

feel the difference



LMActivatorTM SILICONE ACTIVATOR AND ALIGNER for growing patients



SILICONE ACTIVATOR AND ALIGNER

LM-Activator™ - Early orthodontic intervention

LM-ActivatorTM is a prefabricated appliance for supporting healthy growth and development of the face and jaw. The ideal time for treatment with LM-ActivatorTM is in early mixed dentition when the first teeth are changing. By intervening early, the need for further treatment can be significantly reduced and even eliminated. Research indicates that malocclusions in deciduous dentition persist and tend to become more severe as the dentition develops. LM-ActivatorTM provides soft guidance to teeth and jaws when needed.

How does LM-Activator[™] work?

■ When the teeth are changing, LM-Activator[™] gently guides the teeth and jaw towards a healthy growth.

■ LM-Activator[™] aligns teeth, activates mandibular growth and expands the arch perimeter in mixed dentition.

■ LM-ActivatorTM corrects and aligns sagittal and vertical relationships simultaneously - no separate phases are needed. The occlusion can be controlled in a 3-dimensional way.

■ A large number of different model and size combinations makes it possible to select an LM-Activator[™] appliance that is appropriate for the patient.





Gently guiding the growth of erupting teeth and growing jaws can be compared to trimming and supporting a young plant. Guiding to a healthy growth path early and along the growth is more gentle and the outcome will be more natural.



Scan the QR and watch the video

for I M-Activator™ introduction.



"The appliance has many advantages. Most importantly, early treatment with LM-Activator™ will stop the development of the malocclusions, thereby preventing the malocclusion to become more severe. For children, LM-Activator™ is easy to use. The treatment is easy and straightforward, and the treatment outcome more natural."

Professor Emeritus Juha Varrela, DDS, PhD, Specialist in Orthodontics, Institute of Dentistry, University of Turku, Finland



Scan the QR and watch the video about LM-Activator™

GROWING HAPPY SMILES

Advantages for TREATING PATIENTS with LM-Activator™

 $\sqrt{}$ Corrects efficiently different malocclusions.

Suitable for treating overjet, overbite, deepbite, open bite, crowding, Class II and dental anterior crossbite i.e. inverted incisors. Sagittal and vertical relationships can be corrected simultaneously¹.

✓ Cost-effective. Single treatment phase with simultaneous alignment, leveling and anteroposterior correction instead of separate stages.

✓ Clinically and scientifically proven. The treatment method is supported by evidence from cohort controlled and RCT research results.

✓ Reduced treatment complexity. A large assortment of models makes it possible to select the appropriate appliance for the patient. Treatment can be started immediately.

√ Models for alternative arch forms. Narrow model for standard and regular arch widths, and Wide for wider arch forms.

✓ Enhanced durability. Model with reinforcement in incisal area for improved durability, e.g. for deep bite cases.



"Our results showed distinct improvements in overjet, overbite, sagittal molar relationship, and crowding in the treated subjects."

Myrlund R., et al. One year treatment effects of the eruption guidance appliance in 7- to 8-year -old children: a randomized clinical trial. European Journal of Orthodontics, 2015;37(2):128-134. https://doi.org/10.1033/ejo/dju014



"An advantage of the eruption guidance appliance is that it not only guides the eruption of the teeth but also simultaneously acts on the transversal, sagittal, and vertical relationships of both dental arches."

Kesid-Nisula, K., et al. J. Orthodontic intervention in the early mixed dentition: A prospective, controlled study on the effects of the eruption guidance appliance. AM J of Orthodontics and Dentofacial Orthopedics, 2008;133(2), 254-260. https://doi.org/10.1016/j.ajodo.2006.05.039



"As a result of the EGA treatment, the sagittal relationship was corrected from Class II to Class I in 86% of the cases during the active treatment, and it showed further improvement posttreatment. At the age of 16.7 years, 98% of the treatment children, who all had a Class II relationship at the onset of the early mixed dentition, had a Class I relationship."

Keski-Nisula K., et al. Class II treatment in early mixed dentition with the eruption guidance appliance: effects and long-term stability. European Journal of Orthodontics, 2020;42(2):151-156. https://doi.org/10.1093/ejo/ojc020

Safety and comfort FOR THE PATIENT

✓ Made of medical-grade silicone. Flexible by nature and comfortable for the patient.

✓ No additives. No coloring agents, phtalates, softeners, latex, bisphenol-A or fragrance agents.

✓ Safe and fully biocompatible. The use is safe for the patient. The silicone material is tested in accordance with ISO 10993 requirement of 30 days permanent contact with mucous membranes.

✓ Hygienic. Daily rinse with water is enough. Can be disinfected by boiling.

V Evidence based treatment method. The treatment method proven by research results, and the appliance has been used by hundreds of thousands of patients around the world. ✓ Removable and used while sleeping. Patient can eat any food normally, exercise and do any sport, and no metal wire adjustments or emergency visits needed due to broken metal parts.

✓ Feels comfortable. Anatomically designed and rounded tooth slots.

 $\sqrt{\text{Gentle on teeth. Soft silicone is gentle on teeth and comfortable for the patient.}}$

✓ Simple and easy treatment. No separate treatment phases but simultaneous alignment, leveling and anteroposterior correction reducing treatment complexity.

INDICATIONS - when to use LM-Activator™?

LM-ActivatorTM has proven to be effective in treatment of different malocclusions at different dental stages. Evaluating the dentoalveolar, skeletal and functional characteristics is an essential part of selecting patients for LM-ActivatorTM treatment. A thorough case-by-case analysis of the patient's malocclusion and its severity as well as of the patients motivation is needed.

The ideal time for treatment with LM-Activator[™] is in early mixed dentition when the first teeth are changing. Use of LM-Activator[™] is recommended to align teeth, activate mandibular growth and expand the arch perimeter. The chart below provides a demonstrative guideline for case selection.

		Deciduous dentition	Early mixed dentition	Late mixed dentition	Early permanent dentition	Use of LM-Activator™ recommended Use of LM-Activator™ can be considered
Excess overjet, excess overbite, deep bite	Severe					
	Moderate					Contraindications:
	Mild					Skeletal Class III
Anterior crowding (incisors and canines)	Severe					Midline discrepancy > 3mm *)
	Moderate					Very narrow upper arch *)
	Mild					Palatally impacted teeth *)
Dentoalveolar anterior crossbite of 1-2 teeth	Severe					Fully erupted anterior teeth that require torqueingTeeth requiring intrusion
	Moderate					
	Mild					*) May be treated with combination treatment (LM-Activator™ toget
Rotated anterior teeth	Severe					with other appliances such as quad helix)
	Moderate					
	Mild					
Class II	Severe					
	Moderate					
	Mild					
Scissorsbite / Complete mandibular posterior lingual	Severe					
crossbite (i.e. mandibular posterior teeth completely	Moderate					
on the lingual side of the maxillary posterior teeth)	Mild					
Gummy Smile (Treatment start before the eruption	Severe					
of permanent maxillary central incisors)	Moderate					
	Mild					
Open bite (High model recommended)	Severe					
	Moderate					
	Mild					

The treating doctor is solely responsible and liable for diagnosis, treatment, and evaluating whether treatment with LM-ActivatorTM, LM-TrainerTM or any other LM-DentalTM's product is appropriate for a specific patient, and for the outcome of any treatment with LM-ActivatorTM, LM-TrainerTM or any other LM-DentalTM's product. Product used, and use of products shall be determined solely by doctor and evaluated for use with each individual patient where appropriate. Please refer to manufacturer's instructions for use.

Overjet 1)



Before



After 1 year

Deep bite with palatal impingement 1)



Before



After 1 year

Single tooth anterior crossbite ²)



Before



After 15 days

Crowding ³)







After 10 months

Clinical pictures courtesy of ¹) Dr. Rita Myrlund and Dr. Mari Dubland, University of Tromso, Norway. ²) Dr. Gioacchino Pellegrino, Management of eruption problems with preformed silicone orthodontic devices, Poster presented at 21. Janestagung der Deutsche Gesellschaft für Kinderzahnheilkunde 25.09 - 27.09 2014; Freiburg, Germany ¹) Dr. Gioacchino Pellegrino, Deep bite correction with a preformed appliance, Poster with oral presentation presented at 14 Congress of European Academy of Pacificia Densitys; 50 + 8th June 2014; Spotp, Poland.

"We can control the occlusion in a three dimensional way with LM-Activator™. We are able to control overbite, overjet, the lateral contacts of the lower and upper arch and to modify the sagittal growth."



Dr. Giacchino Pellegrino, DDS, Specialist in Orthodontics, Italy

References

^[1] Keski-Nisula, K., Hernesniemi, R., Heiskanen, M., Keski-Nisula, L., & Varrela, J. Orthodontic intervention in the early mixed dentition: A prospective, controlled study on the effects of the eruption guidance appliance. AM J of Orthodontics and Dentofacial Orthopedics, 2008:133(2), 254-260. https://doi.org/10.1016/j.ajodo.2006.05.039

Keski-Nisula K., Keski-Nisula L., Varrela J. Class II treatment in early mixed dentition with the eruption guidance appliance: effects and long-term stability. European Journal of Orthodontics, 2020:42(2):151-156. https://doi.org/10.1093/ejo/cjz092

^{ISI} Keski-Nisula K., Keski-Nisula L., Salo H., Voipio K., Varrela J. Dentofacial changes after Orthodontic Intervention with Eruption Guidance Appliance in the Early Mixed Dentition. Angle Orthod 2008;78(2):324-331. https://doi.org/10.2319/012607-37.1

^[4] Myrlund R., Dubland M., Keski-Nisula K., Kerosuo H. One year treatment effects of the eruption guidance appliance in 7- to 8-year -old children: a randomized clinical trial. European Journal of Orthodontics, 2015;37(2):128-134. https://doi.org/10.1093/ejo/cju014

^[5] Myrlund R., Keski-Nisula K., Kerosuo H. Stability of orthodontic treatment outcomes after 1-year treatment with the eruption guidance appliance in the early mixed dentition: A follow-up study. Angle Orthod 2019: 89(2):206-213. https://doi.org/10.2319/041018-269.1

^{IEI} Kerosuo, H., Heikinheimo, K., Nyström, M., Väkiparta, M. Outcome and long-term stability of an early orthodontic treatment strategy in public health care. European Journal of Orthodontics 2013:35(2):183-189. https://doi.org/10.1093/ejo/cjs087

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Glasl B., Ludwig B., Schopf P. Prevalence and Development of KIG-relevant Symptoms in Primary School Students from Frankfurt am Main* Prävalenz und Entwicklung KIG-relevanter Befunde bei Grundschülern aus Frankfurt am Main*. Journal of Orofacial Orthopedics / Fortschritte der Kieferorthopädie 2006:67(6):414-423. https://doi.org/10.1007/s00056-006-0615-8

^{III} Janson G. R., da Silva C. C., Bergersen E. O., Henriques J. F., Pinzan A. Eruption guidance appliance effects in the treatment of Class II, Division 1 malocclusions. AM J of Orthodontics and Dentofacial Orthopedics 2000:117(2), 119-129. https://doi.org/10.1016/s0889-5406(00)70222-8

LM-Activator[™] MODEL ASSORTMENT features

With LM-Activator[™] alignment, leveling and anteroposterior correction can be done at the same time without separate phases. A large assortment of models makes it possible to select the appropriate appliance for the patient. Treatment complexity for both the clinician and the patient can be reduced.

The four basic LM-Activator[™] model features are: LOW and HIGH, and SHORT and LONG. The appliances are combinations of these features. All the models are available also for two arch widths: NARROW or WIDE. Also REINFORCED model with hard insert in the incisal area is available. The choice of model should always be based on an examination and diagnosis done by or under supervision of a specialist in orthodontic treatment. The appliance should always be fitted to the patient to ensure a good fit.



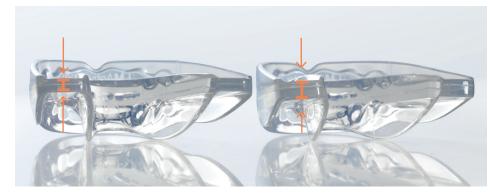
SHORT

NARROW

Model with a shorter molar section for patients whose second molars have not yet erupted.

LONG

Model with a longer molar section for patients whose second molars have erupted.



LOW

Model with basic appliance thickness is applicable to many different cases.

HIGH

Model with thicker premolar and molar area. Specifically designed for treating skeletal and dentoalveolar open bite cases.



There are two different arch widths of all basic models.

WIDE

Model for narrow and regular dental arch width.

Model for wide dental arch width.

All models are available also with incisal reinforcement.

REINFORCED

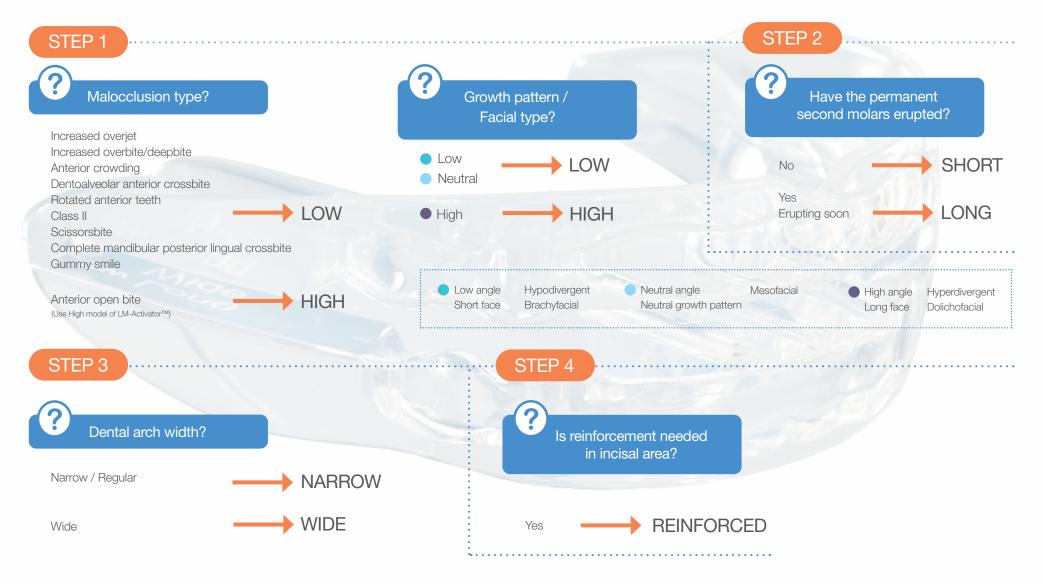
This model has a rigid reinforcement of harder material in the incisal area and is designed especially for skeletal deep bite cases. The model is also suitable for other patients who benefit from a firm surface and improved durability.

General steps on HOW TO CHOOSE the LM-Activator™ MODEL



Scan the QR and watch video guidelines on how to choose the LM-Activator™ model

The selection chart below provides some general basic guidelines on choosing the right LM-Activator[™] appliance for the patient. It is solely the responsibility of the treating doctor to evaluate and determine which model is best suitable for the individual patient.



The treating doctor is solely responsible and liable for diagnosis, treatment, and evaluating whether treatment with LM-ActivatorTM, LM-TrainerTM or any other LM-DentalTM's product is appropriate for a specific patient, and for the outcome of any treatment with LM-ActivatorTM, LM-TrainerTM or any other LM-DentalTM's product. Product used, and use of products shall be determined solely by doctor and evaluated for use with each individual patient where appropriate. Please refer to manufacturer's instructions for use.

Selecting THE SIZE

LM-OrthoSizer[™] is a tool for aiding the selection of the appropriate LM-Activator[™] size. The size is indicative and LM-Activator[™] should always be fitted to ensure the correct size.

- LM 9400 measures the distance across the upper incisors from the distal surface of the left lateral incisor to the distal surface of the right lateral incisor.
- LM 9402 is to be used like LM 9400 but with LM-Activator™ 2 series. The accuracy is improved with separate measures for mandible and maxilla.
- Both are compatible with LM mirror handles (LM 25 SI/XSI/ES, LM 28 XSI/ES).





LM 9400 LM-OrthoSizer™

LM 9402 LM-Activator™ 2 OrthoSizer™

Checking the fit of the appliance

Fitting the appliance to the patient is the most important step of size selection.

1. No crowding and no risk of crowding

Choose the size that matches the dentition. The canine rests at the bottom of the slot and no distalizing force is placed on the canine. If there is crowding or crowding is expected, consider a larger size to enable expansion of the arch perimeter. In case of diastema consider choosing a smaller size.

2. Crowding or risk of crowding

Select a size that is larger than the dentition. LM-Activator[™] guides the canine towards the bottom of its' slot and applies force distally on the canine.

3. The size is too large

The canine is guided against a ridge between two tooth slots and the appliance does not quide the teeth properly. Select a smaller size.

Re-evaluate the size of the appliance when the permanent maxillary and mandibular lateral incisors begin to erupt. It may be necessary to switch to a larger appliance.











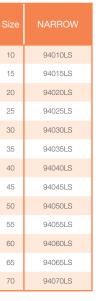
LM-Activator[™] product range

LM-Activator[™] has been used by hundreds of thousands of patients around the world for correcting malocclusions and guiding the teeth and jaw to a healthy grow.

I M-Activator™ I ow Short

Model with a shorter molar section for patients whose second molars have not vet erupted. Delivered in a yellow box.





20

25

30

35

40

45

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55

60

65

70

94020HS

94025HS

94030HS

94035HS

94040HS

94045HS

94050HS

94055HS

94060HS

94065HS

94070HS

Models for wide arch form and/or with reinforced incisal area - see the new generation LM-Activator[™] 2 appliances on next page.

LM-Activator[™] Low Long

Model with a longer molar section for patients whose second molars have erupted. Delivered in a blue box.



Size	NARROW
40	94040L
45	94045L
50	94050L
55	94055L
60	94060L
65	94065L
70	94070L

LM-Activator[™] High Short

Model with a shorter molar section for patients whose second molars have not yet erupted. The High model is thicker in the region of second premolars and molars. It is specifically designed for treating skeletal and dentoalveolar open bite cases. Delivered in an orange box.



LM-Activator[™] High Long

Model with a longer molar section for patients whose second molars have erupted. The High model is thicker in the region of second premolars and molars. It is specifically designed for treating skeletal and dentoalveolar open bite cases. Delivered in a areen box.



Size	NARROW
45	94045H
50	94050H
55	94055H
60	94060H
65	94065H
70	94070H

LM-Activator[™] 2 product range

LM-Activator[™] 2 is the new generation of LM-Activator[™] appliances. The models are the same as in LM-Activator[™], Low and High, Short and Long. In addition there are now two alternative arch widths, Narrow (regular width) and Wide, for all models. A model with incisal reinforcement for increased durability (Reinforced) is also introduced for all models and in two arch widths. LM-Activator[™] 2 has high gloss surface and improved markings.

LM-Activator™ 2 Low Short

Model with a shorter molar section for patients whose second molars have not yet erupted. Delivered in a yellow box.



Size	NARROW	Reinforced	WIDE	Reinforced
35	94235LSN	94235LSNR	94235LSW	94235LSWR
40	94240LSN	94240LSNR	94240LSW	94240LSWR
45	94245LSN	94245LSNR	94245LSW	94245LSWR
50	94250LSN	94250LSNR	94250LSW	94250LSWR
55	94255LSN	94255LSNR	94255LSW	94255LSWR
60	94260LSN	94260LSNR	94260LSW	94260LSWR
65	94265LSN	94265LSNR	94265LSW	94265LSWR
70	94270LSN	94270LSNR	94270LSW	94270LSWR

LM-Activator™ 2 Low Long

Model with a longer molar section for patients whose second molars have erupted. Delivered in a blue box.



Size	NARROW	Reinforced	WIDE	Reinforced
35	94235LLN	94235LLNR	94235LLW	94235LLWR
40	94240LLN	94240LLNR	94240LLW	94240LLWR
45	94245LLN	94245LLNR	94245LLW	94245LLWR
50	94250LLN	94250LLNR	94250LLW	94250LLWR
55	94255LLN	94255LLNR	94255LLW	94255LLWR
60	94260LLN	94260LLNR	94260LLW	94260LLWR
65	94265LLN	94265LLNR	94265LLW	94265LLWR
70	94270LLN	94270LLNR	94270LLW	94270LLWR

LM-Activator™ 2 High Short

Model with a shorter molar section for patients whose second molars have not yet erupted. The High model is thicker in the region of second premolars and molars. It is specifically designed for treating skeletal and dentoalveolar open bite cases. Delivered in an orange box.

LM-Activator™ 2 High Long

Model with a longer molar section for patients whose second molars have erupted. The High model is thicker in the region of second premolars and molars. It is specifically designed for treating skeletal and dentoalveolar open bite cases. Delivered in a green box.

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ISWR	A A A A
ISWR	
ISWR	LM
ISWR	Truestade 2

Size	NARROW	Reinforced	WIDE	Reinforced
35	94235HLN	94235HLNR	94235HLW	94235HLWR
40	94240HLN	94240HLNR	94240HLW	94240HLWR
45	94245HLN	94245HLNR	94245HLW	94245HLWR
50	94250HLN	94250HLNR	94250HLW	94250HLWR
55	94255HLN	94255HLNR	94255HLW	94255HLWR
60	94260HLN	94260HLNR	94260HLW	94260HLWR
65	94265HLN	94265HLNR	94265HLW	94265HLWR
70	94270HLN	94270HLNR	94270HLW	94270HLWR



Size	NARROW	Reinforced	VVIDE	Reiniorcea
35	94235HSN	94235HSNR	94235HSW	94235HSWR
40	94240HSN	94240HSNR	94240HSW	94240HSWR
45	94245HSN	94245HSNR	94245HSW	94245HSWR
50	94250HSN	94250HSNR	94250HSW	94250HSWR
55	94255HSN	94255HSNR	94255HSW	94255HSWR
60	94260HSN	94260HSNR	94260HSW	94260HSWR
65	94265HSN	94265HSNR	94265HSW	94265HSWR
70	94270HSN	94270HSNR	94270HSW	94270HSWR

LM-Trainer[™] products

LM-Trainer[™] can be used in deciduous dentition, e.g. before LM-Activator[™] treatment. It can also be used in functional education and for habit correction, e.g. reverse swallowing and mouth breathing, when harmful oral habits risk causing malocclusions.



LM-Trainer™ Medium LM 94100T

- Slots for incisors and cuspids
- Lip bumber



LM-Trainer™ Small LM 94100S

- Slots for incisors, lip bumperSmaller and softer than
- LM-Trainer™ Medium



LM-Trainer™ Braces

LM 94100TB

- Used in conjunction with brackets and wires
- Brings the mandible forward for Class II correction
- Prevents irritation and wounding of soft tissue
- Lip bumper

LM-Trainer™ 2 Medium LM 94100T2

- Bigger than LM-Trainer™ Medium
- High gloss surface
- Slots for incisors and cuspids
- High labial shields and shaped lingual flanges
- Enhanced lip bumber



LM-Activator[™] motivational materials

Patient compliance is essential for successful treatment. The first month is crucial in adopting the habit to use the appliance (because creating a habit in general requires 3-4 weeks of regularity). To motivate the patient and his/her family, age appropriate material is available for both preadolescents and adolescents. It is important to make sure the patient and his/her family understands that irregular use may be equivalent with no treatment at all.



LM-Activator™ Clinic Marketing brochure M1061EN

- Take-away brochure for clinics to introduce and promote LM-Activator™ treatment for parents. English.

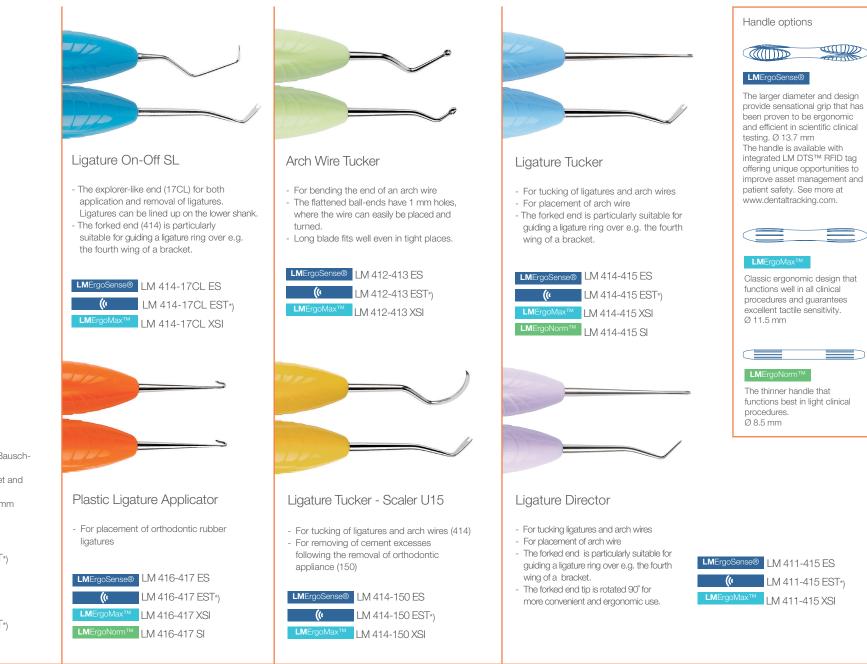


LM-Activator™ Patient Guidance LM 94533 15 pcs

- Cartoon styled guidance for parents and patients on how to use LM-activator™. Includes also a calender for tracking daytime and night-time use. English.

ORTHODONTIC HAND INSTRUMENTS





*) EST = LM-ErgoSense® handle with integrated LM DTSTM RFID tag is compatible with LM Dental Tracking SystemTM. For more information see www.dentaltracking.com and contact your LMTM representative.

LMDental[™]

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