## LM

feel the difference

SHARPEN

FREE

## ENJOY PERIO.

# LMDental



## Your skills are worth LM

Whether it comes to the design or the production of the LM-Dental instruments, we focus on the specific needs of the dental experts. We are in a constant communication with the end users of our products to keep our product development on the cutting edge. We are the innovation leader that others copy. Our radical product theses of the 1980s – a thicker handle, optimized shape, elastic surface, lightness and color coding – have become industry wide standards in the 21st century.

The ergonomics has been the guiding light of our product development since the establishment of the company. Based on new research we now know more than ever about ergonomic instrumentation. The result is LM-ErgoSense, a future icon in dentistry. With contemporary coating technology we are able add on additional features, that offer unique benefits for you and your patient. Sharpen free periodontal and non-stick restorative instruments are finally reality.

In addition to the new level of ergonomics, LM-ErgoSense offers new opportunities with its built-in RFID technology, which together with scanning readers and software create a unique Dental Tracking System.

You can feel the difference and so does your most satisfied patient.

#### LM-DENTAL

LM-Dental Sharp Diamond LM-ErgoSense & Dental Tracking System Handle selection

#### DIAGNOSTICS

Mirror handles Explorers Periodontal probes Furcation probes Diagnostic instrument set

#### 18 PERIODONTICS

Sharp Diamond Sickle scalers Universal curettes Special instruments Gracey finishing curettes LM-ErgoMix instruments Implant series Instrument sets

#### PLANMECA

LM-Dental is part of the Planmeca Group, one of the world's leading manufacturers of dental equipment.

www.planmeca.com

## High-tech production technology

Like every true professional we also aim for the ultimate perfection in our work. LM-Dental devotes its entire product development and production process to achieve the best possible quality in all our products for you to have the very best tools to work with. We deliver the highest of quality to guarantee your success in the treatment results. All our products are produced in Scandinavia. We give our high-tech products a handmade finish to gain a top-quality end result and highest functionality.

## The pioneer in INSTRUMENT ERGONOMICS

How to define the ergonomics of a hand instrument? Firstly a non-slip and natural grip on an instrument are essential. Secondly a lightweight and optimized design prevent effectively occupational diseases. Thirdly a good tactile sensitivity and easy handling of the instrument guarantee the best clinical results. Reliability, wear resistance and comfort are the features that will be evident for both, the dentist and the patient. These are the guiding principals how Pekka Kangasniemi, DDS, one of the founders of LM, defined instrument ergonomics already in the 1980s.

Still today our aim in product development is to innovate together with the clinicians. Based on new research we now know more than ever about ergonomic instrumentation. The result is LM-ErgoSense, which fits the hand perfectly, enables relaxed grip and offers ultimate tactile sensitivity.

#### To sharpen or not to sharpen?

That is the question, but in both cases LM periodontal instruments are ultimate in metallurgy. The high wear resistance and hardness of the blade metal makes them efficient, long-lasting and comfortable.

Resulting from the advanced material technical research and contemporary micro coating technology LM can offer the highest quality in both uncoated and coated product categories.

- The micro coated Sharp Diamond instruments are completely sharpen free and razor sharp.
- If you wish to resharpen the uncoated LM-DuraGradeMAX supersteel offers you the ultimate wear resistance.

According to independent research studies, the wear resistance of LM curettes is significantly better than that of the comparative instruments. The choice is yours. Elastic, ergonimic surface material and optimal contouring - comfortable and non-slip grip

Special alloyed metal core
- lightweight structure
- metal-to-metal connection
for enchanced tactile sensivity

Optimal rigidity

- excellent sensitivity and efficiency - outstanding corrosion resistance

Hand-finishing
- sharp cutting edge

Precision formed tips -extremely sharp, smooth cutting edge



LM-DuraGradeMax supersteel

- High wear resistance
- Immune to corrosion
- Can be resharpened

## Enjoy sharpen free perio

Opposites attract. This holds true with high-quality, periodontal instruments. Optimally they are razor sharp, extremely hard, yet smooth and light. A new micro membrane coating made using modern Physical Vapor Deposition (PVD) technology enables LM to create Sharp Diamond instruments with the optimum combination of these features. Sharp Diamonds are completely sharpen free, tough but refined, offering unique benefits for you and your patient.

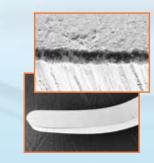
"It's great that I don't need to waste my time on sharpening any longer! Since the Sharp Diamond instruments are totally sharpen free, I can concentrate on the clinical work. Even my patients have noticed how these instruments feel more comfortable and are quieter. I can remove calculus with controlled strokes using extremely light grip. The long-lasting sharpness really makes a difference!"

Anna, Registered Dental Hygienist, USA

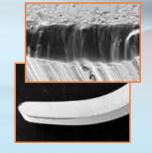
#### COATED

## Ultimate SHARP DIAMOND sharpen free coating

- Micro membrane coating made using the most advanced PVD (Physical Vapor Deposition) technology
- Completely sharpen free
- Superior long-lasting sharpness
- Maximal wear resistance



Cutting edge of the Sharp Diamond curette and the magnification of the edge after the test.



Cutting edge of an typical non-coated curette and the magnification of the edge after the test.

## CHOOSE SHARP.

#### SHARPEN FREE MICRO COATING

You will enjoy full control and improved tactile sense, while easily shaving off calculus instead of fracturing it.



#### DIAMOND-LIKE FEATURES

Sharpen free	$\mathbf{\nabla}$		
Superior sharpness			
Highest rated ergonomics	$\mathbf{\nabla}$		
Minimum maintenance			

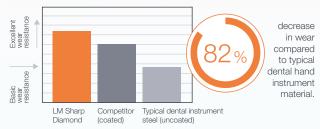
ARDNESS O,

HRC

#### HARDNESS

Hardness contributes to the durability of the instrument. Sharp Diamond reach hardness of over 63 on Rockwell scale.

#### WEAR RESISTANCE\*\*



Reference studies: \*(1) Somunen E, Nevala N: Evaluation of ergonomics and usability of dental scaling instruments; Dental scaling simulation and Field study, part III. Finnish Institute of Occupational Health, LM-Instruments Oy. (2) Nevala N, Somunen E, Remes J, Suomalainen K: Ergonomic and productivity evaluation of scaling instruments in dentistry. The Ergonomics Open Journal 2013; 6, 6-12. \*\* Leppäniemi J. et all: The influence of PVD coatings on the wear performance of steel dental currenters. Key Engineering Materials Vol. 674 (2016), 289-295.

## A genuinely new, ergonomic hand instrument: LMErgoSense SENSATIONAL GRIP AND UNIQUE INTELLIGENCE

Today the focus is on ergonomics – without losing sight of efficiency. The new LM-ErgoSense hand instrument, meets both of these requirements and is truly a unique combination of ergonomic design and integrated new technology. It is the outcome of intense research and product development in close cooperation with dental clinicians and professionals. An ergonomic, high quality hand instrument naturally feels good in the hand. Even genuinely sensational as the new, smart LM-ErgoSense has been described.

#### Rated as the best hand instrument

The value of a truly ergonomic instrument grip can never be emphasized enough as revealed in several scientific studies. A hand instrument with thick silicone handle has been found to be more usable, cause lower perceived strain and to be more productive than those with thinner handles (1). LM-ErgoSense was rated as the best in ten out of fourteen specified usability features compared with the other tested instruments in a dental scaling simulation (1). It was also ranked as the best instrument.

Most participants in the authentic scaling part of the study considered the LM-ErgoSense silicone handle as their favorite due to the enhanced grip, comfort and instrument's functional design. The participants' evaluations were based on their active use of the LM-ErgoSense in authentic clinical work. In another study focusing on ergonomics, usability characteristics and work productivity using different manufacturers' hand instruments the thick, silicone coated LM-Dental hand instruments were the most preferred choice in regard to all 18 usability criteria used in the test (2).



The story of LM-ErgoSense

Reference studies:

(1) Sormunen E., Nevala N: Evaluation of ergonomics and usability of dental scaling instruments; Dental scaling simulation and Field study, part III. Finnish Institute of Occupational Health, LM-Instruments Oy. (2) Nevala N, Sormunen E, Remes J, Suomalainen K: Ergonomic and productivity evaluation of scaling instruments in dentistry. The Ergonomics Open Journal 2013; 6, 6-12.

## LMErgoSense SIMPLY SENSATIONAL

Great tactile sensitivity

Larger diameter & optimal desigr

#### Jnique intelligence with RFID technology

LM-Instruments has developed the idea of an ergonomic instrument even further. An advanced RFID chip can now be integrated into new LM-ErgoSense instrument handles enabling complete and reliable traceability of the instrument. The scanned and documented information improve patient safety, material handling and increase cost efficiency.

Rated best in clinical testing

"Feels great in the hand."



#### LM INNOVATION!

## New intelligence in the dental clinic: LM Dental Tracking System IMPROVING MATERIAL FLOWS AND PATIENT SAFETY



Working together with dental clinics has revealed many challenges in material handling and traceability. How to control and improve the logistics or the increasing requirements for patient safety and documentation? LM has developed the idea

An advanced RFID chip can now be integrated into the LM-ErgoSense instruments enabling complete and reliable traceability of the instrument simply by scanning the chip with a reader that together with software create a unique Dental Tracking System The scanned and documented information will improve and ease asset management and increase cost efficiency. The Dental Tracking System helps to ensure that only safe and clean instruments are used elevating patient safety to a whole new level.

More info on www.dentaltracking.com

## Choosing the handle

Choosing the most ergonomic hand instrument can make a big difference in terms of discomforts and disorders when performing dental work. It is by no means insignificant what the diameter of the hand instrument's handle is or what the material of the grip surface is. When holding the instruments for approximately 2,000 hours each year, the design, weight and feel of the instrument are crucial for the dental practitioner in terms of his/her performance and productivity.

LM instruments are available with a selection of different handles. All exceptionally ergonomic due to the elastic silicone coating and optimized contouring. The clinician's hand fit and indication both play a role in selecting an ideal handle type. Interchanging different handles, may place the user's hand under even less strain.

#### New colors, naming and coding

LM 207 208 15 CE

To facilitate color coding and brighten up working practices LM-ErgoSense, LM-ErgoMax and LM-ErgoNorm instruments come now in new refreshing colors. The name and the code number on the handle ease the identification of the instrument during clinical procedures and maintenance.

#### Handle selection



#### LM-ErgoSense

The larger diameter and design provide sensational grip that has been proven to be ergonomic and efficient in scientific clinical testing. Uniquely intelligent handle with the option for RFID tagging. The compatibility with the Dental Tracking System offers many opportunities to improve asset management and patient safety (see more on www. dentaltracking.com).

#### LM-ErgoMax

Classic ergonomic design that others copy. Functions well in all clinical procedures and guarantees excellent tactile sensitivity and relaxed grip.

#### LM-ErgoNorm

The thinner handle that functions best in light clinical procedures.

#### LM-ErgoMix

The LM-ErgoMix handle for exchangeable tips offers all the economical and ecological benefits of retipping.

Available for specific instruments, see page 40.

#### LM-ErgoAccess

Curved LM-ErgoAccess handle provides better access to hard-to-reach areas.

Available for specified instruments. See page 31.

LM-ErgoSingle

Well balanced mirror handle with better reachability.

#### Codes and diameters

LMErgoSense

ES = ErgoSense handle (Ø 13.7 mm)

#### **LM**ErgoMax

(Ø 11.5 mm)

XSI = ErgoMax handle

SI = ErgoNorm handle (Ø 8.5 mm)

**LM**ErgoNorm

#### **LM**ErgoMi×

EM = ErgoMix handle (Ø 12.5 mm)

#### **LM**ErgoAccess

EASI = ErgoAccess handle (Ø 11.5 mm curved)

#### **LM**ErgoSingle

ESI = ErgoSingle handle (Ø 11.5 mm)

## Special handles







# DIAGNOSTICS

Mirror handles | Explorers | Periodontal probes | Furcation probes | Diagnostic instrument set

#### DIAGNOSTICS - MIRROR HANDLES

#### Simple stem

LM 25 mirror handle threads are in accordance with international standard M2.5. The mirror shank must have a diameter of 2.5 mm.

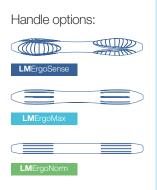
Mirrors are sold separately. Product no 10P12, box of 12 pcs, mirror #4 simple stem.

#### Cone socket

LM 28 mirror handle threads are in accordance with international standard UNF4-48. The mirror shank must have a diameter of 2.6 mm.







ErgoSingle Mirror Handle
LMErgoSingle LM 25 ESI
LMErgoSingle LM 28 ESI

#### - Well balanced, better reachability - Colors: red, grey, blue

Mirror Handle 25

LMErgoSense	1 M 25 FS
<b>LM</b> ErgoMax	LM 25 XSI
<b>LM</b> ErgoNorm	LM 25 SI

#### - Single-ended

- Simple stem design

- Colors: red, grey, blue

#### Mirror Handle 28

LMErgoSense LM 28 ES LMErgoMax LM 28 XSI

## Single-ended Cone socket design, UNF4-48,

with special threads - Colors: red, grey, blue

a, g.o), sido

#### Mirror handle, ortho

<b>LM</b> ErgoSense	LM 25-26 ES
<b>LM</b> ErgoMax	LM 25-26 XSI
<b>LM</b> ErgoSense	LM 28-26 ES

LMErgoMax LM 28-26 XSI - Bausch-Verbiest design

#### - Orthodontic mirror handle

- For measuring the sagittal overjet and vertical overbite

- Millimeter scale, total length 25 mm

#### Mirror Handle JM



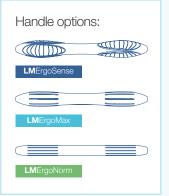
#### - For implant installation

#### DIAGNOSTICS – EXPLORERS

For diagnosing calculus and caries and exploring of pockets, restorations and furcations.

Most explorers and periodontal probes are available also in singleended designs.





Explorer 5-8	3
LMErgoSense	LM 5-8 ES
<b>LM</b> ErgoMax	LM 5-8 XSI
<b>LM</b> ErgoNorm	LM 5-8 SI

#### Explorer 5-9

LMErgoSense	LM 5-9 ES
<b>LM</b> ErgoMax	LM 5-9 XSI
<b>LM</b> ErgoNorm	LM 5-9 SI

LMErgoSense	LM 9-17C ES
<b>LM</b> ErgoMax	LM 9-17C XSI
<b>LM</b> ErgoNorm	IM 9-17C SI

Explorer, centered 9-17C

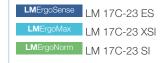
#### Centered tip (17C)Elongated lower shank and "back-action" blade

#### Explorer 17-23

LMErgoSense	LM 17-23 ES
<b>LM</b> ErgoMax	LM 17-23 XSI
<b>LM</b> ErgoNorm	LM 17-23 SI

- For distal surfaces

#### Explorer 17C-23



Centered tip (17C)For distal surfaces



#### Explorer 3-6

<b>LM</b> ErgoSense	LM 3-6 ES
LMErgoMax	LM 3-6 XSI
<b>LM</b> ErgoNorm	LM 3-6 SI

Explorer	11-12
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<b>LM</b> ErgoSense	LM 11-12 ES
<b>LM</b> ErgoMax	LM 11-12 XSI
<b>LM</b> ErgoNorm	LM 11-12 SI

- Angles similar to Gracey 11/12

Flexplorer	11F-12F
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LMErgoSenseLM 11F-12F ESLMErgoMaxLM 11F-12F XSI

Flexible explorer angulated similarly to Gracey 11/12
Well-suited for periodontal diagnosing of subgingival calculus and probing deep pockets

#### Explorer 18-19

LMErgoSenseLM 18-19 ESLMErgoMaxLM 18-19 XSILMErgoNormLM 18-19 SI

 For prosthetic crowns, bridges and inlay- / onlay fillings

#### Explorer 29

LMErgoSense	LM 29 ES
<b>LM</b> ErgoMax	LM 29 XSI
<b>LM</b> ErgoNorm	LM 29 SI

Holst designLateral angle on the shank

- Single-ended

#### Explorer 9

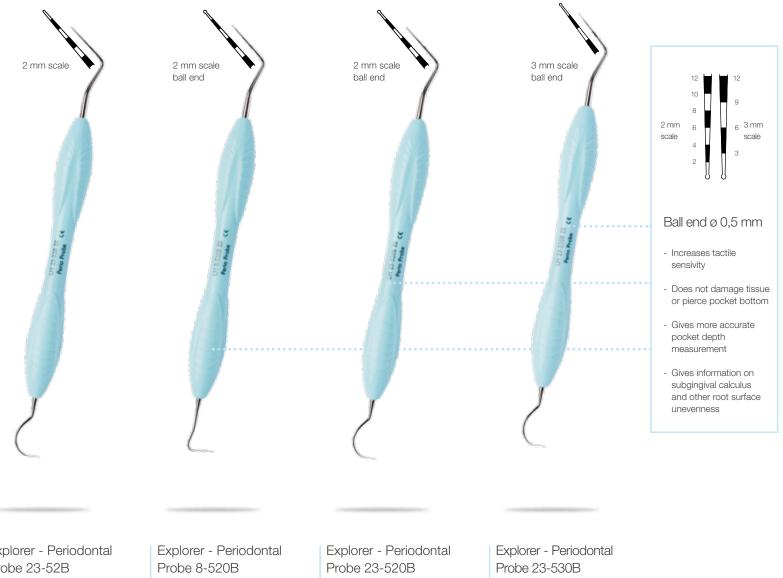
LMErgoSense	LM 9 ES
<b>LM</b> ErgoMax	LM 9 XSI
<b>LM</b> ErgoNorm	LM 9 SI

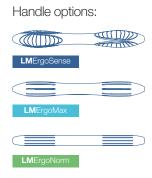
- Single-ended

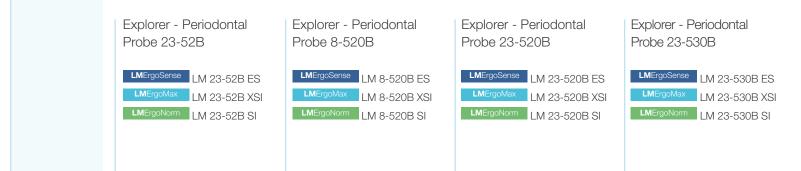
#### DIAGNOSTICS – EXPLORERS – PERIODONTAL PROBES

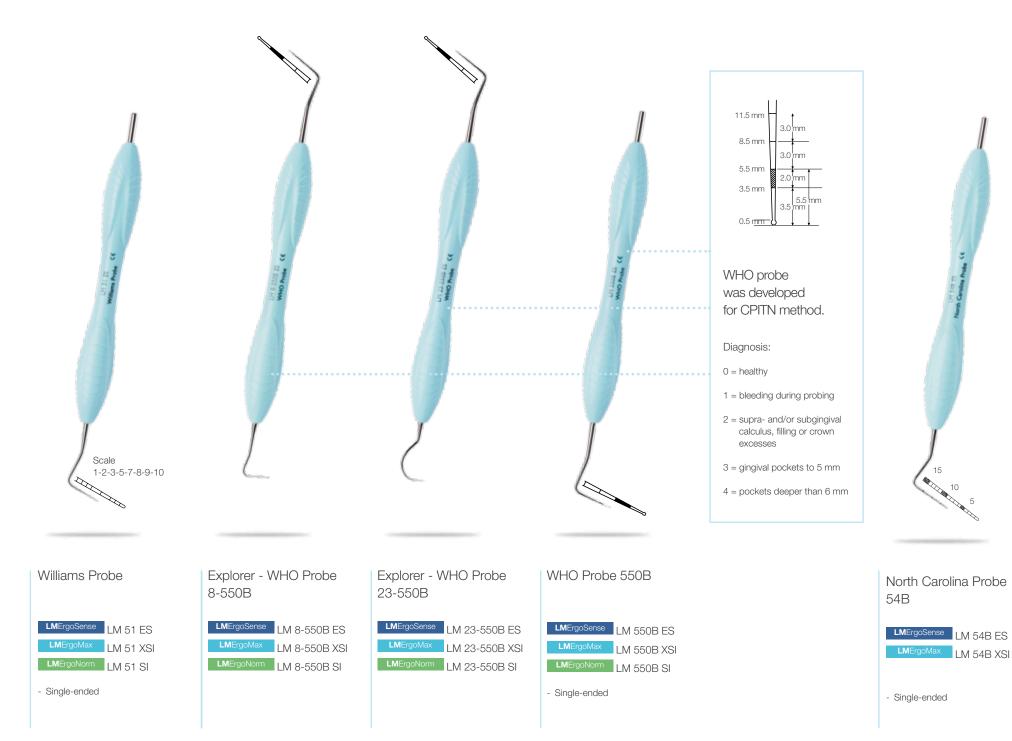
Combination instruments for probing caries and parodontium.

Most explorers and periodontal probes are available also in single-ended designs.











- Similar to 530B but without ball end

Handle options:
LMErgoSense
LMErgoMax

For probing the extent and depth of furcation lesions.

■ For probing furcation lesions from different angles, both in the upper and in the lower

jaw region.

#### Nabers Probe

LMErgoSense	LM 20-21 ES
<b>LM</b> ErgoMax	LM 20-21 XSI
<b>LM</b> ErgoNorm	LM 20-21 SI

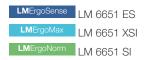
Furcation P	robe
LMErgoSense	LM 20B-21B ES
<b>LM</b> ErgoMax	LM 20B-21B XSI
<b>LM</b> ErgoNorm	LM 20B-21B SI

2 mm scale ball end

#### DIAGNOSTICS - INSTRUMENT SE



#### LM-DiagnoSet



Includes: LM-Servo 5 cassette, Mirror Handle & mirror, Explorer LM 5-8, WHO Probe LM 550B, Round Excavator 1.5 mm, Tweezers



# PERIODONTICS

Sharp Diamond | Sickle scalers | Universal curettes | Special instruments | Gracey finishing curettes | LM-ErgoMix instruments | Implant series | Instrument sets



#### LMErgoSense SHARP DIAMOND

Opposites attract. This holds true with high-quality, periodontal instruments. Optimally they are razor sharp, extremely hard, yet smooth and light. A new micro membrane coating made using modern Physical Vapor Deposition (PVD) technology enables LM to create Sharp Diamond instruments with the optimum combination of these features. Sharp Diamonds are completely sharpen free, tough but refined, offering unique benefits for you and your patient.

#### • Sharpen free

- Long-lasting superior sharpness
- Savings of time & money
- Highest rated ergonomics with sensational grip\*
- Improved productivity & clinical search
- Full control
- Shaving off calculus instead of fracturing it

"The long-lasting sharpness really makes a difference!"

Anna, Registered Dental Hygienist, USA

"I must admit that at first I didn't quite believe that instruments could be this sharp and also sharpen free. I was wrong! The LM-ErgoSense handle adds to the ergonomics and tactile sensitivity. This is the ultimate periodontal instrument."

Lauri, Periodontist, Finland



Hardness contributes to the durability of the instrument. Sharp Diamond reach hardness of over 63 on Rockwell scale.



Decrease in wear compared to typical dental hand instrument material. \*\*

See more details on page 5.

Reference studies: \* (1) Sormunen E., Nevala N: Evaluation of ergonomics and usability of dental scaling instruments; Dental scaling simulation and Field study, part III. Finnish Institute of Occupational Health, LM-Instruments Oy. (2) Nevala N, Sormunen E, Remes J, Suomalainen K: Ergonomic and productivity evaluation of scaling instruments in dentistry. The Ergonomics Open Journal 2013; 6, 6-12. \*\* Leppäniemi J. et all: The influence of PVD coatings on the wear performance of steel dental currettes. Key Engineering Materials Vol. 674 (2016), 289-295.

www.lm-dental.com/sharpdiamond



#### Micro Sickle SD

#### LMErgoSense LM 301-302SD ES

- Sharp Diamond sharpen free coating
- Delicate working end
- Elongated shank

## SHARPEN FREE



LM 215-216MSD ES

Sharp Diamond sharpen free coatingLM-Dual-Gracey



Mini Gracey 1/2 SD

Mini Gracey 7/8 SD

- For premolars and molars

LM 207-208MSD ES

- Sharp Diamond sharpen free coating

- For buccal, mesial and lingual surfaces



Sharp Diamond sharpen free coatingFor incisors and premolars



Mini Gracey 11/12 SD



Sharp Diamond sharpen free coatingFor premolars' and molars' mesial surfaces



#### Mini Gracey 13/14 SD

LMErgoSense LM 213-214MSD ES

Sharp Diamond sharpen free coatingFor premolars' and molars' distal surfaces





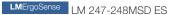
Mini Gracey 15/16 SD



- Sharp Diamond sharpen free coating
- For molars' mesial surfaces
- Blade shank more sharply angulated than
- in Mini Gracey 11/12 for better access



#### Mini Gracey 17/18 SD



- Sharp Diamond sharpen free coating
- For molars' distal surfaces
- Blade shank more sharply angulated than
- in Mini Gracey 13/14 for better access

#### PERIODONTICS – SICKLE SCALERS

For the removal of supragingival calculus.

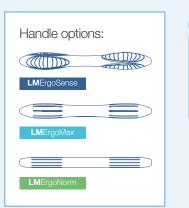
#### Instrumentation:

For calculus removal place the tip third of the scaler's cutting edge against the tooth. Tilt the instrument toward the tooth to achieve 70° to 80° angle between the tooth and the blade. Apply lateral pressure and activate the scaler by using vertical, diagonal or horizontal pull strokes. To maintain control use short 2-3 mm long strokes.



#### Design:

- Triangular cross section
- Face perpendicular to the lower shank
- Two cutting edges (red line)
- Pointed tip





#### Micro Sickle

<b>LM</b> ErgoSense	LM 301-302 ES
<b>LM</b> ErgoMax	LM 301-302 XSI
<b>LM</b> ErgoNorm	LM 301-302 SI

#### 204SD design

Delicate working end

Elongated shank

#### Sickle LM204S

LMErgoSense	LM 303-304 ES
<b>LM</b> ErgoMax	LM 303-304 XSI
<b>LM</b> ErgoNorm	LM 303-304 SI

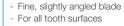
- Sharply angulated shank and very fine working end

#### Mini Sickle

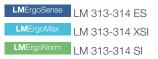
For all tooth surfaces, especially proximal

surfaces.

<b>LM</b> ErgoSense	LM 311-312 ES
<b>LM</b> ErgoMax	LM 311-312 XSI
<b>LM</b> ErgoNorm	LM 311-312 SI



Sickle	LM23



- Shorter blade and longer lower shank than in the Mini Sickle



#### Crane-Kaplan

LMErgoSense	LM 322-323 ES
<b>LM</b> ErgoMax	LM 322-323 XSI
<b>LM</b> ErgoNorm	LM 322-323 SI

- Extremely strong, rigid, sharply angled blade
- For removal of heavy supragingival calculus

#### Mini Kaplan

- LMErgoSenseLM 333-334 ESLMErgoMaxLM 333-334 XSILMErgoNormLM 333-334 SI
- Same angle but with a more delicate blade than in the Crane-Kaplan

#### McCall 11A-12A

LMErgoSenseLM 324-325 ESLMErgoMaxLM 324-325 XSILMErgoNormLM 324-325 SI

#### Sickle Scaler

LMErgoSenseLM 141 ESLMErgoMaxLM 141 XSILMErgoNormLM 141 SI

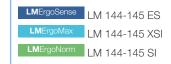
#### - Single-ended

#### Scaler U15 Towner

<b>LM</b> ErgoSense	LM 150 ES
<b>LM</b> ErgoMax	LM 150 XSI
<b>LM</b> ErgoNorm	LM 150 SI

#### - Single-ended

Push Scaler H4-ł	-15
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The chisel-like working end used by pushing. The jacquette working end used by pulling.
90° working surface







#### Scaler H6-H7

LMErgoSense	LM 146-147 ES
<b>LM</b> ErgoMax	LM 146-147 XSI
<b>LM</b> ErgoNorm	LM 146-147 SI

#### Laplander

LMErgoSense LM 148-149 ES **LM**ErgoMax LM 148-149 XSI

Similar to H6-H7 but with a lateral bending - Easy access to molar area and proximal surfaces

## PERIODONTICS

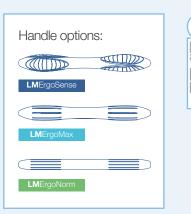
Designed for the removal of moderate to heavy calculus from all supra- and subgingival tooth surfaces.

#### Instrumentation:

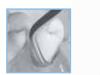
For calculus removal place one of the cutting edges of the universal curette against the tooth surface. Tilt the instrument toward the tooth to achieve 70° to 80° angle between the tooth and the blade. Apply lateral pressure and activate the curette by using vertical, diagonal or horizontal pull strokes. Both cutting edges of the same curette can be used by simply tilting the instrument one way or the other.



Design: Working end perpendicular to the lower shank Two cutting edges (red line) Rounded tip



#### McCALL



Strong blade with rigid shank.



#### McCall 13S-14S

LMErgoSense	LM 222-223 ES
<b>LM</b> ErgoMax	LM 222-223 XSI
<b>LM</b> ErgoNorm	LM 222-223 SI



#### Mini McCall 13S-14S

LMErgoSense	LM 222-223M ES
<b>LM</b> ErgoMax	LM 222-223M XSI
<b>LM</b> ErgoNorm	LM 222-223M SI

- For deep, narrow pockets - Sharper, slightly rounded tip (not sickle-shaped)



#### LANGER

Langer curettes combine universal curette's working end with Gracey curette's shank angulation. Angulations ease access to difficult areas and both mesial and distal surfaces can be treated with the same instrument end.





Langer 5/6

**LM**ErgoMax

and lower jaw

LMErgoSense LM 285-286 ES

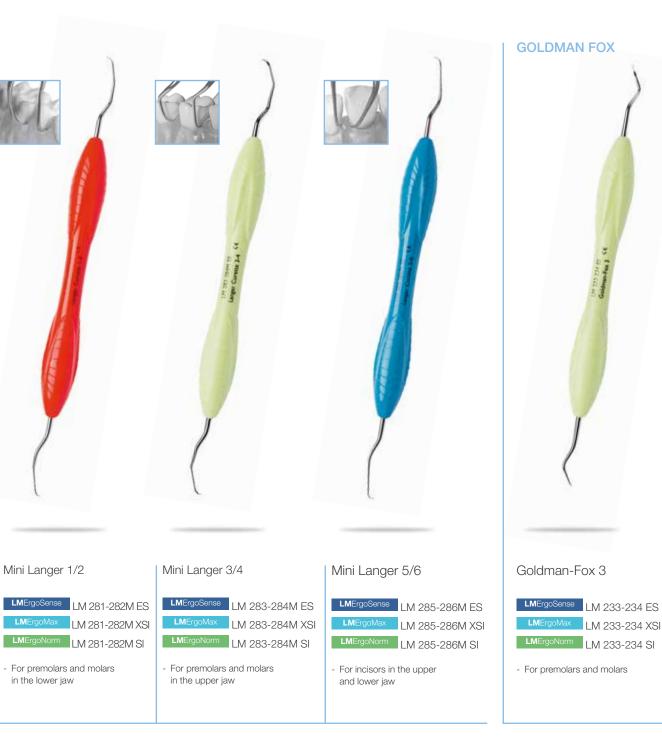
LMErgoNorm LM 285-286 SI

- For incisors in the upper

LM 285-286 XSI

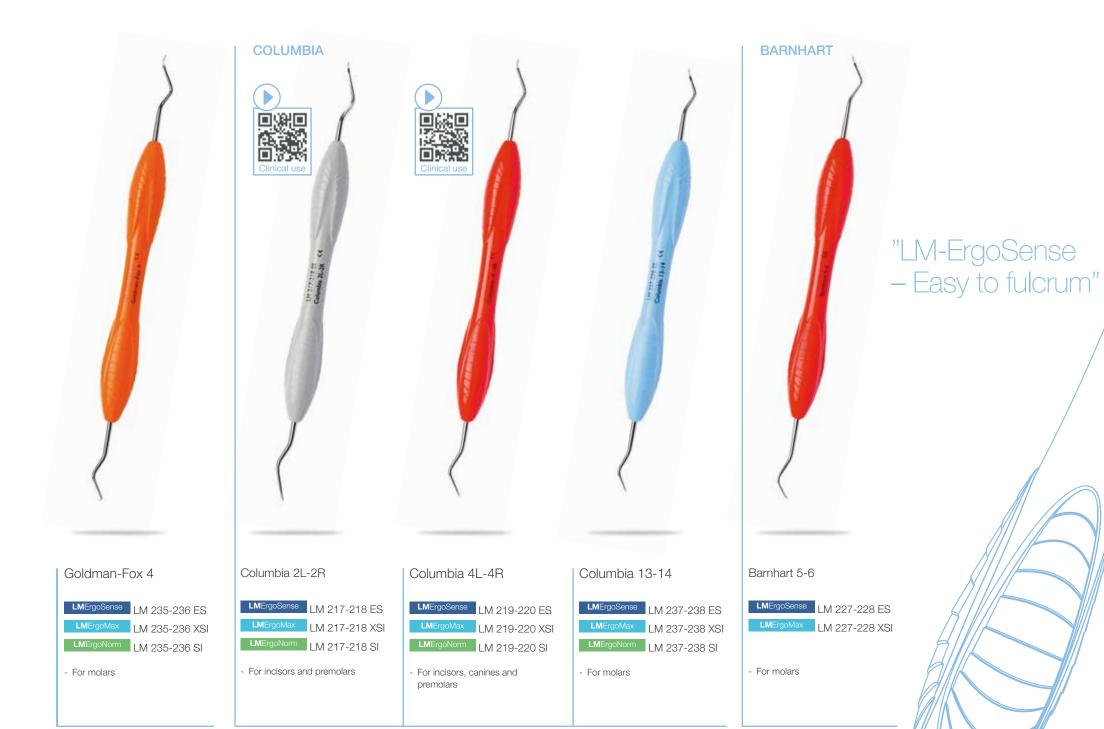
#### **MINI LANGER**

Mini Langers have longer shanks and shorter working ends than standard Langers. Useful in tight interdental spaces. Better access into tight deep pockets and furcations.



LM 233-234 XSI

#### 26

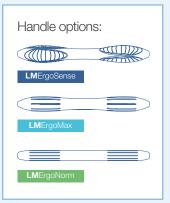


#### PERIODONTICS – DIAMOND FILES

Diamond coated files are designed for cleaning deep concave root surfaces in anatomically difficult areas.

Can be used with multidirectional strokes.







Diamond coated round curved toe - For acute furcation lesions

Furcation	Diamond	File	SV
7-8			

LMErgoSense LM 257-258D ES LMErgoMax LM 257-258D XSI

LMErgoNorm LM 257-258D SI

- Diamond coated egg-shaped toe - For deep furcation lesions

- LMErgoSense LM 263-264D ES LM 263-264D XSI
  - Extremely delicate diamond coated instrument for definitive scaling of the root surface
  - Easy access with a fine, flexible blade in mesial-distal line angles and developmental grooves

#### Furcation Diamond File



- Extremely delicate diamond coated instrument for definitive calculus removal in furcations and root depressions
- Easy access with a fine, flexible blade design

#### PERIODONTICS - LM-SYNTETTE

Combination of universal and finishing curette, designed for the removal of supra- and subgingival calculus.

For both concave and convex surfaces. Distal and mesial surfaces of the same interdental space can be treated with the same instrument head. Suitable for both vertical and horizontal techniques.



Design:

- Two elliptical cutting edges
- Rounded toe



#### LM-Syntette

LMErgoSense	LM 215-216 ES
<b>LM</b> ErgoMax	LM 215-216 XSI
<b>LM</b> ErgoNorm	LM 215-216 SI

#### - LM Dual-Gracey

#### Mini Syntette

- LMErgoSenseLM 215-216M ESLMErgoMaxLM 215-216M XSILMErgoNormLM 215-216M SI
- Mini model excellent in tight, deep pockets
- particularly well adapted for use on premolars' and incisors' palatinal and lingual surfaces



## LM-Syntette story of the original Dual-Gracey

In the late 70-ties Swedish dentist Leif Ericsson, the Head of the Periodontological Department in Västervik Hospital, was challenged with the complexity and the amount of instruments there were available for the periodontal specialists. Couldn't there be an easier way and a simpler instrument, he thought.

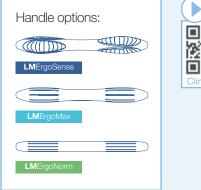
#### A simple thought

He started looking at the design and function of different instruments and got the idea to combine two popular instruments which, however, required switching instrument in the same interproximal space: Gracey 11/12 for mesial surfaces and Gracey 13/14 for distal surfaces. A synthesis of two curettes – a Syntette!

#### Meeting on the train

The idea turned into a sketch on a paper - that ended up in a drawer. Later sometime in the 80-ties, he was standing in a crowded suburban train in Stockholm on the way back from Swedental Dental Congress. By pure coincidence he met the man standing beside him, dentist Pekka Kangasniemi, founder of LM-Instruments. They started discussing the idea and the double sided Gracey, i.e. LM-Syntette was created. An all round instrument for all surfaces in the total dentition, which can be easily shifted from tooth to tooth without changing the instrument.

Simply clever!



#### PERIODONTICS - HOE SCALERS

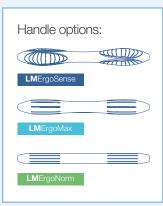
For the removal of supra- and subgingival calculus.

Suitable for deep, narrow pockets and concave root surfaces. For both vertical and horizontal techniques.



- Design:Fine hoe-shaped blade with rounded corners
- Elliptical cutting edge





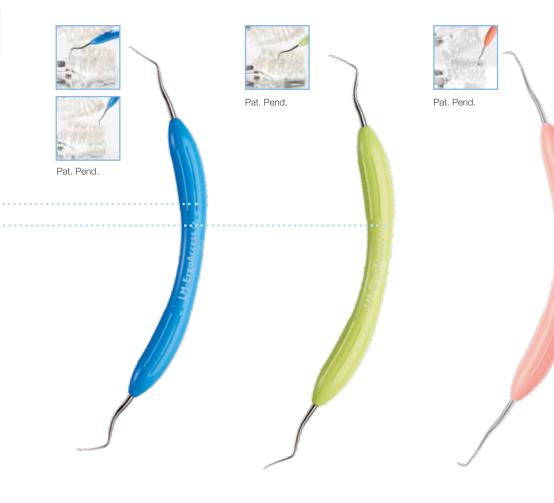


#### PERIODONTICS – LM-ERGOACCESS INSTRUMENTS

Solution for calculus removal from problematic areas. Curved handle provides a natural hand-fit and allows easy access to difficult-to-reach treatment areas. No more mission impossibles in the molar area or with inclined incisors.



H-Scaler I, H-Scaler II: Fine hoe-shaped blade with elliptical cutting edge.



#### H-Scaler I

#### **LM**ErgoAccess

#### LM 112-156 EASI

 The curved handle allows access to hard-to-reach areas such as distal surfaces of molars and lingually inclined incisors

#### H-Scaler II

#### LMErgoAccess

#### LM 156-157 EASI

- Provides easy access to molar area even with smaller oral aperture

#### Micro Sickle EASI

#### **LM**ErgoAccess

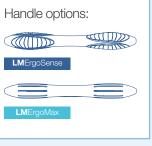
#### LM 301-302 EASI

- Fits well into the approximal surfaces in the front

#### PERIODONTICS - FURCATION INSTRUMENT

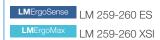
Well-suited for the cleaning of the furcations of multi rooted teeth.





# D Grannes

#### Furcator KS



- Delicate, angled excavator
- Suitable also for the cleaning of narrow approximal concavities and grooves in incisors and premolars
- For cleaning of the furcation roof and inner surfaces, particularly concavations and grooves in them

#### PERIODONTICS - GRACEY FINISHING CURETTES

Area specific curettes for the removal of deep subgingival calculus. For the finishing of subgingival root surfaces.

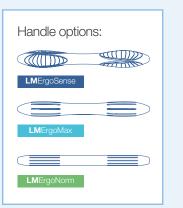
#### Instrumentation:

Place the tip third or half of the cutting edge of a Gracey curette against the tooth surface. (The larger outer curve is always the cutting edge.) Make sure that the lower shank is parallel with the tooth surface. For calculus removal apply moderate and for root planing light lateral pressure and activate the curette by using vertical, diagonal or horizontal pull strokes.



#### Design:

- Working surface inclined 20° to the lower shank
- One curved cutting edge (red line)
- Rounded cutting tip





Gracey 15/16

Gracey 13/14

Gracey 17/18

O Distal

#### STANDARD GRACEY











#### **MINI GRACEY**

Longer lower shank and smaller working end than in the standard model. Functions well in deep narrow pockets.







#### Gracey 15/16

LMErgoSense	LM 245-246 ES
<b>LM</b> ErgoMax	LM 245-246 XSI
<b>LM</b> ErgoNorm	LM 245-246 SI

 For molars' mesial surfaces
 Blade shank more sharply angulated than in Gracey 11/12 for better access

Gracey 17/18

LMErgoSenseLM 247-248 ESLMErgoMaxLM 247-248 XSILMErgoNormLM 247-248 SI

 For molars' distal surfaces
 Blade shank more sharply angulated than in Gracey 13/14 for better access



#### Mini Gracey 13/14 Mini Gr LMErgoSense LM 213-214M ES LMErgoS LMErgoMax LM 213-214M XSI LMErgo LM 213-214M SI LMErgol - For premolars' and molars' - For mola distal surfaces - Blade shank more sharply angulated than in Mini Gracey 11/12 for better access

racey 15/16		Min
Sense	LM 245-246M ES	LM
Max	LM 245-246M XSI	LN
Norm	LM 245-246M SI	LM
ars' mesial surfaces		- For

#### ni Gracey 17/18

ErgoSense LM 247-248M ES LM 247-248M XSI LM 247-248M SI

<sup>-</sup> molars' distal surfaces Blade shank more sharply angulated than in Mini Gracey 13/14 for better access

#### MACRO GRACEY

Standard model's long working end combined with mini model's longer lower shank. Excellent reach interdentally in deep pockets.







#### **RIGID GRACEY**

Blade shank thicker and more rigid, and working end slightly wider than in the standard model. Permits the use of greater pressure.





#### LMErgoMax LM 211-212R XSI LM 207-208R XSI LMErgoNorm LM 207-208R SI LMErgoNorm LM 211-212R SI - For premolars and molars

- For buccal, mesial and lingual

surfaces

LMErgoMax LM 201-202R XSI

LMErgoNorm LM 201-202R SI

- For incisors and premolars

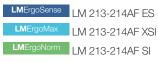
- For premolars' and molars' mesial surfaces

<b>LM</b> ErgoSense	LM 211-212AF ES
<b>LM</b> ErgoMax	LM 211-212AF XSI
<b>LM</b> ErgoNorm	LM 211-212AF SI

- For premolars' and molars' mesial surfaces

Macro

Macro Gracey 13/14



- For premolars' and molars' distal surfaces



### Rigid Gracey 13/14

LMErgoSense	LM 213-214R ES
<b>LM</b> ErgoMax	LM 213-214R XSI
<b>LM</b> ErgoNorm	LM 213-214R SI

- For premolars' and molars' distal surfaces

#### MESIAL-DISTAL GRACEY

Combining a mesial and a distal working end in one instrument. Useful when treating one quadrant at a time.

Distal All mesial-distal Graceys have code rings that make it easy to identify which working end is mesial and which distal.

Mesial

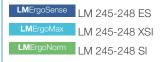


#### Gracey 11/14 LMErgoSense LM 211-214 ES LMErgoMax LM 211-214 XSI LMErgoNorm LM 211-214 SI

#### Gracey 12/13

LMErgoSense	LM 212-213 ES
<b>LM</b> ErgoMax	LM 212-213 XSI
<b>LM</b> ErgoNorm	LM 212-213 SI





#### For molars' mesial surfaces Blade shank more sharply angulated than in Gracey 11/12 for better access

LMErgoSense LM 245-246R ES

LM 245-246R SI

LM 245-246R XSI

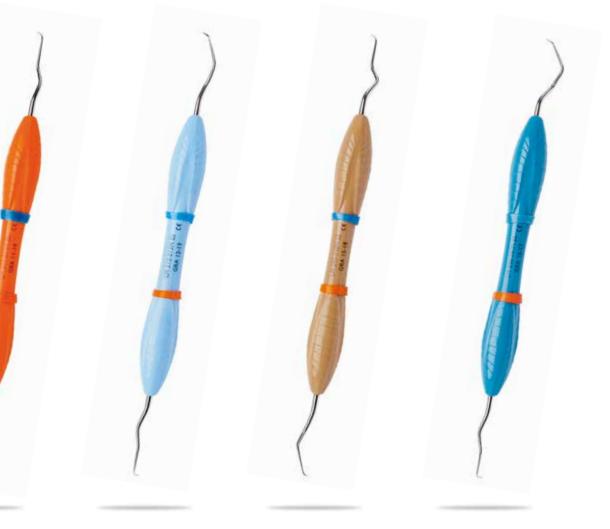
Rigid Gracey 15/16



#### MINI MESIAL-DISTAL GRACEY

Combining a mesial and a distal working end in one instrument. Useful when treating one quadrant at a time.

Mini models have longer lower shank and smaller working end than the standard model. Functions well in deep narrow pockets.





LMErgoSenseLM 246-247 ESLMErgoMaxLM 246-247 XSILMErgoNormLM 246-247 SI



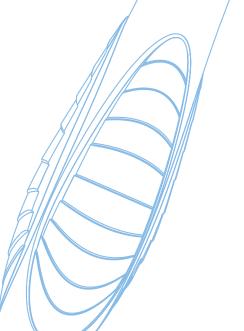
#### MACRO MESIAL-DISTAL GRACEY

Combining a mesial and a distal working end in one instrument. Useful when treating one quadrant at a time.

Macro models have standard model's long working end combined with mini model's longer lower shank. Excellent reach interdentally in deep pockets.

istal ent. d	District volume
Macro Gracey 11/14	Macro Gracey 12/13
LMErgoSenseLM 211-214AF ESLMErgoMaxLM 211-214AF XSLMErgoNormLM 211-214AF SI	

## "LM-ErgoSense – Love the larger design"



#### PERIODONTICS EXCHANGEABLE TIPS

#### LM-ErgoMix

LM-ErgoMix hand instrument series offers the dental team a specially economical, ecological and ergonomic alternative. When ever there is a need for a tip replacement the lock grip is opened, a new tip is inserted and the lock grip is closed again. No extra tools are needed.

Use LM-ErgoMix instruments in the normal way, clean and sterilize it like any other instrument. The sealed construction guarantees high level hygiene.

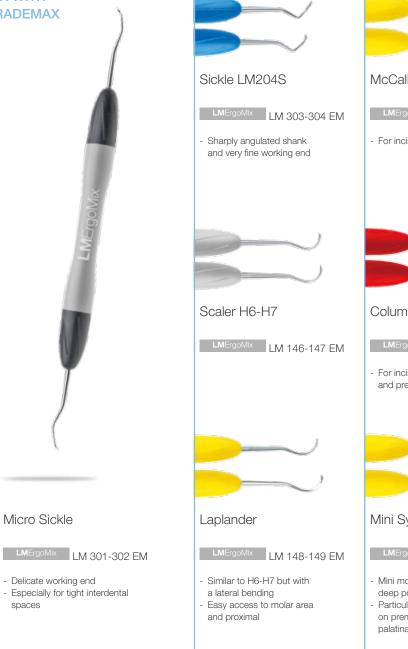
Benefits of retipping:

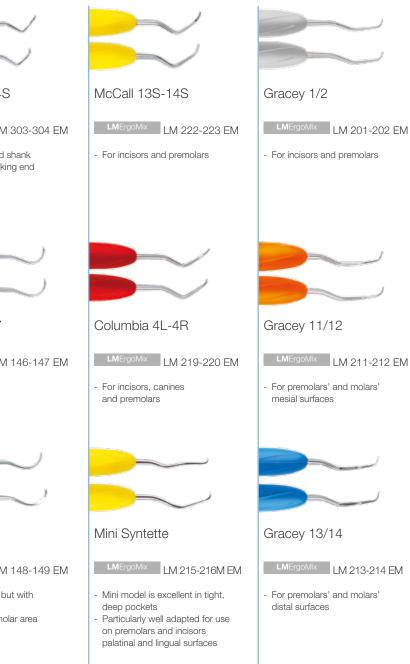
- Always sharp instruments
- Saves time from sharpening
- Minimizes waste
- Enables personalized tip combinations.

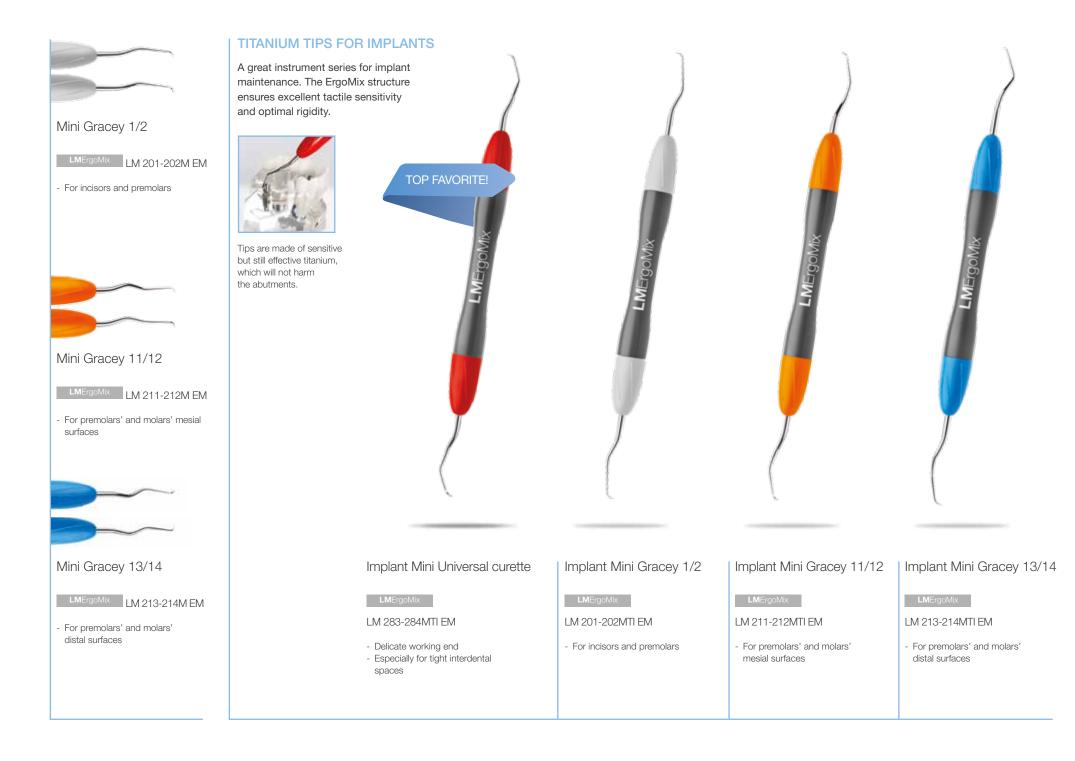


#### **LM-ERGOMIX WITH** LM-DURAGRADEMAX **STEEL TIPS**

spaces







#### LM-ERGOMIX SPARE PARTS

Spare handles	
ErgoMix handle grey	LM 9010 EM
ErgoMix handle dark grey	LM 9011 EM
Spare lock grips	
Orange	LM 9020 EM
Light blue	LM 9021 EM
Grey	LM 9022 EM
Yellow	LM 9023 EM
Dark grey	LM 9024 EM
Red	LM 9025 EM
Spare tips LM-DuraGradeMAX	
Micro Sickle L	LM 301 EM
Micro Sickle R	LM 302 EM
Mini Syntette L	LM 215M EM
Mini Syntette R	LM 216M EM
Mini Gracey 1	LM 201M EM
Mini Gracey 2	LM 202M EM
Mini Gracey 11	LM 211M EM
Mini Gracey 12	LM 212M EM
Mini Gracey 13	LM 213M EM
Mini Gracey 14	LM 214M EM
Scaler H6	LM 146EM
Scaler H7	LM 147EM

Laplander L	LM 148EM
Laplander R	LM 149EM
Gracey 1	LM 201EM
Gracey 2	LM 202EM
Gracey 11	LM 211EM
Gracey 12	LM 212EM
Gracey 13	LM 213EM
Gracey 14	LM 214EM
Columbia 4L	LM 219EM
Columbia 4R	LM 220EM
McCall 13S	LM 222EM
McCall 14S	LM 223EM
Sickle LM 204S L	LM 303EM
Sickle LM 204S R	LM 304EM
Spare tips Titanium	
Implant Mini Universal Curette L	LM 283MTi EM
Implant Mini Universal Curette R	LM 284MTi EM
Implant Mini Gracey 1	LM 201MTi EM
Implant Mini Gracey 2	LM 202MTi EM
Implant Mini Gracey 11	LM 211MTi EM
Implant Mini Gracey 12	LM 212MTi EM
Implant Mini Gracey 13	LM 213MTi EM
Implant Mini Gracey 14	LM 214MTi EM

#### PERIODONTICS – INSTRUMENT SET



#### LM-PerioSet 1

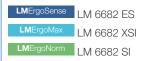
LMErgoSense	LM 6652 ES
<b>LM</b> ErgoMax	LM 6652 XSI
<b>LM</b> ErgoNorm	LM 6652 SI

Includes:

LM-Servo 5 cassette, Mini Sickle, Curette McCall 17-18, Gracey 1/2, Gracey 11/12, Gracey 13/14



#### LM-PerioSet 2

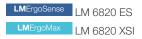


#### Includes:

LM-Servo 8 cassette, Mini Sickle, Curette McCall 17-18, Gracey 1/2, Gracey 9/10, Gracey 11/12, Gracey 13/14, Mini Gracey 15/16, Mini Gracey 17/18



#### LM-Fancy5



#### Includes:

LM-Servo 5 cassette, ErgoSingle mirror handle and mirror, Explorer - Periodontal probe 8-520B, Micro Sickle, Gracey 11/12, Gracey 13/14

#### TERMS OF WARRANTY

#### Limited Warranty

The following warranty terms apply to the sale of LM-Instrument Oy's products (hereinafter "Products") to a purchasing company or individual by LM-Instruments Oy (hereinafter "Manufacturer").

Manufacturer hereby warrants that the Products will be free from defects arising from faulty materials or workmanship for a period of twenty four (24) months from the date of purchase by a customer from Manufacturer's authorized dealer (hereinafter "Authorized Dealer"). The warranty period is exceptionally three (3) months for products with a life inherently shorter than 24 months due to normal wear and tear, for example tips of hand instruments, tips of ultrasonic scalers, tips of endodontic files, front surface mirrors and grinding stones of sharpening devices.

- This warranty shall not apply to Products or parts thereof;
- a) which have been subject to abuse, misuse, negligence or accident or are not connected to proper power supply;
- b) to which any modification, alteration or attachment has been made without written consent of the Manufacturer; or
- c) which are installed or operated violating instructions for installation, use and maintenance;
- d) which are normally consumed in operation for example working tips of LM-MultiHolder, strips for LM-Cello.

The sole and exclusive remedy under this warranty shall be limited to correct or circumvent the errors or to repair or replacement of defective parts of Products by the Manufacturer, EXW Manufacturer's factory, providing that a written claim of the defect is sent to the Manufacturer within the warranty period and the original part is returned to Manufacturer's factory by the Authorized Dealer, and Manufacturer's inspection establishes the existence of such a defect.

The customer must contact the Authorized Dealer from whom the products were purchased to request repair or replacement under this warranty and a written claim of the defects and send the original Product to the Authorized Dealer.

This warranty is void if service or repair is performed by persons not authorized by the manufacturer.

Any Products not manufactured by the Manufacturer, carries only such warranty, if any, as given by any manufacturer thereof.

This warranty is the Manufacturer's only warranty in respect of the Products and the Manufacturer disclaims all other warranties, whether of merchantability, fitness for particular purpose or otherwise, guarantees and liabilities, express or implied, arising by law or otherwise. In no event shall the Manufacturer be liable for any general, consequential or incidental damages, loss of use or loss of profits by reason of the manufacturer's negligence or otherwise in connection with the sale, delivery, installation, repair or use of the Products.

The Manufacturer shall have no liability whatsoever to the Authorized Dealer or customer or any other person for or on account of any injury, loss or damage of any kind or nature, sustained by, or any damages assessed or asserted against, or any other liability incurred by or imposed upon the handling, use, operation, maintenance or repairs of Products by anyone other than the Manufacturer. This exclusion of liability does not apply pursuant to the laws on product liability in case of personal injury and property damage to privately used objects resulting from the Products.

## LMErgoSense »)

## **LM**Dental

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LM dealers worldwide