

EXIDE  
INDUSTRIAL

 **EXIDE**  
**INVARED**

The Red Tubular



Powerful Inverter Battery

*Mera Inverter Maange Only* **INVA**

Presenting **INVARED**, the next generation tubular battery designed specially to withstand long and frequent powercuts and requiring very low maintenance.

**FEATURES**

- Tubular Technology ● Minimum maintenance ● Electrolyte level indicator ● Suited for frequent and long powercuts ● Deep cycle design (600 – 700 cycles at 80% D.O.D.) ● Abuse resistant ● Faster recharge ● Operating sp.gr. 1.250 ± 0.005 at 27°C

**TECHNICAL SPECIFICATION**

| Model       | Capacity* | 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. |
| INVARED 300 | 80 Ah     | 410                | 176   | 249     | 20.80             | 28.50  | 1.13   | 315                                  | 8.40                                   | 4.20                   | 14   | 70                             | 280  |
| INVARED 400 | 115 Ah    | 506                | 220   | 257     | 27.00             | 40.60  | 1.85   | 450                                  | 12.00                                  | 6.00                   | 20   | 100                            | 400  |
| INVARED 500 | 150 Ah    | 506                | 220   | 257     | 34.50             | 50.10  | 1.90   | 585                                  | 15.60                                  | 7.80                   | 26   | 130                            | 520  |

\*The height mentioned is upto terminal top. \*At 27°C when discharged at C20 upto 1.75 vpc (1.280 sp. gr)

**HIGHER DISCHARGE RATES (OPTIONAL)**

| Hours       | 10          | 5   | 3   | 1  |    |
|-------------|-------------|-----|-----|----|----|
| Capacity Ah | INVARED 300 | 70  | 58  | 50 | 35 |
|             | INVARED 400 | 100 | 83  | 72 | 50 |
|             | INVARED 500 | 130 | 108 | 93 | 65 |

**INITIAL CHARGING INSTRUCTIONS**

|  |   |   |
|--|---|---|
| 1. Filling in Specific Gravity   | 1.220 +/- 0.005 at 27°C   | temperature exceeds 50°C, adequate rest to be given till the electrolyte temp. comes to ambient temp. and charging to be continued.<br>5. Conditions of fully charged a) 3 consecutive hourly readings of specific gravity and voltage become constant<br>b) Top of charge voltage will be around 16.2V – 16.5V<br>c) All cells should gas freely<br>d) Minimum Ah has been given<br>6. Specific Gravity at fully charged condition 1.250 +/- 0.005 at 27°C |
| 2. Rest Period   | 4 - 6 hrs.  |   |
| 3. Minimum Ah input  | 315Ah for INVARED300, 450Ah for INVARED 400 and 585Ah for INVARED 500 |   |
| 4. In order to reduce the charging time, the following routine may be adopted. For IR300, the initial charging current may be 8.4Ah upto 2.36vpc followed by 4.2A upto 2.75vpc. For IR400, the initial charging current may be 12.0A upto 2.36vpc followed by 6.0A upto 2.75vpc. For IR500, the initial charging current may be 15.6A upto 2.36vpc. followed by 7.8A upto 2.75vpc. However, in both cases, minimum Ah input to be given. Under no circumstances, battery temperature should exceed 50°C. In case the |   |   |

**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 13.8V.

**BATTERY SELECTION CHART**

| Inverter Rating VA | DC input voltage | Back-Up Duration |               |                 |               |               |               |  |
|--------------------|------------------|------------------|---------------|-----------------|---------------|---------------|---------------|--|
|                    |                  | 6 Hrs.           | 5 Hrs.        | 4 Hrs.          | 3 Hrs.        | 2 Hrs.        | 1 Hr.         |  |
| 300                | 12               | 2P IR300         | IR500         | IR500           | IR400         | IR300         | IR300         |  |
| 500                | 12               | 2P IR500         | 2P IR500      | 2P IR400        | 2P IR300      | IR500         | IR300         |  |
|                    | 24               | 2S IR500         | 2S IR500      | 2S IR400        | 2S IR300      | 2S IR300      | 2S IR300      |  |
| 700                | 12               | 3P IR500         | 3P IR400      | 3P IR400        | 3P IR300      | 2P IR400      | IR400         |  |
|                    | 24               | 2S X 2P IR400    | 2S X 2P IR300 | 2S IR500        | 2S IR500      | 2S IR400      | 2S IR300      |  |
| 1000               | 12               | 4P IR500         | 4P IR500      | 4P IR400        | 4P IR300      | 2P IR500      | 2P IR300      |  |
|                    | 24               | 2S X 2P IR500    | 2S X 2P IR500 | 2S X 2P IR400   | 2S X 2P IR300 | 2S IR500      | 2S IR300      |  |
| 1300               | 24               | 2S X 3P IR500    | 2S X 3P IR400 | 2S X 2P X IR500 | 2S X 2P IR400 | 2S X 2P IR300 | 2S X 2P IR300 |  |
|                    | 48               | 4S X 2P IR400    | 4S X 2P IR300 | 4S IR500        | 4S IR400      | 4S IR300      | 4S IR300      |  |
| 2000               | 24               | 2S X 4P IR500    | 2S X 4P IR500 | 2S X 4P IR400   | 2S X 4P IR300 | 2S X 2P IR500 | 2S X 2P IR300 |  |
|                    | 48               | 4S X 2P IR500    | 4S X 2P IR500 | 4S X 2P IR400   | 4S X 2P IR300 | 4S IR500      | 4S IR300      |  |

S= Series connection; P= Parallel connection. 4S X 2P IR500 means a string with 4 nos IR500 in series and 2 nos such string in parallel. IR500 means INVARED 500.

**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.

Contact our Exide Powercentre Showrooms for Sales & Services



**INVARED is a product of ISO 9001 and ISO 14001 certified factories**

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|--|---|---|
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\*Applied for

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