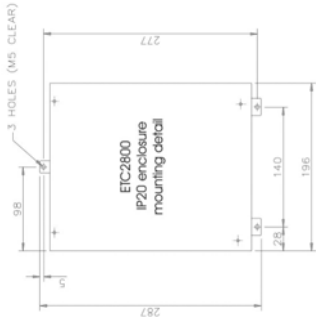
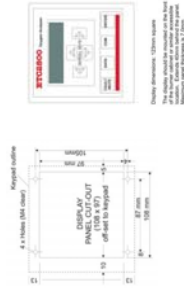


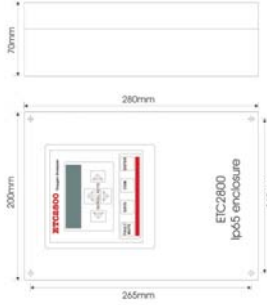
Technical Specification



The analyser is designed for installation inside the burner cabinet. The analyser must be mounted as shown with minimum clearance of 50mm above and 20mm below and at each side of cabinet. Maximum clearance of 10mm between the burner cabinet and the analyser inside the burner cabinet is 0 to 60 degree C. The analyser must be installed in a clean environment as defined in EN6730-1.



Analyser Enclosure Dimensions



Supply	
Supply voltage	115/230Vac +/- 15%
Power Consumption	Approx. 65VA
Supply frequency	50/60Hz +/- 5%
Enclosure	
Operating temperature range (ambient)	0 to 60°C
Protection category (Aluminium casting)	IP65
Sheet metal	IP20
Display	
Type	40 character dot matrix
Analogue inputs	
Number	4
Type	0-5V (1mA max)/4-20mA (switch selected)
Modulation input (required for gross efficiency calculation)	
Type	0-5V (1mA max)/4-20mA (switch selected)
Digital inputs	
Number	3
Type	5Vdc 1mA max
Alarm outputs	
Number	2
Type	Single pole change-over
Contact rating	2A at 230Vac RMS
Analogue outputs	
Number	4
Type	4-20mA
Maximum loop resistance	750Ω
Isolation voltage	50V
Retransmission accuracy	+/- 0.1% of value
RS485	
Type	2-wire (isolated) with ground
Isolation voltage	50V
Efficiency option	
Inlet temperature input	2-wire R.T.D
Flue temperature input	Type K thermocouple
Number of fuels (max)	2
Accuracy	
Display resolution	+/- 1 digit
Oxygen accuracy	+/- 1% of value
Temperature accuracy	+/- 2°C
Probe (General)	
Type	In-situ zirconia
Flue gas temperature	540°C max
Probe head temperature	70°C max
Cable length	30 metres max
Probe interface	ETC specific
Optional probes available on request	

Note The manufacturer of this equipment has a policy of continual product improvement and reserves the right to change the specification of the equipment and the contents of this datasheet without notice.

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ETC 2800 Flue Gas Oxygen Analyser

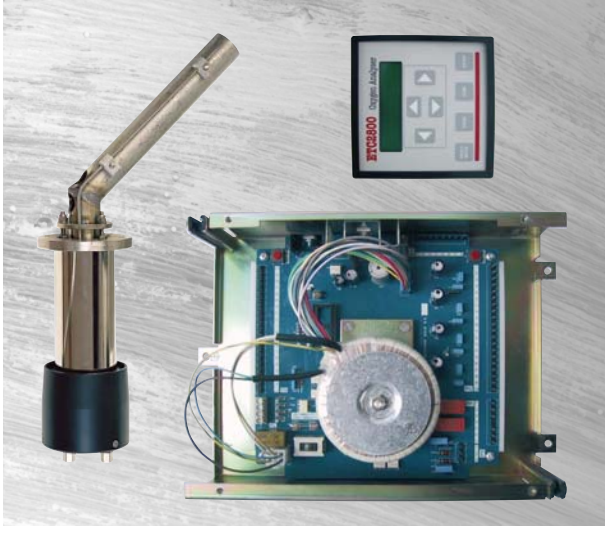
- ETC "in-situ" zirconia oxygen probe
- Microprocessor controlled
- Oxygen measurement
- Flue temperature measurement
- Calculated CO₂
- Boiler Gross or Net Efficiency
- Factory configured or field programmable
- Display options
- Programmable 4 - 20mA outputs
- Programmable high/low limits/alarms
- Simple construction and installation
- IP20 or IP65 Analyser enclosures
- Optional weather shield for probe
- Auto, remote and manual calibration
- Communications software for local and remote connection to PC
- RS485
- Self diagnostics

ETC

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Benefits

- Continuous measurement of Oxygen for combustion efficiency, fuel savings, emissions reductions, extended boiler life and Normalisation of other emission measurements
- Internationally proven ETC oxygen probes with a reputation for accuracy, reliability and longevity
- For use on coal, wood, oil, gas and exotic fuels: suitable for Maritime applications
- Zirconia oxide sensor for precise oxygen measurement
- Minimal maintenance oxygen probe due to no moving parts
- Configurable to suit application and budget
- Simple connection to Building Management Systems for analysis and maintenance planning using 4 - 20 mA outputs and/or communications
- Communications software compatible with other ETC electronic boilerhouse and process products

Description

The ETC2800 is a family of microprocessor controlled boiler analysers. Configurations include simple oxygen analysers and efficiency meters with data logging options.

Each ETC2800 is factory configured by ETC for ease of commissioning. When the optional local display is chosen the product can be re-configured on site if required.

ETC's oxygen probes use zirconia technology which gives an inverse logarithmic output ensuring maximum signal resolution at lower oxygen levels. To ensure long-term stability the ETC probe houses the zirconia cell in an internal, temperature-controlled oven. Very high measurement accuracy and repeatability are achieved.

The output signal from the zirconia probe is connected to the analyser unit where it is amplified, converted and then linearised before being processed for display, transmission or alarm.

Retransmission can be via 4 - 20mA signals and/or via ETC "Comview" communications software. Alarm outputs can be programmed to announce flue temperature and/or oxygen limit conditions.

"Comview" communications software is a powerful package for connection to a local or remote PC. All commissioning information can be viewed on screen. Readings and events can be expressed in tabular and graphic form. A dynamic plant mimic customised for each site is available. Historical events can be logged on the PC and reproduced on screen or in reports.

Auto-calibration of the oxygen probe is an optional feature for Continuous Emissions Monitoring applications.

Order Code

In the order list to the right, each section has several options including "none" or "no". To order, enter the number corresponding to the option you require as shown in the example in the order line at the bottom of the column on the right. When you call ETC, quote this code to our sales team.

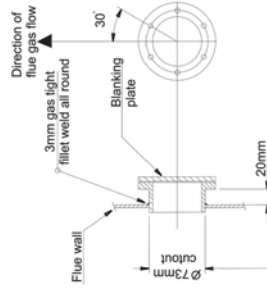
If you require an option that isn't shown in a section enter **999** as the number then enter **999** again at the end of the order line and attach a written description of the special option required.

Option

Analysers type	IP20 for mounting in existing cabinet	01
	IP65 for wall mounting	02
Flue temperature range	None	19
	Non-standard (specify between 0 & 540°C)	10
	0 to 400°C	11
	0 to 1000°F	12
Oxygen range	None	30
	Non-standard (specify between 0 & 21%)	29
	0 to 21%	21
	0 to 15%	22
	0 to 10%	23
Display	None	30
	Separate for IP20 version	31
	Integral for IP65 Version	32
Communications	None	40
	RS 485 (ComView)	41
	RS 485 (ComView + Profibus)	42
Real time clock	None	50
	Yes	51
Calculated Variables	None	60
	Gross efficiency, CO ₂ + Excess air	61
	Net efficiency, CO ₂ + Excess air	62
Probe insertion length	Non-standard	79
	215mm for flues 0.3m to 1.0m	71
	406mm for flues 0.6m to 2.0m	72
	757mm for flues 1.2m to 4.0m	73
Probe flange	For welding to curved and flat sided flues	81
	For screw fixing to flat sided flues	82
Cable pack	None	90
	10 metre (standard)	91
	20 metre (standard)	92
	30 metre (standard)	93

Example Order Line
2800 - 01 - 11 - 21 - 31 - 41 - 50 - 60 - 71 - 81 - 91

Probe Flange Dimensions



Probe Dimensions

