

BREAKING NEW GROUND WITH THE HD SERIES BOOM SYSTEMS

WHEN IT COMES TO ROCK BREAKING, EFFICIENCY AND RELIABILITY MUST BE KEY CONSIDERATIONS TO ENSURE A MINE CONTINUES TO RUN SMOOTHLY, AND TOTAL ROCKBREAKING SOLUTIONS IS LEADING THE WAY.

Total Rockbreaking Solutions (TRS) has had its finger on the pulse of the Australian mining industry for over 10 years.

Founded in Western Australia by experienced construction and mining industry professionals, TRS is a company built on providing customers with service, advice and solutions that meet the needs of demanding industries.

TRS has a highly experienced in-house engineering and project management team that specialises in the mechanical and hydraulic design of heavy-duty fixed boom systems, among other mining necessities.

The latest focus for the company has been its TRS HD Series Boom Systems.

“In the last several years we’ve been working with some of the big Pilbara mine operators,” TRS engineering manager Paul Ingleson told *Australian Mining*.

“After listening and helping with their rock-breaking challenges and issues, we came up with a list of features that we believe are missing from what’s currently available on the market.

“This formed the basis of our new boom system design.”

The resulting HD Series Boom Systems are designed for mines in which the operators work the rock breakers hard and continuously. Featuring increased movement speeds and longer reach booms, the HD Series can cater to the most demanding mining applications.

TRS engineers have over 20 years of experience designing rock-breaker boom systems and have incorporated the company’s leading BoomSafe control and automation system into the HD Series.

Ensuring a machine operates as it’s supposed to when it’s supposed to is a necessity for mine operators. And that necessity is increased when the machine is part of a large-capacity crushing circuit.

“We found that a lot of the current designs in the market aren’t keeping up with the continuous use because they weren’t designed for that duty originally,” Ingleson said.



THE HD SERIES HAS BEEN RE-DESIGNED TO MEET MORE BLASTING NEEDS THAN EVER BEFORE.

“The HD stands for ‘high duty’. The system can handle the stress of regular and constant use and, as a result, the life of the machine is increased.”

TRS has committed itself to improving functional safety in its rock breakers. A key component of keeping the machinery as safe as possible is the incorporation of load-holding valves.

These valves are built into the machine and their installation means that the boom won’t fall if a line breaks. And while many manufacturers incorporate these valves into their rock breakers, TRS has embedded the valves into the cylinders for added safety.

Another focus for the team has been heavy-duty energy-absorbing slew stops to increase the safety of people in the vicinity. Along with the usual primary slew limit sensors, the HD Series features a secondary sensor that will automatically turn the power off and stop the drive. And, in the unlikely event that the secondary sensor fails, there is a hard physical stop.

“It is intrinsically safe without completely relying on sensors, and that’s a big benefit,” Ingleson said.

With the mining sector increasingly adopting new technologies and upgrading machines in a bid to make work faster and more efficient, the HD Series also features automated movements.

“At the press of a button, the machine will automatically go from park through a pre-planned path to where you want it to stop,” Ingleson said.

“We set up a safe working envelope. What that means is that the operator can’t accidentally knock over a light pole or handrail because they can’t work outside of the envelope.

“It’s the first line of defence for a collision.”

Having worked with large Australian mines for years, TRS understands that some of the largest sites are operated remotely. In response, the HD Series can be operated from anywhere in the world through a remote package.

Combining these remote operational capabilities with the increased safety and automation features is a recipe for a completely new and innovative boom system.

But within this innovation, customers can still find the signature servicing facilities for which TRS is known.

“We’ve done a lot of work on providing hammer and tool change facilities,” Ingleson said. “You can safely change the hammer and tool, and you can do it quickly.

“We wanted to put a lot of innovation into the features that complement the boom – it’s one of our core strengths.”

These Australian-designed and engineered systems represent the first significant development in rock-breaker booms in over a decade.

“We’ve designed this series with reliability, safety, and speed in mind,” Ingleson said. “And we’re really proud of the fact that we’ve supported the local industry while doing it.” 