



MG12 Spiral Separator



Overview

The MG12 is a new high performance spiral separator that has demonstrated exceptionally high separation efficiencies on a number of different mineral sand feed types in rougher, scavenger and cleaner duties. The high concentrate grades and very high recoveries achievable on an MG12 in a single pass will result in concentrator plants that are greatly simplified and capable of higher overall metallurgical performance. Conventional flowsheets containing five, six or more spiral stages may be replaced by a three stage MG12 flowsheet that will provide superior metallurgy. In some cases, two stages may be sufficient to achieve targets. Synergistic advantages include cheaper plants with smaller footprints that can be readily relocated if necessary. Fewer processing stages means reduced power consumption and a decreased need for peripheral equipment such as pumps, motors, control circuitry, sumps, intermediate launders and distribution systems. Plants with fewer processing stages are easier to operate, easier to control and quicker to commission.

Features

- 3 repulpers
- Number of starts – single, twin and triple
- 3 x auxiliary slide splitter
- Improved edge for containing splash
- Ganged product splitters
- Highly wear-resistant polyurethane on all operating surfaces

Design Data

Head Feed (per start)

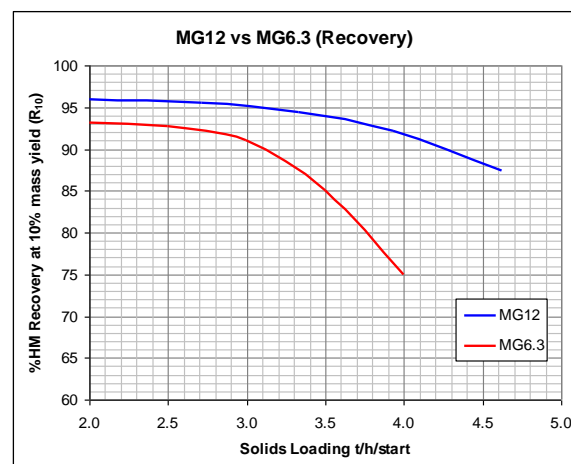
Capacity:	Up to 5.0 t/h per start (typically 3.0 - 3.5 t/h/start)
Pulp Density:	25 to 60% solids (typically 30-45% solids)
Size Range:	0.03 – 2.0mm (0.04 to 0.7mm for optimal separation. Material coarser than 0.7mm has been shown to increase wear rates in some cases)
Pulp Volume:	Up to 8 m ³ /h slurry volume per start (typically 4 to 6 m ³ /h/start)

Application

The principal area of application is in a roughing or scavenging duty (low to medium heavy mineral grade). However, this model has been successfully deployed on feed as high as 40% heavy mineral content.

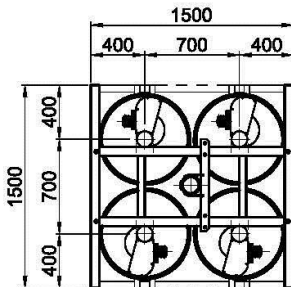
Specific applications include:

- Mineral sand
- Gold – alluvial and hard rock
- Silica sand
- Tungsten
- Tin
- Garnet
- Chromite
- Sillimanite
- Tantalum

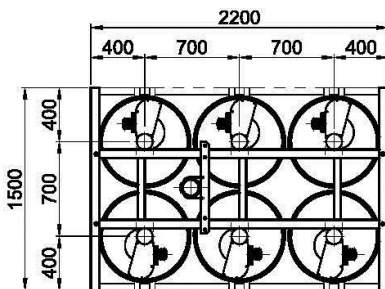




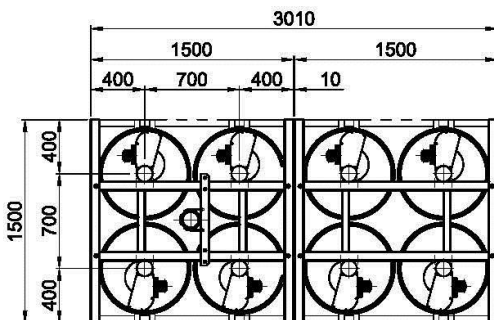
MG12 SPIRALS



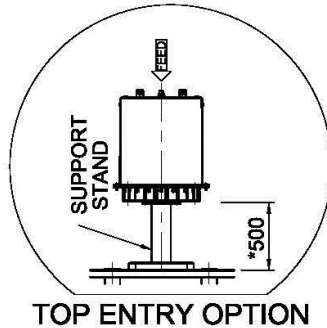
**DOUBLE ROW SPIRAL BANK
BANK OF 4**
(Refer Typical Elevation)



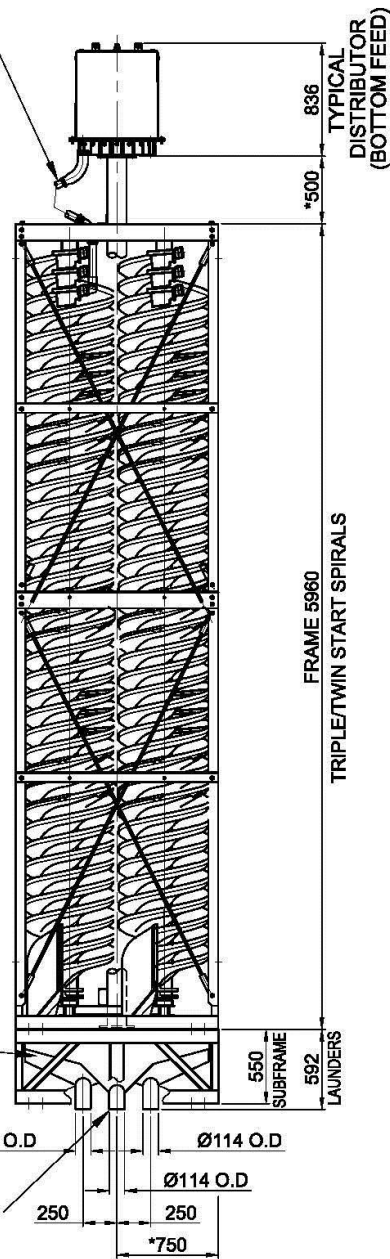
**DOUBLE ROW SPIRAL BANK
BANK OF 6**



**DOUBLE ROW SPIRAL BANK
BANK OF 8 (4x4)**



TYPICAL FEED HOSE ARRANGEMENT



**TYPICAL ELEVATION
BOTTOM ENTRY**

*SPIRAL AVAILABLE IN SINGLE / TWIN / TRIPLE CONFIGURATIONS
*DISTRIBUTOR AVAILABLE AS MK9 OR MK7 T.E. OR B.E.

*NOTE: LAUNDRY/ FEED PIPE/ DISTRIBUTOR/ SUPPORT STAND DIMENSIONS, SPECIFICATIONS & LOCATIONS MAY VARY TO SUIT SPIRAL BANK COMBINATIONS - TRIPLE START SPIRALS DRAWN FOR ILLUSTRATION PURPOSES ONLY

ESTIMATED MASS (tonnes)

SPIRAL BANK	4x2	6x2	8x2	10x2	12x2
TWIN START	1.83	2.53	3.50	4.20	5.15
TRIPLE START	2.08	2.83	3.90	4.70	5.76

Mineral Technologies

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NOTE: MINERAL TECHNOLOGIES RESERVES THE RIGHT TO ALTER SPECIFICATIONS WITHOUT PRIOR NOTICE

FOR CERTIFIED DRAWINGS SUITABLE FOR ENGINEERING DESIGN PURPOSES PLEASE REFER TO MINERAL TECHNOLOGIES

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Rev 1