DORO®
CRANIAL STABILIZATION & RETRACTOR SYSTEMS
Each neurosurgical intervention means a new challenge. Every minute counts. Every step needs to fit. A smooth workflow is essential. The Black Forest Medical Group is proud to support you and your team with innovative solutions that make neurosurgical interventions safer and more efficient.

From our history to the present and turning into the future, we were and always will be driven by the desire to satisfy your needs. Together, we are able to multiply our strengths, making a lasting difference for the health of people worldwide.

Matthias Schüle  Roman Maier  Patrick Lux
Owner & Managing Director  Managing Director  Managing Director

CREATE A NEW WORLD IN NEUROSURGERY WITH US!

Get connected
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Firm positioning of the cranium is essential during neurosurgical procedures for patient safety and the overall outcome of the surgical approach, especially when using technologies like microscopes or navigation. We are driven to create solutions which ensure stability and safety, and provide the strength and flexibility to perform at your very best - whatever your next case might be.
DORO® QR3 HEADREST SYSTEM

The DORO® QR3 Headrest System is developed for daily use in non-imaging neurosurgical applications. Features like built-in navigation adaptor interfaces and Mix & Match compatibility with DORO® Radiolucent products make it a time-saving and versatile device.

VERSATILE
With the DORO® QR3 Skull Clamp as a basis, you are free to enhance the set-up to what suits you best. Retractor arms, entire retractor systems or navigation adaptors – it all fits.

INTUITIVE
Fast and easy mounting frees up resources for the rest of your surgery preparations.

COMPATIBLE
Can directly be attached to an OR table via the neuro interface or mounted to its side-rails utilizing DORO® Side Rail Adaptors (page 10). You can also Mix & Match it with radiolucent DORO® products (page 23).
**QUICK-RAIL®**
**AN INNOVATIVE INTERFACE**

The term QR3 refers to the 3rd generation of our innovative Quick-Rail® technology which is directly implemented in the extension arms of our aluminum skull clamps. Due to its unique shape it can easily be located, even when covered by multiple layers of sterile drape. The Quick-Rail® serves as a form-fitting interface, ensuring reliable attachment of DORO® Retractor Systems and accessories.

**EASY TO READ PRESSURE SCALE**
Metric and imperial units.

**REDUCED RISK OF LACERATIONS**
No play between archholder and skull base when locked.

**PRECISE NAVIGATION**
Navigation tracking device adaptors (page 10) can easily be attached in close proximity to the surgical field.

**SPACIOUS**
Due to its unique shape there is always free space to place the intubation tube, even in prone position.

**EASY, SAFE AND STABLE INTERFACE**
Attach DORO LUNA®, DORO COBRA® or Quick-Clamp products to the form-fitting Quick-Rail® interface (Infobox below).

**STABLE**
Minimum play between the skull clamp base and the extension arm ensures high stability and a reduced risk to lost navigation.

**DORO® QR3 SKULL CLAMP**

*Item no. 1001.001*
DORO® ALUMINUM BASE UNITS

DORO® Base Units are individually designed for specific OR tables. Additionally, you can attach DORO® Base Units to virtually any common OR table with DORO® Side Rail OR Table Adaptors (page 10).

DORO® Adjustable Base Unit
Item no. 3001-00

DORO® Adjustable Base Unit
Mizuho
Item no. 3001-002

DORO® Adjustable Base Unit
Takara Belmont
Item no. 3001-001

DORO® Adjustable Base Unit
Eschmann T-Series
Item no. 3001-010

DORO® BASE UNIT PARKBENCH

The DORO® Base Unit Parkbench is the perfect solution for lateral patient positioning. Its design allows a safe and comfortable positioning of the patient’s arm, resulting in a reduced risk of hematomas. The Base Unit Parkbench is adjustable in width and attaches to almost all standard siderails.

DORO® Base Unit Parkbench
Item no. 3001-006

Trumpf Universal Side Rail Fitting
Item no. 3007-50

Connects the Armrest Parkbench to the DORO® Base Unit Parkbench.

Stryker Armrest Parkbench
Item no. 3001-007
DORO® SWIVEL ADAPTORS

DORO® Swivel Adaptors are the connecting elements between DORO® Skull Clamps and DORO® Base Units. Versions offering pivoting features and additional starbursts are available.

DORO® Swivel Adaptor
Item no. 3002-00
Provides 360° rotation for optimum flexibility in patient positioning.

DORO® Ball Pivot Adaptor
Item no. 3002-50
Provides 360° rotation, pivoting and a unique horizontal inclination up to 90° for maximum flexibility in patient positioning.

DORO® Swivel Adaptor Navigation
Item no. 3002-60
Provides 360° rotation and two additional starbursts for increased options in mounting navigational or similar devices.

DORO® CROSSBAR ADAPTOR

The DORO® Crossbar Adaptor is the perfect solution for all approaches requiring the patient to be in sitting position. It can be mounted to the side-rails of virtually any standard OR tables and provides a stable interface for the DORO® QR3 Headrest System.

DORO® Crossbar Adaptor
Item no. 3007-00
Needs 2x Universal Side Rail Fittings (item no. 3007-50, see page 8).
**DORO® ALUMINUM OR TABLE ADAPTORS**

**DORO® Table Adaptor**  
Item no. 3010-00  
Mounted on square receptacle of OR table.

**DORO® Side Rail OR Table Adaptor**  
Item no. 3011-00  
Width-adjustable universal neuro interface, fitting OR tables with bars up to 70 mm.

**DORO® Side Rail OR Table Adaptor AMSCO®**  
Item no. 3011-10  
Width-adjustable universal neuro interface, fitting OR tables with bars up to 125 mm.

**AMSCO® Headrest Adaptor**  
Item no. 3011-11  
Fits 3080 & 3085 series.

**DORO® NAVIGATION ADAPTORS**

**DORO® Easy Connect Navigation Adaptors** connect directly to the integrated navigation starburst on the Quick-Rail® of the **DORO® QR3 Skull Clamp**, **DORO® Multi-Purpose Skull Clamp** and **DORO® Skull Clamp Teflon®**. This provides a very stable and secure connection and allows positioning the navigation reference array close to the surgical target.

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**DORO® Easy Connect Navigation Adaptor Stryker®**  
Item no. 1204.001  
(Shown with Stryker navigation reference array).

**DORO® Easy Connect Navigation Adaptor Brainlab**  
Item no. 1204.002  
(Shown with Brainlab navigation reference array).

**DORO® Easy Connect Navigation Adaptor Medtronic**  
Item no. 1204.003  
(Shown with Medtronic navigation reference array).
**DORO® REUSABLE SKULL PINS**

- **DORO® Reusable Skull Pins**
  - Stainless Steel
  - Adult
  - Color: Black
  - Item no. 3005-00 (3 pins)

- **DORO® Reusable Skull Pins**
  - Stainless Steel
  - Pediatric
  - Color: Black
  - Item no. 3004-00 (3 pins)

- **DORO® Reusable Skull Pins**
  - Titanium
  - Adult
  - Color: Blue
  - Item no. 3005-50 (3 pins)

- **DORO® Reusable Skull Pins**
  - Titanium
  - Pediatric
  - Color: Blue
  - Item no. 3004-50 (3 pins)

**DORO® DISPOSABLE SKULL PINS**

- **DORO® Disposable Skull Pins**
  - Stainless Steel
  - Adult
  - Color: Black
  - Item no. 3006-00 (36 pins), sterile

- **DORO® Disposable Skull Pins**
  - Stainless Steel
  - Pediatric
  - Color: Yellow
  - Item no. 3006-10 (36 pins), sterile

- **DORO® Disposable Skull Pins**
  - Titanium
  - Adult
  - Color: Turquoise
  - Item no. 3006-20 (36 pins), sterile

- **DORO® Disposable Skull Pins**
  - Titanium
  - Pediatric
  - Color: Green
  - Item no. 3006-30 (36 pins), sterile

- **DORO® Disposable Skull Pins**
  - Stainless Steel
  - Adult
  - Color: Black
  - Item no. 3006-50 (36 pins), sterile

**HIGH-END IMAGING**

Perfect balance of imaging quality and pin stability. The **DORO LUCENT® Disposable Skull Pin** is specifically designed for intra-operative imaging applications using CT, MRI, X-Ray and Fluoroscopy. Imaging artifacts are reduced to a minimum while the composition of a titanium tip and high-performance reinforced polymer ensures a precise, secure and rigid fixation of the patient’s head.

- **DORO LUCENT® Disposable Skull Pins**
  - Adult, sterile
  - Color: Black
  - Item no. 1106.003 (3 pins)
  - Item no. 1106.103 (9 pins)
The DORO® QR3 Headrest System Teflon® is the sterilizable counterpart of our well-established DORO® Headrest System Aluminum. Its autoclavability is a major plus when you are treating highly infectious patients.

**Included Items**

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<tr>
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<tr>
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</tr>
<tr>
<td>DORO® Adjustable Base Unit Teflon®</td>
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**PRECISE NAVIGATION**

Navigation tracking device adaptors (page 10) can easily be attached closely to the surgical field.

**EASY, SAFE AND STABLE CONNECTION**

Attach DORO LUNA®, DORO COBRA® or Quick-Clamp products to the form-fitting Quick-Rail® interface.

**AUTOCLAVABLE**

The Teflon® coated surface of the DORO® QR3 Headrest System Teflon® makes it machine-washable and autoclavable. It conforms to World Health Organization (WHO) Infection Control Guidelines for cleaning and sterilization.

**DORO® QR3 Headrest System Teflon®**

Item no. 3003-100

**DORO® Storage Case Headrest System**

Item no. 1001.030 (optionally available).
**DORO® HORSeshoE HEADREST ALUMINUM**

**SKELETAL TRACTION OPTION**
DORO® Horseshoe Headrests Aluminum are available with or without an Extension Bar.

**PROPER PATIENT POSITIONING**
All DORO® Horseshoe Headrests are adjustable in width.

**ONE BASE FITS ALL**
Mount adult or pediatric gel pads to the same horseshoe base.

### ADULT VERSION

**DORO® Swivel Horseshoe Headrest System, Adult with Extension Bar**
Item no. 3009-00

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<td>DORO® Horseshoe Pad, Adult, left</td>
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</tr>
<tr>
<td>DORO® Extension Bar Horseshoe</td>
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**DORO® Swivel Horseshoe Headrest System, Adult without Extension Bar**
Item no. 3009-02

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### PEDIATRIC VERSION

**DORO® Swivel Horseshoe Headrest System, Pediatric with Extension Bar**
Item no. 3008-00

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**DORO® Swivel Horseshoe Headrest System, Pediatric without Extension Bar**
Item no. 3008-02

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</table>

### DORO® ACCESSORIES

**DORO® Cervical Spine Support**
Item no. 3012-00
Neck support for anterior spine surgery.

**DORO® Headrest Wall Storage Unit**
Item no. 3013-00
81 cm x 94 cm
32” w x 37” h.

**DORO® Lubricant HP500**
Item no. 1001.999
Autoclavable and precise in its application due to its needle-shaped tip.
The DORO® Multi-Purpose Skull Clamp is our most versatile head positioning device. It offers all the beneficial features of the DORO® QR3 Skull Clamp and can be set-up for invasive or non-invasive procedures in adult as well as in pediatric cases. Since a children’s skull is still growing and therefore very vulnerable, neurosurgical solutions are needed which fit their needs. The DORO® Multi-Purpose Skull Clamp provides different kinds of shapes and sizes of gel pads and pin holders. An extension bar with a force application specifically designed for pediatric cases ensures a safe immobilization of the child’s head while providing additional control over the pinning force up to 90N.

**FLEXIBLE**
A large variety of DORO® Gel Pads and Pin Holders is available to support optimal patient positioning (pages 16-17).

**PRECISE NAVIGATION**
Navigation tracking device adaptors (page 10) can easily be attached in close proximity to the surgical field.

**SUPPORTS PEDIATRIC PROCEDURES**
The DORO® Multi-Purpose Skull Clamp features specifically designed components like the 90 N/20 lbs Extension Bar or the head support.

**MIX & MATCH**
Combine the DORO® Multi-Purpose Skull Clamp with a radiolucent base unit and swivel adaptor (page 23).

**EXTENDABLE**
The Quick-Rail® technology enables you to attach accessories and retractor systems such as the DORO LUNA® Retractor System (page 38) easily, quickly, and securely to the skull clamp.

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**DORO® Extension Bar**
90 N/20 lbs
Item no. 3020-52
Which DORO® Multi-Purpose Skull Clamp System works for you?

That depends on the required head positioning method. Check below for guidance. The complete system configurations can be found on the following pages.
Set-up the **DORO® Multi-Purpose Skull Clamp** as a classic 3-pin skull clamp for adult patients or apply the dedicated 90 N /20 lbs extension bar, head support and dual pin holders on both sides when treating pediatric patients. An interface for the direct connection of the PMT® Halo System is also available.

## DORO® Abbott Multi-Purpose Skull Clamp System Pediatric

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<td>3020-01</td>
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<tr>
<td>3020-03</td>
<td>DORO® Head Support (w/o Gel Pads)</td>
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<td>3020-50</td>
<td>DORO® Multi-Purpose Skull Clamp</td>
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<tr>
<td>3020-52</td>
<td>DORO® Extension Bar 90N/20lbs</td>
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<tr>
<td>3020-55</td>
<td>DORO® Single Pin Holder</td>
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<tr>
<td>3020-61</td>
<td>DORO® Gel Head Ring w/ Base 90 mm (3pcs)</td>
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<td>3020-62</td>
<td>DORO® Pin Holder Adjustable, Pediatric</td>
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<td>3020-63</td>
<td>DORO® Gel Head Ring w/ Base 140 mm</td>
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<tr>
<td>3020-65</td>
<td>DORO® Adjustment Key</td>
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<tr>
<td>3020-68</td>
<td>DORO® Gel Ear Ring w/ Base 90 mm (2pcs)</td>
</tr>
<tr>
<td>3020-71</td>
<td>DORO® Trio Gel Pad (adjustable)</td>
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<tr>
<td>3020-001</td>
<td>DORO® Storage Case MPSC System</td>
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## DORO® Universal Multi-Purpose Skull Clamp System

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</table>
Choose from a variety of different gel pad shapes and sizes for optimal patient stabilization for non-invasive positioning. All of the pads can either be mounted to the lateral receptacles at the skull clamp or to the head support for maximized flexibility in patient positioning.

### DORO® Multi-Purpose Skull Clamp System

**Item no. 3020-00**

<table>
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### Storage Case MPSC System

**Item no. 3020-001** (shown with Multi-Purpose Skull Clamp and Accessories)

**STORE IT SAFELY**

All DORO® Multi-Purpose Skull Clamp systems are shipped in a protective storage case.
Intra-operative imaging allows to run diagnostic imaging during surgical procedures to support decision making on how to proceed with the case at hand. Having experienced the complexity of different imaging methods and surgical approaches, we strive to provide technically advanced yet easy to use products.
The DORO LUCENT® Headrest System is the cranial stabilization system of choice for all procedures applying X-Ray & iCT Imaging. It features the completely metal free DORO® Skull Clamp Radiolucent with its beneficial Quick-Rail® interfaces for a quick and easy attachment of navigation tracking devices, retractor systems and other accessories. The DORO LUCENT® Base Unit features a completely new and streamlined design and is also available in a compact version.

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<tr>
<th>DORO LUCENT® Headrest System</th>
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<tr>
<td>DORO® Skull Clamp Radiolucent</td>
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**HIGH-END IMAGING**
DORO LUCENT® Disposable Skull Pins are perfectly stable and reduce imaging artifacts to a minimum (page 11).

**RIGID FIXATION**
Safely position the patient engaging the DORO® Skull Clamp Radiolucent.

**FITTING**
The system connects to virtually any OR table siderrail types.

**ADAPTABLE**
Compact Side Parts are additionally available.

**SAFE**
The form fitting design of the base unit provides a stable base for the entire system.

**CONVENIENT HANDLING**
Combined locking of transitional and sliding member.
VERSATILE
Quick-Rail® Technology enables you to attach accessories and retractor systems easily, quickly, and securely to the skull clamp.

MIX & MATCH
The DORO® Skull Clamp Radiolucent can be mounted to DORO® Aluminum Swivel Adaptor and Base Unit utilizing the Mix & Match Adaptor #3033-50 (page 23).

EASY TO READ PRESSURE SCALE
Metric and imperial units.

REDUCED RISK OF LACERATIONS
No play between archholder and skull clamp when locked.

DORO® Skull Clamp Radiolucent
Item no. 3034-00
(shown with DORO LUCENT® Disposable Skull Pins, page 11).

COMPACT VERSION
Choose the DORO LUCENT® Headrest System that suits you best. If you need to keep a low profile, the DORO LUCENT® Base Unit Compact offers shortened side parts, minimizing the space between base unit and OR table.
DORO LUCENT® NAVIGATION ADAPTORS

✓ MRI  ✓ CT  ✓ ANGIO

DORO® Navigation Adapters Radiolucent offer a safe and stable interface for navigation reference arrays from Stryker®, Medtronic and Brainlab. They are directly mounted to the Quick-Rail® of the DORO® Skull Clamp Radiolucent. These adaptors allow a close positioning of the respective navigation reference array to the patients head while keeping the sterile field intact.

DORO LUCENT®
Navigation Adaptor Brainlab
Item no. 3033-66
For Brainlab Reference Array 19145-01 with or without elongation 19145-02

DORO LUCENT®
Navigation Adaptor Medtronic
Item no. 3033-65

DORO LUCENT®
Navigation Adaptor Stryker®
Item no. 3033-64

PLEASE NOTE:
- Reference arrays are provided by Stryker®, Medtronic and Brainlab.

DORO LUCENT® NAVIGATION ADAPTORS

MRI  CT  ANGIO

DORO®
Swivel Adaptor Radiolucent
Item no. 3033-00

DORO®
Swivel Adaptor Radiolucent, short
Item no. 3033-10

DORO®
Universal DRF Adaptor Radiolucent (includes key)
Item no. 3038-30

DORO LUCENT®
Storage Case Headrest System
Item no. 1101.030

DORO LUCENT®
Locking Transitional Member
Item no. 1101.031

DORO LUCENT®
Transitional Member
Item no. 1101.026
MIX & MATCH

FOR CRANIAL APPLICATIONS
Mix & Match the DORO® Skull Clamp Radiolucent with DORO® Aluminum Swivel Adaptors and Base Units.

DORO® Interface Skull Clamp Radiolucent (to ALU Swivel Adaptor)
Item no. 3033-50

FOR CRANIAL AND CERVICAL SPINE APPLICATIONS
Mix & Match the DORO® Radiolucent Skull Clamp and Swivel Adaptor with DORO® Aluminum Base Units.

DORO® Transitional Member Radiolucent (to ALU Base Unit)
Item no. 3032-00

FOR CERVICAL SPINE APPLICATIONS
Mix & Match DORO® Aluminum Skull Clamps with the DORO® Radiolucent Swivel Adaptor, Transitional Member and Base Unit.

DORO® Interface Skull Clamp Aluminum (to RDL Swivel Adaptor)
Item no. 3033-51
**DORO® HORSESHOE RADIOLUCENT**

☐ MRI  ☑ CT  ☑ ANGIO

DORO® Radiolucent Horseshoes are the best choice for procedures that do not require a rigid fixation. The products come with an extension bar for skeletal traction. The horseshoe features a Quick-Rail® interface for the quick connection of DORO COBRA® Retractor Arms.

**ADULT VERSION**

**DORO® Swivel Horseshoe Headrest Radiolucent**
Adult, with Extension Bar
Item no. 3036-00

<table>
<thead>
<tr>
<th>Included Items</th>
<th>Item no.</th>
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</thead>
<tbody>
<tr>
<td>DORO® Horseshoe Base Radiolucent with Extension Bar</td>
<td>3036-50</td>
</tr>
<tr>
<td>DORO® Horseshoe Pad, Adult, right</td>
<td>3009-10</td>
</tr>
<tr>
<td>DORO® Horseshoe Pad, Adult, left</td>
<td>3009-11</td>
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**PEDIATRIC VERSION**

**DORO® Swivel Horseshoe Headrest Radiolucent**
Pediatric, with Extension Bar
Item no. 3035-00

<table>
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<tr>
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<tbody>
<tr>
<td>DORO® Horseshoe Base Radiolucent with Extension Bar</td>
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<tr>
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</tr>
<tr>
<td>DORO® Horseshoe Pad, Pediatric, left</td>
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</tr>
</tbody>
</table>

**DORO® HORSESHOE RS RADIOLUCENT**

☐ MRI  ☑ CT  ☑ ANGIO

**ADULT VERSION**

**DORO® Horseshoe RS Headrest Radiolucent, Adult, with Extension Bar**
Item no. 3036-70

<table>
<thead>
<tr>
<th>Included Items</th>
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**PEDIATRIC VERSION**

**DORO® Horseshoe RS Headrest Radiolucent, Pediatric, with Extension Bar**
Item no. 3035-70

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<tr>
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</tr>
<tr>
<td>DORO® Horseshoe Pad, Pediatric, left</td>
<td>3008-11</td>
</tr>
</tbody>
</table>

COMPACT

Connect the Horseshoe RS directly to the DORO LUCENT® Transitional Member and benefit from a low profile.

VERSATILE

Attach DORO COBRA® Retractor Arms utilizing the DORO COBRA® Quick-Clamp for Radiolucent Quick-Rail® (page 41).
DORO LUCENT® HORSESHOE ENT

☐ MRI  ✔ CT  ✔ ANGIO

The DORO LUCENT® Horseshoe Headrest ENT is designed to match the specific needs of patient positioning for ear, nose and throat procedures. You can directly mount it to the DORO LUCENT® Transitional Member which allows a low profile by having the open part of the horseshoe facing away from the OR table.

ADULT VERSION

<table>
<thead>
<tr>
<th>Included Items</th>
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<td>DORO LUCENT® Horseshoe Headrest ENT, Adult</td>
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<td>DORO LUCENT® Horseshoe Headrest ENT, RDL w/o Gel Pads</td>
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Shown mounted to the DORO LUCENT® Base Unit.

PEDEATRIC VERSION

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<td>3008-10</td>
</tr>
<tr>
<td>DORO® Horseshoe Pad, Pediatric, left</td>
<td>3008-11</td>
</tr>
</tbody>
</table>

ONE BASE FITS ALL

DORO® Horseshoe Bases share the same gel pad holder design. This means that all our horseshoe gel pads can be mounted to every horseshoe base in our portfolio. The innovative design of the DORO® Horseshoe Base gives you the opportunity to quickly adapt these products to adult or pediatric applications by mounting the respective gel pads, ensuring the optimal set-up for each of your patients.
**DORO® QR3 XTom**

- **MRI**
- **SMALL GANTRY CT**
- **ANGIO**

The **DORO® QR3 XTom Cranial Stabilization System** is designed to fit small gantry CTs. Adjustable Extension Arms ensure an optimal patient placement within CT scanner gantries of 32 mm / 12 inch and larger. The XTom System comes with a specifically designed torque screwdriver to set pin pressure and with the **DORO® XTom U-Belt**, which works like a safety net and will prevent major injuries in case of head slippage, no matter the patient’s head position.

<table>
<thead>
<tr>
<th><strong>DORO® QR3 XTom Cranial Stabilization System</strong></th>
<th>Item no. 4002.100</th>
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<tbody>
<tr>
<td><strong>Included Items</strong></td>
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<tr>
<td>DORO® QR3 XTom Skull Clamp</td>
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<tr>
<td>DORO® XTom U-Belt (3 pcs)</td>
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<tr>
<td>DORO® XTom Storage Case</td>
<td>4002.030</td>
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<tr>
<td>DORO® XTom Torque Screwdriver</td>
<td>4002.068</td>
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<tr>
<td>DORO® XTom Base Unit Parkbench</td>
<td>4002-10</td>
</tr>
<tr>
<td>DORO LUCENT® Disposable Skull Pins (9 pins)</td>
<td>1106.103</td>
</tr>
</tbody>
</table>

**PRECISE NAVIGATION**

Navigation tracking device adaptors can easily be attached in close proximity to the surgical field.

**HIGH-END IMAGING**

**DORO LUCENT®**

Disposable Skull Pins reduce imaging artifacts to a minimum.

**A SMALL GANTRY SOLUTION**

Adjustable Extension Arms ensure that the patient’s head fits into gantries of 32 cm / 12 inch and larger.

**EASY, SAFE AND STABLE INTERFACE**

Attach **DORO LUNA®**, **DORO COBRA®** or Quick-Clamp products to the form-fitting Quick-Rail® interface.

**COMPATIBLE**

The **DORO® QR3 XTom Cranial Stabilization System** is directly mountable to all standard OR tables with side rails.

**DORO® QR3 XTom Cranial Stabilization System**

Item no. 4002.100
Which DORO® System works for your Neurologica scanner?

The DORO® QR3 XTom Cranial Stabilization System is designed to fit small gantry CTs like NeuroLogica’s OmniTom or CereTom scanners. For CTs with larger gantries the DORO LUCENT® Headrest System is the Cranial Stabilization System of choice.
DORO LUCENT® iMRI HEADREST SYSTEM

☑️ MRI  ☐ CT  ☐ ANGIO

DORO LUCENT® iMRI Headrest Systems allow you to use all the beneficial features and the known workflow of a standard rigid 3-pin fixation in an iMRI environment. This technically advanced yet familiar-to-use product features a variant of our proven DORO® Skull Clamp Radiolucent. It is mounted to the OR table’s transfer board by utilizing the DORO LUCENT® iMRI Parallelogram Adaptor, giving you the freedom you need to properly position patients for surgery.

FAMILIAR
The classic 3-pin skull clamp design with ratcheting system allows you to rely on your trained routine and known workflows.

FAST
Directly mountable to transfer boards of selected OR table manufacturers.

HIGH-END IMAGING
DORO LUCENT®
Disposable Skull Pins are perfectly stable and reduce imaging artifacts to a minimum (page 16).

FLEXIBLE
The parallelogram design supports you in positioning your patient properly for surgery.

DORO LUCENT® iMRI Headrest System
MAQUET
Item no. 4003.300
AUTOMATIC IMAGE REGISTRATION READY

Brainlab Automatic Image Registration (AIR) is the fundamental technology for high-precision surgical navigation from start to finish. It adds intraoperatively acquired MR images to surgical navigation while maintaining the preoperative surgical plan. This updated registration compensates for potential loss of navigation accuracy during surgery.

The Brainlab registration matrix with integrated MR markers has been designed exclusively for DORO LUCENT® iMRI Headrest Systems and therefore seamlessly integrates in the standard patient positioning workflow.

MOVEMENT CAPABILITIES

DORO LUCENT® Parallelogram Adaptors allow you to shift, tilt, angle and rotate the skull clamp to find a fitting position for your patient.
Which DORO LUCENT® iMRI Headrest System works for you?

Check the type of MRI scanner and OR table in your OR environment and compare it to the overview below to identify the DORO LUCENT® iMRI Headrest System that will fit your OR environment.

**MRI SCANNER**
- PHILIPS
  - Ingenia MR-OR (1.5T & 3.5T)
- GE
  - 3.0T Signa HDxt / Signa Artist
- SIEMENS
  - MAGNETOM Aera / Skyra

**OR TABLE with Transfer Table Top**
- MIZUHO
- MAQUET / GETINGE
  - Alphamaquet & Otesus / Magnus
- TRUMPF
  - TruSystem

**DORO LUCENT® iMRI Headrest System MIZUHO**
- Item no. 4003.350

  **Included Items**
  - DORO® Skull Clamp
  - Radiolucent for DORO LUCENT® Parallellogram Adaptor
  - DORO® Headplate
  - 4003.001
  - DORO® Adjusting Wrench for DORO LUCENT® Parallellogram Adaptor
  - 4003.005
  - DORO LUCENT® Storage Case for Parallellogram Adaptors
  - 4003.011
  - DORO LUCENT® iMRI Parallellogram Adaptor MAQUET
  - 4003.310
  - DORO LUCENT® Disposable Skull Pins, Adult (3 pcs)
  - 1106.003

  A fitting iMRI Transfer Collision Indicator must be purchased from Phillips.

**PLEASE NOTE:**
With the first installation of a DORO LUCENT® iMRI Headrest System, an expert training is mandatory (page 32). Please contact your local DORO® representative for details.
The DORO LUCENT® iXI Headrest System increases your diagnostic capabilities as it supports intra-operative MR, CT and Angio imaging. This enables you and your team to run diagnostics on bone and tissue within the same surgery, resulting in a more precise treatment with lower time consumption compared to separate imaging approaches.

STATE-OF-THE-ART

The DORO LUCENT® iXI Headrest System is a dedicated multimodality imaging solution designed for use with MAQUET / GETINGE Magnus OR Tables and SIEMENS Nexaris Imaging Suites.

DORO LUCENT® iXI Headrest System
Item no. 4003.500

Included Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>4003.001</td>
<td>DORO® Skull Clamp Radiolucent for DORO LUCENT® Parallellogram Adaptor</td>
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<tr>
<td>4003.005</td>
<td>DORO® Headplate</td>
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<tr>
<td>4003.011</td>
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<td>4003.030</td>
<td>DORO LUCENT® Storage Case for DORO LUCENT® Parallellogram Adaptor</td>
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<td>4003.511</td>
<td>DORO LUCENT® iXI Parallellogram Adaptor</td>
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<td>4003.5XX</td>
<td>DORO LUCENT® iXI Transfer Collision Indicator</td>
</tr>
<tr>
<td>1106.003</td>
<td>DORO LUCENT® Disposable Skull Pins, Adult (3 pcs)</td>
</tr>
</tbody>
</table>

PLEASE NOTE:
With the first installation of a DORO LUCENT® iXI Headrest System, an expert training is mandatory (page 32). Please contact your local DORO® representative for details.

EXTENDABLE

Quick-Rail® Technology enables you to attach accessories and retractor systems easily, quickly, and securely to the skull clamp.

FAMILIAR

The classic skull clamp design lets you apply your known routines and workflows.

AN OPTIMIZED WORKFLOW

Position the patient as required for surgery before starting the actual pinning procedure with the DORO LUCENT® Headplate. This makes further movements of the sedated patient unnecessary, resulting in reduced procedural risk, less stress for the patient and increased convenience for you and your team.
DORO LUCENT® PRODUCT TRAININGS

Dedicated products like the DORO LUCENT® iMRI or iXI Headrest Systems come as a part of a larger iMRI or multimodality imaging installation. Before you start conducting live cases with these state-of-the-art products we will train you in their use. We explain functions, simulate workflows, and assist you in matching them to your distinct needs. These training sessions are held on site, in your facility, with you and your team, to offer the best possible education. DORO® application specialists will cover essential and advanced product knowledge and will match the training to your OR environment. The training will especially focus on overall system set-up & movement capabilities as well as patient positioning and clinical workflow subject to the respective imaging modality.

DORO LUCENT® iMRI & iXI ACCESSORIES

DORO LUCENT® Headplate
Item no. 4003.005

DORO LUCENT® iMRI Pad TRUMPF
Item no. 4003.212

DORO LUCENT® Storage Case for Parallelogram Adaptors
Item no. 4003.030

DORO® Adjusting Wrench for DORO LUCENT® Parallelogram Adaptor
Item no. 4003.011

DORO® Torx Screwdriver T45, nonmagnetic
Item no. 3033-68

DORO LUCENT® iMRI Transfer Collision Indicator
Item no. 4003.XXX

DORO LUCENT® iXI Transfer Collision Indicator
Item no. 4003.5XX

iMRI & iXI Product Training
Item no. 8001
**DORO® SKULL CLAMP – SPINAL FRAMES**

- **MRI**
- **CT**
- **ANGIO**
- **RADIOLUCENT**

This modification of our metal-free **DORO® Skull Clamp Radiolucent** is designed for spinal surgeries and can be mounted to all established spinal OR tables and spinal frames. The slim design allows the skull clamp to be lowered between the rails of the open frame, simplifying patient positioning and imaging procedures.

**FREEDOM IN PATIENT POSITIONING**

Unique shape allows lowering of the patient’s head between the rails of an open frame OR table.

**VERSATILE**

Quick-Rail® Technology enables you to attach accessories and retractor systems easily, quickly, and securely to the skull clamp.

**MIX & MATCH**

The **DORO® Skull Clamp Radiolucent** can be mounted to **DORO® Aluminum Swivel Adaptor and Base Unit** utilizing the Mix & Match Adaptor #3033-50 (page 23) or to fitting counterparts of spinal frame table manufacturers.

**Comparison:** Standard **DORO® Skull Clamp Radiolucent** shown mounted to a MIZUHO OSI Insite® table.
**DORO® OR TABLE ADAPTORS RADIOLUCENT**

- **MRI**
- **CT**
- **ANGIO**

**DORO® Angiography Table Adaptor**
SIEMENS, Radiolucent for Artis Table
Item no. 4003-00

**DORO® Table Adaptor**
medifa®, Radiolucent for Medifa® OR Table 8000
Item no. 4004.001

**DORO® Table Adaptor**
STERIS, Radiolucent for STERIS Carbon OR Tables CMAX XRAY
Item no. 4004.002

**DORO® Table Adaptor**
MAQUET, Radiolucent
Item no. 3031-50

For Alphamaquet 1150 and Magnus 1180 and only in conjunction with MAQUET Adaptor, MAQUET item no. 6005.25A0.

**DORO® Transitional Member**
Radiolucent, long (160 mm)
Item no. 3032-10

Compatible with **DORO® Table Adaptors**
Radiolucent, item nos 3031-50, 4003-00, 4004.001, 4004.002.

**DORO® Transitional Member**
Radiolucent, short (120 mm)
Item no. 3032-20

Compatible with **DORO® Table Adaptors**
Radiolucent, item nos 3031-50, 4003-00, 4004.001, 4004.002.
DORO® Radiolucent Table Adaptors
Set Up Possibilities

Start with the OR table manufacturer at the bottom and work your way up to the DORO® solution that works best for you.
Surgeries are often connected to time-critical or stressful situations. Having to work under pressure demands the highest level of concentration. To enable you to focus on your work, we are driven to develop retractor systems which ease your workflow. Easy to set-up, convenient to use, comfortable as a hand rest, these systems will support you during the whole surgical procedure.
The DORO LUNA® Retractor System is made to support you in every surgery. Its open design allows you to always keep the curves parallel to the floor, independently of patient and skull clamp positioning. Tilt, shift and angle the system into any position you need and you will still be able to use the curves as a comfortable hand rest and retractor arm interface. The adaptability of the DORO LUNA® Retractor System can be further enhanced with additional accessories, making it the most versatile retractor system to date.

The DORO LUNA® Retractor System is the winner of the 2015 Freiburg Innovation Award.

**CONVENIENT**
Snap-on attachment of DORO COBRA® Flexible Rotary Arms on any desired position on the curve.

**SUPPORTIVE**
Ergonomic design makes the DORO LUNA® Curve the optimal hand support. It can be positioned parallel to the floor, independently of skull clamp position.

**FAST**
DORO LUNA® attaches directly to the Quick-Rail®, even over multiple layers of sterile drape.

**EASY**
No extra tools are needed to mount and use DORO LUNA® Retractor Systems.
DORO LUNA® Retractor System – Standard System
Item no. 1203.100

Included Items

<table>
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<tr>
<th>Item</th>
<th>Description</th>
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<tr>
<td>DORO COBRA® Flexible Rotary Arm 280mm (2 pcs)</td>
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<tr>
<td>DORO® Retractor Sterilization Tray</td>
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<td>1201.091</td>
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<tr>
<td>DORO LUNA® Quick-Clamp for Quick-Rail® (2 pcs)</td>
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<td>1203.001</td>
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<td>DORO LUNA® Coupling (4 pcs)</td>
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<td>DORO LUNA® Rod (2 pcs)</td>
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<tr>
<td>DORO® Blade Set 102 mm, Black Coated, 5 pcs (2 sets)</td>
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DORO LUNA® Retractor System – Compact System
Item no. 1203.200

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GET THE BUNDLE

DORO LUNA® Standard Retractor System & DORO® QR3 Skull Clamp
Item no. 1203.110

DORO LUNA® Standard Retractor System & DORO® QR3 Headrest System
Item no. 1203.120

DORO LUNA® Compact Retractor System & DORO® QR3 Skull Clamp
Item no. 1203.210

DORO LUNA® Compact Retractor System & DORO® QR3 Headrest System
Item no. 1203.220

A HIGHLY FLEXIBLE INTERFACE

Unfold the full potential of your DORO LUNA® & DORO COBRA® products by combining them in various set-ups. Mount half a DORO LUNA® Retractor System as a hand support while directly connecting DORO COBRA® Flexible Rotary Arms to the Quick-Rail® of the skull clamp, either in an imaging or in a non-imaging environment.

DORO COBRA® Retractor System mounted to the DORO® QR3 Skull Clamp.

DORO LUNA® Retractor System mounted to the DORO® QR3 Skull Clamp.

DORO LUNA® & DORO COBRA® combined set-up mounted to the DORO® Skull Clamp Radiolucent.
The DORO COBRA® Retractor System is the retractor system of choice for minimal obstruction and access to the surgical site. DORO COBRA® Flexible Rotary Arms are directly mounted to the Quick-Rail® of either the DORO® QR3 Skull Clamp or the DORO® Skull Clamp Radiolucent. A combined set-up with DORO LUNA® components is possible and grants enhanced set-up and application possibilities.

**CONVENIENT**

The DORO COBRA® Retractor System leaves you all the space you need to perform your surgery. You would like to use a comfortable hand support with it? Just mount a DORO LUNA® Compact Retractor System (page 39) to the other side of the skull clamp.
MIX & MATCH

DORO COBRA®
Mix & Match the DORO COBRA® Retractor System with the DORO® Skull Clamp Radiolucent.

DORO COBRA® Quick-Clamp for Radiolucent Quick-Rail®
Item no. 1201.022

DORO COBRA® Retractor System for Radiolucent Quick-Rail®
Item no. 1201.109

DORO LUNA®
Mix & Match the DORO LUNA® Retractor System with the DORO® Skull Clamp Radiolucent.

DORO LUNA® Quick-Clamp for Radiolucent Quick-Rail®
Item no. 1203.009

DORO LUNA® Retractor System - Standard System for Radiolucent Quick-Rail®
Item no. 1203.109

DORO LUNA® Retractor System - Compact System for Radiolucent Quick-Rail®
Item no. 1203.209
DORO COBRA® FLEXIBLE ROTARY ARMS

DORO COBRA® Flexible Rotary Arms are smooth and very precise in their movement. Just clip them on their form-fitting counterparts like the DORO LUNA® Curve or the DORO COBRA® Quick-Clamps, mount a DORO® Brain Spatula and continue your procedure. All DORO COBRA® Retractor Arms share the ability to be quickly adjusted, even without releasing the arm’s tension.

DORO COBRA® Flexible Rotary Arms

<table>
<thead>
<tr>
<th>Available Items</th>
<th>Item no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DORO COBRA® Flexible Rotary Arm 200 mm</td>
<td>1201.005</td>
</tr>
<tr>
<td>DORO COBRA® Flexible Rotary Arm 280 mm</td>
<td>1201.006</td>
</tr>
<tr>
<td>DORO COBRA® Flexible Rotary Arm 350 mm</td>
<td>1201.007</td>
</tr>
<tr>
<td>DORO COBRA® Flexible Rotary Arm 420 mm</td>
<td>1201.008</td>
</tr>
</tbody>
</table>

QUICK ADJUSTMENTS UNDER TENSION

Even under tension, repositioning of the attached brain spatula is possible. Neither the tension of the retractor arm nor the stiffness of the brain spatula will be lost while doing so.

FLEXIBLE

Four different lengths and a 360° rotational body let you position the DORO COBRA® Flexible Rotary Arms precisely at the location where you need them, gaining a high visibility on your surgical site.

FAST TO MOUNT

The snap-On technology allows to quickly, and easily mount DORO COBRA® Flexible Rotary Arms.

DORO® FLEXIBLE ARMS

DORO® Flexible Arms

<table>
<thead>
<tr>
<th>Available Items</th>
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</tr>
</thead>
<tbody>
<tr>
<td>DORO® Flexible Arm 230 mm</td>
<td>3114-34</td>
</tr>
<tr>
<td>DORO® Flexible Arm 300 mm</td>
<td>3114-35</td>
</tr>
</tbody>
</table>

DORO® Flexible Rotary Arms

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<tr>
<td>DORO® Flexible Rotary Arm 200 mm</td>
<td>3114-36</td>
</tr>
<tr>
<td>DORO® Flexible Rotary Arm 280 mm</td>
<td>3114-37</td>
</tr>
<tr>
<td>DORO® Flexible Rotary Arm 350 mm</td>
<td>3114-38</td>
</tr>
</tbody>
</table>
The DORO® Quick-Clamp with Starburst for Radiolucent Quick-Rail® serves as an intuitive interface* for devices used for example in frameless stereotactic or endoscopic procedures. Designed for use over the sterile barrier and form-fittingly connected to the proven Quick-Rail® of the DORO® Skull Clamp Radiolucent, the adaptor provides a stable and secure connection point for third party devices.

*The interface is designed to bear a max. load of 16.8 Nm (which equals a weight of 3.4 kg attached to a horizontally mounted, 50 cm long arm). It is validated for use with the Brainlab VarioGuide®. It is the responsibility of the user to verify that third party devices can safely be secured to the DORO® Quick-Clamp with Starburst for Radiolucent Quick-Rail®. The product is shown mounted to a DORO® Skull Clamp Radiolucent.
DORO® HALO RETRACTOR SYSTEM

The DORO® Halo Retractor System features the classic halo ring design. You can easily attach it to the Quick-Rail® of DORO® QR3 Skull Clamps utilizing the DORO® Quick-Clamp or to older skull clamp versions by engaging the alternatively available C-Clamp. Rotary retractor arms, brain spatulas and accessories are available.

ADAPTABLE
Adjust the halo ring to your needs. One half ring can be angled upwards or downwards, or be removed completely.

COMPATIBLE
The DORO® Halo Retractor System fits almost all common skull clamps, either utilizing the form-fitting Quick-Rail® interface or the C-Clamp.

<table>
<thead>
<tr>
<th>DORO® Quick-Clamp Halo Retractor System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Included Items</td>
</tr>
<tr>
<td>DORO® Quick-Clamp Halo Coupling Set (2 pcs)</td>
</tr>
<tr>
<td>DORO® Halo Ring</td>
</tr>
<tr>
<td>DORO® Halo Support Rod 8 mm (2 pcs)</td>
</tr>
<tr>
<td>DORO® Halo Universal Key (2 pcs)</td>
</tr>
<tr>
<td>DORO® Halo Pattie Tray</td>
</tr>
<tr>
<td>DORO® Flexible Rotary Arm 280 mm (3 pcs)</td>
</tr>
<tr>
<td>DORO® Blade Set 102 mm, Black Coated, 5 pcs (2 sets)</td>
</tr>
<tr>
<td>DORO® Micro Blade Set, 6 pcs</td>
</tr>
<tr>
<td>DORO® Halo Sterilization Case w/ Rack</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DORO® Halo Retractor System w/ C-Clamp</th>
</tr>
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<tr>
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<tr>
<td>DORO® Halo Ring</td>
</tr>
<tr>
<td>DORO® Halo Support Rod 8 mm (2 pcs)</td>
</tr>
<tr>
<td>DORO® Halo Support Bracket w/ C-Clamp Adaptor (2 pcs)</td>
</tr>
<tr>
<td>DORO® Halo Universal Key (2 pcs)</td>
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<tr>
<td>DORO® Halo Pattie Tray</td>
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<tr>
<td>DORO® Halo Sterilization Case w/ Rack</td>
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</tbody>
</table>
DORO® RETRACTOR ACCESSORIES

DORO® Quick-Clamp
Item no. 1202.014

DORO® Quick-Clamp Coupling Universal
Item no. 1202.015

DORO® Halo Support Rod Holder
Item no. 1202.016

DORO® Quick-Clamp Halo Coupling Set
Item no. 1202.010

DORO® Quick-Clamp Halo Coupling Set with Interface Mizuho-Type Retractors
Item no. 1201.045

DORO® Halo Support Bracket with C-Clamp Adaptor
Item no. 3110-51

DORO® Halo Ring
Item no. 3110-01

DORO® Halo Support Rod 8mm
Item no. 3110-08

DORO® Clamp Body for Skin Hooks
Item no. 3114-53

DORO® Halo Pattie Tray
Item no. 3110-85

DORO® Halo Universal Key
Item no. 3110-80

DORO® Mini Vice
Item no. 3114-54

DORO® STERILIZATION TRAYS

<table>
<thead>
<tr>
<th>Included Items</th>
<th>Item no.</th>
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</thead>
<tbody>
<tr>
<td>DORO® Retractor Sterilization Tray</td>
<td>1201.091</td>
</tr>
<tr>
<td>DORO LUNA® Sterilization Tray</td>
<td>1203.091</td>
</tr>
<tr>
<td>DORO® Halo Sterilization Case w/ Rack</td>
<td>3117-00</td>
</tr>
</tbody>
</table>
DORO® MICRO BLADES

WANT TO USE YOUR OWN BLADES?

Do you want to use our state-of-the-art DORO COBRA® Flexible Rotary Arms in combination with brain spatulas you are already familiar with? The DORO® Adaptor for Flat Brain Spatulas is the right choice as it attaches to all DORO® Retractor Arms and holds all common flat brain spatulas. But try out our blades at least once... we are sure you will like them.
**DORO® BLADES**

<table>
<thead>
<tr>
<th>DORO® Blade Set 152 mm, Black Coated, 5 pcs.</th>
<th>DORO® Blade Set 102 mm, Black Coated, 5 pcs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item no. 3116-101</td>
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</tr>
<tr>
<td>Included Items</td>
<td>Included Items</td>
</tr>
<tr>
<td>Item no.</td>
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</tr>
<tr>
<td>152 x 2 mm</td>
<td>102 x 2 mm</td>
</tr>
<tr>
<td>152 x 3 mm</td>
<td>102 x 3 mm</td>
</tr>
<tr>
<td>152 x 4 mm</td>
<td>102 x 4 mm</td>
</tr>
<tr>
<td>152 x 5 mm</td>
<td>102 x 5 mm</td>
</tr>
<tr>
<td>152 x 6 mm</td>
<td>102 x 6 mm</td>
</tr>
</tbody>
</table>

**DORO® Blade Set 152 mm, Conical, Black Coated, 5 pcs.**

| Item no. 3116-601                           |
| Developed Items                            |
| Item no.                                    |
| 152 x 2 mm                                  |
| 152 x 3 mm                                  |
| 152 x 4 mm                                  |
| 152 x 5 mm                                  |
| 152 x 6 mm                                  |

**DORO® Blade Set 102 mm, Conical, Black Coated, 5 pcs.**

| Item no. 3116-601                           |
| Developed Items                            |
| Item no.                                    |
| 102 x 2 mm                                  |
| 102 x 3 mm                                  |
| 102 x 4 mm                                  |
| 102 x 5 mm                                  |
| 102 x 6 mm                                  |

**DORO® Blade Set 102 mm, Rounded Tip, Black Coated, 5 pcs.**

| Item no. 3116-70                           |
| Developed Items                            |
| Item no.                                    |
| 102 x 7 mm                                  |
| 102 x 10 mm                                 |
| 102 x 16 mm                                 |
| 102 x 20 mm                                 |
| 102 x 26 mm                                 |

**WHY BLACK?**

The black matt finish of our blades prevents reflections from the dazzling light focused on the surgical site during procedures and lets you concentrate on your procedure without interruptions.

**CONNECTIVITY GUARANTEED**

DORO® Blades and Micro Blades fit all DORO® and DORO COBRA® Retractor Arms.