



**MAGNI**  
TELESCOPIC HANDLERS

**RTH**

# MAGNI: EXPERIENCE, RELIABILITY AND VERSATILITY

The RTH range is the result of years of experience and research in the field of rotary telehandlers. It reflects and satisfies the needs of our customers and their requirement for reliability and performance.

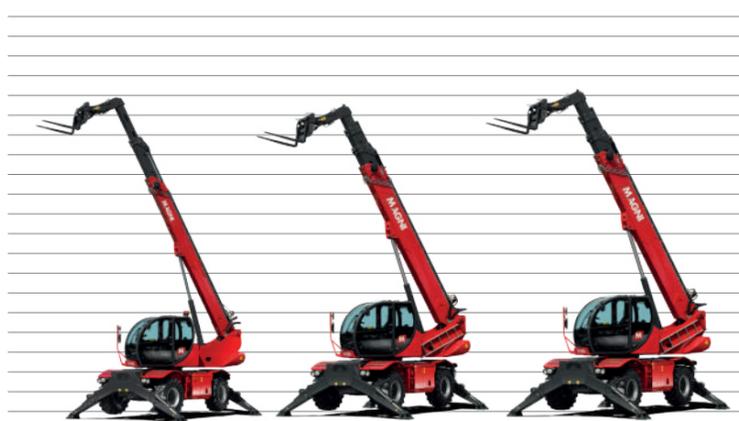
The RTH range is built to ensure the maximum amount of safety and versatility.

Magni versatility is guaranteed by:

- A huge choice of interchangeable attachments for multiple uses, all equipped with the RFID automatic recognition system
- MCTS software which, alongside the CAN BUS system, allows customization of various usage parameters
- 3 different types of steering



**SMART**



RTH 4.18 Smart RTH 5.18 Smart RTH 5.21 Smart RTH 5.23 Smart RTH 5.25 Smart

**SH**



RTH 5.21 SH RTH 5.23 SH RTH 5.25 SH RTH 6.26 SH RTH 6.30 SH RTH 6.35 SH RTH 6.39 SH RTH 6.46 SH RTH 8.25 SH RTH 13.26 SH



**3-MACHINES IN ONE**  
TELESCOPIC FORKLIFT  
ROUGH TERRAIN CRANE  
WORK PLATFORM



LIFT CAPACITY  
**11,200 lbs UP TO 17,600 lbs**  
BEST LOAD CHARTS AVAILABLE



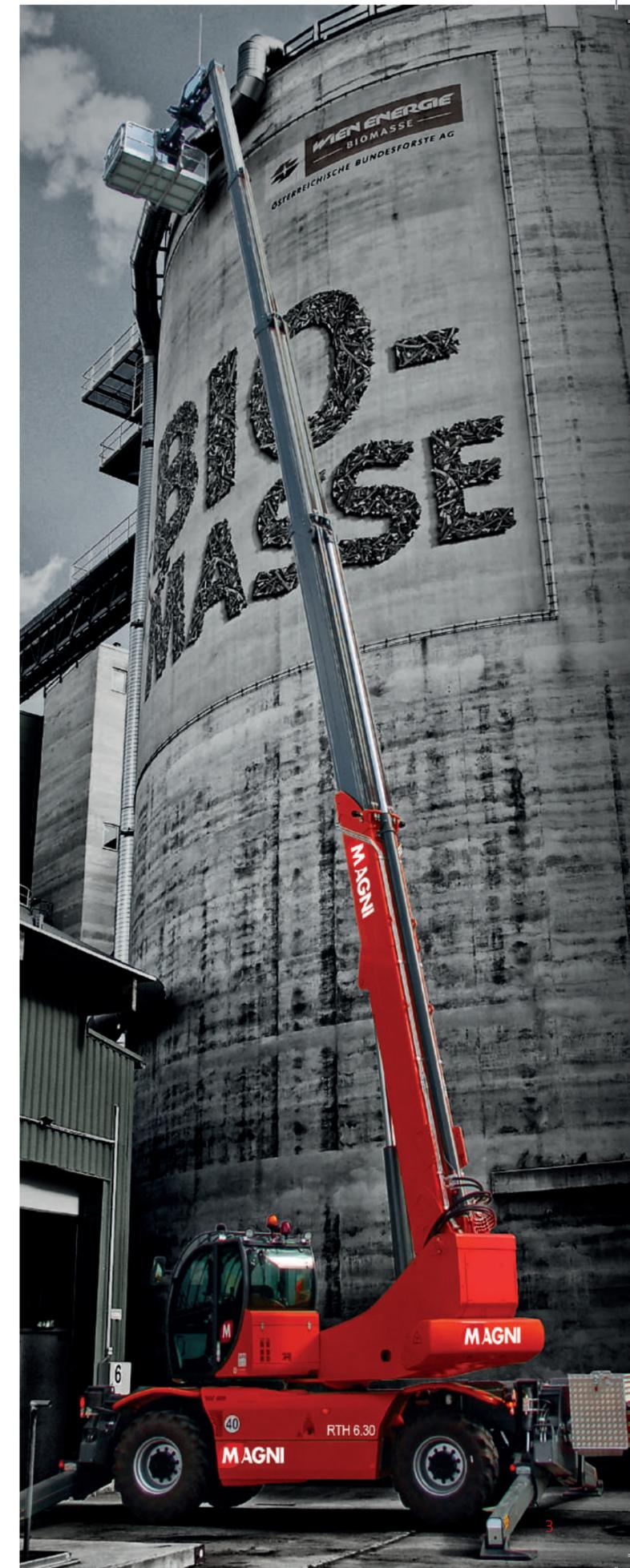
MAX. LIFTING  
HEIGHT  
**57-150 feet**



**108 feet**  
MAX. REACH



**11.81/15.35 inches**  
GROUND  
CLEARANCE ON TIRES



# CAB



## PATENTED DESIGN, FULL-VISIBILITY CAB

The innovative design of MAGNI's cab ensures unbeatable operator comfort and safety. The cab has full visibility thanks to a large windshield 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. The cab is FOPS/ROPS certified and equipped with an upper grill guard to guarantee operator safety even during the most delicate operations.

The adjustable steering column facilitates access to the cab, and allows the operator to achieve their perfect working position. The cab is hermetically sealed and fully pressurized. The 100% air filtration makes MAGNI machines perfect for use even in contaminated environments, with no risks for the operator. Heating and air conditioning are standard on all models in the RTH range (excluding the 4.18 Smart). The cab is also equipped with a cup holder, a big hit with operator, allowing them to enjoy their morning coffee or other beverages inside the cab. (Magni insulated cup available). The cab also features a USB port as standard for charging tablets and smartphones.



100% air filtration



FOPS/ROPS pressurized cab



Heating as standard Air-conditioning



MUG holder

## 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 8 different languages. The touchscreen can also be managed via a joystick. The stabilizers and auto-leveling can also be managed via dedicated buttons.

## INTEGRATED DIAGNOSTICS

Fast, 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



## STANDARD TOUCH SCREEN

All Magni models from 59 ft to 82 ft are equipped with a 7" touch screen display. The machine management software installed on the touch screen gathers all usage data and displays them conveniently over five different pages. Navigating between these pages is extremely easy and intuitive, even for less experienced users.



## XL TOUCH SCREEN

The cabs of 85 ft to 151 ft models features an even larger touch screen (10"). The Linux operating system offers faster, more fluid navigation between pages, even in prolonged use. The larger display provides an enhanced view of the load charts. In these models, the touch screen features updated software which is even faster and easier to use, offering the greatest possible intuitiveness for all operations.

## REMOTE CONTROL TYPES

The RTH range can be equipped with two types of remote controls that allow all hydraulic movements of the machine to be performed. The most advanced version also allows management of the stabilizers and provides the ability to drive the machine at up to 3 mph from a distance of 325 ft. The remote control joysticks are electro-proportional, just like the ones in the cabin, meaning they perfectly reproduce the same precision in the controls.



REMOTE CONTROL



# MCTS

## MAGNI COMBI TOUCH SYSTEM

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 easy to understand. The system is divided into 5 main pages, each dedicated to different functions. The correct page comes on when a function is performed. This ensures a safe operation by the operator.



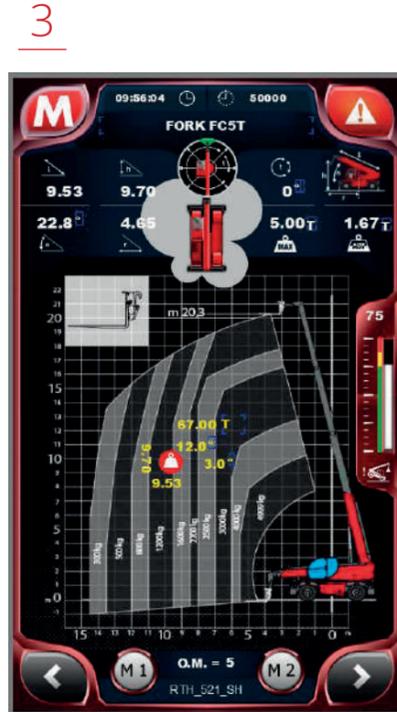
### DRIVE PAGE

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 of the machine.



### STABILIZATION PAGE

The RTH range has an interactive stabilization area: each stabilizer automatically recognizes its extension. Based on this data, the software provides the operator with a progressive load chart, which increases as the length of the stabilizer increases, so that the machine always has the best chart. Moreover, the RTH range is also equipped with an electronic leveling device, which allows for automatic leveling of the stabilizers.



### 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 center of gravity.



### 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.



### CUSTOMIZATION PAGE

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

# KEY CHARACTERISTICS



**BEST LIFTING PERFORMANCE**

OPTIMUM LIFTING PERFORMANCE



LIFT CAPACITY **11,200 lbs** UP TO **17,600 lbs**  
BEST LOAD CHARTS AVAILABLE



MAX. LIFTING HEIGHT **57-150 feet**



**108 feet** MAX. REACH



360° CONTINUOUS ROTATION (Excludes Model 4.18 SMART)



## GROUND CLEARANCE ON TIRES



RTH 4.18 Smart - RTH 5.18 Smart - RTH 5.21 Smart - RTH 5.23 Smart - RTH 5.25 Smart	12.95 in
RTH 5.21 SH - RTH 5.23 SH - RTH 5.25 SH	13 in
RTH 6.26 SH	12.7 in
RTH 6.30 SH - RTH 6.35 SH - RTH 6.39 SH	12.6 in
RTH 6.46 SH - RTH 13.26 SH	15.35 in
RTH 8.25 SH	11.80 in

# PERFORMANCE ON TIRES



## LEVELING SYSTEM ON TIRES

The leveling system on tires is fitted to all models in the RTH range to adapt to all differences in level and

guarantee maximum operator safety on all types of terrain and on any kind of slope.



## 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 most any obstacle.



## GRADEABILITY

MAGNI machines have been designed to handle the toughest slopes, while guaranteeing maximum grip.

4.18 SMART	5.18 SMART	5.21 SMART	5.25 SMART	5.21 SH	5.23 SH	5.25 SH	6.26 SH	6.30 SH	6.35 SH	6.39 SH	6.46 SH	8.25 SH	13.26 SH
41%	44%	44%	41%	44%	44%	41%	42%	40%	43%	43%	30%	43%	30%



**COMPACT DESIGN**

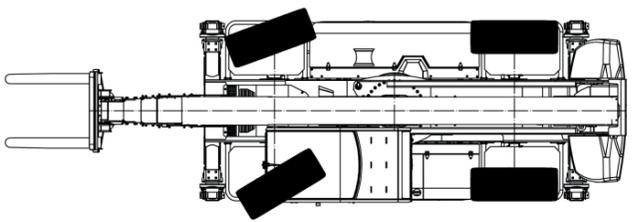
Both the pivoting and scissor stabilizers are perfect for working in tight spaces. The Pivoting offers a compact stabilization area. The scissor stabilizers offers extreme operator flexibility, adapting to any and all site conditions.

**THREE TYPES OF STEERING**

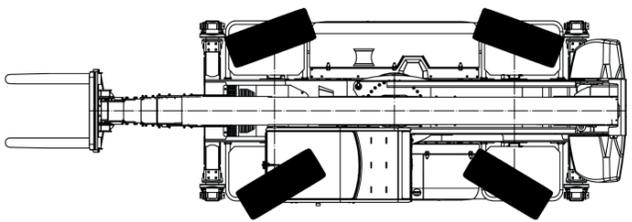
Each model can be road legal and three different types of steering are available:

- Front Steering: for on-road driving
- All Wheel Steering: offers an improved turning radius for moving in tight spaces
- Crab steering: allows the machine to approach from the side

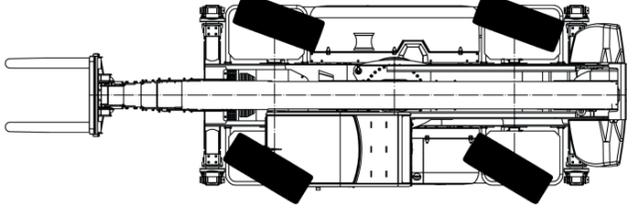
Front Steering



All Wheel Steering



Crab Steering

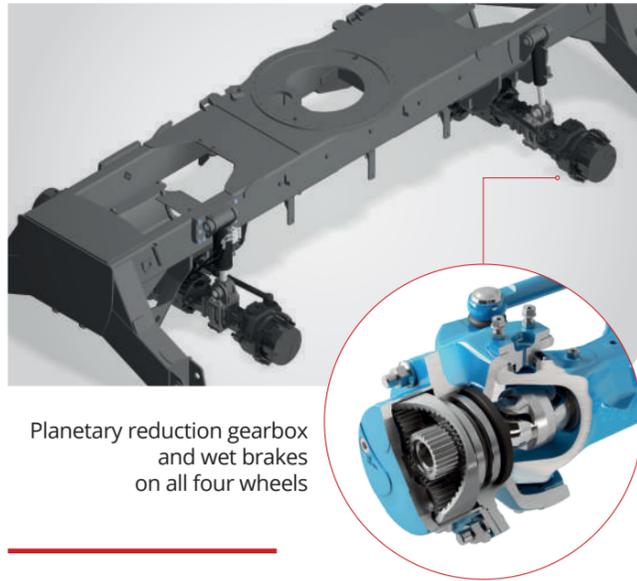


# TECHNICAL SPECIFICATIONS

## 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 with 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.



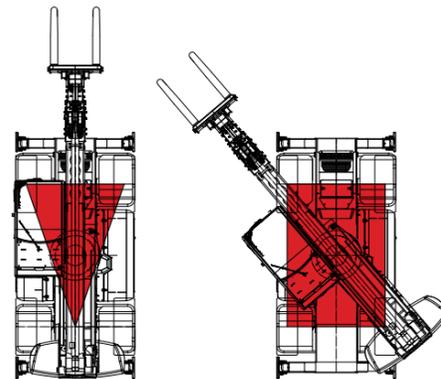
Planetary reduction gearbox and wet brakes on all four wheels

## 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 rear axle is a tilting model to ensure the best off-road performance, but the machine is equipped with automatic differential locking beyond +/- 5° turret rotation to ensure better stability.

**AUTOMATIC REAR AXLE DIFFERENTIAL LOCK BEYOND +/-5° ROTATION**



## ENGINE

All engines supplied with the RTH range meet the requirements of Directive EU 2016/1628 regarding emissions and are Tier IV Final.

The Smart range and the smaller models up to the 5.25 SH are fitted with Deutz engines, while the top-of-the-range models have Mercedes MTU turbo engines, with twin-turbo versions for the three highest-performance models.

The electronic management of the transmission ensures its perfect adaptation to the engine's torque curves in order to optimize 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 and maintenance.



## ELECTRICAL & HYDRAULIC CIRCUIT

The load-sensing system (350 bar effective working pressure) is composed of a gal/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.

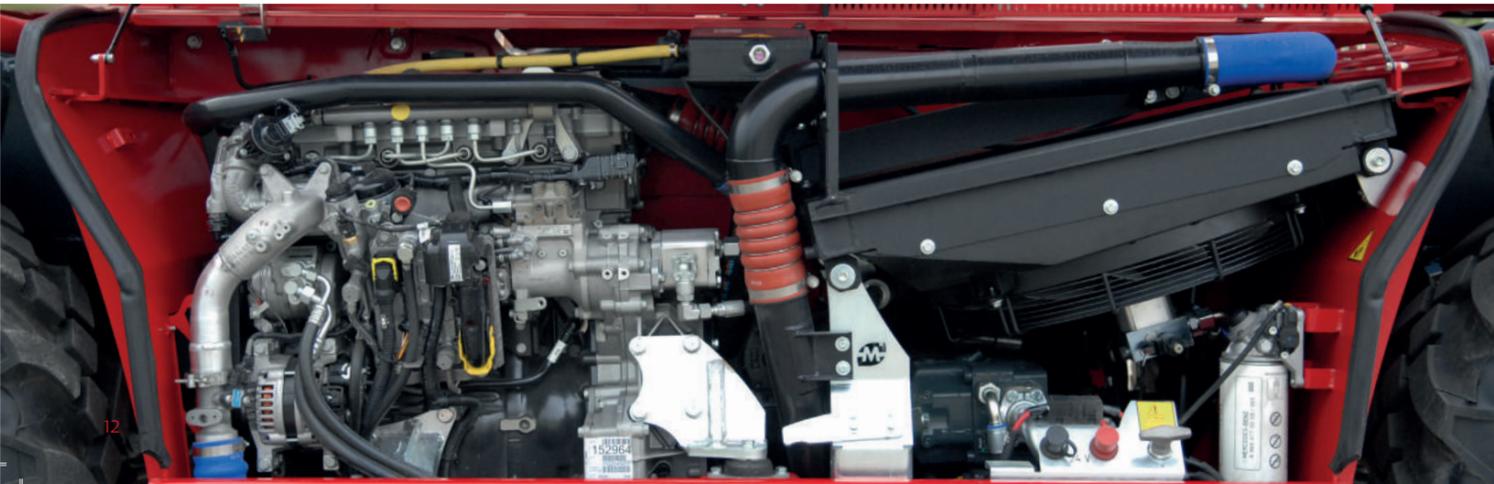
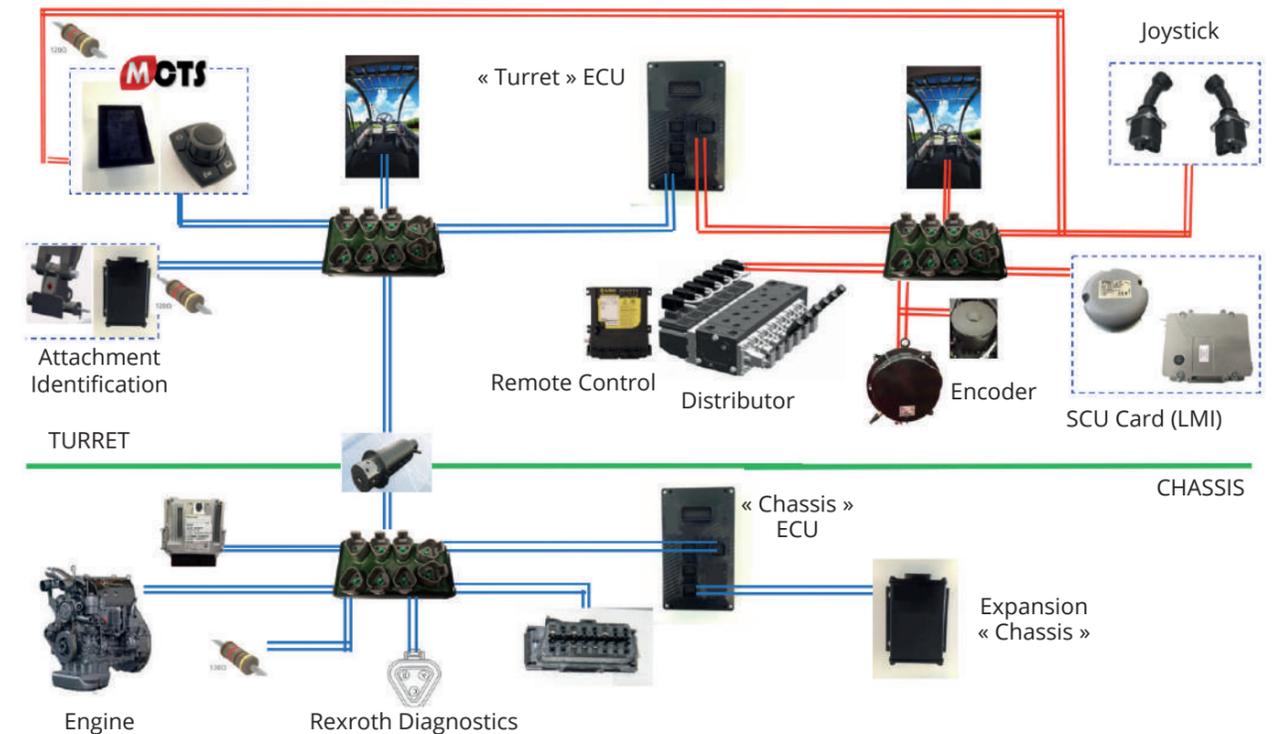
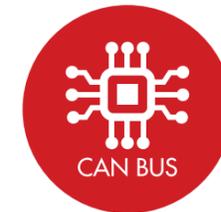
Magni software allows management of flow sharing, guaranteeing both safety and precision of hydraulic movements (up to 3/4 movements at a time).



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.

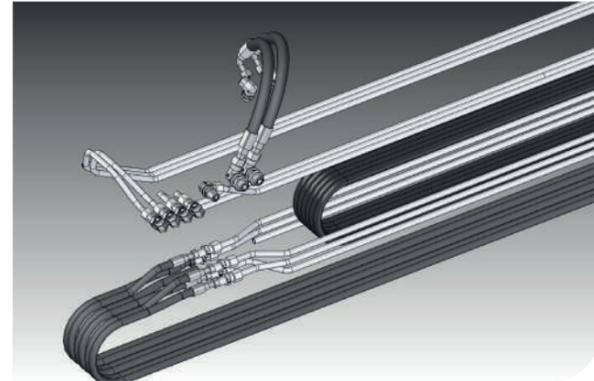


# TECHNICAL SPECIFICATIONS

## BOOM

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 two 3+3 bundles, 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.

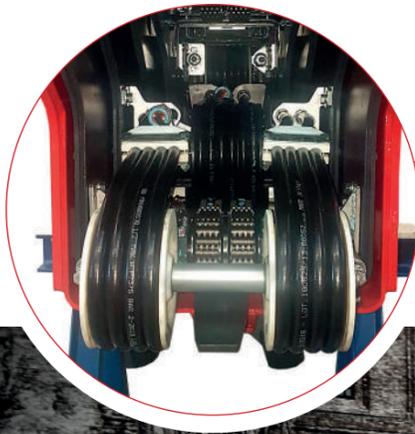
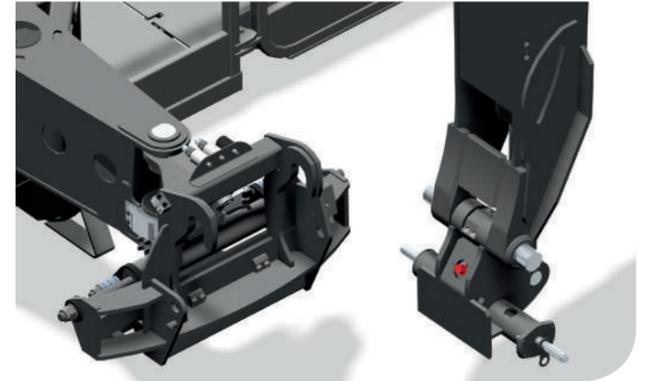


## AUTOMATIC ATTACHMENT RECOGNITION

An RFID (Radio Frequency Identification Tag) 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 recognized 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.





# STABILIZERS

## SMART SERIES

The SMART series is equipped with pivoting stabilizers. The compact size of the chassis is complemented by the pivoting stabilizers 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 they form a very compact stabilization area of just 14 ft, while maintaining impressive lifting capacity.

The performance of the Smart Series is highlighted by its 9.84 ft wheelbase which also allows for more advantageous tire capacities, while compactness is assured by the increased steering angle, offering an improved turning circle to allow maneuvering even in tight spaces.



The lifting and lowering process allows for optimal grip on any kind of ground thanks to the large contact surface; at the same time, it allows for closure of the stabilizer foot without protrusion.

	RTH 4.18 SMART	RTH 5.18 SMART	RTH 5.21 SMART	RTH 5.23 SMART	RTH 5.25 SMART
	A 13.78 in	13.78 in	13.78 in	13.78 in	13.78 in
	B 11.97 in	11.97 in	11.97 in	11.97 in	11.97 in
<b>Maximum pressure on ground (psi)</b>	170.68	170.68	185.0	185.0	185.0



## SH SERIES

The SH series is equipped with scissor stabilizers. Scissor stabilizers have zero protrusion when closed. Their overlapping beams are fastened to the chassis without affecting ground clearance. The stabilizers can be managed simultaneously or individually in order to adapt perfectly to the work zone.

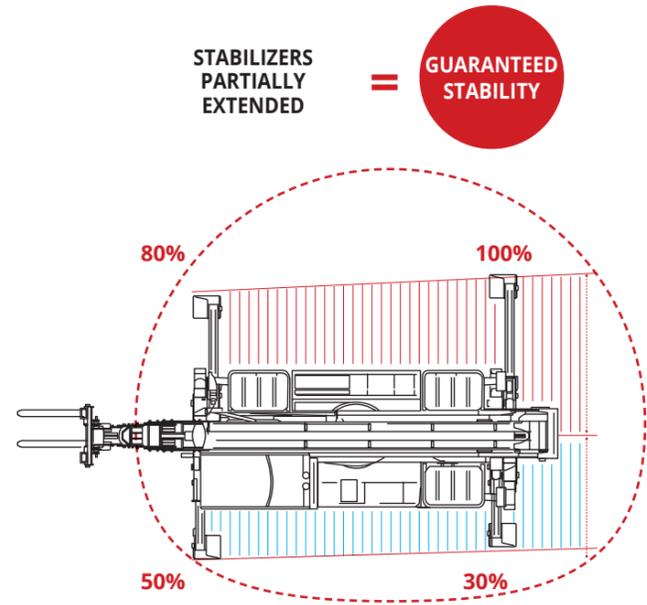


Thanks to their great flexibility, scissor stabilizers do not require much space to stabilize the machine. Even when some or all of the stabilizers are not fully extended, the machine is programmed to provide the best possible load chart.

The stabilizer 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 stabilizer feet without protrusion. It provides infinite setup possibilities.

When they are fully extended the stabilizers guarantee maximum 360 performance thanks to the square stabilization base and provides zero swing.

	5.21 SH	5.23 SH	5.25 SH	6.26 SH	6.30 SH	6.35 SH	6.39 SH	6.46 SH	8.25 SH	13.26 SH
	A 15.35 in	15.35 in	15.35 in	19.29 in	19.29 in	19.29 in	19.29 in	25 in	19.29 in	25.0 in
	B 17.23 in	18.35 in	17.23 in	18.35 in						
<b>Maximum pressure on ground (psi)</b>	170.68	170.68	170.68	170.68	170.68	170.68	170.68	185.0	170.68	185.0



# TECHNICAL SPECIFICATIONS

## LOAD MOMENT INDICATOR (LMI)

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 which stores specific load charts for each attachment and continuously analyzes 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 may cause an unsafe work condition, allowing only for 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.

E



Flashing light.

F



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

D



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





**HEADQUARTERS**

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