



GEKKO
SYSTEMS

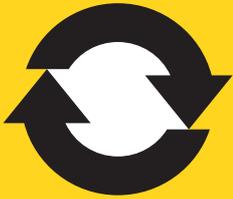
INLINE SPINNER

another step forward in gravity separation

low water consumption low operating costs



INLINE SPINNER



MINERAL PROCESSING TECHNOLOGY



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GEKKO SYSTEMS specialises in the design and development of mineral processing equipment with particular emphasis on gravity separation.

The company's motto "from challenge comes innovation" reflects our focus on pro-active and progressive solutions.

INLINE SPINNER

APPLICATIONS

Gekko Systems is pleased to introduce a new innovative product to the batch centrifugal concentration (BCC) market to improve gold and heavy mineral recovery. The key benefits of this unit are zero water consumption and an advanced PLC system design allowing rapid dump cycles and improved operational uptime. The InLine Spinner's bowl design also allows extremely high upgrade rates and concentrate grades. Applications include hard rock, primary recovery circuits, bulk sample plants, alluvial gold plants, and upgrading of concentrates.

THEORY OF OPERATION

The unit works by feeding slurry into the base of the spinning polyurethane bowl. The bowl operates full of slurry that swirls in a vortex - throwing the dense particles into the riffles located on the bowl's inside face. Cutter bars, operating parallel to the inner face of the bowl, create a turbulent zone that beneficiates recovery by allowing heavy particles to replace lighter particles caught in the g-force of the unit. The riffle depth is designed in such a way that the replacement or separation zone almost reaches the root (rear wall) of the riffle. In this way the maximum amount of heavy mineral is recovered and minimal gangue is recovered to the concentrate.

Automation System: This simple robust PLC circuit carries out all unit functions allowing hands free operation. The InLine Spinner 30 second dump cycle compares with a 2 minute dump cycle typical of other BCC technology. The key benefits of the fast dump cycle are more uptime and the opportunity for more frequent dump cycles.

FEATURES AND BENEFITS

Zero water consumption: The zero water consumption feature of this unit results in minimal impact on mill water balance for installations in grinding circuits. A small amount of water is used to flush the bowl.

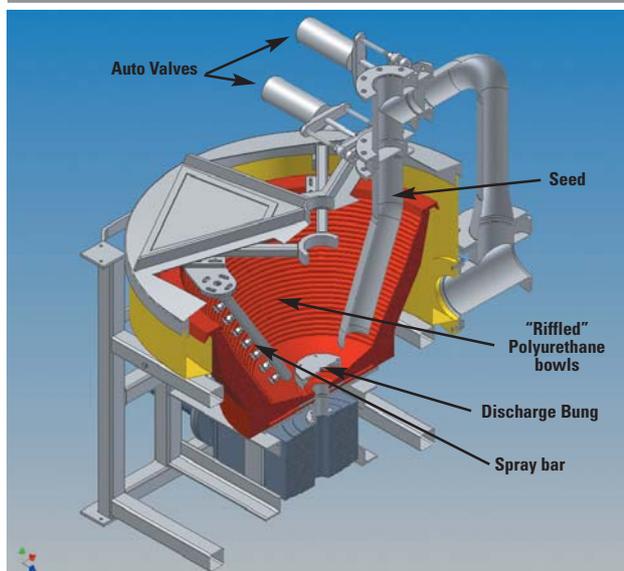
High recoveries for coarse and fine particles: Installation and laboratory testwork has confirmed that the InLine Spinner achieves high recoveries for both coarse and fine mineral particles.

Lower running costs: The zero water consumption feature compares with other BCC that utilise pressurised water injected through a perforated bowl to fluidise the separation bed. Filtered clean water is generally required for competitive units. Complexity is greatly reduced as a result.

Grade Recovery Flexibility: The extremely rapid dump cycle of the unit allows more frequent concentrate discharge without losing unit availability. As a result customers have greater ability to vary performance to achieve required grade recovery objectives. Less gangue is recovered with each dump.

Higher availability: The design simplicity and effectiveness of the InLine Spinner provides for higher availability than other competitive products.

Proven performance: The InLine Spinner is comprised of focused and innovative design modifications on century old metallurgical concepts - providing the ultimate combination in low risk, low cost and high performance equipment.



SPECIFICATIONS

Model ISP	02	30
Max. capacity (tph)	5	30
Approx. concentrate mass (kg)	2	6
Max. water requirement (l/hr)	50	200
Water quality requirement	poor	poor
Installed power (kW)	2.2	3
Approx. dry weight (kg)	250	850
Max. feed size (mm)	6	6