GORBEL
A CLASS ABOVE

Design Standards

All Gorbel Work Station and Jib Cranes are structurally designed in accordance with the ***AISC Steel Construction Manual***.

All Gorbel Work Station and Jib Cranes are in accordance with ***OSHA Specification 1910.179 (CMAA Specification 61)*** and ***ANSI Specification B30.11***, as they apply to Jib and Overhead Cranes.

All Work Station Cranes are in accordance with the following Canadian Standards as they apply to Overhead Cranes: ***CSA Standard B167-96 and CSA Standard C22.2 No.33-M1984 (reaffirmed 1992)***

All Gorbel Jib and Work Station Cranes have a design factor of 15% of the allowable capacity for hoist weight and 25% of the allowable capacity for impact.

Fabrication Standards: All welding is in accordance with ***AWS D14.1***, and is performed by certified welders.

All holes in steel with bearing loads are either punched or drilled. Flame cut holes are not permitted in these applications.

Material Standards: All structural shapes used by Gorbel are a minimum of ***ASTM A-36*** designation. All pipes are structural grade ***ASTM A-53*** and all tubing is ***ASTM A-500***.

All plate and round bar has ***minimum yield strength of 36 KSI.***

Painting Procedure: All structural components are shotblasted and/or washed utilizing a high pressure/high temperature iron phosphate solution prior to painting. A conventional air-assisted airless paint system is used to apply a high solids industrial baking enamel which is cured at elevated temperatures inside an industrial oven.

Some pre-assembled components (example: Work Station Crane endtrucks and hoist trolleys) are powder-coated finish.

Deflection Guideline:

Consider both deflection and stress. The difference in elevation of the track between an unloaded crane and fully loaded crane; measure in inches. L= support center distance. Gorbel tends to have stricter deflection guidelines than others in the industry because we consider both deflection and stress.

> **Work Station Cranes**: Typical design guidelines are L/450 for bridge cranes
> **Work Station Jib Cranes**: Typical design guidelines are L/320 for wall mounted(WSJ200), L/200 for free standing(WSJ360), and L/450 for aluminum work station jibs (AL100).
> **Jib Cranes**: Typical design guidelines are L/150 for wall cantilever (WC), free standing (FS), and mast type (MT), although not all designs meet the guidelines, many are L/150 or better. Wall bracket (WB) are L/450.