

PowerSafe™
EC

PERFORMANCE
SPECIFICATIONS

EnerSys™

Power/Full Solutions



Introducing the PowerSafe EC

PowerSafe™ EC

The PowerSafe™ EC is a lead-calcium battery designed to meet the varied needs of the utility switchgear and telecom markets. The positive plate thickness of 0.340 inches is one of the thickest in the industry. This makes the battery an excellent long duration discharge battery. Additionally, copper inserts within the posts maintain excellent short duration high current performance. EnerSys' larger, double-hole post also provides a stronger intercell connection, assuring maximum electrical integrity.

The EC also features EnerSys' Slide-Lock™ post seal. This unique design allows for natural plate growth over the battery's life without compromising the seal between the post and cover. Extra space is also provided in the cell to increase the amount of electrolyte available and provide ample space for natural growth. All these features help to extend the life of the battery and increase performance.

Features

- Lead-calcium alloy - lowest water loss, lowest maintenance.
- Highest one minute rates.
- For floating applications where increased ambient temperatures are not probable.
- 20 year life expectancy.
- Slide-Lock™ Post Seal.

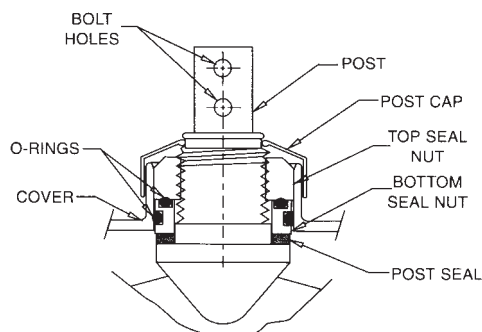
Specifications

- Plate thickness:
Positive: 0.34 in/8.6 mm
Negative: 0.24 in/6.1 mm
- Plate dimensions:

	Height	Width
Pos:	11.4 in/290 mm	9.4 in/239 mm
Neg:	11.4 in/290 mm	9.4 in/239 mm
- Sediment space: 1.0 in/25.4 mm
- Electrolyte over plates: 2.1 in/53.3 mm
- Container:
Styrene Acrylonitrile Copolymer
- Cover: Made from Flame Retardant PVC (UL94-VO/L.O.I. 28%)
- Separators: Microporous rubber
- Retainers: "Vitrex"- glass fiber
- Post type:
EC-5 thru 13 - single post with copper insert
EC-15 thru 21 - double posts with copper inserts
- Post seal type: Slide-Lock™
- Plate suspension type:
Positive: Bridge hung
Negative: Bottom supported
- Vent type: Flame arrestor, fused alumina
- Float voltage setting:
Acceptable min/max: 2.17/2.26Vpc
Recommended: 2.25Vpc
- Specific Gravity: 1.215 (1.250 available on request)
- Bolt connectors: Stainless steel, standard English measure, hex-head
- Intercell connectors: Lead-plated copper

NOTE: All inter-cell, inter-tier, inter-step, end-to-end inter-rack, back-to-back inter-rack connectors, and terminal plates are included with every battery. Cross-aisle inter-rack connectors are not included.

Patented Slide-Lock™ Post Seal



General Specifications

TYPE*	NOM. Ah CAP ¹	Nominal Dimensions						Typical Weight							
		Length**		Width		Height		Unpacked		Domestic Packed		Electrolyte Only / 1.215 S.G.			
		mm	in	mm	in	mm	in	kg	lbs	kg	lbs	kg	lbs	l	gal
EC-5	200	130	5.1	279	11.0	475	18.7	27.7	61	29.0	64	9.5	21	7.8	2.1
EC-7	270	130	5.1	279	11.0	475	18.7	32.7	72	34.0	75	8.6	19	7.1	1.9
EC-9	350	130	5.1	279	11.0	475	18.7	37.6	83	39.0	86	7.7	17	6.4	1.7
EC-11	440	168	6.6	279	11.0	475	18.7	47.2	104	49.4	109	10.9	24	9.0	2.4
EC-13	535	168	6.6	279	11.0	475	18.7	51.7	114	54.0	119	9.1	20	7.5	2.0
EC-15	620	206	8.1	279	11.0	475	18.7	63.5	140	66.2	146	13.2	29	10.8	2.9
EC-17	710	206	8.1	279	11.0	475	18.7	68.0	150	70.8	156	12.2	27	10.1	2.7
EC-19	800	257	10.1	279	11.0	475	18.7	79.8	176	82.6	182	16.8	39	13.8	3.7
EC-21	890	257	10.1	279	11.0	475	18.7	84.8	187	87.5	193	16.3	36	13.5	3.6

* Suffix Number indicates Total Plates Per Cell.

** 0.25" must be added between cells for spacing purposes when calculating total battery rack length.

Constant Current

Discharge Rates in Amperes** to 1.75Vpc at 25°C (77°F)*

TYPE*	NOM. Ah CAP ¹	Minutes			Hours									
		1	15	30	1	1.5	2	3	4	5	8	12	24	72
EC-5	200	220	172	138	100	80	67	51	42	35	25	18.1	10.2	4.2
EC-7	270	330	258	207	150	118	98	73	59	49	33	24.0	13.0	4.8
EC-9	350	440	344	276	200	157	130	97	78	65	44	31.0	17.0	6.4
EC-11	440	550	430	345	250	197	163	122	98	82	56	39.0	22.0	8.0
EC-13	535	660	516	414	300	236	195	146	117	98	67	47.0	26.0	9.6
EC-15	620	770	602	484	350	275	228	170	137	114	78	55.0	30.0	11.2
EC-17	710	880	688	553	400	315	260	194	156	131	89	63.0	34.0	12.8
EC-19	800	990	774	622	450	354	293	219	176	147	100	71.0	39.0	14.4
EC-21	890	1100	860	691	500	393	325	243	195	163	111	79.0	43.0	16.0

Discharge Rates in Amperes** to 1.81Vpc at 25°C (77°F)*

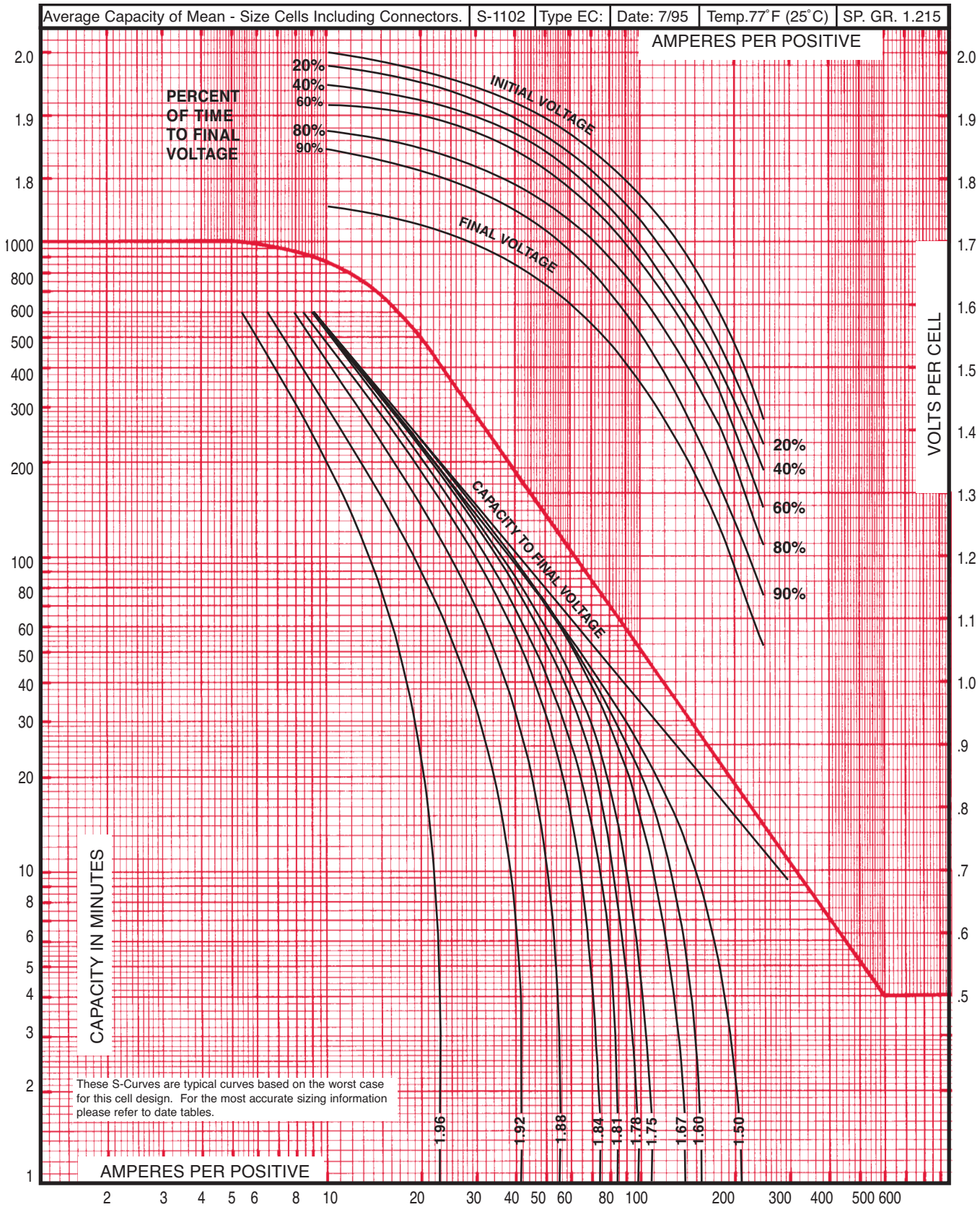
EC-5	170	140	115	86	69	58	44	36	31	21	15.0	8.0	3.1
EC-7	255	210	173	129	103	87	66	54	46	32	23.0	13.0	4.7
EC-9	340	280	231	172	138	116	88	72	61	43	31.0	17.0	6.2
EC-11	425	350	288	215	172	144	110	90	77	54	38.0	21.0	7.8
EC-13	510	420	346	258	207	173	132	108	92	64	46.0	25.0	9.3
EC-15	595	490	403	301	241	202	154	126	107	75	54.0	29.0	10.9
EC-17	680	560	461	344	276	231	176	144	122	86	61.0	34.0	12.4
EC-19	765	630	519	387	310	260	198	162	138	96	69.0	38.0	13.9
EC-21	850	700	576	430	345	289	220	180	153	107	77.0	42.0	15.5

* Ampere values listed represent 100% of the cell's capacity. Initial capacity shall be a minimum of 90% of these values per IEEE 450.

**1.215 S.G. electrolyte at 77°F (25°C) includes intercell connector drop.

¹Nominal AMP-hour capacity at the 8 hour rate.

All data subject to change without notice.



Publication No. US-EC-PS-01 January 2007 • Subject to revisions without prior notice. E.&O.E.



EnerSys
P.O. Box 14145
Reading, PA 19612-4145
USA
Tel: +1-610-208-1991
+1-800-538-3627
Fax: +1-610-372-8613

EnerSys EMEA
Brussels, Belgium
Tel: +32 (0)2 247 94 47

EnerSys Asia
Guangdong, China
Tel: +86-755-2689 3639

Represented by:

Printed in the U.S.A.
© 2007 EnerSys. All rights reserved.
Trademarks and logos are the property of EnerSys and its affiliates unless otherwise noted.