

Product datasheet

Knelson™ GX Concentrating Cone Enhancements in gold recovery

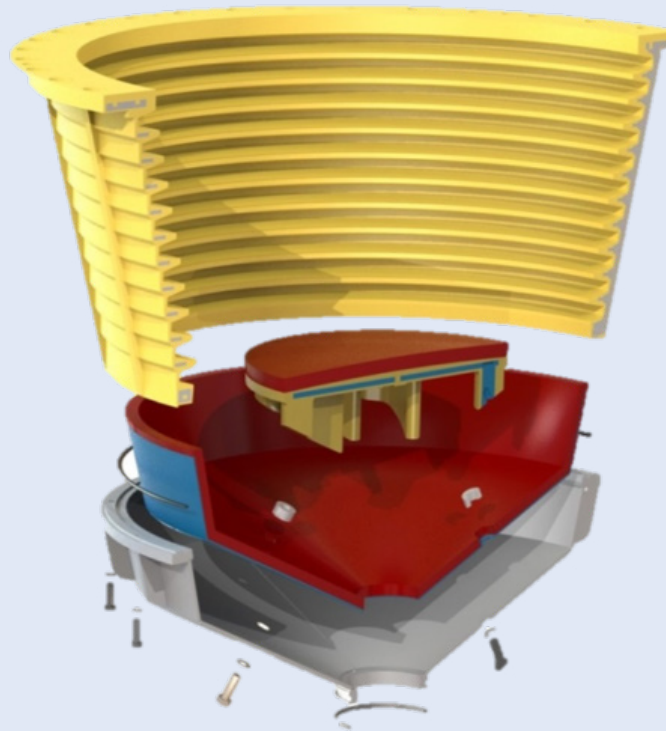
A breakthrough in gravity concentration technology

Our Knelson™ Continuous Gravity Concentrator is an enhanced automated gravity separation system that has been developed specifically to address the requirement for high concentrate mass yield. The GX concentrating cone can be found operating at numerous sites worldwide providing excellent mineral separation and recovery.

For decades, Knelson™ concentrators have been synonymous with industry-leading gravity recovery of fine gold and precious metals. As a top product in its field, no other system on the market has proven to surpass the performance of Knelson Gravity Concentrators.

Key Benefits

- High coarse and fine gold recovery
- Reduced water usage
- Easy maintenance
- Improved operating life



At the heart of this gravity separation technology is the Knelson™ concentrating cone. And our new patented GX model delivers impressive recovery enhancements. By incorporating an advanced distribution of fluidisation water across the entire concentrating cone, the Knelson™ GX significantly improves recovery.

The development of the Knelson™ GX concentrating cone has resulted in an innovative step change in overall coarse and fine gold recovery. Test data shows that gold recovery in all size fractions improved significantly with the GX cone.

As with all Knelson™ concentrating cones, the GX model offers a robust design capable of operating at high G-forces, while maintaining long life and high availability. This new innovative cone design can easily be retrofitted into operating units.

Technical advantages

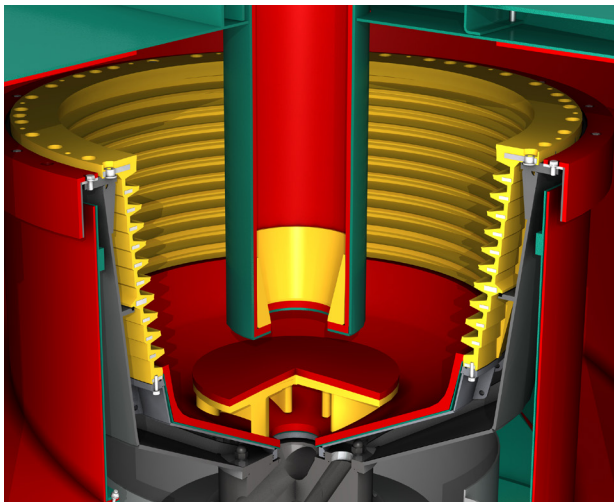
- Highest metallurgical performance
- Tangential water fluidisation improves distribution
- Balanced fluidisation allows for upgrading of concentrate through entire cone
- Fully fluidised cone maximises recovery surface area
- Will operate on feed densities of up to 75%
- Lower overall water requirement and ability to use process water
- Longer intervals between cleaning
- Improved wear resistance, prolonging operating life

Higher gold recovery through innovative design

Customisable fluidisation profiles within each ring of the Knelson™ GX concentrating cone facilitate the highest possible recovery.

Maximising the recovery surface area

Extensive research has proven that significant precious metal recovery upgrade is achieved within the fluidised zones of a concentrating cone. Unlike other gravity concentrators, the Knelson concentrating cone is fully fluidised, thus providing the largest possible recovery surface area. The GX concentrating cone also allows for targeted fluidisation flow control, customised to the feed ore characteristics, which will considerably increase fine and coarse recovery.



Enhanced cone wall angles

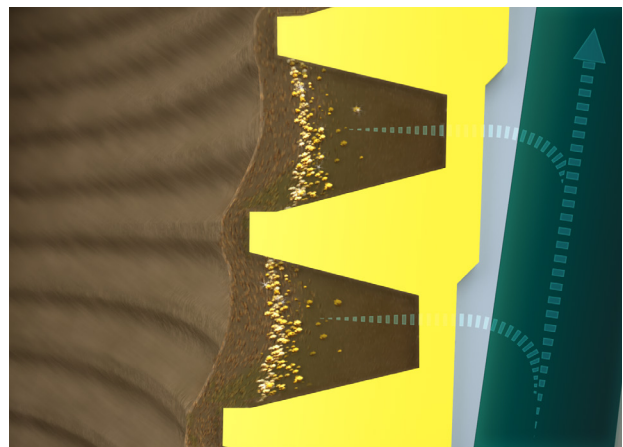
We modified the cone angle design to increase recovery surface area and improve slurry flow characteristics through the cone.

Reduced water consumption

Customised balanced flow across the concentrating cone allows for a significant reduction in fluidisation water requirements, while improving recovery.

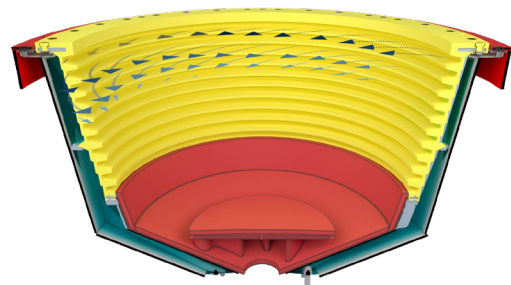
Balanced flow between ring sections

Zone separator nozzles regulate the amount of fluidisation within each recovery ring. Control of the fluidisation water flow results in improved recovery in every ring of the cone.



Tangential water distribution

Tangential introduction of water into the concentrating rings improves the distribution of fluidised water, avoiding rat-holing and dead spots. It also allows thorough flushing of the unit without use of expensive and unnecessary variable-frequency drives.



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