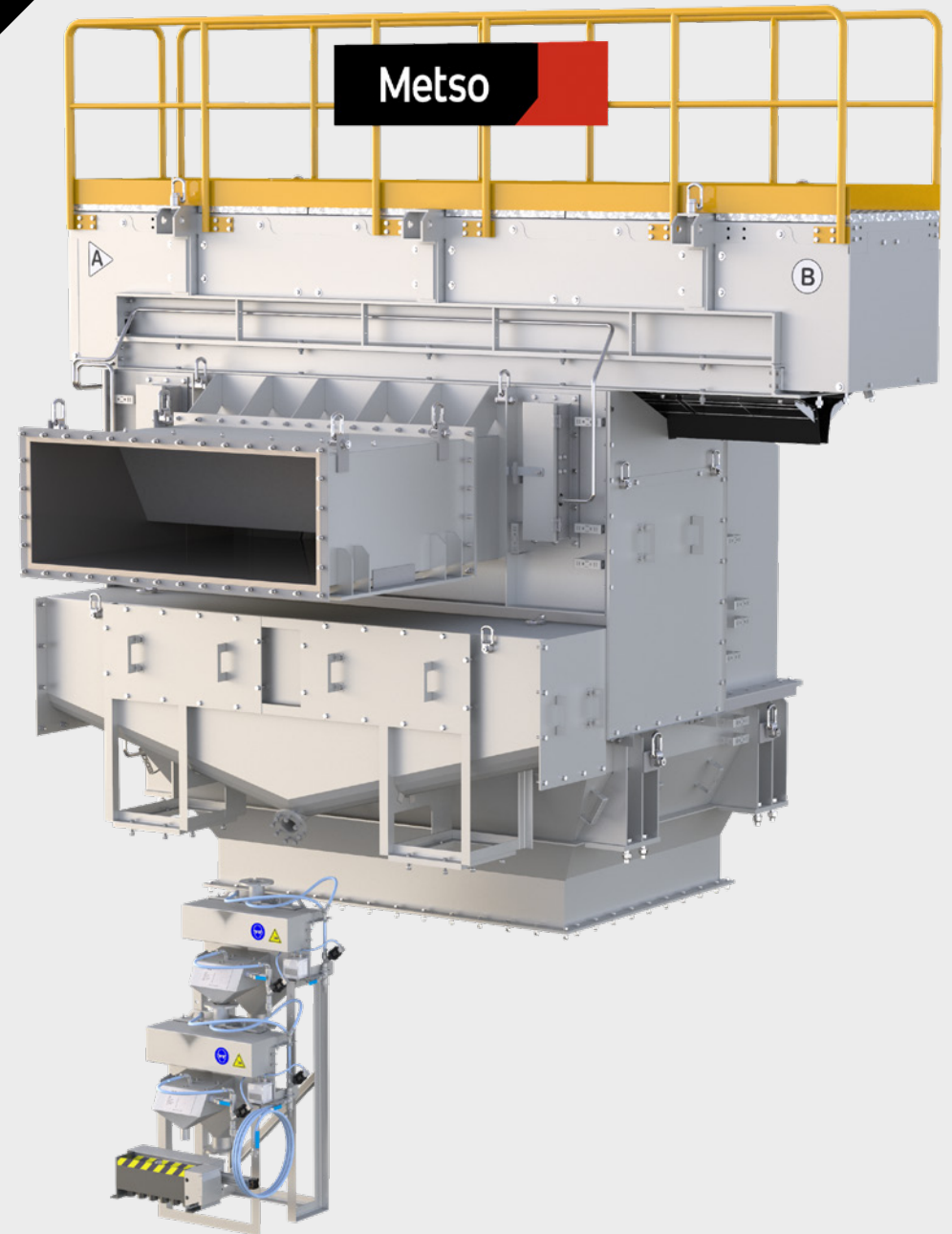


Metso

Linear Metallurgical Sampler



Linear Metallurgical Sampler

The Metso Linear Metallurgical Sampler (LMS) helps to improve production predictability and the transparency of metal accounting. It enables parallel sampling schedules and collection options of process samples and integrates seamlessly with Metso Courier® on-line analyzers. The LMS also enables measuring and reporting of material balances to investors and other stakeholders in compliance with AMIRA P754 and other sampling standards.

Accurate sampling for improved process performance and production transparency

The LMS helps to optimize efficiency and process performance in a minerals processing plant by enabling quick and optimal process control decisions based on accurate and timely samples.

The LMS features a self-diagnostic and self-cleaning system to keep it running properly 24/7, ensuring that it collects representative metallurgical samples for improved process audits and production transparency.

Critical components such as the primary cutter and sample launder feature an automated flushing system, which minimizes extraction and preparation errors due to blockages or contamination. The adjustable speed-controlled cross cutter removes the risk of delimitation error by keeping the cutter speed constant.

The reliable data collection and diagnostic features increase both the value and integrity of the data, while performance over time can be reviewed from historical condition checkup reports.



Benefits

- Improved process audits and production transparency
- Improved production predictability and control of metallurgical mass balance
- Reduced need for manual laboratory assays
- Reliable and efficient production reporting
- High integrity of samples and maximized equipment availability

Improved production predictability and control of metallurgical mass balance

In addition to collecting metallurgical samples the LMS can be connected to and synchronized with Metso on-line analyzers to further improve process control. The system enables collection of all sampling data for production analysis purposes. By combining process history data with different process scenarios the process control philosophy can be quickly adapted according to the ore type being processed. Continuous process follow-up via the analyzer reduces the need for manual laboratory assays.

Local user interface shows the most recent samples and sampler status, which can be virtually synchronized with the analyzer assay results. The sample information

and assay results from the on-line analyzer can be transferred to the plant automation system via communication interfaces to enable virtual predictions of mass balance calculations.

Reliable and efficient production reporting

One of the main advanced features of the LMS is that a single unit can collect multiple metallurgical samples to suit different production reporting and management purposes. Each sample can have its own timing, and

the system can manage multiple buckets. A simultaneous flexible spot sample can also be taken without any system changes. Several sample collection schedules can be set using a bucket selector to estimate 8 or 24-hour production without any extra sample preparations.

High integrity of samples and maximized equipment availability

The LMS is designed for heavy industrial applications, with high availability and versatile functions to monitor both sampling integrity and the quality of the samples. Self-diagnostics and reporting systems ensure that each sample is monitored and any possible issues flagged. Maintenance personnel can use this data to enhance predictive maintenance and spares management strategies. It can also be used as an input to plant automation systems or for remote monitoring purposes via a secure connection.

Technical specifications

- Integrated control and safety
- High-performance 11 kW gear motor
- Belt drive system
- Mild steel construction
- Rubber-lined wet parts
- Stainless steel sample cutter

Standard interfaces for plant automation connectivity (Profibus, Profinet, Modbus)

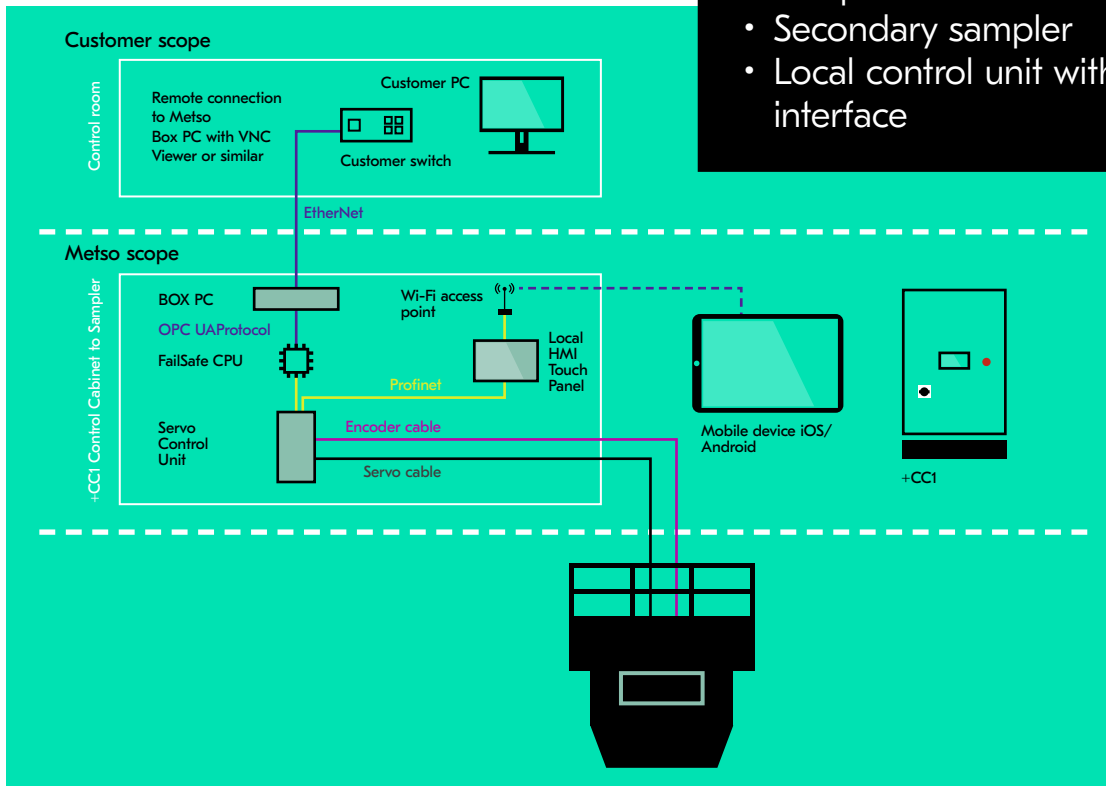
A lifetime of service

Metso provides services for the entire lifecycle of your asset, from single pieces of equipment to entire plants. Metso offers services through a global network of service centers that are committed to providing support whenever needed.

Metso services are designed to optimize customers' plants, equipment and processes. They cover everything from spare parts and maintenance to plant evaluations and upgrades, as well as project management and training.

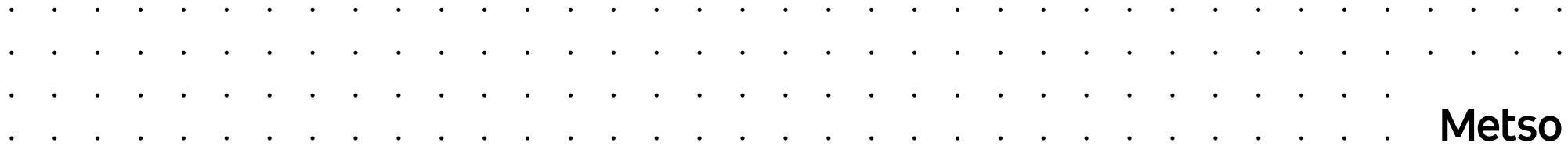
Typical scope of delivery

- LMS drive unit
- Sampler enclosure
- Secondary sampler
- Local control unit with user interface



Metso is a frontrunner in sustainable technologies, end-to-end solutions and services for the aggregates, minerals processing and metals refining industries globally. We improve our customers' energy and water efficiency, increase their productivity, and reduce environmental risks with our product and service expertise. We are the **partner for positive change**.

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