

## RANGE SUMMARY

The PowerSafe® OPzV range of valve regulated lead-acid batteries uses a proven combination of gel and tubular technologies to offer a very high level of reliability. These single cells benefit from an optimised plate design that gives capacities in excess of the DIN standard values. In addition, the PowerSafe OPzV range of batteries offers both an excellent float life and a high cycle life for a truly flexible solution.

The EnerSys® range of PowerSafe OPzV batteries is suitable for a broad range of applications including telecommunications, telephony, power generating stations and distribution systems, railway, airport and seaport signalling, computing, emergency lighting, automation and measuring systems.

### Features & Benefits

- Capacity range: 215Ah to 3170Ah
- C<sub>10</sub> capacities exceed the DIN standard values
- 20 year design life at 20°C
- Excellent deep discharge recovery and cyclability
- Superior operational safety with fully insulated connectors, immobilised electrolyte and one way pressure relief valve with an integral flame arrestor
- Easy installation: vertical or horizontal position
- Very low maintenance: no water addition



## Construction

- Positive electrode - tubular plate with lead-tin-calcium alloy
- Negative electrode - flat plate with lead-calcium alloy grid
- Separator - low resistance microporous material
- Case material - container and lid in ABS; optional flame retardant ABS available (UL94 V-0)
- Electrolyte - sulphuric acid, immobilised as a gel
- Terminal design - terminals with brass insert and M10 stainless steel bolts. Coloured washers are provided for easy polarity recognition

- Connectors - insulated solid copper connector (30 x 3mm) for vertical installations or insulated flexible cable connectors (70mm<sup>2</sup>) for horizontal installations. Each connector design is of the bolt-on type and allows for voltage measurements
- Pressure relief valve - one way valve with integral flame arrestor

## Installation & Operation

- Recommended float charge voltage: 2.25Vpc (20°C)
- Cells can be installed horizontally to minimise use of floor space
- Optional racking offers easy installation and space saving accommodation

## Standards

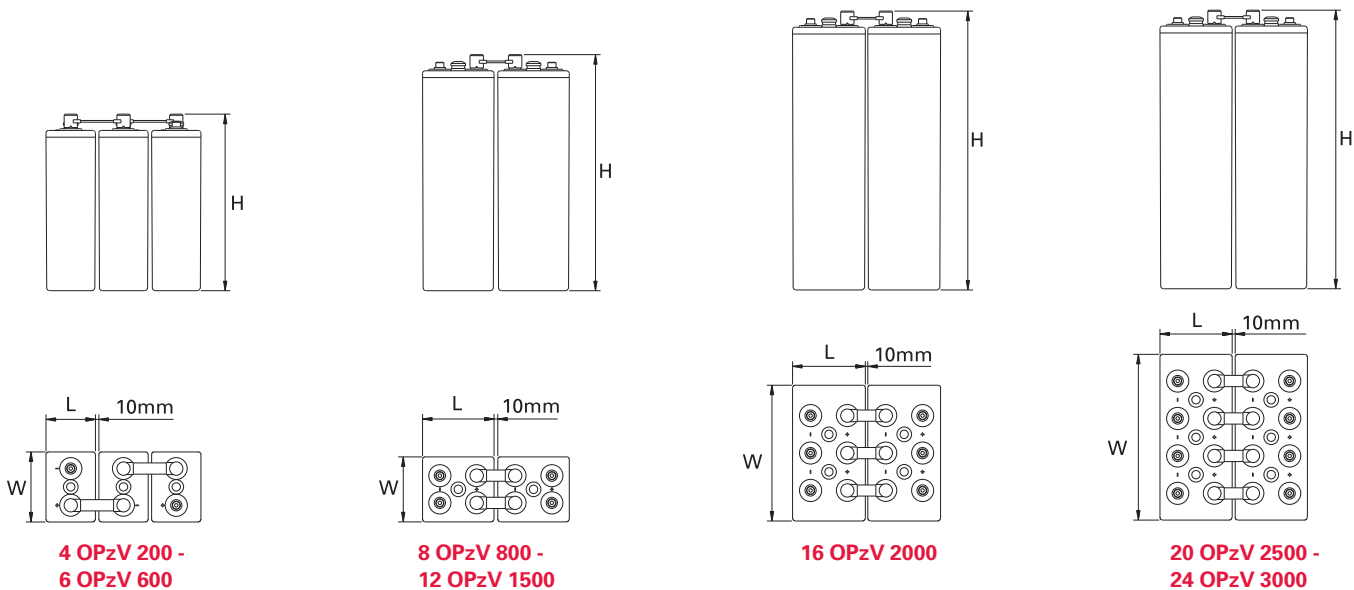
- Tested according to international standard IEC 60896-21 and compliant to defined requirements of IEC 60896-22
- Conforms to the DIN standard 40742 (valve regulated OPzV single cells)
- Classified as "long life" according to the EUROBAT guide 1999
- Proof against deep discharge according to DIN 43539 Part 5
- Low ventilation requirement according to EN 50272-2 and IEC 62485-2
- Manufactured in EnerSys® ISO 9001:2008 and ISO 14001:2004 certified production facilities

## General Specifications

| PowerSafe® OPzV Cell Types | Nominal Voltage (V) | Terminal Pairs | Nominal Capacity (Ah)        |                             | Nominal Dimensions |           |          | Typical Weight kg | Typical Weight lbs | Short Circuit Current (A) | Internal Resistance (mΩ) |          |           |           |
|----------------------------|---------------------|----------------|------------------------------|-----------------------------|--------------------|-----------|----------|-------------------|--------------------|---------------------------|--------------------------|----------|-----------|-----------|
|                            |                     |                | 10 hr rate to 1.80Vpc @ 20°C | 8 hr rate to 1.75Vpc @ 77°F | Length mm          | Length in | Width mm |                   |                    |                           |                          | Width in | Height mm | Height in |
| 4 OPzV 200                 | 2                   | 1              | 215                          | 215                         | 103                | 4.1       | 206      | 8.1               | 403                | 15.8                      | 19.5                     | 43.0     | 2195      | 0.95      |
| 5 OPzV 250                 | 2                   | 1              | 265                          | 265                         | 124                | 4.9       | 206      | 8.1               | 403                | 15.8                      | 23.5                     | 51.9     | 2737      | 0.76      |
| 6 OPzV 300                 | 2                   | 1              | 320                          | 320                         | 145                | 5.7       | 206      | 8.1               | 403                | 15.8                      | 28.0                     | 61.8     | 3175      | 0.66      |
| 5 OPzV 350                 | 2                   | 1              | 385                          | 385                         | 124                | 4.9       | 206      | 8.1               | 520                | 20.3                      | 31.0                     | 68.4     | 3410      | 0.61      |
| 6 OPzV 420                 | 2                   | 1              | 465                          | 465                         | 145                | 5.7       | 206      | 8.1               | 520                | 20.3                      | 36.5                     | 80.5     | 4043      | 0.51      |
| 7 OPzV 490                 | 2                   | 1              | 540                          | 540                         | 166                | 6.5       | 206      | 8.1               | 520                | 20.3                      | 42.0                     | 92.6     | 4607      | 0.45      |
| 6 OPzV 600                 | 2                   | 1              | 705                          | 705                         | 145                | 5.7       | 206      | 8.1               | 695                | 27.3                      | 50.0                     | 110.3    | 3796      | 0.55      |
| 8 OPzV 800                 | 2                   | 2              | 940                          | 940                         | 210                | 8.2       | 191      | 7.5               | 695                | 27.3                      | 68.0                     | 150.0    | 5200      | 0.40      |
| 10 OPzV 1000               | 2                   | 2              | 1170                         | 1170                        | 210                | 8.2       | 233      | 9.2               | 695                | 27.3                      | 82.0                     | 180.8    | 6460      | 0.32      |
| 12 OPzV 1200               | 2                   | 2              | 1410                         | 1410                        | 210                | 8.2       | 275      | 10.8              | 695                | 27.3                      | 97.0                     | 213.9    | 7675      | 0.27      |
| 12 OPzV 1500               | 2                   | 2              | 1600                         | 1600                        | 210                | 8.2       | 275      | 10.8              | 845                | 33.3                      | 120.0                    | 264.6    | 7510      | 0.28      |
| 16 OPzV 2000               | 2                   | 3              | 2110                         | 2110                        | 212                | 8.3       | 397      | 15.6              | 820                | 32.3                      | 165.0                    | 363.8    | 10048     | 0.21      |
| 20 OPzV 2500               | 2                   | 4              | 2640                         | 2640                        | 212                | 8.3       | 487      | 19.2              | 820                | 32.3                      | 200.0                    | 441.0    | 12606     | 0.17      |
| 24 OPzV 3000               | 2                   | 4              | 3170                         | 3170                        | 212                | 8.3       | 576      | 22.3              | 820                | 32.3                      | 240.0                    | 529.2    | 14964     | 0.14      |

### Notes:

The electrical values shown in the table relate to loadings from a fully charged condition at ambient temperature of +20°C. Height shown is overall height, including connectors and shrouds.



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