



LiftMaster[®]

RAILWAY LIFTING JACKS
SLR SERIES

SIDEROS ENGINEERING HAS BEEN OPERATING FOR OVER **40 YEARS** IN MORE THAN **52 COUNTRIES**. THE SUCCESS OF SIDEROS IS DUE TO ITS HIGH-QUALITY PRODUCTS AND CONSTANT COMMITMENT TO RESEARCH, DEVELOPMENT AND DESIGNING OF NEW PRODUCTS

Sideros has been globally active for over 40 years in the sheet metal working machines industry and owes its growing success mainly to the high-quality of its products, to the constant effort dedicated to the development and creation and industrialization of new designs.

Sideros Engineering produces downdraft tables and automation for laser cutting machines; cartridge filters for cutting and welding; automated storage systems for sheet metal, bars and tubes; deburring tumblers for the cleaning of oxy, plasma and laser cut parts; three-axis and head and tailstock welding positioners for welding and assembly.

The constant research, the desire to explore new field and provide a range as complete as possible have led Sideros to develop **LiftMaster**. The railway lifting jacks are the natural evolution of the Syncrolift head and tailstock positioners, thanks to the **experience** gained over the years in designing and manufacturing welding and assembly positioners.

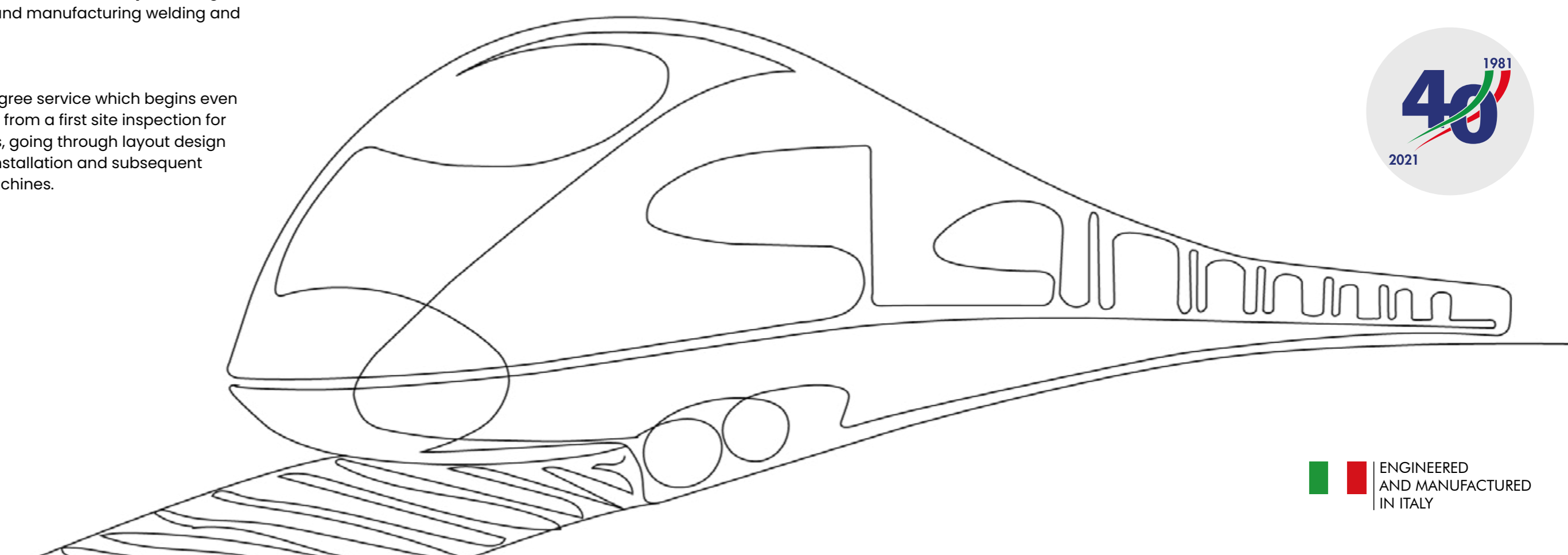
Sideros offers a 360-degree service which begins even before the sale, starting from a first site inspection for the application analysis, going through layout design and all the way to the installation and subsequent maintenance of the machines.

SIDEROS WORLDWIDE SERVICES:

- Site inspection
- Product choice and layout designing consultancy
- Installation by trained technicians around the world
- Training to all operators about operations and maintenance of the machine
- Preventive maintenance services
- Special maintenance services
- Retrofit service of installed machines



SIDEROS: INNOVATORS BY TRADITION



LIFTMASTER

SERIE SLR RAILWAY LIFTING JACKS

Liftmaster is a fully electric **columns** lift system, designed for raising rail vehicles, during assembly and maintenance operations. The system performs **synchronized lifting and lowering** of wagons, locomotives, boogies and complete trains.

The vehicles are placed on lifting carriages located on each column, to be subsequently raised. The **lifting and lowering speed** can be fixed or variable through VFD Inverter.

The columns **control panel** is centralized on a single pulpit. Each column can also have its own independent movement for maintenance or adjustment operations.

All columns have been optimized to be **easily moved**; in fact, with its **hydraulic jack system** and **front/lateral wheels**, the columns can be moved within the maintenance or production department with total flexibility.

Upon request, each column can be placed on special **sliding tracks** to allow proper positioning. The technical features of the lifts can be customized depending on the version and in particular on the **Customer's needs**.



LIFTMASTER

SERIE SLR

FEATURES:

LIFTING CARRIAGE TYPE

From a minimum of 5.000 kg (11,000 lbs) to a maximum of 50.000 kg (110,000 lbs)

VERTICAL STROKE

Up to 3000 mm (10 ft)

MINIMUM LIFTING HEIGHT

Starting from 300 mm (12 in)

MAXIMUM LIFTING HEIGHT

Up to 3500 mm (138 in)

MAXIMUM LIFTING/LOWERING SPEED

~ 9 mm/sec (560 mm/min)

MAXIMUM LIFTING SPEED

~ 50 mm/sec (3000 mm/min)

SAFETY

COLLISIONS SENSOR: Each column is equipped with a collision sensor, aimed to stop the run during its lowering, in case some obstacles are present on the floor

SECONDARY SAFETY NUT: It intervenes only in case of emergency, once the main one fails, supporting the load in safety

LIFTING SCREW TYPE

Trapezoidal Irreversible

INSTALLED POWER PER COLUMN

From 1,85 kW to 9,2 kW for standard versions

SUPPORT SURFACE

Floor or track: maximum acceptable slope 0.3% (3 mm over 1 m).

CONTROL PANEL

Centralized control panel to manage all functions and synchronize all the connected Lifting Jacks

CONTROL INTERFACE

Liftmaster is equipped with a User Friendly 21" HMI Touch Screen control

LIFTING CARRIAGE OPTIONS

LiftMaster can be equipped with a fixed or mobile lifting carriage, depending on the plant layout.

The mobile lifting carriage can be manually or electronically actuated.

The carriage can have a dual movement system:

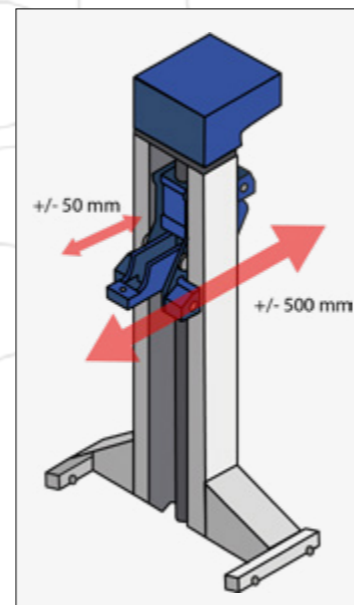
- **Main longitudinal Movement of the entire carriage** (+/- 500 mm - 20 in)

- **Seconday movement directly on the carriage, for small adjustment** (+/- 50 mm - 2 in)

FIXED LIFTING CARRIAGE



MOVABLE LIFTING CARRIAGE



LIFTMASTER OPTIONALS:

WIRELESS PENDANT

Wireless pushbutton pendant, battery powered, with a range of 100m (300ft) equipped with lifting and lowering buttons and E-stop

COLUMNS WIRELESS CONNECTION

In order to avoid power and signal cables on the ground, all columns can be connected using a Bluetooth/Ethernet Bridge technology

LATERAL OR TRANSVERSAL COLUMN MOVEMENT

To facilitate the handling and the alignment of the columns, LiftMaster can be equipped with a set of wheels and rails. The movement of the Lifting Jacks can be manual or motorized

LOAD CELLS

LiftMaster can be integrated with an integrated weighting system to measure the maximum allowed weight on each column. In case of excessive load, the lift will inhibit its movement for safety

LIFTING SPEED CONTROL

The lifting speed of all columns can be adjusted through a VFD Inverter system

WIRELESS MAIN CONTROL PANEL

The Lifts are controlled through a wireless centralized control panel with 21-inch HMI, for the management and operation the entire lifting system

BATTERY POWER SUPPLY

Liftmaster can be powered by batteries, installed on each column. In that way, no power cables are present on the floor, which normally lead to hypothetical trips in the working area

UL/CSA COMPLIANCE & SPECIAL VOLTAGES

LiftMaster can be manufactured according to UL (USA) and CSA (CANADA) electrical standards. Special voltages available: 400 V 60 Hz - 480 V 60 Hz - 600 V 60 Hz

LEAD SCREW LUBRICATION SYSTEM

LiftMaster can be equipped with an automatic screw lubrication system to ensure a high degree of reliability and durability over time

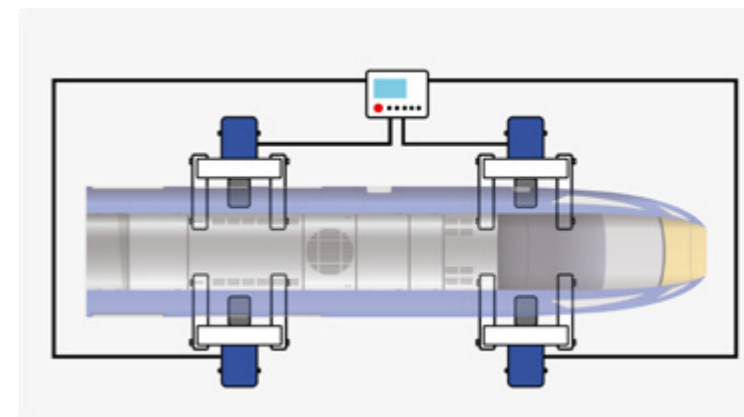
SECONDARY CONTROL UNIT

This options allows the single movement of each column for maintenance or off-set movements

LIFTMASTER CONTROL PANEL CONFIGURATIONS:

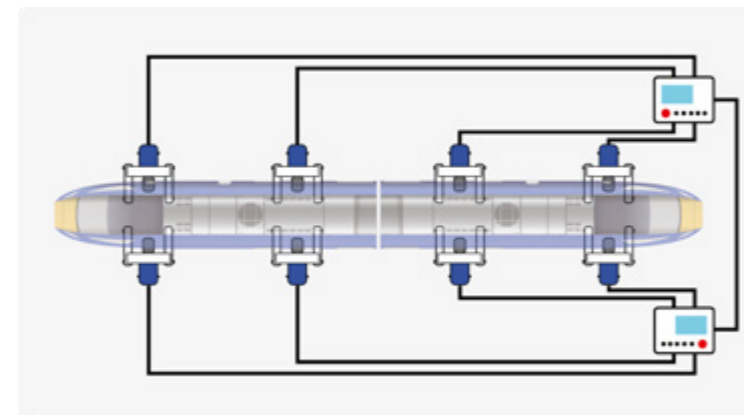
SINGLE-COMMAND SCHEME

The standard scheme is the simplest version to move the columns: it is equipped with a control unit capable of controlling up to 8 columns.



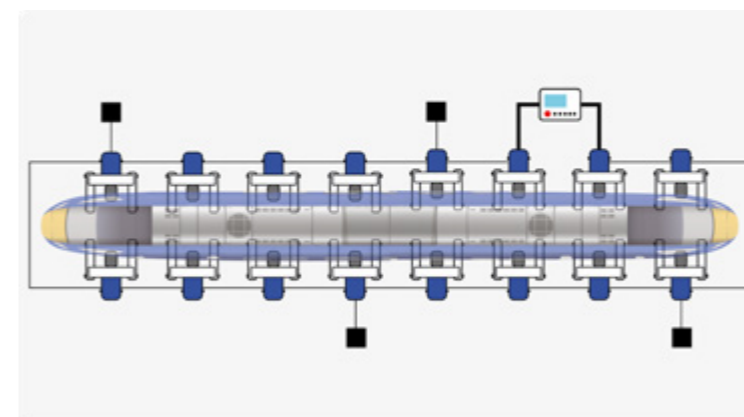
DOUBLE SCHEME

The double scheme works as the one with the single command, but it is able to control up to 16 columns (8+8). The system is equipped with two control units; for this reason, it can be also used as two different "single-command scheme"

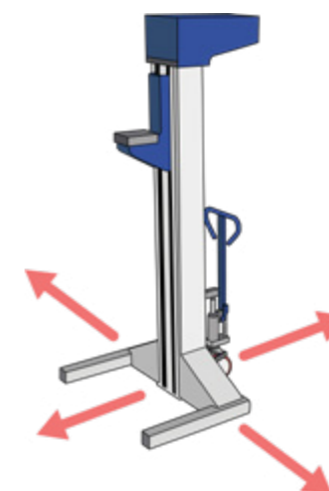


CHAIN SCHEME

The chain scheme is the most advanced and flexible control scheme; it is equipped of only one control unit capable of commanding up to 64 columns. The chain connection system between the various columns decreases the total length of the cables and limits their tracks crossing



LATERAL OR TRANSVERSAL COLUMN MOVEMENT



CONTROL UNIT

Centralized control panel to control and synchronize all the connected columns





ROTOLIFT 3 AXIS WELDING POSITIONERS

ROTOLIFT is a **3 axis positioner** and manipulator specifically designed for assembling and welding operations. Thanks to its unique features, the machine considerably reduces the movement of the workpiece and therefore the use of traditional lifting systems.

ROTOLIFT is a safe and **ergonomic machine** featuring **great flexibility during its use**. Its innovative feature is the possibility not only to tilt up to 140° and rotate the workpiece. The load capacity range starts from 1250 kg (2,750 lbs) up to 60.000 kg (132,000 lbs)

ROTOLIFT COMES IN 2 VERSIONS:

- **HYDRAULIC:** hydraulic lifting, titling and rotation
- **ELETRIC:** hydraulic lifting and tilting, electric rotation by means of VFD Inverter

SYNCRILIFT HEAD AND TAILSTOCK POSITIONERS

The Sideros Engineering Head & Tailstock Positioners are mainly used to **weld and assembly** long and large weldments in many different application fields.

Besides the benefits of ergonomics and safety, during welding and assembly applications, the revolutionary feature of Syncrolift is the compactness and the portability of both columns, thanks to their dedicated hydraulic jacks. The result is an extreme flexibility in the factory.

Syncrolift features two main electrical axis: Electrical elevation/descent, and Electrical 360° left/right rotation.

Syncrolift is configured with a fixed to the ground motorized headstock and an idler tailstock to adjust the workpiece length.

The Syncrolift load capacity range starts from 2000 kg (4,400 lbs) up to 60.000 kg (132,000 lbs)





HEADQUARTER



 **HEADQUARTER**
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