

Battery Range Summary

The PowerSafe[®] VM battery range offers the ideal solution for large capacity, valve regulated lead acid battery requirements. PowerSafe VM batteries' modular design concept, with its integral racking system, provides a cost effective, compact battery solution combined with a quick, simple on site installation process.

PowerSafe VM batteries' extra thick positive grids provide excellent performance and service life across an extensive range of applications including, telecommunications, power generation/distribution sites, both low and high rate UPS and emergency lighting.

PowerSafe VM batteries are designed using proven gas recombination technology which removes the need for regular water addition by regulating the emission of hydrogen and oxygen during charging. Oxygen evolved at the positive plates diffuses through microporous separators to the negative plates, and, by a series of chemical reactions within the cell, recombines to form water. Each cell incorporates its own safety valve that allows the controlled release of gas when pressure builds up within the cell.

The use of gas recombination technology for lead acid batteries has completely changed the concept of standby power. This technology provides the user with the freedom to use lead acid batteries in a wide range of applications.

Features & Benefits

- Capacity range: 200Ah - 5000Ah
- Excellent design life
- Side or top terminations depending on configuration
- Front connections provide excellent maintenance access
- UL94 V-0 rated flame retardant container and lid as standard
- 100% nominal C₁₀ capacity check prior to despatch
- Proven in service

Construction

- Extra thick lead-tin-calcium positive grids to minimise corrosion and prolong service life
- Balanced lead-calcium negative grids to optimise recombination efficiency
- Separator in low resistance microporous fibre glass material within which the electrolyte is fully absorbed, thus preventing acid spills in the case of accidental damage
- Container and heat sealed lid in UL94 V-0 rated flame retardant polypropylene as standard
- Cells housed in steel modules complete with integral racking system
- Optional seismic Zone 4 UBC 1997 approved racking available upon request

- Terminals with a large surface area copper insert to provide maximum conductivity
- Ring burn terminal seal with secondary epoxy resin seal, 100% factory tested and proven in service
- Self regulating pressure relief valve with integral flame arrestor

Installation & Operation

- Recommended float charge voltage: 2.280Vpc at 20°C, 2.265Vpc at 25°C
- The PowerSafe® VM battery range is designed for horizontal installation and can be installed safely within equipment rooms. A separate dedicated battery room is not necessary
- Six month shelf life at 20°C
- Minimal maintenance: no addition of water required

Standards

- Compliant with international standard IEC 60896-21/22
- Classified as "Very Long Life" (> 12 years) according to Eurobat guide 2015
- UL recognised component
- Batteries must be installed in accordance with the IEC 62485-2 standard and national regulations
- Classified as non-spillable battery and approved as non-hazardous cargo for land, sea and air transportation in accordance with the requirements of ADR / RID, IMDG and IATA respectively
- The management system governing the manufacture of PowerSafe VM products is ISO 9001 certified

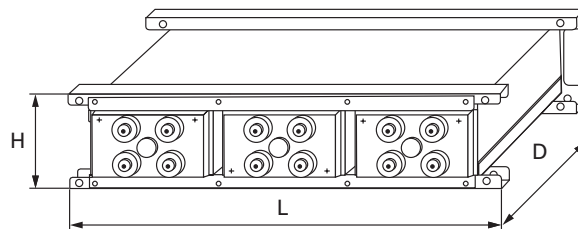
General Specifications

Battery Type ⁽¹⁾	Nominal Voltage (V)	Nominal Capacity (Ah)		Nominal Dimensions (mm)			Typical Weight (kg) ⁽⁴⁾	Short Circuit Current (A) ⁽⁵⁾	Internal Resistance (mΩ) ⁽⁵⁾
		10hr rate to 1.80Vpc @ 20°C	8hr rate to 1.75Vpc @ 77°F	Length	Depth ⁽²⁾	Height ⁽³⁾			
12VM-200	12	200	200	665	330	218	104	3045	0.694
12VM-300	12	300	300	893	330	218	149	4094	0.517
12VM-400	12	400	400	843	516	218	199	4604	0.456
12VM-500	12	500	500	957	516	218	232	5542	0.376
12VM-600	12	600	580	1071	516	218	265	5921	0.354
6VM-850	6	850	840	801	516	218	191	9521	0.222
6VM-1000	6	1000	1000	915	516	218	225	10772	0.195
6VM-1000A	6	1000	1000	801	584	218	230	9754	0.216
6VM-1100	6	1100	1080	972	516	218	245	11069	0.188
6VM-1200	6	1200	1200	915	584	218	267	12054	0.174
6VM-1300	6	1300	1300	972	584	218	291	12864	0.163
6VM-1360	6	1360	1360	1145	516	218	316	14092	0.149
6VM-1500	6	1500	1500	915	558	278	354	14822	0.142
6VM-1600	6	1600	1600	1145	584	218	363	16504	0.127
6VM-1700	6	1700	1640	972	558	278	382	16296	0.129
4VM-2000	4	2000	2000	791	558	278	308	20033	0.105
2VM-2600	2	2600	2600	676	584	218	188	25728	0.082
2VM-3000A	2	3000	3000	801	584	218	230	29262	0.072
2VM-3000	2	3000	3000	638	558	278	236	29644	0.071
2VM-3600	2	3600	3600	915	584	218	267	36162	0.058
2VM-4000	2	4000	4000	791	558	278	308	40066	0.053
2VM-4500	2	4500	4500	915	558	278	354	44466	0.047
2VM-5000	2	5000	4920	972	558	278	382	48888	0.043

Notes:

- (1) The excellent flexibility afforded by the modular construction design provides for further combinations of capacity, voltage or footprint in addition to those illustrated in the above tabulation, eg 2VM-3200, 2VM-4800, 4VM-1000, 4VM-1700 etc.
- (2) The depth shown in the table is for the module only. Add 86mm to obtain the overall depth including the front panel.
- (3) To calculate the total height of a battery stack multiply the module height by the number of modules in the stack and add 100mm for the base support except for the VM -1500, 1700, 2000, 3000, 4000, 4500 and 5000 modules where 120mm must be added.
- (4) The typical weight of the module excludes the connectors, terminal plates, front panels and base support.
- (5) Values refer to 2V cells.

Typical Outline Drawing



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