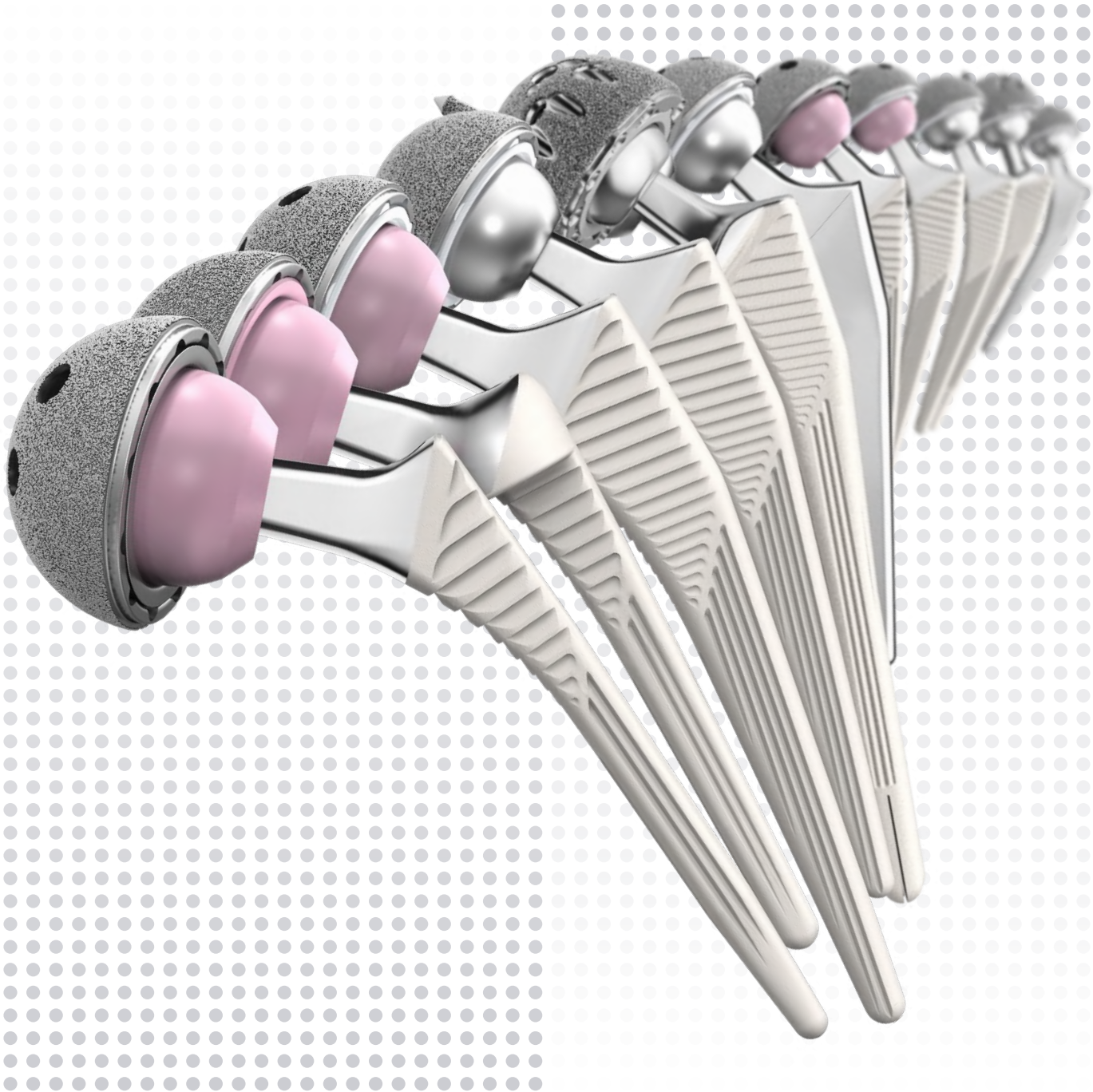
CORAIL®

Total Hip System

Surgical Technique



DePuy Synthes

THE ORTHOPAEDICS COMPANY OF Johnson & Johnson

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Preoperative Planning

The CORAIL Hip System provides preoperative templates at three different magnifications (100%, 115% and 120%). The templates are placed over the AP and lateral radiographs to help determine the implant size in order to restore the patient's natural anatomy.

When templating ensure that the prosthesis does not make cortical contact. Understand the difference between fit and fill and optimum fit.

The surgical objective is a 1-2 mm gap between the cortices and the implant. If in doubt template a size that contacts the cortex and then go down a size.

Templating should be done with a neutral +5 head centre so that the possibility to change to a short or a long neck still remains in order to adjust leg length. The preoperative templating will indicate the level of neck resection.

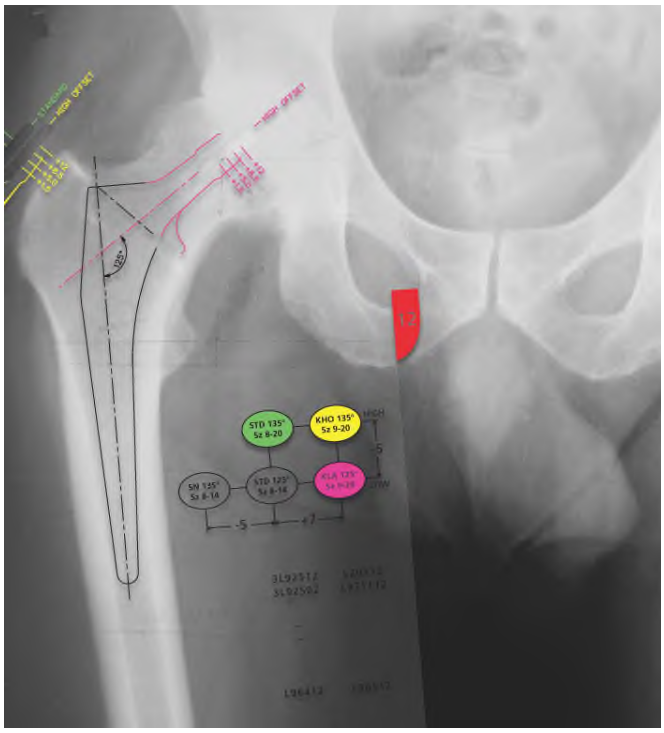


Figure 1.
Pelvis x-ray for templating.

* Footnote/Caption

Preoperative Planning

In Dorr Type A ('champagne flute') femurs (Figure 2) proper metaphyseal fit may require a larger size than the femoral canal can accommodate distally.

In these cases consideration should be given to distal reaming to enlarge the canal to accommodate a broach of the appropriate size.

Preoperative Planning Serves Two Purposes:

1. Implant selection

The ideal implant size should allow adequate femoral shaft filling while providing about 1 mm of space between the implant and the cortical walls. There must be no implant-cortical wall contact.

Templating should be done with a medium neck so that the possibility to change to a short or a long neck still remains in order to adjust leg length.

2. Reconstructing the Femoral Architecture

The purpose of the architectural reconstruction is to restore the length of the lower limb and the abductors' lever arm. These parameters are achieved by means of the type and offset of implant (STD 125/135, KHO, KLA or SN) and the femoral neck cutting level.

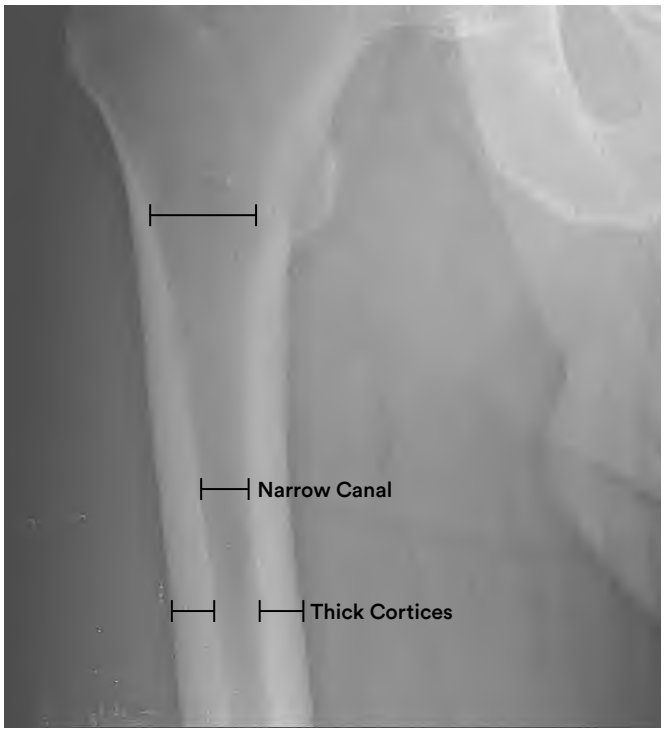


Figure 2.
Example of a DORR Type A femur.

* Footnote/Caption

Femoral Neck Resection

The level of the neck cut, defined during the pre-op planning, is achieved using anatomical landmarks (lesser trochanter, trochanteric fossa, greater trochanter) and a graduated ruler.

A broach aligned with the femoral diaphyseal axis can enable the 45° slanting of the cutting plane to be visualised. If the resection is too high, it may result in a varus positioned stem.

■ **Note:** The osteotomy can be performed in one or two steps depending on the surgeon's preference.

Figure 3.

Femoral Canal Preparation

Preparation of the Entry Point

It is important to select a point of entry posterolaterally to the Piriformis Fossa to avoid varus positioning. Use a curette or general instrument to indicate the direction of the canal.

To prevent under-sizing or varus positioning, the greater trochanter may be prepared with a Modular Box Osteotome (2598-07-530) to allow better insertion of the broaches.

Figure 4.

Visualisation of the Medullary Canal Axis

The medullary canal axis is determined using the femoral canal explorer. Its entry point must be postero-lateral, near the trochanteric fossa. The Canal Explorer (L94018) comprises an 8 mm “bullet” end piece that enables the width of the distal femoral canal to be assessed. The tip of the canal explorer is larger than the distal AP part of the size 8 stems.

■ **Tip:** At this stage, a Type A femur should be identified. In such cases, distal reaming could be carried out in principle followed by compaction broaching.

Figure 5.

Femoral Canal Preparation

Cancellous Bone Compaction

Use the Modular Bone Impactor (L94013) to compact the cancellous bone proximally. This is an important step as the philosophy of the CORAIL Stem is based on bone preservation.

Compaction Broaching

The compaction of the cancellous bone is continued using specific atraumatic broaches. This process begins with the smallest size broach, along the axis provided by the femoral canal explorer. Ensure that broaching is started posterolaterally. The broach should run parallel to the posterior cortex following the natural anatomy of the femur.

Begin with the smallest broach attached to the broach handle and increase the size of broach sequentially until longitudinal and rotational stability is achieved, broaching should then be stopped.

Careful preoperative planning is key to help selection of the final broach size. The version will be determined by the natural version of the femur.

If concern around sizing still exists, intraoperative x-rays could be considered, where available.

■ **Note:** In relation to the planned size, should vertical (subsiding) stability fail to be achieved, check for false route and/or calcar fracture.

Figure 6.

Figure 7.

Calcar Reaming

Leave the last broach in place and use the Shielded Calcar Planer to achieve a flat resection surface. The calcar reaming should allow an optimised fit of the collar on the calcar.

The small shielded calcar reamer (940080007) is to be used for sizes from 8 to 12. The large shielded calcar reamer (L94010) is to be used for sizes 13 and above.

■ **Note:** Ensure all soft tissue is clear before performing calcar reaming.

Figure 8.

Trochometer (Optional)

The trochometer (L94024) is placed on the last broach inserted. Using the trochometer ruler (L94025), the level of the centre of head is checked relative to the apex of the greater trochanter. The grooves correspond to the various implant styles (STD 125/135, KHO, KLA or SN) with a neutral (+5) head.

■ **Note:** If broach is in varus or valgus position in accordance with preoperative planning you must be aware that the head centre level indicated by the trochometer maybe affected.

Figure 9.

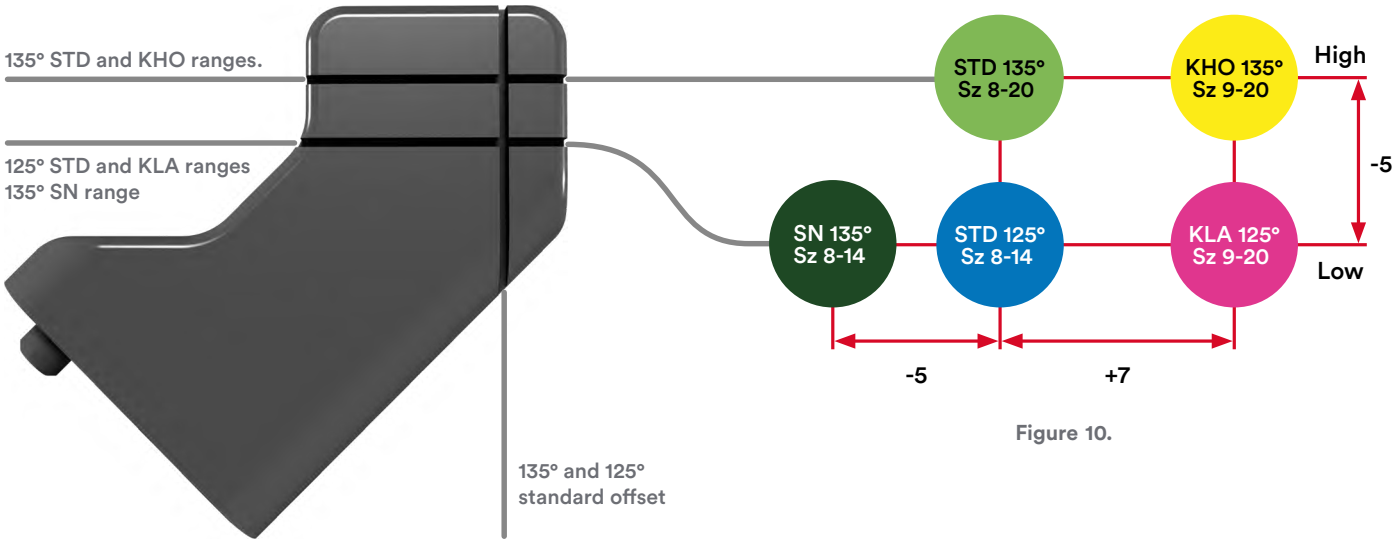


Figure 10.

Trial Reduction

With the final broach in situ, attach the appropriate trial neck and trial head. Reduce the hip and assess what adjustments, if any, are required to ensure stability through a full range of motion.

Trial Implant Removal

The trial neck should then be removed. The broach stability including subsidence or rotation should be checked again using the handle to prove that it has not been affected by the previous test. This also confirms the reliability of the compacted cancellous bed. Should the broach seem to have lost its stability, the broach that is the next size up should be inserted.

The last femoral broach is then removed. The femoral canal **should not** be irrigated or dried in order to preserve the quality of the compacted cancellous bone and promote osteointegration of the stem. The surgeon can then request the selected implant size. The CORAIL Stem can then be implanted.

Figure 11.

Femoral Component Insertion

▲ **Important Note:** The protective covers should be left on until the components are ready to be implanted. Before implanting a femoral head, the male taper on the femoral stem must be wiped clean of any blood, bone chips or other foreign materials. When implanting the definitive stem (that has the same size as the final broach) in the femoral canal, ensure that it is directed in by hand. It must be held by the taper protection sleeve. This will help avoid changing the version as a precautionary measure. You should not have more than a thumb's breadth between the resection line and the top of the HA coating on the stem. If the stem does not readily go down this far, the surgeon should broach again. If the HA level of the stem sinks below the resection line, the surgeon should consider a larger stem or using a collar. Then lightly tap the stem impactor (2570-05-100) to fully seat the stem so the HA coating sits level with the milled femoral neck cut.

Once the femoral stem has been implanted, the calcar should be checked for possible damage such as cracks. If a crack is discovered, this should be wired into place.

■ **Note:** The stem is slightly larger than the broach in order to ensure the press-fit function. This volume difference corresponds to the thickness of the HA coating, 155 µm on either face of the implant.

Figure 12.

Femoral Component Insertion

Bone Grafting (Optional)

Once the CORAIL Stem is fully seated, cancellous bone from the resected femoral head is added around the proximal part of the stem using the bone tamp to seal the femoral canal and to reduce the time for osteointegration which provides definitive stability.

Figure 13.

Femoral Head Impaction

A final trial reduction is carried out to confirm joint stability and range of motion. A DePuy Synthes 12/14 head must be used. Clean and dry the stem taper carefully to remove any particulate debris. Place the femoral head onto the taper and lightly tap it (especially if a ceramic head is used) using the head impactor (200165000). Ensure bearing surfaces are clean and dry and finally reduce the hip.

Figure 14.

Non-Osteointegrated Stem Extraction

▲ **Warning:** Please be aware that the Modular Non Osteo-Integrated Extractor is not in the CORAIL upgrade Kit. Components which make up the Modular Non Osteo-Integrated Extractor can be ordered separately.

If the stem becomes blocked in an incorrect position, sits proud or subsides, it must be removed. This is carried out using a threaded pin screwed into the CORAIL Stem and linked to the modular handle. The strike plate is screwed into the other side of the Modular Handle (L94026) (Figure 13).

In order to optimise the use of the instrument, it is essential to ensure that the threaded rod is fully screwed into the CORAIL Stem during the extraction.

Once the stem is removed, broaching should be resumed with the last used broach to remove the blockage. The extractor is not to be used to extract osteo-integrated stems.

■ **Note:** The extractor screw (the one locking the plate to the handle) must be tightened regularly when extracting a stem (to prevent any loosening of the plate or the screw itself).

Surgical Technique

▲ **CAUTION:** This section is for Size 6 Stems only. This stem is contraindicated with hemiarthroplasty surgery. This stem must not be implanted in patient weighing more than 60kg (130lb). All 12/14 heads available in the DePuy Synthes Portfolio are compatible with this stem. The maximum offset for the head is limited to 13 mm.

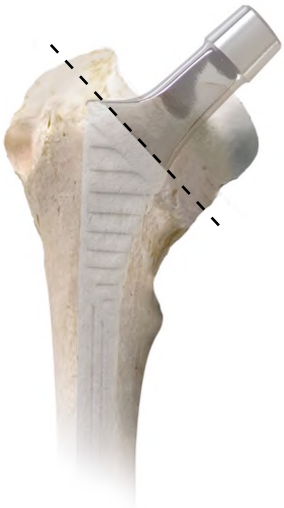
Preoperative Planning

X-ray templates are used during the pre-operative planning to define the femoral neck cutting plane, the degree of lateralisation and the positioning of the cup inside the native acetabular cavity.

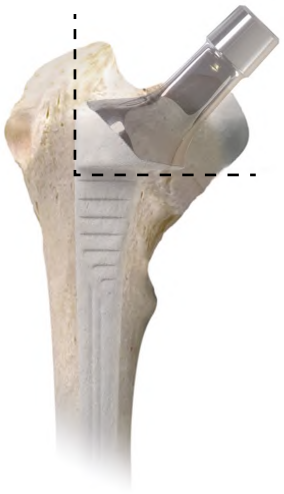
Preop templating

Femoral Neck Resection

Following exposure of the proximal femur, the first neck cut is made higher than the one planned, in order to remove the femoral head. The second neck cut will depend on the implant chosen during the pre-operative planning. If the implant chosen is the K6S, then the neck cut will be a 45° angle cut. If the implant chosen is the K6A, then the neck cut will be biplaner as identified.



Implant K6S



Implant K6A

Surgical Technique

Femoral Canal Preparation

The axis of the femoral cavity is then located using a curette.

Implant K6S

Implant K6A

Trial Reduction

The femoral cavity is prepared using the single monobloc broach specific to each type of implant.

The chosen broach is inserted firmly down to the level of the cervical cutting plane.

Implant K6S

Implant K6A

Surgical Technique

Femoral Component Insertion

▲ **Important Note:** The protective covers should be left on until the components are ready to be implanted. Before implanting a femoral head, the male taper on the femoral stem should be wiped clean of any blood, bone chips or other foreign materials.

The trial stem is introduced to the prepared cavity.

Joint mobility and stability tests can be carried out using trial heads.

Implant K6S Implant K6A

Femoral Head Impaction

The stem is introduced by hand first and then impacted down to the level of either the hydroxyapatite coating in case of the K6S or at the level of the trochanteric bearing in case of the K6A.

A final trial reduction is carried out to confirm joint stability and range of motion.

▲ A DePuy Synthes 12/14 head must be used.

Clean and dry the stem taper carefully to remove any particulate debris. Place the femoral head onto the taper and lightly tap it (especially if a ceramic head is used) using the head impactor. Ensure bearing surfaces are clean and finally reduce the hip.

Implant K6S Implant K6A

Surgical Technique

▲ **CAUTION:** This section is for Cemented Stems only - HA Coated Implants must not be implanted with cement.

The canal is prepared in exactly the same way as for the CORAIL Cementless. To implant the cemented option the following additional steps are required. (For a full description, please refer to the CORAIL Primary Stem (Cementless) Surgical Technique pages 5-12).

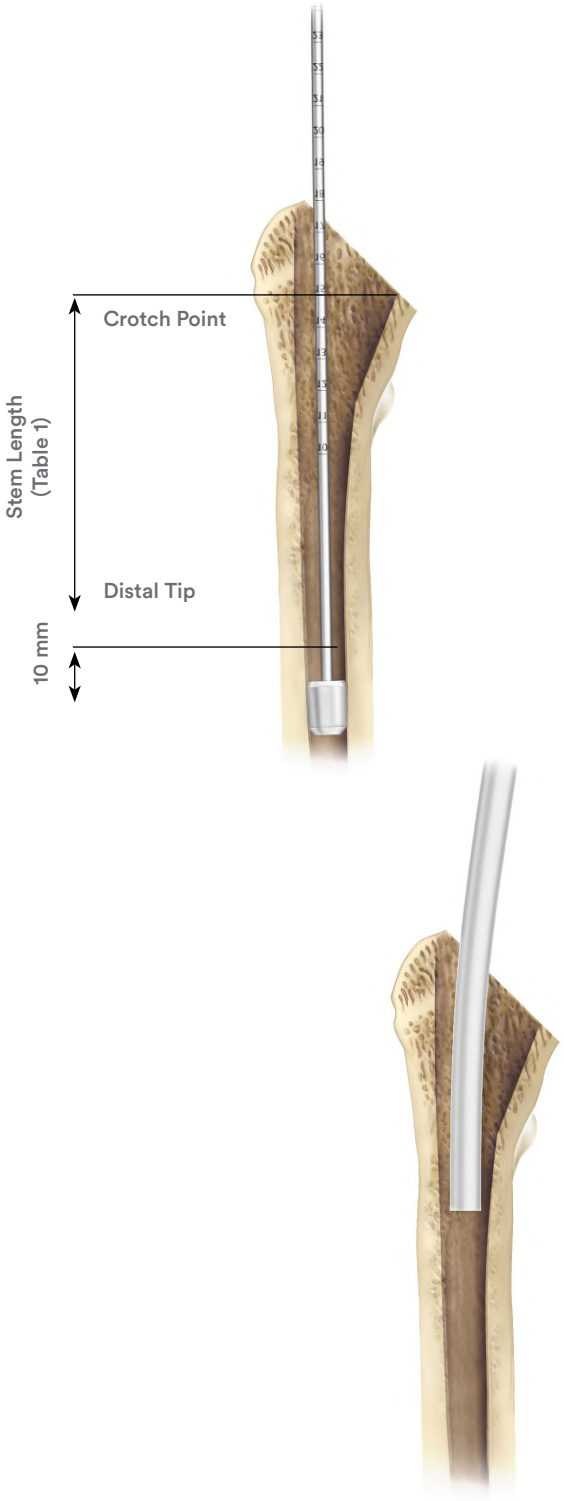
Cement Restrictor – Trial

Select the size of trial cement restrictor identified during pre-operative templating to fit the distal canal. Attach it to the cement restrictor inserter and insert the trial cement restrictor to the planned depth. Check that it is firmly seated in the canal. Remove the trial cement restrictor.

Pulse Lavage

The use of pulse lavage is recommended to clean the femoral canal of debris and to open the interstices of the bone.

By using pulse lavage prior to setting the cement restrictor, the risks of creating fatty embolism will be reduced.[1]



Surgical Technique

Cement Restrictor - Implant

Insert the selected DePuy Synthes cement restrictor implant at the same level as the restrictor trial.

■ **Note:** The size of the cement restrictor should be one size larger than the last trial restrictor inserted to the planned level. The planned level should be 1cm below the tip of the implant.

Implant Size	Stem Length (crotch point to distal tip)	Restrictor Depth
8	95 mm	105 mm
9	110 mm	120 mm
10	120 mm	130 mm
11	125 mm	135 mm
12	130 mm	140 mm
13	135 mm	145 mm
14	140 mm	150 mm
15	145 mm	155 mm
16	150 mm	160 mm
18	160 mm	170 mm
20	170 mm	180 mm

Table 1

Final Bone Preparation

The bone can be dried by passing a swab down the femoral canal which helps to remove any remaining debris.

Surgical Technique

Cementing Technique

High viscosity cement should be used (SMARTSET™ HV or SMARTSET GHV Gentamicin Bone Cement with the CEMVAC™ Vacuum Mixing System). Attach the syringe to the CEMVAC Cement Injection Gun. Assess the viscosity of the cement. The cement is ready for insertion when it has taken on a dull, doughy appearance and does not adhere to the surgeon's glove. Start at the distal part of the femoral canal and inject the cement in a retrograde fashion, allowing the cement to push the nozzle gently back, until the canal is completely filled and the distal tip of the nozzle is clear of the canal.

■ **Note:** Setting time may vary if the cement components or mixing equipment have not been fully equilibrated to 23°C before use

Cut the nozzle and place a femoral pressuriser over the end. The cement must be pressurised to ensure good interdigitation of the cement into the trabecular bone. Continually inject cement during the period of pressurisation. Use the femoral preparation kit curettes to remove excess bone cement. Implant insertion can begin when the cement can be pressed together without sticking to itself.

Surgical Technique

Femoral Component Insertion

▲ **Important Note:** The protective covers should be left on until the components are ready to be implanted. Before implanting a femoral head, the male taper on the femoral stem should be wiped clean of any blood, bone chips or other foreign materials.

Select a stem of the same size as the final broach inserted. Introduce the implant using the stem inserter (259807570) in line with the long axis of the femur in one slow movement. Its entry point should be lateral, close to the greater trochanter.

During stem insertion maintain thumb pressure on the cement at the medial femoral neck. Insert the stem up to the resection level. If necessary, a few light taps on the stem inserter will bring the stem to the right level.

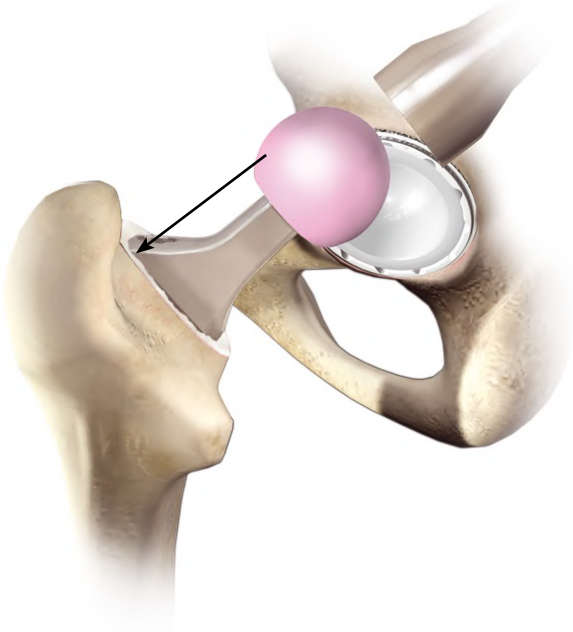
Remove excess cement with a curette. Maintain pressure until the cement is completely polymerised.

Surgical Technique

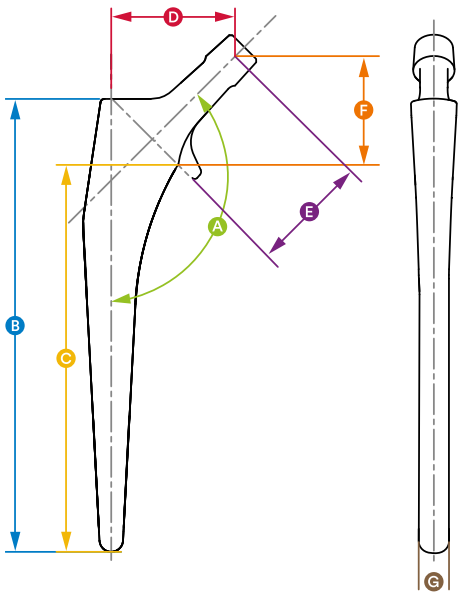
Femoral Head Impaction

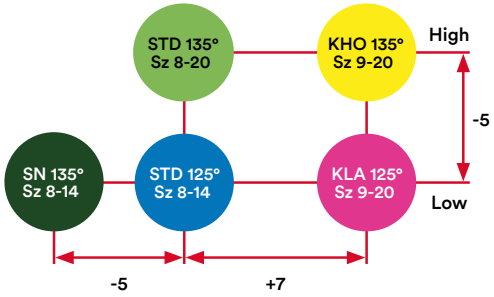
A final trial reduction is carried out to confirm joint stability and range of motion. A DePuy Synthes 12/14 Head must be used. Clean and dry the stem taper carefully to remove any particulate debris.

Place the femoral head onto the taper and lightly tap it (especially if a ceramic head is used) using the head impactor. Ensure bearing surfaces are clean and dry and finally reduce the hip.



Size Offerings





135° STANDARD (STD) Collarless

Size	Neck Shaft Angle (A)	Stem Length (mm) (B)	Stem Length (mm) (C)	Offset (mm) (D)	Neck Length (mm) (E)	Neck height (mm) (F)	Width (mm) (G)
8	135°	115	93	38.3	39	36	7
9	135°	130	108	38.8	39	36	8
10	135°	140	118	39.5	39	36	8
11	135°	145	123	40.3	39	36	9
12	135°	150	128	41.0	39	36	10
13	135°	155	133	41.7	39	36	10
14	135°	160	138	42.3	39	36	10
15	135°	165	143	43.0	39	36	10
16	135°	170	148	43.8	39	36	10
18	135°	180	158	44.8	39	36	11
20	135°	190	168	45.8	39	36	11

135° STANDARD (STD) Collared

Size	Neck Shaft Angle (A)	Stem Length (mm) (B)	Stem Length (mm) (C)	Offset (mm) (D)	Neck Length (mm) (E)	Neck height (mm) (F)	Width (mm) (G)
8	135°	115	93	38.3	39	36	7
9	135°	130	108	38.8	39	36	8
10	135°	140	118	39.5	39	36	8
11	135°	145	123	40.3	39	36	9
12	135°	150	128	41.0	39	36	10
13	135°	155	133	41.7	39	36	10
14	135°	160	138	42.3	39	36	10
15	135°	165	143	43.0	39	36	10
16	135°	170	148	43.8	39	36	10
18	135°	180	158	44.8	39	36	11
20	135°	190	168	45.8	39	36	11

Size Offerings

135° HIGH OFFSET (KHO) Collarless

Size	Neck Shaft Angle A	Stem Length (mm) B	Stem Length (mm) C	Offset (mm) D	Neck Length (mm) E	Neck height (mm) F	Width (mm) G
9	135°	130	108	45.7	43	35	8
10	135°	140	118	46.4	43	35	8
11	135°	145	123	47.2	43	35	9
12	135°	150	128	47.9	43	35	10
13	135°	155	133	48.5	43	35	10
14	135°	160	138	49.2	43	35	10
15	135°	165	143	49.9	43	35	10
16	135°	170	148	50.7	43	35	10
18	135°	180	158	51.8	43	36	11
20	135°	190	168	52.9	43	36	11

135° HIGH OFFSET (KHO) Collared

Size	Neck Shaft Angle A	Stem Length (mm) B	Stem Length (mm) C	Offset (mm) D	Neck Length (mm) E	Neck height (mm) F	Width (mm) G
9	135°	130	108	45.7	43	35	8
10	135°	140	118	46.4	43	35	8
11	135°	145	123	47.2	43	35	9
12	135°	150	128	47.9	43	35	10
13	135°	155	133	48.5	43	35	10
14	135°	160	138	49.2	43	35	10
15	135°	165	143	49.9	43	35	10
16	135°	170	148	50.7	43	35	10
18	135°	180	158	51.7	43	35	11
20	135°	190	168	52.7	43	35	11

125° HIGH OFFSET (KLA)

Size	Neck Shaft Angle A	Stem Length (mm) B	Stem Length (mm) C	Offset (mm) D	Neck Length (mm) E	Neck height (mm) F	Width (mm) G
9	125	130	108	45.6	40	30	8
10	125	140	118	46.3	40	30	8
11	125	145	123	47.1	40	30	9
12	125	150	128	47.8	40	30	10
13	125	155	133	48.5	40	30	10
14	125	160	138	49.1	40	30	10
15	125	165	143	49.8	40	30	10
16	125	170	148	50.6	40	30	10
18	125	180	158	51.8	40	31	11
20	125	190	168	52.8	40	31	11

Size Offerings

125° Standard (STD) Collarless

Size	Neck Shaft Angle A	Stem Length (mm) B	Stem Length (mm) C	Offset (mm) D	Neck Length (mm) E	Neck height (mm) F	Width (mm) G
7	125	110	88	37.9	35	31	6
8	125	115	93	38.4	35	31	7
9	125	130	108	38.9	35	31	8
10	125	140	118	39.6	35	31	8

125° Standard (STD) Collared

Size	Neck Shaft Angle A	Stem Length (mm) B	Stem Length (mm) C	Offset (mm) D	Neck Length (mm) E	Neck height (mm) F	Width (mm) G
7	125	110	88	37.9	35	31	6
8	125	115	93	38.4	35	31	7
9	125	130	108	38.9	35	31	8
10	125	140	118	39.6	35	31	8
11	125	145	123	40.4	35	31	9
12	125	150	128	41.1	35	31	10
13	125	155	133	41.7	35	31	10
14	125	160	138	42.4	35	31	10

135° SHORT NECK (SN) Collarless

Size	Neck Shaft Angle A	Stem Length (mm) B	Stem Length (mm) C	Offset (mm) D	Neck Length (mm) E	Neck height (mm) F	Width (mm) G
7	135	110	88	32.5	32	31	6
8	135	115	93	33.0	32	31	7
9	135	130	108	33.5	32	31	8
10	135	140	118	34.2	32	31	8

135° SHORT NECK (SN) Collared

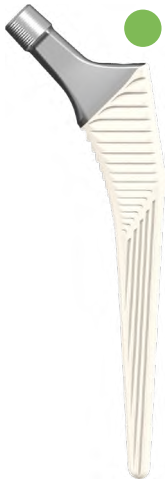
Size	Neck Shaft Angle A	Stem Length (mm) B	Stem Length (mm) C	Offset (mm) D	Neck Length (mm) E	Neck height (mm) F	Width (mm) G
7	135	110	88	32.5	32	31	6
8	135	115	93	33.0	32	31	7
9	135	130	108	33.5	32	31	8
10	135	140	118	34.2	32	31	8
11	135	145	123	35.0	32	31	9
12	135	150	128	35.7	32	31	10
13	135	155	133	36.4	32	31	10
14	135	160	138	37.0	32	31	10

135° SHORT NECK (SN) Collared

Size	Neck Shaft Angle A	Stem Length (mm) B	Stem Length (mm) C	Offset (mm) D
6S	135°	110	93	30.8
6A	135°	110	94	34.4

Ordering Information

Implants



135° Standard STD (KS No Collar)

3L92507	Size 8
3L92509	Size 9
3L92510	Size 10
3L92511	Size 11
3L92512	Size 12
3L92513	Size 13
3L92514	Size 14
3L92515	Size 15
3L92516	Size 16
3L92518	Size 18
3L92520	Size 20

135° Standard STD (KA Collar)

3L92498	Size 8
3L92499	Size 9
3L92500	Size 10
3L92501	Size 11
3L92502	Size 12
3L92503	Size 13
3L92504	Size 14
3L92505	Size 15
3L92506	Size 16
3L92508	Size 18
3L92521	Size 20

135° High Offset KHO (No Collar)

L20309	Size 9
L20310	Size 10
L20311	Size 11
L20312	Size 12
L20313	Size 13
L20314	Size 14
L20315	Size 15
L20316	Size 16
L20318	Size 18
L20320	Size 20

135° High Offset KHO (Collar)

L971109	Size 9
L971110	Size 10
L971111	Size 11
L971112	Size 12
L971113	Size 13
L971114	Size 14
L971115	Size 15
L971116	Size 16
L971118	Size 18
L971120	Size 20

125° High Offset KLA (KLA Collar)

3L93709	Size 9
3L93710	Size 10
3L93711	Size 11
3L93712	Size 12
3L93713	Size 13
3L93714	Size 14
3L93715	Size 15
3L93716	Size 16
3L93718	Size 18
3L93720	Size 20

Ordering Information

125° Standard STD (No Collar)

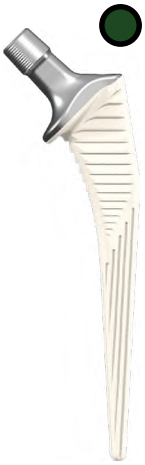
L981208	Size 8
L981209	Size 9
L981210	Size 10

125° Standard STD (Collar)

L971208	Size 8
L971209	Size 9
L971210	Size 10
L971211	Size 11
L971212	Size 12
L971213	Size 13
L971214	Size 14

135° Short Neck SN (No Collar)

L981308	Size 8
L981309	Size 9
L981310	Size 10



135° Short Neck SN (Collar)

L971308	Size 8
L971309	Size 9
L971310	Size 10
L971311	Size 11
L971312	Size 12
L971313	Size 13
L971314	Size 14

Ordering Information

CORAIL Cemented (Standard Offset)

L96408	Size 8
L96409	Size 9
L96410	Size 10
L96411	Size 11
L96412	Size 12
L96413	Size 13
L96414	Size 14
L96415	Size 15
L96416	Size 16
L96418	Size 18
L96420	Size 20

Standard Dysplasic CORAIL Stem

L20106

CORAIL Cemented (High Offset)

L96509	Size 9
L96510	Size 10
L96511	Size 11
L96512	Size 12
L96513	Size 13
L96514	Size 14
L96515	Size 15
L96516	Size 16
L96518	Size 18
L96520	Size 20

CORAIL Stem with Trochanteric Base

L20006

Ordering Information

Instruments

Core Tray

2001-65-000	Femoral/Humeral Head Impactor
2530-81-000	ARTICUL/EZE™ Trial Head Grooved 28 mm +1.5
2530-82-000	ARTICUL/EZE™ Trial Head Grooved 28 mm +5
2530-83-000	ARTICUL/EZE™ Trial Head Grooved 28 mm +8.5
2530-84-000	ARTICUL/EZE™ Trial Head Grooved 28 mm +12
2530-91-000	ARTICUL/EZE™ Trial Head Grooved 32 mm +1
2530-92-000	ARTICUL/EZE™ Trial Head Grooved 32 mm +5
2530-93-000	ARTICUL/EZE™ Trial Head Grooved 32 mm +9
2530-94-000	ARTICUL/EZE™ Trial Head Grooved 32 mm +13
2545-01-700	DePuy Synthes Lid
2570-05-100	SUMMIT® Standard Imp. Inserter
2598-07-530	Modular Osteotome
9400-80-007	Proxima Calcar Planer
9522-12-500F	CORAIL AMT Extra Curved Handle
L20408	Broach CORAIL AMT 8
L20409	Broach CORAIL AMT 9
L20410	Broach CORAIL AMT 10
L20411	Broach CORAIL AMT 11
L20412	Broach CORAIL AMT 12
L20413	Broach CORAIL AMT 13
L20414	Broach CORAIL AMT 14
L94003	Neck Trial 125 STD
L94004	Neck Trial 125 HO
L94005	Neck Trial 135 STD
L94006	Neck Trial 135 HO
L94007	Neck Trial 135 SN
L94013	Modular Bone Compactor
L94018	Canal Explorer
L95057	CORAIL Femoral Tray Sizes 8-14

Expansion Tray

L20415	Broach CORAIL AMT 15
L20416	Broach CORAIL AMT 16
L20418	Broach CORAIL AMT 18
L20420	Broach CORAIL AMT 20
L94010	Large Shielded Calcar Planer
2001-42-000	T Handle
2105-11-000	Canal Reamer 9.0
2105-12-000	Canal Reamer 10.0
2105-14-000	Canal Reamer 11.0
2105-15000	Canal Reamer 12.0
L95058	CORAIL Expansion Tray Sizes 15-20
2545-01-700	DePuy Synthes Lid

■ For full CORAIL AMT Surgical Technique and product codes please refer to “CORAIL Upgrade Surgical Technique” 096172-181205.

All 12/14 heads available in the DePuy Synthes portfolio are compatible with the CORAIL Stem with a maximum offset of 13 mm:

- “Classical” heads: all 12/14 ARTICUL/EZE, 12/14 CoCr, 12/14 BIOLOX Femoral Heads, aSPHERE ARTICUL/EZE 12/14
- In case of ceramic head revision, BIOLOX Delta TS Heads should be used, as these are designed for revision of BIOLOX Delta ARTICUL/EZE Heads.

Ordering Information

Modular Non-Osteointegrated Extractor

L94026	Modular Handle
L94027	Extractor Strike Plate
L94028	Extractor Screw
L94029	Extractor Threaded Rod

CORAIL Dysplasia Tray

L20464	CORAIL Dysplasia Tray
L20465	CORAIL Dysplasia Tray Cover
L20462	Trial stem K6S
L20463	Trial stem K6A
L20461	Monobloc Broach for stem K6S
L20460	Monobloc Broach for stem K6A

Cement Restrictor Kit

5460-02-000	Cement Restrictor Inserter
5460-30-000	Cement Restrictor Trial 1
5460-32-000	Cement Restrictor Trial 2
5460-34-000	Cement Restrictor Trial 3
5460-36-000	Cement Restrictor Trial 4
5460-38-000	Cement Restrictor Trial 5
5460-40-000	Cement Restrictor Trial 6
5460-42-000	Cement Restrictor Trial 7

DePuy Synthes Bone Cements

3092040	SMARTSET HV Bone Cement 40g
3095040	SMARTSET GHV Gentamicin Bone Cement 40g

CEMVAC Vacuum Mixing System

Hardware	
831401	DePuy Synthes Multi-Pressure Vacuum Pump
831202	Syringe Holder
831205	CEMVAC 1 Piece Gun
3210016	Nozzle Cutter

Disposables	
831215 pack)	Single Syringe Set (Box 20 x 1 single sterile
831220 pack)	Double Syringe Set (Box 10 x 2 double sterile
831230	Revision Nozzle (8.5 mm x 5)
831231	Revision Nozzle (6.5 mm x 5)
831234	Nozzle Adaptor 90 Degree (x 5)
3206005	Standard Femoral Pressuriser (x 5)
3206002	Wedge Femoral Pressuriser Large (x 5)

Templating

Preoperative Templatess

L94041	CORAIL X-ray Templates 100% STD HO 8-20
L94042	CORAIL X-ray Templates 115% STD HO 8-20
L94043	CORAIL X-ray Templates 120% STD HO 8-20
L96041	CORAIL X-ray Templates 100% STD HO LE 2
L96042	CORAIL X-ray Templates 115% STD HO LE 2
L96043	CORAIL X-ray Templates 120% STD HO LE 2
L94044	CORAIL X-ray Templates 100% SN 8-10 and Dysplasia 6
L94045	CORAIL X-ray Templates 115% SN 8-10 and Dysplasia 6
L94046	CORAIL X-ray Templates 120% SN 8-10 and Dysplasia 6
L96044	CORAIL X-ray Templates 100% SN 8-14 and Dysplasia 6 LE 2
L96045	CORAIL X-ray Templates 115% SN 8-14 and Dysplasia 6 LE 2
L96046	CORAIL X-ray Templates 120% SN 8-14 and Dysplasia 6 LE 2
3206005	Standard Femoral Pressuriser (x 5)
3206002	Wedge Femoral Pressuriser Large (x 5)

Digital Templates

The availability of digital templates depends on DePuy International's agreement with the vendors.

Please contact DePuy International for more information.

References:

1. Breusch S, Reitgel T, Schnerder U, Volkmann M, Ewerbeck V, Lukoschek M. Cemented Hip Prosthesis Implantation – Decreasing the Rate of Fat Embolism with Pulsed Pressure Lavage. Orthopade. 2000;29:578-586.

DePuy Synthes
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