

MULTIPLE RAIL HANDLING DEVICES

Specification Document



Options and Specifications for Fixed and Adjustable Multi-Rail Handlers

Issue I

August 2022

Contents

Introduction	3
MRH14 Fixed Type Multi-Rail Handlers	4
MRL18 Adjustable Type Multi-Rail Handlers	6
Contact Details	9

Issue Record

First Issue	August 2022
-------------	-------------

Introduction

Loading and unloading large numbers of rails in rail stock yards, dockside operations and rail welding plants is made much quicker, safer and more efficient using Multi-Rail Handlers from Thomson Engineering Design.

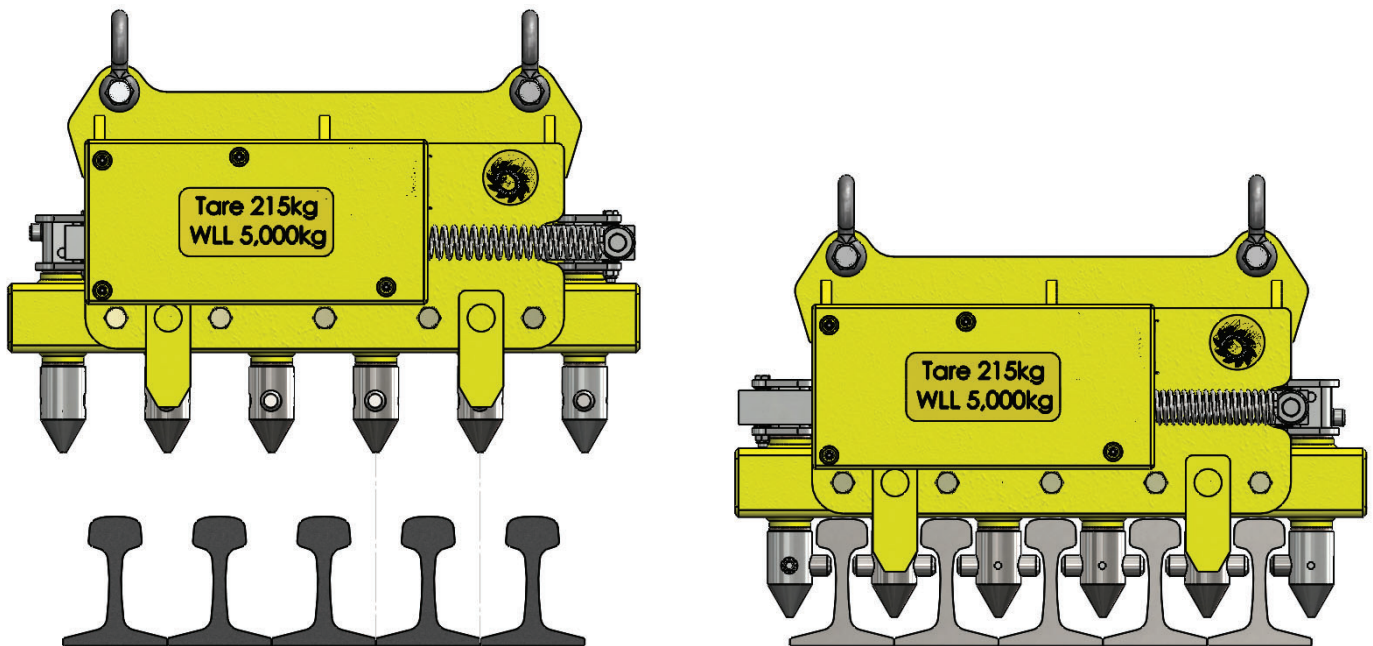
With two types - fixed and adjustable - and four actuation systems - manual, hydraulic, electric and pneumatic - together with capacities ranging from 2 rails to 12 rails (fixed type) or 2 rails to 6 rails (adjustable type) and options including status detection switches, indicator flags and combining beams, more than 1,000 individually tailored rail handling solutions are available.

MRH14 fixed type Multi-Rail Handlers are tailored to the width of the rail foot and so can only be used with a small range of different rail sections. They are more tolerant of dirty and dusty environments and are slightly more robust than the MRL18 adjustable types making them the go-to choice for the harshest environments - rail welding plants and dock yards for example.

Adjustable types can be used to handle rails with a range of different foot widths making them the first choice as a general purpose rail bundle handler, for example in rail stock yards. Setting these units for different rail widths takes just a few minutes and does not require tools but they are limited to a maximum of six rails per unit. Where more rails must be handled with each lift, special combining beams allow multiple units to be linked together.

Thomson Engineering Design can also provide spreader beams to carry a number of Multi-Rail Handlers to support rails of any length. Normally the handlers are installed at 6m to 12m intervals along the length of the spreader beam - depending on the stiffness of the rail sections to be handled.

This document is intended to showcase the breadth of the range of options available for bulk rail handling but we recommend discussing individual projects with our application engineers who will be pleased to advise on the best solution.



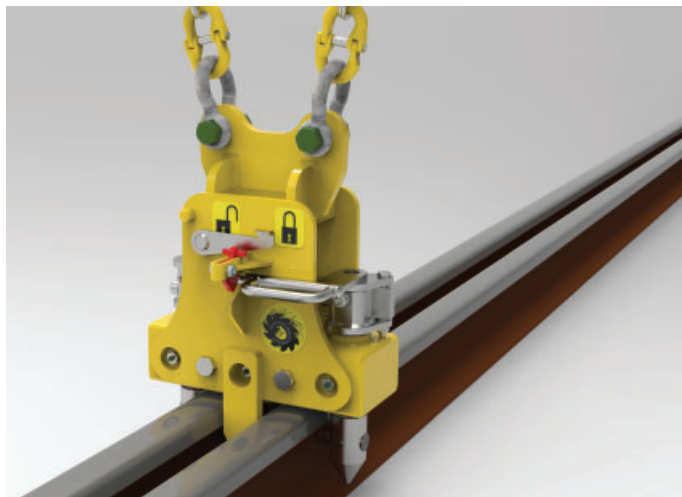
To lock safely into the rails, the spacing of the locking shafts of the rail handler must match the width of the rail foot. On MRH14 units the spacing is fixed, on MRL18 units the spacing is adjustable.

MRH14 Fixed Type Multi-Rail Handlers

MRH14 manual units are double locked for security with the actuator handle held in place by a gate latch and the mechanism also secured by a secondary mechanical locking system.

All MRH14 units have two chain attachment points for stability.

All types of MRH14 units can be specified to lift any number of rails from 2 to 12 and for any rail foot width.



Electrically operated MRH14 Rail Handlers use a 24V DC motor driving a screw actuator to open and close the mechanism.

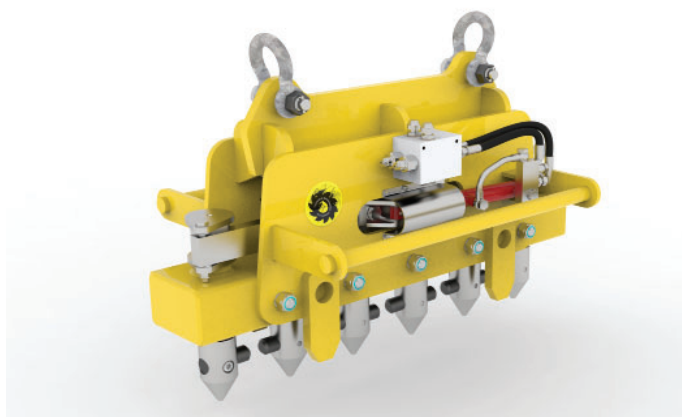
IP67 sealed detector switches can be installed in all MRH units to give an 'open' and 'closed' signal to the control system where required.

Hall effect rail detectors can also be specified which give a signal to tell the control system that the unit is resting on the rails and ready to be actuated.



Hydraulically actuated MRH14 units have a pilot operated check valve on the cylinder to lock the mechanism in the event of a burst hose or other hydraulic system failure.

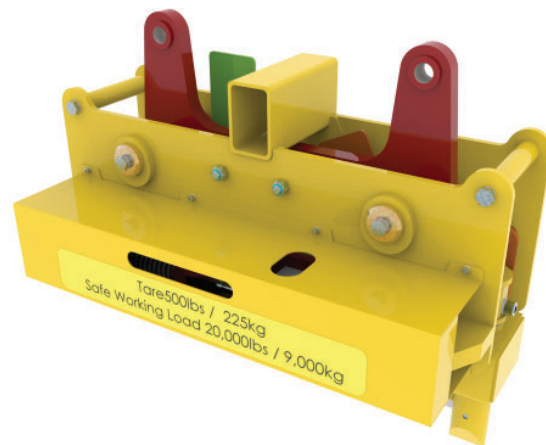
These units also incorporate a pressure control system to protect the mechanism from over pressurisation and a secondary mechanical lock built in.



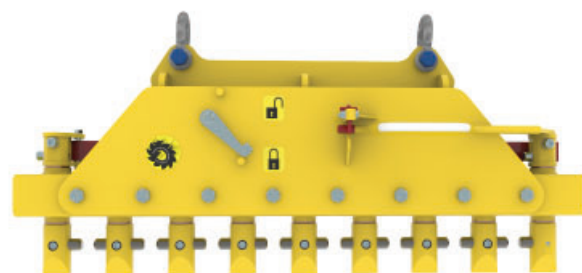
This pneumatically operated 5-Rail MRH 14 unit has been specified with the mechanical 'green flag' indicator which provides a visual indication that the unit has locked onto the rails.

This unit also features a 'parachute' valve which disconnects the cylinder from the air supply when the unit is lifted preventing accidental actuation during the lifting operation.

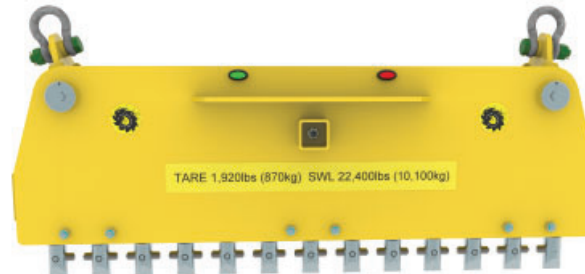
Parachute valve systems can also be specified on hydraulic units.



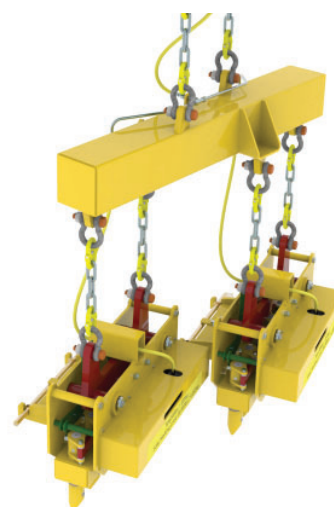
This basic manually operated MRH14 is suitable for lifting 8 rails at a time.



This 12-rail electrically actuated MRH14 has the optional detector switches but in this case they power red and green warning lamps mounted on the unit itself.



Combining beams allow multiple MRH14 units to be linked for handling multiple rail bundles.

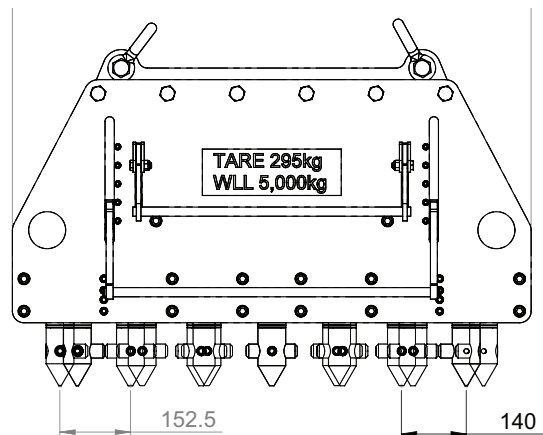


MRL18 Adjustable Type Multi-Rail Handlers

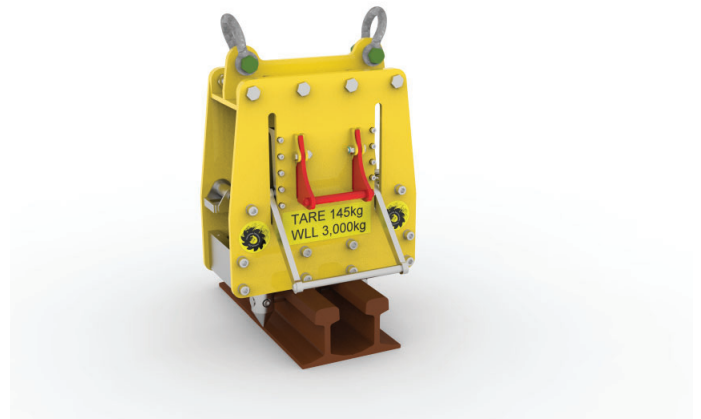
Adjusting the distance between the rail locking shafts allows the MRL18 units to be used with a broad range of running rail sections.

This unique feature makes these units the ideal solution for rail stock yards and similar applications where many different rail types have to be handled.

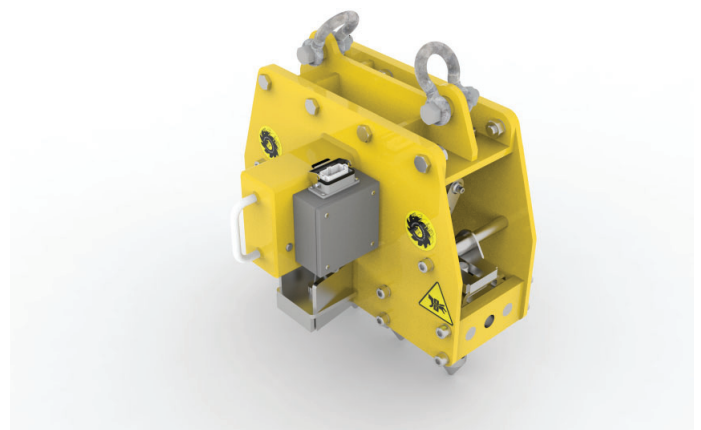
Adjusting the shaft spacing is accomplished in under two minutes and requires no tools.



Manually actuated MRL18 units have a double lock system to ensure complete safety of operation. To release the rails the red lock handle is used to unlock the mechanism then the zinc plated actuator handle is lifted to turn the lock shafts and release the rails.



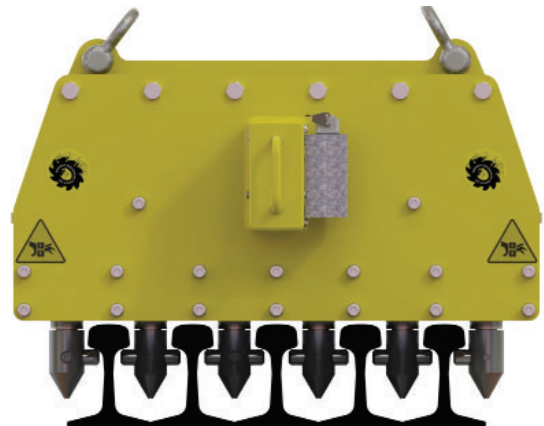
MRL18 units can be specified with manual, hydraulic, pneumatic or electric operation (shown here). All the optional equipment including detector switches, Hall effect sensors and warning systems can also be specified.



MRL18 Multi-Rail Handlers can be specified in 2, 3, 4, 5 or 6-Rail sizes.



As with the MRH14 units the rail is secured with twist-lock shafts which have hardened steel pegs bearing on the under side of the rail heads to lift the rails.

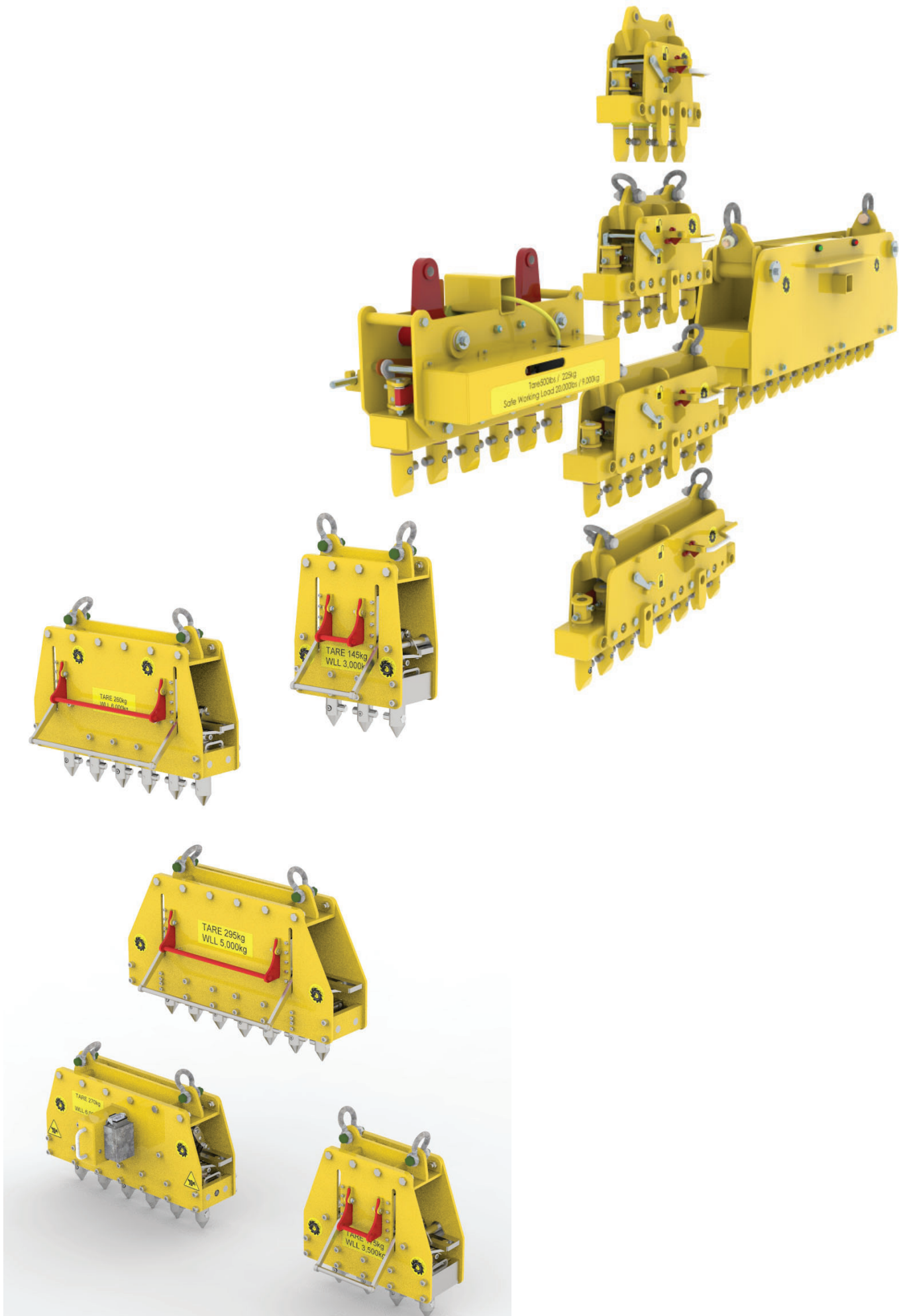


Custom made spreader beam systems can be supplied to cope with any length of rail and type of crane.



Although MRL18 units can only be specified for up to 6 rails, multiple MRL18 units may be used to lift larger numbers of rails when combining beams are added to the specification.





Contact Details

A *ll technical and sales enquiries should be directed to Thomson Engineering Design.*

**Thomson Engineering Design Ltd
Units 2a & 3 Crabtree Road
Cinderford
Gloucestershire
UK
GL14 2YN**

Tel: +44 (0) 1594 82 66 11

**Email: sales@thomsondesignuk.com
 technical@thomsondesignuk.com**

PLEASE NOTE

Whilst every care is taken to ensure that the contents of this document are true and accurate, the specifications of our products and the scope of our services are constantly changing as part of our policy of continuous improvement.

We strongly recommend contacting the factory to ensure that details given are still current.

More than half our business comes from special products designed and built as one-offs and we are always pleased to discuss amended specifications should the product detailed here not meet your exact requirements.

