

ESH 90 -12 AGM

High Rate Discharge Series

12V - 90Ah

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)		90 Ah
Dimension	Length	306mm (12.0inch)
	Width	169mm (6.65inch)
	Height	210mm (8.27inch)
	Total Height	215mm (8.46inch)
Approx Weight		30.0kg (66.2lbs)
Design Life		10 Years

CHARACTERISTICS

Capacity 25°C (77°F)	20 hour rate	90 Ah
Capacity (W) 1.60V, 20°C	10 min	420
Internal resistance (Fully charge, 20°C)		4.2mOhms
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) 800A(5 Sec.)
Charge Methods (Constant Voltage Charge 68°F(20°C)) - Cyclic Use		Cycle Use 14.5 to 14.7V
		Max. charging Current 27A
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	303	235	192	155	133	118	105	95.2	87.5	79.7	73.3
1.65V	285	223	182	147	126	112	100	90.5	83.3	75.9	69.9
1.70V	267	210	172	139	119	106	94.5	85.8	79	72.1	66.4
1.75V	249	197	162	131	112	100	89.2	81.1	74.7	68.3	63
1.80V	238	190	156	127	109	97.4	86.9	79.1	73	66.7	61.6

End Point Volts/Cell	60min	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60V	68	47.6	37.4	31.2	27.1	21.4	17.9	15.3	13.5	12.1	11.1	10.2	8.66	4.41
1.65V	64.9	45.4	35.7	29.9	26	20.5	17.1	14.7	13	11.7	10.6	9.82	8.35	4.26
1.70V	61.7	43.3	34.1	28.5	24.8	19.6	16.4	14.1	12.4	11.2	10.2	9.43	8.04	4.11
1.75V	58.6	41.1	32.4	27.2	23.7	18.7	15.7	13.5	11.9	10.7	9.78	9.04	7.73	3.96
1.80V	57.3	40.3	31.7	26.6	23.2	18.3	15.4	13.2	11.7	10.5	9.62	8.9	7.62	3.91

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	540	420	333	272	235	210	186	168	154	141	130
1.65V	517	404	321	262	227	204	180	163	150	137	126
1.70V	494	389	309	253	219	197	175	158	145	133	123
1.75V	471	373	298	244	211	190	169	153	141	129	119
1.80V	448	357	286	235	204	183	163	148	136	125	116

End Point Volts/Cell	60min	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60V	121	85.7	68.1	57.5	50.4	40	33.8	29.2	25.9	23.4	21.4	19.9	17	8.9
1.65V	118	83.5	66.3	56.0	49.2	39.1	33.1	28.5	25.3	22.9	21	19.5	16.7	8.76
1.70V	115	81.2	64.6	54.6	47.9	38.2	32.3	27.9	24.8	22.4	20.6	19.1	16.4	8.61
1.75V	111	79.0	62.8	53.1	46.7	37.2	31.6	27.3	24.2	21.9	20.1	18.7	16.1	8.47
1.80V	108	76.7	61.1	51.7	45.4	36.3	30.8	26.6	23.7	21.4	19.7	18.3	15.8	8.32

