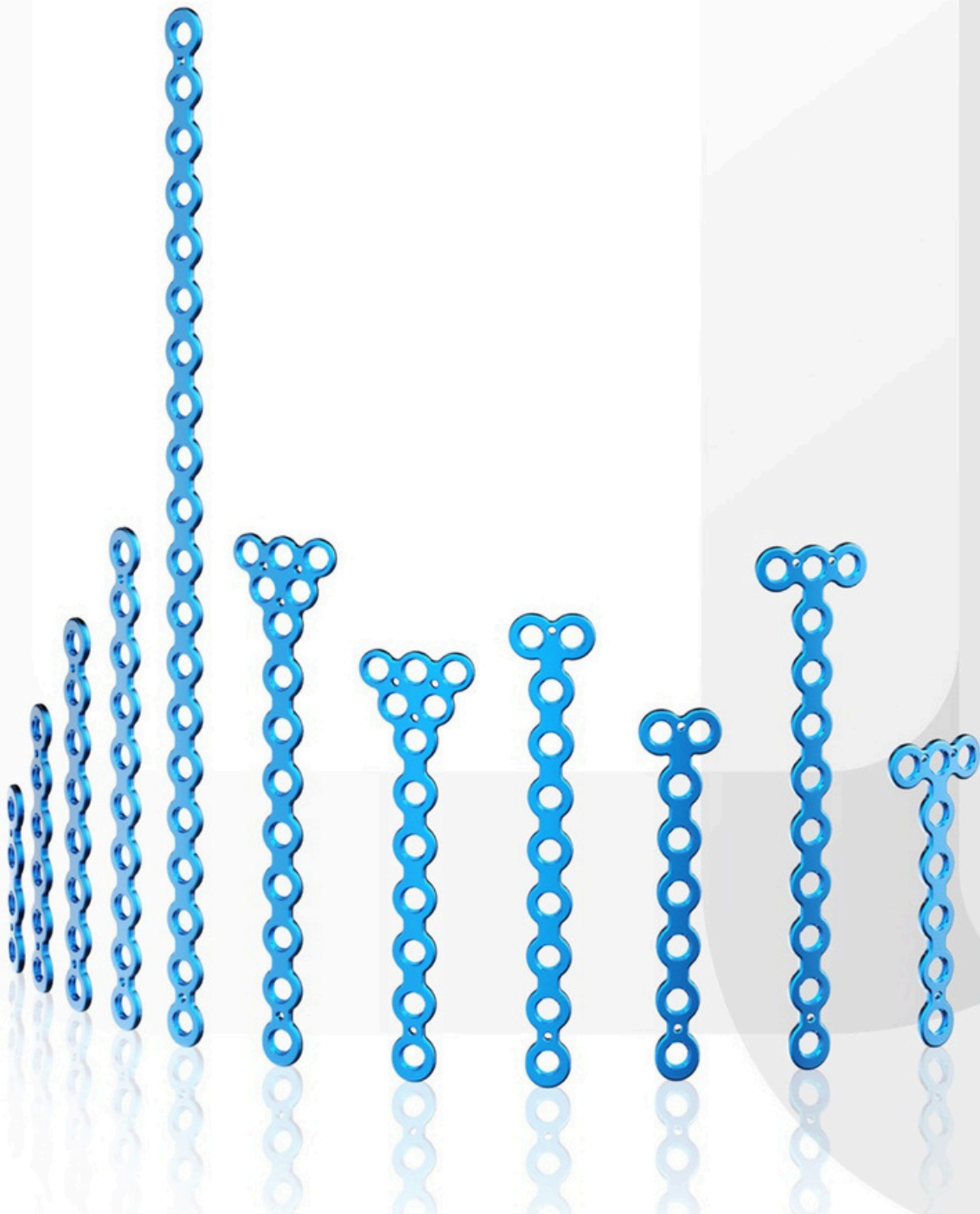


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SMALL FRAGMENT SYSTEM



Contents

3 4	Indication
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10	Small Fragment Cases
	Surgical Technique
	Ordering Information
14	- Plates
16	- Screws
18	- Instruments
22	Set Configuration



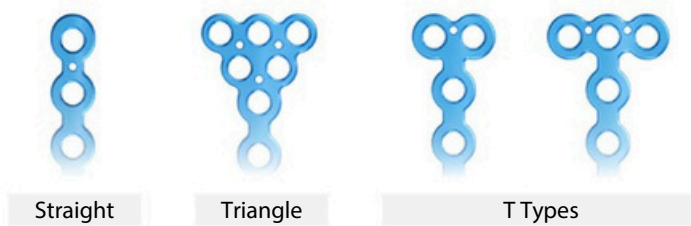
The SUMMA Small Fragment System is intended for fixation of fractures, osteotomies, nonunions, replantations, and fusions of small bones and small bone fragments, particularly in osteopenic bone. Examples include, but are not limited to, the hand, wrist, foot and ankle.

SUMMA Small Fragment System

The SUMMA Small Fragment System is a locking plate system for multiple or complex fracture fixations. The plate design is carefully designed and engineered for different fracture types. The plates will provide flexible surgical techniques for the users.

General Features

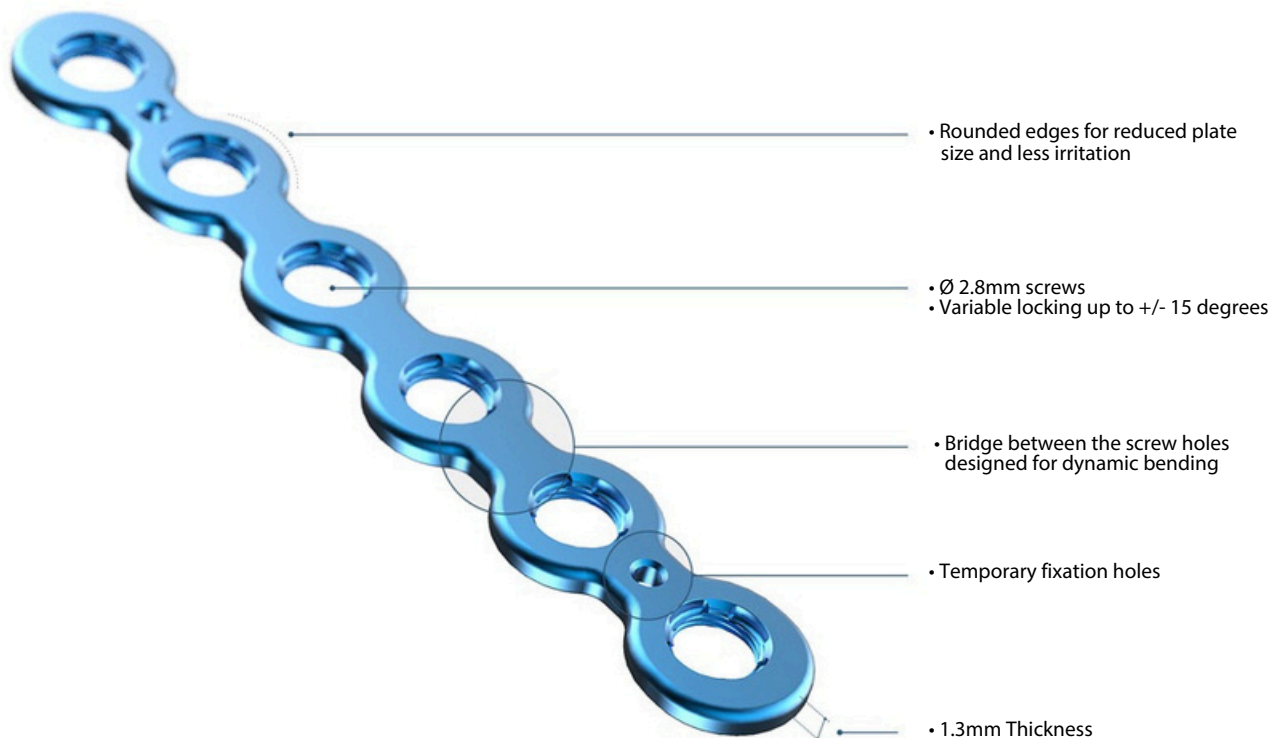
- Low profile plates with flat head screws
- Plate thickness of 1.3mm
- Variable angle screw locking up to $\pm 15^\circ$
- $\varnothing 2.8$ Locking and non-locking cortical screws



Material

- Plates : Pure Titanium GR4, ASTM F67
- Screws : Titanium 6Al Alloy, ASTM F136

Plates



Easy Dynamic Bending

- 3-dimensional contouring (sagittal, axial and coronal) to match the complex bone surfaces.
- Bridge between the holes allow dynamic bending for complex fractures by using benders included in the kit.

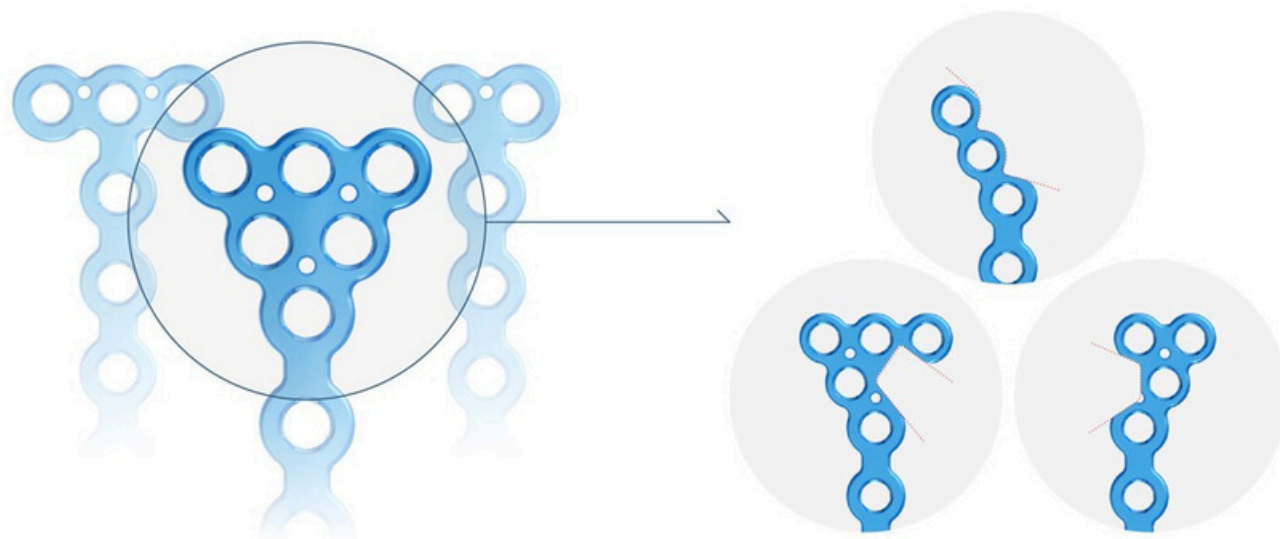


Axial and Coronal Bends (SO-113-334)



Sagittal/Planar Bends (SO-113-345)

Trimming of Small Fragment Plates



- Provide more screw holes for stable and flexible fixation

- Easily cut into different shapes for different fracture types

SUMMA Small Fragment Screw

STARIX Screw with self-retaining function

- Internal recess T8 according to international standard
- Minimizes the risk of cam-out and recess breakage
- Optimal self-retaining function achieved through precision machining



Variable Locking Interface with Locking Screw

- Poly-axial screw insertion
- Variable locking $\pm 15^\circ$
- Plate-screw locking interface



Locking Cortical Screw
Ø2.8 mm



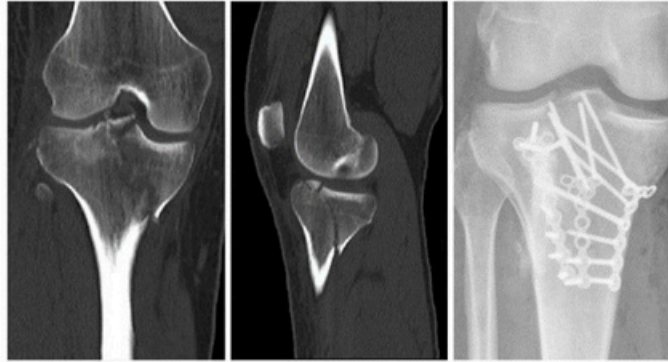
Non-Locking Cortical Screw
Ø2.8 mm

I Small Fragment Cases

Clinical Cases Using Small Fragment System Plates



Tibial Plateau Fracture Combined with PMF and PL Depression



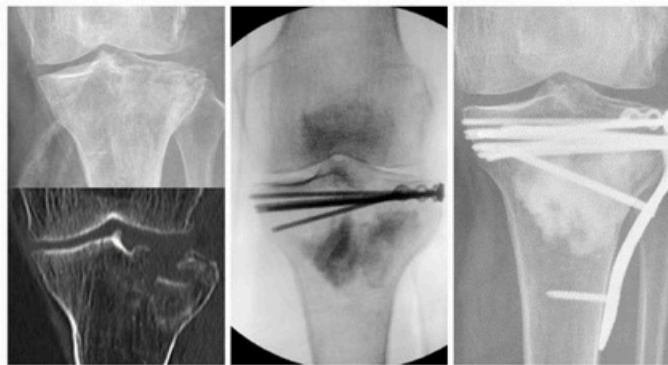
SO -25-SFTS-108

SO -25-SFTR-012

SO -25-SFTR-014



Tibial Plateau Fracture



SO-25-SFST-008



Ankle Fracture



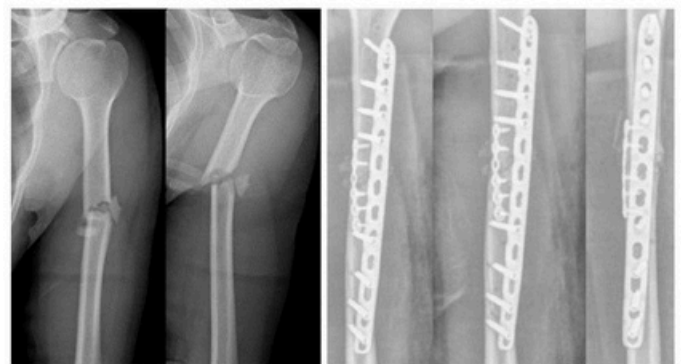
SO-25-SFST-006 

SO-25-SFTS-108 

SO-25-SFTR-012 



Nonunion of Humerus



SO-25-SFST-006 

1. Select Implant

Select an appropriate sized implant. Cut and/or contour the plate if necessary.

2. Fracture Reduction

If necessary, reduce the bone fractures by using reduction forceps and use guide pins for preliminary fixation before plate and screw placement.

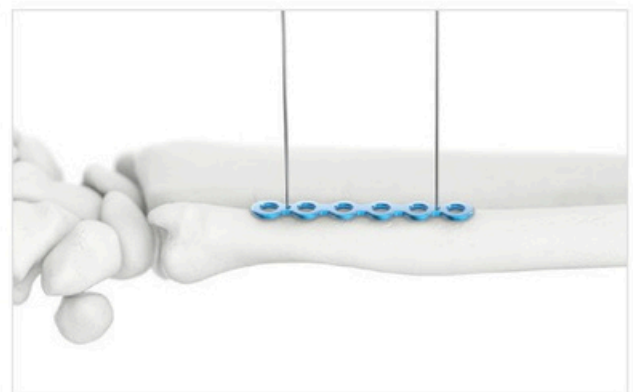
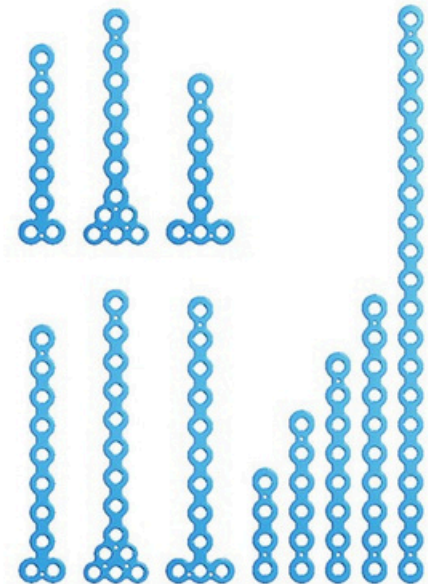
4. Plate Positioning

Select an appropriate plate according to the fracture type and place it on the fracture site.

Avoid placing a screw holes on top of fracture lines.

4. Guide Pin Fixation

Guide pin holes are available in many parts of the plate. Use guide pins (SO-111-068-1) to fix the plate on the bone for drilling and screw insertion.

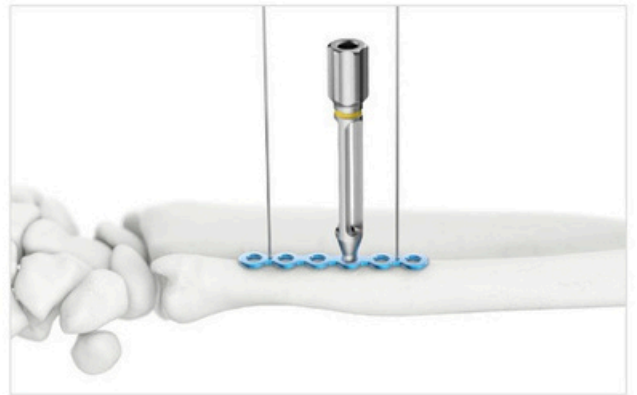


5. Drilling by Three Types of Attachment

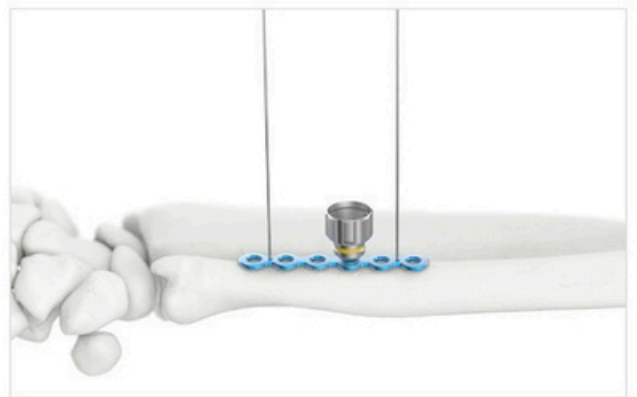
① A drill guide (SO-111-285) to the plate for drilling. If variable angle is required.



② Fixed angle drill sleeve (SO-111-284) can be used.



③ Variable angle drill sleeve (SO-111-286).



6. Measuring Screw Length

When fixed angle drill sleeve is used drilling depth can be read on the side of locking sleeve.

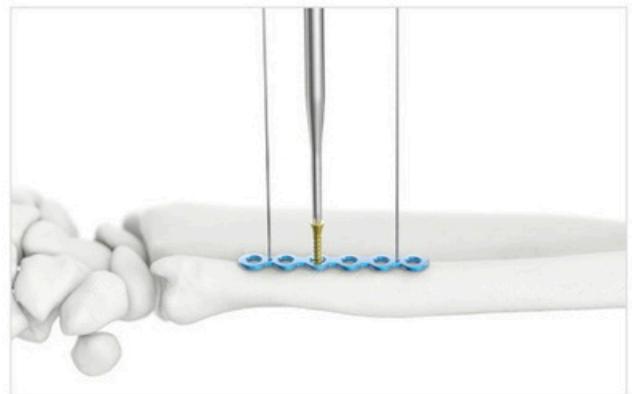
A separate depth gauge (SO-111-267) is available for insufficient visibility of the locking sleeve.



7. Screw Insertion

Insert the screw, and fixate the plate to the bone. Insert any additional screws as needed.

Use non-locking screw if additional compression is required.



I Ordering Information

Small Fragment System Plates



SO-25-SFST-004



SO-25-SFST-006



SO-25-SFST-008



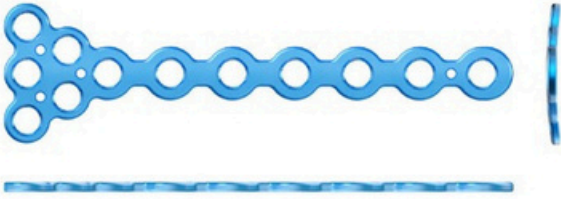
SO-25-SFST-010



SO-25-SFST-020

* Illustrated scale 1:1

Code	Length	Width	Thickness	Holes	Color
SO-25-SFST-004	32.0 mm	7.0 mm	1.30 mm	4	Blue
SO-25-SFST-006	48.0 mm	7.0 mm	1.30 mm	6	Blue
SO-25-SFST-008	64.0 mm	7.0 mm	1.30 mm	8	Blue
SO-25-SFST-010	80.0 mm	7.0 mm	1.30 mm	10	Blue
SO-25-SFST-020	160.0 mm	7.0 mm	1.30 mm	20	Blue



SO -25-SFTS-012



SO -25-SFTR-014

* Illustrated scale 1:1

<i>Code</i>	<i>Length</i>	<i>Width</i>	<i>Thickness</i>	<i>Holes</i>	<i>Color</i>
SO -25-SFTS-012	65.4 mm	7.0 mm	1.30 mm	12	Blue
SO -25-SFTR-014	81.4 mm	7.0 mm	1.30 mm	14	Blue



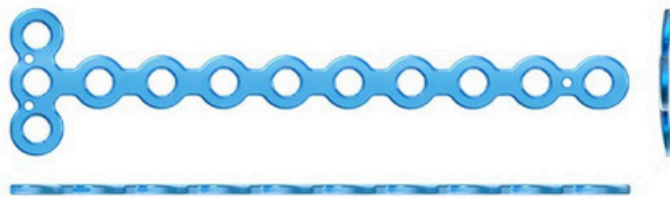
SO -25-SFTS-008



SO -25-SFTS-010



SO -25-SFTS-108



SO -25-SFTS-112

* Illustrated scale 1:1

<i>Code</i>	<i>Length</i>	<i>Width</i>	<i>Thickness</i>	<i>Holes</i>	<i>Color</i>
SO -25-SFTS-008	55.5 mm	7.0 mm	1.30 mm	8	Blue
SO -25-SFTS-010	71.5 mm	7.0 mm	1.30 mm	10	Blue
SO -25-SFTS-108	47.5 mm	7.0 mm	1.30 mm	8	Blue
SO -25-SFTS-112	79.5 mm	7.0 mm	1.30 mm	12	Blue

Small Fragment System Screws

Ø 2.8 mm Locking Cortical Screws



<i>Code</i>	<i>Length</i>	<i>Color</i>	<i>Set Quantity</i>
SO-28L-SO-S08-TA	8 mm	Gold	5
SO-28L-SO-S10-TA	10 mm	Gold	5
SO-28L-SO-S12-TA	12 mm	Gold	5
SO-28L-SO-S14-TA	14 mm	Gold	5
SO-28L-SO-S16-TA	16 mm	Gold	5
SO-28L-SO-S18-TA	18 mm	Gold	5
SO-28L-SO-S20-TA	20 mm	Gold	5
SO-28L-SO-S22-TA	22 mm	Gold	5
SO-28L-SO-S24-TA	24 mm	Gold	5
SO-28L-SO-S26-TA	26 mm	Gold	5
SO-28L-SO-S28-TA	28 mm	Gold	5
SO-28L-SO-S30-TA	30 mm	Gold	5
SO-28L-SO-S32-TA	32 mm	Gold	5
SO-28L-SO-S34-TA	34 mm	Gold	5
SO-28L-SO-S36-TA	36 mm	Gold	5
SO-28L-SO-S38-TA	38 mm	Gold	5
SO-28L-SO-S40-TA	40 mm	Gold	5
SO-28L-SO-S42-TA	42 mm	Gold	5
SO-28L-SO-S44-TA	44 mm	Gold	5
SO-28L-SO-S46-TA	46 mm	Gold	5
SO-28L-SO-S48-TA	48 mm	Gold	5
SO-28L-SO-S50-TA	50 mm	Gold	5
SO-28L-SO-S52-TA	52 mm	Gold	5
SO-28L-SO-S54-TA	54 mm	Gold	5
SO-28L-SO-S56-TA	56 mm	Gold	5
SO-28L-SO-S58-TA	58 mm	Gold	5
SO-28L-SO-S60-TA	60 mm	Gold	5
SO-28L-SO-S60-TA	60 mm	Gold	5
SO-28L-SO-S62-TA	62 mm	Gold	5
SO-28L-SO-S64-TA	64 mm	Gold	5
SO-28L-SO-S66-TA	66 mm	Gold	5
SO-28L-SO-S68-TA	68 mm	Gold	5
SO-28L-SO-S70-TA	70 mm	Gold	5

Ø 2.8 mm Non-Locking Cortical Screws



<i>Code</i>	<i>Length</i>	<i>Color</i>	<i>Set Quantity</i>
SO-28-SO-S08-TA	8 mm	Green	5
SO-28-SO-S10-TA	10 mm	Green	5
SO-28-SO-S12-TA	12 mm	Green	5
SO-28-SO-S14-TA	14 mm	Green	5
SO-28-SO-S16-TA	16 mm	Green	5
SO-28-SO-S18-TA	18 mm	Green	5
SO-28-SO-S20-TA	20 mm	Green	5
SO-28-SO-S22-TA	22 mm	Green	5
SO-28-SO-S24-TA	24 mm	Green	5
SO-28-SO-S26-TA	26 mm	Green	5
SO-28-SO-S28-TA	28 mm	Green	5
SO-28-SO-S30-TA	30 mm	Green	5
SO-28-SO-S32-TA	32 mm	Green	5
SO-28-SO-S34-TA	34 mm	Green	5
SO-28-SO-S36-TA	36 mm	Green	5
SO-28-SO-S38-TA	38 mm	Green	5
SO-28-SO-S40-TA	40 mm	Green	5
SO-28-SO-S42-TA	42 mm	Green	5
SO-28-SO-S44-TA	44 mm	Green	5
SO-28-SO-S46-TA	46 mm	Green	5
SO-28-SO-S48-TA	48 mm	Green	5
SO-28-SO-S50-TA	50 mm	Green	5
SO-28-SO-S52-TA	52 mm	Green	5
SO-28-SO-S54-TA	54 mm	Green	5
SO-28-SO-S56-TA	56 mm	Green	5
SO-28-SO-S58-TA	58 mm	Green	5
SO-28-SO-S60-TA	60 mm	Green	5
SO-28-SO-S60-TA	60 mm	Green	5
SO-28-SO-S62-TA	62 mm	Green	5
SO-28-SO-S64-TA	64 mm	Green	5
SO-28-SO-S66-TA	66 mm	Green	5
SO-28-SO-S68-TA	68 mm	Green	5
SO-28-SO-S70-TA	70 mm	Green	5

Instruments

Drill Bit



Code	Description	Set Quantity
SO -112-28-703	DRILL BIT FOR Ø2.8 158mm YELLOW AO	2

Drill Sleeve



SO-111-284



SO-111-286



SO-111-286

Code	Description	Set Quantity
SO -111-284	DRILL SLEEVE FOR Ø2.4 FIXED ANGLE	2
SO -111-286	DRILL SLEEVE FOR Ø2.4 VARIABLE ANGLE	2
SO -111-157	VARIABLE DRILL SLEEVE HANDLE	2

Guide Pin



Code	Description	Set Quantity
SO -111-068-1	GUIDE PIN Ø0.8	10

Driver



Code	Description	Set Quantity
SO -113-HF-623	DRIVER FOR T8 Ø5 100mm BLUE	2

Handle



Code	Description	Set Quantity
SO -111-206	HANDLE FOR Ø5 SILICON	2

Drill Guide



Code	Description	Set Quantity
SO -111-285	DRILL GUIDE FOR Ø2.4 FIXED ANGLE	1

Instruments

Dispenser



Code	Description	Set Quantity
SO -111-096	DISPENSER FOR GUIDE PIN	1

Bender



SO-111-190



SO-111-345



SO-111-344

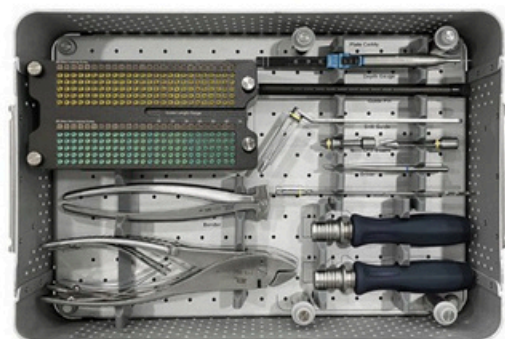
Code	Description	Set Quantity
SO -111-190	BENDER PLIER 2.5T PLATE	2
SO -111-344	BENDER PIN SMALL FRAGMENT PLATE	2
SO -111-345	BENDER PLIER SMALL FRAGMENT PLATE	1

Depth Gauge



Code	Description	Set Quantity
SO-111-267	DEPTH GAUGE FOR Ø2.5 0050	1

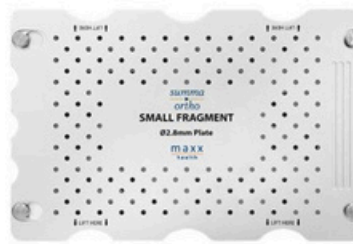
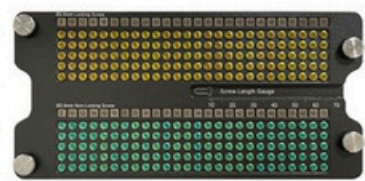
Kit & Caddy



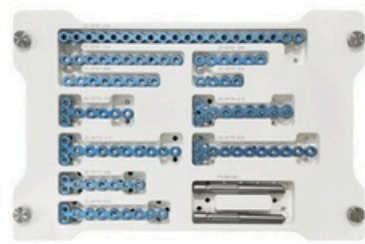
SO-112-156



SO-112-156-3



SO-112-156-4



Code	Description	Set Quantity
SO-112-156	KIT SMALL FRAGMENT	1
SO-112-156-3	SCREW CADDY	1
SO-112-156-4	PLATE CADDY	1

Set Configuration

Plates			
No	Code	Description	Set Quantity
1	SO-25-SFST-004	SMALL_FRAGMENT_STRAIGHT_PLATE_4H	2
2	SO-25-SFST-006	SMALL_FRAGMENT_STRAIGHT_PLATE_6H	2
3	SO-25-SFST-008	SMALL_FRAGMENT_STRAIGHT_PLATE_8H	2
4	SO-25-SFST-010	SMALL_FRAGMENT_STRAIGHT_PLATE_10H	2
5	SO-25-SFST-020	SMALL_FRAGMENT_STRAIGHT_PLATE_20H	2
6	SO-25-SFTR-012	SMALL_FRAGMENT_TRIANGLE_PLATE_12H	2
7	SO-25-SFTR-014	SMALL_FRAGMENT_TRIANGLE_PLATE_14H	2
8	SO-25-SFTS-008	SMALL_FRAGMENT_2_HOLE_HEAD_T_PLATE_8H	2
9	SO-25-SFTS-010	SMALL_FRAGMENT_2_HOLE_HEAD_T_PLATE_10H	2
10	SO-25-SFTS-108	SMALL_FRAGMENT_3_HOLE_HEAD_T_PLATE_8H	2
11	SO-25-SFTS-112	SMALL_FRAGMENT_3_HOLE_HEAD_T_PLATE_12H	2

Instruments			
No	Code	Description	Set Quantity
1	SO-112-28-703	DRILL_BIT_FOR_Ø2.8_158mm_YELLOW_AO	2
2	SO-111-284	DRILL_SLEEVE_FOR_Ø2.4_FIXED_ANGLE	2
3	SO-111-286	DRILL_SLEEVE_FOR_Ø2.4_VARIABLE_ANGLE	2
4	SO-111-157	VARIABLE_DRILL_SLEEVE_HANDLE	2
5	SO-111-285	DRILL_GUIDE_FOR_Ø2.4_FIXED_ANGLE	1
6	SO-113-HF-623	DRIVER_FOR_T8_Ø5_100mm_BLUE	2
7	SO-111-206	HANDLE_FOR_Ø5_SILICON	2
8	SO-111-068-1	GUIDE_PIN_Ø0.8	10
9	SO-111-096	DISPENSER_FOR_GUIDE_PIN	1
10	SO-111-267	DEPTH_GAUGE_FOR_Ø2.5_0050	1
11	SO-111-190	BENDER PLIER 2.5T PLATE	2
12	SO-111-344	BENDER PIN SMALL FRAGMENT PLATE	2
13	SO-111-345	BENDER PLIER SMALL FRAGMENT PLATE	1
14	SO-112-156	KIT SMALL FRAGMENT	1
15	SO-112-156-3	SCREW CADDY	1
16	SO-112-156-4	PLATE CADDY	1

Ø 2.8 mm Locking Screws				Ø 2.8 mm Cortical Screws			
No	Code	Description	Set Quantity	No	Code	Description	Qty/EA
1	SO-28L-SO-S08-TA	28_LOCKING_CORTICAL_STARIX_GOLD_8mm	5	1	SO-28-SO-S08-TA	28_NON_LOCKING_CORTICAL_STARIX_8mm	5
2	SO-28L-SO-S10-TA	28_LOCKING_CORTICAL_STARIX_GOLD_10mm	5	2	SO-28-SO-S10-TA	28_NON_LOCKING_CORTICAL_STARIX_10mm	5
3	SO-28L-SO-S12-TA	28_LOCKING_CORTICAL_STARIX_GOLD_12mm	5	3	SO-28-SO-S12-TA	28_NON_LOCKING_CORTICAL_STARIX_12mm	5
4	SO-28L-SO-S14-TA	28_LOCKING_CORTICAL_STARIX_GOLD_14mm	5	4	SO-28-SO-S14-TA	28_NON_LOCKING_CORTICAL_STARIX_14mm	5
5	SO-28L-SO-S16-TA	28_LOCKING_CORTICAL_STARIX_GOLD_16mm	5	5	SO-28-SO-S16-TA	28_NON_LOCKING_CORTICAL_STARIX_16mm	5
6	SO-28L-SO-S18-TA	28_LOCKING_CORTICAL_STARIX_GOLD_18mm	5	6	SO-28-SO-S18-TA	28_NON_LOCKING_CORTICAL_STARIX_18mm	5
7	SO-28L-SO-S20-TA	28_LOCKING_CORTICAL_STARIX_GOLD_20mm	5	7	SO-28-SO-S20-TA	28_NON_LOCKING_CORTICAL_STARIX_20mm	5
8	SO-28L-SO-S22-TA	28_LOCKING_CORTICAL_STARIX_GOLD_22mm	5	8	SO-28-SO-S22-TA	28_NON_LOCKING_CORTICAL_STARIX_22mm	5
9	SO-28L-SO-S24-TA	28_LOCKING_CORTICAL_STARIX_GOLD_24mm	5	9	SO-28-SO-S24-TA	28_NON_LOCKING_CORTICAL_STARIX_24mm	5
10	SO-28L-SO-S26-TA	28_LOCKING_CORTICAL_STARIX_GOLD_26mm	5	10	SO-28-SO-S26-TA	28_NON_LOCKING_CORTICAL_STARIX_26mm	5
11	SO-28L-SO-S28-TA	28_LOCKING_CORTICAL_STARIX_GOLD_28mm	5	11	SO-28-SO-S28-TA	28_NON_LOCKING_CORTICAL_STARIX_28mm	5
12	SO-28L-SO-S30-TA	28_LOCKING_CORTICAL_STARIX_GOLD_30mm	5	12	SO-28-SO-S30-TA	28_NON_LOCKING_CORTICAL_STARIX_30mm	5
13	SO-28L-SO-S32-TA	28_LOCKING_CORTICAL_STARIX_GOLD_32mm	5	13	SO-28-SO-S32-TA	28_NON_LOCKING_CORTICAL_STARIX_32mm	5
14	SO-28L-SO-S34-TA	28_LOCKING_CORTICAL_STARIX_GOLD_34mm	5	14	SO-28-SO-S34-TA	28_NON_LOCKING_CORTICAL_STARIX_34mm	5
15	SO-28L-SO-S36-TA	28_LOCKING_CORTICAL_STARIX_GOLD_36mm	5	15	SO-28-SO-S36-TA	28_NON_LOCKING_CORTICAL_STARIX_36mm	5
16	SO-28L-SO-S38-TA	28_LOCKING_CORTICAL_STARIX_GOLD_38mm	5	16	SO-28-SO-S38-TA	28_NON_LOCKING_CORTICAL_STARIX_38mm	5
17	SO-28L-SO-S40-TA	28_LOCKING_CORTICAL_STARIX_GOLD_40mm	5	17	SO-28-SO-S40-TA	28_NON_LOCKING_CORTICAL_STARIX_40mm	5
18	SO-28L-SO-S42-TA	28_LOCKING_CORTICAL_STARIX_GOLD_42mm	5	18	SO-28-SO-S42-TA	28_NON_LOCKING_CORTICAL_STARIX_42mm	5
19	SO-28L-SO-S44-TA	28_LOCKING_CORTICAL_STARIX_GOLD_44mm	5	19	SO-28-SO-S44-TA	28_NON_LOCKING_CORTICAL_STARIX_44mm	5
20	SO-28L-SO-S46-TA	28_LOCKING_CORTICAL_STARIX_GOLD_46mm	5	20	SO-28-SO-S46-TA	28_NON_LOCKING_CORTICAL_STARIX_46mm	5
21	SO-28L-SO-S48-TA	28_LOCKING_CORTICAL_STARIX_GOLD_48mm	5	21	SO-28-SO-S48-TA	28_NON_LOCKING_CORTICAL_STARIX_48mm	5
22	SO-28L-SO-S50-TA	28_LOCKING_CORTICAL_STARIX_GOLD_50mm	5	22	SO-28-SO-S50-TA	28_NON_LOCKING_CORTICAL_STARIX_50mm	5
23	SO-28L-SO-S55-TA	28_LOCKING_CORTICAL_STARIX_GOLD_55mm	5	23	SO-28-SO-S55-TA	28_NON_LOCKING_CORTICAL_STARIX_55mm	5
24	SO-28L-SO-S60-TA	28_LOCKING_CORTICAL_STARIX_GOLD_60mm	5	24	SO-28-SO-S60-TA	28_NON_LOCKING_CORTICAL_STARIX_60mm	5
25	SO-28L-SO-S65-TA	28_LOCKING_CORTICAL_STARIX_GOLD_65mm	5	25	SO-28-SO-S65-TA	28_NON_LOCKING_CORTICAL_STARIX_65mm	5
26	SO-28L-SO-S70-TA	28_LOCKING_CORTICAL_STARIX_GOLD_70mm	5	26	SO-28-SO-S70-TA	28_NON_LOCKING_CORTICAL_STARIX_70mm	5

Manufactured for Summa Orthopaedics by Jeil Medical. Distributed by Maxx Health Inc.



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