C&D TECHNOLOGIES
Power Solutions

C&D® DYNASTY® MAX RATE

41-9012

RETURN RECYCLE LEAD

MAXRATE™ PREMIUM PLUS

MR12-540 VALVE REGULATED LEAD ACID BATTERY

PREMIUM REPLACEMENT FOR MAXRATE 12-490 AND UPS12-530FR

FOR UPS STANDBY POWER APPLICATIONS

12V 147 AH @ 20 HR RATE,
12V 537 WATTS/CELL @ 15 MIN. RATE

FEATURES

- 10 year design life @ 25˚C (77˚F)
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance.
- 3 Year Warranty (refer Dynasty warranty card, 41-9011)
- Patented Long Life Alloy having the lowest calcium levels in the industry - minimizing grid growth, reducing gassing, and extending battery life.
- Patented UL Recognized Flame-arresting vents in each cell for safety and long life.
- Designed with the same recombination, thermal runaway prevention, gassing and flame retardant characteristics of the Bellcore 4228 compliant Dynasty Telecom products.
- Proprietary computer modeled radial grid matrix using multiple conductors to provide the lowest internal resistance and highest current carrying capability.
- Proprietary Fixed Orifice Plate Pasting technology applying active material on both sides of the grid for consistent cell-to-cell performance, higher capacity and uniform grid protection.
- UL-recognized component complying with UL1778, 924, 1989 and 94 V-0
- Thermally welded case-to-cover bond to eliminate leakage.
- Can be operated in any orientation. Upright, side or end mounting recommended.
- 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
- Not restricted for water transport – Classified as non-hazardous material per IMDG Amendment 27.
- Flame-retardant polypropylene case and cover compliant with UL 94 V-0 with an Oxygen Limiting Index of greater than 28.

SPECIFICATIONS

12 Volts – 147 AH @ 20 Hour Rate

12 Volts – 537 Watts Per Cell For 15 Minutes to 1.67 Volts per Cell

Constant Power Discharge Ratings – Watts Per Cell @ 77°F (25°C)

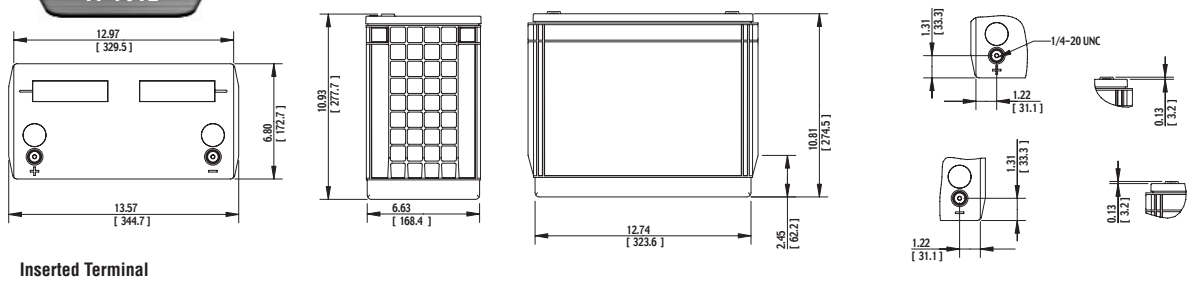
Operating Time to End Point Voltage (in Minutes)

End Point Volts/Cell	10	15	20	30	40	45	50	60	90
1.67	654.0	537.0	450.0	344.0	277.0	252.0	230.0	198.0	139.0

C&D TECHNOLOGIES
Power Solutions

C&D® DYNASTY® MAX RATE

41-9012



Inserted Terminal

*All dimensions in inches and (millimeters). All dimensions are for reference only.
Contact a C&D Representative for complete dimensional information.

MR12-540 SPECIFICATIONS

Cells Per Unit	Voltage Per Unit	Weight	Electrolyte	Maximum Discharge Current	Short Circuit Current	Ohms Imped. 60 Hz (Ω)
6	12.84	100 lbs. 45 kg	Absorbed H_2SO_4 SG = 1.300	800 Amps	5000 Amps @ 0.1 sec.	0.0023 Ohms

Capacity	537 watts per cell at the 15 minute rate to 1.67 volts per cell at 77°F (25°C). 147 Ah @ 20 hr. rate to 1.75 volts per cell @ 77°F (25°C). 133 Ah @ 10 hr. rate to 1.80 volts per cell @ 68°F (20°C).
Operating Temperature Range	**Discharge;** -40°F (-40°C) to +160°F (71°C), **Charge;** -10°F (-23°C) to +140°F (60°C). (with temperature compensation)
Nominal Operating Temperature Range	+74°F (23°C) to +80°F (27°C).
Float Charging Voltage	13.5 to 13.8 VDC/unit Average at 77°F (25°C).
Recommended Maximum Charging Current Limit	C/5 amperes (29.4 amperes @ 100% depth of discharge) @ 20 hour rate
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. Maximum voltage allowed = 1.4% RMS (4% P-P). Maximum current allowed = 7.35 amperes rms (C/20).
Self Discharge	Dynasty MaxRate batteries may be stored for up to 6 months at 77°F (25°C) and then a freshening charge is required. For higher temperatures the time interval will be shorter.
Accessories	Inter unit connectors, racks and cabinet systems are available.
Terminal: Inserted	Threaded copper alloy insert terminal to accept 1/4-20 UNC bolt.
Terminal Hardware Initial Torque: Inserted Terminal	110 in.-lbs. (12.4 N-m).

Constant Power Discharge Ratings – Watts Per Cell @ 77°F (25°C)

Operating Time to End Point Voltage (in minutes)

End Point Volts/Cell	10	15	20	30	40	45	50	60	90
1.75	564.0	472.0	405.0	320.0	261.0	239.0	220.0	190.0	136.0
1.70	625.0	512.0	432.0	334.0	270.0	247.0	226.0	193.0	137.5
1.67	654.0	537.0	450.0	344.0	277.0	252.0	230.0	198.0	139.0
1.65	679.0	554.0	459.0	350.0	282.0	256.0	234.0	200.0	141.0
1.60	696.0	564.0	465.0	354.0	284.0	258.0	237.0	202.0	143.0

Constant Current Discharge Ratings – Amperes @ 77°F (25°C)

Operating Time to End Point Voltage (in hours)

End Point Volts/Cell	1	2	3	5	8	10	12	20	24	72
1.90	75.0	44.0	32.0	21.4	14.4	11.9	10.1	6.35	5.35	1.85
1.85	85.0	49.5	35.8	23.4	15.8	13.0	11.1	6.94	5.88	2.00
1.80	90.0	53.0	38.0	24.6	16.4	13.6	11.5	7.20	6.06	2.07
1.75	95.0	56.0	39.9	25.6	16.9	13.9	11.8	7.35	6.17	2.11

Note: Batteries to be mounted with 0.5 in. (1.25 cm) spacing minimum and free air ventilation. Specifications subject to change without notification.

C&D TECHNOLOGIES, INC.
STANDBY POWER DIVISION
900 East Keefe Avenue
Milwaukee, WI 53212
(414) 967-6500 • Fax (414) 961-6506 • (800) 396-2789
customersvc@cdtechno.com
www.cdtechno.com