Affinis Shoulder System

for reduced allergy risk

Hypoallergenic: Reduced allergy risk

Allergic reactions to metal ions in joint replacement are an issue that concerns patients and physicians alike. Here, the Affinis Shoulder Portfolio offers standard solutions in case of possible hypersensitivity.

Affinis Short, Affinis Classic, Affinis Fracture and Affinis Inverse are defined both by sophisticated implant design and by progressive materials. These include vitamys, a vitamin-E-enriched, highly crosslinked polyethylene, for the glenosphere and glenoid, high-quality ceramics for the heads as well as for the inlays, and titanium for nickel-free anchorage in the bone.

Ceramics and titanium provide a solution for patients with hypersensitivity to nickel, cobalt, chromium and molybdenum ions. The vitamys ceramic articulation pairing highlights the principle for durable and low-wear prostheses.[1, 2, 3, 7]

In addition, Affinis Short, Affinis Classic and Affinis Inverse allow cementless anchorage with the respective uncemented components. The cementless design obviates the risk of thermal damage to the surrounding bone during the curing of the bone cement.

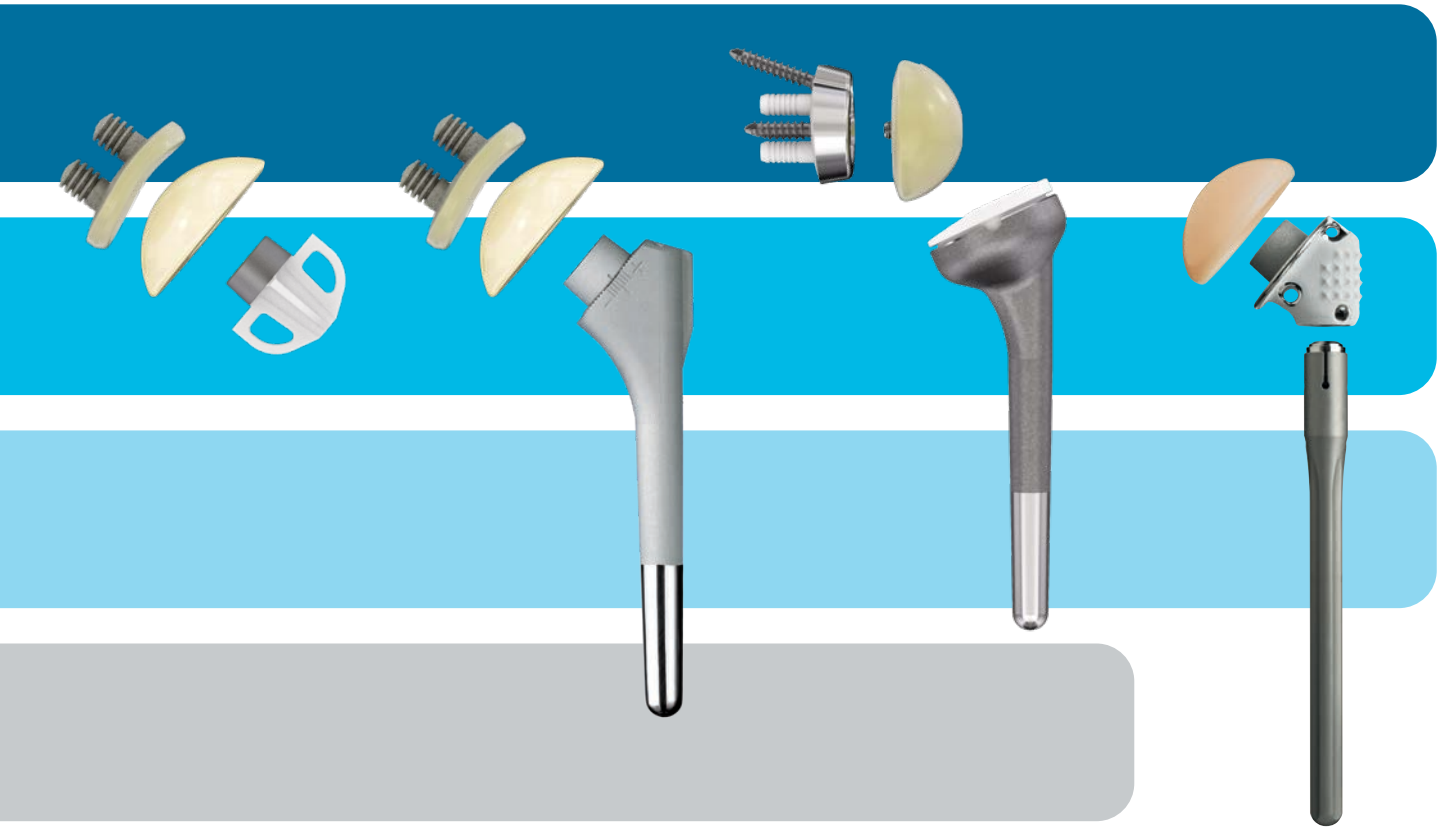
vitamys

Ceramics

Titanium

cementless coating

* when using Affinis Short heads



Affinis Short | Affinis Classic* | Affinis Fracture | Affinis Inverse

Your advantages

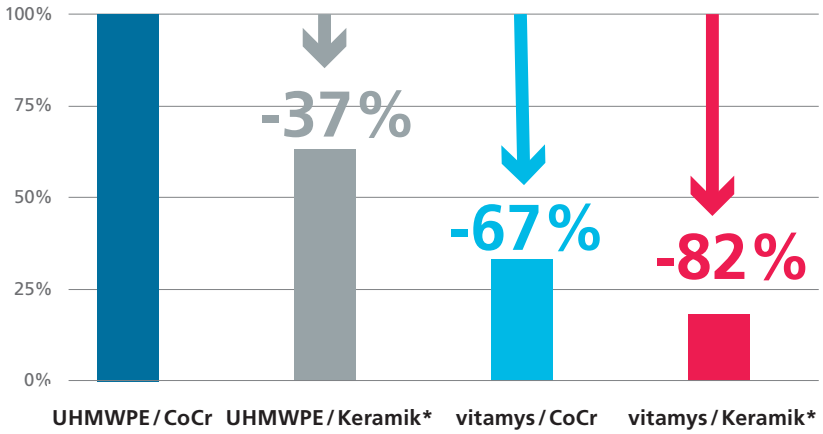
- Hypoallergenic material and therefore reduced allergy risk for the patient
- Reduced wear thanks to low-abrasion[1, 7] articulation bearing
- Immediately available standard solution made from progressive materials

Reduced wear

Both the ceramys ceramic inlay and the vitamys glenosphere of the Affinis Inverse show significantly lower wear in simulator testing than UHMWPE or cobalt-chromium (CoCr) components do. The wear reduction of the best possible pairing vitamys/ceramys versus the CoCr/UHMWPE pairing is 82 %.[1]

Reduction of wear [1]

Wear reduction in % with the Affinis Inverse articulation bearing



* ceramys

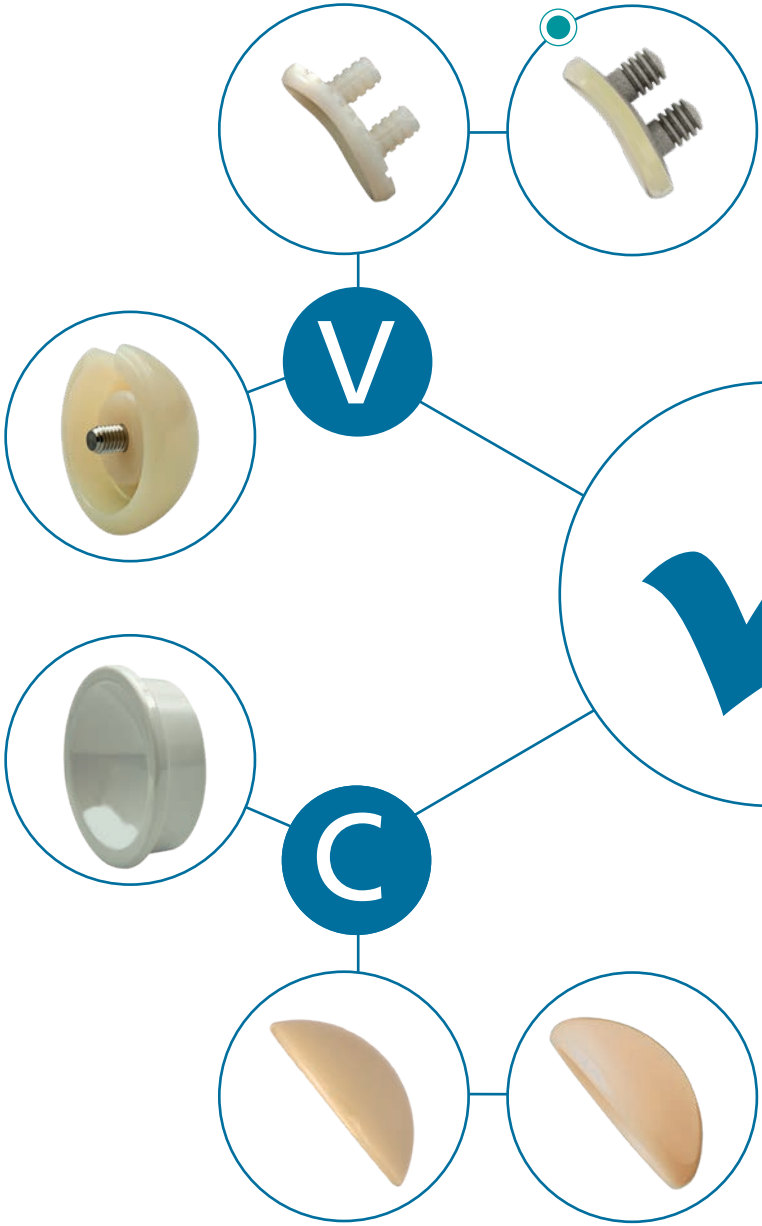
Progressive materials

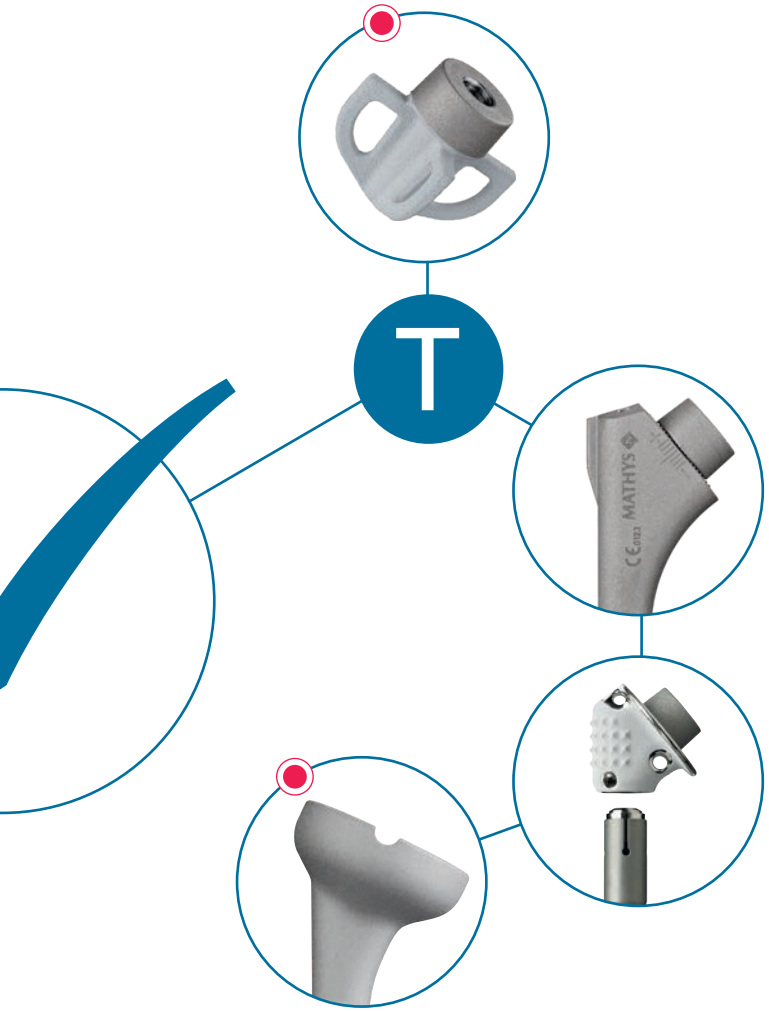
vitamys

The vitamin-E-enriched, highly crosslinked vitamys is designed to deliver maximum resilience and a long service life.[2, 3] Properties such as high resistance to oxidation, ageing and wear, as well as excellent mechanical properties distinguish this proven material and allow long-term survival of the endoprosthesis.[2,3,4]

Ceramics

Since the early 1970s, Mathys has been active in the research, development and manufacture of bioceramics, because we are convinced of their advantages: low wear rates, high strength and toughness, good wettability and biologically inert behaviour.[1,5,6,7] This makes ceramics a treatment solution not only for young and active patients.





Titanium

The nickel-free Ti6Al4V titanium alloy was originally developed for aeronautics, and today it is still the most frequently used titanium alloy. It has proved its worth in medical technology for many years. The quality of the alloy is distinguished by the controlled homogeneous structure and high strength of the material.

Coating

RM titanium coating

Mathys' proprietary titanium coating "RM" (Robert Mathys) enables osseointegration of the implant and permits cementless anchorage. The titanium particles are anchored individually in the polyethylene and not structurally connected to each other. Thus, the elasticity of the implant is not changed by the coating.

Titanium plasma spray and calcium phosphate coating

The double coating made of titanium plasma spray and an absorbable calcium phosphate compound enables cementless anchorage. Thanks to its osteoconductive effect, the surface accelerates osseointegration and contributes to good permanent secondary stability.[8, 9, 10, 11]

References

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Preservation in motion

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