



At Claisse, innovation is where vision and technology intersect the needs of our customers. From developing new products to performing fundamental and applied research, our chemists and engineers are focused on open innovation, exploration and discovery so you always benefit from the best products, services and solutions.



## TECHNICAL SPECIFICATIONS

### Versatility

- Makes peroxide fusion
- Prepares glass disks for XRF analysis
- Prepares solutions for AA, ICP and Wet Chemistry analysis (PRK-FE002 only)

### Productivity

- Produces up to 6 samples simultaneously
- 24 to 30 fusions per hour

### Heating

- Heating chamber temperature up to 1200°C
- Temperature monitored by type R thermocouple located inside the heating chamber
- Heating chamber stability monitored by type R thermocouple located between refractory layers
- Resistance-based heating system
- Heating elements supporting up to 1800°C

### Electrical

- Voltage: 380-415 V~ 3P+N
- Current: 15 A
- Frequency: 50-60 Hz
- Inlet power: 6.8 kVA
- Up to 3.75 kW in the heating chamber

### Dimensions

	TheOx	External power supply
▪ Height	62 cm (24.5 in.)	46 cm (18 in.)
▪ Depth	62 cm (24.5 in.)	60 cm (24 in.)
▪ Width	110 cm (43 in.)	25 cm (10 in.)*

\* Add 9 cm (3.5 in.) for power supply stand

### Weight

	TheOx	External power supply
	90 kg (200 lb)	23 kg (51 lb)

### Programmable

- Temperature
- Crucible rocking speed
- Crucible rocking amplitude: back and forth motion
- Duration
- Cooling airflow
- Magnetic stirring speed for solutions

### Fusion Parameters

### Control and Operation

- One-touch operation
- Precise temperature control and display to +/- 1°C
- Multilingual user interface
- Touch screen user interface
- Automated crucible securing latch

### Software

- Fully automatic
- Windows XP operating system
- User-defined settings
- Preset programs
- Programmable preheat mode
- Automatic standby mode
- Web remote troubleshooting
- 3 secured access levels
- Limitless program storage: 7G Compact Flash

### Communication

- Ethernet external communication link
- LIMS ready
- Industrial grade, robust and reliable communication system (internal Modbus over serial)

### Electronic

- Electronic backbone architecture
- Conformal coated PCB for high corrosion resistance
- Meets UL 94 flammability standard

### Other specifications

- Meets RoHS requirements
- Robotics ready
- 3 USB ports
- Integrated safety door
- 3 different layers of refractory material for maximum heat retention and energy saving
- Sturdy single motor system for optimal crucible rocking
- Efficient melt pouring facilitated by vibration.



*The First and Finest in Fusion*

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TAKE FUSION BY THE HORNS!

## WHAT'S IN A NAME?

For Claisse, it's a chance to show how we feel about our new electric fluxer: TheOx. We are truly proud to name it after such a strong, sturdy and steadfast animal: the noble Ox. The Ox is also a symbol of tenacity, thoroughness and strength. This is a great name for a great instrument!

## WHAT CAN TheOx DO FOR YOU?

### PREPARES

TheOx is a versatile and flexible fluxer that lets you prepare glass disks for XRF analysis as well as solutions for AA, ICP and Wet Chemistry analysis. For those of you who are new to the world of fusion: Fusion consists of mixing an oxidized sample with a lithium borate flux. This mix is heated to around 1000°C. At this temperature, the flux melts and dissolves samples to form a perfectly homogeneous mass. Finally, the molten mixture is poured, either into a preheated platinum mold to produce a glass disk for XRF analysis, or into an unbreakable beaker containing an acid solution to be analyzed by AA, ICP or any traditional Wet Chemistry method.

### PROCESSES

- Mining and geological samples, silica, silicates, clay, ores
- Cement, lime, carbonates, ceramics, glass, slag, refractories
- Sulfides, fluorides
- Bauxites, alumina
- Catalysts, polymers, pigments
- Steel, pure metals, ferroalloys, non-ferrous alloys
- Pharmaceutical samples

### TOTAL ANALYTICAL SOLUTION

When it comes to fusion, Claisse offers a one-stop comprehensive solution to all your needs. Whether you are working with glass disks or solutions, Claisse has the knowledge and the expertise to support all your fusion requirements. Our Technical Representatives are chemists who can help you develop and validate fusion applications for glass disks or solutions that will work for your specific needs. Our Applications/Analytical laboratories are equipped with XRF and ICP spectrometers and are located in Canada and in Australia. No matter where you are, our worldwide network of trained agents will be able to assist you. If you are interested in fusion but wonder if it would work on your tough samples, please don't hesitate to contact the Claisse team we can definitely help you.



TAKE FUSION BY THE HORNS!



Catalog Number	Item	Description
PRK-FE001	TheOx-D	For the preparation of 1 to 6 glass disks
PRK-FE002	TheOx-DS	For the preparation of 1 to 6 glass disks or 1 to 6 solutions

## WHY INVEST IN TheOx?

### [ 1 ] TheOx – HIGH ACCURACY & REPEATABILITY

TheOx has the power to reach temperatures of up to 1200°C. By achieving precise temperature control and monitoring to  $\pm 1^\circ\text{C}$ , TheOx retains volatile elements and ensures repeatable interposition results from one fusion cycle to the next. Automatic agitation of the crucibles gives superior homogenization of the melt in less time.

### [ 2 ] TheOx – HIGH PRODUCTIVITY

Designed for laboratories with a high sample throughput, TheOx lets you process up to 6 samples simultaneously. This instrument lets you do 24 to 30 fusions per hour. The 3.75kW generated in the heating chamber delivers fast fusion temperature ramp ups for shorter fusion cycles and increased sample throughput. If you want to improve productivity in your laboratory, TheOx is the right instrument for you.

### [ 3 ] TheOx – EASY TO USE

Simply plug in TheOx and let it prepare your samples. With this user-friendly fluxer, doing fusions is a one-touch operation. The design makes loading crucibles, molds and beakers easy, and it makes switching from glass disks to solutions a simple operation. This instrument comes with preset fusion programs, a touch screen, and a multilingual user interface. Programmable parameters include temperature, rocking speed and amplitude, step duration and cooling airflow.

### [ 4 ] TheOx – LOW COST OF OWNERSHIP

No matter how you look at it, TheOx saves you money. Sturdy and reliable, this high quality fluxer was designed to withstand heavy workloads and harsh work environments. It is easily serviceable to reduce downtime and its low maintenance and low installation costs give you great value for your money.

## WHY IS TheOx SO SPECIAL?

### [ 1 ] TheOx – PLUG & PLAY

- Powered by electricity
- One-touch operation
- No help required for installation
- No training needed to operate

### [ 2 ] TheOx – SMART

- Remote Web access from anywhere in the world
- Software and firmware update from the Claisse Webpage directly to TheOx
- Remote troubleshooting by Claisse engineers
- Access to live temperature log
- Optional automatic e-mailing of error notices to Claisse engineers
- Self diagnosis with specific error codes
- Real-time temperature display
- Robotics ready
- LIMS ready
- Remote desktop: lets you prepare samples from the comfort of your office

### [ 3 ] TheOx – SAFETY FIRST

- Emergency stop button
- No direct exposure to hot external surfaces
- Integrated safety door
- Can operate supervision-free
- No manipulation of hot vessels
- Automated crucible securing latch

### [ 4 ] TheOx – LOW MAINTENANCE

- Easy to service
- Simply slide out the heating elements for replacement
- Easy access to electronic and mechanical parts
- Easy replacement of refractory layer in the heating chamber

### [ 5 ] TheOx – ENVIRONMENTALLY FRIENDLY

- Powered by electricity
- Programmable preheat mode
- Standby mode for long periods of inactivity
- Meets RoHS requirements

### [ 6 ] TheOx – TOUGH

- Stainless steel and aluminum frame withstands extreme work conditions
- Industrial grade electronic and internal communication system
- Sturdy industrial grade motors
- Powerful, long-lasting heating elements