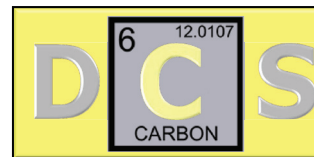




The VR Solar® Front Access, with its grid alloy and DCS Technology, coupled with an advanced Nano-Carbon enhanced negative electrode provides time proven results and unmatched, industry leading cycle life even in partial state of charge (PSoC) operation. This VRLA/AGM battery is designed to be easy to install and maintain, and offers long life and exceptional performance.



NANO-CARBON ENHANCED

## FEATURES AND BENEFITS

- High density pasted plates for high cycle life
- Nano-Carbon enhanced active material to maximize cycle performance and PSoC operation
- Low calcium Lead/Tin alloy plates for efficient gas recombination for long life in both cycling and float applications
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance
- Multicell design for economy of installation and maintenance
- Front Access threaded copper alloy inserts for reduced maintenance and increased safety
- Terminal versatility - ease of diagnostic readings with C&D Ohmic Ring®
- Reduced headspace driving higher energy density, in cabinet or rack applications
- Can be used in any orientation. Upright, side, or end mounting recommended
- High-strength, leak-free polymer container allows for non-restricted shipping: Water: non-hazardous per IMDG Amendment 27 Surface: non-hazardous per DOT-CFR title 49, 171-189 Air: IATA/ICAO, provision A67
- Helium leak tested & dielectric tested to ensure seal integrity
- UL-recognized component
- Battery hardware and removable carrying handles included
- Meets IEC 61427 for PV applications
- Multitier racks and cabinets available

## VR SOLAR® VRS12-215F

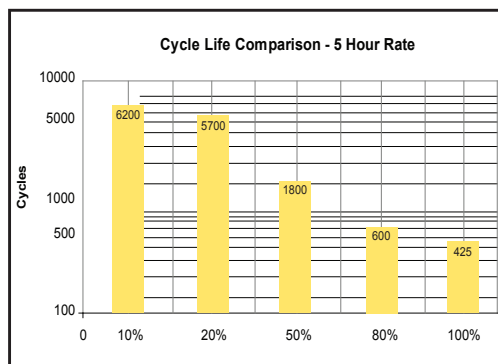
For Renewable Energy Storage



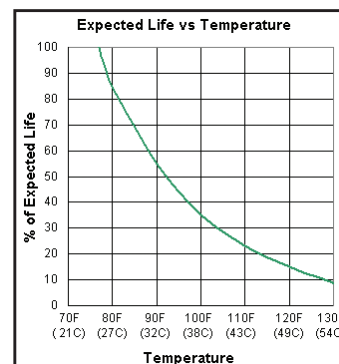
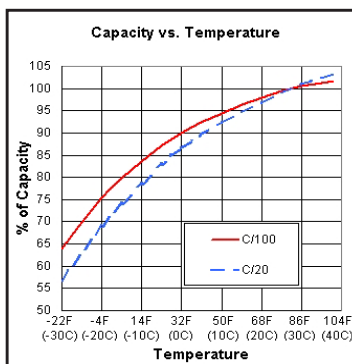
## APPLICATIONS

- Remote/Hybrid Sites
- Communications
- Off-Grid/Renewable
- Grid scale energy storage
- Other cycling applications

## INDUSTRY LEADING CYCLE LIFE



## BATTERY CHARACTERISTICS

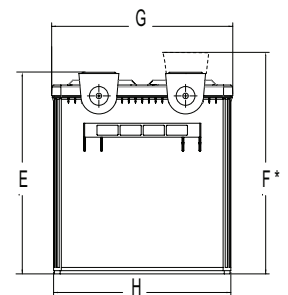
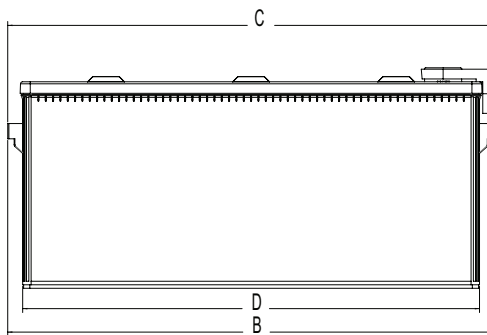
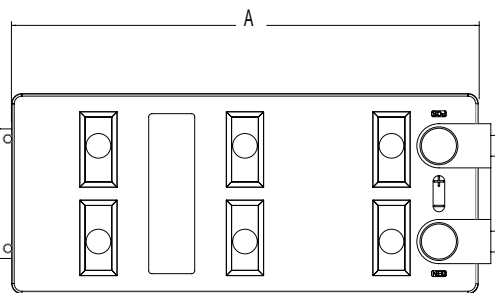


End Voltage Per Cell	Constant Current Ratings (Amperes) @ +77°F (+25°C)															
	1	2	3	4	5	6	8	10	12	16	20	24	36	48	72	100
1.75	125.0	71.5	52.67	42.25	35.20	30.17	23.50	19.30	16.42	12.69	10.40	8.79	6.00	4.56	3.11	2.28
1.80	119.0	68.5	51.00	41.00	34.40	29.50	23.06	18.90	16.04	12.43	10.15	8.58	5.86	4.48	3.07	2.24
1.85	110.0	65.0	48.67	39.50	33.30	28.67	22.38	18.40	15.63	12.13	9.90	8.33	5.69	4.35	2.96	2.16
1.90	92.0	58.0	44.33	36.25	30.60	26.33	20.50	16.85	14.33	11.06	9.03	7.63	5.25	4.02	2.73	1.98

Note: Specifications subject to change without notification. Above ratings do not include interunit connector voltage drops

## SPECIFICATIONS

<b>Cells Per Unit</b>	6
<b>Nominal Voltage Per Unit</b>	12
<b>Weight</b>	159 lbs (72.0kg)
<b>Operating Temperature Range (with temperature compensation)</b>	Discharge: -40°F (-40°C) to +160°F (+71°C) Charge: -10°F (-23°C) to +140°F (+60°C)
<b>Optimal Operating Temperature Range</b>	+74°F (+23°C) to +80°F (27°C)
<b>Recommended Maximum Charging Current Limit</b>	30 amperes per 100Ah @ C <sub>20</sub> (62.4A)
<b>Float Charging Voltage</b>	13.62 to 13.8 VDC/unit Average at +77°F (+25°C)
<b>Equalization and Cycle Service Charging Voltage</b>	14.4 to 14.8 VDC/unit Average at +77°F (+25°C)
<b>Maximum AC Ripple (Charger)</b>	0.5% RMS or 1.5% P-P of float charge voltage recommended for best results Maximum voltage allowed = 4% P-P Maximum current allowed = C <sub>20</sub> RMS (20 Amps)
<b>Self Discharge</b>	Up to 6 months at +77°F (+25°C) and then a freshening charge is required. Batteries stored at temperatures greater than +77°F (+25°C) will require recharge sooner than batteries stored at room temperature less than +77°F (+25°C). See C&D bulletin 41-7272, Self Discharge and Inventory Control for details.
<b>Temperature Compensation Factor (Charging)</b>	+3 mv/°F per cell when operating, below +77°F (+25°C) -3 mv/°F per cell when operating, above +77°F (+25°C)
<b>Terminal</b>	Threaded copper alloy insert terminal to accept 5/16"-18 bolt
<b>Terminal Hardware Torque</b>	160 in-lbs (18 N-m)



\* To top of terminal cover boot

MODEL	A		B		C		D		E		F		G		H	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
VRS12-215F	19.68	499.8	20.74	526.8	20.99	533.2	19.47	494.4	8.80	223.5	10.10	256.5	8.44	214.4	8.26	209.8

\*All dimensions are for reference only. Contact a C&D representative for complete dimensional information.

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