

# Why Pannon?



Well proven double wedge stem  
Eurocone 12/14  
Wide size range C, CL (TPS, HA) version  
Lateralized version  
Simple, accurate instruments  
Press-fit shell  
Most favourable raw materials  
(considering strength, abrasion, fatigue)  
System suitable for minimal  
invasive technique



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# Pannon

## Hip prosthesis family



# Competitive innovation

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# Pannon Hip

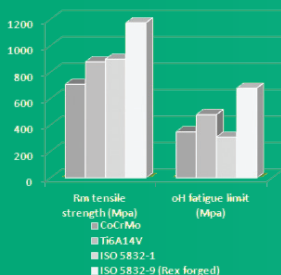


## About Pannon hip prosthesis family

Pannon hip prosthesis family is a so called Müller type system which is internationally recognized and has been implanted in multimillion numbers worldwide.

The publicly accessible registers operated by different European countries ensure long term follow up and prove the excellence and popularity of these products.

Pannon prosthesis stems manufactured by Sanatmetal are in cemented, cementless and revision versions. Cups come as cemented and cementless applications with a wide range of sizes.



## Raw material

The raw material of cemented prosthesis stems is high Nitrogen content REX steel. Its features of high tensile strength, corrosion resistance, abrasion resistance and fatigue properties make this material the most favourable out of all modern implant materials.

Due to the customer demands and the long term excellent results the cementless stems and cups are made of Titanium alloy.

Cemented cups, cup augments and liners are made of UHMWPE (Ultra High Molecular Weight PolyEthylene) with excellent fatigue and abrasion resistance properties.

The material of prosthesis heads is high Nitrogen content REX steel or ceramics.

We purchase the raw materials and forgings conforming the relevant ISO standards from British, French and German suppliers.



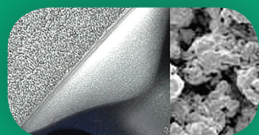
## Prosthesis stem

The range of primer stems consists of 10 sizes (1...10) together with the 8 revision stem sizes (3...10). Lateralized version is also available. To maintain a proper fixation with the head all stems have 12/14 Euroconus feature.

The cementless stems have TPS (Titanium Plasma Spray) or HA (Hydroxy Apatite) coating on the proximal part to ensure optimal bone ingrowth – and secondary stability – due to the proper porosity of the surface.

The cemented and cementless versions can be operated with the same instruments ensuring flexibility for the operator.

The biomechanical testing of Sanatmetal stems were performed by the German ENDOLAB, and internationally accredited laboratory.



TPS



## Head

In case of heads the long life cycle is guaranteed by the precise geometry and surface roughness which is ensured by a machine specifically designed for this task.

There are 7 different offset heads for Pannon stems (-5...+12). Apart from the standard 28 mm head the following are also available: 22, 26, 32 mm. The bipolar heads with eccentric design and wide range of motion are also in many different sizes (41...61 mm).



## Cup

The cemented PE cup has longitudinal and crosswise slots on the outer surface to ensure better fixation. It also features a metal ring to facilitate postoperative x-ray control. For each cup size there is an augment which helps to eliminate luxation of the implant.

The cementless cup system is based on the press-fit principle, the shell has TPS coating to provide a large surface for bone ingrowth. There are 6,5 mm diameter special screws for fixing the shell. The connection between the shell and the liner gives fixation without rotation and out of alignment positions. This eliminates the possibility of secondary abrasion.

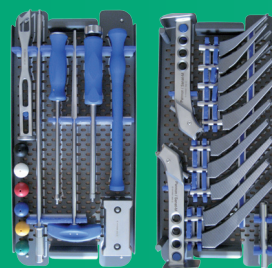
The cemented cups are in the range of 42-62 mm with 2 mm steps. Shells come in 40-74 mm sizes also with a multi-hole revision version. Both cemented and cementless cups are in standard or antiluxation design for 22, 28 and 32 mm heads.



## Packaging

Sanatmetal ships the prosthesis family in sterile packaging. Cleaning and packaging is performed according to validated procedures in aseptic and controlled environment assigned specifically for this purpose.

The sterilizing agent is ETO (Ethylene Oxide).



## Instruments

We supply safe and easy-to-use instruments for the implantation of prostheses. For the stems our tray ensures changeability between cemented and cementless techniques. For the cemented, the cementless cups and the bipolar heads we have a separate tray for each.

For revision stems, extra size cementless cups and ceramic liners supplementary devices are needed which are put into a separate tray.

