On-track Plant Attachment Handbook
About this Handbook

This handbook has been issued as a general guide for the range of attachments which are available for On-Track Plant (OTP) used on the Network Rail Managed Infrastructure.

The handbook gives brief details of attachments, their scope of use, and any limitations in use, technical details, approval reference numbers where these are available and the competency requirements required to operate the equipment.

Examples of widely available attachments have been included; however there may be other types of OTP attachments which have not been included.

Anyone can propose the inclusion of new attachment or an amendment to existing attachments’ details. Please contact the Technical Services Plant team for advice. The contact details are given below.

This handbook will be regularly reviewed by the Professional Head [Plant & T&RS] and updated to include new information relating to OTP attachments.

Disclaimer

This document is issued for information purposes only.

Network Rail makes no warranties that the attachments included in this document are the most suitable for a particular type of work activity, or the only types which are available.

Inclusion of an attachment in this document should not be construed as an endorsement of that product by Network Rail, nor does gives it any preferred status.

It is the responsibility of the owner/user of an attachment to ensure that it has the attained any required product or engineering acceptance certification. In addition, the equipment must be suitable for the work to be carried out and has been maintained to the manufacturers’ recommendations.

Users are also reminded of their own duties under UK Health and Safety legislation.

Supply

Copies of documents are available electronically, within Network Rail’s organisation.

Hard copies of this document will be made available to Network Rail staff and other external organisations on request to the Professional Head [Plant & T&RS].

Version Control

Each section of the handbook has its own issue status and only new or amended sections will be issued along with an updated contents list.
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### Summary of Approval and Competency Requirements

**Competencies Key:**
- ★ Machine Controller
- ★ Crane Operator Licence
- ★ Other

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<tr>
<th>Competency Module No.</th>
<th>Description</th>
<th>Product Approval</th>
<th>Engineering Acceptance RIS-1530-PLT</th>
<th>Other Approvals</th>
<th>Competencies</th>
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<td>OTPA-7</td>
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- ◆ Machine Controller
- ■ Crane Operator Licence
- ★ Other

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<td>OTA-26</td>
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# Access Platforms

<table>
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<td>Chieftain - Merlo - Access Platform</td>
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<td>OTPA-1-2</td>
<td>LH Technology - LH 400 - Access Platform</td>
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<td>Rail-Ability - Rail-Reach III - Platform</td>
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<td>OTPA-1-5</td>
<td>Rail-Ability - Rail Boss Railreach Platform</td>
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<td>OTPA-1-6</td>
<td>SRS - Scissor &amp; Boom Module Platform</td>
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<td>OTPA-1-7</td>
<td>SRS - Bridge Inspection Platform</td>
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</table>
The Chieftain Access Platform has a 1.8 metre platform and has a load carrying capacity of 225 kg.
Typically, it can lift two people and their tools safely to a maximum platform working height of 6.4 metres with a maximum outreach of 7.5 metres.
Full control of the machine from the platform is possible from the console in the basket.

Scope of Use

Working Platform

Competencies

Machine Controller, Crane Controller &
NR/CTM/OTPA/01 - Operate Attachment Access Platform (MEWP)

Product Approval No.

-

Risk Control Sheet No(s).

NR/L3/MTC/RCS0216/MP01 and MP07
OTA-1-1  
Access Platform

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

It shall NOT be used under live OLE or on live conductor rail lines.

Permitted speed - Maximum 5mph (8km/h).

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

The attachment must NOT be disconnected from excavator whilst on track.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook.

Additional documents may include:

Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

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<th>Parameter</th>
<th>Specification</th>
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<tr>
<td>Platform Size</td>
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<tr>
<td>Platform Capacity</td>
<td>225 kg (Max.)</td>
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<tr>
<td>Working Height</td>
<td>8 m (Max.)</td>
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<tr>
<td>Platform Rotation</td>
<td>+/- 95°</td>
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<tr>
<td>Max. Rail Speed Platform Controlled</td>
<td>1.2 m/s</td>
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<tr>
<td>Outreach Max.</td>
<td>7.5 m</td>
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<tr>
<td>Maximum Rail Gradient</td>
<td>1 in 25</td>
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<tr>
<td>Maximum Rail Cant</td>
<td>150 mm (6 °)</td>
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<tr>
<td>Max. Slew Speed - Platform Controlled</td>
<td>0.5 m/s</td>
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<tr>
<td>Max. Basket Raising / Lowering - Platform Controlled</td>
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### OTPA-1-2 Access Platform

**Manufacturer**

LH Access Technology

**Model**

LH 400 - 9/6

**Description**

LH Access Technology manufacturer the U400 Unimog with the LH 400 9/6 mobile elevating working platform attachment module. The platform boom can rotate 180° and it is fitted with 360° rotating basket. The boom can work throughout its full range on rail without the use of stabilisers and mechanical slew locking is fixed to allow for adjacent line working.

The Access Platform has a 2.2 metre platform has a capacity of 400 kg. Typically, it can lift three people and their tools safely to a maximum platform working height of 10 metres with a maximum outreach of 6.5 metres.

Full control of the machine from the platform is possible from the console in the basket.

**Scope of Use**

Working Platform

**Competencies**

Machine Controller, Crane Controller & NR/CTM/OTPA/01 - Operate Attachment Access Platform (MEWP)

**E.A. Cert. No.**

-

**Risk Control Sheet No(s)**

NR/L3/MTC/RCS0216/MP01 and MP07
OTA-1-2 Access Platform

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

1. It shall only operate inside possessions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. It shall NOT be used on live conductor rail lines
4. Working mode - Maximum track cant 180mm and/or 1 in 29 gradients.
5. Permitted speed - Maximum 5mph (8km/h).
6. Staff shall be briefed on the safe operation of the machine prior to its use.
7. The limitations of the RRV to which the machine is attached shall apply.
8. The must NOT be disconnected from RRV whilst on track.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook.

Additional documents may include:

Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification:

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<td>Platform Capacity</td>
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<td>Max. Rail Speed Platform Controlled</td>
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<td>6.5 m</td>
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<td>Maximum Rail Cant</td>
<td>150 mm (6 °)</td>
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<td>Maximum Rail Gradient</td>
<td>1 in 25</td>
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<tr>
<td>Max. Slew Speed - Platform Controlled</td>
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<tr>
<td>Max. Basket Raising / Lowering</td>
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<tr>
<td>Platform Controlled</td>
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</table>
Manufacturer: Rexquote

Model: 14MBX Access Railer

Description
The 14MBX Access Railer is based on the Mecalac 14MBX with a special purpose boom configuration and de-mountable access platform.

It is designed to operate in a railway environment for the access and repair of elevated structures. It can lift two people plus their tools in the platform to the full extent of the machine’s outreach on rail track.

Full control of the machine from the platform is possible from the console in the basket.

The cab controls are modified to address the interlocking and safety aspects of the complete machine. Additional controls allow low speed travel and full arm operation from the platform. These cut out the cab controls when in platform mode.

Scope of Use: Working Platform

Competencies
Machine Controller, Crane Controller & NR/CTM/OTPA/01 - Operate Attachment Access Platform (MEWP)

E.A. Cert. No.: NR/L3/MTC/RCS0216/MP01 and MP07

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01 and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

It shall not be used under live OLE or on live conductor rail lines.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

The attachment must NOT be disconnected from excavator whilst on track.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Engineering Acceptance Certificate (including Limitations of Use) and Logbook.

Additional documents may include:

Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Brake Test Certificates, Load Radius Charts (duty charts) etc.

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<td>Maximum Rail Cant</td>
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<td>Max. Wind speed for Platform Use</td>
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</tr>
<tr>
<td>Maximum Slew Speed - Platform Controlled</td>
<td>0.5 m/s</td>
</tr>
<tr>
<td>Max. Basket Raising / Lowering - Platform Controlled</td>
<td>0.2 m/s</td>
</tr>
</tbody>
</table>
### Manufacturer
Rail-Ability Ltd

### Model
Rail-Reach III

### Description
The Rail-Reach III Mobile Elevating Working Platform (MEWP) module is designed with twist locks that allow for quick fitting to the base truck, a Rail-Ability hybrid MAN TGM 4 x 4 fitted with Rail-Ability rail guidance gear. The rail gear complies with RIS1530PLT and there is optional control to operate a Crane and Drum carrier from the Platform.

A double knuckle boom manipulator crane with a manipulator grab and/or winch facility in front of the Rail-Reach boom on the MEWP modules is an optional and recommended feature for handling OLE structure components.

The MEWP module is fitted with hydraulic stabiliser legs for enhanced duties when the free on rail mode is not required, which also enhance the module mounting and demounting procedure.

### Scope of Use
Working Platform

### Competencies
Machine Controller, Crane Controller & NR/CTM/OTPA/01 - Operate Attachment Access Platform (MEWP)

### Product Approval No.
-  

### Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01-03, MP06, and MP07

### Supplier
A P Webb
OTPA-1-4 Access Platform

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. It shall only operate inside possessions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. It shall NOT be used on live conductor rail lines
4. Working mode - Maximum track cant 150mm and/or 1 in 25 gradients.
5. Permitted speed - Maximum 5mph (8km/h).
6. Staff shall be briefed on the safe operation of the machine prior to its use.
7. The limitations of the RRV to which the machine is attached shall apply.

The must NOT be disconnected from RRV whilst on track.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook.

Additional documents may include:

Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform Capacity</td>
<td>500 kg (Max.) - up to 4 persons plus tools</td>
</tr>
<tr>
<td>Max. Rail Speed Platform Controlled</td>
<td>5 mph</td>
</tr>
<tr>
<td>Platform Size</td>
<td>1.2 m x 2.2 m</td>
</tr>
<tr>
<td>Working Height</td>
<td>14 m (Max.)</td>
</tr>
<tr>
<td>Outreach Max.</td>
<td>6.5 m</td>
</tr>
<tr>
<td>Platform Rotation</td>
<td>360° continuous to stops</td>
</tr>
<tr>
<td>Boom Slewing range</td>
<td>250° continuous to interlocks</td>
</tr>
<tr>
<td>Maximum Rail Cant</td>
<td>150 mm</td>
</tr>
<tr>
<td>Maximum Rail Gradient</td>
<td>1 in 25</td>
</tr>
<tr>
<td>Maximum Platform side loading</td>
<td>2000 N</td>
</tr>
<tr>
<td>Maximum Wind Speed</td>
<td>42mph, 18.9 m/s Beauford Scale 8</td>
</tr>
<tr>
<td>Automatic platform levelling within a</td>
<td>+/- 0,5°</td>
</tr>
</tbody>
</table>
OTA-1-5 Access Platform

Manufacturer: Rail-Ability Ltd  
Model: Rail Boss & Superboss Railreach

Description
The Railreach Mobile Elevating Working Platform (MEWP) modules can be fitted to the Rail Ability - Rail Boss and Superboss base machine via twist locks that allow for quick fitting and removal. The base machines are fitted with Rail-Ability rail guidance gear that complies with the requirements of RIS-1530-PLT.

The Rail Boss and Super-Boss modules are designed to give a maximum lift capacity of up to 300 kgs at a reach of 8 metres and have a maximum basket rotation of up to 225°.

There is room on the working platform for 3 men plus their equipment and the MEWPs are ideal for vegetation control or overhead structure maintenance.

The basket can be controlled from by the controller in the basket or from ground level.

The access platform has proportional controls located at deck and at base, with status indication in vehicle cab and there is a tilt level sensor with audible alarm.

In addition, it has an emergency platform recovery system and there are emergency stop and brakes, in the cab, in the platform, and at the ground controls.

Scope of Use: Working Platform

Competencies: Machine Controller, Crane Controller & NR/CTM/OTPA/01 - Operate Attachment Access Platform (MEWP)

Product Approval No.: -

Risk Control Sheet No(s.): NR/L3/MTC/RCS0216/MP01-03, MP06, and MP07

Supplier: A P Webb Plant Hire
OTPA-1-5 Access Platform

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. It shall only operate inside possessions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. It shall NOT be used on live conductor rail lines
4. Working mode - Maximum track cant 150mm and/or 1 in 30 gradients.
5. Permitted speed - Maximum 5mph (8km/h).
6. Staff shall be briefed on the safe operation of the machine prior to its use.
7. The limitations of the RRV to which the machine is attached shall apply.

The must NOT be disconnected from RRV whilst on track.

Minimum documentation requirement for the host machine are:
Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook.

Additional documents may include:
Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th></th>
<th>Rail-Boss</th>
<th>Super Boss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform Capacity (max.)</td>
<td>250 kg</td>
<td>300 kg</td>
</tr>
<tr>
<td>Working Height (max.)</td>
<td>6 m</td>
<td>7.5 m</td>
</tr>
<tr>
<td>Outreach (max.)</td>
<td>7 m</td>
<td>8 m</td>
</tr>
<tr>
<td>Max. Rail Speed Platform Controlled</td>
<td>6 mph</td>
<td></td>
</tr>
<tr>
<td>Platform Size (length x width)</td>
<td>2 m x 1 m</td>
<td></td>
</tr>
<tr>
<td>Boom Slewing range</td>
<td>180°</td>
<td></td>
</tr>
<tr>
<td>Maximum Rail Cant</td>
<td>150 mm</td>
<td></td>
</tr>
<tr>
<td>Maximum Rail Gradient</td>
<td>1 in 30</td>
<td></td>
</tr>
<tr>
<td>Maximum Platform side loading</td>
<td>500 N</td>
<td></td>
</tr>
<tr>
<td>Maximum Wind Speed</td>
<td>42mph (18.9 m/s)</td>
<td></td>
</tr>
</tbody>
</table>
Manufacturer  SRS Rail Systems       Model  Scissor & Boom Module

Description
The SRS scissor & boom access platform module is designed to operate in a railway environment for the access and repair of elevated structures. It takes about 20 minutes to change modules. They are based on 20ft containers and fastened with standard container locks. Hydraulic and electric power is supplied by the base vehicle through quick fit couplings and multi socket connectors. It can lift two people plus their tools in each of the 2 platforms to the full extent of the machines outreach. Full control of the machine from the platform is possible from the console in the baskets.

The cab controls are modified to address the interlocking and safety aspects of the complete machine. Additional controls allow low speed travel and full arm operation from the platform. These cut out the cab controls when in platform mode.

Scope of Use  Working under OLE and structures
Competencies  Machine Controller, Crane Controller & NR/CTM/OTPA/01 - Operate Attachment Access Platform (MEWP)
E.A. Cert. No.  Various
Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01 and MP07
Supplier  SRS Rail Systems Ltd.
OTP-1-6  Access Platform

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
2. It shall not be used under live OLE.
3. Staff shall be briefed on the safe operation of the machine prior to its use.
4. The limitations of the RRV to which the machine is attached shall apply.
5. The must NOT be disconnected from RRV whilst on track.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Engineering Acceptance Certificate (including Limitations of Use) and Logbook.

Additional documents may include:

Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Brake Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform Size (m)</td>
<td>1.1 m x 2 m x 1.1 m</td>
</tr>
<tr>
<td>Platform Capacity</td>
<td>350 kg</td>
</tr>
<tr>
<td>Outreach Max.</td>
<td>8 m</td>
</tr>
<tr>
<td>Platform Rotation</td>
<td>40°</td>
</tr>
<tr>
<td>Maximum Rail Cant</td>
<td>160 mm</td>
</tr>
<tr>
<td>Maximum Working Height</td>
<td>10 m</td>
</tr>
<tr>
<td>Maximum Platform Height</td>
<td>9 m</td>
</tr>
<tr>
<td>Max. Rail Speed Platform Controlled</td>
<td>3 mph</td>
</tr>
<tr>
<td>Maximum Rail Gradient</td>
<td>12.5</td>
</tr>
<tr>
<td>Max. Wind speed for Platform Use</td>
<td>12.5 m/s</td>
</tr>
<tr>
<td>Maximum Rail Speed</td>
<td>20 mph</td>
</tr>
<tr>
<td>Maximum Slew Speed</td>
<td>0.7 m/s</td>
</tr>
<tr>
<td>Max. Basket Raising / Lowering</td>
<td>0.4 m/s</td>
</tr>
</tbody>
</table>
Manufacturer  SRS Rail Systems  Model  Bridge Inspection Platform

Description
This road-rail vehicle attachment is designed specifically for the inspection of bridges. It's equipped with SRS hydrostatic rail travelling device.

The vehicle is operated on rail from the cabin or from the basket. Once on the bridge, control of the vehicle is passed to the inspector in the basket. The inspector can move the vehicle and the basket to where and how he wishes.

Safety interlocks ensure that it is impossible to control the vehicle from two places at once.

Scope of Use  Working Platform for inspection of bridges and structures

Competencies  Machine Controller, Crane Controller & NR/CTM/OTPA/01 - Operate Attachment Access Platform (MEWP)

Eng. Acceptance No.  ER/0408/09

Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01-03, MP06, and MP07
OTPA-1-7 Access Platform

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. It shall only operate inside possessions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. It shall NOT be used on live conductor rail lines or under live OLE
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The limitations of the RRV to which the machine is attached shall apply.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook.

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

Platform Capacity 215 kg (Max.) - up to 2 persons
Platform Size 1.2 m x 1 m
Reach:

Outreach 6.5 m
Down 7 m
Outer slewing radius 6.5 m
Up 6 m

Maximum Wind Speed 12.5 m/s
## Augers and Drives

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-2-1</td>
<td>Auger Torque</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-2-2</td>
<td>Digga</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-2-3</td>
<td>Kinshofer</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
Auger and Drive Unit

Manufacturer Auger Torque Ltd
Suppliers Exac-One Ltd

Models 10,000 Max - 50,000 Max

Description
The Auger Torque augers and drive units are designed for use on excavators and are an economical, robust solution for drilling holes for posts, poles and foundations. Dependent on the requirements and the excavator, the drive unit can be equipped with different augers, varying in diameter, drilling teeth and heads. The maximum torque of the drive units range from 10,000 to 50,000 Nm.

The units have heavy duty steel housings and compact design, enabled by the planetary gear arrangement. All components run maintenance-free in an oil bath. The drilling direction can be reversed quickly, so that the auger can be easily removed from the hole.

The make and model of the excavator to which the auger drive will be fitted must be established so that the correct size and type of unit can be selected to ensure full drive/machine compatibility.

Scope of Use Drilling holes
Competencies Machine Controller, Crane Controller & OTPA-xx
Product Approval No. -
Risk Control Sheet No(s). NR/L3/MTC/RCS0216/MP01 and MP07
OTPA-2-1 Auger & Drive Unit

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use:

The auger unit shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road Rail Vehicle (RRV) to which it is attached.

The auger drive shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions and Logbook

Additional documents may include:

Test Records, Statutory Inspection & Test Records, Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>10000 Max</th>
<th>15000 Max</th>
<th>20000 Max</th>
<th>30000 Max</th>
<th>50000 Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine weight (tonnes)</td>
<td>11-17</td>
<td>10-17</td>
<td>13-20</td>
<td>17-25</td>
<td>22-30</td>
</tr>
<tr>
<td>Length (m)</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
<td>2 - 3</td>
<td>2 - 3</td>
</tr>
<tr>
<td>Torque max. (Nm)</td>
<td>9789</td>
<td>15741</td>
<td>20652</td>
<td>32269</td>
<td>50195</td>
</tr>
<tr>
<td>Hydraulic pressure (bar)</td>
<td>240</td>
<td>240</td>
<td>240</td>
<td>450</td>
<td>280</td>
</tr>
<tr>
<td>Flow requirement (l/min)</td>
<td>80-170</td>
<td>80-170</td>
<td>100-204</td>
<td>100-300</td>
<td>100-280</td>
</tr>
<tr>
<td>Shaft (mm - square)</td>
<td>75</td>
<td>75</td>
<td>75</td>
<td>110</td>
<td>110</td>
</tr>
<tr>
<td>Weight: (kg)</td>
<td>150</td>
<td>167</td>
<td>185</td>
<td>460</td>
<td>440</td>
</tr>
<tr>
<td>Unit Height (mm)</td>
<td>930</td>
<td>930</td>
<td>930</td>
<td>1610</td>
<td>1330</td>
</tr>
<tr>
<td>Unit Diameter (mm)</td>
<td>290</td>
<td>290</td>
<td>290</td>
<td>410</td>
<td>410</td>
</tr>
<tr>
<td>Drilling Diameter (mm)</td>
<td>150-1000</td>
<td>150-1200</td>
<td>300-900</td>
<td>300-1000</td>
<td>300-1500</td>
</tr>
</tbody>
</table>
OTPA-2-2 Auger and Drive Unit

Manufacturer: Digga  
Models: PD12 / PD15 / PD18 / PD22  
Suppliers: Avant Plant Sales

Description

The Digga augers and drive units are designed for use on excavators and are an economical, robust solution for drilling holes for posts, poles and foundations.

Dependent on the requirements and the excavator, the drive unit can be equipped with different augers, varying in diameter, drilling teeth and heads. The torque of the drive units ranges from 9765 to 22257 Nm.

The units have heavy duty steel housings and compact design, enabled by the planetary gear arrangement. All components run maintenance-free in an oil bath. The drilling direction can be reversed quickly, so that the auger can be easily removed from the hole.

The make and model of the excavator to which the auger drive will be fitted must be established so that the correct size and type of unit can be selected to ensure full drive/machine compatibility.

Scope of Use: Drilling holes

Competencies: Machine Controller, Crane Controller & OTPA-xx

Product Approval No.: -

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01 and MP07
OTPA-2-2  Auger & Drive Unit

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use:

1. The auger unit shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road Rail Vehicle (RRV) to which it is attached.
2. The auger drive shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions and Logbook

Additional documents may include:
Test Records, Statutory Inspection & Test Records, Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>PD12</th>
<th>PD15</th>
<th>PD18</th>
<th>PD22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter (mm)</td>
<td>240</td>
<td>240</td>
<td>290</td>
<td>290</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>624</td>
<td>775</td>
<td>775</td>
<td>775</td>
</tr>
<tr>
<td>Torque max. (Nm)</td>
<td>9765</td>
<td>13911</td>
<td>16191</td>
<td>22257</td>
</tr>
<tr>
<td>Hydraulic pressure (bar)</td>
<td>240</td>
<td>240</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>Flow requirement (l/min)</td>
<td>100 - 230</td>
<td>125 - 230</td>
<td>125 - 230</td>
<td>140 - 230</td>
</tr>
<tr>
<td>Speed (rev/min)</td>
<td>39 - 91</td>
<td>34 - 63</td>
<td>30 - 55</td>
<td>24 - 40</td>
</tr>
<tr>
<td>Shaft (mm - square)</td>
<td>75</td>
<td>75</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Weight: (kg)</td>
<td>110</td>
<td>162</td>
<td>162</td>
<td>162</td>
</tr>
<tr>
<td>Maximum Auger Diameter</td>
<td>150 - 1500</td>
<td>150 - 1500</td>
<td>150 - 1500</td>
<td>150 - 1500</td>
</tr>
<tr>
<td>Length of Auger (mm)</td>
<td>1500</td>
<td>1500</td>
<td>1500</td>
<td>1500</td>
</tr>
<tr>
<td>Machine weight (tonnes)</td>
<td>12 - 15</td>
<td>12 - 15</td>
<td>15 - 18</td>
<td>18 - 24</td>
</tr>
</tbody>
</table>
OTA-2-3 Auger and Drive Unit

Manufacturer: Kinshofer

Models: KM 250-1952 / 3750 / 5500 / 7400

Description

The Kinshofer augers and drive units are designed for use on excavators and are an economical, robust solution for drilling holes for posts, poles and foundations.

Dependent on the requirements and the excavator, the drive unit can be equipped with different augers, varying in diameter, drilling teeth and heads. The torque of the drive units ranges from 1952 to 7400 Nm.

The units have heavy duty steel housings and compact design, enabled by the planetary gear arrangement. All components run maintenance-free in an oil bath. The drilling direction can be reversed quickly, so that the auger can be easily removed from the hole.

The make and model of the excavator to which the auger drive will be fitted must be established so that the correct size and type of unit can be selected to ensure full drive/machine compatibility.

Scope of Use

Drilling holes

Competencies

Machine Controller, Crane Controller & OTPA-xx

Product Approval No.

-

Risk Control Sheet No(s).

NR/L3/MTC/RCS0216/MP01 and MP07
OTPA-2-3 Auger & Drive Unit

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. The auger unit shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road Rail Vehicle (RRV) to which it is attached.
2. The auger drive shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions and Logbook

Additional documents may include:
Test Records, Statutory Inspection & Test Records, Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>KM250-1952</th>
<th>KM250-3750</th>
<th>KM250-5500</th>
<th>KM250-7400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torque @ 200 bar (Nm)</td>
<td>1952</td>
<td>3750</td>
<td>5500</td>
<td>7400</td>
</tr>
<tr>
<td>Hydraulic pressure (bar)</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>240</td>
</tr>
<tr>
<td>Flow requirement (l/min)</td>
<td>25 - 60</td>
<td>40 - 75</td>
<td>50 - 115</td>
<td>70 – 140</td>
</tr>
<tr>
<td>Shaft (mm - square)</td>
<td>57</td>
<td>57</td>
<td>57</td>
<td>57</td>
</tr>
<tr>
<td>Weight: (kg)</td>
<td>45</td>
<td>65</td>
<td>80</td>
<td>95</td>
</tr>
<tr>
<td>Diameter of Auger (mm)</td>
<td>100 - 600</td>
<td>100 - 600</td>
<td>100 - 600</td>
<td>100 - 600</td>
</tr>
<tr>
<td>Length of Auger (mm)</td>
<td>1200</td>
<td>1200</td>
<td>1200</td>
<td>1200</td>
</tr>
<tr>
<td>Weight of Auger (kg)</td>
<td>28 - 81</td>
<td>28 - 81</td>
<td>28 - 81</td>
<td>28 - 81</td>
</tr>
<tr>
<td>Machine weight (tonnes)</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>15</td>
</tr>
</tbody>
</table>
# Description Issue Date

<table>
<thead>
<tr>
<th>OTPA-3-1</th>
<th>Ballast Profile Blade</th>
<th>1</th>
<th>2014</th>
</tr>
</thead>
</table>
**Manufacturer**  Various  

**Suppliers**  All core suppliers

**Description**

Ballast blades or profile buckets are the quickest and most efficient way of spreading ballast on relayed track so the ballast brush has the minimum amount of material to regulate.

All profile buckets are fitted with small rail wheels to ensure that no damage occurs when the profile bucket passes over a dipped joint.

This is a purely mechanical design which is an efficient and cost effective way of redistributing excess ballast.

The benefit of the Profile Bucket is that it can collect and pick up or carry a bucket of ballast spread material.

**Scope of Use**  Redistribution of excess ballast on track

**Competencies**  Machine Controller, Crane Controller & OTPA-7

**Product Approval No.**  -

**Risk Control Sheet No(s).**  NR/L3/MTC/RCS0216/MP01-03 and MP07
OTPA-3-1 Ballast Profile Blade

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

It shall only operate inside possessions.
Maximum speed 5 km/h
It shall NOT be used on live conductor rail lines.
The attachment shall be lifted over S&C and raised check rails.
Staff shall be briefed on the safe operation of the machine prior to its use.
The limitations of the RRV to which the machine is attached shall apply.
The Ballast Plough must NOT be disconnected from RRV whilst on track.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual, Logbook
Additional documents may include:
Product Acceptance Certificate(s) and Inspection Records etc.

Technical Specification

Weight Up to 900 kg (depending on type)
Length Length: up to 500 mm
Width Width: up to 2000 mm
Height 700 mm
### Ballast Brush

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-4-1</td>
<td>Geismar - BVR</td>
<td>1</td>
<td>2014</td>
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<tr>
<td>OTPA-4-2</td>
<td>Rexquote - BB</td>
<td>1</td>
<td>2014</td>
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<tr>
<td>OTPA-4-3</td>
<td>Richter &amp; Muller - HSB 1</td>
<td>1</td>
<td>2014</td>
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<tr>
<td>OTPA-4-4</td>
<td>Windhoff - ASB</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
Manufacturer: Geismar  
Model: BVR

Description
The Geismar Ballast Brush attachment is designed to operate with a road rail vehicle (RRV) using the host machines’ hydraulic power for operation.

A rotating broom, equipped with 50 mm diameter rubber tubes sweeps and feeds excess ballast onto a lateral conveyor belt for transport to either left or right side of the tracks, as selected.

The rotary broom and conveyor are driven by means of hydraulic motors. This system allows a quick disassembly of the rubber tubes.

The ballast brush runs on 4 rail wheels and connects directly to the RRV boom via a traction bar which propels the attachment s along the track.

Scope of Use: Removal of ballast on the track

Competencies: Machine Controller, Crane Controller & OTPA-05

E.A. Cert. No. (example): -

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01-03, and MP07
Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

The Ballast Brush shall only operate inside possessions.

It shall only be used in accordance with the Method Statement for the possession as determined and approved in accordance with the requirements of GE/RT8024.

The Ballast Brush shall only be coupled to RRVs which are certificated for towing or propelling this type of attachment.

It shall not be used on live conductor rails.

When on tracked, the Failsafe Breakaway System shall be tested before travelling or working.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:

Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

- Weight: 2000 kg
- Width: 2830 mm
- Length: 2500 mm
- Height: 1100 mm
- Working Speed: 1.5 - 2 km/h
- Hydraulic Pressure: 180 Bar
- Brush diameter: 830 mm
- Brush rotation speed: 320 rpm
- Brush output: 100 l/min
- Conveyor output: 55 l/min
OTPA-4-2 Ballast Brush

Manufacturer: Rexquote
Model: BB

Description
The Rexquote Ballast Brush attachment is designed for use with a road rail vehicle (RRV) using the host machines’ hydraulic power for operation.

A rotating broom sweeps and feeds excess ballast onto a lateral conveyor belt for transport to either left or right side of the tracks, as selected.

To reduce wear and noise emission, the broom box can be provided with a vulcanised rubber lining on the inside.

The ballast brush runs on 4 rail wheels and a coupling rod connects the attachment to the RRV vehicle.

Four hoisting lugs are provided for loading and unloading the ballast brush.

Scope of Use: Removal of excess ballast on the track

Competencies: Machine Controller, Crane Controller & OTPA-05

Plant Acceptance Cert. No.: AP/PT/0014/2004

E.A. Cert. No. (example): IF/1519/05 (Ready Power Engineering Ltd.)

Risk Control Sheet No(s.): NR/L3/MTC/RCS0216/MP01-03, and MP07
OTA-4-2  Ballast Brush

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

It shall only operate inside possessions.
It shall only be used in accordance with the Method Statement for the possession.
Maximum permitted speed = 10 mph (16 km/h).
Staff shall be briefed on the safe operation of the machine prior to its use.
It shall only be coupled to RRVs or RMMMs which are certified for towing or propelling this type of Ballast Broom and the limitations of the RRV to which the machine is attached shall apply.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:
Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

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<th>Specification</th>
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<tr>
<td>Width</td>
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<tr>
<td>Length</td>
<td>2808 mm</td>
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<tr>
<td>Height</td>
<td>1230 mm</td>
</tr>
<tr>
<td>Maximum Working Speed</td>
<td>500 m/h</td>
</tr>
<tr>
<td>Maximum Rail Cant</td>
<td>150 mm (6”)</td>
</tr>
<tr>
<td>Maximum Rail Gradient</td>
<td>1 in 25</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>180 Bar</td>
</tr>
<tr>
<td>Hydraulic Flow Rate</td>
<td>160 l/min</td>
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<tr>
<td>Rail Wheel Diameter</td>
<td>150 mm</td>
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<tr>
<td>Parking Brake Release Pressure</td>
<td>40 bar</td>
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<tr>
<td>Maximum Static Drawbar Pull Test Load</td>
<td>125 kg</td>
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</table>
Manufacturer: Richter & Muller
Model: HSB 1

Description
The HSB 1 Ballast Brush attachment is designed for use with a road rail vehicle (RRV) using the host machines' hydraulic power for operation.
A rotating broom sweeps and feeds excess ballast onto a lateral conveyor belt for transport to either left or right side of the tracks, as selected.
The ballast brush runs on 4 rail wheels and connects directly to the RRV boom.
The HSB 1 has a Failsafe Breakaway System to immobilise it when disconnected from the host vehicle.

Scope of Use
Removal of ballast on the track

Competencies
Machine Controller, Crane Controller & OTPA-05

Plant Acceptance Cert. No.
AP/PT/0014/2004

E.A. Cert. No. (example)
NS/5019/11 Story Rail Ltd.

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01-03, and MP07
OTPA-4-3  

Ballast Brush

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

The Ballast Brush shall only operate inside possessions.

It shall only be used in accordance with the Method Statement for the possession as determined and approved in accordance with the requirements of GE/RT8024.

The Ballast Brush shall only be coupled to RRVs which are certificated for towing or propelling this type of attachment.

It shall not be used on live conductor rails.

When on tracked, the Failsafe Breakaway System shall be tested before travelling or working.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:

Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification:

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Weight</td>
<td>2400 kg</td>
</tr>
<tr>
<td>Width</td>
<td>2780 mm</td>
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<tr>
<td>Length</td>
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<tr>
<td>Height</td>
<td>1300 mm</td>
</tr>
<tr>
<td>Maximum Working Speed</td>
<td>10 mph</td>
</tr>
<tr>
<td>Maximum Rail Cant</td>
<td>150 mm (6”)</td>
</tr>
<tr>
<td>Maximum Rail Gradient</td>
<td>1 in 25</td>
</tr>
<tr>
<td>Minimum Radius</td>
<td>80 m</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>210 Bar</td>
</tr>
<tr>
<td>Hydraulic Flow Rate</td>
<td>120 l/min</td>
</tr>
</tbody>
</table>
OTPA-4-4 Ballast Brush

Manufacturer: Windhoff
Model: ASB

Description
The ASB Ballast Brush attachment is designed for use with a road rail vehicle (RRV) using the host machines' hydraulic power for operation.

A rotating broom sweeps and feeds the excess ballast onto a lateral conveyor belt for transport to either the left or right hand side of the track, as selected.

To reduce wear and noise emission, the broom box can be provided with a vulcanised rubber lining on the inside.

The ballast brush runs on 4 rail wheels and is propelled along the track by a coupling rod which is connected to the host RRV vehicle.

Four hoisting lugs are provided for loading and unloading the ballast brush.

Scope of Use
Removal of excess ballast on the track

Competencies
Machine Controller, Crane Controller & OTPA-05

Product Approval No.
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01-3 and MP07

Suppliers
A P Webb Ltd.
OTPA-4-4

Ballast Brush

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

It shall only operate inside possessions.
If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
It shall NOT be used on live conductor rail lines.
The machine shall be lifted over S&C and raised check rails.
Working mode - Maximum track cant 180mm and/or 1 in 29 gradients.
Permitted speed - Maximum 5mph (8km/h).
Staff shall be briefed on the safe operation of the machine prior to its use.
The limitations of the RRV to which the machine is attached shall apply.
The Ballast Brush must NOT be disconnected from excavator whilst on track.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:

Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Weight</td>
<td>2100 - 2200 kg</td>
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<tr>
<td>Length</td>
<td>2690 mm</td>
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<tr>
<td>Width</td>
<td>2960 mm</td>
</tr>
<tr>
<td>Height</td>
<td>1230 mm</td>
</tr>
<tr>
<td>Sweeping performance</td>
<td>500 - 700 m/h (depends on the height of ballast &amp; selected sweeping depth)</td>
</tr>
<tr>
<td>Hydraulic Pressure/Flow</td>
<td>- Sweeper drum - 75 l/min @ at 140 bar</td>
</tr>
<tr>
<td></td>
<td>- Conveyor belt - 22 l/min at 140 bar</td>
</tr>
</tbody>
</table>
## Ballast Distributor

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-5-1</td>
<td>GOS Tool &amp; Engineering Ltd.</td>
<td>1</td>
<td>2014</td>
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<tr>
<td>OTPA-5-2</td>
<td>Rail-Ability Ltd - BDU</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
OTPA-5-1 Ballast Distribution Unit

Manufacturer  GOS Engineering  Model  BDU

Description
The BDU is used to distribute ballast into the 4 foot, 6 foot and onto the sleeper ends.

It is attached to a road rail vehicle excavator crane via a tow bar and the host machine is used to fill the hopper and move the BDU as ballast is released.

If it is required to add more ballast to one side of the track (e.g. in preparation for cant adjustment), the hopper height can be adjusted by using the appropriate hydraulic hand pump.

The unit is fitted with side shutters / openings and side wing plates to distribute the ballast in the 6 foot.

Scope of Use  Distribution of ballast onto the track

Competencies  Machine Controller, Crane Controller & OTPA-7

E.A. Certificate No.  -

Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01-04 and MP07
OTPA-5-1 Ballast Distribution Unit

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The trailer shall only operate inside possessions and it shall not be "on or off-tracked" or work under live OLE or Conductor-rail lines.

It may not travel on live Conductor-rail lines but it may travel under live OLE in accordance with the Method Statement for the possession.

It may not activate train operated points.

It shall only be coupled to vehicles which are certificated for towing / propelling this type of trailer unit and is subject to limitations of the towing / propelling vehicle.

It shall only be used for the transport of ballast in accordance with the manufacturers' Operating Manual and the Method Statement for the possession.

Minimum documentation requirement for the host machine are:

Operating Instructions, Engineering Acceptance Certificate and Logbook

Additional documents may include:

Product Acceptance Certificate, Inspection and Maintenance Records etc.

Technical Specification:

Weight: 1500 kg
Length: up to 2000 mm
Width: up to 1800 mm
Height: 1200 mm
Maximum Speed: 5 km/h
The Rail Ability Ballast Distributer Unit is able to self unload a variety of aggregate materials.

It's fitted with 180° slew conveyer, which has raise and lower capability, giving 4m of outreach from near rail head and 10 tonnes capacity.

It is able to discharge at a rate of 2 tonnes per minute and is ideal for ballast and limestone distribution.

It is also ideal for building up shoulders or precise placement of ballast on switches and crossings.

This unit is available on either the "Rail Boss" or the new "Super Boss" machines.

**Scope of Use**
Distribution of ballast onto the track

**Competencies**
Machine Controller, Crane Controller & OTPA-10

**Product Approval No.**
NR/L3/MTC/RCS0216/MP01-03 MP06 and MP07

**Risk Control Sheet No(s).**

**Suppliers**
A P Webb Plant Ltd.
OTPA-5-2 Ballast Distributor

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

It shall only be used for the transport of ballast in accordance with the manufacturers' Operating Manual and the Method Statement for the possession.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

It may not travel on live Conductor-rail lines but it may travel under live OLE in accordance with the Method Statement for the possession.

It may not activate train operated points.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Engineering Acceptance Certificate (including Limitations of Use), LOLER Certification and Logbook

Additional documents may include:

Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts etc.

Technical Specification

- Ballast Capacity: 10 tonnes
- Discharge Rate: 2 tonnes per minute
- Conveyor movement: 180°
- Width: 2 m approx.
- Height: 2 m approx.
- Length: 4 m approx.
# Ballast Excavator

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
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<tr>
<td>OTPA-6-2</td>
<td>Geismar - ODC</td>
<td>1</td>
<td>2014</td>
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</table>
OTPA-6-1 Ballast Excavator

Manufacturer: Dymax
Supplier: SES Rail Ltd.

Models: BB8.4G / BB10.4G / BB12.4G

Description
The Dymax ballast excavator range are compact under cutters that are ideal for use with RRV excavators. They have excellent high torque output from the direct hydraulic drive unit which enables the rapid removal of ballast from beneath tracks using the latest Dymax undercutting technology.

The attachments can undercut fouled ballast from off track or high rail positions and may be mounted either using a quick hitch coupler or directly pinned to the excavator boom.

Scope of Use
Excavating ballast

Competencies
Machine Controller, Crane Controller & OTPA-7

Product Acceptance No.
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01-04 and MP07
Ballast Excavator

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

It shall only operate inside possessions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

It shall NOT be used on live conductor rail lines.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

Minimum documentation requirement for the host machine are:

Operating Instructions and Logbook

Additional documents may include:

Product Acceptance Certificate, Inspection and Maintenance Records etc.

Technical Specification:

<table>
<thead>
<tr>
<th>Model</th>
<th>Flow Ratings</th>
<th>Pressure</th>
<th>Cut Length</th>
<th>Weight</th>
<th>RRV Weight</th>
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<tr>
<td></td>
<td>(lpm)</td>
<td>(bar)</td>
<td>(mm)</td>
<td>(kg)</td>
<td>(tonnes)</td>
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<tr>
<td>BB8.4G</td>
<td>75</td>
<td>275</td>
<td>2540</td>
<td>1134</td>
<td>10-13</td>
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<tr>
<td>BB10.4G</td>
<td>113</td>
<td>290</td>
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<td>14 - 20</td>
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<tr>
<td>BB12.4g</td>
<td>144</td>
<td>290</td>
<td>3648</td>
<td>2993</td>
<td>20-30</td>
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</table>
Manufacturer  Geismar  Model  ODC

Description
The ODC Ballast Clearing beam is designed to be used prior to sleeper replacement to prevent "high points" by quickly removing ballast from the four-foot and ballast shoulder between sleepers in a single operation to enable rapid sleeper extraction.

Working from the centre of the four-foot, the Ballast Clearing Beam pushes out the ballast to each side of the track by means of two sliding guides; each one being moved by its own double-acting hydraulic ram which is fitted with three separate, vertical steel ballast spades.

The outer-most spade is removable and each one has differing dimensions to enable more precise ballast removal to suit individual site needs. Fitted with a Quick-hitch connector and two hydraulic quick-release flexible hoses, the Ballast Clearing Beam can be attached to the road / rail excavator in seconds.

Two rail guides ensure that the Ballast Clearing Beam is centred to the track axis.

The maximum working depth of the ballast spades is preset by means of two adjustable depth stops and these have 5 selectable depth settings.

Scope of Use  Excavating ballast

Competencies  Machine Controller, Crane Controller & OTPA-7

Product Acceptance No.  -

Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01-04 and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

It shall only operate inside possessions.
If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
It shall NOT be used on live conductor rail lines.
Staff shall be briefed on the safe operation of the machine prior to its use.
The limitations of the RRV to which the machine is attached shall apply.

Minimum documentation requirement for the host machine are:
Operating Instructions and Logbook
Additional documents may include:
Product Acceptance Certificate, Inspection and Maintenance Records etc.

Technical Specification

Track Gauge 1435mm
Horizontal stroke of sliders 540mm each side of centre of four foot
Maximum clearing depth 559 mm
Minimum clearing depth 319 mm
Hydraulic requirements from excavator 210 bar @ 140 litres per minute
Length 3000 mm approx
Width 1700 mm approx
Height 1700 mm approx.
Weight 2000 kg approx.
## Ballast Plough

### Description Issue Date

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
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<td>OTPA-7-1</td>
<td>Richter and Muller - S1</td>
<td>1</td>
<td>2014</td>
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<tr>
<td>OTPA-7-2</td>
<td>Thompson Rail Equipment - BP</td>
<td>1</td>
<td>2014</td>
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</tbody>
</table>
OTA-7-1 Ballast Regulator / Plough

Manufacturer: Richter & Muller  
Model: S1

Suppliers: Tasty Plant

Description:
The S1 Ballast Regulator / Plough attachment is an efficient and cost-effective way of redistributing excess ballast. A purely mechanical design, it attaches directly to the host RRV boom. It has 2 adjustable wings which can be swung round forward or trailing behind. The wings can be altered to adjust the angle and area that the wing collects surplus ballast from or spreads the ballast across.

It can be used to collect additional ballast in the cess and force the ballast over the cess rail and into the 4 foot. Likewise, the process can be repeated on the 6 foot rail to transpose the ballast into the 6 foot area.

The benefit of this attachment over a Profile Bucket is that it can collect and spread material outside the width of the sleeper it is working on.

The negative point with the Ballast Plough being, unlike the ballast bucket, it cannot pick up a bucket of ballast and carry ballast.

Scope of Use: Redistribution of excess ballast on track

Competencies: Machine Controller, Crane Controller & OTPA-7

Product Approval No.: PA05 / 01371

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01-03 and MP07
OTPA-7-1 Ballast Regulator / Plough

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

It shall only operate inside possessions.
If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
It shall NOT be used on live conductor rail lines.
The regulator shall be lifted over S&C and raised check rails.
Staff shall be briefed on the safe operation of the machine prior to its use.
The limitations of the RRV to which the machine is attached shall apply.
The Ballast Plough must NOT be disconnected from RRV whilst on track.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual
Engineering Acceptance Certificate (including Limitations of Use)
Logbook

Additional documents may include:
Product Acceptance Certificate(s), Test Records and Inspection Records etc.

Technical Specification:

Weight 1.1 tonnes
Length 1900 mm
Width 1200 mm
Height 1200 mm
**OTPA-7-2 Ballast Plough**

*Manufacturer*  Thompson Rail Equipment Ltd.  
*Model*  BP

**Description**

The Thomson Ballast Plough is designed to remove excess ballast from the centre of the track and place it in the shoulder area.

The design of the blade 'slices' the ballast preventing a pressure wave through the ballast which can lead to damaged clips and housings.

Normally a single pass at 5 km/hr to 8 km/hr is all that's required to leave the track ready for a final pass with a ballast brush or for tamping.

This plough is fitted with automatic, fail safe brakes and has hydraulically adjustable rear wheels to cater for different rail sections and heights.

Optional extras include marker lights, front wheel hydraulic adjustment and a central baffle plate which can be set to bias the ballast flow to one side or the other.

**Scope of Use**  Redistribution of excess ballast on track

**Competencies:**  Machine Controller, Crane Controller & OTPA-7

**Product Acceptance No.**  094/002028

**PADS No.**  094/016049

**Risk Control Sheet No(s).**  NR/L3/MTC/RCS0216/MP01-03 and MP07

**Operators / Suppliers**  TXM Plant
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

It shall only operate inside possessions.
If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
It shall NOT be used on live conductor rail lines.
The machine shall be lifted over S&C and raised check rails.
Staff shall be briefed on the safe operation of the machine prior to its use.
The limitations of the RRV to which the machine is attached shall apply.
The Ballast Plough must not be disconnected from RRV whilst on track.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:

Product Acceptance Certificate(s), Brake Test Records and Inspection Records etc.

Technical Specification

<table>
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<tr>
<th>Specification</th>
<th>Details</th>
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<tbody>
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<td>Suitability</td>
<td>Excavator or other prime mover min. 25 tonnes</td>
</tr>
<tr>
<td>Braking system</td>
<td>Hydraulic fail safe system operating on two wheels</td>
</tr>
<tr>
<td>Brake test force</td>
<td>&gt;8% GVM</td>
</tr>
<tr>
<td>Weight</td>
<td>1965 kg</td>
</tr>
<tr>
<td></td>
<td>Length 3650 mm</td>
</tr>
<tr>
<td>Width</td>
<td>2685 mm</td>
</tr>
<tr>
<td></td>
<td>Height 1170 mm</td>
</tr>
<tr>
<td>Working Speed</td>
<td>6 – 10 kph</td>
</tr>
<tr>
<td>Maximum slope</td>
<td>1:29</td>
</tr>
<tr>
<td>Maximum cant</td>
<td>180mm</td>
</tr>
<tr>
<td>Height adjustment standard</td>
<td>Hydraulic height adjustment to rear wheels</td>
</tr>
<tr>
<td>Height adjustment (optional)</td>
<td>Hydraulic height adjustment to front wheels</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>150 bar (min.) to 210 (max.)</td>
</tr>
</tbody>
</table>
## Bowser

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-8-1</td>
<td>Fuel Proof</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
OTPA-8-1 Fuel Bowser

Manufacturer: Fuel Proof Ltd.  Model: 500 - 4500 L

Description
This range of static bunded fuel storage tanks are pressure tested and suitable to both site and industrial use. These fuel stores are double cylinder, fully bunded, all steel construction, mounted on a tough galvanised tubular steel bases which are fully ADR fuel transportation regulations compliant and meet the requirements of the Environmental Agency Pollution Prevention Guidelines (PPG2).

Design features include a high-flow hand pump (flow rate 45 litres/min), anti-vandal lockable doors, fully sealed rotary fuel gauge, large 2” & 3” alloy filler caps, automatic suction breather, pressure relief valve and an in-line fuel filter.

The tanks can be lifted full of fuel, using either the lifting eyes or the forklift pockets.

The unique Fuelstore pump mounting plate can cater for a wide variety of fuel delivery options. Also fitted as standard are 1/2" BSP generator feed and return connections.

The range of static bowsers from this company start from 500 litres (110 gallons) and go up to 4500 litres (1000 gallons) capacity. Towable, highway trailer variants (1000 & 2000l) of this range are also available.

Scope of Use
Storage and dispensing fuel

Competencies
Machine Controller, Crane Controller

Product Approval No.
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01-03 and MP07

Suppliers
L & W Rail
OTPA-8-1 Fuel Bowser

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

1. The bowser shall only be used for the storage of either diesel or gas oil.
   
   Note: They must not be used for the storage of petrol.

2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and the safe system of work.

3. The tank shall only be lifted using either the lifting lugs or forklift pockets in accordance with the manufacturers’ instructions.

4. Staff shall be briefed on the safe operation of the equipment prior to its use.

5. The limitations of the RRV to which the bowser is attached shall apply.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual, Product Acceptance Certificate, Logbook

Additional documents may include:

Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Information:

<table>
<thead>
<tr>
<th>Capacity litres (gallons)</th>
<th>Length (mm)</th>
<th>Width (mm)</th>
<th>Height (mm)</th>
<th>Empty weight (kg)</th>
<th>Full weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 (110)</td>
<td>1318</td>
<td>1060</td>
<td>1300</td>
<td>450</td>
<td>885</td>
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<tr>
<td>1000 (220)</td>
<td>1588</td>
<td>1309</td>
<td>1509</td>
<td>595</td>
<td>1465</td>
</tr>
<tr>
<td>1500 (330)</td>
<td>2078</td>
<td>1309</td>
<td>1509</td>
<td>699</td>
<td>2085</td>
</tr>
<tr>
<td>2000 (440)</td>
<td>2078</td>
<td>1489</td>
<td>1693</td>
<td>820</td>
<td>2620</td>
</tr>
<tr>
<td>2500 (550)</td>
<td>2600</td>
<td>1489</td>
<td>1693</td>
<td>1000</td>
<td>3225</td>
</tr>
<tr>
<td>3000 (660)</td>
<td>2600</td>
<td>1625</td>
<td>1809</td>
<td>1210</td>
<td>3984</td>
</tr>
<tr>
<td>4500 (1000)</td>
<td>2900</td>
<td>1830</td>
<td>1980</td>
<td>1450</td>
<td>5365</td>
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## Buckets

<table>
<thead>
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<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
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<tbody>
<tr>
<td>OTPA-9-1</td>
<td>Bucket - Clamshell - General</td>
<td>1</td>
<td>2014</td>
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<tr>
<td>OTPA-9-2</td>
<td>Bucket - Clamshell - Kinshofer - C05H-25 - 60</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-9-3</td>
<td>Bucket - Clamshell - Kinshofer - C12H-40 - 100</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-9-4</td>
<td>Liebherr - GM 5, GM 8 and GM 10</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-9-5</td>
<td>Richter &amp; Muller</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
OTPA-9-1  

Clamshell Bucket

Manufacturer  
Various - Engcon, Geismar, Kinshofer, Richter & Muller etc.

Description  
Clamshell buckets can be used for excavating wet beds or drainage as well as general loading unloading, shouldering work and cess work can also be undertaken. The hydraulic system is fitted with a pressure control valve making it suitable for any hydraulic supply from up to 300 bar.

Scope of Use  
Excavating earth, spoil and ballast etc.

Competencies  
Machine Controller, Crane Controller & OTPA-10

Product Approval No.  
-

Risk Control Sheet No(s).  
NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
OTPA-9-1 Clamshell Bucket

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The bucket must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

Weight: Up to 1000kg (Depending on type)

Length: Up to 700mm

Width: Up to 1000mm

Height: 700mm
Clamshell Bucket

Manufacturer: Kinshofer
Models: C05H-25/30/35/40/45/50 & 60

Description:
Clamshell buckets can be used for excavating wet beds or drainage as well as general loading unloading, shouldering work and cess work can also be undertaken.
This robust range of clamshell buckets is designed for use with excavators from 3t to 5t operating weight.
The hydraulic system is fitted with a pressure control valve making it suitable for a hydraulic supply up to 260 bar with flow rates from 25 to 75 litres/min.

Scope of Use: Excavating earth, spoil and ballast etc.
Competencies: Machine Controller, Crane Controller & OTPA-10
Product Approval No.: -
Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
OTPA-9-2 Clamshell Bucket

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The bucket must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, and Logbook

Additional documents may include:

Product Acceptance Certificate (including Limitations of Use), Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>Width (mm)</th>
<th>Opening range (mm)</th>
<th>Volume (litres)</th>
<th>Weight (kg)</th>
<th>Load Capacity (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C05H-25</td>
<td>250</td>
<td>1090</td>
<td>70</td>
<td>160</td>
<td>2000</td>
</tr>
<tr>
<td>C05H-30</td>
<td>300</td>
<td>1090</td>
<td>85</td>
<td>165</td>
<td>2000</td>
</tr>
<tr>
<td>C05H-35</td>
<td>350</td>
<td>1090</td>
<td>100</td>
<td>190</td>
<td>2000</td>
</tr>
<tr>
<td>C05H-40</td>
<td>400</td>
<td>1090</td>
<td>115</td>
<td>205</td>
<td>2000</td>
</tr>
<tr>
<td>C05H-45</td>
<td>450</td>
<td>1090</td>
<td>130</td>
<td>225</td>
<td>2000</td>
</tr>
<tr>
<td>C05H-50</td>
<td>500</td>
<td>1090</td>
<td>140</td>
<td>231</td>
<td>2000</td>
</tr>
<tr>
<td>C05H-60</td>
<td>600</td>
<td>880</td>
<td>115</td>
<td>235</td>
<td>2000</td>
</tr>
</tbody>
</table>
Manufacturer: Kinshofer

Models: C12H-40 / 50 / 65 / 80 / 100

Description:
Clamshell buckets can be used for excavating wet beds or drainage, as well as general loading unloading, shouldering work and cess work can also be undertaken.
This robust range of clamshell buckets is designed for use with excavators from 9t to 12t operating weight.
The hydraulic system is fitted with a pressure control valve making it suitable for a hydraulic supply up to 320 bar with flow rates from 40 to 120 litres/min.

Scope of Use:
Excavating earth, spoil and ballast etc.

Competencies:
Machine Controller, Crane Controller & OTPA-10

Product Approval No.:
-

Risk Control Sheet No(s):
NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
OTPA-9-3  
Clamshell Bucket

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

The bucket must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, and Logbook

Additional documents may include:

Product Acceptance Certificate (including Limitations of Use), Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>Width (mm)</th>
<th>Opening range (mm)</th>
<th>Volume (litres)</th>
<th>Weight (kg)</th>
<th>Load Capacity (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C12H-40</td>
<td>400</td>
<td>1450</td>
<td>170</td>
<td>345</td>
<td>3000</td>
</tr>
<tr>
<td>C12H-50</td>
<td>500</td>
<td>1450</td>
<td>220</td>
<td>370</td>
<td>3000</td>
</tr>
<tr>
<td>C12H-65</td>
<td>650</td>
<td>1450</td>
<td>290</td>
<td>390</td>
<td>3000</td>
</tr>
<tr>
<td>C12H-80</td>
<td>800</td>
<td>1450</td>
<td>355</td>
<td>425</td>
<td>3000</td>
</tr>
<tr>
<td>C12H-100</td>
<td>1000</td>
<td>1450</td>
<td>450</td>
<td>455</td>
<td>3000</td>
</tr>
</tbody>
</table>
OTPA-9-4 Clamshell Bucket

Manufacturer Liebherr Models GM 5, GM 8 & GM 10

Description
Clamshell buckets can be used for excavating wet beds or drainage, as well as general loading unloading, shouldering work and cess work can also be undertaken.

The clamshell is one of the most important digging tools in the utility business. The clamshell selection is based on the ground condition, the specific material weight and the required production performance. The selection of the entire clamshell attachment is significant in order to determine the required digging depth.

Clamshell Capacities from 0.1– 2.0 m³, shell width from 300–2,000 mm

Typical applications are for narrow and deep trench digging and loading and unloading and handling of various bulk goods, and excavation

This range of buckets feature rugged design with protected cylinders, infinite rotation a quick-change system and grab extension available as an option

Scope of Use Excavating earth, spoil and ballast etc.

Competencies Machine Controller, Crane Controller & OTPA-10

Product Approval No. -

Risk Control Sheet No(s). NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
OTPA-9-4

Clamshell Bucket

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

The bucket must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, and Logbook

Additional documents may include:

Product Acceptance Certificate (including Limitations of Use), Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>Width Open (mm)</th>
<th>Height Open (mm)</th>
<th>Height Closed (mm)</th>
<th>Weight (kg)</th>
<th>Capacity (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GM 5 B</td>
<td>300 to 600</td>
<td>1070</td>
<td>1400</td>
<td>410 - 510</td>
<td>0.10 to 0.27</td>
</tr>
<tr>
<td>GM 8 B</td>
<td>320 to 800</td>
<td>1990</td>
<td>2420</td>
<td>710 - 800</td>
<td>0.17 to 0.40</td>
</tr>
<tr>
<td>GM 10 B</td>
<td>320 to 1000</td>
<td>2685</td>
<td>2440</td>
<td>770 - 970</td>
<td>0.17 to 0.60</td>
</tr>
</tbody>
</table>
Manufacturer  
Richter & Muller

Description
The clamshell-bucket developed by Richter & Müller are extremely manageable and can be used for track construction.

These buckets have low structural shape, compact 360° hydraulic rotating motor, integrated pressure relief for the grab function. The buckets have forged bolt-on teeth and tube-protection-stirrup for the hydraulic connections at the grab rotating motor.

Typically, these clamshell buckets can be used for excavating wet beds or drainage. as well as general loading unloading, shouldering work and cess work can also be undertaken.

The hydraulic system is fitted with a pressure control valve making it suitable for any hydraulic supply from up to 300 bar.

Scope of Use
Excavating earth, spoil and ballast etc.

Competencies
Machine Controller, Crane Controller & OTPA-10

Product Approval No.
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
OTPA-9-5  Clamshell Bucket

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The bucket must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

Weight: Up to 1000kg (Depending on type)
Length: Up to 700mm
Cutting Width: 280 to 1000mm
Height: 700mm
Excavator Weight: 13 to 20 tonnes
Max. Lifting capacity: 4 tonnes
Rotary function max. closing energy: 37 kN
Bulk weight: up to 3 t/m3
Operating pressure: max. 350 bar
## Cable Drum Carriers

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-10-1</td>
<td>GOS Engineering</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-10-2</td>
<td>Rexquote - T9</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
**Manufacturer**  
GOS Tool & Engineering Services  
**Model**  
Cable Drum Carrier

**Description**

The cable decoiler is designed to unreel and tension cables in a controlled manner. The drum carrier / decoiler model shown above has an overall length of approximately 2.5 metres. This attachment is specifically designed to carry cable drums up to 2.8 m diameter x 1.6 m wide and is mountable on a suitable rail trailer. The trailer has a robust fabricated steel “A” side frame which allows for easy loading of drums. The frame is equipped with removable locator pins for fitting to Philmor trailers. The cable drum mounting shaft locates in, and is secured in pockets on the top of the 'A' frame. Cable is fed out as the towing Road Rail Vehicle travels along the track.

The trailer is capable of handling drums up to 2.8 m diameter and 1.7 m wide and is designed for a maximum load of 9 tonnes.

Optional extras include: a speed controlled hydraulic motor drive wheel assembly for controlled paying out of recovery cable: a pay boom system to enable delivery of cable to ducts at the side of the track.

**Scope of Use**  
Laying of cable

**Competencies**  
Machine Controller, Crane Controller & OTPA-7

**Product Acceptance No.**  
-

**Risk Control Sheet No(s).**  
NR/L3/MTC/RCS0216/MP01-04 and MP07
OTPA-10-1  Cable Drum Carrier

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The attachment/trailer shall only operate inside possessions and it shall not be "on or off-tracked" or work under live OLE or Conductor-rail lines.

It may not travel on live Conductor-rail lines but it may travel under live OLE in accordance with the Method Statement for the possession.

It may not activate train operated points.

It shall only be coupled to vehicles which are certificated for towing / propelling this type of trailer and is subject to limitations of the towing / propelling vehicle.

It shall only be used for the transport of cable drums in accordance with the Rexquote Operating Manual and the Method Statement for the possession.

Minimum documentation requirement for the host machine are:

Operating Instructions, E.A. Certificate, Logbook

Additional documents may include:
Product Acceptance Certificate, Inspection and Maintenance Records etc.

Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>Overall Length</td>
<td>2.5 m (approximate)</td>
</tr>
<tr>
<td>Width</td>
<td>2.3 m</td>
</tr>
<tr>
<td>Height without Cable Drum</td>
<td>1.8 m</td>
</tr>
<tr>
<td>Height with Cable Drum</td>
<td>3.0 m (approximate)</td>
</tr>
<tr>
<td>Weight</td>
<td>1200 kg</td>
</tr>
<tr>
<td>Maximum Carrying Capacity</td>
<td>9 tonnes</td>
</tr>
<tr>
<td>Maximum Travel speed</td>
<td>10 mph (5 mph at points and crossings)</td>
</tr>
<tr>
<td>Maximum Rail Cant</td>
<td>200 mm (8&quot;)</td>
</tr>
<tr>
<td>Maximum Gradient</td>
<td>1 in 29</td>
</tr>
</tbody>
</table>
DESCRIPTION

The trailer model shown above is the type T9 drum carrier which has an overall length of 5 metre. This 4 wheel trailer is specifically designed to carry cable drums and work with compatible road rail vehicles. The trailer is fitted with hydraulic-release emergency / parking brake. It trailer has robust fabricated steel “A” side frames which allows for easy loading of drums onto the trailer.

The cable drum mounting shaft locates, and is secured in pockets on the top of the 'A' frames. Cable is fed out as the towing Road Rail Vehicle travels along the track.

The trailer has a maximum rated capacity of 16 tonnes (Gross Vehicle Weight) and can carry a maximum payload of 12 tonnes.

SCOPE OF USE

Laying of cable

COMPETENCIES

Machine Controller, Crane Controller & OTPA-7

E.A. CERTIFICATE (example)

IF/0372/11 (Ready Power Engineering)

RISK CONTROL SHEET NO(S).

NR/L3/MTC/RCS0216/MP01-04 and MP07
OTPA-10-2  Cable Drum Carrier

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The trailer shall only operate inside possessions and it shall not be "on or off-tracked" or work under live OLE or Conductor-rail lines.

It may not travel on live Conductor-rail lines but it may travel under live OLE in accordance with the Method Statement for the possession.

It may not activate train operated points.

It shall only be coupled to vehicles which are certificated for towing / propelling this type of trailer and is subject to limitations of the towing / propelling vehicle.

It shall only be used for the transport of cable drums in accordance with the Rexquote Operating Manual and the Method Statement for the possession.

Minimum documentation requirement for the host machine are:

Operating Instructions, E.A. Certificate, Logbook

Additional documents may include:
Product Acceptance Certificate, Inspection and Maintenance Records etc.

Technical Specification:

<table>
<thead>
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<th>Parameter</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Overall Length</td>
<td>5.27 m</td>
</tr>
<tr>
<td>Width</td>
<td>2.69 m</td>
</tr>
<tr>
<td>Height without Cable Drum</td>
<td>1.94</td>
</tr>
<tr>
<td>Height with Cable Drum</td>
<td>2.83</td>
</tr>
<tr>
<td>Weight</td>
<td>3,900 kg</td>
</tr>
<tr>
<td>Maximum Carrying Capacity</td>
<td>12,000 kg</td>
</tr>
<tr>
<td>Maximum Travel speed</td>
<td>10 mph (5 mph at points and crossings)</td>
</tr>
<tr>
<td>Maximum Rail Cant</td>
<td>200 mm (8&quot;)</td>
</tr>
<tr>
<td>Maximum Gradient</td>
<td>1 in 29</td>
</tr>
<tr>
<td>Minimum Brake Release Pressure</td>
<td>27 bar</td>
</tr>
<tr>
<td>Maximum Brake Release Pressure</td>
<td>250 bar</td>
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# Chains and Slings

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-11-1</td>
<td>Chains and Slings - General</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
Manufacturers
Crosby, Dillon, Parsons, Tangye and Thiele

Description
Loose lifting gear such as chains, slings (synthetic and wire), shackles, hoist rings, turnbuckles, eyebolts are widely available from industry leading manufacturers.

Typically, chains are available as single leg, two leg, three leg and four leg slings from most manufacturers.

Synthetic slings are available as Flat or Fibre Round slings. These are normally made from high tensile polyester (PES) and manufactured to machine directive 89/392/CE.

These slings have low elongation and are colour coded according to rating. Typically, these types of slings are available as straight pull, choke hitch, basket hitch or 2 leg slings.

Scope of Use
Lifting operations

Competencies
Machine Controller, Crane Controller & OTPA-x

Product Approval No.
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01-03, MP07 and MP21
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. All loose lifting gear shall have a valid LOLER certificate and shall be subject to a six monthly thorough examination.
2. Lifting equipment shall be subject to all applicable limitations on the LOLER certificate.
3. Lifting gear shall only be used with an RRV when the RC! indicator is active, and the lifting duty is in within the equipments' safe working load in the most adverse condition.
4. Never exceed the working load limit marked on the sling.
5. Never use a sling at angles greater than 60° from the vertical.
6. When lifting operations are finished, slings should be removed from crane hooks and stowed on a properly designed rack. They should not be left lying on the floor where they may suffer damage or may be lost.

Minimum documentation requirement for the host machine are:
Operating Instructions, LOLER certificate.

Additional documents may include:
Test Records, Statutory Inspection & Test Records, Load Radius Charts (duty charts).

Technical Specifications for loose lifting gear are available from the manufacturer.

Working Load Limits

The working load limits (WLL) listed by the manufacturer are the maximum weights which slings are designed to carry in general lifting service according to the standard uniform load method of rating.

In exceptionally hazardous conditions or in any other circumstances which might indicate a need for a WLL lower than the designed figure, the degree of hazard should be assessed by a competent person and the working load limit adjusted accordingly. The WLL, which should be marked on the sling itself, or on a securely fixed metal tag, must not be exceeded in any circumstances.

The load imposed on a sling leg increases as the angle of the leg from vertical increases.

Account is taken of this fact when calculating working load limits. For example, a 10mm two-leg sling to be used at an angle of 45° from the vertical (90° included angle) will have a WLL 1.4 times that of a 10mm single leg sling when used vertically, and not 2 times the single leg.
# Compactor Plates

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-12-1</td>
<td>Atlas Copco - HC103/308/409/920</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-12-2</td>
<td>Engcon - PP350 / PP600 / PP950</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-12-3</td>
<td>Richter &amp; Muller - Compactor Plaint</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
Manufacturer  Atlas Copco  Models  HC 103 / 308 / 409 / 920

Description
Primary areas of work for hydraulic compactors are compaction of soil, ballast, hollow and slope compression, driving in posts and formwork.

The excavator load is partially transferred to the vibrating plate. Thus the weight of the carrier machine accelerates the compacting process, so allowing greater chute heights to be processed.

These units create less noise than a manually operated compactor which is a great advantage in terms of safety and there is the added advantage that there is a reduction in harmful vibration for the operator.

Scope of Use  Compacting ballast and soil
Competencies  Machine Controller, Crane Controller & OTPA-10
Product Approval No.  -
Risk Control Sheet No(s)  NR/L3/MTC/RCS0216/MP01 to MP07
OTPA-12-1 Compactor Plate

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The compactor must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. Staff shall be briefed on the safe operation of the attachment prior to its use.
4. The compactor shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

Minimum documentation requirement for the host machine are:

Operating Instructions, Certificate of Acceptance or Conformity and Logbook.

Additional documents may include:

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>HC 103</th>
<th>HC 308</th>
<th>HC 409</th>
<th>HC 920</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight: (kg)</td>
<td>160</td>
<td>320</td>
<td>430</td>
<td>880</td>
</tr>
<tr>
<td>Flow requirement (l/min)</td>
<td>30</td>
<td>57</td>
<td>76</td>
<td>114</td>
</tr>
<tr>
<td>Hydraulic pressure (bar)</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Vibrating Force (t)</td>
<td>1.4</td>
<td>2.3</td>
<td>3.6</td>
<td>7.3</td>
</tr>
<tr>
<td>Vibrating Frequency (n/min)</td>
<td>2100</td>
<td>2100</td>
<td>2200</td>
<td>2200</td>
</tr>
<tr>
<td>Base plate Size (W x L)</td>
<td>346 x 678</td>
<td>475 x 693</td>
<td>610 x 929</td>
<td>710 x 1178</td>
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<tr>
<td>Plate Coverage (m²)</td>
<td>0.19</td>
<td>0.25</td>
<td>0.42</td>
<td>0.63</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>486</td>
<td>623</td>
<td>622</td>
<td>764</td>
</tr>
<tr>
<td>Slewing Gear Weight (kg)</td>
<td>-</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
</tbody>
</table>
OTPA-12-2 Compactor

Manufacturer: Engcon
Models: PP350 / PP600 / PP950

Description
Primary areas of work for hydraulic compactors are compaction of soil, ballast, hollow and slope compression, driving in posts and formwork.

The excavator load is partially transferred to the vibrating plate. Thus the weight of the carrier machine accelerates the compacting process, so allowing greater chute heights to be processed.

These units create less noise than a manually operated compactor which is a great advantage in terms of safety and there is the added advantage that there is a reduction in harmful vibration for the operator.

Scope of Use
Compacting ballast and soil

Competencies
Machine Controller, Crane Controller & OTPA-10

Product Approval No.
- 

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01 to MP07
Compactor

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The compactor must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. Staff shall be briefed on the safe operation of the attachment prior to its use.
4. The compactor shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

Minimum documentation requirement for the host machine are:

Operating Instructions, Certificate of Acceptance and Logbook.

Additional documents may include:


Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>PP350</th>
<th>PP600</th>
<th>PP950</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compaction force: (kg)</td>
<td>3500</td>
<td>6000</td>
<td>9500</td>
</tr>
<tr>
<td>Weight excl. mounting: (kg)</td>
<td>390</td>
<td>620</td>
<td>900</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>890</td>
<td>1050</td>
<td>1270</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>620</td>
<td>720</td>
<td>900</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>450</td>
<td>520</td>
<td>600</td>
</tr>
<tr>
<td>Compaction area: (m2)</td>
<td>0.42</td>
<td>0.58</td>
<td>0.90</td>
</tr>
<tr>
<td>Hydraulic. flow: (l/min)</td>
<td>75</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Frequency: (Hz)</td>
<td>2100</td>
<td>2100</td>
<td>2100</td>
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</tbody>
</table>
OTPA-12-3

Compactor

Manufacturer: Richter & Muller
Model: Compactor Plaint

Description
Due to its compact structural shape, the compactor plaint is practically applicable on all types of tracks.
The unit has a hydraulic rotator that can turn the compactor head 360° which allows the compression of ballast under the sleeper.
The unit has a high compaction frequency and is applicable with all current excavators.
These units create less noise than a manually operated compactor which is a great advantage in terms of safety and there is the added advantage that there is a reduction in harmful vibration for the operator.

Scope of Use: Compacting Ballast
Competencies: Machine Controller, Crane Controller & OTPA-10
Product Approval No.: -
Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01 to MP07
OTPA-12-3 Compactor

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The compactor must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

3. Staff shall be briefed on the safe operation of the attachment prior to its use.

4. The compactor shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

Minimum documentation requirement for the host machine are:

Operating Instructions, Certificate of Acceptance and Logbook.

Additional documents may include:


Technical Specification

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Weight</td>
<td>350 kg</td>
</tr>
<tr>
<td>Length</td>
<td>1260 mm</td>
</tr>
<tr>
<td>Width</td>
<td>300 mm</td>
</tr>
<tr>
<td>Height</td>
<td>1097 mm</td>
</tr>
<tr>
<td>Rotator capacity</td>
<td>360°</td>
</tr>
</tbody>
</table>
### Cone Penetration Unit

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-13-1</td>
<td>Cone Penetration Test Unit - Lankelma - UK14</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
Lankelma have developed this Cone Penetration Test (CPT) unit to undertake conventional static cone penetration tests on the infrastructure. The unit has been designed to install geotechnical instrumentation and obtain undisturbed soil samples for railway infrastructure projects, including re-signalling, tunnels and station platform works.

The CPT unit is attached to a 360° RRV excavator via a Quick Hitch that is able to safely lift the 2.2 tonne weight of the CPT rig to the desired height of the embankment or test location.

Typically, the rig is used to carry out tests in the Cess, 6 foot, 10 foot, on up and down embankments, cuttings, and at locations that would normally be very difficult to reach with conventional equipment.

Scope of Use: Rail Site Investigation Testing

Competencies: Machine Controller, Crane Controller & OTPA-7

Product Acceptance No.: -

Risk Control Sheet No(s.): NR/L3/MTC/RCS0216/MP01-04 and MP07
OTPA-13-1 Cone Penetration Test Unit

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

It shall NOT be used under live OLE or on live conductor rail lines.

Staff shall be briefed on the safe operation of the machine prior to its use and they shall not ride in the working platform when a movement takes place.

The limitations of the RRV to which the machine is attached shall apply.

The attachment must NOT be disconnected from excavator whilst on track.

Minimum documentation requirement for the host machine are:

Operating Instructions, E.A. Certificate, Logbook

Additional documents may include:

Product Acceptance Certificate, Inspection and Maintenance Records etc.

Technical Specification

Width 1480 mm
Length 1900 mm
Height Overall 2056 mm
Height 1425 mm
Weight 2200 kg

Range of reach (machine dependant) 6 to 10 metres

Lankelma has a list of approved excavator suppliers, who are familiar with the working of the UK14 rig, e.g.:

Stobart Rail, TMX Plant, Quattro Plant, QTS, BRP (Rugby)
# Fast Clippers

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-14-1</td>
<td>AWI - FCM-TR-2</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-14-2</td>
<td>Rosenqvist - CD 400</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-14-3</td>
<td>Thompson Rail Equipment. - Mk 3A</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
### OTPA-14-1 Fast Clipper

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>AWI</th>
<th>Model</th>
<th>FCM-TR-2</th>
</tr>
</thead>
</table>

**Description**

The AWI FCM -TR - 2 Fast Clipper attachment is designed for use with a road rail vehicle (RRV) using the host machines' hydraulic power for operation.

It can both clip and declip PANDROL FASTCLIPS and there is a sleeper lifting unit included for raising low sleepers.

The TR-2 can fit and remove Pandrol FASTCLIP™ at a rate of 10 to 40 sleepers per minute depending upon model type, operator proficiency and track conditions.

**Scope of Use**

Pandrol Fastclips

**Competencies**

Machine Controller, Crane Controller & OTPA-10

**E.A. Cert. No.**

IF/0603/11 (example for vehicle no. 99709_001016-3)

**Risk Control Sheet No(s).**

NR/L3/MTC/RCS0216/MP01 and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. It shall only operate inside possessions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. It shall NOT be used on live conductor rail lines.
4. The machine shall be lifted over S&C and raised check rails.
5. Working mode - Maximum track cant 150mm and/or 1 in 30 gradients.
6. Permitted speed - Maximum 10 mph (16km/h), Switches & Crossings and Raised Check Rails 5mph (Bkm/h).
7. Staff shall be briefed on the safe operation of the machine prior to its use.
8. The limitations of the RRV to which the machine is attached shall apply.
9. The Fast Clipper must NOT be disconnected from excavator whilst on track.

Minimum documentation requirement for the host machine are:

- Maintenance and Operating Instructions
- Engineering Acceptance Certificate (including Limitations of Use)
- Logbook

Additional documents may include:

- Product Acceptance Certificate(s)
- Performance Test Records
- Statutory Inspection Records
- Calibration information/Certificates
- Load Radius Charts (duty charts) etc.

Technical Specification

- Weight: 1.3 tonnes
- Length: 2500 mm (approx.)
- Width: 2000 mm (approx.)
- Height: 1000 mm (approx.)
- Performance: up to 40 clips per minute
- Brake Release Pressure (max.): 30 bar
OTPA-14-2 Fast Clipper

Manufacturer: Rosenqvist Rail Tech AB
Model: CD 400

Description:
The Rosenqvist - CD400 Clip Driver attachment is designed for use on a road rail vehicle (RRV) using the host machines hydraulic power for operation. It can both clip and declip PANDROL FASTCLIPS.

A sleeper lifting unit included for raising low sleepers (but not with the “e Clip” option).

The CD400 can be fitted with proximity sensors for automatic fastening which increases the productivity potential of the machine.

Scope of Use: Pandrol “e Clip”, Fastclip, Fastclip FE and Deenik

Competencies: Machine Controller, Crane Controller & OTPA-10

Product Approval No.: PA05/01477
E.A. Cert. No.: IF/0011/09

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01 and MP07
Fast Clipper

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. It shall only operate inside possessions.
2. Adjacent lines “open to traffic” shall be protected when placing the clip driver on or off track. It shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. It shall NOT be used on live 3rd rail lines or Overhead Line Equipment.
4. The machine shall be lifted over S&C and raised check rails.
5. Working mode - Maximum track cant 150mm and/or 1 in 29 gradients.
6. Permitted speed - Maximum 5mph (8km/h).
7. Staff shall be briefed on the safe operation of the machine prior to its use.
8. The limitations of the RRV to which the machine is attached shall apply.
9. The Clip Driver must NOT be disconnected from excavator whilst on track.

Minimum documentation requirement for the host machine are:

• Maintenance and Operating Instructions
• Engineering Acceptance Certificate (including Limitations of Use)
• Logbook

Additional documents may include:

Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Calibration information/Certificates etc.

Technical Specification

Weight 1400 kg (3087 lb) with tools for clipping and declipping of Pandrol FASTCLIP and sleeper lift

Length 2500 mm (98.3 in)

Width 2100 mm (82.7 in)

Height 1030 mm (40.6 in)

Wheel Diameter 250 mm (9.8 in)

Capacity Up to 40 sleepers / min
Manufacturer: Thompson Rail Equipment Ltd.  Model: Mk 3A

Description
The Thomson Rail Fastclip attachment is designed for use on a road rail vehicle (RRV) using the host machines hydraulic power for operation.

It is suitable for all steel and concrete sleepers and both CEN60 and BS113A rail and it is easy to adjust and to operate. The machine can also be adapted to suit combinations as required.

The machine requires two hydraulic services, one for the sleeper lifter and one for the clipping or de-clipping paddles. The hydraulic system is fitted with a pressure control valve making it suitable for any hydraulic supply from 175 to 300 bar.

Scope of Use: Pandrol “e Clip” and Fastclip

Competencies: Machine Controller, Crane Controller & OTPA-10

Product Approval No.: PA05/01958  E.A. Cert. No.: RT/EA/0186/08

PADS No.: 094/013005

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01 and MP07

Operators / Suppliers: Balfour Beatty Rail, W Bradshaw, Quattro, Readypower, Shovlin Rail, Story Rail, TXM Plant

Issued by the Professional Head [Plant and T&RS] - Issue 1
For advice contact the Plant & T&RS team - tel: 07515628443
Fast Clipper

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. It shall only operate inside possessions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. It shall NOT be used on live conductor rail lines.
4. The machine shall be lifted over S&C and raised check rails.
5. Working mode - Maximum track cant 180mm and/or 1 in 29 gradient.
6. Permitted speed - Maximum 10 mph (16 km/h), 5 mph thorough switches & crossings and raised check rails.
7. Staff shall be briefed on the safe operation of the machine prior to its use.
8. The limitations of the RRV to which the machine is attached shall apply.
9. The Clip Driver must NOT be disconnected from excavator whilst on track.

Minimum documentation requirement for the host machine are:

- Operating Instruction Manual
- Engineering Acceptance Certificate (including Limitations of Use)
- Logbook

Additional documents may include:

Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>2250 kg</td>
</tr>
<tr>
<td>Length</td>
<td>2195 mm</td>
</tr>
<tr>
<td>Width</td>
<td>2200 mm</td>
</tr>
<tr>
<td>Height</td>
<td>1230 mm</td>
</tr>
<tr>
<td>Sleeper Lift Capacity</td>
<td>350 kg</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>90 - 210 Bar</td>
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</table>
## Flails and Brush Cutters

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
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<tbody>
<tr>
<td>OTPA-15-1</td>
<td>Ferri - THM105, THM125 &amp; TIR 150</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-15-2</td>
<td>Geismar - ORD</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-15-3</td>
<td>Mulag - BRK 1200 / UMK1200</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-15-4</td>
<td>OSMA - TE120/160-CP &amp; TFL90/100</td>
<td>1</td>
<td>2014</td>
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<tr>
<td>OTPA-15-5</td>
<td>Windhoff - AGM</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
### Description
The Ferri flail cutting head attachments are designed for use on road rail vehicles (RRV) excavators using the host machines hydraulic power for operation. They are suitable for cutting grass, scrub and small trees up to 60 mm thick.

They are equipped with adjustable protection and automatic change of the cutting shaft rotating direction.

The hydraulic system is fitted with a pressure control valve making it suitable for hydraulic supplies up to 220 bar.

### Scope of Use
Cutting grass, scrub and small trees

### Competencies
Machine Controller & OTPA-11

### Product Approval No.
- 

### Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01 and MP07
**OTP-15-1 Flail - Brush Cutter**

**Control Measures Required**

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

**Limitations of Use**

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and the safe system of work.
2. It shall NOT be used under live OLE or on live 3rd rail lines.
3. Permitted working speed - Maximum 6 mph (10km/h).
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The limitations of the RRV to which the machine is attached shall apply.
6. The must not be disconnected from excavator whilst on track.

**Minimum documentation requirement for the host machine are:**

- Maintenance and Operating Instructions
- Product Acceptance Certificate (including Limitations of Use)
- Logbook

**Additional documents may include:**

Performance Test Records, Inspection Records & Test Certificates, etc.

**Technical Specification**

<table>
<thead>
<tr>
<th>Model</th>
<th>Cutting width (mm)</th>
<th>Exterior width (mm)</th>
<th>Weight (kg)</th>
<th>Flow rate (l/min)</th>
<th>Pressure (bar)</th>
<th>No. of Knives</th>
</tr>
</thead>
<tbody>
<tr>
<td>THM 105</td>
<td>1050</td>
<td>1290</td>
<td>330</td>
<td>60-100</td>
<td>220</td>
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<td>THM 125</td>
<td>1250</td>
<td>1490</td>
<td>348</td>
<td>60-100</td>
<td>220</td>
<td>22</td>
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<tr>
<td>TIR 150</td>
<td>1450</td>
<td>1680</td>
<td>630</td>
<td>90-100</td>
<td>220</td>
<td>24</td>
</tr>
</tbody>
</table>
**DESCRIPTION**

The Geismar Flail / Brush Cutter attachment is designed for use on a road rail vehicle (RRV) using the host machines hydraulic power for operation.

It is suitable for cutting grass and scrub up to 80 mm thick.

It is equipped with adjustable protection.

The hydraulic system is fitted with a pressure control valve making it suitable for a hydraulic supply up to 210 bar.

**SCOPE OF USE**

Cutting grass, scrub and small bushes / trees

**COMPETENCIES**

Machine Controller & OTPA-11

**PRODUCT APPROVAL NO.**

-  

**RISK CONTROL SHEET NO(S).**

NR/L3/MTC/RCS0216/MP01 and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and the safe system of work.
2. It shall NOT be used on live conductor rail lines.
3. Permitted speed - Maximum 6 mph (10km/h).
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The limitations of the RRV to which the machine is attached shall apply.
6. The must not be disconnected from excavator whilst on track.

Minimum documentation requirement for the host machine are:

- Operating Instruction Manual
- Product Acceptance Certificate (including Limitations of Use)
- Logbook

Additional documents may include:

Performance Test Records, Inspection Records, Calibration & Test Certificates, etc.

Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>380 kg</td>
</tr>
<tr>
<td>Total Width</td>
<td>1400 mm</td>
</tr>
<tr>
<td>Working Width</td>
<td>1250 mm</td>
</tr>
<tr>
<td>Length</td>
<td>500 mm</td>
</tr>
<tr>
<td>Height</td>
<td>520 mm</td>
</tr>
<tr>
<td>No. of Flails</td>
<td>12</td>
</tr>
<tr>
<td>Working Speed</td>
<td>Up to 10 km/h (typical)</td>
</tr>
<tr>
<td>Flail Head Speed</td>
<td>2 500 rpm</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>210 bar (max)</td>
</tr>
<tr>
<td>Hydraulic output</td>
<td>100 l/min (max)</td>
</tr>
</tbody>
</table>
Manufacturer: Mulag
Models: BRK 1200 / UMK 1200

Description
The MULAG GMK 1200 Cutting Head attachment is designed for use on a road rail vehicle (RRV) excavators and tractors using the host machines hydraulic power for operation. It’s suitable for cutting grass and scrub up to 60 mm thick.

It’s equipped with adjustable protection and automatic change of the cutting shaft rotating direction.

The hydraulic system is fitted with a pressure control valve making it suitable for hydraulic supplies up to 340 bar.

Scope of Use: Cutting grass and scrub
Competencies: Machine Controller & OTPA-11
Product Approval No.: -
Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01 and MP07
Suppliers: Avondale Environmental Services Ltd
**Control Measures Required**

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

**Limitations of Use**

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and the safe system of work.
2. It shall NOT be used under live OLE or on live 3rd rail lines.
3. Permitted working speed - Maximum 6 mph (10km/h).
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The limitations of the RRV to which the machine is attached shall apply.
6. The must not be disconnected from excavator whilst on track.

**Minimum documentation requirement for the host machine are:**

- Maintenance and Operating Instructions
- Product Acceptance Certificate (including Limitations of Use)
- Logbook

**Additional documents may include:**

Performance Test Records, Inspection Records, Calibration & Test Certificates, etc.

**Technical Specification**

<table>
<thead>
<tr>
<th></th>
<th>BRK 1200</th>
<th>UMK 1200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>375 kg</td>
<td>395 kg</td>
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<tr>
<td>Total Width</td>
<td>1520 mm</td>
<td>1500 mm</td>
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<tr>
<td>Working Width</td>
<td>1200 mm</td>
<td>1200 mm</td>
</tr>
<tr>
<td>Number of Flails</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>Working Speed</td>
<td>Up to 10 km/h</td>
<td>Up to 10 km/h</td>
</tr>
<tr>
<td>Flail Head Speed</td>
<td>2300 rpm.</td>
<td>2300 rpm.</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>340 bar (max)</td>
<td>340 bar (max)</td>
</tr>
<tr>
<td>Flow Rate</td>
<td>62 l/min.</td>
<td>62 l/min.</td>
</tr>
</tbody>
</table>
Manufacturer: OSMA
Models: TE 120-CP, TE160-CP, TFL 90 & TFL100

Description
The OSMA Flail Brush cutting attachments are designed for use on road rail vehicle (RRV) excavators and tractors using the host machines' hydraulic power for operation.

They are suitable for cutting grass, scrub and small trees up to 60 mm thick.

They are equipped with adjustable protection and automatic change of the cutting shaft rotating direction.

The hydraulic system is fitted with a pressure control valve making it suitable for hydraulic supplies up to 250 bar.

Scope of Use: Cutting grass, scrub and small trees

Competencies: Machine Controller & OTPA-11

Product Approval No.: -

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01 and MP07
OTPA-15-4  Flail - Brush Cutter

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and the safe system of work.
2. It shall NOT be used under live OLE or on live 3rd rail lines.
3. Permitted working speed - Maximum 6 mph (10km/h).
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The limitations of the RRV to which the machine is attached shall apply.
6. The must not be disconnected from excavator whilst on track.

Minimum documentation requirement for the host machine are:

- Maintenance and Operating Instructions
- Product Acceptance Certificate (including Limitations of Use)
- Logbook

Additional documents may include:
Performance Test Records, Inspection Records & Test Certificates, etc.

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>Cutting width (mm)</th>
<th>Exterior width (mm)</th>
<th>Weight (kg)</th>
<th>Flow rate (l/min)</th>
<th>Pressure (bar)</th>
<th>Knives</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 120-CP</td>
<td>1250</td>
<td>1450</td>
<td>430</td>
<td>85-100</td>
<td>200-220</td>
<td>40</td>
</tr>
<tr>
<td>TE160-CP</td>
<td>160</td>
<td>1850</td>
<td>525</td>
<td>85-100</td>
<td>200-220</td>
<td>48</td>
</tr>
<tr>
<td>TFL 90</td>
<td>900</td>
<td>1050</td>
<td>450</td>
<td>60-80</td>
<td>180-220</td>
<td>16</td>
</tr>
<tr>
<td>TFL 100</td>
<td>1050</td>
<td>1250</td>
<td>650</td>
<td>90-100</td>
<td>220-250</td>
<td>16</td>
</tr>
</tbody>
</table>
Manufacturer: Windhoff  
Model: AGM

Description
The Windhoff Brush Cutter / Mulcher attachment is designed for use on a road rail vehicle (RRV) using the host machines hydraulic power for operation.

It is suitable for cutting grass and scrub up to 60 mm thick. It is equipped with adjustable protection and automatic change of the cutting shaft rotating direction.

The hydraulic system is fitted with a pressure control valve making it suitable for a hydraulic supply up to 340 bar.

Scope of Use
Cutting grass and scrub

Competencies:
Machine Controller & OTPA-11

Product Approval No.
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01 and MP07
OTPA-15-5 Flail - Brush Cutter

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and the safe system of work.
2. It shall NOT be used on live conductor rail lines.
3. Permitted speed - Maximum 6 mph (10km/h).
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The limitations of the RRV to which the machine is attached shall apply.
6. It must not be disconnected from excavator whilst on track.

Minimum documentation requirement for the host machine are:

- Operating Instruction Manual
- Product Acceptance Certificate (including Limitations of Use)
- Logbook

Additional documents may include:
Performance Test Records, Inspection Records, Calibration & Test Certificates, etc.

Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Weight</td>
<td>880 kg</td>
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<tr>
<td>Total Width</td>
<td>1520 mm</td>
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<tr>
<td>Working Width</td>
<td>1200 mm</td>
</tr>
<tr>
<td>Length</td>
<td>1000 mm</td>
</tr>
<tr>
<td>Height</td>
<td>1350 mm</td>
</tr>
<tr>
<td>No. of Flails</td>
<td>20</td>
</tr>
<tr>
<td>Working Speed</td>
<td>Up to 10 km/h</td>
</tr>
<tr>
<td>Flail Head Speed</td>
<td>1800 rpm.</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>150 bar (max)</td>
</tr>
</tbody>
</table>
## Flash Butt Welders

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-16-1</td>
<td>Flash Butt Welder - Holland K-922</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-16-2</td>
<td>Flash Butt Welder - Holland K-355</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
OTPA-16-1 Flash Butt Welder

Manufacturer: Holland
Model: K - 922

Description
The K-922 welding head is designed specifically for closure welding and has the capability to shear the upset and flash while maintaining a constant tension on the rails.
The unit shown above is based on the Doosan DX160/170 Series excavator.
The GOS - Philmor model DX160RW – “All Terrain Mobile Welder” (ATMW) combines the functional flexibility of a road/rail vehicle with the ability to perform high quality welds in an often challenging railway environment.
The DX160RW road/rail conversion is used as a “transporter” machine to create the ATMW system, incorporating a Holland and Co Model K-922 Flash Butt Welder.
The unit shown is complete with a "Knuckle Boom" and "Mini Dipper" for better control.

Scope of Use
Welding Rail

Competencies
Machine Controller, Crane Controller & OTPA-10

Product Approval No.
-

Supplier
GOS Tool & Engineering

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01 and MP07
OTP-16-1 Flash Butt Welder

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. It shall only operate inside possessions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. It shall NOT be used on live conductor rail lines.
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The limitations of the RRV to which the machine is attached shall apply.
6. The Clip Driver must NOT be disconnected from excavator whilst on track.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual, Product Acceptance Certificate (including Limitations of Use) and Logbook, E. A Certificate (for host machine).

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

Rated Voltage 370 – 390 volts
Rated Primary Current 550 Amps
Rated Welding Current 30,000 Amps
Hydraulic Working Pressure 207 bar
Rated Upset / Pull Force 120 tonnes
Rated Clamping Force 290 tonnes
Welding Pulling Stroke 150 mm
Weight 3800 kg
Overall Dimensions 1000 x 970 x 1895 mm
Description:
The K-355 flash butt welding head is designed specifically for closure welding and has the capability to shear the upset and flash while maintaining a constant tension on the rails.

The unit shown above is based on the Doosan DX160/170 Series excavator. The GOS - Philmor model DX160RW – “All Terrain Mobile Welder” (ATMW) combines the functional flexibility of a road/rail vehicle with the ability to perform high quality welds in an often challenging railway environment.

The DX160RW road/rail conversion is used as a “transporter” machine to create the ATMW system, incorporating a Holland and Co Model K-922 Flash Butt Welder. The unit shown is complete with a "Knuckle Boom" and "Mini Dipper" for better control.

Scope of Use: Welding Rail

Competencies: Machine Controller, Crane Controller & OTPA-10

Product Approval No.: PA05/01439

Supplier: Volker Rail

Risk Control Sheet No(s.): NR/L3/MTC/RCS0216/MP01 and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. It shall only operate inside possessions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. It shall NOT be used on live conductor rail lines.
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The limitations of the RRV to which the machine is attached shall apply.
6. The Clip Driver must NOT be disconnected from excavator whilst on track.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual, Product Acceptance Certificate (including Limitations of Use) and Logbook, E. A Certificate (for host machine).

Additional documents may include:
Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

- Rated Voltage: 380 V +/- 10%
- Rated Primary Current: 500 Amps
- Rated Welding Current: 30,000 Amps
- Hydraulic Working Pressure: 138 bar
- Rated Upset / Pull Force: 65 tonnes
- Rated Clamping Force: 176 tonnes
- Welding Pulling Stroke: 150 mm
- Weight: 2950 kg
- Overall Dimensions: 920 x 1062 x 1852 mm
## Grabs

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-17-1</td>
<td>Block Grab - various</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-17-2</td>
<td>Log (timber) Grab - various</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-17-3</td>
<td>Plate Grab - Thompson Rail Equipment</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-17-4</td>
<td>Post Grab - Kinshofer</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-17-5</td>
<td>Sleeper Loading Grab - Richter &amp; Muller</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
OTPA-17-1 Block Grab

Typical Mechanical Scissor Block Grab

Hydraulic Grab - Kinshofer

Manufacturers

various - Chieftain, Kinshofer, McQuaid, Probst.

Description

Mechanical and hydraulic block grabs are available for lifting packs of concrete blocks, bricks or slabs. There are several designs, some are a fully automatic scissor design mechanism and others incorporate hydraulic cylinders to apply the appropriate pressure to safely lift a pack or individual blocks. Both types are shown above. These types of grabs can handle standard packs of concrete blocks, bricks and slabs safely and their simple sturdy construction results in a long service life.

The grabs can be operated via the RRV without the driver leaving the safety of his vehicle.

Scope of Use

Lifting - packs of concrete blocks, slabs and bricks etc.

Competencies

Machine Controller, Crane Controller & OTPA-10

Product Approval No.

-

Risk Control Sheet No(s).

NR/L3/MTC/RCS0216/MP01-03 MP06 and MP07
OTPA-17-1 Block Grab

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. Grabs must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. Staff shall be briefed on the safe operation of the machine prior to its use.
4. The limitations of the RRV to which the machine is attached shall apply.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions,

Additional documents may include:

Product Acceptance Certificate (including Limitations of Use), LOLER Certification, Test Records, Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

(Note: The details below are for a typical mechanical and hydraulic block grab. Please refer to the manufacturers' individual data sheets for actual details of a particular make and model).

<table>
<thead>
<tr>
<th>Model</th>
<th>Internal Height (mm)</th>
<th>Overall Height (mm)</th>
<th>Opening range (mm)</th>
<th>Capacity (kg)</th>
<th>Pad Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical (typical)</td>
<td>400 - 925</td>
<td>1430</td>
<td>600 - 1130</td>
<td>1800</td>
<td>1200</td>
</tr>
<tr>
<td>Hydraulic - BS311</td>
<td>1000</td>
<td>1650</td>
<td>220 - 1420</td>
<td>2000</td>
<td>1000 - 1200</td>
</tr>
<tr>
<td></td>
<td>1100</td>
<td>1750</td>
<td>160 - 1450</td>
<td>2000</td>
<td>1000 - 1200</td>
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<tr>
<td></td>
<td>1200</td>
<td>1850</td>
<td>98 - 1475</td>
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<td>1000 - 1200</td>
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<tr>
<td></td>
<td>1300</td>
<td>1950</td>
<td>40 - 1500</td>
<td>1600</td>
<td>1000 - 1200</td>
</tr>
</tbody>
</table>
Manufacturers

Various - e.g. Abiljo (UK), Engcon, Kinshofer, Idrobenne etc.

Description

The examples (Kinshofer KM634 range) of hydraulic grabs shown above are typical designs for this type of grab.

These grabs are robust and powerful tools for heavy duty log / timber lifting operations. Their optimised shell design allows the grabs to handle small diameter timber safely and their sturdy construction results in a long service life.

The hydraulic cylinders are positioned such that they are protected within the carrier frame and the use of hose guards gives additional protection to the hydraulic system.

Scope of Use

Lifting operations - logs, timber and vegetation etc.

Competencies

Machine Controller, Crane Controller & OTPA-10

Product Approval No.

-

Risk Control Sheet No(s).

NR/L3/MTC/RCS0216/MP01-03 MP06 and MP07
Log Grab

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. Grabs must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

3. Staff shall be briefed on the safe operation of the machine prior to its use.

4. The limitations of the RRV to which the machine is attached shall apply.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions,

Additional documents may include:

Product Acceptance Certificate (including Limitations of Use), LOLER Certification, Test Records, Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

Note: The details below are for the Kinshofer KM634 range of Log Grabs only.

Please refer to the individual manufacturers' data sheets for capacities of other makes/models.

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity (m²)</th>
<th>Width min. (mm)</th>
<th>Log-Ø max. (mm)</th>
<th>Max. Opening (mm)</th>
<th>Weight (kg)</th>
<th>Closing force (kN)</th>
<th>Load capacity (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM634</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 0-25</td>
<td>0.25</td>
<td>420</td>
<td>90</td>
<td>1470</td>
<td>170</td>
<td>13</td>
<td>4000</td>
</tr>
<tr>
<td>- 0-35</td>
<td>0.35</td>
<td>500</td>
<td>135</td>
<td>1950</td>
<td>225</td>
<td>16</td>
<td>5000</td>
</tr>
<tr>
<td>- 0-50</td>
<td>0.50</td>
<td>500</td>
<td>170</td>
<td>1985</td>
<td>250</td>
<td>15</td>
<td>5000</td>
</tr>
<tr>
<td>- S0-40</td>
<td>0.40</td>
<td>510</td>
<td>135</td>
<td>1950</td>
<td>270</td>
<td>16</td>
<td>6000</td>
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<td>- S0-50</td>
<td>0.50</td>
<td>510</td>
<td>170</td>
<td>1985</td>
<td>275</td>
<td>16</td>
<td>7000</td>
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<tr>
<td>- S0-70</td>
<td>0.70</td>
<td>590</td>
<td>110</td>
<td>2570</td>
<td>530</td>
<td>15</td>
<td>8000</td>
</tr>
</tbody>
</table>
OTPA-17-3 Plate Grab

Manufacturer Thomson Rail Equipment Ltd
Model PG

Description
This type of Plate Grab incorporates a hinge mechanism into the jaw plates to ensure that the grip of the jaws is evenly distributed across all the steel sleepers in the pack. This compact plate grab will handle all designs of steel sleepers in all pack sizes. The hinge mechanism can be locked if the grab is required to handle small loads such as short lengths of rail. For storage and transport the jaws open wider making it stable. For safety, the hydraulic cylinders are fitted with check valves and pressure control valves and for storage and transport the jaws open wider to make it more stable.

Scope of Use
Lifting packs of steel sleepers

Competencies
Machine Controller, Crane Controller & OTPA-10

Product Approval No.
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
OTPA-17-3  Plate Grab

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

The Plate Grab must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, LOLER Certification

Additional documents may include:

Product Acceptance Certificate (including Limitations of Use), Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Unladen Weight</td>
<td>510 kg</td>
</tr>
<tr>
<td>Safe Working Load</td>
<td>5,000 kg</td>
</tr>
<tr>
<td>Proof Load Test</td>
<td>10,000 kg</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>150 to 350 bar</td>
</tr>
<tr>
<td>Hydraulic Rotator</td>
<td>10,000 kg</td>
</tr>
<tr>
<td>Jaw Tip Opening</td>
<td>0 to 970 mm</td>
</tr>
<tr>
<td>Pack Width (floating mode)</td>
<td>200 to 350 mm</td>
</tr>
</tbody>
</table>
Post Grab Manipulator

Manufacturer   Kinshofer  Suppliers   Shovlin Plant & Sandhurst Hire

Description
The manipulators can manoeuvre signal posts, pipes and tubes weighing up to 1000kgs and measuring between 70-300mm diameter easily and safely. Sandhurst manipulators have vertical and horizontal attachment rotation, so used in conjunction with the excavator crowd ram, posts can be rotated and tilted through any angle.

Clamping is very secure, with each clamp working independently of one another. In use, each clamp stops when meeting resistance, enabling uneven shapes to be handled.

Posts are gripped securely and held firm by nylon pads, fitted to the clamps, preventing load slip and providing post protection.

These manipulators have continuous rotation and controlled braking, resulting in smooth and accurate control over post setting.

This attachment is deal for use with RRV excavators from 13 – 30 tonnes.

Scope of Use   Lifting, positioning & setting of Signal Posts

Competencies   Machine Controller, Crane Controller & OTPA-10

Product Approval No.   -

Risk Control Sheet No(s).   NR/L3/MTC/RCS0216/MP01-03 MP06 and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. Grabs must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. Staff shall be briefed on the safe operation of the machine prior to its use.
4. The limitations of the RRV to which the machine is attached shall apply.
5. It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions,

Additional documents may include:

Product Acceptance Certificate (including Limitations of Use), LOLER Certification, Test Records, Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Model KM Range</th>
<th>Load Capacity (kg)</th>
<th>Gripping Diameter (mm) (Min/Max)</th>
<th>Length (mm)</th>
<th>Unit Weight (kg)</th>
<th>Closing Force (kN)</th>
<th>Max. Operating Pressure (Bar)</th>
<th>Oil Flow (L/Min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>930-500</td>
<td>500</td>
<td>100 - 300</td>
<td>785</td>
<td>235</td>
<td>11</td>
<td>200</td>
<td>20 - 40</td>
</tr>
<tr>
<td>930-1000</td>
<td>1000</td>
<td>100 - 300</td>
<td>1275</td>
<td>310</td>
<td>23</td>
<td>200</td>
<td>20 - 40</td>
</tr>
<tr>
<td>930-3000</td>
<td>3000</td>
<td>250 -600</td>
<td>1630</td>
<td>1085</td>
<td>39</td>
<td>200</td>
<td>20 - 40</td>
</tr>
</tbody>
</table>
Sleeper Loading Grab

Manufacturer: Richter & Muller
Model: HSV5 & HSV7
Suppliers: Tasty Plant

Description
The Richter & Müller hydraulic sleeper loading grabs are designed for loading batches of 5 or 7 concrete sleepers, side-by-side.
The beam length is mechanically adjustable so that it is possible to handle sleepers of different lengths.
It incorporates a strong and endlessly rotating (360°) hydraulic rotator which allows rapid, exact and high-efficiency operations possible.
The sleeper loading device may be mounted onto most types of standard RRV excavators.

Scope of Use
Lifting packs of steel sleepers

Competencies
Machine Controller, Crane Controller & OTPA-10

Product Approval No.
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01-03, MP06 and MP07

Issued by the Professional Head [Plant and T&RS] - Issue 1
For advice contact the Plant & T&RS team - tel: 07515628443
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The Sleeper Grab must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. Staff shall be briefed on the safe operation of the machine prior to its use.
4. The limitations of the RRV to which the machine is attached shall apply.
5. It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, LOLER Certification

Additional documents may include:

Product Acceptance Certificate (including Limitations of Use), Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>HSV5</th>
<th>HSV7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (kg)</td>
<td>750</td>
<td>800</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>2000</td>
<td>2400</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>1450</td>
<td>2050</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>800 mm</td>
<td>1100</td>
</tr>
<tr>
<td>Maximum number of sleepers lifted</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>
Hydraulic Hammer Breakers

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-18-1</td>
<td>Atlas Copco - MB750 -1500</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-18-2</td>
<td>JCB - Hammmermaster range</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
Manufacturer  Atlas Copco  Models  MB750 / MB1000 / MB 1200 / MB1500

Description
Atlas Copco medium breakers are powered by a combination of oil and gas (nitrogen). 70% of the impact energy is generated by gas power, which means that the breakers are virtually independent of the hydraulic supply from the RRV thanks to simple design. There are only three moving parts: the percussion piston, the control valve and the pilot valve which helps minimise routine maintenance.

The make and model of the excavator to which a hydraulic breaker will be fitted must be established so that the correct size and type can be selected. The excavator’s hydraulic system must be compatible with the breaker.

Scope of Use  General demolition, rock breaking and trenching

Competencies  Machine Controller, Crane Controller & OTPA-xx

Product Approval No.  -

Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01 and MP07
OTPA-18-1 Hammer - Breaker

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Staff shall be briefed on the safe operation of the machine prior to its use.
2. The breaker shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.
3. The breaker shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are

Maintenance Instructions, Operating Instructions and Logbook

Additional documents may include:

Test Records, Product Acceptance Certificate (if applicable), Statutory Inspection & Test Records, Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model Type</th>
<th>MB750</th>
<th>MB1000</th>
<th>MB1200</th>
<th>MB1500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Weight (kg)</td>
<td>750</td>
<td>1000</td>
<td>1200</td>
<td>1500</td>
</tr>
<tr>
<td>Oil Flow Rate (l/min)</td>
<td>80 - 120</td>
<td>85 - 130</td>
<td>100 - 140</td>
<td>120 - 155</td>
</tr>
<tr>
<td>Hydraulic Pressure (bar)</td>
<td>140 - 170</td>
<td>160 - 180</td>
<td>160 - 180</td>
<td>160 - 180</td>
</tr>
<tr>
<td>Impact Rate (bpm)</td>
<td>370 - 800</td>
<td>350 - 750</td>
<td>340 - 680</td>
<td>330 - 640</td>
</tr>
<tr>
<td>Working Length of Tool (mm)</td>
<td>550</td>
<td>570</td>
<td>605</td>
<td>630</td>
</tr>
<tr>
<td>Tool Diameter (mm)</td>
<td>100</td>
<td>110</td>
<td>120</td>
<td>135</td>
</tr>
<tr>
<td>Machine weight (t)</td>
<td>10 - 17</td>
<td>12 - 21</td>
<td>15 - 26</td>
<td>17 - 29</td>
</tr>
</tbody>
</table>
Manufacturer: JCB  Models: Hammermaster Range

Description:
The JCB Heavy line "Hammermasters" offers a wide range of features: oil and gas powered working principle gives the same high-impact energy virtually independent of oil delivery; long piston stroke provides high impact whilst maintaining smooth operation; and sound insulation is standard, enhancing operator comfort as well as being environmentally friendly. These breakers come with a choice of tools, including hoses, hanger brackets, adaptors, couplings, grease gun and grease.

They are designed to be a durable and robust, high-impact breaker with smooth operation. The large diameter tool give the range a long tool and bush life, reducing failures from incorrect operation and operator abuse. The breakers are fitted with the JCB Autogrease system as standard, which delivers a constant supply of grease to lubricate the breaker components.

The make and model of the excavator to which a hydraulic breaker will be fitted must be established so that the correct size and type can be selected. The excavator’s hydraulic system must be compatible with the breaker.

Scope of Use: General demolition, rock breaking and trenching

Competencies: Machine Controller, Crane Controller & OTPA-xx

Product Approval No.: -

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01-03 and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

Staff shall be briefed on the safe operation of the machine prior to its use.

The breaker shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

The breaker shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Maintenance Instructions, Operating Instructions, Logbook

Additional documents may include:


Technical Specification

<table>
<thead>
<tr>
<th>Model Type</th>
<th>HM860Q</th>
<th>HM1260Q</th>
<th>HM1560Q</th>
<th>HM1700Q</th>
<th>HM2460Q</th>
<th>HM3060Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Weight (kg)</td>
<td>850</td>
<td>1250</td>
<td>1600</td>
<td>1700</td>
<td>2200</td>
<td>3000</td>
</tr>
<tr>
<td>Impact Energy (joules)</td>
<td>1417</td>
<td>1978</td>
<td>2496</td>
<td>3577</td>
<td>4784</td>
<td>6024</td>
</tr>
<tr>
<td>Blow rate / min.</td>
<td>420-750</td>
<td>350-600</td>
<td>360-540</td>
<td>320-600</td>
<td>280-550</td>
<td>280-540</td>
</tr>
<tr>
<td>Hydraulic Pressure (bar)</td>
<td>140-170</td>
<td>140-170</td>
<td>120-140</td>
<td>160-180</td>
<td>160-180</td>
<td>160-180</td>
</tr>
<tr>
<td>Oil Flow Rate (l/min)</td>
<td>80-110</td>
<td>90-120</td>
<td>130-170</td>
<td>130-160</td>
<td>140-180</td>
<td>210-270</td>
</tr>
<tr>
<td>Back Pressure max. (bar)</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Tool diameter (mm)</td>
<td>100</td>
<td>115</td>
<td>135</td>
<td>140</td>
<td>150</td>
<td>165</td>
</tr>
<tr>
<td>Sound Power Level (dBA)</td>
<td>117</td>
<td>117</td>
<td>117</td>
<td>121</td>
<td>121</td>
<td>122</td>
</tr>
<tr>
<td>Machine weight (t)</td>
<td>12</td>
<td>13</td>
<td>16</td>
<td>19</td>
<td>24</td>
<td>32</td>
</tr>
</tbody>
</table>
## Knuckle Boom Cranes

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-19-1</td>
<td>Palfinger - PC2300A</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-19-2</td>
<td>Hiab - 045</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
OTPA-19-1 Knuckle Boom Crane

Manufacturer: Palfinger  Model: PC2300A

Description:
The Aquarius 4WD Canter road rail truck may be fitted with a rear mounted Palfinger PC2300 telescopic knuckle boom crane which is certified for use under live OLE.

The crane has worm slewing drive which enables the crane boom to be precisely rotated.

Load holding valves prevent the crane booms from dropping and are fitted on the main boom cylinder and the extension boom hydraulic cylinders.

The crane incorporates an electro-hydraulic emergency stop button which stops every crane function immediately.

Scope of Use: Lifting operations

Competencies: Machine Controller, Crane Controller & NR/CTM/OTPA/01 - Operate Attachment Access Platform (MEWP)

E.A. Cert. No.: IF/0192/10 (example for Aquarius Canter as shown above)

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01 and MP07
OTPA-19-1 Knuckle Boom Crane

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

2. The crane jib shall NOT be deployed from its stowed travel position, in any circumstances when the RRV is under live OLE.

3. The RRV shall be stationary as the stabiliser legs are interlocked with the crane control. Deployment of the stabiliser legs shall only take place in accordance with the Method Statement and the safe system of work for the possession and the stabiliser legs shall not impinge on sleepers.

4. Only the identified lift point shall be used.

5. Crane and stabiliser legs shall be locked in stowed position when not in use.

6. Staff shall be briefed on the safe operation of the machine prior to its use.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Engineering Acceptance Certificate (including Limitations of Use), LOLER certification, Load Radius Charts (duty charts) and Logbook.

Additional documents may include:

Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Test Certificates, etc.

Technical Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. lifting moment</td>
<td>23 kNm</td>
</tr>
<tr>
<td></td>
<td>16920 lbs</td>
</tr>
<tr>
<td>Safe Working Load at minimum reach</td>
<td>1820 kg</td>
</tr>
<tr>
<td></td>
<td>4010 lbs</td>
</tr>
<tr>
<td>Safe Working Load at maximum reach</td>
<td>500 kg</td>
</tr>
<tr>
<td></td>
<td>1100 lbs</td>
</tr>
<tr>
<td>Maximum hydraulic outreach</td>
<td>4.1 m</td>
</tr>
<tr>
<td></td>
<td>13’ 5”</td>
</tr>
<tr>
<td>Slewing angle</td>
<td>340°</td>
</tr>
<tr>
<td>Max. operating pressure</td>
<td>185 bar</td>
</tr>
<tr>
<td></td>
<td>2683 psi</td>
</tr>
<tr>
<td>Recommended pump capacity</td>
<td>6 l/min</td>
</tr>
<tr>
<td></td>
<td>1.3 gal./min</td>
</tr>
<tr>
<td>Weight</td>
<td>230 kg</td>
</tr>
<tr>
<td></td>
<td>510 lbs</td>
</tr>
</tbody>
</table>
Description
The road rail truck HIAB 045 telescopic knuckle boom crane shown above is rear mounted and is a typical arrangement for a flat bed lorry. Other options are for the crane to be either mounted behind the driving cab or in the middle of the flat bed.

The crane has a slewing drive which enables the crane boom to be precisely rotated.

Load holding valves prevent the crane booms from dropping and are fitted on the main boom cylinder and the extension boom hydraulic cylinders.

The crane incorporates an electro-hydraulic emergency stop button which stops every crane function immediately.

Scope of Use
Lifting operations

Competencies
Machine Controller, Crane Controller & NR/CTM/OTPA/01
- Operate Attachment Access Platform (MEWP)

E.A. Cert. No.
ER/0142/08 (typical example for vehicle shown above)

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01 and MP07
OTPA-19-2 Knuckle Boom Crane

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

2. The crane jib shall NOT be deployed from its stowed travel position, in any circumstances when the RRV is under live OLE.

3. The RRV shall be stationary as the stabiliser legs are interlocked with the crane control. Deployment of the stabiliser legs shall only take place in accordance with the Method Statement and the safe system of work for the possession and the stabiliser legs shall not impinge on sleepers.

4. Only the identified lift point shall be used.

5. Crane and stabiliser legs shall be locked in stowed position when not in use.

6. Staff shall be briefed on the safe operation of the machine prior to its use.

Minimum documentation requirement for the host machine are

Maintenance and Operating Instructions, Engineering Acceptance Certificate (including Limitations of Use), LOLER certification, Load Radius Charts (duty charts) and Logbook.

Additional documents may include

Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection Records, Test Certificates, etc.

Technical Specification

Max. lifting moment 45.3 kNm
Lifting Capacity

<table>
<thead>
<tr>
<th>Length (m)</th>
<th>Capacity (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>2900</td>
</tr>
<tr>
<td>2.4</td>
<td>1900</td>
</tr>
<tr>
<td>3.1</td>
<td>1480</td>
</tr>
<tr>
<td>4.5</td>
<td>1020</td>
</tr>
</tbody>
</table>

Hydraulic Pump Flowrate 25 - 30 l/min

Slewing angle / Slewing Speed 410° / 15°/s

Height in transportation position 1880 mm

Max. operating pressure 22.5 Mpa

Weight 600 kg
# Lifting Beams and Systems

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-20-1</td>
<td>Bag Lifting Beam - Arbil - BRB</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-20-2</td>
<td>Bag Lifting Beam System - Thompson - LRBHA 211</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-20-3</td>
<td>Level Crossing Slab Lifter - Thompson - XL 209</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-20-4</td>
<td>Panel Lifting Beam - TME 630</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-20-5</td>
<td>Rail Lifting Beam - Geismar - PRR 481</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-20-6</td>
<td>Rail Lifting Beam - Geismar - PRR 488</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-20-7</td>
<td>Rail Lifting Beam - Thompson - RLB-20</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-20-8</td>
<td>Sleeper Lifting Beam - Arbil</td>
<td>1</td>
<td>2014</td>
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<tr>
<td>OTPA-20-9</td>
<td>Sleeper Lifting Beam - Geismar - PCT</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-20-10</td>
<td>Telescopic Rail Lifting Beam - Giesmar - PER 495</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-20-11</td>
<td>Telescopic Rail Lifting Beam - Thompson - TRLB20</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-20-12</td>
<td>Track Lifting Jack - Railability</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-20-13</td>
<td>Universal Lifting Beam - Thompson - UB20</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
OTPA-20-1 Bag Lifting Beam

Manufacturer: Arbil  Model: BLB

Description
The Arbil ballast bag lifter helps improve the safe handling of large bags of rail ballast and has been designed to be robust and portable.

The ballast bag lifter is available in either a 1 tonne or 2 tonne version with either welded on hooks or swivel safety hooks for additional safety and ease of use.

Manufactured in two width versions to suit differing bag sizes (800mm – 850mm & 900mm – 970 mm).

Scope of Use
Lifting and handling bags of materials.

Competencies
Machine Controller, Crane Controller & OTPA-10

Product Approval No.
- 

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01 to MP07
OTPA-20-1 Bag Lifting Beam

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. Each beam shall have a valid LOLER certificate.
2. The beam shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road rail Vehicle (RRV) to which it’s attached.
3. The beam shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are

Operating Instructions, LOLER Test Certificate and Logbook.

Additional documents may include


Technical Specification

Safe Working Load 1 tonne or 2 tonne
Weight Up to 75 kg (dependant on type)
Length 800 mm to 1000 mm
Width 800 mm to 1000 mm
Height Up to 400 mm
Suppliers Arbil or Railability
Bag Handling System

Manufacturer       Thomson Rail Equipment
Model              LRBHA 211

Description
The Bag Handling System comprises of hydraulically adjustable lifting forks, and a self-tensioning support frame. It is designed to completely remove the need for operatives to hold bags open during the loading operation & manually attach items of loose lifting tackle.

The system is compatible for use with all 360° Excavators*, (Road~Rail or otherwise); and promotes enforcement of the machine exclusion zone/s, by removing the need for operatives to be part of the loading & lifting processes.

The system is designed to be used with the 1m³ size “1 tonne” bags only.

The bag support frame quickly breaks down into small sections for easy transport.

Scope of Use
Lifting and handling bags of materials.

Competencies
Crane Controller & OTPA-14 & OTPO-02

Product Acceptance No. PA05/04988   PADS No’s. 094/001302 to 001307

Risk Control Sheet No(s). NR/L3/MTC/RCS0216/MP01,02,03,05,07,08, & 21
OTP-20-2 Bag Handling System

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. Each set of lifting forks shall have a valid LOLER certificate.
2. The lifting forks shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road rail Vehicle (RRV) to which it’s attached.
3. The lifting forks shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the bag forks & load weight, in the most adverse condition.

Minimum documentation requirements for the host machine are

Operating Instructions, LOLER Test Certificate and Logbook.

Additional documents may include

Product Acceptance Certificate, Inspection Records, Load Radius, (Lifting duty); Charts.

Technical Specification

Safe Working Load 1 tonne

Weight

Fork Attachment = 350kg,
Bag Support Frame = 75kg

Length 1000 mm

Width 1000 mm

Height 1200 mm

Suppliers Network Rail (Wessex route) owned asset.

Hydraulic Pressure 210 Bar (max.)

90 Bar (min.)

Note First of class example of this unit currently in use on the Wessex route, please consult your RPSE for details of availability, & build of further units.

Issued by the Professional Head [Plant and T&RS] - Issue 1
For advice contact the Plant & T&RS team - tel: 07515628443
OTPA-20-3 Level Crossing Slab Lifter

Manufacturer Thomson Rail Equipment  Model XL 209

Description
The Crossing slab lifter is designed & built to lift, handle, remove & install all types* of level crossing slabs, in use on NR Infrastructure. The slab lifter unit includes a “tlt-rotator” head, which allows the unit to assume the required angles to manipulate the slabs, (in & out of the track); such that all heavy lifting, (manual handling); is avoided.

The unit is mechanical / hydraulic in operation, and is compatible with all suitably rigged 360° Excavators**, (Road Rail or otherwise); and promotes improved safety & greater efficiency on site, with increased productivity, and better worksite management.

* Bomac, Holdfast, & Strail types.  ** Hydraulic Services & Electric circuits.

Scope of Use  Lifting & handling all types of level crossing slabs

Competencies  Crane Controller & OTPA-14, & OTPO-02

Product Approval No.  PA05/04271

Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01, 02, 03, 05, 07 & 21
OTPA-20-3  Level Crossing Slab Lifter

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The attachment must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

Staff shall be briefed on the safe operation of the attachment prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

Equipment can be used under live OLE ONLY when fitted to a machine fitted with a suitable approved height limitation system AND the safe system of work is in place to cover the specific activity.

Minimum documentation requirements for the host machine are:

- Maintenance and Operating Instructions, Product Acceptance and LOLER Certification (including Limitations of Use) and Logbook

Additional documents may include:

- Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

- Width: 675mm
- Height: 1100mm
- Length: 1200mm
- Weight: 890kg
- Lifting Capacity: 375kg
- Operating Temperature: -20° to 60° C

Suppliers: Network Rail (Wessex route) owned asset.

Note: First of class example of this unit currently in use on the Wessex route, please consult your RPSE for details of availability, & build of further units.
Manufacturer: Track Maintenance Equipment

Model: TME630

Description:
The TME Rail Panel Lifting Beam has been specifically designed to lift panels of track. After the section of rail has been cut or assembled into panels, the beam is hydraulically clamped onto the rails of the panel. Optional hydraulic rams then lift the panel clear of the ballast, allowing one Road Rail Vehicle (RRV) to then lift the panel.

The beam can be fitted to any RRV excavator, road rail loader or crane.

Scope of Use:
Lifting and handling of track panels and rail.

Competencies:
Machine Controller, Crane Controller & OTPA-10

Product Approval No.:
-

Acceptance of Certificate No.:
EL/14262/02/04

Risk Control Sheet No(s.):
NR/L3/MTC/RCS0216/MP01 to MP07
OTPA-20-4

Panel Lifting Beam

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The equipment shall only be operated inside a possession that shall normally include any adjacent lines. In situations where there are more than two lines, a risk assessment shall be carried out to determine if the line separation is sufficient to permit some lines to remain open to traffic.
2. Each beam shall have a valid LOLER certificate.
3. The beam shall only be used to lift new or serviceable rail of up to 6m in length. Longer lengths of rail may be lifted when the rail is scrap and marked accordingly.
4. The beam shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.
5. The beam shall only be used with an RRV when the RC! indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.
6. Only the crane controller shall set the position of the by-pass valve.
7. Universal Lifting Beams must be used in pairs for lifting track panels.

Minimum documentation requirement for the host machine are

Operating Instructions, Certificate of Acceptance and Logbook.

Additional documents may include


Technical Specification

<table>
<thead>
<tr>
<th>Safe Working Load</th>
<th>5,000 kg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>600 kg (beam only)</td>
</tr>
<tr>
<td>Length</td>
<td>2500 mm</td>
</tr>
<tr>
<td>Width</td>
<td>2000 mm</td>
</tr>
<tr>
<td>Height</td>
<td>1000 mm</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>150 bar</td>
</tr>
</tbody>
</table>
Manufacturer: Geismar  
Model: PRR 481

Description
This hydraulic rail handling beam has been designed to handle flat bottom rails up to 18 meters along the track or on site.

It has a pair of hydraulically driven clamps mounted at each end which clamp the rails (within the limits of its maximum load).

Hydraulic rams are equipped with non-return valves in order to prevent the load dropping in the event of a hose bursting or hydraulic pressure dropping.

The beam includes a safety device preventing the hydraulic clamps from opening whilst carrying a load (Note: the clamps can open only when there is no load on them)

A hydraulic 360° rotator mounted in the middle of the beam is normally used to connect the beam to the boom of the crane or excavator.

Scope of Use  
Lifting and handling of individual rail or small track panels

Competencies  
Machine Controller, Crane Controller & OTPA-10

Product Approval No.  
PA05/0xxxxx

Risk Control Sheet No(s).  
NR/L3/MTC/RCS0216/MP01, 02, 03, 05, 07, 08 & 21
OTPA-20-5 Rail Lifting Beam

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The equipment shall only be operated inside a possession that shall normally include any adjacent lines. In situations where there are more than two lines, a risk assessment shall be carried out to determine if the line separation is sufficient to permit some lines to remain open to traffic.

2. Each beam shall have a valid LOLER certificate.

3. The beam shall only be used to lift new or serviceable rail of up to 18m in length.

4. The beam shall only be used to lift longer lengths of rail when the rail is scrap and marked accordingly.

5. The beam shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

6. The beam shall only be used with an RRV whose RC! indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are

Operating Instructions, Certificate of Acceptance and Logbook.

Additional documents may include


Technical Specification

Safe Working Load 1150 kg.

Weight 120 kg (beam only)

Weight (Hook and Rotator) 132 kg (approximate)

Length 1300 mm

Width 250 mm

Height 350 mm

Hydraulic Pressure 200 bar (max.)

Maximum hydraulic flow 30 litres per minute
OTA-20-6 Rail Lifting Beam

Manufacturer: Geismar
Model: PRR 488

Description
Thanks to its rotating hydraulic clamps it can handle individual rails up to 18 metres long or small track panels.
The rotating rail handling beam has a pair of hydraulically driven clamps mounted at each end. These can clamp rails or small track panels (within the limits of its maximum load).
Hydraulic rams are equipped with non-return valves in order to prevent the load dropping in the event of a hose bursting or hydraulic pressure dropping.
The beam includes a safety device preventing the hydraulic clamps from opening whilst carrying a load (clamps can open only when there is no load on them)
A rotator mounted in the middle of the PRR 488 connects with the crane or excavator.

Scope of Use
Lifting and handling of individual rail or small track panels

Competencies
Crane Controller & OTPA-10 OTPA-14, & OTPO-02

Product Approval No.
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01, 02, 03, 05, 07, 08 & 21
OTPA-20-6  Rail Lifting Beam

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The equipment shall only be operated inside a possession that shall normally include any adjacent lines. In situations where there are more than two lines, a risk assessment shall be carried out to determine if the line separation is sufficient to permit some lines to remain open to traffic.

2. The beam shall have a valid LOLER certificate.

3. The beam shall only be used to lift new or serviceable rail of up to 18 m in length.

4. The beam shall only be used to lift longer lengths of rail when the rail is scrap and marked accordingly.

5. The beam shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

6. The beam shall only be used with an RRV when the RC! indicator is active.

Minimum documentation requirement for the host machine are

Operating Instructions, Certificate of Acceptance and Logbook.

Additional documents may include


Technical Specification

<table>
<thead>
<tr>
<th>Safe Working Load</th>
<th>6000 kg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>500 kg (beam only)</td>
</tr>
<tr>
<td>Weight (with Hook and Rotator)</td>
<td>132 kg</td>
</tr>
<tr>
<td>Length</td>
<td>1967 mm</td>
</tr>
<tr>
<td>Width</td>
<td>450 mm</td>
</tr>
<tr>
<td>Height</td>
<td>771 mm</td>
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<tr>
<td>Rotator capacity</td>
<td>4,500 kg</td>
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<tr>
<td>Hydraulic Pressure</td>
<td>200 bar</td>
</tr>
<tr>
<td>Maximum hydraulic flow</td>
<td>30 litres per minute</td>
</tr>
</tbody>
</table>
Rail Lifting Beam

Manufacturer: Thompson Rail Equipment Ltd.  
Model: RLB-20

Description
The Thomson Rail Equipment Rail Lifting Beam is designed for lifting and handling individual rails and has a safe working load of 2 tonnes. Check valves are fitted to the gripping rams and a safety lockout valve to prevent jaws opening whilst carrying load with over-ride for scrap clearance work. A heavy duty 10 tonne rotator is an optional extra and the beam is fully driver operated. Typically, the beam can lift, carry, stack and load track panels up to 20m (60ft) long.

Scope of Use
Lifting and handling of individual rail

Competencies
Crane Controller & OTPA-10, OTPA-14 & OTPO-02

Product Approval No.
PA05/02964

Pads No.
094/002030

Plant Acceptance Certificate for Portable/Transportable Infrastructure Plant and Work Equipment No.
IF-P-0003-06

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01, 02, 03, 05, 07 & 21

Operators / Suppliers
Quattro and TXM Plant
OTP-20-7 Rail Lifting Beam

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The equipment shall only be operated inside a possession that shall normally include any adjacent lines. In situations where there are more than two lines, a risk assessment shall be carried out to determine if the line separation is sufficient to permit some lines to remain open to traffic.

2. Each beam shall have a valid LOLER certificate.

3. The beam shall only be used to lift new or serviceable rail of up to 6m in length.

4. The beam shall only be used to lift longer lengths of rail when the rail is scrap and marked accordingly.

5. The beam shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

6. The beam shall only be used with an RRV when the RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are

Operating Instructions, Certificate of Acceptance and Logbook.

Additional documents may include


Technical Specification

Safe Working Load  2,000 kg.
Proof Test Load  4,000 kg
Weight  255 kg (beam only)
Weight with Rotator  285 kg
Length  1300 mm
Width  290 mm
Height  710 mm
Rotator capacity  4,500 kg
Hydraulic Pressure  90 – 210 bar
OTPA-20-8  Sleeper Lifting Beam

Manufacturer / Supplier  Arbil

Description
The Arbil Sleeper Lifting beam is designed for the lifting and handling individual rail sleepers. Sleeper lifting beams are available in various styles with either fixed or adjustable centres, allowing for the differing sleeper spacings.

In addition depending upon the type of beam, a wide variety of dropper chain configurations and sleeper hooks are available.

The standard range of lifting and laying beams are configured for loading, with dropper chains fitted at half sleeper spacings. There are 3 leg, 5 leg, 7 leg and 8 leg spacing options available and there is a choice of pandrol or fast clipper lifting hooks.

Scope of Use  Lifting and laying of rail sleepers

Competencies  Machine Controller, Crane Controller & OTPA-10

Product Approval No.  various

Risk Control Sheet No(s).  NR/L3/MTC/RC0216/MP01 to MP07
OTPA-20-8  
Sleeper Lifting Beam

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The equipment shall only be operated inside a possession that shall normally include any adjacent lines. In situations where there are more than two lines, a risk assessment shall be carried out to determine if the line separation is sufficient to permit some lines to remain open to traffic.

2. Each beam shall have a valid LOLER certificate.

3. The beam shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

4. The beam shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are

Operating Instructions, LOLER Certificate and Logbook.

Additional documents may include


Technical Specification

Safe Working Load 2500 kg.

Weight Up to 150 kg

Length 3000 mm

Width 2400 mm

Height 1800mm (with sleepers attached)

Note:

All Lifting and Laying Beams are fitted with a centre lifting eye and top double leg chain sling as standard. Steering eyes can be fitted to the end of each beam if required.
Manufacturer / Supplier  Geismar  Model  PCT

**Description**
The Geismar Sleeper Lifting beam is designed for lifting and positioning individual rail sleepers.

All types of sleeper can be handled using chains and hooks suited to the type of fastening.

Up to 10, 250 kg concrete sleepers can be lifted and there is a choice of pandrol or fast clipper lifting hooks.

**Scope of Use**  Lifting and laying of rail sleepers

**Competencies**  Machine Controller, Crane Controller & OTPA-10

**Product Approval No.**  -

**Risk Control Sheet No(s).**  NR/L3/MTC/RCS0216/MP01 to MP07
OOTA-20-9  Sleeper Lifting Beam

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The equipment shall only be operated inside a possession that shall normally include any adjacent lines. In situations where there are more than two lines, a risk assessment shall be carried out to determine if the line separation is sufficient to permit some lines to remain open to traffic.

2. Each beam shall have a valid LOLER certificate.

3. The beam shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

4. The beam shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions, LOLER Certificate and Logbook.

Additional documents may include:


Technical Specification

Safe Working Load  2500 kg (10 x 250 kg sleepers)

Weight  Up to 250 kg

Length  3000 mm

Width  2400 mm

Height  1800mm (with sleepers attached)
OTPA-20-10  Telescopic Rail Lifting Beam

Manufacturer  Geismar  Model  PER 495

Description
This Telescopic Rail Lifting Beam is designed for lifting and handling individual rails.
A central frame supports 2 sliding, extendable arms which can lift rail from 18m in length up to a maximum of 24m. The extendable arms are equipped with hydraulic clamps and can be fully driver operated from the cab of the road rail crane. A heavy duty hydraulic rotator and swivel hook shown are optional extras.

The hydraulic gripping rams incorporate non-return valves to prevent the load dropping in the event of hydraulic pressure drop or a hose bursting. In addition, safety lockout valves prevent the gripping clamp jaws from opening whilst carrying a load. The clamps can only open if the beam is in contact with the ground. To open the clamps the return security valve must rest on the frame of the PER 495. This allows for the safe and efficient handling of new rails without risk of damage.

Scope of Use  Lifting and handling of rail
Competencies  Machine Controller, Crane Controller & OTPA-10
Product Approval No.  -
Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01 to MP07
OTPA-20-10 Telescopic Lifting Beam

**Control Measures Required**

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

**Limitations of Use**

1. The equipment shall only be operated inside a possession that shall normally include any adjacent lines. In situations where there are more than two lines, a risk assessment shall be carried out to determine if the line separation is sufficient to permit some lines to remain open to traffic.

2. Each beam shall have a valid LOLER certificate.

3. In the fully closed position, the beam shall only be used to lift new or serviceable flat bottom rail (UIC:60, BS13A, BS110A) of up to 18m (60ft) in length.

4. The beam shall be used to lift new or serviceable flat bottom rail (UIC60, BS 113A, BS 11 OA) up to 24m (80ft) in length with the arms fully extended.

5. The beam shall only be used to lift longer lengths of rail when the rail is scrap and marked accordingly.

6. The beam shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

7. The beam shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

**Minimum documentation requirement for the host machine are**

Operating Instructions, LOLER Certificate and Logbook.

**Additional documents may include**


**Technical Specification**

- Safe Working Load: 1,500 kg.
- Length of rail capacity:
  - Up to 18 m lengths with the arms in the closed position
  - Up to 24 m lengths with the arms fully extended
- Maximum Hydraulic Flow: 20 litres/min
- Service Pressure: 160 bar
- Weight: 700 kg
- Length: 2680 mm to 6000 mm (infinitely variable)
- Width: 498 mm
- Height: 927 mm
Manufacturer: Thompson Rail Equipment Ltd.  
Model: TRLB-20

Description
The Thomson Rail Equipment Telescopic Rail Lifting Beam is designed for the lifting and handling individual rails. With a 1,250 kg safe working load and a 6m effective length this lifting beam handles rail up to 20m (60 ft) in length with minimal flexing of the rail. This allows for the safe and efficient handling of new rails without risk of damage.

Check valves are fitted to the gripping rams and a safety lockout valve to prevent jaws opening whilst carrying load with over-ride for scrap clearance work.

A heavy duty hydraulic rotator or a swivel hook are optional extras and the beam may be fully driver operated.

Scope of Use
Lifting and handling of rail

Competencies
Machine Controller, Crane Controller & OTPA-10

Product Approval No.
05 / 02965  
PADS No.
094 / 002031

Acceptance for Portable / Transportable Plant and Equipment – Certificate No.
IF-P-0007-06

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01 to MP07

Operators / Suppliers
L & W, Network Rail, Quattro, Readypower, Story Rail, SRS, TXM Plant.
OTPA-20-11  Telescopic Lifting Beam

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The equipment shall only be operated inside a possession that shall normally include any adjacent lines. In situations where there are more than two lines, a risk assessment shall be carried out to determine if the line separation is sufficient to permit some lines to remain open to traffic.
2. Each beam shall have a valid LOLER certificate.
3. In the fully closed position, the beam shall only be used to lift new or serviceable flat bottom rail (UIC:60, BSI13A, BS110A) of up to 9.2m (30ft) in length.
4. The beam shall be used to lift new or serviceable flat bottom rail (UIC60, BS 113A, BS 11 OA) up to 18.3m (60ft) in length only in the fully extended position.
5. In the fully closed position, the beam shall only be used to lift new or serviceable bull head rail of up to 6.5m (20ft) in length.
6. The beam shall be used to lift new or serviceable bull head rail up to 9.2m (30ft) in length only in the fully extended position.
7. The beam shall only be used to lift longer lengths of rail when the rail is scrap and marked accordingly.
8. The beam shall only be used to lift new or serviceable rail of up to 6m in length. Longer lengths of rail may be lifted when the rail is scrap and marked accordingly.
9. The beam shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.
10. The beam shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are

Operating Instructions, Certificate of Acceptance and Logbook.

Additional documents may include


Technical Specification

<table>
<thead>
<tr>
<th>Safe Working Load</th>
<th>1,250 kg.</th>
<th>Proof Test Load</th>
<th>2,500 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>525 kg (beam only)</td>
<td>Weight with Rotator</td>
<td>580 kg</td>
</tr>
<tr>
<td>Length</td>
<td>3600 to 6200 mm (infinitely variable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>290 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>910 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotator capacity</td>
<td>12,000 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>90 – 210 bar</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Description**

The Rail Ability Track Lifting beam is designed to assist in the raising and lowering of the track with great precision.

The jack legs work independently to cater for work on canted track.

This attachment can work in conjunction with a hand operated stone blower. This attachment is ideal for working in areas with dropped joints.

The system is compatible for use with 360° excavators, subject to the machine’s lifting capacity.

**Scope of Use**

Track lifting operations

**Competencies**

Crane Controller & OTPA-14 & OTPO-02

**Product Approval No.**

- 

**Risk Control Sheet No(s).**

NR/L3/MTC/RCS0216/MP01,02,03,05,07,08, & 21
OTPAN20-12 Track Lifting Jack

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The equipment shall only be operated inside a possession that shall normally include any adjacent lines. In situations where there are more than two lines, a risk assessment shall be carried out to determine if the line separation is sufficient to permit some lines to remain open to traffic.

2. The beam shall have a valid LOLER certificate.

3. The beam shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

4. The beam shall only be used with an RRV when the RC! indicator is active.

Minimum documentation requirements for the host machine are

Operating Instructions, LOLER Test Certificate and Logbook.

Additional documents may include

Product Acceptance Certificate, Inspection Records, Load Radius, (Lifting duty); Charts.

Technical Specification

<table>
<thead>
<tr>
<th>Safe Working Load</th>
<th>5 tonnes</th>
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</thead>
<tbody>
<tr>
<td>Weight</td>
<td>1000 kg</td>
</tr>
<tr>
<td>Length</td>
<td>300 mm</td>
</tr>
<tr>
<td>Width</td>
<td>2000 mm</td>
</tr>
<tr>
<td>Height</td>
<td>1000 mm</td>
</tr>
</tbody>
</table>

*Note: All technical details above are approximat.*
Manufacturer  Thompson Rail Equipment Ltd.  Model  UB20

Description
The Thomson Rail Equipment Universal Lifting Beam is designed to be used in pairs for the tandem lifting of track panels, or singly for handling rail. They have a safe working load of 10 tonne.

Check valves are fitted to the gripping rams and a safety lockout valve to prevent jaws opening whilst carrying load with over-ride for scrap clearance work

A heavy duty 10 tonne rotator is an optional extra and the beam is fully driver operated. Typically, the beam can lift, carry, stack and load track panels up to 20m (60ft) long.

Scope of Use  Lifting and handling of track panels and rail.

Competencies  Machine Controller, Crane Controller & OTPA-10

Product Approval No.  PA05 / 02004  PADS No.  094/002028

Acceptance for Portable Plant & Equipment – Certificate No.  AR/PT/0017/2003

Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01 to MP07

OTP-20-13  Universal Lifting Beam

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work and Method Statement in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The equipment shall only be operated inside a possession that shall normally include any adjacent lines. In situations where there are more than two lines, a risk assessment shall be carried out to determine if the line separation is sufficient to permit some lines to remain open to traffic.
2. Each beam shall have a valid LOLER certificate.
3. The beam shall only be used to lift new or serviceable rail of up to 6m in length. Longer lengths of rail may be lifted when the rail is scrap and marked accordingly.
5. The beam shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.
6. The beam shall only be used with an RRV when the RC! indicator is active.
7. Only the crane controller shall set the position of the by-pass valve.
8. Universal Lifting Beams must be used in pairs for lifting track panels.

Minimum documentation requirement for the host machine are:

Operating Instructions, Certificate of Acceptance, Maintenance Plan and Logbook.

Additional documents may include:

Technical Specification

<table>
<thead>
<tr>
<th></th>
<th>Safe Working Load</th>
<th>Proof Test Load</th>
<th>10,000 kg.</th>
<th>20,000 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>380 kg (beam only)</td>
<td>Weight with Rotator</td>
<td>460 kg</td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>1820 mm</td>
<td></td>
<td></td>
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<tr>
<td>Width</td>
<td>380 mm</td>
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<tr>
<td>Height</td>
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<tr>
<td>Rotator capacity</td>
<td>12,000 kg</td>
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<tr>
<td>Hydraulic Pressure</td>
<td>90 bar (min.) – 210 bar (max.)</td>
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## Mixers

<table>
<thead>
<tr>
<th>#</th>
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<tr>
<td>OTPA-21-1</td>
<td>Mixer - Agitator - A P Webb</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-21-2</td>
<td>Mixer - Agitator - PCP Ltd. - CF7 / CF9 / CF12</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
Supplier: A P Webb Plant Hire  
Model: Rail Mixer

Description:
The A P Webb - Rail Mixer module is mounted onto a "Rail Boss" road rail vehicle which has rough terrain capability.

The module has a 3 cubic metre capacity and it can be used to transport wet ready mix concrete to site. Alternatively, it can mix the raw ingredients to produce concrete at the work site.

When transporting wet concrete, the mixer keeps it agitated so that it doesn’t set. This attachment is ideally suited for use with piling rigs.

The mixer shown above has its own on-board water supply and has an extendable delivery shoot, allowing the wet concrete to be poured precisely where required.

Scope of Use: Transport and discharge of concrete

Competencies: Machine Controller, Crane Controller & OTPA-10

Product Approval No.: -

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01 and MP07
OTPA-21-1  Mixer - Agitator

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
2. It shall NOT be used on live conductor rail lines.
3. Working mode - Maximum track cant 180mm and/or 1 in 29 gradient.
4. Permitted speed - Maximum 5mph (8km/h).
5. Staff shall be briefed on the safe operation of the equipment prior to its use.
6. The limitations of the RRV to which the mixer is attached shall apply.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual

Additional documents may include:
Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection and maintenance records etc.

Technical Specification:

Nominal Capacity  3 m³
On board water supply
Extendable delivery shoot
Supplier: Premier Concrete Pumping Ltd.  
Model: CF7, CF9 & CF12

Description:
The PCP range of Mixer - Agitator units are holding drums that enable an amount of wet concrete to be discharged as and when it is required at a work site.

The mixer basically keeps the concrete agitated so that it doesn’t set. These are ideally suited for use with piling rigs and are available in 2 to 8 cubic metre capacities.

The units are mounted onto suitable rail trailers and secured via standard container twist locks.

The mixer shown above is working in tandem with a Putzmeister trailer mounted concrete pump.

Scope of Use: Transport and discharge of concrete

Competencies: Machine Controller, Crane Controller & OTPA-10

Product Approval No.: -

Risk Control Sheet No(s.): NR/L3/MTC/RCS0216/MP01 and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
2. It shall NOT be used on live conductor rail lines.
3. Working mode - Maximum track cant 180mm and/or 1 in 29 gradients.
4. Permitted speed - Maximum 5mph (8km/h).
5. Staff shall be briefed on the safe operation of the equipment prior to its use.
6. The limitations of the RRV & Trailer to which the mixer is attached shall apply.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual

Additional documents may include:
Product Acceptance Certificate(s), Performance Test Records, Statutory Inspection and maintenance records etc.

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>CF7</th>
<th>CF9</th>
<th>CF12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Capacity (m³)</td>
<td>7</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Water Tank capacity (litres)</td>
<td>800</td>
<td>2000</td>
<td>2000</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>6400</td>
<td>6700</td>
<td>8050</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>2357</td>
<td>2440</td>
<td>2360</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>2800</td>
<td>2950</td>
<td>3038</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>6500</td>
<td>7500</td>
<td>8500</td>
</tr>
</tbody>
</table>
# Piling Drivers and Hammers

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-22-1</td>
<td>Piling Hammer - BSP - DX-RT 20 &amp; DX-RT 25</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-22-2</td>
<td>Piling Driver Vibratory - Dawson EMV70 / EMV300</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-22-3</td>
<td>Piling Hammer - FAMBO - PR100 / PR110</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-22-4</td>
<td>Piling Driver Vibratory - Movax SP40W / 50W / 60W</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
OTPA-22-1 Piling Hammer

Manufacturer: BSP
Models: DX-RT 20 & DX-RT 25

Description
The DX-RT piling hammer is adapted for use on railway infrastructure applications. Operating from Road-Rail Excavators of approx 30T mass and above. The Hammer is pinned to the excavator bucket linkage. The attachment allows fast erection from horizontal transport position and side-plumbing to vertical of 5° to cope with the cant of rail lines. During piling the hammer is guided or crowded in the vertical plane by the attachment mechanism.

The drive cap adaptation shown fits standard 610mm (24”) dia. UK Network Rail rail piles used to support electrification stanchions. Overall width of cap guide 800mm which can be adapted for other pile sizes. Typically 457mm (18’’), 406mm (16’’) 305mm (12’’)
Piles are normally pitched with a side-grip vibratory head and driven until vibrator reaches its limit. The hammer finally drives the pile to track level at the height determined by the needs of the embankment or cutting.

Scope of Use
Driving foundation piles

Competencies
Machine Controller, Crane Controller & OTPA-1x

Product Approval No.
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01, MP07 and MP15

Supplier
BSP International Foundations Ltd
OTPA-22-1  Piling Hammer

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

It shall only operate inside possessions.
If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
It shall NOT be used under live OLE.
Working mode - Maximum 5° track cant.
Staff shall be briefed on the safe operation of the machine prior to its use.
The limitations of the RRV to which the machine is attached shall apply.

Minimum documentation requirement for the host machine are

Operating Instruction Manual and Logbook.
Additional documents may include:
Product Acceptance Certificate, Test and Inspection Records & Load Radius Charts.

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>DX-RT 20</th>
<th>DX-RT 25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hammer Weight (kg)</td>
<td>4350</td>
<td>4750</td>
</tr>
<tr>
<td>Hammer Length (mm)</td>
<td>3890</td>
<td>3890</td>
</tr>
<tr>
<td>Hammer Width (mm)</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Impact Energy (kNm)</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Blow Rate per minute</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Hydraulic Pressure (bar)</td>
<td>140</td>
<td>180</td>
</tr>
<tr>
<td>Hydraulic Flowrate (l/min)</td>
<td>140</td>
<td>150</td>
</tr>
<tr>
<td>Ram Mass (kg)</td>
<td>1500</td>
<td>2500</td>
</tr>
</tbody>
</table>
Manufacturer: Dawson Construction Plant
Models: EMV70 / EMV300

Description
Dawson excavator mounted vibrators have been designed specifically to work in place of an excavator bucket to drive and extract piles. The pile can be lifted to vertical using the built-in lifting chain where it is then gripped tightly in a powerful hydraulic jaw. Once secured, the pile is then vibrated with high frequency vibrations to ‘fluidise’ the soil resisting the pile. Down-crowd force applied by the excavator boom, coupled with the self-weight of the pile and the vibrator, provides sufficient force to push the pile into the ground. Naturally, the process works in reverse for pile extraction. The equipment offers a highly productive and cost effective piling rig based around standard excavators.

Because these vibrators are high frequency they provide lower levels of ground vibration and low noise levels.

The EMV70 and EMV300 units are extremely versatile and readily adapt to most excavators in the 5 to 25 tonnes range. Hydraulic power supply is taken from the excavators bucket ram circuit.

Scope of Use
Driving and extracting foundation piles

Competencies
Machine Controller and Crane Controller

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01, MP07 and MP15

Suppliers
Sandhurst Equipment Rental
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
2. It shall NOT be used under live OLE.
3. Working mode - Maximum 5° track cant.
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The limitations of the RRV to which the machine is attached shall apply.

Minimum documentation requirement for the host machine are:
Operating Instruction Manual and Logbook.

Additional documents may include:
Product Acceptance Certificate, Test and Inspection Records & Load Radius Charts.

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>EMV70</th>
<th>EMV300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency (vpm)</td>
<td>3000</td>
<td>2400</td>
</tr>
<tr>
<td>Centrifugal Force (kN)</td>
<td>70</td>
<td>300</td>
</tr>
<tr>
<td>Amplitude (mm)</td>
<td>3.4</td>
<td>14.7</td>
</tr>
<tr>
<td>Oil flow (l/min)</td>
<td>30 - 120</td>
<td>130 - 250</td>
</tr>
<tr>
<td>Hydraulic Pressure (bar)</td>
<td>240 - 350</td>
<td>280 - 350</td>
</tr>
<tr>
<td>Hydraulic Motor Power (min. kW)</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td>Dynamic Mass (kg)</td>
<td>410</td>
<td>625</td>
</tr>
<tr>
<td>Total Mass (kg)</td>
<td>520</td>
<td>965</td>
</tr>
<tr>
<td>Excavator class (ton)</td>
<td>5 - 20</td>
<td>13 - 35</td>
</tr>
<tr>
<td>Maximum Pull/Push Loading (kg)</td>
<td>2800</td>
<td>15000</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>942</td>
<td>1200</td>
</tr>
<tr>
<td>Depth (mm)</td>
<td>795</td>
<td>1011</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>360</td>
<td>615</td>
</tr>
<tr>
<td>Clamp force (tonne)</td>
<td>30</td>
<td>36</td>
</tr>
</tbody>
</table>
Manufacturer | FAMBO | Models | PR 700 / PR 1100

Description
The Fambo Piling Hammer is fixed to the excavator boom which allows for fast erection on-site. During piling, the hammer is guided or crowded in the vertical plane by the attachment mechanism.

The drive cap adaptation shown fits standard Network Rail rail piles which are used to support electrification stanchions.

A typical high production piling train will use an excavator mounted side grip vibrator to place, pitch and part drive the pile. The powerful Fambo pile driver with its rapid blow rate is then used to drive the pile to the desired level, quickly and efficiently.

Scope of Use | Driving piles

Competencies | Machine Controller & Crane Controller

Product Approval No. | -

Risk Control Sheet No(s.) | NR/L3/MTC/RCS0216/MP01, MP07 and MP15
**OTPA-22-3**  
**Piling Hammer**

**Control Measures Required:**

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

**Limitations of Use:**

1. It shall only operate inside possessions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. It shall NOT be used under live OLE.
5. Staff shall be briefed on the safe operation of the machine prior to its use.
6. The limitations of the RRV to which the machine is attached shall apply.

**Minimum documentation requirement for the host machine are:**

Operating Instruction Manual and Logbook.

**Additional documents may include:**

Product Acceptance Certificate, Test and Inspection Records & Load Radius Charts.

**Technical Specification**

<table>
<thead>
<tr>
<th>Model</th>
<th>PR 700</th>
<th>PR 1100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fambo Hammer</td>
<td>HR 250</td>
<td>HR 500</td>
</tr>
<tr>
<td>Impact Energy (Nm)</td>
<td>0 - 2450</td>
<td>0 - 4800</td>
</tr>
<tr>
<td>Blow Rate per minute</td>
<td>0 - 100</td>
<td>0 - 100</td>
</tr>
<tr>
<td>Hydraulic Pressure (bar)</td>
<td>180</td>
<td>250</td>
</tr>
<tr>
<td>Hydraulic Flowrate (l/min)</td>
<td>20 - 40</td>
<td>35 - 60</td>
</tr>
<tr>
<td>Hammer Drop Height (mm)</td>
<td>0 - 1000</td>
<td>0 - 1000</td>
</tr>
<tr>
<td>Length of Mast (mm)</td>
<td>3300</td>
<td>5500</td>
</tr>
<tr>
<td>Total Weight (kg)</td>
<td>985</td>
<td>2500</td>
</tr>
</tbody>
</table>
The Movax vibratory driver is fixed directly to the excavator boom which allows for fast erection on-site. They can be used to pick, locate, drive, lift and extract circular tube piles (up to 760 mm diameter). Other applications include the driving of H-beams, support piles, driving of small tubes and the compacting of ground with its compacting plate. This model's piling power is sufficient for easy and moderate grounds. A piling hammer, with its rapid blow rate is then used to drive the pile to the desired level, quickly and efficiently.
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
2. It shall NOT be used under live OLE.
3. Working mode - Maximum 5° track cant.
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The limitations of the RRV to which the machine is attached shall apply.

Minimum documentation requirement for the host machine are:

Operating Instruction Manual and Logbook.

Additional documents may include:
Product Acceptance Certificate, Test and Inspection Records & Load Radius Charts.

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>SP-40W</th>
<th>SP-50W</th>
<th>SW-60W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight without adapter (kg)</td>
<td>1800</td>
<td>1820</td>
<td>1840</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>2071</td>
<td>2071</td>
<td>2071</td>
</tr>
<tr>
<td>Depth (mm)</td>
<td>1275</td>
<td>1275</td>
<td>1275</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>972</td>
<td>972</td>
<td>972</td>
</tr>
<tr>
<td>Excavator class (ton)</td>
<td>18-20</td>
<td>22-25</td>
<td>25-30</td>
</tr>
<tr>
<td>Oil flow (l/min)</td>
<td>120*</td>
<td>150*</td>
<td>180*</td>
</tr>
<tr>
<td>Max. return pressure (bar)</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Pressure setting (bar)</td>
<td>320</td>
<td>320</td>
<td>320</td>
</tr>
<tr>
<td>Frequency (1/min)</td>
<td>3000</td>
<td>3000</td>
<td>3000</td>
</tr>
<tr>
<td>Centrifugal force (kN)</td>
<td>400</td>
<td>500</td>
<td>600</td>
</tr>
<tr>
<td>Driving method</td>
<td>vibra</td>
<td>vibra</td>
<td>vibra</td>
</tr>
<tr>
<td>Swing / tilt angle (°)</td>
<td>360/30</td>
<td>360/30</td>
<td>360/30</td>
</tr>
<tr>
<td>Number of arms</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

* Oil flow at 280 bar only 1 - pump installation allowed.
<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-23-2</td>
<td>Engcon - S50/S60/S70 &amp; EC45/50/60</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-23-3</td>
<td>Geith - QC/QH60(M&amp;H), 65, 70, 80 &amp; 90</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-23-4</td>
<td>Miller - Powerlatch 4, 5, 6 &amp; 7</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
Quick Hitch

Manufacturer: CJM  

Description
This type of quick hitch (also known as a quick coupler) saves time and reduces the risk of injuries through manual handling and crushing during the attachment changing process, whilst giving benefits in improved productivity.

The CJM range of quick hitches can be supplied with either hydraulic or mechanical locking. The hydraulic locking models allow for the rapid change of attachments directly from the drivers’ cab.

The make and model of the excavator to which a quick hitch will be fitted must be established so that the correct size and type of quick hitch can be selected. The excavator's hydraulic and electrical systems must be compatible with the control and actuating system of the quick hitch if it is a “fully automatic type”.

Typical attachments that can be used with coupler are – ballast profile buckets, ballast brushes, tampers, lifting beams, flails, sleeper layers, tilt rotators and drilling rigs etc.

Scope of Use: Connecting OTP attachments to excavator boom

Competencies: Machine Controller, Crane Controller & OTPA-10

Product Approval No.

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01, MP07 and MP21
Quick Hitch

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Where the quick hitch and anything attached to it via its jaws is intended to be used for lifting any load, they must be approved for lifting by the manufacturer. The coupler shall be marked up with its safe working load and have undergone a thorough examination. This includes items like tilt rotators that may also act as a quick hitch.

2. Where an adaptor plate is used to enable a lifting accessory to be attached to a quick hitch the adaptor plate will become part of the lifting accessory and included in the six monthly thorough examination.

3. Each quick hitch used for lifting shall have a valid LOLER certificate.

4. The quick hitch shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

5. The quick hitch shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions, Logbook

Additional documents may include:
Test Records, Statutory Inspection & Test Records, Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model Type</th>
<th>DL 4</th>
<th>DL 6</th>
<th>DL 12</th>
<th>DL 20</th>
<th>DL 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrier Weight (kg)</td>
<td>3 – 5.5</td>
<td>5.5 - 10</td>
<td>10 - 15</td>
<td>15 - 23</td>
<td>23 - 35</td>
</tr>
<tr>
<td>Pin diameter (mm)</td>
<td>35 - 45</td>
<td>45 - 60</td>
<td>60 - 70</td>
<td>70 - 80</td>
<td>80 -100</td>
</tr>
<tr>
<td>Weight: (kg)</td>
<td>40</td>
<td>60</td>
<td>125</td>
<td>250</td>
<td>450</td>
</tr>
<tr>
<td>Lifting Eye SWL (kg)</td>
<td>1000</td>
<td>1000</td>
<td>2000</td>
<td>2000</td>
<td>3000</td>
</tr>
</tbody>
</table>
OTA-23-2 Quick Hitch

Manual & Hydraulic – S range

Hydraulic – EC Oil range

Manufacturer Engcon

Models S50 / S60 / S70 & EC45 / 50 / 60

Description

This type of quick hitch (also known as a quick coupler) saves time and reduces the risk of injuries through manual handling and crushing during the attachment changing process, whilst giving benefits in improved productivity.

The Engcon range of quick hitches can be supplied with either hydraulic or mechanical locking. The hydraulic locking models allow for the rapid change of attachments directly from the drivers’ cab. The EC Oil range is Engcon’s quick hitch system for automatic hydraulic coupling of hydraulic attachments, such as a tilt-rotator.

The make and model of the excavator to which a quick hitch will be fitted must be established so that the correct size and type of quick hitch can be selected. The excavator’s hydraulic and electrical systems must be compatible with the control and actuating system of the quick hitch if it is a “fully automatic type”.

Typical attachments that can be used with coupler are – ballast profile buckets, ballast brushes, tampers, lifting beams, flails, sleeper layers, tilt rotators and drilling rigs etc.

Scope of Use

Connecting OTP attachments to excavator boom

Competencies

Machine Controller, Crane Controller & OTA-10

Product Approval No.

-

Risk Control Sheet No(s).

NR/L3/MTC/RCS0216/MP01, MP07 and MP21
Quick Hitch

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Where the quick hitch and anything attached to it via its jaws is intended to be used for lifting any load, they must be approved for lifting by the manufacturer. The coupler shall be clearly marked with its safe working load and have undergone a thorough examination. This includes items like tilt rotators that may also act as a quick hitch.

2. Where an adaptor plate is used to enable a lifting accessory to be attached to a quick hitch the adaptor plate will become part of the lifting accessory and included in the six monthly thorough examinations.

3. A Quick hitch that is used for lifting shall have a valid LOLER certificate.

4. The quick hitch shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

5. The quick hitch shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions, LOLER certificate (if appropriate) and Logbook

Additional documents may include:

Test Records, Statutory Inspection & Test Records, and Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model Type</th>
<th>S50</th>
<th>S60</th>
<th>S70</th>
<th>ECO45</th>
<th>ECO50</th>
<th>ECO60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axle diameter (mm)</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>45</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>270</td>
<td>340</td>
<td>450</td>
<td>290</td>
<td>270</td>
<td>340</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>430</td>
<td>480</td>
<td>600</td>
<td>430</td>
<td>430</td>
<td>480</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>140</td>
<td>170</td>
<td>190</td>
<td>185</td>
<td>185</td>
<td>190</td>
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<tr>
<td>Weight: (kg)</td>
<td>50</td>
<td>125</td>
<td>210</td>
<td>100</td>
<td>105</td>
<td>180</td>
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<tr>
<td>Max. hydraulic pressure (bar)</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>210</td>
</tr>
<tr>
<td>Flow requirement (l/min)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>55</td>
<td>55</td>
<td>100</td>
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<tr>
<td>Machine weight (t)</td>
<td>6-12</td>
<td>12-18</td>
<td>16-25</td>
<td>6-12</td>
<td>6-12</td>
<td>12-18</td>
</tr>
</tbody>
</table>
Quick Hitch

**Manufacturer**  Geith International  **Models**  QC/QH60(M&H), 65, 70, 80 & 90

**Description**
This type of quick hitch (also known as a quick coupler) saves time and reduces the risk of injuries through manual handling and crushing during the attachment changing process, whilst giving benefits in improved productivity.

The Geith range of Quick Hitches can be supplied with either hydraulic or mechanical locking. The hydraulic locking models allow for the rapid change of attachments directly from the drivers’ cab.

The make and model of the excavator to which a quick hitch will be fitted must be established so that the correct size and type of quick hitch can be selected. The excavator’s hydraulic and electrical systems must be compatible with the control and actuating system of the quick hitch if it is either of the “semi-automatic” or “fully automatic type”.

Typical attachments that can be used with coupler are – ballast profile buckets, ballast brushes, tampers, lifting beams, flails, sleeper layers, tilt rotators and drilling rigs etc.

**Scope of Use**
Connecting OTP attachments to excavator boom

**Competencies**
Machine Controller, Crane Controller & OTPA-10

**Product Approval No.**
-

**Risk Control Sheet No(s).**  NR/L3/MTC/RCS0216/MP01, MP07 and MP21
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Where the quick hitch and anything attached to it via its jaws is intended to be used for lifting any load, they must be approved for lifting by the manufacturer. The coupler shall be clearly marked up with its safe working load and have undergone a thorough examination. This includes items like tilt-rotators that may also act as a quick hitch.

2. Where an adaptor plate is used to enable a lifting accessory to be attached to a quick hitch the adaptor plate will become part of the lifting accessory and included in the six monthly thorough examinations.

3. Each quick hitch used for lifting shall have a valid LOLER certificate.

4. The quick hitch shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

5. The quick hitch shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions, Logbook

Additional documents may include:

Test Records, Statutory Inspection & Test Records and Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>Machine Weight (t)</th>
<th>Base Width mm</th>
<th>Weight Kg (lb)</th>
<th>Pin Dia. mm</th>
<th>Pin Centres max-min (mm)</th>
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</thead>
<tbody>
<tr>
<td>QC60H</td>
<td>11-17</td>
<td>210 / 250</td>
<td>150 (330)</td>
<td>60</td>
<td>280-480</td>
</tr>
<tr>
<td>QH60M</td>
<td>11-17</td>
<td>250</td>
<td>172 (379)</td>
<td>60</td>
<td>355-420</td>
</tr>
<tr>
<td>QC65H</td>
<td>11-15</td>
<td>220 / 250</td>
<td>171 (377)</td>
<td>65</td>
<td>355-430</td>
</tr>
<tr>
<td>QH65M</td>
<td>11-15</td>
<td>220 / 250</td>
<td>177 (390)</td>
<td>65</td>
<td>355-420</td>
</tr>
<tr>
<td>QH70H &amp; M</td>
<td>15-22</td>
<td>250 / 280</td>
<td>186 (410)</td>
<td>70</td>
<td>365-490</td>
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<tr>
<td>QC80H</td>
<td>16-29</td>
<td>280 / 300</td>
<td>285 (628)</td>
<td>80</td>
<td>385-530</td>
</tr>
<tr>
<td>QH80M</td>
<td>16-29</td>
<td>280 / 300</td>
<td>240 (529)</td>
<td>80</td>
<td>390-525</td>
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<tr>
<td>QC90H</td>
<td>24-35</td>
<td>320</td>
<td>420 (924)</td>
<td>90</td>
<td>380-570</td>
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<tr>
<td>QH90M</td>
<td>24-35</td>
<td>325</td>
<td>436 (961)</td>
<td>90</td>
<td>460-610</td>
</tr>
</tbody>
</table>
Manufacturer: Miller UK Ltd.  
Models: Powerlatch 4, 5, 6 & 7

Description:
This type of quick hitch (also known as a quick coupler) saves time and reduces the risk of injuries through manual handling and crushing during the attachment changing process, whilst giving benefits in improved productivity.

The Miller Powerlatch range of hydraulic locking quick hitches models allow for the rapid change of attachments directly from the drivers' cab.

This range of couplers are genuine ‘twin locking’ couplers. In the event of hydraulic failure or accidentally operating the switch, the Powerlatch will automatically lock on both front and rear pins, mechanically and independently of the hydraulic circuit.

Note: Attachments can only be removed in a safe, curled position.

The make and model of the excavator to which a quick hitch will be fitted must be established so that the correct size and type of quick hitch can be selected.

The excavator’s hydraulic system must be compatible with the control and actuating system of the quick hitch.

Typical attachments that can be used with this type of coupler are ballast profile buckets, ballast ploughs, ballast brushes, tampers, lifting beams, flails, sleeper layers, tilt rotators and drilling rigs etc.

Scope of Use: Connecting OTP attachments to excavator boom

Competencies: Machine Controller, Crane Controller & OTPA-10

Product Approval No.: -

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01, MP07 and MP21
Quick Hitch

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Where the quick hitch and anything attached to it via its jaws is intended to be used for lifting any load, they must be approved for lifting by the manufacturer. The coupler shall be clearly marked up with its safe working load and have undergone a thorough examination. This includes items like tilt rotators that may also act as a quick hitch.

2. Where an adaptor plate is used to enable a lifting accessory to be attached to a quick hitch the adaptor plate will become part of the lifting accessory and included in the six monthly thorough examination.

3. A quick hitch which is used for lifting shall have a valid LOLER certificate.

4. The quick hitch shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road Rail Vehicle (RRV) to which it is attached.

5. The quick hitch shall only be used with an RRV whose RC! indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions, LOLER certificate (if appropriate) and Logbook

Additional documents may include:

Test Records, Statutory Inspection & Test Records, Load Radius Charts (duty charts).

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<thead>
<tr>
<th>Model Type</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>Pin diameter (mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 - 65*</td>
<td>70 - 80*</td>
<td>80</td>
<td>80 – 90*</td>
<td></td>
</tr>
<tr>
<td>Minimum Width (mm)</td>
<td>216</td>
<td>272</td>
<td>302</td>
<td>321</td>
</tr>
<tr>
<td>(between bucket bosses)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pin Centres (mm)</td>
<td>345 - 415</td>
<td>376 – 472</td>
<td>430 - 520</td>
<td>443 – 520</td>
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<tr>
<td>355 – 420*</td>
<td>391 – 477*</td>
<td>458 – 525*</td>
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<td></td>
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<tr>
<td>Weight: (kg)</td>
<td>180</td>
<td>263</td>
<td>310</td>
<td>470</td>
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<tr>
<td>Max. hydraulic pressure (bar)</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>Machine weight (t)</td>
<td>10 - 13</td>
<td>14 - 18</td>
<td>19 - 21</td>
<td>22 -27</td>
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## Rail Cropper

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
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<tbody>
<tr>
<td>OTPA-24-1</td>
<td>Mobile Frag - RC 240</td>
<td>1</td>
<td>2014</td>
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<tr>
<td>OTPA-24-2</td>
<td>Mobile Frag - RC450</td>
<td>1</td>
<td>2014</td>
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</tbody>
</table>
Manufacturer: Mobile Frag Ltd.  Model: RC-240

Description

The RC-240 Rail Cropper attachment is designed to fit on most 17 tonne - 25 tonne road rail excavators (RRVs) using the host machines hydraulic power for operation.

It was specifically designed for quick and efficient cutting of all types of scrap rail both in the rail industry and for further processing in the scrap metal industry.

This is a faster method of scrap rail clearance compared to oxy-cutting and the RC-240 attachment can cut up to 2 km of rail per hour into 6 metre lengths.

The attachment requires a 320 bar hydraulic supply to the main cylinder and a 60 bar supply for the rotary actuator.

Scope of Use: Cutting Scrap Rail only

Competencies: Machine Controller, Crane Controller & OTPA-17

Product Approval No.: PA05/01805

Certificate of Acceptance No.: EL/15414/01/02

Risk Control Sheet No(s.): NR/L3/MTC/RCS0216/MP01 and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The Rail Cropper must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

3. Staff shall be briefed on the safe operation of the machine prior to its use.

4. The limitations of the RRV to which the machine is attached shall apply.

5. It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

- Maintenance and Operating Instructions
- Product Acceptance Certificate
- Logbook

Additional documents may include Test performance records and inspection records.

Technical Specification:

- Weight: 1800 kg
- Length: 2100 mm
- Width: 1200 mm
- Height: 700 mm
- Maximum Cutting Force: 300 tonnes
- Hydraulic Pressure: 350 bar max.
- Cuts per minute: 13
- Length of end cuts: from 100mm and above
OTA-24-2 Rail Cropper (Heavy Duty)

Manufacturer: Mobile Frag Ltd.
Model: RC-450

Description:
The RC-450 Rail Cropper attachment is designed to fit on most 32 tonne - 45 tonne road rail excavators (RRVs) using the host machines hydraulic power for operation. It was specifically designed for quick and efficient cutting of all types of scrap rail both in the rail industry and for further processing in the scrap metal industry.

This is a faster method of scrap rail clearance compared to oxy-cutting. The RC-450 attachment can cut sections up to UIC 60 and 141AB rail at a rate 30 tonnes of per hour into 1.5 metre lengths.

The attachment requires a 320 bar hydraulic supply to the main cylinder and a 60 bar supply for the rotary actuator.

Scope of Use: Cutting Scrap Rail only
Competencies: Machine Controller, Crane Controller & OTPA-17
Product Approval No.: -
Certificate of Acceptance No.: -
Risk Control Sheet No(s).: NR/L3/MTC/RCS0216/MP01-MP03, MP07, MP08 & MP25
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The Rail Cropper must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

3. Staff shall be briefed on the safe operation of the machine prior to its use.

4. The limitations of the RRV to which the machine is attached shall apply.

5. It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

- Maintenance and Operating Instructions
- Product Acceptance Certificate
- Logbook

Additional documents may include: Test performance records and inspection records.

Technical Specification:

- Weight: 3500 kg
- Length: 2400 mm
- Width: 510 mm
- Height: 1880 mm
- Maximum Cutting Force: 550 tonnes
- Hydraulic Pressure: 350 bar max.
- Cuts per minute: 10
- Length of end cuts: from 100mm and above
Ripper Blade

<table>
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<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
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<tr>
<td>OTPA-25-1</td>
<td>Abiljo - R70 / R90 / R130 &amp; R160</td>
<td>1</td>
<td>2014</td>
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<tr>
<td>OTPA-25-3</td>
<td>Geith - MODBR / MODCR &amp; MODDR</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
OTPA-25-1 Ripper Teeth

Manufacturer: Abiljo Ltd
Models: R70 / R90 / R130 & R160
Suppliers: Exac-One Ltd

Description
The Abiljo range of ripper teeth is ideally suited for use with 360° road rail excavators from 5 tonnes to 30 tonnes. All of the ripper shanks are cut from high-wear, high yield-strength Hardox steel and fitted with replaceable CAT type tips. They are suitable for use with either a quick hitch or direct mounting applications.

Typically they are used for digging in hard or frozen ground and the ripper is specifically designed for optimum breaking and demolition of hard materials.

Ripping ground prior to digging greatly reduces wear and stress on both bucket and machine, and speeds up overall cycle times.

Scope of Use: Breaking and digging
Competencies: Machine Controller, Crane Controller & OTPA-xx
Product Approval No.: -
Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01, MP07 and MP21
OTPA-25-1 Ripper Teeth

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. The ripper shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.
2. The ripper shall only be used with an RRV whose RCI indicator is active, and the duty is in excess of the loading in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions and Logbook

Additional documents may include:


Technical Specification

<table>
<thead>
<tr>
<th>Model Type</th>
<th>R70</th>
<th>R90</th>
<th>R130</th>
<th>R160</th>
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<tbody>
<tr>
<td>Height (Dimension A)</td>
<td>600 mm</td>
<td>750 mm</td>
<td>750 mm</td>
<td>750 mm</td>
</tr>
<tr>
<td>Shank Material (Hardox)</td>
<td>40 mm</td>
<td>50 mm</td>
<td>50 mm</td>
<td>60 mm</td>
</tr>
<tr>
<td>Tooth System</td>
<td>Cat 205</td>
<td>Cat 215</td>
<td>Cat 225</td>
<td>Cat 225</td>
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<tr>
<td>Machine weight (tonnes)</td>
<td>7 - 9</td>
<td>9 - 10</td>
<td>13-15</td>
<td>16 - 19</td>
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</table>
OTPA-25-2 Ripper Teeth

Manufacturer: Engcon
Models: R5 / R10 / R15 / R20 & R30

Description
The Engcon range of ripper teeth is ideally suited for use with 3600 road rail excavators up to 32 tonnes.

All of the ripper shanks are cut from high-wear, high yield-strength steel and fitted with replaceable CAT type tips. They are suitable for use with either a quick hitch or direct mounting applications.

Typically they are used for digging in hard or frozen ground and the ripper is specifically designed for optimum breaking and demolition of hard materials.

Ripping ground prior to digging greatly reduces wear and stress on both bucket and machine, and speeds up overall cycle times.

Scope of Use
Breaking and digging ground and hard materials

Competencies
Machine Controller, Crane Controller & OTPA-xx

Product Approval No.
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01 and MP07

Issued by the Professional Head [Plant and T&RS] - Issue 1
For advice contact the Plant & T&RS team tel: 07515628443
OTPA-25-2 Ripper Teeth

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

The ripper shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

The ripper shall only be used with an RRV whose RCI indicator is active, and the duty is in excess of the loading in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions and Logbook

Additional documents may include:


Technical Specification

<table>
<thead>
<tr>
<th>Model Type</th>
<th>R5</th>
<th>R10</th>
<th>R15</th>
<th>R20</th>
<th>R30</th>
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<tbody>
<tr>
<td>Height (mm)</td>
<td>600</td>
<td>700</td>
<td>900</td>
<td>1200</td>
<td>1400</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>85</td>
<td>110</td>
<td>180</td>
<td>340</td>
<td>680</td>
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</table>
Geith
MODBR000 / MODCR000 & MODDR000

The Geith range of ripper teeth is ideally suited for use with 3600 road rail excavators up to 30 tonnes.

All of the ripper shanks are high-wear, high yield-strength steel and fitted with replaceable tooth tips and wear shroud (450 BHN). Additional side wear protection plates are incorporated to give extended life of the ripper. Reinforcing gussets are included for added strength and durability.

They are suitable for use with either a quick hitch or direct mounting applications.

Typically they are used for digging in hard or frozen ground and the ripper is specifically designed for optimum breaking and demolition of hard materials.

Ripping ground prior to digging greatly reduces wear and stress on both bucket and machine, and speeds up overall cycle times.

Breaking and digging ground and hard materials
Machine Controller and Crane Controller

NR/L3/MTC/RCS0216/MP01 and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

The ripper shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

The ripper shall only be used with an RRV whose RCI indicator is active, and the duty is in excess of the loading in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions and Logbook

Additional documents may include:

Technical Specification

<table>
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<tr>
<th>Model Type</th>
<th>MODBR000</th>
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<th>MODDR000</th>
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<tbody>
<tr>
<td>Working Depth (mm)</td>
<td>813</td>
<td>940</td>
<td>1039</td>
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<tr>
<td>Shank Thickness (mm)</td>
<td>102</td>
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<tr>
<td>Weight (kg)</td>
<td>260</td>
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<tr>
<td>Machine weight (tonnes)</td>
<td>10 - 18</td>
<td>18 - 23</td>
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## Scarifier

<table>
<thead>
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<th>#</th>
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<tr>
<td>OTPA-26-1</td>
<td>Scarifier - Thompson Rail Equipment</td>
<td>1</td>
<td>2014</td>
</tr>
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</table>
OTPA-26-1 Scarifier

Manufacturer: Thompson Rail Equipment

Model: -

Description
This attachment is designed to deliver quick ballast scarification (three operations in one pass) to improve ballast flow, speed up tamping operation and improve track quality.

The scarifier incorporates special tines which lift and break up the ballast, a levelling blade to smooth the surface and a crumbling roller to break up any clods of contaminated ballast. It removes ballast memory by breaking up, smoothing and levelling compacted ballast, prior to laying steel sleepers. The scarifier tines, levelling bar and crumbling roller are all replaceable parts.

It can be specified for tractor three-point linkage mounting (as shown) or a Quick Hitch head option is available for mounting onto a 360° RRV excavator.

The scarifier is robustly constructed and easy to use.

Scope of Use: Smoothing and levelling compacted ballast

Competencies: Machine Controller, Crane Controller & OTPA-10

Product Approval No.: -

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01-03 and MP07
OTPA-26-1 Scarifier

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The scarifier must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and the safe system of work.
3. Staff shall be briefed on the safe operation of the machine prior to its use.
4. The limitations of the tractor or RRV to which the machine is attached shall apply.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate, Logbook

Additional documents may include:

CE documentation, Inspection Records, Load Radius charts (duty chart) etc.

Technical Specification

Weight (kg) 850 (typical)
Width x Length x Height (mm) 2500 x 2000 x 1000
Hydraulic requirement 1 double acting service
Hydraulic pressure (bar) 175 - 210
Suitability Railway Ballast to any depth
Fitment Category 2 or 3 - 3 point linkage
Optional Attachments Quick Hitch head for mounting on excavator
Tines Heart tines inclined at 5 degrees, rigid mounted
Levelling Board Hydraulically controlled, 200mm travel
Crumbling roller Free floating, self aligning bearings
Accessories included 2.5m hydraulic supply hoses
## Sleeper Spacer / Layer

<table>
<thead>
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<th>#</th>
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<td>OTPA-27-1</td>
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<tr>
<td>OTPA-27-2</td>
<td>GOS – 4 &amp; 7 leg</td>
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<td>OTPA-27-3</td>
<td>Richter &amp; Muller - HSG 5</td>
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<td>OTPA-27-4</td>
<td>Rosenqvist - SL600 HD</td>
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<td>Thompson Rail Equipment - SSB20</td>
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<td>OTPA-27-6</td>
<td>Track Maintenance Equipment - TME610</td>
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<td>OTPA-27-7</td>
<td>Windhoff - ALS5</td>
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Sleeper Spacer

**Manufacturer**  Geismar  
**Model**  PTV286 / PTV896  

**Description**

The Hydraulic Variable Sleeper Spacing attachments - PTV 286 and PTV 896 are designed for the high output unloading and laying of concrete sleepers. The telescopic frame structure make it small yet it's easy adjustable to fit most types of current sleepers.

Different clamps can be mounted on this machine, depending on the shape, length and nature of the sleepers to be handled. They can grip up to 7 sleepers at once.

The main advantage of this machine is its ability to lay down the sleepers according to a chosen spacing, thanks to a simple adjustment, the operator can modify the spacing when needed (for example for curves or any other types of tasks).

The hydraulic telescopic arms work independently, so that sleepers of different lengths can be held safely. The 360° rotator drive provides endless slewing motions for reaching virtually any position.

**Scope of Use**  Lifting and placing sleepers  
**Competencies**  Machine Controller, Crane Controller & OTPA-10  
**Product Approval No.**  -  
**Risk Control Sheet No(s).**  NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
Sleeper Spacer

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The Sleeper Layer must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use), LOLER Certificate and Logbook.

Additional documents may include:

Performance Test Records, Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th></th>
<th>PVT 286</th>
<th>PVT 896</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting Capacity (kg)</td>
<td>1600</td>
<td>2240</td>
</tr>
<tr>
<td>Weight under load (kg)</td>
<td>2900</td>
<td>4040</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>1300</td>
<td>1800</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>3560 (5 sleepers)</td>
<td>4200 (7 sleepers)</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>1300</td>
<td>1130</td>
</tr>
<tr>
<td>Width with clamps (without clamps)</td>
<td>2770 (1820)</td>
<td>2770 (2300)</td>
</tr>
<tr>
<td>Maximum Pressure - Rotator (bar)</td>
<td>250</td>
<td>250</td>
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<tr>
<td>Rams (bar)</td>
<td>160</td>
<td>160</td>
</tr>
<tr>
<td>Adjustment distance for spacing (mm)</td>
<td>300 to 650</td>
<td>300 to 650</td>
</tr>
<tr>
<td>Electrical Circuit Voltage (v)</td>
<td>24</td>
<td>24</td>
</tr>
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</table>
Description
The hydraulic Sleeper Spacing attachment - (4 and 7 leg variants) are designed for the high output unloading and laying of concrete sleepers. The telescopic frame structure make it small, light weight yet its easy adjustable to fit most types of current sleepers.

Different clamps can be mounted on this machine, depending on the shape, length and nature of the sleepers to be handled. They can grip up to 7 sleepers at once.

The main advantage of these attachments is their ability to lay down the sleepers to a chosen spacing. Thanks to a simple adjustment, the operator can modify the spacing when needed (for example for curves or any other types of tasks).

The hydraulic telescopic arms work independently, so that sleepers of different lengths can be held safely. The 360° rotator drive provides endless slewing motions for reaching virtually any position.

Scope of Use
Lifting and placing sleepers

Competencies
Machine Controller, Crane Controller & OTPA-10

Product Approval No.
-

Risk Control Sheet No(s.)
NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The Sleeper Layer must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use), LOLER Certificate and Logbook.

Additional documents may include:

Performance Test Records, Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th></th>
<th>Model</th>
<th>4 Leg</th>
<th>7 Leg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting Capacity (kg)</td>
<td></td>
<td>1500</td>
<td>2500</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td></td>
<td>1000</td>
<td>1250</td>
</tr>
<tr>
<td>Length (mm)</td>
<td></td>
<td>2500</td>
<td>3200</td>
</tr>
<tr>
<td>Height (mm)</td>
<td></td>
<td>1500</td>
<td>1500</td>
</tr>
<tr>
<td>Width with clamps (mm)</td>
<td></td>
<td>2000</td>
<td>2000</td>
</tr>
<tr>
<td>Maximum Pressure (bar)</td>
<td></td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Hydraulic Flow (l/min)</td>
<td></td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

Note: All dimensions are approximate. Please check with the OEM for accurate technical details.
Manufacturer: Richter & Muller
Model: HSG 4 and HSG 5

Description
The Richter & Muller - HSG4 and HSG5 sleeper laying attachments are designed for the high output unloading and laying of concrete and wooden sleepers.

The hydraulic telescopic arms work independently, so that sleepers of different lengths can be held safely.

Lifted into position, their correct placement is assured by a precision gauging system that spreads the sleepers to the desired distance.

The telescopic frame structure make it small yet it’s easy adjustable to fit most types of current sleepers.

The unit is fitted with a 360° hydraulic rotating head and a safety lifting function to prevent the operator from dropping sleepers.

Scope of Use: Lifting and placing sleepers
Competencies: Machine Controller, Crane Controller & OTPA-10
Product Approval No.: PA05/01372
Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01-03, MP06 and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The Sleeper Layer must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use), LOLER Certificate and Logbook.

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Calibration & Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

Weight 1100 kg
Length 3043 mm
Width 2060 mm
Height 1560 mm
Hydraulic Pressure 80 bar
Hydraulic Flow 60 l/min
OTPA-27-4 Sleeper Spacer

Manufacturer: Rosenqvist  
Model: SL600 HD

Description
The Rosenqvist SL600-HD attachment is designed for use high output sleeper laying. Up to six adjacent sleepers can be laid simultaneously from an accompanying supply.

Lifted into position, their correct placement is assured by a precision gauging system that spreads the sleepers to the desired distance. The telescopic frame structure make it small yet it’s easy adjustable to fit most type of sleepers.

The unit can be can be fitted with or without tilt rotating function and a safety lifting function to prevent the operator from dropping sleepers.

Scope of Use: Lifting and placing sleepers
Competencies: Machine Controller, Crane Controller & OTPA-10
Product Approval No.: PA05/03134
Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The Sleeper Layer must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. Staff shall be briefed on the safe operation of the machine prior to its use.
4. The limitations of the RRV to which the machine is attached shall apply.
5. It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

- Maintenance and Operating Instructions
- Product Acceptance Certificate (including Limitations of Use)
- Logbook

Additional documents may include:
Performance Test Records, Statutory Inspection Records, Calibration & Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

Weight 309 kg
Length min. 2000 mm
Length max 4475 mm
Height 1333 mm
Max. Distance between sleepers 762 mm
ManUFACTURER  Thompson Rail Equipment   Model  SSB20 (4 leg shown)

Description
Thomson Rail Engineering manufacture a range of sleeper spacing beams for use with excavator cranes that are designed for lifting, manipulation and precision spacing of concrete sleepers.

Different designs are available for handling 4, 7, 8, 14 or 28 sleepers, according to application. Power pack options include pendant and radio control of grab and spreader functions and all models incorporate a load sensing safety valve to prevent inadvertent release of the load.

The attachments are self powered and radio controlled or linked to the crane’s hydraulic system and can include a hydraulic rotator and adapter head.

All of the models feature light yet rigid fabricated sub frames, strong lifting legs and rubber contact pads to eliminate damage to the sleepers.

Despite its light weight, it is strong enough to handle all standard gauge concrete sleeper up to 400kg.

An automatic hydraulic valve system changes from sleeper grip to sleeper spacing function when the beam is picked up. This means that only two hydraulic services are required to fully control the device.

Scope of Use                   Lifting and placing sleepers
Competencies  Machine Controller, Crane Controller & OTPA-10
Product Approval No.  -
Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
Operators / Suppliers  Quattro

Issued by the Professional Head [Plant and T&RS] - Issue 1
For advice contact the Plant and T&RS team - tel: 07515628443
OTPA-27-5  

Sleeper Layer

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The Sleeper Layer must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

- Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use), LOLER Certification and Logbook

Additional documents may include:

- Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe Working Load</td>
<td>350 kg / leg</td>
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<tr>
<td>Proof Load</td>
<td>700 kg / leg</td>
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<tr>
<td>Hydraulic Pressure</td>
<td>90 - 210 bar</td>
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<tr>
<td>Weight</td>
<td>850 - 950 kg</td>
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<tr>
<td>Width (max.)</td>
<td>3000 mm</td>
</tr>
<tr>
<td>Length (max.)</td>
<td>3500 mm</td>
</tr>
<tr>
<td>Height (with rotator)</td>
<td>1100 mm</td>
</tr>
<tr>
<td>Max. Distance between sleepers</td>
<td>760 mm</td>
</tr>
</tbody>
</table>

Note: All technical details above are approximate for a 7 leg sleeper spacer.
OTPA-27-6  Sleeper Spacer

Manufacturer  Track Maintenance Equipment  Model  TME610

Description
The TME Sleeper Lifting and Spacing Beam has been designed to lift all types of concrete sleeper on the UK market.

The Beam is designed to hydraulically adjust the sleeper spacing before placing onto the track bed. It is adjustable to all current concrete sleeper lengths. It can be fitted to any excavator, road rail loader or crane.

The standard beam lifts and spaces 4 concrete sleepers but can be built to handle other quantities.

Scope of Use  Lifting and placing sleepers
Competencies  Machine Controller, Crane Controller & OTPA-10
Product Approval No.  EL/14262/02/02
Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The Sleeper Layer must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

- Maintenance and Operating Instructions
- Product Acceptance Certificate (including Limitations of Use)
- LOLER Certificate
- Logbook

Additional documents may include:

- Performance Test Records
- Statutory Inspection Records
- Test Certificates
- Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Working Load (lifting 4 sleeper version)</td>
<td>1500 kg</td>
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<tr>
<td>Hydraulic Pressure (max.)</td>
<td>150 bar</td>
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<tr>
<td>Weight</td>
<td>850 kg</td>
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<td>Width (max.)</td>
<td>3000 mm</td>
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<tr>
<td>Length (max.)</td>
<td>3500 mm</td>
</tr>
<tr>
<td>Height (with rotator)</td>
<td>1100 mm</td>
</tr>
<tr>
<td>Max. Distance between sleepers</td>
<td>762 mm</td>
</tr>
</tbody>
</table>
OTPA-27-7  
Sleeper Spacer

Manufacturer  
Windhoff  
Model  
ALS 5

Description
The Windhoff ALS 5 sleeper laying attachment is designed for the high output unloading and laying of concrete and wooden sleepers.

The 5 hydraulic telescopic arms work independently, so that sleepers of different lengths can be held safely. The 360° rotator drive provides endless slewing motions for reaching virtually any position. The telescopic frame structure make it small yet it's easy adjustable to fit most types of current sleepers.

Its use ranges from the laying of sleepers for newly constructed tracks and replacement work to loading and downloading work at supply trains and work sites.

Scope of Use  
Lifting and placing sleepers

Competencies  
Machine Controller, Crane Controller & OTPA-10

Product Approval No.  
-

Risk Control Sheet No(s).  
NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The Sleeper Layer must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use), LOLER Certificate and Logbook.

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Calibration & Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Weight</td>
<td>1150 kg</td>
</tr>
<tr>
<td>Length</td>
<td>3200 mm</td>
</tr>
<tr>
<td>Height</td>
<td>1300 mm</td>
</tr>
<tr>
<td>Width (transport mode)</td>
<td>2240 mm</td>
</tr>
<tr>
<td>Width of Sleepers</td>
<td>2200 - 2600 mm</td>
</tr>
<tr>
<td>Adjustment range for spacing</td>
<td>600 - 750 mm</td>
</tr>
<tr>
<td>No. of Sleepers</td>
<td>5</td>
</tr>
<tr>
<td>#</td>
<td>Description</td>
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<td>------</td>
<td>--------------------------</td>
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<tr>
<td>OTPA-28-1</td>
<td>Geismar - ORT</td>
</tr>
<tr>
<td>OTPA-28-2</td>
<td>Richter &amp; Muller - HSW Combi</td>
</tr>
<tr>
<td>OTPA-28-3</td>
<td>Rosenqvist - SB60</td>
</tr>
<tr>
<td>OTPA-28-4</td>
<td>Windhoff - ASW</td>
</tr>
</tbody>
</table>
Description

The ORT Sleeper Replacing attachment is designed to provide safe insertion and extraction of concrete or wooden sleepers.

It comprises of a retractable transferse beam system for the insertion or extraction of sleepers and a swivelling hydraulic sleeper clamp. The clamp swivel in a horizontal plane to longitudinally position the sleeper along the track, and can vertically swivel (transversally to the track) to ease sleeper insertion.

Lighting illuminates the work area at night or when used in tunnels.

All operations are hydraulically powered using the host RRVs' hydraulic power supply.

It is operated through a remote control inside the cab of the host RRV.

Scope of Use

Lifting and placing sleepers

Competencies

Machine Controller, Crane Controller & OTPA-10

Product Approval No.

- 

Risk Control Sheet No(s).

NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

The Sleeper Changer must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance. Staff shall be briefed on the safe operation of the machine prior to its use. The limitations of the RRV to which the machine is attached shall apply. It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use), LOLER Certification and Logbook

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Performance (sleepers per hour)</th>
<th>10 to 15</th>
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</thead>
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<tr>
<td>Swivelling Clamp Horizontal Rotation</td>
<td>+/- 90°</td>
</tr>
<tr>
<td>Swivelling Clamp Vertical Inclination</td>
<td>0 to 24°</td>
</tr>
<tr>
<td>Swivelling Extraction Arm - Stroke / Power</td>
<td>1200 mm / 5000 daN</td>
</tr>
<tr>
<td>Swivelling Extraction Arm - Insertion Power / Angular Swivel</td>
<td>3800 daN / 30°</td>
</tr>
<tr>
<td>Hydraulic Flow</td>
<td>120 l/min</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>210 bar</td>
</tr>
<tr>
<td>Length</td>
<td>2573 mm</td>
</tr>
<tr>
<td>Width</td>
<td>1614 mm</td>
</tr>
<tr>
<td>Height</td>
<td>2043 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>2500 kg</td>
</tr>
</tbody>
</table>
Manufacturer: Richter & Muller  
Model: HSW Combi

Description
This is a purpose built attachment that is designed for two applications:

1. **Sleeper Changing**
   Where the requirement is for the removal of single sleepers by digging away the ballast to reveal the sleeper and then locating this sleeper within the jaws of the grab and sliding it out to one side or, if wet-bedding, swivel it around and through between the rails.

2. **Excavation of wet-beds**
   The old ballast is dug out and the dig depth can be adjusted down to 600mm by means of rollers. There is no need to split the track at any stage of the operation.
   Side buckets can be removed on certain models to allow for digging through platforms and catch-pits.

Scope of Use: Lifting and placing sleepers

Competencies: Machine Controller, Crane Controller & OTPA-10

Product Approval No.: PA05/01370

Risk Control Sheet No(s.): NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07

Suppliers: Tasty Plant
OTA-28-2  

**Sleeper Changer**

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The Sleeper Changer must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

- Maintenance and Operating Instructions
- Product Acceptance Certificate
- LOLER Certification (if applicable)
- Logbook

Additional documents may include:

- Performance Test Records
- Inspection Records
- Test Certificates
- Load Radius Charts (duty charts) etc.

Technical Specification

- Hydraulic Pressure (max.) 250 bar
- Weight 1.1 tons
- Width 2880 mm
- Height 1300 mm
Manufacture: Rosenqvist  
Model: SB60

Description:
The SB60 Sleeper Replacer is designed to provide safe and efficient replacement of sleepers. It has tilt and rotate functions that allow sleepers to be changed from both the middle and side of the track.

It is also designed for effective movement and recessing of the track ballast and fits most types of sleepers.

Options include:
- Clip Master - for fast and safe clipping of FASTCLIPS
- Buckets - for removing ballast on wet locations

Scope of Use: Lifting and placing sleepers

Competencies: Machine Controller, Crane Controller & OTPA-10

Product Approval No.: PA05/04237

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
OTPA-28-3  

Sleeper Changer

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

The Sleeper Changer must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use), LOLER Certification and Logbook

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>1050 kg</td>
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<tr>
<td>Clamping Force</td>
<td>6000 kg</td>
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<tr>
<td>Torque</td>
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<tr>
<td>Blade Width</td>
<td>2700 mm</td>
</tr>
<tr>
<td>Height</td>
<td>1000 mm</td>
</tr>
</tbody>
</table>
OTA-28-4  Sleeper Changer

Manufacturer  Windhoff  Model  ASW

Description
This is a multifunction attachment for filling and removal of ballast as well as the replacement of a single sleeper or several successive sleepers. The unit is attached to a host road-rail excavator or track construction machine, which also supplies the hydraulic energy required.

Hydraulically operated sleeper tongs and a 360° rotating drive allow for the safe and careful removal or laying of concrete or wooden sleepers as well as concrete-blocks and steel tiebars.

The attachment is equipped with three shovel segments for taking up the ballast under the track grate. The shovel segments can be dismantled for changing of single sleepers.

Scope of Use  Lifting and placing sleepers

Competencies  Machine Controller, Crane Controller & OTPA-10

Product Approval No.  -

Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
Sleeper Changer

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The Sleeper Changer must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use), LOLER Certification and Logbook

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Length</td>
<td>1400 mm</td>
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<tr>
<td>Blade Width</td>
<td>2750 mm</td>
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<tr>
<td>Height</td>
<td>1450 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>1300 kg</td>
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<tr>
<td>Track Widths</td>
<td>Up to 1435 mm</td>
</tr>
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## Tampers

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
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<tbody>
<tr>
<td>OTPA-29-1</td>
<td>Dymax - DBT.1, DX-BT-HY-360 x 2-HX &amp; x 4HX</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-29-2</td>
<td>Geismar - MB8AC</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-29-3</td>
<td>Geismar - MB1T</td>
<td>1</td>
<td>2014</td>
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<tr>
<td>OTPA-29-4</td>
<td>Richter and Muller - Twin Bank Tamper - MSG8</td>
<td>1</td>
<td>2014</td>
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<tr>
<td>OTPA-29-5</td>
<td>Track Maintenance Equipment - RST 0210</td>
<td>1</td>
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<tr>
<td>OTPA-29-6</td>
<td>Windhoff - AST 8</td>
<td>1</td>
<td>2014</td>
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Dymax Ballast Tamper attachments for use with RRV excavators are based upon proven technology and are ideal for spot maintenance where fouled ballast needs to be removed and new ballast tamped into position.

The tamping heads are equipped with vibratory motors (1, 2 or 4 models), replace-able carbide tamping tools, heavy duty frames with rubber isolators that maximises vibrations to the ballast and hydraulic rotators for precise placement.

Dymax tampers are available for most makes and models of excavators, but the machines must have at least 16GPM of hydraulic flow.

The standard duty 1, 2 and 4 motor tampers are ideal for machines such as excavators up to 30 tonnes operating weight.

Scope of Use: Tamping of Ballast

Competencies: Machine Controller, Crane Controller & OTPA-10

Product Approval No.: -

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01, MP07 and MP21
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

Where the tilt rotator or anything attached to it is intended to be used for lifting any load, they must be approved for lifting by the manufacturer. The coupler shall be clearly marked with its safe working load.

Where an adaptor plate is used to enable a lifting accessory to be attached to a tilt rotator the adaptor plate will become part of the lifting accessory and included in the six monthly thorough examination.

A tilt rotator that is used for lifting shall have a valid LOLER certificate.

The tilt rotator shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road Rail Vehicle (RRV) to which it is attached.

The quick hitch shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are:
Operating Instructions, LOLER certificate (if appropriate) and Logbook

Additional documents may include:
Test Records, Statutory Inspection/Test Records and Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>1 Motor DBT.1</th>
<th>2 Motor DX-BT-HY-360 x 2-HX-16T</th>
<th>4 Motor DX-BT-HY-360 x 4-HX-16T</th>
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</thead>
<tbody>
<tr>
<td>Length (mm)</td>
<td>1143</td>
<td>1250*</td>
<td>1320</td>
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<tr>
<td>Width (mm)</td>
<td>712</td>
<td>800*</td>
<td>1473</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>1448</td>
<td>1800*</td>
<td>2200</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>690</td>
<td>1270</td>
<td>2322</td>
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<tr>
<td>Hydraulic Flow Rate (l/min)</td>
<td>29</td>
<td>57</td>
<td>113</td>
</tr>
<tr>
<td>Hydraulic Pressure (bar)</td>
<td>138</td>
<td>152</td>
<td>171</td>
</tr>
<tr>
<td>Rotation</td>
<td>360°</td>
<td>360°</td>
<td>360°</td>
</tr>
<tr>
<td>Machine Weight (tonnes)</td>
<td>7 - 10</td>
<td>12 - 15</td>
<td>12 - 30</td>
</tr>
</tbody>
</table>

* This data gives approximate sizes
Manufacturer: Geismar
Model: MB8AC

Description
Mounted on 4 rail wheels, this tamper is effective for the tamping track and switches. Power is taken from the host RRVs' hydraulic system, whose jib is used for on/off tracking and moving the tamping unit along the track. It has two vertically guided, independent tamping heads and the tamping depth is electrically adjustable. Each tamping head support frame moves transversally to the track axis and operates stably on all types of switch and crossing configurations. Tamping of twin sleepers is also possible. All functions are effectively controlled by the operator from the excavator cab.

Scope of Use: Tamping Ballast
Competencies: Machine Controller, Crane Controller & OTPA-10
Product Approval No.: -
Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
OTA-29-2 Tamper

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

The tamper attachment must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

The limitations of the RRV to which the machine is attached shall apply.

Equipment can be used under live OLE when used on a machine fitted with a suitable approved height limitation system and the safe system of work is in place to cover this.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

Vertical stroke above rail level 660 mm
Transverse stroke of each tamping unit 1050 mm
Distance between tamping tines -
  "Single sleeper" position 290 mm max. (Closing)
  "Twin Sleeper" position 770 mm (Opening)
290 mm max. (Closing)
Length 2000 mm
Width 2500 mm
Height 1580 mm
Weight 2540 kg
Hydraulic Power - Vibration Motor - 46 Hz 115 l/min flow @t 150 bar
Hydraulic Power - Movement 80 l/min flow @ 110 bar
OTA-29-3 Tamper

Manufacturer: Geismar
Model: MB 1T

Description
The MB 1T Ballast Tamping Set has been designed to carry out tamping operations in plain track and switch and crossing areas. The MB 1T has four tamping tines and is connected to, and hydraulically powered by the host Road Rail Vehicle (RRV). The RRV jib controls the movement and handling of the tamping attachment.

The tamping head can swivel for retraction and the plunge depth of each tamping head can be mechanically adjusted. The tamping head is connected to the main frame of the machine through an elastic link enclosed in a swiveling support.

All hydraulic functions are controlled by the machine operator via joysticks located in the RRV cab.

Scope of Use: Tamping Ballast

Competencies: Machine Controller, Crane Controller & OTPA-10

Product Approval No.: -

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The tamper attachment must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

The limitations of the RRV to which the machine is attached shall apply.

Equipment can be used under live OLE when used on a machine fitted with a suitable approved height limitation system and the safe system of work is in place to cover this.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use) and Logbook.

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical stroke above rail level</td>
<td>510 mm</td>
</tr>
<tr>
<td>Output (tamping mode)</td>
<td>100 sleepers / hour (60 m/h)</td>
</tr>
<tr>
<td>Distance between tamping tines -</td>
<td></td>
</tr>
<tr>
<td>&quot;Single sleeper&quot; position</td>
<td>580 mm (Opening)</td>
</tr>
<tr>
<td></td>
<td>320 mm max. (Closing)</td>
</tr>
<tr>
<td>&quot;Twin Sleeper&quot; position</td>
<td>830 mm (Opening)</td>
</tr>
<tr>
<td></td>
<td>320 mm max. (Closing)</td>
</tr>
<tr>
<td>Length</td>
<td>1625 mm</td>
</tr>
<tr>
<td>Width</td>
<td>600 mm</td>
</tr>
<tr>
<td>Height</td>
<td>1450 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>800 kg</td>
</tr>
<tr>
<td>Number of tamping tines</td>
<td>4</td>
</tr>
<tr>
<td>Hydraulic Power - Vibration Motor - 46 Hz</td>
<td>52.5 l/min flow @t 150 bar</td>
</tr>
<tr>
<td>Hydraulic Power - Movement</td>
<td>40 l/min flow @ 120 bar</td>
</tr>
</tbody>
</table>
The Richter & Muller MSG8 twin bank tamper is designed to provide mechanical ballast tamping for small areas, e.g. soft spot sleeper replacement. The twin bank tamper has eight tamping tines which provide balanced tamping under both rails and both sides of the sleeper, all at the same time. The tamping is coupled with on-board vibration to give excellent ballast compaction. The MSG8 Tamping bank is multi-gauge adjustable for 1000mm, 1435mm, 1524mm and 1600mm.

The system is ideal for spot sleeper replacement work and is a significantly safer method of compacting ballast than by manually operated equipment.

The tamper gives better compaction than is achieved by hand held impact hammers and can reduce the number of tamper visits required to achieve final ballast compaction.

Use of the hydraulic mini-tamper mounted on a road-railer allows more sleepers to be replaced and tamped in a single shift thereby allowing improved productivity.

**Scope of Use**  Tamping Ballast

**Competencies**  Machine Controller, Crane Controller & OTPA-10

**Product Approval No.**  -

**Suppliers**  Tasty Plant

**Risk Control Sheet No(s).**  NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
OTA-29-4 Tamper

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The tamper attachment must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance. Only to be used for follow up of wet bed rectification for a maximum length of 10 beds and for use in sidings. Staff shall be briefed on the safe operation of the machine prior to its use. The limitations of the RRV to which the machine is attached shall apply. The attachment must NOT be used in live conductor rail areas. It must not be used under live overhead line equipment unless it is used on a machine fitted with a suitable approved height limitation system and the safe system of work is in place to cover this.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Length</td>
<td>800 mm</td>
</tr>
<tr>
<td>Width</td>
<td>2200 mm</td>
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<tr>
<td>Height (without slew motor)</td>
<td>1150 mm (without slew motor)</td>
</tr>
<tr>
<td>Weight (without slew motor)</td>
<td>1300 kg (without slew motor)</td>
</tr>
<tr>
<td>Hydraulic Operating Pressures</td>
<td>160 bar (Vibration)</td>
</tr>
<tr>
<td></td>
<td>140 bar (Tamping)</td>
</tr>
<tr>
<td>Tamping Performance</td>
<td>Up to 120 m/h</td>
</tr>
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</table>
Description
The RST 0210 Mini Tamper System is designed to provide mechanical ballast tamping in small areas e.g. soft spot sleeper replacement. The double tamper has eight tamping tines which provide balanced tamping under both rails and both sides of the sleeper all at the same time. The tamping is coupled with on-board vibration to give excellent ballast compaction.

The system is ideal for spot sleeper replacement work and is a significantly safer method of compacting ballast than by manually operated equipment. The tamper gives better compaction than is achieved by hand held impact hammers and can reduce the number of plainline tamper visits required to achieve final ballast compaction.

Use of the hydraulic mini-tamper mounted on a road-railer allows more sleepers to be replaced and tamped in a single shift thereby allowing improved productivity.

Scope of Use
Tamping Ballast

Competencies
Machine Controller, Crane Controller & OTPA-10

Product Approval No.
- 

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The tamper attachment must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Only to be used for follow up of wet bed rectification for a maximum length of 10 beds and for use in sidings.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Equipment must NOT be used in live conductor rail areas

Equipment can be used under live OLE when used on a machine fitted with a suitable approved height limitation system and the safe system of work is in place to cover this.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
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<tr>
<td>Length</td>
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<tr>
<td>Width</td>
<td>400 mm</td>
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<tr>
<td>Height</td>
<td>1500 mm</td>
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<tr>
<td>Weight</td>
<td>890 kg</td>
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<tr>
<td>Hydraulic Operating Pressures</td>
<td>190 bar (Vibration)</td>
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<tr>
<td></td>
<td>110 bar (Tamping)</td>
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<tr>
<td>Tamping Performance</td>
<td>Up to 100 m/h</td>
</tr>
</tbody>
</table>
Manufacturer: Windhoff  
Model: AST 8

**Description**
The attachment has 8 tines and is typically used for tamping work on short lengths of track and at switches.

When working at switches, one tamping section can be raised hydraulically. It features two working units with a total of 8 pokers which simultaneously dig into the crib ballast.

A rotating cylinder permits the alignment of the attachment with the sleeper position. All control functions are effectively operated from the excavator cab.

**Scope of Use**
Tamping Ballast

**Competencies**
Machine Controller, Crane Controller & OTPA-10

**Product Approval No.**
PA05/02249

**Risk Control Sheet No(s).**
NR/L3/MTC/RCS0216/MP01-03 MP06 and MP07
OTA-29-6 Tamper

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

The tamper attachment must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Only to be used for follow up of wet bed rectification for a maximum length of 10 beds and for use in sidings.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Equipment must NOT be used in live conductor rail areas

Equipment can be used under live OLE when used on a machine fitted with a suitable approved height limitation system and the safe system of work is in place to cover this.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

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<tr>
<td>Length (dependant on track width)</td>
<td>2200 mm (for standard gauge)</td>
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<tr>
<td>Width</td>
<td>845 mm</td>
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<tr>
<td>Height</td>
<td>1400 mm</td>
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<tr>
<td>Weight</td>
<td>1320 kg</td>
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<tr>
<td>Hydraulics - Compacting motor:</td>
<td>75 l/min at 150 bar</td>
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<tr>
<td>Lock cylinder:</td>
<td>50 l/min at 110 bar</td>
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<tr>
<td>Tamping Performance</td>
<td>ca. 80 – 120 m/h</td>
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<td>#</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------</td>
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<tr>
<td>OTPA-30-1</td>
<td>Arbil - Mk 3</td>
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<tr>
<td>OTPA-30-2</td>
<td>Geismar - OMR H</td>
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<td>OTPA-30-3</td>
<td>Rexquote - RT</td>
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<td>OTPA-30-4</td>
<td>Thompson Rail Equipment - RT 20</td>
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<tr>
<td>OTPA-30-5</td>
<td>Thompson Rail Equipment - Rail Foot Thimble</td>
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</tbody>
</table>
Thimble

Manufacturer: Arbil  
Model: Mk 3

Description

The Arbil Mark 3 Rail Thimble is suitable for use with BS113A, UIC60 and Bull Head rail sections.

It is designed to be suspended from chain, hook or shackle from the host RRV boom.

Rollers grip the rail securely under the head and support it during the threading operation. Grease nipples are fitted to each shaft to allow for lubrication of each roller.

The hydraulic cylinder is fitted with a safety valve in case of hose failure.

Using this thimble, long welded rail can be threaded into place ready for fastening or quickly removed from the rail seats for transposing.

Scope of Use: BS113A and UIC60 rail sections

Competencies: Machine Controller, Crane Controller & OTPA-21

Product Approval No.: -

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01, MP06 and MP07
OTPA-30-1 Thimble

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Where rails are to be moved by means of a rail thimble, the safe system of work shall incorporate adequate control measures for railway specific risks, see - “NR/L2/RMVP/0200/P005 - Handling new or serviceable rail with road-rail excavator cranes in rail mode” for detailed requirements.

2. The shortest length of rail that can be moved with the thimble is 100 metres.

3. Each thimble shall have a valid LOLER certificate.

4. The thimble shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

5. The thimble shall only be used with an RRV whose the load on hook indicator (RCI) indicator is active, and the lifting duty is in excess of the beam/load in the most adverse condition.

6. During the operation the RCI shall be monitored and the load shall not be allowed to exceed the Safe Working Load of the thimble or the lifting appliance.

   Note: This should be limited to a maximum of 2 tonne.

Minimum documentation requirement for the host machine are:

Operating Instructions, LOLER Test Certificate, Product Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:

Test Records, Statutory Inspection Records, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tr>
<td>Safe Working Load</td>
<td>3,000 kg</td>
</tr>
<tr>
<td>Proof Test Load</td>
<td>6,000 kg</td>
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<tr>
<td>Weight</td>
<td>120 kg</td>
</tr>
<tr>
<td>Length</td>
<td>632 mm</td>
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<tr>
<td>Width</td>
<td>730 mm</td>
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<td>Height</td>
<td>730 mm</td>
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<tr>
<td>Hydraulic Pressure</td>
<td>100 – 210 bar</td>
</tr>
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</table>
**Description**

The four roller hydraulic rail clamp/thimble is designed to operate in a railway environment for the laying of long welded rails (LWR). Using this thimble, long welded rail can be threaded into place ready for fastening or quickly removed from the rail seats for transposing. The four roller design enables easier movement over electric and aluminothermic welds during rail/road loader travel.

It is designed to be suspended from chain, hook or shackle from the host RRV boom.

A hydraulic cylinder clamps the rollers under the rail head securely and supports it during the threading operation. Grease nipples are fitted to each shaft to allow for lubrication of each roller. A compression spring mounted on ram rods guarantees clamp locking, even in the case of a hydraulic failure.

**Scope of Use**

BS113A and UIC60 rail sections

**Competencies**

Machine Controller, Crane Controller & OTPA-21

**Product Approval No.**

- 

**Risk Control Sheet No(s).**

NR/L3/MTC/RCS0216/MP01, MP06 and MP07
OTPA-30-2

Thimble

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Where rails are to be moved by means of a rail thimble, the safe system of work shall incorporate adequate control measures for railway specific risks, see - "NR/L2/RMVP/0200/P005 - Handling new or serviceable rail with road-rail excavator cranes in rail mode" for detailed requirements.

2. The shortest length of rail that can be moved with the thimble is 100 metres.

3. Each thimble shall have a valid LOLER certificate.

4. The thimble shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

5. The thimble shall only be used with an RRV whose the load on hook indicator (RCI) indicator is active, and the lifting duty is in excess of the beam/load in the most adverse condition.

6. During the operation the RCI shall be monitored and the load shall not be allowed to exceed the Safe Working Load of the thimble or the lifting appliance. Note: This should be limited to a maximum of 2 tonne.

Minimum documentation requirement for the host machine are:

Operating Instructions, LOLER Test Certificate, Load Radius Charts (duty charts), Logbook, Product Acceptance Certificate (if available, including any “Limitations of Use”)

Additional documents may include:
Test Records, Statutory Inspection Records etc.

Technical Specification:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Safe Working Load</td>
<td>2 tonnes</td>
</tr>
<tr>
<td>Weight</td>
<td>50 kg</td>
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<tr>
<td>Length</td>
<td>492 mm</td>
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<td>Width</td>
<td>368 mm</td>
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<tr>
<td>Height</td>
<td>418 mm</td>
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<td>Hydraulic Flow</td>
<td>80 l/min</td>
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<tr>
<td>Hydraulic Pressure</td>
<td>160 bar</td>
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Distance between rollers:

<table>
<thead>
<tr>
<th>Distance between rollers</th>
<th>Opened clamp</th>
<th>Closed clamp</th>
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<tbody>
<tr>
<td></td>
<td>100 mm</td>
<td>37 mm</td>
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</tbody>
</table>
OTA-30-3

Thimble

Key: 1 Cylinder 2 Upper Rollers 3 Side Rollers 4 Bottom Rollers 5 Pivot Pins

Manufacturer Rexquote  Model RT

Description
The thimble is designed to operate in a railway environment for the laying of rail. Using this thimble, long welded rail can be threaded into place ready for fastening or quickly removed from the rail seats for transposing. The Thimble is built to handle standard flat bottom rails including UIC 60 and 113A.

It is designed to be suspended from chain, hook or shackle from the host RRV boom.

Rollers grip the rail securely under the head and support it during the threading operation. Grease nipples are fitted to each shaft to allow for lubrication of each roller.

The hydraulic cylinder is fitted with a safety valve in case of hose failure.

Scope of Use BS113A and UIC60 rail sections

Competencies Machine Controller, Crane Controller & OTPA-21

Product Approval No. -

Risk Control Sheet No(s). NR/L3/MTC/RCS0216/MP01, MP06 and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Where rails are to be moved by means of a rail thimble, the safe system of work shall incorporate adequate control measures for railway specific risks, see - "NR/L2/RMVP/0200/P005 - Handling new or serviceable rail with road-rail excavator cranes in rail mode" for detailed requirements.
2. The shortest length of rail that can be moved with the thimble is 100 metres.
3. Each thimble shall have a valid LOLER certificate.
4. The thimble shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.
5. The thimble shall only be used with an RRV whose the load on hook indicator (RCI) indicator is active, and the lifting duty is in excess of the beam/load in the most adverse condition.
6. During the operation the RCI shall be monitored and the load shall not be allowed to exceed the Safe Working Load of the thimble or the lifting appliance. Note: This should be limited to a maximum of 2 tonne.

Minimum documentation requirement for the host machine are:

Operating Instructions, LOLER Test Certificate, Load Radius Charts (duty charts), Logbook, Product Acceptance Certificate (if available, including any “Limitations of Use”)

Additional documents may include:
Test Records, Statutory Inspection Records etc.

Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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<tr>
<td>Weight</td>
<td>170 kg</td>
</tr>
<tr>
<td>Length</td>
<td>500 mm (approx.)</td>
</tr>
<tr>
<td>Width</td>
<td>600 mm (approx.)</td>
</tr>
<tr>
<td>Height</td>
<td>750 mm (approx.)</td>
</tr>
<tr>
<td>Hydraulic Flow</td>
<td>10 l/min @ up to 100 bar</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>200 bar (max.)</td>
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</tbody>
</table>
Thimble

Manufacturer  Thompson Rail Equipment Ltd.  Model  RT 20

Description
The Thomson Universal Rail Thimble is suitable for use with both CEN60 and BS113a rail without adjustment and with practically all types of flat bottomed running rail.

It is designed to be suspended from chain, hook or shackle from the host RRV boom.

Four rollers, fitted with Impregnated bronze bushes grip the rail securely under the head and support it during the threading operation. Grease nipples are fitted to each shaft to allow for lubrication of each roller.

It is fitted with a safety check valve and proof tested to 20 tonnes.

Using this thimble long welded rail can be threaded into place ready for fastening or quickly removed from the rail seats for transposing.

Scope of Use  CEN60 and BS113a rail sections
Competencies  Machine Controller, Crane Controller & OTPA-21
Product Approval No.  PA05/03274
Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01, MP06 and MP07
OTPA-30-4 Thimble

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Where rails are to be moved by means of a rail thimble, the safe system of work shall incorporate adequate control measures for railway specific risks, see Network Rail standard - “NR/L2/RMVP/0200/P005 - Handling new or serviceable rail with road-rail excavator cranes in rail mode” for detailed requirements.

2. The shortest length of rail that can be moved with the thimble is 100 metres.

3. Each thimble shall have a valid LOLER certificate.

4. The thimble shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

5. The thimble shall only be used with an RRV whose the load on hook indicator (RCI) indicator is active, and the lifting duty is in excess of the beam/load in the most adverse condition.

6. During the operation the RCI shall be monitored and the load shall not be allowed to exceed the Safe Working Load of the thimble or the lifting appliance. Note: This should be limited to a maximum of 2 tonne.

Minimum documentation requirement for the host machine are:

Operating Instructions, LOLER Test Certificate, Product Acceptance Certificate (including Limitations of Use), Logbook

Additional documents may include:
Test Records, Statutory Inspection Records, Load Radius Charts (duty charts) etc.

Technical Specification:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe Working Load</td>
<td>2,000 kg</td>
</tr>
<tr>
<td>Proof Test Load</td>
<td>4,000 kg</td>
</tr>
<tr>
<td>Weight</td>
<td>235 kg</td>
</tr>
<tr>
<td>Length</td>
<td>630 mm</td>
</tr>
<tr>
<td>Width</td>
<td>730 mm</td>
</tr>
<tr>
<td>Height</td>
<td>735 mm</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>90 – 210 bar</td>
</tr>
</tbody>
</table>
Thomson Rail Foot Thimble

The Thomson Rail foot thimble is a universal rail thimble for threading all types of flat bottom rail, including both running rail and conductor rail sections. The hydraulic cylinders allow the thimble securely to grip the base of the rail section and to guide it accurately into place.

A special mechanism automatically withdraws the rollers a precise amount and locks the hydraulic system as the rail is lifted. In this way the rail is allowed to run freely whilst damage due to welds and rail defects is minimised. Rail cannot be released from the Rail Foot Thimble until safely lowered.

It is designed to be suspended from chain, hook or shackle from the host RRV boom. Using this thimble long welded rail can be threaded into place ready for fastening or quickly removed from the rail seats for transposing.

Scope of Use

Flat bottom rail sections

Competencies

Machine Controller, Crane Controller & OTPA-21

Product Approval No.

PA05/05727

Risk Control Sheet No(s).

NR/L3/MTC/RCS0216/MP01, MP06 and MP07

Operators / Suppliers

Balfour Beatty Rail
OTPA-30-5 Thimble

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Where rails are to be moved by means of a rail thimble, the safe system of work shall incorporate adequate control measures for railway specific risks, see Network Rail standard - “NR/L2/RMVP/0200/P005 - Handling new or serviceable rail with road-rail excavator cranes in rail mode” for detailed requirements.

2. The shortest length of rail that can be moved with the thimble is 100 metres.

3. Each thimble shall have a valid LOLER certificate.

4. The thimble shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

5. The thimble shall only be used with an RRV whose the load on hook indicator (RCI) indicator is active, and the lifting duty is in excess of the beam/load in the most adverse condition.

6. During the operation the RCI shall be monitored and the load shall not be allowed to exceed the Safe Working Load of the thimble or the lifting appliance. Note: This should be limited to a maximum of 2 tonne.

Minimum documentation requirement for the host machine are:

Operating Instructions, LOLER Test Certificate, Product Acceptance Certificate (including Limitations of Use), Logbook

Additional documents may include:

Test Records, Statutory Inspection Records, Load Radius Charts (duty charts) etc.

Technical Specification:

Safe Working Load 2,000 kg

Proof Test Load 4,000 kg

Weight 250 kg

Length 550 mm

Width 480 mm

Height 580 mm

Hydraulic Pressure 90 – 210 bar
## Tilt Rotators

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-31-1</td>
<td>Engcon</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-31-2</td>
<td>Indextator</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-31-3</td>
<td>Kinshofer</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-31-4</td>
<td>Liebherr</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-31-5</td>
<td>OilQuick</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-31-6</td>
<td>Steelwrist</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>


**Manufacturer**  
Engcon

**Models**  
EC10B / 15B / 20B / 30B

**Description**

Engcon’s range of tilt rotators are equipped with double-acting tilt cylinders for optimized tilting force and even operation. The Tiltrotator is equipped with a standard control system that permits the simultaneous control of the rotation, slewing, hydraulic auxiliary function and hydraulic quick hitch.

This control makes the tilt rotator extremely useful in placing attachments in the optimal operating position or for quickly reversing position, saving time and delivering improved productivity.

The make and model of the excavator to which a tilt rotator will be fitted must be established so that the correct size can be selected. Engcon’s tilt rotators can be matched with most existing excavators, with machine weights of 10 to 32 tons.

Typical attachments that can be used with tilt rotator are excavator buckets, flails/brush cutters, pole grabs, grapples, pilling hammers, rail / tree croppers, ballast excavators and drilling rigs etc.

**Scope of Use**  
Connecting OTP attachments to excavator boom

**Competencies**  
Machine Controller & Crane Controller

**Product Approval No.**  
-

**Risk Control Sheet No(s).**  
NR/L3/MTC/RCS0216/MP01, MP07 and MP21
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Where the tilt rotator or anything attached to it is intended to be used for lifting any load, they must be approved for lifting by the manufacturer. The coupler shall be clearly marked with its safe working load and have undergone a thorough examination.

2. Where an adaptor plate is used to enable a lifting accessory to be attached to a tilt rotator the adaptor plate will become part of the lifting accessory and included in the six monthly thorough examinations.

3. A tilt rotator that is used for lifting shall have a valid LOLER certificate.

4. The tilt rotator shall be subject to all applicable limitations on the Engineering Acceptance certificate of the RRV to which it is attached.

5. The quick hitch shall only be used with an RRV who’s RC! indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions, LOLER certificate (if appropriate) and Logbook

Additional documents may include:

Test Records, Statutory Inspection & Test Records and Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model Type</th>
<th>EC 10B</th>
<th>EC 15B</th>
<th>EC 20B</th>
<th>EC 30B</th>
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</thead>
<tbody>
<tr>
<td>Width (mm)</td>
<td>490</td>
<td>570</td>
<td>600</td>
<td>780</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>536</td>
<td>698</td>
<td>800</td>
<td>970</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>420</td>
<td>440</td>
<td>450</td>
<td>740</td>
</tr>
<tr>
<td>Weight: (kg)</td>
<td>270</td>
<td>360</td>
<td>470</td>
<td>850</td>
</tr>
<tr>
<td>Rotation</td>
<td>unlimited</td>
<td>unlimited</td>
<td>unlimited</td>
<td>unlimited</td>
</tr>
<tr>
<td>Tilt Range</td>
<td>+/- .40°</td>
<td>+/- .40°</td>
<td>+/- .40°</td>
<td>+/- .40°</td>
</tr>
<tr>
<td>Flow requirement (l/min)</td>
<td>20 - 40</td>
<td>40 - 60</td>
<td>40 - 80</td>
<td>40 - 80</td>
</tr>
<tr>
<td>Hydraulic pressure (bar)</td>
<td>180 - 210</td>
<td>180 - 210</td>
<td>180 - 210</td>
<td>180 - 210</td>
</tr>
<tr>
<td>Machine weight (t)</td>
<td>6 - 14</td>
<td>12 - 18</td>
<td>16 - 24</td>
<td>22 - 32</td>
</tr>
</tbody>
</table>
OTA-31-2  Tilt Rotator

Manufacturer: Indexator  Models: RT 30 / RT 40 / RT 60 / RT 80

Description:
Indexator’s range of tilt rotators are equipped with either a single or double-acting tilt cylinders for optimized tilting force and even operation. The tilt rotator is equipped with a standard control system that permits the simultaneous control of the rotation, tilt and hydraulic auxiliary function.

Proportional control makes the tilt rotator extremely useful in placing attachments in the optimal position for working or for quickly reversing its position, saving time and delivering improved productivity.

The make and model of the excavator to which a tilt rotator will be fitted must be established so that the correct size can be selected. Indexator’s tilt rotators can be matched with most existing excavators, with machine weights of 6 to 30 tonnes.

Typical attachments that can be used with tilt rotator are excavator buckets, flails/brush cutters, pole grabs, grapples, pilling hammers, rail / tree croppers, ballast excavators and drilling rigs etc.

Scope of Use: Rotating and tilting OTP attachments

Competencies: Machine Controller, Crane Controller & OTPA-xx

Product Approval No.: -

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01, MP07and MP21

Issued by the Professional Head [Plant and T&RS] - Issue 1
For advice contact the Plant & T&RS team - tel: 07515628443
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Where the tilt rotator or anything attached to it is intended to be used for lifting any load, they must be approved for lifting by the manufacturer. The coupler shall be clearly marked with its safe working load.

2. Where an adaptor plate is used to enable a lifting accessory to be attached to a tilt rotator the adaptor plate will become part of the lifting accessory and included in the six monthly thorough examination.

3. A tilt rotator that is used for lifting shall have a valid LOLER certificate.

4. The tilt rotator shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road Rail Vehicle (RRV) to which it is attached.

5. The quick hitch shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions, LOLER certificate (if appropriate) and Logbook

Additional documents may include:
Test Records, Statutory Inspection/Test Records and Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model Type</th>
<th>Width (mm)</th>
<th>Length (mm)</th>
<th>Height (mm)</th>
<th>Weight: (kg)</th>
<th>Tilt Range</th>
<th>Rotation - 1 turn @ 50 l/min</th>
<th>Max / Min flow (l/min)</th>
<th>Hydraulic pressure (bar)</th>
<th>Machine weight (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT 30</td>
<td>635</td>
<td>595</td>
<td>420</td>
<td>225*</td>
<td>+/-40°</td>
<td>7 seconds</td>
<td>30 - 60</td>
<td>200 - 250</td>
<td>6 - 11</td>
</tr>
<tr>
<td>RT 40</td>
<td>695</td>
<td>675</td>
<td>465</td>
<td>315*</td>
<td>+/-40°</td>
<td>7 seconds</td>
<td>40 - 80</td>
<td>200 - 250</td>
<td>10 - 15</td>
</tr>
<tr>
<td>RT 60</td>
<td>790</td>
<td>795</td>
<td>500</td>
<td>460*</td>
<td>+/-40°</td>
<td>7 seconds</td>
<td>40 - 80</td>
<td>200 - 300</td>
<td>15 - 24</td>
</tr>
<tr>
<td>RT 80</td>
<td>940</td>
<td>920</td>
<td>620</td>
<td>730*</td>
<td>+/-40°</td>
<td>7 seconds</td>
<td>50 - 80</td>
<td>200 - 300</td>
<td>23 - 30</td>
</tr>
</tbody>
</table>

* The weight will depend on the type of adapter, quick coupler and control system.
Manufacturer: Kinshofer  Models: TR06 / TR10 / TR18 & TR25-NOX

Description:
Kinshofer range of tilt rotators allow Continuous 360° rotation and a tilting angle of 2 x 45° to 2 x 55° make it a universal joint. Combined with Quick Change System and various attachments this means highest efficiency at any construction site. The NOX Tilt-rotator range is optimally engineered to suit excavators with an operating weight from 3 t to 25 t.

Proportional control makes the tilt rotator extremely useful in placing attachments in the optimal position for working or for quickly reversing its position, saving time and delivering improved productivity.

The make and model of the excavator to which a tilt rotator will be fitted must be established so that the correct size can be selected. Indexator’s tilt rotators can be matched with most existing excavators, with machine weights of 6 to 30 tonnes.

Typical attachments that can be used with tilt rotator are excavator buckets, flails/brush cutters, pole grabs, grapples, pilling hammers, rail / tree croppers, ballast excavators and drilling rigs etc.

Scope of Use: Rotating and tilting OTP attachments
Competencies: Machine Controller, Crane Controller & OTPA-xx
Product Approval No.: -
Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01, MP07 and MP21
OTPA-31-3  Tilt Rotator

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Where the tilt rotator or anything attached to it is intended to be used for lifting any load, they must be approved for lifting by the manufacturer. The coupler shall be clearly marked with its safe working load.
2. Where an adaptor plate is used to enable a lifting accessory to be attached to a tilt rotator the adaptor plate will become part of the lifting accessory and included in the six monthly thorough examinations.
3. A tilt rotator that is used for lifting shall have a valid LOLER certificate.
4. The tilt rotator shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road Rail Vehicle (RRV) to which it is attached.
5. The quick hitch shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions, LOLER certificate (if appropriate) and Logbook

Additional documents may include:

Test Records, Statutory Inspection/Test Records and Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model Type</th>
<th>TR06NOX</th>
<th>TR10NOX</th>
<th>TR18NOX</th>
<th>TR25NOX</th>
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<tbody>
<tr>
<td>Excavator Weight (t)</td>
<td>3 - 6</td>
<td>5 -10</td>
<td>9 - 18</td>
<td>15 -25</td>
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<tr>
<td>Weight (mm)</td>
<td>120</td>
<td>220</td>
<td>460</td>
<td>620</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>360</td>
<td>412</td>
<td>450</td>
<td>534</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>500</td>
<td>610</td>
<td>740</td>
<td>783</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>370</td>
<td>445</td>
<td>530</td>
<td>597</td>
</tr>
<tr>
<td>Tilt Angle</td>
<td>$2 \times 50^\circ$</td>
<td>$2 \times 55^\circ$</td>
<td>$2 \times 50^\circ$</td>
<td>$2 \times 45^\circ$</td>
</tr>
<tr>
<td>Tilting Torque (kN)</td>
<td>8.4</td>
<td>14</td>
<td>27</td>
<td>40</td>
</tr>
<tr>
<td>Rotating Torque (Nm)</td>
<td>7500</td>
<td>7500</td>
<td>8400</td>
<td>10400</td>
</tr>
<tr>
<td>Rotation Speed (rpm)</td>
<td>9.0</td>
<td>7.5</td>
<td>7.0</td>
<td>5.7</td>
</tr>
<tr>
<td>Flowrate (l/min)</td>
<td>40</td>
<td>40</td>
<td>120</td>
<td>120</td>
</tr>
</tbody>
</table>
Manufacturers of OTPA-31-4 Tilt Rotator

Manufacturer: Liebherr
Models: LH-TR 20 & LH-TR 25

Description
The Liebherr hydraulic rotation drive increases the utilisation of an excavator many times. Even under severe conditions, jobs are quickly and effectively accomplished with this modular adapter. The horizontally positioned tilt cylinder is well protected even at the maximum tilt angle and has no extruding parts. Its particular features such as infinite rotation in both directions, tilting at 2 x 50° and the quick-change system turn the hydraulic excavator into a multi-purpose machine.

Proportional control makes the tilt rotator extremely useful in placing attachments in the optimal position for working or for quickly reversing its position, saving time and delivering improved productivity.

The make and model of the excavator to which a tilt rotator will be fitted must be established so that the correct size can be selected.

Typical attachments that can be used with tilt rotator are excavator buckets, flails/brush cutters, pole grabs, grapples, piling hammers, rail / tree croppers, ballast excavators and drilling rigs etc.

Scope of Use
Rotating and tilting OTP attachments

Competencies
Machine Controller, Crane Controller & OTPA-10

Product Approval No.
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01, MP07 and MP21
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Where the tilt rotator or anything attached to it is intended to be used for lifting any load, they must be approved for lifting by the manufacturer. The coupler shall be clearly marked with its safe working load.

2. Where an adaptor plate is used to enable a lifting accessory to be attached to a tilt rotator the adaptor plate will become part of the lifting accessory and included in the six monthly thorough examination.

3. A tilt rotator that is used for lifting shall have a valid LOLER certificate.

4. The tilt rotator shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road Rail Vehicle (RRV) to which it is attached.

5. The quick hitch shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions, LOLER certificate (if appropriate) and Logbook

Additional documents may include:
Test Records, Statutory Inspection/Test Records and Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model Type</th>
<th>LH-TR 20</th>
<th>LH-TR 25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (kg)</td>
<td>470</td>
<td>720</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>870</td>
<td>880</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>440</td>
<td>630</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>600</td>
<td>680</td>
</tr>
<tr>
<td>Tilt Angle</td>
<td>+/- 50°</td>
<td>+/- 50°</td>
</tr>
</tbody>
</table>
OTPA-31-5 Tilt Rotator

**Manufacturer**  OilQuick  **Models** OQTR 30, 40, 60B and 80

**Description:**
Based on Indexator’s proven Rototilt technology the OilQuick range of tilt rotators allow continuous 360° rotation and a tilting angle of 2 x 50° to 2 x 55° make it a universal joint. Combined with Quick Change System and various attachments this means highest efficiency at any construction site. The tiltrotators are optimally engineered to suit excavators with an operating weight from 6 t to 30 t.

Proportional control makes the tilt rotator extremely useful in placing attachments in the optimal position for working or for quickly reversing its position, saving time and delivering improved productivity.

Typical attachments that can be used with tilt rotator are excavator buckets, flails/brush cutters, pole grabs, grapples, pilling hammers, rail / tree croppers, ballast excavators and drilling rigs etc.

**Scope of Use**  Rotating and tilting OTP attachments

**Competencies**  Machine Controller, Crane Controller & OTPA-xx

**Product Approval No.:**  -

**Risk Control Sheet No(s).**  NR/L3/MTC/RCS0216/MP01, MP07 and MP21
OTPA-31-5  Tilt Rotator

Control Measures Required
Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use
Where the tilt rotator or anything attached to it is intended to be used for lifting any load, they must be approved for lifting by the manufacturer. The coupler shall be clearly marked with its safe working load.

Where an adaptor plate is used to enable a lifting accessory to be attached to a tilt rotator the adaptor plate will become part of the lifting accessory and included in the six monthly thorough examination.

A tilt rotator that is used for lifting shall have a valid LOLER certificate.

The tilt rotator shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road Rail Vehicle (RRV) to which it is attached.

The quick hitch shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam/load in the most adverse condition.

Minimum documentation requirement for the host machine are:
Operating Instructions, LOLER certificate (if appropriate) and Logbook

Additional documents may include:
Test Records, Statutory Inspection/Test Records and Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>OQTR 30</th>
<th>OQTR 40</th>
<th>OQTR 60B</th>
<th>OQTR 80</th>
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<tbody>
<tr>
<td>Width - Single cylinders</td>
<td>660 mm</td>
<td>705 mm</td>
<td>790 mm</td>
<td>-</td>
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<tr>
<td>Width - Double cylinder</td>
<td>635 mm</td>
<td>695 mm</td>
<td>810 mm</td>
<td>940 mm</td>
</tr>
<tr>
<td>Weight (kg) depends on type</td>
<td>from 265</td>
<td>from 325</td>
<td>from 480 kg</td>
<td>from 750</td>
</tr>
<tr>
<td>Tilt angle</td>
<td>2x40°</td>
<td>2x40°</td>
<td>2x40°</td>
<td>2x40°</td>
</tr>
<tr>
<td>Max. bucket digging force</td>
<td>70 kN</td>
<td>105 kN</td>
<td>170 kN</td>
<td>200 kN</td>
</tr>
<tr>
<td>Rotation speed (50 l/min)</td>
<td>1 turn/7 sec</td>
<td>1 turn/7 sec</td>
<td>1 turn/7 sec</td>
<td>1 turn/7 sec</td>
</tr>
<tr>
<td>Maximum pressure</td>
<td>25 MPa</td>
<td>25 MPa</td>
<td>25 MPa</td>
<td>25 MPa</td>
</tr>
<tr>
<td>Max. return pressure (50 l/min)</td>
<td>2 MPa</td>
<td>2 MPa</td>
<td>2 MPa</td>
<td>2 MPa</td>
</tr>
<tr>
<td>Min/Max connected flow</td>
<td>30/60 l/min</td>
<td>40/80 l/min</td>
<td>40/80 l/min</td>
<td>50/80 l/min</td>
</tr>
<tr>
<td>Rotation</td>
<td>Unlimited</td>
<td>Unlimited</td>
<td>Unlimited</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Weight of machine</td>
<td>5-11 ton</td>
<td>10-15 ton</td>
<td>12-18 ton</td>
<td>23-30 ton</td>
</tr>
</tbody>
</table>
Manufacturer  Steelwrist
Models  X12 / X18 / X26

Description:
The Steelwrist tiltrotators are designed for excavators with an operating weight between 6 and 26 tonnes. They have a bi-directional tilt angle of 45°, coupled with high torque rotation and are available with hydraulic quick couplers.

Typical attachments for use with the tilt rotator are excavator buckets, flails/brush cutters, pole grabs, grapples, pilling hammers, rail / tree croppers, ballast excavators and drilling rigs etc.

The control systems are all fully integrated and enable control of all functions directly from the driver's cab.

Proportional control makes the tilt rotator extremely useful in placing attachments in the optimal position for working or for quickly reversing its position, saving time and delivering improved productivity.

Scope of Use  Rotating and tilting OTP attachments
Competencies  Machine Controller, Crane Controller & OTPA-10
Product Approval No.  -
Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01, MP07 and MP21
OTPA-31-6  Tilt Rotator

Control Measures Required:
Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use:
Where the tilt rotator or anything attached to it is intended to be used for lifting any load, they must be approved for lifting by the manufacturer. The coupler shall be clearly marked with its safe working load.

Where an adaptor plate is used to enable a lifting accessory to be attached to a tilt rotator the adaptor plate will become part of the lifting accessory and included in the six monthly thorough examination.

A tilt rotator that is used for lifting shall have a valid LOLER certificate.

The tilt rotator shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road Rail Vehicle (RRV) to which it is attached.

The quick hitch shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the beam / load in the most adverse condition.

Minimum documentation requirement for the host machine are:
Operating Instructions, LOLER certificate (if appropriate) and Logbook

Additional documents may include:
Test Records, Statutory Inspection/Test Records and Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th></th>
<th>Model</th>
<th>X12</th>
<th>X18</th>
<th>X26</th>
</tr>
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<tbody>
<tr>
<td>Height (mm)</td>
<td></td>
<td>425</td>
<td>449</td>
<td>512</td>
</tr>
<tr>
<td>Width (mm)</td>
<td></td>
<td>564</td>
<td>612</td>
<td>690</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td></td>
<td>370</td>
<td>490</td>
<td>695</td>
</tr>
<tr>
<td>Tilt angle</td>
<td>+/- 45°</td>
<td>+/- 45°</td>
<td>+/- 45°</td>
<td></td>
</tr>
<tr>
<td>Tilt Force (kNm)</td>
<td></td>
<td>29</td>
<td>41</td>
<td>61</td>
</tr>
<tr>
<td>Rotation</td>
<td>360°</td>
<td>360°</td>
<td>360°</td>
<td></td>
</tr>
<tr>
<td>Rotation speed (rpm)</td>
<td></td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Rotational Torque (kNm)</td>
<td></td>
<td>6.5</td>
<td>7.8</td>
<td>10.6</td>
</tr>
<tr>
<td>Hydraulic Pressure (bar)</td>
<td></td>
<td>180 - 210</td>
<td>180 - 210</td>
<td>180 - 210</td>
</tr>
<tr>
<td>Hydraulic Flow (l/min)</td>
<td></td>
<td>25 - 50</td>
<td>40 - 60</td>
<td>40 - 80</td>
</tr>
<tr>
<td>Weight of machine (tonnes)</td>
<td></td>
<td>6 - 12</td>
<td>12 - 18</td>
<td>18 - 26</td>
</tr>
</tbody>
</table>
## Trailers

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-32-1</td>
<td>Trailer - Chieftain - 4m, 5m and 6m</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-32-2</td>
<td>Trailer - Philmor - T5000 range</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-32-3</td>
<td>Trailer - Rexquote - T4 / T5</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-32-4</td>
<td>Trailer Box - General</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-32-5</td>
<td>Trailer - Aquarius - RRT</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-32-6</td>
<td>Trailer - Aquarius – LTE</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
OTPA-32-1  Trailer - Platform type

Manufacturer  Chieftain  Models  4m, 5m and 6m

Description:
The Chieftain platform rail trailer range enables the cost efficient transport of goods and equipment to worksites and rail stations. They are available in 4, 5 and 6 metre lengths. All trailers are designed and developed to meet all RIS 1530-PLT regulations.

Each platform trailer comes complete with multi-leaf suspension, Ø550mm P1/10 profile wheels, hydraulic brakes, failsafe braking system, full 12V LED lighting, lashing rings and tow hitch c/w tow pole as standard.

Ballast boxes are an optional extra for the platform trailer range.

Scope of Use  Transport of goods and equipment

Competencies  Machine Controller, Crane Controller & OTPA-xx

Product Approval No.  -

Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01 & MP07

Issued by the Professional Head [Plant and T&RS] - Issue 1
For advice contact the Plant & T&RS team  tel: 07515628443
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. Trailer shall only operate inside possessions.
2. Trailer may On or Off track, travel or work under live OLE in compliance with Method Statement for the possession as determined and approved in accordance with the requirements of GE/RTS024.
3. The trailer shall not On or Off track and work on live conductor-rail lines.
4. Maximum track cant 200mm and/or gradient 1/25.
5. Trailer may not activate train operated points.
6. Maximum speed = 10mph, switches and crossings = 5mph.
7. Shall only be coupled to RRVs which are certificated for towing or propelling this type of trailer and the trailer shall be subject to limitations of the towing vehicle.
8. Trailer rated capacity of 24 tonne GLW shall not be exceeded (21 tonne payload).

Minimum documentation requirement for the host machine are:

Operating Instructions, Engineering Acceptance certificate and Logbook.

Additional documents may include:
Test Records, Statutory Inspection & Test Records, Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model Type</th>
<th>4m</th>
<th>5m</th>
<th>5m skelly</th>
<th>6m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (m)</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Gross Trailer Weight (kg)</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Axle Capacity (kg)</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Tare Weight (kg)</td>
<td>2,626</td>
<td>3,036</td>
<td>2,085</td>
<td>3,326</td>
</tr>
<tr>
<td>Payload (kg)</td>
<td>17,374</td>
<td>16,964</td>
<td>17,915</td>
<td>16,674</td>
</tr>
<tr>
<td>Ballast Box (kg)</td>
<td>1,212</td>
<td>1,339</td>
<td>-</td>
<td>1,543</td>
</tr>
</tbody>
</table>
OTPA-32-2  Trailer - Platform

**Manufacturer**  Philmor  **Models**  T5000 series

**Description**
Philmor T5000 series Rail Trailers are “traditional style” non-powered, 2-axle rail vehicles designed to be towed / propelled by a compatible vehicle. Featuring a low, flat deck with fixings along their sides for securing a variety of loads.

The trailers are fully welded steel construction throughout with variable rate, heavy duty single coil sprung independent axles give good ride quality and resistance to derailment.

The platform rail trailer range enables the efficient transport of goods and equipment to worksites and 12 or 20 tonne versions are available on standard 5m long chassis.

Other load capacity variants and sizes (including 3.5 m -10 tonne capacity) are available.

The 4 axle 7040AAS (7m long) rail trailer has hydraulic loading ramps and retractable side extension boards for transporting wide loads of up to 40 tonnes subject to the towing vehicle limitations.

Variants with fully insulated and "gauge adjustable" axles are also available.

Two or four spring applied "failsafe" park brake units are available with air or hydraulic operation – dependent on trailer payload required. Also available with dual air/hydraulic brake capability – for enhanced operational flexibility and capability.

**Scope of Use**  Transport of goods and equipment

**Competencies**  Machine Controller, Crane Controller & OTPA-10

**Engineering Acceptance No.**  Various

**Risk Control Sheet No(s).**  NR/L3/MTC/RCS0216/MP01 & MP07
OTPA-32-2  

Trailer – Platform

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use:

1. Trailer shall only operate inside possessions.
2. Trailer may “On or Off” track, travel or work under live OLE in compliance with Method Statement for the possession as determined and approved in accordance with the requirements of GE/RTS024.
3. The trailer shall not On or Off track and work on live conductor-rail lines.
4. Maximum track cant 200mm and/or gradient 1/25.
5. Trailer may not activate train operated points.
6. Maximum speed = 10mph, switches and crossings = 5mph.
7. Shall only be coupled to RRVs which are certificated for towing or propelling this type of trailer and the trailer shall be subject to limitations of the towing vehicle.
8. Trailer rated capacity GLW shall not be exceeded.

Minimum documentation requirement for the host machine are:

Operating Instructions, Engineering Acceptance certificate and Logbook.

Additional documents may include:

Test Records, Statutory Inspection & Test Records, Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Model Type</th>
<th>T5000 series</th>
<th>7040AAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (metres)</td>
<td>3.5m, 5m &amp; 6m</td>
<td>7.4 m</td>
</tr>
<tr>
<td>Width (metres)</td>
<td>2.4</td>
<td>2.4 (3.1 c/w extensions)</td>
</tr>
<tr>
<td>Platform Height (mm) above rail</td>
<td>550</td>
<td>580</td>
</tr>
<tr>
<td>Number of Axles</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Payload (tonnes)</td>
<td>Up to 20</td>
<td>40</td>
</tr>
<tr>
<td>Gross Trailer Weight (tonne)</td>
<td>Up to 22.9</td>
<td>45.5</td>
</tr>
<tr>
<td>Tare Weight (tonne)</td>
<td>2.9</td>
<td>5.5</td>
</tr>
<tr>
<td>Maximum Speed (mph)</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
Manufacturer: Rexquote
Models: T4 & T5

Description
The Rexquote 2 axle rail trailer range includes a number of different sized flat bed trailers.

These are manufactured with different weight capacities, with or without sides and with the option of specially made ramps, adjustable support legs and other accessories.

Rexquote trailers enable transport of goods and equipment to a worksite without the costly use of a train.

Each trailer is fitted with failsafe, spring applied parking brakes as standard with the option of proportional service braking system controlled by the foot pedal in the cab of the machine or via a joystick in the cab in the case of machines without OEM footbrake.

Included in the range are cable carrying trailers, personnel transporters and the addition of twist locks now means they have the ability to carry ISO containers.

Scope of Use
Transport of goods and equipment

Competencies
Machine Controller and Crane Controller

Engineering Acceptance No.
Various

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01 & MP07
Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use:

1. Trailer shall only operate inside possessions.
2. Trailer may On or Off track, travel or work under live OLE in compliance with Method Statement for the possession as determined and approved in accordance with the requirements of GE/RTS024.
3. The trailer shall not On or Off track and work on live conductor-rail lines.
4. Maximum track cant 200mm and/or gradient 1/29.
5. Trailer may not activate train operated points.
6. Maximum speed = 10mph, switches and crossings = 5mph.
7. The trailer shall only be coupled an RRV which is certificated for towing or propelling this type of trailer and the trailer shall be subject to limitations of the towing vehicle.
8. Trailer rated capacity of 24 tonne GLW shall not be exceeded (21 tonne payload).

Minimum documentation requirement for the host machine are:

Operating Instructions, Engineering Acceptance certificate and Logbook.

Additional documents may include:
Test Records, Statutory Inspection & Test Records, Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th></th>
<th>T4</th>
<th>T5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (m)</td>
<td>4</td>
<td>3.5</td>
</tr>
<tr>
<td>Gross Trailer Weight (tonnes)</td>
<td>24</td>
<td>9</td>
</tr>
<tr>
<td>Axle Capacity (kg)</td>
<td>12000</td>
<td>4500</td>
</tr>
<tr>
<td>Tare Weight (kg)</td>
<td>2900</td>
<td>2250</td>
</tr>
<tr>
<td>Payload (tonnes)</td>
<td>21</td>
<td>8</td>
</tr>
</tbody>
</table>
Manufacturers  
Rexquote, Philmor, Chieftain

Description
Trailer boxes are purpose built attachments that are designed for the efficient transport of goods and equipment to worksites. They are particularly suited for moving loose materials such as spoil, ballast, sand etc. They are available in a range of sizes up to 5m in length.

The trailer boxes are fully welded steel construction with integral lifting points to facilitate loading and unloading from the rail trailer.

Scope of Use  
Transportation of goods and loose materials

Competencies  
Machine Controller, Crane Controller & OTPA-10

Product Approval No.  
-

Risk Control Sheet No(s).  
NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07

Suppliers  
L&W
OTPA-32-4        Trailer Box

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

The boxes must only be lifted and moved by authorised and competent personnel.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the Rail Trailer to which the box is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

LOLER Certification and Logbook

Additional documents may include:

Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>Up to 6m</td>
</tr>
<tr>
<td>Width</td>
<td>Up to 2400 mm</td>
</tr>
<tr>
<td>Height</td>
<td>Up to 800 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>Up to 4900 kg</td>
</tr>
<tr>
<td>Safe Working Load</td>
<td>Up to 15000 kg</td>
</tr>
<tr>
<td>Maximum Speed</td>
<td>10 m.p.h.</td>
</tr>
</tbody>
</table>
Description

This Road Rail trailer is purpose built design for the efficient transport of plant and equipment to worksites.

It may also be used for moving small quantities loose materials such as spoil, ballast, sand etc.

The trailer is fully air braked and road approved at full payload.

The trailers are fully welded construction with integral tail ramps to facilitate loading and unloading of plant.

The trailer is a cost effective and efficient solution for the delivery of small tracked machines from the depot to the track worksite.

Scope of Use

Transportation of plant, equipment and materials

Competencies:

Machine Controller & OTPA-10

Product Approval No.:

PA05/5168

Risk Control Sheet No(s).

NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07

Suppliers

Aquarius Railroad Technologies Ltd
Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

The trailer must only be operated inside possessions and moved by authorised and competent personnel.

Trailer shall not on or off track under live OLE or work on live conductor-rail lines.

Maximum track cant 200 mm and/or gradient of 1/29.

If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the trailer prior to its use.

The limitations of the road rail vehicle to which the trailer is attached shall apply.

Minimum documentation requirement for the host machine are:

E. A. Certification and Logbook

Additional documents may include:

Inspection Records, Test Certificates, Load Charts etc.

Technical Specification

Gross Vehicle Weight 3500 kg

Maximum Payload 2700 kg

Capacity (W x L) 1200 mm x 2400 mm

Maximum Speed 20 m.p.h.

@ switches and crossings 5 m.p.h.
Manufacturer: Aquarius Railroad Technologies Ltd
Model: LTE

Description
The Load Tray Extension (LTE) trailer are purpose built attachments that are designed for the efficient transport of goods and equipment to worksites.
The trailer is a compact light weight design that has a single rail axle (no brakes) and is suitable for towing by a variety of road rail vehicles.
The trailer is a fully riveted aluminium construction with all around small side walls.

Scope of Use
Transportation of goods and materials

Competencies
Machine Controller, Crane Controller & OTPA-10

Product Approval No.
PA05/05135

VAB Certificate No.
IF/0668/12

Vehicle No.
99709-009051-2

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07

Suppliers
Aquarius Railroad Technologies Ltd
OTPA-32-6          Trailer - LTE

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

The trailer must only be lifted and moved by authorised and competent personnel.
The trailer shall be subject to the limitations of the towing RRV.
If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
Maximum speed = 10 mph, points & crossings = 5 mph, raised check rails = 2 mph.
In travelling and working modes, maximum track cant 200mm and/or gradient 1:25.
The rated capacity of 550kg GVW (490kg payload), evenly distributed, shall NOT be exceeded
Staff shall be briefed on the safe operation of the LTE prior to its use.
The limitations of the rail vehicle to which the trailer is attached shall apply.
It shall NOT on/off track, travel or work on live conductor-rail lines.

Minimum documentation requirement for the host machine are:

E.A Certification, Maintenance Manual and Logbook

Additional documents may include:
Inspection Records, Test Certificates, Loading Charts etc.

Technical Specification

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Length*</td>
<td>1700 mm</td>
</tr>
<tr>
<td>Width*</td>
<td>1500 mm</td>
</tr>
<tr>
<td>Height</td>
<td>260 mm</td>
</tr>
<tr>
<td>Trailer Tare Weight</td>
<td>60 kg</td>
</tr>
<tr>
<td>Safe Payload</td>
<td>490 kg</td>
</tr>
<tr>
<td>Maximum Speed</td>
<td>10 m.p.h.</td>
</tr>
</tbody>
</table>

* Note: The dimensions given above are approximate.
### Tree Cutters

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-33-1</td>
<td>Bracke C16 B - Tree Cutting Head</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-33-2</td>
<td>Habbig - HS650 / HS760 / HS 850 - Tree Cutter</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-33-3</td>
<td>Mulag - FSG2000 - Tree Clearing Saw</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-33-4</td>
<td>Waratah - TH250HD - Tree Cutter / Harvester Head</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
OTPA-33-1 
Tree Cutting Head

Manufacturer: Bracke Forest AB
Model: C 16 B

Description
The tree cutting head is versatile, easily manoeuvred, high capacity cutting head which has an open saw box to allow for quick and easy maintenance.

This makes it a head suited to all types of mechanised logging, such as clearing along the trackside, roadsides and power lines. The cutting head can be installed on excavators and other machines equipped with a crane.

The head has efficient grapple arms that make it possible to easily gather and stack valuable assortments of timber. The head uses the same hydraulic cylinder for accumulation and grappling.

The unit has a patented cutting solution that results in extremely quick cuts. The cutting solution comprises a self-tensioning standard cutting chain fitted to a circular saw disc.

The make and model of the excavator to which the head will be fitted must be established to ensure full drive / machine compatibility.

Scope of Use: Cutting and gathering trees

Competencies: Machine Controller, Crane Controller & OTPA-27

Product Approval No.: -

Risk Control Sheet No(s).: NR/L3/MTC/RCS0216/MP01 and MP07
OTPA-33-1 Tree Cutting Head

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. The cutting head shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road Rail Vehicle (RRV) to which it is attached.
2. It must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.
3. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and the safe system of work.
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The cutting head shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions and Logbook

Additional documents may include:

- Test Records, Statutory Inspection & Test Records, Load Radius Charts (duty charts).

Technical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (kg)</td>
<td>270</td>
</tr>
<tr>
<td>Saw Disc Diameter (mm)</td>
<td>795</td>
</tr>
<tr>
<td>Cutting Capacity (mm)</td>
<td>260</td>
</tr>
<tr>
<td>Cutting Chain</td>
<td>¾”</td>
</tr>
<tr>
<td>Hydraulic pressure (bar)</td>
<td>170</td>
</tr>
<tr>
<td>Flow requirement (l/min)</td>
<td>120</td>
</tr>
<tr>
<td>Electrical System (volts)</td>
<td>24</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>1200</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>1000</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>1120</td>
</tr>
<tr>
<td>Machine weight (tonnes)</td>
<td>15 - 28</td>
</tr>
</tbody>
</table>
OTPA-33-2 Tree Cutting Head

Manufacturer: Habbig  
Models: HS650 / HS760 / HS 850

Description

The tree cutting head is versatile, easily manoeuvred, high capacity cutting head with an integral swivel device. The tree-cutter is an economic and efficient way of cutting and pollarding as only one man is needed to cut the trees and lay the branches in rows. There is no need to gather all the branches afterwards and/or pull these down out of the trees.

All Habbig tree-cutters allow the operator to cut and grab timber from within the cab of an excavator, to safely, quickly and neatly clear large volumes of branches and trunks. The timber can then be placed exactly where required, reducing the need for ground-staff.

The make and model of the excavator to which the head will be fitted must be established to ensure compatibility.

Scope of Use

Cutting and gathering trees

Competencies:

Machine Controller, Crane Controller & OTP-27

Product Approval No.

-  

Risk Control Sheet No(s).

NR/L3/MTC/RCS0216/MP01 and MP07
OTP-33-2 Tree Cutting Head

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use:

1. The cutting head shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road Rail Vehicle (RRV) to which it is attached.
2. It must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.
3. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and the safe system of work.
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The cutting head shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the load in the most adverse condition.

Minimum documentation requirement for the host machine are:

Operating Instructions and Logbook

Additional documents may include:

Test Records, Statutory Inspection & Test Records, Load Radius Charts (duty charts).

<table>
<thead>
<tr>
<th>Technical Specification</th>
<th>HS650</th>
<th>HS760</th>
<th>HS850</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (kg)</td>
<td>270</td>
<td>365</td>
<td>475</td>
</tr>
<tr>
<td>Cut Dia. Soft Wood (mm)</td>
<td>200</td>
<td>230</td>
<td>280</td>
</tr>
<tr>
<td>Cut dia. Hard Wood (mm)</td>
<td>160</td>
<td>180</td>
<td>210</td>
</tr>
<tr>
<td>Opening Width (mm)</td>
<td>550</td>
<td>670</td>
<td>660</td>
</tr>
<tr>
<td>Hydraulic pressure (bar)</td>
<td>200 - 220</td>
<td>250 - 270</td>
<td>270 - 300</td>
</tr>
<tr>
<td>Flow requirement (l/min)</td>
<td>60 - 100</td>
<td>60 - 100</td>
<td>80 - 100</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>1350</td>
<td>1600</td>
<td>1700</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>800</td>
<td>830</td>
<td>850</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>1100</td>
<td>1100</td>
<td>1150</td>
</tr>
<tr>
<td>Machine size (tonnes)</td>
<td>3 - 7</td>
<td>5 - 12</td>
<td>8 - 15</td>
</tr>
</tbody>
</table>
Supplier: Mulag
Model: FSG2000

Description
The Mulag clearing saw head has a reach of 8m (from running rail) and can clean cut overhanging branches / vegetation up to 150 mm dia.

The saw head is typically rear mounted on a Unimog Road Rail Vehicle and works in combination with a front mounted chipper. The saw head has tungsten saw blades to give a long operational life.

The RRV and attachments area are approved for single line working with adjacent line open to traffic. The permitted number of personnel in RRV cab is 3, to include the MC.

Scope of Use
Cutting overhanging branches / vegetation

Competencies
OTP Machine Operator with NPTC training Machine Controller, NON Crane Controller, OTP-27

Plant Acceptance Cert. No.
99709 979091-4, 99709 979092-2 & 99709 979094-8

E.A. Cert. No. (example)
IF/0285/12

Suppliers
Avondale Environmental Services
OTPA-33-3 Tree Clearing Saw

Control Measures Required:
Pre site survey identifying off track hazards, overheads, scrape etc

Limitations of Use:
Can ONLY operate inside a possession
It shall NOT on/off track travel or work on live conductor rail lines
It will not activate train operated points

Minimum documentation requirement for the host machine are:
Can only be used with specially adapted Avondale Road Rail Vehicle (Unimog)
Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:
Product Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates etc.

Technical Specification: (Base Vehicle with attachment in Road / Rail transport mode)

Weight 235 kg
Width 2000 mm
Length 700 mm
Height 500 mm
Hydraulic Pressure 340 bar (max.)
Hydraulic Flow Rate 62 l/min

Host Machine - (Unimog MHU800)
Maximum Working Speed 4 mph
Maximum Rail Cant 150 mm (6”)
Maximum Rail Gradient 1 in 25
Maximum Reach 8 m
OTPA-33-4  Tree Cutting / Harvesting Head

Manufacturer  Waratah  Models  TH250 / H270 / H290

Description
The H200 series tree cutting/harvesting heads are a felling head, grapple, and saw, all in one unit that can process trees up to 760 mm diameter. They are designed to be a versatile, easily manoeuvred, high capacity cutting heads for cutting and harvesting timber. The saw units provide fast cutting cycles have automatic chain lubrication and tensioning to improve cutting performance and reduce maintenance.

They are suited to all types of mechanised logging, such as clearing along the trackside, roadsides and power lines. The cutting head can be installed on excavators and other machines equipped with a crane.

The make and model of the excavator to which the head will be fitted must be established to ensure full drive / machine compatibility.

Scope of Use  Cutting and gathering trees

Competencies  Machine Controller, Crane Controller & OTPA-27

Product Approval No.

Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01 and MP07
OTPA-33-4  Tree Cutting Head

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations in Use

1. The cutting head shall be subject to all applicable limitations on the Engineering Acceptance certificate of the Road Rail Vehicle (RRV) to which it is attached.
2. It must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.
3. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and the safe system of work.
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The cutting head shall only be used with an RRV whose RCI indicator is active, and the lifting duty is in excess of the load in the most adverse condition.

Minimum documentation requirement for the host machine are

Operating Instructions and Logbook

Additional documents may include

Test Records, Statutory Inspection & Test Records, and Load Radius Charts (duty charts).

Technical Specifications

<table>
<thead>
<tr>
<th></th>
<th>TH250</th>
<th>H270</th>
<th>H290</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (kg)</td>
<td>950</td>
<td>1350</td>
<td>1870</td>
</tr>
<tr>
<td>Maximum Cutting Capacity (mm)</td>
<td>570</td>
<td>650</td>
<td>750</td>
</tr>
<tr>
<td>Maximum Gripping Width (mm)</td>
<td>1410</td>
<td>1660</td>
<td>1970</td>
</tr>
<tr>
<td>Hydraulic pressure (bar)</td>
<td>280</td>
<td>280</td>
<td>280</td>
</tr>
<tr>
<td>Flow requirement (l/min)</td>
<td>180 - 340</td>
<td>260 - 380</td>
<td>320 - 380</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>1110</td>
<td>1075</td>
<td>1187</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>1500</td>
<td>1585</td>
<td>1970</td>
</tr>
<tr>
<td>Delimbing knives diameter (4 moving &amp; 2 fixed)</td>
<td>400</td>
<td>460</td>
<td>510</td>
</tr>
<tr>
<td>Maximum feed speed (m/s)</td>
<td>4.5 – 6.0</td>
<td>4.5 – 6.0</td>
<td>4.5 – 6.0</td>
</tr>
</tbody>
</table>

IR 22 Rotator

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Load Capacity (kN)</td>
<td>450</td>
<td>450</td>
<td>450</td>
</tr>
<tr>
<td>Torque @ 200 bar (Nm)</td>
<td>3300</td>
<td>3300</td>
<td>3300</td>
</tr>
</tbody>
</table>

Note: All harvester heads have 2WD with hydraulically driven rubber feed rollers
## Vacuum Lifters

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-34-1</td>
<td>Al-Vac 1600 / 3500 Lux &amp; Handy</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-34-2</td>
<td>Vacuum Lifter - GGR UNIC NR1000</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
Model

Al-Vac 1600 & 3500 Lux

Al-Vac Handy

Description

The Al-Vac range of vacuum lifters are designed for lifting porous and polished concrete products such as cable troughing, concrete slabs and sleepers etc. The vacuum lifter pads are flexible enough to work with irregular or textured surfaces and for other porous materials. A range of easily changed suction pads is available for lifting different types of products and materials.

The "1600 or 3500 Lux" vacuum lifters are petrol or diesel engine driven. They may be mounted on rail trailers, road rail lorries and other suitable construction machines. They can be operated safely by one man via a steering arm, which is attached to the suction cup.

The "Al-vac-Handy" is a compact petrol driven unit that can be hung via a lifting shackle to the boom of an excavator crane or a knuckle boom crane.

Scope of Use

Lifting of concrete products, level crossing slabs & cable ducts

Competencies

Machine Controller, Crane Controller & OTPA-23

Product Approval No.

-

Risk Control Sheet Nos.

NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
Vacuum Lifter

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The attachment must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

Equipment can be used under live OLE when used on a machine fitted with a suitable approved height limitation system and the safe system of work is in place to cover this.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, LOLER Certification (including Limitations of Use) and Logbook

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) and Product Acceptance Certificate etc.

Technical Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>1600 / 3500 Lux</th>
<th>Handy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting capacity (kg)</td>
<td>160 / 350</td>
<td>1000</td>
</tr>
<tr>
<td>Temperature range (°C)</td>
<td>0° to 40° max</td>
<td>0° to 40° max</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>2300</td>
<td>1000</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>420</td>
<td>580</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>1580</td>
<td>330</td>
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<tr>
<td>Weight (kg)</td>
<td>350 / 390</td>
<td>67</td>
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<tr>
<td>Suction pad diameter std</td>
<td>440</td>
<td>440</td>
</tr>
<tr>
<td>Suction pad eff. area (cm²)</td>
<td>1017</td>
<td>1017</td>
</tr>
<tr>
<td>Range of Reach (mm)</td>
<td>6000</td>
<td>Host machine dependant</td>
</tr>
<tr>
<td>Lifting Height (mm)</td>
<td>1140</td>
<td>Host machine dependant</td>
</tr>
</tbody>
</table>
Manufacturer  GGR UNIC  Model  NR V1000

Description
The attachment is designed for horizontal lifting of both porous or polished stone and concrete products such as sleepers. The slab lifter has a constant running vacuum system and closed cell foam ring pad that is flexible enough to work with irregular or textured stone surfaces or for other porous materials such as rubber, plastic, drywall, plasterboard and SIPs.

This below-the-hook vacuum lifter comes with a range of pads suitable for lifting products from 90 kg to 1000 kg depending on the shape and size of the load.

A range of higher capacity stone vacuum lifters is available for loads up to 1600 kg.

Scope of Use  Lifting sleepers and level crossing slabs

Competencies  Machine Controller, Crane Controller & OTPA-23

Product Approval No.  PA05/04734

Risk Control Sheet No(s).  NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
**OTPA-34-2 Vacuum Lifter**

**Control Measures Required**

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

**Limitations of Use**

The attachment must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

Equipment can be used under live OLE when used on a machine fitted with a suitable approved height limitation system and the safe system of work is in place to cover this.

**Minimum documentation requirement for the host machine are:**

- Maintenance and Operating Instructions, Product Acceptance and LOLER Certification (including Limitations of Use) and Logbook

**Additional documents may include:**

- Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

**Technical Specification**

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<tr>
<th>Width</th>
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<tbody>
<tr>
<td>Height</td>
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<tr>
<td>Length</td>
<td>620</td>
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</tbody>
</table>

**Suction Pad**

<table>
<thead>
<tr>
<th>VK60/25</th>
<th>VK70/12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>600 X 250 mm</td>
</tr>
<tr>
<td>Lifting Capacity (kg @ 60%)</td>
<td>300</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20° to 60° C</td>
</tr>
<tr>
<td>Max. Hoist Acceleration - Lifting or Lowering</td>
<td>1 ms²</td>
</tr>
<tr>
<td>Maximum Lift inclination from horizontal</td>
<td>30°</td>
</tr>
</tbody>
</table>
## Vacuum Excavators

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTA-35-1</td>
<td>Tube Cube TC1 - BSB</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTA-35-2</td>
<td>Trailer Excavator Unit - G Brown</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTA-35-3</td>
<td>Multi-Vac - GOS / Philmor</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
**OTA-35-1 Vacuum Excavator Unit**

**Manufacturer**  
BSB-Saubagger und Zweiwegetechnik

**Model**  
Tubecube - TC1

**Description**

The tubecube attachment is a solid material suction excavator, hydraulically driven from the host RRV excavators' hydraulic supply.

The tube cube has 3 chambers, a separator container, a fine screening chamber and the fan chamber. The fan produces the suction air flow that lifts material through a flexible tube.

In the 1st chamber (separator), heavier material is deposited while finer material passes through a sieve and into the second chamber (fine screening). Air continues through the fan and out into the environment. When full, the contents are emptied through the two hydraulically operated discharge doors at the bottom of the containers.

Typically, it is used for track construction of foundation trenches, silt clearance of pits, exchange of sleeper ballast, cleaning of contaminated ground, cleaning oil slicks in watercourses and cleaning of ditches.

**Scope of Use**  
Track excavation, construction and cleaning work

**Competencies**  
Machine Controller, Crane Controller & OTPA-10

**Product Approval No.**  
PA05/02638

**Suppliers / Operators**  
Tasty Plant, L & W Plant & W Bradshaw Plant

**Risk Control Sheet No(s).**  
NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

1. The Vacuum Unit must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.

2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

3. Staff shall be briefed on the safe operation of the machine prior to its use.

4. The limitations of the RRV to which the machine is attached shall apply.

5. It must not be used in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use) and Logbook.

Additional documents may include:
Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

Dimensions (L x W x H) 2700 x 2000 x 2500 mm

Weight 1400 kg

Suction Capacity of Radial Ventilator 17000 m³/h

Suction Head of Radial Ventilator 800 - 900 mmWS

Volume of Storage Tank 1m³

Suction Depth 1500 mm

Suction Tube Diameter 250 mm

Hydraulic Pump Flow Rate (minimum) 100 l/min

Operating Pressure (minimum) 280 bar
Manufacturer / Supplier: GBL & Sons Ltd  
Model: Unimog U400 Vactor Unit

Description

The RRV trailer mounted Vactor/Jetter Combination unit is a versatile piece of equipment which is ideal for clean up work and picking up debris. The Vactor unit is designed to be used in remote locations. Its size and power enables jobs to be completed quicker than using conventional techniques.

Typically, it is used for drainage works, sucking up ballast, silt clearance, cleaning of contaminated ground, cleaning oil slicks in watercourses and cleaning of ditches.

Scope of Use: Drainage and Ballast Removal

Competencies: Machine Controller, OTPO-08.02 & OTPO-24

E. A.C. No.: IF/0547/11

Vehicle No.: 99709970986-4

Suppliers: GBL & Sons Ltd

Risk Control Sheet No(s.): NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
OTPA-35-2  \hspace{1cm} Vacuum - Jetter Trailer Unit

Control Measures Required:

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use:

1. The Vacuum Unit must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. Staff shall be briefed on the safe operation of the machine prior to its use.
4. The limitations of the RRV to which the machine is attached shall apply.
5. It must not be used in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Engineering Acceptance Certificate (including Limitations of Use) and Logbook.

Additional documents may include:
Statutory Inspection Records, Test Certificates etc.

Technical Specification

Dimensions (L x W x H) \hspace{1cm} 14.5 m x 2.5 m x 3.7 m
Weight \hspace{1cm} Unimog Un-laden 8.9t Vactor Unit Un-laden 15.4t
Suction Capacity \hspace{1cm} 5000 cmi
Suction Head \hspace{1cm} Inter-changeable
Volume of Storage Tank \hspace{1cm} 10 tonnes
Suction Depth \hspace{1cm} Dependant on material being lifted
Suction Tube Diameter \hspace{1cm} 8" with adaptors down to 4"
Jetter Pump Flow Rate (min.) \hspace{1cm} 70 gallon per min.
Operating Pressure (min.) \hspace{1cm} 2000psi
OTPA-35-3 Vacuum Excavator Trailer Mounted Unit

Manufacture / Supplier: GOS Engineering / Philmor
Model: Multi-Vac

Description

The Rail Trailer mounted vacuum excavator unit is a versatile piece of equipment that is ideal for clean up work and sucking up debris, ballast and water.

The excavator is designed to be used in remote locations. Its size and power enables jobs to be completed quicker than using conventional techniques. It is easily mounted onto a standard 5 metre trailer and will take around 20 minutes to fill up.

Typically, it is used for track construction of foundation trenches, silt clearance of pits, exchange of sleeper ballast, cleaning of contaminated ground, cleaning oil slicks in watercourses and cleaning of ditches.

Scope of Use: Track excavation, construction and cleaning work

Competencies: Machine Controller, Crane Controller & OTP-24

Product Approval No.

Suppliers: GOS Tool & Engineering

Risk Control Sheet No(s): NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
Vacuum Excavator Trailer Mounted Unit

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. The Vacuum Unit must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions.
2. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.
3. Staff shall be briefed on the safe operation of the machine prior to its use.
4. The limitations of the RRV to which the machine is attached shall apply.
5. It must not be used in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use) and Logbook.

Additional documents may include:
Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>3 m</td>
</tr>
<tr>
<td>Width</td>
<td>2.5 m</td>
</tr>
<tr>
<td>Height</td>
<td>2 m</td>
</tr>
</tbody>
</table>

*Note: All dimensions above are approximate*

Volume of Storage Tank 2 cubic metres
# Wood Chippers

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-36-1</td>
<td>Farmi - 260</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-36-2</td>
<td>Jenson - A141ZX PTO</td>
<td>1</td>
<td>2014</td>
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</tbody>
</table>
Description:
This type of hand feed wood chipper is designed to be mounted and fixed directly onto either the front or back of a Road Rail Vehicle. The chipper shown above is mounted on the front of a JCB Fastrack Road Rail Vehicle (RRV) and is driven directly via the vehicle’s power take-off shaft. It is capable to chip up to 260 mm diameter timber. Perfect for all types of road, rail and site clearance work and it’s equally effective with wet and green material.

The 260 range of wood chippers handle timber up to 260 mm in diameter. Knives are adjustable from 7 to 25 mm to alter chip size, thus the chips are suitable for combustion and industrial use, soil improvement, dry litter etc. Flywheel balance to high speed rotation (up to 1000 rpm) results in a high output, more homogeneous chip size and high discharge force. Rotors are mounted on two-row roller bearings. Power demand varies from 30 kW to 70 kW depending on the material to be chipped and accessories to be used with chipper.

It has a strong in-feed hopper with top and side mounted stop bar and automatic load sensing regulator.

Scope of Use
Chipping of small trees and branches

Competencies
Machine Controller & OTPA-7

Product Approval No.
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01-04 and MP07
Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and the safe system of work.
2. It shall NOT be used under live OLE or on live 3rd rail lines.
3. Maximum operating cant (host RRV) is 150 mm and maximum gradient is 1:30
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The limitations of the RRV to which the machine is attached shall apply.
6. The chipper must not be disconnected from RRV whilst on track.

Minimum documentation requirement for the host machine are:

- Maintenance and Operating Instructions
- Additional documents may include:
  - Product Acceptance Certificate (including Limitations of Use), Performance Test Records, Inspection Records, Calibration & Test Certificates, etc.

Technical Specification

<table>
<thead>
<tr>
<th></th>
<th>260 HFEM</th>
<th>260 HF231</th>
<th>260 F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output (m³/h)</td>
<td>40 - 10</td>
<td>30 - 10</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Max. timber / feed opening (mm)</td>
<td>260 x 320</td>
<td>250 x 260</td>
<td>250 x 260</td>
</tr>
<tr>
<td>Thickness of chip, (mm)</td>
<td>3 - 25</td>
<td>3 - 25</td>
<td>3 - 25</td>
</tr>
<tr>
<td>Recommended power (kW)</td>
<td>40 - 115</td>
<td>40 - 115</td>
<td>40 - 115</td>
</tr>
<tr>
<td>Diameter of rotor (mm) / No. Knives</td>
<td>1050 / 2</td>
<td>1050 / 2</td>
<td>1050 / 3</td>
</tr>
<tr>
<td>PTO revolution (rpm)</td>
<td>540 / 1000</td>
<td>540 / 1000</td>
<td>540 / 1000</td>
</tr>
<tr>
<td>Discharge chute standard (m) (optional)</td>
<td>(2.4) 3.0 (3.5)</td>
<td>(2.4) 3.0 (3.5)</td>
<td>(2.4) 3.0 (3.5)</td>
</tr>
<tr>
<td>Rotor weight (kg)</td>
<td>240</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>Chipper weight (kg)</td>
<td>890</td>
<td>830</td>
<td>690</td>
</tr>
<tr>
<td>Twig breakers</td>
<td>Standard</td>
<td>Standard</td>
<td>Standard</td>
</tr>
</tbody>
</table>
Manufacturer:     Jenson
Model:          A141ZX PTO

Description:
This type of manual hand feed wood chipper is designed to be mounted and fixed directly onto either the front or back of a Road Rail Vehicle.

This powerful chipper shown above is mounted on the rear of a Road Rail Unimog and is driven directly via the vehicle’s power take-off shaft. It capable of chipping up to 300 mm diameter timber. Perfect for all types of road, rail and site clearance work and it’s equally effective with wet and green material.

This model has a strong in-feed hopper with top and side mounted stop bar and automatic load sensing regulator. The chippings are collected in a rear mounted chipper box which is mounted on the host vehicle.

Scope of Use
Chipping of small trees and branches

Competencies:
Machine Controller & OTPA-7

Product Approval No.:
-

Risk Control Sheet No(s).
NR/L3/MTC/RCS0216/MP01-04 and MP07
OTPA-36-2 Wood Chipper

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for All operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

1. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and the safe system of work.
2. It shall NOT be used under live OLE or on live 3rd rail lines.
3. Maximum operating cant is 150 mm and the maximum gradient is 1:30.
4. Staff shall be briefed on the safe operation of the machine prior to its use.
5. The limitations of the RRV to which the machine is attached shall apply.
6. The chipper must not be disconnected from RRV whilst on track.

Minimum documentation requirement for the host machine are:

- Maintenance and Operating Instructions
- Product Acceptance Certificate (including Limitations of Use)
- Logbook

Additional documents may include:
Performance Test Records, Inspection Records & Test Certificates, etc.

Technical Specification

Length x width x height 2150 x 1600 x 2900 mm
Power requirement 110 hp+
Feed roller aperture 300 x 410 mm (12” x 16”)
In-feed hopper aperture 1200 x 850 mm
Approx weight (without crane) 1900 Kg
Output (approx.) 29 m³/hr
Chipping disc dimensions 1060 x 45 mm
Disc weight 385 Kg
No. of knives 2
Max. diameter of timber 300 mm
## Miscellaneous Attachments

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTPA-37-1</td>
<td>Snow Blower - Geismar - CAB 1 &amp; CAB2</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-37-2</td>
<td>Stump Grinder - Mulag - BSF 500</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-37-3</td>
<td>Tunnel Washing Brush - Mulag - FWB1600</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>OTPA-37-4</td>
<td>Weed Spraying Unit - Avondale</td>
<td>1</td>
<td>2014</td>
</tr>
</tbody>
</table>
**OTPA-37-1 Snow Blower**

**Manufacturer**  
Geismar

**Models**  
CAB 1 and CAB 2

**Description**  
The Geismar snow blower attachment mounts directly onto the end of the Road Rail Vehicle (RRV) boom and has a centrifugal fan that is driven by a directly mounted hydraulic motor.

High velocity air from the fan passes through a converging nozzle to concentrate the air flow onto the track.

Hydraulic cylinders mounted on the frame allow vertical and side to side pivoting of the blower nozzle to direct the high velocity air to blow snow away from all areas of the track.

All operations are hydraulically powered using the host Road Rail Vehicles' hydraulic power supply which is operated by remote controls in the vehicle cab.

**Scope of Use**  
Clearing snow from the track

**Competencies:**  
Machine Controller, Crane Controller & OTPA-10

**Product Approval No.:**  
-

**Risk Control Sheet No(s).**  
NR/L3/MTC/RCS0216/MP01-03 MP06, and MP07
OTA-37-1 Snow Blower

Control Measures Required

Equipment Operator(s) to have Safe Systems of Work in place for all operational circumstances on the Network Rail Managed Infrastructure.

Limitations of Use

The Snow Blower must only be used by authorised and competent personnel in accordance with mandatory rules, regulations and the equipment operating instructions. If adjacent lines are open to traffic, it shall only be used in accordance with the Method Statement for the possession and only if the safe system of work has taken account of gauge exceedance.

Staff shall be briefed on the safe operation of the machine prior to its use.

The limitations of the RRV to which the machine is attached shall apply.

It must not be used under live overhead line equipment or in live conductor rail areas.

Minimum documentation requirement for the host machine are:

Maintenance and Operating Instructions, Product Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:

Performance Test Records, Statutory Inspection Records, Test Certificates, Load Radius Charts (duty charts) etc.

Technical Specification

<table>
<thead>
<tr>
<th>CAB-1</th>
<th>CAB-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nozzle Width</td>
<td>812 mm</td>
</tr>
<tr>
<td></td>
<td>32 in</td>
</tr>
<tr>
<td>Air Flow</td>
<td>370 kph</td>
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<tr>
<td></td>
<td>230 mph</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>138 bar</td>
</tr>
<tr>
<td></td>
<td>2000 psi</td>
</tr>
<tr>
<td>Hydraulic Flow</td>
<td>227 l/min</td>
</tr>
<tr>
<td></td>
<td>50 gpm</td>
</tr>
<tr>
<td>Directional Control</td>
<td>+/- 30°</td>
</tr>
<tr>
<td></td>
<td>+/- 30°;</td>
</tr>
<tr>
<td>Length</td>
<td>3300 mm</td>
</tr>
<tr>
<td></td>
<td>131 in</td>
</tr>
<tr>
<td>Width</td>
<td>1170 mm</td>
</tr>
<tr>
<td></td>
<td>46 in</td>
</tr>
<tr>
<td>Height</td>
<td>1500 mm</td>
</tr>
<tr>
<td></td>
<td>58 in</td>
</tr>
<tr>
<td>Weight</td>
<td>1099 kg</td>
</tr>
<tr>
<td></td>
<td>2400 lbs</td>
</tr>
</tbody>
</table>

Issued by the Professional Head [Plant and T&RS] - Issue 1
For advice contact the Plant & T&RS team - tel: 07515628443
OTPA-37-2  Stump Grinder

Manufacturer  Mulag  Model  BSF 500

Description
The Mulag BSF 500 Stump Grinder attachment shown has 6 tungsten carbide grinding teeth and is mounted on a Mulag MHU 800 power arm at the rear of a RRV Unimog.

The MHU 800 power arm has a 8m reach (from running rail) and is fitted with break away arm technology.

The host Unimog RRV is approved for single line working with adjacent line open to traffic. The permitted number of personnel in cab = 3 (to include MC).

Scope of Use
Grind-out lineside stumps (typically on railway cuttings)

Competencies
OTP Machine Operator with NPTC Certification
Machine Controller, NON Crane Controller

Plant Acceptance Cert. No. 99709 979091-4, 99709 979092-2 & 99709 979094-8

E.A. Cert. No. (example) IF/0285/12

Supplier(s) Avondale Environmental Services
OTPA-37-2 Stump Grinder

Control Measures Required:
Pre-site survey identifying off track hazards, cables, scrape, cat scan etc.

Limitations of Use:
Can ONLY operate inside a possession
It shall NOT on/off track travel or work on live conductor rail lines
Permitted to on/off track under live OLE in accordance to Method Statement
It will not activate train operated points

Minimum documentation requirement for the host machine are:
Can only be used with specially adapted RRV Unimogs
Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:
Product Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates etc.

Technical Specification

Diameter of grinding wheel 500 mm
Number of grinding chisels 6
Rotation speed 1400 – 1800 rpm
Rate of cut 40 mm maximum / min.
Hydraulic oil pressure 340 bar maximum
Hydraulic flow rate 62 - 90 l/min
Weight 130 kg
Power Arm Reach 8 m
Manufacturer: Mulag  
Model: FWB1600

Description
The Mulag FWB 1600 tunnel washer & retaining wall washing unit incorporates a low pressure detergent mix spray bar with adjustable nozzles and a 2 m width agitating brush.

The attachment shown is mounted on a Mulag MHU 800 power arm at the rear of a RRV Unimog and is driven by a directly coupled hydraulic motor which is powered via the RRVs’ hydraulic system.

The high pressure rinse spray bar incorporates adjustable nozzles

The host RRV is approved for single line working with adjacent line open to traffic

Permitted number of personnel in cab = 3 (to include MC).

Scope of Use
Cleans tunnels, retaining walls and signs to height of 7m

Competencies
OTP Machine Operator with NPTC PA1/6ST
Machine Controller NON Crane Controller

Plant Acceptance Cert. No. 99709 979091-4, 99709 979092-2 & 99709 979094-8

E.A. Cert. No. (example) IF/0285/12

Supplier: Avondale Environmental Services
OTPA-37-3  Tunnel Washing Brush

Control Measures Required:
Pre-site survey to identify off track hazards, assets, water courses etc

Limitations of Use
Can ONLY operate inside a possession
It shall NOT on/off track travel or work on live conductor rail lines
Permitted to on/off track under live OLE in accordance to Method Statement
It will not activate train operated points

Minimum documentation requirement for the host machine are:
Complete independent unit
Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook.

Additional documents may include:
Product Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates etc.

Technical Specification: (Base Vehicle with attachment in Road / Rail transport mode)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>190 kg</td>
</tr>
<tr>
<td>Washing Width</td>
<td>1600 mm</td>
</tr>
<tr>
<td>Brush Diameter</td>
<td>1000 mm</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>340 Bar</td>
</tr>
<tr>
<td>Hydraulic Flow Rate</td>
<td>62 l/min</td>
</tr>
<tr>
<td>Brush Speed</td>
<td>320 rpm</td>
</tr>
<tr>
<td>Maximum Working Speed</td>
<td>Up to 10 mph pending surface</td>
</tr>
<tr>
<td>Power Arm Reach</td>
<td>8 m</td>
</tr>
<tr>
<td>Maximum Rail Cant (base vehicle)</td>
<td>150 mm (6”)</td>
</tr>
<tr>
<td>Maximum Rail Gradient (base vehicle)</td>
<td>1 in 25</td>
</tr>
</tbody>
</table>
OTPA-37-4 Weed Spraying Unit

Manufacturer: Avondale Environmental Services
Model: RRV Spray Unit

Description
RRV Unimog Herbicide Spray Unit with 3 x independent chemical tanks is used for spraying cuttings, retaining walls, tunnel mouths, bridges, viaducts to height of 25m.

Any or all areas can be sprayed in one forward movement with different herbicides

The unit is approved for single line working with adjacent line open to traffic

Scope of Use
Herbicide control unit of vegetation on rail infrastructure Lineside and assets

Competencies
OTP Machine Operator with NPTC PA1/6ST
Machine Controller NON Crane Controller

Plant Acceptance Cert. No.
99709 979091-4, 99709 979092-2 & 99709 979094-8

E.A. Cert. No. (example)
IF/0285/12 Avondale Environmental Services
OTPA-37-4 Weed Spraying Unit

Control Measures Required:
Pre site survey identifying off track hazards, assets, water courses, site conservation i.e. SSSI, neighbouring properties etc

Limitations of Use:
Can ONLY operate inside a possession.
It shall NOT on/off track travel or work on live conductor rail lines.
Permitted to on/off track under live OLE in accordance to Method Statement.
Permitted number of personnel in cab = 3 to include the MC.
It will not activate train operated points.

Minimum documentation requirement for the host machine are:
Complete independent unit
Operating Instruction Manual, Engineering Acceptance Certificate (including Limitations of Use) and Logbook

Additional documents may include:
Product Performance Test Records, Statutory Inspection Records, Calibration & Brake Test Certificates etc.

Technical Specification: (Base Vehicle with attachment in Road / Rail transport mode)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>10,600kg</td>
</tr>
<tr>
<td>Width</td>
<td>2.00m</td>
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<tr>
<td>Length</td>
<td>5.00m</td>
</tr>
<tr>
<td>Transport Height</td>
<td>3.00m</td>
</tr>
<tr>
<td>Maximum Working Speed</td>
<td>Up to 15 mph pending wind speed</td>
</tr>
<tr>
<td>Maximum Rail Cant</td>
<td>150 mm (6&quot;)</td>
</tr>
<tr>
<td>Maximum Rail Gradient</td>
<td>1 in 25</td>
</tr>
<tr>
<td>Minimum Radius</td>
<td>80 m</td>
</tr>
<tr>
<td>Hydraulic Pressure</td>
<td>200 Bar</td>
</tr>
<tr>
<td>Hydraulic Flow Rate</td>
<td>120 l/min</td>
</tr>
</tbody>
</table>