

# MOTORIZED STAGE RIGGING

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Today, the utilization of motorized rigging systems has expanded far beyond its traditional uses of moving heavy stage equipment. Motorized systems do not require counterweights, making them easier to install and to use. New control systems provide a wide variety of options that allow for precise, high-speed and repeatable movement permitting dramatic effects in shows. This level of precision in cues allows each performance to be uniform and safe.

TSC motorized rigging control systems include single point hoists, multi-line hoists, high capacity single and double purchase hoists, line shaft hoists, motorized lighting battens, and motorized self-climbing battens. All systems are built to the user's specifications and with the latest safety systems incorporated to provide security and protection for all. Systems utilizing fixed or variable speeds are available with a wide range of options.

When your plans call for motorized rigging, TSC can manufacture and install various types of motorized rigging engineered specifically to your specifications. A TSC sales and design specialist can direct you to a facility in your area to see our work.

## MOTORIZED RIGGING COMPONENTS

**Cable Drum:** Helically grooved drums that neatly wrap the cable lifting battens. Multiple drums may be used, and supported by a line shaft assembly. They are spaced to properly support the batten or load.

**Computerized Control Systems:** Control systems that allow precise position of battens for each scene. They can also track speed, height, and travel of the battens, allowing the changes between scenes to be recorded into memory, and repeated in the exactly the same manner. (See computer control systems section of this catalog)

**Drum Winches:** Motorized winch with a single drum long enough to accommodate all of the lift lines required to support a batten. The helically grooved drum wraps the cable neatly in a single layer, to avoid damage to the cable and to keep all lines lifting equally. Winches can be located on the grid, catwalks, or in a separate motor platform. Head and loft blocks may be used to direct the lift lines to the batten.

**Gear Motor:** The combined gearbox, motor and brake provide speed reduction, power, and mechanical braking in the smallest space.

**Limit Switch:** Rotary switch geared to rotation of the shaft of the motor. When the switch turns to the appointed spot, it cuts power to the motor. Limit switches can have a number of positions to allow for high trim, low trim, or over travel.

**Line Shaft Winch:** An assembly consisting of the gear motor, and cable drums connected with a steel shaft. Each lift line uses a separate cable drum. The entire load is transferred through the winch frame assembly to the structure, eliminating horizontal loads, and the need for head blocks and loft blocks. The line shaft winch is ideal for situations where there is not much space nor structure to accommodate the horizontal loads.

**Manual Controls:** Simple push button controls to allow visual positioning of battens with motorized systems. All buttons release when they are not being pushed. All controls include an emergency stop that kills power to the motors.

**Point Hoists:** When great flexibility is required, a set of spot lines, or point hoists work together to support and operate a batten or load. Small portable point hoists can be attached to a grid. Larger units can be used with loft blocks to position the lift line appropriately.

## SELECTING A SYSTEM

How do you determine which type of motorized rigging is correct for your facility? Call TSC and have one of our salespersons help you through the process. Selecting a type of set can be based on the following criteria:

- Current steel layout
- Fixed speed or variable speed
- Speed requirement
- Set capacity