



PROCESS

APPLICATION OVERVIEW



FlowJam

**Continuous material
flow detection
(Flow / NoFlow)**

SYSTEM FEATURES

Areas of use

The [FlowJam](#) detects streams of solids of all types by monitoring material movement. It distinguishes between the following switch conditions:

- Material flow
- Material blockage / standstill or empty pipe

The FlowJam is completely insensitive to coatings on the sensor window and measures straight through all non-metallic pipelines. No contact with the material is required. The distance for this can be up to 2 metres. The sensor is even capable of detecting very small material quantities. The [FlowJam S](#) (separate version, sensor and DIN Rail electronics) can be used in potentially explosive atmospheres. This system can be used to detect almost every type of solid with temperatures up to 1000 °C and pressures up to 20 bar.

Function

The system uses the very latest microwave technology with the material movement being detected by using the Doppler effect. The FlowJam is a very reliable device since microwaves can pass through material accumulations on the sensor and still detect material movements beyond them.

The measurement can be taken from outside all non-metallic tank walls, housings, hose lines or pipelines.

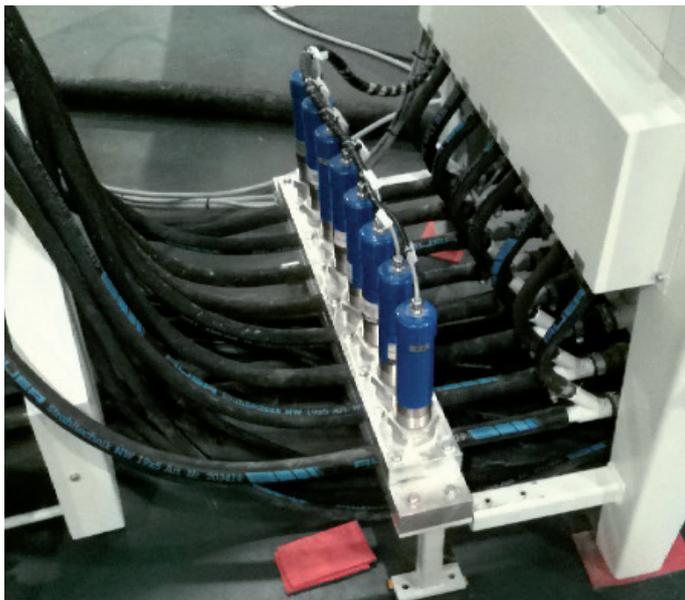
If not, plastic or plexiglas windows can be used.



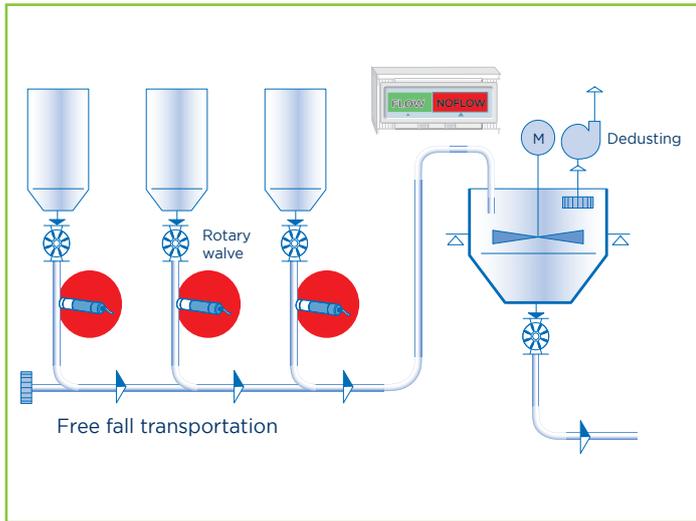
FlowJam



FlowJam S



POSSIBLE INSTALLATIONS FOR YOUR PROCESS



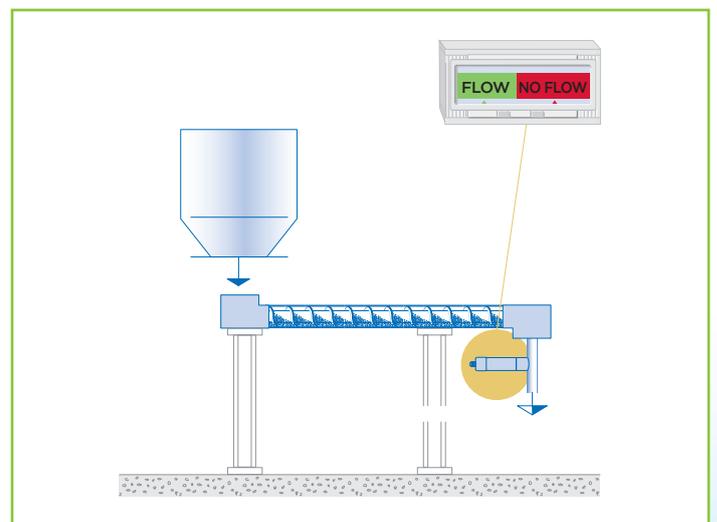
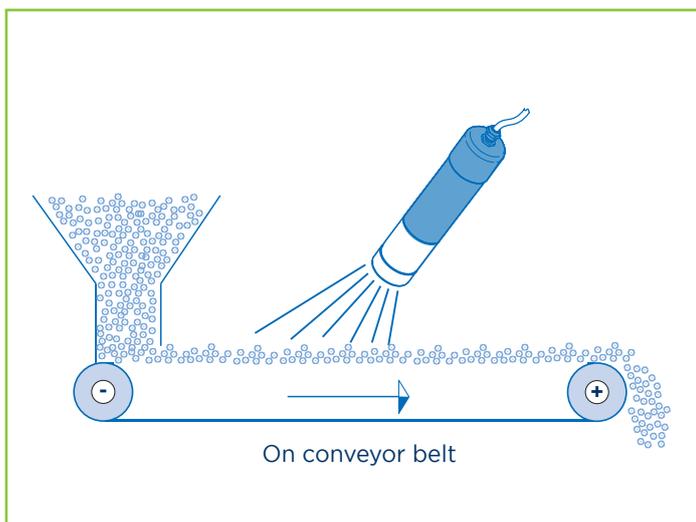
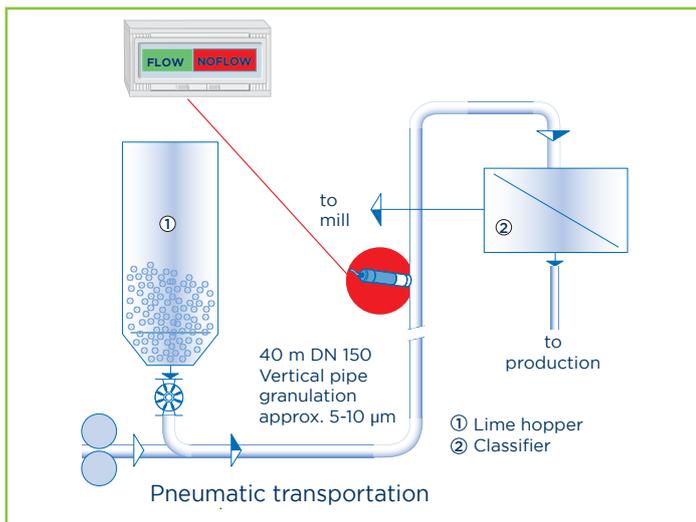
The **FlowJam** essentially enables you to monitor all material streams of powder, dust or granulate in any transport situation.

You receive an immediate alarm signal if the movement stops.

Adjusting the delay time enables you to adjust the alarm system to suit the characteristics of the process.

The sensor can be installed at any point in your process. For example:

- in free fall
- in a pneumatic system
- above a conveyor belt
- in a chute



SOME EXAMPLES OF SUCCESSFUL APPLICATIONS

DETECTION OF CEMENT



Material: Cement

Installation: In an air conveyor;
6 systems installed

Customer benefits: To prevent incorrect mixtures, air conveyors are monitored by the FlowJam to ensure that the material is moving.

DETECTION OF ANIMAL FEED



Material: Animal feed

Installation: Measurement in free fall;
4 systems installed

Customer benefits: Monitor the flow of material after a screw conveyor.

DETECTION OF FUEL



Material: Secondary fuel

Installation: In pneumatic pipes with a pressure adapter 32 systems installed

Customer benefits: If a blockage occurs, the pipeline can be blown free immediately.

This ensures an uniform fuel supply to the blast furnace.

DETECTION OF COAL



Material: Coal

Installation: In blast furnace lances; 16 systems installed

Customer benefits: In the case of a clogged pipe, this can be blown free immediately.

The continuous fuel supply can thus be ensured.

DETECTION OF ABRASIVES



Material: Metal spherical abrasives

Installation: In pneumatic transport system;
2 systems installed

Customer benefits: The FlowJam can reliably monitor whether the abrasive is flowing in the lines.
The device detects the material through the hose line.

DETECTION OF FOOD



Material: Dust from sliced sugar beet drying systems

Installation: Free fall in DN 300 pipeline down stream of cyclone;
6 systems installed

Customer benefits: Monitoring the material flow to ensure no loss of quality.

CYCLONE MONITORING SYSTEM



- Material:** Raw material
- Installation:** In a cyclone, high temperature up to 300 °C;
AL₂O₃ ceramic; 4 systems installed
- Customer benefits:** If the cyclone becomes filled with material due to a blockage and this then hardens, it takes a great deal of cleaning work to rectify the situation.

NEW



FlowJam T



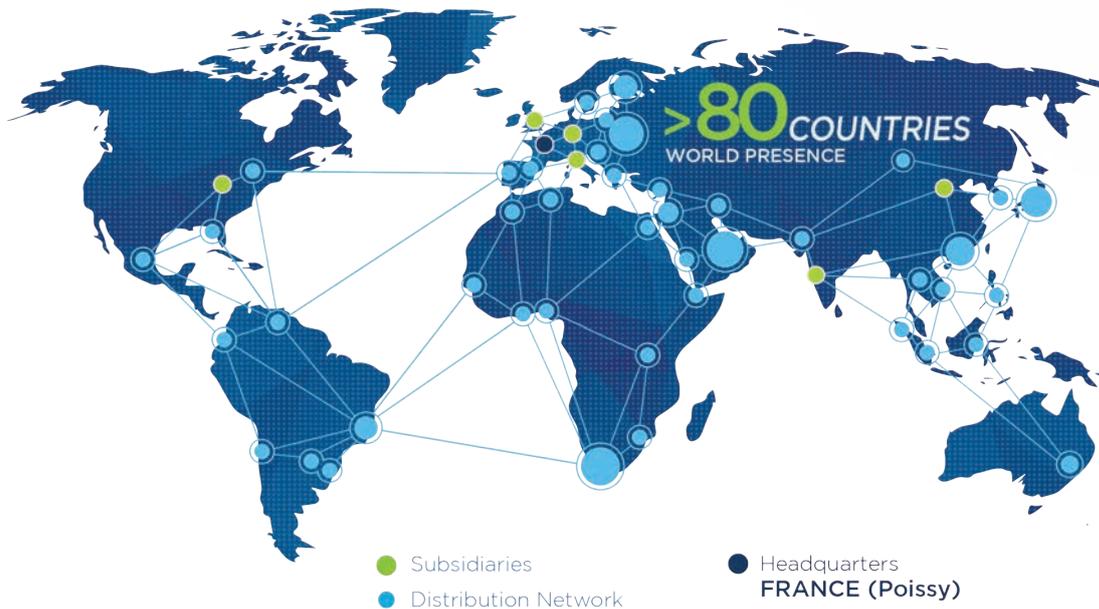
POWDER FLOW MONITORING IN FLEXIBLE PIPELINES

- Material:** Abrasives
- Quantity:** 50 - 400 g/min
- Installation:** Just before the abrasive focusing jet
- Function:** Control of the abrasive injection during the cutting process
- Customer benefits:**
- Quality optimization through immediate signalling of quantity changes during abrasive dosing
 - Avoidance of high production costs due to excessive material costs
 - Reduction of faulty batches

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