

450 - 1900 Ah  
1.358 - 4.686 KW/Cell

# DOUGLAS SAFEGUARD® PREMIUM

**Douglas Safeguard® Premium Offers The Ultimate** in modular standby power systems. The Safeguard® Premium series of valve-regulated, lead-acid batteries is housed in steel racks that can be stacked to 85" high and meet IBC 2000 seismic Zone 4 requirements. Safeguard® Premium batteries are installed horizontally and provide up to 60% more energy per unit volume than conventional batteries. Our 2-Volt cells provide you a capacity range from 450 to 1900 Ah, with a warranty life of 20 years under recommended operating conditions. Each jar and cover is constructed of flame-retardant UL94 V0 halogen-free PC/ABS plastic, with a LOI of 32%. The thick wall PC/ABS construction eliminates the need for compression, reducing total weight and providing greater installation flexibility.



## DESIGN FEATURES:

- **Post Seal.** Triple barrier seal eliminates acid leaks and post movement.
- **Terminal Post.** Large cross section, heavy-duty post with tin plated copper insert allows for very high discharge currents.
- **Plates.** Wider, construction for both positive and negative pasted plates, with special lead/calcium/tin/silver alloy. Resists corrosion to enhance life of product.
- **Separators.** High-quality microporous glass fibers facilitate gas diffusion, optimize acid absorption and have lower electrical resistance. Low internal resistance, high-energy density, separator maintains compression throughout life, giving excellent vibration resistance.
- **Electrolyte.** High-purity sulfuric acid absorbed in separator has 1.280 SG. (1.300 SG for 1900 Ah). No acid spill, easy to handle and install, supplied filled and charged, no acid handling. No watering or hydrometer reading which cuts maintenance expense.
- **Float Voltage.** Douglas Safeguard® batteries provide optimum performance when float charged at 2.23 (2.25 for 1900 Ah)  $\pm$  1% VPC for temperatures at 77°F (25°C).
- **Safety Valve.** Every cell has its own one-way valve which operates between 1.45 – 2.20 PSI for safety in the event of abusive operating conditions. Valve-regulated operation, with controllable internal pressure for safety and reliability and very low maintenance in service.
- **Flame Arrestor.** Built-in above every safety valve. Maximum safety in the event of abusive charging.
- **Container and Cover.** Made of thick wall PC/ABS with high mechanical strength and impact resistance. Non-toxic, non-halogenated flame retardant to UL94 V0, LOI 32%. Non-clamped installation allows air circulation for environmental control and optimum service life. In the event of fire, non-toxic materials offer personnel safety.
- **Inter-cell Connectors and Top Termination.** Heavy-duty tin-plated copper connectors minimize voltage drop in battery circuits. Connections do not require torque maintenance or grease (NO-OX).
- **Storage.** The shelf life of Douglas Safeguard® batteries is affected by temperature. The lower the storage temperature, the longer the shelf life. At 77°F (25°C) batteries lose about 3% capacity per month.

DOUGLAS® SAFEGUARD®  
PREMIUM

  
**DOUGLAS BATTERY**  
Connect with a leader

# Technical Specifications

## Weights and Dimensions

MODEL NUMBER	AH CAPACITY	INDIVIDUAL CELL							
		LENGTH		DEPTH		HEIGHT		WEIGHT	
		INCHES	mm	INCHES	mm	INCHES	mm	lbs.	kg
DGP2-450	460	8.10"	206	4.88"	124	19.96"	507	78.7	35.7
DGP2-550	559	8.10"	206	5.71"	145	19.96"	507	96.3	43.7
DGP2-650	662	8.10"	206	6.54"	166	19.96"	507	112.2	50.9
DGP2-800	816	8.27"	210	10.00"	254	19.96"	507	139.8	63.4
DGP2-900	912	8.27"	210	10.00"	254	19.96"	507	153.7	69.7
DGP2-1000	1016	8.27"	210	10.00"	254	19.96"	507	168.7	76.5
DGP2-1200	1224	8.27"	210	10.83"	275	26.85"	682	196.2	89.0
DGP2-1400	1424	8.27"	210	10.83"	275	26.85"	682	224.9	102.0
DGP2-1600	1632	8.27"	210	10.83"	275	26.85"	682	255.7	116.0
DGP2-1900	1880	8.27"	210	10.83"	275	26.85"	682	255.7	116.0

Based on 8-hour rate to 1.75 End VPC @ 77°F (25°C)

MODEL NUMBER	AH CAPACITY	MODULAR STRING				24VDC				48VDC			
		LENGTH		DEPTH		HEIGHT		WEIGHT		HEIGHT		WEIGHT	
		INCHES	mm	INCHES	mm	INCHES	mm	lbs.	kg	INCHES	mm	lbs.	kg
3DGP2-450	450	29.62"	752	24.22"	615	41.07"	1043	1199	544	70.08"	1780	2435	1105
4DGP2-450	460	38.75"	984	24.22"	615	33.59"	853	1170	531	54.70"	1389	2378	1079
3DGP2-550	559	29.62"	752	24.22"	615	44.36"	1127	1422	645	76.68"	1948	2857	1296
4DGP2-550	559	38.75"	984	24.22"	615	35.83"	910	1391	631	59.60"	1514	2783	1262
3DGP2-650	662	29.62"	752	24.22"	615	47.67"	1211	1625	737	83.30"	2116	3185	1445
4DGP2-800	816	38.75"	984	24.22"	615	48.95"	1243	1962	890	86.25"	2191	3833	1739
4DGP2-900	912	38.75"	984	24.22"	615	48.95"	1243	2128	965	86.25"	2191	4166	1890
4DGP2-1000	1016	38.75"	984	24.22"	615	48.95"	1243	2308	1047	86.25"	2191	4526	2053
4DGP2-1200	1224	38.88"	988	30.69"	780	51.44"	1307	2849	1292	91.06"	2313	5576	2529
4DGP2-1400	1424	38.88"	988	30.69"	780	51.44"	1307	3245	1472	91.06"	2313	6368	2889
4DGP2-1600	1632	38.88"	988	30.69"	780	51.44"	1307	3641	1652	91.06"	2313	7160	3248
4DGP2-1900	1880	38.88"	988	30.69"	780	51.44"	1307	3749	1701	91.06"	2313	7374	3445

Height includes bottom support channel and top terminal plate. Depth dimension includes Front Safety Shield. Weight may vary +/- 5%.

## Performance Specifications

Amperes Discharge Rates @ 77°F (25°C)

TYPE	1.75 End VPC				Hours											
	Minutes															
	5	10	15	30	1	1.5	2	3	4	5	6	8	10	12	24	
DGP2-450	933	794	683	479	305	223	179	131	104	86.2	73.9	57.5	47	39.6	19.3	
DGP2-550	1250	1053	900	622	389	280	223	161	126	105	89.7	69.9	57.4	48.7	25.2	
DGP2-650	1473	1240	1059	733	459	331	264	190	150	124	106	82.7	67.8	57.4	29.5	
DGP2-800	1776	1500	1285	895	563	408	326	235	185	153	131	102	83.6	70.7	35.8	
DGP2-900	2041	1717	1467	1019	639	462	368	264	207	171	146	114	94	80.1	43.3	
DGP2-1000	2221	1873	1607	1122	709	514	410	295	232	191	164	127	105	88.9	47.4	
DGP2-1200	1929	1742	1556	1256	837	617	492	354	278	230	196	153	125	107	56.9	
DGP2-1400	2291	2069	1847	1492	994	720	574	413	324	268	229	178	146	124	66.3	
DGP2-1600	2653	2396	2139	1727	1151	822	656	471	370	306	262	204	167	142	75.8	
DGP2-1900	3480	2951	2606	1810	1284	948	756	544	428	353	302	235	198	164	87	

Watts per Cell Discharge Rates @ 77°F (25°C)

TYPE	1.67 End VPC														
	Minutes														
	5	10	11	12	13	14	15	16	17	18	19	20	25	30	35
DGP2-450	1900	1593	1540	1491	1444	1400	1358	1319	1282	1247	1214	1182	1047	941	855
DGP2-550	2509	2085	2013	1946	1882	1822	1766	1713	1663	1616	1571	1529	1349	1207	1093
DGP2-650	2965	2464	2379	2299	2224	2154	2087	2024	1965	1910	1857	1807	1594	1427	1292
DGP2-800	3646	3028	2924	2826	2734	2648	2566	2490	2418	2350	2286	2225	1965	1760	1596
DGP2-900	4104	3409	3292	3182	3078	2981	2890	2804	2722	2646	2573	2505	2212	1981	1796
DGP2-1000	4557	3785	3655	3532	3418	3310	3208	3113	3023	2938	2857	2781	2456	2201	1995
DGP2-1200	3350	3150	3107	3064	3021	2978	2935	2884	2833	2782	2731	2680	2515	2378	2257
DGP2-1400	4091	3750	3697	3644	3592	3539	3486	3425	3365	3304	3244	3183	2986	2824	2680
DGP2-1600	4300	4250	4207	4164	4122	4079	4036	3966	3896	3825	3755	3685	3458	3270	3104
DGP2-1900	5957	5306	5182	5058	4934	4810	4686	4580	4475	4369	4264	4158	3795	3465	3251

Per IEEE-1188 standard, rates listed are 100% of cell capacity, with a minimum of 90% initial capacity.

All data subject to change without notice.



Registered Company



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