

# MIP-LAF SERIES

## CLASS A SHIELDED ISOLATORS FOR RESEARCH ACTIVITIES



- ✓ Total work area width of 1390 mm
- ✓ Work chamber with air quality conforming to Class A "At rest" (EEC-cGMP)
- ✓ Tele-pliers to handle the vial
- ✓ Dose calibrator compartment equipped with pneumatic elevator
- ✓ Product extraction system in shielded container by means of specific drawer

The series of MIP-LAF hot cells is specially designed to house various dispensing system and radiochemistry modules. The MIP-LAF shielded isolator is provided with laminar flow area for aseptic operation in compliance with cGMP.

The hot cell can be provided with several accessories such as the possibility of installing several models of telemanipulator, lateral autoclave and shielded or not shielded pre-chamber.

Laminar flow and 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-LAF cell is equipped with Comecer Drawing System, allowing the extraction of the vial without opening the cell, ensuring safe conditions for the operator, and with a shielded waste compartment.

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.

The series has been designed to guarantee radioprotection to the operator and the utmost decontamination and cleaning procedures effectiveness. The work chamber is sealed, shielded on every side and kept under negative pressure.

### Features and Benefits

- Possibility of installing two tele-manipulators
- Possibility of installing side autoclave (which can be reached with the tele-manipulator)
- 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
- Shielded chambers under constant negative pressure
- Filtration system to generate laminar flow in the Class A chamber, made with HEPA H14 absolute filtering cartridge
- Air inlet filtration system made with HEPA H14 absolute filtering cartridge
- Air outlet filtration system made with active carbon filtering cartridge
- Possibility of installing a Geiger-Muller probe to detect radioactivity inside the cell and door interlock management
- Possibility of installing ventilation isolation valves and connection to hydrogen peroxide solution generators (AVC LIGHT) for the dispensing chamber and the material introduction chamber
- Possibility of installing a system for automatic leak tests

**Equipment lines**

The machine is available in different equipment lines to fulfil the requirements of any production centre.

Main equipment	Models													
	MIP LAF 1390 75 1P HD	MIP LAF 1390 75 1P HD HAND PORTS	MIP LAF 1390 75 1P SLIDING	MIP LAF 1390 75 1P HD WITH SOLID WASTE	MIP LAF 1390 75 1P HD HAND PORTS WITH SOLID WASTE	MIP LAF 1390 75 1P HD AUTOCLAVE WITH SOLID WASTE	MIP LAF 1390 75 1P HD WITH SOLID WASTE AND UNSHIELDED PRECHAMBER	MIP LAF 1390 75 1P HD HAND PORTS WITH SOLID WASTE AND UNSHIELDED PRECHAMBER	MIP LAF 1390 75 1P HD AUTOCLAVE WITH SOLID WASTE AND UNSHIELDED PRECHAMBER	MIP LAF 1390 75 1P HD WITH SOLID WASTE AND SHIELDED PRECHAMBER	MIP LAF 1390 75 1P SLIDING WITH SOLID WASTE	MIP LAF 1390 75 1P SLIDING WITH SOLID WASTE AND UNSHIELDED PRECHAMBER	MIP LAF 1390 75 1P SLIDING WITH SHIELDED PRECHAMBER	MIP LAF 1390 75 1P SLIDING WITH SOLID WASTE AND SHIELDED PRECHAMBER
Type of door	Hinged	Hinged	Motorised sliding	Hinged	Hinged	Hinged	Hinged	Hinged	Hinged	Hinged	Motorised sliding	Motorised sliding	Motorised sliding	Motorised sliding
Hand doors passage	-	S	-	-	S	-	-	S	-	-	-	-	-	-
NOT shielded pre-chamber	-	-	-	-	-	-	S	S	S	-	-	S	-	-
Shielded pre-chamber	-	-	-	-	-	-	-	-	-	S	-	-	S	-
Drawing System	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Autoclave	-	-	-	-	-	S	-	-	S	-	-	-	-	-
Solid waste compartment	-	-	-	S	S	S	S	S	S	S	S	S	-	S
Dose calibrator	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smart Geiger (internal environmental monitoring system)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

S= Standard; 0= Option; R= Configurable when placing order

**Technical data**

Support frame material		Carbon steel treated with epoxy paints
External casing material		AISI 304 - Scotch-Brite™
Working chamber material		AISI 316L - Mirror-Bright
Lead purity	Title	Pb 98% + Sb 2%
Electrical panel protection rating	IP	54
Shielding (Pb)	mm	75
Shielded glass window dimensions	mm	270 x 270 (w x h)
Weight	kg	13500
Working chamber internal dimensions	mm	1390 x 848 x 1250 (w x d x h)
External dimensions (without pre-chamber)	mm	1644 x 1435 x 2995 (w x d x h)

**Ventilation and Filters**

Main chamber	Air classification: Class "A" with laminar flow (LAF) Air inlet: H14 absolute filter Air outlet: active carbon filter Air flow rate: 240 m <sup>3</sup> /h
Side pre-chamber (if applicable)	Air classification: Class "B" Air inlet: H14 absolute filter UNSHIELDED PRECHAMBER air outlet: absolute filter H14 SHIELDED PRECHAMBER air outlet: active carbon filter Air flow rate: 7 m <sup>3</sup> /h

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