

NOVATECH® 3D

Individualized
Silicone Airway Stent



a bess group company



3D custom-made implants

NOVATECH

Because Life is Precious.

Founded in 1986, we have been producing silicone stents developed by Dr. Dumon for over 30 years. In order to improve patient care, we have added many developments over the years, such as STERITALC® and various instruments for bronchoscopy.

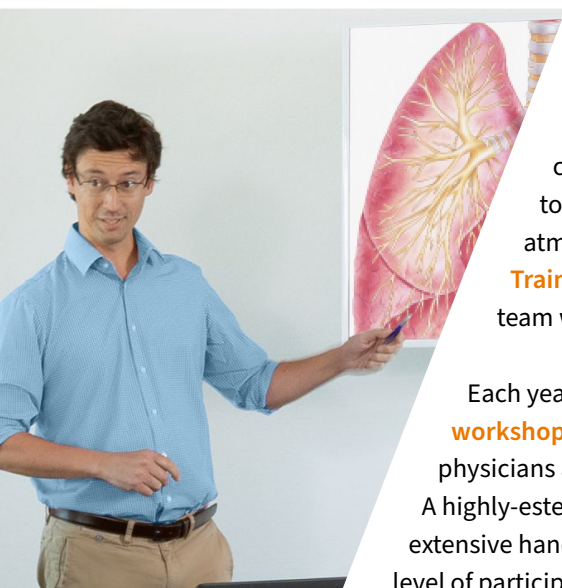


Office, production and warehouse in La Ciotat, south of France

Quality Made in Europe

Our high demand on quality, function and cost-effectiveness along with the ability to react quickly to individual needs, has earned us the trust of physicians worldwide

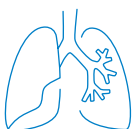
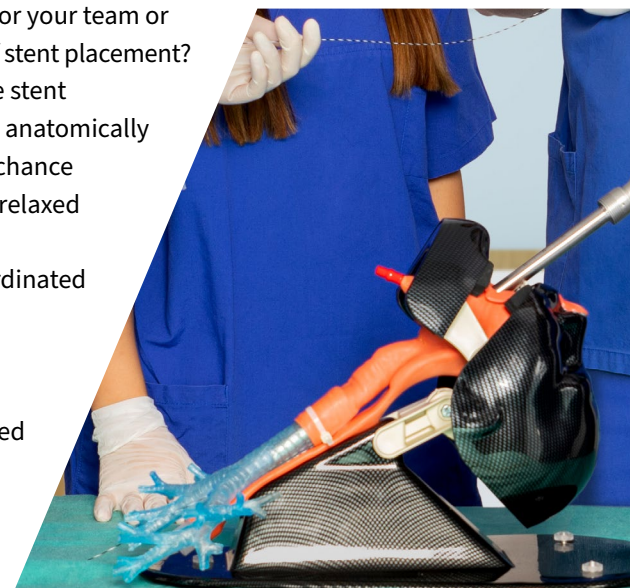
The full package. Expert advice on demand.



You wish to train new members or your team or refresh your team's knowledge of stent placement? Our qualified experts demonstrate stent placement at your location. We use anatomically correct models and give your staff a chance to handle stents and instruments in a relaxed atmosphere.

Training is important — only a well-coordinated team will achieve perfect results.

Each year, we organize **rigid bronchoscopy workshops** in France – a benefit for experienced physicians as well as beginners. A highly-esteemed faculty, small groups and extensive hands-on practice guarantee a high level of participant satisfaction.



NOVATECH and AnatomikModeling

Partners in Innovation.



3D custom-made implants

AnatomikModeling is the result of 10 years of research and development in collaboration with Rangueil University Hospital and Larrey Hospital in Toulouse, France. Its particularly innovative technology of computer-aided design (CAD) enables the creation of personalized 3D implants.

AnatomikModeling continuously researches for innovative solutions to specific pathologies, using 3D technologies. Partnering with Novatech means the combination of high-end 3D-technology with profound expertise in pulmonology and manufacturing of silicone airway stents. The result is the NOVATECH® 3D stent — precisely adapted to the patient's individual anatomy, with the proven quality of a Novatech silicone stent.



a bess group company

Since 2003 **Novatech SA** has been part of bess group in Berlin, Germany – a family-owned and managed medical device company with more than 30 years of expertise in medical device technology.



Fully individualized Airway Stent

— a new approach

In cases of complex anatomy of the airways, common stent shapes may not fit or fix a patient's specific problem. Together with researchers from the Pulmonology department at Toulouse University Hospital, France, AnatomikModeling has successfully developed customized stents that are identical to the patient's trachea and/or bronchi.

First results from a clinical trial with this new generation of stents have been published in one of the most prestigious international pneumology journals, the American Journal of Respiratory and Critical Care Medicine.¹

¹ Guibert N., Didier A., Moreno B., Mhanna L., Brouchet L., Plat G., Hermant C., Mazieres J. Treatment of post transplant complex airway stenosis with a three-dimensional, computer-assisted customized airway stent. – Am. J. Respir. Crit. Care Med. 2017.

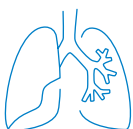
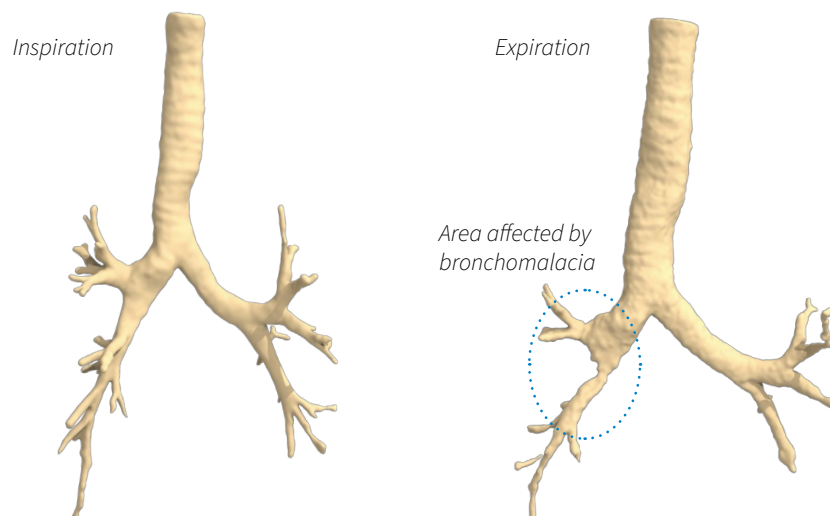


Steps in creating a NOVATECH® 3D stent

CT Data

The patient's CT data is the starting point for creating a NOVATECH® 3D stent.

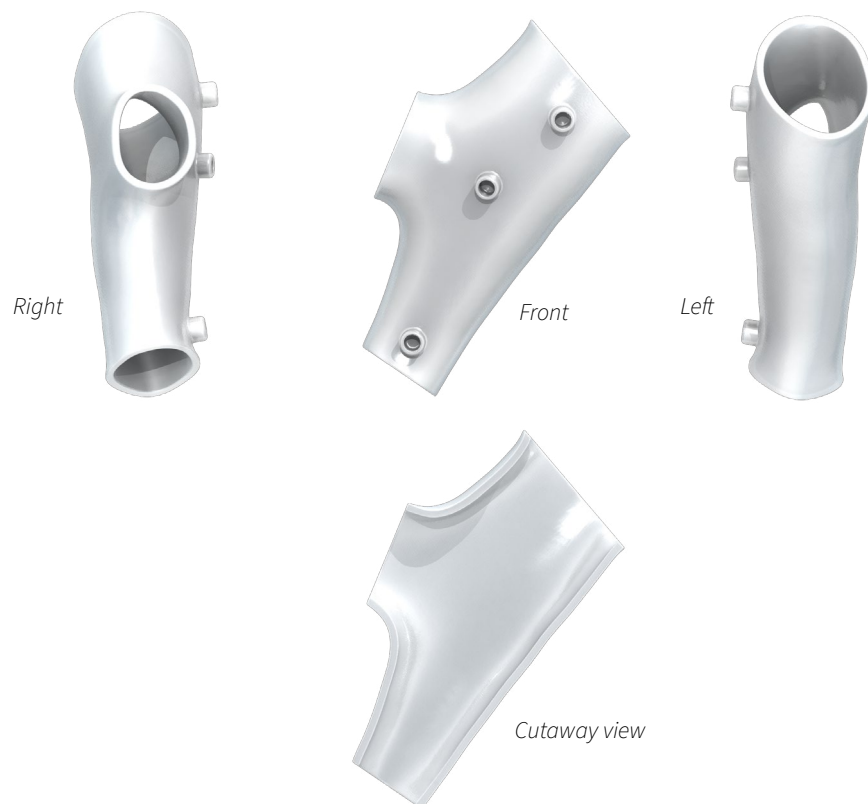
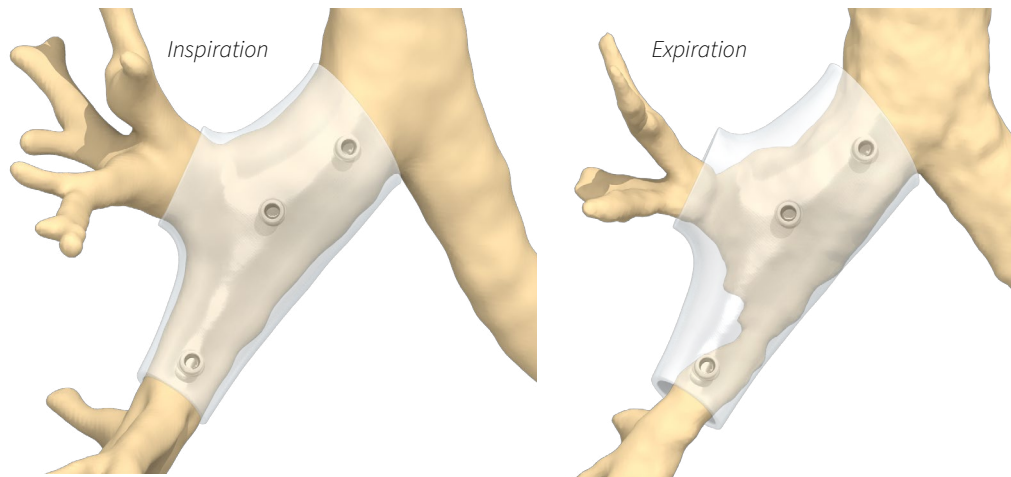
In difficult cases where standard stents are not suitable, our experts are at the physician's disposal to discuss, assist and find an individualized stenting solution. Based on CT-scan images of the patient's airways, provided by the physician via server upload or data carrier, a virtual 3D reconstruction of the patient's airways is produced. In addition, a detailed description of the case will help to precisely identify the requirements for the custom stent.



Design proposal

Based on the CT data, engineers create a stent design proposal.

By means of the volumetric image of the affected airway region, the physician defines a perfectly fitting silicone stent. A stent is virtually designed, exactly adapted to the patient's anatomy. The physician receives an interactive 3D-pdf with the proposed stent-design via e-mail or download.

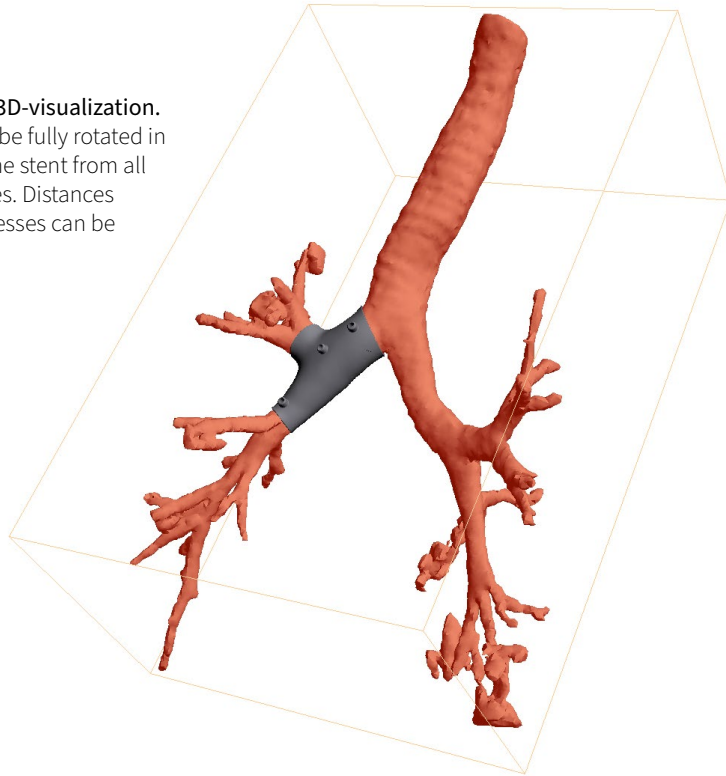


Review and approval

An interactive 3D-pdf allows in-depth analysis of the proposed stent design.

The interactive 3D-pdf serves as an analysis tool for the physician. It visualizes the patient's anatomy and shows the proposed stent inside the patient's anatomy. By allowing to **view the stent from all perspectives** and to **measure distances and wall thicknesses**, the physician can make an informed decision on the suitability of the stent design. Once the stent design is final, the physician submits his approval for manufacturing the NOVATECH® 3D stent.

Screenshot of 3D-visualization.
The image can be fully rotated in order to view the stent from all sides and angles. Distances and wall thicknesses can be measured.

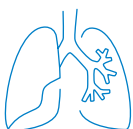


Stent fabrication

After the physician's approval, the design is used to manufacture the actual NOVATECH® 3D stent out of transparent silicone - in the familiar high quality of Novatech stents.



NOVATECH® 3D stents



Proven features – and a multitude of options

Individualization of an airway stent comes along with a multitude of stent design options that can be realized. Thanks to Novatech's decades long experience in stent manufacturing, the individual **NOVATECH® 3D** stent combines this versatility with the proven Novatech quality - featuring the advantages of the renowned **NOVATECH® GSS™**.

Shapes and Angles

NOVATECH® 3D stents can be realized in almost any requested shape.

Wallthickness

Its wallthickness can be defined according to the physician's indications, variably along the stent contour.

Long term implantable silicone

NOVATECH® 3D are made of the same high quality silicone as NOVATECH® GSS™.

Studs

NOVATECH® 3D optionally feature studs to prevent stent migration. The position of the studs is fully variable.

Radiopacity

Studs can be filled with gold and/or barium sulphate allowing X-ray visibility. X-ray markers can also be integrated into the stent wall.

Anti-Adherent surface

A special silicone-based surface treatment provides an anti-adherent surface that reduces obstruction risks.

Sterility

NOVATECH® 3D are manufactured and packaged under clean room conditions and come sterile.

Placement

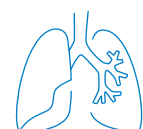
Usually, it will be possible to load the NOVATECH® 3D stent into the TONN™ NOVATECH® Stent Applicator.

Optionally, a second specimen of the stent can be manufactured for testing previous to placement.



For more information visit

www.novatech.fr/en/3D



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NOV-MR-PCA-3D-EN-Rev.1



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