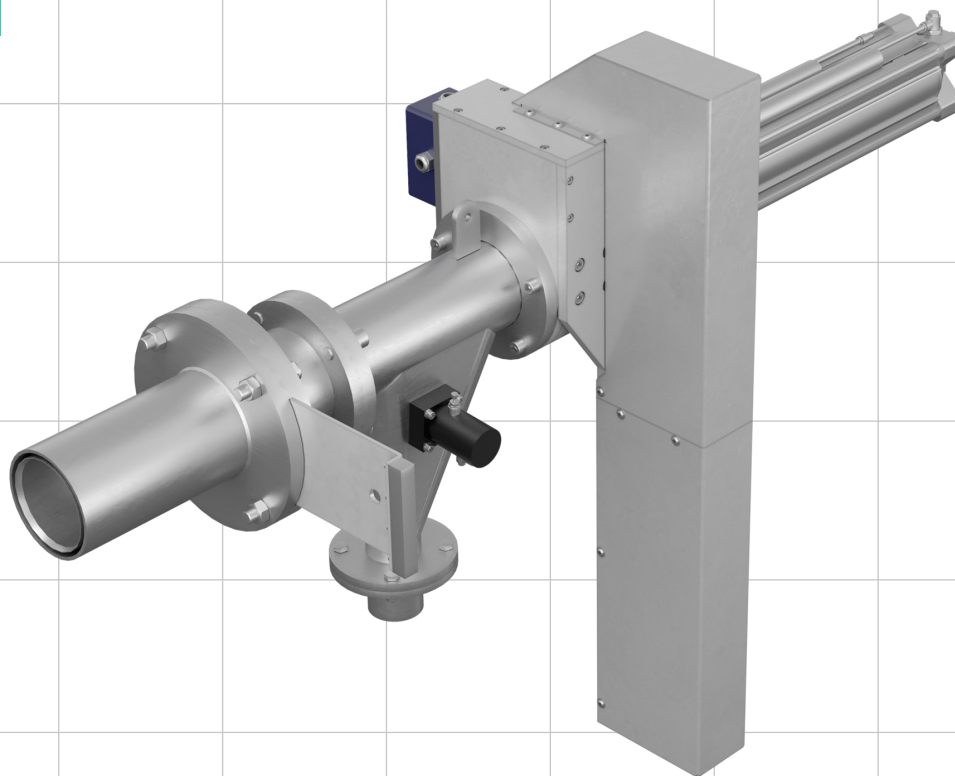




Hotmeal Sampler



# QCX® PSH101/102 HOT MEAL SAMPLER

The PSH Hot Meal Sampler is recognised for minimal clogging 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.

The PSH 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.

## 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 PSH Hot Meal Sampler takes a spoon sample directly from the chute of the pre-calcliner 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  $\text{CaCO}_3 > \text{CaO}$  reaction.

## Possible configurations

### Automated hot meal sampler with manual sample collection (PSH101)

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

### Automatic Hot Meal Sampler with Automatic Sending Station (PSH102 + PTS102)

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

## Specification

|                        |   |
|------------------------|---|
| 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        | 0.4 l   |
| Sample frequency       | < 10 samples / 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<br>(Quality 2.4.2 as per ISO 8573-1)                          |
| Operating conditions   | Temperature: -10°C to 40°C,<br>optional -20°C to 55°C<br>Humidity: 0 - 100% |
| Weight                 | Approx. 120 kg  |
| Dimensions (W x D x H) | 1,560 x 480 x 980 mm  |

