



REVOLUTION UP

Upgrade system for machine-room lifts.

A groundbreaking advance or a tried and tested solution?

Both!

The **Silens Pro REVOLUTION**® is the smartest and most technologically-advanced range of lifts that we have designed in all of our 55 years as a lift manufacturer. Launched onto the market in 2019, the **Silens Pro REVOLUTION**® has revolutionised the gearless machine-roomless lift market and established a new technological standard that is now setting the pace all over the world.

Since its launch, sales of the **REVOLUTION** range haven't stopped growing, with thousands of units manufactured, installed and in operation across five continents

The original **Silens Pro REVOLUTION**® lift with a 450-630Kg rated load was soon followed by the 1000Kg model designed for buildings with higher volumes of passenger traffic. Then we developed the **Silens Pro REVOLUTION Nano** and **Micro**® 100-630Kg models to deliver all the cutting-edge specifications of the **REVOLUTION** system to lifts installed in existing buildings.



REVOLUTION UP means that our **REVOLUTION** technology can now transform already-existing lifts.

What exactly is REVOLUTION UP?

REVOLUTION UP is a technology package that dramatically upgrades existing machine-room lifts and transforms them into state-of-the-art equipment.

It doesn't just modernise lifts: it makes them up-to-date

Unlike traditional modernisations, **REVOLUTION UP** does not just make minor improvements, it equips the lift with new features and technology worthy of an up-to-the-minute lift system.

Why settle for just modernisation when your lift can be brought fully up to date?

A comprehensive solution and just one sole supplier

- **REVOLUTION UP** offers a complete package in one single order, with proven results and the optimal integration of all component parts.
- No need for costly on-site adjustments.
- **IMEM's** technical support direct to the customer.

New life for your lift at a minimal cost

- **REVOLUTION UP** equires the replacement only of key elements, keeping in place all other original lift components, thereby minimising the investment required to produce a fully-updated lift system.



REVOLUTION UP transforms your existing lift into a state-of-the-art lift system

Smart

Equipped with **software and hardware** that allow the lift system to develop its **automatic machine-learning** capacity and **constantly update** itself.

Digitised and connected

Improves passenger experience by showing them the **information** that matters **in real time**, and significantly improves **preventive maintenance**, anticipating and preventing possible incidents.

Faster

Its **Varispeed technology** smart-manages lift velocity, allowing speeds of up to 1.2 m/s **to reduce waiting and travel times and optimise passenger traffic flow.**



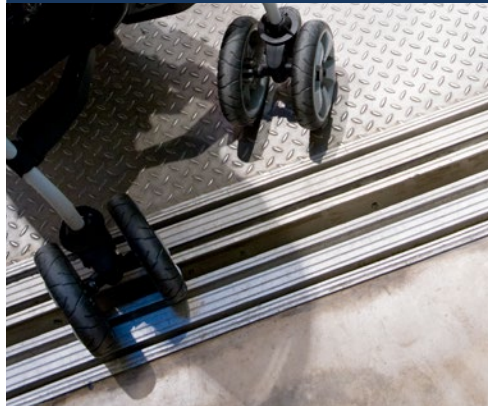
Energy-efficient

Its **gearless motor**, its **stand-by mode** that shuts down the entire system when it is not in use, and its **smart traffic management** combine to **reduce the lift's electricity consumption.**



Both more simple and more advanced

REVOLUTION UP simplifies the system by dispensing with certain mechanical elements of the old lift, replacing them with **modern programmable electronic devices** whose software can be updated as required **to continually improve performance.**



More accurate

It delivers precision car-floor-to-landing levelling at every stop, putting an end to the awkward and dangerous misalignments typical of old lifts.

Safer

State-of-the-art electronic safety devices guarantee your peace of mind.

More comfortable

The annoying noises and vibrations of the old lift are replaced **by the smooth and silent motion** of the new.

Longer-lasting

This durable and reliable solution gives your existing lift **a whole new lease of life.**





Silence, ride comfort and energy efficiency: the before and the after

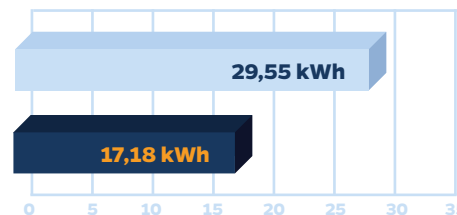
Actual measurements taken on-site in June 2023.

Measuring tool: PCE-MSM 4 Sound Level Meter

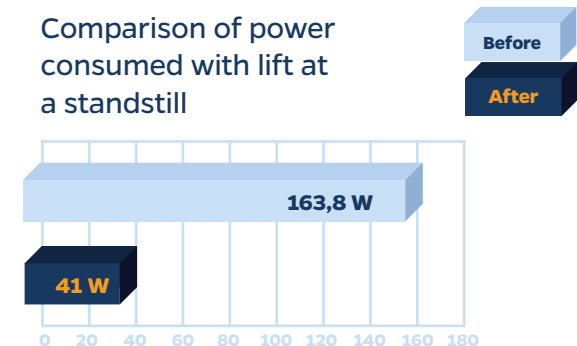
- * Measurement of in-car sound levels during travel, excluding door operations.
- ** Maximum measurement during travel, excluding door operations.
- *** ISO 8100-34:2021 Lifts for the transport of persons and goods - Part 34: Measurement of lift ride quality.
Measuring tool: Henning QS3 acceleration sensor
- **** ISO 25745-2 Energy performance of lifts, escalators and moving walks - Part 2: Energy calculation and classification for lifts (elevators).
Measuring tool: Fluke 435 Power Quality and Energy Analyser

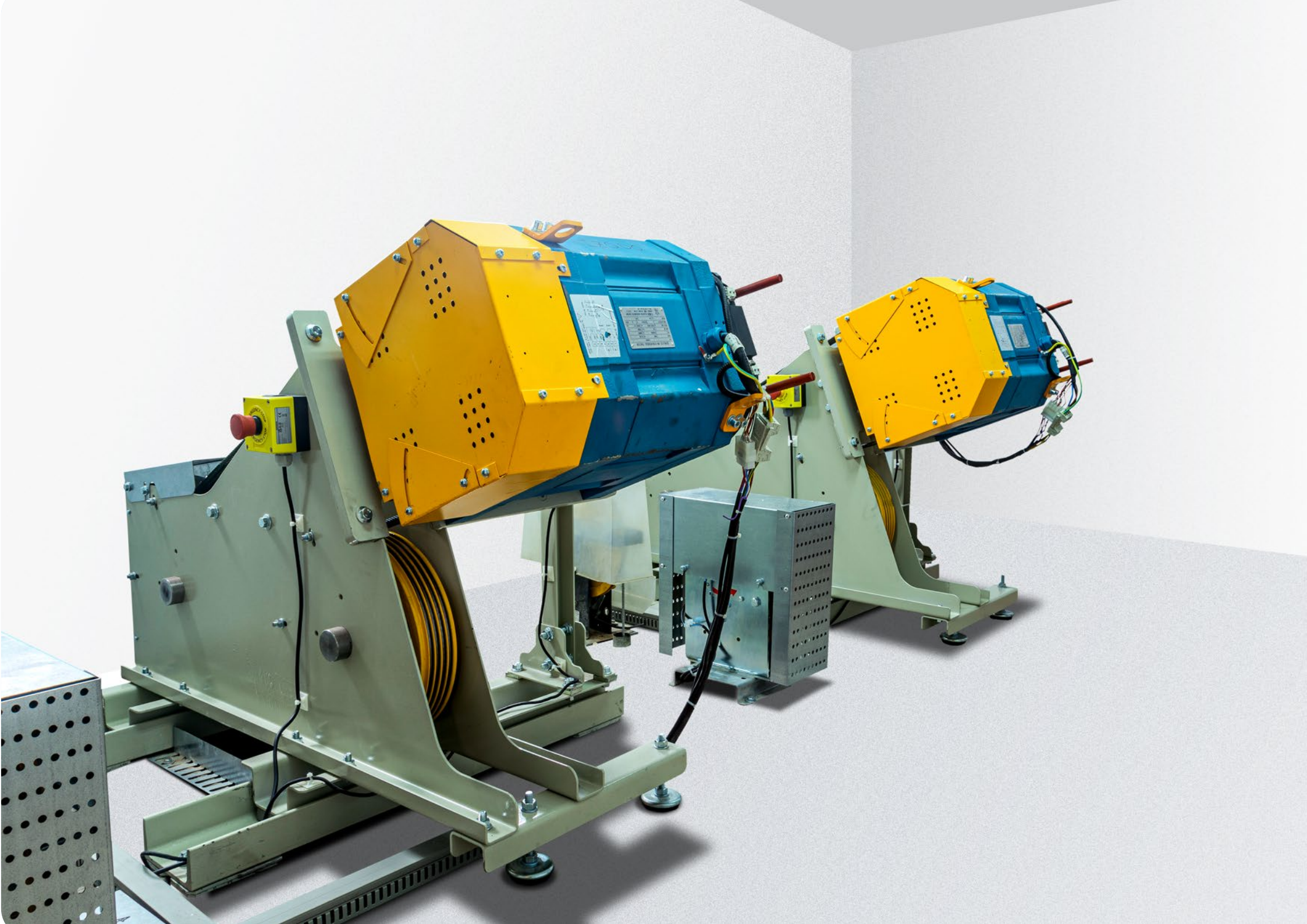
Lift before upgrade	Lift after upgrade
Two-speed, 1 m/s Drive unit with SANVI S126-H reduction gear	Revolution UP , 1m/s, Gearless Revolution drive unit
8 stops, 21.3 metres' travel distance	8 stops, 21.3 metres' travel distance
APB control system	Revolution down collective control system
Semi-automatic doors	Semi-automatic doors
Single-phase door operator	Single-phase door operator
In-car sound level: 53,9 dBa*	In-car sound level: 50 dBa*
Sound level at landing closest to machine room: 60,7 dBa**	Sound level at landing closest to machine room: 46 dBa**
Vibration: 58 mg*** ISO A95 Z-axis	Vibration: 12,2 mg*** ISO A95 Z-axis
Energy consumption at usage category 2 (75 trips a day): Class C****	Energy consumption at usage category 2 (75 trips a day): Class A****

Comparison of energy consumption in a complete travel cycle



Comparison of power consumed with lift at a standstill





A package **optimised** to suit your project

REVOLUTION UP is supplied as a complete package programmed to suit the needs of each particular project:

➔ **REVOLUTION control system in the machine room**

The powerful **REVOLUTION** control system is the brain that **gives the original lift a new intelligence**, connectivity and high performance, all **precision-controlled**.

➔ **REVOLUTION push-button panel**

With a cutting-edge design and a stainless-steel finish, it incorporates the exclusive **7-inch Smartech colour display** that provides passengers with up-to-the-minute information in real time.

➔ **Permanent-magnet gearless drive unit**

Compact, quiet, reliable and energy-efficient, it gives the existing lift the **optimal ride comfort** of a brand-new lift.

➔ **Special bedplate**

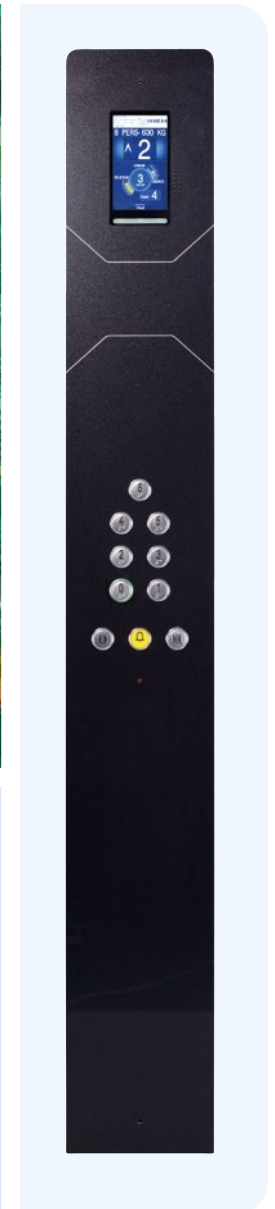
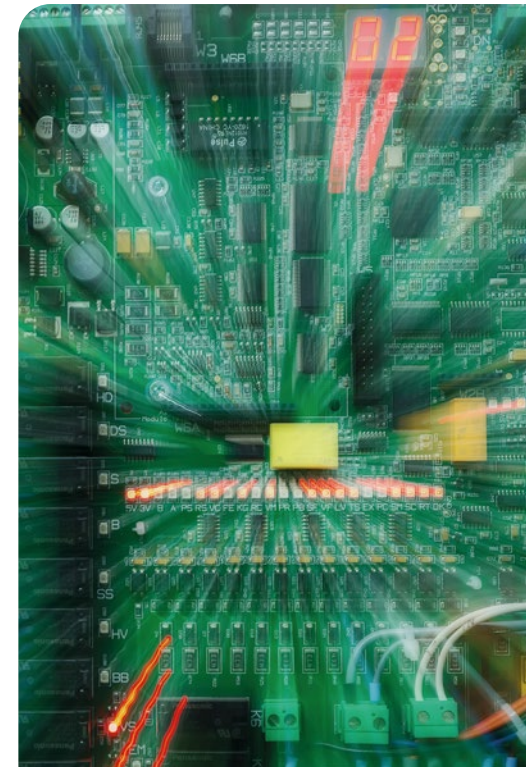
Designed to **maximise the durability of the ropes and motor**, it can be safely, quickly and easily installed in any existing machine room.

➔ **Configuration kits**

Connectors, cables and accessories.

➔ **Optional extras**

Include Smartech landing displays and Automatic Rescue systems.



Options for the **mechanical** part.

- ➔ Controller cabinet fixing kit.
- ➔ 2D barrier kit and fixings.
- ➔ Conventional traction car sling rope anchorage plate kit.
- ➔ Assembly tools to position the traction machine on the bedplate.



Options for the **electrical** part

- ➔ Standards (Non-CE version): EN81-73, EN81-28.
- ➔ Standards (version EN81-20/50): EN81-70, EN81-73, EN81-28.
- ➔ Automatic Emergency release system that drives the lift to the nearest landing.
- ➔ Controller available options:
 - Automatic return to the main floor
 - Car light timer.
 - Independent service.
 - Fan timer
 - Keyswitch to restrict the access to the lift
 - EN81-70: door closing button, nudge signal, voice synthesizer, buzzer, main floor push-button with green ring relief.
- ➔ Load weighing device options:
 - Wiring for the existing load weighing device (contact and 230 Vac or 24 V power supply).
 - Load weighing device on traction cables.
- ➔ Car door operator options:
 - Mechanical operator with single-phase motor.
 - Mechanical operator with three-phase motor.
- ➔ Cam Options:
 - 190 Vdc cam.
 - 110 Vdc cam.
 - 24 Vdc cam.
- ➔ Safety edge (Light Barrier)/photocell options:
 - Prepared for customer's photocell.
 - Photocell transmitter and receiver to be installed in a 13 mm cutout in car fronts.
 - WECO 2D barrier (includes fixing kit).
- ➔ Car Operating Panel:
 - BCR1 Model (1085x245mm).
 - BCR2 Model (1800x245mm).
- ➔ Telephone options.
 - Microkey MK742 telephone.
 - EN81-28 on COP.
- ➔ Landing operating panels options:
 - BER2 Model (flush 80x245mm).
 - BER3 Model (80x250mm surface).
- ➔ Landing indicator panels options:
 - FERV. Direction arrows.
 - HLER in cabin (EN 81-70).
 - Smartech HR (EN81-70).
- ➔ Extra car lighting. Spot or square LED kit.
- ➔ Extra Shaft lighting - Fixed lighting kit.

The information that matters to the passenger – in real time

In-car Smartech display



Passenger and load capacity

Indicates the maximum rated load expressed in kilograms and the maximum number of passengers that the lift can carry.

Speed

The passenger is informed in real time of the speed reached during each trip, from when the lift starts until it stops at the destination floor.

Position and direction

Indicates the lift's position in the building at any given moment, and also shows its direction of travel.

Energy consumption

Informs the passenger during the trip of whether the lift is consuming energy, or is acting as a generator of energy and thereby reducing the building's operating costs.



And that's not all

- ➔ **Lift availability before the trip**
The screen indicates whether the lift is available for use.
- ➔ **Smartech Autotest function**
Displays verification of the lift systems' and safety features' functionality before each trip.
- ➔ **Destination floor and time remaining before arrival**
Indicates the lift's destination floor and the remaining time (in seconds) before arrival there.
- ➔ **Destination arrival message**
Informs passengers when the lift has arrived at its destination.
- ➔ **Time and date**
Always displays the correct time and date.

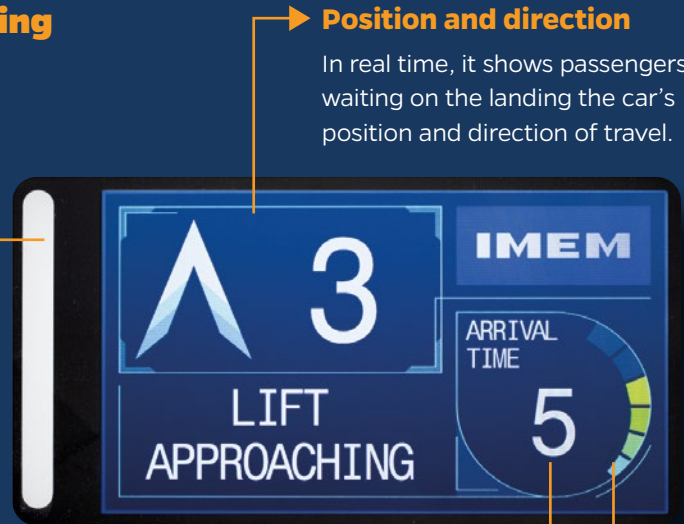
Included as standard with REVOLUTION UP

And on the landing as well...

Smartech HR landing display*

LED flash boarding alert

A flashing message alerts passengers to the imminent arrival of the lift car at their landing.



Position and direction

In real time, it shows passengers waiting on the landing the car's position and direction of travel.

Countdown to pick-up

A progress bar and a countdown in seconds – totally accurate and updated in real time – keeps the waiting passenger informed of the time remaining before lift arrival.

Energy consumption

Informs the passenger of whether the lift is consuming energy, or is generating energy during travel, so reducing the building's operating costs.



Voice synthesiser included!

* Optional



And that's not all

→ Welcome messages

The screen displays a welcome message to users, adapted to the particular time of day.

→ Lift status messages

The display gives lift users important information such as in-car passenger overload, door blockage, people boarding or leaving the lift or any other significant occurrence.

→ Voice messages

The display shares with the user trip-related information via a voice synthesiser integrated into the frame. Synthesiser volume is configurable according to the particular time of day.

All the visual and auditory information shown has been designed in accordance with the requirements of EN81-70: 2018. Safety rules for the construction and installation of lifts - Particular applications for passenger and goods passenger lifts - Part 70: Accessibility to lifts for persons including persons with disability.



The most competitive solution that meets regulatory compliance standards and **improves lift safety**

REVOLUTION UP does not require the costly replacement of components of the existing lift system in order to ensure its compliance with the regulatory demands of the new ITC-AEM1 technical instruction.

With **REVOLUTION UP**, the technology of the existing lift is brought up to compliance with the EN81-20 standard (except for retained components) and it upgrades itself to fulfil new safety standards.



Operational range

REVOLUTION UP is specifically designed for the **upgrade of electric traction-drive lifts** with a 1:1 roping ratio and an upper machine room, of any make and model and in the operational range set out below.

Q (Kg)	300	375	450	525	630
P (Kg)	400-800	450-850	500-900	550-950	600-1050
Rope drop	325/480-1000	325/480-1000	325/480-1000	325/480-1000	325/480-1000

Different specifications and special solutions available on request.



Installation: safe, fast and easy

REVOLUTION UP is a solution produced by lift professionals for lift professionals, and designed down to the last detail to minimise the costs and duration of installation and avoid unnecessary work on-site

- ➔ The entire package is pre-assembled, pre-wired and pre-connected at the factory, so that **on-site installation takes the shortest possible time.**
- ➔ Dismantling and installation work is carried out with the new control cabinet and drive unit in place, making installation **significantly safer for the installer.**
- ➔ No magnets and no final limit switches: **maximum simplicity.**
- ➔ **Automatic shaft-data analysis process:** no more time-consuming adjustment of deceleration distances and levelling accuracy.
- ➔ Complete and detailed **installation manual** provided.
- ➔ **It removes the need for costly on-site customisations**, such as modifications to the safety-gear system and the use of overspeed governors with the Parking System to deal with UCM, **thereby saving time and reducing installation costs.**

Smart preventive maintenance

- ➔ To the original lift's overspeed governor and safety gear, **REVOLUTION UP** adds a **PESSRAL system** which monitors the speed and in-shaft position of the lift car in real time, **improving safety levels by a factor of two.**
- ➔ A much **more reliable** lift system means far **fewer breakdowns.**
- ➔ Fittings that can be hazardous or interfere with maintenance work, such as metal screens, supports or fixings, are removed from the shaft.
- ➔ **Fewer elements to maintain and adjust inside the shaft: REVOLUTION UP** processes shaft data in real time, and so eliminates the need for mechanical limit switches, final limit switches, fixings, magnetic detectors and more.
- ➔ **Levelling accuracy is set just once** during installation: the setting is stored, memorised by the system, and guaranteed to function over the long term.
- ➔ **The testing of components and devices** is carried out **from the control cabinet**, so there is **no need** for technicians **to enter the shaft.**





UP
REVOLUTION UP

*Your lift is due
for an upgrade.*



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