

OSAKA

BATTERIES

OPzV (2V) VRLA Batteries

OPzV series is Valve Regulated Lead Acid battery adopting immobilised GEL and Tubular Plate technology, offering high reliability and stable performance. The OPzV series is designed and manufactured according to DIN standards, with die-casted positive grid and patented active material formula, they exceed the DIN standard values. They offer 20+ years design life in float service at 25 °C and are more suitable for cyclic use under extreme operating conditions.

The 2V OPzV Batteries are of the latest technology. These products can be widely used in Telecommunication/IT, Traffic Systems (Signaling & Lighting), Mobile Phone Station, Drinking Water Supply System, Security Lighting, Power Plants, Industrial Control, Electro Medical Systems & Solar & Wind Energy Storage etc.



**Sealed Valve Regulated Lead Acid
Batteries for Cyclic Applications**



OPzV (2V) VRLA Batteries

OPzV tubular gel VRLA batteries uses gas recombination technology. These battery are designed for cyclic and excellent temperature resistance. OPzV series is well suited for high rate, medium & low to long discharge.

Application

- Telecommunication & IT
- Emergency, Security, Traffic Systems (Signaling & Lighting) & UPS
- Power Plants / Grid Stations
- Electro Medical Systems
- Drinking Water Supply Systems
- Solar & Wind Energy System

Product Feature

- 2 Volt
- Tubular positive plates, pressure cast from tin-calcium alloy
- Electrolyte immobilized in gel structure
- Standard ABS plastic
- Thread female M10 terminal posts
- High integrity post seal design to prevent electrolyte leakage and terminal corrosion
- Installation in vertical or horizontal position

Electrical Characteristics

Nominal voltage:	2V
Capacity range:	2V-200AH~ 3000AH
Self discharge:	< 2~3%/month at 25 °C
Operating temperature:	Discharge: - 40 °C ~ 50 °C Charge: - 20 °C ~ 45 °C Storage: - 20 °C ~ 40 °C
Recommended temperature:	25 °C
Design life:	12 year (in float operation in temperature controlled environment)
Float voltage at 20 °C:	2.23V/cell
Boost charge voltage:	2.40V/cell

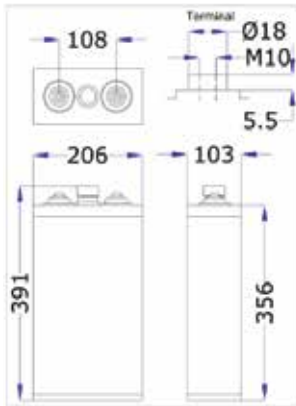
Standard

ISO9001
ISO14001
IEC 60896-21 & 22

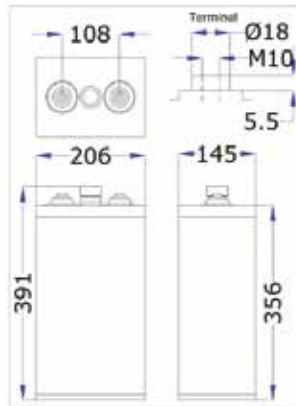
Main Specification & Type

Type	Nominal Voltage (V)	Nominal Capacity C10 (AH) F.V=1.8V/CELL	Dimensions (mm)				Weight Appx ±1 (Kg)	Internal Resistance (MΩ 25°C)	Max. Discharge Current (A) (5 sec)
			L±2	W±2	H±5	TH±5			
4OPzV200	2	200	103	206	356	391	18.3	1.00	1000
6OPzV300	2	300	145	206	356	391	25.4	0.85	1350
6OPzV420	2	420	145	206	471	506	35.5	0.75	1700
7OPzV490	2	500	166	206	471	506	41.0	0.70	2000
6OPzV600	2	600	145	206	646	681	48.0	0.65	2500
8OPzV800	2	800	191	210	646	681	64.0	0.60	3500
10OPzV1000	2	1000	233	210	646	681	78.0	0.50	3800
12OPzV1500	2	1500	275	210	795	830	115.0	0.45	4500
16OPzV2000	2	2000	399	214	775	810	154.0	0.44	7000
24OPzV3000	2	3000	576	212	775	810	215.0	0.35	10500

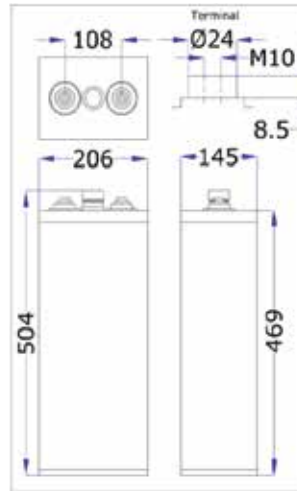
4OPzV200



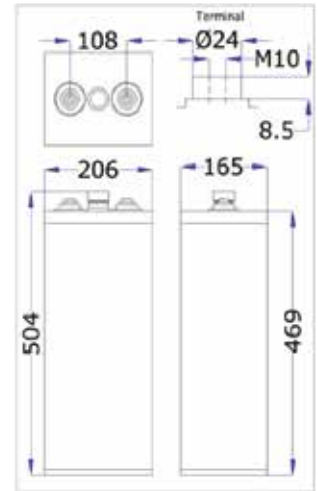
6OPzV300



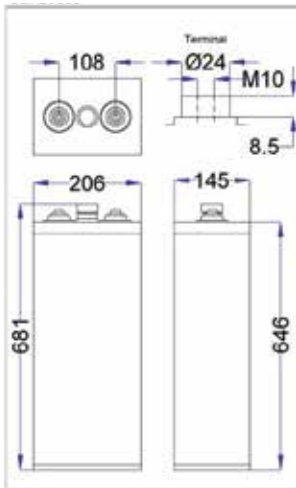
6OPzV420



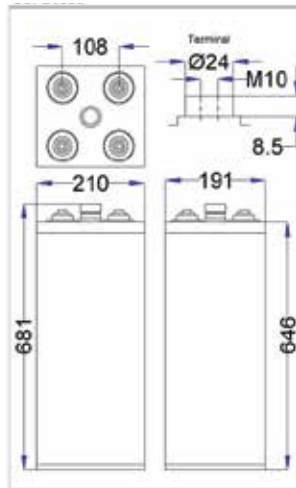
7OPzV490 (500)



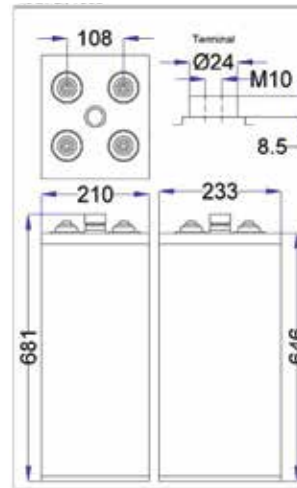
6OPzV600



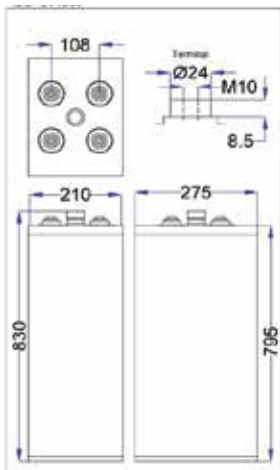
8OPzV800



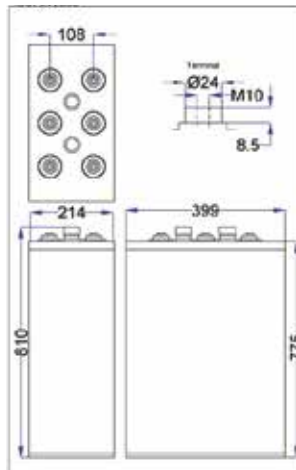
10OPzV1000



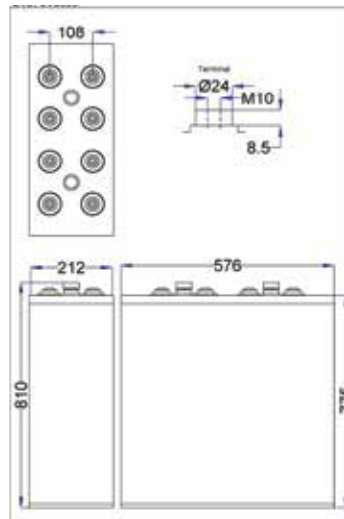
12OPzV1500



16OPzV2000



24OPzV3000



Self Discharge : Remaining Capacity 92% (25 °C)/3month 94% /1month
 Nominal Operating Temperature: 20±5 °C

Initial Charge

Constant Current Charge

Battery Temperature	Voltage Setting	Charging Time	Full Charge Criteria
0~10 °C	2.38V~2.45V	48~72 hrs	When the individual cell voltages have not risen for a period of 4 hours
15~30 °C	2.35V~2.40V	36~72 hrs	
30~40 °C	2.32V~2.35V	24~48 hrs	

Floating Charge

Charge the battery with 2.25~2.27V /cell, Temperature Compensation $-3\text{mV} / ^\circ\text{C}$

Cyclic Charge

Charge the battery with 2.35~2.40V /cell, Temperature Compensation $-4\text{mV} / ^\circ\text{C}$
 Equalizing charging the battery after discharge and per 3 month.

Charge the battery with 2.41V /cel for 24 hours, Temperature Compensation $-4\text{mV} / ^\circ\text{C}$

Maximum Charge Current : 0.20C10 (A)

Type	Max. Charge Current
OPzV200	40.0 A
OPzV300	60.0 A
OPzV420	84.0 A
OPzV490	100.0 A
OPzV600	120.0 A
OPzV800	160.0 A
OPzV1000	200.0 A
OPzV1500	300.0 A
OPzV2000	400.0 A
OPzV3000	600.0 A

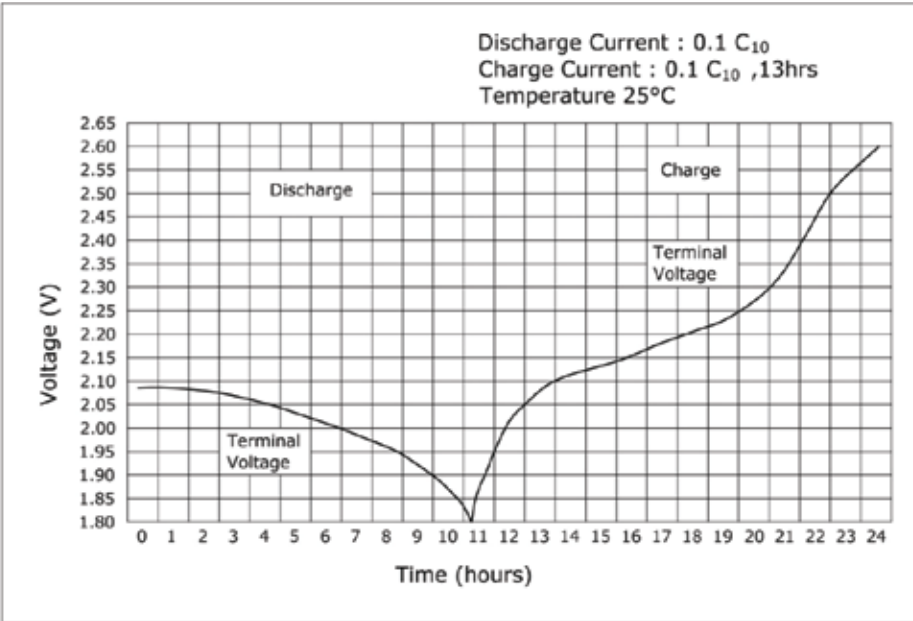
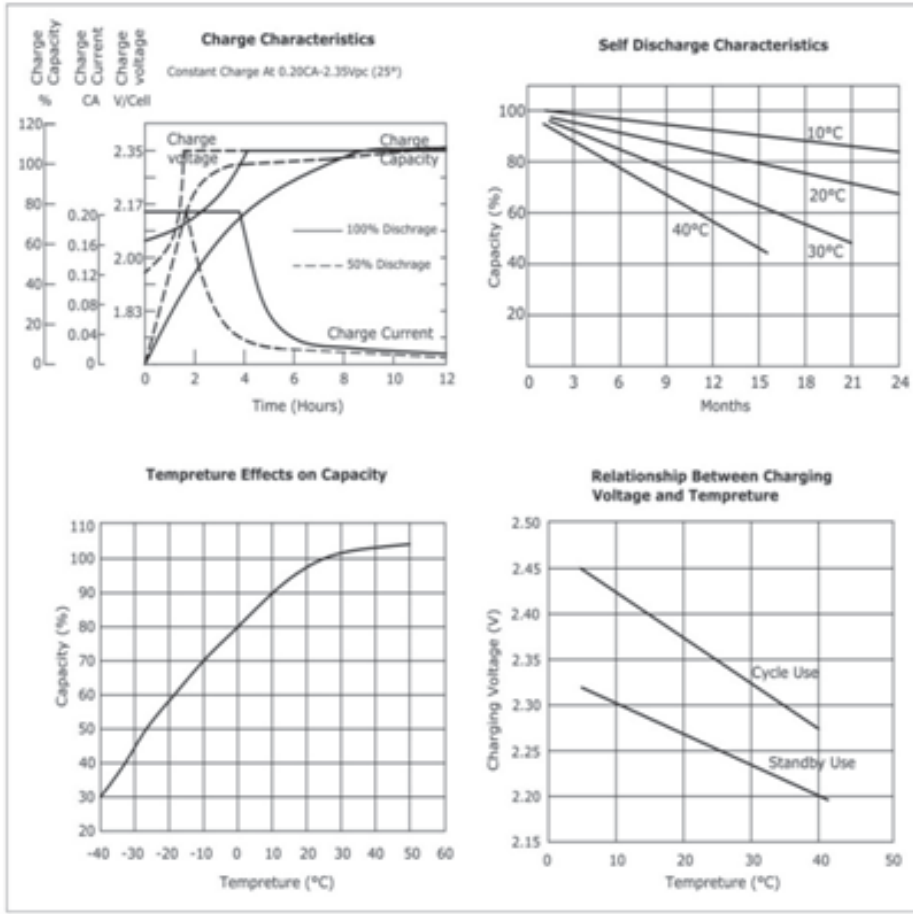
Design floating Life
 20 year at 25 °C



Specification of OPzV Battery

Constant Current Discharge Characteristics at 25°C (A)

	F.V (v)	Time							
		30min	1hr	2hr	3hr	5hr	8hr	10hr	20hr
4OPzV200	1.70	162.0	109.0	68.0	52.4	36.0	24.4	20.2	10.7
	1.75	158.0	107.0	67.0	52.0	35.8	24.2	20.1	10.6
	1.80	152.0	104.0	65.2	50.4	34.8	23.4	20.0	10.6
	1.85	144.0	98.8	62.0	47.8	33.0	22.2	19.0	10.2
6OPzV300	1.70	242.0	164.0	102.0	78.6	54.0	36.6	30.3	16.1
	1.75	236.0	161.0	101.0	78.0	53.7	36.3	30.2	16.0
	1.80	228.0	156.0	97.8	75.6	52.2	35.1	30.0	15.9
	1.85	216.0	148.0	93.0	71.7	49.5	33.3	28.5	15.1
6OPzV420	1.70	339.0	230.0	143.0	110.0	75.6	51.2	42.4	22.6
	1.75	331.0	225.0	141.0	109.0	75.2	50.8	42.3	22.4
	1.80	319.0	218.0	137.0	106.0	73.1	49.1	42.0	22.3
	1.85	303.0	217.0	130.0	100.0	69.3	46.6	39.9	21.2
7OPzV500	1.70	404.0	274.0	170.0	131.0	90.0	61.0	50.5	26.9
	1.75	394.0	268.0	168.0	130.0	89.5	60.5	50.4	26.7
	1.80	380.0	260.0	163.0	126.0	87.0	58.5	50.0	26.5
	1.85	361.0	247.0	155.0	120.0	82.5	55.5	47.5	25.2
6OPzV600	1.70	486.0	327.0	204.0	157.2	108.0	73.2	60.6	32.1
	1.75	474.0	321.0	201.0	156.0	107.4	72.6	60.3	31.8
	1.80	456.0	312.0	195.6	151.2	104.4	70.2	60.0	31.7
	1.85	432.0	296.4	186.0	143.4	99.0	66.6	57.0	30.5
8OPzV800	1.70	648.0	436.0	272.0	209.6	144.0	97.6	80.8	42.8
	1.75	632.0	428.0	268.0	208.0	143.2	96.8	80.4	42.4
	1.80	608.0	416.0	260.8	201.6	139.2	93.6	80.0	42.2
	1.85	576.0	395.2	248.0	191.2	132.0	88.8	76.0	40.6
10OPzV1000	1.70	810.0	545.0	340.0	262.0	180.0	122.0	101.0	53.5
	1.75	790.0	535.0	335.0	260.0	179.0	121.0	100.6	53.0
	1.80	760.0	520.0	326.0	252.0	174.0	117.0	100.0	52.8
	1.85	720.0	494.0	310.0	239.0	165.0	111.0	95.0	50.8
12OPzV1500	1.70	1215.8	818.0	510.3	393.2	270.2	183.1	151.6	80.3
	1.75	1185.7	803.0	502.8	390.2	268.7	181.6	150.9	79.6
	1.80	1140.7	780.5	489.3	378.2	261.2	175.6	150.1	79.2
	1.85	1080.7	741.5	465.3	358.7	247.7	166.6	142.6	76.2
16OPzV2000	1.70	1620.0	1090.0	680.0	524.0	360.0	244.0	202.0	107.0
	1.75	1580.0	1070.0	670.0	520.0	358.0	242.0	201.1	106.0
	1.80	1520.0	1040.0	652.0	504.0	348.0	234.0	200.0	105.6
	1.85	1440.0	988.0	620.0	478.0	330.0	222.0	190.0	101.5
24OPzV3000	1.70	2431.5	1636.0	1020.6	786.5	540.3	366.2	303.2	160.6
	1.75	2371.5	1606.0	1005.6	780.5	537.3	363.2	301.8	159.2
	1.80	2281.4	1561.0	978.6	756.5	522.3	351.2	300.2	158.5
	1.85	2161.3	1482.9	930.6	717.4	495.3	333.2	285.2	152.3



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*All data and specifications are subject to change without any prior notice.