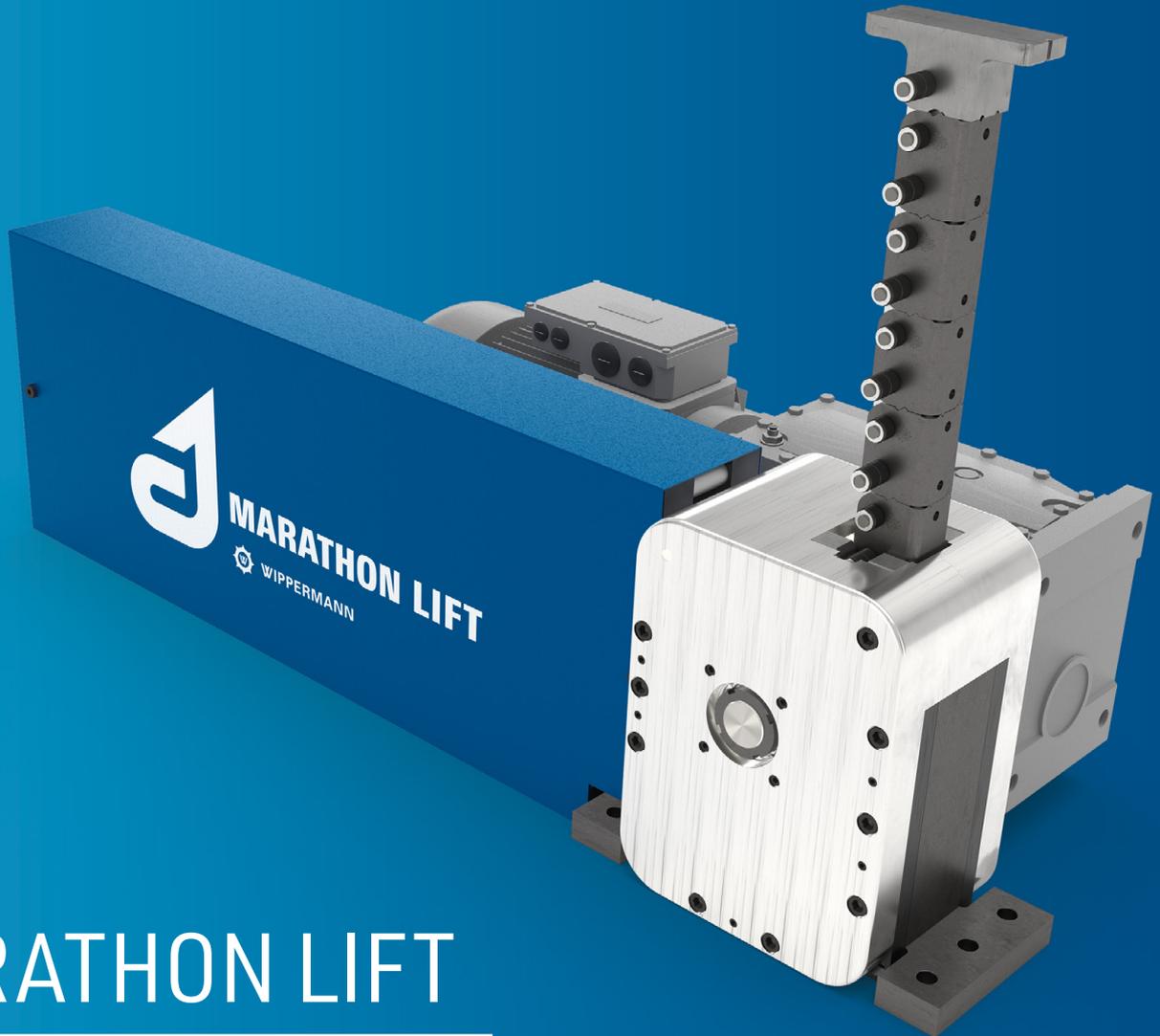


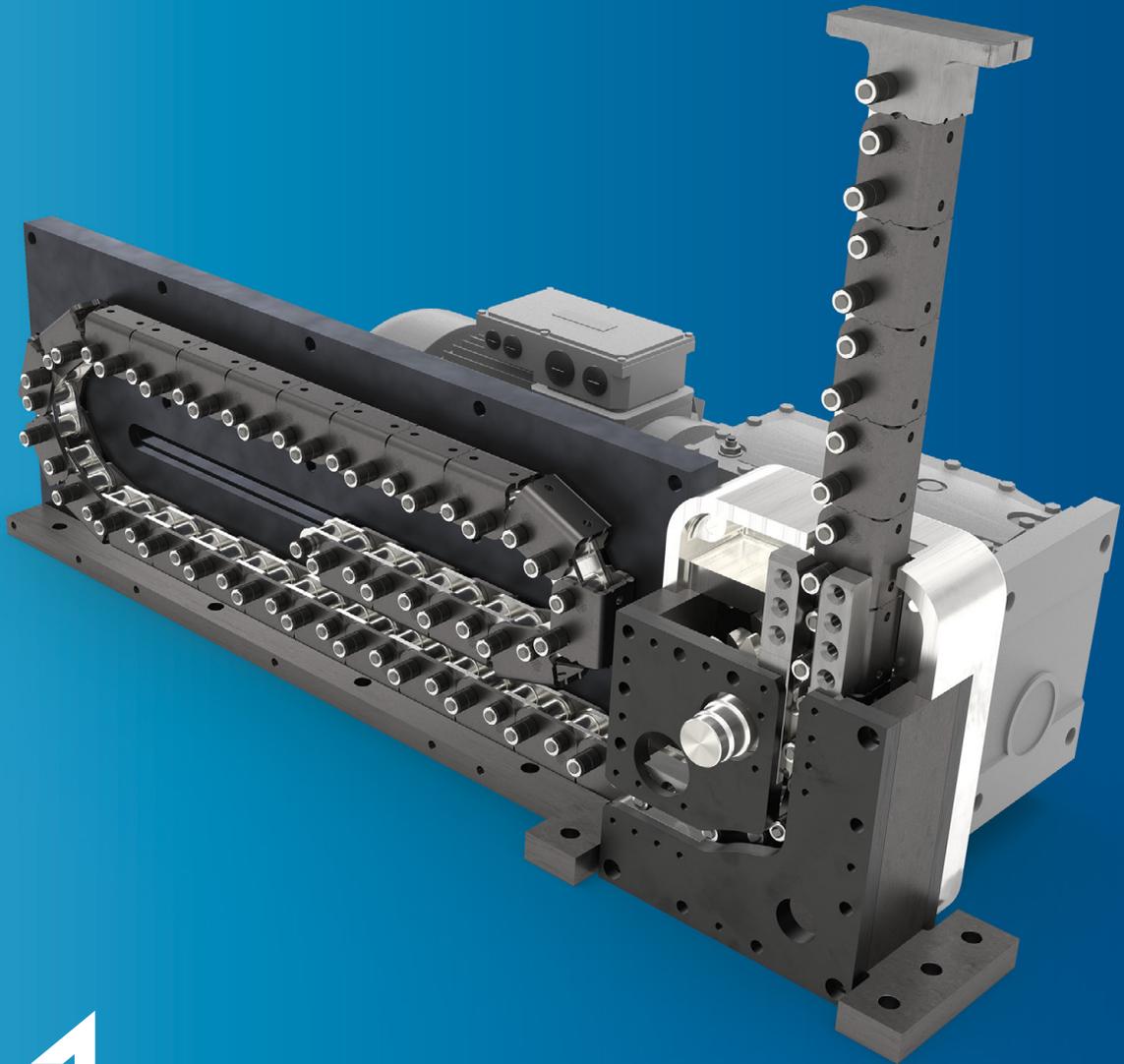


WIPPERMANN



MARATHON LIFT

The maintenance-free rigid chain system for various hoisting and conveyor applications.



LIFT OFF!

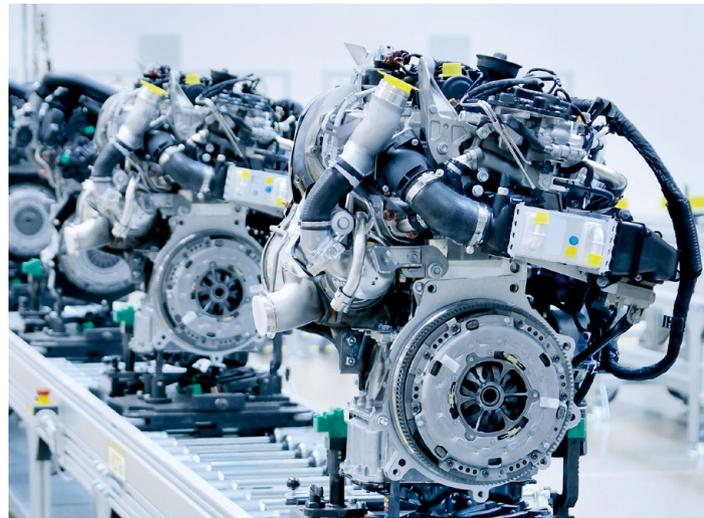
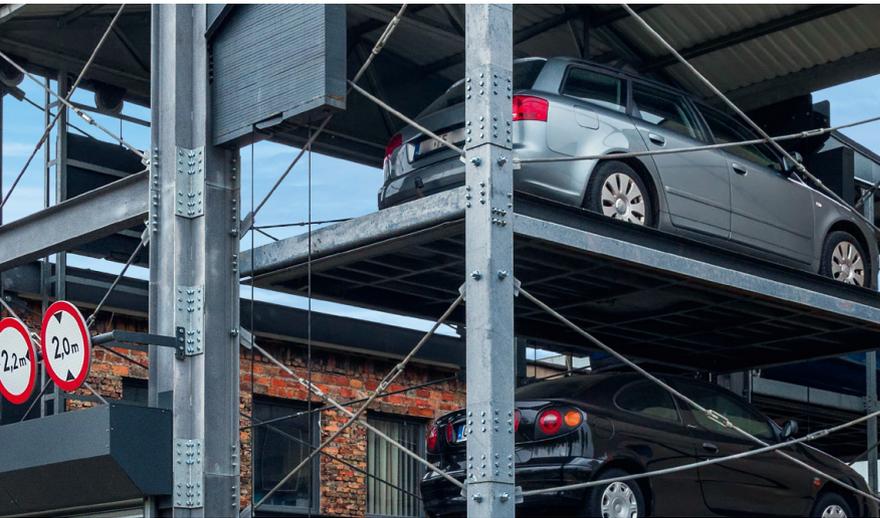
A CHAIN CREATES THRUST.

We have always been driven to set things in motion. Industrial chains and sprockets from Wippermann convince customers around the world in a wide variety of industries and applications. Now we have developed a drive system which will literally take transport processes to a new level thanks to the new Marathon rigid chain.

Moving loads by means of a chain is not a new concept. In many cases the motion is caused by tensile forces. However, in the Marathon Lift all loads - whether components, containers, vehicles, people or machines - are pushed upwards by a chain. Perfectly matched to weight, height and speed depending on the desired application.

The rigid chain becomes the lifting element. The patented technology developed by us provides it with a unique level of stability. Efficiency and freedom from maintenance make the Marathon Lift an intelligent alternative to hydraulic, spindle or toothed rack systems.

The Marathon Lift is the result of innovative engineering in combination with a proven product: The Marathon chain, one of the best drive chains in the world. "Made by Wippermann". "Made in Germany".



Thanks to our competence in the segment of maintenance-free industrial chains and sprockets, we have been a valued and respected partner in mechanical and plant engineering for many decades. We have developed the Marathon Lift because we want to offer our customers new possibilities in the field of hoisting and conveyor systems. With this system, we offer you a powerful and particularly economical alternative to traditional hoisting systems on a mechanical or hydraulic basis.

Maintenance-free for highest cost-effectiveness

Another strength of the Marathon Lift is its durability. Maintenance-free and resistant even under permanent high loads with over a million movements - this is the system of choice for manufacturing processes with high demands on reliability and the lowest possible maintenance cycles. But the Marathon Lift is also convincing from an ecological point of view as it neither requires the operating material needed for hydraulic systems nor complex lubrication systems for comparable chain systems.

Compact and powerful

The compact design facilitates the integration of the Marathon Lift wherever installation space is limited. In this way, high performance requirements and wear resistance can be combined with difficult spatial parameters. For conditions that are not only found in complex machine and plant construction projects.

DIVERSE REQUIREMENTS. ONE SOLUTION.

Whether industrial manufacturing processes, storage and logistics, dynamic applications in buildings such as vehicle lift systems or stage construction - the Marathon Lift is designed for the specific requirements of a wide range of industries.

AS VERSATILE AS YOUR BUSINESS.

Unlimited possibilities – from mechanical and plant engineering to concert halls.



Industrial applications

In complex manufacturing processes such as the automotive industry, the Marathon Lift can be used, among others, as a drive in scissor lifts. In the processing industry, for example, the system can also be used for tool changes in large systems.



Storage and logistics / intralogistics

The growing freight transport demands flexible loading and unloading systems. Users are, for example, truck haulage companies and airports. In addition to transport, intralogistics is another potential area of application to optimise flows of goods within closed systems.



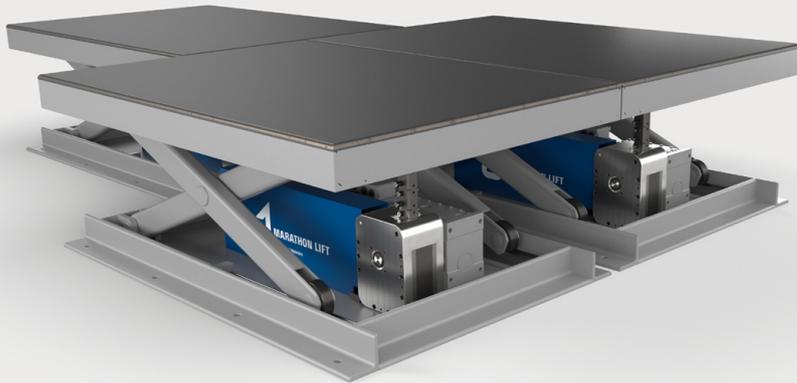
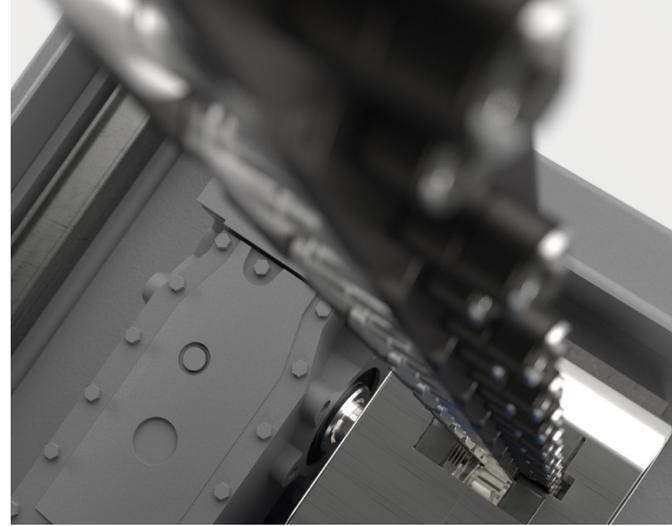
Building services engineering and architecture

In inner-city areas, space is scarce and expensive. This makes solutions for space-saving parking all the more important, for example in underground garages where vehicles have to be moved across several floors. The Marathon Lift allows the implementation of appropriate systems.



Stage and event technology

Opera today, rock concert tomorrow: A flexible adaptation of the stage is part of everyday life. Movable elements play an important part. Our Marathon Lift will put the largest concert grand piano in the spotlight. The system also allows the implementation of dynamic seating and platform systems in multifunctional halls.



Scissor lifts

Scissor lifts have become indispensable in industrial manufacturing. They ensure that extremely heavy components or entire machines can be vertically aligned in an easy, controlled and precise manner.

With an intelligently cross-linked control of several units, even dynamic processes can be flexibly controlled on different levels. The innovative rigid chain system ensures a reliable and jerk-free starting and stopping of the lift tables and the positioning at the target height with millimetre precision.

Advantages compared to hydraulic systems

One of the most essential advantages of the Marathon Lift is its compact design: The drive module with the compact chain box, motor and gearbox can be installed completely underneath the scissor lift.

- 1 Space-saving integration in scissor lifts
- 2 Multi system with cross-linked control
- 3 Innovative rigid chain for precise and jerk-free positioning

Marathon: uncompromising quality

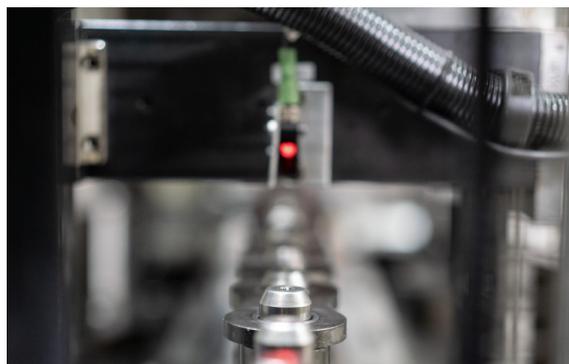
In the segment of maintenance-free high-performance chains, Wippermann has been setting benchmarks for decades. We achieve this through permanent new and further developments in terms of fatigue strength as well as wear, corrosion and temperature resistance. We work with highly resilient steels as well as environmentally friendly and functional coatings and manufacture our components using state-of-the-art systems.

Our Marathon chain enjoys an excellent reputation in the field of industrial mechanical and plant engineering. Its combination of a sintered bushing containing special lubricants and a pin with the strongest wear protection layer on the market allows maintenance-free applications. Its service life is up to 35 times longer than that of standard roller chains without lubrication. Marathon stands for endurance and top performance.

An innovative rigid chain is the core of the system

In most cases, hoisting systems are driven by chain or hydraulic drives. While hydraulic systems require a lot of installation space as well as time and cost-intensive maintenance intervals, chain-based systems offer clear advantages. It is especially the case if the chain – as the core of the system – is characterised by an exceptionally high performance.

This is exactly why the Marathon Lift is based on our proven premium product, the Marathon chain. We are convinced: Only a company that can manufacture this chain is able to develop such a powerful system.



THE U MAKES IT UNIQUE.

The Marathon rigid chain has patented outer plates in the form of a U-profile. During the lifting movement, the flexible chain creates a highly stable outer column which ensures maximum vertical stability by transferring the pressure forces: a unique, strong unit.

Special chains with complex add-on elements for comprehensive transport and conveyor applications have long been part of our product portfolio. Our extensive engineering expertise in this area enabled us to achieve maximum stability and precise positioning even under the highest loads with the Marathon rigid chain thanks to the interlocking design.

The support and guide rollers, which are alternately positioned outside the plates, interlock precisely with the special sprockets and thus enable a fast and smooth lifting movement even under heavy loads.

1 · 2 · 3 Patented outer plate for highest stability during the lifting process



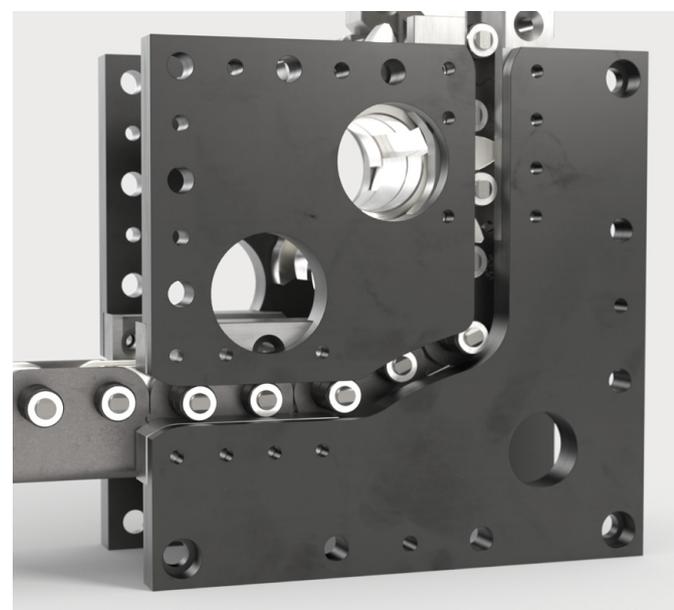
Sprockets must be precisely adapted to the driven chain and the particular application. This is prerequisite to minimise wear and to increase the service life. The special sprockets for the Marathon Lift are another proof of our extensive expertise in this area. The special gearing ensures the smooth motion of the system and is therefore as gentle as possible on the drive components of the rigid chain under load.

Patented deflection

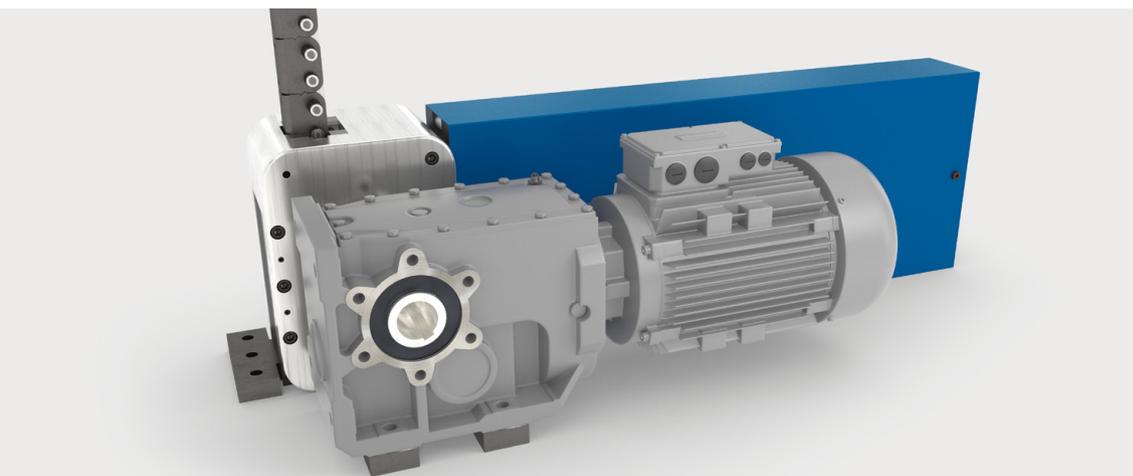
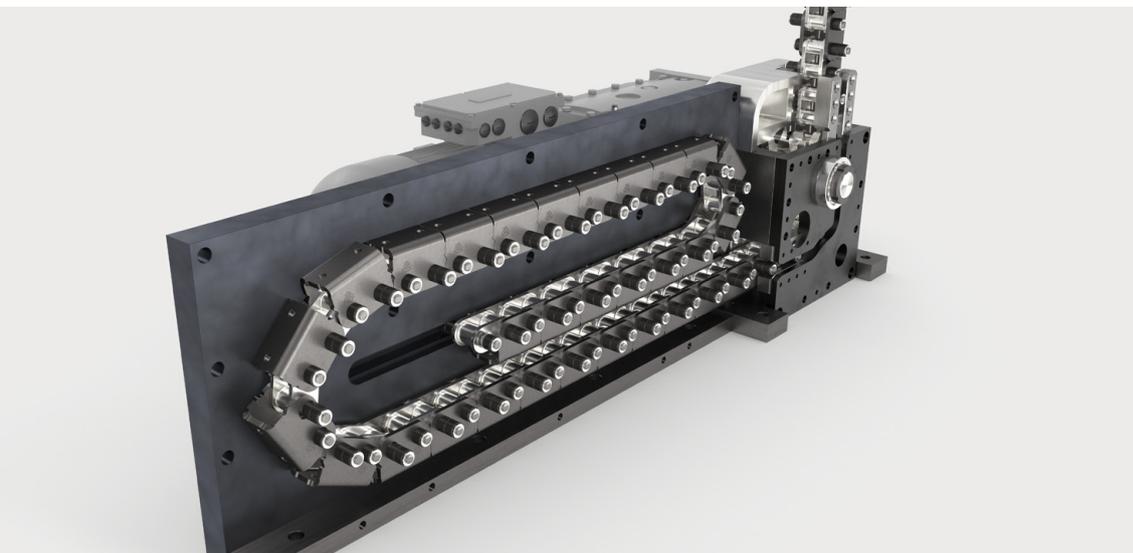
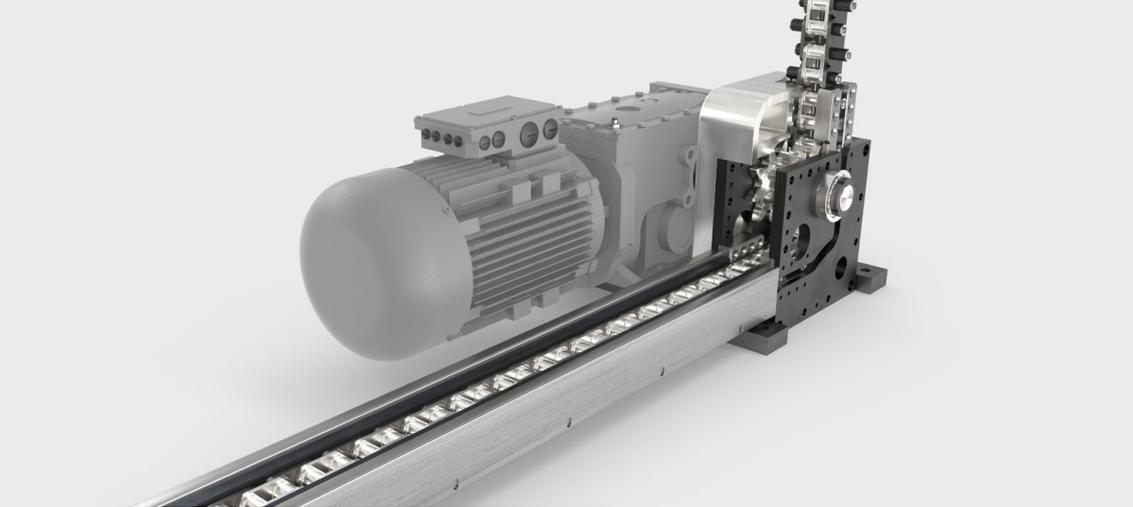
The patented deflection system allows the unique interaction between the chain feeding from the chain box without load and the push phase under heavy load. The chain is deflected load-free on specially shaped guide rails and is decoupled from the lifting movement. This reduces wear in the joint and between the U-bolts to a minimum. Moreover, this functional principle ensures an even motion of the chain and thus a jerk-free lifting of the loads.

EFFICIENTLY DRIVEN.

Our special sprockets with specifically adapted gearing get the system moving. The patented deflection ensures a smooth and even movement.



- 1 State-of-the-art sprocket manufacturing technologies
- 2 Special sprocket with distinct gearing for highest efficiency
- 3 Patented deflection system



- 1 Linear, particularly economical chain storage
- 2 Chain box for space-saving storage of the chain
- 3 Individual motor and drive unit

THE PERFECT FIT, EVEN IN SMALL SPACES.

Whatever you intend to move or lift – the Marathon Lift offers high performance with a small footprint. Due to the variety of requirements, we have designed the system in such a way that the various options for chain storage offer a high degree of flexibility and scalability.

Where to store the chain? This is an important question with regard to the available installation space. The storage of the chain in a chain box designed for the specific application enables our customers to realise larger lifting heights with small installation space. If there is sufficient space, however, the chain can also end straight on a rail.

Drive made to measure

The Marathon Lift is designed for easy integration into the respective system for various hoisting and conveyor applications. Within the framework of the usual standards and the technical specifications, our customers can develop individual solutions for the motor or the power transmission of the system or rely on the support of our engineering department.



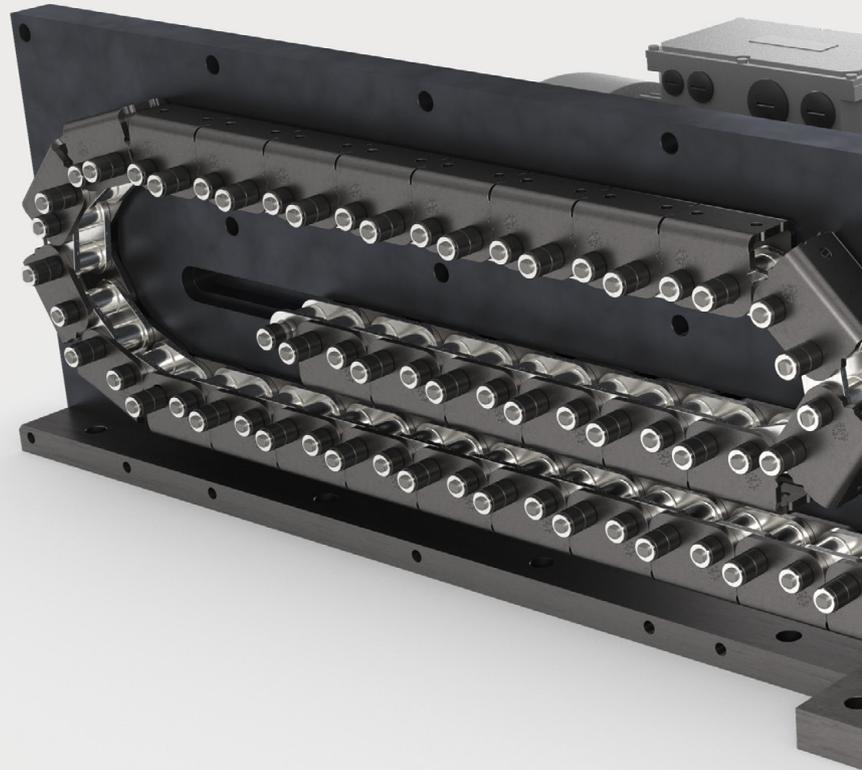
Chain box

The chain is stored in a compact chain box to save space.



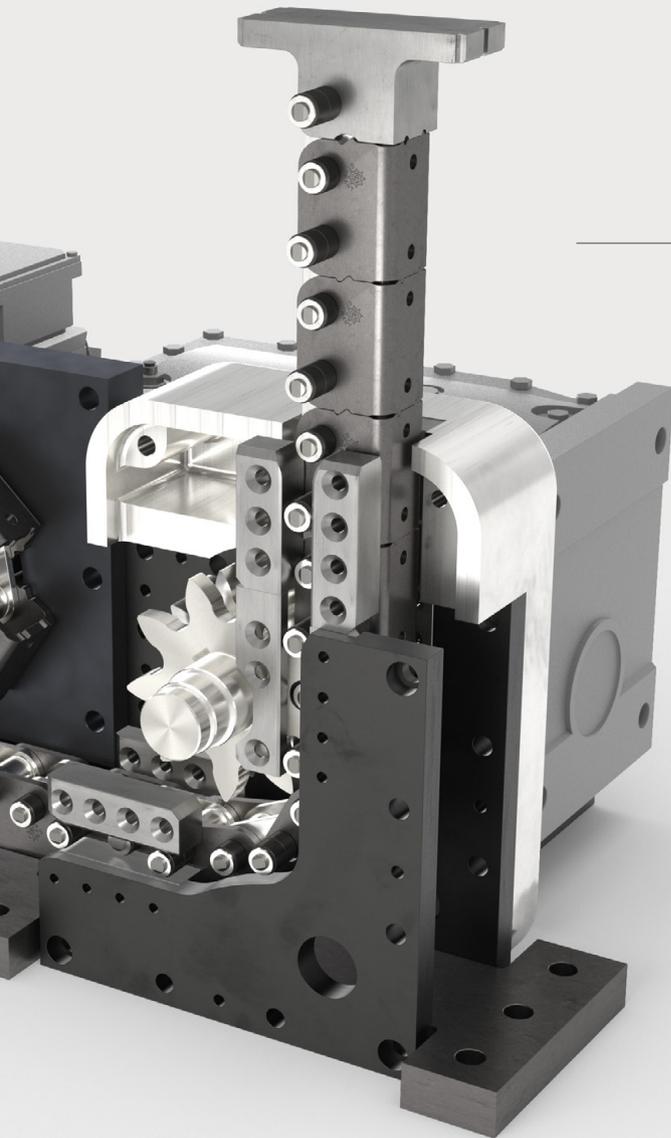
Marathon chain link

Thanks to the self-lubricating chain links, the Marathon rigid chain offers unique freedom from maintenance.



MARATHON LIFT

The system offers all advantages of the linear chain technology in a compact module – powerful, efficient and now also maintenance-free.



Outer plate as U-profile

The innovative outer plate of the rigid chain ensures the high rigidity and the transmission of the pressure forces.



Customised drive

The drive unit consisting of motor and gear can be customised according to the specific requirements of the application.



Special sprocket

High-performance special sprockets with specifically adapted gearing ensure the efficient drive of the rigid chain.



Patented deflection

The chain is deflected on special guide rails without load, thus reducing wear of the chain.

BENEFITS AT A GLANCE

Long-term resilience

Even after more than 1,000,000 cycles, the rigid chain, the deflection and the sprocket do not exhibit significant wear.

Exceptional lifting force

The linear chain system lifts heavy loads despite its small construction size.

Compact design

The efficient chain storage allows the system to be deployed even in places where conventional hoisting systems would require too much space.

Even drive

The patented innovative U-plates as well as the deflection ensure a smooth movement and jerk-free starting.

Precision

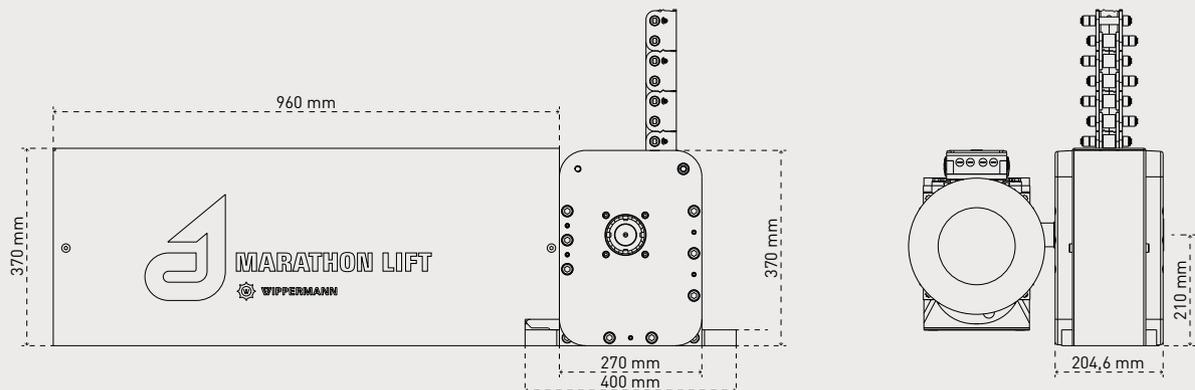
The lifting system can be moved to any position with millimetre precision without rebounding.

Low energy consumption

Rigid chain actuators operate with considerably lower energy consumption than hydraulic systems.

Freedom from maintenance

Thanks to our maintenance-free high-performance chain, the Marathon Lift can be operated without additional lubrication.



TECHNICAL INFORMATION

Capacity F_{\max} (stat.): 35 kN
Capacity F_{\max} (dyn.): 18 kN
Breaking load of the chain F_B : 140 kN
Max. load capacity: 1,8 t
Max. unguided lift: 2 m
Max. speed: 200 mm/s

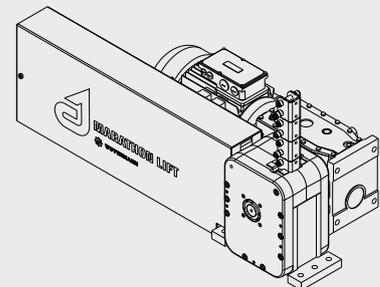
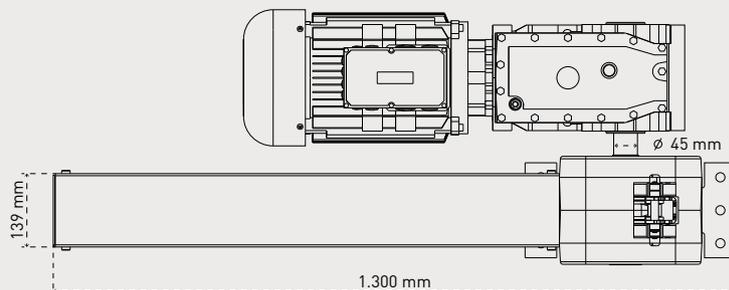
Min. construction height: 370 mm
Min. cycles: > 1.000.000

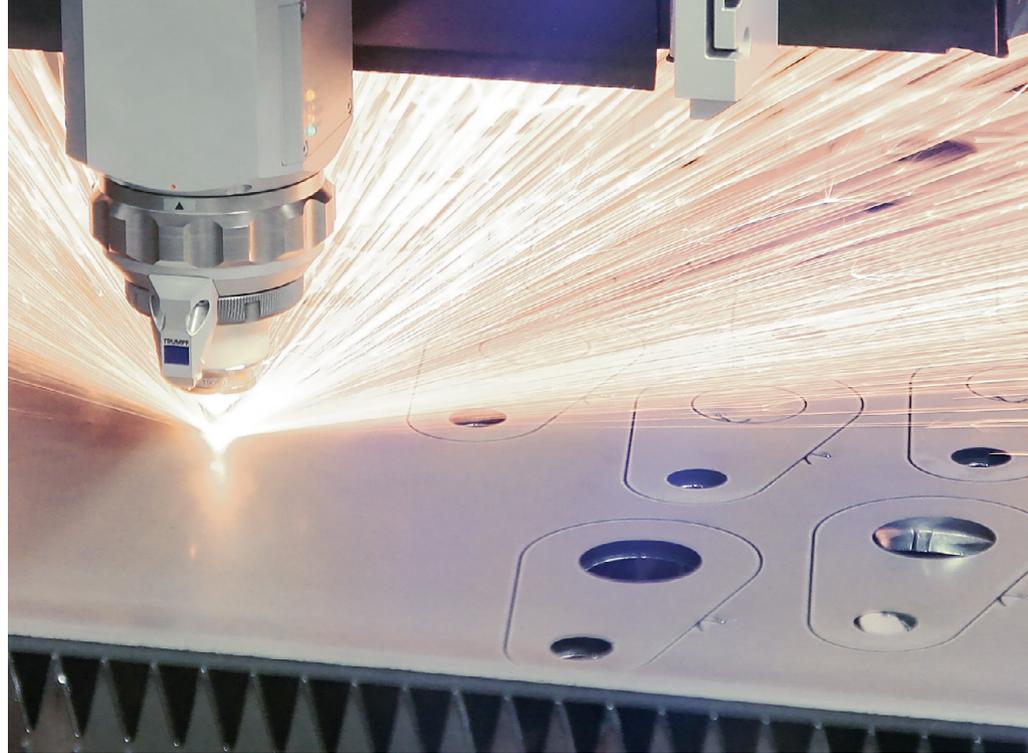
Chain pitch: 1,5" / 38,1 mm
Weight of the chain: 14 kg

Conformity: ROHS, REACH

Declaration of Incorporation : in accordance with Machinery Directive 2006/42/EC, Annex II B

Patents: No. 10 2016 110 949
No. 10 2016 110 950





More than 125 years of experience, highest engineering and manufacturing expertise, as well as customised services make us the ideal partner for all questions regarding drive systems.

- 1 Company founder Wilhelm Wippermann sen. (*1858 †1929)
- 2 State-of-the-art fibre laser cutting technology for tailor-made drive solutions

WIPPERMANN: INNOVATE DRIVE TECHNOLOGY SINCE 1893.

As an independent family-owned business in the fifth generation with approximately 300 employees, we offer a comprehensive range of high-quality components for our customers' drive systems around the world.

In 1893, Wilhelm Wippermann jr. founded a company "for the serial production of bicycle and motorcycle parts" in the German city of Hagen. At the beginning of the 20th century, the company developed a truck chain which became a great success, as, among others, all electric mail vans were equipped with it – at a time when "e-mobility" was not yet an issue. After World War II, the company's focus was on steel link chains and steel chain sprockets for various industrial application areas. Over the course of the years, this strategic orientation led to a broad understanding of different industries' requirements.

Thanks to our extensive experience in combination with our high engineering competence, we offer high-performance components for various drive solutions, such as maintenance-free chains designed for high-temperature use up to 200°C, as stainless variants for permanent use in water or for the FDA-approved deployment in the food industry.

We are the market leader in the segment of maintenance-free industrial chains.

The Marathon Lift is the next logical development step in our mission to continuously support our customers with high-performance drive solutions. With tailor-made engineering, high-quality products and comprehensive services and logistics, we successfully meet the requirements of our customers: maximum performance and optimal economic efficiency for increasingly demanding tasks.

One important quality feature applies to all of our solutions: Our products are planned, designed and manufactured without compromise entirely in Germany. Thus they are truly "Made in Germany".

WIPPERMANN JR. GMBH
Delsterner Straße 133
58091 Hagen

Postfach 4020
58040 Hagen

Germany

Phone +49 2331 782-0
Fax +49 2331 782-356

E-mail info@wippermann.com
Internet www.wippermann.com