SF INDUSTRIAL

STAN RED

FROST & SULLIVAN

2010 BEST PRACTICES AWARD

Market Leadership - Industrial Batteries
India Back-up Power Industry
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Dazzling Homes.
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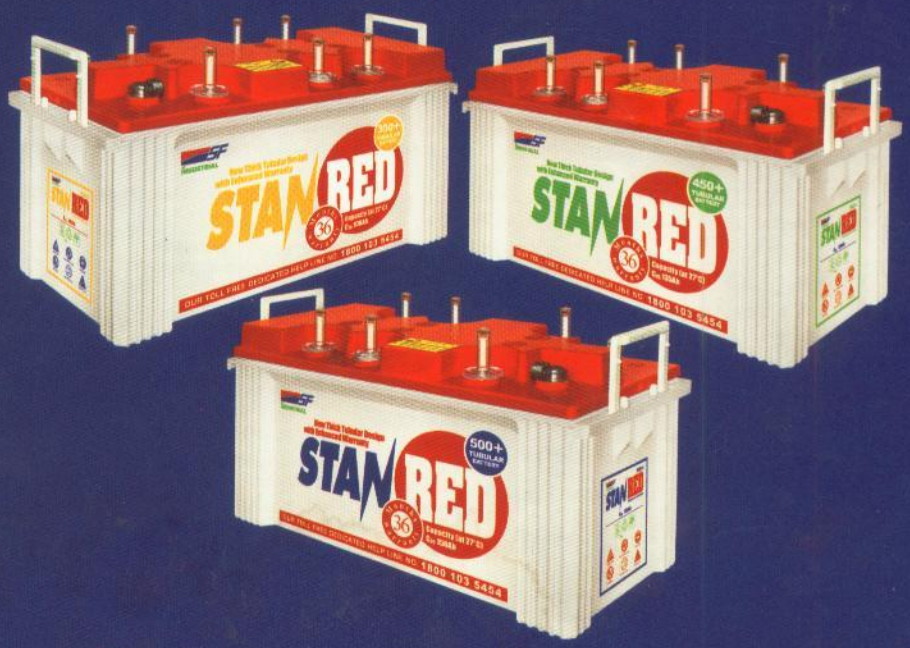

300+ /350+ /450+ /500+

INDUSTRIAL

Presenting the New STANRED + range, the next generation tubular batteries designed specially to withstand long and frequent power interruptions. The STANRED+ Tubular Batteries have New Thick Tubular Design Positive Plates. These batteries have enhanced warranty of 36 Months and require very low maintenance.

FEATURES

● More than 20% extra electrolyte which means lesser topping-up frequency and better thermal management ● Tubular Technology ● Minimum maintenance ● Electrolyte level indicator ● Suited for frequent and long powercuts ● Deep cycle design (800 plus cycles at 80% D.O.D.) ● Abuse resistant ● Faster recharge ● Operating sp.gr. 1.250 ± 0.005 at 27°C

TECHNICAL SPECIFICATION

Model	Capacity when discharged at C_{20} upto 1.75 vpc (1.250 sp.gr)	Dimension (+/-3mm)			Weight (Kg+/-5%)		Volume of Electrolyte (1.220 Sp. Gr) Liters/Cell	Initial charge Minimum AH input (AH)	Initial Charge at Constant Current (A)		Constant Potential Limiting Current (Amps)	Trickle Charge (Current in mA)	
		Length	Width	Height*	Dry	Filled			Start (upto 2.36 vpc)	Finish (upto 2.75 vpc)		Min.	Max.
STANRED 300+	80 Ah	410	176	281	18.4	30.1	1.60	315	8.4	4.2	17.5	70	280
STANRED 350+	100 Ah	506	220	277	24.0	43.0	2.60	396	10.6	5.3	22.0	88	352
STANRED 450+	135 Ah	506	220	277	29.5	47.5	2.47	531	14.0	7.0	29.5	118	475
STANRED 500+	150 Ah	506	220	277	32.5	50.1	2.40	563	15.0	7.5	31.0	125	500

*The height mentioned is upto terminal top. *At 27°C when discharged at C20 upto 1.75 vpc (1.250 sp. gr)

INITIAL CHARGING INSTRUCTIONS

1. Filling in Specific Gravity 1.220 +/- 0.005 at 27°C
2. Rest Period 10 hrs.
3. Minimum Ah input for SR300+ is 315Ah, for SR350+ is 396Ah, for SR450+ is 531Ah and for SR500+ is 563Ah.
4. In order to reduce the charging time, the following routine may be adopted. For SR300+, the initial charging current may be 8.4A upto 2.36vpc followed by 4.2A upto 2.75vpc. For SR350+, the initial charging current may be 10.6A upto 2.36vpc followed by 5.3A upto 2.75vpc. For SR450+, the initial charging current may be 14.0A upto 2.36vpc followed by 7.0A upto 2.75vpc. For SR500+, the initial charging current may be 15.0A upto 2.36vpc followed by 7.5A upto 2.75vpc.

However, in all cases, minimum Ah input to be given. Under no circumstances, battery temperature should exceed 50°C. In case the temperature exceeds 50°C, adequate rest to be given till the electrolyte temp. comes to ambient temp. and charging to be continued.

5. Conditions of fully charged
   a) 3 consecutive hourly readings of specific gravity and voltage become constant
   b) Top of charge voltage will be around 16.2V - 16.5V
   c) All cells should gas freely
   d) Minimum Ah has been given
6. Specific Gravity at fully charged condition 1.250 +/- 0.005 at 27°C

NORMAL RECHARGING INSTRUCTIONS

Recharging through Inverter at constant potential mode of 14.4V with limited current as specified. After battery potential reaches 14.4V, the battery should continue in float charge mode at constant potential of 13.5V.

APPLICATION CHART

Electrical Load	System Voltage	Reco. Inverter Rating	Recommended Battery for Different Back-up time				
			5 Hrs.	4 Hrs.	3 Hrs.	2 Hrs.	1 Hr.
2 Tube + 2 Fan	12	650 VA	2P SR350+	SR500+	SR450+	SR350+	SR300+
4 Tube + 4 Fan	12	650 VA	3P SR450+	2P SR500+	2P SR450+	2P SR350+	SR450+
4 Tube + 5 Fan + 1TV	12	850 VA	4P SR450+	3P SR450+	3P SR450+	2P SR450+	2P SR300+
8 Tube + 9Fan + 1 TV	24	1450 VA	3P X 2S SR450+	3P X 2S SR450+	2P X 2S SR500+	2P X 2S SR450+	2S SR500+

NOTE: If the limit current of one battery is 'A' amp, for 'N' no. batteries in parallel, the limit current for charging of inverter should be AxN amp. Otherwise there will be problem during charging in parallel connection. This point should be taken in consideration before putting batteries in parallel combination.

S= Series connection; P= Parallel connection. e.g. 3PX2S = A string containing 2 nos. batteries in series and 3 nos. such strings in parallel.

Statutory Notice:

All batteries contain lead, which is harmful for humans and environment. As per statutory requirements, the used battery must be returned to the authorized dealer, manufacturer or at the designated collection centres.

SF INDUSTRIAL

STANRED + is a product of ISO 9001 and ISO 14001 certified factories

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