

1.5 MM LCP® SYSTEM

For treatment of fractures and arthrodeses of canines and felines

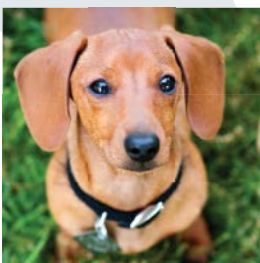
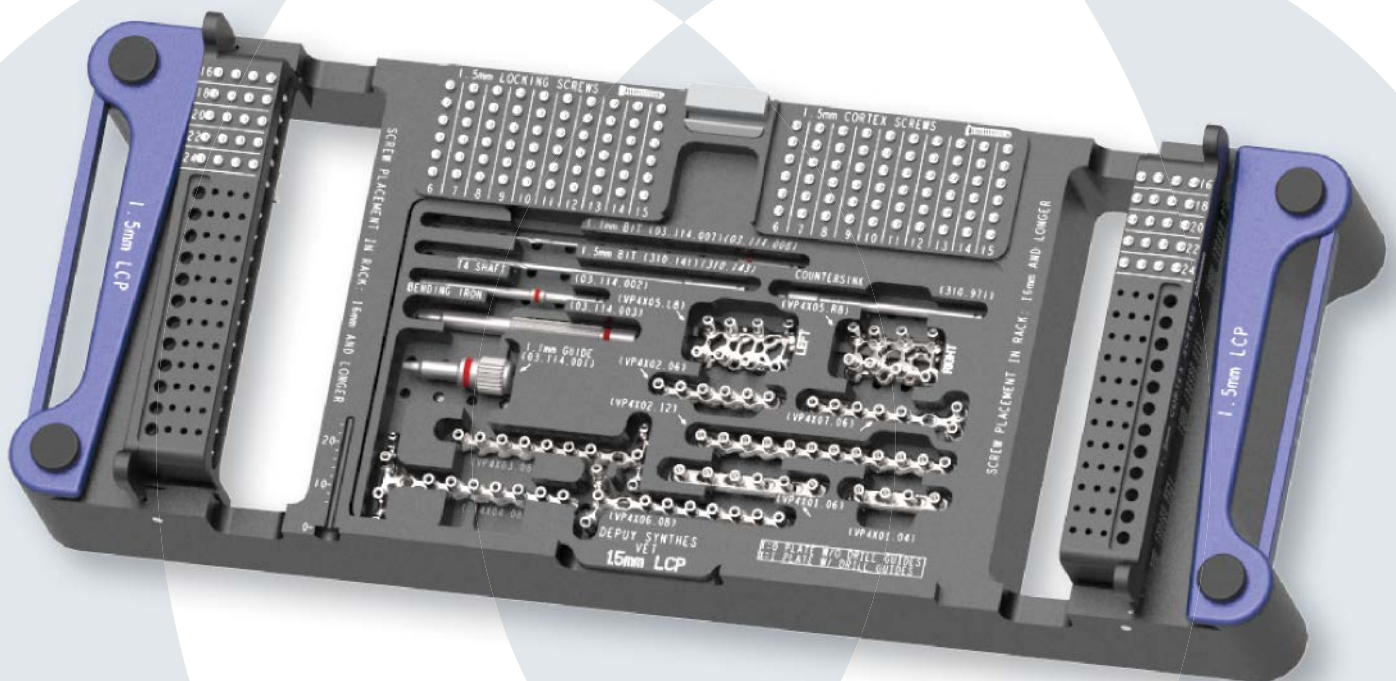


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1.5 MM LCP® SYSTEM

For treatment of fractures and arthrodeses of canines and felines

The 1.5 mm LCP® System consists of 1.5 mm locking compression plates (LCP), instruments, and an implant module set.

Plates

- Low profile to minimize soft tissue irritation
- Cut-to-length feature minimizes inventory
- Stacked Combi holes allow the use of a locking screw or a cortex screw in the same round conical plate hole
- Available with or without short threaded drill guides preassembled to the plate
- Combi holes in the LCP Plates allow use of a cortex screw in the compression side of the hole or a locking screw in the threaded side of the hole



1.5 mm LCP System

For treatment of fractures and arthrodeses of canines and felines



Cut-to-length feature minimizes inventory



Stacked Combi holes allow the use of a locking screw or a cortex screw in the same round conical plate hole



Available with or without short threaded drill guides preassembled to the plate



Locking screws

- Self-tapping tip facilitates insertion
- Self-retaining STARDRIVE™ Recess allows improved torque transmission and increased resistance to stripping
- Threaded head profile used with LCP Plates creates a fixed-angle construct, particularly advantageous in osteopenic bone
- Low-profile head sits flush with the plate
- Available in stainless steel



Cortex screws

- Self-tapping tip facilitates insertion
- Self-retaining STARDRIVE Recess allows improved torque transmission and increased resistance to stripping
- Used for compression
- Low-profile head sits flush with the plate
- Available in stainless steel

Note: 1.5 mm LCP Screws are not compatible with other DePuy Synthes plating systems.

AO PRINCIPLES

In 1958, the AO formulated four basic principles, which have become the guidelines for internal fixation.¹ Those principles, as applied to the 1.5 mm LCP Mini Fragment System, are:

Anatomic reduction

Fracture reduction and fixation to restore anatomical relationships, when applicable.

Stable fixation

Locking screws create a fixed-angle construct, providing angular stability, when applicable.

Preservation of blood supply

Tapered end may facilitate submuscular plate insertion. Submuscular plate insertion may help to preserve tissue viability. Limited-contact plate design minimizes disruption of soft tissue and preserves vascular blood flow for bone healing.

Early, active mobilization

Early mobilization per standard AO technique creates an environment for bone healing, expediting a return to optimal function.

1. Müller ME, Allgöwer M, Schneider R, Willenegger H. *Manual of Internal Fixation*. 3rd ed. Berlin Heidelberg New York: Springer-Verlag; 1991.

REDUCE FRACTURE AND TRIM PLATE

1

Reduce fracture

Instruments

VW1003.15	1.0 mm Kirschner Wire, trocar point or
VW1004.15*	1.0 mm Kirschner Wire, trocar points on both ends
399.97*	Reduction Forceps, with points

Reduce the fracture and, if necessary, fix with Kirschner wires or reduction forceps.

2

Trim plate

Instrument

391.98*	Plate Cutter, for 1.0 mm–2.0 mm plates
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The plate cutter can be used on a preassembled plate without removal of the short threaded drill guides.

Optional instrument

391.962*	Bending/Cutting Pliers
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If the bending/cutting pliers are used on a plate preassembled with drill guides, the drill guides must first be removed from the plate.

Trim the plate to the desired length using the cutters and remove the burrs.



*Also available.

INSERT PLATE

3 Contour plate (optional)

Instrument

03.114.003	Threaded Bending Pin, for 1.5 mm LCP Plates
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If necessary, use threaded bending pins to contour the plate to fit the patient's anatomy. The bending pins can be inserted over the short threaded drill guides or threaded into the screw holes. The threaded bending pins should be used to prevent deformation of the threaded holes while bending.

Optional instruments

391.962*	Bending/Cutting Pliers
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391.963*	Universal Bending Pliers
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The non-preassembled plates can also be bent using the flat-nosed pliers.

Note: If possible, bend LCP Plates between the Combi holes. Do not deform the Combi holes during bending or over-bend the plates, as this may adversely affect insertion of locking screws.



*Also available.

4

Position plate

Instruments

VW1003.15	1.0 mm Kirschner Wire, trocar point or
VW1004.15*	1.0 mm Kirschner Wire, trocar points on both ends
398.819*	Plate Holding Forceps with swivel foot, 150 mm
399.97*	Reduction Forceps, with points

Position the plate over the reduced fracture using forceps and fix provisionally with Kirschner wires or reduction forceps, if necessary.

Note: If using a preassembled plate, the short threaded drill guides must be removed from surrounding holes to allow plate holding forceps to sit flush on the plate. The point of pointed reduction forceps can be inserted in the cannulation of the short threaded drill guides to secure the plate to the bone.



*Also available.

INSERT SCREWS

5

Determine screw type

Depending on the individual case, cortex screws and/or locking screws may be inserted. Determine where locking screws will be used. Locking or cortex screws can be used in any of the screw holes, with the exception of the nonthreaded elongated hole, which only accepts 1.5 mm cortex screws. If a combination of locking and cortex screws is planned, a cortex screw should be inserted first to pull the plate to the bone. If a locking screw is inserted first, ensure that the plate is held securely to the bone, to avoid spinning of the plate as the screw is locked into the plate.

*Also available.

6

Insert screws in plate head

Instruments

03.114.009	STARDRIVE Screwdriver Shaft, with Holding Sleeve, T4, 66 mm
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311.03	Handle, with mini quick coupling
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319.11	Depth Gauge for mini screws
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Alternative instrument

03.114.002	STARDRIVE Screwdriver Shaft, T4, 42 mm, self-retaining
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for use with 1.5 mm locking screws

03.114.007	1.1 mm Drill Bit, mini quick coupling, 75 mm
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for use with 1.5 mm cortex screws

03.114.007	1.1 mm Drill Bit, mini quick coupling, 75 mm
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310.141	1.5 mm Drill Bit, mini quick coupling, 65 mm
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312.14	1.5 mm/1.1 mm Double Drill Sleeve
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A 1.5 mm cortex screw can be inserted in the nonthreaded elongated hole. Adjust the plate as necessary and tighten the screw.

Note: The fracture pattern will dictate the optimal screw placement.

6. Insert screws in plate head
continued

Cortex Screw Insertion

If a cortex screw will be inserted normal to the plate, the short threaded drill guide can be used. If a cortex screw will be angled or inserted using a lag technique, use the double drill sleeve. Use the 1.1 mm drill bit for the threaded hole and the 1.5 mm drill bit for the gliding hole. Determine the screw length using the depth gauge.

Locking Screw Insertion

Drill for a 1.5 mm locking screw using the short threaded drill guide preassembled in the plate, and the 1.1 mm drill bit. Measure for screw length using the depth gauge.

Notes:

- If using a preassembled plate, the short threaded drill guide must be removed from the hole before using the double drill sleeve.
- If measuring through the short threaded drill guide, subtract 5 mm from the reading, to account for the drill guide.

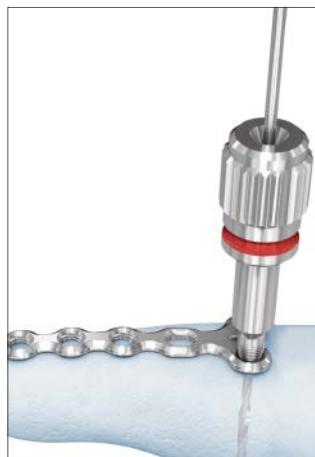
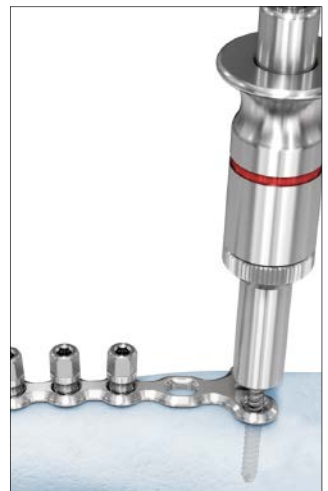
Alternative technique

Instrument

03.114.001 1.1 mm LCP Threaded Drill Guide

On non-preassembled plates, thread the 1.1 mm threaded drill guide into the hole and drill.

Note: Remove the 1.1 mm LCP Threaded Drill Guide before measuring.



7

Insert screws in plate shaft

Instruments

03.114.009	STARDRIVE Screwdriver Shaft, with Holding Sleeve, T4, 66 mm
311.03	Handle, with mini quick coupling
319.11	Depth Gauge for mini screws

Alternative instrument

03.114.002	STARDRIVE Screwdriver Shaft, T4, 42 mm, self-retaining
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for use with 1.5 mm locking screws

03.114.007	1.1 mm Drill Bit, mini quick coupling, 75 mm
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for use with 1.5 mm cortex screws

03.114.007	1.1 mm Drill Bit, mini quick coupling, 75 mm
310.141	1.5 mm Drill Bit, mini quick coupling, 65 mm
312.14	1.5 mm/1.1 mm Double Drill Sleeve

A 1.5 mm cortex screw can be inserted in the nonthreaded elongated hole. Adjust the plate as necessary and tighten the screw.

Note: The fracture pattern will dictate the optimal screw placement.

7. Insert screws in plate shaft
continued

Cortex Screw Insertion

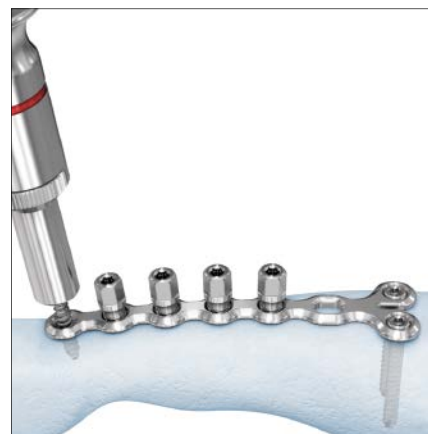
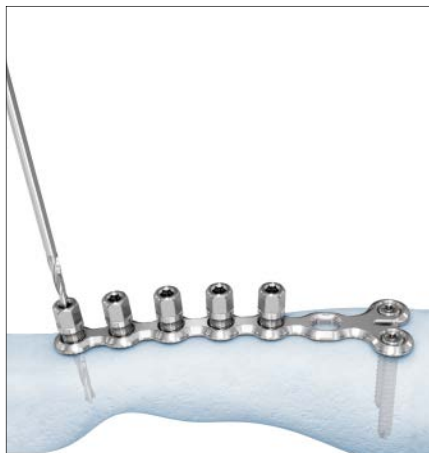
Insert 1.5 mm cortex or locking screws in the plate shaft. If a cortex screw will be inserted normal to the plate, the short threaded drill guide can be used. If a cortex screw will be angled or inserted using a lag technique, use the double drill sleeve. Use the 1.1 mm drill bit for the threaded hole and the 1.5 mm drill bit for the gliding hole. Determine the screw length using the depth gauge.

Locking Screw Insertion

Drill for a 1.5 mm locking screw using the short threaded drill guide preassembled in the plate, and the 1.1 mm drill bit. Measure for screw length using the depth gauge.

Notes:

- If using a preassembled plate, the short threaded drill guide must be removed from the hole before using the double drill sleeve.
- If measuring through the short threaded drill guide, subtract 5 mm from the reading, to account for the drill guide.



On non-preassembled plates, thread the 1.1 mm threaded drill guide into the hole and drill.

Note: Remove the 1.1 mm LCP Threaded Drill Guide before measuring.

Alternative technique

Instrument

03.114.001 1.1 mm LCP Threaded Drill Guide

8
Remove short threaded drill guides

Instruments

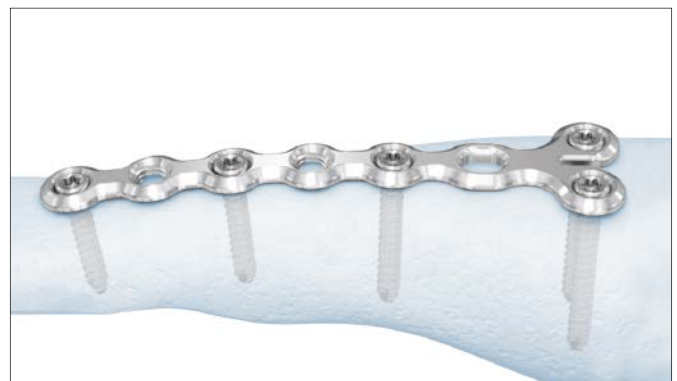
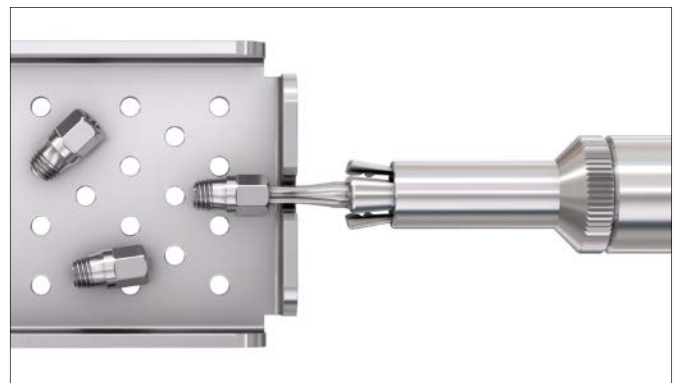
03.114.009 STARDRIVE Screwdriver Shaft, with Holding Sleeve, T4, 66 mm

311.03 Handle, with mini quick coupling

Alternative instrument

03.114.002 STARDRIVE Screwdriver Shaft, T4, 42 mm, self-retaining

Be sure to remove all short threaded drill guides when using preassembled plates. The removable tray located in the bottom of the module can serve as a tool to help remove the short drill guides from the screwdriver shaft. It is recommended to count the short threaded drill guides, to ensure they are all removed before closure.



IMPLANT REMOVAL

Implant removal

Instruments

03.114.009	STARDRIVE Screwdriver Shaft, with Holding Sleeve, T4, 66 mm
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311.03	Handle, with mini quick coupling
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Alternative instrument

03.114.002	STARDRIVE Screwdriver Shaft, T4, 42 mm, self-retaining
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Loosen all locking screws first to prevent the plate from rotating during removal of the last locking screw. Remove all cortex screws in a second step. If the screw threads are stripped, a stripped screw extractor can be used. An extraction bolt or hollow reamer can be used to engage shaft threads for removal.

IMPLANTS

1.5 mm Cortex Screws, self-tapping, with T4 STARDRIVE Recess

- Used to provide compression or neutral fixation
- Low-profile head sits flush in the plate holes
- STARDRIVE Recess mates with self-retaining screwdriver and provides improved torque transmission
- 6 mm to 24 mm lengths



1.5 mm Locking Screws, self-tapping, with T4 STARDRIVE Recess

- Threaded, conical head locks securely in Combi holes of the plate, to provide angular stability
- Locked screws allow unicortical screw fixation and load transfer to the near cortex
- STARDRIVE Recess mates with self-retaining screwdriver and provides improved torque transmission
- 6 mm to 24 mm lengths



Note: For information on fixation principles using conventional and locked plating techniques, please refer to the *Small Fragment System Technique Guide (J9511B)*.

Screws are made of implant-quality 316L stainless steel.

1.5 mm LCP Plates

Stainless Steel	Holes	Length (mm)
VP4001.04	4	23
VP4001.06	6	36



1.5 mm LCP Adaption Plates

Stainless Steel	Holes	Length (mm)
VP4002.06	6	29
VP4002.12	12	59



1.5 mm LCP T-Plates

Stainless Steel	Description
VP4003.08	3 holes head, 8 holes shaft
VP4004.08	4 holes head, 8 holes shaft



1.5 mm LCP Extended H-Plates

Stainless Steel	Description
VP4005.R8	right
VP4005.L8	left



1.5 mm LCP Y-Plate

Stainless Steel	Description
VP4006.08	3 holes head, 8 holes shaft



1.5 mm LCP Condylar Plate

Stainless Steel	Description
VP4007.06	2 holes head, 6 holes shaft



Plates are made of implant-quality 316L stainless steel.

1.5 mm LCP Plates

Stainless Steel	Holes	Length (mm)
VP4101.04	4	23
VP4101.06	6	36



1.5 mm LCP Adaption Plates

Stainless Steel	Holes	Length (mm)
VP4102.06	6	29
VP4102.12	12	59



1.5 mm LCP T-Plates

Stainless Steel	Description
VP4103.08	3 holes head, 8 holes shaft
VP4104.08	4 holes head, 8 holes shaft



1.5 mm LCP Extended H-Plates

Stainless Steel	Description
VP4105.R8	right
VP4105.L8	left



1.5 mm LCP Y-Plate

Stainless Steel	Description
VP4106.08	3 holes head, 8 holes shaft



1.5 mm LCP Condylar Plate

Stainless Steel	Description
VP4107.06	2 holes head, 6 holes shaft



INSTRUMENTS

03.114.001 1.1 mm LCP Threaded Drill Guide,
for 1.5 mm LCP Plates



03.114.002 STARDRIVE Screwdriver Shaft, T4,
42 mm, self-retaining



03.114.003 Threaded Bending Pin, for 1.5 mm
LCP plates



03.114.007 1.1 mm Drill Bit, mini quick coupling,
75 mm



03.114.009 STARDRIVE Screwdriver Shaft, with
Holding Sleeve, T4, 66 mm



310.141 1.5 mm Drill Bit, mini quick coupling,
65 mm



310.971 Countersink, for 1.3 mm and 1.5 mm
screws



1.5 MM LCP INSTRUMENT AND IMPLANT SETS

Module

- 60.116.545 1.5 mm LCP Module Case
 01.116.531 Screw Length Marker Kit

Instruments

- 03.114.001 1.1 mm LCP Threaded Drill Guide, for 1.5 mm LCP Plates, 2 ea.
 03.114.002 STARDRIVE Screwdriver Shaft, T4, 42 mm, self-retaining
 03.114.003 Threaded Bending Pin, for 1.5 mm LCP plates, 2 ea.
 03.114.007 1.1 mm Drill Bit, mini quick coupling, 75 mm, 2 ea.
 03.114.009 STARDRIVE Screwdriver Shaft, with Holding Sleeve, T4, 66 mm
 310.141 1.5 mm Drill Bit, mini quick coupling, 65 mm, 2 ea.
 310.971 Countersink, for 1.3 mm and 1.5 mm screws
 311.03 Handle, with mini quick coupling
 319.11 Depth Gauge for mini screws



Implants

1.5 mm Locking Screws, self-tapping, with T4 STARDRIVE recess

	Length (mm)	Qty.
VS106.006	6	6
VS106.007	7	6
VS106.008	8	6
VS106.009	9	6
VS106.010	10	6
VS106.011	11	6
VS106.012	12	6
VS106.013	13	6
VS106.014	14	6
VS106.015	15	6
VS106.016	16	4
VS106.018	18	4
VS106.020	20	4
VS106.022	22	4
VS106.024	24	4

1.5 mm Cortex Screws, self-tapping, with T4 STARDRIVE recess

	Length (mm)	Qty.
VS105.006	6	6
VS105.007	7	6
VS105.008	8	6
VS105.009	9	6
VS105.010	10	6
VS105.011	11	6
VS105.012	12	6
VS105.013	13	6
VS105.014	14	6
VS105.015	15	6
VS105.016	16	4
VS105.018	18	4
VS105.020	20	4
VS105.022	22	4
VS105.024	24	4

For detailed cleaning and sterilization instructions, please refer to:
www.synthes.com/cleaning-sterilization
 In Canada, the cleaning and sterilization instructions will be provided with the Loaner shipments.

Note: For additional information, please refer to package insert.

Implants, continued

Without Short Threaded Drill Guides

1.5 mm LCP Plates, 2 ea.

	Holes	Length (mm)
VP4001.04	4	23
VP4001.06	6	36

1.5 mm LCP Adaption Plates, 2 ea.

	Holes	Length (mm)
VP4002.06	6	29
VP4002.12	12	59

1.5 mm LCP T-Plates, 2 ea.

	Description
VP4003.08	3 holes head, 8 holes shaft
VP4004.08	4 holes head, 8 holes shaft

1.5 mm LCP Extended H-Plates, 2 ea.

	Description
VP4005.L8	left
VP4005.R8	right

1.5 mm LCP Y-Plate, 2 ea.

	Description
VP4006.08	3 holes head, 8 holes shaft

1.5 mm LCP Condylar Plate, 2 ea.

	Description
VP4007.06	6 holes shaft

1.5 MM LCP INSTRUMENT AND IMPLANT SETS WITH DRILL GUIDES

Module

- 60.116.545 1.5 mm LCP Module Case
- 01.116.531 Screw Length Marker Kit

Instruments

- 03.114.001 1.1 mm LCP Threaded Drill Guide, for 1.5 mm LCP Plates, 2 ea.
- 03.114.002 STARDRIVE Screwdriver Shaft, T4, 42 mm, self-retaining
- 03.114.003 Threaded Bending Pin, for 1.5 mm LCP plates, 2 ea.
- 03.114.007 1.1 mm Drill Bit, mini quick coupling, 75 mm, 2 ea.
- 03.114.009 STARDRIVE Screwdriver Shaft, with Holding Sleeve, T4, 66 mm
- 310.141 1.5 mm Drill Bit, mini quick coupling, 65 mm, 2 ea.
- 310.971 Countersink, for 1.3 mm and 1.5 mm screws
- 311.03 Handle, with mini quick coupling
- 319.11 Depth Gauge for mini screws



Implants

1.5 mm Locking Screws, self-tapping, with T4 STARDRIVE recess

	Length (mm)	Qty.
VS106.006	6	6
VS106.007	7	6
VS106.008	8	6
VS106.009	9	6
VS106.010	10	6
VS106.011	11	6
VS106.012	12	6
VS106.013	13	6
VS106.014	14	6
VS106.015	15	6
VS106.016	16	4
VS106.018	18	4
VS106.020	20	4
VS106.022	22	4
VS106.024	24	4

1.5 mm Cortex Screws, self-tapping, with T4 STARDRIVE recess

	Length (mm)	Qty.
VS105.006	6	6
VS105.007	7	6
VS105.008	8	6
VS105.009	9	6
VS105.010	10	6
VS105.011	11	6
VS105.012	12	6
VS105.013	13	6
VS105.014	14	6
VS105.015	15	6
VS105.016	16	4
VS105.018	18	4
VS105.020	20	4
VS105.022	22	4
VS105.024	24	4

Implants, continued

With Short Threaded Drill Guides

1.5 mm LCP Plates

	Holes	Length (mm)
VP4101.04	4	23
VP4101.06	6	36

1.5 mm LCP Adaption Plates

	Holes	Length (mm)
VP4102.06	6	29
VP4102.12	12	59

1.5 mm LCP T-Plates

	Description
VP4103.08	3 holes head, 8 holes shaft
VP4104.08	4 holes head, 8 holes shaft

1.5 mm LCP Extended H-Plates

	Description
VP4105.L8	left
VP4105.R8	right

1.5 mm LCP Y-Plate

	Description
VP4106.08	3 holes head, 8 holes shaft

1.5 mm LCP Condylar Plate

	Description
VP4107.06	6 holes shaft

For detailed cleaning and sterilization instructions, please refer to:

www.synthes.com/cleaning-sterilization

In Canada, the cleaning and sterilization instructions will be provided with the Loaner shipments.

ALSO AVAILABLE

Instruments

03.114.008	1.1 mm Drill Bit, Stryker J-latch, 85 mm
03.114.010	STARDRIVE Screwdriver Shaft, T4, 66 mm
311.03	Handle, with mini quick coupling
319.11	Depth Gauge for mini screws
391.962	Bending/Cutting Pliers
391.963	Universal Bending Pliers
391.98	Plate Cutter, for 1.0 mm–2.0 mm plates
398.819	Plate Holding Forceps, with swivel foot, 150 mm
399.97	Reduction Forceps, with points
VW1003.15	1.0 mm Kirschner Wire, trocar point
VW1004.15	1.0 mm Kirschner Wire, trocar points on both ends

Lid and Tray

60.114.004	Tray for Small Threaded Drill Guides, for 1.5 mm module
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CAUTION: Federal law restricts this device to sale by or on the order of a veterinarian.



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