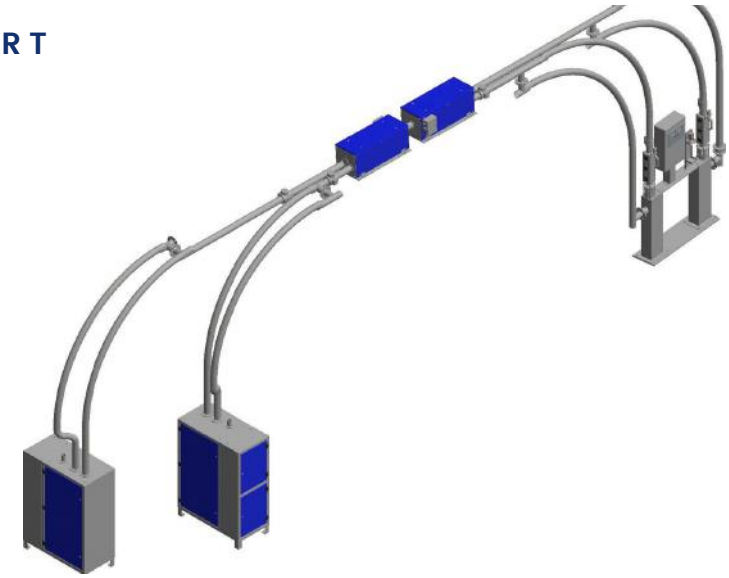
PRODUCT DATASHEET

Industrial Pneumatic Tube Transport System

EFFICIENT SAMPLE TRANSPORT

Our pneumatic airtube systems ensure the reliable and swift transportation of samples from the steelworks to the laboratory. Leveraging our extensive decades-long expertise in this field, we are adept at installing these systems even in challenging spatial conditions and across vast distances.

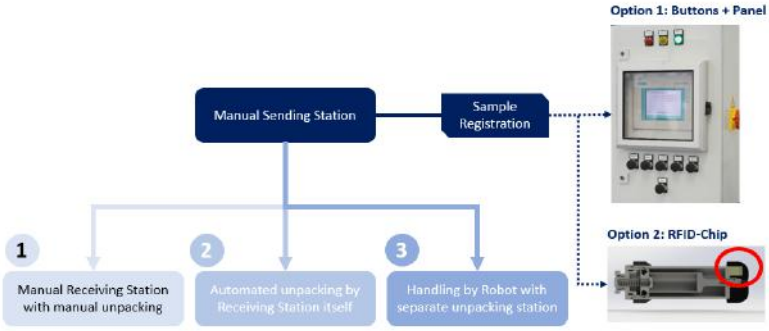


Sample data transfer

Utilizing our advanced sending and receiving stations, we seamlessly integrate sample information from the customer's manufacturing execution systems (MES) into our Sample Control Software (SamCoS). Sample registration can be operated easily by using buttons our touch-display or RFID-technology (by scanning a chip within the carrier).

Manual or fully automated

Upon the pneumatic tube's arrival at the laboratory, the sample undergoes a (1) manual or automatic unpacking process and is carefully aligned for subsequent sample preparation and analysis. Powdered samples, such as slag, are discharged into cups for further processing. This step occurs either within the (2) receiving station itself or at (3) specialized unpacking and transfer stations. In every scenario, our processes are meticulously optimized to achieve short throughput times and ensure maximum plant availability.



Quality Control Systems

PRODUCT DATASHEET

Manual Sending Station SAMPLI-SRM-M

RELIABLE AND FAST SENDING

The SAMPLI-SRM-M serves as our plant station designed for the seamless sending and receiving of airtube carriers, facilitating the transit from the steelworks to the laboratory. The steel, iron, or slag sample is carefully loaded into the designated carrier, sealed with the aid of the integrated tool, and positioned at the input point. Once the sample identification has been chosen through a simple pushbutton on the control panel, the carrier embarks on its journey to the laboratory, where it can be unpacked for further processing. Optionally automated sample ID recognition is possible by RFID technology. The station is sesigned for high sample throughput and 24/7 shift operation. Our design meets safe and simple operation combined with special safety measures. It is characterized by particular robustness and reliability, especially in the harsh environment of production plants.

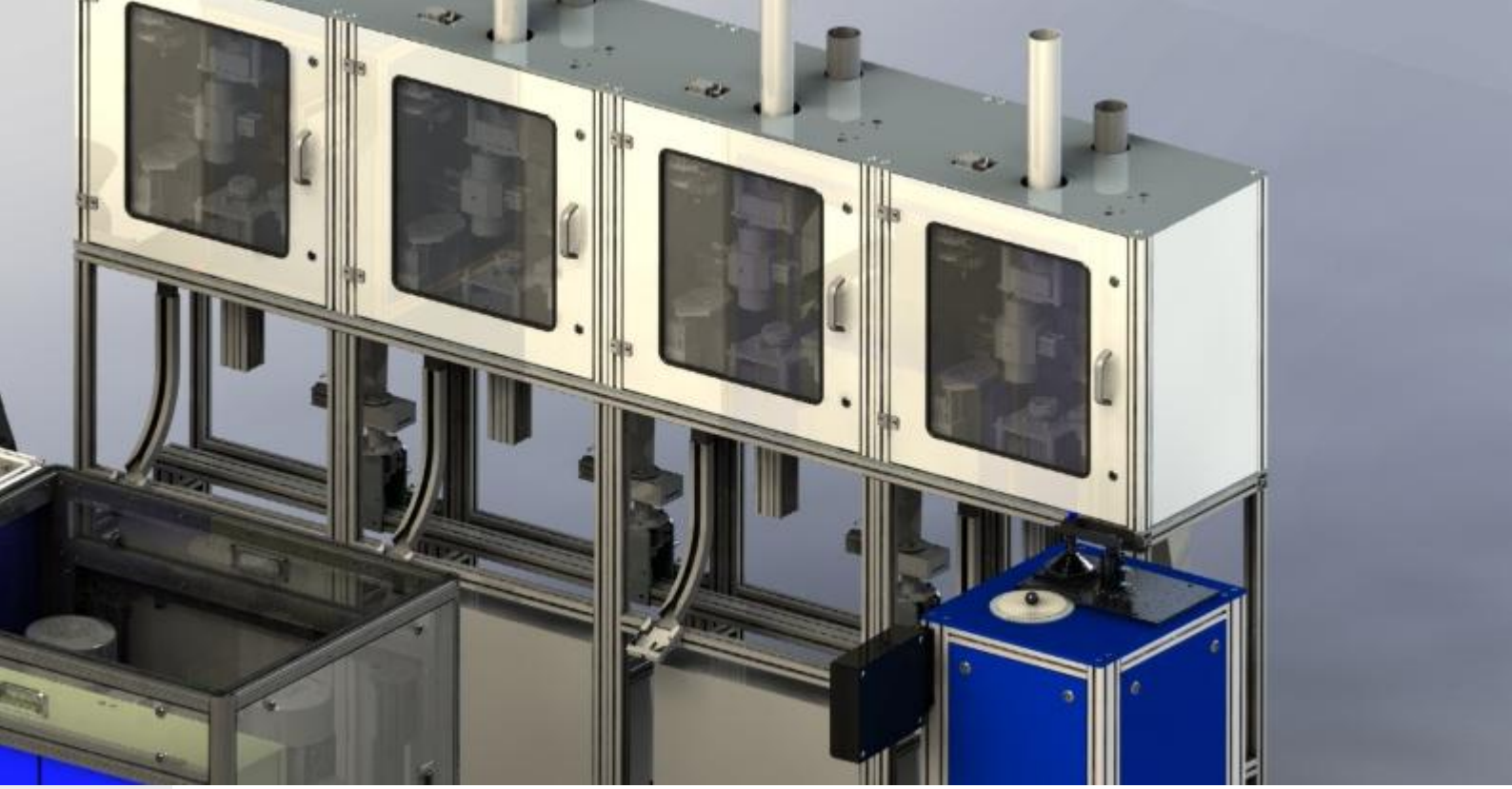
Carrier-Opener

Operator Terminal with buttons

Technical specifications

USE	Sending and Receiving station for carriers within production facility
Drive	3x 400V, 50 HZ
Protection Class	IP 54
Dimensions (WxDxH):	Approx. 960x400x1.915mm
Weight	Approx. 140 kg

Quality Control Systems

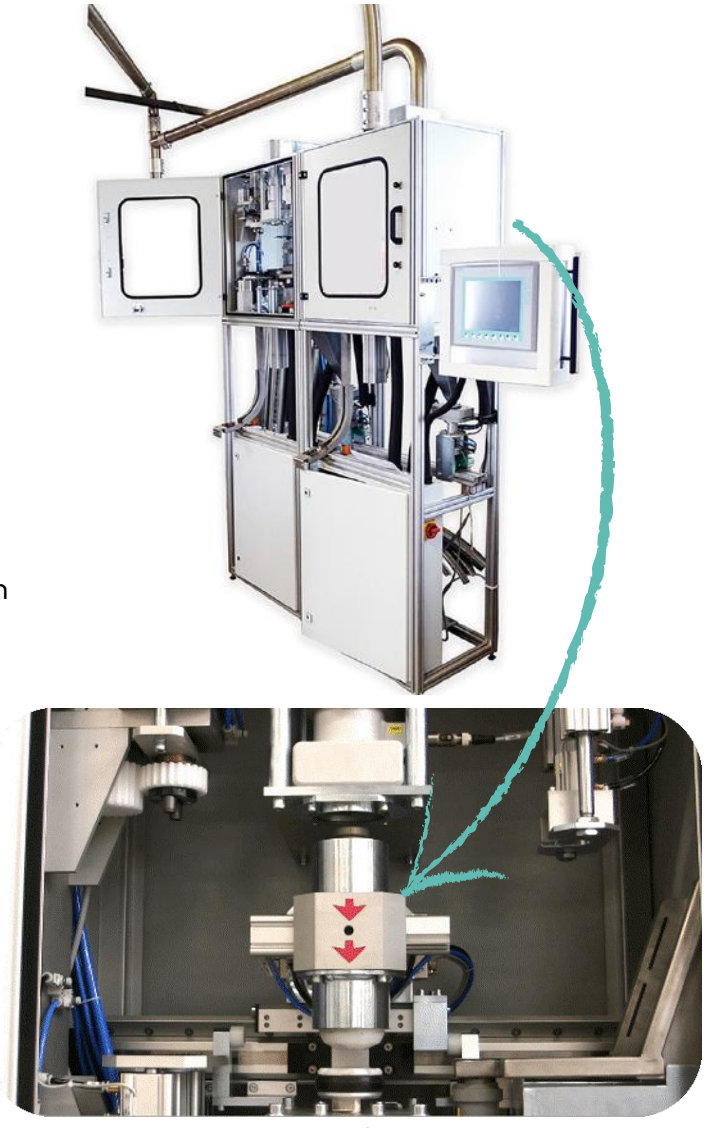


PRODUCT DATASHEET

Auto Receiving Station SAMPLI-RSM-UNPK

FLEXIBLE AND EFFICIENT HANDLING WITHIN STATION

The SAMPLI-RSM-UNPK dispatch and receiving station is specifically engineered for the automated handling of pneumatic tube carriers within the laboratory context. This station facilitates the receiving and sending of diverse sample materials, such as hot or cold metal samples, granular materials, powder samples, and other types of samples. Upon receiving a pneumatic tube carriers, the this system automatically performs a sequence of actions, including opening, emptying, closing, and returning the carriers to the dispatching station. This entire process is seamlessly managed by an integrated handling system. All system modules are seamlessly integrated into the machine column and are easily accessible through doors in the housing.

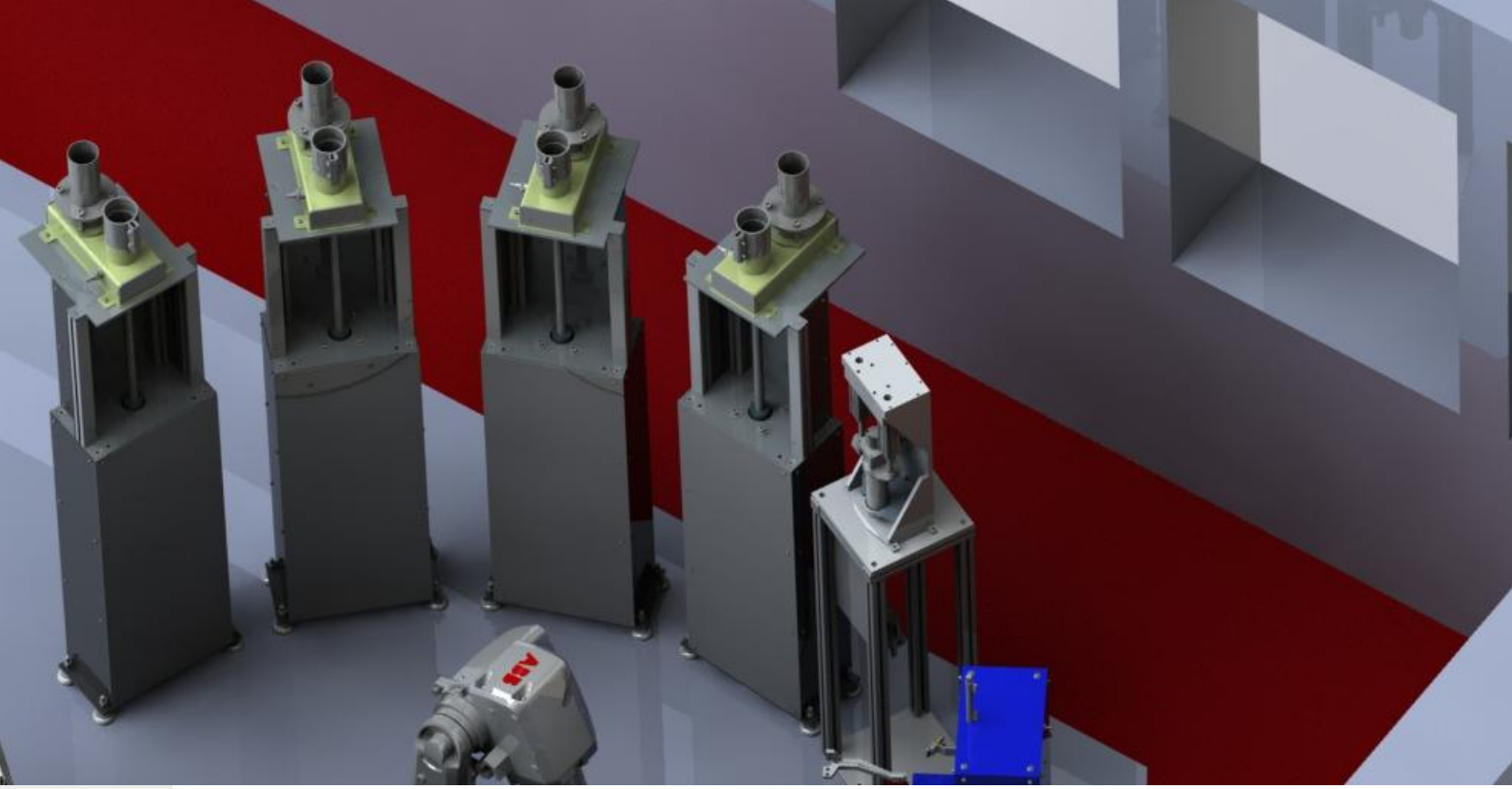


Integrated handling system

Technical specifications

USE	Opening, emptying within laboratory and closing, and returning the carriers to the field station.
Drive	3x 400V, 50 HZ
Protection Class	IP 54
Dimensions (WxDxH):	Approx. 770x500x2.235mm
Weight	Approx. 290 kg

Quality Control Systems



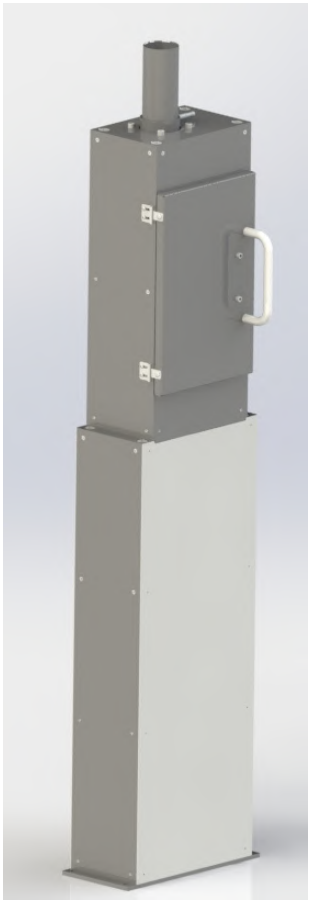
PRODUCT DATASHEET

Auto Receiving Station SAMPLI-RSM-R

ROBUST & COMPACT DESIGN FOR DIRECT WAYS TO LAB

The SAMPLI-RSM-R laboratory station is significantly more space-saving than the SAMPLI-RSM-UNPK in order to enable as many direct routes (transport lines without diverters) to the laboratory as possible. SAMPLI-RSM-R is specifically designed for the automated dispatch and reception of pneumatic carriers in robot automation. All integrated machines are arranged in a circular fashion and are operated by a central robot. Upon the carrier's arrival in the laboratory, the robot extracts it from this station and transfers it to the unpacking station SAMPI-OPST-R (see page 6). Here, the sample is removed for further processing in the automation system. Subsequently, the robot returns the empty carrier to SAMPLI-RSM-R to send it back to the plant station. If necessary, operators can use this station for manual operation from back site.

Front site



Back site (for manual operation)

Technical specifications

USE	Receipt of pneumatic carriers in the robot laboratory and sending back to the field station
Drive	3x 400V, 50 HZ
Protection Class	IP 54
Dimensions (WxDxH):	Approx. 430x200x1.900mm

Quality Control Systems

PRODUCT DATASHEET

Tube Diverter and Tube Transport Contact

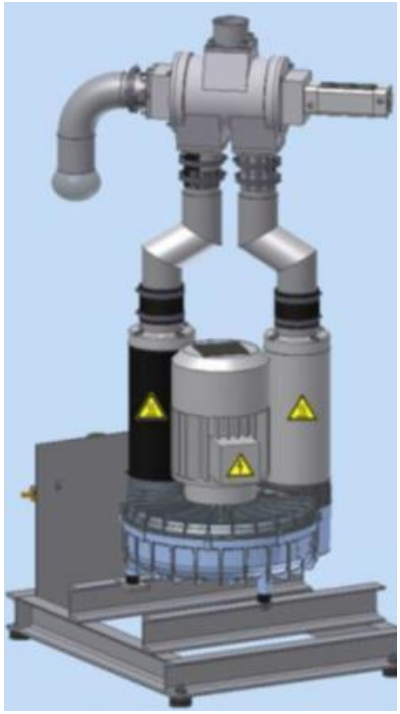
2-Way / 4-Way Diverter

Tube Transport Contact

RELIABLE AND FAST TRANSPORT

DIVERTER redirect carriers from two or four tubes along one selected route to the laboratory (e.g. From 2 or 4 SENDING STATIONS to 1 LABORATORY RECEIVING STATION). Conversely, they can be used to split a pneumatic tube line into two or four tubes. TUBE TRANSPORT CONTACT is used to signal and control carrier that have passed through.

TRANSPORT BLOWER STATION



SUITABLE FOR LONG DISTANCES

The TRANSPORT BLOWER STATION generates driving air for the airtube system. Depending on the direction of rotation of the motor (for blowers with max. 3.6 kW) or the position of the reverse valve (for blowers up from 4.0 KW engine power), driving air is fed into the pneumatic tube system or withdrawn from it, thus determining the direction of travel of a sample carrier. This system shortens sampling times and increased efficiency due to return valves that allow rapid change of air direction over several kilometers (no need to change the direction of rotation of the electric motor). Moreover the robust design ensures reliable transport even under particularly harsh environments.

Technical specifications

Engine power	3,6kW, 4,8kW, 7,5kW or 11kW
Weight	56kg, 90kg, 108kg or 150kg
Dimensions (LxWxH):	484 x 595 x 583mm 750 x 600 x 868mm 750 x 600 x 993 mm 750 x 600 x 1.100m

Quality Control Systems

PRODUCT DATASHEET

Carrier-Opener and Conveyor Belt

SAMPLI-OPST-R (STEEL)

Steel Sample Carrier

Technical specifications

USE	Opening of Sample Carrier Steel
Drive	Pneumatic
Dimensions (WxDxH):	Approx. 300x300x1.820mm

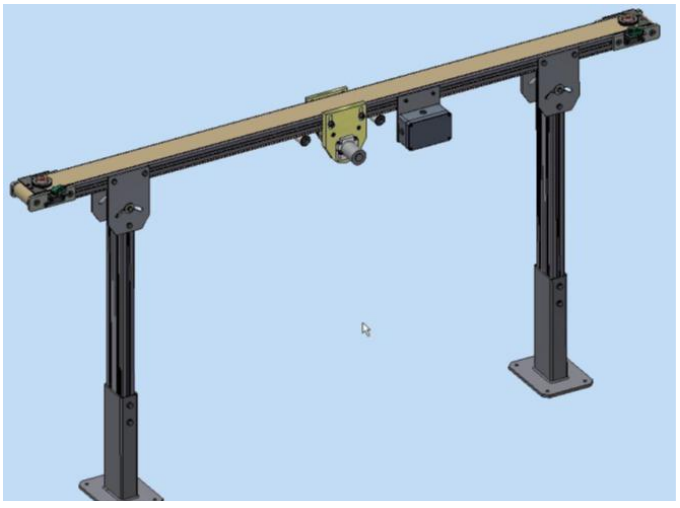
SAMPLI-OPSL-R (SLAG)

Slag Sample Carrier

Technical specifications

USE	Opening of Sample Carrier Steel
Drive	Pneumatic
Dimensions (WxDxH):	Approx. 300x300x1.615mm

CONVEYOR BELT



HIGHLY CONFIGURABLE

This conveyor belt is specially configurable for transporting sample cups, steel rings or samples itself within the process chain of quality laborator This conists the transport to sample preparation machines as well as to XRF, XRD or OES analyis units. This system is fully automated through communication to higher-level control.

Technical specifications

Operating voltage	24V
Weight	Project dependent
Dimensions (WxDxH):	Project dependent