Building on Success

Variable Angle LCP® Locking Technology

DePuy Synthes
PART OF THE Johnson & Johnson FAMILY OF COMPANIES
The Evolution of Plating Technology

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<th>Round Screw Hole</th>
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| • Cortical or cancellous screws can be angled through the plate | • Screw can be inserted eccentrically for axial compression  
• Screw placed in the inclined area of the plate hole will move the underlying bone horizontally in relation to the plate  
• Compression in only one direction | • Screw can be inserted eccentrically for axial compression  
• Compression from either side of the hole  
• Allows cortical or cancellous screws to be angled through the plate  
• Limited-contact plate with undercuts reduce the contact area between bone and plate that may reduce impairment of blood supply  
• Plate design with undercuts provides uniform stiffness and improves contourability | • Round locking hole for fixed angle locking  
• Functions as an internal fixator. Plate is not compressed against the bone, reducing impairment of blood supply |
Building on Success

The launch of the DePuy Synthes Locking Compression Plate (LCP®) System represented an important milestone in patient care. With the LCP System, locking screw technology was merged with conventional plating techniques. Since then, our locking compression plates have delivered successful clinical outcomes for patients all over the world.

As an innovator and market leader in locked plating technology for over ten years, DePuy Synthes offers the Variable Angle LCP (VA LCP®) locking technology as another clinical milestone.

### Locking Compression Plate (LCP) Combi Hole
- Combines dynamic compression with fixed angle locking
- Threaded hole section for locking screws
- Dynamic compression hole for conventional screws

### Variable Angle Locking Compression Plate (VA LCP) Hole
- Four columns of threads provide four points of locking between the VA LCP Plate and the variable angle screw, forming a fixed angle construct at the desired screw angle
- Screws can be angled anywhere within a 30° cone around the central axis of the plate hole

### Variable Angle LCP Combi Hole
- Combines a dynamic compression hole with a variable angle locking screw hole
- Provides flexibility of selecting either axial compression or variable angle locking in the same hole
2.7 mm/3.5 mm Variable Angle LCP
Anterolateral Distal Tibia Plate
Variable angle locking screws provide the ability to create a fixed-angle construct while also allowing the surgeon the freedom to choose the screw trajectory. A fixed-angle construct provides advantages in osteopenic bone or multi-fragmentary fractures.

With DePuy Synthes Variable Angle LCP System locking screw technology, screw angulation is unlimited within a cone of 30° around the central axis of the plate hole.

Variable angle locking enables optimal screw positioning and offers many benefits, allowing the surgeon to:

- Target fragments with high-quality bone, especially in patients with osteopenic bone
- Adjust screw direction after bending the plate
- Position screw precisely to avoid joint penetration
- Redirect screw position to avoid existing implants, prostheses, or independent lag screws
- Adapt screw position to accommodate varied patient anatomy and capture fracture fragments
Focus on Simplicity

Variable angle locking is achieved without the use of bushings, end caps, additional implants, or multiple technique steps. Other variable angle plating systems require thread-tapping of the plate or insertion of end caps, which increase the number of steps in the clinical procedure.

The DePuy Synthes platform of Variable Angle LCP Plates is based on a common approach to implant design and instrumentation, reducing complexity and ensuring a familiar technique.

Locking is facilitated with a simple technique using the DePuy Synthes Torque Limiting Attachment (TLA). The TLA serves an important role; it ensures strength of the plate-screw interface and prevents overtightening of the screw.
Variable Angle LCP Locking Technology

Variable Angle LCP Plate 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 Plate 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 Plate Elongated Combi Hole
- Elongated Combi Hole aids in reduction and plate positioning, providing more versatility for the surgeon

Variable Angle LCP System Locking Holes accept:

Variable Angle Locking Screws
- Threaded, spherical screw head profile
- Rounded shape facilitates various angles in the plate
- Self-retaining StarDrive™ Recess for improved torque transmission and increased 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

4.5 mm Variable Angle LCP Curved Condylar Plate
Quality Instruments for Performance

- Cone-shaped drill guides feature a compact design and allow quick alignment to the plate
- Locking is facilitated with a simple technique using the DePuy Synthes Torque Limiting Attachment (TLA)
- Compression forceps in the 2.4 mm/2.7 mm Forefoot/Midfoot System provide a streamlined method of compression
- Plate reduction wires with stop temporarily hold plate to the bone
- Reduction forceps in the 2.7 mm/3.5 mm VA LCP Elbow System aid in reduction
Low-profile Fixation

• Recess for screwheads reduces screw prominence and creates a low-profile construct
• Rounded plate profile helps reduce soft tissue irritation
• 2.7 mm Metaphyseal Screws are an alternative to cortex screws with a low-profile head

2.4 mm/2.7 mm
Variable Angle LCP Forefoot/Midfoot System
Expanded Options

Most DePuy Synthes Variable Angle LCP Plates are available in both stainless steel and titanium alloy.
Wide Range of Applications

With a portfolio of more than 440 different variable angle plates, DePuy Synthes offers solutions for a wide range of applications:

- Clavicle
- Distal humerus
- Olecranon
- Volar and dorsal distal radius
- Hand
- Distal femur
- Distal tibia
- Proximal tibia
- Foot

Variable Angle LCP Screws are available in 2.4 mm, 2.7 mm, 3.5 mm, and 5.0 mm sizes.
Quality Manufacturing

DePuy Synthes manufacturing facilities maintain high standards through modern production methods and high-tech machinery while following environmental, safety, and compliance regulations.
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