



DATA SHEET

MOTIVE 31XHS

MODEL **31XHS with Screw in Cap**

VOLTAGE **12**

MATERIAL **Polypropylene**

DIMENSIONS **Inches (mm)**

BATTERY **Deep-Cycle Flooded/Wet Lead-Acid Battery**

COLOR **Black**

WATERING **No Watering System Available**



WITH **T₂** TECHNOLOGY



12 VOLT

| PERCENTAGE CHARGE | SPECIFIC GRAVITY | CELL | VOLT |
|-------------------|------------------|-------|-------|
| 100 | 1.277 | 2.122 | 12.73 |
| 90 | 1.258 | 2.103 | 12.62 |
| 80 | 1.238 | 2.083 | 12.50 |
| 70 | 1.217 | 2.062 | 12.37 |
| 60 | 1.195 | 2.040 | 12.24 |
| 50 | 1.172 | 2.017 | 12.10 |
| 40 | 1.148 | 1.993 | 11.96 |
| 30 | 1.124 | 1.969 | 11.81 |

PHYSICAL SPECIFICATIONS

| | | | | | 20 | 1.098 | 1.943 | 11.66 |
|-----|------------|---------|---------|----------------------------|--|-------|---------------------|----------------------------------|
| | | | | | 10 | 1.073 | 1.918 | 11.51 |
| BCI | MODEL NAME | VOLTAGE | CELL(S) | TERMINAL TYPE ^G | DIMENSIONS ^C INCHES (mm) | | | WEIGHT ^H LBS. (kg) |
| | | | | | LENGTH | WIDTH | HEIGHT ^F | |
| | | | | | 30H | 31XHS | 12 | |

ELECTRICAL SPECIFICATIONS

| CHARGER VOLTAGE SETTINGS (AT 77°F/25°C) | | | | |
|---|-------|-------|-------|-------|
| SYSTEM VOLTAGE | 12V | 24V | 36V | 48V |
| Bulk Charge | 14.82 | 29.64 | 44.46 | 59.28 |
| Float Charge | 13.50 | 27.00 | 40.50 | 54.00 |
| Equalize Charge | 16.20 | 32.40 | 48.60 | 64.80 |

Do not install or charge batteries in a sealed or non-ventilated compartment. Constant under or overcharging will damage the battery and shorten its life as with any battery.

| ADD | SUBTRACT |
|---|---|
| 0.005 volt per cell for every 1°C below 25°C 0.0028 volt per cell for every 1°F below 77°F | 0.005 volt per cell for every 1°C above 25°C 0.0028 volt per cell for every 1°F above 77°F |

| CRANKING PERFORMANCE | | CAPACITY ^A MINUTES | | CAPACITY ^B AMP-HOURS (Ah) | | | | ENERGY (kWh) | INTERNAL RESISTANCE (mΩ) | SHORT CURRENT (amps) | CIRCUIT |
|-----------------------------------|--------------------------------|-------------------------------|-----------|--------------------------------------|-------|-------|--------|--------------|--------------------------|----------------------|---------|
| C.C.A. ^D @ 0°F (-18°C) | C.A. ^E @ 32°F (0°C) | @ 25 Amps | @ 75 Amps | 5-Hr | 10-Hr | 20-Hr | 100-Hr | 100-Hr | | | |
| — | — | 225 | 57 | 105 | 120 | 130 | 144 | 1.73 | — | — | — |

CHARGING INSTRUCTIONS

CHARGING TEMPERATURE COMPENSATION

RECYCLE RESPONSIBLY STATE OF CHARGE MEASURE OF OPEN-CIRCUIT VOLTAGE TROJAN 31XHS PERFORMANCE PERCENT CAPACITY VS. TEMPERATURE

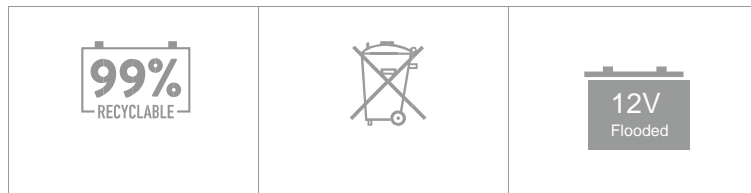
OPERATIONAL DATA

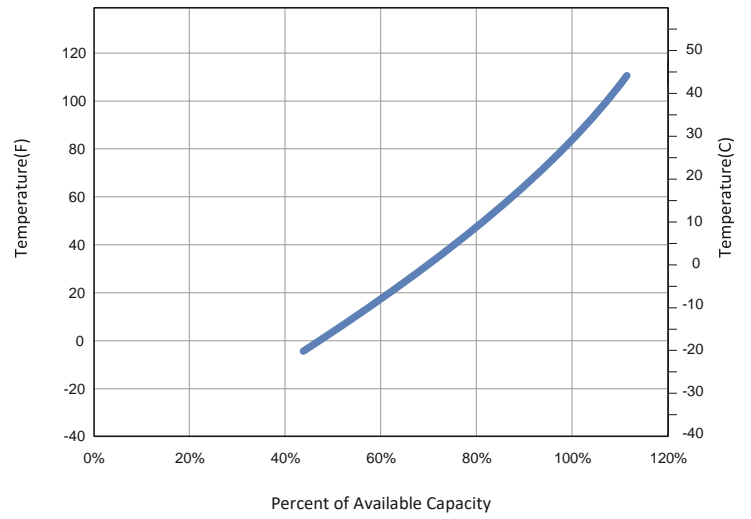
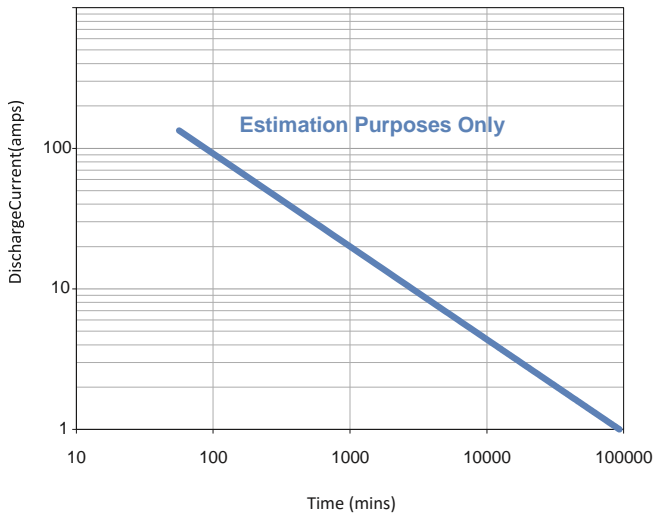
| OPERATING TEMPERATURE | SELF DISCHARGE |
|---|--|
| -4°F to 113°F (-20°C to +45°C). At temperatures below 32°F (0°C) maintain a state of charge greater than 60%. | 5 – 15% per month depending on storage temperature conditions. |

1000

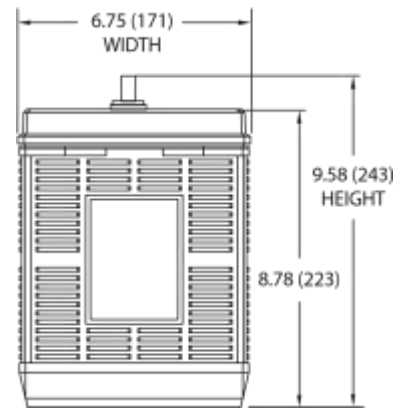
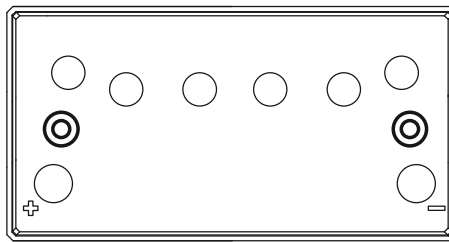
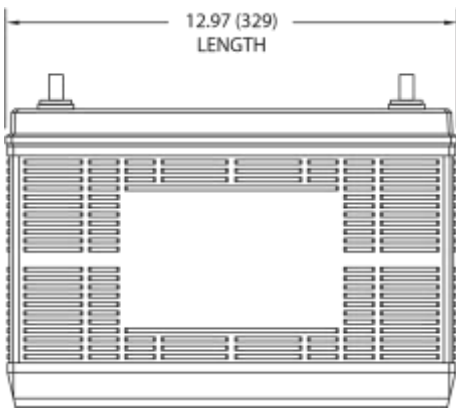
140

60






BATTERY DIMENSIONS (shown with ST)



TERMINAL CONFIGURATIONS^G

| 11 | ST | STUD TERMINAL |
|---|----|---------------|
|  | | |
| Terminal Height Inches (mm) 1.64 (16) | | |
| Torque Values in-lb (Nm) 120 – 180 (14 – 20) | | |
| Bolt 3/8" | | |

- A. The number of minutes a battery can deliver when discharged at a constant rate at 80°F (27°C) and maintain a voltage above 1.75 V/cell. Capacities are based on peak performance.
- B. The amount of amp-hours (Ah) a battery can deliver when discharged at a constant rate at 80°F (27°C) and maintain a voltage above 1.75 V/cell. Capacities are based on peak performance.
- C. Dimensions may vary depending on type of handle or terminal. Batteries should be mounted with 0.5 inches (12.7 mm) spacing minimum.
- D. C.C.A. (Cold Cranking Amps) - the discharge load in amperes which a new, fully charged battery can maintain for 30 seconds at 0°F (-18°C) at a voltage above 1.2 V/cell.
- E. C.A. (Cranking Amps) - the discharge load in amperes which a new, fully charged battery can maintain for 30 seconds at 32°F (0°C) at a voltage above 1.2 V/cell. This is sometimes referred to as marine cranking amps @ 32°F or M.C.A. @ 32°F.
- F. Height taken from bottom of the battery to the highest point on the battery. Heights may vary depending on type of terminal.
- G. Terminal images are representative only.
- H. Weight may vary.



Designed in compliance with applicable BCI, DIN, BS and IEC standards.
 Tested in compliance to BCI and IEC standards.



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