Façade Installation

Complete Systems

for an

Economic Installation

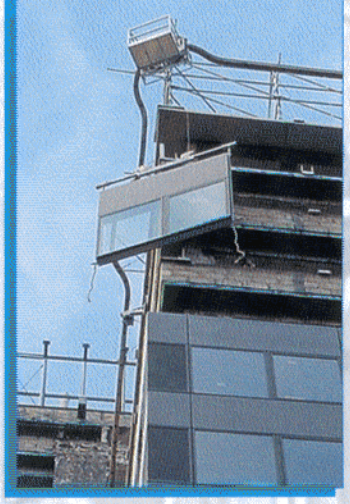
Tractel Group

www.tractel.com

Buildings are like trees, if ...

... they keep growing and spring up everywhere!

... their "foliage", the façade to be attached.



In former times, it was a challenge for lots of craftsmen to create the exclusive façade that the architect had designed.

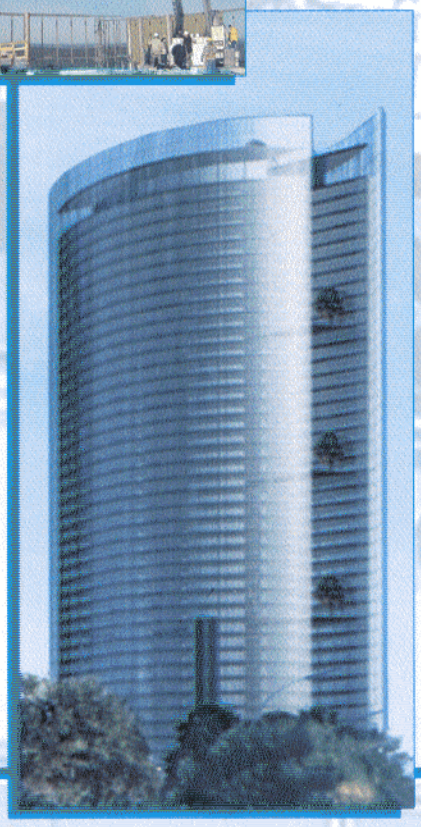
Today alle these tradesmen operate using modern industrialised methods. Standard elements are produced and delivered just in time to the site, to be assembled to give the buildings their "foliage".

In the past on tall commercial or residential towers, craftsmen used tubular scaffoldings, to install windows and façade elements. Today complete elements of considerable dimensions and weight need to be lifted and secured, to fix the cladding.

In most cases, the fitters are working from inside the building. Where access is not possible at floor level such as lift shafts and atriums, installation of the cladding must be done from outside.

For all these cases, it's a matter of fact:

TRACTEL can offer ideal solutions for this work!



- Lifting units using **TIRAK® endless-hoists** can be supplied to lift façade elements of what ever dimensions and weight to any required height – safely, quickly, and they can be used to precisely position cladding and elements.

  TIRAK® machines with standard capacities of 600, 1000, 1500 kg are available.

- If installation must be done from outside, **suspended platforms** using **TIRAK® hoists** allow the workmen to select for themselves the ideal position required to carry out their installation work.
- Temporarily installed **monorail systems** can be designed to allow the operatives to reach all the areas they need to be in to complete their work.
- On the German-Post-Tower in Bonn, the **building Maintenance Units** (BMU) were programmed to be installed early enough to allow the hoisting system for the cladding components to utilise the boom section of the BMU.

Using more than fifty years experience in the design and manufacture of Materials Handling Equipment and in the field of Man-riding Applications, the TRACTEL Group can provide the equipment needed to add the "foliage" to the new trees.

You can depend on us!

Monorail-system

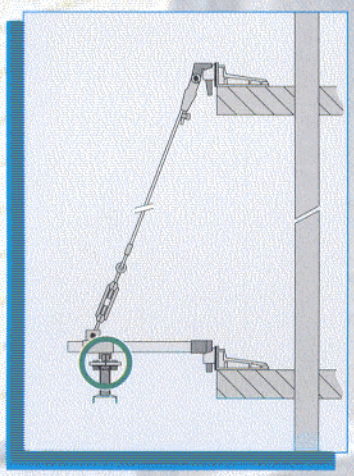
For Installation Heights up to 30 meters

In this example a Hoisting **generator** platform is combined to traverse along the rail section.

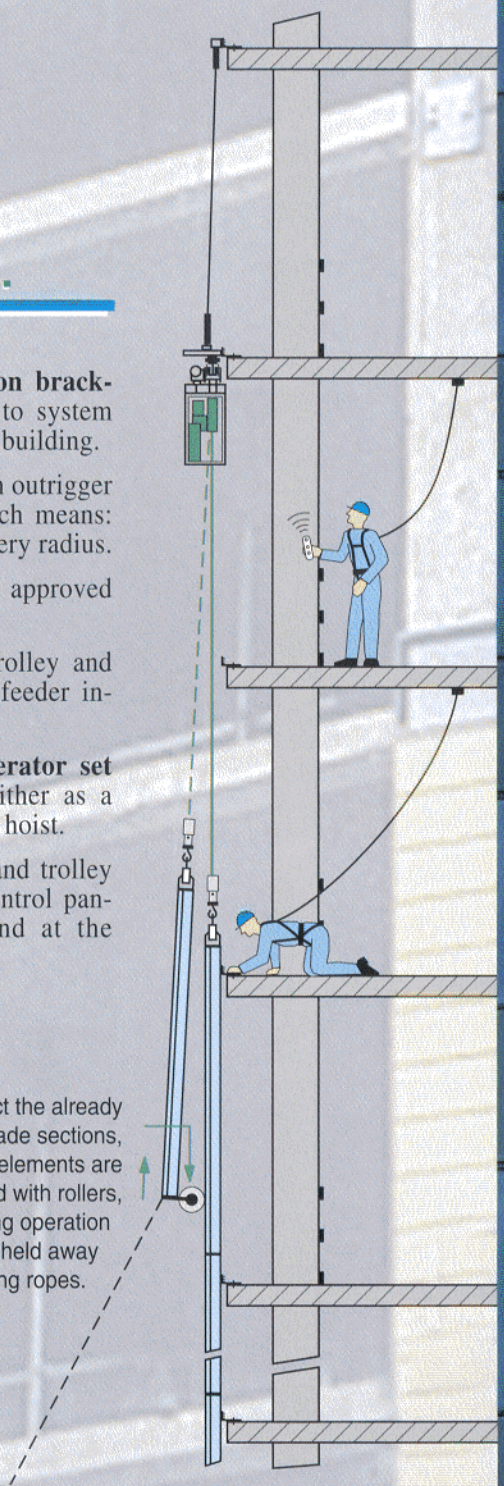
The standard, ...

- **Outrigger and suspension brackets** of the rail are fixed to system structural elements of the building.
- The **anchor plate** between outrigger and rail is **slewable**, which means: one standard item suits every radius.
- All the **rails systems** are approved for **1500 kg capacity.**
- **Electric supply** to the trolley and hoist is given through a feeder inside the rail-profile.

  As an alternative, a **generator set** follows the hoist unit, either as a tender, or fixed above the hoist.
- **Radio control** for hoist and trolley can be done from two control panels, from the ground and at the mounting height.



Slewable anchor plate
for every curve radius.



To protect the already assembled façade sections, the new elements are temporarily equipped with rollers, and during the lifting operation are held away by using guying ropes.

... effective, and highly economic!

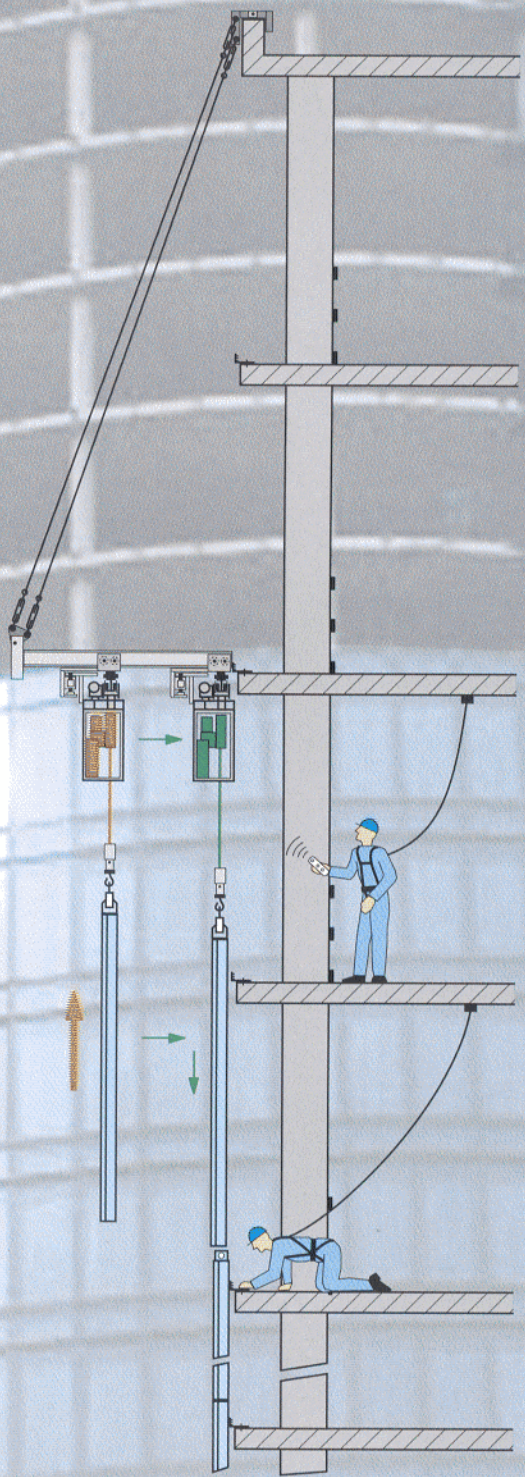
The Standard-„Plus"

For Installation Heights up to 60 meters

- To protect the already installed façade, lifting the new elements can be done using a **TIRAK® system** mounted on a combined **outrigger and monorail section**.
- **Hoists with two speeds**, e.g. with 9 m/min [▬] and 2.25 m/min [▬], allow rapid lifting combined with the precise positioning of the façade elements.
- Hoist units with **continuously variable speeds** increase these advantages:
  From 0 to 15 m/min [▬] for quick lifting and from 0 to 2.25 m/min [▬] for the precise positioning.

Hoisting unit on the retracted rail section

Hoisting unit with generator passing a curve

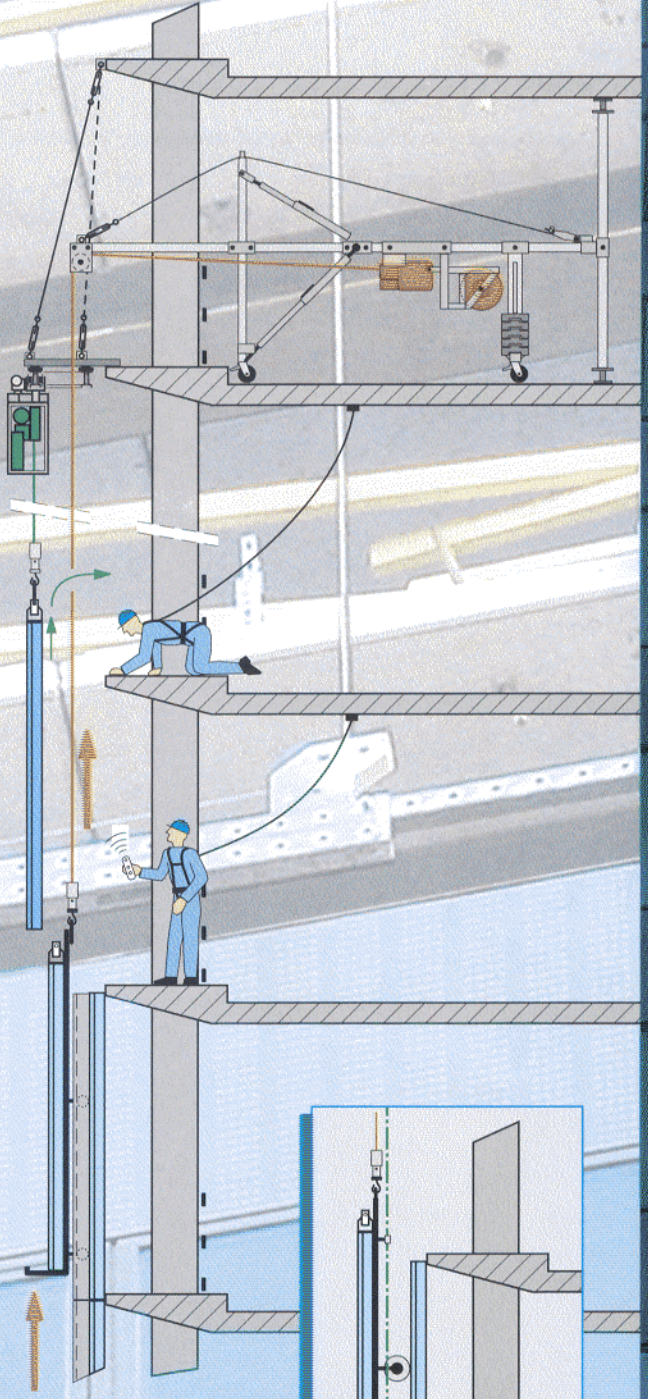


Time is Money!

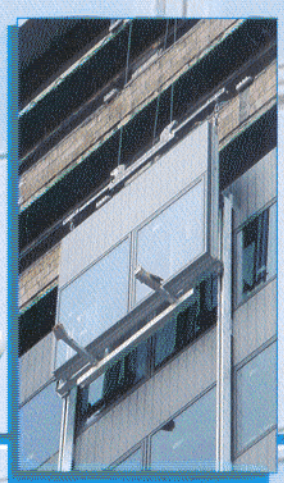
Quick Lift

For High Buildings

Monorail – on the left side the section, where it "doubles" the quick lift.



- Mounted on a special outrigger, a second **TIRAK® hoist** lifts a sliding carriage with facade elements – **at 15 m/min [▬]!**
- The carriage is guided by temporarily installed rails.
  If the building maintenance unit utilises such guiding rails, they would no doubt be installed, and they can be used for stabilizing the carriage.
- The monorail track "doubles" the area of the quick lift, so that the installation hoisting unit can take over the elements from the carriage.



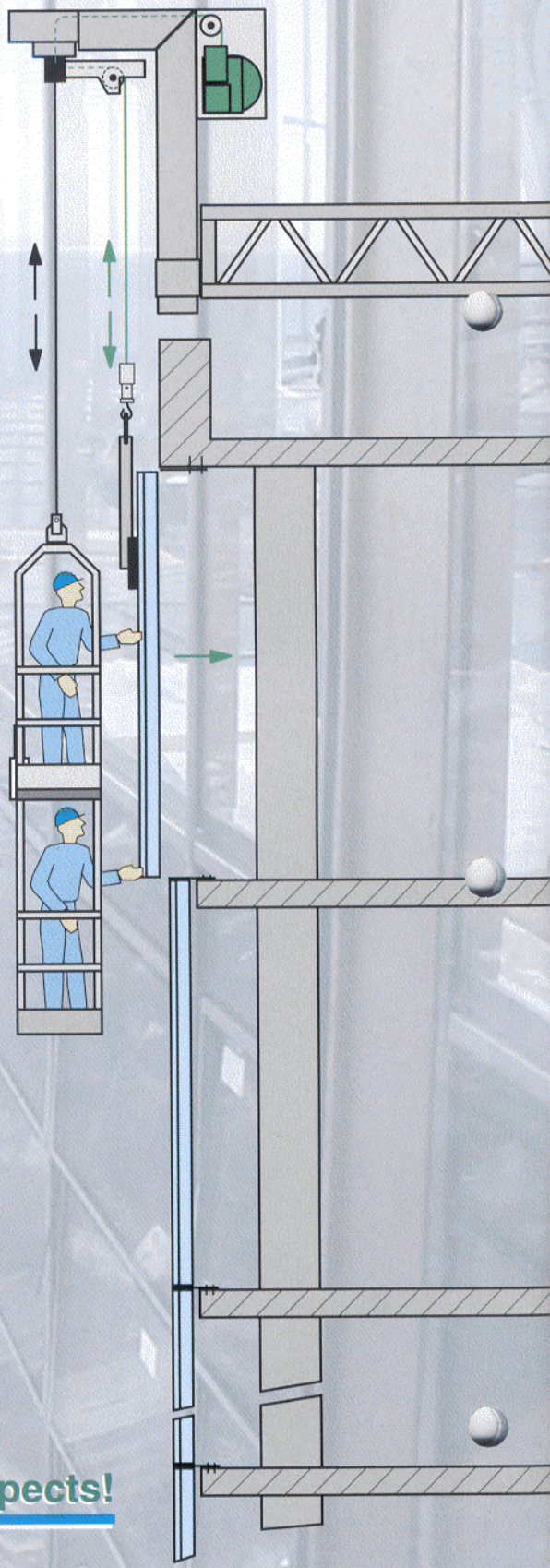
- If due to the façade's design, the installation of guide rails is impossible, then tensioned wire ropes are used to stabilize the carriage, and rollers protect the façade's surface.

... for the real big sites!

"What about the last floor?"

The jib section of the BMU with operatives in the cradle and a panel suspended from the material hoist and held by a vacuum lifter.

BMU outrigger with integrated material hoist.



Cladding the upper floors will need other devices than those illustrated earlier. But TRACTEL has **suitable solutions**:

- Use the **Building Maintenance Unit** (BMU) to install the last façade elements,
  - either with the standard spreader bar, or
  - with an additional **material hoist**, which is standard equipment on modern units – e. g. for the future replacement of defective window panels.

  If the installation is to be done from the outside, use the BMU's cradle, or a temporary platform.
- If there is no BMU – frequent on older buildings – we can offer **mobile roof rigs**.

  Use the TRACTEL Group's know-how, to gain the **best possible access** and **lifting systems** for any project.

... we consider all aspects!

The Heavy Weight Champion

Lateral movable outrigger system

- For **heavy façade elements** of marble or concrete, we recommend using an outrigger system with integrated **TIRAK® hoist** available in **capacities up to 3 tons**.
- **Horizontal traversing** is achieved through
  - a **monorail system** matching the complete façade, or
  - a **roof track** as shown on the above, if the roof allows it.

Outrigger with suspension points for a platform and spreader bar for lifting the façade elements

Installation with two platforms

Spreader bar with suspended façade element and an installer on the platform, ready for secure the element.

The examples of this brochure are only a limited selection of the solutions offered by the TRACTEL Group.

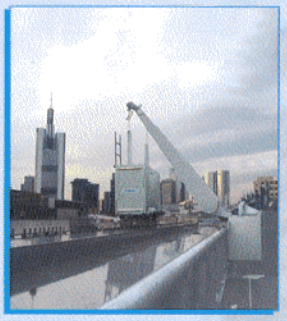
Do you have a new challenge for our team?
Feel free to test us!

Bet that …

TRACTEL can help!

This part of the job completed, think of using our ...

Building Maintenance Units ...



Roof-car installations

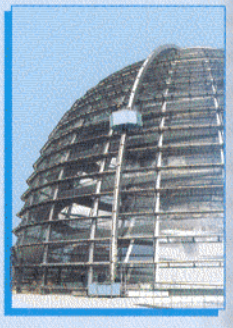
Outrigger systems

... to care for the building and keep that "just built" look.

- Reaching any point of the façade
  - with **roof car and cradle** is the classical solution,
  - with **cradle and "outrigger"** – whenever a rail system cannot be considered for architectural reasons.
- Gaining access, **outside and inside**:
  - with **suspended platforms**, climbing up and down wire ropes, and traversing on a **monorail**,
  - with the **working basket** of a **mast-climbing system** – the mast traversing on **rails**,
  - and in restricted or special areas with **ladder systems**, again laterally moving on **rails**.

In addition to **I-beams** we offer various **aluminium profiles**, which can be made to harmoniously suit any kind of construction.

Monorail systems, outside and inside



Mast-climbing installations

Ladder system installation

Modern innovative building designs demand creative solutions.

The earlier you involve our team in your planning, the easier and more economical the installation will be!

TRACTEL Group offers
optimized access solutions ...

... to let the building always shine!

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