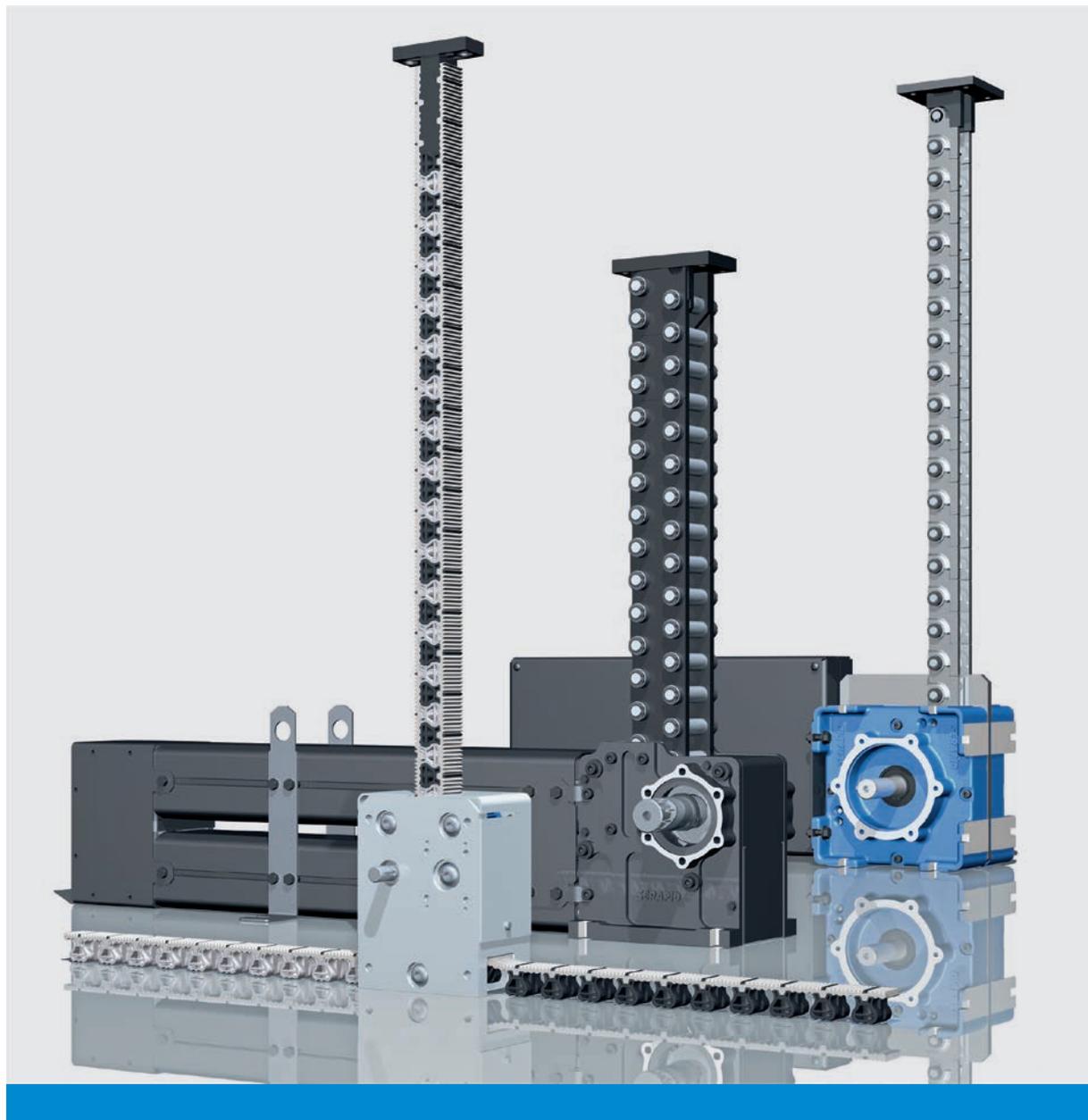


## LINEAR TELESCOPIC MOTION SYSTEMS FOR MEDICAL ENGINEERING

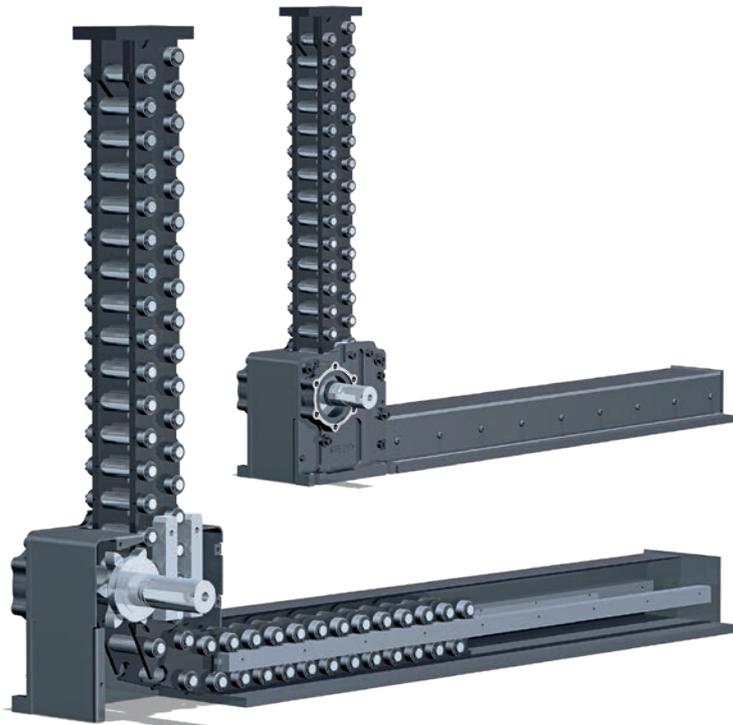
Moving examination and operating tables in MRI scanners



## RIGID CHAINS FOR MEDICAL ENGINEERING

SERAPID motion systems have proven themselves in applications from the assembly line to cleanrooms. Our technology is centered around the Rigid Chain, a purely mechanical actuator we started developing over 40 years ago, that today is known for its smoothness, repeatability and eco-friendliness. Because the stored chain is flexible this allows many space saving storage configurations, providing designers with lots of options.

While in industrial applications the focus is on heavy loads, counting in tons, medical motion systems are more about the smoothness and accuracy of the movements themselves. Our horizontal and vertical motion systems are used in examination and operating tables, showing their potential in this field of application.



Our RigiBelt, an entirely non-magnetic actuator, is tailored to movements in the area of magnetic resonance imaging (MRI). As a real Rigid Chain it is superior to alternative solutions because of its compactness and reliability.

### LinkLift – the lifting chain

We originally developed the LinkLift specifically for vertical movement, in order to fulfill the need for low-noise, steady and safe movement required in stage and event engineering. The chain links are square-shaped, stacking one above the other like building blocks when the actuator extends. The result is a lifting column with very high stability and rigidity even over long strokes. Further features are the compact size of the drive system and its low profile.

#### LinkLift 30MS

<b>dynamic capacity</b>	10 kN
<b>static capacity</b>	20 kN
<b>maximum stroke</b>	1 900 mm
<b>speed</b>	up to 200 mm/s
<b>pinion segment radius</b>	30 mm
<b>minimum height</b>	190 mm
<b>weight of drive housing</b>	8 kg
<b>weight of chain</b>	15 kg/m
<b>lifetime</b>	240 000 cycles
<b>safety factor</b>	≥ 8x up to 600 kg



## RigiBelt – the non-magnetic drive

The RigiBelt brings two rows or belts of interlocking elements together, much like a zipper, which form a solid bar when extending. The passive portions of each belt can be coiled and stored in an efficient, space-saving way. All materials are non-magnetic: the teeth and belts are made of flexible and rigid plastic respectively. The drive mechanics are partly made of stainless steel or anodised aluminum.

RigiBelt	
capacity	up to 1 000 N (standard)
speed	up to 300 mm/s
max. stroke (dep. on load) *	up to 1 000 mm (std.), unguided
closing height *	150 mm, minimum
weight of drive housing *	2 kg, minimum
weight of belts	700 g/m
lifetime	240 000 cycles
safety factor	≥ 3x up to 80 kg

\* dependant on design



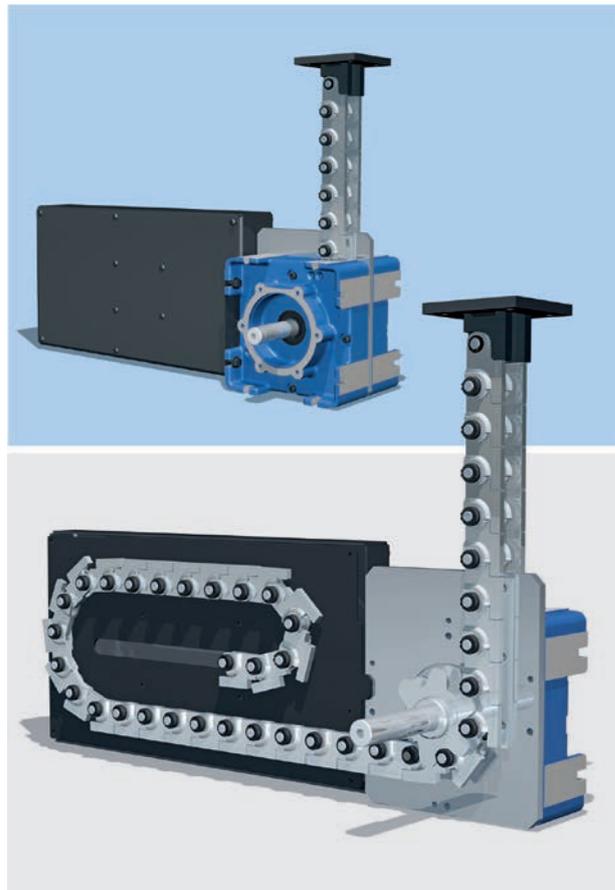
standard drive



## ChainLift – proven Rigid Chain Technology

The ChainLift is based on our classic horizontal chain, redesigned for vertical lifting. Reinforced links and modified drive guides ensuring stability and safety. The storage magazine is available in different sizes and can be adapted to existing space conditions. The ChainLift has been used in medical engineering for more than ten years and has passed all relevant certifications.

ChainLift 40MS	
capacity	7.5 kN
max. stroke (dep. on load)	1 000 mm
speed (dep. on load)	up to 200 mm/s
pinion segment radius	40 mm
minimum height	255 mm
weight of drive housing	15 kg
weight of chain	7.8 kg/m
lifetime	130 000 cycles
safety factor	≥ 8x up to 600 kg



## Benefits of SERAPID's Rigid Chain Technology

Our rigid-chain technology combines the strengths of other transfer methods, such as hydraulics, belts or spindle screws, and at the same time it eliminates their weaknesses.

- positioning accuracy in the millimeter range
- high speed
- high load capacity

- maintains position with no drift
- long strokes with minimal space requirements
- smooth movement, uniform speed
- space-saving storage of chain return
- highly flexible system, easy to integrate
- energy efficiency 80%
- low maintenance, long lifetime

**Longer strokes, greater capacities, higher speeds, special storage configurations or materials available by request.**

### SERAPID France - Head Office

ZI Louis Delaporte, Zone Bleue, Voie F  
F-76370 Rouxmesnil-Bouteilles | France  
+33 (0)2 32 06 35 60  
info-fr@serapid.com

### SERAPID Ltd

Elm Farm Park, Great Green, Thurston,  
Bury St Edmunds | IP31 3SH England  
+44 (0)1359 233335  
info-uk@serapid.com

### SERAPID Deutschland GmbH

Wilhelm-Frank-Straße 30  
D-97980 Bad Mergentheim | Germany  
+49 (0)7931 9647-0  
info-de@serapid.com

### SERAPID USA INC.

34100 Mound Road  
Sterling Heights MI 48310 | USA  
+1 586 274 0774  
info-us@serapid.com

### SERAPID Singapore Pte Ltd

1 George Street #10-01  
Singapore 049145 | Singapore  
+65 9119 5890  
info-sg@serapid.com

SERAPID Italy Office | +39 01 18 00 35 44 | info-it@serapid.com  
SERAPID Mexico Office / LATAM | +52 1 442 4 900 701 | info-mx@serapid.com

SERAPID China Office | +86 185 1215 0303 | info-cn@serapid.com  
SERAPID Brazil Office | +55 11 9 73 85 78 37 | info-br@serapid.com

**SERAPID**  
RIGID CHAIN TECHNOLOGY  
[www.serapid.com](http://www.serapid.com)