



**SHAW-BOX®**

# **GLOBAL KING™ & WORLD SERIES™**

ELECTRIC WIRE ROPE HOISTS

MONORAIL

TOP-RUNNING  
DECK MOUNTS

FAST SHIPPING

LONGER LIFTS

VARIABLE FREQUENCY  
DRIVES

HAZARDOUS  
ENVIRONMENTS



C O L U M B U S M c K I N N O N C O R P O R A T I O N



**SHAW-BOX**

# GLOBAL KING<sup>™</sup> & WORLD SERIES<sup>™</sup>

## ELECTRIC WIRE ROPE HOISTS



Yale<sup>®</sup> Global King<sup>™</sup> and Shaw-Box<sup>®</sup> World Series<sup>™</sup> wire rope hoists are built for the world market. Manufactured in Wadesboro, North Carolina, these best-in-class hoists combine more than 140 years of experience with the latest in manufacturing and materials technology, rigid design standards and the highest quality components.

The Global King and World Series hoists are some of the most competitive wire rope hoists on the market today. With industry-leading safety features, flexible configurations and a variety of options, including longer lifts, fast shipping, special control options and features for hazardous environments, these hoists are designed for ease of use and long life in even the most heavy-duty applications.

### 3-Year Standard Warranty

Since their introduction almost 10 years ago, Global King and World Series hoists continue to exceed user expectations and are some of the lowest total-cost-of-ownership wire rope hoists in the industry.



The Global King and World Series deliver the performance and reliability customers have come to rely on and are backed by one of the best warranties in the industry.

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# MONORAIL

## ELECTRIC WIRE ROPE HOISTS

Yale Global King and Shaw-Box World Series monorail wire rope hoists provide long life in heavy service applications that require faster lifting speeds and precise positioning control. These heavy-duty wire rope monorail hoists are metric rated, low headroom and built to meet or exceed either FEM 2m or 3m duty (similar to AMSE H4 or H4+ duty).

## CAPACITIES 1 to 15 TONS

Frame Size	4 Part Reeved Models							2 Part Reeved Models							Features			
	Capacity (Metric Tons)	Available Lifts (ft.)	Standard Lifting Speeds (fpm)	Standard Hoist HP	Standard Traverse (fpm)	Standard Trolley HP	Beam Flange Range (in.)	Capacity (Metric Tons)	Available Lifts (ft.)	Standard Lifting Speeds (fpm)	Standard Hoist HP	Standard Traverse (fpm)	Standard Trolley HP	Beam Flange Range (in.)	Hoist VFD Control	Trolley VFD Control	Explosion-Proof Control	Spark & Corrosion-Resistance
<b>A</b>	2 & 3	20 40 60	20 / 5	5 / 1.25	55 / 18	.5 / .17	4-5/8 to 14	1	40	24 / 6	3.0 / .75	55 / 18	.5 / .17	4-5/8 to 14	Optional	Optional	Not Available	Not Available
<b>B</b>	5	25 40 60	20 / 5	7.5 / 1-.875	55 / 18	.5 / .17	4-5/8 to 20	2-1/2	80	40 / 10	7.5 / 1.875	55 / 18	.5 / .17	4-5/8 to 18	Optional	Optional	Optional	Optional
<b>C</b>	7.5 & 10	25 40 60	20 / 5	15 / 3.75	50 / 17	.75 / .25	6 to 26	3-3/4 & 5	80	40 / 10	15 / 3.75	50 / 17	.75 / .25	4-5/8 to 24	Optional	Optional	Optional	Optional
<b>D</b>	15	25 40 60	18 / 4.5	20 / 5	50 / 17	1 / .33	8 to 20	7-1/2	80	36 / 9	20 / 5	50 / 17	1 / .33	8 to 18	Optional	Optional	Not Available	Optional

## HOIST FEATURES:

### 1 WIRE ROPE DRUM

Machined from quality steel and deep grooved with a rope guide to help ensure the rope stays in the grooves. Wire rope is secured to the drum with three heavy ductile iron clamps and designed to have three extra wraps of wire rope on the drum with the rope at full extension (low hook).

### 2 HEAVY-DUTY DC DISC BRAKES

Rated at 200% torque. Provide quick positive stops and load holding.

### 3 HOIST MOTOR

Two-speed motor with a 4:1 ratio provides a low speed for precise load handling and a high speed for fast throughput. Designed and manufactured specifically for hoisting service.

### 4 GEARING

Triple reduction hoist gearing is oil bath lubricated, operating in an oil-tight, cast aluminum gear case.

### 5 FRAME

Heavy steel frame provides a solid foundation and positive alignment of key components.

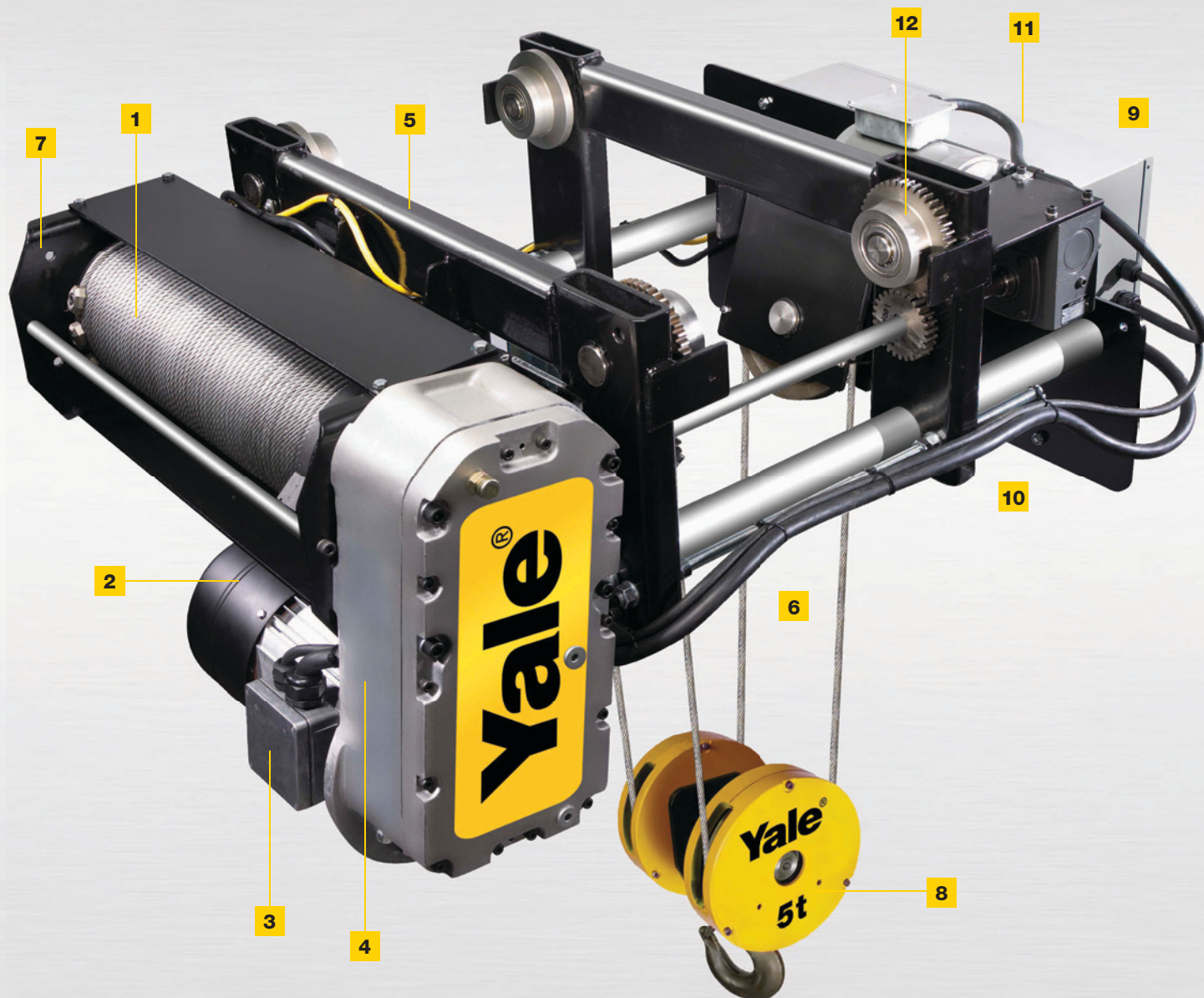
### 6 LOW HEADROOM

Reeved to a low-headroom design lower block for minimum headroom and maximum lift.

### 7 LIMIT SWITCHES

Standard upper and lower geared control circuit hoist motion limit switch. An additional block-operated upper control circuit limit switch is also provided as standard equipment. Hoist overcapacity limit switch prevents lifting excessive overloads.





## TROLLEY FEATURES:

### 8 TRUNNION-STYLE BLOCK & HOOK

Bearing-mounted trunnion hook that rotates 360° and swings back and forth 180° for easier load adjustment.

### 9 ELECTRONIC HOIST MONITORING CARD

Hoist comes standard with Pulse™ Monitor Card that records key information that can simplify troubleshooting and help reduce maintenance costs. Requires Pulse Monitor computer interface kit (sold separately) to read the data.

### 10 TROLLEY

Monorail trolley is easily adjustable to handle a wide range of beam flange widths. Trolley drop stops furnished as standard equipment. Rubber bumpers optional.

### 11 HOIST & TROLLEY CONTROLS

Housed in a common NEMA 4/12 enclosure with hoist motion monitor, motor thermal overloads, overcapacity limit switch and more. Easily accessible electrical components. Two-speed hoist and trolley control for smooth acceleration and precise load positioning.

### 12 WHEELS

Steel compound tread wheels for long life and use on either wide-flange or "S" beams. One wheel on each side of trolley driven for positive tracking.

# TOP-RUNNING & DECK-MOUNT

## ELECTRIC WIRE ROPE HOISTS

The Yale Global King and Shaw-Box World Series top-running, deck-mount wire rope hoists feature a low-headroom, heavy-duty design ideal for heavy service applications. Featuring a double-girder trolley, these hoists are designed to provide long life in applications that require higher lifting speeds and precise positioning control. Built to meet or exceed either FEM 2m or 3m duty (similar to AMSE H4 or H4+ duty).

## CAPACITIES 1 to 20 TONS



Frame Size	4 Part Reeved Models						Features			
	Capacity (Metric Tons)	Available Lifts (ft.)	Standard Lifting Speeds (fpm)	Standard Hoist HP	Standard Traverse (fpm)	Standard Trolley HP	Hoist VFD Control	Trolley VFD Control	Explosion-Proof Control	Spark & Corrosion-Resistance
<b>B</b>	5	25 40 60	20 / 5	7.5 / 1.875	50	.5	Optional	Standard Equipment	Optional	Optional
<b>C</b>	7.5 & 10	25 40 60	20 / 5	15 / 3.75	50	.5 (2)	Optional	Standard Equipment	Optional	Optional
<b>D</b>	15	25 40 60	18 / 4.5	20 / 5	75	1 (2)	Optional	Standard Equipment	Not Available	Optional
	20*	16'-8" 26'-8" 40	12 / 3	20 / 5	75	1.5 (2)	Optional	Standard Equipment	Not Available	Optional

\* 20 Metric Ton D Frame is modified from 4-part reeving to 6-part reeving.

## HOIST FEATURES:

### 1 WIRE ROPE DRUM

Machined from quality steel and deep grooved with a rope guide to help ensure the rope stays in the grooves. Wire rope is secured to the drum with three heavy ductile iron clamps and designed to have three extra wraps of wire rope on the drum with the rope at full extension (low hook).

### 2 HEAVY-DUTY DC DISC BRAKES

Rated at 200% torque. Provide quick positive stops and load holding.

### 3 HOIST MOTOR

Two-speed motor with a 4:1 ratio provides a low speed for precise load handling and a high speed for fast throughput. Designed and manufactured specifically for hoisting service.

### 4 GEARING

Triple reduction hoist gearing is oil bath lubricated, operating in an oil-tight, cast aluminum gear case.

### 5 LOW HEADROOM

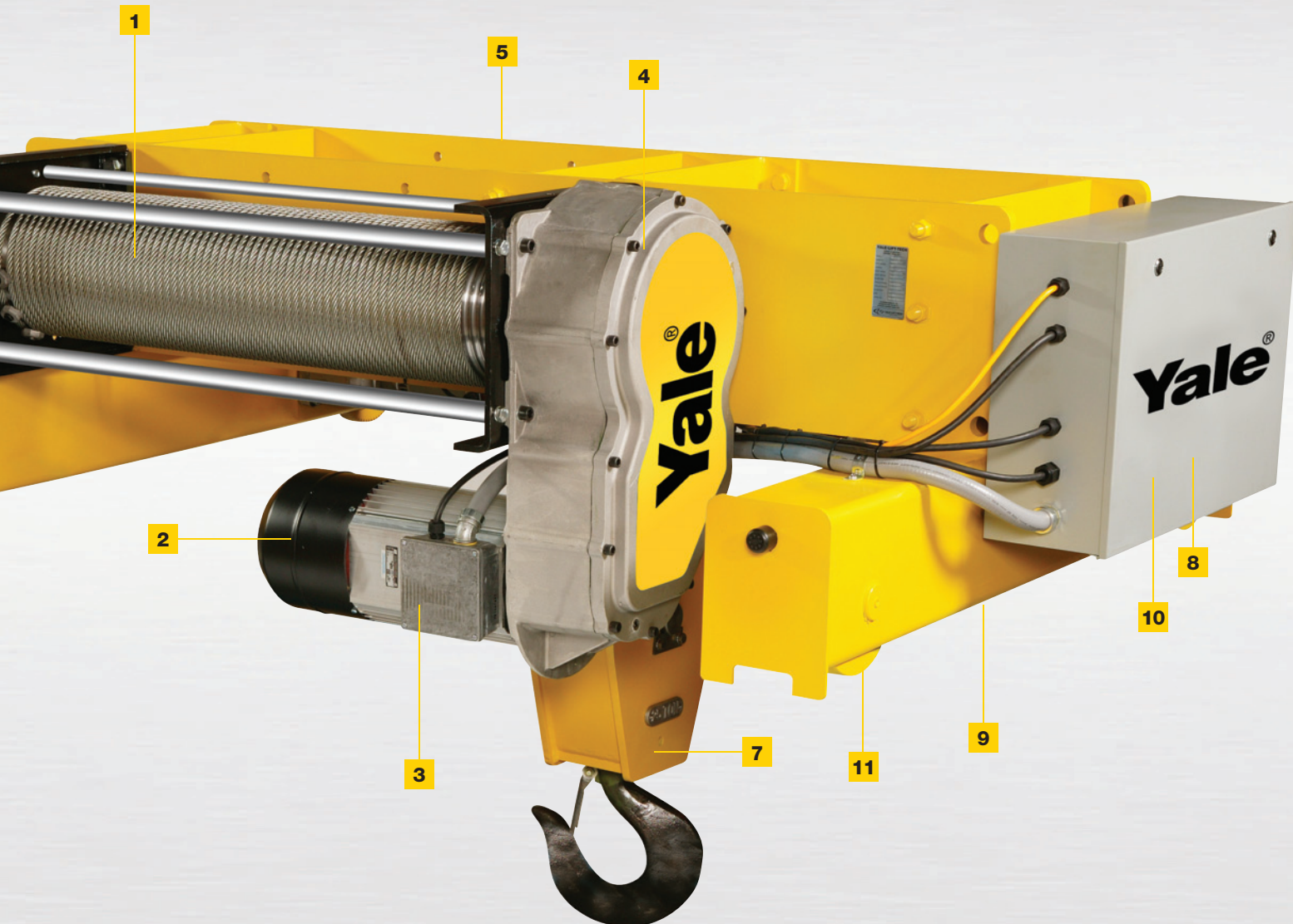
Low headroom design provides maximum hook travel.

### 6 LIMIT SWITCHES (NOT PICTURED)

Standard upper and lower geared control circuit hoist motion limit switch. An additional block-operated upper control circuit limit switch is also provided as standard equipment. Hoist overcapacity limit switch prevents lifting excessive overloads.

### 7 TRUNNION-STYLE BLOCK & HOOK

5 through 15 Metric Ton units come with a bearing-mounted trunnion hook that rotates 360° and swings back and forth 180° for easy load adjustment. 20 Metric Ton units have a fully enclosed hook block with load hook that rotates a full 360°.



Top-Running Unit Shown Above

## TROLLEY FEATURES:

### 8 ELECTRONIC HOIST MONITORING CARD

Hoist comes standard with Pulse™ Monitor Card that records key information that can simplify troubleshooting and help reduce maintenance costs. Requires Pulse Monitor computer interface kit (sold separately) to read the data.

### 9 TROLLEY

Trolley trucks are a heavy-duty steel weldment fabricated from structural steel shapes for maximum positive alignment of components. High-impact rubber bumpers are standard on all four corners.

### 10 HOIST & TROLLEY CONTROLS

Housed in a common NEMA 4/12 enclosure with hoist motion monitor, motor thermal overloads, overcapacity limit switch and more. Easily accessible electrical components. Two-speed hoist with trolley VFD control for smooth acceleration and precise load positioning.

### 11 WHEELS

Flat-tread hardened steel wheels to run on ASCE or square bar rail. One wheel on each side of trolley driven for positive tracking. 5-ton capacity trolleys drive both wheels through single motor and gear reducer. All other capacities have dual drives.



# FAST SHIPPING

Yale Global King and Shaw-Box World Series wire rope hoists are available as Quick-Ship units designed to ship in as little as 48 hours! Since their launch, the Flex-48 Quick Ship Program have proven to be reliable and trusted solutions when fast delivery is critical.

One catalog number, one shipment, one warehouse with world-class delivery – ordering doesn't get any easier.

## FLEX-48 QUICK SHIP PROGRAM

For customers in the United States, Yale Global King and Shaw-Box World Series hoists are available as Quick Ship units shipping within 48 hours (2 business days) directly from our factory located in Wadesboro, North Carolina. Ordering is simple. Just pick a catalog number, then select a product brand kit number.



### MODEL VARIATIONS INCLUDE:

- 2 Monorail Units ready for installation in existing crane systems
- 3 Complete Plug & Play Crane Kits suitable for up to 50 ft. maximum bridge spans
- 1 Complete Plug & Play Crane Kit suitable for up to 60 ft. maximum bridge spans

If the specifications of the Flex-48 Quick Ship models do not match your exact needs, please contact Columbus McKinnon for a quote.



# FLEX-48 QUICK SHIP PROGRAM



## MONORAIL HOISTS

### 5 METRIC TON

Hoist Catalog #: 45343101

Shaw-Box Product Brand Kit #: 23563825

Yale Product Brand Kit #: 23563826

Net Weight: 900 lbs.

THE FLEXIBILITY TO  
CHOOSE YOUR BRAND

- 5 Metric Ton capacity
- 25 ft. lift
- 460-3-60, 115 V/C
- 20/5 FPM two-speed hoist using 7.5/1.875 HP – 3600/900 RPM motor
- 55/18 FPM two speed trolley using .5/.17 HP – 1800/600 RPM motor
- 4" tread diameter wheels to fit ASI or WF beams with 8.125" through 14" flange width, no curves

### 10 METRIC TON

Hoist Catalog #: 45343203

Shaw-Box Product Brand Kit #: 23563845

Yale Product Brand Kit #: 23563846

Net Weight: 1,750 lbs.

THE FLEXIBILITY TO  
CHOOSE YOUR BRAND

- 10 Metric Ton capacity
- 25 ft. lift
- 460-3-60, 115 V/C
- 20/5 FPM two-speed hoist using 15/3.75 HP – 3600/900 RPM motor
- 50/17 FPM two-speed trolley using .75/.25 HP – 1800/600 RPM motor
- 6" tread diameter wheels to fit ASI or WF beams with 8.125" through 14" flange width, no curves

## PLUG & PLAY SINGLE-GIRDER TOP-RUNNING CRANE KITS

### 5 TON

Hoist Catalog #: K0550S25044GX

Shaw-Box Product Brand Kit #: 23563825

Yale Product Brand Kit #: 23563826

Net Weight: 2,306 lbs.

THE FLEXIBILITY TO  
CHOOSE YOUR BRAND

- 5 ton capacity (US Short Tons)
- 25 ft. lift
- 460-3-60, 115 V/C
- 20/5 FPM two-speed hoist using 7.5/1.875 HP – 3600/900 RPM motor
- 55/18 FPM two-speed trolley using .5/.17 HP – 1800/600 RPM motor
- 4" tread diameter wheels to fit ASI or WF beams with 8.125" through 14" flange width
- Trolley stops with rubber bumpers
- 50 ft. maximum crane span
- VFD controlled 100 FPM bridge traverse using 1 HP – 84.1 Output RPM motor
- 160 MM end trucks with 90" wheel base
- Mainline contactor & manual disconnect included
- Plug & Play festoon package

### 5 TON

Hoist Catalog #: K0560S25044G

Shaw-Box Product Brand Kit #: 23563825

Yale Product Brand Kit #: 23563826

Net Weight: 2,460 lbs.

THE FLEXIBILITY TO  
CHOOSE YOUR BRAND

- 5 ton capacity (US Short Tons)
- 25 ft. lift
- 460-3-60, 115 V/C
- 20/5 FPM two-speed hoist using 7.5/1.875 HP – 3600/900 RPM motor
- 55/18 FPM two-speed trolley using .5/.17 HP – 1800/600 RPM motor
- 4" tread diameter wheels to fit ASI or WF beams with 8.125" through 14" flange width
- Trolley stops with rubber bumpers
- 60 ft. maximum crane span
- VFD controlled 100 FPM bridge traverse using 1 HP – 84.1 Output RPM motor
- 160 MM end trucks with 90" wheel base
- Mainline contactor & manual disconnect included
- Plug & Play festoon package

### 10 TON

Hoist Catalog #: K1050S25044G

Shaw-Box Product Brand Kit #: 23563845

Yale Product Brand Kit #: 23563846

Net Weight: 3,370 lbs.

THE FLEXIBILITY TO  
CHOOSE YOUR BRAND

- 10 ton capacity (US Short Tons)
- 25 ft. lift
- 460-3-60, 115 V/C
- 20/5 FPM two-speed hoist using 15/3.75 HP – 3600/900 RPM motor
- 50/17 FPM two-speed trolley using .75/.25 HP – 1800/600 RPM motor
- 6" tread diameter wheels to fit ASI or WF beams with 8.125" through 14" flange width
- Trolley stops with rubber bumpers
- 50 ft. maximum crane span
- VFD controlled 100 FPM bridge traverse using 1.5 HP – 72.8 Output RPM motor
- 200 MM end trucks with 90" wheel base
- Mainline contactor and manual disconnect included
- Plug & Play festoon package

### 10 TON

Hoist Catalog #: K1050S25044GX

Shaw-Box Product Brand Kit #: 23563845

Yale Product Brand Kit #: 23563846

Net Weight: 3,370 lbs.

THE FLEXIBILITY TO  
CHOOSE YOUR BRAND

- 10 ton capacity (US Short Tons)
- 25 ft. lift
- 460-3-60, 115 V/C
- 20/5 FPM two-speed hoist using 15/3.75 HP – 3600/900 RPM motor
- 50/17 FPM two-speed trolley using .75/.25 HP – 1800/600 RPM motor
- 6" tread diameter wheels to fit ASI or WF beams with 8.125" through 14" flange width
- Trolley stops with rubber bumpers
- 50 ft. maximum crane span
- VFD controlled 100 FPM bridge traverse using 1.5 HP – 72.8 Output RPM motor
- 200 MM end trucks with 96" wheel base
- Mainline contactor and manual disconnect included
- Plug & Play festoon package

Please note that end trucks are suitable for operation on 25# through 40# ASCE rail only. For other rail sizes please contact our Sales Department for quotation.

# LONGER LIFTS

## ELECTRIC WIRE ROPE HOISTS

Reach new heights with our industry-leading wire rope hoists. Yale Global King and Shaw-Box World Series wire rope hoists are more flexible and versatile than ever before. Meeting industry demand, we have added more models to our offering that provide longer lifts.

### 60 FT. LIFT UNITS

**Lift:** 60 ft.

**Capacities:** Up to 15 Tons

**Lifting Speeds:** 20/5 FPM on most models

**Trolley:** Available as monorail or top-running units.  
2-speed trolley control is standard on monorail hoist.  
VFD trolley standard on top-running units.  
(See trolley details on pages 5 and 7.)

### 80 FT. LIFT 2-PART REEVED UNITS

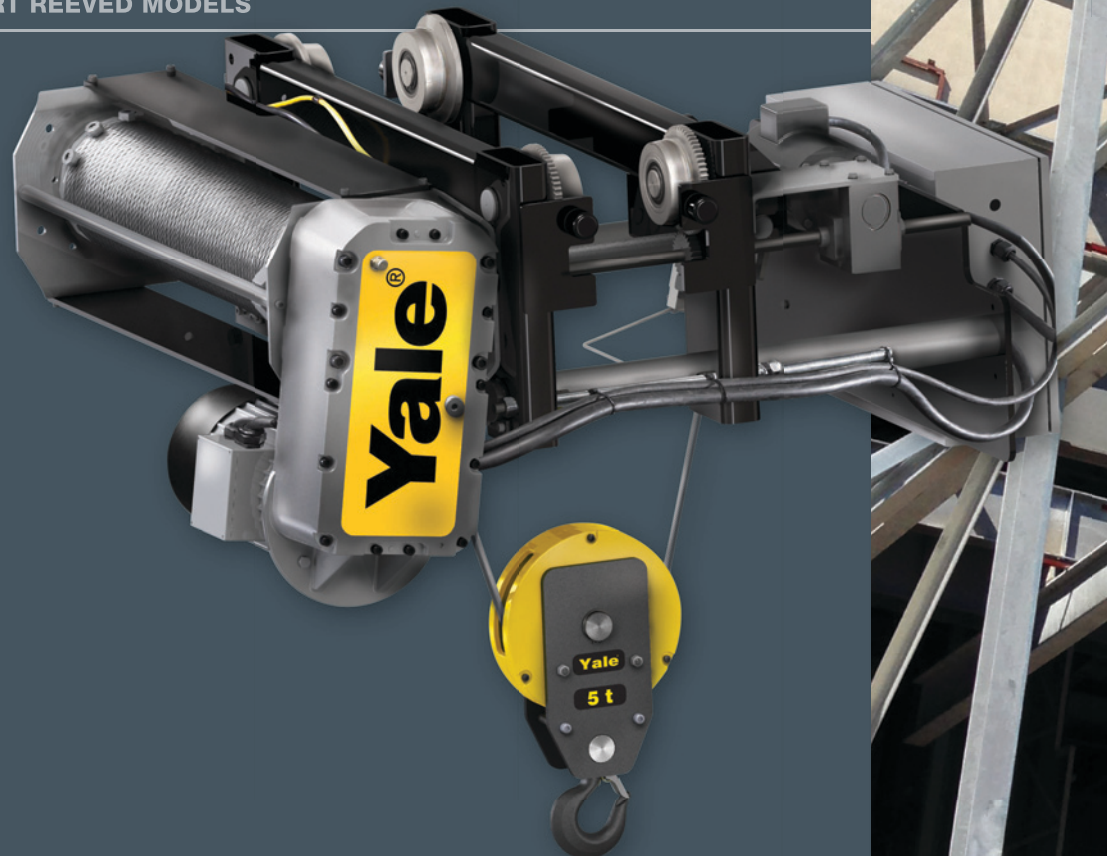
**DOUBLE THE AVAILABLE LIFT AT TWO TIMES  
THE LIFTING SPEED OF 4-PART REEVED MODELS**

**Lift:** 80 ft.

**Capacities:** Up to 7-1/2 Tons

**Lifting Speeds:** 40/10 FPM  
on most models

**Trolley:** Available as monorail units.  
2-speed trolley control standard.  
(See trolley details on pg. 5.)









# VARIABLE FREQUENCY DRIVES



## FOR ELECTRIC WIRE ROPE HOISTS

Yale Global King and Shaw-Box World Series electric wire rope hoists are available with Magnetek variable frequency drives – one of the industry's premier variable frequency drives. These VFD units allow for greater speed adjustment, improved load control, higher duty cycles and increased hoist life. Magnetek variable frequency drives feature a modern design and provide reliable, user-friendly controls. Keypad with data readout allows for easy programming and on-the-spot troubleshooting.

### BENEFITS & FEATURES

#### PRECISE LOAD CONTROL

20:1 speed ratio allows for a wide range of hoist lifting speeds while decreasing load bounce. Modified open-loop vector control with gearbox-mounted speed sensor protects against over-speed and speed deviation. Quick-stop feature allows the hoist to stop within 3" at high speeds.

#### LONGER HOIST, BRAKE & MOTOR SERVICE LIFE

Frequency drive offers built-in thermal overload and overcurrent protection for the hoist motor. Ramp-down-to-stop feature decreases load bounce and increases brake life.

### INDUSTRY-LEADING SAFETY FEATURES

#### EASY TROUBLESHOOTING

VFD control features keypad and easy-to-read screen for on-the-spot safety readouts. Recorded fault history aids in troubleshooting process.

#### OVERLOAD & OVER-SPEED PROTECTION

Load Check II™ feature, preset to 100% of load, monitors capacity and prevents overloading if capacity is exceeded. Modified open-loop vector control with gearbox-mounted speed sensor protects against over-speed and speed deviation.

#### HIGHER DUTY CYCLES

External brake resistor allows for maximum heat dissipation and uninterrupted drive service at high-duty cycles. Hoists are not equipped with load brakes, reducing heat generation in high-duty-cycle applications.

#### FLEXIBLE CONFIGURATIONS

Standard 2-step infinitely variable control with acceleration and deceleration control. Optional 3-step infinitely variable control as well as 2 and 3 speed multi-step controls. Multiple power supply options also available. Drive is equipped with 115V interface card for compatibility with 115V control bridge and crane systems.

### KEY FEATURES:

#### 1 WIRE ROPE DRUM

Machined from quality steel, deep grooved with a rope guide to help ensure the rope stays in the grooves. Wire rope is secured to the drum with three heavy-duty clamps and designed to have three extra wraps of wire rope on the drum with the rope at full extension (low hook).

#### 2 HEAVY-DUTY DC DISC BRAKES

Rated at 200% torque. Provide quick positive stops and load holding.

#### 3 MOTORS

Features inverter-duty hoist motor for use with variable frequency drives. Designed and manufactured specifically for hoisting service.

#### 4 GEARING

Triple reduction hoist gearing is oil bath lubricated, operating in an oil-tight, cast aluminum gear case.

#### 5 FRAME

Heavy steel frame provides a solid foundation and positive alignment of key components.

#### 6 LOW HEADROOM

The hoist is reeved to a low-headroom design lower block for minimum headroom and maximum lift (not shown).

#### 7 LIMIT SWITCHES

The hoist is provided with an upper and lower geared control circuit hoist motion limit switch. An additional block-operated upper control circuit limit switch is also provided as standard equipment. A hoist overcapacity limit switch prevents overloading. Drive equipped with Load Check II™ feature that monitors capacity and prevents overloading if capacity is exceeded.



# CAPACITIES 1 to 20 METRIC TONS

AVAILABLE ON MONORAIL, TOP-RUNNING  
& DECK-MOUNTED HOISTS



## 8 TRUNNION-STYLE BLOCK & HOOK

Each hoist comes with a bearing-mounted trunnion hook that rotates 360° and swings back and forth 180° for easier load adjustment.

## 9 ELECTRONIC HOIST MONITORING CARD

Hoist comes standard with Pulse™ Monitor Card that records key information that can simplify troubleshooting and help reduce maintenance costs. Requires Pulse Monitor computer interface kit (sold separately) to read the data.

## 10 TROLLEY

Available as monorail or top-running units. (See trolley details on pages 5 and 7)

## 11 HOIST & TROLLEY CONTROLS

Housed in a common NEMA 4/12 enclosure with hoist motion monitor, motor thermal overloads, overcapacity limit switch and more. Easily accessible electrical components. VFD hoist and trolley control for smooth acceleration and precise load positioning.

## 12 WHEELS

Steel compound tread wheels for long life and use on either wide-flange or "S" beams. One wheel on each side of trolley driven for positive tracking.

# HAZARDOUS ENVIRONMENTS

## EXPLOSION-PROOF WIRE ROPE HOISTS WITH SPARK-RESISTANT FEATURES

Yale Global King and Shaw-Box World Series explosion-proof wire rope hoists are engineered and built for use in Division 2, Class I, Groups B, C & D hazardous environments. These units feature special enclosures, metal clad electrical cables and fittings, and intrinsically safe limit switches and control stations.

Our explosion-proof units are well suited for offshore rigging platforms and downstream processing facilities in the Oil and Gas Industry where flammable gases and liquids are present. Spark-resistant options are available on Global King and World Series hoists with underhung and top-running trolleys, as well as deck-mounted configurations.

Tagged Division 2 Hazardous Location motors, which surpass OSHA requirements are included as standard equipment. Optional corrosion-resistant features are also available upon request.

### STANDARD FEATURES

#### WIRE ROPE DRUM

Machined from quality steel, deep-grooved with a rope guide to help ensure the rope stays in the grooves. Wire rope is secured to the drum with three heavy ductile iron clamps and designed to have three extra wraps of wire rope on the drum with the rope at full extension (low hook).

#### HEAVY-DUTY DISC BRAKES

Rated at 200% torque, provide quick, positive stops and load holding.

#### GEARING

Triple reduction hoist gearing is oil bath lubricated, operating in an oil-tight, cast aluminum gear case.

#### FRAME

Heavy steel frame provides a solid foundation and positive alignment of key components.

#### TRUNNION-STYLE BLOCK & HOOK

Bearing-mounted trunnion hook rotates 360° and swings back and forth 180° for easier load adjustment.

#### LOW HEADROOM

Reeved to a low-headroom design lower block for minimum headroom and maximum lift.

#### TROLLEY

Available as monorail or top-running units. (See trolley details on pages 5 and 7)

#### ELECTRONIC HOIST MONITORING CARD

Hoist comes standard with Pulse™ Monitor Card that records key information that can simplify troubleshooting and help reduce maintenance costs. Requires Pulse Monitor computer interface kit (sold separately) to read the data.



### DEFINITION OF DIVISION, CLASS & GROUP

#### DIVISION 2

Locations in which hazardous concentrations are handled, processed or used but are normally within closed containers or closed systems from which they can escape only in the case of accidental rupture or breakdown.

#### CLASS 1

Locations in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.

#### GROUP B

Atmospheres containing hydrogen, or gases and vapors of equivalent hazard, such as manufactured gas.

#### GROUP C

Atmospheres containing ethyl-ether vapors, ethylene or cyclo propane.

#### GROUP D

Atmospheres containing gasoline, hexane, naphtha, benzene, butane, alcohol, acetone, benzol, lacquer solvent vapors or natural gas.





## EXPLOSION-PROOF FEATURES:

- 1 NEMA 4/7/9 RATED CONTROL ENCLOSURE**  
Hoist and trolley controls are housed in a NEMA 4/7/9 rated enclosure with hoist motion monitor, thermal overloads, over-capacity limit switch and more. Two-speed control for smooth acceleration and precise load positioning.
- 2 MC (METAL CLAD) ELECTRICAL CABLE & FITTINGS**  
Where required.
- 3 STANDARD MOTOR**  
Tagged Division 2 hazardous location motor is two-speed with a 4:1 ratio from high to low speed; giving a low speed for precise load handling and a high speed for fast throughput.
- 4 INTRINSICALLY SAFE LIMIT SWITCHES**  
Standard upper and lower geared hoist motion limit switch prevents overloading. An additional block-operated upper control circuit limit switch is also provided as standard equipment.
- 5 INTRINSICALLY SAFE CONTROL STATION**  
Available when required.

## SPARK-RESISTANT OPTIONS:

- 6 BRONZE SHEAVES**  
Allow for safe and smooth operation, while preventing sparking as a result of friction between the wire rope and lower sheaves located within the hook block.
- 7 BRONZE TROLLEY WHEELS**  
Reduce possibility of sparking when in contact with steel rails, bridge, runway beams or drive pinions, thereby also reducing the possibility of igniting hazardous atmospheres.
- 8 BRONZE OR COPPER-PLATED LOAD HOOK**  
Solid bronze or copper-plated load hooks with our standard nylon sheave covers reduce the possibility of sparking in the event the hook block strikes steel or other ferrous metal objects. Load hooks include stainless steel spring-loaded safety latches.
- 9 DROP STOPS WITH RUBBER BUMPERS**  
Prevents sparking in the event of accidental collision with other equipment on beam.

## CORROSION-RESISTANT OPTIONS:

Available for the Global King and World Series hoists. Contact a CMCO customer service representative if required for your application.

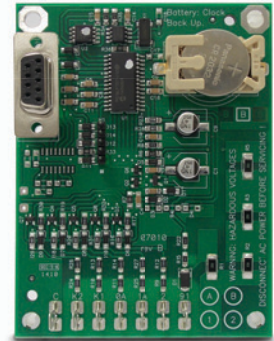
# PULSE™ MONITOR

## ELECTRONIC HOIST DATA INTERFACE

The proper use and maintenance of your Columbus McKinnon powered hoists can help ensure a long service life, as well as operator safety.

Pulse Monitor is an electronic monitoring system that records key performance data for your hoist during normal operation. The captured data can be read with the Pulse computer interface kit\* to assist you in troubleshooting and determining preventative maintenance solutions. A more accurate diagnosis can help reduce maintenance costs and minimize downtime.

Standard on our popular Yale Global King and Shaw-Box World Series wire rope hoists, Pulse technology is also available in kits for adaptation to other Columbus McKinnon hoists.



### WHAT INFORMATION DOES THE PULSE MONITOR RECORD?

The Pulse Monitor electronically captures key information with a time and date stamp every time the hoist's motor is powered on, including:

#### MOTOR STARTS

A motor start is recognized by energization of either the slow or fast motor winding for 300ms or more.

#### CUMULATIVE RUN TIME

Every time the motor is energized, the Pulse Monitor records how long it runs and adds to the cumulative total run time.

#### PLUG EVENT (EXCESSIVE PLUGGING)

A plug event is recorded when the directional contactor (node 0A or 1A) is energized four times within any two second period of operation.

#### OVERCAPACITY EVENT

An overcapacity trip will be recorded when the monitor card terminals K1 and K2 measure 115 volts\*\* and terminal 0A is at 0 volts. The overcapacity event is recorded based on absence of a voltage at the normally closed contact from the overload limit switch relay. It is not measuring load on the motor, but rather the state of the overload limit switch.

#### MOTOR TRIP EVENT

A motor trip event will be recorded when the monitor card terminal K1 measures 115 volts\*\* and terminal K2 is at 0 volts.

#### VOLTAGE MEASUREMENT

For every motor event, the voltage will be measured.



Pulse Monitor Interface Kit with USB Adaptor



## TOTAL COST OF OWNERSHIP

The long-term expense of maintenance, service fees and replacement parts can add up over the full service life of a hoist. All of these after-sale costs contribute to the total cost of ownership – which is an important factor to consider when making a purchasing decision.

The Pulse Monitor can help provide an even lower total cost of ownership for your CMCO hoist, by allowing for:

### BETTER MAINTENANCE TIMING

Consistently monitors motor starts, hoist run time and cumulative run time for preventative maintenance planning.

### REDUCED DOWNTIME DUE TO IMPROPER HOIST USE

Monitors excessive hoist use, excessive plugging, motor trip events and overcapacity events.

### VERIFICATION OF CLEAN LINE VOLTAGE

Measures voltages for every motor event to ensure hoist is running on adequate line voltage.

### LONGER HOIST LIFE

Allows operator to schedule maintenance at regular intervals and monitor hoist abuse.

## PULSE MONITOR KIT OFFERING

The Pulse Monitor is available in four different kit varieties to accommodate individual needs.

### PULSE MONITOR INTERFACE KIT WITH USB ADAPTOR

Catalog #: **PINTERFACEUSB**

Use with Yale Global King & Shaw-Box World Series hoists equipped with a Pulse Monitor Card. Kit includes:

- (1) Pulse Monitor Computer Interface (9V battery not included)
- (1) Serial Extension Cable (6 ft.)
- (1) Pulse Monitor Software Disk
- (1) StarTech.com USB Adaptor Software Disk
- (1) Serial Port to USB Adaptor Cable (3 ft.)

Note: Kit also includes a DB9 to DB25 pin adapter for 25-pin RS232 serial communication, which will not be needed in most cases.

### PULSE MONITOR INTERFACE KIT

Catalog #: **PINTERFACEKIT**

Use with Yale Global King & Shaw-Box World Series hoists equipped with a Pulse Monitor Card. Kit includes:

- (1) Pulse Monitor Computer Interface (9V battery not included)
- (2) Serial Extension Cable (6 ft.)
- (1) Pulse Monitor Software Disk

### PULSE MONITOR INDIVIDUAL CARD KITS

Catalog #: **PCARDKIT1** (Use with 115V control)

Catalog #: **PCARDKIT2** (Use with 24V control)

Use kits to install Pulse Monitor Card on CMCO hoists that do not include card as standard equipment. To read data on the card, a computer interface kit, sold separately, is also required. Kit includes:

- (1) Pulse Monitor Card
- (1) Card Mounting Bracket
- (1) Pulse Monitor Software Disk
- (6) Pan Head Phillips Screw Self Tap #6-32 X 5/8" (includes 2 extra)
- (3) Pan Head Phillips Screw Self Tap #10-24 X 1/4" (includes 1 extra)
- (10) Terminal Wire Insulated Female Quick Connector Panduit Part no. DNR14-188F1B-C (tab size 0.187 X 0.020) (includes 3 extra)
- (1) 16# Insulated Wire (15 ft.)

### PULSE MONITOR COMPLETE CARD & INTERFACE KITS

Catalog #: **PCOMLETEKIT1** (Use with 115V control)

Catalog #: **PCOMLETEKIT2** (Use with 24V control)

Use to install Pulse Monitor Card on CMCO hoists that do not include the Pulse Monitor Card as standard equipment. Kit also includes computer interface kits required to read card data. (Requires 3" X 5-1/4" X 2-1/2" envelope in control enclosure.) Kit includes:

- (1) Pulse Monitor Card
- (1) Card Mounting Bracket
- (1) Pulse Monitor Computer Interface (9V battery not included)
- (2) Serial Extension Cable (6 ft.)
- (1) Pulse Monitor Software Disk
- (1) StarTech.com USB Adaptor Software Disk
- (1) Serial Port to USB Adaptor Cable (3 ft.)
- (6) Pan Head Phillips Screw Self Tap #6-32 X 5/8" (includes 2 extra)
- (3) Pan Head Phillips Screw Self Tap #10-24 X 1/4" (includes 1 extra)
- (10) Terminal Wire Insulated Female Quick Connector Panduit Part no. DNR14-188F1B-C (tab size 0.187 X 0.020) (includes 3 extra)
- (1) 16# Insulated Wire (15 ft.)

Note: Kit also includes a DB9 to DB25 pin adapter for 25-pin RS232 serial communication, which will not be needed in most cases.

\* Computer interface kit (sold separately) is required to read Pulse Monitor Card data.

\*\* While the Pulse Monitor itself is capable of +/-5% voltage measurement accuracy, two additional factors may further decrease accuracy. Motor voltage is calculated using the control voltage powering the Pulse Monitor. This calculation is based on the ideal ratio of the control transformer (primary voltage to secondary voltage). Any variation in the control transformer ratio will consistently skew the motor voltage data. Additionally, this voltage measurement is made at the point where the Pulse Monitor is connected. If this point is significantly removed from the motor being monitored, a noticeable voltage drop may exist. The user is cautioned to consider both these contributing factors while interpreting the stored voltage data.







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Columbus McKinnon is committed to providing expert safety training on the proper use and inspection of rigging and overhead lifting equipment. Our company offers comprehensive programs at our national training centers as well as on-site at your facility. Courses include:

- Hoist Maintenance
- Safe Hoisting
- Rigging Gear Inspection
- Crane & Hoist Inspection
- Load Securement
- Crane Operator Training
- Rigging

Win in the marketplace with **CMCO University™**. This three-day program is designed to give Channel Partners intimate product and application knowledge that they can use to advise their end-user customers during the product selection and sales processes.



Columbus McKinnon's corporate headquarters in Getzville, New York, is home to our state-of-the-art **Niagara Training Center**. The 3,000-square-foot facility is dedicated to training Channel Partners and end users on the safe and proper use of hoist and rigging products. The Center offers a one-of-a-kind training experience on chain and rigging equipment with more than 75 manual and powered hoists, enclosed track systems and our 50-foot-wide crane system with 3-ton Yale Global King wire rope hoist.



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