

MARATHON®



SPECIFICATIONS

Top Terminal Batteries

GNB®

INDUSTRIAL POWER

A Division of **EXIDE** Technologies

From the World Leader in VRLA Battery Technology

Designed for durability in Telecommunications and Electric Utility applications, the GNB TOP Terminal MARATHON® series provides high performance and reliability in long duration discharge applications. The MARATHON® family of batteries highlights another example of GNB's extensive experience and world wide leadership in VRLA technology.

“Designed in” Quality Manufacturing

Quality manufacturing processes for the MARATHON® series batteries incorporate the industry's most advanced technologies including: an automated helium leak detection system, a computer controlled “fill by weight” acid filler, and a temperature controlled water bath formation process. Each and every unit is capacity tested.

High Performance MARATHON® Series Features

- Standard: Reinforced polypropylene container and cover
- Optional: Flame-retardant reinforced container and cover compliant with UL94 V-0, 28% L.O.I.
- Integrated Flash-arrester ultrasonically welded into cover.
- Patented “Diamond Side-Wall” design to maintain structural integrity in higher operating temperatures
- Heat sealed case-to-cover bond to ensure a leak proof seal
- High-Compression Absorbent Glass Mat (AGM) technology for greater than 99% recombination efficiency
- High-tin, calcium, silver, lead positive plate design for maximum service float life; 10 year design life @ 25°C (77°F)
- Heavy duty copper alloy terminals for ease of assembly and reduced maintenance
- Reliable one-way, self-resealing safety vents
- Multicell design for faster installation and reduced maintenance
- Horizontal or vertical operation
- Removable carry handles for ease of installation.

Applications

MARATHON® series batteries incorporate GNB's advanced VRLA technology designed for long life and high performance in:

Telecommunications

- Distributed Power
- PCS
- Cellular
- Broadband

Electric Utility

- Switchgear Control Power
- Communications



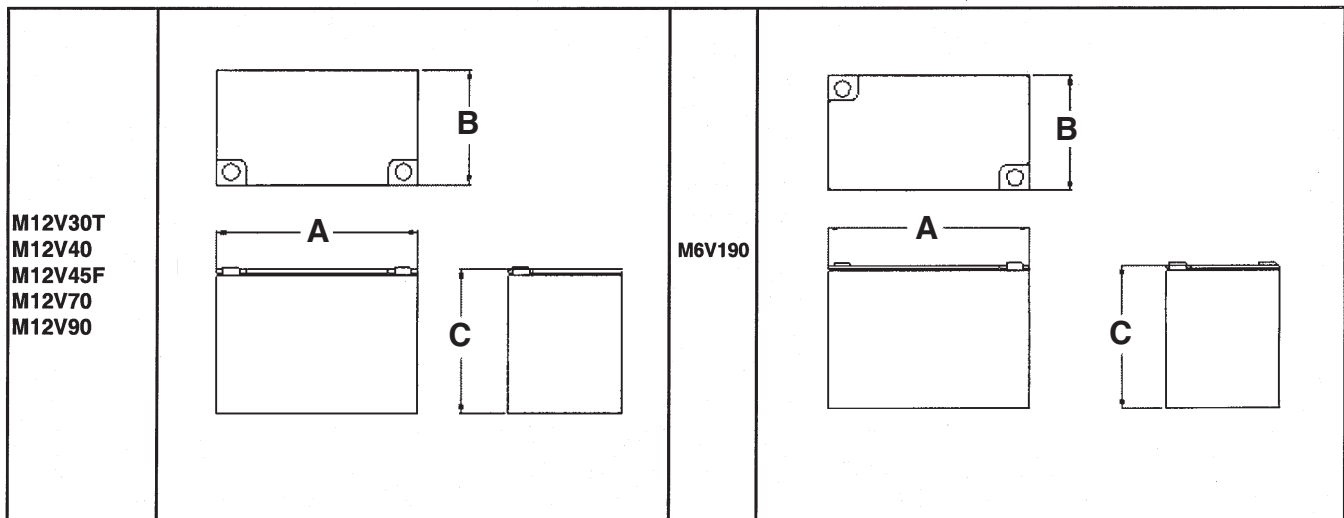
MARATHON® Specifications

Model Number [#]	Voltage	Capacity (AH)		Nominal Dimensions						Nominal Weight	
		8 Hr To 1.75 VPC @ 25°C	10 hr To 1.80 VPC @ 20°C	Inches			Millimeters			lbs.	Kg
				A	B	*C	A	B	*C		
M12V30T [%]	12	28	28	6.75	5.13	6.90	171	130	175	24	10.7
M12V40	12	40	37	7.81	6.58	7.01	198	167	178	39	17.8
M12V45F [%]	12	46	45	8.68	4.78	9.58	220	121	243	38	17.5
M12V70	12	72	71	10.25	6.85	8.80	260	174	224	61	27.8
M12V90	12	90	88	12.05	6.85	8.80	306	174	224	72	32.8
M6V190	6	190	186	12.05	6.85	8.80	306	174	224	74	33.5

* Bolt, washer, and connector typically increase height by 0.45 in. (11 mm)

Add suffix "F" to model number for flame retardant version OPTION

% Available in flame retardant version ONLY



MARATHON® Electrical Data

Model Number	Short Circuit Current (Amps)	Internal Resistance (mOhms)
M12V30T	1576	7.7
M12V40	2341	5.3
M12V45F	2162	5.4
M12V70	3271	3.7
M12V90	3365	3.7
M6V190	6343	1.0

Float Voltage & Charging

Constant Voltage charging is recommended

Recommended float voltage: 2.27 VPC @ 25°C (77°F)

Float Voltage Range: 2.25 to 2.30 VPC @ 25°C (77°F)

Equalize voltage: 2.35 VPC for 24 Hours

NOTE: Design and/or specifications subject to change without notice. If questions arise, contact your local GNB sales representative for clarification

MARATHON®

MARATHON® Performance Specifications Amperes @ 25°C (77°F)

	Model Number	Time														
		24 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2.5 hr	2 hr	1.5 hr	1 hr	0.5 hr
1.75 Final VPC	M12V30T	1.3	2.5	2.9	3.2	3.6	4.1	4.7	5.5	6.6	8.4	9.8	11.9	15.1	21.2	36.9
	M12V40(F)	1.7	3.4	4.1	4.4	5.0	5.6	6.4	7.6	9.3	11.9	14.0	16.9	21.5	30.5	51.3
	M12V45F	2.1	4.0	4.7	5.2	5.8	6.5	7.5	8.7	10.6	13.5	15.8	19.1	24.0	33.2	57.8
	M12V70(F)	3.2	6.2	7.4	8.2	9.1	10.1	11.6	13.4	16.2	20.6	24.0	28.9	36.8	51.6	90.8
	M12V90(F)	4.2	7.8	9.2	10.1	11.2	12.7	14.3	16.7	20.2	25.9	30.2	36.5	46.6	65.7	107.0
	M6V190(F)	9.1	16.6	19.5	21.4	23.7	26.7	30.6	35.9	43.7	56.0	65.6	79.5	102.0	144.9	246.0

	Model Number	Time														
		24 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2.5 hr	2 hr	1.5 hr	1 hr	0.5 hr
1.78 Final VPC	M12V30T	1.3	2.4	2.9	3.2	3.6	4.1	4.7	5.4	6.6	8.3	9.7	11.7	14.9	21.0	36.6
	M12V40(F)	1.7	3.4	4.0	4.3	4.9	5.5	6.3	7.5	9.2	11.8	13.9	16.8	21.3	30.2	50.7
	M12V45F	2.1	4.0	4.7	5.2	5.7	6.5	7.5	8.7	10.5	13.5	15.7	18.9	23.8	32.9	57.0
	M12V70(F)	3.2	6.2	7.4	8.1	9.0	10.0	11.4	13.3	16.0	20.4	23.8	28.7	36.5	51.3	90.0
	M12V90(F)	4.1	7.7	9.1	10.0	11.2	12.6	14.2	16.6	20.0	25.5	29.8	36.0	45.9	64.7	105.2
	M6V190(F)	9.0	16.5	19.4	21.2	23.6	26.5	30.3	35.6	43.3	55.5	65.0	78.8	101.1	143.5	241.6

	Model Number	Time														
		24 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2.5 hr	2 hr	1.5 hr	1 hr	0.5 hr
1.80 Final VPC	M12V30T	1.3	2.4	2.9	3.2	3.6	4.0	4.6	5.4	6.5	8.3	9.6	11.6	14.8	20.8	36.0
	M12V40(F)	1.7	3.4	4.0	4.3	4.9	5.5	6.3	7.5	9.2	11.8	13.8	16.7	21.2	30.0	50.0
	M12V45F	2.1	3.9	4.7	5.1	5.7	6.4	7.4	8.6	10.4	13.3	15.5	18.8	23.6	32.5	56.0
	M12V70(F)	3.2	6.2	7.4	8.0	8.9	9.9	11.3	13.2	15.9	20.3	23.6	28.5	36.3	51.0	89.0
	M12V90(F)	4.1	7.7	9.1	10.0	11.1	12.5	14.1	16.5	19.9	25.3	29.5	35.7	45.5	64.0	103.3
	M6V190(F)	8.9	16.4	19.2	21.1	23.4	26.3	30.1	35.3	43.0	55.0	64.3	77.9	99.9	142.0	236.5

	Model Number	Time														
		24 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2.5 hr	2 hr	1.5 hr	1 hr	0.5 hr
1.81 Final VPC	M12V30T	1.3	2.4	2.9	3.2	3.5	4.0	4.6	5.3	6.4	8.2	9.5	11.4	14.6	20.5	35.4
	M12V40(F)	1.7	3.4	4.0	4.3	4.8	5.4	6.2	7.4	9.1	11.7	13.7	16.6	21.1	29.9	49.6
	M12V45F	2.1	3.9	4.6	5.1	5.6	6.4	7.3	8.5	10.3	13.2	15.4	18.6	23.3	32.0	54.8
	M12V70(F)	3.1	6.1	7.3	8.0	8.8	9.9	11.2	13.1	15.8	20.1	23.4	28.2	35.9	50.6	87.4
	M12V90(F)	4.1	7.6	9.0	9.9	11.0	12.4	14.0	16.3	19.7	25.1	29.3	35.4	45.1	63.5	101.8
	M6V190(F)	8.8	16.2	19.0	20.9	23.2	26.1	29.9	35.1	42.6	54.5	63.6	76.9	98.5	139.5	231.0

	Model Number	Time														
		24 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2.5 hr	2 hr	1.5 hr	1 hr	0.5 hr
1.83 Final VPC	M12V30T	1.2	2.4	2.8	3.1	3.5	3.9	4.5	5.2	6.3	8.0	9.4	11.3	14.4	20.2	34.8
	M12V40(F)	1.6	3.3	3.9	4.2	4.7	5.3	6.1	7.3	9.0	11.6	13.6	16.4	20.9	29.5	48.5
	M12V45F	2.0	3.8	4.5	5.0	5.6	6.3	7.3	8.4	10.2	13.0	15.2	18.3	22.9	31.4	53.5
	M12V70(F)	3.1	6.0	7.1	7.9	8.8	9.8	11.1	12.9	15.6	19.9	23.2	27.9	35.6	50.1	85.6
	M12V90(F)	4.0	7.5	8.9	9.8	10.8	12.2	13.8	16.1	19.4	24.7	28.8	34.8	44.3	62.4	100.3
	M6V190(F)	8.6	16.0	18.8	20.7	23.0	25.9	29.6	34.8	42.2	53.7	62.7	75.8	96.8	136.5	224.3