Cementless Total Hip Replacement

MetaFix™
Cementless Total Hip Replacement

Corin
Responsible Innovation

A universal choice for cementless total hip replacement
MetaFix™ is based on a clinically proven\textsuperscript{1,2,3,4,5,6} femoral stem design which was developed in France during the early 1980s by the ARTRO Group, who trained together in Lyon.

Typical survivorship rates with stems of this type are:
- 98\% at 15 years in 2956 hips\textsuperscript{4}
- 98\% at 18 years in 5456 hips\textsuperscript{6}
Based on a proven design with over 25 years of clinical use
Evolution
Today’s patients have increased expectations and place increased demands upon their total hip replacement.

The evolution of different treatment options has facilitated greater options to treat a broad range of patient indications.

The MetaFix stem is compatible with a range of acetabular options:
- Trinity™ Advanced Bearing Acetabular System with:
  - BIOLOX delta® ceramic-on-ceramic
  - Highly cross-linked polyethylene
  - ECiMa™ (vitamin E stabilised highly cross-linked polyethylene)
- Corin’s Unipolar and Bipolar hemiarthroplasty options

Versatility
The 155μm hydroxyapatite coating and proven stem geometry offer the surgeon and patient confidence in stem stability across multiple indications.

The three neck offset options allow the surgeon to restore the patient’s natural biomechanics. All three neck varieties are available in sizes 0-10, offering a total of 33 different stem solutions:
- 135° standard offset
- 135° laterised offset
- 125° standard offset
Simplicity
The MetaFix instrumentation is designed for simplicity and theatre efficiency and includes:
- A choice of male/female broach handle connections to suit individual surgeon requirements
- Lighter weight trays for manoeuvrability
- Specialised instrumentation platform, designed to suit all surgical approaches, allowing for simple, accurate implantation and reproducible results

Trunnion characteristics
An independent test centre electrochemical evaluation showed that the dynamic current which indicates micromotion between the taper and head was below the median reached by stems of the predicate devices. Since micromotion results in damage to the passivation layer and surface oxide, the less micromotion there is at the modular interface, the better the fretting characteristics will be. Given this, it is likely that the lower dynamic current observed with the MetaFix stem will lead to more favourable corrosion characteristics in the long term, compared to the competitor devices shown in the boxplot below.
References:

7. Data held on file, Corin Group PLC.