

Stormajor™ Boom Feeder BF0415T Support Pack

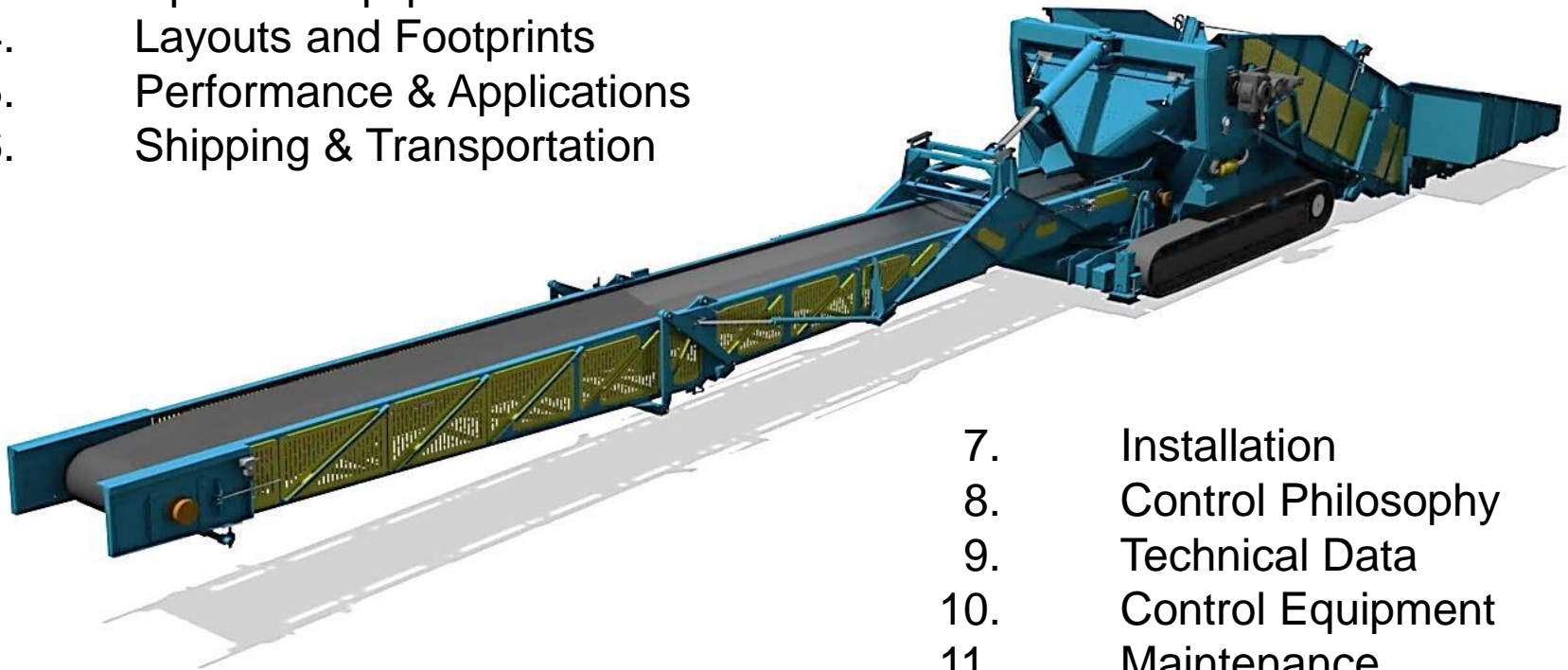


SAMSON
AUMUNDGROUP

BOOM FEEDER BF0415T

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SAMSON Materials Handling Ltd. have provided a range of specialist engineering solutions to the bulk materials handling industry since 1966. We design and manufacture mobile equipment that can move an incredibly wide range of materials, and is used by companies in a variety of different and diverse industries, from mining and minerals to ports and power.

SAMSON are part of the internationally renowned AUMUND Group, which also includes AUMUND Fördertechnik and SCHADE Lagertechnik in Germany, specialising in professional bulk handling solutions that provide the very highest levels of performance, engineering and reliability.

BOOM FEEDER BF0415T

The evolution of the wheeled Stormmajor™ to the tracked version offers market proven high performance and reliability with unrivalled manoeuvrability.

This concept delivers a cost effective solution for stockpiling, barge loading, shiploading and rail wagon loading, even in the world's most arduous conditions



BOOM FEEDER BF0415T

Key Features

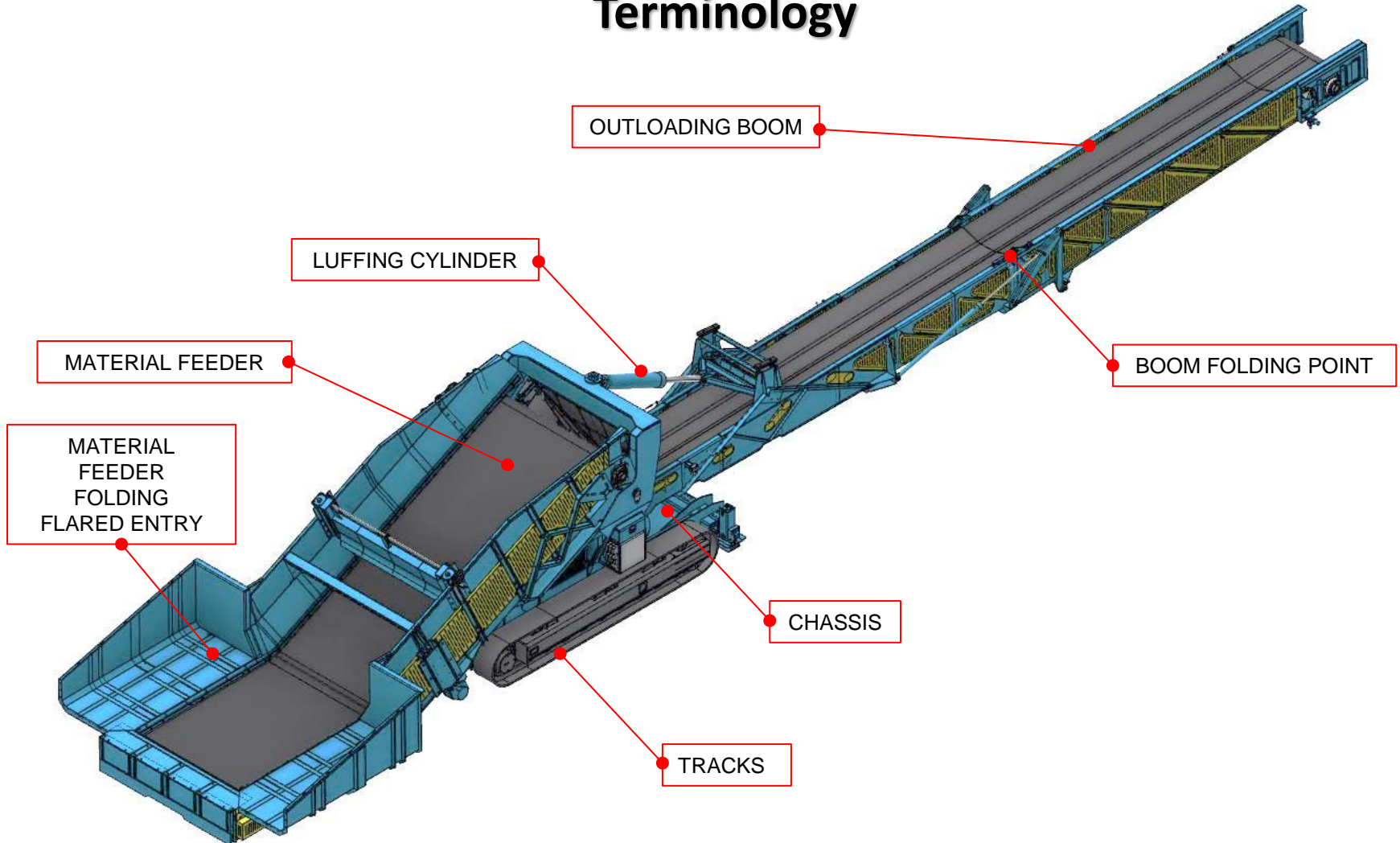
- ✓ Compact dimensions
- ✓ Rapid set up time
- ✓ 20 m & 15 m boom available
- ✓ Folding hoppers
- ✓ Increased radial facility
- ✓ Remote control via umbilical control or optional radio control
- ✓ Outriggers
- ✓ Winch operated levelling blade

Benefits

- ✓ Easily transportable to site and immediately operational
- ✓ Quick production start up from delivery
- ✓ Offering fleet owners flexibility
- ✓ Accept a huge variety of trucks and loading options
- ✓ +/- 65 degrees offers more efficient stockpiling with fewer moves
- ✓ Ease of operation
- ✓ Increased radial range
- ✓ Flexibility in controlling material flow

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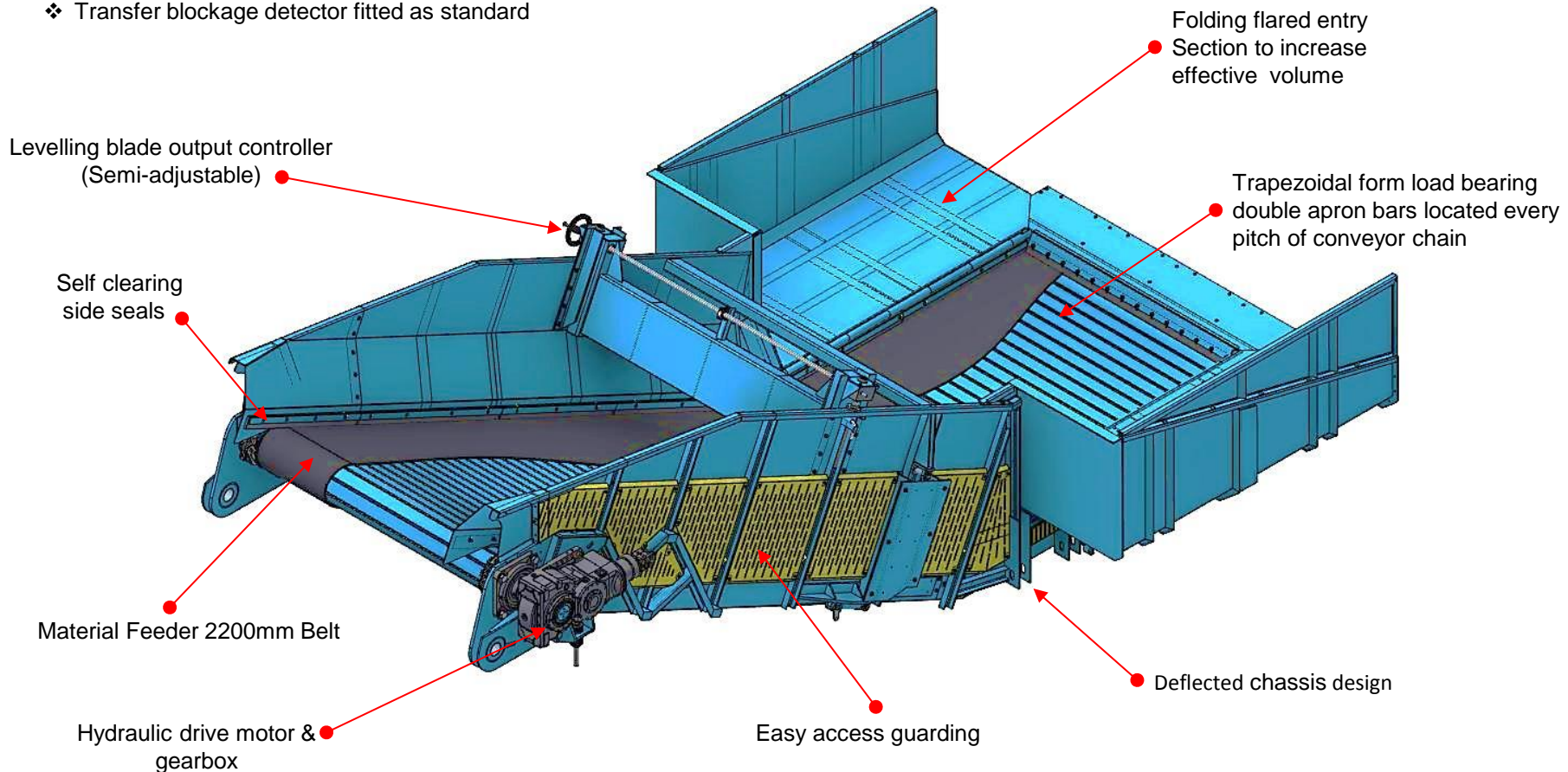
Terminology



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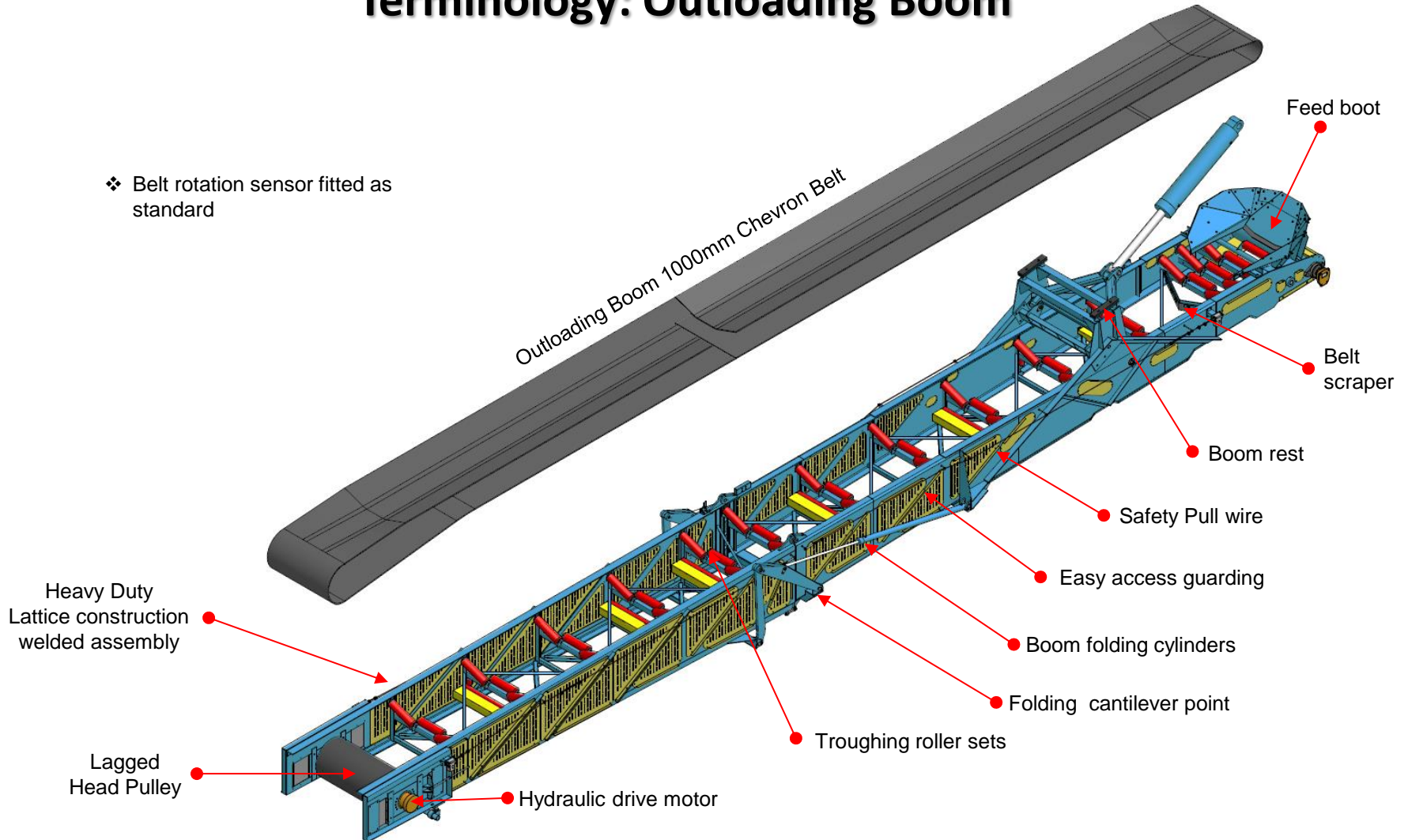
Terminology: Material Feeder

- ❖ Belt rotation sensor fitted as standard
- ❖ Transfer blockage detector fitted as standard



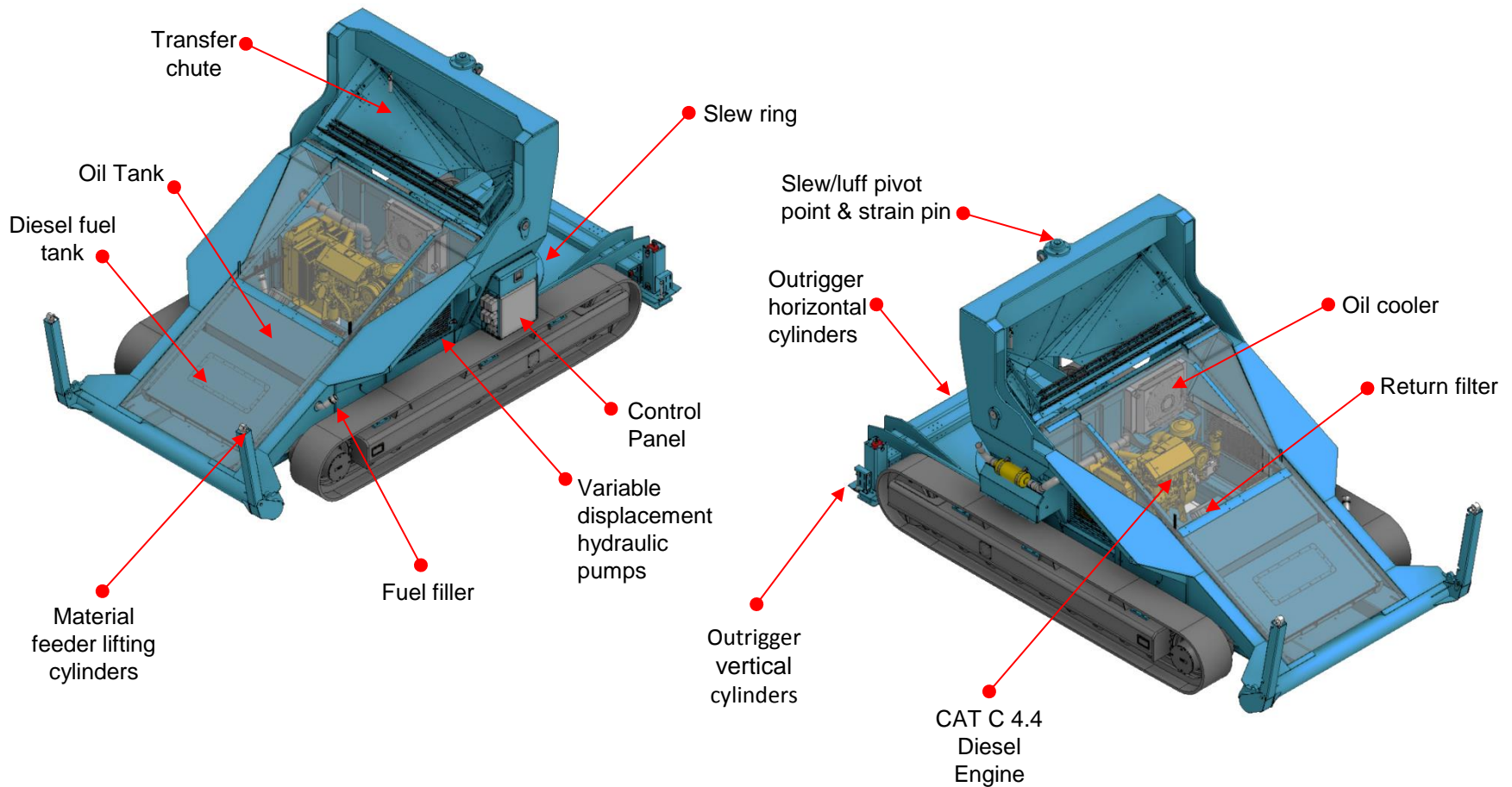
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Terminology: Outloading Boom



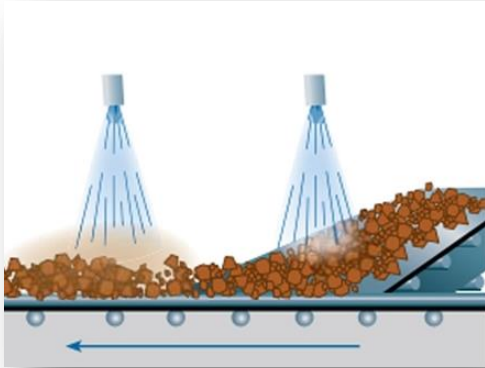
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Terminology: Chassis

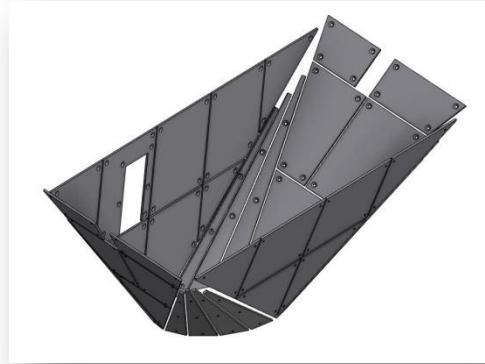


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Optional Equipment



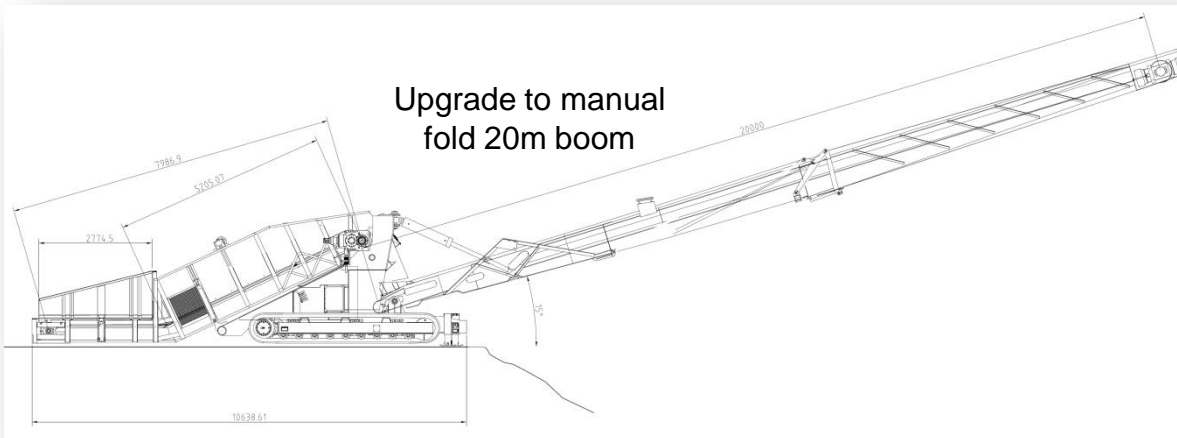
Dust suppression water spray



Wear plates in transfer chute



Canvas dust package



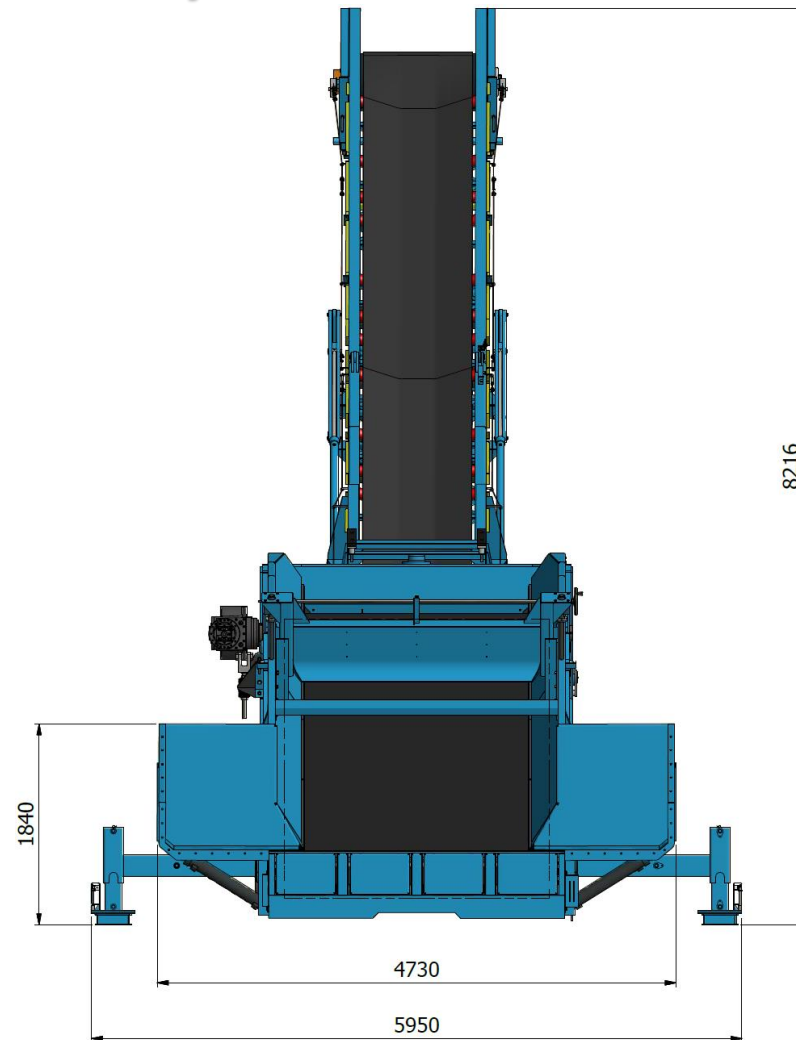
Upgrade to manual fold 20m boom



Radio remote control

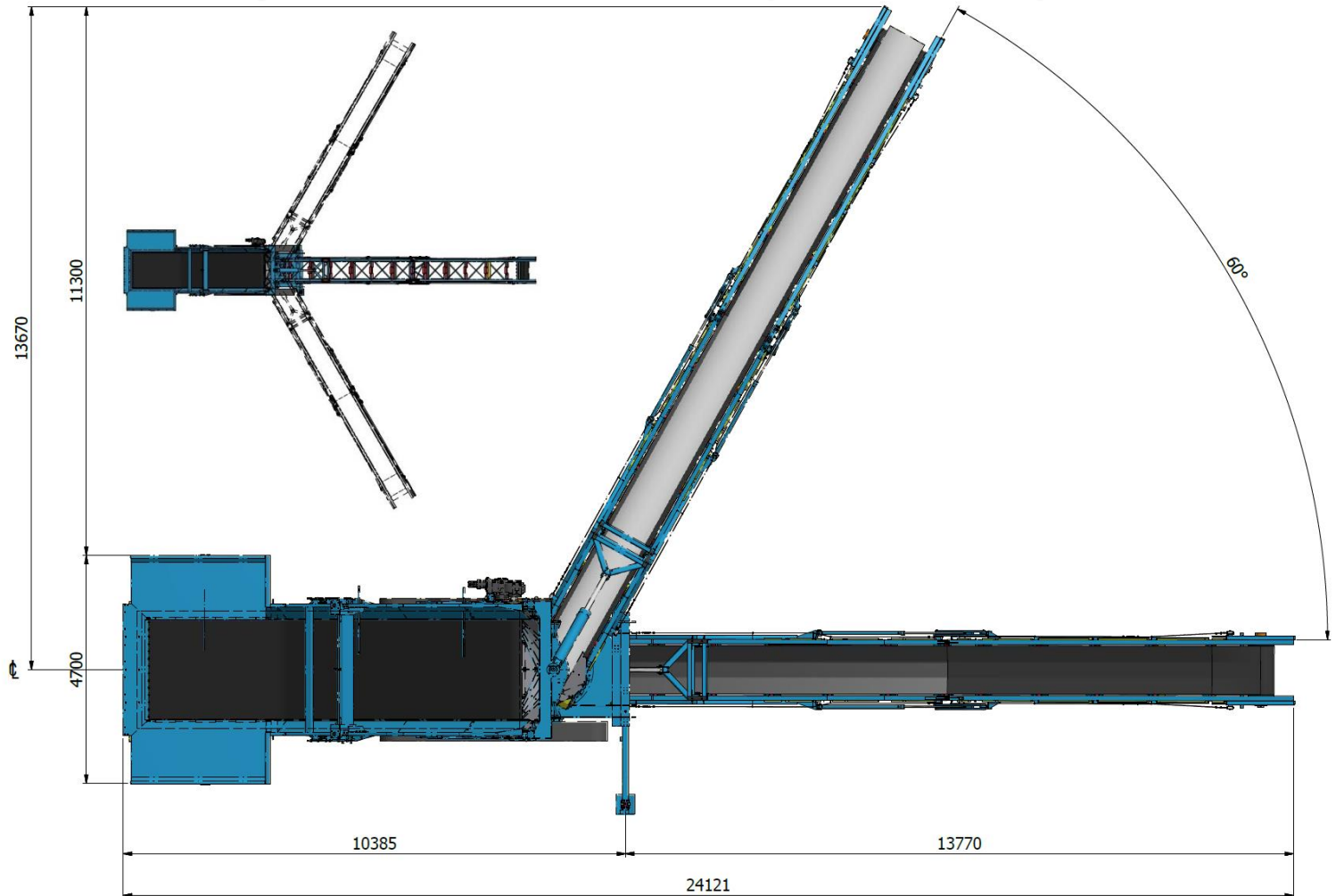
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Layouts: Rear Elevation



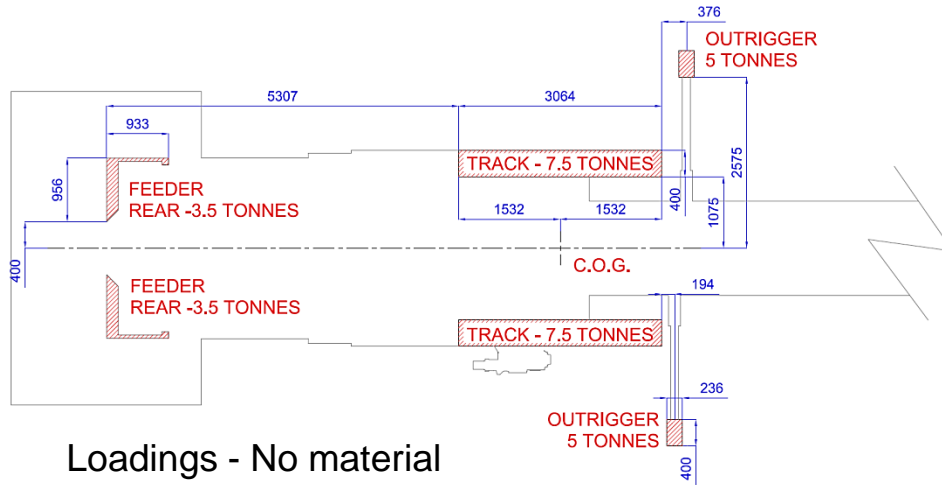
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Layouts: Plan Elevation (15m Boom)

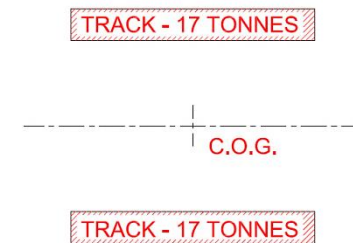


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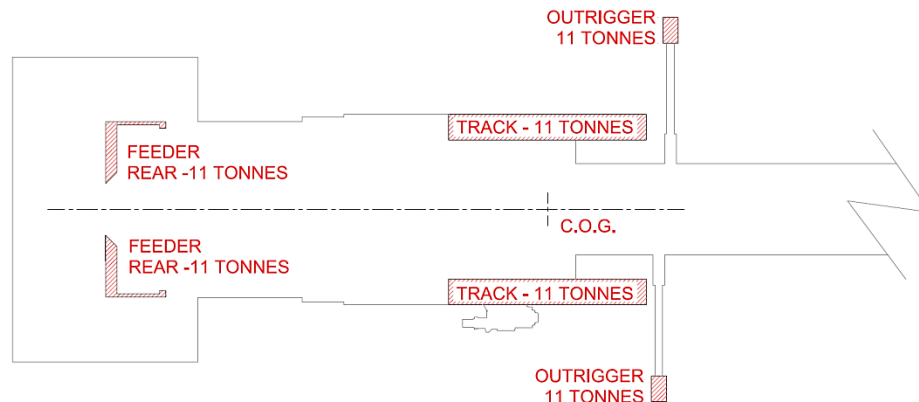
Dimensions: Loadings



Loadings - No material



Transportation Footprint



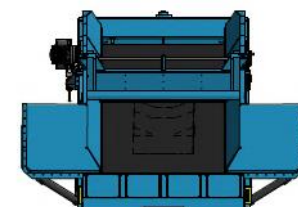
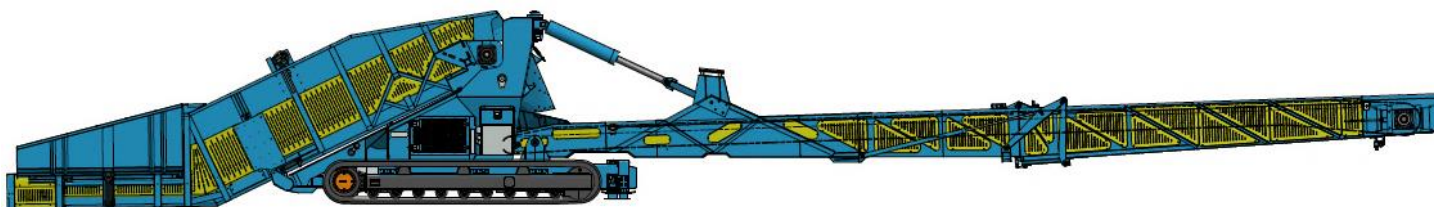
Loadings - Fully Loaded

Machinery Gross Weight (Empty): 35 Tonnes
 Machinery Gross Weight (Fully Loaded): 66 Tonnes

Material Density for Calculation 1.6t/m³
 C.O.G. – Centre of Gravity

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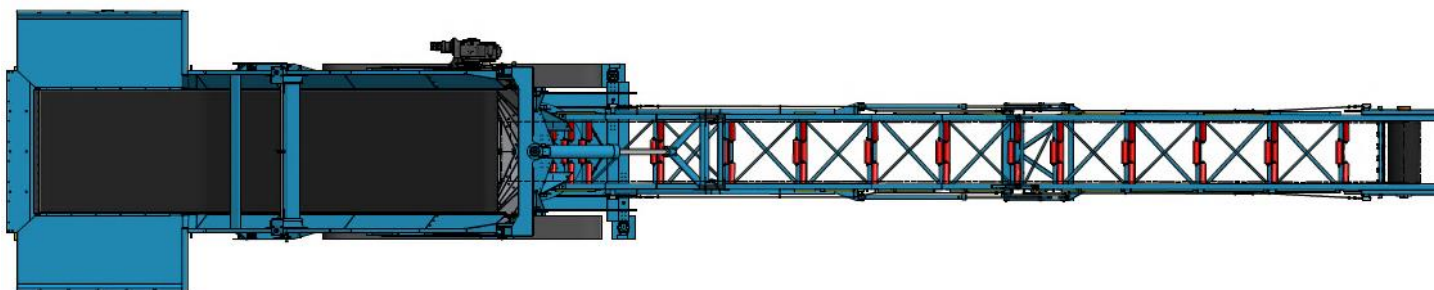
Performance Data



Maximum Density: 1.6 t/m³
 Lump Size: 200mm (10%)
 Capacity: 625m³/hr.

Typical Materials;

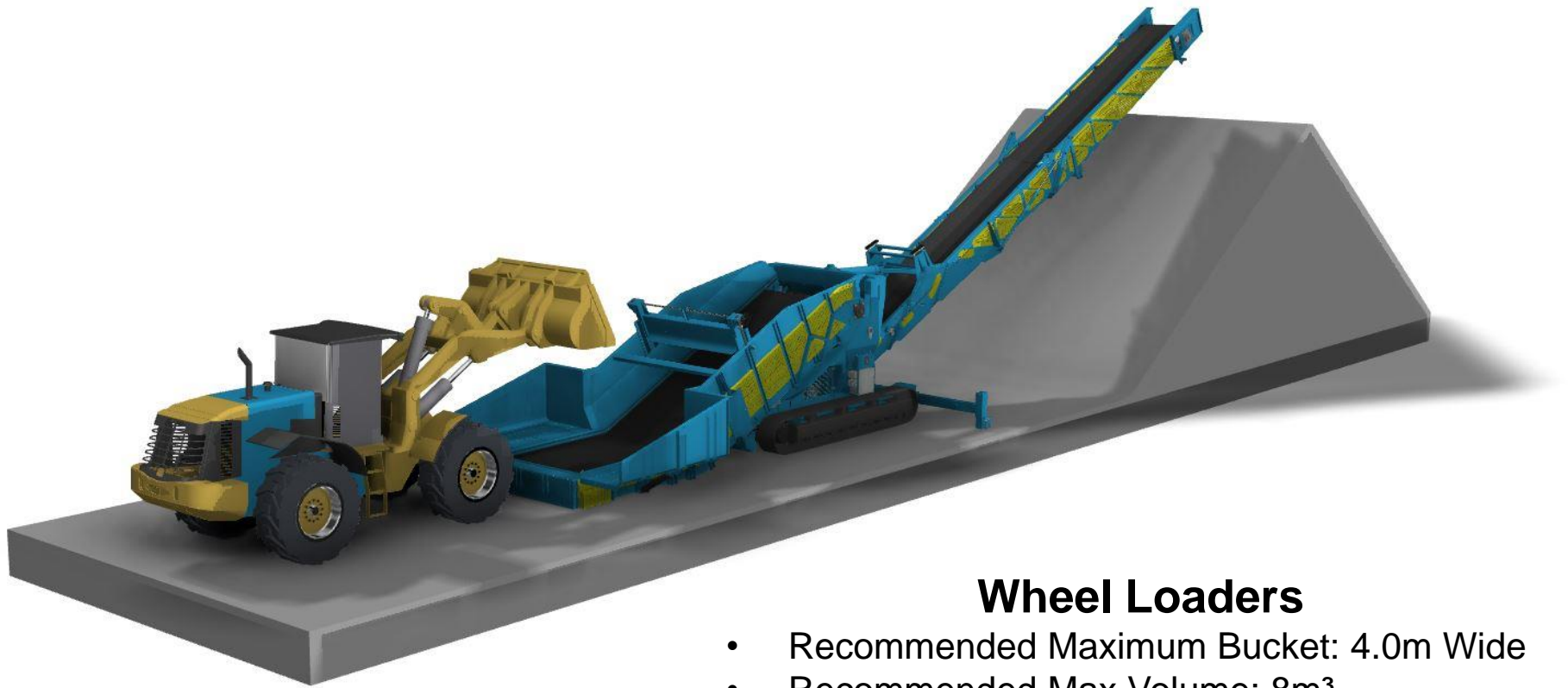
- Mineral Ores
- Sand
- Aggregates
- Coal
- Coke
- Wood Pellets



The above data is representative, please
 contact your SMH Sales Representative for
 specific applications

BOOM FEEDER BF0415T

Performance: Loading with Wheel Loaders



Wheel Loaders

- Recommended Maximum Bucket: 4.0m Wide
- Recommended Max Volume: 8m³

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Performance: Loading with ADT's

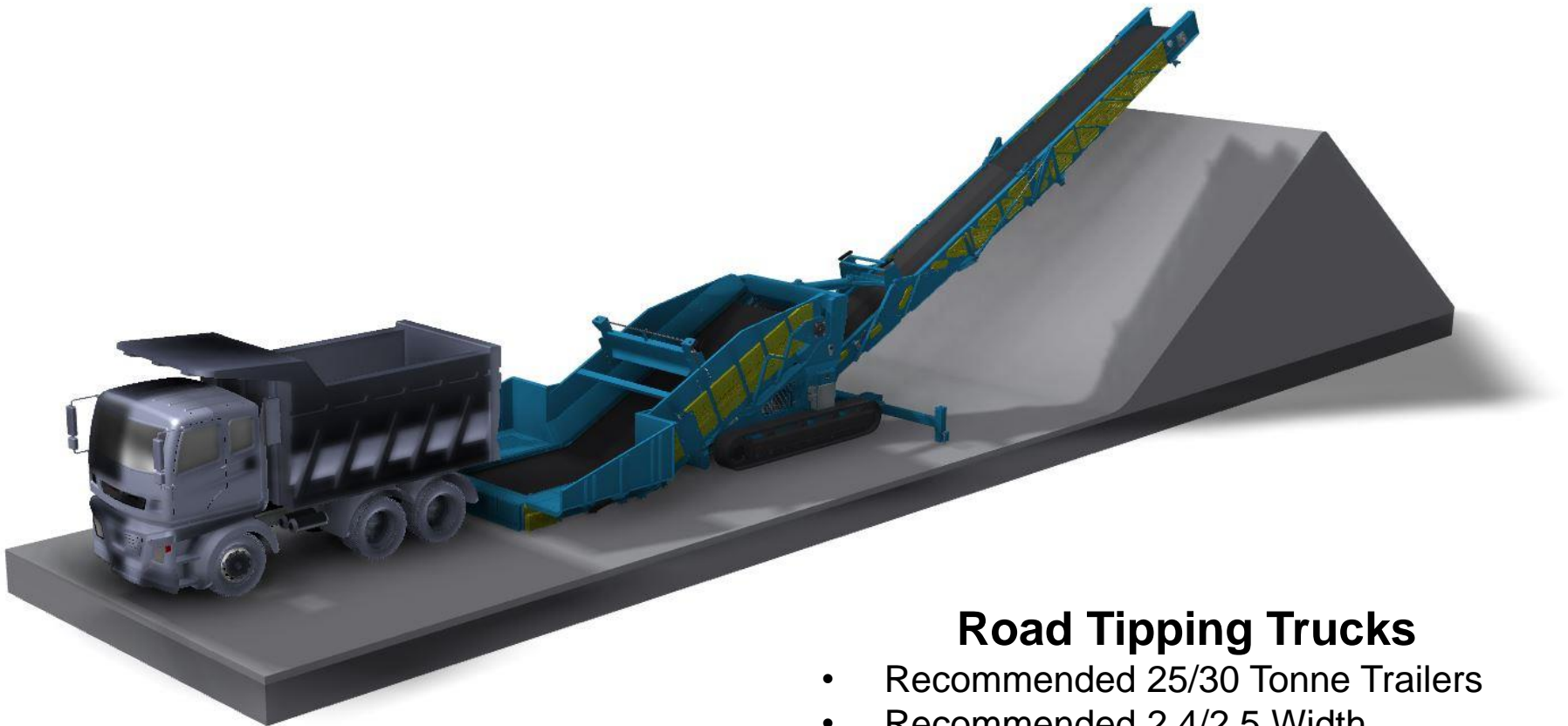


Articulated Dump Trucks

- Recommended 30 Tonnes Capacity

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Performance: Loading with Road Tipping Trucks



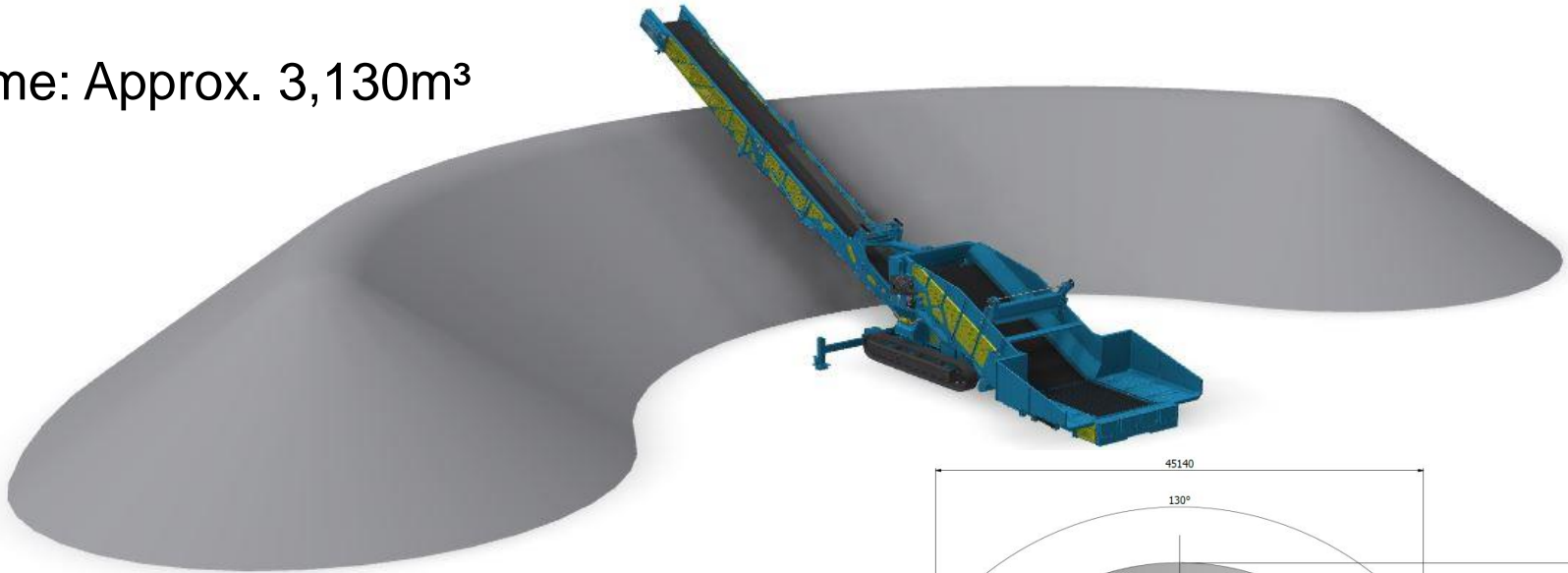
Road Tipping Trucks

- Recommended 25/30 Tonne Trailers
- Recommended 2.4/2.5 Width

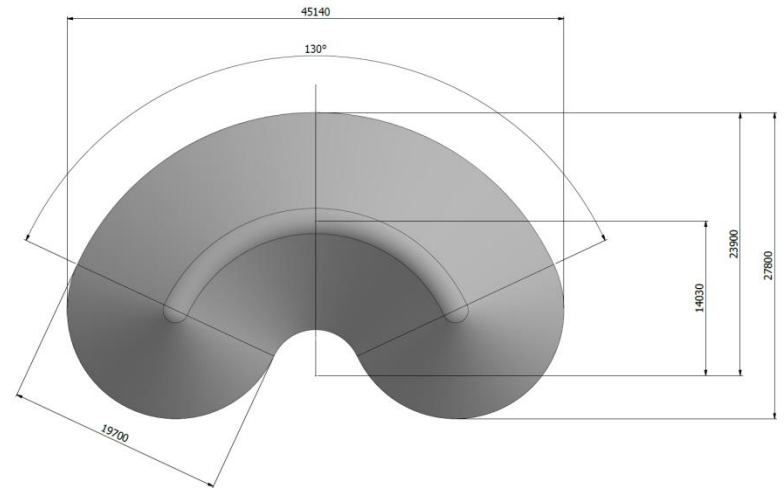
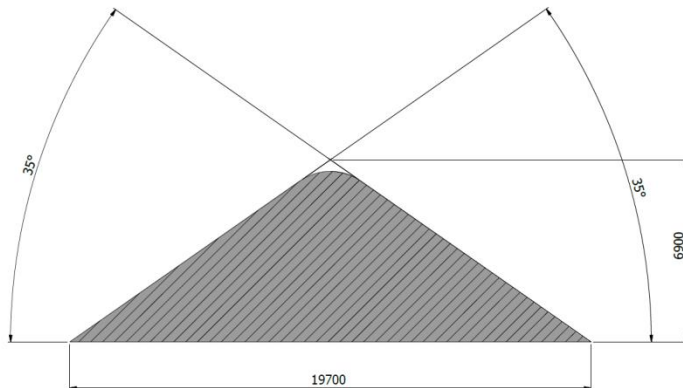
BOOM FEEDER BF0415T

Performance: Stockpiling with the 15m Boom

Volume: Approx. 3,130m³



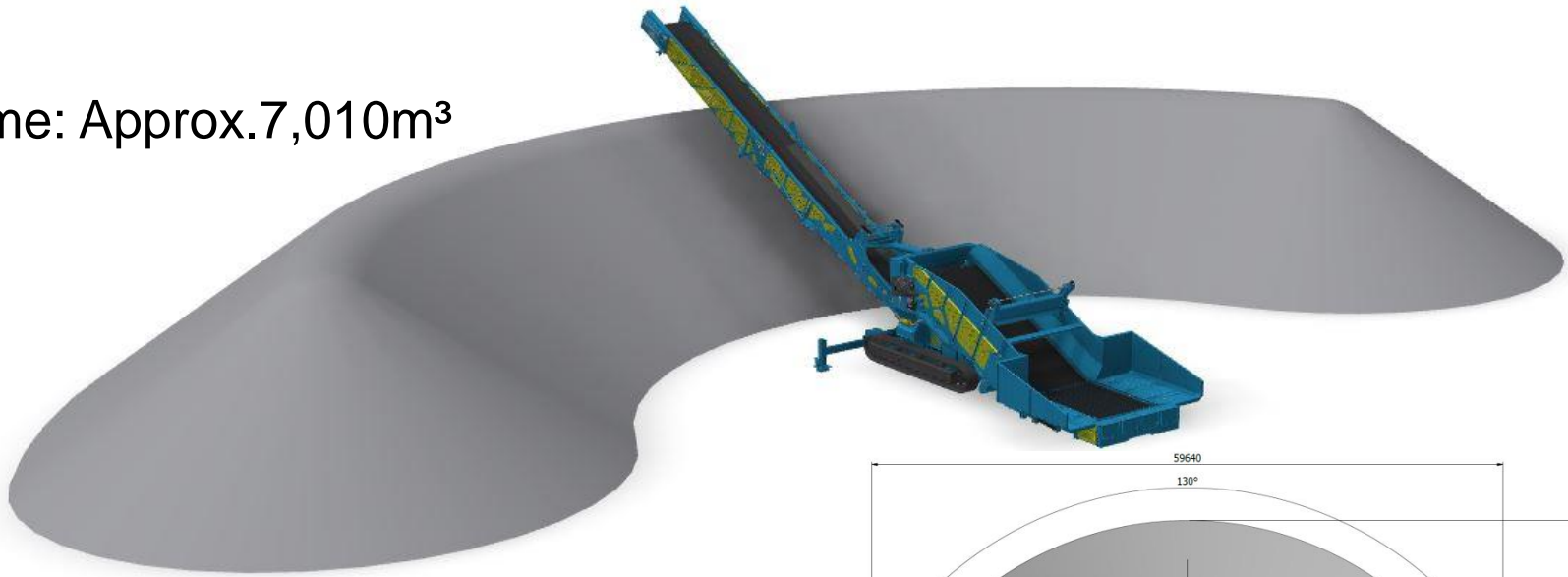
Dimensions with Boom @25°



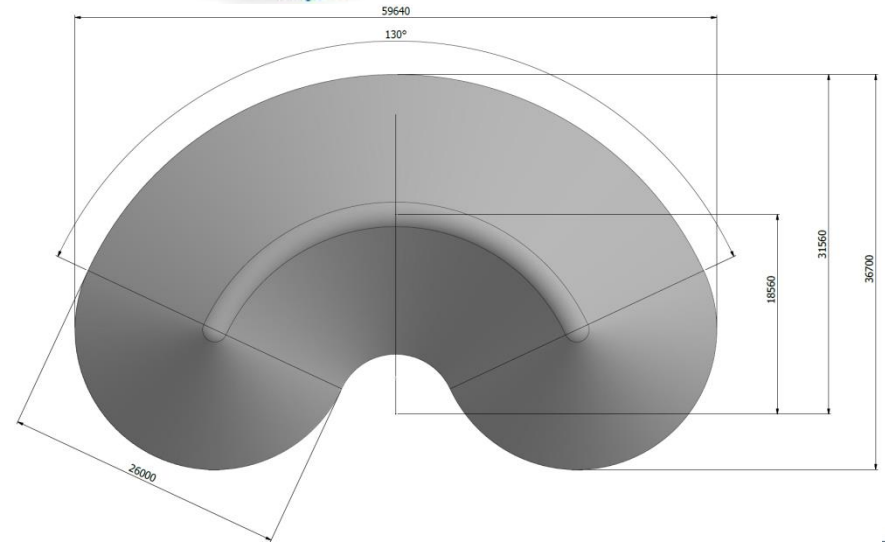
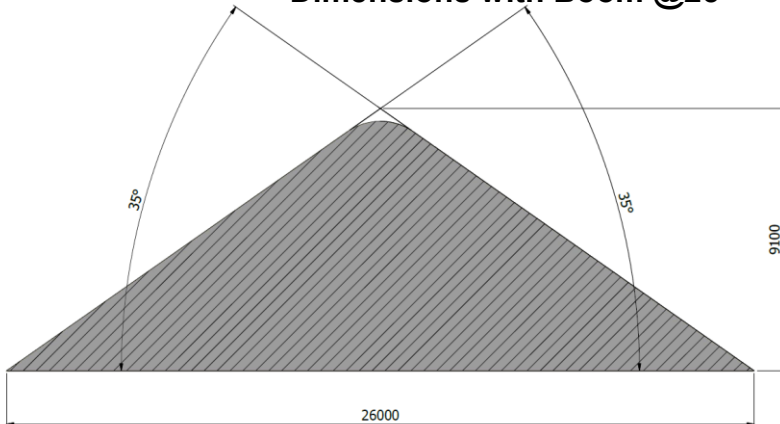
BOOM FEEDER BF0415T

Performance: Stockpiling with the 20m Boom

Volume: Approx. 7,010m³

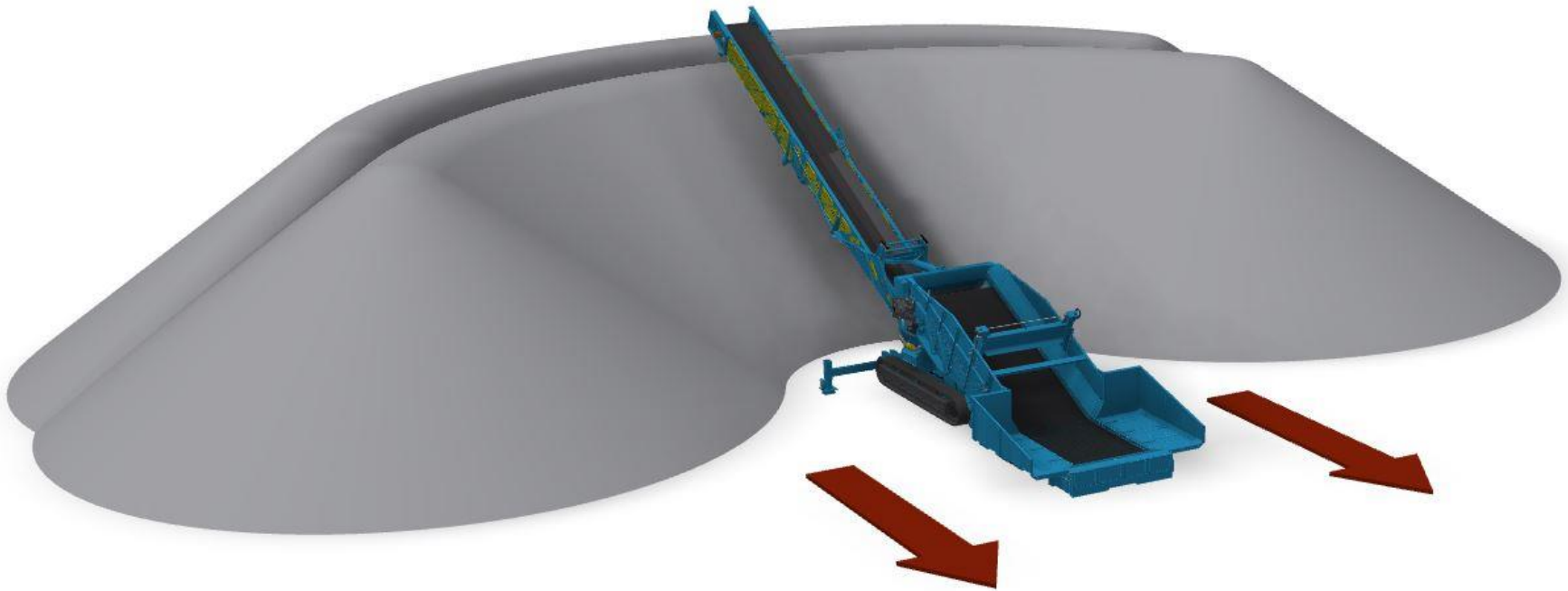


Dimensions with Boom @25°



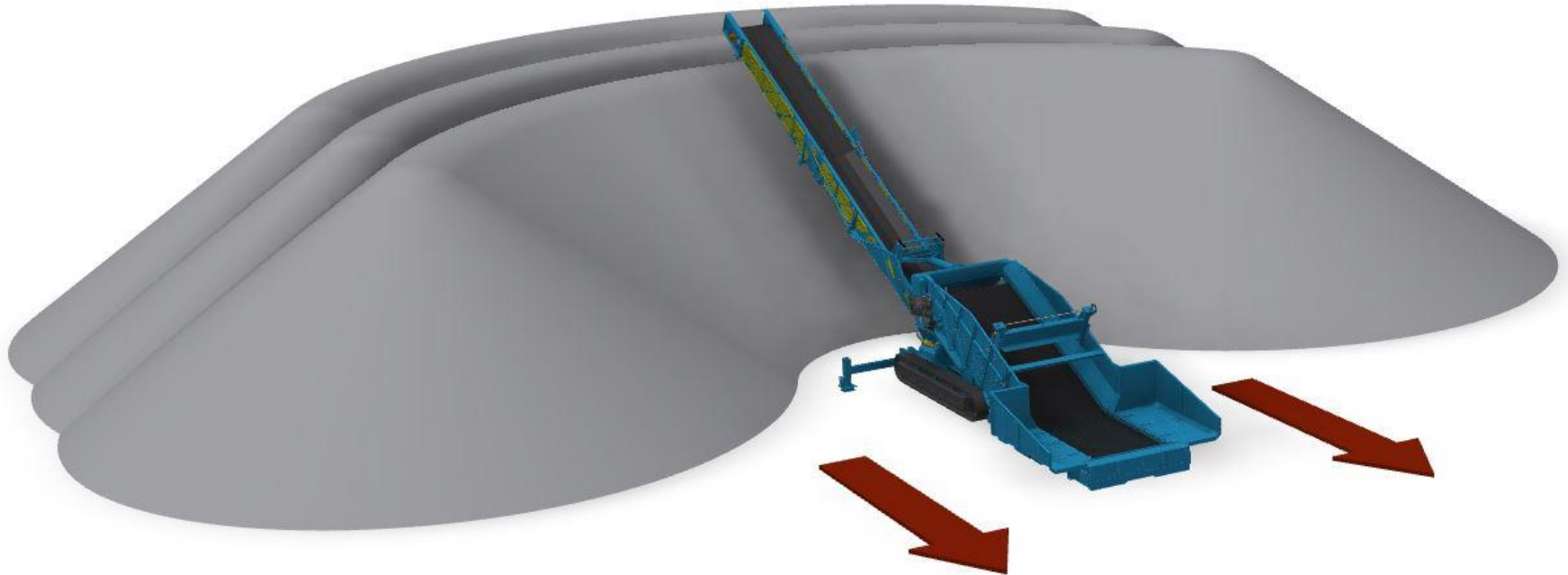
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Performance: Plateau Stockpiling



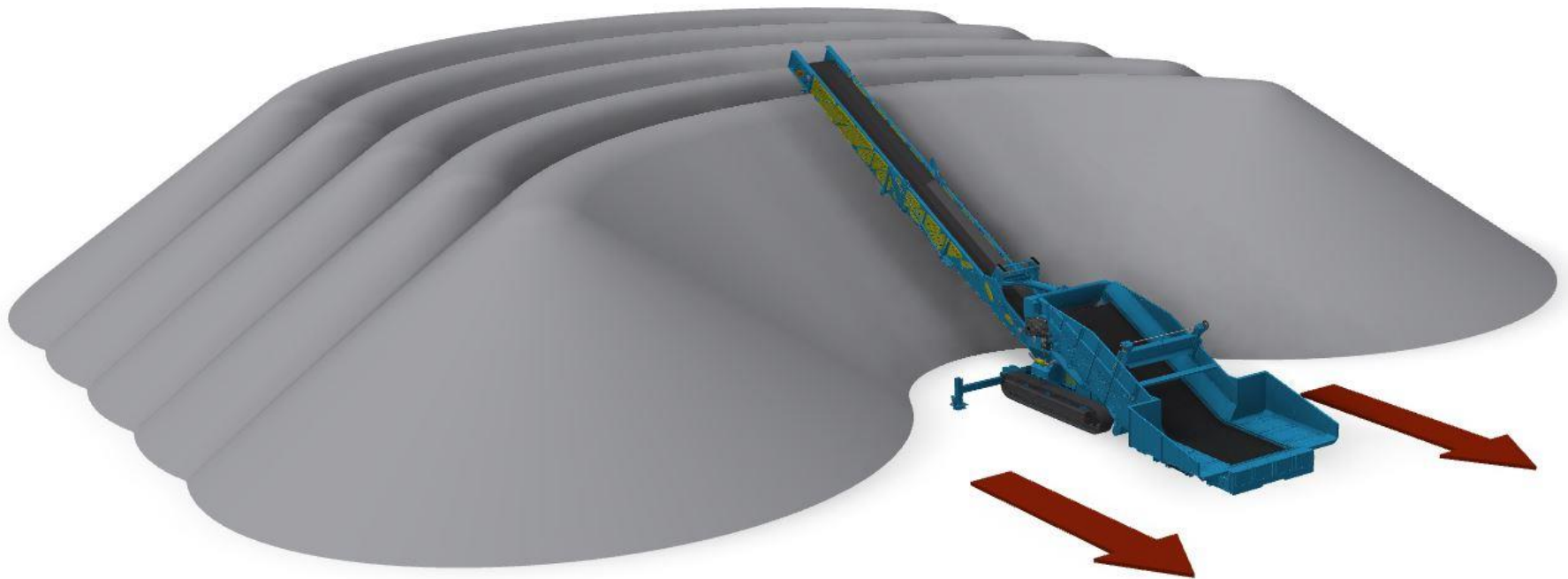
BOOM FEEDER BF0415T

Performance: Plateau Stockpiling



BOOM FEEDER BF0415T

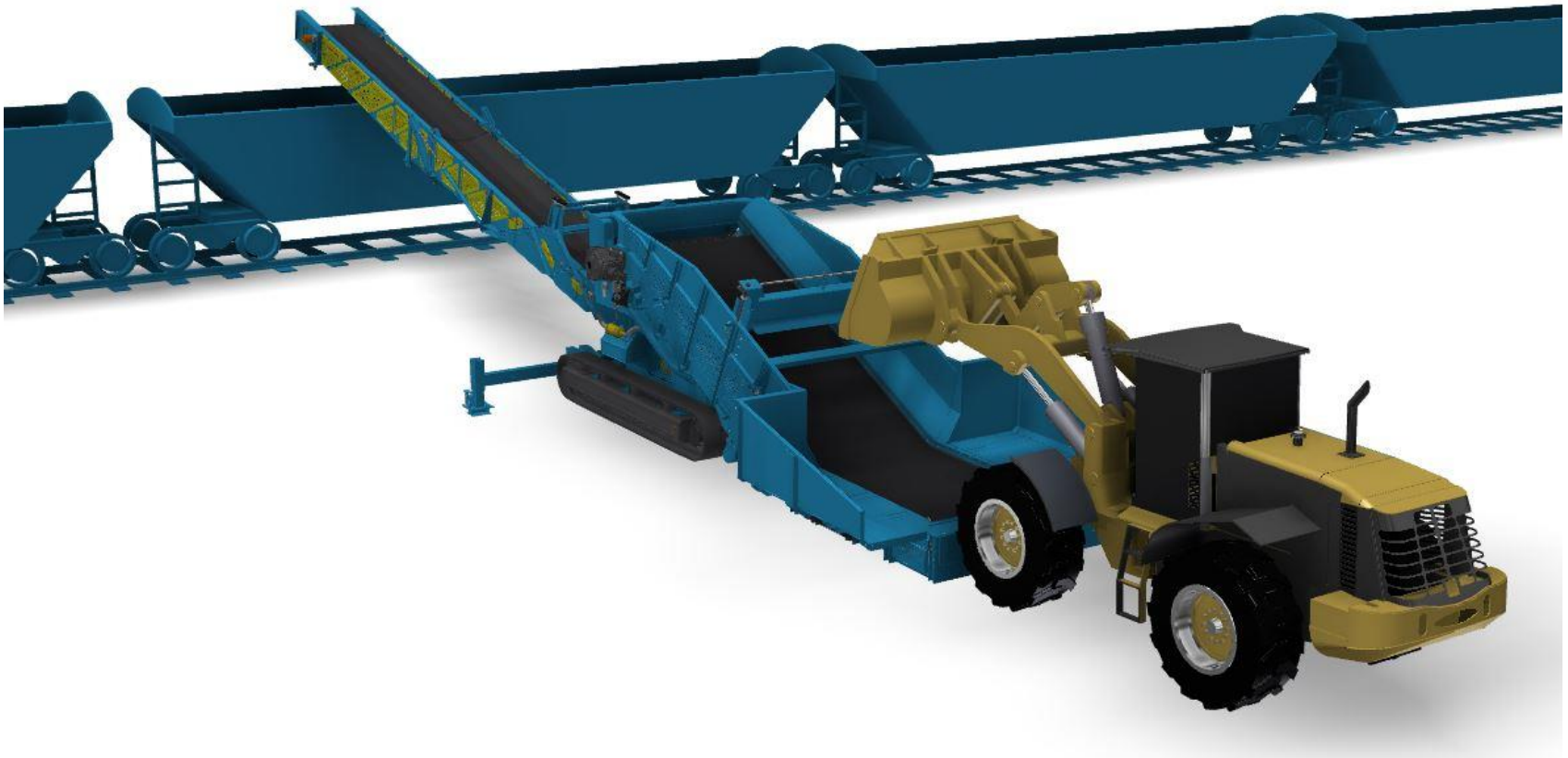
Performance: Plateau Stockpiling



- Optional Automatic Stockpiling (Slew & Luff)
- Relocation by Operator

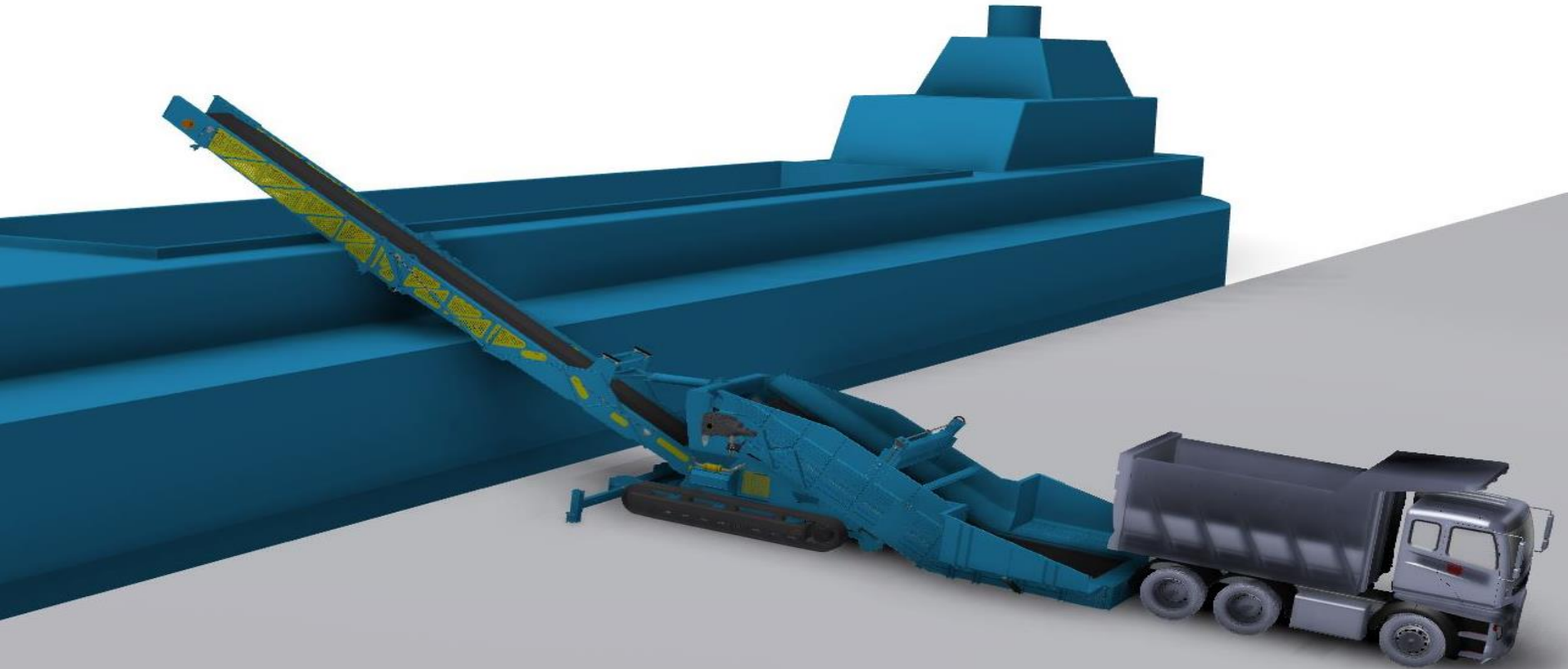
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Applications: Rail Loading



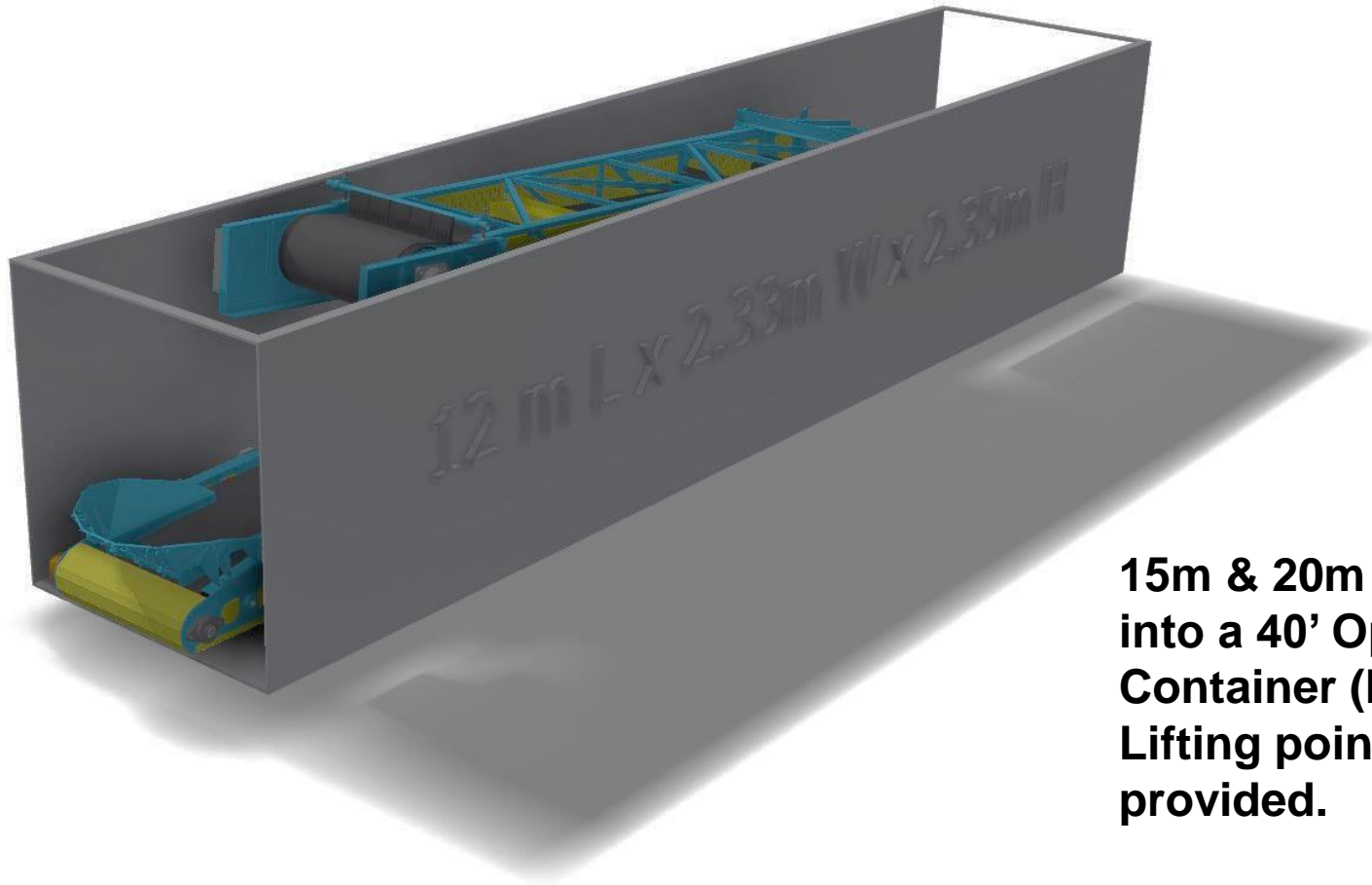
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Applications: Barge Loading



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Shipping: Ex-Works (Boom Conveyor)



**15m & 20m Booms lift
into a 40' Open Top
Container (In-Gauge).
Lifting points are
provided.**

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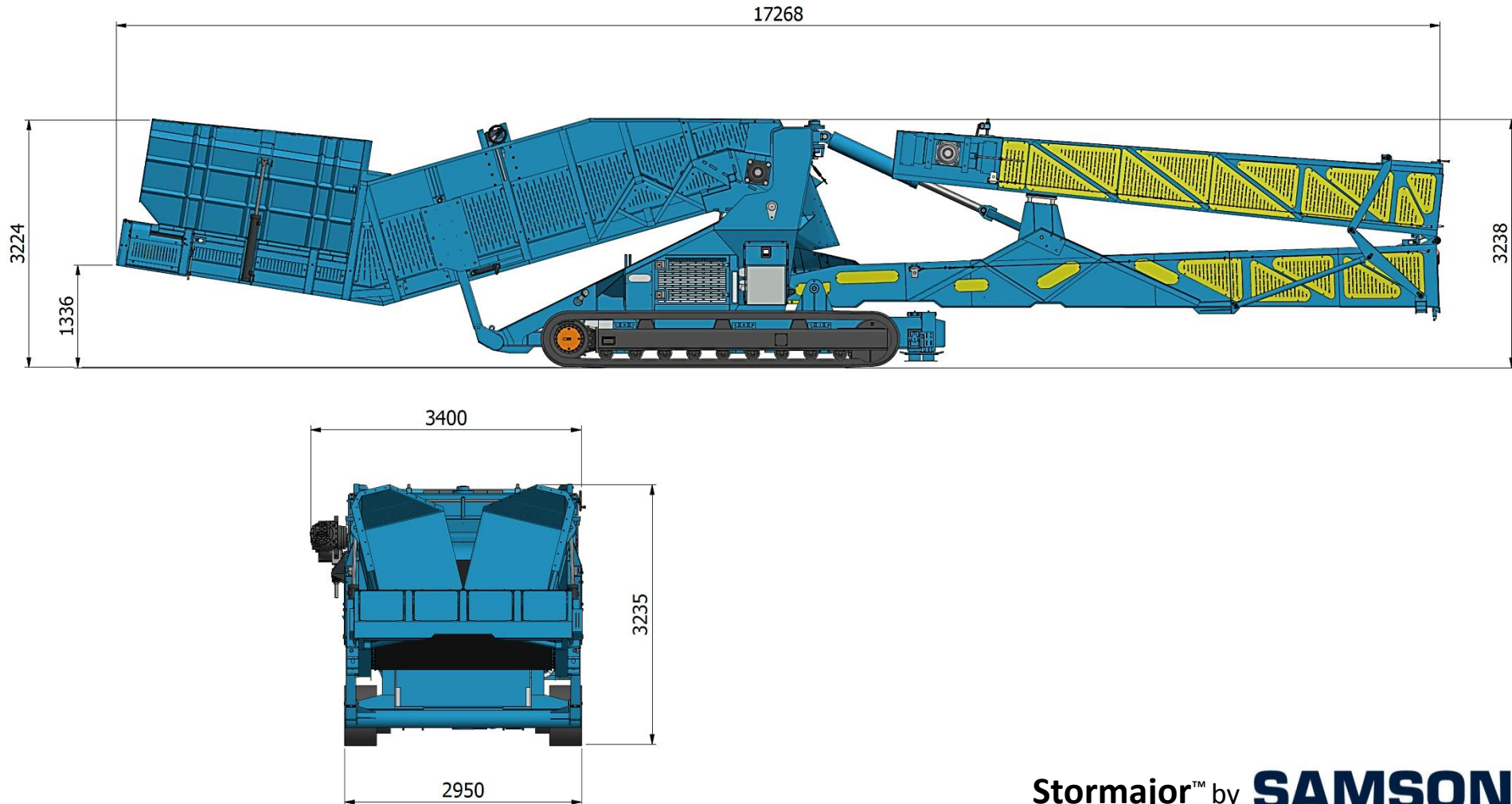
Shipping: Ex-Works (Main Body)



Main Body is driven onto a 40' Low Loader & Transported to Port to be loaded onto Ro Ro Vessel (Stowed internally).

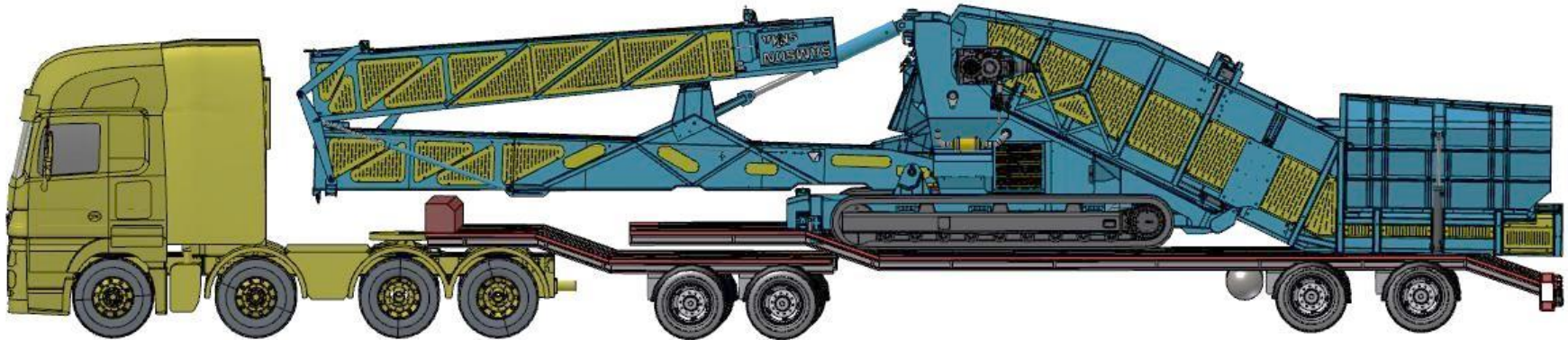
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Transportation Dimensions when Loading onto Trucks



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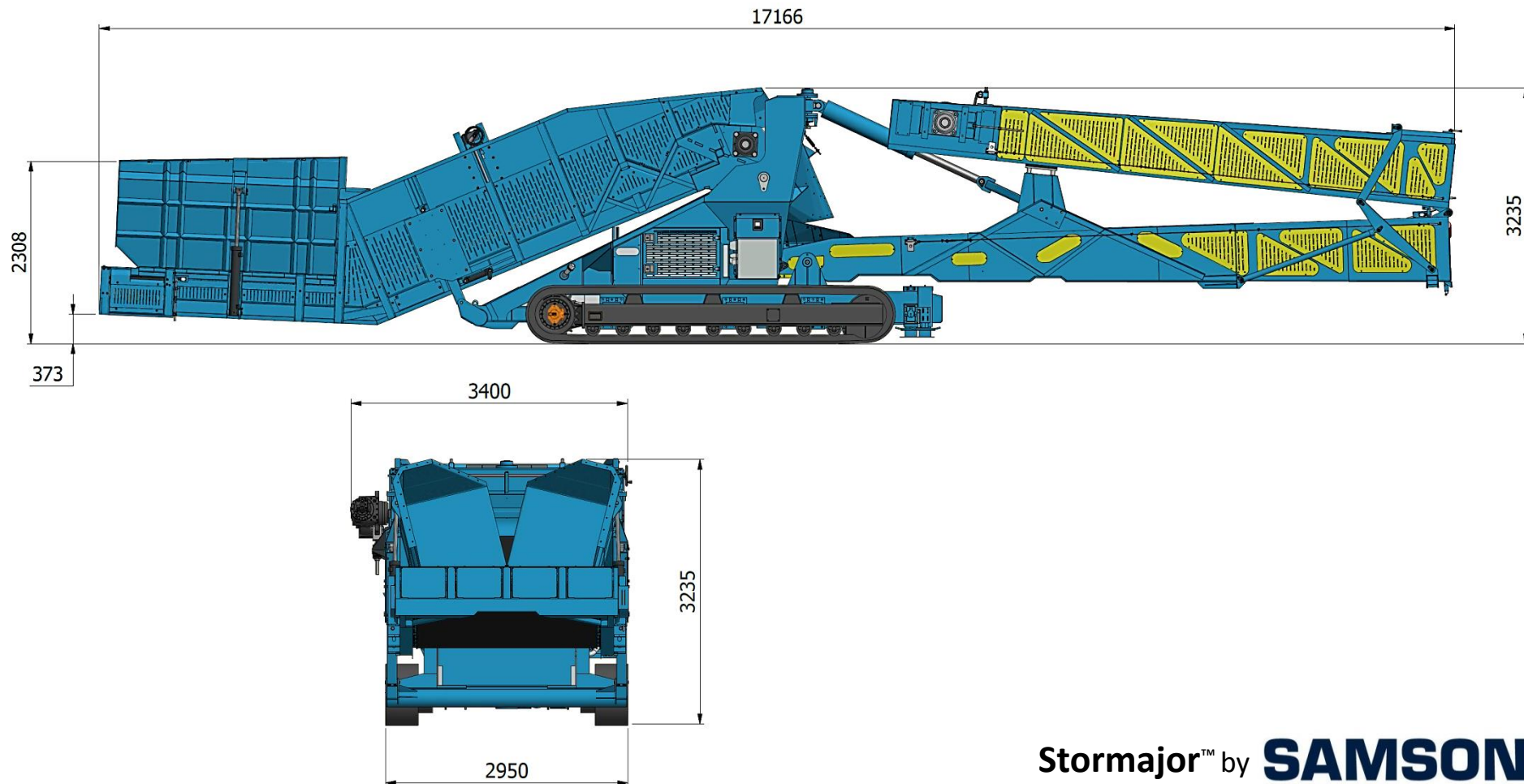
Transport: By Road



- Minimum Low Loader capacity – 40 Tonnes
- Maximum Ramp inclination on the Trailer should not exceed 1 in 4

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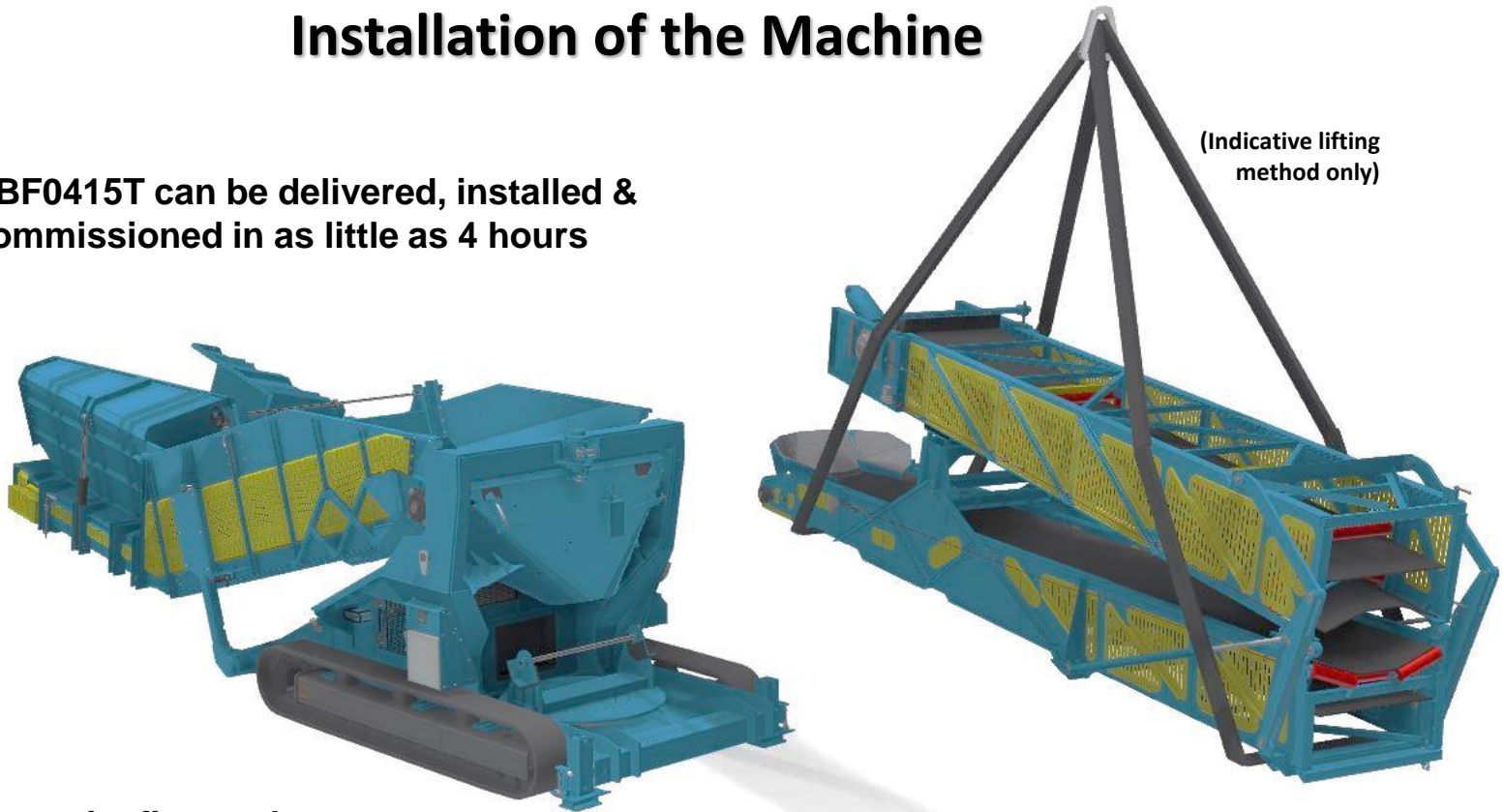
Operational Dimensions when Travelling on Site



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Installation of the Machine

The BF0415T can be delivered, installed & commissioned in as little as 4 hours



The units fit together mechanically with pins.
All electrical & hydraulics with quick-couplers & connectors

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Control Philosophy

Function	Control Location	Description
Start Engine	Ignition Key switch on Control Panel	All Hydraulic controls in Neutral Position. Ignition switch is turned to “heat” position until indicator disappears on screen, then turned to “Start” position.
Engine Speed	Selector switch on Control panel	Selects one of 3 pre-set speeds
Mode Selection	Selector switch on Control Panel	Selection of Load, Track, or Setup mode
Start Load	Pushbutton on Control Panel	Provided all safety and sequence interlocks are in place, this will cause a sequenced start of the conveyors.
Stop Load	Pushbutton on Control Panel	When the conveyors are running this will cause a sequenced stop of the conveyors (emptying the machine). If the button is held down the conveyors will stop immediately.
Lever Valve Enable	Pushbutton on Control Panel	Some functions are controlled by Lever valves which need to be enabled before use. Enabling these functions disables some controlled by Control valves. The button can only be used in Setup Mode. Pressing the button will toggle the valve selection from “Control Valves” to “No Valves” to “Lever Valves” and so on. An indicator on the screen will identify the selection.
Fault	Pilot Lamp on Control Panel	Indicates a Fault exists. The screen will provide more information.
Remote Enable	Selector switch on Control Panel	This must be switched to “Remote” before either the Wired “Doglead” control or the Radio Control (Option) can be used.
Emergency Stop	Various Locations	This hardwired safety circuit removes all power to the hydraulic valves and will stop the engine – for emergency use only.

BOOM FEEDER BF0415T**Control Philosophy**

Function	Control Location	Description
Boom Luff Raise / Lower	Pushbuttons on Control Panel (or on Radio remote if fitted)	This can be used in all modes, but with restricted movement if the boom is folded. Can only be operated if “Control Valves” is selected.
Clam Shell open / Close	Pushbuttons on Control Panel (or on Radio remote if fitted)	This can be used in Setup or Load mode. Can only be operated if “Control Valves” is selected.
Slew Left / Right	Pushbuttons on Control Panel (or on Radio Remote if fitted)	This can be used in Setup or Load Mode. Can only be operated if “Control Valves” is selected. There are safety conditions that have to be in place (for example “Outriggers Deployed”)
Track Joysticks	Paddle style Joysticks on Wired “Doglead” Controller (or Radio Remote Control if fitted)	Only used in Track Mode and if all safety and sequence interlocks are in Place. Each Paddle controls one of the two tracks allowing the machine to be freely manoeuvred.
Screen Display	Above Control Panel	Provides Diagnostic and Operator information. In setup mode “Free Manual” (for maintenance use) is possible via the screen display and soft keys.

BOOM FEEDER BF0415T

Technical Data

Reception unit – General Dimensions: -	
Material Feeder Type	MF0415
Design	Deflected Chassis
Length between shaft centres.	8 metres
Length Loading Section.	3 metres
Angle Loading Section	0 degrees
Length Inclined Discharge Section	5 metres
Angle Inclined Discharge Section	25 degrees
Feeder Body Fabrication	6.0 mm steel plates
Feeder Entry Design	Folding Flared
Feeder Entry Width	4.5 meters
Feeder Entry Construction	6 mm steel plates.
Design Average Material Bed Depth	1.0 metres.
Conveyor Belt width.	2.2 metres
Conveyor Chain Specification.	450kN.
Conveyor Belt support slat design.	Double
Feeder Drive gear Reference.	Shaft mounted Gear unit.
Material Density for Load Calculation	1.6 tonnes per cubic metre
Design Volumetric Capacity	19.8 cubic metres
Design Volumetric Output Rate	625 cubic metres per hour.
Design Maximum Output Rate	1000 tonnes per hour.
Bed Depth at the Samson Discharge	750 mm.
Design Belt Speed	8.48 metres per minute

Radial Outloading Boom Specification: -	
Conveyor boom centres.	15.0 metres.
Conveyor belt width.	1000-mm.
Conveyor belt type.	25.0-mm Chevron Cleated.
Design belt speed.	Variable to 3.0 mps.
Drive type.	Direct coupled hydraulic motor.
Feed section design.	Troughed.
Idler diameter.	102mm.
Idler pitch.	1200 and 2400-mm.

Travel System: -	
Mobility design.	Fully Self-propelled Travel
Under gear design.	Steel Growser Track units.
Mobility Drive type.	Hydraulic motor.
Travel Speed.	2.2 metres per minute
Reception unit luffing actuator.	Hydraulic cylinder.
Fuel Consumption (Full load)	28 l/hr.

Process Instrumentation: -	
Reception unit Belt Rotation Sensor	Included
Discharge Boom Belt Rotation Sensor	Included
Transfer point Blockage Detector	Tilt Switch

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Technical Data

Slewing and Luffing system: -	
Boom Luffing range.	Variable from 2° to 30°.
Designed working angle.	25°.
Maximum discharge height.	7.1 metres. (20m Boom – 8m)
Slewing range.	Plus/minus 65°.
Maximum operating arc length.	15.0 metres.
Luffing actuator.	Hydraulic cylinder.
Slewing actuator.	Hydraulic cylinder.
Luffing and slewing control valve.	Manual.

Standard Paint Finish	
Surface Preparation	Blasting to SA 2.5
Single Coat Finish	Primer Only
Dry Film Thickness	40 microns

Paint Finish - Code 2.	
Surface Preparation	Blasting to SA 2.5
Coating Manufacturer	International.
Primer - Alkyd	Interprime 466 - 80 microns
Finish Coat - Alkyd	Interlac 665 - 40 microns
Machine Body Colour	RAL 5015 (Blue)
Guards	Red.
Total Dry Film Thickness	120 microns

Instrumentation and Controls: -	
Emergency stop buttons at Samson entry.	Two number Included.
Electrical main cabinet.	Mounted to machine chassis.
Protection fuses.	Within control panel.
Key motor stop/start.	On control panel.
Press button slewing Left/Right.	On control panel.
Press button luffing Raise/Lower.	On control panel.
Press button Travel Left/Right.	Umbilical Remote control.
Press button Travel Forwards/Reverse.	Umbilical Remote control.
Reception unit Luffing control.	Manual Valve

Hydraulic System Specification: -	
Selected Duty Cycle	2000 Running Hours per year
Prime mover type.	Diesel Engine
Model.	CAT C4.4.
Horse Power.	134 HP.
Rated Power.	100kW.
Hydraulic pump design.	Tandem pump Assembly.
Control valves type.	Cetop Valves
Hydraulic oil cooler.	Air Blast type.
Hydraulic oil filtration.	Full protection to all circuits.

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Control Equipment



PLC Control System specially designed for mobile equipment. Complete with screen display for diagnostics



Valve Blocks & Levers controlling;

- Outrigger reach
- Outrigger plant
- Apron luff
- Boom fold



Full compliance Emergency Stops;

- Control Panel box
- Front left entry section
- Rear left entry section
- Rear right entry section
- Radio remote

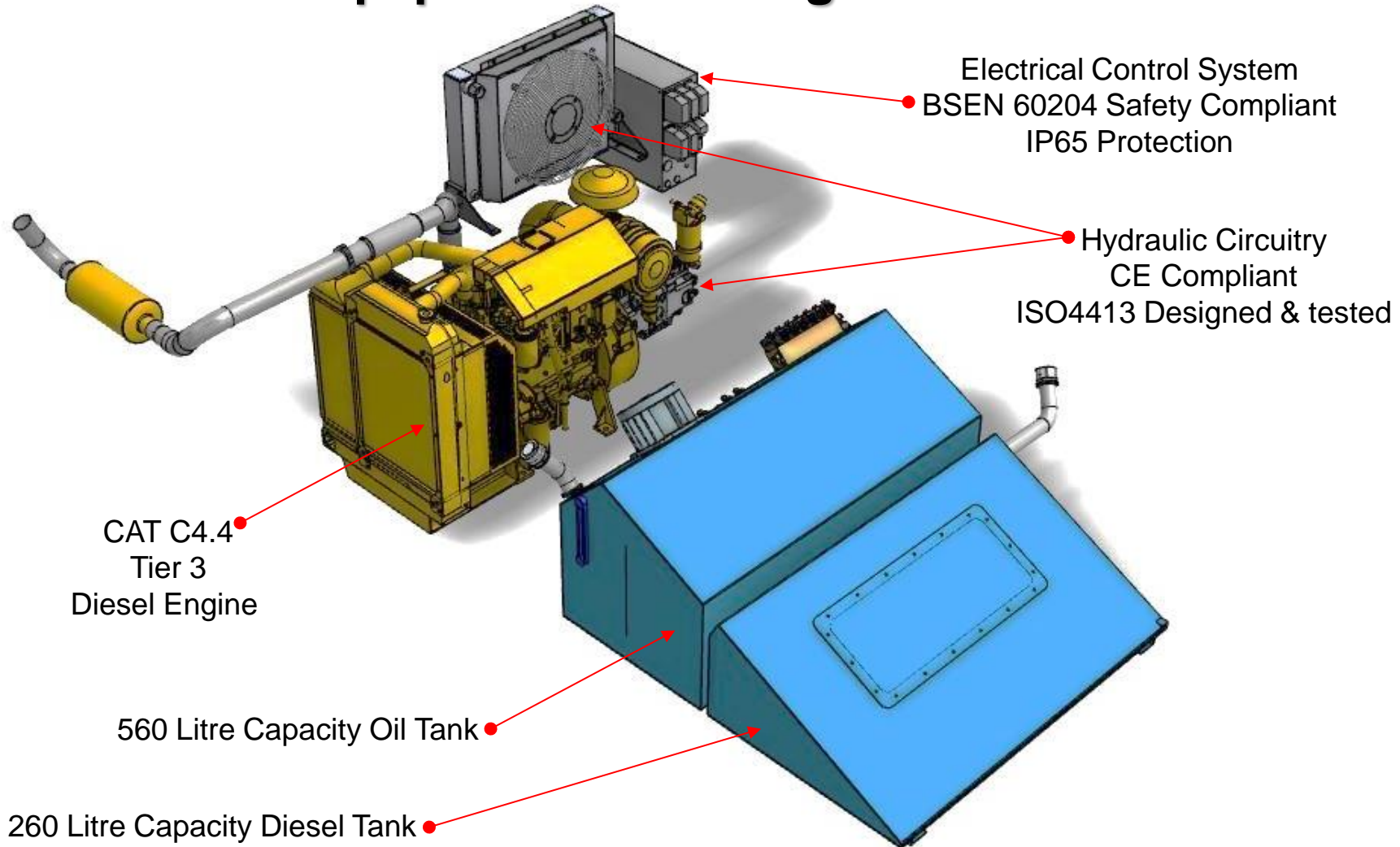
Emergency pull cords are also located on each side of the boom (4 total)

6m 'Dog lead' remote control



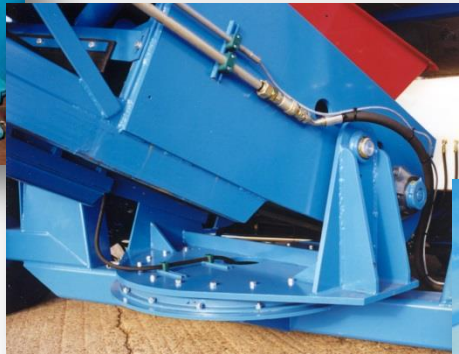
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Control Equipment: Powering the Machine



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Ease of Maintenance



Maintenance Frequency

- ✎ Weekly
- ✎ Monthly
- ✎ Three Monthly

Maintenance Points Easily Accessible;

- ✎ Engine Checks
- ✎ Hydraulic Equipment Checks
- ✎ Fluid Levels
- ✎ Mechanical Checks
- ✎ Lubrication Points
- ✎ Safety Checks



Dedicated to providing the most comprehensive range of mobile solutions for bulk materials handling in Ports and Terminals, Mining, Environmental, Cement, Foodstuffs, Agriculture and Power.

Built around the unique concept of the Samson™ Material Feeder, SAMSON Materials Handling offer flexibility, reliability, quality, and industry leading performance from truck intake right through to mobile stacking and ship loading solution.

Product specification and dimensions are subject to change without notice or obligation. The photographs and/or drawings are for illustrative purposes only. Refer to SAMSON Operators Manual for instructions on the proper use of this equipment. © 24/06/13 (REV03) by SAMSON Materials Handling Ltd. All rights reserved.

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