

## RIGA: fast bulking of renewable energy



### THE OPPORTUNITY

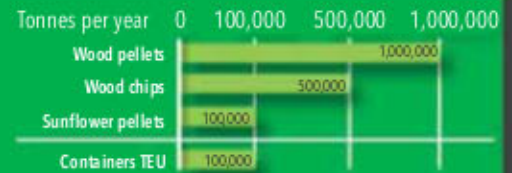
Renewable energy, generated by replenishable resources, like biomass (a by-product of organic material), is becoming a key power source for heavy industries such as mining. The global increase in demand for this power source is down to its low production costs, environmental and regulatory incentive, and if managed properly, a very stable source of clean energy supply. These benefits are very important, as in some industries the cost of energy to produce a product or deliver a service is between 10–30% in many cases in determining failure or success.

The transition from traditional energy sources, such as fossil fuel to renewable resources, opens up interesting opportunities for ports, which are finding creative and effective ways to transport, store and load renewable bulk materials, such as biomass into bulk ships for export.

Riga Universal Terminal (RUT), part of the Portek Group in Latvia, wanted to expand its biomass logistics to a more efficient and environmentally safe operation. After serious considerations of

### Facts about cargo handling by RUT

#### CARGO handled

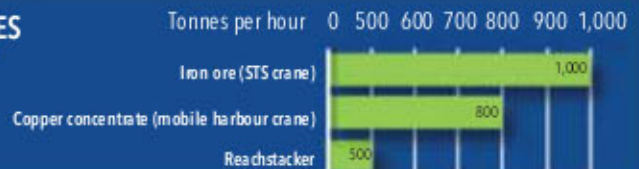


#### MATERIAL HANDLER comparison



### Facts about Revolver<sup>®</sup> loading rates

#### LOADING RATES RAM Revolver<sup>®</sup>





other solutions — and looking beyond the traditional way of bulk handling — it decided on a fairly new, but successful integrated system, called 'Containerized Bulk Handling' (CBH) to handle its biomass wood pellets.

#### THE SOLUTION

Biomass is filled in open top containers at source, or from a shed or stockpile in the port, and taken right to the dock. A rotating spreader hooked to an existing crane then picks up the container and takes it into the ship's hold, where the rotating spreader rotates the container through 360° tipping out the biomass. This operation significantly mitigates environmental issues, such as dust pollution and loss of material. This is a winning solution, right from exporter, the port and the environment.

Terminals which do not have a traditional bulk handling infrastructure or expensive warehouses, conveyor belts and shiploaders, can now use this simple but complete holistic approach to accommodate any type of dried bulk using existing equipment at the port. The open top container is used as a means of transport, storage and loading facility, in conjunction with the rotating spreader.

Through CBH, Portek's innovating management has taken the multi-purpose terminal to new heights of added-value services for its containers, breakbulk, timber and other types of bulk material operations.

#### THE NUMBER

RUT had the option of considering the purchase of a conventional material handler worth €1.3 million, on top of other complimentary equipment, with significantly increased the total operational price. This conventional material handler option provided for a maximum biomass loading rate of 200tph (tonnes per hour).

With the assistance of its Liebherr service and agent partners, RUT included the option of using a rotating spreader called 'RAM Revolver' for Containerized Bulk Handling, which rotates the 45-tonne-capacity container inside the bulk vessel's hold. With a small investment for the rotating spreader, RUT now has higher loading rates, higher annual tonnage and higher profits. This RAM Revolver option provided for a biomass loading rate of up to 600tph. Normal containerized bulk handling cycles per hour on a mobile



## Containerised Bulk Handling with RAM Revolver®

### The revolutionary bulk handling system

**Environmentally Friendly**

**Fast & Efficient**

**Cost Effective**

**Fast to Market**

- For all types of crane  
*Ship to Shore | MHC | Ship | Reach Stacker | Bridge Crane*
- Use existing port equipment  
*as part of the bulk handling process*
- Container as transport & storage  
*conveniently, safely & secure & no stacking*
- Commodities Handled  
*Grains | Mineral Sands | Soya | Wood Chips | Coal  
Scrap Metals | Bagged Materials | Iron Ore | Copper Concentrate*



**Fill**  
AT THE MINE OR FACILITY



**Seal**  
THE CONTAINER



**Transport**  
BY ROAD OR RAIL



**Load Ship**  
WITH RAM REVOLVER®

**RAM**  
SPREADERS

[www.ramspreaders.com](http://www.ramspreaders.com)

harbour cranes are between 20 to 25 cycles.

### THE FUTURE

Although the CBH system, which handles all types of bulk material, is fully operational in many countries — from Australia all the way to Africa, the Americas and the Caribbean — RUT has deployed the very first CBH operation in Europe for the export of biomass. It has therefore set a new benchmark in the bulk handling industry, that is more efficient, environmentally safe and a fast deployment time; all with lower investment than most traditional systems.

Global, regional and also local port operators can now take advantage of the existing traffic of millions of tonnes of

bulks that are available in their own hinterland, without having to invest in new expensive and complex traditional systems such as warehouses, conveyor belts and shiploaders. Everything they need, they already have; with the exception of a



**MHC**  
Crane



**SHIP**  
Crane



**STS**  
Crane



**Bridge**  
Crane



**Reach**  
Stacker

*A Rotating Spreader for every need.*

rotating spreader, which is usually procured by the port, and the right number of containers, which are usually bought or leased by the exporter or logistics provider.

Bulk exporters will no longer have to

transport their product a long way to a port with warehouse facilities, whilst a local multipurpose terminal, with or without harbour cranes, can do the job more efficiently with a total lower cost for everyone.