



For healthcare professional use only. The illustrated image does not represent a connection between the use of the medical device described, nor its performance.

## *Preservation in motion*



optimys

Product information

# optimys

The optimys hip stem is one of the possible solutions for young and active patients but also suitable for older patients with good bone quality. It is designed to restore the individual anatomical conditions of the patient.<sup>1,2,3</sup> The design preserves more bone and surrounding tissue structures than a traditional primary stem<sup>2,3,4</sup> and allows the surgeon to perform all minimal invasive surgical techniques. The system features a streamlined product portfolio and instrumentation to ensure a straightforward handling.

## ***Rectangular impaction hole***

### **Safe and rotation-guided insertion**

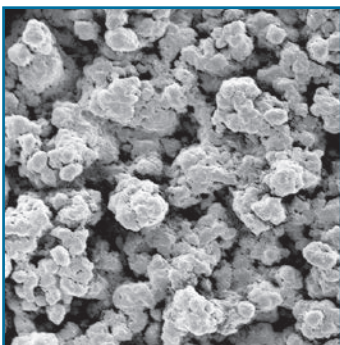
The rectangular impaction hole allows a controlled positioning of the implant using the impactor. Anteversion can easily be reproduced.



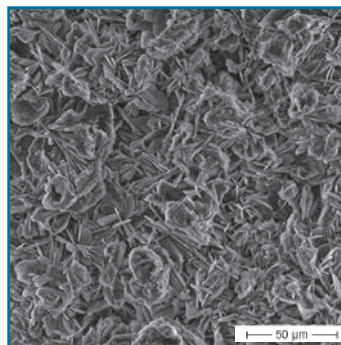
## ***Titan Plasma Spray and Calcium Phosphate coating***

### **Good mechanical anchoring and accelerated osseointegration**

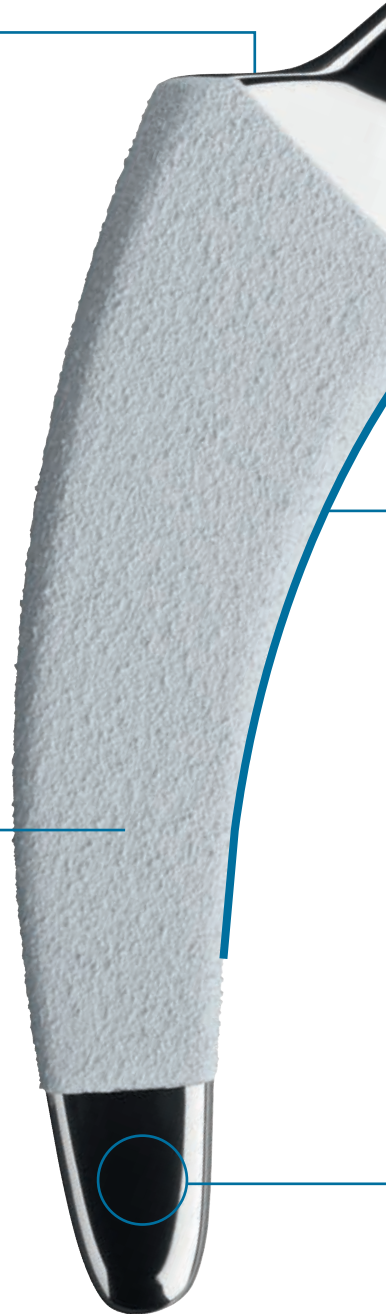
The rough titanium plasma sprayed coating offers a secure anchorage in the bone and the overlaying calcium phosphate coating promotes a rapid osseointegration for a good secondary stability.<sup>5,6</sup>



Titan Plasma Spray (TPS)

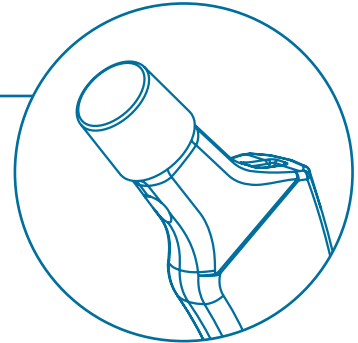


Calcium Phosphate (CaP)





## Trapezoidal neck geometry



## Triple taper design

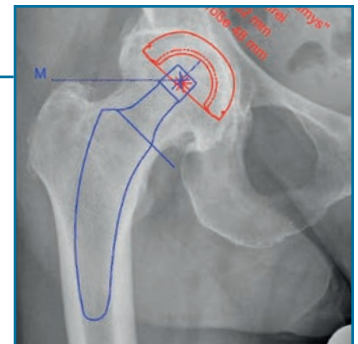
### Good primary stability

The effectiveness of tapered stem designs has been clinically proven over many years. The triple taper of the optimys stem ensures a controlled and rotational stable fixation in the metaphyseal area of the femur.<sup>1</sup> The risk of subsidence is minimised.<sup>7</sup>

## Anatomical curvature

### Anatomical fit along the calcar arch

optimys restores the individual anatomical conditions of the patients.<sup>1,2,3</sup> Extensive X-ray and CT analysis have been performed to determine the final shape of the stem, especially at the calcar arch. Due to the distinctive curvature, the optimys stem may be used for almost all primary cases.<sup>2,8</sup>



## Polished distal tip

### Avoids distal osseointegration

The distal part of the stem features a round tip for easy insertion.<sup>3</sup>

<sup>1</sup> Kutzner K.P., Kovacevic M.P., Roeder C., Rehbein P., et al. Reconstruction of femoro-acetabular offsets using a short-stem. *Int Orthop*, 2015. 39(7): p. 1269-75.

<sup>2</sup> Jerosch J. *Kurzschafteendoprothesen an der Hüfte*. 2017: Springer. 315.

<sup>3</sup> Kutzner K.P., Donner S., Schneider M., Pfeil J., et al. One-stage bilateral implantation of a calcar-guided short-stem in total hip arthroplasty. *Operative Orthopädie und Traumatologie*, 2017: p. 1-13.

<sup>4</sup> Hochreiter J., Hejkrlik W., Emmanuel K., Hitzl W., et al. Blood loss and transfusion rate in short stem hip arthroplasty. A comparative study. *Int Orthop*, 2017. 41(7): p. 1347-1353.

<sup>5</sup> Kutzner K.P., Pfeil D., Kovacevic M.P., Rehbein P., et al.

Radiographic alterations in short-stem total hip arthroplasty: a 2-year follow-up study of 216 cases. *Hip Int*, 2016. 26(3): p. 278-83

<sup>6</sup> DOT Medical Implant Solutions. <http://www.dot-coating.de>

<sup>7</sup> Bieger R.I., A.; Reichel, H.; Durselen, L. Biomechanics of a short stem: In vitro primary stability and stress shielding of a conservative cementless hip stem. *J Orthop Res*, 2013. 31(8): p. 1180-6.

<sup>8</sup> Pfeil J., Siebert W., Grieshaber H.M. optimys, in *Kurzschafteendoprothesen – Wo liegen die Unterschiede?*, J. Jerosch, Editor. 2012, Deutscher Ärzte-Verlag. p. 23-40.

<sup>9</sup> Data on file

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## ***Well-thought-out instrumentation for an straight forward handling***

The optimys instrumentation offers intra-operative flexibility. Various starter instruments and rasp handles for all MIS approaches are available to accommodate the surgeon's preferences.

The optimys rasps ensure a precise preparation of the implant bed with the goal of having a stable positioning of the implant.<sup>3,9</sup>

