

SKM Hip Stem System

Surgical Technique



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"Movement is Life"

SKM – Short Anatomical Hip Stem

The **SKM – Short Anatomical Hip Stems**, cemented as well as cementless, can be implanted with the same set of instruments as the Biotech BA Total Hip Systems, with the additional special SKM rasp tray.

With its unique design and the wide range of available left and right sizes, the SKM stem covers a wide range of indications in the hip replacement surgery. The initial stability of the cementless stem is based on its anatomical shape and the titanium plasma sprayed porous coating in the full length of the stem.

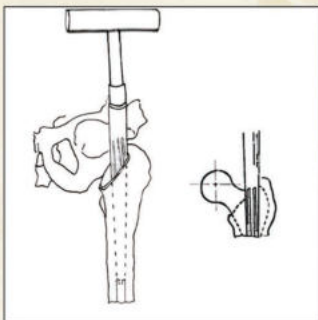
This initial mechanical fixation will change into a biological fixation as a result of bone growing into the porous coating. The rasp geometry is 1:1 with the prosthesis, which allows the surgeon to choose the preferred cement mantle thickness by using a prosthesis smaller than the reamed cavity. The standard 12/14 (5°42'30") taper of the prosthesis can be accommodated with metal as well as ceramic modular heads.

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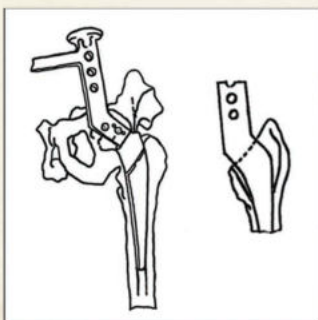
Patient Position and Exposure

The SKM Stem ideally facilitates the Minimally invasive operation technique, however it is certainly also suitable for standard operation technique. Therefore, the patient positioning and exposure of the femur should be done according to the surgeons decision on the chosen surgical technique. After removing the femoral head a box chisel may be used to open the femoral canal. Accurate positioning of the entry point will facilitate reaming of the femoral canal resulting in a neutral orientation of the final implant.



Reaming the Femoral Canal

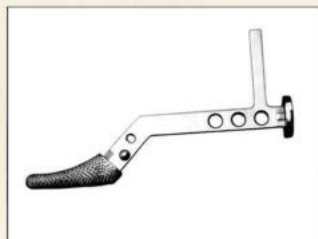
Once the medullary canal is located, a hand-held tapered reamer is introduced slowly. A neutral position of the reamer is shown by the fact that most of the reamer can be introduced before circumferential cortical bone is encountered. Marks on the reamer will indicate the position of the femoral head in relation to the corresponding rasp/prosthesis. Take care that healthy cortical bone stock is not sacrificed.



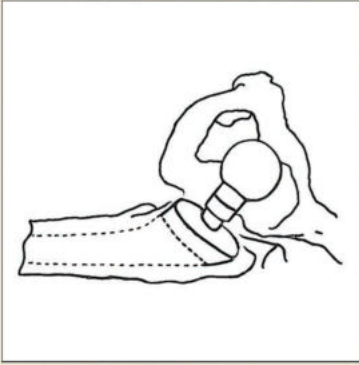
Rasping the Femoral Canal

The femoral canal is shaped to the prosthesis with the use of rasps, starting with the smallest size. Rasping is continued with incremental sizes until rigid cortical bone contact prevents a fully seated rasp from further introduction. During the rasping procedure the desired angle and version of the stem need to be controlled by the surgeon. If fully seating can not be achieved, use of the reamer might be needed again.

NOTE: always take care to use the suitable left or right rasp size!

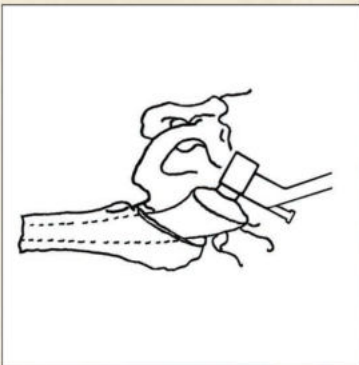


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Trial Reduction

The modular SKM-Rasp system allows for a trial reduction once the rasping procedure has been completed. Simply remove the rasp handle and replace it by a trial head-neck component. The joint can be reduced to examine leg length, stability and range of motion. If need be, adjustments can be made.



Femoral Component Insertion

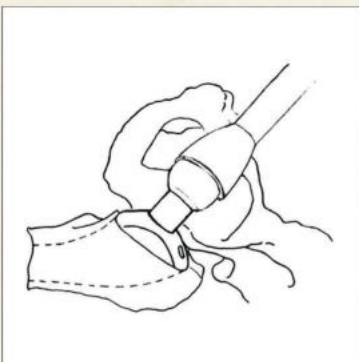
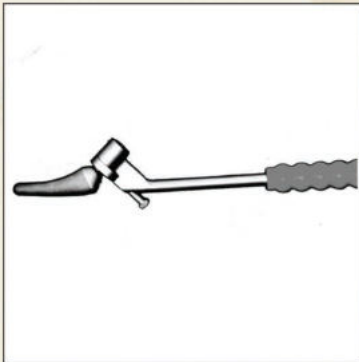
Cementless Component

The size of the final stem corresponds with the size of the rasp used for trial reduction. Increasing impaction force will be needed to fully seat the prosthesis.

Cemented Component

The bone bed is cleaned and the bone cement is prepared and introduced into the femoral canal according to standard recommendations. The dimensions of a rasp correspond to the dimensions of the same size prosthesis. This gives the surgeon control over the cement mantle thickness. **Choosing a prosthesis one size smaller than the final rasp, allows for a 1 mm circumferential cement mantle.** The stem is inserted into the cement until it's final depth is reached and pressure is applied until the cement has cured.

In case another trial reduction is preferred, special trial heads are available.



Femoral Head

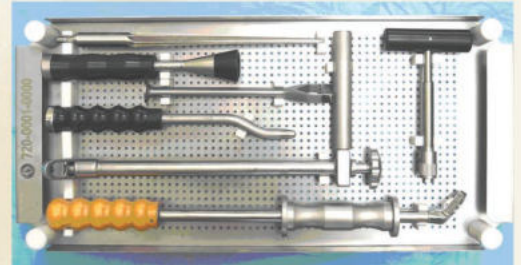
It is recommended that the prosthesis taper is thoroughly cleared from any blood and/or debris before the final head is attached. After doing so, the appropriate metal or ceramic femoral head is placed onto the clean and dried taper and lightly tapped with the head impactor. The hip is reduced and closure is done in a routine fashion.

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BioTech™ does not practice medicine and does not recommend any particular surgical technique or implant for use on a specific patient. Choosing the appropriate technique and implant is the responsibility of the surgeon performing implant procedures.

720-0001-0000 Femoral Instrument Tray

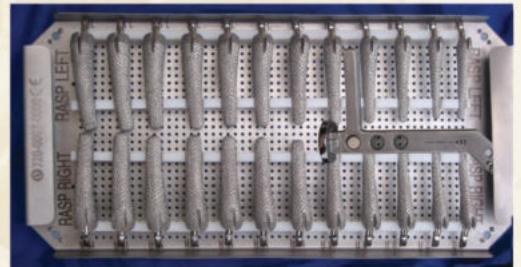
- 720-0001-0001 Stem impactor
- 720-0001-0002 Modular head impactor
- 720-0001-0003 Conical impactor
- 720-0001-0004 Tapered reamer
- 720-0001-0005 T-handle for 0004
- 720-0001-0006 Extractor with head
- 720-0001-0008 Box chisel



720-0008-0000 SKM Rasp Tray

- 720-0002-2006 SKM - Short Anatomical Rasp right, 6
- 720-0002-2007 SKM - Short Anatomical Rasp right, 7
- 720-0002-2008 SKM - Short Anatomical Rasp right, 8
- 720-0002-2009 SKM - Short Anatomical Rasp right, 9
- 720-0002-2010 SKM - Short Anatomical Rasp right, 10
- 720-0002-2011 SKM - Short Anatomical Rasp right, 11
- 720-0002-2012 SKM - Short Anatomical Rasp right, 12
- 720-0002-2013 SKM - Short Anatomical Rasp right, 13
- 720-0002-2014 SKM - Short Anatomical Rasp right, 14
- 720-0002-2015 SKM - Short Anatomical Rasp right, 15
- 720-0002-2016 SKM - Short Anatomical Rasp right, 16
- 720-0002-2017 SKM - Short Anatomical Rasp right, 17

- 720-0002-1006 SKM - Short Anatomical Rasp left, 6
- 720-0002-1007 SKM - Short Anatomical Rasp left, 7
- 720-0002-1008 SKM - Short Anatomical Rasp left, 8
- 720-0002-1009 SKM - Short Anatomical Rasp left, 9
- 720-0002-1010 SKM - Short Anatomical Rasp left, 10
- 720-0002-1011 SKM - Short Anatomical Rasp left, 11
- 720-0002-1012 SKM - Short Anatomical Rasp left, 12
- 720-0002-1013 SKM - Short Anatomical Rasp left, 13
- 720-0002-1014 SKM - Short Anatomical Rasp left, 14
- 720-0002-1015 SKM - Short Anatomical Rasp left, 15
- 720-0002-1016 SKM - Short Anatomical Rasp left, 16
- 720-0002-1017 SKM - Short Anatomical Rasp left, 17
- 720-0002-0021 Handle for Rasp



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