Kenton

Together with Researchers

CO_2 Incubator CR and CST series

IR sensor, auto-control CO2 concentration

CR-80
CR-160
CST-80
CST-160

Gather all the essence of Kenton technology

Together with researchers

The GX Thermostatic Drying Oven is essential equipment in laboratories and research facilities for drying, sterilization, heated storage, and heat treatment

CR Series CO2 Incubator

Warranty: 3 years

Applications: Ideal for cell culture, microbiology, pathology, and life sciences.

Key Features:

- **Stable Environment:** Utilizes ALLHEAT™ Chamber heating technology to maintain a consistent temperature, ensuring optimal growth conditions.
- **Accurate CO2 Monitoring:** Features a professional-grade infrared CO2 sensor for precise detection of CO2 levels.
- **Cross-Contamination Prevention:** Equipped with a UV sterilization lamp to effectively minimize the risk of cross-contamination during cultivation.
- **Constant Temperature Control:** The incubator door is designed with a constant temperature system, reducing the impact of external factors on the internal environment.
- **Durable Construction:** The stainless steel liner is made using seamless welding and bonding techniques, enhancing temperature stability and minimizing external interference.
- **Pollution Minimization:** The fan and air inlet valve automatically shut off when the door is opened, reducing the entry of outside air and contaminants.
- **Gas Filtration and Sterilization:** Comes with a standard gas filter device and an internal UV lamp for disinfection, further preventing cross-contamination.
- **Certification Services:** Offers IQ, OQ, PQ, and related certification services.
- **Safety Standards:** CE certified and complies with AS2064 standards.

This incubator is designed to provide a reliable and controlled environment for various scientific applications, ensuring the integrity of your cultures over time.

CST Series Tri-Gas Incubator

Warranty: 3 years

Applications: Designed for cell tissue culture in fields such as medicine and biosciences.

Key Features:

- **Advanced Gas Control:** The incubator uses a touch-screen microcomputer control panel with professional-grade infrared sensors for precise management of CO2, O2, and N2 levels.
- **Automated Gas Regulation:**
  - When O2 levels exceed 23%, the incubator activates O2 gas.
  - Once the desired O2 concentration is reached, CO2 is activated.
  - If O2 drops below 19%, N2 is introduced to maintain accuracy, with CO2 re-engaging once the O2 level is stabilized.
- **Constant Temperature System:** The incubator door is equipped with a system that maintains stable internal temperatures, minimizing the effects of external temperature fluctuations.
- **Durable Construction:** The stainless steel liner is crafted using seamless welding and bonding techniques, ensuring temperature stability and reducing external interference.
- **Pollution Minimization:** The fan and air inlet valve automatically shut off when the door is opened, limiting the introduction of outside air and contaminants.
- **Gas Filtration and Sterilization:** Features a gas filter and a UV sterilization lamp to effectively prevent cross-contamination of cultures.
- **Certification Services:** Offers IQ, OQ, and PQ services in both Chinese and English, along with a variety of verification options.
- **Safety Standards:** CE certified and compliant with Australian AS2064 standards.

This incubator provides a controlled environment for sensitive cell culture applications, ensuring the integrity of your biological samples throughout their growth cycle.

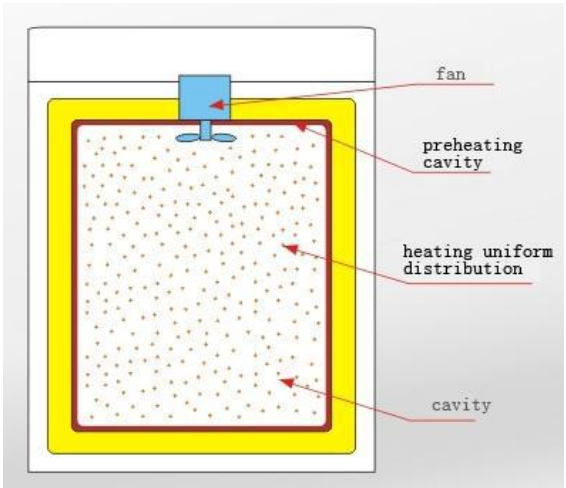
ALLHEAT™ Chamber preheating technology

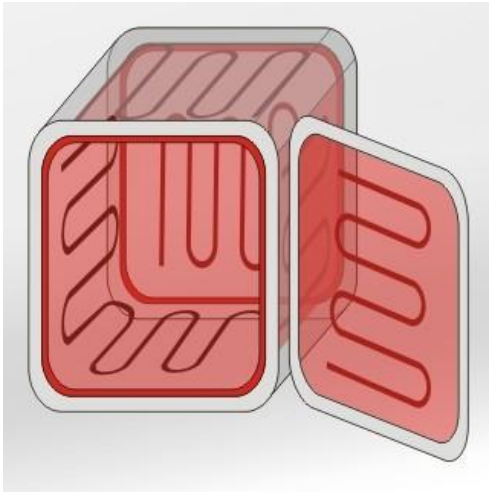
Overview:

ALLHEAT™ Chamber preheating technology ensures precise and uniform temperature distribution within the incubator, optimizing conditions for cell culture and other sensitive applications.

Key Features:

- **Even Heat Distribution:** The heating elements are evenly distributed along the inner walls of the chamber. This design promotes effective heat transfer and uses forced fan convection to ensure that every part of the chamber reaches and maintains the desired temperature.
- **Six Surface Heating:** The chamber features heating on six surfaces, including a dedicated heating system for the door. This prevents condensation on the glass door, maintaining clear visibility without affecting the internal environment.
- **Energy Efficiency:** The ALLHEAT™ series CO2 incubators are designed for low energy consumption. Their heat retention characteristics minimize energy loss, allowing customers to reduce operational costs.
- **Constant Temperature Control:** The incubator door includes a constant temperature system that helps maintain stable conditions inside, minimizing the influence of external factors on the internal environment.





ALLFLOW™ Clean Air Circulation System

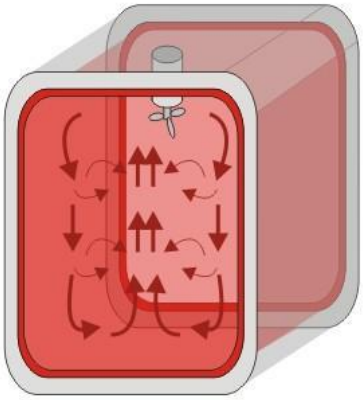
Overview:

The ALLFLOW™ Clean Air Circulation System is designed to provide optimal air flow and temperature stability within the incubator, ensuring a reliable environment for cell culture and other sensitive applications.

Key Features:

- **Efficient Air Circulation:** The ALLFLOW™ system utilizes advanced forced convection to quickly recover temperature after the door is opened. It features high-quality cooling fans from renowned international brands, ensuring durability and consistent performance for optimal experimental conditions.
- **Stable Temperature Control:** This air circulation system maintains continuous temperature stability in the working chamber. Once the user-set temperature is achieved, the environment remains ideal for sample incubation or culture.
- **Clean Gas Inlet:** The CO2 inlet valve is equipped with a filter device, ensuring that the gas entering the chamber is clean and free from contaminants.
- **UV Sterilization:** The chamber includes a UV sterilization system that operates regularly to eliminate contaminating microorganisms, effectively preventing cross-contamination during experiments.
- The ALLFLOW™ Clean Air Circulation System ensures a controlled and contaminant-free environment, crucial for successful biological and experimental outcomes.

Circulating Fan



Clean Air Circulation System

ALLSENS™ Programmable PID Controller

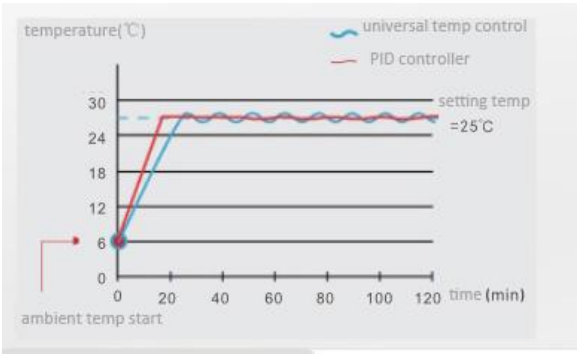
Overview:

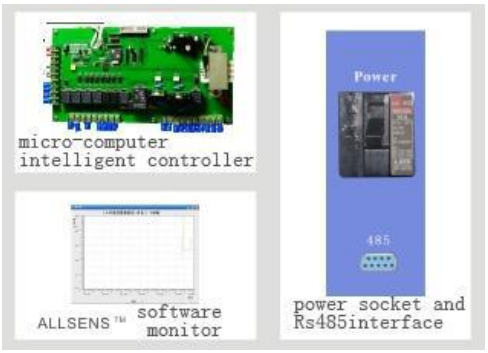
The ALLSENS™ Programmable PID Controller offers advanced control and monitoring features for precise temperature and gas management in incubators, enhancing user experience and operational efficiency.

Key Features:

- **User-Friendly Interface:** The integrated touch LCD screen displays critical parameters, including temperature set value, actual temperature, humidity, CO2 set and measured values, and O2 or N2 settings for tri-gas incubators. The English subtitles ensure easy navigation and operation.
- **Adaptive PID Control:** This controller precisely manages temperature to prevent fluctuations and maintain a stable, uniform environment. It also includes a high-temperature alarm for added safety.
- **Data Security and Connectivity:** User password protection safeguards settings, while the built-in multifunctional memory menu allows for data recording and storage via a USB interface. It can connect to multiple devices simultaneously through a standard RS485 interface for real-time monitoring.
- **Audible Alerts:** Operations are accompanied by beep alerts to confirm actions or notify users of specific events.
- **Remote Control:** The controller supports remote operation and programming through ALLSENS™ software, allowing for convenient monitoring and adjustments.
- The ALLSENS™ Programmable PID Controller ensures precise and reliable management of incubator conditions, making it an essential tool for successful cell culture and other sensitive applications.

Touch LCD screen





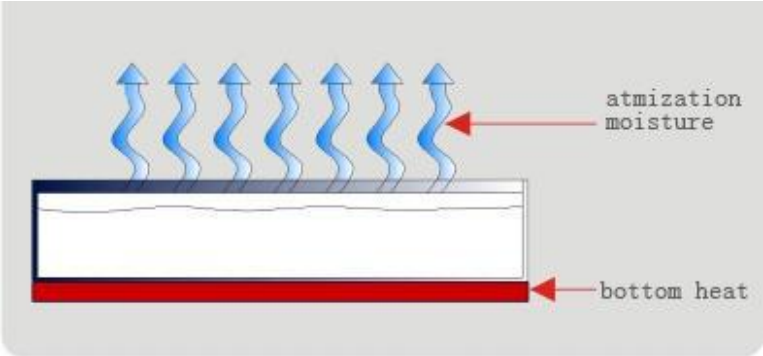
ALLMIST™ Inside Water Pan Humidification Technology

Overview:

The ALLMIST™ technology provides efficient humidity control within the incubator, creating an optimal environment for cell culture.

Key Features:

- **Integrated Humidifier Design:** The original water pan liner is designed to quickly atomize water, enhancing the humidification process.
- **Sustained Humidity Levels:** Soft air infused with water vapor is circulated throughout the chamber, effectively increasing and maintaining humidity levels. This ensures that the culture environment remains saturated with the necessary moisture.
- This advanced humidification technology supports the growth and stability of biological samples by maintaining ideal humidity conditions.



Note: Please be aware that the ALLMIST™ Inside Water Pan Humidification Technology provides natural humidification but does not include functionality for controlling or maintaining constant humidity levels. If you require precise humidity control, consider the LRH-CR or LRH-CST series, which offer these advanced features.

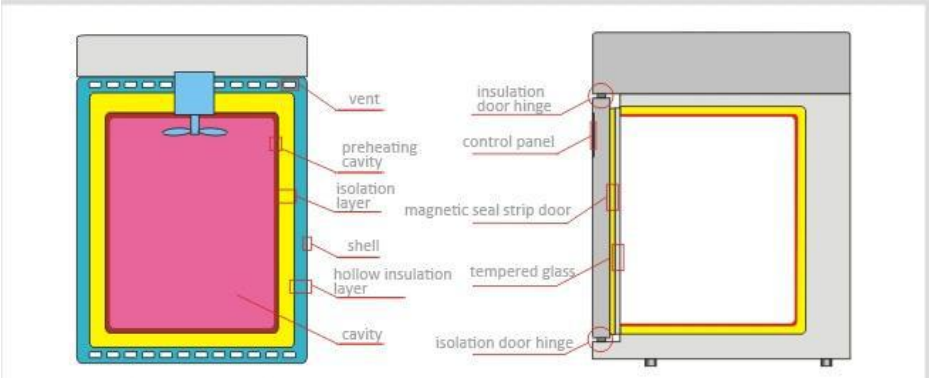
Pro-Insulation™ Isolation Insulation Technology

Overview:

Pro-Insulation™ technology is designed to maintain consistent temperature within the incubator while minimizing energy loss.

Key Features:

- **Inner Isolation Gate Design:** This feature allows for easy observation of samples without compromising the temperature consistency inside the chamber.
- **Effective Heat Management:** The design ensures complete isolation between the liner and the outer shell, preventing energy loss from heat transfer.
- **High-Density Insulation Material:** The liner is wrapped in high-density thermal insulation, enhancing its ability to retain heat.
- **Secure Door Seal:** A silicone door seal, combined with a magnet design on the outer door, ensures a tight closure, further minimizing heat loss.



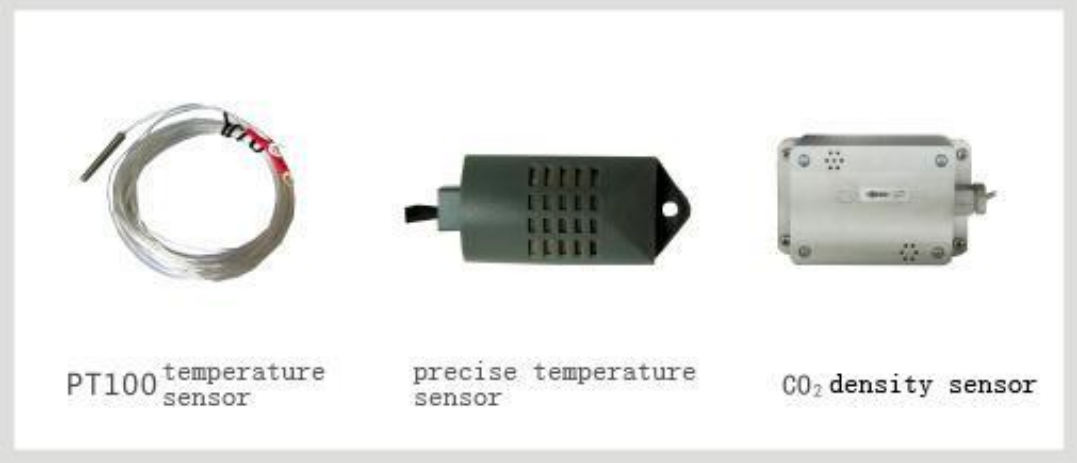
Qualified Sensors for Temperature, Humidity, CO2, and O2 (Tri-Gas Incubator)

Overview:

This tri-gas incubator features advanced sensors to ensure precise monitoring and control of critical environmental parameters.

Key Features:

- **Humidity Sensor:** Made from aerospace-grade materials, this maintenance-free sensor offers reliable performance. It features an industrial PT100 sensor, providing a short response time and low self-heating temperature.
- **IR CO2 and O2 Sensors:** These sensors include automatic temperature compensation, making them suitable for high-humidity environments (over 98%). They deliver high accuracy and low drift, ensuring precise concentration measurements. Additionally, they are designed for quick recovery of CO2 and O2 levels after disturbances.



Ergonomic Design

Overview:

The incubator features an ergonomic design that prioritizes user comfort and functionality while ensuring optimal performance.

Key Features:

- **Stylish Appearance:** The laboratory's classic color scheme and modern arc-shaped design provide an aesthetically pleasing look while enhancing operational comfort.
- **Integrated Design:** The exterior handle and LCD screen are seamlessly integrated into the structure, allowing for a comfortable viewing angle and easy access for door operation.
- **Customizable Shelving:** The mesh shelves can be adjusted in both interval and number to meet specific customer requirements, maximizing storage capacity.
- **User-Friendly Structure:** The vertical cabinet design positions electrical components in the upper section, facilitating easy maintenance.
- **Optimized Workspace:** The vertical layout maximizes the working chamber's space, making it convenient to access samples located at the top.
- **Double Door Design:** This feature allows for easy observation of samples without significantly affecting temperature stability, complemented by a bell-type lighting system for enhanced visibility.
- **Gas Sampling Port:** The inner glass door includes an 8mm diameter hole for convenient gas sampling.

Modern Manufacturing Processes

Overview:

The incubator is built using advanced manufacturing techniques to ensure durability and quality.

Key Features:

- **Precision Fabrication:** Sheet metal components are crafted using laser cutting and CNC bending technology, ensuring precise dimensions and a high-quality finish.
- **Corrosion Resistance:** Cold-rolled sheets undergo a three-step acidification anti-rust treatment, enhancing their resistance to corrosion and extending the lifespan of the incubator.
- **Durable Surface Finish:** The exterior of the incubator features a spray-applied plastic finish, providing a robust and attractive surface.
- **High-Quality Inner Chamber:** The inner chamber is constructed from SUS304 stainless steel, known for its excellent corrosion resistance and durability, ensuring a clean and stable environment for samples.

Easy to Clean

Overview:

The incubator is designed for easy cleaning and maintenance, ensuring a hygienic environment for your samples.

Key Features:

- **Smooth Internal Surfaces:** The internal surfaces are designed with minimal welds, making them smooth and easy to clean.
- **Pull-Out Multilayer Shelves:** The shelves are designed to be easily removable with fewer metal accessories, simplifying the cleaning process.
- **Drainage for Humidification:** The chamber includes a drainage design for the humidification collection tank, allowing users to easily discharge water as needed to prevent bacterial growth.
- **Water Pan Drainage:** The water pan features a drainage valve that users can open to remove excess water, further minimizing the risk of bacteria.

Convenient Maintenance

Overview:

The incubator is designed for easy maintenance, ensuring efficient operation and minimizing downtime.

Key Features:

- **Advanced Micro-Computer Controller:** The liquid crystal micro-computer controller features diagnostic functions that display operating parameters, including historical records of temperature and humidity data, making troubleshooting straightforward.
- **Separate Electrical Components:** The electrical control components are installed separately from the working chamber. The electrical output parts are located at the bottom of the incubator, making them easily accessible for maintenance and repairs.

Secure and Efficient Protection Concept

Overview:

The incubator incorporates advanced safety features to ensure secure operation and prevent overheating.

Key Features:

- **Multiple Over Temperature Protection:** The incubator includes several over-temperature protection functions, accompanied by audible and visual alarms to alert users of any issues.
- **Automatic Double Over Temperature Protection:** This feature provides an added layer of safety, automatically activating if the temperature exceeds safe limits.
- **UL Certified Components:** All main components have UL certification, ensuring they meet stringent safety and quality standards.
- **Compliance with DIN Standards:** The over-temperature protection devices conform to Germany's DIN standard D12880 Class 3.1, guaranteeing high safety performance.

Technical parameters

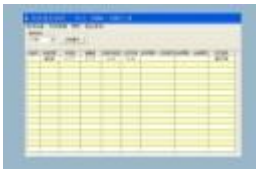
Product Model	CO_2 Incubator		CST Tri-Gas Incubator	
	CR-80	CR-160	CST-80	CST-160
Convection Mode	Forced Convection		Forced Convection	
Control System	PID intelligent touch screen control panel		PID intelligent touch screen control panel	
Temp. Range	RT+5℃~60℃		RT+5℃~60℃	
Temp. Accuracy	0.1		0.1	
Temp. Fluctuation（37℃）	±0.3		±0.3	
Temp. Uniformity（37℃）	±0.5		±0.5	
CO_2 Range	0~20%		CO2: 0~20%, O2: 1~25%	
CO_2 Sensor/Uniformity	IR sensor(±0.1%)		CO2(±0.1%), O2(±0.1%)	
CO_2 Recovery Without overshoot (after 30 seconds door opening to 5%)	≤2 minutes		≤2 minutes	
Temp. Recovery Without Overshoot(after 30 seconds door opening to 37℃)	≤8 minutes		≤8 minutes	
Humidification Method	Humidity Pan＞95%（with Temp. display）		Humidity Pan＞95%（with Temp. display）	
Working environment	Ambient temperature：10~30℃, Humidity <70%		Ambient temperature：10~30℃, Humidity <70%	
Insulation materials	environmental protection type material		environmental protection type material	
External Dimensions(H×W×D)	755×550×547	905×610×687	755×550×547	905×610×687
Internal Dimensions(H×W×D)	500×400×400	650×460×540	500×400×400	650×460×540
Interior Volume(L)	80	160	80	160
Interior steel materials	SUS304 stainless steel		SUS304 stainless steel	
Number of Shelves	2	3	2	3
Power supply	AC220V/110V		AC220V/110V	
Power Consumption (W)	500	650	500	650

Net Weight(KG)	35	55	35	55
Shipping Dimensions(H×W×D)	880×630×635	1030×690×695	880×630×635	1030×690×695

Optional product accessories

1. Portable printer
2. Air interface
3. ALLSENS^{TM} software
4. High-efficiency gas filter
5. Test hole
6. SUS304 stainless steel punched laminate
7. Glass interior doors with independent partition opening and closing

Printer



ALLSENS^{TM} software

gas filter

Test hole

- All technical data is under no load conditions, environment temperature 25℃, relative humidity 50%RH, voltage fluctuation ±10%, no obvious shock and dust.
- KENTON may change the above technical parameters at any time. There is deviation about product appearance due to some factors such as the photographic or printed result, please understand and reserves the final right of interpretation.

International standards

Temperature safety standard: Germany DIN 12880 Class 3.1

Electrical safety standards: International IEC61010-1/ US UL61010-1/ EU EN61010-1

Comparison list	CR (Professional type)	HCP (Basic type)
		
Controller		
PID LCD touch screen	●	
PID digital		●
Brand accessories		
Sense Air concentration sensor	●	

ST bi type silicon controlled	●	
Philip chip	●	
Taiwan opitcal coupler	●	
SENSIRION sensor	●	
Internal material		
SUS304 St.steel	●	●
Motor fan		
High temperature resistant bearing	●	●
Heat dissipation fan	●	●
Electric element		
Carbon electric film	●	●
CO2 control way		
Auto control	●±0.1	
Manual control		●
RS232 outfit	●	
Remote control	●	
ALLHEAT chamber preheating	●	●
ALLFLOW	●	●
ALLSENS	●	
ALLMIST	●	●
Insulation	●	
Heating sides	6 sides	5 sides
Air duct	3D	3D
Door seal	Silicone+magnetic	Silicone+magnetic
Insulation	aluminium silicate	aluminium silicate
Temp accuracy ℃	±0.1	±0.5
fluctuation	±0.5%	±0.5%
Temp.uniformity	±0.5%	±1%
Cut-off memory	●	
Timer	●	●
Alarm	●	●
Warranty	3 years	2 years

KENTON APPARATUS LTD.

Manufacture of drying oven, lab incubator, climate chamber, laminar flow cabinet, biological safety cabinet(OEM,ODM)

Kenton is a laboratory instrument manufacturer. In 1999, Kenton produced the first batch of 101 series drying oven and launched them on the market. Later, it successively launched incubator, biochemical incubator and other series. In 2005, we obtained ISO: 9001 quality certification, and in 2008-2012, we successively obtained CE certification. In 2013, a new generation of product series was introduced, and its functions and uses were comprehensively upgraded. The liner material was upgraded to SUS 304 stainless steel. In 2011, we expanded the global market, and now our products are sold to Europe, America, Southeast Asia major markets. Kenton manufactures laboratory equipment under our own brand. Our product line includes biological safety cabinets, artificial climate chambers, drying ovens, incubators, high temperature chambers, humidifiers, water baths, industrial air ovens, laminar flow cabinet, biochemical incubators, vacuum ovens, constant temperature and humidity chambers, and light incubators, among other series. The 30,000 sets produced annually are expected to expand at a pace of 20% annually. It has emerged as South China's biggest and most significant equipment manufacturer. The business has launched Kenton Technology Ltd. to concentrate on the development of supporting equipment in the disciplines of biological research and life sciences, in response to changes in worldwide market demand. We increased the new product series, which includes: blood oscillator, anaerobic oven, (Ultra)low temperature refrigerator, non-pipeline clean gas fume hood, sterile isolation cabinet, drug testing safety cabinet, etc., via independent research and development and technical advancement. Numerous scientific research departments, medical preservation, genetic vaccination, and other businesses make extensive use of our goods. In the meanwhile, we have expanded our recognition and support and have sold to Europe, America, Southeast Asia, Australia, the Middle East, and other international markets thanks to consistent investment, research and development, and advancements in workers, equipment, and technology. To supply top-notch goods and services to reputable laboratories and scientific research centers, as well as to mining and industrial companies both domestically and internationally.

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