



**Combo Hand System**  
**1.2mm/ 1.7 mm/ 2.3mm**  
**Surgical Technique**

## Medical Implants

Astrolabe recognizes that proper surgical procedures and techniques are responsibilities of medical professionals.

The following guidelines are provided for information purposes only. Each surgeon must evaluate the appropriateness of the procedures based on their medical training, experience and condition of the patient. Before using the system, the surgeon must consult the operating instructions for additional warnings, precautions, indications, contraindications and adverse effects.

## COMBO HAND SYSTEM 1.2/1.7/2.3 mm



- Astrolabe Combo Hand is a modular system, differentiated by color, referring to the diameter of screws, which facilitates and makes easier the choice of the most appropriated implant to the most varied demands of hand surgery.
- The low profile of the plates minimizes tissue irritation.
- Plates design that allows the use of Locking Screws and/or Non-Locking Screws



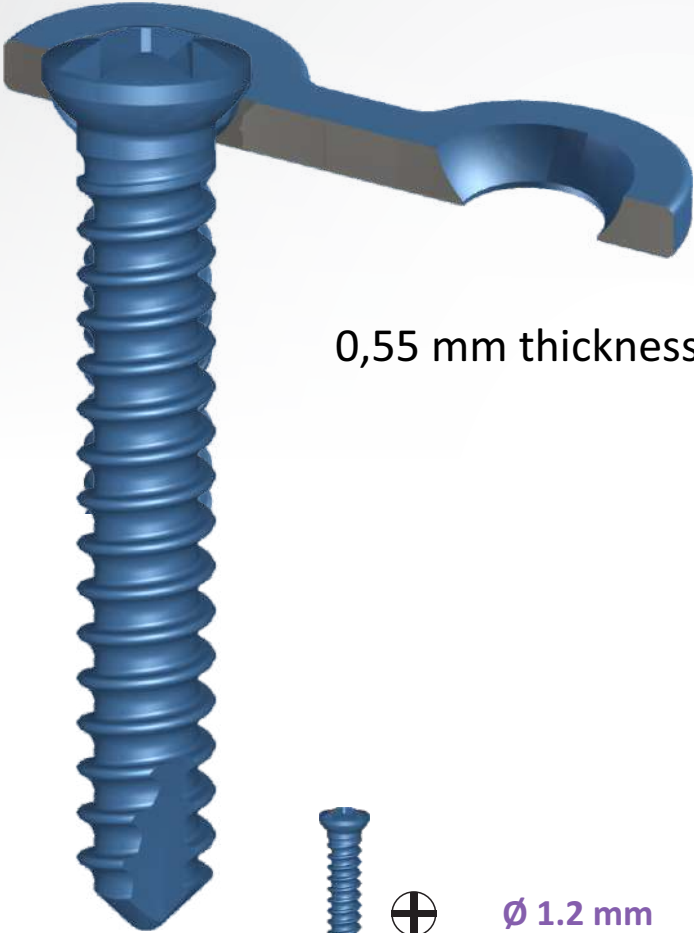
### Indications:

- Handsurgery
- Traumatology
- Reconstructive surgery
- Plastic surgery

1.2 mm 1.7 mm 2.3 mm



1.2 mm MIC  
Standard Plates



0,55 mm thickness



Ø 1.2 mm  
Cortical Screw  
4 mm – 13 mm, 1 mm increments



Ø 1.4 mm  
Cortical Screw  
3 mm - 7 mm, 2 mm increments

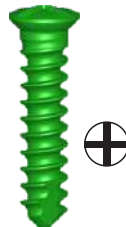
# 1.7 mm MIN Locking Plates



1,0 mm thickness

## Ø 1.7 mm Cortical Screw

4 mm - 21 mm, 1mm increments .

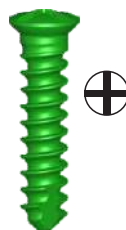


## Ø 1.9 mm Cortical Screw

5 mm & 7 mm

## Ø 1.7 mm Locking Screw

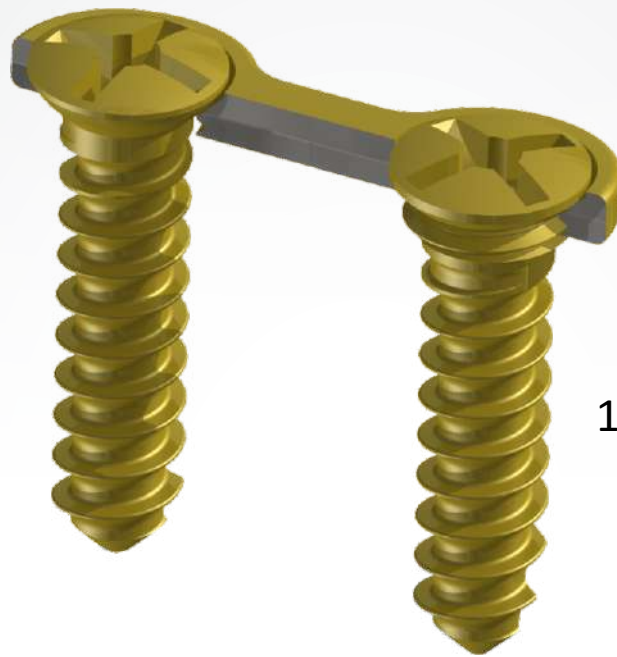
4 mm - 21 mm, 1mm increments



## Ø 1.9 mm Locking Screw

5 mm & 7 mm

## 2.3 mm MAC Locking Plates



1,0 mm thickness

### Ø 2.3 mm Cortical Screw

5 mm - 24 mm, 1mm increments



### Ø 2.5 mm Cortical Screw

6 mm

### Ø 2.3 mm Locking Screw

5 mm - 24 mm, 1mm increments



### Ø 2.5 mm Locking Screw

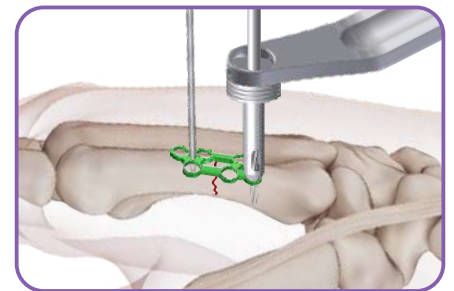
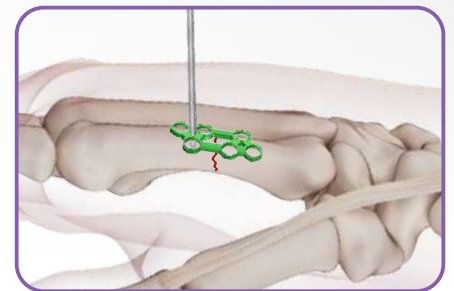
6 mm



- After choosing the appropriate plate, if necessary, it can be moulded (item 17/ 18) to better fit the patient's anatomy.
- Position the plate over the fracture or osteotomy and provisionally fix it with a Kirschner Wire.



- **1.2mm/ 1.7mm/ 2.3mm Cortical Screws:** Use the Combo Hand System color code and select the appropriate Drill Guide Insert (item 20/ 21/ 22/ 23/ 24) properly coupled with the Drill Guide Handle (item 06) then proceed with drilling using the Drill Bit (item 01/02/03).



**NOTE:** If it is necessary to deepen a little more the drilling, when using 2.3mm plates and screws (yellow), is recommended the use of the Drill Guide Insert, for Drill Bit/wire  $\varnothing$  up to 2.5 mm (item 23) because it has no "stop" at its tip.

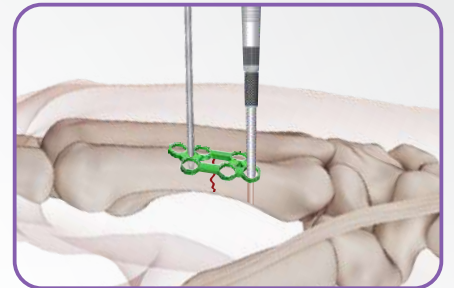
- **1.7mm/ 2.3mm Locking Screws:** It is mandatory the use of Threaded Drill Guide ( item 25/ 26) to perform a perpendicular drilling and a perfect fit of the Locking Screws over the plate.
- Use the Combo Hand System color code and select the appropriate Threaded Drill Guide and Drill Bit then proceed with drilling.



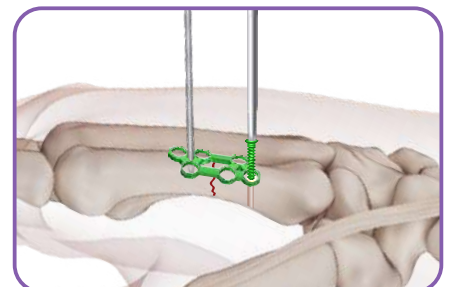


## Surgical Technique

- The screw measure can be obtained by reading on the Depth Gauge (item 13/ 14).



- Use the Combo Hand System color code and select the appropriate Handle ( item 04/ 05) and Shaft Screwdriver ( item 10/ 11/ 12) to position the screws.



- Proceed with x-ray to check if final position is according to initial intention.



01

**Drill Bit, Ø1.0 x 83 mm, Stop 15 mm**

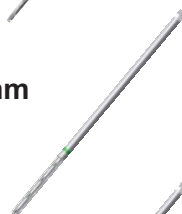
Stryker Coupling  
Blue Code  
Cod.: 09.01.07.10010



02

**Drill Bit, Ø1.4 x 94 mm, Stop 26 mm**

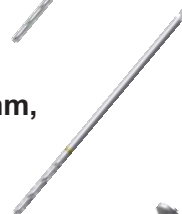
Stryker Coupling  
Green Code  
Cod.: 09.01.07.14010



03

**Drill Bit, Ø1.9 x 94 mm, Stop 26 mm,**

Stryker Coupling,  
Yellow Code  
Cod.: 09.01.07.19010



04

**Handle, Dental Coupling, 105 mm**

Metal  
Cod.: 09.04.05.10500



05

**Handle, Dental Coupling, 110 mm**

Black  
Cod.: 09.04.05.11050



06

**Drill Guide Handle**

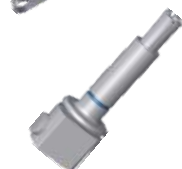
Cod.:09.04.06.00000



07

**Locked Sleeve, 1.2 mm**

Cod.: 09.06.08.12000



08

**Locked Sleeve, 1.7 mm**

Cod.: 09.06.08.17000



09

**Locked Sleeve, 2.0 - 2.3 mm**

Cod.: 09.06.08.20230



10

**Shaft Screwdriver, Cross-1.2**

70 mm, Dental Coupling  
Blue Code  
Cod.: 09.07.13.12071



11

**Shaft Screwdriver, Cross-1.7,**

70 mm, Dental Coupling  
Green Code  
Cod: 09.07.13.17073



12

**Shaft Screwdriver, Cross-2.3**

70 mm, Dental Coupling  
Yellow Code  
Cod.: 09.07.13.23072



13

**Depth Gauge, 30 mm**

Cod.:09.08.01.00030



14

**Depth Gauge, 60 mm**

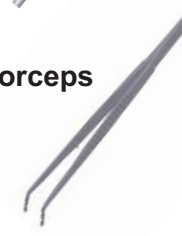
Cod.09.08.01.00060



15

**Plate and Screw Holding Forceps**

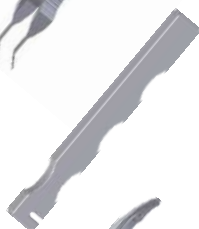
Angled, 150 mm  
Cod.:09.10.06.00150



16 **Plate and Screw Holding Forceps**, Angled-Serrated Jaw, 150 mm  
Cod.: 09.10.06.10150



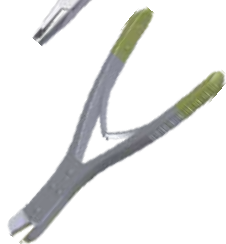
17 **Bender** for 1.2/1.7/2.3 mm System Plates  
Cod.: 09.13.00.12172



18 **Bending Pliers**, with Pin, 135 mm  
Cod.: 09.14.02.10135



19 **Cutting Pliers** 180 mm  
Cod.: 09.14.03.00180



20 **Drill Guide Insert** for Drill Bit/Wire Ø up to 1.1 mm  
Blue Code  
Cod.: 09.27.02.00011



21 **Drill Guide Insert**, for Drill Bit/Wire Ø up to 1.5 mm  
Green Code  
Cod.: 09.27.02.00015



22 **Drill Guide Insert** for Drill Bit/Wire Ø up to 2.0 mm,  
Yellow Code  
Cod.: 09.27.02.00020



23 **Drill Guide Insert** for Drill Bit/Wire Ø up to 2.5 mm,  
Yellow Code  
Cod.: 09.27.02.00025



24 **Drill Guide Insert**, for Drill Bit/Wire Ø up to 2.0 mm  
Eccentric, 1.3 mm Thickness,  
Yellow Code  
Cod.: 09.27.03.04020



25 **Drill Guide, Ø1.5mm** Threaded, Hand 1.7mm  
Cod.: 09.05.05.15017



26 **Drill Guide, Ø2.0mm** Threaded, Hand 2.3mm  
Cod.: 09.05.05.20023





# COMBO HAND SYSTEM

## 1.2mm/ 1.7mm/ 2.3mm

### Surgical Technique

Rua José Gomes Ferreira nº 2 - Armazém 1  
2660-517 São Julião do Tojal, Loures, Portugal  
Tlf.: (+351) 219 672 298 | [info@astrolabe-medical.com](mailto:info@astrolabe-medical.com)  
[www.astrolabe-medical.com](http://www.astrolabe-medical.com)