

Thern

Application Story



Mining



Mining Equipment Supplier Turns to Thern with Unique Need



A P&H “C-Series” power shovel operates at a mine in northern Minnesota. The “C-Series” is equipped with Thern winches for quick replacement of damaged windshields.

Mining is a big industry – literally. The jobs are big and the equipment even bigger. Mines ranging from copper and iron ore to diamonds employ equipment that is large, heavy, industrial and rugged. It is an industry that routinely measures in tons, not pounds.

Since 1884, P&H Mining Equipment has been a leading supplier of heavy mining equipment including power shovels, production drilling rigs and walking draglines. In 2007 they introduced a new line of power shovels designed with maximum operator comfort and productivity in mind.

The operator cabs where the operators sit, also known as Loading Control Centers or LCCs, are fitted with special exterior visor panels that block direct sunlight and reduce windshield glare. Given the immense size of shovel units, LCC windshields are large and very heavy and in the past were installed using hydraulic platform rigs.

Window replacement happens frequently due to shovels being operated near the blast zones, those areas of surface mines where miners detonate explosives to loosen hard-rock benches. Despite precautionary measures, rock frag-

ment often strike the windows. New generation “C-Series” shovel LCCs introduced new design elements that make window replacement a more complicated procedure requiring careful maneuvering and positioning. The search for a solution to this problem led P&H engineers to the internet. That search in turn led them to Thern.

Mines are generally unforgiving places, often located in harsh climates ranging from bitterly cold to scorching hot, severely dry to extremely wet and humid. P&H equipment is designed to withstand it all, meaning that the equipment chosen for window





Two 4WP2T8 Atlas winches are carried on each C-Series shovel. Their portability and compact power make them ideally suited for quick windshield replacement on the shovels.

maintenance needs to be equally rugged and durable. Load capacity and portability are among the key application requirements as the equipment is needed for both scheduled and unscheduled maintenance of the 1,000 pound LCC windows.

After researching the available products offered by Thern, designers selected the 2,000 pound capacity 4WP2T8 series Atlas winch for service on the LCCs. Its compact design, reliable operation and sufficient load capacity made it an ideal choice for the P&H units. The 4WP2T8 affords maintenance workers the level of control they require to quickly and efficiently replace damaged windshields. During replacement, the winches hoist the windows panels carefully in tandem, and once the windows are properly positioned they are installed on the LCC. The winches, relatively lightweight at around 100 lbs each, are easi-

ly moved, conveniently store on board, and can set up on short notice for unplanned repairs, reducing downtime and increasing operational efficiency.

As more shovel units roll out into the field in 2008 and beyond, P&H looks to make Thern winches a standard shovel accessory. It is an application requiring load handling strength, durability and portability and Thern winches deliver.

APPLICATION DETAILS

Lifting or pulling:	Lifting
Line pull required:	2000 lbs
Travel distance of load:	30 feet
Power source:	230/1/60
Installation requirements:	Base Mounted
Environment:	Outdoor
Frequency of operation:	Intermittent

