

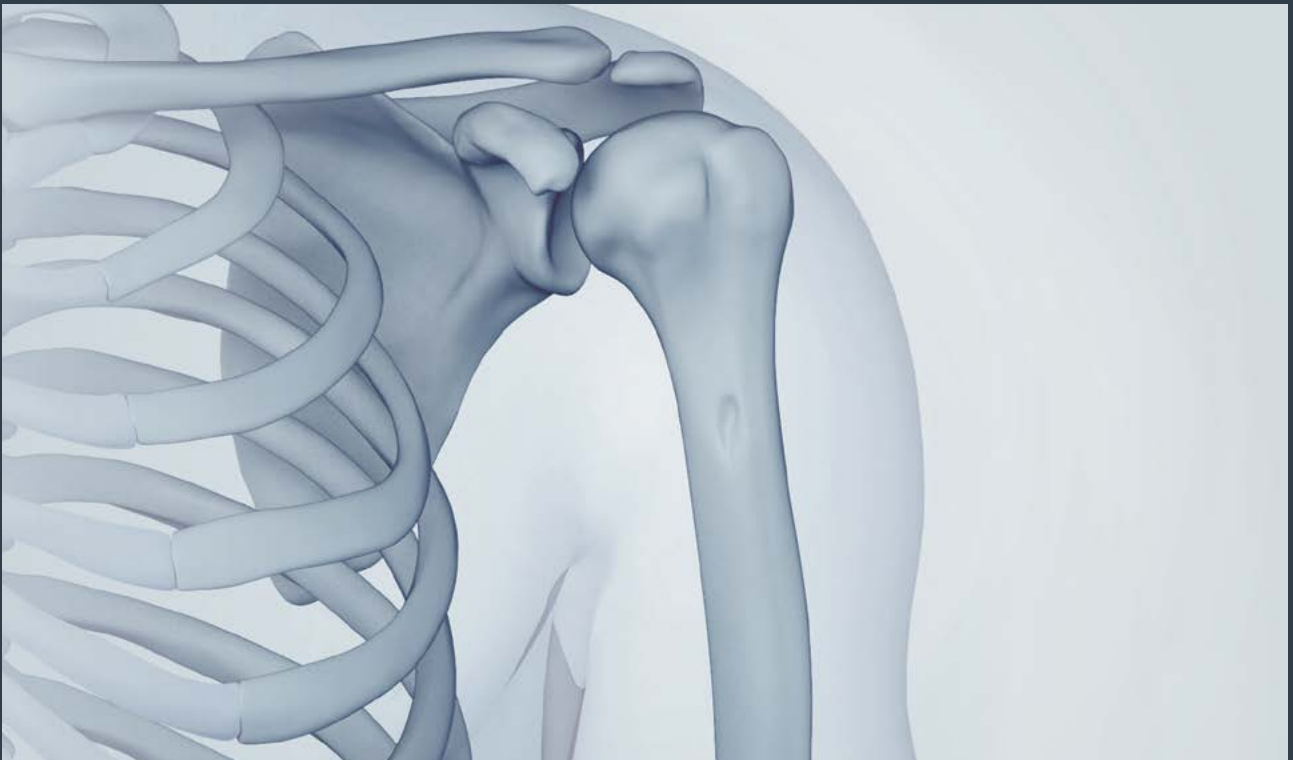
# ARX HUMERUS SYSTEM

3.5 / 4.0 Proximal Humerus Plate



# Contents

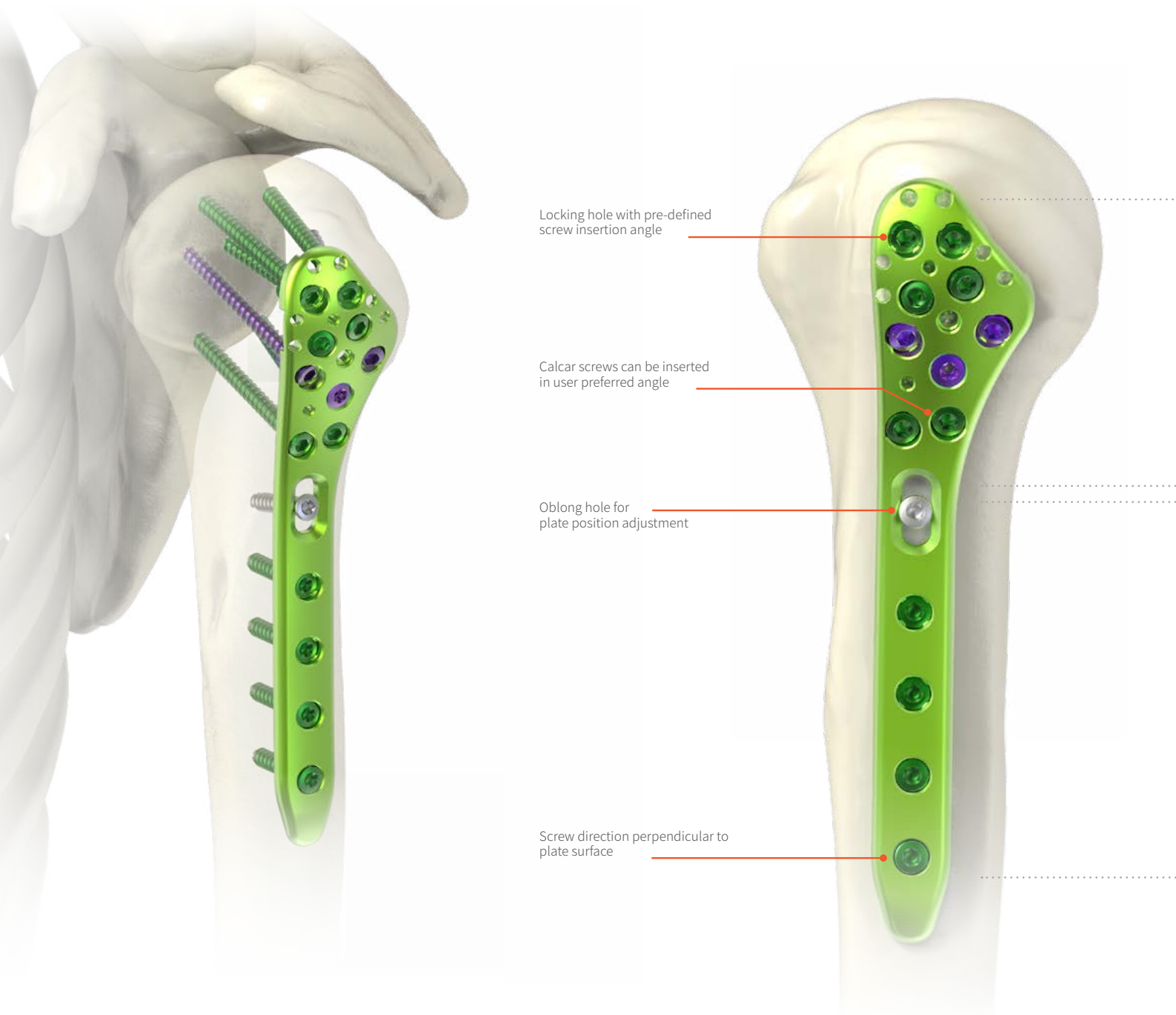
3	Indication
4	Overview
8	Surgical Technique
12	Ordering Information_Plates
14	Ordering Information_Screws
	- Ø 3.5 mm Cortical Locking Screws
	- Ø 3.5 mm Cortical Non-Locking Screws
	- Ø 4.0 mm Cancellous Locking Screw
16	Ordering Information_Instruments
19	Set Configuration Suggestions



**ARIX Humerus System** is indicated for fractures, fracture dislocations, osteotomies, and nonunions of the proximal humerus, particularly in osteopenic bone.

## ARIX Humerus Plate

The ARIX Humerus System is indicated for fractures, fracture dislocations, osteotomies and nonunions of the proximal humerus.



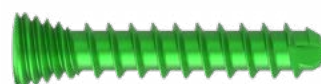
### Material

Commercially Pure Titanium, ASTM F-67  
Ti-6Al-4V, ASTM F-136

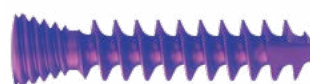
### ARIX Humerus Screw



Proximal



Ø 3.5 mm Cortical Locking Screw

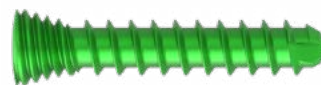


Ø 4.0 mm Cancellous Locking Screw

Distal

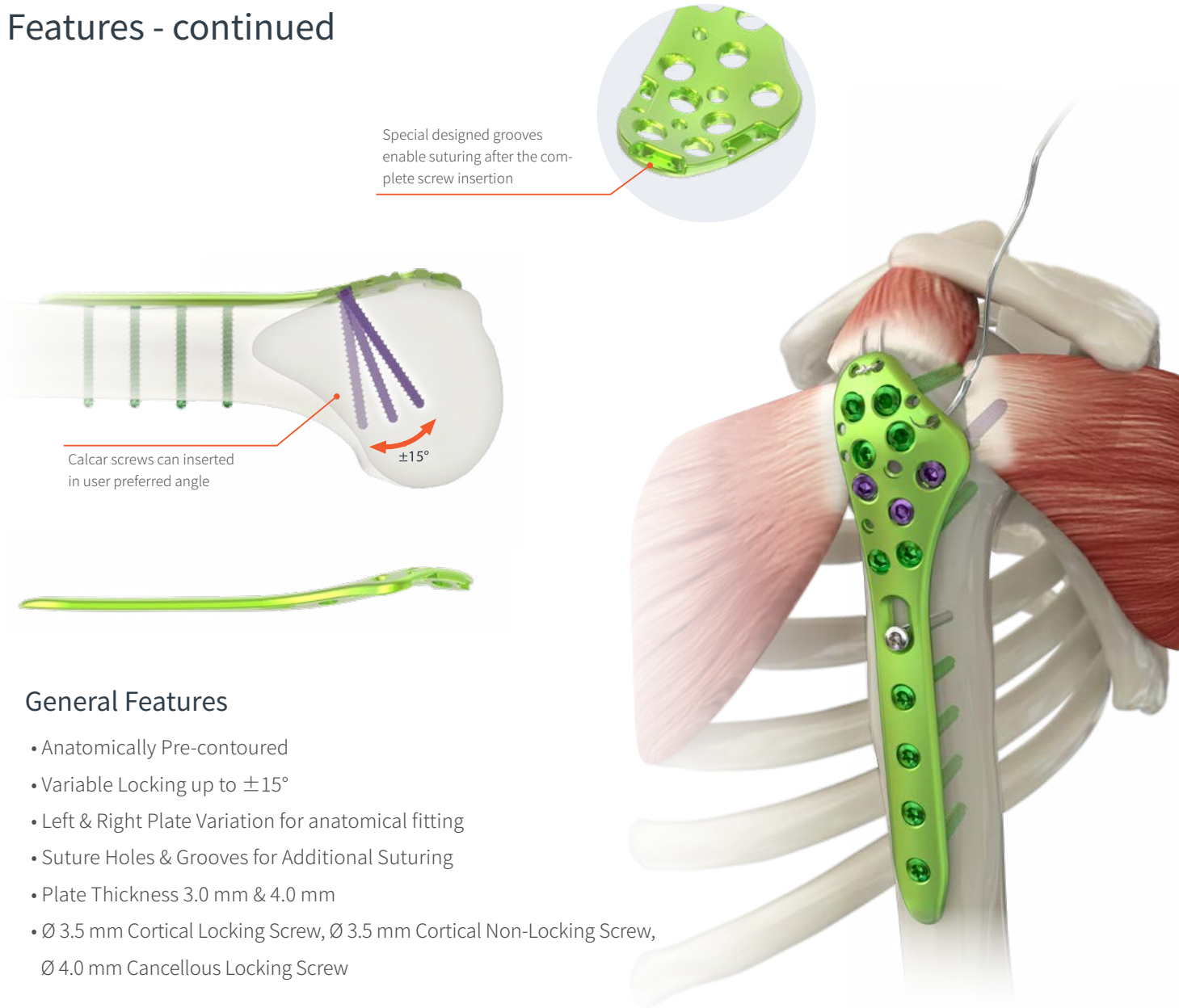


Ø 3.5 mm Cortical Non-Locking Screw



Ø 3.5 mm Cortical Locking Screw

## Features - continued

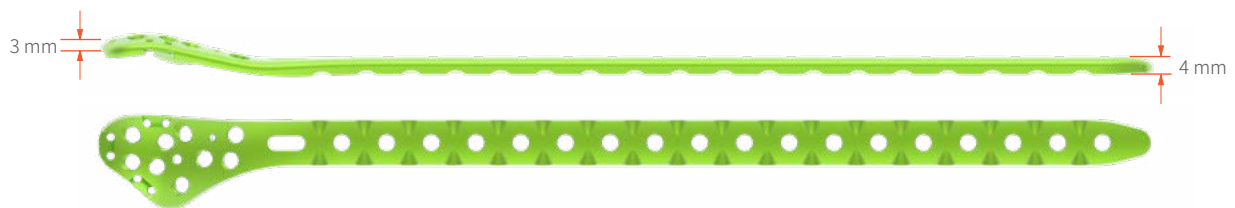


### General Features

- Anatomically Pre-contoured
- Variable Locking up to  $\pm 15^\circ$
- Left & Right Plate Variation for anatomical fitting
- Suture Holes & Grooves for Additional Suturing
- Plate Thickness 3.0 mm & 4.0 mm
- $\varnothing 3.5$  mm Cortical Locking Screw,  $\varnothing 3.5$  mm Cortical Non-Locking Screw,  $\varnothing 4.0$  mm Cancellous Locking Screw

### Special Feature for Long Type Plates (Optional, thickness: 4 mm)

- Limited Contact Design for Better Blood Supply
- Extra Long Plates available(7 ~ 19 Holes)
- Improved Plate Strength with Variable Plate Thickness





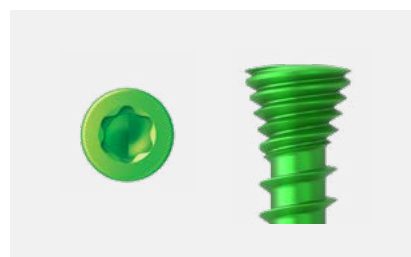
## Variable Locking Interface with Locking Screw

- Poly-axial Screw Insertion
- Angle range:  $\pm 15^\circ$
- Plate-Screw Locking Interface

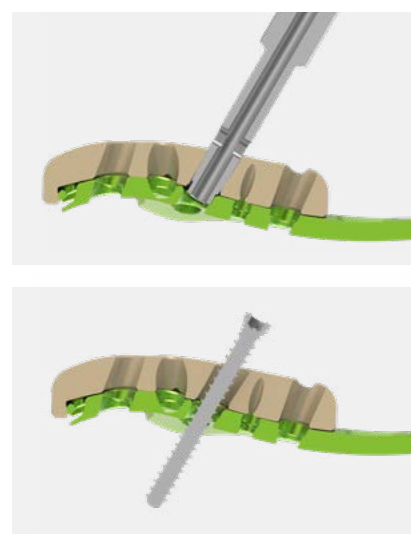


## STARIX Screw with T10

- Prevent Cam-out
- Allow Higher Torque Application
- Self-Retaining function
- Locking & Non-Locking Variations available



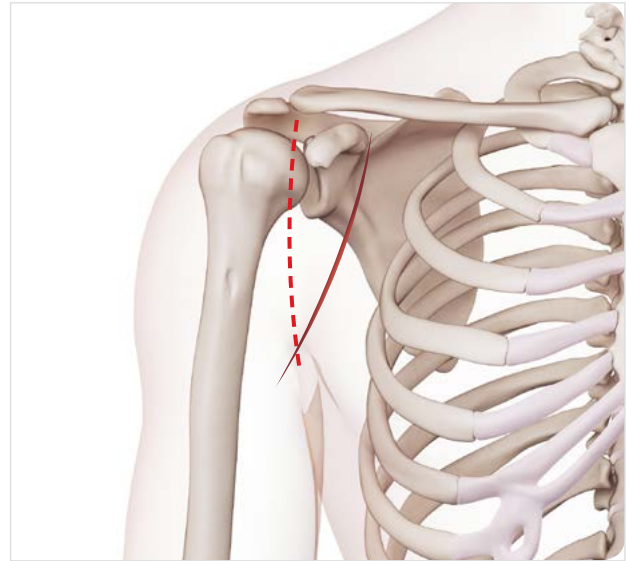
## Drill Guide Block for Optimal Screw Insertion



Drill guide block ensures optimal screw insertion angles

## 1. Approach

The deltopectoral approach can be used for almost any proximal humeral fracture.

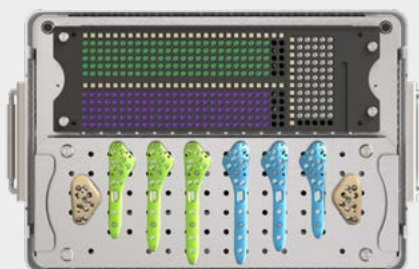


## 2. Fracture Reduction and Preliminary fixation

Fractures in proximal humerus represent various fracture types. Reduction can be performed by suturing or pure traction depending on the type of fracture. After fracture reduction, hold the reduction manually or with a pointed reduction forceps. Temporarily secure it with 2 K-wires.

*Note: Ensure that K-wires do not interfere with correct plate placement*

### Required Set



ARIX Humerus System  
112-122



### 3. Plate positioning and initial fixation

Place the plate in correct placement.

1. Align properly along the axis of the humeral shaft
2. More slightly posterior to the bicipital groove (2 ~ 4 mm)

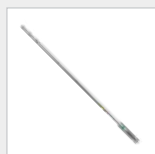


Place the drill guide(111-212) on the oblong hole in plate shaft for drilling.  
Using a  $\varnothing$  2.7 mm drill bit(112-35-704), drill a hole with bi-cortical.  
Attach the plate to the humeral shaft with a 3.5 mm cortical screw in the oblong hole.



*Note : If necessary, assemble the drill sleeve handle(111-157) with a variable drill sleeve(111-172) for better visibility during operation.*

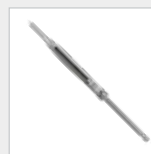
#### Required Instruments



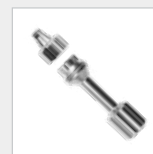
Drill Bit  
112-35-704



Drill Guide  
111-212



Depth Gauge  
111-181



Drill Sleeve  
111- 172  
Drill Sleeve Handle  
111-157

## 4. Fixation

Attach the plate to the proximal humerus head & shaft with plate locking holes.  
Several types of screw can be used in plate locking holes.

- Ø 3.5 mm Cortical Locking Screw (35L-SO-LXX-TA)
- Ø 3.5 mm Cortical Non-Locking Screw (35-SO-LXX-T)
- Ø 4.0 mm Cancellous Locking Screw (40L-SA-XXX-TA)

The procedures can be used in the following methods.

Choose an appropriate drill sleeve between unidirectional sleeve(111-173) and variable angle sleeve(111-172) to drill holes.  
Do not drill through the subchondral bone and into the shoulder joint.  
Measure hole depth and choose an appropriate screw to insert into the plate locking holes.

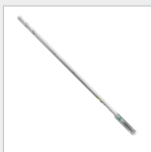


### Optional

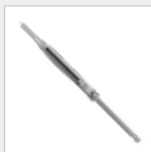
Use a drill guide block(111-175-L, R).  
It makes the fastening and positioning of sleeve more convenient.  
Do not use the variable angle drill sleeve with drill guide block together.



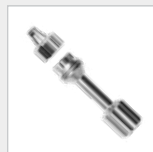
### Required Instruments



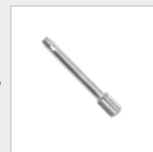
Drill Bit  
112-35-704



Depth Gauge  
111-181



Drill Sleeve  
111- 172  
Drill Sleeve Handle  
111-157



Drill Sleeve  
111-173



Drill Guide Block  
111-175-L



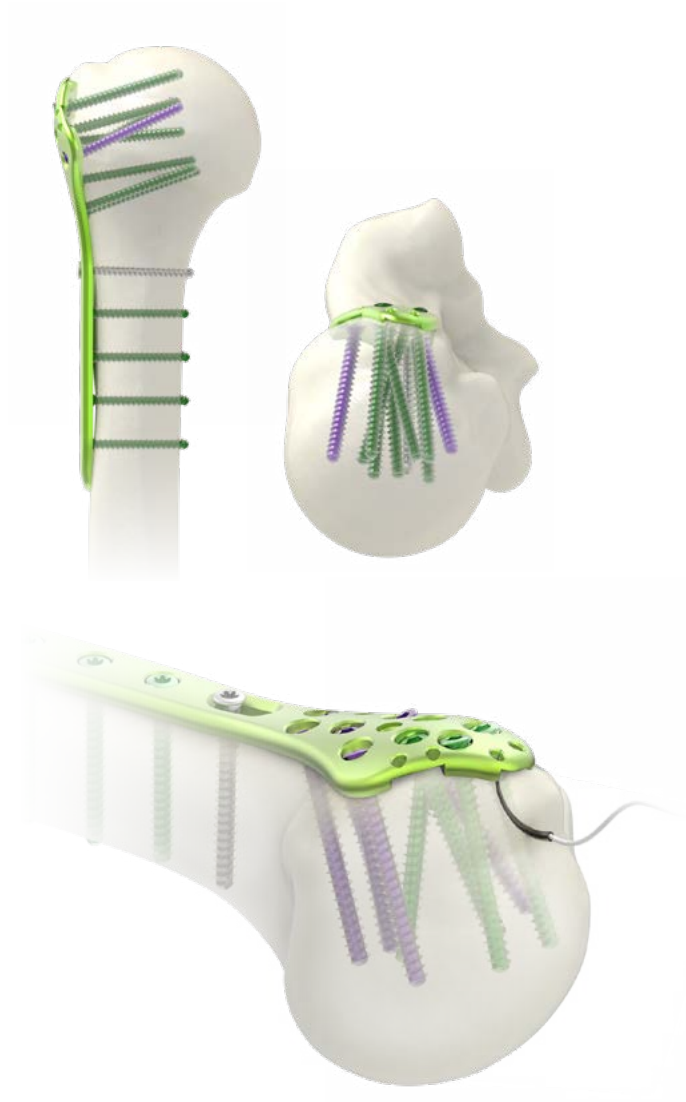
Drill Guide Block  
111-175-R

## 5. Suturing and Final check

Sutures placed through the insertions of each rotator cuff tendon increase stability.

Pass the sutures through the corresponding holes in the plate and tie them together.

Using image intensification, check carefully for correct reduction and fixation at various arm positions. Ensure that screw tips are not intraarticular.



## 6. Closure and Implant Removal

### Close Incision

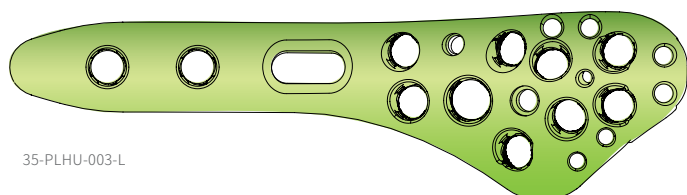
Use the appropriate method for surgical closure of the incision

### Implant Removal

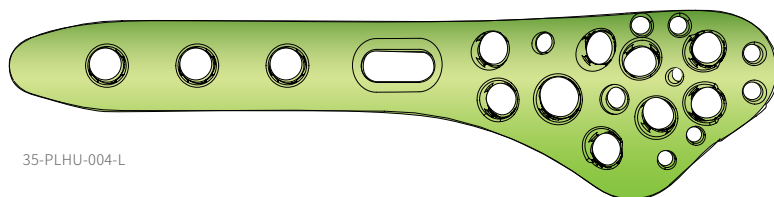
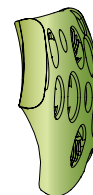
To remove locking screws, first unlock all screws from the plate; then remove the screws completely from the bone. The last screw removed should be a non-locking screw on the shaft. This is to make sure the plate does not spin when locking screws are removed.

## ARIX Humerus System Plates

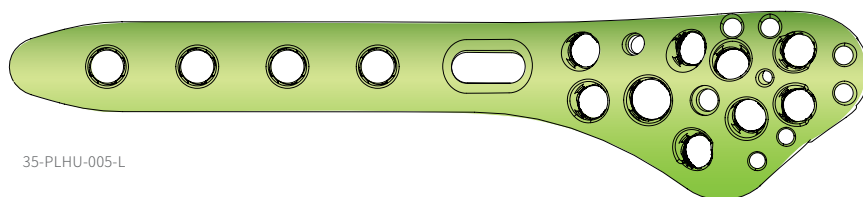
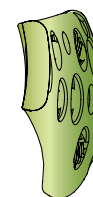
### Left Plates



35-PLHU-003-L



35-PLHU-004-L

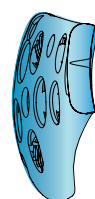
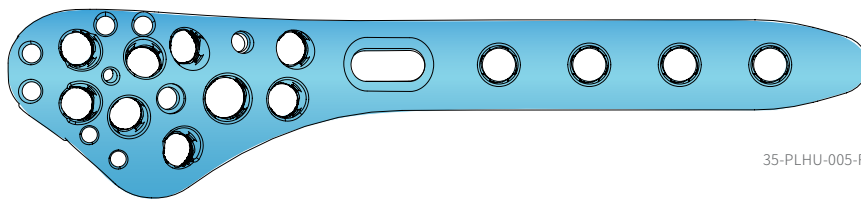
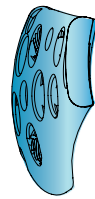
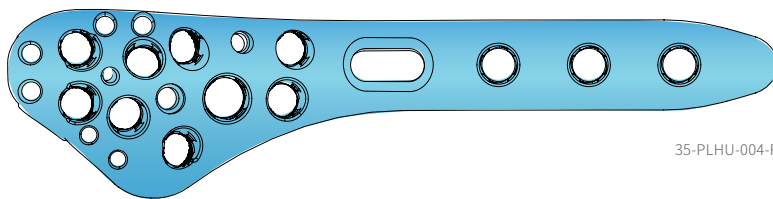
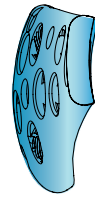
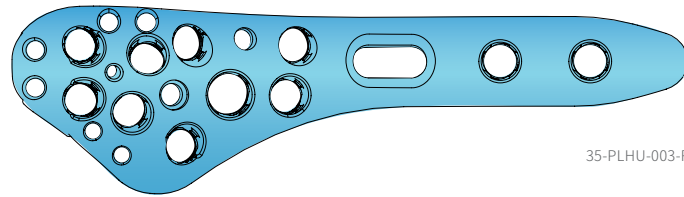


35-PLHU-005-L



<i>Code</i>	<i>Holes</i>	<i>Length</i>	<i>Thickness</i>	<i>Color</i>	<i>Set Quantity</i>
35-PLHU-003-L	3	90 mm	3.0 mm	Green	2
35-PLHU-004-L	4	102 mm	3.0 mm	Green	2
35-PLHU-005-L	5	114 mm	3.0 mm	Green	2

Right Plates



Code	Holes	Length	Thickness	Color	Set Quantity
35-PLHU-003-R	3	90 mm	3.0 mm	Blue	2
35-PLHU-004-R	4	102 mm	3.0 mm	Blue	2
35-PLHU-005-R	5	114 mm	3.0 mm	Blue	2

## ARIX Humerus System Screws

### Ø 3.5 mm Cortical Locking Screws (STARIX)



Code	Length	Color	Set Quantity
35L-SO-L20-TA	20 mm	Green	5
35L-SO-L22-TA	22 mm	Green	5
35L-SO-L24-TA	24 mm	Green	5
35L-SO-L26-TA	26 mm	Green	5
35L-SO-L28-TA	28 mm	Green	5
35L-SO-L30-TA	30 mm	Green	10
35L-SO-L32-TA	32 mm	Green	10
35L-SO-L34-TA	34 mm	Green	10
35L-SO-L36-TA	36 mm	Green	10
35L-SO-L38-TA	38 mm	Green	10
35L-SO-L40-TA	40 mm	Green	10
35L-SO-L42-TA	42 mm	Green	5
35L-SO-L44-TA	44 mm	Green	5
35L-SO-L46-TA	46 mm	Green	5
35L-SO-L48-TA	48 mm	Green	5
35L-SO-L50-TA	50 mm	Green	5
35L-SO-L52-TA	52 mm	Green	5
35L-SO-L56-TA	56 mm	Green	5
35L-SO-L60-TA	60 mm	Green	5

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



Code	Length	Color	Set Quantity
35-SO-L20-T	20 mm	Silver	5
35-SO-L22-T	22 mm	Silver	5
35-SO-L24-T	24 mm	Silver	5
35-SO-L26-T	26 mm	Silver	5
35-SO-L28-T	28 mm	Silver	5
35-SO-L30-T	30 mm	Silver	5
35-SO-L32-T	32 mm	Silver	5
35-SO-L34-T	34 mm	Silver	5
35-SO-L36-T	36 mm	Silver	5
35-SO-L38-T	38 mm	Silver	5
35-SO-L40-T	40 mm	Silver	5



## Ø 4.0 mm Cancellous Locking Screws (STARIX)



<i>Code</i>	<i>Length</i>	<i>Color</i>	<i>Set Quantity</i>
40L-SA-020-TA	20 mm	Purple	5
40L-SA-022-TA	22 mm	Purple	5
40L-SA-024-TA	24 mm	Purple	5
40L-SA-026-TA	26 mm	Purple	5
40L-SA-028-TA	28 mm	Purple	5
40L-SA-030-TA	30 mm	Purple	10
40L-SA-032-TA	32 mm	Purple	10
40L-SA-034-TA	34 mm	Purple	10
40L-SA-036-TA	36 mm	Purple	10
40L-SA-038-TA	38 mm	Purple	10
40L-SA-040-TA	40 mm	Purple	10
40L-SA-042-TA	42 mm	Purple	5
40L-SA-044-TA	44 mm	Purple	5
40L-SA-046-TA	46 mm	Purple	5
40L-SA-048-TA	48 mm	Purple	5
40L-SA-050-TA	50 mm	Purple	5
40L-SA-052-TA	52 mm	Purple	5
40L-SA-056-TA	56 mm	Purple	5
40L-SA-060-TA	60 mm	Purple	5

## ARIX Humerus System Instruments

### Drill Bits



112-35-704

Code	Description	Set Quantity
112-35-704	Drill Bits for Ø 3.5 mm, Ø 4.0 mm Screws, AO Type	2

### Driver



113-HF-616

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

### Drill Sleeve & Drill Sleeve Handle



111-173



111-172



111-157

Code	Description	Set Quantity
111-173	Drill Sleeve for Ø 3.5 mm, Ø 4.0 mm Screws, Fixed Angle	2
111-172	Drill Sleeve for Ø 3.5 mm, Ø 4.0 mm Screws, Variable Angle	1
111-157	Drill Sleeve Handle	1

### Drill Guide Block



111-175-L



111-175-R

Code	Description	Set Quantity
111-175-L	Drill Guide Block, Left	1
111-175-R	Drill Guide Block, Right	1

## Grasping Forceps



114-009

Code	Description	Set Quantity
114-009	Grasping Forceps	1

## Drill Guide



111-212

Code	Description	Set Quantity
111-212	Drill Guide for Ø 3.5 mm, Ø 4.0 mm Screws, Fixed Angle	1

## Screwdriver Handle



111-063

Code	Description	Set Quantity
111-063	Screwdriver Handle	2

## Depth Gauge



111-181

Code	Description	Set Quantity
111-181	Depth Gauge for Ø 3.5 mm, Ø 4.0 mm Screws	1

## ARIX Humerus System Instruments

### Guide Pin Dispenser & Guide Pin



111-068-3



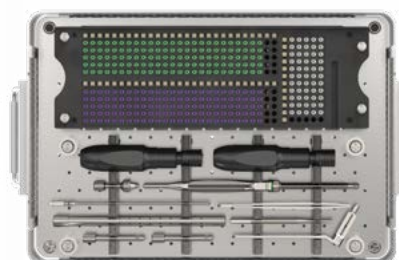
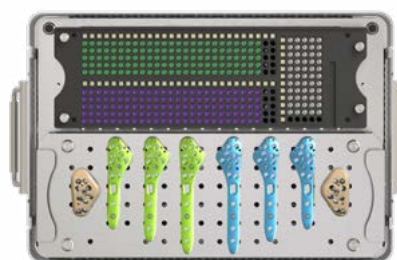
111-096

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

### Tray



112-122



Code	Description	Set Quantity
112-122	ARIX Humerus System Tray	1

## ARIX Humerus Set Configuration

Ø 3.5 mm Cortical Locking Screws				Ø 4.0 mm Cancellous Locking Screws			
No.	Code	Description	Set Quantity	No.	Code	Description	Set Quantity
1	35L-SO-L20-TA	Ø 3.5 mm Cortical Locking Screw, Length 20 mm	5	1	40L-SA-020-TA	Ø 4.0 mm Cancellous Locking Screw, Length 20 mm	5
2	35L-SO-L22-TA	Ø 3.5 mm Cortical Locking Screw, Length 22 mm	5	2	40L-SA-022-TA	Ø 4.0 mm Cancellous Locking Screw, Length 22 mm	5
3	35L-SO-L24-TA	Ø 3.5 mm Cortical Locking Screw, Length 24 mm	5	3	40L-SA-024-TA	Ø 4.0 mm Cancellous Locking Screw, Length 24 mm	5
4	35L-SO-L26-TA	Ø 3.5 mm Cortical Locking Screw, Length 26 mm	5	4	40L-SA-026-TA	Ø 4.0 mm Cancellous Locking Screw, Length 26 mm	5
5	35L-SO-L28-TA	Ø 3.5 mm Cortical Locking Screw, Length 28 mm	5	5	40L-SA-028-TA	Ø 4.0 mm Cancellous Locking Screw, Length 28 mm	5
6	35L-SO-L30-TA	Ø 3.5 mm Cortical Locking Screw, Length 30 mm	10	6	40L-SA-030-TA	Ø 4.0 mm Cancellous Locking Screw, Length 30 mm	10
7	35L-SO-L32-TA	Ø 3.5 mm Cortical Locking Screw, Length 32 mm	10	7	40L-SA-032-TA	Ø 4.0 mm Cancellous Locking Screw, Length 32 mm	10
8	35L-SO-L34-TA	Ø 3.5 mm Cortical Locking Screw, Length 34 mm	10	8	40L-SA-034-TA	Ø 4.0 mm Cancellous Locking Screw, Length 34 mm	10
9	35L-SO-L36-TA	Ø 3.5 mm Cortical Locking Screw, Length 36 mm	10	9	40L-SA-036-TA	Ø 4.0 mm Cancellous Locking Screw, Length 36 mm	10
10	35L-SO-L38-TA	Ø 3.5 mm Cortical Locking Screw, Length 38 mm	10	10	40L-SA-038-TA	Ø 4.0 mm Cancellous Locking Screw, Length 38 mm	10
11	35L-SO-L40-TA	Ø 3.5 mm Cortical Locking Screw, Length 40 mm	10	11	40L-SA-040-TA	Ø 4.0 mm Cancellous Locking Screw, Length 40 mm	10
12	35L-SO-L42-TA	Ø 3.5 mm Cortical Locking Screw, Length 42 mm	5	12	40L-SA-042-TA	Ø 4.0 mm Cancellous Locking Screw, Length 42 mm	5
13	35L-SO-L44-TA	Ø 3.5 mm Cortical Locking Screw, Length 44 mm	5	13	40L-SA-044-TA	Ø 4.0 mm Cancellous Locking Screw, Length 44 mm	5
14	35L-SO-L46-TA	Ø 3.5 mm Cortical Locking Screw, Length 46 mm	5	14	40L-SA-046-TA	Ø 4.0 mm Cancellous Locking Screw, Length 46 mm	5
15	35L-SO-L48-TA	Ø 3.5 mm Cortical Locking Screw, Length 48 mm	5	15	40L-SA-048-TA	Ø 4.0 mm Cancellous Locking Screw, Length 48 mm	5
16	35L-SO-L50-TA	Ø 3.5 mm Cortical Locking Screw, Length 50 mm	5	16	40L-SA-050-TA	Ø 4.0 mm Cancellous Locking Screw, Length 50 mm	5
17	35L-SO-L52-TA	Ø 3.5 mm Cortical Locking Screw, Length 52 mm	5	17	40L-SA-052-TA	Ø 4.0 mm Cancellous Locking Screw, Length 52 mm	5
18	35L-SO-L56-TA	Ø 3.5 mm Cortical Locking Screw, Length 54 mm	5	18	40L-SA-056-TA	Ø 4.0 mm Cancellous Locking Screw, Length 56 mm	5
19	35L-SO-L60-TA	Ø 3.5 mm Cortical Locking Screw, Length 60 mm	5	19	40L-SA-060-TA	Ø 4.0 mm Cancellous Locking Screw, Length 60 mm	5

Ø 3.5 mm Cortical Non-Locking Screws				Instruments			
No.	Code	Description	Set Quantity	No.	Code	Description	Set Quantity
1	35-SO-L20-T	Ø 3.5 mm Cortical Non-Locking Screw, Length 20 mm	5	1	112-35-704	Drill Bits for Ø 3.5mm, Ø 4.0 mm Screws, AO Type	2
2	35-SO-L22-T	Ø 3.5 mm Cortical Non-Locking Screw, Length 22 mm	5	2	113-HF-616	Driver for STARIX T10	2
3	35-SO-L24-T	Ø 3.5 mm Cortical Non-Locking Screw, Length 24 mm	5	3	111-173	Drill Sleeve for Ø 3.5mm, Ø 4.0 mm Screws, Fixed Angle	2
4	35-SO-L26-T	Ø 3.5 mm Cortical Non-Locking Screw, Length 26 mm	5	4	111-172	Drill Sleeve for Ø 3.5mm, Ø 4.0 mm Screws, Variable Angle	1
5	35-SO-L28-T	Ø 3.5 mm Cortical Non-Locking Screw, Length 28 mm	5	5	111-157	Drill Sleeve Handle	1
6	35-SO-L30-T	Ø 3.5 mm Cortical Non-Locking Screw, Length 30 mm	5	6	111-175-R	Drill Guide Block, Right	1
7	35-SO-L32-T	Ø 3.5 mm Cortical Non-Locking Screw, Length 32 mm	5	7	111-175-L	Drill Guide Block, Left	1
8	35-SO-L34-T	Ø 3.5 mm Cortical Non-Locking Screw, Length 34 mm	5	8	114-009	Grasping Forceps	1
9	35-SO-L36-T	Ø 3.5 mm Cortical Non-Locking Screw, Length 36 mm	5	9	111-212	Drill Guide for Ø 3.5mm, Ø 4.0 mm Screws, Fixed Angle	1
10	35-SO-L38-T	Ø 3.5 mm Cortical Non-Locking Screw, Length 38 mm	5	10	111-063	Screwdriver Handle	2
11	35-SO-L40-T	Ø 3.5 mm Cortical Non-Locking Screw, Length 40 mm	5	11	111-181	Depth Gauge for Ø 3.5mm, Ø 4.0 mm Screws	1
				12	111-068-3	Guide Pin Ø1.6mm	10
				13	111-096	Guide Pin Dispenser	1
				14	112-122	ARIX Humerus System Tray	1

Plates			
No.	Code	Description	Set Quantity
1	35-PLHU-003-L	Left, Length 90mm, 3 Holes, 3.0T	2
2	35-PLHU-004-L	Left, Length 102mm, 4 Holes, 3.0T	2
3	35-PLHU-005-L	Left, Length 114mm, 5 Holes, 3.0T	2
4	35-PLHU-003-R	Right, Length 90mm, 3 Holes, 3.0T	2
5	35-PLHU-004-R	Right, Length 102mm, 4 Holes, 3.0T	2
6	35-PLHU-005-R	Right, Length 114mm, 5 Holes, 3.0T	2

**JEILMEDICAL**

**JEILMEDICAL CORPORATION**

702·703·704·705·706·804·805·807·812·815-ho, 55, Digital-ro 34-gil, Guro-gu, Seoul, 08378, Rep. of Korea

**DOMESTIC SALES**      **T** 82.2.850.3500    **F** 82.2.850.3535    **E** jeil@jeilmed.co.kr

**INTERNATIONAL SALES**    **T** 82.2.850.3935    **F** 82.2.850.3537    **E** global@jeilmed.co.kr

[www.jeilmed.co.kr](http://www.jeilmed.co.kr)

Print Date: 2019.02.15    32-A01(00)