



VR SOLAR® SERIES

For Renewable Energy Storage
Capacities from 33 to 100 Ampere-hours



The VR Solar®, with its proprietary grid alloy and paste formulation, provides superior performance in both high cycling and float applications. This VRLA/AGM battery is designed to be easy to install and maintain, and offers long life and exceptional performance.

FEATURES AND BENEFITS

- Robust plate for extended cycle life.
- Computer generated grid design optimized for high power density.
- Low calcium grid alloy for reduced gas emissions and ease of recycling.
- Flame-arresting one-way pressure-relief vent for safety and long life.
- UL-recognized component.
- Multicell design for economy of installation and maintenance.
- Case and cover available in standard polypropylene.
- Thermally welded case-to-cover bond to eliminate leakage.
- Removable carrying handles (HIT Versions)
- Can be used in any orientation. Upright, side, or end mounting recommended.
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance.
- Not restricted for air transport - complies with IATA/ICAO Special Provision A67.
- Not restricted for surface transport – classified as non-hazardous material as related to DOT-CFR Title 49 parts 171-189.
- Low profile terminals with threaded copper alloy inserts for reduced height, reduced maintenance, and increased safety.
- Non-Hazardous, not restricted for any transportation mode (air, water or land)

SPECIFICATIONS

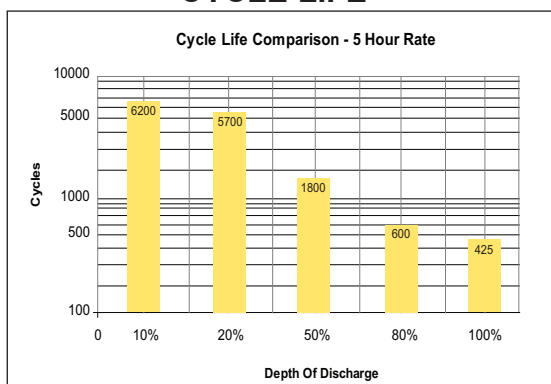
Cells Per Unit	6
Nominal Voltage Per Unit	12
Electrolyte	Absorbed H ₂ SO ₄ , SG = 1.300
Operating Temperature Range (with temperature compensation)	Discharge: -40°F (-40°C) to +160°F (71°C) Charge: -10°F (-23°C) to +140°F (60°C)
Normal Operating Temperature Range	+68°F (20°C) to +80°F (27°C)
Recommended Maximum Charging Current Limit	30 amperes per 100 Ah @ C ₂₀
Float Charging Voltage	13.5 to 13.8 VDC/unit Average at 77°F (25°C)
Equalization and Cycle Service Charging Voltage	14.4 to 14.8 VDC/unit Average at 77°F (25°C)
Maximum AC Ripple (Charger)	0.5% RMS or 1.5% P-P of float charge voltage recommended for best results
Self Discharge	Battery can be stored up to 6 months at 77°F (25°C) before a freshening charge is required. Batteries stored at temperatures greater than 77°F (25°C) will require recharge sooner than batteries stored at lower temperatures. See C&D bulletin 41-7272, Self-Discharge and Inventory Control for details.
Accessories	Inter-unit connectors, racks and cabinet systems are available
Terminal	Inserted Terminal (Copper Alloy) 10-32 UNF bolt (VRS12-33, VRS12-50) ¼-20 UNC bolt (VRS12-75, VRS12-88, VRS12-100)
Terminal Hardware Initial Torque	30 in.-lbs (3.4 N-m) (VRS12-33, VRS12-50) 110 in.-lbs (12.4 N-m) (VRS12-75, VRS12-88, VRS12-100)

PERFORMANCE RATINGS

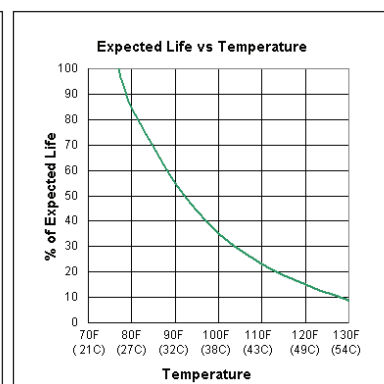
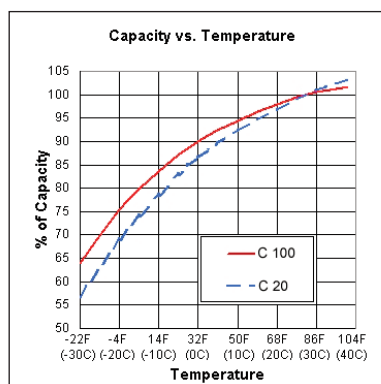
Model	Ampere Hour & Power per Unit to 1.75 Volts per cell @ 77°F (25°C)											
	2 Hr Capacity		6 Hr Capacity		12 Hr Capacity		20 Hr Capacity		72 Hr Capacity		100 Hr Capacity	
	Ah	KWh	Ah	KWh	Ah	KWh	Ah	KWh	Ah	KWh	Ah	KWh
VRS12-33IT/HIT	23.6	0.276	29.5	0.351	31.7	0.379	33.0	0.394	33.8	0.406	34.0	0.408
VRS12-50IT	35.1	0.414	44.4	0.539	47.8	0.570	50.0	0.599	51.8	0.622	52.0	0.624
VRS12-75HIT	53.2	0.636	66.3	0.787	72.0	0.861	75.0	0.898	77.6	0.930	78.0	0.936
VRS12-88HIT	58.0	0.747	76.2	0.893	83.6	0.991	88.0	1.053	92.5	1.088	95.0	1.104
VRS12-100HIT	62.0	0.768	83.7	0.997	93.5	1.117	100.0	1.200	103.5	1.240	106.0	1.250

Additional ratings and application information are available in the Battery Selection Program found at www.cdstandbypower.net

INDUSTRY LEADING CYCLE LIFE



BATTERY CHARACTERISTICS



DIMENSIONS & WEIGHTS

		A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight
	VRS12-33IT/ VRS12-33HIT	7.76 (197.1) 8.16 (207.2)	7.54 (191.4)	5.19 (131.9)	5.02 (127.6)	6.52 (165.7)	6.80 (172.7)	27 lbs. (12 kg)
	VRS12-50IT	9.0 (228.6)	8.86 (225.1)	5.48 (139.2)	5.31 (134.8)	7.89 (200.3)	8.07 (205.1)	40 lbs. (18 kg)
	VRS12-75HIT	10.27 (260.9) 10.76 (273.2)	10.17 (258.4)	6.83 (168.9)	6.65 (168.9)	7.89 (200.3)	8.01 (203.5)	54 lbs. (25 kg)
	VRS12-88HIT	12.51 (317.8)	11.95 (303.5)	6.83 (173.4)	6.65 (168.9)	7.94 (201.6)	8.06 (204.8)	64 lbs. (30 kg)
	VRS12-100HIT	13.42 (340.9)	12.75 (323.7)	6.80 (172.7)	6.54 (166.0)	8.40 (213.2)	8.52 (216.4)	69 lbs. (31 kg)
Battery Termination								
VRS12-33IT/HIT	VRS12-50IT	VRS12-75HIT	VRS12-88HIT	VRS12-100HIT				

Notes: 1.) HIT versions include a handle, 2.) [xxx.x] represents dimensions in millimeters.

C&D TECHNOLOGIES, INC.

1400 Union Meeting Road
 P.O. Box 3053 • Blue Bell, PA 19422-0858
 (215) 619-2700 • Fax (215) 619-7899 • (800) 543-8630
customersvc@cdtechno.com
www.cdtechno.com

Any data, descriptions or specifications presented herein are subject to revision by C&D Technologies, Inc. without notice. While such information is believed to be accurate as indicated herein, C&D Technologies, Inc. makes no warranty and hereby disclaims all warranties, express or implied, with regard to the accuracy or completeness of such information. Further, because the product(s) featured herein may be used under conditions beyond its control, C&D Technologies, Inc. hereby disclaims all warranties, either express or implied, concerning the fitness or suitability of such product(s) for any particular use or in any specific application or arising from any course of dealing or usage of trade. The user is solely responsible for determining the suitability of the product(s) featured herein for user's intended purpose and in user's specific application.