

# Kalmar RT240

## Rough Terrain Container Handler



# Kalmar RT Center LLC's Rough Terrain Container Handler(RTCH)

Kalmar RT's RTCH has 53,000 lbs (24,040 kg) capacity with the ability to stack 20 and 40 foot ISO containers three high and two rows deep.



Purpose built for rough terrain, fording through 60 inches (1.52 meters) of water, extreme operating temperatures and unsurpassed reliability and durability. (Standard paint color shown to the left)

Unmatched transportability and versatility  
(Optional commercial paint shown to the right)



# Contents

## RTCH RT240

- 3 Moving Logistics into Rough Terrain
- 4 Material Handling Versatility
- 5 Patented Folding Boom
- 6 Proven Reliability



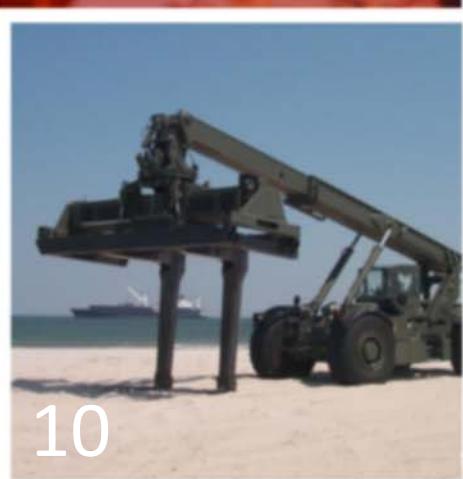
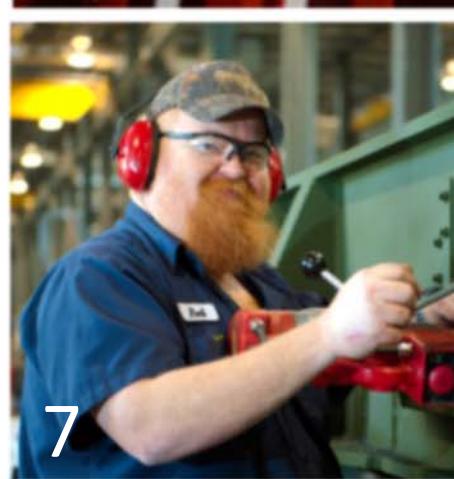
## Service Kits

- 8 Initial Service Kit
- 8 Authorized Stocking List
- 8 Breakout Cable Kit
- 8 Basic Issue Item Kit



## Attachments

- 9 Slinglift Attachment
- 10 Forklift Attachment



## Technical Specifications

- 13-14 Technical Specifications

# Moving Logistics into Rough Terrain

The Kalmar RT240 operates in unimproved, rough terrain surfaces while easily handling twenty or forty foot containers in the harshest conditions.



KRTC is a customer focused organization dedicated to the highest level of integrity and innovation, delivering quality products through excellence and teamwork. Our vision is to be the world leader in material handling solution and related services for the government sector.

The use of containers for the delivery of a wide variety of supplies is rapidly expanding within most military operations throughout

the world. Military and humanitarian operations in remote locations mean logistics must be supported in areas where infrastructure has been destroyed or is non-existent. Military Forces have turned to containerization as a solution to this challenge.

The Kalmar RTCH have the ability to travel over unimproved, rough terrain surfaces while easily handling twenty or forty foot containers in even the harshest of condi-

tions. It is easily transportable and does not require any special tools.

**Kalmar RT Center (KRTC)** provides material handling solutions for our primary customer, the U.S. Department of Defense, its allies, and related government agencies worldwide.

# Material Handling Versatility



## Capabilities

- Stack or unstack twenty and forty foot ISO containers with a gross weight of 53,000 lb (24,040 kg) stacked three high, in the first row.
- Stack or unstack twenty and forty foot ISO containers, with a gross weight of 27,500 lb (12,474 kg), stacked three high, in the second row.
- Stack or unstack twenty foot ISO containers with a gross weight of 53,000 lb (24,040 kg), stacked two high, in the longitudinal position.

Kalmar RT Center's equipment has stood the test of time and battle. We understand military operations are conducted in rough, unforgiving environments. We design and build our equipment with that in mind.

## Features

The Kalmar RT240 is equipped with an electro-hydraulically operated twenty to forty foot top handler that is capable of:

- Side shifting
- Rotation/Slewing
- Forward/rear tilting
- Left/right tilting
- Load position leveling and locking

These features allow containers to be handled in a wide range of approach angles and ground conditions.



# Patented Folding Boom Design



The Kalmar RT240 has a patented folding boom design that allows conversion from operational mode to transport mode in less than thirty minutes without disassembly, special tools, or lifting assets. This conversion brings the RTC240 from an overall height of four meters (13.12 ft) to just under three meters (9.84 ft) allowing the machine to be transported by ship, rail, or over the road by truck.

The RT240 can self-deploy an additional third axle reducing its weight footprint. This coupled with mountable wheels for the top handler, allows the machine to be loaded on transport aircraft such as the C-5, C-17, and the ANTONOV 124.



# Proven Reliability in Any Condition Around the World

## Anywhere, anytime, in any condition



The Kalmar RT240 operates with ease in adverse terrain and weather conditions from the extreme heat of the Southwest Asian deserts to the frigid cold of the Arctic regions. The machine is capable of fording 1.52 meters (5 ft) of water allowing it to operate where other container handlers and reach stackers cannot. By utilizing the different steering modes, the RTCH can operate in tight areas such as military and commercial landing ships or large areas like a shipping container yard. It is an essential tool for logistics in rough terrain.

The RTCH has been utilized to deliver food, water, and medical supplies to natural disaster victims. Missions have included Hurricane Katrina and Operation Unified Response for the earthquake in Haiti. Its ability to traverse the unfavorable conditions remaining after the natural disaster was an essential asset to the success of the relief efforts. The Kalmar RTCH can go anywhere, anytime, in any condition.

# We are here to help you!

At Kalmar RT Center we understand the quality of an organization is in direct proportion to its commitment to excellence. At Kalmar RT Center, excellence is our standard.



## Field Service and Warranty

The Kalmar RT Center is proud to provide equipment and services to the United States Armed Forces, its allies, and related government agencies worldwide. We are dedicated to providing our customers with the best customer service and support around the clock. Our technicians provide technical assistance and are here to help keep the machines operations ready for any mission.

## Field Service Representatives

The Kalmar RT Center has Field Service Representatives (FSRs) on the ground in Southwest Asia, and provide assistance worldwide.

## Reset Services

Our facilities in Texas and Kuwait have certified technicians that are currently restoring the RTCH to factory specifications and applying the latest upgrades, so the Warfighter can accomplish their mission. We are currently expanding our Refurb – Reset programs to encompass any MHE equipment, regardless of manufacturer. Our facilities are state of the art capable of a full spectrum of operations from vehicle to component rebuild.

# Service Kits

Kalmar RT Center's equipment gets the job done. We understand that when a Soldier has a mission to accomplish he needs his equipment to work. We pride ourselves in ensuring it does!



## Initial Service Kit

The Initial Service Kit provides the filters and related items to perform the required service after the initial 100 hours of operation. This 100-hour service is a requirement to maintain the warranty.

## Basic Issue Item Kit

The Basic Issued Item Tool Kit is an essential kit for maintaining and adjusting RTCH items that accrue normal wear and tear. The kit includes: hydraulic reservoir wrench, jacking screws, 3/16 long arm hex key wrench, Philips screwdriver (standard,round,8), crescent wrench, 18 ounce black vinyl tool pouch, slip joint pliers, and air pressure gauge.



## Authorized Stocking List Kit

The ASL Kit provides the service parts and filters to perform preventative maintenance services on the RTCH throughout the 1st 2,000 hours of operation.

## Breakout Cable Kit

This breakout cable kit is installed in series with the existing sensor wiring harness. It is used to troubleshoot the pressure and temperature sensors, electronic control module (ECM), and engine harness.

# Sling Lift Attachment



The sling lift attachment is easily picked up by the RTCH in the normal 20 foot ISO container top handler position. No modifications or additions are needed for the RTCH to handle or operate the sling attachment.

This attachment allows for the movement of slung loads up to 48,000 lbs (21,772 kg) in capacity. Dual and single point loading gives versatility in type and configuration of load handling, such as barriers, bunkers, wheeled equipment, construction equipment, and any load with rated sling points.

Fold down legs allow for easy pick and place of the attachment. Design allows for air, trailer and marine transport with the attachment installed on the RTCH.



# Forklift Attachment



The forklift attachment is connected to the top handler twist locks and two hydraulic hose quick-disconnects. Forklift operation is controlled from the joystick, and includes adjustable fork tines. The fork tines are adjustable from 24in. (61 cm) center-to-center to 81.5 in. (207 cm) center-to-center. Lift capacity is 44,000 lb (19,958 kg). This gives the operator the flexibility to lift or load a wide variety of cargo, including standard and odd size containers as well as material loaded on a pallet.

The forklift kit attaches directly to the twist locks on the top handler in less than fifteen minutes without special tools or other lift assets. The fork tines and vertical support beams fold under the forklift framework for transport.



# RTCH Enhanced Training Aid (RETA)



## Training In the field with the RETA Enhanced Training Aid

The RETA is a enhanced training aid designed to be an efficient tool for training and educating the operators of the Kalmar RT240. The RETA has built-in training sessions that can be used in many different ways. There are 5 different sessions that include:

- Free drive - The first one is a non restricted "free driving" session where you can do anything that you'd like.
- Container Transporting - The training session is specially designed to improve operator's skills to transport containers from remote areas.
- Container Lifting - The training session is specially designed to improve operator's skills of lifting containers and stacking them into position.
- Water maneuvers – This training session is designed to help operators differentiate the movement between water and land.
- Dock transporting - This session is specially designed to improve skills with the fork kit attachment by moving pallets, one at a time, onto the shipping dock.

### Practice makes Perfection

The pictures above and to the right are live screen shots taken during a simulation. As shown above, this machine allows students to get a practical feel for the machine before use in the field.

# Training Services



## 40/80 Hour Operator Training

The operator course gives the students the basic knowledge of the methods to safely operate the Kalmar RTCH in real world conditions. For example:

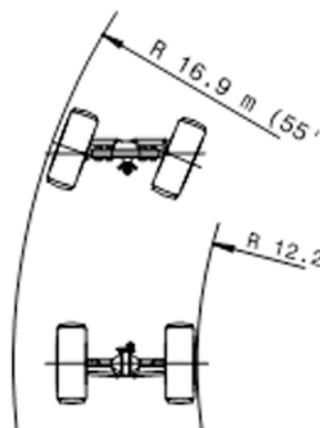
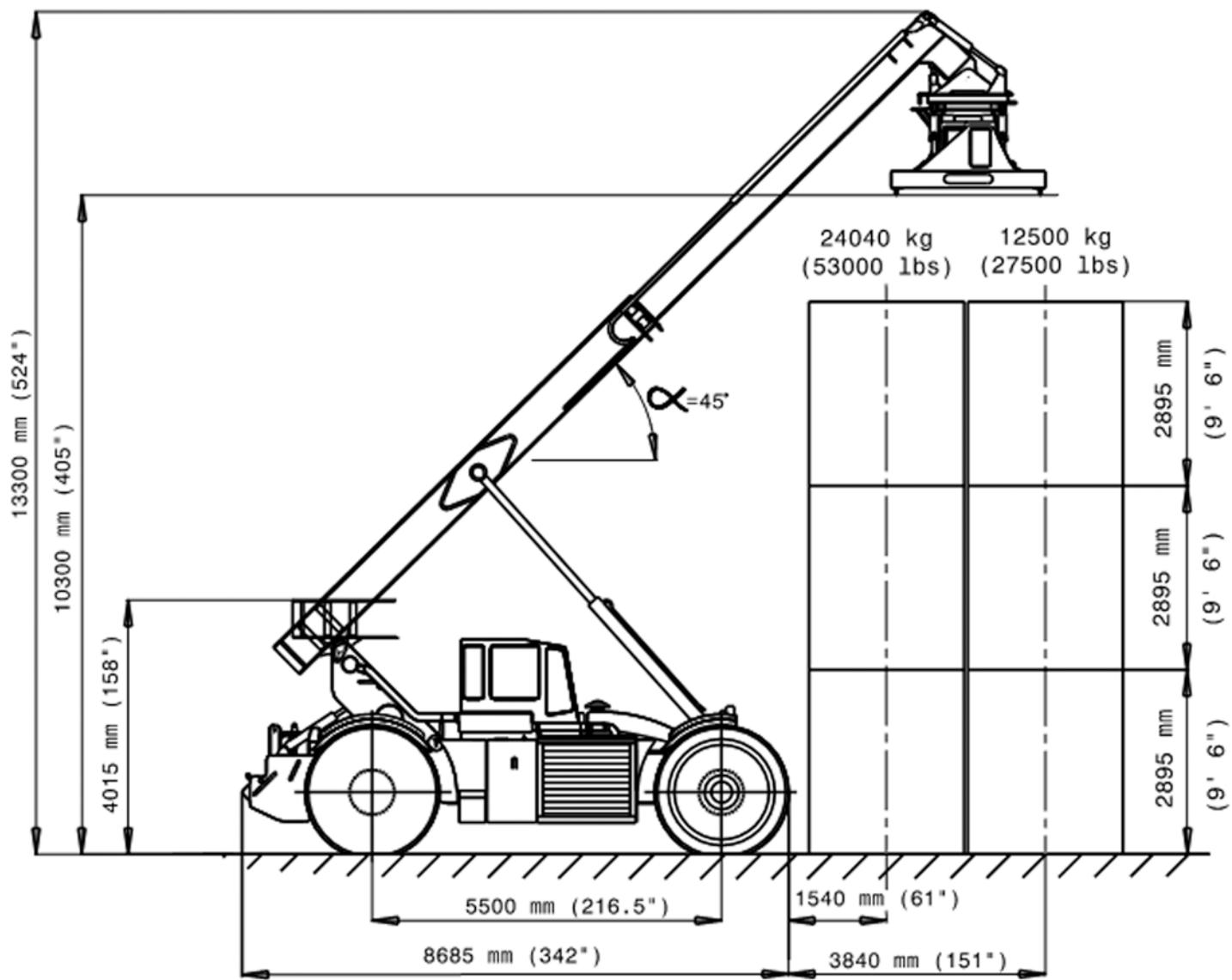
- The course shows how to make proper inspections, maintenance and lubrication procedures to keep the vehicle fully mission capable.
- The students will learn the operational skills and techniques to safely handle and manipulate 20 to 40 foot containers throughout a wide range of mission driven scenarios.
- Students are introduced to the different transportation modes of the RTCH and perform the transport conversions in a safe and efficient manner.

Written and practical tests are given to evaluate the effectiveness of the training. Certificate of completion is issued.

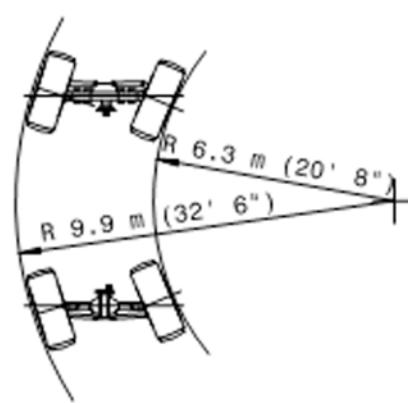
## 40/80 Hour Maintenance Training

The purpose of the Field Level Maintenance course is to provide the student with the basic knowledge and skills to troubleshoot, repair and maintain the Kalmar RTCH. The course will cover: safety, hydraulic systems, mechanical systems, and engine systems.

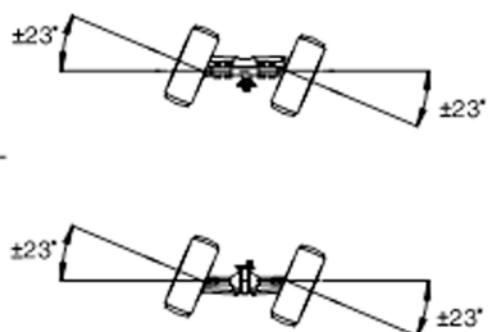
Written and practical tests are given to evaluate the effectiveness of the training. Certificate of completion is issued.



2 Wheel Steer



4 Wheel Steer



Crab Steer

## **Engine**

Make ..... Cummins  
 Model ..... QSM11, US EPA Tier III  
 Cylinder ..... 6  
 Power ..... 298 kW/400 HP  
 Displacement ..... 10.8 L/269 cu.in  
 Cooling ..... Hydraulic driven, variable speed fan  
 Fuel ..... Diesel/JP-8/JP-5

## **Transmission**

Make ..... ZF  
 Model ..... 4 WG310  
 Gears ..... 3 fwd/2 rev

## **Axles**

Make ..... Kessler  
 Model, Front ..... LT102PL341/528NLB4650  
 Model, Rear ..... LT102PL341/528NLB4660

## **Brakes**

Service.....Hydraulically operated & cooled,  
 in-board, wet disk type.  
 Parking .....Hand operated, spring  
 applied/hydraulically released

## **Performance**

Travel speed, unladen ..... 37 km/h, 23 mph  
 Travel speed, laden ..... 24 km/h, 15 mph  
 Travel speed, reverse, max ..... 11.3 km/h, 7 mph  
 Gradeability ..... at 3 km/h, 2 mph  
 Unladen ..... 27%  
 Laden ..... 27%  
 Fording depth ..... 1.52 m, 60 in

## **Weight**

Curb weight ..... 53751 kg, 118500 lbs  
 Front axle ..... 29121 kg, 64200 lbs  
 Rear axle ..... 24630 kg, 54300 lbs

## **Service Capacities**

Fuel tank ..... 390 L, 103 gal  
 Hydraulic tank ..... 681 L, 180 gal

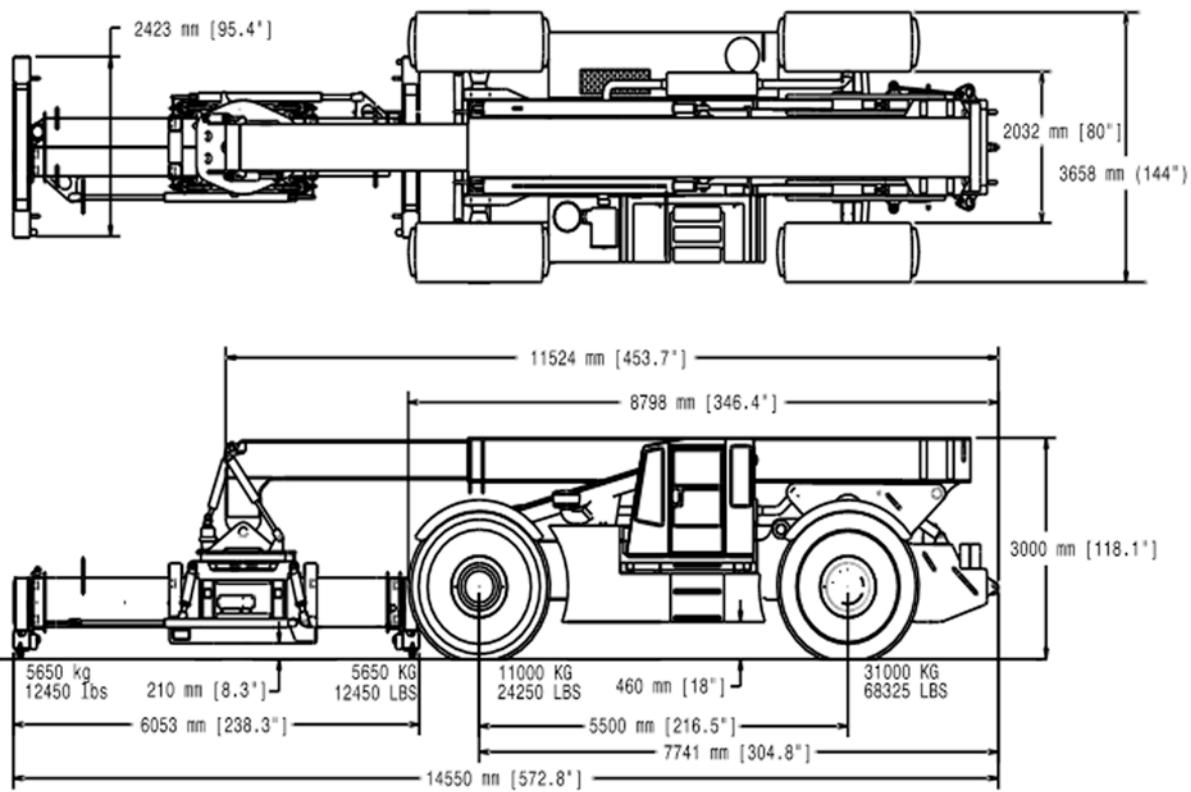
## **Additional Data**

Electrical system ..... 24V DC  
 Alternator ..... 105 Amps

## **Tires**

Size ..... 29.5 - 35

RT240 in Transport Mode





Kalmar RT Center's vision is to be the world leader in material handling solutions and related services. We are a customer focused organization dedicated to the highest level of integrity and innovation delivering quality products through excellence and teamwork.