INSTRUCTIONS FOR USE

THE AIO SOLUTION®
3rd GENERATION
BREAST- AND
LUNGBOARD

Article Nos. :
38003  38102
38004  38200
38100  38201
38101  38202

A. GENERAL PRODUCT INFORMATION
This product is a medical device used for positioning and immobilisation of breast and lung patients in supine position in radiation therapy. The products can be used during both the simulation and treatment stage, including MRI simulation.

This product may only be used in combination with immobilisation masks produced by Orfit. Orfit prohibits the use of unauthorised third-party products in conjunction with its own products.

B. PRODUCT DESCRIPTION
This AIO Solution® 3rd generation Breast- and Lungboard is primarily used for the treatment of malignancies in the thorax and abdomen. The system includes a set of breast & lung position cushions and associated accessories. It is used in combination with the Raycast® High Precision Head Supports and Blocks & Wedges and the Efficast® Pre-cuts to form a reproducible patient positioning and immobilisation device in the field of radiotherapy. Information on these other parts and instructions on how to make the masks can be found in the respective 'instructions for use' and on www.orfit.com.

The AIO solution® 3rd generation Breast- and Lungboard is a modular system of which the cushions and accessories can be indexed onto the thin AIO 3rd generation carbon fibre (38001) and fibreglass (38002) base plate or directly onto the simulation and treatment couch. This allows the system being suitable for use in small bore CT and MRI scanners.

C. PRODUCT RANGE

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D. PRECAUTIONS FOR USE
Breast- & lungboard cushions 38100, 38101 & 38102
The cushions can be used in combination with the AIO 3rd generation carbon fibre (38001) and fibreglass (38002) base plates or can be indexed directly onto the simulation and treatment couch.

The 0° wedge cushion (38101) fits in the cut-out provided in the AIO 3rd generation base plates. The 10° wedge cushion can be indexed by inserting the widest part of the indexing knobs (38202) into the holes provided on the bottom side of the cushions.
The protruding part of the indexing knobs will fit into the positioning holes provided in 0° wedge cushion and the base plates.

The arm rest cushion high can be indexed to the 0° wedge cushion or the 10° wedge cushion in exactly the same way by using the indexing knobs. The protruding part of the indexing knobs will fit into the positioning holes provided in the 0° wedge cushion and the base plates or into the positioning holes provided on top of the 10° wedge cushion.

The 10° wedge cushion and arm rest cushion high can also be indexed directly onto the simulation and treatment couch without using a base plate. This is done by means of 2-pin or 3-pin indexing bars.

When indexing the 10° wedge cushion directly onto the simulation and treatment couch, the indexing knobs are inserted with the widest part into the holes provided at the bottom of the cushions. In this way the knobs are not protruding and stored, allowing the cushions to lay flat on the couch.

The arm rest cushion high can be indexed directly onto the simulation and treatment couch using a 2-pin or 3-pin indexing bar. For more information about the positioning of the head of the patient see ‘standalone grip pole block 38004’ section below.

Always verify that the cushions are correctly positioned on the base plates or the simulation and treatment couch.

The blue breast- and lung immobilisation cushions can be combined with the grey head & neck knee and leg immobilisation cushions to create a comfortable and reproducible position of the patient. More information on these cushions can be found in the respective ‘instructions for use’ and on www.orfit.com.

The cushions used on the treatment machines are often used more frequently than those on the simulators and during the imaging stages. Therefore we recommend rotating the cushion sets between the different machines on a regular base to avoid differences in wear and tear of the cushions.

Do not expose the cushions to a hot air blower and make sure that no sharp objects can come into contact with the cushions.

Note: these cushions cannot be used on the 1st or 2nd generation AIO base plates.

**Secondary base plate 38003**

The secondary base plate allows the use of 4-points lung and thorax masks, 5-points asymmetric breast masks and 6-points thorax masks in combination with the 3rd generation blue AIO breast- & lung immobilisation cushions.

This high density base plate has 2 positioning knobs on the bottom of the plate that fit into the positioning holes provided in the base plates and the 10° wedge cushion. This secondary base plate cannot be indexed directly onto the simulation and treatment couch.

Always verify that the secondary base plate is correctly positioned and indexed.

**Hand positioning accessories 38200 & 38201**

The grip pole collar (38200) and grip pole long (38201) allow comfortable and reproducible positioning of the hands of the patients during thoracic treatments with the 3rd generation AIO Solution Breast- & Lungboard.

To index the grip pole collar, slide it onto the cranial side of the 3rd generation AIO base plates.

To fix the grip pole collar to the base plate, insert 1
or 2 grip poles into the positioning holes provided in the grip pole collar.
The grip pole collar is indexed to the table with a 2-pin or 3-pin bar (see image below).

Always verify that the grip pole collar and grip pole long are correctly positioned and indexed on the base plate.

Standalone grip pole block 38004
The standalone grip pole block is used to index the hands and head of lung patients when treated flat on the table without the use of the AIO 3rd generation base plate and 10° wedge cushion. The standalone grip pole block is used in combination with the grip pole collar and Raycast® High Precision Head Supports to create a comfortable and reproducible position of the patient.

The standalone grip pole block is indexed to the simulation and treatment couch by means of a 2-pin or 3-pin indexing bar. The grip pole collar is slided onto the cranial side of the standalone grip pole block and locked by inserting 1 or 2 grip poles into the positioning holes provided in the grip pole collar (see image below).

Always verify that the standalone grip pole block is correctly positioned and indexed on the simulation and treatment couch.

A patient set-up form is available on the Orfit website.

E. STORAGE

Always store the products in a safe place to prevent them from getting damaged or falling onto other objects. Do not put heavy objects on the cushions and prevent hard objects from falling onto them to prevent permanent deformations. Avoid pressure points on the cushions during storage as these can cause imprints in the cushions. The imprints will disappear overtime when the pressure is released.

Store the hand positioning accessories in such a way that they cannot fall or bump against anything. Never place the grip poles under load or pressure.

Store the system between +10°C (50°F) and 40°C (104°F).

F. PROPERTIES

<table>
<thead>
<tr>
<th>38003 – AIO 3rd generation secondary base plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical properties:</td>
</tr>
<tr>
<td>Dimensions: L 285 mm x W 200 mm x H 22 mm</td>
</tr>
<tr>
<td>L 11.22&quot; x W 7.87&quot; x H 0.87&quot;</td>
</tr>
<tr>
<td>Weight: 330 g</td>
</tr>
<tr>
<td>Materials: HPL</td>
</tr>
<tr>
<td>This product is made entirely of electrically non-conductive, non-metallic and non-magnetic materials and is MRI safe.</td>
</tr>
<tr>
<td>Dosimetric properties:</td>
</tr>
<tr>
<td>This product is made of a high density material and is not intended to treat through. The product is not located in the treatment area.</td>
</tr>
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<table>
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<tr>
<th>38004 – AIO 3rd generation standalone grip pole block</th>
</tr>
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<tbody>
<tr>
<td>Physical properties:</td>
</tr>
<tr>
<td>Dimensions: 455 mm x 228.6 mm x 20.5 mm</td>
</tr>
<tr>
<td>17.91 &quot; x 9 &quot; x 0.81 &quot;</td>
</tr>
<tr>
<td>Weight: 770 g</td>
</tr>
<tr>
<td>Materials: HPL</td>
</tr>
<tr>
<td>This product is made entirely of electrically non-conductive, non-metallic and non-magnetic materials and is MRI safe.</td>
</tr>
<tr>
<td>Mechanical properties:</td>
</tr>
<tr>
<td>The AIO 3rd generation standalone grip pole block is made of HPL which keeps its dimensions overtime and under conditions of frequent use.</td>
</tr>
<tr>
<td>Dosimetric properties:</td>
</tr>
<tr>
<td>This product is made of a high density material and is not intended to treat through. The product is not located in the treatment area.</td>
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</table>
38100 – AIO 3rd generation arm rest high

Physical properties:
Dimensions:  
L 400 mm x W 528 mm x H 236 mm  
15.75” x W 20.79” x H 9.29”
Weight: 840 g
Materials: EPP, PE foam, PUR coating
Density foam: 50 kg/m³

This product is made entirely of electrically non-conductive, non-metallic and non-magnetic materials and is MRI safe.

Mechanical properties:
The 3rd generation AIO cushions are made of low density PE foam that is covered with a PUR coating. This combination results in a stable cushion that keeps its dimensions overtime and under conditions of frequent use.

Dosimetric properties:
The attenuation and skin build-up at 6 MV and 15 MV per cm of material:

<table>
<thead>
<tr>
<th>Attenuation (± 0.15%)</th>
<th>Skin Build-up (± 0.1 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 MV</td>
<td>15 MV</td>
</tr>
<tr>
<td>0.25%</td>
<td>15%</td>
</tr>
<tr>
<td>0.6 mm</td>
<td>0.6 mm</td>
</tr>
</tbody>
</table>

Note: Use these numbers as a guidance only. Perform the measurements again in your department to verify these results.

38102 – AIO 3rd generation wedge 0°

Physical properties:
Dimensions:  
L 775 mm x W 461 mm x H 86 mm  
30.51” x 18.15” x H 3.39”
Weight: 1050 g
Materials: EPP, PE foam, PUR coating
Density foam: 50 kg/m³

This product is made entirely of electrically non-conductive, non-metallic and non-magnetic materials and is MRI safe.

Mechanical properties:
The 3rd generation AIO cushions are made of low density PE foam that is covered with a PUR coating. This combination results in a stable cushion that keeps its dimensions overtime and under conditions of frequent use.

Dosimetric properties:
The attenuation and skin build-up at 6 MV and 15 MV per cm of material:

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Note: Use these numbers as a guidance only. Perform the measurements again in your department to verify these results.

38200 – AIO 3rd generation grip pole collar

Physical properties:
Dimensions:  
L 145 mm x W 240 mm x H 46 mm  
5.71” x W 9.45” x H 1.81”
Weight: 280 g
Materials: POM
This product is made entirely of electrically non-conductive, non-metallic and non-magnetic materials and is MRI safe.

**Mechanical properties:**
The AIO 3rd generation grip pole collar is made of POM which keeps its dimensions overtime and under conditions of frequent use.

**Dosimetric properties:**
This product is made of a high density material and is not intended to treat through. The product is not located in the treatment area.

### 38201 – AIO 3rd generation grip pole long

**Physical properties:**
Dimensions: L 30 mm x W 30 mm x H 431 mm
L 1.18” x W 1.18” x H 16.97”

Weight: 275 g
Materials: POM

This product is made entirely of electrically non-conductive, non-metallic and non-magnetic materials and is MRI safe.

**Mechanical properties:**
The AIO 3rd generation grip pole long is made of POM which keeps its dimensions overtime and under conditions of frequent use.

**Dosimetric properties:**
This product is made of a high density material and is not intended to treat through. The product is not located in the treatment area.

### 38202 – AIO 3rd generation indexing knobs for cushions

**Physical properties:**
Dimensions: L 66 mm x W 66 mm x H 32 mm
L 2.60" x W 2.60" x H 1.26"

Weight: 45 g
Materials: POM

This product is made entirely of electrically non-conductive, non-metallic and non-magnetic materials and is MRI safe.

**Mechanical properties:**
The AIO 3rd generation indexing knobs for cushions are made of POM which keeps its dimensions overtime and under conditions of frequent use.

**Dosimetric properties:**
This product is made of a high density material and is not intended to treat through. The product is not located in the treatment area.

### G. MAINTENANCE AND WASTE MANAGEMENT

These products can be cleaned and disinfected by means of soapy water or an isopropanol based disinfectant, applied with a soft cloth. If unsure about the cleaning fluid, do not use. **Never use aerosol sprays, corrosive cleaning agents, solvents or abrasive detergents.**

The AIO 3rd generation cushions are made of a closed-cell foam and will not absorb any cleaning agent.

Periodic checks of these products should be done to insure the parts are not worn and require repair or replacement. **Do not attempt to make repairs yourself.** Contact your distributor if there are any questions or concerns.

These products can be disposed of with household waste.

### H. ADDITIONAL INFORMATION

The pictures below give an idea of the dimensions (height) of the complete AIO 3rd generation Breast & Lungboard set and the minimum bore size (CT scanner etc.) needed for a clear pass. If a certain cushion setup cannot enter the bore, it is recommended to remove the armrest and grip poles, slide the table through the bore and replace the armrest and grip poles from the backside of the scanner.

The first view represents the highest setup possible (base plate, 0° cushion, 10° wedge and arm rest high together with two grip poles):

The second view is of a lower setup without base plate (Standalone grip pole block, 10° wedge and arm rest high together with two grip poles):
For additional information such as distributor contact information, product brochures, Safety Data Sheets and regulatory information, please visit our website www.orfit.com.