# EVERGLADE™

**SURGICAL** TECHNIQUE

SignatureOrtho™

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# Introduction

The Signature Orthopaedics Everglade stem is a Ti6Al4V dual-tapered stem with a lateral shoulder and proximally plasma-spray coated to promote bone ongrowth.
The Signature Orthopaedics Everglade Instrument system is an instrument set for implantation of the Signature Orthopaedics Everglade cementless hip stem. The Everglade instrument set features a modular broach handle that quick-connects to several instrument attachments to reduce the overall number of instruments and reduce the size and weight of the instrument tray.

## Indications

Components of the Signature Orthopaedics hip replacement range are intended to replace a hip joint where bone stock is sufficient to support the implant. When a surgeon has selected prosthetic replacement as the preferred treatment, the devices are indicated for:

- Non-inflammatory degenerative joint disease including osteoarthritis or avascular necrosis
- Inflammatory joint disease including rheumatoid arthritis
- Correction of functional deformity including congenital hip dysplasia
- Traumatic injury involving the hip joint including traumatic arthritis or femoral head or neck fracture
- Failed previous hip surgery including internal fixation or joint fusion, reconstruction, hemiarthroplasty, surface replacement, or total replacement
- Dislocation risks (when used with SignaSure range)

Signature Orthopaedics' Origin, Everglade, Remedy, Origin-NS, Pegasus, Spartan, World and Everglade Hip femoral stems, SignaSure Cementless Cups, Logical and World Acetabular Cups are intended for cementless fixation only. Signature Orthopaedics' Evolve, Cemented TSI (both CoCr and HNSS variants), and Cemented Origin femoral stems and SignaSure Cemented Cups are intended for cemented fixation only. Signature Orthopaedics' SignaSure Logical/World Metal Insert is indicated for use with a cementless Signature Orthopaedics' Logical/World Acetabular Cup to provide dual mobility articulation.
Signature Orthopaedics' constrained liner components are indicated particularly for patients at high risk of hip dislocation due to a history of prior dislocation, bone loss, joint or soft tissue laxity, neuromuscular disease or intraoperative instability.

Signature Orthopaedics' Evolve UniPolar Head and BiPolar Head are intended for hemi-hip arthroplasty only, where the natural acetabulum does not require replacement. The Evolve UniPolar Head and BiPolar Head are indicated for bone fractures or pathologies involving only the femoral head/neck and/or proximal femur, such as:

- Acute femoral head or neck fracture
- Fracture dislocation of the hip
- Avascular necrosis of the femoral head
- Non-union of femoral neck fractures
- Certain high subcapital and femoral neck fractures in the elderly
- Degenrative arthritis involving only the femoral head

## Contraindications

In general, prosthetic components require adequate bone support for correct fit and function. The use of prosthetic components is therefore contraindicated where any pathological condition may reduce the quantity and or strength of the bone which is supporting the prosthesis. Some contraindications are relative to the extent and severity of conditions and the benefits of prosthetic arthroplasty should be considered based on the patient's overall evaluation and the possibility of alternative treatment.

Examples of such conditions include; osteoporosis, osteomalacia, osteogenesis imperfecta, or hypophosphatemia. Other contraindications include:

- Conditions limiting blood supply to the bone or joint.
- Systemic or local infection.
- Previous high dose radiotherapy.
- Psychological or neurological conditions which would restrict the patient's ability or compliance in restricting physical activity.
- Skeletal immaturity.
- Conditions or activity which may place excessive load on the components such as; obesity, muscle, tendon & ligament deficiencies, multiple joint disabilities, and Charcot joints.

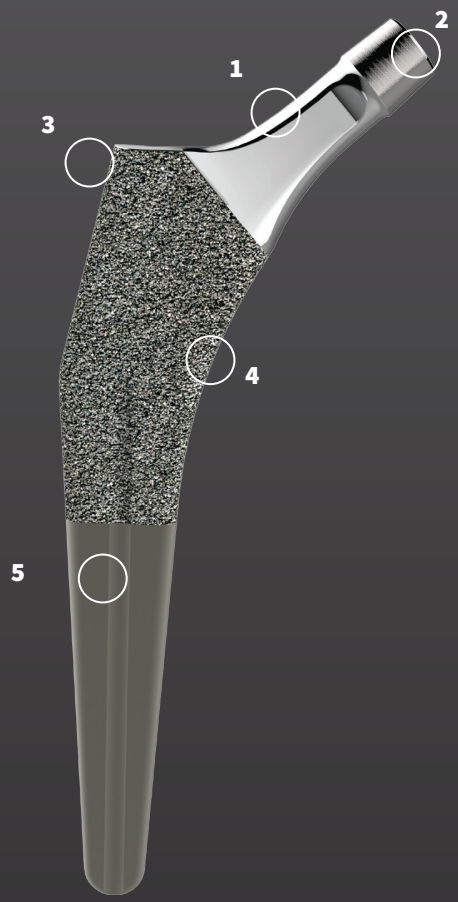
The Signature Ceramic Femoral Head (containing Zirconia) is contraindicated for use with any other than an UHMWPE cup or a metal backed UHMWPE cup. This head must only be used with Logical™ Cup with a UHMWPE Logical™ Liner.
The Signature Orthopaedics' constrained liners are contraindicated particularly for active patients.
Signature Orthopaedics' constrained liners are also contraindicated for use with the Signature Orthopaedics Origin-NS stem and Cemented TSI stem due to decreased range of motion.
Signature Orthopaedics' Cemented TSI and Cemented Origin Stems are contraindicated for use with CoCr femoral heads due to a potential risk of increased fretting corrosion.

*USA only

# Everglade Stem Features

## Cementless Hip Stem

- Material and coating (Ti6Al4V with titanium plasma spray coating).
- Threaded proximal feature aids in positioning and removal.




## 1. Standard and High offset versions

## 2. 12/14 Taper

## 3. Low-profile lateral shoulder

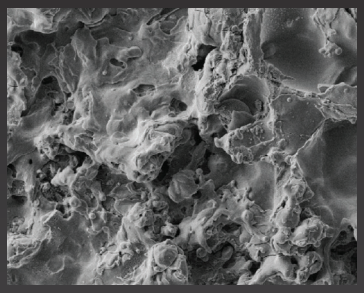
Enables insertion in reduced insertion techniques, including anterior approach.

## 4. Tapered geometry

Wedge-shaped stem initial fixation and proximal bone loading.

## 5. Titanium Plasma Spray Coating

- Tensile Strength > 22MPa
- Shear Strength > 22MPa
- Coating Thickness 70-130 microns.



Everglade coating x100

## 6. Reduced distal option*

- An option for cases where there are concerns over the distal loading of the femur.
- Provides surgical options to cater for a range of patients.

*USA only

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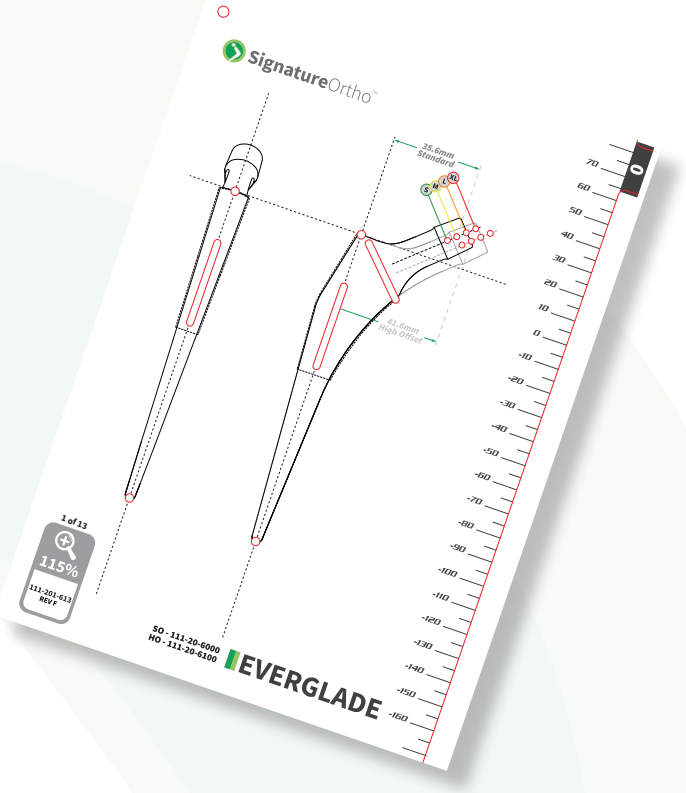
## Preoperative Planning

Everglade X-Ray templates can be used over anterior/posterior and lateral radiographs to help determine the correct size to restore the patient's anatomy.
Templates are 115% magnification.

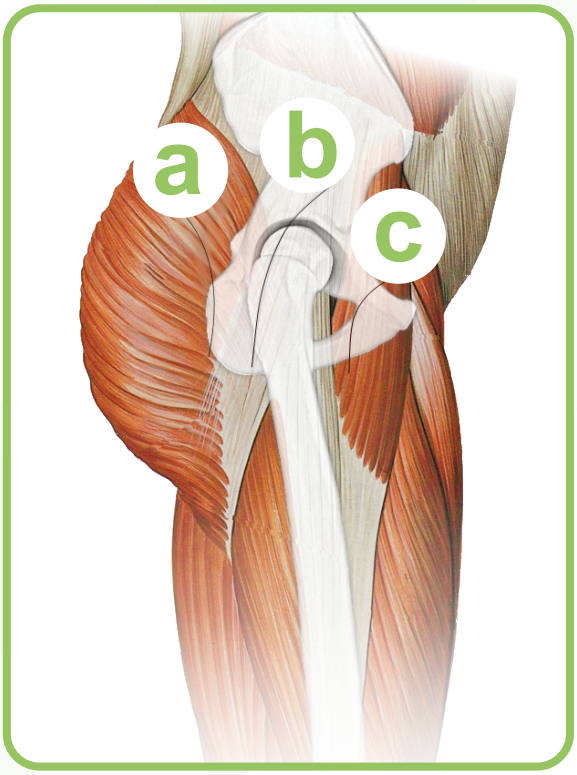



2

## Preoperative Planning

The Everglade stem can be used with any surgical approach that the surgeon selects.

a. Posterior approach
b. Posterolateral/anterolateral approach
c. Anterior approach

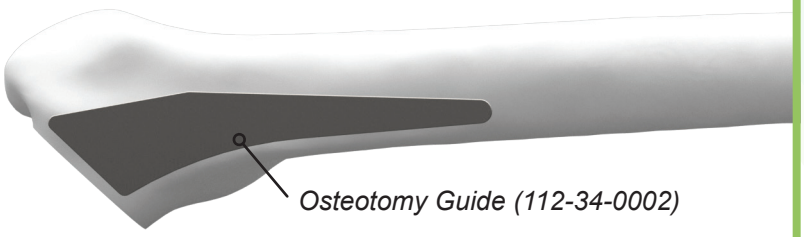


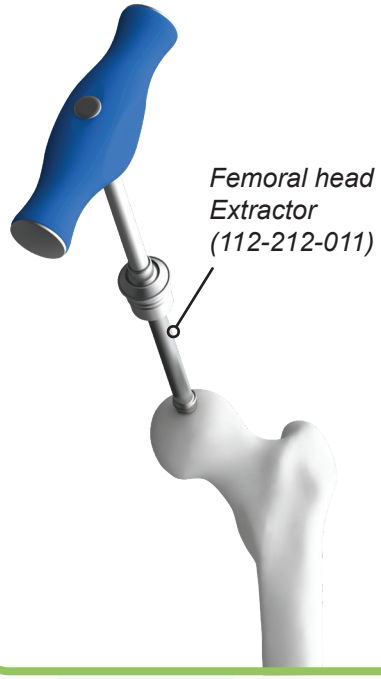

**Note:**
Prior to the following steps, complete all steps detailed in 111-12-0003 for the Logical acetabular cup implantation.

3

## Femoral Neck Resection

The osteotomy guide should be used in conjunction with preoperative planning, to determine the level of the femoral neck resection. This can be performed in multiple steps, depending on surgeon preference.




**Optional technique:**
The femoral head extractor may be used with the T-handle or under power to aid in the removal of the resected head, especially during an anterior approach technique.

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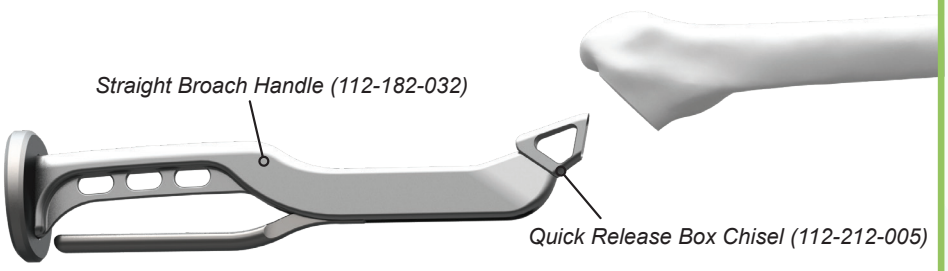
## Femoral Preparation

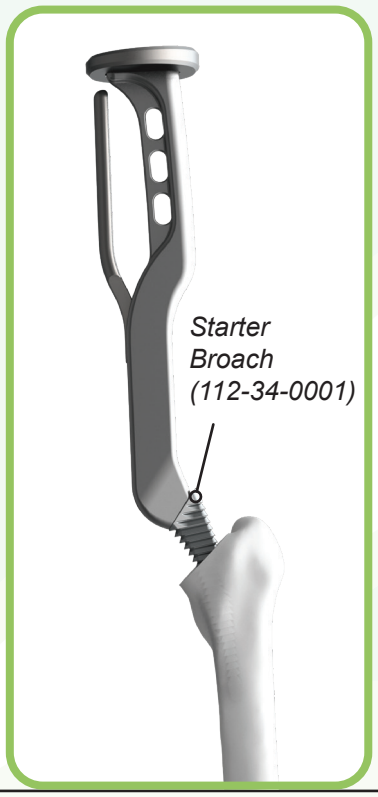
Enter the femoral canal as laterally as possible with the Box Osteotome to initiate access to the medullary canal. The Canal Reamer may be used as needed to open the natural axis of the femoral canal for broach preparation.

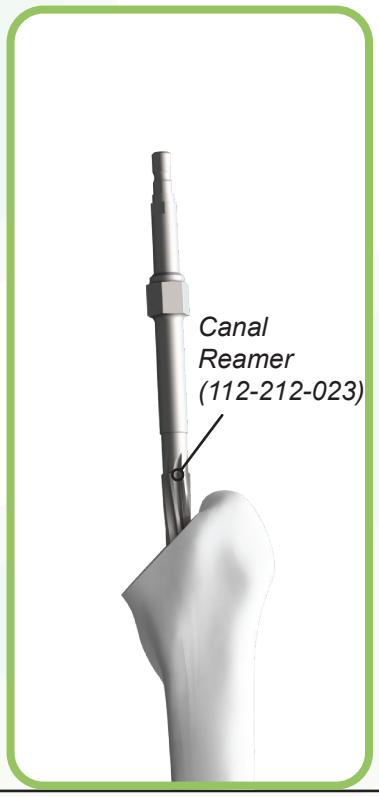


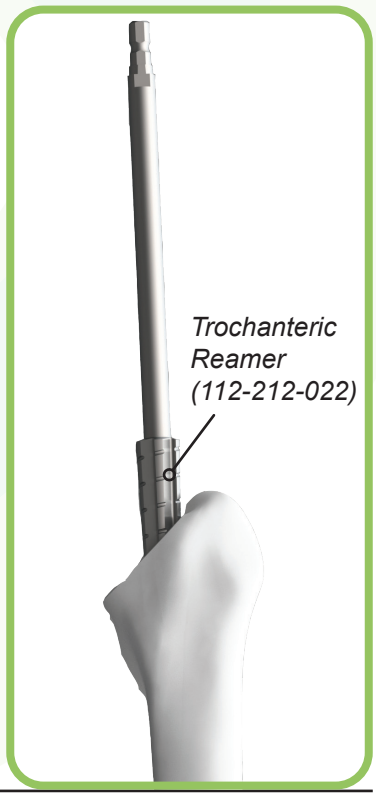

## Optional technique:

While the Everglade system is intended to be a broach-only system, the Everglade instrument tray contains instruments for optional use to assist in proper axial alignment along the femoral canal and to induce lateral bias where needed:

**a.** Starter broach induces lateral bias by rasping beneath the greater trochanter
**b.** Canal reamer creates a guide hole for the distal end of the trochanteris reamer
**c.** Trochanteric reamer removes trochanteric bone tissue laterally to assist neutral alignment with the femoral axis during broaching



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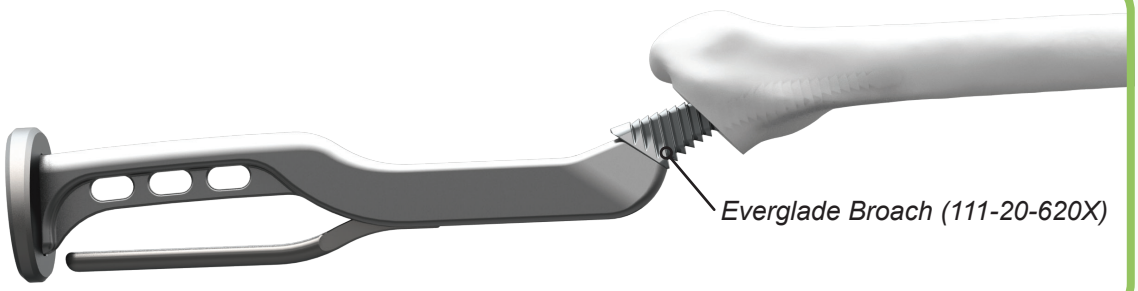
## Broaching

The broach should run parallel to the posterior cortex following the natural anatomy of the femur. Begin with the smallest broach and increase the size of the 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 be the natural version of the femur.



*Everglade Broach (111-20-620X)*

**Note:**
Refer to **Appendix:Broaching Techniques and Tips** for detail on the theory of compaction broaching, why this technique is used for Everglade stems, and how to form a bed of compacted bone.

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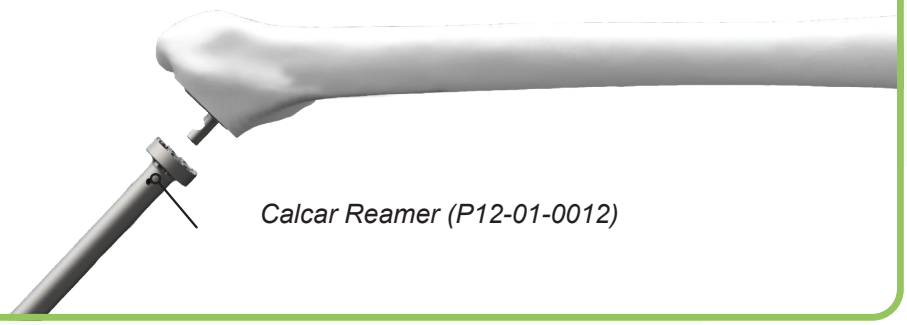
## Calcar Reaming

With the broach in situ, use the Calcar Reamer to achieve a flat resection surface. Slide the reamer over the broach quick connect fitting to maintain the resection angle. Carefully advance the reamer towards the broach face and into the resected edge of the femur until it bottoms out against the broach face.



*Calcar Reamer (P12-01-0012)*

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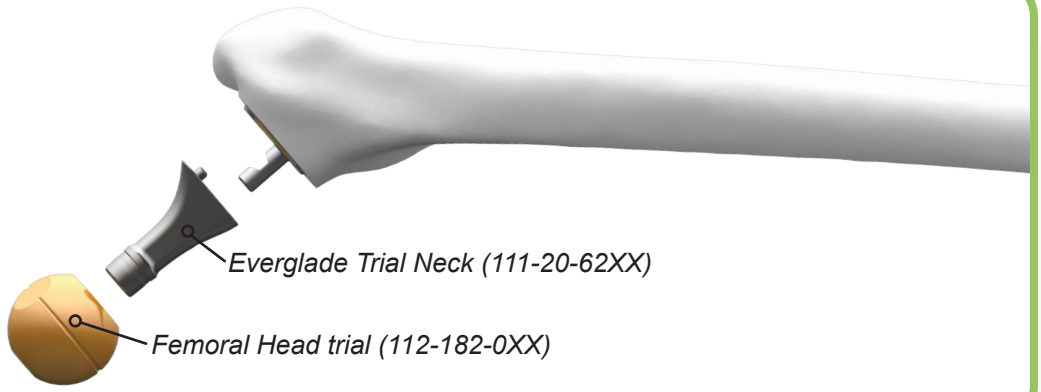
## Trial Reduction

With the final broach still in situ, attach the appropriate trial neck and trial head. Reduce the hip and assess what adjustments, if any, are required to provide stability through a full range of motion. Remove the trial head, trial neck and final broach. DO NOT irrigate or dry the femoral canal. This will help to preserve the compacted cancellous bone quality and may encourage biological fixation of the stem.




**Instrument identification:**
Trial heads are colour coded based on offset.
Refer to Everglade Implants Sizing Guide in this surgical technique for more details.

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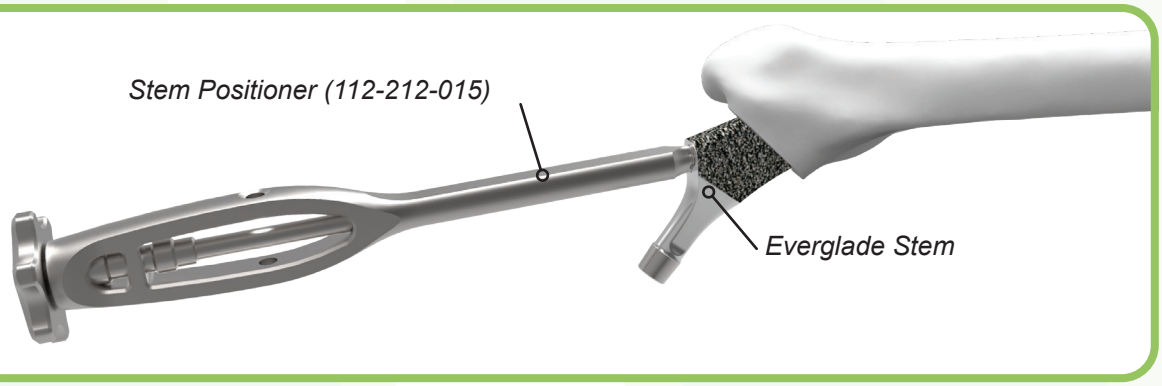
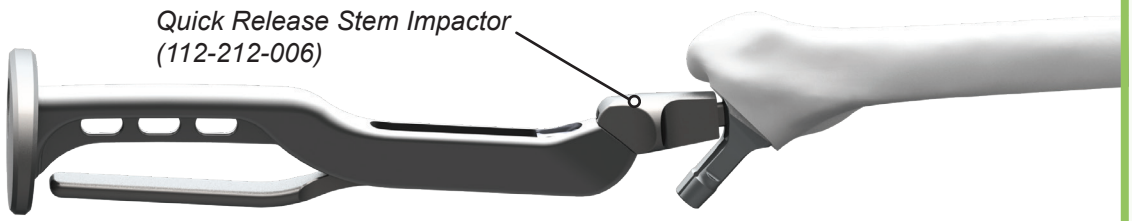
## Femoral Component Insertion

When implanting the definitive stem (same size as final broach) in the femoral canal, ensure that it is directed in by hand. This will help avoid changing the version as a precautionary measure. There should be no more than 15-20mm between the resection line and the top of the porous coating on the stem. If the stem does not readily go down this far, the surgeon should broach again. Once the stem is placed, lightly tap the stem impactor to fully seat. DO NOT over-impact as this may lead to splitting of the femur.




**Instrument operation:**
To connect the Everglade stem to the stem positioner, first slide the inner shaft of the positioner through the outer shaft, spinning the strikeplate so the inner shaft threads in and falls through. Turn the threaded tip of the inner shaft into the female threads on the Everglade stem until a snug hold is achieved to prevent damage to the threads.

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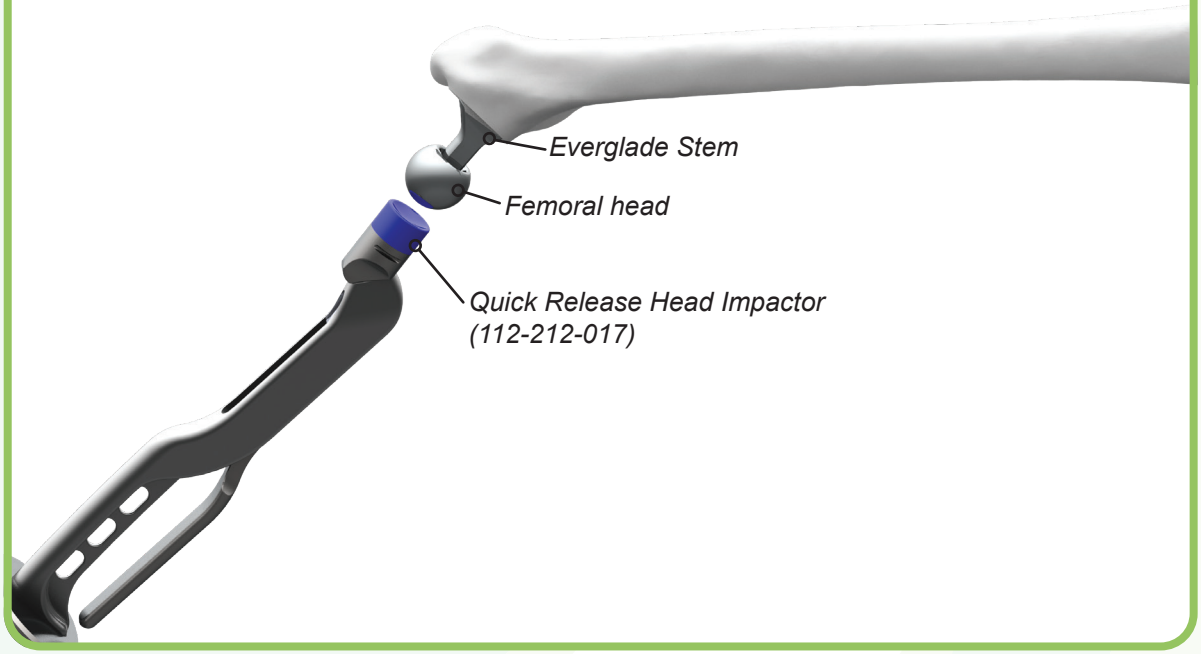
## Femoral Head Impaction

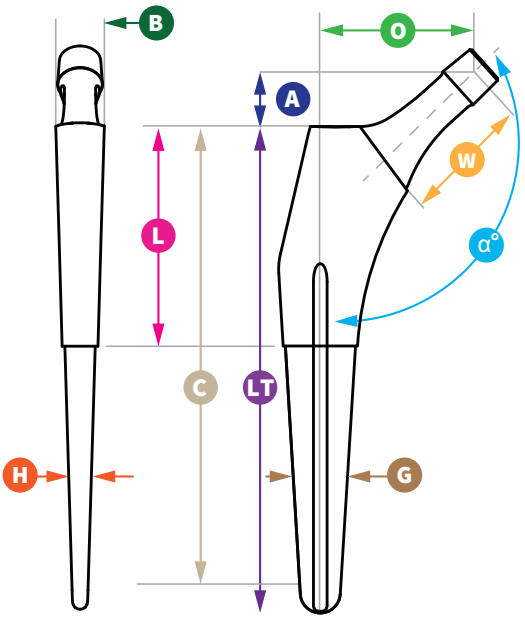
A final trial reduction is carried out to confirm joint stability and range of motion. Clean and dry the stem taper to remove any particulate matter or debris. Place the femoral head onto the taper and lightly tap it using the head impactor. Ensure that bearing surfaces are clean and finally reduce the hip.

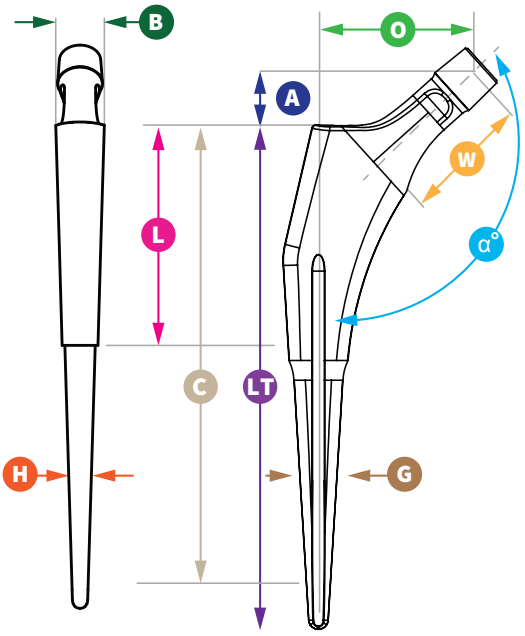


# Everglade Implant sizing guide*



| SIZE | OFFSET | LT | L | W | O | α° | G | H | C | B | A |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 111-20-6000 | Standard Offset | 120 | 54 | 35.7 | 35.6 | 132 | 4.9 | 4.4 | 96 | 11.5 | 11.4 |
| 0 111-20-6100 | High Offset | 120 | 54 | 40.1 | 41.6 | 132 | 4.9 | 4.4 | 96 | 11.5 | 11.4 |
| 111-20-6300 | Standard Offset Reduced Distal | 118 | 54 | 35.7 | 35.6 | 132 | 5.0 | 4.4 | 96 | 11.5 | 11.4 |
| 111-20-6400 | High Offset Reduced Distal | 118 | 54 | 40.1 | 41.6 | 132 | 5.0 | 4.4 | 96 | 11.5 | 11.4 |
| 111-20-6001 | Standard Offset | 120 | 61 | 38.5 | 38.7 | 132 | 5.6 | 4.6 | 122 | 11.8 | 12.7 |
| 1 111-20-6101 | High Offset | 120 | 61 | 43.0 | 44.7 | 132 | 5.6 | 4.6 | 122 | 11.8 | 12.7 |
| 111-20-6301 | Standard Offset Reduced Distal | 120 | 61 | 38.5 | 38.7 | 132 | | 4.6 | 122 | 11.8 | 12.7 |
| 111-20-6401 | High Offset Reduced Distal | 120 | 61 | 43.0 | 44.7 | 132 | | 4.6 | 122 | 11.8 | 12.7 |
| 111-20-6002 | Standard Offset | 123 | 63 | 39.4 | 40.1 | 132 | 6.9 | 4.9 | 124 | 12.2 | 13.4 |
| 2 111-20-6102 | High Offset | 123 | 63 | 43.8 | 46.1 | 132 | 6.9 | 4.9 | 124 | 12.2 | 13.4 |
| 111-20-6302 | Standard Offset Reduced Distal | 123 | 63 | 39.4 | 40.1 | 132 | | 4.9 | 124 | 12.2 | 13.4 |
| 111-20-6402 | High Offset Reduced Distal | 123 | 63 | 43.8 | 46.1 | 132 | | 4.9 | 124 | 12.2 | 13.4 |
| 111-20-6003 | Standard Offset | 136 | 64 | 39.3 | 40.7 | 132 | 8.2 | 5.0 | 126 | 12.2 | 13.4 |
| 3 111-20-6103 | High Offset | 136 | 64 | 43.8 | 46.7 | 132 | 8.2 | 5.0 | 126 | 12.2 | 13.4 |
| 111-20-6303 | Standard Offset Reduced Distal | 121 | 64 | 43.8 | 40.7 | 132 | 6.2 | 5.0 | 126 | 12.2 | 13.4 |
| 111-20-6403 | High Offset Reduced Distal | 121 | 64 | 43.8 | 46.7 | 132 | 6.2 | 5.0 | 126 | 12.2 | 13.4 |
| 111-20-6004 | Standard Offset | 138 | 65 | 40.4 | 42.1 | 132 | 8.9 | 5.0 | 128 | 12.5 | 14.1 |
| 4 111-20-6104 | High Offset | 138 | 65 | 44.9 | 48.1 | 132 | 8.9 | 5.0 | 128 | 12.5 | 14.1 |
| 111-20-6304 | Standard Offset Reduced Distal | 124 | 65 | 40.4 | 42.1 | 132 | 6.9 | 5.0 | 128 | 12.5 | 14.1 |
| 111-20-6404 | High Offset Reduced Distal | 124 | 65 | 44.9 | 48.1 | 132 | 6.9 | 5.0 | 128 | 12.5 | 14.1 |
| 111-20-6005 | Standard Offset | 140 | 66 | 40.4 | 42.7 | 132 | 9.7 | 5.0 | 130 | 12.6 | 14.1 |
| 5 111-20-6105 | High Offset | 140 | 66 | 44.9 | 48.7 | 132 | 9.7 | 5.0 | 130 | 12.6 | 14.1 |
| 111-20-6305 | Standard Offset Reduced Distal | 127 | 66 | 40.4 | 42.7 | 132 | 7.7 | 5.0 | 130 | 12.6 | 14.1 |
| 111-20-6405 | High Offset Reduced Distal | 127 | 66 | 44.9 | 48.7 | 132 | 7.7 | 5.0 | 130 | 12.6 | 14.1 |
| 111-20-6006 | Standard Offset | 143 | 67 | 40.4 | 43.3 | 132 | 10.9 | 5.1 | 132 | 12.8 | 14.1 |
| 6 111-20-6106 | High Offset | 143 | 67 | 44.9 | 49.3 | 132 | 10.9 | 5.1 | 132 | 12.8 | 14.1 |
| 111-20-6306 | Standard Offset Reduced Distal | 130 | 67 | 40.4 | 43.3 | 132 | 8.9 | 5.1 | 132 | 12.8 | 14.1 |
| 111-20-6406 | High Offset Reduced Distal | 130 | 67 | 44.9 | 49.3 | 132 | 8.9 | 5.1 | 132 | 12.8 | 14.1 |
| 111-20-6007 | Standard Offset | 133 | 68 | 40.4 | 43.9 | 132 | 11.7 | 5.2 | 134 | 12.9 | 14.1 |
| 7 111-20-6107 | High Offset | 133 | 68 | 45.0 | 49.9 | 132 | 11.7 | 5.2 | 134 | 12.9 | 14.1 |
| 111-20-6307 | Standard Offset Reduced Distal | 133 | 68 | 40.4 | 43.9 | 132 | 9.7 | 5.2 | 134 | 12.9 | 14.1 |
| 111-20-6407 | High Offset Reduced Distal | 133 | 68 | 45.0 | 49.9 | 132 | 9.7 | 5.2 | 134 | 12.9 | 14.1 |
| 111-20-6008 | Standard Offset | 148 | 70 | 43.4 | 46.8 | 132 | 13 | 5.2 | 136 | 13.2 | 16.1 |
| 8 111-20-6108 | High Offset | 148 | 70 | 47.9 | 52.8 | 132 | 13 | 5.2 | 136 | 13.2 | 16.1 |
| 111-20-6308 | Standard Offset Reduced Distal | 136 | 70 | 43.4 | 46.8 | 132 | 11 | 5.2 | 136 | 13.2 | 16.1 |
| 111-20-6408 | High Offset Reduced Distal | 136 | 70 | 47.9 | 52.8 | 132 | 11 | 5.2 | 136 | 13.2 | 16.1 |
| 111-20-6009 | Standard Offset | 151 | 71 | 43.4 | 47.4 | 132 | 14.0 | 5.3 | 138 | 13.4 | 16.1 |
| 9 111-20-6109 | High Offset | 151 | 71 | 47.9 | 53.4 | 132 | 14.0 | 5.3 | 138 | 13.4 | 16.1 |
| 111-20-6309 | Standard Offset Reduced Distal | 139 | 71 | 43.4 | 47.4 | 132 | 12.0 | 5.3 | 138 | 13.4 | 16.1 |
| 111-20-6409 | High Offset Reduced Distal | 139 | 71 | 47.9 | 53.4 | 132 | 12.0 | 5.3 | 138 | 13.4 | 16.1 |
| 111-20-6010 | Standard Offset | 153 | 72 | 43.4 | 48.0 | 132 | 13.4 | 5.3 | 140 | 15 | 16.1 |
| 10 111-20-6110 | High Offset | 153 | 72 | 47.9 | 54.0 | 132 | 13.4 | 5.3 | 140 | 15 | 16.1 |
| 111-20-6310 | Standard Offset Reduced Distal | 142 | 72 | 43.4 | 48.0 | 132 | 11.4 | 5.3 | 140 | 15 | 16.1 |
| 111-20-6410 | High Offset Reduced Distal | 142 | 72 | 47.9 | 54.0 | 132 | 11.4 | 5.3 | 140 | 15 | 16.1 |
| 111-20-6011 | Standard Offset | 158 | 74 | 43.4 | 49.3 | 132 | 17.2 | 6.0 | 142 | 14.3 | 16.1 |
| 11 111-20-6111 | High Offset | 158 | 74 | 47.9 | 55.3 | 132 | 17.2 | 6.0 | 142 | 14.3 | 16.1 |
| 111-20-6311 | Standard Offset Reduced Distal | 145 | 74 | 43.4 | 49.3 | 132 | 15.2 | 6.0 | 142 | 14.3 | 16.1 |
| 111-20-6411 | High Offset Reduced Distal | 145 | 74 | 47.9 | 55.3 | 132 | 15.2 | 6.0 | 142 | 14.3 | 16.1 |
| 111-20-6012 | Standard Offset | 163 | 76 | 43.6 | 50.5 | 132 | 19.7 | 6.3 | 144 | 14.6 | 16.1 |
| 12 111-20-6112 | High Offset | 163 | 76 | 48.0 | 56.5 | 132 | 19.7 | 6.3 | 144 | 14.6 | 16.1 |
| 111-20-6312 | Standard Offset Reduced Distal | 148 | 76 | 43.6 | 50.5 | 132 | 17.7 | 6.3 | 144 | 14.6 | 16.1 |
| 111-20-6412 | High Offset Reduced Distal | 148 | 76 | 48.0 | 56.5 | 132 | 17.7 | 6.3 | 144 | 14.6 | 16.1 |

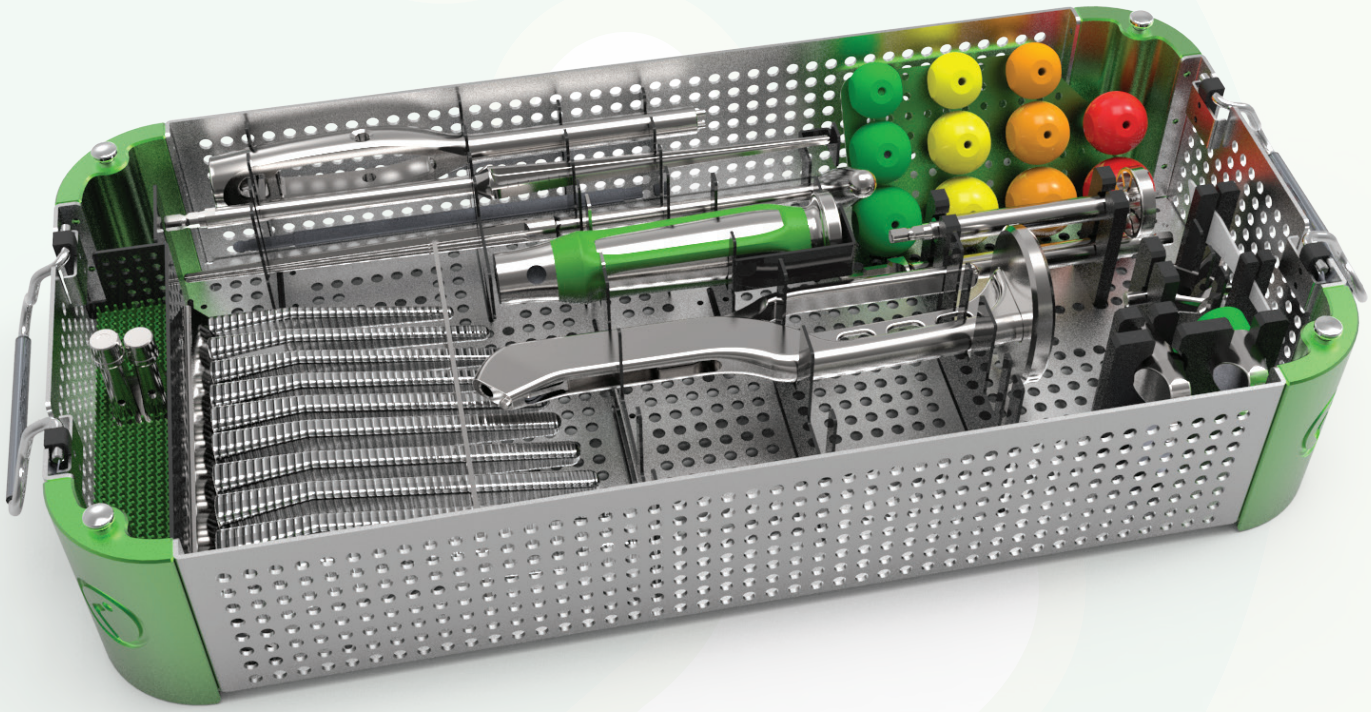



| | | Ø28 | | Ø32 | | Ø36 | | Ø40 | |
|---|---|---|---|---|---|---|---|---|---|
| S | CoCr | -3.5 | 111-152-011 | -4.0 | 111-152-021 | -4.0 | 111-152-031 | -4.0 | 111-152-041 |
| | Ceramic | | 111-152-611 | | 111-152-621 | | 111-152-631 | | 111-152-641 |
| | Stainless Steel | | 111-152-111 | | 111-152-121 | | 111-152-131 | | |
| M | CoCr | +0.0 | 111-152-012 | +0.0 | 111-152-022 | +0.0 | 111-152-032 | +0.0 | 111-152-042 |
| | Ceramic | | 111-152-612 | | 111-152-622 | | 111-152-632 | | 111-152-642 |
| | Stainless Steel | | 111-152-112 | | 111-152-122 | | 111-152-132 | | |
| L | CoCr | +3.5 | 111-152-013 | +4.0 | 111-152-023 | +4.0 | 111-152-033 | +4.0 | 111-152-043 |
| | Ceramic | | 111-152-613 | | 111-152-623 | | 111-152-633 | | 111-152-643 |
| | Stainless Steel | | 111-152-113 | | 111-152-123 | | 111-152-133 | | |
| XL | CoCr | | | +7.0 | 111-152-024 | +8.0 | 111-152-034 | +8.0 | 111-152-044 |
| | Ceramic | | | | 111-152-624 | | 111-152-634 | | 111-152-644 |
| | Stainless Steel | | | | 111-152-124 | | 111-152-134 | | |

*Reduced distal is USA only

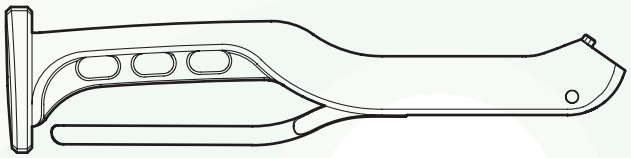
# Everglade Instrument Tray



# Everglade Instruments

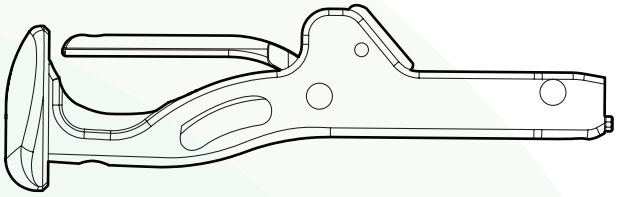
## Straight Broach Handle

112-182-032



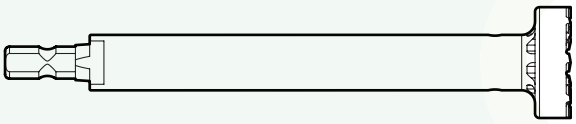
## Short Broach Handle

112-25-0146



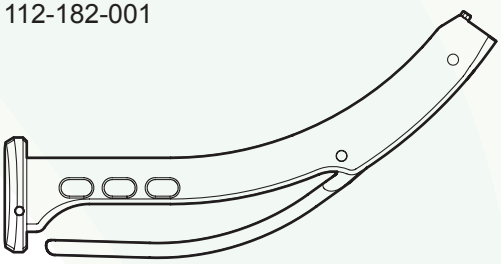
## Calcar Reamer

P12-01-0012



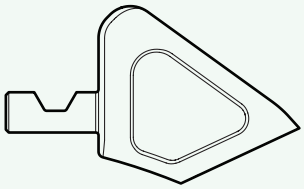
## Curved Broach Handle

112-182-001



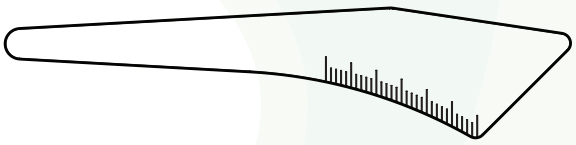
## Quick Release Box Chisel

112-212-005



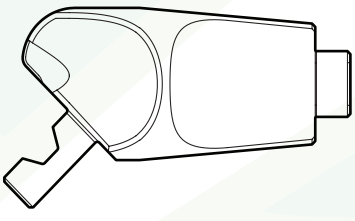
## Osteotomy Guide

112-34-0002



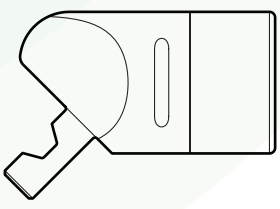
## Quick Release Stem Impactor

112-212-006



## Quick Release Head Impactor

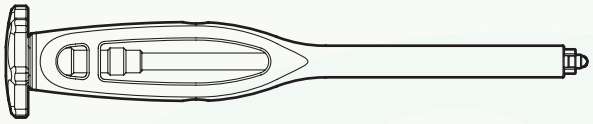
112-212-017



# Everglade Instruments

## Stem Positioner

112-182-027 Outer
112-182-028 Inner



## Modular Stem Impactor

112-25-0080 Curved
112-25-0092 Offset
112-25-0093 Bullet Tip

## Trochanteric Canal Reamer

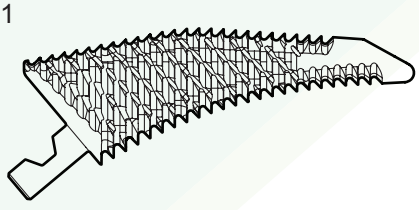
112-212-022

## IM Drill

112-182-087

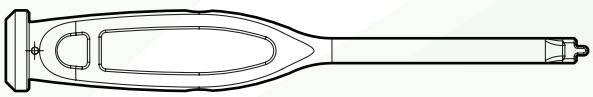
## Starter Broach

112-34-0001



## Stem Positioner UniBody

112-212-026

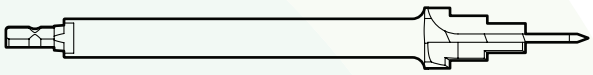


## Canal Reamer

112-212-023

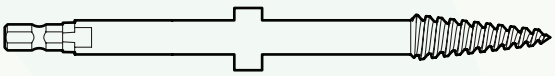
## Stepped Entry Reamer

112-162-001



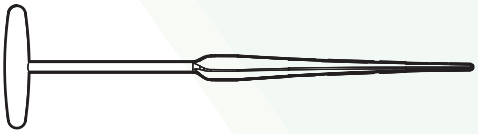
## Femoral Head Extractor

112-182-117



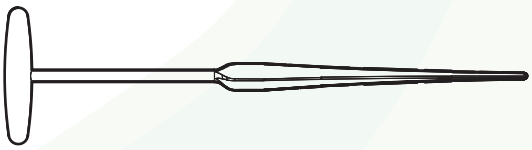
## Small Tapered Pin Reamer

112-182-013



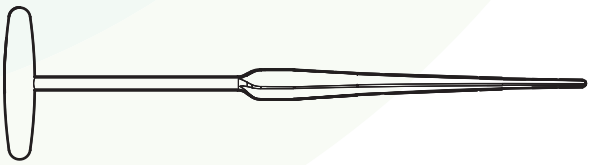
## Large Tapered Pin Reamer

112-182-144



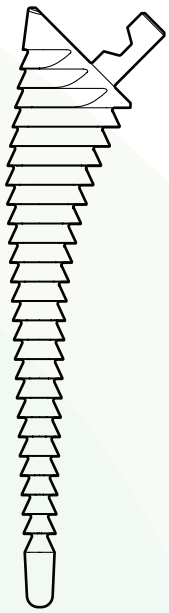
## XL Tapered Pin Reamer

112-182-148

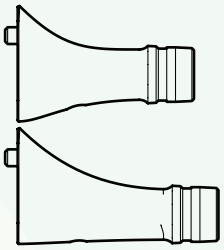


# Everglade Instruments

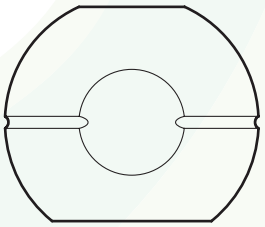
| Everglade Broaches | | Distal Reduced Everglade Broaches* | |
|---|---|---|---|
| 111-20-6200 | Size 0 | 111-20-6903 | Size 3 |
| 111-20-6201 | Size 1 | 111-20-6904 | Size 4 |
| 111-20-6202 | Size 2 | 111-20-6905 | Size 5 |
| 111-20-6203 | Size 3 | 111-20-6906 | Size 6 |
| 111-20-6204 | Size 4 | 111-20-6907 | Size 7 |
| 111-20-6205 | Size 5 | 111-20-6908 | Size 8 |
| 111-20-6206 | Size 6 | 111-20-6909 | Size 9 |
| 111-20-6207 | Size 7 | 111-20-6910 | Size 10 |
| 111-20-6208 | Size 8 | 111-20-6911 | Size 11 |
| 111-20-6209 | Size 9 | 111-20-6912 | Size 12 |
| 111-20-6210 | Size 10 | | |
| 111-20-6211 | Size 11 | | |
| 111-20-6212 | Size 12 | | |



| Everglade Trial Necks | |
|---|---|
| 111-20-6250 | Size 0 Standard Offset |
| 111-20-6260 | Size 0 High Offset |
| 111-20-6251 | Size 1 Standard Offset |
| 111-20-6261 | Size 1 High Offset |
| 111-20-6252 | Size 2-3 Standard Offset |
| 111-20-6262 | Size 2-3 High Offset |
| 111-20-6253 | Size 4-7 Standard Offset |
| 111-20-6263 | Size 4-7 High Offset |
| 111-20-6254 | Size 8-12 Standard Offset |
| 111-20-6264 | Size 8-12 High Offset |



| Trial Femoral Heads | |
|---|---|
| 112-182-040 | Ø28mm -3.5mm Green |
| 112-182-041 | Ø28mm 0.0mm Yellow |
| 112-182-042 | Ø28mm +3.5mm Orange |
| 112-182-017 | Ø32mm -4.0mm Green |
| 112-182-018 | Ø32mm 0.0mm Yellow |
| 112-182-019 | Ø32mm +4.0mm Orange |
| 112-182-020 | Ø32mm +8.0mm Red |
| 112-182-021 | Ø36mm -4.0mm Green |
| 112-182-022 | Ø36mm 0.0mm Yellow |
| 112-182-023 | Ø36mm +4.0mm Orange |
| 112-182-024 | Ø36mm +8.0mm Red |
| 112-182-043 | Ø40mm -4.0mm Green |
| 112-182-044 | Ø40mm 0.0mm Yellow |
| 112-182-045 | Ø40mm +4.0mm Orange |
| 112-182-046 | Ø40mm +8.0mm Red |

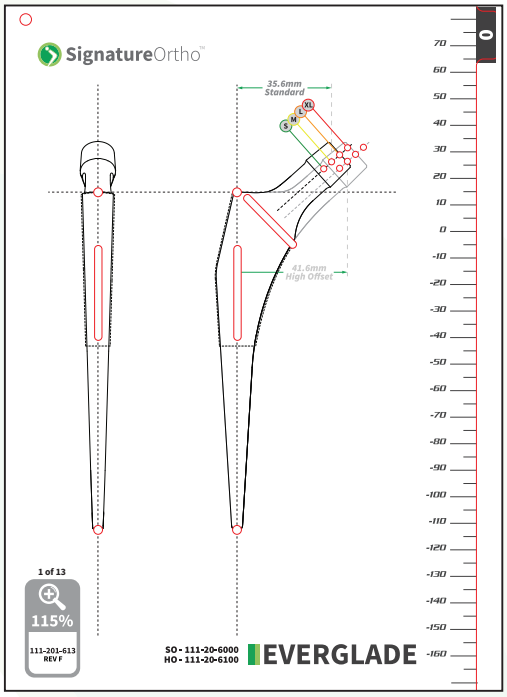


*USA only

# Everglade Instruments

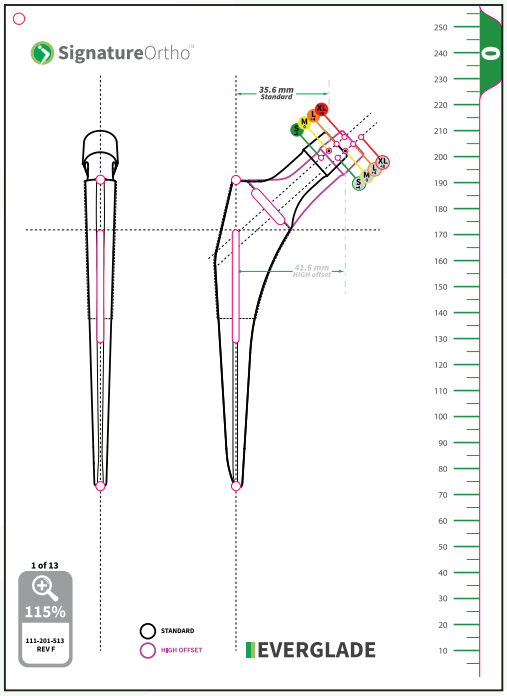
## Everglade Preoperative Templates

111-201-613 Size 0-12 Template




## Everglade RDS Preoperative Templates

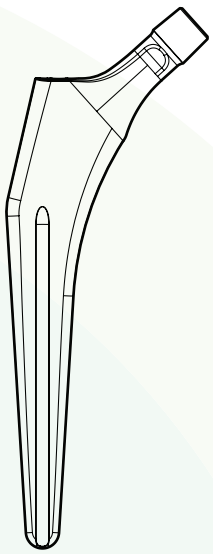
111-201-513 Size 0-12 Template



# Everglade Implants

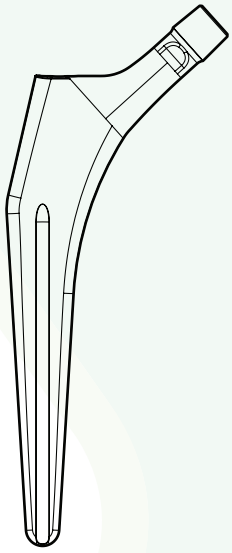
## Everglade Standard Offset Stem

| | |
|---|---|
| 111-20-6000 | Size 0 |
| 111-20-6001 | Size 1 |
| 111-20-6002 | Size 2 |
| 111-20-6003 | Size 3 |
| 111-20-6004 | Size 4 |
| 111-20-6005 | Size 5 |
| 111-20-6006 | Size 6 |
| 111-20-6007 | Size 7 |
| 111-20-6008 | Size 8 |
| 111-20-6009 | Size 9 |
| 111-20-6010 | Size 10 |
| 111-20-6011 | Size 11 |
| 111-20-6012 | Size 12 |



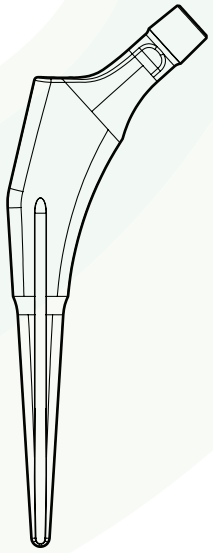
## Everglade High Offset Stem

| | |
|---|---|
| 111-20-6100 | Size 0 |
| 111-20-6101 | Size 1 |
| 111-20-6102 | Size 2 |
| 111-20-6103 | Size 3 |
| 111-20-6104 | Size 4 |
| 111-20-6105 | Size 5 |
| 111-20-6106 | Size 6 |
| 111-20-6107 | Size 7 |
| 111-20-6108 | Size 8 |
| 111-20-6109 | Size 9 |
| 111-20-6110 | Size 10 |
| 111-20-6111 | Size 11 |
| 111-20-6112 | Size 12 |



## Everglade Stem, Standard Offset – Reduced Distal*

| | |
|---|---|
| 111-20-6303 | Size 3 |
| 111-20-6304 | Size 4 |
| 111-20-6305 | Size 5 |
| 111-20-6306 | Size 6 |
| 111-20-6307 | Size 7 |
| 111-20-6308 | Size 8 |
| 111-20-6309 | Size 9 |
| 111-20-6310 | Size 10 |
| 111-20-6311 | Size 11 |
| 111-20-6312 | Size 12 |

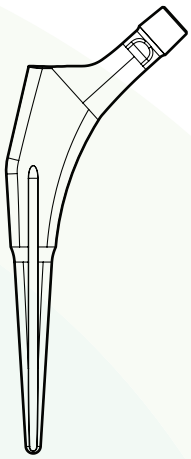


*USA only

# Everglade Implants

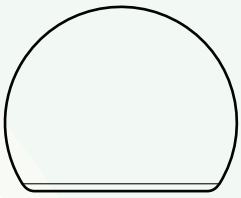
## Everglade Stem, High Offset – Reduced Distal*

| | |
|---|---|
| 111-20-6403 | Size 3 |
| 111-20-6404 | Size 4 |
| 111-20-6405 | Size 5 |
| 111-20-6406 | Size 6 |
| 111-20-6407 | Size 7 |
| 111-20-6408 | Size 8 |
| 111-20-6409 | Size 9 |
| 111-20-6410 | Size 10 |
| 111-20-6411 | Size 11 |
| 111-20-6412 | Size 12 |



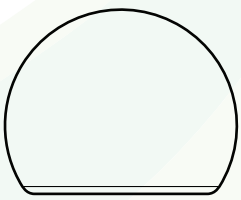
## Signature Ceramic Femoral Head

| | |
|---|---|
| 111-152-611 | Size 28mm S |
| 111-152-612 | Size 28mm M |
| 111-152-613 | Size 28mm L |
| 111-152-621 | Size 32mm S |
| 111-152-622 | Size 32mm M |
| 111-152-623 | Size 32mm L |
| 111-152-624 | Size 32mm XL |
| 111-152-631 | Size 36mm S |
| 111-152-632 | Size 36mm M |
| 111-152-633 | Size 36mm L |
| 111-152-634 | Size 36mm XL |
| 111-152-641 | Size 40mm S |
| 111-152-642 | Size 40mm M |
| 111-152-643 | Size 40mm L |
| 111-152-644 | Size 40mm XL |
| 111-152-651 | Size 44mm S |
| 111-152-652 | Size 44mm M |
| 111-152-653 | Size 44mm L |
| 111-152-654 | Size 44mm XL |



## Fusion Ceramic Femoral Head*

| | |
|---|---|
| 111-22-0511 | Size 28mm |
| 111-22-0512 | Size 32mm |
| 111-22-0513 | Size 36mm |



*USA only

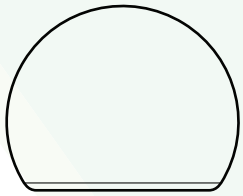
# Everglade Implants

## Signature SS Femoral Head

| | |
|---|---|
| 111-152-111 | Size 28mm S |
| 111-152-112 | Size 28mm M |
| 111-152-113 | Size 28mm L |
| 111-152-121 | Size 32mm S |
| 111-152-122 | Size 32mm M |
| 111-152-123 | Size 32mm L |
| 111-152-124 | Size 32mm XL |
| 111-152-131 | Size 36mm S |
| 111-152-132 | Size 36mm M |
| 111-152-133 | Size 36mm L |
| 111-152-134 | Size 36mm XL |

## Signature CoCr Femoral Head

| | |
|---|---|
| 111-152-011 | Size 28mm S |
| 111-152-012 | Size 28mm M |
| 111-152-013 | Size 28mm L |
| 111-152-021 | Size 32mm S |
| 111-152-022 | Size 32mm M |
| 111-152-023 | Size 32mm L |
| 111-152-024 | Size 32mm XL |
| 111-152-031 | Size 36mm S |
| 111-152-032 | Size 36mm M |
| 111-152-033 | Size 36mm L |
| 111-152-034 | Size 36mm XL |
| 111-152-041 | Size 40mm S |
| 111-152-042 | Size 40mm M |
| 111-152-043 | Size 40mm L |
| 111-152-044 | Size 40mm XL |



## Ti6Al4V Fusion Taper Sleeve*

| | |
|---|---|
| 111-37-0001 | Fusion Taper Sleeve -4mm |
| 111-37-0006 | Fusion Taper Sleeve -2mm |
| 111-37-0002 | Fusion Taper Sleeve 0mm |
| 111-37-0007 | Fusion Taper Sleeve +2mm |
| 111-37-0003 | Fusion Taper Sleeve +4mm |
| 111-37-0008 | Fusion Taper Sleeve +6mm |
| 111-37-0004 | Fusion Taper Sleeve +8mm |

*USA only

# Appendix: Broaching Techniques and Tips

It is advised to stop broaching when stability is achieved with a slightly countersunk broach than to attempt to force as oversized broach into the canal. The coating limit line on the implant stem will sit below the resection line but the stem should achieve stability. Consider a longer neck or higher head offset.

Managing Different Femoral Canal Geometries

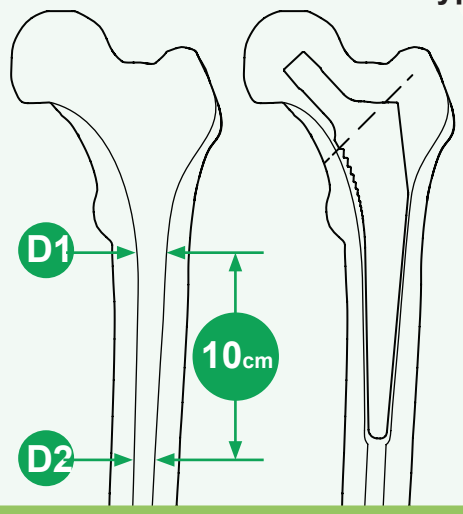
The Dorr femur type system classifies femurs based on a ratio that relates to the geometry of the femoral canal:

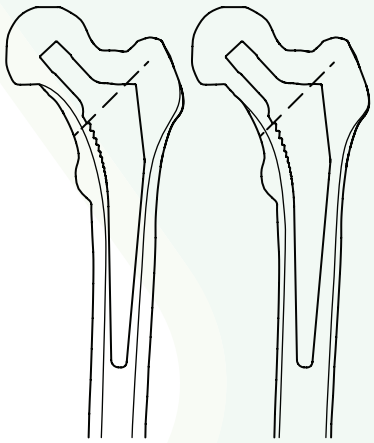
$$R = D_2/D_1$$

see figures at the bottom left

An R-value less than ~0.5 implies a very fluted canal that will more likely bind distally if the canal is not over-reamed. Preoperative templating is especially important for this reason. Refer to the Everglade Implant Sizing guide in this technique to help decide what size reamer to use. The three types are as follows.

**Type A** R < 0.5
**Type B** R = 0.5 to 0.9
**Type C** R > 0.9



**Type A**
Reaming the femoral canal to the distal tip of the definitive stem ensures compaction of the metaphyseal cancellous bone and reduced binding against the cortical wall, which can lead to stress shielding and an ill-seated stem

**Types B & C**
The Everglade broaches preserve the natural anatomy of the femoral canal. Rotational and axial stability and a change in pitch indicate an appropriate amount of compaction broaching.

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