

# TOTAL WRIST ARTHROPLASTY

## Indication :

For symptomatic wrist joint issues (such as pain, malalignment, or instability) due to osteoarthritis, when conservative treatments have failed.

## Prosthesis:

**Type:** Cementless, modular total wrist arthroplasty (TWA) Motec®

**Design:** Spherical joint with a ball-and-socket configuration

**Materials:** Ceramic-coated CoCrMo radius cup, head, and neck (metal-metal friction)

**Fixation:** Threaded stems provide immediate primary fixation in the cortical bone

**Coating:** Bonit® coating on stems for enhanced long-term implant fixation and osseous integration



**Objective:**

To achieve a strong, stable, mobile, and pain-free wrist with complete pain relief, improved range of motion, and enhanced grip strength

**Technique:**

**Surgical approach:** Dorsal approach (5 to 7 cm incision)

**Surgical duration:** Approximately 2 to 3 hours

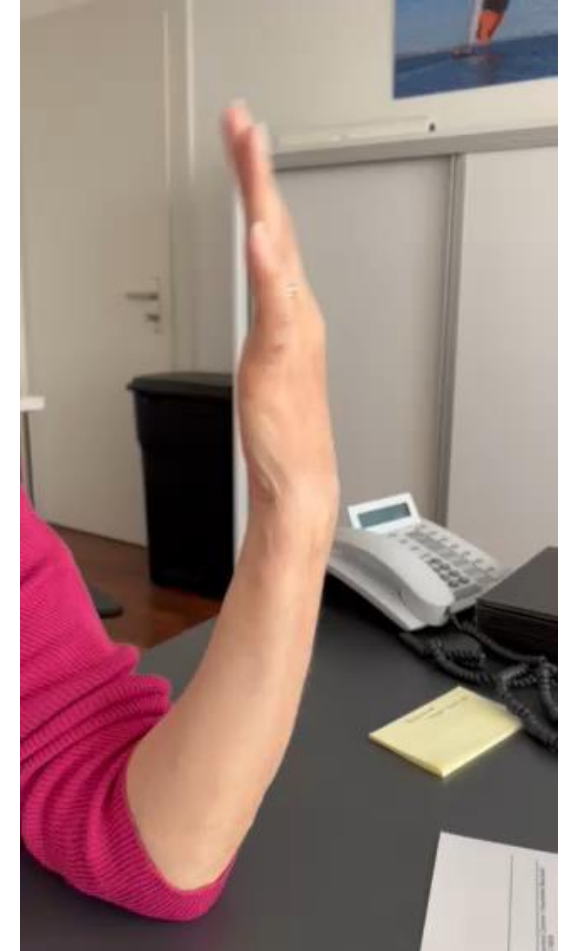
**Postoperative Wrist Splint:** 6 weeks

**Rehabilitation:** Initiate with limited range of motion exercises starting on day 2 post-surgery.

**Sick leave:** 2 to 3 months



6 weeks



**Complications:**

Loosening: Rare

Poor osteointegration: Rare

Metallosis: Due to friction and wear

Fracture or weakening of the Third Metacarpal/Radius: Possible

Ulnar wrist Deviation in Flexion: caused by misalignment of the rotational center

Prominent third metacarpophalangeal Joint: may occur

**Survival Rate:**

Approximately 90% over 10 to 15 years.

Modular prostheses may be replaced or converted to total wrist fusion if needed.

**References:**

Giwa L, Siddiqui A, Packer G. Motec Wrist Arthroplasty: 4 Years of Promising Results. J Hand Surg Asian Pac Vol. 2018 Sep;23(3):364-368.

Reigstad O, Holm-Glad T, Bolstad B, Grimsgaard C, Thorkildsen R, Røkkum M. Five- to 10-Year Prospective Follow-Up of Wrist Arthroplasty in 56 Nonrheumatoid Patients. J Hand Surg Am. 2017