

Er. PRATIK ADHIKARI

(Registered Mechanical Engineer)
License No.: 5607 Mechanical "A"
PAN No.: 127274430

Address: Khairahani-4, Chitwan
Contact No.: 9845703510
Email: prat.adhik@tcioe.edu.np

Date: 2083/01/23

Wheelbarrow Technical Specifications

Technical Specifications

Application/Test facility

Heavy-duty single-wheel manual wheelbarrow for agricultural and farm use. Used for transporting soil, compost, manure, mulch, harvest produce, bricks, and general farm materials.

1. Design considerations

- Type: Single-wheel manual push wheelbarrow for agricultural and farm use.
- Load Capacity: Minimum 130 kg rated load capacity.
- Tray/Body Material: Mild Steel (MS) or Galvanized Steel. Minimum 1.2 mm thickness. Rust-resistant finish (powder-coated, galvanized, or painted).
- Tray Volume: Minimum 65 litres.
- Tray Dimensions: 90 cm (L) × 50 cm (W) × 25 cm (D) minimum.
- Frame Material: Heavy-gauge Mild Steel tube, fully welded. Minimum 25 mm outer diameter tube.
- Handle Material: Two steel handles with non-slip rubber/plastic grip. Ergonomic design for comfortable operation.
- Handle Length: Minimum 95 cm from wheel axle to handle end.
- Wheel: Single pneumatic rubber tyre, minimum size 15 inch diameter. Pneumatic type preferred for rough farm terrain.
- Tyre Type: Pneumatic (air-filled) for shock absorption on uneven farm ground.
- Axle: Heavy-duty steel axle with sealed bearing or bushing; greasing port preferred.
- Stand Legs: Two rear support legs, robust welded steel, to hold wheelbarrow upright when not in use.
- Weight of Equipment: 12–20 kg (empty, assembled).

2. Safety and maintenance Requirements


- Balance: Loaded wheelbarrow must balance with operator and tipped load without tipping sideways.
- Rust Protection: All steel surfaces (tray, frame, handles) must have factory-applied rust-resistant finish.
- Safety: No sharp edges or protrusions on tray lip or frame that could injure operator.

Required documents (during bid submission)

- Product-specific catalogue with photograph, dimensions, load capacity, and material specification.

Other requirements (during delivery)

- Warranty letter: Minimum 1-year
- Delivery, installation, and testing.



Er. Pratik Adhikari
Registered Mechanical Engineer
Regd No: 5607 Mechanical "A"

Er. PRATIK ADHIKARI

(Registered Mechanical Engineer)

License No.: 5607 Mechanical "A"

PAN No.: 127274430

Address: Khairahani-4, Chitwan

Contact No.: 9845703510

Email: prat.adhik@tcioe.edu.np

Date: 2083/01/23

Chaff Cutter Technical Specifications

Technical Specifications
Application/Test facility Electric grass and hay cutter for agricultural and livestock use.
1. Design considerations <ul style="list-style-type: none">• Production Capacity: 300-700 kg per hour.• Feeding Mouth: Minimum 9 inches for easy bunch feeding.• Manufacturing material: Heavy-duty cast Iron or MS (Mild steel Plate).• Mounting: Trolley type with wheels for easy movement.• Transmission: V-belt drive with safety guard• Cutting length: 10-30 mm (Adjustable)• Blades: minimum 3 blades (High carbon steel or forged steel)• Wheel: Minimum 32 inches diameter lockable wheels.
2. Safety and maintenance Requirements <ul style="list-style-type: none">• Electric motor: 3 HP electric chaff cutter• Reverse gear: Reverse gear to clear jams.• Power Supply: 220 volts, 1-phase, 50 Hz.• Enclosure: All the rotating parts, along with the belts and cutter, should be inside a proper sheet metal housing.• Control: On/off switch; overload protection and emergency stop mechanism.• Indications and instructions on the machine should be either in English or Nepali.
Required documents (during bid submission) <ul style="list-style-type: none">• Product-specific catalogue
Other requirements (during delivery) <ul style="list-style-type: none">• Warranty letter: Minimum 1-year• Delivery, installation, and testing.



Er. Pratik Adhikari
Registered Mechanical Engineer
Regd No: 5607 Mechanical "A"

Er. PRATIK ADHIKARI

(Registered Mechanical Engineer)

License No.: 5607 Mechanical "A"

PAN No.: 127274430

Address: Khairahani-4, Chitwan

Contact No.: 9845703510

Email: prat.adhik@tcioe.edu.np

Date: 2083/01/23

Stainless steel Milk Cans Technical Specifications

Technical Specifications

Application/Test facility

Stainless steel milk cans for milk collection, storage, and transport in dairy farms.

1. Design considerations

- Type: Stainless steel milk can with fitted lid, for dairy farm milk collection and transport.
- Two sizes: 10 litre and 40 litre.
- Material: Food-grade Stainless Steel AISI 304 (SS-304)/ SS-202 or equivalent. All contact surfaces must be food-grade.
- Thickness: Minimum 0.9 mm for body (10L); minimum 1.2 mm for body (40L). Bottom sheet minimum 1.5 mm (40L).
- Capacity: 10 Litre (1 unit) and 40 Litre (1 unit).
- Finish: Mirror / bright polish (inside and outside). Smooth finish for easy cleaning and hygiene.
- Welding: TIG welded with gas purging for clean, hygienic, leak-free joints. No rough weld beads on interior surfaces.
- Lid: Tight-fitting lid with lid handle. Lid must prevent spillage and contamination. Rubber gasket preferred for 40L to ensure airtight seal.
- Handles: 10L: one U-shaped carry handle (SS). 40L: two side handles + lid handle (all SS).
- Bottom Ring: Reinforced bottom ring for stability and to protect bottom from direct contact with ground.

2. Safety and maintenance Requirements

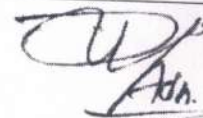
- Leak Test: Each can must be leak-tested (water test) before delivery.
- Corrosion Resistance: SS material used must not react with milk acids. No aluminium, iron, or low-grade steel may be used for food-contact surfaces.
- Temperature Compatibility: Must withstand hot water/steam cleaning (up to 90°C) for sanitation without deformation.
- Marking: Capacity marking (10L / 40L) to be embossed or stamped on the can body or lid.

3. Required documents (during bid submission)

- Product-specific catalogue with detailed specifications and photographs.

Other requirements (during delivery)

- Warranty Letter: Minimum 1-year comprehensive warranty covering manufacturing defects and normal wear and tear.



Er. Pratik Adhikari
Registered Mechanical Engineer
Regd No: 5607 Mechanical "A"