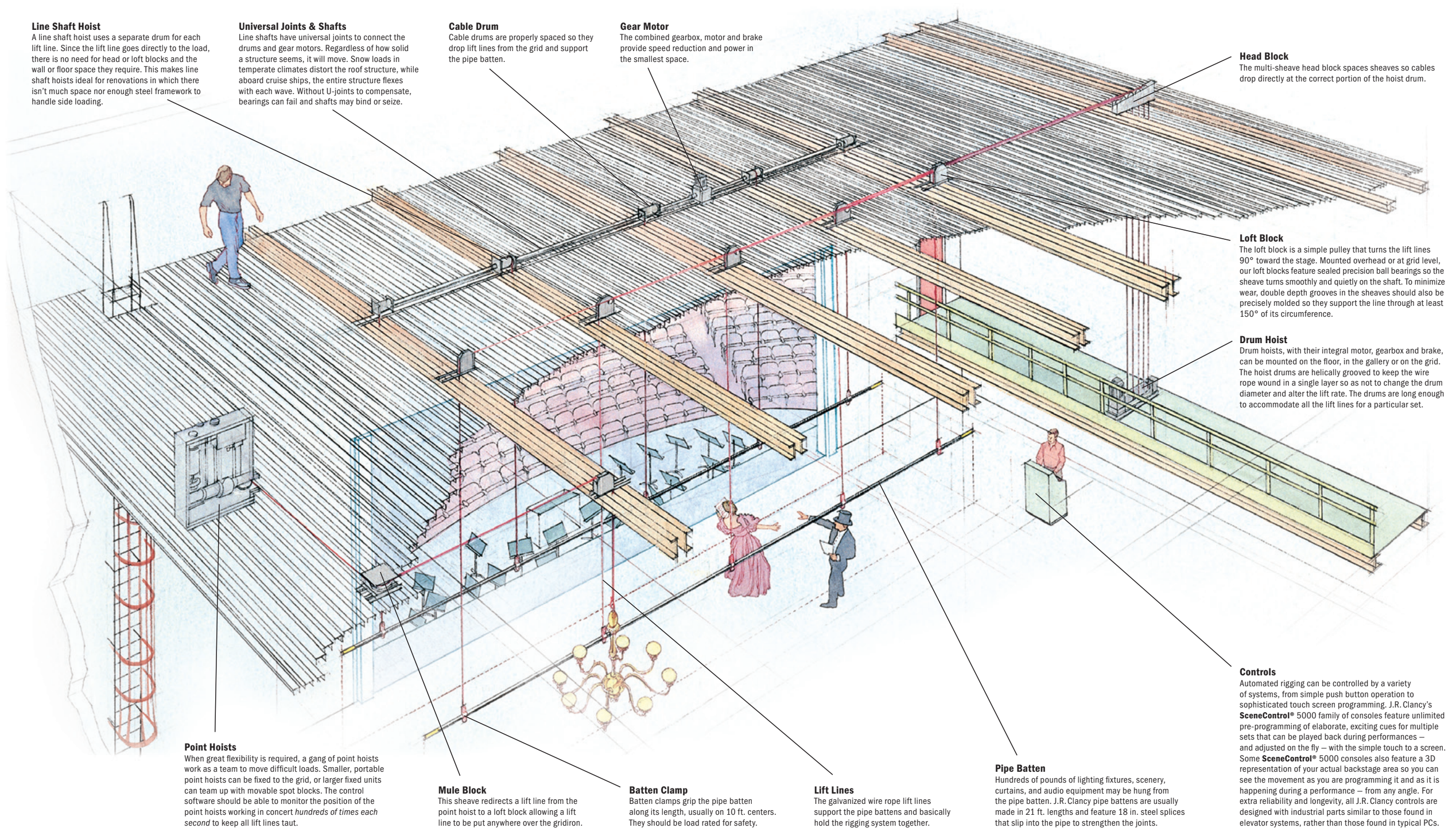


# How Automated Rigging Works



## Line Shaft Hoist

A line shaft hoist uses a separate drum for each lift line. Since the lift line goes directly to the load, there is no need for head or loft blocks and the wall or floor space they require. This makes line shaft hoists ideal for renovations in which there isn't much space nor enough steel framework to handle side loading.

## Universal Joints & Shafts

Line shafts have universal joints to connect the drums and gear motors. Regardless of how solid a structure seems, it will move. Snow loads in temperate climates distort the roof structure, while aboard cruise ships, the entire structure flexes with each wave. Without U-joints to compensate, bearings can fail and shafts may bind or seize.

## Cable Drum

Cable drums are properly spaced so they drop lift lines from the grid and support the pipe batten.

## Gear Motor

The combined gearbox, motor and brake provide speed reduction and power in the smallest space.

## Head Block

The multi-sheave head block spaces sheaves so cables drop directly at the correct portion of the hoist drum.

## Loft Block

The loft block is a simple pulley that turns the lift lines 90° toward the stage. Mounted overhead or at grid level, our loft blocks feature precision ball bearings so the sheave turns smoothly and quietly on the shaft. To minimize wear, double depth grooves in the sheaves should also be precisely molded so they support the line through at least 150° of its circumference.

## Drum Hoist

Drum hoists, with their integral motor, gearbox and brake, can be mounted on the floor, in the gallery or on the grid. The hoist drums are helically grooved to keep the wire rope wound in a single layer so as not to change the drum diameter and alter the lift rate. The drums are long enough to accommodate all the lift lines for a particular set.

## Point Hoists

When great flexibility is required, a gang of point hoists work as a team to move difficult loads. Smaller, portable point hoists can be fixed to the grid, or larger fixed units can team up with movable spot blocks. The control software should be able to monitor the position of the point hoists working in concert *hundreds of times each second* to keep all lift lines taut.

## Mule Block

This sheave redirects a lift line from the point hoist to a loft block allowing a lift line to be put anywhere over the gridiron.

## Batten Clamp

Batten clamps grip the pipe batten along its length, usually on 10 ft. centers. They should be load rated for safety.

## Lift Lines

The galvanized wire rope lift lines support the pipe battens and basically hold the rigging system together.

## Pipe Batten

Hundreds of pounds of lighting fixtures, scenery, curtains, and audio equipment may be hung from the pipe batten. J.R. Clancy pipe battens are usually made in 21 ft. lengths and feature 18 in. steel splices that slip into the pipe to strengthen the joints.

## Controls

Automated rigging can be controlled by a variety of systems, from simple push button operation to sophisticated touch screen programming. J.R. Clancy's **SceneControl® 5000** family of consoles feature unlimited pre-programming of elaborate, exciting cues for multiple sets that can be played back during performances – and adjusted on the fly – with the simple touch to a screen. Some **SceneControl® 5000** consoles also feature a 3D representation of your actual backstage area so you can see the movement as you are programming it and as it is happening during a performance – from any angle. For extra reliability and longevity, all J.R. Clancy controls are designed with industrial parts similar to those found in elevator systems, rather than those found in typical PCs.

In 1965, J.R. Clancy introduced the **SceneControl®** console, the first ever automated control system. Today, venues from international performing arts centers to middle schools benefit from the programmability, creativity, and enhanced safety of automated rigging.

## Intuitive Controls, Ease of Use, and Enhanced Safety

Automated rigging allows accurate, pre-programmable movements that can be executed with the push of a button. With automated rigging, there is no need to pull ropes, load heavy weights, or climb high loading galleries. In the past, automated rigging was built on a customized basis, so it was typically affordable only for major performing arts centers. That meant smaller theatres with limited budgets had no choice but to install manual rigging. Today, J.R. Clancy offers a full line of automated systems as standard products with a range of speeds, capacities, mounting options, and control systems that fit the needs of most theatres, including schools and universities. To learn more or discuss your rigging needs visit us online or contact us today.

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