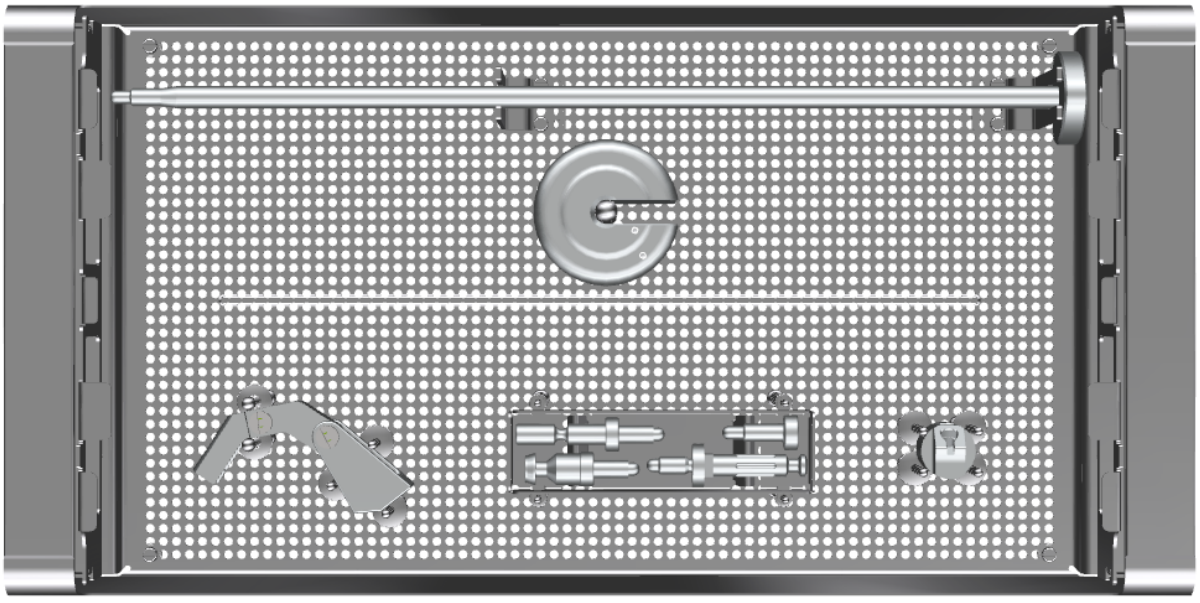
OHST medical technology

Extraction instrument set for hip stems with 12/14 cone

Instructions for Use



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INTRODUCTION AND PRODUCT DESCRIPTION

The extraction instrument set contains a number of instruments for the removal of hip stems. The core element of the extraction instrument set is the *Stem extractor* (Figure 1). It provides for a connection between the hip stem and the various connecting elements. The cone of the stem is grasped by means of metal clamps.
The extraction is performed with the *Stem extractor* for the 12/14 cone. The *Stem extractor* is designed such that a variety of rasp handles or an extraction rod with a striking weight can be used. Two threaded holes in a U-shaped angle enable the surgeon to strike out the stem in the direction of the axis.

Caution:
The *Stem extractor* must not be used for the reduction of hip stems, as the cone of the hip stem can be damaged by the metal clamps.

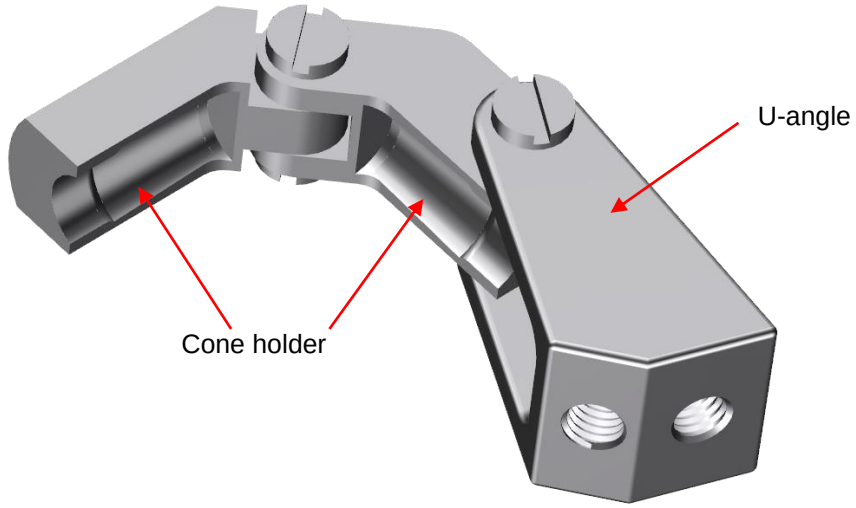

Figure 1: Stem extractor

The *Stem extractor* is suitable for all stem systems with a 12/14 cone and can be combined with different handles.

INSTRUCTIONS FOR USE

Stem extractor with hip stem

The *Stem extractor* is designed such that it can be used with a variety of stem systems and the different sizes of hip implants. Before using a handle/extraction rod, always attach the *Stem extractor* to the hip stem cone first:

- Fold the *Stem extractor* as shown in Figure 2.
- Position the *Stem extractor* above the cone of the hip stem and check whether the stem cone is grasped sufficiently when the metal jaws are pushed together.

Figure 2: Stem extractor and hip stem

Stem extractor with Extractor Bar M8

Note:
Before use the tread has to be moisted using ultra pure water.

- Taking into account the axis of the stem, screw the extraction rod into one of the two drill-holes of the *Stem extractor* until the cone is firmly in position (Figure 3).

Note:
The axis of the extraction rod and of the hip stem should be more or less aligned in the same direction.

- Connect the *Modular Weight* to the *Extractor Bar M8* (Figure 4).

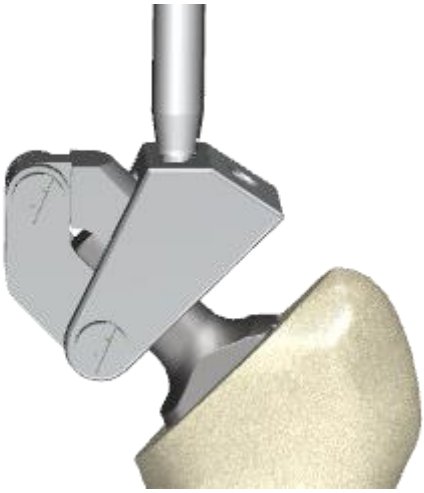

Figure 3: Stem extractor with screwed-in Extractor Bar M8 (detailed view)

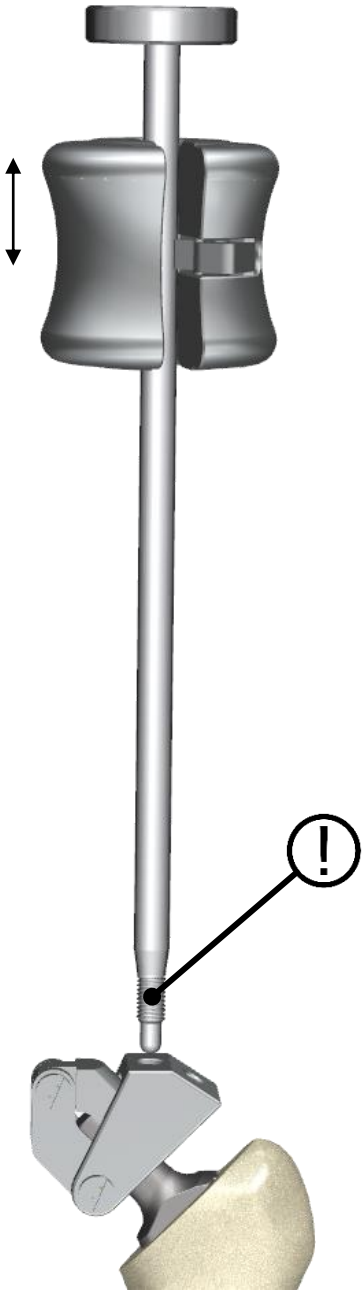

Figure 4: Stem extractor with Extractor Bar M8 and Modular Weight in necessary alignment to the implant

Stem extractor with Rasp Handle Standard Hook Coupling and Handle Adapter Hook Coupling

- Taking into account the axis of the stem, screw the *Handle Adapter Hook Coupling* into one of the two drill-holes of the *Stem extractor* until the cone is firmly in position (Figure 5).
- Connect the *Rasp Handle Standard Hook Coupling* to the *Handle Adapter Hook Coupling* (Figure 5 and 6).

Note:
Before use the tread has to be moisted using ultra pure water.

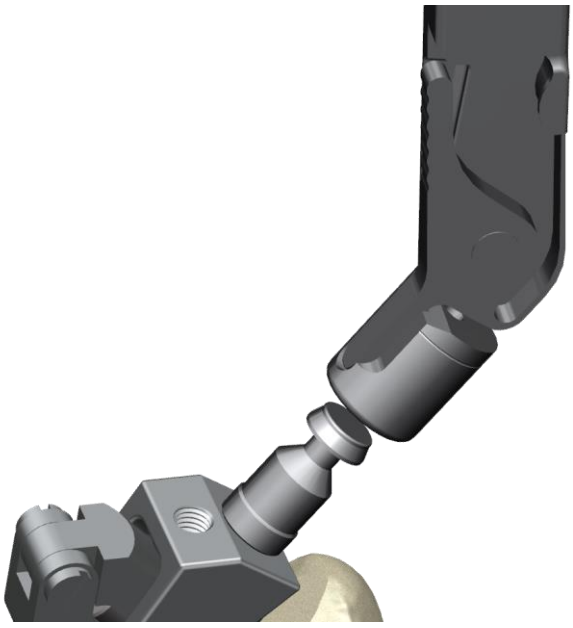

Figure 5: Stem extractor with screwed-in Handle Adapter Hook Coupling and Rasp Handle Standard Hook Coupling (detailed view)

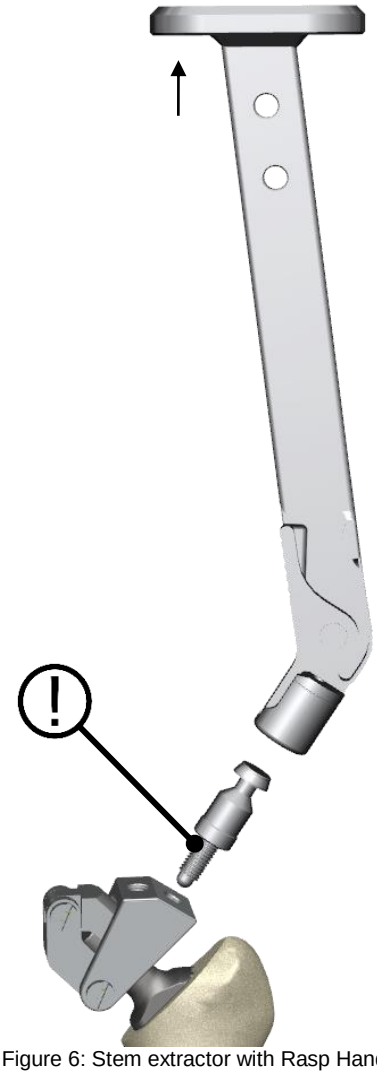

Figure 6: Stem extractor with Rasp Handle Standard Hook Coupling and Handle Adapter Hook Coupling in necessary alignment to the implant

Stem extractor with Rasp Handle bended dismantable and Handle Adapter Cylinder Coupling

- Taking into account the axis of the stem, screw the *Handle Adapter Cylinder Coupling* into one of the two drill-holes of the *Stem extractor* until the cone is firmly in position (Figure 7).
- Connect the *Rasp Handle bended dismantable* to the *Handle Adapter Cylinder Coupling* (Figure 7 and 8).

Note:
Before use the tread has to be moisted using ultra pure water.

Figure 7: Stem extractor with screwed-in Handle Adapter Cylinder Coupling and Rasp Handle bended dismantable (detailed view)

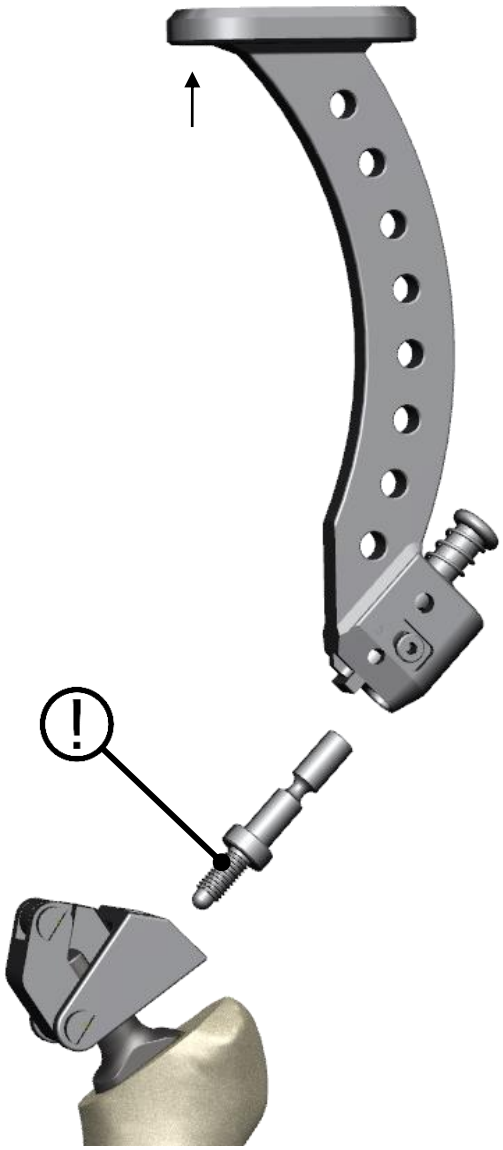

Figure 8: Stem extractor with Rasp Handle bended dismantable and Handle Adapter Cylinder Coupling in necessary alignment to the implant

Stem extractor with IMT adapter for Stem extractor

- Taking into account the axis of the stem, screw the *IMT adapter for Stem extractor* into one of the two drill-holes of the *Stem extractor* until the cone is firmly in position (Figure 9 and Figure 10).

Note:
Before use the tread has to be moisted using ultra pure water.

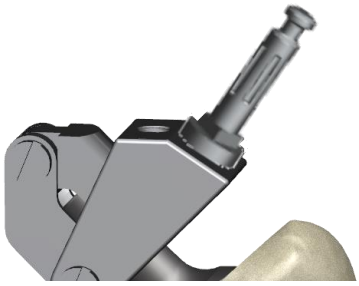

Figure 9: Stem extractor with IMT adapter for Stem extractor (detailed view)

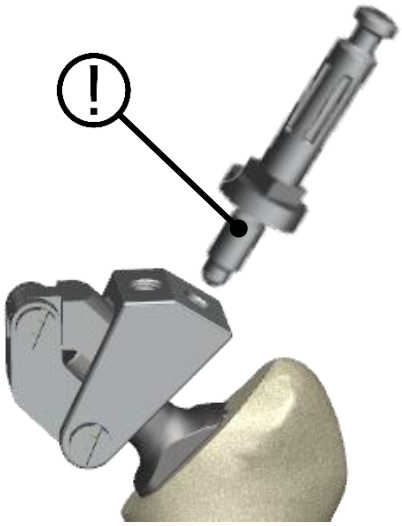

Figure 10: Stem extractor IMT adapter for Stem extractor in necessary alignment to the implant

Stem extractor with Rasp handle straight and Adapter modular

- Taking into account the axis of the stem, screw the *Screw for Adapter modular* into one of the two drill-holes of the *Stem extractor* until the cone is firmly in position (Figure 11). Connect the *Screw for Adapter modular* with the *Extraction piece for adapter modular* (Figure 13).
- Connect the *Rasp handle straight* to the *Adapter modular* (Figure 11 and 12).

Note:
Before use the tread has to be moisted using ultra pure water.

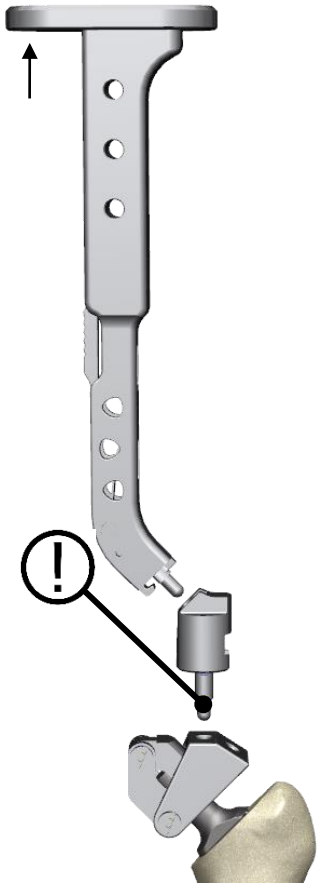

Figure 12: Stem extractor with Rasp handle straight and Adapter modular in necessary alignment to the implant

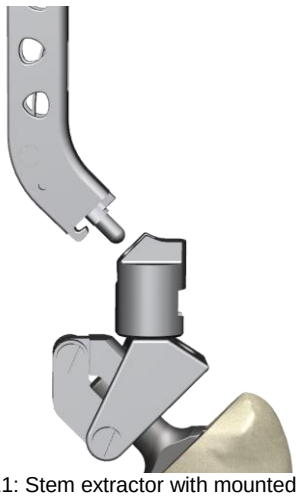

Figure 11: Stem extractor with mounted Adapter modular and Rasp handle straight (detailed view)

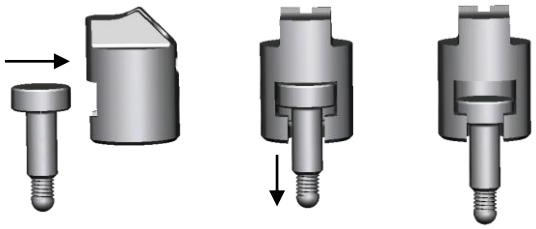

Figure 13: Connection of the Screw for Adapter modular with the Extraction Piece for Adapter modular

Using the Stem extractor

The seat of the hip stem endoprosthesis in the femur must be loosened beforehand using suitable, customary methods. Only then may the shaft extractor be connected to the cone as described above. The endoprosthesis should be extracted from the implantat bed with moderate hammer blows against the striking plate of the rasp handles or with moderate blows of the combination of extractor and impact weight along the femoral axis toward the center of the body. It is imperative to avoid damaging the remaining structure of the femur bone. Then proceed with the operation as routine.

STEM EXTRACTION INSTRUMENTS

Extraction instrument set for femoral stems with 12/14 cone (Art. no. 206-010)

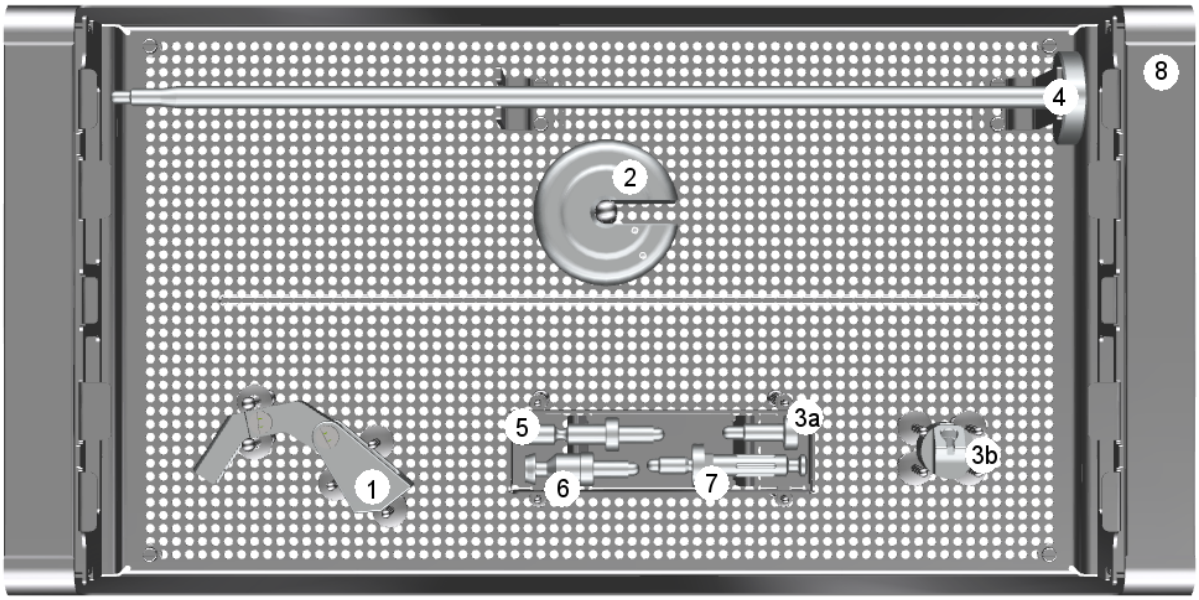

Figure 14: Extraction instrument set for hip stems with 12/14 cone

No.	Instrument	Art. no.
1	Stem extractor for 12/14 cone	206-009
2	Modular Weight	506-2107
3	Handle Adapter modular for Stem Extractor	367-1300
3a	Screw for Adapter modular	367-1300 I/II
3b	Extraction piece for adapter modular	367-1300 II/II
4	Extractor Bar M8, L=430mm	367-1250
5	Handle Adapter Cylinder Coupling for Stem Extractor	506-074
6	Handle Adapter Hook Coupling for Stem Extractor	506-075
7	IMT adapter for Stem extractor	334-106
8	Tray Instrument Set for Extraction Femoral Stem for Cone 12/14	206-011

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