The DHC hot cell is a **GMP grade A shielded isolator**, with vertical laminar flow over the complete working area, dedicated to the dispensing of radiopharmaceutical: it is designed for the automatic and manual preparation of radiopharmaceuticals in a large controlled and safe environment.

The hot cell is fully managed by the Operator Panel touch screen PC which controls all the operations and the events taking place. This unique feature provides the total data saving and traceability required by the GMP (data traceability).

**Main equipments:**
- predisposition for n. 2 telemanipulators
- n. 1 air-tight, shielded and vented pre-chamber (double door drawer)
- extraction systems for vials and/or syringes with shielded container retrieval, in the front or lateral sides
- integrated shielded area for dose calibrator
- front shielded door with Lead glass window
- polycarbonate internal door with gloves for air-tightness, maintenance and cleaning
- n. 1 cabinet for PCM housing (option)
- n. 1 shielded and vented waste area (8 lt), accessible from the back of the cell (option)

The DHC is equipped with **inflatable seals** to grant air tightness Class II (ISO 10648:2)

The **manual dispensing** can be carried out by the use of telemanipulators

The **automatic dispensing** can be performed through:
- µDDS-A automatic vials and syringes dispenser *(Class 1m medical device - CE 0476)*
- CRP vials dispenser

<table>
<thead>
<tr>
<th>Model</th>
<th>Shielding Pb mm</th>
<th>Typical Application</th>
<th>Weight Kg</th>
<th>Emitter Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHC</td>
<td>75</td>
<td>Vials and/or syringes dispensing</td>
<td>15.500</td>
<td>Y</td>
</tr>
</tbody>
</table>
**DHC Dispensing Hot Cell**

**Dimensions**
- External dimensions: 1,540(w) x 1,490(d) x 3,030(h) mm
- Internal dimensions: 1,280(w) x 930(d) x 1,160(h) mm

**Shielding**
- 75 mm Pb

**Internal view**
- N. 1 lead glass window 350(w) x 350(h) mm x 75 mm Pb Eq.
- N. 2 neon white-lights (IP 54) > 500 Lux each

**Active Safeties**
- DPC: the ventilation system, controlling electronically n.2 fans, keeps constant both the pressure inside the hot cell and the air exchange, independently from building HVAC and filter clogging, and even in cases of: non efficient internal leak tightness - breaking of the gloves - breaking of the teletong booting
- 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 of the environmental parameters of the cell (internal pressure, filter clogging, ventilation status, etc.)
- N. 1 manometer for continuous pressure status visualization

**Shielding**
- 75 mm Pb

**Ventilation**
- Internal 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: ULPA U15
- N. 1 pre-chamber 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

**Equipments**
- Predisposition for n. 2 telemanipulators (Image 1)
- Main double door: shielded door for radioprotection and polycarbonate door with gloves for air-tightness. The 2 doors are independent and open separately
- Operator Panel Touch Screen PC: operator software interface for operations handling, system control, data saving and display, GMP compliant data traceability (Image 3)
- N. 1 air-tight, shielded and vented pre-chamber
- Extraction systems for vials and/or syringes, with shielded container retrieval in the front or lateral sides packing room (Image 5)
- Multi diameter sealed pass-through system (Roxtec) for capillaries, cables and technical gas

**External**
- Arm-tray to support laptop and/or dose calibrator read-out unit
- µDDS-A automatic dispenser
- CRP vial dispenser
- Dose calibrator automatic up/down elevator
- AIS GM tube (for door interlock) connection to the area monitor net “ENVIRO”
- GMP monitor - External PC for audit trail and alarm log file, saving into uncorruptible files (Image 4)
- N. 1 cabinet for PCM housing
- N. 1 shielded and vented waste area (8 lt), accessible from the back of the cell

**External finishing**
- External finishing in AISI 304 Stainless Steel, Scotch Brite finishing, from floor to top of the hot cell 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
- PWI: Pharmaceutical Wall Integration for clean room classified radio pharmacy. The hot cell can be integrated to the clean room wall granting a perfect air-tight separation from back side, not classified, to front side, classified