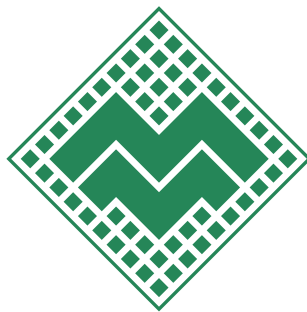




MULTOTEC

Dry Cross-cut Sampling Solutions



Your Specialist in Process Equipment



Dry Cross-cut Sampling Solutions

Multotec Process Equipment (Pty) Ltd has been manufacturing and supplying sampling equipment under license to Siebtechnik GmbH in Germany, since 1987.

Multotec is currently a leading provider in the design and supply of dry sampling installations to Africa and selected international markets. Our specialists have experience in all aspects of sampling and preparation over an extensive range of mineral applications. This enables the selection of the best and most cost-effective solutions to all sampling problems, large and small.

The Multotec dry sampling range of equipment consists of:

- Belt-end and screen-end primary cross-cut samplers for discharge chute applications
- True-belt® samplers designed to suit conveyor belt widths from 450 mm to 2 500 mm, travelling at up to 6 m/s
- Secondary rotating plate dividers to suit various top sizes of material and variable division ratio requirements
- Vezin dividers to suit lower material feed rates, but with widely adjustable division ratios and replicate sampling
- Impact, rolls or jaw crushers and hammer mills for material size reduction can be provided
- 3CR12, 316 or 304 stainless steel, HDPE and VRN-lined mild steel sample chute work and containers
- Sample feed and/or rejects handling systems, e.g. bucket elevators, skip hoists, tube chain conveyors or mini conveyors
- Complete turnkey sample stations for run-of-mine (ROM) or product materials in all mining and mineral industries and applications is also an option

This sampling equipment incorporates all the process and design knowledge gained during Multotec and Siebtechnik's long and collaborative involvement within the area of dry sampling, to provide customised plants on a guarantee basis.

Since 2005, Multotec has had a close association with the World Conference of Sampling and Blending (WCSB) and its leading consultants. This has further helped Multotec align itself with correct sampling methods and design in an endeavour to provide best sampling practice.

Specifications

Various ISO, ASTM, DIN, AS and other internationally recognised sampling standards stipulate that:

- Prescribed sample increment masses and numbers shall be collected per lot or batch size
- The sample cutter width shall be at least three times the nominal top size of the material to be sampled and travel at consistent speed (Minimum cutter width is 30 mm)
- There is to be a minimum of disturbance to the material stream when taking the necessary full cross-cut
- Sampling equipment and plants are to be designed to avoid contamination of sample
- All chute work to have recommended minimum slopes of 70° with radiused corners to eliminate build-up
- Samples must be representative and free of any commercially significant bias

References

More than 700 Multotec sampler installations have been supplied in the last decade into all international mining markets and industries (gold, coal, iron, manganese, chrome, aluminium, ferroalloys, lime, heavy mineral sands, platinum, copper, zinc, and andalusite) along with many more by Siebtechnik.

Coal Product

- Payment sample stations
- Control sample stations

Run-of-mine

(Gold and platinum)

- Over 50 primary samples and sample tower installations

Ship and Train Loading/Off-Loading

(Coal, coke, dolomite and iron ore)

- RBCT terminal
- Saldanha iron ore terminal

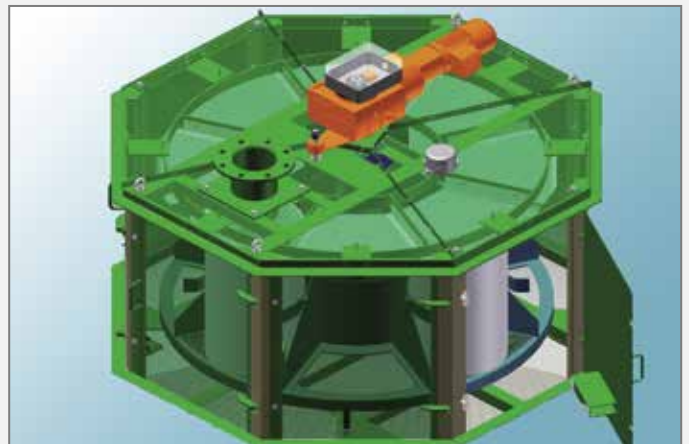
Contamination Removal Systems

- Tramp metal elimination
- Foreign material removal

Electrical Controls

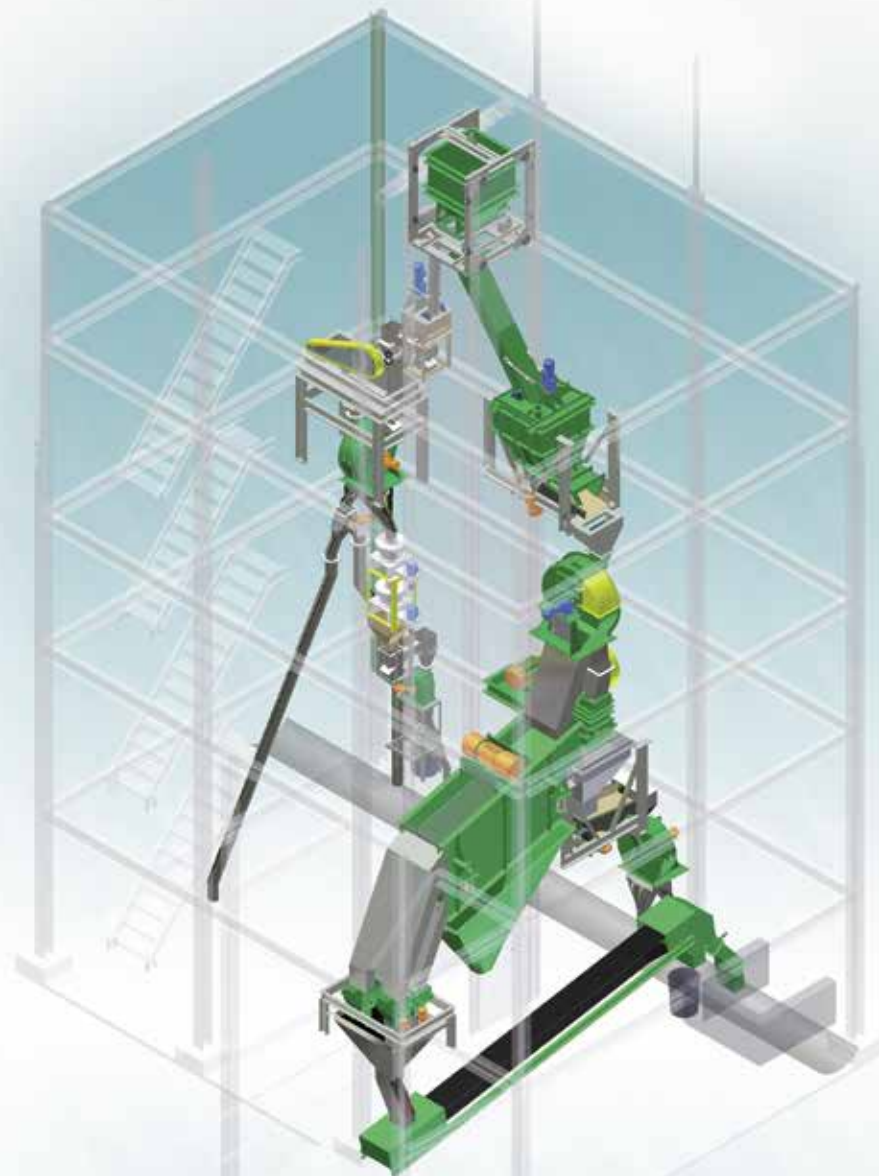
- All electrical control specifications vary between plants, their processes and the type of projects
- PLC and/or relay/timer controls available and housed in floor or wall mounted control boxes or a motor control centre (MCC) building
- Mimic or graphic displays are optional with central plant SCADA interfacing capability
- Enclosures available in all IP and NEMA ratings for splash, water and dust proofing

And many other specialised applications



Sample Collection Carousel Advantages:

- Up to 20 container carousels or table indexers for sample collection of various material consignments
- Versatile piece of equipment with up to 100 litre container sizes
- Separate or replicate samples possible for control purposes
- The sampling containers can be accessed via service doors
- Level detection in containers is possible
- Automatic indexing of containers



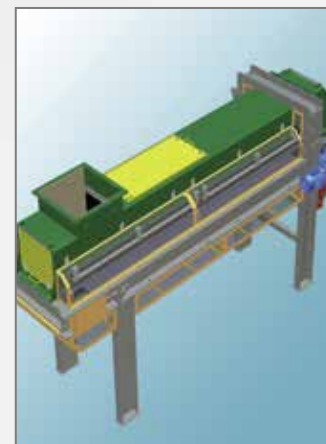
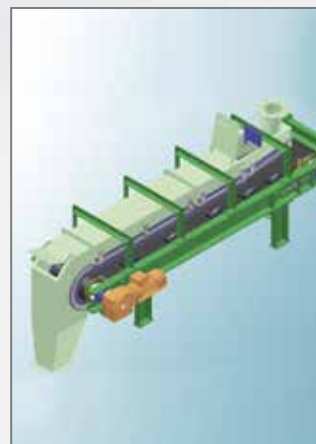
Diverter Advantages:

- Mainly used to split a sample into two easily handled portions
- Diverts physical and chemical samples into separate streams
- Used to alternate samples, i.e. interleaf sample mode



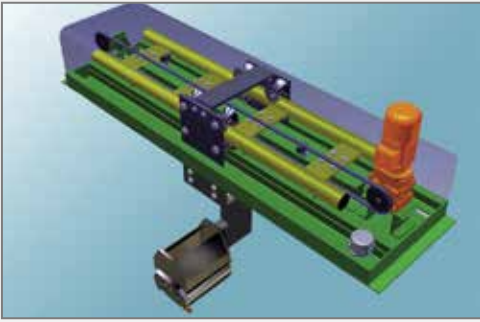
Bucket Divider Advantages:

- Very versatile piece of equipment
- Sample collector and vezin type splitter all in one
- It provides accurate separation of samples:
 - duplicate or replicate samples possible for control purposes
 - 1 to 4 separate samples possible
- Ease of access - the sampling container(s) can be inspected and accessed via the doors provided



Mini Conveyor Advantages:

- Consistently trickle feeds crushers and dividers
- Totally enclosed units emphasised
- One or bi-directional conveyor if dual physical and chemical samples are needed
- Also conveniently used in reject handling



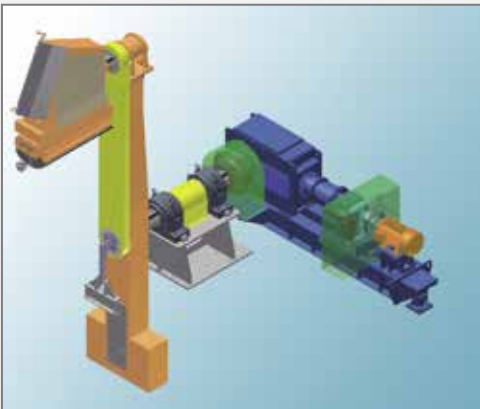
Cross-stream Sampler Advantages:

- Rugged construction
- Designed for all discharge stream applications
- Versatile drive methods
- Suitable for light- and heavy-duty applications
- Bottom dump or continuous discharge units available
- Theory of Sampling (TOS) compliant design



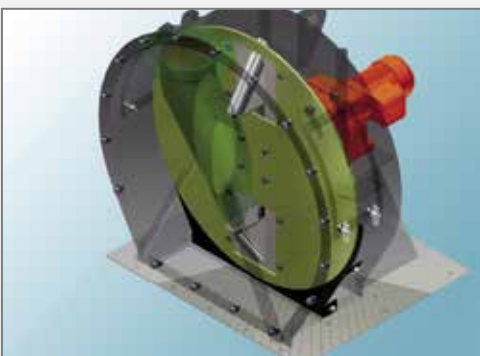
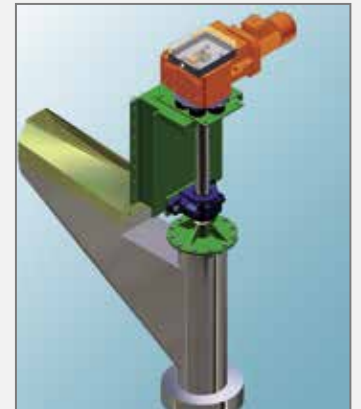
True-belt® Sampler Advantages:

- An improvement on the cross-belt sampler
- Suitable for conveyor widths from 450 mm (18 ") to 2 400 mm (95 ")
- Can sample ore containing large rocks, i.e. nominally 300-400 mm Tag/SAG Mill feed
- Material is only sampled in discharge chute after it has been removed from the belt
- Can be installed on horizontal or inclined conveyor belts with an elevation of up to 18°
- Designed to suit idler troughing from 20° to 25° ideally
- Supplied with rubber or polyurethane skirting and curtains to prevent spillage of agitated materials and misplacement of sample
- Sampling can be either mass or time-based
- Can be adapted to allow sampling of most conveyed material
- Guaranteed collection of unbiased sample increment
- Durable high carbon steel sample cutter available
- The upgraded designs clarify the debate on grade distribution biases as levied at cross-belt sampler



Rotating Plate Divider Advantages:

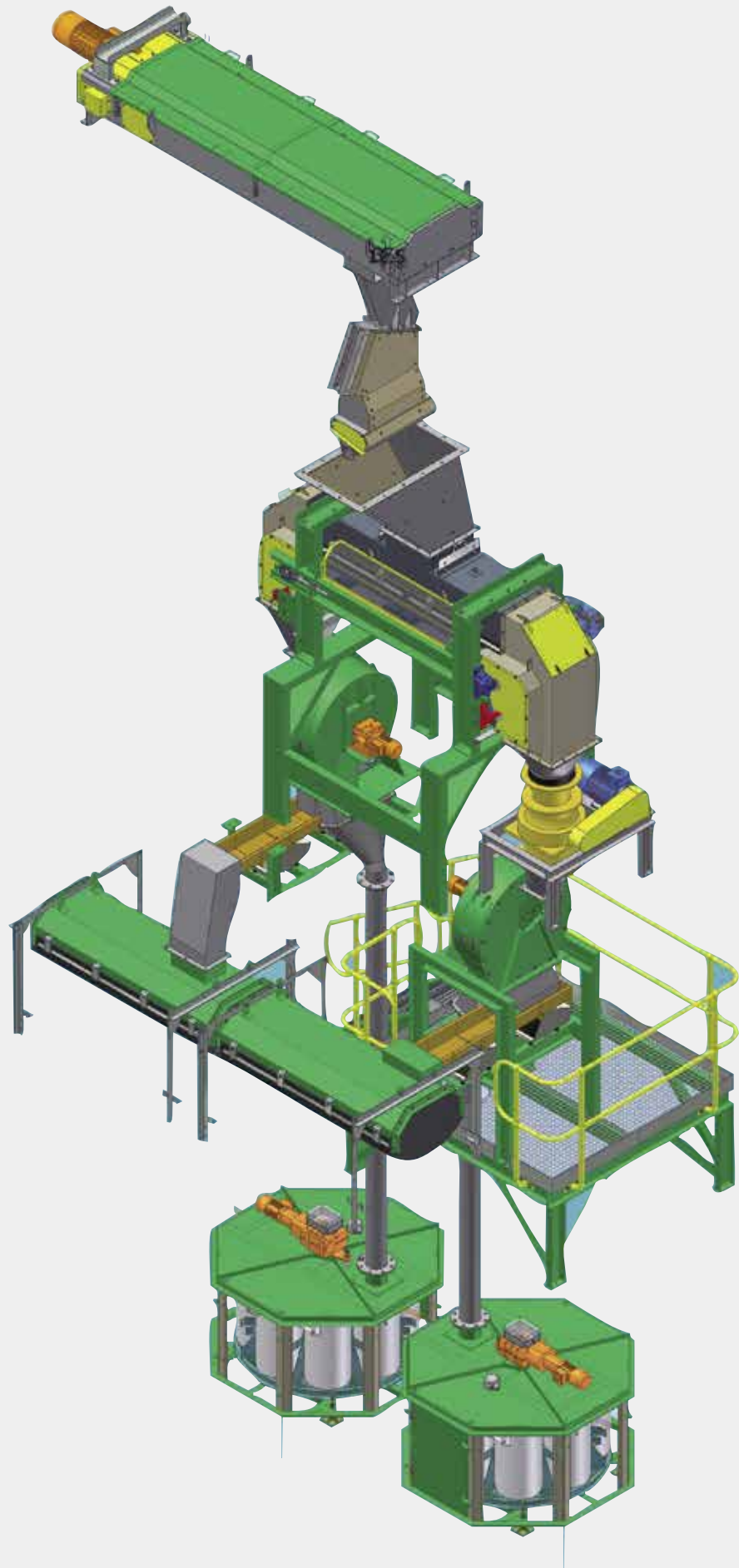
- Used for reliable dry material sample division
- Suitable for primary and secondary sampling
- Consistent feed necessary
- Mechanically reliable, low maintenance
- Ideal for bulk materials handling application
- Various sizes and models available
- 1 to 4 cutters possible (bolt on)

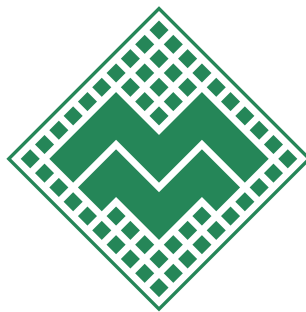


Swing-arm Sampler Advantages:

- At conveyor belt discharge point
- Collect and elevate primary sample for convenient discharge
- Light- and heavy-duty applications
- Low maintenance and excellent availability
- Continuous discharge or bottom dump chutes possible







MULTOTEC

Australia – Brisbane

Tel: +61 (7) 3442 0100
Fax: +61 (7) 3200 7733
Email: sales@multotec.com.au

Australia – Perth

Tel: +61 (8) 9406 3500
Fax: +61 (8) 9302 1732
Email: sales@multotec.com.au

Canada – Edmonton

Tel: +1 (780) 433 8825
Fax: +1 (780) 433 8836
Email: canada@multotec.com

Canada – Montréal

Tel: +1 (450) 651 5858 (ext. 203)
Fax: +1 (450) 651 0002
Email: canadam@multotec.com

Chile

Tel: +56 (2) 745 3317/3302
Fax: +56 (2) 745 3432
Email: chile@multotec.com

Botswana

Tel: +267 297 4524/4525
Email: botswana@multotec.com

Ghana

Tel: +233 302 517 821
Email: multotec@multotec.wa.com

Mozambique

Tel: +258 25 240057
Cell: +258 84 064 9544
Email: mozambique@multotec.com
moz@multotec.com

South Africa

Tel: +27 (0) 11 923 6000
Fax: +27 (0) 11 394 8701/5099
Email: marketing@multotec.com

Zambia

Tel: +260 212 313 354
Fax: +260 212 312 422
Email: multotec@multotec.co.zm

www.multotec.com

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Sampling Solutions	Wear Lining Solutions	Mill and Scrubber Linings
Solid / Liquid Separation Solutions	Conveyor System Solutions	
Pumps	Process Water Treatment and Metals Recovery	



Multotec products are subject to continuous development and Multotec reserves the right to make changes to the specifications and design of its products without prior notification.