

Patented system avoiding unexploited rests of expensive active solution in the vial thus saving considerable amount of money! The very efficient patented system reduces secondary costs to a minimum as well as the whole time needed for manipulation. You save money and you have better irradiation protection at the same time. You do not need a big hot cell with 50mm Pb shielding to prepare doses for patients! The Lynax batching unit is the most compact one and does not need any additional shield.

The only automatic dispensing unit that does not need any heavily shielded working cell! Original patented system avoids unshielded manipulations with FDG.

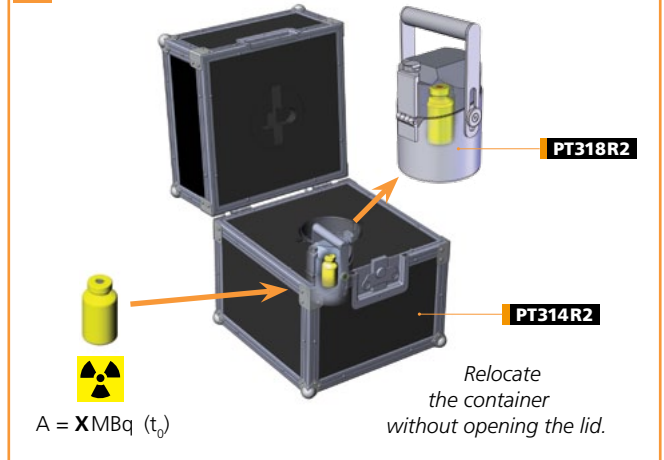
1

The activity is transported from the laboratory to the NM department inside the Packaging set Type A for transport of radioactive solutions **PT314R2**. It consists of the outer case and the inner tungsten container **PT318R2**. The packaging set is located next to the working place. It is a laminar flow cell or just a simple workbench where the Automatic batching and measuring device **PT317R3** is located. The lead castle is not necessary while working with the device **PT317R3**.

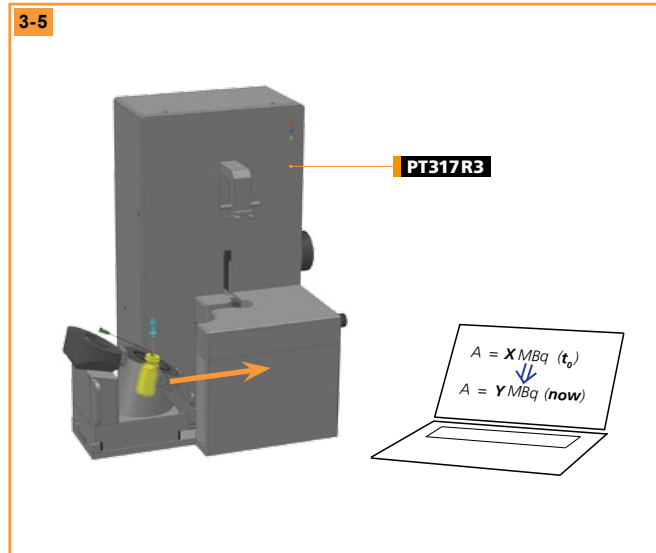
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The inner tungsten container **PT318R2** with 28mm of W is taken out of the outer case and without opening the lid transported into the socket of the Automatic batching and measuring device **PT317R3**.

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The lid of the **PT318R2** is open manually and two needles are introduced into the vial - a breathing needle (bent) and a suction needle. The vial being in a slanted position the edge of the suction needle comes exactly into the lowest inner point of the vial. This patented configuration avoids the rests. The container **PT318R2** now with two needles introduced into the rubber lid of the vial is subsequently plugged into the body of the batching device **PT317R3**. The cone (head) of the needle comes exactly between the fastening jaws of the chucking head and is fixed manually by a screw. The value of the activity in the vial and the respective time must be entered into the daily program of the control computer.

4

The activity of FDG in the vial is being calculated by the control computer during the batching procedure. The value of the activity remaining in the vial shows the display of the control computer continuously.

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The device is now prepared for withdrawing the radioactive solution into the syringe. The whole procedure has been made without extracting the vial from the shielding container **PT318R2** which is a component part of the Packaging set Type A **PT314R2** and for the procedure of batching becomes also a part of the Batching and measuring device **PT317R3**.

6

The syringe (Braun OMNIFIX) inside the tungsten shielding **PT358R5** or **PT359R5** is located into the cylindrical socket of the upper part of the **PT317R3**. The angular position of the shield is defined by a small groove on its external surface. The groove being small and located on the rim of the shield it does not restrain the shielding qualities.

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The syringe is connected to the needle by means of the thread in the head of the syringe by rotating the syringe manually.

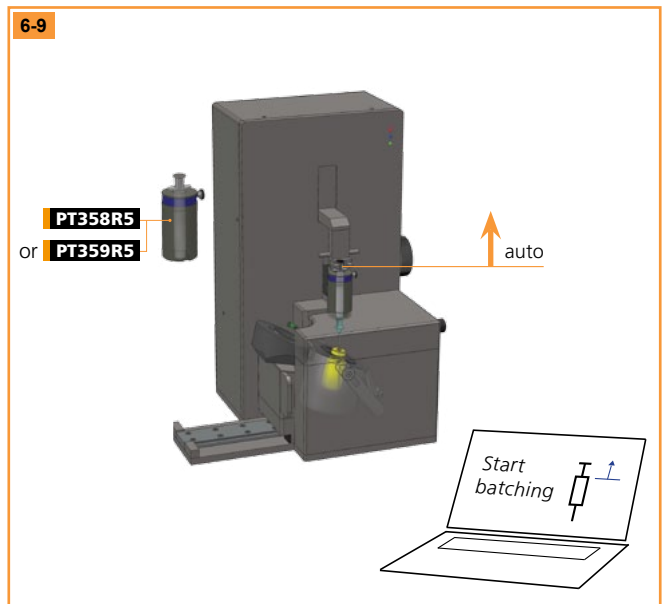
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The lifting fork of the batching device is connected to the outer end of the syringe piston manually. This operation is very simple and needs about 3 seconds. The hand of the radiopharmacist does not touch the piston.

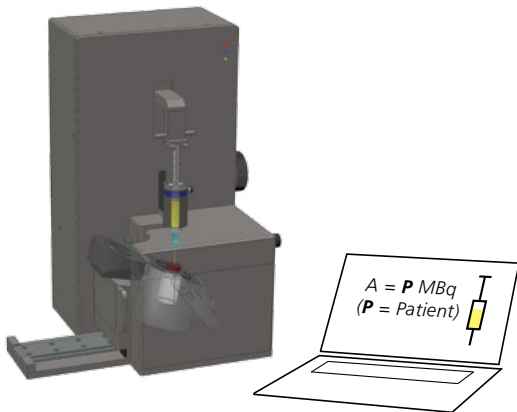
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The controlling of the functions is carried out using a control laptop. The crew selects the activity to be drawn into the syringe and starts the batching.

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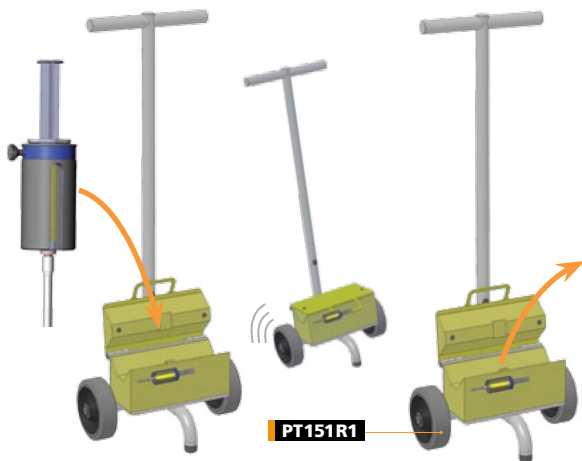
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A needle or a stopper must now be connected to the syringe to cover its cone during transport. The Simple stand **PT326R0** or **PT326R1** serves to connect one of these elements.

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In case of manual administration the protective sheath of the needle is to be removed using the pincers **PT352R0** before administering the activity to the patient.

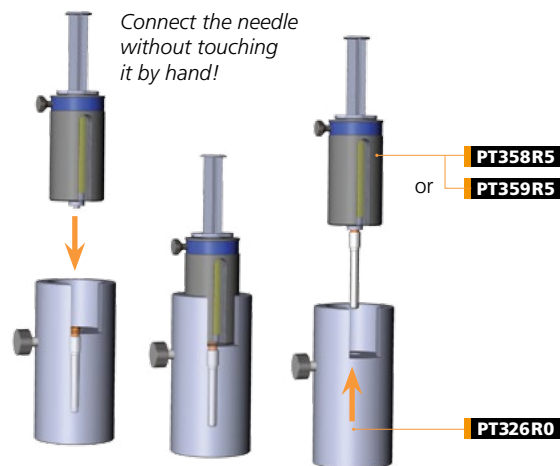
14

In case of automatic administration the syringe inside the shield is relocated into the Administering stand for FDG **PT321R0** or the Administering stand **PT353R6** after removing the needle or the stopper using the Simple stand **PT326R0** or **PT326R1** again. The connecting piece with diaphragm and adaptors for a needle, a syringe containing saline solution and a short connecting tube are prepared in the stand beforehand.

10

The activity is drawn into the syringe automatically being measured continually. The time needed for preparation of one dose is about 30 seconds. The syringe inside the shielding **PT358R5** or **PT359R5** is to be taken out of the batcher after the dose has been prepared.

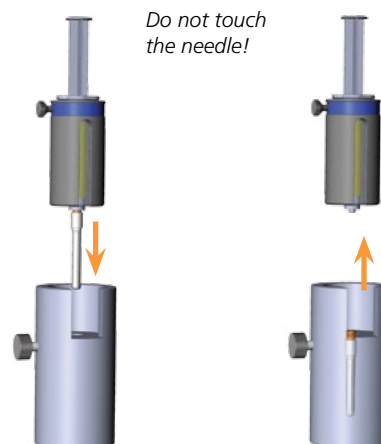
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The Petomobil **PT151R1** can be used for transporting the syringe inside the shielding **PT358R5** or **PT359R5** (covered either by a needle or a stopper) to a patient.

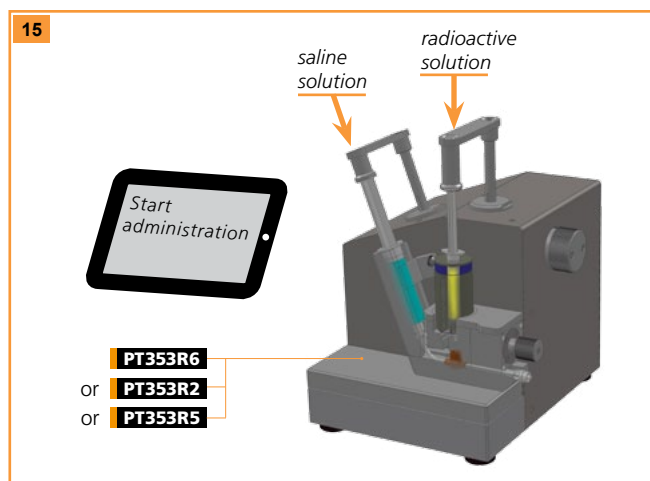
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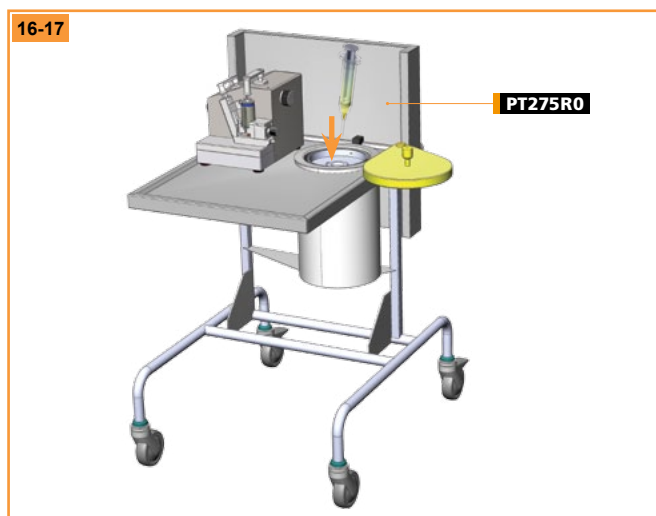
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The administering person connects the patient to the tube leading to the syringes, choose the mode of administration and starts the administration.

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The Movable table with a screen and a waste container **PT275R0** helps to handle all necessary materials next to the patient and protects the administering person at the same time.

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After the administration (preselected procedure) has been finished wastes are deposited in the shielded container incorporated in the table **PT275R0**.

Typical Equipment for PET - Tungsten System

- | | |
|---|-------|
| 1. Laminar flow cell MB120NM with 2 waste containers shielded with 20 mm Pb (dose calibrator can be included) | 1 pc |
| 2. Packaging set Type A for transport of radioactive solutions PT314R2 | 2 pcs |
| 3. Automatic batching and measuring device PT317R3 | 1 pc |
| 4. Petomobil 40mm Pb PT151R1 | 2 pcs |
| 5. Movable table with a screen and a waste container PT275R0 | 1 pc |
| 6. Administering stand for FDG PT353R6 , PT353R2 or PT353R5 | 1 pc |
| 7. Movable table with a waste container PT149R1 (see SPECT) | 2 pcs |
| 8. Simple stand for connecting a needle PT326R0 or a stopper PT326R1 | 2 pcs |
| 9. Syringe shielding 5 ml with a shielding window PT358R5 or Syringe shielding 2 ml with a shielding window PT359R5 | 2 pcs |

Options:

10. Working bench with 2 waste containers **PT320R0** (acc. customer's demands)
11. Automatic programmable administering stand **PT321R2**
12. Movable table with a screen, a shielding win. and a waste cont. **PT275R1**
13. Waste containers (acc. customer's demands)

List of used disposables

Dose preparation

- BBRAUN Spinocan 0,9 x 88 mm yellow (4509900)
- or Spinocan 1,1x88 mm ivory (4501195)
- BBRAUN Sterican 0,8 x 120 mm green (4665643)
- BBRAUN Omnifix 5ml (4617053V) or 3ml (4617022V) with Luer lock

Automatic administration

- BBRAUN omnifix 10ml luer-lock.
- BBRAUN Spinocan 0,9 x 25 mm, orange (4657500)
- or Spinocan 0,8x25 (4657543)
- BBRAUN Connection Tubing with injection-port (4247116)