

dryfit® block batteries

Sonnenschein M (1,000 cycles gel battery)

Sonnenschein, with the robust and reliable dryfit® technology, takes the next step in product evolution: The innovative M technology which enables gel batteries to give 1,000 cycles at 70% depth of discharge.

With the experience of more than 120 years in battery manufacturing and continuous further development of the dryfit® gel technology, Sonnenschein managed to significantly extend the cycle life durability of gel batteries. The results are Sonnenschein M batteries with an excellent total cost of ownership for all traction purposes.



Main technical features and benefits:

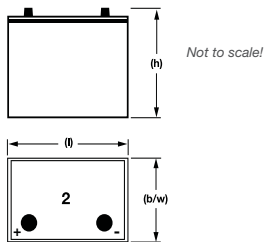
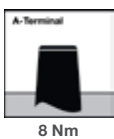
- > Battery technology: VRLA (valve regulated lead-acid)
- > Maintenance-free (no topping up during the whole service life)
- > Very high intrinsic safety
- > Extremely robust and reliable
- > Low self-discharge rate
- > Up to 80% depth of discharge possible
- > 1,000 cycles in accordance with IEC 60254-1



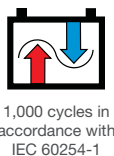
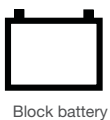
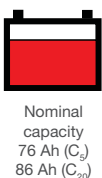
Technical characteristics and data

| Type | Nominal voltage V | Nominal capacity C ₅ (30 °C) Ah | Nominal capacity C ₂₀ (30 °C) Ah | Length (l) max. mm | Width (b/w) max. mm | Height (h) max. mm | Weight kg | Terminal | Terminal position |
|-------------|----------------------|--|---|--------------------------|---------------------------|--------------------------|--------------|------------|-------------------|
| GF 12 076 H | 12 | 76 | 86 | 330 | 171 | 236 | 28.8 | A-Terminal | 2 |

Drawings with terminal position, terminal and torque



Specifications



dryfit® block batteries

Sonnenschein GF-Y Range (dryfit® A500 cyclic)

The GF-Y block battery range is particularly suitable for the leisure and mobility market (wheelchairs, scooters, golf carts and electric boats).

Main technical features and benefits:

- > Battery technology: VRLA (valve regulated lead-acid)
- > Maintenance-free (no topping up during the whole service life)
- > Very high intrinsic safety
- > Robust, safe and reliable
- > Low self-discharge rate
- > 450 cycles in accordance with IEC 60254-1
- > Product range:
 - 12 V block batteries
 - 14 Ah up to 93,5 Ah (C5)
 - 15 Ah up to 110 Ah (C20)

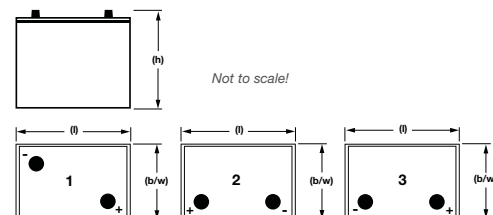
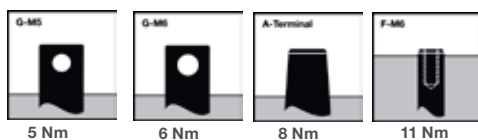


Technical characteristics and data

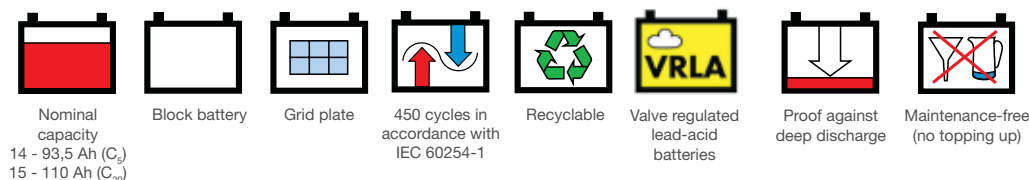
| Type | Nominal voltage V | Nominal capacity C ₅ (30 °C) Ah | Nominal capacity C ₂₀ (30 °C) Ah | Length (l) max. mm | Width (b/w) max. mm | Height (h) max. mm | Weight kg | Terminal | Terminal position |
|--------------------|----------------------|--|---|--------------------------|---------------------------|--------------------------|--------------|------------|-------------------|
| GF 12 014 Y F | 12 | 14.0 | 15.0 | 181 | 76.0 | 167 | 6.00 | G-M5 | 3 |
| GF 12 022 Y F | 12 | 22.2 | 24.0 | 167 | 176 | 126 | 9.60 | G-M5 | 3 |
| GF 12 025 Y G | 12 | 25.0 | 28.0 | 197 | 132 | 180 | 11.1 | G-M5 | 2 |
| GF 12 033 Y 1 | 12 | 32.5 | 38.0 | 210 | 175 | 175 | 14.6 | A-Terminal | 3 |
| GF 12 033 Y G1*/G2 | 12 | 32.5 | 38 | 210 | 175 | 175 | 14.6 | G-M6 | 3 |
| GF 12 040 Y | 12 | 40 | 48 | 242 | 175 | 190 | 17.5 | A-Terminal | 3 |
| GF 12 044 Y | 12 | 44 | 50 | 261 | 135 | 230 | 19 | A-Terminal | 3 |
| GF 12 051 Y 1/ 2* | 12 | 51 | 56 | 278 | 175 | 190 | 20.8 | A-Terminal | 3 |
| GF 12 051 Y G1 | 12 | 51 | 56 | 278 | 175 | 190 | 20.8 | G-M6 | 3 |
| GF 12 052 Y 0 | 12 | 52.7 | 60 | 261 | 170 | 178 | 19.8 | F-M6 | 2 |
| GF 12 063 Y 0 | 12 | 63 | 70 | 261 | 171 | 210 | 23 | F-M6 | 2 |
| GF 12 065 Y* | 12 | 65 | 78 | 353 | 175 | 190 | 26.8 | A-Terminal | 3 |
| GF 12 072 Y | 12 | 72 | 80 | 330 | 171 | 236 | 30 | A-Terminal | 2 |
| GF 12 094 Y | 12 | 93.5 | 110 | 286 | 269 | 230 | 38.5 | A-Terminal | 1 |

* with hold down

Drawings with terminal position, terminal and torque



Specifications



dryfit® block batteries

Sonnenschein GF-V Range (dryfit® traction block)

The GF-V block battery range is designed for hard industrial use. This includes applications such as cleaning machines, pallet trucks, automatic guided vehicles, mobile elevating work platforms, electric cars and buses.

Main technical features and benefits:

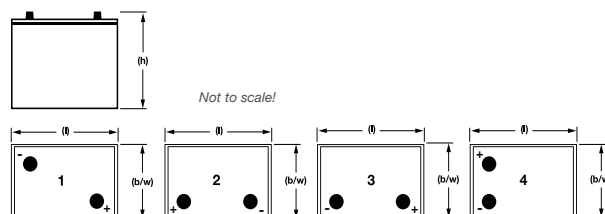
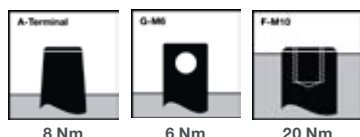
- > Battery technology: VRLA (valve regulated lead-acid)
- > Maintenance-free (no topping up during the whole service life)
- > Very high intrinsic safety
- > Robust, safe and reliable
- > Low self-discharge rate
- > 700 cycles in accordance with IEC 60254-1
- > Product range:
 - 6 V and 12 V block batteries
 - 50 Ah up to 240 Ah (C₅)
 - 55 Ah up to 270 Ah (C₂₀)



Technical characteristics and data

| Type | Nominal voltage V | Nominal capacity C ₅ (30 °C) Ah | Nominal capacity C ₂₀ (30 °C) Ah | Length (l) max. mm | Width (b/w) max. mm | Height (h) max. mm | Weight kg | Terminal | Terminal position |
|---------------|----------------------|--|---|--------------------------|---------------------------|--------------------------|--------------|------------|-------------------|
| GF 06 160 V1 | 6 | 160 | 196 | 246 | 192 | 275 | 29.0 | A-Terminal | 1 |
| GF 06 160 V2 | 6 | 160 | 196 | 264 | 183 | 270 | 33.0 | A-Terminal | 1 |
| GF 06 180 V | 6 | 180 | 200 | 246 | 192 | 275 | 31.0 | A-Terminal | 1 |
| GF 06 180 V Q | 6 | 180 | 200 | 246 | 192 | 284 | 31.5 | F-M10 | 1 |
| GF 06 240 V | 6 | 240 | 270 | 311 | 183 | 358 | 47.0 | A-Terminal | 1 |
| GF 12 050 V | 12 | 50.0 | 55.0 | 278 | 175 | 190 | 19.0 | A-Terminal | 3 |
| GF 12 050 V G | 12 | 50.0 | 55.0 | 278 | 175 | 190 | 19.0 | G-M6 | 3 |
| GF 12 076 V | 12 | 76 | 86 | 330 | 171 | 236 | 28.8 | A-Terminal | 2 |
| GF 12 090 V | 12 | 90 | 98 | 513 | 189 | 219 | 36.5 | A-Terminal | 4 |
| GF 12 105 V | 12 | 105 | 120 | 345 | 174 | 283 | 37.5 | A-Terminal | 3 |
| GF 12 110 V | 12 | 110 | 120 | 513 | 223 | 219 | 45.5 | A-Terminal | 4 |
| GF 12 160 V | 12 | 160 | 196 | 518 | 274 | 238 | 62.5 | A-Terminal | 4 |

Drawings with terminal position, terminal and torque



Specifications

| | | | | | | | |
|---|---------------|------------|---|------------|-------------------------------------|------------------------------|----------------------------------|
| | | | | | | | |
| Nominal capacity 50 - 240 Ah (C ₅) 55 - 270 Ah (C ₂₀) | Block battery | Grid plate | 700 cycles in accordance with IEC 60254-1 | Recyclable | Valve regulated lead-acid batteries | Proof against deep discharge | Maintenance-free (no topping up) |





Exide Technologies, with operations in more than 80 countries, is one of the world's largest producers and recyclers of lead-acid batteries. Exide Technologies provides a comprehensive and customized range of stored electrical energy solutions. Based on over 120 years of experience in the development of innovative technologies, Exide Technologies is an esteemed partner of OEMs and serves the spare parts market for industrial and automotive applications.

GNB Industrial Power – A division of Exide Technologies – offers an extensive range of storage products and services, including solutions for telecommunication systems, railway applications, mining, photovoltaic (solar energy), uninterrupted power supply (UPS), electrical power generation and distribution, fork lifts and electric vehicles.

Exide Technologies takes pride in its commitment to a better environment. An integrated approach to manufacturing, distributing and recycling of lead-acid batteries has been developed to ensure a safe and responsible life cycle for all of its products.

GNB® INDUSTRIAL POWER devises enduring energy concepts that convince with efficiency, flexibility and profitability.