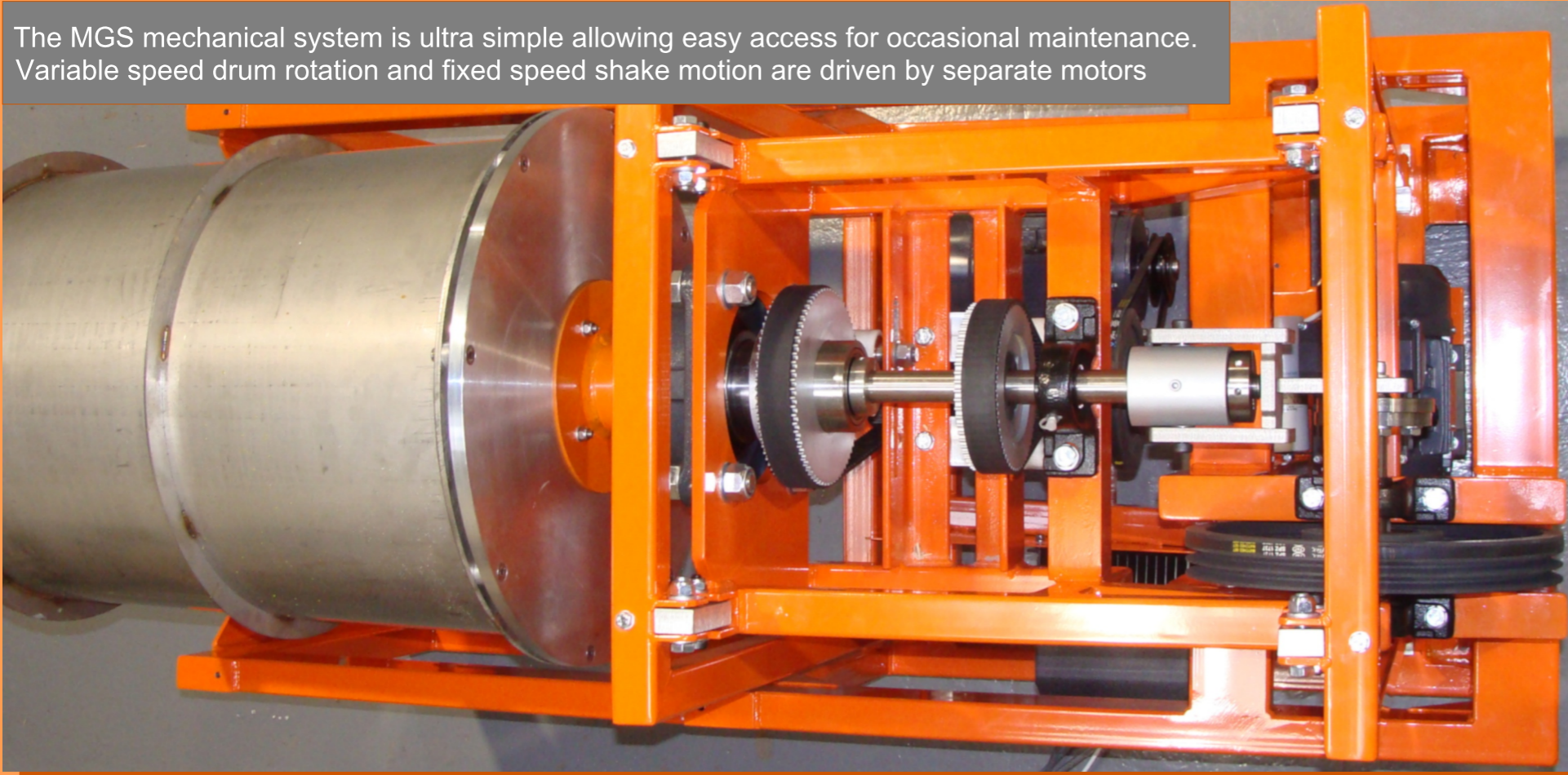




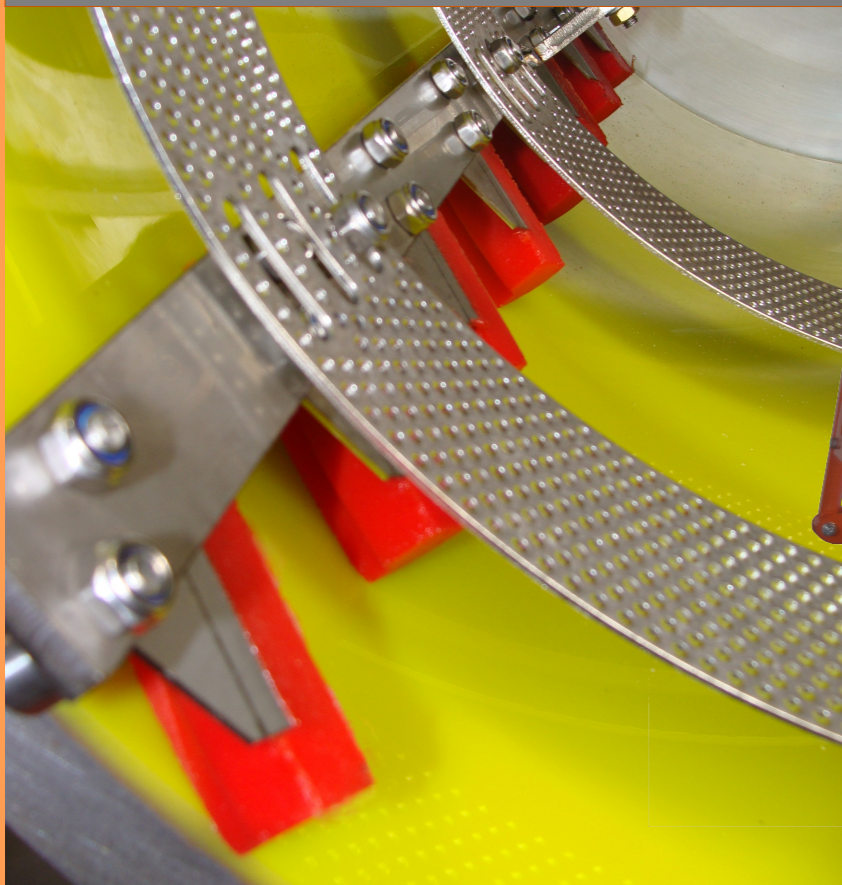
C900 Pilot Plant MGS

A proven machine for pilot scale gravity separation or the production processing of small waste streams. The C900 is used worldwide in mineral processing laboratories and has an unsurpassed ability to recover fine and ultra-fine materials.

The MGS mechanical system is ultra simple allowing easy access for occasional maintenance. Variable speed drum rotation and fixed speed shake motion are driven by separate motors



The MGS' scraper blade system drags heavy fine materials to the front of the drum, while tailings are washed to the back of the machine. Alternative scraper designs are available to optimise the scraping action



Originally developed as a laboratory machine, the **C900 MGS** is a scaled down version of the proven production machine. This mid size machine is ideal for larger scale pilot plant testing or for small scale production operations. It is designed to stand the rigours of a 24/7 mining operation, yet has full adjustability for laboratory testing if needed.

The Multi Gravity Separator (MGS) operates on a similar principle to a shaking table to separate and upgrade very fine materials. MGS' subtle centrifugal force simulates **enhanced gravity**, pinning heavier materials to the wall of the drum to be dragged forward by scraper blades, while lighter tailings are agitated by the shaking motion and washed away. The MGS will function satisfactorily with materials up to 500 microns but, it works **exceptionally well** when there is a **narrow size band** of material below **100 microns**

The benefits of using an MGS system in a gravity circuit are typically:

- Delivers very **high grade and recovery** from fine and ultrafine material
- **Sustainable, chemical free** processing
- Suitable for concentrating many valuable metal bearing ores
- Self regulating and able to cope with **significant changes in material grade** without losses

Ability to cope with changes in **feed pulp density** by adjusting wash water levels

Flexible solution

- Can be used to produce saleable grade concentrate from low grade tailings in one step, or
- Can be used in a two stage process either as a rougher or finisher to optimize capacity and recovery

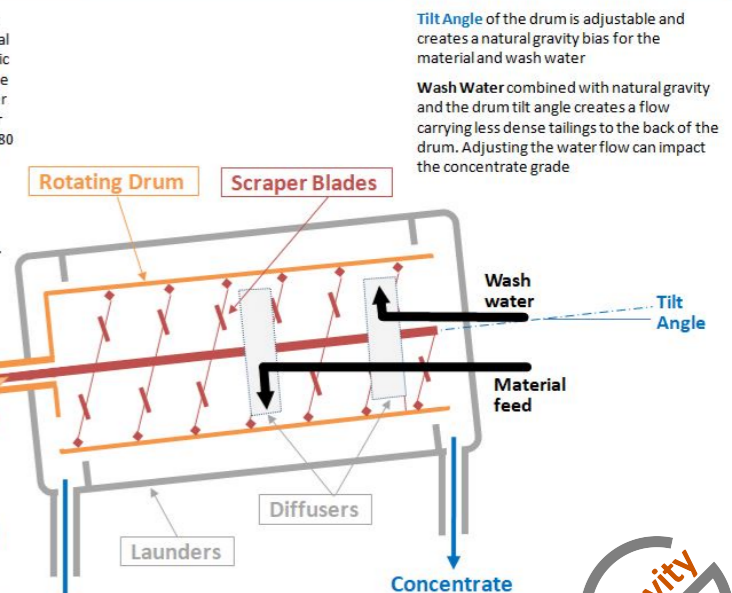
How the Gravity Mining - Multi Gravity Separator works

Drum Rotation - Slurry is fed to the mid point of the drum as it rotates. The subtle centrifugal force capitalizes on small differences in Specific Gravity keeping heavier materials in place to be dragged forward by the scraper blades. Lighter materials flow with the wash water to the rear of the drum. Rotation speed is variable (100-180 RPM) allowing flows to balance for optimum recovery and grade

Scraper blades are rotated at a differential speed to the drum which drags heavier materials forward to the front of the machine. Blade design is critical for maximum output, allowing lighter material to flow, while heavier material is caught and dragged forward

The Drum and Scraper system move together in an adjustable **Axial simple harmonic motion**. This fluidizes the material allowing directional movement

MGS' **Tapered Drum** creates higher centrifugal forces towards the tailings end of the machine, this has the effect of recycling any heavy material that finds its way to this end of the machine





C900 Pilot MGS technical specifications

Capacity	250 Kg/hr (dry basis - material dependent)
Feed Particle size range	500-1 micron
Feed Pulp Density	10% to 50% solids w/w
Packed dimensions	1620*710*1090 mm
Gross Packed weight	520 Kg
Nett weight	360 Kg
Electrical standard	IP66 with centrally mounted control panel
Power requirements	Single phase 110/240V 50/60 Hz (3 phase optional)
Drum Drive Electric Motor	1.1 kW variable speed
Shake Drive Electric Motor	0.55 kW fixed speed
Total Power	1.7 kW installed (typical consumption 0.8 kW)
Drive System	Belt
Rotational Speed	100-280 rpm infinitely variable
Shake Frequency	4.0, 4.8 and 5.7 Hz
Shake Amplitude	15 mm std. (10 or 20 mm optional)
Tilt Angle	7.5 degrees std. (0-9 degrees optional)
Wash Water	0-10 litres/min per drum (free of solids)
Construction materials	
Frames	Powder coated steel
Drum	Aluminium
Drum Lining	Abrasion resistant polyeurethane