

*Section 3. Specifications***1. OPERATING CHARACTERISTICS**

Weight capacity	3600 Kg (8000 Lb)
Moving speed	18 Km/h (11 mph)
	21 Km/h (13 mph) (optional)
Transfer speed	18 m/min. (60 feet/min.)
Elevation time to first preset (2100 mm high)	8–10 seconds
Minimum transfer height	480 mm (18.86 inches)
Maximum transfer height	3600 mm (141.73 inches)
Optional maximum height	2995 mm (117.5 inches)
Exterior turn radius	8.0 m (315 inches)
Gradient capacity	5° (8%) with cargo

2. GENERAL DIMENSIONS (SEE FIGURE 1)

Ground clearance	105 mm (4 inches)
Front track width	2.66 m (105 inches)
Rear track width	2.68 m (106 inches)
Wheelbase	4.46 m (176 inches)

3. SHIPPING DIMENSIONS

Total length	6.50 m (256 inches)
Total width	2.9 m (114 inches)
Total height	1.70 m (67 inches)
Approximate total weight	7230 Kg (16104 Lb)
Shipping volume	32 m ³ (1130 feet ³)

4. CARGO PLATFORM DIMENSIONS

Width between guides	1.56 m (61.41 inches)
Length between cargo guards	4.12 m (162.41 inches)

Lateral guide height 60 mm (2.36 inches)
Cargo guard height 50 mm (1.97 inches)
Front end platform width <1600 mm (63 inches)

5. CAPACITIES

Hydraulic oil tank capacity 218 Lt (57 gls.)
Fuel tank capacity 75 Lt (20 gls.)
Hydraulic fluid ISO VG 32/68

6. NOISE LEVELS

Measuring conditions:

- Engine: Deutz F4L 1012
- Location: Driver's position
- Height: Drivers's left ear

Platform lowered, with engine at full speed 94 dB (A)
Platform at maximum height, with engine at full speed 79 dB (A)
Circulating at medium speed 89 dB (A)

7. VIBRATION LEVELS

Acceleration value, operator's compartment 0.8 m/s²

8. ENGINE SET

<u>Motor</u>	<u>Nº of cylinders</u>	<u>Power</u>
DEUTZ BF4M 1012	4	65 Kw (88 C.V.) at 2500 rpm

9. WHEELS AND TIRES

Rear axle, wheel Solid type, specification: 7.00 R12.
Rear axle, wheel (optional) Pneumatic type, specification: 7.50 R12
(pressure = 10 bar).
Front axle, wheel Solid type, specification: 21 x 8 R9.

10. BRAKES

Hydrostatic	Deceleration (by lifting foot from accelerator pedal) through hydraulic traction motors.
Service	Hydraulic brake acting upon the rear wheels; shoe and drum.
Parking	Negative brake on rear right wheel.
Fluid	Hydraulic oil ISO VG 32/68

11. AXLES

Front axle	Steering axle made up of wheel, bushing and axle spindle.
Rear axle	Drive axle made up of hydraulic motors directly coupled to wheels, with service brake on both wheels and parking brake on rear right wheel.

12. STEERING

System	Hydraulic steering system activated by a 100 cm ³ /rev Orbitrol valve. Incorporates antishock valve block.
Activation	Through double acting, double rod hydraulic cylinder through conjugation rods.

13. CARGO PLATFORM

Transfer system	Made up of Heliroll rollers and wheels, activated by four motors. System divided into two sections that may be operated together or separately.
Cargo guards	The cargo area is delimited by two guards: one in front and another in the rear. These guards are activated by hydraulic cylinders. A middle cargo guard is optional.
Cargo guides	Optional. Made up of two guides placed in the front of the cargo platform.

14. HYDRAULIC SYSTEM

Traction pump	Piston-type variable flow 50 cm ³ /rev. hydraulic pump, coupled directly to the thermal motor inertia drive.
Traction motors	Two piston motors, low speed, elevated torque and 380 cm ³ /rev. flow coupled directly to the drive wheels.
Service pump	Double bodied gear pump with 38 and 11 cm ³ /rev. cylinder capacities, coupled in tandem to the traction pump.
Hydraulic Actuators	Double action single rod main platform elevation cylinders. Compensated telescopic platform elevation cylinders. Double rod, double action steering cylinder. Single action, single rod cargo guard activation cylinders.
	Double action, single rod cargo guide cylinders (optional).
Transfer motors	Fixed flow motors, 295 cm ³ /rev., for transfer rollers
Flow regulators	Flow regulators for main and auxiliary elevation cylinders. Flow regulator for cargo transfer system
Pressure Switch	Service brake and accumulator pressure switches.
Accumulator	Accumulator in steering line, platform lowering directional antireturn and brake system.
Filters	Filter in tank return line. Filter in services pump intake line in tank. Cartridge filter in traction pump.
Manual pump	A lever-activated manual pump is installed for activating emergency maneuvers.

Traction circuit operation pressure	350 bar (5075 psi)
Services circuit	170 bar (2465 psi)
Roller motor circuit pressure	100 bar (1450 psi)
Service brake circuit pressure	40 bar (580 psi)
Parking brake circuit pressure	20 bar (290 psi)
Accumulator maneuver pressure	80–120 bar (1160–1740 psi)

15. ELECTRICAL CIRCUIT

Power supply	Two direct current 12 volt batteries (12 VCC). 28 volt alternator on engine.
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Lighting

Front	Two headlights and two turning and parking lamps.
Rear	Two modules with turning signal, parking, and brake lights, reverse lamps and reflectors.

Front working lamp. Optional rear working lamp, beacon, and platform lifting and lowering beacon.

Magnetothermic fuses or circuit breakers	5 A. Magnetothermic fuse for ignition. 40 A. Magnetothermic fuse for heater and electric fan. 5 A. Magnetothermic fuse for instruments. 15 A. Magnetothermic fuse for lights and horn. 15 A. Magnetothermic fuse for functions. 15 A. Magnetothermic fuse for emergency stop, traction and brakes. 8 A. Magnetothermic fuse for electronic accelerator (optional). 5 A. Magnetothermic fuse for turn signal lights and warning lights.
Optional emergency motor pump	An optional electrically activated pump may be installed.

16. SAFETY FEATURES AND EMERGENCY SERVICES

Engine safety features	The engine is protected against excessive engine temperature, low oil pressure and, in the case of the Deutz motor, belt breakage. Starter motor activation restricted with thermal motor running. Motor cannot be started if traction manipulation device is not in neutral position.
Traction safety	There is only traction if desired gear is selected, accelerator is pressed, parking brake is not engaged and cargo guards are raised.
Emergency stops	Standard version of vehicle is equipped with emergency stop button on instrument panels. Additional emergency stop buttons on the chassis and the rear button panel are optional. Buttons may be lighted.
Service safety features	Two seconds after placing traction manipulation device in neutral position, parking brake is applied automatically. Elevation cylinders (main and telescopic) with directional antireturns.

Platform lifting/lowering restricted above 600 mm when guards are lowered. Below 600 mm, platform lifting and lowering is not restricted when rear cargo guard is lowered.

Transfer motors are protected by torque limiting valves.

Transfer restricted if traction manipulation device is not in neutral position.

Automatic cargo guard operation.

Negative parking brake.

Traction speed limited to 6 Km/h with platform raised.

When the service brake pedal is pressed, the traction pump and the performance of VDO electronic accelerator (optional) are electrically disconnected.

- Emergency indicators Control panel includes the following indicators: high engine temperature, low oil pressure, battery charge, belt breakage, engine starting heater, turn signals, engaged parking brake indicator, and traction manipulation device in neutral position. An electronic accelerator check indicator is optional.
- Other indicators Both standard and as an option, the vehicle includes lighted and audio vehicle and platform actuation indicators.

17. WIND RESISTANCE

- Wind resistance 52 km/h

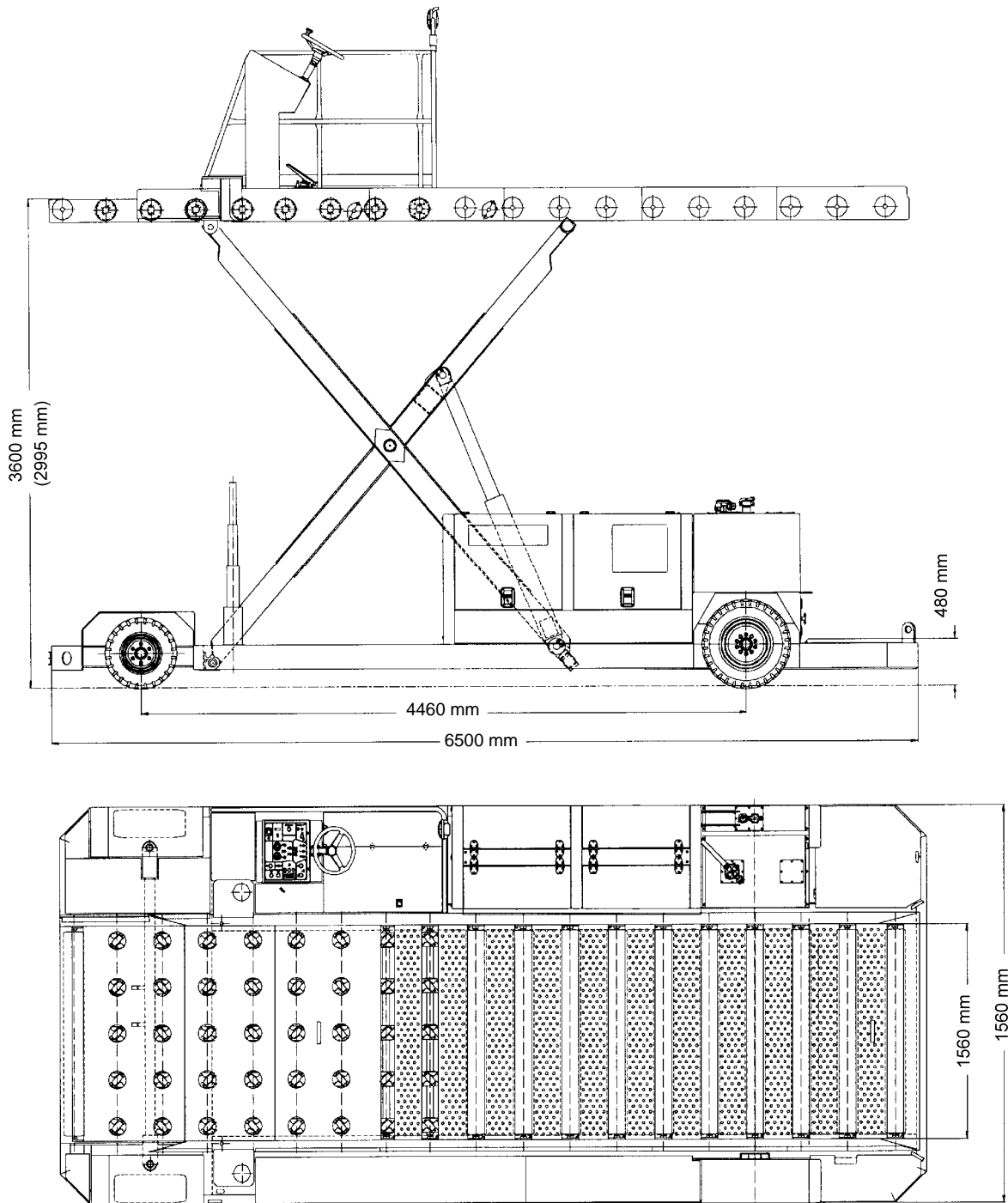


Figure 1
GENERAL DIMENSIONS

Section 4. Transportation and Shipping

1. PREPARING THE VEHICLE FOR TRANSPORTATION

This section contains general information on preparation of the CLT-8 for transportation. Check regulations of the countries through which the unit will be transported for specific requirements, such as dimensional limitations, whether or not the vehicle can be transported with fuel, etc.

Review storage requirements (Section 6) for information on protection that may be required if time en route is expected to be more than two or three days.

**WARNING**

BEFORE REMOVING OR INSTALLING ANY COMPONENT ON THE VEHICLE, BE ABSOLUTELY SURE THAT IT IS ON A LEVEL SURFACE, WHEELS ARE BLOCKED AND ELECTRIC POWER SUPPLY IS DISCONNECTED.

A. LUBRICATION AND GREASING

Preparing the vehicle for transportation requires an adequate preliminary lubrication.

- (1) All joint components, hinges, bolts, etc., should be greased.
- (2) Hydraulic cylinder rods which are exposed to the air should be covered with hydraulic oil.
- (3) Battery terminals should be covered with Vaseline to avoid corrosion during transfer.
- (4) All components which require periodic greasing should be exceptionally greased, according to the lubrication and greasing tables included in Chapter 2 of this manual.

B. SHIPPING

The vehicle should be shipped, whenever possible, according to the following indications:

- (1) Retract completely the main and auxiliary elevation hydraulic cylinders.
- (2) Remove elements or accessories that may be damaged in transportation, such as the driver's seat, working lamp, beacon, battery, etc., and ship them in a separate crate.
- (3) Tape all doors, lids or folding covers of any compartments which may occasionally open.
- (4) Protect the instrument panel with plastic or any other isolating material, positioning all controls in neutral.

2. INSTRUCTIONS FOR LOADING AND UNLOADING THE VEHICLE (SEE FIGURE 1)**WARNING**

IT IS NOT RECOMMENDED TO USE FORKLIFTS AS AUXILLIARY LOADING ELEMENTS, DUE TO THE IMMINENT DANGER OF SLIDING AND FOR DAMAGES THAT IT MAY CAUSE TO THOSE COMPONENTS LOCATED IN THE LOWER PART OF THE CHASSIS.

A. LIFTING

A crane with loading capacity greater than the weight of the vehicle to be transported should be used for loading and unloading the vehicle from the transport unit. It is necessary to use the hooks on the unit as hooking points for the lifting cables, in order to avoid damaging other components.

The CLT-8 vehicle is provided with four stowage points (see Figure 1) for the aforementioned cables, two in the front and two in the rear.

When the lifting cables are placed on their respective hooks, it is important to check if the cables will cause friction when the vehicle is lifted. Wooden blocks or other protection may be used on these points to avoid damages to the frame. The CLT-8 loading and unloading crane should have a minimum capacity of 8000 Kg (17600 Lbs.).

B. RESTRAINT

Restrain the vehicle with universal tie-down straps, chains and over-center tensioning devices and chocks. Do not route tie-downs across handrails. Use the hooking points for securing the vehicle.

Inspect all attaching points to insure that the restraints are secure and that straps (if used) do not bear against angular surfaces that may cause failure en route due to chafing or vibration.

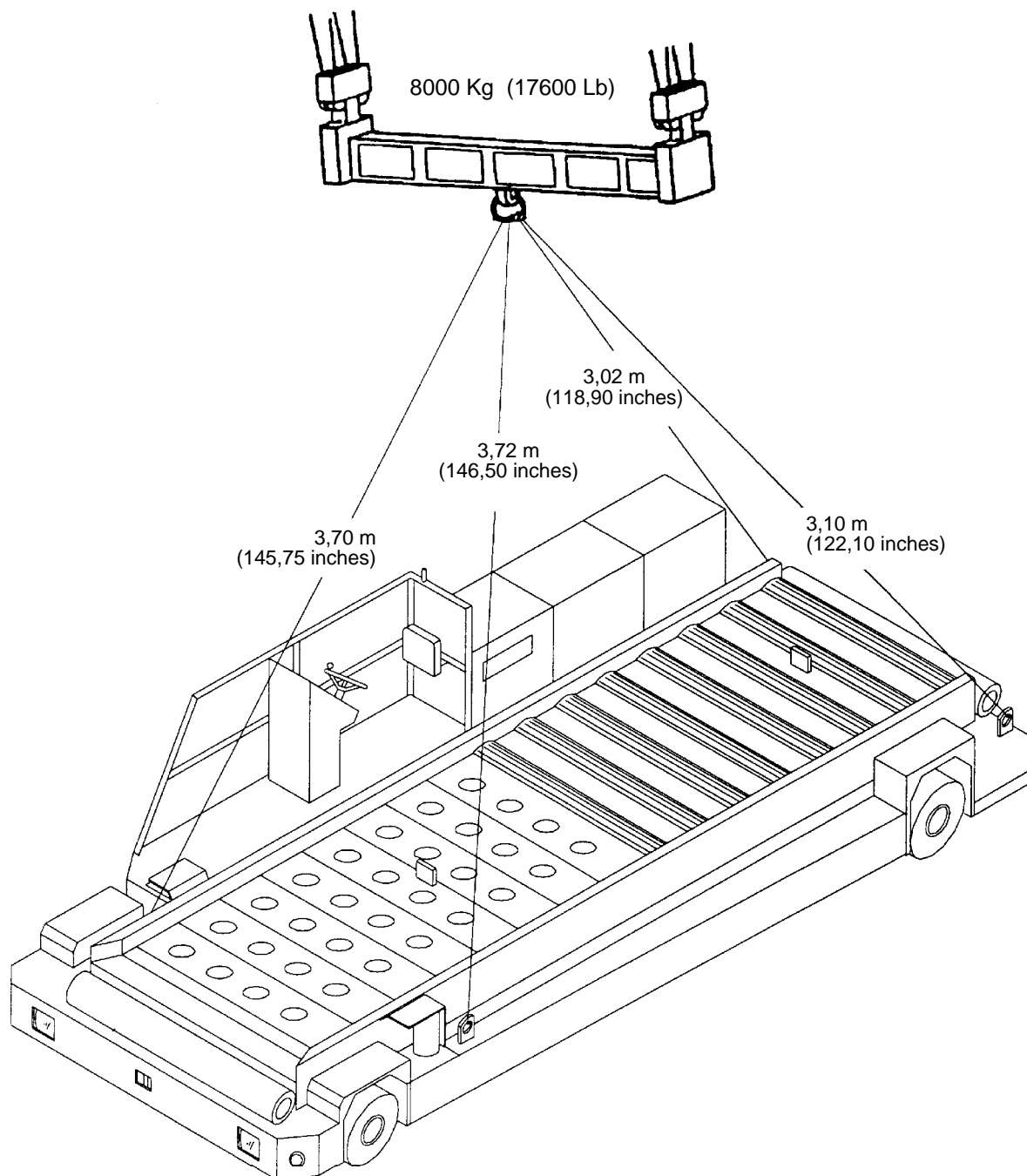


Figure 1
LOADING AND UNLOADING THE VEHICLE