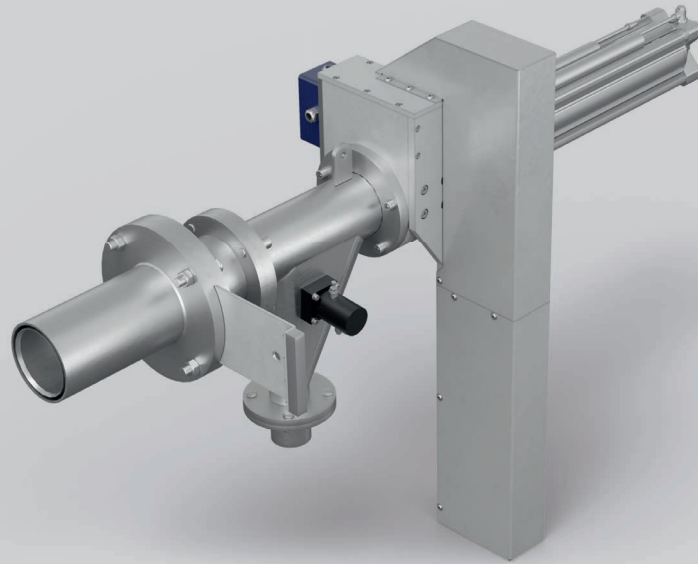




Hotmeal Sampler



Hot Meal Sampler QCX® PSH101/102

The Hot Meal Sampler is suited to sampling free-flowing non-sticky, granular samples, including minerals, slag, ores, cements and raw materials, from a chute. These may be hot materials, such as kiln feed, and samples taken at an earlier stage in a calciner or pre-heater.

Samples can be taken either manually via a sample container or automatically via an automatic sample transport sending station. This way, your operators avoid exposure to a dangerously harsh environment. Automatic sampling also allows for reproducible and representative samples with correct timestamps.

Sampling site temperature can be up to 1,150°C. Air cooling via a metal contact surface allows for fast sample cooling that prevents sample changes, avoids chemical and mineralogical reactions, and decreases time for material transport to the laboratory.

The Hot Meal Sampler is recognised for minimal clocking and blockages. This prevents costly disruptions and difficult to remove 'sticky phases'. The easy and safe removal of the hot meal sampler means it is simple to maintain during normal operation.

Advantages

- Safety: protecting operators was the main priority when designing the sampler. Specially designed sample containers and automatic sample transport minimise the risk of serious injuries.
- Cost-efficient: unbeatable accuracy and safety standards, as well as simple maintenance processes, combine to make this sampler highly productive and cost-efficient.
- Robust: durable materials and innovative designs for all moving parts allow this sampler to be reliable and long-lasting despite the inherently harsh conditions it operates in.
- Automation: the sampler seamlessly integrates with your automated QCX system and other automatic sampling systems to maximise your sampling accuracy and efficiency.

Accurate results delivered fast

How it works

The Hot Meal Sampler takes a spoon sample directly from the chute of the pre-calciner of hot material up to 1,150°C. Its robust build means it can perform continuously under these harsh conditions.

In idle mode, the sampling spoon sits retracted away from the hot raw meal and gasses.

When your controller activates the sampler, the cylinder piston pushes the sampling spoon into the hot meal stream. The piston is automatically withdrawn after a few seconds and the sampling spoon, full of contents, turns 180 degrees. The sampled material falls by gravity into a water-cooled mixing tank. This instantaneously 'freezes' the calcination via the $\text{CaCO}_3 \rightarrow \text{CaO}$ reaction.

Possible configurations

Automated hot meal sampler w/ manual sample collection (PSH101)

The PSH101 Hot Meal Sampler has the option of manual sample collection via a designated sample container.

Automated hot meal sampler w/ sending station (PSH102 + PTS102)

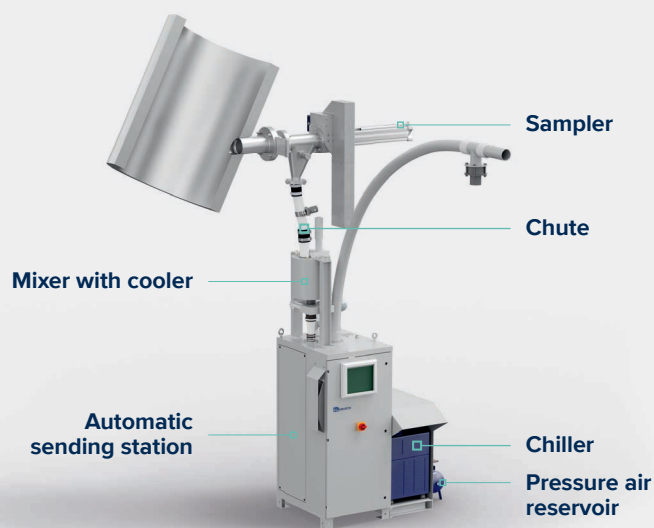
The PSH102 Hot Meal Sampler seamlessly enables automatic sample collection when integrated with an automatic sample transport sending station.

Specification of sampler

Sample material	Up to 1,150°C, top size 1 mm
Sampling location	Kiln feed, cyclone / pre-heater stages
Sampling type	Spot sample
Sample quantity	0.5 l
Sample frequency	< 10 samplings / hour
Sample cooling	Cooling mixer with closed circuit liquid cooling
Power supply	3 x 380 – 500 V; 50/60 Hz; 2 kW
Compressed air supply	0.6 – 1.0 MPa (Quality 2.4.2 as per ISO 8573-1)
Operating conditions	Temperature: -10°C to 40°C, optional -20°C to 55°C Humidity: 0 – 100 %
Weight	Approx. 120 kg
Dimensions (W x D x H)	1,560 x 480 x 980 mm



PSH101



PSH102 + PTS102

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