ10S |
| **910** | Brutale | 06-09 | PTZ10S |
| **800** | Brutale | -16 | PTZ10S |
| **750** | F4, Brutale | 00-08 | PTX12A-BS• |
| **675** | F3, Brutale | -16 | PTZ10S |

## NORTON

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1200** | 9 1/2 | -10 | PTX20CH-BS |
| | Sport | -10 | PTX20CH-BS |
| | Scrambler | -10 | PTX20CH-BS |
| | Granpasso | -10 | PTX20CH-BS |
| | Corsaro, Veloce, Avio | -10 | PTX20CH-BS |
| **850** | 850 Commando, Commando (75) | | CB14L-A2• |
| **750** | 750 Ranger Commando | | CB9-B |
| **350** | 350 Navigator | | 6N11A-1B |

† Must use factory activated battery.
• Please see battery cross reference chart on page 11 for optional upgrades.

## OZBIKE

| cc | Model | Year | Battery Type |
|---|---|---|---|
| | All Models | All | PTX5L-BS• |

## PANDORA MOTOR SPORTS

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **70** | Trail Rider | 99-02 | PTX4L-BS• |
| **50** | Com-ute | 96-02 | 6N4-2A |
| | Cub | 96-99 | PTX4L-BS• |
| | Fun Rider | 96-02 | 6N2-2A |
| | Retro | 01-02 | CB7-A |
| **36** | Com-ute | 98-01 | 6N4-2A |

## PEUGEOT

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **150** | Elyseo | 98 | CB12AL-A |
| **125** | Elyseo | 98 | CB12AL-A |
| | SV, SV Geo | 93-97 | CB5L-B |
| **100** | Speedfighter, Trakker | 98 | PTX5L-BS• |
| | SV, SV Geo | 97 | CB5L-B |
| **80** | SV, SV Geo | 93-96 | CB5L-B |
| **50** | Buxy, RS | 96-97 | CB4L-B• |
| | Elyseo | 98 | CB4L-B• |

## PIAGGIO-VESPA

| cc | Model | Year | Battery Type |
|---|---|---|---|
| | APE CAR,MP, MPR,P602 | | C60-N24AL-B• |
| | Ape 50 FL | 93 | CB9-B |
| | Boxer, Bravo, Ciao | | B39-6 |
| | Cosa 2 | | CB7-A |
| | Cosa CLX 125 (c/cvv.) | | CB7-A |
| | Cosa CLX 150 (c/avv.) | | CB7-A |
| | Cosa CLX 200 (c/avv.) | | CB7-A |
| | Free | | CB4L-B• |
| | Hexagon 125/150 | | CB9-B |
| | NRG 50 | | CB4L-B• |
| | P125ETES, P125TS | | CB7-A |
| | P200E (c/avv.) | | CB9-B |
| | PK50, PK50-C.A., PK50N, PK50XL | | CB7-A |
| | PK80S-C.A. | | CB7-A |
| | PK125FL, PK125SS, PK125XL | | CB7-A |
| | PX125 | | CB9-B |
| | PX125+80E | | 12N5.5-3B |
| | PX125+80E-AREC | | 12N5.5-3B |
| | PX125+80E-ARC | | CB9-B |
| | PX125T5 | | CB9-B |
| | PX150E | | CB9-B |
| | PX150E-ARC | | CB9-B |
| | PX200-ARC | | CB9-B |
| | PX200E-ARC | | 12N5.5-3B |
| | PX200GS | | CB9-B |
| | Quartz, Sactto, Sfera 50, Sfera 80,Skipper 125/150 | | CB4L-B• |
| | Vespa 50 Elestart | | 6N11A-1B(x2) |
| | Vespa 125 Sprint | | B39-6 |
| | Vespa 150 GL | | B39-6 |
| | Vespa 150 FL/ FL2 (c/av.) | | CB7-A |
| | Zip - Zip (Fast Rider) | | CB4L-B• |

## PUCH

| cc | Model | Year | Battery Type |
|---|---|---|---|
| | Cobra 80 | | B39-6 |
| | Cobra GTL, Daytona NS50, Monza | | B39-6 |
| | Lido SL50, Lido Vario | | CB4L-B• |
| | Monza GP, Monza GX, Monza X | | B39-6 |

## ROYAL ENFIELD

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **500** | All Kick-Start Models | 95-99 | CB7-A |
| | All Kick-Start Models | 00-03 | CB5L-B |
| | All Electric Start Models | 00-03 | CB14L-A2• |
| **350** | All Kick-Start Models | 95-99 | CB7-A |
| | All Kick-Start Models | 00-03 | CB5L-B |
| | All Electric Start Models | 00-03 | CB14L-A2• |

## SYM

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **50** | Red Devil | 01 | PTX4L-BS• |

## TGB / VINKING

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **150** | All Models | 00 | CB4L-B• |
| **125** | All Models | 00 | CB4L-B• |
| **90** | All Models | 00 | CB4L-B• |
| **50** | All Models | 00 | CB4L-B• |

## TRIUMPH

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **2300** | Rocket III | 03-16 | PTX20L-BS• |
| **1600** | Thunderbird | 10-16 | PTX20L-BS• |
| **1215** | Tiger Explorer | 12-16 | PTX20L-BS• |
| | Trophy | 12-16 | PTX20L-BS• |
| **1200** | Trophy | 00-04 | PTX14-BS• |
| | All Other Models | 93-99 | CB14L-A2• |
| **1050** | Speed Triple | 05-10 | PTX12BS-FS† |
| | Speed Triple | 11-16 | PTX14-BS• |
| | Sprint GT | 11-16 | PTX14-BS• |
| | Sprint ST | 05-10 | PTX12BS-FS† |
| | Tiger | 07-11 | PT12B-4 |
| | Tiger | 12-16 | PTX14-BS• |
| **1000** | Daytona | 92-93 | CB14L-A2• |
| **955** | Daytona 955i, Speed Triple, Sprint ST | 99-04 | PTX14-BS• |
| | Sprint RS | 00-04 | PTX14-BS• |
| | Tiger | 02-06 | PTX14-BS• |
| | All Other Models | 96-97 | CB14L-A2• |
| **900** | Bonneville | 06-07 | PTX12-BS• |
| | Scrambler | 06-07 | PTX12-BS• |
| **900** | T90 | | 6N11A-1B |
| | Tiger | 99-01 | PTX14-BS• |
| | Thruxton | 03-11 | PTX12-BS• |
| | Thunderbird | 02-03 | CB14L-A2• |
| | All Other Models | 91-01 | CB14L-A2• |
| **865** | America | 01-13 | PTX12-BS• |
| | Bonneville T100, SE, FI | 11-16 | PTX12-BS• |
| | Bonneville T100, SE, FI | 08-10 | PT12B-4 |
| | Bonneville T100, SE | 05-07 | PTX12-BS• |
| | Scrambler | 11-16 | PTX12-BS• |
| | Scrambler | 08-10 | PT12B-4 |
| | Scrambler | 05-07 | PTX12-BS• |
| | Speedmaster | 03-13 | PTX12-BS• |
| | Thruxton | 09-13 | PT12B-4 |
| **800** | Tiger 800 | 11-16 | PTX16-BS• |
| | Bonneville | 01-05 | PTX12-BS• |
| | Speedmaster | 03-05 | PTX12-BS• |
| **750** | Bonneville, Tiger | | CB9-B |
| | T150 Trident | | CB7L-B |
| | All Other Models | 93-97 | CB14L-A2• |
| **675** | Daytona 675, R | 06-07 | PT7B-4 |
| | Daytona 675, R | 08-12 | PTX9-BS• |
| | Daytona 675, R | 13-16 | PTX9BS-FS† |
| | Street Triple, R | 09-13 | PTX9-BS• |
| **650** | T120 Bonneville | | CB7L-B |
| **600** | 600 (12V) | | B39-6(x2) |
| | 6T, T20B | | 6N11A-1B |
| | Daytona 600 | 03-05 | PTX9-BS• |
| | TT600 | 00-03 | PTX12-BS• |
| **500** | 500 (12V) | | B39-6(x2) |
| | 5TA, TR5A/R | | 6N11A-1B |
| **350** | 350 (6V) | | 6N11A-1B |
| | 350 (12V) | | B39-6(x2) |
| | 350 3TA, Twenty One | | B38-6A |
| **250** | Tigress (6V) | | 6N11A-1B |
| | Tigress (12V) | | 6N11A-1B(x2) |
| **200** | Tiger | | 6N11A-1B |
| **183** | Tigress | | 6N11A-1B |
| **173** | Tigress | | 6N11A-1B |
| **150** | Trident | | CB7L-B |
| **120** | Bonneville | | CB7L-B |

# RIDING MOWER BATTERY APPLICATIONS

## ALLIS-CHALMERS

| Model | Battery Type |
|---|---|
| 405, 508 | 12N9-4B-1• |
| 608LTD, 611LTD, 611 Special,611H, 613, 616 Special, 616H, 830 Sprint, T811, T816, 1036 Spirit | U1(9) |

## ARIENS / GARAVELY

| Model | Battery Type |
|---|---|
| 1330, 1332, 8028, 8530 | CB14A-A2• |
| 901000 & 912000 Series | 12N12A-4A-1• |
| 925000 & 927000 Series | 12N12A-4A-1• |
| 929001, 929002, GT17, 931001, 931006, GT20, 931010, 931018, HT16, YT10, YT11 | U1(9) |

## ATLAS TOOL & MFG. CO.

| Model | Battery Type |
|---|---|
| ER2600, ER650, ER2680, ER3280 | 12N9-3A-1• |

## BOLENS

| Model | Battery Type |
|---|---|
| Husky 728, Husky 770, Husky 829 | CB9-B |

## BUTTON COMPANY

| Model | Battery Type |
|---|---|
| 32-10BBS, 36-10BBS | U1(9) |
| 36H-10BBS | U1(9) |
| 52-10BBS, 52H-10BBS | U1(9) |
| Lawn Lark 36 | U1(9)R |

## CARTER BROTHERS

| Model | Battery Type |
|---|---|
| EZ-502, EZ-502C, EZ-702, EZ-702C | CB12A-A• |

## CASE INTERNATIONAL

| Model | Battery Type |
|---|---|
| 107, 108, 108XC, 110, 110XC, 116XC, 117, 118, 210, 220, 222, 226, 442, 448, 644, 646, 648, 80XC | U1(9) |
| M80 | CB12A-A• |

## DEERE & CO.

| Model | Battery Type |
|---|---|
| 100, 108, 111, 112L, 116, 116H | U1(9) |
| 200, R72, R92, S82, S92 | U1(9) |

## DIXIE CHOPPER

| Model | Battery Type |
|---|---|
| 5018, 5020, 5024, 6024 | U1(9) |

## E.T. RUGG CO.

| Model | Battery Type |
|---|---|
| 5049-E2, 5049-E4, 5069-E, 5088-E | U1(9) |

## ECONOMY TRACTOR

| Model | Battery Type |
|---|---|
| PK1212 | U1(9)R |

## FLOW-MOW MOWER CO.

| Model | Battery Type |
|---|---|
| JETX 2668 | U1(9) |

## FORD MOTOR CO.

| Model | Battery Type |
|---|---|
| LGT100, LGT120, LGT125, LGT145, LGT165, LT75, RMT66 | U1(9) |

## GARDEN WAY / TROY BUILT

| Model | Battery Type |
|---|---|
| Pony (before 1996) | CB12A-A• |
| Pony (After 1996) | CB9-B |
| Troy-Built Rototiller | U1(9) |

## GENERAL APPLIANCE MFG., CO.

| Model | Battery Type |
|---|---|
| All Electric Starters | U1(9) |

## GENERAL POWER

| Model | Battery Type |
|---|---|
| 3-725-E7, 3-725-E8, 3-725-E9 | 12N12A-4A-1• |
| WES725, WES725-FS | 12N12A-4A-1• |

## GILSON

| Model | Battery Type |
|---|---|
| GT14, GT14E, GT14HE | U1(9) |
| YT11E, YT11HE, YT12.5, YT12E | U1(9) |

## GRAVLEY CORPORATION

| Model | Battery Type |
|---|---|
| 1132, 1138, IHDE-126, IHDE-130, IHSE-126 | U1(9) |
| 408 | U1(9)R |

## HEILMAN ENTERPRISES

| Model | Battery Type |
|---|---|
| 11-76, 11-77, 11-78, 8-76, 8-77 | U1(9) |
| 220, 440, 445, 550, 555 | U1(9)R |

## HUFFMAN MFG. CO. (HUFFY)

| Model | Battery Type |
|---|---|
| H-270, H-360 | CB12A-A• |

## HULL INDUSTRIES

| Model | Battery Type |
|---|---|
| TC30ER | CB16-B• |

## JACOBSEN/HOMELITE/ HUSTLER

| Model | Battery Type |
|---|---|
| 42642, 43020, 43032, 43037 | CB9-B |
| 43043, Javelin MK11, RE-8E | CB9-B |
| 53107, 53146, 53148, 53200, 53215, 53275, 53300, 53330 | U1(9) |
| GT12G, GT12H | U1(9) |
| 730-OLE, T-8 | U1(9)R |

## JC PENNEY

| Model | Battery Type |
|---|---|
| 931-2703, 931-2737, 931-5730 | U1(9) |

## J. I. CASE

| Model | Battery Type |
|---|---|
| M-80 | 12N12A-4A-1• |

## KEES

| Model | Battery Type |
|---|---|
| 48/60 | U1(9) |

## KUBOTA

| Model | Battery Type |
|---|---|
| B4200, B5100, B5200, B6100, B620, B7100 | U1(9) |
| G3200, G4200, G5200, G6200, PX2100 | U1(9) |

## LAWN BOY

| Model | Battery Type |
|---|---|
| 333, 335, 5802, 5803, 7258E | 12N9-3A-1• |
| 7259E, 7260E, 8227E, 8228E | 12N9-3A-1• |
| 8229E, 8229EA, 8233E | 12N9-3A-1• |
| 9303E, 9325ES, 9328E, 9328ES, 9365ES, 9368E, 9368ES | U1(9) |
| 9369ES (After 1975) | U1(9) |
| 9329ES (After 1975) | U1(9) |
| 9369ES & 9329ES (Thru 1975) | U1(9)R |

## MINNEAPOLIS-MOLINE

| Model | Battery Type |
|---|---|
| All Models | U1(9) |

## MONTGOMERY WARD

| Model | Battery Type |
|---|---|
| 99 & Under Series | CB9-B |
| 1300-1400 Series | U1(9) |

## MORIDGE MFG., CO.

| Model | Battery Type |
|---|---|
| 1210, 1622, 1822 | U1(9) |

## MTD PRODUCTS

| Model | Battery Type |
|---|---|
| 300, 400, 500, 600 Series | CB14L-A2• |
| 385, 410, 412, 465, 485, 489, 497 | CB14L-A2• |
| 387, 397, 455, 485, 495, 497, 525, 667, 760 | U1(9) |
| 500, 525, 526, 600, 698, 775, 795 | CB14L-A2• |
| 796, (395, 760 From 1981) | CB14L-A2• |
| 700-800 Series | C50-N18L-A3• |

## MURRAY OHIO MFG., CO.

| Model | Battery Type |
|---|---|
| 2523, 3033, 3035, 6-30502 | CB14L-A2• |
| 6-30502X4, 6-30702, 6-30702X4 | CB14L-A2• |
| 7-30502 | CB14L-A2• |

## NOMA

| Model | Battery Type |
|---|---|
| 321050... 321054, 328000... 328018 | CB14L-A2• |
| 360100, 36101 | CB14L-A2• |

## POWER KING

| Model | Battery Type |
|---|---|
| 1212 | U1(9) |

## ROOF MFG., CO.

| Model | Battery Type |
|---|---|
| 492683, 493081, 493071 | U1(9) |
| 30-N7-3, 830-E, 30-NB-E | U1(9)R |

## ROPER

| Model | Battery Type |
|---|---|
| 96444, 96927, 96941, K522, K852 | CB9-B |
| L722, L72256R | CB9-B |
| K9224AR, K922PRA, K9324AR | CB14L-A2• |
| K932PRA, L8000AT | CB14L-A2• |

## SEARS

| Model | Battery Type |
|---|---|
| 502.23365, 50223366, 502.2561128 | U1(9)R |
| 502.256050, 502.256051 | 12N14-3A• |
| 502.256060... 502.256063 | 12N14-3A• |
| 502.256070, 502.256071 | 12N14-3A• |
| 502.256080, 502.256081 | 12N14-3A• |
| 502.256120... 502.256126 | 12N14-3A• |
| 502.256130... 502.256132 | 12N14-3A• |
| 502.2561321,502.2561576, 502.2561576 | U1(9)R |
| 502.256134, 502.256136A | 12N14-3A• |
| 502.256138, 917.255260 | 12N14-3A• |
| 502.25617, 502.25619 | U1(9)R |
| 502.255270... 917.255273 | 12N14-3A• |
| 502.255330, 917.255340 | 12N14-3A• |
| 502.256135, 502.256136 | CB16L-B• |
| 502.256137, 502.256140 | CB16L-B• |
| 502.256141, 502.256142 | CB16L-B• |
| 131.96927, 131.969310 | 12N9-3A-1• |
| 131.96941, 131.96970 | 12N9-3A-1• |
| 520.25800 (Thru 1966) | U1(9) |
| 520.25710 (Thru 1966) | U1(9) |
| 520.25538 (Thru 1966) | U1(9) |
| 536.250820...536.250823 | 12N9-3A-1• |
| 536.25087 | 12N9-3A-1• |
| 536.250920...536.250922 | 12N9-3A-1• |
| 536.255110, 536.255112 | 12N9-3A-1• |
| 536.255113, 536.255212 | 12N9-3A-1• |
| 536.255220, 536.255221 | 12N9-3A-1• |

## SEARS (Continued)

| Model | Battery Type |
|---|---|
| 536.255230...536.255232 | 12N9-3A-1• |
| 536.255240,536.255250 | 12N9-3A-1• |
| 536.657020,536.657040 | 12N9-3A-1• |
| 536.657060, 536.657080 | 12N9-3A-1• |
| 536.658080, 536.963100 | 12N9-3A-1• |
| 917.250740, 917.255120 | 12N9-3A-1• |
| 917.25424, 917.25431... 917.25435 | U1(9)R |
| 917.25474 | U1(9)R |
| 917.255121, 917.259180 | 12N9-3A-1• |
| 917.25541, 917.25558, 917.25582 | U1(9)R |
| 917.25932 | 12N9-3A-1• |

## SIMPLICITY

| Model | Battery Type |
|---|---|
| 3008, 3008-3, 99075 | CB9-B |

## SNAPPER

| Model | Battery Type |
|---|---|
| All Walk Behind Mowers (Electric Start) | PTX4L-BS• |

## SPEEDEX TRACTOR CO.

| Model | Battery Type |
|---|---|
| 1020, 103, 1240, 1240M, 1320, 1330, 1632, 1640, 1640M, 1722, 1822, 820, 840, S-17, S-18 | U1(9) |

## SWISHER

| Model | Battery Type |
|---|---|
| 18Hp/32” | CB12A-A• |

## TRU-TEST

| Model | Battery Type |
|---|---|
| 2-832E5, 6-1036E5, 3-83DE-5, 7-1036DE-5 | U1(9) |
| WDE-10365, WDE-8325, WE-10365, WE-8325 | U1(9) |

## TURFMASTER

| Model | Battery Type |
|---|---|
| 12/36, 12/39 | U1(9) |

## VOELLER, INC.

| Model | Battery Type |
|---|---|
| SS-7 | U1(9) |

## WESTERN INT’L. (DYNAMARK)

| Model | Battery Type |
|---|---|
| 320800, 328000, 361000 | CB14L-A2• |
| 361100, 361102... 361107 | CB14L-A2• |
| 361113, 361114, 421101, 456301 | CB14L-A2• |

## WHEEL HORSE / TORO

| Model | Battery Type |
|---|---|
| 108-3, 108-5, 111-5 (1985) | CB14L-A2• |
| A85, A115 (1984) | CB14L-A2• |
| 11-32, 11-38, 11-44 | U1(9) |
| 57300, 57351, 57356, 57360 | U1(9) |
| 7-25, TE10, TE12 | U1(9) |
| Grandmaster 117 | U1(9) |

## WHITE OUTDOOR PRODUCTS

| Model | Battery Type |
|---|---|
| FST-16 | C50-N18L-A3• |
| GT-185, -205, -1000 | C50-N18L-A3• |
| LT-125, -155, -160, -165 | C50-N18L-A3• |
| GT1000, R80, T100, T80, T800, T85 | U1(9) |

## WOODS

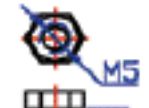
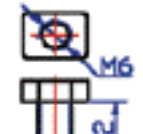
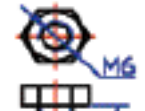
| Model | Battery Type |
|---|---|
| 1250, 1850 | U1(9) |

## YARD MAN INC.

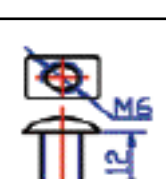
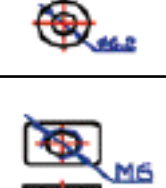
| Model | Battery Type |
|---|---|
| 13420, 3730 | 12N9-3A-1• |
| Beetle | 12N14-3A• |

• Please see battery cross reference chart on page 11 for optional upgrades.

## NUT & BOLT KITS (FOR SUPER SPORT & ULTRA SPORT SERIES BATTERIES)

| PART # | DESIGN | BATTERY TYPE |
|---|---|---|
| MCB-01 |  | CB4L-A, CB4L-B, CB9L-A2 |
| MCB-02 |  | 6N6-3B, 6N6-3B-1, 6CB8L-B, 12N5-3B, 12N5-4B, 12N5.5-3B, 12N5.5-4A, 12N5.5A-3B, CB3L-A ,CB3L-B, CB5L-B |
| MCB-03 |  | CB12AL-A2 |
| MCB-04 |  | 12N11-3A-1, 12N14-3A, CB10A-A2, CB10L-A2, CB10L-B2, CB12B-B2, CB12C-A, CB14A-2, CB14A-A2, CB14B-2, CB14L-A2, CB14L-B2, SCB14L-A2, SCB14L-B2, CB16AL-A2, HCB16A-AB, CB18-A, CB18L-A, C50-N18A-A, SC50-N18L-AT, C50-N18L-A-LM |
| MCB-05 |  | CB16CL-B |
| MCB-06 |  | 6N11-2D, 6N11A-1B, 6N12A-2D, B38-6A, B54-6, 12N7-4A, 12N7-3B, 12N7D-3B, 12N7-4B, 12N9-3A-1, 12N9-3B, 12N9-4B-1, 12N10-3A, 12N10-3A-1, 12N12A-4A-1, CB7-A, CB7C-A, CB7L-B, CB9-B, CB9A-A, CB9L-B, CB12A-A, CB12AL-A, CB12A-B, CB14L-A1 ,CB16-B, CB16L-B, CB16-B-LM, CB16HL-A-LM, PT9A-BS, PTX12AABS-FS |
| MCB-09 |  | CHD4-12, C60-N24-A, C60-N24L-A, C60-N24AL-B, 51814, 51913, 53030 |

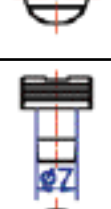
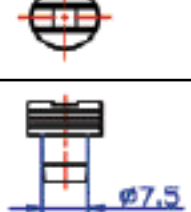
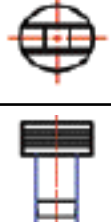
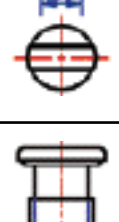
## NUT & BOLT KITS (FOR SUPER SPORT & ULTRA SPORT SERIES BATTERIES)

| PART # | DESIGN | BATTERY TYPE |
|---|---|---|
| MCB-10 |  | CB16B-A, CB16B-A1, C50-N18L-A3 |
| MCB-11 |  | PTX20-BS, PTX20CH-BS |
| MCB-12 |  | PTZ5S, PT6B-3, PT7B-4, PTZ7S |
| MCB-13 |  | 12N24-3, U1(9), U1(9)R, 51913-FS, P11U1LD-FS |
| MCB-14 |  | PTX7ABS-FS, PT9B-4, PTX9BS-FS, PT12B-4, PTX12BS-FS, PT14B-4, PTX14BS-FS, PTX14AHBS-FS, PTX14AHLBS-FS, PTX15LBS-FS, PTZ16H, PTX19BS-FS, PTX19LBS-FS, PTX19CLBS-FS, PIX30CLBS-FS, PTX7A-BS, PTX9-BS, PTX12-BS, PTX14-BS, PTX14AH-BS, PTX14AHL-BS, PTX14L-BS, PTX16-BS, PTX19-BS, PTX19L-BS, PTX19CL-BS, PIX30CL-BS |
| MCB-15 |  | B39-6 |
| MCB-17 |  | PTX14LBS-FS, PTX15L-BS, PTX20BS-FS, PTX20HBS-FS, PTX20HLBS-FS, PTX20LBS-FS, PIX30HLBS-FS, PIX30LBS-FS, PIX32HLBS-FS, PIX50LBS-FS, PIX30L-BS, PIX50-BS, PIX50L-BS |

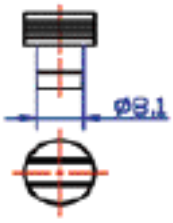
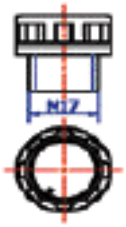
## NUT & BOLT KITS (FOR SUPER SPORT & ULTRA SPORT SERIES BATTERIES)

| PART # | DESIGN | BATTERY TYPE |
|---|---|---|
| MCB-19 |  | PTX16-BS-1 |
| MCB-20 |  | PTX20L-BS |
| MCB-21 |  | PTX4LBS-FS, PTX5LBS-FS, PT6.5L-BS, PTX7LBS-FS, PTX4L-BS, PTX5L-BS, PTX7L-BS, PTZ8V |
| MCB-22 |  | PTZ10S, PTZ12S, PTX12ABS-FS, PTZ14S, PTR9-BS, PTX12A-BS |
| MCB-23 |  | CB30L-B, CB30CL-B |
| MCB-24 |  | CB10L-B, CB14A-A |

## FILLING CAPS FOR CONVENTIONAL TYPE BATTERIES (FOR SUPER SPORT SERIES BATTERIES)

| PART # | DESIGN | BATTERY TYPE |
|---|---|---|
| MCC-01 |  | C60-N24-A, C60-N24L-A, C60-N24L-B, 53030 |
| MCC-02 |  | 6N4-2A, 6N4-2A-2, 6N4-2A-3, 6N4-2A-4, 6N4-2A-5, 6N4-2A-8 (6), 6N4B-2A, 6N4B-2A-3 , 6N4B-2A-5, 6N6-3B, 6N6-3B-1, 6CB8L-B, 6N11A-1B, B38-6A, 12N5-3B, 12N5-4B, 12N5.5-3B, 12N5.5-4A, 12N7-4A, 12N7-3B, 12N7-4B, 12N9-3A-1, 12N9-3B, 12N9-4B-1, 12N10-3A, 12N10-3A-1, 12N14-3A, CB2.5L-C, CB2.5LC-1, CB3L-A, CB3L-B, CB4L-A, CB4L-B, CB5L-B, CB7-A, CB7L-B, CB9-B, CB9A-A, CB9L-A2, CB9L-B, CB10A-A2, CB10L-A2, CB10L-B, CB10L-B2, CB12AL-A2 CB14A-2, CB14A-A, CB14A-A2, CB14-B2, CB14L-A1, CB14L-A2, CB14L-B2, SCB14L-A2, SCB14L-B2, CB16AL-A2, HCB16A-AB, C50-N18A-A, C50-N18L-A3, SC50-N18L-AT, C50-N18L-A-LM |
| MCC-03 |  | 12N12A-4A-1, CB12A-A, CB12A-B, CB16-B, CB16CL-B, CB16L-B, CB16-B-LM |
| MCC-04 |  | 6N12A-2D, B54-6, 12N7D-3B, 12N11-3A-1, CB16B-A, CB16B-A1 |
| MCC-05 |  | CB7C-A |
| MCC-06 |  | CB30L-B, CB30CL-B, 51814, 51913 |

## FILLING CAPS FOR CONVENTIONAL TYPE BATTERIES (FOR SUPER SPORT SERIES BATTERIES)

| PART # | DESIGN | BATTERY TYPE |
|---|---|---|
| MCC-07 |   | 6N2-2A, 6N2-2A-1, 6N2-2A-3, 6N2-2A-4, 6N2-2A-8, 6N2A-2C, 6N2A-2C-3, 6N4A-4D, 6N4C-1B, 6N5.5-1D, 6N5.5-1D-1, 6N6-1B, 6N6-1D-2, 6N11-2D, 12N5.5A-3B, CB12B-B2, CB12C-A, CB18-A, CB18L-A, CB16HL-A-LM |
| MCC-10 |   | 12N24-3 |
| MCC-14 |   | B39-6 |
| MCC-16 |   | PTX4B-BS |
| MCC-17 |   | CHD4-12 |

## SEALING STRIPS FOR SEALED MAINTENANCE FREE BATTERIES (FOR SUPER SPORT SERIES BATTERIES)

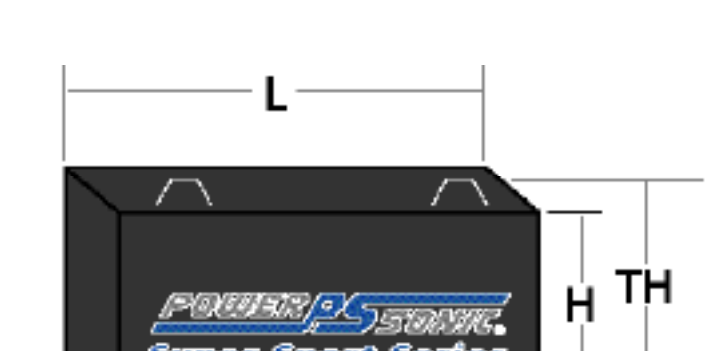
| PART # | BATTERY TYPE | SIZE(LxWxH)MM |
|---|---|---|
| MCS-03 | PTX19-BS, PTX19L-BS, PTX19CL-BS | 156x18x13 |
| MCS-05 | PTR4A-BS | 100x15x9 |
| MCS-08 | PTX7A-BS, PT9A-BS, PTR9-BS, PTX9-BS, PTX12-BS, PTX12A-BS, PTX14-BS, PTX14L-BS, PTX16-BS, PTX16-BS-1 | 135x16x10 |
| MCS-09 | PTX4L-BS, PTX5L-BS, PT6.5L-BS, PTX7L-BS | 104.5x15.5x12 |
| MCS-10 | PIX30L-BS, PIX30CL-BS | 152.4x17.9x13 |
| MCS-11 | PTX15L-BS, PTX20-BS, PTX20CH-BS, PTX20L-BS | 155.4x15.4x12.4 |
| MCS-12 | PTX14AH-BS, PTX14AHL-BS | 116.6x11x11 |
| MCS-13 | PIX50-BS, PIX50L-BS | 183.2x18.2x13 |


## OTHER BATTERY HARDWARE (FOR SUPER SPORT SERIES BRAND BATTERIES)

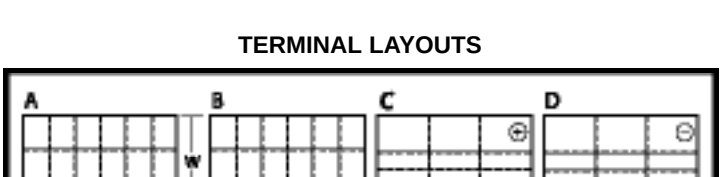
| PART # | BATTERY TYPE |
|---|---|
| MC101 | Harley Davidson Battery Cable Adapter |
| MC102 | Water Sensor for C50N18L-A3 |
| MC103 | Water Sensor for All Models Except C50-N18L-A3 |

## IMPORT AUTOMOTIVE BATTERY SPECIFICATIONS

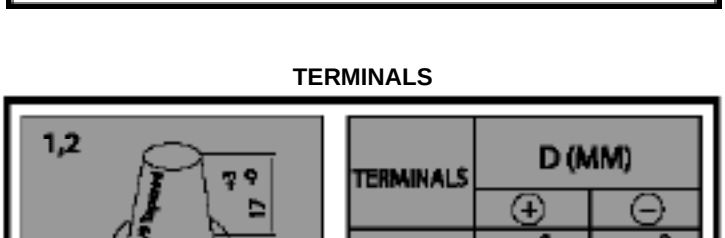
| Type | Voltage (V) | Capacity at 10HR (Ah) | CCA @ 0° F (-18° C) | Apprx. Weight w/o Acid (Lbs.) | Terminal Type | Dimensions in Inches (+/- 1/16 In.) Length | Width | Height | Terminal Height | Dimensions In Millimeters (+/- 2 mm.) Length | Width | Height | Terminal Height | Assembly Figure (per cover polarity) | Handle Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P-NS40Z | 12 | 35 | 250 | 17 | 1 | 7 11/16 | 5 1/16 | 7 3/4 | 8 9/16 | 195 | 128 | 197 | 218 | A | Plastic |
| P-NS40ZL | 12 | 35 | 250 | 17 | 1 | 7 11/16 | 5 1/16 | 7 3/4 | 8 9/16 | 195 | 128 | 197 | 218 | B | Plastic |
| P-NS40Z(S) | 12 | 35 | 240 | 17 | 2 | 7 11/16 | 5 1/16 | 7 3/4 | 8 9/16 | 195 | 128 | 197 | 218 | A | Plastic |
| P-NS40ZL(S) | 12 | 35 | 240 | 17 | 2 | 7 11/16 | 5 1/16 | 7 3/4 | 8 9/16 | 195 | 128 | 197 | 218 | B | Plastic |
| P-NS60 | 12 | 45 | 315 | 19 | 1 | 9 1/4 | 5 1/4 | 7 13/16 | 8 1/2 | 236 | 133 | 198 | 215 | A | Plastic |
| P-NS60L | 12 | 45 | 315 | 19 | 1 | 9 1/4 | 5 1/4 | 7 13/16 | 8 1/2 | 236 | 133 | 198 | 215 | B | Plastic |
| P-NS60(S) | 12 | 45 | 305 | 19 | 2 | 9 1/4 | 5 1/4 | 7 13/16 | 8 1/2 | 236 | 133 | 198 | 215 | A | Plastic |
| P-NS60L(S) | 12 | 45 | 305 | 19 | 2 | 9 1/4 | 5 1/4 | 7 13/16 | 8 1/2 | 236 | 133 | 198 | 215 | B | Plastic |
| P-NS100 | 12 | 85 | 630 | 38 | 2 | 15 15/16 | 6 13/16 | 8 1/8 | 9 1/8 | 405 | 173 | 206 | 232 | A | Rope |
| P-NS100(L) | 12 | 85 | 630 | 38 | 2 | 15 15/16 | 6 13/16 | 8 1/8 | 9 1/8 | 405 | 173 | 206 | 232 | B | Rope |
| P-NS120 | 12 | 110 | 750 | 47 | 2 | 19 15/16 | 7 1/8 | 8 3/8 | 9 3/4 | 507 | 180 | 213 | 247 | C | Rope |
| P-NS120(L) | 12 | 110 | 750 | 47 | 2 | 19 15/16 | 7 1/8 | 8 3/8 | 9 3/4 | 507 | 180 | 213 | 247 | D | Rope |
| P-NS200 | 12 | 170 | 1100 | 70 | 2 | 19 15/16 | 10 1/2 | 8 1/2 | 9 7/16 | 507 | 267 | 216 | 240 | C | Rope |
| P-NS200(L) | 12 | 170 | 1100 | 70 | 2 | 19 15/16 | 10 1/2 | 8 1/2 | 9 7/16 | 507 | 267 | 216 | 240 | D | Rope |




### TERMINAL LAYOUTS




### TERMINALS



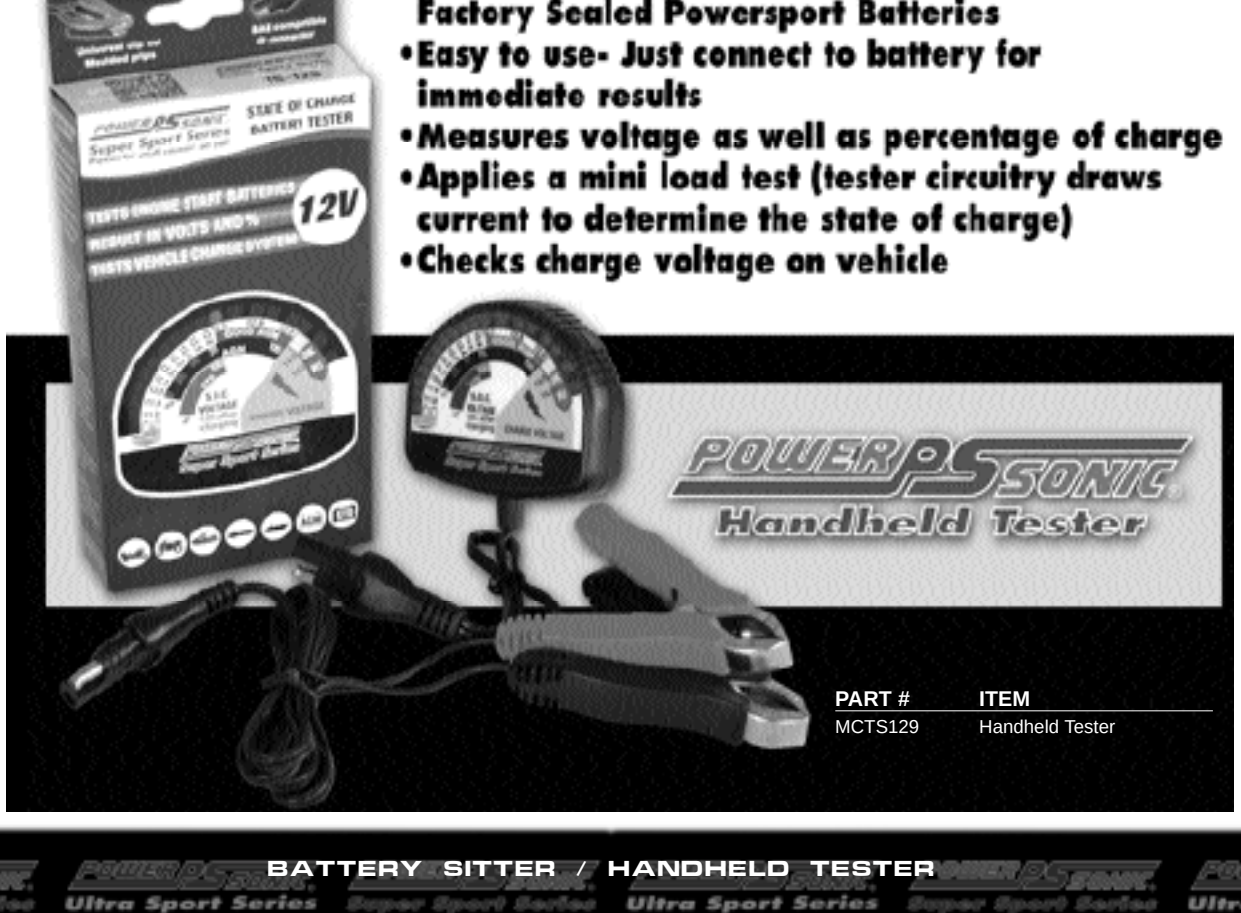

## POWERSPORT BATTERY BUYING GUIDE- TOP 25 BATTERIES REPRESENTING 85% OF THE TOTAL SALES IN THE REPLACEMENT MARKET SEGMENT

| Position | Power-Sonic Super Sport Part # | % of Coverage in Powersport Replacment Market | Model Fitment Information Motorcycle | ATV | Personal Watercraft | Snow Mobile | Utility Vehicle | Scooter | Lawn & Garden |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **PTX14-BS** | 11.1% | 62% | 20% | _ | 3% | 1% | 14% | _ |
| 2 | **CB14A-A2** | 8.8% | _ | 86% | _ | 7% | 5% | _ | 2% |
| 3 | **PTX5L-BS** | 8.3% | 36% | 43% | _ | _ | _ | 21% | _ |
| 4 | **PTX20L-BS** | 7.2% | 44% | 14% | 19% | 18% | 5% | _ | _ |
| 5 | **PTX9-BS** | 5.8% | 68% | 24% | _ | _ | _ | 8% | _ |
| 6 | **PTX12-BS** | 5.2% | 63% | 21% | _ | _ | 1% | 15% | _ |
| 7 | **PTX4L-BS** | 5.1% | 45% | 33% | _ | _ | _ | 20% | 2% |
| 8 | **PIX30L-BS** | 4.4% | 29% | 33% | _ | 5% | 33% | _ | _ |
| 9 | **PTX7A-BS** | 4.1% | 21% | 29% | _ | _ | _ | 50% | _ |
| 10 | **CB14L-A2** | 3.9% | 59% | 2% | 1% | 18% | _ | 1% | 19% |
| 11 | **CB16CL-B** | 3.7% | _ | 34% | 57% | _ | 9% | _ | _ |
| 12 | **PTZ7S** | 2.4% | 47% | 30% | _ | _ | _ | 23% | _ |
| 13 | **PTZ10S** | 1.8% | 83% | 7% | _ | _ | _ | 10% | _ |
| 14 | **PTX7L-BS** | 1.7% | 85% | 4% | _ | _ | _ | 11% | _ |
| 15 | **CB12A-A** | 1.7% | 82% | 4% | _ | _ | _ | _ | 14% |
| 16 | **PTZ14S** | 1.5% | 96% | _ | _ | _ | _ | 4% | _ |
| 17 | **C50-N18L-A3** | 1.4% | 43% | 5% | _ | 41% | _ | _ | 11% |
| 18 | **PT7B-4** | 1.3% | 50% | 45% | _ | _ | _ | 5% | _ |
| 19 | **CB14-A2** | 1.0% | 32% | 29% | _ | 39% | _ | _ | _ |
| 20 | **PT12B-4** | 0.9% | 100% | _ | _ | _ | _ | _ | _ |
| 21 | **PT14B-4** | 0.8% | 100% | _ | _ | _ | _ | _ | _ |
| 22 | **PTX20-BS** | 0.8% | 41% | _ | 4% | 55% | _ | _ | _ |
| 23 | **CB12C-A** | 0.7% | _ | 100% | _ | _ | _ | _ | _ |
| 24 | **PT9B-4** | 0.7% | 72% | 14% | _ | _ | _ | 14% | _ |
| 25 | **12N9-4B-1** | 0.7% | 100% | _ | _ | _ | _ | _ | _ |

## BATTERY SITTER

| PART # | ITEM |
|---|---|
| MCA12C | Battery Sitter Charger/Tester |
| MCTM71 | Easy Battery Connector |
| MCTM131 | Tecmate Multi 5-Bank Charger |
| MCTA09 | Tecmate Sport Portable Battery Tester |


## POWER-SONIC SUPER SPORT & ULTRA SPORT SERIES HANDHELD TESTER




| PART # | ITEM |
|---|---|
| MCTS129 | Handheld Tester |

## POWERSPORTS BATTERY RACK

| PART # | ITEM |
|---|---|
| MCR01 | Three Tier Powersports Battery Rack |

OUR HEAVY DUTY, EASY TO ASSEMBLE THREE TIER DESIGN BATTERY RACK, IS A PERFECT WAY TO PROFESSIONALLY DISPLAY THE POWER-SONIC SUPER SPORT SERIES LINE.

THIS RACK ALSO MAKES A GREAT SALES AND PROMOTIONAL TOOL, WHICH CAN BE USED WHEN SETTING UP NEW INVENTORIES.

COMES COMPLETE WITH A COLORFUL HEADER BOARD, WHICH WILL DEFINITELY HELP THIS ATTRACTIVE DISPLAY GET NOTICED!

## POWERSPORTS PROMOTIONAL ITEMS

# Sealed Lead-Acid Batteries Technical Manual

POWER SONIC

# Features of Power-Sonic Sealed Lead Acid Batteries

## Sealed/Maintenance–Free

The valve regulated spill proof construction allows trouble-free safe operation in any position. There is no need to add electrolyte, as gases generated during the charge phase are recombined in a unique “oxygen cycle”.

Power-Sonic sealed lead acid batteries can be operated in virtually any orientation without the loss of capacity or electrolyte leakage. However, upside down operation is not recommended.

## Long Shelf Life

A low self-discharge rate, up to approximately 3% per month, may allow storage of fully charged batteries for up to a year, depending on storage temperatures, before charging becomes critical. *However, we strongly recommend that all batteries should be recharged within six months of receipt as it will enhance their long term life.*

Please refer to this Technical Manual and individual battery specification sheets for more details.

## Design Flexibility

Same model batteries may be used in series and/or parallel to obtain choice of voltage and capacity. The same battery may be used in either cyclic or standby applications. Over 80 models available to choose from.

## Deep Discharge Recovery

Special separators, advanced plate composition and a carefully balanced electrolyte system ensure that the battery has the ability to recover from excessively deep discharge.

## Economical

The high watt-hour per dollar value is made possible by the materials used in a sealed lead-acid battery; they are readily available and low in cost.

## Easy Handling

No special handling precautions or shipping containers, surface or air, are required due to the leak-proof construction.

## Compact

Power-Sonic batteries utilize state of the art design, high grade materials, and a carefully controlled plate-making process to provide excellent output per cell. The high energy density results in superior power/volume and power/weight ratios.

## Low Pressure Valve Regulators

All batteries feature a series of low pressure one-way relief valves. These valves safely release any excessive accumulation of gas inside the battery and then reseal.

## High Discharge Rate

Low internal resistance allows discharge currents of up to ten times the rated capacity of the battery. Relatively small batteries may thus be specified in applications requiring high peak currents.

## Wide Operating Temperature Range

Power-Sonic batteries may be discharged over a temperature range of -40°C to +60°C (-40°F to +140°F) and charged at temperatures ranging from -20°C to +50°C (-4°F to +122°F).

## Rugged Construction

The high impact resistant battery case is made of non-conductive ABS plastic. The case materials impart great resistance to shock, vibration, chemicals and heat. Flame Retardant (FR) battery cases and lids are available where the end application dictates.

## Long Service Life

PS/PSH and PSG Series: Have a design life of up to five years in standby applications. In cyclical applications up to 1,000 charge/discharge cycles can be expected depending on average depth of discharge.

PG Series: Have a design life of up to 10 years in float applications.

Please consult this Technical Manual and product specifications to become aware of the many factors that effect product life.

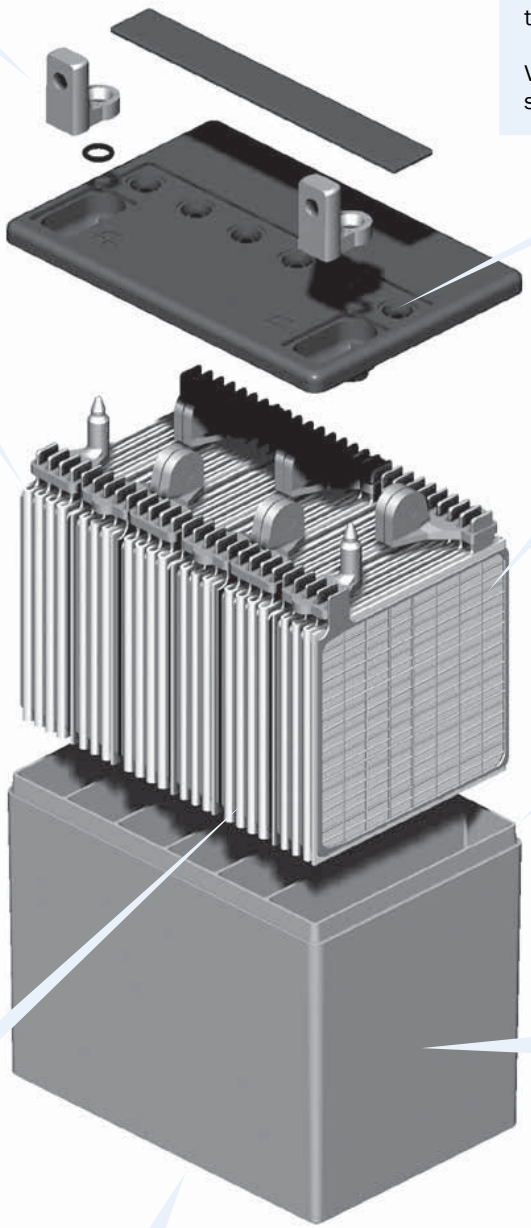
# Battery Construction

### Terminals
Depending on the model, batteries come either with AMP Faston type terminals made of tin plated brass, post type terminals of the same composition with threaded nut and bolt hardware, or heavy duty flag terminals made of lead alloy.

A special epoxy is used as sealing material surrounding the terminals.

### Relief valve
In case of excessive gas pressure build-up inside the battery, the relief valve will open and relieve the pressure. The one-way valve not only ensures that no air gets into the battery where the oxygen would react with the plates causing internal discharge, but also represents an important safety device in the event of excessive overcharge.

Vent release pressure is between 2-6 psi; the seal ring material is neoprene rubber.



### Plates (electrodes)
Power-Sonic utilizes the latest technology and equipment to cast grids from a lead-calcium alloy free of antimony. The small amount of calcium and tin in the grid alloy imparts strength to the plate and guarantees durability even in extensive cycle service. Lead dioxide paste is added to the grid to form the electrically active material.

In the charged state, the negative plate paste is pure lead and that of the positive lead dioxide. Both of these are in a porous or spongy form to optimize surface area and thereby maximize capacity. The heavy duty lead calcium alloy grids provide an extra margin of performance and life in both cyclic and float applications and give unparalleled recovery from deep discharge.

### Separators
Power-Sonic separators are made of non-woven glass fiber cloth with high heat and oxidation resistance. The material further offers superior electrolyte absorption and retaining ability, as well as excellent ion conductivity.

### Case Sealing
Depending on the model the case sealing is ultrasonic, epoxy or heat seal.

### Container
Case and lid material is ABS, high impact, resin with high resistance to chemicals and flammability. Case and cover are made of non-conductive ABS plastic to UL94-HB or UL94 V-O.

This case has molded-in dividers for each 2 volt cell.

### Electrolyte
Immobilized dilute sulfuric acid: $H_2SO_4$.

### Leakproof Design & Operational Safety
The leak proof construction of Power-Sonic batteries has ensured that our batteries have been approved for shipment by air, both by D.O.T. and I.A.T.A.

U.L's component recognition program for emergency lighting and power batteries lists Power-Sonic under file number MH20845

# Theory of Operation

The basic electrochemical reaction equation in a lead acid battery can be written as:


## Discharge

During the discharge portion of the reaction, lead dioxide ($PbO_2$) is converted into lead sulfate ($PbSO_4$) at the positive plate. At the negative plate sponge lead (Pb) is converted to lead sulfate ($PbSO_4$). This causes the sulfuric acid ($2H_2SO_4$) in the electrolyte to be consumed.

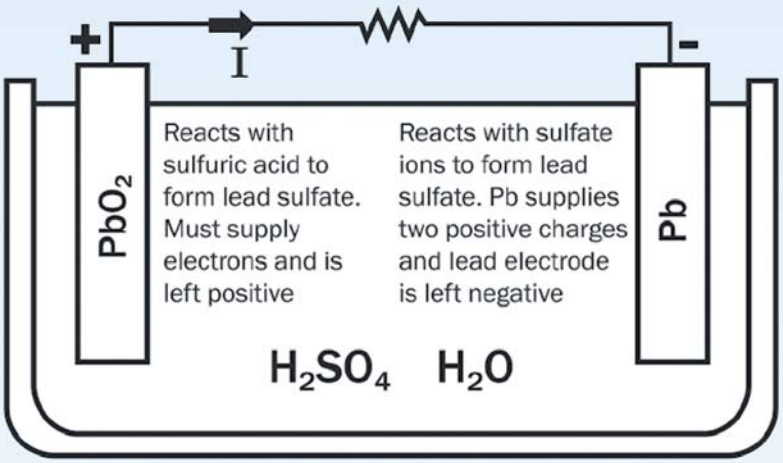



***Figure 1: Chemical reaction when a battery is being discharged***

## Charge

During the recharge phase of the reaction, the cycle is reversed. The lead sulfate ($PbSO_4$) and water are electrochemically converted to lead (Pb), lead dioxide ($PbO_4$) and sulfuric acid ($2H_2SO_4$) by an external electrical charging source.

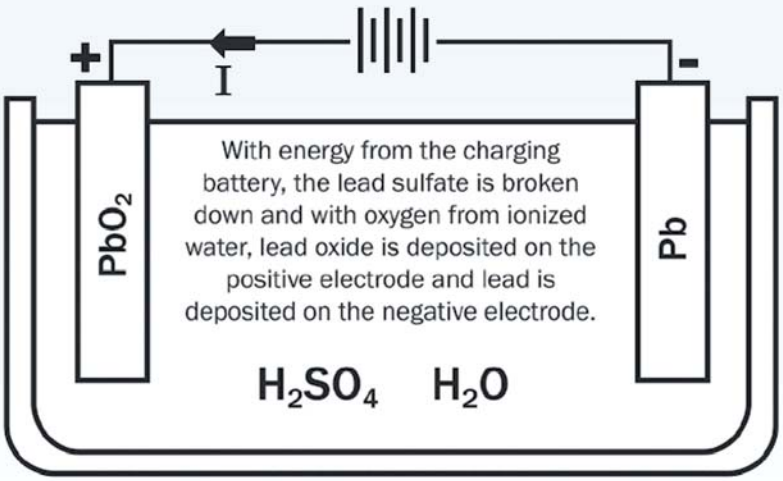



***Figure 2: Chemical reaction when a battery is being charged***

# Theory of Operation

## Oxygen Recombination

To produce a truly maintenance-free battery, it is necessary that gases generated during overcharge are recombined in a so-called “oxygen cycle”. Should oxygen and hydrogen escape, a gradual drying out would occur, eventually affecting capacity and battery life.

During charge, oxygen is generated at the positive and reacts with and partially discharges the sponge lead of the negative. As charging continues the oxygen recombines with the hydrogen being generated by the negative, forming water. The water content of the electrolyte thus remains unchanged unless the charging rate is too high.

In case of rapid generation of oxygen exceeding the absorbing capacity of the negative plate, the pressure relief valve will open to release excessive gas.

## Deep Discharge

Power-Sonic batteries are protected against cell shorting by the addition of a buffering agent that ensures the presence of acid ions even in a fully discharged state.

Power-Sonic defines “deep discharge” as one that allows the battery voltage under load to go below the cut-off (or “final”) voltage of a full discharge. The recommended cutoff voltage varies with the discharge rate. Table 1 shows the final discharge voltages per cell.

It is important to note that deep discharging a battery at high rates for short periods is not nearly as severe as discharging a battery at low rates for long periods of time. To clarify, let’s analyze two examples:

- **Battery A** – Discharged at the 1C rate to zero volts.
  “C” for a 4 AH battery, for example, is 4 amps. Full discharge is reached after about 30 minutes when the battery voltage drops to 1.5V/cell. At this point, only 50% of rated capacity has been discharged (1 C amps x 0.5 hrs = 0.5C Amp. Hrs). Continuing the discharge to zero volts will bring the total amount of discharged ampere-hours to approximately 75% because the rapidly declining voltage quickly reduces current flow to a trickle. The battery will recover easily from this type of deep discharge.

- **Battery B** – Discharged at the 0.01 C rate to zero volts.
  0.0IC for a 4 AH battery is 40mA. Full discharge is reached after 100+ hours when the terminal voltage drops to 1.75 V/cell. At this point, the battery has already delivered 100% of its rated capacity (0.01 x 100 hrs = 1C Amp. Hrs.). Continuing the discharge to zero volts will keep the battery under load for a further period of time, squeezing out every bit of stored energy.

  This type of “deep” discharge is severe and is likely to damage the battery. The sooner a severely discharged battery is recharged, the better its chances to fully recover.

| Discharge Current | Final Discharge Voltage Per Cell |
|---|---|
| 0.1C or below, or intermittent discharge | 1.75 |
| 0.17C or current close to it | 1.75 |
| 0.6C or current close to it | 1.70 |
| From 1C to 2C or current close to it | 1.50 |
| 3C or current close to it and above | 1.37 |

***Table 1: Final discharge voltage per cell***

# Capacity

The capacity of a battery is the total amount of electrical energy available from a fully charged cell or cells. Its value depends on the discharge current, the temperature during discharge, the final (cut-off) voltage and the general history of the battery.

Table 2 shows capacities for various multiples of the 20-hour discharge current for PS, PSH and PSG models.

| Rated Capacity | 20 Hour Rate | | 10 Hour Rate | | 5 Hour Rate | | 1 Hour Rate | |
|---|---|---|---|---|---|---|---|---|
| | Amps | AH | Amps | AH | Amps | AH | Amps | AH |
| 0.5 AH | 0.025 | 0.50 | 0.045 | 0.45 | 0.08 | 0.40 | 0.30 | 0.30 |
| 0.8 AH | 0.04 | 0.80 | 0.072 | 0.72 | 0.13 | 0.65 | 0.48 | 0.48 |
| 1.1 AH | 0.055 | 1.10 | 0.10 | 1.00 | 0.19 | 0.95 | 0.68 | 0.68 |
| 1.4 AH | 0.07 | 1.40 | 0.13 | 1.30 | 0.24 | 1.20 | 0.85 | 0.85 |
| 2.0 AH | 0.10 | 2.00 | 0.19 | 1.90 | 0.34 | 1.70 | 1.24 | 1.24 |
| 2.3 AH | 0.115 | 2.30 | 0.225 | 2.25 | 0.39 | 1.95 | 1.38 | 1.38 |
| 2.5 AH | 0.125 | 2.50 | 0.22 | 2.20 | 0.40 | 2.00 | 1.50 | 1.50 |
| 2.8 AH | 0.14 | 2.80 | 0.25 | 2.50 | 0.48 | 2.40 | 1.70 | 1.70 |
| 2.9 AH | 0.145 | 2.90 | 0.26 | 2.60 | 0.49 | 2.45 | 1.80 | 1.80 |
| 3.2 AH | 0.16 | 3.20 | 0.30 | 3.00 | 0.54 | 2.70 | 2.00 | 2.00 |
| 3.4 AH | 0.17 | 3.40 | 0.33 | 3.30 | 0.58 | 2.90 | 2.20 | 2.20 |
| 3.5 AH | 0.175 | 3.50 | 0.33 | 3.40 | 0.59 | 2.95 | 2.17 | 2.17 |
| 3.8 AH | 0.19 | 3.80 | 0.35 | 3.50 | 0.64 | 3.20 | 2.40 | 2.40 |
| 4.5 AH | 0.225 | 4.50 | 0.41 | 4.10 | 0.64 | 3.20 | 2.75 | 2.75 |
| 5.0 AH | 0.25 | 5.00 | 0.43 | 4.30 | 0.80 | 4.00 | 3.00 | 3.00 |
| 5.4 AH | 0.27 | 5.40 | 0.50 | 5.00 | 0.90 | 4.50 | 3.60 | 3.60 |
| 5.5 AH | 0.275 | 5.50 | 0.54 | 5.40 | 0.95 | 4.75 | 3.70 | 3.70 |
| 6.0 AH | 0.30 | 6.00 | 0.56 | 5.60 | 0.98 | 4.90 | 3.60 | 3.60 |
| 6.5 AH | 0.325 | 6.50 | 0.61 | 6.10 | 1.10 | 5.50 | 4.03 | 4.03 |
| 7.0 AH | 0.35 | 7.00 | 0.63 | 6.30 | 1.19 | 5.95 | 4.34 | 4.34 |
| 7.2 AH | 0.36 | 7.20 | 0.70 | 7.00 | 1.30 | 6.50 | 4.60 | 4.60 |
| 8.0 AH | 0.40 | 8.00 | 0.78 | 7.75 | 1.40 | 7.00 | 4.80 | 4.80 |
| 8.5 AH | 0.425 | 8.50 | 0.81 | 8.10 | 1.50 | 7.50 | 6.50 | 6.50 |
| 9.0 AH | 0.45 | 9.00 | 0.83 | 8.30 | 1.54 | 7.70 | 5.60 | 5.60 |
| 10.0 AH | 0.50 | 10.00 | 0.93 | 9.30 | 1.70 | 8.50 | 6.20 | 6.20 |
| 10.5 AH | 0.53 | 10.50 | 0.98 | 9.80 | 1.87 | 9.35 | 6.82 | 6.82 |
| 12.0 AH | 0.60 | 12.00 | 1.15 | 11.50 | 2.10 | 10.50 | 7.30 | 7.30 |
| 13.0 AH | 0.65 | 13.00 | 1.22 | 12.20 | 2.30 | 11.50 | 8.00 | 8.00 |
| 14.0 AH | 0.70 | 14.00 | 1.30 | 13.00 | 2.50 | 12.50 | 8.45 | 8.45 |
| 18.0 AH | 0.90 | 18.00 | 1.70 | 17.00 | 3.20 | 16.00 | 11.10 | 11.10 |
| 20.0 AH | 1.00 | 20.00 | 1.85 | 18.50 | 3.40 | 17.00 | 12.40 | 12.40 |
| 21.0 AH | 1.05 | 21.00 | 2.00 | 20.00 | 3.70 | 18.50 | 13.00 | 13.00 |
| 26.0 AH | 1.30 | 26.00 | 2.40 | 24.00 | 4.40 | 22.00 | 16.10 | 16.10 |
| 28.0 AH | 1.40 | 28.00 | 2.62 | 26.20 | 5.00 | 25.00 | 18.60 | 18.60 |
| 35.0 AH | 1.75 | 35.00 | 3.30 | 33.00 | 6.20 | 31.00 | 25.00 | 25.00 |
| 36.0 AH | 1.80 | 36.00 | 3.35 | 33.50 | 6.12 | 30.60 | 22.30 | 22.30 |
| 40.0 AH | 2.00 | 40.00 | 3.80 | 38.00 | 6.70 | 33.50 | 24.00 | 24.00 |
| 55.0 AH | 2.75 | 55.00 | 5.10 | 51.00 | 8.80 | 44.00 | 30.60 | 30.60 |
| 75.0 AH | 3.75 | 75.00 | 7.20 | 72.00 | 13.60 | 68.00 | 47.00 | 47.00 |
| 100.0 AH | 5.00 | 100.00 | 9.20 | 92.00 | 15.80 | 79.00 | 55.20 | 55.20 |
| 110.0 AH | 5.50 | 110.00 | 10.30 | 103.00 | 17.70 | 88.50 | 61.80 | 61.80 |
| 140.0 AH | 7.00 | 140.00 | 13.50 | 135.00 | 24.00 | 120.00 | 84.00 | 84.00 |
| 210.0 AH | 10.50 | 210.00 | 20.00 | 200.00 | 36.00 | 180.00 | 168.00 | 168.00 |

***Table 2: Capacities for various multiples of the 20-hour discharge current - PS, PSH and PSG models.***

# Capacity

Table 3 shows capacities for various multiples of the 20-hour discharge current for PG models.

| Rated Capacity | 20 Hour Rate | | 10 Hour Rate | | 5 Hour Rate | | 1 Hour Rate | |
|---|---|---|---|---|---|---|---|---|
| | Amps | AH | Amps | AH | Amps | AH | Amps | AH |
| 28.0 AH | 1.50 | 30.00 | 2.80 | 28.00 | 5.10 | 25.50 | 18.60 | 18.60 |
| 35.0 AH | 1.80 | 36.00 | 3.50 | 35.00 | 6.50 | 32.50 | 27.00 | 27.00 |
| 42.0 AH | 2.25 | 45.00 | 4.20 | 42.00 | 7.20 | 36.00 | 25.20 | 25.20 |
| 56.0 AH | 3.00 | 60.00 | 5.60 | 56.00 | 9.50 | 47.50 | 33.00 | 33.00 |
| 65.0 AH | 3.53 | 70.60 | 6.50 | 65.00 | 11.20 | 56.00 | 39.00 | 39.00 |
| 75.0 AH | 4.00 | 80.00 | 7.50 | 75.00 | 12.90 | 64.50 | 45.00 | 45.00 |
| 92.0 AH | 4.90 | 98.00 | 9.20 | 92.00 | 15.80 | 79.00 | 55.20 | 55.20 |
| 103.0 AH | 5.55 | 111.00 | 10.30 | 103.00 | 17.70 | 88.50 | 61.80 | 61.80 |
| 124.0 AH | 6.45 | 129.00 | 12.40 | 124.00 | 21.30 | 106.50 | 74.40 | 74.40 |
| 144.0 AH | 7.70 | 154.00 | 14.40 | 144.00 | 24.08 | 120.40 | 84.00 | 84.00 |
| 153.0 AH | 8.30 | 166.00 | 15.30 | 153.00 | 26.30 | 131.50 | 91.80 | 91.80 |
| 210 0 AH | 11.30 | 226.00 | 21.00 | 210.00 | 36.10 | 180.50 | 126.00 | 126.00 |

***Table 3: PG-Series batteries, by industry convention, are rated at their 10 hour rate.***

Capacity, expressed in ampere-hours (AH), is the product of the current discharged and the length of discharge time. The rated capacity (C) of a Power-Sonic battery (PS, PSH and PSG-Series) is measured by its performance over 20 hours of constant current discharge at a temperature of 20°C (68°F) to a cut off voltage of 1.75 volts/cell.

As an example, model PS-610, with a rated capacity of 1.1 AH will deliver 55mA (1/20 of 1.1 AH, or 0.05C) for 20 hours before the voltage reaches an end voltage of 5.25 volts.

By cycling the battery a few times or float charging it for a month or two, the highest level of capacity development is achieved. Power-Sonic batteries are fully charged before leaving the factory, but full capacity is realized only after the battery has been cycled a few times or been on float charge for some time.

When a battery discharges at a constant rate, its capacity changes according to the amperage load. Capacity increases when the discharge current is less than the 20 hour rate and decreases when the current is higher.

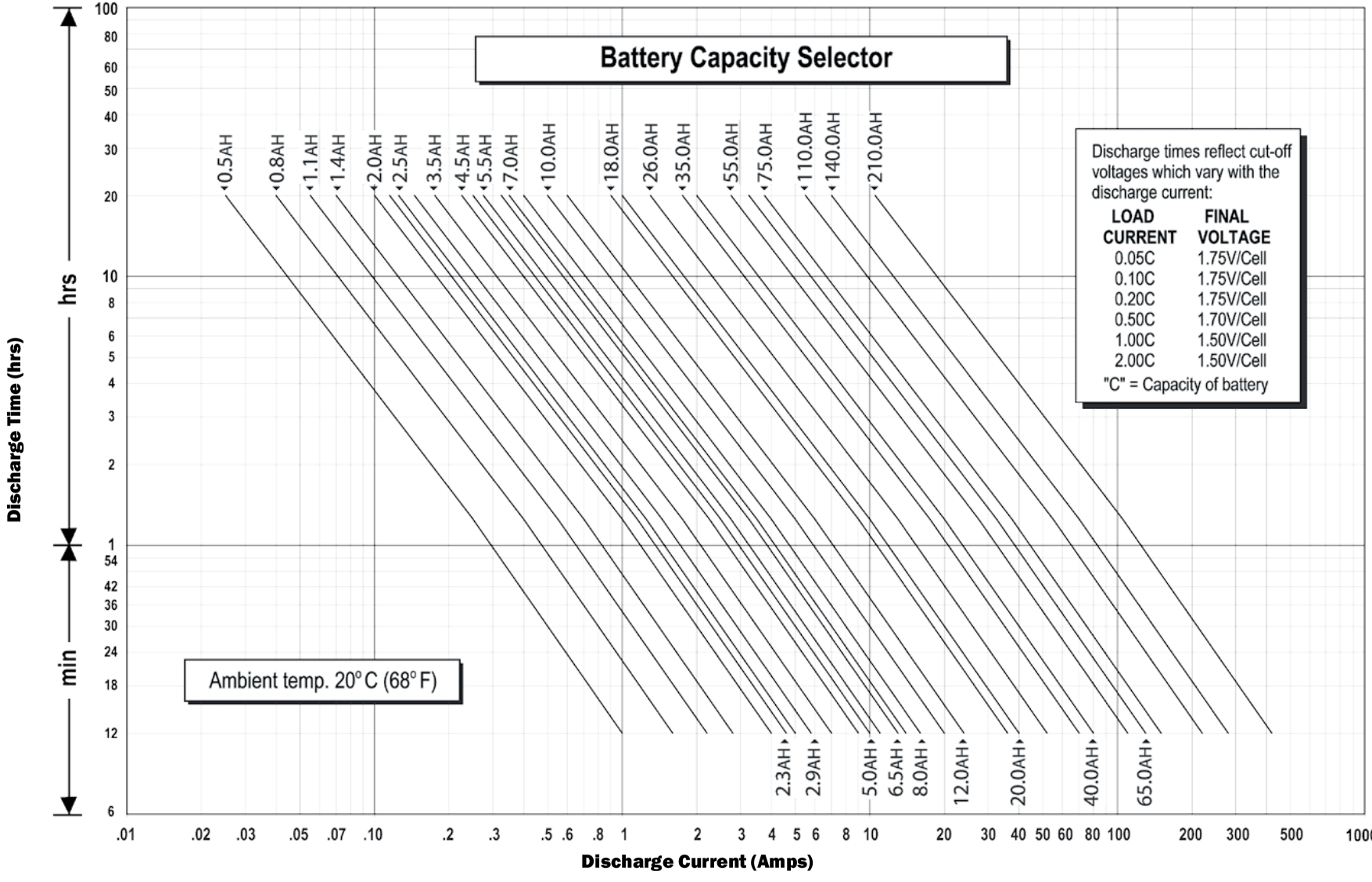



***Figure 3: Capacity lines for Power-Sonic batteries***

Figure 3 shows capacity lines for major Power-Sonic battery models with different ampere-hour ratings. Amperage is on the horizontal scale and the time elapsed is on the vertical scale; the product of these values is the capacity.

Proper battery selection for a specific application can be made from this graph if the required time and current are known. For example, to determine the proper capacity of a battery providing 3 amps for 20 minutes, locate the intersection of these values on the graph. The line immediately above that point represents the battery which will meet the requirement.

# Performance Data

## Discharge

During discharge the voltage will decrease. The graphs in Figure 4 illustrate this for different discharge rates and ambient temperatures. “C” is the rated capacity of a battery: “C” for model PS-610 (6V – 1.1 AH) is 1.1AH. By convention the rating of nearly all sealed-lead acid batteries, is based on a 20-hour (0.05C) discharge rate. For larger batteries used for telecom and large UPS systems (our PG-Series) the convention is to use a 10-hour rate (0.1C).

An important feature of Power-Sonic batteries is shown in the discharge curves; namely, the voltage tends to remain high and almost constant for a relatively long period before declining to an end voltage.

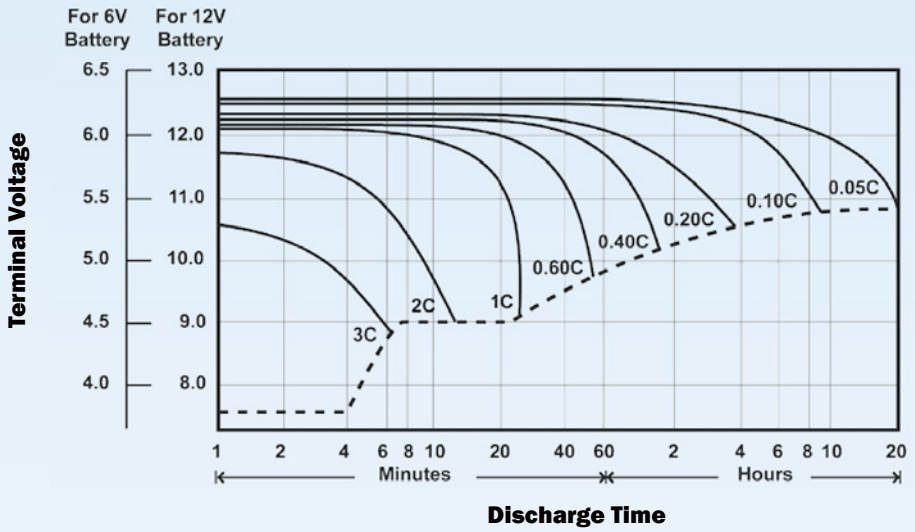



***Figure 4: Discharge Characteristic Curves at 20°C (68°F)***

## Open-Circuit Voltage

Open circuit voltage varies according to ambient temperature and the remaining capacity of the battery. Generally, open circuit voltage is determined by the specific gravity of the electrolyte. Discharging a battery lowers the specific gravity. The open circuit voltage of a Power-Sonic battery is 2.16 V/cell when fully charged and 1.94 V/cell when completely discharged.

As seen in Figure 4, under load, the battery can deliver useful energy at less than 1.94 V/cell, but after the load is removed the open circuit voltage will “bounce back” to voltages shown in Figure 5, dependent upon residual capacity.

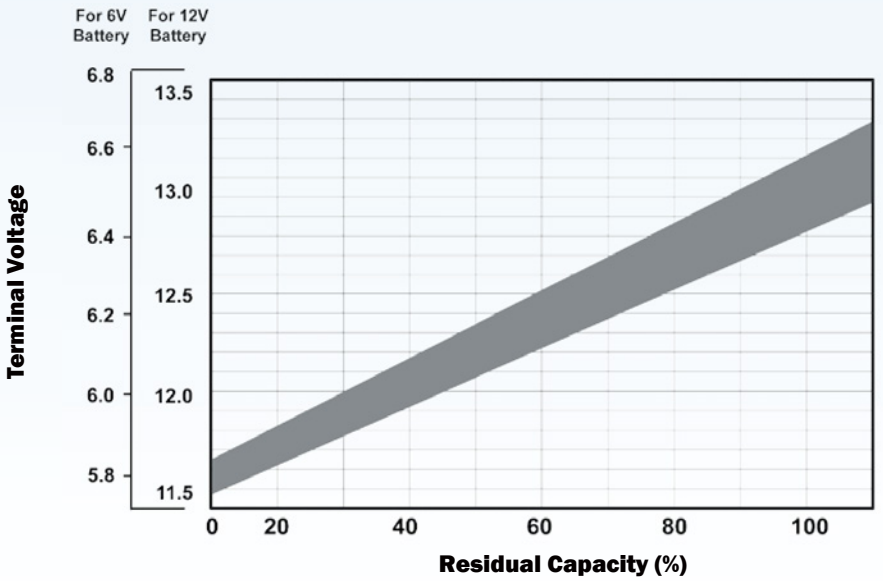



***Figure 5: Open-Circuit Voltage Characteristics***

# Performance Data

## Temperature

Actual capacity is a function of ambient temperature and rate of discharge. At 20°C (68°F) rated capacity is 100%. The capacity increases slowly above this temperature and decreases as the temperature falls. Even at -40ºC (-40°F), however, the Power-Sonic battery will still function at better than 30% of its rated capacity when discharged at the 20-hour rate (0.05C). At any ambient temperature, the higher the rate of discharge, the lower the available capacity. This relationship is shown in Figure 6.

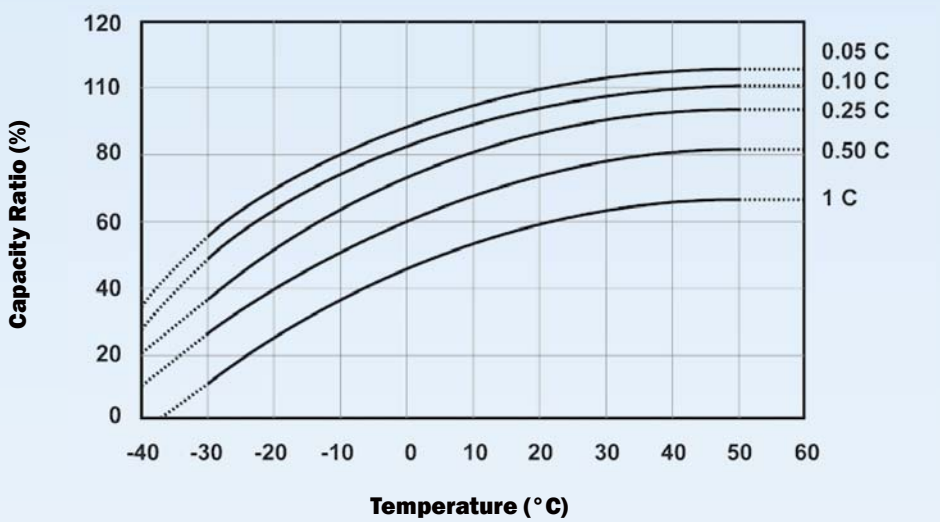



***Figure 6: Effect of Temperature on Capacity***

Power-Sonic batteries may be discharged at temperatures ranging from -40°C to 60°C (-40°F to 140°F) and charged at temperatures from -20°C to 50°C (-4°F to 122°F).

While raising ambient temperature increases capacity, it also decreases useful service life. It is estimated that battery life is halved for each 10°C (18°F) above normal room temperature.

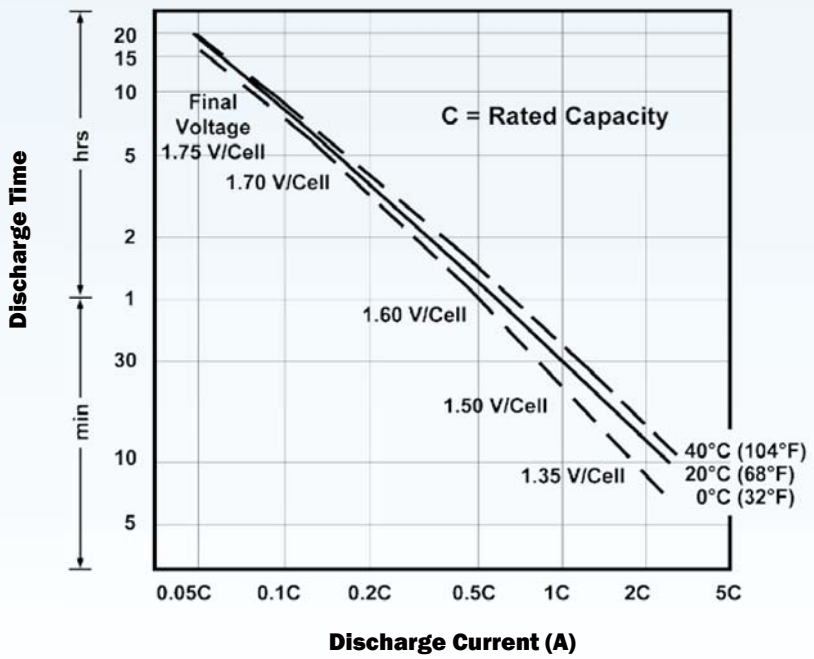



***Figure 7: Relationship between current and discharge time for different ambient temperatures***

# Performance Data

## Shelf Life & Storage

Low internal resistance and special alloys in the electrodes assure a low self discharge rate and, consequently, a long shelf life. If kept at 20°C (68°F), about 60-70% of the nominal capacity remains after one year of storage. Due to the self-discharge characteristics of this type of battery, it is imperative that they be charged within 6 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

The rate of self discharge varies with the ambient temperature. At room temperature (20°C (68°F)) it is about 3% per month. At low temperatures it is nearly negligible; at higher ambient temperatures self discharge increases.
To obtain maximum battery life and performance, batteries should be recharged as soon as possible after each use and not stored in a discharged state. If possible batteries should be stored at 20°C (68°F) or lower, and recharged every six months when not in use.

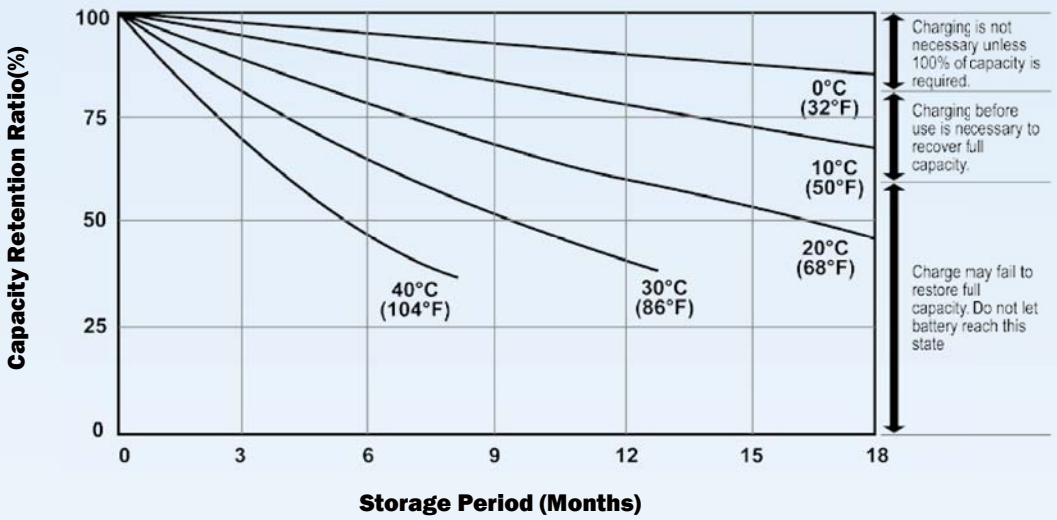



**Figure 8: Self Discharge Characteristics**

## Battery Life

Cyclic Use: The number of charge/discharge cycles depends on the capacity taken from the battery (a function of discharge rate and depth of discharge), operating temperature and the charging method.

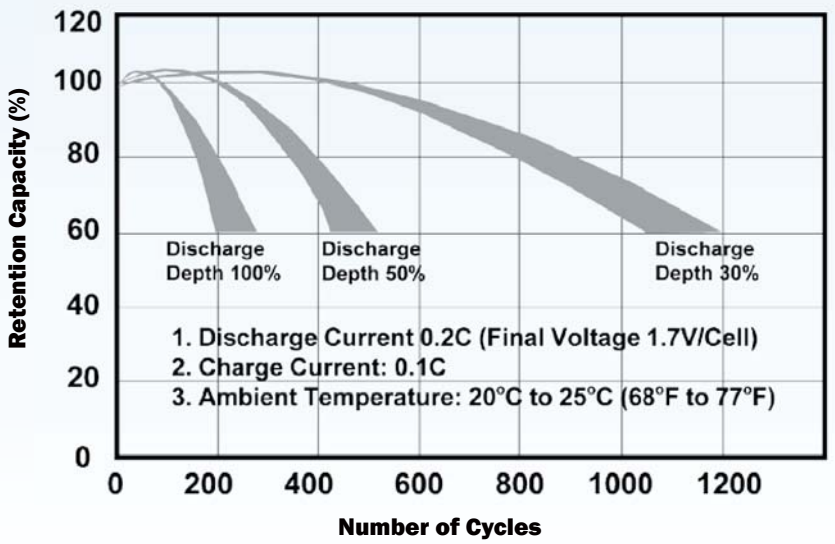



***Figure 9: Relationship between depth of discharge and number of cycles as well as increases of capacity during the early cycles.***

# Performance Data

## Battery Life (continued)

Standby Use: The float service life, or life expectancy under continuous charge, depends on the frequency and depth of discharge, the charge voltage, and the ambient temperature. At a float voltage of 2.25V to 2.30V/cell and an ambient temperature of 20°C to 25°C (60°F to 77°F) Power-Sonic batteries should last four to five years before the capacity drops to 60% of its original rating.

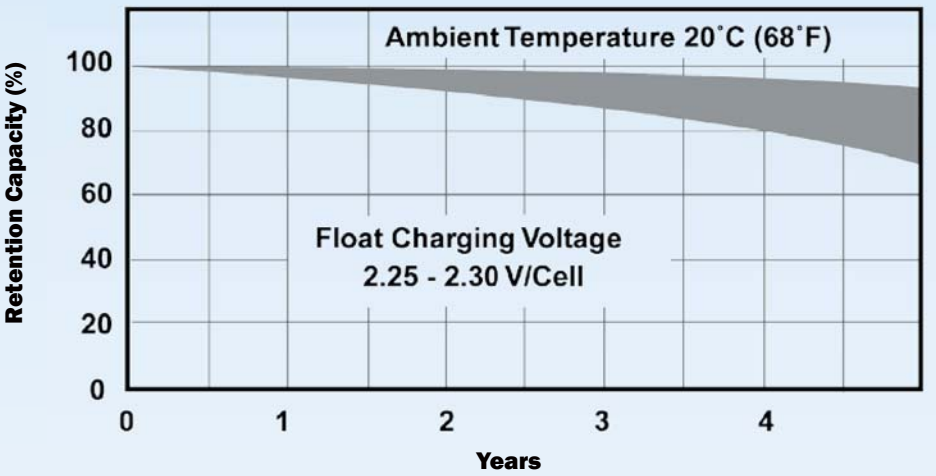



***Figure 10: Indicates how capacity changes over time.***

The graph in Figure 11 shows life characteristics in float (standby) service for ambient temperatures ranging from 15°C to 55°C (60°F to 130°F). If prevailing ambient temperatures are well above 20°C to 25°C (68°F to 77°F) the life expectancy of this type of battery in float service depends greatly on temperature compensated charging. The typical temperature coefficient is 2mV/cell/20°C and under.

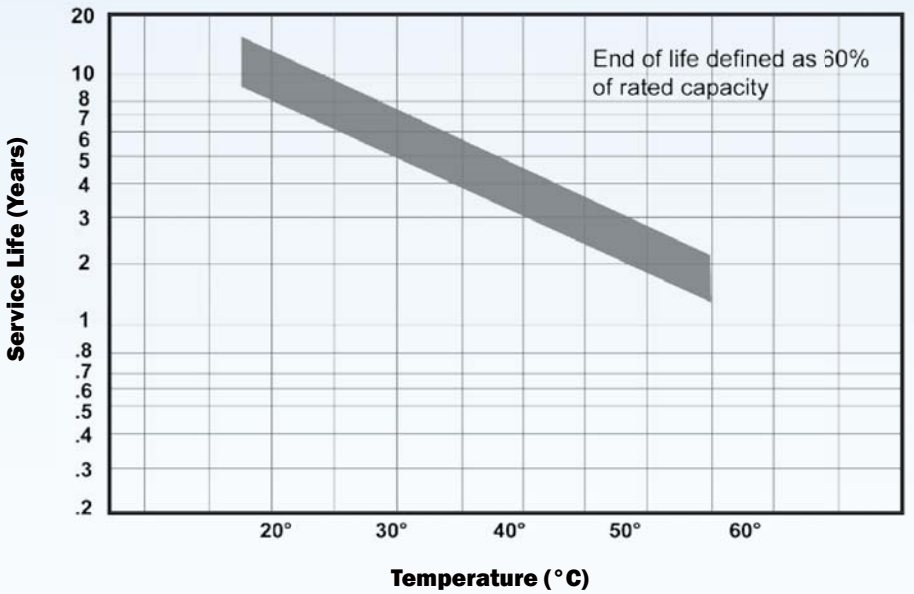



***Figure 11: Service life at various ambient temperatures***

# Performance Data

## Over Discharge

To optimize battery life, it is recommended that the battery be disconnected from the load (either electronically or manually) when the end voltage - a function of the discharge rate - is reached. It is the voltage point at which 100% of the usable capacity of the battery has been consumed or continuation of the discharge is useless because of the voltage dropping below useful levels. The final discharge voltages per cell are shown in Table 1 (Page 4).

Discharging a sealed lead-acid battery below this voltage or leaving a battery connected to a load will impair the battery's ability to accept a charge. To prevent potential over discharge problems, voltage cut off circuits as shown in Figure 12 may be used.

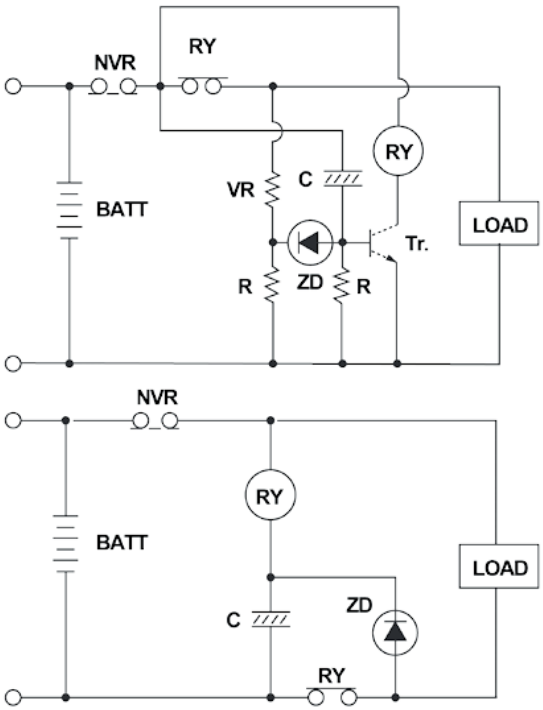



***Figure 12: Circuits of Over-Discharge Preventative Device***

## Charging

Dependable performance and long service life depend upon correct charging. Faulty procedures or inadequate charging equipment result in decreased battery life and/or unsatisfactory performance. The selection of suitable charging circuits and methods is as important as choosing the right battery for the application.

Power-Sonic batteries may be charged by using any of the conventional charging techniques:

- Constant Voltage
- Constant Current
- Taper-Current
- Two Step Constant Voltage

To obtain maximum service life and capacity, along with acceptable recharge time and economy, constant voltage-current limited charging is recommended.

To charge a Power-Sonic SLA battery, a DC voltage between 2.30 volts per cell (float) and 2.45 volts per cell (fast) is applied to the terminals of the battery. Depending on the state of charge, the cell may temporarily be lower after discharge than the applied voltage. After some time, however, it should level off.

During charge, the lead sulfate of the positive plate becomes lead dioxide. As the battery reaches full charge, the positive plate begins generating dioxide causing a sudden rise in voltage due to decreasing internal resistance. A constant voltage charge, therefore, allows detection of this voltage increase and thus control of the current charge amount.

Additional information regarding charging methods can be found on pages 13 through 19.

# Charging

## Charging Characteristics

During constant voltage or taper charging, the battery's current acceptance decreases as voltage and state of charge increase. The battery is fully charged once the current stabilizes at a low level for a few hours. There are two criteria for determining when a battery is fully charged: (1) the final current level and (2) the peak charging voltage while this current flows.

## Charging Methods

Selecting the appropriate charging method depends on the intended use (cyclic or float service), economic considerations, recharge time, anticipated frequency and depth of discharge, and expected service life. The key goal of any charging method is to control the charge current at the end of the charge.

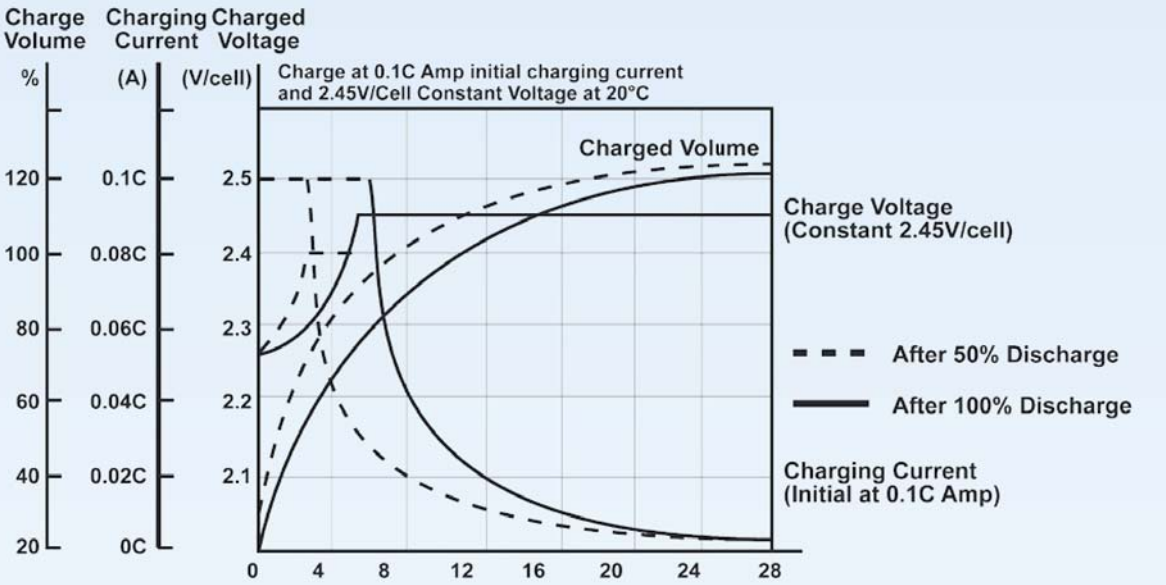



***Figure 13: Typical charge characteristics for cycle service where charging is non-continuous and peak voltage can be higher.***

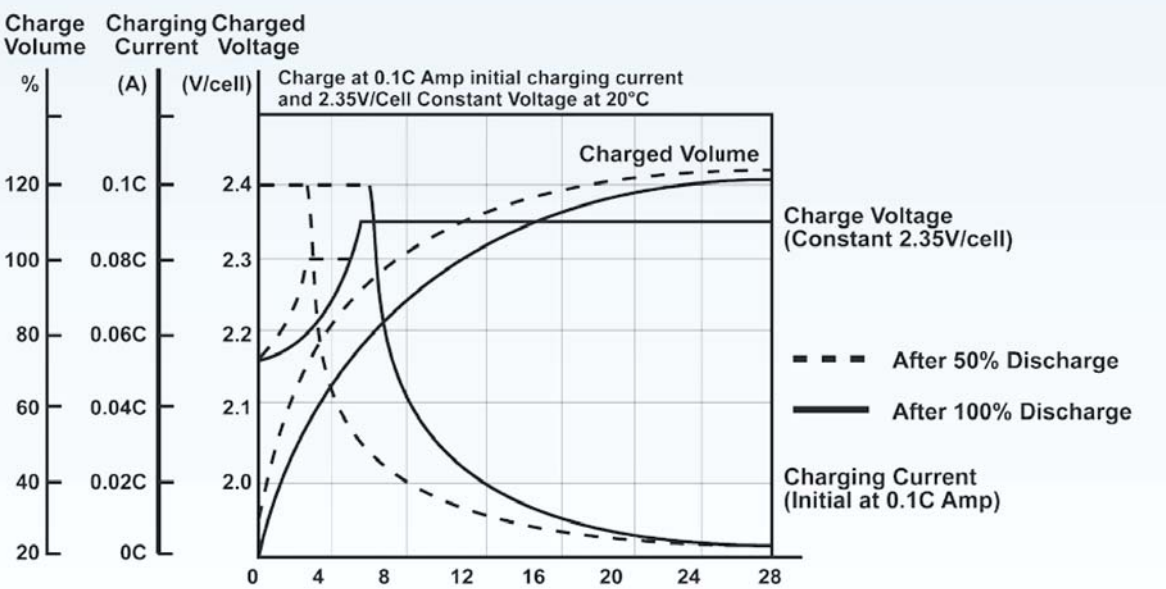



***Figure 14: Typical characteristics for standby service type charge. Here, charging is continuous and the peak charge voltage must be lower.***

# Charging

## Constant Voltage Charging

Constant voltage charging is the best method to charge Power-Sonic batteries. Depending on the application, batteries may be charged either on a continuous or non-continuous basis. In applications where standby power is required to operate when the AC power has been interrupted, continuous float charging is recommended. Non-continuous cyclic charging is used primarily with portable equipment where charging on an intermittent basis is appropriate.

The constant voltage charge method applies a constant voltage to the battery and limits the initial charge current. It is necessary to set the charge voltage according to specified charge and temperature characteristics. Inaccurate voltage settings cause over- or under-charge. This charging method can be used for both cyclic and standby applications.

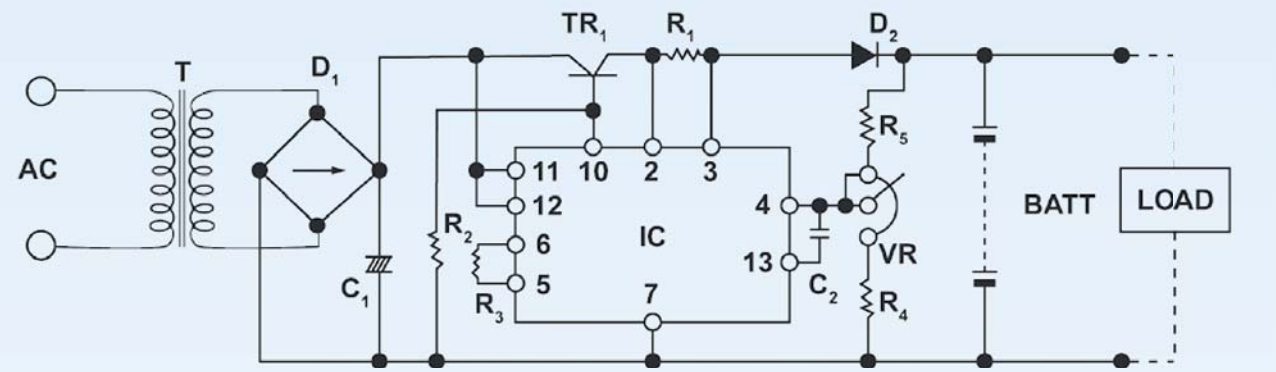



***Figure 15: Constant voltage charging circuit***

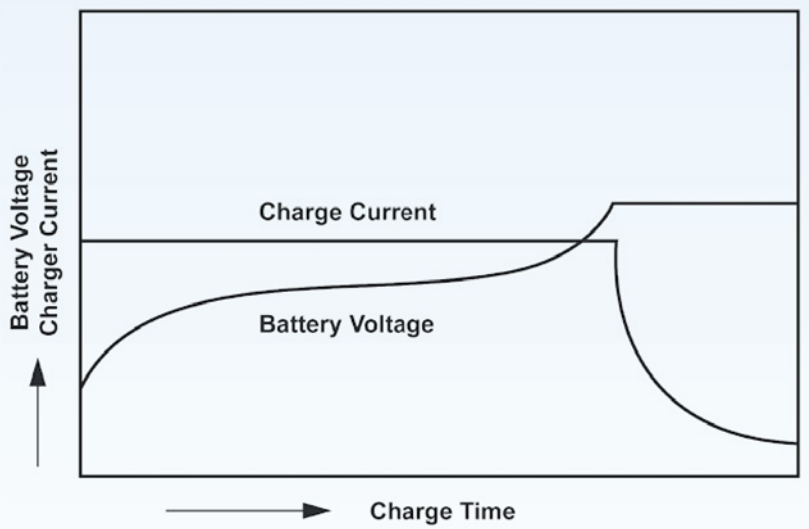



***Figure 16: Constant voltage charging characteristics***

# Charging

## Constant Current Charging

Constant current charging is suited for applications where discharged ampere-hours of the preceding discharge cycle are known. Charge time and charge quantity can easily be calculated, however an expensive circuit is necessary to obtain a highly accurate constant current. Monitoring of charge voltage or limiting of charge time is necessary to avoid excessive overcharge.

While this charging method is very effective for recovering the capacity of a battery that has been stored for an extended period of time, or for occasional overcharging to equalize cell capacities, it lacks specific properties required in today's electronic environment.

## Taper-Current Charging

This method is not recommended as it is somewhat abusive of sealed lead acid batteries and can shorten service life. However, because of the simplicity of the circuit and low cost, taper-current charging is extensively used to charge multiple numbers and/or for cyclic charging.

When using a taper-current charger the charger time should be limited or a charging cut-off circuit be incorporated to prevent overcharge. Please contact our technical department if you need assistance with this.

In a taper-current charging circuit, the current decreases in proportion to the voltage rise. When designing a taper charger always consider power voltage fluctuations. In this event the internal resistance drop will convert to heat. Heat generated by the circuit should be measured and if required a heat sink should be incorporated in the design.

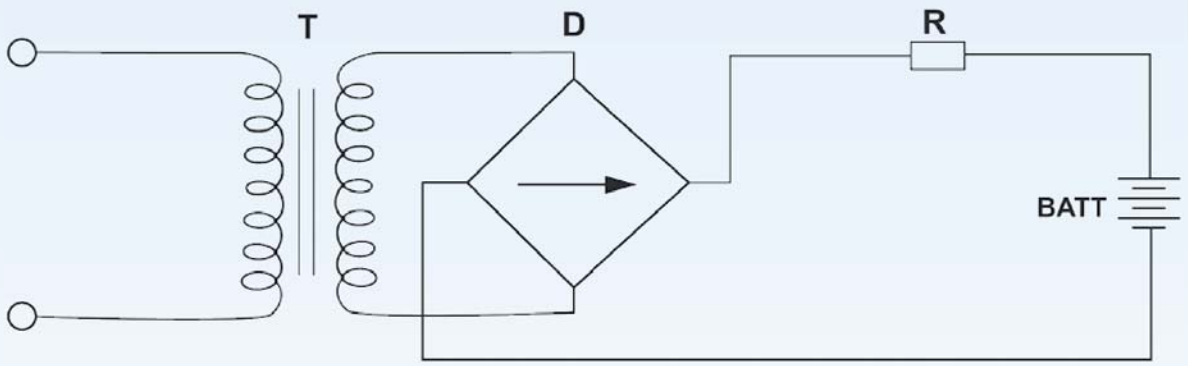



***Figure 17: Taper-current charging circuit***

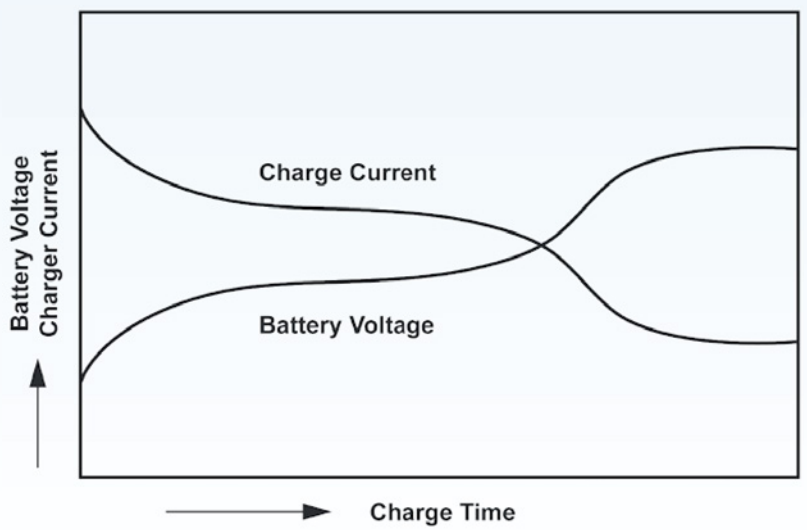



***Figure 18: Taper-current charging characteristics for this type of basically unregulated charger.***

# Charging

## Overcharging

As a result of too high a charge voltage excessive current will flow into the battery, after reaching full charge, causing decomposition of water in the electrolyte and premature aging.

At high rates of overcharge a battery will progressively heat up. As it gets hotter, it will accept more current, heating up even further. This is called thermal runaway and it can destroy a battery in as little as a few hours.

## Undercharging

If too low a charge voltage is applied, the current flow will essentially stop before the battery is fully charged. This allows some of the lead sulfate to remain on the electrodes, which will eventually reduce capacity.

Batteries which are stored in a discharged state, or left on the shelf for too long, may initially appear to be “open circuited” or will accept far less current than normal. This is caused by a phenomenon called “sulfation”. When this occurs, leave the charger connected to the battery. Usually, the battery will start to accept increasing amounts of current until a normal current level is reached. If there is no response, even to charge voltages above recommended levels, the battery may have been in a discharged state for too long to recover.

**Caution! Never charge or discharge a battery in a hermetically sealed enclosure. Batteries generate a mixture of gases internally. Given the right set of circumstances, such as extreme overcharging or shorting of the battery, these gases might vent into the enclosure and create the potential for an explosion when ignited by a spark.**

If in any doubt, or if concepts of proper use and care are unclear, please ensure that you contact Power-Sonic’s technical department.

## Charging for Cycle Operation

Cyclic applications generally require that recharging be done in a relatively short time. The initial charge current, however, must not exceed 0.30 x C amps. Just as battery voltage drops during discharge, it slowly rises during charge. Full charge is determined by voltage and inflowing current. When, at a charge voltage of 2.45 ± 0.05 volts/cell, the current accepted by the battery drops to less than 0.01 x C amps (1% of rated capacity), the battery is fully charged and the charger should be disconnected or switched to a float voltage of 2.25 to 2.30 volts/cell. The voltage should not be allowed to rise above 2.45 ± 0.05 volts/cell.

## Charging for Standby Operation

Standby applications generally do not require that the battery be charged as fast or as frequently as in cycle operation. However, the battery must be kept constantly charged to replace the energy that is expended due to internal loss and deterioration of the battery itself. Although these losses are very low in Power-Sonic batteries, they must be replaced at the rate the battery self discharges; at the same time the battery must not be given more than these losses or it will be overcharged. To accomplish this, a constant voltage method of charging called “float charging” is used.

The recommended constant float voltage is 2.25 - 2.30 volts per cell. Maintaining this float voltage will allow the battery to define its own current level and remain fully charged without having to disconnect the charger from the battery. The trickle current for a fully charged battery floating at the recommended charge voltage will typically hover around the 0.001C rate (10mA for a 10AH battery, for example.)

The float charger is basically a constant voltage power supply. As in cycle chargers, care must be exercised not to exceed the initial charge current of 0.30 x C amperes.

# Charging

## Two-Step Constant Voltage Charging

This method uses two constant voltage devices. In the initial charge phase the high voltage setting is used. When charging is nearly complete and the charge voltage has risen to a specified value (with the charge current decreased), the charger switches the voltage to the lower setting. This method allows rapid charging in cycle or float service without the possibility of overcharging, even after extended charging periods.

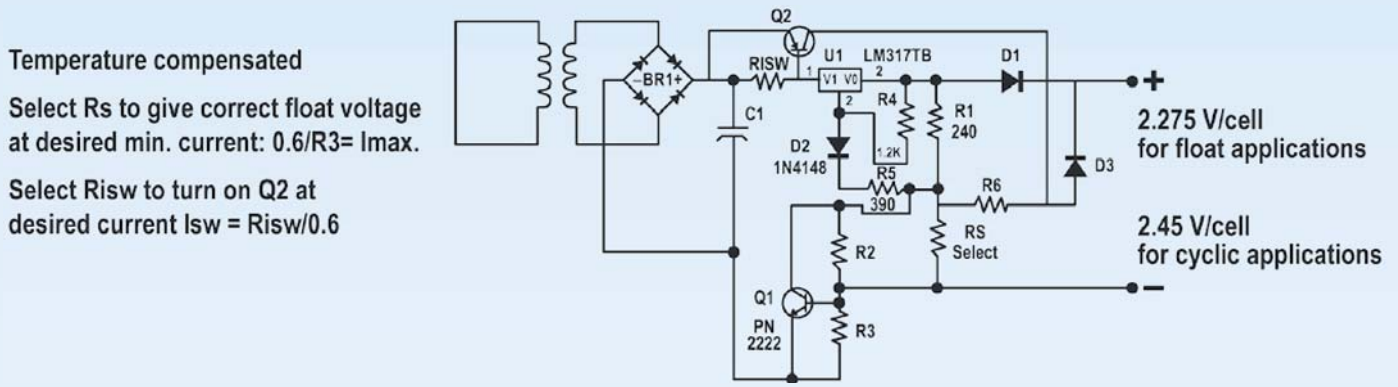



***Figure 19: Dual stage current limited battery charger.***

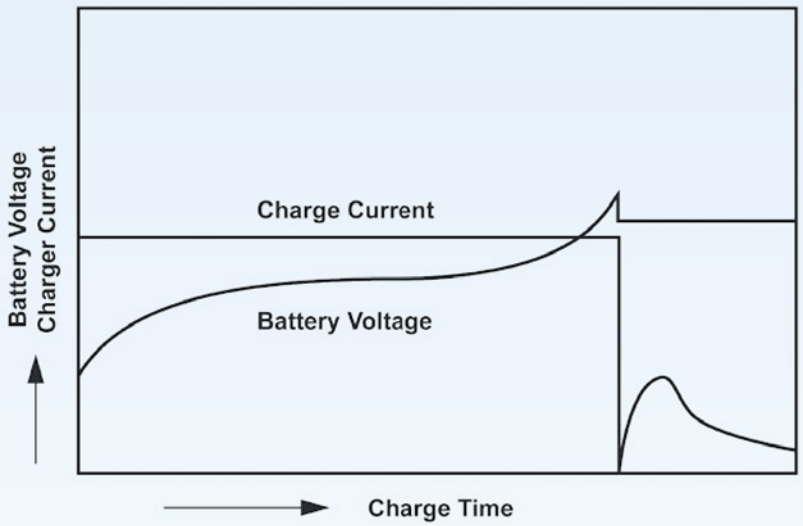



***Figure 20: Two-step constant voltage charging characteristics.***

## Charging in Series

Lead-acid batteries are strings of 2 volt cells connected in series, commonly 2, 3, 4 or 6 cells per battery. Strings of Power-Sonic batteries, up to 48 volts and higher, may be charged in series safely and efficiently. However, as the number of batteries in series increases, so does the possibility of slight differences in capacity. These differences can result from age, storage history, temperature variations or abuse.

Fully charged batteries should never be mixed with discharged batteries when charging in series. The discharged batteries should be charged before connection.

When a single constant voltage charger is connected across an entire high voltage string, the same current flows through all cells in the string. Depending on the characteristics of the individual batteries, some may overcharge while others remain in a slightly undercharged condition.

To minimize the effects of individual battery differences, use batteries of the same age, amp hour, and history and, if possible, charge in strings of no greater than 24 or 48 volts.

# Charging

## Charging in Parallel

Power-Sonic batteries may be used in parallel with one or more batteries of equal voltage.

When connected in parallel, the current from a charger will tend to divide almost equally between the batteries. No special matching of batteries is required. If the batteries of unequal capacity are connected in parallel, the current will tend to divide between the batteries in the ratio of capacities (actually, internal resistances).

When charging batteries in parallel, where different ratios of charge are to be expected, it is best to make provisions to assure that the currents will not vary too much between batteries.

## Temperature Compensation

Power-Sonic batteries perform well both at low and high temperatures. At low temperatures, however, charge efficiency is reduced; at temperatures above 45°C (113°F), charge efficiency increases so rapidly that there is a danger of thermal runaway if temperature compensation is not precise.

The effect of temperature on charge voltage is less critical in float applications than in cyclic use, where relatively high charge currents are applied for the purpose of short recharge times.

Temperature effects should definitely be considered when designing or selecting a charging system. Temperature compensation is desirable in the charging circuit, especially when operating outside the range of 5°C to 35°C (41°F to 95°F). The temperature coefficient is -2mV/cell/°C below 20°C (68°F) in float use and -6mV/cell/ °C below 20°C in cyclic use. For higher temperatures the charge voltage should be correspondingly decreased.

***Ambient Charge Voltage Per Cell***

| Temperature | Cyclic Use (V) | Float Use (V) |
|---|---|---|
| -40°C (-40°F) | 2.85 – 2.95 | 2.38 – 2.43 |
| -20°C (-4°F) | 2.67 – 2.77 | 2.34 – 2.39 |
| -10°C (14°F) | 2.61 – 2.71 | 2.32 – 2.37 |
| 0°C (32°F) | 2.55 – 2.65 | 2.30 – 2.35 |
| 10°C (50°F) | 2.49 – 2.59 | 2.28 – 2.33 |
| 20°C (68°F) | 2.43 – 2.53 | 2.26 – 2.31 |
| 25°C (77°F) | 2.40 – 2.50 | 2.25 – 2.30 |
| 30°C (86°F) | 2.37 – 2.47 | 2.24 – 2.29 |
| 40°C (104°F) | 2.31 – 2.41 | 2.22 – 2.27 |
| 50°C (122°F) | 2.25 – 2.35 | 2.20 – 2.25 |

***Table 4: Recommended charge voltages for different temperatures.***

## Top Charging

All battery lose capacity through self-discharge, it is recommended that a “top up charge” be applied to any battery that has been stored for a long period of time, prior to putting the battery into service.

To successfully top charge a battery stored for more than 12 months, the open circuit voltage must be higher than 2.0 volts per cell, in this case, always confirm open circuit voltage prior to attempting top up charging.

# Charging

## Charging Efficiency

The charging efficiency (η) of a battery is expressed by the following formula:

$$\eta = \frac{\text{AH Discharged After Fully Charged}}{\text{AH Delivered to Battery During Charge}}$$

The charging efficiency varies depending upon the state of charge of the battery, temperatures, and charging rates. Figure 21 illustrates the concept of the state of charge and charging efficiency. As shown in Figure 22. Power-Sonic batteries exhibit very high charging efficiency, even when charged at low charging rates.

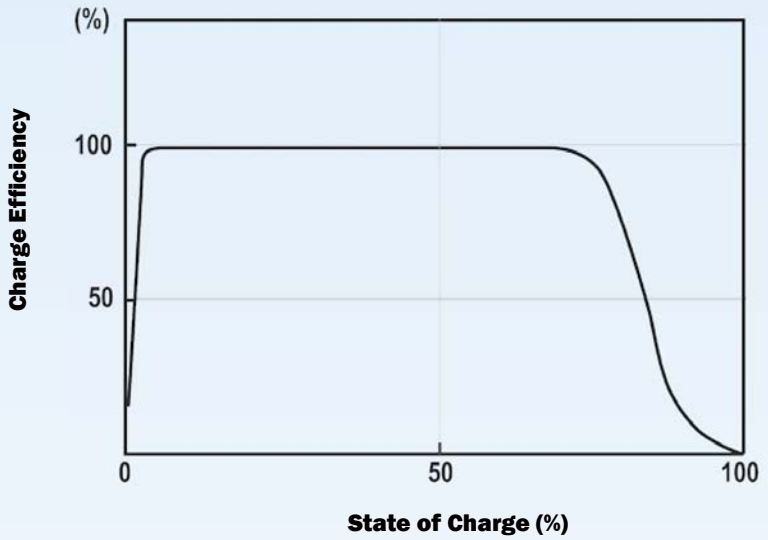



***Figure 21: Charge efficiency vs. state of charge.***

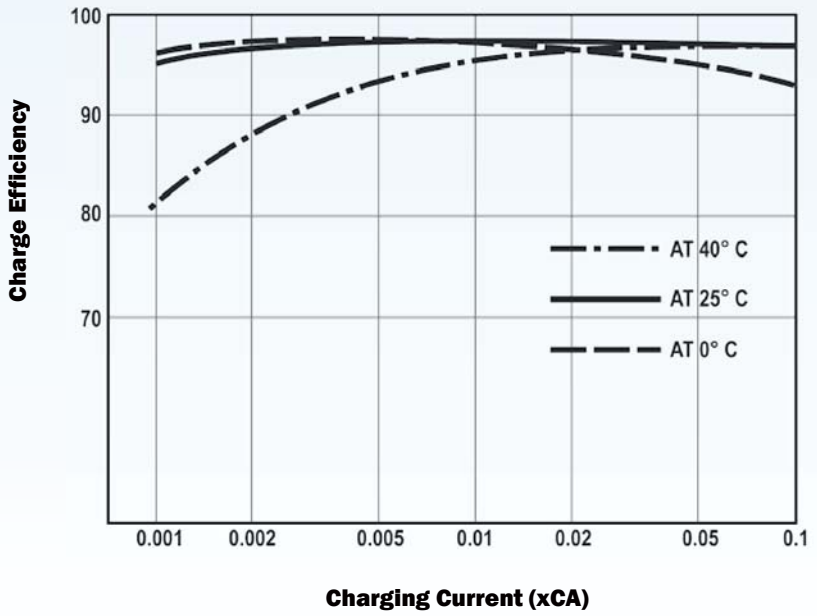



***Figure 22: Charge efficiency vs. charging current.***

# Important Do's and Don'ts

Power-Sonic rechargeable sealed lead-acid batteries are designed to provide years of dependable service. Adherence to the following guidelines will ensure that battery life is maximized and operation is trouble-free.

## Material Safety Data Sheets (MSDS)

- It is important that you familiarize yourself with these prior to handling, installing and disposing of all batteries. If there are any questions raised from these please contact Power-Sonic's technical department.

## Handling

- Always wear insulated gloves when handling batteries; especially when connecting series and parallel groups of batteries.
- Follow all precautions as described in our Materials Safety Data Sheets (MSDS). This information is subject to change depending upon government legislation.
- If equipment is to be stored for a long period of time the batteries should be disconnected to avoid undue drain on the batteries and any potential for damage to the equipment.

## Installation

- Fasten batteries tightly and make provisions for shock absorption if exposure to shock or vibration is likely.
- When installing the battery within a piece of equipment, fix it securely at the lowest practicable point.
- The battery should not be attached to any piece of equipment during "burn-in" testing.
- Do not apply undue force to the terminals or bend them. Avoid applying heat to the terminals through processes such as soldering.
- If soldering to the battery terminals is unavoidable it must be accomplished within 3 seconds, using a soldering iron no greater than 100 watts.
- Do not place batteries in close proximity to objects which can produce sparks or flames, and do not charge batteries in an inverted position.
- Avoid exposing batteries to heat! Care should be taken to place batteries away from heat-emitting components. If close proximity is unavoidable, provide ventilation. Service life is shortened considerably' at ambient temperatures above 30°C (86°F).
- To prevent problems arising from heat exchange between batteries connected in series or parallel, it is advisable to provide air space of at least 0.4" (10mm) between batteries.
- Do not mix batteries with different capacities, different ages or of different makes. The difference in characteristics will cause damage to the batteries and possibly to the attached equipment.
- Battery cases and lids made of ABS plastic can sustain damage if exposed to organic solvents or adhesives.
- For best results and generally acceptable performance and longevity, keep operating temperature range between -40°C (-40°F) and 60°C (140°F).
- It is good practice to ensure that the connections are re-torqued and the batteries are cleaned periodically.
- Do not attempt to disassemble batteries. Contact with sulfuric acid may cause harm. Should it occur, wash skin or clothes with liberal amounts of water. Do not throw batteries into a fire; batteries so disposed may rupture or explode. Disassembled batteries are hazardous waste and must be treated accordingly.

# Important Do's and Don'ts

## Charging

- Batteries should not be stored in a discharged state or at elevated temperatures. If a battery has been discharged for some time, or the load was left on indefinitely, it may not readily take a charge. To overcome this, leave the charger connected and the battery should eventually begin to accept charge.
- Continuous over-or undercharging is the single worst enemy of a lead-acid battery. Caution should be exercised to ensure that the charger is disconnected after cycle charging, or that the float voltage is set correctly.
- Although Power-Sonic batteries have a low self-discharge rate which permits storage of a fully charged battery for up to a year, it is important that a battery be charged within 6 months after receipt to account for storage from the date of manufacture to the date of purchase. Otherwise, permanent loss of capacity might occur as a result of sulfation. To prolong shelf life without charging, store batteries at 10°C (50°F) or less.
- Although it is possible to charge Power-Sonic batteries rapidly, i.e. in 6-7 hrs. it is not normally recommended. Unlimited current charging can cause increased off-gassing and premature drying. It can also produce internal heating and hot spots resulting in shortened service life. Too high a charge current will cause a battery to get progressively hotter. This can lead to "thermal runaway" and can destroy a battery in as little as a few hours.
- Caution: Never charge or discharge a battery in an airtight enclosure. Batteries generate a mixture of gases internally. Given the right set of circumstances, such as extreme overcharging or shorting of the battery, these gases might vent into the enclosure and create the potential for an explosion when ignited by a spark. Generally, ventilation inherent in most enclosures is sufficient to avoid problems.
- When charging batteries in series (positive terminal of one battery is connected to the negative terminal of another) the interconnecting cables must all be of equal length and resistance to insure equalization of the load. All batteries in the string will receive the same amount of charge current, though individual battery voltages may vary.
- When charging batteries in parallel (positive terminals are connected to the positive terminal and negative terminals to the negative), all batteries in the string will receive the same charge voltage, but the charge current each battery receives will vary until equalization is reached.
- High voltage strings of batteries in series should be limited to twenty 6 volt or ten 12 volt batteries when a single constant voltage charger is connected across the entire string. Differences in capacity can cause some batteries to overcharge while others remain undercharged thus causing premature aging of batteries. It is, therefore, not advisable to mix batteries of different capacities, make, or age in a series string.
- To minimize the effects of cell or battery differences, charge the string in 24 volt battery groups through a constant current source with zener diode regulation across individual batteries or battery groups.
- Recharge time depends on the depth of the preceding discharge and the output current of the charger. To determine the approximate recharge time of a fully discharged battery, divide the battery's capacity (amp. hrs) by the rated output of the charger current (amps) and multiply the resulting number of hours by a factor of 1.75 to compensate for the declining output current during charge. If the amount of amp. hrs. discharged from the battery is known, use it instead of the battery's capacity to make the calculation.

POWER SONIC

# Glossary

## Active Material
The active electro-chemical materials used in the manufacture of positive and negative electrodes.

## Ambient Temperature
The prevailing surface temperature to which a battery is exposed.

## Ampere
Unit of measurement for electric current.

## Ampere-Hour
The product of current (amperes) multiplied by time (hours). Used to indicate the capacity of a battery. Also Amp. Hr. or A.H.

## Battery
Two or more cells connected together, most typically in series.

## C
Used to signify a charge or discharge rate equal to the capacity of a battery divided by one hour. Thus C for a 1600 mAh battery would be 1.6 A. C/5 for the same battery would be 320 mA and C/10 would be 160 mA.

## Capacity
The electrical energy available from a cell or battery expressed in ampere-hours.

- **Available capacity**: ampere-hours that can be discharged from a battery based on its state of charge, rate of discharge, ambient temperature, and specified cut-off voltage.
- **Rated capacity ("C")**: the discharge capacity the manufacturer states may be obtained at a given discharge rate and temperature.
- **Capacity fade**: the loss of capacity due to inadequate recharging.

## Cell
The basic building block of a battery. The nominal voltage of a lead-acid cell is 2 volts.

- **Cell reversal:** the act of driving a cell into reverse polarity by excessive discharge.
- **Primary cell:** cell or battery that can be discharged only once.
- **Secondary cell:** the process is reversible so that charging and discharging may be repeated over and over.

## Charge
The conversion of electrical energy to chemical energy; the process which restores electrical energy to a cell or battery.

- **Charge retention**: a battery's ability to hold a charge. It diminishes during storage.
- **Charge acceptance**: quantifies the amount of electric charge that accumulates in a battery.
- **Float charge**: maintains the capacity of a cell or battery by applying a constant voltage.

## Charge (Continued)

- **Trickle charge**: maintains the capacity of a cell or battery by applying a small constant current.
- **Charge equalization**: brings all of the cells in a battery or string to the same state of charge.

## Closed Circuit Voltage Test
A test method in which the battery is briefly discharged at a constant current while the voltage is measured.

## Cutoff Voltage
The final voltage of a cell or battery at the end of charge or discharge.

## Cycle
A single charge and discharge of a cell or battery.

## Deep Cycle
A cycle in which the discharge continues until the battery reaches it's cut-off voltage, usually 80% of discharge.

## Direct Current (DC)
The type of electrical current that a battery can supply. One terminal is always positive and the other always negative.

## Discharge
The process of drawing current from a battery.

- **Deep Discharge**: the discharge of a cell or battery to between 80% and 100% of rated capacity.
- **Depth of Discharge**: the amount of capacity - typically expressed as a percentage - removed during discharge.
- **Self Discharge**: the loss of capacity while stored or while the battery is not in use.
- **Self Discharge Rate**: the percent of capacity lost on open circuit over a specified period of time.

## Drain
The withdrawal of current from a battery.

## Electrode
Positive or negative plate containing materials capable of reacting with electrolyte to produce or accept current.

## Electrolyte
Conducts ions in a cell. Lead acid batteries use a sulfuric acid solution.

## End of Charge Voltage
The voltage reached by the cell or battery at the end of charge, while the charger is still attached.

## Energy Density
Ratio of battery energy to volume or weight expressed in watt-hours per cubic inch or pound.

# Glossary

### Gas Recombination
The process by which oxygen gas generated from the positive plate during the final stage of charge is absorbed into the negative plate, preventing loss of water.

### High Rate Discharge
A very rapid discharge of the battery. Normally in multiples of C (the rating of the battery expressed in amperes).

### Impedance
The resistive value of a battery to an AC current expressed in ohms (Ω). Generally measured at 1000 Hz at full charge.

### Internal Resistance
The resistance inside a battery which creates a voltage drop in proportion to the current draw.

### Negative Terminal
The terminal of a battery from which electrons flow in the external circuit when a battery discharges. See Positive Terminal

### Nominal Voltage / Nominal Capacity
The nominal value of rated voltage / the nominal value of rated capacity. The nominal voltage of a lead-acid battery is 2 volts per cell.

### Open Circuit Voltage
The voltage of a battery or cell when measured in a no load condition.

### Overcharge
The continuous charging of a cell after it achieves 100% of capacity. Battery life is reduced by prolonged overcharging.

### Parallel Connection
Connecting a group of batteries or cells by linking all terminals of the same polarity. This increases the capacity of the battery group.

### Polarity
The charges residing at the terminals of the battery.

### Positive Terminal
The terminal of a battery toward which electrons flow through the external circuit when the cell discharges. See Negative Terminal.

### Rated Capacity
The capacity of the cell expressed in amperes. Commonly, a constant current for a designated number of hours to a specified depth of discharge at room temperature.

### Recombination
The state in which the gasses normally formed within the battery cell during its operation are recombined to form water.

### Series Connection
The connection of a group of cells or batteries by linking terminals of opposite polarity. This increases the voltage of the battery group.

### Self Discharge
The loss of capacity of a battery while in stored or unused condition without external drain.

### Separator
Material isolating positive from negative plates. In sealed lead acid batteries it normally is absorbent glass fiber to hold the electrolyte in suspension.

### SLA Battery
Sealed lead-acid battery, generally having the following characteristics: Maintenance-free, leak-proof, position-insensitive. Batteries of this type have a safety vent to release gas in case of excessive internal pressure build-up. Hence also the term: Valve regulated battery.

"Gel Cells" are SLA batteries whose dilute sulfuric acid electrolyte is immobilized by way of additives which turn the electrolyte into a gel.

### Service Life
The expected life of a battery expressed in the number of total cycles or years of standby service to a designated remaining percentage of original capacity.

### Shelf Life
The maximum period of time a battery can be stored without supplementary charging.

### Standby Service
An application in which the battery is maintained in a fully charged condition by trickle or float charging.

### State of Charge
The available capacity of a battery at a given time expressed as a percentage of rated capacity.

### Sulfation
The formation or deposit of lead sulfate on the surface and in the pores of the active material of the batteries' lead plates. If the sulfation becomes excessive and forms large crystals on the plates the battery will not operate efficiently and may not work at all.

### Thermal Runaway
A condition in which a cell or battery on constant potential charge can destroy itself through internal heat generation.

### Valve Regulated Lead Acid Battery (VRLA)
See "SLA Battery" listed above.

# PG-SERIES
# LONG LIFE BATTERIES


POWER SONIC
PG-SERIES

POWER-SONIC®
PG-SERIES

Power-Sonic has more than 39 years of battery industry experience and today our batteries are sold in more than 70 countries world-wide. Since our inception in 1970, our focus has been the design, manufacture and marketing of rechargeable batteries, specifically:

- Sealed lead-acid (SLA), also called valve regulated lead-acid (VRLA) batteries
- Powersport batteries
- Sealed nickel-cadmium (NiCd) and nickel-metal hydride (NiMH) batteries
- NiCd and NiMH configured packs (cell assemblies)
- Battery Chargers

Our products are widely used in an ever broadening range of electronic and industrial applications. Our batteries continue to be used wherever cost effective and reliable DC power is required, be it as the principal power or standby power source.

Our aim is the ongoing improvement of our existing products, coupled with the development of new tailored products, to meet the ever increasing needs for stand alone power. Our advanced engineering techniques and state-of-the-art manufacturing processes ensure that we remain on the cutting edge of battery technology. These skills, coupled with our selection of the finest raw materials, allow us to produce batteries combining superior performance and value.

Providing our customers with reliable, yet economical, products is the cornerstone of our mission.

## PG-Series Specifications

Tolerances are +/- 2mm.

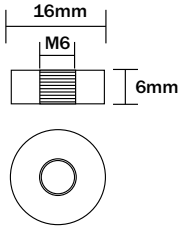
| Model | Nominal Voltage (V) | Rated Capacity (A.H.) | | | Length | | Width | | Height | | Ht. Over Terminal | | Weight | | Standard Terminals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10-hr. | 5-hr. | 1-hr. | in. | mm | in | mm | in | mm | in | mm | lbs. | kgs. | |
| PG-6V210 FR* | 6 | 210.0 | 180.5 | 126.0 | 12.70 | 323 | 7.00 | 178 | 8.98 | 228 | 9.21 | 234 | 71.6 | 32.5 | T11 |
| PG-12V28 FR* | 12 | 28.0 | 25.5 | 18.6 | 6.56 | 167 | 6.96 | 177 | 4.92 | 125 | 4.92 | 125 | 18.5 | 8.4 | T12 |
| PG-12V35 FR* | 12 | 35.0 | 32.5 | 27.0 | 7.72 | 196 | 5.10 | 130 | 6.22 | 158 | 6.97 | 177 | 24.5 | 11.1 | T6 |
| PG-12V42 FR* | 12 | 42.0 | 36.0 | 25.2 | 7.76 | 197 | 6.50 | 165 | 6.69 | 170 | 6.14 | 156 | 32.0 | 14.5 | T6 |
| PG-12V55 FR* | 12 | 56.0 | 47.5 | 33.0 | 8.98 | 228 | 5.39 | 137 | 8.27 | 210 | 8.50 | 216 | 36.0 | 16.4 | T6 |
| PG-12V65 FR* | 12 | 65.0 | 56.0 | 39.0 | 13.70 | 348 | 6.57 | 167 | 7.00 | 178 | 6.26 | 159 | 47.0 | 21.3 | T6 |
| PG-12V75 FR* | 12 | 75.0 | 64.5 | 45.0 | 13.70 | 348 | 6.57 | 167 | 7.00 | 178 | 6.46 | 164 | 51.0 | 23.1 | T6 |
| PG-12V75T FR* | 12 | 75.0 | 64.5 | 45.0 | 10.24 | 260 | 6.61 | 168 | 8.27 | 210 | 8.51 | 216 | 55.0 | 24.9 | T6 |
| PG-12V92 FR* | 12 | 92.0 | 79.0 | 55.2 | 12.05 | 306 | 6.61 | 168 | 8.27 | 210 | 8.51 | 216 | 61.0 | 27.7 | T6 |
| PG-12V103 FR* | 12 | 103.0 | 88.5 | 61.8 | 13.00 | 330 | 6.80 | 173 | 8.35 | 212 | 8.66 | 220 | 70.0 | 31.8 | T11 |
| PG-12V120 FR* | 12 | 124.0 | 106.5 | 74.4 | 16.14 | 410 | 6.97 | 177 | 8.86 | 225 | 8.30 | 211 | 81.5 | 37.0 | T11 |
| PG-12V140 FR* | 12 | 144.0 | 120.5 | 84.0 | 13.50 | 345 | 6.73 | 171 | 10.79 | 274 | 11.02 | 280 | 99.0 | 44.9 | T11 |
| PG-12V150 FR* | 12 | 153.0 | 131.5 | 91.8 | 19.09 | 485 | 6.70 | 170 | 9.53 | 242 | 8.82 | 224 | 103.3 | 46.7 | T11 |
| PG-12V200 FR* | 12 | 210.0 | 180.5 | 126.0 | 20.55 | 522 | 9.45 | 240 | 8.58 | 218 | 8.82 | 224 | 144.0 | 65.3 | T11 |

* FR: UL94 V-0 flame retardant case & cover

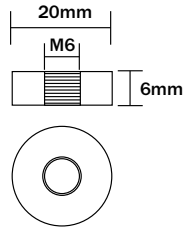
All data subject to change without notice.

## Terminal Configurations

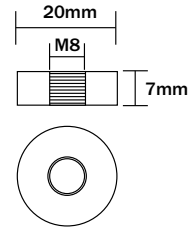
**T6 Terminal**
**Threaded insert - 6mm STUD**




**T8 Terminal**
**Threaded insert - 6mm STUD**




**T11 Terminal**
**Threaded insert - 8mm STUD**



## Features

### Sealed/Maintenance-Free
Valve-regulated, spill-proof construction allows trouble-free, safe operation in any position. The sealed system eliminates electrolyte checking and refilling. Gases generated during charge are recombined in a unique “oxygen cycle”.

### Long Service Life
Thick plate design based on sturdy lead-calcium grids and advanced paste technology provide design lives of up to 10 years in standby applications.

### AGM Technology
Absorbent Glass Mat technology, in tandem with one-way pressure relief valves, result in efficient gas recombination and safety of operation even in severe over-charge or over discharge situations.

### Low Internal Resistance
Superb high-rate discharge and charge characteristics, achieved through advanced separator technology and plate composition, ensure reliable and stable performance critical in UPS and telecom applications.

### Low Self-Discharge
High purity lead, in conjunction with lead-calcium alloy grids, account for excellent shelf-life characteristics permitting storage for extended periods of time at 68°F (20°C) or below.

### Non-Spillable Design - Ease of Handling
Proven VRLA technology guarantees trouble-free operation and “non-restricted article” status for surface and air transportation under DOT (CFR-49) and IATA (A67) regulations.

### Rugged Construction
High-impact resistant ABS plastic (UL94 V-O flame retardant) used for case and cover. High internal compression ratios and innovative inter-cell weld technology impart resistance to shock, vibration, chemicals and heat.

### Designed-In Reliability
Cutting-edge manufacturing and process control, combined with strict quality assurance procedures, guarantee consistent and dependable performance.

## Typical applications for the PG-Series batteries include:

### Standby Power
- Communications & Telecom Systems
- UPS - Uninterruptible Power Supplies
- Marine & Power Station Applications
- Back-Up for Security & Lighting Systems
- Access Control Devices
- Elevators

### Primary Power
- Remote Monitoring
- Remote Area Power Generation
- Personal Transport Vehicles
- Geophysical Instruments & Power Tools
- Solar-Powered Systems
- Remote Access Devices
- Robotics

## Battery Capacity

The capacity of a battery is the total amount of electrical energy available from a fully charged cell. Its value depends on the discharge current, the temperature during discharge, the final (cut-off) voltage and the history of the battery.

Capacity, expressed in ampere-hours (AH), is the product of the current discharged and the length of discharge time. Battery capacity varies according to the discharge rate being used. Capacity increases when discharge current is less than the 10-hr. rate and decreases when the load current is higher.

The rated capacity of a Power-Sonic PG-Series battery is measured by its performance over 10 hours of constant current discharge at 68°F (20°C) to a final (cut-off) voltage of 1.75 volts per cell.

| Discharge Current | Final Voltage |
|---|---|
| 0.05C to 0.10C | 1.70V/cell |
| 0.10C to 0.30C | 1.75V/cell |
| 0.30C to 0.50C | 1.70V/cell |
| 0.50C to 2.0C | 1.60V/cell |
| 2.00C and above | 1.37V/cell |

**Table 1 : Cut-off Voltage**

Proper battery selection for a specific application can be made from the discharge curves shown for each model if the required time and current load are known.

## Discharge Characteristics

Battery voltage decreases during discharge. The discharge curves in Figure 1 illustrate this for different discharge rates. “C” is the rated capacity of a battery. The discharge curves may be used for battery selection. It is advisable, however, to review the selection on the basis of graphs of individual data sheets.

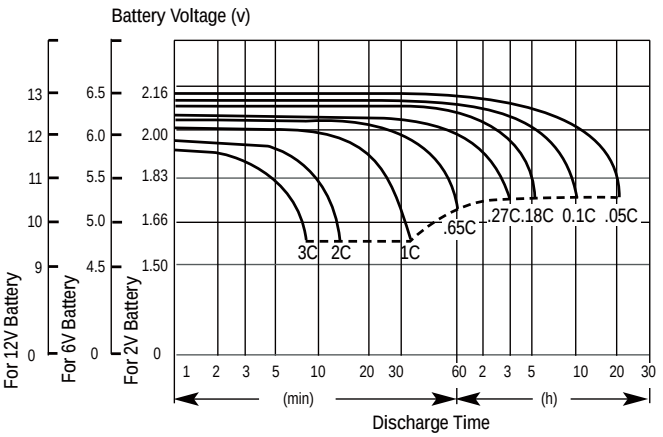



**Figure 1: Discharge characteristic curves at various rates 77°F(25°C)**

## Open Circuit Voltage

Open circuit voltage varies according to ambient temperature and the remaining capacity of the battery. Generally, open circuit voltage is determined by the specific gravity of the electrolyte. Discharging the battery lowers the specific gravity. Consequently, it is possible to determine the approximate remaining capacity of a battery from the terminal voltage. The O.C.V of a Power-Sonic battery is 2.15V/cell when fully charged and 1.95V/cell when fully discharged.

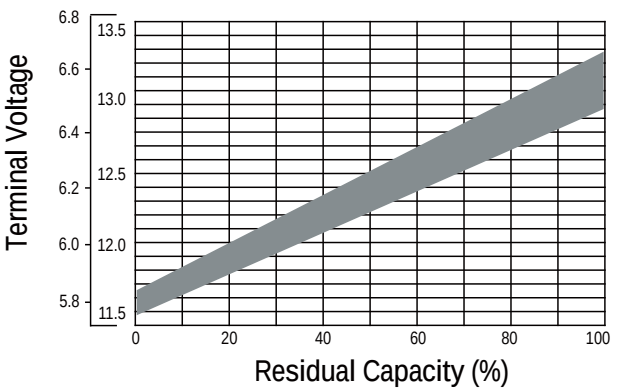



**Figure 2: Open-circuit voltage characteristics**

## Cut-Off Voltage

Cut-off or ‘final’ discharge voltage is the battery terminal voltage under load, i.e. in a closed circuit, to which the battery is safely discharged to maximize battery life. The appropriate cut-off voltage varies according to the actual discharge current. As a rule of thumb, high amp. loads will tolerate a lower final discharge voltage than low amp. ones with longer run times. See Table 1.

POWER-SONIC PG-SERIES

## Cyclic Use

The number of charge/discharge cycles depends on the capacity taken from the battery - a function of discharge rate and depth of discharge - operating temperature and the charging method.

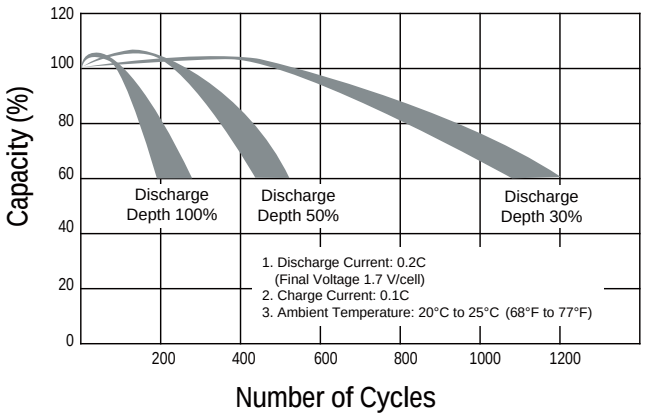



**Figure 3: Depth of discharge vs. number of cycles**

Figure 3 shows the relationship between depth of discharge and number of cycles, but also the capacity increases during the early cycles.

## Standby Use

The float service life, or the life expectancy under continuous charge, depends on the frequency and depth of discharge, the charge voltage and the ambient temperature.

At a float voltage of 2.25-2.30 V/cell and an ambient temperature of 68-77°F (20-25°C), PG-Series 6V & 12V batteries are designed to yield a service life of up to 10 years before the capacity drops to about 60%.

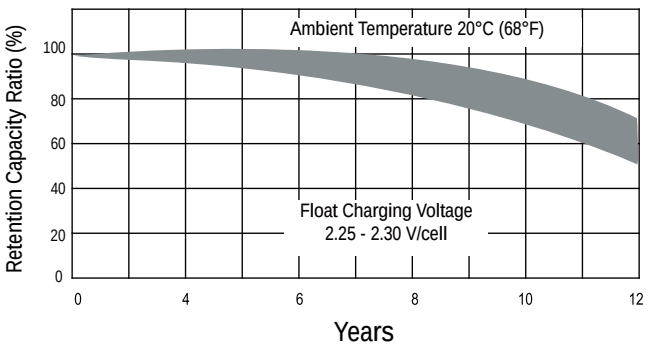



**Figure 4: Life characteristics in standby use**

The graph in Figure 5 shows life characteristics in float (standby) service for ambient temperatures ranging from 60-130°F (15-55°C).

If prevailing ambient temperatures are well above 68-77°F (20-25°C) the life expectancy of this type of battery in float service depends greatly on temperature compensated charging. The typical temperature coefficient is -3mV/cell/°C. The graph in Figure 5 is based on temperature compensated charging.

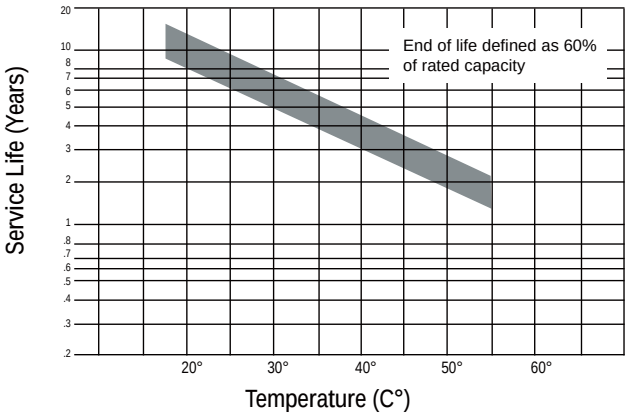



**Figure 5: Service life at various ambient temperatures**

## Effects of Temperature

Actual capacity is a function of ambient temperature and rate of discharge. At 68°F (20°C) rated capacity is 100%. Above this temperature capacity increases, below it capacity decreases as temperature falls.

While raising ambient temperatures increases capacity, it also decreases useful service life. It is estimated that battery life is halved for each 18°F (10°C) above normal room temperature.

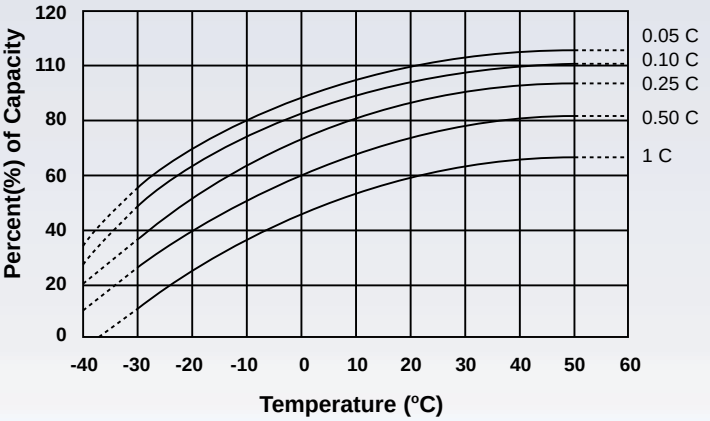



**Figure 6: Effects of temperature on capacity**

## Shelf Life and Storage

Special alloy electrodes and high purity lead impart low self-discharge rates and, consequently, a long shelf life. The rate of self-discharge is approximately 3% per month when batteries are stored at 68°F (20°C). At low temperatures it is nearly negligible, at higher ones self-discharge increases.

To maximize battery life and performance:

- Recharge after each use
- Do not store in a discharged state
- Store at 68°F (20°C) or lower
- Recharge every 6 months if not used

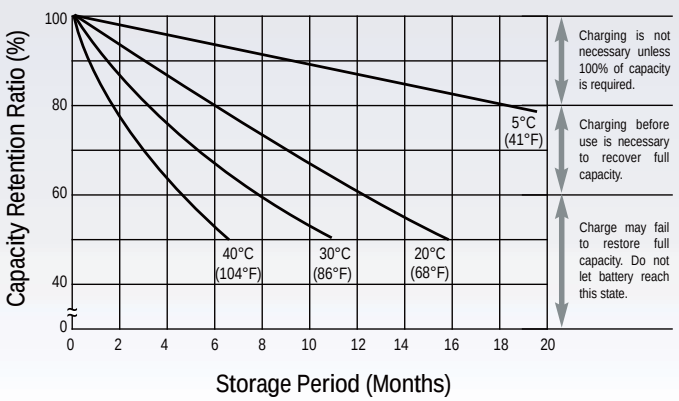



**Figure 7: Shelf life and storage**

## Charging

Dependable performance and long service life depend upon correct charging. Faulty procedures or inadequate charging equipment, result in decreased battery life and/or unsatisfactory performance. The selection of suitable charging circuits and methods is as important as choosing the right battery for the application.

To charge a Power-Sonic battery, a DC voltage higher than the open-circuit voltage of 2.15 is applied to the terminals of the battery. Depending on the state of charge, the cell may temporarily be lower (after discharge) or higher (immediately after charging) than 2.15 V/cell.

Power-Sonic batteries may be charged by using any of the conventional charging techniques. To obtain maximum service life and capacity, along with acceptable recharge time and economy, constant voltage-current limited charging is recommended.

### Constant Voltage Charging

Constant voltage - current limited charging is the recommended charging method for Power-Sonic batteries. Care must be taken to adhere to the charge voltage and initial charge current limits.

### Constant Current Charging

It is generally not a recommended charge method. It is, however, an effective method for occasional boost-charging of batteries in series after extended storage or prior to a capacity verification. Charge time must be strictly controlled to avoid detrimental over-charge.

### Taper Charging

This is the simplest, least expensive charging method. Either quasi-constant voltage or quasi-constant current characteristics can be built into the charger through combination of transformer, diode and resistance. Of the two, constant potential charging is preferable.

### Float-Charge Applications

In this set-up the battery and the load are connected in parallel with the rectified power source. A constant voltage - current limited charger is recommended. Proper voltage is 2.25 - 2.30 V/cell at 77°F (25°C). Initial charge current should be limited to 0.3C amps (30% of rated capacity).

## Supplemental Boost Charge

Batteries which have been in storage for extended periods of time will lose capacity due to their self-discharge characteristics. To restore full capacity and/or ensure that permanent capacity loss does not occur, a properly timed constant voltage type 'boost' charge is recommended. For storage temperatures of 68-86°F (20-30°C) such top-off charges should be applied every 6 months, at higher ambients, every 3 months. Avoid storage temperatures above 86°F (30°C), wherever possible.

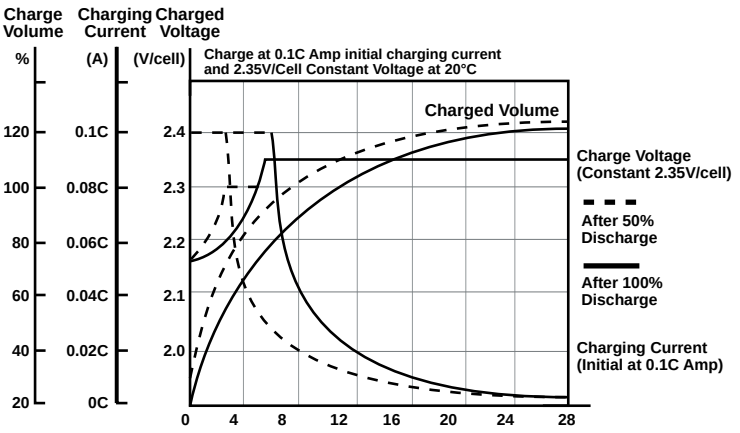



**Figure 8: Charging characteristics in stand-by mode**

## Cyclic Applications

Cyclic use requires a fast charge time and protection against over-charge and over-discharge. Charge voltage should be 2.45 ± 0.05 V/cell at 77°F (25°C). Initial current should be limited to 0.2C.

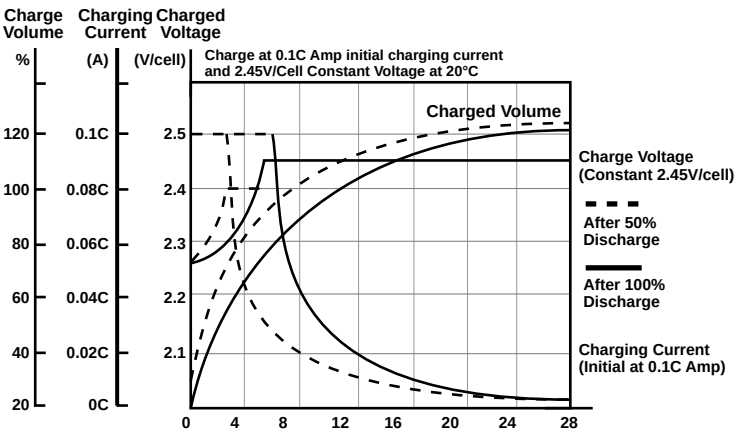



**Figure 9: Charging characteristics in cycle charge mode**

## Temperature Compensation

Power-Sonic batteries perform well both at low and high temperatures. At low temperatures, however, charge efficiency is reduced; at temperatures above 113°F (45°C), charge efficiency increases so rapidly that there is a danger of thermal runaway if temperature compensation is not precise.

The effect of temperature on charge voltage is less critical in float applications than in cyclic use, where relatively high charge currents are applied for the purpose of short recharge times.

| Temperature | Cyclic Use (V) | Float Use (V) |
|---|---|---|
| -40°F (-40°C) | 2.85 – 2.95 | 2.38 – 2.43 |
| -4°F (-20°C) | 2.67 – 2.77 | 2.34 – 2.39 |
| 14°F (-10°C) | 2.61 – 2.71 | 2.32 – 2.37 |
| 32°F (0°C) | 2.55 – 2.65 | 2.30 – 2.35 |
| 50°F (10°C) | 2.49 – 2.59 | 2.28 – 2.33 |
| 68°F (20°C) | 2.43 – 2.53 | 2.26 – 2.31 |
| 77°F (25°C) | 2.40 – 2.50 | 2.25 – 2.30 |
| 86°F (30°C) | 2.37 – 2.47 | 2.24 – 2.29 |
| 104°F (40°C) | 2.31 – 2.41 | 2.22 – 2.27 |
| 122°F (50°C) | 2.25 – 2.35 | 2.20 – 2.25 |

**Table 2: Recommended charge voltages for different temperatures.**

Temperature effects should definitely be considered when designing or selecting a charging system. Temperature compensation is desirable in the charging circuit, especially when operating outside the range of 41-95°F (5-35°C). The temperature coefficient is -2mV/cell/°C below 68°F (20°C) in float use and -6mV/cell/ °C below 68°F (20°C) in cyclic use. For higher temperatures the charge voltage should be correspondingly decreased.

# POWER PS SONIC®

# Rechargeable Batteries

POWER PS SONIC

## General Purpose Design

* FR: UL94 V-0 flame retardant case & cover

| Model | Nominal Voltage V | Nominal Capacity A.H. | Current @ 20-hr. rate mA | Length | | Width | | Height | | Ht. Over Terminal | | Weight | | Standard Terminals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | in. | mm | in. | mm | in. | mm | in. | mm | lbs. | kgs. | |
| PS-260 | 2 | 6.0 | 300 | 1.97 | 50 | 1.34 | 34 | 3.94 | 100 | 4.13 | 105 | 0.89 | 0.40 | F1 |
| PS-445 | 4 | 4.5 | 225 | 1.89 | 48 | 2.09 | 53 | 3.70 | 94 | 3.86 | 98 | 1.30 | 0.59 | F2 |
| PS-490 | 4 | 9.0 | 450 | 4.01 | 102 | 1.73 | 44 | 3.74 | 95 | 4.02 | 102 | 2.20 | 1.00 | F2 |
| PS-4100 | 4 | 10.0 | 500 | 4.01 | 102 | 1.97 | 50 | 3.70 | 94 | 3.85 | 98 | 2.50 | 1.13 | F1 |
| PS-605 | 6 | 0.5 | 25 | 2.24 | 57 | 0.55 | 14 | 1.97 | 50 | 1.97 | 50 | 0.20 | 0.09 | WL |
| PS-610 | 6 | 1.1 | 55 | 2.00 | 51 | 1.65 | 42 | 2.00 | 51 | 2.20 | 56 | 0.44 | 0.20 | F1 |
| PS-612 | 6 | 1.4 | 70 | 3.82 | 97 | 0.94 | 24 | 2.00 | 51 | 2.20 | 56 | 0.66 | 0.30 | F1 |
| PS-621 | 6 | 2.0 | 100 | 1.69 | 43 | 1.46 | 37 | 2.99 | 76 | 2.99 | 76 | 0.75 | 0.34 | F1 |
| PS-628 | 6 | 2.9 | 145 | 2.60 | 66 | 1.30 | 33 | 3.86 | 98 | 4.06 | 103 | 1.30 | 0.59 | F1 |
| PS-630 | 6 | 3.5 | 175 | 5.28 | 134 | 1.34 | 34 | 2.35 | 60 | 2.56 | 65 | 1.37 | 0.62 | F1 |
| PS-632 | 6 | 3.5 | 175 | 2.60 | 66 | 1.30 | 33 | 4.65 | 118 | 4.80 | 122 | 1.65 | 0.83 | F1 |
| PS-640 | 6 | 4.5 | 225 | 2.76 | 70 | 1.86 | 47 | 3.94 | 100 | 4.25 | 108 | 1.60 | 0.73 | F1 |
| PS-650LS & LF | 6 | 5.0 | 250 | 2.64 | 67 | 2.64 | 67 | 3.94 | 100 | 4.64 | 118 | 1.80 | 0.82 | F1 or SP |
| PS-665 | 6 | 6.5 | 325 | 3.86 | 98 | 2.20 | 56 | 3.78 | 96 | 4.02 | 102 | 2.70 | 1.22 | FP |
| PS-670 | 6 | 7.0 | 350 | 5.95 | 151 | 1.34 | 34 | 3.70 | 94 | 3.94 | 100 | 2.42 | 1.10 | F1 |
| PS-682 | 6 | 9.0 | 450 | 3.86 | 98 | 2.20 | 56 | 4.65 | 118 | 4.72 | 120 | 3.20 | 1.45 | F1 |
| PS-6100 | 6 | 12.0 | 600 | 5.95 | 151 | 2.00 | 51 | 3.70 | 94 | 3.86 | 98 | 4.30 | 1.95 | F1 or F2 |
| PS-6120FP | 6 | 13.0 | 650 | 4.25 | 108 | 2.80 | 71 | 5.55 | 141 | 5.55 | 141 | 4.80 | 2.18 | FP |
| PS-6200 | 6 | 20.0 | 1000 | 6.18 | 157 | 3.27 | 83 | 4.92 | 125 | 4.92 | 125 | 7.10 | 3.22 | NB1 |
| PS-6360 | 6 | 36.0 | 1800 | 6.25 | 159 | 3.35 | 85 | 6.50 | 165 | 6.93 | 176 | 12.10 | 5.49 | F2 or NB1 |
| PS-62000 | 6 | 210.0 | 10500 | 12.05 | 306 | 6.65 | 169 | 8.65 | 220 | 8.96 | 228 | 63.93 | 29.00 | T8 |
| PS-832 | 8 | 3.2 | 160 | 5.29 | 134 | 1.44 | 36.5 | 2.49 | 63 | 2.70 | 69 | 1.58 | 0.72 | F1 |
| PS-1208 | 12 | 0.8 | 40 | 3.78 | 96 | 0.98 | 25 | 2.44 | 62 | n/a | n/a | 0.77 | 0.35 | WL |
| PS-1212 | 12 | 1.4 | 70 | 3.78 | 96 | 1.69 | 43 | 2.04 | 52 | 2.28 | 58 | 1.20 | 0.54 | F1 |
| PS-1220 | 12 | 2.5 | 125 | 7.00 | 178 | 1.38 | 35 | 2.36 | 60 | 2.56 | 65 | 2.10 | 0.95 | F1 |
| PS-1221S | 12 | 2.0 | 100 | 5.91 | 150 | 0.80 | 20 | 3.52 | 89 | n/a | n/a | 1.60 | 0.73 | F1/0 |
| PS-1223 | 12 | 2.3 | 115 | 7.17 | 182 | 0.94 | 24 | 2.40 | 61 | 2.40 | 61 | 1.50 | 0.68 | PC |
| PS-1227 | 12 | 2.9 | 145 | 3.11 | 79 | 2.20 | 56 | 3.90 | 99 | 4.13 | 105 | 2.40 | 1.09 | F1 |
| PS-1228 | 12 | 2.8 | 140 | 5.24 | 133 | 1.30 | 33 | 3.82 | 97 | 4.09 | 104 | 2.60 | 1.18 | F1 |
| PS-1229 | 12 | 2.9 | 145 | 7.00 | 178 | 1.38 | 35 | 2.36 | 60 | 2.60 | 66 | 2.30 | 1.04 | F1 |
| PS-1230 | 12 | 3.4 | 170 | 5.24 | 133 | 2.64 | 67 | 2.36 | 60 | 2.60 | 66 | 2.90 | 1.32 | F1 |
| PS-1238 | 12 | 3.8 | 190 | 7.68 | 195 | 1.85 | 47 | 2.91 | 74 | 2.99 | 76 | 3.50 | 1.59 | F1 |
| PS-1250 | 12 | 5.0 | 250 | 3.54 | 90 | 2.76 | 70 | 3.98 | 101 | 4.21 | 107 | 3.50 | 1.59 | F1 or F2 |
| PS-1270 | 12 | 7.0 | 350 | 5.95 | 151 | 2.56 | 65 | 3.70 | 94 | 3.86 | 98 | 4.80 | 2.18 | F1 or F2 |
| PS-1278HD | 12 | 7.8 | 390 | 5.95 | 151 | 2.56 | 65 | 3.68 | 93.5 | 3.90 | 99 | 5.51 | 2.50 | F2 |
| PS-1280 | 12 | 8.0 | 400 | 5.95 | 151 | 2.56 | 65 | 3.72 | 94.5 | 3.90 | 99 | 5.60 | 2.54 | F1 or F2 |
| PS-1282L | 12 | 9.0 | 450 | 7.72 | 196 | 2.20 | 56 | 4.65 | 118 | 4.65 | 118 | 6.90 | 3.13 | F1 |
| PS-1282S | 12 | 9.0 | 450 | 3.86 | 98 | 4.40 | 112 | 4.65 | 118 | 4.65 | 118 | 6.90 | 3.13 | F1 |
| PS-1290 | 12 | 9.0 | 450 | 5.95 | 151 | 2.56 | 65 | 3.70 | 94 | 3.86 | 98 | 6.00 | 2.72 | F2 or NB1 |
| PS-12100 | 12 | 12.0 | 600 | 5.95 | 151 | 4.00 | 102 | 3.70 | 94 | 3.86 | 98 | 8.14 | 3.69 | F1 or F2 |
| PS-12100H | 12 | 10.5 | 525 | 5.94 | 151 | 2.56 | 65 | 4.40 | 112 | 4.67 | 118 | 7.23 | 3.28 | F2 |
| PS-12120 | 12 | 12.0 | 600 | 5.95 | 151 | 3.86 | 98 | 3.70 | 94 | 3.94 | 100 | 7.92 | 3.59 | F2 or NB1 |
| PS-12120L | 12 | 12.0 | 600 | 8.45 | 215 | 2.75 | 70 | 5.75 | 146 | 5.75 | 146 | 9.50 | 4.32 | FP |
| PS-12140 | 12 | 14.0 | 700 | 5.95 | 151 | 3.86 | 98 | 3.70 | 94 | 3.94 | 100 | 9.00 | 4.09 | F2 |
| PS-12180 | 12 | 18.0 | 900 | 7.13 | 181 | 3.00 | 76 | 6.59 | 167 | 6.59 | 167 | 12.60 | 5.72 | F2, NB2, T12 |
| PS-12180HD-M5 | 12 | 18.0 | 900 | 7.14 | 181 | 3.03 | 77 | 6.59 | 167 | 6.59 | 167 | 13.38 | 6.07 | T12 |

## General Purpose Design (Continued)

* FR: UL94 V-0 flame retardant case & cover

| Model | Nominal Voltage V | Nominal Capacity A.H. | Current @ 20-hr. rate mA | Length | | Width | | Height | | Ht. Over Terminal | | Weight | | Standard Terminals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | in. | mm | in. | mm | in. | mm | in. | mm | lbs. | kgs. | |
| PS-12200 | 12 | 20.0 | 1000 | 7.13 | 181 | 3.00 | 76 | 6.57 | 167 | 6.50 | 165 | 13.20 | 6.00 | NB1 |
| PS-12200HD-M6 | 12 | 21.0 | 1060 | 7.14 | 181 | 2.99 | 76 | 6.56 | 167 | 6.56 | 167 | 14.00 | 6.35 | T12-A |
| PS-12260 | 12 | 26.0 | 1300 | 6.56 | 167 | 6.97 | 177 | 4.92 | 125 | 4.92 | 125 | 17.00 | 7.71 | F2, NB2, T12 |
| PS-12280 | 12 | 28.0 | 1400 | 6.50 | 165 | 4.92 | 125 | 6.97 | 177 | 6.97 | 177 | 20.10 | 9.14 | NB1 |
| PS-12330 | 12 | 33.0 | 1650 | 7.72 | 196 | 5.14 | 131 | 6.22 | 158 | 7.00 | 178 | 21.40 | 9.73 | NB3 |
| PS-12350 | 12 | 35.0 | 1750 | 7.72 | 196 | 5.14 | 131 | 6.22 | 158 | 7.00 | 178 | 23.40 | 10.64 | NB3 or T6 |
| PS-12400 | 12 | 40.0 | 2000 | 7.76 | 197 | 6.50 | 165 | 6.69 | 170 | 6.69 | 170 | 29.10 | 13.20 | NB4 |
| PS-12550 | 12 | 55.0 | 2750 | 9.04 | 230 | 5.45 | 138 | 8.15 | 207 | 8.98 | 228 | 36.00 | 16.33 | U or T6 |
| PS-12750 | 12 | 75.0 | 3750 | 10.25 | 260 | 6.60 | 168 | 8.15 | 207 | 8.98 | 228 | 50.60 | 22.95 | U or T6 |
| PS-121000 | 12 | 100.0 | 5000 | 12.00 | 305 | 6.60 | 168 | 8.15 | 207 | 8.98 | 228 | 68.00 | 30.84 | U or T6 |
| PS-121100 | 12 | 110.0 | 5500 | 13.00 | 330 | 6.73 | 171 | 8.35 | 212 | 8.66 | 220 | 69.50 | 31.52 | T11 |
| PS-121400FR* | 12 | 140.0 | 7000 | 13.50 | 343 | 6.73 | 171 | 10.80 | 274 | 11.15 | 283 | 99.00 | 44.91 | T11 |
| PS-122500 | 12 | 260.0 | 13000 | 20.55 | 522 | 10.55 | 268 | 8.66 | 220 | 8.90 | 226 | 161.00 | 73.00 | T11 |

## High-Rate Discharge Design / PSH Series

* FR: UL94 V-0 flame retardant case & cover

| Model | Nominal Voltage V | Nominal Capacity A.H. | Current @ 20-hr. rate mA | Length | | Width | | Height | | Ht. Over Terminal | | Weight | | Standard Terminals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | in. | mm | in. | mm | in. | mm | in. | mm | lbs. | kgs. | |
| PSH-655 FR* | 6 | 5.5 | 275 | 2.76 | 70 | 1.85 | 47 | 3.94 | 100 | 4.17 | 106 | 2.10 | 0.95 | F1 |
| PSH-1255 FR* | 12 | 6.0 | 300 | 3.54 | 90 | 2.76 | 70 | 3.98 | 101 | 4.21 | 107 | 4.00 | 1.81 | F2 |
| PSH-1280 FR* | 12 | 8.5 | 400 | 5.95 | 151 | 2.56 | 65 | 3.72 | 94.5 | 3.90 | 99 | 5.75 | 2.61 | F2 |
| PSH-12100 FR* | 12 | 10.5 | 525 | 5.94 | 151 | 2.56 | 65 | 4.37 | 111 | 4.61 | 117 | 7.00 | 3.18 | F2 |
| PSH-12180 FR* | 12 | 21.0 | 1050 | 7.14 | 181 | 3.03 | 77 | 6.59 | 167 | 6.59 | 167 | 13.20 | 5.99 | NB2 |

## High-Rate Discharge, Long Life Design / PHR Series

* FR: UL94 V-0 flame retardant case & cover

| Model | Nominal Voltage (V) | Watts per Cell @ 15-min. | Rated Capacity (A.H.) 20-hr. | Length | | Width | | Height | | Ht. Over Terminal | | Weight | | Standard Terminals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | in. | mm | in | mm | in | mm | in | mm | lbs. | kgs. | |
| PHR-1236* | 12 | 36 | 8.5 | 5.95 | 151 | 2.56 | 65 | 3.68 | 93.5 | 3.90 | 99 | 5.3 | 2.4 | F2 |
| PHR-1290* | 12 | 90 | 21 | 7.14 | 181 | 2.99 | 76 | 6.56 | 167 | 6.56 | 167 | 14.0 | 6.35 | T12-A |
| PHR-12100* | 12 | 93 | 27 | 6.46 | 164 | 4.92 | 125 | 6.89 | 175 | 6.50 | 165 | 20.9 | 9.48 | T12 |
| PHR-12150* | 12 | 150 | 36 | 7.68 | 195 | 5.12 | 130 | 6.46 | 164 | 6.57 | 167 | 22.5 | 10.2 | T6 |
| PHR-12200* | 12 | 225 | 58 | 9.02 | 229 | 5.43 | 138 | 7.87 | 200 | 7.99 | 203 | 38.1 | 17.3 | T6 |
| PHR-12300* | 12 | 324 | 82 | 10.20 | 259 | 6.61 | 168 | 8.19 | 208 | 8.31 | 211 | 52.5 | 23.8 | T6 |
| PHR-12350* | 12 | 370 | 95 | 12.00 | 305 | 6.61 | 168 | 8.15 | 207 | 8.27 | 210 | 60.4 | 27.4 | T6 |
| PHR-12400* | 12 | 430 | 110 | 12.81 | 326 | 6.69 | 170 | 8.39 | 213 | 8.50 | 216 | 69.2 | 31.4 | T8 |
| PHR-12500* | 12 | 492 | 150 | 13.19 | 335 | 6.77 | 172 | 10.83 | 275 | 10.94 | 278 | 92.6 | 42.0 | T8 |
| PHR-12550* | 12 | 539 | 155 | 13.19 | 335 | 6.77 | 172 | 10.83 | 275 | 10.94 | 278 | 93.5 | 42.4 | T8 |

## Long Life Design / PG Series

* FR: UL94 V-0 flame retardant case & cover

| Model | Nominal Voltage V | Rated Capacity (A.H.) | | | Length | | Width | | Height | | Ht. Over Terminal | | Weight | | Standard Terminals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10-hr. | 5-hr. | 1-hr. | in. | mm | in. | mm | in. | mm | in. | mm | lbs. | kgs. | |
| PG-6V210 FR* | 6 | 210.0 | 180.5 | 126.0 | 12.70 | 323 | 7.00 | 178 | 8.98 | 228 | 9.21 | 234 | 71.6 | 32.5 | T11 |
| PG-12V28 FR* | 12 | 28.0 | 25.5 | 18.6 | 6.56 | 167 | 6.96 | 177 | 4.92 | 125 | 4.92 | 125 | 18.5 | 8.4 | T12 |
| PG-12V35 FR* | 12 | 35.0 | 32.5 | 27.0 | 7.72 | 196 | 5.10 | 130 | 6.22 | 158 | 6.97 | 177 | 24.5 | 11.1 | T6 |
| PG-12V42 FR* | 12 | 42.0 | 36.0 | 25.2 | 7.76 | 197 | 6.50 | 165 | 6.69 | 170 | 6.14 | 156 | 32.0 | 14.5 | T6 |
| PG-12V55 FR* | 12 | 56.0 | 47.5 | 33.0 | 9.04 | 230 | 5.45 | 138 | 8.15 | 207 | 8.43 | 214 | 36.0 | 16.3 | T6 |
| PG-12V75 FR* | 12 | 75.0 | 64.5 | 45.0 | 13.70 | 348 | 6.57 | 167 | 7.00 | 178 | 6.73 | 171 | 54.0 | 24.54 | T6 |
| PG-12V75T FR* | 12 | 75.0 | 64.5 | 45.0 | 10.24 | 260 | 6.61 | 168 | 8.27 | 210 | 8.51 | 216 | 54.0 | 24.54 | T6 |
| PG-12V100 FR* | 12 | 100.0 | 87.0 | 60.8 | 12.05 | 306 | 6.61 | 168 | 8.27 | 210 | 8.51 | 216 | 69.5 | 31.5 | T6 |
| PG-12V103 FR* | 12 | 103.0 | 88.5 | 61.8 | 13.00 | 330 | 6.80 | 173 | 8.35 | 212 | 8.66 | 220 | 70.0 | 31.8 | T11 |
| PG-12V120 FR* | 12 | 124.0 | 106.5 | 74.4 | 16.14 | 410 | 6.97 | 177 | 8.30 | 211 | 8.86 | 225 | 82.0 | 37.2 | T11 |
| PG-12V140 FR* | 12 | 144.0 | 120.5 | 84.0 | 13.50 | 343 | 6.73 | 171 | 10.79 | 274 | 11.02 | 280 | 101.0 | 45.9 | T11 |
| PG-12V150 FR* | 12 | 153.0 | 131.5 | 91.8 | 19.10 | 485 | 6.70 | 170 | 9.53 | 242 | 8.82 | 224 | 103.0 | 46.7 | T11 |
| PG-12V200 FR* | 12 | 210.0 | 180.5 | 126.0 | 20.55 | 522 | 9.45 | 240 | 8.58 | 218 | 8.82 | 224 | 141.0 | 64.1 | T11 |

# AGM Deep Cycle Batteries / PDC Series

| Model | Nominal Voltage | Rated Capacity AH | | Length | | Width | | Height | | Total Height | | Weight | | Terminal Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 20-hr | 10-hr | in. | mm. | in. | mm. | in. | mm. | in. | mm. | lbs. | kgs. | |
| PDC-1275 | 12 | 7.5 | 7.2 | 5.94 | 151 | 2.56 | 65 | 3.72 | 94.5 | 3.94 | 100 | 5.5 | 2.5 | F2 |
| PDC-1285 | 12 | 8.5 | 8.0 | 5.94 | 151 | 2.56 | 65 | 3.72 | 94.5 | 3.94 | 100 | 6.0 | 2.7 | F2 |
| PDC-12140 | 12 | 14.0 | 13.0 | 5.96 | 151.5 | 3.92 | 100 | 3.82 | 97 | 3.98 | 101 | 9.5 | 4.3 | F2 |
| PDC-12200 | 12 | 21.0 | 20.0 | 7.15 | 181.5 | 3.01 | 77 | 6.73 | 171 | 6.73 | 171 | 15 | 6.9 | B (T12) |
| PDC-12260 | 12 | 28.0 | 26.0 | 6.56 | 166.5 | 6.89 | 175 | 4.92 | 125 | 4.92 | 125 | 21 | 9.4 | NB |
| PDC-12260H | 12 | 26.0 | 24.0 | 6.50 | 165 | 4.92 | 125 | 6.89 | 175 | 6.89 | 175 | 21 | 9.5 | B (T12) |
| PDC-12350 | 12 | 35.0 | 33.0 | 7.68 | 195 | 5.12 | 130 | 6.46 | 164 | 7.09 | 180 | 25 | 11.2 | NB |
| PDC-12400 | 12 | 40.0 | 38.0 | 7.76 | 197 | 6.50 | 165 | 6.69 | 170 | 6.69 | 170 | 32 | 14.5 | B (T6) |
| PDC-12600 | 12 | 60.0 | 55.0 | 9.04 | 230 | 5.45 | 138 | 8.27 | 210 | 8.66 | 220 | 39 | 17.7 | U (T9) |
| PDC-12800 | 12 | 80.0 | 75.0 | 10.24 | 260 | 6.61 | 168 | 8.27 | 210 | 9.06 | 230 | 50 | 22.7 | U (T14) |
| PDC-121000 | 12 | 100 | 92.0 | 12.05 | 306 | 6.61 | 168 | 8.27 | 210 | 8.50 | 216 | 61 | 27.5 | U (T14) |
| PDC-121100 | 12 | 107 | 100.0 | 12.99 | 330 | 6.81 | 173 | 8.46 | 215 | 8.66 | 220 | 67 | 30.4 | B (T6) |
| PDC-122000 | 12 | 214 | 200.0 | 20.55 | 522 | 9.45 | 240 | 8.58 | 218 | 8.82 | 224 | 138 | 62.5 | B (T11) |

# Power-Gel Long Life Batteries / DCG Series

| Model | Nominal Voltage | Rated Capacity (AH) | | | | Approx. Dimension | | | | | | | | Approx. Weight | | Terminal Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 20HR | 10HR | 5HR | 1HR | Length | | Width | | Height | | Total Height | | | | |
| | | 1.80V/cell | 1.80V/cell | 1.75V/cell | 1.60V/cell | mm | in. | mm | in. | mm | in. | mm | in. | kg | lbs | |
| DCG12-26 | 12 | 26 | 24 | 21 | 14 | 167 | 6.56 | 175 | 6.89 | 125 | 4.92 | 125 | 4.92 | 9.0 | 20 | T12 |
| DCG12-32 | 12 | 32 | 28 | 25 | 17 | 195 | 7.68 | 130 | 5.12 | 164 | 6.46 | 180 | 7.09 | 10.7 | 24 | T6 or NB |
| DCG12-38 | 12 | 38 | 35 | 30 | 21 | 197 | 7.76 | 165 | 6.50 | 170 | 6.69 | 170 | 6.69 | 13.5 | 30 | T6 |
| DCG12-50 | 12 | 50 | 47 | 40 | 28 | 230 | 9.04 | 138 | 5.45 | 210 | 8.27 | 220 | 8.66 | 16.7 | 37 | T6 or U |
| DCG12-70 | 12 | 70 | 65 | 56 | 39 | 260 | 10.24 | 168 | 6.61 | 210 | 8.27 | 228 | 8.98 | 23.0 | 51 | T6 or U |
| DCG12-85 | 12 | 85 | 78 | 68 | 47 | 306 | 12.05 | 168 | 6.61 | 210 | 8.27 | 213 | 8.38 | 27.1 | 60 | T6 |
| DCG12-100 | 12 | 100 | 93 | 80 | 55 | 330 | 12.99 | 173 | 6.81 | 212 | 8.35 | 220 | 8.66 | 31.0 | 68 | T11 |
| DCG12-110 | 12 | 110 | 102 | 88 | 61 | 410 | 16.14 | 177 | 6.97 | 225 | 8.86 | 225 | 8.86 | 36.0 | 79 | T11 |
| DCG12-125 | 12 | 125 | 121 | 104 | 72 | 344 | 13.54 | 171 | 6.73 | 274 | 10.79 | 280 | 11.02 | 47.3 | 103 | T11 |
| DCG12-140 | 12 | 140 | 126 | 108 | 74 | 485 | 19.09 | 170 | 6.69 | 240 | 9.45 | 240 | 9.45 | 44.2 | 97 | T11 |
| DCG12-200 | 12 | 200 | 186 | 160 | 110 | 522 | 20.55 | 240 | 9.45 | 218 | 8.58 | 224 | 8.82 | 62.9 | 138 | T11 |

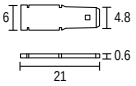
# Terminal Options

F1 FASTON
0.187" x 0.032"
quick disconnect tabs.

F2 FASTON
0.250" x 0.032"
quick disconnect tabs

FP FASTON POLARIZED
Positive: "F2", Negative: "F1"

F1/0




SP SPRING TERMINALS
Fully collapsible positive and negative contacts

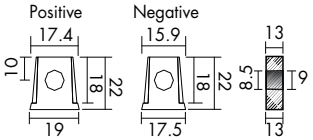
WL INSULATED WIRE LEADS
- Molex Housing 5264-02 & 5263-PBT plug on PS-605
- AMP Housing 1-480318-0 & 8116-1 on PS-1208

PC PRESSURE CONTACTS

TH TOY BATTERY CONNECTORS
H-connector PS-6120 TH

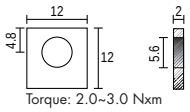
TS TOY BATTERY CONNECTORS
S-connector PS-6120 TS

U



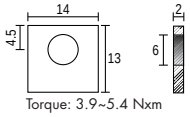

Torque: 11.0~14.7 Nxm

NB1



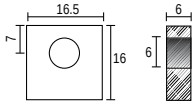

Torque: 2.0~3.0 Nxm

NB2



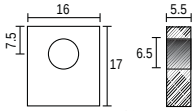

Torque: 3.9~5.4 Nxm

NB3



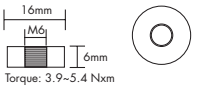

Torque: 3.9~5.4 Nxm

NB4



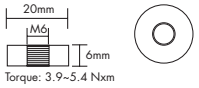

Torque: 3.9~5.4 Nxm

B, T6 THREADED INSERT - 6mm STUD



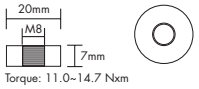

Torque: 3.9~5.4 Nxm

T8 THREADED INSERT - 6mm STUD



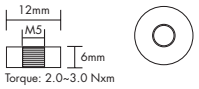

Torque: 3.9~5.4 Nxm

T11 THREADED INSERT - 8mm STUD



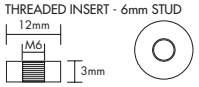

Torque: 11.0~14.7 Nxm

T12 THREADED INSERT - 5mm STUD




Torque: 2.0~3.0 Nxm

T12-A THREADED INSERT - 6mm STUD




Torque: 3.9~5.4 Nxm

# POWERSONIC®

# RECHARGEABLE LITHIUM IRON PHOSPHATE BATTERIES

## PCM Features

- Balancing function for cells
- Over-current protection
- Over-voltage protection
- Over-discharge protection
- Short-circuit protection

## Battery Features

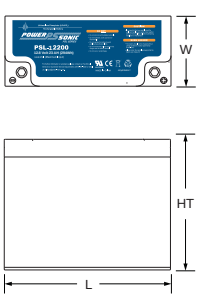
- Higher Cycle Life
- Better High-Temp Performance
- Faster Charging
- Lower Self Discharge
- BMS provides real-time communication between battery & host system (E3 models only)

## LiFePO4 Lithium Iron Phosphate Series

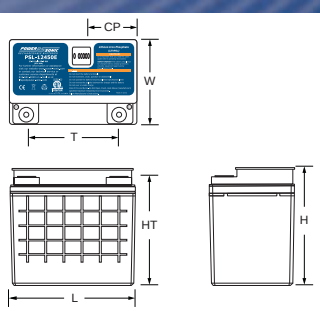
| Model | Battery Type* | Rated Voltage | Rated Capacity (AH) | Dimensions: in. (mm) | | | | | | | | Weight | | Terminal Type Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Length | | Width | | Height | | Ht. Over Terminal | | | | |
| | | V | AH | inch | mm | inch | mm | inch | mm | inch | mm | lbs. | kgs. | |
| PSL-12200 | E2/E3 | 12.8 | 23.0 | 7.13 | 181 | 3.00 | 76 | 6.54 | 166 | 6.54 | 166 | 6.16 | 2.80 | M5 |
| NEW! PSL-12450E | E3 | 12.8 | 45.0 | 7.70 | 195 | 5.20 | 130 | 7.20 | 183 | 7.20 | 183 | 12.8 | 5.8 | M6 |
| PSL-24200 | E2 | 25.6 | 22.0 | 7.70 | 195 | 5.20 | 130 | 7.20 | 183 | 7.20 | 183 | 13.0 | 5.9 | M6 |

* E2 – With simple PCM (No communications port)  E3 – With SMBus series PCM (With communications port)

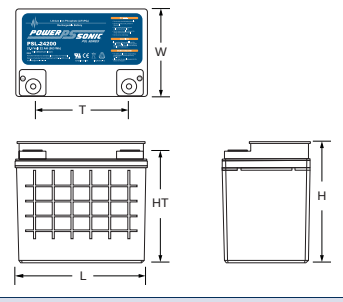
## Physical Dimensions: in (mm)




L: 7.13 (181)  W: 3.00 (76)  H: 6.54 (166)  HT: 6.54 (166)

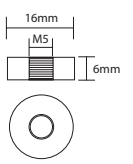



L: 7.70 (195)  W: 5.20 (130)  H: 7.20 (183)  HT: 7.20 (183)
T: 5.35 (136)  CP: 2.91 (73.96)

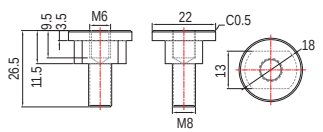



L: 7.70 (195)  W: 5.20 (130)  H: 7.20 (183)  HT: 7.20 (183)
T: 5.51 (140)

- M5
  -Threaded insert w. 5 mm stud fastener




- M6




Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.

# Engineered With Vision. Built With Care.

**Power-Sonic** has been a leading force in the global battery business for over 47 years. Our Company has thrived due to our commitment to provide high quality cost effective batteries, backed by a level of service that is second to none.

We pride ourselves on our flexibility and ability to act quickly in bringing new industry leading products to market. Power-Sonic produces and distributes an extensive range of rechargeable batteries worldwide enveloping a broad spectrum of electronic and industrial applications. We are proud to hold ISO 9001:2008 certification covering all aspects of our organization. We strive to produce batteries with superior performance characteristics and value, through advanced engineering and state-of-the art manufacturing processes, coupled with the use of premium raw materials. Power-Sonic remains dedicated to continual product development to improve the performance and reliability of our product range.

# SLA CHARGERS: Automatic Switch-Mode and Float Chargers

"A-C" Series:
Automatic chargers are "switching" type devices which operate without the use of transformers. I.C.'s control and regulate current and voltage and automatically switch from the higher fast charge voltage to the lower float voltage when batteries are very close to being fully charged. At the float voltage it is safe to leave the battery connected to the charger indefinitely, making charging pretty much fool-proof. This type of charger is ideal for cyclic applications where recharge time is critical and timely charge termination cannot be counted on. This type of charger ensures optimum battery performance & service life.

"F-C" Series:
Float chargers are designed to provide optimum life for batteries used in standby applications where charging is continuous. The chargers deliver a constant voltage of 2.25 to 2.30 volts per cell which allow the battery to seek its own current level and maintain itself in a fully charged condition. This series is best suited for burglar and fire alarm equipment, emergency lighting, memory protection, or UPS systems where the battery serves as back-up power to the AC source.

| Model | Nominal Voltage | Output Voltage Float/Fast Charge | Output Current mA | Type Automatic | Dimensions: in. (mm) | | | Weight | | Charger Design |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Length | Width | Height | lbs. | kgs. | |
| PSC-6300A-C* | 6 | 6.75 / 7.35 | 300 | Dual Rate | 2.05 (52) | 1.57 (40) | 2.64 (67) | 0.21 | 0.10 | Plug-in |
| PSC-6300F-C* | 6 | 5.0 / 6.95 | 300 | Float | 2.05 (52) | 1.57 (40) | 2.64 (67) | 0.21 | 0.10 | Plug-in |
| PSC-6500A-C* | 6 | 6.75 / 7.35 | 500 | Dual Rate | 2.05 (52) | 1.57 (40) | 2.64 (67) | 0.21 | 0.10 | Plug-in |
| PSC-6500F-C* | 6 | 5.0 / 6.95 | 500 | Float | 2.05 (52) | 1.57 (40) | 2.64 (67) | 0.21 | 0.10 | Plug-in |
| PSC-61000A-C* | 6 | 6.75 / 7.35 | 1000 | Dual Rate | 2.24 (57) | 1.73 (44) | 3.23 (82) | 0.30 | 0.14 | Plug-in |
| PSC-64000A-C | 6 | 6.75 / 7.35 | 4000 | Dual Rate | 5.43 (138) | 2.83 (72) | 1.65 (42) | 0.90 | 0.41 | Desk Top |
| PSC-12300A-C* | 12 | 13.50 / 14.70 | 300 | Dual Rate | 2.05 (52) | 1.57 (40) | 2.64 (67) | 0.21 | 0.10 | Plug-in |
| PSC-12300F-C* | 12 | 10.0 / 13.8 | 300 | Float | 2.05 (52) | 1.57 (40) | 2.64 (67) | 0.21 | 0.10 | Plug-in |
| PSC-12500A-C* | 12 | 13.50 / 14.70 | 500 | Dual Rate | 2.24 (57) | 1.73 (44) | 3.23 (82) | 0.30 | 0.14 | Plug-in |
| PSC-12500F-C* | 12 | 10.0 / 13.8 | 500 | Float | 2.05 (52) | 1.57 (40) | 2.64 (67) | 0.21 | 0.10 | Plug-in |
| PSC-12800A-C* | 12 | 13.50 / 14.70 | 800 | Dual Rate | 2.24 (57) | 1.73 (44) | 3.23 (82) | 0.30 | 0.14 | Plug-in |
| PSC-122000A-C | 12 | 13.50 / 14.70 | 1800 | Dual Rate | 5.43 (138) | 2.83 (72) | 1.65 (42) | 0.90 | 0.41 | Desk Top |
| PSC-124000A-C | 12 | 13.50 / 14.70 | 4000 | Dual Rate | 5.43 (138) | 2.83 (72) | 1.65 (42) | 0.90 | 0.41 | Desk Top |
| PSC-1210000A-C** | 12 | 13.50 / 14.70 | 10000 | Dual Rate | 8.80 (224) | 5.17 (131) | 3.33 (85) | 4.30 | 1.95 | Desk Top |
| PSC-241000A-C | 24 | 27.00 / 29.40 | 1000 | Dual Rate | 5.43 (138) | 2.83 (72) | 1.65 (42) | 0.90 | 0.41 | Desk Top |

* Note: All plug-in design have 39" (1m) leads. All desktop design have 59" (1.5m) input leads and 39" (1m) output leads. Connectors to the battery are alligator clips with insulated sleeves.

** Note: PSC-1210000A-C is only available for use with input voltages of 90-132V 60 Hz. This charger is ideally suited for batteries from 40-100AH. The charger may also be used for charging batteries from 100-140AH, but the charging time will be increased.

Power-Sonic does not offer chargers for batteries with capacities higher than 100 AH. If you have any queries or difficulties locating a suitable charger for batteries above 100 AH, our Technical Department will be happy to assist you. All data subject to change without notice.

# POWERPSSONIC®

## Ultra Sport Series


## High Performance Factory Activated Maintenance Free

## Powerful Stuff Comin' At Ya!

## BATTERY SPECIFICATIONS

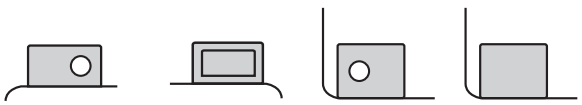
| Type | Voltage (V) | Capacity at 10HR (Ah) | CCA @ 0° F (-18° C) | CA† | Apprx. Weight (Lbs.) | Charge Current (Ah) | Dimensions In Inches (+/- 1/16 In.) Length | Width | Height | Dimensions In Millimeters (+/- 2 mm.) Length | Width | Height | Assembly Figure (per cover polarity) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PTX14LBS-FS | 12 | 12 | 150 | 275 | 10.6 | 1.4 | 6 | 3 7/16 | 5 3/4 | 150 | 87 | 145 | |
| PTX20HBS-FS | 12 | 20 | 290 | 460 | 14.6 | 2.0 | 7/8 | 3 7/16 | 6 1/8 | 175 | 87 | 155 | |
| PTX20HLBS-FS | 12 | 20 | 290 | 460 | 14.6 | 2.0 | 6 7/8 | 3 7/16 | 6 1/8 | 175 | 87 | 155 | |
| PIX30HLBS-FS | 12 | 30 | 400 | 530 | 21.6 | 3.0 | 6 9/16 | 5 | 6 7/8 | 166 | 126 | 175 | |
| PIX32HLBS-FS | 12 | 32 | 420 | 560 | 22.9 | 3.2 | 6 9/16 | 5 | 6 7/8 | 166 | 126 | 175 | |

† Cranking value determined by the use of a hand held tester. Individual results may very.

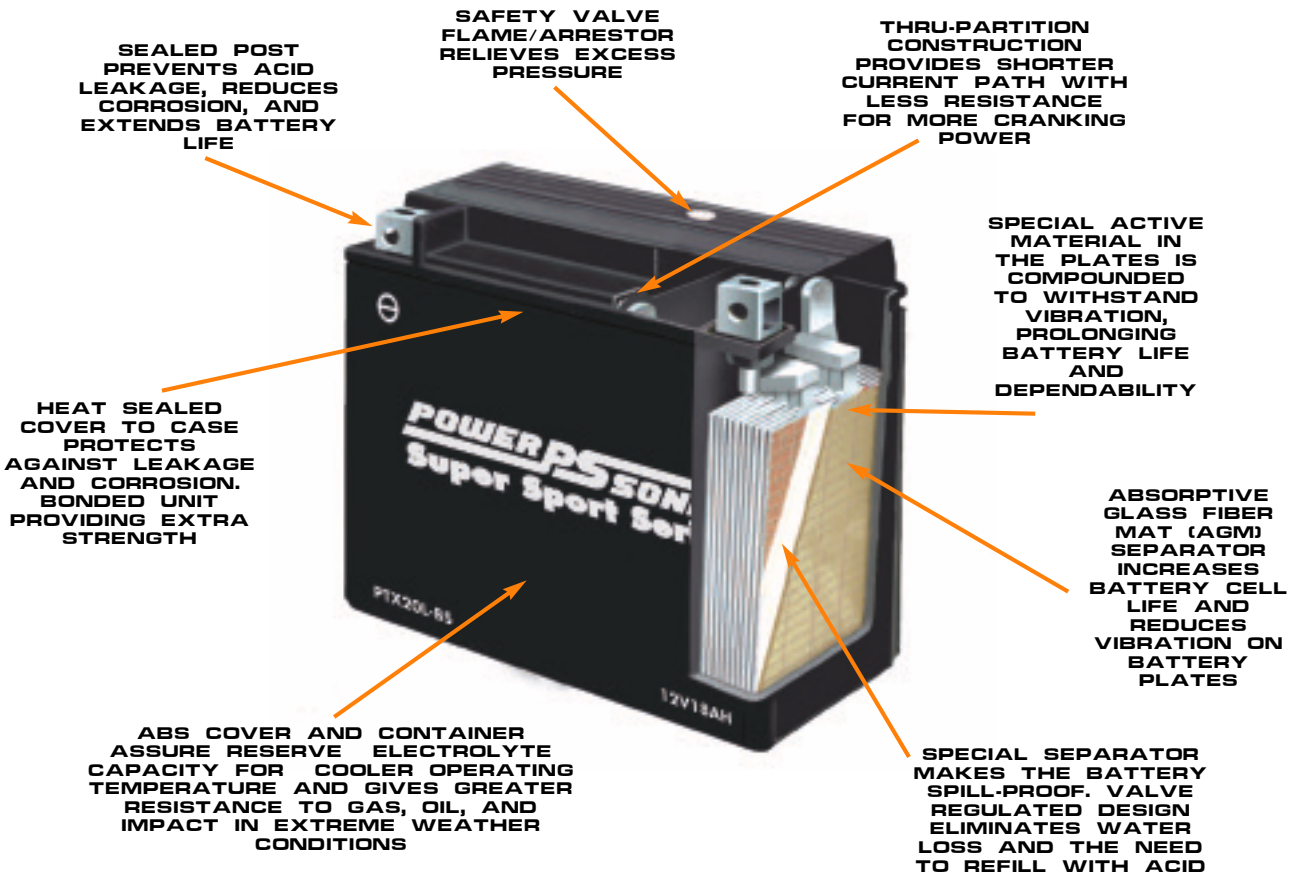
**Due to the self-discharge characteristics of this type of battery, it is imperative that they be charged within 6 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation. To prolong shelf life without charging, store batteries at 50°F (10°C) or less.**

## TERMINAL CONFIGURATIONS

**FRONT** **SIDE** **TOP** **TOP** (PTX14LBS-FS)



## BATTERY FEATURES



# APPLICATION INFORMATION

## BIG DOG

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1750** | Boxer | 01-02 | PTX20HLBS-FS |
| | Bulldog | 98-02 | PTX20HLBS-FS |
| | Huskey, Husky XT | 99-02 | PTX20HLBS-FS |
| | Mastiff | 01-02 | PTX20HLBS-FS |
| | Pibull | 98-02 | PTX20HLBS-FS |
| | Prosport, Prosport 18 | 99-02 | PTX20HLBS-FS |
| | Vintage- Classic, Light, Sport | 99-01 | PTX20HLBS-FS |
| | Wolf | 00-02 | PTX20HLBS-FS |
| **1570** | Vintage- Classic, Light, Sport | 99 | PTX20HLBS-FS |
| **1442** | Aerogilde, Aerosport | 98-99 | PTX20HLBS-FS |
| | Bulldog | 98 | PTX20HLBS-FS |
| | Pitbull | 98-99 | PTX20HLBS-FS |
| | Prosport, Prosport 18 | 98 | PTX20HLBS-FS |
| | Vintage- Classic, Light, Sport | 98 | PTX20HLBS-FS |
| **1340** | Aerogilde, Aerosport | 97 | PTX20HLBS-FS |
| | Coyote | 95-96 | PTX20HLBS-FS |
| | Proglide | 95-00 | PTX20HLBS-FS |
| | Vintage- Classic, Light, Sport | 95-97 | PTX20HLBS-FS |

## BUELL

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1200** | X1 Lightning | 99-02 | PTX20HLBS-FS |
| | S3,S3T Thunderbolt | 97-02 | PTX20HLBS-FS |
| | M2 Cyclone | 97-02 | PTX20HLBS-FS |

## EXCELSIOR-HENDERSON

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1386** | SuperX | 99-00 | PTX20HLBS-FS |

## HARLEY-DAVIDSON

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1803** | CVO FLH (Touring) | 07-16 | PIX30HLBS-FS/ PIX32HLBS-FS |
| | CVO FXD Fat Bob (Dyna) | 07-15 | PTX20HLBS-FS |
| | CVO FLST (Softail) | 07-15 | PTX20HLBS-FS |
| | FLS (Softail Slim S, Fat Boy S) | 16 | PTX20HLBS-FS |
| **1690** | FLH, FLT (Touring) | 11-16 | PIX30HLBS-FS/ PIX32HLBS-FS |
| | FXD (Dyna) | 12-16 | PTX20HLBS-FS |
| | FLS (Softail) | 12-16 | PTX20HLBS-FS |
| **1584** | FXD (Dyna) | 07-11 | PTX20HLBS-FS |
| | FXST, FLST (Softail) | 07-11 | PTX20HLBS-FS |
| | FL, FLH (Touring) | 07-10 | PIX30HLBS-FS/ PIX32HLBS-FS |
| **1450** | FXD (Dyna) | 99-06 | PTX20HLBS-FS |
| | FXST,FLST (Softail) | 00-06 | PTX20HLBS-FS |
| | FL,FLH (Touring) | 00-06 | PIX30HLBS-FS/ PIX32HLBS-FS |
| | FL,FLH (Touring) | 99 | PIX30HLBS-FS/ PIX32HLBS-FS |
| **1340** | FXD,FXST (Dyna) | 97-99 | PTX20HLBS-FS |
| | FLST (Softail) | 97-99 | PTX20HLBS-FS |
| | FL,FLH (Touring) | 97-98 | PIX30HLBS-FS/ PIX32HLBS-FS |

## HARLEY-DAVIDSON (CONTINUED)

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1250** | VRSC V-Rod | 08-16 | PTX20HLBS-FS |
| **1200** | XL,XLH (Sportster) | 04-16 | PTX14LBS-FS |
| | XL,XLH (Sportster) | 97-03 | PTX20HLBS-FS |
| | XR1200X | 09-12 | PTX14LBS-FS |
| **883** | XL,XLH (Sportster) | 04-16 | PTX14LBS-FS |
| | XL,XLH (Sportster) | 97-03 | PTX20HLBS-FS |
| **750** | Street | 14-16 | PTX14LBS-FS |
| **500** | Street | 14-16 | PTX14LBS-FS |

## HONDA

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1800** | GL1800 Gold Wing | 09-16 | PTX20HLBS-FS |
| | GL1800 Gold Wing | 01-08 | PTX20HLBS-FS |
| | NRX1800 Valkyrie Rune | 04-05 | PTX20HLBS-FS |
| | VTX1800C | 02-11 | PTX20HLBS-FS |
| | VTX1800R Retro | 02-11 | PTX20HLBS-FS |

## INDIAN

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1819** | Chief Classic, Chief Vintage, Chieftain, Roadmaster | 14-15 | PTX20HLBS-FS |
| | Cheftain, Roadmaster, Chief, Dark Horse | 16 | PTX20HLBS-FS |
| **1442** | Scout, Spirit | 02-03 | PTX20HBS-FS |
| | All Models | 99-01 | PTX20HBS-FS |

## MOTOGUZZI

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1380** | California | 13 | PTX20HLBS-FS |
| **1064** | California Classic, Vintage | -12 | PTX20HLBS-FS |
| **936** | Bellagio | -10 | PTX20HLBS-FS |

## POLARIS VICTORY

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1730** | All Models | 08-14 | PTX20HLBS-FS |
| **1507** | V92C,DC Classic | 98-04 | PTX20HLBS-FS |
| | Deluxe, Cruiser | 98-04 | PTX20HLBS-FS |
| | V92SC | 00-01 | PTX20HLBS-FS |
| | Sport Cruiser | 00-01 | PTX20HLBS-FS |
| | V92TC | 02-06 | PTX20HLBS-FS |
| | Touring Cruiser | 02-06 | PTX20HLBS-FS |
| | Vegas, Kingpin | 03-05 | PTX20HLBS-FS |

## TRIUMPH

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **2300** | Rocket III | 03-16 | PTX20HLBS-FS |
| **1600** | Thunderbird | 10-16 | PTX20HLBS-FS |

## YAMAHA

| cc | Model | Year | Battery Type |
|---|---|---|---|
| **1700** | XV1700A Road Star, Silverado | 04-09 | PTX20HLBS-FS |
| **1600** | XV1600 Road Star (All) | 99-03 | PTX20HLBS-FS |
| **1300** | XVZ13 Royal Star/ Venture (All) | 96-12 | PTX20HLBS-FS |
| | XVS13AY V-Star 1300, Stryker | 09-16 | PTX20HLBS-FS |