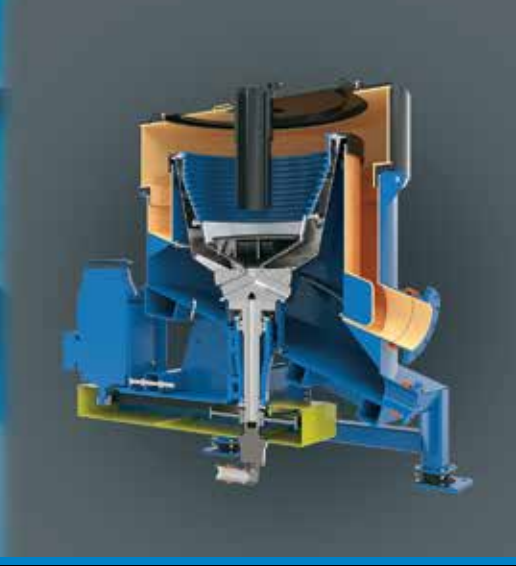


FALCON FRONTIER CONCENTRATOR

APPLICATIONS

- Recovery of gold, silver and platinum group metals
- Recovery of gold from cyclone feed, underflow or overflow within the grinding circuit
- Recovery of gold in alluvial gold operations
- Recovery of gold from aggregate plants

KEY ADVANTAGES

- Parabolic bowl profile has riffles on both sides of the dynamic slurry face to utilize the concentration mechanisms of both the Knelson™ and Falcon SB concentrators
- In field trials, the Falcon Frontier bowl profile achieved almost 20% higher recovery of coarse gold and 50% higher recovery of fine gold compared to competing concentrators
- In a side-by-side operating plant comparison, the Frontier bowl achieved an average gold recovery of 54% in the gravity circuit, compared to 18% with Knelson™ XD48 concentrators
- High G forces (highest in the mineral processing industry) allow for higher efficiency and the recovery of very fine material
- Fully automated, "one touch" operation that provides the least amount of offline time and highest possible concentrate security

Modern gold centrifuges have become standard equipment in most gold recovery processes because they are a simple, inexpensive, and effective way of recovering free gold – but like with any process, there is always room for improvement. Falcon Frontier Concentrator represents the first significant improvement in gravity gold recovery in more than 20 years.

The two main existing concentrator types use different mechanisms to concentrate gold. One bowl type consists of an inclined, constant-angle bowl wall and fluidized riffles along the entire height of the bowl. The second type, the Falcon SB concentrator, uses an inclined, smooth-walled separation zone followed by a vertical recovery zone with fluidized riffles. The differences in the bowl geometries result in a significantly different concentration mechanism.

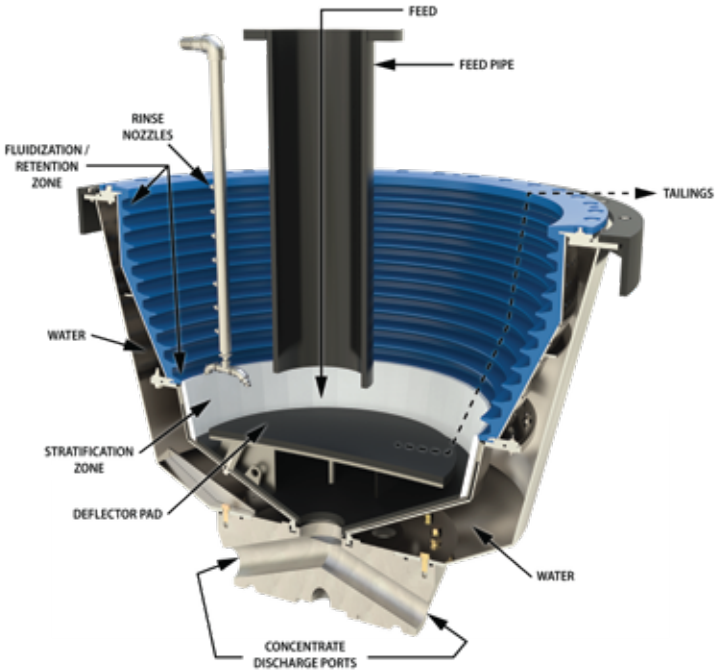
Sepro has created the Falcon Frontier concentrator that combines both concentration mechanisms within one unit. The Frontier bowl is designed to have riffles on both sides of the dynamic slurry face. The bottom riffles are exposed to the slurry flow, creating a turbulent eddy current concentration zone. The top riffles are not directly exposed to the slurry flow, creating a relatively quiet zone of particle separation and recovery. In between is a transition zone where the angle of the bowl wall is equal to the angle of the dynamic slurry face. Combining both concentration mechanisms (along with a smooth transition zone) dramatically improves overall gold recovery across a range of ore types, gold grades and particle sizes.

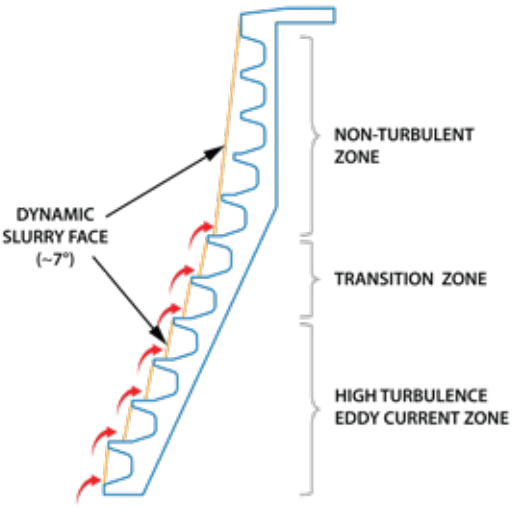
FALCON FRONTIER CONCENTRATOR

SPECIFICATIONS

MODEL			FR400	FR1350	FR2500	FR5200
RECOMMENDED SOLIDS CAPACITY*		t/h	3 - 15	50 - 150	100 - 250	200 - 400
MAX SLURRY CAPACITY		m³/hr	30	205	340	545
CONCENTRATING SURFACE AREA		m²	0.457	0.78	1.34	2.11
G-FORCE RANGE	upper	200	200	200	200	200
	lower	60	60	60	60	60
MACHINE WEIGHT		kg	560	2800	4370	6900*
MOTOR POWER		kW (HP)	3.7 (5)	18 (25)	45 (60)	75 (100)
PROCESS WATER CONSUMPTION		m³/hr	5 - 8	15 - 24	27 - 35	35 - 55
WATER SUPPLY PRESSURE		bar	3 - 4	3 - 4	3 - 4	3 - 4
RECOMMENDED MAXFEED PARTICLE SIZE		mm	2.0	2.0	2.0	2.0
ABSOLUTE MAXIMUM FEED PARTICLE SIZE*		mm	2.5	6.0	6.0	6.0
MAXIMUM FEED PERCENT SOLIDS*		%	45 - 70	45 - 70	45 - 70	45 - 70
CONCENTRATE SLURRY FLUSH VOLUME*		litre	50	170	290	400
CONCENTRATE SOLIDS FLUSH VOLUME*		cm³	2460	17550	30400	39000
DIMENSIONS	WIDTH	m	0.98	1.64	1.86	2.37
	LENGTH	m	1.01	2.27	2.55	3.25
	HEIGHT	m	1.93	2.04	2.33	2.96

*Includes weight and dimensions of the maintenance platform installed on FR5200.





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