



SECTION – VI

Technical specification for Lead Acid Tubular Type Traction Battery for Forklift operation

This specification covers design, manufacture, testing before dispatch, supply, testing & commissioning of new battery sets for Forklift as per details given below.

SPECIFICATION	SPECIFICATION NAME	REQUIREMENT
GENERIC	Traction batteries for Forklift, Lead acid Type (with tubular positive plates) conforming to international specification and BIS standards	Compliance to IS 5154 (latest) and IEC 60254-1: 2005
	Type of cell	Tubular, Lead acid
	Cell Voltage	2 Volt
	Type/Capacity (in Ah) at 5 h Rate	385Ah and 360Ah
	Application	Forklift Operation
CONSTRUCTIONAL	Material for the battery bank body	Metallic Box with lifting provisions (Hole in 2 side), Fibre separator between 2 Banks and in between Bank and Battery Box.
	Constructional requirements as per IS 5154 (Part 2) : 2013 IEC 60254-2 : 2008.	compliance required
	Drain hole in Battery Box for drainage of electrolyte	compliance required
	Marking and packing as per clause no 4 of IS 5154 (Part 2) : 2013 IEC 60254-2 : 2008.	compliance required
	Basic Dimensions of the traction battery as per Clause no 5 of IS 5154 (Part 2): 2013 IEC 60254-2 : 2008.	compliance required
	Battery condition	Fully Charged
CERTIFICATIONS	All the test reports and certificates in compliance to IS 5154 (Part 1) : 2013 IEC 60254-1 : 2005 and IS 5154 (Part 2) : 2013 IEC 60254-2 : 2008.	compliance required
TEST	Carry out test in the battery as per IS 5154 (Part 1) : 2013 IEC 60254-1 : 2005	required
	Testing procedures as per IS 5154 (Part 1) : 2013 IEC 60254-1 : 2005	Required



Detailed Specification of Type 1	TYPE 1 (SOR Item no. 1 Material Code - 5945011903) 1. Capacity: 48 Volt, Min. 365 Ah (Fully Charged) 2. Nos. of Cell: 24 3. Type of Cell: Lead Acid 4. Voltage of Each Cell: 2 Volt 5. Battery Body: Metallic Box with Lifting Provision (Hole in 2 side) 6. Fibre Separator between 2 Banks and in-between Bank and Battery Box 7. Drain Hole in Battery Box for drainage of electrolyte Dimension: 1. No. of Bank in 1 Battery: 2 Banks (24Volt each) 2. Cell: 157mm(L) x 140mm(B) x 405mm(H) 3. Bank (2 x 24V): 850mm(L) x 650mm(B) x 405mm(H) 4. Metallic Battery Box: 905mm(L) x 680mm(B) x 420mm(H) Features/Accessories: 1. All terminal shall be connected and provided with Output Point (Nylon Connector) ready to use 2. Output Socket (Nylon Connector) (Push Fit Type) 3. Base Lug (3 nos.) for Seating in Forklift Chassis Note: Battery will be fitted in Macneill (MEL) Make (Model - Ranger 1015) Battery Operated Forklift Truck
Detailed Specification of Type 2	TYPE 2 (SOR Item no. 2 Material Code - 5945014263) 1. Capacity: 48 Volt, Min. 360 Ah (Fully Charged) 2. Nos. of Cell: 24 3. Type of Cell: Lead Acid 4. Voltage of Each Cell: 2 Volt 5. Battery Body: Metallic Box with Lifting Provision (Hole in 2 side) 6. Fibre Separator between 2 Banks and in-between Bank and Battery Box 7. Drain Hole in Battery Box for drainage of electrolyte Dimension: 1. No. of Bank in 1 Battery: 2 Banks (24Volt each) 2. Cell: 198mm(L) x 82mm(B) x 460mm(H) 3. Metallic Battery Box: 1015mm(L) x 432mm(B) x 645mm(H) Features/Accessories: 1. All terminal shall be connected and provided with Output Point (Nylon Connector) ready to use 2. Output Socket (Nylon Connector) (Push Fit Type) Note: Battery will be fitted in Macneill (MEL) Make (Model - EV 15) Battery Operated Forklift Truck



ADDITIONAL TECHNICAL SPECIFICATIONS

1. Inter Connection of the cells should be through bolt-on system and connectors.
2. Following accessories to be provided with the battery banks.
 - i) Multimeter- 3 nos
 - ii) Hydrometer- 5 nos
 - iii) Thermometer-5 nos
 - iv) Acid resistant gloves- 5 pairs
 - v) Acid resistant aprons- 5 nos
3. 10 % spares against the accessories such as Vent Plugs, Nuts, Bolts, Washers, Intercell connectors to be provided for the batteries in this order.