CONSUMER BENEFITS

- Our batteries provide steady performance with affordable cost to the customer
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CONSUMER BENEFITS

Our batteries provide steady performance with affordable cost to the customer Offering 5 years warranty of Maintenance Free Product

- Free from maintenance
- Zero spillage &hassle-free transportation
- Complete sealed maintenance free battery & higher cycle life (3200 cycles @ 50% depth of discharge)
- Very low self discharge(<3%)to take care of storage loss

ABOUT TECHNOLOGY

What is Gel Technology?

A modern gel battery (also known as a "gel cell") is a Valve Regulated Lead Acid battery with a jellified electrolyte; the sulphuric acid is mixed with fumed silica, which makes the resulting mass gel-like and immobile. Unlike a flooded wet-cell lead-acid battery, these batteries do not need to be kept upright Tubular plates use a frame structure consisting of a series of vertical spines connected to a common bus bar. The tubular design keeps the active material mechanically together inside the porous gauntlet and around the spines.

What Makes our Battery Superior?

Alloy

- ✓ Deep dischargeable & higher life cycle due to antimony free alloy.

Spine

- ✓ High pressure die-casted spines leading to less corrosion and higher cyclic life.
- ✓ The number of spines are increased to accommodate more active material in a single plate and higher capacity per given size.

Separator

- ✓ Low electrical resistant &high porosity corrugated sintered PVC material increases electrical performance.

Gauntlet

- ✓ High bursting strength polyester material preventing active materialshedding
- ✓ High porosity and low electrical resistant material giving higher chargeefficiency
- ✓ Improved non-woven gauntlet gives optimized active material utilization & higher capacity

Process

- ✓ Unique 4-step curing program provides good adhesion of active material to the grid leads to higher cyclic life.

Paste Recipe

- ✓ Special additives and optimized negative paste recipe for faster charge acceptance.

CORE FEATURES

High Surface Carbon

Use of high surface carbon improves the discharge performance. This exhibits high capacity, excellent life cycle performance, reduces the irreversible lead sulphate on NAM & Improve the active material utilization for electrode better performance. Reduces the capacity /mileage drop during the ageing.

- ✓ Higher Cycle life in PSOC Conditions & faster charging acceptability.
- ✓ Higher Energy density & Fast recovery in deep cycle.
- ✓ Improved electrochemical Surface area of negative plate.

Special Grade Separator

Use of special grade Micro porous sintered PVC separator its internal structure is very porous, tortuous and hydrophilic allows better electron flow because of its high porosity resulting more output. Corrugated structure retains negative mass intact and gelled electrolyte for longer life.

- ✓ Higher Oxidation Resistance, Lesser Electrical Resistance.
- ✓ High Volume Porosity & Higher mechanical strength.
- ✓ Protect active material against shedding.

Gelled Electrolyte

Electrolyte gel filled with high surface fumed silica using specially designed for Solar and UPS energy storage systems. Gel form electrolyte is improved high and low temperature performance, good in heat dissipation. High purity fumed silica used to very low electrical resistance and water loss.

- ✓ Fully maintenance free Valve regulated system, No fumes and spillage due to gas recombination system.
- ✓ Gel filled electrolyte no stratification in acid.
- ✓ No failure due to partial state of charge (PSoC).

Valve Regulated Vent Plugs

Fully sealed fit and forget valve regulated lead acid battery is fully maintenance free. No water top up required throughout life of the battery.

- ✓ Specially designed vent plug with German technology accurate pressure maintenance and release system.
- ✓ Fully maintenance free Valve regulated system, No fumes and spillage. Battery can be installed in living room.
- ✓ World class aesthetic look and user-friendly product.

Micro Pores Woven Gauntlet

Use of micro pores woven gauntlet based on polyester with optimum resin content having reinforced mechanical property (specially elasticity), allow maximum ionic transfer through gauntlet pores, low electrical resistance for better capacity & consistent results throughout life.

- ✓ High Bursting Strength, High Porosity with Low Electrical Resistant.
- ✓ 100% polyester with less resin content allows Higher Active material Utilization.
- ✓ Excellent Resistance to Oxidation At High Operating Temperatures.

PRODUCT ADVANTAGES

Tubular Positive Plates
Proven cycling and deep cycling capabilities.

Gelled Electrolyte
No stratification and no failure due to Partial state of charge

Valve Regulated
No water top up during service life

Antimony Free Alloy
Longer shelf life because of very low self-discharge

High pressure die-cast spine grids
Rate of grid corrosion is very low & higher float life

Supplied in filled and charged condition
100% capacity on first discharge

Hassle Free Transportation
No spillage during transportation, no harmful acid oozing out

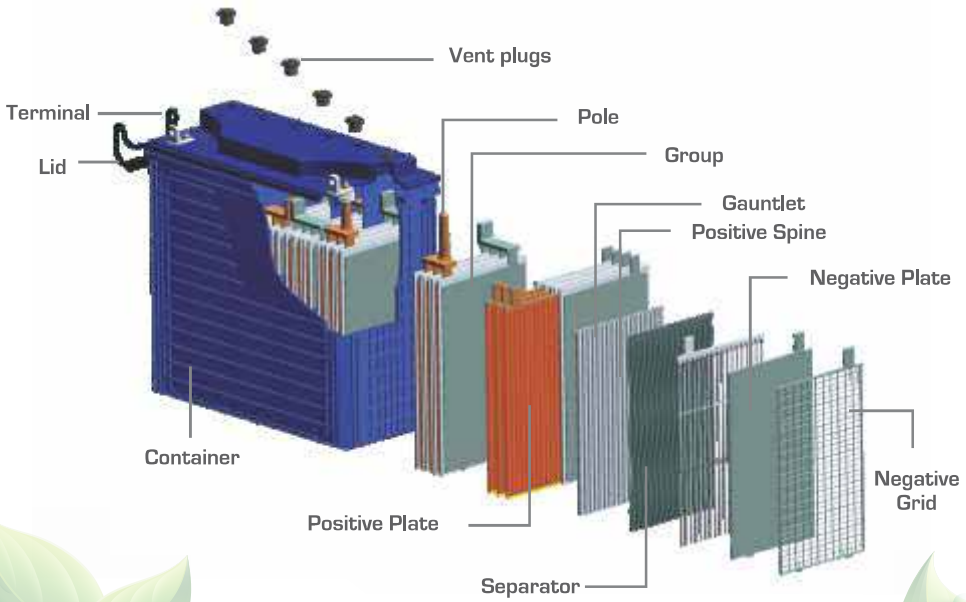
German Technology
Don't emit any hazardous gas during usages, controlled regulation of hydrogen gas

PRODUCT TECHNOLOGY

Comparison of Batteries with Different Technologies Available

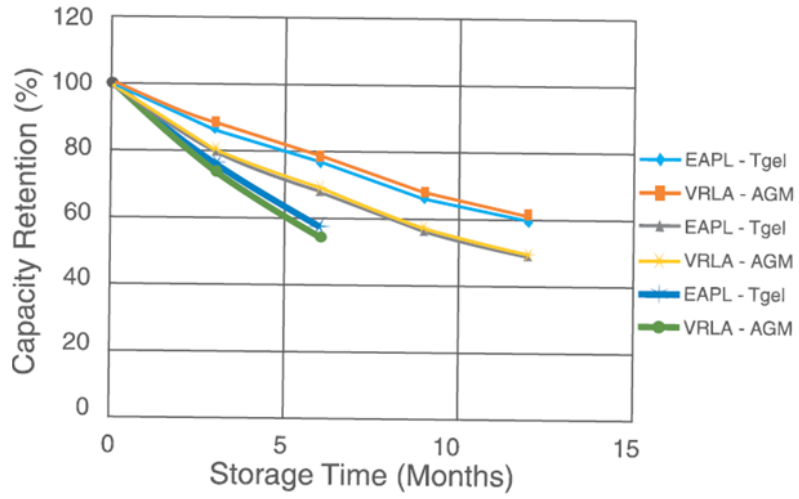
S.No.	Features	Conventional Tubular	Gel - Tubular
1	Cycle Life to 80% DOD	1200 cycles at an Avg temp. of 27°C	2000 cycles at an Avg temp. of 27°C
2	Float Life at 35°C	Good	Very Good
3	Acid Stratification	Frequently occur	No Stratification occur Since electrolyte is in Gel form
4	Performance under Partial state of charge	Satisfactory	Very Good
5	Stability of Capacity over Life	Good	Very Good
6	Maint To pupenance or Water	Water top up required	Fully Maintenance free
7	Self Discharge Rate @ 27°C	Avg. 5% per month	Less than 3% per Month
8	Usage Posture	Vertical posture only (up right)	Can be used both Vertical and Horizontal postures
9	Occupancy space requirement	Need Separate space & good ventilation for fumes	Not necessarily required special space.

Tubular Gel - Cross Section View

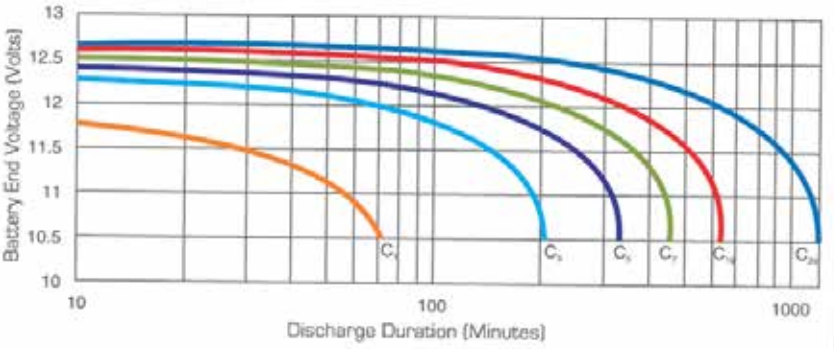


T-GEL BATTERYTECHNOLOGY

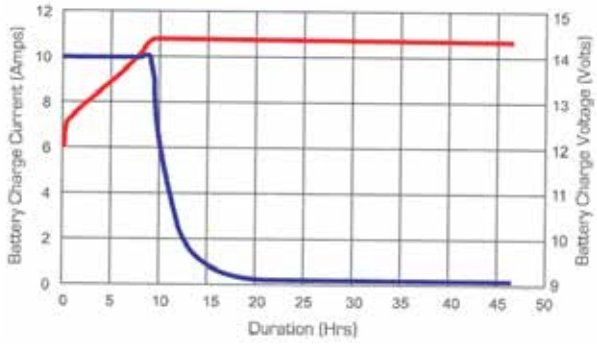
CAPACITY DROP IN STORAGE TUBULAR GEL VRLA VS AGM VRLA



DISCHARGE CHARACTERISTICS- TUBULAR GEL BATTERIES



CV CHARGE CHARACTERISTICS- TUBULAR GEL BATTERIES

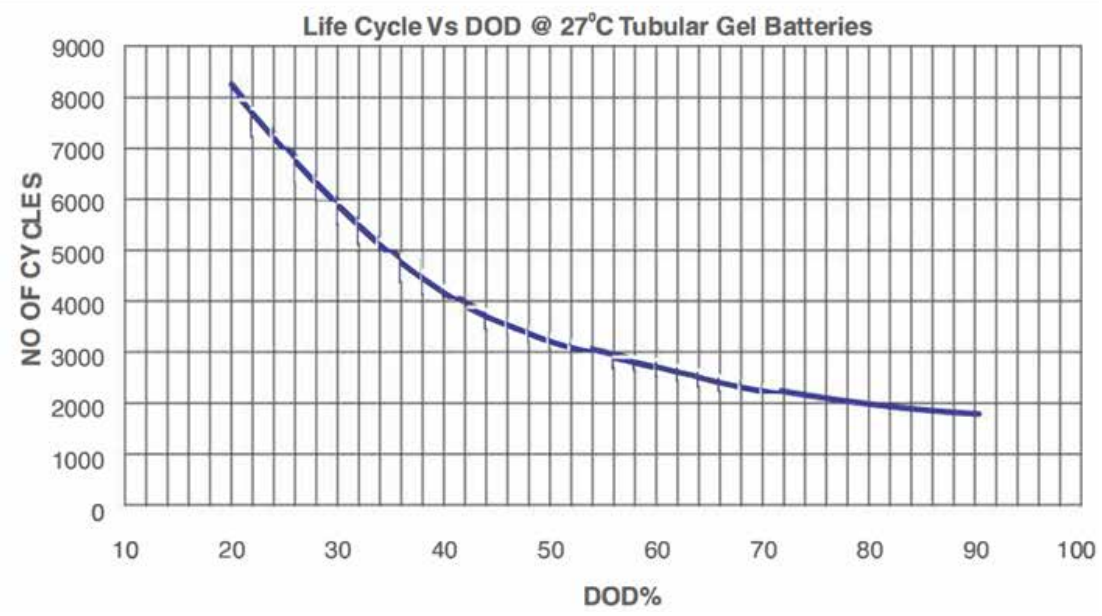


PRODUCT SERIES

Battery Range

S.No.	Model Nomenclature	Capacity @ C10	Capacity @ C20	Dimensions			Filled Weight (kg ±3%)	Gross Weight (kg ±3%)	Warranty (in month)
				Overall Height (±3mm)	Width (±3mm)	Length (±3mm)			
1	LPK 125TG	100 AH	115 AH	406	190	445	41.5	43.1	60 + 60
2	LPK 160TG	150AH	165 AH	406	190	445	54.0	555	60 + 60
	LPK 220TG	200 AH	225 AH	406	190	445	68.7	70.3	60 + 60

Life Cycle Graph



T-GEL BATTERY APPLICATION

Battery Range

Emergency Backup Power Supply

Communication Power Supply

Emergency Light

Office Automation Equipments

Aircraft Signal

Solar Water Pumps

Auto Control Signal

Solar Wind Hybrid Power Plant

Solar Home Light Systems

Medical Equipment

Solar Street Light

Electrical Power Systems (EPS)

• Emergency Backup Power Supply • Emergency Light • Aircraft Signal • Auto Control Signal • Solar Home Lights Systems • Solar Street Light • Electrical Power Systems • Medical Equipment • Solar Wind Hybrid Power Plant • Solar Water Pumps • Office Automation Equipments • Communication Power Supply