PANACEA ALLOYS PVT. LTD.

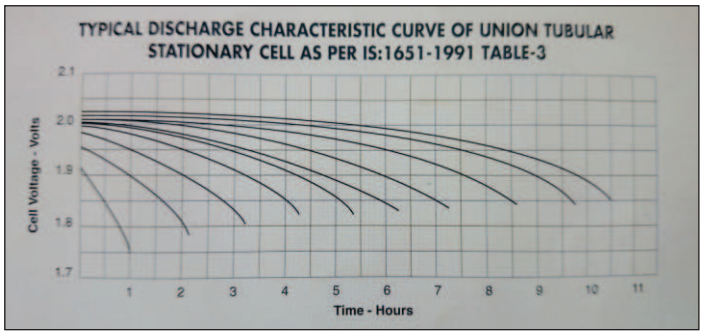
UNION Batteries

STATIONARY BATTERIES
LOW MAINTENANCE (LM)

UNION' LM Stationary Batteries are designed with utmost care, to minimise a host of maintenance and operational problems. The low Antimony Lead Selenium alloy (<2%) used in the manufacture of these batteries result in reduced gassing thereby yielding Low maintenance characteristics most effectively. These batteries are available in single cell design in SAN Transparent containers offering wide range for a variety of applications.

Ideally, these batteries are well suited for the following applications:

- Stand by in Generating Power Stations (Hydroelectric, Thermal & Nuclear)
- Stand by in Substations (of all Kvs)
- Large Uninterrupted Power Systems (for all system voltages & KVA ratings)
- Inverter Power Supply Applications
- Power Line Carrier Communication Systems
- Switching Systems
- Main Telephone Exchanges
- Cathodic Protection Systems
- Microwave, Optical Fibre & Co-axial Repeater Stations
- Rural Automatic Telephone Exchanges
- Signalling & Telecommunication Systems
- Satellite Communication Systems
- Solar Photovoltaic Power Generation Systems (Thermal Power, Refrigeration, Street Lighting, Power Plants in various configuration)
- Power Supply for Instrumentation

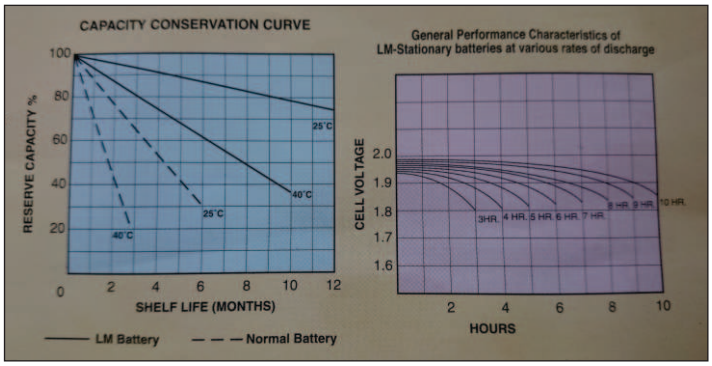


CAPACITIES AT VARIOUS RATES OF DISCHARGE - IS 1651 - 91 TABLE - 3

Hours	10	9	8	7	6	5	4	3	2	1
Capacity%	100	97.9	95.0	91.7	87.9	83.3	78.2	71.7	63.3	50.0
End Volts (V)	1.85	1.84	1.84	1.83	1.83	1.82	1.81	1.80	1.78	1.75

Useful Characteristics

- Less topping up frequency, instant installation and eco-friendly
- Minimum loss of capacity on stand-by
- Excellent charge acceptance ability
- Long service life on float charging mode
- Compact and sleek design, occupies less space
- Reliable power supply
- Transparent containers for easy inspection & maintenance (Visible Electrolyte Level)
- Safe in service
- 'High Discharge Performance' cells will be offered on request
- Excellent Appearance



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TECHNICAL SPECIFICATIONS (As per IS specifications) (NDP)

Our Cell Designation	Capacity @ 10 Hr. Rate	Overall Dimensions			Weight (Approx.)		First Charge Current	Recharge Current	
		L Tol 5 mm	W Tol 5 mm	H max	With Acid	Without Acid		Upto 2.4 V	Till Full Charge
1	2	3	4	5	6	7	8	9	10
	Ah	mm	mm	mm	Kgs.	Kgs.	Amps.	Amps.	Amps.
1 DS 60	60	103	206	430	13.3	7.8	6.0	6.0	3.0
2 D5 40	80	103	206	430	14.0	8.6	8.0	8.0	4.0
3 DS 40	120	103	206	430	15.6	10.7	12.0	12.0	6.0
4 DS 40	150	103	206	430	17.5	12.5	15.0	15.0	8.0
5 DS 40	200	124	206	430	22.5	15.5	20.0	20.0	10.0
4 DS 63	250	124	206	580	25.3	18.0	25.0	25.0	13.0
5 DS 63	300	145	206	580	30.5	20.8	30.0	30.0	15.0
6 DS 63	350	166	206	580	30.5	24.2	35.0	35.0	18.0
5 DS 80	400	145	206	730	40.0	26.0	40.0	40.0	20.0
7 DS 63	450	166	206	580	38.0	27.1	45.0	45.0	23.0
6 DS 80	500	145	210	730	45.8	31.0	50.0	50.0	25.0
7 DS 80	550	191	210	730	59.5	43.0	55.0	55.0	28.0
8 DS 80	600/650	191	210	730	63.5	45.5	60.0	60.0	30.0
9 DS 80	700	191	210	730	66.2	48.5	70.0	70.0	35.0
10 DS 80	800	275	210	730	75.5	53.5	80.0	80.0	40.0
12 DS 80	1000	275	212	730	83.8	59.0	100.0	100.0	50.0
12 DS 100	1200	275	212	880	106.8	75.0	120.0	120.0	60.0
15 DS 100	1500	397	212	880	141.6	97.0	150.0	150.0	75.0
16 DS 100	1600	397	212	880	147.4	102.0	160.0	160.0	80.0
20 DS 100	2000	487	212	880	187.0	131.0	200.0	200.0	100.0
26 DS 100	2500	576	212	880	217.4	149.0	250.0	250.0	125.0
28 DS 100	3000	576	212	880	232.0	168.0	300.0	300.0	150.0
28 DS 125	“3500	576	212	880	234.4	168.0	350.0	350.0	175.0

Filling acid specific gravity 1.180 ±0.005 at 27°C
Final operational specific gravity 1.200 ± 0.005 at 27°C

“Final Sp gravity 1.245 ± 0.005

We reserve the right to change, modify, cancel the technical specifications without prior notice

IMPORTANT INFORMATION :

1. All Accessories like stands, insulators, electrolyte and maintenance tools will be suitably designed and supplied if required.
2. You could furnish the Duty cycle for cells and we size it for you to choose most appropriate AH capacity.
3. Installation, Erection, Commissioning & Testing of cells are provided at site if desired.
4. Apt Battery room size and ventilation requirements would be provided if you furnish the available dimension (volume) at site.

NOTE :

1. Filling Sp.gr. of Sulphuric Acid at 27°C : 1.180/ 1.230
2. Final Sp.gr. of Sulphuric Acid after full charge at 27°C :1.200 ± 0.005 / 1.245 ± 0.005 as per DIN specification
3. Duration of First Charge : 15 hrs. (Approx.) as per column 8 above
4. Duration, of Recharge in two steps : 15 hrs. (Approx.) as per column 9 & 10 above
5. AH' capacity indicated is at 10 hrs. Discharge rate at 1.200 Sp.gr. ± 0.005 of acid to an end Voltage of 1.85 VPC/at 1.245 Sp.gr. ± 0.005 to 1.80 VPC as per DIN specification
6. Voltage/Cell at the end of full charge : 2.5 to 2.7 V
7. Higher Recharging current under Constant Potential charging is allowed subject to controlling the temperature within 55°C. Most preferred Temperature is within 43°C for deriving maximum life. Frequent recharging at a temperature above 43°C would drastically bring down useful service life.
8. Cells are assembled in SAN transparent container and supplied in dry-charged condition.
9. The above data is subject to change any time without notice as we constantly endeavour to improve the performance.
10. Abbreviations used :

TOL	Tolerance	A	Ampere	hrs./hr.	: Hours/Hour
AH	Ampere Hour	V	: Volts	L	: Length
mm	Millimetre	Approx	Approximately	W	: Width
Kgs.	Kilograms	VPC	: Volts/Cell	H	: Height
Sp.gr	Specific Gravity	C	Centigrade	Deg	: Degree