

# **RAM** **SPREADERS**

## **3400 & 3500 series**

**All Electric Telescopic Spreaders  
for Container Lifting Cranes**



**Performance Through Innovation**



The RAM 3400 and 3500 series of All-Electric Telescopic Spreaders bring innovative standards of reliability, low maintenance and performance to container handling with the RAM 3400 series spreaders designed for ship-to-shore cranes and RAM 3500 for yard stacking cranes.

The use of electrical drives and components eliminate hydraulic systems, improve uptime and provide a safer, more environmentally friendly operation.

Designed to handle 20ft, 40ft and 45ft containers, the 3400 and 3500 series provide telescopic handling flexibility for containers up to 40 tonnes with a lightweight version available in the 3500 series.

### **Quality Design and Construction**

All RAM spreaders are designed to DIN 15018 and to other applicable international standards. Twin double box centre section, internally stiffened telescoping beams and steel wear plates on end beams are just some of the reasons why the 3400 and 3500 series are built to last and minimise downtime. Automated welding ensures consistent quality and all RAM spreaders are tested to 125% of designed load before delivery. Motors and gearboxes are mounted on the end beams in well protected locations, readily accessible for maintenance.

### **Flipper / Gather Guides**

The 3400 series spreaders for ship-to-shore cranes are fitted with electric retractable flippers on each corner as standard. The flipper design helps gather the container smoothly and absorb the impact between the spreader and container.

The 3500 series spreaders for yard stacking cranes are fitted with four fixed guides as standard.

### **Twistlocks**

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

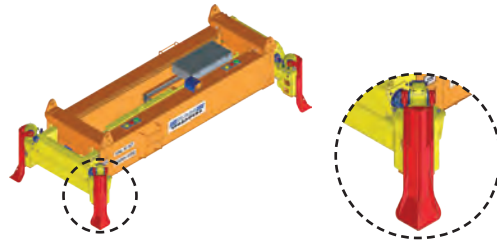
### **Electrical System**

The spreader electrical system is designed to operate at the same voltage as the crane and is in accordance with IEC/IEEE Regulations. The spreader is designed with an on-board logic control system. An enclosure is fitted to the centre section from where cables run to the various electrical components on the spreader. A multi-pin electrical socket is fitted to one side of the enclosure to accept the multi-pin plug from the headblock. Electrical control and overload protection is installed in the enclosure for the spreader's electrical system. All RAM spreaders use electrical systems built from high quality components supplied by leading manufacturers and are readily available from suppliers worldwide.

**TECHNICAL DATA**

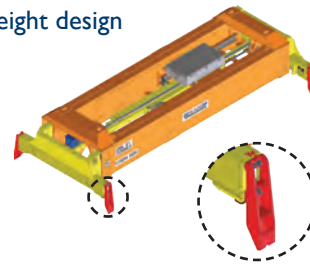
**3400 series for ship-to-shore cranes with flipper arms**

Model	Container Size	Capacities	Tare Weight
3410	1 x 20ft / 40ft	40t SWL	9.5t
3420	1 x 20ft / 40ft / 45ft	40t SWL	10.0t



**3500 series for yard stacking cranes with fixed guides**

Model	Container Size	Capacities	Tare Weight	Applications
3510	1 x 20ft / 40ft	40t SWL	6.8t	Lightweight design
3520	1 x 20ft / 40ft / 45ft	40t SWL	7.8t	Lightweight design
3530	1 x 20ft / 40ft	40t SWL	8.5t	
3540	1 x 20ft / 40ft / 45ft	40t SWL	9.0t	



**Operational Speeds**

Function		Power Rating	
Twistlock	1.5 sec	Telescopic System	3.7 kW
Flipper	5 sec	Twistlock	2 x 0.4 kW
Telescopic - 20ft ~ 40ft	28 sec		
Telescopic - 20ft ~ 45ft	34 sec		



**OPTION FEATURES**

RAM Spreaders offers a wide range of options to provide the most productive spreader specifications, including:

**ASi Communications**

All spreader functions are controlled by ASi communications. The ASi system simplifies the installation of electrical components, provides efficient diagnostics and makes it easy to feed data to the crane's control system. It can be fitted with a controller on the spreader or can be extended back to the crane.

**On-Board PLC**

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

**Twin Twenty Container Detection System**

Ensures that the operation cannot handle two 20ft container instead of a 40ft container.

**Height Monitoring System**

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



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)
- Light Weight Spreaders
- Overheight Spreaders
- Twin40 Headblock
- Revolver® / Rotating Spreaders
- PinSmart (Automated Twistlock Handling Machine)

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Printed on April 2014

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