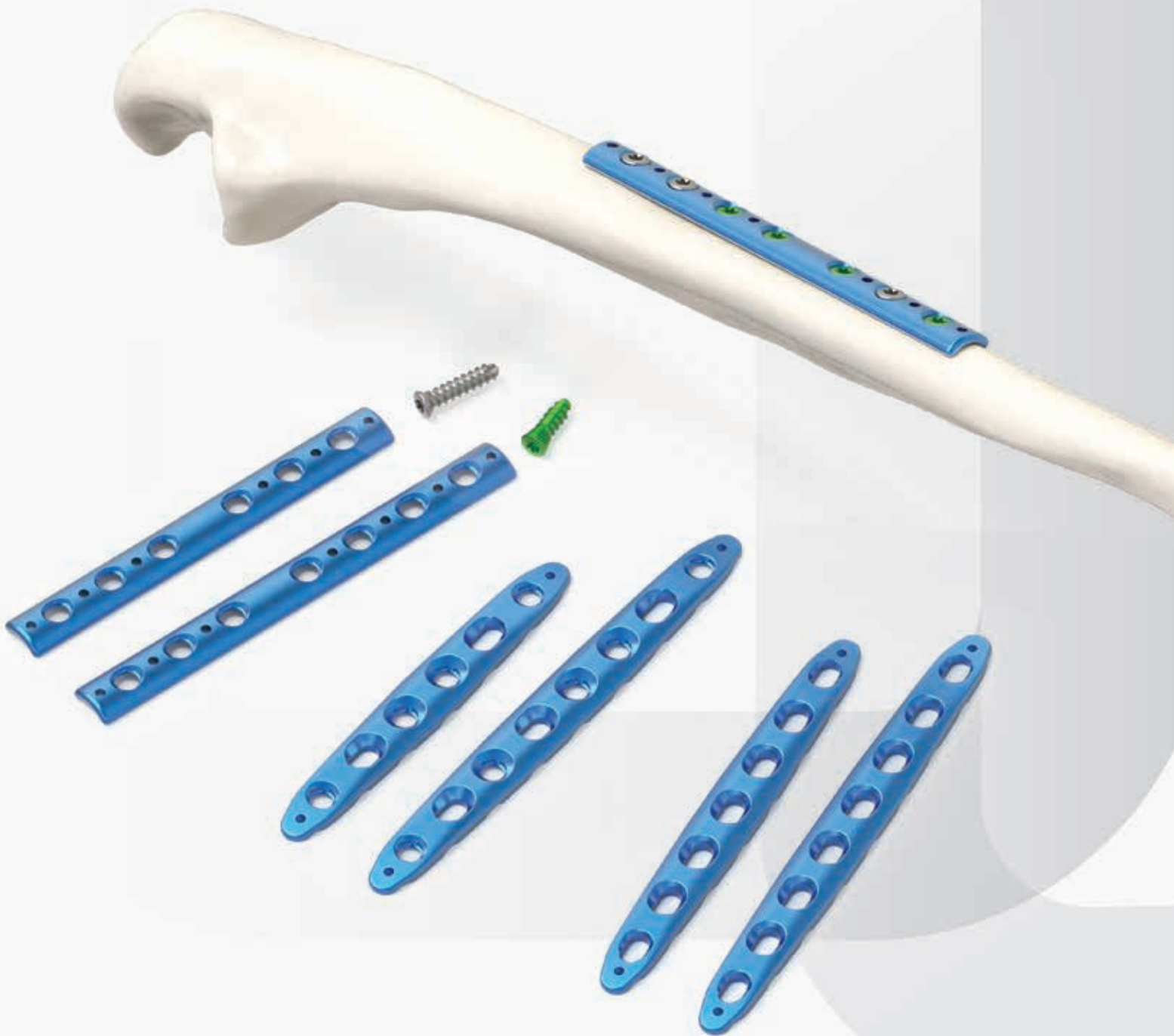


# DIAPHYSIS SYSTEM



# Contents

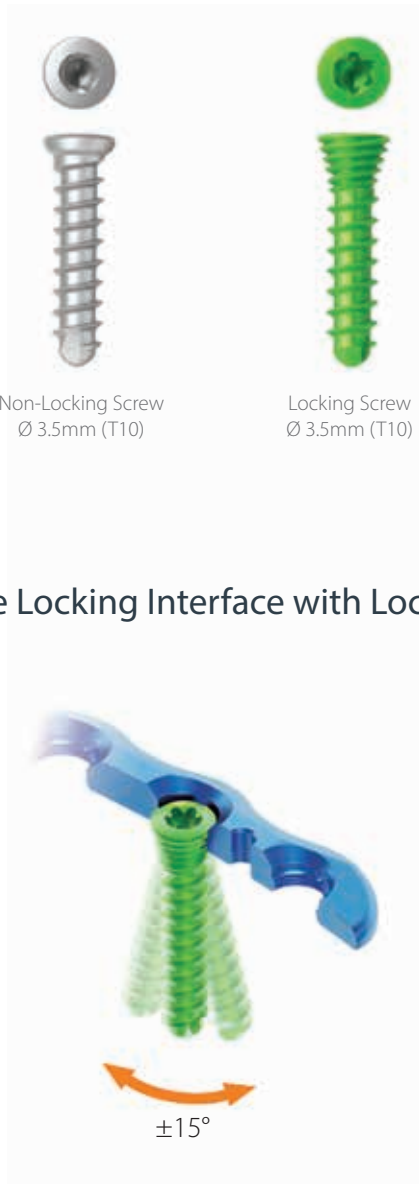
3	Indications
4	Features and Benefits
6	Surgical Technique
10	Product Overview
11	Ordering Information
	- SUMMA Diaphysis System Plates 1/3 Tublar / LC-DCP / LCP
14	- SUMMA Diaphysis System Screws
15	- SUMMA Diaphysis System Instruments
18	Set Configuration Suggestion



The **SUMMA Diaphysis System** is intended for fixation of fractures, osteotomies, and non-unions of the clavicle, scapula, olecranon, humerus, radius, ulna, pelvis, tibia, fibula, particularly in osteopenic bone.

## SUMMA Diaphysis Screw

### STARIX Screw with T10



#### Screw Variation

Self-tapping 3.5 non-locking & locking screw

- Prevents cam-out
- Allows higher torque application
- Self-retaining function
- Locking & non-locking variations available

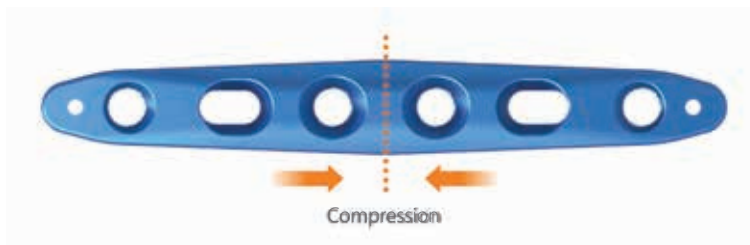
### Variable Locking Interface with Locking Screw

- Polyaxial screw insertion
- Angle range:  $\pm 15^\circ$
- Plate-screw locking interface

### Screw Specifications

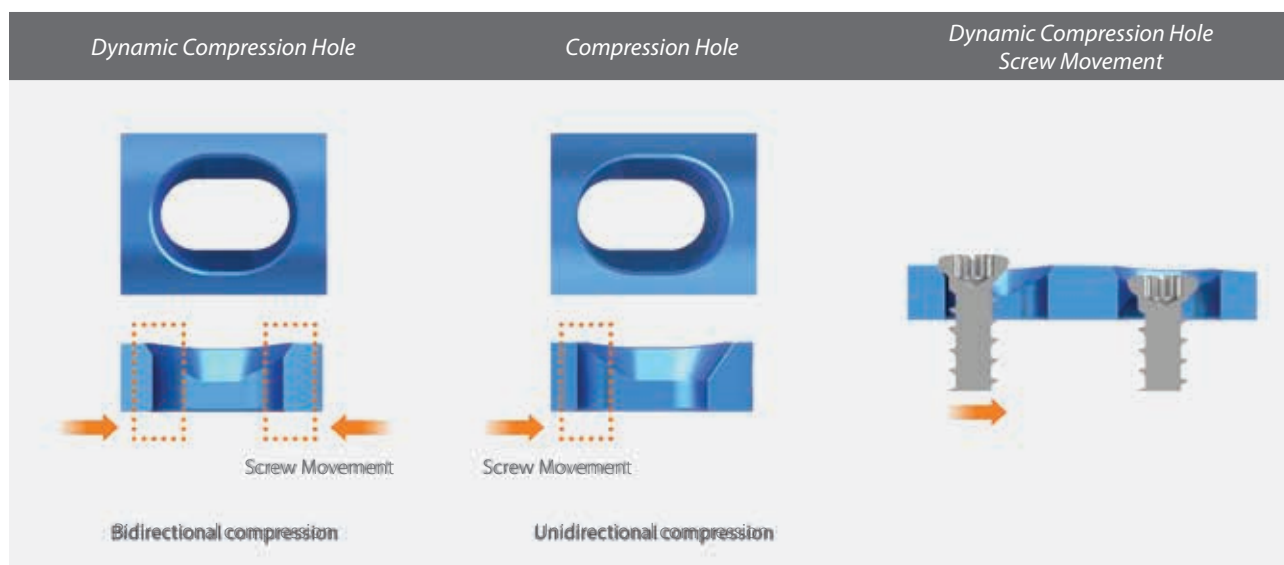
Screw Types	Outer Diameter	Length	Insertion Type	Screw Head Recess	Color	Material
Locking Screw	Ø 3.5 mm	10 ~ 24 mm	Self-Tapping	Starix	Green ●	Titanium Alloy
Cortical Screw (Non-Locking)					Silver ●	

## SUMMA Diaphysis Plate



### Compression Holes

- Designed to exert dynamic pressure between the bone fragments
- Produces absolute stability, eliminating all inter-fragmentary motion
- Plates with appropriate hole types available for all plating purposes



### Plate Specifications

Types	Thickness	Length	Width	Color	Material
1/3 Tubular	1.6 mm	58 ~ 154 mm	9.9 mm	Light Blue <span style="color: blue;">●</span>	Pure Titanium Gr.4
LC-DCP	3.8 mm	80 ~ 152 mm	11.0 mm		
LCP	3.8 mm	80 ~ 200 mm	11.0 mm		

## Surgical Technique

### 1. Fracture Reduction and Plate Contouring

Expose and clean fracture. In simple fractures adjust the bone fracture line.

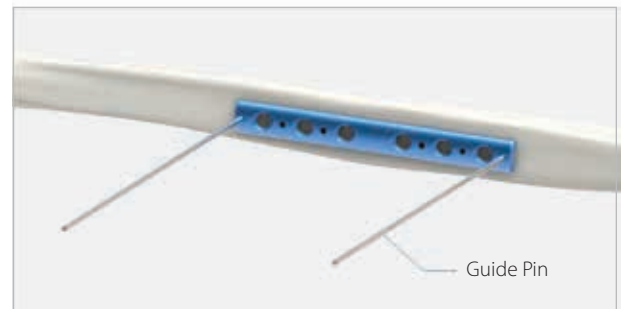
The plates are available in various lengths and shapes. Choose the appropriate plate type and length for operation purpose.

Use the plate bender to contour the plate to the anatomy.



### 2. Temporary Plate Placement

The plate may be temporarily held in place with guide pin through the plate guide pin holes.



#### Required Set

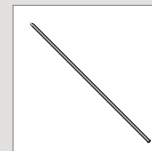


SUMMA Diaphysis System Tray  
112-114

#### Required Instruments



Plate Bender  
111-180



Guide Pin  
111-068-3

### 3. Drilling

Load the drill sleeve or drill guide in the desired hole and predrill the hole with the drill bit.

#### Drilling of non-locking screw hole

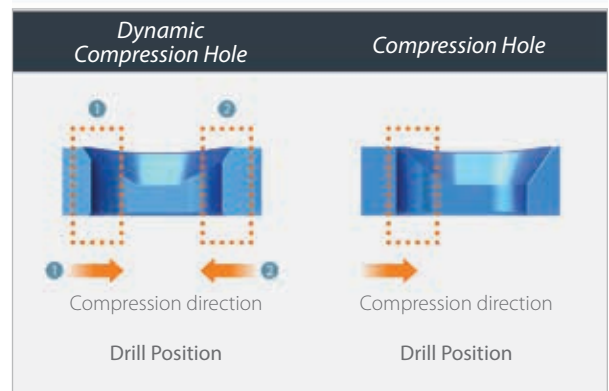
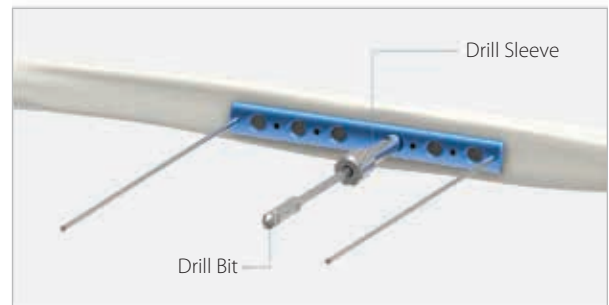
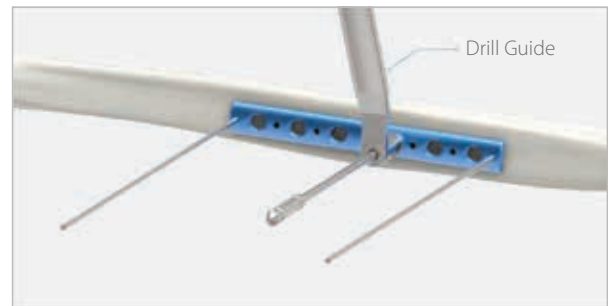
Use the drill sleeve or drill guide for an eccentric (compression) or neutral (buttress) insertion of appropriate screw.

#### Neutral insertion

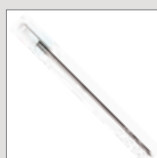
If the screw has to be inserted in neutral position, locate the drill sleeve on the center of oval hole.

#### Dynamic compression, eccentric insertion of a non-locking screw

To drill a hole for dynamic compression, place the drill guide eccentrically at the edge of the dynamic compression portion of plate hole, without applying pressure.



#### Required Instruments



Drill Bit  
112-35-703



Drill Guide  
111-260



Drill Guide  
111-168



Drill Sleeve  
111-170



Drill Sleeve  
111-171

## 3. Drilling - continued

### Drilling of locking screw hole

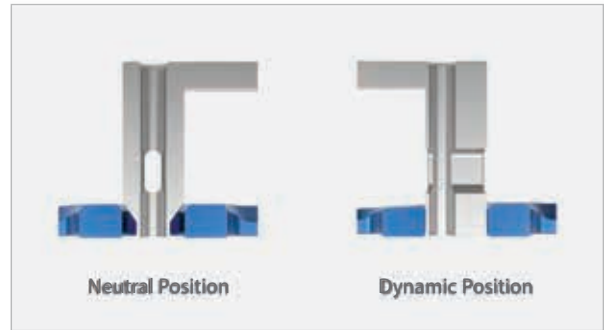
Use the drill sleeve or drill guide for an eccentric (compression) or neutral (buttress) insertion of appropriate screw.

### Normal insertion

Locate the drill sleeve for uni-direction on the center of locking hole.

### Variable angled insertion

To drill a hole for angled screw insertion, place the drill guide for variable-direction on the center of locking hole. Insert the drill bit and adjust the drilling angle to user preferred screw insertion angle. The variable angle drill sleeve enables the screw to be inserted at a user preferred angle within  $\pm 15^\circ$  range.



*Note: If necessary, assemble the drill sleeve handle (111-157) with a variable drill sleeve for better visibility during the operation.*



### Required Instruments



**Drill Bit**  
112-35-703



**Drill Guide**  
111-260



**Drill Guide**  
111-168



**Drill Sleeve**  
111-170



**Drill Sleeve**  
111-171

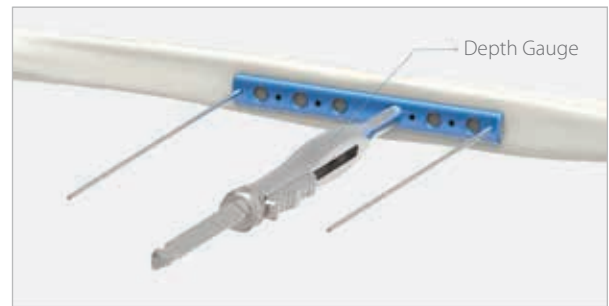


**Drill Sleeve Handle**  
111-157

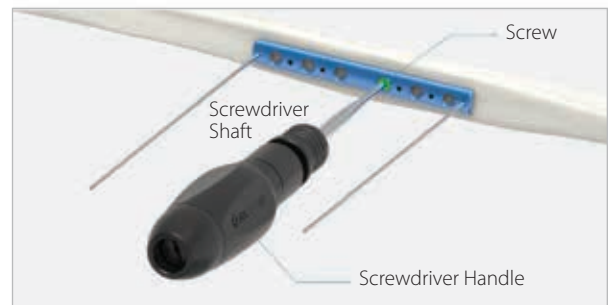


#### 4. Depth Measurement and Screw Insertion

Remove the drill guide and drill bit. Load the depth gauge in the drilled hole to determine screw length.



Use the screwdriver handle and screwdriver shaft to insert the appropriate length screw.



#### 5. Closure and Implant Removal

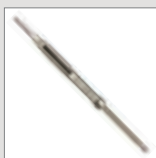
##### Close incision

Use the appropriate method for surgical closure of the incision

##### Implant removal

To remove locking screws, first unlock all screws from the plate; then remove the screws completely from the bone. The last screw removed should be a non-locking screw on the shaft. This is to make sure the plate does not spin when locking screws are removed.

#### Required Instruments



Depth Gauge  
111-086



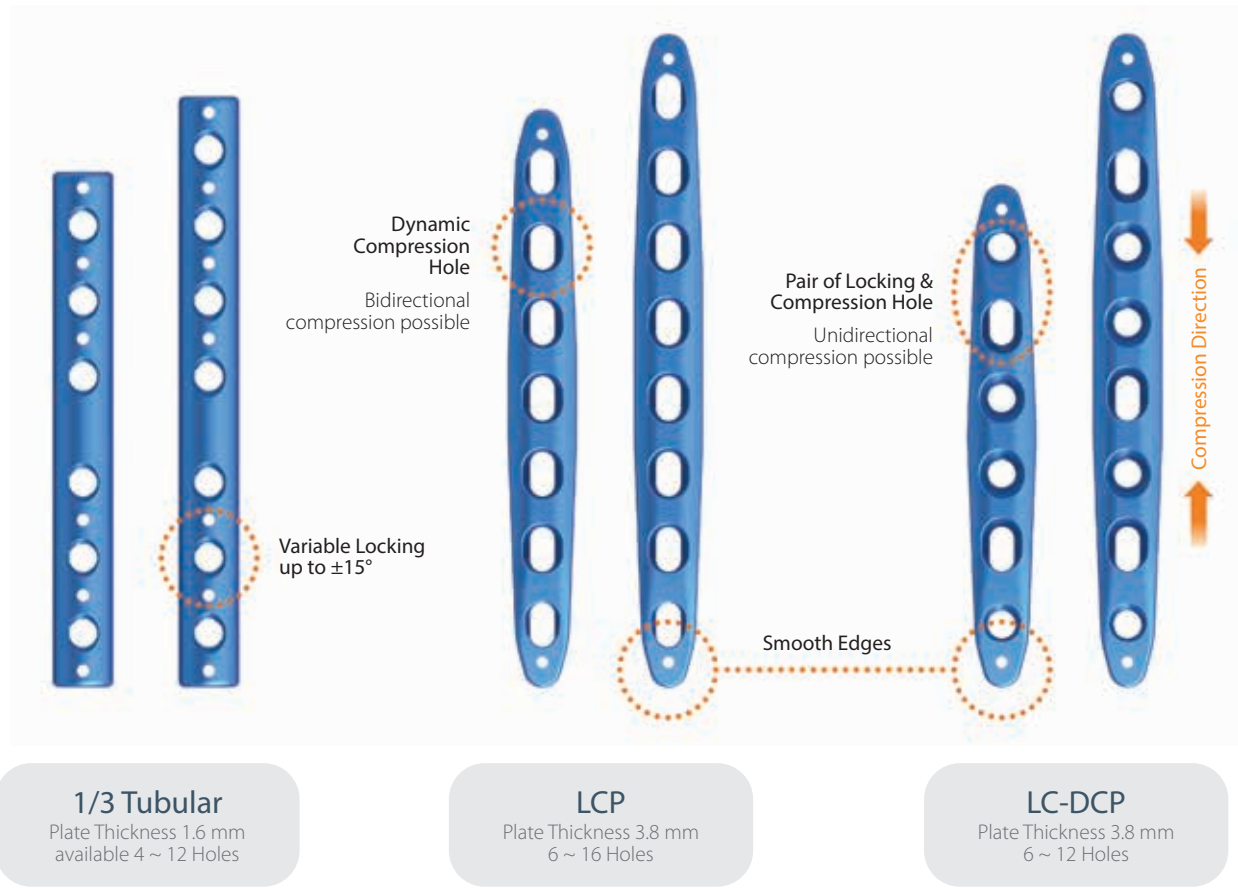
Screwdriver  
Handle  
111-063



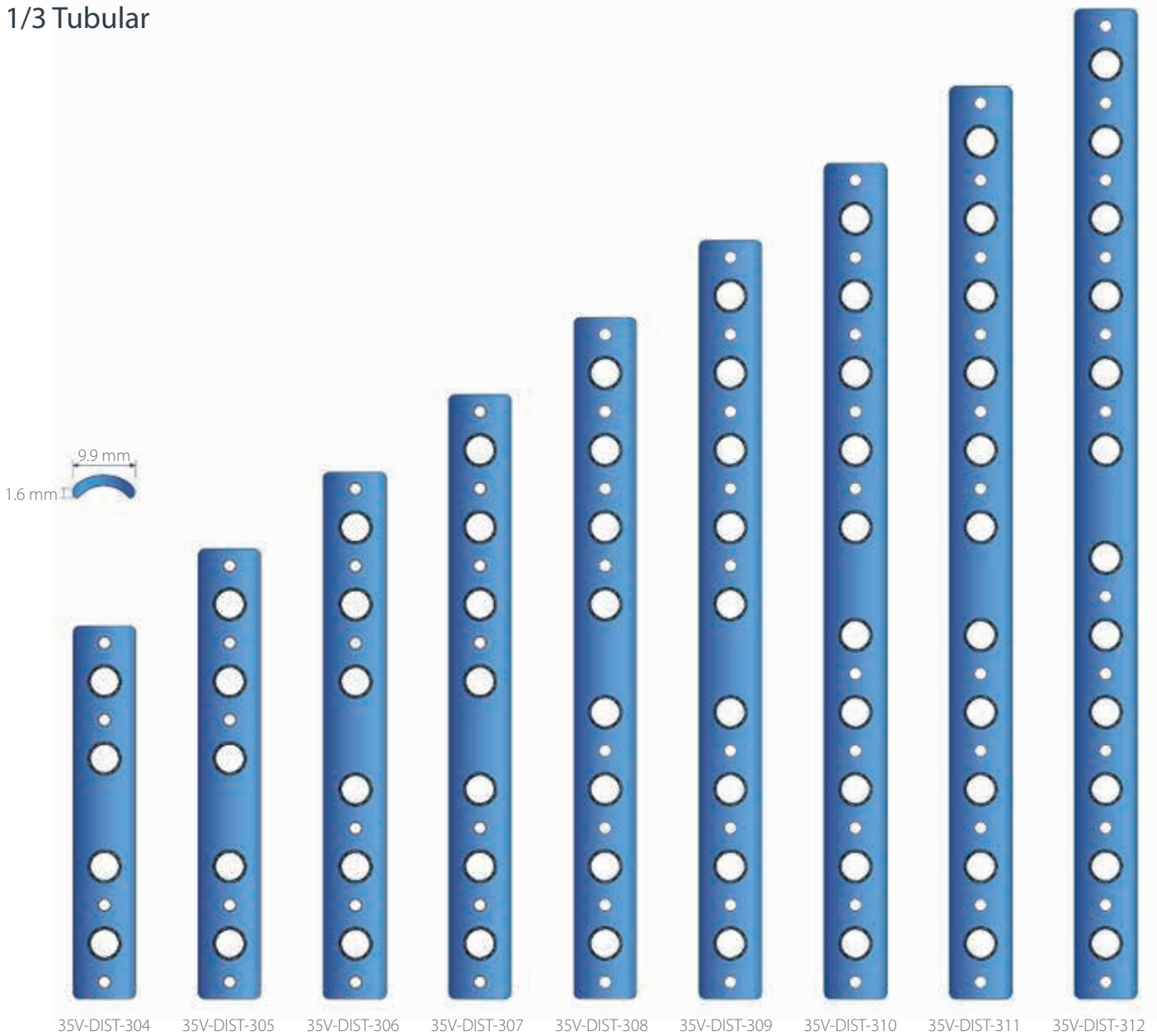
Screwdriver  
Shaft  
113-HF-616

## SUMMA Diaphysis System Plates

A Universal Plating System for Long Bone Fractures & Reconstructions



1/3 Tubular

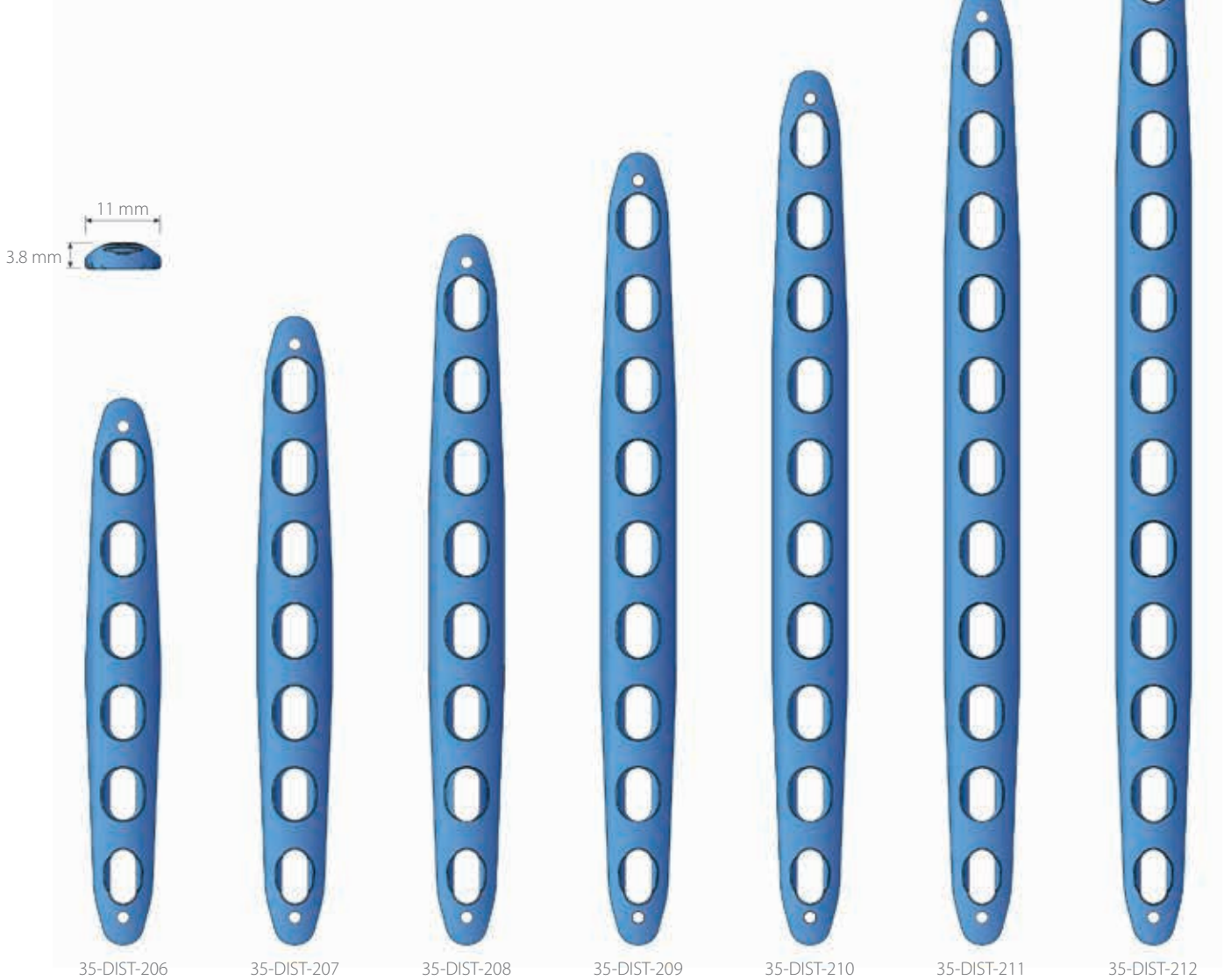


[Unit: mm]

Code	Holes	Length	Width	Thickness	Color	Set Quantity
35V-DIST-304	4	58 mm	9.9 mm	1.6 mm	Light Blue	1
35V-DIST-305	5	70 mm	9.9 mm	1.6 mm	Light Blue	1
35V-DIST-306	6	82 mm	9.9 mm	1.6 mm	Light Blue	1
35V-DIST-307	7	94 mm	9.9 mm	1.6 mm	Light Blue	1
35V-DIST-308	8	106 mm	9.9 mm	1.6 mm	Light Blue	1
35V-DIST-309	9	118 mm	9.9 mm	1.6 mm	Light Blue	1
35V-DIST-310	10	130 mm	9.9 mm	1.6 mm	Light Blue	1
35V-DIST-311	11	142 mm	9.9 mm	1.6 mm	Light Blue	1
35V-DIST-312	12	154 mm	9.9 mm	1.6 mm	Light Blue	1

## SUMMA Diaphysis System Plates

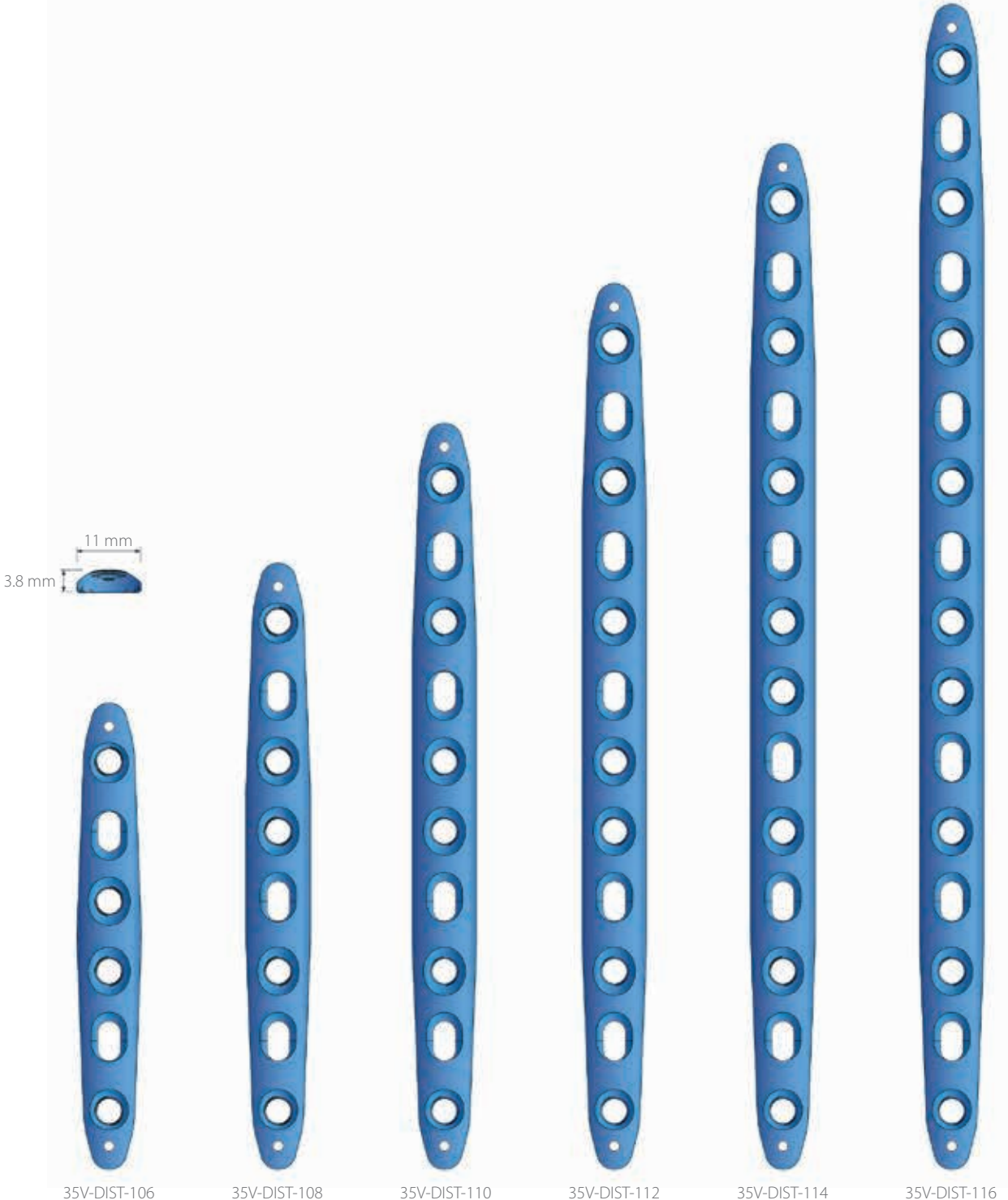
### LC-DCP



[Unit: mm]

Code	Holes	Length	Width	Thickness	Color	Set Quantity
35-DIST-206	6	80 mm	11.0 mm	3.8 mm	Light Blue	1
35-DIST-207	7	92 mm	11.0 mm	3.8 mm	Light Blue	1
35-DIST-208	8	104 mm	11.0 mm	3.8 mm	Light Blue	1
35-DIST-209	9	116 mm	11.0 mm	3.8 mm	Light Blue	1
35-DIST-210	10	128 mm	11.0 mm	3.8 mm	Light Blue	1
35-DIST-211	11	140 mm	11.0 mm	3.8 mm	Light Blue	1
35-DIST-212	12	152 mm	11.0 mm	3.8 mm	Light Blue	1

LCP



[Unit: mm]

Code	Holes	Length	Width	Thickness	Color	Set Quantity
35V-DIST-106	6	80 mm	11.0 mm	3.8 mm	Light Blue	1
35V-DIST-108	8	104 mm	11.0 mm	3.8 mm	Light Blue	1
35V-DIST-110	10	128 mm	11.0 mm	3.8 mm	Light Blue	1
35V-DIST-112	12	152 mm	11.0 mm	3.8 mm	Light Blue	1
35V-DIST-114	14	176 mm	11.0 mm	3.8 mm	Light Blue	1
35V-DIST-116	16	200 mm	11.0 mm	3.8 mm	Light Blue	1

## SUMMA Diaphysis System Screws

### Ø 3.5 mm Locking Screws (STARIX)



<i>Code</i>	<i>Length</i>	<i>Color</i>	<i>Set Quantity</i>
35L-SO-L10-TA	10 mm	Green	5
35L-SO-L12-TA	12 mm	Green	5
35L-SO-L14-TA	14 mm	Green	5
35L-SO-L16-TA	16 mm	Green	5
35L-SO-L18-TA	18 mm	Green	5
35L-SO-L20-TA	20 mm	Green	5
35L-SO-L22-TA	22 mm	Green	5
35L-SO-L24-TA	24 mm	Green	5

### Ø 3.5 mm Non-Locking Screws (STARIX)



<i>Code</i>	<i>Length</i>	<i>Color</i>	<i>Set Quantity</i>
35-SO-L10-T	10 mm	Silver	5
35-SO-L12-T	12 mm	Silver	5
35-SO-L14-T	14 mm	Silver	5
35-SO-L16-T	16 mm	Silver	5
35-SO-L18-T	18 mm	Silver	5
35-SO-L20-T	20 mm	Silver	5
35-SO-L22-T	22 mm	Silver	5
35-SO-L24-T	24 mm	Silver	5

## SUMMA Diaphysis System Instruments

### Drill Sleeve & Variable Angle Drill Sleeve Handle



111-170



111-171



111-157

Code	Description	Set Quantity
111-170	Drill Sleeve for Ø 3.5 mm Screws, Fixed Angle	1
111-171	Drill Sleeve for Ø 3.5 mm Screws, Variable Angle	1
111-157	Variable Angle Drill Sleeve Handle	1

### Drill Bits



112-35-703



112-35-701-L

Code	Description	Set Quantity
112-35-703	Drill Bits for Ø 3.5 mm Screws, AO Type	2
112-35-701-L	Lag Drill Bits for Ø 3.5 mm Screws, AO Type	2

### Driver



113-HF-616

Code	Description	Set Quantity
113-HF-616	Driver for STARIX T10	2

### Depth Gauge



111-086

Code	Description	Set Quantity
111-086	Depth Gauge for Ø 2.8 mm, Ø 3.5 mm Screws	1



## SUMMA Diaphysis System Instruments

### Screwdriver Handle



111-063

Code	Description	Set Quantity
111-063	Screwdriver Handle	2

### Drill Guide



111-168



111-260

Code	Description	Set Quantity
111-168	Drill Guide for Ø 3.5 mm Screws, Fixed Angle & Compression	1
111-260	Drill Guide for Ø 3.5 mm Screws, Fixed & Variable Angle	1

### Dispenser & Guide Pin



111-068-3



111-096

Code	Description	Set Quantity
111-068-3	Guide Pin Ø 1.6 mm	10
111-096	Dispenser	1



Grasping Forceps



114-009

Code	Description	Set Quantity
114-009	Grasping Forceps	1

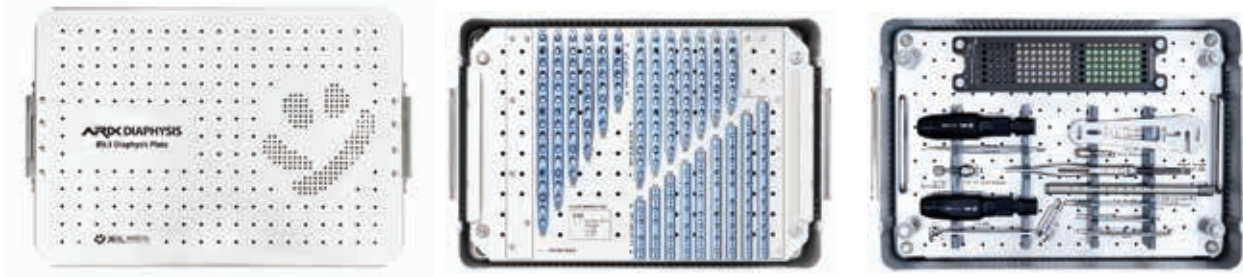
Plate Bender



111-180

Code	Description	Set Quantity
111-180	Plate Bender	2

SUMMA Diaphysis System Tray



112-114

Code	Description	Set Quantity
112-114	SUMMA Diaphysis System Tray	1

## Diaphysis Set Configuration

<i>Plates (1/3 Tubular Type)</i>			
No	Code	Description	Set Quantity
1	35V-DIST-304	1/3 Tubular Type, Length 58 mm, 4 Holes, 1.6T	1
2	35V-DIST-305	1/3 Tubular Type, Length 70 mm, 5 Holes, 1.6T	1
3	35V-DIST-306	1/3 Tubular Type, Length 82 mm, 6 Holes, 1.6T	1
4	35V-DIST-307	1/3 Tubular Type, Length 94 mm, 7 Holes, 1.6T	1
5	35V-DIST-308	1/3 Tubular Type, Length 106 mm, 8 Holes, 1.6T	1
6	35V-DIST-309	1/3 Tubular Type, Length 118 mm, 9 Holes, 1.6T	1
7	35V-DIST-310	1/3 Tubular Type, Length 130 mm, 10Holes, 1.6T	1
8	35V-DIST-311	1/3 Tubular Type, Length 142 mm, 11 Holes, 1.6T	1
9	35V-DIST-312	1/3 Tubular Type, Length 154 mm, 12 Holes, 1.6T	1

<i>Plates (LC-DCP Type)</i>			
No	Code	Description	Set Quantity
1	35-DIST-206	LC-DCP Type, Length 80 mm, 6 Holes, 3.8T	1
2	35-DIST-207	LC-DCP Type, Length 92 mm, 7 Holes, 3.8T	1
3	35-DIST-208	LC-DCP Type, Length 104 mm, 8 Holes, 3.8T	1
4	35-DIST-209	LC-DCP Type, Length 116 mm, 9 Holes, 3.8T	1
5	35-DIST-210	LC-DCP Type, Length 128 mm, 10 Holes, 3.8T	1
6	35-DIST-211	LC-DCP Type, Length 140 mm, 11 Holes, 3.8T	1
7	35-DIST-212	LC-DCP Type, Length 152 mm, 12 Holes, 3.8T	1

<i>Plates (LCP Type)</i>			
No	Code	Description	Set Quantity
1	35V-DIST-106	LCP Type, Length 80 mm, 6 Holes, 3.8T	1
2	35V-DIST-108	LCP Type, Length 104 mm, 8 Holes, 3.8T	1
3	35V-DIST-110	LCP Type, Length 128 mm, 10 Holes, 3.8T	1
4	35V-DIST-112	LCP Type, Length 152 mm, 12 Holes, 3.8T	1
5	35V-DIST-114	LCP Type, Length 176 mm, 14 Holes, 3.8T	1
6	35V-DIST-116	LCP Type, Length 200 mm, 16 Holes, 3.8T	1

<i>Plates (1/3 Tubular Type)</i>			
No	Code	Description	Set Quantity
1	35-SO-L10-T	Ø 3.5 mm Non-Locking Screw, Length 10 mm	5
2	35-SO-L12-T	Ø 3.5 mm Non-Locking Screw, Length 12 mm	5
3	35-SO-L14-T	Ø 3.5 mm Non-Locking Screw, Length 14 mm	5
4	35-SO-L16-T	Ø 3.5 mm Non-Locking Screw, Length 16 mm	5
5	35-SO-L18-T	Ø 3.5 mm Non-Locking Screw, Length 18 mm	5
6	35-SO-L20-T	Ø 3.5 mm Non-Locking Screw, Length 20 mm	5
7	35-SO-L22-T	Ø 3.5 mm Non-Locking Screw, Length 22 mm	5
8	35-SO-L24-T	Ø 3.5 mm Non-Locking Screw, Length 24 mm	5
9	35L-SO-L10-TA	Ø 3.5 mm Locking Screw, Length 10 mm	5
10	35L-SO-L12-TA	Ø 3.5 mm Locking Screw, Length 12 mm	5
11	35L-SO-L14-TA	Ø 3.5 mm Locking Screw, Length 14 mm	5
12	35L-SO-L16-TA	Ø 3.5 mm Locking Screw, Length 16 mm	5
13	35L-SO-L18-TA	Ø 3.5 mm Locking Screw, Length 18 mm	5
14	35L-SO-L20-TA	Ø 3.5 mm Locking Screw, Length 20 mm	5
15	35L-SO-L22-TA	Ø 3.5 mm Locking Screw, Length 22 mm	5
16	35L-SO-L24-TA	Ø 3.5 mm Locking Screw, Length 24 mm	5

<i>Instruments</i>			
No	Code	Description	Set Quantity
1	111-170	Drill Sleeve for Ø 3.5 mm Screws, Fixed Angle	1
2	111-171	Drill Sleeve for Ø 3.5 mm Screws, Variable Angle	1
3	111-157	Variable Angle Drill Sleeve Handle	1
4	112-35-703	Drill Bits for Ø 3.5 mm Screws, AO Type	2
5	112-35-701-L	Lag Drill Bits for Ø 3.5 mm Screws, AO Type	2
6	113-HF-616	Driver for STARIX T10	2
7	111-086	Depth Gauge for Ø 2.8 mm, Ø 3.5 mm Screws	1
8	111-063	Screwdriver Handle	2
9	111-168	Drill Guide for Ø 3.5 mm Screws, Fixed Angle & Compression	1
10	111-260	Drill Guide for Ø 3.5 mm Screws, Fixed & Variable Angle	1
11	111-068-3	Guide Pin Ø 1.6 mm	10
12	111-096	Dispenser	1
13	114-009	Grasping Forceps	1
14	111-180	Plate Bender	2
15	112-114	SUMMA Diaphysis System Tray	1



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