

IM 6000

EXCESS AIR CONTROLLER

The IM 6000 is an oxygen / excess air combustion controller to measure, store and control oxygen (O₂) in a combustion process.

The analyzer works with all sorts of fuel (liquid fuels, gas and solid fuels) and calculates CO₂, combustion efficiency and measures the flue-gas temperature with a separate thermocouple probe.

The IM 6000 can be installed with new boilers and it also can be easily integrated into existing installations.

The wall-mounted enclosure is rated IP65 and the instrument comes equipped with all needed sensors, probes and installation material like flanges.

PRODUCT FEATURES

- In-situ (no sampling required) zirconoxyd sensor to measure Oxygen O₂
- Flue-gas temperature probe (Thermocouple type K)
- Calculation of combustion efficiency
- Calculation of Carbon dioxide CO₂
- LCD Display
- LED function display
- Memory (4 weeks with an interval of 60s)
- Diagnostic functions
- RS232/RS485 port for the communication with a PC
- Software included for online trends, data download and unit configuration
- Analog output for O₂
- Control functions:
 - 3-point control / Relay
 - PI control of oxygen
 - Trim control (adds PI control signal to an existing analog signal)



Why is it important to monitor O₂?

If the O₂ is not monitored continuously during a combustion process, then outside factors like ambient air pressure, fuel supply pressure, fuel supply heating, filter blockage or ambient air temperature can change the excess air level.

A change like that means the combustion process will lose energy and therefore the fuel cost increases.

By using the IM 6000 the O₂ is continuously monitored and can be maintained at an optimum level to achieve a good combustion (high efficiency), which will reduce fuel cost and save energy.

Applications:

- Boiler: Flue-gas oxygen control
- Furnaces and kilns for the
 - Cement & Lime Industry
 - Ceramic Ovens
 - Bitumen & Tar Manufacturing
- Dryers and Heaters for the
 - Timber Industry
 - Chemical Industry
 - Food Processing Industry
 - Textile Industry
 - Soap and Detergent Manufacturing
- And many more

**TECHNICAL DATA**

Power supply	110VAC or 220VAC
O2 – sensor	In-situ Zirconoxyd
O2 – measurement range	0-21 Vol. %
O2 – accuracy	+/- 0.3%
O2 – resolution	0.1 Vol. %
Flue-gas temperature probe	Thermocouple Type K; sheath length 300mm
Flue-gas temperature – range	-10°C to 400°C
Flue-gas temperature – accuracy	-10°C to 99.9°C : +/- 2°C > 100°C : +/- 2% of displayed value
Flue-gas temperature – resolution	0.1°C
Combustion efficiency (calculated)	0 to 99.9%
Combustion efficiency (calculated) – resolution	0.1%
Carbon dioxide (calculated)	0 to CO2max. (CO2max. depends on the fuel)
Carbon dioxide (calculated) – resolution	0.1 Vol. %
Operating temperature	0°C to 60°C
Storage temperature	-10°C to 80°C
Dimensions (enclosure)	260 x 220 x 130 mm
Weight	Approx. 7 kg
Enclosure rating	IP65

STANDARD EQUIPMENT

IM 6000 controller with memory
3-point controller / Relay
PI controller
Oxygen in-situ sensor (20m connection cable)
Flue-gas temperature probe 300mm (20m connection cable)
Wires, cables
Flanges for O2-sensor and temperature probe
RS232 cable
Software for PC



O2-Sensor

IM Environmental Equipment Germany GmbH reserves the right to adopt technical modifications without prior notice.