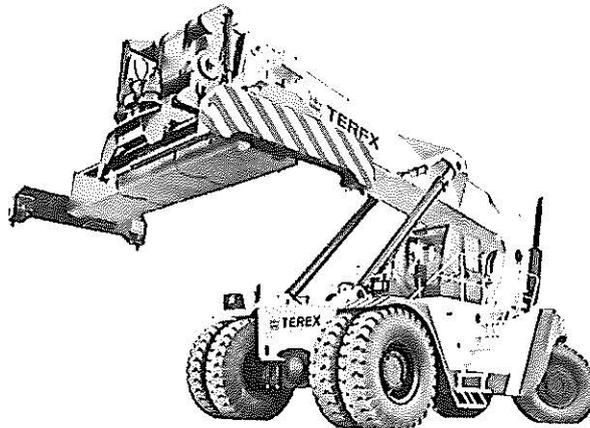


## Laden Reach Stacker Quotation To:

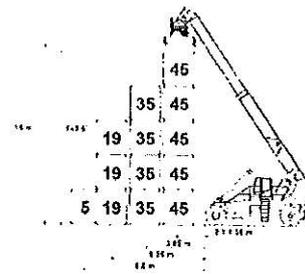


Quote ref.  
 467/13AR\_GG  
 Dated  
 August 26th, 2013

**n.3 TEREX Laden Reach Stacker CS46KS Lift Capacity (Container Stacking)**

(Country of origin: ITALY)

- |                         |                     |
|-------------------------|---------------------|
| -) Max capacity 1st row | 45 Ton (4th height) |
| -) Max capacity 2nd row | 35 Ton (4th height) |
| -) Max capacity 3rd row | 19 Ton (3rd height) |



### STRUCTURE

- DIN 15018 - 1 standard in accordance to crane design criteria
  - a. lifting class H2
  - b. working conditions B4
  - Chassis and Spreader: St 510 D / Weldom 700
- High quality grade steel



Terex Operations Italy srl  
 Via Cisa Ligure, 51/A  
 42041 - Lentigione di Brescello  
 Reggio Emilia, Italy

Paid-in capital € 2.000.000  
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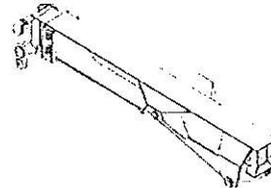


# TEREX

Port Solutions

### Telescopic boom

- Totally made with HIGH Quality grade steel (WELDOX 700)
- Terex designed box section which both internally and externally welded
- All bearings on the boom are grease able spherical bearings;
- *low maintenance- guaranteed 5 years*



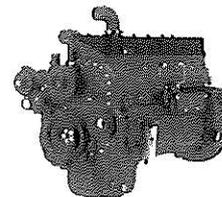
### Engine

**Cummins QSM11 – Water cooled turbo diesel**

Power 246 Kw at 2.100 rpm

Cylinders 6 in line

Displacement 6 - 10,800 cm<sup>3</sup> / 571 inc.<sup>3</sup>



### Hydrodynamic Transmission

**DANA / CLARK mod. 36415**

- Four speed forward and four in reverse
- Protection against change of direction with machine in motion
- Electronic gear change; *produces ultra smooth gear change*

### Drive Axle

**KESSLER D 102 PL 340**

- Axle width 4200 mm
- Heavy duty fabrication with wet disc brakes;
- Double reduction differential case and planetary final end drive

*Designed for the most demanding applications*



**KESSLER CO**



**TEREX**



**TEREX | GOTTWALD**

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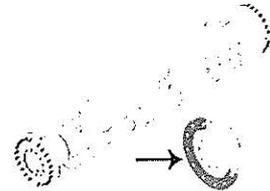
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## Steering Axle

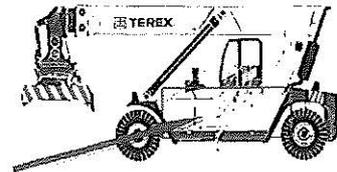
### Terex F 101

- Heavy duty designed mono beam made of high tensile steel
- Full Ackermann steering geometry for increased tyre life
- Fully grease able bearings for extend life



## Hydraulic System

- Two (2) Piston Pumps; *cost effective maintenance*
- Two (2) Proportional Distributors
- Hydraulic oil cooling system with thermostatic switch
- Large capacity oil hydraulic tank with exterior level indicators (850 liters)
- Centralized lubrication system

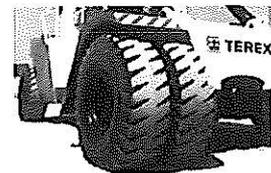


## Parking Brake

- Disc type on transmission line which is mechanically powered
- The brake fails "safe" in the event of hydraulic pressure failure

## Tyres

- Four wheels on drive axle 18.00 - 33 P.R. 36
- Two wheels on steering axle 18.00 - 33 P.R. 36

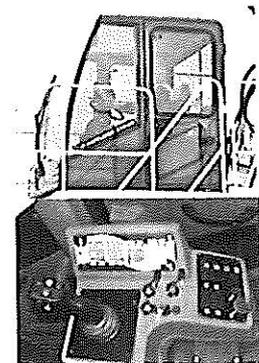


## Drivers Cabin *Optima*

Cabin placed in elevated central position for greater visibility

- Ergonomic dashboard and control panel
- All round safety glass
- Super comfort suspension seat
- Excellent noise suppression
- Secondary seat; *can accommodate instructor or trainee*
- Windscreen wipers on front, rear and top windows with washers
- Multifunctional joystick to control all functions of the boom and spreader

*Special fail safe feature; requires the heat of the drivers hand to operate hydraulic functions*





# TEREX

Port Solutions

## Electronic Weighing System "Digicontrol"<sup>3</sup>

### ➤ Weighing system

Electronic type to check in real time:

- a. net weight of the container lifted ( accuracy 1% )
- b. current length of the boom
- c. current boom angle
- d. real height from ground of the container

### ➤ Overload safety protection

Electronic system stops lifting in the event of machine overloaded

### ➤ Anti overtilting protection

Electronic system stops all machine functions which could bring machine in dangerous condition like further boom extension or lowering

### ➤ Out of balance load detection

The display shows the weight on both sides of the container and stops the sideshifting on heavier side in order to prevent unsafe maneuvers

### ➤ Operative and functional Black box.

The system can store operative and functional information. These information can be transferred on a lap top computer through a serial door placed on the cabin dashboard.

### ➤ Dynamic stability safety system

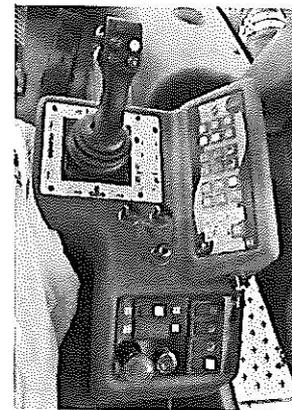
Electronic system stops all machine functions which could bring machine in dangerous condition like further boom extension or lowering when machine in motion. The system also reduces maximum allowed speed in case of dangerous stability condition.

### ➤ Electronic accelerator

The system preserves engine and transmission from mechanical failures

### ➤ CAN BUS connection system with new generation engines and transmission

Logicontrol is able to interface with new generation electronic engines and transmissions in order to improve engine safeties and functional information availability.



Functional black box

start: 15/03/11 15:08:09
end:-
High transmission temperature

Operative Black box

time: 15/03/11 15:10:37
weight: 20.1
hand. time: 15 34/45
counter: 1



## TEREX

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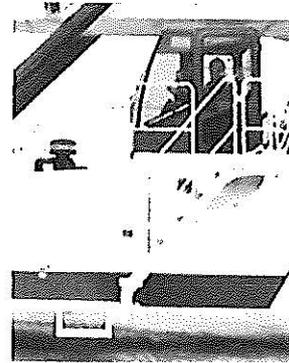
### Electrical System

- 24 volt 110amp alternator
- 24 V / 200 Ah battery
- Battery isolator
- Blown fuse Indicator
- fuses and distribution units located in easy accessible department

*This area is lockable and dust free*

### Standard Lighting

- Boom working lights; spreader working lights
- Reverse motion lights
- Rear brake lights & normal forward lights; rotating beacon



### Main Dimensions

➤ Max. lifting height under spreader	15200 mm
➤ Total length (boom in)	11900 mm
➤ Wheelbase	6500 mm
➤ Max height boom collapsed	5100 mm
➤ Turning radius	8900 mm
➤ Front axle width	4200 mm
➤ Min. ground clearance	550 mm

### Weights

➤ Total weight unladen	81000 kg
➤ Total weight laden	126000 kg
➤ Drive axle weight unladen	43000 kg
➤ Drive axle weight laden	95500 kg
➤ Steering axle weight unladen	38000 kg
➤ Steering axle weight laden	30500 kg

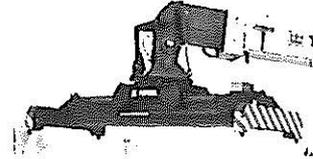
### Performances

➤ Traveling speed unladen	25 km / h
➤ Traveling speed laden	23 km / h
➤ Lifting speed unladen	0.34 m / s
➤ Lifting speed laden	0.30 m / s
➤ Lowering speed unladen	0.50 m / s
➤ Lowering speed laden	0.28 m / s
➤ Grade ability unladen	30 %
➤ Grade ability laden	26 %
➤ Max tow bar pull	30000 kg

## Telescopic Spreader -- Manufactured by Terex

**Able to automatically select 20' - 30' - 40' ISO containers**

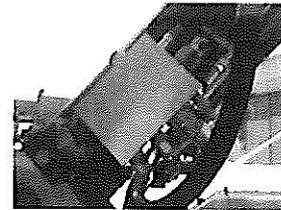
- Twist locks can only be operated once all 4 corners are landed
- Full floating Twist locks
- Push button pre-selection of 20-30-40ft positions
- Automatic leveling system
- Max lifting capacity under spreader 45000 kg
- Spreader weight 8500 kg
- Rotation - 95° / + 185°
- Side shift - 800 / + 800 mm
- Mechanic pile slope + / - 3°



## Safeties

### MACHINE

- Engine and transmission protection system prevents catastrophic damage
- Anti over-tipping protection (static and dynamic);  
*Limits the travel speed preventing tipping due to excessive speed*
- Safety valves with speed limiter on cylinders
- Heat sensitive dead man grip on joystick
- Protection against change of direction with machine in motion;  
*Prevents drive train damage*



### SPREADER

- Twist locks locking only after correct positioning
- Lifting only after correct locking
- Twist locks unlocking only after correct positioning
- Anti-collision rotation limit switch;  
*Prevents driver from accidentally rotating the container into the machine*
- Boom lowering stop device when spreader is seated

## Customer requested options included

- 2 Sets of manuals (CD format)
- 1 Set of electronic manuals
- 24v cabin supply
- Air Conditioning