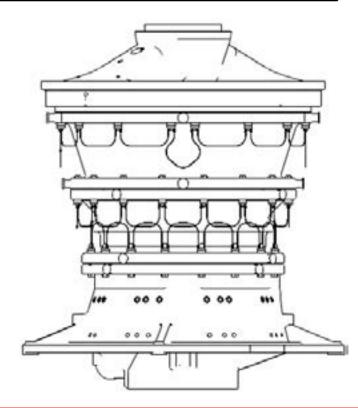
# Hydraulic joint hardware



The Hydraulic joint hardware has been developed for all sizes of Superior<sup>TM</sup> primary gyrafory crusher.

Metso is proud to introduce Hydraulic joint hardware, improving safety and security when performing maintenance on your crusher.

# Challenges

Loose shell attachment hardware can be a common issue at sites as the consistent dumping of ore and crusher operation can lead to the bolts backing out. This can potentially cause damage to the shell fit, requiring costly repair or replacement for the largest components of your Gyratory crusher. This requires manual intervention to fix, which exposes your repair crews to the potential for strain or fall injuries.

### What it is

The Hydraulic joint hardware consists of the hydraulic pump, supply hoses and the hydraulic nuts themselves. Four kits have been developed to meet the needs of all sizes of machine, and the correct kits are simply picked and supplied for the right joint on your machine and installed onsite. Options are also available for electric and air driven hydraulic pumps, allowing for whatever is most convenient at your Gyratory installation.

# How it helps

# Production increase

Unlike other competitive solutions on the market, Metso's Hydraulic shell hardware has been designed to pull the shells together in one motion, saving you the reset time that would be necessary with other systems. Additionally, the Hydraulic hardware pulls with plenty of force to ensure a proper fit between your shells, no longer forcing you to perform a long torque process to properly fit.

# Safety

Traditional shell maintenance requires maintenance crews to manually tighten and torque the shell joints using work platforms or ladders, exposing them to the potential for strain or fall injuries. The Hydraulic joint hardware is designed to automatically ensure that the proper torque is reached, ensuring the proper joint connection on your crusher without requiring your maintenance teams to work in dangerous conditions.

