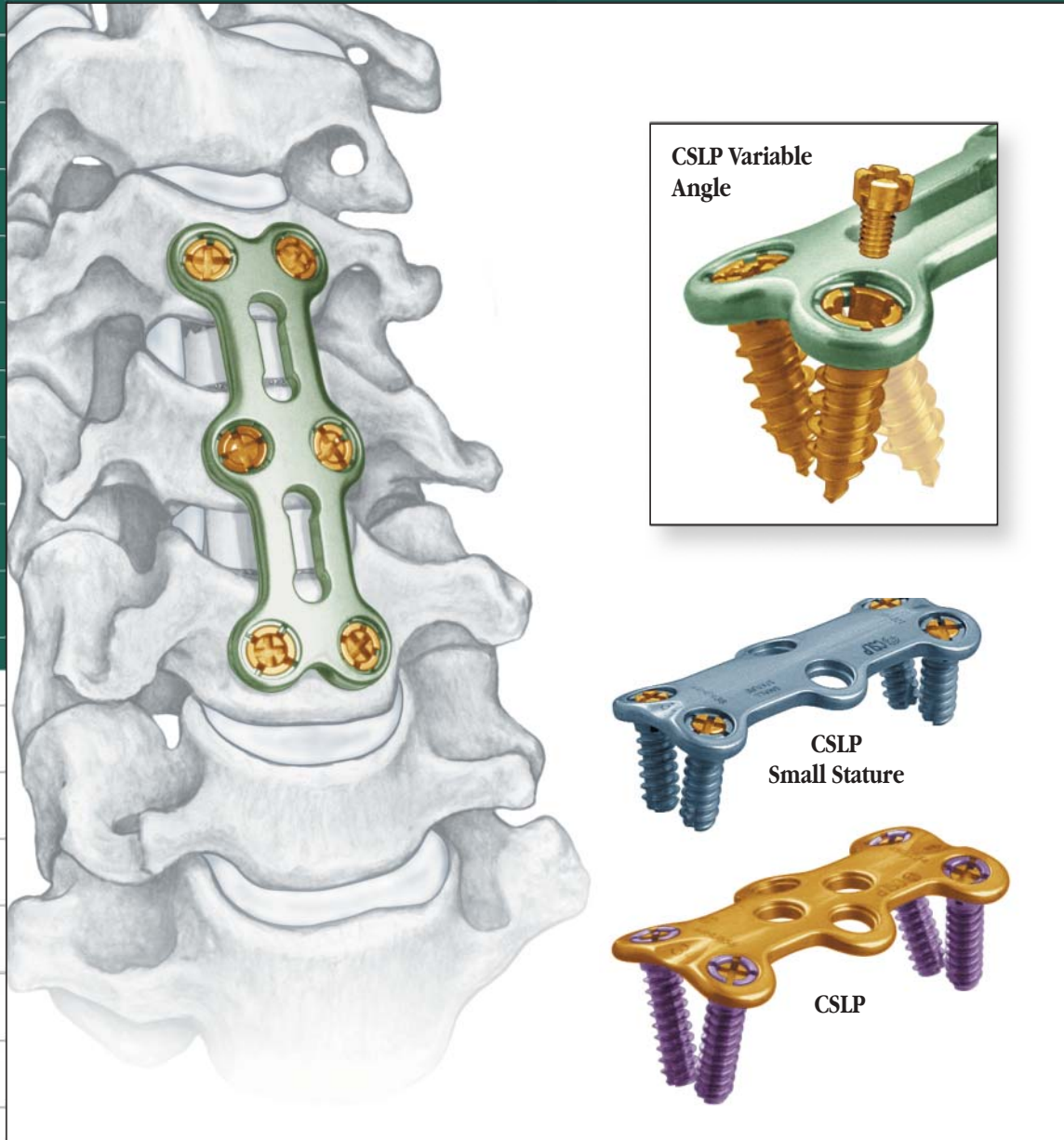


The Cervical Spine Locking Plate CSLP



Principle Based Surgery with the Cervical Spine Locking Plate (CSLP)

The AO ASIF Principles of Internal Fixation

In 1958, the AO ASIF (Association for the Study of Internal Fixation) formulated four basic principles,¹ which have become the guidelines for internal fixation. They are:

- Anatomic reduction
- Stable internal fixation
- Atraumatic surgical technique
- Early active pain-free mobilization

The fundamental aims of fracture treatment in the limbs and fusion of the spine are the same. A specific goal in the spine is the return of as much function as possible of the injured neural elements.²

Anatomical alignment in the cervical spine means restoring and maintaining the lordosis and the original disc height. The goal of *stable internal fixation* in the cervical spine is to maintain not only the integrity of a mobile segment and make it fuse, but also to maintain the balance and the physiologic three-dimensional form of the cervical spine.³

The Proven Performance of CSLP

The Synthes Cervical Spine Locking Plate (CSLP) was developed by Dr. Edwin Morscher, along with the technical commission of the AO, following the AO principles for internal fixation. Since its introduction to the United States in 1991, CSLP has been used in more than 150,000 anterior cervical fusions. The clinical performance of CSLP has been documented in more than 20 peer-reviewed studies.⁴

During its lifetime, several new generations of CSLP have been developed:

- Adjusting the hole pattern to multilevel discectomies;
- Decreasing the plate size to conform to small-statured spines;
- And now—offering variable angle and self-drilling screws to ease the technique.



1. M.E. Müller, M. Allgöwer, R. Schneider, H. Willenegger: *AO Manual of Internal Fixation*, 3rd Edition (Berlin: Springer-Verlag) 1991.

2. *ibid.*

3. M. Aebi, J.S. Thalgott, J.K. Webb. *AO ASIF Principles in Spine Surgery*, (Berlin: Springer-Verlag) 1998.

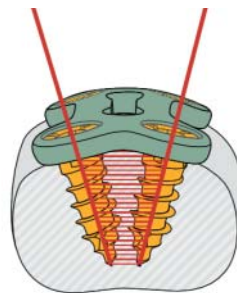
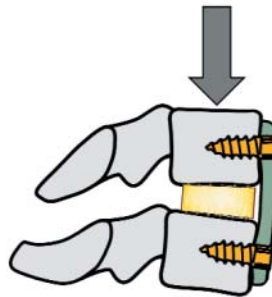
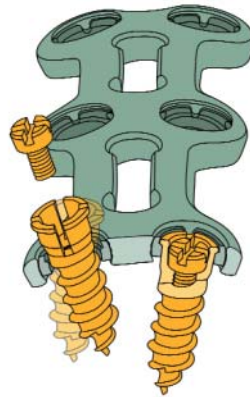
4. Partial list of published clinical CSLP studies:

- Tribus et al., *Spine*, 1999, No.9: "The Efficacy of Anterior Cervical Plating in the Management of Symptomatic Pseudoarthrosis of the Cervical Spine."
- Caspar et al., *Journal of Spinal Disorders*, 1998, No.1: "Anterior Cervical Plate Stabilization in One- and Two Level Degenerative Disease."
- Shapiro et al., *Journal of Neurosurgery*, Feb. 1996: "Banked Fibula and the Locking Anterior Cervical Plate in ACF Following Discectomy."
- Johnston & Crockard, *Journal of Neurosurgery*, Feb. 1995: "One-Stage Internal Fixation and Anterior Fusion in Complex Cervical Spinal Disorders."
- Rechtine et al., *Techniques in Orthopaedics*, 1994, No.1: "The Synthes Cervical Spine Locking Plate and Screw System in Anterior Cervical Fusion."

The Principles of CSLP

All CSLP generations are based on the same AO ASIF principles as applied to the cervical spine:

CSLP Principle	CSLP Design Feature	Clinical Importance
Stable Fixation	Screws lock to the plate	<ul style="list-style-type: none"> • Stabilizes the motion segment and minimizes motion between graft and vertebrae. • Buttresses the graft against excessive compressive loads thereby minimizing subsidence, maintaining lordosis, disc height, and nerve root decompression.
Load Sharing	Carefully designed plate stiffness	<ul style="list-style-type: none"> • Follows 'Wolff's Law' to allow fusion (load transmission through graft).
Safe and Secure Construct	Instrumentation supports optimal medial screw angulation.	<ul style="list-style-type: none"> • Each pair of screws entraps a wedge of bone, for increased pullout resistance. • Decreases the risk of impingement of the vertebral artery and the nerve roots. • Minimizes screw interference
Atraumatic Technique	Thin plate with a smooth profile	<ul style="list-style-type: none"> • Minimizes tissue irritation leading to esophageal erosion.



CSLP–Load Sharing without Compromising Stability

The Mechanics of Load Sharing

Studies have shown that stable plated ACDFs result in less graft collapse and less loss of lordosis than unplated ACDFs⁵⁻⁷. It is important, however, that a stable construct shares enough load with the graft to avoid stress shielding.

The mechanics of load sharing between the bone graft and the CSLP plate in the cervical spine is shown in Fig.1. As load is applied, the lordotic curvature of the construct helps to absorb the load by bending and absorbing the energy of the load. The stable construct returns to its original shape as the load is removed, thereby maintaining the anatomical alignment.

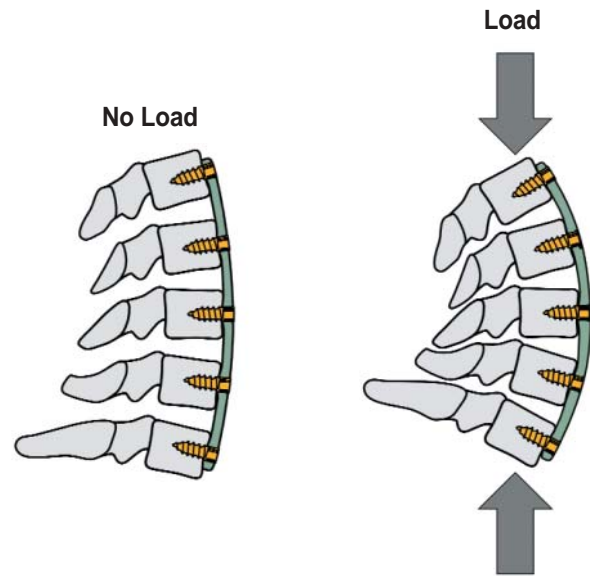


Fig. 1: CSLP construct absorbing the energy of the applied load

Carefully Designed Plate Stiffness

The bending stiffness of the plate and screw construct is the most important factor in determining how much load is shared with the bone. As the plate/screw construct stiffness increases, the percentage of load through the graft decreases.

The bending stiffness of the cervical plate is largely a function of both the plate thickness and the material stiffness. In order to limit the bending stiffness, CSLP plates are designed with a low profile (2–2.5 mm) and manufactured from commercially pure titanium, which is 90% as stiff as Ti-6Al-4V.

Independent testing has shown that the CSLP plates share 47% of the load when 45 N are applied and 59% of the load when 90 N are applied⁸ (Fig.2).

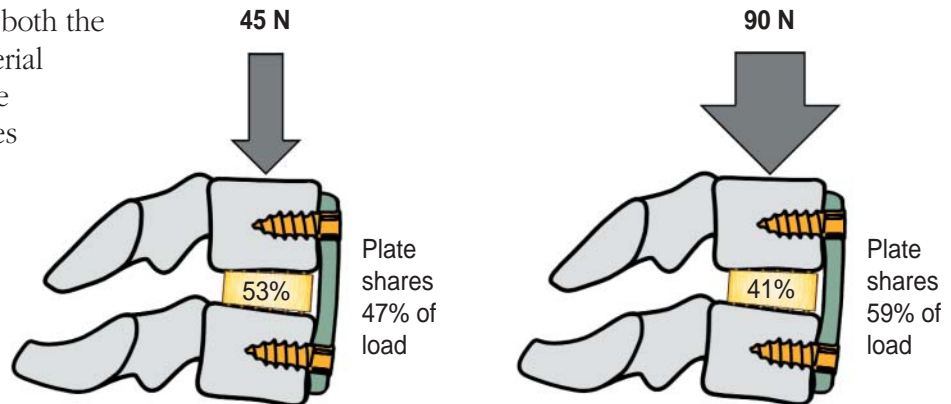


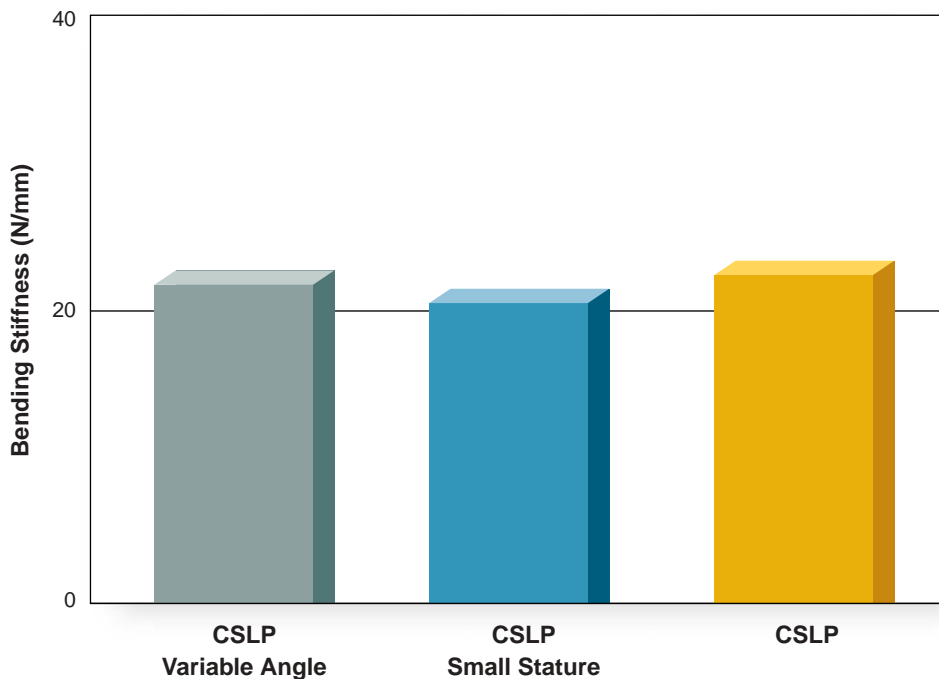
Fig. 2: CSLP's Load Sharing Characteristics

5. J.C. Wang, et. al.; "Increased Fusion Rates with Cervical Plating for Two-Level ACDF"; Paper #1, CSRS 1998.
6. P.W. McDonough, et. al.; "Single-Level Anterior Cervical Discectomy: Plate vs. No Plate"; Paper #3, CSRS 1998.
7. R.D. Orr, et. al.; "Radiographic Comparison of Plated versus Unplated Fusion for Single ACDF"; Paper #2, CSRS 1998.
8. Andrew J. Rapoff, et. al.; "Anterior Cervical Graft and Plate Load Sharing"; *Journal of Spinal Disorders*; Vol 12, No 1, pp 45-49.

The CSLP Small Stature and CSLP Variable Angle systems are designed to match the load-sharing performance of the original CSLP system.



Bending Stiffness Comparison



Static compression bending tests show the similarities between the 2-Level plates⁹

The Synthes Anterior CSLP System including the Small Stature Anterior Cervical Vertebrae Plate System consists of plates with Expansionhead Screws and Locking Screws. The plate attaches to the anterior portion of the vertebral body of the cervical spine. The CSLP system listed systems are intended for anterior screw fixation to the cervical spine (C2-C7) for the following indications: spondylolisthesis, fracture, spinal stenosis, and tumor.

9. Static compressive bending testing of the CSLP, Small Stature CSLP, and CSLP Variable Angle constructs is based on the guidelines of ASTM F1717 "Standard Test Methods for Static and Fatigue for Spinal Implant Constructs in a Corpectomy Model."

Plate Comparisons

General Specifications	CSLP Variable Angle	CSLP Small Stature	Cervical Spine Locking Plate
Plate Color	Light Green	Light Blue	Gold
Plate Width	18 mm	16 mm	21 mm
Axial Bend Radius	20 mm	15 mm	25 mm
Pre-Bent Lordotic Radius	200 mm	NA	NA
Maximum Thickness	2.5 mm	2.0 mm	2.0 mm
Lengths Available (overall)			
1-Level	23 mm–35 mm	20 mm–34 mm	22 mm–34 mm
2-Level	37 mm–55 mm	34 mm–54 mm	36 mm–54 mm
3-Level	54 mm–78 mm	47 mm–77 mm	53 mm–77 mm
4-Level	69 mm–109 mm	NA	68 mm–92 mm
Screw Angulation			
Cephalad Pair	Up to 20°	6° cephalad	12° cephalad
Intermediate Pairs	Up to 20°	0°	0°
Caudal Pair	Up to 20°	0°	0°
Screw Pair Convergence Angle	Up to 30°	19°	25°
Holes Available for Graft Screws	No	No	Yes



CSLP Variable Angle



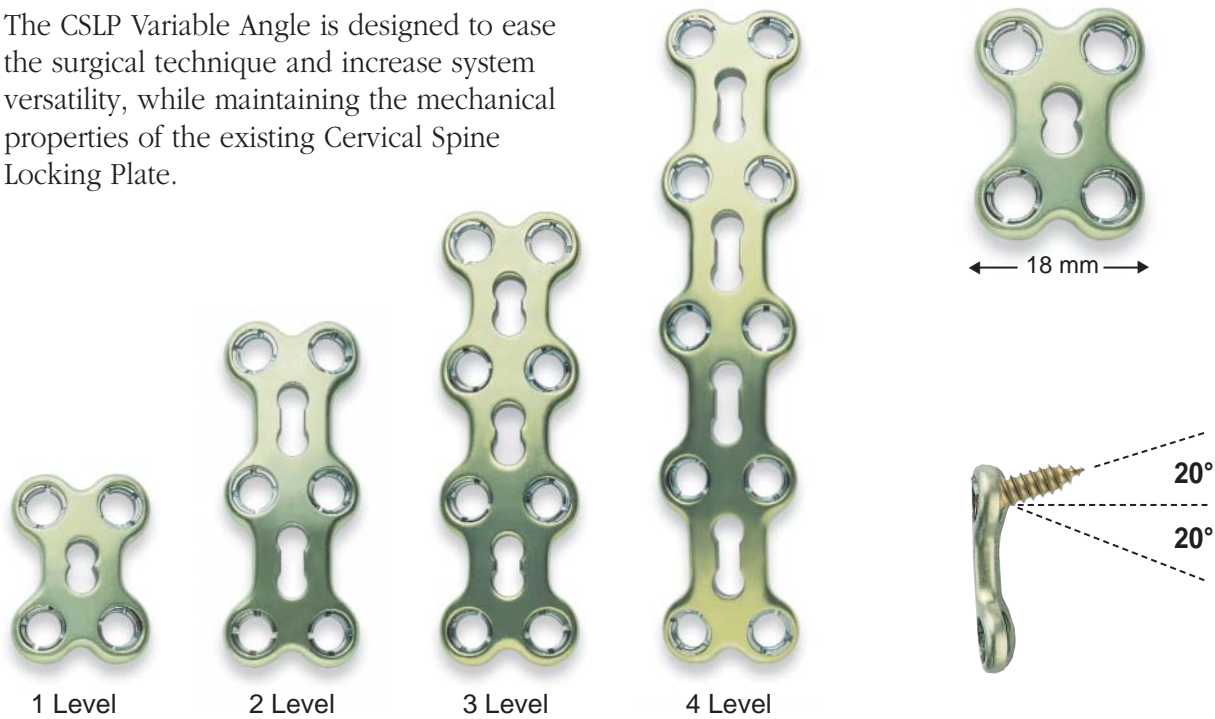
CSLP Small Stature



CSLP

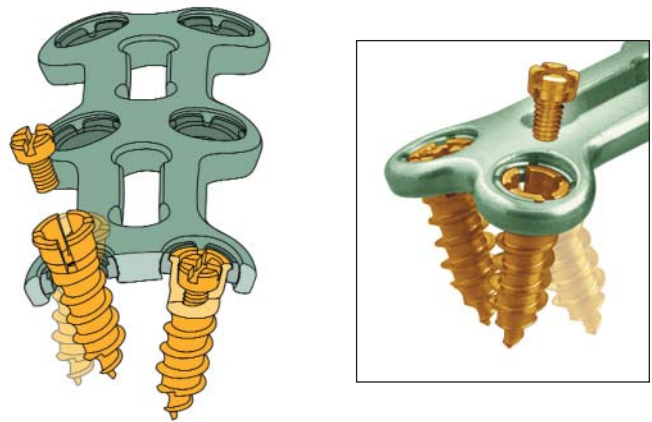
CSLP Variable Angle

The CSLP Variable Angle is designed to ease the surgical technique and increase system versatility, while maintaining the mechanical properties of the existing Cervical Spine Locking Plate.



Variable Screw Angulation

The screw can be angulated in any direction and still lock to the plate. This provides the stability and load sharing needed to allow bony fusion. The locking mechanism relies on the expansionhead screws, which have been proven effective in over 150,000 procedures.



Self-Drilling Screws

Self-drilling screws make drilling unnecessary. They have the same pull-out strength as self-tapping and standard screws of the same size.



CSLP Variable Angle (continued)

Additional Features

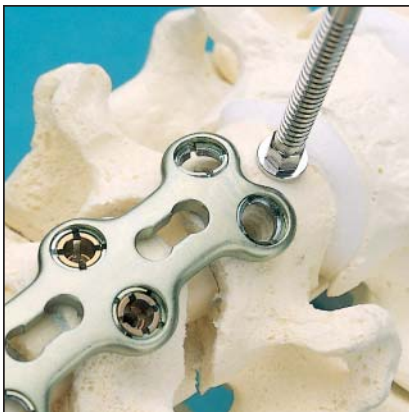
- Pre-lordosed plates
- Back surface of plate textured to reduce slippage
- Longer screw lengths allow bicortical screw purchase
- Available for 1-, 2-, 3- and 4-level corpectomies and discectomies






*Bicortical screws (green)
18 mm, 19 mm, 20 mm*



A notch at each end of the plate allows space for pins when used to compress the graft.



Expansionhead Screws Compatible with CSLP Variable Angle

		12 mm	14 mm	16 mm	18 mm	19 mm	20 mm
Standard Screws	4.0 mm Cortex	•	•	•	■		
	4.35 mm Cancellous	•	•	•	■		
							
Self-Tapping Screws	4.0 mm Cortex	•	•	•	•	•	•
	4.0 mm Cancellous	•	•	•	■		
	4.35 mm Cancellous	•	•	•	■		
	4.5 mm Cancellous	•	•	•	■		
							
Self-Drilling Screws	4.0 mm Cortex	•	•	•	■		
	4.0 mm Cancellous	•	•	•	■		
	4.5 mm Cancellous	•	•	•	■		
							

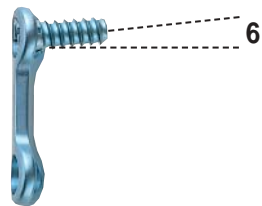
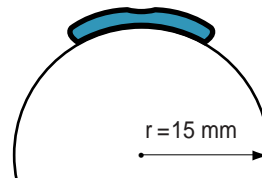
- Recommended for use
- Not available

CSLP Small Stature

Small Stature CSLP is designed for small vertebral bodies. It has the narrowest plate width of all CSLP versions, without compromising stiffness and strength.

Features

- 16 mm plate width
- 2 mm plate thickness
- Available for 1-, 2- or 3-level corpectomies or discectomies



Expansionhead Screws Compatible with CSLP Small Stature

		12 mm	14 mm	16 mm	18 mm	19 mm	20 mm
Standard Screws	4.0 mm Cortex	•	•	Not available			
	4.35 mm Cancellous	•	•	Not available			
Self-Tapping Screws	4.0 mm Cortex	•	•	Not available			
	4.0 mm Cancellous	•	•	Not available			
	4.35 mm Cancellous	•	•	Not available			
	4.5 mm Cancellous	•	•	Not available			
Self-Drilling Screws	4.0 mm Cortex	Not available					Not available
	4.0 mm Cancellous	Not available					Not available
	4.5 mm Cancellous	Not available					Not available

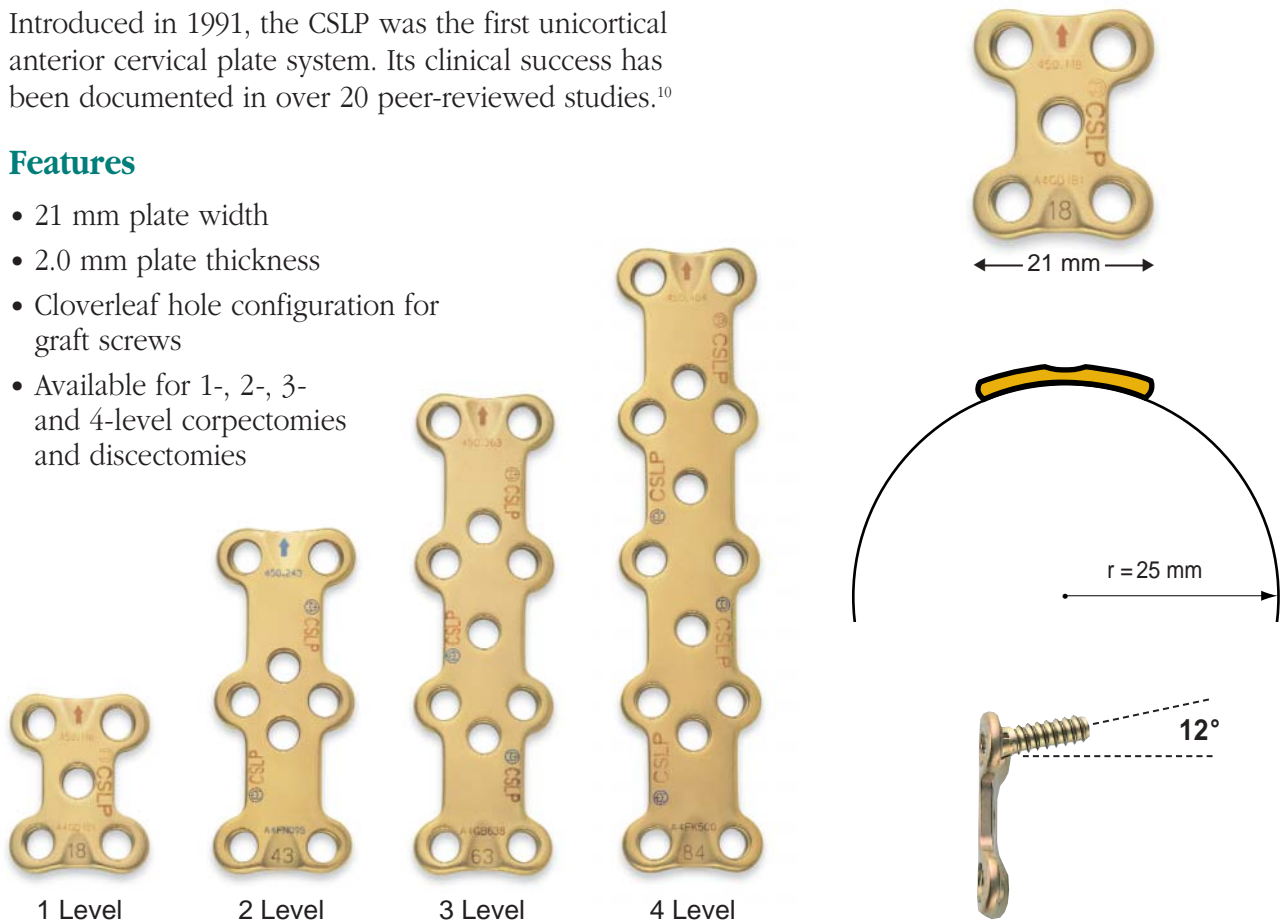
• Recommended for use ■ Not recommended for use ■ Not available

CSLP

Introduced in 1991, the CSLP was the first unicortical anterior cervical plate system. Its clinical success has been documented in over 20 peer-reviewed studies.¹⁰

Features

- 21 mm plate width
- 2.0 mm plate thickness
- Cloverleaf hole configuration for graft screws
- Available for 1-, 2-, 3- and 4-level corpectomies and discectomies



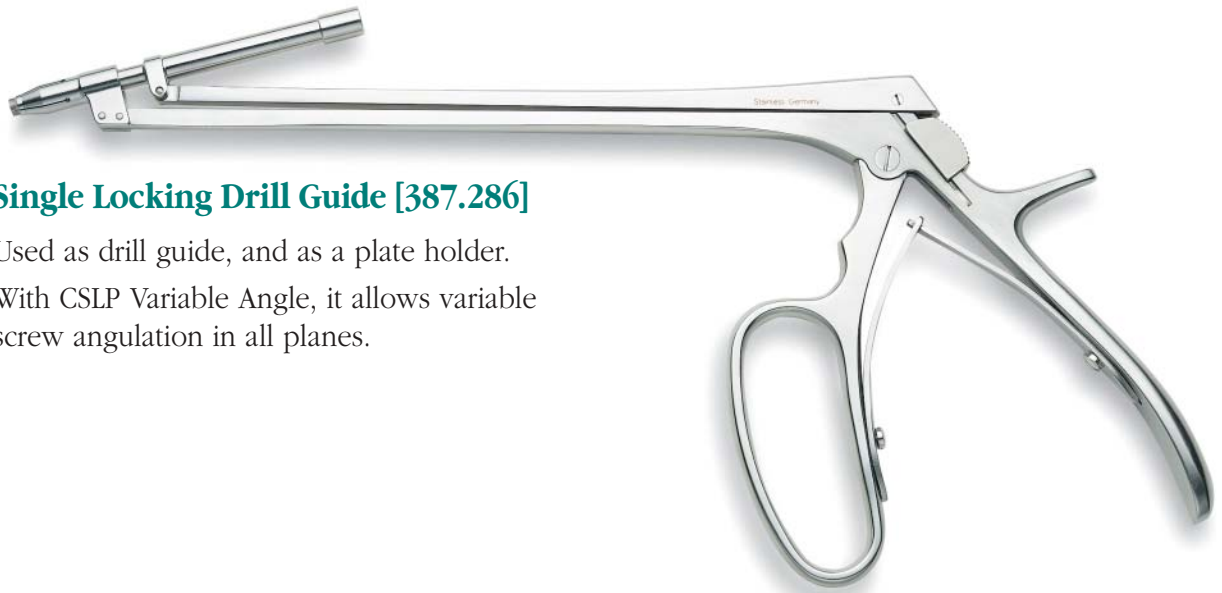
Expansionhead Screws Compatible with CSLP

		12 mm	14 mm	16 mm	18 mm	19 mm	20 mm
Standard Screws	4.0 mm Cortex	•	•	•	■		
	4.35 mm Cancellous	•	•	•	■		
Self-Tapping Screws	4.0 mm Cortex	•	•	•	■		
	4.0 mm Cancellous	•	•	•	■		
	4.35 mm Cancellous	•	•	•	■		
	4.5 mm Cancellous	•	•	•	■		
Self-Drilling Screws	4.0 mm Cortex	■			■		
	4.0 mm Cancellous	■			■		
	4.5 mm Cancellous	■			■		

• Recommended for use ■ Not recommended for use ■ Not available

10. Partial list of published clinical CSLP studies (see note 4 on Inside Front Cover).

Instruments



Single Locking Drill Guide [387.286]

Used as drill guide, and as a plate holder.
With CSLP Variable Angle, it allows variable screw angulation in all planes.



3.0 mm Drill Bit with stop, 12 mm–16 mm [324.12, 324.14, 324.16] (silver)

For use with the Single Locking Drill Guide [387.286].



Awl for self-drilling screws [387.291]

Used to center the screw hole in the plate and to break the near cortex.



Tip of awl



Cervical Depth Gauge [387.292]

For determining the correct length of bicortical screws.



3.0 mm Drill Bit for Bicortical Screws [387.275]

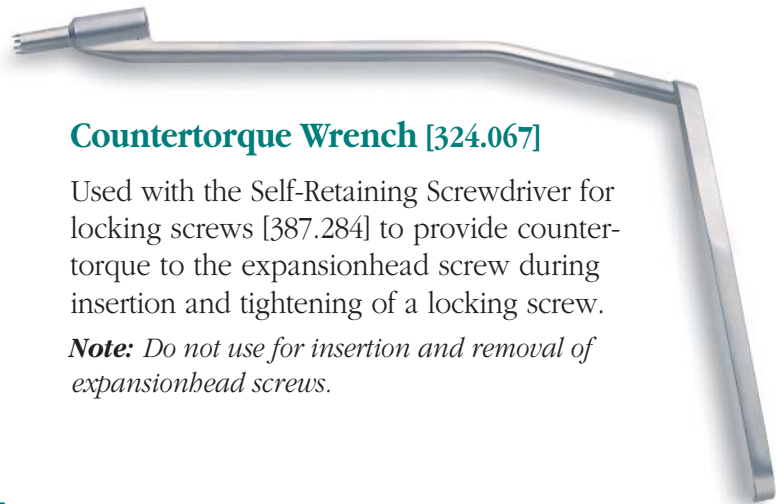
For use only with CSLP Variable Angle.

Note: This drill bit has a safety stop of 20 mm when used with the Single Locking Drill Guide [387.286].



Caliper [324.06]

For sizing graft.



Countertorque Wrench [324.067]

Used with the Self-Retaining Screwdriver for locking screws [387.284] to provide counter-torque to the expansionhead screw during insertion and tightening of a locking screw.

Note: Do not use for insertion and removal of expansionhead screws.



Temporary Fixation Pin [387.595]

Holds any Cervical Spine Locking Plate securely to the bone prior to final placement of screws. Compatible for use with CSLP Self-Retaining Screwdriver for expansionhead screws [387.282].

Instruments (continued)



Taps [387.276–387.279]

Used to tap drilled holes for non–self-tapping expansionhead screws.



Self-Retaining Screwdriver, for expansionhead screws [387.282]

For insertion of expansionhead screws. May also be used to insert the Temporary Fixation Pin [387.595].



Self-Retaining Screwdriver, for locking screw [387.284]

For inserting the locking screw [497.78] into the expansionhead screw.



Plate Lifter [324.066]

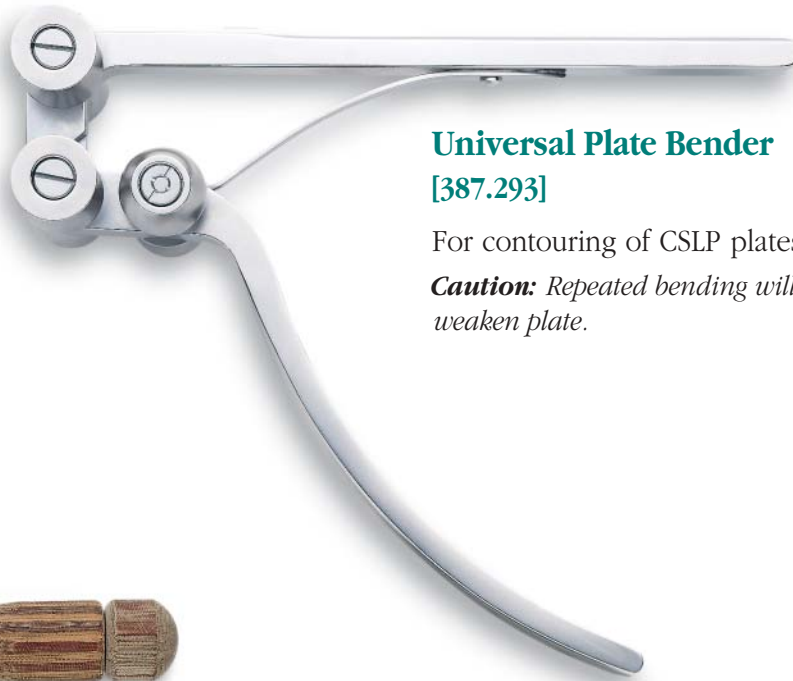
For lifting CSLP plates out of modules [304.975, 304.976, 304.978, 304.984, 304.985].



Increase lordotic bend



Decrease lordotic bend



Universal Plate Bender [387.293]

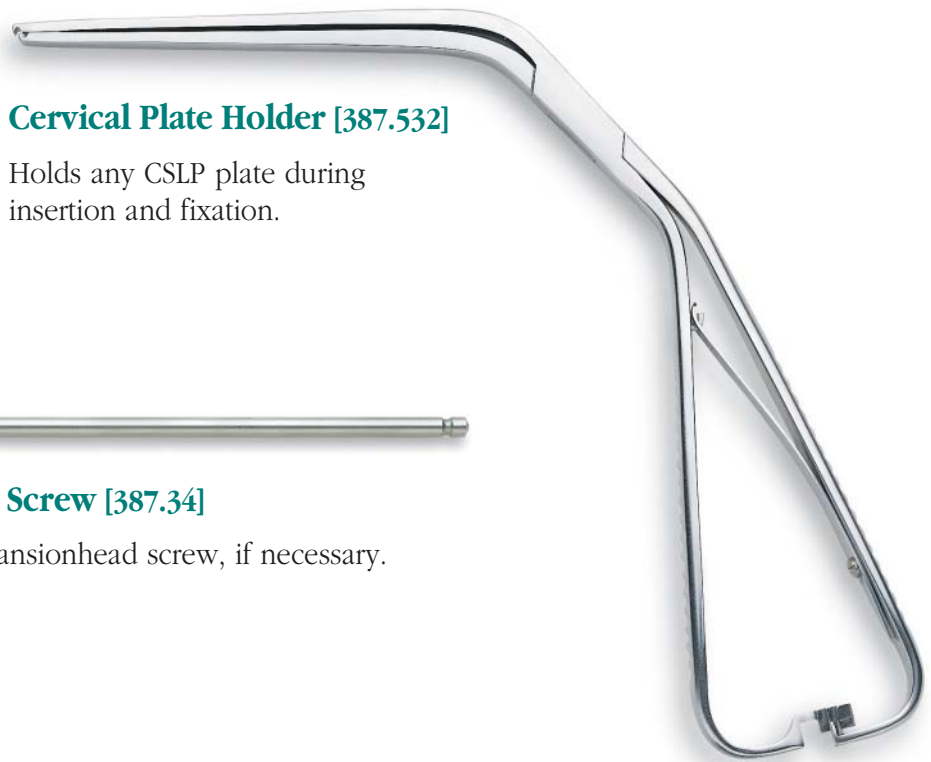
For contouring of CSLP plates.

Caution: Repeated bending will weaken plate.



Handle with quick coupling [311.43.99]

For use with drill bits and conical extraction screw.



Cervical Plate Holder [387.532]

Holds any CSLP plate during insertion and fixation.



Conical Extraction Screw [387.34]

For removal of an expansionhead screw, if necessary.

Instrument Chart

Catalog Number	CSLP Instruments	for use with:	CSLP Variable Angle	CSLP Small Stature	CSLP
324.06	Caliper		•	•	•
324.066	Plate Lifter		•	•	•
324.067	Countertorque Wrench		•	•	•
324.12	3.0 mm Drill Bit with stop, 12 mm		•	•	•
324.14	3.0 mm Drill Bit with stop, 14 mm		•	•	•
324.16	3.0 mm Drill Bit with stop, 16 mm		•		•
387.276	Tap for 4.0 mm Cortex Expansionhead Screws		•	•	•
387.277	Tap for 4.0 mm Cancellous Expansionhead Screws		•	•	•
387.278*	Tap for 4.35 mm Cancellous Expansionhead Screws		•	•	•
387.279*	Tap for 4.5 mm Cancellous Expansionhead Screws		•	•	•
387.282	Self-Retaining Screwdriver, for expansionhead screws		•	•	•
387.284	Self-Retaining Screwdriver, for locking screw		•	•	•
387.286	Single Locking Drill Guide		•	•	•
387.291	Awl for Self-Drilling Expansionhead Screws		•		
387.293	Universal Plate Bender		•	•	•
387.34	Conical Extraction Screw		•	•	•
387.532	Plate Holder		•	•	•
387.595	Temporary Fixation Pin		•	•	•
311.43.99	Handle with quick coupling		•	•	•
387.292*	Cervical Depth Gauge (for bicortical screws)		•		
387.275*	3.0 mm Drill Bit for Bicortical Screws		•		

Templates are included in implant sets.

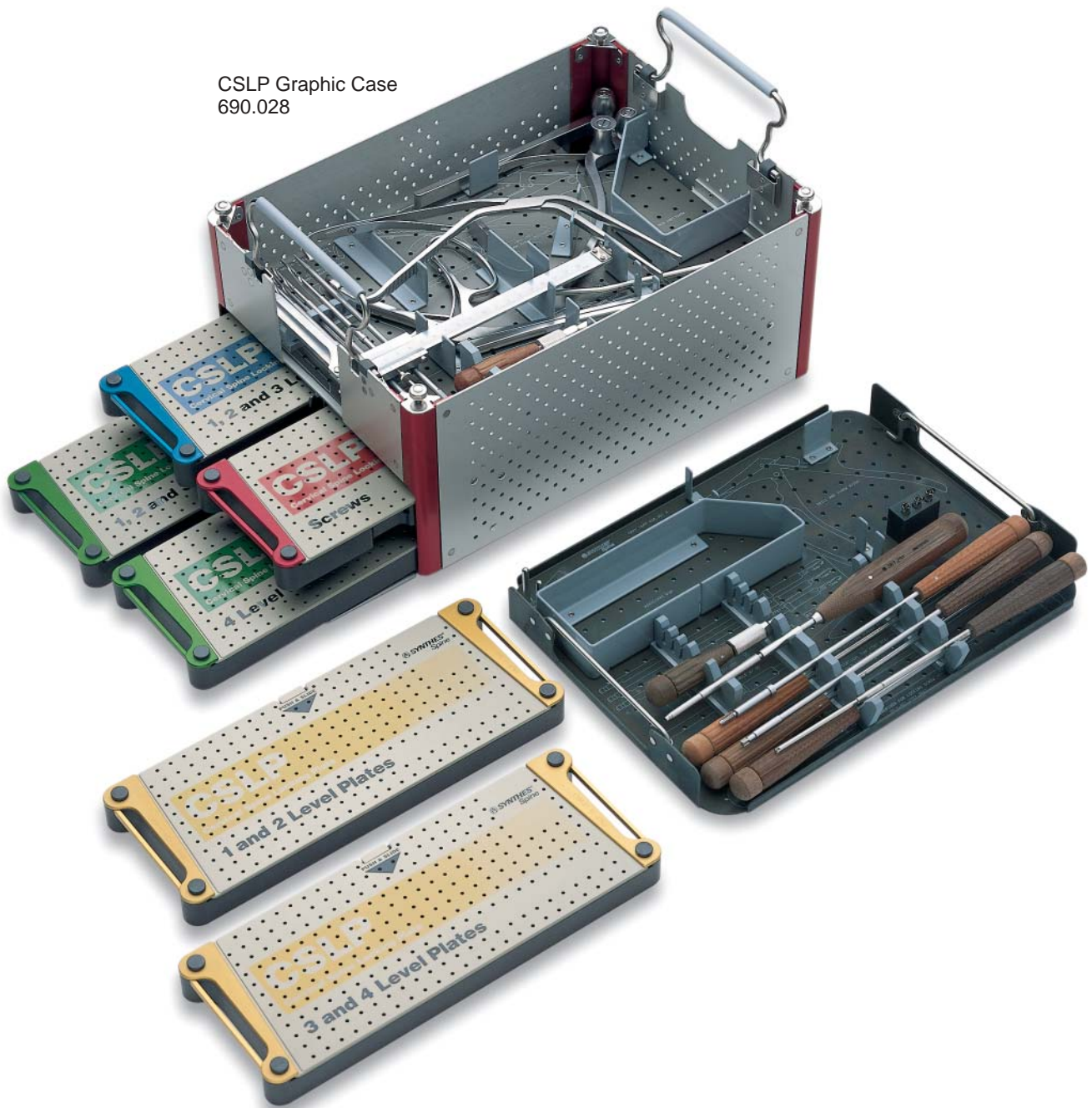
*Instrument is also available, not included in set.

CSLP Plate Comparison

CSLP Variable Angle			CSLP Small Stature			CSLP		
Catalog Number	Cephalad to caudal hole pair length (mm)	Overall length (mm)	Catalog Number	Cephalad to caudal hole pair length (mm)	Overall length (mm)	Catalog Number	Cephalad to caudal hole pair length (mm)	Overall length (mm)
One-Level Plates								
450.151	14	23	487.212	12	20	450.114	14	22
450.152	16	25	487.213	14	22	450.116	16	24
450.153	18	27	487.214	16	24	450.118	18	26
450.154	20	29	487.215	18	26	450.120	20	28
450.155	22	31	487.222	20	28	450.122	22	30
450.156	24	33	487.223	22	30	450.124	24	32
450.157	26	35	487.224	24	32	450.126	26	34
			487.225	26	34			
Two-Level Plates								
450.161	28	37	487.216	26	34	450.228	28	36
450.162	31	40	487.217	28	36	450.231	31	39
450.163	34	43	487.218	30	38	450.234	34	42
450.164	37	46	487.226	32	40	450.237	37	45
450.165	40	49	487.227	34	42	450.240	40	48
450.166	43	52	487.228	37	45	450.243	43	51
450.167	46	55	487.236	40	48	450.246	46	54
			487.237	43	51			
			487.238	46	54			
Three-Level Plates								
450.171	45	54	487.339	39	47	450.345	45	53
450.172	48	57	487.342	42	50	450.348	48	56
450.173	51	60	487.345	45	53	450.351	51	59
450.174	54	63	487.348	48	56	450.354	54	62
450.175	57	66	487.351	51	59	450.357	57	65
450.176	60	69	487.354	54	62	450.360	60	68
450.177	63	72	487.355	57	65	450.363	63	71
450.178	66	75	487.356	60	68	450.366	66	74
450.179	69	78	487.357	63	71	450.369	69	77
			487.358	66	74			
			487.359	69	77			
Four-Level Plates								
450.181	60	69				450.460	60	68
450.182	64	73				450.464	64	72
450.183	68	77				450.468	68	76
450.184	72	81				450.472	72	80
450.185	76	85				450.476	76	84
450.186	80	89				450.480	80	88
450.187	84	93				450.484	84	92
450.188	88	97						
450.189	92	101						
450.190	96	105						
450.191	100	109						

The Cervical Spine Locking Plate System

CSLP Graphic Case
690.028



The Cervical Spine Locking Plate System

Cervical Spine Locking Plate Instrument Set [105.897]

324.06	Caliper
324.061	Locking Drill Guide with Tissue Protection Sleeve
324.065	Cervical Plate Bender
324.066	Plate Lifter, 4 ea.
324.067	Countertorque Wrench
324.12	3.0 mm Drill Bit with stop, 12 mm, 2 ea.
324.14	3.0 mm Drill Bit with stop, 14 mm, 2 ea.
324.16	3.0 mm Drill Bit with stop, 16 mm, 2 ea.
387.20	3.0 mm Drill Guide
387.276	Tap for 4.0 mm Cortex Expansionhead Screws
387.277	Tap for 4.0 mm Cancellous Expansionhead Screws
387.282	Self-Retaining Screwdriver for expansionhead screws, 2 ea.
387.284	Self-Retaining Screwdriver for locking screw, 2 ea.
387.291	Awl for Self-Drilling Screws
387.293	Universal Plate Bender
387.34	Conical Extraction Screw
387.532	Plate Holder
387.595	Temporary Fixation Pin, 3 ea.
311.43.99	Handle with quick coupling, 2 ea.
690.028	CSLP Graphic Case

CSLP Basic Instrument Set (for CSLP and Small Stature CSLP) [105.898]

324.06	Caliper
324.061	Locking Drill Guide with Tissue Protection Sleeve
324.065	Cervical Plate Bender
324.067	Countertorque Wrench
324.12	3.0 mm Drill Bit with stop, 12 mm, 2 ea.
324.14	3.0 mm Drill Bit with stop, 14 mm, 2 ea.
324.16	3.0 mm Drill Bit with stop, 16 mm, 2 ea.
387.20	3.0 mm Drill Guide
387.276	Tap for 4.0 mm Cortex Expansionhead Screws
387.277	Tap for 4.0 mm Cancellous Expansionhead Screws
387.282	Self-Retaining Screwdriver, for expansionhead screws, 2 ea.
387.284	Self-Retaining Screwdriver, for locking screw, 2 ea.
387.293	Universal Plate Bender
387.34	Conical Extraction Screw
387.532	Plate Holder
387.595	Temporary Fixation Pin, 3 ea.
311.43.99	Handle with quick coupling
690.028	CSLP Graphic Case

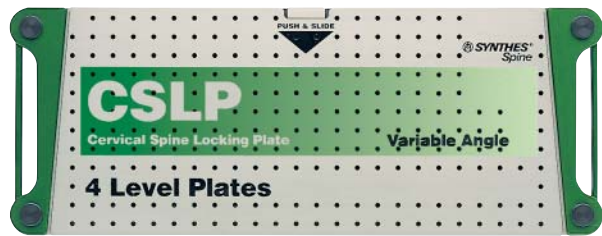
Also Available

387.278	Tap for 4.35 mm Cancellous Expansionhead Screws
387.279	Tap for 4.5 mm Cancellous Expansionhead Screws
387.292	Cervical Depth Gauge
387.275	3.0 mm Drill Bit for Bicortical Screws
387.286	Single Locking Drill Guide

CSLP Variable Angle Implant Set [105.894]



Module Case for 1-,2-, and 3-Level Plates [304.984]



Module Case for 4-level Plates [304.985]

	Cephalad to caudal hole pair length (mm)	Overall length (mm)
One-Level Plates		
450.151	14	23
450.152	16	25
450.153	18	27
450.154	20	29
450.155	22	31
450.156	24	33
450.157	26	35
Two-Level Plates		
450.161	28	37
450.162	31	40
450.163	34	43
450.164	37	46
450.165	40	49
450.166	43	52
450.167	46	55
Three-Level Plates		
450.171	45	54
450.172	48	57
450.173	51	60
450.174	54	63
450.175	57	66
450.176	60	69
450.177	63	72
450.178	66	75
450.179	69	78

Also Available
324.066 Plate Lifter

	Cephalad to caudal hole pair length (mm)	Overall length (mm)
Four-Level Plates		
450.181	60	69
450.182	64	73
450.183	68	77
450.184	72	81
450.185	76	85
450.186	80	89
450.187	84	93
450.188	88	97
450.189	92	101
450.190	96	105
450.191	100	109

Also Available
324.066 Plate Lifter

Set also includes corresponding templates [350.151-.191].

Small Stature CSLP Implant Set [105.895]



Module for Small Stature CSLP [304.978]

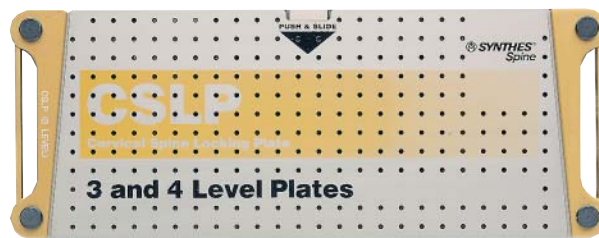
	Cephalad to caudal hole pair length (mm)	Overall length (mm)		Cephalad to caudal hole pair length (mm)	Overall length (mm)
One-Level Plates			Three-Level Plates		
487.212	12	20	487.339	39	47
487.213	14	22	487.342	42	50
487.214	16	24	487.345	45	53
487.215	18	26	487.348	48	56
487.222	20	28	487.351	51	59
487.223	22	30	487.354	54	62
487.224	24	32	487.355	57	65
487.225	26	34	487.356	60	68
Two-Level Plates			487.357	63	71
487.216	26	34	487.358	66	74
487.217	28	36	487.359	69	77
487.218	30	38	Also Available		
487.226	32	40	324.066	Plate Lifter	
487.227	34	42			
487.228	37	45			
487.236	40	48			
487.237	43	51			
487.238	46	54			

Note: There are no templates in this set.

CSLP Implant Set [105.896]



Module for 1- and 2-Level Plates [304.975]



Module for 3- and 4-Level Plates [304.976]

	Cephalad to caudal hole pair length (mm)	Overall length (mm)
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One-Level Plates

450.114	14	22
450.116	16	24
450.118	18	26
450.120	20	28
450.122	22	30
450.124	24	32
450.126	26	34

Two-Level Plates

450.228	28	36
450.231	31	39
450.234	34	42
450.237	37	45
450.240	40	48
450.243	43	51
450.246	46	54

Also Available

324.066 Plate Lifter

	Cephalad to caudal hole pair length (mm)	Overall length (mm)
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Three-Level Plates

450.345	45	53
450.348	48	56
450.351	51	59
450.354	54	62
450.357	57	65
450.360	60	68
450.363	63	71
450.366	66	74
450.369	69	77

Four-Level Plates

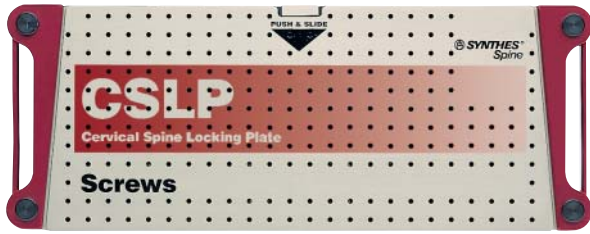
450.460	60	68
450.464	64	72
450.468	68	76
450.472	72	80
450.476	76	84
450.480	80	88
450.484	84	92

Also Available

324.066 Plate Lifter

Set also includes corresponding templates [350.xxx].

CSLP Screws



CSLP Screw Module [304.983]
(Holds six Screw Rack Inserts)

Standard Expansionhead Screws

4.0 mm Cortex	
450.012	12 mm
487.04	14 mm
450.016	16 mm

4.35 mm Cancellous	
451.012	12 mm
488.814	14 mm
451.016	16 mm

Locking Screw

497.78	1.8 mm
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Self-Drilling Expansionhead Screws

4.0 mm Cortex	
450.137	12 mm
450.138	14 mm
450.139	16 mm

4.0 mm Cancellous	
450.131	12 mm
450.132	14 mm
450.133	16 mm

4.5 mm Cancellous	
450.144	12 mm
450.145	14 mm
450.146	16 mm

Self-Tapping Expansionhead Screws

4.0 mm Cortex	
487.042	12 mm
487.044	14 mm
487.046	16 mm

4.0 mm Cancellous	
450.134	12 mm
450.135	14 mm
450.136	16 mm

4.35 mm Cancellous	
487.052	12 mm
487.054	14 mm
487.056	16 mm

4.5 mm Cancellous	
450.141	12 mm
450.142	14 mm
450.143	16 mm

4.0 mm Cortex, for bicortical use*	
450.127	18 mm*
450.128	19 mm*
450.129	20 mm*



*Screw Rack Insert
shown with screws*

Screw Rack Inserts (must be ordered separately)

For Standard Expansionhead Screws

304.983T1	4.0 mm Cortex
304.983T6	4.35 mm Cancellous

For Self-Drilling Expansionhead Screws

304.983T3	4.0 mm Cancellous
304.983T5	4.0 mm Cortex
304.983T9	4.5 mm Cancellous

For Self-Tapping Expansionhead Screws

304.983T2	4.0 mm Cortex
304.983T4	4.0 mm Cancellous
304.983T7	4.35 mm Cancellous
304.983T8	4.5 mm Cancellous

Also Available

304.981	Module case for CSLP Standard Plates 5, 8 and 9 holes
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* Longer lengths for bicortical purchase may be stored in flip-up screw rack of module.

SYNTHES Spine

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