

Overhead Bridge Crane Operating Speeds

1. Overview

Determining the proper speed for a new overhead bridge crane is not easy. An overhead bridge crane with too much speed is a costly and dangerous tool. An overhead bridge crane with not enough speed is an obstruction to proper production methods and a complete waste of money. Often, workers will use older and faster equipment rather than newer, slower, equipment because management decided a faster crane wasn't necessary – more on that later.



Fig. 101

2. Mini-Case – the old crane versus the new crane.

At a nameless Chicago forging facility, Overhead Crane A (see fig. 101) was built in the 1930's, and is relatively high-speed. Overhead Crane A was manufactured by a company no longer in business, and was costly to repair as each part was custom-made. Crane A was made well, but worn out and ready for the scrap yard. The management of this Chicago-area facility bought Overhead Crane B, but skimmed on speeds. As a result, workers are not able to achieve prior rates of production achieved with the old overhead crane. Strike One: Overhead Crane B cannot pay for itself as the management thought it could. Workers continue to use Overhead Crane A when the boss is not looking, and it continues to break down, costing lots of money. Strike Two: Overhead Crane A should be in the scrap yard, or on stand-by status, not being used up every day. Now when Overhead Crane A goes down, the owner is stuck with one old useless crane, and one new sorta-useless overhead crane. Strike Three: Production slows down, and heads roll.

3. Speeds for Standard Cranes

Keeping in mind that a standard overhead bridge crane (class “C”) is between two and twenty tons rated capacity, has about twenty foot height of lift, and spans under sixty-four feet, the speeds are easy. There is typically a base speed and one or two upgrade speeds for each motion. See the chart below for typical standard and upgrade speeds for standard overhead bridge cranes. Keep in mind these are general speeds – overhead bridge cranes are available in many different fast and slow speeds.

Capacity	Motion	Standard Speeds (in fpm)	Upgrade Speeds
2	Hoist	30	40
	Trolley	50	80
	Bridge	60	100, 150
5	Hoist	15	20, 30
	Trolley	50	80
	Bridge	60	100, 150
7	Hoist	10	15, 20
	Trolley	50	80
	Bridge	60	100, 150
10	Hoist	10	15, 20
	Trolley	45	50
	Bridge	60	100, 150
15	Hoist	5	10, 15
	Trolley	45	
	Bridge	60	100, 150
20	Hoist	5	10
	Trolley	45	
	Bridge	60	100, 150

3. Speeds for Class “D”, “E”, and “F” Cranes

Many speeds are offered as cranes become more highly customized. Bridge speeds for long runways or high-cycle cranes can easily see 300 fpm. Trolley speeds on long-span cranes can top 120 fpm, and hoisting speeds on high-cycle or long-lift can advance to

fifty or sixty fpm, if not more. It's best to map answer the following questions and then contact Dearborn Overhead Crane at 800-CRANE-58 with your answers.

Custom Crane Speed Questions

- What is the crane primarily handling?
- How far does the crane typically travel?
- How many starts per hour in each direction?
- What is the lifting height?
- Are you happy with an existing overhead bridge crane's speeds?