



## Thern Clew Winches Work Behind the Scenes for Honolulu's Diamond Head Theatre

Honolulu's Diamond Head Theatre (DHT) has a rich history as the third-oldest, continuously operating theatre in the United States. The theatre began performances in 1915 at the Honolulu Opera House. In 1952 the theatre, then named the Honolulu Community Theatre, refurbished the Fort Ruger Theatre, a one-time movie house for the Army Post. The theatre became a fully modern venue for stage productions.

Until recently, little had changed in the theatre since that first renovation over 30 years ago and much of the equipment had become obsolete. Then, in 2002, Diamond Head Theatre received a grant to complete renovations to the electrical system and stage area.

For the first time ever DHT was able to have a grid installed in the stage area. Because DHT does not have a fly loft, a system of pipes and rope rigging was being used to hang scenery, drapes and lights.

According to Patrick Kelly, technical director for the theatre, "Originally everything was hung from the ceiling I-beams or roof timbers, a nightmare as far as safety was concerned."

With the installation of the grid came the need for a safer lift system. At a grid height of 20 feet, with a proscenium opening of 14-16 feet and no fly loft, it was not feasible for the theatre to fly equipment during performances. So, they began looking primarily for a system that would be used as a load-in area to hang borders, drapery and lighting equipment between shows.

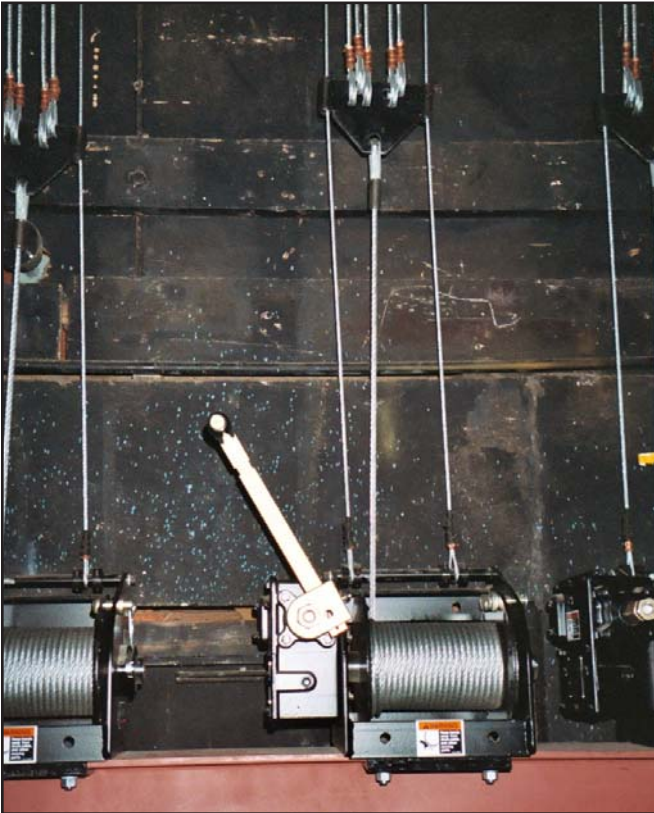


A row of Thern clew winches hold set lines in place at the Diamond Head Theatre.

The solution they chose was to install a series of nine Thern CW1-1000 Clew Winches that would be used to lift and then hold lighting and scenery pipes above the proscenium opening when they were not in use.

Designed specifically with the theatre/entertainment industry in mind, the Thern CW1-1000 Clew Winch offers the dependable holding capacity that DHT needs to confidently lift multi-line loads and hold them overhead when not in use. Additionally,





Thern CW-1100 clew winches added versatility, efficiency and security to DHT's productions.

the clew guide wires are anchored to the guide bar and can be infinitely spaced to accommodate clew widths up to 15 inches.

DHT had the clew winches installed on their fly rail, an I-beam about 3 ft. off the stage floor. The resulting length of travel on the clew is about 17 ft. to the grid. On the 5-9/16 inch diameter drum of the CW1-1000 this ends up being about one full wind plus another third. They are using 1/4" cable on a 5-line set for lifting their pipes.

Because DHT doesn't use the winches during performances, they are primarily stationary and locked off. One of the features they found particularly appealing about the CW1-1000 was the number of locking positions on the drum of the winch.

The CW1-1000 is designed with a lock-out pin to secure the drum to the frame in 12 different positions at 30° increments (less than 2 inches of load travel) to provide secondary load holding and prevent unauthorized use. An automatic Weston style brake provides the primary source of positive load control.

Diamond Head Theatre limits their pipe load to about 1000 lbs, the recommended capacity for this model of the Thern Clew Winch.

"We've never run into a situation, even with a temporarily heavier load, that there's going to be any sort of freewheeling on the winch at all," said Kelly.

Additional features of the CW1-1000 Clew Winch by Thern include a single reduction bronze worm gearing for secure operation, key hole anchors for easy attachment of wire rope, and standard configurations for wall or base installation and single or double drum rigging.

Thern's added features to minimize wear to their clew winches include a cast iron gear case that totally encloses gears in oil or grease for continuous lubrication, a large diameter drum to minimize wear to wire ropes, and a durable satin black enamel paint finish to resist corrosion. All Thern products come with a two-year limited warranty.

The entire renovation of Diamond Head Theatre including planning took several months, but they were fully operational again just in time for their 2003 holiday production of *The Sound of Music*.

