

Potain - Very high cranes

An exceptional know-how





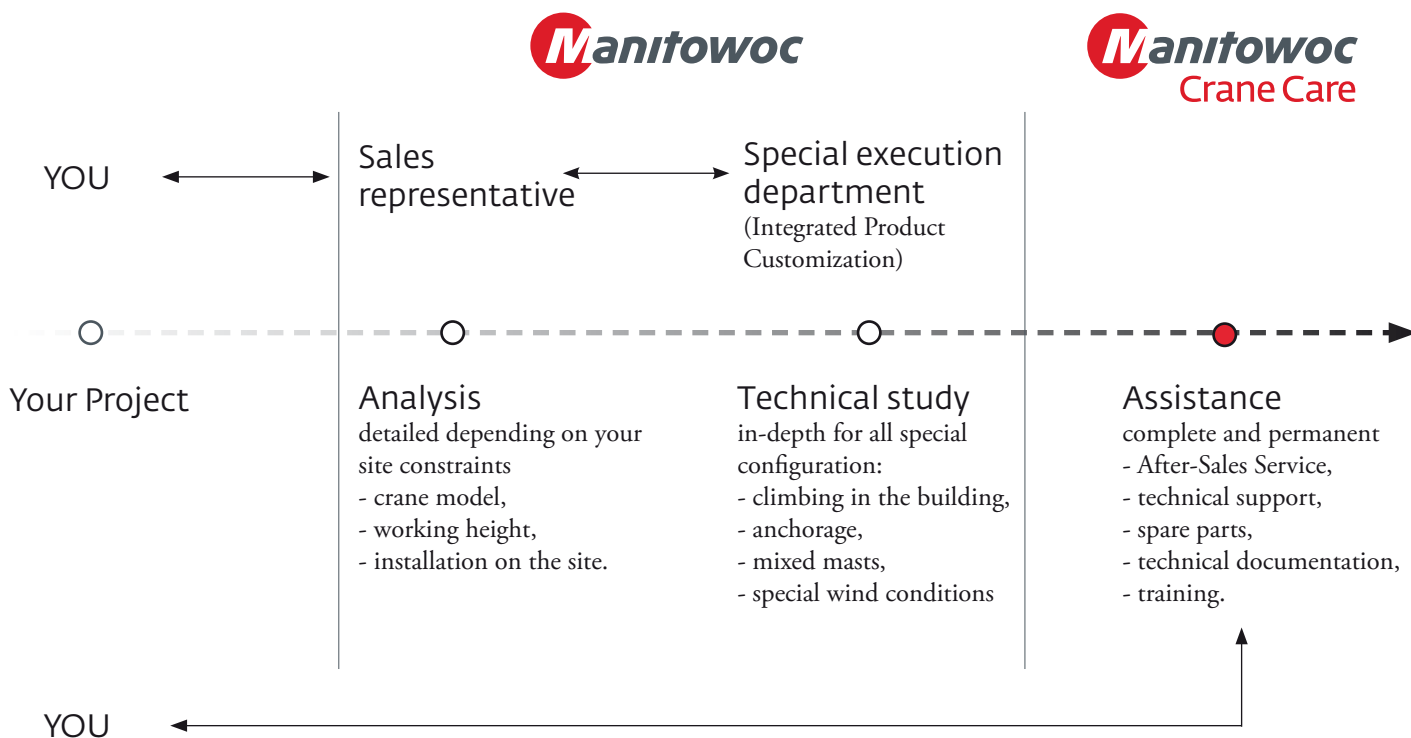
World expert of tailor-made sites, Manitowoc commits to be at your side.

The exceptional site, pharaonic, out of the ordinary, the technical achievement

With the assistance of our organization with worldwide cover, a highly qualified team, with a strong experience acquired through several decades, will answer accurately your specific requirements.

With a recognized know-how, Manitowoc offers you clever solutions, a precision work, and always with a strict sense of safety rules.

A team at your service:



Big construction works

Manitowoc has prestigious references in the whole world to its credit.

RUSSIA - Bridge of Russky Island to Vladivostok

Two Potain tower cranes have worked for the execution of the bridge connecting the Russky Island to Vladivostok: a Topless MDT 368 (16 t) crane and a Maxi MD 1100 (50 t), both anchored to the bridge piers with hook heights of respectively 324 m and 335 m.

Once the bridge was finished, 3 records have been beaten: the longest cable-stayed bridge of the world with 1104 m length, bridge with the highest piers with 324 m height and the bridge with the shortest construction time of just 43 months.

Manitowoc has proudly accepted the challenge in an especially restrictive context:

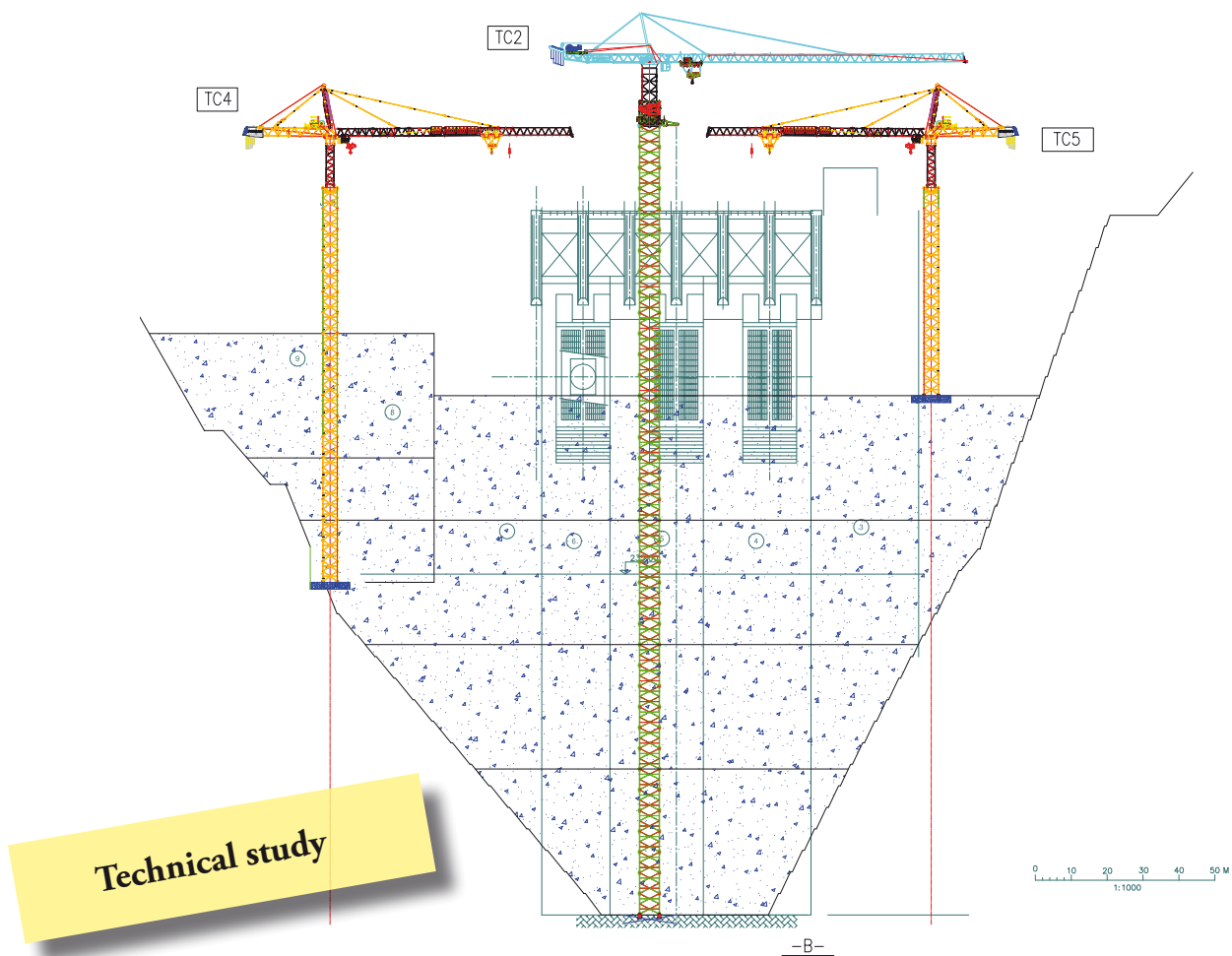
- site localized in a **seismic zone**,
- anchorages with large **span of up to 17 m**,
- **special 4 m mast cross-section** for the MDT 368,
- **installation of a hoisting winch for big height/high speed** on the MDT 368.



Our commitment to technical innovation and the manufacturing of high-performance cranes of high capacities allows us to offer systematically profitable solutions adapted to your requirements.

Manitowoc is involved in each step of your project, from the study to the execution, and provides support during the whole execution time.

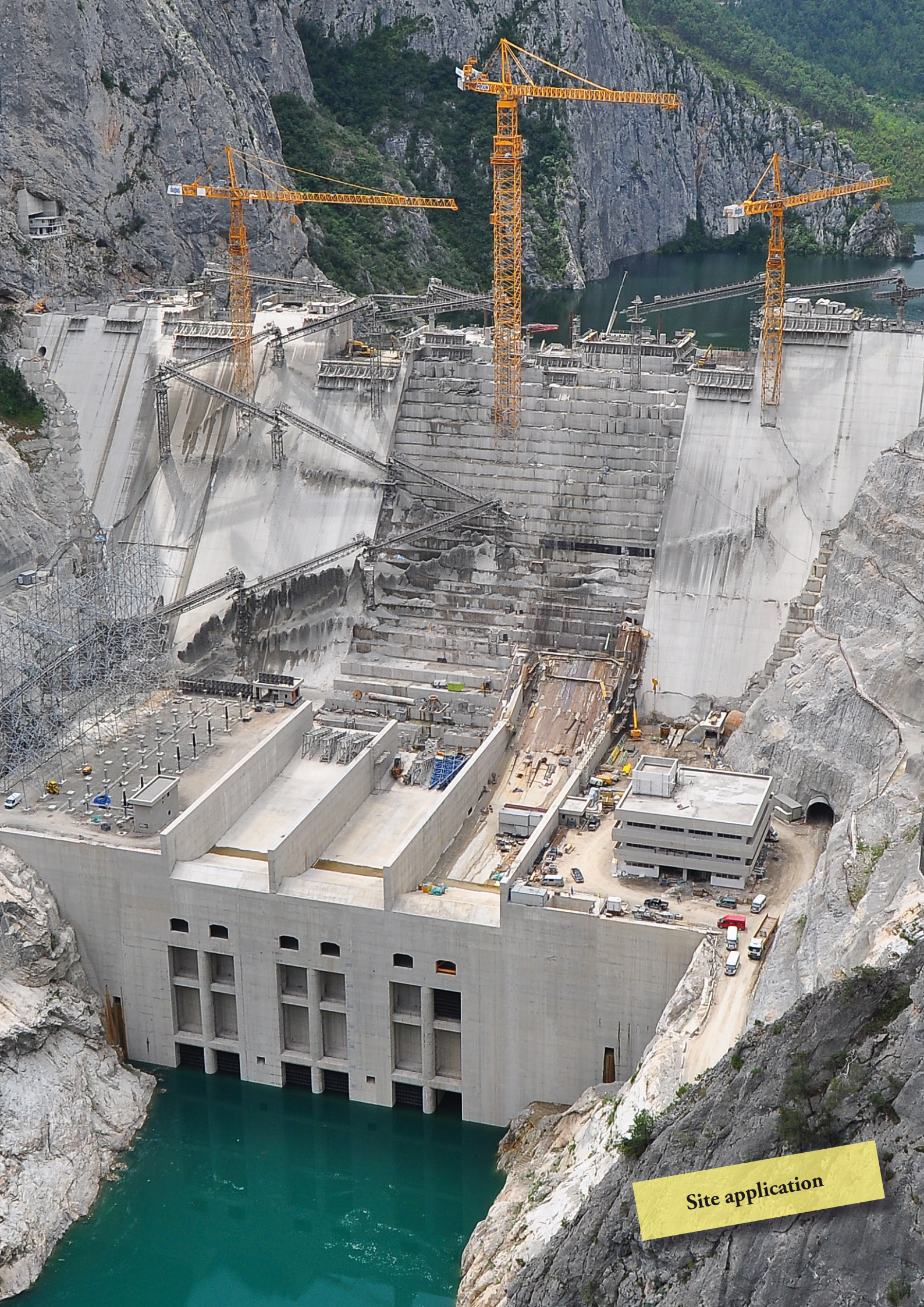
TURKEY - Boyabat dam



Potain Maxi MD cranes have been used for Boyabat dam on the Kizil river near Duragan. A part of the crane towers have been embedded in the construction. The **two MD 1100** cranes of 40 t maximum load have reached **120 m** height for one crane and **137 m** for the other one. The **MD 2200 cranes** with 64 t max. load reached **104 m and 225 m**.

Our expert team has supervised successfully:

- the installation study of the cranes and the various site sequences
- the erection and the heightening of each crane



Site application

For high and big constructions

Manitowoc takes up a challenge and supplies you a customized solution, adapted to your requirements while observing your site constraints.

1. External anchorage

This technique of anchoring to the building by means of anchorage frames allows to reach breathtakingly heights exceeding 200 m, 300 m and more.

We offer:

- **standard anchoring sequences** for the most current cases,
- **customized anchoring sequences** for the most complicated sites and for optimizing the number of anchorages.

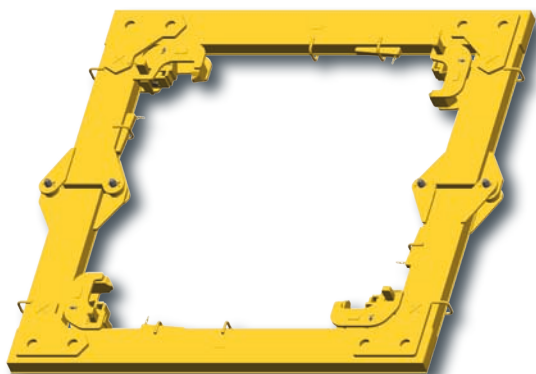
One or several frames fixed to the structure by rigid connections can be fitted according to the final height to be reached. The unusual stresses caused by the big height are therefore perfectly transmitted to the structure.

Manitowoc includes in its standard offer anchoring frames for all mast cross-sections of 1,2 m, 1,6 m, 2 m, 2,45 m, 2,5 m and more.

In addition we ensure support for the connecting beam design:

- **supply of the manufacturing drawing,**
- **execution and supply of the parts**

Anchoring to the building can be applied to the tower cranes with horizontal jib or to cranes with luffing jib.





AUSTRALIA - City Square Tower in Perth

Three cranes with luffing jib, **two MR 295** (50 m and 45 m jib) and **one MR 615** (60 m jib), have worked at the construction of the tower with **hook heights higher than 230 m.**

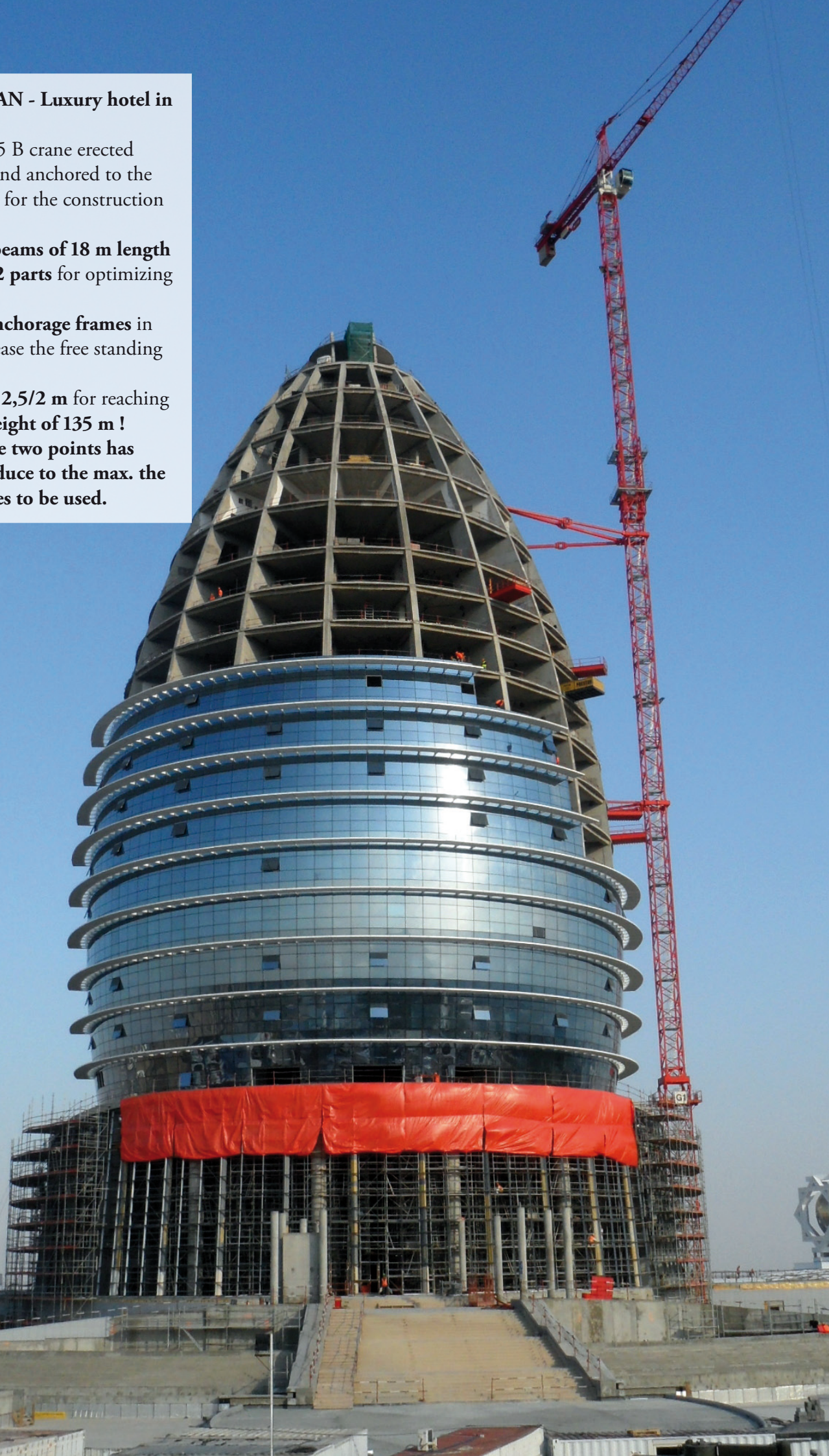
- **anchoring sequences adapted to the building geometry.**

TURKMENISTAN - Luxury hotel in Ashgabat

A Potain MD 265 B crane erected on mixed masts and anchored to the building operates for the construction of the hotel:

- **connecting beams of 18 m length designed in 2 parts** for optimizing the transport,
- **reinforced anchorage frames** in order to increase the free standing height,
- **mixed masts 2,5/2 m** for reaching a working height of 135 m !

Combining these two points has enabled us to reduce to the max. the number of frames to be used.



In Bahrain in MIDDLE EAST, a **Potain crane of K type** has been used for the construction of the World Trade Center :

- **anchorages with 24 m span,**
- **final height of 265 m.**



PORTUGAL - Corgo viaduct

Potain cranes are taking part in the viaduct construction, major element of a new highway for connecting the Portuguese town Porto with the Spanish border.

5 cranes of MD and MDT types, 8 t and 12 t, are used, with working heights up to 123 m.

—> Please note that the anchorage to the building is applicable to «smaller» cranes, erected on 1,2 m or 1,6 m masts, for example.

2. Climbing in the building

Climbing of the crane resting on the building (floor, elevator shaft, external supports) allows to increase considerably the working height and to adapt to the work progress.

Kept by the climbing collars fixed to different levels, the crane rises by climbing at the same time as the construction without adding mast sections.

Heightening is carried out easily and rapidly by means of a hydraulic unit.

You take advantages of optimum performances at reduced costs!

- **reduced jib radius,**
- **powerful load curves,**
- **no overslewing limitation,**
- **short crane tower (the crane is raised inside the construction),**
- **standard crane reusable in all configurations,**
- **optimised transport (limited number of packages),**
- **reduced climbing equipment which can be reused,**
- **possible application on cranes with horizontal jib and luffing jib.**

We supply equipment for each standard mast type with cross-sections from 1,2 m to 2,45 m.

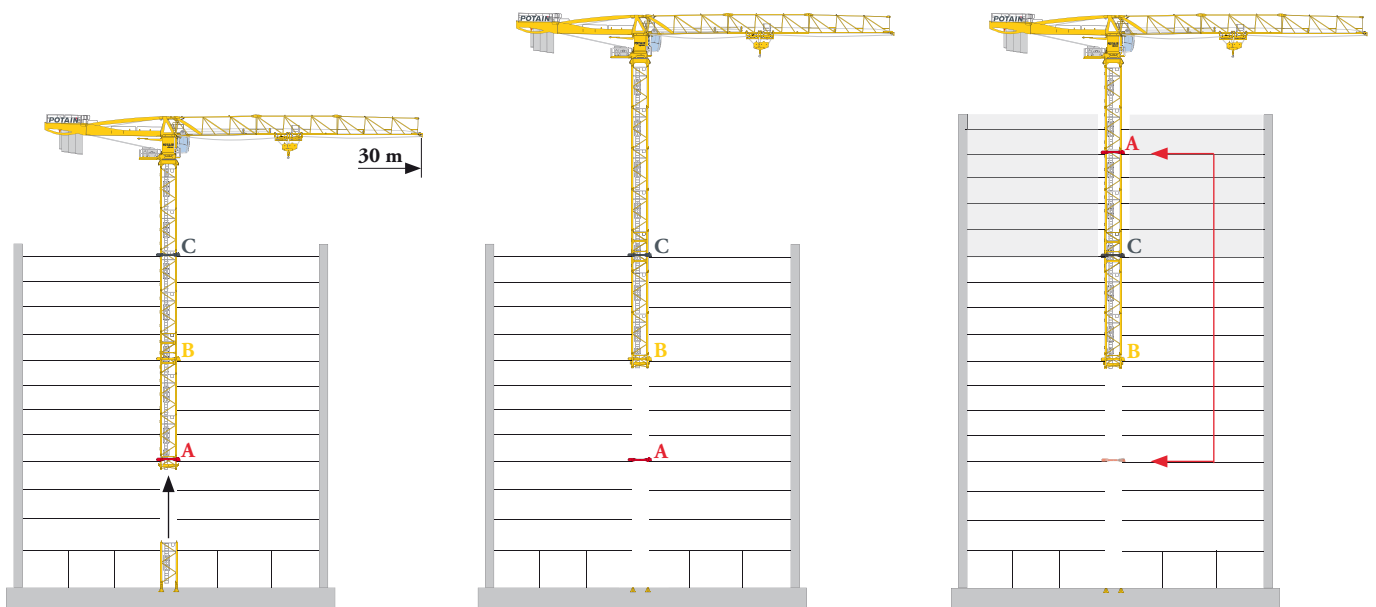




RUSSIA - Mercury City Tower
An MR 295 H16 (45 m jib) is in the middle of the construction site of the highest tower in Europe, the Mercury City Tower of the financial quarter in Moscow. It is erected inside the concrete structure of more than 300 m height.

- customized climbing sequences,
- special climbing collars,
- assistance in dismantling the crane.

Climbing principle



TURKEY - Zorlu Levent

Two MCR 225 A cranes work for the construction of a building in Istanbul **with a final height of 200 m.** They rest on different floors by means of collars and then rise at the same time as the building (standard climbing sequences).

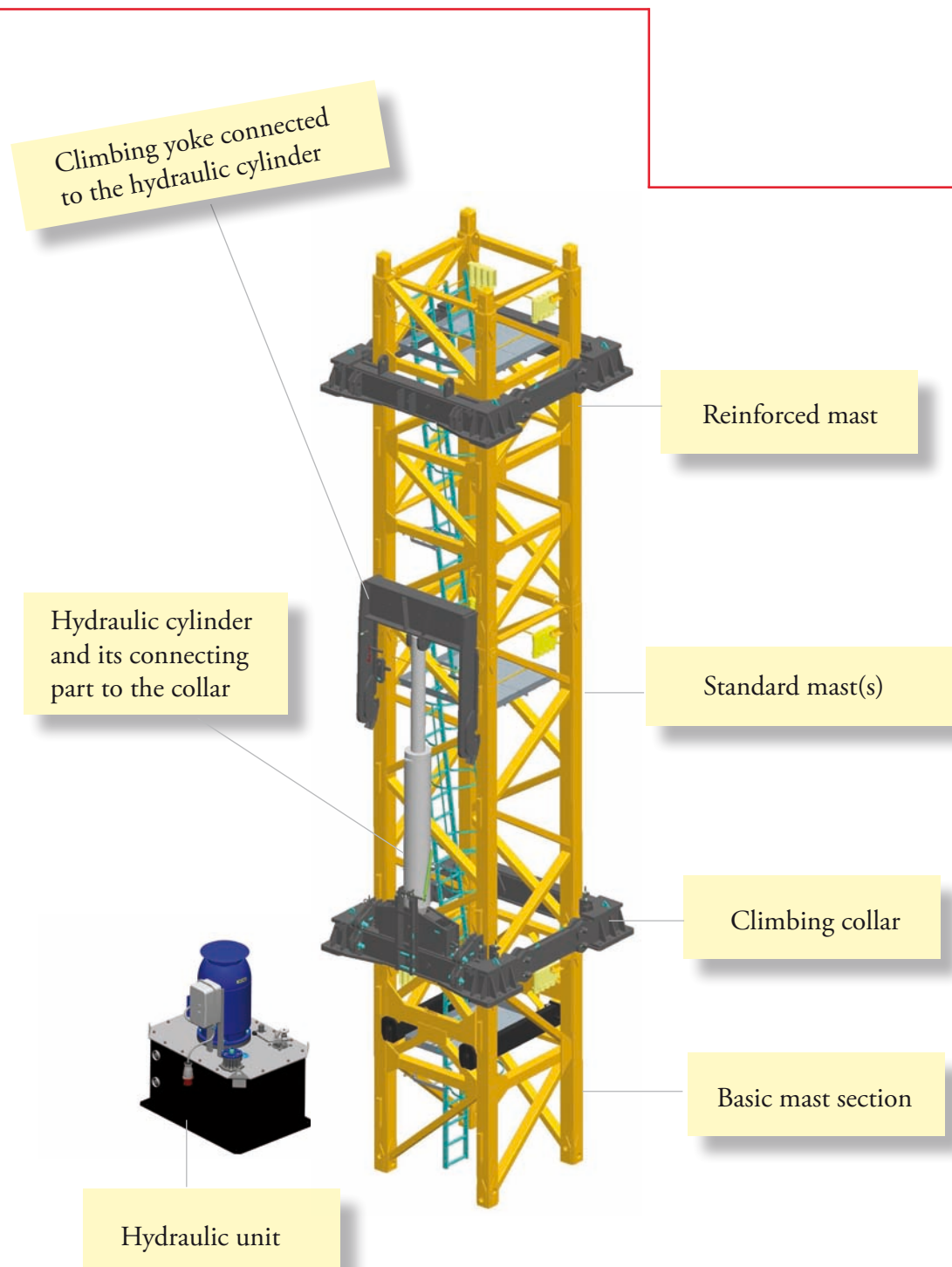




A reduced and reusable equipment

You invest an optimised capital in a reduced and reusable equipment for installing your crane for climbing inside the building.

- three collars,
- minimum one reinforced mast section (fitted at the level of the climbing collar),
- a basic mast section (short mast section located at the crane tower base).



(Illustration: «during climbing»)



FRANCE

Two Potain MDT 368 cranes, most successful model on the market and a relatively new one, are working on the construction of silos at the Atlantic Coast.

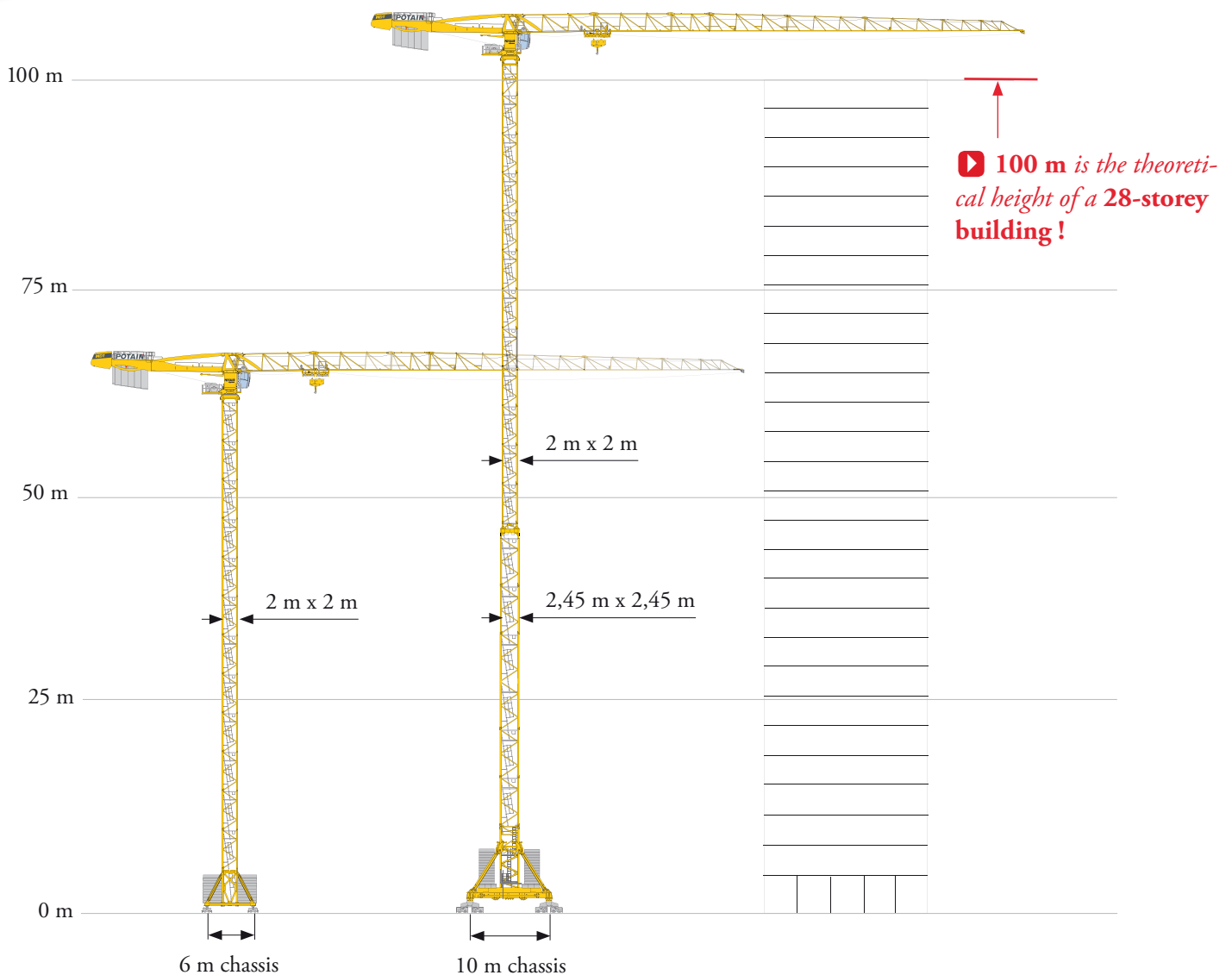
- mixed masts 2,45/2 m,
- 75 m height,
- geographic zone where wind speeds reach sometimes 200 km/h at jib height.

3. Mixed masts

This installation type allows you to **increase considerably the free standing height** without any specific equipment but mast sections with large base and a connecting mast.

- very high hook height, free standing crane,
- no special equipment required,
- use of standard elements (optimization of your stockyard),
- easy and rapid erection.

Example of performances obtained



Example of performances

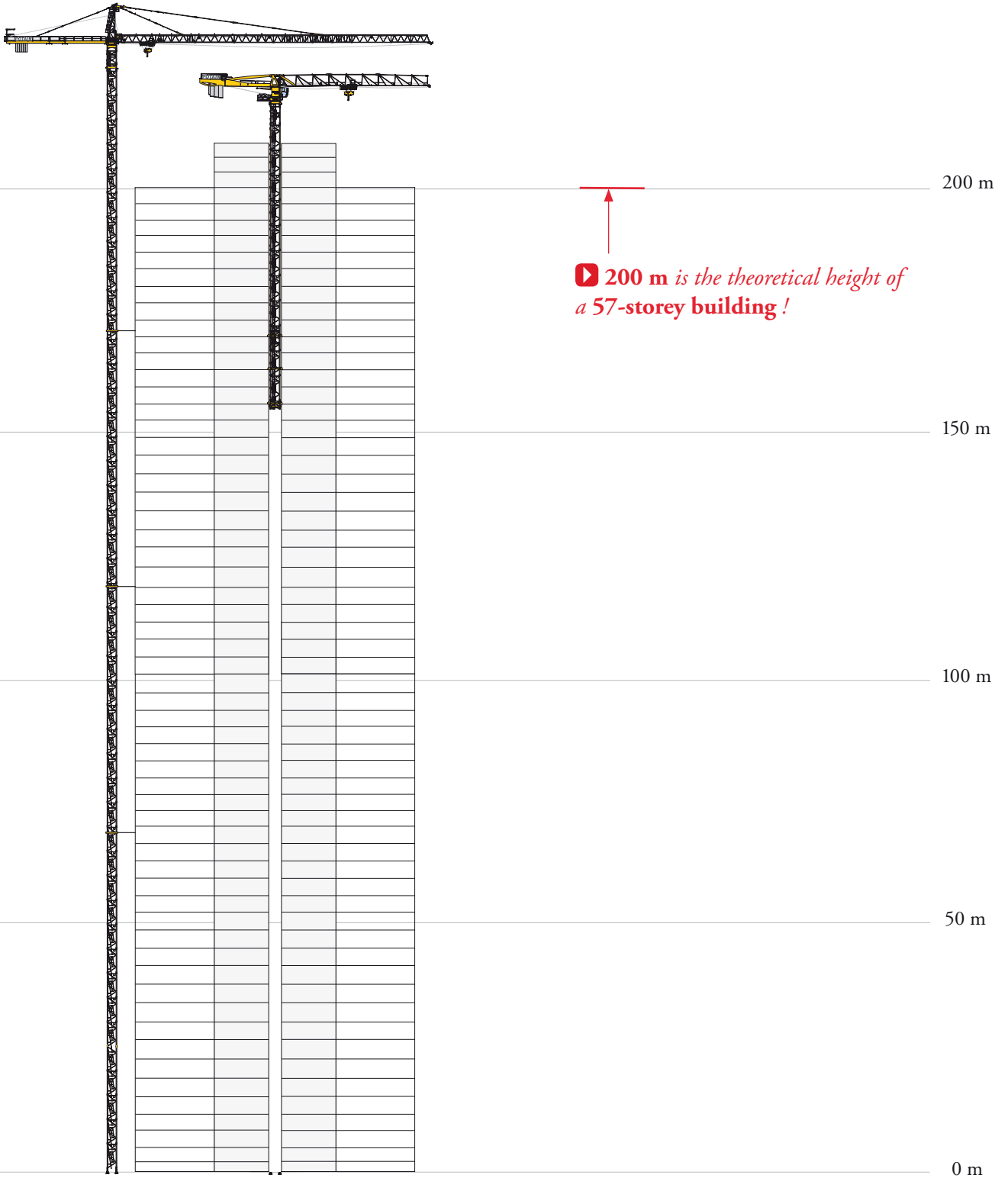
Safety and productivity are the key words

We supply “turn-key” solutions, well-proven and reliable for all special installations and for all Potain cranes (Topless, with tie bars, with luffing jib).



However the height, there is

Final phase

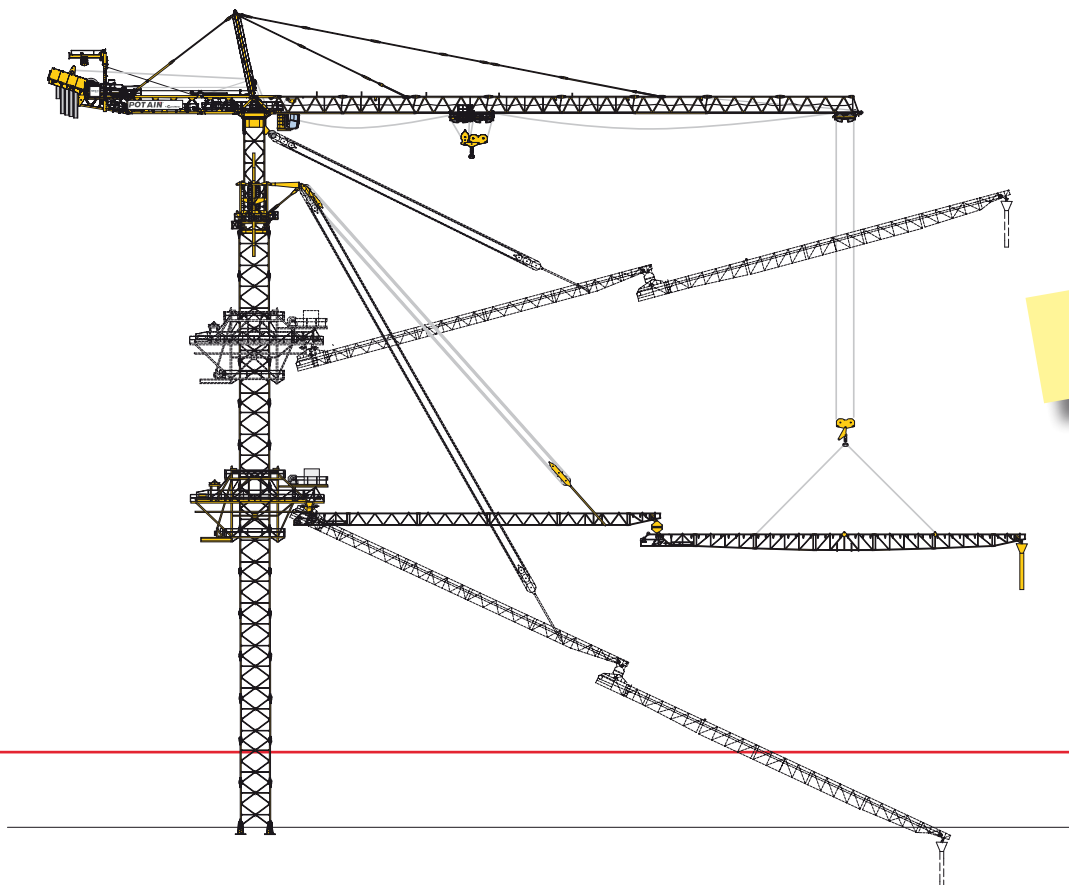
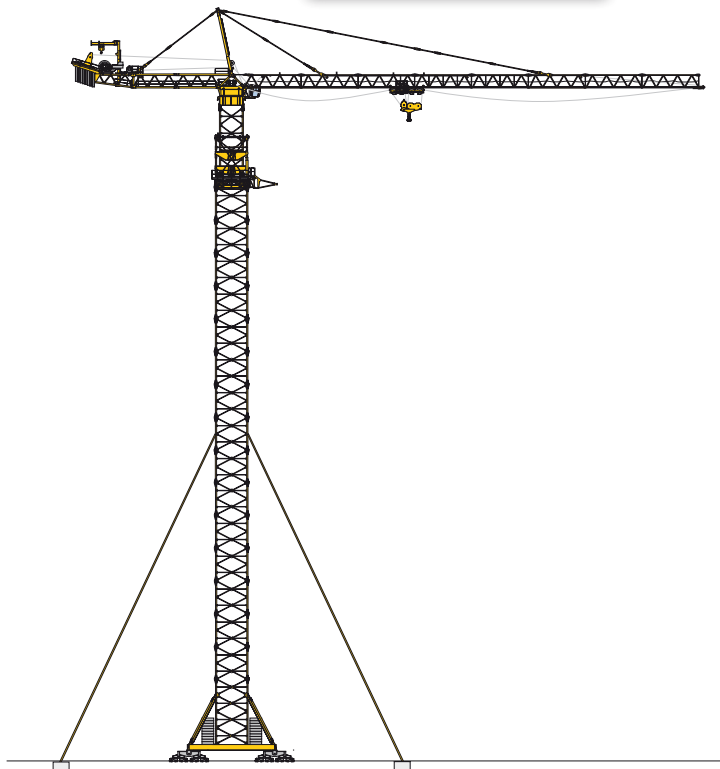
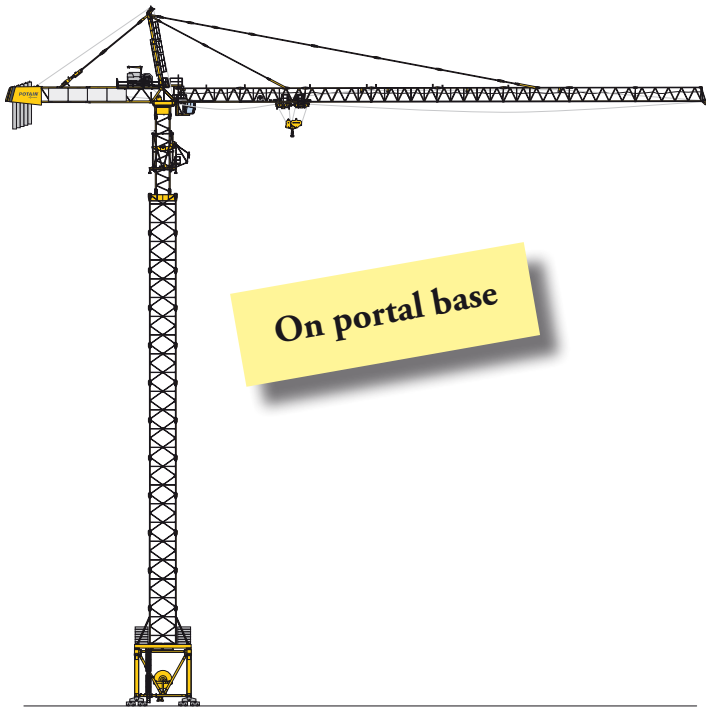


is always a Potain solution

Our offer	1,2 m	1,6 m	2 m	2,45 m	2,5 m	4 m	5,5 m
Climbing inside the building	●	●	●	●			
Anchorage frame	●	●	●	●	●	●	●
Connecting mast	1,6 / 1,2 m	2 / 1,6 m	2,45 / 2 m		4 / 2,5 m	5,5 / 4 m	

Special solutions

Guyed



More than 80 years
of experience
at your service

POTAIN

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