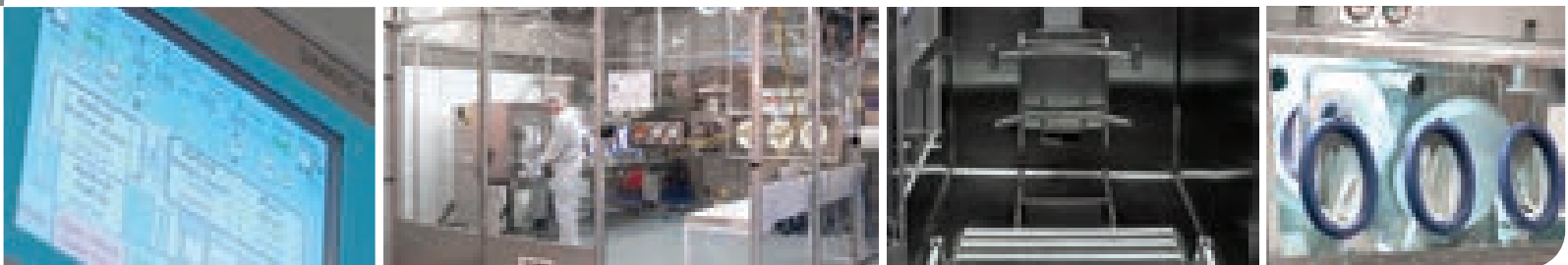




ENGINEERED CONTAINMENT SOLUTIONS

Containment Isolators



Extract Technology Rigid Containment Isolators have been designed for handling potent compounds that can offer guaranteed levels of operator protection as low as 10ng/m³ (task duration). These include designs for sampling, dispensing and sub-division, mixing, milling and vessel charging, as well as containing integrated process devices such as filter dryer units, tablet press enclosures, blenders, mills and pack off systems.

The Isolator is designed to not only provide a physical barrier between the operator and the product but to also provide a controlled environment, negatively pressurised with an atmospheric condition or a reduced oxygen content using an inert gas.

To maximize both operator and equipment interfaces 3D modelling and full scale mock-ups are used extensively to facilitate the best understanding possible of the pharmaceutical process and the operators involvement whilst ensuring high levels of containment are achieved.

Extract also offers installation, commissioning and IQ/OQ validation and containment testing by our fully trained engineers to ensure the system fully conforms to your requirements. To complete the package, our dedicated Aftersales department will supply total support.

Our sales and engineering staff will work closely with you to design the optimum system to meet your needs. Extract offers complete in-house design, engineering, fabrication and installation.

**FOR MORE INFORMATION ON CONTAINMENT ISOLATORS CALL
+44 (0) 1484 432 727 OR EMAIL info@extract-technology.com**



High Containment Isolators



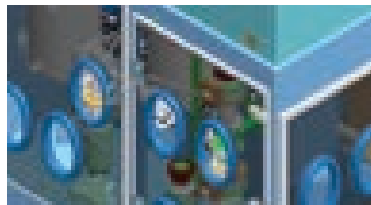
As a provider of total containment solutions we can tailor High Containment Isolators to your exact requirements. However, you will find a summary of some of our main features.

- Ergonomic design
- Extract Technology Pharmport™ Glove Port
- Multiple Chambers
- Drum/product manipulation devices
- Fully welded 316L stainless steel fabrication
- Inflatable seals
- 17mm radiused corners
- Safe change "push-push" filters
- Closed loop control system
- ATEX, CE, GAMP 5 and CFR 21 part 11 competent
- Integration of proprietary contained transfer detail e.g. RTP, SBV's etc
- Controlled environment re: temperature, humidity and oxygen content
- Fully integrated WIP/CIP clean systems including wash lances, rotary spray balls and solvent atomizing devices
- Raise/lower systems
- Dispensing equipment including scales, displays, printers and dispensing management systems.

www.extract-technology.com

Whatever else you look for in a high containment solution, you will want it to be proven, tested and guaranteed. Extract Technology's Isolator solutions deliver all these things and more.

1. Design



We generate conceptual designs based upon proven solutions, before finally compiling product specifications, standard operating procedures (SOPs) and working schematics (P&IDs).



2. Mock up

We can create full scale, fully-operating mock-ups which take into account ancillary equipment, manipulation devices and airflow / pressure regimes. The client review follows, at which stage any necessary modifications are made.

3. Manufacturing

Manufactured in high quality stainless or exotic alloy steels the Isolator fabrications are formed, welded and polished to exacting standards and client requirements within ISO 9001 operating procedures.

4. Factory Acceptance Testing

Only when the equipment is fully built and pre-commissioned to design parameters is it exposed to a range of tests and standard operating procedures (SOPs). These can include high volume dust in air monitoring, internal / external surface swabbing, standard dust in air monitoring, and full scale operational tests of performance, all being performed within our controlled test environment.

Comprehensive range of Containment Isolators



Dispensing and Sub-division

Extract Technology dispensing and sub-division Isolators are suitable for both large and small scale operations.

They provide operator, environment and product protection, and facilitate both the loading and unloading of products which require containment. They enable bulk and process container product transfer, feature integrated weighing systems, and afford low OEL protection. They are available in a range of versions, giving transfer from differing bulk containers into FIBCs, drums, process vessels, bags or liners.



Sampling Isolators

Extract Technology Sampling Isolators are ideal for use in warehouse or production areas. They provide low OEL protection and can be used in both positive and negative environments. A range of options are available, including contained sample removal and multi-chamber protection.

Charging and Formulation

Extract Technology Charging Isolators enable the manual charging of product by weight or volume.

Auto product feed to weight systems with contained bulk container load/unloading is possible for use on either same floor process or multi floor charging systems. You can choose from a number of product transfer configurations from a range of vessels into IBC's, FIBC's, drums, reactors, vessels, sacks or bags, all with the option of safe empty drum "bag out" removal system



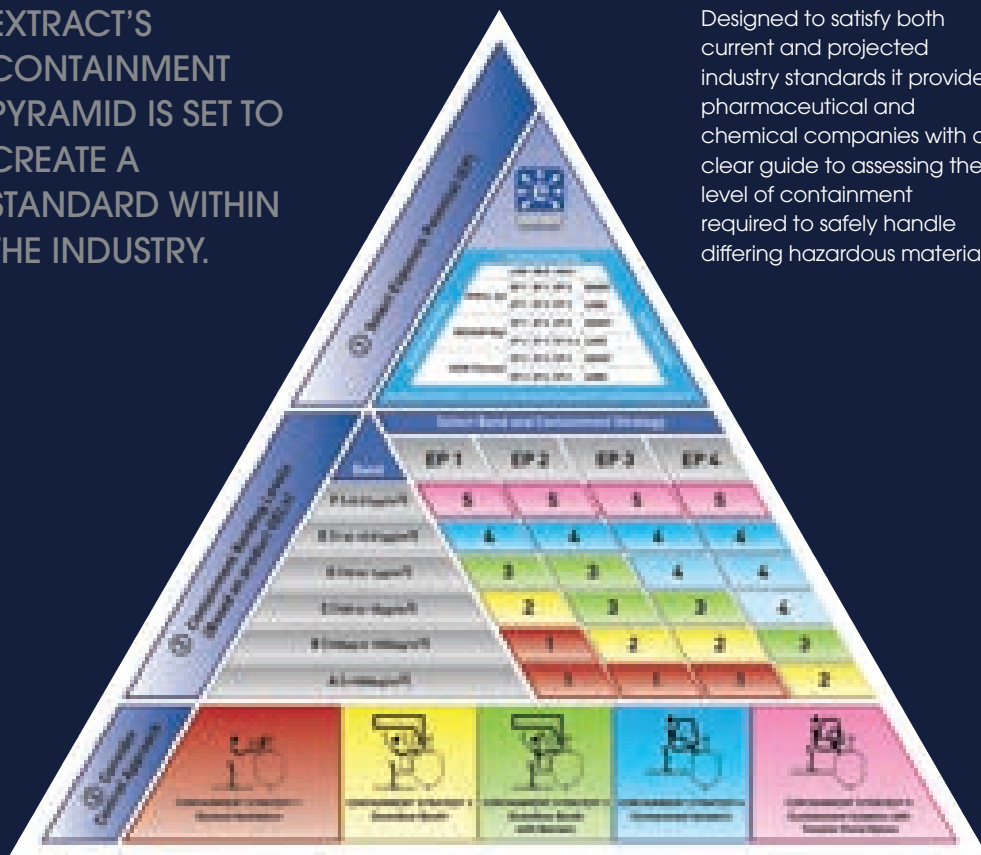
Process Offloading Isolators

Extracts Technology Pack Off Isolators allows you to precisely offload to weight, whilst providing product, operator and environment protection.

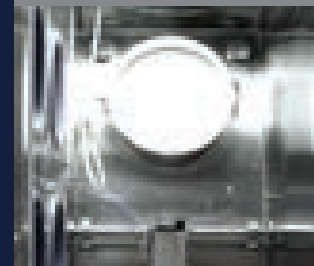
Creating a physical barrier between the operator and product these units are capable of handling some of the most potent pharmaceutical compounds. Two Chamber pack-off isolator's incorporate automated in-feed and out-feed conveyors, product control, inerting system and product sampler. Product pack-off Isolators accommodate multi drum sizes and continuous liner facilities.

The Control Strategy Pyramid

**EXTRACT'S
CONTAINMENT
PYRAMID IS SET TO
CREATE A
STANDARD WITHIN
THE INDUSTRY.**



Designed to satisfy both current and projected industry standards it provides pharmaceutical and chemical companies with a clear guide to assessing the level of containment required to safely handle differing hazardous materials.



DEFINING THE CONTROL STRATEGY

The selection grid at the heart of the Control Strategy Pyramid permits the exposure potential rating and operator exposure band to intersect at the recommended Control Strategy selection. This is a simple cross reference to identify the correct equipment to be used to control and handle a specific process.

Full turn key package including

Installation/ Commissioning

Every installation is conducted under full supervision by fully qualified, highly experienced Extract Technology engineers. Commissioning/validation services are undertaken, along with comprehensive operator training packages. Full test reports and IQ/OQ documentation can also be provided.

Optional Design Study Facility

Extract Technology offer a full design study service which allows the client to fully investigate all possible containment solutions with a minimum outlay. A typical design study involves a detailed site survey and process discussion to establish the full extent of the project. Next the engineering designs, specifications and costings are generated before a full on site presentation is undertaken. An additional option involves the construction of full working Isolator mock-ups for review by the client.



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