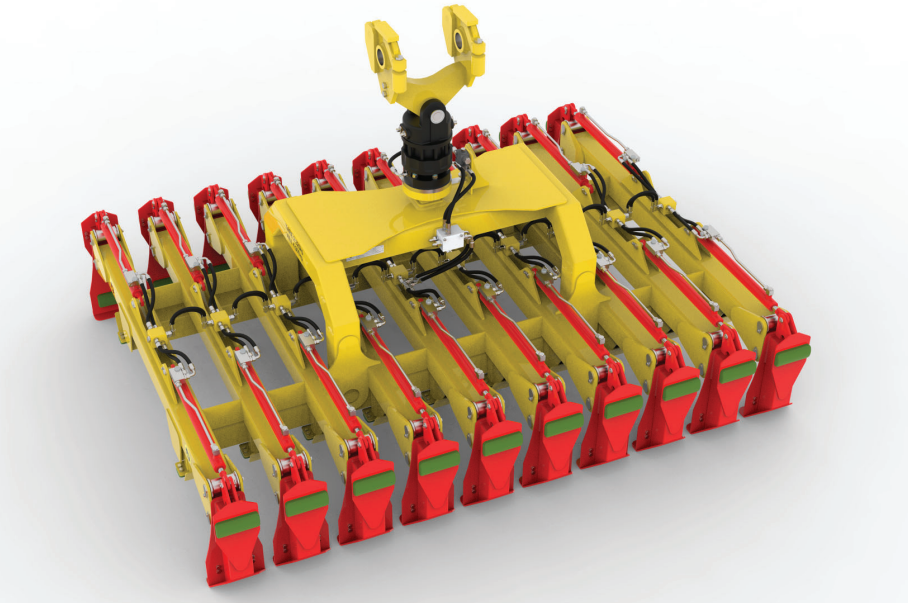
SHB21 SLEEPER HANDLER
Specifications



A range of sleeper handling attachments designed for full-time use handling variable length sleepers

Issue 1

January 2021

Document Number: SHB21-SPEC Issue: 01 Date: JANUARY 2021

THOMSON ENGINEERING DESIGN
A QM SYSTEMS COMPANY

Contents

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Introduction

The Thomson SHB21 series Sleeper Handlers feature a unique, long-travel jaw design allowing them to handle both full-length and cut-length sleepers.

Three standard models are available for 5, 7 or 10 sleepers per lift but custom specifications are also available.

The SHB21 Sleeper Handlers are designed for full-time, heavy-duty use in depots and sleeper plants in loading, unloading and stock-piling operations and are robust enough for use with heavy excavators or materials handlers.

SHB21 Sleeper Handlers grip the sleepers with specially designed urethane pads to eliminate damage and marking of the sleeper surfaces and all models incorporate state-of-the-art safety features including in-built pressure control and 'parachute valve' protection.

Each unit is hand built and individually tailored to suit the client's particular sleeper type and is fully tested and certificated prior to despatch.

This document provides typical specifications for each standard model but custom specifications can always be accommodated. Please contact technical@thomsondesignuk.com for more details.

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Using the SHB21 Sleeper Handlers

The jaws of the SHB21 Sleeper Handler open wide to make it easy to align with the sleepers.

As the device is lowered onto the sleeper stack, angled guides help centre the main frame on the sleepers. The device is lowered until its weight rests on the sleepers whilst soft urethane pads prevent marking of the sleeper surface.

Plenty of clearance below the main frame allows timber dunnage to be lifted with the sleepers to eliminate the need for workers to climb onto the sleeper stacks.

With the weight of the device resting on the sleepers the jaws are closed, gripping the sleeper ends via more soft urethane pads. Each jaw exerts a 1,000kg force to firmly and safely grip the sleepers.

Where sleepers of varying lengths must be handled the jaws automatically adjust to suit each individual sleeper. This unique feature allows sleepers to be pre-cut to suit on-site obstacles such as catch pits or signalling equipment and the SHB21 will automatically adjust itself to suit.

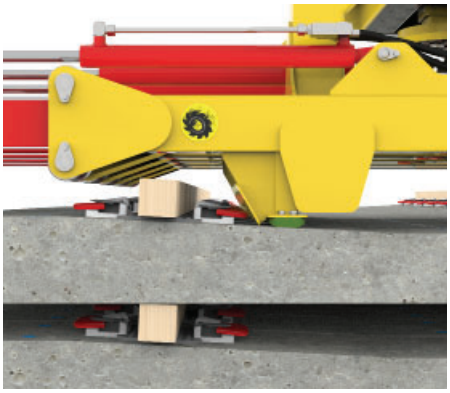
Typically, up to 300mm may be cut from either end (or indeed both ends) of any or all the sleepers.

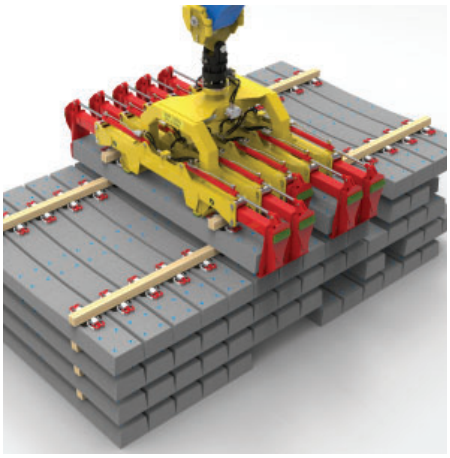
For loading or unloading rigid sided wagons, urethane bumpers are fitted to the outer ends of each of the jaws to minimise damage to the device and the wagon.

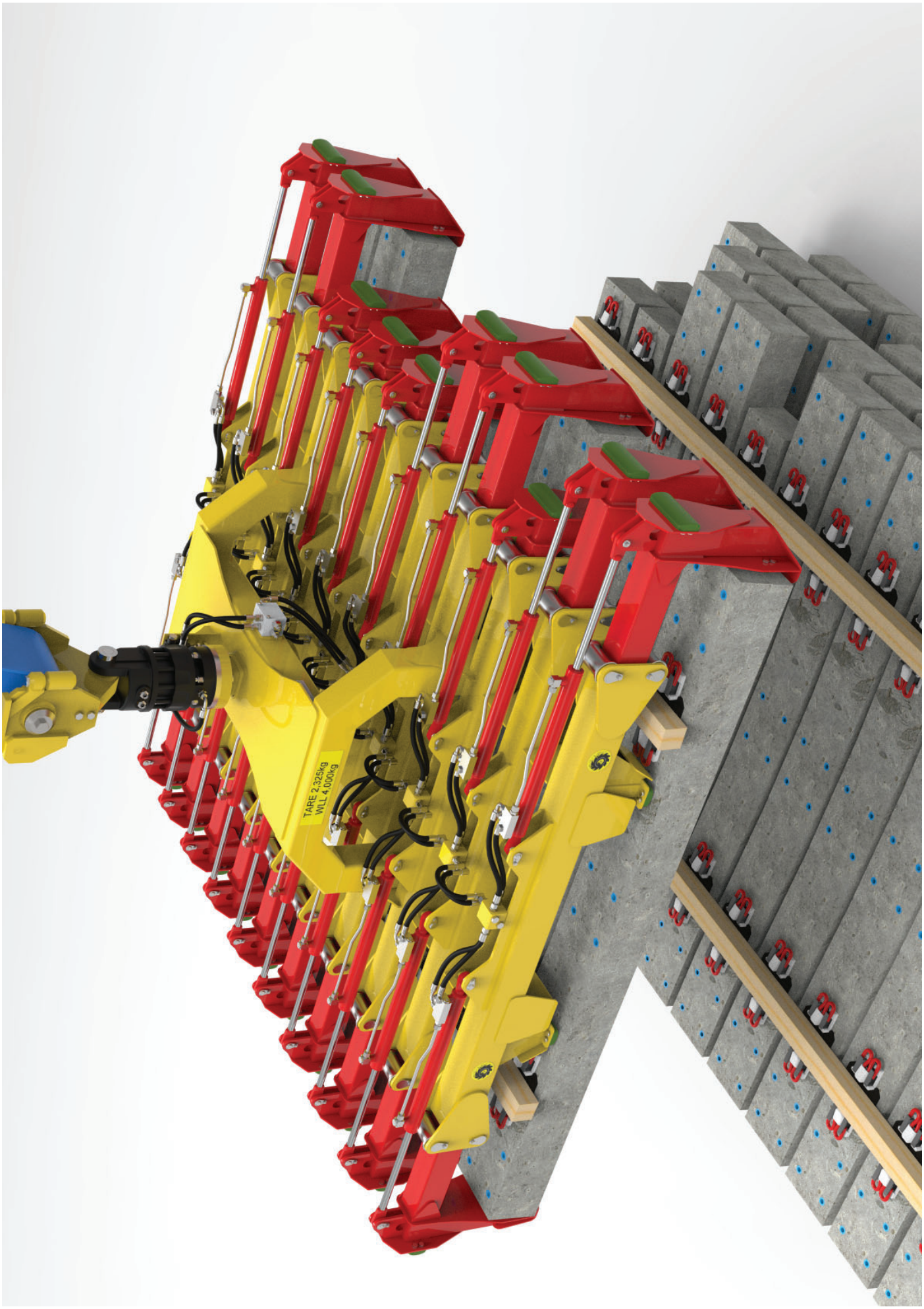
The SHB21 Sleeper Handlers are fitted with a system which automatically locks the hydraulic system when the device is lifted. This system prevents inadvertent or accidental release of the sleepers whilst they are being lifted.

A pressure control system built into the hydraulic system allows the device to be used with any standard excavator or materials handler.

A sixteen-tonne capacity hydraulic rotator allows the operator to precisely align and position the device and the use of a single grab control minimises operator fatigue.

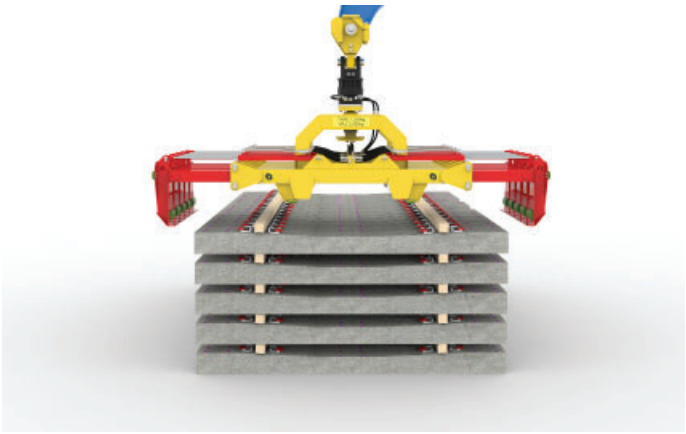




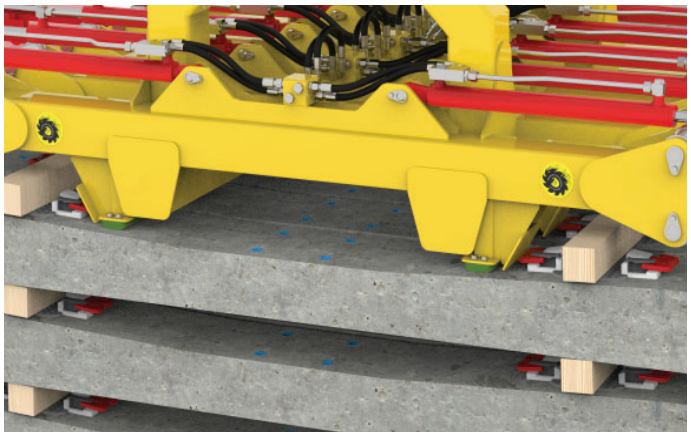


Key Features

Wide opening jaws allow plenty of clearance when lowering the device onto the stack. This minimises the risk of accidental collision with the sleepers and consequent damage to the sleeper surface.



Guide plates help to align the device with the sleepers and ensure that sleepers are kept nicely in line as they are handled.

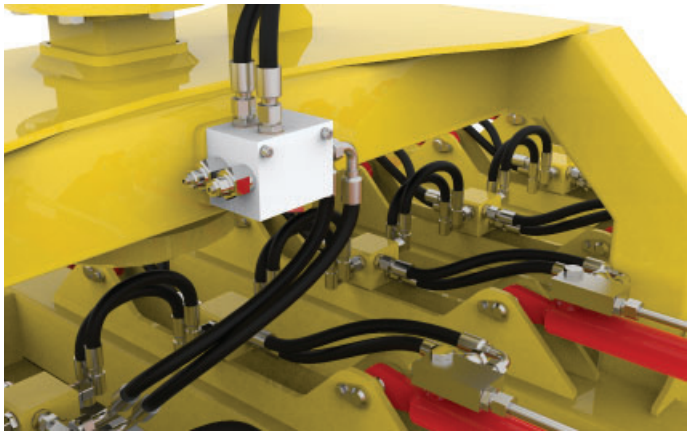


All parts of the device which come into contact with the concrete surfaces of the sleepers are fitted with urethane pads to prevent damage to the sleeper surfaces.

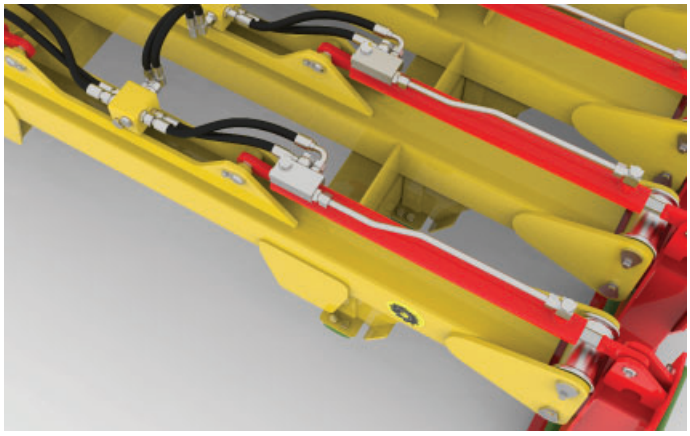
Steel plates on the bottom of each jaw pass below the sleepers to provide a secondary security during lifting. In normal operation these plates never touch the sleepers.

The spring-loaded 'parachute' valve shuts off the connection to the hydraulic cylinders when the SHB21 is lifted. This feature prevents inadvertent or accidental release of the sleepers.

A pressure control valve ensures that the device may be used with almost any machine.



Every hydraulic cylinder is fitted with a pilot-operated check valve to automatically lock the cylinder in the event of a hose burst or other hydraulic failure.



For extra safety, steel toe plates on the jaws pass beneath the sleeper ends.

SHB21-05-01 SLEEPER HANDLER SPECIFICATIONS

Tare weight (with typical adapter)	1,250	kg
Capacity	5	sleepers
Working Load Limit	2,000	kg
Maximum Individual Sleeper Weight	400	kg
Minimum Sleeper Length	1,920	mm
Maximum Sleeper Length	2,800	mm
Jaw Travel	500	mm
Sleeper Grip Force	10	kN
Grab System Pressure	100	Bar
Rotator Capacity	160	kN

Hydraulic System

No. of Services Required	2	
Minimum Pressure (grab circuit)	100	Bar
Maximum Pressure (grab circuit)	300	Bar
Minimum Pressure (rotate circuit)	80	Bar
Maximum Pressure (rotate circuit)	250	Bar
Rotator Torque (@250 Bar)	3,400	Nm

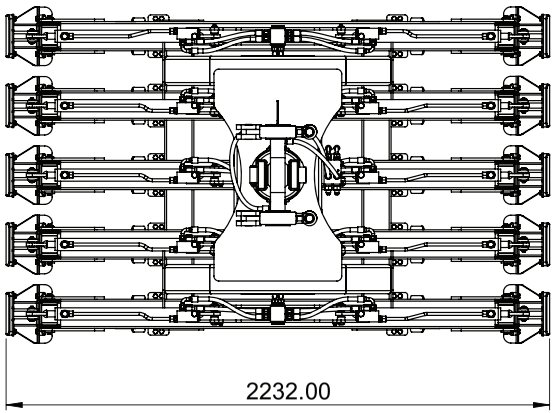
Options

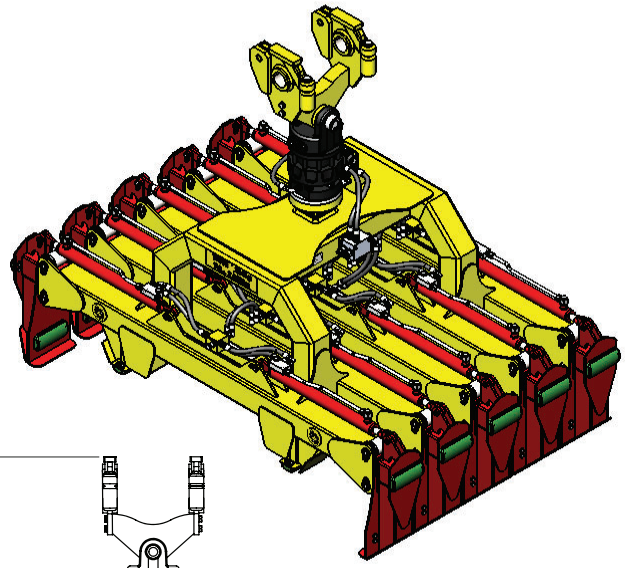
Adapter head to suit host machine

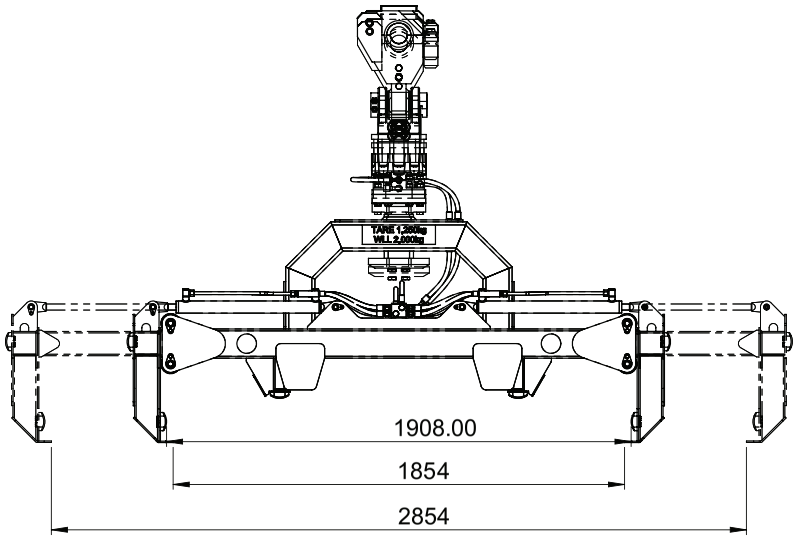
Connecting hoses and fittings

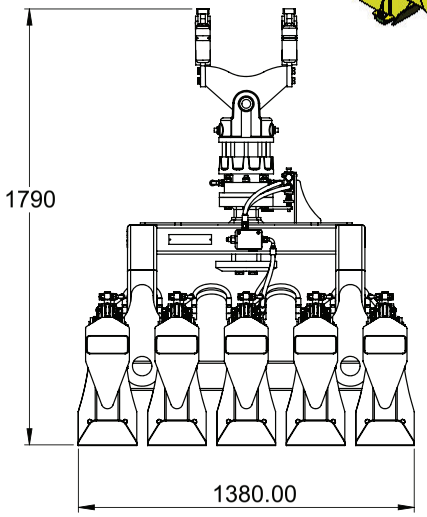
Notes

Each unit is custom made to suit individual sleeper type to be handled. Dimensions shown on Page 9 are for handling 285mm wide sleepers.









	PROJECT SHB21-05-01 SLEEPER HANDLER	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: +0.5 / -0.5mm ANGULAR: +/- 0.5deg	FINISH: AS PARTS COLOUR: AS PARTS SOURCE:	DEBUR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION 01			
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Vendor No.		APPV'D							
Where Used		MFG							
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Q'TY REQ'D	1								
Client			Third angle Projection			WEIGHT: 1311.09		SCALE:1:20	SHEET 1 OF 4

SHB21-07-01 SLEEPER HANDLER SPECIFICATIONS

Tare weight (with typical adapter)	1,725	kg
Capacity	7	sleepers
Working Load Limit	3,000	kg
Maximum Individual Sleeper Weight	425	kg
Minimum Sleeper Length	1,920	mm
Maximum Sleeper Length	2,800	mm
Jaw Travel	500	mm
Sleeper Grip Force	10	kN
Grab System Pressure	100	Bar
Rotator Capacity	160	kN

Hydraulic System

No. of Services Required	2	
Minimum Pressure (grab circuit)	100	Bar
Maximum Pressure (grab circuit)	300	Bar
Minimum Pressure (rotate circuit)	80	Bar
Maximum Pressure (rotate circuit)	250	Bar
Rotator Torque (@250 Bar)	3,400	Nm

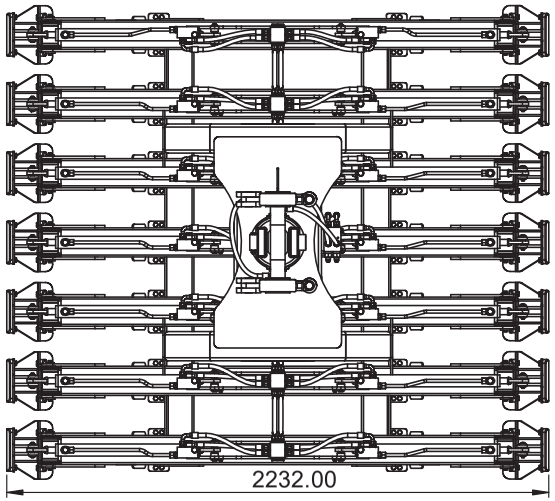
Options

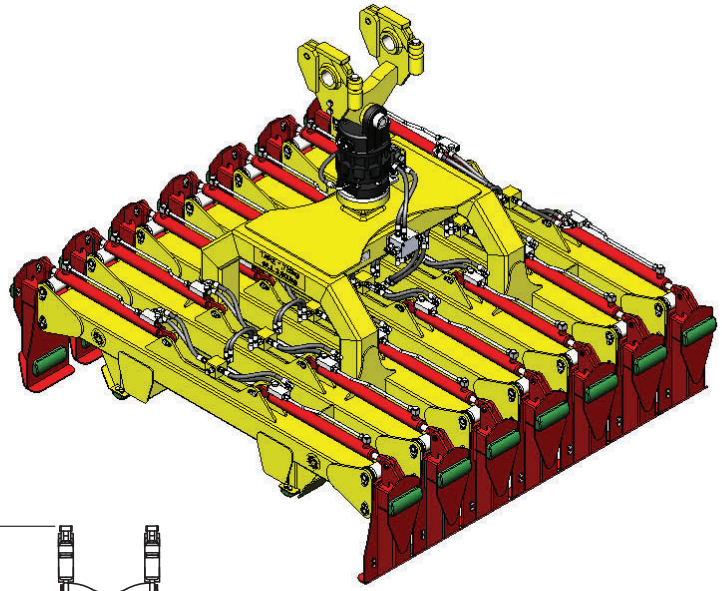
Adapter head to suit host machine

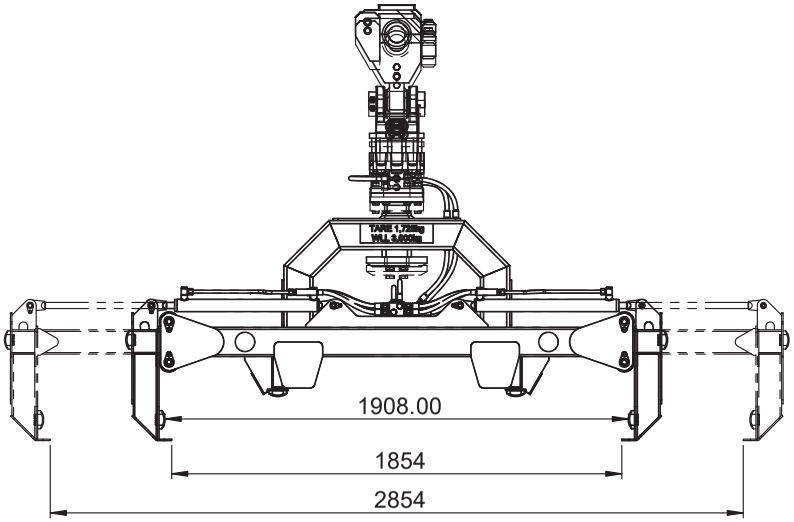
Connecting hoses and fittings

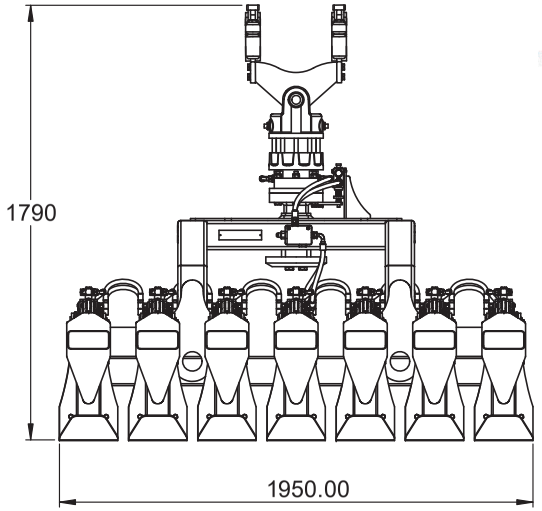
Notes

Each unit is custom made to suit individual sleeper type to be handled. Dimensions shown on Page 11 are for handling 285mm wide sleepers.









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Where Used		MFG								
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Client						WEIGHT: 1706.97			SCALE:1:20	SHEET 1 OF 4

SHB21-10-01 SLEEPER HANDLER SPECIFICATIONS

Tare weight (with typical adapter)	2,325	kg
Capacity	10	sleepers
Working Load Limit	4,000	kg
Maximum Individual Sleeper Weight	400	kg
Minimum Sleeper Length	1,920	mm
Maximum Sleeper Length	2,800	mm
Jaw Travel	500	mm
Sleeper Grip Force	10	kN
Grab System Pressure	100	Bar
Rotator Capacity	160	kN

Hydraulic System

No. of Services Required	2	
Minimum Pressure (grab circuit)	100	Bar
Maximum Pressure (grab circuit)	300	Bar
Minimum Pressure (rotate circuit)	80	Bar
Maximum Pressure (rotate circuit)	250	Bar
Rotator Torque (@250 Bar)	3,400	Nm

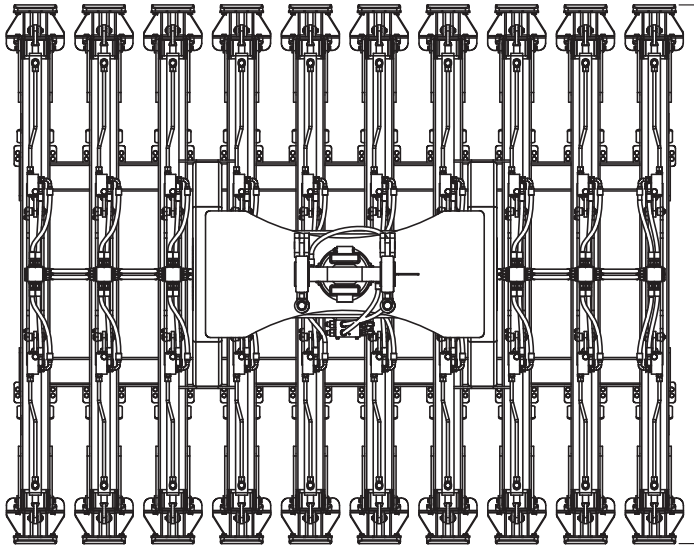
Options

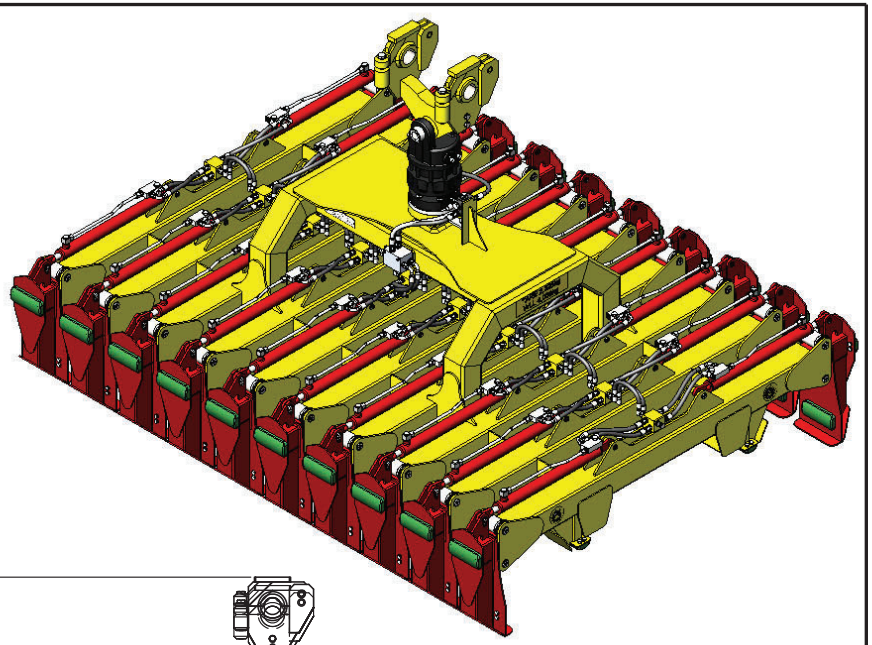
Adapter head to suit host machine

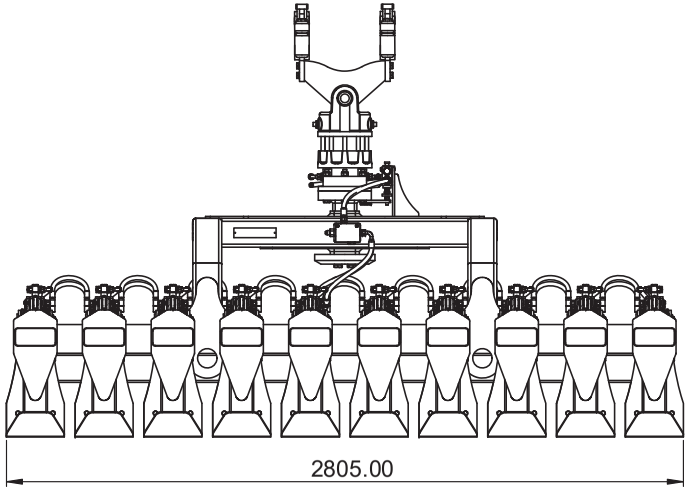
Connecting hoses and fittings

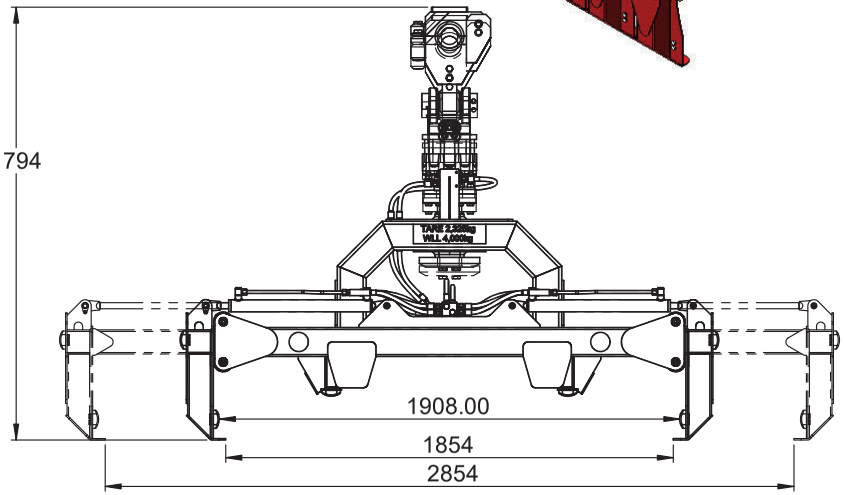
Notes

Each unit is custom made to suit individual sleeper type to be handled. Dimensions shown on Page 13 are for handling 285mm wide sleepers.









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Vendor		APPV'D							
Vendor No.		MFG							
Where Used		Q.A							
Configuration	TRANSPORT								
Q'TY REQ'D	1								
Client									

Third angle Projection

TITLE: MAIN ASSEMBLY			
MATERIAL:	DWG NO. SHB21-10-01-001	A3	
WEIGHT: 2333.30	SCALE:1:20	SHEET 1 OF 4	

Contact Details

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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.

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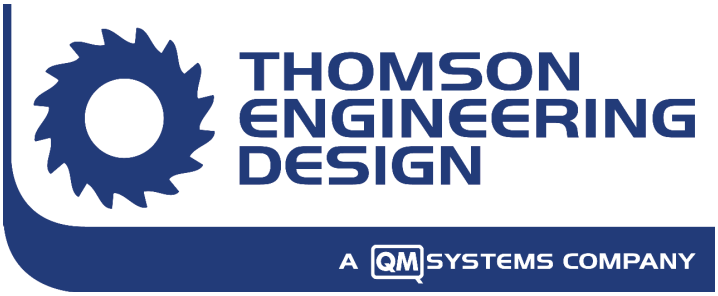

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