Surgical Technique

Eurofit Primary Cementless Stem

Your partner for implants and trauma products

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Contents

Please note:
This document is intended as a guide for the surgeon only. There are multiple techniques for the insertion of Eurofit Primary Cementless Stem, with any surgical procedure, a surgeon should be thoroughly trained and be aware that this procedure is appropriate for the patient before proceeding.

Eurofit primary cementless stem

Introduction

This document describes the surgical technique for the Eurofit cementless stem.

Eurofit cementless stem consists of:
- Hydroxyapatite (HA) coating
- Titanium Alloy (Ti6Al4V ELI alloy according to ASTM F 136 - ISO 5832/3) with cementless body
- Straight, rectangular shape
- 135° stem neck angle
- 12/14 taper
- Vertical and horizontal macro shapes to increase stability
- Double - tapered distal edge

Eurofit Primary Cementless Stem (Sterile)			
Ref. Number HA Coated	**Stem Size**	**Length L(mm)**	**Cone Size**
EB8401T000S	0	127	12/14
EB8401T001S	1	131	12/14
EB8401T002S	2	135	12/14
EB8401T003S	3	139	12/14
EB8401T004S	4	143	12/14
EB8401T005S	5	147	12/14
EB8401T006S	6	151	12/14
EB8401T007S	7	155	12/14
EB8401T008S	8	159	12/14
EB8401T009S	9	163	12/14

1. Indications

The Eurofit Cementless Stem is designed for cementless use in total or partial hip arthroplasty in primary or revision surgery.

Patients should have one or more of following:

- A severely painful and/or disabled joint from osteoarthritis, traumatic arthritis, rheumatoid arthritis, or congenital hip dysplasia
- Avascular necrosis of the femoral head
- Acute traumatic fracture of the femoral head or neck
- Failed previous hip surgery including joint reconstruction, internal fixation, arthrodesis, hemi-arthroplasty, surface replacement arthroplasty, or total hip replacement
- Certain cases of ankyloses

Eurofit Cementless Stem size 0 implant should not be implanted in patients with a mass of 65 kg or greater.

2. Contraindications

Total or partial hip replacement is contraindicated in following cases:

- Acute, systemic or chronic infection.
- Muscular, neurological or vascular deficiency of the affected limb.
- Bone destruction, or loss of bone characteristics that may compromise the stability of the implant.
- Pathologies that may compromise the functionality of the implant in any way.

Mental or neuromuscular disorders may create an unacceptable risk to the patient and can be a source of postoperative complications. It is the surgeon's responsibility to ensure that the patient has no known allergy to the materials used.

3. Preoperative Planning

Careful preoperative planning is essential. It will help the operator to pre-select the femoral implant size in order to restore an architecture corresponding to the operated patient's anatomy.

In addition, using the set of X-ray templates to the scale of 1.15:1 (with an X-ray of the same magnification), it will be possible to determine:

- The implant size.
- The level of the neck cut.
- The neck length.
- The prosthetic rotation center.

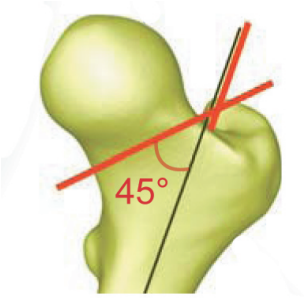
Additional Info:
The final implant will be selected intra-operatively, because of possible discrepancies between actual conditions and templating.

4. Surgical Approach

The instrumentation has been developed for a posterior approach.

5. Femoral Neck Osteotomy

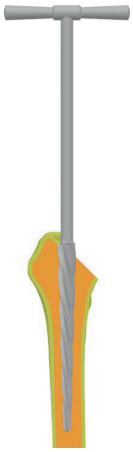
- The level of the neck cut is determined during preoperative planning using the X-ray templates.
- The femoral neck osteotomy is at an angle of 45° to the diaphyseal axis of the femur.
- The resection is performed with an oscillating saw, taking care to maintain the 45° angle.
- The femoral head is removed using an extractor.



6. Femoral Preparation

For access to the medullary canal, the thigh is held in the position providing the best exposure of the diaphyseal axis.

To avoid undersizing and varus positions of the stem, a box chisel is applied opposite the digital fossa of the femoral neck.



Guide the chisel with a slight anteversion: this step is essential for correct application of the rasp and implant.
This removes a block of cancellous bone.

If needed, the endomedullary cancellous bone can be reamed using the metaphyseal reamer assembled with the T shaped Handle for reamer.

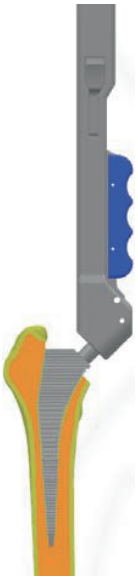
Check the axis and ensure cortical continuity.

It is recommended to make a slight recess in the neck base or in the trochanteric overhang, if necessary to clear for the shoulder of the rasp, then of the stem.

The femoral diaphysis is prepared using sequential rasps. Assemble the rasp with the rasp handle
Rasps of increasing sizes, starting from size 0, are introduced until complete locking; the first rasp determines the position of the following rasps.

Check the rasp anteversion.

The rasps must be inserted to optimum level determined by the 45° cut.

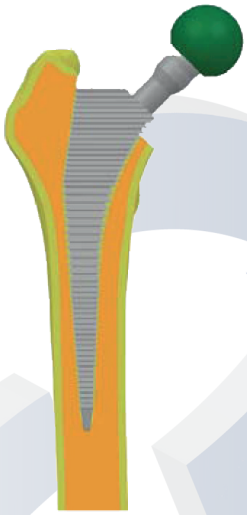


Notice:
Never force impaction when the rasp is blocked in the diaphysis. The final rasp should be rotationally stable to assure stability of the implant.

7. Trialing

After complete locking of the rasp in the diaphysis, the rasp handle is removed.

After the rasping process is completed, modular test heads of different diameters and heights are selected according to the anatomy of the patient.



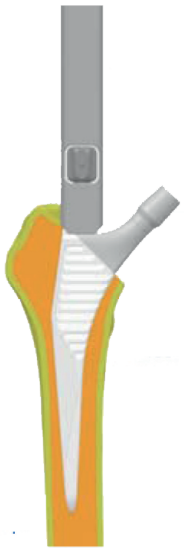
Attention:
To make head insertion easier wet the head before insertion.

A trial head is fitted to the trial neck by pushing it into the taper. To remove a trial head, simply pull it.

Additional Info:
The head impactor must be used only for head impaction and not for the correction of the acetabular shell position.
After checking and testing mobility, joint stability and lower limb length, remove the rasp.

8. After Selection of Implants

Insert the final prosthesis into place. The final prosthesis size corresponds to the rasp used.



Notice:
Take care not to damage the taper's micro-thread while placing the final implant.

Insert the implant into the femoral cavity, using the stem impactor to push it down.
The anteversion of the stem is guided by the quadrangular recess left in the femur by the rasps.

Attention:
Under no circumstances, the implant anteversion should be changed at this stage.

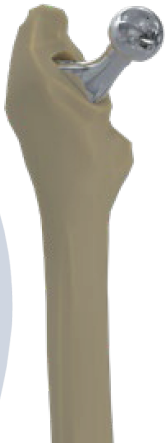
The stem is lowered to the end of the gap opened by the rasp. Final impaction is done carefully with dedicated impactor.

Notice:
Never force impaction when the stem is blocked in the diaphysis.

At this stage, you can check the neck length by inserting a test ball to make sure and then thoroughly clean the conical part of the stem before hammering in the ball head.

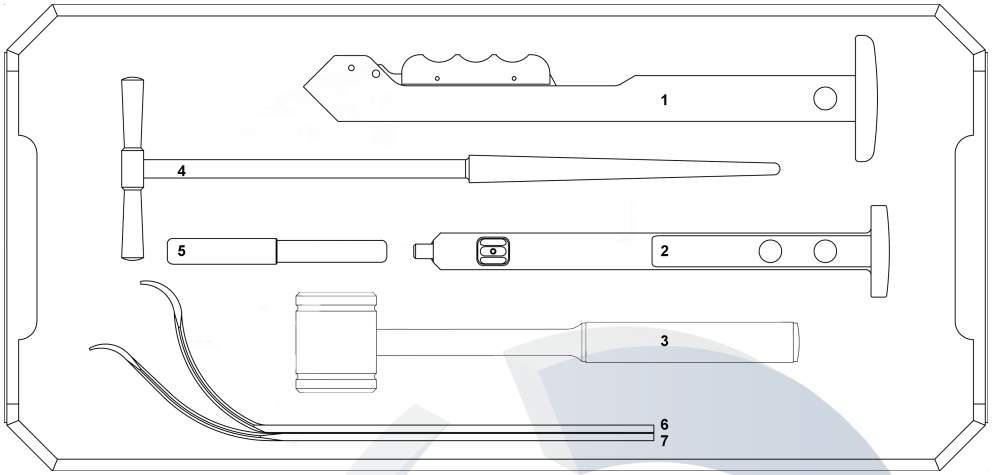
Remove any spongy bone debris with a curette.

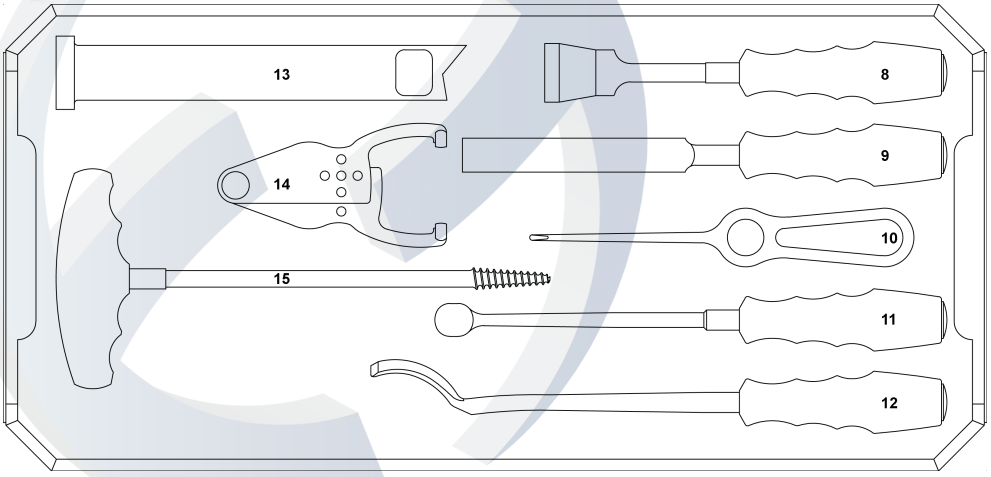
modular head nailing pocess is done.

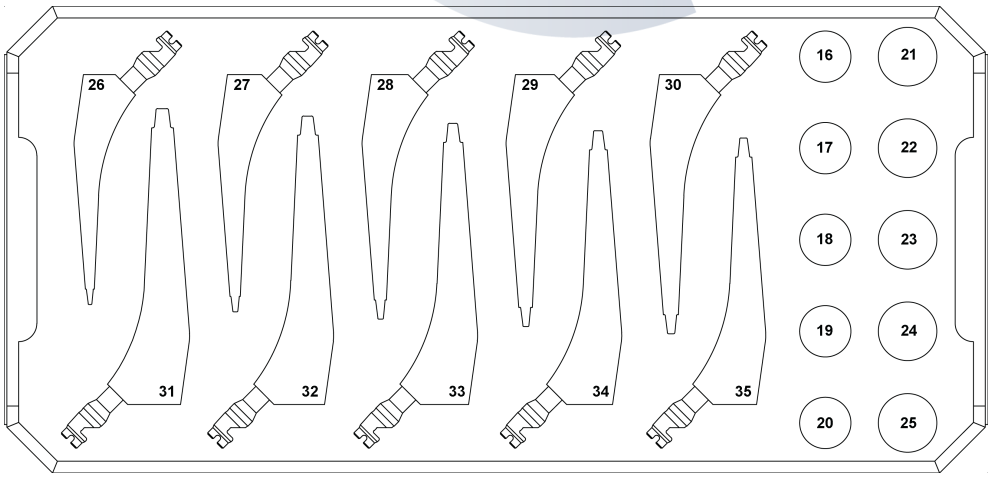


10. Instruments & Trays

EUROFIT Primary Cementless Stem Instrumentation Set (EK0326N001N)







EUROFIT Primary Cementless Stem Instrumentation Set (EK0326N001N)

No	Ref. Number	Description
1	EE1001S050N	MODULAR RASP HANDLE
2	EE0420N161N	EUROFIT COMBINE WRENCH
3	EE0701S401N	EUROFIT SLOTTED HAMMER
4	EE1033S003N	REAMER AWL
5	EE1000S001N	RASP BAR
6	EE0210S101N	HOHMANN RETRACTOR TYPE 1
7	EE0210S102N	HOHMANN RETRACTOR TYPE 2
8	EE0702N003N	FEMORAL HEAD IMPACTOR
9	EE0521N102N	STRAIGHT CHISEL
10	EE0204S002N	BONE HOOK BLUNT
11	EE0521N105N	SPOON CURETTE
12	EE0521N125N	SWAN NECKED SPOON CURETTE
13	EE0502S101N	CHISEL
14	EE0802S011N	FEMORAL HEAD GAUGE
15	EE0610N001N	FEMORAL HEAD EXTRACTOR
16	EE3601R001N	TEST HEAD FOR MODULAR STEM / Ø28 - 12*14 Cone - S
17	EE3601R002N	TEST HEAD FOR MODULAR STEM / Ø28 - 12*14 Cone - M
18	EE3601R003N	TEST HEAD FOR MODULAR STEM / Ø28 - 12*14 Cone - L
19	EE3601R004N	TEST HEAD FOR MODULAR STEM / Ø28 - 12*14 Cone - XL
20	EE3601R005N	TEST HEAD FOR MODULAR STEM / Ø28 - 12*14 Cone - XXL
21	EE3604R001N	TEST HEAD FOR MODULAR STEM / Ø32 - 12*14 Cone - S
22	EE3604R002N	TEST HEAD FOR MODULAR STEM / Ø32 - 12*14 Cone - M
23	EE3604R003N	TEST HEAD FOR MODULAR STEM / Ø32 - 12*14 Cone - L
24	EE3604R004N	TEST HEAD FOR MODULAR STEM / Ø32 - 12*14 Cone - XL
25	EE3604R005N	TEST HEAD FOR MODULAR STEM / Ø32 - 12*14 Cone - XXL
26	EE1039S000N	EUROFIT Primary Cementless Stem Rasp / 0
27	EE1039S001N	EUROFIT Primary Cementless Stem Rasp / 1
28	EE1039S002N	EUROFIT Primary Cementless Stem Rasp / 2
29	EE1039S003N	EUROFIT Primary Cementless Stem Rasp / 3
30	EE1039S004N	EUROFIT Primary Cementless Stem Rasp / 4
31	EE1039S005N	EUROFIT Primary Cementless Stem Rasp / 5
32	EE1039S006N	EUROFIT Primary Cementless Stem Rasp / 6
33	EE1039S007N	EUROFIT Primary Cementless Stem Rasp / 7
34	EE1039S008N	EUROFIT Primary Cementless Stem Rasp / 8
35	EE1039S009N	EUROFIT Primary Cementless Stem Rasp / 9

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