



## Lifting the Industry to New Heights Breckenridge Sets the Standard on Innovation and Safety for the Ski Industry



Breckenridge ski resort installed Thern davit cranes to help with maintenance procedures for their chair lifts.

Settled in 1859, the town of Breckenridge, Colorado started its humble beginnings as a small gold and silver mining town. Since then, the area has exploded into a thriving tourist town and home to Breckenridge Ski Resort. As one of the premier ski resorts in the U.S., Breckenridge has been setting the standard for design innovations, safety and maintenance in the ski industry for years. For a busy winter resort that sees over 1.5 million skiers a year, safeguarding guests and resort personnel is a must.

To create a pristine ski environment and ensure equipment functionality for winter sports enthusiasts, lift maintenance is a continual process for the crew at the resort. Cables and lifts need to be safe and in perfect working condition by ski season. Boasting some of the largest lifts in the US, manag-

ing safety issues and keeping lift downtime to a minimum has been the key to Breckenridge's success.

So how does one manage the safety and maintenance for 26-lifts with a capacity of 36,680 people per hour? The answer is meticulous work, dedicated personnel and the best equipment in the industry.

Butch David, Master Lift Mechanic at the resort, takes his job very seriously. "I take it personally when a lift stops and people have to sit out in the cold, it's not a pleasant experience, especially when it's below zero, lucky for us we do most of our maintenance during the off season."

The summer time is when the majority of lift maintenance takes place. David's crew is responsible for





Breckenridge uses modified versions of Thern's model 5124 portable davit crane shown above.

every bearing, every motor and every movable item on the hill. They have to check every sheave that carries a cable and at Breckenridge that totals somewhere in the ballpark of 4,000-5,000 sheaves. Along with lift repairs, every chair has to be removed from the cable and checked over for any mechanical problems. When chairs weigh anywhere from 700-1,000 lbs., lifting them from the cable onto the ground is next to impossible without the proper equipment.

To help transport these monolithic chairs from the lift cable to the ground, Breckenridge utilizes two Thern Davit Cranes. The Thern Davit Cranes are mounted on two of Breckenridge's "super chair" lifts. The "super chairs" hold four to six passengers and shuttle them up the slopes at high-speed. "These lifts travel up the mountain at a rate of 1,000 feet per minute, that's pretty fast," says David. "In fact, the first actual four person super chair lift in the world, was built here at Breckenridge in 1981." Breckenridge uses modified 5124 Davit Cranes each powered by a 4WP-K power winch. The cranes have

adjustable booms that can telescope to four different lengths and adjust in height for safe loading and unloading. The base model has a lift capacity of up to 2,000 lbs. When asked if the heavy-duty winch made his job easier David responded, "That would be a total understatement, our job would be impossible without them."

The 4WP2-K utilizes a 115-volt, single-phase electric motor. With machine cut worm gears and an internal mechanical brake, the winch is able to withstand the heavy weight of the ski chairs.

David feels that Thern cranes are a reliable way to maintain a safe environment for its resort personnel and guests. "Without the cranes, trying to move that kind of weight could cause the chair to roll one way or the other endangering our crewmembers," says David. "And we don't want anyone getting hurt."

Most of the work that David's crew does is in the grip area (the grip is the part that connects the chair to the cable). For lift inspection and repair, each chair has to be removed from the parking rail down to the ground. In order to do this effectively Breckenridge had the plate mount for the cranes specially modified so the crane was able to fit on the top of an 18-inch tube about 18-feet in the air. The tube was the only solid point where they had access to anchor the crane and the only position where they could lower the chairs.

"I'll put our downtime against any resort in the nation," says David. With safeguards like these in place and dedicated professionals maintaining them, Breckenridge rarely has problems with their lifts.

Breckenridge Mountain boasts a summit elevation of 12,998 feet (1,036 meters) and offers 26 chair lifts some of the best slopes in the US. In fact the resort is currently in planning stages to build the highest





chair lift in the US, which they have coined the Summit Lift for now. With a price tag at around 4 million dollars the resort is carefully working on layout and design. “We are extremely ecology minded here at the resort, the terrain on the slopes is very fragile, so while we are developing building plans for the Peak 8 lift, we will do whatever is deemed necessary to protect it,” says David.

Careful planning, quality safety equipment and advances in technology are grooming a path for Breckenridge’s continued success in the ski industry.

