TECHNICAL CRANE REPORT

NORTH AMERICAN INDUSTRIES, INC.

Single Girder or Double Girder Crane?

Bridge cranes can be designed having either 1 or 2 cross girders. A common misconception is that double girder cranes are more durable.

Based on CMAA (Crane Manufacturers Association of America) specifications, both single and double girder cranes are equally rigid, strong and durable. This is because single girder cranes use much stronger cross girders than double girder cranes, and single girder cranes have lateral bracing, unlike double girder cranes.

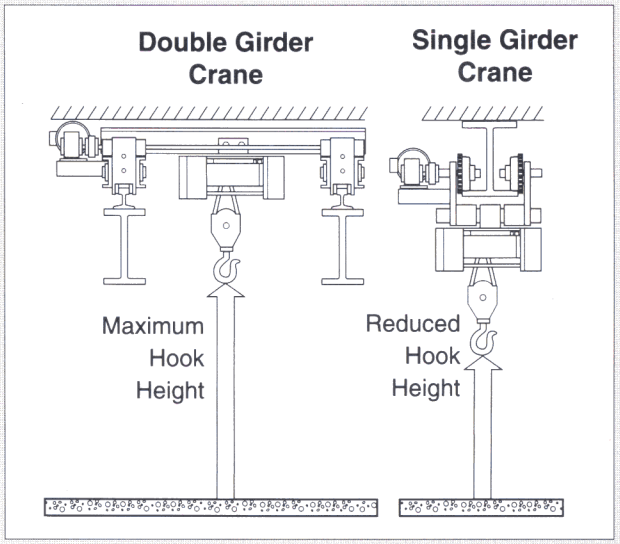
Hook height (lift) is the issue.

The real difference between single and double girder cranes is hook height (how far above the floor your hoist will lift). Double girder cranes provide better hook height, typically 18-36 inches better.

Double girder cranes can provide more lift, because on double girder cranes the hoist is placed between the cross girders, not under the cross girder. You gain the depth of the cross girder.

Cost considerations

Single girder cranes cost less in many ways:
Only 1 cross girder is required, the trolley is simpler, freight costs less, installation is quicker, and your runway beams are lighter due to the reduced crane dead weight.



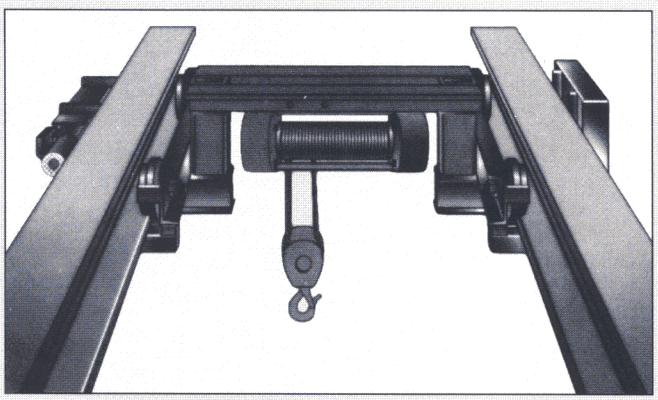
Double girder cranes provide greater hook height, but are no more durable than single girder cranes.

Not every crane can be a single girder crane.

Single girder cranes have been built in spans over 100' and capacities of over 100 tons, but typically cost effective engineering dictates that single girder cranes be considered as per this chart.

Cost Effective Single Girder Cranes

Capacity *(Tons)*	Max. Span *(Feet)*
0–7.5	80
10	75
15	65
20	60
25	55
30	50
35	45



Ultra low headroom trolley installed on a double girder crane for an extra compact crane.

Ultra low headroom (ULH) trolleys for extra compact cranes.

Double girder cranes typically have the hoist and trolley riding on top of the cross girders. As an option, we can provide a trolley that rides between the cross girders. This is beneficial:

- If maximum hook height is required.
- If your cross girders, as well as your hoist, must be the maximum height above the floor.
- If you must minimize the distance above your runway beam.

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