
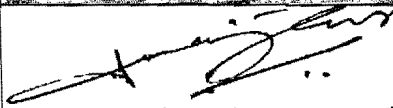
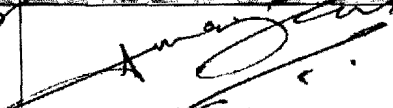



BHEL- ISG, BANGALORE 	TECHNICAL ENQUIRY SPECIFICATION OF BATTERY OPERATED PALLET TRUCK	DOCUMENT NUMBER
	Customer : TIRUPATI TIRUMALA DEVASTHANA,	TTD/ PALLET-01

TECHNICAL SPECIFICATIONS OF BATTERY OPERATED PALLET TRUCK

Prepared By	Checked by	Approved by
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BHEL- ISG, BANGALORE



**TECHNICAL ENQUIRY SPECIFICATION OF BATTERY
OPERATED PALLET TRUCK**


DOCUMENT NUMBER

Customer :
TIRUPATI TIRUMALA DEVASTHANA,

TTD/ PALLET-01

CONTENTS

Sl. No.	DESCRIPTION	SHEET No.		
I	BRIEF INTRODUCTION	03	Of	08
II	SCOPE OF SUPPLY	03	Of	08
III	CONSTRUCTION FEATURES	03	Of	08
IV	SAFETY FEATURES	04	Of	08
V	GENERAL REQUIREMENTS	05	Of	08
VI	INSPECTION, TESTING AND DESPATCH	05	Of	08
VII	O&M MANUAL AND TRAINING	05	Of	08
VIII	BHEL'S TECHNICAL SPECIFICATION & DETAILS TO BE FILLED BY BIDDER	06	Of	08
IX	SERVICES, SPARES AND GUARANTEE	08	Of	08

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1.0 Brief Introduction:

BHEL desires to procure Battery operated Pallet Truck for easy transportation of pallets in one of their customer's warehouses. It should be suitable for a long travel in plants and versatile machine to handle the pallets safely & quickly with minimum efforts and quick maneuver.

It is also desired that pallet truck be installed with Heavy duty, which are chargeable & long life. To avoid any accident maximum safety features must be provided as push stop, horn & automatic brakes in handle, with up, down & drive buttons.

Operator should be able to control easily the whole systems for lifting & transportation of loaded pallets, negotiating the turning with minimum maneuver standing on the platform attached with the pallet trucks.

2.0 Scope of Supply:

To design, manufacture & supply 10 nos. battery operated pallet truck of minimum load carrying capacity 1.5 Tons with operator platform along with charger.

Place of Installation:

Tirupati Tirumala Devasthanam, Tirupati temple, Andhra Pradesh

End User/ Customer:

Tirupati Tirumala Devasthanam

3.0 Construction Features:

Chassis

Fabricated MS Plate/Channels/Rolled frame sections welded for rigid construction to withstand rough handling.

Drive Unit

D.C. Traction Motor.

Traction Battery

BHEL- ISG, BANGALORE



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Tubular cell traction battery. Battery to be provided should be of adequate capacity.

Make of Battery & Battery Charger

Any of following

EXIDE/AMCO/AMARON/PANASONIC/OKAYA

Suitable Battery charger shall be supplied along with the pallet truck.

Steering

Design ergonomically comfortable for operator. Steering should be capable of turning 90 degree in either direction.

Brakes

Electromagnetic type.

Also Parking Brake to be provided.

Raising and lowering system

The pallet truck shall be provided with raising and lowering system through push button.

Operator Standing Platform:

Vibration -dampened stand on platform.

Wheels

Load carrying wheels of material: Polyurethane

All wheels to be provided with shield ball bearings.

Forward and reverse travel through push button.

4.0 Safety features:

- a. Bidder to furnish complete details of safety features included in offered equipment.
- b. Emergency cutoff, light and horn to be included in offered equipment.

BHEL- ISG, BANGALORE



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TTD/ PALLET-01

- c. The operator platform should be ergonomically fit for the operator's use.
- d. Battery shall comply to DIN or British standard.

5.0 General Requirements:


- a. Bidder to furnish reference list of customers to whom same ~~of~~ higher capacity equipments has been supplied. (at least three customers in last three years to whom machine of similar specification have been supplied-at least three certificate of performance of supplied machines).
- b. The offer shall include the details with diagram for offered equipment and a complete technical description of all parts of the truck.
- c. Bidders to submit Brochure/ Catalogue along with their technical bid.
- d. Supply, arrangement for inspection, packaging, despatch, transportation & unloading at installation place shall be in the scope of successful bidder.
- e. Bidder to also refer commercial terms and condition given separately.
- f. In case of any ambiguity and/or conflict in technical specification BHEL's decision and interpretation shall be final and binding.

6.0 Inspection, testing and despatch:

- a. Equipment to be offered for inspection before despatch with minimum 7 days advance notice in written form to BHEL.

7.0 O&M manual and training:

- a. Four sets of following documents, in English language should be supplied along with the equipment.
 - i) Operation & Maintenance Instructions
 - ii) Spare parts manual
 - iii) Assembly Drawing
 - iv) Electrical wiring drawings, power & control circuits

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- b. Successful bidders to arrange for free demonstration and training at the installation place. Training shall be for minimum 48 hours spanning minimum 7 days or as desired by end customer.

8.0 BHEL's Technical Specification & details to be filled by Bidder

Sl. No.	Features		BHEL's Specification and requirement	Bidder to confirm and Indicate the details
1.	Qty. of Battery Operated Pallet Truck required	Nos.	10	
2.	Qty. of Out Board Battery Charger required.	Nos.	10	
3.	Characteristics			
a.	Capacity (minimum)	Kg	1500	
b.	Load Center (to match fork length)	mm	To match fork length and CG of loaded trays.	
	Power Device		Battery	
	Operator Type		Rider	
	Wheel (Drive / Load)		Polyurethane	
	Wheel Quantity		1D+ 4L	
	Specifications			
	Max. Speed	Laden	Km/h	Min. 4
		Un-laden		Min 6
	Max. Lifting Speed	Laden	m/s	As per Mfg std.
		Un-laden		As per Mfg std.
	Max. Lowering Speed	Laden	m/s	As per Mfg std.
		Un-laden		As per Mfg std.

BHEL- ISG, BANGALORE



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Lifting Height	mm	As per Mfg std.	
Ground Clearance + fork thk.	mm	As per Mfg std.	
Raised Height	mm	As per Mfg std.	
Overall Length	mm	As per Mfg std.	
Fork Length	mm	Sufficient to width wise handle three stack of tray of size 800mm (L) x 430mm (B) x 75mm (H) each stack carrying minimum 20 trays.	
Body length	mm	As per Mfg std.	
Overall Width	mm	As per Mfg std.	
Overall fork Width	mm	As per Mfg std.	
Size of Load Wheel	mm	As per Mfg std.	
Size of Steering Wheel	mm	As per Mfg std.	
Size of balance Wheel	mm	As per Mfg std.	
Outside turning radius	mm	1600-1900	
Fork Width	mm	As per Mfg std.	
Driving System			
Battery type		Industry type as specified above.	
Voltage /Capacity	V/Ah	24 / 210	
Distance which can be Travelled in single charging of battery.	Kms	As per Mfg std.	
Battery charging time	Hrs.	As per Mfg std.	
Driving Motor	Kw	As per Mfg std.	
Lifting Motor	Kw	As per Mfg std.	
Brake (Service/Travel)		Electromagnetic	

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	Brake (for Parking)	As per Mfg std.	
	Control Unit Type	Electronic	

9.0 Services, Spares and Guarantee:

- a. Support required for spares and services for minimum period of 5 years which will be executed by the end customer TTD by entering into AMC. Its cost to be furnished as per the price format.
- b. List of fast moving spare items and its cost to be furnished separately along with Price bid.
- c. Guarantee: The pallet truck and it's accessories to be guaranteed against any manufacturing defect/ malfunction for a minimum period of 12 months from the date of installation at work place.