MACH-AIRE

Products and services for containment and clean air applications

Fume cupboards

Pharmaceutical Isolators

Downflow powder control booths

Clean rooms for NHS Pharmacy, Tissue Banks and industry

ACDP Containment laboratories

Modular clean rooms

Validation and testing

Microbiological safety cabinets

Horizontal and vertical laminar units

Specialised extract systems

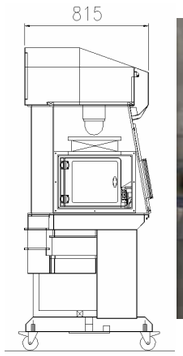
Clean room accessories

Design & consultancy

Full compliance with relevant national and international standards

TECHNICAL DATA

MODEL	INP-120(A)	INP-180(A)
EXTERNAL DIMENSIONS mm	1980X2005X815	2580X2005X815
INTERNAL DIMENSIONS mm	1000X700X600	1600X700X600
GLOVE PORT DIMENSIONS mm	300x250 OVAL	300X250 OVAL
WEIGHT (KGS)	190	240
TRANSFER HATCH CLASSIFICATION	TYPE “D”	TYPE “D”
TRANSFER HATCH DOOR OPENING DIMS.	300X275	300X275
FILTER EFFIECIENCY	HEPA H-14 99.999% AT 0.3 MICRON	HEPA H-14 99.999% AT 0.3 MICRON
NOISE LEVEL SPL dba	>57	>57
LIGHT LEVEL (LUX)	>1000	>1000
ELECTRICAL DETAILS	230V AC 50HZ 8 AMPS	230V AC 50HZ 10 AMPS

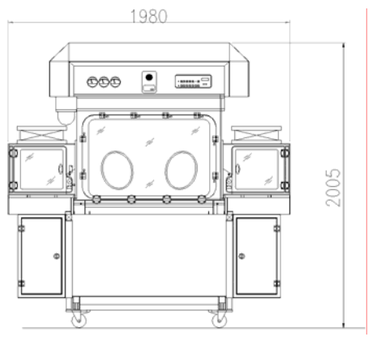


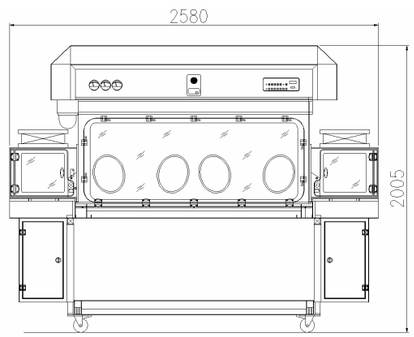
Standard Equipment

- Grade A Working Chamber
- Type D Transfer Hatches
- Transfer Hatch automatic interlocks / timers
- Side load / unload Transfer Hatch shelves
- Microprocessor based touch-type controls
- Constant visual displays of all critical functions
- Battery back up for alarms (AS / NZ 4273
- Splashproof electrical socket(s)
- Service ports

Optional Equipment

- Vari-lift Support Stand
- Closed Circuit Television System
- Handsfree Intercom
- Hanging bar and hooks
- Under Transfer hatch Storage Cupboards
- Extra Splashproof electrical socket outlets
- Service Valves, vacuum, air, etc.
- Glove / Sleeve Leak Test Kit
- Sealing lids for pressure decay tests
- Automatic Particle Counting System
- Vapourised hydrogen peroxide (VHP) gassing pipework





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DATA SHEET 713

MACH-AIRE

PHARMACEUTICAL ISOLATORS

RIGID,NEGATIVE PRESSURE PHARMACEUTICAL ISOLATOR

“Wherever there are cleanrooms and laboratories you will find Mach-Aire products playing an important role in the research and manufacturing programmes of the worlds largest companies and institutions.

Our capabilities, whether in technology, design, safety of operation, construction or service are also fully at your disposal”.

FEATURES

- Operator protection
- Product protection
- Environmental protection
- Slanted front window
- All round vision
- Ergonomic design
- Independent fumigation of transfer hatches and chamber

APPLICATIONS

- NHS Hospital Pharmacy
- Dispensing of toxic medicines
- Radiopharmaceutical dispensing
- Cytotoxic dispensing
- Blood products
- Toxic powder weighing

Standards Compliance according to

- BS EN ISO 14644.7 20004 SEPARATIVE DEVICES
- EC GMP Grade “A” Laminar Flow
- EN 61010 Electrical Wiring
- BS EN ISO 14644.1 Class 5

New Generation Pharmaceutical Isolators

FOR THE NEW CENTURY’S SCIENTIST

DATA SHEET 713

MACH-AIRE

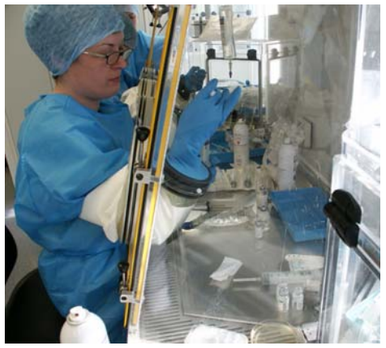
The INP Series Isolators working chamber is a unique acrylic / stainless steel fabrication for effective product placement and ease of working operations (as compared to standard square box shaped, enclosed chamber isolators). Its slightly angled sloping front and diffused lighting 'open vision' chamber and transfer hatches, 'membrane-booted-safe-change' lower primary H.E.P.A. filter, combined with Q.C. visual monitoring and recording using the digital closed circuit television (C.C.T.V.) system and hands free intercom speech communication – gives the MACH-AIRE INP Series Isolator many unique features over its competitors.

The working chamber is from a polished acrylic panel. The front hinged visor is also from polished acrylic. (Acrylic combines a variety of qualities including excellent appearance, rigidity, good stability to light and heat, and outstanding clarity. Also it is non-toxic, resistant to corrosion and weathering and has good electrical properties.)

The Isolator working surface (with raised lip for containment of any spillage) and sided peripheral air velocity slots and sump area below is fabricated from 316 quality stainless steel which is internally polished to a 240 grit satin brush finish.

The front acrylic visor is bottom hinged allowing downwards opening giving total unobstructed access into the chamber. The visor is compression (mechanical) sealed to the chamber via multiple compression latches manufactured from stainless steel. Oval or circular arm ports are sealed into the viewing panel.

'Lock-on/screw off' service ports (40mm dia.), one in each of the transfer hatches and one into the chamber, are provided. Particle monitoring / other cabling or external nozzles can be adapted to suit these ports. Splashproof IP56 13amp (1ph.) electrical socket(s) are positioned on the back wall of the Isolator as standard.



The first MACH-AIRE Cytotoxic Isolator integrating a digital colour C.C.T.V. camera complete with remote zoom / focus etc. controls and monitor(s) was installed in February 1998. Since then the C.C.T.V. system has been further improved and now incorporates a fully programmable, computer compatible eyeball "intelligent camera". Up to 8 cameras, each with a maximum of 64 pre-set positions per camera can be linked into a single control unit.

All materials and components used within both the MACH-AIRE INP Series Isolators are in compliance with current Standards and Codes of Practice, and are strictly controlled under the quality assurance systems implemented through MACH-AIRE LTD's BS.EN.ISO:2000 registration.

Design Superiority

The overall "open aspect" design of the INP Isolator with strategic positioning of mechanical and electronic equipment, linked with the safechange design for the gross contaminated primary H.E.P.A. filter provides the pharmacist with a stand alone, Isolator un-equalled on today's market for safe aseptic reconstruction and preparation of both hazardous and non-hazardous sterile products.

A Type 2 Isolator is designed to protect the product from process-generated and external factors that would compromise its quality and to protect the operator from hazards associated with the product during operation and in the event of failure. A stainless steel (moveable) hanging bar with shaped hooks is positioned below the H.E.P.A. filter in the working chamber (optional item).

Fan / Filter Chambers

The Isolator fan/filter chambers and front hinged controls facia panel are all from corrosion resistant 'zintec' zinc coated sheet steel with polyester coated (inside and outside) surface, texture finished. All internal surfaces and internal components are capable of withstanding gaseous disinfection or sterilisation and usual disinfectants.

Ease of operation

The Mach-Aire Model ICT-180 (A) and INP-120 (A) Type 2 (Negative Pressure) Isolators are a high quality product made to an ergonomic design that is both user friendly and efficiently functional.

Easy Working Space

The working area is well lit with easy access to the transfer chambers. The stainless steel working surface is dished to cope with leaks of fluids.

The working chamber can be remotely visually monitored from outside by a joystick operated high resolution camera mounted outside the chamber for checking labels, batch numbers, checking by responsible person, operator technique, training etc. Additionally VCR or disk recording is available.

Transfer Chambers

The two 'open aspect' transfer hatches are manufactured from polished acrylic and stainless steel similar to the working chamber. Both hatches are fitted with electro-magnetically 'INTERLOCKED' and 'TIMED' double doors. The transfer hatches are maintained at a lower differential pressure to the working chamber, therefore the airflow influence will when the inner door is opened be into the hatch and away the working chamber.

Filters

All H.E.P.A. filters are H14 and of the minipleat design with a minimum efficiency of 99.999% of all particles over 0.3 microns.

The primary H.E.P.A. filter located directly below the sump is uniquely supplied with an integral 'safe change' flexible skirt, which connects directly on to the sump upstand. Upon H.E.P.A. change over all contamination is sealed in the H.E.P.A. envelope which is then disposed of complete with skirt and compression strip.

Progressive density synthetic pre-filter panels are mounted upstream of the transfer hatch H.E.P.A. filters.

Support Stand

The support stand is manufactured from a welded mild steel box section 38mm x 38mm which is polyester coated. Lockable castors are fitted for mobility.

Storage Cupboards and Work Tops

Below each transfer hatch can be fitted (optional) a lockable storage cupboard with internal removable stainless steel shelves. Purpose shaped phenolic resin load/unload worktops are located to the front of each transfer hatch outer door as standard.

Gauntlets

All gauntlet sleeves are 'tailored' and manufactured from a double skinned construction of p.v.c. and polyester materials giving comfort and impermeability to aerosols, etc. The gauntlet sleeves have a unique visual indication of any leak in either the outer of inner skin

Cuff rings are designed for safe aseptic glove change techniques, which does not compromise the internal chamber integrity.

These items, an additional cost item on competitors isolators are standard equipment on Mach-Aire isolators