For Fragment-Specific Fracture Fixation
with Variable Angle Locking Technology

2.4 mm Variable Angle LCP® Distal Radius System

Surgical Technique

DePuy Synthes

PART OF THE Johnson & Johnson FAMILY OF COMPANIES

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Note: **Please refer to the 2.4 mm Variable Angle LCP Volar Rim Plates technique guide and the 2.4 mm Variable Angle Dorsal Plates technique guide for features and benefits and technique information.**

MR Information
The 2.4 mm Variable Angle LCP® Distal Radius System has not been evaluated for safety and compatibility in the MR environment. It has not been tested for heating, migration or image artifact in the MR environment. The safety of the 2.4 mm Variable Angle LCP® Distal Radius System in the MR environment is unknown. Scanning a patient who has this device may result in patient injury.

Image intensifier control

2.4 MM VARIABLE ANGLE LCP DISTAL RADIUS SYSTEM

Plate features
Three head sizes accommodate patient anatomy.

- Narrow
  – 6-hole head (19.5 mm)
- Standard
  – 6-hole head (22 mm)
  – 7-hole head (25.5 mm)
- Anatomically contoured volar distal radius plates designed to address both simple and complex fractures
- Variable Angle LCP® (VA LCP) Plate holes in the head of the plate combined with variable angle locking screws offer a locked construct to support the articular surface and reduce the need for bone graft
- Manufactured in stainless steel and titanium

Variable angle locking
- Screws can be angled anywhere within a 30° cone around the central axis of the plate hole (Figures 1 and 2)
- Four columns of threads in the variable angle locking hole provide four points of threaded locking between the VA LCP Plate and the variable angle locking screw, forming a fixed-angle construct at the desired screw angle (Figure 3)
- The head of the 2.4 mm variable angle locking screw has a rounded shape to facilitate various angles within the locking hole (Figure 4)

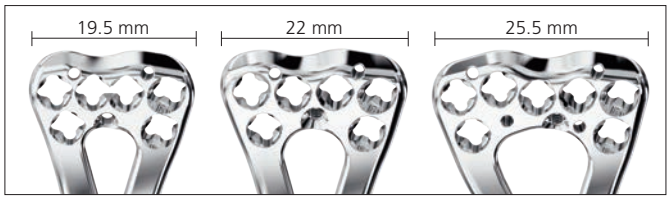


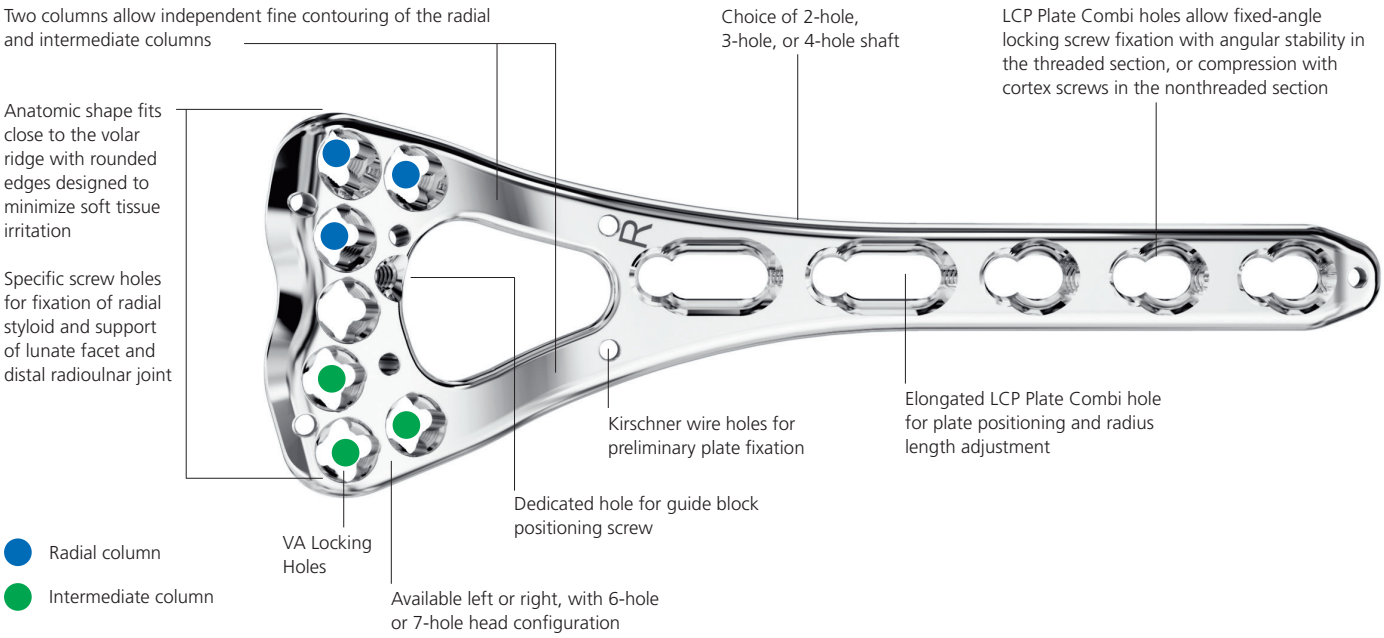
Figure 1

Figure 2

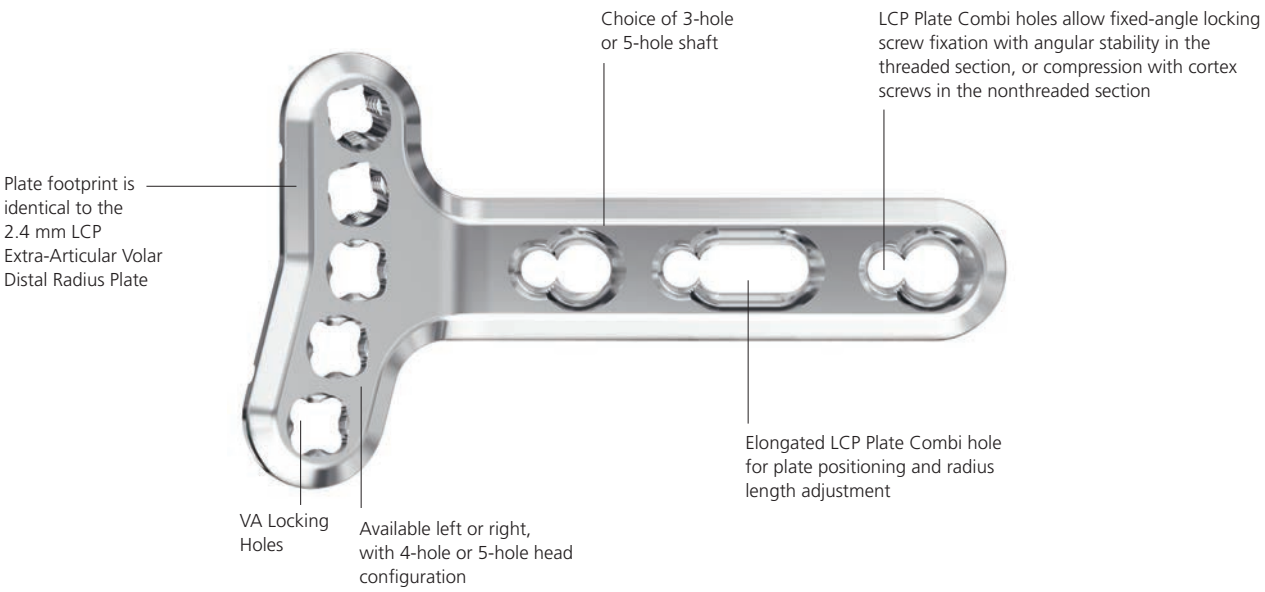
Figure 3


Figure 4

2.4 mm Variable Angle LCP Two-Column Volar Distal Radius Plate



2.4 mm Variable Angle LCP Volar Extra-Articular Distal Radius Plate

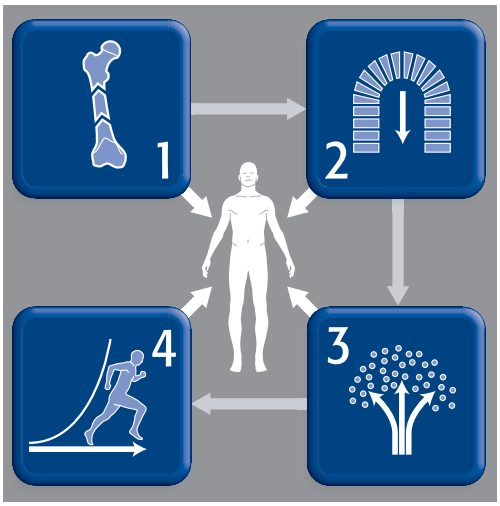


AO PRINCIPLES

In 1958, the AO formulated four basic principles, which have become the guidelines for internal fixation.[1,2]

Anatomic reduction
Fracture reduction and fixation to restore anatomical relationships.

Early, active mobilization
Early and safe mobilization and rehabilitation of the injured part and the patient as a whole.



Stable fixation
Fracture fixation providing absolute or relative stability, as required by the patient, the injury, and the personality of the fracture.

Preservation of blood supply
Preservation of the blood supply to soft tissues and bone by gentle reduction techniques and careful handling.

1. Müller ME, Allgöwer M, Schneider R, Willenegger H. *Manual of Internal Fixation*. 3rd ed. Berlin, Heidelberg, New York: Springer-Verlag; 1991.
2. Rüedi TP, RE Buckley, CG Moran. *AO Principles of Fracture Management*. 2nd ed. Stuttgart New York: Thieme; 2007.

INDICATIONS

The 2.4 mm Variable Angle LCP Distal Radius Plates are indicated for fixation of complex intra- and extra-articular fractures and osteotomies of the distal radius and other small bones in adults, skeletally mature adolescents, and the following adolescent distal radius fractures:

- intra-articular fractures exiting the epiphysis
- intra-articular fractures exiting the metaphysis
- physeal crush injuries
- any injuries which cause growth arrest to the distal radius

CLINICAL CASES

Case 1
77-year-old female,
cause of injury: unknown


Preoperative AP


Preoperative lateral


Postoperative AP


Postoperative lateral, 20° inclined

Case 2
47-year-old female,
cause of injury: hit by horse

Preoperative AP


Preoperative lateral


Postoperative AP


Postoperative lateral

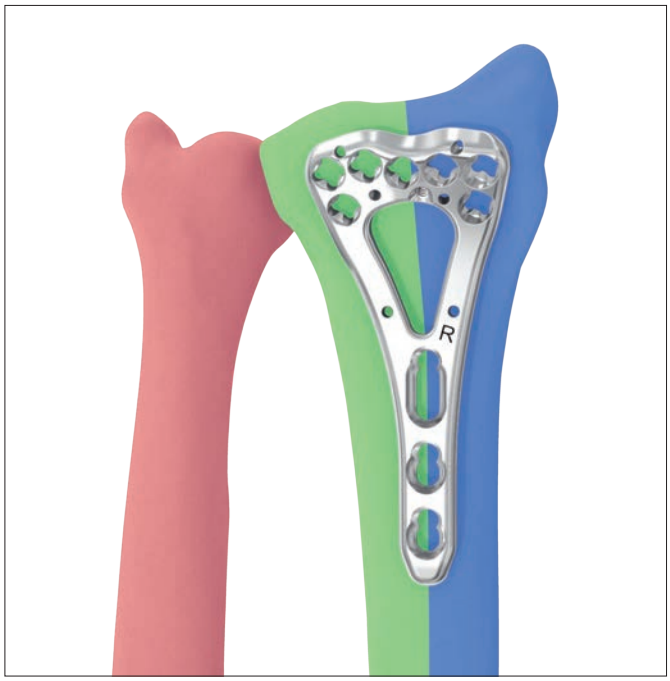
THREE-COLUMN THEORY

The treatment of distal radius fractures requires a meticulous reconstruction of the joint surface, as well as stable internal fixation and early functional postoperative treatment. Extra-articular fractures require both the restoration of the volar tilt and radial length to reduce the possibility of displacement. Malalignment may result in limitations of movement, changes of load distribution, and midcarpal instability, as well as increased risk of osteoarthritis in the radiocarpal joint. Intra-articular fractures with articular displacement of more than 2 mm in the radiocarpal joint may result in osteoarthritis and functional impairment.

The distal radius and distal ulna form a three-column biomechanical construction[3]:

- The intermediate column is the medial part of the distal radius, with the lunate fossa and the sigmoid notch.
- The radial column is the lateral radius with the scaphoid fossa and the styloid process.
- The ulnar column is the distal ulna, the triangular fibrocartilage, and the distal radioulnar joint.

Following reduction, stabilization requires optimal fixation of the intermediate column as well as the radial column. In the case of a fractured distal ulna that compromises the distal radioulnar joint, the ulnar column should be stabilized as well.



VA LCP Two-Column Volar Distal Radius Plate allows both fixation and buttressing of the two columns of the distal radius.

Radial column

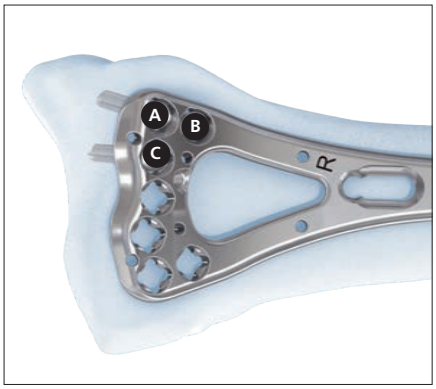
Intermediate column

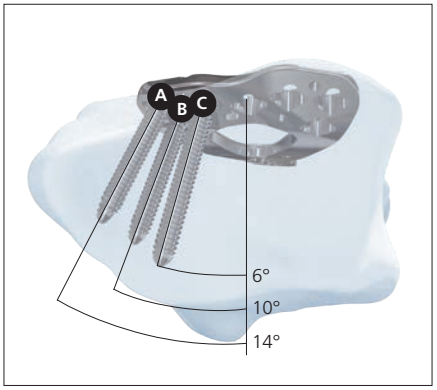
Ulnar column

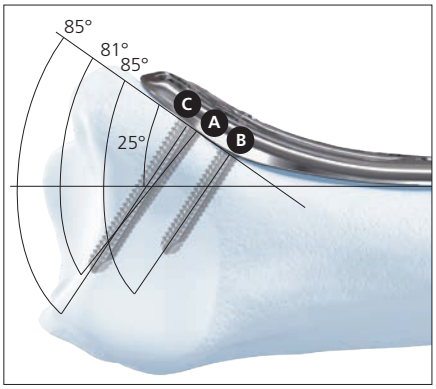
3. Rikli DA, Regazzoni P. Fractures of the distal end of the radius treated by internal fixation and early function. A preliminary report of 20 cases. *J Bone Joint Surg Br*. 1996;78(4):588-92.

PREOPERATIVE PLANNING

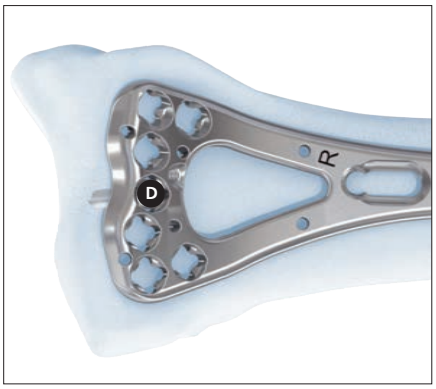
Nominal screw trajectories for Variable Angle LCP Two-Column Volar Distal Radius Plates with 7 head holes

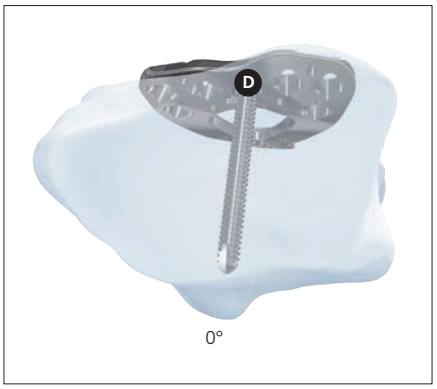


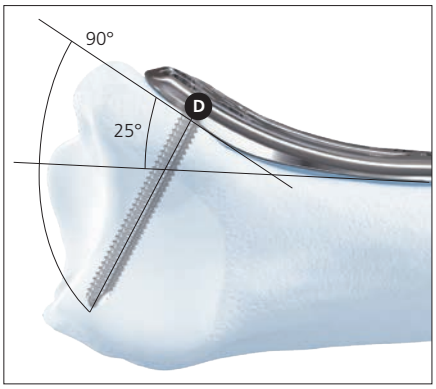




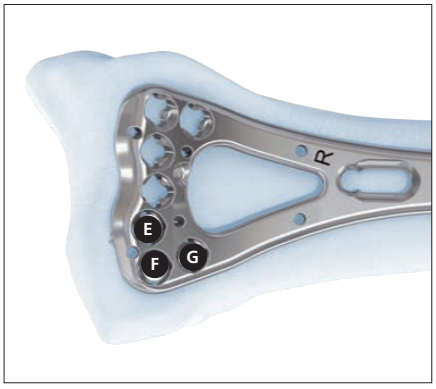
Radial column screws

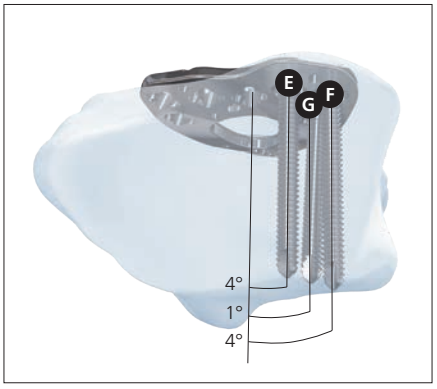


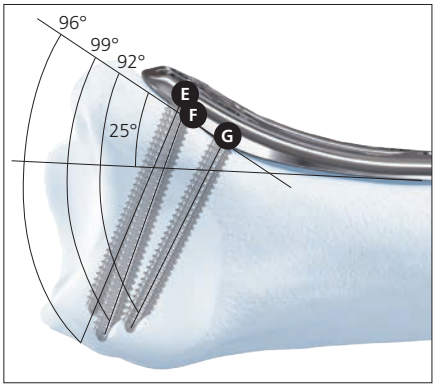




Central screw

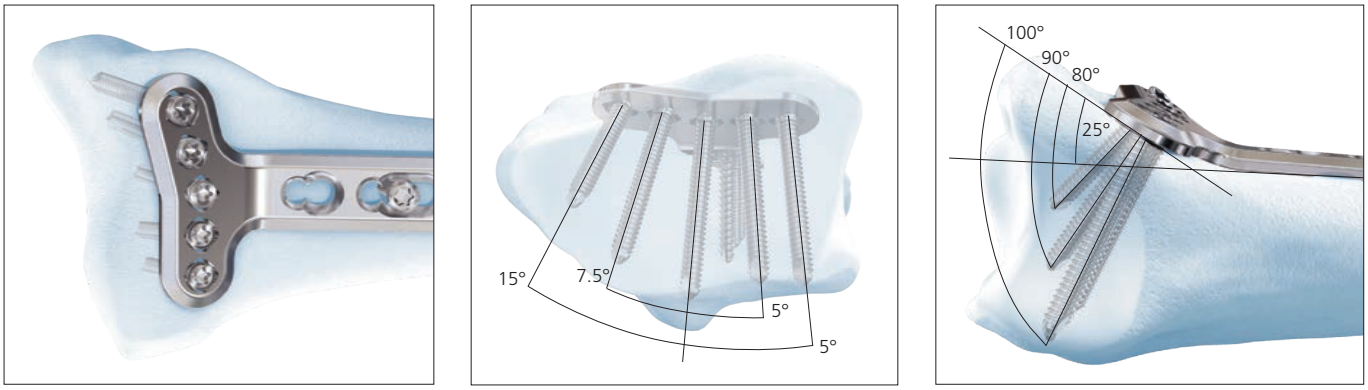






Intermediate column screws

Nominal screw trajectories for Variable Angle LCP Volar Extra-Articular Distal Radius Plates



Nominal screw angles

1
Preparation

Required set	
01.111.478/ 01.111.479	2.4 mm Variable Angle LCP (VA LCP) Distal Radius System Set (stainless steel or titanium)

Alternative sets	
01.110.045/ 01.110.046	2.4 mm LCP Distal Radius System (stainless steel or titanium)
01.110.070/ 01.110.071	2.4 mm Variable Angle LCP Distal Radius Instrument and Implant Set (stainless steel or titanium)
01.111.484/ 01.111.485	2.4 mm LCP and Variable Angle LCP (VA LCP) Distal Radius Instrument Set (stainless steel or titanium)

Make a longitudinal incision slightly radial to the flexor carpi radialis tendon (FCR) (Figure 1). Dissect between the FCR and the radial artery, exposing the pronator quadratus (Figure 2). Detach the pronator quadratus from the lateral border of the radius and elevate it toward the ulna (Figure 3).

Precaution: **Leave the volar wrist capsule intact to avoid devascularization of the fracture fragments and destabilization of the volar wrist ligaments.**

Note: **For information on fixation principles using conventional and locked plating techniques, please refer to the Small Fragment Locking Compression Plate (LCP) System Technique Guide.**

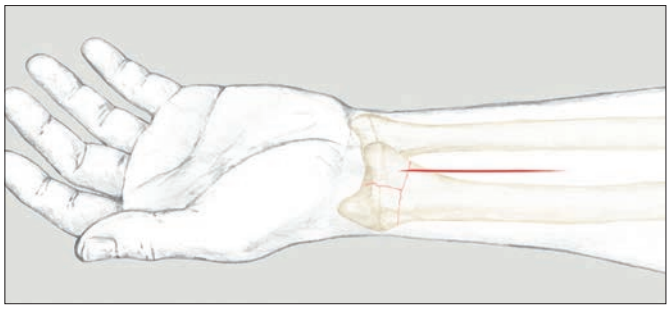


Figure 1

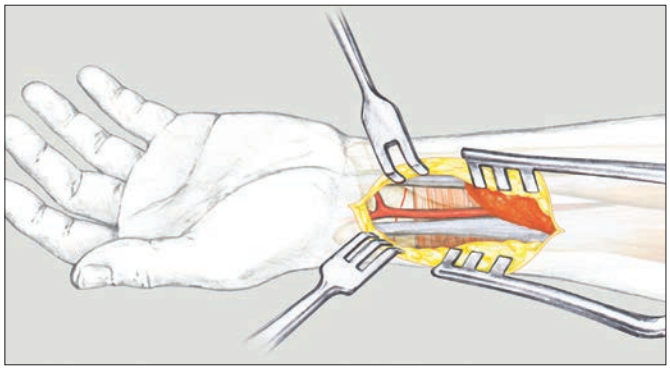


Figure 2

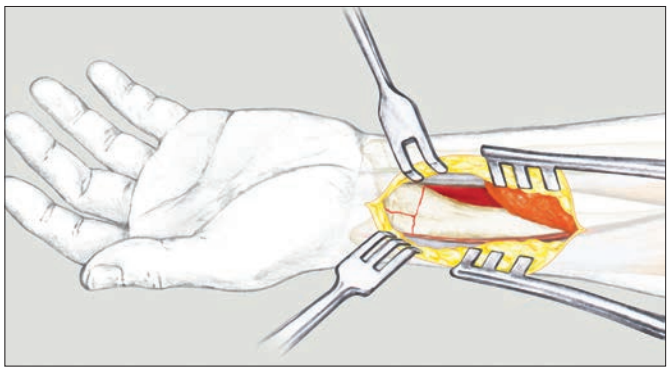


Figure 3

2

Reduce fracture and position plate

Instruments	
03.111.005	Depth Gauge for 2.4 mm–2.7 mm screws
310.19	2.0 mm Drill Bit, quick coupling
310.509	1.8 mm Drill Bit with depth mark, quick coupling
311.43	Handle, with quick coupling
314.453 or 314.467	Short StarDrive Screwdriver Shaft, T8, 55 mm StarDrive Screwdriver Shaft, T8, 105 mm
323.202	2.4 mm Universal Drill Guide
323.26	2.7 mm Universal Drill Guide

Alternative instruments	
319.006	Depth Gauge, for 2.0 mm and 2.4 mm screws
319.01	Depth Gauge, for 2.7 mm screws

Reduce the fracture using the preferred reduction technique. The reduction method will be fracture specific.

Apply the plate to fit the extra-articular volar surface and insert a 2.4 mm or 2.7 mm cortex screw in the elongated hole in the plate shaft. Measure screw length using the depth gauge. Adjust the plate position as necessary and tighten the screw with a T8 StarDrive™ Screwdriver.

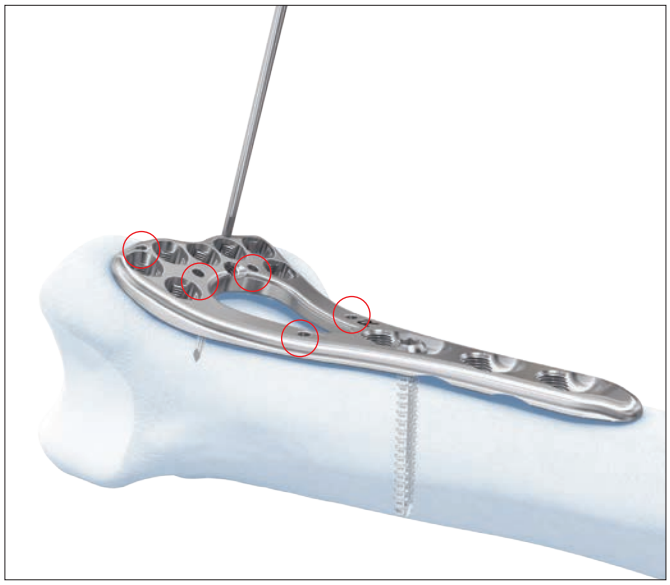
Note: Use the 1.8 mm drill bit when inserting a 2.4 mm cortex screw. Use the 2.0 mm drill bit when inserting a 2.7 mm cortex screw.

The order of screw insertion in the shaft and metaphysis may vary depending on the fracture pattern and reduction technique.

Verify plate and distal screw location with a drill bit or K-wires before inserting multiple screws.

If necessary, use 1.25 mm K-wires inserted through selected K-wire holes to temporarily fix the plate distally.

The order of screw insertion and the use of K-wires may vary depending on the fracture pattern and reduction technique.



Options for preliminary Kirschner wire fixation

Optional instruments

02.111.500.10	1.25 mm Plate Reduction Wire, threaded tip with small stop, 150 mm
02.111.501.10	1.25 mm Plate Reduction Wire, threaded tip with large stop, 150 mm
	Guide Blocks for Two-Column Plates, narrow
03.111.500	6 hole, right
03.111.501	6 hole, left
	Guide Blocks for Two-Column Plates
03.111.600	6 hole, right
03.111.601	6 hole, left
03.111.700	7 hole, right
03.111.701	7 hole, left

A guide block may be attached to a two-column plate (not shown).

Perform several radiographic views of the distal radius to ensure alignment and reduction.

Option: **If necessary, a 1.25 mm plate reduction wire, with small stop, may be used through a K-wire hole to temporarily hold the plate to the bone and in position. Alternatively, a 1.25 mm plate reduction wire, with large stop, may be used through the DCU portion of the Combi hole.**

Precautions:

The plate reduction wires and Kirschner wires are single use items, do not re-use.

The design of the plate holes allow a certain degree of deformation. However, if threaded holes are significantly deformed, locking is not sufficiently efficient.

Reverse bending or use of the incorrect instrumentation for bending may weaken the plate and lead to premature plate failure (e.g., breakage). Do not bend the plate beyond what is required to match the anatomy.

3
Insert proximal screws

Instruments	
03.111.005	Depth Gauge for 2.4 mm–2.7 mm screws
310.19	2.0 mm Drill Bit, quick coupling
310.509	1.8 mm Drill Bit with depth mark, quick coupling
311.43	Handle, with quick coupling
314.453	Short StarDrive Screwdriver Shaft, T8, 55 mm
314.467	StarDrive Screwdriver Shaft, T8, 105 mm
319.006*	Depth Gauge, for 2.0 mm and 2.4 mm screws
319.01*	Depth Gauge, for 2.7 mm screws
323.029	Threaded LCP Drill Guide
323.202	2.4 mm Universal Drill Guide
323.26	2.7 mm Universal Drill Guide

Determine where 2.4 mm variable angle locking screws or 2.4 mm or 2.7 mm cortex screws will be used in the shaft of the plate. Insert these screws beginning with the most proximal screw.

Note: **Use the 1.8 mm drill bit when inserting a 2.4 mm variable angle locking or 2.4 mm cortex screw. Use the 2.0 mm drill bit when inserting a 2.7 mm cortex screw.**

Insert the threaded LCP Drill Guide into the threaded portion of the Combi hole when drilling for a 2.4 mm variable angle locking screw.

Measure for locking screw length directly from the depth mark on the drill bit and the gauge on the LCP Drill Guide window.

Alternatively, use the depth gauge to measure for screw length.

Insert screws with a T8 StarDrive Screwdriver.

*Also available.

Precaution: **Do not use the threaded LCP Drill Guide (323.029) in variable angle locking holes.**

4
Drill for variable angle screw distally

Instruments	
03.110.000	1.8 mm Universal Variable Angle Locking Drill Guide
03.111.005	Depth Gauge, for 2.4 mm–2.7 mm screws
310.509	1.8 mm Drill Bit with depth mark, quick coupling
311.43	Handle, with quick coupling
314.453 or 314.467	Short StarDrive Screwdriver Shaft, T8, 55 mm StarDrive Screwdriver Shaft, T8, 105 mm

Optional instruments	
03.110.023	1.8 mm Variable Angle Locking Drill Guide, cone
03.110.024	1.8 mm Variable Angle Locking Drill Guide, coaxial

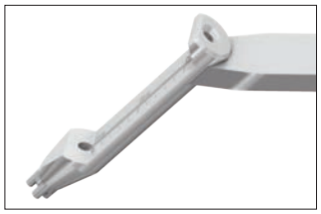
The 2.4 mm variable angle locking screws may be inserted in the head of the plate. Use the cone-shaped end of the universal variable angle locking drill guide to drill variable angle holes at the desired angle.

Alternatively, use the 1.8 mm variable angle drill guide, cone.

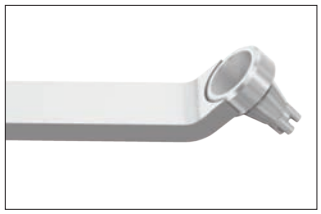
The drill guide tip keys into the cloverleaf design of the VA LCP Plate holes.

Note: The drill guide inserts coaxially into the hole (Figure 1). Ensure that the tip of the drill guide remains fully seated in the hole while drilling.

When the universal variable angle locking drill guide is engaged in the variable angle locking hole, use the 1.8 mm drill bit to drill to the desired depth at the desired angle (Figure 2).



Use this guide for fixed-angle drilling



Use this guide for off-axis drilling

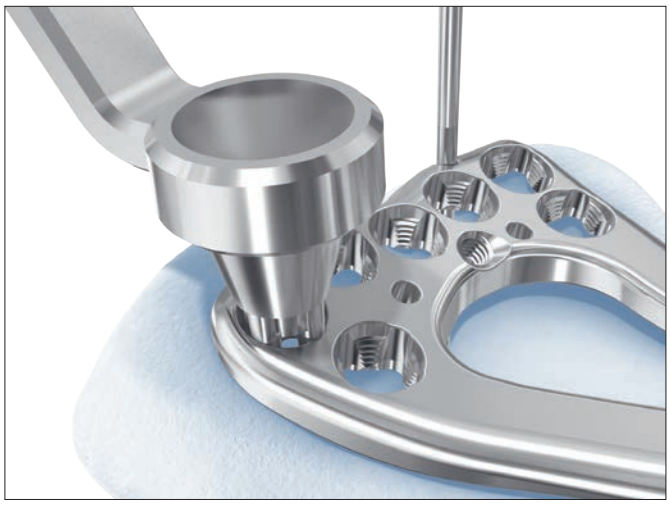


Figure 1

Figure 2

The funnel of the drill guide allows the drill bit a total variation in angulation of 30° (Figure 3).

When drilling off-axis, the drill guide should remain in place and the drill bit may be aimed in any direction within the cone.

The fixed-angle end of the 1.8 mm universal variable angle drill guide, or the 1.8 mm variable angle drill guide, coaxial, only allows the drill bit to follow the nominal trajectory of the locking hole (Figure 4).

- Verify the drill bit angle under C-arm to ensure the desired angle has been achieved. If necessary, drill at a different angle and verify again under C-arm.

Use the depth gauge to measure for the correct screw length.

Note: **When using the cone end of the variable angle drill guide, measurement cannot be taken with the 1.8 mm drill bit with depth mark. The depth gauge must be used.**

Precaution: **Do not use any threaded drill guide in the variable angle locking holes in the head of the plate, as it could damage the threads in the hole.**

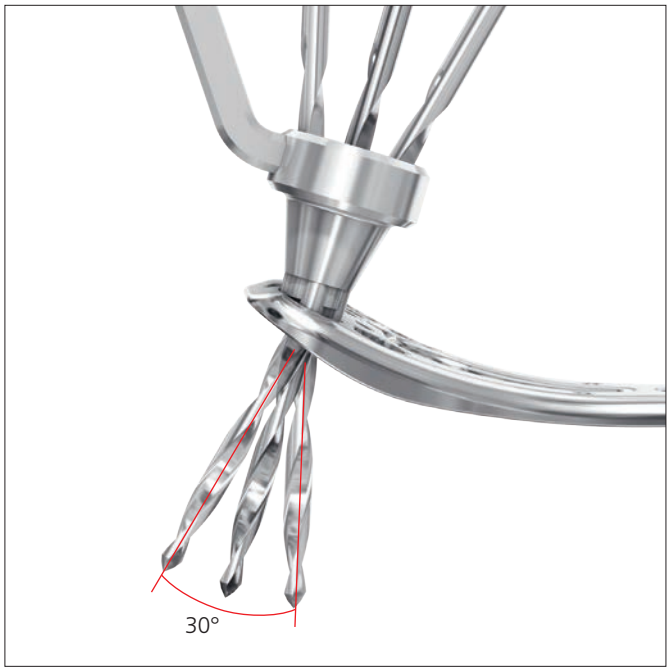


Figure 3

Figure 4

Alternative technique

Instruments	
03.110.021	1.8 mm Drill Guide with Measuring for Guide Block
03.111.007	Positioning Screw for Variable Angle LCP Two-Column Plate Guide Block
	Guide Blocks for Two-Column Plates, narrow
03.111.500	6 hole, right
03.111.501	6 hole, left
	Guide Blocks for Two-Column Plates
03.111.600	6 hole, right
03.111.601	6 hole, left
03.111.700	7 hole, right
03.111.701	7 hole, left

Alternatively, to insert screws at the nominal screw angle (on-axis), use the two-column distal radius plate guide block in combination with the drill guide.

The guide block holes are designed to accept the drill guide with measuring for guide block.

For drilling, insert the drill guide into the locking hole and drill to the desired depth using the 1.8 mm drill bit.

Read the screw length directly from the laser mark on the drill bit.

Alternatively, measure using the depth gauge directly through the guide block.

Note: **For the direction of predefined screw angles, refer to page 8 or 9.**

5
Preliminary screw placement

Instruments	
311.43	Handle, with quick coupling
314.453 or 314.467	Short StarDrive Screwdriver Shaft, T8, 55 mm StarDrive Screwdriver Shaft, T8, 105 mm

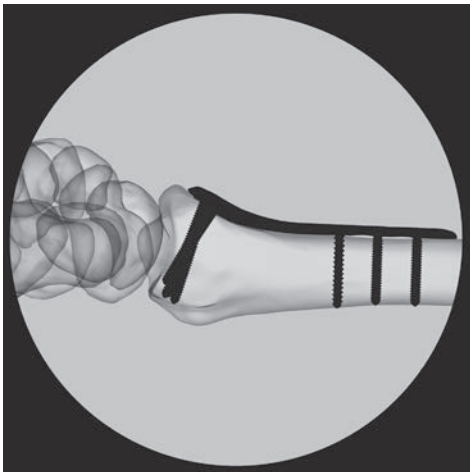
Insert the correct length variable angle locking screw or variable angle locking buttress pin manually, using the self-retaining T8 StarDrive Screwdriver shaft and handle with quick coupling. Insert the screw until the screwhead is seated in the variable angle locking hole. **Do not overtighten the screw.** Insert additional screws as needed.

Note: When a guide block is used, the Variable Angle LCP® Locking Screw or Buttress Pin or standard LCP® Locking Screw or Buttress Pin may be inserted with a T8 StarDrive™ Screwdriver directly through the guide block.

6

Confirm proper joint reconstruction

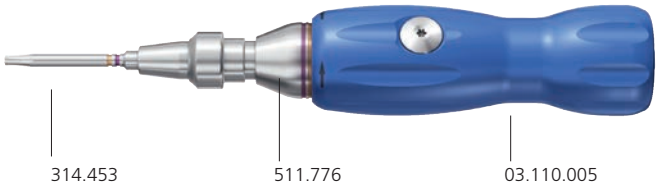
Confirm proper joint reconstruction, screw placement and screw length using multiple C-arm views. To ensure that the distal screws are not in the joint, use additional views such as a 10° dorsally tilted, 20° inclined lateral, and 45° pronated oblique view.

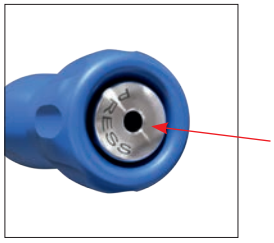


7

Lock variable angle screws

Instruments	
03.110.005	Handle for Torque Limiting Attachment
314.453 or 314.467	Short StarDrive Screwdriver Shaft, T8, 55 mm StarDrive Screwdriver Shaft, T8, 105 mm
511.776	Torque Limiting Attachment, 0.8 Nm





Use the 0.8 Nm torque limiting attachment (TLA) for final tightening of the 2.4 mm VA locking screws or 1.8 mm VA locking buttress pins.

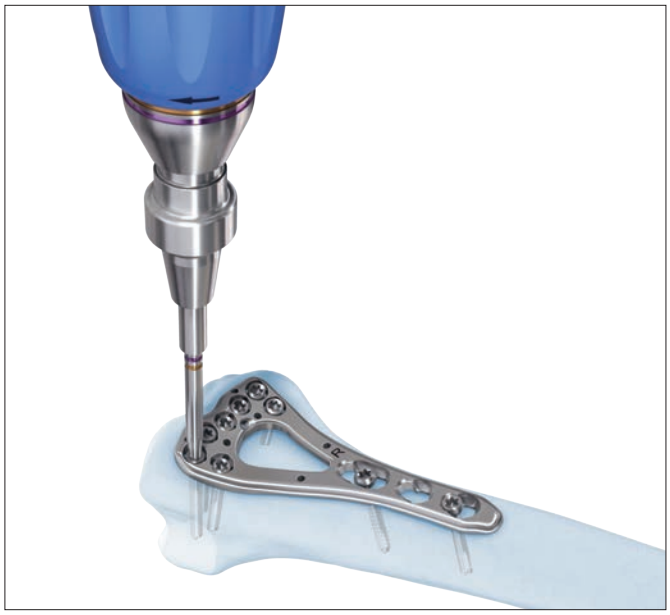
The TLA attaches to the blue handle for TLA, and a T8 StarDrive Screwdriver shaft.

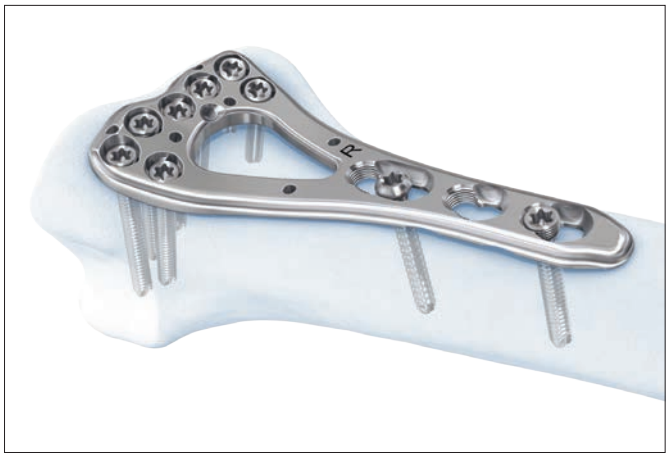
Precaution: **Use of the TLA is mandatory when inserting locking screws into variable angle locking holes, to ensure the adequate torque is applied. Final locking must be done manually using the TLA.**

* Also available

The torque limiting attachment (TLA) ensures maximum strength of the plate-screw interface and prevents over-tightening of the variable angle screws. With this final locking step, the screws are securely locked into the plate.

Note: **When performing the final locking step, the TLA should always be used.**





8

Close incision

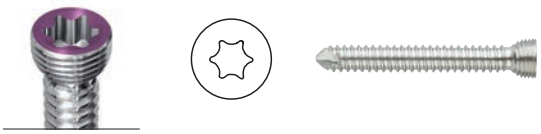
Use the appropriate method for surgical closure of the incision.

SCREWS USED WITH THE 2.4 MM VARIABLE ANGLE DISTAL RADIUS PLATES

Stainless Steel and Titanium

2.4 mm Variable Angle Locking Screws, self-tapping, with StarDrive Recess

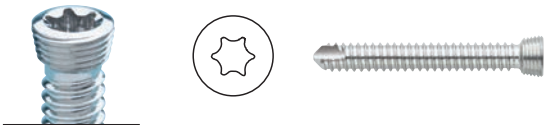
- Threaded, rounded head locks securely into the variable- angle locking holes in the plate head to provide angular stability at angles determined by the surgeon
- Threaded, rounded head locks securely into the threaded portion of Combi holes in shaft, to provide angular stability
- Locked screws allow unicortical screw fixation and load transfer to the near cortex
- 8 mm–30 mm lengths (2 mm increments)



Precaution: **Use of 0.8 Nm TLA torque limiting attachment is required.**

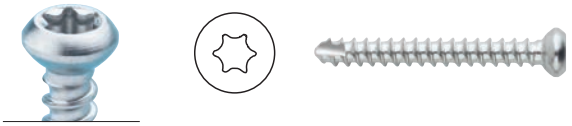
2.4 mm Locking Screws, self-tapping, with StarDrive Recess

- Threaded, conical head locks securely into the threaded portion of the Combi holes in the plate to provide angular stability
- Locked screws allow unicortical screw fixation and load transfer to the near cortex
- 6 mm–30 mm lengths (2 mm increments)



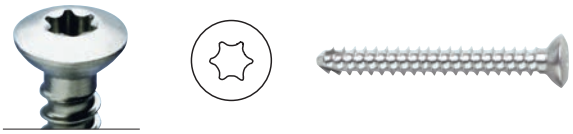
2.4 mm Cortex Screws, self-tapping, with StarDrive Recess

- For use in round or Combi holes
- Low-profile head in the plate holes
- Used to provide compression or neutral fixation
- 6 mm–30 mm lengths (2 mm increments)



2.7 mm Cortex Screws, self-tapping, with StarDrive Recess

- For use in Combi holes
- Used to provide compression or neutral fixation
- 10 mm–30 mm lengths (2 mm increments)



1.8 mm Variable Angle Locking Buttress Pins, with T8 StarDrive Recess

- Smooth, nonthreaded shaft profile with a blunt, rounded tip
- Threaded, rounded head locks securely into the variable-angle locking holes in the plate head, to provide angular stability at angles determined by the surgeon
- Neck threads on the shaft aid in implant removal
- Locked pins allow unicortical screw fixation and load transfer to the near cortex
- 1.8 mm diameter matches the core diameter of a 2.4 mm locking screw
- 8 mm–30 mm lengths (2 mm increments)

Screws are made of implant-quality 316L stainless steel or titanium alloy (Ti-6Al-7Nb)

2.4 MM VARIABLE ANGLE LCP VOLAR EXTRA-ARTICULAR DISTAL RADIUS PLATES

Left plates

02.110.203/
04.110.203

02.110.204/
04.110.204

02.110.207/
04.110.207

02.110.208/
04.110.208

Right plates

02.110.201/
04.110.201

02.110.202/
04.110.202

02.110.205/
04.110.205

02.110.206/
04.110.206

Part numbers beginning with "02" indicate 316L stainless steel plates.
Part numbers beginning with "04" indicate commercially pure (CP) titanium plates.

2.4 MM VARIABLE ANGLE LCP TWO-COLUMN VOLAR DISTAL RADIUS PLATES, NARROW

Left plates

02.111.521/
04.111.521

02.111.531/
04.111.531

02.111.541/
04.111.541

02.111.551/
04.111.551

Right plates

02.111.520/
04.111.520

02.111.530/
04.111.530

02.111.540/
04.111.540

02.111.550/
04.111.550

Part numbers beginning with "02" indicate 316L stainless steel plates.
Part numbers beginning with "04" indicate commercially pure (CP) titanium plates.

2.4 MM VARIABLE ANGLE LCP TWO-COLUMN VOLAR DISTAL RADIUS PLATES

Left plates

02.111.621/
04.111.621

02.111.631/
04.111.631

02.111.641/
04.111.641

02.111.651/
04.111.651

02.111.721/
04.111.721

02.111.731/
04.111.731

02.111.741/
04.111.741

02.111.751/
04.111.751

Part numbers beginning with "02" indicate 316L stainless steel plates.
Part numbers beginning with "04" indicate commercially pure (CP) titanium plates.

Right plates

02.111.620/
04.111.620

02.111.630/
04.111.630

02.111.640/
04.111.640

02.111.650/
04.111.650

02.111.720/
04.111.720

02.111.730/
04.111.730

02.111.740/
04.111.740

02.111.750/
04.111.750

Part numbers beginning with "02" indicate 316L stainless steel plates.
Part numbers beginning with "04" indicate commercially pure (CP) titanium plates.

SELECTED INSTRUMENTS FROM THE 2.4 MM VARIABLE ANGLE LCP (VA LCP) DISTAL RADIUS SYSTEM

Stainless Steel (01.111.478) and Titanium (01.111.479)

02.111.500.10	1.25 mm Plate Reduction Wire, threaded tip with small stop, 150 mm*	
02.111.501.10	1.25 mm Plate Reduction Wire, threaded tip with large stop, 150 mm*	
03.110.000	1.8 mm Universal Variable Angle Locking Drill Guide	
03.110.005	Handle for Torque Limiting Attachment	
03.110.007	StarDrive Screwdriver, T8	
03.110.021	1.8 mm Drill Guide with Measuring for Guide Block	
03.110.023	1.8 mm Variable Angle Locking Drill Guide, cone	

* Plate reduction wires also available sterile, single-packed.
Use 02.111.50X.01S to order the appropriate item.

Selected Instruments from the 2.4 mm Variable Angle LCP (VA LCP) Distal Radius System
Stainless Steel (01.111.478) and Titanium (01.111.479)

03.110.024	1.8 mm Variable Angle Locking Drill Guide, coaxial	
03.111.005	Depth Gauge for 2.4 mm–2.7 mm Screws	
03.111.007	Positioning Screw for Variable Angle LCP Two-Column Plate Guide Block	
	Guide Blocks for Two-Column Plate, 6-hole head, narrow	
03.111.500	right	
03.111.501	left	
	Guide Blocks for Two-Column Plate, 6-hole head	
03.111.600	right	
03.111.601	left	
	Guide Blocks for Two-Column Plate, 7-hole head	
03.111.700	right	
03.111.701	left	
310.19	2.0 mm Drill Bit, quick coupling	
310.26	2.7 mm Drill Bit, quick coupling, 100 mm	

Selected Instruments from the 2.4 mm Variable Angle LCP (VA LCP) Distal Radius System
Stainless Steel (01.111.478) and Titanium (01.111.479)

310.509	1.8 mm Drill Bit with depth mark, quick coupling	
310.530	2.4 mm Drill Bit with depth mark, quick coupling	
311.43	Handle, with quick coupling	
314.453	Short StarDrive Screwdriver Shaft, T8, 55 mm	
314.467	StarDrive Screwdriver Shaft, T8, 105 mm	
314.468	Holding Sleeve, for StarDrive Screwdriver shaft, T8	
319.39	Sharp Hook	

Selected Instruments from the 2.4 mm Variable Angle LCP (VA LCP) Distal Radius System
Stainless Steel (01.111.478) and Titanium (01.111.479)

323.029	Threaded LCP Drill Guide	
323.202	2.4 mm Universal Drill Guide	
323.26	2.7 mm Universal Drill Guide	
324.084	1.25 mm K-wire Insert	
329.12	Bending Pliers, 140 mm, for 1.5 mm and 2.0 mm plates	
329.922	Bending Pin, for 2.4 mm locking plates	
398.41	Reduction Forceps with Points, broad, ratchet, 132 mm length	

Selected Instruments from the 2.4 mm Variable Angle LCP (VA LCP) Distal Radius System
Stainless Steel (01.111.478) and Titanium (01.111.479)

398.95	Termite Forceps, 90 mm length	
399.18	Hohmann Retractor, 6 mm width, small, short narrow tip, 160 mm length	
399.19	Hohmann Retractor, 8 mm width, small, short narrow tip, 160 mm length	
399.48	Periosteal Elevator, 3 mm width, curved blade, straight edge	
399.481	Periosteal Elevator, 3 mm width, curved blade, round edge	
399.97	Reduction Forceps, with points, ratchet, 130 mm length	
511.776	Torque Limiting Attachment, 0.8 Nm, quick coupling	

ALSO AVAILABLE

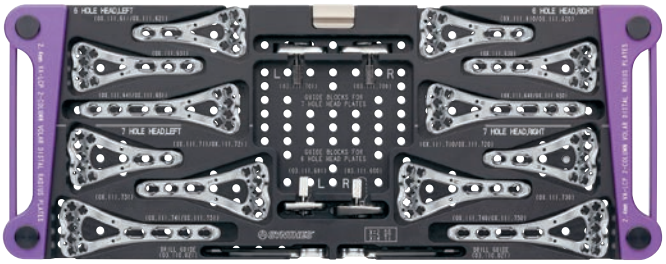
03.110.022	StarDrive Screwdriver Shaft, T8, with hexagonal coupling, for ratcheting handle	
311.023.97	Ratcheting Screwdriver Handle	
319.006	Depth Gauge, for 2.0 and 2.4 mm screws, measures up to 50 mm	
319.01	Depth Gauge, for 2.7 mm screws	

2.4 MM VARIABLE ANGLE LCP (VA LCP) TWO-COLUMN VOLAR DISTAL RADIUS PLATE SET

Stainless Steel (01.111.461) and Titanium (01.111.462)

Module

60.111.461	Module for 2.4 mm Variable Angle LCP Two-Column Volar Distal Radius Plate



Implants

2.4 mm Variable Angle LCP Two-Column Volar Distal Radius Plates, right◊

Stainless Steel*	Titanium**	Head Holes	Shaft Holes	Length (mm)
02.111.620	04.111.620	6	2	45
02.111.630	04.111.630	6	3	54
02.111.640	04.111.640	6	4	66
02.111.650	04.111.650	6	5	75
02.111.720	04.111.720	7	2	47
02.111.730	04.111.730	7	3	55
02.111.740	04.111.740	7	4	68
02.111.750	04.111.750	7	5	77

2.4 mm Variable Angle LCP Two-Column Volar Distal Radius Plates, left◊

Stainless Steel*	Titanium**	Head Holes	Shaft Holes	Length (mm)
02.111.621	04.111.621	6	2	45
02.111.631	04.111.631	6	3	54
02.111.641	04.111.641	6	4	66
02.111.651	04.111.651	6	5	75
02.111.721	04.111.721	7	2	47
02.111.731	04.111.731	7	3	55
02.111.741	04.111.741	7	4	68
02.111.751	04.111.751	7	5	77

*316L Stainless steel.
**Commercially pure (CP) titanium.
◊Available nonsterile or sterile-packed. Add "S" to product number to indicate sterile product.

Note: For additional information, please refer to the package insert or www.e-ifu.com.

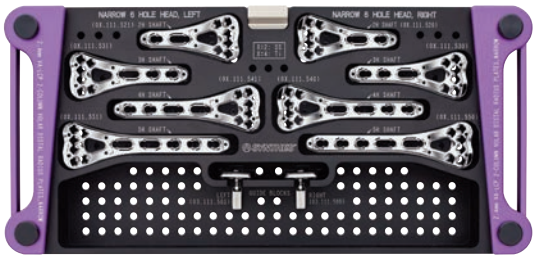
For detailed cleaning and sterilization instructions, please refer to www.depuysynthes.com/hcp/cleaning-sterilization or sterilization instructions, if provided in the instructions for use.

2.4 MM VARIABLE ANGLE LCP (VA LCP) NARROW TWO-COLUMN VOLAR DISTAL RADIUS PLATE SET

Stainless Steel (01.111.480) and Titanium (01.111.481)

Module

60.111.465	Implant Module for 2.4 mm VA LCP Two-Column Volar Distal Radius Plate, Narrow



Implants

2.4 mm Variable Angle LCP Two-Column Volar Distal Radius Plate, narrow, right◊

Stainless Steel*	Titanium**	Head Holes	Shaft Holes	Length (mm)
02.111.520	04.111.520	6	2	42
02.111.530	04.111.530	6	3	51
02.111.540	04.111.540	6	4	63
02.111.550	04.111.550	6	5	72

2.4 mm Variable Angle LCP Two-Column Volar Distal Radius Plates, narrow, left◊

Stainless Steel*	Titanium**	Head Holes	Shaft Holes	Length (mm)
02.111.521	04.111.521	6	2	42
02.111.531	04.111.531	6	3	51
02.111.541	04.111.541	6	4	63
02.111.551	04.111.551	6	5	72

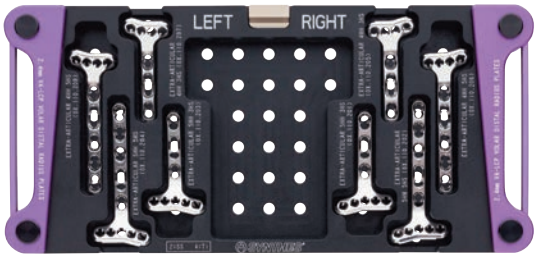
*316L Stainless steel.
**Commercially pure (CP) titanium.
◊Available nonsterile or sterile-packed. Add "S" to product number to indicate sterile product.

2.4 MM VARIABLE ANGLE LCP (VA LCP) EXTRA-ARTICULAR DISTAL RADIUS PLATE SET

Stainless Steel (01.111.482) and Titanium (01.111.483)

Module

60.111.467	Module for VA LCP Volar Extra-Articular Distal Radius Plate



Implants

2.4 mm Variable Angle LCP Volar Extra-Articular Distal Radius Plates, right

Stainless Steel*	Titanium**	Head Holes	Shaft Holes	Length (mm)
02.110.201	04.110.201	5	3	48
02.110.202	04.110.202	5	5	66
02.110.205	04.110.205	4	3	45
02.110.206	04.110.206	4	5	65

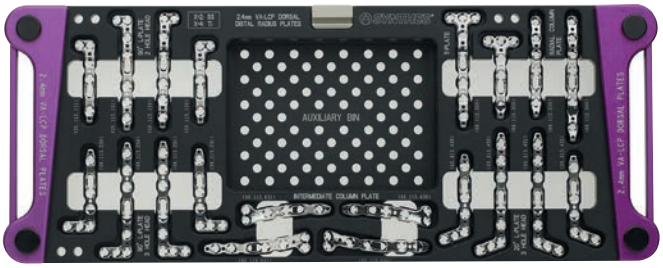
2.4 mm Variable Angle LCP Volar Extra-Articular Distal Radius Plates, left

Stainless Steel*	Titanium**	Head Holes	Shaft Holes	Length (mm)
02.110.203	04.110.203	5	3	48
02.110.204	04.110.204	5	5	66
02.110.207	04.110.207	4	3	45
02.110.208	04.110.208	4	5	65

*316L Stainless steel.
**Commercially pure (CP) titanium.

2.4 MM VARIABLE ANGLE LCP DORSAL DISTAL RADIUS PLATE MODULE SET

Stainless Steel (01.115.000) and Titanium (01.115.001)



Module

60.111.476	Module for 2.4 mm VA LCP Dorsal Distal Radius Plates

Implants

2.4 mm Variable Angle LCP Dorsal Distal Radius Plates, Radial Column◊

Stainless Steel*	Titanium**	Holes	Length (mm)
02.115.530	04.115.530	5	46
02.115.540	04.115.540	6	57

2.4 mm Variable Angle LCP Dorsal Distal Radius Plates, Intermediate Column, 2-holes◊

Note: The plates for the right radius (0x.115.630 and 0x.115.640) are angled left and the plates for the left radius (0x.115.631 and 0x.115.641) are angled right.

Stainless Steel*	Titanium**	Shaft Hole	Length (mm)	Angled
02.115.630	04.115.630	3	41	+90°
02.115.631	04.115.631	3	41	-90°
02.115.640	04.115.640	4	49	+90°
02.115.641	04.115.641	4	49	-90°

2.4 mm Variable Angle LCP Dorsal Distal Radius L-Plates, 2-holes◊

Stainless Steel*	Titanium**	Shaft Hole	Length (mm)	Angled
02.115.130	04.115.130	3	37	+90°
02.115.131	04.115.131	3	37	-90°
02.115.150	04.115.150	5	51	+90°
02.115.151	04.115.151	5	51	-90°

*316L Stainless steel.
**Commercially pure (CP) titanium.
◊Available nonsterile or sterile-packed. Add "S" to product number to indicate sterile product.

2.4 mm Variable Angle LCP Dorsal Distal Radius Plate Module Set
Stainless Steel (01.115.000) and Titanium (01.115.001)

2.4 mm Variable Angle LCP Dorsal Distal Radius L-Plates, 3-hole head◊

Stainless Steel*	Titanium**	Shaft Hole	Length (mm)	Right Angled
02.115.230	04.115.230	3	37	+90°
02.115.231	04.115.231	3	37	-90°
02.115.250	04.115.250	5	51	+90°
02.115.251	04.115.251	5	51	-90°

2.4 mm Variable Angle LCP Dorsal Distal Radius L-Plates, oblique, 3-hole head◊

Stainless Steel*	Titanium**	Shaft Hole	Length (mm)	Oblique Angled
02.115.430	04.115.430	3	41	+20°
02.115.431	04.115.431	3	41	-20°
02.115.450	04.115.450	5	55	+20°
02.115.451	04.115.451	5	55	-20°

2.4 mm Variable Angle LCP Dorsal Distal Radius T-Plates, 3-hole head◊

Stainless Steel*	Titanium**	Shaft Hole	Length (mm)
02.115.330	04.115.330	3	37
02.115.350	04.115.350	5	51

Instrument

511.776	Torque Limiting Attachment, 0.8 Nm, quick coupling†

*316L Stainless steel.
**Commercially pure (CP) titanium.
◊Available nonsterile or sterile-packed. Add "S" to product number to indicate sterile product.
†0.8 TLA must be used with the 2.4 mm VA LCP Dorsal Distal Radius Plates.
This TLA can be housed on the instrument tray in the main graphic case.

2.4 MM VARIABLE ANGLE LCP (VA LCP) VOLAR RIM DISTAL RADIUS PLATE MODULE SET

Stainless Steel (01.115.486) and Titanium (01.115.487)

Graphic Case

60.111.486	Module Bin, ½ Length, ½ Height, for VA LCP Volar Rim Plates

Note: This bin is not included as part of sets 01.111.478 or 01.111.479. This bin is to be housed in the Plate Module Shell (60.116.052), and should be combined with other distal radius plate bins and/or auxiliary bins (listed in "Also Available Section") to create a complete module.

Instruments

	Guiding Blocks for 2.4 mm VA LCP Volar Rim Distal Radius Plate
03.115.700	6-hole head, right
03.115.701	6-hole head, left
03.115.800	7-hole head, right
03.115.801	7-hole head, left

Implants

2.4 mm Variable Angle LCP Volar Rim Distal Radius Plates◊

Stainless Steel*	Titanium**	Head Holes	Shaft Holes	Length (mm)	
02.115.750	04.115.750	6	5	57	right
02.115.751	04.115.751	6	5	57	left
02.115.850	04.115.850	7	5	57	right
02.115.851	04.115.851	7	5	57	left

*316L Stainless steel.
**Commercially pure (CP) titanium.
◊Available nonsterile or sterile-packed. Add "S" to product number to indicate sterile product.

SCREW SET FOR 2.4 MM VARIABLE ANGLE LCP (VA LCP) DISTAL RADIUS SYSTEM

Stainless Steel (01.111.486) and Titanium (01.111.487)

Screw Rack

61.111.469	Screw Rack for 2.4 mm Variable Angle LCP (VA LCP) Distal Radius System Graphic Case

Implants

1.8 mm Variable Angle Locking Buttress Pins, with T8 StarDrive Recess

Stainless Steel*	Titanium†	Length (mm)	Qty.
02.210.078	04.210.078	8	3
02.210.080	04.210.080	10	3
02.210.082	04.210.082	12	3
02.210.084	04.210.084	14	3
02.210.086	04.210.086	16	6
02.210.088	04.210.088	18	6
02.210.090	04.210.090	20	6
02.210.092	04.210.092	22	6
02.210.094	04.210.094	24	6
02.210.096	04.210.096	26	6
02.210.098	04.210.098	28	3
02.210.100	04.210.100	30	3

2.4 mm Variable Angle Locking Screws, with T8 StarDrive Recess

Stainless Steel*	Titanium†	Length (mm)	Qty.
02.210.108	04.210.108	8	5
02.210.110	04.210.110	10	5
02.210.112	04.210.112	12	5
02.210.114	04.210.114	14	10
02.210.116	04.210.116	16	10
02.210.118	04.210.118	18	15
02.210.120	04.210.120	20	15
02.210.122	04.210.122	22	15
02.210.124	04.210.124	24	10
02.210.126	04.210.126	26	10
02.210.128	04.210.128	28	5
02.210.130	04.210.130	30	5

*316L Stainless steel.
†Titanium alloy (Ti-6Al-7Nb).

Screw Set for 2.4 mm Variable Angle LCP (VA LCP) Distal Radius System
Stainless Steel (01.111.486) and Titanium (01.111.487)

2.4 mm Cortex Screws, self-tapping, with T8 StarDrive Recess, 3 ea.

Stainless Steel*	Titanium†	Length (mm)
201.756	401.756	6
201.758	401.758	8
201.760	401.760	10
201.762	401.762	12
201.764	401.764	14
201.766	401.766	16
201.768	401.768	18
201.770	401.770	20
201.772	401.772	22
201.774	401.774	24
201.776	401.776	26
201.778	401.778	28
201.780	401.780	30

2.7 mm Cortex Screws, self-tapping, with T8 StarDrive Recess, 3 ea.

Stainless steel*	Titanium†	Length (mm)
202.870	402.870	10
202.872	402.872	12
202.874	402.874	14
202.876	402.876	16
202.878	402.878	18
202.880	402.880	20
202.882	402.882	22
202.884	402.884	24
202.886	402.886	26
202.888	402.888	28
202.890	402.890	30

*316L Stainless steel.
†Titanium alloy (Ti-6Al-7Nb).

2.4 MM VARIABLE ANGLE LCP (VA LCP) DISTAL RADIUS SYSTEM

Stainless Steel (01.111.478) and Titanium (01.111.479)

Graphic Cases and Trays

61.116.001	Graphic Case, Full Length, 4 bay for Modular Graphic Case System
61.111.471	⅔ Instrument Tray for LCP and VA LCP Distal Radius Systems
61.111.472	⅓ Instrument Tray for Distal Radius, Forceps and Bending Pliers
61.111.473	⅓ Instrument Tray for Distal Radius, Retractors, Hook, and Elevators

Instruments

02.111.500.10	1.25 mm Plate Reduction Wire, threaded tip with small stop, 150 mm, 1 pkg. of 10 ea.
02.111.501.10	1.25 mm Plate Reduction Wire, threaded tip with large stop, 150 mm, 1 pkg. of 10 ea.
03.110.000	1.8 mm Universal Variable Angle Locking Drill Guide
03.110.005	Handle for Torque Limiting Attachment
03.110.007	StarDrive Screwdriver, T8
03.110.021	1.8 mm Drill Guide with Measuring for Guide Block
03.110.023	1.8 mm Variable Angle Locking Drill Guide, cone
03.110.024	1.8 mm Variable Angle Locking Drill Guide, coaxial
03.111.005	Depth Gauge for 2.4 to 2.7 mm Screws
03.111.007	Positioning Screw for Variable Angle LCP Two-Column Plate Guide Block
	Drill Bits, quick coupling, 100 mm
310.19	2.0 mm
310.26	2.7 mm
310.509	1.8 mm
310.530	2.4 mm
311.43	Handle, with quick coupling
314.453	Short StarDrive Screwdriver Shaft, T8, 55 mm
314.467	StarDrive Screwdriver Shaft, T8, 105 mm
314.468	Holding Sleeve, for StarDrive Screwdriver Shaft, T8
319.39	Sharp Hook

323.029	Threaded LCP Drill Guide
323.202	2.4 mm Universal Drill Guide
323.26	2.7 mm Universal Drill Guide
324.084	1.25 mm K-wire Insert
329.12	Bending Pliers, 140 mm, for 1.5 mm and 2.0 mm plates
398.41	Reduction Forceps with Points, broad, ratchet, 132 mm length
398.95	Termite Forceps, 90 mm length
399.18	Hohmann Retractor, 6 mm width, small, short narrow top, 160 mm length
399.19	Hohmann Retractor, 8 mm width, small, short narrow top, 160 mm length
399.48	Periosteal Elevator, 3 mm width, curved blade, straight edge
399.481	Periosteal Elevator, 3 mm width, curved blade, round edge
399.97	Reduction Forceps, with points, ratchet, 130 mm length
511.776	Torque Limiting Attachment, 0.8 Nm, quick coupling

Kirschner Wires, 150 mm, trocar point, 1 pkg. of 10 ea.

Stainless Steel*	Titanium**	
02.110.300	04.110.300	1.8 mm
292.12	492.12	1.25 mm
292.16	492.16	1.6 mm

60.116.054 Module Adapters, 4 pkg. of 2 ea.

Assembled on both ends of any 1-high module to prevent movement when housed in the module bay of the following graphic cases: 60.116.001, 60.116.003, 60.116.004, 60.116.005, 60.116.006

Includes implant sets:

Stainless Steel	Titanium	
01.111.461	01.111.462	2.4 mm Variable Angle LCP (VA LCP) Two-Column Volar Distal Radius Plate Set
01.111.480	01.111.481	2.4 mm Variable Angle LCP (VA LCP) Narrow Two-Column Volar Distal Radius Plate Set
01.111.482	01.111.483	2.4 mm Variable Angle LCP (VA LCP) Extra-Articular Distal Radius Plate Set
01.111.486	01.111.487	Screw Set for 2.4 mm Variable Angle LCP (VA LCP) Distal Radius System
01.115.000	01.115.001	2.4 mm Variable Angle LCP (VA LCP) Dorsal Distal Radius Plate Module Set

*316L Stainless steel.
**Titanium alloy (Ti-6Al-4V).

ALSO AVAILABLE
For use with Modular Graphic Case System

Graphic Cases and Accessories

60.111.474	1.8 mm Short Threaded Drill Guide and Measuring Device Module (Module fits into auxiliary bin on the ⅔ instrument tray. This module houses instruments used with only LCP Implants. Module houses 03.110.006, 03.110.020, and 323.035)
61.116.001	Graphic Case, Full Length, 4 Bay
61.116.003	Graphic Case, Full Length, One High
61.116.004	Graphic Case, ⅔ Length, 4 Bay
61.116.005	Graphic Case, ⅔ Length, 2 Bay
61.116.006	Graphic Case, ⅔ Length, One High
61.116.014	Support Screws for Trays and Screw Racks, for use with Full Length Modular Graphic Cases
61.116.015	Lid, Full Length for Modular Graphic Case System
61.116.016	Lid, ⅔ Length for Modular Graphic Case System

Instrument Trays

61.111.471	⅔ Length Instrument Tray for LCP and VA LCP Distal Radius Systems
61.111.472	⅓ Instrument Tray for Distal Radius, Forceps and Bending Pliers
61.111.473	⅓ Instrument Tray for Distal Radius, Retractors, Hook and Elevators
61.116.114	⅓ Length Auxiliary Tray
61.116.020	⅓ Length Instrument Tray for 2.4 mm Cortex and Variable Angle Screws
61.116.028	⅓ Length Instrument Tray for 2.4 mm/2.7 mm Cortex, Locking and Variable Angle-LCP Screws
61.116.033	⅓ Length Instrument Tray for Mini Fragment General Instruments

Plate Module and Bins

60.116.052	Module Shell for Plate Trays and Auxiliary Trays, for Modular Graphic Case System
60.111.462	Module Lid for VA LCP Two-Column Volar Distal Radius Plate Module
60.111.466	Module Lid for VA LCP Two-Column Volar Distal Radius Plate, Narrow
60.111.468	Module Lid for VA LCP Extra-Articular Distal Radius Plate
	Module Bins ½ length, ½ height
60.111.481	For 6-hole head, volar column plates
60.111.482	For 7-hole head, volar column plates
60.111.483	For 8-hole head, volar column plates
60.111.484	For 9-hole head, volar column plates
60.111.478	Narrow 6-Hole Head, Two-Column Plates
60.111.479	6-Hole Head, Two-Column Plates
60.111.480	7-Hole Head, Two-Column Plates
60.116.203	Auxiliary Bin, ½ length, ½ height
	Module Bins full length, ½ height
60.111.485	For 2.4 mm VA LCP Dorsal Distal Radius Plates
60.116.200	Auxiliary Bin, full length, full height

Screw Module, Screw Blocks, and Accessories

60.111.470	Screw Rack Lid for 2.4 mm VA LCP Distal Radius System Graphic Case
60.116.050	Screw Module Shell, for Modular Graphic Case System
60.116.051	Lid for Screw Module Shell
60.116.058	2.4 mm Screw Block for Screw Module Shell
60.116.059	2.7 mm Screw Block for Screw Module Shell
60.116.013	Assembly Screws, for Screw Module Shell (5 pkg.)

Label Sheets

60.111.475	Graphic Case Label Sheet for Distal Radius Systems
60.116.554	Label Pack, for 2.4 mm screws and instruments for Modular Graphic Case System
60.116.555	Label Pack, for 2.7 mm screws and instruments for Modular Graphic Case System

Screw Type Push Pins (5 ea.)

60.116.452	Blank
60.116.503	Buttress
60.116.507	Cortex
60.116.513	Locking
60.116.521	VA Locking

Also Available
For use with Modular Graphic Case System

Length Marker Push Pins (5 ea.)

	Length (mm)		Length (mm)
60.116.451	Blank	60.116.318	18
60.116.306	6	60.116.320	20
60.116.308	8	60.116.322	22
60.116.310	10	60.116.324	24
60.116.312	12	60.116.326	26
60.116.314	14	60.116.328	28
60.116.316	16	60.116.330	30

Instrument Tray Sets

Stainless Steel	Titanium	
01.111.500	01.111.501	⅔ Instrument Tray, for LCP and Variable Angle LCP Distal Radius Systems
01.111.516		⅓ Instrument Tray for Distal Radius, Forceps and Bending Pliers
01.111.517		⅓ Instrument Tray for Distal Radius, Retractors, Hook and Elevators
01.116.020		⅓ Instrument Tray for 2.4 mm Cortex and Variable Angle Locking Screws
01.116.228		⅓ Length Instrument Set for 2.4 mm Locking, Variable Angle Locking, Cortex and 2.7 mm Cortex Screws
01.116.033		⅓ Length Mini Fragment General Instrument Set

Screw Rack Set

Stainless Steel	Titanium	
01.111.486	01.111.487	Screw Set for 2.4 mm Variable Angle LCP (VA LCP) Distal Radius System

Screw Module Sets

Stainless Steel	Titanium	
01.111.502	01.111.503	2.4 mm and 2.7 mm Variable Angle Locking Screw Module for Distal Radius
01.111.504	01.111.505	2.4 mm and 2.7 mm LCP Screw Module,for Distal Radius
01.111.506	01.111.507	2.4 mm and 2.7 mm LCP and Variable Angle Locking Screw Module, for Distal Radius
01.111.508	01.111.509	2.4 mm LCP and Variable Angle Locking Screw Module, for Distal Radius

Plate Module with Bin Sets

Stainless Steel	Titanium	
01.111.510	01.111.511	2.4 mm Variable Angle LCP Two-Column Plate Module, with Bins
01.111.512	01.111.513	2.4 mm LCP Volar Column Plate Module, with Bins
01.111.514	01.111.515	2.4 mm Two-Column and Volar Column Plate Module, with Bins

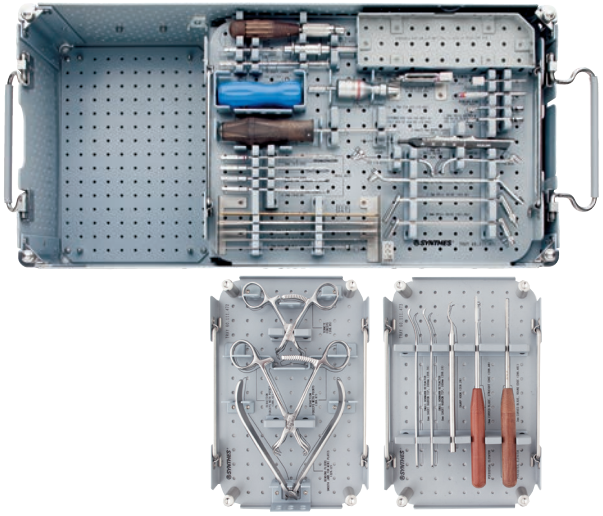
Additional Instruments

03.110.022	StarDrive Screwdriver Shaft, T8 with hexagonal coupling for ratcheting handle
311.023.97	Ratcheting Screwdriver Handle
319.006	Depth Gauge, for 2.0 mm and 2.4 mm screws
319.01	Depth Gauge, for 2.7 mm screws
	Sizing Templates, for 2.4 mm Variable Angle LCP Two-Column Volar Distal Radius Plate
03.111.530/ 03.111.531	Narrow, 6-hole head (right and left)
03.111.630/ 03.111.631	6-hole head (right and left)
03.111.730/ 03.111.731	7-hole head (right and left)

ALTERNATE SETS

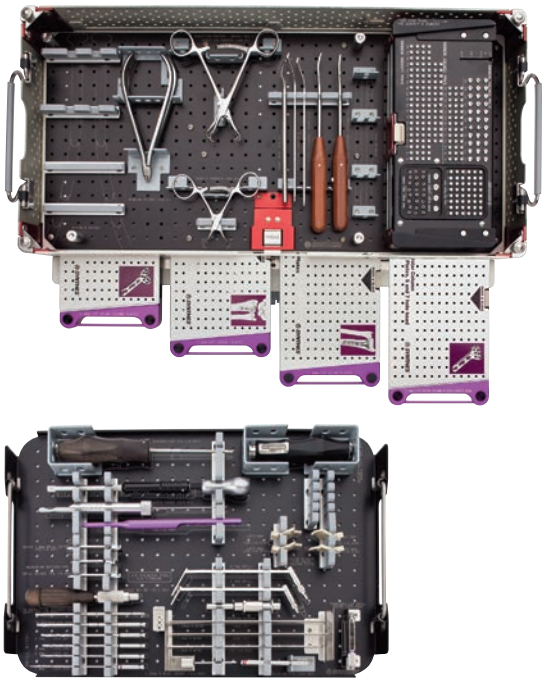
2.4 mm LCP and Variable Angle LCP (VA LCP) Distal Radius Instrument Set
Stainless Steel (01.111.484) and Titanium (01.111.485)

Note: **Distal radius implant modules and screw sets are ordered separately.**



2.4 mm LCP Distal Radius System
Stainless Steel (01.110.045) and Titanium (01.110.046)

60.110.037	Graphic Case for 2.4 mm LCP Distal Radius System
60.110.038	Screw Rack for 2.4 mm LCP Distal Radius System Graphic Case



2.4 mm Variable Angle LCP Distal Radius System Instrument and Implant Set

Stainless Steel (01.110.070) and Titanium (01.110.071)

60.110.070 Variable Angle LCP Distal Radius Instrument and Implant Module

60.110.071 Variable Angle LCP Distal Radius Instrument and Implant Module Lid

60.110.072 Module Upgrade Kit for the 2.4 mm VA LCP Two-Column Volar Distal Radius Plate (for use with 01.110.070 and 01.110.071)

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Monument, CO 80132

Synthes GmbH
Luzernstrasse 21
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