Pediatric Solutions
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The formation of DePuy Synthes Companies created an organization inspired to provide the broadest portfolio of pediatric patient care solutions worldwide. Our product offerings provide a complete and robust portfolio addressing patient needs in trauma, deformity correction, spine, and craniomaxillofacial reconstruction. This symbiosis enables us to better serve clinicians and hospitals. We are inspired to help return pediatric patients to active living and fulfilling futures.
3.5 mm LCP® Superior Clavicle Plate
3.5 mm LCP Superior Anterior Clavicle Plate
2.7 mm/3.5 mm VA LCP® Anterior Clavicle Plate
Titanium Elastic Nails
Stainless Steel Elastic Nails
2.7 mm/3.5 mm VA LCP Elbow System
Variable Angle Locking Hand System
2.4 mm VA LCP Distal Radius Plate System
2.4 mm LCP Distal Radius Plate System
3.5 mm and 4.5 mm LCP Plates
3.5 mm and 4.5 mm Curved LCP Plates
ViviGen® Cellular Bone Matrix
CONFORM® Flex
6.5 mm Cannulated Screws
Hip Preservation Surgery Set
7.3 mm Slipped Capital Femoral Epiphysis (SCFE) Screws
Pediatric LCP Hip Plate System
Cannulated Pediatric Osteotomy System (CAPOS)
Titanium Elastic Nails
Stainless Steel Elastic Nails
Adolescent Lateral Entry Femoral Nail-EX (ALFN)
TFN-ADVANCED® Proximal Femoral Nailing System (TFNA)
Reamer Irrigator Aspirator
3.5 mm and 4.5 mm LCP Plates
3.5 mm and 4.5 mm Curved LCP Plates
Pediatric LCP Condylar Plates
VA LCP Proximal Tibia Plates
Medium External Fixation System
2.7 mm/3.5 mm VA LCP Ankle Trauma System
2.4 mm/2.7 mm VA LCP Forefoot/Midfoot System
2.7 mm Variable Angle Calcaneal Plating System
3.5 mm Variable Angle Medial Column Fusion Plating System
MAXFRAME™ Multi-Axial Correction System
Distraction Osteogenesis Ring System
ViviGen Cellular Bone Matrix
CONFORM Flex
2.7 mm LCP Ulna Osteotomy System
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ViviGen Cellular Bone Matrix
CONFORM Flex
EXPEDIUM® Spine System
EXPEDIUM Growing Spine System
EXPEDIUM 4.5 Spine System
EXPEDIUM 5.5 Spine System
EXPEDIUM VERSE® Spinal System
VEPTR® Vertical Expandable Prosthetic Titanium Rib
VEPTR II™ Titanium Rib
External Midface Distractor
Midface Distractor
Maxillary Distractor
Curvilinear Distractor
TRUMATCH® CMF Personalized Solutions
RAPIDSORB® Rapid Resorbable Fixation System
ViviGen Cellular Bone Matrix
CONFORM Flex
2.7 MM / 3.5 MM VA LCP ELBOW SYSTEM

- Comprehensive System consisting of five (5) distal humerus plates and three (3) types of olecranon plates
- Options for parallel and perpendicular plating of the distal humerus: Medial, Extended Medial, Lateral, Posterolateral, and Posterolateral Distal Humerus Plates with Lateral Support
- Options for olecranon plating: Proximal Olecranon Plate, Olecranon Plate, and Extra Articular Proximal Ulna Plate
- Low-profile design with rounded plate edges, and recesses for screw heads designed to help reduce soft tissue irritation

LOCKING CLAVICLE PLATES

- Pre-contoured, anatomic shape
- Available in Superior, Superior-Anterior, and Anterior plate families
- Superior and Superior-Anterior plates feature a lateral extension that accepts 2.7 mm locking screws
- Anterior plates have 2.7 mm VA screws in the lateral extension to target various fracture patterns
- Combi holes in shaft provide choice of axial compression or locking ability
DISTAL RADIUS PLATES

- Anatomically precontoured plates minimize the need for bending
- Rounded edges and polished plate surfaces help minimize soft tissue irritation
- Variable Angle screws provide better screw targeting for various fracture patterns
- Multiple plate portfolio for different patient needs
VARIABLE ANGLE LOCKING HAND SYSTEM

• Extensive range of implants for greater surgical options
• Low-profile and pre-contoured plates to help reduce potential soft tissue irritation
• Designed to offer screw placement options in a variety of fragment patterns and around joints
• Strength and stability of locked plating
• Instrumentation designed for ease of use
• Available in 1.3 mm, 1.5 mm, and 2.0 mm
ELASTIC NAILS: TITANIUM (TEN) AND STAINLESS STEEL (STEN)

- Designed to provide biological, minimally invasive fracture treatment
- Biomechanical principal based on symmetrical bracing action of two elastic nails inserted into the metaphysis, each of which bears against the inner bone at three points to create four properties essential for optimal results
- Six diameters are available, in titanium and stainless steel
- End caps prevent nail migration and help reduce likelihood of soft tissue irritation

ADOLESCENT LATERAL ENTRY FEMORAL NAIL-EX (ALFN)

- Lateral entry site facilitates preservation of blood supply to the femur
- Three proximal locking options: two 5.0 mm recon screws, one 4.0 mm 120° antegrade or one transverse 4.0 mm static or dynamic
- Small distal diameter 8.2 mm, 9.0 mm, or 10.0 mm
TFN-ADVANCED PROXIMAL FEMUR NAILING SYSTEM (TFNA)

- Outcome-based design including improved nail shape (1.0 meter anatomic bow) designed to help avoid impinging anterior cortex; LATERAL RELIEF CUT™ Design preserves bone in insertion area due to reduced critical width; and unique titanium alloy and BUMP CUT™ Design provide improved fatigue strength
- Reduced procedural complexity with radiolucent insertion handle to improve x-ray visualization, and assists with guide wire placement; QUICK CLICK® Self-Retaining Technology designed for easier nail/insertion handle attachment; and the locking mechanism is preassembled for intraoperative decision flexibility
- Comprehensive surgical options including: the choice of both TFNA Helical Blade or TFNA Screw to suit a wide variety of clinical needs; unique third distal hole with 10º additional offset to better target bone in condyles; rotational and static locking options; and a wide selection of nail lengths and diameters as small as 9 mm to cover broad array of patient anatomy
PEDIATRIC LCP FRACTURE PLATE

- Anatomic plate shape designed for optimal fracture fixation
- Angular stability reduces the risk of primary and secondary loss of fixation
- Initial plate positioning with k-wires allows for intraoperative flexibility
- Variety of plate sizes (3.5 mm and 5.0 mm) and screw lengths allow patient specific fit

3.5 MM AND 4.5 MM CURVED LCP PLATES/ STRAIGHT PLATES

- 3.5 mm and 4.5 mm Curved LCP Plates/Straight LCP Plates
- Anatomically contoured for long bones
- Combi holes provide the choice of axial compression or locking capability throughout the length of the plate
- Limited-contact profile to preserve the periosteum
MINIMALLY INVASIVE REDUCTION AND PLATE INSERTION INSTRUMENTS

- Minimally invasive surgery supports the principles of biological internal fixation by avoiding long incisions and extensive soft tissue stripping associated with conventional techniques
- Devascularization of the fragments can be minimized by indirect reduction
- Compatible with the 3.5 mm and 4.5 mm Curved and Straight LCP Plates

REAMER IRRIGATOR ASPIRATOR

- Single pass reaming with reduced complication
- Allows for harvesting autogenous bone
- Removal of infected and necrotic bone and tissue
- Reduces intramedullary pressure, potential for fat embolization and heat generated during reaming
LOWER EXTREMITY FRACTURES

VA LCP PROXIMAL TIBIA PLATES

- Available in two bends (small and large bend) to accommodate varying anatomies
- Plate head includes six 3.5 mm VA LCP Variable Angle Locking Holes and five K-wire holes with notches
- Plate neck includes two 3.5 mm VA LCP Variable Angle Locking Holes for kickstand screws and one elongated hole that accommodates 3.5 mm cortex screws for compression, preliminary fixation, and plate adjustment

2.7 MM/3.5 MM VA LCP ANKLE TRAUMA SYSTEM

- Comprehensive System consisting of five (5) distal tibia plates and one (1) fibula plate
- Multiple options for plating of the distal tibia: medial, anteromedial, anterolateral, and T- and L- distal tibia plates
- Low-profile design, rounded plate edges, and recesses for screw heads designed to help reduce soft tissue irritation
- Compression and Distraction System for fracture reduction
- 2.7 mm Metaphyseal Screws for low-profile fixation
- Two new reduction instruments
LOWER EXTREMITY FRACTURES

MEDIUM EXTERNAL FIXATION SYSTEM

- Modular system with inter-system compatibility
- Clip-on clamps with pin-to-pin or pin-to-bar flexibility
- Clamp functionalities allow customized frames
2.4 MM/2.7 MM VA LCP FOREFOOT/MIDFOOT SYSTEM

- System consists of anatomic and procedure-specific plates, variable angle locking and cortex screws, and compression feature, to aid in reconstructive foot surgery
- Plates feature variable angle locking holes, with or without the dynamic compression portion
- Compression system has tactile compression and is designed within the plate to minimize additional soft tissue dissection
LOWER EXTREMITY FRACTURES

3.5 MM VARIABLE ANGLE LOCKING MEDIAL COLUMN FUSION PLATING SYSTEM

- Offers a range of 3.5 mm Variable Angle Locking anatomic plates designed for complex fusion applications such as advanced deformities
- Medial Column Fusion Plate with Talus Extension is a longer length plate designed for arthrodesis of the talonavicular, first naviculocuneiform, and tarsometatarsal joints
- Plantar plate option allows for increased biomechanical strength as the plantar application is on the tension side of the medial column

2.7 MM VARIABLE ANGLE LOCKING CALCANEAL PLATING SYSTEM

- System offers a 2.7 mm Variable Angle Locking lateral extensile plate with a variety of screw hole options to treat a broad array of calcaneal fractures and is available in 3 size options
- Designed to treat complex fractures with multiple fixation points targeting key areas of hard cortical bone in the calcaneus
- Minimally invasive anterolateral plate option is designed to help preserve soft tissue on the lateral calcaneal wall
2.7 MM LCP ULNA OSTEOTOMY PLATE

- Smooth, low-profile plate with rounded edges and tapered ends with a thick center to bury lag screw designed to minimize risk of soft tissue irritation
- Combi holes accept 2.7 mm Locking and 2.7 mm Cortex screws allowing for flexible screw placement (lag screw, neutral, locking)
- Parallel saw blades, specific to oblique or transverse cut and amount of shortening, allow surgeon to create osteotomy in one cut (compatible with DePuy Synthes Power Tools only)
- Drill templates allow for pre-drilling of plate fixation holes before cut is made, ensuring correct rotational alignment; 2.0 mm, 2.5 mm, 3.0 mm, 4.0 mm, and 5.0 mm shortening lengths
- Saw guide attaches to drill template and offers assisted guidance during oblique cuts
- Compression/distraction instrument allows for adequate compression to promote proper bone union. Also allows for shortenings >5 mm with freehand technique
6.5 MM CANNULATED SCREWS

- High thread-to-core ratio for pullout resistance
- Reverse-cutting threads for removal
- Stainless steel and titanium

7.3 MM SLIPPED CAPITAL FEMORAL EPIPHYSIS (SCFE) SCREWS

- 10 mm or 20 mm threads offer option to cross physis or gain compression
- Cannulated shaft screw design (with shaft same diameter as threads) facilitates screw insertion and removal
- 9.8 mm diameter head with STARDRIVE™ Recess minimizes risk of screw head stripping during insertion or removal

HIP PRESERVATION SURGERY SET

- Instruments designed specifically for periacetabular osteotomy and hip impingement procedures
- Osteotomes can withstand hammer blows and include etch lines for measuring depth
- Aluminum retractors are lightweight and have radiolucent properties. Femoral head templates are transparent to aid with reshaping of the femoral head
PEDIATRIC LCP PLATES
- Angular stability reduces the risk of primary and secondary loss of correction
- Initial plate positioning with K-wires allows for intraoperative flexibility and correction
- Variety of plate sizes (2.7 mm, 3.5 mm and 5.0 mm), angles (90° – 150°) and screw lengths allow optimal patient fit
- 130° plate length up to 175 mm for fracture fixation
- Calcar screw for added fixation

CANNULATED PEDIATRIC OSTEOTOMY SYSTEM (CAPOS)
- Osteotomy plates are offered in a variety of sizes for optimal patient fit
- Cannulated chisels and guide wires simplify surgical technique
- Saw guides improve the accuracy of the osteotomy and reduce surgical time
MAXFRAME™ MULTI-AXIAL CORRECTION SYSTEM

- The MAXFRAME System with PFM Technology is designed to reduce the treatment plan error that can be at risk with systems which require data to be measured from patient x-rays and manually entered into software.
- The MAXFRAME 3D Software provides a dynamic visualization of the patient treatment plan, letting you plan for success even before adjusting the first strut.
DISTRACTION OSTEOTOMIES (DO) RING SYSTEM

- Allows angular corrections, lengthening and compression
- Modular, for multiple frame options
Variable Angle LCP COMBI® Hole
Four columns of threads in locking hole provide four points of locking between the VA LCP Plate and the variable angle locking screw, forming a fixed-angle construct at the desired screw angle.

Variable Angle LCP COMBI Hole
Many of the variable angle plates feature a variable angle COMBI hole that combines a dynamic compression hole with a variable angle locking screw hole. This provides the flexibility of selecting either axial compression or variable angle locking in the same hole.

Variable Angle LCP Elongated COMBI Hole
Elongated COMBI hole aids in reduction and plate positioning, providing more versatility for the surgeon.

Variable Angle Locking Screws
- Threaded, spherical screw head profile
- Rounded shape facilitates various angles in the plate
- Self-retaining STARDRIVE Recess designed to improve torque transmission and provide resistance to stripping

Locking Screws
- Threaded conical screw head profile
- For use in variable angle locking holes in the predefined nominal angle

Cortex Screws
- Can be used for traditional compression and fixation
EXPEDİUM® GROWING SPINE SYSTEM

• Enables creation of a non-fusion spinal construct that can be lengthened through less invasive surgery to accommodate the growing spine for patients with potential for additional spinal growth under 10 years of age

• Features an assortment of Extended Tandem Connector sizes to accommodate individual patient anatomy and a surgeon’s preferred surgical technique

• Offers compatibility with both the EXPEDİUM 4.5 Spine System (when using a 4.5 x 5.5 mm dual diameter rod) and the EXPEDİUM 5.5 Spine System to provide versatility in construct fixation
EXPEDIUM 4.5 SPINE SYSTEM

- Lowest implant profile in DePuy Synthes thoracolumbar portfolio
- Shorter and lighter instruments for smaller anatomies and delicate surgery
- Multiple implant options to address multiple spine pathologies
- Interconnectivity to other EXPEDIUM Spine Systems for diverse options
EXPEDIUM 5.5 SPINE SYSTEM

- Solutions for rigid posterior fixation of the thoracolumbar regions of the spine
- This system combines simplicity and versatility allowing the surgeon to design the construct based on intraoperative developments and patient anatomy
- Offers significant and unique design innovations, giving the surgeon a versatile system with maximum flexibility
EXPEDİUM VERSE SPINAL SYSTEM

- Combines the attributes of multiple screw types into one versatile implant to provide intraoperative flexibility
- Offers “hypermobility” of the polyaxial head in combination with reduction tabs to simplify rod capture
- Reduces the number of instruments required for fusion procedures, potentially simplifying the back table and reducing costs associated with reprocessing
VEPTR/VEPTR II VERTICAL EXPANDABLE PROSTHETIC TITANIUM RIB

- Mechanically stabilize and distract the thorax
- Correct three-dimensional thoracic deformities
- Provide improvement in volume for respiration and lung growth
- Expand, distract, and replace components through less-invasive surgery
EXTERNAL MIDFACE DISTRACTOR
Distraction of the maxilla, midface, and cranium in adult and pediatric patients
- Preassembled components for quick device assembly in the OR
- Numerous adjustments and vector control
- Anterior headframe slides forward along mounting plate
- Headframe expands and closes symmetrically as a single unit
- Variable positioning of vertical rod along front of headframe
- Threaded tip design on cranial pins to reduce pin loosening
- Cranial pin placement on multiple horizontal planes to resist downward titling of the headframe

MIDFACE DISTRACTOR
Internal distraction of cranial and midfacial bones in adult and pediatric patients
- Multiple anterior footplate design to achieve desired vector
- Footplate spans zygomaticomaxillary suture for central midface advancement
- Variable positioning of posterior footplate for placement in good quality bone without limiting advancement capability

MAXILLARY DISTRACTOR
Internal distraction of the maxilla in adult and pediatric patients
- Multiple anterior footplate heights to avoid tooth roots during screw placement
- Multiple posterior heights with two offsets for correct positioning in intraoral cavity
- Attaches to maxilla or dental splint
- Made of stainless steel for rigidity to maintain planned vector
CURVILINEAR DISTRACTOR

Internal distraction and bone transport of mandible in adult and pediatric patients including neonates

• Advances and rotates the mandible along a curve to achieve both chin advancement and ramus lengthening¹
• Prevents an anterior open bite secondary to distraction
• Closes an existing anterior open bite
• Tab indicates a half turn with activation instrument
• 5 radii of curvature plus a straight distractor
• 2.0 mm and 1.3 mm sizes
• Flexible extension arms removed easily by an axial pull without a surgical procedure
• 2.0 mm footplates accept locking screws for added stability

PREOPERATIVE PLANNING

As a part of TRUMATCH CMF Personalized Solutions, DePuy Synthes CMF has an offering of patient specific products and services that can facilitate a surgeon’s treatment plan. Included in this offering is PROPLAN CMF® Virtual Surgical Planning, a computer-aided surgical planning service for preoperative case visualization, which includes surgical guides to transfer the plan to the operating room.

PROPLAN CMF Virtual Surgical Planning

• Live interactive planning session with a knowledgeable clinical engineer
• Surgeons make critical clinical decisions preoperatively
• 2D and 3D visualization of preoperative patient anatomy and condition
• Cephalometric analysis
• Simulation of skeletal osteotomies
• Visualization of movement of osteotomized bone to desired post treatment position
• Identification of potential bone interferences
• Virtual placement of the distractor to determine the proper distractor size and placement
• Visualization of the clinical plan to validate the planned, clinical result
• Soft tissue simulation and (3D) photomapping

In addition to virtual case planning, PROPLAN CMF Virtual Surgical Planning products and services include anatomic bone models, surgical guides, and PROPLAN CMF Connect.

• Bone models are useful for bending distractor footplates preoperatively
• Surgical guides function as cutting and drilling guides to accurately transfer the plan to the OR
• PROPLAN CMF Connect is a web-based interface surgeons may use to manage and track PROPLAN CMF Virtual Surgical Planning cases
RAPIDSORB RAPID RESORBABLE FIXATION SYSTEM

Resorbable fixation of cranial bone in adult and pediatric patients

- Implants maintain fixation for 8 weeks\(^1\) during the critical bone healing phase
- Stable reconstruction which completely resorbs in approximately 12 months\(^1\)
- Radiolucent material
- Wide variety of plates, meshes, clamps, and screws

1. Average strength retention data on file USBI007003.
ALLOGRAFTS

ViviGen® Cellular Bone Matrix**

- ViviGen is the only cellular allograft focused on lineage committed bone cells
- ViviGen bone cells are osteogenic, viable and able to proliferate
- ViviGen provides an osteoconductive scaffold and possesses osteoinductive properties
- LifeNet Health processing protects and maximizes bone cell viability from recovery to implantation
- Every ViviGen lot is aseptically processed and all final product is tested for sterility using USP <71> standards
- Packaging allows for efficient heat transfer allowing for thawing in less than five minutes ensuring cell viability

** Data on file at LifeNet Health-DHF 12-008. ViviGen is a Registered Trademark of LifeNet Health.

CONFORM FLEX

- 100% demineralized cancellous bone—osteoco nductive, osteoinductive, and osteogenic potential when combined with bone marrow aspirate* 
- Monolithic, single-piece design, which resists migration
- Can be compressed up to 50% of its size and/or cut for precise and easy placement
- Wickable—absorbs and retains bone marrow aspirate, blood or saline


**Data on file at LifeNet Health-DHF 12-008. ViviGen is a Registered Trademark of LifeNet Health.
DePuy Synthes Mobile Application for iPhone, iPod touch, and iPad

Download the DePuy Synthes Mobile App for more information on our upper extremity products. Available through iTunes.

www.depuysynthes.com

Please visit the DePuy Synthes website for more information on our products.

Limited Warranty and Disclaimer: DePuy Synthes products are sold with a limited warranty to the original purchaser against defects in workmanship and materials. Any other express or implied warranties, including warranties of merchantability or fitness, are hereby disclaimed.

This brochure is for informational purposes only. Please refer to the Surgical Technique Guide or package inserts for specific indications, sub-populations and additional information for the devices listed within.

CAUTION: Federal Law restricts these devices to sale by or on the order of a physician.

Some devices listed in this brochure may not have been licensed in accordance with Canadian law and may not be for sale in Canada. Please contact your sales consultant for items approved for sale in Canada.

Not all products may currently be available in all markets.

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To order (Canada): 800-946-8999

Note: For recognized manufacturer, refer to the product label.

www.depuysynthes.com

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