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## **HPC-30 Specifications**

Applications	The HPC-30 is an ideal solution for small-scale and start-up Alluvial Mining or Placer Mining mining operations. The design of the HPC-30 also makes it suitable for a broad range of heavy particle concentration applications including gravity concentration of minerals such as tin or cassiterite, copper or malachite, lead, silver, garnets and most other minerals, metals and gemstones. The HPC-30 recovery unit is offered with a choice of feed systems to accommodate a broad range of applications, sites and operating conditions.
Capacity	Capacity of HPC machines is defined according to the rate at which they will consume / process a stockpile of raw feed material ("Run of Mine" or "Bank-run" material). This is material typical of Placer deposits which contain large and small rocks, gravel, stones and sandy material. Processing capacity is limited primarily by the fraction of undersize material screened from this raw feed and fed onto the HPC's Concentrator Belt. Accordingly, should you feed the HPC machine with material which is already undersize (or the deposit you are processing consists mostly of fine/sandy material), all of this material will pass directly to the concentrator belt and the effective operating capacity of the machine will be based on this.
	Please refer to the attached Production Capacity Tables and Material Flow Diagrams for capacity information corresponding to the material to be processed.
Drive System	The Concentrator Belt and Trommel are independently driven, each with the following components
	<ul> <li>Digital Variable Frequency Controller housed within a waterproof enclosure</li> <li>2.2kW (3.0 HP) 3-phase Drive Motor</li> <li>Reduction Gearbox</li> </ul>
	Note: Power supplied to the HPC-30 is supplied directly to the Variable Frequency Controllers which converts the power to 3-phase power required by the Drive Motors. The Variable Frequency Controllers can be adjusted to set the speed of the Concentrator Belt and Scrubbing / Screening Trommel independently.
Electrical Supply Requirements	Electrical Supply must be 3- Phase 380-480V and 50/60Hz. (The HPC-30 can be configured to accept Single Phase power - needs to be specified on order). The motors on the HPC-30 have a combined rating of 4.4kW so any generator or power supply capable of delivering this power will be adequate (excludes power required for feed conveyors and electrical water pump). HPC-30 is supplied with Electrical Supply cable Note: Electrical Generator is not supplied with the HPC-30.
Water Supply Requirements	The HPC-30 requires water supply of approx. 100 gallons/minute (400 liters/minute or 24m3/hour) at a pressure of approximately 45psi (310 kPa). Any electrical, petrol or diesel powered pump capable of providing this water flow may be used. The Water Supply must be connected via a 3" hose ("lay-flat" or discharge hose) clamped onto the inlet nipple on the Water Manifold. Note: Water Pump and connection hose are not supplied with the HPC-30.
Feed material	Maximum: 6" (150 mm) minus material. Recommended: 3" (75mm) minus. See feeder spec's for max. feed size.
Trommel	Scrubbing & Screening Trommel is 168" (4.27 m) long with 20" (0.5m) diameter and 100" (2.5 m) 2-stage Scrubber. Screen is 1/3" (8 mm). Trommel inclination, height and speed are independently adjustable.
Feed Hopper	Fixed Feed Chute designed to receive feed from 18" (450 mm) conveyor
Dimensions	
- Length	230" (5.84 m) with Tail Sluice stowed / 300" (7.6 m) with Tail Sluice extended
- Width	90" (2.30 m)
- Height	88" (2.24 m) with Trommel fully Lowered / 110" (2.8 m) with Trommel raised
- Weight	7,000 lbs (3,200 kg)
Shipping info	Optimal shipping configuration: 1 HPC-30 in 20' container. International customs code: HS #: 8474.10.00 (1). Sorting, screening, separating or washing machines
Trailer	Double-axle trailer with Pintle-hitch.
Manning	1 equipment operator required. Note: for safety reasons, it is always best to have at least 2 people present when operating machinery.

Note: Specifications may be changed without notice











## Material Flow for HPC-30 with AF-30





1) Raw feed is dumped onto the Grizzly above the Feed Conveyor. This material includes sand, gravel, stones and large rocks.

## Material Flow for HPC-30 with FC-30





## HPC-30 Production Capacity Guideline for Alluvial Gold Recovery (tons/hour)

	HPC	C-30
Undersize	Fine	Normal
100%	4 tph	8 tph
90%	4 tph	9 tph
80%	5 tph	10 tph
70%	6 tph	11 tph
60%	7 tph	13 tph
50%	8 tph	16 tph
40%	10 tph	20 tph
30%	13 tph	27 tph

Undersize	% of raw feed which reports to the Concentrator Belt (standard screen size is -8mm)
	This corresponds to #5 on Material Flow Diagrams
Fine	Feed material where there is a very high % of gold particle sizes below 150 mesh / 100 microns
Normal	Feed material where the majority of gold particle are larger than 150 mesh / 100 microns

This is a guideline only – it is impossible to guarantee capacity without testing specific materials.