

## Battery Range Summary



### Features and Benefits

- Capacity range: 46Ah–518Ah
- Available in 2, 4, 6 and 12 volt units
- UL94 V-0 flame retardant containers and lids
- Designed for a wide range of applications
- High reliability
- Excellent service life

The EnerSys<sup>®</sup> range of PowerSafe<sup>®</sup> V Top Terminal batteries has been designed specifically for use in applications that demand the highest levels of security and reliability. With compliance to the most rigorous international standards, PowerSafe V-TT batteries are recognised worldwide as a premium solution for Telecom and Utility applications. The reputation of PowerSafe V-TT batteries for long service life, together with excellent high rate performance, also makes them a great choice for high integrity, high specification UPS systems.

PowerSafe V top terminal cells and monoblocs deliver superior performance whilst occupying less space than conventional standby power batteries. The use of V-0 rated flame retardant ABS plastic for the thick wall containers and lids offers high mechanical strength with excellent safety features.

PowerSafe V-TT batteries are designed using gas recombination technology which removes the need for regular water addition by controlling the evolution 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.

**EnerSys**<sup>®</sup>

Power/Full Solutions

Visit us at [www.enersys.com](http://www.enersys.com)

## Construction

- Positive plates designed to prolong service life and enhance corrosion resistance
- Separators in low resistance microporous glass fibre. The electrolyte is absorbed within this material, preventing acid spills in case of accidental damage
- Containers and lids in flame retardant ABS material, highly resistant to shock and vibration
- Terminals with brass insert for maximum conductivity and with high compression grommet for long life
- Self-regulating pressure relief valves prevent ingress of atmospheric oxygen

## Installation & Operation

- PowerSafe® V-TT cells and blocs are designed for installation in cabinets or on stands. A separate battery room is not necessary
- Cells and blocs can be mounted in vertical or horizontal orientation
- Recommended float charge voltage: 2.280Vpc at 20°C or 2.265Vpc at 25°C
- Six months shelf life at 20°C
- Reduced maintenance: no water addition required
- Wide operating temperature range: -30°C to +45°C

## Standards

- Designed to be compliant with international standard IEC 60896-21/22
- Classified as "Very Long Life" (>12 years) according to the 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 V Top Terminal products is ISO 9001 certified

## General Specifications

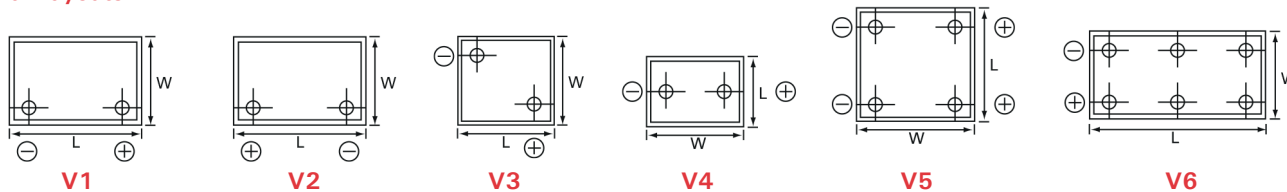
Battery Type	Nominal Voltage (V)	Nominal Capacity (Ah)		Nominal Dimensions (mm)				Typical Weight (Kg)	Short Circuit Current (A) <sup>(2)</sup>	Internal Resistance (mΩ) <sup>(2)</sup>	Terminals	
		10 hr rate to 1.80Vpc @ 20°C	8 hr rate to 1.75Vpc @ 25°C	Length	Width <sup>(1)</sup>	Bloc/Cell Height	Height Over Connections				Type	Layout
12V45	12	46	47	218	164	204	224	17.2	1297	9.68	M6 F	V1
12V55	12	56	59	271	164	204	224	21.0	1537	8.09	M6 F	V1
12V70	12	68	70	314	164	204	224	24.9	1814	6.95	M6 F	V1
12V95	12	95	95	302	175	227	247	33.2	2586	4.88	M6 F	V2
4V105	4	103	103	191	202	235	235	16.4	2429	1.73	M8 M	V3
6V105	6	103	103	191	202	235	235	20.4	2652	2.39	M8 M	V3
6V130	6	132	134	243	206	234	243	26.8	3571	1.77	M8 F	V3
4V155	4	154	155	202	202	228	228	23.0	4800	0.80	M8 M	V5
6V155	6	154	155	292	202	228	228	33.0	4800	1.20	M8 M	V6
6V170	6	173	173	302	175	230	256	31.8	4457	1.42	M8 F	V3
2V200	2	200	194	110	208	247	270	12.8	4605	0.46	M8 F	V4
4V230	4	231	232	292	202	228	228	32.5	6082	0.68	M8 M	V5
2V275	2	275	267	142	208	247	270	16.6	5850	0.36	M8 F	V4
2V310	2	308	309	202	202	228	228	23.0	9259	0.22	M8 M	V5
2V320	2	320	329	195	208	219	245	22.0	9675	0.22	M8 F	V5
2V400/2	2	400	388	195	208	247	270	23.6	7782	0.27	M8 F	V4
2V460/4	2	462	464	292	202	228	228	32.5	10929	0.18	M8 M	V5
2V460/6	2	462	464	292	202	228	228	33.0	10929	0.18	M8 M	V6
2V500/2	2	500	484	238	208	247	270	28.2	8740	0.24	M8 F	V4
2V500/6	2	518	516	296	204	240	240	33.4	14136	0.15	M8 F	V6

Notes:

<sup>(1)</sup> In horizontal installation, the width of PowerSafe V Top Terminal blocs and cells becomes the height, irrespective of positive and negative polarities.

<sup>(2)</sup> Figures obtained via IEC method.

## Terminal Layouts



EnerSys World Headquarters  
2366 Bernville Road, Reading  
PA 19605, USA  
Tel: +1-610-208-1991  
+1-800-538-3627

EnerSys EMEA  
EH Europe GmbH  
Baarerstrasse 18  
6300 Zug  
Switzerland

EnerSys Asia  
152 Beach Road  
Gateway East Building #11-08  
Singapore 189721  
Tel: +65 6416 4800

Contact: