

Neuroline



NEUROLINE
PRODUCT CATALOGUE
2023

PLEASE NOTE THAT SOME ITEMS IN THIS CATALOGUE MAY HAVE BEEN DISCONTINUED OR TAKEN OUT OF PRODUCTION. PRICES, COLOURS AND/OR COMPOSITION OF OUR PRODUCTS MAY CHANGE OVER TIME. WE RECOMMEND A VISIT TO OUR WEBSITE FOR UPDATED VERSIONS OF OUR BROCHURES.
© 2023 EMD KFT. ALL RIGHTS RESERVED. NO PART OF THIS PUBLICATION MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPIING, RECORDING OR OTHERWISE, WITHOUT PRIOR WRITTEN CONSENT OF EMD KFT.

4 Foreword

OUR PROMISE
FROM CEO

8 About Us

EMD PROFILE
COMPANY HISTORY

12 Neurosurgery

NEUROSMART HIGH-SPEED MOTOR SYSTEM

18 Craniotomy

HANDPIECES
CUTTERS

24 Attachments

STANDARD HANDPIECES
ANGLED HANDPIECES
SLIM ATTACHMENTS

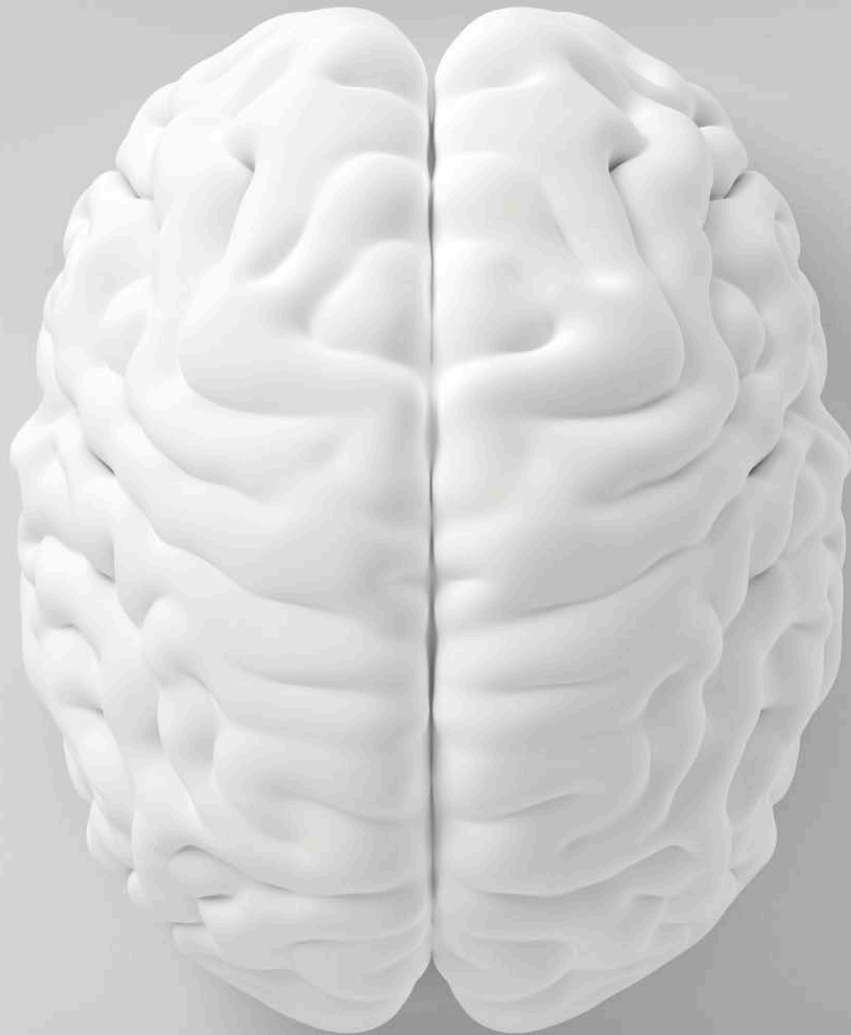
32 Cranial Perforation

NEUROSMART PERFORATOR HANDPIECE
DISPOSABLE CRANIAL PERFORATORS
REUSABLE CRANIAL PERFORATORS

42 Accessories

WASH-RINSE DEVICE
STORAGE CONTAINER
SERVICE OILING SPRAY

CONTENTS



Be Ahead Of The Curve With Our Latest Innovations

WE ARE FAMILY OF MOTIVATED INDIVIDUALS, DRIVEN BY OUR DESIRE TO MAKE INNOVATIVE, EXCELLENT QUALITY MEDICAL PRODUCTS AVAILABLE TO MODERN MEDICINE IN A SUSTAINABLE WAY.

At EMD we offer quality design, production and services, that enable medical professionals to perform advanced minimal invasive operations.

Our carefully accumulated knowledge and expertise enable us to create singular tools and devices that medical professionals can use sustainably. To offer our customers the best of the best, our products are manufactured with meticulous care from high quality materials.

We are dedicated and passionate in everything we do. Through our performance and solution driven mindset, we have the opportunity to make a difference. We are innovation and business oriented with a strong belief in daring to do things better.

FOREWORD

From CEO

“

Everything we do is rooted in the belief that, together with our colleagues, teams and partners, we can create positive change to support modern medicine through our high-end products and services.

Each time before we embark on a new development, we have to make sure we possess the essential attributes that will fuel us to work for years to come for the very moment we first hold a new product in hand. These are: know-how, perseverance, proof and faith.

We've been working hard and have come a long way over the last 25 years. When EMD was founded in 1997, we were thinking about how we could design and manufacture minimal invasive medical devices. Since then, we've made such a progress as a team that today, however, we are thinking about how to become one of the best and most innovative companies in the industry.

We are proud of the progress we're making, and are ensuring that our expertise and competencies are essential elements of EMD's future that we will continue to embrace and grow.”

Mr. Gyula Ujvari
FOUNDER & CEO



1997

EMD is founded as a repair service provider. Main activity is repair of endoscopic optics and endoscopic instruments.

2001

We launch our laparoscopic system being first own product development.

2005

EMD steps out of being a local supplier and starts export activities in various markets. EMD begins to develop and produce neurosurgery devices.

2012

EMD relocates to new headquarters with more on site facilities. Company profile continues to expand.

2017

The company obtains CE approval for own neurosurgical and laparoscopy development.

2021

Product portfolio is further increased by six additional EMD product group receiving CE mark.

2022

First product group got FDA approval.

ARROW IT IS

Our Vision

We believe in leading not following. We turn fault into our virtue and trust our never-compromising nature dictating our rhythm, which takes us to innovative ideas and exceptional product developments.

We are convinced that possibility is bigger than the fear of failure. That is why we dare to dream big and are not afraid to be challenged on the way to success. Our vision is to be industry leaders in medical device development and manufacture.

Our Mission

OUR MISSION IS TO SUPPORT MODERN MEDICINE BY OFFERING ADVANCED, FIRST-CLASS QUALITY MEDICAL DEVICES.

Our Values

We like to walk our talk and lead by example. Our values are part of who we are, what we stand for and how we act.

Our great colleagues make the difference. It's when we share our skills, knowledge and expertise, we become one team.

We encourage and help each other to achieve our goals, while always having our customers' and their patients' best interest in mind.

Markets & Expansion

EMD is expanding, with a focus on multi-channel sales. We treat and nurture long term partnerships and business growth as one of our top priorities. We offer advanced and unique medical tools for minimal invasive surgeries that want to give professionals unbeatable value with the best combination of innovation, quality, price and sustainability.

When it comes to expansion strategies and activities, we spare no time to find the most prosperable opportunities we are able to find out there, that not only benefit us, but our partners too. With the continuous product developments we have been making recently, we are enthusiastic to be on the path greatly expanding our existing presence on the market.

Research & Development

Our network of medical professionals, together with the global industry needs and challenges set new directions to our developments.

Through our product developments, our priority is to effectively support surgical procedures, which are still very difficult or can only be performed with conventional surgery, so that they could be carried out with as few and little incisions as possible. In the near future, we continue to focus on minimal invasive developments and present new products for spine,- neuro,- and laparoscopic surgery.

Innovative Solutions

Innovative product developments enable us to find and implement new technologic solutions, which are not yet in practice.

At the birth of a new idea, we start exploring ways of execution and won't stop until we find the right technology that can be applied for best results. This way, we are inspired to never stand still, we find new discoveries and are able to create that was thought impossible.

Professional Experience

**COMBINED WITH BRILLIANT IDEAS
IN THE SERVICE OF NEUROSCIENCE.**

NEUROSURGERY IS ABOUT PRECISION AND CAREFUL PLANNING.

WITH THE BEST OF OUR KNOWLEDGE AND EXPERIENCE, IN CLOSE CO-OPERATION WITH MOST RENOWNED NEUROSURGEONS, WE OFFER OWN DEVELOPED, PATENTED PRODUCTS IN THE FIELDS OF CRANIAL AND SPINE SURGERY.

NEUROSCIENCE



Choosing Smart Solutions

DESIGNED AND DEVELOPED ESPECIALLY FOR CRANIAL AND SPINE SURGERY, THE **NeuroSmart** HIGH-SPEED MOTOR SYSTEM IS INTRODUCED AS TRUE FRONT-RUNNER OF ITS CATEGORY.

The intelligent, **emd**[®]-engineered **NeuroSmart** System recognizes whether a Perforator Handpiece or high speed Handpiece is connected to the motor.

At the same time as the Perforator Handpiece is connected by the user, the Control Unit automatically sets for its most optimal speed for **emd**[®]Cranial Perforators, *preventing inappropriate speed starting*. For maximum patient protection, speed drive is *automatically optimized* to ensure perforation starts at appropriate rpm. Therefore, with **NeuroSmart** High-Speed Motor System the risk of an accidental high speed start is completely avoided. When the adapter is disconnected, the control unit resets to latest speed use of *High Speed Mode*.

Maximum Safety. High Power.

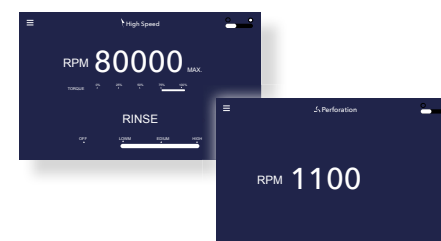
- ⊕ OUTSTANDING MOTOR PERFORMANCE OF 120W
- ⊕ SPEED RANGE 10.000-80.000 RPM
- ⊕ COST-EFFECTIVE SOLUTION - ONE MOTOR OF ALL ATTACHMENTS
- ⊕ AUTOMATIC HANDPIECE DETECTION FOR MAXIMUM SAFETY
- ⊕ OPTIMAL SPEED SETTINGS
- ⊕ INTEGRATED IRRIGATION PUMP WITH 10-DEGREE ADJUSTMENT
- ⊕ TOUCH SCREEN DISPLAY FOR EASY HANDLING AND CLEANING
- ⊕ ONE-CLICK CONNECTION OF SYSTEM ELEMENTS

TOUCH SCREEN FRONT PANEL

With its one-piece glass front panel, the **NeuroSmart** Control Unit was designed with medical hygiene and user practicality in mind.

The touch screen display offers easy handling and all-inclusive cleaning options.

The user-friendly menu navigation is further supported by intelligent *High-Speed* and *Perforation* mode detection.

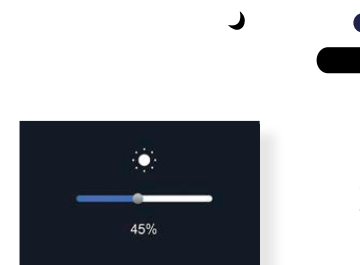


AUTOMATIZED MODE SETUP

Connection and disconnection of the Perforator Handpiece results in an immediate, automatized change of user modes and display functions.

LIGHT/DARK APPEARANCE

The user has the possibility to switch between light and dark view modes at any point during procedure.



Screen brightness is easily adjustable according to the needs of operating environment.

INTEGRATED IRRIGATION PUMP

During neurosurgical procedures, it is essential to ensure about proper cooling at surgical area. **NeuroSmart** Control Unit features integrated irrigation pump with variable flow control.



SMART & SUPERB POWERED MOTOR

Highly cost-efficient, due to its high-excursion motor power, the **NeuroSmart** High-Speed Motor by itself manages to drive the entire range of **emd**[®] Handpiece attachments at appropriate speed. Using *One-Click Technology*, the complete range of Hand,- and Nosepiece tools are easily connected to the motor by a single snapping movement.

Integrated *bend relief* to prevent cable torsion and increase protection of connection.



CABLE CONNECTED FOOTSWITCH

The combined Footswitch pedal is used to start/stop motor operation, while using the push button, rinsing mode is turned on/off.

The footswitch construction complies with IPX8 standard and is therefore easy to clean and disinfect.

Pedal and push button positioning delivers comfort even during longer user times.



Standard Set Configuration



NSS-110

CONTROL UNIT

Power consumption: 300 VA
Power Supply: 110-240 VAC; 50-60 Hz
Irrigation capacity: 0-100ml/min.
Weight: 5kg
Device class: IIb
Protection class: I



NSS-120

HIGH SPEED MOTOR with integrated cable
3m long connecting cable

Autoclavable
Speed Range: 10.000-80.000 rpm
Output power: 120W
Device class: IIb



NSS-130

DOUBLE FOOTSWITCH
4m long connecting cable

Waterproof
Device class: IIb
Standard IPX8

WE BELIEVE THAT

Functionality And Design

CREATE WORK OF ART.

EITHER WE ARE WORKING ON A NEW PRODUCT DEVELOPMENT OR WE ARE RETHINKING AN OLDER DESIGN, OUR TOP PRIORITY IS CREATING HIGH-END PRODUCTS THAT COMPLY WITH THE CHALLENGES OF THE TIME, BOTH IN TERMS OF FUNCTION AND USABILITY.

CRANIOTOMY

HANDPIECES Craniotome

Absolute Performance. Without Compromises.

EACH **emd**® HANDPIECE COLLECTION IS MADE OF STAINLESS STEEL, GUARANTEEING LONG PRODUCT LIFE. WITH THE SLEEKEST DESIGN ON THE MARKET, A CLEAN SHAPE AND SURFACE MAKES OUR CRANIOTOME HANDPIECE ESPECIALLY EASY TO CLEAN AND HOLD. THE ERGONOMIC PEN-GRIP SOLUTION ALLOWS COMFORTABLE USE AND A STABLE GRIP DURING OPERATION.

The *One-Click Technology* provides easy connection of the Craniotome Handpieces by simply snapping it to the motor.

Both the inserted craniotome cutter and duraguard are simultaneously locked in position with rotary knob. For greatest safety, starting of the motor is not possible until rotary knob is locked.

For more user support, duraguards and craniotome cutters are marked with size identifiers. Duraguards are available in fixed and rotatable configurations.

The range also includes additional models for special application areas. Eg. *special head* for craniotomy nearby the sinus or duraguards with *increased head length* for laminotomy.

Craniotome/laminotome heads with fix duraguard are also available with irrigation. The feature ensures a consistent low temperature during cutting.



NSH-310

Illustration of **emd**® Craniotome Handpiece



**NSH-310+
NSH-332**

Illustration of **emd**® Craniotome Handpiece with Craniotome Head



NSH-320

CRANIOTOME HEAD

Fix - Without Duraguard

Use with cutters:
NLC-1T 3.5mm exposure
NLC-1ST 3.5mm exposure
NLC-2T 5.5mm exposure
NLC-2ST 5.5mm exposure



NSH-331R

CRANIOTOME HEAD, L11 R

Rotatable - Duraguard - Size 1

Use with cutters:
NLC-1T
NLC-1ST



NSH-331

CRANIOTOME HEAD, L11

Fix - Duraguard - Size 1

Use with cutters:
NLC-1T
NLC-1ST



NSH-332R

CRANIOTOME HEAD, L15 R

Rotatable - Duraguard - Size 2

Use with cutters:
NLC-2T
NLC-2ST



NSH-332

CRANIOTOME HEAD, L15

Fix - Duraguard - Size 2

Use with cutters:
NLC-2T
NLC-2ST



NSH-333R

CRANIOTOME HEAD, L25 R

Rotatable - Duraguard - Size 3

Use with cutters:
NLC-3T
NLC-3ST



NSH-333

CRANIOTOME HEAD, L25

Fix - Duraguard - Size 3

Use with cutters:
NLC-3T
NLC-3ST



NSH-334R

LAMINOTOME HEAD, L35 R

Rotatable - Protection Guard

(max. speed 30,000 rpm)

Use with cutters:
NLC-4T
NLC-4ST



NSH-334

LAMINOTOME HEAD, L35

Fix - Protection Guard

(max. speed 30,000 rpm)

Use with cutters:
NLC-4T
NLC-4ST

General Features

- ⊕ 80,000 RPM (EXCEPT FOR LAMINOTOME)
- ⊕ **emd**® CRANIOTOME HANDPIECES ARE DESIGNED FOR BOTH ADULT AND PEDIATRIC SURGERY
- ⊕ **emd**® OFFERS THREE FOOTED DURAGUARDS; ONE LAMINOTOME HEAD; ONE SPECIALTY HEAD FOR SINUS
- ⊕ QUICK AND EASY RELEASE CHUCK OF DURAGUARDS
- ⊕ CRANIOTOME/LAMINOTOME HEADS WITH FIX DURAGUARD ARE ALSO AVAILABLE WITH IRRIGATION

For the available Craniotome cutters, please see HS Tools catalogue.

PRECISELY DESIGNED EDGE CONSTRUCTIONS, DURABLE BLADES ARE THE MAIN FEATURES OF NEUROLINE CRANIOTOME CUTTERS.

AVAILABLE IN FOUR STANDARD LENGTHS TO FIT THE RIGHT SIZE DURAGUARD OR EVEN A SPECIAL CRANIOTOME HEAD.

THREE CUTTING BLADES DELIVER THE BEST PERFORMANCE BOTH FOR STRAIGHT AND TWISED MODELS.



NLC-1T

CRANIOTOME CUTTER, L11
Straight with 3 cutting edge - Size 1
Use with duraguard:
NSH-331
NSH-331R

NLC-2T

CRANIOTOME CUTTER, L15
Straight with 3 cutting edge - Size 2
Use with duraguard:
NSH-332
NSH-332R

NLC-3T

CRANIOTOME CUTTER, L25
Straight with 3 cutting edge - Size 3
Use with duraguard:
NSH-333
NSH-333R

NLC-4T

CRANIOTOME CUTTER, L35
Straight with 3 cutting edge - Size 4
Use with duraguard:
NSH-334
NSH-334R



NLC-1ST

CRANIOTOME CUTTER, L11
Spiral with 3 cutting edge - Size 1
Use with duraguard:
NSH-331
NSH-331R

NLC-2ST

CRANIOTOME CUTTER, L15
Spiral with 3 cutting edge - Size 2
Use with duraguard:
NSH-332
NSH-332R

NLC-3ST

CRANIOTOME CUTTER, L25
Spiral with 3 cutting edge - Size 3
Use with duraguard:
NSH-333
NSH-333R

NLC-4ST

CRANIOTOME CUTTER, L35
Spiral with 3 cutting edge - Size 4
Use with duraguard:
NSH-334
NSH-334R

WE BELIEVE THAT

Uncompromising Quality

IS A MATTER OF HIGH EXPECTATIONS.

GUARANTEEING THE RELIABILITY OF AN **emd**[®] PRODUCT REQUIRES THE APPLICATION OF A MULTITUDE OF SKILLS. FROM THE PRECISE SELECTION OF RAW MATERIALS AND MACHINING TECHNOLOGIES TO THE COMPLEXITY OF PRODUCT CERTIFICATION, EVERY STEP IS TAKEN TO ENSURE THAT OUR QUALITY ITEMS MEET THE HIGHEST SAFETY STANDARDS FOR BOTH THE PATIENT AND THE SURGEON.

ATTACHMENTS

Absolute Performance. Without Compromises.

EACH **emd**® HANDPIECE COLLECTION IS MADE OF STAINLESS STEEL, GUARANTEEING A LONG PRODUCT LIFE. FEATURING A PURPOSEFULLY SLEEK DESIGN, THE CLEAN SHAPE AND SURFACE MAKES OUR STANDARD HANDPIECES ESPECIALLY EASY TO CLEAN. THE ERGONOMIC PEN-GRIP SOLUTION ALLOWS COMFORTABLE USE AND A STABLE GRIP DURING OPERATION.

The *One-Click Technology* provides easy connection of the Standard Handpieces by simply snapping it to the motor.

Both the inserted tool cutter and the handpiece are simultaneously locked in position with rotary knob. For greatest safety, starting of the motor is not possible until rotary knob is locked.

The special *Tool Grasping Technology* of attachments supports product selection and economic operation.

HANDPIECES Standard



NSH-411
STANDARD STRAIGHT HANDPIECE
Working length 25mm, ø 5.5mm

NSH-412
STANDARD STRAIGHT HANDPIECE
Working length 45mm, ø 5.5mm

NSH-413
STANDARD STRAIGHT HANDPIECE
Working length 70mm, ø 5.5mm




NSH-414
STANDARD STRAIGHT HANDPIECE
Working length 95mm, ø 5.5mm

NSH-415
STANDARD STRAIGHT HANDPIECE
Working length 120mm, ø 5.5mm

NSH-416
STANDARD STRAIGHT HANDPIECE
Working length 170mm, ø 5.5mm

NSH-417
STANDARD STRAIGHT HANDPIECE
Working length 220mm, ø 5.5mm

General Features

-  80,000 RPM
-  STANDARD HANDPIECES ARE COMPATIBLE WITH BURRS Ø 2,3MM
-  UNIFORM-SIZED ADJUSTABLE EXPOSURE TOOL IS COMPATIBLE WITH ALL HAND, - AND NOSEPIECES OF **NeuroSmart** FAMILY

For available burrs, see HS tools catalogue.



NSH-421
STANDARD ANGLED HANDPIECE
Working length 25mm, ø 5.5mm



NSH-422
STANDARD ANGLED HANDPIECE
Working length 45mm, ø 5.5mm



NSH-423
STANDARD ANGLED HANDPIECE
Working length 70mm, ø 5.5mm



NSH-424
STANDARD ANGLED HANDPIECE
Working length 95mm, ø 5.5mm



NSH-425
STANDARD ANGLED HANDPIECE
Working length 120mm, ø 5.5mm



NSH-426
STANDARD ANGLED HANDPIECE
Working length 170mm, ø 5.5mm



NSH-427
STANDARD ANGLED HANDPIECE
Working length 220mm, ø 5.5mm

Burrs With Benefits

USER-FRIENDLY AND COST-EFFICIENT HS TOOLS ARE AVAILABLE WITH THE MOST COMMONLY USED GEOMETRIES.

THANKS TO THE SPECIAL *TOOL GRASPING TECHNOLOGY*, ALL STANDARD AND ANGLED **emd**[®] NEUROLINE HANDPIECES ARE TO BE USED WITH *UNIFORM-SIZED* BURRS AND TOOLS.

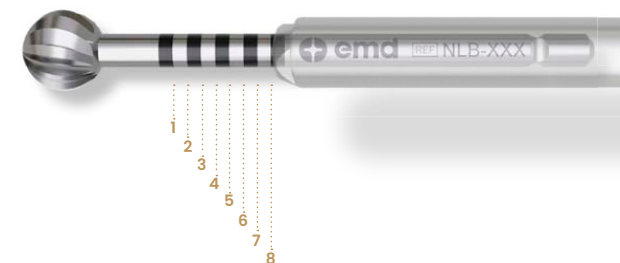


**ONE SIZE.
MANY APPLICATIONS.**



EXPOSURE IN 8 POSITIONS

Desired tool length is easily adjustable according to user preferences.



ATTACHMENTS slim

EACH **emcd**® HANDPIECE COLLECTION IS MADE OF STAINLESS STEEL, GUARANTEEING A LONG PRODUCT LIFE.

FEATURING A PURPOSEFULLY SLEEK DESIGN, THE CLEAN SHAPE AND SURFACE MAKES OUR SLIM HANDPIECES ESPECIALLY EASY TO CLEAN.

THE ERGONOMIC *PEN-GRIP SOLUTION* ALLOWS COMFORTABLE USE AND A STABLE GRIP DURING OPERATION.

SEVERAL NEUROSURGICAL APPLICATIONS REQUIRE MORE PRECISE ACCESS TO THE OPERATING AREA.

SLIM ATTACHMENTS ARE DETACHABLE MODELS OF AN ANGLED HANDPIECE AND SMALL BORE NOSEPIECES.

SLIM ATTACHMENTS ARE MAINLY USED IN *SPINE SURGERY* APPLICATIONS. ALL HANDPIECE AND NOSEPIECE COMBINATIONS ARE WELL BALANCED WHICH IS A GREAT BENEFIT DURING LONGER OPERATIONS.



NSH-510
SLIM HANDPIECE
Angled



NSH-521
LINEAR SLIM HEAD
Working length 85mm, ø 4.7mm



NSH-522
LINEAR SLIM HEAD
Working length 105mm, ø 4.7mm



NSH-523
LINEAR SLIM HEAD
Working length 125mm, ø 4.7mm



NSH-531
CURVED SLIM HEAD
Working length 85mm, ø 4.7mm



NSH-532
CURVED SLIM HEAD
Working length 105mm, ø 4.7mm



NSH-533
CURVED SLIM HEAD
Working length 125mm, ø 4.7mm

General Features

- ⊕ 25,000 RPM
- ⊕ SLIM NOSEPIECES ARE COMPATIBLE WITH BURRS Ø 1.0MM

WE KNOW THAT

Patient Safety

STARTS AT ENGINEERING.

THE SKILL LEVEL OF A HIGH-SPEED MOTOR SYSTEM IS GIVEN BY THE VARIETY OF ATTACHMENTS AND THEIR EXTENSIVE FUNCTIONALITY. THE MAIN PRINCIPLES OF OUR CONSTRUCTION ARE SAFETY, ERGONOMICS AND SUSTAINABILITY.

AND ANIMAL DEGENERATION

NeuroSmart Perforator Handpiece

EXPERIENCE THE DIFFERENCE A Handpiece Can Make.

WITH FULL STAINLESS STEEL FINISH, THE NEW GENERATION **emd**[®] PERFORATOR HANDPIECE TAKES CRANIAL PERFORATION TO THE NEXT LEVEL. A HIGHLY EFFICIENT YET EASY USE MADE POSSIBLE BY THE INTEGRATED *SMART TECHNOLOGY*.

The speed reducer features *Automatic Trepan Mode* recognition for the **NeuroSmart** Control Unit. Ergonomic handle for a comfortable, stable grip. Handpiece is available with Hudson end connection.

Thanks to the One-Click Connection, the Perforator Handpiece can be simply mounted on the motor. The perforator lock/release knob can be easily operated with the thumb.

The ergonomic handle is very comfortable to hold and its surface finish allows a secure grip.



Illustration of **emd**[®] Perforator Handpiece equipped with NeuroLine Single Use Cranial Perforator.





Illustration of **emd**[®] Perforator Handpiece equipped with NeuroLine Reusable Cranial Perforator.



NSH-210
PERFORATOR HANDPIECE
Autoclavable

General Features

-  1,000 RPM
-  **emd**[®] PERFORATOR HANDPIECE ACCEPTS HUDSON END CONNECTION
-  TO BE USED WITH **NeuroSmart** HS MOTOR AND CRANIAL PERFORATORS FOR SKULLS 3.0MM AND 1.5MM THICK



Unique Advantages. Multiple Safety Mechanisms.

emd[®] NEUROLINE CRANIAL PERFORATORS WERE DESIGNED AND DEVELOPED TO PROVIDE MAXIMUM PERFORMANCE WITH MAXIMUM PATIENT SAFETY. THE INTEGRATED THREE-LEVEL SAFETY TECHNOLOGY IS PATENT PROTECTED AND OFFERS EXCLUSIVE DRILLING EXPERIENCE FOR THE USER.

EXCELLENT TIP CONTROL TO AVOID SKIDDING

The start of perforation is a critical point, the guiding tip of the drill ensures keeping the perforator exactly on the operation point to avoid skidding on uneven surfaces as well.



HIGH PERFORMANCE & CONSISTENT DRILLING QUALITY

Thanks to the specially developed edge design, the simultaneous movement of the drilling and cutting heads guarantees optimum results.



RESTARTABLE AT ANYTIME

The surgeon has the possibility to continuously supervise the perforation, as the device can be stopped and safely restarted anytime.



BONE PAD FORMATION

Cranial perforation is not a simple drilling, NeuroLine perforators form a bone pad at the end of the drilling process, which protects the dura.

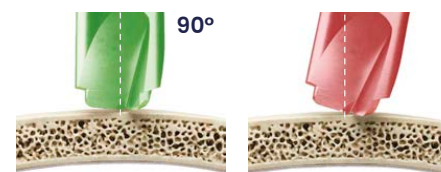


Product Versatility & Compatibility

PRODUCT RANGE OF emd[®] NEUROLINE CRANIAL PERFORATORS GIVES A FREE CHOICE FOR THE CUSTOMER EITHER THEY PREFER SINGLE USE OR REUSABLE MODELS.

All our perforators are manufactured with universal Hudson end coupling.

Thanks to the standardized connection, compatibility is granted for the most commonly used medical high speed motordrill trepan adapters/speed reducers, which are equipped with standard Hudson chuck fitting.



IMPORTANCE OF CORRECT POSITIONING

To ensure a safe and successful operation, maintaining the correct position (90°) of the perforator against the skull is crucial and must be remembered at all times when drilling is being performed.

Explanation of Article Numbers by Size

NLO-7/11-1.5

NLO-B/A-C

(eg. for disposable perforator for thin bone)

NLM-11/14-3.0

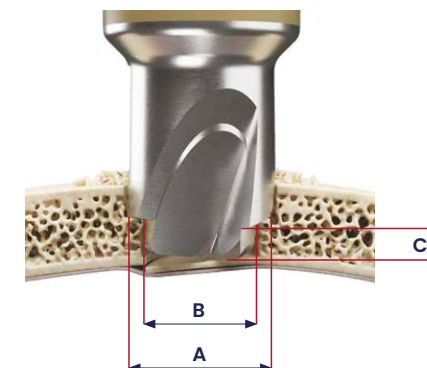
NLM-B/A-C

(eg. for reusable perforator for thick bone)

A: DIAMETER OF PERFORATOR EXTERNAL DRILL PART
• DIAMETER OF UPPER PART OF HOLE

B: DIAMETER OF PERFORATOR INTERNAL DRILL PART
• DIAMETER OF LOWER PART OF HOLE

C: MINIMUM THICKNESS OF SKULL BONE REQUIRED FOR OPERATION OF PERFORATOR
(OVERHANG OF INTERNAL DRILL PART ON EXTERNAL DRILL PART)



DISPOSABLE Cranial Performors

WITH PATENTED TECHNOLOGY, DISPOSABLE CRANIAL PERFORATORS ARE FULLY DEVELOPED AND MANUFACTURED BY **emd**.

SAFETY BEING OUR TOP PRIORITY, SINGLE-USE PERFORATORS ARE EQUIPPED WITH THREE SAFETY SYSTEMS.

THE BUILT-IN SAFETY MECHANISM ALLOWS THE SAME PRESSURE TO BE APPLIED ON SOFTER AREAS AS WELL WITH SAME EFFICIENCY.



FOR USE ON SKULLS MIN. 3.0MM THICK



NLO-6/9-3.0
CRANIAL PERFORATOR, SINGLE USE
Disposable



NLO-7/11-3.0
CRANIAL PERFORATOR, SINGLE USE
Disposable



NLO-9/13-3.0
CRANIAL PERFORATOR, SINGLE USE
Disposable



NLO-11/14-3.0
CRANIAL PERFORATOR, SINGLE USE
Disposable

FOR USE ON SKULLS MIN. 1.5MM THICK



NLO-6/9-1.5
CRANIAL PERFORATOR, SINGLE USE
Disposable



NLO-7/11-1.5
CRANIAL PERFORATOR, SINGLE USE
Disposable



NLO-9/13-1.5
CRANIAL PERFORATOR, SINGLE USE
Disposable



NLO-11/14-1.5
CRANIAL PERFORATOR, SINGLE USE
Disposable

REUSABLE Cranial Perforators

OUR REUSABLE CRANIAL PERFORATORS WITH PATENTED TECHNOLOGY OFFER HIGHEST SAFETY FOR BOTH USER AND PATIENT.

WITH THE DEVELOPMENT OF THE REUSABLE PERFORATOR, WE AIMED TO CREATE SUCH A REUSABLE DEVICE THAT IS ENTIRELY CLEANABLE AND STERILIZABLE.

CONSISTING OF FOUR PARTS, PRODUCT ASSEMBLY AND DISASSEMBLY IS PARTICULARLY EASY. THE emd® REUSABLE CRANIAL PERFORATOR IS CURRENTLY THE ONLY CRANIAL PERFORATOR WITH SUCH PRODUCT FEATURES ON THE MARKET.

AVAILABLE WITH HUDSON CONNECTION.



FOR USE ON SKULLS MIN. 3.0MM THICK



NLM-6/9-3.0
CRANIAL PERFORATOR, REUSABLE
Autoclavable
available in set with Holder Device



NLM-7/11-3.0
CRANIAL PERFORATOR, REUSABLE
Autoclavable
available in set with Holder Device



NLM-11/14-3.0
CRANIAL PERFORATOR, REUSABLE
Autoclavable
available in set with Holder Device



NLM-S2-6/9
HOLDER DEVICE
Autoclavable
Use with perforator:
NLM-6/9-3.0

NLM-S2-7/11
HOLDER DEVICE
Autoclavable
Use with perforator:
NLM-7/11-3.0

NLM-S2-11/14
HOLDER DEVICE
Autoclavable
Use with perforator:
NLM-11/14-3.0

REPROCESSING MADE EASIER

NeuroLine Reusable Perforators are fully dismountable. To make the assembly and reprocessing easier, we developed a holder device for storage and sterilization.

Handling is made easy with the components' dedicated locations identified by pictograms. All cutting edges are protected, minimizing the risk of damage to inserted parts.



WE KNOW THAT

Success Of An Operation

RELIES ON THE TEAM BEHIND.

THE LIFE EXPECTANCY OF A HIGH QUALITY MEDICAL DEVICE DEPENDS ON BOTH THE ACCURACY OF MANUFACTURING AND THE CARE TAKEN IN ITS OPERATION AND REPROCESSING.

AS MANUFACTURERS, WE STRIVE TO OFFER SOLUTIONS FOR MEDICAL PROFESSIONALS TO ENSURE EASE OF USE, STORAGE AND STERILISATION.

ACCESSORIES

Accessories of Irrigation

TO KEEP THE OPERATION AREA COOL WE RECOMMEND TO CHOOSE A SUFFICIENT IRRIGATION METHOD.

USING THE INTEGRATED PUMP OF THE NEUROSMART CONTROL UNIT WITH THE SINGLE USE IRRIGATION TUBE SET ADAPTED ON THE HANDPIECE PROVIDES A COMFORTABLE SOLUTION.

THE REUSABLE IRRIGATION ADAPTER CAN BE EASILY AND SAFELY FIXED ON THE HANDPIECE. WIDE SELECTION IS AVAILABLE FOR THE ALL WORKING LENGTH RANGE.



NSI-610
IRRIGATION SET
For NSH-4xx, NSH-5xx handpieces
made by ASSAmed GmbH /
REF AMP85.3000



NSI-641
STANDARD IRRIGATION ADAPTER, L25
Standard – Size 1
NSH-411
NSH-421

NSI-642
STANDARD IRRIGATION ADAPTER, L45
Standard – Size 2
NSH-412
NSH-422

NSI-643
STANDARD IRRIGATION ADAPTER, L70
Standard – Size 3
NSH-413
NSH-423

NSI-644
STANDARD IRRIGATION ADAPTER, L95
Standard – Size 4
NSH-414
NSH-424

NSI-651L
LINEAR IRRIGATION ADAPTER, L85
Linear – Slim – Size 1
NSH-521

NSI-652L
LINEAR IRRIGATION ADAPTER, L105
Linear – Slim – Size 2
NSH-522

NSI-653L
LINEAR IRRIGATION ADAPTER, L125
Linear – Slim – Size 3
NSH-523

NSI-611
FLUID BOTTLE HOLDER
For NSS-110

NSI-645
STANDARD IRRIGATION ADAPTER, L120
Standard – Size 5
NSH-415
NSH-425

NSI-646
STANDARD IRRIGATION ADAPTER, L170
Standard – Size 6
NSH-416
NSH-426

NSI-647
STANDARD IRRIGATION ADAPTER, L220
Standard – Size 7
NSH-417
NSH-427

NSI-651C
CURVED IRRIGATION ADAPTER, L85
Curved – Slim – Size 1
NSH-531

NSI-652C
CURVED IRRIGATION ADAPTER, L105
Curved – Slim – Size 2
NSH-532

NSI-653C
CURVED IRRIGATION ADAPTER, L125
Curved – Slim – Size 3
NSH-533



The Importance Of Product Care

PROPER PRE-CLEANING IS ESSENTIAL TO PROVIDE EFFECTIVE STERILIZATION. THANKS TO OUR WASH-RINSE DEVICE ALL THE ATTACHMENTS ARE FULLY FLUSHABLE.

THE SYSTEM COMPONENTS CAN BE EASILY POSITIONED AND ITS USAGE ENSURES THAT THE INSIDE OF EACH COMPONENT IS PERFECTLY FREE OF CONTAMINATION.



THE LIFE CYCLE OF MEDICAL DEVICES CONTINUES BEYOND THE O.R.

Life expectancy of our tools and devices can be further extended by careful maintenance.

In our stainless steel Storage Container all system components can be perfectly over-viewed. The specific silicone holders fix the system elements safely, granting stable position during the preprocessing.

We strongly recommend using a synthetic Oiling Spray dedicated for cleaning and lubrication, as well as following our product specific instructions of use.



NSC-710

WASH-RINSE DEVICE
with cleaning connections
for attachments
Autoclavable



NSC-712

CERAMIC FILTER
For NSC-710

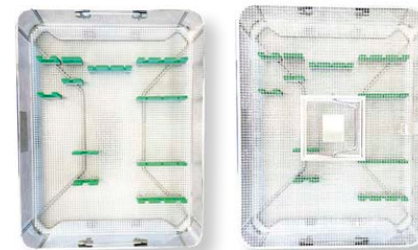


NSC-720

OILING SPRAY
300ML
Use for all handpieces

NSC-721

OILING SPRAY NOZZLE
For NSC-720



NSC-730

INSTRUMENT TRAY
with lid and silicon holders
Autoclavable
dimensions: 482mm x 246mm x 73mm
(L x W x H)
For storage and sterilization



emd.hu

EMD-KFT.
H-4031 Debrecen, Bartók Béla u. 113/B
+36 52 486 034, +36 52 422 465
info@emd.hu

2023_EN_V1



Beyin Cerrahi



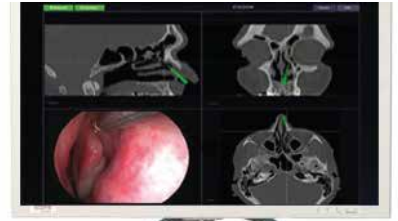
KBB



Spinal Cerrahi

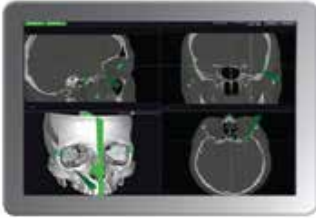
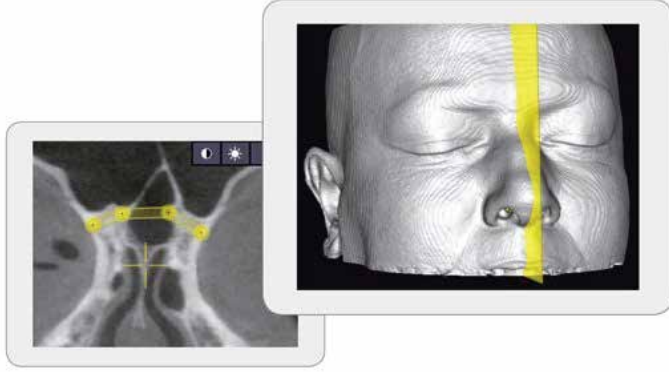


dynamic navigation

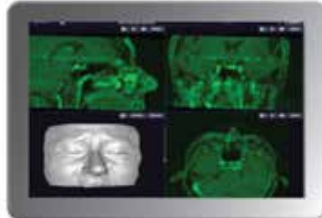




Preoperative Planning Station



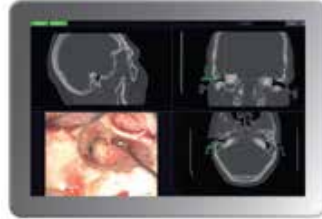
Plastik Cerrahi



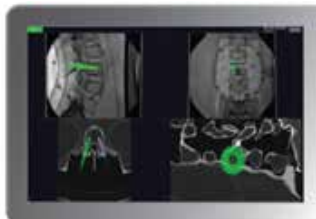
Fusion



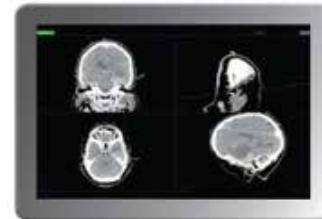
Sinüs Cerrahi



Kulak Cerrahi







Spinal Cerrahi







Beyin Cerrahi

Fiagon operasyon öncesi Planlama Yazılımı özellikli tasarımının cerrahlara desteği



-  Lateral Kafatası Cerrahi
-  Plastik Yapılandırma ve Yüz Cerrahi
-  Tümör Cerrahi
-  Dental İmplant Cerrahi

Fiagon Planning Software

ENT / CMF

-  Sinüs Navigasyon Sistem
-  Ear Navigasyon Sistem
-  Plastik Rekonstrüksiyon Module
-  Navigasyon Module Fusion

NEURO

-  Neuro Navigasyon Sistem
-  Spine Navigasyon Sistem

Cerraha destek sağlar

- Lateral Skull Base Surgery
- Plastik Rekonstrüksiyon Surgery
- Tümör Surgery
- Dental Implant Surgery
- Partial removal of the medial orbital wall



Preoperative Planning Station
Şimdi App iPad ve iPhone için kullanımda

Emniyetli Hızlı ve Fiagon ile kolay

- Hastanın hızlı ve kolay kaydı
- Fiagon Tracey ile baştan sona fotoğraf kaydı
- Yatan hasta ve ayakta hastalar için müdahaleye hazır
- Anatomik yapılar için ayarlanabilir cihazlar
- Cihazın ucunda kesin navigasyon
- Ameliyat sırasındaki maksimum entegrasyonda akışı destekleme
- Endoskopi ve mikroskopi için uygulama



Fiagon Tracey size hasta kayıt merkezi işlem için tamamen yeni bir seçenek sunuyor.



Görüntüler tablet ile yakalanır ve Fiagon Tracey kaydı hesaplar. Sonuç olarak kaydın kalitesi kullanıcıya özel cihaz klavuzunda bağımsızdır. Bu cerrah ve hasta için hızlı ve kolaydır. Bu nedenle yatan hasta ve ayakta hasta uygulamalarında kullanılabilir.

Otomatik Kayıt

Fotoğraflı kayıt yolu ile yüzün tam yüzeyinin incelenmesi iPad uzaktan kumanda ile hızlı ve kolay kullanım



Benzersiz esnek aletler



Navigasyon Uçlu Elastik Aletler

Aletin ucunda elektromanyetik navigasyon cerrahi alanda esnek cihazların hassas izlenmesi



Beyin Cerrahi için Benzersiz Esnek Biyopsi Enstrümanlar

Beyin Cerrahi için Entegre Navigasyon Sistemi



Fiagon Navigasyon Sistemi , navigasyon sisteminden gelen veriyi direkt olarak mikroskobun göz parçasına yönlendirir.

Çerçevesiz Navigasyon

Fiagon navigasyon sistemi rezeksiyon , biyopsi , shunt yerleştirmesi ve endoskopik beyin müdahalesini destekler.

Entegre Navigasyon

Navigasyon verisi Fiagon Navigasyon sistemi ile direkt mikroskop görüntüsüne eklenir. Göz parçası veya diğer görüntüleme kaynakları ile görüş yönünü değiştirme ihtiyacını ortadan kaldırır.

Kalibre Enstrümanlar

Tüm Fiagon beyin navigasyonu enstrümanları fabrikada kalibre edilir ve açıldığı gibi kullanılabilir. Bu sizi zaman kaybindan korur.

Uyarlanabilir Yazılım

Beyin navigasyonunun yazılımı iş akışına göre kişiselleştirilebilir. Çeşitli görsel veriler (CT, MRI , PET-CT, DTI) operasyon öncesi birleştirilebilir ve planlanabilir ve ardından ameliyathanede navigasyon sistemine yüklenebilir.



Beyin Cerrahisi için Eşsiz ve Esnek Enstrümanlar

Biyopsi Pointer

1.8 mm çapında beyin biyopsi kanüllerinin navigasyonla kullanılmasını sağlar.



Shunt Pointer

Çeşitli drenaj kateterlerinin navigasyonla kullanılmasını sağlar.

VirtuDrive™ CUBE4D

VirtuDrive™

Premium Hardware

Yüksek Performans Bilgisayar Donanımı

VirtuLite™

İnteraktif Kullanıcı Arayüzü

VirtuView™

Yüksek çözünürlük görüntü ile endoskopik açılar



Spinal Navigasyon

Fiagon Navigasyon Sisteminin kurulumu vertebral füzyon (spondylodesis) için optimize edilmiştir.

3D Registrasyon

Fiagon'un 3D registrasyonu, hastanın 3D C- kolları veya mobil CT tarayıcılar ile hızlı ve otomatik mobil CT tarayıcılar ile hızlı ve otomatik bir şekilde registre edilebilmesini sağlar. Ayrıca registrasyon operasyon öncesi veri setlerine göre de yapılabilir.

Kalibre Enstrümanlar

Tüm Fiagon omurga navigasyonu enstrümanları fabrikada kalibre edilir ve açıldığı gibi kullanılabilir. Bu da zaman kaybından korur.

Radyolusent EM Alan Jeneratörü

Fiagon alan jeneratörü ergonomik hasta başlığına entegredir. Görüntü kalitesini etkilemeden doktorun çalışma alanını kısıtlamadan bir görüş alanı oluşturur.

Tablet Kontrolü

Fiagon kumandası navigasyon yazılımının ve operasyon öncesi planlamanın kablosuz bir şekilde iPad aracılığı ile yapılmasını sağlar. Kumanda doktora ekran görüntüsü çekme veya görüntü kaydetme gibi başka çeşitli özellikler de sunmaktadır.

Spine Pointer

Delinecek deliklerin ve pedikül cidaların derinlik ve konumlarını belirlemek için navigasyonlu bir enstrümandır.

Center Pointer

Kortikal kemik açıklığı ve giriş noktasının net belirlenmesi için

Awl Pointer

Pedikül vidasının deliğinin açılması için

Hasta Omurga Lokalizer

Omurga müdahaleleri için özel olarak tasarlanmış lokalizer klemp operasyon sırasında sabittir ve hasta takibi sağlar. Müdahale alanı kısıtlanmaz doktor çalışma alanı engellenmez.

Lokalizer Spine

Spinöz çıkıntı ataçmanı

Spinal Cerrahi için Benzersiz Enstrümanlar





Navigation Unit
E 01 1103



Universal Headrest
E 01 1003



Registration Pointer
E 01 2003



Localizer Headband
E 01 2200



Localizer Adhesive Pad
E 01 2202



Localizer Bone Screw
E 01 2201



FlexTube 3 mm
E 01 2104



FlexTube 4 mm
E 01 2106



PointerTube Strammberger
E 01 2102



PointerTube Sinüs Frontalis
E 01 2103



FlexPointer 1.5 mm
E 01 2004



FlexPointer 2.8 mm
E 01 2002



GuideWire 0.6 mm
E 01 2913



GuideWire 0.8 mm
E 01 2911



PointerShell
E 01 2902 3 mm
E 01 2900 4 mm
E 01 2901 5 mm



PointerShell Universal
E 01 2904



FinePointer
E 01 2300



HeadBand
E 013000



Adhesive Pads
E 00 3001



AWL Pointer
Center Pointer



Neuro Gate
E 01 2220



Skull Clamp
N 01 1904



N 01 1920



Mayfield