

# NMC PRI

## NUCLEAR MEDICINE HOT CELL



Specifically designed to accomplish the latest GMP guidelines for the preparation of gamma and beta radiopharmaceuticals, the NMC PRI is a GMP grade A hot cell, with a GMP grade B pre-chambers. Equipped with a Laminar Air Flow on the total working surface and inflatable seals. Its large inner room and specific equipment make the NMC PRI a remarkably flexible working instrument for many applications.

The flexibility of the **NMC PRI** is enhanced by different shielding configuration options:

Models	Lead mm	Plexiglass mm	Typical Application	Emitter Type
NMC PRI 30	30	-	High energy SPECT	Y
NMC PRI 30-10	30	10 under the stainless steel	High energy SPECT	Y, B
NMC PRI 30-20In	30	20 internally covering "at sight" the main working area		Y, B
NMC PRI 50	50		PET (511 KeV)	Y
NMC PRI 50-20In	50	20 internally covering "at sight" the main working area	High energy PET SPECT	Y, B

The working area (**Image 1**) is made of AISI316L stainless steel, Mirror Brite finishing. All bending and corners have a radius of 12mm for easy cleaning operations. The welding are polished and smooth to avoid any liquid penetration. The work floor has raised edges to prevent any leakage of accidentally spilled liquid. The ventilation, vertical Laminar Air Flow type, grants a GMP grade A air quality. The n. 2 pre-chambers are equipped with a ventilation system which grants a GMP grade B air quality. **NMC PRI** is fully GMP compliant and the operator has a large variety of possibilities, thanks to its equipment:

- N. 2 pre-chambers
- Dose calibrator shielded area
- U.V. antibacterial lamp
- N. 2 gloves
- N. 2 waste containers
- Main double door: Shielded and Polycarbonate

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High tech, high care

## DIMENSIONS

- External dimensions: 1.430(w) x 920(d) x 2.480(h) mm
- Internal dimensions: 1.200(w) x 590(d) x 730(h) mm

## SHIELDING

- Lead and Plexiglass can be mounted in different combinations: please check the table on the front side. The Plexiglass is behind the stainless steel box of the working area.
- Dose calibrator area: 30 mm Pb (Pos. 1, 2) and 50 mm Pb for Pos. 3
- OPTION:** - The Plexiglass can be mounted "at sight": the stainless steel box will be behind it. Internal dimensions 1.180(w) x 570(d) x 720(h) mm

## INTERNAL VIEW

- Lead glass windows 400(w) x 250(h) x 30 or 50 mm Pb Eq. Mounted on the central position of the main door
- N. 2 LED lights

## ACTIVE SAFETIES

- AIS: GM tube for door interlock system that prevents the main door opening when the activity level inside the cell overcomes the alarm threshold (the threshold can be set by the operator)
- Software control for cell parameters (negative pressure, filter clogging, ventilation status, UV light timer, etc.)
- N. 1 manometer for continuous pressure status visualization (**Image 7**)
- N. 1 U.V. antibacterial lamp
- OPTION** - CES: GM tube continuous radiation monitor on hot cell exhaust air, to control the radioactive gas release, via closure of inlet and outlet ducts until a complete decay

## VENTILATION

- Working area air quality classification: GMP grade A
- Inlet filter: HEPA H13
- Outlet filter: HEPA H13 + active charcoal
- Laminar Air Flow on complete surface
- Main filter: HEPA H14
- N.2 pre-chambers air quality classification: GMP grade B

## AIR-TIGHT

- The inflatable seals grant a Class II air tightness (ISO 10648:2). This feature classifies the hot cell to the range of an isolator

## EQUIPMENT

- Main double door: Shielded door for radioprotection and Polycarbonate door for air-tight and gloves mounting. The 2 doors are independent and open separately
- N. 1 pre-chamber for Tc99 generator carousel housing. The carousel can house n. 4 round-shape or n. 2 square-shape generators (**Images 2 and 4**).
- N. 1 pre-chamber for disposable and syringes introduction/extraction (**Image 5**)
- **Operator Panel Touch Screen PC:** operator software interface for handling, system control, data saving and display, **data traceability GMP compliant (Image 5)**
- N.2 gloves fixed on the Polycarbonate door (**Image 6**)
- Dose calibrator shielded area
- N. 2 waste bins: capacity 5 lt. each (**Image 3**)
- Multi diameter sealed pass-through system (Roxtec) for cables
- Special stainless steel flange with air-tight passages for capillaries and technical gases
- Arm-tray to support laptop and/or dose calibrator control unit (**Image 6**)
- The carousel can be replaced by a lift system for lead pot housing. Generally used as a FDG transport container, the system is also suitable for other applications
- OPTION:** -  $\mu$ DDS-A automatic dispenser
  - Lateral Class B pharmaceutical pre-chamber

## EXTERNAL FINISHING

- External finishing in AISI 304 Stainless Steel, Scotch Brite finishing, from floor to 2.480 (h) mm on the front, left and right sides.
- OPTION:** - The external finishing in AISI 304 Stainless Steel can be extended until the contact to the false ceiling

# NMC PRI

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1



2



3



4



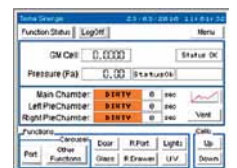
5



6



7



8

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