



Applications and Key Benefits

- + Designed for highest reliability in standby mode, for high performance, high current and deep discharge applications
- Ideal for:
 - Nuclear and thermal power plants
 - Electrical utilities
 - Power supply units for substations
 - Switchgear
 - Signaling and emergency lighting
 - IT datacenters
 - Starter batteries for diesel generators
- + 25 year design life in float operation in temperature controlled environments
- + 100% rated capacity throughout the battery life
No requirement to oversize the battery
- + Excellent for high current discharge (1 to 60 min), and medium to long discharge (2 to 8 hours)
- + Long life even in the worst operating conditions
- + Extra thick pure lead Planté plates
- + High reliability post seal
- + Extremely long topping-up intervals
- + 100% Recyclable

Applicable Standards

- DIN 40738 - specification GroE cells
- IEC 60896 part 11 - vented types requirements & tests
- BS 6290 part 2 - British Standard Planté specification
- UK National Grid (with optional nut & bolt terminals)

FIAMM Manufacturing

- ISO 9001 - Quality Management System
- ISO 14001 - Environmental Management System

Technical Features

- Positive GroE (Planté) plates, cast from pure lead to avoid capacity drop during the long battery life
- Negative plates with rugged pasted grid construction with a service life compatible with the positive plates
The alloy and curing process are designed to maintain the porosity of the active material during operation
- High purity sulphuric electrolyte with a very low specific gravity of 1.22 (±0.01) at 20°C
- Microporous separators maximize electrolyte utilization, minimize resistance and guarantee lowest self discharge
- Cell containers are injection molded from high quality transparent SAN (styrene acrylonitrile) for easy cell status inspection
- Lids made of opaque ABS
- Female threaded M10 terminals and pillars with solid brass inserts ensure highest conductivity and perfect contact (Optional nut and bolt type terminals with copper inserts)
- High integrity post seal design to avoid electrolyte leakage and terminal corrosion
- Vent plugs effectively return acid spray to the cell under normal operating conditions of float and boost charging
The vent plugs have a ceramic filter and bayonet lock, designed to prevent any errant spark or flame from entering the cell
- Dedicated service hole allows topping-up without removal of the vent plug
- Flame retardant lids are optional
- Flexible, fully insulated cable connectors with insulated screw with probe hole on the top for electrical measurement
- External recombination plugs optionally available
- < 3% self-discharge per month at 20°C allows 4 months shelf life
- Optional seismic racks UBC zone 4



ENDURLITE**SGL / SGH GroE****FIAMM SGL-SGH GroE range**

| DIN 40738 Type | Model | Capacity (Ah) at 20°C | | Short Circuit Current (A) IEC 60896-11 | Internal Resistance (mOhm) IEC 60896-11 | Weight (kg) | Electrolyte (liters) | Dimensions (mm) | | |
|-------------------|---------|-----------------------|----------------------|---|--|----------------|-------------------------|-----------------|-------|--------|
| | | 10 hrs to 1.80 VPC | 5 hrs to 1.80 VPC | | | | | Length | Width | Height |
| 3 GroE 75 | SGL 7D | 79 | 66 | 1500 | 1.333 | 17.5 | 5.4 | 182 | 153 | 415 |
| 4 GroE 100 | SGL 9D | 105 | 88 | 2000 | 1.000 | 19.7 | 5.2 | 182 | 153 | 415 |
| 5 GroE 125 | SGL 11D | 131 | 110 | 2500 | 0.556 | 21.9 | 5.1 | 182 | 153 | 415 |
| 6 GroE 150 | SGL 13D | 155 | 132 | 3000 | 0.463 | 24.1 | 4.9 | 182 | 153 | 415 |
| 7 GroE 175 | SGL 15D | 183 | 154 | 3500 | 0.397 | 26.3 | 4.8 | 182 | 153 | 415 |
| 8 GroE 200 | SGL 17D | 209 | 176 | 4000 | 0.347 | 33.2 | 7.7 | 182 | 228 | 415 |
| 9 GroE 225 | SGL 19D | 235 | 198 | 4500 | 0.308 | 35.4 | 7.5 | 182 | 228 | 415 |
| 10 GroE 250 | SGL 21D | 261 | 220 | 5000 | 0.278 | 37.6 | 7.4 | 182 | 228 | 415 |
| 11 GroE 275 | SGL 23D | 287 | 242 | 5500 | 0.253 | 39.8 | 7.2 | 182 | 228 | 415 |
| 12 GroE 300 | SGL 25D | 314 | 264 | 6000 | 0.231 | 42.0 | 7.0 | 182 | 228 | 415 |
| 13 GroE 325 | SGL 27D | 340 | 286 | 6500 | 0.214 | 52.5 | 11.6 | 182 | 340 | 415 |
| 14 GroE 350 | SGL 29D | 366 | 308 | 7000 | 0.199 | 54.6 | 11.3 | 182 | 340 | 415 |
| 15 GroE 375 | SGL 31D | 392 | 330 | 7500 | 0.185 | 56.7 | 11.1 | 182 | 340 | 415 |
| 16 GroE 400 | SGL 33D | 418 | 352 | 8000 | 0.174 | 58.9 | 10.9 | 182 | 340 | 415 |
| 17 GroE 425 | SGL 35D | 444 | 374 | 8500 | 0.163 | 61.0 | 10.6 | 182 | 340 | 415 |
| 18 GroE 450 | SGL 37D | 470 | 396 | 9000 | 0.154 | 63.0 | 10.3 | 182 | 340 | 415 |
| 5 GroE 500 | SGH 11D | 550 | 440 | 8000 | 0.181 | 96 | 26.6 | 328 | 268 | 607 |
| 6 GroE 600 | SGH 13D | 660 | 528 | 9600 | 0.151 | 106 | 26.4 | 328 | 268 | 607 |
| 7 GroE 700 | SGH 15D | 770 | 616 | 11200 | 0.129 | 114 | 26.2 | 328 | 268 | 607 |
| 8 GroE 800 | SGH 17D | 880 | 704 | 12800 | 0.113 | 123 | 25.4 | 328 | 268 | 607 |
| 9 GroE 900 | SGH 19D | 990 | 792 | 14400 | 0.100 | 132 | 24.6 | 328 | 268 | 607 |
| 10 GroE 1000 | SGH 21D | 1100 | 880 | 16000 | 0.090 | 141 | 23.8 | 328 | 268 | 607 |
| 11 GroE 1100 | SGH 23D | 1210 | 968 | 17600 | 0.082 | 150 | 23.0 | 328 | 268 | 607 |
| 12 GroE 1200 | SGH 25D | 1320 | 1056 | 19200 | 0.075 | 174 | 32.0 | 328 | 348 | 607 |
| 13 GroE 1300 | SGH 27D | 1430 | 1144 | 20800 | 0.069 | 182 | 31.1 | 328 | 348 | 607 |
| 14 GroE 1400 | SGH 29D | 1540 | 1232 | 22400 | 0.093 | 191 | 30.3 | 328 | 348 | 607 |
| 15 GroE 1500 | SGH 31D | 1650 | 1320 | 24000 | 0.087 | 199 | 29.5 | 328 | 348 | 607 |
| 16 GroE 1600 | SGH 33D | 1760 | 1408 | 25600 | 0.081 | 225 | 40.2 | 328 | 438 | 607 |
| 17 GroE 1700 | SGH 35D | 1870 | 1496 | 27200 | 0.076 | 234 | 39.3 | 328 | 438 | 607 |
| 18 GroE 1800 | SGH 37D | 1980 | 1584 | 28800 | 0.072 | 242 | 38.5 | 328 | 438 | 607 |
| 19 GroE 1900 | SGH 39D | 2090 | 1672 | 30400 | 0.068 | 251 | 37.7 | 328 | 438 | 607 |
| 20 GroE 2000 | SGH 41D | 2200 | 1760 | 32000 | 0.065 | 259 | 36.9 | 328 | 438 | 607 |
| 21 GroE 2100 | SGH 43D | 2310 | 1848 | 33600 | 0.062 | 295 | 47.5 | 328 | 529 | 607 |
| 22 GroE 2200 | SGH 45D | 2420 | 1936 | 35200 | 0.059 | 303 | 46.7 | 328 | 529 | 607 |
| 23 GroE 2300 | SGH 47D | 2530 | 2024 | 36800 | 0.057 | 312 | 45.5 | 328 | 529 | 607 |
| 24 GroE 2400 | SGH 49D | 2640 | 2112 | 38400 | 0.054 | 320 | 45.1 | 328 | 529 | 607 |
| 25 GroE 2500 | SGH 51D | 2750 | 2200 | 40000 | 0.052 | 337 | 48.4 | 328 | 574 | 607 |
| 26 GroE 2600 | SGH 53D | 2860 | 2288 | 41600 | 0.050 | 346 | 47.5 | 328 | 574 | 607 |

Electrical Characteristics

- + NOMINAL VOLTAGE: 2 V/cell
- + FLOAT VOLTAGE CHARGE AT 20°C: 2.23 V/cell
- + BOOST CHARGE: 2.4 V/cell

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