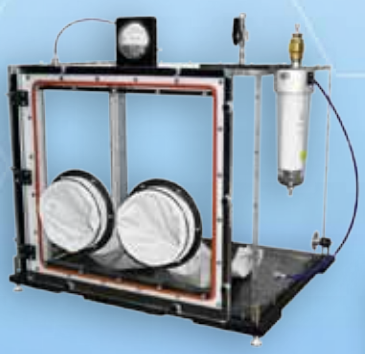
FLOW SCIENCES, INC.

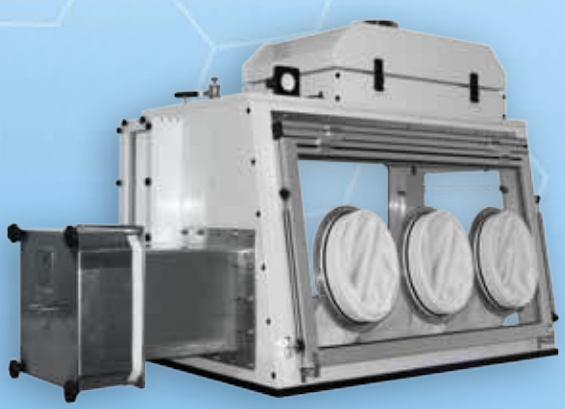
CONTAINED ENVIRONMENTAL SYSTEMS™

GLOVE BOX GALLERY

HYBRID ISOLATOR



INERT GASES GLOVE BOX



LATERAL FLOW GLOVE BOX

TEMPERATURE AND HUMIDITY CONTROLLED ENVIRONMENTS (THCE)

BAG OUT HEPA LATERAL FLOW GLOVE BOX

www.flowsciences.com

ENGINEERING SAFETY FOR THE CONTAINMENT OF YOUR APPLICATION

CONTAINED ENVIRONMENTAL SYSTEMS™

Flow Sciences' Contained Environmental Systems are comprised of four product series for potent powder handling that require attributes beyond our traditional vented enclosures. Developed through global customer request the products' containment performance and scope are scalable. Applications span many chemicals from Active Pharmaceutical Ingredients (APIs) to new Nanomaterials like carbon nanotubes.

The series are Temperature and Humidity Contained Environment (THCE), Vented Atmosphere Contained Environment (VACE), Controlled Atmosphere Contained Environment (CACE) and our newest the Hybrid Isolator. Available in two configurations both the Vented Hybrid Isolator (VHI) and the Sealed Hybrid Isolator (SHI) are new standard items for High Potency chemical containment. The labeled and described pictures are captioned with CQ (Custom Quotation) numbers. These numbers represent a product customized for a particular application.

Our purpose is *engineering safety for the containment of your application*. In addition to our traditional offering of enclosures encompassing equipment from bench-top to production, we are pleased to introduce you to more solutions for your containment challenges.

THCE Temperature and Humidity Contained Environment

LATERAL FLOW

HEPA Filtration IN/OUT

PRODUCT & PERSONNEL PROTECTION

- Patented Flow Design
- Bag-In/Bag-Out HEPA Filtration
- Touch Screen Interface with Data Logging Software
- LED Lighting
- Controlled Sterility
- Ergonomic Design
- Temperature and Humidity Sensor
- Phenolic Dished Resin Base
- ASHRAE 110-95 and CE Conformity

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VACE Vented Atmosphere Contained Environment

AIRFLOW COLOR GUIDE

- BLUE indicates room air
- GREEN indicates HEPA filtered air
- RED indicates contaminated air

PRODUCT PROTECTION

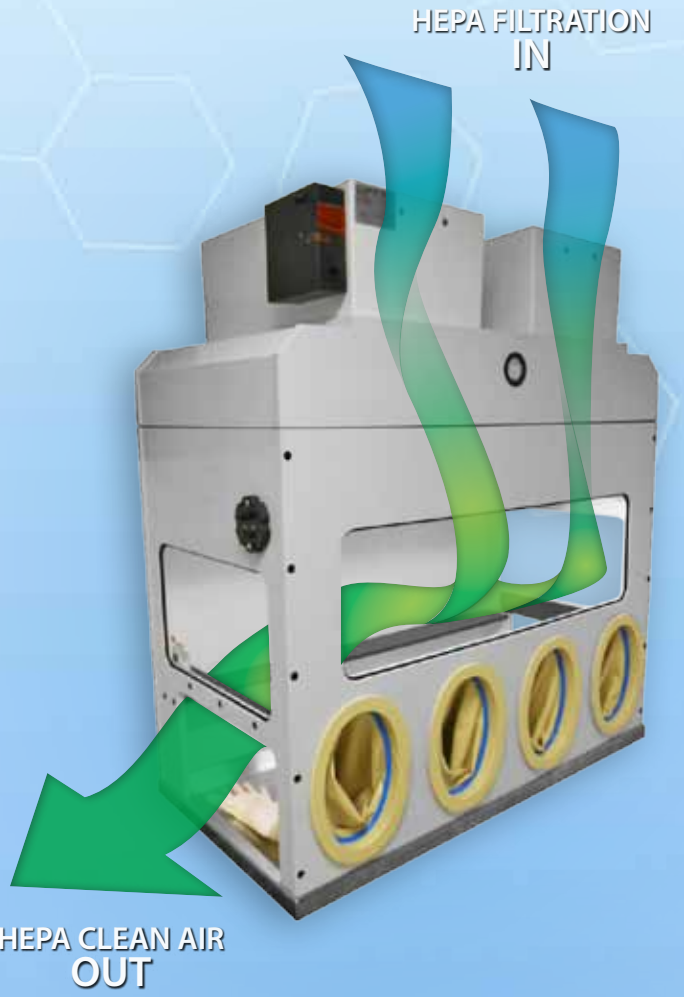
POSITIVE PRESSURE

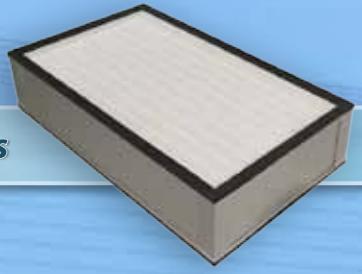
Positive pressure enclosures are used when lab personnel are not at risk for exposure to contaminants, however, there is a great risk of product contamination. Applications include, but are not limited to:

- DNA analysis
- GC or ICP mass spectroscopy
- Bottling liquid or solid API's
- Electronic circuit board assembly or microchip production
- Preparing petri dish media
- Keeping utensils free of contamination after being autoclaved

Flow Sciences provides enclosures which pull ambient room air through HEPA filtration, providing a non-contaminated, gentle airflow across the working area. Clean air then exits back into the laboratory environment.

SHOWN: CQ 4045
Application: Bottling API's





99.99% High Efficiency Particulate Air (HEPA) filters

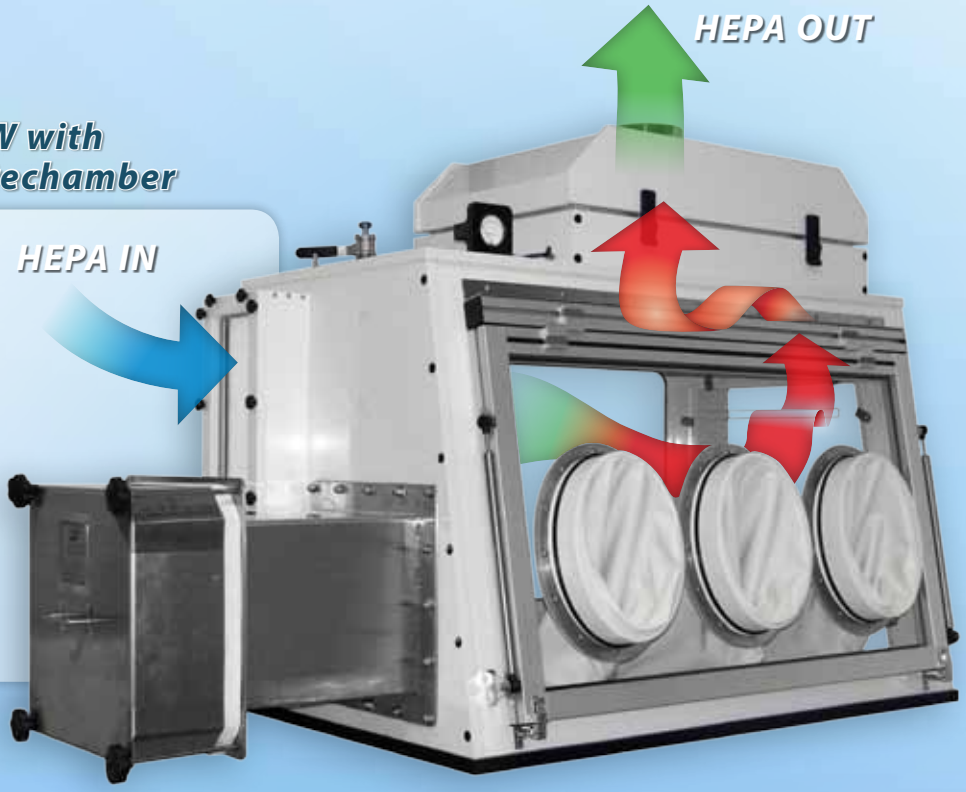
CONTAINED ENVIRONMENTAL SYSTEMS™

VACE VENTED ATMOSPHERE CONTAINED ENVIRONMENT

LATERAL FLOW with stainless steel antechamber

- Stainless steel antechamber
- 16" ergonomic glove ports
- HEPA filtration IN/OUT
- Stainless steel drain basin
- Compressed air
- Acrylic ceiling window for increased visibility

SHOWN: CQ 4042
Application: Charging Vessel



LATERAL FLOW with Bag Out HEPA filtration

- Clean HEPA in, clean HEPA out
- Class 100
- Less expensive than stainless
- Bag out Safety
- 10" Glove Ports

SHOWN: CQ 4141
Application: Powder Handling

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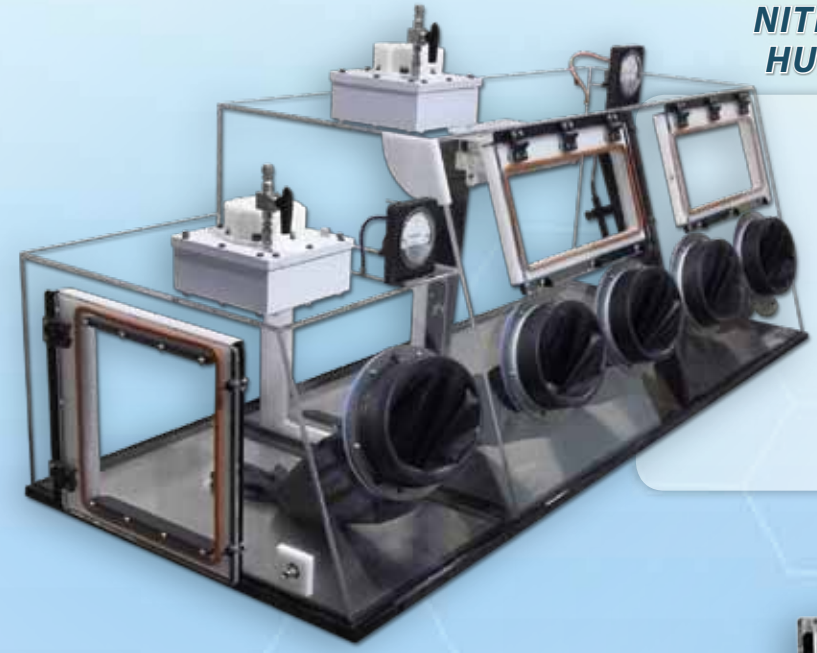
CACE Controlled Atmosphere Contained Environment



NITROGEN OR ARGON HUMIDITY CONTROL

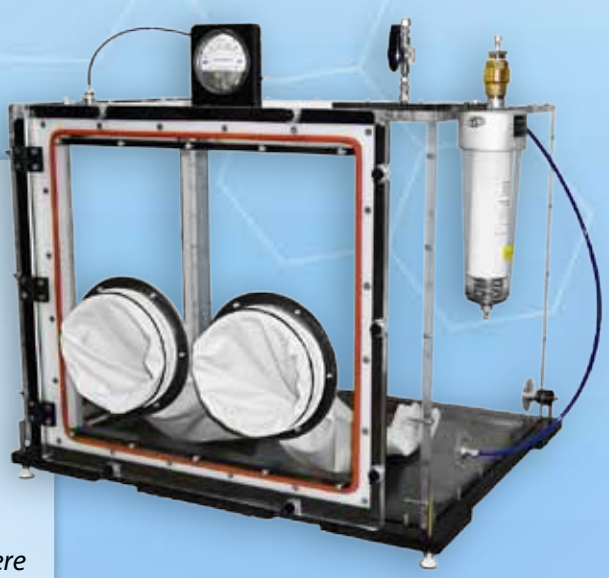
- Chemically resistant phenolic base with stainless steel inset
- Over Pressure Valve
- Ergonomic Design
- Inert Gas Environment
- Magnihelic Pressure Gauge

SHOWN: CQ 3767
Application: Nitrogen Purge

INERT GASES

- Ergonomic Glove Ports
- Desiccant Filter
- Nitrogen Inlet and Purge Valve
- Oxygen Probe Connection
- Magnihelic Pressure Gauge
- Drain Connection
- Hinged Door

SHOWN: CQ 3701
Application: Controlled Atmosphere



F.A.T AVAILABLE

FACTORY ACCEPTANCE TESTING

- Validate the performance of your enclosure
- Know containment levels to the nanogram/m^3 over an 8 hour time weighted average
- Third party validation options

HYBRID ISOLATOR FEATURES

Surrogate Powder and Factory Acceptance Testing (F.A.T.) with results showing ***containment below 50 nanograms/m³ (ng/m³)*** over an 8 hour time weighted average.

Reduce turbulence and reproduce consistent performance based results. Balance stability to the ***7th decimal.***

The Hybrid Isolator is also available as a BULK POWDER system, and we offer Factory Acceptance Testing (FAT).

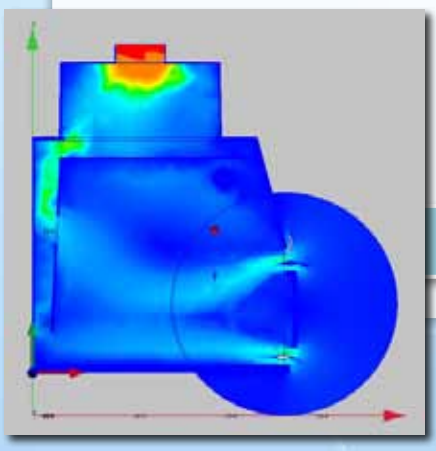
Product # shown:
EHA363027ABD
36" w x 30" d x 27" h

Available Standard Hybrid Isolator Sizes

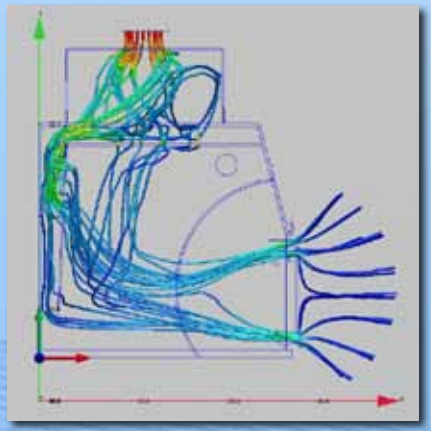
Product #	*Description*
EHA363027ABD	36" w x 30" d x 27" h Hybrid Isolator
EHA483027ABD	48" w x 30" d x 27" h Hybrid Isolator
EHA603027ABD	60" w x 30" d x 27" h Hybrid Isolator
EHA723027ABD	72" w x 30" d x 27" h Hybrid Isolator

THE NON-STERILE HYBRID ISOLATOR

In the ongoing search for new therapeutic treatments, pharmaceutical companies are developing a new class of Highly Potent Active Pharmaceutical Ingredients (HPAPI). Containment of these highly potent compounds for the protection of the scientists tasked with working with them is of major concern. One reason for this is the high expense often associated with new equipment designed to handle the task. In order to combat these potentially high capital outlays, many companies are looking at alternative methods of containment. The Hybrid Isolator, offered by Flow Sciences, Inc., is one such method of ***reducing the cost of containment.***



A Velocity Profile demonstrates the gentle airflow across the work surface shown in blue.

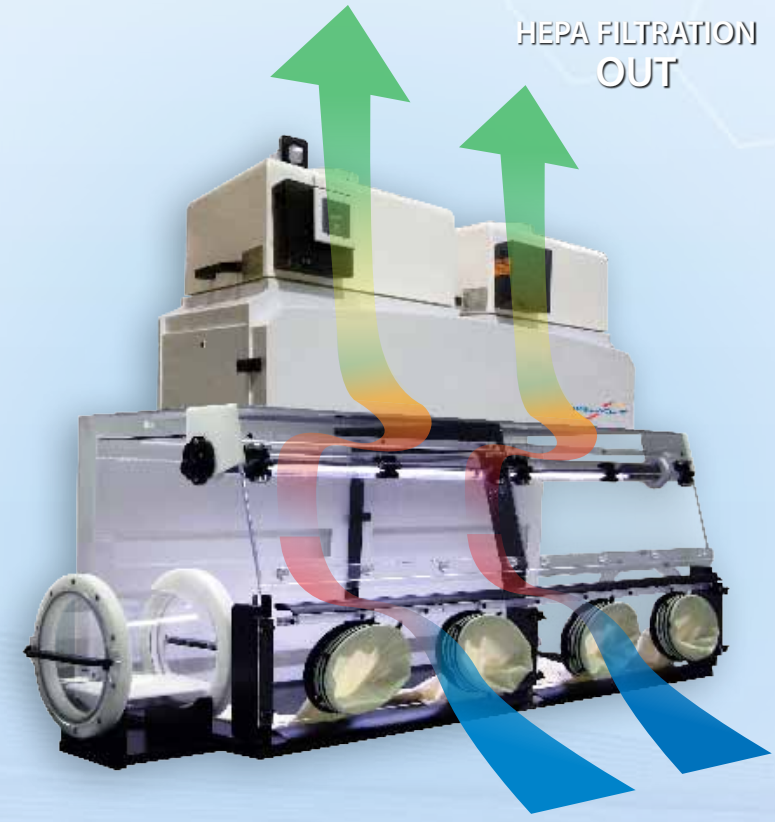


A Particle Trace shows the distribution of particulates as they travel to the back plenums of the enclosure, through the HEPA filters and out of the exhaust port.

The Hybrid Isolator is designed to protect workers from exposure to chemicals by fully encompassing equipment used by scientists during research and development, and manufacturing processes. The Isolator has been developed using Flow Sciences' expertise in Computational Fluid Dynamics (CFD) and can be designed and manufactured to fit the customer's needs.

Computational Fluid Dynamics

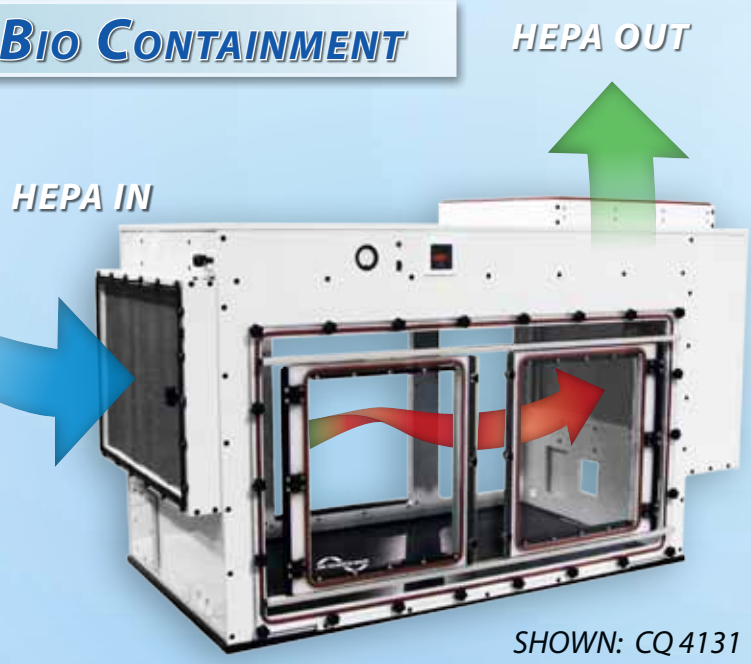
Air distributes evenly, without roll, across the HEPA filters and leaves through an adjustable speed fan with integrated alarm.



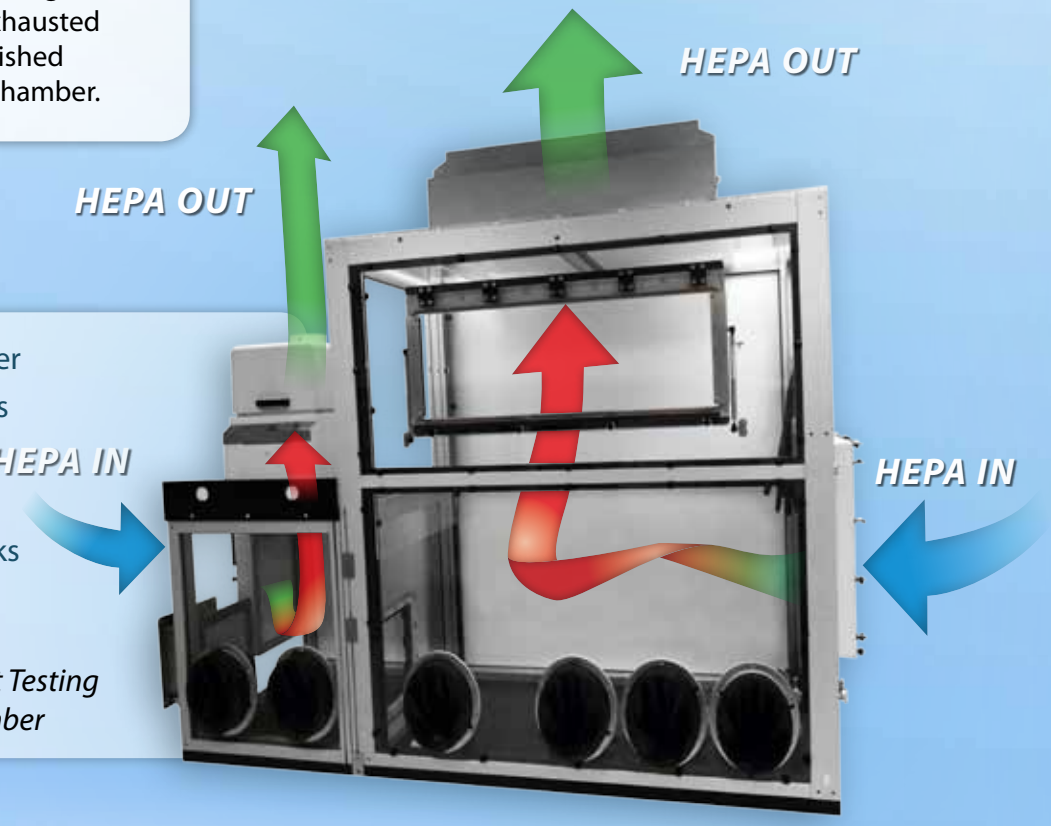
Blue indicates gentle, low velocity ambient room air entering over the air foils and being pulled across the work surface through the rear plenums.

LFBC Lateral Flow Bio Containment

The LFBC™ Lateral Flow Bio Containment system US Patent # 6,896,712 is A biohazard safety enclosure or workstation particularly adapted for enclosing automated instrumentation includes a chamber defined by front, back, top, bottom, and opposed walls; a HEPA filter across an air inlet opening into the chamber, and an airflow means to direct air horizontally through at least part of the chamber between the end walls. Preferably, the workstation has a second HEPA filter across an air outlet opening in the work chamber, with the airflow means including a conduit extending from the air outlet opening to the air inlet opening. A fan draws air through the conduit. Part of the filtered air is exhausted from the workstation and is replenished through a make up Inlet in to the chamber.



SHOWN: CQ 4131
Application: Laboratory Robot



- Stainless steel antechamber
- 16 " ergonomic glove ports
- HEPA filtration IN/OUT
- Pass Through Access
- Hinged Door w/ Gas Shocks

SHOWN: CQ 3959
Sealed Hybrid Isolator (SHI)
Application: Instron Impact Testing Enclosure with antechamber

Contact Us Today for Your Containment Solution

1-800-849-3429

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FLOW SCIENCES, INC.

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