

# ReNaissance.

► Modernization Kit



**DOPPLER**

Elevating your World.

Has your elevator  
reached its Middle Ages?

**It's time for ReNaissance!**





# Upgrading your Elevation Experience!

## Why modernize?

Modernization gives new life to your old elevator.

It increases safety, improves operation quality and offers a better ecological performance. It updates the aesthetic appeal and makes the lift more attractive and accessible.

DOPPLER has tailored an elevator modernization program that applies to your building's characteristic features.

**ReNaissance** is our customized approach to offer you a safe and reliable elevator, minimizing energy consumption, costs, need for repairs and disturbance.

It is the ideal solution from low-rise to high-rise applications, ensuring the best possible elevation experience to the passengers.

One of the biggest concerns about modernization is the disruption to normal buildings operation during installation. ReNaissance is a carefully designed approach to minimize the inconvenience of inhabitants.

## Does your elevator show signs of age?

### 10 signs that it's time to modernize!

- ▶ Frequent shutdowns
- ▶ Doors malfunction
- ▶ Rising repair costs
- ▶ High electricity consumption
- ▶ Out-of-date style
- ▶ Imprecise floor leveling
- ▶ Noise and vibration
- ▶ Inaccessible to disabled
- ▶ Long waiting times
- ▶ Change of building's usage

# The Essence of ReNaissance.

## Safety First.



### **Your safety is our top priority at DOPPLER.**

We ensure that the lift becomes compliant to the most modern safety regulations (EN 81-80 / Safety standards for Existing Lifts).

In the process of redesigning your elevator we install a wide range of safety features to ensure that the system will be 100% safe.

### **For the user**

In case of a power failure, the car lighting turns on immediately and the automatic emergency operation allows the safe evacuation of the cabin. Moreover, an emergency call system provides direct contact between passengers and front desk/rescue service.

Passengers are protected from closing doors through a light curtain system which uses scores of multiple infrared light beams.

The precise leveling accuracy system ensures passenger's safety while entering and exiting the elevator.

### **For the maintainer**

Plenty of old lifts have hazardous gaps between the cabin and the shaft walls.

Doppler balustrades on the car top are used for extra protection

Modern designed car top control box eliminates the risk of an accident when working from the car top, which is a necessary operation of maintenance.

## Design is People.



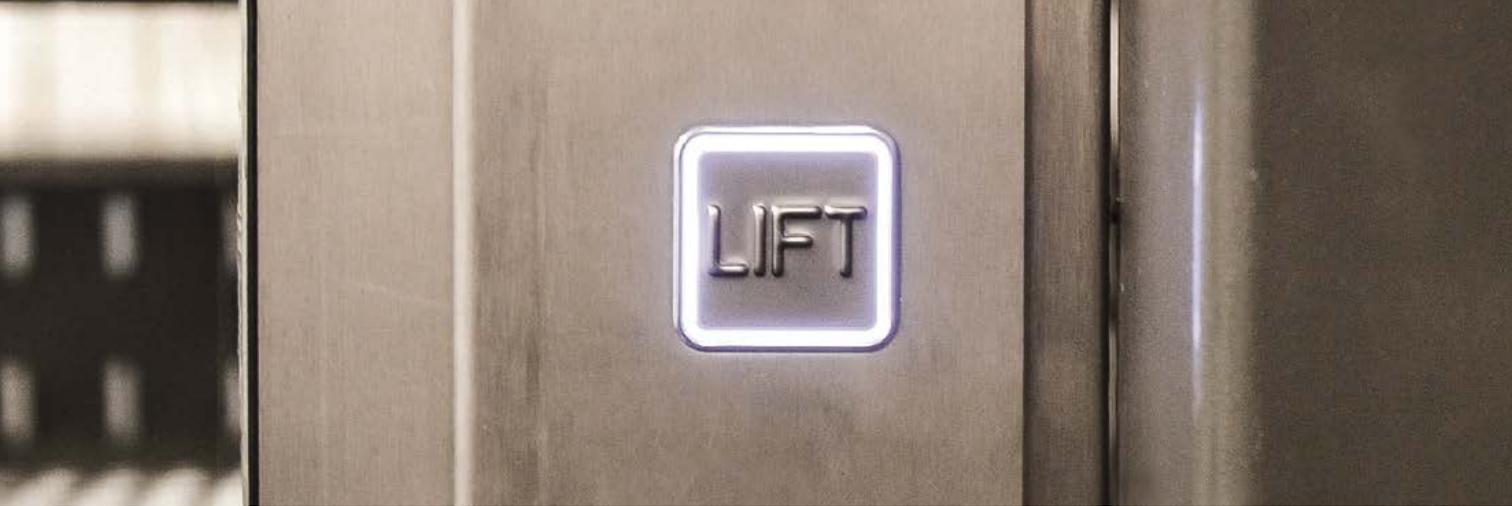
The unique cabin redesign not only adds value to the building but also leaves positive impressions to all passengers.

For DOPPLER, when it comes to design, there are no limits to imagination. We aspire to provide you with exceptional car design according to the required preferences.

We provide a wide variety of materials to choose from, such as display elements, components and lighting options in order to create a bespoke cabin that will fit your individual style and budget.

Apart from being attractive, DOPPLER's cabins are extremely durable and robust.

Last but not least, DOPPLER ReNaissance ensures that your elevator meets the legal obligations and creates improved access for people with special needs according to EN 81-70 and vandal resistant requirements as per EN 81-71 legislations.



## Go Greener.



### **In DOPPLER we think, design and act greener!**

We incorporate environmentally friendly features into the manufacturing procedure, upgrading the energy saving systems i.e using the inverter drives for lift motors, which leads to lower energy consumption.

Moreover, the lift operates in a stand-by mode during off-peak and idle periods, the car lighting and ventilation fan are automatically switched off when the lift is not in use, and efficient LED lighting is used to minimize energy consumption.

The above-mentioned solutions result in cutting cost, increasing effectiveness and upgrading the building value.

By the end of modernization's procedure, we distinguish and collect all recyclable materials taking care of their safe disposal.

RECO+, our energy recovery system, exploits the power which is dissipated as wasted heat in the environment and returns it to the lift for its next movement. Thus, it significantly reduces energy demand by succeeding energy saving up to 40%.

DOPPLER ReNaissance incorporates effective project planning and, as a result, a modernization project can be completed within a few days, minimizing residents' disturbance.

## Elevating Smoothly.

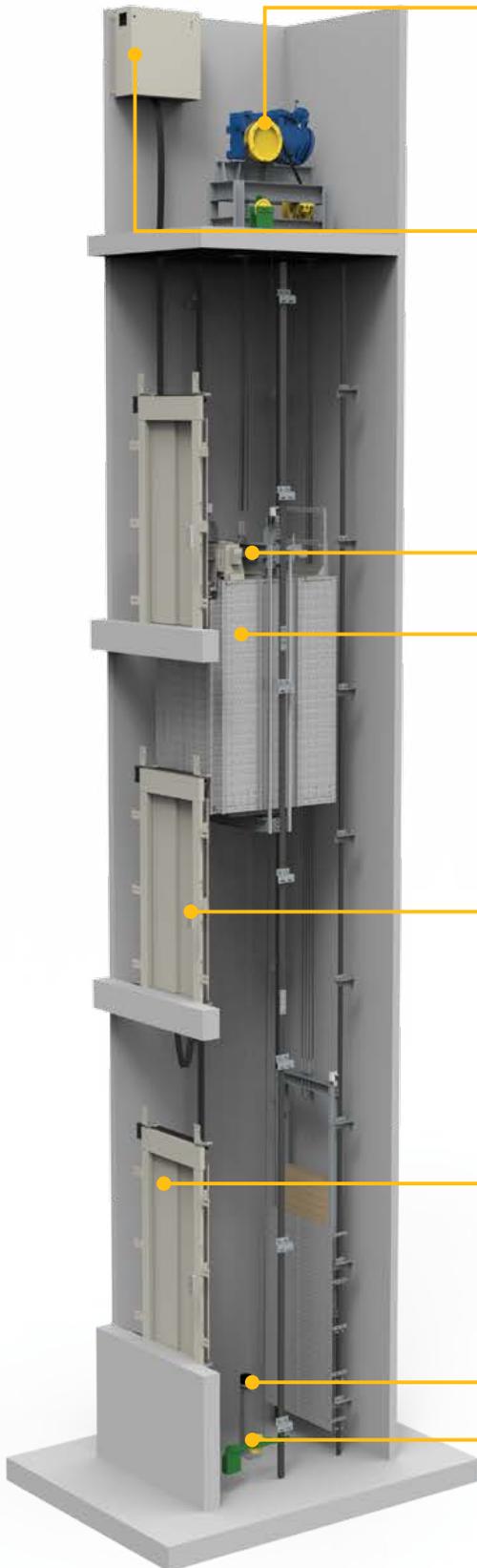


DOPPLER ReNaissance minimizes significantly both waiting and traveling times (by specific parts replacement) resulting in increased passenger satisfaction.

In addition, the enhanced ride quality with smoother acceleration as well as the quiet operation are the most important attributes resulting from the modernization process

By placing the technologically advanced components within the elevators, we manage to increase its lifecycle creating a lift that performs even better than its original status.

# Traction ReNaissance.



1

Controller

Replacing the old control system with a new one ensures the best possible operation.

By using inverter drives, we can achieve high-end performance and energy saving.

Additionally, new wiring loom as well as replacement of the car top control box are recommended.

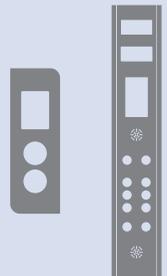


5

LOP & COP

Update the aesthetics of your building with new hall buttons and car operating panels that compliment with the interior design fitting your unique style.

Long-lasting LED illumination reduces the energy consumption and offers an improved riding experience to the residents.



6

Doors

Improve the aesthetic appeal of the building with new door panels.

Safety mechanisms, such as light curtains, guarantee upgraded safety, convenience and accessibility to the passengers.

The door motor with VVVF drive ensures a smoother, quieter & more reliable door operation.



2

Machine

DOPPLER offers a full range of geared and gearless machines, fully compatible with VVVF control and drive system.

Improved speed control, leveling accuracy and ride comfort are ensured that way, as well as less energy consumption, heat and wear on mechanical equipment.

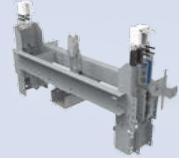


3

Dopplus

Dopplus is the easiest way to modernize your lift becoming this way compliant to the EN 81-80 (Safety standards for Existing Lifts).

The upper Car sling crossbeam is replaced with a new one, including progressive safety gear actuated by a compatible overspeed governor in accordance with EN 81-1:1998, 9.8 and 9.9.



4

Cabin

One of the basic aesthetic criteria is the cabin.

The numerous combinations of false ceilings, handrails, floors and wall panels give us the opportunity to create a bespoke car design improving the accessibility for people with special needs.



7

Buffer

Acting as an additional safety protection, a buffer is designed to stop a descending car beyond its normal limit and soften the force that an elevator runs into the pit during an emergency.

That way we minimize the injuries in case of a safety gear malfunction.



8

Overspeed Governor

One of the most important safety components of traction elevators (and some roped hydraulic elevators) is the overspeed governor.

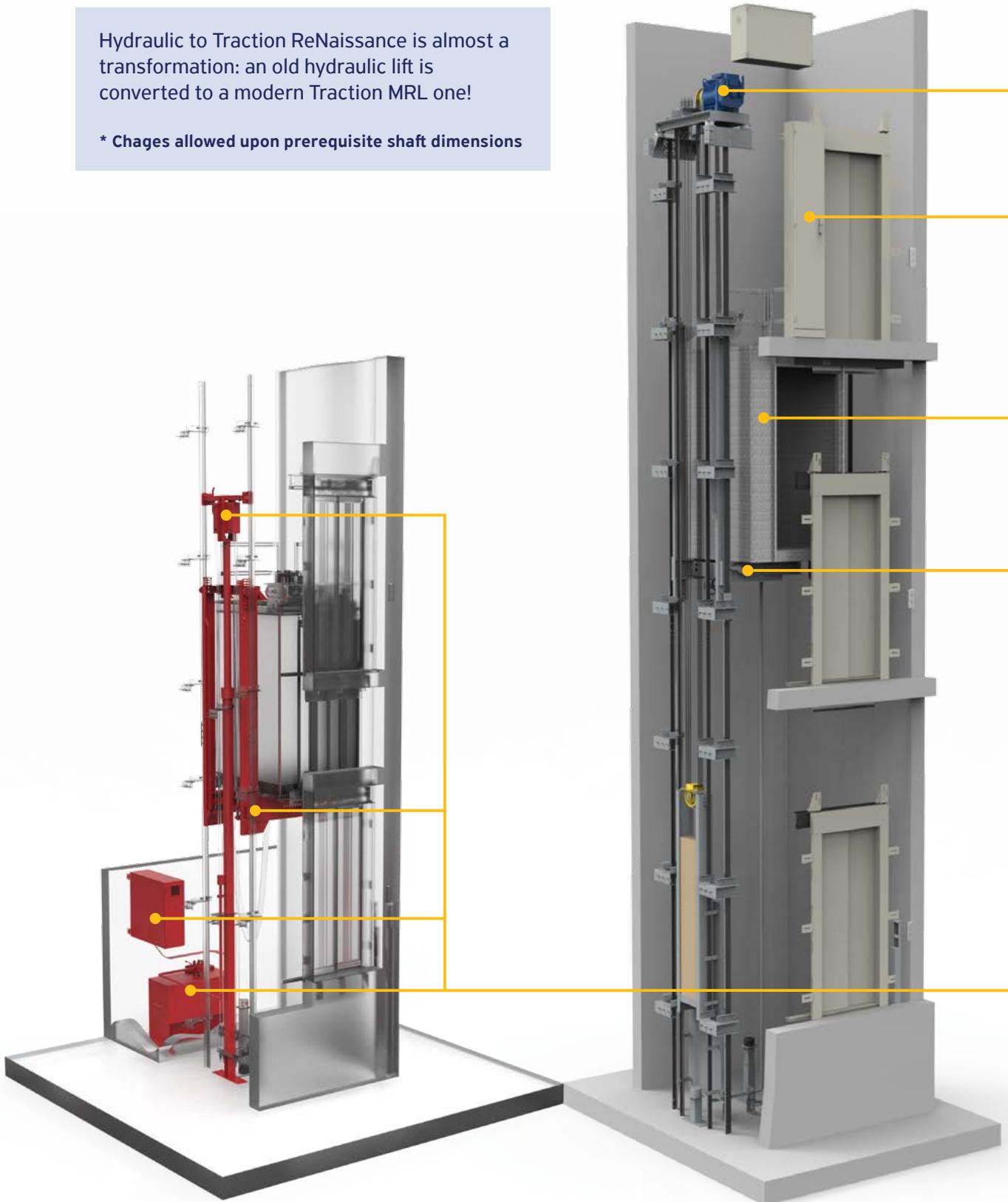
In the event of car overspeed, overspeed governor actuates the car sling safety gear bringing the lift to a standstill.



# Hydraulic to Traction ReNaissance.

Hydraulic to Traction ReNaissance is almost a transformation: an old hydraulic lift is converted to a modern Traction MRL one!

\* Chages allowed upon prerequisite shaft dimensions



1

Machine Base

New philosophy for the mounting of the motor in the elevator shaft. Isolation of the motor and its base using new vibration dampers.

New philosophy for overload weighing.

New overload device is installed which results to smaller headroom dimensions.



2

Controller

A new control system is posed at the level of upper stop.

By using inverter drive, high-end performance is achieved saving energy.

Additionally, new wiring loom as well as replacement of the car top control box are recommended.



3

Cabin

One of the basic aesthetic criteria is the cabin.

The numerous combinations of false ceilings, handrails, floors and wall panels give us the opportunity to create a bespoke car design improving the accessibility for people with special needs.



4

Sling

Car sling including progressive safety gear actuated by a compatible overspeed governor in accordance with EN 81-1:1998, 9.8 and 9.9.

Isolation of the cabin and the car sling using vibration dampers. Overspeed governor installed on the car sling, allowing smaller pit depth and headroom dimensions.



5

Hydraulic Parts Removal

Save valuable space by removing the old hydraulic machine room.

Hydraulic jack and power unit are no more needed, therefore are removed as well.

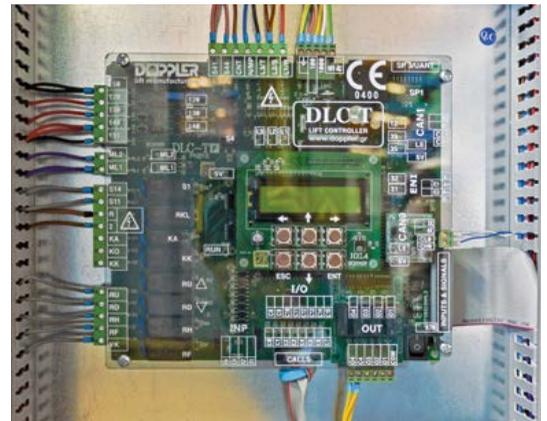
The old controller must also be removed.



# Energy Saving.

## DOPPLER Inverter Controllers

- ▶ Outstanding VVVF technology
- ▶ Remarkable lower energy consumption up to 30%
- ▶ Use of efficient energy saving methods, such as standby mode for lighting and ventilation
- ▶ Improvement of total power factor of the system
- ▶ A ride quality with smoother acceleration and reduced noise
- ▶ Reduced shaft wiring and less traveling cables



## Inverter

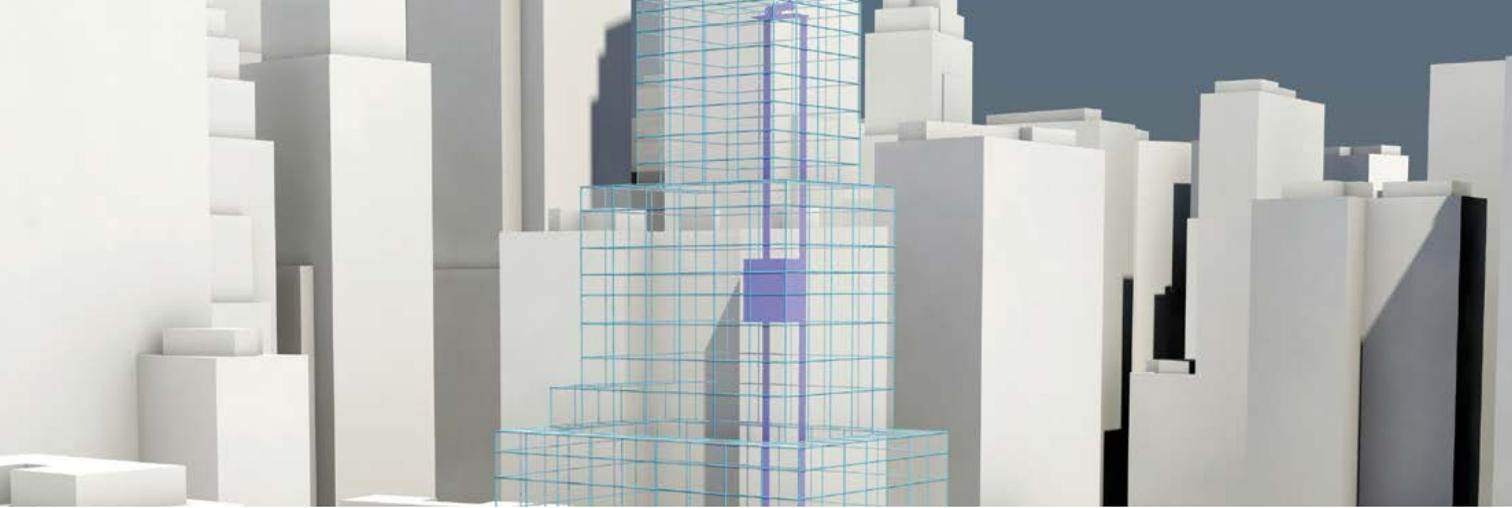
- ▶ Compact dimensions and reduced noise for MRL installations
- ▶ Precise levelling for a safe passengers ingress / egress
- ▶ Smooth landing with Direct / Creep to floor approach
- ▶ Pre-torque function for a smooth start
- ▶ Asynchronous motors (open and closed loop) control & Synchronous motors (absolute and incremental encoders) control
- ▶ Optimized design and high quality technology for a longer life cycle



## LED Lighting

LEDs are extremely energy efficient and long lasting. Replacing old incandescent or even fluorescent light bulbs by LED lamps on the landings or/and in the cabin, can lead to even 80-90% reduce of corresponding cost.





## RECO+ (Kinetic Energy Recovering System)

DOPPLER proudly introduces RECO+ which converts the wasted energy into electricity.

RECO+ differs from other energy saving systems since it doesn't feed the recovered energy back to the electric grid but it saves it into supercapacitors in order to use it to the next cabin's movement.

### Ecology

RECO+ exploits the power which is dissipated as wasted heat in the environment. Thus, it significantly reduces energy demand by succeeding energy saving up to 70% in comparison with a conventional traction elevator.

### Economy

The reduction in electric consumption constitutes a cost-efficient solution since it leads to lower electricity costs.

### Safety

RECO+ upgrades the safety level of moving passengers by embodying the automatic emergency operation. The system is equipped with an internal controller, which secures that the required energy will be always available for passengers' evacuation in case of power failure.

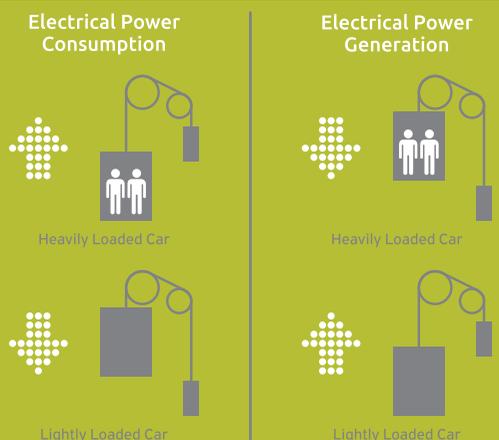


A conventional traction elevator system consists of a cabin, a counterweight and a machine. The counterweight is designed to balance a half-loaded cabin.

### The gravitational force generates power acting on:

- ▣ Descending cabins that are heavier than the counterweight
- ▣ Ascending cabins that are lighter than the counterweight

The excess energy is consumed in VVVF resistors and is dissipated as heat in the environment.



# Safety.

## Bi-directional Progressive Safety Gear (According to the standards: EN 81-20 and EN 81-50)

- ▶ Acting: upwards and downwards
- ▶ Maximum tripping speed: 2.5m/s
- ▶ Admissible guide rail thickness: from 7 to 16mm
- ▶ Floating mounting on the car sling
- ▶ Actuated by a compatible overspeed governor in accordance with EN 81-1:1998, 9.8 and 9.9



## DOPPLER Inverter Controllers

DOPPLER inverter controllers help to improve safety:

- ▶ Optimize leveling accuracy. This means that risk of accident when entering or exiting the lift is minimized
- ▶ Provide easy emergency operation upon power failure
- ▶ Fully complied to European standards



## Emergency Alarm Device

A programmable phone device, allowing voice communication between passengers and rescue service.

The emergency telephone system provides trapped passengers with an easy, hands-free connection to emergency help.

The system provides built-in speaker, microphone and backlit LCD display, which is used for programming and status information.





## Light Curtains

Light curtains are used instead of a simple photocell in order to ensure maximum safety and comfort.

The light curtain detects presence in the door path without physical contact, reducing the possibility of an injury and increasing passenger protection in the landing zone.

Even if a small object appear in its path, it immediately opens the closing direction lift doors.

They are easy to install and easy to replace obsolete mechanical systems.



## Overspeed Governors

Remote reset by electrical acting

- ▶ Remote tripping mechanism by electrical acting
- ▶ Protection of uncontrolled car movement in conformity with to EN81-1/2-1998+A3 2009  
(The overspeed governor is blocked when the lift is not in movement).



## Buffers

Buffers act as an additional safety protection.

Their main function is to reduce the impact of the elevator in case of a safety gear malfunction when the elevator fails.

They may be of polyurethane or oil type in respect of the rated speed.



# Cabins & Accessories.

Create a unique style for your elevator and upgrade its aesthetic appearance by choosing from a wide variety of materials and lighting.

## Inox



Stainless St.  
Mirror

Stainless St.  
Satine

Stainless St.  
Linen

Stainless St.  
Dama

## Galaxy



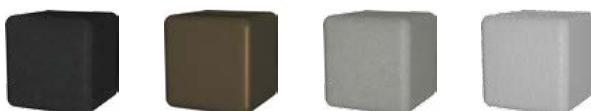
Laminate  
R5411

Laminate  
313

Laminate  
861

Laminate  
859

## Epoxy



Epoxy 501  
Black

Epoxy 501  
Bronze

Epoxy 501  
Silver

Epoxy  
7035

## Epoxy myReflection



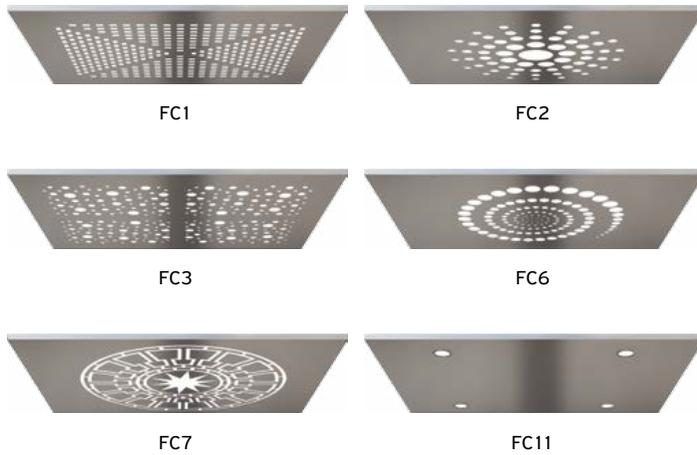
Tartan  
Print

Colorful Tree  
Print

Honeycomb  
Print

Bolshoi  
Print

## False Ceilings

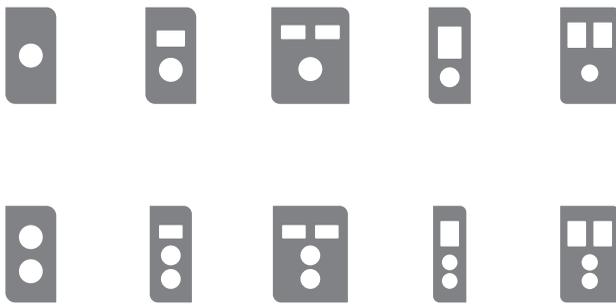


## Handrails



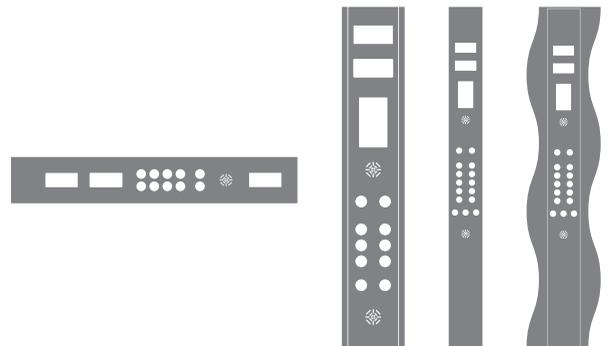
### Landing Operating Panels

- ▶ Face plate or Wall mounted
- ▶ 7-Segment, Dot Matrix & LCD Display options
- ▶ Red or Blue color signalization



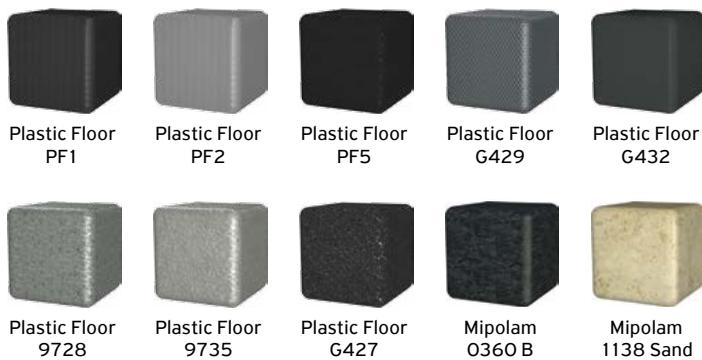
### Car Operating Panels

- ▶ Horizontal COP with handrail
- ▶ Custom shaped option
- ▶ TFT Display or Logo engraving



## Floors

### Plastic Floors



### Granites & Tiles



In order to view the full range of our samples scan the **QR Code with your smartphone/tablet** or contact your **DOPPLER Sales Representative.**



# Renovated Projects.

DOPPLER offers extensive modernization solutions for products that have over exceeded their designed life cycle and suggested operational limits. Through modernization service safety, accessibility, ride quality, energy consumption and design are significantly upgraded.

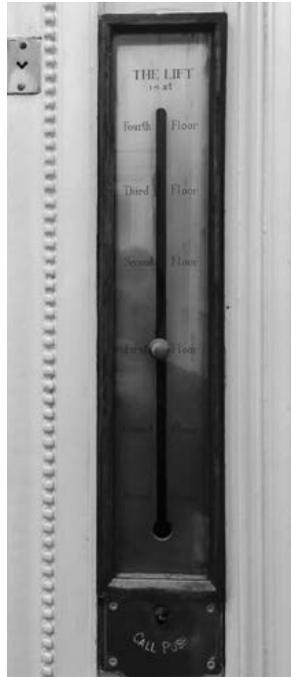
Before



After



Before



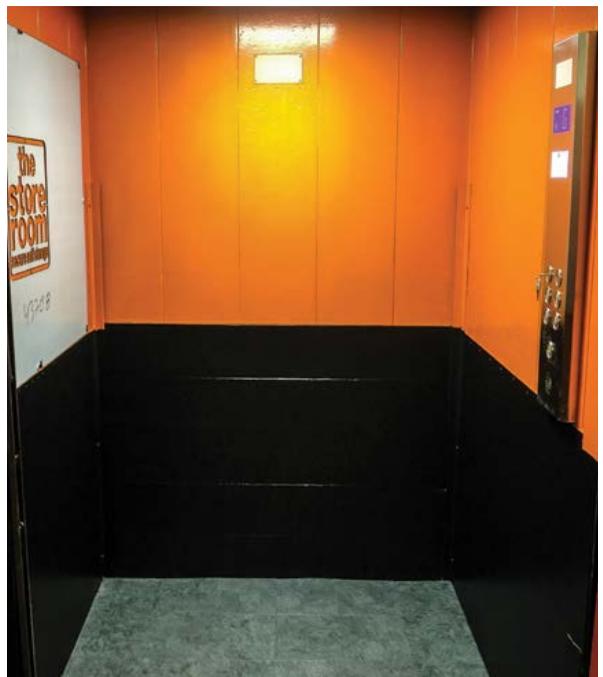
After



Before



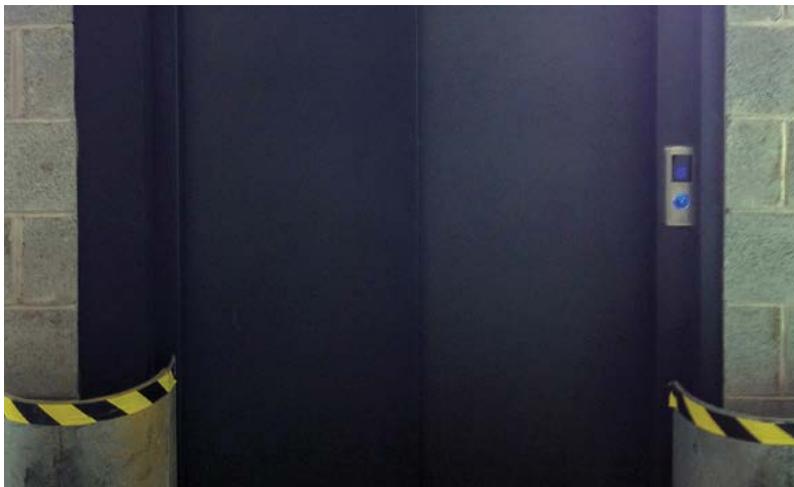
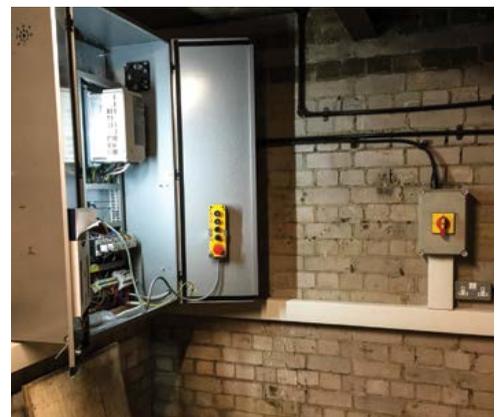
After





## Elevator Package Replacement

- ▶ Keep existing cabin & counter weight guide rails
- ▶ Keep existing motor
- ▶ New cabin sling
- ▶ Upgrade to progressive safety gear
- ▶ Replacement of over speed governor
- ▶ Full replacement of ropes, clamps and sheave guards
- ▶ Controller replacement
- ▶ New shaft wiring loom
- ▶ New shaft switches
- ▶ New car top control box
- ▶ New trailing cables
- ▶ New safety edges
- ▶ New car operating panel (COP surface mounted)
- ▶ New Landing operating panels (LOPs with LCD display direction arrows and floor indication)
- ▶ Voice announcer
- ▶ Auto dialler
- ▶ Shaft lighting



# Why ReNaissance?

## Energy Efficiency

Modernization enables you to reduce the energy consumption and shrink the electricity costs. We have a keen focus on maximizing savings in power costs and maximizing efficiency. RECO+, our innovative energy recovery system, is the proof of our commitment to incorporate a greener approach to everything we design and manufacture.

## Customization

DOPPLER ReNaissance is a tailored approach to suit each and every need. Flexibility is one of our competitive advantages, thus we are able to offer modernization proposals to any building in the world.

## State-of-the-Art Technology

Modernization ensures that your building remains attractive and competitive. We use the latest technology at every step of the upgrade process in order to provide the best benefits for your lift.



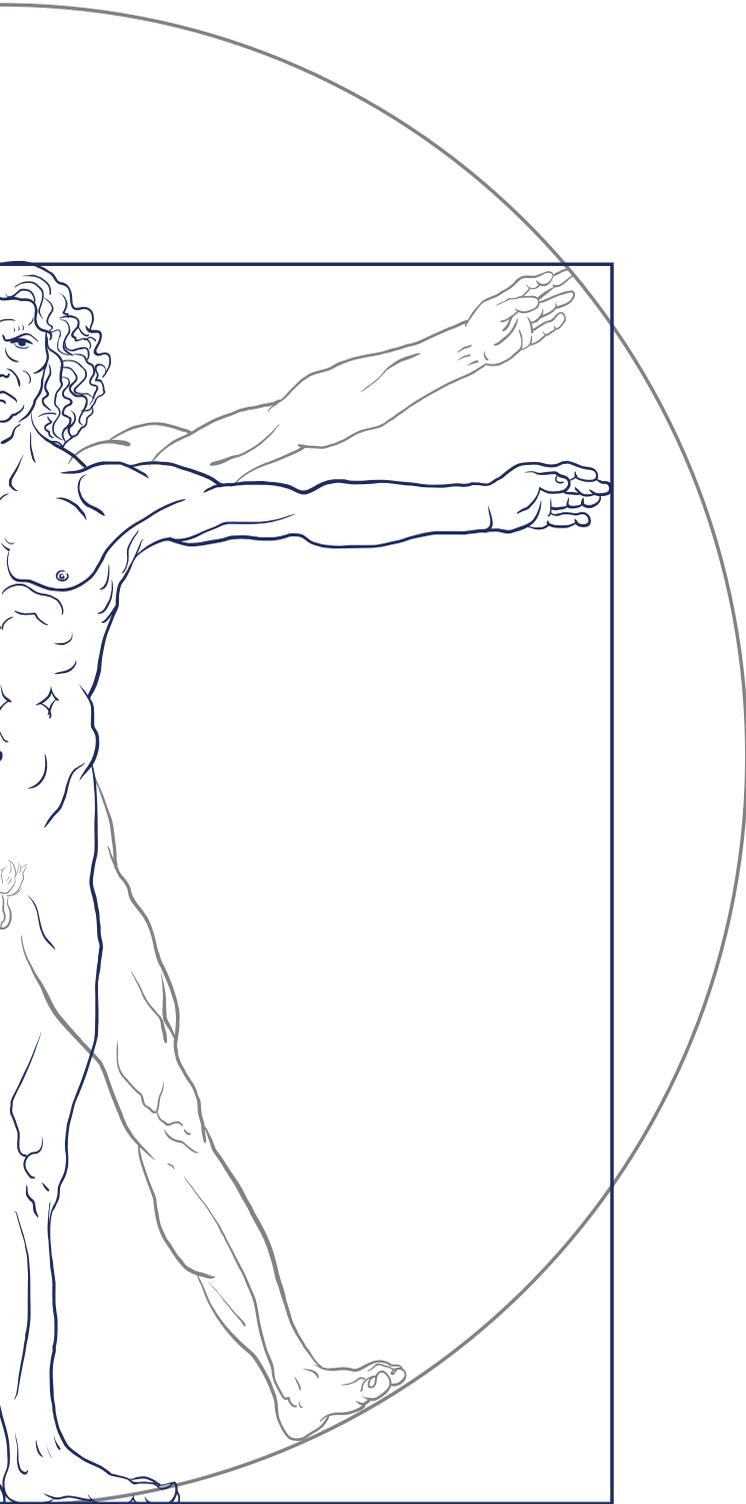
## Certificates

The compliance with the new EU norms and regulations poses a great challenge to the old elevators. ReNaissance brings your elevator up to date with the latest safety standards maximizing reliability and performance.

## Value for Money

Modernization is the easiest way to upgrade your elevator avoiding large investments. DOPPLER consults finding the best possible solution which covers all requirements and budgets.

For more information, contact  
our Sales Representatives.



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In more than 60 countries!

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