



## Thermo Scientific CQM FLEX

### PGNAA Coal Quality Manager

The Thermo Scientific™ Coal Quality Manager FLEX (CQM FLEX) provides minute-by-minute quality analysis of your most critical coal streams. The CQM FLEX is the ultimate analyzer with the best accuracy available, which allows you to minimize variations in coal quality, ensure contract compliance, and improve your efficiency. The CQM FLEX is designed to improve your bottom line.

#### The CQM calculates and reports

- Heating value (kcal/kg, kJ/kg or BTU/lb)
- Lbs SO<sub>2</sub> per million BTU
- Volatile matter
- Fixed carbon
- Ash fusion temperature (based on customer specific empirical relations)

#### The CQM measures and reports

- Ash
- Sulfur
- Moisture
- SiO<sub>2</sub>
- Al<sub>2</sub>O<sub>3</sub>
- Fe<sub>2</sub>O<sub>3</sub>
- Na<sub>2</sub>O (in some cases)
- CaO
- TiO<sub>2</sub>
- K<sub>2</sub>O
- Nitrogen
- Chlorine
- Carbon (with neutron generator option)
- Hydrogen (with neutron generator option)
- Oxygen (with neutron generator option)

The CQM FLEX is a second generation analyzer developed from the highly successful and accurate Thermo Scientific CQM. It is a full-featured analyzer that incorporates Prompt Gamma Neutron Activation (PGNAA) technology and is designed to accept feed from a sample system, control the flow through the analyzer and measure the major coal quality parameters of interest to coal producers and coal-fired power generators.

## CQM FLEX – PGNAA Coal Quality Manager

| Description                                                     | Quantity                                                                     |
|-----------------------------------------------------------------|------------------------------------------------------------------------------|
| <b>Physical dimensions</b>                                      |                                                                              |
| Channel support frame                                           | 4,507 mm (177 in) long x 1,631 mm (64 in) wide                               |
| Total length of the unit                                        | 5,555 mm (219 in)                                                            |
| Clearance height required                                       | 2150 mm - 2350 mm (85 in - 93 in)                                            |
| Clearance width required                                        | 2632 mm (104 in)                                                             |
| Unit weight                                                     | 5700 kg (12.566 lbs)                                                         |
| Hopper capacity                                                 | 1000 lbs of coal (assuming 55 lbs/ft <sup>3</sup> )                          |
| Electrical control box                                          | Part of the main assembly – does not need any additional mounting            |
| Motor control box                                               | 600 mm height x 400 mm width x 300 mm length (24 x 16 x 12 in)               |
| <b>Electrical specifications</b>                                |                                                                              |
| Electronics enclosure                                           | NEMA 4X stainless steel box                                                  |
| Motor control box                                               | NEMA 4X stainless steel box                                                  |
| <b>Electronic requirements</b>                                  |                                                                              |
| Electronics enclosure                                           | 230VAC 50 or 60 Hz, 5 Amps 4 wire (L1, L2, N, GND)                           |
| Motor control box                                               | 460VAC 50 or 60 Hz, 10 Amps 4 wire (L1, L2, N, GND)                          |
| <b>Communication links</b>                                      |                                                                              |
| Electronics enclosure to operator console (customer supplied)   | Fiber Optic 62.5/125 multimode (minimum of 2 fibers) 4000m (13,000 ft.) max. |
| Operator console to customer control system (customer supplied) | OPC client/server link                                                       |
| Off-site communication                                          | One data quality phone line or internet link required                        |
| <b>Neutron source options</b>                                   |                                                                              |
| Cf 252                                                          | Neutron source                                                               |
| Neutron generator                                               | Electrically driven neutron source                                           |
| Operating temperature                                           | -30°C to +50°C (-22°F to +122°F)                                             |



Learn more at [thermofisher.com/coal](https://thermofisher.com/coal)

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