

RAM **SPREADERS**

2400 & 2500 series

**Telescopic Spreaders
for Container Lifting Cranes**



Performance Through Innovation



The RAM 2400 and 2500 series of Telescopic Spreaders bring innovative standards of reliability, low maintenance and performance to container handling with the RAM 2400 series spreaders designed for ship-to-shore cranes and RAM 2500 for yard stacking cranes.

The spreaders can be designed to interface with new or existing crane headblocks and electrical communication systems.

The spreaders are electro-hydraulically operated with all functions of the spreader controlled from the crane operator's cabin.

The range of models provide safe working loads of between 35 and 50 tonnes and capable of handling 20ft/40ft/45ft containers.

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 2400 and 2500 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 2400 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 2500 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.

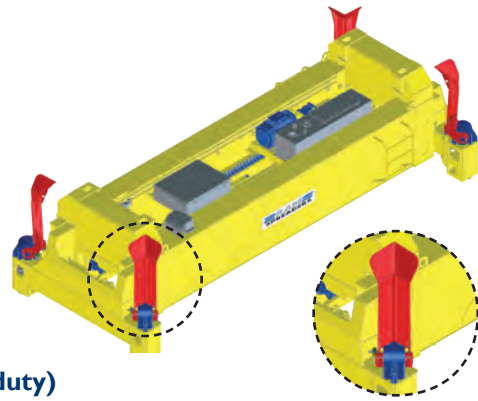
Electrical System

The electrical system of the spreader 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

2400 series for ship-to-shore cranes with flipper arms (heavy duty)

| Model | Container Size | Capacities |
|-------|------------------------|------------|
| 2410 | 1 x 20ft / 40ft | 35t SWL |
| 2420 | 1 x 20ft / 40ft / 45ft | 40t SWL |
| 2430 | 1 x 20ft / 40ft | 40t SWL |
| 2440 | 1 x 20ft / 40ft / 45ft | 50t SWL |

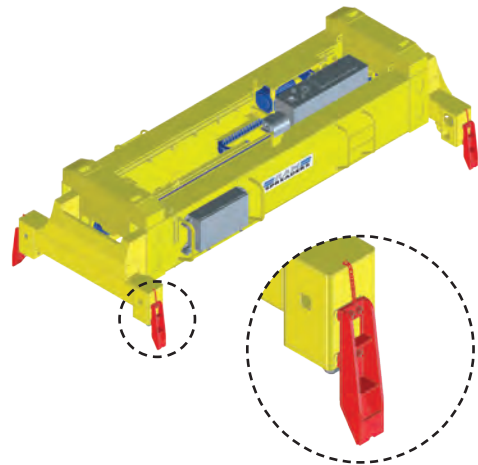


2400 series for yard stacking cranes with flipper arms (light duty)

| Model | Container Size | Capacities |
|-------|------------------------|------------|
| 2450 | 1 x 20ft / 40ft / 45ft | 40t SWL |
| 2460 | 1 x 20ft / 40ft | 40t SWL |

2500 series for yard stacking cranes with fixed guides

| Model | Container Size | Capacities |
|-------|------------------------|------------|
| 2510 | 1 x 20ft / 40ft | 35t SWL |
| 2520 | 1 x 20ft / 40ft / 45ft | 40t SWL |
| 2530 | 1 x 20ft / 40ft | 40t SWL |
| 2540 | 1 x 20ft / 40ft / 45ft | 50t SWL |



Operational Speeds

| Function | Speed | Power Rating |
|--------------------------|---------|---|
| Twistlock | 1.5 sec | Power 7.5kW or 11.0 kW (depending on spreader model) |
| Flipper | 5 sec | |
| 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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