

# ESH 100 -12AGM

12V - 100Ah

High Rate Discharge Series

## INTRODUCTION

Rocket ESH Series is designed for the application which requires high power output. ESH series can deliver 50% more power than ESC Series of Rocket Batteries. This is achieved by optimizing the grid plate design and by using advanced plate paste formula.

Through its constant research and development, Global has continued to lead its nation's storage battery industry. From the beginning, Global's motto has been to provide its customers with "more powerful and durable batteries". Therefore, Global has been in the pursuit of quality advanced technology in the battery manufacturing business.

In order to stay in competition with the international battery market, Global has established capital and technical ties with the world's most renowned battery manufacturers, such as Yuasa Corporation of Japan, Hagen Batteries AG. of Germany, and SAFT of France.

## TECHNICAL FEATURES

- Non-Spillable Sealed Construction
- Absorbent Glass Mat System (AGM System)
- ABS (Acrylonitrile Butadiene Styrene) container and cover
- Gas Recombination
- Maintenance-Free Operation
- Low Pressure Venting System
- Heavy - Duty Grids
- Low Self-Discharge - Long Shelf Life
- Wide Operating Temperature Range

## APPLICATIONS

- UPS
- Telecom Communication Equipments
- Fire Alarm & Security Systems
- Medical Instruments
- Emergency Lighting
- Computer Backup

## COMPLAINTS STANDARD

- JIS C8702, BS 6290/4 and IEC 896/2
- Eurobat Guide/HF
- ISO9001/ISO14000

## SPECIFICATION

Nominal Voltage		12V
Capacity (20HR, 25°C)		100 Ah
Dimension	Length	330mm (13.0inch)
	Width	171mm (6.73inch)
	Height	215mm (8.46inch)
	Total Height	220mm (8.66inch)
Approx Weight		33.0kg (72.8lbs)
Design Life		10 Years

## CHARACTERISTICS

Capacity 25°C (77°F)	20 hour rate	100 Ah
Capacity (W) 1.60V, 20°C	10 min	470
Internal resistance (Fully charge, 20°C)		3.7mOhms
Self-discharge (20°C)	1 month	Remaining Capacity:97%
Operating temperature range	Discharge	-20°C~60°C
	Charge	-10°C~60°C
	Storage	-20°C~60°C
Maximum discharge current		68°F(20°C) 900A(5 Sec.)
Charge Methods (Constant Voltage Charge 68°F(20°C)) - Cyclic Use		Cycle Use 14.5 to 14.7V
		Max. charging Current 30A
Charge Methods (Constant Voltage Charge 68°F(20°C)) - Standby Use		Temp. compensation - 30mV/°C
		Standby Use 13.6-13.8V
		Temp. compensation - 20mV/°C

**THE BATTERY CONTAINER AND COVER ARE AVAILABLE BOTH IN ABS plastic and Flame Retardant (FR).**

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### CONSTANT CURRENT DISCHARGE (Amperes) at 25°C

End Point Volts/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min
1.60V	351	271	222	180	155	138	123	111	101	92.2	84.8
1.65V	330	256	211	171	147	131	116	105	96.2	87.8	80.8
1.70V	309	242	199	162	139	124	110	100	91.3	83.4	76.9
1.75V	288	227	188	152	131	117	104	94.1	86.4	79	72.9
1.80V	276	218	181	148	127	114	101	91.8	84.3	77.1	71.2

End Point Volts/Cell	60min	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60V	78.7	55.4	43.8	36.8	32.2	25	20.7	17.6	15.3	13.7	12.4	11.4	9.64	4.9
1.65V	75.1	52.9	41.9	35.2	30.8	23.9	19.8	16.9	14.7	13.1	11.9	10.9	9.29	4.74
1.70V	71.4	50.4	39.9	33.6	29.4	22.9	19	16.1	14.1	12.6	11.4	10.5	8.95	4.57
1.75V	67.8	47.9	38.0	32.0	28.1	21.9	18.1	15.4	13.5	12.1	11	10.1	8.6	4.41
1.80V	66.3	46.9	37.2	31.4	27.5	21.4	17.8	15.2	13.3	11.9	10.8	9.9	8.48	4.35

### CONSTANT POWER DISCHARGE (Watts per cell) at 25°C

End Point Volts/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min
1.60V	627	470	378	310	270	243	216	196	180	164	151
1.65V	600	453	364	300	261	235	209	190	175	159	147
1.70V	573	435	351	289	252	227	202	184	169	154	143
1.75V	547	418	338	279	243	219	195	177	164	150	138
1.80V	520	400	325	268	234	211	188	171	158	145	134

End Point Volts/Cell	60min	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60V	140	100.0	80.4	68.5	60.5	47.7	40	34.2	30.1	27	24.5	22.6	19.6	10.2
1.65V	136	97.7	78.3	66.7	59	46.6	39.1	33.5	29.4	26.4	24	22.2	19.3	10
1.70V	133	95.0	76.3	65.0	57.5	45.4	38.2	32.7	28.8	25.8	23.5	21.7	18.9	9.87
1.75V	129	92.4	74.2	63.3	56	44.3	37.3	32	28.1	25.3	23	21.3	18.6	9.71
1.80V	125	89.8	72.1	61.6	54.5	43.2	36.4	31.2	27.5	24.7	22.5	20.8	18.2	9.54

