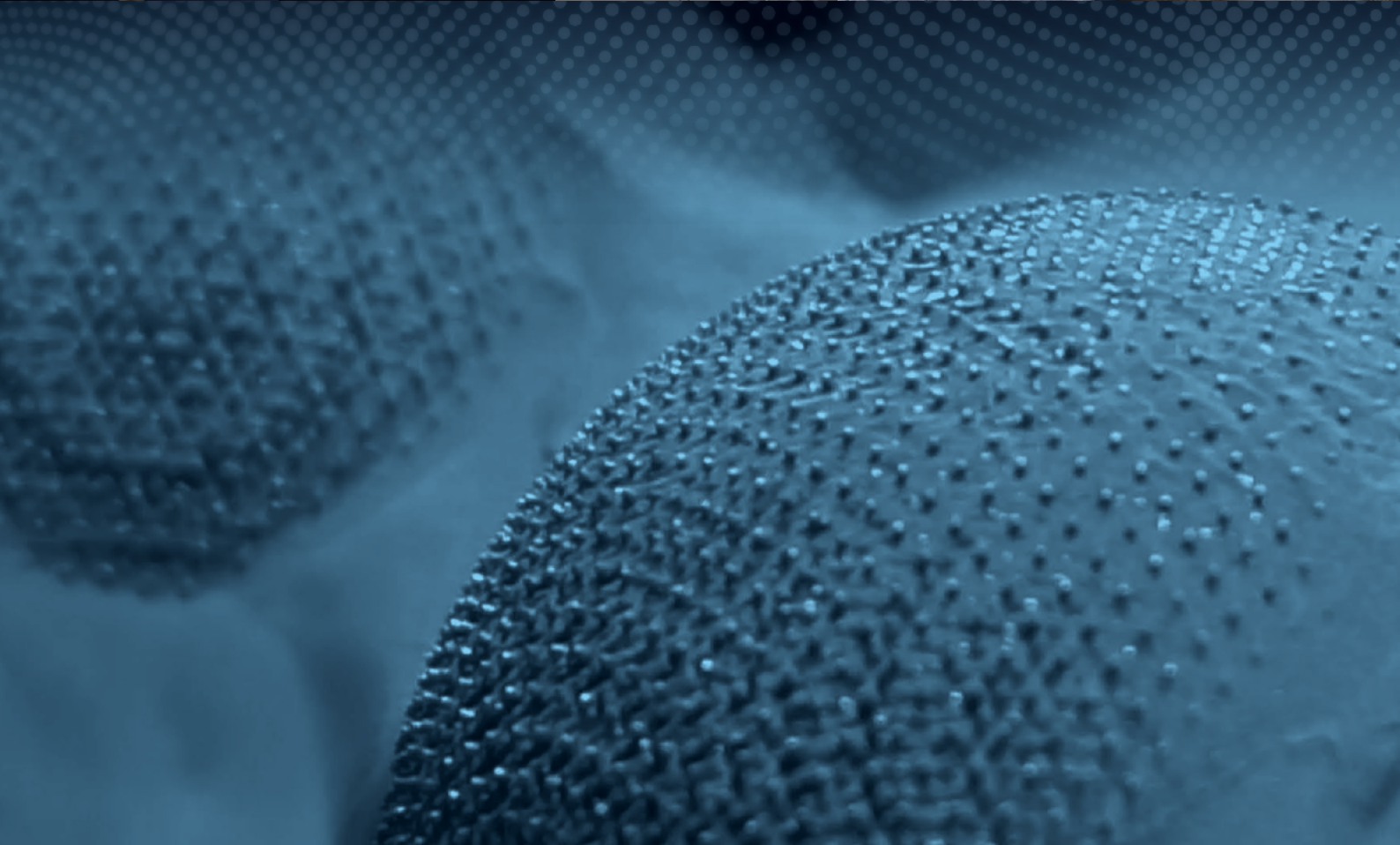




ORTHOPAEDIC INNOVATION DRIVEN BY RESEARCH AND TECHNOLOGY



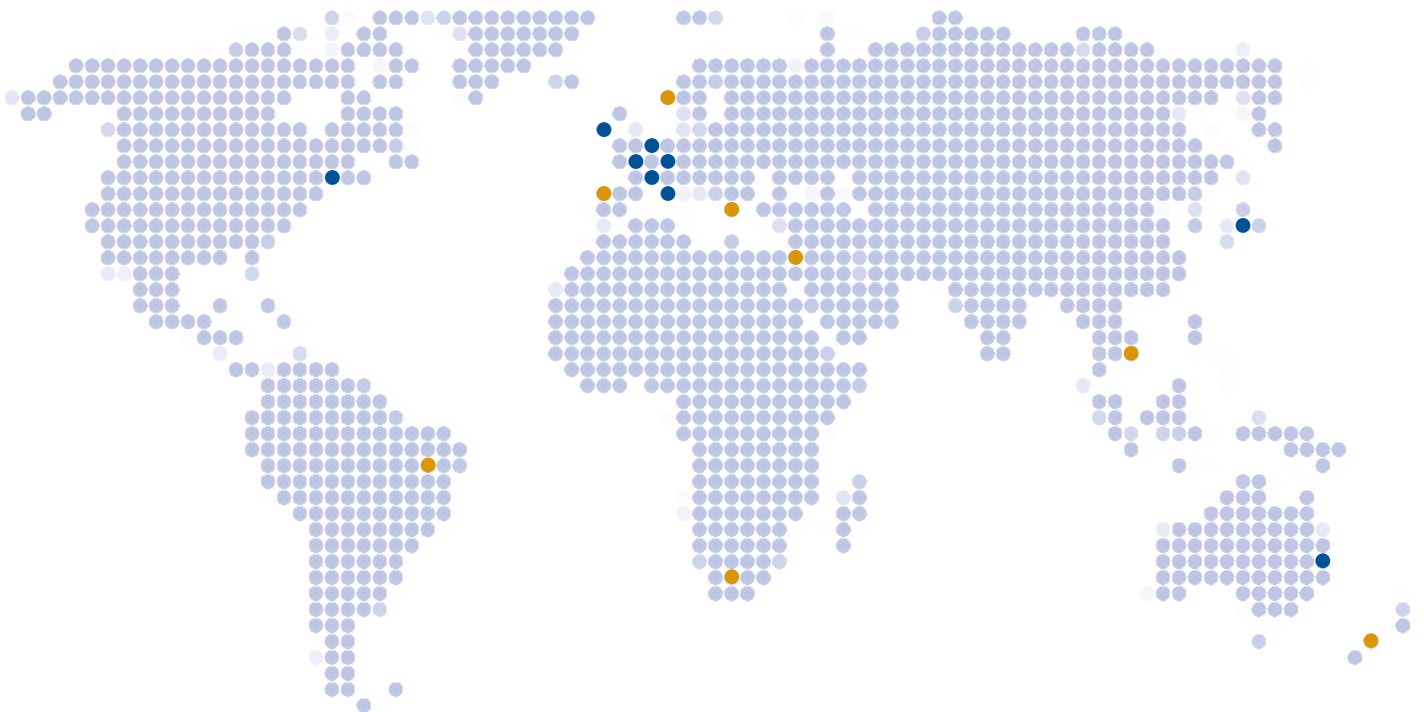


Adler Ortho® is a privately own company, fully dedicated to the research, development, production and sale of medical devices for orthopaedics.

Since its foundation, Adler Ortho® has been driven by innovation, employing the latest technologies available, with vital direction and collaboration from the clinical community.

We are a leading company in the design and marketing of high quality orthopaedic implants, the majority of which are produced with 3D printing technology.

Our commercial presence in the global market is constantly expanding. Today we have subsidiaries in Europe, USA, Japan and Australia, and distributors on all continents.





2004
Adler Ortho® commercial operations begin



2007
Fixa Ti-Por® Cup.
The first 3D printed off the shelf implant.



2010
Custom Made Implant Service commences.



2016
Entry to the Extremity market with the 3D printed Antea radial head implant.



2015
Fixa Duplex Cup.
The first 3D printed Dual Mobility Cup.



2017
Adler Ortho® develops an integrated process for planning, design and production of Custom Made implants.
With the advantages of 3D printing we help our clients to deal with the most complex cases.

- Web portal dedicated to the management of Custom products
- Chat Room with the engineer dedicated to the project
- 3D planning of the surgery.
- On request 3D printed plastic model of the anatomical part to be reconstructed.
- Disposable instruments and surgical technique specifically designed for each patient.

2006
Validation work commences to enable Powder Manufacturing Technology in Orthopaedics.

2009
Parva Stem.
The first 3D printed hip stem.

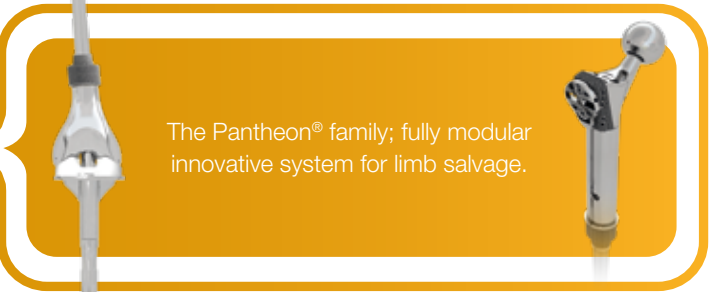


2017
New factory in Bari, Italy, a state of the art production unit totally devoted to 3D printing manufacturing.

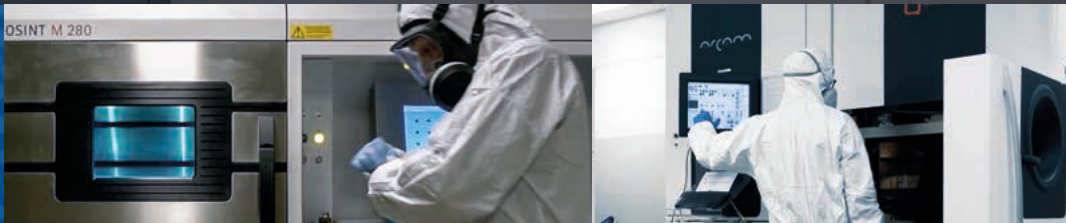
2011
Genus.
Uni World first 3D printed CoCrMo implant.



2019
Adler Ortho® launches the 3D printed **Bridging Collars**, a revolution in the Limb Salvage market.



State Of The Art Manufacturing



State-of-the-art factories and production technologies for the orthopedic market

Adler Ortho® has three highly advanced production units:

the main headquarters in Cormano (Milan) where all Adler Ortho® implants are also designed.

The high-tech factory in Bari, entirely dedicated to the 3D printing of metal alloy prostheses and plastic devices.

The Novagenit factory in Mezzolombardo (Trento) which deals with product final cleaning and packaging.

Young Company with solid foundations

Adler Ortho® started commercial operations in 2004. We are a young business, but we have solid foundations having been developed from the association of a group of Managers with a long and profound experience of the worldwide orthopedic market.

Technology, development and strategy

Thanks to our strategy, devoted to the research and development of unique and cutting-edge technologies, today Adler Ortho® markets [the world's largest portfolio of orthopaedic implants manufactured with additive technology](#). With the unique know-how acquired in the field of 3D printing we can also offer our customers an almost complete customisable service, to help them solve even the most complex cases.

From Italy to the World

Innovation, development and reliability have contributed to a continuous development of the Adler Ortho® commercial presence. Today we have sales offices in [Europe](#), [USA](#), [Japan](#) and [Australia](#) and distributors all over the World.



The Powder Manufacturing Technology



High tech in the world of orthopedics

Adler Ortho® is built on innovation and technology. The company owns a number of exclusive patents and has developed a unique knowledge and experience in the production of orthopaedic implants both with "traditional" manufacturing and also using the 3D printing technique, of which it is a world leader.

We use both electron beam and laser beam additive techniques to produce our implants, always starting from metal powders, which is why we call this process "powder manufacturing technology".

The production units of Cormano and Bari adopt the most advanced technologies both in the field of implant manufacturing and also, fundamental for us, quality control.

Additive manufacturing technique

Implants are produced directly from metal powders melted using an electronic or laser beam. Implants are produced starting from the CAD model, without using any physical



tool. The prosthesis is produced layer after layer together with its surface and it is therefore monolithic.

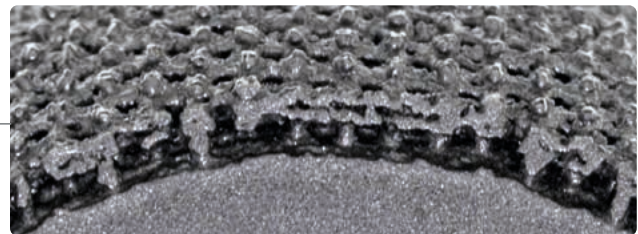
This technology allows for the creation of even very complex **three-dimensional monolithic metal structures**, otherwise impossible to produce using traditional manufacturing methods..

Uncemented implants can then have extremely rough monolithic surfaces with three-dimensional interconnected porosity, ideal to maximise the prosthesis primary stability and promote its subsequent **osseo-integration**.

In 2017 Adler Ortho® opened a modern fully automated production unit in Bari, Italy, devoted to implant and instrument manufacturing using powder technology.

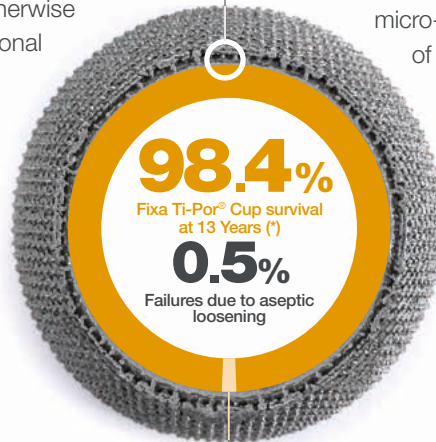
Ti-Por® and Co-Por®

Ti-Por® is a three-dimensional surface with fully interconnected porosity, resulting in a monolithic construct where the porous surface cannot be detached from its substrate.



The surface is extremely rough due to the integrated micro-spikes covering it. This has the advantage of maximising implant primary stability even in the presence of poor quality bone.


Adler Ortho® was the first and remains the only company producing 3D printed implants made of CoCrMo alloy with additive technique. The surface obtained by working this alloy is called Co-Por® and is completely analogous to Ti-Por®.



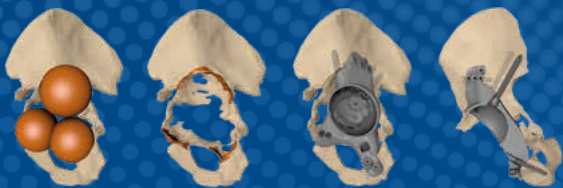
Revisions due to any reason: **1.6%**

(*) Data from the RIPO joint registry available at Adler Ortho®.





Custom Made.
A complete and personalized service
from prostheses to instruments



Maximum customisation capabilities of 3D printing

Adler Ortho® is also a leader in the field of custom made prostheses.

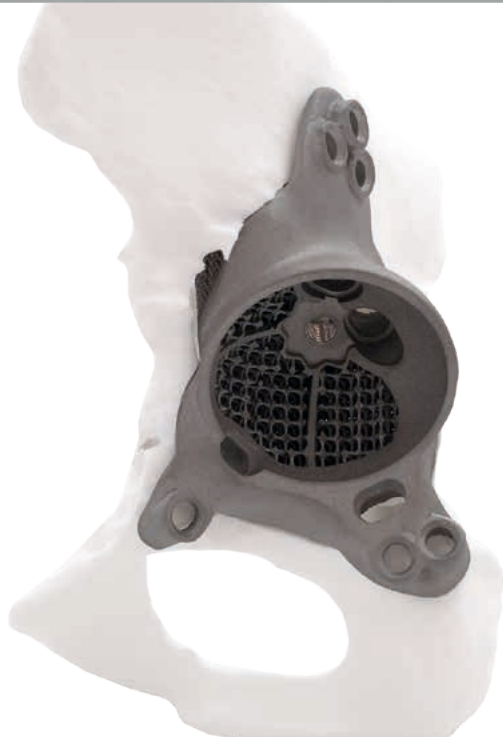
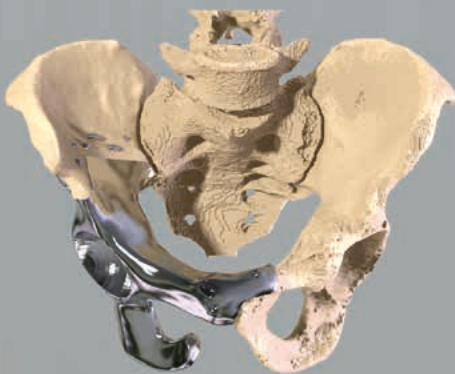
Additive technology allows the design of customised implants reconstructed from patient CT scans and/or MRI.

These prostheses are normally used for specific applications such as the reconstruction of bone segments in cancer patients, or to compensate for bone loss caused by septic or aseptic loosening of orthopaedic prostheses.

3D printing allows us to produce a personalised patient specific implant and also instrumentation set for each case.

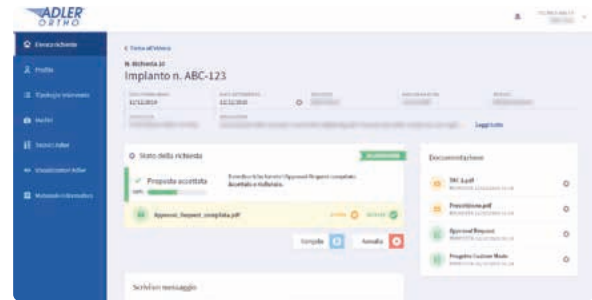
Adler Ortho® offers an integrated range of customized services, which goes well beyond the mere design of patients specific prosthetic implants, tailored and designed to help Surgeons to solve even the most complex cases.

- Feasibility study on dedicated web portal
- 3D reconstruction
- Advanced 3D Planning
- Simulation of bone preparations
- Patient Specific tools
- Surgical planning



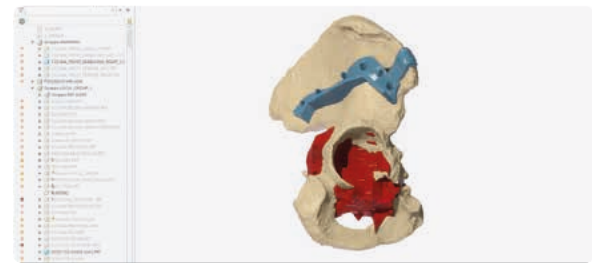
Dedicated online custom process portal

Surgeons can upload patient scans and communicate directly with the design engineers at Adler Ortho® during the design stage in order to speed up and simplify the whole process.



3D reconstruction

The Adler Ortho® engineers use data from CT scans and/or of MRI to reconstruct the anatomical segment in 3D, including existing implants if relevant or areas with cement.



Advanced 3D planning

Starting from the 3D reconstruction of the anatomical segment it is possible to plan with absolute precision the positioning of the prosthesis that will be used and determine the technique that will be followed for its implantation.

3D printed anatomical segments for bone preparations

On request anatomical models can be 3D printed in sterilisable plastic to simulate the surgical procedure or as an adjunct to assist the design of Custom Made implants.

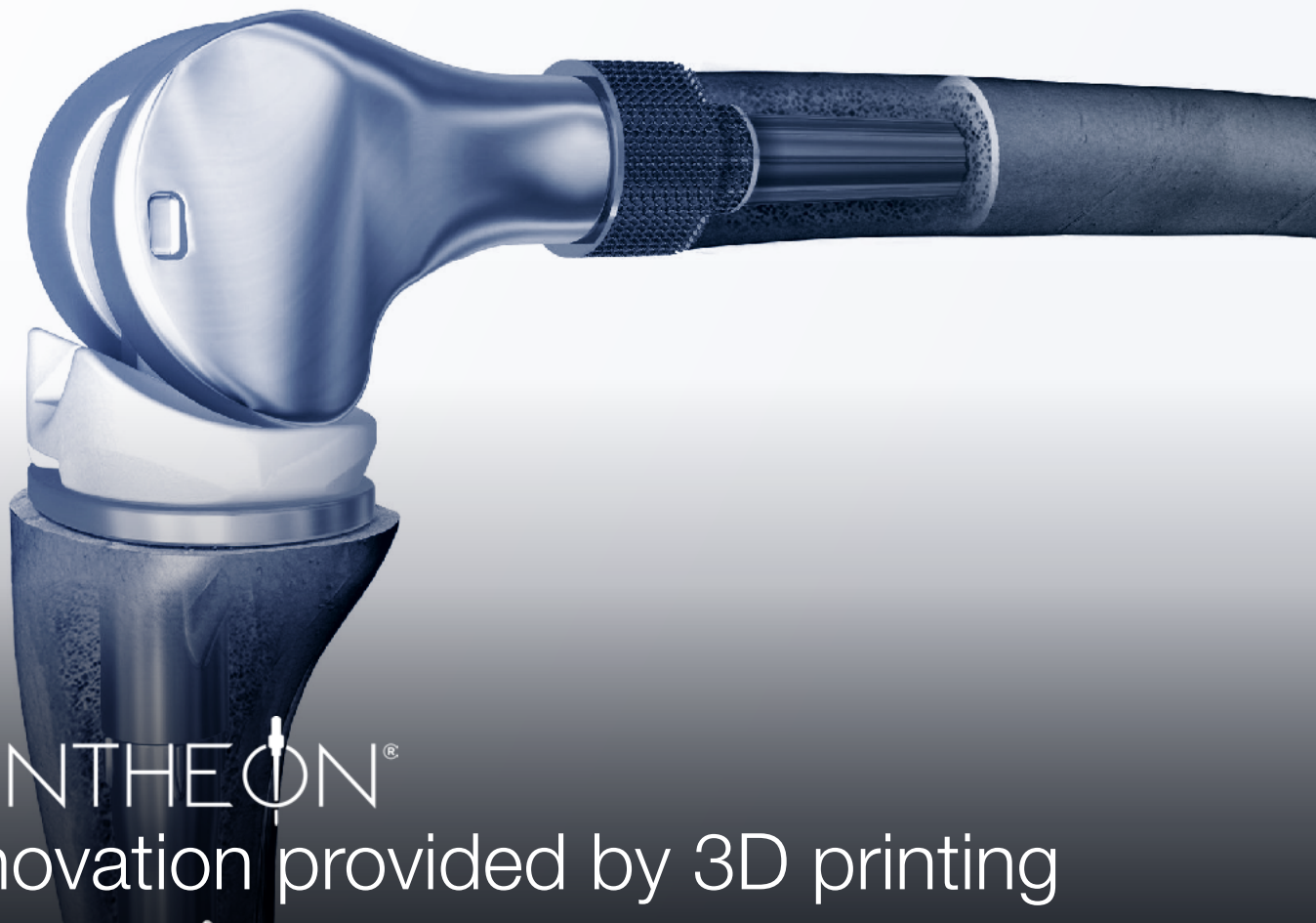


Patient specific instruments

We provide a full set of disposable instruments designed to fit the patient's specific anatomy.

Surgical planning

In collaboration with the surgeon, we study and propose the most appropriate surgical technique for each case to treat.



PANTHEON®

Innovation provided by 3D printing



A complete and integrated modular system for limb salvage

Pantheon® is a fully modular prosthetic system for limb salvage designed to manage severe loss of bone in oncology, trauma or complex revision cases due to infection or aseptic loosening.

The development of the Pantheon® system was made possible by Adler Ortho's long experience in additive manufacturing technology and from the collaboration with a group of esteemed international centres specialised in limb salvage.

Adler Ortho® technology brings true innovation in the field of mega-prostheses

The Pantheon® system represents an important innovation in the field of large resection prostheses.

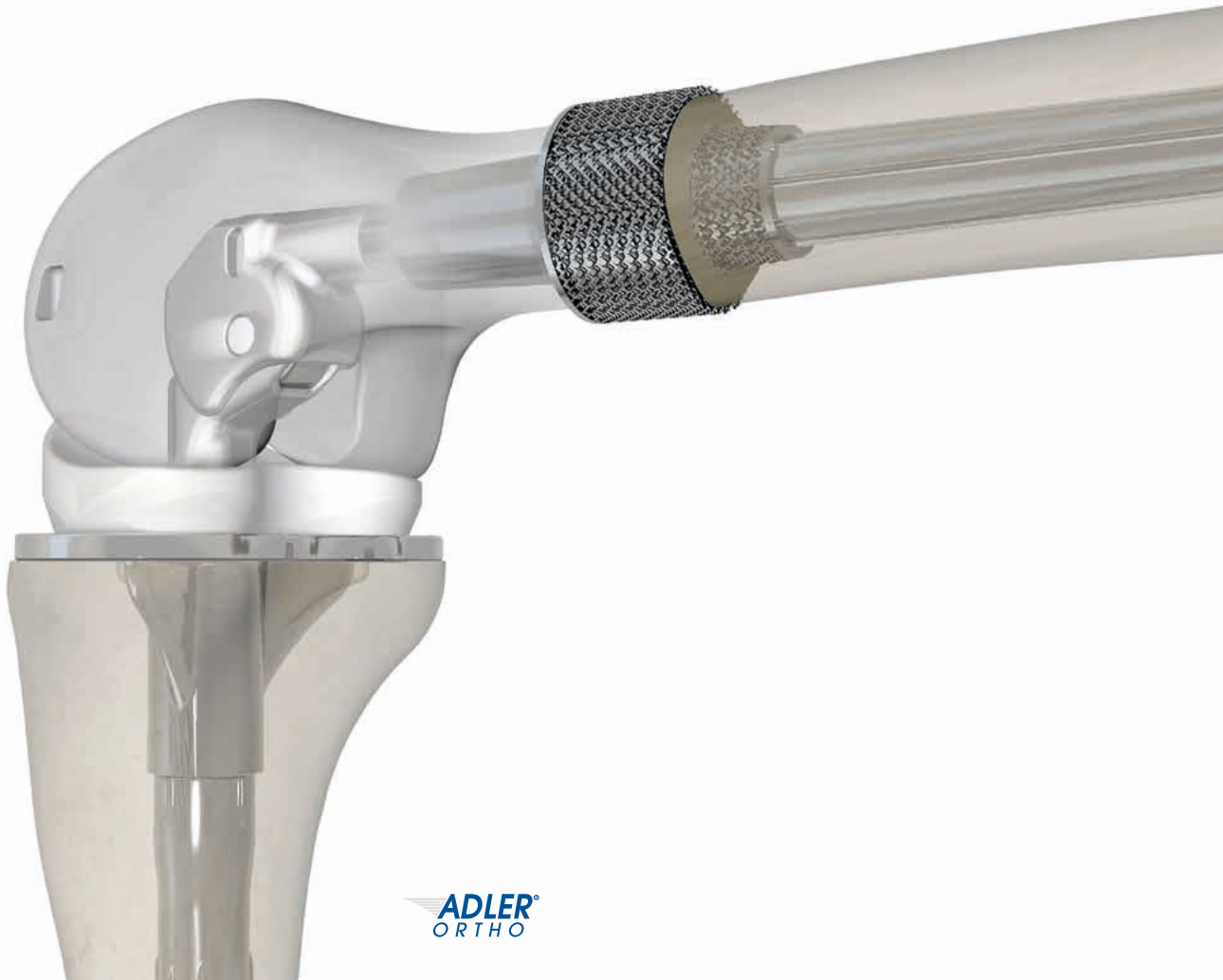
Pantheon® is an integrated fully modular system suitable for both oncological and for severe bone loss following trauma or previous implant failure.



Bridging Collars, the revolutionary heart of the Pantheon® system

The Bridging Collar is the heart of the Pantheon® system. Incorporating Adler Ortho® patented technology made possible

by 3D printing that has two functions: it greatly increases implant primary stability due to its integrated endosteal cone. Optimal secondary stability via integration with the host bone is ensured via the 3D monolithic structure of the collar with Innovation provided by 3D printing interconnected porosity.





A-EXTREMITY Adler Ortho® Technology for Extremities

Adler Ortho® applies its 3D printing expertise to implants for small joints.



ANTEA

Radial head implant, totally hipo-allergenic with 3D printed radial stem and Ti-Por® surface.



NAVICULA

Scaphoid, Semi_scaphoid and semi-lunate implants.



FAR Total Ankle Prosthesis

Completely hypoallergenic, the FAR ankle integrates Ti-Por® technology for enhanced osseointegration. Also offers the benefit of improved component alignment accuracy by utilising 3D printed patient specific instruments.

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