



**PowerSafe**<sup>®</sup>  
DSG

## Battery Performance Specifications

## Features and Benefits

- Capacity range 295 - 1600 Ah at the 8 hour rate to 1.75Vpc at 77°F (25°C)
- 100% initial capacity
- 12 multi-cell units, six 8v units and six 4v units reduces linear footprint
- Individual (or dual) terminals per cell to allow individual cell monitoring
- Plated copper terminals, single hole for 5 and 7 plate models, dual hole for remainder of models
- Thick grids for excellent long duration discharge and long life

## Construction

- 0.25" thick positive plates provide excellent long discharge rates for complex load profiles
- Separator - microporous phenolic resin with glass fiber retainers
- Standard jar material is Styrene Acrylonitrile (SAN) with flame retardant PVC cover. Optional PC flame retardant jar with flame retardant PVC cover (5-13 plate) or flame retardant PC cover (15-27 plate)
- Electrolyte - dilute sulfuric acid with specific gravity of 1.215
- Slide-Lock™ post seal design
- Flame arrestors - included for increased operational safety

## Installation and Operation

- Tin-plated copper inter-cell connections standard; lead-plated optional
- Lead-plated copper posts DSG-05 to DSG-19 - one positive and one negative post per cell; DSG-21 to DSG-27 - two positive posts and two negative posts per cell
- Optimized for long duration discharge and complex duty cycle required for switchgear application
- 20-year life expectancy in float service at 77°F (25°C)
- Operating temperature: 32°F (0°C) to 104°F (40°C)  
Recommended temperature: 68°F (20°C) to 86°F (30°C)

## Standards

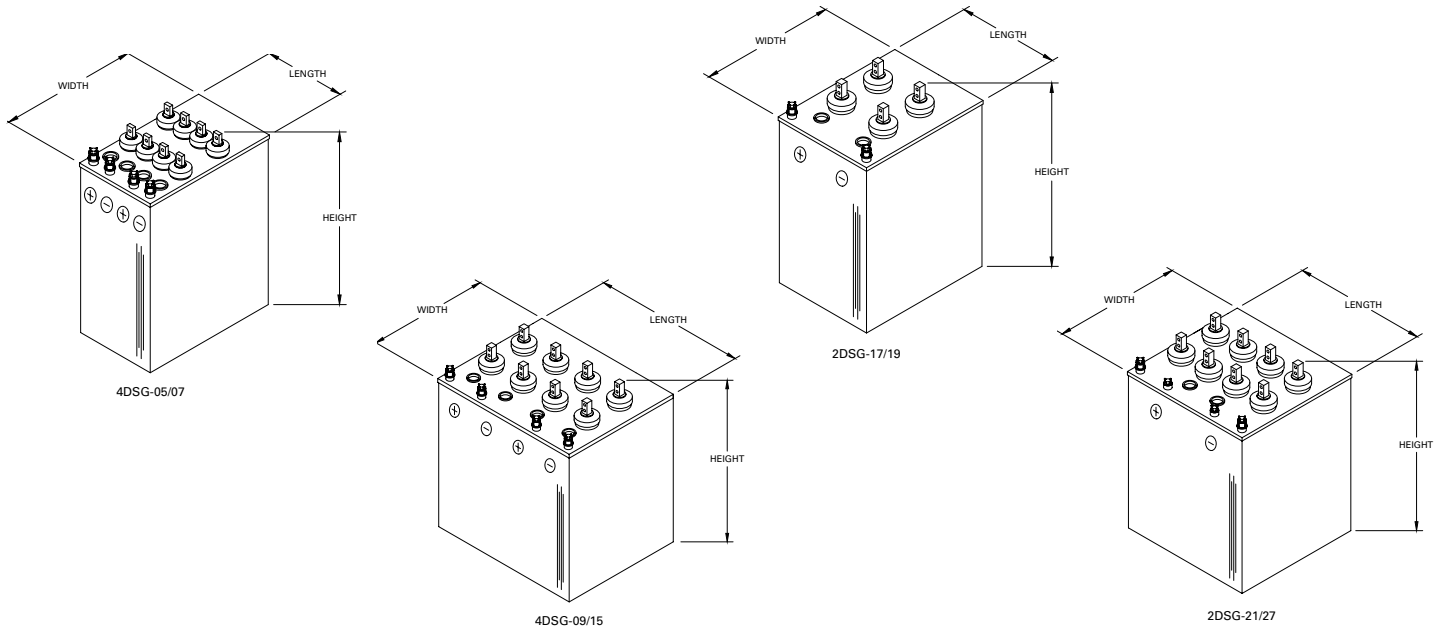
- The management systems governing manufacturing of this product are ISO-9001 and ISO-14001 certified
- Optional IEEE 450 or customer specific testing available

## General Specifications

Battery Type*	Nominal Capacity (Ah)	Nominal Dimensions								Weights - Volumes							
	8 hr rate to 1.75Vpc @ 25°C/77°F	Length**		Width		Height		Height to top of terminal plate		Unpacked Container		Domestic Packed Container		Electrolyte Only / 1.215 S.G. per cell			
		in	mm	in	mm	in	mm	in	mm	lbs	kg	lbs	kg	gallon	liter	lbs	kg
<b>4DSG-05</b>	295									267	121	276	125	6.3	23.8	64.0	29.0
<b>4DSG-07</b>	375									328	149	337	153	5.8	22.0	59.2	26.8
<b>4DSG-09</b>	595									494	224	509	231	13.2	49.8	134	60.6
<b>4DSG-11</b>	680	16.7	424	16.0	406	22.7	576	28.8	731	555	252	570	259	12.2	46.0	124	56.0
<b>4DSG-13</b>	745									617	280	632	287	11.1	42.1	113	51.3
<b>4DSG-15</b>	885	20.2	513	16.0	406	22.7	576	30.0	763	756	343	775	352	11.0	41.6	112	50.7
<b>2DSG-17</b>	1053									435	197	450	204	6.6	25.1	67.5	30.6
<b>2DSG-19</b>	1132	12.1	308	16.0	406	22.7	576	30.0	763	451	205	466	211	6.0	22.5	60.5	27.4
<b>2DSG-21</b>	1373									546	248	565	256	10.2	38.6	104	47.0
<b>2DSG-23</b>	1449									580	263	599	272	9.8	37.1	99.5	45.1
<b>2DSG-25</b>	1524	16.7	424	16.0	406	22.7	576	30.1	764	615	279	634	288	9.4	35.5	95.3	43.2
<b>2DSG-27</b>	1600									650	295	669	303	9.2	34.8	93.4	42.4

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

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



**Constant Current**

**1.215 Specific Gravity Discharge Rates in Amperes per Cell\* to 1.75Vpc at 77°F (25°C)**

Battery Type	Nominal Capacity (Ah) 8 hr rate to 1.75Vpc @ 25°C/77°F	Minutes			Hours									
		1	15	30	1	1.5	2	3	4	5	8	12	24	72
4DSG-05	295	405.1	306.9	233.7	161.1	125.0	102.4	76.83	61.99	52.53	36.90	26.24	15.37	6.29
4DSG-07	375	577.9	451.2	336.9	226.8	173.5	141.5	104.2	82.83	69.24	47.14	32.97	18.24	6.85
4DSG-09	595	764.1	605.7	461.6	319.6	249.2	205.2	153.9	124.1	105.3	74.24	53.01	31.29	12.94
4DSG-11	680	945.4	748.8	565.9	386.9	298.4	244.8	182.6	145.9	122.8	85.15	60.22	34.55	13.69
4DSG-13	745	1120	887.9	665.8	449.1	342.8	278.9	206.3	164.2	136.9	93.00	65.16	35.95	13.42
4DSG-15	885	1268	1019	781.8	532.7	404.3	328.1	242.2	194.3	162.4	110.6	78.26	42.99	16.38
2DSG-17	1053	1364	1153	896.8	619.2	473.0	384.8	284.9	229.1	192.2	131.6	93.51	51.78	20.03
2DSG-19	1132	1524	1261	961.7	659.6	508.5	416.7	309.6	248.2	208.3	141.5	99.38	53.55	19.37
2DSG-21	1373	1714	1379	1057	730.1	569.5	471.9	356.1	289.7	245.3	171.6	118.9	64.01	24.34
2DSG-23	1449	1902	1534	1173	804.9	623.7	513.7	384.8	310.9	262.4	181.1	126.0	67.79	25.33
2DSG-25	1524	2072	1685	1287	878.8	676.7	555.1	413.0	331.8	279.2	190.5	133.1	71.56	26.32
2DSG-27	1600	2225	1832	1400	951.9	729.1	595.8	440.7	352.4	295.3	200.0	140.1	75.33	27.31

**1.215 Specific Gravity Discharge Rates in Amperes per Cell\* to 1.81Vpc at 77°F (25°C)**

Battery Type	Nominal Capacity (Ah) 8 hr rate to 1.75Vpc @ 25°C/77°F	Minutes			Hours									
		1	15	30	1	1.5	2	3	4	5	8	12	24	72
4DSG-05	295	274.4	256.0	203.2	147.0	116.7	97.67	74.91	61.21	52.26	36.90	26.24	15.37	6.29
4DSG-07	375	386.2	369.6	289.0	202.2	157.9	130.5	98.19	79.34	66.94	46.17	32.67	18.23	6.85
4DSG-09	595	526.3	496.1	394.8	286.8	228.8	192.1	148.0	121.4	104.0	74.20	53.01	31.29	12.94
4DSG-11	680	639.3	610.4	481.0	344.4	271.7	226.4	172.1	140.0	119.0	83.43	59.69	34.55	13.69
4DSG-13	745	745.8	721.0	562.4	396.6	309.3	255.4	191.7	154.2	129.9	89.26	63.26	35.27	13.27
4DSG-15	885	870.0	836.1	669.9	473.8	366.3	300.7	224.9	181.9	153.8	106.8	76.51	42.67	16.38
2DSG-17	1053	952.6	939.1	762.2	549.3	428.6	353.5	265.5	215.4	182.3	126.7	90.97	51.00	19.94
2DSG-19	1132	1029	1029	816.3	581.2	456.0	377.9	284.7	230.2	194.2	133.8	95.26	52.22	19.13
2DSG-21	1373	1176	1127	893.9	646.8	516.5	434.0	333.3	273.7	234.0	165.9	116.5	63.80	24.34
2DSG-23	1449	1299	1252	992.0	710.4	562.5	469.6	357.5	291.5	248.1	173.8	122.7	67.22	25.33
2DSG-25	1524	1415	1375	1089	773.0	607.4	504.3	380.9	308.9	261.6	181.7	128.9	70.60	26.32
2DSG-27	1600	1514	1496	1186	834.8	651.1	537.6	403.3	325.9	274.7	189.4	134.9	73.89	27.19

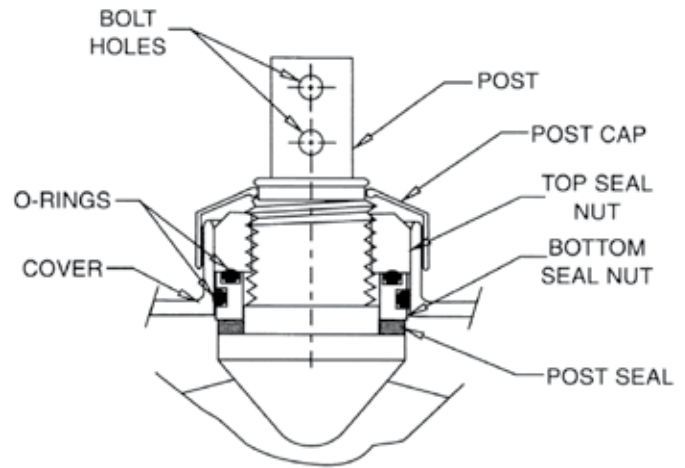
*\*Includes intercell connector drop.  
Ampere values listed represent 100% of the initial capacity.  
All data subject to change without notice.*

**Catalog Rint and Isc Catalog Values\***

Battery Model	*Resistance (μOhm)	Isc (Amps)
4DSG-05	520	3,830
4DSG-07	363	5,502
4DSG-09	270	7,394
4DSG-11	222	8,996
4DSG-13	188	10,607
4DSG-15	157	12,749
2DSG-17	149	13,450
2DSG-19	127	15,728
2DSG-21	104	19,094
2DSG-23	98	20,492
2DSG-25	92	21,889
2DSG-27	86	23,287

\* Resistance values are per cell and for reference only  
(not intended to represent an ohmic value or base line measurement)

**Exclusive Slide-Lock™ Post Seal**



Dual Hole Post Shown

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