

RAM **Revolver**™

for Containerized Bulk Handling



Performance Through Innovation



The RAM Revolver® has been developed to provide a safe, efficient and environmentally friendly machine for the exporting and handling of bulk materials.

Designed to work with ship-to-shore, mobile harbour, reach stacker and even ship cranes, the RAM Revolver® uses the same robust design as conventional RAM spreaders. The RAM Revolver® consists of an inner and outer frame, the outer frame attaches to the crane mechanically and electrically.

Why Use a RAM Revolver® ?

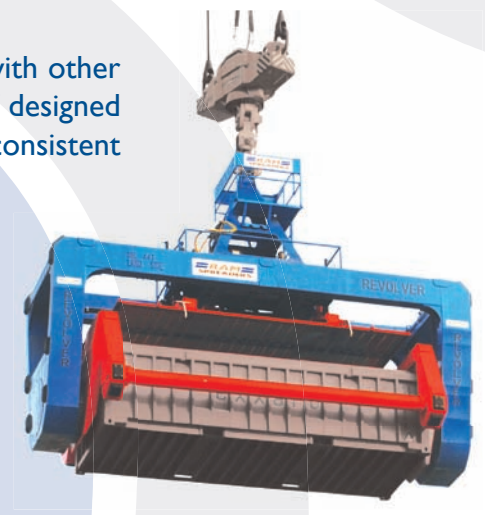
- **Fast to Market:** Short lead times
- **Clean and Green:** Almost zero dust and no stock piles - **Environmental Best Practice**
- **Low Cost:** Use existing container handling equipment and containers as storage
No Building Required
- **Fast:** Can load up to 1000 tonnes per hour

Quality Design and Construction

The RAM Revolver® is designed to DIN 15018 together with other applicable international standards and is tested to 125% of designed load before delivery. Its automated welding ensures consistent quality and stability.

Lid Lifter

To ensure a high level of environmental compliance, RAM has designed a revolver that can remove a lid, rotate and tip the container and replace the lid in one smooth process at the bottom of a ships hatch reducing dust to almost zero.



Twistlock

The floating twistlocks allow the operator to quickly locate and lock the Revolver® onto a container. Proximity switches indicate the locked and unlocked condition of the twistlocks.

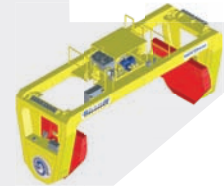
Electrical System

In accordance with IEC/IEEE Regulations and designed to operate at the same voltage as the crane, the Revolver® electrical system is fitted with an on-board logic control system.

The RAM Revolver® uses electrical systems built from high quality components, supplied by leading manufacturers and are readily available from suppliers worldwide.

TECHNICAL DATA

| Model | Container Size | Capacities | Tare Weight | Application |
|-------|----------------|------------|-------------|--------------------------|
| 4111 | 20ft | 38t SWL | 12.0t | For ship-to-shore crane |
| 4112 | 40ft | 38t SWL | 17.0t | For ship-to-shore crane |
| 4121 | 20ft | 45t SWL | 15.0t | For mobile harbour crane |
| 4131 | 20ft | 35t SWL | 8.0t | For ship crane |
| 4141 | 20ft | 38t SWL | 10.0t | For reach stacker |



Operational Speeds

Function

| | |
|-----------------------|---------|
| Twistlock | 1.5 sec |
| Rotation through 360° | 30 sec |
| Gripper | 7 sec |

OPTION FEATURES

RAM Revolver® offers a wide range of options to provide the most productive revolver specifications, including:

On-Board PLC

RAM Revolver® can be fitted with an on-board PLC for logic control and a simplified control system.

Height Monitoring System

A valuable safety and productivity feature, signalling to the crane operator when the spreader is approaching the top of the pile or wharf.

Container Side Support

Additional protects the bulk handling container during the rotation of bulk into the ships hatch.



RAM Spreaders continues to develop its product range, both in response to customer expectations and in anticipating future developments. With such a wide range of spreader models and options we can meet the needs of most terminal operators but we're always happy to develop bespoke solutions to deliver the most effective and practical container handling solution.

RAM Spreaders is the world's leading independent, dedicated specialist spreader manufacturer. The company has manufacturing facilities in China; service and repair centres in Singapore, UK and Germany; and sales and after-sales service support throughout Asia, Americas, Europe, Middle East and Africa.

PRODUCT RANGE

A comprehensive range of product for:

- Ship-to-Shore Cranes
- Yard Stacking Cranes
- Mobile Harbour Cranes
- Straddle Carrier

Product range includes:

- Electro-Hydraulic Spreaders (Single and Twinlift)
- All-Electric Spreaders (Single and Twinlift)
- Revolver® / Rotating Spreaders
- Light Weight Spreaders
- Overheight Spreaders
- Twin40 Headblock



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