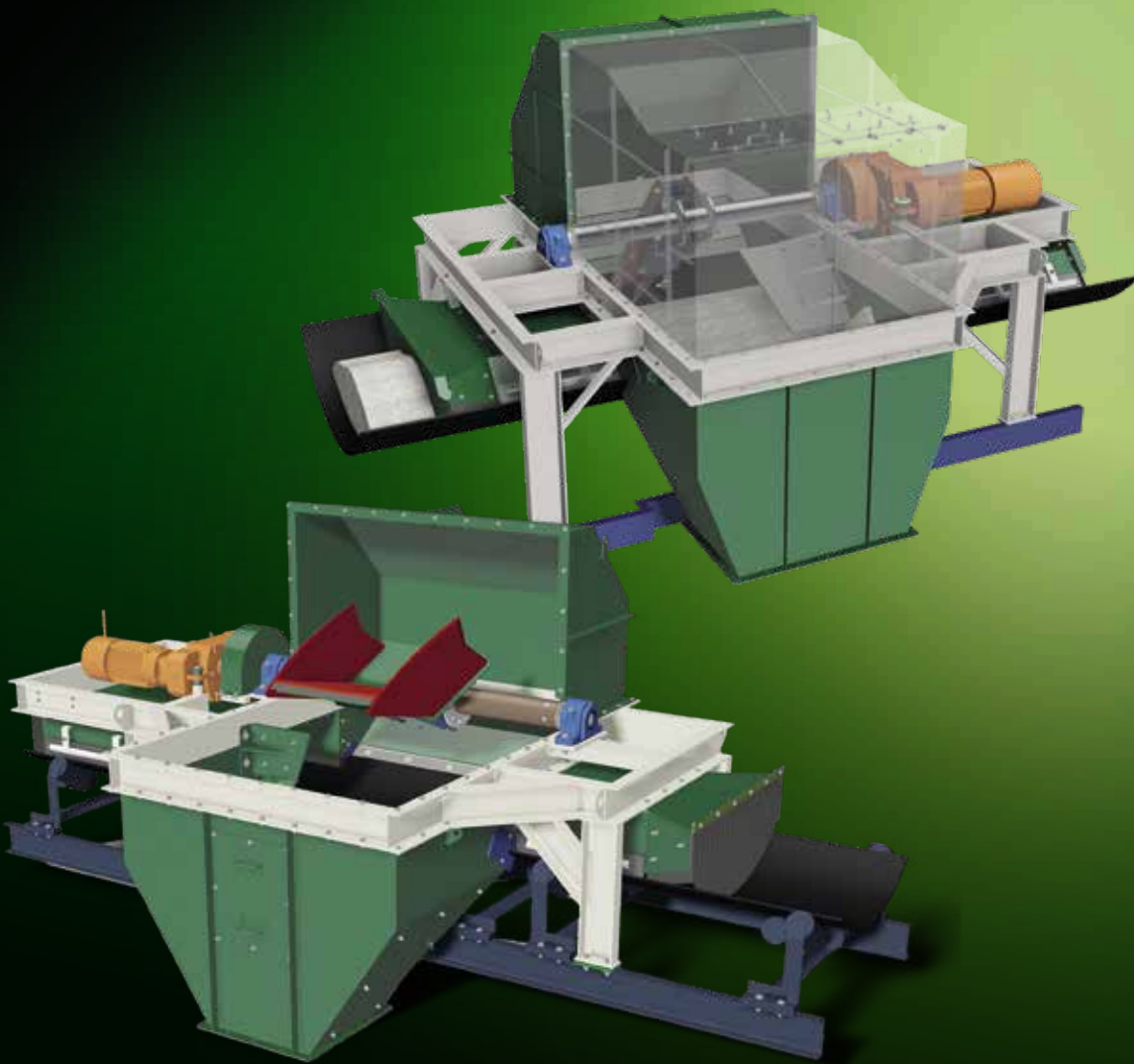


MULTOTEC

Cross Belt Sampling Systems



Your Specialist in Process Equipment



Cross Belt Sampling System

Multotec has manufactured and supplied sampling equipment under license to Siebtechnik GmbH in Germany since 1987. Multotec is a leader in the design and supply of dry cross belt sampling installations in Africa. 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 sampling solutions for belt conveying applications. We also provide cross-stream sampling solutions where recommended.

Primary Cross Belt Samplers

- To suit all conveyors from 450 mm (18 ") to 2 400 mm (95 ") wide
- Used where belt throughputs are up to 7 000 tph
- Can be installed on horizontal or inclined belts up to 18°
- Computer generated simulations and 3D Inventor modelling of designs available
- Designed to suit various idler troughing angles of 20° to 35°
- Rubber or polyurethane skirting and curtains to contain agitated material together with wider housing to eliminate spillage
- Sampling is executed on a mass or time basis
- Adapted to sample most conveyed mineral particle depending on amount of fines and moisture

Reliable Cutter

- Guaranteed unbiased increment using straight or angled cutters
- Slot width conforms to all ISO, ASTM and AS recommendations
- Nylon brush with polyurethane or staggered rubber scraper assembly for positive removal of all fines
- Durable stainless or Mn steel sample cutter scoop available
- Cutter speed exceeds belt speed up to 60% but limited to 6 m/s tip speed
- Correct sampler designs adopted to comply with international norms

Construction

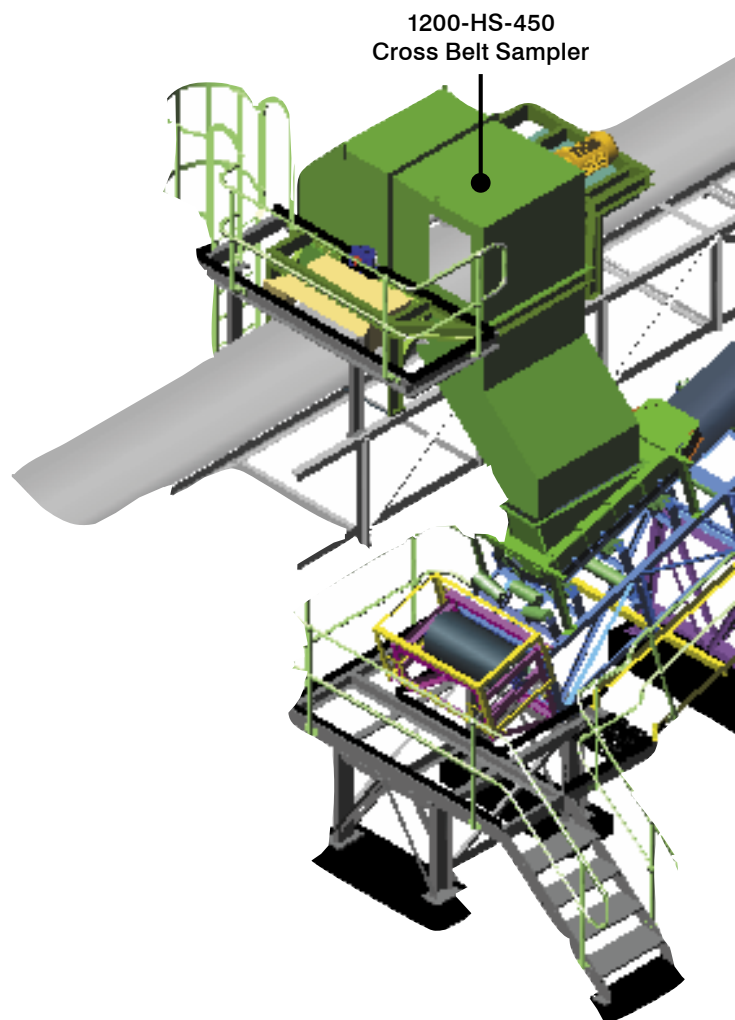
- Direct drive unit complete with geared brake motor up to 45 kW
- Dedicated brake controller panel and adjustable timer for reliable operation
- Systems custom made to suit each application
- Manufactured in South Africa according to ISO 9001:2008 standards

Retrofit

- Easily mounted on conveyor stringers along length of conveyor
- Installed and commissioned in a few hours
- Trouble-free operation until 98% availability
- Minimal plant modifications at low cost when retrofitting
- Shims / spacers used to ensure cutter ≤ 5 mm from belt surface
- 5-roll belt idler configuration preferred to optimise belt curvature
- Guaranteed not to damage the conveyor belt when correctly installed



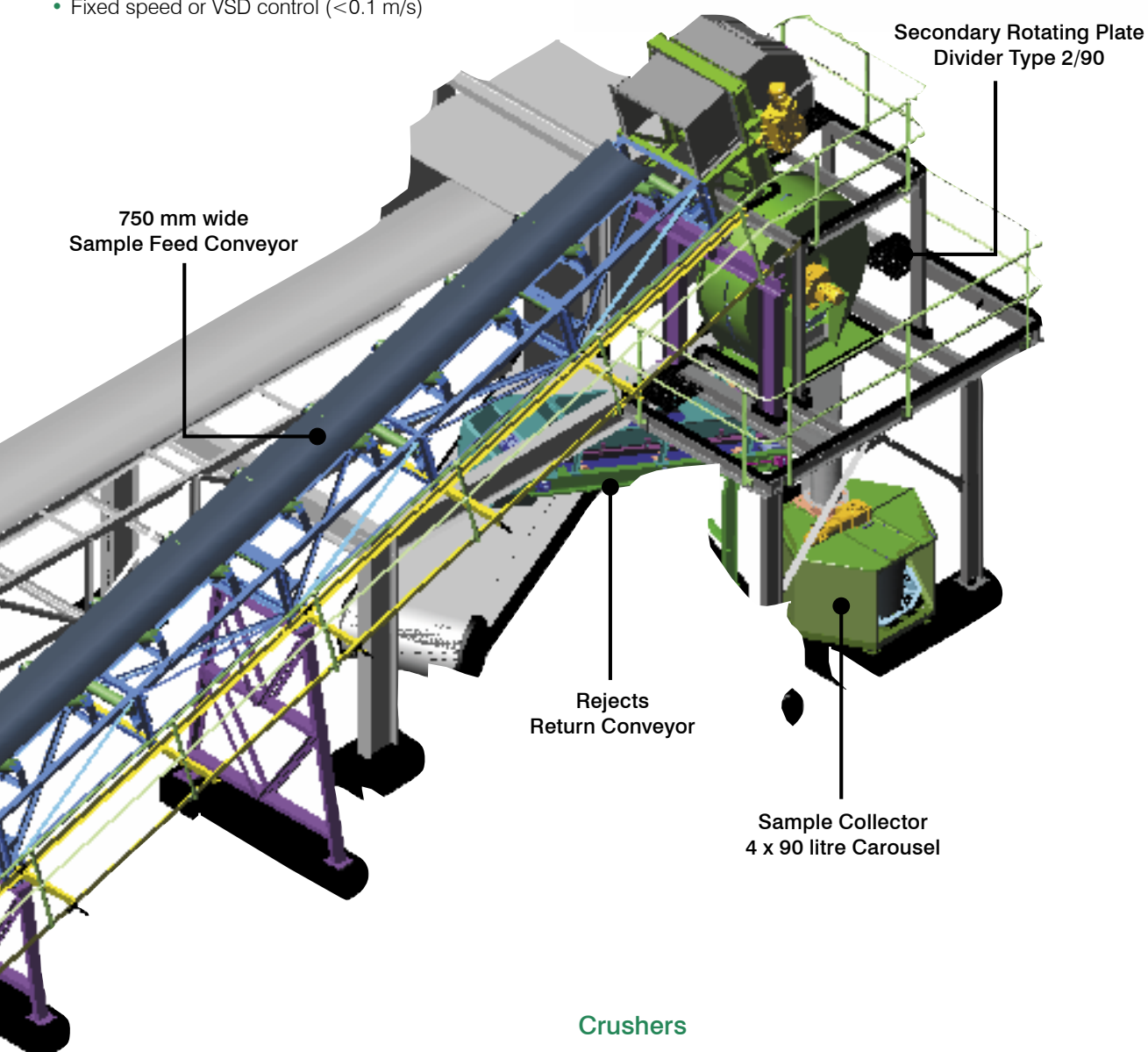
Cross Belt Sampler with Angled Cutter



Sample Feeder Conveyor

Our custom designed mini-conveyors provide a space-efficient and cost-effective way to enclose sampled material between unit sampling, crushing and division steps.

- Lightweight, rugged construction
- Custom design (300 mm – 1 050 mm width and 1 500 mm – 40 000 mm in length)
- Fully guarded moving parts
- Scraper to clean belt discharge
- Ease of tensioning adjustment and maintenance
- Flat or troughed design
- Four leg footprint with mounting brackets
- Optional dust or moisture covers to prevent contamination
- Alignment and speed switches optional
- Flow adjustment/control plates
- Fixed speed or VSD control (<0.1 m/s)



Crushers

Jaw, impact, rolls and cone crushers sourced for various sample material size reductions prior to sample subdivision. Low throughput (<10 tph) and high reduction ratio machines recommended as required.

Rotating Plate Divider

- For continuous or timed dry material splitting
- Suitable for primary sampling and secondary division
- Must be consistently fed by vibratory feeder or feeder conveyor
- Ideal sample divider for bulk materials handling systems
- Various sizes or models available 2/16, 2/40, 2/63, 2/90 and 2/125
- Takes multiple cuts of primary samples or feed



Rotating Plate

Stainless Steel Cutter



Maintenance

- Mechanically very reliable with up to 99% availability
- Gearbox lubricated for life 14 – 28 rpm
- No operating spares required

Construction

- Material – mild, VRN or 304 stainless steel
- Single sample and rejects discharge chute
- 1 to 4 bolt-on cutters possible
- Simple design and principle of operation
- Geared motor (0.37 – 1.5 kW)

Installation

- Self contained, robust unit
- Easily installed and retrofitted
- Electric operation – 380 to 600 V, 50/60 Hz
- Control voltage 110 V, 220 V or 24 VDC to suit customer requirements

Accurate and Reproducible

- Secondary and tertiary division to produce composite final sample
- Bolt-on cutters allow alternative splitting ratios of 1% to 50%
- Cutter width minimum of 30 mm ($1\frac{3}{4}$ ")
- Cutter rotates at 0.45 m/s (2 ft/s)



Carousel/Product Indexer (Sample Collector)

Application

Multotec indexer units are designed to split one sample stream into dedicated containers or to selectively collect one stream from a multi stream configuration into a specific container. The container units will fill sequentially on a timed base or on intelligent selective filling. Sample collection can also occur via a rotary splitter arrangement whereby replicate samples of equal mass are collected in a number of cannisters.



Construction

- PVC sample collection containers on movable surface
- Linear or rotational movement on table
- 4 - 20 containers of up to 100 litre sizes
- Proximity sensors for bucket position control
- Alternative moving inlet chute design and fixed position containers

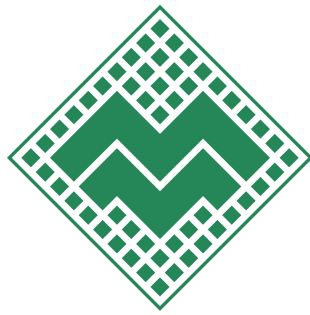
Installation

- Retrofit or greenfields projects
- Mounting brackets provided with adjustable feet
- Bolt-on inlet flange
- Timer based or intelligent PLC system control

Benefits

- Compact rugged construction
- Custom design used for various applications
- Wide range of selective splitting
- Maintenance-friendly and easily accessible
- Lockable container door with limit switch
- Easily removable locks and interchangeable containers





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Sampling Solutions	Wear Lining Solutions	Mill and Scrubber Linings
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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.