Make your dreams come true

“I don’t remember how we came across SERAPID; possibly when hunting around for a technical precedent for what we wanted to propose, which existed, as far as we knew, only in theatre staging systems. What the SERAPID team brought first was an incredible openness to taking on what, to most people, would have sounded like an impossible challenge: to make a piece of public space move. Where we would have expected every other company on earth to say “no, it’s not possible”, SERAPID simply brought solid technical expertise and immediately set about demonstrating how it could not only be made possible, but completely plausible and reliable.”

Architect’s statement

Stage area formed from café roof

Café

History

SERAPID was founded in France in 1972 and designs and manufactures systems to move heavy loads using its proprietary Rigid Chain Technology (RCT). In the beginning SERAPID designed products and solutions for problems encountered by the automobile industry, but soon entered the nuclear and aeronautical market by offering precise, compact and reliable solutions.

In the 1980s it extended its presence throughout Europe and into the United States. In parallel to this geographic expansion, SERAPID adapted, innovated and evolved its products for new markets. In 1996 SERAPID introduced RCT to theatre and show professionals with the LinkLift product, specifically designed to meet stage and scenery lifting needs. Today over 1200 sites around the world use this technology to lift and move stages and platforms.

In 2009 SERAPID developed the RigiBelt, a totally non-magnetic belt designed for medical and pharmaceutical applications.

Since 2014 SERAPID has been using its expertise to develop solutions for kinetic architecture: the reconfiguring of building infrastructure; moving a structural element such as a wall, roof or room, raising or lowering a truck, a car or goods. SERAPID has developed its Building DynamicS (BDS) range of solutions to meet these architectural needs.

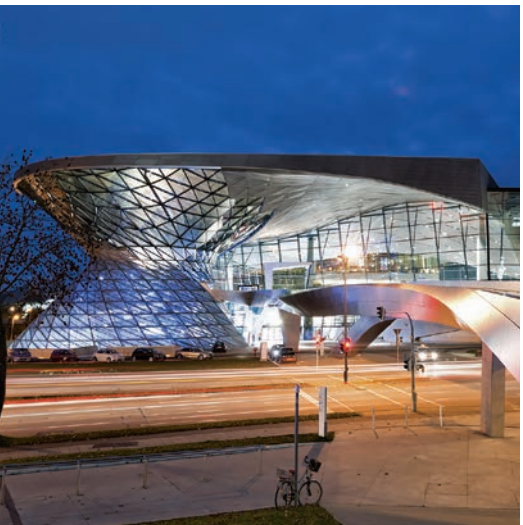
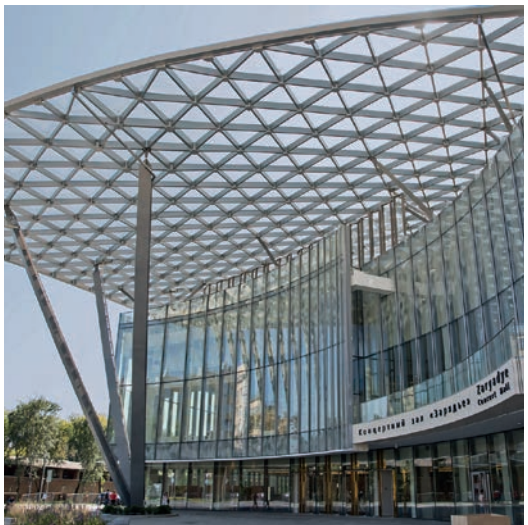
SERAPID is continuously improving its product range and provides adapted and bespoke solutions for the most challenging projects. For over 45 years the driving force behind the SERAPID team has been to support clients through all phases of their projects to ensure they are provided with effective solutions.

Export development with the recent opening of SERAPID Singapore PTE LTD to serve Asia, continuous innovation and the penetration of new markets make SERAPID a key supplier in the movement of loads.




SERAPID

RIGID CHAIN TECHNOLOGY


Sketch of F. Gehry (first drawing of the Fondation Louis Vuitton's project - Paris)

Sample Projects
Architecture

Concert Hall Zaryadye

Moscow | Russia

The redevelopment of the vacant site previously occupied by the now demolished Rossiya Hotel was the subject of an international design competition, won after a hard fought battle by a consortium led by Diller Scofidio + Renfro (DS + R). The result is the spectacular ZARYADYE Park, which includes 25,200 square metres of performance venues, including a Philharmonic Concert Hall. As with most modern venues, the concert hall was designed to be multi-purpose, a space that could be reconfigured from flat floor to raked seating to accommodate a variety of events.

With raked seating, a curved row configuration is known to provide superior sightlines; but combining curved rows with automated reconfigurable seating had long been thought impossible. However, SERAPID's engineers have developed a solution, QSX seating system, that works for straight, curved or faceted tiers regardless of the number of rows, seats or configurations. The QSX system that SERAPID produced for the Zaryadye project consists of twenty curved rows ranging from 23 to 30 metres, with a total of 677 seats. The system is fully automated and can change from a flat floor to a raked seating setup in less than 15 minutes.




Fondation Louis Vuitton

Paris | France

Conceived by Franck Gehry, this glass building resembling a yacht with wind-filled sails is located at the crossroads of the Bois de Boulogne and the Jardin d'Acclimatation. This modern art museum is composed of 11 galleries and a 320 seat auditorium.

The auditorium hosts debates, conferences but also live shows, cinema or video. The space must therefore be transformable to meet the needs of the varying events.

The SERAPID QSX system uses a sequence of vertical and rotational movements; to allow the auditorium to be automatically transformed from a clear hardwood floored area, which can be flat or tiered, to one of raked theatre seating to suit specific events. The unique design allows for different floor finishes in the seating configuration and air-conditioning to be fed directly to each seat.

BMW Welt

Munich | Germany

The BMW multi-purpose venue at BMW headquarters in Munich was designed to present the brand's latest models, organise meetings or put on cultural events.

The architect's objective was to create a single venue with maximum flexibility for different uses. SERAPID LinkLift columns meet this objective by providing a multitude of platform elevation and configuration possibilities. This allows the space to be converted from a perfectly flat floor for an exhibition, to a raked configuration for a show.

The auditorium is also equipped with 2 central elevators to bring vehicles up from the floor below for launches of new models during press conferences for example. SERAPID rigid chain technology allows multiple space configurations, platform elevation and venue transformation.

Dubai Mall

Dubai | United Arab Emirates

Dubai Mall is one of the world's biggest shopping malls. In the heart of the complex an area is reserved entirely for events such as fashion shows or product launches.

Five large lifts, one with an integral revolve, make up a catwalk covering some 155m^2, allowing a variety of configurations and including provision for direct access from changing rooms below the mall on to the catwalk. The catwalks are lowered to ground level when not in use.

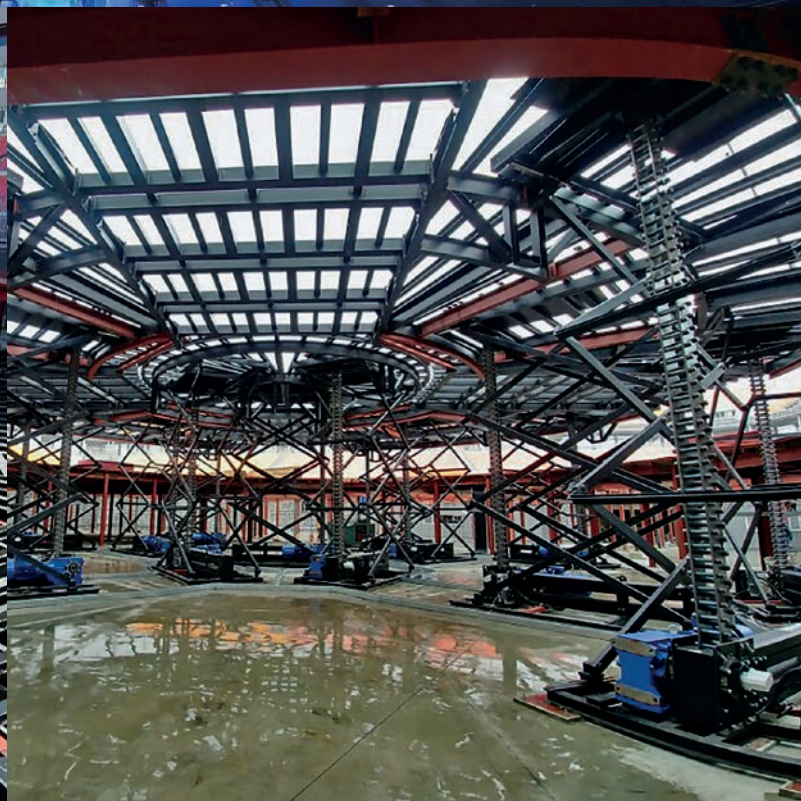
The 5 elevator platforms are covered with LED screens and glass panels that can support a load of 1 tonne/m^2. They are raised using SERAPID LinkLift elevator columns which were selected for their reliability, low noise levels, compactness of their machinery and their capacity to safely lift heavy loads.

Olympic Games Winter 2018

Pyeongchang | South Korea

This exceptional event took place at the PyeongChang Olympic Stadium, east of Seoul, South Korea. The pentagon-shaped and fully open stadium can accommodate around 35,000 people and was specially built for this event. Since the open design of the stadium provided no protection against the challenging weather conditions (remarkably low temperatures and severe winds), the choice of Rigid Chain Technology (RCT) was legitimate: the LinkLift, robust and reliable, allows the stable lifting of heavy loads on high strokes, even in harsh environments.

For the event, SERAPID provided its Meridian Lift, a circular lifting platform powered by LinkLift electromechanical actuators. The lift, located in the centre of the stadium, was designed with an outside diameter of 24 metres, rising to 5.5 metres in height, thanks to 12 LinkLift 100 actuators. This platform provides a lift capacity of 28.5 tonnes. At its centre, there is a second independent platform with a diameter of 8 metres. This platform also elevates to 5.5 metres and utilises 3 LinkLift 100 telescopic columns for a capacity of 9.5 tonnes.



Olympic Games Summer 2008

Beijing | China

A SERAPID LinkLift elevation system was selected for this extraordinary event to equip the stage platforms for the opening ceremony in the Beijing National Stadium nicknamed ‘the Bird’s Nest’.

Ten platforms each with 56 tonne capacity and a total combined surface area of 1080 m² were raised using 62 LinkLift elevator columns. Each platform had scissor guides to guarantee stability at a height of 7 metres.

The ceremony was held on 08. 08. 2008 at 8:08 in the evening; 8 being the symbol for prosperity and infinity in Chinese culture. The event also contributed to the prosperity and long life of SERAPID rigid chain technology!


上海四安
北京城建安装嘉京宏青年突击队

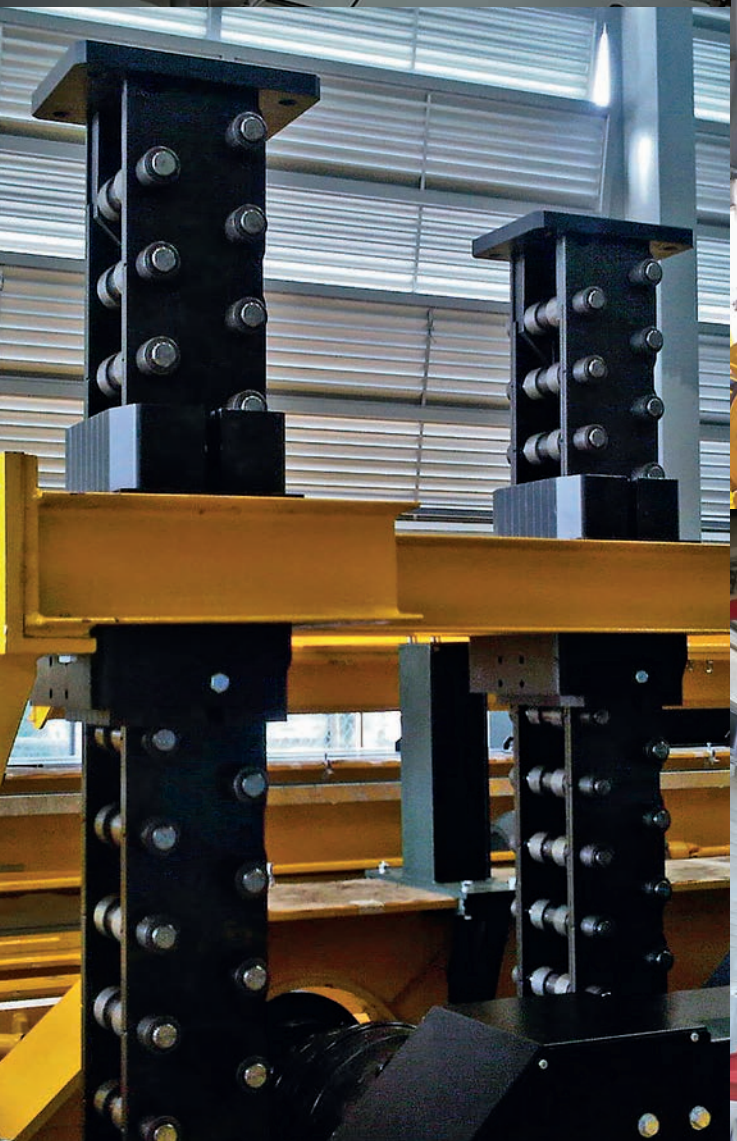
Sports Hub

Republic of Singapore | Singapore

To solve issues relative to capacity and spectator interaction, the Singapore stadium opted for flexible stand configuration to be able to adapt to the needs of differing sports such as football, athletics, cricket, rugby, etc.

At the core of this system the SERAPID LinkLift rigid chain makes it possible to raise 43 different sized sections of stands weighing up to 110 tonnes. The SERAPID system can raise a section in 3 minutes, showing undeniable strength to quickly and easily reconfigure the stadium.

In addition to increasing the stadium's capacity for football, rugby and cricket events, the changes in configuration ensure that spectators are as close as possible to the action, enhancing their overall experience.



Eventpodium

Broederliefde Group | Worldwide

In response to a request from a customer for a reliable, robust, non-hydraulic scissor lift platform for dynamic events, the SERAPID team developed a platform - the 'EventPodium'- to meet the specific requirements of the event industry. Up to that point, no other company in the sector had met this challenge but thanks to our purely mechanical systems, all the drawbacks of hydraulics, such as sensitivity to temperature, oil leaks or the complexity of synchronisation with multiple platforms, were eliminated.


TONNY VAN EDE - TRIBUNE

Bolchoi Theatre

Moscow | Russia

The prestigious Bolshoi Theatre is a world famous symbol of Moscow and Russia. After 6 years of refurbishment, the Bolshoi re-opened its historic stage in 2011.

SERAPID supplied several elevation systems for the main stage and the rehearsal room for the famous theatre. The 3 orchestra lift platforms for the main theatre and the 5 platforms for the rehearsal room were fitted with SERAPID LinkLift elevator columns. The LinkLift elevation system combines fluid movement, speed and low noise levels.

SERAPID's 45 years of experience in rigid chain technology make it one of today's leading players in stage and orchestra elevator technology, and in the stage scenery horizontal movement sector.

Lincoln Center

New York | United States

The David H. Koch Theater houses the New York City Ballet Company in the prestigious Lincoln Center for the Performing Arts. Originally named the New York State Theater, it was designed by architect Philip Johnson and built for the 1964–1965 World's Fair.

Renovation work began in July, 2008 with overall designs by JCJ Architecture with Schuler Shook-Theatre Planners as theatre consultants.

Working with iWeiss – Theatrical Solutions, SERAPID designed, built and installed 3 new Orchestra Lift systems replacing the original pit filler system which allowed for the expansion of the orchestra pit to a total of 1,350 square feet.

Rising Tide Bar

Oasis of the Seas | Royal Caribbean Cruise Line

Located at the heart of the atrium, the rising tide bar is a favourite attraction of this sea-going giant. Connecting the 5th and 8th decks, this elevating ship-shaped bar carries up to 35 passengers with a smooth, gentle motion.

The technical challenge of markedly restrictive space was met by using four SERAPID LinkLift columns. The telescopic LinkLift chain system stores in a compact space when the bar is in the low position yet provides a long stroke length. LinkLift columns can raise many tonnes over long distances, in this case, a 40 tonne bar is lifted over 10 metres, in complete safety.


ST SERVICES

SKYDECK

Willis Tower, Chicago | United States

SERAPID rigid chain technology was chosen for the “glass balconies” on the facade of the Willis Tower in Chicago so that they appear to be suspended in the sky. SERAPID rigid chains are used to safely extend outward 4 glass boxes from the tower's 103rd floor, which is at a height of 412 metres, giving visitors a unique experience.

Thanks to the SERAPID LinearBeam the 4 boxes can easily be retracted into the building structure in strong winds or for maintenance work. Rigid chain technology is reliable, silent and its reduced size allows it to be discretely built into the system.

These “glass balconies” known as The Skydeck attract over one million visitors every year.

Retractable Roof

Campo Pequeno Arena | Lisbon

Since 1892 the Campo Pequeno has been the main bull ring in Lisbon and an architectural icon. By the year 2000 the building had fallen into a state of disrepair and it was decided that it should be restored. Use solely as a bull ring was not financially viable so a plan was formulated to make the building suitable for use not only as a bull ring, but also for concerts, circus and shows. As part of this there was a requirement for a roof that could be opened for bull fighting, but closed for concerts and similar events.

The central 36 metre diameter part of the roof is comprised of 8 segments, each weighing 7 tonnes. The SERAPID LinearBeam actuators were chosen to move these segments. Designed to move heavy loads, the SERAPID rigid chain makes it possible to move and accurately position the heavy elements. The reliable and robust push-pull system was adapted to operate in an outdoor environment.

Rigid Chain Technology makes it possible to think outside the box! It is robust and compact and adapts to all configurations, allowing it to move large structural elements over long distances.

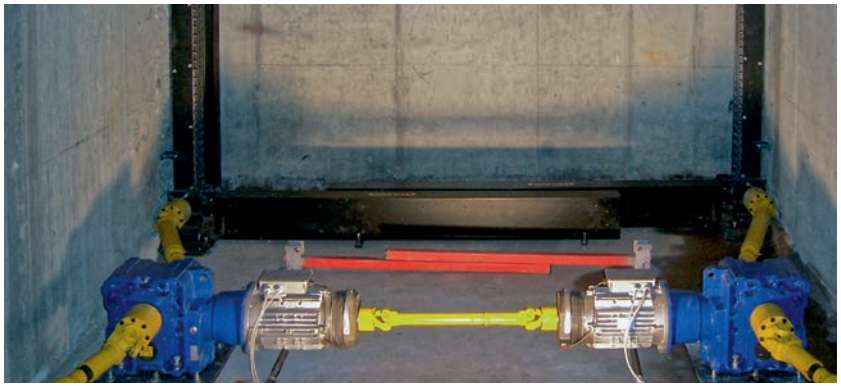
Transport Elevator

Maxim Gorki Theatre | Berlin, Germany

This transport elevator is set in to the adjacent roadway and is designed to transport goods and stage scenery from street level to the theatre basement. The cabin roof is covered with 7.2 tonnes of cobblestones which form part of the street surface when the elevator is not in use. The cabin is raised so that goods can be lowered to the level beneath the street.

There were two recurring issues with the original elevator system, poor reliability and high maintenance costs, which led to it being replaced.

Because of its strength and dependability the SERAPID solution was chosen to replace the original system. The elevator system, comprised of 4 LinkLifts, was installed and has been running since 2007 with no failures and very little maintenance.



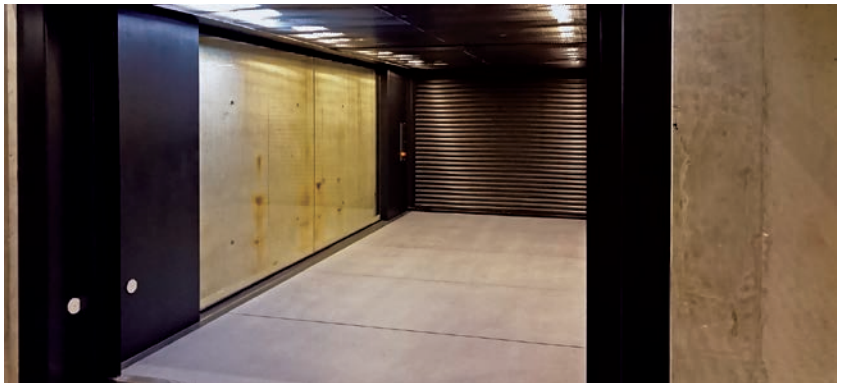
Car Lift

London | England

Located at a private residence in London, the lift in its ‘parked’ position forms part of the driveway of the house with its structural roof finished in natural stone allowing a car to be parked on top. The lift is finished in architectural glass and black perforated steel giving it a modern and minimalist appearance. It is raised to allow a car to be driven into it and transported down to the underground garage. This can still be done even with a car parked on the roof of the lift, providing maximum flexibility for the parking and garaging of cars within the limited space available at the property.

LinkLift system is designed for an 8.5 metres stroke with speed of 120 mm/s. The SERAPID lifting solution is machine roomless with all the drive system being located in the pit below the lift.

The lift offers all the benefits of a SERAPID system, giving high and repeatable positioning accuracy, low noise, low maintenance and none of the problems associated with high capacity hydraulic lifts.




TRANSIT

Unusual Truck Lift

Amore Pacific | Korea

SERAPID has just completed the design, LinkLifts and motorisation and controls for a unique truck lift for Amore Pacific, a Korean manufacturer of skincare products. The lift is designed to carry trucks from street level to an art gallery below ground level.

The lift's unique feature is that when coming up to road level to allow trucks to enter, it must pick up a section of road weighing approximately 41.5 tonnes. It is the unique characteristics of the LinkLift that allows this to be done, as all of the chains' attributes come in to play;strength, positioning accuracy and the fact that the column is rigid and incompressible. These features meant that only SERAPID could offer a safe and reliable solution within the available space to raise a total load of (18+41.5 tonnes) when the weight of the truck and lift car are added to the weight of the road.
The lift also features a unique lift door system designed by SERAPID, which utilises a combination of LinearBeams and ChainLifts to power bi-parting 8.5 metre wide lift doors. The top part of the door encompasses part of the roof which needs to be raised above the height of the lift car to allow the gull wing doors on the trucks to open fully.


Climate Control
Air-Ride Suspension

Truck Lift

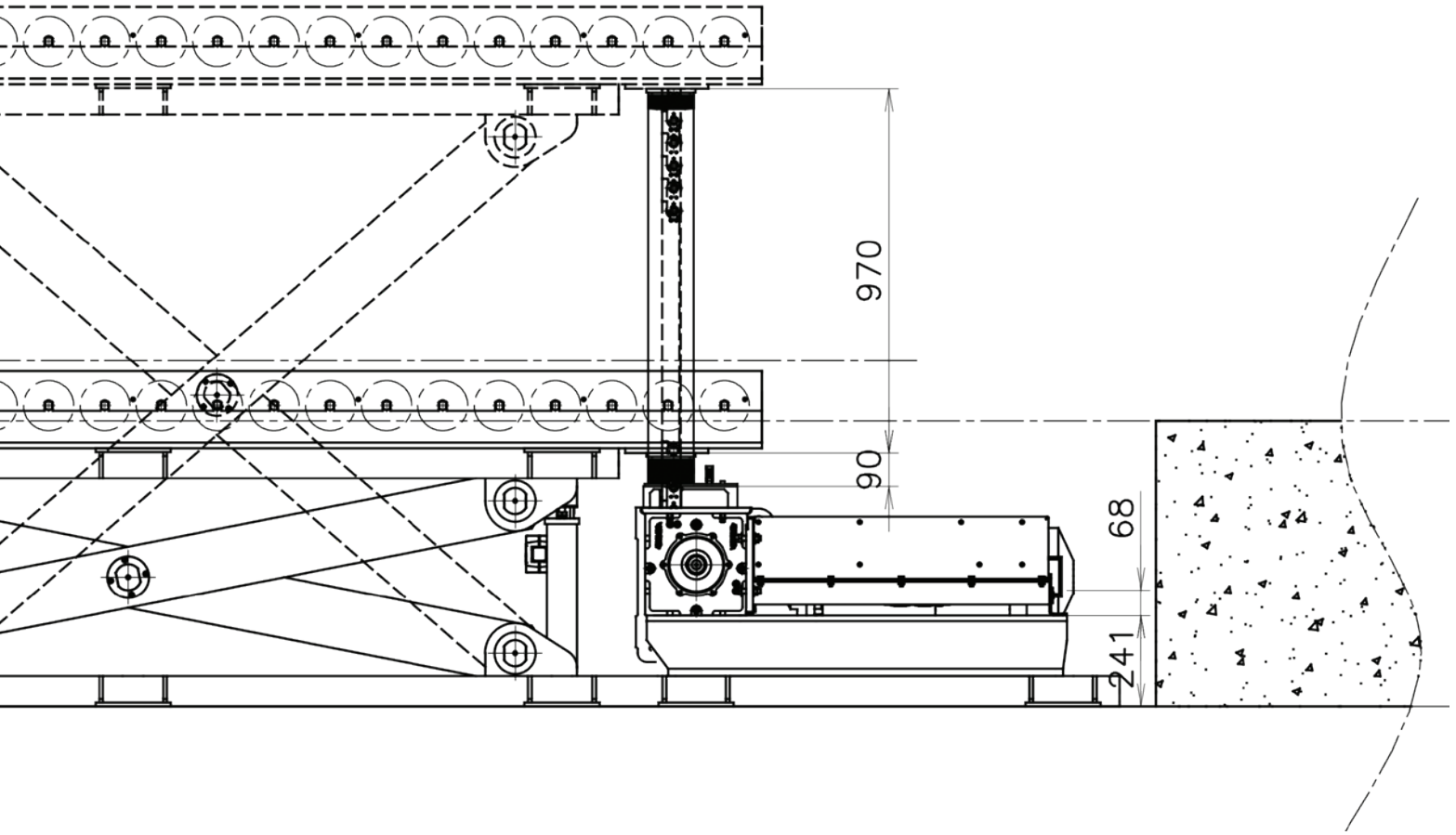
National Theatre Mannheim | Mannheim, Germany

Following repeated oil leakage problems and bearing failures in the previous hydraulic elevator system, the SERAPID solution was chosen to renovate this elevator platform.

The 31.5 tonne truck lift at the Mannheim National Theatre is used to access 3 levels: the basement, ground floor and first floor. LinkLift elevator columns, used in conjunction with simple linear guides were installed in the elevator pit. As this solution does not require a machine room, the existing machine room was cleared for use as a storage space.

The SERAPID LinkLift rigid chain is environmentally friendly and reliable, it requires very little maintenance and is easy to adapt to existing configurations in a refurbishment context.


NTM
NATIONALTHEATER MANNHEIM
MAN
TGA 18.320


970
90
68
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Our Other Markets

Other Markets

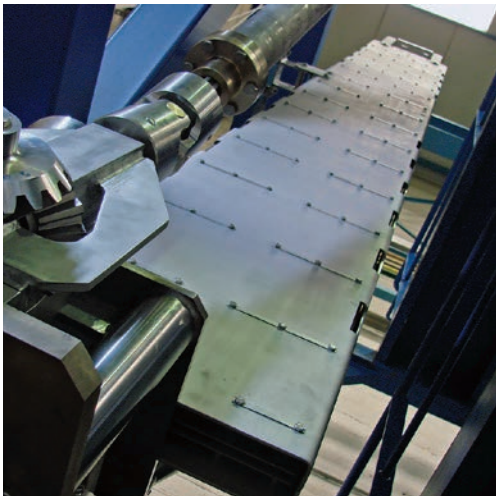
AEROSPACE

AIR PLANE ASSEMBLY

METROLOGY

NUCLEAR

PUSHER CHAIN FOR PACKAGE TRANSFER HOODS



HORIZONTAL FUEL TRANSFER TO POOLS

TOOL HANDLING

QUICK DIE CHANGE

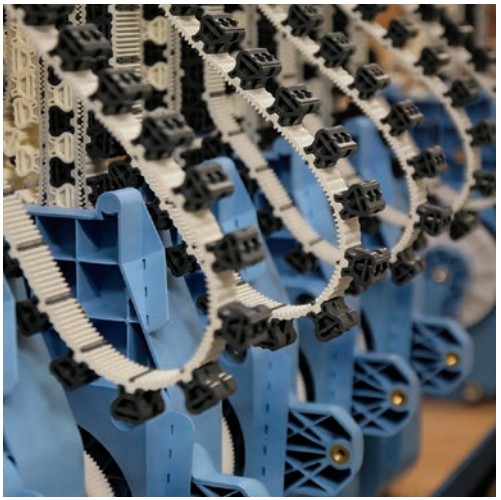
PRESS DIE POSITIONING AND TRANSFER SYSTEM

AUTOMOTIVE

LIFTING PLATFORMS

HIGH PERFORMANCE ELEVATOR PLATFORMS

MEDICAL



NON MAGNETIC ACTUATOR

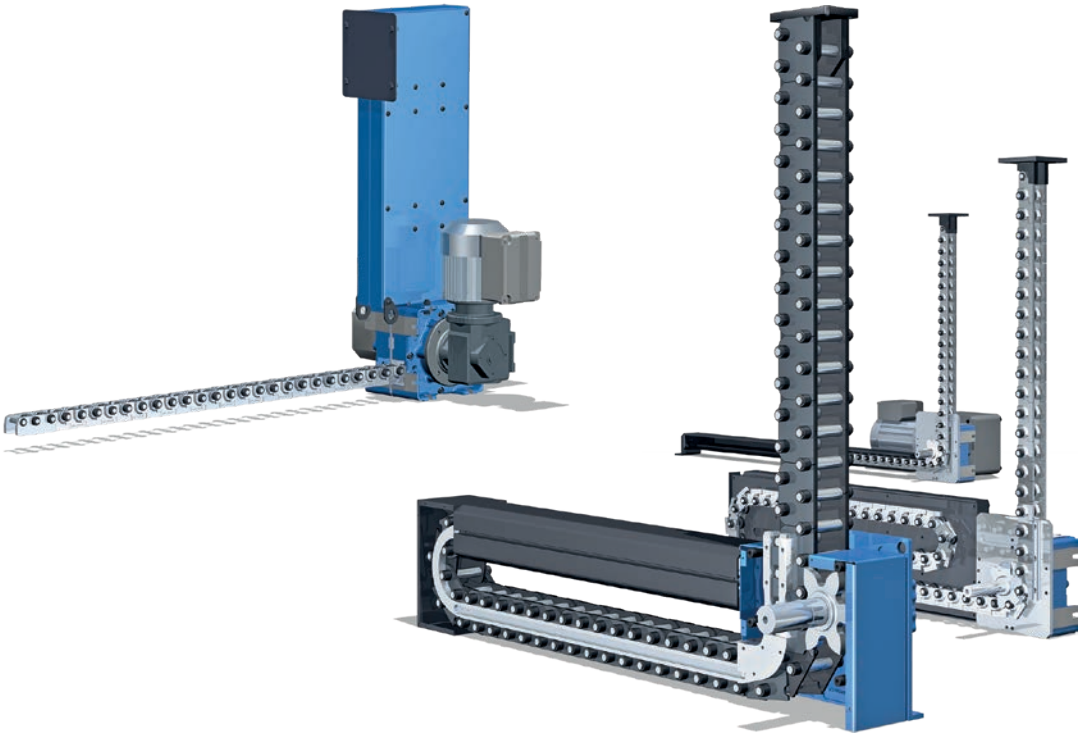
MRI TRANSFER

Rigid Chain Technology

Simple and flexible technology

SERAPID has been working in the field of linear movement equipment for over 45 years. The SERAPID elevation and transfer systems are designed using a simple mechanical principle making it possible to transfer loads of a few kilograms to several hundred tonnes using rigid chain technology (RCT).

This technology is based on the use of interlocking chain links. When the chain is deployed in one plane it behaves like a true rigid pushing/pulling bar. In the other plane, the chain unlocks in the drive casing and stores in a reduced space.



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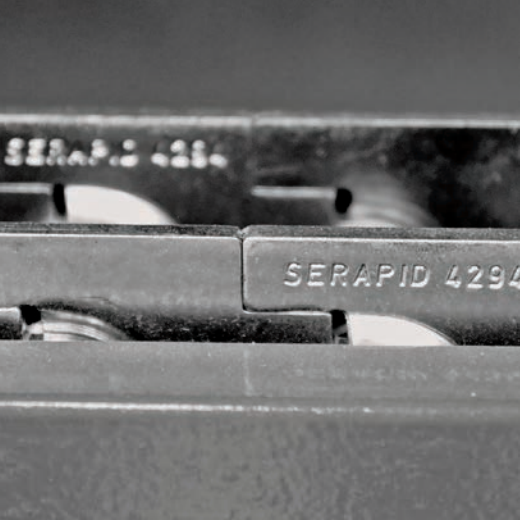
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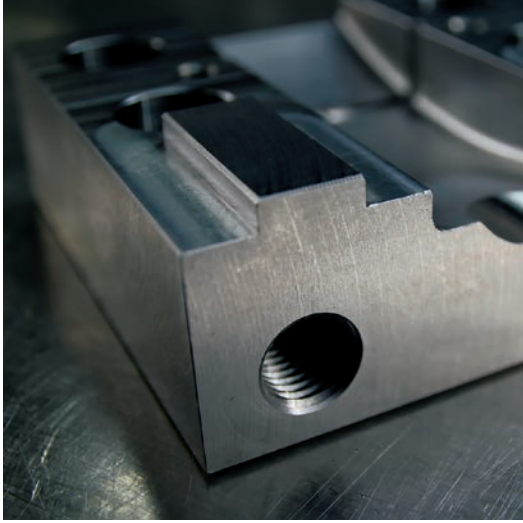

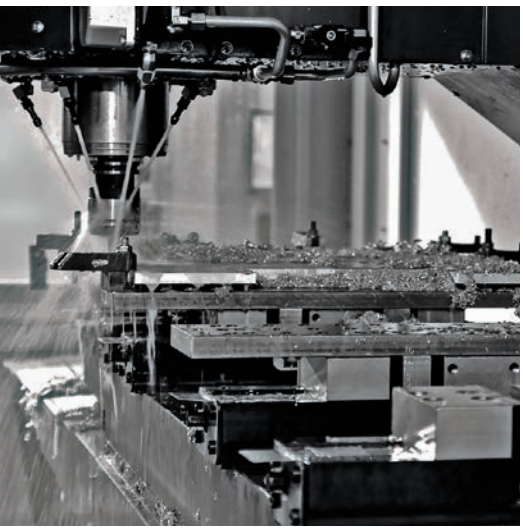

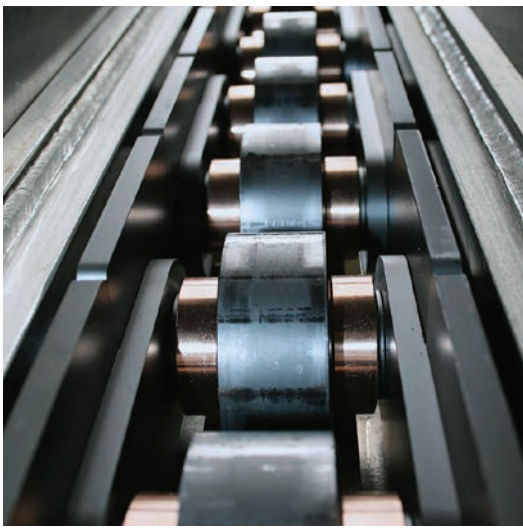

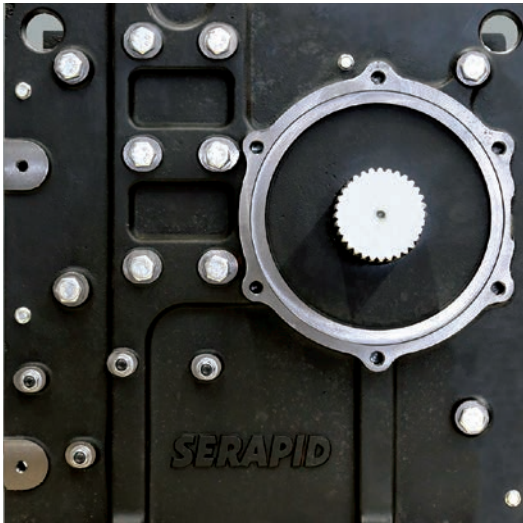
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