

Proton Positioning and Immobilization

orfit The
precision
expert



This product catalog will introduce you to **proton positioning and immobilization** that ensures accurate daily positioning, minimal patient motion and increased patient satisfaction.

We help to overcome daily positioning uncertainties

Minimal motion, maximum comfort

Special focus on pediatric solutions

Customer care from identifying your needs to helping you get the most value out of the product.

For more than 30 years, Orfit Industries has been providing solutions for immobilizing and positioning patients in Radiation Oncology.

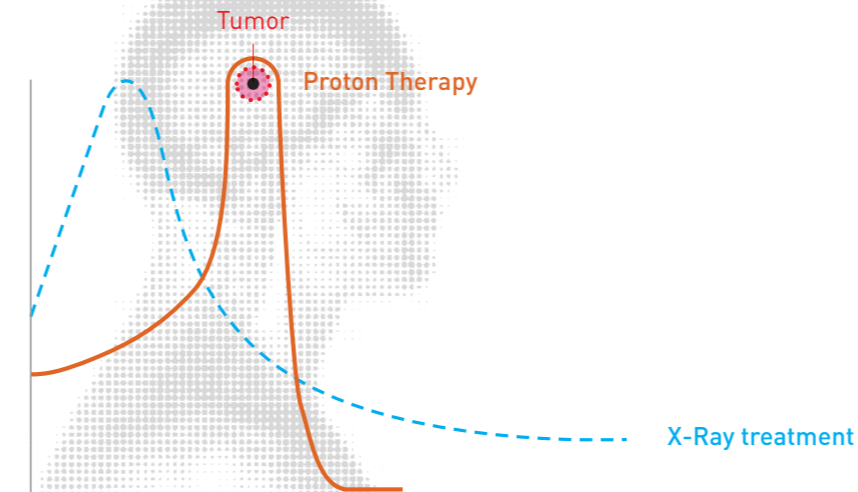
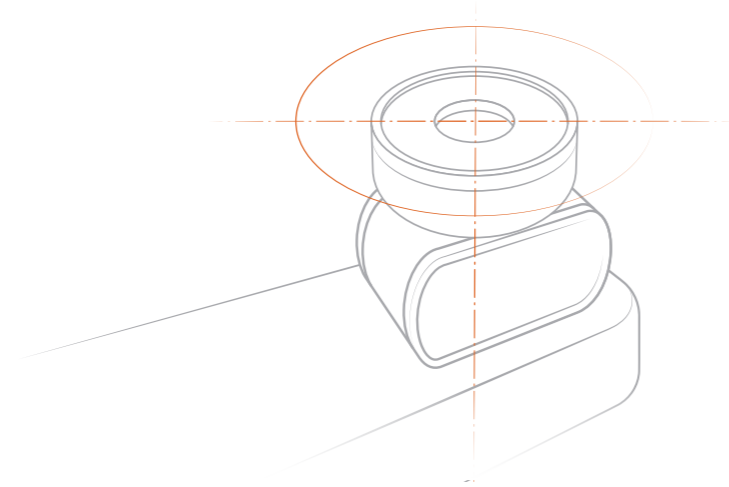
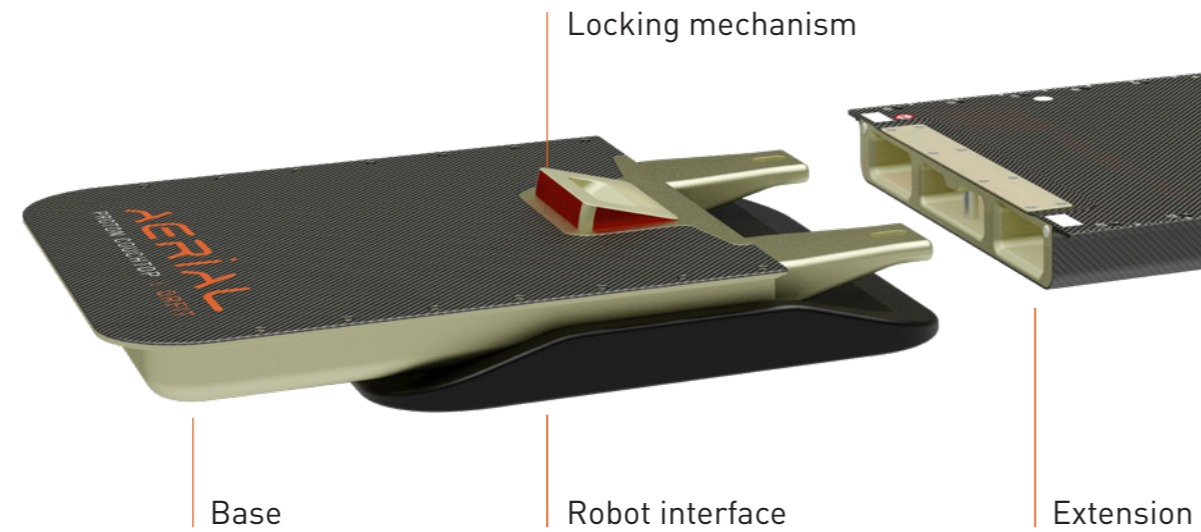
Based on an in-depth knowledge of the market, our team of engineers and product designers has developed adaptive solutions that correspond with the requirements of ever increasing precision in radiation therapy.

AERIAL

PROTON COUCH TOP | ORFIT

Aerial®, an entirely new proton couch top that optimizes the impact of the proton dose.

Combined with Nanor® masks we bring more comfort to the patient while safeguarding stability and reproducibility.



Source: <http://www.samsunghospital.com/home/proton/en/whatIsProtonTherapy/principle.do>

Changes in absolute Wet values are limited, with an observed variation of less than 0.5 mm, over 100 mm distance in longitudinal direction.

The Aerial Couch Top consists of a base and a variety of extensions (available in different lengths)

• HP PRO



• Rectangular



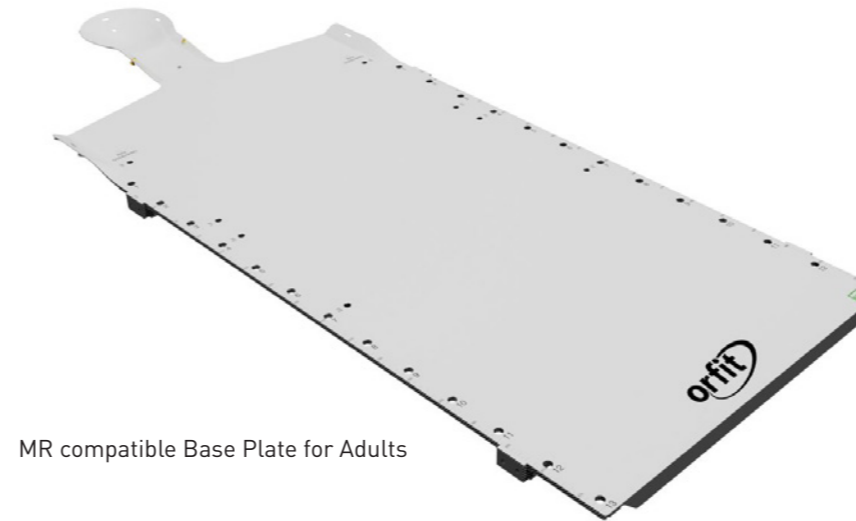
• Pediatric
(under development)



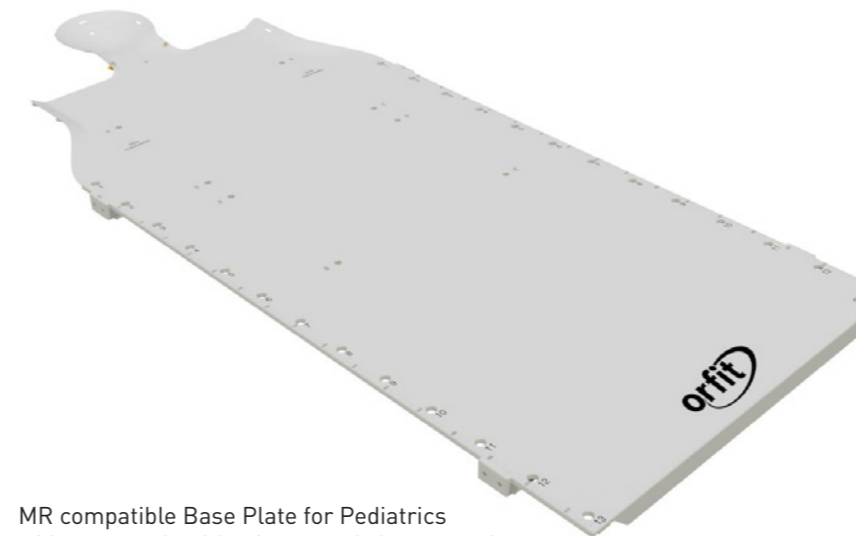
Optimal mask stability and patient position reproducibility

Positioning solutions HP PRO Base Plates

HP PRO Base Plates have been designed to meet the specific standards proton therapy demands. A homogeneous, low density base plate with a narrow head and neck area allows the gantry to come close to the patient and minimizes the air gap. Each base plate is lightweight, with excellent dosimetric properties.



MR compatible Base Plate for Adults



MR compatible Base Plate for Pediatrics with narrow shoulders' area and shorter neck area

ADULT BASE PLATES

Art. N°	Product Description	Interface	Compatibility
25000/1	Extension and overlay	pin	—
25000/22	Extension and overlay short	pin	—
25000/25	Extension extra long	pin	—
25000/20	Extension Type 1	clamp	—
25000/30	Extension Type 2	clamp	—
25000/18	Overlay	—	—
250000/26	Overlay	—	Elekta Hexa-POD™ evo RT System
25000/1/MR	Overlay	—	MR

PEDIATRIC BASE PLATES

Art. N°	Product Description	Interface	Compatibility
25000/27	Extension 0-7 years	pin	—
25000/28	Extension 0-7 years, type 2	clamp	—
25000/16	Extension 8-16 years	pin	—
25000/35	Extension 8-16 years, Type 1	clamp	—
25000/29	Extension 8-16 years, Type 2	clamp	—
25000/36	Extension extra long 8-16 years	pin	—
25000/33	Overlay 8-16 years	—	—
25000/16/MR	Overlay 8-16 years	—	MR

Positioning solutions
Accessories

Hand Holds

Hand holds offer your patient a place to rest their hands during treatment. It will help them feel more relaxed during treatment and has a positive effect on tense shoulders.

T-shaped Vacuum Bag
and Moldcare Cushion

A vacuum bag or moldcare cushion gives extra support to your patient's shoulders. Individual shoulder positioning will prevent shoulder sagging.

Head & Neck Moldcare
Cushions

Available in three sizes to create a personalized head rest cushion.

Flexible Shim

A flexible shim is placed on top of the moldcare head rest cushion to counteract patient swelling.

Head Rest Indexing Plate

The Head Rest Indexing Plate is used to attach a personalized head support, such as a Moldcare Cushion, to the base plate.

Cranial back stop

To ensure that the head of the patient is correctly positioned, and prior to the molding of the mask, a cranial back stop can be attached to the cup-like head rest of the base plate.



T-shaped Vacuum Bag

Hand Holds



Moldcare Cushion

Flexible Shim



Cranial back stop



Head Rest Indexing Plate



Accessories

Art. N°	Product	Size	Quantity
25000/6	Cranial Back Stop	—	1
25000/17/A	Hand Hold A	—	1
25000/17/B	Hand Hold B	—	1
18211	T-Shaped Vacuum Bag	595 x 600 mm, 7 liter	1
18094	T-Shaped Moldcare Cushion	—	1
18090	Moldcare	150 x 200 mm	1
18091	Moldcare	200 x 250 mm	1
18092	Moldcare	200 x 450 mm	1
25000/7/20	Adult Head Rest Indexing Plate	—	20
25000/39/20	Pediatric Head Rest Indexing Plate	—	20
25070	Adult Flexible Shim	1 mm	1
25071	Pediatric Flexible Shim	1 mm	1

A high comfort level may promote patient stability and will contribute to the best possible patient experience, but finding a comfortable treatment position for your patient continues to be a challenge?

Conventional immobilization solutions have limitations regarding patient comfort and some clinicians naturally hold on to the most rigid materials available in the market.

Dive into a Nanor mask and learn how nanoparticles create a strong mask with a thickness of only 1.6 mm.

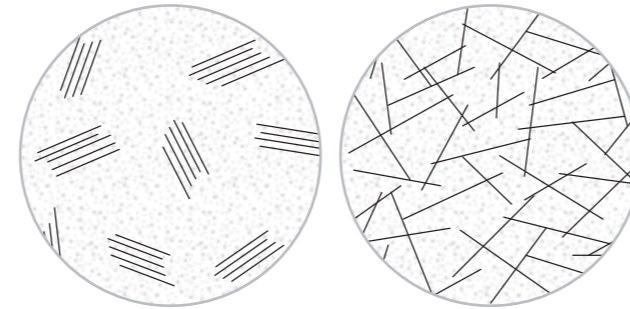


To better understand, let's dive into a conventional thermoplastic mask. Its internal structure consists of a non-exfoliated polymer matrix, where polymer layers are completely separated. Once the mask has cooled down to room temperature, these polymer layers will shrink, creating a mask that feels too tight and that brings physical discomfort.

Nanor masks, that consist of a polymer matrix reinforced with nanoparticles, form a cluster network that keeps the micro volume sizes more stable. It results in a mask with less shrinkage and less pressure on the patient's face.

These same nanoparticles establish a unique internal structure that create a very strong mask with a thickness of only 1.6 mm.

With Nanor we focus on the impact a mask can have on a positive patient experience. It's about how your patients feel. Do they feel calm? Are they able to control their breathing? Does he or she feel fine lying immobilized on the treatment couch? Optimizing patient experience during simulation and treatment plays an important role in achieving a better overall experience, with better care as the final outcome.



Shrinkage of nano composite material - schematic presentation of non-exfoliated (left) and fully exfoliated (right) nano clay composite material.



Immobilization Solutions

Orfit masks for proton therapy are available for brain; head, neck and shoulders; and abdomen-pelvis.

All cranial mask profiles are designed without sharp corners or edges to achieve an optimal interaction between the immobilization equipment and the proton beam. The patented mask locking mechanism clicks on the base plate in two steps and can be quickly released in case of emergency. The masks contribute to minimal patient motion, and maximum comfort by using Nanor thermoplastic materials.

Abdomen-pelvic masks are used for patient immobilization for extracranial proton treatments, and are easily attached to the base plate with push-pins.

Head-only single layer masks allow for a PTV margin of 1 mm.



ADULT MASKS

Art. N°	Application	Opening for nose	Size	Thickness	Perforation	Material
25100/16MI+N/NH	Head	—	—	1.6 mm	microplus	Nanor
25100/16MI+N/NH	Head	with nose hole	—	1.6 mm	microplus	Nanor
25105/2MI+N/NH	Head, neck and shoulders	—	—	2 mm	microplus	Nanor
25105/2MI+N	Head, neck and shoulders	with nose hole	—	2 mm	microplus	Nanor
25108/2MI+N/NH	Head, neck and shoulders	—	large	2 mm	microplus	Nanor
45204/32MA/EFF	Pelvis mask adult	—	—	3.2 mm	maxi	Efficast

PEDIATRIC MASKS

Art. N°	Application	Opening for nose	Size	Thickness	Perforation	Material
25101/16MI+N/NH	Head	—	medium	1.6 mm	microplus	Nanor
25101/16MI+N	Head	with nose hole	medium	1.6 mm	microplus	Nanor
25103/16MI+N/NH	Head	—	small	1.6 mm	microplus	Nanor
25107/2MI+N/NH	Head, neck and shoulders	—	small	2 mm	microplus	Nanor
25106/2MI+N/NH	Head, neck and shoulders	—	medium	2 mm	microplus	Nanor
25106/2MI+N	Head, neck and shoulders	with nose hole	medium	2 mm	microplus	Nanor

Various masks available to accommodate all head sizes.

A radiotherapy mask becomes a close companion during treatment, often threatening and scary, but also cheering on to push through. We hope these colorful princesses and super hero themed stickers will give your pediatric patients the confidence and courage they need to push through treatment.

One free sticker sheet offered in each box of pediatric masks.



Are you an artistic Radiation Therapist or do you have a creative patient? Use our step-by-step painting guide to get started.



Customer Service is the backbone of our relationship with every Orfit client. Over the last 30 years, we have built a solid reputation for being a service-led company – delivering high quality products to meet all of your clinical needs and to exceed your expectations for ongoing support.

Wherever you are, you can count on the professionalism of the entire Orfit organization and our network of distributors.

Go to www.orfit.com/proton for more information.

Contact us for an in-person or remote presentation
▶ welcome@orfit.com





Equipment installed in the respective locations on this map

Aerial Couch Top

HP PRO immobilization devices



Watch the video 'Proton Therapy Comes to Utah | Huntsman Cancer Institute' by scanning the QR code.



About ORFIT

Orfit Industries brings high precision and comfort to the positioning and immobilization of cancer patients in proton therapy with solutions that perfectly pair with advanced proton therapy delivery techniques.

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