The RFUSION Weighing Station performs the weighing of flux according to a preset absolute mass or to a preset sample-to-flux ratio. It combines the robot and the control panel, so it is the core of each workstation. A mixing device ensures good homogenization of sample with flux before fusion.

**Electrical Requirements/Power:**
- Single phase 240 VAC, 50/60 Hz, 20 A
- Power: 1450 W

**Dimensions (HxDxW):**
- 213 cm (28") x 135 cm (53") x 190 cm (75")
- Weight: 600 kg (1325 lb)

**Component Modules:**
- i. **Robotic Arm:** A six-axis electro-servo-driven industrial robot equipped with optic-fiber sensors for crucible detection.
- ii. **Claisse TheAnt:** An automatic flux dispenser with a maximum accuracy of 0.1 mg equipped with a high performance analytical balance with a maximum precision of 0.1 mg and an overload protection for vertical and horizontal loads. Can be used as a stand-alone.
- iii. **Claisse VortexMixer:** A homing mixer with programmable speed.

The RFUSION M4 Fusion Station is an add-on for the RFUSION Weighing Station. It performs the preparation of glass disks for XRF analysis with up to two, three positions gas burner type fluxers.

**Gas Requirements:**
- Propane or LPG 9 psi (± 1), 62 kPa (± 7)
- Natural gas 10 psi (± 1), 69 kPa (± 7)

**Electrical Requirements/Power:**
- Single phase 240 VAC, 50/60 Hz, 20 A
- Power: 1450 W

**Dimensions (HxDxW):**
- 244 cm (96") x 82 cm (32") x 254 cm (100")
- Weight: 575 kg (1275 lb)

**Component Modules:**
- i. **Claisse M4 Fluxer:** A 3-position gas fusion instrument with programmable heating and agitation by rotation on an inclined axis. Capability for multi-temperature fusion cycles of up to 15 steps. Doesn’t require the use of compressed air and oxygen. Can be used as a stand-alone. Two M4 Fluxers can be installed in the station for a total of 6 positions. Capability to shut down fusion positions to save operating costs.
- ii. **Artificial Vision:** 10000 3D profiles per second smart camera for advanced and tough industrial environments.

**General Specifications**
- Control
  - i. HMI touch screen control panel
  - ii. Capability to store 10 automated programs
  - iii. Parameter setting rights management through 3 levels protected by passwords
- Communication
  - i. Ethernet
  - ii. LIMS ready
  - iii. Remote troubleshooting via Internet connection

At Claisse, innovation is where vision and technology intersect to meet 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.
**MODULAR SYSTEM**

- **System setup**
  - Easy access to all components
  - Standard and/or customizable
- **System can be upgraded gradually**
- **Back-up modules** can be used during maintenance
- **Standard configuration parts available** from stock
- **FAST COMMISSIONING TIME**
- **SIMPLIFIED MAINTENANCE**
  - Sturdy and reliable workstation
  - Each fusion and weighing module can be used as a stand-alone as well as combined in a fully automated program.
  - Glass crucibles can be prepared even if one crucible is down.
  - Simplify training for raw and/or unskilled personnel
  - Remote work troubleshooting available
  - Remote works troubleshooting available

**KEY FEATURES**

1. **SAFETY FIRST**
   - The rFUSION Modular System is equipped with two emergency pushbuttons, door lock and safety light curtains that protect the operators from moving objects.
   - Ventilation cabinets containing gas fusion instruments, gas detectors are installed to prevent and stop leakage, and to avoid operations or unsatisfactory gas pressures. For Claisse, workstation and operator safety are an absolute priority.

2. **PRIORITIZED INTEGRATION**
   - Using a 3D vision smart camera, the rFUSION Modular System can see and fuse crucibles individually or in a combined mode of working.
   - The 3D vision smart camera functions as the eyes of the fusion instrument and control the installation and removal of each platinum crucible with extreme precision.

3. **RELIABLE AUTOMATIC WEIGHTING**
   - The Claisse weighting module, the Thermo, serves to automatically weigh the sample and dispense the flux according to a programmed sample to flux ratio with an accuracy of ups to one tenth of a milligram. With Claisse, you can achieve high performance industrial balance that is specially designed for automated processes.

4. **TM TOUCH SCREEN CONTROL PANEL**
   - The touch screen control panel allows the operator to control, monitor, diagnose and manage all the rFUSION Modular System operations with ease and convenience.
   - Workstation programming is protected by three levels of access with security codes, operator, lab manager and Claisse engineers. The lab manager access enables enabling, disabling and editing of rFUSION’s programs.
   - The operator level limits the decision making to starting and stopping automated programs.

5. **CLASSE FUSION INSTRUMENT AND APPLICATION SUPPORT**
   - Fusione instruments bearing the Claisse signature stand out for exceptional analytical performance, reliability, ease of use and maintenance. They are the standards in the market. Claisse fusion systems are also supported by a team of experienced fusion application specialists that can develop highly effective fusion programs for all installations and provide after sales services.

6. **REMANANT WER PROBLEM SOLVING AND UNSTICKING CAPABILITIES**
   - We provide remote diagnostic tools that can solve in-situ problems and get the system up and running again. Our service team is always there to help.

**FOUR BENEFITS TO INVESTING IN A CLASSIC-FUSION MODULAR SYSTEM**

1. **IMPROVES ANALYTICAL RESULTS**
   - Claisse fusion systems allow personnel to work on other tasks while automation handles the sample preparation by fusion is done automatically.

2. **MORE EFFICIENT MANAGEMENT OF LAB PERSONNEL**
   - The rFUSION Modular System's automation reduces labor time by 90% and cuts the costs associated with lab technicians, not only in terms of wages, but to a large extent also the overall costs associated with recruitment, training, workspace and employee administration.

3. **INCREASES AND STABILIZES OUTPUT RATES**
   - The rFUSION Modular System is equipped with a high-performace industrial balance that is specifically designed for automated processes.

4. **GREAT RETURN ON INVESTMENT**
   - Fusion instruments bearing the Claisse signature stand out for exceptional analytical performance, reliability, ease of use and maintenance. They are the standards in the market.

**LET THE rFUSION WORK FOR YOU!**

**OPTIMIZED UPTIME**

- Sturdy and reliable workstation
- Each fusion and weighing module can be used as a stand-alone as well as combined in a fully automated program.
- Glass crucibles can be prepared even if one crucible is down.
- Simplify training for raw and/or unskilled personnel
- Remote work troubleshooting available
- Remote works troubleshooting available

**FAST COMMISSIONING TIME**

- Standard configurations are built and shipped within a few months
- On-site installation and startup are completed in a few weeks
- Standard power requirements
- No need for oxygen, compressed air and water cooling installations

**DEFINITION OF LAB PERSONNEL**

- Claisse fusion system's autonomity allow personnel to work on other tasks while automation handles the sample preparation by fusion is done automatically.
- Claisse fusion system's autonomity reduce labor time by 90% and cuts the costs associated with lab technicians, not only in terms of wages, but also the overall costs associated with recruitment, training, workspace and employee administration.
- Claisse fusion system's autonomity is equipped with a high-performance industrial balance that is specifically designed for automated processes.

**NIGHT AND WEEKEND SHIFTS**

- The rFUSION Modular System's autonomy allows personnel to work on other tasks while automation handles the sample preparation by fusion is done automatically.
- Claisse fusion system's autonomity reduce labor time by 90% and cuts the costs associated with lab technicians, not only in terms of wages, but also the overall costs associated with recruitment, training, workspace and employee administration.
- Claisse fusion system's autonomity is equipped with a high-performance industrial balance that is specifically designed for automated processes.

**SAFETY FIRST**

- The rFUSION Modular System is equipped with two emergency pushbuttons, door lock and safety light curtains that protect the operators from moving objects.
- Ventilation cabinets containing gas fusion instruments, gas detectors are installed to prevent and stop leakage, and to avoid operations or unsatisfactory gas pressures. For Claisse, workstation and operator safety are an absolute priority.

**INTEGRATION**

- Using a 3D vision smart camera, the rFUSION Modular System can see and fuse crucibles individually or in a combined mode of working.
- The 3D vision smart camera functions as the eyes of the fusion instrument and control the installation and removal of each platinum crucible with extreme precision.

**RELIABLE AUTOMATIC WEIGHTING**

- The Claisse weighting module, the Thermo, serves to automatically weigh the sample and dispense the flux according to a programmed sample to flux ratio with an accuracy of ups to one tenth of a milligram. With Claisse, you can achieve high performance industrial balance that is specifically designed for automated processes.

**TM TOUCH SCREEN CONTROL PANEL**

- The touch screen control panel allows the operator to control, monitor, diagnose and manage all the rFUSION Modular System operations with ease and convenience.
- Workstation programming is protected by three levels of access with security codes, operator, lab manager and Claisse engineers. The lab manager access enables enabling, disabling and editing of rFUSION’s programs.
- The operator level limits the decision making to starting and stopping automated programs.

**CLASSE FUSION INSTRUMENT AND APPLICATION SUPPORT**

- Fusione instruments bearing the Claisse signature stand out for exceptional analytical performance, reliability, ease of use and maintenance. They are the standards in the market. Claisse fusion systems are also supported by a team of experienced fusion application specialists that can develop highly effective fusion programs for all installations and provide after sales services.

**REMANANT WER PROBLEM SOLVING AND UNSTICKING CAPABILITIES**

- We provide remote diagnostic tools that can solve in-situ problems and get the system up and running again. Our service team is always there to help.