

# FIAMM

Industrial Batteries

ENDURLITE

# SGL-SGH

series



FIAMM's **SGL-SGH** battery range can be used in standby mode for duties requiring high performance and deep discharge. The SGL-SGH battery range is specially designed to ensure the highest reliability for special application such as switchgears, power stations, etc... Its extra thick pure lead planté plates and a high reliability post seal guarantee a long life even in the worst operating conditions. The life of this range can get to 25 years in float operation and benign temperature environment.

FIAMM has a program of continuous improvement investing in manufacturing processes, equipment and technology.

FIAMM's Standby Battery manufacture is in compliance with ISO 9001 and ISO 14001 quality assurance. Our continuous investment in battery technology is reflected by means of premium products that are of the highest quality and reliability.

## Technical Features

**Positive plates** are Planté type, cast from pure lead to ensure there is no fall-off in capacity throughout their long life

**Negative plates** are of rugged pasted grid construction with a service life compatible with the positive plates

**Separators** are microporous, giving maximum electrolyte utilisation and minimize resistance.

**Cell containers** are moulded from high quality transparent SAN (styrene acrylonitrile)

**Vent plugs:** the vents effectively return acid spray to the cell under all normal operating conditions of float and boost charging

A flame retardant version is available as an option upon request

**Terminals:** Nut and bolt type terminals with copper inserts and twin inter-cell connectors ensure maximum voltage at the terminals during high current discharges

**Post seals:** high integrity post seal design to avoid electrolyte leakage and terminal corrosion

**Electrolyte:** it consists of diluted sulphuric acid with a specific gravity of  $1.22\pm 0.01$  Kg/dm<sup>3</sup> at 20°C

**Connectors:** twin solid copper plated connectors are used for all cells to reduce inter-cell volt drop

## Applicable Standards

IEC 60896 part 11  
UK National Grid

## Product Features

- + The best reliability in the lead-acid batteries technologies
- + Very long life
- + High performance

# Standby Products



# SGL-SGH series



| DIN 40738 STANDARD |                                   | CELL TYPE | CAPACITY (AH) at 20°C |                    |                    |                   | WEIGHT (kg)      |                     | ELECTROLYTE (Litres) | DIMENSIONS (mm) |       |        |
|--------------------|-----------------------------------|-----------|-----------------------|--------------------|--------------------|-------------------|------------------|---------------------|----------------------|-----------------|-------|--------|
| Type               | Nominal Capacity 10 hrs, 1.80 VPC |           | 10 hrs rate to 1.80   | 5 hrs rate to 1.80 | 3 hrs rate to 1.80 | 1 hr rate to 1.70 | with electrolyte | without electrolyte |                      | Length          | Width | Height |
| 3 GroE 75          | 75                                | SGL 7D    | 79                    | 66                 | 60                 | 45                | 17.5             | 10.9                | 5.4                  | 182             | 153   | 415    |
| 4 GroE 100         | 100                               | SGL 9D    | 105                   | 88                 | 80                 | 60                | 19.7             | 13.3                | 5.2                  | 182             | 153   | 415    |
| 5 GroE 125         | 125                               | SGL 11D   | 131                   | 110                | 100                | 75                | 21.9             | 15.7                | 5.1                  | 182             | 153   | 415    |
| 6 GroE 150         | 150                               | SGL 13D   | 155                   | 132                | 120                | 90                | 24.1             | 18.1                | 4.9                  | 182             | 153   | 415    |
| 7 GroE 175         | 175                               | SGL 15D   | 183                   | 154                | 140                | 105               | 26.3             | 20.5                | 4.8                  | 182             | 153   | 415    |
| 8 GroE 200         | 200                               | SGL 17D   | 209                   | 176                | 160                | 120               | 33.2             | 23.8                | 7.7                  | 182             | 228   | 415    |
| 9 GroE 225         | 225                               | SGL 19D   | 235                   | 198                | 180                | 135               | 35.4             | 26.2                | 7.5                  | 182             | 228   | 415    |
| 10 GroE 250        | 250                               | SGL 21D   | 261                   | 220                | 200                | 150               | 37.6             | 28.6                | 7.4                  | 182             | 228   | 415    |
| 11 GroE 275        | 275                               | SGL 23D   | 287                   | 242                | 220                | 165               | 39.8             | 31.0                | 7.2                  | 182             | 228   | 415    |
| 12 GroE 300        | 300                               | SGL 25D   | 314                   | 264                | 240                | 180               | 42.0             | 33.4                | 7.0                  | 182             | 228   | 415    |
| 13 GroE 325        | 325                               | SGL 27D   | 340                   | 286                | 260                | 195               | 52.5             | 38.4                | 11.6                 | 182             | 340   | 415    |
| 14 GroE 350        | 350                               | SGL 29D   | 366                   | 308                | 280                | 210               | 54.6             | 40.8                | 11.3                 | 182             | 340   | 415    |
| 15 GroE 375        | 375                               | SGL 31D   | 392                   | 330                | 300                | 225               | 56.7             | 43.2                | 11.1                 | 182             | 340   | 415    |
| 16 GroE 400        | 400                               | SGL 33D   | 418                   | 352                | 320                | 240               | 58.9             | 45.6                | 10.9                 | 182             | 340   | 415    |
| 17 GroE 425        | 425                               | SGL 35D   | 444                   | 374                | 340                | 255               | 61.0             | 48.0                | 10.6                 | 182             | 340   | 415    |
| 18 GroE 450        | 450                               | SGL 37D   | 470                   | 396                | 360                | 270               | 63.0             | 50.4                | 10.3                 | 182             | 340   | 415    |
| 5 GroE 500         | 500                               | SGH 11D   | 550                   | 440                | 400                | 300               | 96               | 64                  | 26.6                 | 328             | 268   | 607    |
| 6 GroE 600         | 600                               | SGH 13D   | 660                   | 528                | 480                | 360               | 106              | 73                  | 26.4                 | 328             | 268   | 607    |
| 7 GroE 700         | 700                               | SGH 15D   | 770                   | 616                | 560                | 420               | 114              | 82                  | 26.2                 | 328             | 268   | 607    |
| 8 GroE 800         | 800                               | SGH 17D   | 880                   | 704                | 640                | 480               | 123              | 92                  | 25.4                 | 328             | 268   | 607    |
| 9 GroE 900         | 900                               | SGH 19D   | 990                   | 792                | 720                | 540               | 132              | 102                 | 24.6                 | 328             | 268   | 607    |
| 10 GroE 1000       | 1000                              | SGH 21D   | 1100                  | 880                | 800                | 600               | 141              | 112                 | 23.8                 | 328             | 268   | 607    |
| 11 GroE 1100       | 1100                              | SGH 23D   | 1210                  | 968                | 880                | 660               | 150              | 122                 | 23.0                 | 328             | 268   | 607    |
| 12 GroE 1200       | 1200                              | SGH 25D   | 1320                  | 1056               | 960                | 720               | 174              | 135                 | 32.0                 | 328             | 348   | 607    |
| 13 GroE 1300       | 1300                              | SGH 27D   | 1430                  | 1144               | 1040               | 782               | 182              | 144                 | 31.1                 | 328             | 348   | 607    |
| 14 GroE 1400       | 1400                              | SGH 29D   | 1540                  | 1232               | 1120               | 840               | 191              | 154                 | 30.3                 | 328             | 348   | 607    |
| 15 GroE 1500       | 1500                              | SGH 31D   | 1650                  | 1320               | 1200               | 900               | 199              | 163                 | 29.5                 | 328             | 348   | 607    |
| 16 GroE 1600       | 1600                              | SGH 33D   | 1760                  | 1408               | 1280               | 960               | 225              | 176                 | 40.2                 | 328             | 438   | 607    |
| 17 GroE 1700       | 1700                              | SGH 35D   | 1870                  | 1496               | 1360               | 1020              | 234              | 186                 | 39.3                 | 328             | 438   | 607    |
| 18 GroE 1800       | 1800                              | SGH 37D   | 1980                  | 1584               | 1440               | 1080              | 242              | 195                 | 38.5                 | 328             | 438   | 607    |
| 19 GroE 1900       | 1900                              | SGH 39D   | 2090                  | 1672               | 1520               | 1140              | 251              | 205                 | 37.7                 | 328             | 438   | 607    |
| 20 GroE 2000       | 2000                              | SGH 41D   | 2200                  | 1760               | 1600               | 1200              | 259              | 214                 | 36.9                 | 328             | 438   | 607    |
| 21 GroE 2100       | 2100                              | SGH 43D   | 2310                  | 1848               | 1680               | 1260              | 295              | 237                 | 47.5                 | 328             | 529   | 607    |
| 22 GroE 2200       | 2200                              | SGH 45D   | 2420                  | 1936               | 1760               | 1320              | 303              | 246                 | 46.7                 | 328             | 529   | 607    |
| 23 GroE 2300       | 2300                              | SGH 47D   | 2530                  | 2024               | 1840               | 1380              | 312              | 256                 | 45.5                 | 328             | 529   | 607    |
| 24 GroE 2400       | 2400                              | SGH 49D   | 2640                  | 2112               | 1920               | 1440              | 320              | 265                 | 45.1                 | 328             | 529   | 607    |
| 25 GroE 2500       | 2500                              | SGH 51D   | 2750                  | 2200               | 2000               | 1500              | 337              | 278                 | 48.4                 | 328             | 574   | 607    |
| 26 GroE 2600       | 2600                              | SGH 53D   | 2860                  | 2288               | 2080               | 1560              | 346              | 288                 | 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 with a maximum current of  $0.15 \times C_{10}$  (A)
- ✦ INTERNAL RESISTANCE: SGL cells =  $0.1 \times 1/C_{10}$  Ohm; SGH cells =  $0.13 \times 1/C_{10}$  Ohm
- ✦ MAXIMUM SHORT CIRCUIT CURRENT: for fully charged cells and without the voltage losses associated with connectors, SGL cells =  $20 \times C_{10}$  (A), SGH cells =  $16 \times C_{10}$  (A)

FIAMM S.p.A.  
Industrial Batteries  
www.fiamm.com  
email:info.standby@fiamm.com



Industrial Batteries