



Surgical Technique

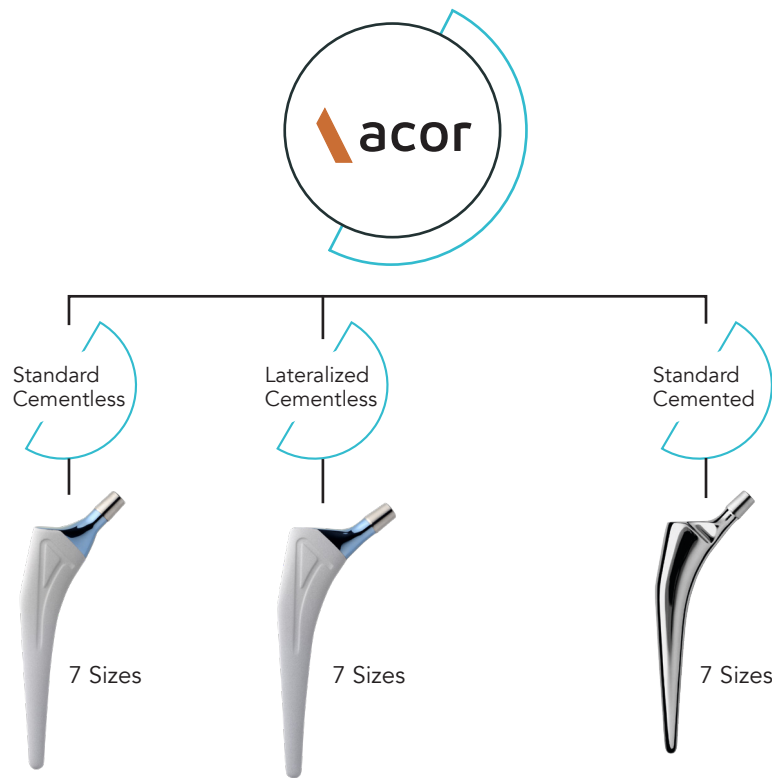


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Concept and range



Ceramic



Diameters
28 - 32 - 36 mm
biolo^x delta

Ceramic revision

Diameters
28 - 32 - 36 mm
biolo^x delta

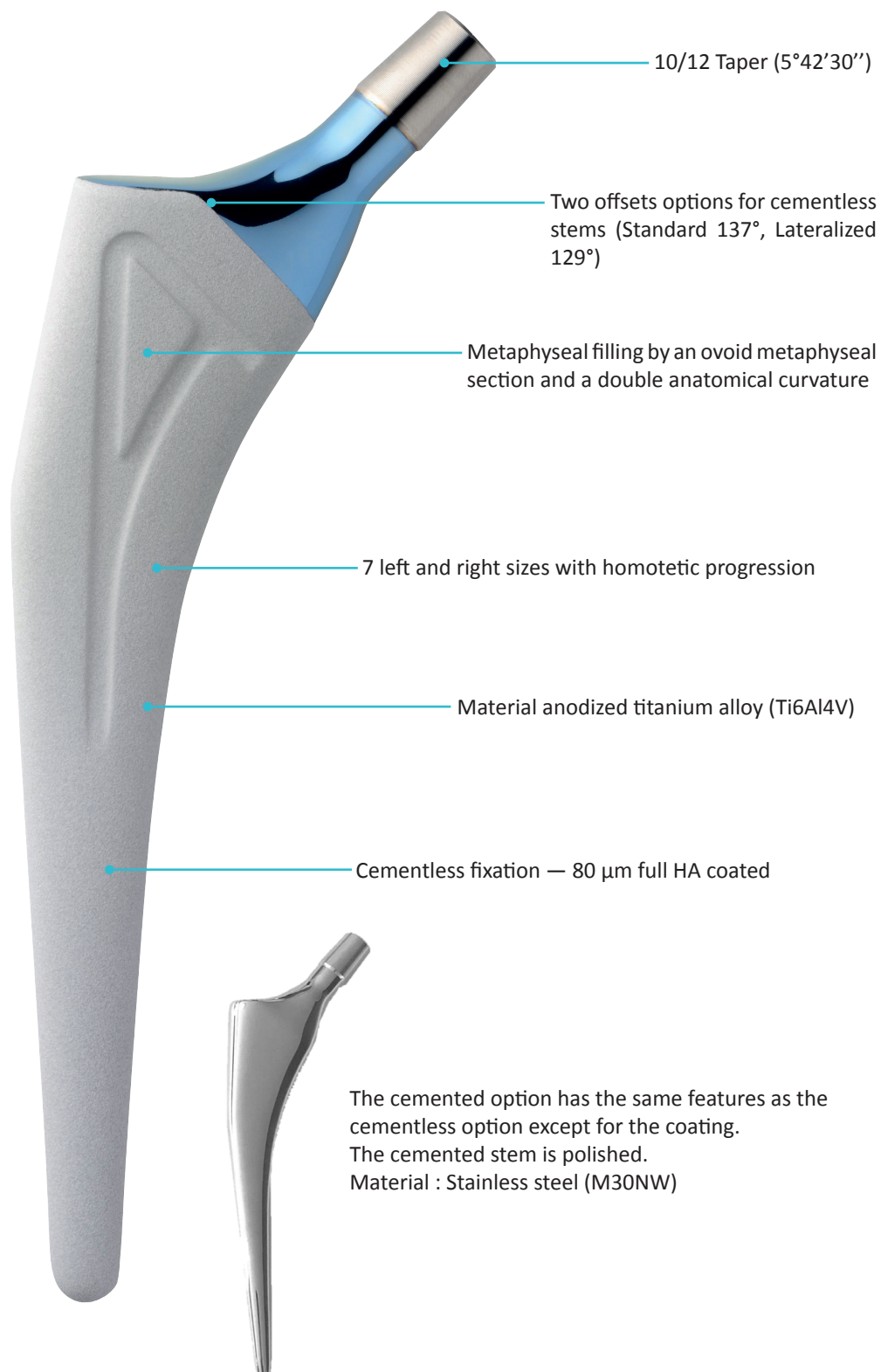
Metallic



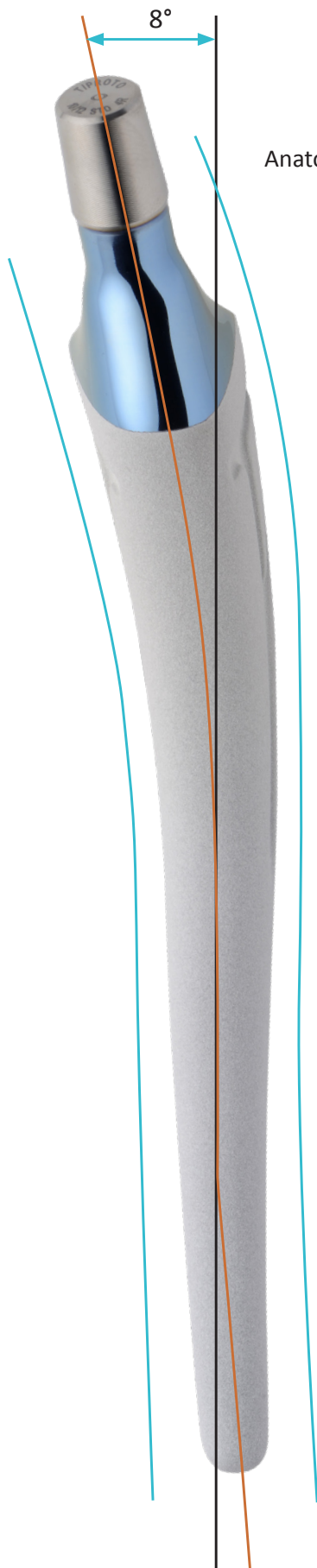
Diameters
22.2 - 28 - 32 mm
M30NW

Concept and range

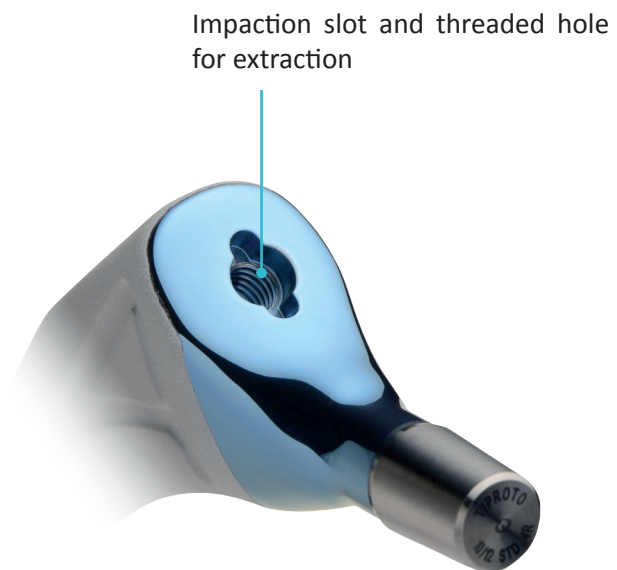
Range of anatomical stems, available in several versions:
Standard or lateralized cementless stem, standard cemented stem.
Identical intramedullary characteristics for all versions.



Concept and range



Anatomic shape with a 8° metaphyseal antversion

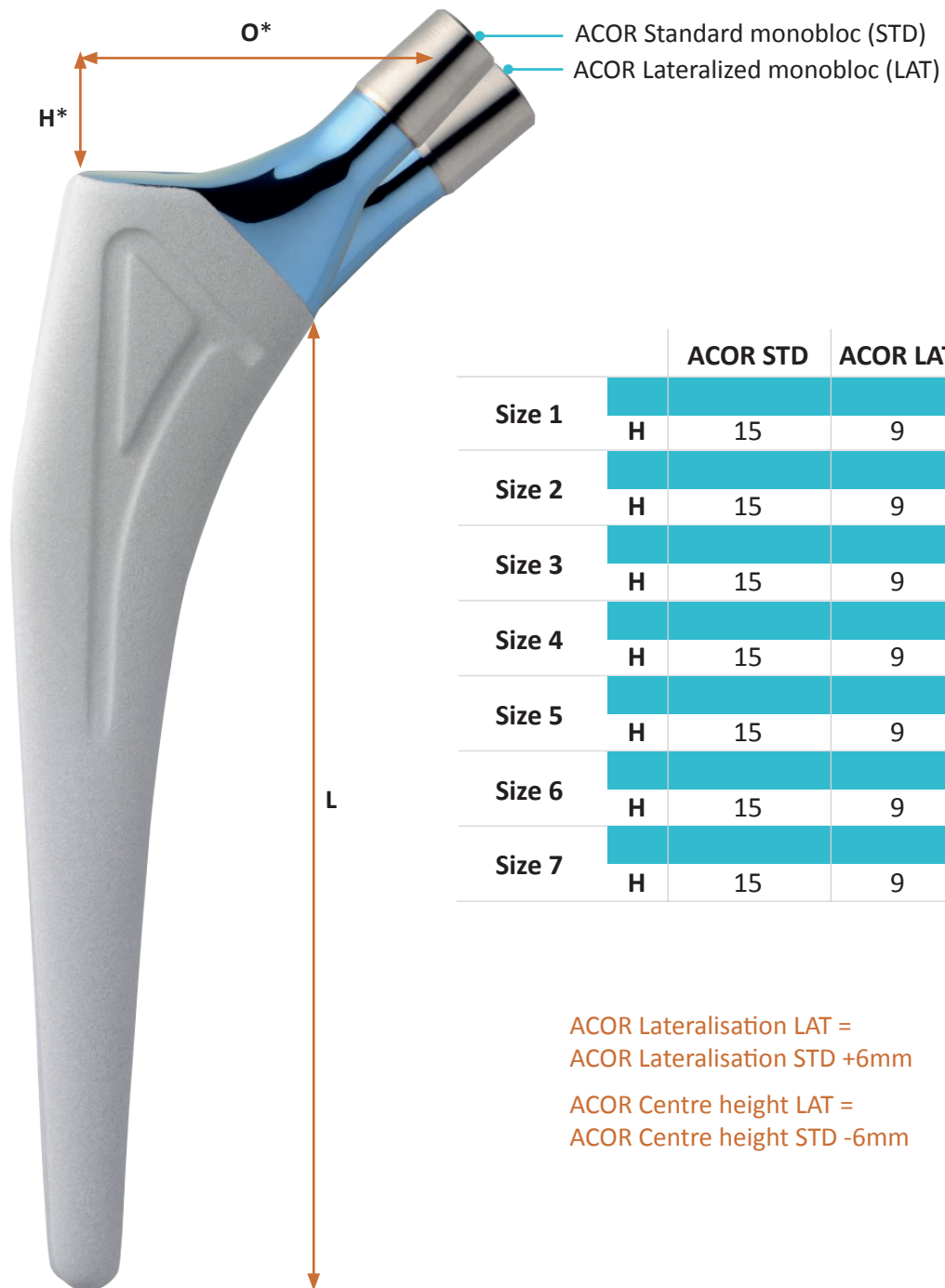


Impaction slot and threaded hole for extraction

Weight limitations:

The Acor lateralized anatomic cementless femoral stem Size 1 is not recommended for patients over 60 kg.

Concept and range



		ACOR STD	ACOR LAT	Length
Size 1	H	15	9	98
Size 2	H	15	9	104
Size 3	H	15	9	110
Size 4	H	15	9	116
Size 5	H	15	9	122
Size 6	H	15	9	128
Size 7	H	15	9	134

ACOR Lateralisation LAT =
ACOR Lateralisation STD +6mm

ACOR Centre height LAT =
ACOR Centre height STD -6mm

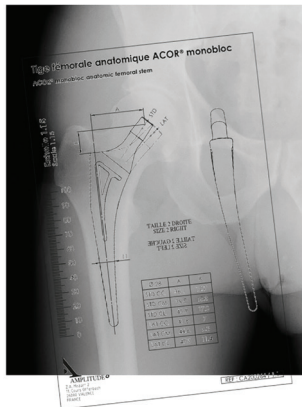
*Diaphysis distance – Head centre medium neck



Surgical technique overview

1

Pre-operative
planning



2

Neck resection & Femoral
canal preparation



3

Broaching



4

Trials on broach



Surgical technique overview

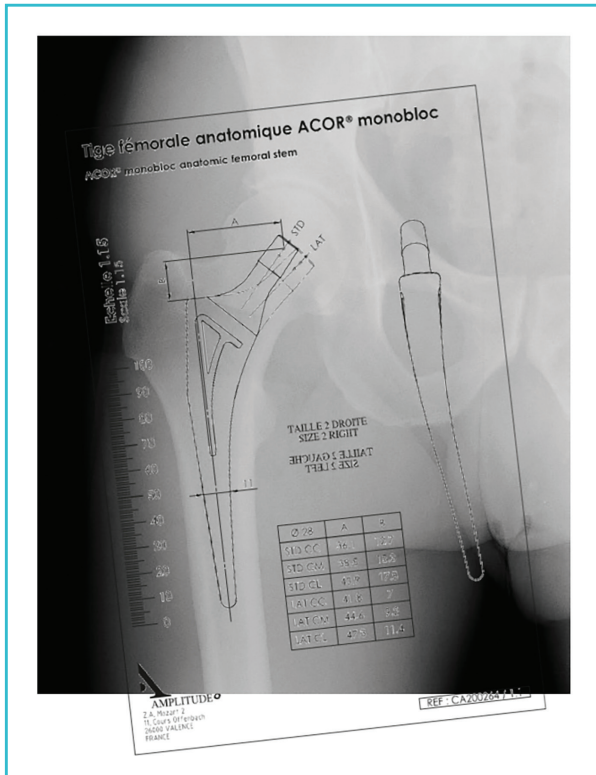
5 Final stem impaction



6 Final Head impaction



1 Pre-operative planning



Planning is an important step in selecting the most appropriate implant to restore the patient's anatomy. It must take into account quantitative and qualitative factors (bone quality, bone density, patient morphology).

ACOR femoral stem is available in Standard or Lateralized version :

Compare the healthy side to the operated side. Template the healthy side first. This is especially important if the femoral head is deformed. Then trace the operated side and note the femoral cut level, stem size and the new femoral centre.

The implant size must allow for a good metaphyseal filling.

Select the suitable stem. The cut level of the neck must allow a good restoration of the lower limb and femoral offset.

Record and measure the neck resection level to use it as a reference during the surgery.

Determine and adjust the length of the prosthetic neck to restore the leg length.

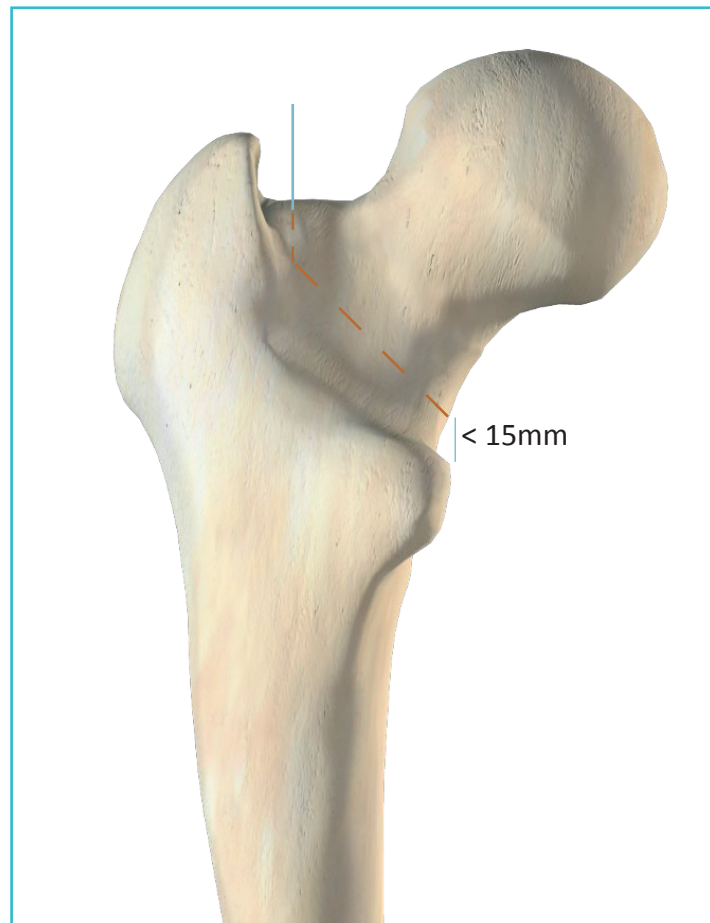
REMINDER

The purpose of this surgical technique description is to provide instructions on how to use the instrumentation properly. The surgeon is fully responsible for choosing and performing the approach and surgical technique.

NOTE

Templates are provided at 115% scale. Other magnifications and digital templates are available on request.

2 Neck resection



Identify the anatomical landmarks, lesser trochanter, greater trochanter, piriformis fossa).

Determine the cervical cut level as defined during the pre-operative planning step. It is usually located 15 mm up to the lesser trochanter.

Identify the resection level onto the bone in relation to the selected landmarks. The neck can be cut before or after the dislocation of the femoral head, taking care to protect soft tissues.

When the cut is achieved lower, a second vertical cut can be required, at the base of the neck and greater trochanter. Adjustments can be made onto broach if necessary.

3 Femoral canal preparation



Canal opening

Retraction of the gluteus medius and removal of the lateral cortical bone at the piriformis insertion will permit true axial introduction of the instruments and implant. Use the box chisel to start preparing the metaphyseal area by removing cortical bone, passing close to the medial side of the greater trochanter at its junction with the neck.

Assemble the box chisel on the broach handle to start the preparation of the metaphysis according to the preoperative planning. This preparation is important to avoid varus positioning

Canal preparation

Assemble the 12*10 reamer on the T-handle. Push it down into the femoral canal to prepare it for broaching making sure to stay in the femoral shaft axis.



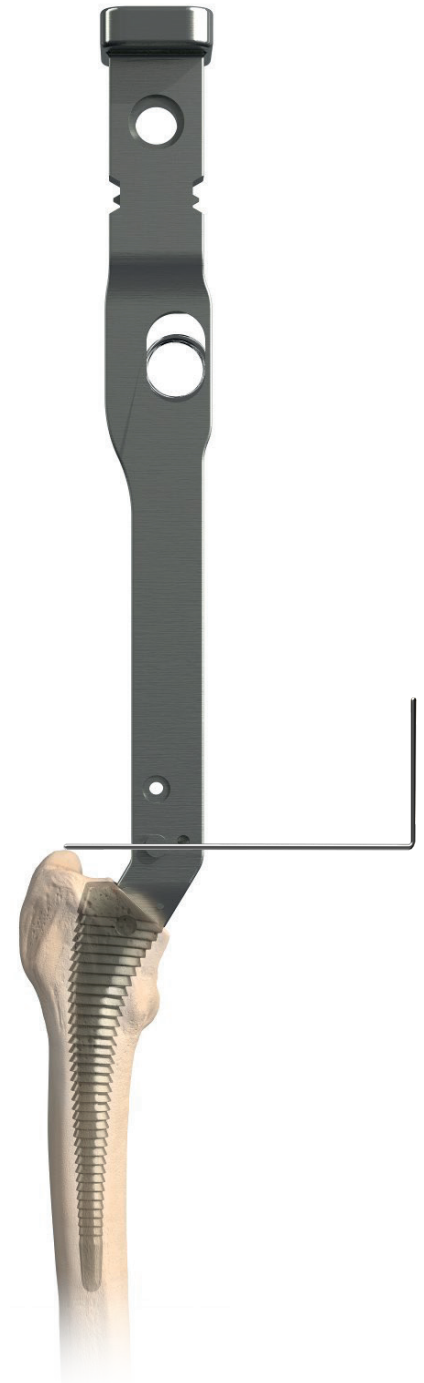
4 Broaching

Broaching is performed beginning with the size 1 broach corresponding to the operated side (Grey broach = Left - Golden broach = Right). Assemble it to the broach handle adapted to surgical approach. The broach should be oriented in line with the femoral axis. Impact the broach down the femur.

The progressive preparation is performed using broaches of increasing sizes, until optimal metaphyseal fit, good rotational and axial stability is achieved. The depth corresponds to the junction between the broach and the broach handle. Make sure this junction visible when the last broach is inserted. It is possible to check the impaction level by inserting the blunt K-wire into the broach handle (horizontal projection of head centre with medium neck).

In order to prevent any varus position, attention must be paid to introduce the broaches in the anatomical axis.

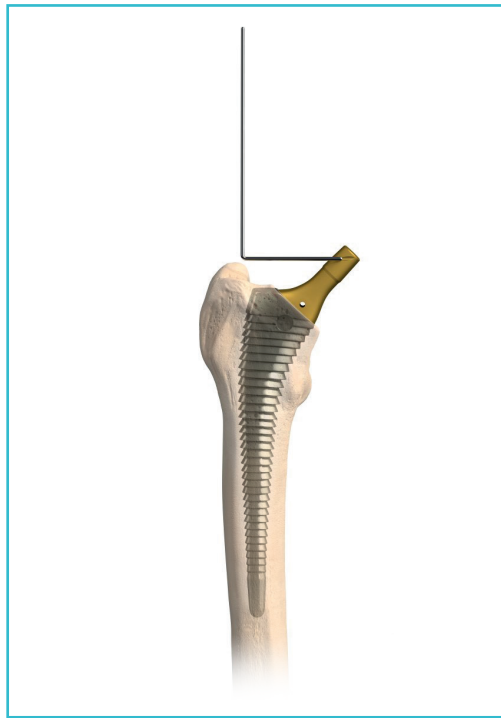
The size of the last broach is usually the same as the size templated. Leave the last broach in the femur and remove the broach handle.



NOTE

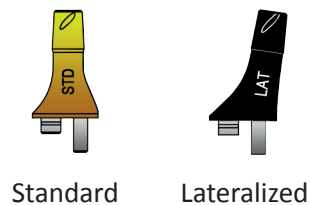
It is important to have good femoral filling with the broach and good rotational stability.

5 Trials on broach



Select the trial neck corresponding to what was determined during planification.

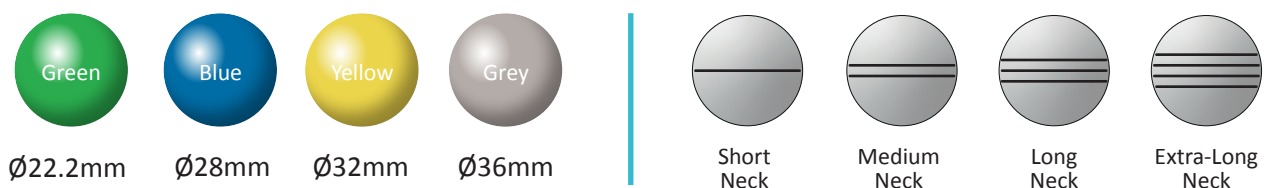
Place the trial neck of the desired offset on the broach in place :



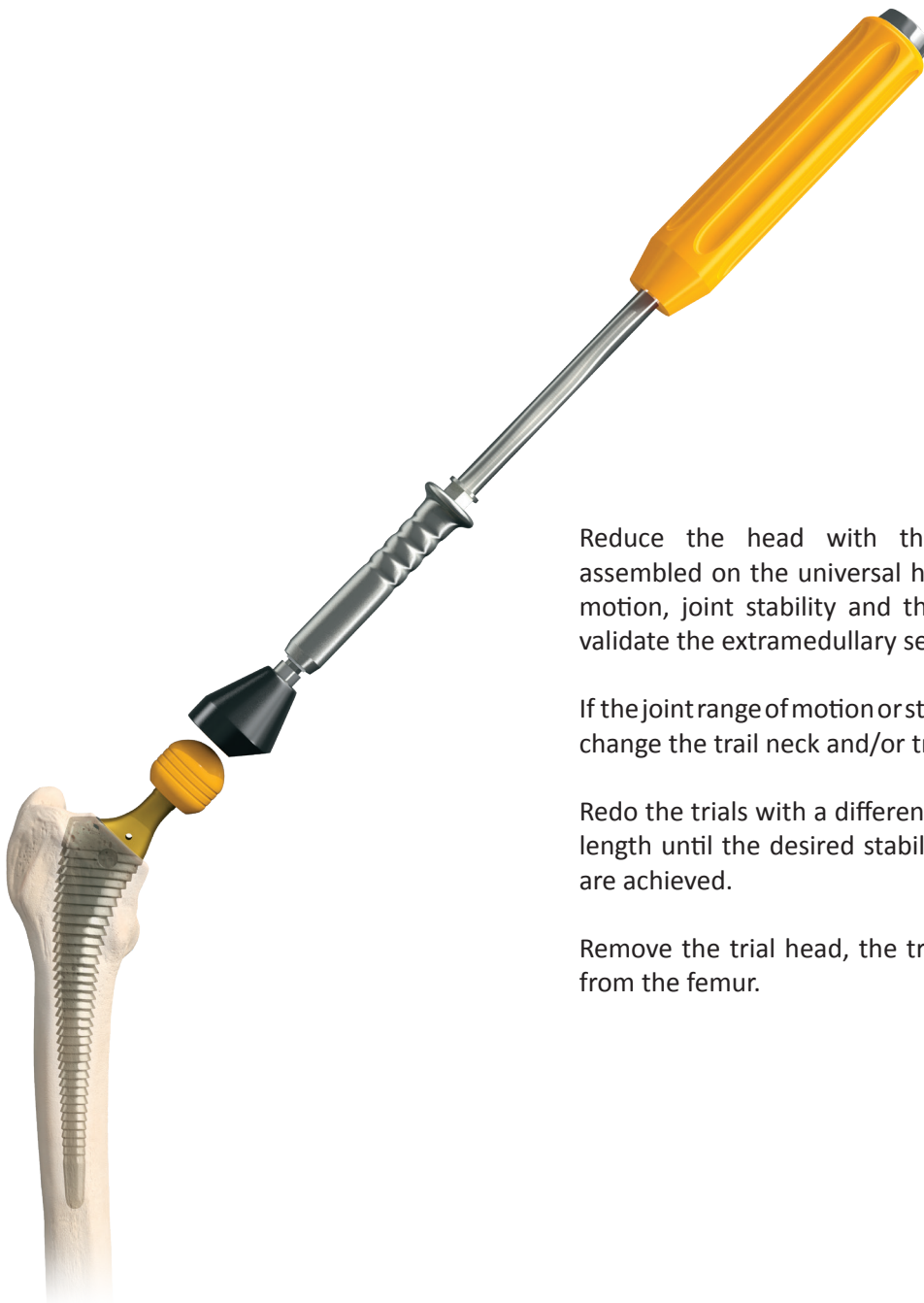
Please refer to table page 8 for offset values corresponding to the different options.

Check the height of the head centre relative to the anatomical landmark by placing the blunt K-wire on the trial neck slot (horizontal projection of the femoral head with medium neck to 0 mm).

Select and place a trial head of the desired length and diameter on the trial neck.



5 Trials on broach



Reduce the head with the neck-head impactor assembled on the universal handle. Test the range of motion, joint stability and then check the length to validate the extramedullary settings.

If the joint range of motion or stability are unsatisfactory, change the trail neck and/or trial head length.

Redo the trials with a different trail neck and /or head length until the desired stability and range of motion are achieved.

Remove the trial head, the trial neck and the broach from the femur.

NOTE

The femoral neck can be recut directly on the broach.

NOTE

Keep the chosen broach, modular neck on broach and femoral head on the table to serve as a reference for the final implanted components.

6 Final stem impaction : Cementless stem

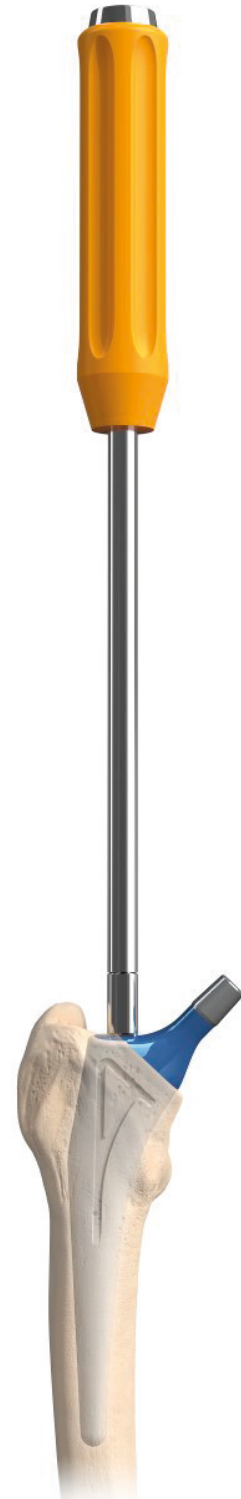
Select the ACOR femoral stem that matches the size model and side chosen during the trials (Standard or Lateralized).

Manually position the stem in the prepared femoral canal.

Place the stem **impactor for monobloc stem** in the impaction oblong hole on top of the stem being implanted.

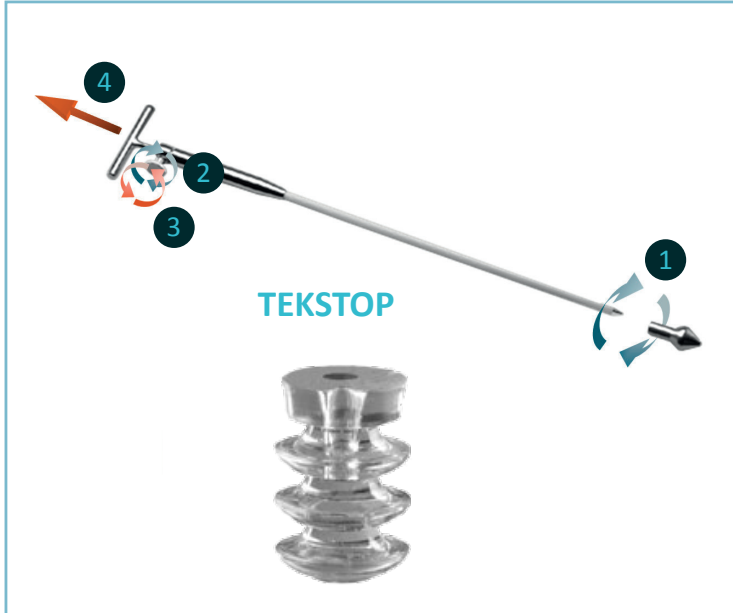
Impact the stem until adequate stability is achieved. HA border corresponds to the junction between broach and broach handle. Remove the stem impactor.

If necessary, redo a trial with a trial head.



6 Final stem impaction : Cementless stem

Diaphyseal obturator introduction



Wash and dry the intramedullar femoral cavity. Femoral canal obturation should be performed according to the surgeon's habits. The AMPLITUDE range offers the TEKSTOP bioabsorbable restrictor and a non absorbable UHMWPE restrictor.

Introduce the cement restrictor according to following instructions depending on the model used:

TEKSTOP:

Based on femoral canal preparation, determine in the instrumentation the adequate trial «olive» diameter and assemble it on the handle by threading it completely **1**.

Tighten the holding screw on the body of the inserter **2**.

Compare the length with the validated broach by using a landmark that can be used to determine adequate insertion depth.

Insert in the femoral canal until determined depth is reached to assess the diameter. Repeat trials until diameter has been validated. Remove the trial «olive» by unthreading it.

Choose the TEKSTOP restrictor of the same size as the validated trial «olive». Assemble it on the inserter and insert it in the femoral canal.

Unthread the holding screw **3** and pull the handle to leave the TEKSTOP in place **4**.

Non absorbable cement restrictor:

Assemble the non-absorbable restrictor on the introducer.

A graduation on the inserter indicates insertion depth. Compare with the validated broach by using a landmark that can be used to determine adequate insertion depth. Add 1 cm to ensure positioning well below the stem.

Insert in the femoral canal until determined depth is reached.

Remove the inserter to leave the restrictor in place.

NOTE

Follow the instruction for use of the cement being used.

6 Final stem impaction : Cemented stem

Select the ACOR femoral stem that matches the size model and side chosen during the trials.

Manually position the stem in the prepared femoral canal and remove the excess of cement.

Ensure that the stem is held in place until the complete polymerisation of the cement thanks to the impactor for the monobloc stem.

If necessary, redo a trial with a trial head.



7 Final head impaction



Select final femoral head that matches settings validated during trials.

Before placing the head on the stem :

Carefully rinse and dry the stem taper,
Meticulously inspect the stem taper and female head taper,
remove any foreign body.

Impaction of a metallic or ceramic head:

Manually place the head onto stem taper by gently turning it while pushing it along the taper axis until it is firmly seated. Use the head impactor assembled on the universal handle to impact it axially.

Reduce the joint.

Impaction of a metallic or ceramic revision head:

Manually assemble, on the table, the metallic sleeve in the ceramic head until feeling a resistance. Manually place the head onto stem taper by gently turning it while pushing it along the taper axis until it is firmly seated. Use the head impactor assembled on the universal handle to impact it axially.

Reduce the joint.

Implants extraction (optional)

Remove the femoral head (by tapping around the base of the head).

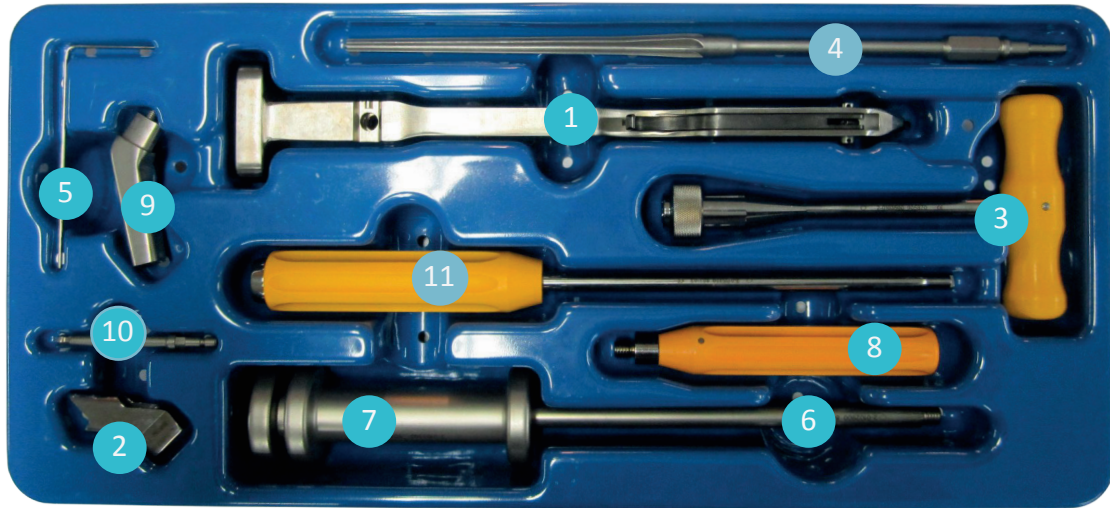


Assemble the slap hammer weight onto the slap hammer shaft and screw both components into the slap hammer tip. Tightly screw the slap hammer tip into the upper portion of the stem and extract it.



Instrumentation

ACOR instrumentation set



Rep	Description	Reference	Qty
1	Straight broach handle - coventional / navigated	2-0116901	1
2	Box chisel	2-0116300	1
3	Reamer handle	2-0103500	1
4	Reamer 12 x 10	2-0103612	1
5	Alignment pin \varnothing 2 A/P	2-0114000	1
6	Slap hammer shaft	2-0102900	1
7	Slap hammer weight	2-0103300	1
8	Holding handle	2-0104200	1
9	Modular femoral stem extractor	2-0116000	1
10	Spherical tip H.5	2-0115700	1
11	Modular femoral stem impactor	2-0115900	1

Instrumentation

ACOR instrumentation set



Rep	Description	Reference	Qty
1	Trial modular neck on broach - LATERAL	2-0116401	1
1	Trial modular neck on broach - MEDIAL	2-0116402	1
1	Trial modular neck on broach - LATERAL PLUS	2-0116403	1
1	Trial modular neck on broach - MEDIAL PLUS	2-0116404	1
1	Trial modular neck on broach - ANTE LEFT / RETRO RIGHT 8°	2-0116405	1
1	Trial modular neck on broach - ANTE RIGHT / RETRO LEFT 8°	2-0116406	1
1	Trial modular neck on broach - LATERAL +10.5	2-0116409	1
1	Trial modular neck on broach - MEDIAL +10.5	2-0116410	1
2	Trial modular neck on stem - LATERAL / MEDIAL	2-0116101	1
2	Trial modular neck on stem - ANTE / RETRO 8°	2-0116102	1
2	Trial modular neck on stem - LATERAL PLUS / MEDIAL PLUS	2-0116103	1
2	Trial modular neck on stem - LATERAL / MEDIAL +10.5	2-0116105	1
3	Trial head on stem Ø22.2 Short / Medium / Long neck	2-0100405 to 2-010407	1 of each
4	Trial head on stem Ø28 Short / Medium / Long / Extra- Long neck	2-0100401 to 2-0100404	1 of each
5	Trial head on stem Ø32 Short / Medium / Long neck	2-0100408 to 2-0100410	1 of each
6	Universal handle conventional/navigated	2-0117600	1
7	Femoral head gripping tip Ø22.2 / Ø28 / Ø32	2-0104322 to 2-0104332	1 of each
8	Femoral head and modular neck impactor	2-0115800	1
8	Impactor for Ø22.2 heads	2-0101400	1
9	Modular neck extractor	2-0116200	1
10	Wrench 19mm	2-0118400	1

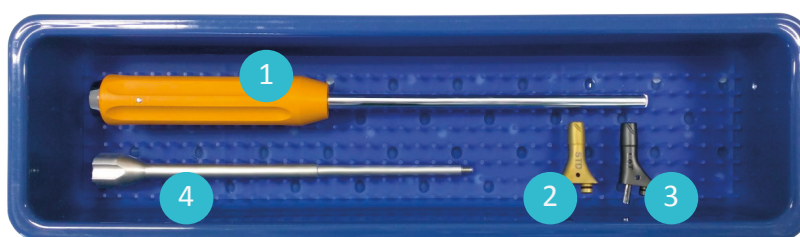
Instrumentation

ACOR instrumentation set



Rep	Description	Reference		Qty
		Left	Right	
1	ACOR femoral stem broach Size 1	2-01156G1	2-01156D1	1
2	ACOR femoral stem broach Size 2	2-01156G2	2-01156D2	1
3	ACOR femoral stem broach Size 3	2-01156G3	2-01156D3	1
4	ACOR femoral stem broach Size 4	2-01156G4	2-01156D4	1
5	ACOR femoral stem broach Size 5	2-01156G5	2-01156D5	1
6	ACOR femoral stem broach Size 6	2-01156G6	2-01156D6	1
7	ACOR femoral stem broach Size 7	2-01156G7	2-01156D7	1

ACOR Monobloc additional instrumentation set



Rep	Description	Reference	Qty
1	Monobloc femoral stem impactor	2-0100900	1
2	Trial neck on broach 10/12 standard	2-0125801	1
3	Trial neck on broach 10/12 lateralized	2-0125802	1
4	Slap hammer tip	2-0103200	1

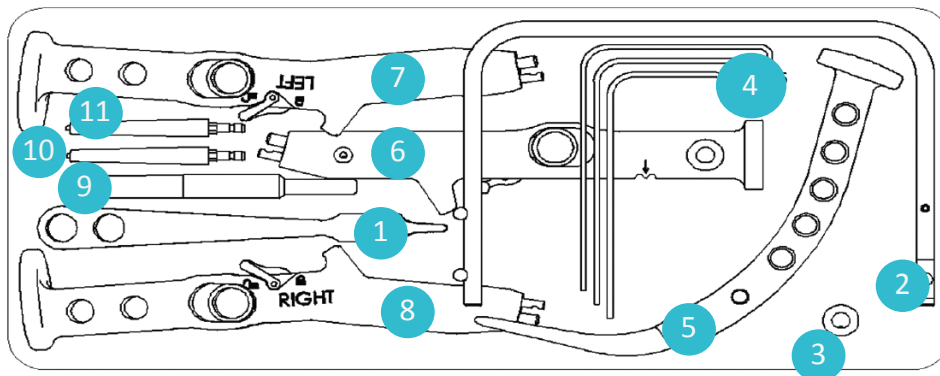
Instrumentation

Optional: Röttinger broach handles



Description	Reference	Qty
Offset left broach handle	2-0199001	1
Offset right broach handle	2-0199002	1

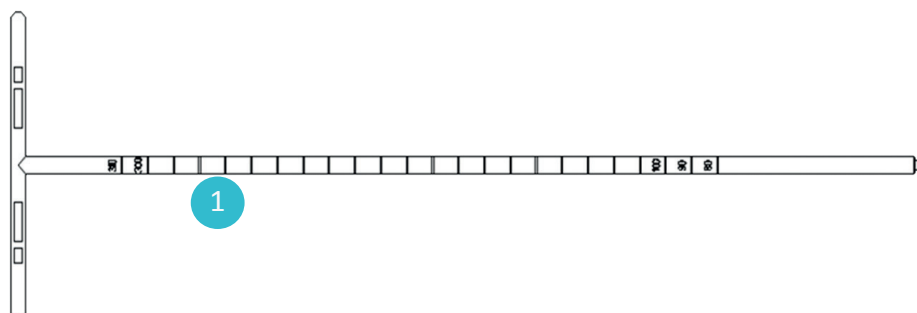
Anterior approach instrumentation set



Rep	Description	Reference	Qty
1	Dual curvature Hohmann retractors	2-0199200	1
2	Charnley retractor frame	2-0199100	1
3	Valve fixation ring	2-0120700	1
4	Valve lengths 60, 80 and 100 for Charnley retractor frame	2-0122906 to 2-0122910	1 of each
5	Femoral preparation starter broach	2-0199300	1
6	Straight broach handle for HUETER approach -navigated	2-0123000	1
7	Offset broach handle for HUETER approach - right	2-0123700	1
8	Offset broach handle for HUETER approach - left	2-0123800	1
9	Holding rod 10 / 15	2-0126100	1
10	Impactor tip - Monobloc stem - Anterior approach	2-0198401	1
11	Impactor tip - Modular stem - Anterior approach	2-0198402	1

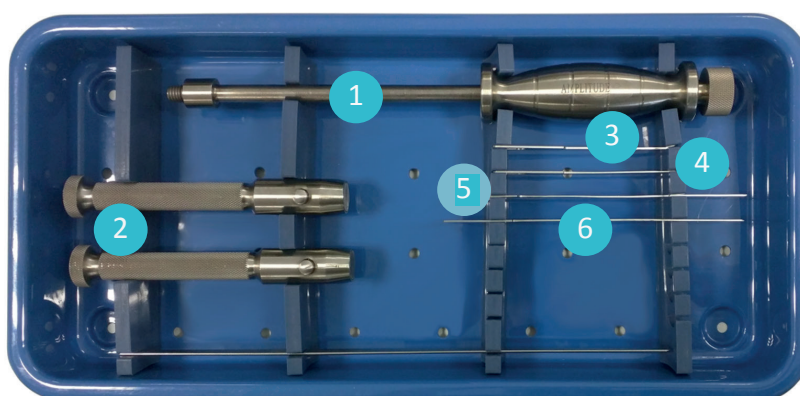
Instrumentation

Cement restrictor instrumentation set



Rep	Description	Reference	Qty
1	Inserter for cement restrictor	2-0103400	1

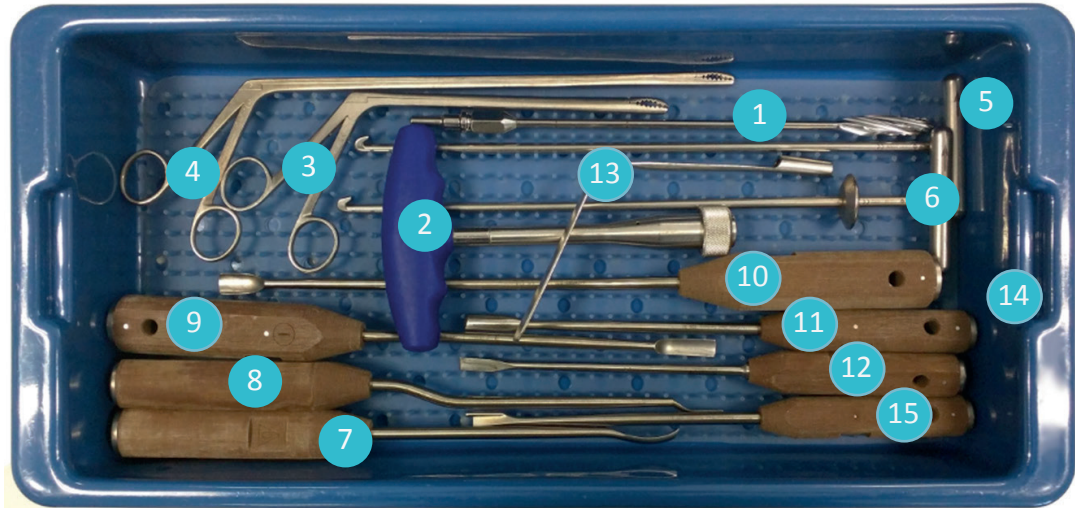
Cementless stem extraction instrumentation set



Rep	Description	Reference	Qty
1	Extraction slap hammer	12-007-000	1
2	Quick release handle	10-020-000	2
3	Flexible chisel blade 8 mm Short	2-0198801	1
4	Flexible chisel blade 10 mm Short	2-0198803	1
5	Flexible chisel blade 8 mm Long	2-0198802	1
6	Flexible chisel blade 10 mm Long	2-0198804	1

Instrumentation

Cement extraction instrumentation set



Rep	Description	Reference	Qty
1	Manual reamer 7 mm for handle 3.40.550	3-40 252	1
1	Manual reamer 8 mm for handle 3.40.550	3-40 253	1
1	Manual reamer 9 mm for handle 3.40.550	3-40 254	1
1	Manual reamer 10 mm for handle 3.40.550	3-40 255	1
1	Manual reamer 11 mm for handle 3.40.550	3-40 256	1
1	Manual reamer 12 mm for handle 3.40.550	3-40 257	1
1	Manual reamer 13 mm for handle 3.40.550	3-40 258	1
1	Manual reamer 14 mm for handle 3.40.550	3-40 259	1
2	Quick release handle	58-02-4008	1
3	Cement pincer - Short	3-30-542	1
4	Cement pincer - Long	3-30-543	1
5	Cement extraction curette	3-30-318	1
6	Cement extraction curette - 10 mm	3-30-319	1
7	Cement extracting chisel NEG 9 mm L 340 mm	3-30-312	1
8	Cement extracting chisel NEG 9 mm L 290 mm	3-30-309	1
9	Cement extracting chisel POS 9 mm L 340 mm	3-30-313	1
10	Cement extracting chisel NEG 11,5 mm L 400 mm	3-30-314	1
11	Lexer chisel 8 mm L 280 mm	3-30-304	1
12	Cup removal chisel 7.5 L 310 mm	3-30-316	1
13	Spiraled drill bit guide 6 mm	3-30-131	1
14	Spiraled drill bit 6 mm	3-40-297	1
15	Cement spilting blade 5 mm L 280 mm	3-30-307	1

NOTES



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