



SMG



SMG Battery Range

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**T**HE FIAMM SMG TUBULAR GEL RANGE IS DESIGNED FOR APPLICATIONS WHERE PERFORMANCE AND OPERATING CONDITIONS ARE CRITICAL. THEY ARE MAINTENANCE-FREE AND COMBINE THE BENEFITS OF A GELLED ELECTROLYTE WHICH PROVIDES LONGER LIFE AND A WIDER TEMPERATURE OPERATING RANGE.

THE SMG RANGE IS MADE UP OF 2V CELLS AND 12V BLOCKS. THE 2V CELLS CONFORM TO INTERNATIONAL OPZV STANDARDS DIN40742 NORM. THE RANGE IS CONSTRUCTED TO PROVIDE A HIGH LEVEL OF ROBUSTNESS AND IS DESIGNED FOR APPLICATIONS WHERE CHARGE-DISCHARGE CYCLES HAVE TO BE GUARANTEED WITH RELIABILITY. THE RANGE IS MAINTENANCE-FREE WITH A LOW SELF-DISCHARGE CHARACTERISTIC FOR PERIODS WHEN BATTERIES MAY BE STORED OR OFF FLOAT CHARGE. THE SMG 2V CELL RANGE CAN BE INSTALLED HORIZONTALLY IN DEDICATED RACKS SAVING VALUABLE SPACE. THE RANGE IS FULLY ECO-FRIENDLY WITH ALL COMPONENTS BEING FULLY RECYCLABLE. 12V FRONT TERMINAL DESIGN PERMITS AN EASY INSTALLATION.



#### MAIN APPLICATIONS:



TELECOMMUNICATION



INDUSTRIAL UPS



UTILITIES AND INDUSTRY



RAILWAYS



OIL & GAS



RENEWABLE ENERGY

## SPECIFICATIONS

The positive tubular grid is composed of a special alloy (Pb-Sn-Ca) which is die-cast to guarantee high corrosion resistance

The electrolyte is immobilized into GEL structure due to a special silica binding addition

Separators have extremely high porosity and provides very low internal resistance

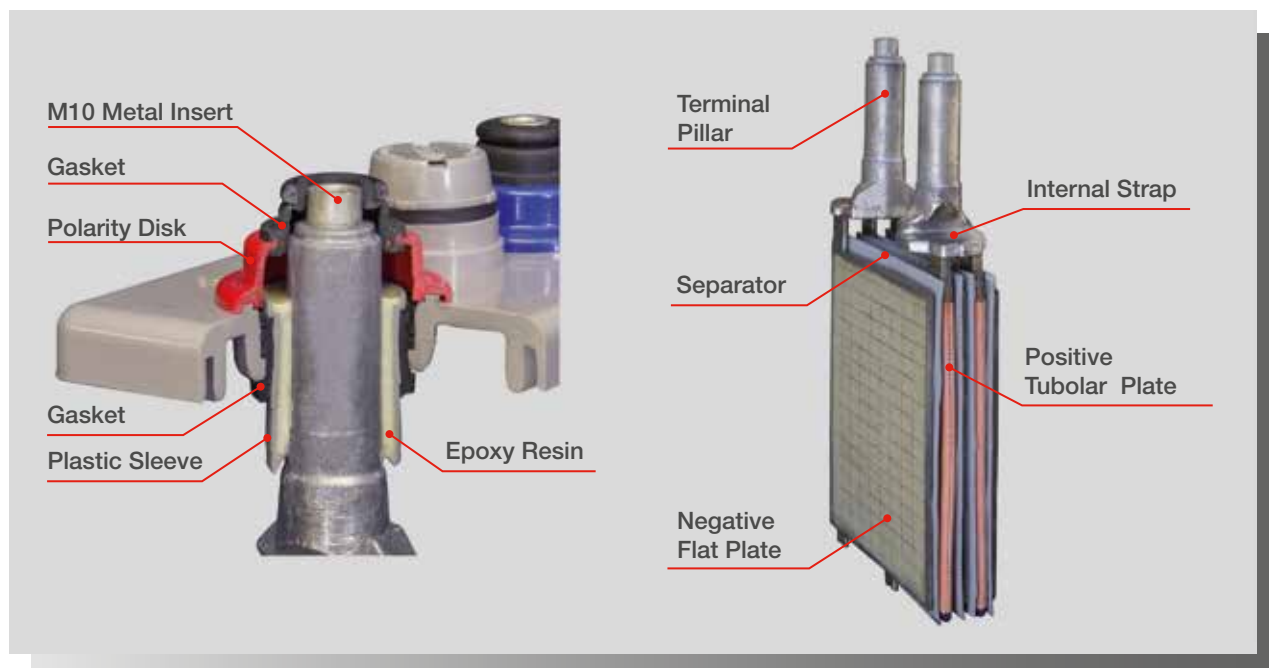
ABS cases flame retardant and classified to UL94 V0 with LOI >28% standard for 12V and available on request for 2V cells

The vent plug comprises an exhaust valve and porous flameproof disc for a superior safety

The metallic threaded insert on terminals ensure the highest conductivity and provides maximum torque retention and easy installation

The connecting bolt is fully insulated but with probe hole on the top to grant electrical measurements (2V only)

## TECHNOLOGY



THE UNIQUE FIAMM TERMINAL DESIGN OF THE 2V CELL PERMITS PILLAR GROWTH DURING CELL LIFE WITHOUT LEAKAGE. THIS FEATURES AVOID MECHANICAL STRESS ON THE LID OF THE CELL.

THE GEL ELECTROLYTE STRUCTURE SLOWS THE DRYING OUT OF THE CELL ENSURING AN 18 YEAR DESIGN LIFE FOR 2V CELLS AND 15 YEARS FOR 12V BATTERIES. LOW SELF-DISCHARGE ALLOWS 6 MONTHS SHELF LIFE.

BATTERY TYPE	REFERENCE OPzV DIN 40742	NOMINAL CAPACITY (Ah) 10H to 1.8VPC at 20°C	SHORT CIRCUIT CURRENT (A) IEC 60896 21-22	INTERNAL RESISTANCE (mOhm) IEC 60896 21-22	NOMINAL DIMENSION (in)			TYPICAL WEIGHT (lbs)
					Lenght	Width	Height	
SMG 220	4 OPzV 200	220	2700	0.74	4.06	8.11	16.02	41.8
SMG 275	5 OPzV 250	275	3520	0.592	4.88	8.11	16.02	50.7
SMG 330	6 OPzV 300	330	4100	0.493	5.71	8.11	16.02	58.6
SMG 380	5 OPzV 350	380	3350	0.607	4.88	8.11	20.59	66.1
SMG 460	6 OPzV 420	460	3990	0.502	5.71	8.11	20.59	73.4
SMG 530	7 OPzV 490	530	4640	0.436	6.54	8.11	20.59	86.0
SMG 720	6 OPzV 600	720	6220	0.321	5.71	8.11	27.48	106.9
SMG 960	8 OPzV 800	960	7120	0.284	8.27	7.52	27.56	142.5
SMG 1200	10 OPzV 1000	1200	8820	0.227	8.27	9.17	27.56	177.2
SMG 1440	12 OPzV 1200	1440	10530	0.19	8.27	10.83	27.56	209.6
SMG 1680	12 OPzV 1500	1680	11730	0.17	8.27	10.83	33.43	246.3
SMG 2005	14 OPzV 1750	2000	13900	0.14	8.35	15.71	32.52	297.6
SMG 2250	16 OPzV 2000	2250	15810	0.13	8.35	15.71	32.52	332.8
SMG 2520	18 OPzV 2250	2520	17700	0.11	8.35	19.17	32.52	376.9
SMG 2800	20 OPzV 2500	2800	20050	0.10	8.35	19.17	32.52	417.4
SMG 3080	22 OPzV 2750	3080	22055	0.09	8.35	22.68	32.52	458.6
SMG 3350	24 OPzV 3000	3350	23490	0.09	8.35	22.68	32.52	498.4
SMG 3640	26 OPzV 3250	3640	25000	0.08	8.35	22.68	32.52	529.1
12 SMG 100	-	100	1500	7.8	4.96	21.97	10.63	97.0
12 SMG 130	-	130	1470	8.6	4.96	21.97	12.64	119.0

## ELECTRICAL CHARACTERISTICS

Float Voltage: 2.25 V/cell at 68°F

Boost Voltage: 2.40 V/cell

Float Voltage Compensation with Temperature: -1.39mV/cell/°F

Self-Discharge at 68°F: <2%/month

## STANDARDS

DIN 40742 – specification OPzV cells (2V)

DIN 43539T5 – deep discharge

IEC 60896 Parte 21 – VRLA testing methods

IEC 60896 Parte 22 – VRLA requirements

Eurobat Guide “Very Long Life” >12 years

UL recognized (12V)

## CERTIFICATIONS

ISO 9001

Quality Management System

ISO 14001

Environmental Management System

ISO 45001

Workplace Safety & Health

## ACCESSORIES

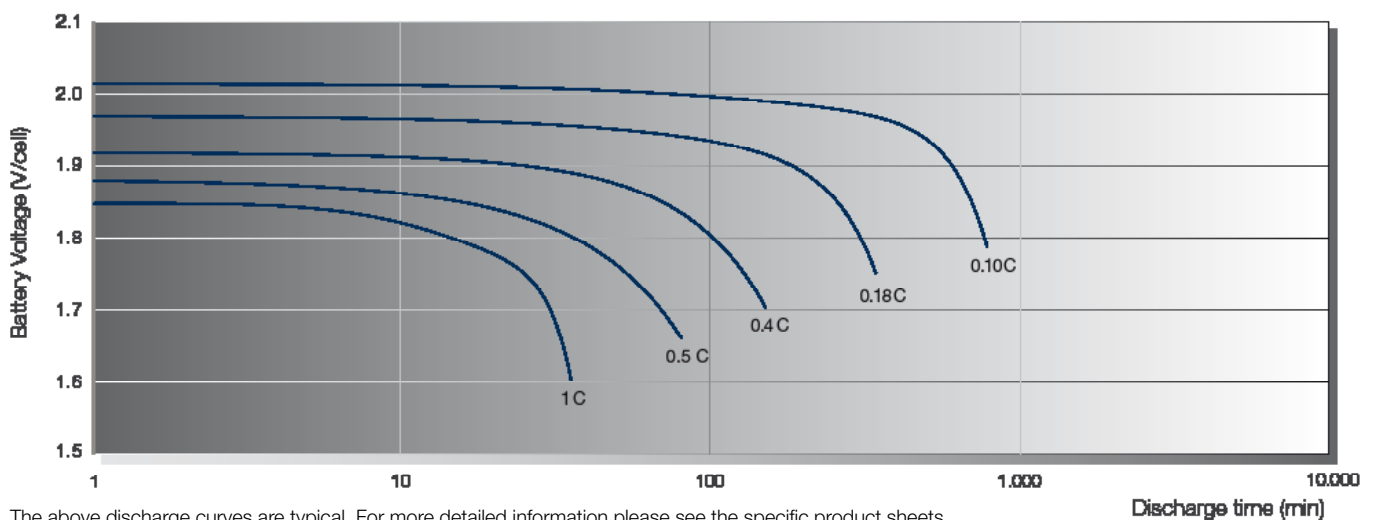
RVS (Remote Venting System) only for 12V

Racks for battery installation (standard and anti-seismic)

Cabinets for battery installation

Monitoring system

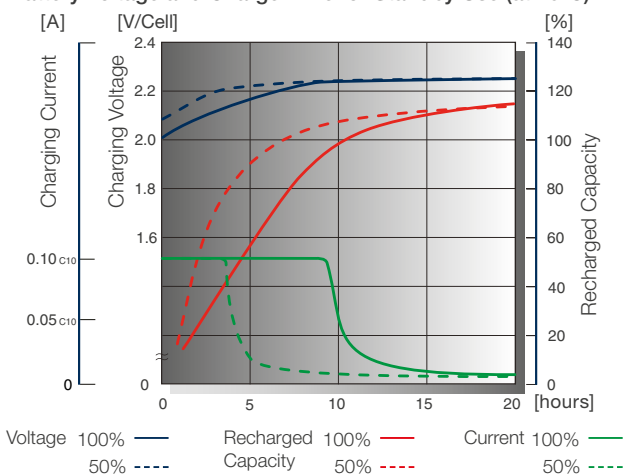
### DISCHARGE CURVES at different current / final voltage (at 68°C)



The above discharge curves are typical. For more detailed information please see the specific product sheets.

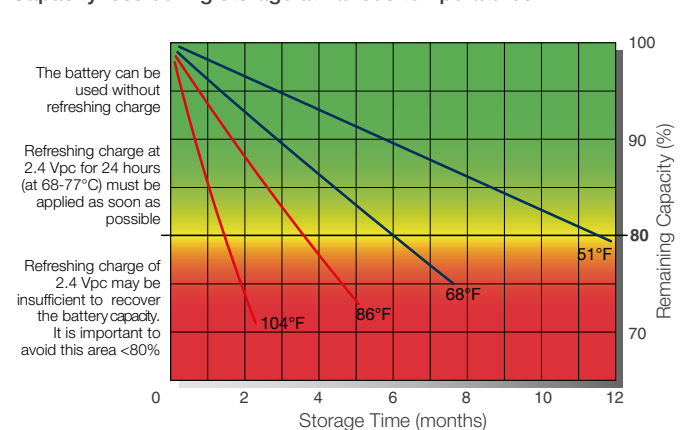
### TYPICAL CHARGE CURVES

Battery Voltage and Charge Time for Standby Use (at 20°C)



### STORAGE

Capacity loss during storage at various temperatures



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