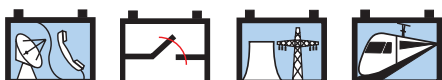


Industrial Batteries / Network Power

Marathon M-FT



»AGM modular power«



Industrial Batteries

The powerful range of Network Power

GNB® Industrial Power offers reliable energy storage solutions for critical systems requiring uninterrupted power supply. With a comprehensive product range based on state-of-the-art technologies, GNB delivers the right battery for every application.

The below table is only indicative and depends on the specific customer application. For more information please ask a GNB sales representative.

Applications	Battery ranges																		
	Sonnenschein							Marathon		Sprinter		Absolyte	Powerfit	Classic					
	A400/A600	A400 FT	A500	A700	SOLAR	RAIL	Power Cycle	M-FT	L/XL	P/XP	XP-FT	GP/GX	S100/S300	GroE	OCSM	OPzS	Energy Bloc/OGi	Solar	rail
Telecom	●	●	●	●			●	●		●	●				●	●	●		
UPS	●	●	●	●			●	●	●	●	●				●		●		
Emergency lighting	●	●	●	●			●	●	●	●	●		●			●	●		
Security	●		●	●						●	●		●		●	●			
Utility	●	●		●			●	●				●		●	●	●	●		
Railways	●	●	●	●		●	●	●				●			●		●		●
Photovoltaic					●		●					●						●	
Universal	●	●	●	●			●	●	●	●	●		●		●	●	●		

Powerful product brands



> VRLA batteries (Valve Regulated Lead Acid) in which the electrolyte is fixed in an Absorbent Glass Mat (AGM)



- > Excellent high current capability
- > Very economical
- > Maintenance-free (no topping up)



- > VRLA batteries (Valve Regulated Lead Acid) in which the electrolyte is fixed in a gel (dryfit® technology)
- > Inventor of Gel technology
- > Highest reliability, even in non-optimal conditions
- > Particularly suitable for cyclic applications
- > Maintenance-free (no topping up)



- > Conventional lead-acid batteries with liquid electrolyte
- > Extreme reliability, proven over decades
- > Low maintenance

Marathon M-FT

The safe storage system with long design life

Designed for durability in telecommunications and electric utility applications, the Marathon M-FT series provides high performance and reliability in medium and long duration discharge applications. The location of the terminals on the front (vs. the top) of the battery greatly facilitates the installation and maintenance of the product when placed in a cabinet enclosure or on a standard relay rack tray.

Your benefits:

- > **Front terminal design** – easy access for faster installation and maintenance
- > **Durable polypropylene casing (available as flame retardant)** – maintains structural integrity in higher operating temperatures
- > **Short recharging time** – high availability
- > **Optimal energy density** – saves floor space
- > **Completely recyclable** – low CO₂ footprint



Specifications:

- > Maintenance-free (no topping up) during the whole service life
- > High-Compression Absorbent Glass Mat (AGM) technology
- > Nominal capacity 35.0 – 200 Ah
- > Design life: »> 12 years– Very Long Life« according to EUROBAT 2015 Classification
- > Central degassing
- > Available as standard* or flame retardant version (UL 94-V0)
- > Grid plates with superior lead calcium alloy for excellent corrosion resistance
- > Very low gassing due to internal gas recombination (99 % efficiency)
- > Low self discharge rate, enabling extended storage capability
- > Designed in accordance with IEC 60896-21/-22
- > Approval: Underwriter Laboratories (UL)
- > Trouble-free transportation of operational blocks and cells. no restriction for most rail, road, sea and air transportation (IATA, DGR clause A67)
- > Manufactured in Europe* in our ISO 9001 certified production plants



Design life
> 12 years –
Very Long
Life



Nominal
capacity
35.0 – 200 Ah



Block battery



Grid plate



Recyclable



Valve regulated
lead-acid
batteries



Maintenance
free (no
topping up)

*Except part numbers NAMF120105VM0FU and NAMF120090VM0FU manufactured in USA

Marathon M-FT

Technical data

Technical characteristics and data

Type	Part number	Nom. voltage V	Nominal capacity C ₁₀ 1.80 Vpc 20°C Ah	Capacity C ₈ 1.75 Vpc 25°C Ah	Capacity C ₃ 1.70 Vpc 20°C Ah	Capacity C ₁ 1.60 Vpc 20°C Ah	Length (l) max. mm	Width (b/w) max. mm	Height (h1) max. mm	Weight approx. kg	Internal resistance mOhm**	Short circuit current A**	Terminal
M6V200FT	NAMT060200HM0FA	6	200	200	167	140	361*	132	250	34.0	1.7	3461	F-M6
M12V35FT	NAMF120035HM0MA	12	35.0	35.0	30.8	27.0	280	107	189	14.0	11.0	1149	M-M6-90°
M12V50FT	NAMF120050HM0MA	12	47.0	48.0	41.1	34.9	280	107	231	18.0	8.2	1547	M-M6-90°
M12V60FT	NAMF120060HM0MA	12	59.0	59.0	50.2	40.8	280	107	263	23.0	7.0	1794	M-M6-90°
M12V90FT	NAMF120090HM0FA / NAMF120090VM0FU	12	86.0	86.0	75.2	65.3	395	105	270	31.0	5.1	2440	F-M6-90°
M12V100FT	NAMF120100HM0FA	12	100	103	89.4	75.0	395	105	287	33.0	5.0	2445	F-M6-90°
M12V105FT	NAMF120105HM0FA / NAMF120105VM0FU	12	100	104	86.6	71.3	511	110	238	35.8	4.9	2554	F-M6-90°
M12V125FT	NAMF120125HM0FA	12	121	125	112	89.4	559	124	283	47.6	4.7	2640	F-M6-90°
M12V155FT	NAMF120155HM0FA	12	155	158	133	105	559	124	283	52.8	3.8	3292	F-M6-90°
M12V190FT	NAMF120190HM0FA	12	190	193	168	140	559	125	318	62.0	3.4	3653	F-M6-90°

*Installed length of type M6V200FT: 376 mm

**According to IEC 60896-21/22

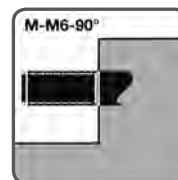
Container, terminal and torque

- > **Container:** - UL 94-HB* = Polypropylene (PP)
- UL 94-V0 = Polypropylene (PP)

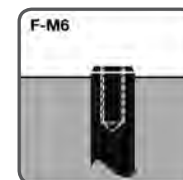
Figures are also valid for UL 94-V0 version,
Change »H« to »V« in the part number, E.g.:

> **Standard:** NAMF120035 **H** M0MA

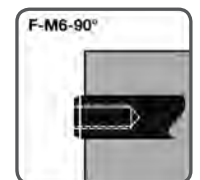
> **UL 94-V0:** NAMF120035 **V** M0MA



6 Nm



11 Nm



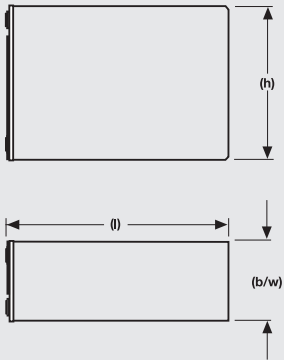
11 Nm

*This does not apply for part numbers NAMF120105VM0FU and NAMF120090VM0FU

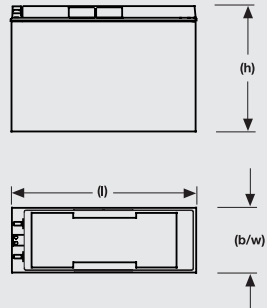
Marathon M-FT

Drawings Marathon M-FT

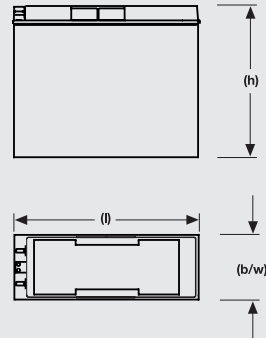
M6V200FT



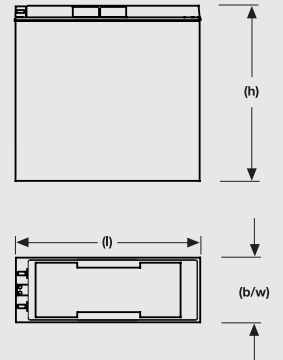
M12V35FT



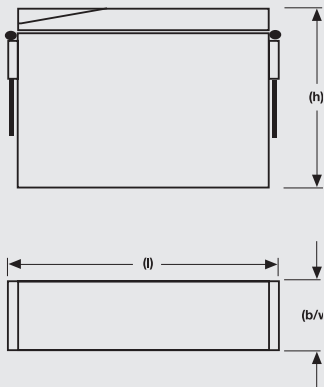
M12V50FT



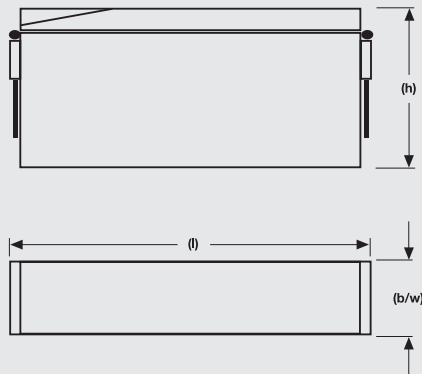
M12V60FT



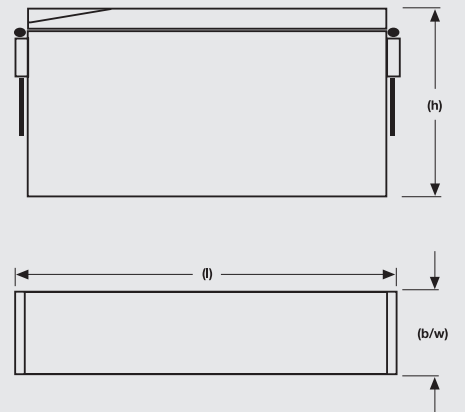
M12V90FT
M12V100FT



M12V105FT



M12V125FT -
M12V190FT



Not to scale!

Marathon M-FT

Constant current discharge

1.94 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HMOFA ¹	131	131	131	131	115	90.7	67.7	54.9	40.3	27.3	18.8	15.4	13.1	7.05
M12V35FT	NAMF120035HMOMA ¹	77.0	70.0	55.0	45.6	32.1	19.9	14.0	10.9	7.7	4.96	3.30	2.72	2.32	1.27
M12V50FT	NAMF120050HMOMA ¹	110	100	81.0	67.3	43.6	26.1	18.7	14.8	10.5	6.72	4.41	3.61	3.06	1.64
M12V60FT	NAMF120060HMOMA ¹	114	105	86	72.9	49.7	30.5	22.1	17.5	12.7	8.45	5.63	4.61	3.91	2.10
M12V90FT	NAMF120090HMOFA ^{1,2}	100	100	100	100	73.0	47.0	33.9	26.8	19.5	12.7	8.37	6.86	5.84	3.15
M12V100FT	NAMF120100HMOFA ¹	115	115	115	115	80.0	50.0	35.0	31.0	22.5	14.8	9.80	8.00	6.80	3.06
M12V105FT	NAMF120105HMOFA ^{1,2}	121	121	121	121	79.9	52.4	38.3	30.6	22.3	14.9	9.74	7.96	6.75	3.60
M12V125FT	NAMF120125HMOFA ¹	97.5	97.5	97.5	97.5	77.8	62.1	45.6	36.6	27.0	17.3	11.4	9.47	8.00	4.22
M12V155FT	NAMF120155HMOFA ¹	189	175	145	122	95.1	74.0	56.2	46.3	33.5	21.8	14.4	11.7	9.96	5.28
M12V190FT	NAMF120190HMOFA ¹	152	149	142	135	115	90.0	68.0	55.8	40.2	26.6	18.0	14.8	12.7	6.90

1.92 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HMOFA ¹	159	159	159	159	133	97.7	72.7	59.0	43.1	29.0	20.0	16.3	13.9	7.47
M12V35FT	NAMF120035HMOMA ¹	90.0	80.0	62.0	50.2	34.4	21.3	15.0	11.7	8.3	5.28	3.50	2.88	2.46	1.34
M12V50FT	NAMF120050HMOMA ¹	122	110	88.0	73.0	46.8	28.0	20.1	15.9	11.2	7.10	4.66	3.82	3.24	1.74
M12V60FT	NAMF120060HMOMA ¹	122	112	93.0	79.2	53.7	33.1	23.8	18.9	13.6	9.11	5.98	4.89	4.16	2.23
M12V90FT	NAMF120090HMOFA ^{1,2}	110	110	110	110	80.0	50.5	36.2	28.5	20.4	13.4	8.86	7.26	6.17	3.33
M12V100FT	NAMF120100HMOFA ¹	130	130	130	130	87.0	53.0	37.1	32.5	23.5	15.6	10.4	8.50	7.22	3.25
M12V105FT	NAMF120105HMOFA ^{1,2}	132	132	132	132	86.0	55.8	40.6	32.3	23.5	15.8	10.3	8.42	7.13	3.79
M12V125FT	NAMF120125HMOFA ¹	125	125	125	125	91.7	67.3	49.4	39.7	29.1	18.5	12.1	10.1	8.53	4.48
M12V155FT	NAMF120155HMOFA ¹	215	198	170	149	108	78.8	59.7	49.0	35.1	23.0	15.3	12.5	10.5	5.60
M12V190FT	NAMF120190HMOFA ¹	180	176	166	156	131	100	75.0	61.0	44.5	29.0	19.3	15.9	13.6	7.40

1.90 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HMOFA ¹	187	187	187	187	150	105	77.9	63.0	45.8	30.6	21.1	17.2	14.7	7.92
M12V35FT	NAMF120035HMOMA ¹	105	93.0	70.0	56.4	36.8	22.8	16.0	12.5	8.8	5.61	3.71	3.05	2.60	1.41
M12V50FT	NAMF120050HMOMA ¹	140	125	97.0	79.3	50.1	29.6	21.3	16.9	11.9	7.52	4.92	4.02	3.41	1.83
M12V60FT	NAMF120060HMOMA ¹	145	130	103	86.5	58.0	35.6	25.6	20.2	14.5	9.55	6.35	5.19	4.40	2.36
M12V90FT	NAMF120090HMOFA ^{1,2}	115	115	115	115	84.0	53.9	38.5	30.3	21.6	14.1	9.33	7.65	6.51	3.52
M12V100FT	NAMF120100HMOFA ¹	150	150	150	150	99.0	58.5	40.9	35.0	25.0	16.5	10.9	8.90	7.56	3.40
M12V105FT	NAMF120105HMOFA ^{1,2}	141	141	141	141	91.6	59.4	42.9	34.1	24.6	16.4	10.9	8.90	7.52	3.97
M12V125FT	NAMF120125HMOFA ¹	152	152	152	152	105	72.6	52.9	42.3	31.1	19.6	12.9	10.5	9.00	4.84
M12V155FT	NAMF120155HMOFA ¹	236	225	195	170	122	83.9	63.4	51.9	37.0	24.1	16.3	13.3	11.2	5.91
M12V190FT	NAMF120190HMOFA ¹	210	205	191	178	145	112	84.0	65.0	46.5	30.5	20.3	16.8	14.4	7.80

1.87 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HMOFA ¹	231	231	231	231	175	115	84.0	66.9	48.6	32.4	22.4	18.3	15.5	8.29
M12V35FT	NAMF120035HMOMA ¹	120	105	77.0	61.2	39.2	24.3	17.0	13.2	9.3	5.92	3.91	3.21	2.73	1.48
M12V50FT	NAMF120050HMOMA ¹	150	133	103	83.0	53.0	31.1	22.3	17.6	12.5	7.93	5.20	4.26	3.61	1.94
M12V60FT	NAMF120060HMOMA ¹	160	143	113	93.3	60.9	37.4	26.9	21.2	15.2	10.0	6.69	5.46	4.63	2.47
M12V90FT	NAMF120090HMOFA ^{1,2}	120	120	120	120	87.0	57.4	40.8	32.0	23.1	14.7	9.77	8.03	6.84	3.71
M12V100FT	NAMF120100HMOFA ¹	160	160	160	160	106	62.0	43.4	37.0	26.3	17.4	11.5	9.40	7.99	3.59
M12V105FT	NAMF120105HMOFA ^{1,2}	147	147	147	147	97.9	62.6	45.1	35.7	25.8	17.0	11.4	9.34	7.89	4.17
M12V125FT	NAMF120125HMOFA ¹	169	169	169	169	115	78.0	56.5	44.9	33.0	20.8	13.6	11.1	9.48	5.08
M12V155FT	NAMF120155HMOFA ¹	273	260	225	196	136	89.5	67.2	54.8	39.0	25.3	17.1	14.0	11.7	6.18
M12V190FT	NAMF120190HMOFA ¹	270	260	237	216	165	118	89.0	68.0	47.9	31.6	21.4	17.8	15.2	8.22

¹ Discharge data also valid for other containers

² Discharge data also valid for part numbers NAMF120105VMOFU and NAMF120090VMOFU

Marathon M-FT

Constant current discharge

1.85 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HMOFA ¹	345	325	283	250	186	122	88.3	70.1	50.6	33.5	23.0	18.9	16.0	8.54
M12V35FT	NAMF120035HMOMA ¹	128	109	80.0	63.5	40.9	25.3	17.7	13.8	9.6	6.13	4.04	3.32	2.82	1.52
M12V50FT	NAMF120050HMOMA ¹	160	140	108	87.0	55.5	32.2	23.1	18.2	12.9	8.20	5.38	4.41	3.74	2.01
M12V60FT	NAMF120060HMOMA ¹	170	152	118	97.0	62.9	38.5	27.7	21.8	15.7	10.3	6.92	5.65	4.78	2.54
M12V90FT	NAMF120090HMOFA ^{1,2}	207	189	150	126	90.0	59.5	42.3	33.2	23.5	15.1	10.0	8.28	7.07	3.87
M12V100FT	NAMF120100HMOFA ¹	265	245	200	168	110	64.0	44.8	38.3	27.1	17.9	11.8	9.60	8.16	3.67
M12V105FT	NAMF120105HMOFA ^{1,2}	265	240	191	154	101	64.7	46.5	36.9	26.5	17.5	11.7	9.59	8.12	4.32
M12V125FT	NAMF120125HMOFA ¹	175	175	175	175	119	79.1	57.9	46.4	34.3	21.6	14.1	11.5	9.80	5.24
M12V155FT	NAMF120155HMOFA ¹	324	290	245	210	147	92.8	69.6	56.8	40.3	26.1	17.6	14.3	12.1	6.35
M12V190FT	NAMF120190HMOFA ¹	382	350	293	253	178	122	92.0	70.0	49.3	32.4	22.0	18.3	15.6	8.44

1.83 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HMOFA ¹	385	360	309	270	197	126	90.8	71.9	51.7	34.2	23.3	19.2	16.3	8.66
M12V35FT	NAMF120035HMOMA ¹	140	118	85.0	66.0	41.8	25.7	18.0	14.0	9.8	6.23	4.11	3.37	2.87	1.55
M12V50FT	NAMF120050HMOMA ¹	170	148	112	90.0	56.5	32.6	23.3	18.4	13.1	8.38	5.48	4.48	3.80	2.03
M12V60FT	NAMF120060HMOMA ¹	180	159	123	100	65.0	39.2	28.2	22.2	15.9	10.5	7.03	5.74	4.85	2.57
M12V90FT	NAMF120090HMOFA ^{1,2}	220	200	160	133	92.0	61.0	43.3	34.0	23.9	15.3	10.2	8.40	7.17	3.92
M12V100FT	NAMF120100HMOFA ¹	300	270	213	177	114	66.0	46.2	39.5	27.7	18.1	12.0	9.80	8.33	3.74
M12V105FT	NAMF120105HMOFA ^{1,2}	295	260	200	163	104	66.3	47.6	37.7	27.1	17.9	12.0	9.79	8.28	4.40
M12V125FT	NAMF120125HMOFA ¹	186	186	186	186	124	81.7	59.6	47.7	35.2	22.1	14.4	11.8	10.0	5.34
M12V155FT	NAMF120155HMOFA ¹	355	315	257	220	154	95.8	71.5	58.1	41.2	26.7	17.9	14.7	12.3	6.50
M12V190FT	NAMF120190HMOFA ¹	420	381	312	266	186	123	92.0	71.5	50.7	33.2	22.5	18.6	15.9	8.54

1.80 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HMOFA ¹	425	395	335	290	208	132	95.1	75.1	53.8	35.3	24.0	19.9	16.8	8.90
M12V35FT	NAMF120035HMOMA ¹	150	125	88.0	68.5	42.5	26.3	18.4	14.2	10.0	6.38	4.21	3.46	2.94	1.58
M12V50FT	NAMF120050HMOMA ¹	180	155	116	93.0	58.5	33.5	23.8	18.7	13.2	8.64	5.66	4.68	3.89	2.05
M12V60FT	NAMF120060HMOMA ¹	188	165	127	103	66.4	39.6	28.5	22.5	16.3	10.8	7.21	5.87	4.96	2.62
M12V90FT	NAMF120090HMOFA ^{1,2}	237	215	171	140	94.0	63.0	44.7	35.0	24.5	15.7	10.4	8.57	7.31	3.99
M12V100FT	NAMF120100HMOFA ¹	338	300	230	188	118	67.5	47.2	40.3	28.2	18.4	12.2	10.0	8.50	3.82
M12V105FT	NAMF120105HMOFA ^{1,2}	320	280	214	170	109	68.3	49.0	38.7	27.8	18.3	12.2	10.0	8.47	4.48
M12V125FT	NAMF120125HMOFA ¹	204	204	204	204	132	85.1	61.8	49.2	36.3	22.8	14.8	12.1	10.3	5.46
M12V155FT	NAMF120155HMOFA ¹	385	340	270	230	161	99.8	73.8	59.6	42.2	28.0	18.9	15.5	12.6	6.64
M12V190FT	NAMF120190HMOFA ¹	458	410	330	278	193	125	93.0	73.0	52.0	33.9	22.9	19.0	16.3	8.70

1.78 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HMOFA ¹	475	435	362	309	216	134	96.5	76.3	54.6	35.7	24.2	20.0	16.9	8.95
M12V35FT	NAMF120035HMOMA ¹	160	130	90.0	70.0	43.2	26.4	18.4	14.3	10.0	6.42	4.24	3.48	2.97	1.61
M12V50FT	NAMF120050HMOMA ¹	190	162	119	95.0	59.2	33.8	24.0	18.8	13.3	8.70	5.70	4.68	3.92	2.06
M12V60FT	NAMF120060HMOMA ¹	195	170	130	105	67.9	39.6	28.6	22.7	16.7	10.8	7.26	5.91	5.00	2.64
M12V90FT	NAMF120090HMOFA ^{1,2}	265	233	179	144	96.0	63.6	45.0	35.2	24.7	15.8	10.4	8.62	7.35	4.01
M12V100FT	NAMF120100HMOFA ¹	370	320	243	195	121	69.0	48.3	40.9	28.7	18.7	12.4	10.2	8.67	3.90
M12V105FT	NAMF120105HMOFA ^{1,2}	360	310	230	185	115	69.3	49.7	39.2	28.1	18.5	12.4	10.1	8.57	4.53
M12V125FT	NAMF120125HMOFA ¹	214	214	214	214	136	86.6	62.7	49.8	36.7	23.0	15.0	12.2	10.4	5.53
M12V155FT	NAMF120155HMOFA ¹	410	360	285	240	165	101	74.9	60.3	43.0	28.5	19.1	15.6	12.7	6.72
M12V190FT	NAMF120190HMOFA ¹	489	433	346	291	197	128	93.0	74.0	53.0	34.5	23.2	19.2	16.4	8.75

¹ Discharge data also valid for other containers

² Discharge data also valid for part numbers NAMF120105VMOFU and NAMF120090VMOFU

Marathon M-FT

Constant current discharge

1.75 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HM0FA ¹	515	470	383	323	220	135	97.2	76.9	55.1	36.2	24.5	20.2	17.1	9.04
M12V35FT	NAMF120035HM0MA ¹	175	138	92.0	71.5	43.4	26.4	18.5	14.3	10.1	6.55	4.32	3.53	2.99	1.59
M12V50FT	NAMF120050HM0MA ¹	200	168	122	96.5	59.9	34.2	24.3	19.0	13.5	8.82	5.77	4.69	3.96	2.08
M12V60FT	NAMF120060HM0MA ¹	200	175	132	107	68.7	40.1	28.9	22.9	16.5	10.9	7.34	5.97	5.05	2.66
M12V90FT	NAMF120090HM0FA ^{1,2}	285	248	185	148	98.0	64.0	45.4	35.5	24.9	15.9	10.5	8.68	7.40	4.03
M12V100FT	NAMF120100HM0FA ¹	385	332	250	200	124	70.0	49.0	41.3	29.0	18.9	12.5	10.3	8.75	3.93
M12V105FT	NAMF120105HM0FA ^{1,2}	360	310	230	185	115	70.0	50.2	39.7	28.5	18.7	12.6	10.2	8.68	4.55
M12V125FT	NAMF120125HM0FA ¹	233	233	233	233	141	88.1	63.6	50.4	37.1	23.3	15.2	12.4	10.5	5.60
M12V155FT	NAMF120155HM0FA ¹	433	380	300	250	169	103	75.7	60.8	43.5	29.0	19.2	15.7	12.9	6.79
M12V190FT	NAMF120190HM0FA ¹	524	460	363	303	204	130	95.0	76.0	54.5	35.5	23.4	19.3	16.5	8.80

1.73 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HM0FA ¹	540	490	397	333	223	136	97.9	77.4	55.4	36.5	24.7	20.2	17.1	9.06
M12V35FT	NAMF120035HM0MA ¹	185	145	94.0	72.4	44.0	26.5	18.5	14.3	10.2	6.65	4.34	3.54	3.00	1.60
M12V50FT	NAMF120050HM0MA ¹	210	175	124	98.6	60.7	34.3	24.4	19.1	13.6	8.90	5.79	4.71	3.97	2.08
M12V60FT	NAMF120060HM0MA ¹	205	178	134	108	69.0	40.2	29.0	23.0	16.6	11.0	7.37	6.00	5.06	2.66
M12V90FT	NAMF120090HM0FA ^{1,2}	314	265	192	151	100	64.4	45.5	35.6	24.9	15.9	10.5	8.70	7.42	4.04
M12V100FT	NAMF120100HM0FA ¹	400	346	258	204	126	71.0	49.7	41.9	29.3	19.1	12.6	10.4	8.84	3.97
M12V105FT	NAMF120105HM0FA ^{1,2}	380	330	240	189	116	70.5	50.6	40.0	28.6	18.8	12.7	10.3	8.71	4.56
M12V125FT	NAMF120125HM0FA ¹	236	236	236	236	143	88.7	64.1	50.8	37.3	23.5	15.3	12.5	10.5	5.63
M12V155FT	NAMF120155HM0FA ¹	465	405	310	258	173	104	76.2	61.2	44.0	29.1	19.3	15.8	12.9	6.80
M12V190FT	NAMF120190HM0FA ¹	563	490	375	312	209	132	96.0	77.0	55.2	35.6	23.5	19.4	16.6	8.86

1.70 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HM0FA ¹	565	510	407	340	226	137	98.4	77.8	55.7	36.7	24.8	20.3	17.2	9.09
M12V35FT	NAMF120035HM0MA ¹	195	150	95.5	73.8	44.4	26.7	18.6	14.4	10.2	6.68	4.36	3.56	3.02	1.61
M12V50FT	NAMF120050HM0MA ¹	215	179	127	99.7	61.0	34.5	24.5	19.2	13.6	8.94	5.84	4.74	4.00	2.09
M12V60FT	NAMF120060HM0MA ¹	210	182	135	109	69.5	40.4	29.2	23.1	16.7	11.0	7.42	6.03	5.09	2.67
M12V90FT	NAMF120090HM0FA ^{1,2}	340	280	200	155	102	64.7	45.7	35.7	25.0	16.0	10.6	8.74	7.45	4.06
M12V100FT	NAMF120100HM0FA ¹	420	360	265	208	127	72.0	50.4	42.4	29.8	19.2	12.8	10.5	8.92	4.01
M12V105FT	NAMF120105HM0FA ^{1,2}	410	345	245	193	118	71.2	51.1	40.4	28.8	18.9	12.7	10.3	8.75	4.58
M12V125FT	NAMF120125HM0FA ¹	241	241	241	241	147	89.6	64.6	51.2	37.5	23.7	15.4	12.6	10.6	5.67
M12V155FT	NAMF120155HM0FA ¹	505	430	320	265	176	105	76.9	61.7	44.5	29.2	19.4	15.9	13.0	6.83
M12V190FT	NAMF120190HM0FA ¹	611	520	387	321	213	134	98.0	78.0	56.0	35.7	23.6	19.5	16.7	8.90

1.67 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HM0FA ¹	600	535	422	348	228	138	99.1	78.2	56.0	36.9	25.0	20.5	17.3	9.12
M12V35FT	NAMF120035HM0MA ¹	205	156	97.0	74.9	44.8	26.8	18.7	14.5	10.3	6.72	4.39	3.58	3.03	1.61
M12V50FT	NAMF120050HM0MA ¹	220	183	129	101	61.7	34.7	24.6	19.3	13.7	9.00	5.89	4.77	4.02	2.10
M12V60FT	NAMF120060HM0MA ¹	214	184	137	110	69.9	40.7	29.4	23.2	16.8	11.1	7.46	6.06	5.12	2.68
M12V90FT	NAMF120090HM0FA ^{1,2}	365	300	210	160	105	64.9	45.9	35.9	25.2	16.1	10.6	8.77	7.48	4.07
M12V100FT	NAMF120100HM0FA ¹	440	375	271	211	129	73.0	51.1	42.8	30.1	19.4	12.9	10.6	9.01	4.05
M12V105FT	NAMF120105HM0FA ^{1,2}	430	360	250	196	119	72.0	51.6	40.7	29.1	19.0	12.8	10.4	8.79	4.59
M12V125FT	NAMF120125HM0FA ¹	248	248	248	248	150	90.6	65.2	51.7	37.6	23.9	15.5	12.7	10.7	5.72
M12V155FT	NAMF120155HM0FA ¹	530	450	330	270	179	106	77.6	62.2	44.8	29.3	19.5	16.0	13.1	6.86
M12V190FT	NAMF120190HM0FA ¹	641	545	399	327	216	136	99.0	78.6	56.2	35.8	23.7	19.6	16.8	8.95

¹ Discharge data also valid for other containers

² Discharge data also valid for part numbers NAMF120105VM0FU and NAMF120090VM0FU

Marathon M-FT

Constant current discharge

1.65 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HM0FA ¹	640	560	435	357	231	139	99.8	78.6	56.3	36.9	25.0	20.5	17.3	9.14
M12V35FT	NAMF120035HMOMA ¹	215	158	98.0	75.5	45.0	26.9	18.7	14.5	10.3	6.75	4.40	3.59	3.04	1.62
M12V50FT	NAMF120050HMOMA ¹	225	186	131	102	62.0	34.9	24.7	19.3	13.8	9.08	5.92	4.80	4.04	2.11
M12V60FT	NAMF120060HMOMA ¹	216	186	139	111	70.4	40.8	29.4	23.3	16.8	11.1	7.49	6.09	5.13	2.69
M12V90FT	NAMF120090HM0FA ^{1,2}	390	315	215	165	108	65.1	46.0	36.0	25.2	16.1	10.6	8.79	7.49	4.08
M12V100FT	NAMF120100HM0FA ¹	470	400	280	215	130	74.0	51.8	43.1	30.3	19.6	13.0	10.7	9.09	4.09
M12V105FT	NAMF120105HM0FA ^{1,2}	445	370	258	197	120	72.6	52.0	41.0	29.2	19.0	12.9	10.4	8.82	4.60
M12V125FT	NAMF120125HM0FA ¹	250	250	250	250	152	91.2	65.7	52.0	37.7	24.0	15.6	12.7	10.8	5.75
M12V155FT	NAMF120155HM0FA ¹	555	470	340	274	180	106	78.0	62.5	45.0	29.4	19.7	16.1	13.1	6.88
M12V190FT	NAMF120190HM0FA ¹	672	569	411	332	217	138	101	79.2	56.4	36.0	23.8	19.7	16.9	8.96

1.60 Vpc – Discharge in A at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HM0FA ¹	680	590	450	365	233	139	99.7	78.6	56.3	36.9	25.0	20.5	17.3	9.14
M12V35FT	NAMF120035HMOMA ¹	223	163	100	75.5	45.1	27.0	18.7	14.5	10.3	6.75	4.40	3.59	3.04	1.62
M12V50FT	NAMF120050HMOMA ¹	230	190	133	104	62.5	34.9	24.7	19.4	13.8	9.08	5.92	4.80	4.04	2.11
M12V60FT	NAMF120060HMOMA ¹	218	187	140	112	70.4	40.8	29.4	23.3	16.9	11.2	7.49	6.09	5.13	2.69
M12V90FT	NAMF120090HM0FA ^{1,2}	400	330	220	170	110	65.1	46.0	36.0	25.2	16.1	10.6	8.79	7.49	4.08
M12V100FT	NAMF120100HM0FA ¹	502	430	295	219	132	75.0	52.5	43.5	30.5	19.7	13.1	10.7	9.09	4.09
M12V105FT	NAMF120105HM0FA ^{1,2}	460	380	260	201	122	73.4	52.0	41.0	29.2	19.0	12.9	10.4	8.82	4.60
M12V125FT	NAMF120125HM0FA ¹	250	250	250	250	152	91.2	65.7	52.0	37.7	24.0	15.6	12.7	10.8	5.75
M12V155FT	NAMF120155HM0FA ¹	600	495	350	277	181	106	78.0	62.5	45.3	29.6	19.8	16.2	13.1	6.88
M12V190FT	NAMF120190HM0FA ¹	725	598	423	335	219	140	102	80.0	56.5	36.2	23.9	19.8	16.9	8.96

¹ Discharge data also valid for other containers

² Discharge data also valid for part numbers NAMF120105VM0FU and NAMF120090VM0FU

Marathon M-FT

Constant power discharge

1.65 Vpc – Discharge in W/block at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HM0FA ¹	3200	2850	2200	1835	1285	805	588	471	332	216	146	119	101	53.2
M12V35FT	NAMF120035HMOMA ¹	2067	1595	1064	810	485	309	221	174	122	78.1	51.8	42.6	36.3	19.8
M12V50FT	NAMF120050HMOMA ¹	2416	2039	1337	1060	659	416	296	232	165	107	70.7	56.8	47.5	24.1
M12V60FT	NAMF120060HMOMA ¹	2426	2089	1500	1157	739	489	350	276	197	130	87.8	71.3	60.1	31.4
M12V90FT	NAMF120090HM0FA ^{1,2}	3800	3190	2250	1800	1190	739	522	408	293	193	130	105	89.3	47.0
M12V100FT	NAMF120100HM0FA ¹	4924	4153	2950	2310	1449	865	605	502	359	227	149	122	103	46.6
M12V105FT	NAMF120105HM0FA ^{1,2}	4505	3800	2770	2160	1326	809	579	456	326	214	145	118	99.8	52.5
M12V125FT	NAMF120125HM0FA ¹	2373	2373	2373	2373	1599	981	705	557	403	269	186	157	131	67.6
M12V155FT	NAMF120155HM0FA ¹	5500	4800	3470	2850	1960	1196	865	695	517	337	223	182	153	81.3
M12V190FT	NAMF120190HM0FA ¹	6380	5938	4480	3519	2245	1600	1200	920	650	423	283	232	196	108

1.60 Vpc – Discharge in W/block at 20 °C

Type	Part number	3 min	5 min	10 min	15 min	30 min	1 h	1.5 h	2 h	3 h	5 h	8 h	10 h	12 h	24 h
M6V200FT	NAMT060200HM0FA ¹	3360	2950	2250	1850	1295	805	588	471	332	216	146	119	101	53.2
M12V35FT	NAMF120035HMOMA ¹	2134	1633	1089	820	490	310	221	174	122	78.2	51.8	42.7	36.3	19.9
M12V50FT	NAMF120050HMOMA ¹	2458	2064	1356	1076	670	417	296	233	167	108	70.7	56.8	47.5	24.2
M12V60FT	NAMF120060HMOMA ¹	2467	2131	1523	1175	746	489	350	276	197	131	87.8	71.3	60.1	31.4
M12V90FT	NAMF120090HM0FA ^{1,2}	3900	3290	2300	1820	1200	739	522	408	293	193	130	105	89.3	47.0
M12V100FT	NAMF120100HM0FA ¹	5200	4300	3000	2345	1451	870	609	505	364	230	150	122	104	46.9
M12V105FT	NAMF120105HM0FA ^{1,2}	4900	3960	2795	2180	1326	809	579	456	326	214	145	118	99.8	52.5
M12V125FT	NAMF120125HM0FA ¹	2373	2373	2373	2373	1599	981	705	557	403	269	186	157	131	67.6
M12V155FT	NAMF120155HM0FA ¹	5750	5000	3500	2870	1970	1196	865	700	518	339	223	182	153	81.3
M12V190FT	NAMF120190HM0FA ¹	6600	6200	4600	3650	2300	1620	1220	932	655	425	284	233	197	108



¹ Discharge data also valid for other containers

² Discharge data also valid for part numbers NAMF120105VM0FU and NAMF120090VM0FU

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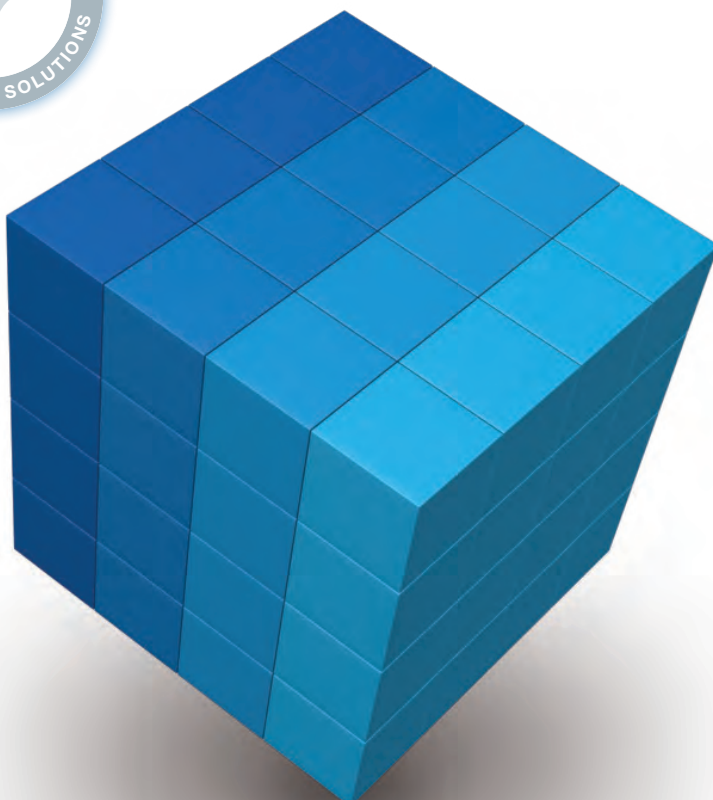
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