



YK™

ELECTRIC WIRE ROPE HOISTS



MAGNETEK



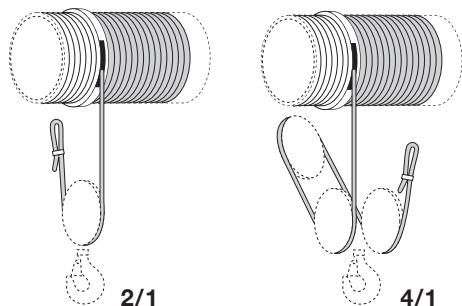
COLUMBUS MCKINNON CORPORATION



YK™ ELECTRIC WIRE ROPE HOISTS AND CRANE COMPONENTS

When you need quality and performance in a wire rope hoist, turn to the Yale® YK™ hoist from Columbus McKinnon. Based on German technology, the Yale YK delivers the industry-leading technology and safety you need for your lifting applications in a compact, easy-to-maintain design. Precision engineered, these hoists are built for reliable operation, high efficiency, and long service life and are competitively priced for the U.S. market. Operators, crane manufacturers, and system manufacturers can benefit from the hoist's modular system that allows for configuration of the hoist and crane system to exact application needs. Complete with a low-headroom trolley, the Yale YK is ideal for applications with space limitations.

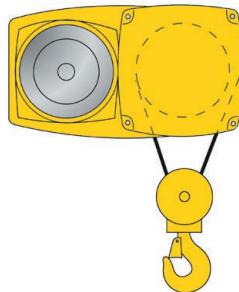
CAPACITIES: 1 TO 30 TONS



SINGLE-GROOVED ROPE DRUM

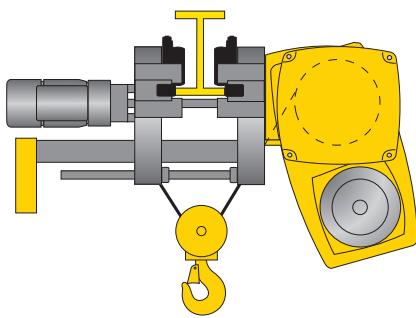
2-part single or 4-part single reeving is available, depending on the application.

LIFT: MAXIMUM 131 FT.



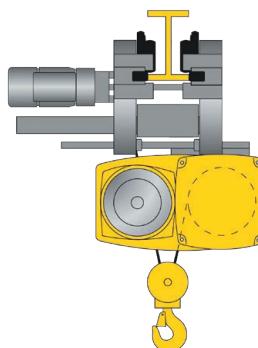
BASE MOUNT MODEL

Can be used as stationary hoisting or towing equipment, for example in systems manufacturing. The rope lead-off angle, the hoist mounting, and the mounting position of the hoist motor can be adjusted as needed. Available for 1-30 ton capacities.



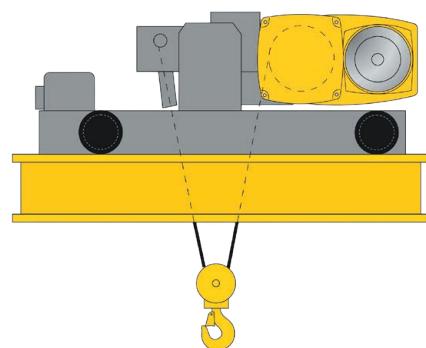
LOW-HEADROOM MONORAIL TROLLEY

The monorail trolley is used on monorail runways and single-girder overhead traveling cranes. Trolley is easily adjustable for different beam sizes and comes standard with two speed trolley. Available for 1-15 ton capacities.



STANDARD HEADROOM MONORAIL TROLLEY

Specially designed for small clearances, the monorail trolley has a narrow width. It is used on monorail runways and single-girder overhead traveling cranes. Available for 20-30 ton capacities.



TOP RUNNING DOUBLE GIRDER TROLLEY

Extremely compact with minimal hook approach and headroom dimensions. Flexible design ensures all four wheels are in contact with the girder. Available for 1-30 ton capacities.



COMPACT DESIGN

Compact dimensions due to U-shape design. Exceptionally short approach allows for optimum use of work area when space is limited.

LOW MAINTENANCE

Largely maintenance-free design with field-proven components designed for low wear and long service life.

SHORT LEAD TIMES

Assembled in Wadesboro, North Carolina, with German-made components, these units offer short lead times to meet tight deadlines.

H3, H4 & H4+ DUTY CYCLE

FLEXIBLE CONFIGURATIONS

Hoists can be configured to your unique application needs. Available in 5 frame sizes with 16 load capacity variants.

EXTENSIVE SAFETY FEATURES

Standard safety features include block-operated limit switch, adjustable geared limit switch, motor temperature control, and overload protection.

SMOOTH OPERATION

Extremely smooth starting and braking characteristics.

OPTIONAL PANEL AND MOTOR HEATERS

Available for hoist, trolley, and bridge motions.

OPTIONAL PATENTED TRACK WHEELS

Monorail trolley packages for patented track wheels are available for capacities up to 7.5 tons.

OPTIONAL TRAVEL LIMIT SWITCH

Standard version includes limit switching in both directions, switching from fast/slow, and IP65 or NEMA 4/4X rating. Wired and mounted to the hoist.

OPTIONAL TOWING ARM

Available for power supply with adjustable height and length.

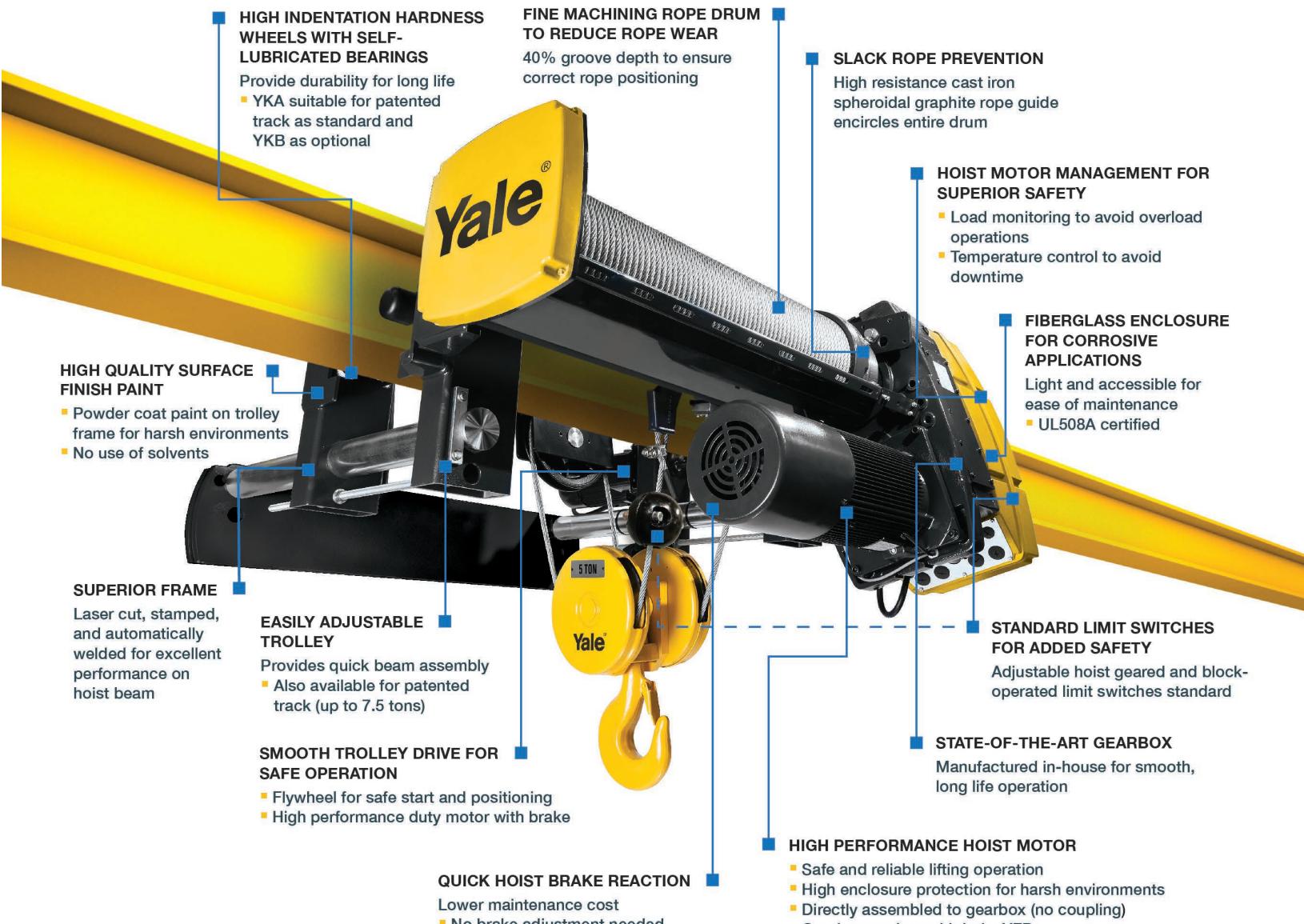
OPTIONAL PENDANT CONTROL

OPTIONAL SPARE PARTS KIT

STANDARD FEATURES

Features	
Capacities	1–30 tons
Lift Heights	Up to 131 feet
Ambient Temperature	-4°F to +104°F (-20°C to +40°C)
Hoist & Trolley Protection to IEC/EN 60529	IP55 or NEMA 4/12
Voltage	208, 230, 460V, 3 phase, 60 Hz (Control Voltage 120V)
Third Party Labeling	UL508A
Warranty	3-year standard
Hoist	
Reeving	2PS & 4PS
Hoist Speed Control	2-speed control. Optional Magnetek VFD
Complete Hoist Control	Includes mainline contactor K10, transformer & trolley fuses. Does not include: main hoist fuses to be sized for both hoist and trolley – for use on monorails
Crane MFG Control	Includes safety contactor K20, trolley fuses. Hoist control does not include: transformer, mainline, main fuses sized for hoist & trolley (items not included to be located in bridge control panel) – for use on cranes
Control Enclosure	Fiberglass – IP55 or NEMA 4/12
Overload Protection	Standard electronic load limiting device
Geared Limit Switch	Four switching points (3 up, 1 down), Emergency top, Operational top, Changeover from fast to slow, Emergency bottom
Block-Operated Limit Switch	Standard
Rope Guide	Cast iron spheroidal graphite
Hoist Motor	Standard hoist performance monitoring
	3 phase A.C. squirrel cage induction motor, 2-speed cylindrical motor and flywheel mass for smooth start and stop
	6:1 ratio with class F insulation, S4 duty class, 40/20% duty cycle
	IP55 or NEMA 4/12
	Standard motor thermal protection
	Hoist motor connection wired into control enclosure
Hoist Motor Brake	DC power, no adjustment needed
	IP66 or NEMA 4/4x
	Double-sided, asbestos-free linings on monodisc
Hoist Drum	Machined steel – 40% grooved depth
Hoist Gearing	Helical lubed for life
Bearings	Anti-friction. All sealed for life
Hook Assembly	360° rotation with safety latch
Paint	Two part polyurethane base and top coat to 3.2 mil thickness or epoxy powder coat to 2.4 mil, Yale yellow
Trolley	
Types	Monorail, Double Girder, Base Mount
Trolley Control	Magnetic contactor – 2 speed. Optional Magnetek VFD
Travel Motor Speed 60 Hz	80/20 fpm
Bumpers & Drop Lugs	Standard
Mechanical Safety Devices	All trolleys come standard with anti-tipping devices and trolley guards
Trolley Motor	2 speed, S4 duty class, class F insulation, IP55 or NEMA 4/12
Trolley Brake	DC brake
Trolley Gearing	Helical
Temperature Control of Travel Motors	Standard
Wheel Material	Ductile Iron 240 BHN





BUILT TO PERFORM

TECHNOLOGY

You can work with confidence knowing the technology behind the Yale YK is built to the highest industry standards. Working together, these low-maintenance components provide best-in-class performance, high efficiency, and long service life for any application. The Yale YK is also designed with safety in mind, including features such as geared limit switches, motor temperature control, and overload protection.

1 ROPE AND ROPE GUIDE



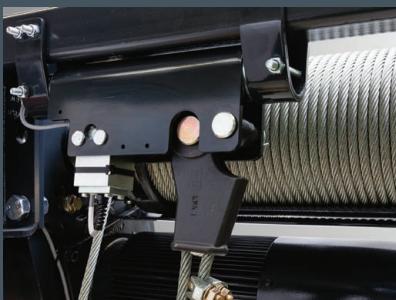
- Specialized wire rope is highly flexible and features a long service life
- Field-proven enclosed rope guide constructed of spheroidal graphite cast iron for high-temperature environments
- GJS material (previously designated GGG40) is suitable for extreme high and low temperatures
- 360° rope tensioner prevents rope slackening for added safety and performance
- Prevents overwrap and slack rope

2 PAINT



- Standard paint treatment in Yale yellow
- High-quality primer and top coats also available as standard

3 OVERLOAD PROTECTION



- Continuous electronic load monitoring when load is suspended
- Limitation on maximum load determined by load measurement at the rope anchorage point

4 PRECISION GEARING

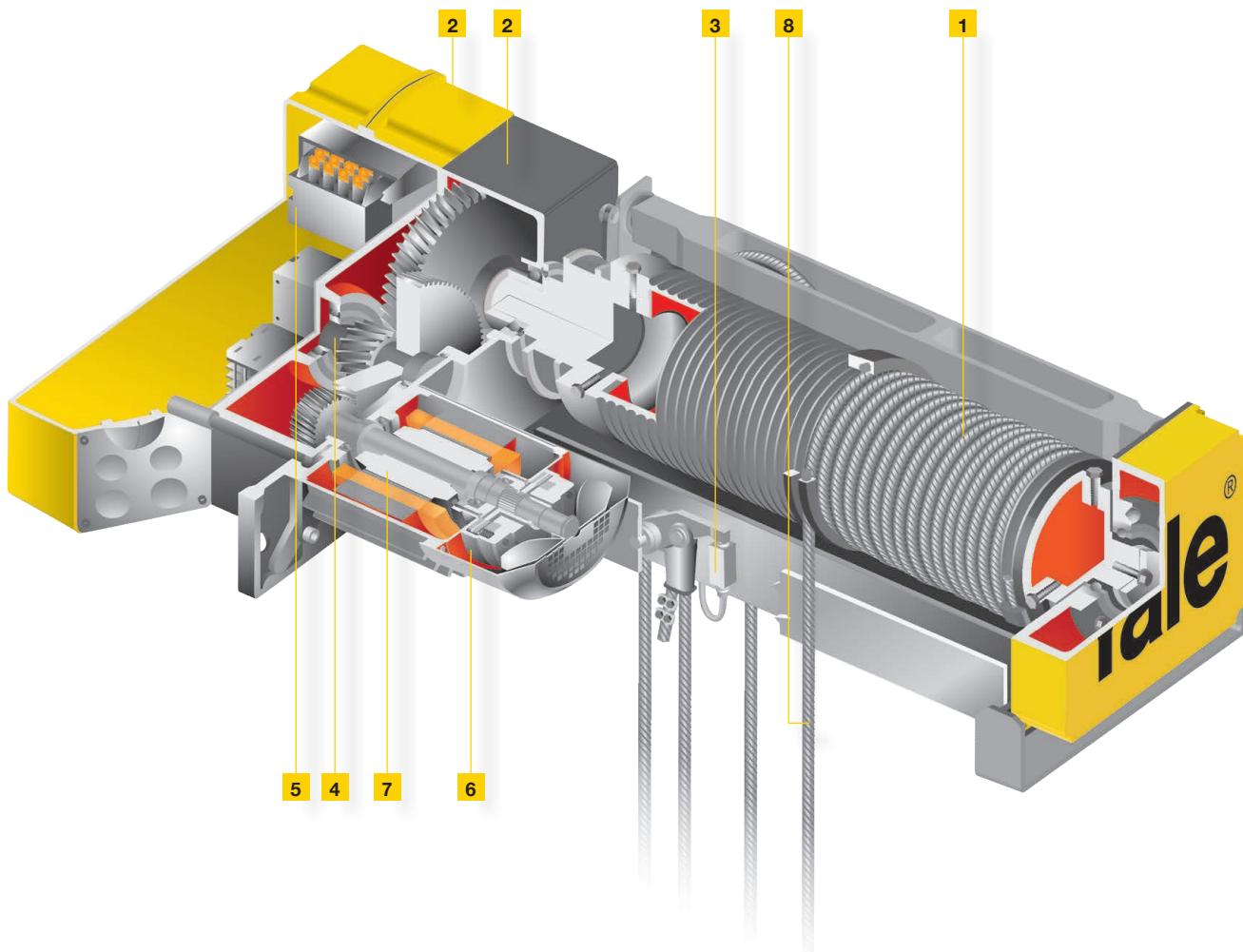


- Lifetime oil-lubricated gearbox means no oil change out is required
- Precision gearing for quiet operation
- Enclosed housing for maximum accuracy and stability

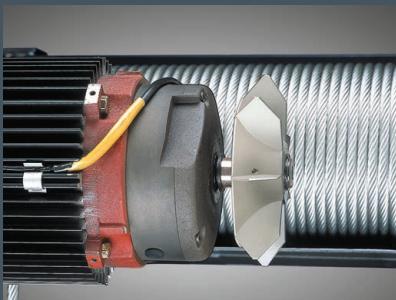
5 CONTROL PANEL



- Standard motor performance monitoring
- Inchng operation is suppressed for reduced jogging
- Oversized contactors for added safety
- Standard temperature monitoring of hoist and travel motors
- UL508A control enclosure for hoist, trolley, and bridge motions



6 BRAKE



- Low-maintenance, asbestos-free brake needs no adjustment
- Oversized, heavy-duty brake for long service life
- Brake is easily accessible from the outside for ease of maintenance and inspection
- Motor management ensures low wear
- IP66 or NEMA 4/x protection

7 MOTOR



- Specially designed motor specific to hoisting applications with high operational demands
- Classified according to FEM (ISO) with high duty cycle and switching operation frequency
- IP55 or NEMA 4/12, thermal class F
- Motor outside rope drum ensures highly efficient motor cooling and is easy to maintain
- PTC thermistors ensure reliable temperature control for slow or fast speeds
- Reliable operation, even with low voltage or heavy loads

8 BOTTOM BLOCK



- Optimal drum-to-sheave diameter ratio for reduced rope wear
- Wire rope is flexible and durable for long life
- Fine machining of drum reduces wear on rope and sheaves
- Drum is easily accessible for rope maintenance or replacement
- Robust bottom hook block with low headroom design for use in tight spaces

MAGNETEK VARIABLE FREQUENCY DRIVES

Combining Magnetek's reliable IMPULSE® Variable Frequency Drives with Yale YK's industry-leading design creates a one-of-a-kind, intelligent option for lifting applications. IMPULSE drives continuously monitor many environmental and functional components of a hoist, such as motor temperature, end of travel and slow down limits, brake functionality, motor speed, and more. Variable frequency drives maintain safe functional thresholds, which decreases mechanical fatigue and increases reliability and uptime.

For trolley motion, the IMPULSE®-G+ Mini drive allows for expanded speed adjustments, improved load control, high duty cycles, and increased crane life. The IMPULSE-G+ Mini's size permits the use of smaller control enclosures, reducing the overall cost of an installation.

Hardware and software are designed and extensively tested specifically for the operating conditions seen in overhead material handling applications. IMPULSE-G+ Mini is available for monorail, double girder, and base mount hoists with load capacities up to 30 tons.



IMPULSE•G+ MINI STANDARD FEATURES

SAFE OPERATING WINDOWS™

Reduce the possibility of programming unsafe parameters.

MOTOR THERMAL OVERLOAD PROTECTION

Reduces the possibility of motor damage.

X-PRESS PROGRAMMING™

Allows programming for initial setup within seconds.

QUICK STOP™

Reduces the possibility of crane collision.

SWIFT-LIFT™

Allows overspeeding with light loads or empty hook.

REVERSE PLUG SIMULATION™

Allows operators to smoothly and quickly stop and change directions without setting the brake.

AUTO-TUNING

Non-rational auto-tuning for performance demanding applications.

UL RECOGNIZED ELECTRONIC THERMAL OVERLOAD



For hoist motion, the IMPULSE®·VG+ Series 4 drive provides reliable, user-friendly controls and industry-leading features to keep you working safely. IMPULSE·VG+ is available for monorail, double girder, and base mount hoists with capacities up to 30 tons.

The easy-to-use keypad provides five lines of 16 characters each and includes soft keys and upgraded parameter selection. The display makes navigation and reading diagnostics even easier.

Allows For:

- Programming various drive parameters
- Parameter backup (store and copy)
- Monitoring functions of the drive
- Reading of alpha-numeric fault diagnostic instructions
- Remote monitoring



THE ADVANTAGE

Only Columbus McKinnon can offer the quality and performance of the Yale YK together with Magnetek, the premier name in crane controls.

IMPULSE·VG+ STANDARD FEATURES

*Features are configurable by user



MAGNETEK

ENCODER FEEDBACK

IMPULSE drives continuously monitor motor speed and load to ensure optimal performance and safe load control.

DYNAMIC BRAKING

Dynamically decelerates motors without the use of brakes. Brakes would only be used for parking and emergency braking, reducing brake pad wear and tear.

ANTI-SHOCK*

Automatically stabilizes loads by detecting and minimizing rapid increases in motor torque, reducing the potential for crane damage.

ULTRA-LIFT™*

Allows over speeding with light loads or empty hook. Motor speed can be adjusted to operate at peak performance.

LOAD FLOAT™

Allows a load to be held aloft at zero speed without setting the electric brake. This reduces wear and increases hoist lift response time.

BRAKE CHECK AT STOP

Tests that brakes can safely hold a load at the end of a run and the motor will maintain control of the load in case of brake failure.

SHORT CIRCUIT PROTECTION

Detects if a motor has a short circuit and can prevent additional failure of the control system.

LOAD CHECK II™*

Continuously monitors hoist overload conditions, halting upward motion and only allowing the load to be lowered.

PROGRAMMABLE LIMIT SWITCHES*

Allow for configurable slow down and stop limits based on encoder pulses without additional hardware.

SLACK CABLE DETECTION*

Provides annunciation of slack cable condition to operators.

PHASE LOSS DETECTION

Detects if incoming power phase is lost and maintains a safe state of the load.

TORQUE PROVING AT START

Determines if the motor can safely control a load before opening the brake to provide additional safety.

MICRO-SPEED™*

Allows operators to scale motor speed, which is useful for load positioning.

RADIO REMOTE CONTROLS

Magnetek's Flex EX2 series of radio remote controls are durable, rugged, and equipped with more than 200 programmable functions for system customization. A frequency agility feature automatically switches channels when interference is detected, and advanced synthesized RF controls with 124 channels add flexibility to frequency management in the field. IP66-rated, fully sealed transmitter and receiver enclosures provide protection in harsh environments.

Flex EX2 is available for all current wire rope hoist models, as well as crane kits with optional plug-and-play connector.



FLEX-48 QUICK SHIP PROGRAM

Yale YK monorail hoists and crane kits are available as Quick Ship units designed to ship in as little as 48 hours. The Flex-48 Quick Ship Program has proven to be the reliable and trusted solution when fast delivery is critical. One catalog, one shipment, one warehouse with world class delivery – ordering doesn't get any easier.

The Flex-48 Quick Ship program is available for five and 10-ton monorail hoists with 33 feet of lift. Flex-48 Quick Ship monorail crane kits are available as three, five, and 10-ton units. If the specifications of the Flex-48 Quick Ship models do not match your exact needs, please contact Columbus McKinnon for a quote.

FAST SHIPPING

For customers in the United States, Yale YK monorail hoists and crane kits are available as Quick Ship units shipping within 48 hours (two business days) directly from our factory in Wadesboro, North Carolina. Ordering is simple. Just pick a catalog number and choose your ideal hoist.



THE POWER TO CONFIGURE

The Yale YK is available on Compass™, Columbus McKinnon's online product configurator. Compass provides our U.S. partners with detailed technical data, drawings, and documentation for a formal quotation package, simplifying the configuration and order process.



CRANE KITS

Crane kits consolidate all the essential crane components into a plug-and-play system, including the Yale YK hoist and trolley, end trucks, festoon, pendant control or radio remote control, bridge panels with variable frequency drives, and optional travel limit switch, patented track wheels, towing arm, variable frequency drives for trolley motion, accessories, and documentation. Our high-quality crane component options are available to configure for unique applications. Columbus McKinnon's comprehensive crane kits are precisely designed, and components are matched to best suit application needs for top-running monorail or double girder units up to 30 tons, which ensures fast and easy on-site assembly. Kits can be quoted using Compass™, and are available to all Yale distributors.



Components are carefully packed and accompanied by all necessary documentation and assembly instructions

CRANE KIT COMPONENTS

FESTOON SYSTEM

Connection housings are made from durable metal with spring loaded snap connections. Quick-connect plugs require no special tools or skills to "wire up."

CONTROL PANEL

Bridge control panels with plug-and-play connections are standard with Magnetek's IMPULSE® G+ Mini Variable Frequency Drives, which offer controlled acceleration and deceleration for smooth operation, reduced load swing, and extended drive train life.

ONLINE QUOTING TOOL

Compass is the easy-to-use online configurator that allows Yale distributors to easily prepare an estimate and generate clearance drawings.

RADIO REMOTE CONTROL (OPTIONAL)

The Flex EX2 series of radio remote controls are ergonomic, lightweight, and offer more than 200 programmable functions for customization. Fully sealed, IP66-rated transmitter and receiver enclosures offer protection in harsh environments.

HOIST & TROLLEY

Yale YK provides industry-leading technology and safety features with a low headroom design for maximum hook travel. Available for applications up to 30 tons.

END TRUCKS

Fitted with two removable (not welded) rail sweeps for easier inspection of the wheels, end trucks also feature two oversized hand holes for easy access to connection plate bolts.

INDUSTRY-LEADING SERVICE & TRAINING

With a legacy spanning over 140 years, Columbus McKinnon's best-in-class products are used around the world. Developed by our team of product managers, engineers, and manufacturing professionals, our products are designed for top-of-the-line performance, reliability, and safety. When you need help selecting the best Columbus McKinnon product or system for your lifting application or assistance with routine maintenance, we are here for you.

Columbus McKinnon is committed to developing products and systems that meet the highest levels of quality, right down to the smallest details.

- Our Products
- Our Technology
- Our Service
- Our Support



KNOW HOW. KNOW WHY.

Columbus McKinnon provides expert safety training on the proper use and inspection of rigging and overhead lifting equipment.

- Comprehensive Hoist, Crane, and Rigging Training
 - In-house training at national Columbus McKinnon training centers
 - On-site training at customer facilities
- Crane & Hoist Inspection and Maintenance Training
- Crane Operator Training
- Rigging Certificate
- CMCO University™
 - Product and application knowledge to advise customers during product selection and purchasing
- And much more





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CORPORATION

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