TwinFix
Cannulated Compression Screw

Leibinger Solutions for Hand Surgery

Procedural Guide
TwinFix

Sterilization, Organization, Storage
29-12020 Profyle MODULAR Sterilizing Container
29-40162 TwinFix Implant Module
29-12007 Instrument Rack
29-12022 Rack for Implant Module
29-12024 Profyle MODULAR Generic Instrument tray with silicone insert
29-12021 Lid for Sterilizing Container

Instrumentation for Percutaneous Approach
07-40250 Drill and Screw Guide
07-40211 Sleeve for Target Device (07-40210) and Drill and Screw Guide (07-40250)
07-40215 Drill Guide for 1 mm K-Wires
07-40240 Cannulated Screwdriver Handle
07-40230 Cannulated Drill 2.4 mm, with depth stop
07-40232 Cannulated tap
07-40220 Cannulated Screwdriver Blade
07-40280 K-Wire, 1.0 x 160 mm (Package of 10)
07-40245 Depth Measuring Gauge

Additional Instrumentation for Open Screw Osteosynthesis
07-40210 Target Device for Compression Screw
07-40216 Scaphoid Target Bow
07-40270 Self-retaining Retractor with Guiding Sleeves for Kirschner Wires 1.0/1.6 mm diam.

Optional
07-40221 Emergency blade for screw removal

3.2 mm TwinFix Cannulated Compression Screws
58-30414 Diam. 3.2 x 14 mm
58-30416 Diam. 3.2 x 16 mm
58-30418 Diam. 3.2 x 18 mm
58-30420 Diam. 3.2 x 20 mm
58-30421 Diam. 3.2 x 21 mm
58-30422 Diam. 3.2 x 22 mm
58-30423 Diam. 3.2 x 23 mm
58-30424 Diam. 3.2 x 24 mm
58-30425 Diam. 3.2 x 25 mm
58-30426 Diam. 3.2 x 26 mm
58-30427 Diam. 3.2 x 27 mm
58-30428 Diam. 3.2 x 28 mm
58-30430 Diam. 3.2 x 30 mm
58-30432 Diam. 3.2 x 32 mm
58-30434 Diam. 3.2 x 34 mm
Indications

1. Insertion of the K-wire

Maximum ulnar inclination of the wrist provides a good view of the scaphoid.

Under image intensifier, the K-wire is applied in p.a. projection at the junction of the radial/middle third of the scaphoid tubercle. Ensure that insertion is as far dorsally as possible on the edge of the trapezium.

The wire is then drilled proximally under repeated image intensifier control towards the „tip of the scaphoid‟.

On the lateral projection, the K-wire must not penetrate the waist of the scaphoid. It should lie within the bone at a distance of approx. 2 mm from the palmar cortex.

With the hand in 45° supination, the proximal pole of the scaphoid is seen very clearly. The tip of the wire is drilled forward in this position as far as the cortex but without penetrating it. The position of the wire is then checked again carefully in all 4 planes.

The K-wire is inserted using the drill and screw guide.
2. Checking the position of the Kirschner wire in 4 planes under image intensifier control

- a.p. (axial alignment of the K-wire in the scaphoid)
- lateral (position relative to the trapezium and to the waist of the scaphoid)
- 45° pronation (view of the head of the scaphoid)
- 45° supination (view of the pole of the scaphoid)

3. Determining screw length

Measuring the length - the measuring sleeve is inserted over the K-wire. Ensure that the tip sits firmly on the tubercle and that no soft tissue has become interposed.

4. Drilling through drill and screw guide

Reading the scale – the end of the K-wire defines the length of the screw.

The length read off the depth measuring gauge is set on the cannulated drill by means of the knurled screw.

The drill guide with sleeve is positioned firmly to the tubercle (caution: interposed tissue). The opening on the sleeve faces towards the trapezium. The drill is inserted into the drill guide over the K-wire and is rotated until it meets the knurled nut. Do not change the angulation of the drill while the K-wire is inserted into the drill. Checking the position with the image intensifier is recommended. Alternatively, drilling can be continued under constant image intensifier control until just before the tip of the K-wire.

Caution: for reasons of safety, the scale shows 2 mm less than the actual length of the wire.

5. Loading the screw

Check the screwdriver blade is in the locked position (yellow and blue ring visible), center the screwdriver blade and press firmly to remove the screw from the implant module.

6. Measuring screw length

Optional: checking of the screw length on the measuring scale of the implant module.

7. Insertion of the screw

Selection of a screw shorter than the measured length is recommended. This guarantees that the head of the screw can be submerged sufficiently beneath the level of the cortex and the tip of the screw will not impact on the end of the drill hole in the proximal fragment and force the fracture apart.
The required screw length is read from the side of the sleeve on the target device.

Caution:
When measuring with the target device, a safety distance of 4 mm is included so that the TwinFix screw can be submerged sufficiently beneath the level of the cortex.

All further steps are described under points 4 – 8.