

# MIP SERIES

SHIELDED CELLS FOR SYNTHESIS AND RESEARCH



FLEXIBLE / VERSATILE / SAFE



an  company

# MIP SERIES

## SHIELDED CELLS FOR SYNTHESIS AND RESEARCH

The MIP series of shielded hot cells is designed to host **automatic modules for routine production or research equipment of radioisotopes and radiopharmaceuticals for experimental use.**

The MIP shielded isolator is available in two sizes: 1100 mm and 1390 mm (work chamber width).

- Modular design and flexible configuration
- Available in Pb 75 or 100 mm shielding
- 7" touch-screen operator panel to check and trace the critical parameters of the machine both in "at rest" or "in operation" mode
- Air quality complies with Class B "At rest" (EEC-cGMP)
- Airtight connections for radioactive fluids
- Fluid supply lines made of AISI 316L stainless steel with ball shut-off valves
- DOP test connections (filter leakage test)
- Product extraction system (Drawing System).



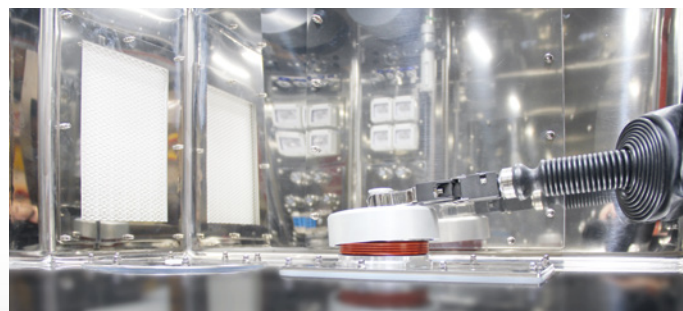
The cell is shielded on all sides with 75 mm or 100 mm thick lead.

Shielded door with lead glass window. The working area is made of AISI 316L stainless steel with Mirror-Bright surface finishing.

Turbulent flow internal ventilation kept in continuous negative pressure. Perfect door closing is ensured by a system of inflatable gaskets placed around the door's perimeter.

The MIP cell is equipped with Comecer Drawing System, allowing the extraction of the vial without opening the cell, ensuring safe conditions for the operator.

The cell's standard equipment also includes a technical lower compartment with electrical sockets, a manual tele-plier for moving the objects from outside, a shielded ion chamber compartment, connected with the working area, where the isotope vials can be calibrated using a pneumatic elevator.



### Main features

- Right side tele-pliers to handle the vial from the work area to the extraction system and dose calibrator
- Preparation and installation of two tele-manipulators
- Preparation and installation of the side autoclave (which can be reached with the tele-manipulator)
- Dose calibrator compartment equipped with pneumatic elevator
- Product extraction system in shielded container by means of specific drawer. Extraction occurs by means of an airlock system with an automatic double valve separation
- Hinged or sliding front door equipped with a large shielded glass. In the case of the hinged door, it is equipped with hand passage doors for hot manipulation
- Set up for side material passage chamber (side airlock), shielded or non-shielded, with air quality complying with Class B "At rest" (EEC-cGMP) and equipped with manipulation gloves
- Set up for side shielded sliding door, which is automatically controlled, between the material introduction chamber and dispensing chamber
- An inflatable gasket system, placed on the perimeter of the openings, seals the chambers.
- Air outlet filtration system made with active carbon filtering cartridge.
- Air inlet filtration system made with HEPA absolute filtering cartridge with 99.995% efficiency.
- Set-up for the Geiger probes for measurement of the radioactivity present inside the cell
- Lower technical compartment with electrical sockets and sealed cable entry
- Set-up for contaminated air containment systems (ACS)
- Set-up for automatic leak test

The MIP series enables you to host large sized automatic synthesis modules or complex equipment (such as HPLC).

It has suitable shielding for isotopes with very energetic gamma emissions.

It is possible to install tele-manipulators and a side autoclave to sterilise the product, which makes this cell ideal for advanced research.

The system complies with the cGMP guidelines.



## MAIN FEATURES

The machine is available in different equipment lines to fulfil any requirement.

Main equipment	Models													
	MIP-1100-75-1P-HD	MIP-1100-75-1P-HD AND HAND DOORS	MIP-1100-75-1P SLIDING	MIP-1390-75-1P-HD	MIP-1390-75-1P SLIDING	MIP-1100-100-1P-HD	MIP-1390-100-1P-HD	MIP-1100-75-1P-HD UNSHIELDED PC SX	MIP-1390-75-1P-HD UNSHIELDED PC SX	MIP-1390-75-1P-HD SHIELDED PC SX	MIP-1390-75-1P SLIDING SHIELDED PC SX	MIP-1390-75-1P-HD AUTOCLAVE	MIP-1390-75-1P SLIDING AUTOCLAVE	
Shielding (mm Pb)	75	75	75	75	75	100	100	75	75	75	75	75	75	
Width of the working chamber (mm)	1100	1100	1100	1390	1390	1100	1390	1100	1390	1390	1390	1390	1390	
Type of door	Hinged	Hinged	Motorised sliding	Hinged	Motorised sliding	Hinged	Hinged	Hinged	Hinged	Hinged	Motorised sliding	Hinged	Motorised sliding	
Hand doors passage	-	S	-	-	-	-	-	-	-	-	-	-	-	
NOT shielded pre-chamber	-	-	-	-	-	-	-	S	S	-	-	-	-	
Shielded pre-chamber	-	-	-	-	-	-	-	-	-	S	S	-	-	
Drawing System	S	S	S	S	S	S	S	S	S	S	S	S	S	
Autoclave	-	-	-	-	-	-	-	-	-	-	-	S	S	
Dose calibrator	O	O	O	O	O	O	O	O	O	O	O	O	O	
Smart Geiger (internal environmental monitoring system)	O	O	O	O	O	O	O	O	O	O	O	O	O	
Tele-pliers	S	S	S	S	S	S	S	S	S	S	S	S	S	
Led bulb lighting	S	S	S	S	S	S	S	S	S	S	S	S	S	
Notebook support	S	S	S	S	S	S	S	S	S	S	S	S	S	
Light column signalling machine status	S	S	S	S	S	S	S	S	S	S	S	S	S	
Internal connections for technical gases	S	S	S	S	S	S	S	S	S	S	S	S	S	
Internal inlets for radiofluid capillaries	S	S	S	S	S	S	S	S	S	S	S	S	S	
Sealed cable input	S	S	S	S	S	S	S	S	S	S	S	S	S	

S= Standard; O= Option; R= On customer request

## Technical data

External casing material		AISI 304 - Scotch-Brite™
Working chamber material		AISI 316L - Mirror-Bright
Shielding (Pb)	mm	75 ÷ 100
Weight	kg	MIP-1100-1SP-75: 9500 MIP-1390-1SP-75: 11500
Working chamber internal dimensions	mm	MIP-1100: 1116 x 860 x 985 (w x d x h) MIP-1390: 1390 x 850 x 1259 (w x d x h)
External dimensions	mm	MIP-1100: 1370 x 1280 x 2400 (w x d x h) MIP-1390: 1644 x 1280 x 2600 (w x d x h)



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