

CORAIL™

Hip System

Surgical Technique



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The Science Of Simplicity

With over 2,000,000 stems provided for patients worldwide¹ and over thirty years of clinical history, the CORAIL™ Total Hip System has extensive experience as a hydroxyapatite (HA) coated stem.

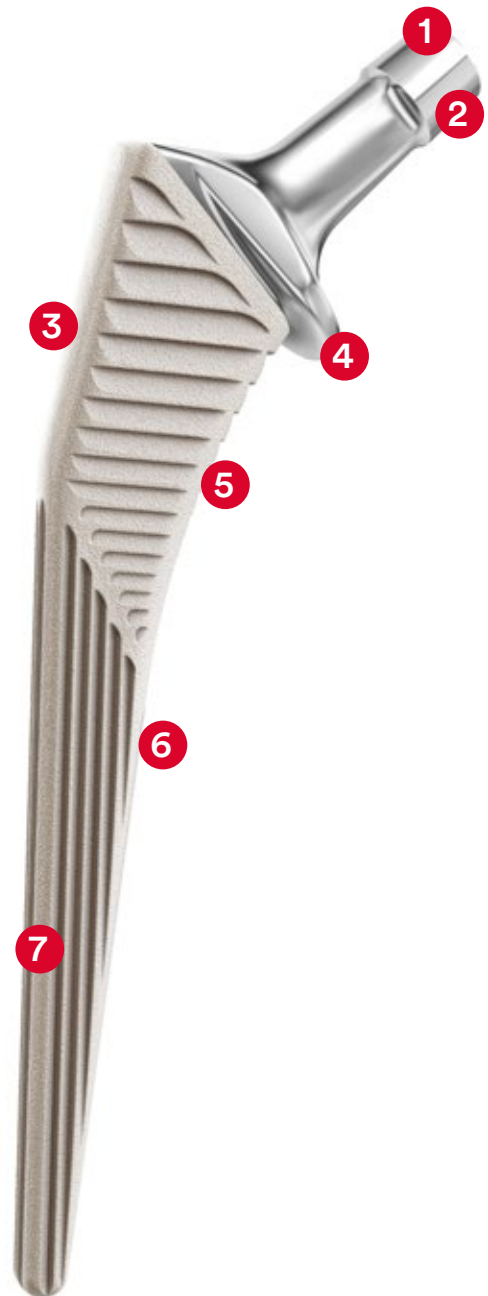
Combining basic design features, including shape, surface finish and extensive hydroxyapatite coating, with a simple compaction broach-only surgical technique, the CORAIL Total Hip System has demonstrated long-term stem survivorship of 96.3% at 25 years.²

Over time, additions have been made to the original CORAIL Hip System to provide additional options for orthopaedic surgeons treating today's patients, including:

- Neck geometry designed for broad range of motion
- High offset option to treat increased femoral offset patients
- Coxa vara stem option to treat varus neck angled patients
- Short neck option to treat patients with a smaller femoral neck anatomy

The Science Of Simplicity

- 1 Multiple offset options aiming to restore hip biomechanics
- 2 Tapered neck geometry and ARTICUL/EZE™ Hip Taper designed to increase range of motion
- 3 Low-profile lateral shoulder design enables easy insertion in reduced incision techniques, including the anterior approach
- 4 Available in collared and non-collared options
- 5 Step geometry is designed to convert hoop stresses to compressive loads
- 6 Vertical/horizontal grooves designed to provide rotational and axial stability
- 7 Proprietary HA coating



Preoperative Planning

The CORAIL Stem may be implanted using any of the contemporary less invasive approaches as well as the traditional surgical techniques for total hip arthroplasty. The goal of any technique selected is adequate visualization of both the acetabulum and the proximal femur so that a direct view down the femoral canal can be gained and the entire rim and depth of the acetabulum visualized.

Preoperative planning enables the surgeon to prepare for the case and anticipate situations that may arise during surgery. A thorough preoperative plan incorporates elements from the patient's history, physical examination and radiographic analysis.

Preoperative Planning Goals

1. Determine preoperative leg length discrepancy
2. Assess acetabular component size and placement
3. Determine femoral component, size, position and fit
4. Assess femoral offset

▲ **Simple Surgical Technique:** Broach only technique offering reproducible surgical results with minimal instrumentation

▲ **Compaction Broaching Technique:** Designed for preservation of endosteal blood supply and cancellous bone structures

▲ **Dual Offset Options:** Designed to accommodate a variety of patient anatomies to restore hip biomechanics

▲ **Thirty Years of Clinical History:** Providing confidence for the surgeon and for the patient

Preoperative Planning

Radiographs

The first step in accurate templating is obtaining high-quality radiographs using a standardized protocol with known magnification. Use magnification markers attached to the patient leg at the level of the greater trochanter to verify magnification.

The CORAIL Total Hip System incorporates 20% magnification in its x-ray templates.

Obtain an anterior/posterior (A/P) view of the pelvis with both extremities in 15 degrees of internal rotation to position the head and neck parallel to the coronal plane. A direct lateral radiograph should also be obtained and used to determine femoral fixation.

Determination of Leg Length Discrepancy

Perform a clinical evaluation in conjunction with a radiographic analysis to determine preoperative leg length discrepancy and use both to determine intraoperative leg length management.

To estimate leg length discrepancy radiographically, draw a reference line through the bottom of the ischium (Figure A). Measure the distance from the lesser trochanter landmark to the reference line on each side. The difference between the two is the radiographic leg length discrepancy. Clinical examination should help determine the actual leg length irregularity.

The tip of the greater trochanter may be used as an alternative reference mark in conjunction with the lines through the obturator foramina.

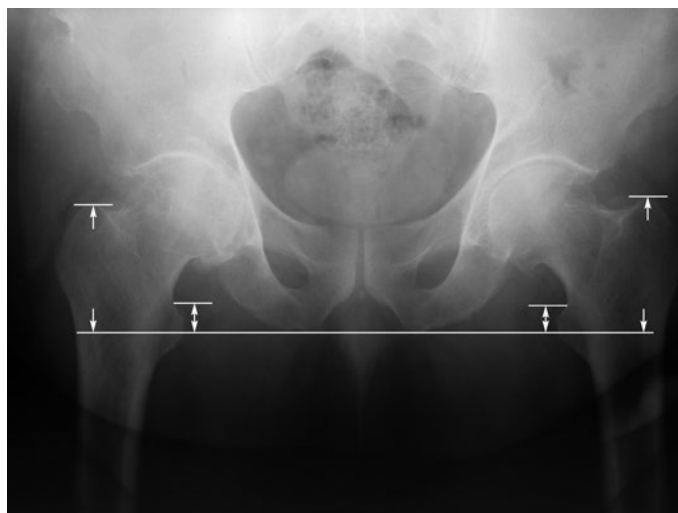


Figure A.

Preoperative Planning

Acetabular Cup size and position

Most sizing determinations are made using the A/P radiograph of the hip. Determine the optimal position for the acetabular component and estimate the size using the PINNACLE™ Acetabular Cup System template overlays. The acetabular teardrop can be referenced as the interior margin of the acetabular reconstruction.

The goal in cementless acetabular fixation is to optimize position and bone contact. Once this is determined, mark the intended center of rotation of the bearing surface on the A/P radiograph (Figure B).

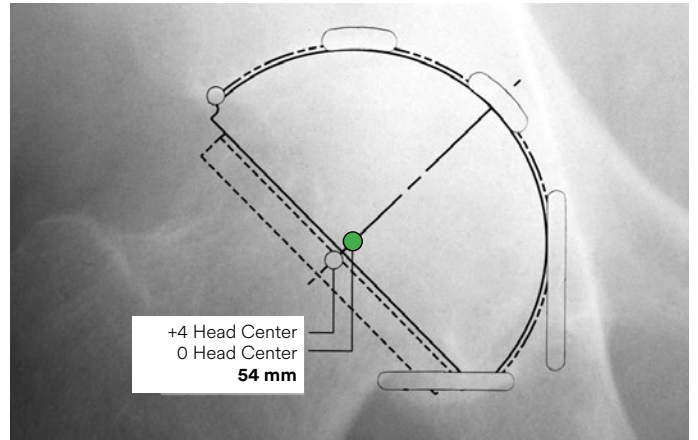


Figure B. ● Cup center of rotation

Femoral Stem Selection

The CORAIL Stem is designed to seat in cancellous bone, and cortical contact should be avoided when templating. Select the appropriate template size that is smaller than the cortex in the proximal femur. The femoral template should be in line with the long axis of the femur and the neck resection line drawn at the point where the selected stem provides the desired amount of leg length.

The vertical distance between the planned center of rotation of the acetabular component and the center of rotation of the femoral head constitutes the distance the leg length will be adjusted.

The level of neck osteotomy depends on the stem size and the desired leg length, with the goal of using a nonskirted modular head to optimize range of motion prior to prosthetic impingement. To help properly position the template on the lateral radiograph, estimate the distance between the tip of the greater trochanter and the lateral shoulder of the prosthesis using the A/P radiograph (Figure C).

Verify that the stem size chosen in the A/P plane also fits in the lateral plane. The lateral radiograph of a properly sized CORAIL Implant will not exhibit cortical contact.

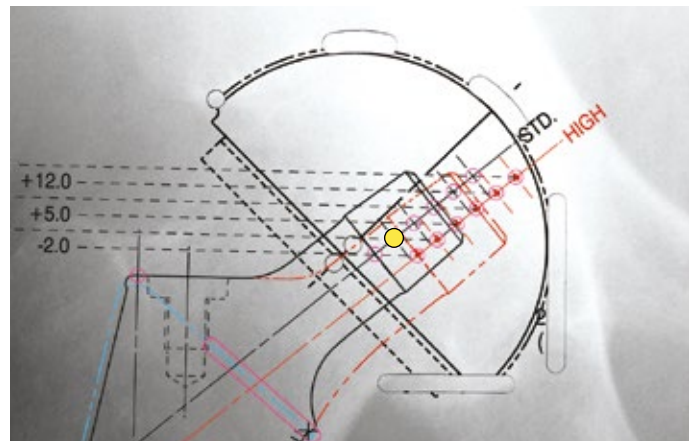


Figure C. ● Head center of rotation

Preoperative Planning

Offset Requirements

The CORAIL Total Hip System Implants are available in standard, high offset, varus, and short neck options. Through templating and intraoperative trialing, determine which option restores proper offset by matching the cup's center of rotation with the desired head center of rotation (Figure D).

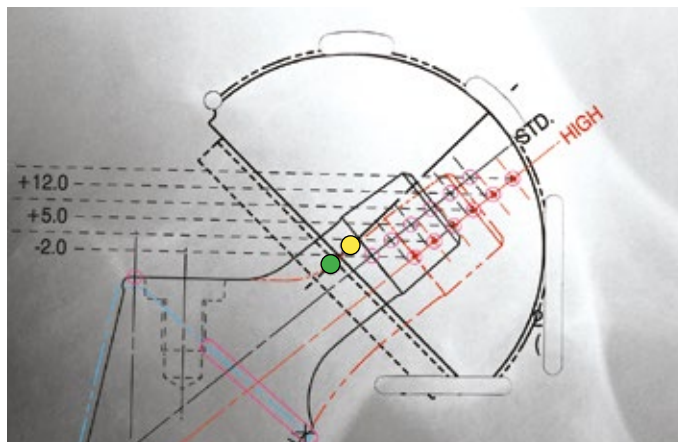


Figure D. ● Cup center of rotation
● Head center of rotation

Optional Distal Reaming

In Dorr Type A ('champagne flute') femurs (Figure E) 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.

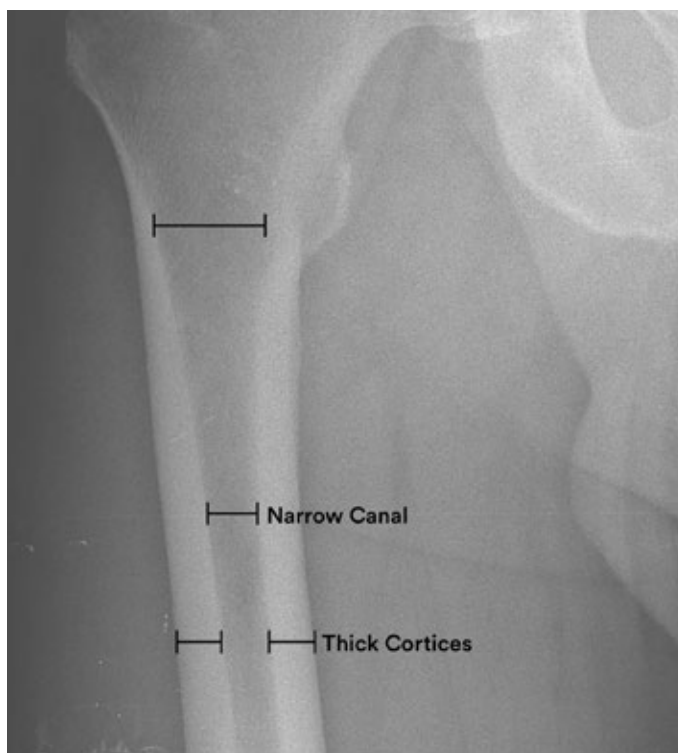


Figure E. Example of a DORR Type A femur.

1

Neck Osteotomy

The level of the neck resection is determined during preoperative templating. The cut will be approximately 1 cm above the lesser trochanter. Center the resection guide along the neutral axis of the femur and mark the resection line. Perform the osteotomy, taking care to maintain the correct angle (Figure 1).



Figure 1.

2

Metaphyseal Preparation

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 to allow better insertion of the broaches and accomodate multiple approaches to the hip (Figure 2).



Figure 2. Modular Osteotome

3

Femoral Canal Preparation

The CORAIL Broach is available with several broach handle options depending on the surgical approach (Figures 3A, 3B, 3C); the dual-offset handle is also available, but not shown. Select the appropriate handle for the surgical approach. Beginning with the smallest CORAIL Compaction Broach attached to the selected broach handle, progressively enlarge the metaphyseal cavity by compacting and shaping the cancellous bone until the level of the neck resection is reached. Broaching should continue until complete stability is achieved with the last size broach used without reaching cortical contact in the femoral canal, ensuring cancellous bone preservation. The size of each broach is the same as the corresponding implant without HA (hydroxyapatite) coating (155 microns). If you impact a broach and it does not fully seat in the canal, it is recommended to go back to the previous size broach and re-establish the broach envelope of cancellous bone to accept the smaller size implant. The CORAIL Implant's design allows you to go back to the smaller size.



Figure 3A.
Posterior Approach

Figure 3B.
Posterolateral/
Anterolateral Approach

Figure 3C.
Anterior Approach

4

Calcar Preparation

Place the calcar planer onto the broach stud and mill the calcar to the broach face, allowing the implant collar (if used) to seat flush against the calcar. Make certain the calcar planer is rotating before engaging calcar to prevent the planer from binding on the calcar.

5

Trial Reduction

Trial neck segments and trial modular heads are available to assess proper component position, joint stability, range-of-motion and leg length (Figure 4). The CORAIL Hip is available in the five stem options shown below and offers the appropriate neck trial segment to match up with the stem option.

- 135° Standard Offset Collarless/Collared (KS/KA) Neck Trial: STD-135
- 135° High Offset Collarless/Collared (KHO) Neck Trial: KHO
- 135° Short Neck Low Offset Collarless/Collared (SN) Neck Trial: SN
- 125° High Offset Coxa Vara Collared (KLA) Neck Trial: KLA
- 125° Standard Offset Collarless/Collared (STD) Neck Trial: STD-125

With the CORAIL Broach in situ, attach one of the five neck segment options. Perform a trial reduction with a +5 ARTICUL/EZE Head trial to allow for one up or down adjustment in neck length without using a skirted femoral head (see stem specifications chart in back of the technique for adjustment measurements). Reduce the hip and assess stability through a full range of motion, and check for impingement.

Leg length and offset may be adjusted by varying the neck length with the appropriate femoral head. Alternatively, leg length may be reduced with a lower neck cut and advancing the broach or alternatively driving the broach and repeating the calcar milling.



Figure 4.

6

Femoral Component Insertion

CORAIL Total Hip System Implants can be inserted with either a threaded retaining inserter or a non-threaded inserter. Both inserters provide rotational control during stem implantation.

■ **Note:** Prior to using either inserter, the CORAIL Stem should be inserted by hand into the femoral canal with 1.5 to 2.0 cm of HA showing above the resection.

If the retaining inserter is chosen, verify that it is assembled with the inserter shaft threaded into the inserter handle (Figure 5A). Ensure the tines on the inserter are aligned with the recesses of the inserter platform on the top of the implant (Figure 5B). Fully engage the threads of the inserter into the implant to ensure the inserter is securely attached to the implant.

If the non-retaining inserter is chosen, introduce stem by hand into femoral canal (Figure 6A). Ensure the tines of the inserter are aligned with the recesses of the inserter platform on the top of the implant (Figure 6B).

With the taper protected by the cover, gently introduce the implant and impact it in the central axis of the femur, to the level of the HA coating (or the collar) (Figures 5C and 6C). With the prostheses in situ, remove the taper cover and add the trial head and acetabular trial liner to assess implant stability and leg length.



Figure 5A.

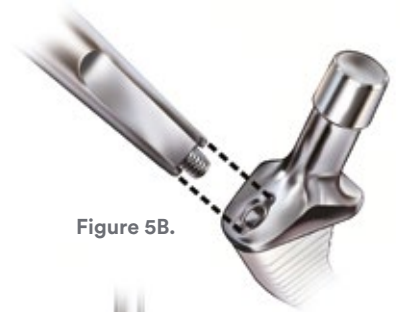


Figure 5B.



Figure 5C.



Figure 6A.

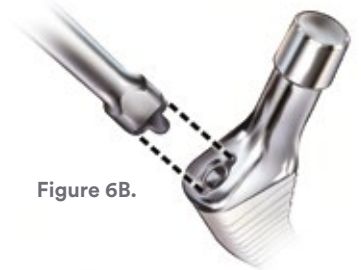


Figure 6B.



Figure 6C.

7

Femoral Head Impaction

Irrigate, clean and dry the prosthesis to ensure the taper is free of debris. Place the appropriate femoral head onto the taper and lightly tap using the head impactor before reducing the hip (Figure 7).



Figure 7.



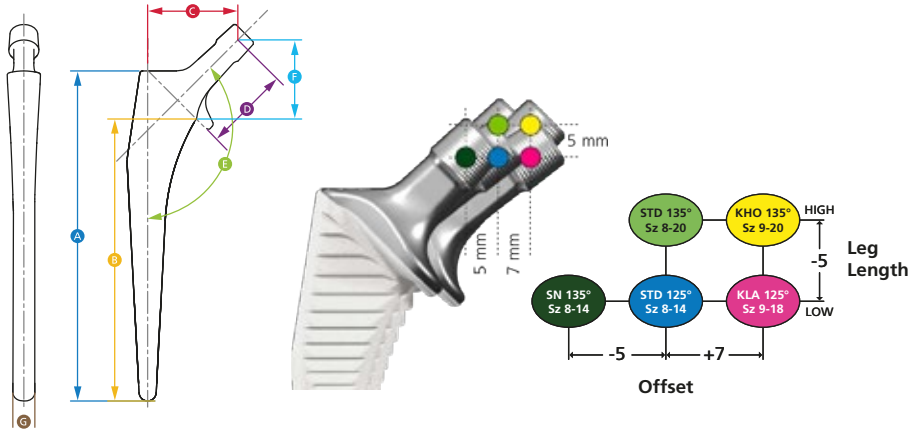
5 years post-op

Specifications



| Size | A | B | C | | | | | | D | | | | | E | F | | | | | G | | | |
|--|--------------------------------------|-------------------------|-----------------------|------|------|------|------|-------|----------------------------|------|----|------|-----|------------------|----------------------------|-----|------|----|------|-------------------|-------|----|----|
| | Lateral Stem Length (mm) | Medial Stem Length (mm) | Offset with Head (mm) | | | | | | Neck Length with Head (mm) | | | | | Neck Shaft Angle | Leg Adjustment Length (mm) | | | | | Distal Width (mm) | | | |
| | | | -2 | +1.5 | +5 | +8.5 | +12 | +15.5 | -2 | +1.5 | +5 | +8.5 | +12 | +15.5 | | -2 | +1.5 | +5 | +8.5 | +12 | +15.5 | | |
| COLLARED & COLLARLESS (KA / KS) | 6 STANDARD OFFSET† (Collarless Only) | 110 | 93 | 25.8 | 28.3 | 30.8 | 33.2 | 35.7 | 38.2 | 27 | 30 | 34 | 37 | 41 | 44 | 135 | 26 | 28 | 31 | 33 | 35 | 38 | 8 |
| | 8 STANDARD OFFSET | 115 | 93 | 33.3 | 35.8 | 38.3 | 40.8 | 43.2 | 45.7 | 32 | 35 | 39 | 42 | 45 | 49 | 135 | 31 | 33 | 36 | 38 | 41 | 43 | 7 |
| | 9 STANDARD OFFSET | 130 | 108 | 33.8 | 36.3 | 38.8 | 41.3 | 43.7 | 46.2 | 32 | 35 | 39 | 42 | 45 | 49 | 135 | 31 | 33 | 36 | 38 | 41 | 43 | 8 |
| | 10 STANDARD OFFSET | 140 | 118 | 34.6 | 37.1 | 39.5 | 42.0 | 44.5 | 47.0 | 32 | 35 | 39 | 42 | 45 | 49 | 135 | 31 | 33 | 36 | 38 | 41 | 43 | 8 |
| | 11 STANDARD OFFSET | 145 | 123 | 35.3 | 37.8 | 40.3 | 42.8 | 45.2 | 47.7 | 32 | 35 | 39 | 42 | 45 | 49 | 135 | 31 | 33 | 36 | 38 | 41 | 43 | 9 |
| | 12 STANDARD OFFSET | 150 | 128 | 36.1 | 38.6 | 41.0 | 43.5 | 46.0 | 48.4 | 32 | 35 | 39 | 42 | 45 | 49 | 135 | 31 | 33 | 36 | 38 | 41 | 43 | 10 |
| | 13 STANDARD OFFSET | 155 | 133 | 36.7 | 39.2 | 41.7 | 44.1 | 46.6 | 49.1 | 32 | 35 | 39 | 42 | 45 | 49 | 135 | 31 | 33 | 36 | 38 | 41 | 43 | 10 |
| | 14 STANDARD OFFSET | 160 | 138 | 37.3 | 39.8 | 42.3 | 44.8 | 47.2 | 49.7 | 32 | 35 | 39 | 42 | 45 | 49 | 135 | 31 | 33 | 36 | 38 | 41 | 43 | 10 |
| | 15 STANDARD OFFSET | 165 | 143 | 38.1 | 40.6 | 43.0 | 45.5 | 48.0 | 50.5 | 32 | 35 | 39 | 42 | 45 | 49 | 135 | 31 | 33 | 36 | 38 | 41 | 43 | 10 |
| | 16 STANDARD OFFSET | 170 | 148 | 38.8 | 41.3 | 43.8 | 46.3 | 48.7 | 51.2 | 32 | 35 | 39 | 42 | 45 | 49 | 135 | 31 | 33 | 36 | 38 | 41 | 43 | 10 |
| | 18 STANDARD OFFSET | 180 | 158 | 39.8 | 42.3 | 44.8 | 47.3 | 49.7 | 52.2 | 32 | 35 | 39 | 42 | 45 | 49 | 135 | 31 | 33 | 36 | 38 | 41 | 43 | 11 |
| | 20 STANDARD OFFSET (Collared Only) | 190 | 168 | 40.8 | 43.3 | 45.8 | 48.3 | 50.7 | 53.2 | 32 | 35 | 39 | 42 | 45 | 49 | 135 | 31 | 33 | 36 | 38 | 41 | 43 | 11 |
| COLLARED & COLLARLESS (KHO) | 9 HIGH OFFSET | 130 | 108 | 40.7 | 43.2 | 45.7 | 48.1 | 50.6 | 53.1 | 36 | 40 | 43 | 47 | 50 | 54 | 135 | 30 | 33 | 35 | 38 | 41 | 43 | 8 |
| | 10 HIGH OFFSET | 140 | 118 | 41.5 | 43.9 | 46.4 | 48.9 | 51.3 | 53.8 | 36 | 40 | 43 | 47 | 50 | 54 | 135 | 30 | 33 | 35 | 38 | 41 | 43 | 8 |
| | 11 HIGH OFFSET | 145 | 123 | 42.2 | 44.7 | 47.2 | 49.6 | 52.1 | 54.6 | 36 | 40 | 43 | 47 | 50 | 54 | 135 | 30 | 33 | 35 | 38 | 41 | 43 | 9 |
| | 12 HIGH OFFSET | 150 | 128 | 43.0 | 45.4 | 47.9 | 50.4 | 52.8 | 55.3 | 36 | 40 | 43 | 47 | 50 | 54 | 135 | 30 | 33 | 35 | 38 | 41 | 43 | 10 |
| | 13 HIGH OFFSET | 155 | 133 | 43.6 | 46.1 | 48.5 | 51.0 | 53.5 | 56.0 | 36 | 40 | 43 | 47 | 50 | 54 | 135 | 30 | 33 | 35 | 38 | 41 | 43 | 10 |
| | 14 HIGH OFFSET | 160 | 138 | 44.2 | 46.7 | 49.2 | 51.6 | 54.1 | 56.6 | 36 | 40 | 43 | 47 | 50 | 54 | 135 | 30 | 33 | 35 | 38 | 41 | 43 | 10 |
| | 15 HIGH OFFSET | 165 | 143 | 45.0 | 47.4 | 49.9 | 52.4 | 54.8 | 57.3 | 36 | 40 | 43 | 47 | 50 | 54 | 135 | 30 | 33 | 35 | 38 | 41 | 43 | 10 |
| | 16 HIGH OFFSET | 170 | 148 | 45.7 | 48.2 | 50.7 | 53.1 | 55.6 | 58.1 | 36 | 40 | 43 | 47 | 50 | 54 | 135 | 30 | 33 | 35 | 38 | 41 | 43 | 10 |
| | 18 HIGH OFFSET | 180 | 158 | 46.9 | 49.4 | 51.8 | 54.3 | 56.8 | 59.2 | 36 | 40 | 43 | 47 | 50 | 54 | 135 | 30 | 33 | 36 | 38 | 41 | 43 | 11 |
| | 20 HIGH OFFSET | 190 | 168 | 47.9 | 50.4 | 52.9 | 55.3 | 57.8 | 60.3 | 36 | 40 | 43 | 47 | 50 | 54 | 135 | 30 | 33 | 36 | 38 | 41 | 43 | 11 |

Specifications



| Size | | A | | C | | | | | | | D | | | | | E | F | | | | | | G |
|-----------------------------|--------------------|--------------------------|-------------------------|-----------------------|------|------|------|------|-------|----|----------------------------|----|------|-----|-------|-----|----------------------------|------|----|------|-----|-------|----|
| | | Lateral Stem Length (mm) | Medial Stem Length (mm) | Offset with Head (mm) | | | | | | | Neck Length with Head (mm) | | | | | | Leg Adjustment Length (mm) | | | | | | |
| | | | | -2 | +1.5 | +5 | +8.5 | +12 | +15.5 | -2 | +1.5 | +5 | +8.5 | +12 | +15.5 | | -2 | +1.5 | +5 | +8.5 | +12 | +15.5 | |
| COLLARED (KLA) | 9 HIGH OFFSET | 130 | 108 | 40.6 | 43.1 | 45.6 | 48.1 | 50.5 | 53.0 | 33 | 36 | 40 | 43 | 47 | 50 | 125 | 26 | 28 | 30 | 33 | 35 | 38 | 8 |
| | 10 HIGH OFFSET | 140 | 118 | 41.4 | 43.9 | 46.3 | 48.8 | 51.3 | 53.8 | 33 | 36 | 40 | 43 | 47 | 50 | 125 | 26 | 28 | 30 | 33 | 35 | 38 | 8 |
| | 11 HIGH OFFSET | 145 | 123 | 42.1 | 44.6 | 47.1 | 49.6 | 52.0 | 54.5 | 33 | 36 | 40 | 43 | 47 | 50 | 125 | 26 | 28 | 30 | 33 | 35 | 38 | 9 |
| | 12 HIGH OFFSET | 150 | 128 | 42.9 | 45.4 | 47.8 | 50.3 | 52.8 | 55.2 | 33 | 36 | 40 | 43 | 47 | 50 | 125 | 26 | 28 | 30 | 33 | 35 | 38 | 10 |
| | 13 HIGH OFFSET | 155 | 133 | 43.5 | 46.0 | 48.5 | 50.9 | 53.4 | 55.9 | 33 | 36 | 40 | 43 | 47 | 50 | 125 | 26 | 28 | 30 | 33 | 35 | 38 | 10 |
| | 14 HIGH OFFSET | 160 | 138 | 44.1 | 46.6 | 49.1 | 51.6 | 54.0 | 56.5 | 33 | 36 | 40 | 43 | 47 | 50 | 125 | 26 | 28 | 30 | 33 | 35 | 38 | 10 |
| | 15 HIGH OFFSET | 165 | 143 | 44.9 | 47.4 | 49.8 | 52.3 | 54.8 | 57.2 | 33 | 36 | 40 | 43 | 47 | 50 | 125 | 26 | 28 | 30 | 33 | 35 | 38 | 10 |
| | 18 HIGH OFFSET | 170 | 148 | 45.6 | 48.1 | 50.6 | 53.1 | 55.5 | 58.0 | 33 | 36 | 40 | 43 | 47 | 50 | 125 | 26 | 28 | 30 | 33 | 35 | 38 | 10 |
| COLLARED & COLLARLESS (STD) | 8 STANDARD OFFSET | 115 | 93 | 33.4 | 35.9 | 38.4 | 40.8 | 43.3 | 45.8 | 28 | 32 | 35 | 39 | 42 | 45 | 125 | 26 | 28 | 31 | 33 | 36 | 38 | 7 |
| | 9 STANDARD OFFSET | 130 | 108 | 33.9 | 36.4 | 38.9 | 41.3 | 43.8 | 46.3 | 28 | 32 | 35 | 39 | 42 | 45 | 125 | 26 | 28 | 31 | 33 | 36 | 38 | 8 |
| | 10 STANDARD OFFSET | 140 | 118 | 34.7 | 37.1 | 39.6 | 42.1 | 44.6 | 47.0 | 28 | 32 | 35 | 39 | 42 | 45 | 125 | 26 | 28 | 31 | 33 | 36 | 38 | 8 |
| COLLARED | 11 STANDARD OFFSET | 145 | 123 | 35.4 | 37.9 | 40.4 | 42.8 | 45.3 | 47.8 | 28 | 32 | 35 | 39 | 42 | 45 | 125 | 26 | 28 | 31 | 33 | 36 | 38 | 9 |
| | 12 STANDARD OFFSET | 150 | 128 | 36.2 | 38.6 | 41.1 | 43.6 | 46.1 | 48.5 | 28 | 32 | 35 | 39 | 42 | 45 | 125 | 26 | 28 | 31 | 33 | 36 | 38 | 10 |
| | 13 STANDARD OFFSET | 155 | 133 | 36.8 | 39.3 | 41.7 | 44.2 | 46.7 | 49.2 | 28 | 32 | 35 | 39 | 42 | 45 | 125 | 26 | 28 | 31 | 33 | 36 | 38 | 10 |
| | 14 STANDARD OFFSET | 160 | 138 | 37.4 | 39.9 | 42.4 | 44.8 | 47.3 | 49.8 | 28 | 32 | 35 | 39 | 42 | 45 | 125 | 26 | 28 | 31 | 33 | 36 | 38 | 10 |
| COLLARED & COLLARLESS (SN) | 8 LOW OFFSET | 115 | 93 | 28.0 | 30.5 | 33.0 | 35.5 | 37.9 | 40.4 | 25 | 28 | 32 | 35 | 38 | 42 | 135 | 26 | 29 | 31 | 34 | 36 | 38 | 7 |
| | 9 LOW OFFSET | 130 | 108 | 28.5 | 31.0 | 33.5 | 36.0 | 38.4 | 40.9 | 25 | 28 | 32 | 35 | 38 | 42 | 135 | 26 | 29 | 31 | 34 | 36 | 38 | 8 |
| | 10 LOW OFFSET | 140 | 118 | 29.3 | 31.8 | 34.2 | 36.7 | 39.2 | 41.7 | 25 | 28 | 32 | 35 | 38 | 42 | 135 | 26 | 29 | 31 | 34 | 36 | 38 | 8 |
| COLLARED | 11 LOW OFFSET | 145 | 123 | 30.0 | 32.5 | 35.0 | 37.5 | 39.9 | 42.4 | 25 | 28 | 32 | 35 | 38 | 42 | 135 | 26 | 29 | 31 | 34 | 36 | 38 | 9 |
| | 12 LOW OFFSET | 150 | 128 | 30.8 | 33.3 | 35.7 | 38.2 | 40.7 | 43.2 | 25 | 28 | 32 | 35 | 38 | 42 | 135 | 26 | 29 | 31 | 34 | 36 | 38 | 10 |
| | 13 LOW OFFSET | 155 | 133 | 31.4 | 33.9 | 36.4 | 38.8 | 41.3 | 43.8 | 25 | 28 | 32 | 35 | 38 | 42 | 135 | 26 | 29 | 31 | 34 | 36 | 38 | 10 |
| | 14 LOW OFFSET | 160 | 138 | 32.0 | 34.5 | 37.0 | 39.5 | 41.9 | 44.4 | 25 | 28 | 32 | 35 | 38 | 42 | 135 | 26 | 29 | 31 | 34 | 36 | 38 | 10 |

Ref. Number 103519609 Rev 2

Implants

135° Standard Offset Collarless (KS)

| Cat. No. | Size |
|----------|------|
| 3L92507 | 8 |
| 3L92509 | 9 |
| 3L92510 | 10 |
| 3L92511 | 11 |
| 3L92512 | 12 |
| 3L92513 | 13 |
| 3L92514 | 14 |
| 3L92515 | 15 |
| 3L92516 | 16 |
| 3L92518 | 18 |
| 3L92520 | 20 |

135° Standard Offset Collared (KS)

| Cat. No. | Size |
|----------|------|
| 3L92498 | 8 |
| 3L92499 | 9 |
| 3L92500 | 10 |
| 3L92501 | 11 |
| 3L92502 | 12 |
| 3L92503 | 13 |
| 3L92504 | 14 |
| 3L92505 | 15 |
| 3L92506 | 16 |
| 3L92508 | 18 |
| 3L92521 | 20 |

135° High Offset Collarless (KHO)

| Cat. No. | Size |
|----------|------|
| L20309 | 9 |
| L20310 | 10 |
| L20311 | 11 |
| L20312 | 12 |
| L20313 | 13 |
| L20314 | 14 |
| L20315 | 15 |
| L20316 | 16 |
| L20318 | 18 |
| L20320 | 20 |

135° High Offset Collared (KHO)

| Cat. No. | Size |
|----------|------|
| L971109 | 9 |
| L971110 | 10 |
| L971111 | 11 |
| L971112 | 12 |
| L971113 | 13 |
| L971114 | 14 |
| L971115 | 15 |
| L971116 | 16 |
| L971118 | 18 |
| L971120 | 20 |

135° Short Neck Low Offset Collarless (SN)

| Cat. No. | Size |
|----------|------|
| L981308 | 8 |
| L981309 | 9 |
| L981310 | 10 |

135° Short Neck Low Offset Collared (SN)

| Cat. No. | Size |
|----------|------|
| L971308 | 8 |
| L971309 | 9 |
| L971310 | 10 |
| L971311 | 11 |
| L971312 | 12 |
| L971313 | 13 |
| L971314 | 14 |

125° Standard Offset Collared (STD)

| Cat. No. | Size |
|----------|------|
| L971208 | 8 |
| L971209 | 9 |
| L971210 | 10 |
| L971211 | 11 |
| L971212 | 12 |
| L971213 | 13 |
| L971214 | 14 |

125° Coxa Vara High Offset Collared (KLA)






| Cat. No. | Size |
|----------|------|
| 3L93709 | 9 |
| 3L93710 | 10 |
| 3L93711 | 11 |
| 3L93712 | 12 |
| 3L93713 | 13 |
| 3L93714 | 14 |
| 3L93715 | 15 |
| 3L93716 | 16 |
| 3L93718 | 18 |

125° Standard Offset Collarless (STD)

| Cat. No. | Size |
|----------|------|
| L981208 | 8 |
| L981209 | 9 |
| L981210 | 10 |

Instruments

CORAIL AMT Broach Case

| Cat. No. | Description |
|--------------|---|
| 2665-99-000 | CORAIL Broach Case Complete* |
| L20440 | Neck Resection Guide |
| L20408 | Broach Size 8 |
| L20409 | Broach Size 9 |
| L20410 | Broach Size 10 |
| L20411 | Broach Size 11 |
| L20412 | Broach Size 12 |
| L20413 | Broach Size 13 |
| L20414 | Broach Size 14 |
| L20415 | Broach Size 15 |
| L20416 | Broach Size 16 |
| L20418 | Broach Size 18 |
| L20420 | Broach Size 20 |
| L94003 | CORAIL Neck Segment 125° Standard Offset (STD-125)  |
| L94004 | CORAIL Neck Segment 125° Coxa Vara High Offset Collared (KLA)  |
| L94005 | CORAIL Neck Segment 135° Standard Offset (STD-135)  |
| L94006 | CORAIL Neck Segment 135° High Offset (KHO)  |
| L94007 | CORAIL Neck Segment 135° Short Neck Low Offset (SN)  |
| 9522-11-500 | CORAIL AMT Curved Handle |
| 9522-10-500F | CORAIL AMT Straight Broach Handle |
| 9522-12-500F | CORAIL AMT Extra Curved Handle |
| 2002-31-000 | Anteversión Osteotome |
| 2570-04-100 | Calcar Planer Small |
| 2665-99-100 | CORAIL Upgrade Tray** |

CORAIL AMT Core Case

| Cat. No. | Description |
|-------------|--|
| 2665-99-003 | CORAIL Core Case (Tray, Head Caddy, Lid) |
| 2354-10-000 | Canal Probe |
| 53-0360 | T-Handle |
| 2598-07-570 | Retaining Implant Inserter (2 pcs) |
| 2570-05-100 | Standard Implant Inserter |
| 2001-65-000 | Head Impactor |
| 2530-81-000 | 28 mm Articul/eze +1.5 mm Trial Head |
| 2530-82-000 | 28 mm Articul/eze +5.0 mm Trial Head |
| 2530-83-000 | 28 mm Articul/eze +8.5 mm Trial Head |
| 2530-84-000 | 28 mm Articul/eze +12.0 mm Trial Head |
| 2530-85-000 | 28 mm Articul/eze +15.5 mm Trial Head |

X-Ray Templates

| Cat. No. | Description |
|-------------|-----------------------------------|
| 2665-04-511 | CORAIL STD 125 135 KLA KHO LE2 |
| 2665-04-512 | CORAIL SN 135 and Dysplasia 6 LE2 |

*Note: For size 6 instrumentation and implant ordering information, see the CORAIL Size 6 surgical technique - available from your DePuy Synthes Joint Reconstruction Sales Consultant.

*CORAIL Broach Case include the Tray, Base, and Lid. The tray holds broaches size 8-20, 3 Neck Segments (135° STD, 135° KHO, and 125° KLA), and the Neck Resection Guide. The base holds the Broach Handles, Anteversión Osteotome, and Calcar Planer Small.

**CORAIL Upgrade Tray is an upgrade to the tray currently included in 2665-99-000 with a similar design in that it will hold broaches size 8-20 and the Neck Resection Guide, but has been upgraded to have 5 spaces for Neck Segments to accommodate the CORAIL Line Extension.

Instruments

TSS Femoral Core Case 1

| Cat. No. | Description |
|-------------|--|
| 2598-07-460 | Universal Stem Inserter Handle Trial Heads – 2 Sets per Case Note: accommodates up through size 44 mm |
| 2598-07-570 | Retaining Stem Inserter (2 pcs) |
| 2598-07-530 | Modular Box Osteotome |

Any two of the below handles accommodated:

| Cat. No. | Description |
|--------------|--|
| 2570-00-000 | SUMMIT™ Universal Broach Handle |
| 2598-07-540 | Long Posterior Broach Handle |
| 2598-07-550 | Extra Curved Broach Handle |
| 2598-07-350 | Anterior Dual Offset Broach Handle – Left |
| 2598-07-360 | Anterior Dual Offset Broach Handle – Right |
| 9522-10-500F | CORAIL AMT Straight Broach Handle |
| 9522-11-500 | CORAIL AMT Curved Broach Handle |
| 2598-07-470 | CORAIL/TRI-LOCK™ Posterior Stem Inserter Shaft |
| 2598-07-480 | SUMMIT Posterior Stem Inserter Shaft |
| 2598-07-435 | Bullet Tip Stem Inserter Shaft |
| 2598-07-430 | Standard Straight Stem Inserter Shaft |
| 2598-07-440 | CORAIL/TRI-LOCK Anterior Stem Inserter Shaft |
| 2598-07-450 | SUMMIT Anterior Stem Inserter Shaft |

TSS Femoral Core Case 1

| Cat. No. | Description |
|-------------|---------------------------------------|
| 2354-10-000 | Muller Awl Reamer with Hudson End |
| 2001-42-000 | T-Handle |
| 2001-80-501 | IM Initiator Sized |
| 9400-80-007 | Shielded Calcar Planer Small |
| 85-3927 | Femoral Rasp |
| 9400-80-001 | Canal Finder |
| 2001-65-000 | Femoral/Humeral Head Impactor |
| 2001-66-000 | Replacement Tip Femoral Head Impactor |

Additional Instruments Compatible with CORAIL Hip System

| Cat. No. | Description |
|-------------|-----------------------------|
| L93205 | CORAIL Bone Impactor |
| L93606 | Bone Tamp |
| 2570-04-200 | Calcar Planer Large |
| 2001-47-000 | Calcar Mill Small |
| 2001-48-000 | Calcar Mill Medium |
| 2001-49-000 | Calcar Mill Large |
| 2570-04-501 | Modular Calcar Planer Small |
| 2570-04-503 | Modular Calcar Planer Large |
| 2570-04-500 | MI Calcar Reamer Shaft |

References:

1. DPS__DPS_Corail 1986-2017 sales da_DOE_RPT_20170717.pdf
2. Vidalain JP (2011) 25-year ARTRO Results: A Special Vintage from the Old World. In: Vidalain JP et al; The CORAIL Hip System: A Practical Approach Based on 25 Years of Experience. Springer; pg 94-101.

CAUTION: Federal Law restricts these devices to sale by or on the order of a physician.

Some devices listed in this surgical technique may not have been licensed in accordance with Canadian law and may not be for sale in Canada. Please contact your sales consultant for items approved for sale in Canada.

Not all products may currently be available in all markets.

Please refer to the instructions for use for a complete list of indications, contraindications, warnings and precautions.

Only for distribution within the USA.



DePuy Orthopaedics, Inc.

700 Orthopaedic Drive
Warsaw, IN 46582
USA
Tel: +1 (800) 366 8143
Fax: +1 (800) 669 2530

DePuy Ireland UC

Loughbeg
Ringaskiddy
Co. Cork
Ireland
Tel: +353 21 4914 000
Fax: +353 21 4914 199

www.depuysynthes.com