



EXIDE **POWERSAFE EHP**

Premium Front Access Range of Data Center Batteries



Product Range

Battery Type	15min Power Rating up to 1.67 VPC	Dimension with Accessories (L X W X H) in mm	Weight (Kg) ± 5%	Internal Resistance (mΩ)
EHP12-340W-FT	340W	513 X 110 X 241	34.5	4.50
EHP12-450W-FT	450W	568 X 126 X 299	51.3	4.10
EHP12-560W-FT	560W	568 X 126 X 299	54.7	3.60
EHP12-640W-FT	640W	568 X 126 X 320	61.3	3.30
EHP12-750W-FT	750W	622 X 126 X 326	68.5	3.10

Features

- ▶ Singular technology combining superior high-rate power capability and long term reliability
- ▶ Maintenance free AGM VRLA battery with synthetic fiber reinforced absorbent glass mat to ensure high recombination efficiency and life-long compression retention
- ▶ ABS container and cover resists bulging
- ▶ Flame retardant grade ABS (FRV0) meets safety requirements
- ▶ Container and cover heat sealed and 100% tested to prevent leaks
- ▶ Corrosion- resistant Lead-Calcium-Tin positive grid alloy, low gassing and water loss feature ensure long service life
- ▶ Flame arresting and self-resealing vent valves
- ▶ Terminals with brass insert for maximum conductivity and epoxy sealing for eliminating leaks
- ▶ Computer aided design and manufacturing process controls ensure quality products
- ▶ True front access and sleek battery design for ease of maintenance and optimal space utilization
- ▶ Suitable for rack or cabinet installation

Charging Parameters

Mode of Operation	Voltage setting per 12V unit for ambience Temp. 20°-30°C
FLOAT	13.62V ± 0.1V
BOOST	14.10V ± 0.1V

Temperature Compensation (Reference Temp- 25°C): -18mV/°C/12V unit

- String equalization in boost mode once in 3 months for 16-24 hours

Construction

- ▶ Positive and negative plates in lead-tin-calcium alloy with optimized grid design.
- ▶ Separator – Synthetic fiber reinforced microporous absorptive glass mat.
- ▶ The electrolyte is absorbed within this material, preventing acid leakage in case of accidental damage.
- ▶ Bolt-on type terminals with a large surface area with Brass insert to provide maximum conductivity.
- ▶ Self-regulating vent valve with integrated flame arrestor.
- ▶ ABS Lid & Container for robust mechanical properties.
- ▶ Especially suited for high power application.

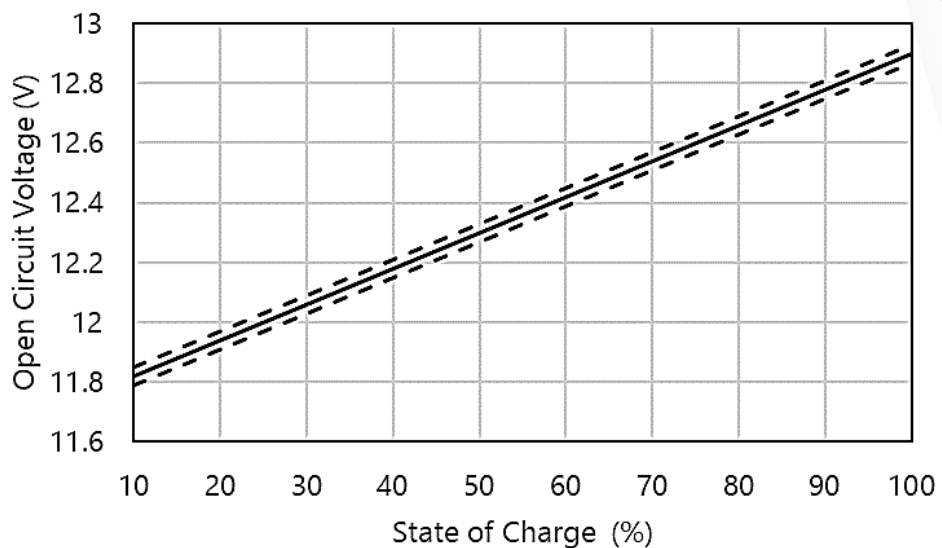
Effect of Temperature on Power

104°F (40°C)	102%
77°F (25°C)	100%
32°F (0°C)	82%
5°F (-15°C)	62%

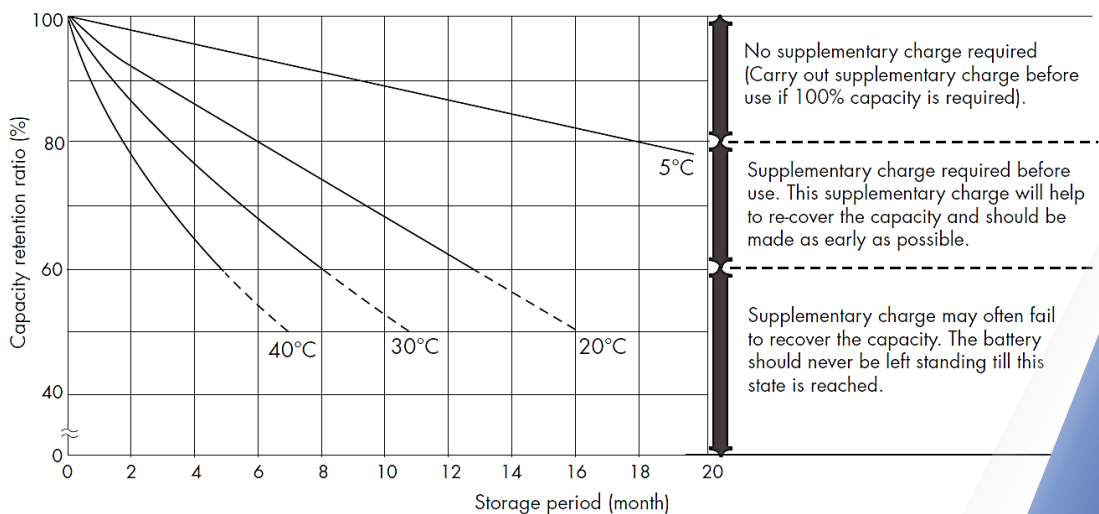
Design Life

➤ 10 Years in float application at 25°C

SoC vs OCV



Storage & supplementary Charge



Gas Evolution

Under worst case operating condition, the below table to be referred for calculation of hydrogen gas evolution per battery

Battery Type	Rate of Hydrogen Evolution
EHP12-340W	0.00057 m ³ /hr
EHP12-450W	0.00087 m ³ /hr
EHP12-560W	0.00092 m ³ /hr
EHP12-640W	0.00100 m ³ /hr
EHP12-750W	0.00110 m ³ /hr

Air Flow Calculation

Required Air Flow

$$= d \times s \times (\text{hydrogen gas evolved per hour from battery bank}) \text{m}^3/\text{hr}$$

d= dilution ratio = (100-4)/ 4 = 24;

Lower explosive limit for Hydrogen= 4% below which the air mixture will be to lean to burn

s= factor of safety, e.g. s = 5

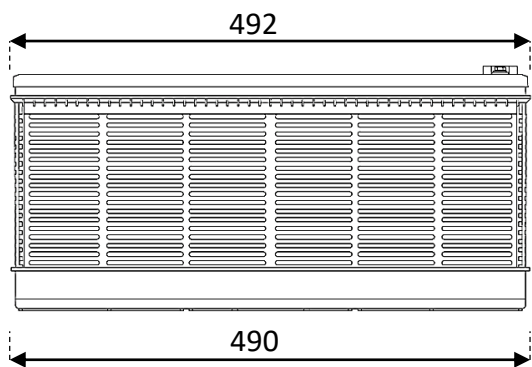
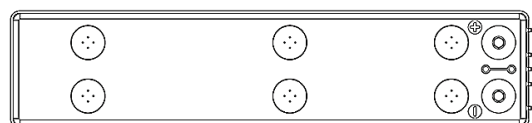
Heat Generation

Under worst case operating condition, the below table to be referred for calculation of heat generation during charging per battery

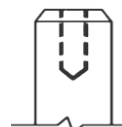
Battery Type	Rate of Heat Generation
EHP12-340W	2.84 W
EHP12-450W	4.32 W
EHP12-560W	4.59 W
EHP12-640W	4.99 W
EHP12-750W	5.40 W

EHP12-340W-FT

Product Outline



Terminal

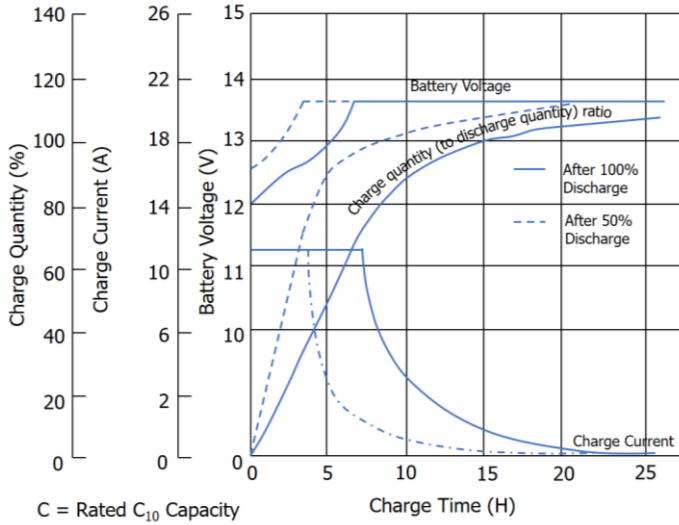


M6 Bolt-on Terminal

Constant Power Discharge Rating per cell at 25 ° C

ECV	10 min	15 min	20 min	30 min	40 min	50 min	60 min
1.6	452	346	260	221	176	150	133
1.67	437	340	252	215	170	148	132
1.7	427	338	251	214	167	146	130
1.75	404	330	245	213	163	143	127
1.8	357	302	223	206	160	140	120

Charge Characteristics



Charging Current

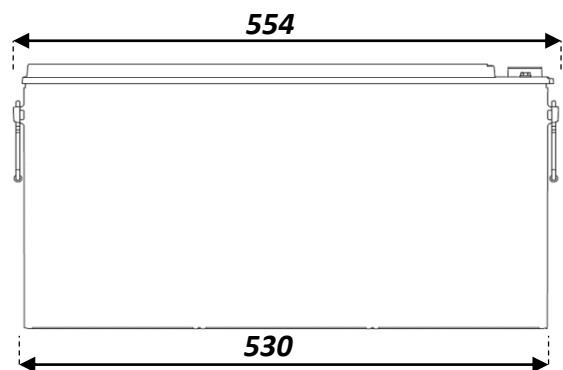
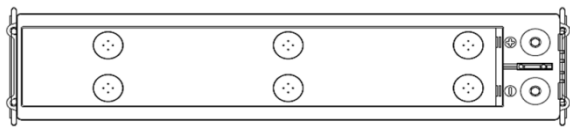
Minimum	10.5A
Maximum	26A

Other Information

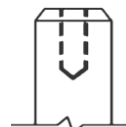
Terminal Torque	11.3 N-m
Short Circuit Current	2100A
Cable Sizing	2A/mm ²
Max Cable Drop	<20mV/meter

EHP12-450W-FT

Product Outline



Terminal

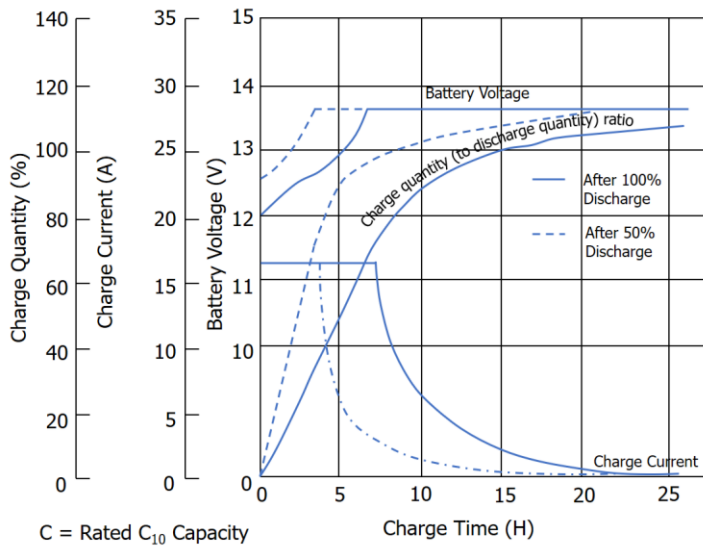


M6 Bolt-on Terminal

Constant Power Discharge Rating per cell at 25 ° C

ECV	10 min	15 min	20 min	30 min	40 min	50 min	60 min
1.60	588	467	371	299	240	203	178
1.67	559	450	358	291	234	200	176
1.70	542	441	352	288	231	198	173
1.75	508	422	337	283	226	194	170
1.80	453	387	310	268	218	189	167

Charge Characteristics



Charging Current

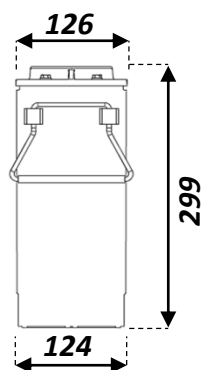
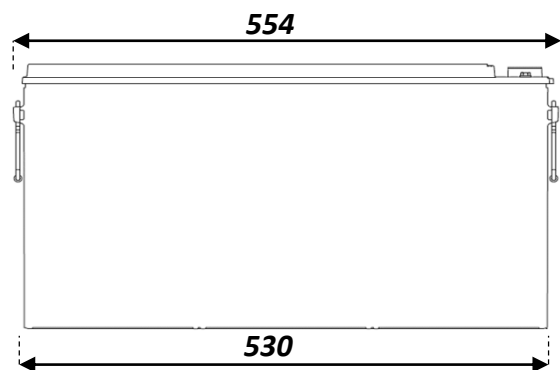
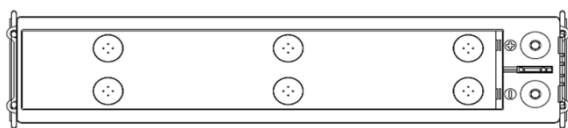
Minimum	16A
Maximum	40A

Other Information

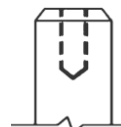
Terminal Torque	11.3 N-m
Short Circuit Current	3200A
Cable Sizing	2A/mm ²
Max Cable Drop	<20mV/meter

EHP12-560W-FT

Product Outline



Terminal

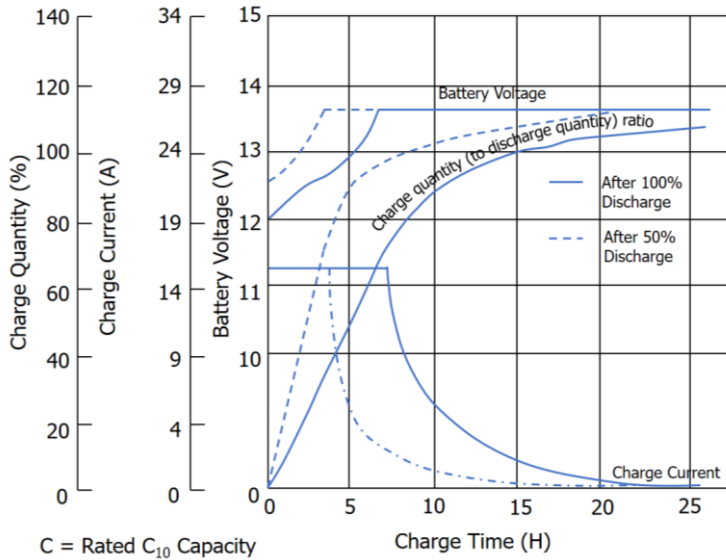


M6 Bolt-on Terminal

Constant Power Discharge Rating per cell at 25 ° C

ECV	10 min	15 min	20 min	30 min	40 min	50 min	60 min
1.60	712	576	471	369	297	250	218
1.67	670	560	453	360	291	247	216
1.70	647	535	443	356	288	245	215
1.75	602	506	420	344	280	238	210
1.80	540	463	389	324	267	230	202

Charge Characteristics



Charging Current

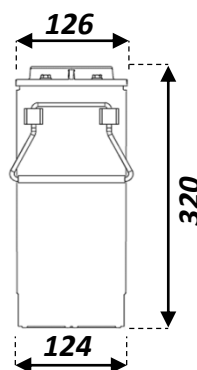
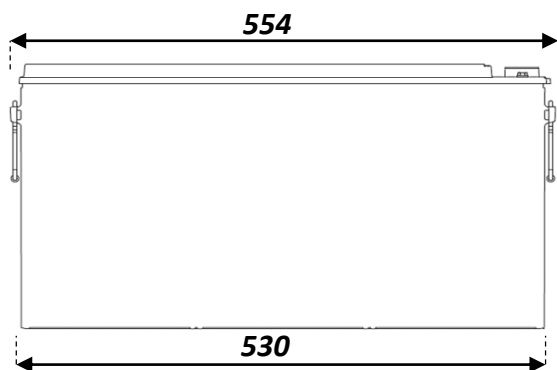
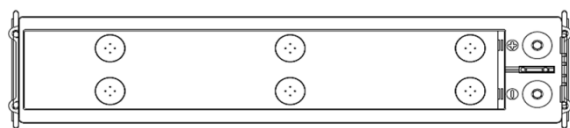
Minimum	16.5A
Maximum	42A

Other Information

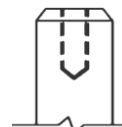
Terminal Torque	11.3 N-m
Short Circuit Current	3300A
Cable Sizing	2A/mm ²
Max Cable Drop	<20mV/meter

EHP12-640W-FT

Product Outline



Terminal

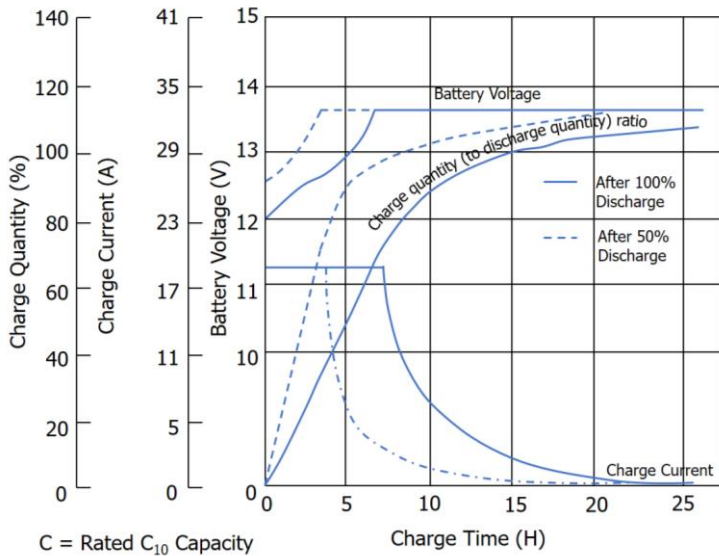


M6 Bolt-on Terminal

Constant Power Discharge Rating per cell at 25 ° C

ECV	10 min	15 min	20 min	30 min	40 min	50 min	60 min
1.60	824	675	561	432	349	293	254
1.67	770	640	539	423	343	289	252
1.70	742	620	525	417	340	287	251
1.75	687	582	495	399	329	280	246
1.80	618	532	460	374	311	267	235

Charge Characteristics



Charging Current

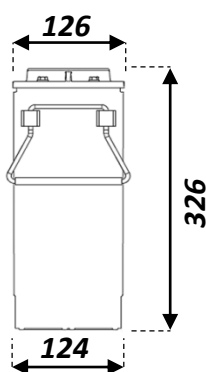
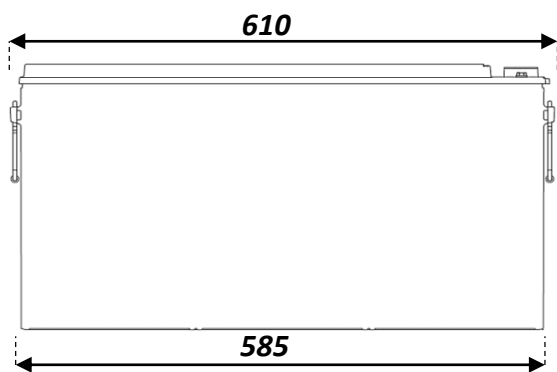
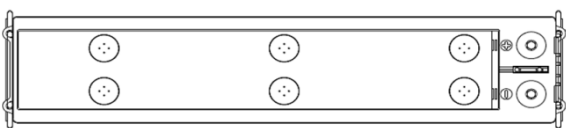
Minimum	18.5A
Maximum	47A

Other Information

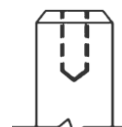
Terminal Torque	11.3 N-m
Short Circuit Current	3700A
Cable Sizing	2A/mm ²
Max Cable Drop	<20mV/meter

EHP12-750W-FT

Product Outline



Terminal

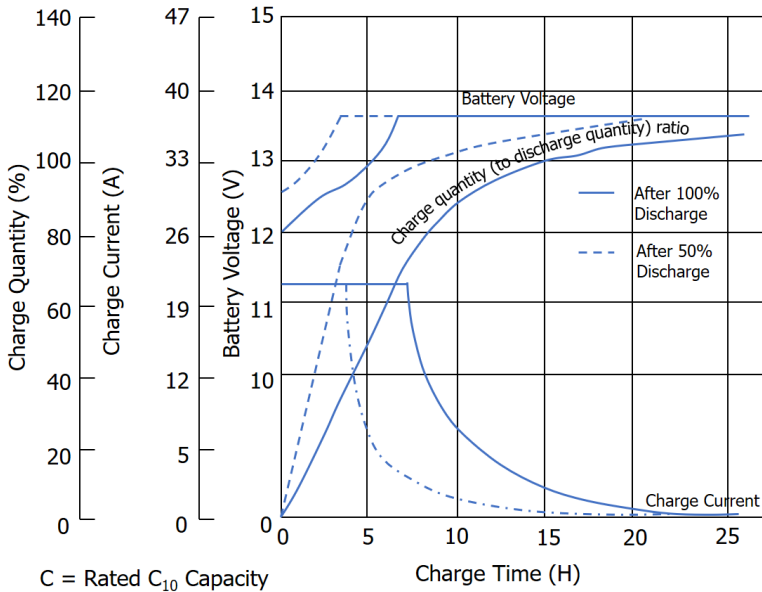


M6 Bolt-on Terminal

Constant Power Discharge Rating per cell at 25 ° C

ECV	10 min	15 min	20 min	30 min	40 min	50 min	60 min
1.60	960	795	672	510	412	345	299
1.67	892	750	644	499	406	341	296
1.70	857	723	626	492	403	339	294
1.75	791	674	587	467	388	330	289
1.80	714	616	547	436	365	312	275

Charge Characteristics



Charging Current

Minimum	20A
Maximum	50A

Other Information

Terminal Torque	11.3 N-m
Short Circuit Current	4100A
Cable Sizing	2A/mm ²
Max Cable Drop	<20mV/meter

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