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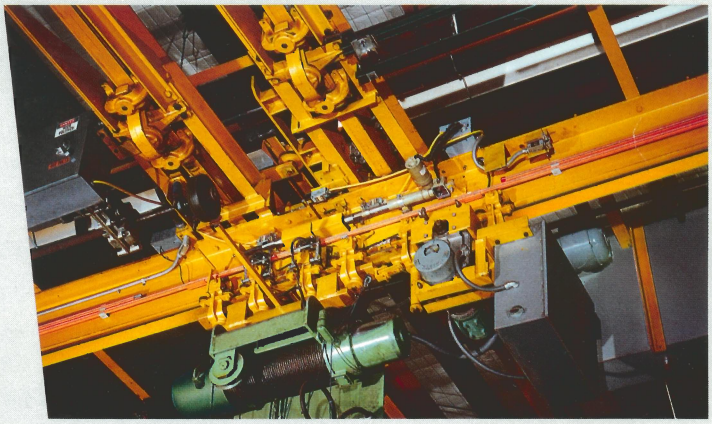

Metal Buildings and Underhung Cranes
A Systems Approach to Built-In Efficiency

A Systems Approach to Crane/Building Design

A building is much more than a shelter from the elements. Properly designed, it can be an integral part of the manufacturing process within.

When cranes and buildings are designed independently, there is an unavoidable redundancy in structural steel which can compromise either the use of valuable floor space or crane flexibility.

By integrating the design of the building and the crane system in the earliest stages of the building project, maximum benefits can be achieved.

We know that this approach works. For years, TC/American Monorail has worked cooperatively with metal building suppliers to produce quality, cost-efficient systems which have, in turn, satisfied the customers' ultimate total needs.

Careful attention to customer satisfaction—before and after the sale—is a TC/American Monorail trademark. Engineered reliability is backed by a continuous commitment to provide the most productive, yet most economical, equipment for the job.

A TC/American Monorail Crane To Meet Your Material Handling Requirements

Just as no one building can satisfy all manufacturers' needs, neither can just one style of crane satisfy all the material handling requirements within a building. There are numerous features and benefits available in the TC/American Monorail product line which will satisfy almost any need for material handling—and any metal building architecture.

Involving your TC/American Monorail representative in the earliest building planning stages will allow you—the owner—and the builder to evaluate the crane options that will do the best job. Consider these six basic options:

1 Single-Girder or Single-Bridge Cranes

These are the cranes most commonly used to satisfy the majority of material handling requirements in a manufacturing or assembly operation.

2 Triple-Girder Cranes

When needs for improved headroom, longer span or greater capacity exceed the limits of a single-girder crane, this hybrid may well be the answer. Triple-girder cranes span greater widths and carry greater capacities due to the nature of their design.

3 Double-Girder Cranes

Double-girder cranes allow the hoist to be brought up in between the griders to improve the hook height. Because two girders are used to carry the load, longer spans can be bridged for capacities up to 15 and 20 tons.

1

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4 Truss Cranes

When the crane bay reaches dimensions of 90 to 100 feet, it may be necessary to consider a truss crane. Truss cranes can be built with free spans of up to 100 feet and a 10-ton capacity.

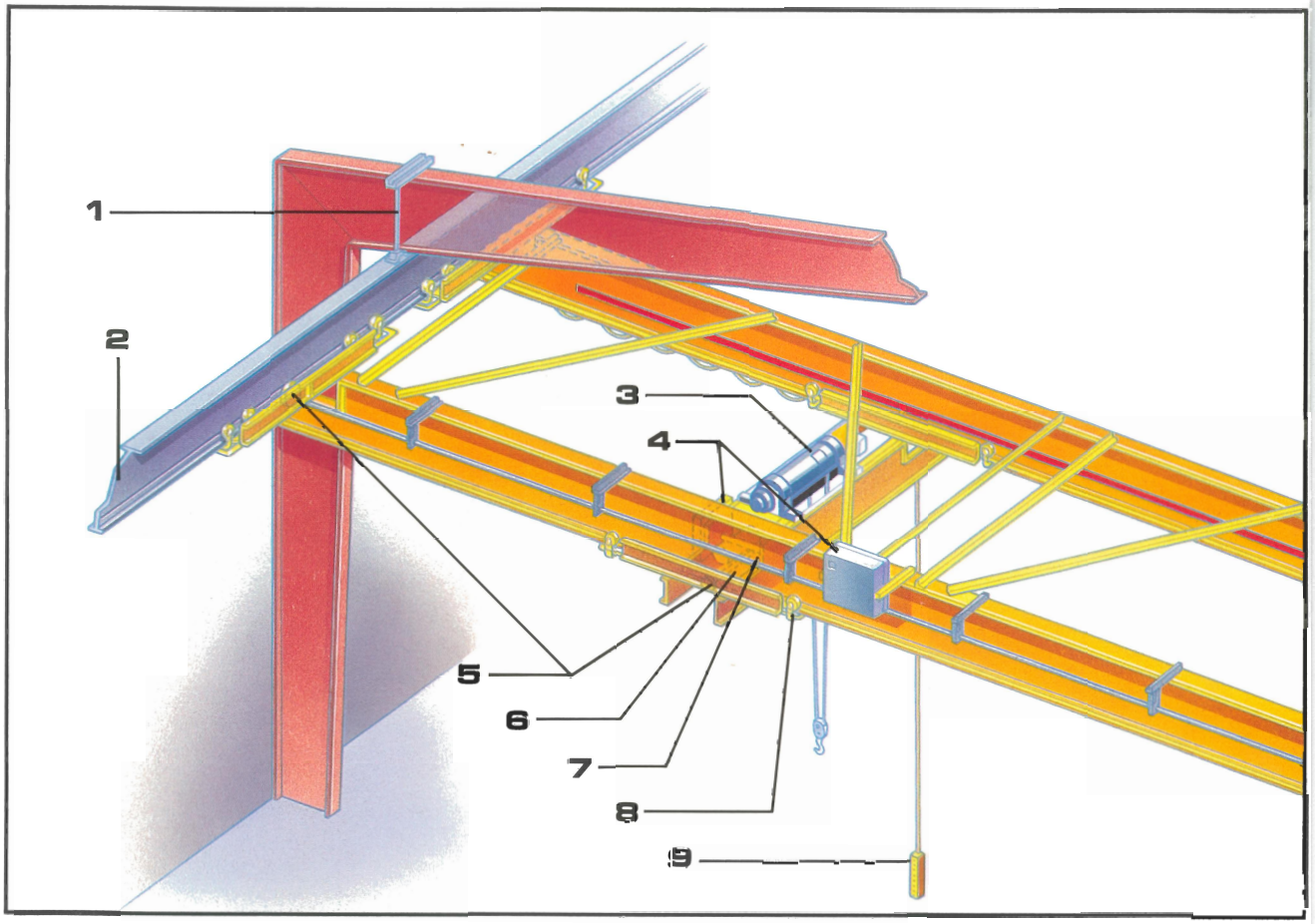
5 Multiple-Runway Cranes

When the free span in the crane bay is well over 100 feet, as frequently happens in the aerospace industry, a multiple runway crane may be the answer. They can be built to an almost unlimited length, and it is not uncommon to have seven or more runways and cranes 200 feet or more in length operating in a single bay.

6 Interlocking Cranes

When the need arises to transfer a hoist load from one crane bay adjacent to a second crane bay, the unique interlocking feature of TC/American Monorail underhung cranes is a decided asset. A crane in each of the two bays locks into a fixed crossover track, allowing the load to be transferred without setting the load down.

If there is no column line separating the crane runways, the crossover may be omitted. The crane bridges can interlock directly, one to the other, at a point along the runway.



Typical Metal Building Crane Installation

1 Flexible Suspension
-Simple attachment to a pre-engineered building
-Compensates for building expansion
-Compensates for initial misalignments
-Allows for easy re-leveling of runway should building settle

2 Three-Piece Track
-Less beam weight
-Hard, high-carbon steel operating tread
-Flat, uniform-width operating tread

3 Hoist
-As required by the application or specified by the customer

4 Control Panel
-Totally enclosed, gasketed cover
-Manual disconnect switch
-Magnetic mainline contactor
-Short circuit protection
-Motor-running overcurrent protection
-Fused secondary on transformer
-Adjustable ballast resistor

5 Drive Wheels
-Solid rubber or polyurethane, spring-loaded for constant and uniform pressure or steel load-carrying wheels available

6 Reducer
-Spur gear
-Splash lubricated
-Hardened gears

7 Drive Motor
-Rated for 30 minutes
-Class B insulation crane duty
-Disc brake

8 Articulating Trolleys
-Hardened steel wheels
-Re-greasable wheel bearings
-Easily removable wheels
-Trolley design reduces asymmetric loading

9 Control Pendant
-Control position from either hoist or carrier, or from trolley track at customer's option

TC/American Cuts Costs

System Design

- Design flexibility
- Lighter building loads
- Pre-engineered components available to custom fit your application
- Eliminates redundant structure
- Efficient use of floor and air space
- Optimum material flow

Ease of Installation

- All cranes are completely mechanically and electrically assembled and factory tested
- Runways are prefabricated, pre-punched, pre-cut, and pre-painted
- Match-marked crane runways reduce installation time
- Crane runways use bolt-together construction for splices and supports

Ease of Expansion

- Underhung design permits economical expansion of the crane system by interlocking with additional cranes and/or monorails
- Bolt-together runway construction allows for easy modification
- Standard design of all components ensures compatibility

Ease of Maintenance

- Interchangeable standard parts
- Trolley design allows easy wheel changing
- Hardened operating track reduces need for runway beam replacement
- Steel wheels with hardened treads for long life
- Hardened gears in reducers

A Wide Range of Options

- Multiple runway and interlocking systems
- Single-, double-, triple-girder or truss cranes
- Optional steel load-carrying drive wheels available

Complete technical details can be obtained on all of our features and product benefits by contacting either TC/American Monorail or your nearest TC/American Monorail representative.

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