Light Crane System
Complete your Light Crane System

Complete your Light Crane System with a hoist from the broadest portfolio of manual and powered hoists in the industry. The experience of a Columbus McKinnon Application Expert can help you select one that best suits your needs.

- **CM SHOPSTAR**
  Capacities from 1/8 to 1/2 ton
  Use when you need a rugged, high duty electric chain hoist that is lightweight and provides very low headroom.

- **Yale CPVF**
  Capacities from 1/8 to 2 tons
  Use when you need an economical, durable, general purpose electric chain hoist.

- **Yale YJL**
  Capacities from 1/8 to 2 tons
  Use when you need an industrial duty electric chain hoist available in single, two or variable speeds.

- **Yale CPE**
  Capacities from 1.6 to 10 tons
  Use when you need a highly efficient and economical product with high load, faster speeds, less reeving for professional applications, which makes service easy and inexpensive.

- **CM LODESTAR**
  Capacities from 1/8 to 3 tons
  Use when you want to utilize a best-in-class hoist for extra heavy duty applications that require special options and features—all backed by a lifetime warranty.

Hoists available in electric and air versions.
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Yale Light Cranes – a versatile and economic solution for loads up to 2000 kg and 10 meter span

Yale Light Crane System provides an ergonomic and cost effective solution to conventional overhead crane systems particularly when there is a height and space restriction. Versatile and reliable overhead handling can be achieved for a variety of applications using the Yale modular design. The robust design of our components and the high standard of manufacturing guarantees long life with the minimum of maintenance. Our program range consists of sliding door fittings, overhead conveyor systems, festoon systems, fall arrest systems and light cranes.

Features

- Loads up to 2000 kg
- Bridge spans up to 10 meters
- Modular design allows extendibility and relocatability
- Cost effective
- Easy to install using a variety of supporting brackets.
- Large range of mounting options
- Connectivity with future or existing overhead conveyor system
- Telescopic cranes
- Manual or electric Travel
- Floor or ceiling mounted cranes.
- Components available in gold or silver finish.
- Stainless steel cranes.

1. End stop with cable end clamp
2. Trolley with pin
3. Cable trolley
4. Track end stop
5. Festoon Storage
   It is possible to extend one of the long travel profile for festoon storage purposes. This way no crane travel space is lost.
6. End carriage with track joint
Light Crane Specifications

Our wide range of 3 Track profile sizes can accommodate loads up to 2000 kg. The Yale enclosed track tapered design allows correct alignment of the trolleys and reduces the possibility of dust build up. This ensures the smooth running of the trolleys and the long life of the crane. Yale light cranes require only 1-4% force of the weight being lifted in order to operate. For use in aggressive environments we can also offer Yale Cranes in stainless steel grade 304.
Floor Mounted Crane with Standard Long Travel Tracks

Floor mounted cranes are particularly useful when the roof cannot support an overhead Crane. The bridge profile is usually reinforced to achieve longer spans and plain long travel track profiles can be used by supporting them directly to an I beam that runs parallel above.

Floor Mounted Crane with Reinforced Long Travel Tracks

By using reinforced track profiles in the long travel the support distance can be increased rendering the I beams along the track profiles unnecessary. This way installation time is also minimised.
Ceiling Mounted Crane with Plain Long Travel Tracks

Ceiling mounted cranes are useful where the floor space is limited. Since the cranes are directly mounted on the ceiling and no supporting columns are necessary the working floors are kept clear for other operations. However it requires an adequate ceiling structure. Standard long travel can be used when short distance supporting is possible by utilizing I beams or other structures at the ceiling.

Ceiling Mounted Crane with Reinforced Long Travel

In the case where the overhead steel structure is limited, reinforced track profiles can be used to minimise the supporting points required.
Multiple Bridge Cranes

Multiple bridges can be used in the same long travel tracks in order to accommodate multiple operators working at the same time. To prevent one crane crashing into the other buffer zones can be created using different methods. This way it is also possible to use lower capacity long travel tracks with more than one bridge crane. For example a 500 kg runway can be used with 2 bridge cranes of 500 Kg each. In order to keep the distance between them and to avoid overloading the runways, buffer zones can be created.

Permanent buffer zones using end stops

Buffer zones using distancers

Mobile buffer zones
Telescopic Monorail and Cranes

In order to cover a wider area than the supporting space structure permits, a telescopic cross bridge is available. Using our components telescopic cranes are also possible which are very often installed in containers and trucks and used in the automotive industry for tool suspension.

<table>
<thead>
<tr>
<th>Yale Profil No.</th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>P max Kg</td>
<td>125</td>
<td>250</td>
<td>500</td>
</tr>
<tr>
<td>A max mm</td>
<td>1300</td>
<td>1300</td>
<td>1300</td>
</tr>
</tbody>
</table>
Utilizing our enclosed Profiles we produce high quality and low cost jib cranes suitable for wall or pillar mounting. Our standard range covers 180 degrees for capacities of up to 1000 kg. Our jib crane sets come complete with a trolley for load suspension and the appropriate cable / hose trolleys.

Our enclosed profile design offers ease of use and minimal pulling / pushing force in the operation of the jib cranes. This is critical for the ergonomic operation of the jib crane, and to minimise potential strain on the user.

<table>
<thead>
<tr>
<th>Weight kg</th>
<th>L mm</th>
<th>Yale Profile No.</th>
<th>H mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>4000</td>
<td>I</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>6000</td>
<td>II</td>
<td>1000</td>
</tr>
<tr>
<td>500</td>
<td>4000</td>
<td>II</td>
<td>900</td>
</tr>
<tr>
<td></td>
<td>6000</td>
<td>II</td>
<td>1100</td>
</tr>
<tr>
<td>1000</td>
<td>4000</td>
<td>III</td>
<td>1000</td>
</tr>
</tbody>
</table>
Flexible Cranes System - Monorial/Single-girder Crane

Monorail model YKR-M
Capacity 125 - 1000 kg
The monorail is adapted to our range of hoisting equipment and offers versatile solutions for lifting and moving loads. Standard connections and fastening arrangements ensure easy assembly.
The modular design enables modifications required by changing production conditions to be carried out easily and quickly.

Specifications model YKR-M

<table>
<thead>
<tr>
<th>Profile YSK-ES</th>
<th>Overall height adjustable mm</th>
<th>Capacity in kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>125</td>
</tr>
<tr>
<td>I</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>Suspension spacing for monorail Lm m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>125</td>
<td>4.1</td>
<td>2.5</td>
</tr>
<tr>
<td>250</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Single-girder crane model YKR-S
Capacity 125 - 1000 kg
Single-girder cranes of the YKR-S model range are user-friendly cranes with a large operating radius. Swaying of the load is reduced, since the push-type trolley automatically aligns to the optimal lifting position.
The three-dimensional design and its low deadweight contribute to providing ergonomic solutions to lifting tasks at the workplace.

Specifications model YKR-S

<table>
<thead>
<tr>
<th>Profile YKR-S</th>
<th>Capacity in kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>125</td>
</tr>
<tr>
<td>I Span lxt</td>
<td>4.6</td>
</tr>
<tr>
<td>I Girder length lxt</td>
<td>5.0</td>
</tr>
<tr>
<td>II Span lxt</td>
<td>7.45</td>
</tr>
<tr>
<td>II Girder length lxt</td>
<td>8.0</td>
</tr>
</tbody>
</table>
Double-girder crane model YKR-D

Capacity 125 - 2000 kg

Double-girder cranes of the YKR-D model range are also suitable for heavy loads owing to their wide load capacity range. The position of the hoist between the bridge profile sections ensures maximum utilization of the lifting height.

### Specifications model YKR-D

<table>
<thead>
<tr>
<th>Profile YKR-D</th>
<th>Capacity in kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>125</td>
</tr>
<tr>
<td>I Span la</td>
<td>6.2</td>
</tr>
<tr>
<td>I Girder length lb</td>
<td>9.0</td>
</tr>
<tr>
<td>II Span la</td>
<td>8.5</td>
</tr>
<tr>
<td>II Girder length lb</td>
<td>9.0</td>
</tr>
</tbody>
</table>

Single-girder and double-girder cranes can either be fitted to the ceiling structure or to free-standing supporting frames.

A further application is the use of an existing rack structure as the supporting structure for single-girder suspension cranes. This application is not only more economical than a free-standing supporting structure but also enables the system to be used without an existing roof profile sections.
Festooned cable system
The Yale festooned cable system kit contains all the parts necessary to install a power supply.

Features
- The PVC flat cable 4 x 2.5 mm² is suitable for all electric hoists with a power consumption of up to 25 A.
- The rollers are fitted with bronze bushes resp. ball bearings.
- The C-rail, rail support brackets and rail connectors are zinc-plated for added protection against corrosion.

Options
- Mounting kit consisting of support arm and girder clips for connection to the beam.

Quantity of units dependant on track length.

Special applications e.g. for curves or cable trolley for round cables on request.

Optional: Mounting kit consisting of support arm and girder clips for connection to the beam.
General

Insulated Conductor System U15, U25, U35, U15, U25, U35 are single-phase, insulated conductor rails for use in cranes (overhead cranes, loading bridges, etc.), monorail systems, AS/RS systems, elevator systems, sliding doors, data and signal transmission, amusement rides, high-voltage installations, conductor rail trench systems, and many more, for a current consumption of 10 to 1250 A.

The insulated conductors U15, U25 and U35 are designed according to VDE 0100, which is today’s international safety requirement and are finger safe to VDE 0470, part 1 (EN 60 529) (Protection code IP 23 in hanging arrangement).

For collectors is this touch proof only valid if the carbons are completely inside the bus bar.

In hand areas installed conductor systems, in which the collectors leave the bus bar due to site requirements, the customer has to make sure that touch proof is created on site. (e.g. barriers or disconnection)

This is only valid for voltages over 25 Volt AC or 60 Volt DC. The adjacent picture demonstrates that the VDE test finger cannot reach live conductors.

The shroud which envelopes the various conductors is an excellent insulator. Therefore our unipole insulated conductors guarantee utmost safety in operation.

Any number of conductors can be installed side by side at minimum space requirement. Standard rail sections U15, U25 are 6 m and U35 6,25 m long. Shorter sections are available.

Joint splices

Bolted joint splices are designed to rigidly join conductor bars and provide mechanical and electrical continuity. They include insulated protection covers.

Expansion joint sections must be provided for high temperature fluctuation and for system runs exceeding 100 m for U 15 (150 m for U 25/U 35) - see installation procedure.

Feed terminals

Feed terminal sets are preferably installed at conductor joints. Adequate single core feed cables must be provided for connection of the incoming power.

End caps

The open ends of unipole conductors are closed by end caps.

Transfer funnels and Transfer guides

Single pole and multi pole transfer guides are available for spur lines, turntables and switches or other transfer applications.

Isolating sections

Isolating sections are electrical interrupts of the conductor. Under normal operating conditions a cross over with collectors to switch the voltage off or on is only allowed with low power ratings (control current).

Conductor isolating sections are available for sectionalizing control circuits, maintenance bays etc.

Curves

Factory fabricated or field prepared radius bends (not U35) can be used for horizontal or vertical curves.

Collectors

Depending on the system requirement single or double collectors are used.

The mentioned continuous current are for collectors in stand operation with copper conductors. With the AE-conductor the collectors which are working with only > 10 m/min. Travel speed or stand most of the time are only permitted to work with 50% of the continuous current.

The length of the collector connection cable is not allowed to exceed 3 m, if the preceding overload protection is not dimensioned for this connecting cable.

See VDE 0100 part 430 and EN 60204.

(Note: This often occurs with more than one collector per system. The supplied connecting cable (H07 RN-F) is suitable for the mentioned currents. For the different cable layings have the reduction factors according to VDE 0299 to be considered.

Safety advice

It must be ensured that the arrangement of the conductor system provides minimum distances (0.5 m) between fixed and mobile plant parts (i.e. between conductor rails, collector trolleys and towing arms) so as to avoid the risk of pinching.

<table>
<thead>
<tr>
<th>Profile</th>
<th>Type</th>
<th>Nominal Voltage</th>
<th>Continuous ampere capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>U15</td>
<td></td>
<td>000 V</td>
<td>100 A</td>
</tr>
<tr>
<td>U25</td>
<td></td>
<td>1000 V</td>
<td>450 A</td>
</tr>
<tr>
<td>U35</td>
<td></td>
<td>1000 V</td>
<td>1250 A</td>
</tr>
</tbody>
</table>
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