Recuperación de Oro
Recuperçcão de Ouro
Récupération de l'or
Добыча золота

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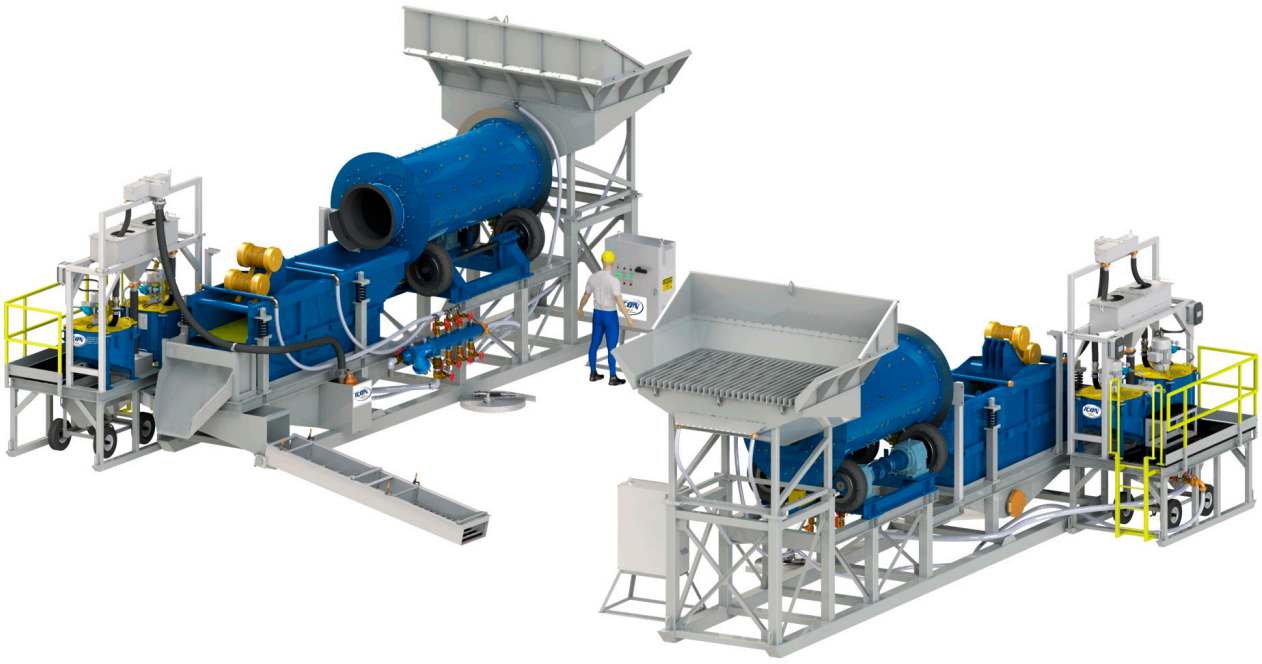
Patents Pending

iCON Gold Recovery is proud to present the

IGR 3000 Plant

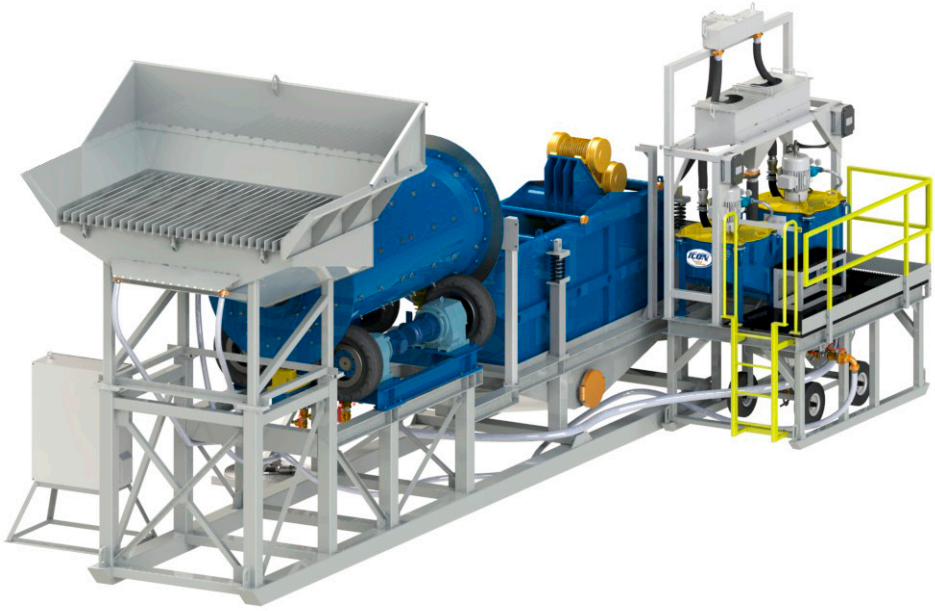


Specifically designed for Alluvial Material Including:

- *Gravel*
- *Laterite*
- *Saprolite*
- *Moderate Clay*

The Recovery of Fine Gold

With the rising price of gold and the limited amount of mineable land, people are now focusing on the recovery of fine gold – this requires enhanced gravity concentrators. Some rivers of the world have been sluiced as many as 6 times yielding profitable gold each time, and demonstrating that traditional sluices can have very poor recovery. Alluvial miners commonly stop digging at the first layer of clay or throw it aside acknowledging their inability to recover the gold. The IGR 3000 Plant incorporates scrubber technology with world class Falcon / iCON Concentrators.



What is a Scrubber

A scrubber is not a trommel and a trommel is not a scrubber. The two are quite different and quite inefficient when incorporated in the same mechanism. A rotating screen needs a relatively low rpm to allow the fines to pass through the screen. An effective scrubber needs a relatively high rpm to lift the material higher, turn the material over and to input energy into the scrubbing action between the larger rocks and the clay material. Comparatively, a scrubber will have at least twice the horse power as the same dimension and capacity trommel.

A scrubber is a high rpm 'autogenous' mill. A scrubber will rotate at 75% of the 'critical rpm.' The critical rpm is the rpm required for the material to cling to the wall and rotate with the drum without falling. A scrubber uses the large rocks to break up the finer material in the same way a ball mill uses steel balls to break up ore.

Sepro scrubbers are industrial duty: manufactured from the thickest steel, best liners (rubber or polyurethane) and highest quality construction available in the world.

Please visit our web site for complete details: ***www.iconcentrator.com***

The Process

The IGR 3000 was designed for a nominal 30 tons per hour feed rate based on an alluvial type material with moderate clay contamination.

Material is loaded into the plant feed hopper through a static scalping grizzly with 75 mm bar spacing. Oversize is to be periodically removed manually from the grizzly. Undersize feed material is washed into the scrubber feed chute by water jets strategically placed in the feed hopper and by a manually operated water monitor. Water is piped from an on board water manifold system that supplies water to the complete plant from the customer's primary water supply. Material is scrubbed and clays and silts dispersed into the slurry. Slurry is discharged over the double deck vibrating screen. Oversize (+10mm) from the vibrating screen is discharged via a chute to ground level where it can be removed by the customer's mobile equipment or by the client's conveyor system. Product from the bottom deck oversize (-10mm + 2mm) is discharged onto the sluice, complete with riffles and fiber mats, where coarse gold will be recovered. The screen undersize (-2mm) is pumped from the screen undersize hopper to the concentrator feed box/splitter. The concentrator feed box services a dual purpose as it regulates feed to the concentrators by flowing excess slurry directly to the sluice when required and it serves as a manual by-pass system during the concentrator rinse cycle. Feed from the concentrator feed box flows directly into the twin i350 centrifugal gravity concentrators. Tailings from the concentrator are directed to the inlet side of the sluice to aid the oversize material (-10mm +2mm) in flowing down the sluice to the final tails area. Concentrate from the twin i350 concentrators is directed to a wheeled storage tote which can be easily removed and towed to a final location for final upgrading and smelting. Concentrates from the sluice need to be removed periodically washed and added to the gravity concentrate.

- 75 mm – passes the grizzly and into the scrubber
- 10 mm + is rejected by the top level of the vibration screen
- 2 mm + to 10 mm – is feed to the high efficiency sluice
- 2mm – is distributed to 2 i350 Concentrators

What's Included

One (1)	Feed chute fabricated of mild steel with mild steel grizzly bars with 75mm openings, spray nozzles and feed spout to rotary scrubber.
One (1)	Sepro rotary scrubber with nominal dimensions 1.2m x 3.0m long complete with drum, polyurethane liners and lifter bars, rubber tire drive assembly with tires, wheels, gearbox and two (2) 7.5 kW drive motors and variable frequency drive (VFD) 220 VAC, 3phase, 50Hz (220/3/50).
One (1)	Double deck Sepro-Sizetec HDS 1 x 3 m heavy duty horizontal vibrating screen complete with two (2) x 3.8 kW electric vibrating motors, welded screen body construction and polyurethane screen panels on both decks (Top deck: 12 mm, Bottom Deck: 2mm) and VFD 220/3/50.
One (1)	Skid frame assembly for mounting scrubber and screen complete with water distribution manifold for scrubber, vibrating screen, also includes integral sluice box for coarse gold recovery, screen oversize discharge chute.
Two (2)	i350 Concentrators complete with VFD drive, 3.7kW, 220/3/50 electric motor, i350 components mounted in a custom steel frame assembly.
One (1)	75mm outlet submersible slurry pump with VFD drive and 3.7kW electric drive motor 220/3/50.
Two (2)	Good quality used 40' Sea Containers for shipping. The Containers can be used as secure storage on site once the module is removed. (Some site work will be required to configure module for operation).
Wiring for on plant equipment (suitable for 220/3/50).	
Wheeled concentrate tote.	

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What's Not Included

- Clean Water:
  - 6-10 m3/hour clean water required for i350's
  - 85m3/hour of process water for grizzly, scrubber, screen
- Generator: 100 kw recommended, 220/50-60/3 phase. Actual current consumption is 270 Full Load Amps (FLA). The recommended generator capacity is double the actual consumption of the plant for the reliability of the generator.
- On-site erection/assembly/commissioning.

Optional Equipment

- Oversize Conveyor.
- Process Water Pump.
- Concentrate Clean Up Shaking Table.

Capacity

- The IGR 3000 Plant is designed for a nominal 30 tons per hour of solids
- The true limit of the plant is 20 tph of 2mm- sand based on the capacity of the concentrators.
- The overall capacity is 30 tph total or 20 tph sand, whichever comes first.