# Balance cylinder upgrades



The Balance cylinder upgrade has been developed for all Superior™ gyratory crushers, enhancing protection for your valuable mainshaft and step components.

The latest generation of Balance cylinders has been developed to provide additional protection against mainshaft jump on your Superior™ crusher.

# Challenges

When uncrushable tramp or hard ores enter your crusher, your mainshaft can be wedged up and become separated from your step components. This can potentially cause damage to your bearing components, leading to unplanned downtime and shutdowns.

### What it is

Metso has designed the latest generation of balance cylinders to add additional protection against damage to your maintshaft components. Dual, Triple, or any number of balance cylinders can be added onto your existing crusher to help accomodate additional mainshaft jump. By increasing the amount of balance cylinders, we increase the amount of hydraulic oil available to accomodate any mainshaft seperation, allowing for additional mainshaft jump. The balance cylinder kit is designed to work with your existing mainshaft positioning system (MPS) piping, and the additional balance cylinder is easily installed by physically mounting it to the machine. Once completed, it is a simple case of filling the additional cylinder with nitrogen and hydraulic fluid and the machine is ready to run. The component makeup of this kit is a balance cylinder, "Y" pipe, gaskets, clamps and mounting straps.

# How it helps

## Production increases

The balance cylinder upgrade allows you to increase profitability at your plant. The accomodation of additional mainshaft jump versus a stock machine and the prevention of damage to critical components keeps your crusher operational and producing under heavy load conditions. The prevention of mainshaft jump also means your current parts remain in good operating condition for longer on the crusher, reducing the need to purchase additional spares and saving you operational budget.

# Safety

Metso's balance cylinder upgrade kits have been designed to prevent damage to your mainshaft components during the processing of hard ores. This allows for additional vertical travel when compared to your original machine. Less potential for damage equals less intervention from your maintenance crews, keeping them working on safer planned projects and maintaining your operational schedule.

