

REQUEST FOR QUOTATION

New Equipment Inspection

Company Name: _____

Address: _____

City, Province: _____ Contact Name: _____

Postal Code: _____ Phone: _____ Fax: _____

Job Reference: _____ E-Mail Address: _____

Equipment Type: T/R D/G Bridge Crane D/G Trolley Hoist D/G Gantry Crane Jib Crane
 T/R S/G Bridge Crane S/G Trolley Hoist S/G Gantry Crane Radio Control Unit
 U/R S/G Bridge Crane Monorail Trolley Hoist Chain Hoist Other: _____

MAIN HOIST

Wire Rope Chain
 Lifting Capacity: _____
 Lift Height: _____
 Lift Speeds: VFD
 Two Speed
 Single Speed
 Manual
 Trolley Speeds: VFD
 Two Speed
 Single Speed
 Manual

AUXILIARY HOIST (if applicable)

Wire Rope Chain
 Lifting Capacity: _____
 Lift Height: _____
 Lift Speeds: VFD
 Two Speed
 Single Speed
 Manual
 Trolley Speeds: VFD
 Two Speed
 Single Speed
 Manual

BRIDGE (if applicable)

Capacity: _____
 Span: _____
 Travel Speeds: VFD Single Speed
 Manual Two Speed

CLASS (Service)

Class A - Infrequent Class D - Heavy
 Class B - Light Class E - Severe
 Class C - Moderate Class F - Mill Duty

If there are two hoists on this equipment, are they to be on separate trolleys or one common trolley? Separate Common

CONTROL

Pendant on Track
 Pendant from Hoist
 Radio Control with Pendant Back-Up
 Power Supply _____

OTHER

Enclosures: CEMA 1 (Indoors) CEMA 12 (Dust Tight) CEMA 4 (Outdoor Moisture Tight)

RUNWAY

Do you require a runway system for this equipment? Yes No
 If yes, please check all the components you require.
 Conductor Beam Columns Rail
 What is the required length of the runway? _____
 If new columns are required, will they be free standing tied back to existing structure
 What is or what will be the column center to center spacing? _____
 Do you require installation of this equipment? Yes No
 Do you require freight to the job site? Yes No
 If yes, what is the location? as above OR: _____

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 MISSISSAUGA / GTA Sales and Customer Assistance 1.866.672.5719
 HAMILTON 24 Customer Service Line All Ontario 1.800.461.4509

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OVERVIEW

- Service
 - Emergency 24 Hour Service
 - Equipment Inspections
 - Inspection Certificates
(In compliance with MOL)
- Parts for All Cranes and Related Equipment for All Manufacturers
- Training Seminars in Crane Operation
- Non-destructive Testing for All Types of Lifting Attachments
- Rebuilds, Upgrades and Modifications of Existing Systems
- Chain Hoists and Lifting Attachments
- Standard Overhead, Jib and Gantry Cranes
- Custom Cranes
- Heavy Duty Cranes
- Runway Systems and Monorail Systems
- Installations by Factory Trained Personnel

CRANE COMPONENTS

Bridge - The main travelling structure of the crane which spans the width of the bay. The bridge consists of two end trucks and one or two bridge girders depending on the **Equipment Type**.

End trucks - Located on either side of the span, the end trucks house the wheels on which the entire crane travels. These wheels ride on the runway beam allowing access to the entire length of the bay.

Bridge Girder(s) - The principal horizontal beam of the crane bridge which supports the trolley and is supported by the endtrucks.

Trolley Hoist - The unit consisting of both the hoist and the trolley frame. In situations where more than one hoist is required on one crane, both hoists can be supplied on a single trolley or on separate trolleys.

Trolley - The trolley carries the hoist across the bay along the bridge girder(s) traversing the span.

Hoist - The hoist is mounted to the trolley and performs the actual lifting function via a hook or lifting attachment. There are two basic types of hoist. The first is a **Wire Rope Hoist** which is very durable and will provide long term, reliable usage. The other type of hoist is the **Chain Hoist**. These hoists are used for lower capacity, lighter duty applications and for projects in which cost is a primary deciding factor.

CRANE CLASSIFICATIONS

The Crane Manufacturers Association of America (CMAA) has established six service classes to enable the purchaser to specify the most economical class of crane for a particular installation. It is uneconomical to either under specify or over specify when choosing a service class. Specifying a crane with too light a service class will reduce cost but may result in excessive maintenance. A crane with too high a service class may decrease maintenance costs but at an excessive initial investment.

Class A - infrequent Service **Class D** - Heavy Service
Class B - Light Service **Class E** - Severe Service
Class C - Moderate Service **Class F** - Mill Duty

BASIC TERMINOLOGY

Capacity - The maximum weight the crane will be required to lift.

Span - The horizontal distance between the rails of the runway on which the crane is to travel.

Lift or Hook Height - The required distance from the floor to the crane hook. This dimension is critical in most applications as it determines the height of the runway from the floor and is dependent on the clear inside height of the building.

Bridge, Trolley and Lift Speeds - The rate at which the bridge or trolley travels, or at which the hoist lifts, usually in feet per minute or FPM. You may specify either Single Speed or Two Speed travel / lift or a specific rate of speed, (i.e. 120 & 30 FPM bridge travel). Another option as far as motion speeds are concerned is a Variable Frequency Drive. See the Control section for more information.

EQUIPMENT TYPES

This section specifies the kind of equipment you require. Overhead cranes come in four basic configurations;

Top Running (T/R) - The crane bridge travels on top of rails mounted on a runway beam supported by either the building columns or columns specifically engineered for the crane.

Under Running (U/R) - The crane bridge travels on the bottom flange of the runway beam which is usually supported by the roof structure.

Single Girder (S/G) - The crane consists of two end trucks, a single bridge girder and the trolley hoist unit. The trolley runs on the bottom flange of the bridge girder.

Double Girder (D/G) - The crane consists of two end trucks, two bridge girders and the trolley hoist unit. The trolley runs on rails on top of the bridge girders.

A variation on these types of overhead crane are **Gantry Cranes**. These cranes are essentially the same as the regular overhead cranes, however, the bridge girder(s) are connected to "legs" on either side of the span. These "legs" eliminate the supporting runway and column system and connect to end trucks which run on a rail either embedded in, or laid on top of, the floor.

For some applications only a **Trolley Hoist** is required. For instance, in the case of a monorail system a **Trolley Hoist** unit similar to the one used on single girder cranes is mounted on a beam which might be used to service an assembly line within the clients facility. Other clients may have an existing single or double girder crane bridge and may just want to replace the hoisting unit. In most of these situations, capacity permitting, we can provide either a **Wire Rope** or **Chain Hoist**.

Another solution which may fit your needs is a **Jib Crane**. A **Jib Crane** basically consists of a boom which is supported as a cantilever on a column. A **Trolley Hoist** travels along the boom which can rotate.

CONTROL

Pendant - The pendant provides the operator precise control over the motions of the crane. There are many configurations of pendant depending on the functions of the equipment being controlled. Each pushbutton on the pendant controls an operating function of the crane.

The pendant may be suspended from the **Trolley Hoist**, requiring the operator to walk with and beside the load, or on a separate sliding track system allowing the operator to move independently of the load.

VFD - A pendant can also be used in conjunction with a **Variable**

Frequency Drive. A **VFD** is used to vary the frequency of the motors controlling the motions allowing for smooth acceleration and deceleration. The buttons on the pendant operate a VFD unit in much the same way as **Two Speed** control. The first step is held to maintain the current speed while the second step is used for acceleration. Deceleration is achieved by releasing the button entirely. Pressing the button back to the first step will maintain the new slower speed. It should be noted that the deceleration is not achieved through uncontrolled coasting but through a programable dynamic braking system. The control provided by a **VFD** allows for a high level of customization.

Radio Control - The radio control performs exactly like the pendant but operates using a radio frequency. The radio control incorporates numerous safety features and allows the operator a greater range of operator motion than a pendant.

Power Supply - The electrical service available in the building for which the crane is being designed (i.e. 575 Volt, 3 phase, 60 Hertz).

Enclosures - The enclosures house all of the electrical components on the crane and are rated by the **National Electrical Manufacturers Association (NEMA)** or the **Canadian Electrical Manufacturers Association** as to the level of protection they provide from the conditions in the surrounding environment. There are three basic levels of protection.

CEMA/NEMA 1 - Provides protection against accidental contact with, and electrical shock from, enclosed equipment.

CEMA/NEMA 12 - Provides indoor protection against falling dirt, dust, oil and water.

CEMA/NEMA 4 - Provides indoor protection in hosed down, very wet or outdoor environments, as well as falling dirt, dust, oil and water.

RUNWAY

The rails, beams and columns on which the crane operates. The rail, on which the endtrucks run, is fastened to the runway beam. This beam is then supported on columns (**Top Running**) or from the roof structure (**Under Running**). The existing building columns can be used or new ones can be supplied with the system. New columns can either be completely **Free Standing** or **Tied Back** to the existing building structure for additional lateral support. When designing a runway system that is utilizing existing building columns, it is important to provide the center to center spacing between the columns. **Conductors** supply power to the crane and are mounted on the runway beam.

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