HY-G
CONCENTRATORS

OPERATOR MANUAL

Hy-G P21 Gold Concentrator

Installation, Start-Up & Maintenance

General tips for operating a Hy-G concentrator in Manual Mode. This manual covers general installation, start-up, the concentrate flush cycle and routine maintenance for the Hy-G P21.

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Model P21 — Specifications

OVERVIEW	
Series	Placer (P) Series
Bowl Size	533 mm (21 inch)
CAPACITY & FEED	
Max Capacity	60+ TPH
Efficient Max Capacity	Approx. 30 TPH
Feed / Max Screen Size	6 mm (1/4")
Recovery	+95% of free gold between 6 mm and 44 micron (1/4" and 325 mesh)
DRIVE	
Motor(s) / Power	One (7.5 HP) · 7.5 HP
WATER & CONCENTRATE	
Water Required	435 lpm at 241 kpa (115 gpm @ 35 PSI)
Concentrate Volume	22 liters of Solids (approx. 6 gallons of Solids)
WEIGHT & DIMENSIONS	
Weight	1084 kg (2,388 lbs)
Dimensions	1346.2 mm x 1549.4 mm x 1956 mm High (53" x 61" x 77" High)
Price	Request Pricing

About this manual. This document covers installation, start-up, the concentrate flush cycle and routine maintenance for the Hy-G P21. A certified electrician must connect the electric motor to the power supply.

1. Basic Install

A certified electrician must connect the Hy-G electric motor to the power supply.

1. Fasten the Hy-G Concentrator to a hard, level surface and ensure the machine is level.
2. Have a certified electrician connect supplied power to the Hy-G starter.
3. Connect fresh water for fluidization. For optimal performance, the operator MUST use a fresh-water pump that matches the volume and pressure specified by Hy-G for each model. Fresh water should be fairly clean of suspended solids.
4. Connect the slurry feed line to the Hy-G. Incoming slurry piping should include 1 metre (approx. 3 ft) of flexible piping where it connects to the Hy-G slurry infeed, to reduce transfer of slurry feed-line vibration.
5. Connect the concentrate discharge to a concentrate containment.

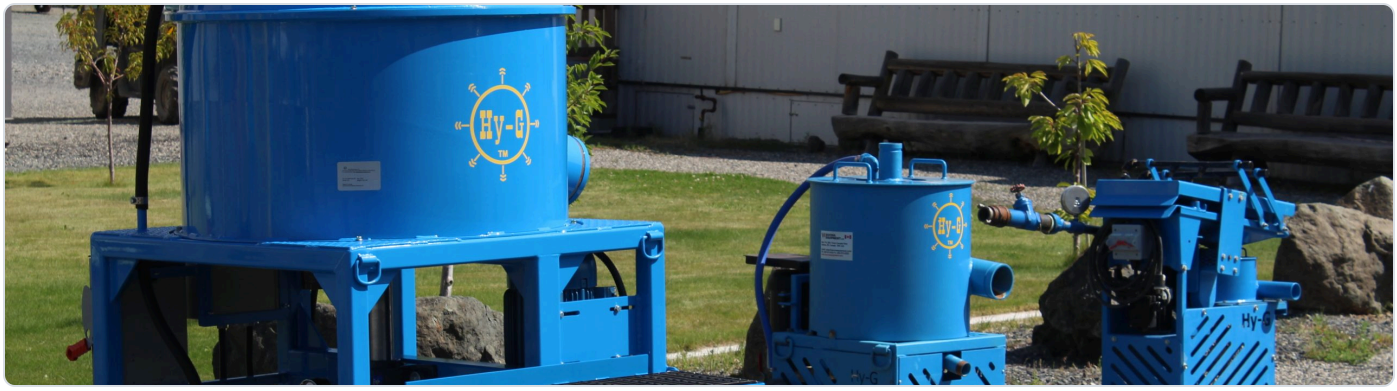
2. Basic Start-Up

1. Crack open the main fresh-water valve to fluidize the rotary union and simultaneously turn power ON.
2. Set typical operating pressure: for Placer (P) Series bowls bring fluidization back pressure to approx. 28 PSI; for Mill (M) Series bowls bring fluidization back pressure to approx. 15 PSI — then adjust for fine tuning.
3. Start feeding slurry. Slurry should be no more than 40% solids.
4. Maintain a consistent, steady flow of slurry to the Hy-G.
5. Maintain a consistent back pressure during the run cycle.

3. Basic Stop / Concentrate Flush Cycle

1. Stop or divert incoming slurry and give the bowl a few seconds to process the balance of slurry fed to the bowl.
2. Reduce back pressure to approx. 3 – 5 PSI.
3. Crack open the concentrate flush water valves.
4. Crack open the bowl spray bar.
5. Power OFF the bowl.
6. As the bowl slows, it is best to reduce back pressure to 2 – 3 PSI.
7. IMPORTANT: Ensure concentrate is ONLY flowing out the concentrate drain pipe and is not being discharged to tailings.
8. As the bowl finishes its slow-down, reduce then turn off back pressure.
9. When the concentrate is drained and the bowl is empty, shut all valves OFF and you are ready to re-start.
10. You can use the hose bib and external nozzle for complete wash-down of the bowl and concentrator.

4. Maintenance

1. Ensure the motor, bearings, and rotary union are maintained per manufacturer instructions.
2. During operation, check that the water pressure is equal on both sides of the Y-Strainer, or that the Y-Strainer screen is regularly checked and cleaned of debris.
3. In general, the Hy-G is a very robust machine with limited servicing and spares required.

Safety note: Recovery is by gravity and fluidization. No mercury or chemicals are used in the Hy-G Concentrator.