



Catalog

**Rerailing systems
for tramways, tram-trains
and metros**

Safety

In motion, the horizontal plays ensure that the jacks remain straight, even in the most extreme positions. This unique design eliminates any risk of the equipment slipping, at all times.

Versatility

The rerailing equipment can be fitted under the vehicle from one side, making rerailing possible under a tunnel or near a platform. That is a decisive advantage over other existing systems using a single rerailing beam. It is also possible to shift a vehicle in one operation placing one rerailing device on each bogie (in accordance to constructor's recommendations).

User-friendly

Due to its design, SAMS' systems are lighter than single beam systems. Two technicians can operate it safely. The two CRP rerailing devices are easy to handle thanks to retractable wheels. The 500 mm sliding stroke was designed to reduce the number of required operations.



Constructors

SAMS Rerailing designs and manufactures rerailing kits to be delivered with the new rolling stock: tramways, tram-trains and metros.



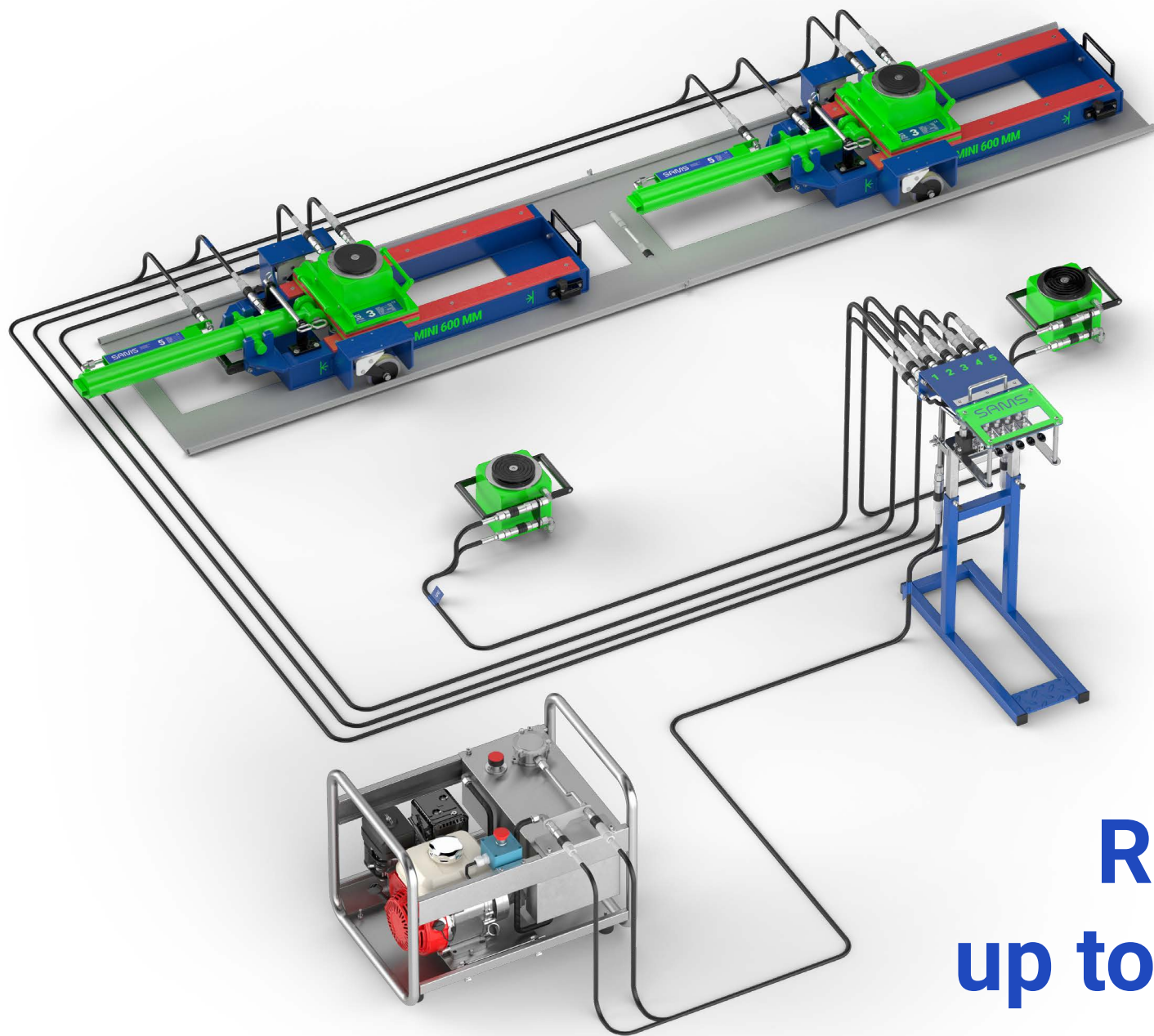
Operators

Rerailing kit, maintenance equipment, or training. SAMS Rerailing acts as a partner for Operators providing our experience and reactivity.



Firemen

SAMS Rerailing proposes a specific kit dedicated to firemen's use, and compatible with all types of rolling stock. A specific on-site training is also available.



**Rerailing kit
up to 48 tonnes**

Summary

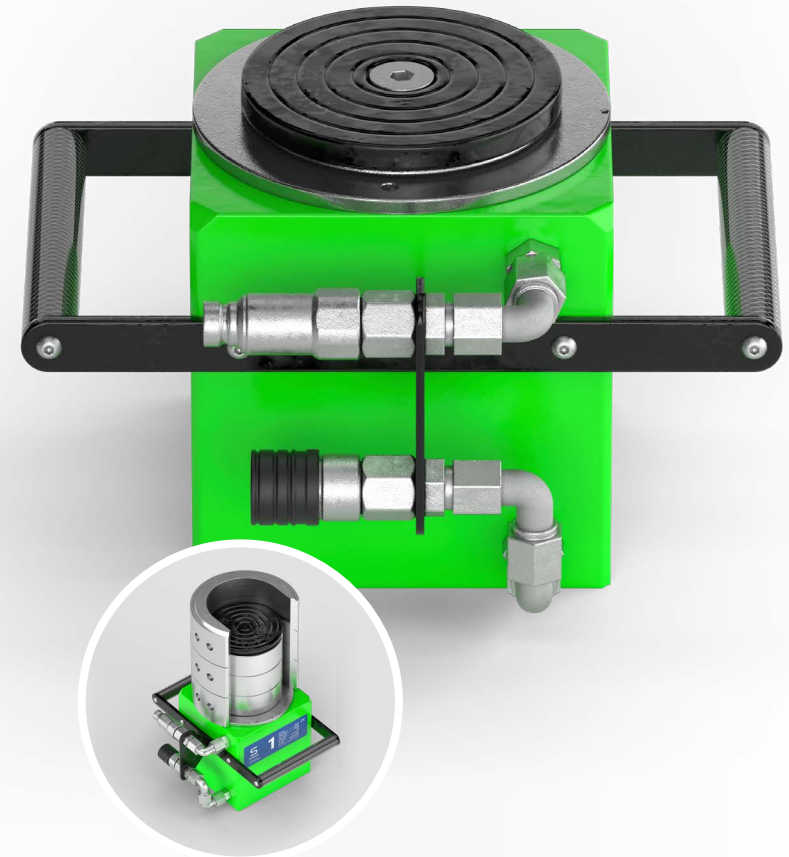
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Prelifting Jack

To prepare the operation, the two powerful jacks allow for a safe lifting of the vehicles : anti-slip contact pads, handy manipulation thanks to the handles, easy connections, safety and anti-spill couplers (see p.8).

Delivered with: prelifting steel plate, wooden and nylon wedges to reduce the clearances and adjust to difficult terrains: grass, ballast...

Options: aluminum version for jacks twice as light. Extra stroking device (for example: 132 mm on a 12 T cylinder).



| Load capacity | Stroke | Dimensions | Rated pressure | Weight |
|------------------------------|--------|---------------------|----------------|--------|
| 7 to 14 T ^{[1][2]} | 158 mm | 250 x 200 x h160 mm | 200 bars | 20 kg |
| 10 to 20 T ^[1] | 356 mm | 290 x 245 x h200 mm | 200 bars | 42 kg |
| 12 to 24 T ^{[1][2]} | 158 mm | 270 x 220 x h160 mm | 200 bars | 26 kg |
| 16 to 32 T ^[1] | 158 mm | 290 x 230 x h170 mm | 200 bars | 30 kg |

^[1] Capacity at half stroke | ^[2] Equipment in stock

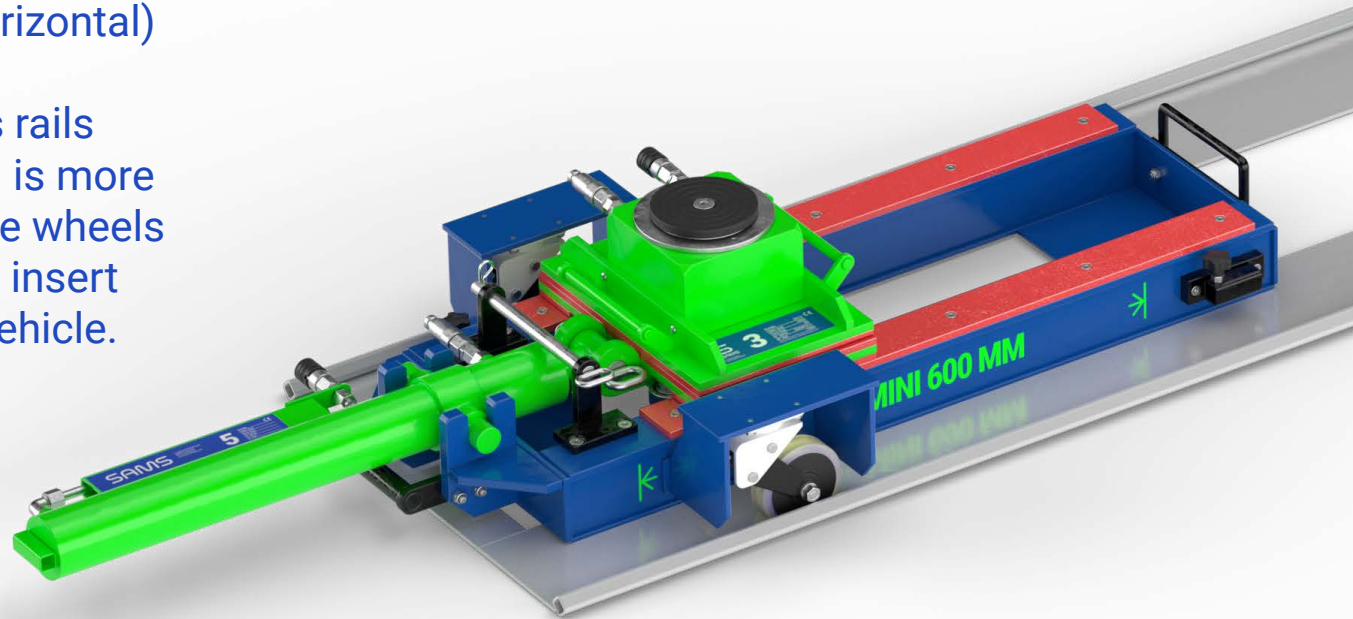
CRP Rail

Essential part of the SAMS' re-railing system, the CRP rail is equipped with a lifting jack and a shifting jack (horizontal) with 500 mm stroke which allows the vehicle to be placed back on its rails with precision and safely. Handling is more convenient thanks to the retractable wheels under load and a very low height to insert easily under any type of low floor vehicle.

Delivered with: an insertion rail to facilitate the set up.

Advantage: the system allows you to carry out the re-railing operation with access from only one side (e.g. derailment next to a platform or in a tunnel).

Options: Aluminum jacks to reduce the weight by 20% of the CRP rail.

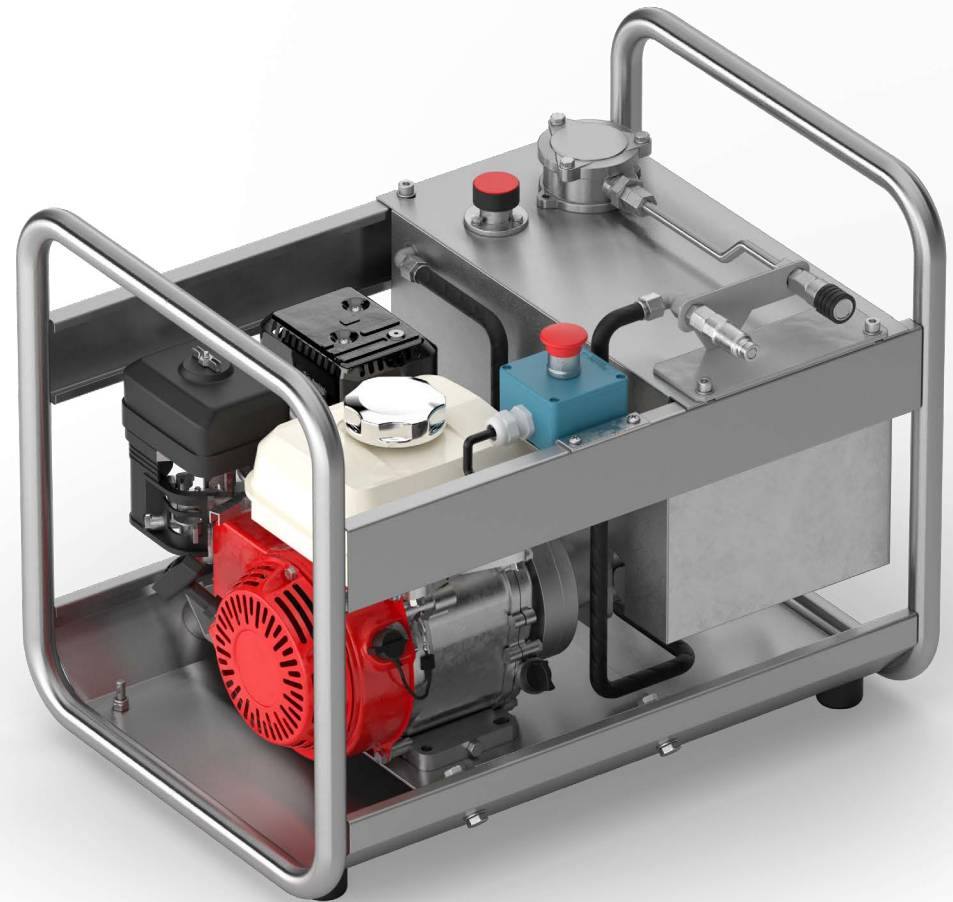


| Load capacity | Lifting stroke | Dimensions | Rated pressure | Weight |
|--------------------------|----------------|----------------------|----------------|--------|
| 7 to 14 T ^[1] | 162 mm | 1486 x 522 x h226 mm | 200 bars | 82kg |
| 12 à 24 T ^[1] | 242 mm | 1487 x 542 x h266 mm | 200 bars | 105kg |

^[1] Capacity at half stroke

Hydraulic Power Station

Compact and powerful, operating with a thermal engine (gasoline), the station provides pressure for all operations. Connected to long hoses, it is installed distantly for the safety of operators. Made with high end materials and components so that no specific maintenance is required.



| Flow rate | Maximal pressure | Oil tank | Dimensions | Weight |
|-----------|------------------|-----------------|---------------------|--------|
| 3 l/min. | 200 bars | 13 liters / H46 | 600 x 460 x h520 mm | 55 kg |

Portable control unit

Interface between the hydraulic pump and the lifting system, the control unit has 5 distributors equipped with independent handles for a complete and very precise control of operations. The desk is telescopic for easy handling and storage.

Delivered with: 7 hoses of 10 meters + a T-hose with hydraulic couplers, ISO 16028 standard, safety and anti-spill couplers, without oil loss.



| Connections | Stroke | Minimal dimensions | Maximal dimensions | Weight |
|-------------|----------|---------------------|----------------------|--------|
| X 5 | 200 bars | 630 x 230 x h750 mm | 630 x 230 x h1000 mm | 18 kg |

Manual safety pump

For rerailing operations in confined spaces (tunnels) or indoor (depot), the manual pump can be used instead of the thermal hydraulic power station to avoid the emission of toxic gases for the operators. Designed with the best materials and components, a pressure of 200 bars can be reached with the action of a single person requiring only 47 kg in vertical thrust.



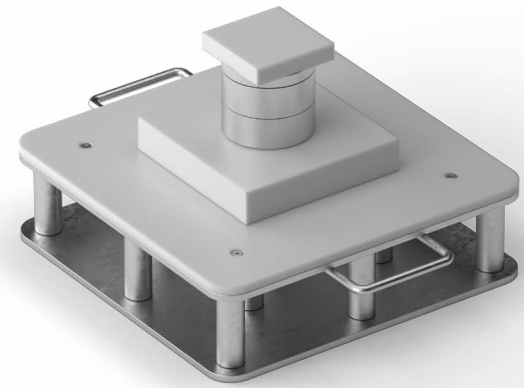
| Tank capacity | Flow rate | Dimensions | Nominal pressure | Weight |
|---------------|--------------------------------|---------------------|------------------|----------------|
| 10 liters | 25 cm ³ / actuation | 620 x 260 x h670 mm | 200 bars | 30 kg with oil |

Pneumatic lifting kit



When the vehicle has sunk into loose or unstable ground, the ultra-thin cushion powered by a compressed air bottle (output set at 8 bar) allows a very fast inflation and prelifting. Combined with the provided wedges to reach the lifting plates, it can replace the jack of the re-railing kit.

RotulSlide®



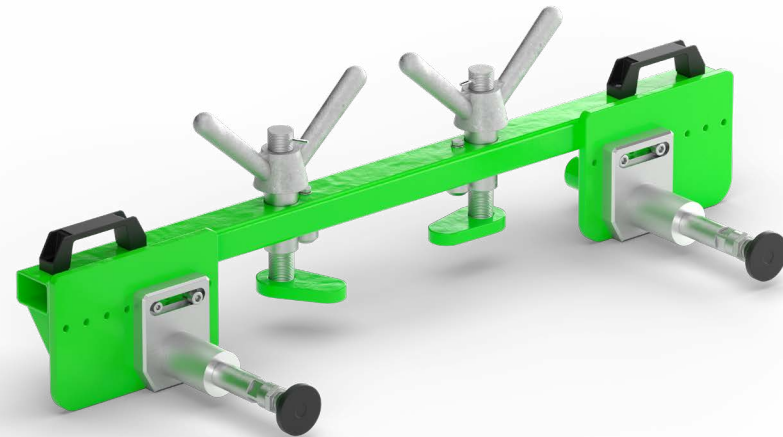
SAMS' exclusive and patented equipment, the ROTULSLIDE® makes it possible to create a pivot point allowing lateral movements in all situations, thanks to its unique omnidirectional ball head and Teflon surfaces.

Lorry



To be fitted with SAMS' rerailing kits, the lorry is used in the event of a derailment with bogies or axles out of services. Withstanding up to 30 tons, it allows the damaged vehicle to be brought back to the depot.

Articulation locking bar



Custom-made according to the brand and model of the vehicle, the system fits easily and sturdily between the modules to lock the articulation and control the movements during the shifting operation.

Lighting

To facilitate operations even at night, SAMS offers powerful and handy systems to illuminate the working area and the locations where the equipment is fitted under the vehicle.

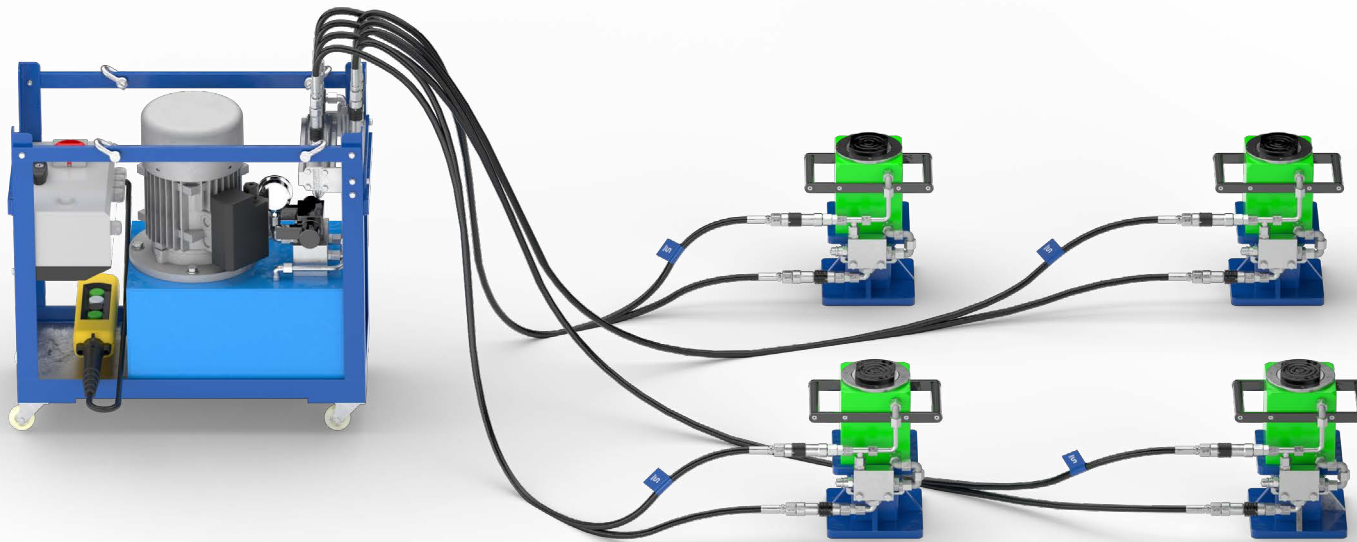
Options: High capacity lithium batteries.



Pit car body lifting system

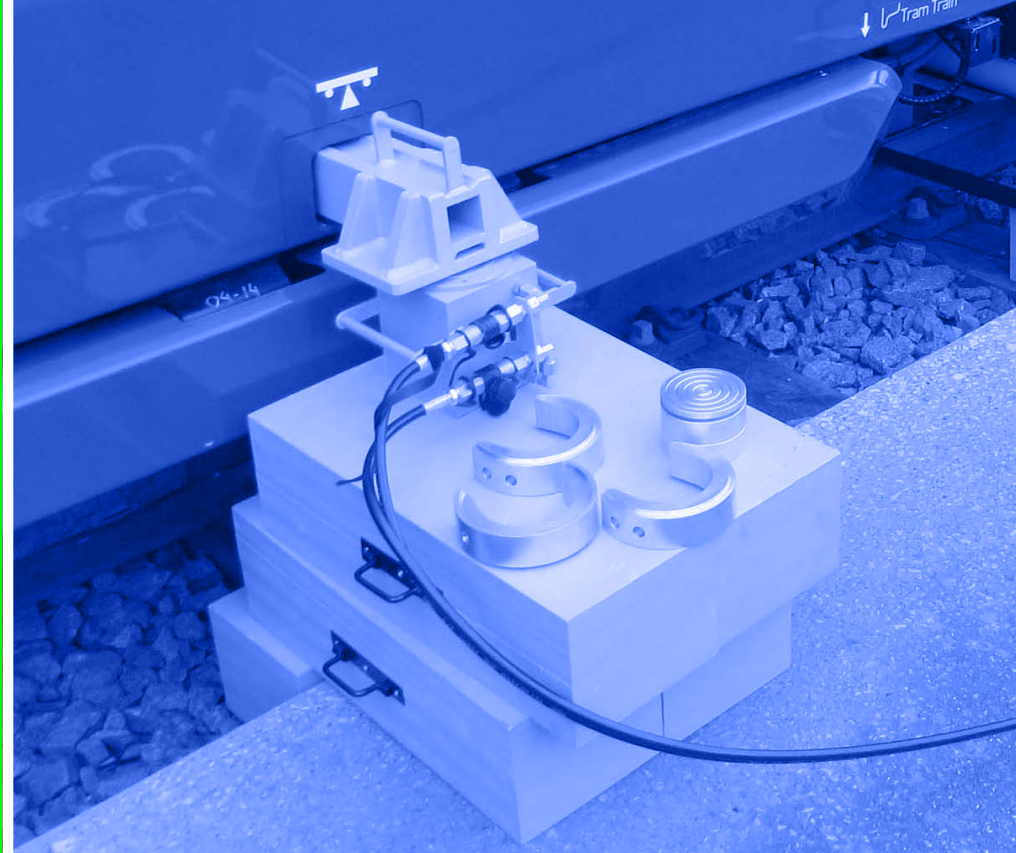
With its nearly 40 years of experience in re-railing systems, SAMS offers a complete kit to lift and allow the operators to carry out shimming of the carbody after wheel reprofiling in the workshop. By design, the cylinders can be either fixed to workstation, or be used at various locations in the workshop. The hydraulic power station is electrical.

Options: steel or aluminum lifting jacks (2 times lighter), various shims kit.



| Load capacity | Nominal pressure | Stroke | Dimensions of a jack | Weight of a jack |
|---------------|------------------|--------|----------------------|------------------|
| 4 x 14 T | 200 bars | 85 mm | 230 x 250 x h366 mm | 29 kg |

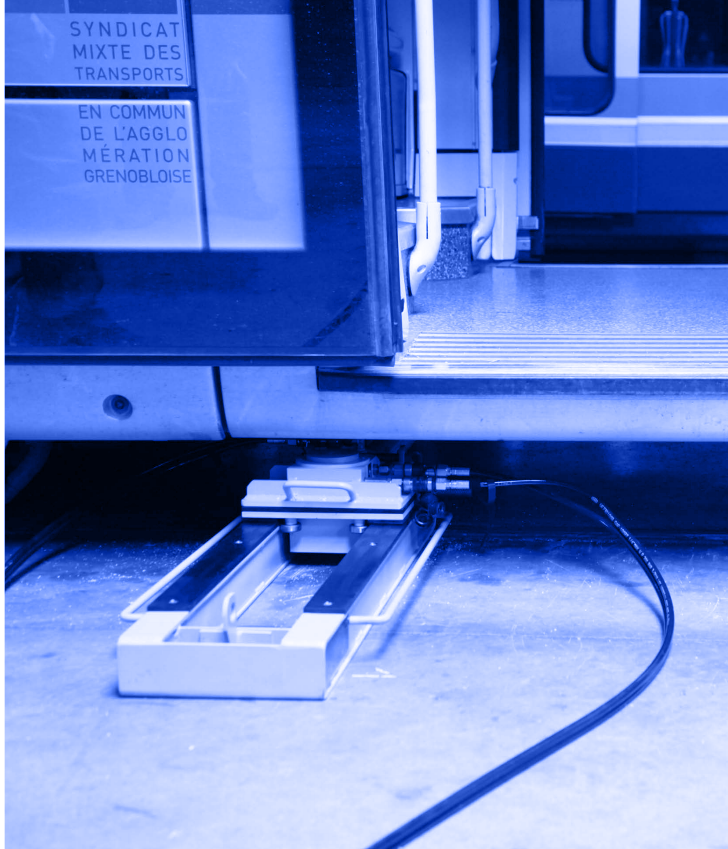
SAMS' solutions in situation



Pre-lifting operation near a quayside that requires shimming to reach the lifting point (here 48 cm). The vehicle must be lifted higher than the available stroke of the cylinder.



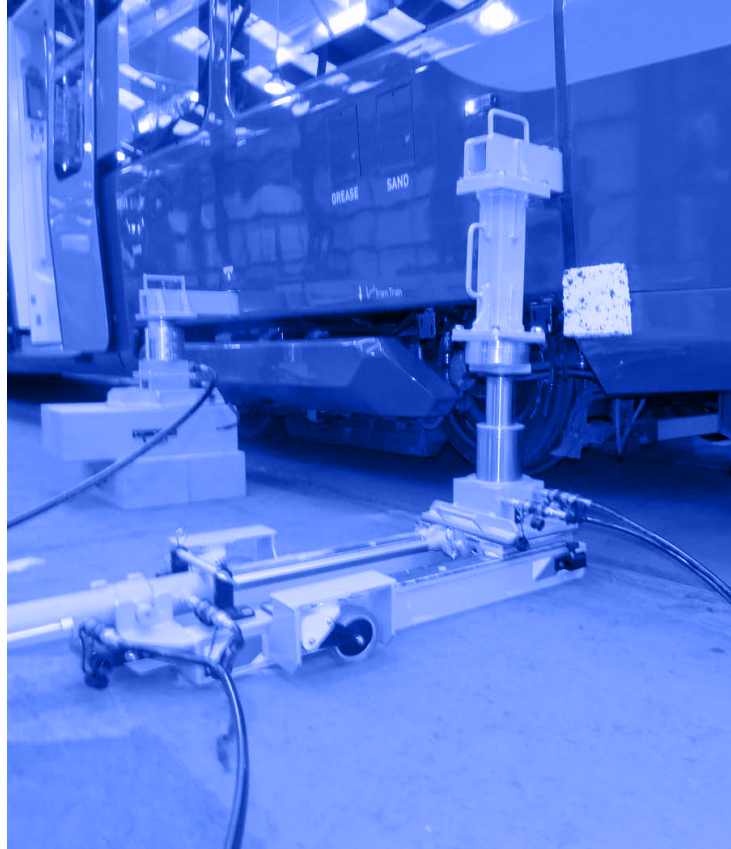
SAMS' solution: wooden wedges for the height, and C-wedges to extend the jack's stroke.



Classic derailment situation without any difficulty of terrain or height. Vehicle derailed less than 500 mm from the rails



SAMS' solution:
re-railing carried out in 15 minutes.



Tram with re-railing side slots, at a significant height.



SAMS' solution:
custom-made steel lifting bar and booster bar, with rotated interface for optimal contact surface.



Re-railing on a railroad switch on ballast.



SAMS' solution:
wedges dedicated to the customer environment are provided to optimize the equipment set-up.



Rerailing process

SAMS' unique global approach includes the rerailing equipment, the rerailing process for your rolling stock as well as a day of on-site training to approve the rerailing process.



10 years warranty

Ultra-sturdy and reliable, SAMS also provides an extended 10 years warranty on all our rerailing equipment (under normal conditions of use and maintenance).



French fabrication

All our products are designed by our engineering team. They are then fabricated, assembled and tested in our factory in France (Grenoble – Alpes) by our specialized technicians.



Documentation + Training

SAMS' equipment is delivered with:

- a certificate of conformity in compliance with the country regulation,
- a comprehensive user manual,
- a maintenance manual.

A day of training on your site is included with every delivery. All rerailing scenarios are explained and detailed, including rolling-stock specificities (brand / model). The full training support is delivered on a USB flash memory.



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