

TECHNICAL SPECIFICATIONS FOR 20-FT WIDE-PALLET DOLLY**1 Basic****1.1 Configuration (refer to Annex A)**

- a) Overall length: Body 6600 mm + Towing bar (1400 mm) = 8000mm
- b) Overall width: 2620 mm + 700mm = 3320mm
- c) Overall height: 530 mm (roller surface to ground level)
- d) Overall tare weight: Not more than 4.2 tons
- e) Maximum Speed: 25km/hr
- f) Load capacity: Max 27 tons
- g) Capability: able to handle 20ft pallet and 16ft pallet.

2 FRAMEWORK

- 2.1 Main chassis structure shall be 76 mm x 76 mm x 203 mm thick mild steel material (ASTM A36)
- 2.2 All longitudinal beams shall preferably have continuous run member beams. Joining of main frames will not be accepted.
- 2.3 All welding shall preferably have continuous seams whenever possible. Welding at critical locations must be adequately reinforced and supported.
- 2.4 Design of chassis must be such that all loads shall be evenly distributed across the entire framework
- 2.5 Chassis must be able to withstand rough handling and knocks without dents

3 TOW BAR (Refer to Annex A1)

- 3.1 To be of heavy-duty design but light weight not exceeding 50kg with a 25.4 mm thick towing plate. Material: 63 mm x 63 mm x 6 mm mild steel hollow section comply with ASTM A36 or equivalent and install triangle rubber bumper 110mm x 110mm below the tow bar.
- 3.2 Shall have provision of a lock device to lock tow bar in upright position and released with ease.
- 3.3 Shall come with a rigid support stand and a spring actuated stand.

3.4 Shall be cushioned by a long balancer mechanism to prevent injury to operator. Tow bar's eye must be:

- a) Min. 25.4 mm thick material; and
- b) Adequately joined to the chassis and welded to prevent breakage due to shearing force.

3.5 The tow bar stand height shall be 350 mm from the ground.

4 **BRAKES**

4.1 Shall be tow bar actuated with braking in the down position.

4.2 Must be able to apply brakes on a fully laden HPD during operation.

4.3 Must be concealed to prevent accidental damage by forklift.

5 **CASTOR AND WHEELS**

5.1 All 28 solid tyres shall be 400 x 8 heavy duty types and be able to withstand tropical heat and salty environment.

5.2 They must not show significant wear and tear within 12 months of use.

5.3 Dolly shall have 12 front swivel castors and 16 rigid rear castors. The swivel castors will be ball bearing type and size is 240 mm x240mm.

5.4 Bearings used must be heavy duty ball bearings packed with grease and must have a means for lubrication.

5.5 Castors must be of heavy-duty type. Tenderers are required to submit their castor design for evaluation.

5.6 Wheel shaft shall have minimum of 50 mm diameters and must retrofit with **wheel shaft stainless steel bushing**.

5.7 All hubs to be machined from a single block of material and to be shown on site show-round.

6 **HEAVY DUTY ROLLERS**

6.1 End rollers must be protected by a mild steel flat plate of 9 mm thickness.

6.2 All rollers shall be 76 mm x 310 L except for .02 rollers (76 mm x 225 L) to be positioned at the platform. Retrofit 76mm x 260mm L rollers for 2 outer rows platform (to be confirmed at the site show-round). - Total of 176 pieces rollers

6.3 Wall thickness of rollers shall be 3mm and shaft shall be 20mm with split pin locking device and tack welded.

6.4 Rollers to be sand blasted and galvanized to prevent corrosion.

7 **RESTRAINTS/STOPPERS**

7.1 The dolly shall be adequately provided with fixed side guides at both sides.

7.2 There shall be butterfly stoppers for four positions, with each position having 2 butterfly stoppers:-

1st position from end to 1st stoppers i.e. 126" (3200 mm);
2nd position from end to 2nd stoppers i.e. 193.5" (5029 mm);
3rd position from end to 3rd stoppers i.e. 242" (6147 mm); and
4th position from front butterfly stoppers to 4th stoppers i.e. 126" (3200 mm)

7.3 The distance from left butterfly to right butterfly is 2489 mm.

7.4 The butterfly stopper height during locking position shall be 5" from surface of the walkway.

7.5 Altogether there are 26 butterfly stoppers to be installed onto the HPD.

7.6 The thickness for the butterfly stoppers is 25.4 mm, length is 228 mm and width is 152 mm.

7.7 Additional 10 butterfly stoppers to be installed for outer 2 rows platform (distance to be confirmed during the site show-round)

8 **WALKWAYS**

8.1 The walkways shall be sand blasted and painted chequered plate 3mm thick bolted with counter screwed to the chassis.

9 FRONT FIXED STOPPERS (C-CHANNEL)

9.1 Front fixed stopper to be installed at the centre of the width of dolly.

9.2 Length to be of 1570mm and the height 80mm.

10 SIDE GUIDES

10.1 Side guides to be of mild steel flat bar.

10.2 Their thickness to be of 12 mm and height 80 mm.

11 PAINTING

11.1 Entire structure to be sand blasted or powered brush prior to paint application.

11.2 Structure to be coated with a layer of red lead primer (waterbased type) and finishing coat shall be 2 coats of SATS corporate colors. (Shall be advised). Weight and unit number of pallet dollies printed on equipment.

12 ACCEPTANCE TEST

12.1 Supplier to perform all necessary inspections and tests to show that the dollies meet all specifications. Supplier's records of inspections and tests must be kept complete and available to SATS at all times.

13 OTHERS

13.1 Reflectors to be put at the four corners of the dolly and protected with guards.

13.2 Unit identification numbers to be cut-out type numbers and welded on.

13.3 All fasteners to be of castle nut type wherever possible.

13.4 All bolts to be high tensile bolts with fine threads.

13.5 Each dolly to be weighed prior to delivery and the tare weight clearly indicated.

13.6 All wheel hubs must apply with **red loctite 271** during fastening.

13.7 PE Certification of Maximum Load Capacity of 20FT Pallet dolly
-- 27 ton

13.8 Manufacturer to provide 12 months of Warranty period for
equipment & parts

14 **ITEMS TO BE SUPPLIED**

14.1 The supplier shall supply the following items:

Parts Manual – PDF and 4 sets Hardcopy
Repair Manual – PDF and 4 sets Hardcopy