FLOODED

NATIONWIDE BATTERY

MARINE | GOLF | INDUSTRIAL | AUTO | SPECIAL APPLICATIONS | SOLAR

LEAD-CALCIUM BATTERY

KCR-13

KCR SERIES

- Voltage: 2V
- Reserve Capacity: 491 Ah@8hr rate to 1.75VPC @ 77F
- Weight: 97 lbs (44.0 kg)
- Length: 5.59 in (142 mm)
- Width: 10.44 in (265 mm)
- Height: 18.25 in (464 mm)
- Positive Thickness: 0.312in (7.9mm)
- Negative Thickness: 0.210in (5.3mm)
- Separator: Microporous with fibrous glass mat
- Container: Thermoplastic, transparent (SAN)
- Cover: High-Impact, flame retardant UL 94-V0; ASTM D-635 self-extinguishing
- Recommended Float Voltage: 2.20-2.25 VPC
- Terminals: Two, 1-inch (25 mm) square posts with 2 thru- holes

EVERY BATTERY 100% CAPACITY TESTED

FOR SWITCHGEAR & CONTROL APPLICATIONS

C&D Technologies flooded batteries are engineered to provide superior performance and reliability over the life of the product. These batteries are designed using proprietary techniques and quality components and materials for reduced maintenance and extended battery life.

C&D TECHNOLOGIES

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MODEL **KCR-13**
VOLTAGE **2V**
CAPACITY **491Ah @ hr to 1.75VPC**
CONTAINER **Thermoplastic, transparent (SAN)**
COVER **Flame-retardant, tongue-and-groove seal. UL 94-V0; ASTM D-635 self-extinguishing**
BATTERY TYPE **Lead-Calcium**

2V

PRODUCT + PHYSICAL SPECIFICATIONS

Serie	Model	Voltage	Cell(s)	Terminal Quantity	Dimensions [C] Inches (mm)			Weight Lbs. (kg)
					Length	Width	Height [F]	
KCR	**KCR-13**	**2**	**1**	2	**5.59 (142)**	**10.44 (265)**	**18.25 (464)**	**97 (44.0)**

ELECTRICAL SPECIFICATIONS

VPC	Ah @ 8hr Rate	NOMINAL RATE @ 77F (+25C) IN 1.215 SPECIFIC GRAVITY (INCLUDES CONNECTION DROP)							
		AMPERES							
		1 MIN	15 MIN	30 MIN	1 HR	1.5 HR	3 HR	4 HR	8 HR
1.75	491	654	450	350	254	203	130	106	61
1.78	477	560	404	320	235	190	124	101	59
1.81	464	466	357	289	217	177	118	97	58

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NATIONWIDE BATTERY

CHARGING INSTRUCTIONS

Charger Voltage Settings (at 77°F/25°C)					
System Voltage	2V	4V	24V	48V	125V
Bulk / Equalize Charge	2.35	4.70	28.20	56.40	141.00
Float Charge	2.25	4.50	27.00	54.00	135.00
High Voltage Alarm	2.45	4.90	29.40	58.80	147.00
Low Voltage Alarm	1.75	3.50	21.00	42.00	105.00

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.

CHARGING TEMPERATURE COMPENSATION

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

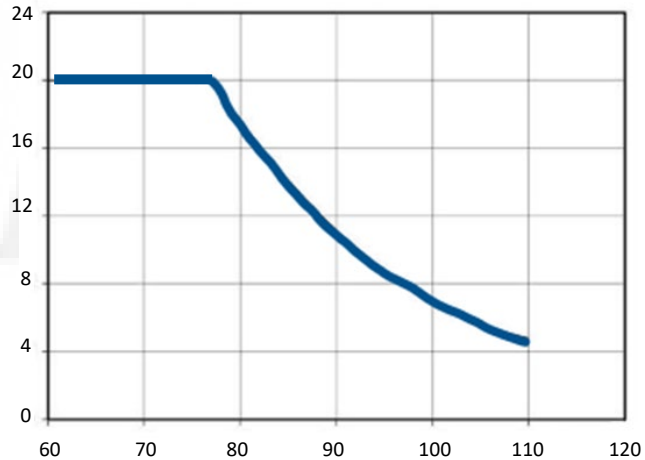
OPERATIONAL DATA

Operating Temperature	Self Discharge
Reccomended operating temperature range 60F (15 C) – 90F (32 C) Limit Operating Range 32F (0 C) – 120F (49 C)	Less than 3% per month depending on storage temperature conditions

STATE OF CHARGE MEASURE OF OPEN-CIRCUIT VOLTAGE

Percentage Charge	Cell	Specific Gravity
100	2.06 - 2.08	1.210 - 1.220
75	2.03 – 2.04	1.185 -1.195
50	2.00 – 2.01	1.160 – 1.170
25	1.97 – 1.98	1.135 – 1.145
0	1.95 or less	1.110 – 1.120

BATTERY LIFE v AMBIENT TEMPERATURE



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NATIONWIDE BATTERY

KCR Lead-Calcium Battery

FOR SWITCHGEAR & CONTROL APPLICATIONS

Capacities from 192 to 824 Ampere-hours

C&D Technologies flooded batteries are engineered to provide superior perfor-mance and reliability over the life of the product. These batteries are designed using proprietary techniques and quality components and materials for reduced maintenance and extended battery life.

FEATURES & BENEFITS

- Electrical testing to 100% capacity on every battery string prior to shipping assures performance of every battery string upon delivery
- Long life positive plates cast with a proprietary process and high-purity alloy
- 20 year environmental and seismic qualification
- Computer-controlled charging results in consistently formed plates for reliable performance out of the box (no cycling required in the field)
- Suspended positive plates permit free growth without pressure on jar and cover

SAFE OPERATION

- Flame-retardant covers enhance battery plant safety with self-extinguishing properties, LOI>32%, UL 94V-0
- Low-evaporation, flame-arrester vent to extend watering intervals and prevent external sparks from reacting with the hydrogen inside the cell

COST SAVINGS

- Transparent container allows visual inspection of plates
- Soft rubber post seal minimizes stress on post reducing maintenance requirements
- Computer controlled heli-arc welded post seals result in consistent and reliable seals for less maintenance and longer product life

APPLICATIONS

- Electric Power Generation Facilities
- Nuclear Power Plants
- Electric Utility Substations
- Emergency Systems
- Manufacturing Facilities
  - Assembly Lines
  - Process Controls
- Petrochemical processing plants
- Pipelines

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LEAD RETURN RECYCLE