



# **PROCESS**

## **APPLICATION OVERVIEW**



### **SolidFlow 2.0**

**Flow measurement  
Pneumatic / Free fall**

## SYSTEM FEATURES

### Areas of use

The SolidFlow 2.0 has been specially developed for measuring quantities of solids in pipelines.

The sensor is used for the online measurement

- of powder, granulate, dust, etc.
- with particle sizes between 1 nm and 10 mm
- which are transported pneumatically
- or in free fall after mechanical feeders
- from a few kilogrammes to approx. 20 t/h

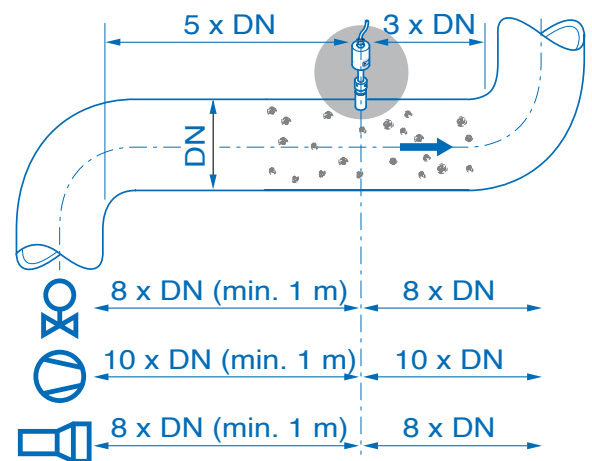
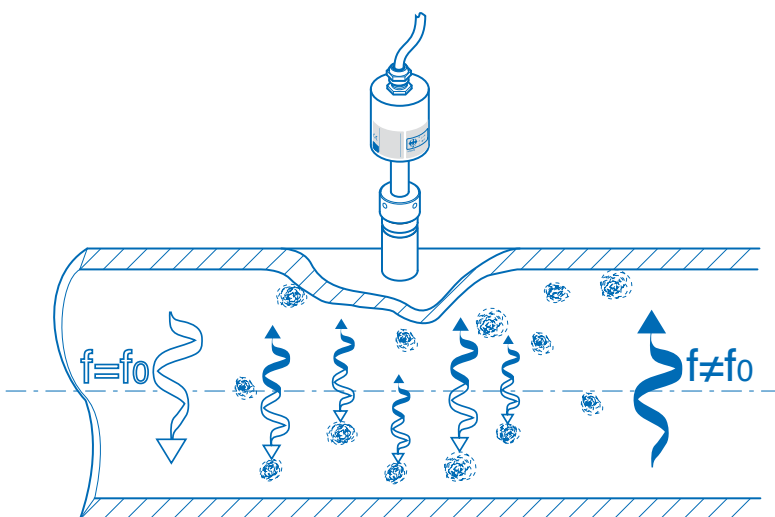
The SolidFlow 2.0 is suitable for use in potentially explosive atmosphere zones 20 and 1 and can be installed on any metallic pipe. The non-contact measurement using modern microwave technology is easy to retrofit and suffers absolutely zero wear.

### Function

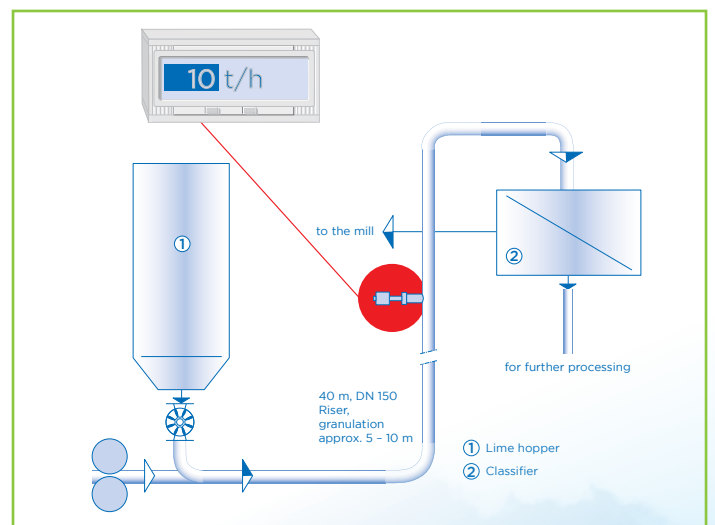
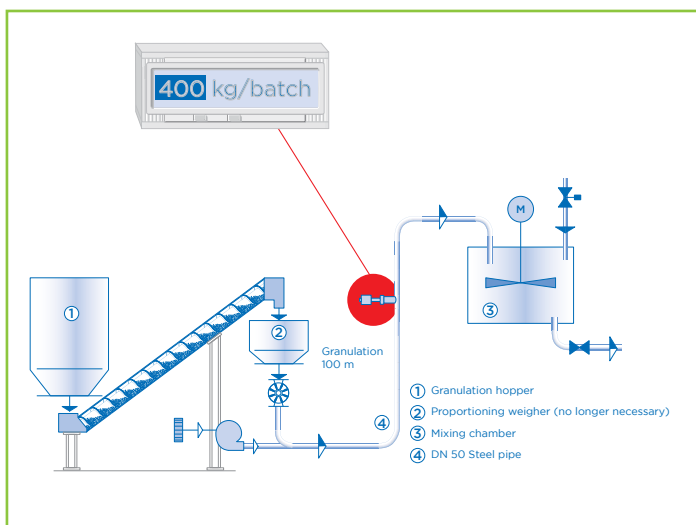
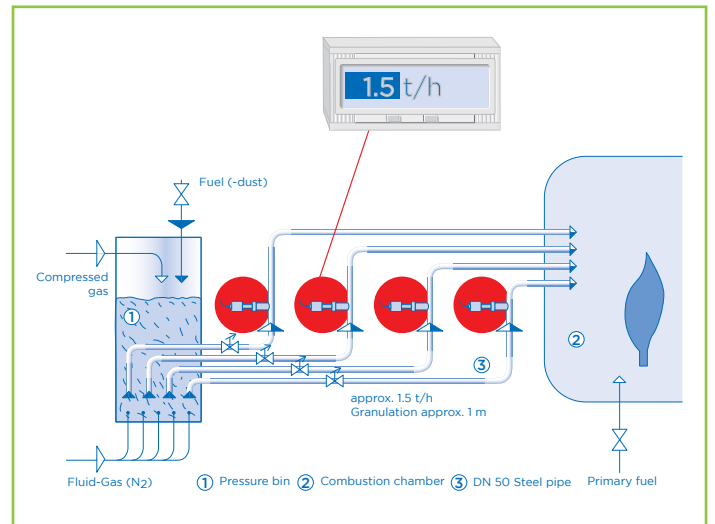
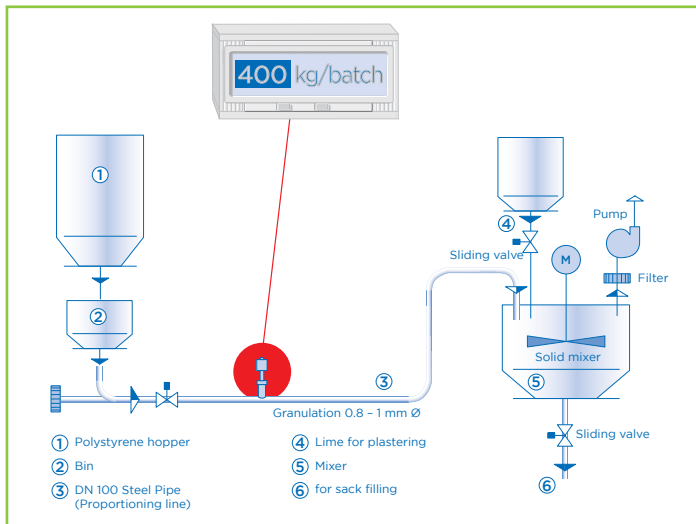
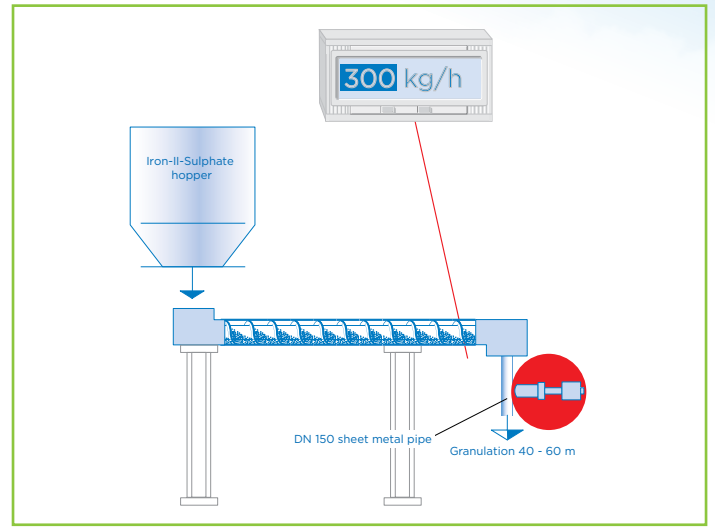
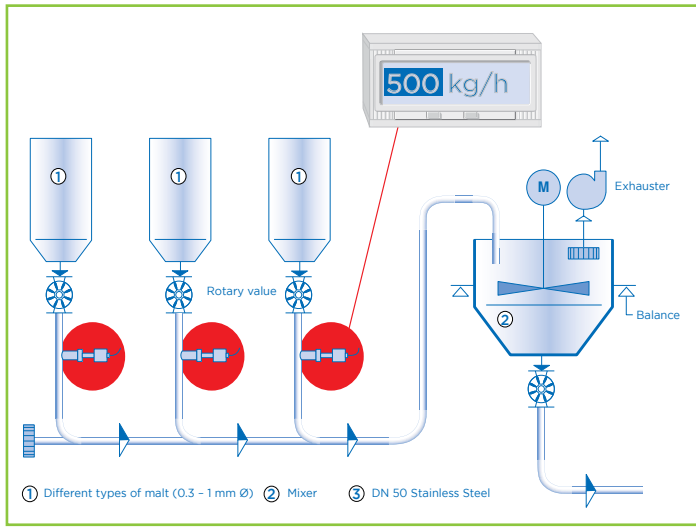
The sensor must be used in metallic pipelines. The special integration of microwave technology creates a measurement field together with the metallic pipeline.

The microwave radiation in the pipeline is reflected by the solid particles and received by the sensor. The received signals are evaluated in terms of their frequency and amplitude.

The sensor works like a particle counter counting the quantity of flowing particles per unit of time. The frequency-selected evaluation system ensures that only moving particles are measured and deposits are suppressed. For the use in pneumatic conveying lines the sensor offers the latest roping compensation technology that compensates measurement errors caused by stratification. The system is calibrated when installed by entering the reference quantity and pressing a button.



# POSSIBLE INSTALLATIONS FOR YOUR PROCESS



# SOME EXAMPLES OF SUCCESSFUL APPLICATIONS

## MASS FLOW MEASUREMENT OF WAX GRANULATE



- Customer:** Manufacturer of montan wax opencast mine
- Material:** Montan wax (granulate)
- Installation place:** Pipe after spray towers
- Volume:** 6 t/h
- Customer benefits:** Continuous quantity measurement of processed material to have an improved process control. There are no installations in the material stream.
- The measurement has a high reliability through active rope compensation of the SolidFlow 2.0.

## MASS FLOW MEASUREMENT OF LIME



- Customer:** Cement plant (Finland)
- Material:** Lime
- Installation place:** Free fall downstream of a rotary valve in a DN 250 pipeline (double measurement point)
- Volume:** Approx. 18 t/h
- Customer benefits:** There are four supply points above the main transport section. A different material is fed into the system through each of these supply points. The supply quantity is regulated by the rotary valve speed. This in turn receives its signals from the SolidFlow 2.0 measurement system. A constant mixing ratio is therefore ensured.

## QUANTITY MEASUREMENT OF ACTIVATED CARBON



- Customer:** Waste incineration plant (Netherlands)
- Material:** Activated carbon
- Installation place:** Carbon blow-in system in pneumatic line
- Volume:** Approx. 250 - 600 kg/h
- Customer benefits:** Recording of the actual product flow on both production lines.

## MASS FLOW MEASUREMENT OF LIME HYDRATE



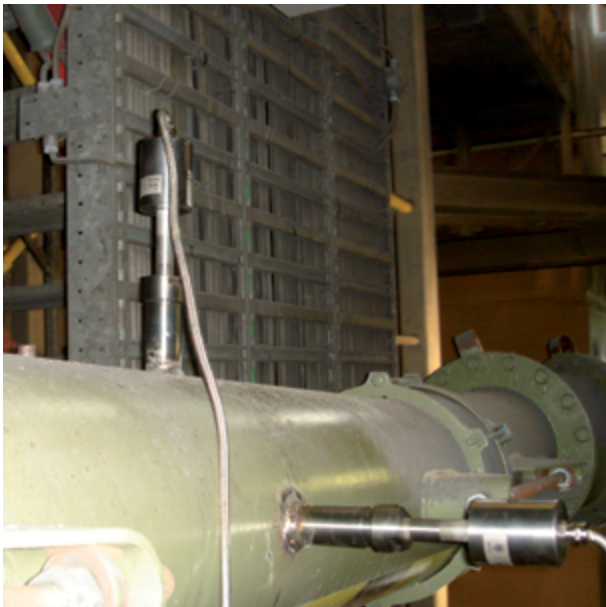
- Customer:** Waste incineration plant (Germany)
- Material:** Lime hydrate
- Installation place:** Pneumatic riser line / DN 80
- Volume:** Approx. 1500 kg/h
- Customer benefits:** The high or low metering of adsorbent material is prevented by the SolidFlow 2.0 measurement.

## CONTINUOUS FLOW MEASUREMENT OF LIMESTONE



<b>Customer:</b>	Limestone manufacturer
<b>Material:</b>	Limestone
<b>Installation place:</b>	Pneumatic line
<b>Volume:</b>	Approx. 8 - 9 t/h
<b>Customer benefits:</b>	Exact measurement of flow rate instead of theoretical data provided by the plant operator's employees for indication of the quantity. The sensor can be calibrated and transmits the exact measurement data to the control system. It is a robust, durable and process-safe sensor technology with a non-intrusive installation.

## MASS FLOW MEASUREMENT OF TANNING AGENT



<b>Customer:</b>	Chemical plant (Netherlands)
<b>Material:</b>	Tanning agent
<b>Installation place:</b>	Double measurement point in DN-250-pipeline (pneumatic transport system)
<b>Volume:</b>	Approx. 500 kg/h
<b>Customer benefits:</b>	The SolidFlow 2.0 measurement system determines the discharge quantity from the dryer.

## MASS FLOW MEASUREMENT OF COFFEE POWDER



<b>Customer:</b>	Coffee manufacturer (Greece)
<b>Material:</b>	Coffee powder
<b>Installation place:</b>	Free fall in DN 200 line
<b>Volume:</b>	Approx. 1,5 t/h
<b>Customer benefits:</b>	Recording of the actual product flow on both production lines.

## MASS FLOW MEASUREMENT OF WOOD PARTICLES

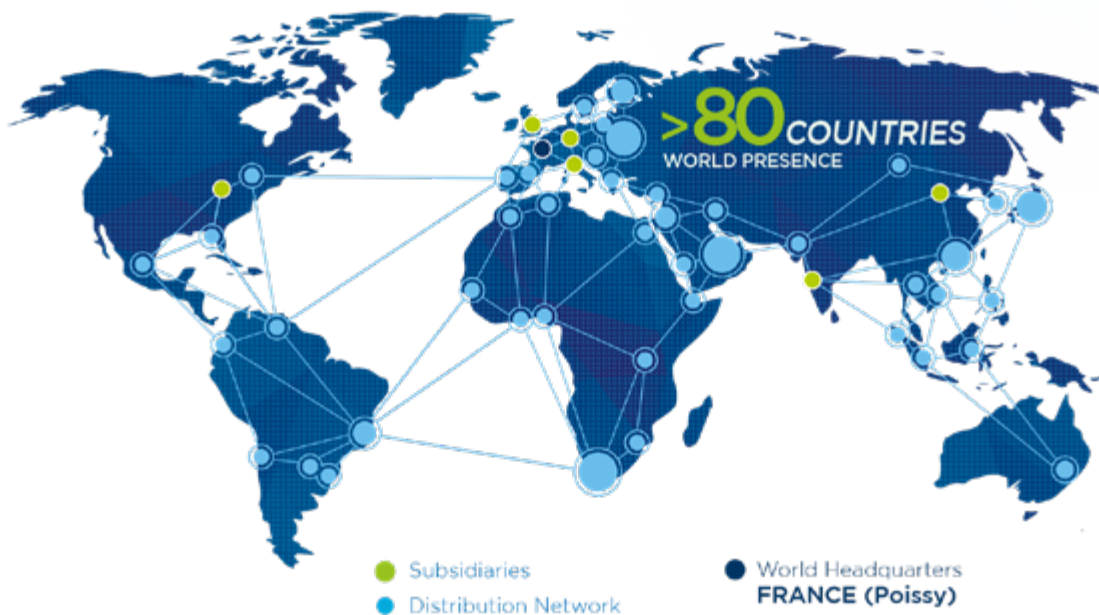


<b>Customer:</b>	Press board plant (Germany)
<b>Material:</b>	Wood particles
<b>Installation place:</b>	DN 100 pipelines (horizontal pneumatic transport system)
<b>Volume:</b>	Approx. 900 kg/h
<b>Customer benefits:</b>	Continuous measurement of the conveyor material stream for controlling production.

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