

공정용 고체/분체 흐름 감지기

시스템 기능

개요

Flow-Jam은 물질 이동에 대한 모든 종류의 흐름을 감지합니다.

Flow-Jam은 하기 조건에 의해 감지하고 구별 합니다.

- 파이프내 분체/고체 흐름
- 분체/고체 의 막힘/정지/비어 있음

이 시스템은 Microwave를 사용하여 측정물에 비접촉하여 작동하므로 도플러 원리를 통해 물질의 움직임을 감지합니다.

- 물질 침전물에 대해 절대적으로 둔감하여 측정에 영향X
- 모든 파이프 사이즈에 설치 가능
- 센서 헤드 아답터 사용시 최대 220°C 및 20bar 공정에 적용 사용 가능(세라믹 아답터 사용시 1,000°C 까지 사용 가능)
- 릴레이 스위칭을 통한 시그널 출력



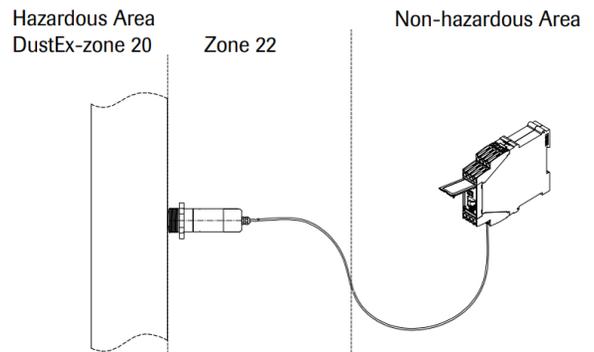
Model : Flow-Jam

분체/고체 흐름, 막힘 측정  
공압이송 / 자유낙하

시스템 구성

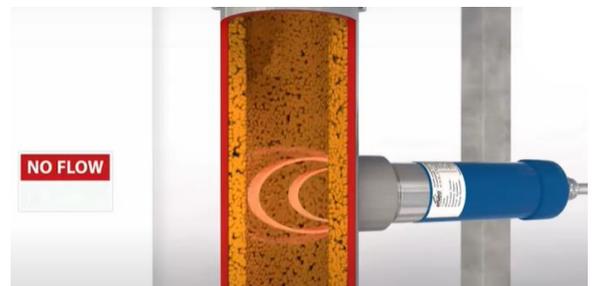
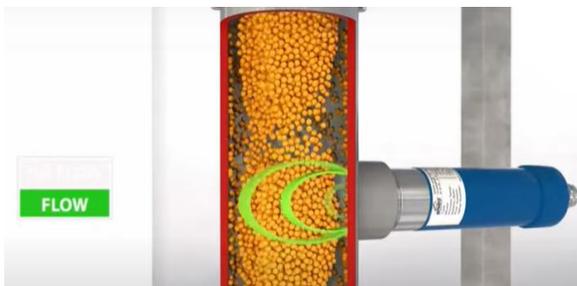
구성요소

- Flow-jam sensor
- Welding socket 1-1/2" Screw(F)
- 공정별 조건에 따른 Process Adapter 선택 (Option)  
For Pressure, Temperature, Food, High temp.
- DIN rail transmitter(Option) 별도 흐름 트랜드 모니터링 필요시

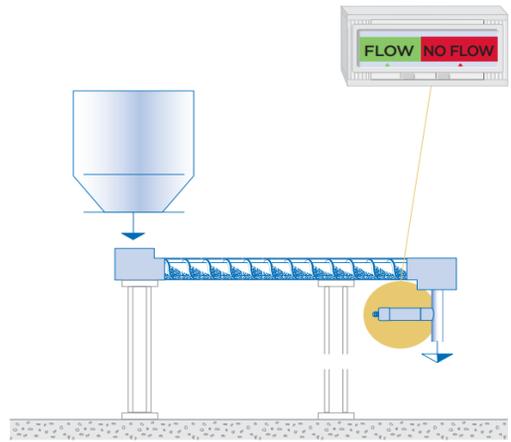
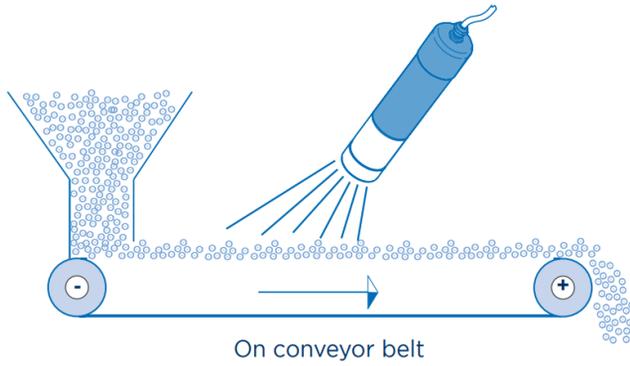
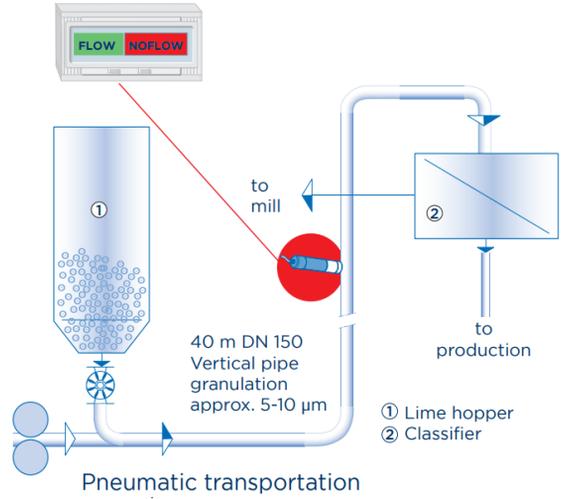
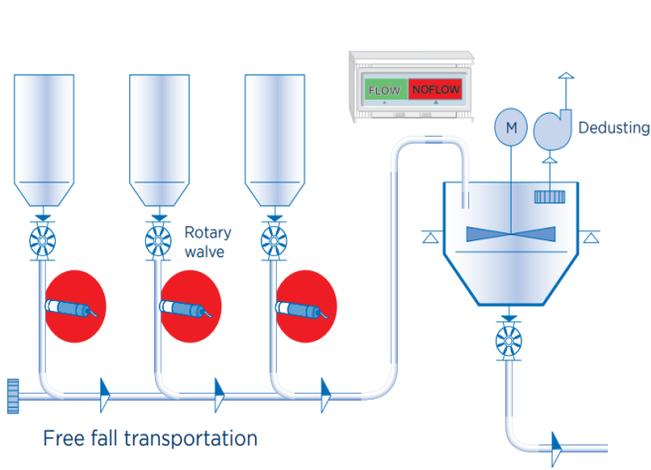


적용 어플리케이션

발전소	시멘트	화학	에너지플랜트
주조공정	소각장	광물	식품
석회공정	바이오매스	도장설비	석고슬러지



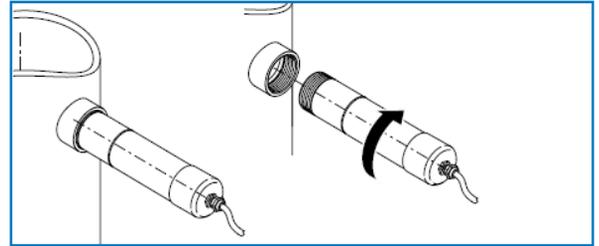
적용 가능 어플리케이션



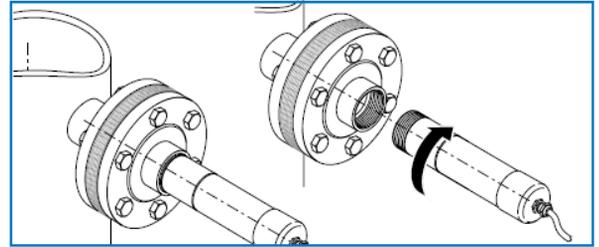
## Specification

### Sensor

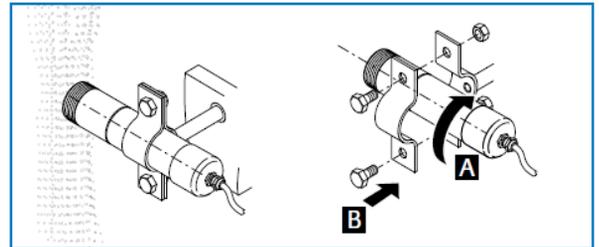
Housing material	Stainless steel 1.4571
Protection type	IP65
Process temperature	-20 to 80°C -20 to 220°C (with process adapter) Max. 1000°C (with ceramic flange)
Ambient temperature	-20 to 60°C
Working pressure	Max. 1bar Max. 20bar (with process adapter)
Relay contact	Max. rated load: 250 V AC Max. peak current: 6 A Max. rated load 230 V AC: 250 VA Max. breaking capacity DC1: 3/110/220 V: 3/0.35/0.2 A Min. switching load: 500 mW (10 V/5 mA)
Response time	250 ms to 15 s (continuously adjustable)
Measuring frequency	K-Band 24.125 GHz; ±100 MHz
Transmitting power	Max. 5 mW
Weight	1.0 kg
Dimensions	Housing: length of 216 mm / diameter of 52 mm Thread: length of 30 mm / diameter of G 1½"



Thread mounting



Mounting with separating flange



Mounting with pipe clamp

### Process adapter (Option)

	Pressure adapter	Temperature adapter	Food adapter	High temperature adapter
Material	Stainless steel 1.4571 POM diaphragm	Stainless steel 1.4571 Tecapeek diaphragm	Stainless steel 1.4571 Tecapeek GF30 diaphragm	Steel Ceramic diaphragm
Temperature	-20 to 80°C	Max. +220°C	Max. +220°C	Max. 1000°C
Pressure	Max. 20bar	Max. 20bar	Max. 20bar	Max. 40bar
Thread	G 1½" on both sides	G 1½" on both sides	G 1½" on both sides	G 1½" on both sides
Wrench width	55mm	55mm	55mm	17mm

### Transmitter DIN Rail (Option)

Power supply	24 VDC ±10%
Power consumption	Approx. 3.5W
Relay output	Max. rated load: 250 V AC Max. peak current: 6 A Max. rated load 230 V AC: 250 VA Max. breaking capacity DC1: 3/110/220 V: 3/0.35/0.2 A Min. switching load: 500 mW (10 V/5 mA)
Fall-delay time	250 ms ... 15 s (continuously adjustable)
Analog output (optional)	1 x 4 - 20 mA (0 -20 mA), load < 500 Ω (Active)
Weight	Approx. 172g