

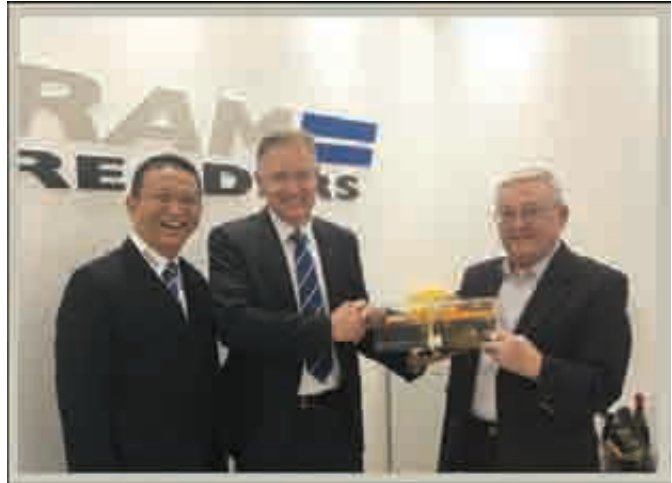
RAM **SPREADERS**

**World Leading Lifting Accessories Supplier
for Bulk & Container Handling**



Performance Through Innovation

RAM Spreaders' ancestral roots began back in 1876 as Ed Mills & Son, a blacksmith company in Liverpool, England. The Mills family ran the business with success and during the 1970's further diversified its business interests into container handling equipment with the then Director of Ed Mills & Son, Mr. Robert A. Mills. The name RAM represents the initials of Robert A. Mills whilst being synonymous with strength, power and reliability.



Robert A. Mills (RAM Founder) on his retirement day with Sebastian Brandes (Group CEO) and Philip Lee (RAM CEO)

In 1992, NSL Engineering, a subsidiary of NSL Ltd, acquired RAM Spreaders as part of the company's business diversification.

Over the years, RAM Spreaders has successfully established itself as a reputable brand name in the container handling industry through strategic market penetration and innovative product development. Currently, RAM products are present in more than 65 countries, across all continents.

In May 2015, NSL's RAM Spreaders business merged with the grab business of Salzgitter Maschinenbau AG (one of the world's leading cargo grab manufacturers and the leading shipboard crane grab builder) under a joint venture arrangement through PEINER SMAG Lifting Technologies GmbH. With the merger, the Group is currently the world's leading lifting accessories supplier and global market leader in both bulk cargo and container handling industries.

Design, Product Development and Production

RAM's Design and product development continue to take place in the Singapore Head Office and a production plant of 64,000m² land areas in Changshu China for maximum flexibility and responsiveness to meet customers' needs. The Changshu plant has been in operation since 2005 and is equipped with the latest production techniques and world class quality control system.

Global After-Sales Service and Spare Parts Support

RAM has a well-established global network, providing after-sales services and spare parts support by qualified engineers from our main offices in Singapore, UK, Germany and service centers in East / West Coast America, South America, Middle East and Africa. RAM also provides extensive formal and practical training available both on-site and in workshop to equip our customers with product knowledge necessary to carry out routine maintenance which is important for the spreaders' safety reliability and performance.



RAM Spreaders are designed to operate on ship-to-shore cranes, yard stacking cranes, jib cranes, mobile harbour cranes, straddle carriers, reach stackers and front loaders. Models include fixed or telescopic operation, single or twinlift and overheight spreaders as well as hook beams, rotators and headblocks.

RAM CenterSpread® Spreaders

Twinlift CenterSpread® spreaders can either handle two 20ft containers with centerspreading capabilities or a single container up to 45ft in length. The twinlift housings can be deployed when required for twinlift operation. In twinlift mode, the spreader memory positioning system will ensure the centerspreading gap is stored and repeatable. ASi two-wired electrical communication and control system is standard on this range of spreader equipped with numerous advance and complex features which are beyond what the traditional hard wiring electrical system can handle.



RAM Twin40 Headblocks

The Twin40 Headblocks design brings outstanding performance, control and versatility to twin 40ft, 45ft or 4x20ft containers handling. There are two systems developed: RAM SingFlex™ for single-hoist crane and RAM DualFlex™ for dual-hoists crane. The RAM SingFlex™ headblock system provides a new operational dimension to the traditional single-hoist crane. Without the capital investment need for dual-hoists crane, the traditional single-hoist crane, equipped with RAM SingFlex™ headblock system can equally match the operation flexibilities with lower cost.

RAM All-Electric Spreaders

RAM all-electric spreaders provide a cost effective, low maintenance and environmentally friendly alternative to establish electro-hydraulic spreader design. Powered by electric drives, the all-electric designs eliminates the need for hydraulic systems. They are very quiet and energy efficient requiring less maintenance and servicing.

RAM PinSmart®

RAM PinSmart® is an automated twistlock handling machine for handling a wide range of container twistlocks in a container terminal. Designed to handle 20ft, 40ft, 45ft and twin 20ft containers, the RAM PinSmart® machine reduces injuries, improves productivity and reduces cost by automating dangerous manual task.

RAM Revolver®

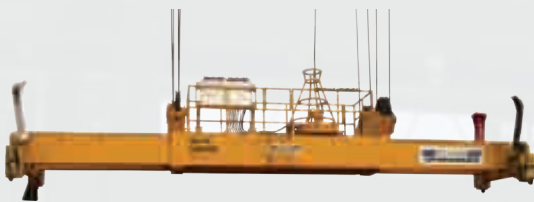
RAM Revolver® is a safe, efficient and environmentally friendly spreader for the exporting and handling of bulk material. It can be designed to work with Ship-to-Shore cranes, mobile harbour cranes, ship cranes or even lift trucks. RAM Revolver® consists of an inner and outer frame. The inner frame locks onto the container and rotates it using a patented RAM drive system.



2400 series

Electro-hydraulic telescopic spreaders

Model	Container sizes	Capacities
2410	1 x 20ft / 40ft	35 tons
2420	1 x 20ft / 40ft / 45ft	41 tons
2430	1 x 20ft / 40ft	41 tons
2440	1 x 20ft / 40ft / 45ft	51 tons



3400 series

All electric telescopic single lift spreaders

Model	Container sizes	Capacities
3410	1 x 20ft / 40ft	41 tons
3420	1 x 20ft / 40ft / 45ft	41 tons



2900 series

Telescopic twinlift spreaders with CenterSpread®

Model	Container sizes	Capacities	CenterSpread®
2920	1 x 20ft / 40ft / 45ft 2 x 20ft	41 tons 2 x 25 tons	0 - 1600mm
2930	1 x 20ft / 40ft / 45ft 2 x 20ft	41 tons 2 x 32.5 tons	0 - 1600mm
2940	1 x 20ft / 40ft / 45ft 2 x 20ft	51 tons 2 x 32.5 tons	0 - 1600mm



3900 series

All electric telescopic twinlift spreaders with CenterSpread®

Model	Container sizes	Capacities	CenterSpread®
3920	1 x 20ft / 40ft / 45ft 2 x 20ft	41 tons 2 x 25 tons	0 - 1600mm
3930	1 x 20ft / 40ft / 45ft 2 x 20ft	41 tons 2 x 32.5 tons	0 - 1600mm
3940	1 x 20ft / 40ft / 45ft 2 x 20ft	51 tons 2 x 32.5 tons	0 - 1600mm

2500 series

Electro-hydraulic telescopic spreaders

Model	Container sizes	Capacities
2510	1 x 20ft / 40ft	35 tons
2520	1 x 20ft / 40ft / 45ft	41 tons
2530	1 x 20ft / 40ft	41 tons
2540	1 x 20ft / 40ft / 45ft	51 tons

with option of Gather Guides



3500 series

All electric telescopic single lift spreaders

Model	Container sizes	Capacities	Application
3510	1 x 20ft / 40ft	41 tons	Light weight structure
3520	1 x 20ft / 40ft / 45ft	41 tons	Light weight structure
3530	1 x 20ft / 40ft	41 tons	Heavy duty structure
3540	1 x 20ft / 40ft / 45ft	41 tons	Heavy duty structure



2900 series

Telescopic twinlift spreaders with CenterSpread®

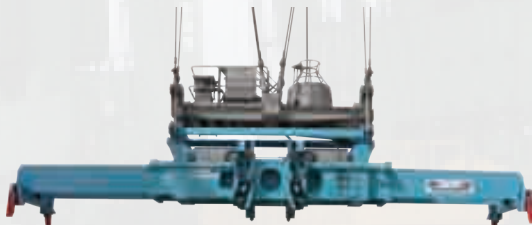
Model	Container sizes	Capacities	CenterSpread®
2950	1 x 20ft / 40ft	41 tons	0 - 800mm
	2 x 20ft	2 x 25 tons	
2960	1 x 20ft / 40ft	41 tons	0 - 800mm
	2 x 20ft	2 x 32.5 tons	
2970	1 x 20ft / 40ft / 45ft	51 tons	0 - 800mm
	2 x 20ft	2 x 32.5 tons	
2980	1 x 20ft / 40ft / 45ft	51 tons	0 - 1600mm
	2 x 20ft	2 x 32.5 tons	



3900 series

All electric telescopic twinlift spreaders with CenterSpread®

Model	Container sizes	Capacities	CenterSpread®
3950	1 x 20ft / 40ft	41 tons	0 - 800mm
	2 x 20ft	2 x 25 tons	
3960	1 x 20ft / 40ft	41 tons	0 - 800mm
	2 x 20ft	2 x 32.5 tons	
3970	1 x 20ft / 40ft / 45ft	51 tons	0 - 800mm
	2 x 20ft	2 x 32.5 tons	





2700 series

Electro-hydraulic single lift / twinlift spreaders for mobile harbour crane

Model	Container sizes	Capacities	Centre of gravity adjustment
2710	1 x 20ft / 40ft	35 tons	±1200mm
2720	1 x 20ft / 40ft / 45ft	41 tons	±1200mm
2730	1 x 20ft / 40ft	41 tons	±1200mm
2740	1 x 20ft / 40ft 2 x 20ft	41 tons 2 x 25 tons	±1200mm
2750	1 x 20ft / 40ft / 45ft 2 x 20ft	41 tons 2 x 32.5 tons	±1200mm
2760	1 x 20ft / 40ft / 45ft 2 x 20ft	51 tons 2 x 32.5 tons	±2100mm



1700 series

Telescopic spreaders for small moving vehicles

Model	Container sizes	Capacities	Application
1730	1 x 20ft / 40ft	45 tons	For straddle carriers
1740	1 x 20ft / 40ft	45 tons	For reach stackers



Model 2220

Telescopic overheight spreaders with automatic latching

Container sizes	Capacities
1 x 20ft / 40ft / 45ft	51 tons

Model 3350

Twin40 headblocks for single hoist container lifting cranes

Operation Mode	Equipment	Container Size	Capacities
Single Spreader	Master headblock	1 x Hatch cover	41 tons
		1 x 20ft	32.5 tons
		1 x 40ft / 45ft	51 tons
		2 x 20ft	2 x 32.5 tons
Twin Spreader	Master or slave headblock	1 x Hatch cover	41 tons
		1 x 20ft	32.5 tons
		1 x 40ft / 45ft	41 tons
		2 x 20ft	2 x 32.5 tons
	Master and slave headblock	2 x 20ft	2 x 32.5 tons
		2 x 40ft / 45ft	2 x 41 tons
		4 x 20ft	4 x 20 tons



4000 series

PinSmart®, automatic twistlock handling machine

Model	Container sizes	Capacities
4010	1 x 20ft / 40ft/ 45ft 2 x 20ft	Discharge - Fully automated Load - 75% reduction in work
4020	1 x 20ft / 40ft / 45ft 2 x 20ft	Discharge - Fully automated Load - 75% reduction in work Fixed to crane Movable bogey



4100 series

Revolver® for containerized bulk handling

Model	Container sizes	Applications
4111	1 x 20ft	For ship-to-shore crane
4112	1 x 40ft	For ship-to-shore crane
4121	1 x 20ft	For mobile harbour crane
4131	1 x 20ft	For ship crane
4141	1 x 20ft	For reach stacker



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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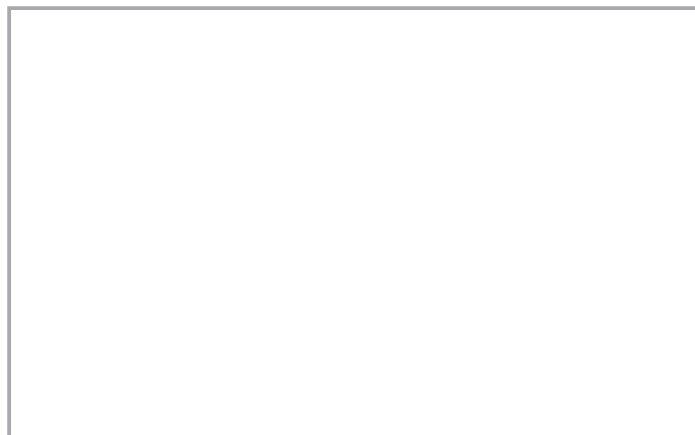
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Lifting Technologies

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