

RMS Circular Jigs



JIGS, also known as mineral jigs, are one of the most widely applied gravity concentrating devices used in the world. They are widely used as concentrators for recovery of tin, heavy rare earths, diamonds, gold and platinum group metals.

The development of the circular jigs for tin in the 1960's has led to the development of one of the most significant advances in modern high capacity gravity concentration equipment.

RMS-ROSS CORPORATION has taken the concept of the circular jig and redesigned all elements to produce one of the most efficient, high capacity jigs available in the world today.

- Reliable and cost effective
- High capacity and surge resistant
- Excellent recovery
- Electronic frequency control
- Easy stroke adjustment
- Greater particulate retention time



In conventional square jigs, the feed accelerates toward the discharge. However, in circular jigs the feed decelerates as it approaches the discharge because the cross sectional area of the flow channel increases dramatically as the feed approaches the discharge. Therefore the particulate retention time is substantially longer in the RMS-Ross CIRCULAR JIG compared to any traditional jig, enhancing the capture of fine gold.

The primary function of the RMS Circular Jigs is **stratification** and the secondary function is the **separation** of the stratified layers into two discrete products - tailings and concentrate. The stratification and separation are affected by the **jig cycle**.



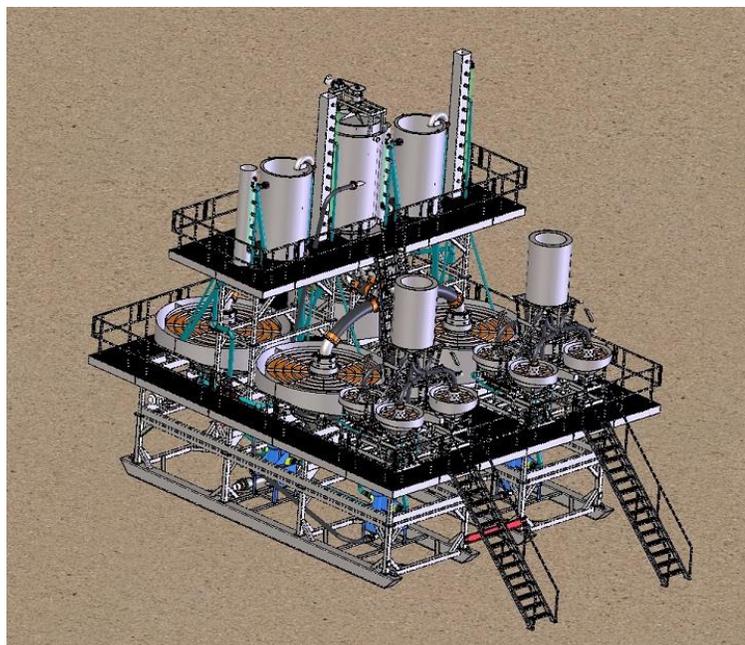
The jig cycle consists of an upstroke, or 'propulsion stroke', and a down stroke, or 'suction stroke'. The upstroke results in the creation of a very 'soft' bed (dilation) where the lighter particles are lifted into the tailings stream and the heavier particles can readily sink and be sucked through the screen in the down stroke or the suction stroke. The inflow of water is restricted to the down stroke so that the suction in the bed can be modified to suit the highly variable conditions on site.



Circular jigs are more efficient than trapezoidal or square configurations where interference patterns result in zones of pulse disruption, negatively affecting feed flow. Whereas pulsations occurring in a concentric round chamber, working at a tuned frequency, will give rise to balanced nodal pulse patterns providing even vertical sorting of the jig bed. Therefore, the RMS Circular Jigs are more efficient by inherent physical design.

The RMS Circular Jig has a simple harmonic motion cycle where the up and down strokes are of equal duration and intensity, but both length of stroke and frequency are independent and easily adjustable.

The same is true of hutch water; there are individual tanks and adequate valving for absolute control of water pressure. The higher the hutch water pressure, the less the suction, the higher the grade of concentrate. Inversely, the lower the hutch water pressure, the greater the suction, resulting in more concentrate but lesser grade.



Specifications

Single Jig Cell Specifications

***Double these numbers for Regular Duplex Cell Jig Plant Configuration**

Description

	3 Foot	6 Foot	9 Foot
Area of Bed (sq. ft)	7	28.3	63.6
Feed Rate per cell (cy/hr)	10	42	95
Feed Rate per cell (TPH)	15	63	143
Hutch Water Requirement (GPM/LPM)	30 / 115	130-150 / 500-575	300-340 / 1150-1300
Lip Length (ft)	9.4	18.8	28.3