

# OPzS (FLOODED) AND OPzV (GEL) TUBULAR PLATE BATTERIES

Innovative Technology.  
Proven Expertise.  
Best in Class Solutions.



**Discover**<sup>®</sup>  
Innovative Battery Solutions

OPzS/OPzV Tubular Plate Battery

# BENEFITS AND FEATURES

## Long Service Life

Tubular positive plates with non-woven polyester gauntlets are designed to prevent active material plate shedding and provide the highest cycling expectancy amongst lead acid technologies, particularly in PSoC (Partial State of Charge) operation.

High energy density tubular plates in combination with lead calcium alloy reduces self discharge and charge current requirements during float operation and extends battery service life.

## Performance and Reliability

Special sliding pole terminals are designed to accommodate natural grid growth occurrence throughout battery lifetime. Battery containers are made of Acrylonitrile Butadiene Styrene (ABS) and Styrene Acrylonitrile (SAN) to endure high impact and heat environments.

## Maintenance and Optimization

OPzS Flooded batteries are manufactured with reduced watering frequency requirements and transparent containers to easily monitor electrolyte level. OPzV Gel batteries are valve-regulated, non-spillable, completely maintenance-free and can be ordered with the option to be horizontally mounted.

## Safety

All products are tested and certified to multiple international safety standards for use in Photovoltaic and Stationary applications. Flame retardant containers and centralized gassing and watering kits are available upon request.

## Lowest Total Cost of Ownership

OPzV and OPzS Tubular batteries provide the Lowest Total Cost of Ownership (TCO) amongst lead acid technologies. Further savings can be achieved in Hybrid systems through diesel abatement and peak shaving.

# CERTIFIED QUALITY

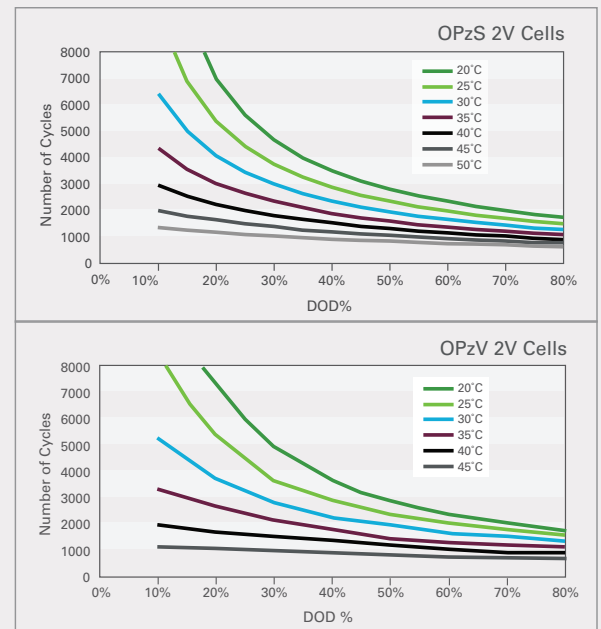
Discover and its manufacturing facilities are fully certified to ISO 9001/14001 and OSHA 18001 standards. OPzS and OPzV Tubular products are also tested in compliance to multiple international standards:

- Eurobat "Long Life" classification
- IEC 60896-21/22 (OPzV) and IEC60896-11 (OPzS) test standard for stationary applications
- IEC 61427 test standard for photovoltaic energy systems
- EN50272-1 and EN50272-2 safety requirements
- DIN 40742 (OPzV) and DIN 40736 (OPzS) standard for stationary tubular plate cells
- UN 2800 (US DOT Compliance)

# APPLICATIONS

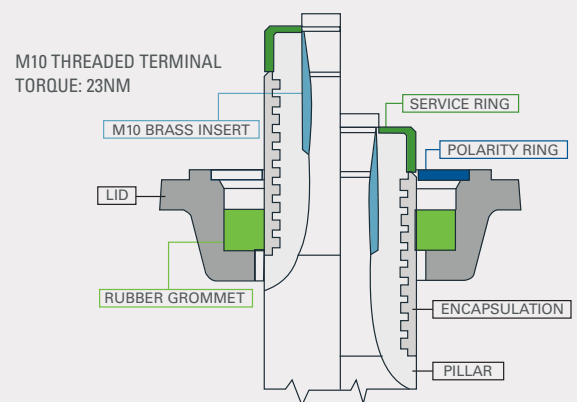
- Hybrid Systems
- Hydraulic Systems
- Micro-grid
- Net Metering
- Off-Grid Systems
- Peak Shaving / Grid Stabilization
- Residential Storage Systems
- Security / Traffic Lighting and Signaling Systems
- Telecom Network and BTS

## CYCLE LIFE IN RELATION TO DEPTH OF DISCHARGE



## SLIDING POLE TERMINAL DESIGN

Maintains an airtight seal even when the plates expand and grow throughout the lifetime of the cell.



## TUBULAR PLATE TECHNOLOGY

Tubular Positive Plate and non-woven Polyester Gauntlets extend battery cycle and service life performances by reducing corrosion, self-discharge rates and capacity loss from active material plate shedding.



Type No.	NOMINAL CAPACITY					Poles	MECHANICAL CHARACTERISTICS									
	240 HR	120 HR	100 HR	20 HR	10 HR		Length		Width		Height*		Height**		Weight	
	1.85VPC at 20°C / 68°F				1.75VPC at 27°C / 80°F		IN	MM	IN	MM	IN	MM	IN	MM	LB	KG

## 2 VOLT CELLS

# OPZS FLOODED RANGE

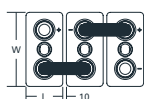
2VRE-400TF	197	187	183	139	126	2	4.1	105	8.2	208	14.4	367	15.4	392	31	14
2VRE-500TF	274	263	258	198	180	2	4.1	105	8.2	208	14.4	367	15.4	392	35	16
2VRE-600TF	310	300	294	237	215	2	4.1	105	8.2	208	14.4	367	15.4	392	40	18
2VRE-800TF	391	378	370	297	270	2	5.0	126	8.2	208	14.4	367	15.4	392	46	21
2VRE-900TF	470	454	445	356	324	2	5.8	147	8.2	208	14.4	367	15.4	392	55	25
2VRE-1100TF	574	553	542	436	396	2	5.0	126	8.2	208	19.0	484	20.0	509	59	27
2VRE-1300TF	686	661	648	521	474	2	5.8	147	8.2	208	19.0	484	20.0	509	70	32
2VRE-1500TF	780	750	735	595	541	2	6.6	168	8.2	208	19.0	484	20.0	509	81	37
2VRE-1800TF	948	904	886	670	609	2	5.8	147	8.2	208	25.8	656	26.8	682	84	38
2VRE-2000TF	1006	966	947	739	672	2	5.8	147	8.2	208	25.8	656	26.8	682	90	41
2VRE-2500TF	1286	1230	1205	920	836	2	5.8	147	8.2	208	25.8	656	26.8	682	86	39
2VRE-2600TF	1330	1278	1252	982	893	4	8.3	212	7.6	193	25.8	656	26.8	682	132	60
2VRE-3000TF	1546	1484	1454	1131	1028	4	8.3	212	9.2	235	25.9	659	26.9	684	154	70
2VRE-3200TF	1656	1592	1560	1225	1114	4	8.3	212	9.2	235	25.9	659	26.9	684	163	74
2VRE-3800TF	1985	1908	1870	1462	1329	4	8.3	212	10.9	277	25.9	658	26.8	683	191	87
2VRE-4400TF	2283	2216	2172	1785	1623	4	8.3	212	10.9	277	31.8	809	32.8	834	224	102
2VRE-4500TF	2294	2226	2181	1793	1630	4	8.3	212	10.9	277	31.8	809	32.8	834	233	106
2VRE-5500TF	2868	2770	2715	2176	1978	6	8.3	212	15.7	400	30.8	784	31.8	809	321	146
2VRE-5800TF	3019	2921	2863	2325	2114	6	8.3	212	15.7	400	30.8	784	31.8	809	321	146
2VRE-5900TF	3065	2972	2913	2405	2186	6	8.4	215	15.7	400	30.8	784	31.8	809	321	146
2VRE-7600TF	3917	3780	3704	2958	2689	8	8.3	212	19.2	489	30.7	782	31.7	807	394	179
2VRE-8200TF	4217	4076	3994	3219	2926	8	8.4	214	19.2	489	30.7	782	31.7	807	394	179
2VRE-8600TF	4639	4484	4394	3540	3219	8	8.4	214	22.7	578	30.8	784	31.8	809	442	201
2VRE-9200TF	4769	4620	4528	3697	3361	8	8.4	214	22.7	578	30.8	784	31.8	809	460	209

# OPZV GEL RANGE

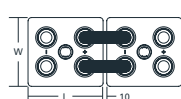
2VRE-600TG	307	305	301	246	224	2	4.1	105	8.2	208	14.4	367	15.4	392	42	19
2VRE-800TG	382	380	376	308	280	2	5.0	126	8.2	208	14.4	367	15.4	392	48	22
2VRE-900TG	459	457	452	370	336	2	5.8	147	8.2	208	14.4	367	15.4	392	57	26
2VRE-1100TG	567	564	556	446	405	2	5.0	126	8.2	208	19.0	484	20.0	509	68	31
2VRE-1300TG	681	678	668	535	486	2	5.8	147	8.2	208	19.0	484	20.0	509	79	36
2VRE-1600TG	797	793	782	624	567	2	6.6	168	8.2	208	19.0	484	20.0	509	92	42
2VRE-1900TG	987	982	968	759	690	2	5.8	147	8.2	208	25.8	656	26.8	681	110	50
2VRE-2600TG	1313	1306	1287	1012	920	4	8.3	212	7.6	193	25.8	657	26.8	682	145	66
2VRE-3200TG	1643	1635	1610	1265	1150	4	8.3	212	9.2	235	25.9	659	26.9	684	180	82
2VRE-3900TG	1979	1969	1938	1518	1380	4	8.3	212	10.9	277	25.9	658	26.8	683	213	97
2VRE-4400TG	2238	2227	2197	1782	1620	4	8.3	212	10.9	277	31.8	809	32.8	834	246	112
2VRE-5900TG	2981	2966	2927	2376	2160	6	8.4	215	15.7	400	30.8	784	31.8	809	343	156
2VRE-7400TG	3723	3704	3655	2970	2700	8	8.4	214	19.2	489	30.7	782	31.7	807	418	190
2VRE-8200TG	4095	4074	4021	3267	2970	8	8.4	214	22.7	578	30.8	784	31.8	809	475	216
2VRE-8900TG	4483	4461	4402	3564	3240	8	8.4	214	22.7	578	30.8	784	31.8	809	497	226
2VRE-9700TG	4857	4833	4769	3861	3510	8	8.4	214	22.7	578	30.8	784	31.8	809	519	236

\* Height over lid. \*\* Height over pillar.

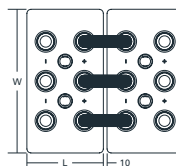
## DRAWINGS



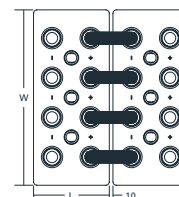
2V - 2 Pole



2V - 4 Pole



2V - 6 Pole



2V - 8 Pole



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