

**FIRST
NATIONAL** **battery**™
WORLD CLASS BATTERY MANUFACTURER

**STANDBY
BATTERIES**



EXCIS™
GroE Vented
Lead Acid Batteries

For More Information Contact:
FIRST NATIONAL BATTERY
TOLL FREE: 0800 112600

PRODUCT AND SERVICE BENEFITS

- **Locally-Manufactured Range**
Manufactured by a South African company.
- **Premier Quality**
Conforms to BS 6290 1999; IEC 60896-11:2002; DIN 40738 standards; and manufactured to ISO9001:2008, in a ISO14001:2004 facility.
- **Nationwide After-Sales Support**
Countrywide network of branches and agencies, with access to information to ensure sound technical backup.
- **Proven Reliability**
Planté technology manufactured since early 1960's.
- **Customer Care**
Every standby cell carries a comprehensive product warranty backed by the industry leader and supported by a national distributor network.

DESIGN FEATURES

Designed for all standby duties including power stations, telephone exchanges, switchgear operation, telecommunications, emergency lighting and diesel starting.

Noteworthy advantages of these cells are:

- Ease of inspection, test and maintenance (a hydrometer reading indicates the state of charge.)
- Lower internal resistance which provides increased performance at high rates of discharge.
- No falling-off of capacity with age.
- Life expectancy of 20 years or longer.
- Designed for float-charge operation, always ready for use.

POSITIVE PLATE

Are 10mm thick pure lead grids for longer life and to provide sufficient material to ensure that there is no fall-off capacity throughout the life of the cell.

NEGATIVE PLATE

Are of industrial pasted grid construction, for balanced performance and life.

SEPARATORS

Made of an integrated polyester mat re-inforced phenolic resin, for exceptionally long life, degree of porosity and ensuring minimum internal resistance

TECHNICAL DETAILS

FLOAT CHARGING

As these cells are designed for standby applications they should be float charged to ensure that they remain fully charged, ready for instant use, at all times. Correct float voltage settings may vary depending upon operational difference but as a guideline 2.25 volts per cell at 25°C, may be used as a level of charge which will minimise the need for equalising charges, whilst providing acceptable life. The installation and maintenance manual should be read for further information.

SPECIFIC GRAVITY

A simple hydrometer reading indicates the state of charge. A fully charged cell will have a specific gravity of 1.225.

VOLTAGE

The nominal voltage is 2 volts per cell, i.e. a nominal 110V battery will have 55 cells. On discharge, the recommended final voltage at which the discharge should be terminated depends on the discharge rate. It is not recommended to continue discharging the cells once the final voltage has been reached as the voltage will fall away at an increasing rate with minimal gain of discharge duration and the risk of over-discharge.

CAPACITY

The capacity of these cells is normally rated at the 10hour rate of discharge although the capacity which can be taken from a cell will vary depending on the discharge rate, as indicated in the capacity table. Capacity is also affected by temperature.

INSTALLATION

These cells can be conveniently connected in either edge-to-edge or face-to-face configurations, using solid or flexible connectors, and M8 fasteners. For High-rate applications, copper inserted terminals are also available. The standard method of connection is to follow the shortest distance between two terminals.

RECHARGING

The cell's ampere hour efficiency is 90%. To fully recharge the cells the amount of charge required is equal to the amount of discharge in ampere hours plus 11%.

TRANSPARENT CONTAINERS

Moulded from transparent styrene acrylonitrile (SAN) to provide optimum transparency and very high insulating qualities, eliminating the need for separate cell insulators.

CELL LIDS

Moulded from opaque SAN. Are permanently sealed to the container.

VENT PLUGS

Are of a special design which effectively returns all acid spray to the cell, but allows free exit of oxygen and hydrogen gasses. Hydro-save recombination plugs also available for reduced top-up intervals.

GroE, Capacities, Weights and Dimensions

Type	Capacity in amp hours at 25°C when discharged in			Initial Charge Current	Weight		Approx Quantity of acid 1.225 SG	External dimensions of cell container			Overall height of cells – H3 (Copper Posts)	Centres of cells	Width of single row stillage or stand	Width of double row stillage or stand
	10 Hours	3 Hours	1 Hour		Cell compl. filled	Acid only 1.225 SG		Length	Width	Height H1				
Final Voltage	1.80	1.80	1.75	Amps	Kg	Kg	Litres	m m	m m	m m	m m	m m	m m	m m
3 GroE 75	92	70	49	5	15.2	5.4	4.4	153	182	364	410	192	400	710
4 GroE 100	122	93	66	6	18.4	6.4	5.2	153	182	364	410	192	400	710
5 GroE 125	148	114	83	8	19.3	5.1	4.2	153	182	364	410	192	400	710
6 GroE 150	174	135	101	9	21.3	4.9	4.0	153	182	364	410	192	400	710
7 GroE 175	200	157	118	11	23.4	4.8	3.9	153	182	364	410	192	400	710
8 GroE 200	226	178	135	12	28.5	7.7	6.3	228	182	364	410	192	426	742
9 GroE 225	252	199	153	13	30.5	7.5	6.1	228	182	364	410	192	426	742
10 GroE 250	278	220	170	15	32.6	7.4	6.0	228	182	364	410	192	426	742
11 GroE 275	304	241	187	16	34.6	7.2	5.9	228	182	364	410	192	426	742
12 GroE 300	330	262	204	18	36.6	7.0	5.7	228	182	364	410	192	426	742
13 GroE 325	371	292	219	20	43.4	11.6	9.5	338	182	364	410	192	540	970
14 GroE 350	399	315	236	21	45.3	11.3	9.2	338	182	364	410	192	540	970
15 GroE 375	424	333	254	23	47.3	11.1	9.1	338	182	364	410	192	540	970
16 GroE 400	452	354	271	24	49.3	10.9	8.9	338	182	364	410	192	540	970
17 GroE 425	476	375	288	26	51.2	10.6	8.7	338	182	364	410	192	540	970
18 GroE 450	504	396	305	28	53.1	10.3	8.4	338	182	364	410	192	540	970
5 GroE 500	537	449	371	30	91.0	34.8	28.4	268	328	542	590	338	370	885
6 GroE 600	644	539	445	35	98.3	33.1	27.0	268	328	542	590	338	370	885
7 GroE 700	751	628	519	41	108.1	33.8	27.6	268	328	542	590	338	370	885
8 GroE 800	859	718	593	47	115.6	32.3	26.4	268	328	542	590	338	370	885
9 GroE 900	966	808	667	53	123.0	30.6	25.0	268	328	542	590	338	370	885
10 GroE 1000	1074	898	741	59	130.5	29.0	23.7	268	328	542	590	338	370	885
11 GroE 1100	1181	988	815	65	139.7	29.2	23.8	348	328	542	590	338	370	771
12 GroE 1200	1288	1077	889	71	160.8	41.2	33.6	348	328	542	590	338	370	771
13 GroE 1300	1396	1167	963	77	168.2	39.6	32.3	348	328	542	590	338	370	771
14 GroE 1400	1503	1257	1037	83	175.7	38.0	31.0	348	328	542	590	338	370	771
15 GroE 1500	1610	1347	1112	89	185.6	38.8	31.7	438	328	542	590	338	458	1106
16 GroE 1600	1718	1436	1186	94	208.7	52.9	43.2	438	328	542	590	338	458	1106
17 GroE 1700	1825	1526	1260	100	216.1	51.2	41.8	438	328	542	590	338	458	1106
18 GroE 1800	1932	1616	1334	106	223.6	49.7	40.6	438	328	542	590	338	458	1106

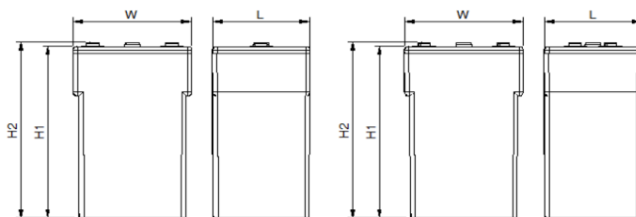
The length of a stand is n x cell centre where n is the number of cells in a row.

GroE, Capacities, Weights and Dimensions

Type	Capacity in amp hours at 25°C when discharged in			Initial Charge Current	Weight		Approx Quantity of acid 1.225 SG	External dimensions of cell container			Overall height of cells - H3 (Copper Post)	Centres of cells	Width of single row stillage or stand	Width of double row stillage or stand
	10 Hours	3 Hours	1 Hour		Cell compl. filled	Acid only 1.225 SG		Length	Width	Height H1				
Final Voltage	1.80	1.80	1.75	Amps	Kg	Kg	Litres	m m	m m	m m	m m	m m	m m	m m
19 GroE 1900	2040	1706	1408	112	231.0	48.0	39.2	438	328	542	590	338	458	1106
20 GroE 2000	2147	1796	1482	118	239.7	47.6	38.9	528	328	542	590	338	547	11287
21 GroE 2100	2254	1885	1556	124	267.0	65.9	53.8	528	328	542	590	338	547	1287
22 GroE 2200	2362	1975	1630	130	274.5	64.3	52.5	528	328	542	590	338	547	1287
23 GroE 2300	2469	2065	1704	136	281.9	62.7	51.2	528	328	542	590	338	547	1287
24 GroE 2400	2576	2155	1778	142	291.8	63.5	51.8	574	329	542	590	338	592	1377
25 GroE 2500	2684	2244	1853	148	305.2	67.8	55.3	574	329	542	590	338	592	1377

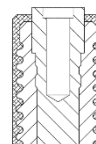
The length of a stand is n x cell centre where n is the number of cells in a row.

M8 Fasteners



3 GroE 75 – 12 GroE 300
5 GroE 500 – 6 GroE 600

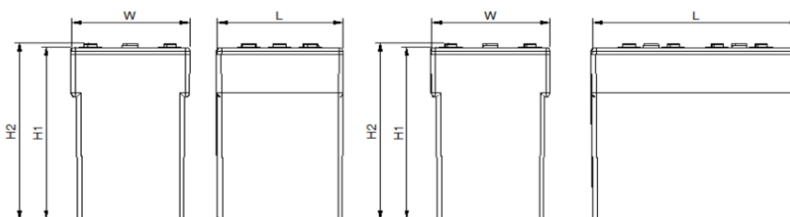
13 GroE 325 – 18 GroE 450
7 GroE 700 – 10 GroE 1000



Torque = 24Nm ± 1Nm

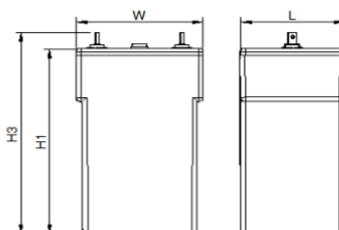
H2 = 380mm (25Ah cells)

H2 = 556mm (100Ah cells)



11 GroE 1100 – 14 GroE 1400
15 GroE 1500 – 19 GroE 1900

20 GroE 2000 – 23 GroE 2300
24 GroE 2400 – 25 GroE 2500



M8 Fasteners

Torque = 13Nm ± 2Nm

Note:

All cells available in Brass Inserted Posts, Copper Inserted Posts face to face & Edge to Edge configuration

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