

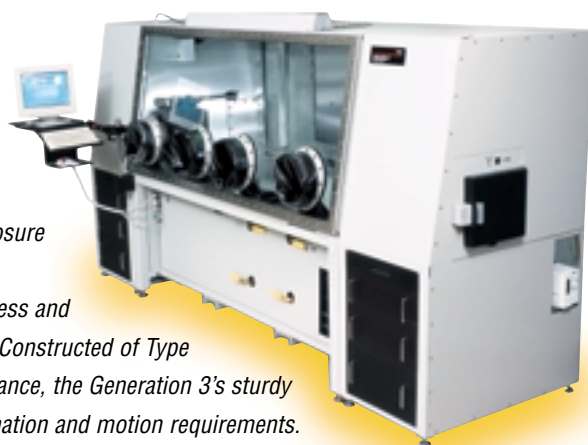
Generation 3

Atmospheric Enclosure

The Generation 3 provides the ultimate in computer-controlled atmospheric enclosures.

The Most Advanced Atmospheric Enclosure in the Industry

The Unitek Benchmark Generation 3 Atmospheric Enclosure is a rugged, tight, Windows NT® computer-controlled atmospheric enclosure. It provides a safe, easy-to-access and easy-to-use enclosure optimized for hermetic sealing. Constructed of Type 304 internally polished stainless steel for easy maintenance, the Generation 3's sturdy tubular steel frame provides solid support for all automation and motion requirements. The enclosure features an easily-removed safety glass viewing window. The window is equipped with glove ports that have built-in armrests and butyl gloves. The design of the Generation 3 conforms to the ergonomic standards of NASA-STD-3000, allowing comfortable use for a broad range of body types. It provides maximum dexterity, visibility, comfort and range of motion.



- **Fully-integrated hardware, controlled by Benchmark's advanced architecture Windows NT-based software** provides maximum yield by eliminating the risk of operator error. Constant monitoring of the glove box environment and computer-controlled door locks guarantee that the desired environment is reached and maintained within the enclosure.
- **Contamination-free environment** is achieved through independent vacuum pumping systems on all ovens and interchanges. Each pumping system is dedicated to completely and automatically evacuate its designated chamber.
- **Multiple vacuum bakeout oven configurations** with temperature ranges of ambient to 300°C are available. Exclusive closed-loop computer control and monitoring of each oven surface, including heated shelves, ensures their temperature stability.
- **Automatic push button inner and outer doors.** The Generation 3 doors are easy to operate, yet its exclusive closed-loop computer control prevents accidental or out-of-sequence door opening, maintaining integrity of the enclosed environment.
- **Fully-integrated automatic electronic gas pressure control system**, with user-selectable set points, includes oil-less check valve.
- **Moisture and oxygen monitoring** available for real-time environmental control, both with user-selectable weld process inhibit levels to insure that no parts are sealed unless the specified environmental conditions have been reached.
- **Helium gas mixing is easily achieved** using the Generation 3's integrated helium monitoring and gas mixing capabilities.
- **ISO 9000/Military specification traceability** through Benchmark's total environmental control, monitoring and reporting.
- **The modular, configurable design of the Generation 3** allows you to customize the system to fully meet your process requirements.
- **Multi-level password control** for operator, process engineer, and service engineer allow tight control of all process parameters.
- **LAN interface port** available for remote monitoring.
- **Calibrated to NIST standards.**
- **CE certification available.**



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The Generation 3 is an ideal glove box system for precise control of moisture, pressure or the gas composition of a processing environment.

This state-of-the-art atmospheric enclosure provides fully-integrated computer control of all elements of the system including enclosure pressure, interior and exterior doors, gas and moisture analysis and control instrumentation, vacuum ovens and antechambers. Within the glove box an inert environment can be maintained with ultra-low (<1 ppm) moisture and oxygen levels to meet the most demanding packaging standards. The system operating software is easy-to-learn and easy-to-use. It resides on the Microsoft Windows NT® operating system.

Additional Features and Options

- A broad choice of vacuum pumping systems – oil-less, cryogenic, turbo-molecular – depending upon the requirements of your process.
- Triple redundant oven temperature protection to guard against over-temperature conditions.
- Integrated dual column gas dryer/oxygen removal option to deliver ultra-low moisture and oxygen environments.

Ovens

Configuration:

A variety of configurations to meet process and material handling requirements; including end-loading, front loading, rear loading, with up to three heated shelves.

Temperature Ramping:

User-selectable computer-controlled PID loop with graphical interface.

Temperature:

To 200°C standard with optional higher temperature ranges available.

Programmability:

Fully programmable with virtually unlimited scheduling capability.

Vacuum pressure:

< 3x10⁻² mbarr

Analysis and Monitoring Capabilities

Oxygen Detection Range: 0-1000 ppm

Moisture Detection Range: -20°C. to -80°C. dew point

Gas Purity

Oxygen: to <1 ppm O₂

Moisture: to <1 ppm H₂O

Standard Configurations

Enclosure Length:	48" (122 cm)	60" (152 cm)	81" (207 cm)
Total Length:	101" (257 cm)	113" (287 cm)	134" (340 cm)
Depth:	42" (106.75 cm)	42" (106.75 cm)	42" (106.75 cm)
Enclosure Height:	36" (91.5 cm)	36" (91.5 cm)	36" (91.5 cm)
Height:	72" (183 cm)	72" (183 cm)	72" (183 cm)
Glove Ports:	2	4	4

Utilities

Electrical:

5-wire Wye, 208-240, 3-phase, 30 amps, 50/60 Hz
Step-down power transformers available for all input power requirements.

Inputs:

Nitrogen 65psi (448kPa)
Compressed air 80psi (550kPa)

Water:

Not required with available internal water re-circulator.

Specifications are subject to change without notice.

Your Local Representative



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