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**RANGE SUMMARY**

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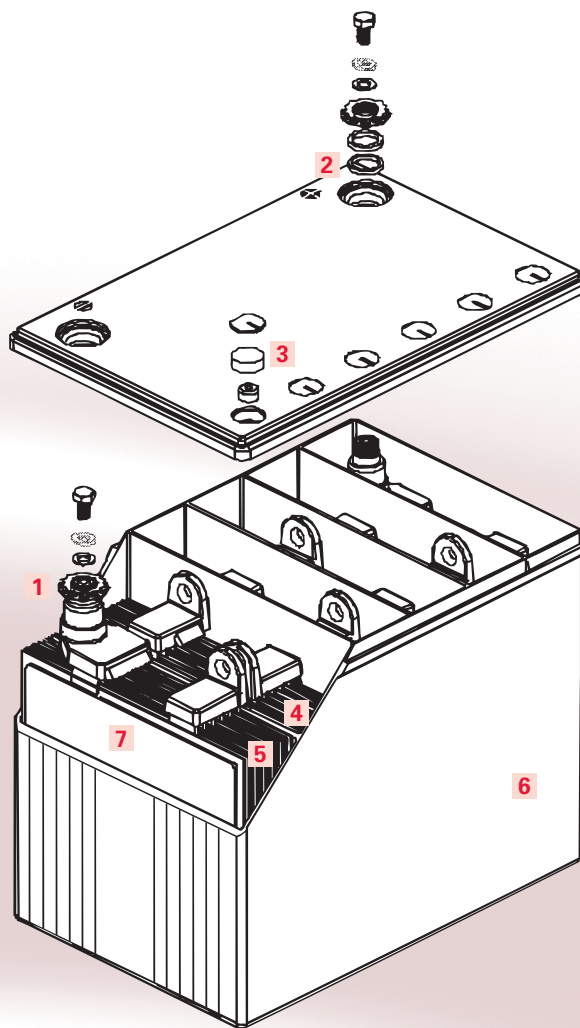


# PowerSafe™ VE

The PowerSafe™ VE range of valve regulated lead acid batteries has been designed to offer competitive solutions for the global telecommunications and information technology markets which demand the highest levels of security and reliability. PowerSafe VE incorporates select design features that maximize reliability, while ensuring superior performance and an excellent service life.

Gas recombination technology for valve regulated lead acid batteries has totally changed the concept of standby power. The minimal level of gas evolution allows battery installation in cabinets or telecom equipment racks, in offices or near main equipment, maximizing space utilization and reducing storage and maintenance costs.

PowerSafe VE delivers superior performance, occupying less space than conventional standby power batteries. Thick, ribbed plastic containers and covers provide high mechanical strength and excellent safety features.



## Construction

- 1 High conductivity terminals**  
Threaded brass insert for maximum conductivity and ease of installation.
- 2 High integrity terminal seal**  
Compression grommet designed for long life.
- 3 Self-regulating relief valve**  
Low pressure non-return valve prevents ingress of atmospheric oxygen.
- 4 Rugged high performance positive plates**  
Grids designed to resist corrosion and prolong active life.
- 5 Balanced negative plates**  
Ensure optimum recombination efficiency.
- 6 Tough cell containers**  
Thick-wall polypropylene compound plastic, highly resistant to shock and vibration. Available in either flame retardant or standard grade material.
- 7 Separators**  
Low resistance microporous glass fiber. The electrolyte is absorbed within this material.



## Features & Benefits

- Capacity range: 46Ah - 125Ah
- 100% initial battery capacity
- Positive and negative plate grids made of lead-calcium-tin alloy for long life and efficient recharge
- Flame arrestors built into each cell vent for added safety
- Containers and covers are available in both flame retardant (UL94-V0/L.O.I.>28%) or standard grade compound
- Individual cell vents
- Optional wire harness

## Standards

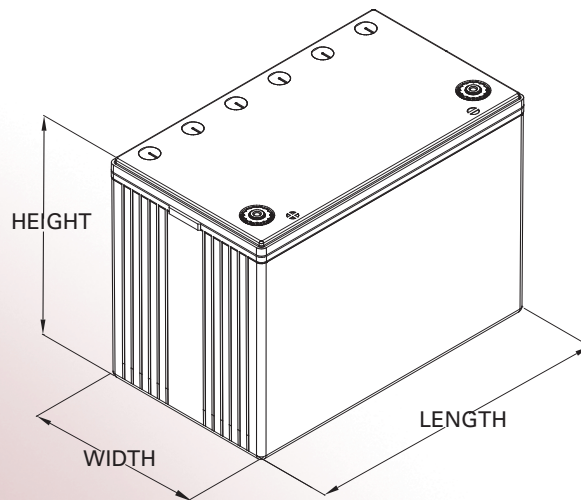
- UL listing - File No MH12544
- All EnerSys production facilities worldwide are certified to ISO 9001
- Approved for shipping as non-hazardous, non-spillable - per IATA Special Provision A67 and 49 CFR

## GENERAL SPECIFICATIONS

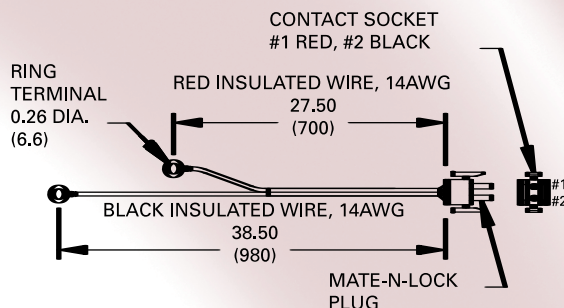
Type	Nominal Voltage (V)	Nominal Capacity (Ah)		Nominal Dimensions						Typical Weight		Short Circuit Current (A)	Max Discharge Current (Amps - 2 min rate to 1.50Vpc)	Internal Resistance (mΩ)
		10hr rate to 1.80 Vpc at 68°F/20°C	8hr rate to 1.75 Vpc at 77°F/25°C	Height*		Width		Length		kg	lbs			
12VE45	12	44	46	206	8.1	139	5.5	226	8.9	19.5	43.0	2775	375	4.50
12VE70	12	70	72	206	8.1	174	6.9	258	10.1	27.2	60.0	3175	475	3.93
12VE85	12	82	84	211	8.3	174	6.9	303	11.9	32.2	71.0	3700	550	3.37
12VE95	12	94	96	211	8.3	173	6.8	338	13.3	36.3	80.0	4225	630	2.95
12VE125	12	122	125	272	10.7	173	6.8	338	13.3	49.9	110.0	4600	735	2.70

\* Wiring harness adds 1" (25.4mm) to overall height

- Normal operating temperature range -22°F/-30°C to 113°F/45°C.
- Float charging voltage - 77°F/25°C. 13.4-13.6 volts per unit (average) (2.24 - 2.27 Vpc).
- Charging current  
PowerSafe VE can be safely recharged at high current rates.
- Storage time  
PowerSafe VE batteries can be stored for up to 6 months at 77°F/25°C before a freshening charge is required. At higher temperatures this time interval will be reduced.
- Torque specifications - 60 lbf in (6.8 Nm) ± 5%.

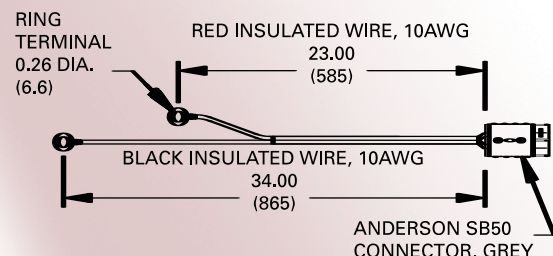


### Harness Assembly 12VE45



\* Maximum current limit: 11 Amps

### Harness Assembly 12VE70 through 12VE125



\* Maximum current limit: 30 Amps

## Constant Current Discharge Rates in Amperes at 77°F (25°C)

Cell Type	End Voltage	Standby Time*										
		1 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	6 Hr	7 Hr	8 Hr	10 Hr
<b>12VE45</b>	1.75	240	63.0	36.0	19.6	13.7	10.6	8.7	7.4	6.5	5.8	4.8
	1.78	228	60.0	35.0	19.2	13.5	10.4	8.6	7.3	6.4	5.7	4.7
	1.80	220	59.0	34.0	18.9	13.2	10.3	8.4	7.2	6.3	5.6	4.7
	1.83	200	57.0	33.0	18.4	13.0	10.1	8.3	7.1	6.2	5.5	4.6
	1.88	165	52.0	31.0	17.4	12.3	9.6	8.0	6.8	6.0	5.3	4.4
	1.92	131	47.0	28.0	16.0	11.0	9.0	7.0	6.3	5.5	4.9	4.1

Cell Type	End Voltage	Standby Time*										
		1 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	6 Hr	7 Hr	8 Hr	10 Hr
<b>12VE70</b>	1.75	336	89.0	55.0	30.9	21.7	16.9	13.8	11.7	10.2	9.0	7.3
	1.78	314	87.0	54.0	30.8	21.7	16.9	13.8	11.7	10.2	9.0	7.3
	1.80	300	85.0	54.0	30.3	21.5	16.7	13.7	11.7	10.2	9.0	7.3
	1.83	270	82.0	52.0	29.4	20.8	16.2	13.3	11.3	9.9	8.8	7.2
	1.88	222	74.0	47.0	26.9	19.1	14.9	12.3	10.5	9.2	8.2	6.7
	1.92	172	68.0	42.0	24.1	17.1	13.4	11.0	9.4	8.3	7.4	6.0

Cell Type	End Voltage	Standby Time*										
		1 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	6 Hr	7 Hr	8 Hr	10 Hr
<b>12VE85</b>	1.75	392	103	64.0	36.0	25.4	19.7	16.1	13.7	11.9	10.5	8.6
	1.78	367	102	64.0	35.9	25.4	19.7	16.1	13.7	11.9	10.5	8.6
	1.80	350	99.0	63.0	35.4	25.1	19.5	16.0	13.6	11.8	10.5	8.6
	1.83	315	95.0	60.0	34.3	24.3	18.9	15.5	13.2	11.5	10.2	8.4
	1.88	259	87.0	55.0	31.4	22.3	17.4	14.4	12.3	10.7	9.5	7.8
	1.92	200	79.0	49.0	28.1	20.0	15.6	12.9	11.0	9.6	8.6	7.0

Cell Type	End Voltage	Standby Time*										
		1 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	6 Hr	7 Hr	8 Hr	10 Hr
<b>12VE95</b>	1.75	448	118	73.0	41.2	29.0	22.5	18.4	15.6	13.6	12.0	9.8
	1.78	419	116	73.0	41.0	29.0	22.5	18.4	15.6	13.6	12.0	9.8
	1.80	400	113	71.0	40.5	28.6	22.3	18.3	15.5	13.5	12.0	9.8
	1.83	360	109	69.0	39.2	27.8	21.6	17.8	15.1	13.2	11.7	9.6
	1.88	296	99.0	63.0	35.9	25.5	19.9	16.4	14.0	12.2	10.9	8.9
	1.92	229	90.0	56.0	32.1	22.8	17.8	14.7	12.6	11.0	9.8	8.0

Cell Type	End Voltage	Standby Time*										
		1 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	6 Hr	7 Hr	8 Hr	10 Hr
<b>12VE125</b>	1.75	555	161	94.0	52.9	37.3	29.0	23.8	20.3	17.6	15.6	12.7
	1.78	510	157	93.0	52.7	37.3	29.0	23.8	20.3	17.6	15.6	12.7
	1.80	484	153	91.0	51.9	36.9	28.8	23.7	20.2	17.6	15.6	12.7
	1.83	428	146	88.0	50.4	35.8	28.0	23.1	19.7	17.3	15.4	12.6
	1.88	355	131	80.0	46.2	32.9	25.7	21.3	18.3	16.1	14.3	11.8
	1.92	271	115	71.0	41.2	29.4	23.1	19.3	16.6	14.6	13.0	10.7

\* Maximum current limit when utilizing wire harness: 11 Amps for 12VE45, 30 Amps for all other sizes



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