



MERLO ROTO TELEHANDLERS



SCOTTISH HOUSE BUILDERS
HEALTH & SAFETY FORUM

JARVIE PLANT LTD

WM W M ROSE & SONS LTD

Presented by: Alan Rose





WHERE DOES A MERLO FIT INTO THE SITE

The Merlo is the all in 1 Machine

- Telescopic Handler
- Crane
- Access Platform
- Pick and Carry
- Unload a lorry on site

**The Roto is the
Swiss army on site**





A truly versatile machine that can be operated in
3 Different Ways

Cab



From a platform



Radio Control





HEALTH & SAFETY BENEFITS



Live Load Charts

Remote Control

Auto Jack Legs

Tilting Cab

Attachment
recognition tags

Camera's

Zero Tail Swing

Ground pressure on
jack legs





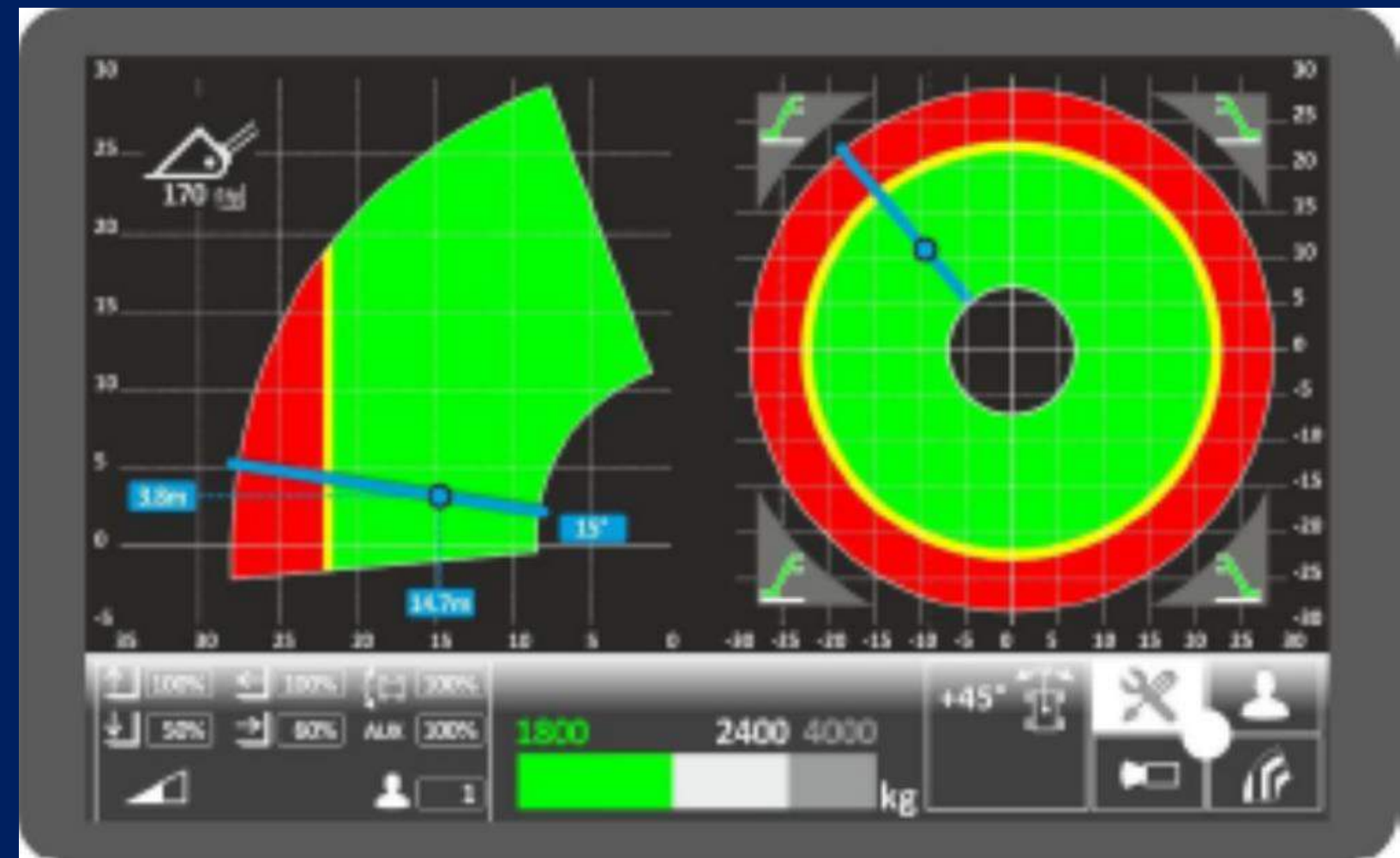
LIVE LOAD CHARTS



This system will recognise the attachment that the machine has picked up and set the load chart to the machine.

If a 600KG fly jib is fitted to the machine, the attachment will set the lift capacity to 600KG and no more.

If the auto jack leg button is used, then the machine will set all the jack legs out to 100%. So a full working load chart.





LIVE LOAD CHARTS

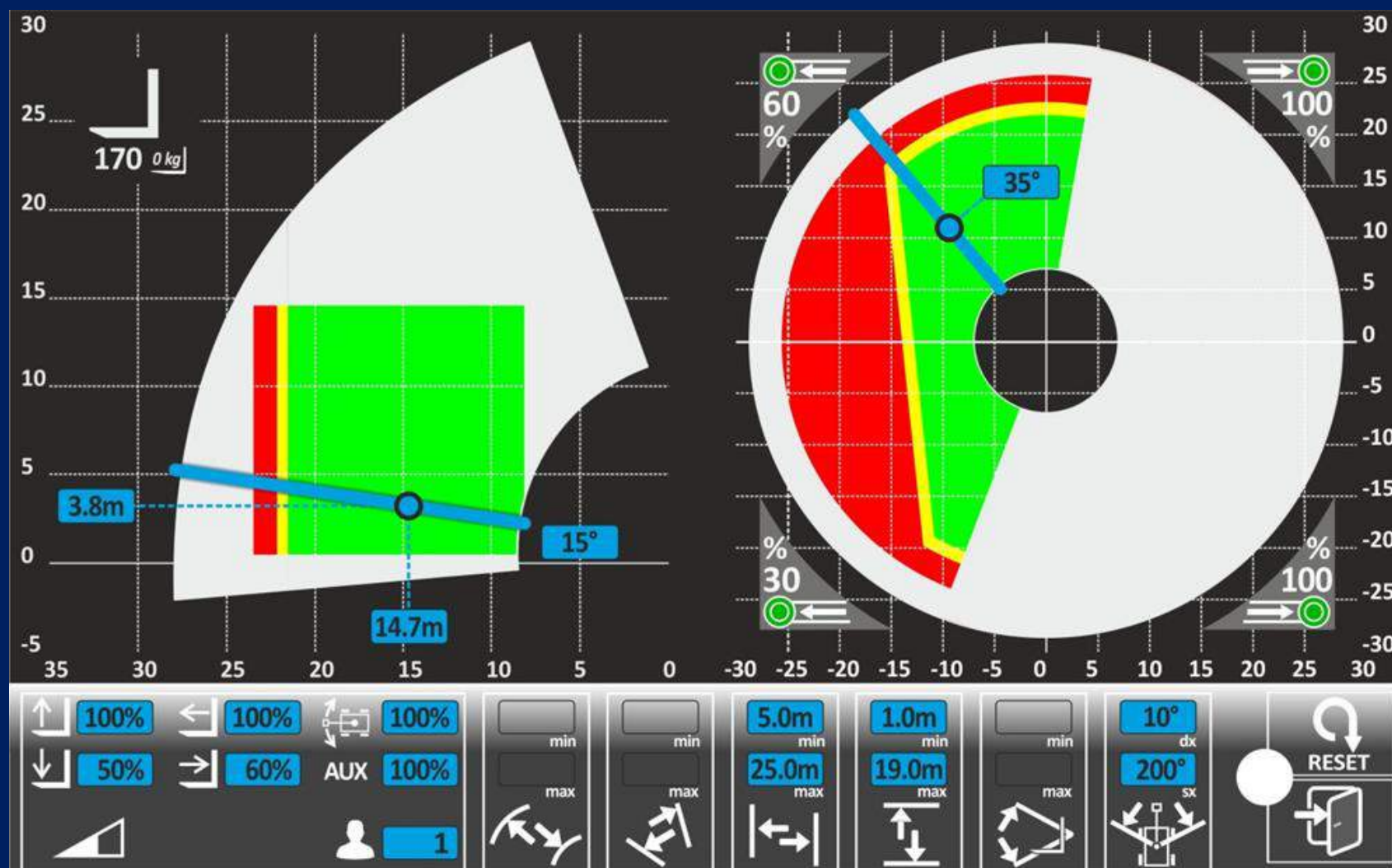


It is possible to set a work area,
managing the limits within which the
boom can operate:

Extension Limit

Lift Limit

Rotation Limit



Customer Advantages:

- Greater speed of use and management of the machine.

- Greater operating comfort for repetitive operations

- Increased safety when working in hazardous environments



ASCS SYSTEM



The ASCS system allows the operator to set the speed of the hydraulic movements and to manage the geometric limits within which the boom can be operated in complete safety. There are even up to 6 different setups available.



In the event of blocking of movements, a pop-up shows the customer the movements that can still be carried out, in order to simplify the information to the operator.

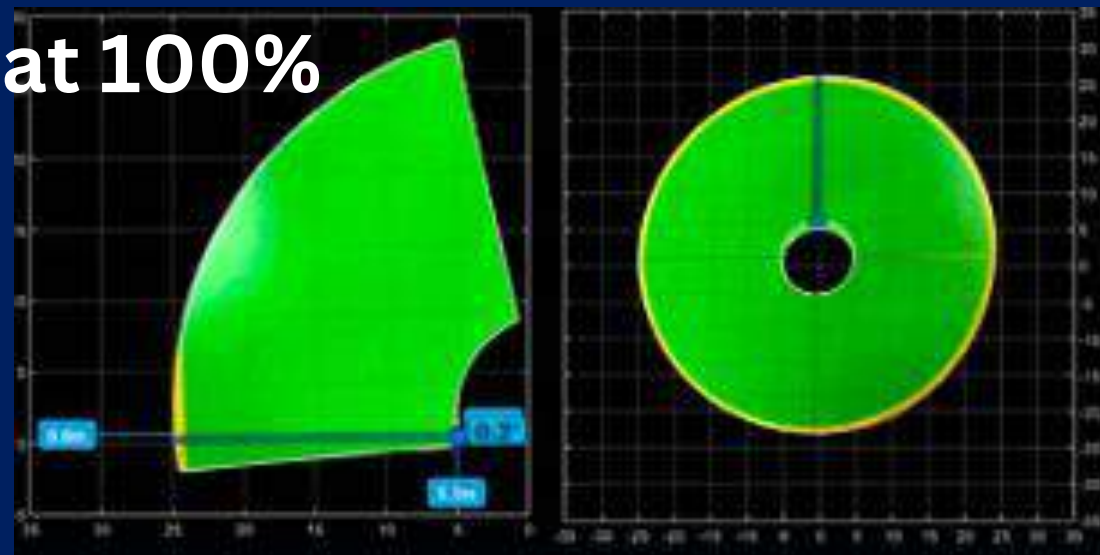


STABILISERS

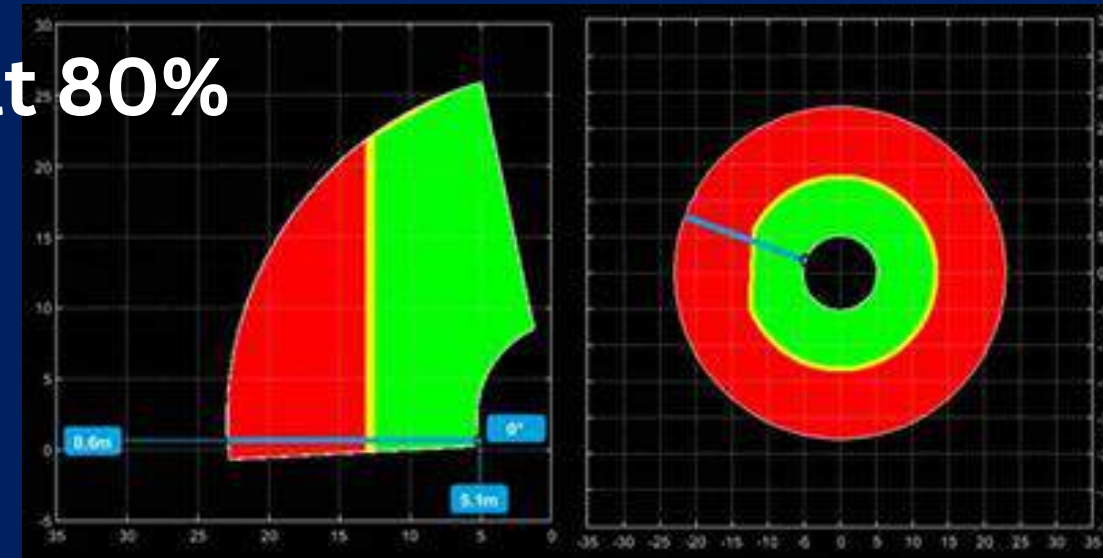


The work area will automatically vary based on the position of each stabiliser.

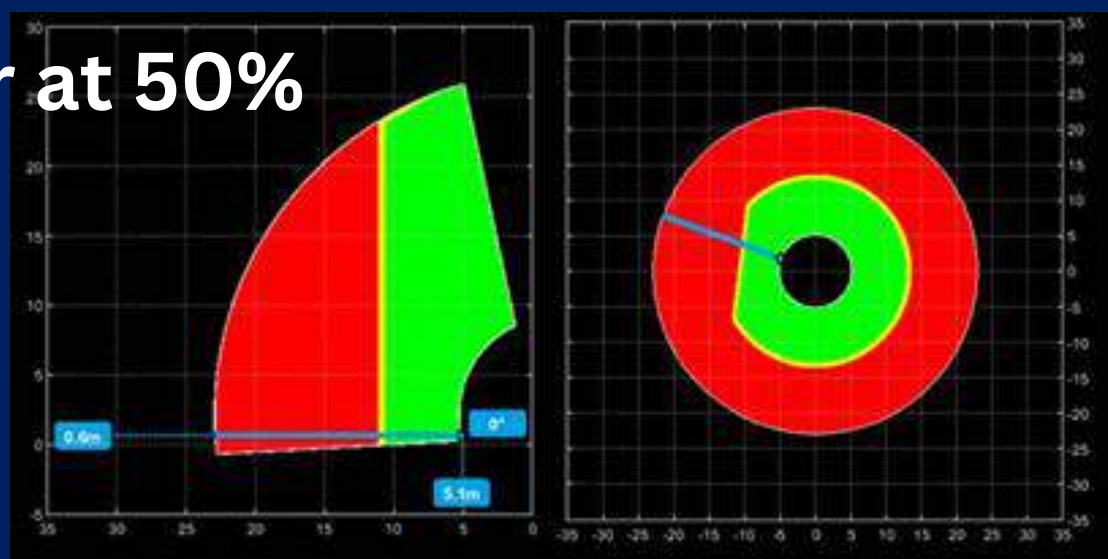
Stabiliser at 100%



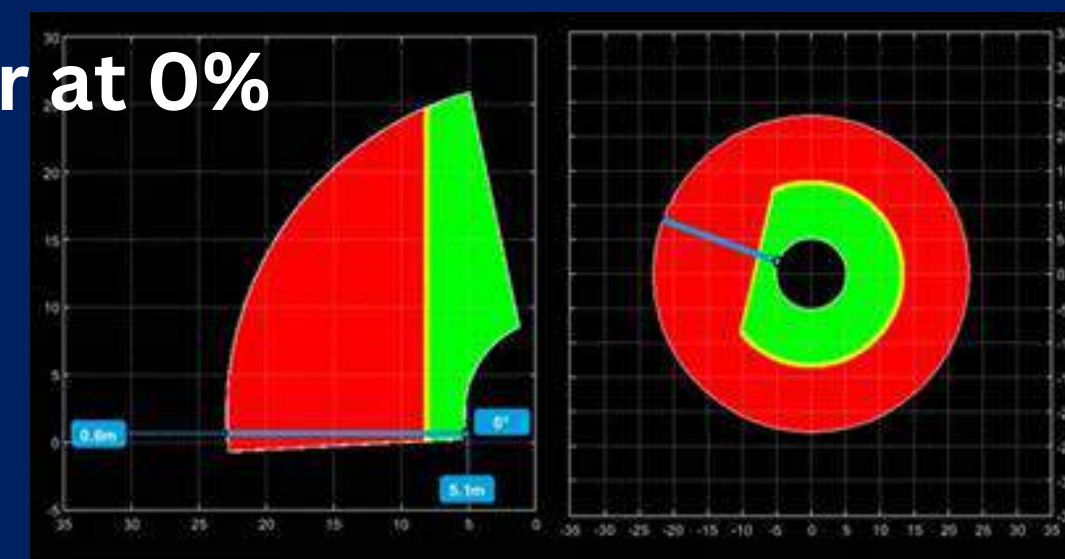
Stabiliser at 80%



Stabiliser at 50%



Stabiliser at 0%



Customer Benefits:

More Performance

Greater operational
safety

Greater machine
versatility

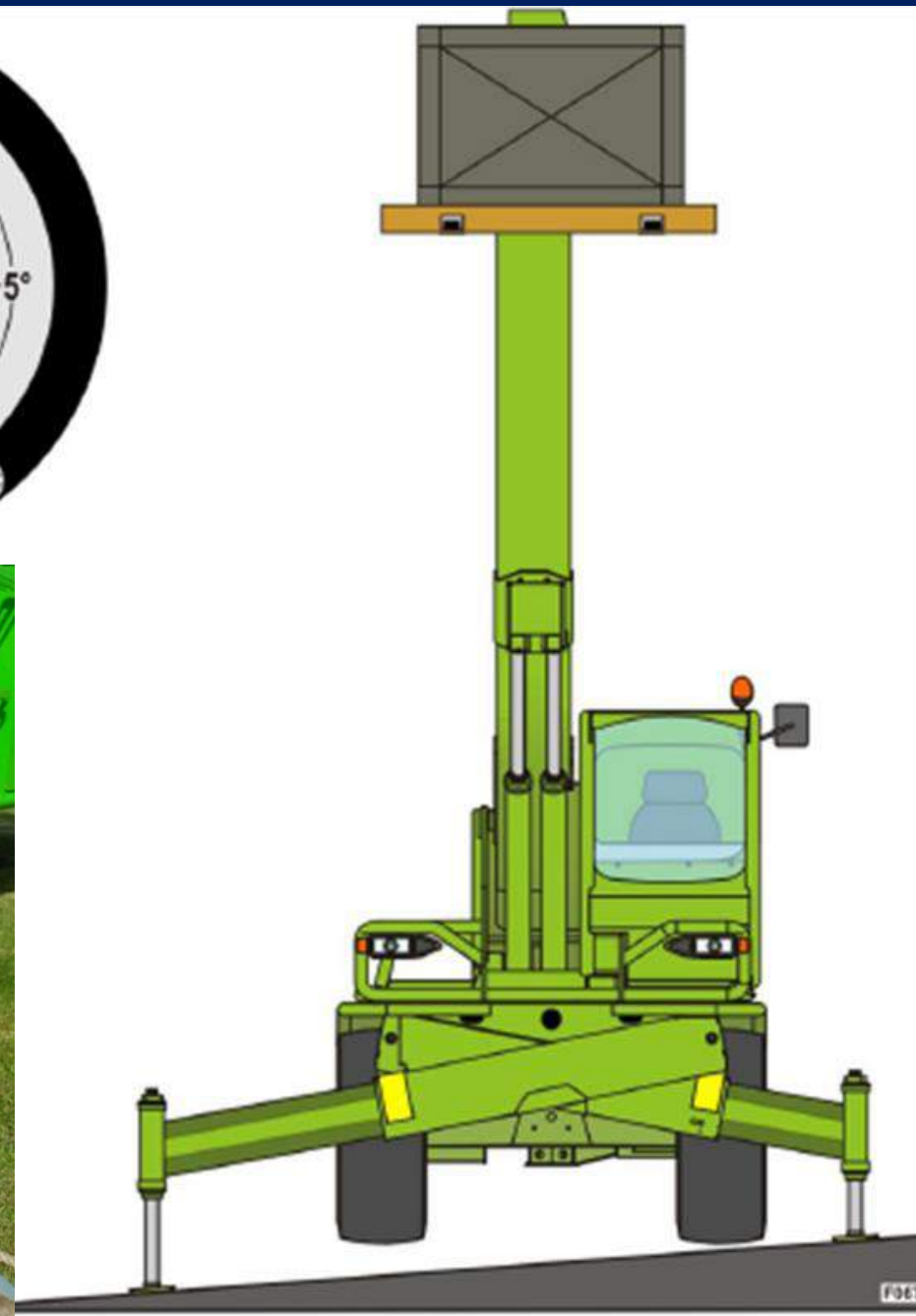
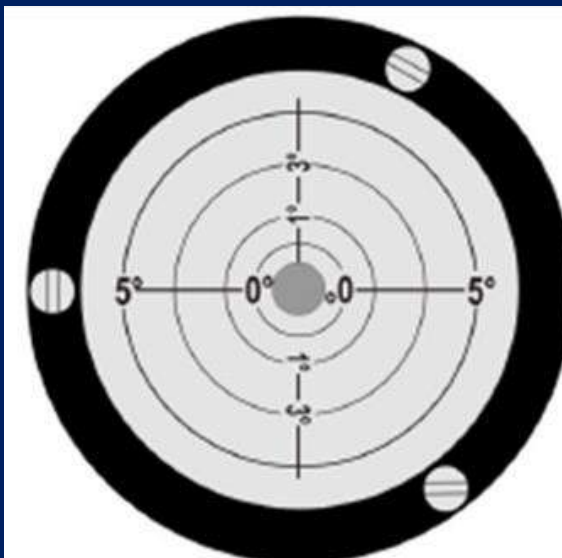


JACK LEGS

Automatic or Manual



- Fantastic levelling capabilities on stabilisers.
- Can be positioned at any width!
- Automatic or Manual setup





JACK LEGS



When lowering the stabilizers automatically the machine goes through a specific process:



- Axle suspension is raised to give maximum ground clearance for stabilizers to extend freely
- Stabilizers are extended fully for best stabilization.
- Suspensions are lowered to allow full travel of lowering rams if required.
- Lowering rams are activated to lift the wheels from the ground and the machine is Automatically Levelled



STABILISER



The ROTO machines with «multi-position» stabilisers are equipped as standard with plates to increase the support surface, reducing ground pressure. Ideal for working on softer ground.





REMOTE CONTROL



The Remote control box can be used as a control box for aerial work platforms and or for remote control use.

In cab charging point as standard.

Customer Benefits:

- Easier to use
- Greater precision in movements thanks to potentiometers
- Operator can be standing near the drop site to position the load where they want it. Rather than doing a blind lift.





DYNAMIC LOAD CONTROL SYSTEM



This feature is a safety device that is activated when the vehicle is approaching the permitted stability limit and blocks all movements of the boom, except from retraction

The operator is informed by the proportional illumination of the stability indicator in the cab:

Green lights - the machine is within the permitted limits

Yellow lights – the machine is approaching the permitted limits. Intermittent buzzer activated in the cab. Reduced hydraulic speeds.

Red lights – the machine has reached the permitted limits. All machine movements are blocked. Continuous buzzer. Light on the control panel is on.



This System is also on the outside on the machine to show other site workers the machine is working within its limits



MERLO ROTO CAB



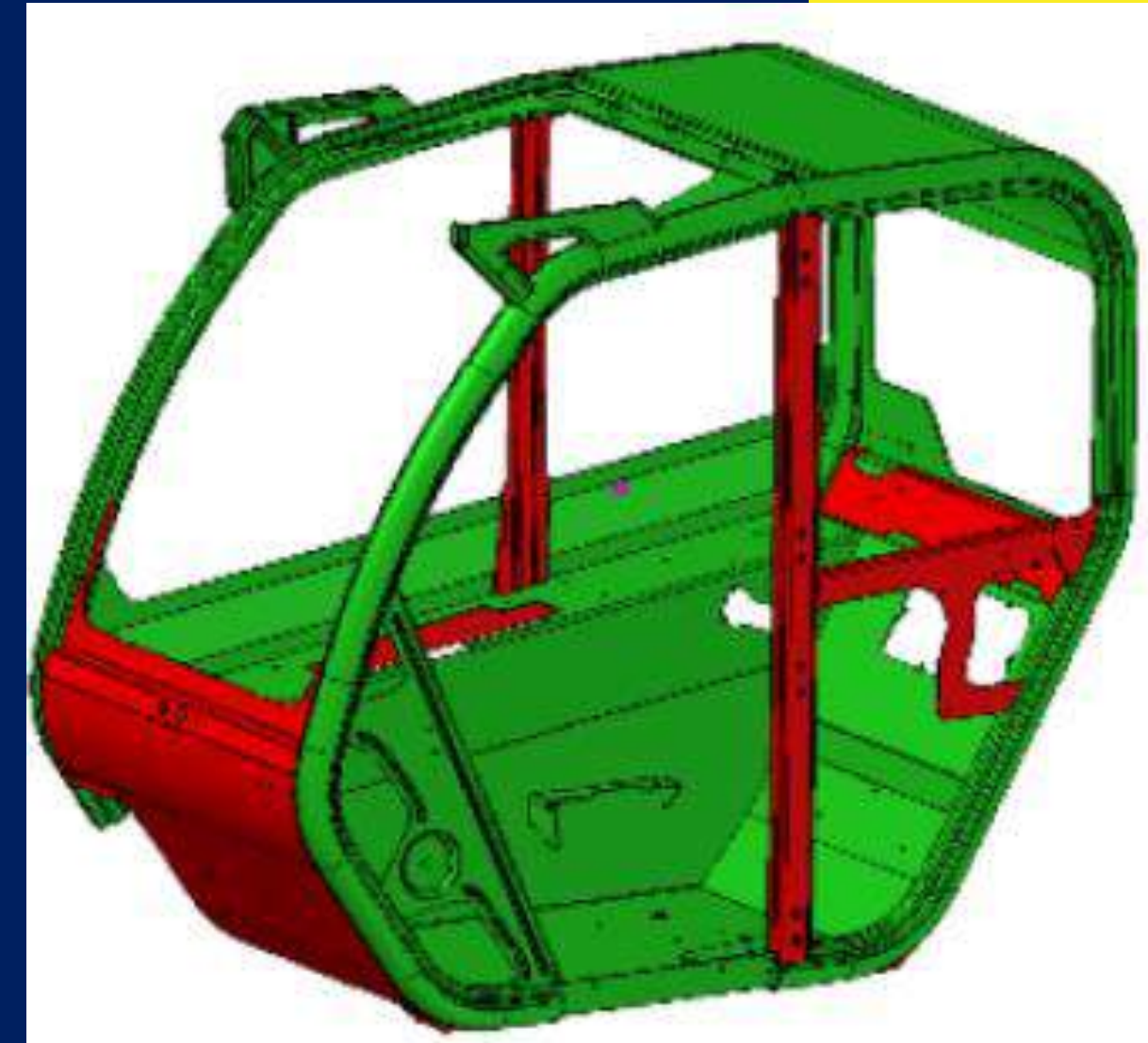
- FOPS (lev. II) with external windscreen protection and ROPS

- 4.3 m2 of glazed surface for brightness and visibility

- 1010 mm of width for operator comfort

- Windscreen and rear window wipers as standard

- Pressurized, according to ISO 10263-3



The new Roto machines have a structurally reinforced cab with an additional right side upright. This ensures ROPS protection on all models.



MERLO ROTO CAB



The machine is equipped as standard with a cab tilting device, which allows it to be raised by 20° to guarantee the visibility of the load in all circumstances.

Customer Benefits:

- Best operating comfort for the customer
- Greater visibility of the load during operation
- Easy to use

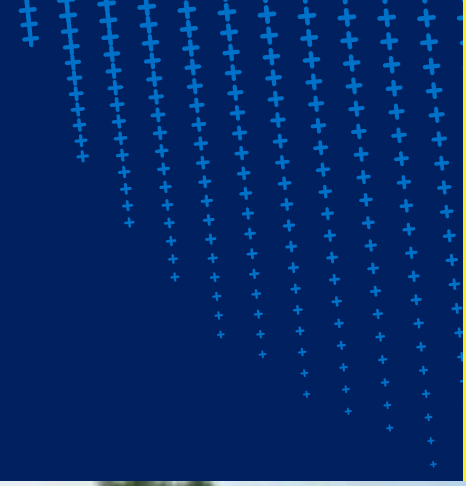
Upper protection grid outside the cab. It guarantees FOPS II level protection. It can be removed for cleaning the glass roof.





MERLO ROTO CAB

Great 360-degree visibility





ATTACHMENT SENSORS



A recognition sensor is mounted on all the attachments produced by TreEmme and on all machine carriages of the ROTO range.



Once the attachment is detected, the machine automatically sets the load chart of the attachment to protect the safety of the attachment and machine.



ATTACHMENTS

make the machine



These all have a Tag which links to the machine and sets the Load chart. So a 600kg fly jib will make the load chart up to lift 600kg and no more.

Hooks

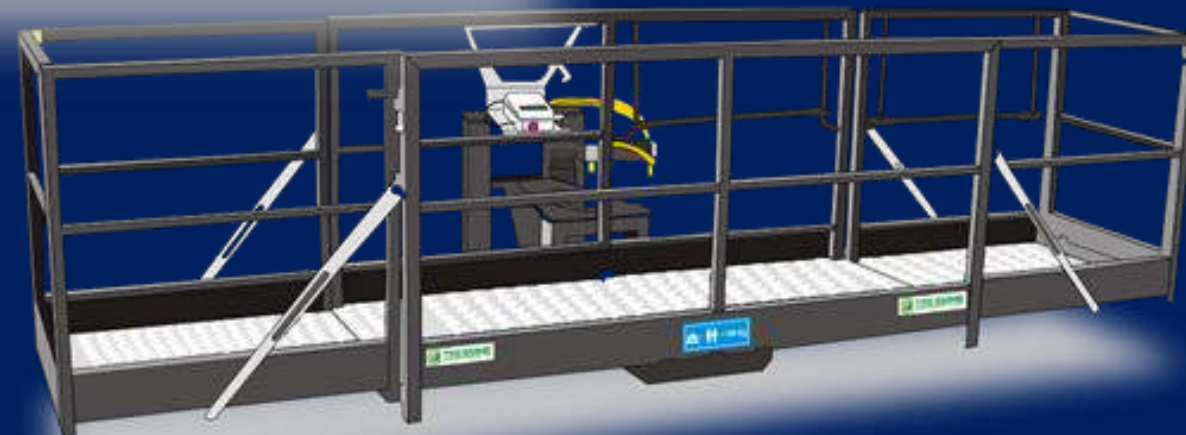
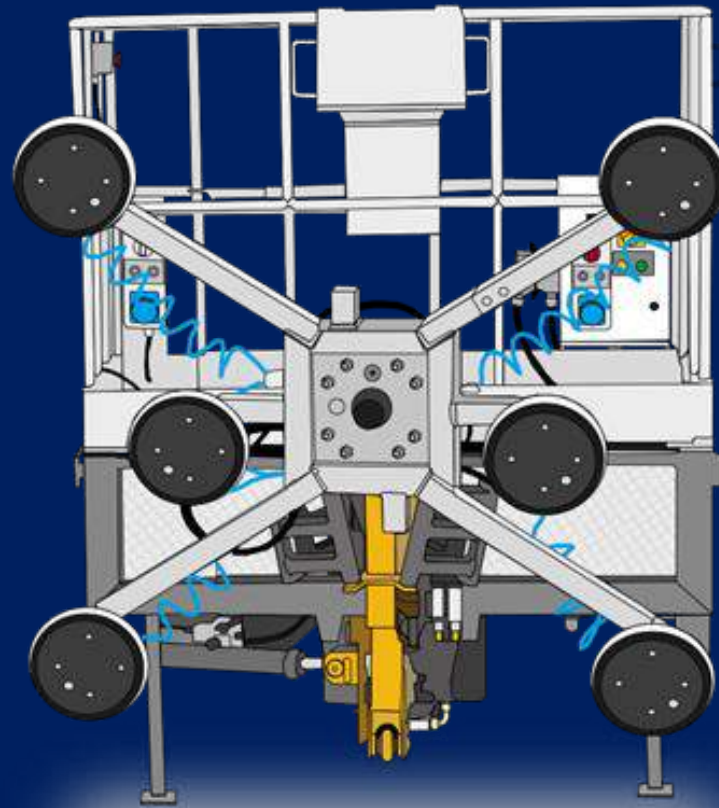
Winch

Lifting Boom

Baskets

3D Platform

Fly Jibs



- EN15000 is the specific European Standard that deals with the stability part of the standard for telescopic handler EN1459.
- This means that the machine must be able to recognise when it is approaching the pre determined stability limit of the machine.
- Past this point, the machine could be subject to tipping forward, therefore causing further repercussions.
- This applies to all manufacturers of telescopic handlers





EN15000

Roto – three machines in one



Telescopic handler



Crane



Access platform



Standard Telescopic handler has to meet EN1459

Mobile telescopic crane standard EN 13000 up dated in 2014

Mobile elevated work platforms EN280 up dated in 2022

For all Standard telescopic handler stability also EN15000

The roto meets the safety standards of EN13000 but because it has also to meet telescopic handler EN 1459 the Roto exceeds this standard – for example the cab

Roto meets this standard but Merlo would argue that the Roto is much safer as you cannot use it as an access platform until the stabilisers are deployed. Most Mobile elevated work platforms can be driven at height

Roto cab – meets ROPS and FOPS for extra protection for the operator, Crane cab – similar construction to an HGV cab with little protection

Outstanding Roto performance of 800Kgs to 32 metres working height with a out reach of 44 metres



MERLO HYBRID



● Plug and Operate Merlo Roto

● Drive onto site using the Diesel engine

● Jack legs down

● Plug into 3 phase Electric supply

● And run the machine

● Green Machine





QUESTIONS



THANK YOU