SHIELDED INJECTION SYSTEM FOR THERANOSTIC PRODUCTS





Theranojet® ARA is a shielded injection system designed for the radiation protected intravenous administration of radiopharmaceutical drugs for Targeted **Radiation Therapy (TRT)** labelled in particular with <sup>177</sup>Lu. This singledose shielded injection system can be extended to other uses such as other uses such as alpha therapy, and some diagnostic protocols.

Lightweight, mobile and versatile, the shielded injection system Theranojet®ARA allows to safely load radiopharmaceuticals, using a removable shielded container, facilitating transport and connection to the vial.

Designed for optimal radiation protection, Theranojet® ARA limits the risk of contamination to a minimum, guaranteeing medical staff complete safety during injection. It prevents any risk of extravasation or the injection or air bubbles, thanks to its secure, configurable pump that guarantees flexibility according to the different protocols used.

This **lightweight** unit with 4 double castors, is easy to handle and move around. Its two side handles allows it to be moved effortlessly to carry patient doses to the injection cubicles.

It is made entirely of stainless steel, and includes a removable containment tray, allowing for simple and quick disinfection and decontamination, when required, without altering the injection unit's components.



# FOCUS

**Bag holders [1]** are designed to received NaCl (or amino acid) bags and facilitate dose dilution as well as tube rinsing.

The support [2] and vial shield [3] enable the vial to be turned over, ensuring that all the content is fully administered. This system, secured by a sterile transfer device, reduces the risk of contamination and needle-stick injuries by facilitating the set up and the decay of the vial at the end of the injection unlike the use of needles which requires risky handling.



The removable containment tray [4] makes it possible to contain the radio-pharmaceutical in the event of a possible connection problem. Since the tray can be removed, this makes disinfection and decontamination easier.

The pump [5] with its adjustable screen, ensures that the drug is injected in a configurable, secure way and is also used to rinse the connection to the vial. It self-manages the detection of occlusions and air bubbles. The two channels of the pump enable the progressive injection of the radiopharmaceutical with optimal operator radiation protection.

The side handles [6] make it easy to guide the device. It has a large gripping area that can be adjusted to the height of the healthcare personnel.

**The 4 castor wheels [7]** make it easy to move the device. It is possible to lock the wheels to ensure that the device cannot be moved.

The protection screen [8] and the protection housing [9] protects the user during the injection. The transparency of leaded organic glass makes the tubing and the retention area visible throughout the operation. Access to the pump is secure for rinsing the connection to the vial.



## CHARACTERISTICS

#### General

External dimensions (with serum rod):

L 712 x D 759 x H 1 760 mm

#### Shielding thickness:

Transparent organic screen: 0.5 mm of lead eq.

#### Component parts:

- Dual-pouch serum rod
- Rotating vial shield support
- Pump
- Mobile frame
- Protective screen (Transparent organic screen dim.: L 220 x H 170 mm)
- 2 castor wheels
- 2 castor wheels with brakes
- Injection kit support

#### Material:

- 304L stainless steel frame and serum rod

Weight: 86 kg

#### **Shielded vial shield**

**Shielding thickness:** 21,5 mm lead glass and 7 mm of lead

Vial volume: 30 mL

Weight of the vial shield with its cap:

3.9 kg

#### **Radiation protection**

Maximum radioactivity that can be handled to obtain a dose rate less than  $100\mu Sv/h$  at 5 cm from the walls\*

100μ3V/II at 3 cm from the watts	
Radionuclides	Activity
<sup>177</sup> Lu	7400 MBq
Dackage	

#### Package

Package dimensions:

L 850 x D 850 x H 1,900 mm

Package weigh: 150 kg

Ref. Theranojet®ARA: 00050009

Ref. Additional vial shield: 00050036

\*Regulations in ASN Guide No.°32 "In vivo nuclear medicine facilities: minimum technical rules for design, operation and maintenance"

### **EFFECTIVE DIMENSIONS (mm)**



