

# SD-SDH



SD-SDH Battery Range

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**T**HE SD-SDH RANGE IS IS THE PERFECT CHOICE WHEN APPLICATION REQUIRES HIGH POWER IN A SHORT PERIOD OF TIME.

THE RANGE IS CONSTRUCTED TO PROVIDE A HIGH LEVEL OF ROBUSTNESS AND DESIGNED FOR APPLICATIONS WHERE HIGH ENERGY PEAKS ARE NEEDED IN A SHORT TIMEFRAME. DUE TO A SPECIAL LOW ANTIMONY PLATES DESIGN THE RANGE OFFERS USERS THE BENEFIT OF LOW MAINTENANCE RESULT IN IMPROVED OPERATING COSTS. BATTERIES NEED TOPPING-UP ONCE EVERY THREE YEARS UNDER NORMAL OPERATING CONDITIONS. FURTHERMORE THE DESIGN IS OPTIMIZED TO OFFER VERY LOW SELF-DISCHARGE FOR LONG STORAGE PERIOD WITHOUT A REFRESHING CHARGE. LIKE ALL FIAMM LEAD-ACID BATTERIES THE SD SDH RANGE IS ECO-FRIENDLY AND FULLY RECYCLABLE.



#### MAIN APPLICATIONS:



## SPECIFICATIONS

The flat plates design provides a larger active surface area; the result is maximum performance with a high rate discharge

Electrolyte: sulphuric acid electrolyte with specific gravity of 1.27 kg/l at 20°C

Low internal resistance due to high porosity separators

Robust box construction made of SAN with a flame retardant ABS lid

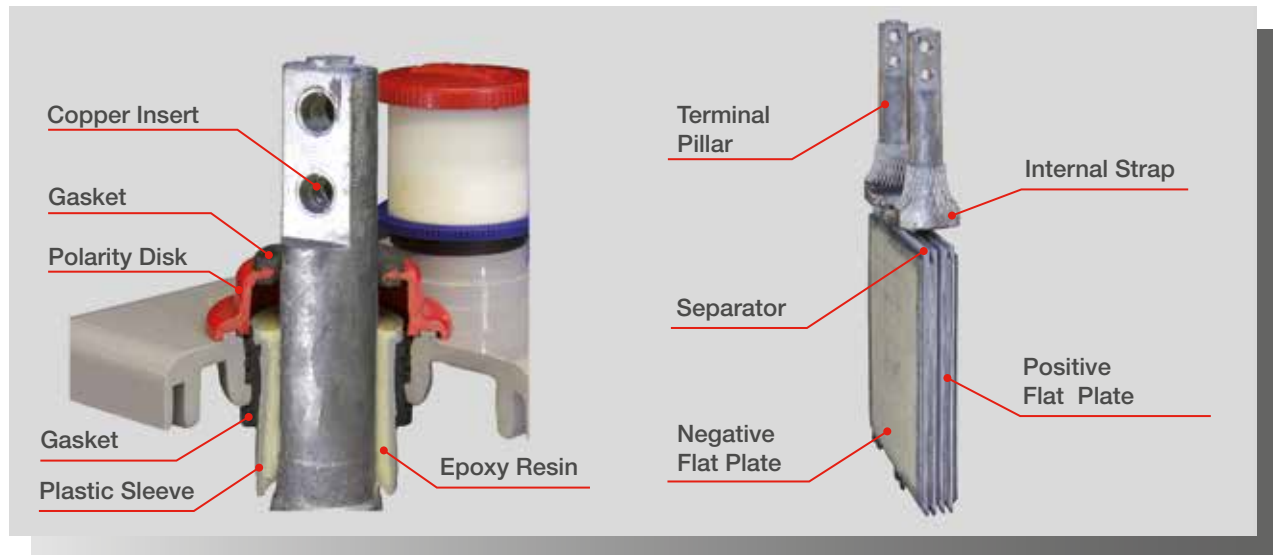
Flameproof vent plugs made of porous materials for superior safety

Long shelf life of up to six months is possible without recharge (<2% discharge per month)

Flat post is designed for high contact area with rigid connection

Rigid copper connections to allow higher currents

## TECHNOLOGY



THE UNIQUE FIAMM TERMINAL DESIGN PERMITS PILLAR GROWTH DURING CELL LIFE WITHOUT LEAKAGE. THE SD-SDH RANGE HAS A DESIGN LIFE IS 15 YEARS DUE TO HIGH RELIABILITY AND COMPONENTS MANUFACTURE PROCESS.

LOW SELF-DISCHARGE ALLOWS UP TO 6 MONTHS WITHOUT RECHARGE IN OPEN CIRCUIT CONDITION. ALL SD-SDH MODELS ARE AVAILABLE IN A DRY CHARGE VERSION.

CELL TYPE	NOMINAL CAPACITY (Ah) 10H to 1.8VPC at 20°C	SHORT CIRCUIT CURRENT (A) IEC 60896-11	INTERNAL RESISTANCE (mOhm) IEC 60896-11	NOMINAL DIMENSION (mm)			ELECTROLYTE QUANTITY (liters)	TYPICAL WEIGHT (with electrolyte) (kg)
				Lenght	Width	Height		
SD 5	80	1280	1.625	103	206	423	4.4	13.8
SD 7	120	1920	1.083	103	206	423	4.0	15.5
SD 9	160	2560	0.813	124	206	423	5.2	17.5
SD 11	200	3200	0.650	124	206	423	4.8	20.5
SD 13	240	3840	0.542	145	206	423	6.0	23.5
SD 15	280	4480	0.464	145	206	423	6.0	26.3
SD 17	320	5120	0.406	187	206	423	8.0	29.5
SD 19	360	5760	0.361	187	206	423	7.7	30.6
SD 21	400	6400	0.325	187	206	423	7.6	32.0
SD 23	440	7040	0.295	187	206	423	7.4	35.0
SDH 13	480	4800	0.438	145	206	710	10.9	43.9
SDH 15	560	5600	0.375	145	206	710	10.5	46.7
SDH 17	640	6400	0.330	210	191	710	15.2	57.0
SDH 19	720	7200	0.292	210	191	710	14.4	59.5
SDH 21	800	8000	0.263	210	191	710	14.4	66.8
SDH 23	880	8800	0.239	210	233	710	18.4	71.0
SDH 25	960	9600	0.219	210	233	710	17.6	78.8
SDH 27	1040	10400	0.202	210	233	710	16.8	76.0
SDH 29	1120	11200	0.188	210	275	710	20.8	92.6
SDH 31	1200	12000	0.175	210	275	710	20.4	95.4
SDH 33	1280	12800	0.164	210	275	710	20.0	98.2
SDH 35	1360	13600	0.154	210	275	710	19.6	101
SDH 37	1440	14400	0.146	218	368	687	36.8	117
SDH 39	1520	15200	0.138	218	368	687	34.8	121
SDH 41	1600	16000	0.131	218	368	687	33.1	124
SDH 43	1680	16800	0.125	218	368	687	30.8	128
SDH 45	1760	17600	0.119	218	368	687	29.2	131
SDH 47	1840	18400	0.114	218	368	687	24.8	135
SDH 49	1920	19200	0.109	218	368	687	27.1	138
SDH 51	2000	20000	0.105	218	448	687	36.0	150
SDH 53	2080	20800	0.101	218	448	687	35.2	152
SDH 55	2160	21600	0.097	218	448	687	33.6	157
SDH 57	2240	22400	0.094	218	448	687	32.8	161
SDH 59	2320	23200	0.091	218	448	687	31.5	164



## ELECTRICAL CHARACTERISTICS

Float Voltage: 2.23 V/cell at 20°C

Boost Voltage: 2.40 V/cell

Float Voltage Compensation with Temperature: -2.5 mV/cell/°C

Self-Discharge at 20°C: <2%/month

## CERTIFICATIONS

ISO 9001

Quality Management System

ISO 14001

Environmental Management System

ISO 45001

Workplace Safety & Health

## STANDARDS

IEC 60896 Part 11 – vented types requirements & tests

BS 6290 part 2 – British Standard specification

## ACCESSORIES

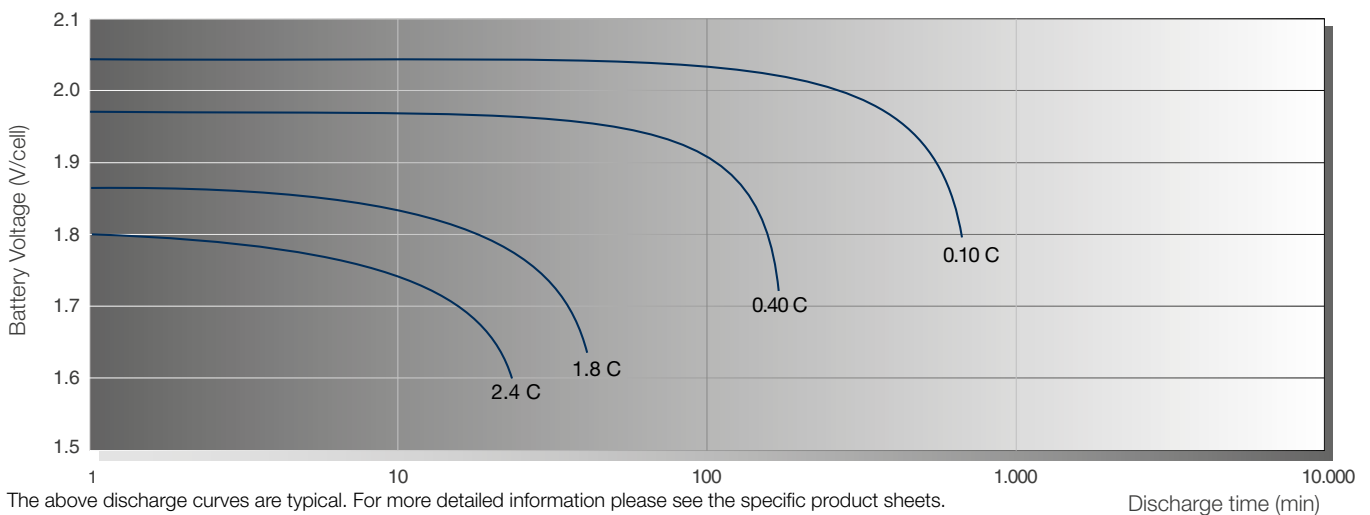
Recombination plug

Filtering plugs to DIN standard

Racks for battery installation (standard and anti-seismic)

Monitoring system

### DISCHARGE CURVES at different current / final voltage (at 20°C)

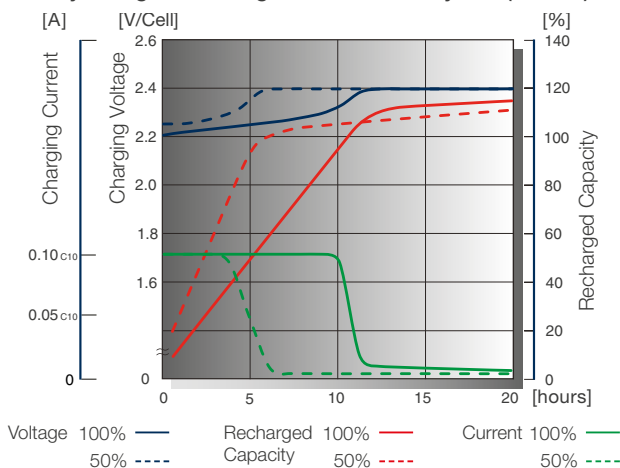


The above discharge curves are typical. For more detailed information please see the specific product sheets.

Discharge time (min)

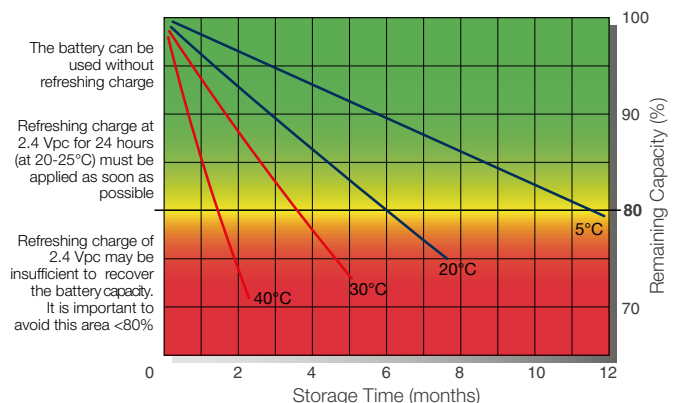
### TYPICAL CHARGE CURVES

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



### STORAGE

Capacity loss during storage at various temperatures



The battery can be used without refreshing charge

Refreshing charge at 2.4 Vpc for 24 hours (at 20-25°C) must be applied as soon as possible

Refreshing charge of 2.4 Vpc may be insufficient to recover the battery capacity. It is important to avoid this area <80%



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