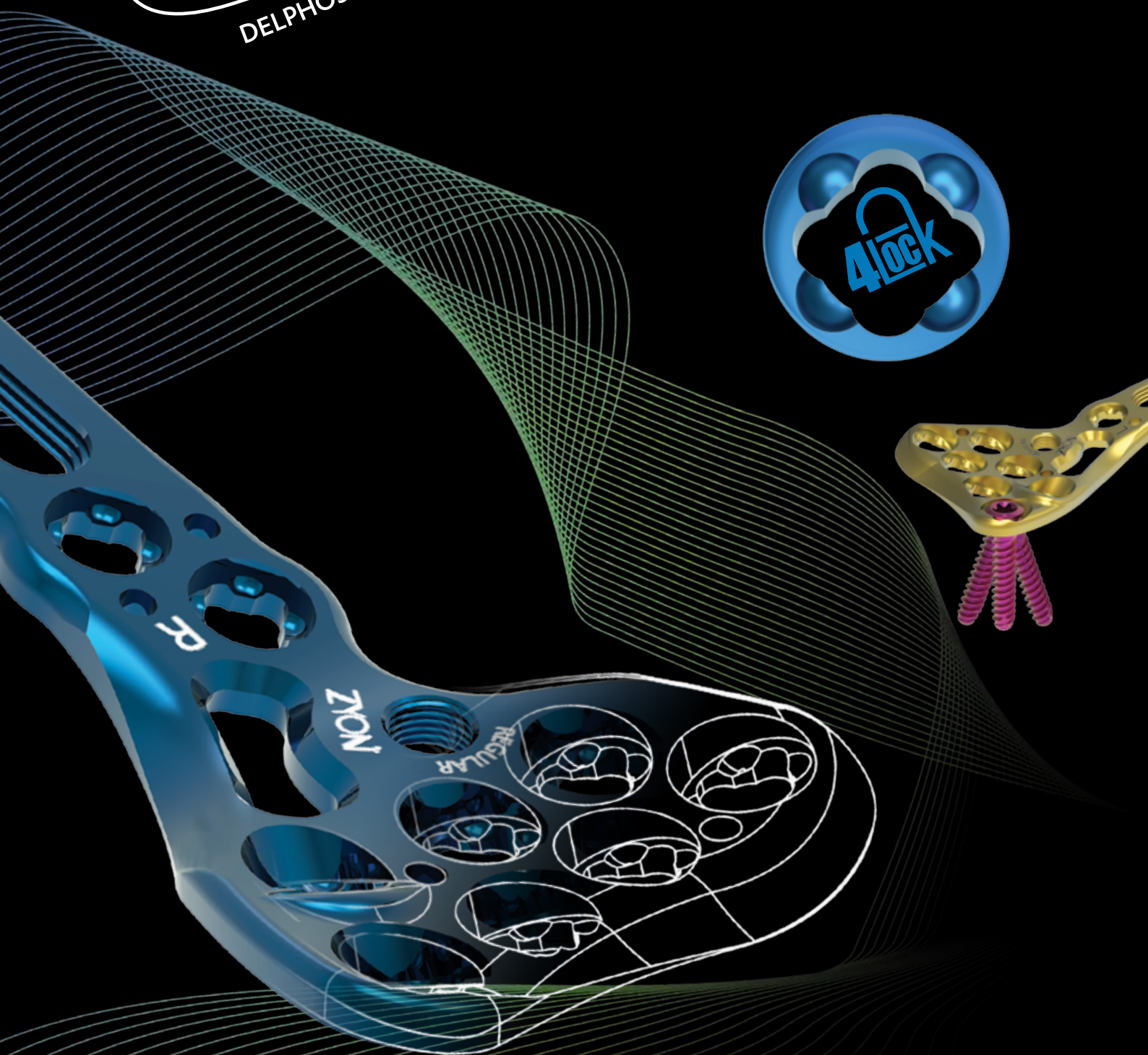
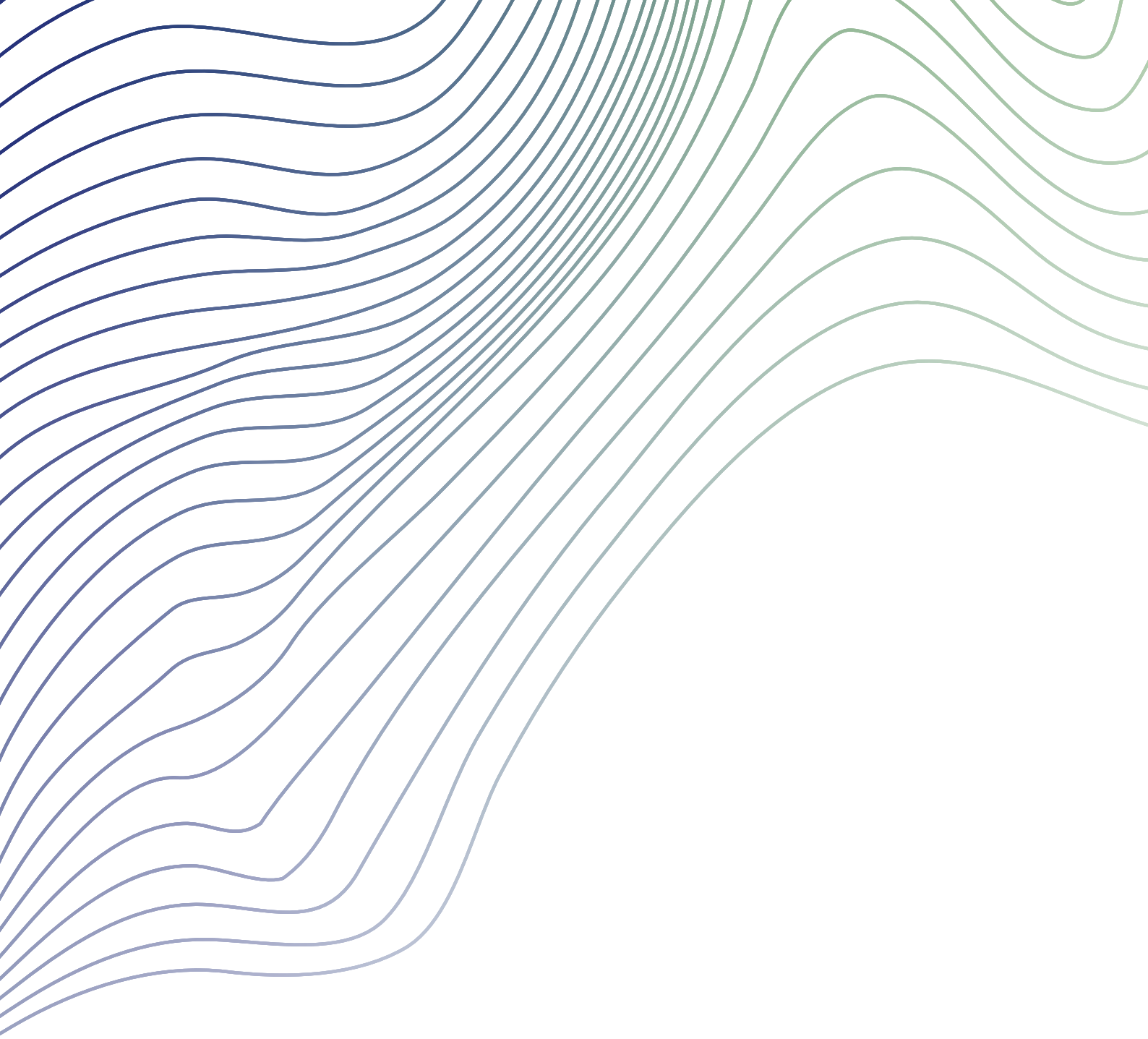


**ZYON<sup>TM</sup>**  
DELPHOS VOLAR PLATES

# ANATOMICAL VOLAR PLATE





A “volar plate” is a term that generally refers to a type of orthopedic device or implant used in hand surgery, especially in procedures related to the treatment of fractures of the bones of the forearm or hand. These plates are designed to be attached to the volar surface (the palmar surface) of the hand or wrist bones, helping to stabilize fractures, allowing them to heal properly.

Volar plates are commonly used in fractures of the distal radius, one of the most frequent fractures of the forearm, occurring near the wrist. The choice for a volar plate is made based on several factors, including the type and severity of the fracture, the patient’s bone health, and the patient’s activity and functional needs.



  
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# FEATURES

The **Zyon** plate has been designed to provide the best anatomical performance for the patient. Provides support and stability without interfering with wrist and hand mobility.

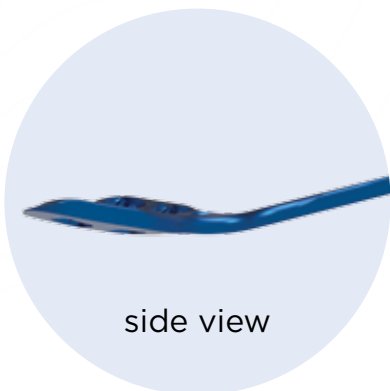
Colour code for quick identification; blue (right side) or yellow (left side).

The **Zyon** plate works with 4 different types of screws to better adapt to different fracture types and provide optimal results for the patient.

All screws are offered with a double thread system that reduces screwing time by 50%.



# ANATOMICAL CHARACTERISTICS



side view



front view



30° view

**Anatomic Pre-Molded**

**Very Low Profile**

**Zyon** plate is carefully pre-molded to fit the specific curvature and shape of the bones, where it will be applied. This combined with the low profile design, ensures a stable hold and minimal interference with normal movements.



There is a wide range of sizes and shapes available to best accommodate different individual anatomies and specific types of fractures.



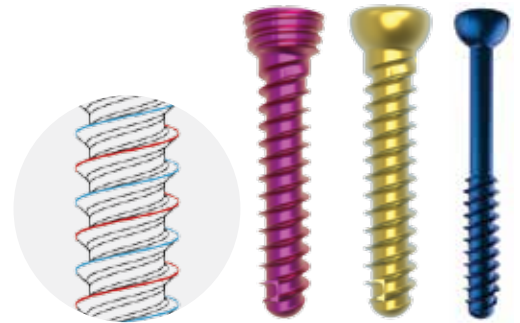
## FIXATION

### Screw Fastening System

The double thread screw will facilitate the time consuming screwing of all the screws on the plate, it will reduce the total time in 50%.

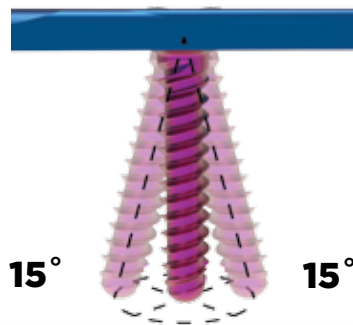
### The 4 Locking System

The 4 Locking System will allow to securely fix the locking screw into the **Zyon** plate with 15° angulation.



### Polyaxial Holes

**Zyon's** Plate polyaxial screw holes can be used by all screws: Locking, Cortical, Lag and Peg screws



**Cortical**



**Lock**

# PLATES



## Narrow

L



48 mm



R

DTH-V-2042L-09

Left

DTH-V-2042R-09

Rigth

## Regular



48 mm



DTH-V-2442L-09

Left

DTH-V-2442R-09

Rigth



58 mm

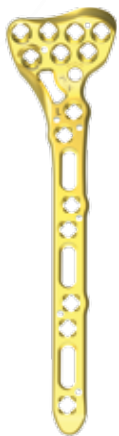


DTH-V-2452L-09

Left

DTH-V-2452R-09

Rigth



96 mm



DTH-V-2492L-09

Left

DTH-V-2492R-09

Rigth

## Wide



58 mm



DTH-V-2852L-09

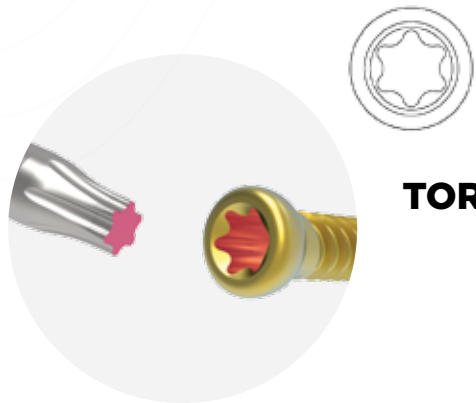
Left

DTH-V-2852R-09

Rigth



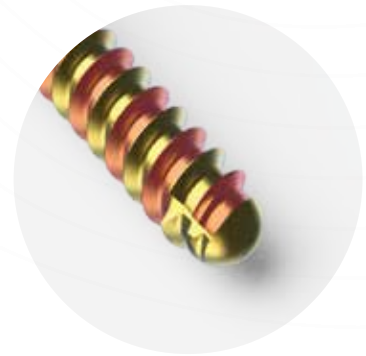
# SCREW FEATURES



**TORX**

## Double Thread

50% more optimized penetration



## Rounded Edges Atraumatic Tip



# SCREWS

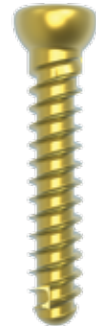
## System 2.4 Locking

| Reference       | Length mm |
|-----------------|-----------|
| DTH-V-2410-265K | 10        |
| DTH-V-2412-265K | 12        |
| DTH-V-2414-265K | 14        |
| DTH-V-2416-265K | 16        |
| DTH-V-2418-265K | 18        |
| DTH-V-2420-265K | 20        |
| DTH-V-2422-265K | 22        |
| DTH-V-2424-265K | 24        |
| DTH-V-2426-265K | 26        |
| DTH-V-2428-265K | 28        |
| DTH-V-2430-265K | 30        |



## System 2.4 Cortical

| Reference      | Length mm |
|----------------|-----------|
| DTH-V-2410-265 | 10        |
| DTH-V-2412-265 | 12        |
| DTH-V-2414-265 | 14        |
| DTH-V-2416-265 | 16        |
| DTH-V-2418-265 | 18        |
| DTH-V-2420-265 | 20        |
| DTH-V-2422-265 | 22        |
| DTH-V-2424-265 | 24        |
| DTH-V-2426-265 | 26        |
| DTH-V-2428-265 | 28        |
| DTH-V-2430-265 | 30        |



## System 2.4 LAG

| Reference      | Length mm |
|----------------|-----------|
| DTH-V-2414-365 | 14        |
| DTH-V-2416-365 | 16        |
| DTH-V-2418-365 | 18        |
| DTH-V-2420-365 | 20        |
| DTH-V-2422-365 | 22        |
| DTH-V-2424-365 | 24        |
| DTH-V-2426-365 | 26        |
| DTH-V-2428-365 | 28        |
| DTH-V-2430-365 | 30        |



## System 2.0 PEG

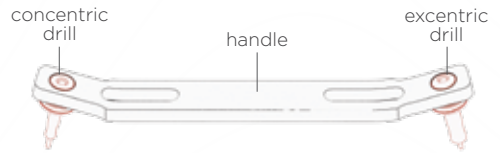
| Reference       | Length mm |
|-----------------|-----------|
| DTH-V-2014-265P | 14        |
| DTH-V-2016-265P | 16        |
| DTH-V-2018-265P | 18        |
| DTH-V-2020-265P | 20        |
| DTH-V-2022-265P | 22        |
| DTH-V-2024-265P | 24        |
| DTH-V-2026-265P | 26        |
| DTH-V-2028-265P | 28        |



# INSTRUMENTAL

## Threaded Drill Guides

SK-V-2535-600 - for 2,0 mm drill  
SK-V-2535-601 - for 2,5 mm drill



## Handle to insert drill holes

SK-2433-800



## Variable Angle Drill Guide

SK-2535-602 - Ø 2,0 mm



## Drill AO connection

SK-2030-814 - 2,0 x 100 (stop 30 mm)  
SK-2350-814 - 2,3 x 100 (stop 50 mm)



## Depth Gauge

SK-0011-800



## Periosteal Lever

SK-0006-800 - 6mm



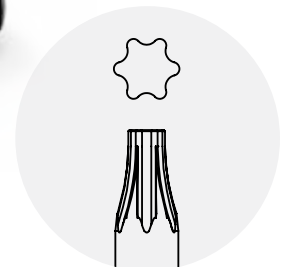
## Screwdriver handle AO connection

DA-C-0019-830 - fixed cannulated



## Screwdriver blade Torx AO connection

SK-NCT08-800 - nuncannulated



## Bone Wire

DSE-1210-WIRE - 1.2 x 100mm





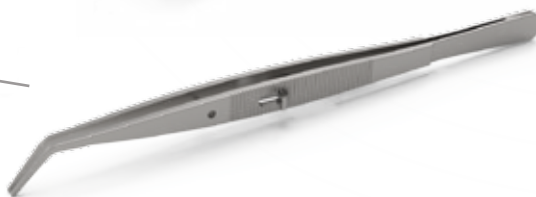
**Bone lever**

SK-0002-800 - 8mm



**Angled Tweezer**

SK-0030-800



**Storage tube**

SK-1015-WIRE - for 1.0mm wire 120mm long



**Reduction forceps with point**

SK-2424-800



**Reduction forceps with teeth**

SK-2426-800



**Self Retaining Retractor**

SK-V-0097-800



# TRAYS

**Volar Plate Tray**

DAV-2500-801



**Volar Plate Sterilization Box**

DSV-0000-801



# SURGICAL PROCEDURE

Surgery for the placement of a volar plate is typically performed under general or local anaesthesia.

The surgeon makes an incision in the skin in the volar region of the forearm or hand, exposes the fracture, realigns the bone fragments, and fixes the plate to the bone with screws.

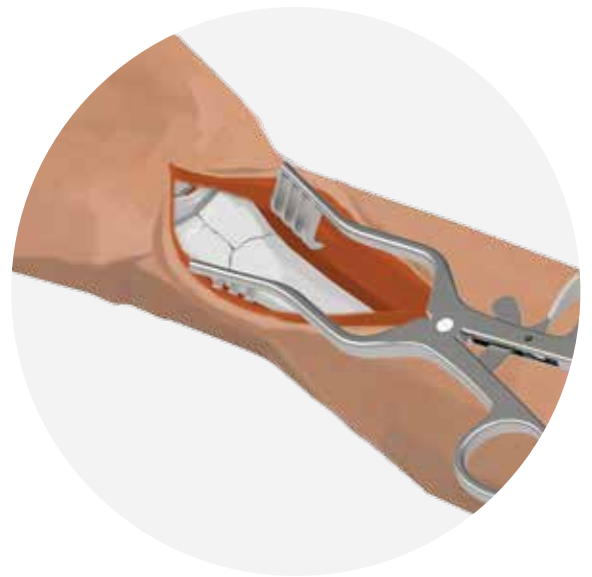
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## 1. Exposure of the radius

A skin incision of 6-10 cm length is made on the distal forearm three centimeters proximal to the wrist.

The flexor carpi radialis tendon (FCR) is exposed. To obtain access to the pronator quadratus, the incision extends between the FCR and the radius artery.

The pronator quadratus is detached from the lateral edge of the radius to elevate an ulnar-based flap.



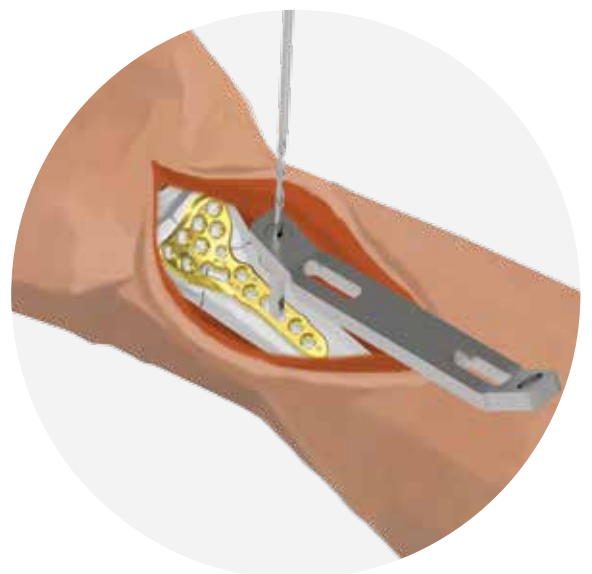
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## 2. Insertion of the plate

Choose the **Zyon** Plate according to the fracture pattern and the patient's anatomy.

The plate is placed centrally above the longitudinal axis in the direction of the distal edge of the radius. The plate can be temporarily fixed with Ø 1.2 mm bone wires.

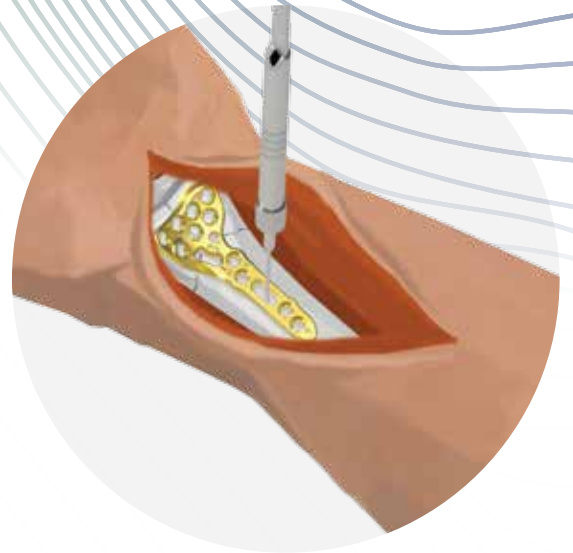
The first screw hole is made into the slotted hole of the shaft using the monodirectional drill and the core hole drill.



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### 3. Determination of the screw length

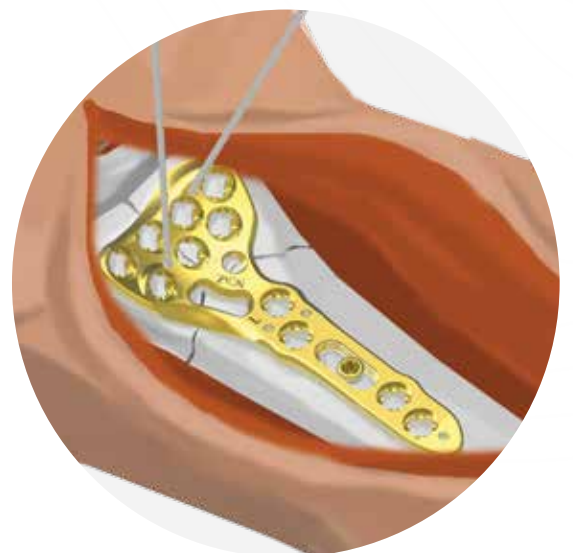
The correct screw length is determined using the depth gauge.



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### 4. Insertion of the first shaft screw

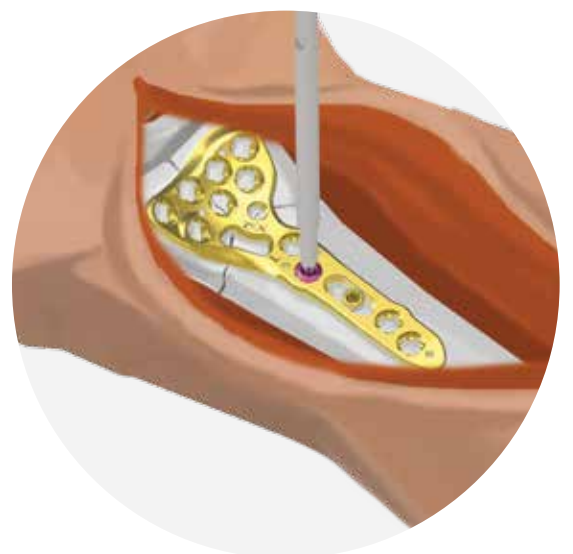
The plate is fixed in the oblonged hole with a cortical screw.  
The correct plate position and the anatomical reduction are checked under x-ray control in both planes.  
It has to be ensured that the plate does not project over the watershed-line; this might cause irritation to the flexor tendons.  
If necessary, the result has to be corrected and the plate displaced in longitudinal and/or lateral direction. The screw has to be loosened for this purpose.



---

### 5. Insertion of another shaft screw

In order to be able to absorb optimally the forces in the shaft region during reduction, it is advisable to insert another screw, preferably a purple locking screw, prior to the reduction, ensuring that the plate is positioned correctly.



---

## 6. Fracture reduction

The tilted fracture is reduced under x-ray control. The bent hand is reduced by applying longitudinal traction combined with dorsal digital compression.

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## 7. Insertion of the distal screws

The first distal drill is made using the polyaxial drill guide. The screw length is determined and a purple locking screw is inserted.



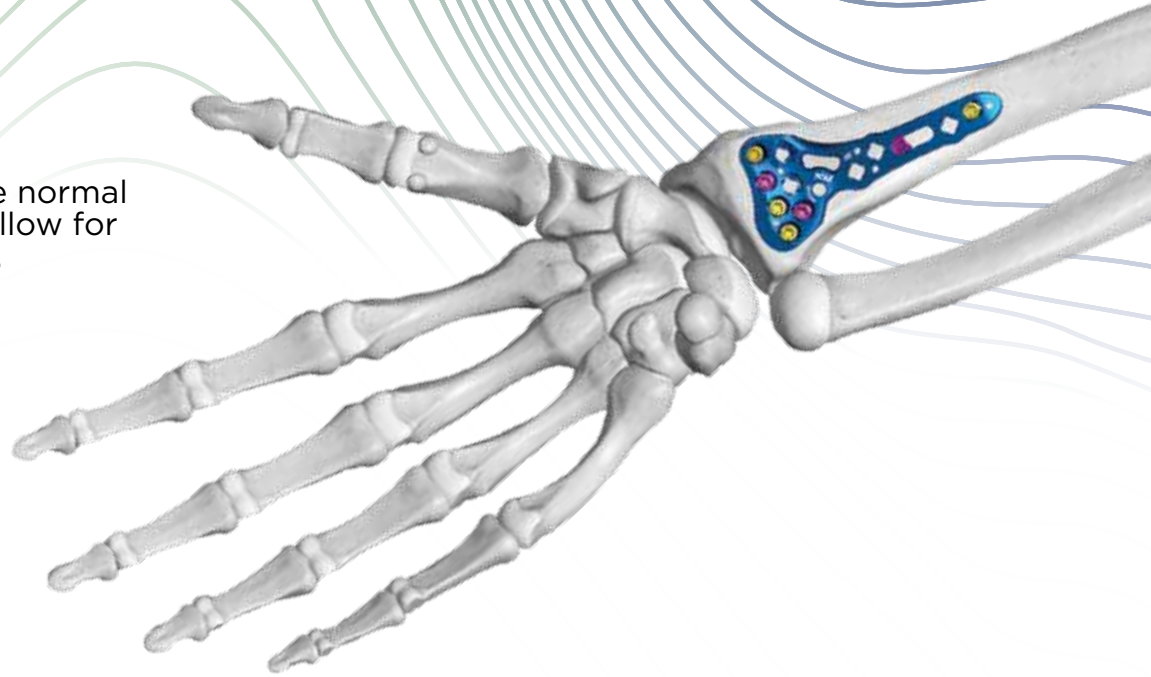
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## 8. Insertion of additional screws

All additional screws are inserted. For this purpose, drilling and measuring is performed as usual. The screws are positioned in the direction of the dorsal edge of the radius. If possible, the radially positioned screw should be inserted into the radial styloid process. The subchondral position of the screws is checked under x-ray control. If required, spongiosa or bone substitute can be inserted through the plate window.



The goal is to restore normal bone anatomy and allow for proper bone healing.



**Zyon** plate is designed not only to stabilize and promote healing of bone fractures, but also to minimize interference with the function of tendons and other surrounding soft tissues.



## Postoperative and Recovery

After surgery, there may be a period of immobilization, followed by physical therapy to restore hand and wrist function and strength. The duration of recovery may vary, depending on the severity of the fracture and the patient's individual response to treatment.

While volar plates offer many benefits in treating hand and wrist fractures, like any surgical procedure, they also have potential risks, including infection, bone healing issues, and the need for additional surgery to remove the hardware if it causes discomfort or complications. The decision to use a volar plate should be made after careful discussion between the patient and the orthopedic surgeon, considering all the potential benefits and risks. The design of volar plates is a crucial aspect of their success in treating fractures, especially those located in the volar (palmar) region of the radius and other parts of the forearm and hand, therefore **Zyon plate brings one of the thinnest options of the market.**



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*Our medical devices have CE Marking under TÜV Rheinland Notified Body, and are subjected to rigorous testing and trials. Delphos QMS comply with all applicable standards requirements of ISO 13485.*

ISO 13485

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