ADEV PRODUCT RANGE & GUIDE

Gas Analysers & Integrated Systems
for Process Gas Analysis

Edition 2021

Made for Process

ADEV

At ADEV, we are committed to a set of core values that not only define who we are, but also serve as guideposts to help us become the company we would like to be. And we aspire to live these values every day.

INTEGRITY
We take the high road by practicing the highest ethical standards and honouring our commitments. We take personal responsibility for our own actions

QUALITY
We strive for first-time quality and continuous improvement in all that we do to meet or exceed the standards of excellence stakeholders expect of us

SAFETY
We value human life and well-being above all else and take action accordingly. We believe all incidents, injuries and workplace illnesses are preventable. We are personally accountable for our own safety and collectively responsible for each other's safety. By committing to safety first, we advance our goals for quality, cost, and schedule

TRUST & RESPECT
We act with integrity, consistency, and honesty in all that we do. We value a culture of openness and inclusion in which everyone is treated fairly and where everyone has an opportunity to contribute

WHAT'S RIGHT FOR CLIENTS
We place clients at the center of everything we do. We want to exceed customer expectations and build relationships that last a lifetime

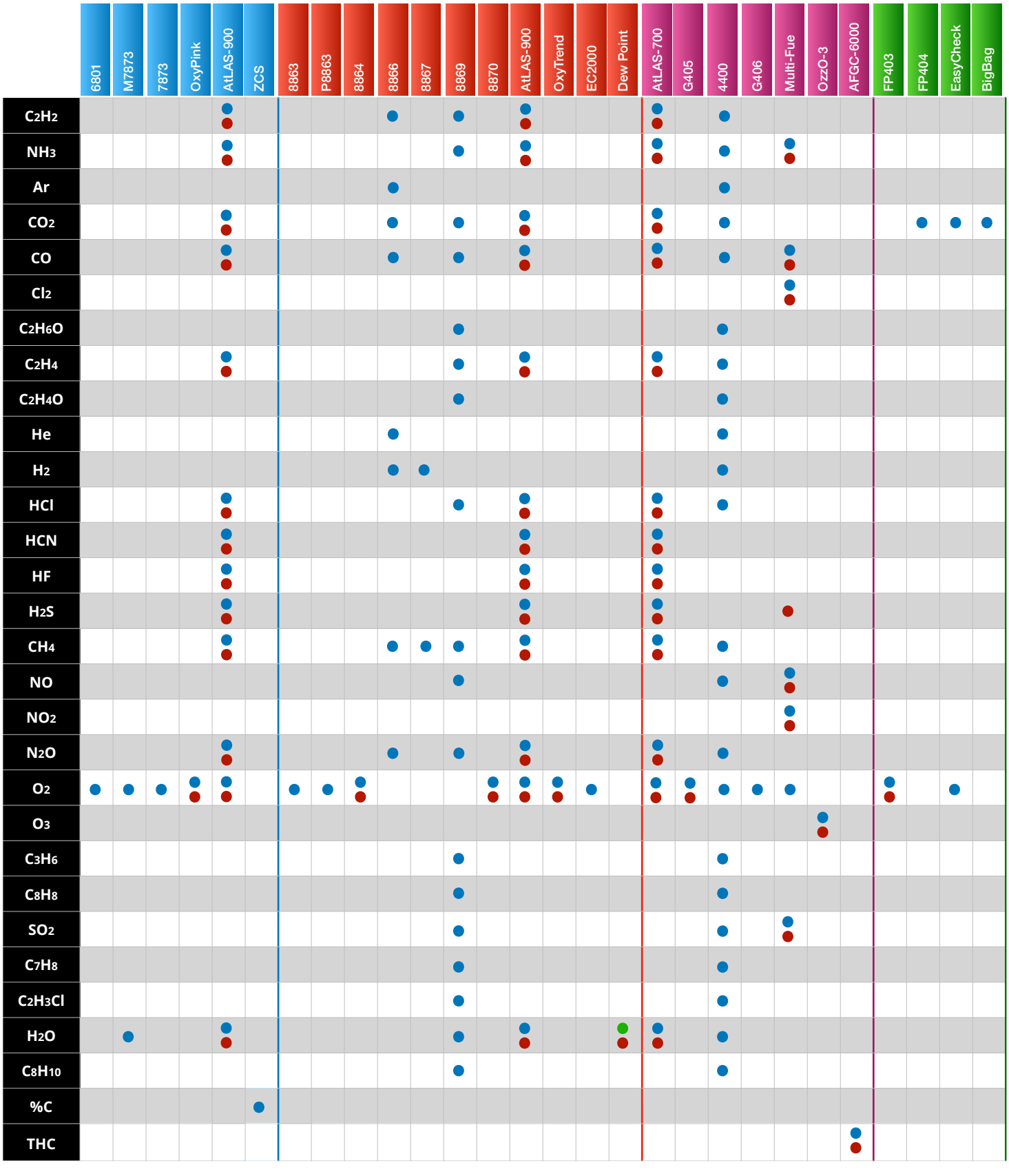

CESI NOTIFICATION

PRODUCT QUALITY ASSURANCE NOTIFICATION

CESI-ATEX

ADEV is one of the very few Italian companies that manufactures on its own know how basis and with ATEX Products Quality Notification

GAS SELECTION GUIDE



● Measure in % ● Mesure in ppm ● Measure in Dew Point

IN-SITU

Flue Gas Analyser 6801

Zirconia

ZIRCONIA FLUE GAS ANALYSER FOR HIGH TEMP. O2 MEASUREMENTS (600 to 1250°C)

Designed to measure Oxygen in flue gas for combustion efficiency and fuel saving. Ideal for measurements in combustion chamber at high temperature, typical of incinerators, cremators, heating furnaces, soaking pits and annealing furnaces.

- Sensor on the tip (no gas circulation)
- Sulfur resistant due to ceramic material
- Available version for installation in Hazardous area ATEX Zone 1

Gas	Measure	App
O2 Oxygen	% Percent	Combustion

IN-SITU

Flue Gas Analyser M7873

SIL2

Zirconia

SELF-HEATED ZIRCONIA FLUE GAS ANALYSER FOR MEASUREMENTS AT MAX 700°C

Designed to measure Oxygen in flue gas for combustion efficiency and fuel saving in small and medium boilers fed by Natural Gas and light oils, Oxygen control in drying biological muds process, measure of water vapor content in textile and Pulp&Paper

- Sensor on the tip (no gas circulation)
- No reference air flow need
- Process Temperature up to 700°C
- Up to 300 mm lengths

Gas	Measure	App
O2 Oxygen H2O Water	% Percent	Combustion

IN-SITU

Flue Gas Analyser 7873

Zirconia

SELF-HEATED ZIRCONIA FLUE GAS ANALYSER FOR MEASUREMENTS AT MAX 700°C

Designed to measure Oxygen in flue gas for combustion efficiency and fuel saving in big boilers and power plants fed by Natural Gas, light and heavy oils, LPG, Biomass and Coal.

- Sensor on the tip (no gas circulation)
- No reference air flow need
- Great resistance to corrosion
- Resistant to acid condensation thanks to the special anti-acid coating
- Process Temperature up to 700°C
- Up to 2000 mm lengths

Gas	Measure	App
O2 Oxygen	% Percent	Combustion

IN-SITU

Carbon Probe ZCS3/4

Zirconia

ZIRCONIA PROBE FOR CARBON POTENTIAL CONTROL IN HEAT TREATMENTS (TEMP. FROM 700 TO 1050°C)

Probe suitable for direct insertion into the process to monitor the carburizing atmosphere. Measuring electrode and outer tube made in special refractory SS.

- Great Resistance to corrosion
- Range 1000-1300 mV proportional to Carbon range 0.01% - 1.6 %C
- ZCS3: Plug-In connector type
- ZCS4: Screw terminal type
- Lengths 460 / 630 / 800 mm

Gas	Measure	App
C	%	
Carbon	Percent	Process

IN-SITU

Flue Gas Analyser OxyPink

Zirconia

ZIRCONIA FLUE GAS ANALYSER FOR OXYGEN MEASUREMENTS FROM 0°C TO 1250°C

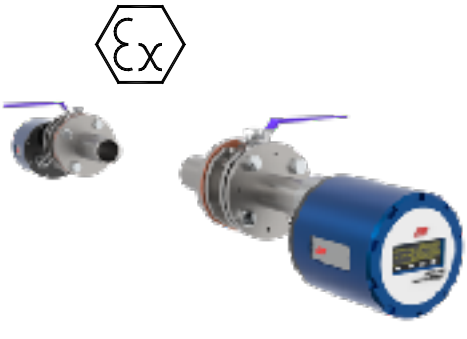
Designed to measure Oxygen in flue gas for combustion efficiency and fuel saving. Thanks to the particular integrated heating system, OxyPink is the unique probe that can ensure a really in situ measure at both high and low temperature with the benefits of a ceramic-made probe.

- Sensor on the tip (no gas circulation)
- Extreme resistance to abrasion
- Sulfur resistant due to ceramic material
- Optimised for use in Cremators

Gas	Measure	App
O2	%	
Oxygen	Percent	Combustion

IN-SITU / FIELD

Laser TDLAS Analyser AtLAS-900



TDLAS

CROSS-STACK TUNABLE DIODE LASER ABSORPTION SPECTROSCOPY (TDLAS) ANALYSER

AtLAS-900 is a laser gas analyser able to measure in situ (cross-the-stack) or extractive a wide number of gas. Available for single gas or double gas measure.

- Robust design for industrial applications
- Incredibly fast response time & small drift
- Single line spectrum technology, free from interference of background gases
- Measure achievable even on short paths
- ATEX certification for Zone 1 / Zone 21

Gas	Measure	App
O2, CO, CO2, H2O, NH3, H2S, HCl, HF, HC	%	Process
Multiple	Percent	Safety
	ppm	Quality
	Trace	

FIELD

ThermoParamagnetic Analyser 8863

Thermo Paramagnetic

RUGGED OXYGEN ANALYSER FOR INERTING CONTROL & HEAVY DUTY APPLICATIONS

The most reliable and long-life Oxygen analyser on the market for inerting control in centrifuges and reactors feed gas, pharmaceutical industry, solvents recovery, fertilizers, power plants, Sulphur production plants and many others critical applications.

- Safe area and Hazardous area Zone1 / 21 Installation (ATEX certified)
- High corrosion-resistant version with cell in Hastelloy®
- Practically indestructible
- Available transmitter version

Gas: O2 Oxygen

Measure: % Percent

App: Process, Safety, Nuclear

FIELD

Paramagnetic (Dumbbel) Analyser P8863

Paramagnetic

ACCURATE OXYGEN ANALYSER WITH DUMB-BELL TECHNOLOGY

Designed for Oxygen purity measurement and for use in Iron & Steel plants and petrochemical plants as well as for inerting control applications.

- Safe area and Hazardous area Zone1 / 21 Installation (ATEX certified)
- Extremely fast response time
- No cross-sensitivity effect from other gas in the sample stream
- Available transmitter version

Gas: O2 Oxygen

Measure: % Percent

App: Process, Safety, Quality

FIELD

Zirconia Analyser 8864

Zirconia

GENERAL PURPOSE ZIRCONIA OXYGEN ANALYSER

This general purpose analyser is suitable to measure Oxygen in ppm and in % range in all applications where there are no combustibles in the stream gas. Widely used in combustion applications, technical gas industry and in endothermic generators.

- Safe area and Hazardous area Zone1 / 21 Installation (ATEX certified)
- Very fast response time
- Available transmitter version for % ranges
- Solid state reference sensor (micro-pod technology) eliminates the need of a reference air flow

Gas: O2 Oxygen

Measure: % Percent, ppm Trace

App: Process, Quality, Combustion

FIELD

Thermal Conductivity Analyser 8866

Thermal Conductivity

TOP-RELIABILITY THERMAL CONDUCTIVITY ANALYSER

The 8866 is the state-of-the-art analyser based on TC technology, able to measure a great number of gas in binary mixtures (H2, He, Ar, CO2, CH4, N2O and others). The range of application is extremely wide: heat treatments, Iron & Steel industry, copper furnaces, galvanising lines, chemical & petrochemical, synthesis gas, fertilizers, power plants and technical gas industry.

- Safe area and Hazardous area Zone1 / 21 Installation (ATEX certified)
- Triple range version for hydrogen cooled generators
- Cross sensitivity compensation function
- Available transmitter version

Gas: H2, CO2, He, CH4, Ar, N2O — Binary Mixtures

Measure: % — Percent

App: Process, Quality, Nuclear

FIELD

Total Combustibles Analyser 8867

Catalytic

TOTAL COMBUSTIBLES ANALYSER

8867 is tailored to provide a reading of the sum of all combustible gas inside a process, to avoid the risk of explosion inside ovens and furnaces. The air dilution port, combined with the ADEV special dilution system, can warranty a perfect measure even in case of Oxygen deficiency that is most dangerous condition. Fully-proved technology widely used in Iron & Steel plants and petrochemical plants.

- Safe area and Hazardous area Zone1 / 21 Installation (ATEX certified)

Gas: CO, H2, CH4 — Combustibles

Measure: % — Percent

App: Process, Combustion

FIELD

Infrared Analyser 8869

Infrared

RUGGED INFRARED ANALYSER FOR HEAVY DUTY APPLICATIONS

The 8869 is an extremely rugged process infrared analyser able to provide selective and highly accurate measure of a great number of gas having infrared spectrum. Ideal solution for use in applications where dirty sample gas can damage any other analyser (e.g. heat treatments, iron & steel industry, blast furnaces, sulphuric gas production) as well as in technical gas industry.

- Can measure up to 3 infrared components
- No chopper and other moving parts
- Wetted parts in noble materials
- Safe area and Hazardous area Zone1 / 21 Installation (ATEX certified)

Gas: CO, CO2, SO2, CH4, NH3, H2O, VCM, HC, ... — Multiple

Measure: %, ppm — Percent, Trace

App: Process, Safety, Quality

FIELD

Zirconia Analyser 8870

Zirconia

REFERENCE-AIR-FLOW SENSOR ZIRCONIA OXYGEN ANALYSER

8870 integrates a big size sensor with reference air flow system that eliminates the effects of barometric pressure variations. Ideal solution for in line O2 traces measurements in pure gas or in heavy duty applications. It is suitable to measure Oxygen in ppm and in % range and it can be used also in reducing conditions in heat treatments.

- Insensitive to barometric pressure variations
- Usable in both Oxidizing and reducing conditions
- Extremely fast response time
- Available transmitter version for % ranges
- Can withstand with high amount of dirty in the sample

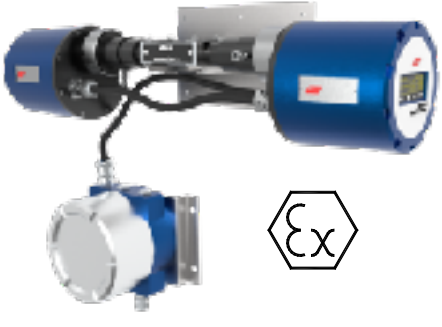
Gas: O2 Oxygen

Measure: % Percent; ppm Trace

App: Process; Quality; Combustion

FIELD

Laser TDLAS Analyser AtLAS-900



TDLAS

EXTRACTIVE TUNABLE DIODE LASER ABSORPTION SPECTROSCOPY (TDLAS) ANALYSER

Laser gas analyser for industrial on line applications, mainly used to measure Oxygen (inert control) in centrifuges and reactors in chemical and pharmaceutical industry, as well as in biogas and landfill gas.

- Wet parts in special materials, able to withstand acids and solvents
- Incredibly fast response time & small drift
- Single line spectrum technology
- Requires a very reduced sampling system
- ATEX certification for Zone 1 / Zone 21

Gas: O2, CO, CO2, H2O, NH3, H2S, HCl, HF, HC Multiple

Measure: % Percent; ppm Trace

App: Process; Safety; Quality

FIELD

Electrochemical Analyser OxyTrend

Electrochemical

OXYGEN TRANSMITTER

OxyTrend is an electrochemical analyser for Oxygen measurements in Trace (ppm) or percent in process applications. Configurable for for safe or Hazardous area up to to Zone 1 / 21 (ATEX). The high-performance electrochemical sensor is unaffected by most of background gases, making this analyser suitable to be used in chemical and petrochemical, natural gas and many others in classified area.

- Usable as two-wires loop powered 4-20 mA transmitter and/or with RS485 output
- 9 different sensor for standard and acid stream
- Range menu selectable
- User friendly, multi-language menu
- Wide LCD display with reading in auto-range

Gas: O2 Oxygen

Measure: % Percent; ppm Trace

App: Process; Quality

FIELD

Electrochemical Analyser EC2000

Electrochemical

GENERAL PURPOSE, COST EFFECTIVE ELECTROCHEMICAL OXYGEN ANALYSER

EC2000 series is the entry level of ADEV product range for the measurement of Oxygen in %. Nevertheless, the cell has a long operative life and high immunity to the presence of CO2, H2, HC and many other interfering gases in the background. Widely used in Nitrogen/Hydrogen generators, air operation plants, compressed air, biogas, mixers and inerting.

- Very accurate and fast response time
- Easy operation and calibration by trimmers
- Safe area and Hazardous area Zone1 & Zone 21 Installation (ATEX certified)

Gas: O2 Oxygen

Measure: % Percent

App: Process, Quality

FIELD

Dew Point Transmitter

Capacitive

TWO-WIRES LOOP POWERED DEW POINT TRANSMITTER

ADEV has selected on the market one of the most reliable and accurate dew point transmitter to integrate in the product range

- Two-wires loop powered 4-20 mA transmitter
- Precise, long term stability
- Quick response time
- Pressure tight
- Direct insertion into the process or bypass model with flow chamber in SS316
- Available ModBus RTU interface

Gas: H2O Moisture

Measure: °C DewPoint, ppm Trace

App: Process, Quality

RACK & Benchtop

Laser TDLAS Analyser AtLAS-700

TDLAS

LASER GAS ANALYSER IN 19" PANEL MOUNTING CASE

AtLAS-700 is a rack type tunable laser gas analyser for industrial in line and environmental monitoring. The analyser combine the TDLAS technology and multiple reflection, long optical path technology that can measure a variety of gas from high % down to traces.

- Multi-reflection technology achieves optical path up to 25 meters, improving detection limit
- No inner moving parts
- Wavelength modulation spectroscopy flows better anti-interference capability
- Sensitivity down to ppm and ppb level

Gas: O2, CO, CO2, H2O, NH3, H2S, HCl, HF, HC Multiple

Measure: % Percent, ppm Trace

App: Process, Safety, Quality

RACK & Benchtop

Zirconia Analyser G405

Zirconia

ZIRCONIA OXYGEN ANALYSER

G405 integrates a sensor with reference air flow system that eliminates the effects of barometric pressure variations. Ideal solution for in line O2 traces measurements in pure gas. It is suitable to measure Oxygen in ppm and in % range and it can be used also in reducing conditions in heat treatments.

- Insensitive to barometric pressure variations
- Usable in both Oxidizing and reducing conditions
- Extremely fast response time

Gas
O2
Oxygen

Measure
%
Percent
ppm
Trace

App
Process
Quality
Combustion

RACK & Benchtop

Multi Gas Analyser 4400

Various

MODULAR CONTINUOUS GAS ANALYSER

Model 4400 is an extremely all rounded instrument that can integrate different sensing modules. It is available in transportable version or for rack 19". Available modules are:

- Thermoparamagnetic module
- Paramagnetic module
- Thermal conductivity module
- Infrared module
- Total combustibles module
- Electrochemical module
- Dew Point module

Gas
...
Multiple

Measure
%
Percent

App
Process
Quality

RACK & Benchtop

Electrochemical Analyser G406

Electrochemical

GENERAL PURPOSE, COST EFFECTIVE OXYGEN ANALYSER

G406 is a general purpose analyser for the measurement of Oxygen in %. Nevertheless, the cell has a long operative life and high immunity to the presence of CO2, H2, HC and many other interfering gases in the background. It is available in transportable version or for rack 19" and it can integrate sampling components like pumps, flow meters, filters, etc...

- Very accurate and fast response time
- Easy operation and calibration by trimmers

Gas
O2
Oxygen

Measure
%
Percent

App
Process
Quality
Combustion

RACK & Benchtop

Portable Analyser EC300GB

Electrochemical

PORTABLE PPM O2 ANALYSER (ELECTROCHEMICAL)

EC300GB is compact analyser for ppm O2 measurements that integrates a smart protection circuit able to seal the cell when it is not in measure. Ideal solution for discontinuous measurement where the cell needs to be protected from contact with air (e.g. in glove box or portable applications).

- Switch from sample to bypass (sealed) just pushing one button
- Possibility to integrate a sampling pump without sample contamination
- Wide LCD display with reading in auto-range & user friendly menu

Gas: O2 Oxygen

Measure: ppm Trace

App: Process, Quality

RACK & Benchtop

Multi Gas Analyser Multi-Flue

UV DOAS
TDLAS

MULTI-GAS ANALYSER, ABLE TO MEASURE UP TO 5 GAS

Developed for environmental and industrial control, this analyser is based on DOAS chemometric algorithms, making it suitable to measure a wide variety of gas.

- Direct measure NO and NO2, eliminating the need of any converter.
- It can integrate UV optical bench, Laser optical bench and electrochemical cells
- Available in standard version, for low emissions and ultra-low emissions
- No moving parts e no vibration influence
- No cross interference

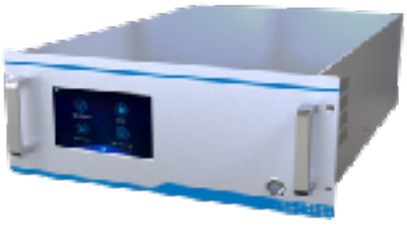
Gas: SO2, NO, NO2, O2, NH3, H2S, CO, CL2 Multiple

Measure: % Percent; ppm Trace

App: Combustion, Quality

RACK & Benchtop

UV Spectrometry Analyser OzzO-3



UV DOAS

OZONE ANALYSER FOR AIR QUALITY MONITORING

Ozzo-3 is a rack type UV spectrometry analyser that, combined with an advanced microprocessor technology, provides accurate and reliable detection of Ozone at ppb and ppm levels. Main gas circuit include sampling pump, flow plug, pressure sensor, flow sensor three-way solenoid valve.

- Ideal for ai quality monitoring
- Self-checking for intensity decaying of light source
- USB and Ethernet interface
- Large memory and history day saved automatically

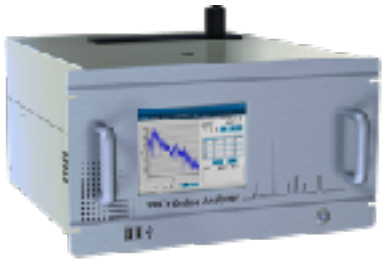
Gas: O3 Ozone

Measure: ppm Trace

App: Quality

RACK & Benchtop

FID + GC Analyser AFGC-6000



FID + GC

GAS CHROMATOGRAPH + FID ANALYSER

Extractive analyser based on Gas Chromatography separation (GC) and Flame Ionisation Detection (FID) technology for in line monitoring of VOC/TOC.
Able to detect Methane, Non-Methane Hydrocarbons, Total Hydrocarbons, Low-Carbon Aldehyde Ketone, Benzene series.

- Automatic purging and bloc back routine of the columns
- Automatic ignition and alarm of FID detector
- Supports multi-detector configuration
- Support TCO/IP network remote control

Gas
- TOC
- VOC
- THC

Combustibles

Measure
- %
- Percent
- ppm
- Trace

App
- Process
- Quality
- Combustion

MAP

In Line Zirconia Analyser FP403

Zirconia

IN LINE GAS ANALYSER FOR GAS PACKAGING MACHINES

FP403 is a reliable zirconia analyser for quality assurance on MAP-enabled flow packaging machines.

- Designed for use on all type of packaging machines (horizontal and vertical)
- Extremely fast response time
- Integral sampling pump
- Analog output and contact to stop the pump when not in use
- Available combo version to perform in line analysis on packaging machine + head space analysis on food packages.

Gas
- O2

Oxygen

Measure
- %
- Percent
- ppm
- Trace

App
- Quality

MAP

Infrared Analyser FP404

Infrared

PORTABLE GAS ANALYSER FOR CO2 CONTROL IN STORAGE ROOMS

The FP404 is specifically designed to perform accurate CO2 measurements in yogurt and fruit tanks and in every other storage room in which Carbon Dioxide may develop during the ripening process.

- Visualization of tank inner pressure by manometer on front panel
- No choppers or other moving parts
- Fast response time and excellent stability
- Optional battery powered operation
- Flow rate control by integral flow meter

Gas
- CO2

Carbon Dioxide

Measure
- %
- Percent

App
- Quality

MAP

Handheld Analyser EasyCheck

Electrochemical
Infrared

HEAD SPACE ANALYSER FOR MAP QUALITY CONTROL

EasyCheck is a practical battery powered analyser for random sample checking and measurement of residual Oxygen (O2) and Carbon Dioxide (CO2) levels in gas-treated food packaging (MAP).

- Simple and intuitive handling
- Alarm and data logger suitably pre-configured for every kind of quality control
- Integrated measurement memory stores up to 1000 measurements
- Data can be processed in MS-Excel
- USB port for easy data transfer
- Low volume of sample gas required

Gas
- O2 Oxygen
- CO2 Carbon Dioxide

Measure
- % Percent

App
- Quality

MAP

Infrared Analyser BigBag

Infrared

PORTABLE ANALYSER FOR CO2 CONTROL IN BIG BAGS

The BigBag NDIR analyser is specifically designed to measure CO2 up to 100% in volume inside bags filled with rice or other grains. Carbon Dioxide is used to avoid the development of microorganisms that may damage the product.

- Sensor for direct insertion in the bag
- Robust and portable
- Buzzer to dice the operator that wanted CO2 level is reached inside the bag
- Fast response time
- Very simple to use

Gas
- CO2 Carbon Dioxide

Measure
- % Percent

App
- Quality

OEM Bench

Laser Optical Bench AtLAS-L

TDLAS

LASER (TDLAS) GAS MODULE

AtLAS-L is a compact optical bench based on Laser technology (TDALS), very easy to integrate into whichever mechanical mounting and for this reason it's the ideal solution for OEM applications.

- Multi-reflection technology achieves optical path up to 25 meters, improving detection limit
- No inner moving parts
- Wavelength modulation spectroscopy flows better anti-interference capability
- Sensitivity down to ppm and ppb level
- Also available in Explosion Proof housing ATEX certified for Zone 1 / Zone 21

Gas
- O2, CO, CO2, H2O, NH3, H2S, HCl, HF, HC Multiple

Measure
- % Percent
- ppm Trace

App
- Process
- Safety
- Quality

SAMPLING COMPONENTS

ADEV has designed on its own know how some critical pneumatic components that are often necessary to design the pre-treatments systems. The design of these parts is the result of a long applicative experience in the field of gas analysis, where very specific problems need to be faced to deliver the sample gas to the analyser in the best way to ensure a long service life and reduce the maintenance to the minimum.

VORTEX

Vortex is a sample gas cooler, operated only by compressed air and without any electric part. This feature makes this device a cost-effective solution in hazardous area applications. This system can be used up to Zone 1 / Zone 21 (ATEX).

The great efficiency of this device allows to cool down a flow rate of about 3 L/min. of sample gas to very low temperatures. The set point can be manually or automatically adjusted (in this case an electronic thermostat and a solenoid valve will be integrated).

Vortex bowls and inner coil can be made in different materials, making this device usable in a variety of application and to withstand sample gases rich of solvents and acids.

WATER TRAP

The purpose of the water trap is to drain whichever amount of water coming from upstream (generally the sampling point). It can work in both positive or negative pressure condition up to 300 or 1000 mm of water column and it warrants the continuous drain and the self priming condition with negative pressure.

In case of obstructions at the sampling point, this system allows not to suck all the water because the water is drained in to the trap head. Then this water is used for reintegrating the water columns.

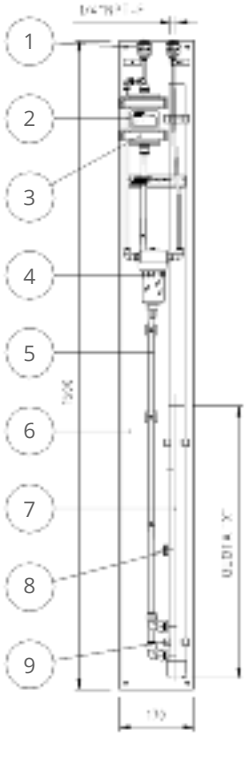
COMBINED VERSIONS

Vortex cooler and Water trap can be combined together in order to obtain a complete pre-treatment system able to cool down the sample, remove the liquid and filter the gas before sending it to the analysers.

1. Sample IN / OUT
2. Tank
3. Tank support
4. Filter
5. Pipe
6. Panel
7. Leg
8. Plug
9. Pipe clamp

11. Quota X can be adjusted. Standards quota are:

1. 630 mm
2. 1375 mm

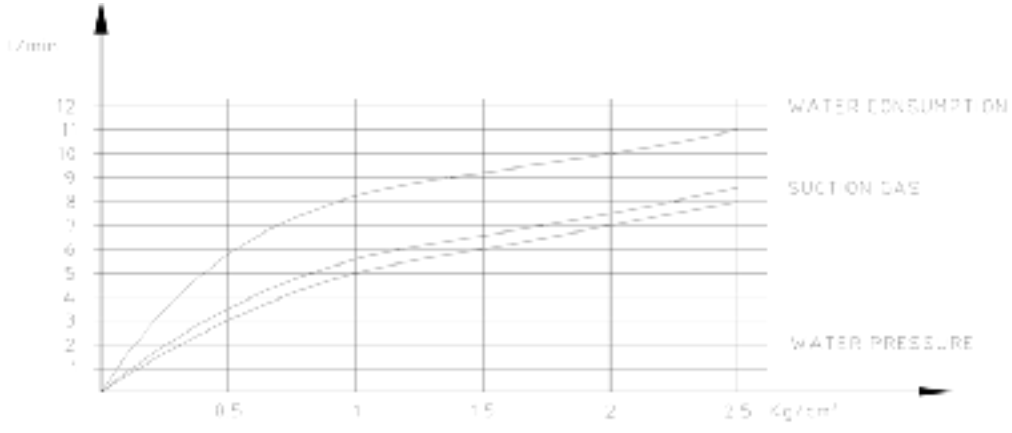


WATER EJECTOR

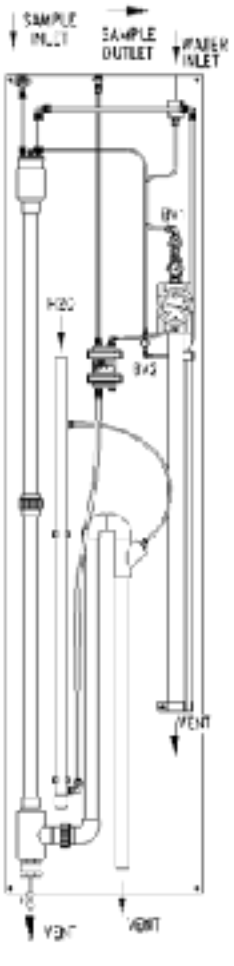
Water ejector is a sucking system and scrubber delivering a very clean sample gas from extremely dirty sample gas.

When water is available and the gas to be measured is not soluble, this solution is to be preferred. This device not only pressurise the sample, but also clean it, removing all corrosive and soluble components (like solvents). At the end, it deliver a constant flow of sample gas at a constant pressure to the analysers.

A built-in, two-stage gas water-separator, centrifugation and cyclone prevent any water infiltration. The water leg, which regulates a stable pressure at the outlet, it is self-cleaning type. The bottom drain hole is continuously flushed in order to prevent any sediment built-up which could otherwise cause plugging problems.



The unit is supplied with integral water pressure and sample vacuum gauges for easy servicing of the system. Absence of moving parts makes the system extremely reliability and low maintenance.

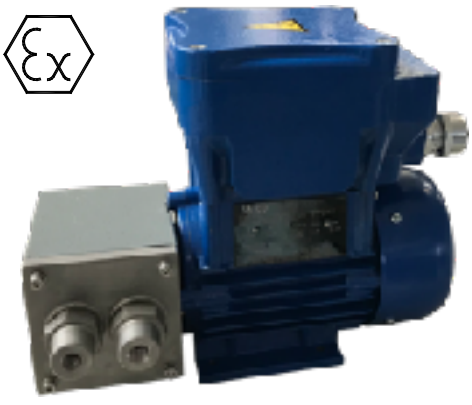


MUD & DUST SEPARATOR

This system is suitable to sample the gas from very dirty process with huge load of mud and dust are present. It is normally provided mounted on AISI panel with dimensions 2500 x 600 mm, sides bent with holes at the corners for easy wall mounting. Custom versions are available.

On the panel, the following main components are mounted:

- Water ejector, fed with medium hardness water at standard pressure (≥ 1 Atm). It can act like a pump able to produce a high level of vacuum and to provide the output gas washed and cleaned with a pressure of 1000 mm of water column. Without moving parts is quite free of maintenance.
- Mud separator. This system is able to separate the mud and water sucked together with the sample gas, limiting the teat and wear (and consequent maintenance) of the water ejector.
- Original system of columns with wide diameter tubes, designed to be easily disconnected and removed/replaced in case of maintenance.
- Water traps system.

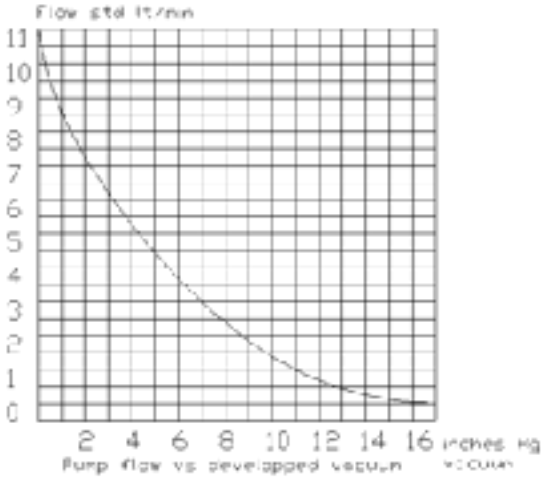


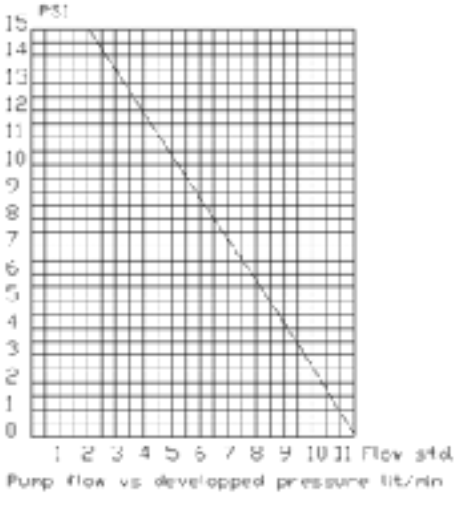
DIAPHRAGM PUMPS

ADEV has designed a sampling pump tailored for sucking gas from defending processes and in industrial grade environment.

- Pump head in SS 316 with adjustable orientation
- Valves and diaphragms in Teflon
- Low level of noise
- Startup against pressure or vacuum
- Standard or reverse rotation
- Available for safe area installation and for hazardous area ATEX certified with protection mode II 2G EEx d IIC T4

PUMP DIAGRAMS



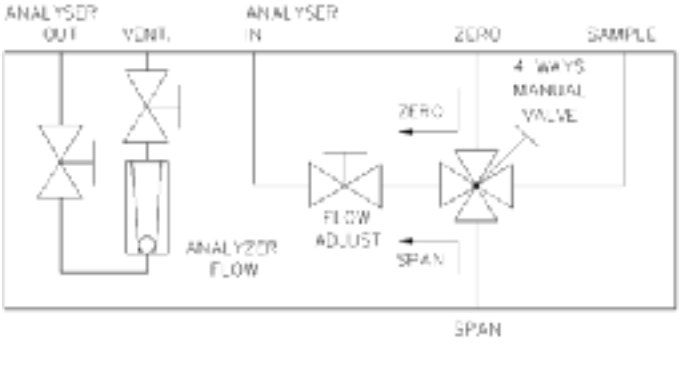


WATER COOLED SAMPLE PROBE & FLANGE

Water-cooled sample probe with water spryer on the tip. The spryer reduce to the minimum the quantity of sucked dusts, making this device idea for use on very demanding applications like cements plants and BOF.
Immersion length on customer specification (up to 3 meters and more). Mounting system (counter-flange) in SS with inlets for blow-back with air. This system allows flushing back the dusts that built up on the wall, sticking the probe.

SS316 MODULE

Compact module in SS316 offers a comprehensive and compact solution to switch from sample to Zero & Span gas and to check and adjust the flow rate to the analysers



ENGINEERING & SAMPLING SYSTEMS

ADEV, due to provide a complete solution to solve the customer applicative problem, other than the different models of analysers, can provide complete analysis systems in accordance to customer specification, integrating the necessary automation.

ADEV projects range from simple panels or mini cabinet with just few components to big cabinets or panels that integrates multiple analysers, automation and communication.

Sample and conditioning system on Stainless Steel panel, for installation in hazardous area Zone 1 (ATEX).

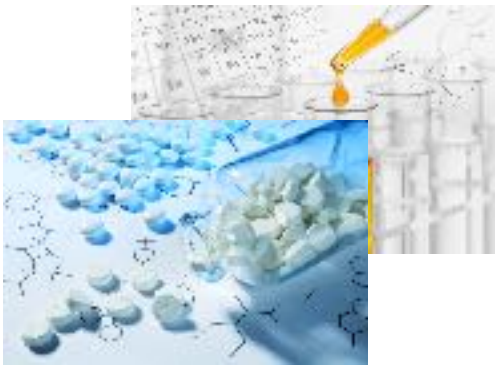
Sampling system in mini-cabinet in Stainless Steel with glass front door. Suitable for wall mounting for installation in hazardous area Zone 1 (ATEX).

Sample and conditioning system housed inside a self-standing cabinet. Scanning system on 24 sample points and supervision PLC with touch panel HMI for managing all system functions and communication.

Analysis system for a project of research in the field of energy. The sampling system is designed for hazardous area Zone 1 (ATEX). Control units in rack 19” for remote installation in safe area (control room).

Sampling system housed inside a self-standing cabinet. Aspiration from 3 sampling points, liquid discharge by a systems of water traps and columns and final filtering and conditions system before sensing to infrared analyser.

PHARMACEUTICAL
& CHEMICAL INDUSTRY



Innovative Oxygen measuring system, designed for inerting control in chemical and Pharma industry. Based on the Laser (TDLAS) analyser model AtLAS-900, it can withstand with the most severe streams.

The analyser can accept a sample gas saturated with acid and solvents and even liquid without parliament damages. This allows to reduce the sample and conditions to the minimum

Traditional sampling system with pre-treatment panel including filter, vortex cooler and liquid discharger.

Final sampling system with thermoparamagnetic analyser housed in mini-cabinet in Stainless Steel with glass front door. Suitable for wall mounting for installation in hazardous area Zone 1 (ATEX).

Programmable mixing system for air / combustible gases. Able to create explosive mixtures with retrofit analysis of the mixture itself for explosion proof tests. All the system is managed by the operator thanks a desktop PC that allows the complete control of the machine

AMBIENT DETECTION

Flammable gas (Catalytic Sensor)	Flammable gas (Infrared Sensor)	Toxic gas (Infrared Sensor)	Toxic gas (Electrochemical)
Methane	Methane	Carbon Dioxide (CO2)	Oxygen (O2)
LPG	Butane	R32	Carbon Monoxide (CO)
Butane	Propane	R134A	Ammonia (NH3)
Propane	Acetone	SF6	Hydrogen Sulphide
Petrol Vapours	Butadiene	R125	Nitrix Oxide (NO)
Acetic Acid	Cyclohexane	R1234YF	Hydrogen (H2)
Acetone	Dimethyl Ether	R1234ZE	Sulphur Dioxide (SO2)
Butyl Acetate	Ethane	R404A	Nitrogen Dioxide (NO2)
Butyl Alcohol	Ethyl Acetate	R407A	Chlorine (CL2)
Cyclohexane	Ethyl Alcohol	R407F	
Cyclopentane	Ethyl Ether	R449A	
Ethane	Heptane	R507A	
Ethyl Acetate	Hexane	R410A	
Ethyl Alcohol	Iso Butane	R417A	
Ethyl Ether	Iso Butylene	R448	
Ethylene	Iso Propyl Alcohol		
Heptane / Hexane	Pentane		
Hydrogen	Propylene		
Iso Butane	R251A Difluoretane		
Iso Butyl Alcohol	R32		
Iso Pentane	R1234yf		
Iso Propyl Alcohol	R1234ze		
Methyl Alchol			
Methyl Ethyl Ketone			
Nonane			
Pentane			
Propylene			
Propyl Alhohol			
Tri-Methylbenzene			
Toluene			
Xylene			
Acetylene			
Ammonia			
Benzene			
Ethylene Oxide			
JP8 (Jet Propeller)			
Styrene			
Vinyl Acetate			

T.LEL, T.TOX and T.O2 gas detectors are used to detect the presence combustible gases (%LEL), toxic gas or O2 depletion in environments where the principal constituent is air.

The industrial grade catalytic sensor (Pellistor) employed for the detection of flammable compounds offers a great precision and selectivity with most of the explosive gases, thus avoiding false alarms.

Some models come complete with Infrared sensors. Infrared sensors are not affected by those poisoning and inhibiting substances that damage Pellistor sensors. This grants a higher accuracy and a longer lifetime to the detector and allows the instrument to be used in atmospheres where the traditional Pellistor cells could not be used.

While for the tox gas, electrochemical sensors used, allow to detect the presence of toxic gas in ppm and in % vol. of O2.

All detectors are powered at 12-24 VDC and with standard analog 4-20 mA output (3 wires). In option, each detector can be equipped with 3 relays outputs (24 V, 1A) and with local integral display. Easy non-intrusive calibration by means of magnetic pen

AD5/PL4 Control Panel can manage 4 analogue 4-20mA gas detectors and can be expanded to 8 by using an optional 4-zone expansion module, easily connectable directly in the control unit.

The unit is provided into an ABS housing (dimensions 486 x 288 x 148 mm), with IP65 protection, complete with power supply at 230 / 12Vdc / 1.5A. Measured gas concentration is shown on the display (backlit) while alarm status (also fault alarm) are visible also by means of LED on front panel.

By adding the optional 4-zone expansion module, the panel gets 4 additional inputs and 16 Open-Collector outputs (negative safety) that can be associated to AL2 – AL3 alarms of each of the 8 inputs).

Contacts

ADEV S.r.l.

Via S. Eurosia, 27/A
20811 Cesano Maderno (MB) - Italy

+39 (0)362 641684

+39 (0)362 575058

info@adev.it

OxyPink

ADEV

Made for Process

Our MISSION

We want to satisfy our customers' needs and help them succeed.

This unites us around a simple premise: Clients can be better served when they have a relationship with a trusted provider that knows them well, provides reliable guidance, and can serve their full range of analysis needs.