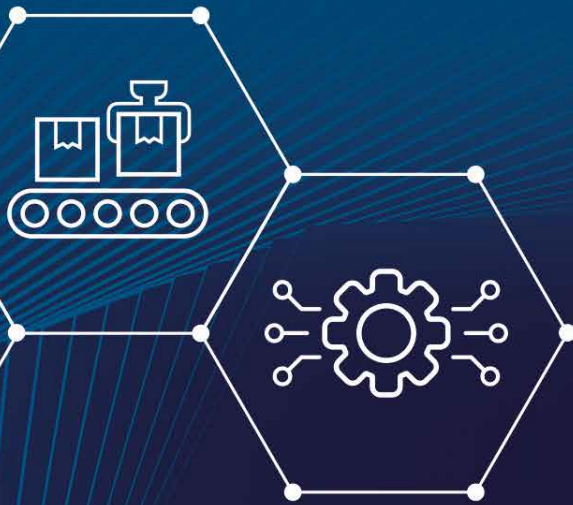




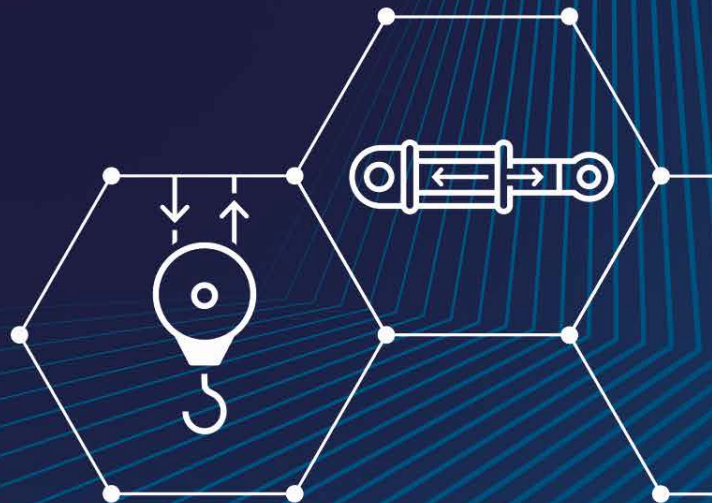
**INTELLIGENT MOTION**

Columbus McKinnon



# PORTFOLIO

BRANDS & PRODUCTS



# 5 STRONG BRANDS – FROM ONE HAND



## STAHL CRANESYSTEMS

The STAHL CraneSystems brand stands for reliable and safe hoists and crane components as well as methodical engineering solutions.

The products are used in standard, special and explosion-protected bridge cranes or hoisting systems in industries such as automotive, oil and gas, power station construction, chemical industry, transport and logistics, steel and concrete industry, mechanical and plant engineering, air and road transport industry as well as in the pharmaceutical and food industry.

## PFAFF SILBERBLAU

Pfaff-silberblau has been a technological leader in drive and lifting technology for 150 years. Innovative complete solutions with worm gear screw jacks, electromechanical components of linear drive technology or hoists for steel and heavy industry, logistics, stage technology, for offshore plants and ATEX areas. With this unique portfolio of hoisting gear units, customers can combine components and solutions according to their needs. The Pfaff portfolio of winches ranges from manual winches for standard applications to winches driven by electric motors.

Whether you're travelling above or underground – Pfaff-silberblau Rail Technology plays a vital "behind the scenes" role to ensure trains are running safely and efficiently. Our product range includes mobile lifting jacks, lifting platforms, as well as special customized equipment and complete under-floor lifting systems. To cover all maintenance and repair work on bogies, wheel sets and vehicle chassis, Pfaff-silberblau has the optimal solutions for your workshop.

## YALE

Yale is the leading brand in Europe for standard manual hoists. Delivered ready for use, the devices are used in a variety of industrial and commercial sectors worldwide: in construction, mechanical engineering, transport, energy & water management, oil & gas and paper production.

The application-oriented range as well as all innovative new and further developments of Yale products are constantly raising the bar in terms of quality, reliability and safety. The wide range of products includes hoists, cable pullers, jib and gantry cranes, load handling equipment and weighing technology, hydraulic tools, heavy-duty load moving systems, pallet trucks and stackers, textile lifting and lashing equipment.

## DORNER

Precision conveyors – solving industrial, packaging, and sanitary conveyance needs. Founded in 1966 in Hartland, Wisconsin, Dorner is a global leader in the design, application, manufacturing, and integration of conveyor systems. Customers all over the world turn to Dorner to achieve improved efficiency, productivity, and a positive ROI. Dorner is transforming conveyor automation with cutting edge solutions and best in class support. Our team of conveyance experts meet the challenges of various industries head on, and create unique conveyor systems to meet our customers needs.

## MONTRATEC

montratec GmbH was founded in 2017 as a spin-off from a globally successful corporate group. We combine the dynamic and innovation of a start-up with more than 20 years of intralogistics experience. montrac® helps you master complex internal transport operations and assembly processes smarter, faster and more efficiently.

The modular montrac® monorail systems make it possible to interlink production processes between robots and workstations more flexibly than ever before. Leading medical institutions and industrial companies from the automotive, plastics, consumer goods, optical, food, medical and pharmaceutical industries use these solutions to maximise their material throughput and minimise throughput times. montrac® makes a significant contribution to utilising the diverse possibilities of Industry 4.0, particularly with intelligent solutions for Intralogistics 4.0.

# THE GROUP



## About Columbus McKinnon

For almost 150 years Columbus McKinnon has been one of the world's leading companies for lifting technology and intelligent motion control in material handling. Our high-quality brands such as STAHL CraneSystems, Magnetek, Pfaff-silberblau, Duff-Norton, Yale, Dorner, CM and montratec design and manufacture a comprehensive portfolio of durable and reliable products for a variety of industries which can move, lift, position and secure loads ergonomically and safely.

Columbus McKinnon combines experience, know-how and innovation with a broad understanding of user requirements; this allows us to perfectly address the requirements and wishes of our customers. We offer complete systems for lifting, pulling and securing materials that have been specially developed for industry-specific requirements.

Columbus McKinnon is headquartered in Charlotte, North Carolina. Our global presence includes offices and manufacturing facilities in North America, Latin America, Europe, Africa and Asia.

## THE INDUSTRIES

- Automotive industry
- Bus and rail industry
- Chemical and pharmaceutical industry
- Power supply
- Entertainment
- Aerospace
- Marine and port industry
- Metal industry
- Offshore



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# A GLOBAL LEADER IN INTELLIGENT MOTION SOLUTIONS



LIFTING  
DISTRIBUTION



LIFTING  
SOLUTIONS



CONVEYANCE  
SOLUTIONS



LINEAR MOTION  
SOLUTIONS

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# INTRODUCTION

The following pages will give you a comprehensive insight into our wide range of products and solutions. Discover the wide-ranging world of **lifting technology, crane technology, automation technology, precision conveyors, intralogistics and rail technology.**

Find out how our brands and their products interact perfectly and complement each other. We present **applications for a wide range of industries and challenges**, from the food industry to heavy-duty logistics. Especially in industries where sensitive products are processed under demanding conditions, hygienic and often also mechanical requirements for the equipment used are of crucial importance.

Our products are designed to meet these challenges and offer you optimum **performance, safety and reliability.**

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# LIFTING TECHNOLOGY

## ELECTRIC AND PNEUMATIC

Available in a wide range of capacities, features, and specifications, Columbus McKinnon's portfolio of electric and pneumatic hoists are known throughout the material handling industry for their strength and performance.



In a coating plant for the automotive industry in China, 48 specially designed ST chain hoists operate at very high humidity levels.

### PRODUCT RANGE

- Electric chain hoists
- Pneumatic chain hoists
- Electric wire rope hoists
- Explosion proof (ATEX) electric chain hoists
- Explosion proof (ATEX) pneumatic chain hoists
- Explosion proof (ATEX) electric wire rope hoists



# LIFTING TECHNOLOGY

## MANUAL HOISTS & WINCHES



### MANUAL HOISTS

Columbus McKinnon's line of manual hoists combines superior engineering, efficiency, and durability for a wide range of applications.

#### YALEERGO 360®

The YaleERGO 360® UT with automatic safety gear in overhead line construction.

### WINCHES

The portfolio ranges from manual wire rope winches for standard applications to customized winches driven by electric motors. The spectrum of load capacities is wide. All products impress with effective power transmission, safe operation and high-quality workmanship.

#### BETA EL4 WINCH

The Pfaff-silberblau BETA EL4 winch in use in automotive test benches. There, it serves as a travel system for the vertical adjustment of a sun simulation system in a climate chamber.

### PRODUCT RANGE

- Hand chain hoists
- Hand lever hoists
- Cable pullers and accessories
- Explosion proof (ATEX) hand chain hoists
- Explosion proof (ATEX) hand lever hoists



### PRODUCT RANGE

- Electric wire rope winches
- Manual wire rope winches
- Worm gear drives
- Accessories





# CRANE TECHNOLOGY

## CRANE SYSTEMS & COMPONENTS

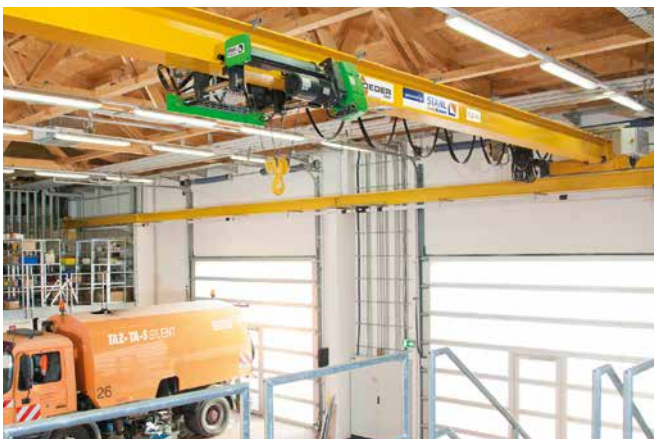


### WORKPLACE AND JIB CRANES

Columbus McKinnon offers the optimal solution for every application with its complete range of crane systems and lifting systems.

### APPLICATION EXAMPLES

- Floor mounted jib crane with four electric chain hoists ST 50
- Single girder overhead travelling crane with electric wire rope hoist SH



### PRODUCT RANGE

- Gantry cranes
- Floor mounted jib cranes
- Wall mounted jib cranes



### CRANE COMPONENTS

High-quality crane components in an economical plug-and-play system for quick and easy installation.

### APPLICATION EXAMPLE

Double girder overhead travelling crane with crane operator cabin and electric wire rope hoist AS 7 ZW.

### PRODUCT RANGE

- Crane electrics
- End trucks and carriages
- Travel drives
- Wheel blocks
- Explosion-proof crane electrics
- Crane kits



# AUTOMATION TECHNOLOGY

## ACTUATORS

Our actuator systems with worm gear screw jacks are used in a wide variety of applications in areas such as mechanical engineering, the automotive industry, energy supply, the food sector and logistics applications. Suitable series are available for requirements in a wide range of load ranges and different sizes or stroke speeds. This includes the proven screw jack series as well as the newly developed SSP series with stainless steel screw jacks. We offer high-quality drive systems with comprehensive service, consulting and engineering.



### SPECIAL SOLUTION

Columbus McKinnon is equipping the ferry port in Kuryk on the shores of the Caspian Sea with Pfaff-silberblau screw jacks. The two huge loading bridges each contain 24 Pfaff-silberblau SHE 150.1 special screw jacks and 48 special geared motors, thus creating the technical basis for complete freight trains to enter and leave the ferries quickly.

### PRODUCT RANGE

- Screw jacks 2.5 kN up to 2,000 kN
- Linear actuators 0.55 kN up to 100 kN
- Lifting columns PHOENIX up to 25 kN
- Bevel gear boxes up to 8,500 Nm output torque
- Clutches, cardan shafts, spindle covers
- Screws & nuts

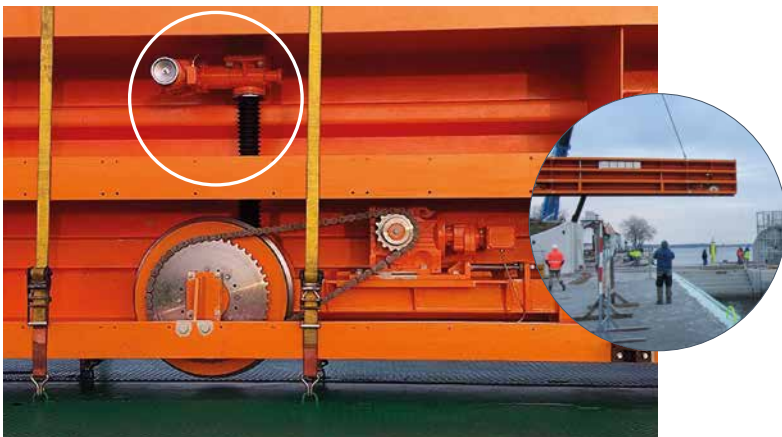




# AUTOMATION TECHNOLOGY APPLICATIONS



Optimized worm gear screw jacks from Pfaff-silberblau lift and lower the roof of Milan's stage reliably and, above all, safely.



The SHE worm gear screw jacks from Pfaff-silberblau are used in the sliding gates of the promenade.  
*(Image rights: ARGE HPI/hpl Greifswald)*



SHE series worm gear screw jacks from Pfaff-silberblau ensure reliable operation in the latest screeds of a global mechanical engineering company.



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# PRECISION CONVEYORS

## CHAIN, FABRIC & BELT CONVEYORS

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### FLEXIBLE CHAIN CONVEYORS

For particularly flexible and individual designs, FlexMove conveyor systems and FlexMove individual components made of aluminum and stainless steel are ideally suited. Slat band chain conveyors are also known under the product names plastic chain conveyors and link belt conveyors.



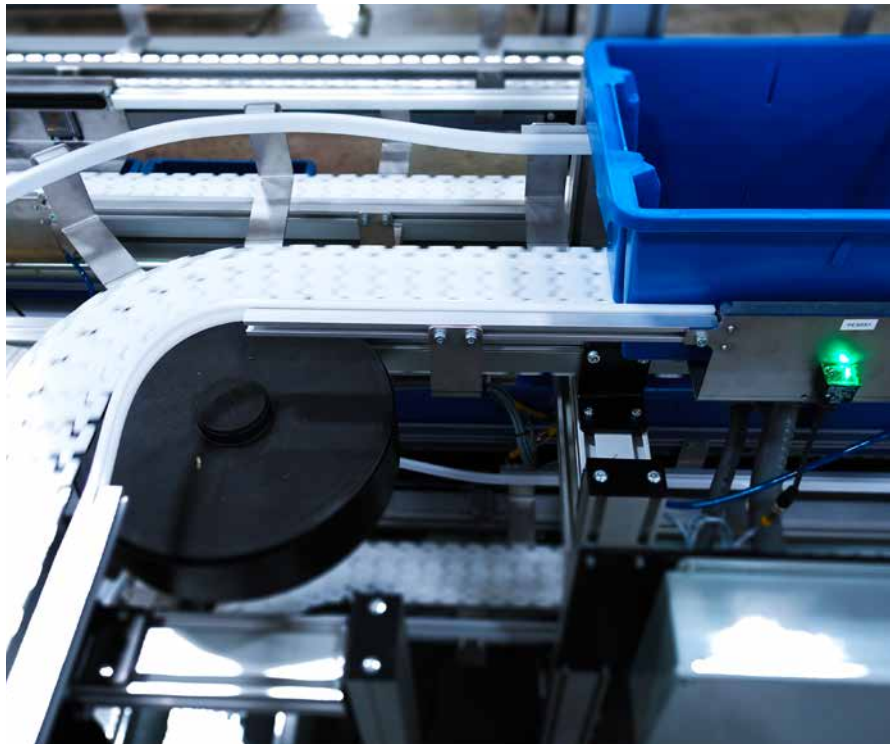
### FABRIC AND MODULAR BELT CONVEYORS

Conveyors offer companies a number of unique ways to move parts and products. These systems help increase productivity, efficiency and more.

Our belt and plastic modular chain conveyors can be easily adapted to specific designs and assemblies. They are used to transport parts with conveyor configurations such as straight, curved lines and rising (Z-frame). We also have a wide variety of belt and guide options to help you find the right conveyor for you.

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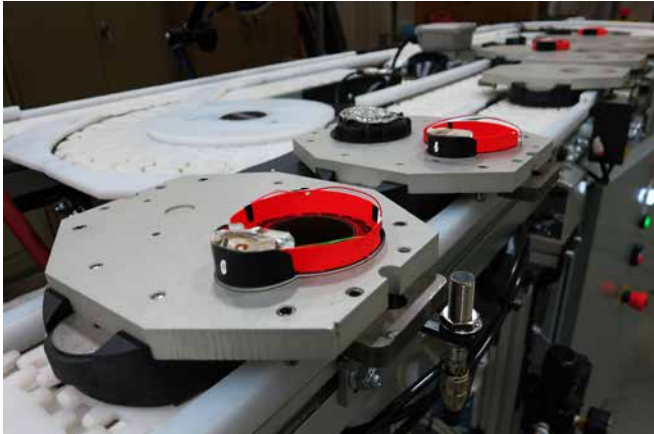
Modern warehouse automation began with the integration of conveyor belt systems. In the time since these innovations, conveyors have played an important role in facilitating the efficient and accurate automation of warehouse operations in all applications and industries.





# PRECISION CONVEYORS

## PALLET SYSTEMS & SANITARY



### PALLET SYSTEMS

The Dorner's pallet system conveyors simplify product flow and control with features such as the unique pin tracking system, industry-appropriate pallet sizes and innovative modules.

Our Precision Move 2200 Series pallet system conveyor and Flexmove pallet systems feature advanced pallet traffic management and are specifically designed to increase efficiency, reduce downtime in automation processes and provide accurate conveyance.

### SANITARY AND STAINLESS STEEL CONVEYORS

Our 7X Series conveyors - also known as AquaGuard and AquaPruf platforms - take food handling conveyors to a whole new level. Designed for fast and effective sanitation and protection against contamination, the 7X Series offers the same quality and flexible design as all of our Dorner systems.

We are proud to offer the only conveyor belts in the industry with USDA certification: the AquaPruf 7400 Ultimate and 7600 Ultimate. These are the only modular conveyors on the regulatory list of approved equipment for the meat and poultry industry.





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# INTRALOGISTICS

## AUTOMATION & TRANSPORT SYSTEMS

Intralogistics and production processes are optimised down to the last second. montrac® maximises material throughput in the shortest of cycle times and provides exceptional system stability. Plus flexible expandability of the system as a whole.

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### MODULAR SYSTEM

When conventional transport systems reach their limits, then it's time to install montrac®. Our intelligent, modular transport and process solutions sustainably advance the competitive position of your company and contribute significantly to making your production processes fit for the future – with practically limitless layout options for your individual production environment.

montrac® is the intelligent automation and transport system to enable customised, smarter, faster and more efficient interlinking of your production, assembly and logistics processes. With the montrac® modular system, we can react individually to your requirements and circumstances and realise almost all customer wishes.

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### SYSTEM BENEFITS

- Reliability
- Ecological footprint
- On-board power supply
- Unlimited system layout
- 100% Antistatic
- Payload up to 70 kg
- Speed up to 55 m/min
- Predictive maintenance
- Impact-free transport due to sensor technology
- Space-saving



### SHUTTLES

Core components of the montrac® system, montrac® shuttles are intelligent single or twin-axle conveyors equipped with an on-board power supply. Moving self-centred on the monorail, the shuttles are equipped with highly developed sensors that prevent potential collisions with obstacles or other shuttles.

Each shuttle is powered by a maintenance-free, low-voltage motor located in the axle. Cams on the T-grooves along the track specify shuttle speed and stopping positions. Speed parameters can be pre-configured to optimally meet your individual requirements.

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### SHUTTLE SOLUTION

- Positive influence on ROI
- Ecologically energy-optimized operation
- Energy-efficient direct current via the monorail
- Efficiency-optimized drives at the shuttle
- Low maintenance requirements, minimal wear

# INTRALOGISTICS CONFIGURATION & SIMULATION

Design and optimise your own montrac<sup>®</sup> transport system. Use the free montrac<sup>®</sup> Configurator to configure complete production lines via drag & drop – including 3D visualisation and detailed material stock lists.



## SHUTTLE RAIL SYSTEM

The Trac monorail is made of a colourless anodised, extruded aluminium profile. Conductor rails can run left or right along a Trac, allowing flexible placement of the TracControl routing module. Components such as curves, junctions, switches and lifts are all available to enable flexible routing.



## PERIPHERALS

The montrac<sup>®</sup> transport system offers a number of practical peripheral components to meet specific work centre and automatic assembly area requirements. For example, components to support the product to prevent burdening the shuttle or inclining platforms to enhance ergonomics. These options allow you to further optimise your production and work processes.



## TRACSET

TracSet is a universal, modular, height-adjustable system for creating customised montrac<sup>®</sup> system assemblies and base frames. Thanks to the practical compression joints (dovetail joints), the robust and versatile profile system can be quickly and easily assembled. No mechanical processing of the profiles, e.g. drilling, is required.



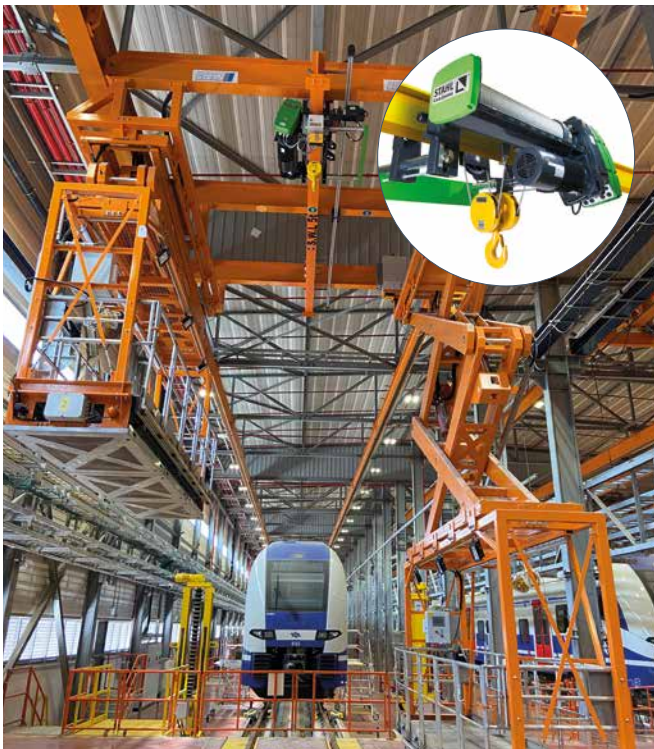
## TRACCONTROL

System-specific controls ensure optimum functioning and utilisation of the montrac<sup>®</sup> transport system. Our modular TracControl routing components allow you to precisely control and seamlessly monitor your system. Diverse interfaces such as IO-Link enable the integration of external control components or overriding routing systems.



# RAIL TECHNOLOGY WORKSHOP EQUIPMENT

Whether you're travelling above or underground – Pfaff-silberblau Rail Technology plays a vital role behind the scenes to ensure trains are running safely and efficiently. Anyone who operates modern transport systems today depends heavily upon reliable maintenance and inspection of their fleet. Our equipment enables maintenance work to be organised and executed efficiently by minimizing downtime. The timely discovery of wear and eliminating potential hazards: this is fundamental to providing smooth-running, safe and efficient rolling-stock operations.



To simplify the dismantling of components and their onward transport, vertically movable cranes were installed between the nacelles. These can also be controlled remotely via radio control. STAHL CraneSystems' wire rope hoists with capacities from 1,000 up to 5,000 kg support the dismantling of components on the roof of the wagons.

## PRODUCT RANGE

- Underfloor lifting systems
- Lifting jacks
- Roof working platforms
- Hybrid lifting systems
- Turntables
- Bogie-axle exchange systems
- Bogie lifting systems
- Transfer tables
- Bogie lift and turn devices
- Workshop equipment





# EVENTS

## ENTERTAINMENT TECHNOLOGY

Columbus McKinnon Entertainment Technology (CM-ET) is an industry leader in providing high-quality lifting and positioning equipment to riggers around the world. In addition to a product line that is recognized in venues around the world, CM-ET has built a network of distributors that provide the highest level of customer service to users in the industry.



Wherever the show is, a knowledgeable CM-ET distributor is available to provide support with parts, service or accessories. When you're looking for products or services to ensure your event shines, turn to the company with more than 150 years of experience meeting our customers' needs – Columbus McKinnon.

### APPLICATION EXAMPLES

Columbus McKinnon has established a reputation throughout the entertainment industry as a leading provider of high-quality lifting and positioning equipment to event builders around the world. From international sporting events and tours to Broadway musicals and theaters, promoters and production companies rely on our products. The Show must go on!

### PRODUCT RANGE

- Electric chain hoists
- Electric wire rope winches
- Manual wire rope winches
- Manual trolleys
- Trolley and beam clamps
- Hand lever hoists
- Hand chain hoists
- Textile slings and accessories



## COLUMBUS MCKINNON

Columbus McKinnon has a history of over 150 years and is a world leader in lifting and intelligent motion control technology. The innovative portfolio of high-quality brands, including STAHL CraneSystems, Magnetek, Pfaff-silberblau, Duff-Norton, Yale, Dornier, CM and montratec addresses the needs of our customers by enhancing safety and promoting growth and efficiency. Experience, expertise and innovation

combined with a deep understanding of user needs are the formula for success that has long underpinned our portfolio of hoists, material handling equipment and lifting accessories. Columbus McKinnon is a global organization headquartered in Charlotte, USA (North Carolina). Its global presence includes offices and manufacturing facilities in North America, Latin America, Europe, Africa and Asia.



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