

GEL BATTERY

DG SERIES DEEP CYCLE GEL BATTERY



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Designed floating service life: 12 years @ 20 °C/68 °F

Voltage covers: 6V, 8V, 12V

Capacity: from 24Ah to 260Ah

### Main Applications

- Aerial Work Platform (AWP)/Access
- Hybrid Telecom Remote Base Stations
- Grid Frequency Leveling Systems
- All Back-up Applications
- Remote Monitoring & Instrumentation
- Renewable Energy (Solar, Small Wind and Small Hydro)



### General Features

- **GEL Technology**  
The success of DG batteries comes from the internationally superior Gel technology. It is ideal for standby or frequent cyclic discharge applications under extreme environments
- **Long Life Time**  
Especially designed for telecommunication use with 10+ years design life in float service. By combining the newly developed paste formula with up-to-date AGM structures, this range features 12 years design life. By using strong grids, high purity lead and patented Gel electrolyte, the DGseries offers excellent recovery after deep discharge under frequent cyclic discharge use, and can deliver 400 cycles at 100% DOD.
- **Excellent Recovery from Deep Cycle**  
Unique technical processes are used into the grid alloy and electrolyte additive, in this case the battery can be recharged after being over-discharged.

### DG SERIES DEEP CYCLE GEL BATTERY Part 1

Model	Voltage (V)	Capacity C20 (AH)	Dimensions				Approx. Weight (kg)	Terminal Type
			Length (mm)	Width (mm)	Height (mm)	Total height (mm)		
DG12-33	12	33	195	130	155	168	10.2	T5
DG12-40	12	40	198	166	169	169	13.2	T5
DG12-55	12	55	229	138	211	216	17.0	T5
DG12-65	12	65	350	167	182	182	21.0	T11
DG12-70	12	70	350	167	182	182	22.5	T11
DG12-75	12	75	260	169	211	218	23.5	T11
DG12-80	12	80	260	169	211	218	25.0	T11/T14
DG12-90	12	90	306.5	168.5	210	231	28.5	T11/T14
DG12-100	12	100	328	172	215	220	30.0	T11/T14
DG12-120	12	120	407	177	225	225	35.5	T11/T14
DG12-134	12	134	340	173	280	287	41.5	T11/T14
DG12-150	12	150	483	170	241	241	44.5	T11/T14
DG12-180	12	180	532	207	214	219	53.0	T11/T14
DG12-200	12	200	522	240	219	224	60.0	T11/T14
DG12-230	12	230	521	269	204	209	67.0	T11/T14
DG12-260	12	260	520	268	220	225	74.0	T11/T14





## DG SERIES DEEP CYCLE GEL BATTERY Part 2

Model	Voltage (V)	Capacity C20 (AH)	Dimensions				Approx. Weight kg	Terminal Type
			Length mm	Width mm	Height mm	Total height mm		
DG6-100Ah	6	100	194	170	205	212	16.5	F14
DG6-150Ah	6	150	260	180	245	252	23.5	F12
DG6-180Ah	6	180	306	168	220	227	26.5	F12
DG6-200Ah	6	200	322	177.5	226	231	29.0	F14/F16
DG6-200Ah-S	6	200	260	180	245	252	30.0	F12
DG6-225Ah	6	225	322	177.5	226	231	32.0	F14/F16
DG6-225Ah-S	6	225	243	187	275	275	32.0	F14
DG6-310Ah	6	310	295	178	346	364	44.5	F14
DG6-280Ah	6	280	295	178	346	364	41.7	F14
DG6-335Ah	6	335	295	178	346	364	45.5	F14
DG2-200Ah	2	200	172.5	110	328	351	14.0	F10
DG2-250Ah	2	250	171	150	330	353	17.5	F10
DG2-350Ah	2	350	211	176	330	353	24.5	F10
DG2-400Ah	2	400	211	176	330	353	26.0	F10
DG2-450Ah	2	450	211	176	330	353	29.0	F10
DG2-500Ah	2	500	242	172	330	353	30.5	F10
DG2-600Ah	2	600	302	175	330	353	37.0	F10
DG2-650Ah	2	650	302	175	330	353	40.0	F10
DG2-750Ah	2	750	409	175	330	353	46.0	F10
DG2-800Ah	2	800	409	175	330	353	50.0	F10
DG2-1000Ah	2	1000	475	174	328	351	62.0	F10
DG2-1200Ah	2	1200	475	174	328	351	74.0	F10
DG2-1500Ah	2	1500	401	350	341	364	96.0	F10
DG2-2000Ah	2	2000	490	350	341	364	126.5	F10
DG2-2500Ah	2	2500	710	353	341	364	171.0	F10
DG2-3000Ah	2	3000	710	353	341	364	193.0	F10
FTG12-55Ah	12	55	291	106	230	230	18.0	F11
FTG12-90Ah	12	90	562	114	188	188	26.5	F6
FTG12-105Ah	12	105	508	110	236	236	32.5	F8/F17
FTG12-110Ah	12	110	410	110	286	286	33.0	F9
FTG12-150Ah	12	150	565	110	288	288	43.5	F9
FTG12-160Ah	12	160	565	110	288	288	47.0	F9
FTG12-180Ah	12	180	560	125	316	316	52.0	F19

**T1 Terminal** FASTON TYPE (Copper) quick disconnect tabs; silver coating for better conductivity

Technical drawing showing dimensions: 3.2 [0.126], 6.35 [0.25], 8.8 [0.347], 4.75 [0.187].

**T2 Terminal** FASTON TYPE (Copper) quick disconnect tabs; silver coating for better conductivity

Technical drawing showing dimensions: 3.4 [0.134], 7.95 [0.313], 6.35 [0.25], 0.8 [0.031].

**T3 Terminal** Brass Coated With Tin  
Torque: 3.9 ~ 5.4 N\*m (34.39 ~ 47.75 in\*lbs)

Technical drawing showing dimensions: 14 [0.551], 4.5 [0.177], 13 [0.512], 2 [0.079], 6 [0.236].

**T4 Terminal** Brass Coated With Tin

Technical drawing showing dimensions: 5.12 [0.201], 4.75 [0.187], 16 [0.394].

**T5 Terminal** Lead  
Torque: 3.9 ~ 5.4 N\*m (34.39 ~ 47.75 in\*lbs)

Technical drawing showing dimensions: 18 [0.709], 18 [0.709], 7.5 [0.295], 6.7 [0.264], 6.3 [0.248].

**T6 Terminal** Brass Coated With Tin; Threaded Insert 6mm STUD  
Torque: 3.9 ~ 5.4 N\*m (34.39 ~ 47.75 in\*lbs)

Technical drawing showing dimensions: 6 [0.236], 6 [0.236], 6 [0.236].

**T7 Terminal** Brass Coated With Tin; Threaded Insert 8mm STUD  
Torque: 3.9 ~ 5.4 N\*m (34.39 ~ 47.75 in\*lbs)

Technical drawing showing dimensions: 18 [0.709], 6 [0.236], 6 [0.236].

**T9 Terminal** Lead  
Torque: 11 ~ 14.7 N\*m (97.28 ~ 130.0 in\*lbs)

Technical drawing showing dimensions: 18 [0.709], 20 [0.787], 13 [0.512], 8 [0.315].

**T10 Terminal** Lead  
Torque: 3.9 ~ 5.4 N\*m (34.39 ~ 47.75 in\*lbs)

Technical drawing showing dimensions: 17 [0.669], 16 [0.63], 8.5 [0.335], 9 [0.315], 6 [0.236].

**T11 Terminal** Brass Coated With Tin; Threaded Insert 8mm STUD  
Torque: 11 ~ 14.7 N\*m (97.28 ~ 130.0 in\*lbs)

Technical drawing showing dimensions: 18 [0.709], 6 [0.236], 6 [0.236].

**T12 Terminal** Brass Coated With Tin; Threaded Insert 5mm STUD  
Torque: 2.0 ~ 3.0 N\*m (17.69 ~ 26.53 in\*lbs)

Technical drawing showing dimensions: 12 [0.472], 12 [0.472], 6 [0.236], 6 [0.236].

**T13 Terminal** Brass Coated With Tin; Threaded Insert 6mm STUD  
Torque: 3.9 ~ 5.4 N\*m (34.39 ~ 47.75 in\*lbs)

Technical drawing showing dimensions: 19 [0.748], 19 [0.748], 6 [0.236], 21 [0.827], 4 [0.157].

**T14-1 Positive** Lead  
Torque: 11 ~ 14.7 N\*m (97.28 ~ 130.0 in\*lbs)

Technical drawing showing dimensions: 17.4 [0.685], 10 [0.394], 18 [0.709], 22 [0.866], 8.5 [0.335], 13 [0.512], 6.3 [0.248], 9 [0.354].

**T14-2 Negative** Lead  
Torque: 11 ~ 14.7 N\*m (97.28 ~ 130.0 in\*lbs)

Technical drawing showing dimensions: 15.9 [0.626], 10 [0.394], 18 [0.709], 22 [0.866], 8.5 [0.335], 13 [0.512], 6.3 [0.248].



**INSTALLATION**

- 1) Lay the battery with up-down direction instead of inverted in any case.
- 2) Abnormal vibration or shock is not allowed.
- 3) Do insulate when installation.
- 4) Make the batteries ventilated and gapped.
- 5) Do not mixed up different brand and different manufacturing date batteries.
- 6) Separate the batteries from organic solvent.

**APPLICATION**

- 1) Ensure the application conditions to be in compliance with manufacturer's specification requirement.
- 2) Charge battery to full at the first use or after term storage.
- 3) Since installed in UPS, the battery life cycle be seriously affected if the operating frequency is high.
- 4) Inspect lead acid battery regularly.
- 5) Do replace a new battery if the ABS container is deformed or leaking.
- 6) Fire risk exists if the wires do not joint tightly at terminal.
- 7) Discharging once every three months is recommendable if there is no power- off. Do replace the battery if the charging voltage and discharging voltage is abnormal.
- 8) Replace the battery immediately if the battery capacity is less than 50% of rated capacity.

**MAINTENANCE**

- 1) When cleaning the batteries, use a soft damp cloth. A dry cloth may cause static electricity that could result in a fire or explosion.
- 2) ALWAYS replace the batteries with the new ones before the end of their useful life (50% state of their initial discharge duration time) as determined in the specifications.
- 3) Precautions are required to prevent using batteries in a high temperature environment.
- 4) Avoid using organic solvents such as thinner, gasoline, lamp oil or benzene and liquid detergent to clean the batteries.
- 5) ALWAYS make sure the battery terminals are clean to prevent the development of unnecessarily high resistance. High resistance will impair battery performance.

**STORAGE**

- 1) ALWAYS Store the batteries in a safe place away from metal or other conductive materials.
- 2) ALWAYS keep the batteries from water that could cause corrosion on the terminals of the batteries.
- 3) ALWAYS keep the batteries right-side-up during transportation. AVOID letting rough handling of the batteries, e.g. strong shock and/or jolt. Moving the batteries in other than the up-right position may impair battery performance.
- 4) When storing the batteries, be sure to remove them from the equipment or disconnect them from the charger and the load.
- 5) Charge the batteries at least once every six months if they are stored at 25 C (77 F).
- 6) To prevent the shortening the battery life ALWAYS store the batteries in a fully charged state.



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