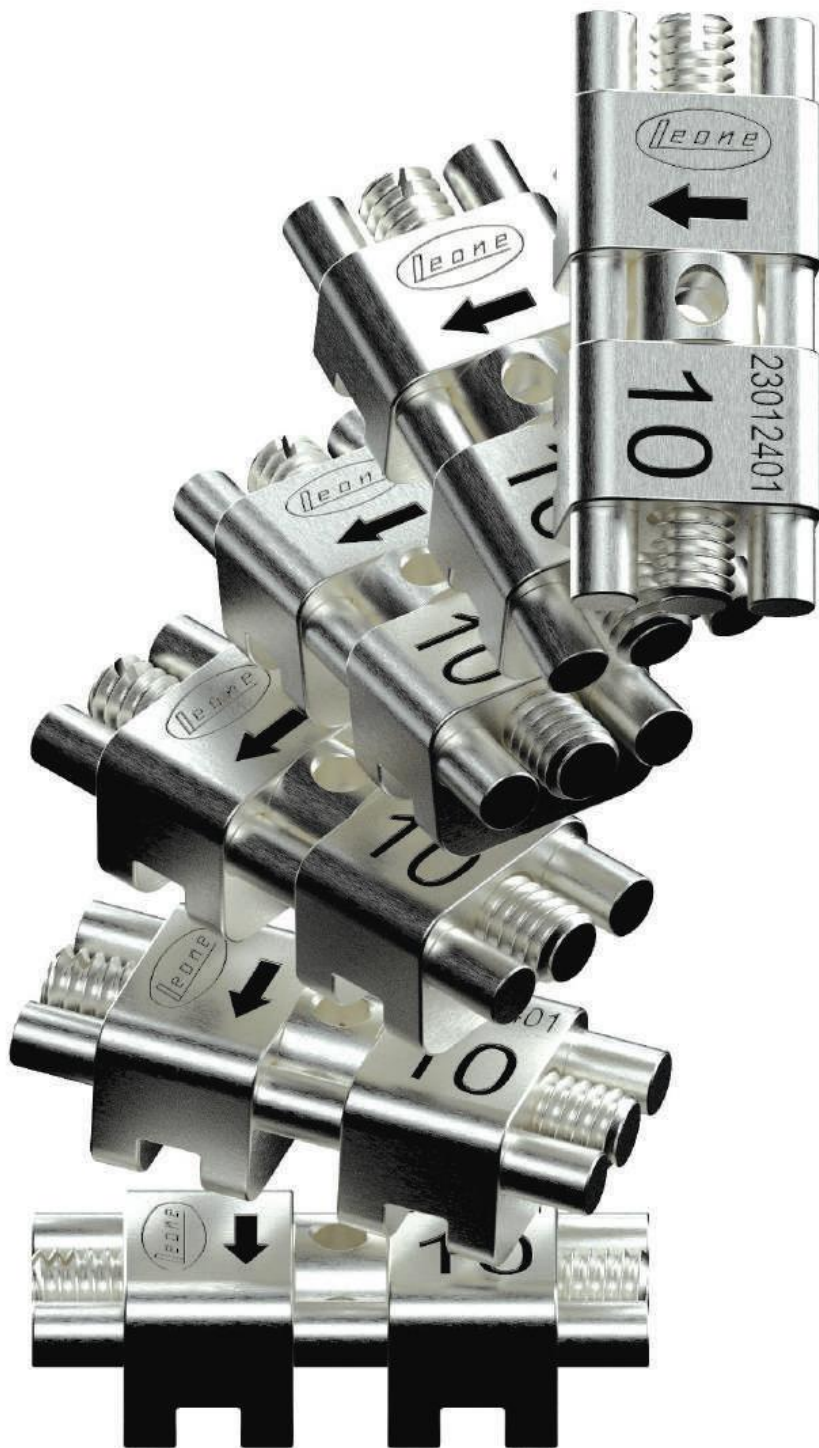
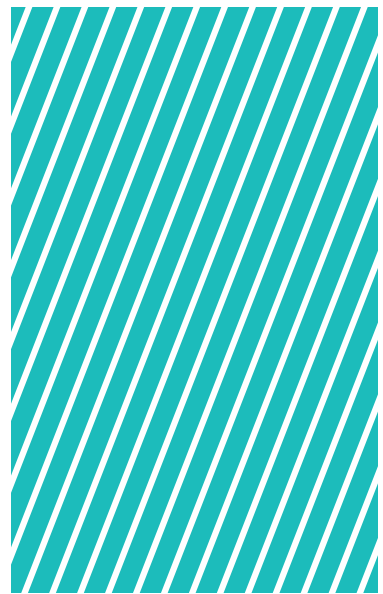


# DIGITAL WORKFLOW DEVICES



**A**





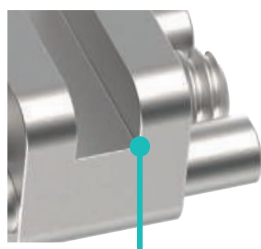
PATENTED

## FIRST RPE SCREW DESIGNED FOR A FULLY DIGITAL WORKFLOW



### RPE FULLY DIGITAL DESIGNED

CAD-CAM anatomical expander allows the manufacturing of totally customized appliances with dental anchorage, hybrid (teeth and TADs) and bone borne in a full digital workflow, by using **3DLEONE DESIGNER** software. Thanks to a manufacturing process called Laser Melting, the STL file will become a high precision sintered framework, that will fit perfectly the slot on the expander bodies thus to be joined permanently by laser welding



### SQUARED SLOTS

The CAD-CAM anatomical expander body feature, instead of the standard arms, squared slots that allow a correct oriented coupling of digitally designed customized laser melted framework and, thanks to their geometric shape, the fully transmission of the expansion forces to the teeth and/or TADs



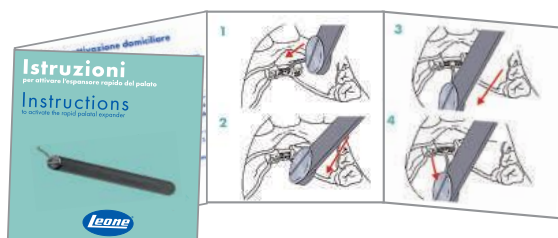
### THE STRONGEST RPE

CAD-CAM anatomical expander is manufactured by biomedical stainless steel with increased mechanical properties and a dedicated geometry of the male screw head that allow us to declare, based on in-vitro tests performed, a strengthness higher than 60kgf, about 50% higher than standard RPE. These features ensure the treatment efficiency even with maxillary expansion in adult patients with 2 or 4 TADs



### STRENGTHENED SWIVEL KEY

The strengthened swivel key for CAD-CAM anatomical expander, supplied inside the package, is more resistant than standard one and its use is mandatory in order to enable the full transmission of expansion forces



### INSTRUCTIONS TO ACTIVATE THE EXPANDER USEFUL FOR PARENTS AND CLINICIANS

**CAD-CAM ANATOMICAL EXPANDER  
OPTIMIZED FOR SKELETAL ANCHORAGE ON TADs**

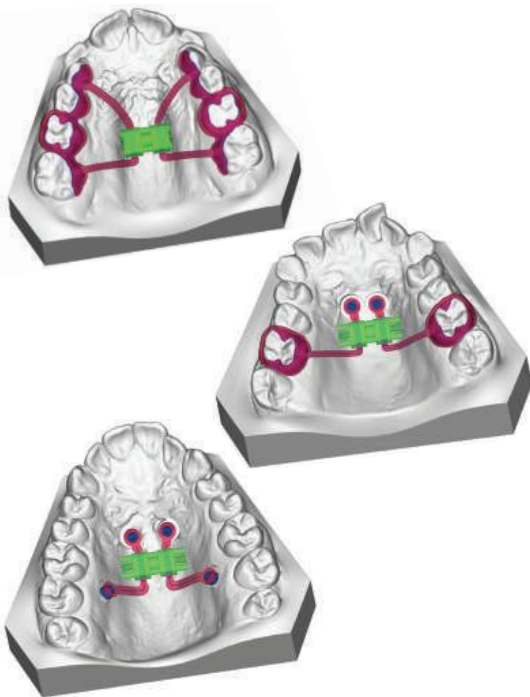
The CAD-CAM anatomical expander, with a design like the expander with orthogonal arms, is optimized for this particular use: instead of arms, it includes 2 longitudinal square slots in the bodies that allow perfect laser welding with the digitally designed and sintered structure. The small size of the body, the unique self-centring guide system, and the use of biomedical steel with superior resistance for guides and male screw, allow optimal positioning of the expander even in cases of severe contraction, favouring biomechanical control of expansion even in MARPE therapies on adult patients. It is possible to digitally design hybrid expanders, with both dental and skeletal anchorage, or entirely skeletal anchorage on TADs. The expansion capacity, expressed in mm, the arrow indicating the activation direction, and the lot number are laser-marked on the body.

Package includes:

- 1 stainless steel key
- 1 hinged enhanced-key with handle
- Instructions for the patient for at-home endoral activation

Packs of 1

.Stl file available on the website [www.leone.it](http://www.leone.it) and included in the library of 3DLEONE DESIGNER software



front view	back view		body			activation turns for maximum expansion limit
		<b>A0630-08D</b>	1,5x1,5mm	12 mm	8 mm	40
		<b>A0630-10D</b>	1,5x1,5mm	14 mm	10 mm	50
		<b>A0630-12D</b>	1,5x1,5mm	16 mm	12 mm	60

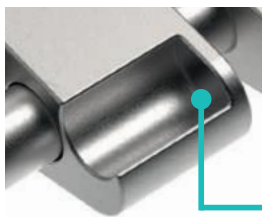


PATENTED

**NEW EXPANDERS  
DESIGNED FOR TOOTH BORNE  
APPLIANCES**



Leone's CAD-CAM Tooth Borne expander series broadens the Leone expander CAD-CAM range. The most popular and used Leone expanders has been optimized to be included in a fully digital workflow to manufacture expansion appliances with dental anchorage. The CAD-CAM Tooth Borne expanders are made of stainless steel and manufactured according to the high-quality Leone standards. They feature transversal housings to be coupled with the digital designed and sintered framework, instead of the arms as the classic models.



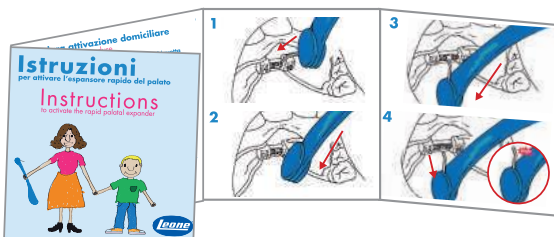
**EMBEDDED SLOTS**

The Tooth Borne CAD-CAM expanders bodies feature slots embedded in the body profile that allow a correct oriented coupling of digitally designed customized laser melted framework. This feature guarantees a high reliability of the device throughout the therapy.



**SWIVEL KEY**

Each expander comes with the classic blue swivel key. Also available with activation turn counter



**INSTRUCTIONS FOR USE OF EXPANDERS  
USEFUL FOR PARENTS AND CLINICIANS**



NEW

**RAPID EXPANDER  
TOOTH BORNE**

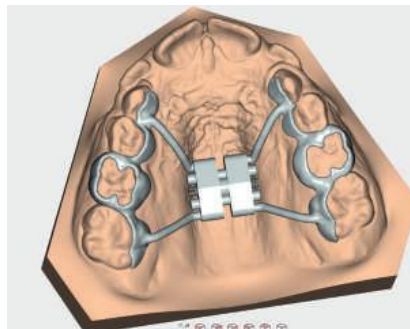
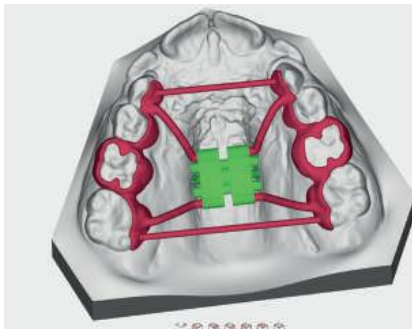
The CAD-CAM Rapid Expander Tooth Borne screw is the optimized CAD-CAM version of the Leone's best seller expander: instead of the arms, it has four transversal housings with an ending stop on the bodies that allow a perfect oriented coupling with the digitally designed and SLM manufactured framework, thus assuring an optimal laser welding process. It is recommended for the utilization on tooth borne appliances. This series of expanders keeps all the features and sizes of our worldwide famous expander, allowing doctors to smoothly switch to digital manufactured RPEs. Expansion capacity in mm, directional arrow and lot number are laser marked on the body of the screw.

Supplied with:

- 1 stainless steel key (to be used only inside the lab)
- 1 blue swivel key with handle
- Instructions for the patient for at-home endoral activation

**Pack of 1**

.Stl file available on the website [www.leone.it](http://www.leone.it) and included in the library of **3DLEONE DESIGNER** software



front view	back view		body			activation turns for maximum expansion limit	
			2 mm	12 mm	8 mm	0,8 mm	35
		<b>A0620D09</b>	2 mm	14 mm	9 mm	0,8 mm	40
		<b>A0620D11</b>	2 mm	16 mm	11 mm	0,8 mm	50
		<b>A0620D13</b>	2 mm	18 mm	13 mm	0,8 mm	60

**NEW**

**EASY ACCESS MICRO EXPANDER  
TOOTH BORNE**

This expander is the optimized CAD-CAM version of the Stealth Easy Access. Instead of the arms, it has two transversal housings with an ending stop on the bodies that allow a perfect oriented coupling with the digitally designed and SLM manufactured framework, thus assuring an optimal laser welding process.

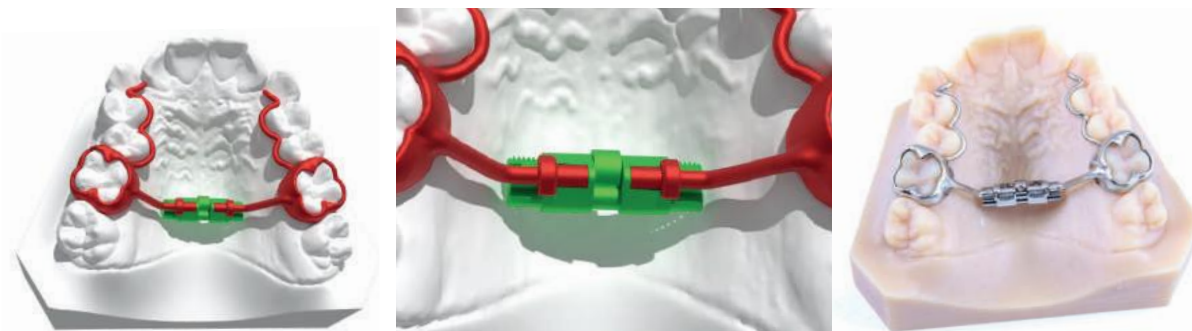
Thanks to the more visible screw holed-head, the micro expander A1621D allows an easier intraoral activation with the swivel key. It is recommended for dental anchored expanders. This series of expander keeps all the features and sizes of our classic worldwide famous expander, allowing doctors to smoothly switch to digital manufactured RPEs. Expansion capacity in mm, directional arrow and lot number are laser marked on the body of the screw.

Supplied with:

- 1 stainless steel key (to be used only inside the lab)
- 1 swivel key with handle
- Instructions for the patient for at-home endoral activation

**Pack of 1**

.Stl file available on the website [www.leone.it](http://www.leone.it) and included in the library of **3DLEONE DESIGNER** software



4,95 mm front view	4,05 mm back view		body			activation turns for maximum expansion limit	
		<b>A1621-08D</b>	2 mm	12 mm	8 mm	0,8 mm	35
		<b>A1621-11D</b>	2 mm	16 mm	11 mm	0,8 mm	50
		<b>A1621-13D</b>	2 mm	18 mm	13 mm	0,8 mm	60

NEW



**EXPANDER LOWER ARCH  
TOOTH BORNE**

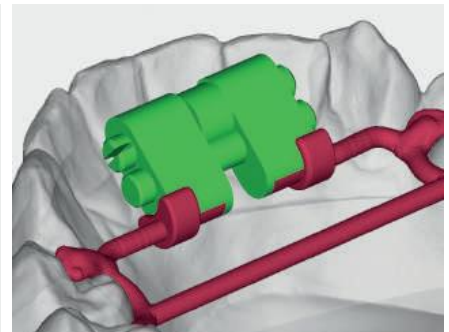
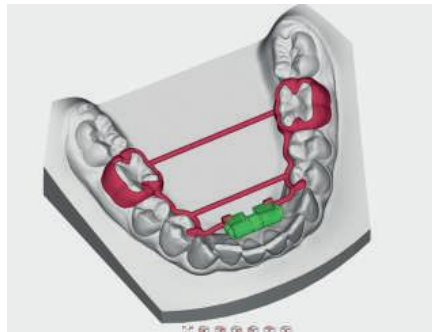
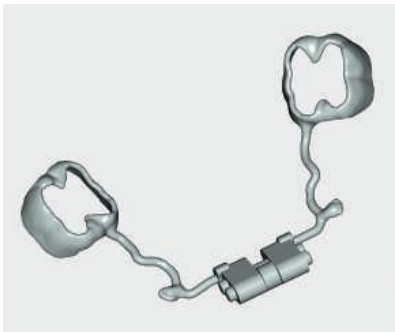
The CAD-CAM expander for lower arch Tooth Borne is the optimized CAD-CAM version of the Torko lower screw. Instead of the arms, it has two transversal housings with an ending stop on the bodies that allow a perfect oriented coupling with the digitally designed and SLM manufactured framework, thus assuring an optimal laser welding process. The main characteristics are the same of the classic A0623 expanders, featuring a flat profile that reduces the overall bulkiness, particularly important since it is recommended for the use on lower jaw tooth borne appliances. Expansion capacity in mm, directional arrow and lot number are laser marked on the body of the screw.

Supplied with:

- 1 stainless steel key (to be used only inside the lab)
- 1 key with safety ring leash
- Instructions for the patient for at-home endoral activation

**Pack of 1**

.Stl file available on the website [www.leone.it](http://www.leone.it) and included in the library of **3DLEONE DESIGNER** software



7,5 mm front view	4 mm back view		body			activation turns for maximum expansion limit	
		<b>A0623-08D</b>	2 mm	12 mm	8 mm	0,8 mm	35
		<b>A0623-11D</b>	2 mm	16 mm	11 mm	0,8 mm	50

**NEW**



**LEAF EXPANDER  
TOOTH BORNE**

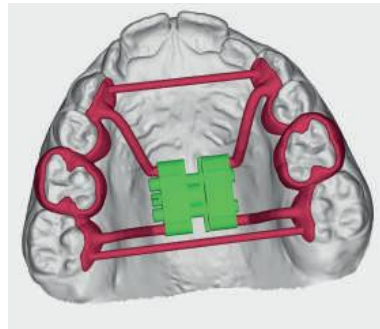
The CAD-CAM Leaf Expander is a spring loaded expander that, along with the male screw, has two or three MEMORIA Ni-Ti leaf springs that allow the release of calibrated and continuous forces to promote the expansion of the maxillary arch. It is a device optimized for the CAD-CAM procedure, instead of the arms it has four transversal rounded slots on the bodies that allow a correct oriented coupling for the welding of digitally designed customized laser melted framework. The main features are the same as the standard Leaf expander series. It is recommended for the utilization on tooth borne appliances. This expander series keeps the efficiency of the classic expander while looking towards the future.

Supplied with:

- 1 stainless steel key (to be used only inside the lab)
- 1 swivel key with handle

**Pack of 1**

.Stl file available on the website [www.leone.it](http://www.leone.it) and included in the library of **3DLEONE DESIGNER** software



11 mm front view		4 mm back view		body	body	body	body	activation turns for maximum expansion limit	
				<b>A2703-06D</b> 2 springs 450 g approx.	2 mm	12 mm	6 mm	0,4 mm	30
				<b>A2704-06D</b> 2 springs 900 g approx.					
				<b>A2703-09D</b> 3 springs 450 g approx.	2 mm	16 mm	9 mm	0,4 mm	45
				<b>A2704-09D</b> 3 springs 900 g approx.					

EXPANDER ACTIVATION GUIDELINES		LEAF EXPANDER cementation		FIRST visit		SECOND visit		THIRD visit	
<b>6 mm</b>	<b>A2703-06D</b> <b>A2704-06D</b>	spring activation 0 turns	<b>after 6 weeks</b>	10 turns	<b>after 4 weeks</b>	10 turns	<b>after 4 weeks</b>	10 turns	10 turns
<b>9 mm</b>	<b>A2703-09D</b> <b>A2704-09D</b>	spring activation 0 turns	<b>after 8 weeks</b>	15 turns	<b>after 6 weeks</b>	15 turns	<b>after 6 weeks</b>	15 turns	15 turns



NEW

**LEAF SELF EXPANDER  
TOOTH BORNE**

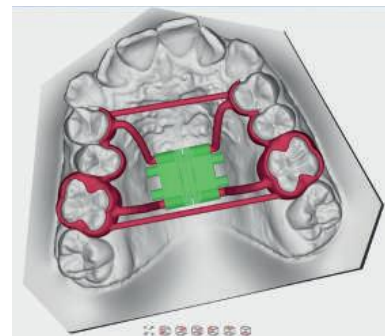
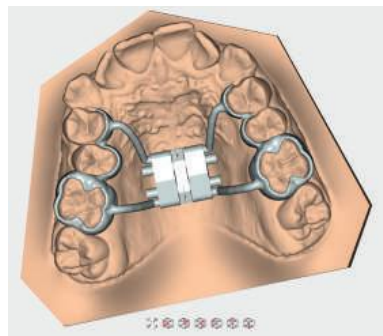
Leaf Self Expander is a spring loaded expander equipped with four or six MEMORIA Ni-Ti leaf springs that allow the release of calibrated and continuous forces to promote the expansion of the maxillary arch.

It is a device optimized for the CAD-CAM procedure: instead of the arms it has four transversal rounded slots on the bodies that allow a correct oriented coupling for the welding of digitally designed customized laser melted framework. The main features are the same as the standard Leaf expander series. It is recommended for the utilization on tooth borne appliances.

This expander series keeps the efficiency of the classic expander while looking towards the future.

**Pack of 1**

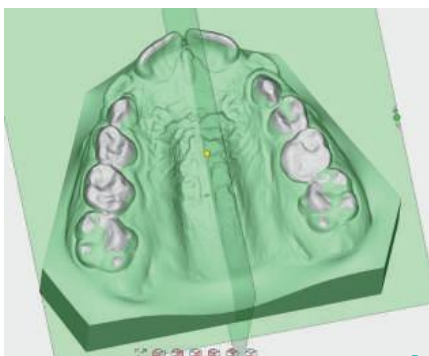
.Stl file available on the website [www.leone.it](http://www.leone.it) and included in the library of **3DLEONE DESIGNER** software



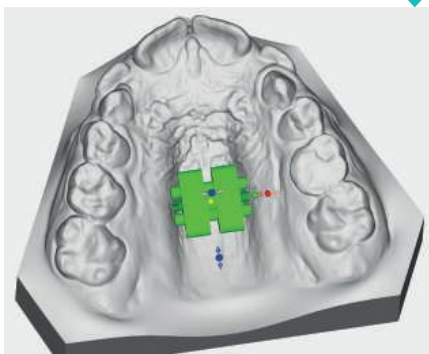
11 mm front view	4 mm back view		body	
		<b>A2705-06D</b> 4 springs 450 g approx.	2 mm	11 mm
		<b>A2706-06D</b> 4 springs 900 g approx.		6 mm
		<b>A2705-09D</b> 6 springs 450 g approx.	2 mm	15 mm
		<b>A2706-09D</b> 6 springs 900 g approx.		9 mm



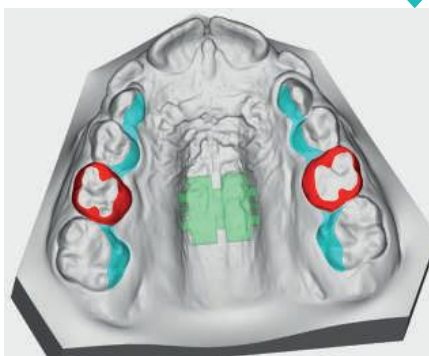
MODELS  
ORIENTATION



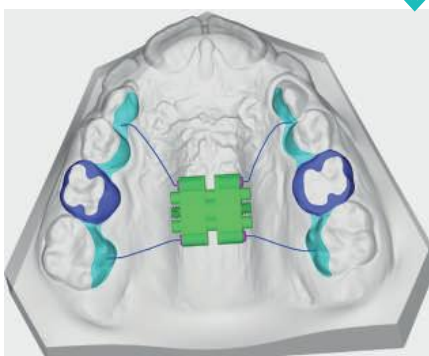
SCREW POSITION  
DEFINITION



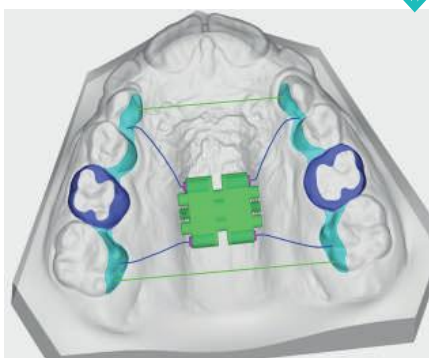
BANDS  
DEFINITION



ARMS  
DEFINITION



SUPPORT  
DEFINITION



**3DLEONE DESIGNER  
SOFTWARE**

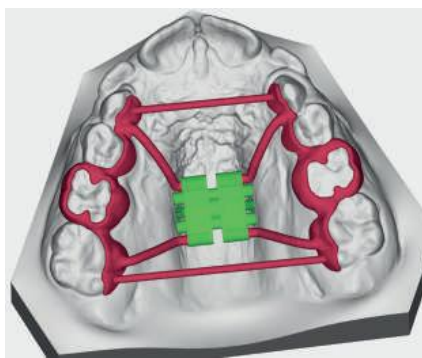
**3DLEONE DESIGNER** is the first software based on an easy and driven workflow for the digital design of customized framework to be coupled with our innovative CAD-CAM expanders.

Based on our experience with many different software in the dental field and due to the increased customer requests, Leone has made out an innovative and intuitive software that allows to design, not only bands and supports, but also the expander arms, and can automatically place the expander also in the right position, in very short time and independently from the digital skills.

**3DLEONE DESIGNER** software allows to upload and manage the .STL files of both upper and lower arches, obtained from a laboratory scanner or directly from an intra-oral scanner, and it has already in library all the range of Leone's CAD-CAM expanders available.

Once the digital driven workflow is completed, thanks to an innovative technology called Selective Laser Melting, the designed .STL file will become, a high precision sintered framework and will be coupled perfectly with the chosen Leone CAD-CAM expander. Then the framework and the expander will be permanently laser welded.

REVIEW &  
EXPORT



FOR FURTHER INFORMATION  
ON **3DLEONE DESIGNER**  
SOFTWARE VISIT WEB SITE **3DLEONE.IT**

