



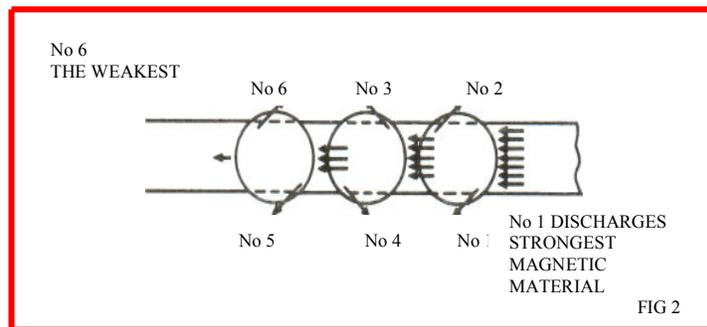
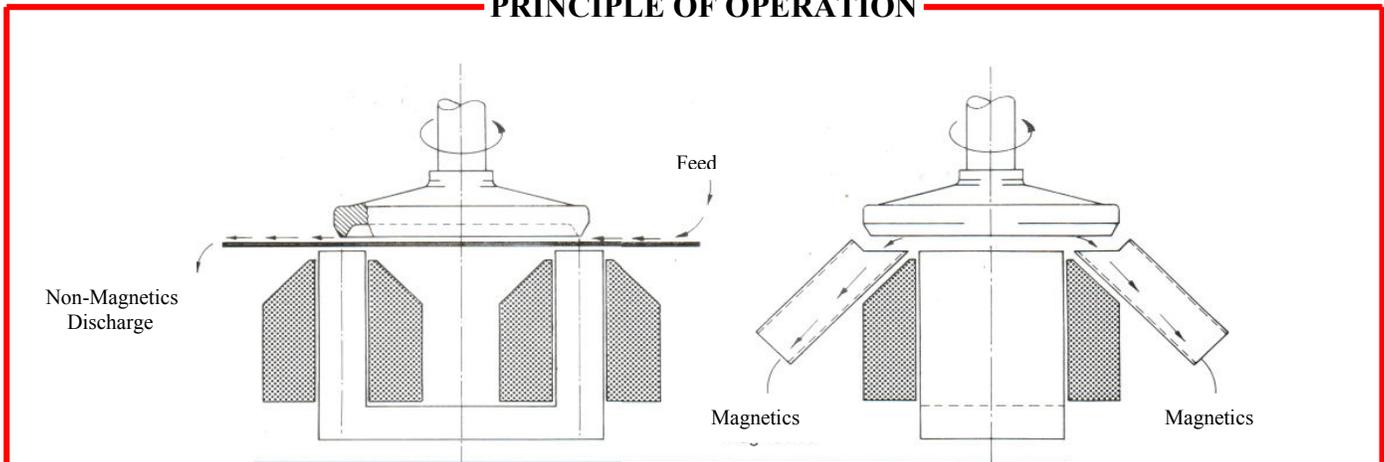
## **MASTER MAGNETS INDUSTRY GUIDE**



### **MAGNETIC SEPARATION EQUIPMENT FOR MINING AND MINERALS CONCENTRATION INDUSTRY**

### **MASTERMAG DISC TYPE MINERAL SEPARATORS**

## PRINCIPLE OF OPERATION



### OPERATION

Feed material is discharged from a hopper to a vibratory feedertray. A thin layer of material is continuously transported beneath the rotating discs where magnetic particles are 'picked up' and attracted to the high gradient zones on the discs. These captured particles are then carried by the rotating discs to the magnetics discharge chutes where they are released. Scrapers mounted on the chutes ensure the total discharge of magnetic particles. Non-magnetic material is then transported through a second magnetic separation zone where secondary separation occurs, and is finally discharged at the end of the machine as a clean non-magnetic product.

### APPLICATIONS

Concentration of dry, granular minerals such as ilmenite, garnet, monazite, wolframite, columbite-tantalite, etc.

Removal of minerals of low magnetic susceptibility from cassiterite, zircon, scheelite, rutile, etc.

Purification of quartz for the glass making industry.

Purification of abrasives

Extraction of iron oxides from chemical and food products.

The removal of feebly magnetic particles from swarf.

### FEATURES

One, two or three disc machines are available, giving a maximum of 2, 4 or 6 magnetic products respectively.

Magnetic intensity is controlled by varying the current of each coil section from the control panel or by manual adjustment of the air gap between discs and feed belt.

Feed belt speed can be varied to suit material being treated.

Feed rate is governed by either electric vibratory feeder or a gravity feed hopper with a snap action gate lever.

A continuously discharging permanent magnetic scalper unit can be fitted to any size of separator to remove highly magnetic materials, such as magnetite or free iron particles which would otherwise accumulate on the first disc and impair separation.

When the presence of highly magnetics is not evident in a quantity sufficient to justify use of the continuous discharging scalper unit, a static permanent magnet is fitted to collect traces of free iron or magnetite



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