

## MORE PRODUCTIVE DRILL RIGS WITH LESS ENVIRONMENTAL IMPACTS

Today's mining industry is striving to increase productivity while minimizing impacts of operations on the environment and improving workers' protection. Over the last decades, OEM have continuously improved the design of mining equipment using new technologies and innovation. As a result, today's machines are much more productive, safer and environment-friendly.

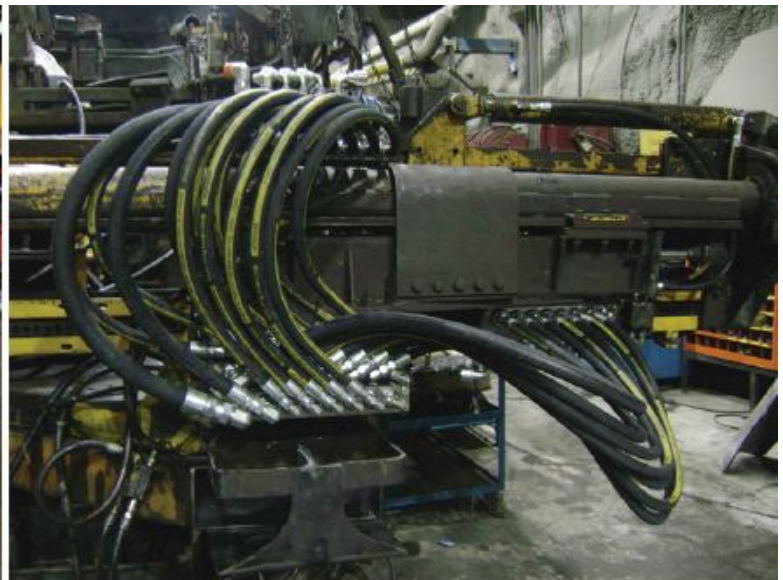
**Underground drill rigs are just about to make another important step forward very soon.**

A new patented technology is now available on the market for those who wish to design and use more reliable, more productive and safer drill rigs with less environmental impacts. Results are impressive:

- Less downtime
- Lower operating and maintenance costs
- Easier maintenance
- Fewer oil leaks and spills for sustainable mining
- Shorter hoses which will last longer
- Increased reliability and safety of drill rig



Drill rig without Swiwell manifold™



Drill rig with Swiwell manifold™

Thanks to Swiwell™ technology, it is now possible to redefine hose dynamic motions to eliminate torsion, hoses dragging on the ground and lessen the risk of hydraulic system contamination.

Installing Swiwell™ technology on underground drill rig significantly increase productivity, reliability and safety of the machine while reducing operation costs and oil leakages.

Swiwell Manifolds™ also allow for maintenance to be much quicker and easier. Quicker because every hose is always accessible without having to remove other hoses and/or spiral plastic guard. Easier because all hose functions can be identified (laser engraved) on manifold.



Using Swiwell™ technology at the machine design stage often allows for a reduction in its manufacturing cost and overall weight. Swiwell™ technology can also easily be installed on drill rigs that are currently in use.



## Greener Mining

The mining industry is changing and more than ever committed to cleaner and safer practices. Taimi Hydraulics innovative solutions are in line with this trend. Our Swiwell Manifolds™ are designed to have a positive impact on both the user's operations and the environment. Using Swiwell Manifolds™ means:

- **Less hydraulic fluid in the environment**  
Taimi products are designed to be leak-free and will not dismantle during operation. This significantly reduces hydraulic fluid consumption.
- **Less hydraulic hose replacements**  
Our innovative products eliminate torsion in hydraulic hoses and allow for the use of much shorter lines. Shorter hydraulic hoses, which last longer, reduce harmful environmental waste produced by the use of a machine
- **Less hydraulic fittings replacements**  
As for hoses, hydraulic fittings must be manufactured, transported, used and discarded. Using less means lower environmental impacts.

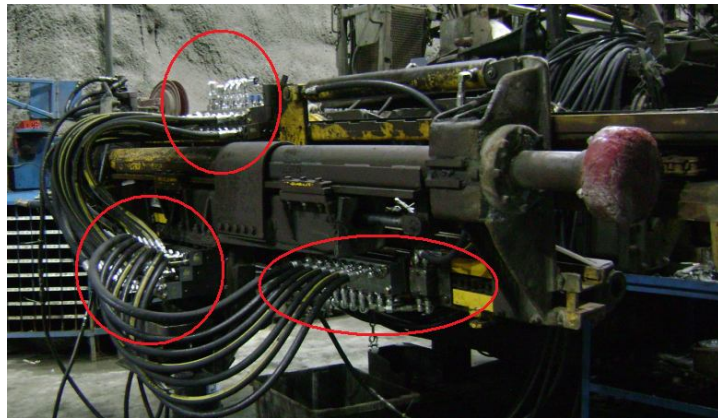


### 3 Simple Steps to More Productive Drill Rigs

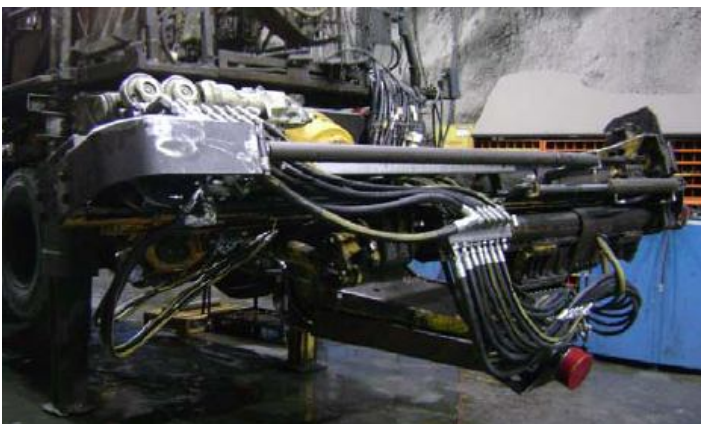
**Step 1:** First step is to study the original dynamic of hose movement. For example, we have a MacLean Series 900 Scissor Bolter at the right hand side as it was operating a Canadian gold mine.



**Step 2:** Once we have established which hose does what, sizes and configurations, each hose is taken out the machine and Swiwell Manifolds™ are installed .



**Step 3:** Appropriate hoses in terms of size, fitting configuration and length are installed between manifolds.



As a result, next generation of mining equipment will be more productive, more cost effective, safer and also greener! This is innovation serving the mining industry.