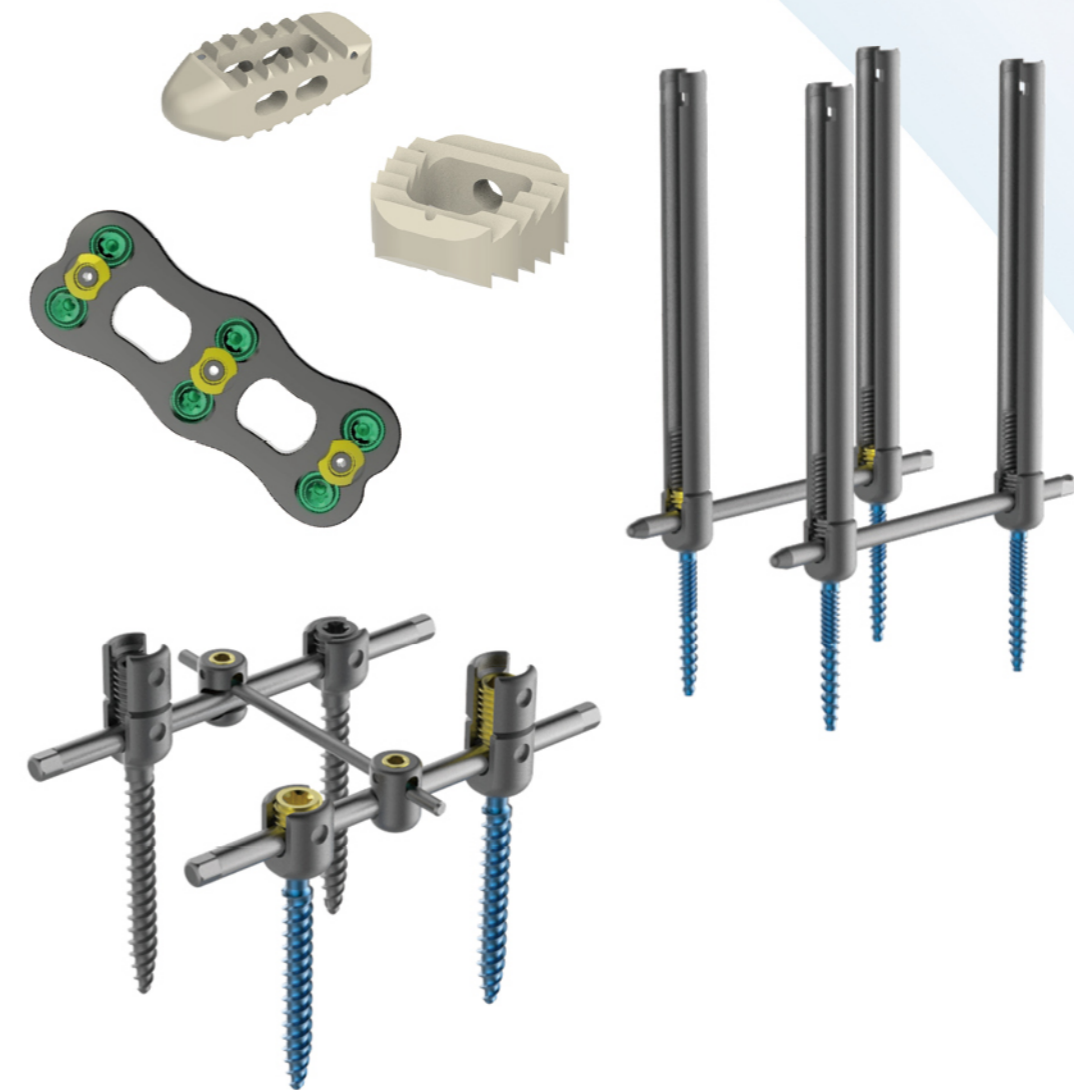


XU Spine Products



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Shandong ShinvaUnited
Orthopedic Company Limited



ShinvaUnited Channel

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Company Introduction

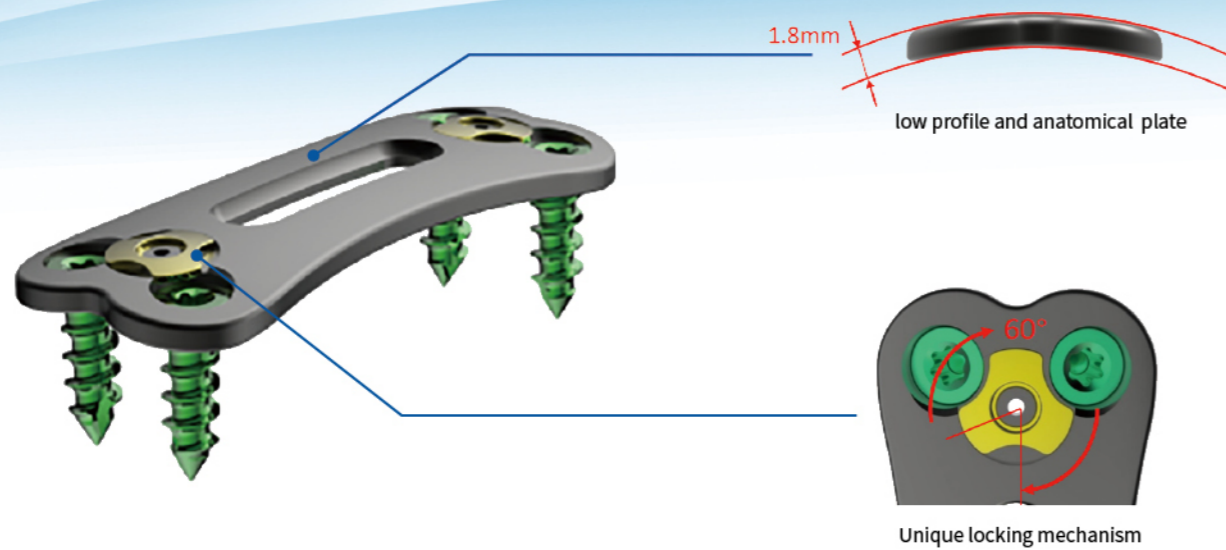
Shandong ShinvaUnited Orthopedic Co., Ltd. was established as a joint venture between United Orthopedic Corporation and Shinva Medical Instrument Company in 2016 . It is located in Zibo High tech Industrial Development Zone. Integrating with R & D, production and sales, it is mainly engaged in three series of orthopaedic implants, 3D printing orthopaedic implants and supporting surgical instruments of Knee, Hip and Spine.

ShinvaUnited has paid great attention to research and development, and we have built mature R&D system and quality management system to guarantee advanced, effective and reliable products. Based on the technology transfer of United Orthopedic, we are aimed to construct leading and advanced R&D and manufacturing base on orthopaedic products integrated with R&D, production sales and service.



XU Anterior Cervical Plate Assembly 1.8

XU Anterior Cervical Plate Assembly 1.8



Specification :



Anterior Cervical Plate		
Product Code	Length(mm)	Length Interval(mm)
S5-011-(020~027)	20~27.5	2.5
S5-011-(030~045)	30~45	2.5
S5-011-(047~055)	47.5~55	2.5
S5-011-(057~070)	57.5~70	2.5
S5-011-(072~087)	72.5~87.5	2.5
S5-011-(090~110)	90~110	5

Variable Angle Self Tapping Screw			
Product Code	Diameter(mm)	Length(mm)	Length Interval(mm)
S9-015-1(11~21)	3.5	11~21	2
S9-015-2(11~21)	3.75	11~21	2
S9-015-3(11~21)	4.0	11~21	2
S9-015-4(11~21)	4.5	11~21	2

Variable Angle Self Drilling Screw			
Product Code	Diameter(mm)	Length(mm)	Length Interval(mm)
S9-017-1(11~21)	3.5	11~21	2
S9-017-2(11~21)	3.75	11~21	2
S9-017-3(11~21)	4.0	11~21	2
S9-017-4(11~21)	4.5	11~21	2

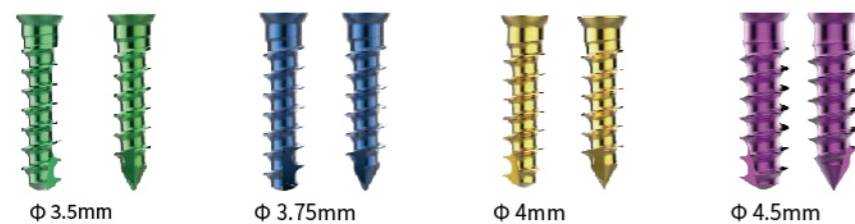
Product Characteristics :

- ① Ultra-low profile to reduce the occurrence of related complications.
- ② Variable angle screw.
- ③ 60° clockwise turn securely locks both screws.
- ④ Curved plate is in line with the physiological anatomy.

Medial/Lateral and Cephalad/Caudal Angulation



Color-coded Screw Options

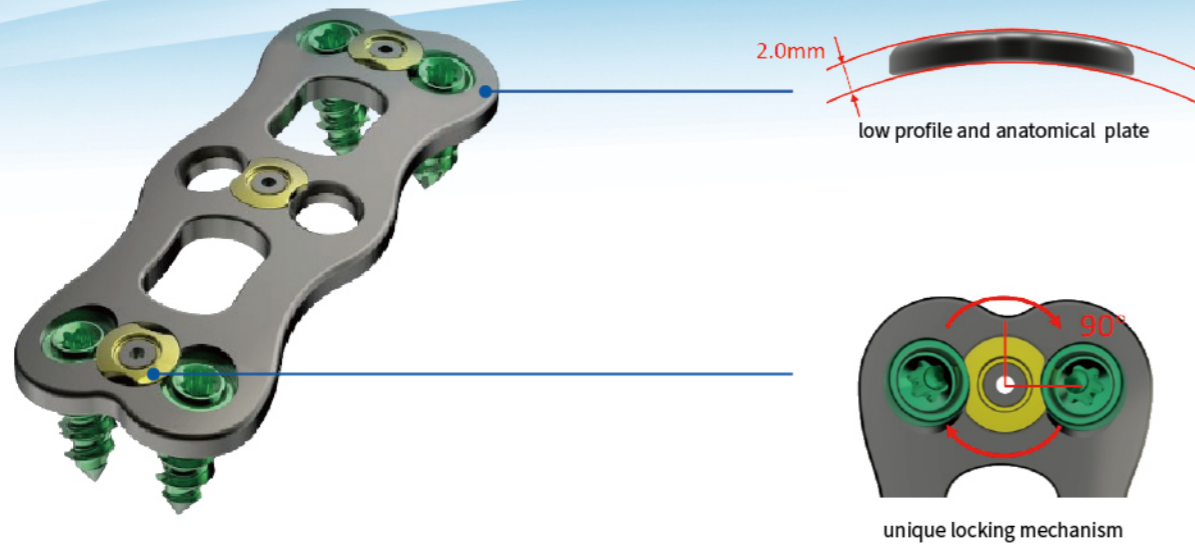


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- [1] Ko J-H, Han K-S, Yoon S-J. Efficacy of Laryngeal Rehabilitation Therapy on Dysphagia after Anterior Cervical Surgery: Prospective, Randomized Control Trial. *Journal of Clinical Medicine*. 2022;11(9):2470.
- [2] Schroeder G D, Kepler C K, Hollern D A, et al. The Effect of Dynamic Versus Static Plating Systems on Fusion Rates and Complications in 1-Level and/or 2-Level Anterior Cervical Discectomy and Fusion: A Systematic Review[J]. *Clinical Spine Surgery*, 2017, 30(1): 20.
- [3] Gupta N, Kotrasheti S M, Naik V. A Comparative Clinical Study Between Self Tapping and Drill Free Screws as a Source of Rigid Orthodontic Anchorage[J]. *Journal of Maxillofacial & Oral Surgery*, 2012, 11(1):29-33

XU Anterior Cervical Plate Assembly 2.0

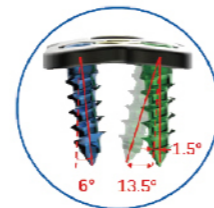
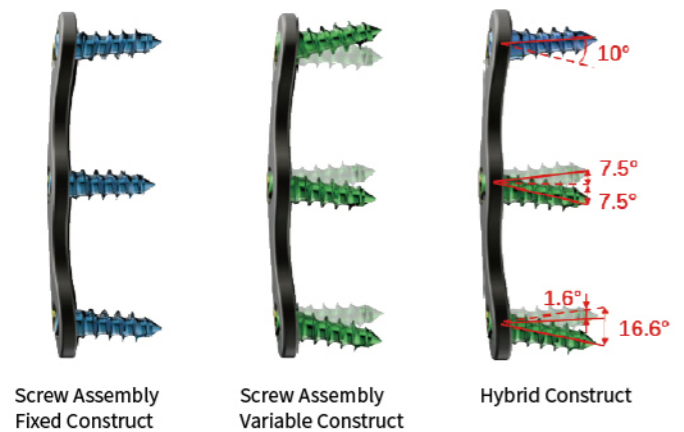
XU Anterior Cervical Plate Assembly 2.0



Product Characteristics:

- ① Ultra-low profile to reduce the occurrence of related complications.
- ② Large graft visibility window.
- ③ Multiple screw combinations to meet different clinical needs.
- ④ 90° clockwise turn securely locks both screws.
- ⑤ Curved plate is in line with the physiological anatomy.

Screw Combinations^[2]



Specification:

Anterior Cervical Plate				
Code	Length(mm)	Number of Screw holes	Length Interval(mm)	Reference Picture
S5-021-(020~035)	20~35	4	2.5	
S5-021-(037~055)	37.5~55	6	2.5	
S5-021-(057~070)	57.5~70	8	2.5	
S5-021-(072~087)	72.5~87.5	10	2.5	
S5-021-(090~110)	90~110	12	5	

Fixed Angle Screw					
Type	Code	Diameter(mm)	Length(mm)	Length Interval(mm)	Reference Picture
Variable Angle Self Tapping Screw	S9-021-3(11~21)	4.0	11~21	2	
	S9-021-4(11~21)	4.5	11~21	2	
Variable Angle Self Drilling Screw	S9-023-3(11~21)	4.0	11~21	2	
	S9-023-4(11~21)	4.5	11~21	2	

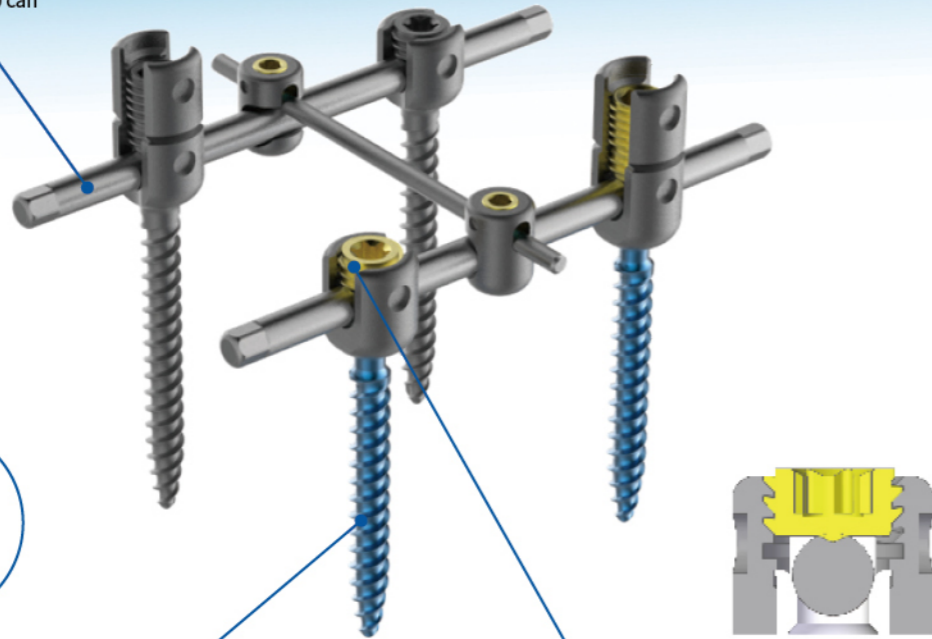
Variable Angle Screw					
Type	Code	Diameter(mm)	Length(mm)	Length Interval(mm)	Reference Picture
Variable Angle Self Tapping Screw	S9-025-3(11~21)	4.0	11~21	2	
	S9-025-4(11~21)	4.5	11~21	2	
Variable Angle Self Drilling Screw	S9-027-3(11~21)	4.0	11~21	2	
	S9-027-4(11~21)	4.5	11~21	2	

References

- [1]Ko J-H, Han K-S, Yoon S-J. Efficacy of Laryngeal Rehabilitation Therapy on Dysphagia after Anterior Cervical Surgery: Prospective, Randomized Control Trial. Journal of Clinical Medicine. 2022; 11(9): 2470.
- [2]Schroeder G D, Kepler C K, Hollern D A, et al. The Effect of Dynamic Versus Static Plating Systems on Fusion Rates and Complications in 1-Level and/or 2-Level Anterior Cervical Discectomy and Fusion: A Systematic Review[J]. Clinical Spine Surgery, 2017, 30(1):20.

XU Posterior Thoracolumbar Fixation System Open Series

• Two systems of 5.5 and 6.0 can meet patients' needs.



• Dual lead thread design decreases insertion time.

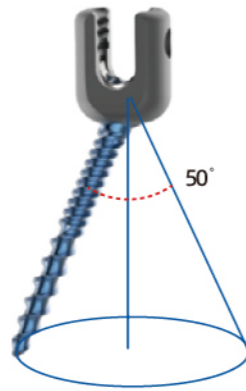
• Negative angle thread design to minimize cross threading and tulip splaying.

Pedicle Screw



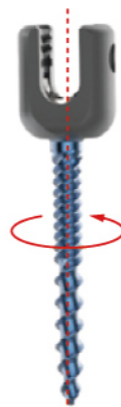
Fixed angle pedicle screw

• offers a lower profile and rigid design, which can be used as construct anchors in spine, particularly at the apex of scoliotic curves.



Polyaxial pedicle screw

• 50° cone of wider conical angulation for optimum versatility.



Uni-axial pedicle screw

• Combining the rod-alignment capabilities of a polyaxial screw with the vertebral body control of a fixed axial screw.

XU Posterior Thoracolumbar Fixation System Open Series



Screw I: Single thread design
Screw II: Dual thread design provides enhanced pedicle fixation.



• Color coded by diameter for polyaxial and monoaxial pedicle screw.



• Optional reduction screw.

Setscrew



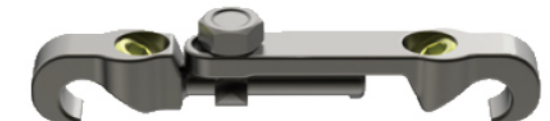
• Type II screw plug anodized for enhanced corrosion resistance.

Transverse link



Hooked Transverse link

• Low profile reduces irritation to surrounding tissues and is easy to install.



Adjustable Transverse link

• Dual-plane rotation feature for angled rod connections.

XU Posterior Thoracolumbar Fixation System Open Series

Specification:



Fixed Angle Pedicle Screw
Fixed Angle Pedicle Screw, Reduction

Type	Diameter (Φ,mm)	Length (L,mm)
I: 5.5/6.0 II: 5.5/6.0	4.0, 4.5	25, 30, 35, 40
	5.0-7.5	30, 35, 40, 45, 50, 55, 60, 65



Polyaxial Pedicle Screw
Polyaxial Pedicle Screw, Reduction

Type	Diameter (Φ,mm)	Length (L,mm)
I: 5.5/6.0 II: 5.5/6.0	4.0, 4.5	25, 30, 35, 40
	5.0-7.5	30, 35, 40, 45, 50, 55, 60, 65



Monoaxial Pedicle Screw
Monoaxial Pedicle Screw, Reduction

Type	Diameter (Φ,mm)	Length (L,mm)
II: 5.5/6.0	4.0, 4.5	25, 30, 35, 40
	5.0-7.5	30, 35, 40, 45, 50, 55, 60, 65

XU Posterior Thoracolumbar Fixation System Open Series

Specification:

Setscrew	Type	Diameter (Φ,mm)
	standard I/II	10
	auto-break off I/II	
	auto-break off, reduction I/II	

Hex-end Rod	Type	Diameter (Φ,mm)	Length (L,mm)
	straight I	5.5/6.0	50-500 (inc. 10mm)

Transverse Link	Type	Length(L,mm)
	hooked 5.5/6.0	30-50, 40-60, 50-70, 60-80
	adjustable 5.5/6.0	42-46, 40-50, 45-54, 50-65, 54-74, 65-80, 80-100, 100-120

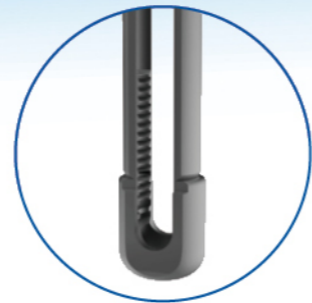
XU Posterior Thoracolumbar Fixation System Minimally Invasive Series

• Long extension with 110mm accommodates a variety of patients' shape.



• Negative angle thread design to minimize cross threading and tulip splaying.

• Cannulated design for precise positioning.






• 20mm inner thread design for vertebral reduction.




• Dual lead thread design provides enhanced fixation and decreases insertion time.

• Bullet nose profile can be navigated easily through soft tissues.
• Optional straight rod set for thoracic procedures.

XU Posterior Thoracolumbar Fixation System Minimally Invasive Series

MIS Pedicle Screw	Type	Diameter (Φ,mm)	Length (L,mm)
	III: 5.5 III: 6.0	5.0-7.5	30, 35, 40, 45, 50, 55, 60

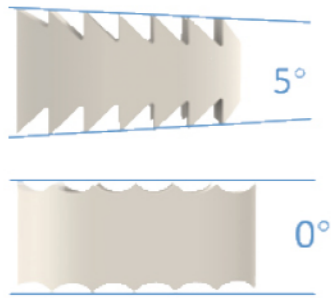
Hex-end Rod	Type	Diameter (Φ,mm)	Length(L,mm)
	straight II: 5.5/6.0	5.5/6.0	50-130 (inc.10mm)
	prebent rod: 6.0	6.0	50-130 (inc.10mm)

Setscrew	Type	Diameter (Φ,mm)
	standard I/II	10
	auto-break off I/II	
	auto-break off, reduction I/II	

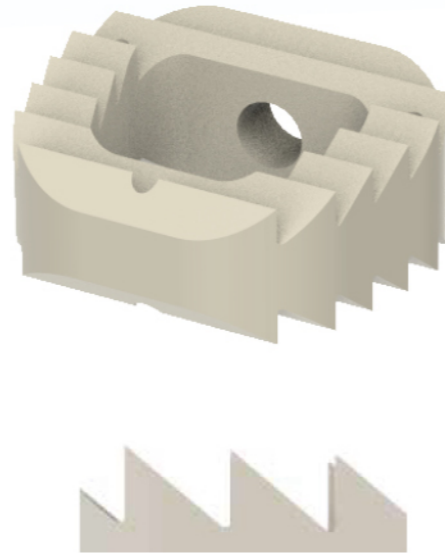
PEEK

- Excellent biocompatibility.
- Modulus of elasticity is close to that of cortical bone, effectively reducing stress shielding^[1].
- X-ray transmittable and is easy to observe the postoperative fusion.
- Resistant to abrasion, high temperature, pressure, and corrosion.

XU Cervical Cage



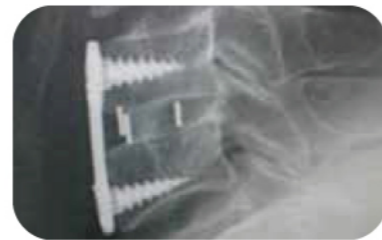
• 0° and 5° anterior camber meet different patients' needs.



• Anti-migration serrated design keeps stability within interbody space.



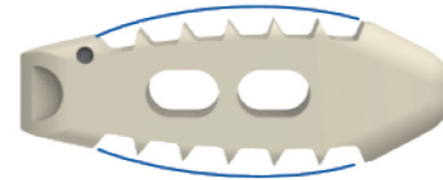
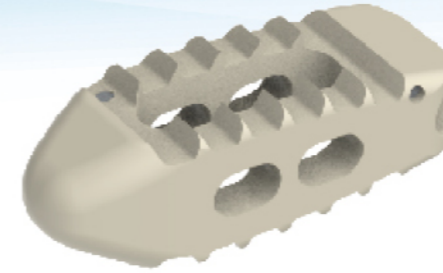
• Provide maximum space for bone graft.



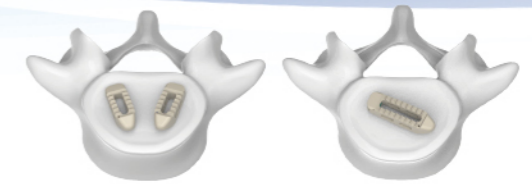
• Radiodense marker permits optimal postoperative follow-up.

Cervical Cage Series		
Angle	Width * Length(mm)	Height(mm)
0°	15×12	5~11
0°	15×14	5~11
5°	14×12	5~11
5°	15×14	5~11
5°	16×14	7~11

XU PLIF/TLIF Lumbar Cage (Anatomic)

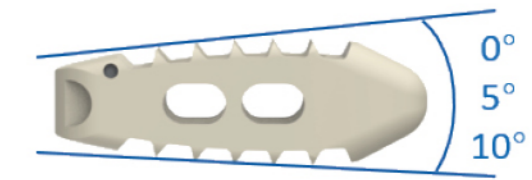


• Convex anatomical shape matches vertebral endplates^[2].



• Multiple sizes and specifications apply to different surgery in PLIF and TLIF.

• Available for open and minimally invasive surgery.

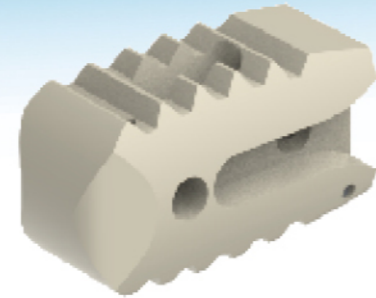
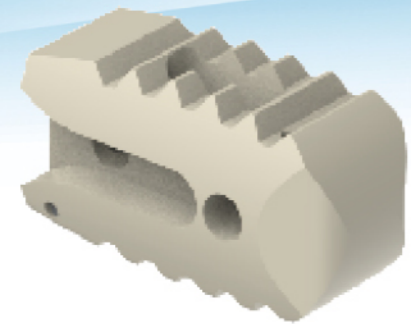


• Bullet tip design for easy implantation in the intervertebral space.

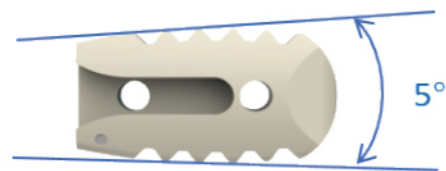
• 0°, 5° and 10° anterior camber meet different patients' needs^[4].

Lumbar Cage (Anatomic)			
Angle	Width(mm)	Length(mm)	Height(mm)
0°,5°,10°	9	20~36	8
0°,5°,10°	10	20	9~16
0°,5°,10°	10	22	9~16
0°,5°,10°	10	24	9~16
0°,5°,10°	10	26	9~16
0°,5°,10°	10	28	9~16
0°,5°,10°	10	30	9~16
0°,5°,10°	10	32	9~16
0°,5°,10°	10	34	9~16
0°,5°,10°	10	36	9~16

XU PLIF/TLIF Lumbar Cage (Revolve)



• Bullet tip design for easy implantation.



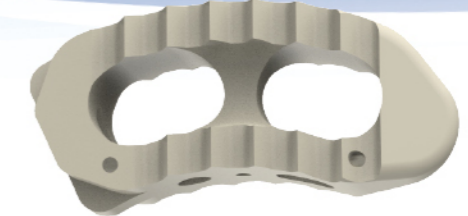
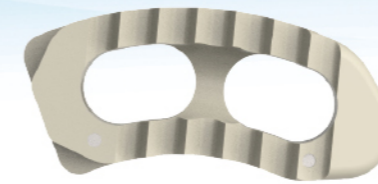
• 5° anterior convexity angle restores the patients' physiologic anterior convexity.



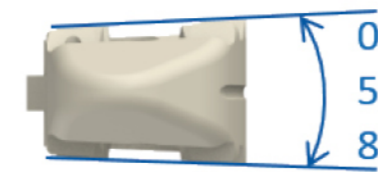
• Revolve technique may protect the neural structure throughout the implantation process.

Lumbar Cage(Revolve)			
Angle	Width(mm)	Length(mm)	Height(mm)
5°	5	20~32	7
5°	6	20~32	8
5°	7	20~32	9
5°	8	20~32	10
5°	9	20~32	11
5°	10	20~32	12
5°	11	20~32	13
5°	11	20~32	14
5°	12	20~32	15
5°	12	20~32	16

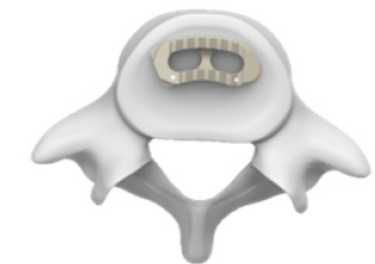
XU TLIF Lumbar Cage(Crescent)



• Provide large fusion surface for bone inducing ingredients to containment.



• Anatomical shape restores height and lordotic angle in the lumbar.



• Suitable for TLIF, anteriorly placed to reduce the risk of subsidence^[5].

Lumbar Cage(Crescent)			
Angle	Width(mm)	Length(mm)	Height(mm)
0°,5°,8°	10	26	7~18
0°,5°,8°	10	28	7~18
0°,5°,8°	10	30	7~18
0°,5°,8°	10	32	7~18
0°,5°,8°	10	34	7~18
0°,5°,8°	10	36	7~18

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[1]Mavrogenis A F, Vottis C, Triantafyllopoulos G,et al. PEEK rod systems for the spine[J]. Eur JOrthop Surg Traumatol, 2014,24(1 Supplement): 111-116.

[2]Yoo J S, Min S H,Yoon S H.Fusion rate according to mixture ratio and volumes of bone graft in minimally invasive transforaminal lumbar interbody fusion: minimum 2-year follow-up[J]. European Journal of Orthopaedic Surgery & Traumatology, 2015, 25(1 Supplement): 183-189.

[3]Pitzen T,Schmitz B,GeorgT,et al.Variation of endplate thickness in the cervical spine.[J]. European Spine Journal, 2004,13(3): 235-240.

[4]Keller T S,Colloca C J, Harison D E,et al.Influence of spine morphology on intervertebral disc loads and stresses in asymptomatic adults: implications for the ideal spine[J]. Spine Journal, 2005, 5(3): 297-309.

[5]Bailey C S, Sjovold S G, Dvorak M F,et al.The strength profile of the thoracolumbar endplate reflects the sagittal contours of the spine.[J]. Spine, 2011, 36(2): 124-128.

