



GENERAL PURPOSE **BATTERIES**

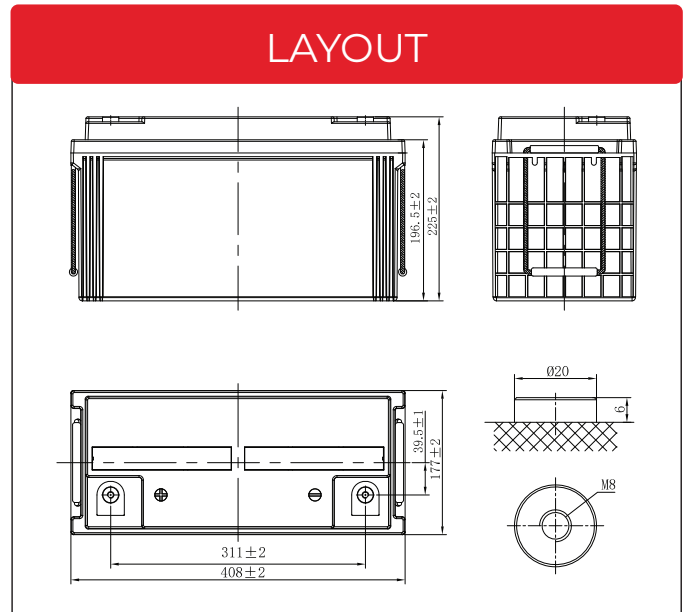
ST12-120 (12V 120Ah)



www.starmaxbatteries.com

ST SERIES - GENERAL PURPOSE

ST12-120



General Features

- ✓ 10 years design life(25°C)
- ✓ Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
- ✓ PbCaSn alloy for plate grids: less gassing, less self-discharging
- ✓ High quality AGM separator: extend cycle life and prevent micro short circuit
- ✓ High purity raw material: ensure low self discharge rate

Applications

- ✓ All purpose
- ✓ Uninterruptable Power Supply (UPS)
- ✓ Electric Power System (EPS)
- ✓ Emergency backup power supply
- ✓ Alarm and security system
- ✓ Communication power supply
- ✓ DC power supply
- ✓ Auto control system

Standards

- ✓ Compliance with IEC 60896 standards, EU Battery Directive
- ✓ UL, CE Certified
- ✓ Manufactured in Starmax® IATF16949, ISO45001, ISO 9001 and ISO 14001 certified production facilities



SPECIFICATIONS

Rated Voltage	12V	
Nominal Capacity	120.0Ah	(C ₁₀ ,1.80V/cell)
Dimensions	Length	408±2mm (16.1 inches)
	Width	177±2mm (6.97 inches)
	Container height	225±2mm (8.86 inches)
	Total height	225±2mm (8.86 inches)
Approx. weight	35.0 Kg (77.2 lbs)	
Terminal	M8	
Container material	ABS	
Rated capacity (25°C)	123.4 Ah	(20hr,6.17A,1.80V/cell)
	120.0 Ah	(10hr,12.0A,1.80V/cell)
	107.0 Ah	(5hr,21.4A,1.75V/cell)
	97.5 Ah	(3hr,32.5A,1.75V/cell)
	75.0 Ah	(1hr,75.0A,1.60V/cell)
Max. discharge current	1200A (5s)	
Internal resistance (25°C)	Approx 4.0mΩ	
Operating temp. range	Discharge	-15~50°C (5~122°F)
	Charge	-20~40°C (-4~104°F)
	Storage	-15~40°C (5~104°F)
Nominal operating temp. range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 36.0A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	Initial Charging Current less than 36.0A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self discharge	ST series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	

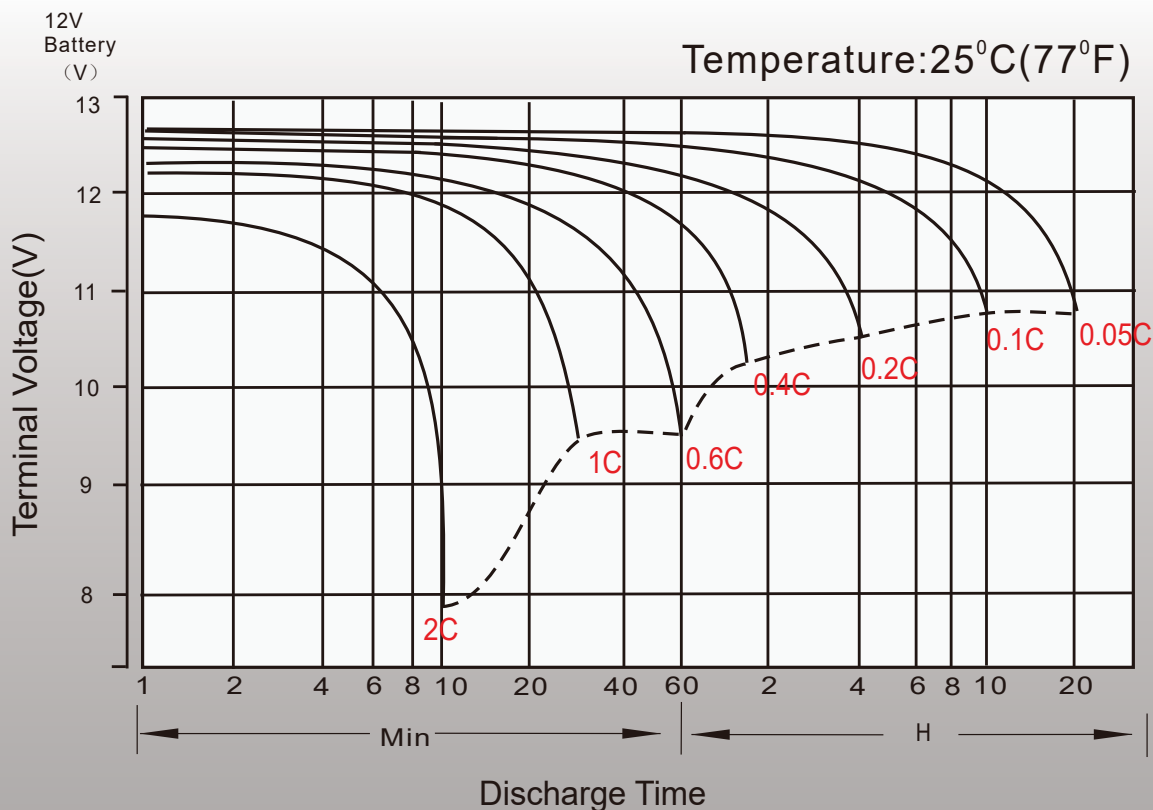
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	234.7	166.9	150.8	118.6	106.1	77.5	65.7	47.6	400	29.4	23.0	20.0	17.6	13.6	11.2	5.96
1.80V/cell	266.9	189.4	170.9	134.1	115.5	82.1	68.1	49.2	41.3	31.9	24.6	21.0	18.9	14.3	12.0	6.17
1.75V/cell	289.9	205.4	185.1	144.8	117.8	85.1	71.4	51.8	43.5	32.5	25.1	21.4	19.1	14.3	12.1	6.24
1.70V/cell	309.9	219.0	196.5	153.5	120.2	86.8	72.8	52.8	44.4	33.1	25.5	21.8	19.2	14.6	12.2	6.30
1.67V/cell	320.8	226.0	202.3	157.7	122.0	88.1	73.9	53.6	45.0	33.4	25.9	22.2	19.3	14.8	12.3	6.38
1.60V/cell	332.1	233.7	208.6	161.8	123.7	89.3	75.0	54.3	45.7	33.7	26.2	22.5	19.4	14.9	12.4	6.45

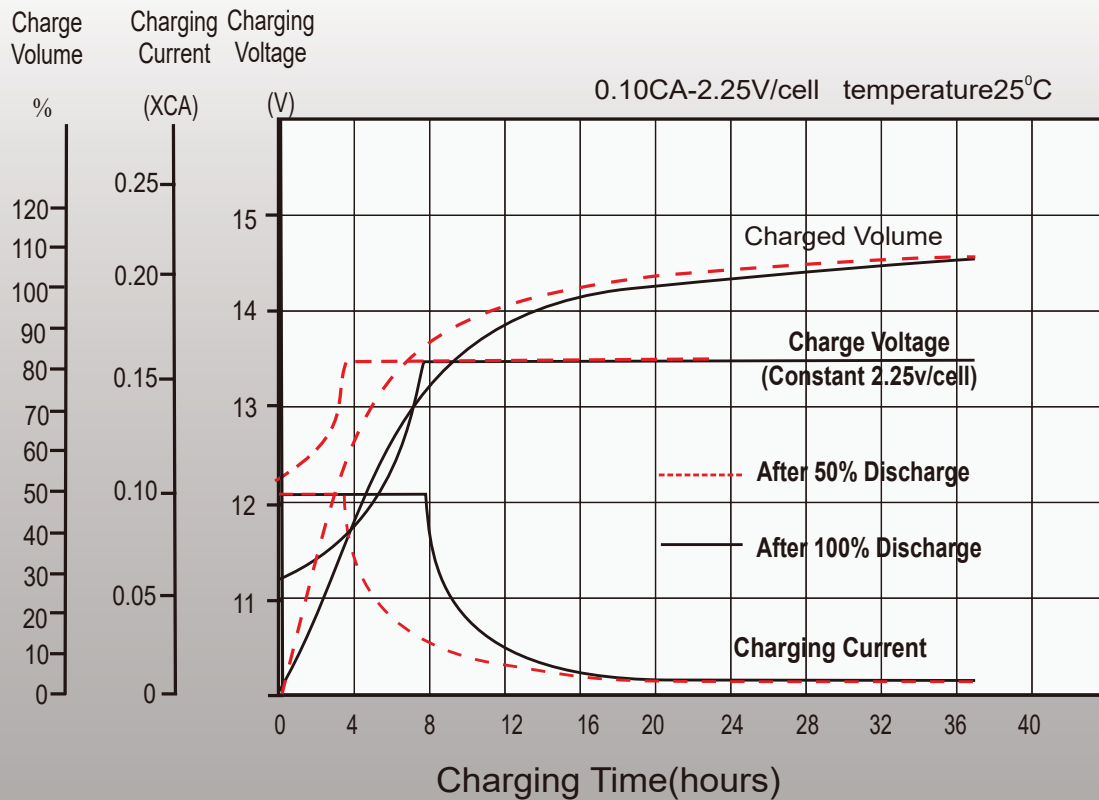
Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	438.3	313.9	285.6	225.6	202.7	149.0	127.1	92.4	77.9	57.4	45.2	39.4	34.8	26.9	22.3	11.9
1.80V/cell	490.3	351.2	319.5	252.4	218.9	156.8	130.9	95.0	80.0	62.0	48.1	41.2	37.2	28.2	23.4	12.3
1.75V/cell	523.3	374.8	341.0	269.4	221.7	161.5	136.7	99.4	83.9	63.0	48.8	41.8	37.4	28.3	23.6	12.4
1.70V/cell	550.1	394.0	358.5	283.2	224.2	163.6	138.7	101.0	85.2	64.0	49.5	42.4	37.5	28.7	23.8	12.5
1.67V/cell	559.1	400.4	364.3	287.8	225.8	165.1	140.0	101.9	86.1	64.3	50.1	43.1	37.6	29.0	24.0	12.6
1.60V/cell	566.9	406.0	369.4	291.8	226.8	165.9	141.0	102.7	86.8	64.6	50.4	43.5	37.7	29.3	24.3	12.8

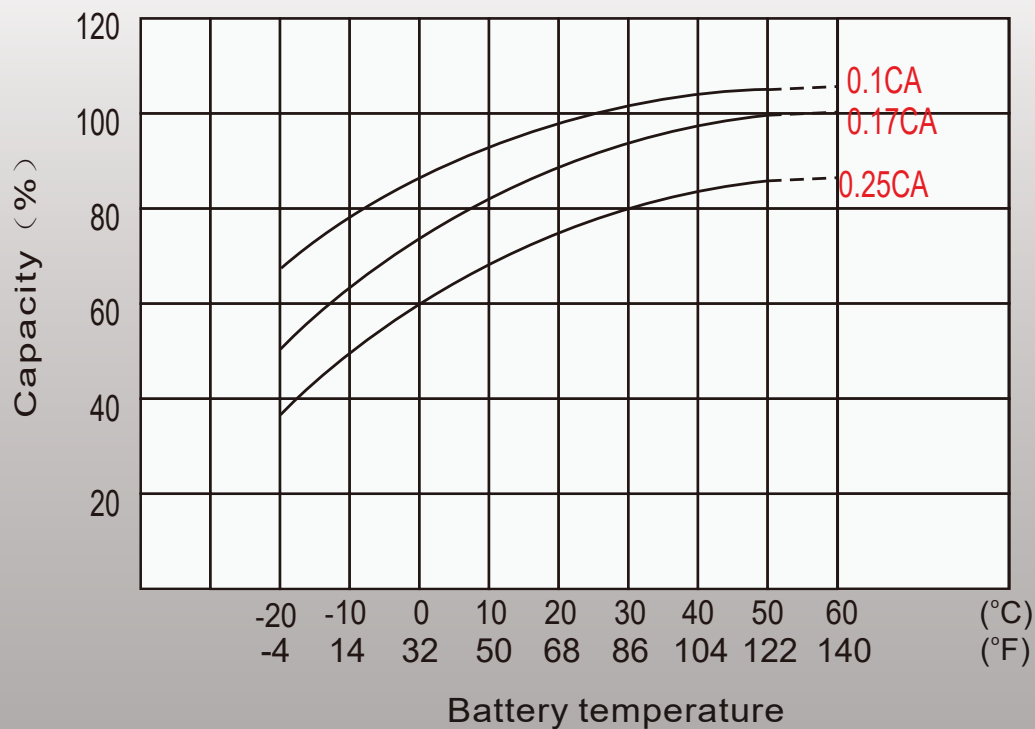
Discharge Characteristics



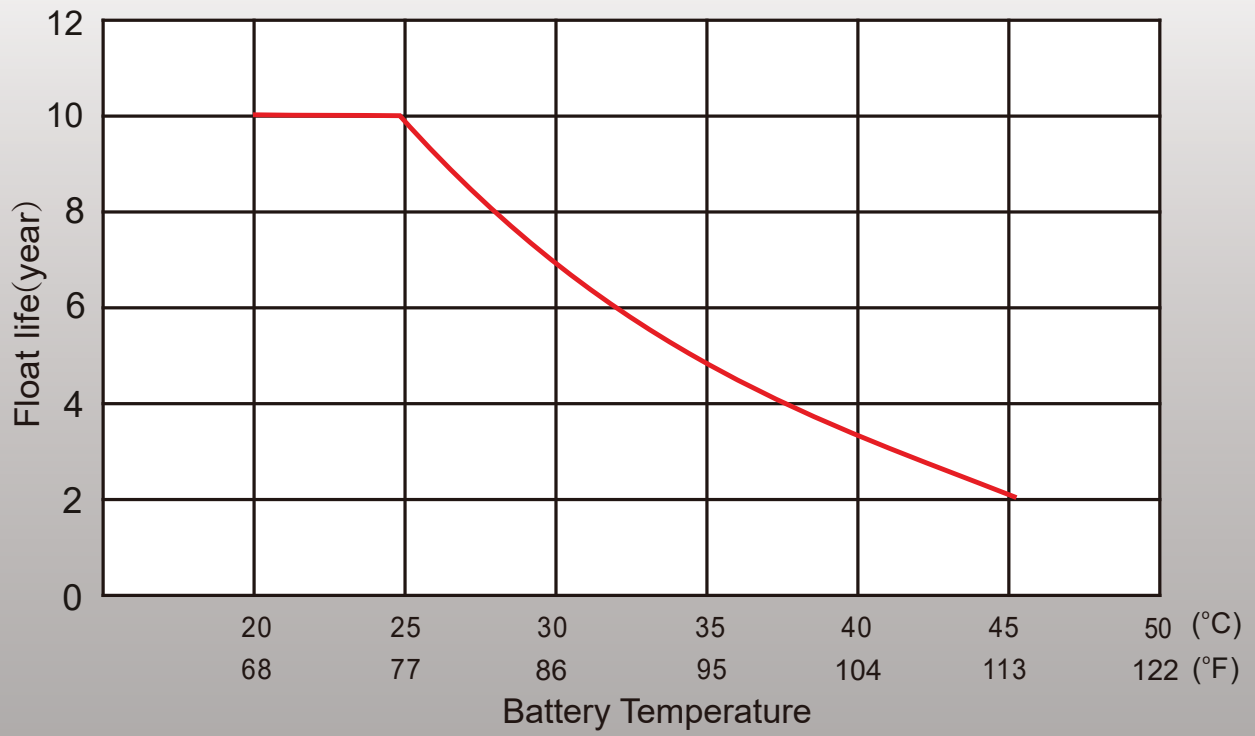
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Float Service Life



ST12-120 (12V 120Ah)



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