

Telescoping T 41 - T 61 - T 851

Guide Produit



Telescopic cages

For 1.6 m, 2 m, and 2.45 m K mast sections

Notes

Guides Produit are available under Manitowoc Direct > Potain at: www.manitowoc.com

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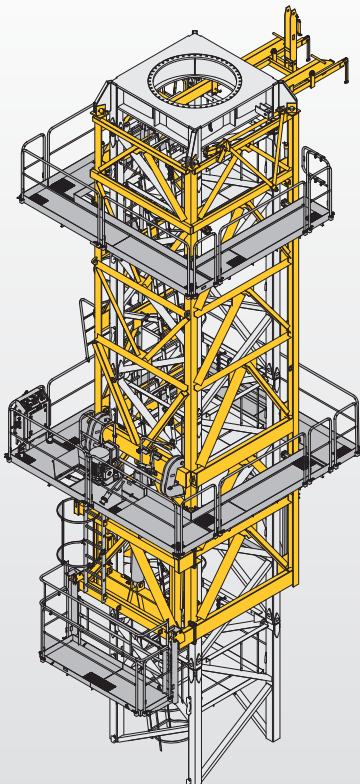
The evolution of K mast telescopic cages (1.6 m , 2 m and 2.45 m)

The general working principle of telescoping remains unchanged (the cage lifts through successive hydraulic cylinder actions). Several ergonomic and technical improvements have been made to Potain telescopic cages. These include:

- An additional platform for easy locking/unlocking of the yoke
- Tie-off points for technicians at each working level
- Updated safety signs (updated informational, warning and instructional labels)
- Reinforced structure
- Easily connected hydraulic equipment
- A balance assist system
- A secure yoke locking system

TELESCOPIC CAGES T 41 - T 61

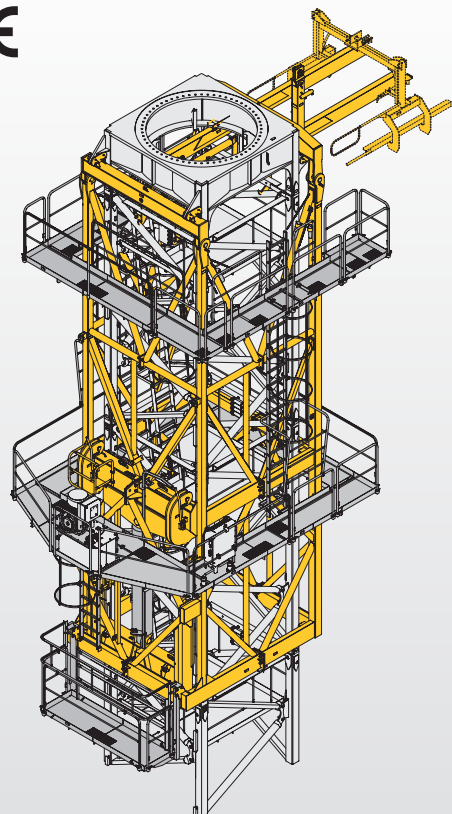
CE



1.6 m ---> T 41
2 m ---> T 61

TELESCOPIC CAGE T 851

CE



2.45 m ---> T 851

Cages and components

Regulations

The equipped T 41, T 61 and T 851 telescopic cages are considered as separate machines and as such comply with European regulations.

The CE marking placed on each cage confirms compliance with these requirements and procedures defined in the "Machines" directive and the other directives that concern them, such as the "Noise" directive or the "Electromagnetic Compatibility" directive.

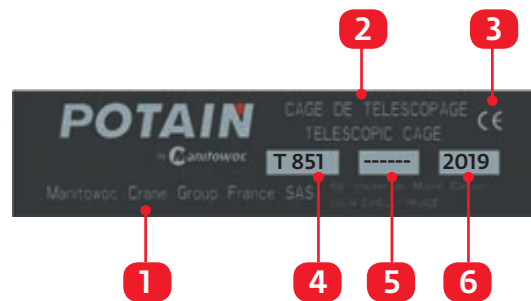
Each telescopic cage delivered has:



As with new crane purchases, the Initial Erection Report and the First Commissioning Report must be completed and returned to Manitowoc to activate the warranty.

Serial number

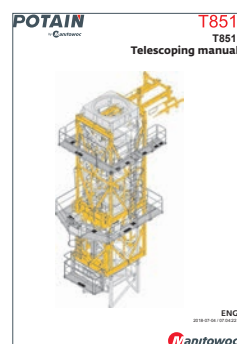
As with cranes, each cage sold has a readable and indelible marking that provides the following information:



- Manitowoc's company name and address (1)
- Name of the machine (2)
- CE mark (3)
- Name of the type (4)
- Serial number (5)
- Year of manufacture (6)

A dedicated technical manual

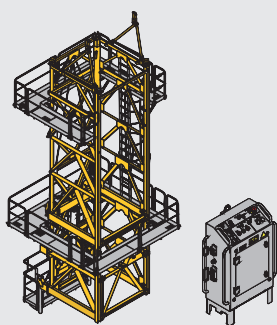
Each telescopic cage is delivered with its own technical manual (independent of the crane manual), which gives the instructions and limitations for use.



- Manuals included are written in a language comprehended by the crane operator
- Two sets of manuals are delivered (one set delivered with the cage and one set delivered to the customer/representative)
- Storage in the telescoping switch box

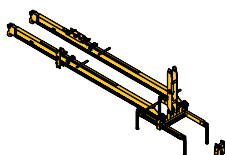
Components

TELESCOPIC CAGE T 41 (1.6 m)

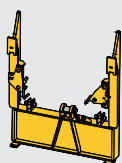


Telescopic cage
T 41⁽¹⁾
Switch box + wiring
Price code: CT060

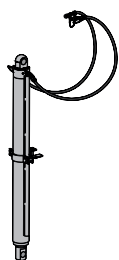
(monoblock cage)



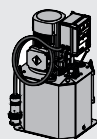
Set of telescoping
accessories T 41
Price code: AT030



Telescoping traverse
1.6 m (yoke)
Price code: TT030



Hydraulic cylinder
160 X 125 / C1800
Price code: VH030

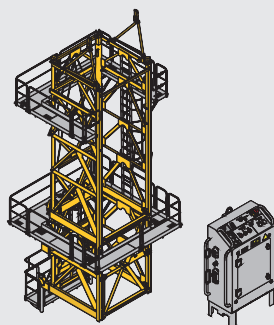


Hydraulic unit
4 kW + oil⁽²⁾
Price code: GH030



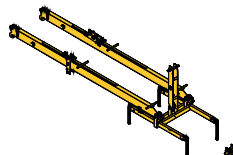
RFID tag for
telescopic cage
Price code: OR013

TELESCOPIC CAGE T 61 (2 m)

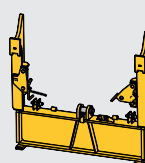


Telescopic cage
T 61⁽¹⁾
Switch box + wiring
Price code: CT061

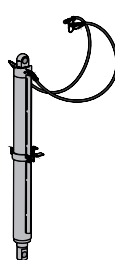
(monoblock cage)



Set of telescoping
accessories T 61
Price code: AT031

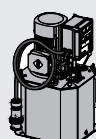


Telescoping traverse
2 m (yoke)
Price code: TT031



Hydraulic cylinder
• 180 X 125 / C1800
Price code: VH031

• 200 X 140 / C1800
Price code: VH032
(depending on crane model)



Hydraulic unit
11 kW + oil⁽²⁾
Price code: GH031

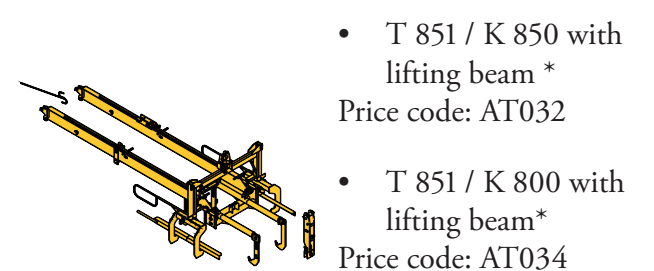
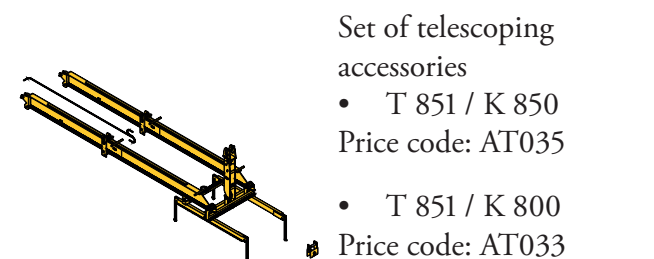
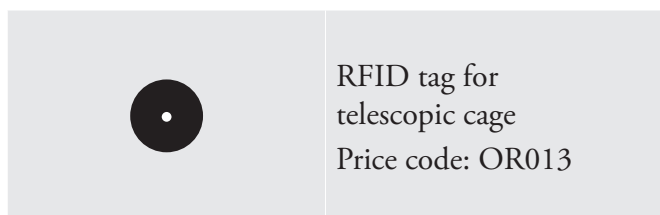
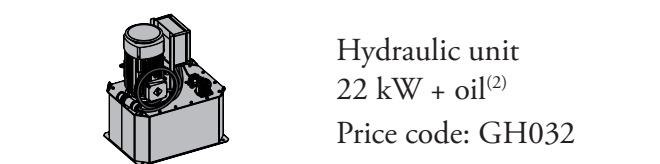
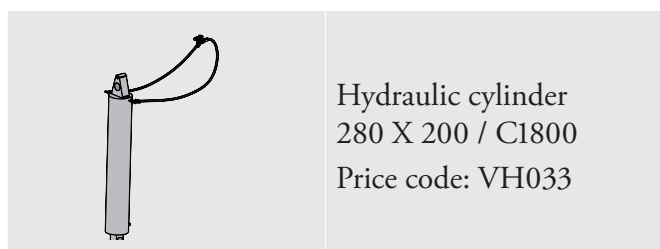
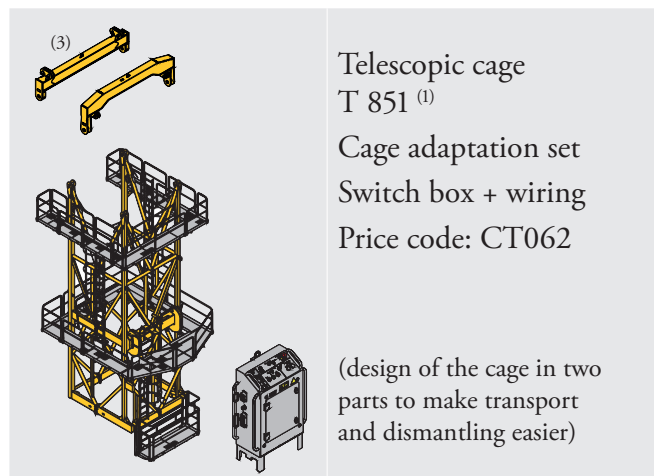


RFID tag for
telescopic cage
Price code: OR013

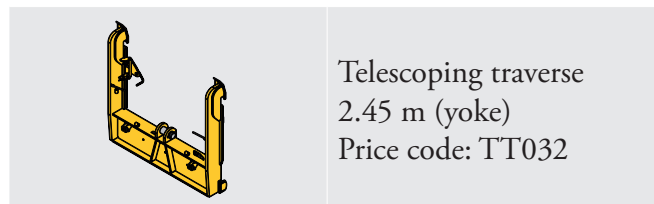
Cages and components

Components

TELESCOPIC CAGE T 851 (2.45 m)



(* special lifting accessory
that makes attaching and lift-
ing a mast section easier
before telescoping)



(1) Telescopic cage comes equipped with a descent kit that allows the crane operator to evacuate the crane through the slewing section if a problem occurs during the telescoping phase.

(2) Oil compatible with the operating temperatures and storage within the country (oil type defined at the factory according to country's technical requirements)

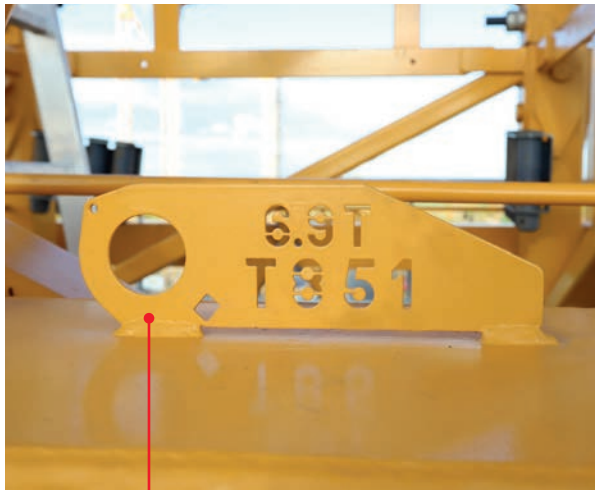
(3) Reinforced rear beam. Connector guides are present to recognize the rear beam T 800A which is not fitted on the T 851 and vice versa

One telescoping equipment for several cranes

The telescoping equipment can be utilized on several models of cranes using the same mast section:

- Removable telescopic cage and accessories
- Hydraulic equipment (cylinder and hydraulic unit)
- Telescoping traverse

For simplicity each component is listed as an option in the price list separately.



RFID tag support

Quick identification of components

For quick identification, the main components have a commercial plate that indicates the name and weight.

Cages and components

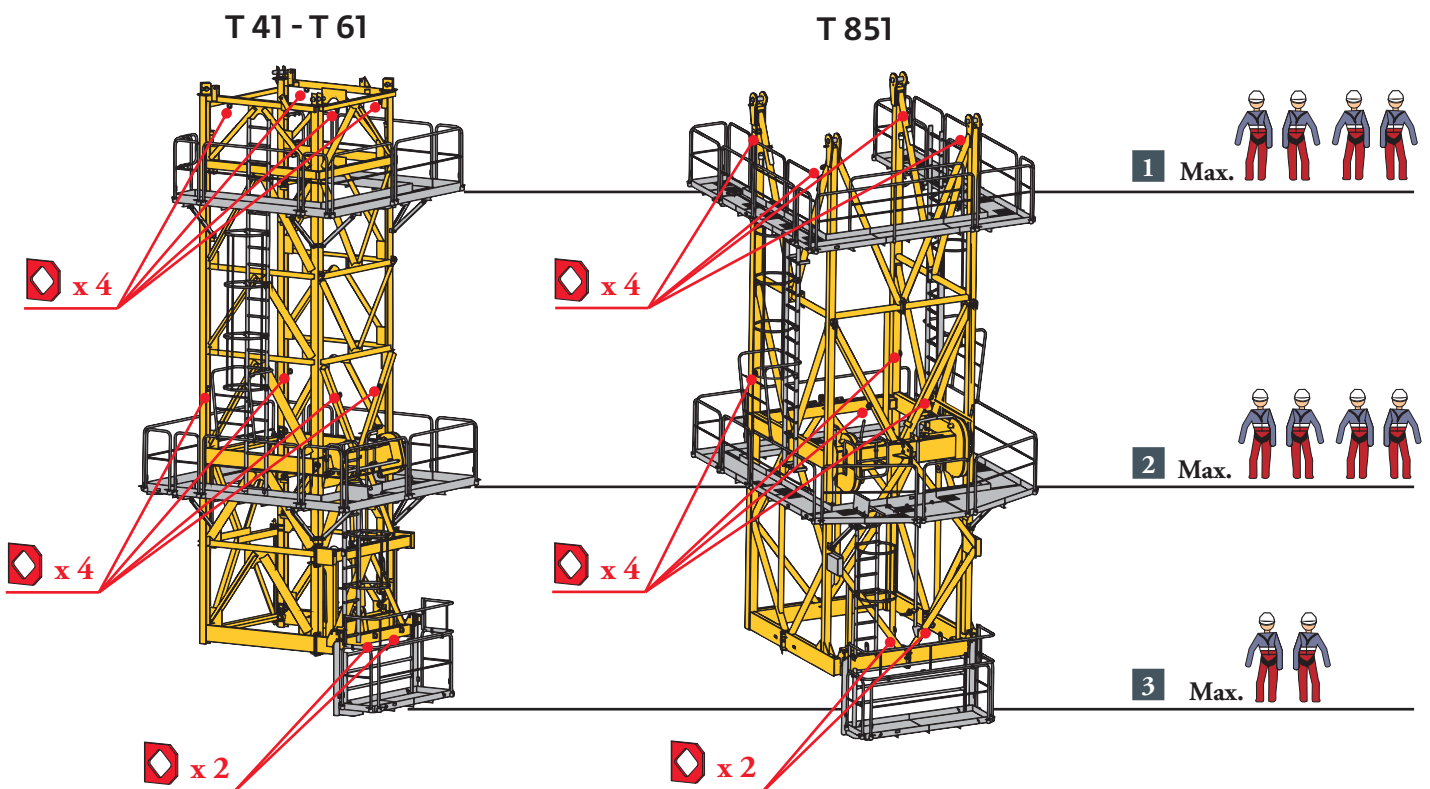
Use on the GME range

	Telescoping 1.6 m	Telescoping 2 m	Telescoping 2.45 m
MDT 109	T 40A - T 41		
MDT 139	T 40A - T 41		
MDT 189	T 40A - T 41	T 60A - T 61	
MDT 219 J8 - J10	T 40A - T 41	T 60A - T 61	
MDT 249 J10 - J12	T 40A - T 41		
MDT 259 J10 - J12		T 60A - T 61	
MDT 269 J10 - J12		T 60A - T 61	
MDT 319		T 60A - T 61	
MDT 349 L12 - L16		T 60A - T 61	
MDT 389 L12 - L16		T 60A - T 61	T 800A / K 800 T 851 / K 800
MDT 809 M25 - M32 - M40			T 851 / K 850
MD 509 M20 - M25			T 800A / K 800 T 851 / K 800
MD 559			T 800A / K 800 T 851 / K 800
MD 569			T 800A / K 800 T 851 / K 800
MD 689 M25 - M40			T 800A / K 850 T 851 / K 850
MRH 125	T 40A - T 41	T 60A - T 61	
MRH 175	Not permitted	T 60A - T 61	
MR 90 C	T 40A - T 41	T 60A - T 61	
MR 160 C	T 40A - T 41	T 60A - T 61	
MR 225 A		T 60A - T 61	
MR 295 H16 - H20		T 60A - T 61	T 800A / K 800 T 851 / K 800
MR 298		T 60A - T 61	T 800A / K 800 T 851 / K 800
MR 418			T 800A / K 800 T 851 / K 800
MR 608			T 800A / K 800 T 851 / K 800
MR 618			T 800A / K 800 T 851 / K 800

Access and work areas

The technicians have **three levels of work platforms** and suitable ladders to access all the areas required to carry out the telescoping operation:

1. **Upper platforms** on the sides and rear of the cage
2. **Intermediate platforms** on the four sides of the cage
3. **Lower platform** on the rear of the cage



Tie-off points



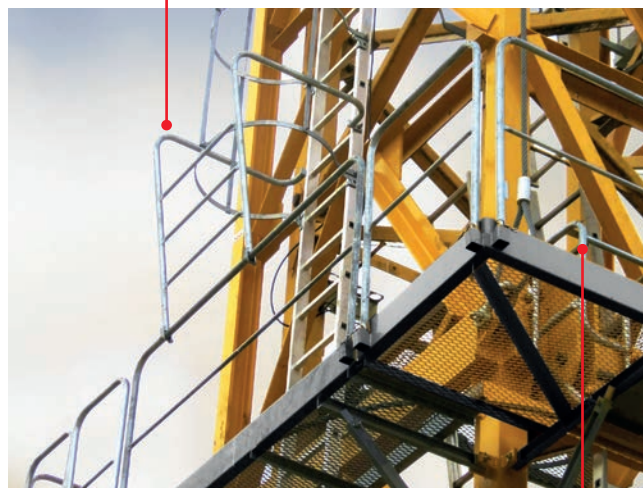
Ten tie-off points spread out over the three working levels and the four sides of the cage allow technicians to easily attach their safety harnesses during the telescoping operations.

Improved ergonomics

- ✓ Lower platform, used for yoke locking/unlocking operations, with heightened grab rail and anti-slip rungs



- Protective grab rail securing access to upper/intermediate platforms



Grab rail allows easy exit through the intermediate platform trap door



- < Interventions of the technicians from the work platforms protected by grab rails.

Safety signs

Safety signs have been permanently placed on the three types of telescopic cages before leaving the factory. Weather-resistant, well-placed, and easy-to-see panels provide appropriate instructions and warnings relating to the telescoping equipment.



Safety sign concerning telescoping operations displayed on the four corners of the cage and the tower-head (or telescoping mast)

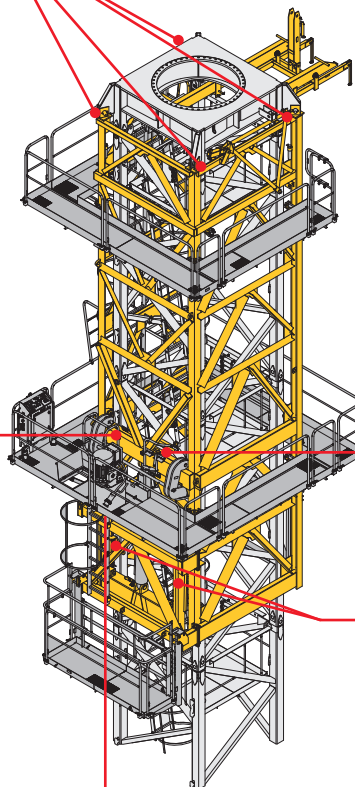
Safety sign related to telescoping operations, located at the level of the yoke and shoe control levers, close to the person responsible for maneuvering who gives the instructions to the technicians



- PPE must be worn
- Protection against falls
- Telescoping operation carried out exclusively by pre-trained personnel



Identification plate for the telescopic cage positioned on the central beam indicates:
Type of cage/Serial number/
Year of manufacture

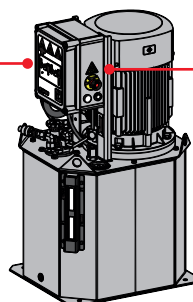


Safety sign warning of risk of crushing of hands clearly visible at the level of the yoke locking system



Safety sign concerning the hydraulic unit located on the switch box with:

- Maximum pressure
- Prevention of risks of electrocution and burns
- Use of the control lever
- Noise level in dB



"Specific hydraulic unit emergency stop" sticker on switch box

Reinforced structure

Slings points allows easy passage of a shackle

✓ Reinforced panel diagonals



To limit loss and handling, shackles and slings can remain in place on the cage once it is installed.



New hydraulic equipment

The T 41, T 61 and T 851 telescopic cages are now equipped with new cylinders and new hydraulic units.

Hydraulic cylinders (1800 stroke)

	160/125	180/125	200/140	280/200
T 41	x			
T 61		x	x	
T 851				x

New equipped cylinders are not hydraulically compatible with the previous equipment; the new hydraulic units must be used.

Hydraulic units

	Motor power	Motor speed	Max. adjustable pressure	Flow rate
T 41	4 kW	1460 rpm (50 Hz) 1800 rpm (60 Hz)	410 bars	7.7 l/min
T 61	11 kW		410 bars	15.5 l/min
T 851	22 kW		420 bars	22.5 l/min



The 50 Hz/60 Hz hydraulic units are equipped with:

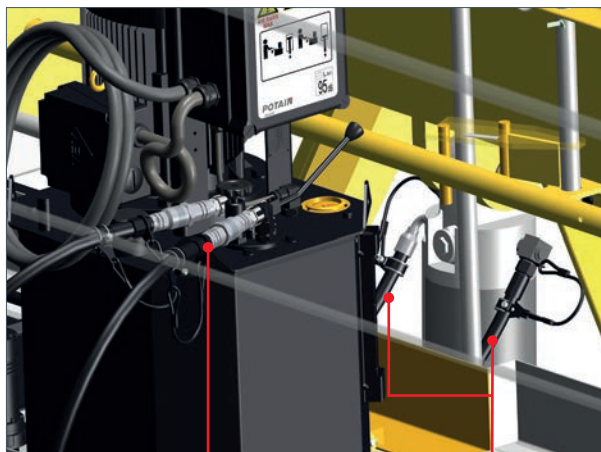
- An emergency stop button for easy shut off
- A thermostat that automatically halts operation when the oil temperature rises above 70 °C
- A shunt mode requiring hold to run using the green start button.
- An adjustment dial for maximum pressure

It is possible to use the new units in place of the old ones with a specific kit code 84061002 (comprising the electric wiring and the upper and lower hydraulic pressure connections) available as Spare Parts from Manitowoc Crane Care.

Technical changes

Unit/cylinder connection

- Fast and efficient hydraulic connections
- Ends are easily screwed in manually until blocked
- Flexible elements are fitted with protective casings to protect against oil projection in the event of leakage.



Quick connections

Two 2.5 m flexible elements
attached to cylinder

The performances obtained for the in/out speed of the cylinder rod take into account the equipment and the limits imposed by the standard-related requirements.

The old hydraulic units/cylinders are not compatible with the new CE certified cages.

Balance assist system

Telescopic cages are equipped with a balance assist system that helps to stabilize the cage during telescoping.

This device is available on all GME models, with a working principle adapted to the control system in the cranes (CCS or not).

Two working systems:

Adjustment through teach-in programming for cranes equipped with CCS (versions 1.9 and later)

- Teach-in programming done from the telescoping control unit on the switch box (located on the intermediate platforms) while telescoping (towerhead disconnected and entirely removed from the mast section fish plates)
- Adjustment of the balancing radius and recording of the minimum and maximum radii thresholds authorized with a load given through validation by technicians
- Balancing and adjustment always carried out with the crane operator in the cab, who carries out the orders of the person responsible for maneuvering situated at the telescoping console (operation is always done from the cab, but the crane operator is limited in dangerous movements once the teach-in programming has been done)
- Automatic cut off of all the crane movements with the exception of the trolley-in and trolley-out movements that allow return to a safe position (reduced speed) as soon as the limits are reached (+ permanent sound signal and red light)

Adjustment with assistance through the control unit for cranes not equipped with CCS

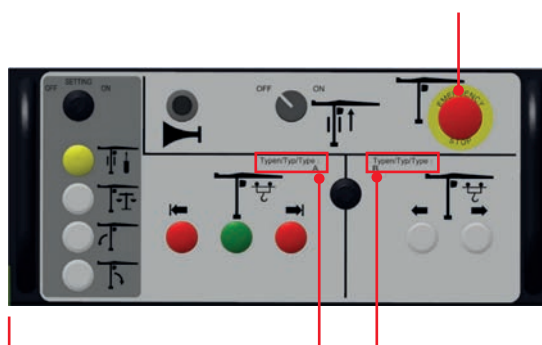
- Manual adjustment of balancing radius
- Visual checking of balancing position
- Trolley-in and trolley-out movements in cab controlled and authorized from the control unit

Stainless steel switch box,
IP 54, UL/CSA compatible



Storage space for the technical manual and other documents

Emergency stop button cuts off
all crane movements



Controls for the CCS
cranes (type A)

Controls for the non-
CCS cranes (type B)

Technical changes

Improved yoke locking system



Locking of yoke on the mast section lugs

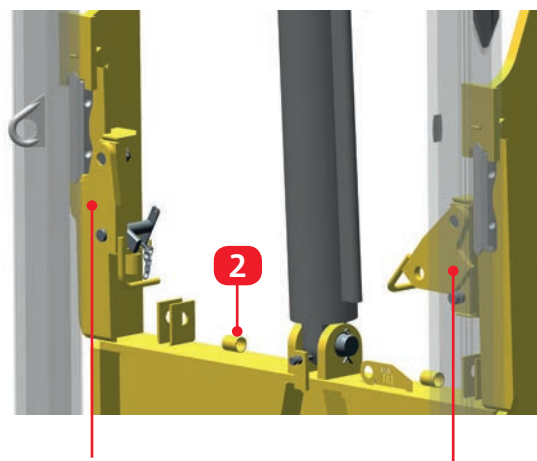
The yoke is equipped with new locks that ensure it is maintained in place on the mast section lugs during all phases of use:

- Installing the cage
- Telescoping
- Telescoping down
- Moving the cage to the bottom of the crane tower

Quick and high-performance locking system

(no additional tools required)

- Easy, effortless manipulation
- Round handle for better grip
- Locking pin remains in position during maneuvering of lock
- Standard solution on the three telescoping equipment T 41, T 61 and T 851



Yoke locked on mast section lugs

Yoke unlocked on mast section lugs

Locking of yoke on the cage

The blocking and locking of the yoke on the cage for transport, placement of the cage, and operations on the cylinder have been improved and standardized for the three telescoping equipment:

- Use of the two pins make manual handling easier (1)
- Two supports provided for storing the pins which are removed during operations (2)

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