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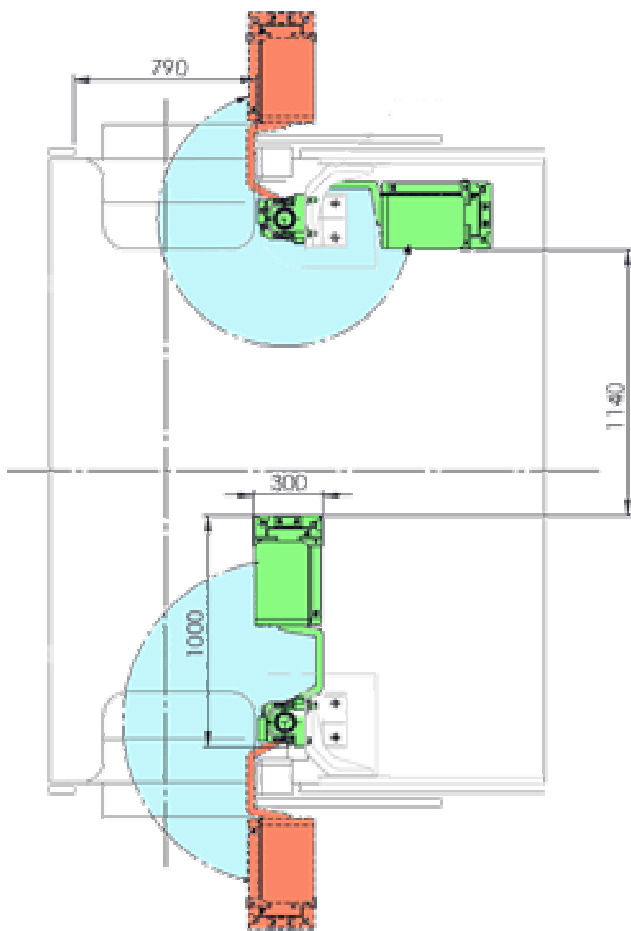
**LiftOk-Rh**



## Generalities

The **"LiftOk-Rh"** is a device designed to achieve the lifting of a load from the station platform to the railway vehicle floor.

**"LiftOk-Rh"** meets all the requirements of the TSI-PRM (European Official Journal no. L 64 of 7 March 2008) and is therefore suitable to board Persons with reduced mobility, forced in a wheelchair, (PMR).

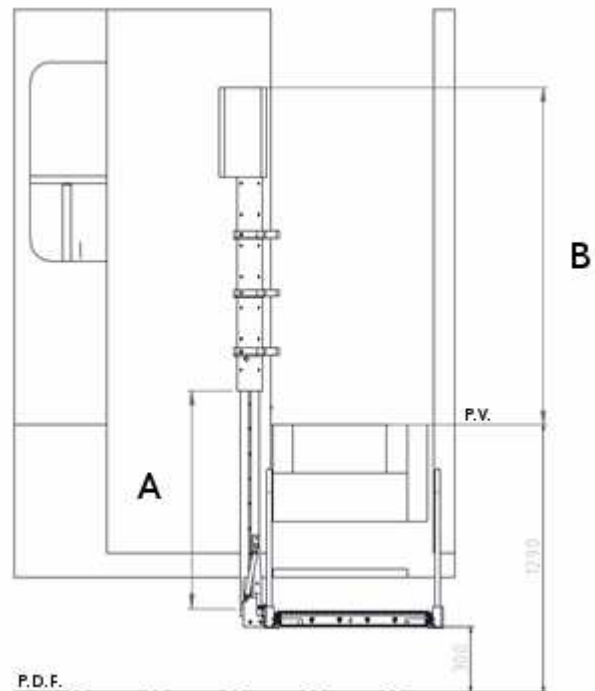


The lifter **"LiftOk-Rh"** can easily be mounted inside the coach in the same vestibule, in position adjacent to the passenger door, indifferently to the right or left side, perpendicular or parallel to the door; always ensuring the required dimensions passage free space useful for people in wheelchairs.

The **"LiftOk-Rh"** may be located inside a special cubicle harmonized with the vehicle interiors.

The **"LiftOk-Rh"** type is completely electromechanical driven.

All components comply with the fire and smoke more restrictive for the railway sector standards and the specific environment standard (recyclables approx. 98%).



The lift has been designed to provide the most comprehensive vehicle-platform compatibility.

Thanks to its telescopic structure can be adapted to different needs of customers simply by acting on the length of the lifting jack.

A STROKE [mm]	B MAX. JACK LENGHT [mm]
1060	1630
800	1370

Its flexibility allows it to be applied without major structural changes to vehicles vestibule and door frame. It can be easily installed with access doors with minimum clearance of at least 800 mm, such as the coaches built between the years 70 ' - 90'.

Steel made is devoid of any welding. All parts and components are connected to each other by means of screws and bolts. This feature allows to assemble the lift directly on the vehicle with simple operations and standard tools.

This peculiarity also ensures simplicity in the maintenance operations or components replacement.



The spare parts management is further simplified by the high rate of component standardization. All parts, in fact, can be mounted for both on right or the left lift fitting.

### “LiftOk-Rh” Main features

The lifting electric motor is controlled by a dedicated electronics that ensures constant speed and acceleration (change from zero speed to operating speed) of less than 0.3 g as required by the current regulations to avoid sudden acceleration to the backbone of People on wheelchair . As the motion is not powered by hydraulic fluid the acceleration and speed can granted at any ambient temperature.

Main dimension at **rest position** are :

Height	1630 mm (stroke 1060 mm)
	1370 mm (stroke 800 mm)

Width and Length

Smaller Side	300 mm
Greater Side	1000 mm

Weight c.a. 220 kg

Max Power 1 kW

Power Supply from 12 to 110 Vdc

Main dimension with the **loading platform in operating condition** :

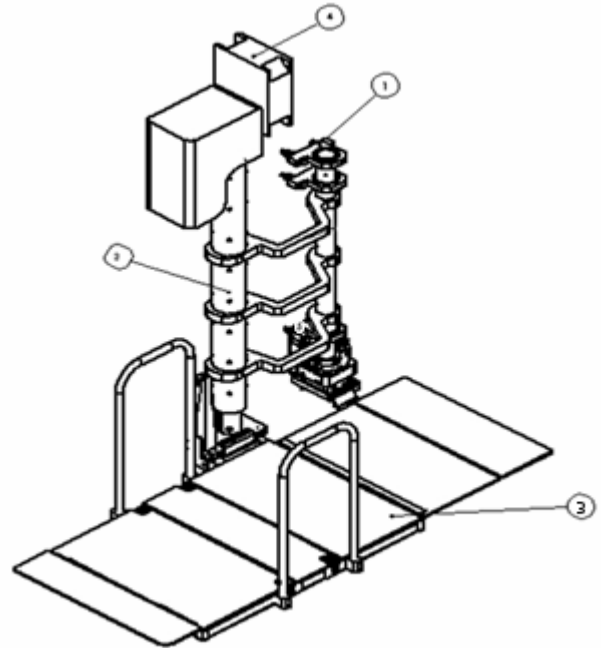
Width and Length

Smaller Side	760 mm
Greater Side	1250 mm

The “LiftOk-Rh” is essentially composed of four elements.

1. **Spinning pillar**, is the group mechanically secured to the vehicle structure by means of eight screws to withstand the vertical forces (1g), transverse (3g) and longitudinal (5d) in accordance with current regulations.
2. **Lifting pillar**, is connected to the spinning pillar by means of the three rods. It internally accommodates and supports the lifting system itself.
3. **Lifting platform**, host the Person on a wheelchair lifting her from the platform station to the floor of the vestibule of the rail vehicle and vice versa. The platform of the “LiftOk-Rh” is made in three parts plus a telescopic one.

4. **Electrical box and control unit** : the electrical circuit is located in a watertight box that can be positioned independently of the lift fitting..



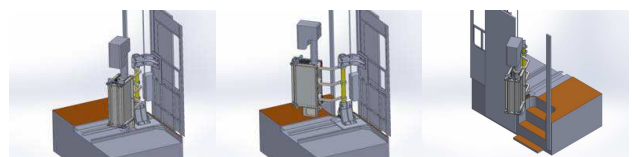
The lift control system is designed according to the EN 50155 requirements (railways electronic equipments) specifically referring to:

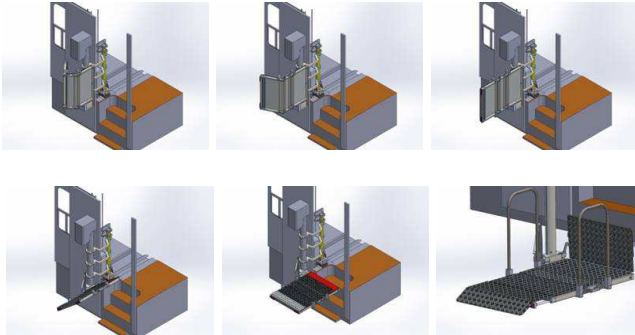
- operating voltage range,
- dielectrics loads resistance,
- pulse current resistance capability
- temperature range,
- vibration resistance.

The ramp control to meet the requirements of the EMC 50121-3-2 (Electromagnetic compatibility Part 3-2: "Rolling Stock - Apparatus").

### “LiftOk-Rh” Operational sequences

The starting sequence requires the positioning of the lift out of it housing by rotating it around its spinning pillar. This movement can be manual or driven by an electric motor. The sequences can be seen in the following pictures.





The next step is the opening of the platform, acting on its three constituent parts.

While the loading platform is completely opened it is reversed and placed parallel to the platform.

All these activities are manually operated by trained staff.

The third and last step stage involves, before and after the housing of the wheelchair on the platform lift, the vertical movement.



## Some References

The "LiftOk-Rh" comes from the lifters mounted on vehicles of some European rail operators as: Arenaways (ITALY) and RegioJet (CZECH REPUBLIC).

On the Arenaways coaches the lift has been fully integrated in the interior design of the vestibule area, avoiding the usual unpleasant perception of specialization and discrimination of the vehicle equipped for passengers with reduced mobility.

The same entry door does not have dedicated approaches that are normally taken for the PRM boarding avoiding discrimination. The same entrance door can be used both by able-bodied that from PRM

The installation of lifts on the 70 ' - 90' dated vehicles, subject to refurbishment is shown by the pictures referred to the RegioJet and Arenaways applications, where the installation of the lift "LiftOk-Rh" was made possible without structural interventions on the vehicle

or door specialization, while ensuring compliance with regulations.



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