



**PowerSafe**<sup>®</sup>

**ESG Performance Specifications**

## Features and Benefits

- Capacity range 187 - 935 Ah
- Lead-calcium alloy
- Standard Styrene Acrylonitrile (SAN) jar with flame retardant UL94 V-0 PVC cover; PC flame retardant jar and cover optional
- 20 year life expectancy in float service at 77°F (25°C) ambient temperature

## Construction

- 0.28" thick positive plates provide excellent long discharge rates and long life
- Separator – microporous phenolic resin with glass fiber retainers
- Electrolyte – dilute sulfuric acid with specific gravity of 1.215
- Copper inserted posts
- Slide-Lock™ post seal design
- Flame arrestors – included for increased operational safety

## Installation and Operation

- Tin plated copper inter-cell connectors (standard); lead plated optional
- Dual posts for high current carrying capability (ESG-19 and above)
- Excellent one minute rate, long duration discharge and complex duty cycle capability for switchgear applications
- 20 year life expectancy in float service at 77°F (25°C)
- Post design features low resistance copper inserts for high rate performance
- Operating temperature: 32°F (0°C) to 104°F (40°C)  
Recommended temperature: 68°F (20°C) to 86°F (30°C)

## Standards

- The management systems governing the manufacture of this product are ISO 9001:2015 and ISO 14001:2004 certified

## General Specifications

Battery Type*	Nominal Capacity**	Cells per Jar	Nominal Dimensions						Electrolyte (1.215 S.G.)					
			Length <sup>†</sup>		Width		Height***		Unpacked Weight		Weight (per jar)		Volume (per jar)	
			in	mm	in	mm	in	mm	lbs	kg	lbs	kg	gal	L
<b>2ESG-05</b>	187	2	6.6	168	11.1	282	18.6	472	87	39	26.7	12.1	2.8	10.5
<b>2ESG-07</b>	234	2	6.6	168	11.1	282	18.6	472	107	49	24.3	11.0	2.5	9.5
<b>2ESG-09</b>	281	2	6.6	168	11.1	282	18.6	472	127	58	22.3	10.1	2.3	8.8
<b>2ESG-11</b>	354	2	9.2	234	11.1	282	18.6	472	156	71	27.3	12.4	2.8	10.7
<b>2ESG-13</b>	418	2	9.2	234	11.1	282	18.6	472	177	80	26.4	12.0	2.7	10.4
<b>ESG-15</b>	501	1	6.6	168	11.1	282	18.7	475	117	53	25.6	11.6	2.7	10.0
<b>ESG-17</b>	580	1	6.6	168	11.1	282	18.7	475	127	58	24.9	11.3	2.6	9.8
<b>ESG-19</b>	662	1	8.1	206	11.1	282	18.7	475	152	69	32.4	14.7	3.4	12.7
<b>ESG-21</b>	698	1	8.1	206	11.1	282	18.7	475	162	73	31.7	14.4	3.3	12.4
<b>ESG-23</b>	733	1	8.1	206	11.1	282	18.7	475	172	78	31.3	14.2	3.2	12.3
<b>ESG-25</b>	884	1	10.1	257	11.1	282	18.7	475	195	88	41.0	18.6	4.3	16.1
<b>ESG-27</b>	909	1	10.1	257	11.1	282	18.7	475	205	93	40.3	18.3	4.2	15.8
<b>ESG-29</b>	935	1	10.1	257	11.1	282	18.7	475	215	98	39.8	18.1	4.1	15.6

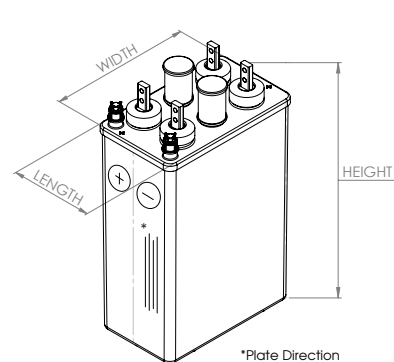
\* Prefix number indicates cells per jar. Suffix number indicates total plates per cell

\*\* Nominal Ampere hour capacity at the 8 hour rate to 1.75 volts per cell @ 77°F (25°C)

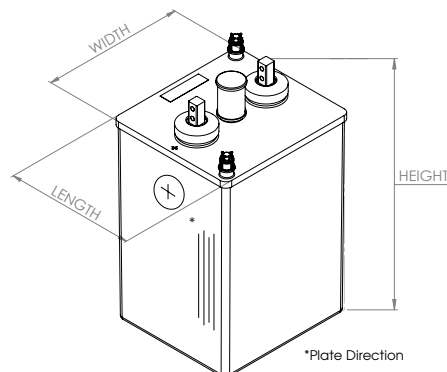
\*\*\* Total battery height including terminal plate is 23.0 in (584 mm)

† 0.25 in must be added between units for spacing purposes when calculating total battery length

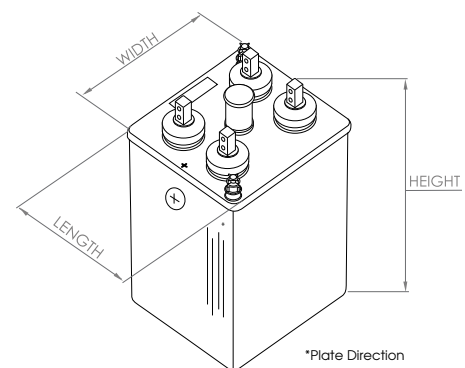
## Outline Drawings



**2ESG-05 to 2ESG-13**



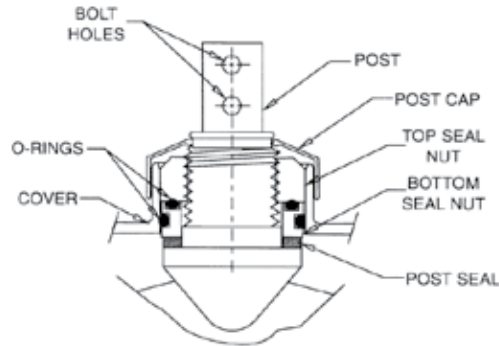
**ESG-15 to ESG-17**



**ESG-19 to ESG-29**

### Rint and Isc

Cell Type	Resistance	Isc
	$\mu$ Ohms	Amps
2ESG-05	722	2771
2ESG-07	575	3734
2ESG-09	427	4698
2ESG-11	349	5821
2ESG-13	315	6374
ESG-15	256	7901
ESG-17	221	9075
ESG-19	208	9607
ESG-21	184	11053
ESG-23	160	12499
ESG-25	155	12879
ESG-27	142	14191
ESG-29	129	15502



Slide-Lock™ Post Seal

### Constant Current 1.215 Specific Gravity

#### Discharge Rates in Amperes per Cell to 1.75Vpc at 77°F (25°C)

Cell Type	Nominal Capacity*	Minutes			Hours									
		1	15	30	1	1.5	2	3	4	5	8	12	24	72
2ESG-05	187	302	194	142	97	75	62	47	38	33	23	17	10	4
2ESG-07	234	388	283	206	136	104	85	63	50	42	29	21	12	5
2ESG-09	281	475	368	267	175	132	107	78	62	52	35	25	13	5
2ESG-11	354	553	462	337	222	168	136	99	79	65	44	31	17	6
2ESG-13	418	641	535	392	260	197	159	117	93	77	52	37	20	7
ESG-15	501	820	628	451	295	223	181	134	108	91	63	44	24	9
ESG-17	580	891	711	514	338	256	207	154	125	105	72	51	28	10
ESG-19	662	1005	756	571	384	291	237	176	141	119	83	59	34	14
ESG-21	698	1156	848	631	420	317	257	190	152	127	87	62	34	13
ESG-23	733	1307	944	691	455	343	277	203	162	135	92	65	35	13
ESG-25	884	1367	1012	758	509	390	319	237	191	160	111	79	44	17
ESG-27	909	1475	1094	818	545	414	337	249	199	166	114	81	44	17
ESG-29	935	1581	1175	878	581	438	354	260	207	173	117	82	45	17

#### Discharge Rates in Amperes per Cell to 1.81Vpc at 77°F (25°C)

Cell Type	Nominal Capacity*	Minutes			Hours									
		1	15	30	1	1.5	2	3	4	5	8	12	24	72
2ESG-05	187	151	151	126	89	71	60	46	38	33	23	17	10	4
2ESG-07	234	245	237	180	124	97	80	60	49	42	29	21	12	5
2ESG-09	281	340	308	232	158	121	99	74	59	50	34	24	13	5
2ESG-11	354	386	379	291	201	155	127	94	76	64	44	31	17	6
2ESG-13	418	486	442	339	234	180	147	109	88	74	50	36	20	7
ESG-15	501	499	499	389	266	205	168	128	104	89	62	44	24	9
ESG-17	580	624	592	444	304	234	192	145	118	101	70	50	28	10
ESG-19	662	615	615	498	350	270	222	167	136	116	82	59	34	14
ESG-21	698	738	706	549	380	292	240	179	145	122	85	61	34	13
ESG-23	733	893	779	600	411	315	257	191	153	128	88	63	35	13
ESG-25	884	765	765	652	456	357	296	224	182	154	108	78	44	17
ESG-27	909	891	891	707	489	378	311	233	189	159	110	79	44	17
ESG-29	935	1037	980	763	522	399	327	243	195	164	113	80	44	17

\* Nominal Ah Capacity is based on 8 hour discharge to 1.75 vpc at 77°F (25°C)  
Rates are subject to change without notice



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