



**HTL**  
CAD/CAM-Lab

**Device  
Intraoral  
Apnia (DIA)**



**bti**<sup>®</sup>  
Human  
Technology

# The solution for the treatment of obstructive sleep apnoea and rhonchopathy and snoring



## DAILY TREATMENT + DISCHARGE SPLINT

Mandibular advancement devices advance the mandible to traction the airway (achieving a uniform, uninterrupted flow of oxygen). This means that during the sleep cycle the position of the condyle is modified.

As a consequence, the perception of the centric relationship between the maxilla and the mandible is lost. For this reason, an unloading splint has been designed whose

function is to help the condyle to reposition the mandible in the centric relationship in a fast and effective way.

After the sleep cycle, the patient removes the mandibular advancement device and has to put on the unloading splint for 5-10 minutes (e.g. in the shower). This helps the condyle to reposition itself so that it does not feel a change in its occlusion.

### 1. DEVICE INTRAORAL APNIA

#### TREATMENT

Highly adjustable device for optimal patient comfort.



### 2. BTI APNIA®

#### DIAGNOSIS OF THE PATHOLOGY AND CONTROL OF THE EVOLUTION OF THE TREATMENT

The device is easy and convenient to fit by the patient at home by fitting a nasal cannula and a pulse oximeter on the index finger.

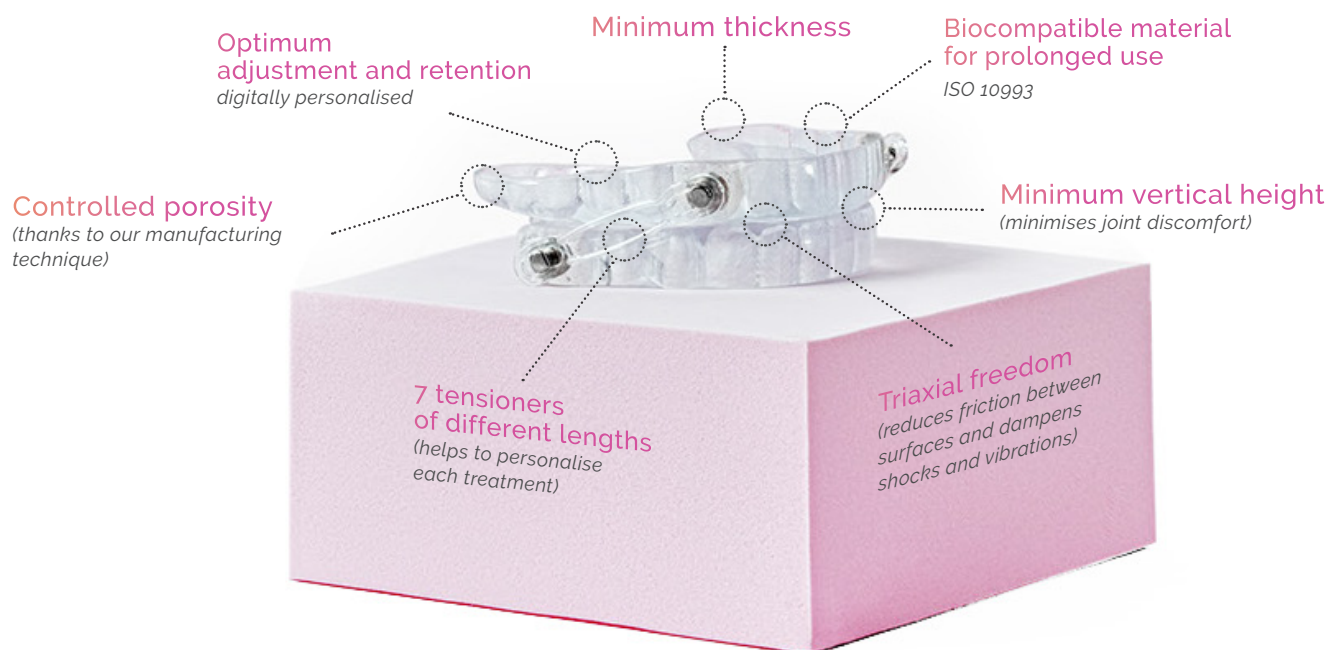


## DEVICE INTRAORAL APNIA (DIA)

# Great fit for a comfort optimal of the patient

The APNIA Intraoral Device (DIA) is used to **treat the sleep apnoea y the snoring**. It consists of a bimaxillary splint connected by means of tensors that prevent retraction and/or allow the jaw to move forward. This **helps a maintain the airway airway openduring the sleep**, achieving a uniform, uninterrupted flow of oxygen and thus reducing the number of apnoeas and snoring.

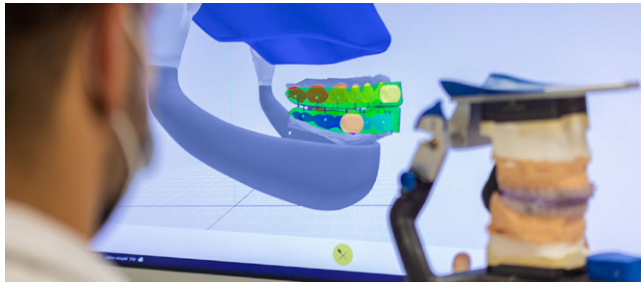
DIA is recommended for use by **persons who have sleep apnoea o chronic snoring** especially if they have not been able to relieve these symptoms by other methods, such as lifestyle changes or the use of positive airway pressure devices (when they cannot tolerate this type of treatment).



# PROPRIETARY TECHNOLOGY DESIGN AND MANUFACTURING

## 1. OBTAINING THE MODELS (.STL)

By direct intraoral scanning (full digital flow), also by scanning in the laboratory from the patient's models (mixed flow).



## 2. EXCLUSIVE SOFTWARE (FUNCTIONAL VIRTUAL ARTICULATOR)

We customise the biomechanical movements of each patient to find perfectly defined and adjusted antagonist contacts.



## 3. ADJUSTMENT OF THE OCCLUSION

Simulates the seating of the splint in the patient's mouth. Both the design and the fit of the splint is micrometric. We add an entry vector to the splint, avoiding the need to retouch to fit the splint in the mouth.

## 4. ADDITIVE MANUFACTURING

We use the most sophisticated additive manufacturing technology on the market and we also use a material that is responsive to thermal stimuli, since it because **increases the comfort of the device when is at a temperature body temperature.**



*We manufacture all  
our splints  
in a center for  
production by means of  
3D printing  
(thanks to our  
own software),  
using a  
specific material  
to provide  
greater comfort and  
durability.*



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# ADVANTAGES

## 1 COMFORT

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The device has the minimum vertical height to achieve the lowest possible impact at the level of the TMJ. Sub-millimetre thickness.

## 2 DURABILITY

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The device is made of a material sufficiently tough to withstand the mechanical loads to which it will be subjected on a daily basis.

## 3 ACCURACY

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HTL has an Artificial Intelligence (AI) algorithm that proposes the optimal and precise design, analysing the biomechanical requirements of the patient.



## 4 ADJUST

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HTL manufactures all intraoral devices with state-of-the-art printers, achieving a precise fit in both occlusion and retention.

## 5 VERSATILITY

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The device has 7 tensioners of different lengths to achieve an optimal advancement designed to adapt to the needs of each patient.





**HTL CAD CAM**

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