



# **YDFIX Distal Radius Plate**



# References

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# 1 Introduction

The Ydfix Distal Radius plate is the first member of the polyaxial angle stabilized plate family of IMD LTD. It offers wide range of possibilities for the precise and secure fixation of distal radius fractures. The screws can be inserted in  $\pm 15$  deg angulation from preset anatomical directions enabling the surgeon to perform the most modern treatment of the fracture.

### 1.1 | The implant

 Polyaxial angle stabilized system in step - free ±15 deg angulation of insertion

### 1.2 | The instruments

- Capable of drilling in preset and ±15 deg step free directions
- Instruments and implants in one tray
- Optimized instruments

### 2.1 | Ydfix Distal Radius plate - V

Size	Holes on head	Holes on tail	Туре
Large	5+4	3; 5; 8	left/rig
Medium	4+3	3; 5; 8	left/rig
Small	3+2	3; 5; 8	left/rig

### Raw material

**Anodised Titanium** 

Colour

szürke



- Maximum 3 times of correction possibility when misidentifying the correct screw direction towards the fragment
- Ability to perform minimally invasive surgery
- Oval hole for plate fixation
- Rounded edges to protect nearby soft tissues
- Thinned head, the implant does not interfere with the wrist area tissues
- Holes for temporary Kirschner wires
- Self tapping but blunt ended screws to avoid tissue irritation
- 2 mm plate thickness
- Anodized Titanium raw material
- Torx headed screws
- Two different plate contours, the eared version is for fixing Styloid Processus fragments

### 1.3 | Indications

### Distal radius fractures.







Length

8 - 34

(in 1 mm steps)

Raw material

### **Anodised Titanium**

Colour

# Implant range | 2



### 2.4 | Cortical screw - TX Ø2,7 mm



Length

8 - 34

(in 2 mm steps)

Raw material

### Anodised Titanium

Colour

# 3 | Surgical description

### 3.1 | Patient positioning

Patient is in supine position, the affected limb is straight and supported while the palm is upwards.

### 3.2 | Incision

Make a longitudinal incision from flexor carpi radialis to slightly radial direction. Locate FCR, radial artery, separate pronator quadratus from the lateral part of radius and lift above the ulna.

### 3.3 | Selecting the plate size

Select the plate of that size where the head of the plate is equivalent to the distal radius width. Take also into consideration the positions of the fragments. Whenever needed modellate the plate to the shape of the bone surface with bending tools. To modellate the plate enter the tools' threaded part into the holes of the plate and perform bending.

### 3.5 | Fixing the oval hole

The first screw is inserted into the oval hole of the plate.

To do so place and sink the neutral sleeve of the double drill sleeve into the middle of the oval hole. Perform drilling with 2 mm spiral drill (1).

To determine the length of necessary screws there are two possibilities.

1) The laser marking on the drillbit functions as a length gauge. Push the stop to the surface of the sleeve. After the removal of drilling read the necessary screw length just below the stop (2).

### 3.4 | Insertion of the plate

The optimal position of the plate is reached when the arched head of the plate is in level with the distal radius.

Fix the reposition with temporary Kirschner wires through the plate if needed. Pay close attention that the plate shall not interfere with the joint.



2) After the removal of the drill and the sleeve guide the length gauge through the bone, hit against the bone surface, place the hook on the farther edge of the hole. Read the screw length at the red mark (3).



# 3 | Surgical description

Drive in the screw with the Torx screwdriver (4). The screw should be tightened only to such an extent that the position of the plate could be corrected in longitudinal direction.

If the position of the plate is optimal tighten the screw in the oval hole. As soon as the screw head touches the plate switch to torque limiting screwdriver to avoid excessive torque. (5)

Pay attention that the plate shall not harm wrist joint.

### Remark

Plates with bent ears provide fixation possibilities for fragments of Styloid processus.



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### 3.6.1 | Drilling through polyaxial sleeve

Place and sink the polyaxial sleeve into the hole of the plate. Perform drilling with 2 mm drillbit. Pay attention not to drill into the joint.

### Attention

When pre-drilling for polyaxial screw only the traditional length measurement could be used. Guide the length gauge through the bone, hit against the bone surface, place the hook on the farther edge of the hole. Read the screw length at the red mark.

### 3.6 | Fixing screws in the head of the plate

After setting the optimal position of the plate first fix the screws of the head.

It is possible to insert the screws into preset anatomical directions. To achieve this pre-drill with the neutral (straight) sleeve see point 3.6.2.

To enter the screws within  $\pm 15$  deg direction from the preset, use the polyaxial sleeve to obtain polyaxial angle stabilized connection between the plate and the screw. See 3.6.1.



Drive in the screw with Torx screwdriver. The insertion of the screws is possible in  $\pm 15$  deg angular deviance from the anatomically preset directions while maintaining the angle stabilized locking. As soon as the screw head touches the plate switch to torque limiting screwdriver to avoid excessive torque.

Perform the above in case of all screws considered necessary.



# 3 | Surgical description

### 3.6.2 | Drilling through neutral sleeve

Place and sink the neutral (straight sleeve of the double drill sleeve into the hole of the plate. Perform drilling with 2 mm drillbit.

According to point 3.5 the screw length determination could be made in two ways.

After length gauging fix the screw with Torx screwdriver. Screw insertion is possible in the preset directions while maintaining angle stabilized locking. As soon as the screw head touches the plate switch to torque limiting screwdriver to avoid excessive torque.

Perform the above in case of all screws considered necessary.



### 3.7 | Angle stabilized locking on the tail

On the tail of the plate it is possible to apply polyaxial and cortical screws. The appropriate axial stability is reached in case of perpendicular screw insertion.

For anatomical reasons the usage of Ydfix angle stabilized screws is suggested.

### 3.7.1 | Drilling through neutral sleeve

Place and sink the neutral (straight) sleeve of the double drill sleeve into the hole of the plate. Perform drilling with 2 mm drillbit.

According to 3.5 perform length gauging by any of the described method and fix the screw with Torx screwdriver. As soon as the screw head touches the plate switch to torque limiting screwdriver to avoid excessive torque.



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# 4 | Implant list

### 4.1 | Ydfix Distal Radius plate - V

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Size	Туре	Holes (H+S)	Length (mm)	Anodised Titanium
Large	Left	9 + 3	54	3035402003
Large	Left	9 + 5	70	3035402005
Large	Left	9 + 8	94	3035402008
Large	Right	9 + 3	54	3035401003
Large	Right	9 + 5	70	3035401005
Large	Right	9 + 3	94	3035401008
Medium	Left	7 + 3	52	3036402003
Medium	Left	7 + 5	68	3036402005
Medium	Left	7 + 8	92	3036402008
Medium	Right	7 + 3	52	3036401003
Medium	Right	7 + 5	68	3036401005
Medium	Right	7 + 3	92	3036401008
Small	Left	5 + 3	50	3037402003
Small	Left	5 + 5	66	3037402005
Small	Left	5 + 8	90	3037402008
Small	Right	5 + 3	50	3037401003
Small	Right	5 + 5	66	3037401005
Small	Right	5 + 3	90	3037401008

### .3 | Ydfix screw Ø2,7 mm

Size	Anodised Titanium
8	1017427008
10	1017427010
12	1017427012
14	1017427014
16	1017427016
18	1017427018
20	1017427020
22	1017427022
24	1017427024
26	1017427026
28	1017427028
30	1017427030
32	1017427032
34	1017427034



# Implant list | 4

### 4.4 | Cortical screw - TX Ø2,7 mm

Size	Anodised Titanium
8	1032427008
10	1032427010
12	1032427012
14	1032427014
16	1032427016
18	1032427018
20	1032427020
22	1032427022
24	1032427024
26	1032427026
28	1032427028
30	1032427030
32	1032427032
34	1032427034

# 5 | Instrument list





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Surgical instruments			
Description	Size	Quantity	Cat. no.
Screwdriver	Т9	1	5210720009
Torque screwdriver	T9/1 Nm	1	5210510036
Plate bender	4 mm	2	5280114901
Length gauge	2,7-3,5 mm	1	5280114905
Double drill sleeve - PAS	2 mm	1	5280114902
Spiral drill with quick- connecting end	2x125 mm	1	5280114903
Kirschner wire	1.2x100 mm	10	5937512100
Screw forceps	6 mm	1	5939999002
Drill stop	2 mm	2	5210510222
Tray (empty) YDR		1	5233800015
Filled-up tray (YDR)		1	5233800014

### 5.2 | Instruments

Screwdriver Torx (T9)
Torque limiting screwdriver (T9/1 Nm)
Plate bender (4 mm)
Depth gauge (2,7-3,5 mm)
Double drill sleeve - PAS (2 mm)
Spiral drill with quick connecting end (2x125 mm)
Kirschner wire (1,2x100 mm)
Screw forceps (6 mm)

Stop (2 mm)

# **Instrument list** | 5





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