envea
KNOWLEDGE IN ACTION

CATALOGUE

PROCESS

Monitoring for Powder, Dust & Gas

EN

WHAT WE DO

The newly formed **Process** division of ENVEA brings together the expertise of a range of global instrumentation companies already established as experts in their respective fields to provide an unrivalled range of monitoring solutions for industrial processes.

The process division includes market leading companies ENVEA - SWR engineering, ENVEA UK Ltd and ENVEA S.A who each provide innovative instrumentation for the monitoring of powders, dust and gases specifically for manufacturing industries to provide added value measurement solutions.

Together our companies provide over 70 years of experience of producing ground breaking instrumentation to enhance manufacturing processes helping to reduce lost production, plant maintenance times and associated costs. Our instruments are supported by a global sales and service subsidiary network as well as distributors in over 70 countries.

Our experience in the process industry is allied to the over 40 years' experience of our parent company ENVEA S.A in the manufacture of gas CEMS and air quality analysis systems.

ENVEA offers solutions for Process Control, Emission Monitoring and Air Quality.

Our experience based on thousands of installations helps to improve your process


OUR SOLUTIONS ADAPT TO YOUR NEEDS.

INDUSTRIES

WHERE WE WORK

Our extensive experience in process applications in a wide range of industrial markets has provided us with an unrivaled knowledge and understanding of differing applications and the potential cost reductions and process enhancements that our instruments can bring.

Working closely with many of the World's leading manufacturers has given us an in-depth understanding of their needs which has always been an important driver in the development of our instrumentation. Often installed in harsh working environments our sensors have been designed to provide rugged, reliable monitoring often with built-in self-checks to assure optimum instrument functionality.

Working in a wide range of applications from heavy industries such as power, minerals and steel to complex processes in the chemical and food industries, our instrumentation for the monitoring of powder, dust and gas help to make processes more reliable, increase efficiency and create cost reduction benefits.

MINERALS

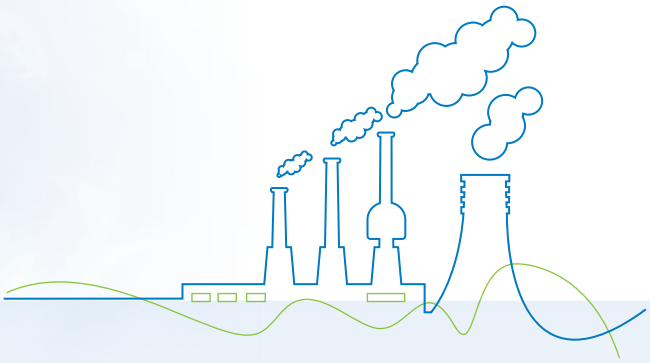
- cement
- lime
- gravel
- asphalt
- quartz
- gypsum
- brick
- ceramics
- salt
- coal / coke
- glass
- asbestos
- china clay
- fiberglass
- lead glass
- mining
- refractory
- quarrying
- vermiculite

METAL

- steel
- galvanizing
- foundry
- aluminum recycling
- aluminum smelting
- copper recycling
- copper smelting
- ferrous foundry
- lead recycling
- lead smelting
- nickel smelting
- precious smelting
- zinc recycling
- zinc smelting

CHEMICAL

- plastic
- titanoxid
- paint
- pharmacy
- fertilizer
- rubber
- cosmetics
- carbon black
- detergents
- ink
- toner
- tyres
- pesticides
- pigments
- refinery
- TiO_2
- coating powder



POWER

- coal
- biomass
- incinerators
- bio fuels
- gas
- oil

INCINERATION

- clinical
- chemical
- crematoria
- municipal

FOOD

- coffee
- milk powder
- sugar
- animal food
- cereals
- pectin
- grain
- tobacco
- beverage
- flour
- pet food
- starch

WOOD

- insulations
- floors
- chipboard
- pulp & paper
- cellulose
- fibers and additives
- particleboard
- timber products

and many more ...

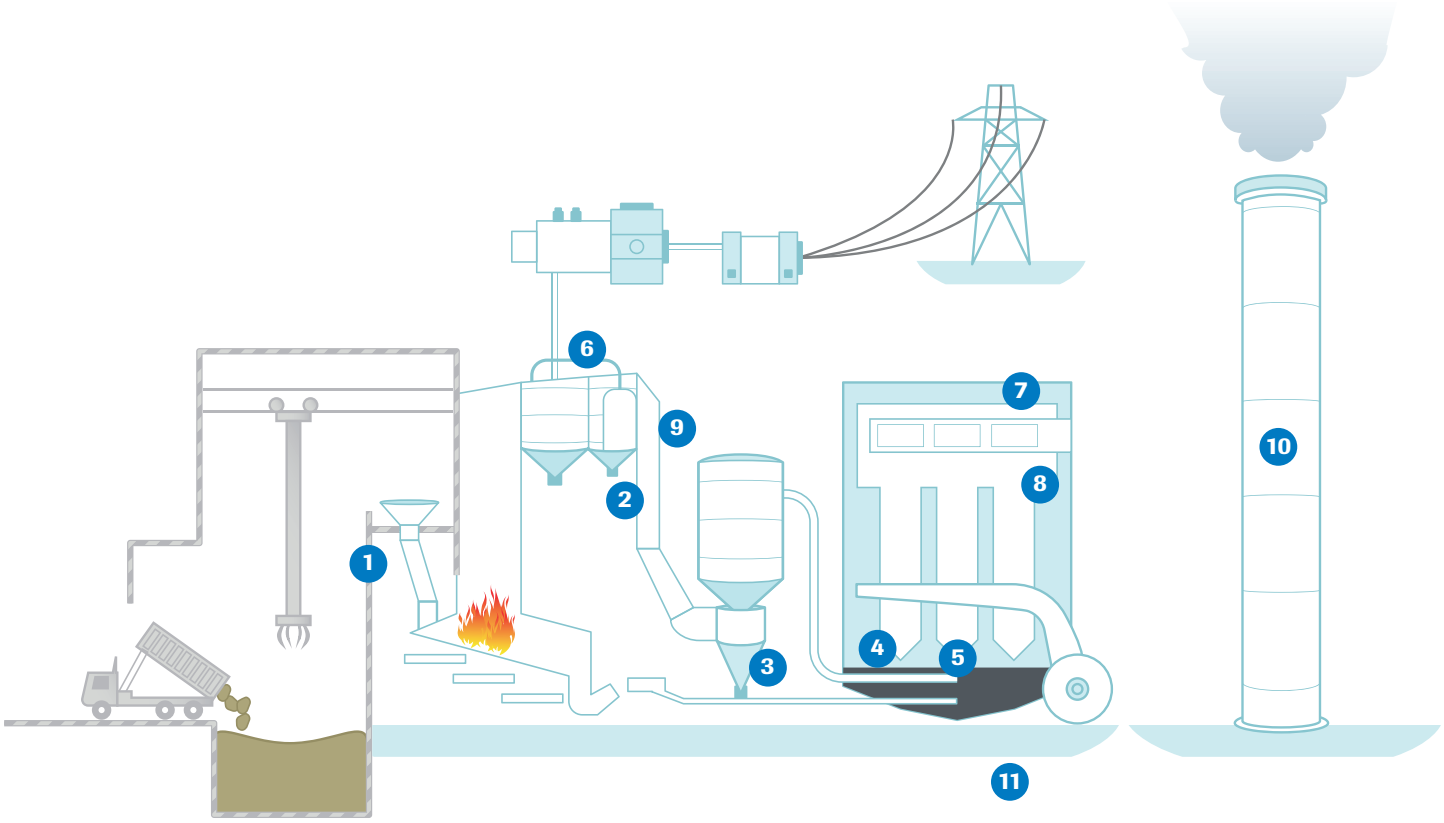
WHATEVER INDUSTRY WE WORK IN

Our installations are driven by:

- Providing our users with increased automation for energy and raw material efficiency
- Increasing the potential for on-line real time quality control and trending
- Providing real time sensor feed-back information for more flexible and high productivity production
- Meeting new regulatory demands and developments for environmental protection whilst driving operating costs down

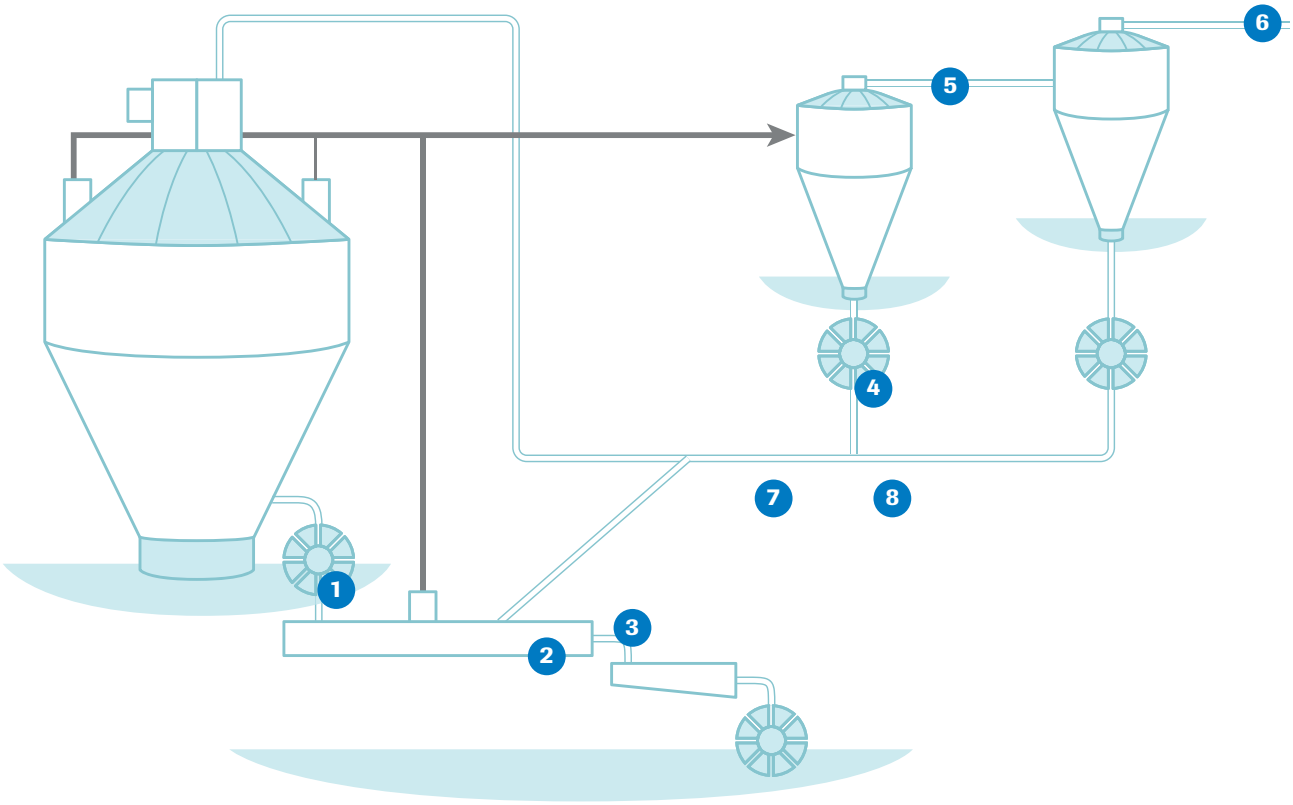
Below examples show typical solutions.

INCINERATION



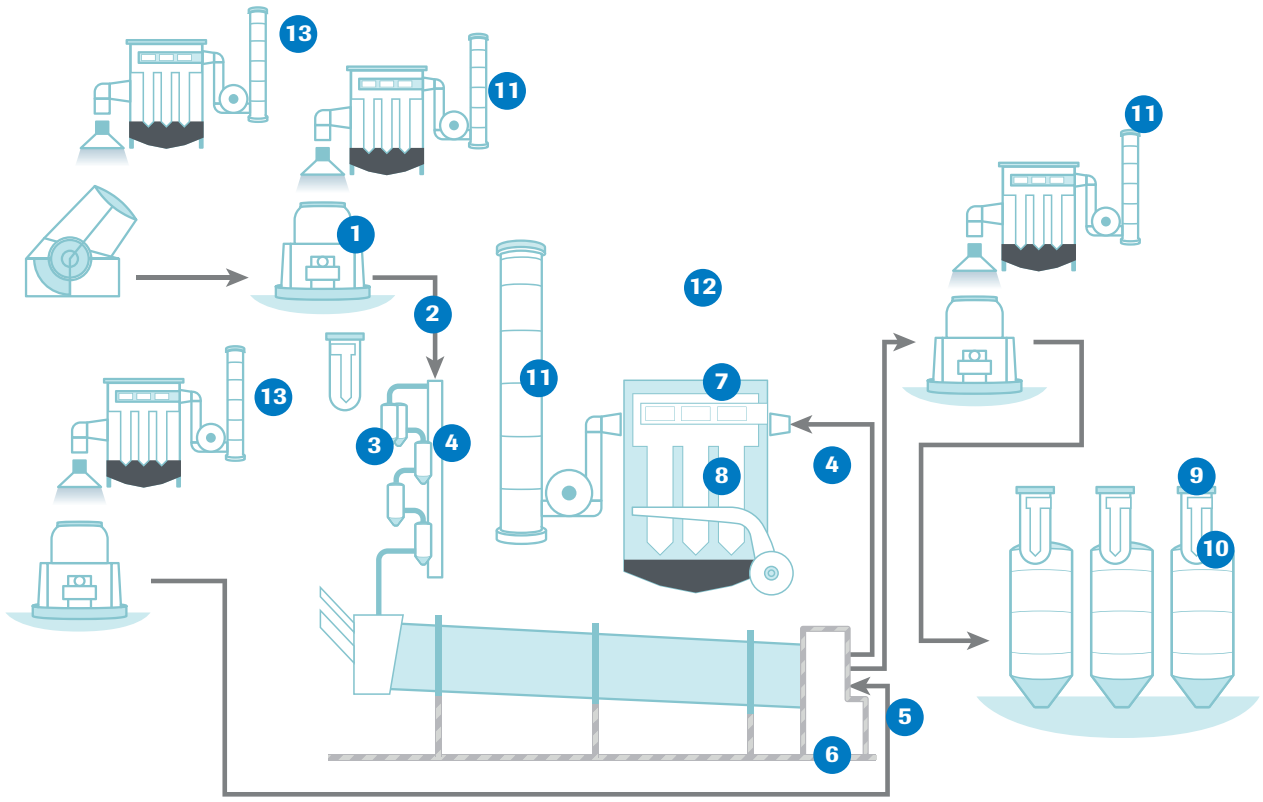
1. Point level detection in charging chute
2. Mass flow measurement of absorbent
3. Flow/NoFlow detection at cyclone outlet
4. Ash level detection at filter outlets
5. Flow detection at ash transportation system
6. Continuous level measurement in storage silos
7. Individual chamber baghouse performance monitoring
8. Predictive bag filter row monitoring
9. Process gas monitoring: O_2, NH_3, Hg, CO, NOx, SO_2, HCl, H_2O
10. Mainstack compliance gas, dust and flow measurement: NOx, SO_2, CO, CO_2, O_2, NH_3, HCl, HF, H_2O, Hg, TOC, dust, PCDD/F, flow, T, p
11. Potential hazards measurements: CO, CO_2, COV, NO_2, H_2S, SO_2, TRS, particles

FOOD AND PHARMA (SPRAY DRYING)



1. Mass flow measurement out of spray dryer
2. Continuous moisture measurement in fluidized-bed dryer
3. Mass flow measurement for inline blending
4. Flow/NoFlow detection in return powder lines
5. Primary filter performance monitoring
6. Compliance dust measurement trending
7. Ambient dust monitoring
8. Potential hazards measurement: CO, CO_2, COV, NO_2, H_2S, SO_2, TRS, particles

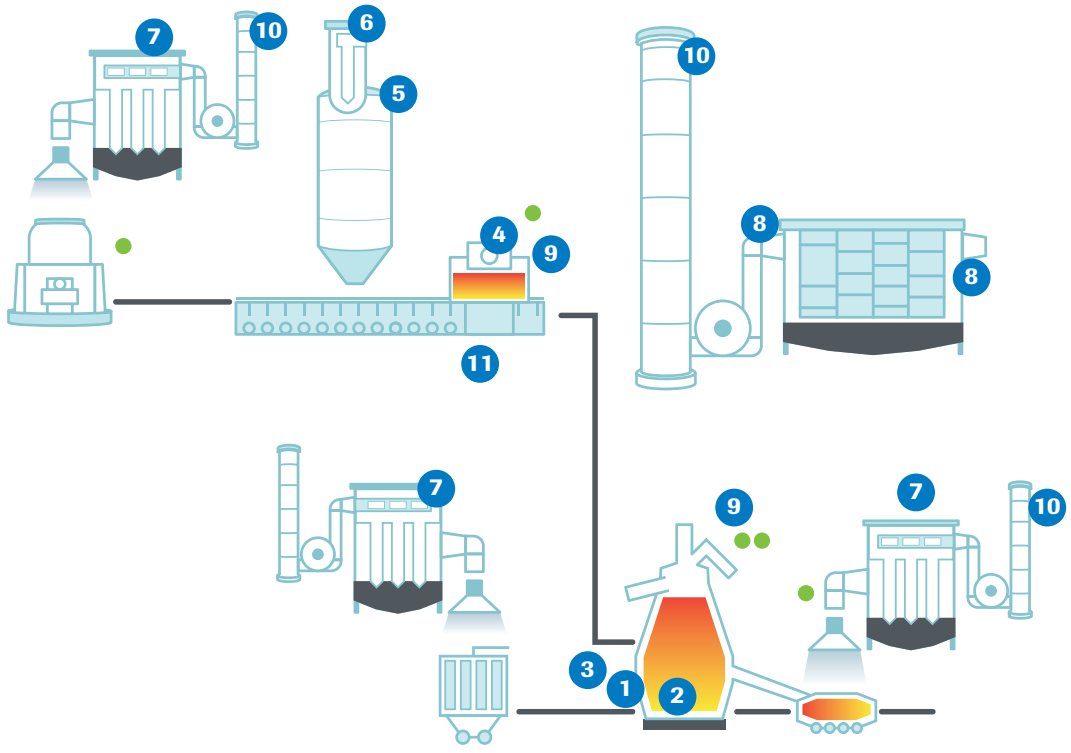
CEMENT



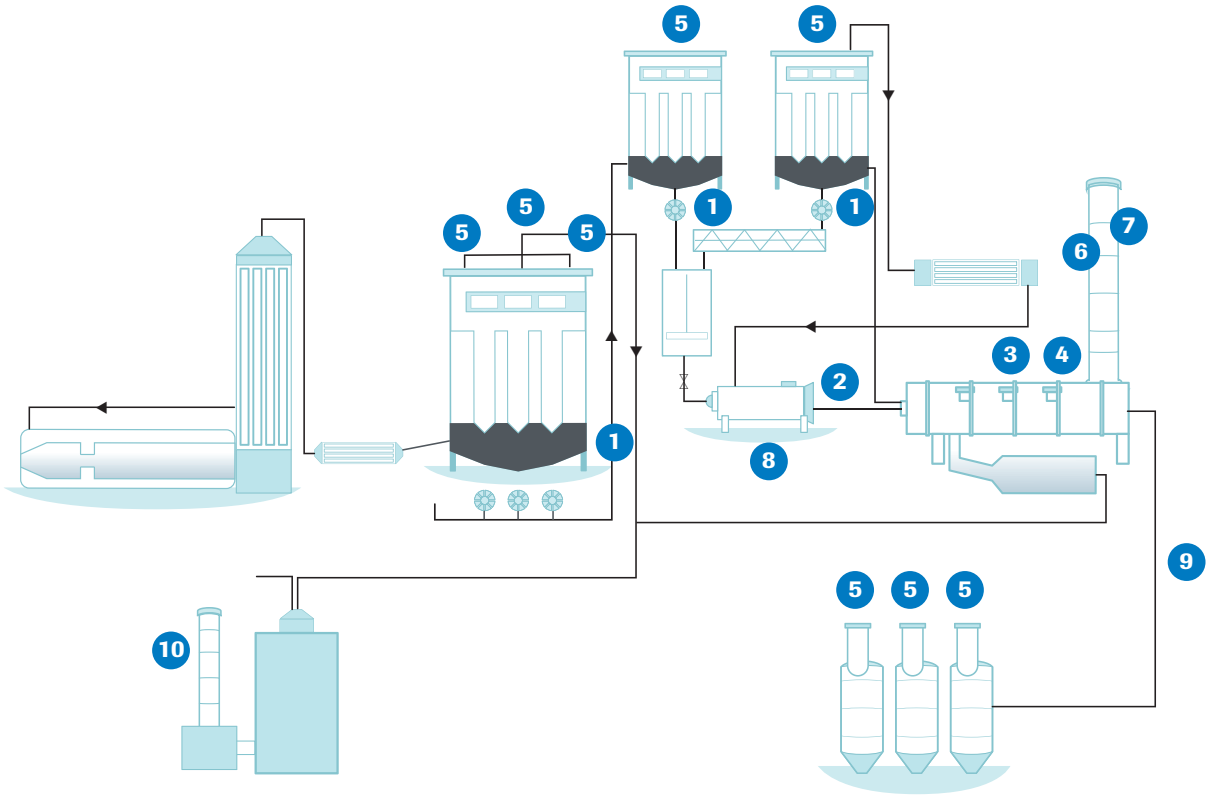
1. Continuous mass flow measurement of mill reject
2. Flow trending in air slide
3. Flow/NoFlow detection on cyclones
4. Process gas monitoring: NOx, CO, O_2, Hg
5. Mass flow and velocity measurement of coal into kiln
6. Continuous moisture measurement of secondary fuel
7. Baghouse chamber performance monitoring
8. Predictive bag filter row monitoring
9. Silo baghouse performance monitoring
10. Continuous level measurement in storage silos
11. Mainstack emissions compliance gas, dust and flow measurement: HCl, SO_2, CO, CO_2, NOx, H_2O, O_2, COV, dust, flow, T, p, PCDD/F, Hg
12. Potential hazards measurement: SO_2, COV, particles
13. Filter performance monitoring

STEEL

1. Mass flow measurement of pulverized coal into blastfurnace
2. Flow/NoFlow detection in single coal lance
3. Continuous moisture measurement of coal
4. Continuous flow measurement of sinter dust
5. Level detection in storage silos
6. Silo baghouse performance monitoring
7. Individual chamber baghouse performance
8. Monitoring electro-filter efficiency
9. Process gas monitoring
   - CO, O_2
   - NH_3 (si SCR)
10. Mainstack emissions compliance gas, dust and flow measurement: CO, SO_2, NOx, H_2O, NH_3, CO_2, O_2, CH_4, COV, dust, flow, T, p
11. Potential hazards measurement: COV, CO, CO_2,NH_3, SO_2, particles

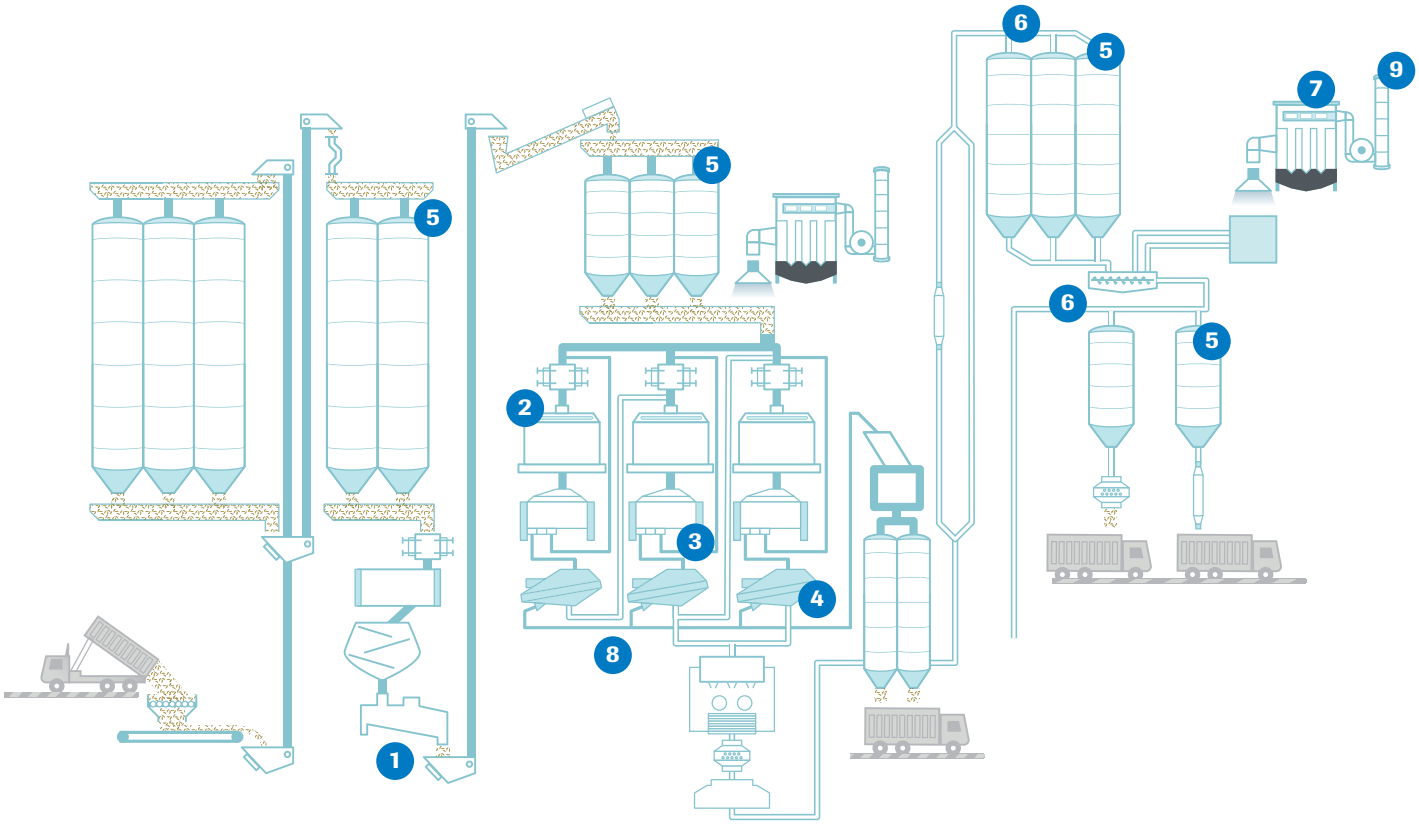


CARBON BLACK



1. Flow/NoFlow detection at filter outlets
2. Flow measurement after pelletizer
3. Continuous moisture measurement after dryer
4. Process gas monitoring
5. Predictive monitoring of bag row failure
6. Final stack dust emissions for compliance and performance monitoring
7. Emissions compliance monitoring: CO, SO_2, NOx, H_2O, NH_3, CO_2, O_2, CH_4, COV, dust, flow, T, p
8. Potential hazards detection: COV, CO, CO_2, NH_3, SO_2, particles
9. Mass flow measurement of carbon black to silos
10. Wet stack dust emissions

GRAIN



1. Flow measurement after intake and cleaning
2. Flow/NoFlow detection of flow into roller mills
3. Continuous moisture measurement after conditioning
4. Screen break detection
5. Continuous level measurement in storage silos
6. Silo baghouse performance monitoring
7. Baghouse chamber performance monitoring
8. Ambient dust monitoring
9. Compliance dust emission measurement: CO_2, NH_3, SO_2, dust

POWDER

ENVEA - SWR engineering manufactures an unrivalled range of monitors for powder, granulates and dust to meet the continued demands of industrial processes to better understand and control their processes to help provide increases in efficiency and product quality.
With almost 25 years of experience ENVEA - SWR engineering has achieved extensive knowledge in use of sensors for the measurement of flow, level, moisture, concentration, velocity and particle size detection. All working with the latest ground-breaking microwave and electromagnetic technologies.

FLOW MEASUREMENT

IN GRAVITY TRANSPORT AFTER FEEDERS

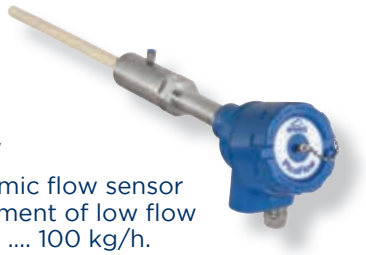
SolidFlow 2.0
Microwave sensor for on-line mass flow measurement of solids up to 20 t/h.
- easy assembly via weld-on socket
- for almost all types of dusts, powders, granules
- latest technology with active roping compensation

MaxxFlow HTC
Electromagnetic flowmeter, designed to measure bulk material flows from 10 .... 300 t/h.
The meter has no mechanical parts in the flow, is 100 % dustproof and erosion free because of ceramic inner pipe.
- arbitrary mounting position (inclined/free fall)
- low headroom required
- easy to calibrate

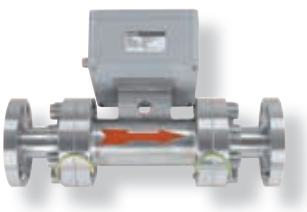
IN AIR SLIDE TRANSPORT

SlideControl
Microwave sensor for contactless monitoring of material flow in air slides.
- easy to install
- gives trending information by 4 .... 20 mA output

IN PNEUMATIC CONVEYING



PicoFlow
Electrodynamic flow sensor for measurement of low flow rates from 0 .... 100 kg/h.
Ideally used in leanphase conveying.
- suitable for very low concentrations
- ceramic coating prevents sensor wear



DensFlow
Designed to measure solid flows during dense phase transport.
The sensor measures density and speed.
- no wear because of ceramic inner pipe
- for high pressure up to 110 bar

SolidFlow 2.0

POWDER

FLOW MEASUREMENT

APPLICATIONS

MASS FLOW MEASUREMENT IN GRAVITY TRANSPORT

SolidFlow 2.0

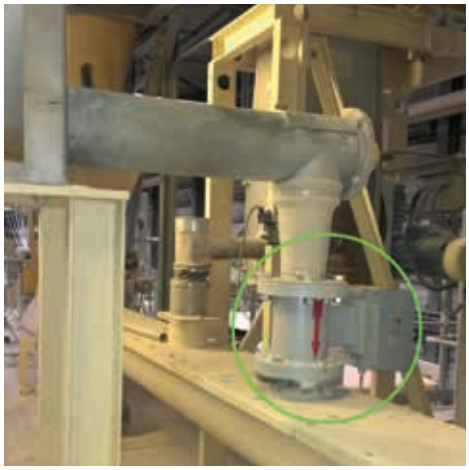
Waste incineration plant

Material: Furnace coke

Installation: Freefall between screw conveyor and injector

Volume: 300 - 400 kg/h

Customer benefits: Easy process control in exhaust gas cleaning. Avoidance of under- and overdosing. Contactless measurement, thus no erosions.



MaxxFlow HTC

Building materials

Material: Clay

Installation: Freefall after screw conveyor

Volume: 30 - 80 t/h

Customer benefits: Contactless and maintenance-free measurement of high throughput rates. Replacement of Impact Flowmeter.

For flow rates up to 300 t/h

FLOW MEASUREMENT IN AIR SLIDES

SlideControl

Cement plant

Material: Cement

Installation: Air slide after main storage silo

Volume: Approx. 80 t/h

Customer benefits: Securing of constant material availability at the filling machine. Easy to retrofit sensor.

POWDER

FLOW MEASUREMENT

APPLICATIONS

MASS FLOW MEASUREMENT IN PNEUMATIC CONVEYING

SolidFlow 2.0

Starch production

Material: Starch

Installation: Starch pneumatic blow line

Volume: 0 - 3 t/h

Customer benefits: Totalizing starch flow into the silo for inventory control.

For flow rates up to 20 t/h

PicoFlow

Incineration plant

Material: Furnace coke, hydrated lime

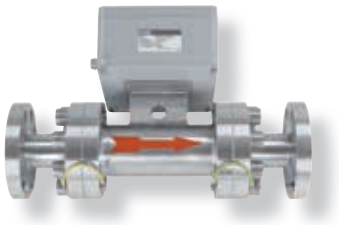
Installation: Pneumatic blow line

Volume: 4 - 50 kg/h

Customer benefits: Continuous flow measurement at low air/solid ratios. Documentation of material consumption.

For extremely low flow rates from 0 to 100 kg/h

DensFlow



Steel plant

Material: Coal

Installation: Pneumatic densephase conveying

Volume: 2 - 10 t/h

Customer benefits: Controlling coal flow in main pipe from vessel to coal distributor.

Also as a high pressure version up to 110 bar available

UNDERSTANDING YOUR PROCESS AND HELPING TO IMPROVE.

POWDER

FLOW / NOFLOW DETECTION

IN GRAVITY TRANSPORT AFTER FEEDERS

FlowJam *Plus*

This microwave sensor is an advanced version of the FlowJam already well known and used in thousands of applications.

Beside Flow or NoFlow, the FlowJam *Plus* in case of a NoFlow situation indicates if it is ...

- caused by blockage
- or empty pipe caused by a stop of material supply

Gives Flow/NoFlow *PLUS* Jam/NoJam information

IN PNEUMATIC CONVEYING

FlowJam

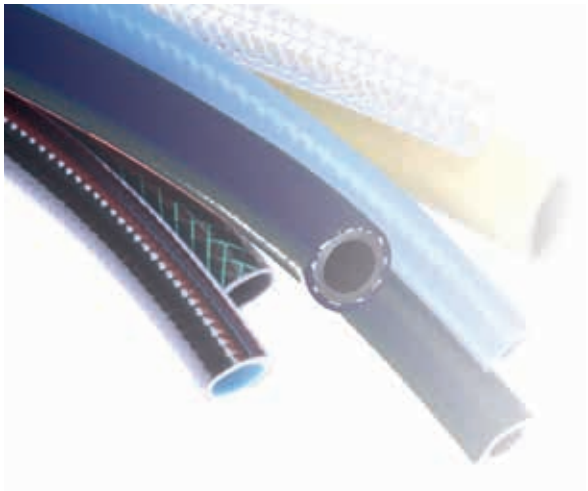
FlowJam S

Microwave detector for contactless monitoring of material flow (Flow/NoFlow).

Reliable sensor insensitive to deposits or build-up of material.

- with adapters suitable up to 1000 °C and 20 bar pressure
- as compact version or with separate electronics
- FlowJam S with 4 ... 20 mA output

ON FLEXIBLE HOSES



FlowJam A

Microwave-based detector for monitoring the flow of solids conveyed by hose lines.

The system can be installed on electrically non-conductive hoses, such as plastic or rubber, with an outside diameter between 2 to 10 mm.

- easy to retrofit
- 4 ... 20 mA output via converter

POWDER

FLOW / NOFLOW DETECTION

APPLICATIONS

FLOW DETECTION IN GRAVITY TRANSPORT

FlowJam *Plus*

Incineration plant

Material: Activated carbon

Installation: After rotary valve

Volume: Max. 100 kg/h

Customer benefits: Activated carbon is being dosed into incinerator to reduce dioxin emissions. FlowJam *Plus* monitors the flow continuously and indicates immediately any interruption.

FLOW DETECTION IN PNEUMATIC CONVEYING

FlowJam & FlowJam S

Building material

Material: White and grey concrete

Installation: Silo outlet before screw conveyor

Volume: Approx. 1 t/h

Customer benefits: Production security by monitoring of material flow. Avoidance of shutdown or waiting time during production process and system start up.

FLOW DETECTION ON FLEXIBLE HOSES

FlowJam A

Surface treatment

Material: Glass beads

Installation: Flexible hose after dosing device

Volume: 0.5 kg/min

Customer benefits: Securing of constant material flow with decreased pulsations.

POWDER

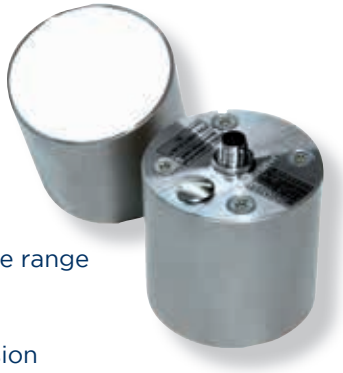
MOISTURE MEASUREMENT

Sensors for continuous moisture measurement and installation on conveyor belts, screw feeder or hoppers. Two types of sensor-technology to cover a wide range of applications. Both sensors penetrate the product for most reliable measurements.

M-Sens 2

Microwave based sensor for high resolution and accuracy.

- up to 120 °C
- highly resistant to abrasion
- integrated temperature reading
- flow detection function

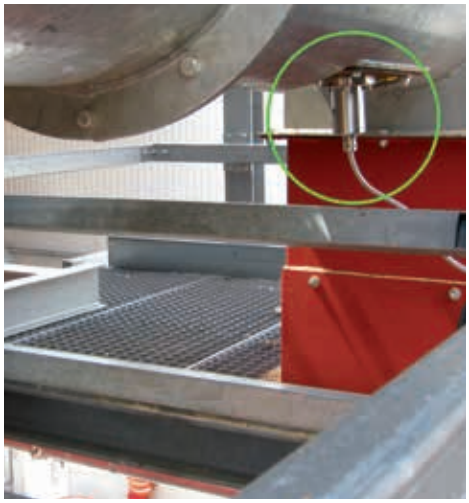


M-Sens WR

Capacitive sensor for wide range applications.

- up to 190 °C
- highly resistant to abrasion

APPLICATION



M-Sens 2

Pellets production

Material: Wood chips

Installation: Screw conveyor

Volume: 3 t/h

Moisture: 3 - 8 %

Customer benefits: Measurement of dryer input-moisture for control.

- Continuous measurement on screw conveyors, hoppers and belt conveyors
- Also available with flow detection function and integrated temperature reading

POWDER

VELOCITY

Especially designed for continuous measurement of velocity of solids and particles such as granulates, powders and dusts, which are transported in free fall or in pneumatic transport. Uses triboelectric correlation technology.

SpeedFlow 2.0

- plug-in sensor for easy retrofit
- no calibration required

SpeedFlow 2.0-Pipe

- measures full cross-section
- no calibration required

APPLICATION

Available as plug-in
or full cross-section version

SpeedFlow 2.0

Food manufacturing

Material: Ingredients

Installation: Pneumatic conveying line

Volume: 300 - 400 kg/h

Velocity: 10 - 12 m/s

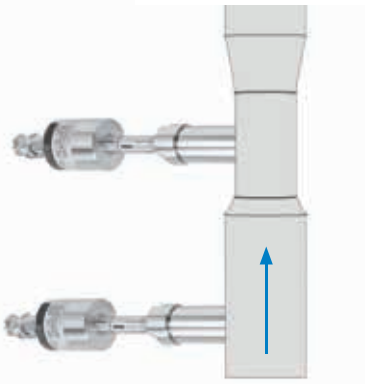
Customer benefits: Ensure that material speed does not exceed maximum to avoid product damage.

POWDER

PARTICLE SIZE MONITORING

Paddy

Paddy has been developed to supply a trending information of pulverization. It measures changes in particle size for instance to detect screen breaks. Paddy is insensitive against contaminations and works without a bypass.



APPLICATION

Paddy

Refinement

Material: Quartz

Installation: On tumble screen

Volume: 150 kg/h

Customer benefits: Improved continuous monitoring of fines in between the twice-a-day manual check.

RELIABLE SOLUTIONS
BASED ON EXPERIENCE.

POWDER

LEVEL

POINT LEVEL

ProGap 2.0-BS
- with filling-signal-recognition
- indicates level and material flow
- separated version enables installation in positions difficult to access

ProGap 2.0
Microwave barrier for contactless detection of dry bulk solids in containers, or chutes. Reliable fill level and limit level detection.
- with adapters suitable up to 1000 °C and 20 bar pressure
- 25 m measuring range

CONTINUOUS

Nico 15/30
Radar sensor for measuring the level of material in silos and containers.
Available for silos up to 15 m or 30 m high (depending on version). Can be used with a wide variety of materials, regardless of the size or composition of the material.
- high plant availability, because wear and maintenance-free
- maintenance-free operation through non-contact measuring principle
- reliable measurement independent of vapour, dust and noise

POWDER

LEVEL

APPLICATIONS

POINT LEVEL

ProGap 2.0

Plasterboards

Material: Paper fibers

Installation: Filling chute of a material hopper

Customer benefits: Detection of material jam at the earliest possible time. Fault-free process control and avoiding process downtime.

ProGap 2.0-BS

Surface treatment

Material: Sand

Installation: Min. and max. position in storage hopper

Customer benefits: Contactless measurement of minimum and maximum level for filling control.

Up to 25 meters distance

CONTINUOUS

Nico 15/30

Cement plant

Material: Cement

Installation: Top of main storage silo

Customer benefits: Continuous level measurement for inventory control.

DUST

ENVEA UK Ltd manufacture an unrivalled range of particulate monitors to meet the demands of industrial processes from both regulatory and process standpoints. Based on our ground breaking range of approved particulate monitors, our instruments allow end-users to better understand and measure their particulate emissions as well as to qualify the efficiency of dust filter systems and process plant.
By the correct selection of a suitable particulate monitor, industrial processes can achieve both cost savings in terms of reduced filter maintenance and lost production and in addition improve emissions to atmosphere.
Instruments are available to measure both dry and saturated wet stacks, utilising a wide range of technologies including Opacity (cross stack optical), Scatter (forward and back scatter) techniques, Electrodynamic (probe electrification) instruments and extractive scatter specifically for saturated wet stacks.
Technology choice is dependent on filter plant type and stack conditions with Opacity and Scatter based instruments typically used after Electrostatic Precipitators whilst after Baghouses, Cartridge Filters, Cyclones etc, electrodynamic instruments provide a pragmatic, cost effective solution.
A wide range of instruments are available to meet varying application requirements:

- Simple Gross Filter Failure devices
- Standalone filter trending devices compliant to US EPA MACT Bag Leak Detector Standards, US ASTM D7392-07 and European BImSchV 27 Class 2 (EN 15859)
- Multi-Sensor controller-based instruments multi-compartment baghouse performance monitoring
- EN 14181/EN13284-2 accredited PM-CEMS for environmental compliance measurement

In addition software packages provides a proven solutions to both view real time data from the particulate monitor, produce reports and configure the instrument. Its Predict package allows bag filter degradation to be identified to row level, to aid in preventative filter maintenance before breaches in environmental limits.

BROKEN BAG DETECTION

Dust Alarm 40
Controller based
filter failure detector icon driven
colour display and key pad

Dusty
Entry level stand
alone gross filter
failure detector

Dusty C
Compact gross filter
failure detector
with filter trending

DUST

BROKEN BAG DETECTION

APPLICATIONS

The entry level gross filter failure detector

Dusty

This sensor provides a simple solution to identifying catastrophic failure of a fabric filter bag house, cartridge filters or cyclones. Ideally suited to applications from 0.1 mg/m³ the Dusty provides an immediate alarm in case of a filter break.
Dusty is a preferable OEM sensor solution.

Stand alone gross filter failure detector with trending

Dusty C

This standalone sensor in addition to its configurable alarms features a 4 ... 20 mA output to allow the remote observation of filter trends when connected to the site Digital Acquisition System. The Dusty C is also a preferred OEM sensor in case a trending output is required.

Controller based gross filter failure instrument

Dust Alarm 40

This two-piece sensor and remote controller system features an Icon Driven colour display to facilitate the easy setup of the remote sensor and observation of filter trends and alarms.
This controller based solution negates the need for instrument engineers to access the sensor, which is often installed in difficult to access locations.
Available with twin configurable alarms and a 4 ... 20 mA output the Dust Alarm 40 provides easy remote observation of filter performance.

Reliable Electrodynamic® technology
- non-contact charge induction
- unaffected by rod contamination

Stack sizes up to 4 m

DUST

DUST MONITORS

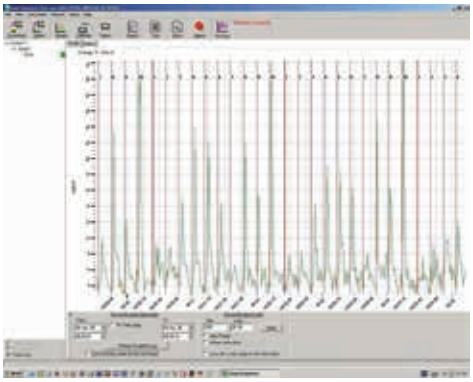
ProSens

When simple Broken Bag Detection is not enough a range of real dust monitors provide scalable instrumentation to enable calibration via an Iso-Kinetic test or the dosed reference method in mg/m^3. Available both as approved leak and measurement instruments to BImSchV 27 class 2 and 3 (EN 15859) and designed to meet US ASTM D7392-07 for Bag Leak Detectors, the dust monitors are available in both stand alone and two-piece sensor/controller configurations.
With inbuilt sensor health checks including sensor short circuit and drift (zero and span) and utilising patented ElectroDynamic® non-contact charge induction technology, these instruments provide a rugged and reliable. solution to filter performance monitoring.

Leak Alert 73/75/80

DM 170

DUST TOOLS



Predict module, sequential pulse cleaning analysis of a bag house chamber with 10 rows.
High peaks indicating Bag Row degradation.

Ease of access to emissions data from sources plant-wide is vitally important. Dust Tools software is a powerful and customizable software suite for down-loading, displaying, analysing and reporting data from both ENVEA control units and sensors to PCs.

Offered in a modular format providing features and options suitable for specific particulate monitoring requirements which include:

- Emission reporting in compliance with local or national environmental legislation provided by Data Reporter and QAL Reporter software modules.
- Process control and analysis via real-time graphical data trending from DUST TOOLS Online module, with easy to use zoom, pan and auto-ranging facilities to display the data that is needed, fast.
- For multi-row and multi-chamber bag house operators, Predict and Predict View software modules allow failing filter elements to be located and replaced before gross filter failure occurs, enabling scheduled preventative maintenance and minimized process downtime.

DUST

DUST MONITORS

APPLICATIONS

Leak Alert 73/75/80

The standalone Leak Alert range offers a range of rugged, durable sensor options to address challenging stack conditions with passive active and fully insulated sensor options for stacks with condensation issues or sticky dust, as well as standard 316SS sensor rods these instruments feature both manual and automatic self-checks to ensure measurement integrity.
Accurate emission measurement with rapid dynamic ranging allows plant operators to locate the position of leaking bags to row level. When integrated with Predict PC software it provides ultimate arrestment plant fault finding capability permitting bag cleaning pulses to be accurately monitored while maintaining high accuracy in background emission monitoring.

Leak Alert 65-02 and ProSens

For those who prefer to interrogate and configure their sensor remotely or require explosion-proofed sensors this controller-based monitors provides reliable and robust monitoring of particulate dust levels and leaks from faulty bag media. The sensor, installed after the baghouse, these sensors conditions, amplifies and analyses the dust signal and communicates a secure digital signal to the remotely located control unit, where instrument set-up, local graphical display and both digital and 4 ... 20 mA output signals are provided.

- Available for explosive atmospheres gas and dust
- Up to 500 °C stack temperatures
- Advanced probe contamination check

Monitoring solutions post electro-filters

DM 170

The DM 170 provides a cost-effective solution for measuring dust post ESP or in combustion stacks with no filtration. The DM 170 Back Scatter instrument requires only single point mounting and offers quality checks to assure measurement accuracy. It provides a compact stand-alone measurement solution for non-compliant applications in medium to high dust concentrations. It is the perfect instrument not only for final stack monitoring but also as a failure device between primary filters (ESP) and secondary baghouses.

DUST

FILTER PERFORMANCE

Leak Locate 320

It is vital to know when a baghouse is operating within compliance limits. To be able to understand where in the filter degradation is happening before breaches in environmental levels provides additional benefits to the filter operator.

Multiple networked sensors, up to 32 channels per controller, allow each compartment of large multi-chamber baghouses to be continually monitored to determine the deterioration of the filter elements at both compartment and row level.

These systems provide a proven method of providing information to allow preventative maintenance procedures, thereby greatly reducing unplanned filter outages, maintenance times, lost production and spare filter element inventories. Also, as a consequence of planned preventative baghouse maintenance total particulate emissions are greatly reduced.

NETWORK SYSTEMS

TÜV Rheinland®

QAL 991

ENVEA'S range of networked ElectroDynamic® dust monitors including the QAL1 (EN 15267-3) certified sensor QAL 991 provides an integrated solution for the monitoring of multiple baghouses. Transferring data from and supplying power to the sensors via a single ModBus cable network these calibratable instruments provide remote real-time observation of filter performance and access to logged historical data.

Comprising a multi-lingual ProController with a large full colour display and capable of handling up to 32 channels, these network systems offer a simpler and more cost-effective solution to standalone sensors when monitoring multiple filters.

DUST

AMBIENT

APPLICATIONS

INDOOR & OUTDOOR AIR QUALITY

How much dust floats in your workspace?

AirSafe 2

The uncomplicated little assistant to permanently check the environment for dust.
Installed in factory halls, at workplaces or at predestined dust sources, the AirSafe 2 delivers an alarm when a threshold value is exceeded.
And if that is not enough: trend signal available!

Fugitive emissions and hazard detection

Cairpol

Your plant and equipment can be the source of fugitive emissions causing environmental pollution and loss to your business.
We provide a wide range of Cairsens gas micro-sensors for the industry to help keeping employees safe and reduce odour emissions and hazardous air pollutants.
Networkable, with no maintenance required, solar energy powered, the Cairnet version can be deployed quickly for fixed and portable measurement applications. The associated application software CairMap allow for real-time forecasting fugitive emissions of a multi-source installation for the management of events and processes.
Cairpol systems can be also used to supplement conventional air quality stations by offering additional measurement points providing additional coverage and measurement data for an area, the data and software is compatible with Air Quality Data Acquisition systems.

Conventional mobile or fixed air quality monitoring stations

Criteria air pollutants analysers

Monitoring air quality is essential for local authorities as well as for major public and private industries to understand and prevent air pollution and assess emission sources, in order to preserve health and contribute to the fight against the greenhouse effect. With over 35 000 air quality monitors measuring the pollution of cities and industrial sites worldwide, our analysers are designed for the continuous monitoring of pollutants emitted by industry such as sulphur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds, ammonia, hydrogen fluoride and fine particulates PM10 & PM2.5.

GAS

ENVEA is present in almost all parts of an industrial process, alongside dust and powders, gases are important to monitor and measure in order to keep your process running at its optimal rate. We offer a complete range of products that will not only help you control your process, but also allow you to prevent incomplete reactions in abatement systems and consequently to reduce emissions. With various sampling methods and analysis technologies, our gas monitors will help you maintain the high standard performances of your industrial processes.

SELECTIVE ANALYSIS

Direct extractive

MIR 9000

Non-dispersive infrared gas filter correlation measurement for dry and wet applications

In-Situ

LAS 300 XD

Tunable Diode Laser Absorption Spectrometry Analyzer

APPLICATIONS

SCNR plant

LAS 300 XD

A decisive factor in the assessment of the SCNR process is the resulting slip after an incomplete reaction.
LAS 300 XD is measuring the residual gaseous ammonia (NH_3) in the exhaust gas.

By using TDL technology costly sample gas extraction via heated sample lines is omitted.

Cyclone preheater

MIR 9000

The gas sample is extracted and conditioned before transport, in order to have all moisture and condensible components removed prior to its analysis for NOx, CO and O_2 in a cement plant.

GAS

GAS MONITORING RANGE

	HCl	HF	NO	NO_2	N_2O	NOx	SO_2	CO	CH_4	TOC	NH_3	H_2O (%)	CO_2 (%)	O_2 (%)
EXTRACTIVE DRY														
MIR 9000	0-15 / 5000	0-20 / 300	0-100 / 5000	0-100 / 1000	0-20 / 1000	0-200 / 5000	0-75 / 5000	0-75 / 5000	0-10 / 1000	0-50 / 5000			0-10 / 100	0-10 / 25
MIR 9000 CLD	0-15 / 5000	0-20 / 300	0-20 / 2000	0-20 / 2000	0-20 / 1000	0-20 / 2000	0-75 / 5000	0-75 / 5000	0-10 / 1000	0-50 / 5000			0-10 / 100	0-10 / 25
MIR 9000 CLD RACK			0-20 / 2000	0-20 / 1000		0-20 / 2000							0-20	0-10 / 25
EXTRACTIVE WET														
MIR 9000H	0-100 / 5000	0-40 / 300	0-200 / 5000	0-200 / 5000		0-200 / 5000	0-500 / 5000	0-75 / 10000			0-15 / 500	0-30 / 40	0-10 / 100	0-10 / 25
LAS 300 RK *(ppm)*	0-10 / 500	0-5									0-15			0-30
MIR FT	0-15 / 500	0-3 / 100	0-200 / 2000	0-200 / 2000	0-100 / 500	0-200 / 2000	0-75 / 20 000	0-75 / 10 000	0-15 / 1000	0-50 / 1000	0-15 / 500	0-30 / 40	0-10 / 30	0-10 / 25
IN-SITU														
LAS 300 XD *(ppm)*	0-10 / 3000 (H_2O 0-50%)	0-100						Low: 0-500 High: 0-100%			0-15 / 500 (H_2O 0-50%)			0-10 / 100
MIR IS	0-15 / 5000	0-20 / 300	0-100/ 5000	0-100 / 1000	0-20/ 1000	0-200 / 5000	0-75 / 5000	0-75 / 5000	0-10 / 1000	0-50 / 5000			0-10 / 100	0-10 / 25

Lowest / Highest available ranges expressed in mg/m³ (may vary with your site conditions to be indicated on the Site Survey Form you provide us with)

MOISTURE MEASUREMENT

LAS 300 XD

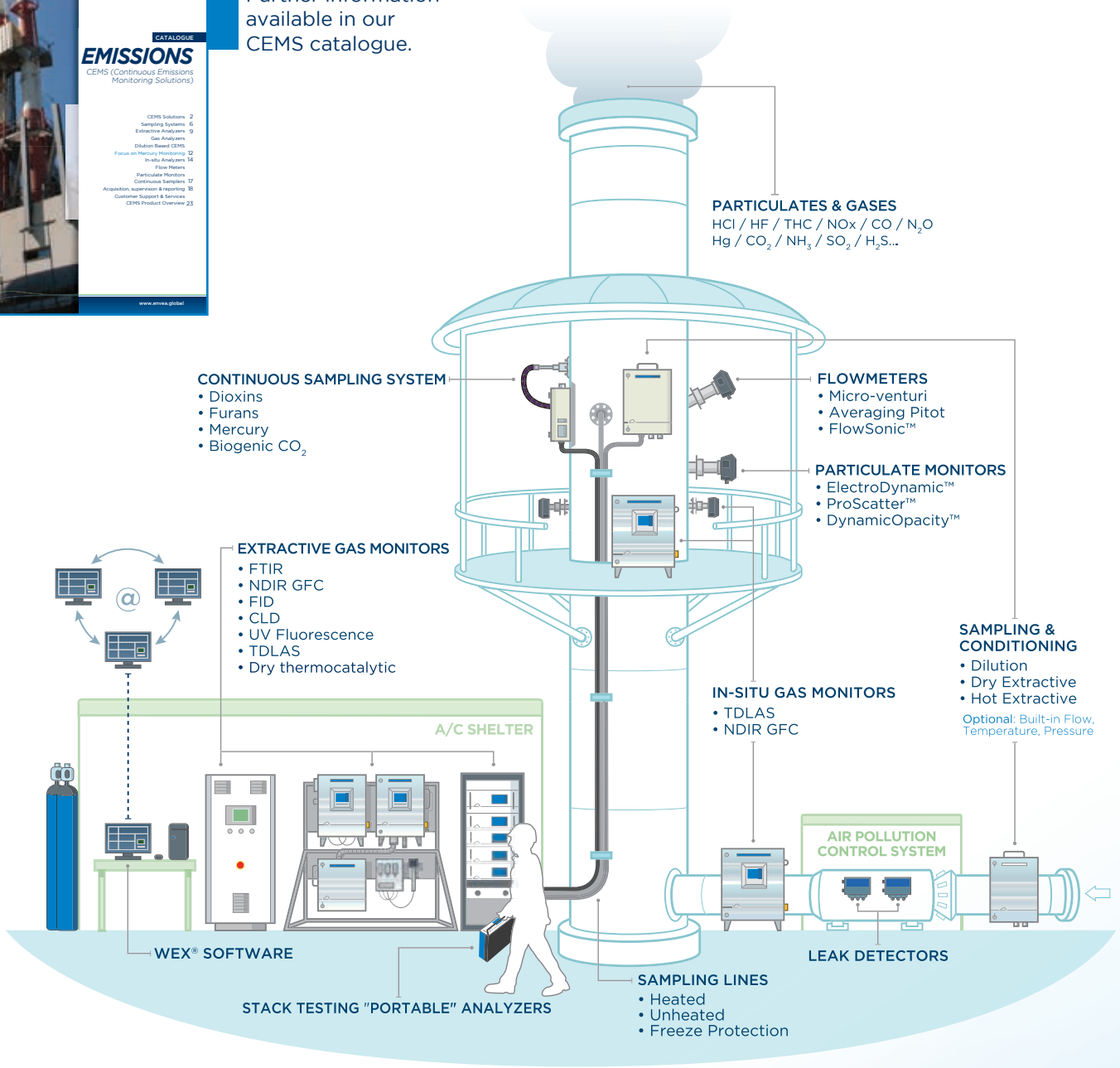
Tunable Diode Laser Absorption Spectrometry Analyzer

Non-contact laser-based measurement for future fast and reliable readings of H_20-concentration in gas streams. Reduces maintenance and of ownership.

AND FOR YOUR EMISSION COMPLIANCE

We design and produce a complete range of state of the art analyzers, sampling systems, data acquisition systems and software for the measurement & reporting of pollutants such as: **HCl, SO_2, NO, NO_2, NOx, N_2O, CO, CO_2, CH_4, THC, nmHC, NH_3, HF, H_2S, TRS, O_2, H_2O, Temperature, Flow, Pressure, Particulates, Mercury, Dioxins...**

Further information available in our CEMS catalogue.



With decades of industrial experience, our systems are designed and developed as a **complete turnkey solution**. From sample extraction, through analysis, data acquisition and report management, each system is configured to comply to the normative demands and technical constraints of our clients, no matter the industrial domain:

- Waste-to-energy plants
- Combustion
- Power plants
- Gas turbines
- Biomass
- Glass industry
- Cement plants
- Pulp mills
- DeNOx (SNCR, SCR)
- Boilers & industrial furnaces
- Process control
- Metal, steel, petrochemical, chemical industries...

PROCESS CONTROL INCREASES EFFICIENCY AND REDUCES EMISSIONS.

SUPPORT & SERVICE

Improved plant performance by close partnership

With the global structure of the group we are very close to our customers.
Internal technical training make sure to have specialists and technical expertise available all over the world. Our engineers have full knowledge in all our process solutions but also do understand your process. That way we work in a close partnership with our clients to improve their processes, whatever your location or industry.
The Technical Support Services Team with its world-wide presence of experts brings experience from a wide range of applications and industrial sectors, ensuring that systems are set-up, operated and maintained to maximize functionality for their intended purpose.

COMMISSIONING

Utilizing our commissioning services allows you to ensure a proper commissioning of your process instrumentation. Especially during start-up of your process this ensures that everything runs smooth and customers have access to all specific skills needed.

CALIBRATION

Regular calibration of the instruments is essential to get reliable information for controlling your process especially for quality-critical processes. ENVEA with its global network provides cost effective on site services for that purpose.

TRAINING

Training programs are custom-tailored and will specifically adhere to your company's particular needs, whether you require instruction for one individual or a group. Available training options are designed to be conducted in classroom, on-site or in factory settings.

We can help you run your installation as efficiently and smoothly as possible

GROUP STRUCTURE - PROCESS

The process division of **ENVEA** currently operates three product centres where Research & Development together with manufacturing takes place: **ENVEA - SWR engineering, ENVEA UK Ltd and ENVEA S.A**.
With distributors in over 70 countries and a philosophy of working in close partnership with our customers to ensure a perfect understanding of their needs we develop innovative solutions for their monitoring requirements. Inclusive technology exchange between product centres has a great importance within the group and accelerates the process of bringing new class leading products to market.

Running technical centres for evaluating the performance of our sensors is essential for developing good products and is always part of the R&D-process.

At these sites we also manufacture all products for process instrumentation worldwide.

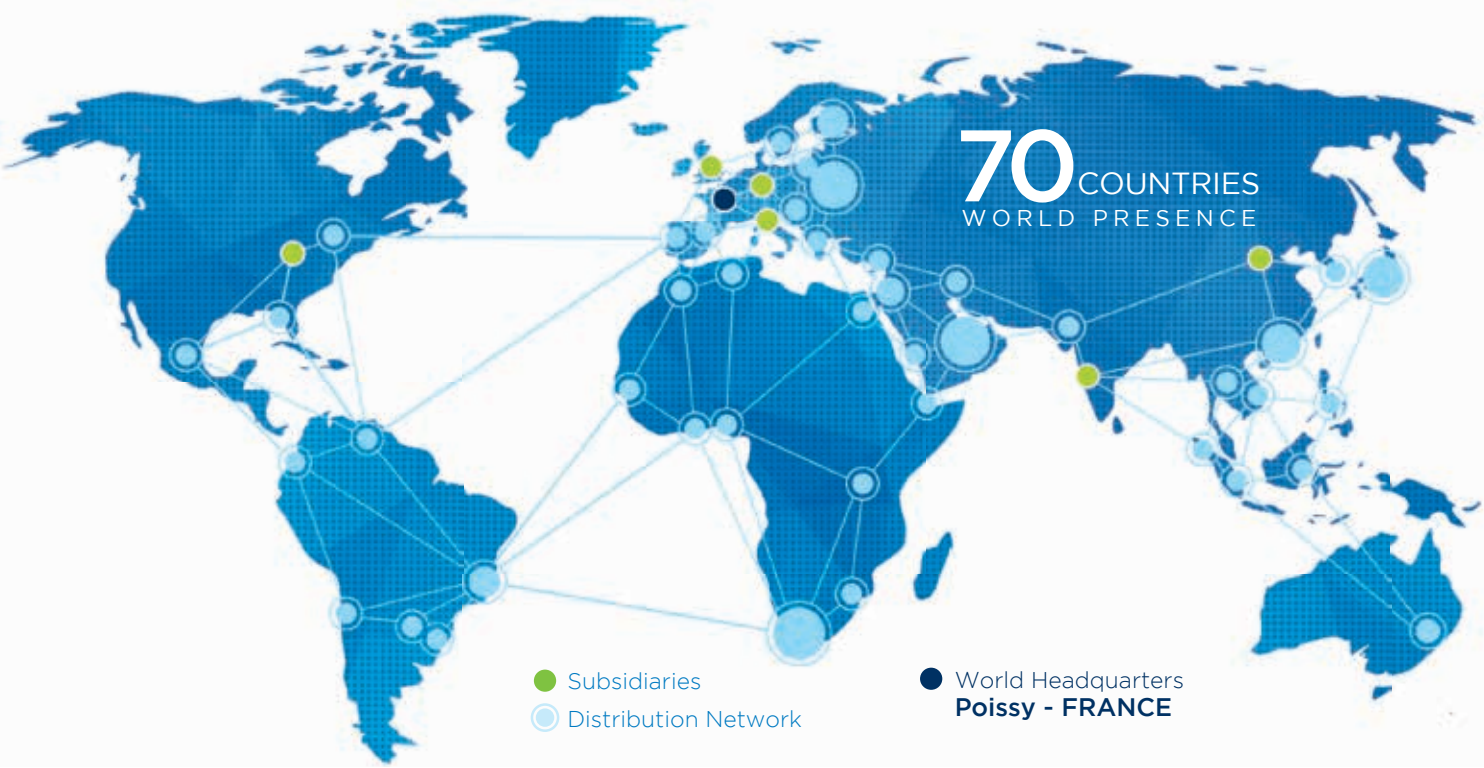
Every year we provide customers with thousands of measuring points by trusting in our well qualified and highly motivated staff.

Committed to quality
Quality and its continuous improvement is a prime focus at all ENVEA product centres.
We work hard to consistently design in and provide outstanding quality into our products.
Our management systems are based on ISO 9001 and in addition all locations are certified to ISO 14001.
We have many longstanding relationships with our suppliers who apply the same principles of quality assurance to the components and systems they supply us.
We endeavour to supply right first-time equipment and services to all our customers.

A STRONG WORLD PRESENCE

In line with its development strategy and desire to unite its technologies, production sites & sales subsidiaries, the group has created the global commercial brand **envea**™. It hopes to provide a clearer vision on its solutions of the measurement, acquisition & processing of environmental data and services.

Faithful to the principles on which it was founded – innovation & quality, ethics & social responsibility, shared values & transparency – the group is committed to providing you with solutions and assistance at the highest standards in order to comply with applicable regulations; as well as the optimization of industrial processes for an improved efficiency, significant savings of raw materials & energy, the reduction of environmental impact.



Our worldwide references guarantee a perfect understanding of your needs and ability to manage a vast range of applications:

More than 35 000 air quality monitors are measuring the pollution of cities worldwide:
Rio de Janeiro, Istanbul, Barcelona, Seoul, Mecca, Delhi, Moscow, Paris, Budapest, Mumbai, Abu Dhabi, Bangkok, Dakar, Beijing, Chongqing...

Over 25 000 processes & emission sources are monitored worldwide across a broad range of industries such as: chemical, minerals, power, incineration, food and pharma or wood industry.

Monitoring Solutions

Process - Emissions - Ambient Air

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ISO 9001:2015 QMS
ISO 14001:2015 EMS
OHSAS 18001:2007 HSMS
CERTIFIED

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