Universal Neuro™ III
1.5mm Cranial fixation system
The Universal Neuro III module neatly contains a comprehensive selection of screws, low profile plates, skull base plates, dynamic mesh, and instrumentation.

**Unique Features:**

**Low profile**
Low profile height (0.4mm) with deeper countersinks, broader bars, and a smoother geometry.

**AXS screw**
Optimized self-drilling AXS (axial stability) screws help with off-axis loading and insertion.

**Specialized plates**
Specialized plates to reconstruct difficult skull base approaches with minimal plate modification.

**Color coding**
Color coding of the modules and associated instrumentation provides ease of use for surgeon and staff.

You specialize in your patients. We specialize in you.
Universal Neuro III module

The Universal Neuro III module neatly contains a comprehensive selection of skull base plates, low-profile plates, dynamic mesh, screws, and the instrumentation needed to fixate cranial bone flaps.

Unique features:

- Addition of specialized plates to reconstruct difficult skull base approaches with minimal plate modification
- Optimized self-drilling screws with addition of 3mm option
- Unique burr hole cover design with added fixation hole and dynamic bar for ease of contouring
- 20% thinner plates* with deeper countersink, broader bars, smoother geometry, and same stability
- Addition of ergonomic screwdriver handle
- Redesigned module with designated pockets for decreased plate stacking and ease of identification
- Customizable screw disc with screws of different lengths
Universal Neuro III system: Storage and sterilization containers

The Universal Neuro III System features Half (not shown), Combined and Quarter size sterilization containers to accommodate a wide variety of options for your specific neurosurgical needs. In addition, there are 2D and 3D mesh storage options.
Technology and innovations

**VariSpeed - battery powered screwdriver**

- Touch sensors for continuous, variable speed control
- Forward and reverse capabilities
- Ergonomically balanced for both left and right hand use
- Acoustic Feedback to help ensure battery is attached and device is working properly
- Standby Mode to minimize power consumption and improve battery life
- Improved electrical components to protect against rigorous sterilization parameters and excessive heat

**Instrumentation**

- Ergonomically shaped screwdriver handle and newly designed screwdriver blade for improved handling, allowing optimal blade-to-screw interface/retention and easier screw insertion

**Burr hole covers**

- Unique burr hole covers with added fixation hole and dynamic bar design for ease of contouring; in addition to two new shunt plate options

**Lower profile plates**

- 0.4mm profile height allows for rigid fixation of cranial flaps with decreased palpability
- Deeper countersink* for a more flush plate/screw construct
- Select plates feature break-off tabs for easy handling and identification
- Comprehensive selection of implants including shunt, "dog-bone," gap, and box plates along with 5 sizes of burr hole covers offer numerous fixation options
**Screws**

**AXS - Axial stability screw**

The latest iteration of the Universal Neuro screw continues to advance neurotechnology. A brand new head design provides surgeons with ease-of-use and performance.

**Unique features:**

- Enhanced pick-up designed to minimize complications in loaded screwdriver hand-off from tech to surgeon, with optimized self-retention to allow reliable transport into OR field
- Self-centering feature facilitates off-axis insertion
- Low profile heights:
  - 4mm SD screw with blue plate - 0.55mm
  - 4mm SD screw with gold plate - 0.6mm

**Optimized self-drilling (SD) screws**

- Addition of 3mm self-drilling screw provides lowest plate-to-screw profile option in UNIII system for minimal palpability
- Newly designed self-drilling screws require 25% less turns to fully insert*
- 23% lower construct for decreased palpability*
- 40% greater initial bite into bone for quicker insertion*

**Customizable screw disc delivery system**

- Customizable screw disc allows placement of 3, 4, and 5mm SD screws and/or 4, 5, 6mm ST screws in a single screw disc
Dynamic mesh

Dynamic mesh has optimized properties to facilitate controlled, three-dimensional contouring while maintaining adequate rigidity for bone defects of varied size and location. Dynamic mesh can be shaped to fit most three-dimensional bone surfaces without unwanted wrinkled or overlapped areas.

Unique features:
- Standard (Gold - 0.60mm profile height) and Malleable Low Profile (Blue - 0.30mm profile height) designs
- Dedicated screw holes for many options in screw placement
- Easy to cut and accurately contour to anatomical structures
- Instrumentation for cutting

2D mesh

Unique features:
- Countersink - designed to reduce palpability
- Smooth edge aids insertion
- MR conditional - allows diagnostics after implantation
- Variety of mesh types - strength vs malleability
- New 0.3mm Hybrid mesh - 3x stronger than 0.3mm Dynamic mesh

3D mesh

Unique features:
- Countersink - designed to reduce palpability
- Has stiffness equivalent to golden 2D mesh
- Used for open defects up to 70mm and muscle attachment
- Pre-formed minimizes bending effort to fit patient

Unique features:
- Countersink - designed to reduce palpability
- Increased stiffness, for increased patient protection, compared to 2D mesh
- Used for open defects up to the size of the mesh and muscle attachment
- Anatomically pre-formed minimizes bending
Skull base plates

The addition of dedicated skull base plates may make reconstruction of unique cranial approaches quicker and more efficient through minimal plate modification.

**Unique features:**
- Low profile 0.3mm construct for minimal implant palpability
- Multiple thickness and size options to match unique patient needs
- Closed outer frame design offers enhanced stability
- Multiple fixation holes, including long holes within center of plates, for added rigidity
QuikFlap offers an easy, cost effective solution for cranial flap fixation. Provided sterile, the procedure packs can limit processing risks for the hospital while decreasing inventory and the cost of backstock.

**Unique features:**
- Space conservation
- Sterilization by manufacturer specifications
- Cost efficiency
- Comprehensive product offering
- Now offered with the AXS screw

**Options:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Contains</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-01540S</td>
<td>2-hole plate set with self-drilling screw</td>
<td>UNIII 0.6mm 2-hole rigid plate (x3) UNIII screw AXS self-drilling 1.5x4mm (x6)</td>
</tr>
<tr>
<td>12-01541S</td>
<td>2-hole plate set, self-tapping screw</td>
<td>UNIII 0.6mm 2-hole rigid plate (x3) UNIII screw AXS self-tapping 1.5x4mm (x6)</td>
</tr>
<tr>
<td>12-01542S</td>
<td>2-hole plate set, low profile with tab</td>
<td>UNIII 0.4mm 2-hole plate with tab (x3) UNIII screw AXS self-drilling 1.5x4mm (x6)</td>
</tr>
<tr>
<td>12-01544S</td>
<td>2-hole plate burr hole cover 14mm set</td>
<td>UNIII 0.4mm 2-hole plate with tab (x2) UNIII 0.4mm 14mm burr hole cover (x1) UNIII screw AXS self-drilling 1.5x4mm (x10)</td>
</tr>
<tr>
<td>12-01546S</td>
<td>2-hole plate burr hole cover 20mm set</td>
<td>UNIII 0.4mm 2-hole plate with tab (x2) UNIII 0.4mm 20mm burr hole cover (x1) UNIII screw AXS self-drilling 1.5x4mm (x10)</td>
</tr>
<tr>
<td>12-01548S</td>
<td>2-hole plate burr hole cover 14mm set</td>
<td>UNIII 0.4mm 14mm burr hole cover (x1) UNIII screw AXS self-drilling 1.5x4mm (x6)</td>
</tr>
</tbody>
</table>
1.5mm Neuro plates/mesh
product number description
Low profile plates
(Order quantity: package of 1)
53-34804 Straight plate, 8-hole
53-34164 Straight plate, 16-hole
53-34406 Straight plate, 4-hole w/ bar
53-36212 Dog-bone plate, 2-hole rigid
   (0.6mm), 12mm bar
53-34212 Dog-bone plate, 2-hole, 12mm
   bar, w/ tab
53-34216 Dog-bone plate, 2-hole, 16mm bar
53-34228 Box plate, 2 x 2 hole, small
53-34300 Rectangle plate, 2 x 2 hole
53-34608 Double-Y plate, 6-hole, w/ bar
53-34612 Gap plate, 6-hole, small
53-34622 Gap plate, 6-hole, large
53-34240 Box plate, 2x2 hole, large
53-34230 Box plate, 2x2 hole, large, w/ tab
53-34630 X plate, 4-hole

Skull base plates
(Order quantity: package of 1)
53-00362 Round malleable (0.3mm), small
53-00364 Round malleable (0.3mm), medium
53-00466 Round rigid (0.4mm), large
53-00342 Translabyrinthine malleable
   (0.3mm), small
53-00346 Translabyrinthine malleable
   (0.3mm), large
53-00324 Temporal malleable (0.3mm)
53-00382 Suboccipital
53-00324 Temporal malleable
   (0.3mm), large
53-00346 Temporal malleable
   (0.3mm), small
53-00486 Suboccipital rigid (0.4mm), large

Low profile burr hole covers
(Order quantity: package of 1)
53-34507 Burr hole cover, 7mm, with tab
53-34510 Burr hole cover, 10mm, with tab
53-34514 Burr hole cover, 14mm, with tab
53-34520 Burr hole cover, 20mm, with tab
53-34524 Burr hole cover, 24mm, with tab
53-34614 Shunt burr hole cover, 14mm, with tab
53-34620 Shunt burr hole cover, 20mm, with tab

2D mesh
(Order quantity: package of 1)
56-90312 Dynamic mesh 40x40x0.3mm
56-90314 Dynamic mesh 90x90x0.3mm
56-90316 Dynamic mesh 120x120x0.3mm
56-90612 Dynamic mesh 40x40x0.6mm
56-90614 Dynamic mesh 90x90x0.6mm
56-90616 Dynamic mesh 120x120x0.6mm
56-90618 Dynamic mesh 200x200x0.6mm
56-90814 Dynamic mesh 90x90x0.8mm
56-90816 Dynamic mesh 120x120x0.8mm
56-90818 Dynamic mesh 200x200x0.8mm
56-90342 Hybrid mesh 60x60x0.3mm
56-90344 Hybrid mesh 90x90x0.3mm
56-90346 Hybrid mesh 120x120x0.3mm

3D mesh
(Order quantity: package of 1)
56-90654 Pre-form mesh, 90x90x0.6mm
56-90656 Pre-form mesh, 120x120x0.6mm
56-90658 Pre-form mesh, 190x190x0.6mm
56-91062 Pre-form mesh, right,
   17.5x12.8cm; T:1mm
56-91064 Pre-form mesh, left,
   17.5x12.8cm; T:1mm

Neuro containers
product number description
Sterilization containers
29-15330 Module with lid
29-15331 Plate inlay
29-15335 Mesh inlay
29-15336 Screw disc inlay
29-15332 Instrument inlay
29-15012 Half-size container
29-15013 Half-size lid
29-15023 Lid for combined tray
29-15026 Combined container
29-15027 Mat for combined tray
29-15028 Instrument inlay for combined tray
29-15031 Quarter-size container
29-15032 Quarter-size lid
29-15036 Accessory tray
29-15037 Silicone mat

Mesh storage and instrumentation
01-01036 Mesh cutter coarse,
   190x55x20mm
01-01038 Mesh clipper,
   135x60x20mm
29-92001 2D mesh storage rack with lid
29-92002 2D mesh storage tray with lid
29-92003 2D silicon mat, small
29-92004 2D silicon mat, large
29-91002 Storage tray for mesh instruments
29-93001 3D mesh storage rack with lid
29-93002 3D mesh storage rack with lid
29-93003 3D silicon mat

1.5mm AXS neuro screws
product number description
Screw disc - pre-loaded
(Order Qty: Pkg of 1)
29-56933 Screw disc, 1.5x3mm, SD, 80/p
29-56934 Screw disc, 1.5x4mm, SD, 80/p
29-56935 Screw disc, 1.5x5mm, SD, 80/p
29-56034 Screw disc, 1.5x4mm, ST, 80/p
29-56035 Screw disc, 1.5x5mm, ST, 80/p

Screw disc - empty
(Order Qty: Pkg of 1)
29-15091 Screw disc, 1.5mm, empty

AXS screws
60-15035 Screwdriver blade long
60-15036 Screwdriver blade short
56-15034 Self-tapping screw, 1.5x4mm
56-15035 Self-tapping screw, 1.5x5mm
56-15036 Self-tapping screw, 1.5x6mm
56-15933 Self-drilling screw, 1.5x3mm
56-15934 Self-drilling screw, 1.5x4mm
56-15935 Self-drilling screw, 1.5x5mm
56-17334 Emergency screw, 1.7x4mm

Twist drills (Single use only)
(Order quantity: package of 1)
60-12594 1.2mm drill bit, 4mm stop,
   J-latch end
60-12596 1.2mm drill bit, 6mm stop,
   J-latch end
60-12394 1.2mm drill bit, 4mm stop,
   TPS end
60-12396 1.2mm drill bit, 6mm stop,
   TPS end

Neuro instrumentation
product number description
Instrumentation
62-18110 Plate forcep
62-18330 In-situ cutter
62-15001 Screwdriver handle, small
62-15002 Screwdriver handle, medium
62-15035 UNIII AXS screwdriver blade, long
62-15036 UNIII AXS screwdriver blade, short
36-00726 Plate bending plier
64-00132 Mesh bending plier
37-10930 Plate/mesh scissors
60-12294 Drill w/ dental interface
60-12296 Drill w/ dental interface

Markers
52-00003 Screw marker 3mm
52-00004 Screw marker 4mm
52-00005 Screw marker 5mm
52-00006 Screw marker 6mm
Complementary products

**DirectInject**
DirectInject is the first and only on-demand HA cement, redefining ease-of-use in cranial closure. It’s intended to repair neurosurgical burr holes, contiguous craniotomy cuts and other cranial defects.

**Applications**
- Ready for implantation immediately upon request
- A second mixer-cannula allows for dual interval implantation
- Requires no manual mixer or preparation
- Maintains consistent viscosity with negligible displacement of cement

**DirectInject**
DuraMatrix-Onlay PLUS is derived from purified, bovine Achilles tendon. It is intended for use as a dura substitute for the repair of dura mater.

**Features**
- Leak resistant, providing durability and additional protection against CSF leaks
- Resorption time of approximately 8 weeks that occurs at a balanced rate
- Sponge-like product that conforms to the natural contours of the defect site

**DuraMatrix Suturable**
DuraMatrix Suturable is a collagen dura membrane from purified intact bovine dermis tissue. It is intended for use as a dura substitute for the repair of dura mater.

**Features**
- Highest suture pull out strength in DuraMatrix portfolio
- Demonstrates effective protection against CSF leakage
- 38-40 weeks resorption that occurs at a balanced rate

**Cranial iD - patient specific implants**
Cranial iD implants allow you to address your patients desire for complete restoration and aesthetic results. These are available in the material of your choice including MEDPOR, PEEK and PMMA.

**MEDPOR neuro implants**
MEDPOR porous polyethylene implants provide surgeons with an expanding range of options for reconstruction and augmentation. MEDPOR is a biocompatible, porous polyethylene material. The interconnecting, omni-directional pore structure may allow for fibrovascular in-growth and integration of the patient’s tissue. More than 650,000 procedures have been performed with MEDPOR biomaterial, with more than 350 published clinical reports in cranial, reconstructive, oculoplastic and cosmetic applications.

**Delta system**
Delta System resorbable implant technology merges science and simplicity. The system consists of resorbable bone plates and screws fabricated from a unique tripolymer. The Delta system tripolymer is a composition of poly L-Lactide/D-Lactide/Glycolide having a molecular ratio of 85/5/10. The resulting tripolymer is an extraordinary combination of strength, contourability and absorption, well suited for craniomaxillofacial surgery.

**Colorado needle**
The Colorado microdissection needle has an ultra-sharp tip for clean, precise soft tissue dissection. The heat resistant tungsten alloy maintains tip sharpness, and is highly polished for easy cleaning. We offer a wide selection of needle electrodes and standard shaft sizes for use in standard handpieces.
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Devices may have been licensed in accordance with Canadian Law.

References:
1. Internal testing TI4282
2. TI4579 Mesh Upgrade 3D Mesh Impression Test with Maximum Defect
3. T14580 Mesh Upgrade 3D Mesh Impression Test with 70mm Defect
4. In vitro data on file at Collagen Matrix, Inc.

* When compared to Stryker Universal Neuro II System Implants
1 Stryker Test Reports TI2269 and TI3137
2 Stryker Test Reports TI2441 and TI2446

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