



MULTOTEC
CANADA

SLURRY SAMPLERS FOR METALLURGICAL ACCOUNTING

TWO-IN-ONE SAMPLERS

WORLDWIDE RENOWNED MINERAL SAMPLING EQUIPMENT

General Features

The Two-in-One sampler has a unique design combining ergonomically sized sampling and engineering integrity within a confined space.

Key Benefits and Features

- ◇ Compact and robust rubber lined unit for vertical gravity flow with no secondary reject stream—designed for easy installation and maintenance access
- ◇ Fully compliant with Pierre Gy's theory of mineral sampling and normalized sampling standards
- ◇ Stainless steel, sharp-edged, replaceable cutter for easier maintenance
- ◇ Dedicated control panel allowing sample size adjustments
- ◇ Optional wash water and retention hopper
- ◇ Dedicated electrical control panel with adjustable timer



Inlet size up to 900 mm or 36 in. pipe

For vertical gravity flow up to 4500 m³/h

Suitable for nominal top size particles of 15 mm

Up to 1 HP gear-motor ensuring constant stream cut

Two-In-One Samplers

The two-in-one sampler from Multotec features a unique design, combining sampling and engineering integrity within a confined space. These compact, robust units enable high sampling frequency, are easy to install and can be custom-designed based on your specific requirements. The primary section is constructed of mild steel and the housing is lined in rubber or ceramic.

Reliable dual proximity sensors control cutter travel between the two 'parked' positions on either side of the primary sampler inlet flange. The secondary section is an integrated vezin sampler, which typically has 4 radial cutters of pre-determined width. This makes the two-in-one sampler extremely versatile and enables it to produce ergonomically sized samples at required division ratios when running continuously.



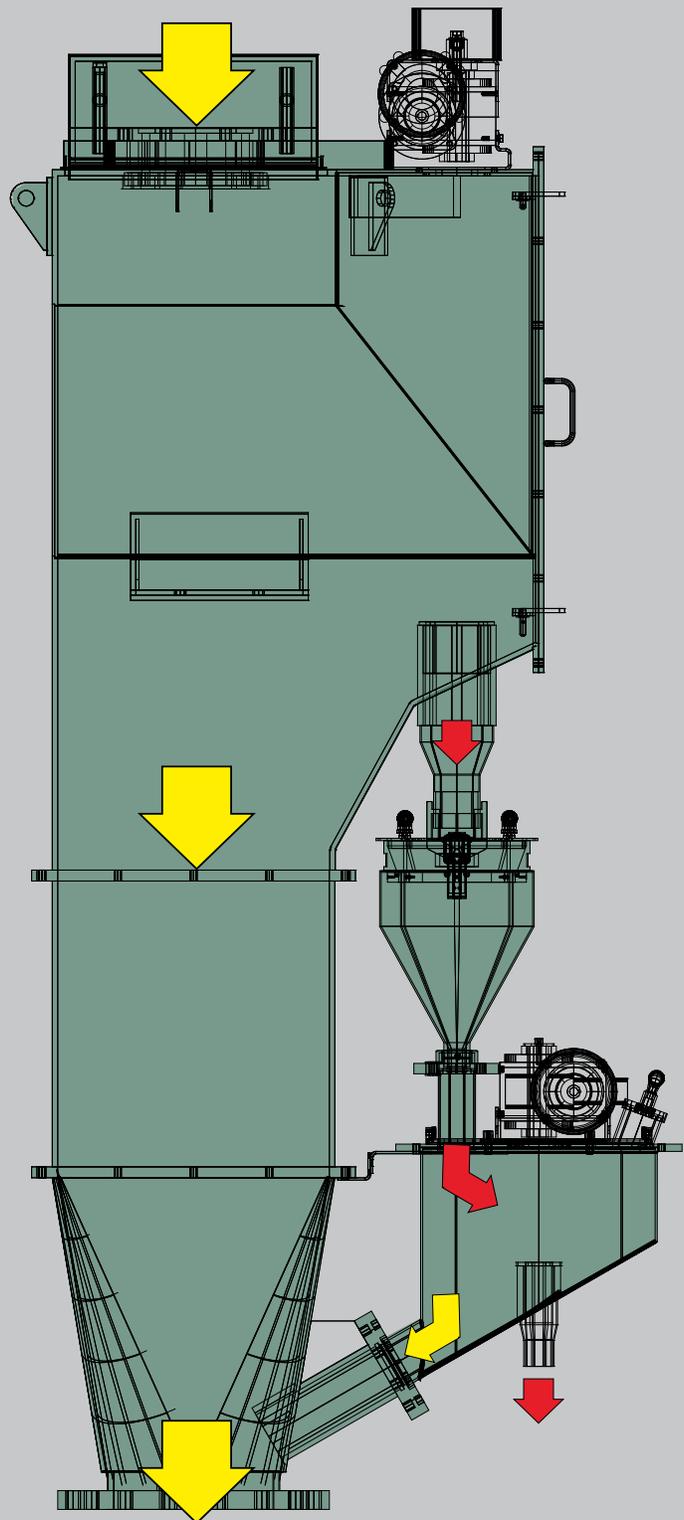
Options for Two-In-One

THE TWO-IN-ONE COMES WITH THREE OPTIONS:

The retention hopper equipped with air pressure preserves first cut homogeneity and sampling correctness. While the second sample is being processed, gravity acts on the particles and potentially biases coarser particle size distribution. The air pressure inside the hopper creates a gentle turbulence that keeps the sample mixed and maintains the statistical integrity of the sample.

The wash water system sprays water on the cutter blade after each cut to avoid any buildup of particles that would potentially contaminate a subsequent sample. It also reduces required maintenance time, and its operating parameters are completely adjustable using the control panel.

The vezin can be equipped with **dual outlets** that replicate or split the sample in two allowing, for instance, statistical comparison of the slurry's homogeneity as required by some standards.



Principle of Operation

The slurry is sampled first by the cutter arm, which collects between 20 and 50 liters of slurry. In a second state, the vezin reduces the sample by 4% to 16%, resulting in an ergonomically sized sample suitable to your handling capabilities.

Rejects from the first cut flow back into the stream, avoiding sampling loss. For high volume applications, a third vezin stage is included to ensure adequate sampling of the process.

Vezein

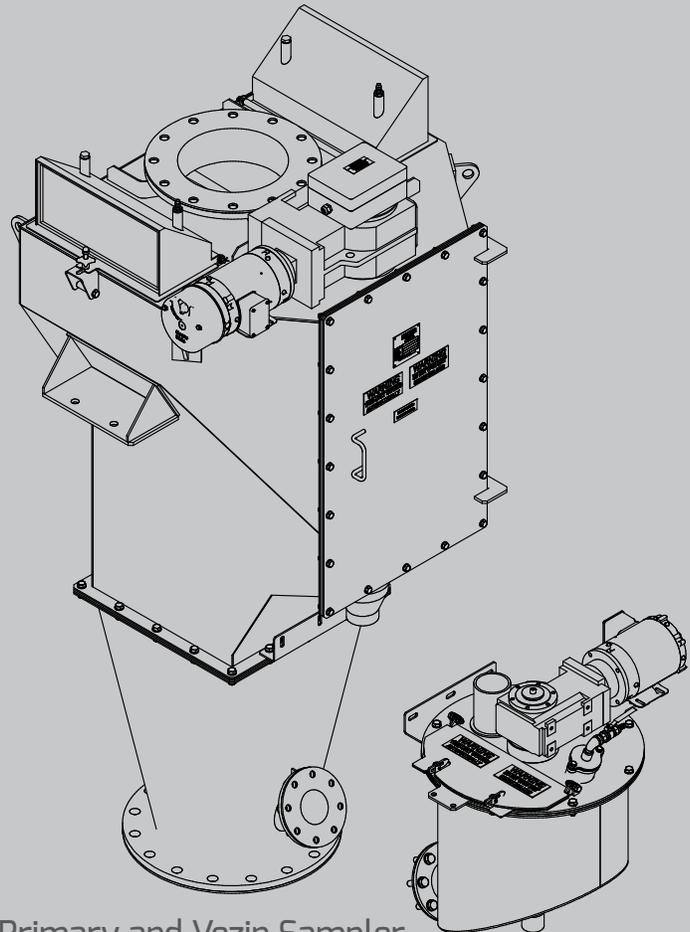
Constructed in either rubber lined mild steel or polyurethane, they are light, chemically inert and cost effective while keeping the sampling integrity. The vezein sampler design is compliant with the highest standards, can be operating continuously or on a time basis. In that case, timers provide a final composite sample according to the recommended sampling frequencies. Large lid or inspection door with mesh is included for operator safety.



Sampling Correctness

The theory of sampling was introduced and developed by Pierre Gy in the 1970s and 1980s with the goal of defining best practices for mineral sampling correctness to ensure each particle has the same probability of being sampled. Aside from any statistical considerations, the specifications for unbiased sampling equipment could be summarized as follows:

- ◇ Cut the near-vertical stream entirely and perpendicularly
- ◇ Provide an adequate and constant speed for the cutter
- ◇ Prevent particles from bouncing from one blade to another by having sharp cutter blades
- ◇ Have the capacity to capture all samples without loss or contamination from previous samples
- ◇ Ensure that the cutter blade distance is at least three times the size of top size particles and constant for linear cuts or tapered for radial cuts



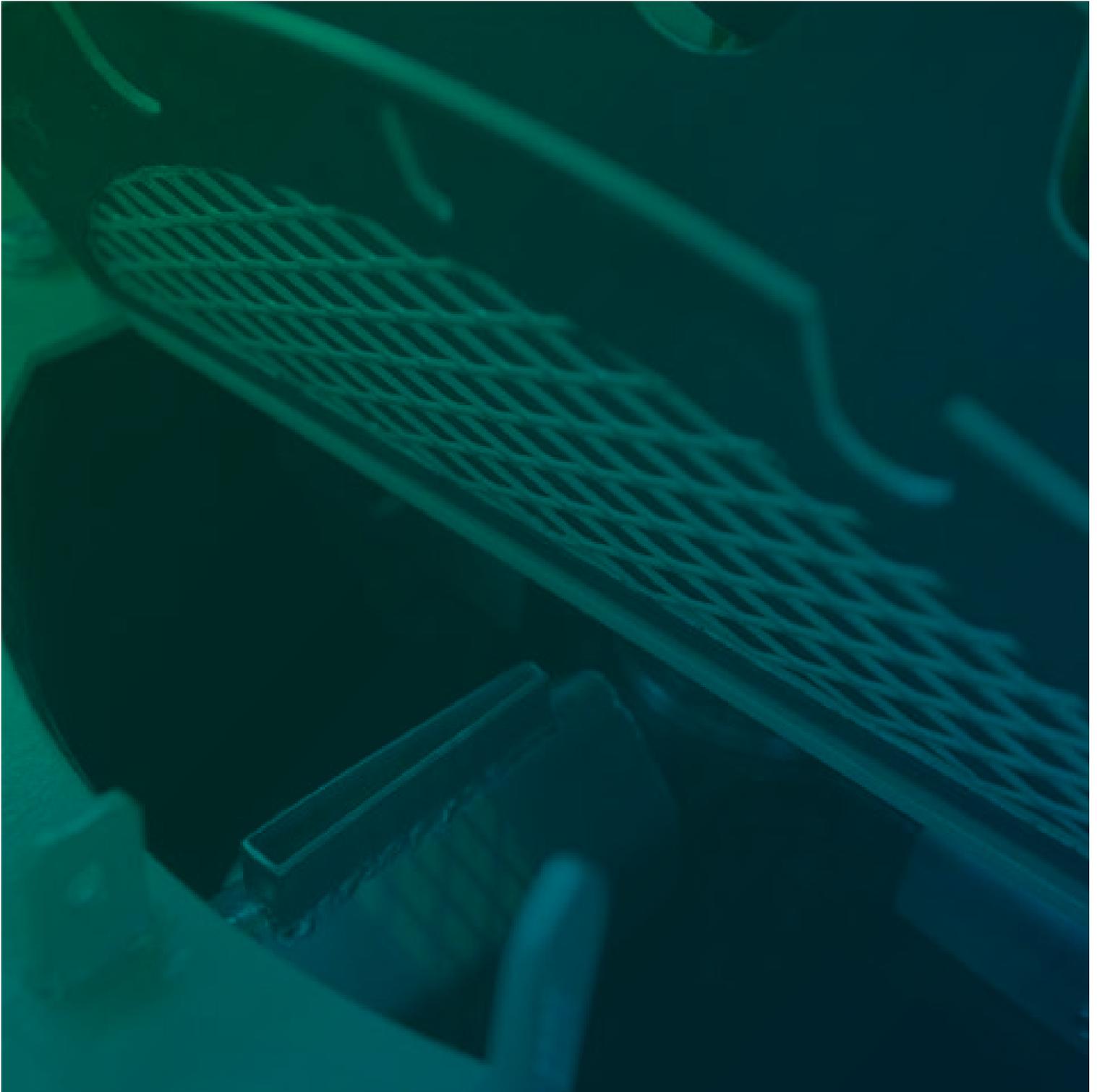
Primary and Vezein Sampler



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