Part of the Variable Angle Periarticular Plating System

4.5 mm Variable Angle LCP® Curved Condylar Plate System

Surgical Technique

DePuy Synthes

PART OF THE Johnson&Johnson FAMILY OF COMPANIES

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MR Information
The 4.5 mm VA LCP Curved Condylar Plate 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 4.5 mm VA LCP Curved Condylar Plate System in the MR environment is unknown. Scanning a patient who has this device may result in patient injury.

Image intensifier control

4.5 mm Variable Angle LCP® Curved Condylar Plate System

The DePuy Synthes 4.5 mm Variable Angle (VA) LCP® Curved Condylar Plate is part of the VA LCP Periarticular Plating System which merges variable angle locking screw technology with conventional plating techniques.

The 4.5 mm VA LCP Curved Condylar Plate System has many similarities to standard locking fixation methods, with a few important improvements. Variable angle locking screws provide the ability to create a fixed-angle construct (which provides advantages in osteopenic bone and multifragmentary bridge-plated fractures) while also allowing the surgeon the freedom to choose the screw trajectory before "fixing" the angle of the screw.

Note: For information on fixation principles using conventional and locked plating techniques, please refer to the DePuy Synthes Large Fragment LCP Instrument and Implant Set Technique Guide.

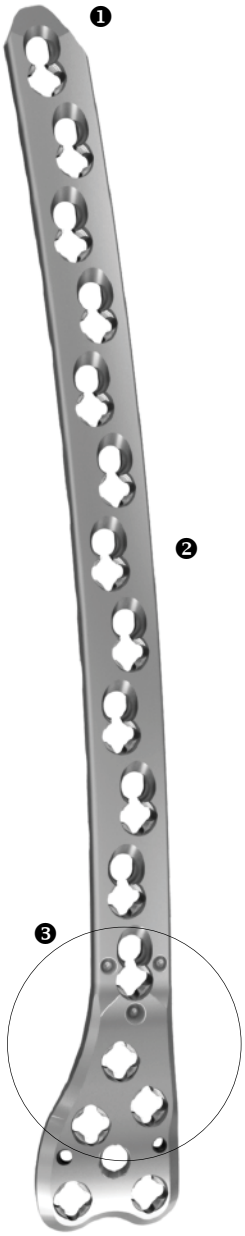
The value of the system to offer solutions for diverse surgical situations is based on these three benefit pillars:

1. **Implant versatility** to address many fracture patterns, surgical situations, and patient anatomies
2. **Variable Angle Locking and OPTILINK™ Screw** technology for reliable screw insertion and removal
3. **Broad instrument options** including minimally-invasive instrumentation for limited soft tissue trauma

1. Implant versatility

- Broad choice of plate lengths (6–22 holes) ❶
- Anatomic plate shape to match patient's anatomy: precontoured shaft to mimic the anterior bow of the femur, precontoured plate head to match the distal femur and anatomic screw hole pattern ❷
- Plate with Variable Angle (VA) locking holes in the plate head and Variable Angle COMBI® (VA LCP) holes in the plate shaft ❸
- Free choice of plate material (stainless steel or titanium alloy)
- Plate compatibility with several screw types fulfilling diverse functions including VA Locking, Locking, and Cortex Screws
- Plate compatibility with several periprosthetic treatment options: VA periprosthetic locking screws with blunt tip and VA Positioning Pins for cable system in cruciform design to fit in the VA Locking hole. Compatibility with Locking Attachment Plate ❹

Note: The central hole in the head of the plate is a fixed angle locking hole and accepts 5.0 mm VA locking screws. ❺



2. Variable Angle Locking and OPTILINK™ Screw Technology

Variable Angle Screw Technology

- Variable Angle Locking Screws to adapt screw angles to diverse fracture patterns and anatomies
- VA technology with angulation possibilities of up to 15° in each direction around the central axis of the plate hole ❻
- Broad choice of screw types and lengths depending on fracture types and surgeon preference: periprosthetic, solid, or cannulated VA Locking Screws ❼
- All solid VA Locking Screws are equipped with a STARDRIVE™ recess; cannulated VA Locking Screws offer a 4.0 mm hex recess

OPTILINK™ Screw Technology

- OPTILINK is the brand name for a Stainless Steel VA Locking Screw which has undergone a special heat treatment and hardening process
- The brand name OPTILINK has been chosen as the technology
  - Optimizes the link between plate and screw and
  - Optimizes the link between two materials
- To differentiate the screw from the "normal" Stainless Steel Locking Screws, a golden color coding has been added on the top of the screw
- OPTILINK technology makes the use of VA Locking Screws in Stainless Steel or TAN VA Condylar Plates possible

3. Broad instrument options

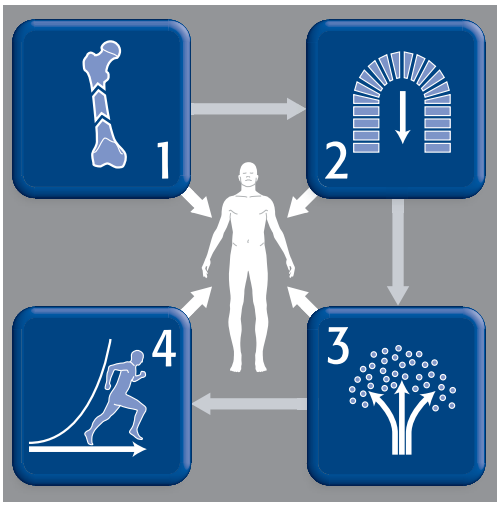
- Various instrument options for fixed and variable angle predrilling in the plate head
- Dedicated instrumentation for a minimally-invasive approach in the plate shaft
  - Insertion handle for plate insertion and attaches through the most distal VA locking hole in the plate shaft
  - Aiming arm and guides for targeted predrilling and screw insertion in the plate shaft
  - Scalpel handle for making incision through the aiming arm for predrilling and screw insertions in the plate shaft

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 DePuy Synthes 4.5 mm VA LCP Curved Condylar Plate System is indicated for buttressing multifragmentary distal femur fractures including: supracondylar, intra-articular and extra-articular condylar fractures, periprosthetic fractures, fractures in normal or osteopenic bone, nonunions and malunions.

Special Considerations

AO Principles of Fracture Management

The 4.5 mm VA LCP Curved Condylar Plate is one plating solution for fixation of distal femur fractures. Full assessment of the fracture and injury to the patient should be performed to determine if the fracture should be treated by an alternative method of fixation.

Postoperative Care

The 4.5 mm VA LCP Curved Condylar Plate is a load-bearing device; therefore, it is important for the patient to be made aware of postoperative limitations.

The following is a recommended approach for postoperative care following the treatment of distal femur fractures[2].

The aim of surgery is to provide stable fixation which allows early, functional rehabilitation of the injured knee. Active, assisted motion of the hip, knee, and ankle may be started as early as 48 hours post-operatively, provided the soft tissue injury permits this and the patients has a good analgesia regimen. Continuous passive motion may also be effective.

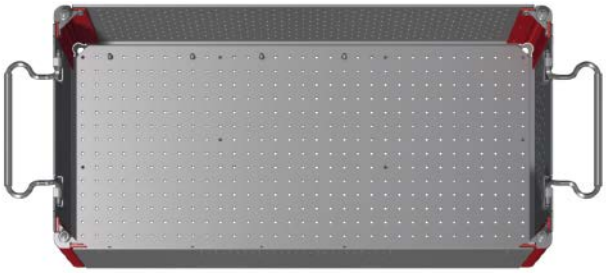
In simple fractures with bone contact, the internal fixation is stable enough to allow partial weight bearing (10–15 kg) immediately after surgery.

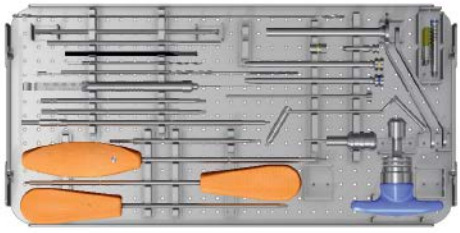
Multifragmentary fractures with bridge plate constructs generally require more protection and should not bear weight initially. Progressive weight bearing is allowed after callus formation is seen during follow-up at 6 to 12 weeks.

2. Rüedi TP, RE Buckley, CG Moran. *AO Principles of Fracture Management*. 2nd ed. Stuttgart New York: Thieme; 2007.

1. Prepare preoperative plan

Required sets	
01.231.015 or 01.231.018	4.5 mm VA LCP Curved Condylar Plate Set 4.5 mm Ti VA LCP Curved Condylar Plate Set
01.231.016	4.5 mm VA LCP Curved Condylar Aiming Instrument Set
01.231.017 and/or 01.231.023	4.5 mm VA LCP Instrument and Screw Set (screws for use with stainless steel plates only) 5.0 mm VA Locking Screw with OPTILINK Technology Set (for use with stainless steel and/or titanium plates)
Optional sets	
105.909	Periarticular Reduction Forceps Set
115.700	Large Distractor
115.720 or 115.740	Large External Fixator Set with Self-Drilling Schanz Screws Large External Fixator Set with Ti Self-Drilling Schanz Screws
Optional instrument	
03.100.048	6.0 mm LCP Attachment Pin (used with Large Distractor)





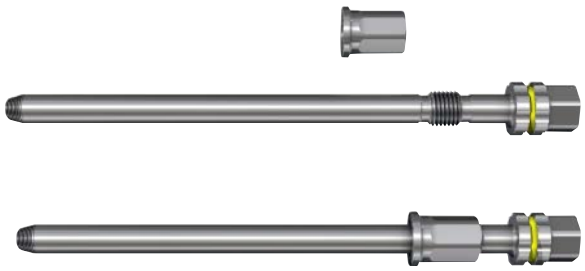
Complete a preoperative radiographic assessment and prepare the preoperative plan. Position the patient supine on a radiolucent operating table. Viewing the distal femur under fluoroscopy in both the lateral and AP views is necessary.

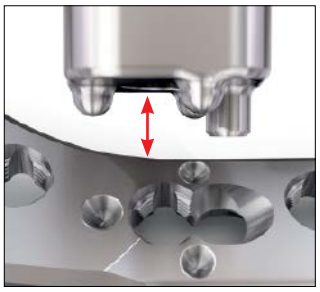
Precaution: Plate bending is not recommended as this may weaken the plate and the plate-screw interface and can compromise the targeting function of an aiming arm, if in use. However, there may be cases in which plate bending is clinically necessary. In such cases, the plate should only be bent to fit proximal femur anatomy and only bend the plate incrementally and between screw holes using the plate bending press (329.30), and never bend back and forth. Insert at least one screw distal to the bend.

2. Attach insertion handle

Instruments

03.231.001	Insertion Handle for 4.5 mm VA LCP Curved Condylar Plate
03.231.005	Interlocking Bolt for 4.5 mm VA LCP Curved Condylar Plate Insertion Handle
03.231.006	Nut for Interlocking Bolt for 4.5 mm VA LCP Curved Condylar Plate Insertion Handle
321.16	Combination Wrench, 11 mm width across flats





Note: In certain cases, (e.g., distal fracture treated with a short plate) it may be advantageous to do the surgery without using an aiming arm. Then, for inserting VA locking screws in the plate shaft, the same surgical technique as described in section "Insert Screws in Surrounding Plate Head Holes" applies. Cortex screws can be inserted in the shaft of the plate without using the aiming arm by applying the technique described in the LCP Locking Compression Plate surgical technique.

Thread the nut onto the interlocking bolt.

Position the insertion handle so that the spherical pins on the underside align with the dimples around the first COMBI hole of the appropriate 4.5 mm VA LCP curved condylar plate. Insert the interlocking bolt, with nut, into the through hole of the insertion handle and thread the tip into the threaded portion of the COMBI hole until it is firmly finger-tightened.

Tighten the interlocking bolt with the combination wrench.

Precaution: It is important that the appropriate 4.5 mm VA LCP curved condylar plate is placed flat on the back table when positioning the insertion handle and interlocking bolt, to ensure the interlocking bolt is perpendicular to the plate and not cross threaded into the COMBI hole.

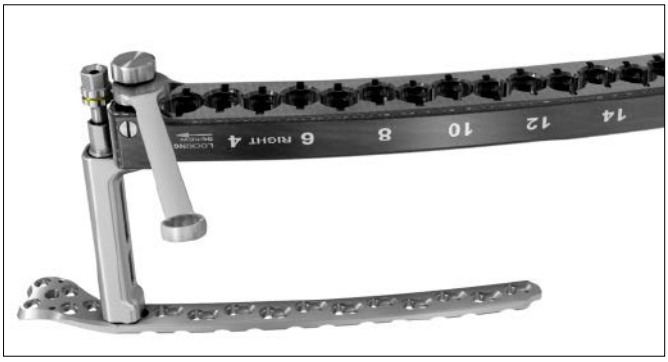
Alternative instrument

03.120.022	Handle for Percutaneous Threaded Drill Guides

The handle for the percutaneous threaded drill guides can be used to insert the interlocking bolt, with nut, into the through hole of the insertion handle to thread the tip into the threaded portion of the COMBI hole until it is firmly tightened.

3. Secure aiming arm to plate

Instruments	
03.231.003	Aiming Arm for 4.5 mm VA LCP Curved Condylar Plate, left
03.231.004	Aiming Arm for 4.5 mm VA LCP Curved Condylar Plate, right
03.231.007	Locking/Neutral Guide for 4.5 mm VA LCP Curved Condylar Aiming Arm
321.16	Combination Wrench, 11 mm width across flats
324.215	2.5 mm Percutaneous Wire Guide for 5.0 mm Locking Screws



Attach the appropriate aiming arm to the insertion handle.

Use the combination wrench to secure the connection bolt to the insertion handle.

Insert a locking/neutral guide into the hole in the aiming arm corresponding with the most proximal COMBI hole in the plate. Orient the arrow on the locking/neutral guide in the direction of the “LOCKING SCREW” arrow on the aiming arm.

Insert the 2.5 mm percutaneous wire guide assembly through the locking /neutral guide and securely thread it into the plate. Tighten the wire guide to the plate to achieve a stable construct between the aiming arm and plate.

Using the combination wrench, tighten the nut on the interlocking bolt to compress the insertion handle to the plate. The insertion handle should be securely attached to the plate and can now be used for plate insertion.

4. Remove aiming arm

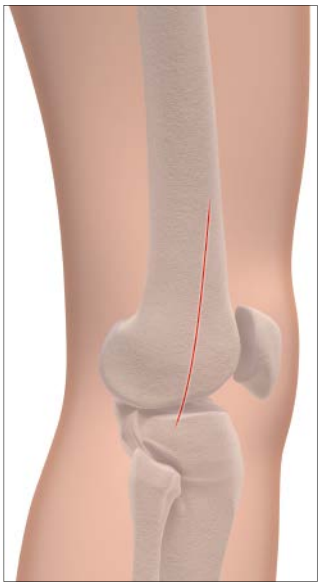
Remove the 2.5 mm percutaneous wire guide, locking/neutral guide and aiming arm to prepare for initial plate insertion.

5. Make incision

Lateral incision
A lateral incision is recommended for a simple articular (AO classification 33-C1) or extra-articular fracture (AO classification 32- or 33-A). The incision begins at Gerdy's tubercle.

Precaution: The incision can be extended if necessary to improve visualization of the articular surface or lateral metaphysis and diaphysis. It may not always be appropriate to use limited incisions and closed reduction techniques.

Lateral parapatellar incision
In the presence of a complex intra-articular fracture (AO classifications 33-C2 or C3), perform a lateral parapatellar approach. Perform an arthrotomy to expose the joint for reduction. Translate the patella and extensor mechanism as necessary with eversion of the patella in special circumstances. Ensure adequate exposure of the joint for an anatomic reduction.



Lateral

Lateral parapatellar

1. Reduce articular surface

Instruments
Pointed Reduction Forceps
Kirschner Wires

Reduce and temporarily secure the articular fragments with pointed reduction forceps and/or Kirschner wires. If a Hoffa plane fracture is present, the posterior condylar fragments must be reduced and provisionally stabilized with K-wires inserted from anterior to posterior.

2. Fix reduction with screws

Secure the condyles with appropriately placed screws. The 4.5 mm VA LCP curved condylar plate may be held laterally on the condyle to select an area where the screw(s) will not interfere with the footprint of the plate. Placing screws around the periphery of the condyle, choosing screws with smaller heads (e.g., 3.5 mm screws), and sinking screws such that they are nearly flush with the lateral condylar cortical edge will ease subsequent plate insertion and improve fit.

For fixation of a posterior articular fragment (Hoffa fracture), place 3.5 mm cortex screws or 4.0 mm cancellous bone screws from anterior to posterior and countersink the screwheads so they lie below the level of articular cartilage. An appropriate headless compression screw may also be used.

Note: Most lengths of 3.5 mm cortex screws are in the Pelvic Implant Set (125.885) and the 3.5 mm Low Profile Pelvic System Implant Set (01.100.002). These sets only contain stainless steel screws.

1. Insert plate

Using the insertion handle assembly, insert the plate submuscularly distal to proximal. Slide the plate proximally until the plate head is oriented properly on the lateral condyle.

Note: The aiming arm can be attached to the insertion handle either before or after plate insertion. In larger patients, it may be advantageous to attach the aiming arm to the insertion handle after plate insertion to minimize risk of impinging any soft tissues during insertion.

2. Determine plate position

In the A-P view, central screw axis should be parallel to knee joint axis (Figure 1).

In the inferior view, central screw axis should be parallel to patellofemoral joint and this is usually anterior 1/3 from the joint (Figure 2).

In the lateral radiographic view, distal shaft of the plate should be in line with the femoral shaft (Figure 3). The posterior edge of the plate is curved to mimic the posterior anatomic curvature of the condyle.

Fracture often results in the femoral shaft been out of alignment with the distal fragment, therefore plate position is extremely important, correct plate position can be determined by orientating the distal plate profile to that of the lateral condyle.

Note: The most posterior distal screw hole could potentially be below the Blumensaat's line, thus requiring the use of a unicondylar screw. For more information on Blumensatt's line, please refer to *The American Journal of Sports Medicine*.[3]

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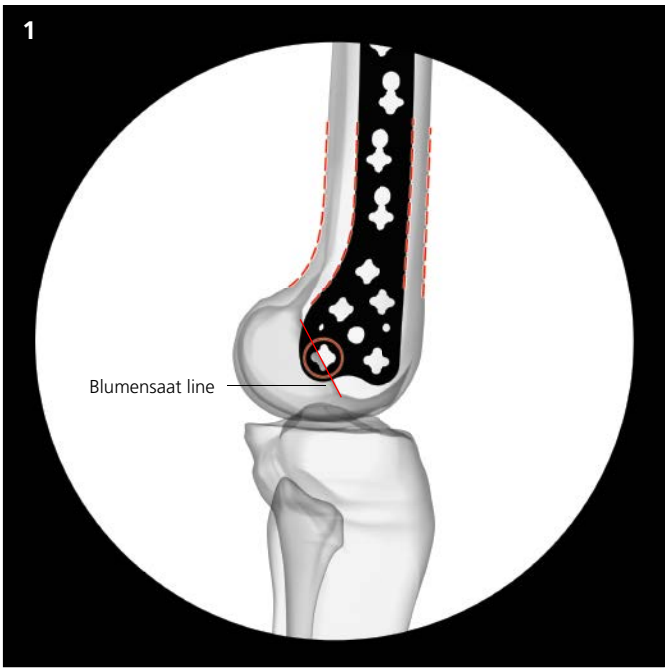

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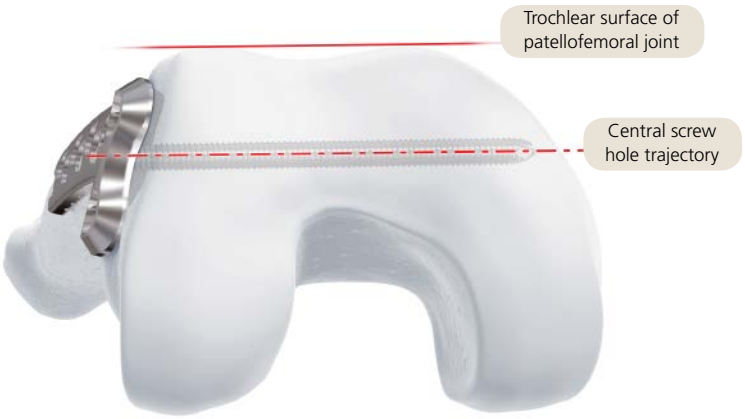

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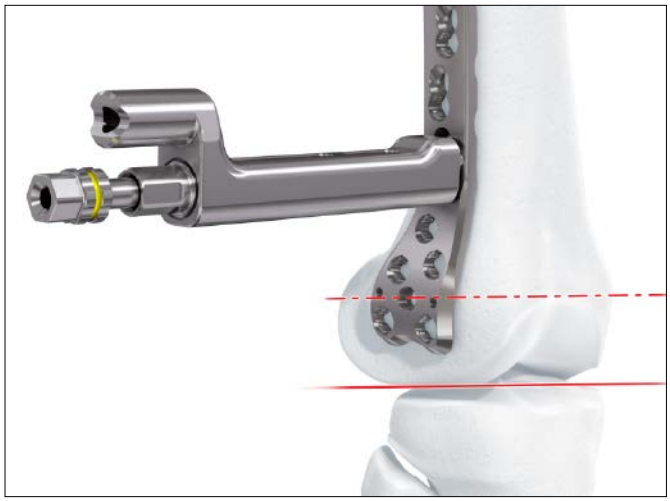
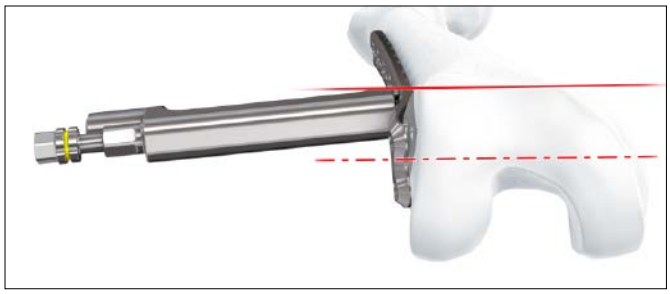
3. Schottle PB, Schmeling A, Rosenstiel N, Weiler A. Radiographic landmarks for femoral tunnel placement in medial patellofemoral ligament reconstruction. *Am J Sports Med*. 2007;35(5):801-804.

Optional technique to determine plate position

Optional instruments	
03.120.023	Pull Reduction Device for 4.3 mm P ercutaneous Threaded Drill Guide
03.120.026	2.5 mm Drill Tip Guide Wire, 300 mm
03.010.150	Star/HexDrive Screwdriver, T25/3.5 mm hex
03.010.151	Star/HexDrive Screwdriver Shaft, T25/3.5 mm hex
03.231.009	Trocar for 4.3 mm VA Drill Guide, long
03.231.016	Cannulated 4.0 mm Hex Screwdriver Shaft, 6 mm hex coupling
310.243	2.5 mm Drill Tip Guide Wire, 200 mm
314.23	Cannulated 4.0 mm Hexagonal Screwdriver Shaft
324.174	2.5 mm Wire Guide for 5.0 mm screws
338.49	Large Quick Coupling





When using the plate as a reduction tool, proper plate placement with respect to the distal segment must be ensured prior to proceeding.

Place a guide wire across the femoral condyles at the level of the knee to indicate the joint axis. Place a second guide wire across the patellofemoral joint on the trochlear surface.

Secure the plate position by using either reduction forceps or by inserting at least one guide wire through the Kirschner wire holes in the plate head before inserting the first screw in the distal segment. Wires can also be inserted through one of the plate head holes by using a wire guide threaded at zero degrees in relation to the plate.

Note: Before proceeding, confirm plate head placement.

3. Secure aiming arm to plate distally and make incision

Instruments	
03.231.003	Aiming Arm for 4.5 mm VA LCP Curved Condylar Plate, left
03.231.004	Aiming Arm for 4.5 mm VA LCP Curved Condylar Plate, right
321.16	Combination Wrench, 11 mm width across flats

Reattach the aiming arm to the insertion handle.

Finger-tighten the connection bolt to secure the aiming arm to the insertion handle. For final tightening, use the combination wrench to secure the connection bolt to the insertion handle.

Locate the hole in the aiming arm that corresponds with the most proximal COMBI hole in the plate. The aiming arm is numbered to facilitate locating the most proximal hole in the plate. Make a skin incision at this location. The incision should be in-line with the direction of the future trocar and cannula insertion.

Note: The recommended insertion depth of the wires in the plate is 20 mm. The images illustrate the recommended insertion depth and the new wire hole trajectory in the plate head.

Precaution: In case a deeper insertion is required, the use of fluoroscopy is recommended to avoid collision.

Alternative instrument for making incision

03.120.016	Scalpel Handle

Attach a #11 blade to the scalpel handle. The scalpel handle will pass through the aiming arm holes and assist in performing a minimally invasive and accurate incision.

The scalpel handle is designed such that the blade is offset with respect to the handle. It should be inserted, backed out, rotated 180°, and reinserted. The goal is to create an incision through the skin, IT band, and vastus lateralis fascia that is larger than the cannula that is to be inserted.

An adequate incision must be made in order to prevent soft tissue impingement when inserting the cannula.

Precaution: Always remove the scalpel blade before storing in the graphic case.

4. Insert trocar

Instruments	
03.120.015	Trocar with Handle
03.231.007	Locking/Neutral Guide for 4.5 mm VA LCP Curved Condylar Plate Aiming Arm

Insert the trocar with handle into a locking/neutral guide for the VA LCP curved condylar plate aiming arm. Align the self-retaining features until the trocar snaps into place within the locking/neutral guide.

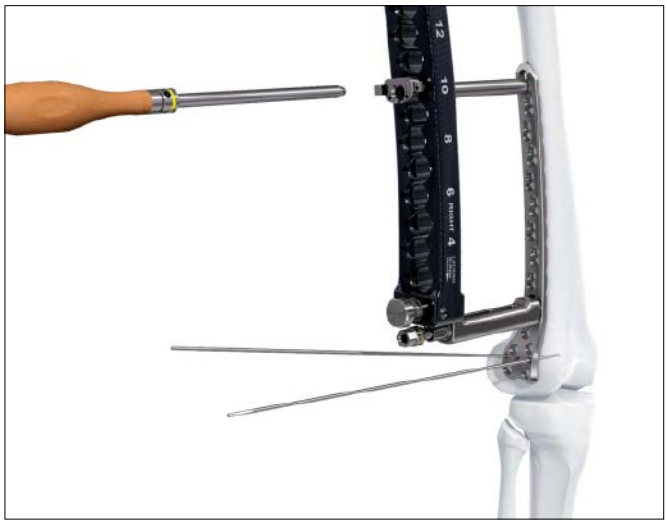
Orient the arrow on the locking/neutral guide in the direction of the "LOCKING SCREW" arrow on the aiming arm, and then use the assembled trocar and locking/neutral guide to push down to the plate through the incision.

Push the assembly completely down, aligning the self-retaining features, until it snaps completely into the aiming arm. Take care not to place excessive pressure on the guide as deflection can occur between the guide and the plate in the face of excessive pressure. The potential for this is increased with longer plates inserted through small incisions in larger patients.

Remove the trocar with handle by depressing its release mechanism and pulling it away from the locking/neutral guide.

5. Secure aiming arm to plate proximally

Instruments	
03.120.022	Handle for Percutaneous Threaded Drill Guides
03.120.026	2.5 mm Drill Tip Guide Wire, 300 mm
324.215	2.5 mm Percutaneous Wire Guide for 5.0 mm Locking Screws

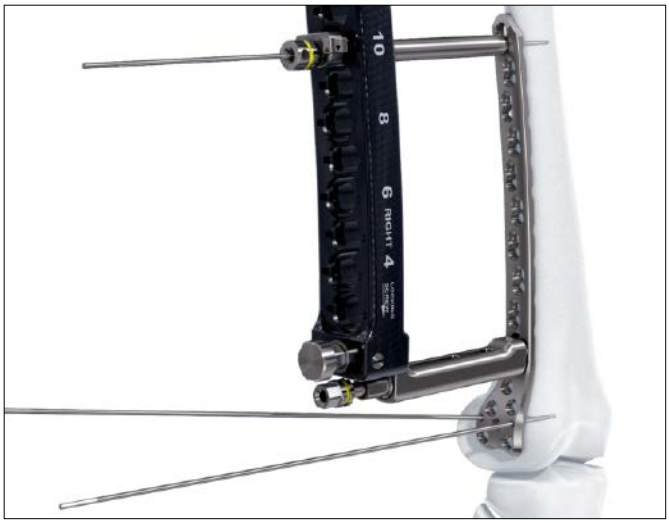


To ensure precise targeting using the aiming arm, it is important to build the box by inserting the 2.5 mm wire.

Thread the handle into the wire guide. Insert the handle and wire guide assembly through the locking/neutral guide, and securely thread it into the plate. Turn the handle counterclockwise to disengage and remove it from the guide.

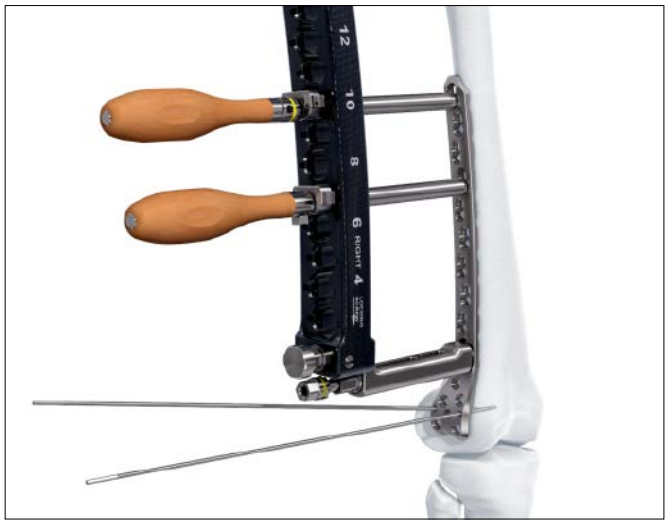
Note: Be sure to securely tighten the wire guide to the plate to achieve a stable construct between the aiming arm and the plate.

Insert a 2.5 mm drill tip guide wire into the bone through the percutaneous wire guide only after ensuring appropriate length and rotation have been achieved through the fracture site. Small changes in coronal and sagittal plane alignment will still be possible after this step.



If necessary, to assist in aligning the aiming arm with the plate, the trocar with handle and locking neutral guide can be inserted into the most distal hole of the proximal fragment.

The trocar assembly may assist in securing the 2.5 mm percutaneous wire guide into the most proximal hole in the plate to complete the box so that a 2.5 mm wire can be inserted to secure the aiming arm to the plate.



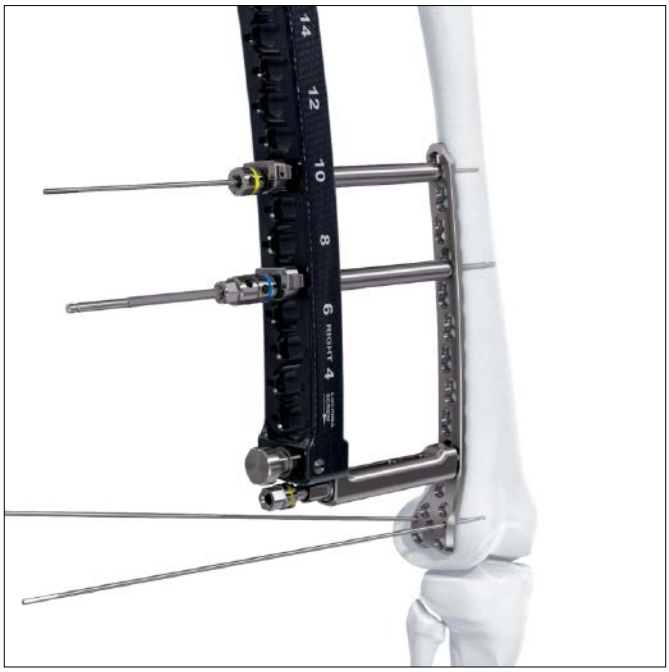
Alternative instruments for proximal fixation

324.203	4.3 mm Percutaneous Threaded Drill Guide
324.213	4.3 mm Percutaneous Drill Bit, quick coupling, 300 mm

Using the 4.3 mm drill bit, drill through the 4.3 mm percutaneous drill guide to the far cortex, leaving the drill bit in place to stabilize the proximal portion of the place on the bone.

6. Use pull reduction device (optional)

Instruments	
03.120.023	Pull Reduction Device for 4.3 mm Percutaneous Drill Guide
03.231.007	Locking/Neutral Guide for 4.5 mm VA LCP Curved Condylar Plate Aiming Arm
321.16	Combination Wrench, 11 mm width across flats
324.203	4.3 mm Percutaneous Threaded Drill Guide



Additional correction can be completed before placement of screws in both main fracture fragments. The pull reduction device is placed through the guide and the plate holes to pull or push bone fragments relative to the plate.

This instrument can be used for:
- Minor varus/valgus adjustment (approximately 2°–4°)
- Coronal plane translational adjustments
- Stabilization of plate-bone orientation during insertion of the first screws
- Alignment of segmental fractures
- Predrilling dense or thick cortical bone before placing a 5.0 mm VA locking screw

Note: The pull reduction device may be used for minor corrections. It must be used with a 4.3 mm percutaneous threaded drill guide and a locking/neutral guide.

Thread the nut for the pull reduction device over the tip of the pull reduction device.

When pull reduction device has been attached to a power tool (quick coupling), insert it through a 4.3 mm percutaneous threaded drill guide that has been threaded into the plate.

With the nut in its highest position, begin power insertion of the pull reduction device. Stop insertion before the tip of the pull reduction device reaches the far cortex.

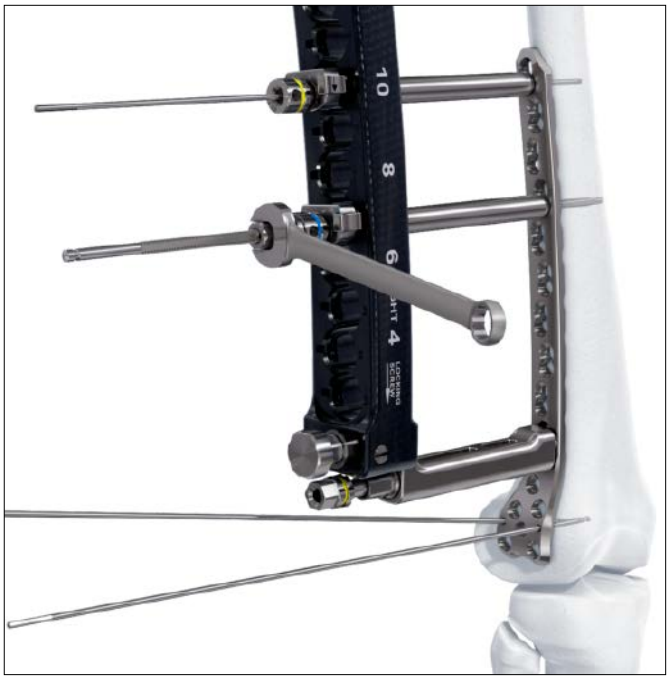
Precaution: Attempting to advance beyond this point may cause threads to strip in bone.

Remove the power tool and begin tightening the nut toward the drill guide, while monitoring progress under radiographic imaging.

Note: A combination wrench may be used to facilitate tightening and loosening of the nut.

Stop when the desired reduction is achieved. If the plate is properly positioned distally parallel to the anterior half of the lateral femoral condyle, it will be slightly internally rotated with respect to the shaft proximally. This has the potential to create minor sagittal plane changes when using this technique for coronal plane alignment.

The pull reduction device is 4.3 mm in diameter and calibrated for screw length measurement to allow later placement of a 5.0 mm VA locking screw in the same hole.



Optional instrument

03.231.002	Stopper for 4.5 mm VA LCP Curved Plate Aiming Arm

Mark each screw location in the aiming arm, using a stopper for reference, as screw insertion proceeds.

Insert Screw in Central Plate Head Hole

Option A: 5.0 mm Solid Variable Angle Screw

1. Drill

Instruments	
310.431	4.3 mm Drill Bit, quick coupling, 180 mm
312.449	4.3 mm Threaded Drill Guide

The central plate head hole is a fixed-angle hole which accepts 5.0 mm VA locking screws, however only in a nominal position. Although screws may be inserted in any order, it is usually advantageous to start with the central screw.

Note: If required, lag screw reduction of a fragment must be accomplished before inserting locking screws into the fragment. Lag screw reduction can be accomplished using a 5.0 mm cannulated conical screw,* or a 4.5 mm cortex screw, in the central hole of the plate head. For interfragment compression, the 5.0 mm screw nut can be used with 5.0 mm cannulated conical screws. Conical and cortex screws may be replaced with locking screws after reduction is complete.

Insert a 4.3 mm threaded drill guide into the central head hole of the plate. Insert the 4.3 mm drill bit through the drill guide, parallel to the joint axis and perpendicular to the anterior half of the lateral femoral condylar.[4,5]

Advance the drill but until it reaches the medial wall of the femoral condyle.

Precaution: Verify that the wire for preliminary fixation is not colliding with a drill bit or screw during fixation.

*5.0 mm cannulated conical screws can be found in the Periarticular Plating System and the 5.0 mm Cannulated Conical Screw Set.

4. Karunakar MA, Kellam JF. Avoiding malunion with 95° fixed-angle distal femoral implants. *J Orthop Trauma.* 2004;18(7):443-445.
5. Maier A, Cordey J, Regazzoni P. Prevention of malunions in the rotation of complex fractures of the distal femur using the dynamic condylar screw (DCS): an anatomical graphic analysis using computed tomography on cadaveric specimens. *Injury.* 2000;31(suppl 2):B63-B69.

Option A: 5.0 mm Solid Variable Angle Screw

2. Measure for screw length

Instrument	
319.10	Depth Gauge, for large screws

To measure for screw length, read off the calibrated 4.3 mm drill bit or use the depth gauge.

Alternatively, the depth gauge can be used to measure for screw length after removal of the threaded drill guide.

Precaution: Due to the difference in the placement of the head of a locking screw compared to a cortex screw, care should be taken when determining screw length with the depth gauge.

Remove the drill bit and drill guide.

Alternative technique: Using percutaneous instruments

Alternative instruments	
324.203	4.3 mm Percutaneous Threaded Drill Guide
324.213	4.3 mm Percutaneous Drill Bit, quick coupling, 300 mm, calibrated

Alternatively, the 4.3 mm percutaneous threaded drill guide may be inserted into the central hole of the plate and the screw measurement can be read from the calibrated 4.3 mm percutaneous drill bit.

Option A: 5.0 mm Solid Variable Angle Screw

3. Insert screw

Instruments	
03.010.151	Star/HexDrive Screwdriver Shaft, T25/3.5 mm hex
03.231.013	6 Nm Torque Limiting Blue T-Handle, 6 mm hex coupling
03.231.015	SD25 STARDRIVE™ Screwdriver Shaft, 6 mm hex coupling, 180 mm
314.119	STARDRIVE Screwdriver Shaft, T25, quick coupling

Insert the appropriate length 5.0 mm variable angle locking screw.

Initial insertion of the 5.0 mm variable angle locking screws may be done using power equipment and the T25 STARDRIVE screwdriver shaft with quick coupling.

Confirm screw position and length prior to final tightening.

Precautions:

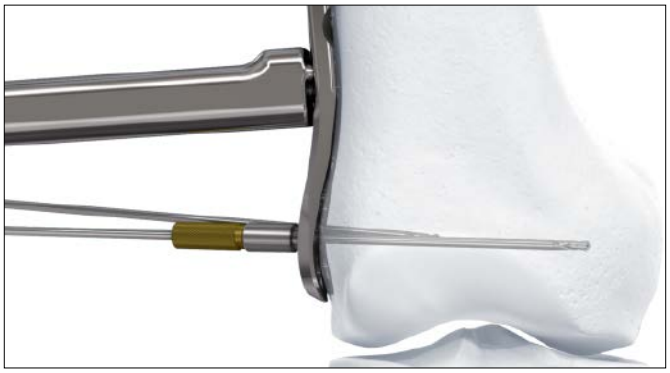
- **Verify that the wire for preliminary fixation is not colliding with a drill bit or screw during insertion.**
- **Final tightening must always be done manually using the 6 Nm torque limiting handle and the T25 STARDRIVE Screwdriver shaft with 6 mm hex coupling.**
- **The 6 Nm torque limiting handle should not be used for screw removal as it could damage the instrument.**

Insert Screw in Central Plate Head Hole

Option B: 5.0 mm Cannulated Variable Angle Screw

1. Insert drill tip guide wire

Instruments	
310.243	2.5 mm Drill Tip Guide Wire, 200 mm
324.174	2.5 mm Wire Guide for 5.0 mm screws



The central plate head hole is a fixed-angle hole which accepts 5.0 mm VA locking screws, however only in a nominal position. Although screws may be inserted in any order, it is usually advantageous to start with the central screw.

Note: If required, lag screw reduction of a fragment must be accomplished before inserting locking screws into the fragment. Lag screw reduction can be accomplished using a 5.0 mm cannulated conical screw,* or a 4.5 mm cortex screw, in the central hole of the plate head. For interfragment compression, the 5.0 mm screw nut can be used with 5.0 mm cannulated conical screws. Conical and cortex screws may be replaced with locking screws after reduction is complete.

Insert a 2.5 mm drill tip guide wire through the pre-assembled 2.5 mm wire guide, parallel to the joint axis and perpendicular to the anterior half of the lateral femoral condyle.

Advance the guide wire through the wire guide until it reaches the medial wall of the femoral condyle.

Precaution: Verify that the wire for preliminary fixation is not colliding with a drill bit or screw during insertion.

*5.0 mm cannulated conical screws can be found in the Periarticular Plating System and the 5.0 mm Cannulated Conical Screw Set.

Option B: 5.0 mm Cannulated Variable Angle Screw

Alternative technique: Using percutaneous instruments

Instruments	
324.215	2.5 mm Percutaneous Wire Guide for 5.0 mm Locking Screws
03.120.026	2.5 mm Drill Tip Guide Wire, 300 mm

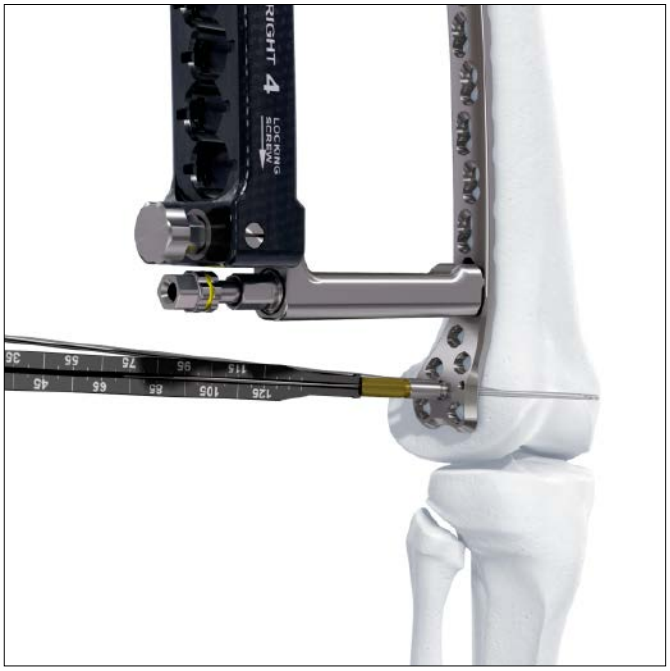
Alternatively, the 2.5 mm percutaneous wire guide for 5.0 mm locking screws may be inserted into the central head hole of the plate and the 2.5 mm drill tip guide wire, 300 mm, can be inserted through the wire guide, parallel to the joint axis and the perpendicular to the anterior half of the lateral femoral condyle.

Advance the guide wire through the wire guide until it reaches the medial wall of the femoral condyle. Follow Step 2 to measure for screw length.

2. Measure for screw length

Instrument	
03.231.017	Direct Measuring Device for cannulated VA Screws

Remove the 2.5 mm wire guide. Measure for screw length using the direct measuring device for 5.0 mm cannulated VA screws. For proper screw length measurement, the direct measuring device should be firmly placed into the plate hole. This will place the tip of the screw at the tip of the guide wire.



Option B: 5.0 mm Cannulated Variable Angle Screw

3. Insert screw

Instruments	
03.231.013	6 Nm Torque Limiting Blue T-Handle, 6 mm hex coupling
03.231.016	Cannulated 4.0 mm Hexagonal Screwdriver Shaft, 6 mm hex coupling
314.23	Cannulated 4.0 mm Hexagonal Screwdriver Shaft
338.49	Large quick coupling

Insert the appropriate length 5.0 mm cannulated variable angle locking screw over the guide wire and into the bone. Remove the guide wire.

Initial insertion of the 5.0 mm cannulated variable angle locking screws may be done using power equipment and the cannulated 4.0 mm hexagonal screwdriver shaft with the large quick coupling. Confirm screw position and length prior to final tightening.

Precautions:

- **Verify that the wire for preliminary fixation is not colliding with a drill bit or screw during insertion.**
- **Final tightening must always be done manually using the 6 Nm torque limiting handle and the T25 STARDRIVE Screwdriver shaft with 6 mm hex coupling.**
- **The 6 Nm torque limiting handle should not be used for screw removal as it could damage the instrument.**

Note: The self-drilling, self-tapping flutes of the 5.0 mm cannulated variable angle screws make predrilling and pretapping unnecessary in most cases. In dense bone, the lateral cortex can be predrilled, if necessary.

Insert Screws in Surrounding Plate Head Holes

Option A: 5.0 mm Solid Variable Angle Screws

1. Drill

Instruments	
03.122.040	4.3 mm Variable Angle Double Drill Guide with Cone
310.431	4.3 mm Drill Bit, quick coupling, 180 mm

The 4.3 mm variable angle drill guide with cone allows either fixed-angle drilling (straight end) or off-axis drilling (cone-shaped end).

Notes:

- **Placing screws at a nominal angle (zero degrees), using the straight end of the 4.3 mm variable angle double drill guide with cone (03.122.040), provides maximum locking strength* of the connection of the screw to the plate. Choose off-axis angles only when clinically indicated.**
- **When drilling, the tip of the drill guide should remain fully seated in the hole.**

The fixed-angle end of the drill guide ensures that the drill bit follows the normal trajectory of the locking hole. Insert the 4.3 mm drill bit, through the fixed angle end of the drill guide.

*Testing on file at DePuy Synthes.

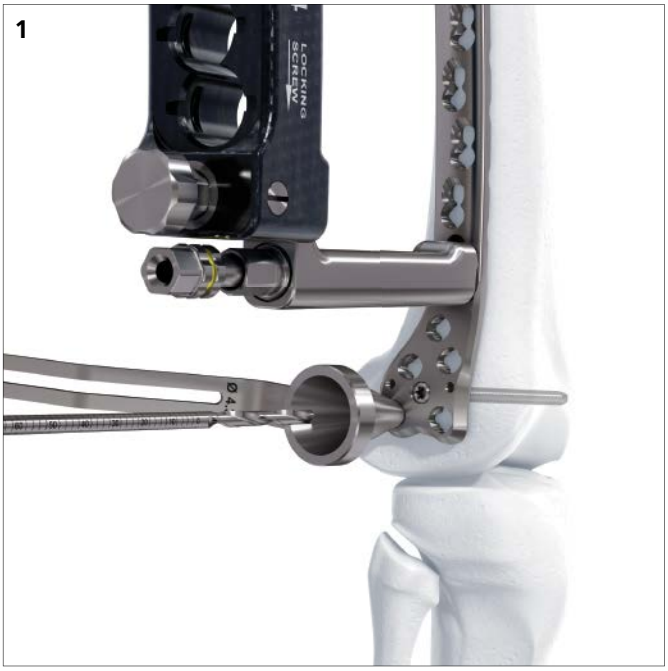
Option A: 5.0 mm Solid Variable Angle Screws

Alternative techniques for off-axis drilling

Instruments	
03.122.040	4.3 mm Variable Angle Double Drill Guide with Cone
310.431	4.3 mm Drill Bit, quick coupling, 180 mm

Insert the 4.3 mm drill bit through the cone-shaped end of the drill guide, at the desired angle (Figure 1). The drill guide inserts coaxially into the variable angle locking hole and the tip keys into the cloverleaf design of the hole.

1



Instruments	
03.231.008	4.3 mm Variable Angle Spherical Drill Guide, long, for 5.0 mm VA Locking Screws
324.213	4.3 mm Percutaneous Drill Bit, quick coupling, 300 mm, calibrated
395.911	Drill Sleeve Handle

As an alternative to the 4.3 mm variable angle double drill guide with cone, the 4.3 mm variable angle spherical drill guide can be used for off-axis drilling with the 4.3 mm percutaneous drill bit (Figure 2).

Thread the 4.3 mm variable angle spherical drill guide into the drill sleeve handle. For off-axis drilling, the spherical tip of the variable angle drill guide should be gently pressed into the variable angle hole to ensure the lip of the drill guide stops on the edge of the variable angle hole to prevent drilling beyond 15°. Insert the 4.3 mm drill bit through the drill guide, at the desired angle.

To measure for screw length, read off of the calibrated 4.3 mm drill bit. Remove the drill bit and drill guide.

2

Option A: 5.0 mm Solid Variable Angle Screws

2. Measure for screw length

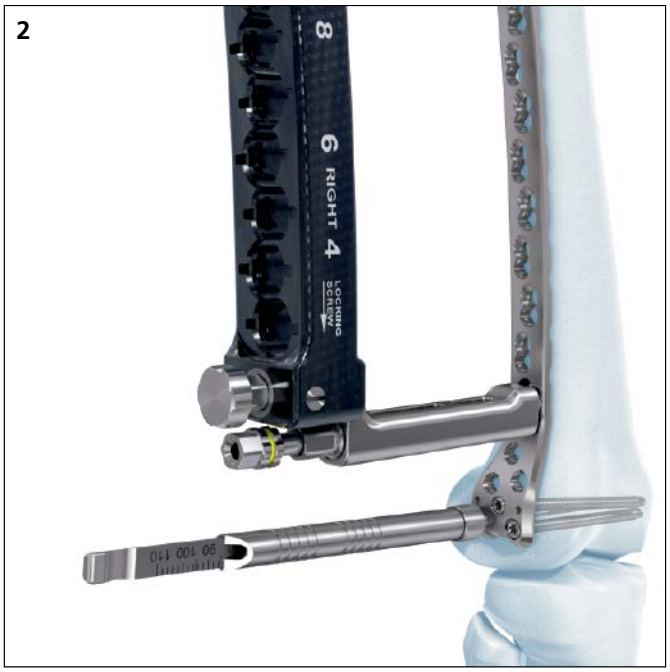
Alternative Instrument

319.10	Depth Gauge, for large screws

To measure for screw length, read off of the calibrated drill bit (Figure 1).

Alternatively, the depth gauge can be used for screw length measurement. Remove the drill bit and drill guide. Use the depth gauge to measure for screw length (Figure 2).

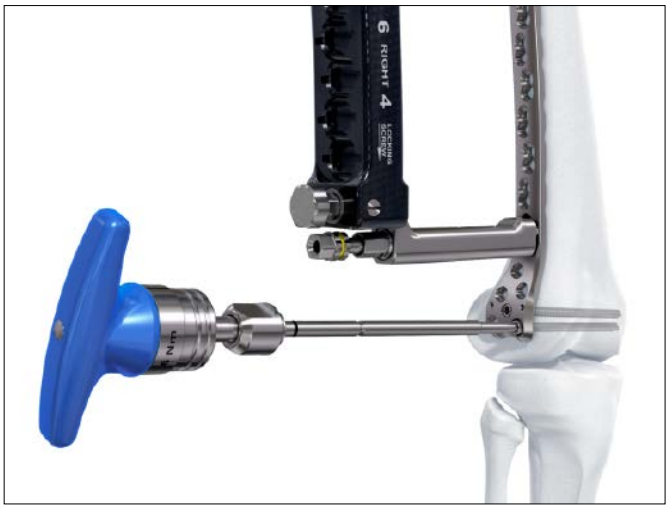
Precaution: Due to the difference in the placement of the head of a locking screw compared to a cortex screw, care should be taken when determining screw length with the depth gauge.



Option A: 5.0 mm Solid Variable Angle Screws

3. Insert screw

Instruments	
03.010.151	Star/HexDrive Screwdriver Shaft, T25/3.5 mm hex
03.231.013	6 Nm Torque Limiting Blue T-Handle, 6 mm hex coupling
03.231.015	SD25 STARDRIVE Screwdriver Shaft, 6 mm hex coupling, 180 mm
314.119	STARDRIVE Screwdriver Shaft, T25, quick coupling



Insert the appropriate length 5.0 mm variable angle locking screw.

Initial insertion of the 5.0 mm variable angle locking screws may be done using power equipment and the T25 STARDRIVE screwdriver shaft with quick coupling.

Confirm screw position and length prior to final tightening.

Note: If possible, it is recommended that all six screw holes in the plate head be filled.

Precautions:

- **Verify that the wire for preliminary fixation is not colliding with a drill bit or screw during insertion.**
- **The most posterior distal screw may be positioned distal to Blumensaat's line, requiring a unicondylar screw.**
- **Final tightening must always be done manually using the 6 Nm torque limiting handle and the T25 STARDRIVE Screwdriver shaft with 6 mm hex coupling.**
- **The 6 Nm torque limiting handle should not be used for screw removal as it could damage the instrument.**

Insert Screws in Surrounding Plate Head Holes

Option B: 5.0 mm Cannulated Variable Angle Screws

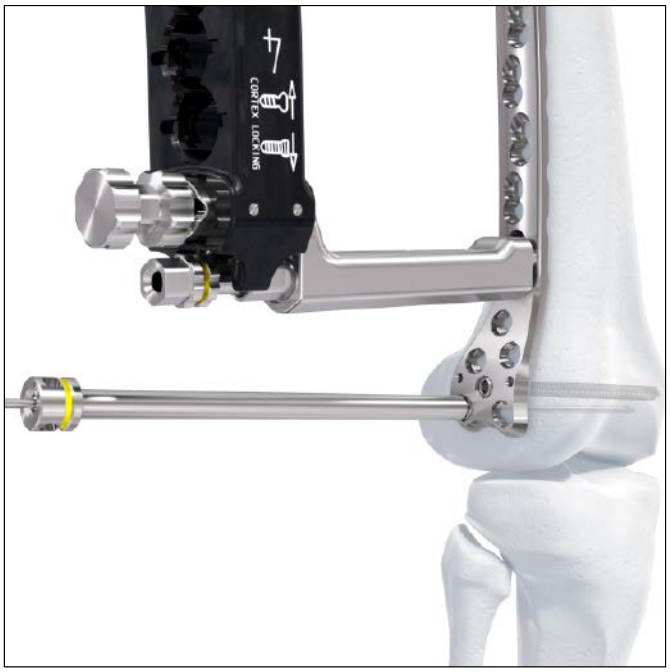
1. Drill

Instruments	
03.120.026 or 310.243	2.5 mm Drill Tip Guide Wire, 300 mm 2.5 mm Drill Tip Guide Wire, 200 mm
324.215 or 324.174	2.5 mm Percutaneous Wire Guide for 5.0 mm Locking Screws 2.5 mm Wire Guide for 5.0 mm Locking Screws

Thread the 2.5 mm percutaneous wire guide into the variable angle locking hole. Insert the 2.5 mm drill tip guide wire through the 2.5 mm wire guide.

Note: Placing screws at a nominal angle (zero degrees), using the 2.5 mm wire guide (324.174/324.215), provides maximum locking strength* of the connection of the screw to the plate. Choose off-axis angles only when clinically indicated.

Precaution: Verify that the wire for preliminary fixation is not colliding with a guide wire or screw during insertion.



*Testing on file at DePuy Synthes.

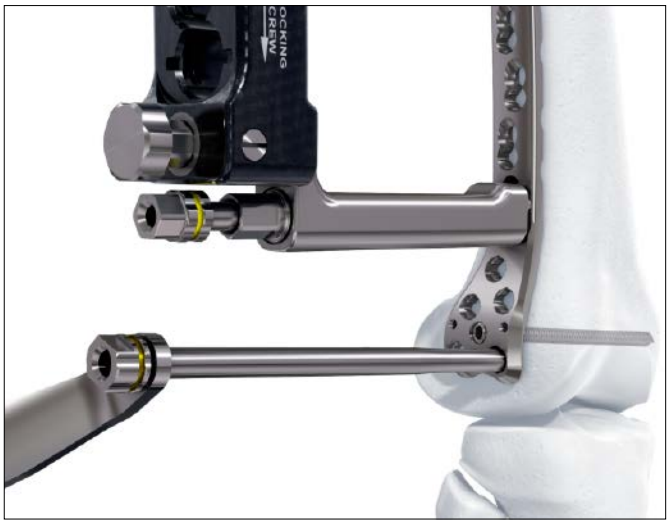
Option B: 5.0 mm Cannulated Variable Angle Screws

Alternative technique for off-axis drilling

Instruments	
03.120.026	2.5 mm Drill Tip Guide Wire, 300 mm
03.231.019	2.5 mm Variable Angle Spherical Wire Guide, long, for 5.0 mm VA Cannulated Locking Screws
395.911	Drill Sleeve Handle

Insert the 2.5 mm variable angle spherical wire guide into the drill sleeve handle and thread until tight. For off-axis drilling, the spherical tip of the variable angle wire guide should be gently pressed into the variable angle hole to ensure the lip of the wire guide stops on the edge of the hole, to prevent drilling beyond 15°. Insert the guide wire through the wire guide at the desired angle.

Precaution: Verify that the wire for preliminary fixation is not colliding with a guide wire or screw during insertion.



2. Measure for screw length

Instrument	
03.231.017	Direct Measuring Device for 5.0 mm Cannulated VA Screws

Remove the wire guide. Measure for screw length using the direct measuring device for 5.0 mm cannulated VA screws.

For proper screw length measurement, the direct measuring device should be firmly placed into the plate hole. This will place the tip of the screw at the tip of the guide wire.

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Option B: 5.0 mm Cannulated Variable Angle Screws

3. Insert screw

Instruments	
03.231.013	6 Nm Torque Limiting Blue T-Handle, 6 mm hex coupling
03.231.016	Cannulated 4.0 mm Hex Screwdriver Shaft, 6 mm hex coupling
314.23	Cannulated 4.0 mm Hexagonal Screwdriver Shaft
338.49	Large Quick Coupling

Insert the appropriate length 5.0 mm variable angle locking screw.

Initial insertion of the 5.0 mm variable angle locking screws may be done using power equipment and the T25 STARDRIVE screwdriver shaft with quick coupling.

Confirm screw position and length prior to final tightening.

Note: : If possible, it is recommended that all six screw holes in the plate head be filled.

Precautions:

- **Verify that the wire for preliminary fixation is not colliding with a drill bit or screw during insertion.**
- **The most posterior distal screw may be positioned distal to Blumensaat's line, requiring a unicondylar screw.**
- **Final tightening must always be done manually using the 6 Nm torque limiting handle and the T25 STARDRIVE Screwdriver shaft with 6 mm hex coupling.**
- **The 6 Nm torque limiting handle should not be used for screw removal as it could damage the instrument.**

Insert Screws in Plate Shaft

Option A: 4.5 mm Cortex Screws

1. Insert trocar assembly

Instruments	
03.120.015	Trocar with Handle
03.231.007	Locking/Neutral Guide for 4.5 mm VA LCP Curved Condylar Plate Aiming Arm
Optional Instrument	
03.120.016	Scalpel Handle

Choose an aiming arm hole and make an incision through it. Optionally, the scalpel handle may be used.

Precaution: Always remove the scalpel blade before storing in the graphic case.

Assemble a trocar with handle and locking/neutral guide, as described in the Insert Plate section.

Orient the arrow on the locking neutral guide in the direction of the "CORTEX" arrow on the aiming arm. Use the assembled trocar guide to stab down to the plate through the aiming arm hole and incision.

Push the assembly completely down until it snaps into the self-retaining feature of the aiming arm.

Remove the trocar by depressing the release mechanism and pulling it away from the locking/neutral guide.

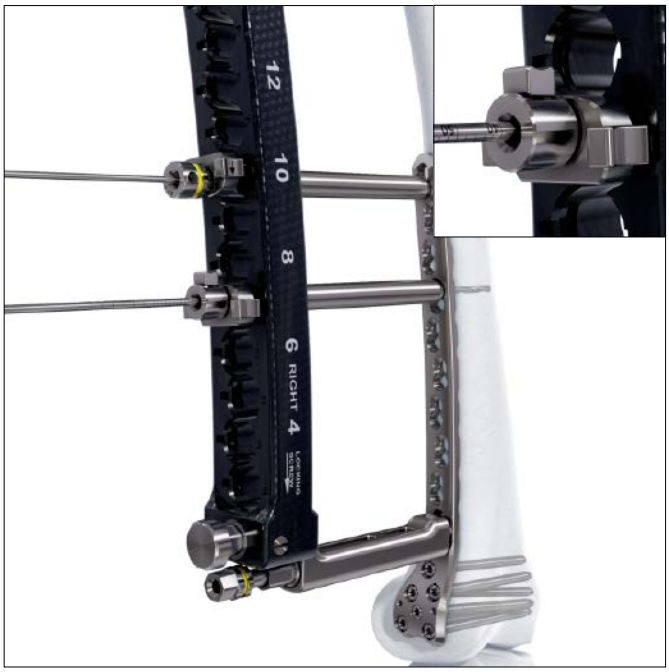
Option A: 4.5 mm Cortex Screws

2. Drill and determine screw length

Instruments	
03.120.017	Neutral Drill Guide, for 4.5 mm Cortex Screws
324.212	3.2 mm Percutaneous Drill Bit, quick coupling, 300 mm, calibrated

Insert the neutral drill guide into the locking/neutral guide, while aligning the self-retaining features, until it snaps into place.

Use the 3.2 mm percutaneous drill bit to drill and determine screw length from the drill bit calibration aligned with the top of the drill guide.



Alternative technique for determining screw length

Instrument	
324.208	Percutaneous Direct Measuring Device

Place the percutaneous direct measuring device over the drill bit and against the end of the drill guide. Determine screw length from the end of the drill bit.

Option A: 4.5 mm Cortex Screws

3. Insert screws

Instruments	
03.120.150	Star/HexDrive Screwdriver T25/3.5 mm hex
03.010.151	Star/HexDrive Screwdriver Shaft, T25/3.5 mm hex

Remove the drill bit and neutral drill guide. Use the Star/HexDrive screwdriver shaft to insert the cortex screw under power.

Use the Star/HexDrive screwdriver to fully tighten the screw manually.

Repeat this process to insert as many 4.5 mm cortex screws as necessary into the plate shaft.

Precaution: All 4.5 mm cortex screws must be inserted and tightened before insertion of locking screws.

Optional Instrument	
03.231.002	Stopper for 4.5 mm VA LCP Curved Plate Aiming Arm

Mark each screw location in the aiming arm, using a stopper for reference, as screw insertion proceeds.

Option B: 5.0 mm Solid Variable Angle Screws – Fixed-Angle Technique

Fixed-Angle Technique

1. Make incision and insert trocar

Instruments	
03.120.015	Trocar with Handle
03.231.007	Locking/Neutral Guide for 4.5 mm VA LCP Curved Condylar Plate Aiming Arm
Optional Instrument	
03.120.016	Scalpel Handle

Choose an aiming arm hole and make an incision through it. Optionally, the scalpel handle may be used.

Precaution: Always remove the scalpel blade before storage in the graphic case.

Insert the trocar with handle into a locking/neutral guide for the VA LCP curved condylar plate aiming arm. Align the self-retaining features until the trocar snaps into place within the locking/ neutral guide. Orient the arrow on the locking/neutral guide in the direction of the "LOCKING SCREW" arrow on the aiming arm, and then use the assembled trocar and locking/neutral guide to push down to the plate through the incision.

Push the assembly completely down, aligning the self-retaining features, until it snaps completely into the aiming arm. Take care not to place excessive pressure on the guide as deflection can occur between the guide and the plate in the face of excessive pressure. The potential for this is increased with longer plates inserted through small incisions in larger patients.

Remove the trocar with handle by depressing its release mechanism and pulling it away from the locking/neutral guide.

Option B: 5.0 mm Solid Variable Angle Screws – Fixed-Angle Technique

2. Drill and determine screw length

Instruments	
03.120.022	Handle for Percutaneous Threaded Drill Guides
324.203	4.3 mm Percutaneous Threaded Drill Guide
324.213	4.3 mm Percutaneous Drill Bit, quick coupling, 300 mm, calibrated

Optional Instrument	
03.120.029	4.0 mm Hexagonal Key

Thread the handle into the 4.3 mm percutaneous threaded drill guide. Insert the drill guide through the guide sleeve, and thread it into the plate. Turn the handle counterclockwise to disengage and remove it from the drill guide.

Insert the 4.3 mm percutaneous drill bit through the drill guide. Determine the screw length from the drill bit calibration aligned with the top of the drill guide.

Remove drill bit and drill guide.

Notes:

- **Placing screws at a nominal angle (zero degrees), using the straight end of the 4.3 mm percutaneous threaded drill guide (324.203), provides maximum locking strength of the connection of the screw to the plate. Choose off-axis angles only when clinically indicated.**
- **Use the tip of the handle as a pin wrench to loosen the percutaneous drill guides from the plate. Alternatively, the 4.0 mm hexagonal key can be used.**

Alternative Instrument for Measuring	
324.208	Percutaneous Direct Measuring Device

Place the percutaneous direct measuring device over the drill bit and against the end of the drill guide. Determine screw length from the end of the drill bit.

Option B: 5.0 mm Solid Variable Angle Screws – Fixed-Angle Technique

3. Insert screw

Instruments	
03.010.151	Star/HexDrive Screwdriver Shaft, T25/3.5 mm hex
03.231.002	Stopper for 4.5 mm VA LCP Curved Condylar Plate Aiming Arm
03.231.013	6 Nm Torque Limiting Blue T-Handle, 6 mm hex coupling
03.231.015	SD25 STARDRIVE Screwdriver Shaft, 6 mm hex coupling, 180 mm
314.119	STARDRIVE Screwdriver Shaft, T25, quick coupling

Insert the appropriate length 5.0 mm variable angle locking screw.

Initial insertion of the 5.0 mm variable angle locking screws may be done using power equipment and the T25 STARDRIVE screwdriver shaft with quick coupling.

Confirm screw position and length prior to final tightening.

Precautions:

- **Verify that the wire for preliminary fixation is not colliding with a drill bit or screw during insertion.**
- **Final tightening must always be done manually using the 6 Nm torque limiting handle and the T25 STARDRIVE Screwdriver shaft with 6 mm hex coupling.**
- **The 6 Nm torque limiting handle should not be used for screw removal as it could damage the instrument.**

Insert as many 5.0 mm variable angle locking screws as necessary into the plate shaft. Mark each screw location in the aiming arm using a stopper for reference as screw insertion proceeds.

Option B: 5.0 mm Solid Variable Angle Screws – Off-Axis Technique

Off-Axis Technique

1. Make incision and insert wire guide

Instruments	
03.231.008	4.3 mm Variable Angle Spherical Drill Guide, long, for 5.0 mm VA Locking Screws
03.231.009	Trocar for 4.3 mm VA Drill Guide, long
03.231.010	Protection Sleeve for 4.3 mm VA Drill Guide, long
Optional Instrument	
03.120.016	Scalpel Handle

Choose an aiming arm hole and make an incision through it. Optionally, the scalpel handle may be used.

Precaution: Always remove the scalpel blade before storing in the graphic case.

Insert the 4.3 mm variable angle spherical drill guide into the protection sleeve for 4.3 mm variable angle drill guide. Insert the trocar for the 4.3 mm variable angle drill guide into the 4.3 mm variable angle spherical drill guide. Insert the trocar/ drill guide/protection sleeve assembly to the plate through the previously created incision.

For off-axis insertion of the 5.0 mm solid variable angle locking screws, the trocar/drill guide/protection sleeve assembly can be placed through the aiming arm hole, or it can be placed outside of the aiming arm.

The spherical tip of the variable angle drill guide should be gently pressed into the variable angle hole to ensure the lip of the drill guide stops on the edge of the variable angle hole to prevent drilling beyond 15°.

Remove the trocar from the assembly.

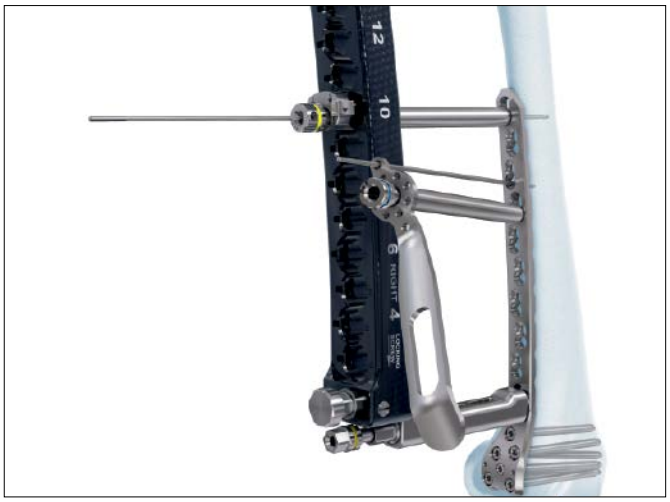
Option B: 5.0 mm Solid Variable Angle Screws – Off-Axis Technique

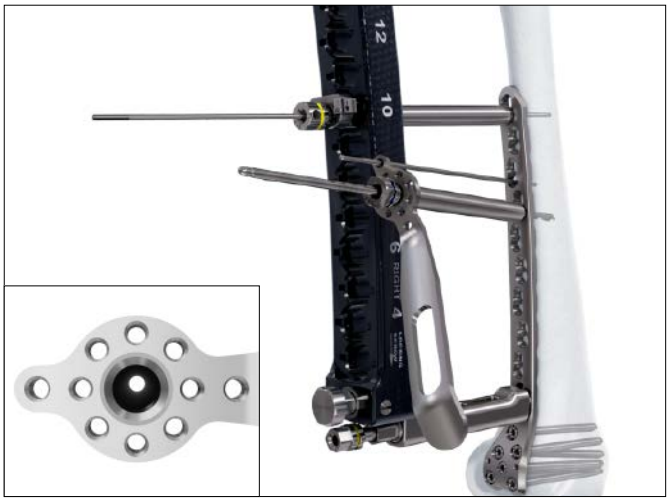
2. Provisionally fix drill guide assembly

Instrument	
03.120.026	2.5 mm Drill Tip Guide Wire, 300 mm

Find the desired angle and insert a 2.5 mm guide wire into one of the wire holes around the central hole of the protection sleeve. The variable angle drill guide and protection sleeve assembly is now provisionally fixed at the desired angle. Depending on the guide wire location, the wire may need to be cut to allow room for drilling.

Precaution: If the guide wire is inserted into one of the two outside holes, there is no need to cut the wire before drilling. If the guide wire is inserted into one of the immediate holes around the drill guide then the wire must be cut to allow room for the drill bit.



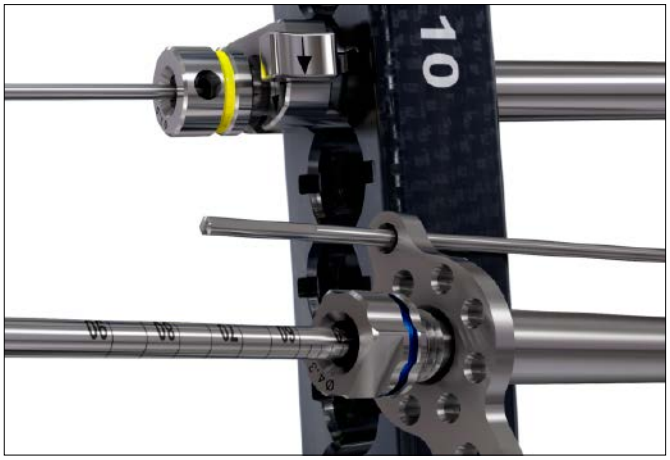


3. Drill and determine screw length

Instrument	
324.213	4.3 mm Percutaneous Drill Bit, quick coupling, 300 mm, calibrated

Insert the 4.3 mm percutaneous drill bit through the 4.3 mm variable angle drill guide and drill to the desired depth.

Determine screw length from the drill bit calibration at the top of the drill guide.



Option B: 5.0 mm Solid Variable Angle Screws – Off-Axis Technique

4. Insert screw

Instruments	
03.010.151	Star/HexDrive Screwdriver Shaft, T25/3.5 mm hex
03.231.013	6 Nm Torque Limiting Blue T-Handle, 6 mm hex coupling
03.231.015	SD25 STARDRIVE Screwdriver Shaft, 6 mm hex coupling, 180 mm
314.118	STARDRIVE Screwdriver, T25

Remove the drill bit and drill guide. Insert the appropriate 5.0 mm variable angle screw through the protection sleeve.

Note: For initial insertion of the 5.0 mm solid variable angle locking screw, it is recommended to use the T25 STARDRIVE screwdriver to ensure intended screw placement.

Confirm screw position and length prior to final tightening.

Precautions:

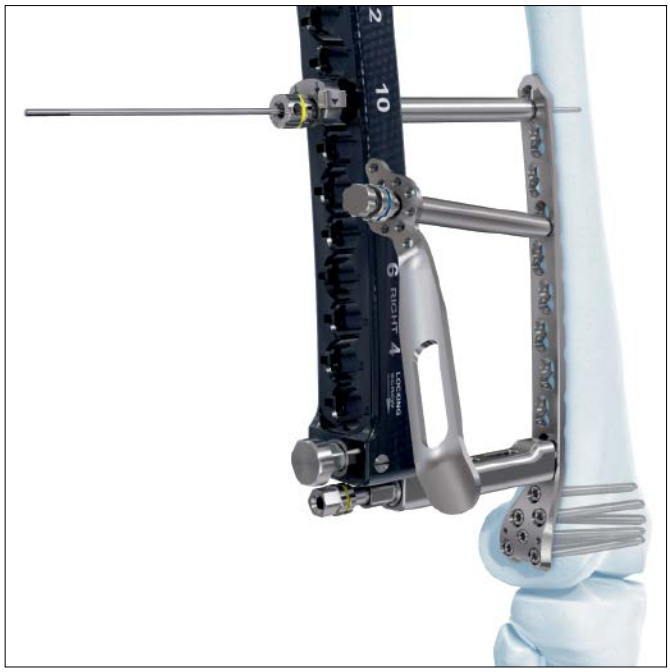
- **Verify that the wire for preliminary fixation is not colliding with a drill bit or screw during insertion.**
- **Final tightening must always be done manually using the 6 Nm torque limiting handle and the T25 STARDRIVE Screwdriver shaft with 6 mm hex coupling.**
- **The 6 Nm torque limiting handle should not be used for screw removal as it could damage the instrument.**

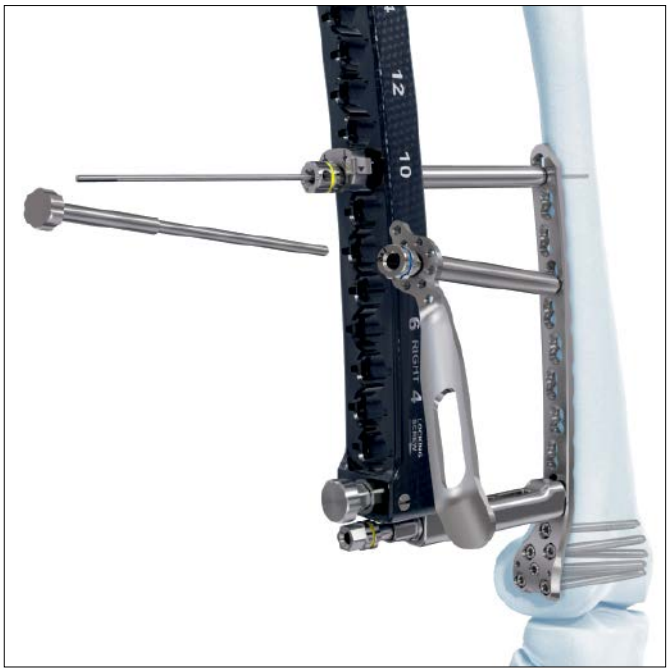
Option C: 5.0 mm Cannulated Variable Angle Screws – Off-Axis Technique

Off-Axis Technique

1. Make incision and insert wire guide

Instruments	
03.120.026	2.5 mm Drill Tip Guide Wire, 300 mm
03.231.009	Trocar for 4.3 mm VA Drill Guide, long
03.231.010	Protection Sleeve for 4.3 mm VA Drill Guide, long
03.231.019	2.5 mm Variable Angle Spherical Wire Guide, long, for 5.0 mm VA Cannulated Screws
Optional Instrument	
03.120.016	Scalpel Handle





Choose an aiming arm hole and make an incision through it. Optionally, the scalpel handle may be used.

Precaution: Always remove the scalpel blade before storing in the graphic case.

Insert the 2.5 mm variable angle spherical wire guide into the protection sleeve for 4.3 mm variable angle drill guide.

For off-axis insertion of the 5.0 mm solid variable angle locking screws, the trocar/ drill guide/protection sleeve assembly should be placed through the aiming arm hole, or it can be placed outside of the aiming arm.

The spherical tip of the variable angle drill guide should be gently pressed into the variable angle hole to ensure the lip of the drill guide stops on the edge of the variable angle hole to prevent drilling beyond 15°.

Remove the trocar from the assembly.

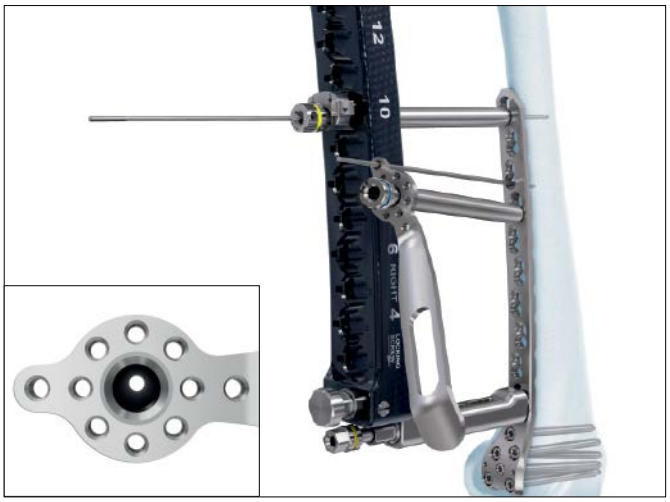
Option C: 5.0 mm Cannulated Variable Angle Screws – Off-Axis Technique

2. Provisionally fix drill guide assembly

Instrument	
03.120.026	2.5 mm Drill Tip Guide Wire, 300 mm

Find the desired angle and insert a 2.5 mm guide wire into one of the wire holes around the central hole of the protection sleeve. The variable angle drill guide and protection sleeve assembly is now provisionally fixed at the desired angle. Depending on the guide wire location, the wire may need to be cut to allow room for drilling.

Precaution: If the guide wire is inserted into one of the two outside holes, there is no need to cut the wire before drilling. If the guide wire is inserted into one of the immediate holes around the drill guide then the wire must be cut to allow room for the drill bit.



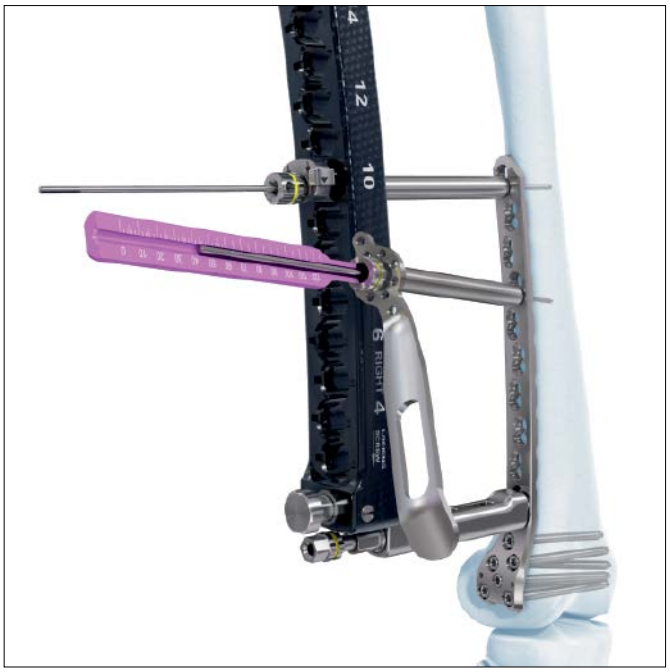
Option C: 5.0 mm Cannulated Variable Angle Screws – Off-Axis Technique

3. Drill and determine screw length

Instrument	
03.120.026	2.5 mm Drill Tip Guide Wire, 300 mm
324.208	Percutaneous Direct Measuring Device

Insert the 4.3 mm percutaneous drill bit through the 4.3 mm variable angle drill guide and drill to the desired depth.

Determine screw length from the drill bit calibration at the top of the drill guide.



Option C: 5.0 mm Cannulated Variable Angle Screws – Off-Axis Technique

4. Insert screw

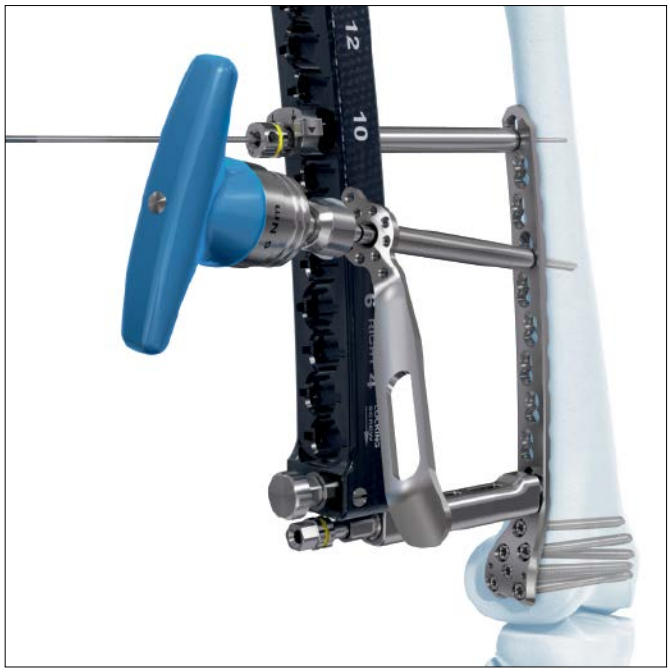
Instruments	
03.231.013	6 Nm Torque Limiting Blue T-Handle, 6 mm hex coupling
03.231.016	Cannulated 4.0 mm Hex Screwdriver Shaft, 6 mm hex coupling, 180 mm
314.23	Cannulated 4.0 mm Hexagonal Screwdriver Shaft
338.49	Large Quick Coupling

Remove the drill bit and drill guide. Insert the appropriate 5.0 mm variable angle screw through the protection sleeve.

Confirm screw position and length prior to final tightening.

Precautions:

- **Verify that the wire for preliminary fixation is not colliding with a drill bit or screw during insertion.**
- **Final tightening must always be done manually using the 6 Nm torque limiting handle and the T25 STARDRIVE Screwdriver shaft with 6 mm hex coupling.**
- **The 6 Nm torque limiting handle should not be used for screw removal as it could damage the instrument.**



1. Remove locking/neutral guides

2. Remove aiming arm

Turn the connecting bolt on the aiming arm counterclockwise to loosen and remove the aiming arm from the insertion handle.

3. Remove insertion handle

Instrument	
321.16	Combination Wrench, 11 mm width across flats

Use the combination wrench to loosen the nut for the interconnecting bolt for the insertion handle and remove the interconnecting bolt.

If desired, insert an appropriate screw into the first Combi hole in the plate shaft.

Precaution: This hole is often located immediately adjacent to or in the fracture zone. Because of this, it has the potential to maximize stress concentration in the implant and adversely affect strain in the fracture gap. With most fracture patterns in this region, it is preferable to leave this hole unfilled.

Implants

4.5 mm Variable Angle LCP Curved Condylar Plates

Stainless Steel	Titanium	Holes	Length (mm)	
02.124.406	04.124.406	6	159	right
02.124.407	04.124.407	6	159	left
02.124.408	04.124.408	8	195	right
02.124.409	04.124.409	8	195	left
02.124.410	04.124.410	10	230	right
02.124.411	04.124.411	10	230	left
02.124.412	04.124.412	12	266	right
02.124.413	04.124.413	12	266	left
02.124.414	04.124.414	14	301	right
02.124.415	04.124.415	14	301	left
02.124.416	04.124.416	16	336	right
02.124.417	04.124.417	16	336	left
02.124.418	04.124.418	18	370	right
02.124.419	04.124.419	18	370	left

For additional implant options, see the Also Available section.

Screws Used with the 4.5 mm VA LCP Curved Condylar Plates

5.0 mm Variable Angle Locking Screw

May be used in the fixed-angle central plate head hole and all variable angle locking holes, including the locking portion of the Combi holes

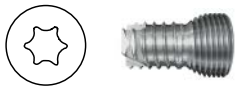
- Threaded rounded head
- Self-tapping tip
- Stainless steel or stainless steel with OPTILINK Technology

5.0 mm Cannulated Variable Angle Locking Screw

May be used in the fixed-angle central plate head hole and all variable angle locking holes, including the locking portion of the Combi holes.

- Threaded rounded head
- Self-drilling tip
- Stainless steel or stainless steel with OPTILINK Technology

5.0 mm Periprosthetic Variable Angle Locking Screw



May be used in the fixed-angle central plate head hole and all variable angle locking holes, including the locking portion of the Combi holes.

- Threaded rounded head
- Self-tapping flutes
- Blunt tip allows unicortical fixation of fractures when a previously placed implant is present
- Stainless steel or stainless steel with OPTILINK Technology

5.0 mm Variable Angle Positioning Pin

May be used in the variable angle locking holes, including the locking portion of the Combi holes.

- Recommended pin solution for cable applications in implants with 5.0 mm VA locking holes
- Hole in the pin oriented to the side of the plate allows for cable fixation
- Forceps or a needle holder may help to hold the pin when placing it in the plate hole
- Make sure to mount the positioning pin on the cable before passing it. For further information on using these positioning pins, please refer to the DePuy Synthes Variable Angle Positioning Pins Surgical Technique Guide.
- Stainless steel or titanium

The following existing locking screws are compatible with the 4.5 mm VA LCP Curved Condylar Plate:

- 4.5 mm Cortex Screws
- 5.0 mm Cannulated Conical Screws*
- 5.0 mm Cannulated Locking Screws
- 5.0 mm Locking Screws
- 5.0 mm Periprosthetic Locking Screws

*The 5.0 mm Cannulated Conical Screws can only be used in the fixed-angle central plate head hole and cannot be used in the variable angle locking holes.

Notes:

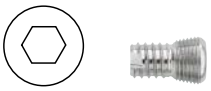
- **The 5.0 mm Locking Screws can only be used zero degrees/on-axis of the screw hole and must be tightened with the 4.0 Nm Torque Limiter.**
- **It is recommended to use the available guiding tools to assist with insertion at zero degrees.**

5.0 mm Locking Screw

May be used in the fixed-angle central plate head hole, the surrounding variable angle locking holes in the plate head, and the variable angle locking portion of the Combi holes throughout the plate shaft. Screws must be inserted at zero degrees and will provide a locked, fixed-angle screw/plate construct.

- Threaded conical head
- Fully threaded shaft
- Self-tapping tip
- Stainless steel or titanium

5.0 mm Periprosthetic Locking Screw



May be used in the fixed-angle central plate head hole, the surrounding variable angle locking holes in the plate head, and the variable angle locking portion of the Combi holes throughout the plate shaft. Screws must be inserted at zero degrees and will provide a locked, fixed-angle screw/plate construct.

- Threaded rounded head
- Self-tapping flutes
- Blunt tip allows unicortical fixation of fractures when a previously placed implant is present
- Stainless steel or titanium

4.5 mm Cortex Screw

May be used in the DCU portion of the Combi holes and in the central plate head hole, to compress the plate to the bone or create axial compression.

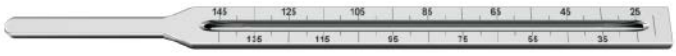
- Self-tapping tip
- Stainless steel or titanium

The 4.5 mm VA LCP Curved Condylar Plate System is compatible with:

- The Orthopaedic Cable System
- 3.5 mm LCP Locking Attachment Plates

Instruments

03.231.001	Insertion Handle for 4.5 mm VA LCP Curved Condylar Plate	
03.231.002	Stopper for 4.5 mm VA LCP Curved Condylar Plate Aiming Arms	
03.231.003	Aiming Arm for 4.5 mm VA LCP Curved Condylar Plate, left	
03.231.004	Aiming Arm for 4.5 mm VA LCP Curved Condylar Plate, right	
03.231.005	Interlocking Bolt for 4.5 mm VA LCP Curved Condylar Plate Insertion Handle	
03.231.006	Nut for Interlocking Bolt for 4.5 mm VA LCP Curved Condylar Plate Insertion Handle	
03.231.007	Locking/Neutral Guide for 4.5 mm VA LCP Curved Condylar Plate Aiming Arm	
03.231.008	4.3 mm Variable Angle Spherical Drill Guide, long, for 5.0 mm VA Locking Screws	

03.231.009	Trocar for 4.3 mm VA Drill Guide, long	
03.231.010	Protection Sleeve for 4.3 mm VA Drill Guide, long	
03.231.013	6 Nm Torque Limiting Blue T-Handle, 6 mm hex coupling*	
03.231.015	SD25 STARDRIVE Screwdriver Shaft, 6 mm hex coupling, 180 mm	
03.231.016	Cannulated 4.0 mm Hex Screwdriver Shaft, 6 mm hex coupling, 180 mm	
03.231.017	Direct Measuring Device for 5.0 mm Cannulated VA Screws	
03.231.019	2.5 mm Variable Angle Spherical Wire Guide, long, for 5.0 mm VA Cannulated Screws	

Also Available

03.231.018	6 Nm Torque Limiting Blue Handle, with 6 mm hex coupling*	

*For recalibration of the Torque Limiting Handles (03.231.013 and 03.231.018): DePuy Synthes recommends 6 month servicing and inspection by the original manufacturer. The Torque Limiting Handle should be sent to your DePuy Synthes repair center annually for calibration. The user accepts the responsibility for this annual calibration.

4.5 mm VA LCP Curved Condylar Plate Set
Stainless Steel (01.231.015) and Titanium (01.231.018)

Graphic Case

61.231.015 Graphic Case for 4.5 mm Variable Angle LCP Curved Condylar Plate Set

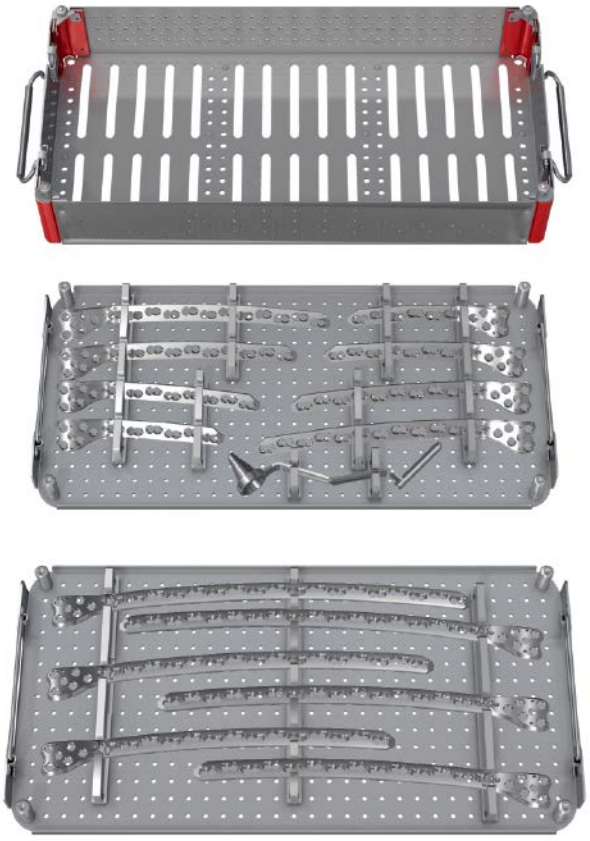
Implants

4.5 mm Variable Angle LCP Curved Condylar Plates

Stainless Steel	Titanium	Holes	Length (mm)	
02.124.406	04.124.406	6	159	right
02.124.407	04.124.407	6	159	left
02.124.408	04.124.408	8	195	right
02.124.409	04.124.409	8	195	left
02.124.410	04.124.410	10	230	right
02.124.411	04.124.411	10	230	left
02.124.412	04.124.412	12	266	right
02.124.413	04.124.413	12	266	left
02.124.414	04.124.414	14	301	right
02.124.415	04.124.415	14	301	left
02.124.416	04.124.416	16	336	right
02.124.417	04.124.417	16	336	left
02.124.418	04.124.418	18	370	right
02.124.419	04.124.419	18	370	left

Optional Instrument

03.122.040 4.3 mm Variable Angle Double Drill Guide with Cone



Shown with 03.122.040 (not included)

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.

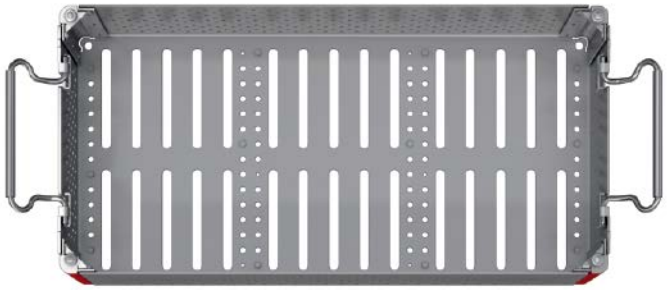
4.5 mm VA LCP Curved Condylar Aiming Instrument Set (01.231.016)

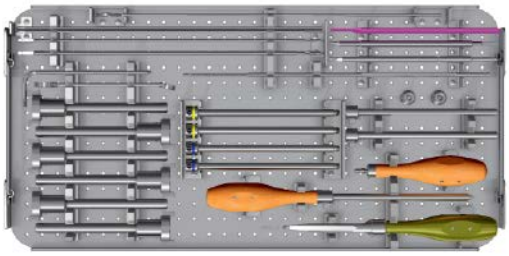
Graphic Case

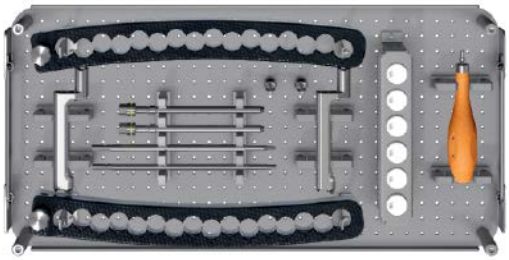
61.231.016	Graphic Case for 4.5 mm Variable Angle LCP Curved Condylar Aiming Instrument Set

Instruments

03.010.151	Star/HexDrive Screwdriver Shaft, T25/3.5 mm hex
03.120.015	Trocar with Handle
03.120.016	Scalpel Handle
03.120.017	Neutral Drill Guide, for 4.5 mm cortex screws, 2 ea.
03.120.022	Handle for Percutaneous Threaded Drill Guides, 2 ea.
03.120.023	Pull Reduction Device for 4.3 mm Percutaneous Threaded Drill Guide, 2 ea.
03.120.026	2.5 mm Drill Tip Guide Wire, 300 mm, 8 ea.
03.231.001	Insertion Handle for 4.5 mm VA LCP Curved Condylar Plate
03.231.002	Stopper for 4.5 mm VA LCP Curved Condylar Plate Aiming Arms, 6 ea.
03.231.003	Aiming Arm for 4.5 mm VA LCP Curved Condylar Plate, left
03.231.004	Aiming Arm for 4.5 mm VA LCP Curved Condylar Plate, right
03.231.005	Interlocking Bolt for 4.5 mm VA LCP Curved Condylar Plate Insertion Handle, 2 ea.
03.231.006	Nut for Interlocking Bolt for 4.5 mm VA LCP Curved Condylar Plate Insertion Handle, 2 ea.
03.231.007	Locking/Neutral Guide for 4.5 mm VA LCP Curved Condylar Plate Aiming Arm, self-retaining, 6 ea.
314.119	STARDRIVE Screwdriver Shaft, T25, quick coupling
319.461	2.5 mm Cleaning Stylet
321.16	Combination Wrench, 11 mm width across flats
324.203	4.3 mm Percutaneous Threaded Drill Guide, 4 ea.







324.208	Percutaneous Direct Measuring Device
324.212	3.2 mm Percutaneous Drill Bit, quick coupling, 300 mm, calibrated, 2 ea.
324.213	4.3 mm Percutaneous Drill Bit, quick coupling, 300 mm, calibrated, 2 ea.
324.215	2.5 mm Percutaneous Wire Guide for 5.0 mm Locking Screws, 4 ea.

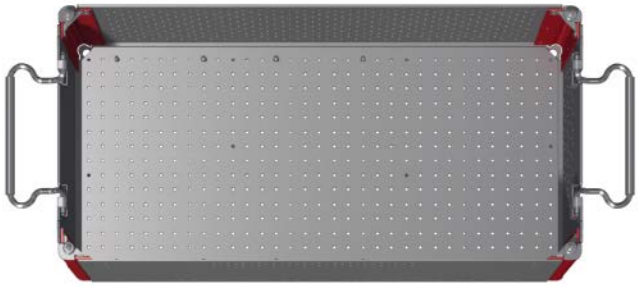
Also Available Instruments

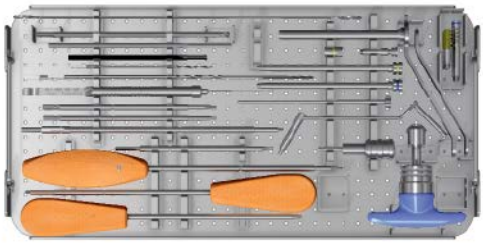
03.120.029	4.0 Hexagonal Key
03.231.015	SD25 STARDRIVE hex coupling 180 mm
03.231.016	Cannulated 4.0 Hex Screwdriver Shaft, 6 mm, hex coupling, 180 mm

4.5 mm VA LCP Instrument and Screw Set
Stainless Steel (01.231.017)

Graphic Case

61.231.017	Graphic Case for 4.5 mm Variable Angle LCP Instrument and Screw Set
60.116.106	4.5 mm Screw Rack Block for Screw Rack Shell for Modular Graphic Case System, 2 ea.
60.116.107	5.0 mm Screw Rack Block for Screw Rack Shell for Modular Graphic Case System, 3 ea.
60.116.111	5.0 mm Periprosthetic Screw Rack Block for Screw Rack Shell





Length Marker Push Pins

	Length (mm)		Length (mm)
60.116.310	10	60.116.346	46
60.116.312	12	60.116.348	48
60.116.314	14	60.116.350	50
60.116.316	16	60.116.352	52
60.116.318	18	60.116.354	54
60.116.320	20	60.116.355	55
60.116.322	22	60.116.356	56
60.116.324	24	60.116.358	58
60.116.325	25	60.116.360	60
60.116.326	26	60.116.362	62
60.116.328	28	60.116.364	64
60.116.330	30	60.116.365	65
60.116.332	32	60.116.366	66
60.116.334	34	60.116.368	68
60.116.335	35	60.116.370	70
60.116.336	36	60.116.375	75
60.116.338	38	60.116.380	80
60.116.340	40	60.116.385	85
60.116.342	42	60.116.390	90
60.116.344	44		
60.116.345	45		

60.116.507	Screw Type Push Pin, Cortex
60.116.521	Screw Type Push Pin, VA Locking
60.116.523	Screw Type Push Pin, Cannulated VA Locking
60.116.560	Label Pack for 4.5 mm Screws and Instruments
60.116.561	Label Pack for 5.0 mm Screws and Instruments

Instruments

03.010.150	Star/Hex Drive Screwdriver, T25/3.5 mm hex
03.010.151	Star/Hex Drive Screwdriver Shaft, T25/3.5 mm hex
03.231.008	4.3 mm Variable Angle Spherical Drill Guide, long, for 5.0 mm VA Locking Screws
03.231.009	Trocar for 4.3 mm VA Drill Guide, long
03.231.010	Protection Sleeve for 4.3 mm VA Drill Guide, long
03.231.013	6 Nm Torque Limiting Blue T-handle, 6 mm hex coupling
03.231.015	SD25 STARDRIVE Screwdriver Shaft, 6 mm hex coupling,180 mm
03.231.016	Cannulated 4.0 mm hex Screwdriver Shaft, 6 mm hex coupling, 180 mm
03.231.017	Direct Measuring Device, for 5.0 mm Cannulated VA Conical and Locking Screws
03.231.019	2.5 mm Variable Angle Spherical Wire guide, long, for 5.0 mm VA Cannulated Screws
292.652	2.0 mm Non-colored Threaded Guide Wire, spade point, 230 mm, 10 ea.
310.243	2.5 mm Drill Tip Guide Wire, 200 mm, 10 ea.
310.31	3.2 mm Drill Bit, 145 mm, quick coupling
310.431	4.3 mm Drill Bit, 180 mm, quick coupling
310.44	4.5 mm Drill Bit, 145 mm, quick coupling
310.632	5.0 mm Cannulated Drill Bit, quick coupling, 200 mm
310.634	4.3 mm Cannulated Drill Bit, quick coupling, 200 mm
310.99	Countersink, for 4.5 mm and 6.5 mm screws
311.449	Push-Pull Reduction Device, for use with 4.5 mm LCP plates, 2 ea.
311.46	Tap, for 4.5 mm screws
312.449	4.3 mm Threaded Drill Guide, for 5.0 mm locking screws, 2 each
312.48	4.5 mm/3.2 mm Insert Drill Sleeve
314.05	Cannulated 4.0 mm Hexagonal Screwdriver
314.11	Holding Sleeve
314.118	STARDRIVE Screwdriver, T25
314.23	Cannulated 4.0 mm Hexagonal Screwdriver Shaft
314.281	Holding Sleeve, for Large Fragment Locking and Variable Angle Screws
319.10	Depth gauge, for large screws
319.24	2.9 mm Cleaning Brush
319.461	2.5 mm Cleaning Stylet
321.12	Articulated Tension Device
321.16	Combination Wrench, 11 mm width across flats
323.46	4.5 mm Universal Drill Guide
324.174	2.5 mm Wire Guide for 5.0 mm Screws, 4 ea.
324.213	4.3 mm Percutaneous Drill Bit, quick coupling, 300 mm, calibrated
338.49	Large quick coupling
395.911	Drill Sleeve handle

Also Available Instruments

311.431	Large handle with quick coupling
311.66	Tap for 6.5 mm Cannulated Bone Screws
312.67	6.5 mm/3.2 mm Double Drill Sleeve
319.701	Cannulated Screw Measuring Device

4.5 mm VA LCP Instrument and Screw Set
Stainless Steel (01.231.017)

Implants

222.578	5.0 mm Screw Nut, 2 ea.
219.99	Washer, 6 ea.

5.0 mm Periprosthetic Variable Angle Locking Screws, self-tapping, STARDRIVE 25

Stainless Steel	Length (mm)	Qty.
02.231.010	10	3
02.231.012	12	3
02.231.014	14	3
02.231.016	16	3
02.231.018	18	3

5.0 mm Variable Angle Locking Screws, self-tapping, STARDRIVE 25

Stainless Steel	Length (mm)	Qty.
02.231.220	20	3
02.231.222	22	3
02.231.224	24	3
02.231.226	26	3
02.231.228	28	3
02.231.230	30	3
02.231.232	32	3
02.231.234	34	3
02.231.236	36	3
02.231.238	38	3
02.231.240	40	3
02.231.242	42	3
02.231.244	44	3
02.231.246	46	3
02.231.248	48	3
02.231.250	50	3
02.231.255	55	2
02.231.260	60	2
02.231.265	65	2
02.231.270	70	2
02.231.275	75	2
02.231.280	80	2
02.231.285	85	2
02.231.290	90	2

5.0 mm Cannulated Variable Angle Locking Screws, 4.0 mm Hex

Stainless Steel	Length (mm)	Qty.
02.231.620	20	2
02.231.625	25	2
02.231.630	30	2
02.231.635	35	2
02.231.640	40	2
02.231.645	45	2
02.231.650	50	2
02.231.655	55	3
02.231.660	60	3
02.231.665	65	3
02.231.670	70	3
02.231.675	75	3
02.231.680	80	3
02.231.685	85	3
02.231.690	90	3

4.5 mm Cortex Screws, self-tapping

Stainless Steel	Length (mm)	Qty.
214.822	22	3
214.824	24	3
214.826	26	3
214.828	28	3
214.830	30	3
214.832	32	3
214.834	34	3
214.836	36	6
214.838	38	6
214.840	40	6
214.842	42	6
214.844	44	3
214.846	46	3
214.848	48	3
214.850	50	3
214.852	52	2
214.854	54	2
214.856	56	2
214.858	58	2
214.860	60	2
214.862	62	2
214.864	64	2
214.866	66	2
214.868	68	2
214.870	70	2

5.0 mm VA Locking Screw With OPTILINK Technology Set (01.231.023)

Graphic Case

61.116.100	Screw Rack Shell for Modular Graphic Case System, 2 ea.
60.116.106	4.5 mm Screw Rack Block for Screw Rack Shell for Modular Graphic Case System, 2 ea.
60.116.107	5.0 mm Screw Rack Block for Screw Rack Shell for Modular Graphic Case System, 3 ea.
60.116.111	5.0 mm Periprosthetic Screw Rack Block for Screw Rack Shell

Length Marker Push Pins

	Length (mm)		Length (mm)
60.116.310	10	60.116.346	46
60.116.312	12	60.116.348	48
60.116.314	14	60.116.350	50
60.116.316	16	60.116.352	52
60.116.318	18	60.116.354	54
60.116.320	20	60.116.355	55
60.116.322	22	60.116.356	56
60.116.324	24	60.116.358	58
60.116.325	25	60.116.360	60
60.116.326	26	60.116.362	62
60.116.328	28	60.116.364	64
60.116.330	30	60.116.365	65
60.116.332	32	60.116.366	66
60.116.334	34	60.116.368	68
60.116.335	35	60.116.370	70
60.116.336	36	60.116.375	75
60.116.338	38	60.116.380	80
60.116.340	40	60.116.385	85
60.116.342	42	60.116.390	90
60.116.344	44		
60.116.345	45		

60.116.506	Screw Type Push Pin, Conical
60.116.507	Screw Type Push Pin, Cortex
60.116.521	Screw Type Push Pin, VA Locking
60.116.523	Screw Type Push Pin, Cannulated VA Locking
60.116.560	Label Pack for 4.5 mm Screws and Instruments
60.116.561	Label Pack for 5.0 mm Screws and Instruments

5.0 mm Periprosthetic Variable Angle Locking Screws, self-tapping, STARDRIVE 25
Stainless Steel

with OPTILINK	Length (mm)	Qty.
42.231.010	10	3
42.231.012	12	3
42.231.014	14	3
42.231.016	16	3
42.231.018	18	3

5.0 mm Variable Angle Locking Screws, self-tapping, STARDRIVE 25
Stainless Steel

with OPTILINK	Length (mm)	Qty.
42.231.220	20	3
42.231.222	22	3
42.231.224	24	3
42.231.226	26	3
42.231.228	28	3
42.231.230	30	3
42.231.232	32	3
42.231.234	34	3
42.231.236	36	3
42.231.238	38	3
42.231.240	40	3
42.231.242	42	3
42.231.244	44	3
42.231.246	46	3
42.231.248	48	3
42.231.250	50	3
42.231.255	55	2
42.231.260	60	2
42.231.265	65	2
42.231.270	70	2
42.231.275	75	2
42.231.280	80	2
42.231.285	85	2
42.231.290	90	2

5.0 mm Cannulated Variable Angle Locking Screws, 4.0 mm Hex
Stainless Steel

with OPTILINK	Length (mm)	Qty.
42.231.620	20	2
42.231.625	25	2
42.231.630	30	2
42.231.635	35	2
42.231.640	40	2
42.231.645	45	2
42.231.650	50	2
42.231.655	55	3
42.231.660	60	3
42.231.665	65	3
42.231.670	70	3
42.231.675	75	3
42.231.680	80	3
42.231.685	85	3
42.231.690	90	3

4.5 mm Cortex Screws, self-tapping

Titanium	Length (mm)	Qty.
414.822	22	3
414.824	24	3
414.826	26	3
414.828	28	3
414.830	30	3
414.832	32	3
414.834	34	3
414.836	36	6
414.838	38	6
414.840	40	6
414.842	42	6
414.844	44	3
414.846	46	3
414.848	48	3
414.850	50	3
414.852	52	2
414.854	54	2
414.856	56	2
414.858	58	2
414.860	60	2
414.862	62	2
414.864	64	2
414.866	66	2
414.868	68	2
414.870	70	2

5.0 mm Cannulated Conical Screws

Titanium	Length (mm)	Qty.
04.205.265	65	2
04.205.270	70	2
04.205.275	75	2
04.205.280	80	2
04.205.285	85	2
04.205.290	90	2
04.205.295	95	2

Also Available Implants and Instruments

4.5 mm Variable Angle LCP Curved Condylar Plates, sterile

Stainless Steel	Titanium	Holes	Length (mm)	
02.124.406S	04.124.406S	6	159	right
02.124.407S	04.124.407S	6	159	left
02.124.408S	04.124.408S	8	195	right
02.124.409S	04.124.409S	8	195	left
02.124.410S	04.124.410S	10	230	right
02.124.411S	04.124.411S	10	230	left
02.124.412S	04.124.412S	12	266	right
02.124.413S	04.124.413S	12	266	left
02.124.414S	04.124.414S	14	301	right
02.124.415S	04.124.415S	14	301	left
02.124.416S	04.124.416S	16	336	right
02.124.417S	04.124.417S	16	336	left
02.124.418S	04.124.418S	18	370	right
02.124.419S	04.124.419S	18	370	left
02.124.420S	04.124.420S	20	405	right
02.124.421S	04.124.421S	20	405	left
02.124.422S	04.124.422S	22	439	right
02.124.423S	04.124.423S	22	439	left

5.0 mm Periprosthetic Variable Angle Locking Screws, self-tapping, sterile

Stainless Steel	Stainless Steel with OPTILINK	Length (mm)
02.231.008S	42.231.008S	8
02.231.010S	42.231.010S	10
02.231.012S	42.231.012S	12
02.231.014S	42.231.014S	14
02.231.016S	42.231.016S	16
02.231.018S	42.231.018S	18

5.0 mm Variable Angle Locking Screws, self-tapping, STARDRIVE 25

Stainless Steel	Stainless Steel with OPTILINK	Length (mm)
02.231.214	42.231.214	14
02.231.216	42.231.216	16
02.231.218	42.231.218	18

5.0 mm Variable Angle Locking Screws, self-tapping, STARDRIVE 25, sterile

Stainless Steel	Stainless Steel with OPTILINK	Length (mm)
02.231.295S	42.231.295S	95
02.231.300S	42.231.300S	100
02.231.305S	42.231.305S	105
02.231.310S	42.231.310S	110

5.0 mm Cannulated Variable Angle Locking Screws, 4.0 mm Hex, sterile

Stainless Steel	Stainless Steel with OPTILINK	Length (mm)
02.231.695S	42.231.695S	95
02.231.700S	42.231.700S	100
02.231.705S	42.231.705S	105
02.231.710S	42.231.710S	110

3.5 mm Locking Attachment Plates, for 4.5 mm LCP Plates◊ (Marking A):

Stainless Steel	Titanium	Holes
02.120.601	04.120.601	4
02.120.602	04.120.602	8

Connection Screw for 3.5 mm Locking Attachment Plates, for 4.5 mm LCP Plates◊:

Stainless Steel	Titanium
02.120.606	04.120.606

Optional Instruments

03.122.040	4.3 mm Variable Angle Double Drill Guide with Cone
03.231.015	SD25 STARDRIVE Screwdriver Shaft, 6 mm hex coupling, 180 mm
03.231.016	Cannulated 4.0 mm Hex Screwdriver Shaft, 6 mm hex coupling, 180 mm
311.431	Large Handle with quick coupling
311.66	Tap for 6.5 mm Cancellous Bone Screws
312.67	6.5 mm/3.2 mm Double Drill Sleeve
60.116.112	Auxiliary Block for Screw Rack Shell
60.116.451	Length Marker Push Pin, Blank
60.116.452	Screw Type Push Pin, Blank

◊Available nonsterile and sterile-packed. Add "S" to product number for sterile product.

Also Available Sets

01.100.002	3.5 mm Low Profile Pelvic System Implant Set
01.120.102	3.5 mm Locking Attachment Plate Set
01.120.104	3.5 mm Titanium Locking Attachment Plate Set
01.221.010	Orthopaedic Cable Instrument Set with Pistol Grip Tensioner and Cable Cutter with Trigger Handle
01.240.201	Periarticular LCP Plating System, with 5.0 mm Locking Screws
01.240.401	Periarticular LCP Plating System, with 5.0 mm Titanium Locking Screws
105.924	Orthopaedic Cable System Instrument Set
115.401	Large Fragment LCP Instrument Set
115.403	Large Fragment LCP Screw Set
115.85	Pelvic Instrument Set
125.885	Pelvic Implant Set
146.403	Large Fragment Titanium LCP Screw Set

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