

# RTH RANGE COLLECTION





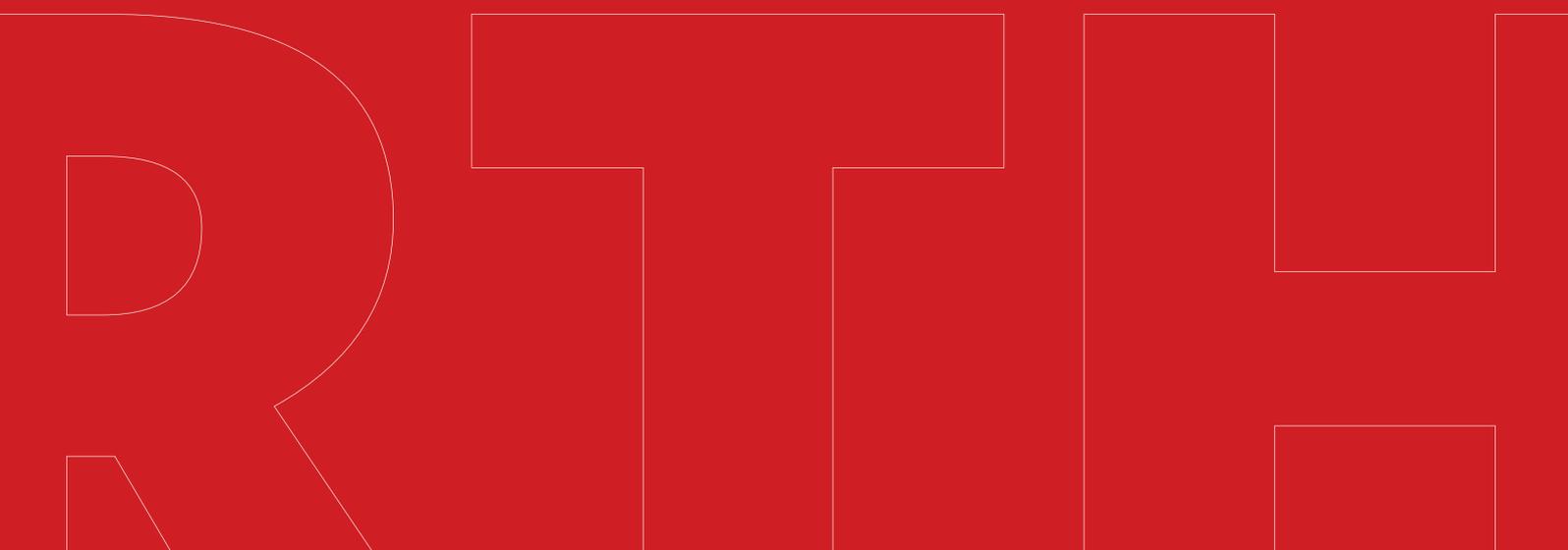


**Quality, craftsmanship and innovation.  
The secret lies in precision. Having clear ideas is vital:  
we need to know where we want to go and what we want to create.  
And at Magni, we throw our all into accomplishing it.**

**Riccardo Magni – President**

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Magni Telescopic Handlers was founded in 2013. Thus began the development of the widest range of telescopic handlers on the market; from rotating telescopic handlers to fixed, heavy-duty models and fixed-boom construction telescopic handlers. Italy was no longer enough and so six further branches have been set up: Magni TH France, Magni UK, Magni America, Magni Deutschland, Magni SA and Magni Asia Pacific. To offer our clients the best technical and commercial service around, we have created a network of over 300 dealers, a number that is constantly increasing. And that is just the beginning of our story.



# MAGNI: EXPERIENCE, RELIABILITY AND VERSATILITY

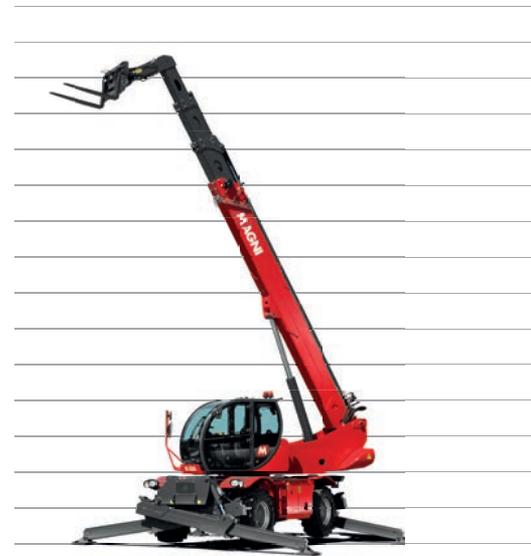
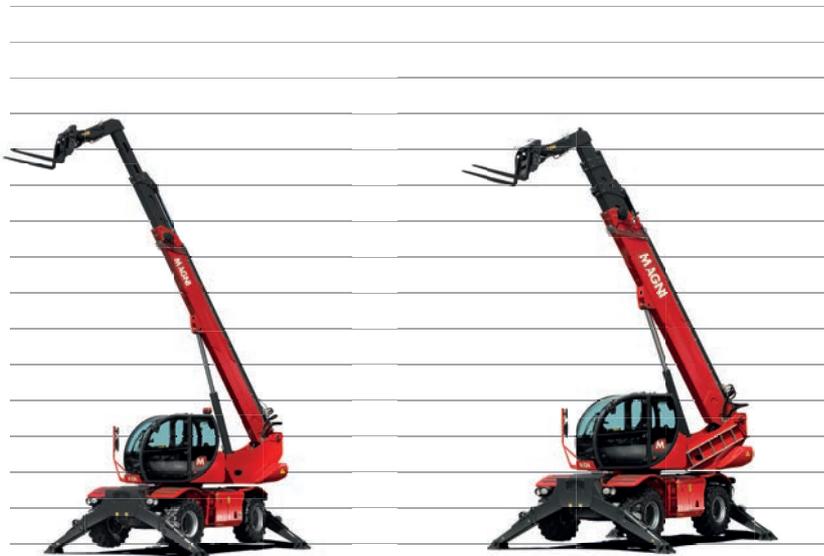
The RTH range is the result of years of experience and research in the field of rotating telescopic handlers. It reflects and satisfies the needs of our customers and their requirement for reliability and performance. The RTH range is built to adapt to any worksite and

operate in maximum safety, guaranteeing the best lifting performance under any conditions. The 360° rotating turret and its great versatility makes our RTH range the perfect choice to maximise efficiency by having just one machine able to carry



3 machines in 1

TELESCOPIC HANDLER  
OFF-ROAD CRANE  
AERIAL WORK PLATFORM



RTH  
4.18

RTH  
5.18

RTH  
5.21

RTH  
5.23

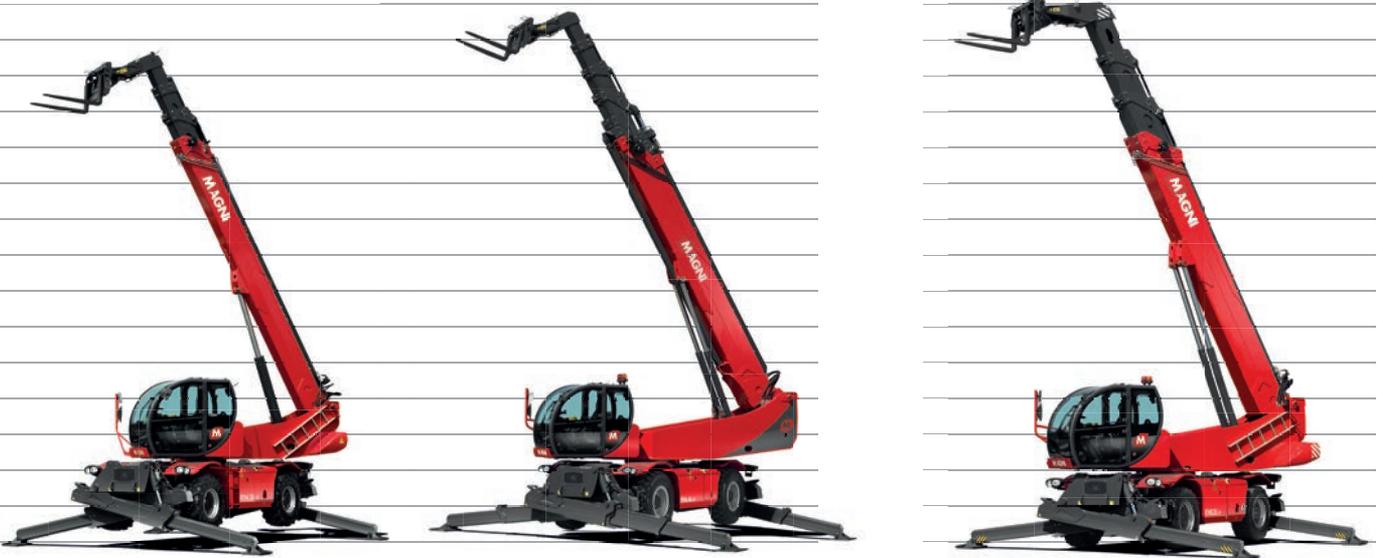
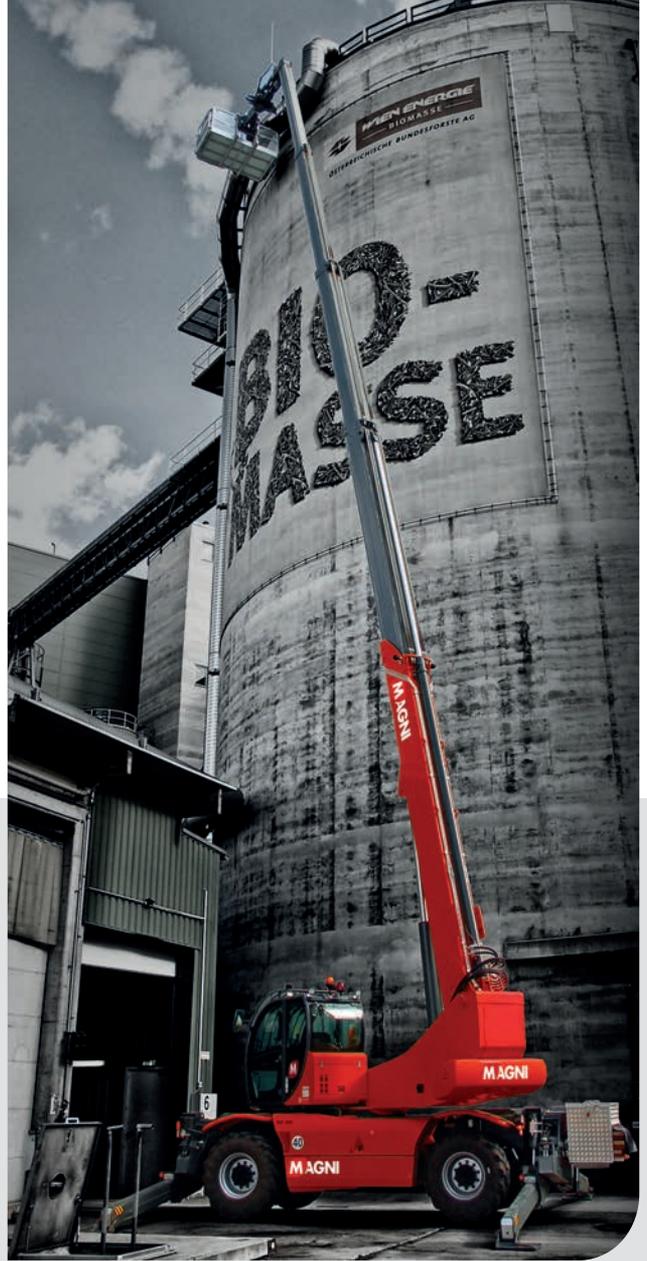
RTH  
5.25

RTH  
6.21

RTH  
6.23

RTH  
6.25

out more tasks. Thanks to a wide range of available attachments (forks, hooks, jibs, platforms and more), and an R.F.ID automatic attachment recognition system for safe pairing, the utmost versatility is always guaranteed with Magni RTH.



RTH  
6.30

RTH  
6.35

RTH  
6.39

RTH  
6.46

RTH  
6.51

RTH  
7.26

RTH  
8.25

RTH  
13.26

# COMFORT CAB

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**REGISTERED CAB  
WITH FULL VISIBILITY**

The innovative design of Magni's cabs ensures unbeatable operator comfort and safety. The cab has **full visibility** thanks to a large windscreen which extends from the operator's head to their feet, allowing them to view the load even when it is suspended overhead or with the boom completely lowered.



**FOPS/ROPS  
PRESSURISED CAB**

The cab is **FOPS/ROPS** certified and equipped with an upper grill guard to guarantee operator safety even during the most delicate operations. The cabin is also airtight and fully pressurised, to ensure a safe working environment for the operator at all times.





## HEATING AIR-CONDITIONING

Our RTH range can be used in any part of the world, from Siberia to the African deserts. All machines in the RTH range are therefore equipped as standard with a **heating and air conditioning** system. (Except RTH 4.18)



## 100% AIR FILTRATION

Magni machines feature **100% air filtration**. This feature, which is standard on all RTH models, enables the machines to be used even in polluted or contaminated environments. You simply need to change the filter according to your requirements.



## ADJUSTABLE STEERING COLUMN

Achieving the most **comfortable and ergonomic driving position** is essential while working. The Magni RTH cab allows you to easily adjust the steering wheel to the most ergonomic and comfortable position. Nevertheless, when the column is straight, you can effortlessly access the cab. The seat can also be moved forwards and backwards to achieve the perfect support for your back.



## MUG HOLDER

Recently added to the cab, you will now find a **mug holder**. This is a big hit with operators, allowing them to enjoy their morning coffee or other beverages during their breaks. The cab also features a USB port as standard, ideal for charging tablets and smartphones.



# CONTROL PANEL

## STANDARD TOUCHSCREEN

All Magni models from 4 to 5 ton capacity are equipped with a 7" touchscreen display. The machine management software installed on the touchscreen gathers all usage data and displays them conveniently over five different pages. Navigating between these pages is extremely easy and intuitive, even for less expert users.

## XL TOUCHSCREEN

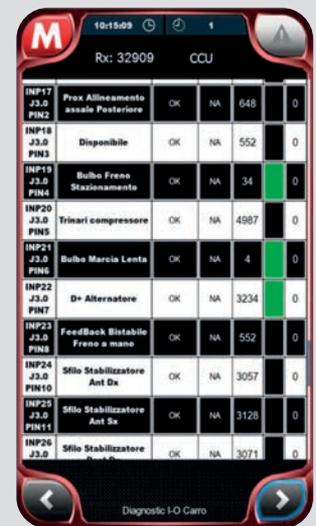
The cabs of models with 6, 7, 8, 13 ton capacity feature a larger touchscreen (10"). The Linux operating system used is faster and more fluid when navigating between pages, even during prolonged use. The larger display offers greater legibility of the load charts. In these models, the touchscreen features updated software which is even easier to use, offering the greatest possible intuitiveness for all operations.

## MAGNI CONTROL PANEL

The user-friendly touchscreen display is used to manage the whole machine: it is extremely intuitive, and communicates with the operator via more than 170 written fault messages in 12 different languages. The touchscreen can also be managed via a joystick. The stabilisers and auto-levelling can also be managed via dedicated buttons.

## INTEGRATED DIAGNOSTICS

Fast and simple troubleshooting of electrical and electronically managed components allows for reductions in machine downtime. When a fault is detected, the system automatically shuts off any movement likely to worsen the fault and displays an alarm code which identifies the fault type.





# CONTROL PANEL



The Magni Combi Touch System is a brand new concept in machine management; it is easy to use for both expert and new operators, thanks to its icon-based design which makes it highly intuitive. The system is divided into 5 main pages, each one dedicated to different functions. Each page can also be easily brought up via a specific button on the joystick.



1



## DRIVE PAGE

All data on the transmission and its components are shown in the upper section, just like a traditional instrument cluster, whereas the lower section allows the driver to select the type of steering. This selection is facilitated by the presence of two alignment sensors. It is also possible to set the speed (tortoise/hare).

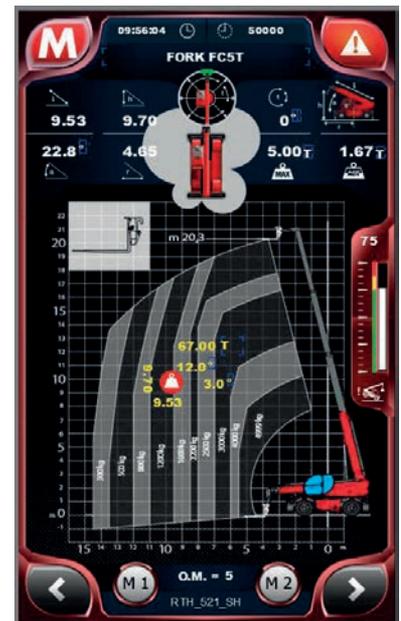
2



## STABILISATION PAGE

The RTH range has an interactive stabilisation area: each stabiliser automatically recognises its extension. Based on this data, the software provides the operator with a progressive load chart, which increases as the length of the stabiliser increases, so that the machine always has the best chart. The RTH range is also equipped with an electronic level for automatic levelling of the stabilisers.

3



## LOAD CHART PAGE

Magni uses the "Load Moment Indicator" system which meets all regulations for cranes. The screen displays a dynamic load chart which allows the operator to keep a constant view of the payload's centre of gravity.

4



### CONTROL PAGE

The upper section is used to manage basic cab commands (such as temperature and ventilation), the middle section is dedicated to the machine lights, while the lower section displays the various available options for switching from the cab controls to remote control.

5



### CUSTOMISATION PAGE

This page displays the limitations for 360° turret rotation and also for the working height. It is also possible to customise the hydraulic speeds for lifting/lowering and extension/retraction of the boom, turret rotation, fork tilting and attachment functions for dangerous or repetitive manoeuvres.

Extra



### VOLVO STAGE V ENGINE DIAGNOSTIC\*

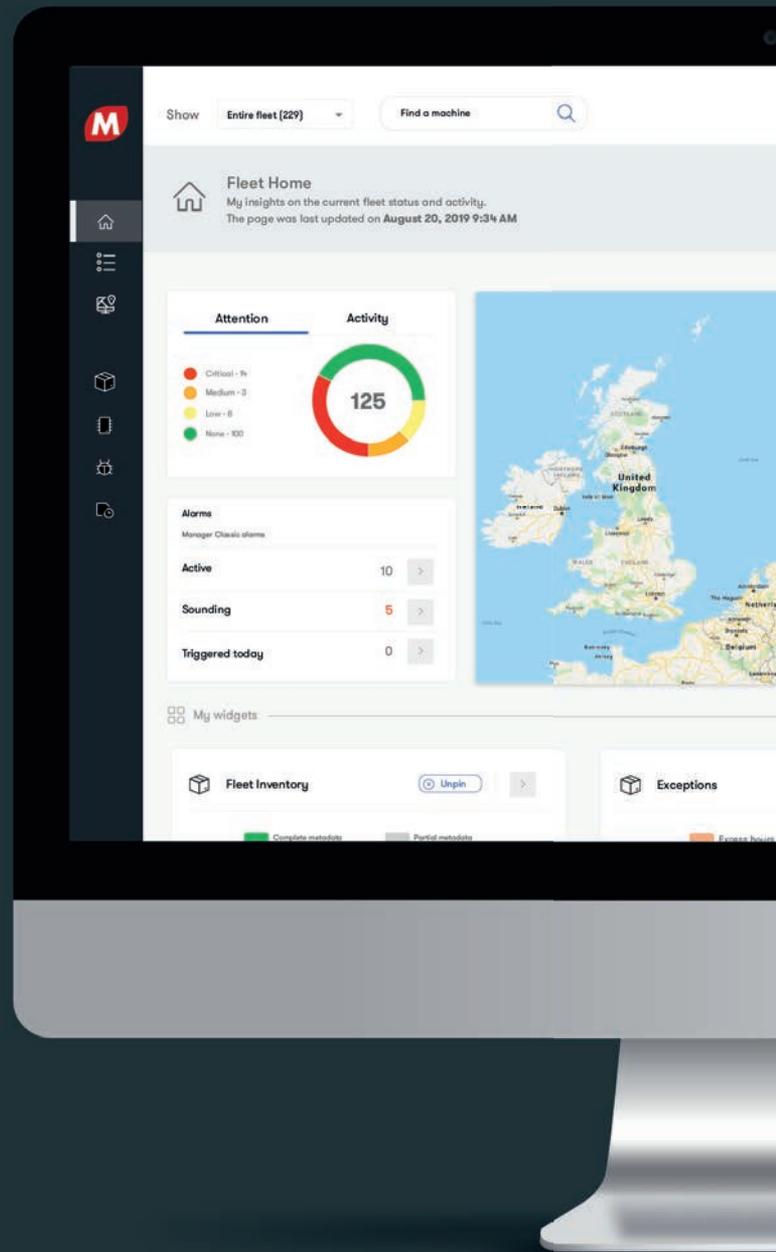
This page is dedicated to the performance of the Volvo Stage V engines. It allows users to check the % blockage of the catalytic converter, and to activate the DPF regeneration procedure directly.

\*Available just for machine equipped with with Volvo Stage V Engine.



## The New Fleet Management

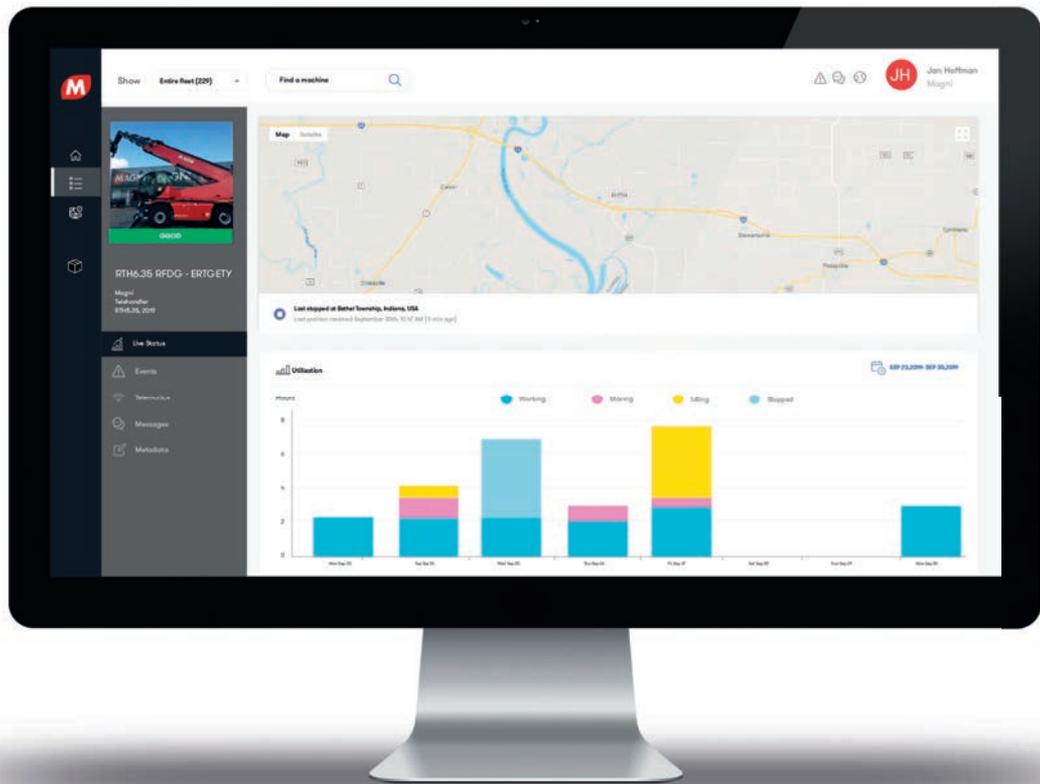
Have your fleet at a fingertip. Enjoy MyMagni free of charge for the first three years on all new machines.



Discover how the new GPS system that Magni Telescopic Handlers fits on each machine can help you manage and monitor your fleet. A total overview that enables you to map and track every movement of your fleet, and displays the most critical items on your dashboard.



**EFFICIENT:** Monitoring of machine hours and service alerts improve maintenance planning. Machine error warnings and maintenance history records are also available. Technical alarms and maintenance data help to keep your fleet running and in perfect condition at all times. Drive down costs and drive up productivity.



## MyMagni Desktop

### FLEET HOME

This page displays the exact position of each unit and its operating status, via a colour legend.

### CLASSIC

This is an embedded section that provides access to standard modules such as reports, servicing, alarms and access control.

### FLEET INVENTORY

Here you can easily segment and chart your fleet, helping you make informed business decisions.

### SEARCH FOR A UNIT

Here you can find all the relevant information, such as geolocation and GPS status, in real time simply by setting the appropriate filters available on the page.

### CAN BUS DATA

This is the landing page where you can check daily usage, CAN BUS data, and even investigate any current active events for all the machines in your fleet.

## TOP FEATURES:

### ENGINE

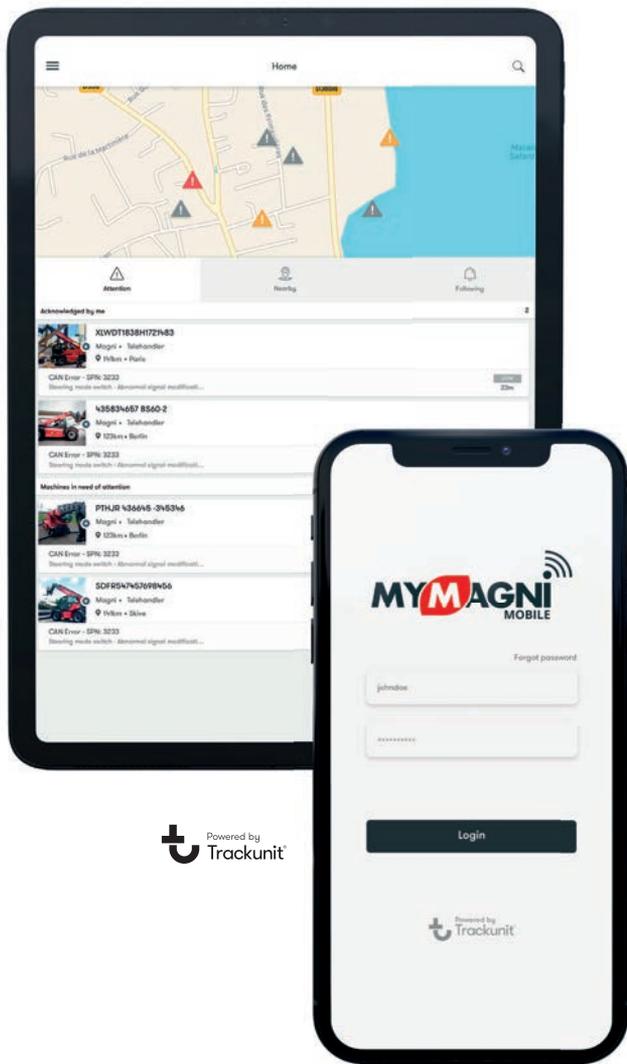


- Engine Hours / Total Vehicle Hours
- Engine Total Fuel Used
- Engine Coolant Temperature
- Engine Oil Temperature
- Engine Oil Level & Pressure

### SAFETY



- Alarm Code Error from LMI
- Machine Alarm SPN
- FMI Error Code of Engine Alarm
- Key Bypass



## MyMagni Mobile

This is a light version designed for mobile fleet management. This app helps you identify machines in need of immediate care, forestalling potential breakdowns. The events engine collects and displays all important machine events such as CAN fault codes, pre-checks and service, damage and even overdue service.

**CHAT: this message centre helps keep track of ongoing communication between you and your customer.** You can also share high-quality pictures and video content.

MyMagni is available on both the Apple Store and Google Play Store. You can stay connected to your fleet with a simple tap of your smartphone's screen. Resolve issues. Limit downtime.

Have fun with the MyMagni Mobile app!



### COMPLIANT WITH:

**CE** - compliant with the RED Directive 2014/53/EU as stated in the EU Declaration of Conformity.

**FCC and IC** - the product contains radio transmitters certified in accordance with the relevant parts of CFR 47 and Industry Canada rules and regulations.

**PTCRB** - certified in accordance with North American Permanent Reference Document 03 for cellular communication and radio resource management protocols.

**Automotive** - E1-certified as an Electronic Sub-Assembly (ESA) for installation in vehicles according to United Nations (UN) R10.

**Environmental class** - environmentally tested for use on heavy trucks (SAE J1455) covering vehicles and off-road machinery. Enclosure protection class: IP67.

### LOAD / BOOM POSITION



- Current boom length & height
- Actual load & current max. load
- Machine load
- Max load capacity
- Boom in motion

### MAINTENANCE

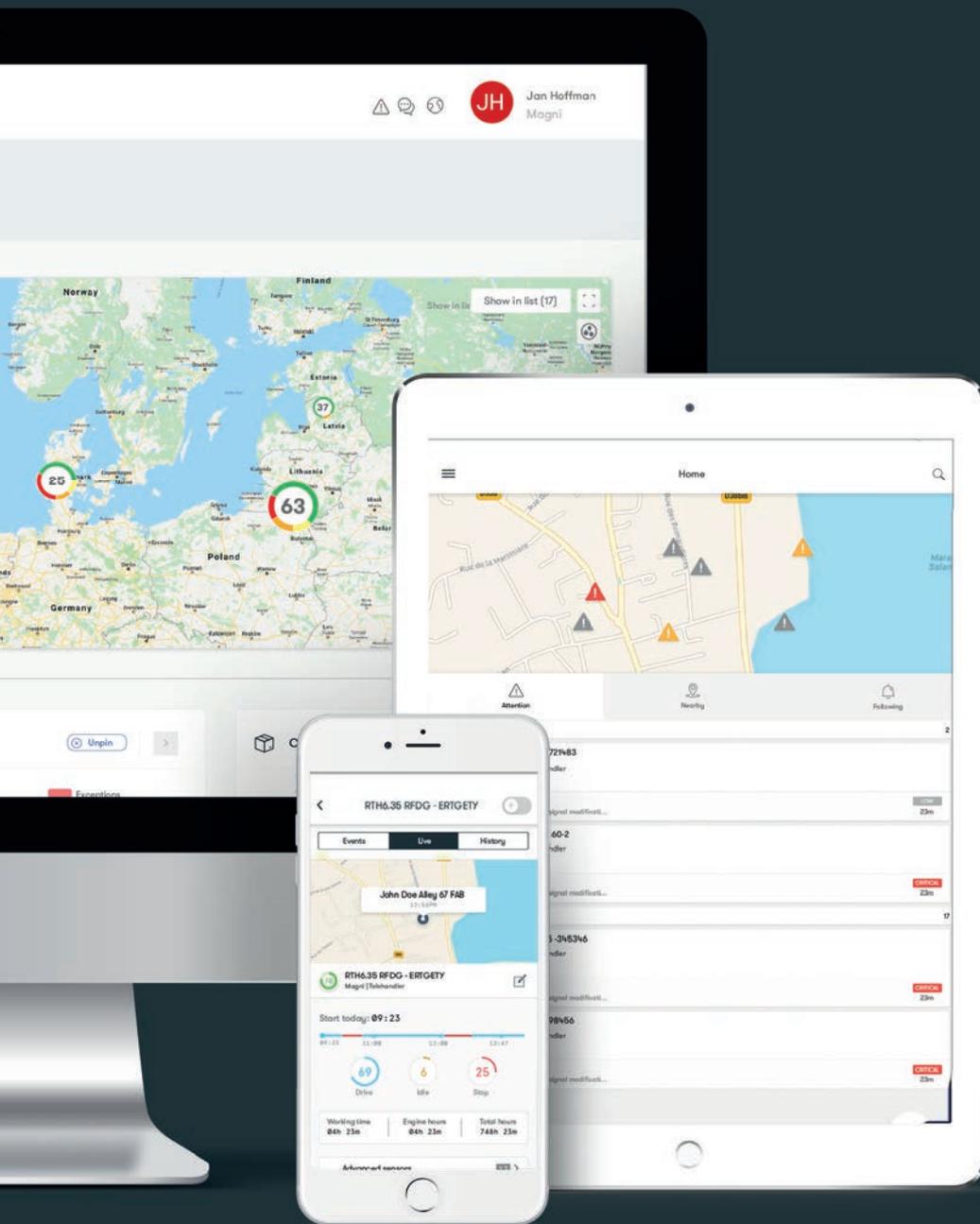


- Schedule your maintenance
- Hours left to maintenance
- Check oil level
- Check filter wear

### MACHINE CHECK-UP



- Vehicle speed and direction
- Gear engaged & DEF level
- Working mode & tool configuration
- Post-treatment diesel exhaust fluid tank level
- Battery voltage



**SMART:** A simple and intuitive interface, optimised for both desktops and portable devices. Each page displays different sets of data, and you can easily navigate between them via a menu. MyMagni allows you to connect to your fleet anywhere in the world.



**SAFE:** Always keep an eye on your fleet. Real-time geo-fence alarms alert you when the machine leaves a specific operating area, and also notify you of unauthorised use of the machine. Real-time curfew and tow alerts also notify you if a machine is switched on or moved illegally. Safety warnings alert you of malfunctions and safety-related defects.

# KEY CHARACTERISTICS

## SAFE, STRONG AND RELIABLE

Our Rotating Telescopic Handler range combines craftsmanship with innovation and technology, to offer high-end performance in each application. Our unique approach to R&D into new products and technologies allows us to constantly develop and improve our range, and offer our customers the best working solutions. The RTH range, a three-in-one machine by nature (forklift, crane and man platform), is the perfect solution for every job site.

## ROTATING COMPONENT BY LIEBHERR

Magni has a partnership with Liebherr's Components Division to supply the rotation technology for our RTH range. All 6-, 7-, 8- and 13-tonne capacity models incorporate this rotation system technology. Magni – always attaining greater heights and precision.



**360° ROTATION**  
(Excluding the 4.18 model)



**MAX. LIFTING CAPACITY:**  
4 to 13 tonnes



**MAX. LIFTING HEIGHT:**  
18 to 51 m



**HORIZONTAL MAX. REACH**  
35 m



**OPTIMUM LIFTING PERFORMANCE**





## WARRANTY

All RTH models feature a 24-month parts and service warranty\*.

The Magni warranty requires your machine to be regularly serviced from new by an authorised Magni dealer.

Our warranty covers any defects attributable to faulty materials or workmanship for a maximum of 2 years or 2,000 machine working hours.

Our Aftersales Team and Spare Parts Department are always ready to support you, every day of the year.



## AUTOMATIC PARKING BRAKE

This function greatly improves the management of the parking brake, making the machine easier and even safer to drive. It can be applied only to machines with engines that meet Stage V specifications.

This function means it is no longer necessary to use the dedicated button on the steering column to engage and disengage the parking brake.

The brake is automatically engaged whenever the vehicle's speed approaches zero, and is disengaged when the FNR is in drive mode and you hit the drive pedal. (Except RTH 4.18)

\*Consumables are excluded from the warranty.



## GROUND CLEARANCE

4.18	285 mm	6.30	320 mm
5.18	330 mm	6.35	320 mm
5.21	330 mm	6.39	320 mm
5.23	330 mm	6.46	340 mm
5.25	330 mm	6.51	340 mm
6.21	330 mm	7.26	320 mm
6.23	330 mm	8.25	300 mm
6.25	330 mm	13.26	380 mm



## GRADEABILITY

4.18	63 %	6.30	44 %
5.18	48 %	6.35	65 %
5.21	45 %	6.39	65 %
5.23	44 %	6.46	50 %
5.25	43 %	6.51	42 %
6.21	41 %	7.26	46 %
6.23	41 %	8.25	65 %
6.25	41 %	13.26	50 %

# PERFORMANCE ON TYRES

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-8°



0°



+8°

## LEVELLING SYSTEM ON TYRES

The levelling system on tyres is standard for all models in the RTH range, and helps the operator to work in total safety even on irregular terrain.

This mechanism lets the driver adjust the machine levelling and have the full load chart for all operations, even with ground inclinations which would normally affect the lifting performance.

Magni has also introduced an **additional** levelling safety device: if the operator tries to manually correct the inclination of the machine on uneven terrain, the system detects the machine inclination and only allows compensation to be performed in the correct direction, preventing any movement which could worsen the situation.



OFF-ROAD

The powerful hydrostatic transmission provides each wheel with all the power necessary to tackle the roughest terrain and the toughest slopes. Equipped with four-wheel drive, two forward/reverse gears and

a rear tilting axle, the RTH range guarantees perfect stability and maximum grip. In addition, the impressive ground clearance allows the machine to overcome any obstacle.

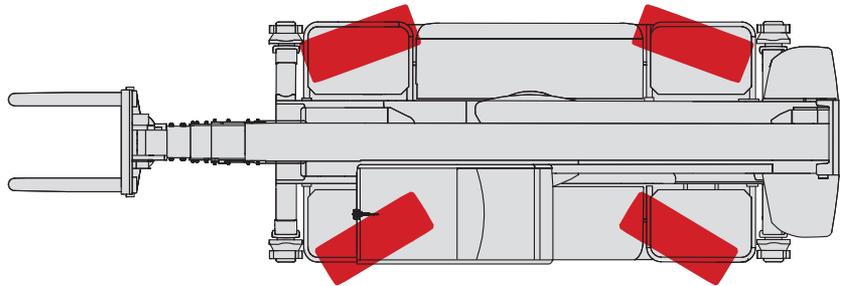


## AUTOMATIC STEERING

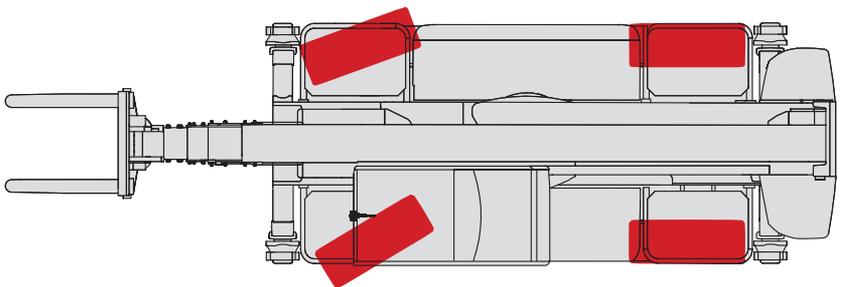
For increased convenience during long operating sessions, we have added an additional steering function. The automatic steering system allows you to switch from one steering type to another, without having to align the wheels manually. This enhances not only safety and driving comfort, but also the performance of your Magni model.

## TYPES OF STEERING

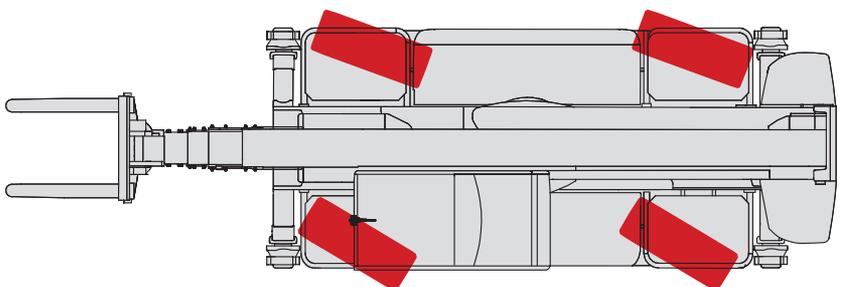
**1**  
**Round steering:** offering an improved turning circle for moving in tight spaces



**2**  
**Front steering:** for on-road driving



**3**  
**Crab steering:** allows the machine to approach from the side

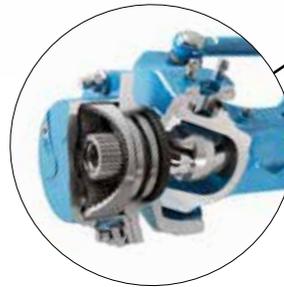
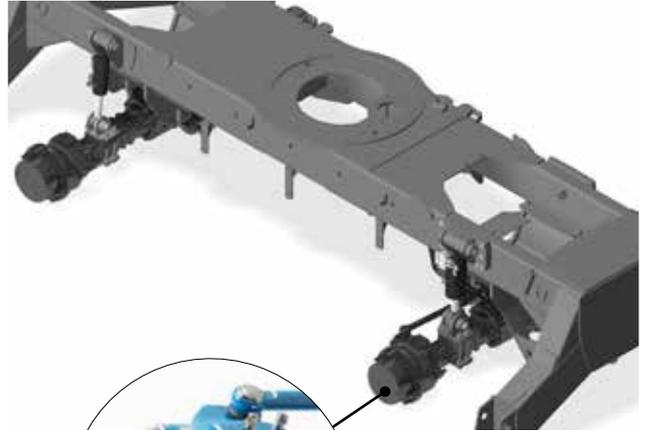


# TECHNICAL SPECIFICATIONS

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## TRANSMISSION

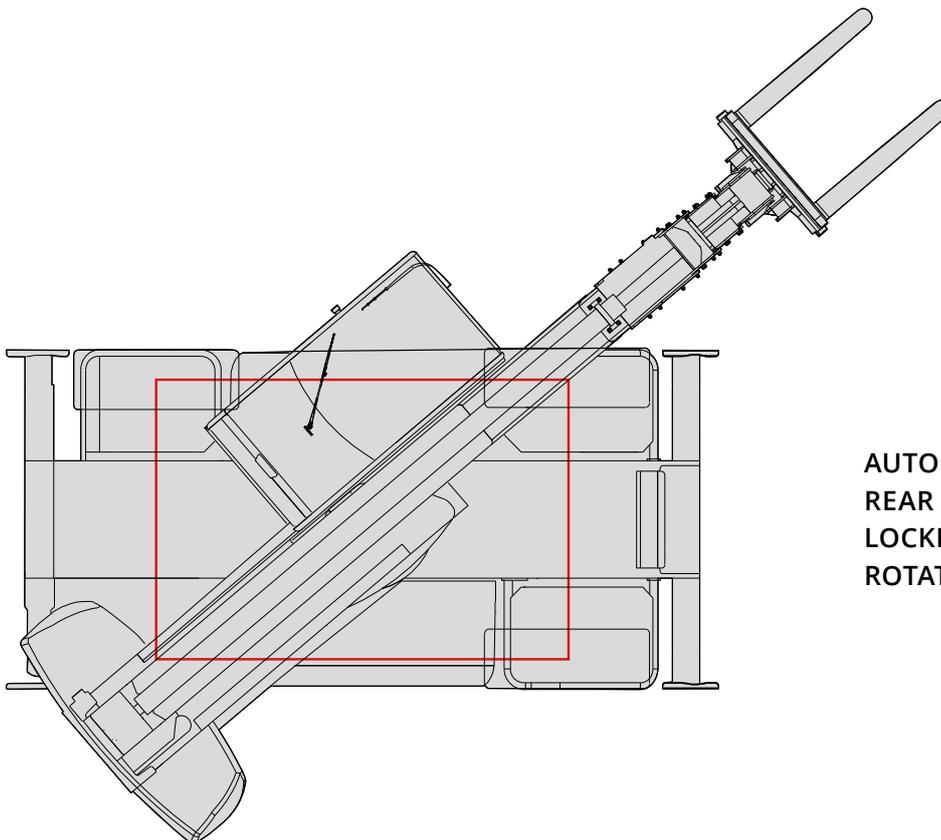
The electronically controlled hydrostatic transmission, composed of an electronically controlled variable displacement pump (500 bar working pressure), ensures accurate and progressive speed regulation to position the load in complete safety. The automatic calibration of the hydrostatic pump and motor with variable displacement offers the perfect balance between speed and pulling force. The two-speed gearbox offers a high and low speed range for on-road and off-road driving, respectively.



Planetary reduction gearbox and wet brakes on all four wheels

## AXLES

The axles of the RTH range, with planetary reduction gearbox and multi-disc wet brakes, have the steering cylinder on the upper part in order to protect them from accidental collisions. The axle has a 30% limited slip differential lock. Moreover, the unit is equipped with an automatic axle locking system that is activated as soon as the turret is rotated by  $\pm 7^\circ$ .



**AUTOMATIC REAR AXLE DIFFERENTIAL LOCKING BEYOND  $\pm 5^\circ$  ROTATION**



## ENGINE TYPE

All engines supplied with the RTH range meet the requirements of Regulation **(EU) 2016/1628** regarding emissions.

### **Magni will be the first to install Stage V engines.**

Our top-of-the-range models will feature VOLVO engines in order to ensure best-in-class performance even with high capacities. The smaller models in the range, up to the RTH 5.25, will be equipped with powerful Stage V Deutz engines. The electronic management of the transmission ensures its perfect adaptation to the engine's torque curves in order to optimise the use of the components, allowing for a 10-15% reduction in fuel consumption and longer lifetimes for the components themselves. The engine bay has been designed for easy access, facilitating inspections.



## HYDRAULIC CIRCUIT

All models from the RTH 5.18 up feature a **load-sensing** system (350 bar effective working pressure). It is composed of an l/s high pressure pump (for hydraulic movement); two electro-proportional joysticks and a SIL 2 main safety valve which complies with EN 13489 concerning the safety of electronic controls.

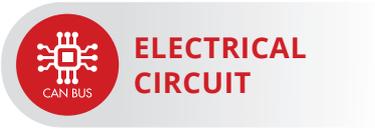
Gas-tight couplings, thermoplastic hoses and steel pipes ensure a perfect seal.

The electronic management of the hydraulic system allows it to select the best engine speed for the hydraulic power required, providing reductions in fuel consumption.

Magni software allows management of flow sharing, guaranteeing both safety and precision of each hydraulic movement (up to 3/4 movements at a time).



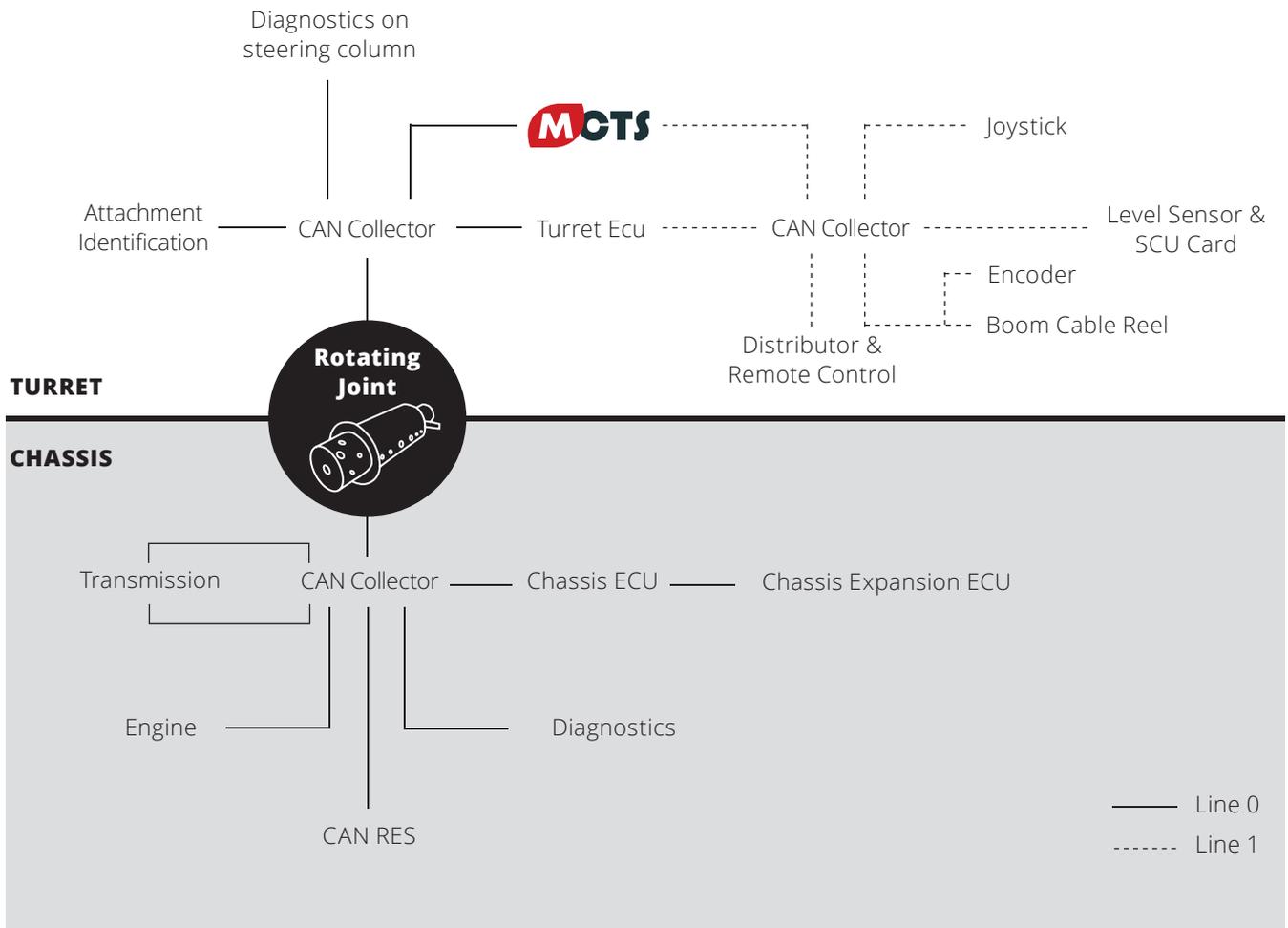
# TECHNICAL SPECIFICATIONS



The **IP67-rated** electric circuit is protected against water and dust ingress, and runs at 24V.

The RTH range is equipped with a **CAN BUS**, which handles all data relating to the electronic components. All information regarding the engine, transmission, hydraulic system and load moment indicator is shown on the touchscreen display.

CAN BUS technology requires around a third less wiring, reducing the risk of faults on the circuit and increasing overall reliability of the machine.





# TECHNICAL SPECIFICATIONS

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## **AUTOMATIC ATTACHMENT RECOGNITION**

An R.F.ID automatic attachment recognition system is fitted as standard to all models in the RTH range, installed on the boom head. When the attachment is coupled to the machine, it is recognised automatically, the display is consequently updated with the corresponding load chart and the load limit device is set for that specific attachment.

Thanks to its reduced weight, the new quick-fit system offers improved lifting capacity. This system makes the RTH range much safer, preventing the risk of selecting incorrect attachments.



## BOOM STRUCTURE

Manufactured from high-tensile steel, the boom is extremely tough and rigid but at the same time very light, increasing the load capacity and preventing it from flexing. The telescopic extension of the sections is actuated by a cylinder. A dual-chain system and hydraulic hoses completely contained inside the boom itself significantly reduce accidental breakages due to collisions.



The block is composed of welded hoses, preventing rubbing between the individual lines and maintaining alignment, thus also contributing to a significant reduction in faults. The sliding pads are fastened to steel blocks, ensuring smooth movement of the structure.



# PIVOTING STABILISERS

Magni's pivoting stabilisers are quick to deploy and position. They guarantee maximum stability thanks to the large contact surface that assures optimal grip on any kind of ground.

The retracted position is ideal for moving around tight work sites, as the stabilisers remain entirely within the machine's footprint with no protrusion.



On all smaller models the compact size of the chassis is complemented by the pivoting stabilisers installed on the same axis; when these are closed they do not protrude from the outline of the machine, and do not affect its ground clearance.

When they are opened, on the other hand, they form a very compact stabilisation area, while maintaining impressive lifting capacity.

The performance of the smaller models is highlighted by their small wheelbase which also allows for more advantageous tyre capacities, while compactness is assured by the increased steering angle, offering an improved turning circle to allow manoeuvring even in tight spaces.

	4.18	5.18	5.21	5.23	5.25
 <b>A</b> (mm)	350	350	350	350	350
<b>B</b> (mm)	304	304	304	304	304
<b>Max. pressure on ground</b> (kgf/cm <sup>2</sup> )	13.8	13.8	13.8	13.8	13.8



When working on slopes or irregular ground, just one button press allows you to automatically level the machine on stabilisers. An electronic level detects the machine's inclination and brings it back to the horizontal. A green dot on the touchscreen display indicates the machine level, allowing you to monitor it at all times.



MAGNI

MAGNI

RTH 5.25  
Smart

# SCISSOR STABILISERS

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The biggest models are equipped with scissor stabilisers, which have zero protrusion when closed. Their overlapping beams are fastened to the chassis without affecting ground clearance. The stabilisers can be managed simultaneously or individually in order to adapt perfectly to the work zone.



## AUTOMATIC LEVELLING

When working on slopes or irregular ground, just one button press allows you to automatically level the machine on stabilisers. An electronic level detects the machine's inclination and brings it back to the horizontal. A green dot on the touchscreen display indicates the machine level, allowing you to monitor it at all times.

## ZERO PROTRUSION

The stabiliser extension and retraction process guarantees perfect grip on any kind of ground thanks to the large contact area, thus preventing the risk of sinking into the ground. At the same time, it ensures automatic closing of the stabiliser feet without protrusion.





### COMPACT STABILISATION

Thanks to their great flexibility, scissor stabilisers do not require much space to stabilise the machine. Even when it is only partially stabilised, the machine is programmed to provide the best possible load chart on each side.

### 360° PERFORMANCE

When fully extended, the stabilisers guarantee maximum performance over a full 360° thanks to their square stabilisation base. This allows them to perform any task with ease.



# SCISSOR STABILISERS

## STABILISING PADS

The stabilising pads for scissor stabilisers are specifically designed to offer perfect grip and prevent any slippage. The wide contact area is designed to distribute the load evenly to the ground and support machine performance. Stabiliser pads are available as an option to increase the stabilisation area and reduce the pressure on the ground.

## SOFT CLOSING

Magni has implemented a new function on the new RTH range that slows down the movement of the scissor stabilisers during the closing phase, making it even quieter and smoother.

	6.21	6.23	6.25	6.30	6.35	6.39	6.46	6.51	7.26	8.25	13.26
 <b>A</b> (mm)	390	390	390	490	490	490	610	610	490	490	610
<b>B</b> (mm)	320	320	320	320	320	320	360	360	320	320	360
<b>Max. pressure on ground</b> (kgf/cm <sup>2</sup> )	12.2	12.2	12.2	12.2	12.2	12.2	13	13	12.2	12.2	13

\*Size only of the surface area in contact with the ground, excluding the bent edges of the stabilising pad.

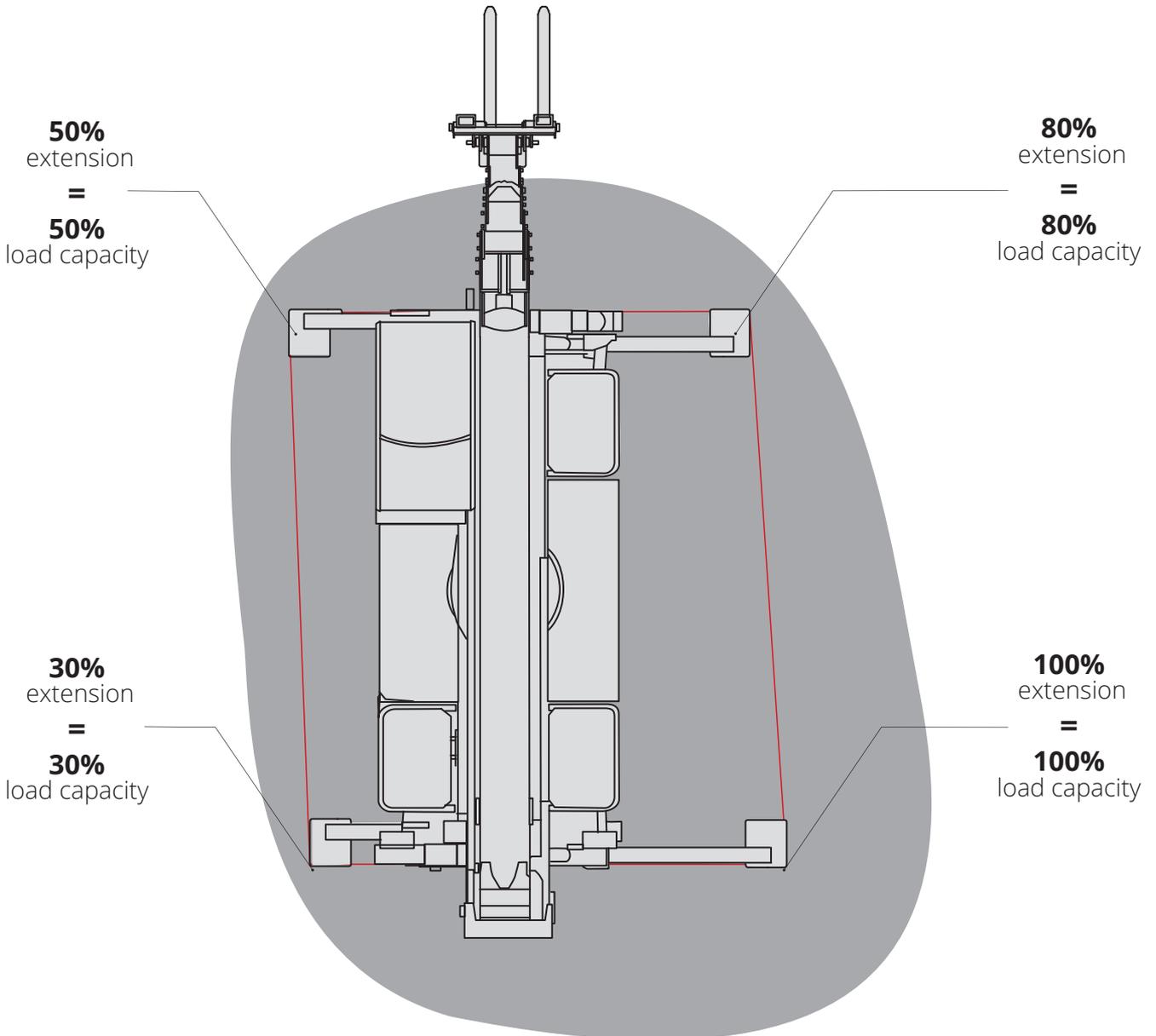


## FLEXIBILITY

Scissor stabilisers are perfect for working in tight spaces, and adapt to the space limitations of each work site. Their incredible flexibility means you can easily extend or retract any stabiliser independently, depending on the surrounding obstacles. **Full 360° performance is guaranteed, with lifting capacity adjusted in proportion to stabiliser extension.** This optimised load chart management makes the user's life easier, ensuring they always have the best load chart available whatever the machine setup and position.

## STABILISER EXTENSION CONTROL

The stabiliser configuration can be saved on the dedicated software screen. All the stabiliser positions will be saved and the onboard software will make them available the next time the machine is started.



# TECHNICAL SPECIFICATIONS



## LOAD MOMENT INDICATOR

In order to ensure maximum safety, all machines in the RTH range meet product standards for forklift trucks, cranes and aerial work platforms. All Magni telescopic handlers are equipped with a Load Limit Device (LMI). The LMI stores specific load charts for each attachment and continuously analyses the

spatial positioning of the load, dynamically displaying the correct load chart based on the machine's working configuration.

If an overload occurs, it automatically stops any movement which would aggravate the situation, allowing only retraction.

A



Boom angle and length detection potentiometer with redundant safety devices.

B



Load weight detection via 4 pressure transducers: 2 installed on the lifting cylinders and 2 on the compensation cylinder.

C



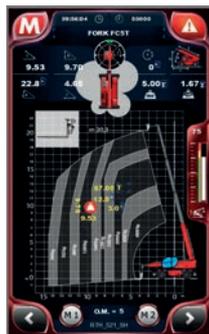
Turret position detection via rotation sensors installed within the rotating joint.

D



Flashing light.

E



Dynamic representation of all the collected data on the touchscreen display for the operator.

F



Automatic detection of stabiliser configuration via potentiometers installed inside the beams to ensure their protection.





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