

# RG17-01 HIGH-PERFORMANCE RAIL GRAB

## Specifications



Technical details and specifications for the Thomson  
Engineering Design RG17-01 Rail Grab

Issue 1

October 2017



# Introduction

*The Thomson Engineering Design RG17-01 Rail Grab has been specially designed for rail delivery, changing and repair operations.*

Its key feature is its ability to handle rails from 300mm to 18m long making it suitable for use in rail repair, delivery or renewal operations.

Rails are held securely in the jaws thanks to the very high 40kN grip force applied to each side and there is no risk of marking or damaging the rail because this force is spread over a wide steel jaw face.

The special jaw shape and configuration allows the grab to stack rails tightly foot-to-foot, maximising the load capacity of vehicles and wagons.

Every part of the device is built for long-term heavy-duty use in the challenging environment of the rail industry.

# Specifications

## Performance

Tare Weight	300	kg	660	lbs
Safe Working Load (WLL)	2,500	kg	5,500	lbs
Grab Force per Jaw	40	kN	9,000	lbs
Rail Compatibility	Running Rails			
Max. Rail Length	18	m	60	ft
Min. Rail Length	300	mm	12	in

## Rotator

Rotator Capacity	6,000	kg	13,200	lbs
Rotator Torque (at 250 Bar)	1,800	Nm	1,300	ft lb
Rotation	Full 360 degree continuous			
Rotator Top Pin Diameter	35	mm	1.375	in

## Key Dimensions

Jaw Width	300	mm	12	in
Overall Height	1,045	mm	41	in
Overall Width	550	mm	21.7	in
Overall Length	500	mm	19.7	in

## Hydraulic System Data

Cylinder Bore	60	mm	2.36	in
System Pressure	150	Bar	2,175	psi
Max. Hydraulic Supply Pressure	300	Bar	4,350	psi
Min. Hydraulic Supply Pressure	150	Bar	2,175	psi
Max. Pressure to Rotate Function	250	Bar	3,625	psi

# Hydraulic System Features

*The Thomson RG17-01 Rail Grab is a robust unit designed for long-term heavy-duty use. Its hydraulic system incorporates a parachute valve device to lock the jaws when the grab is lifted and other features to meet the most stringent safety requirements.*

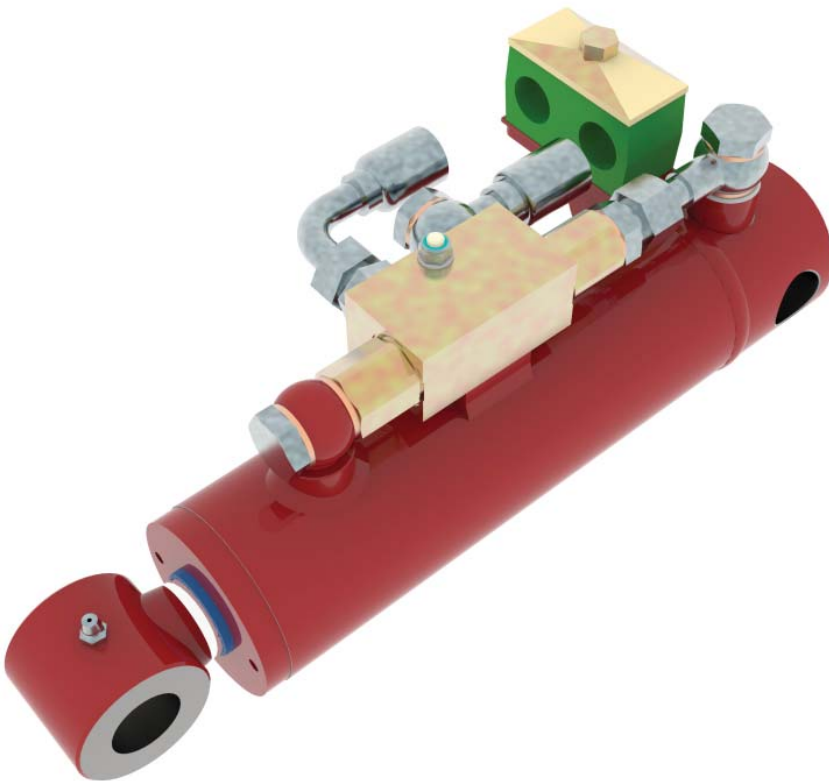
A 6,000kg capacity hydraulic rotator is used to provide the high torque required to slow long rail lengths. The high capacity of this rotator helps to ensure the durability of the grab.

The rotator mount slides up and down a few millimetres within the main frame of the device and this movement is used to operate the spring-loaded parachute valve. When the grab is lifted this valve closes off the connection to the jaw cylinder so that the grab cannot release its load.

To ensure that the grab is compatible with all host machines a precision pressure reducing valve is fitted in the system to limit the pressure in the grab hydraulic system to 150 Bar. The inlet pressure from the host machine can be up to 300 Bar without affecting the pressure in the grab system.

As well as preventing overload damage to the structure, this feature significantly improves the life of the cylinder and its seals.

A pilot operated check valve mounted on the cylinder itself locks the cylinder in the event of a burst hose or failed connection to the host machine.





# Design Features

*The key design feature of the RG17-01 Rail Grab is its high strength, wide jaw which allows the grab to handle both short and long rail lengths with equal safety and accuracy.*

The jaws and the body of the grab are of fully-welded steel construction and are specially shaped to ensure that rails can be stacked foot-to-foot for maximum use of space when loading trucks and wagons.

Servicing the device is simple. All joints are fitted with grease nipples which are protected from damage by robust guard bars and cover panels.

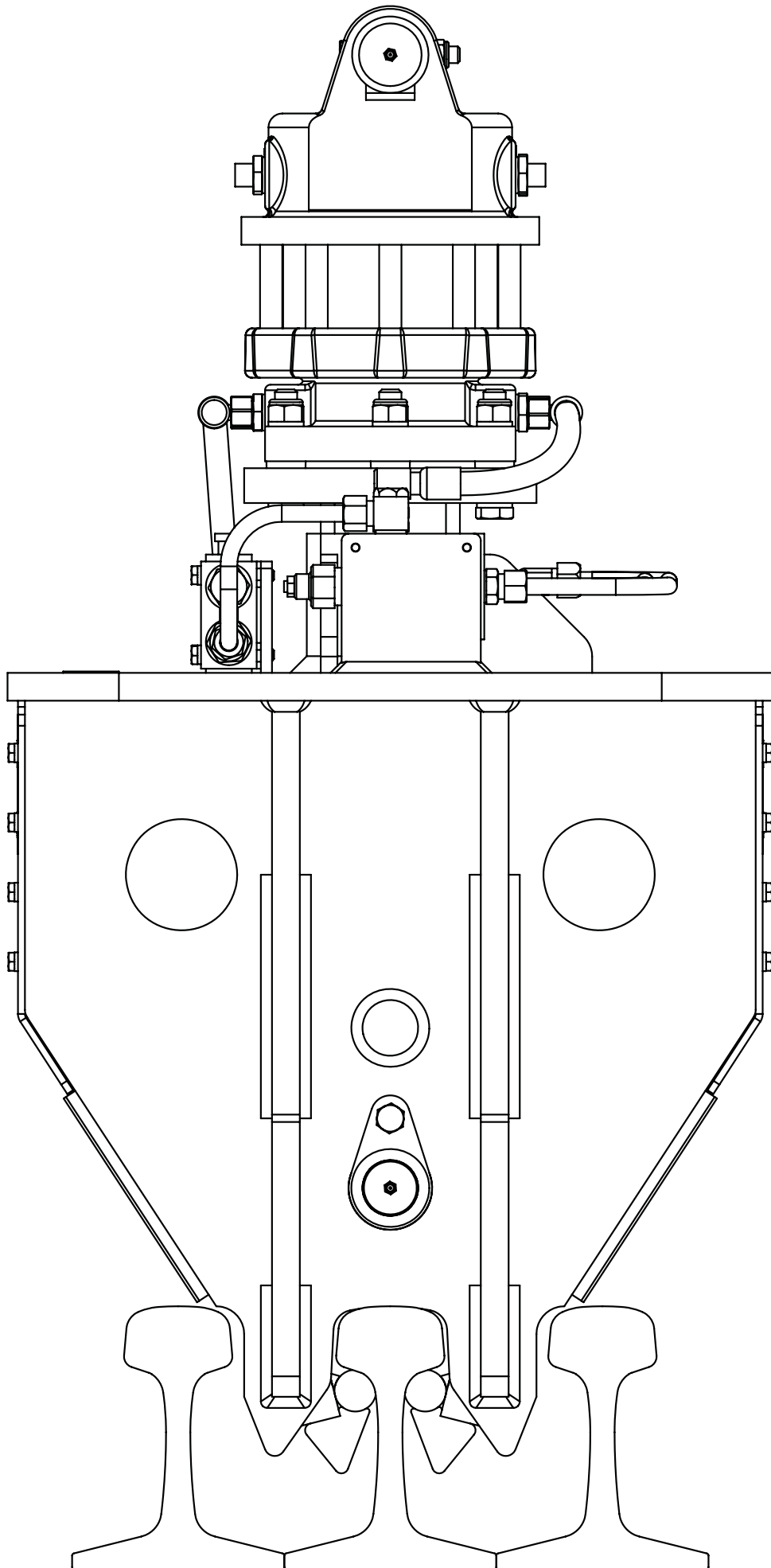
Full parts backup is provided directly from the factory.

For statutory examinations the maintenance documentation gives guidance on thorough examination of the device.

A full range of adapter heads is available to connect the RG17-01 Rail Grab to excavators, truck cranes and even telehandlers - see our separate adapter head selection guide available as a download from our website [www.thomsonrail.com](http://www.thomsonrail.com).

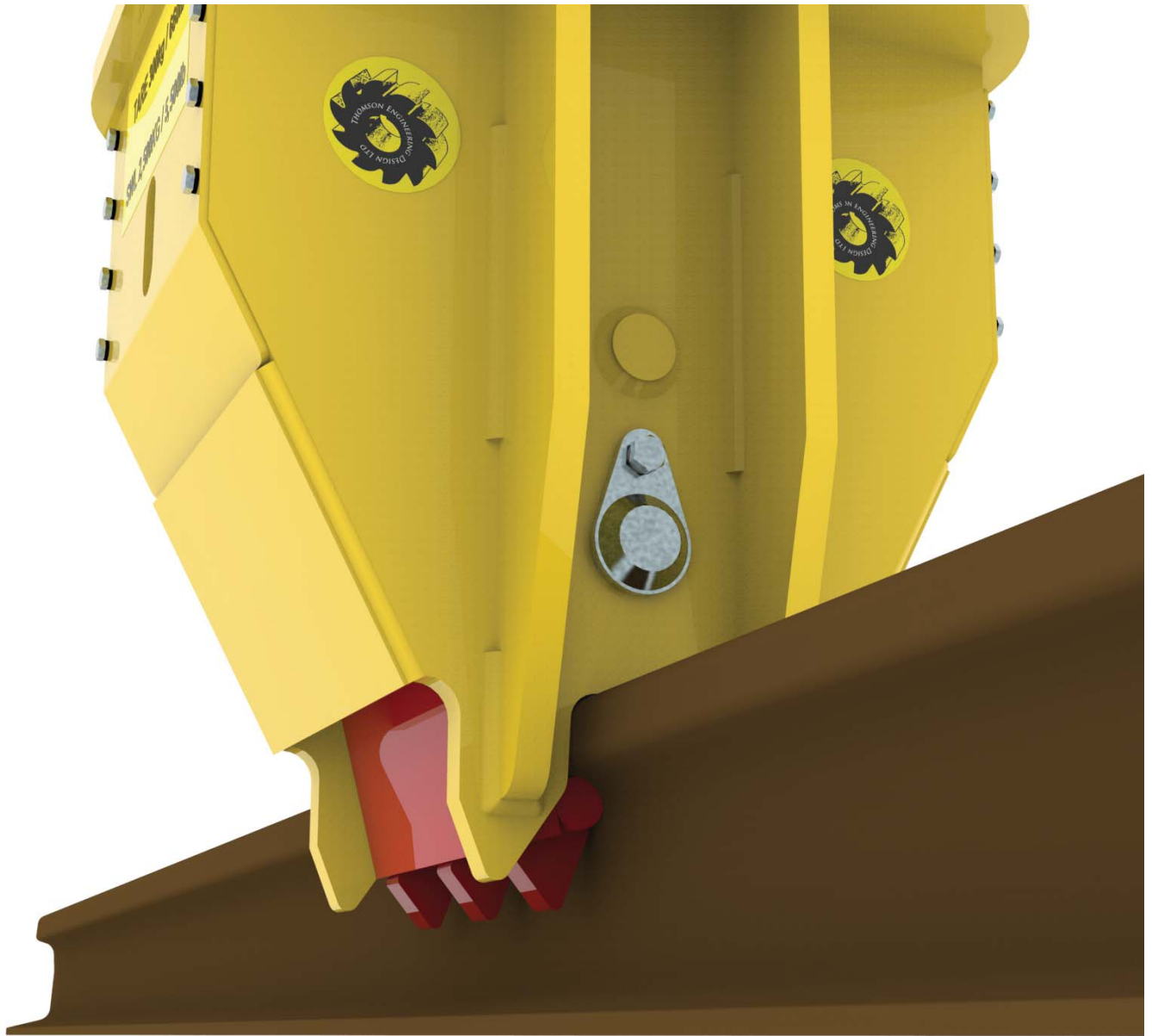
The grab is supplied with full installation, operating and maintenance instructions, a Certificate of Conformity and a LOLER test certificate.

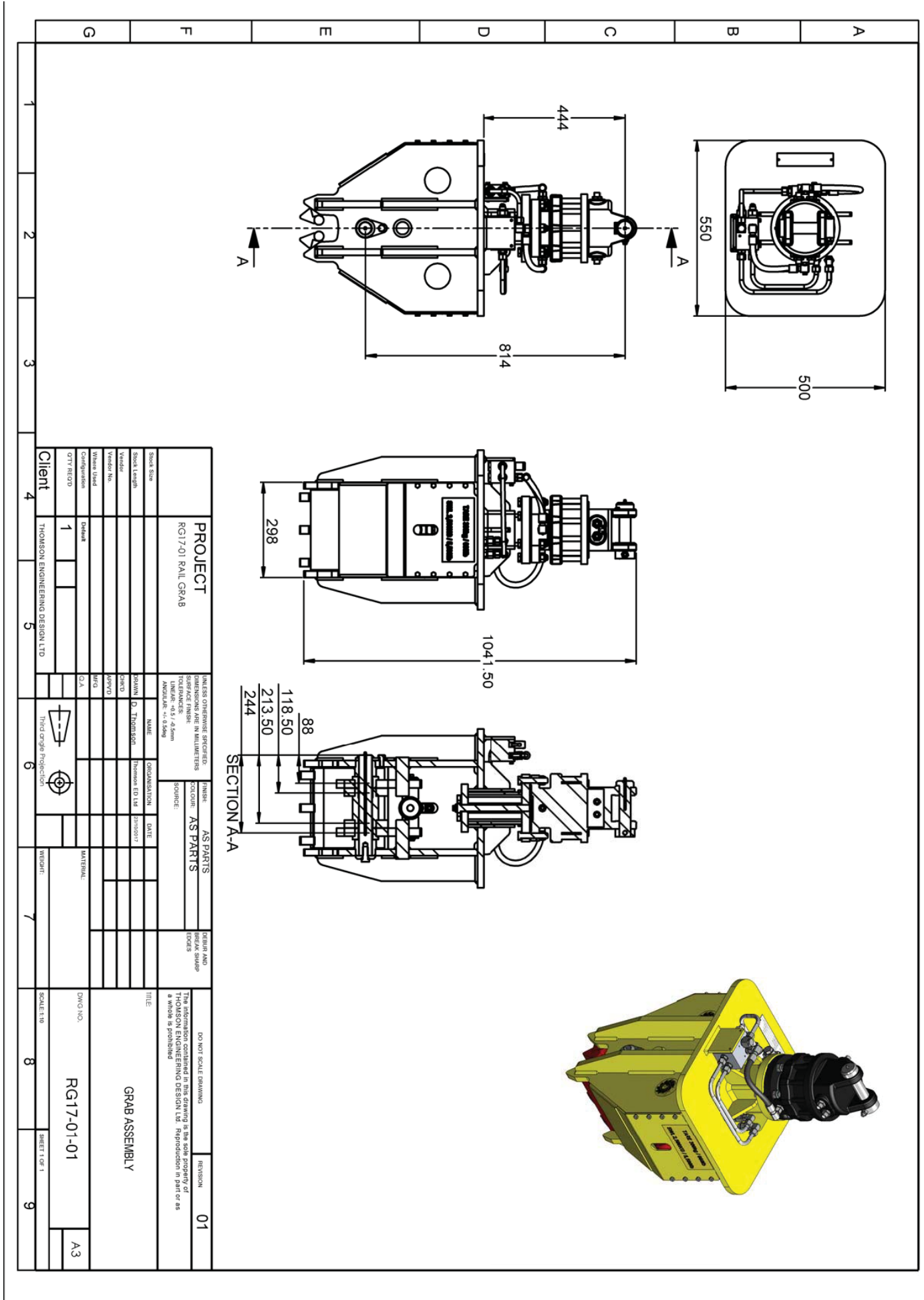












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<b>DO NOT SCALE DRAWING</b>		The information contained in this drawing is the sole property of THOMSON ENGINEERING DESIGN LTD. Reproduction in part or as a whole is prohibited	
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<b>REVISION</b>		01	

<b>Stock Size</b>		<b>NAME</b>	THOMSON	<b>DATE</b>	
<b>Stock Length</b>		<b>ORGANISATION</b>	THOMSON ED LTD	<b>PROJECT</b>	
<b>Vendor</b>		<b>THICKNESS</b>	3.00	<b>REVISION</b>	
<b>Vendor No.</b>		<b>FINISH</b>	AS PARTS	<b>SCALE</b>	1:1
<b>Where Used</b>		<b>PROJ</b>		<b>WEIGHT</b>	
<b>Configuration</b>		<b>DATE</b>		<b>MATERIAL</b>	
<b>Qty Req'd</b>	1	<b>DESCRIPTION</b>		<b>SCALE</b>	1:1

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# Contact Details

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## **PLEASE NOTE**

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

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

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

