JUST®
MEDICAL

HARMONY

HAR.Ti+HA

HARMONY TAPERED STEM

Surgical technique

Compose a Harmonious Life

JUST®
MEDICAL

HIP PRODUCTS FOR ALL-RO

Dynamic fatigue tests of femoral stem's head-neck conjunction and body after 10 million
Dynamic wear tests after 5 million cycles in the international E

HARMONY™ ACETABULAR CUP SYSTEM

SEE 3D PR
TRABECULAR ACETAB

ACETABULAR CUP


HARMONY Cup
(Ti+HA, DDH)


HARMONY Cup
(Ti+HA)


HARMONY Cup
(Ti-Porous)


HARMONY Cup
(Ti+HA, Revision)


SEE Trabecular Cup
(Titanium, DDH)


SEE Trabe
(Titan

LINER


22/32Standard
（UHMWPE）


28/32 10°
（UHMWPE）


28/10°
（HPE）


32/10°
（HPE）


36/10° 内衬
（HPE）

FEMORAL HEAD


Φ22 (0/+3.5)


Φ24（+0/3.5/7）


Φ28


Φ28（±3.5）


Φ28（+7）


Φ32


Φ32（±

FEMORAL STEM


MINI™
Minimally Invasive Stem


DELTA
CLASSIC Rectangular Stem

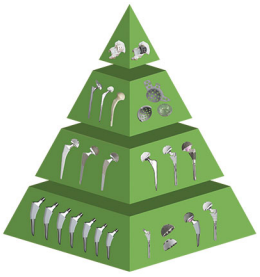

HARMONY
Tapered Stem (Ti-porous)


DELTA
Rectangular Stem (Ti-porous)


TAICH®
Cemented Stem

–MINIMAL INVASIVE–

PRIMARY



OUND SURGICAL SOLUTIONS

cycles in the international CNAS laboratory shows excellent results and no risk of fracture.
Endolab® laboratory in Germany shows excellent wear resistance.

RINTING BULAR CUP SYSTEM®

cular Cup
ium)

SEE Trabecular Cup
(Titanium, Revision)

CAGE AND MESH SYSTEM

AOS Cage (Revision)

AOS Ring (Revision)

Acetabular Mesh (Revision)

CEMENTED ACETABULAR CUP

Cemented Acetabular Cup

28 Constrained
(UHMWPE)

32 Constrained
(UHMWPE)

28 Cemented liners
(HPE)

32 Cemented liners
(HPE)

36 Cemented liners
(HPE)

Bone model restoration

3.5)

Φ32 (+7)

Bipolar Head

Φ28 (S/M/L)
BIOLOX® delta Ceramic

Φ32 (S/M/L/XL)
BIOLOX® delta Ceramic

Φ36 (S/M/L/XL)
BIOLOX® delta Ceramic

Customized prosthesis design

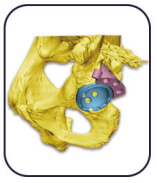
ASM®
Modular Stem

SEE® 3D Printing
Trabecular Modular Stem

Hip Spacer

TAICH® LONG
Cemented Revision Stem

RSL®
Revision Stem



Customized product
simulated implantation

COMPLEX PRIMARY *REVISION* *CUSTOMIZED*

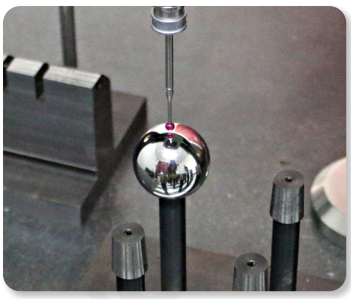
Imported Raw Material

All raw material of UHMWPE inserts were manufactured in Germany, meeting the technical requirements in ISO 5834 part 2 and ASTM F648.

Precise Processing

Strict Inspection

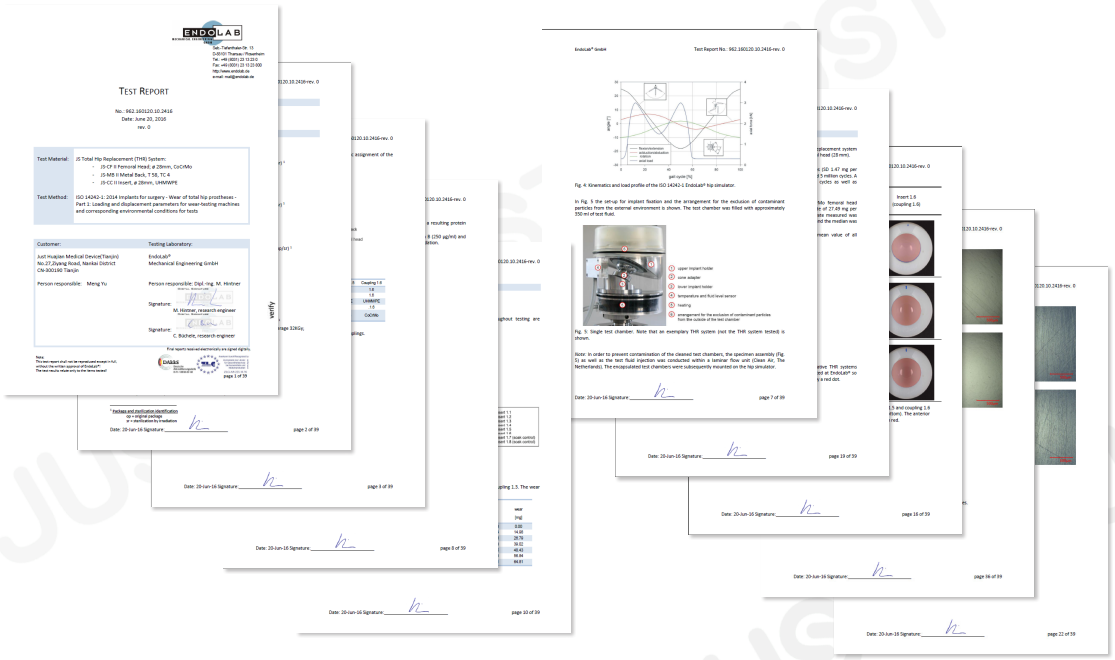
JUST MEDICAL Inspection Center

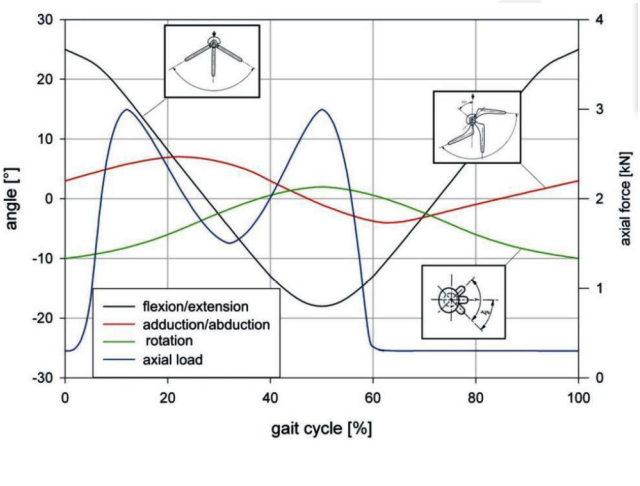


Wear Test in EndoLab®

嘉思特医疗髋关节产品为确保品质有效，在完成嘉思特医疗品质检测中心的全项目检测外，还在 EndoLab 国际实验室完成了 500 万次的动态磨损试验。

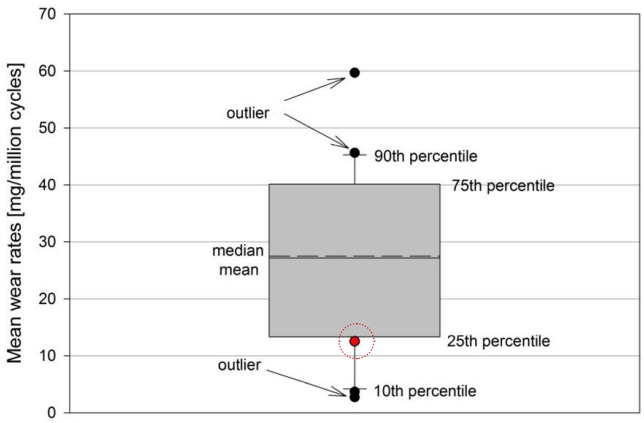
EndoLab® 国际实验室附属于德国慕尼黑大学并与多个国家和国际研究部门有着紧密合作，是一家经过 ISO 17025 认证的实验室，实验室主要对植入类假体进行检测和动态磨损模拟试验。且 EndoLab® 实验室是一个经过认证的 ZLG - P - 944.98.07 实验室。





▲ EndoLab® 髋关节模拟动态负载（ISO 14242 - 1）

本实验旨在测试嘉思特医疗全髋关节系统（常规 UHMWPE 对 28mm 股骨头 CoCrMo）的磨损表现。



▲嘉思特髋关节系统的数据为红色标记

经过500万次模拟人体正常运动的活动周期后，测得嘉思特医疗髋关节产品的平均磨损率为12.53 mg/百万次。与EndoLab®数据库比较，嘉思特医疗全髋关节产品的平均磨损率低于EndoLab®目前测得的平均值27.49mg/百万次。

专利证书

专利名：一种髋关节假体　　专利号：ZL 2013 1 0530967.6
专利名：一种双涂层髋关节假体　　专利号：ZL 2012 2 0389033.6
专利名：一种多衬偏心设计的组配式压配髋臼假体
专利号：ZL 2015 2 0336953.5

- Exclusive titanium porous and HA double coating technology
- Effective and long-term fixation—Stepped Ti+HA double coating
- Optimized tapered neck geometry increases range of motion
- Excellent biomechanics performance

Effective and Long-term Fixation—Stepped Ti+HA Double Coating

1. Stepped design transmits the vertical forces created by the tapered implant to the host bone in compression rather than in shear. (Figure 1) The stepped design increases 13% proximal coating area that provides a large contact area, at the same time, increasing the proximal area.

2. HARMONY stem manufactured from high-strength, low stiffness, forged Ti6Al4V; the elastic modulus is more close to bone. The combined strength of the vacuum plasma-sprayed titanium porous coating ≥ 50mpa, the ratio of the volume of all the pores > 35%. The HA coating is around 50 um (Figure 2), the coating thickness and material bring a better clinical performance, which is beneficial to primary bone ingrowth.

3. The anatomical loading distribution alignment of proximal femur and lesser trochanter on the medial cortical bone is uniform (accords with Wolff rule); the medial radius of HARMONY stem mates with the femur anatomy (radioactive array) (Figure 3).

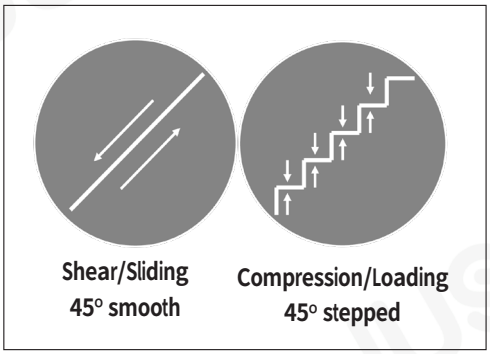


Figure 1

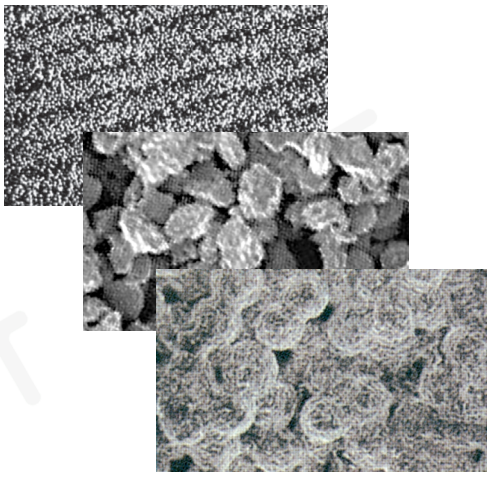
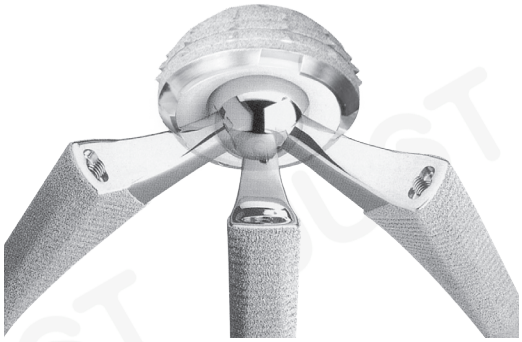


Figure 2

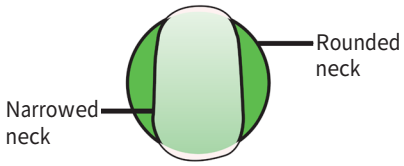
Figure 3

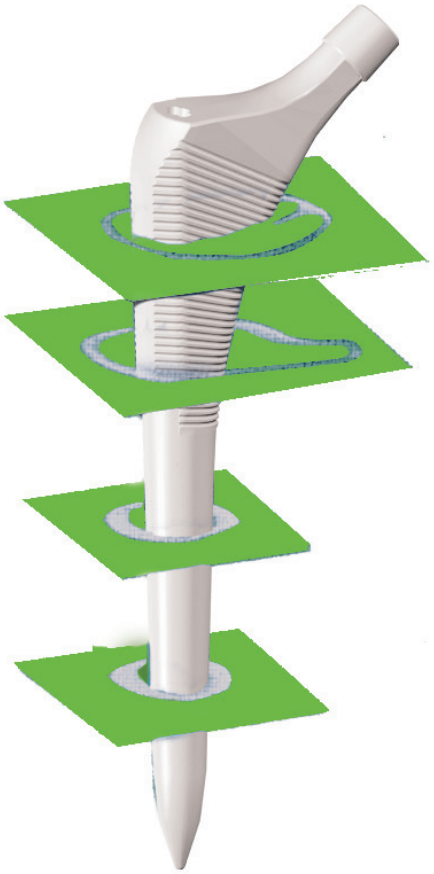


Optimized Tapered Neck Geometry Increases Range of Motion

Optimal Range of Motion

The tapered neck geometry has been optimized for increased range of motion. The range of motion increases to 146 degree, polished neck is designed to reduce wear debris generation secondary to prosthetic impingement.





Excellent Biomechanical Performance

The 3-degree proximal to distal taper creates stem geometry with proven stability.
The length of the stem provides immediate three-point fixation.

The High Offset Design Restores the Original Biomechanical Mechanism

The biomechanical restoration is very important to the functional restoration of hip joint replacement, which has a long-term success.

A 130-degree neck shaft angle in both standard and high offset implants enables femoral offset restoration and soft tissue tensioning without affecting leg length. The constant 130-degree neck shaft angle is achieved by shifting the neck geometry of the femoral component medially by a proportional amount.

The choice of offset depends on the trial neck.

Preoperative Planning

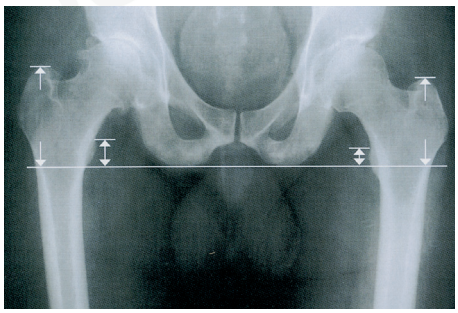
Preoperative planning enables the surgeon to prepare for the case and anticipate situations that may arise during surgery. A through preoperative plan incorporates elements from the patient's history, physical examination and radiographic analysis.

Preoperative Planning Goals

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

Radiographs

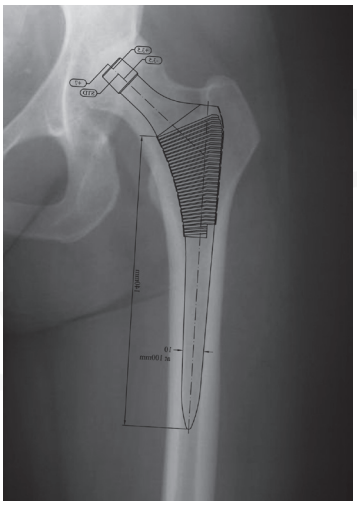
The first step in accurate templating is obtaining high-quality radiographys using a standardized protocol with known magnification. Use magnification markers attached to the patient's leg at the level of the greater trochanter to verify magnification.



Determination of Leg Length Discrepancy

To determine existing preoperative leg length, perform a clinical evaluation in conjunction with a radiographic analysis. Use both to determine intraoperative leg length management.

As an estimate of leg length discrepancy radiographically, draw a reference line through the bottom of the obturator foramina 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. The tip of the greater trochanter may be used as an alternative reference mark in conjunction with the lines through the obturator foramina.



HARMONY Hip Prosthesis Selection

Select the femoral component template size that will fit the proximal femur and equalize leg lengths. The tapered geometry of the tapered hip system femoral component does not require distal canal fill. The level of neck osteotomy depends on the stem size and the desired leg length, Verify that the stem size chosen in the A/P plane also fit in the lateral plane.

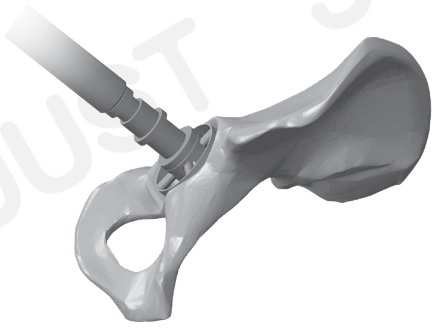
Offset Requirements

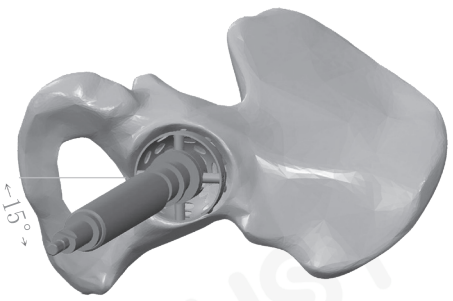
The HARMONY tapered hip system is available with standard and high offset options for all stem body sizes. Through templating and intraoperative trialing, determine which option restores proper offset by matching the cup's center of rotation with the desired head center of rotation.

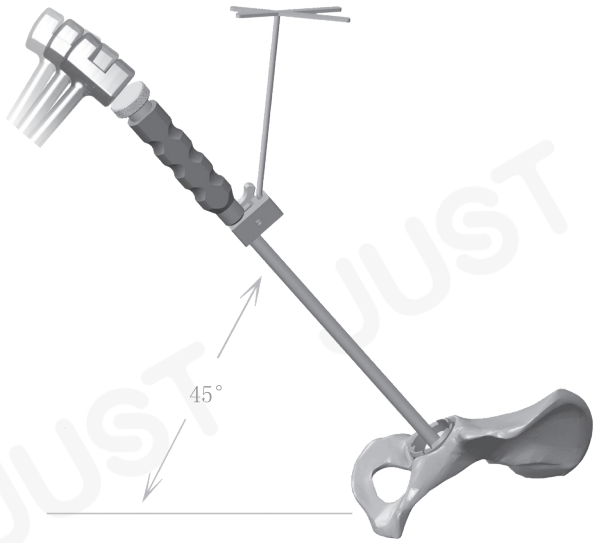
Femoral Neck Cutting

Evaluate the proximal femur and align the neck resection guide down the long axis of the femur. Determine the resection level by aligning the top of the guide with the tip of the greater trochanter or by referencing a measured resection level above the lesser trochanter. Mark the resection line using electrocautery or methylene blue. Resect the femoral head.

If desired, make a conservative neck resection initially. The calcar rasp may be used later to adjust the neck cut.







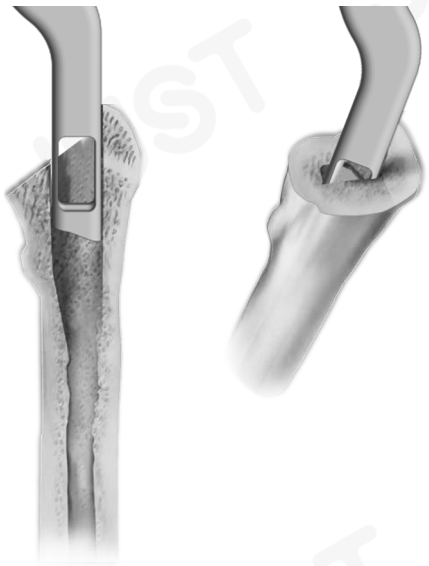
1. Make sure the acetabular is fully exposed and remove soft tissue from acetabular rim.

2. Progressively ream the acetabular until healthy subhondral bone is reached and a hemisoherical dome is achieved. Using the trial acetabular cup handle, place a trial acetabular cup sizer into the reamed acetabulum and assess its position and cortical bone contact. The inferior rim of the trial cup should be level with the bottom of the teardrop. The trial cup angle of orientation should match that recorded during preoperative templating, which are normally 45 degrees of lateral opening (abduction) and 15-30 degrees of anteversion. Confirm this using the acetabular cup impactor-2 .

3. Implant the acetabular cup (note: ensure the patient still in the right position before the cup is implanted).

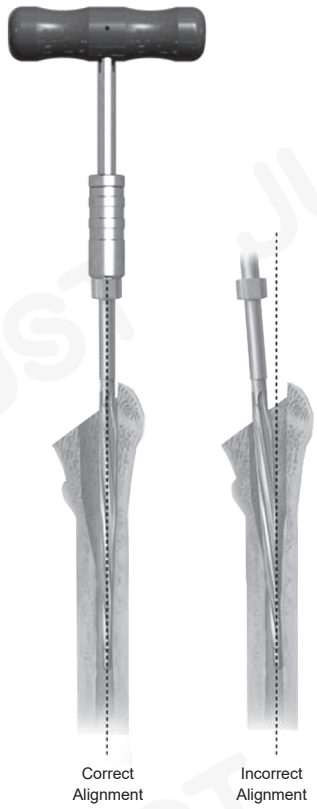
4. Remove the acetabular cup impactor from the trial cup and place the desired liner into the cup .

◆Femoral preparation



Opening Medullary Canal

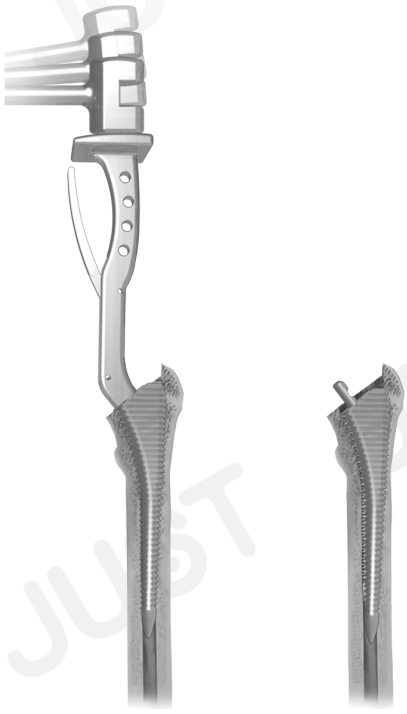
The opening depth is about 1-1.5 cm close to the direction of the great trochanter along the femoral medullary canal.



Medullary Canal Alignment

Utilize the tapered canal probe attached to the T-handle to establish a direct pathway to the medullary canal. The path established by the canal probe will dictate the route for the optional guide reamer, reamers and medullary rasps.

Note: Take caution to ensure neutral alignment of the canal probe.

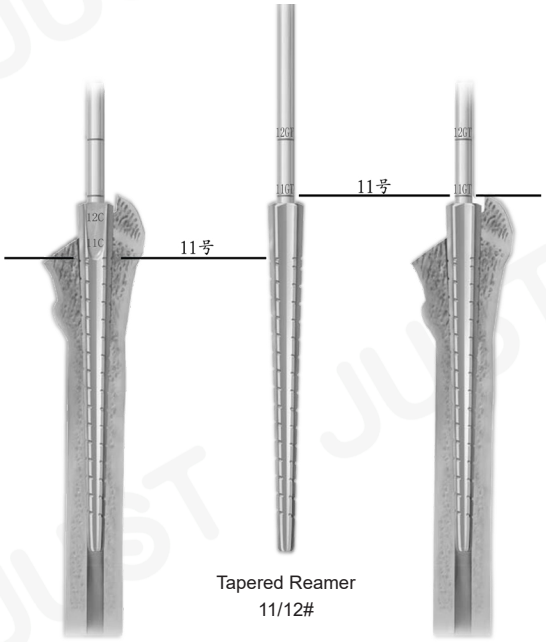


Fit and Fill

The final meullary rasp should fit and fill the proximal femur, with the top of the cutting teeth resting at the point of the desired neck resection. The final meullary rasp should feel rotationally stable.

The meullary rasp handle is undersized to allow the meullary rasp to be countersunk. If the b roach size is countersunk below the neck resection, re-evaluate the resection level. If the neck resection level is determined to be correct, the next larger size meullary rasp is recommended. Additional reaming may also be required.

Unlock the meullary rasp handle by pulling the lever on the meullary rasp handle down. Remove the meullary rasp handle.



Tapered Reamer
11/12#

Calcar
Reference Marks
Size 11

Great Trochanter
Reference Marks
Size 11

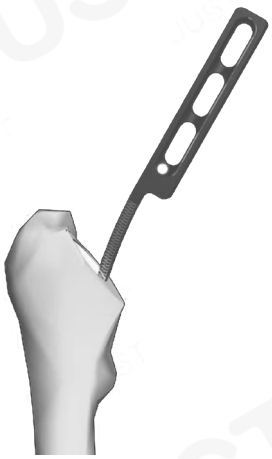
Dual Reference Options

Calcar Referencing

When referencing from the calcar, use the distal reamer depth reference lines for the desired femoral component for reamer depth gauging. The reamer depth reference line for the desired size should align with the medial neck resection at the cortical-cancellous margin for the calcar.

Greater Trochanter Referencing

When referencing from the tip of the greater trochanter, use the reamer depth referencing lines for the desired femoral component for reamer depth gauging. The reamer depth reference line for the desired size should align with the tip of the greater trochanter.



为了保证假体柄中心对线，可以选择性的使用侧方拇指锉使髓腔近端进入点侧移，以利于随后的近端扩髓和远端扩髓。

股骨近端扩髓

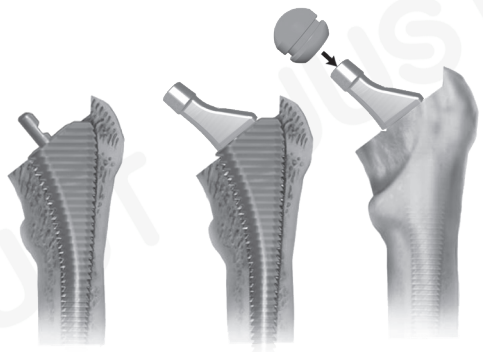
股骨近端扩髓以术前模版测量为参照，建议由小到大依次扩髓。

为保证正确的髓腔锉对线，将髓腔锉靠近外侧，贴近大转子。确定上外侧股骨颈残余物被清除以避免对线不正。每个假体型号都有相应的髓腔锉。

随后将髓腔锉打入髓腔内，注意保证正确的对钱和前倾角。

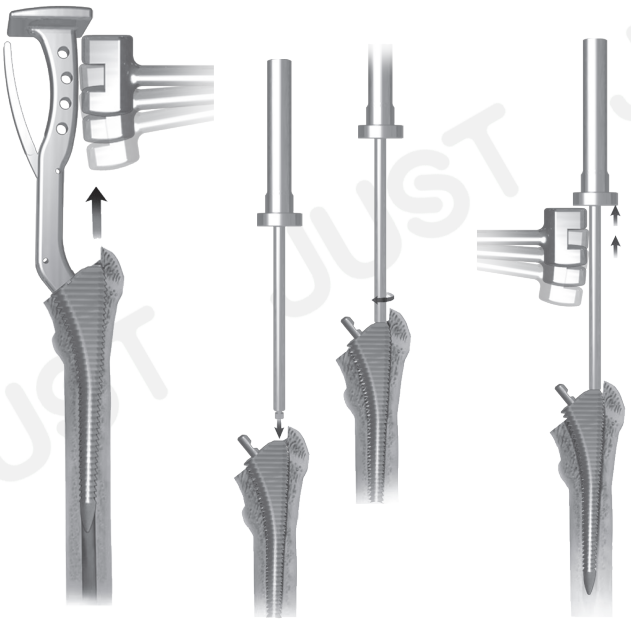
注：股骨假体近端涂层区域相对于髓腔锉单侧增大 0.375mm，故术中应检查髓腔锉的对线。尺寸正确、对线良好的髓腔锉应与股骨颈后侧的皮质骨接触良好。

最后使用的髓腔锉应贴合、填充近端股骨，锯齿顶端位于期望的颈部截骨线处。同时应感觉到其旋转稳定性。髓腔锉手柄较髓腔锉小以利于扩髓。如果髓腔锉在扩髓时低于颈部截骨线下 4mm，则重新判断截骨水平。如果颈部截骨水平是正确的，则推荐使用下一个较大尺寸的髓腔锉。附加的锥形远端扩髓可能也需要。将手柄上的杠杆推向远端解开锁定装置，移去手柄。



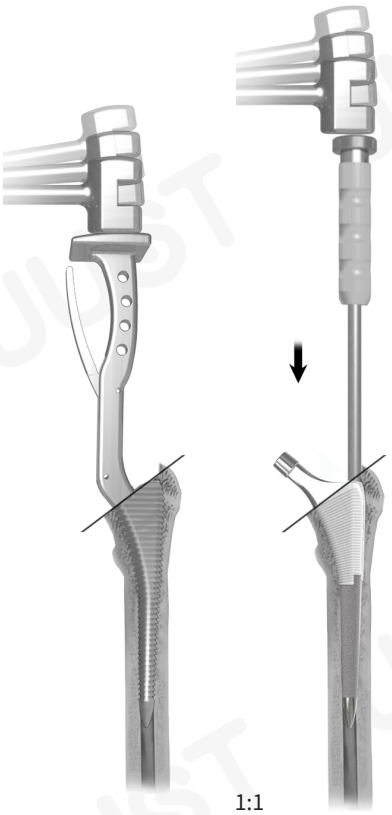
Trial Reduction

Trial neck segments and trial femoral heads are available to assess proper component position, joint stability, and range of motion and leg length.



Broach Extraction

To use the medullary rasp extractor, insert the tip into the slot on the lateral shoulder of the broach. Rotate the extractor 90 degrees to lock it in place. Use a slotted hammer to extract the medullary rasp from the canal.



股骨柄假体与髓腔锉的对应关系

Prosthesis implantation

After the final acetabular cup is in place, introduce the femoral stem to the medullary canal. Rotate the stem into its proper orientation and advance the stem into the canal using slotted hammer. The implant should meet resistance 10-15 mm above the desired final seating position. Advance the stem into position with moderate blows from the slotted hammer. The implant is fully seated when the top of the proximal coating is at the level of the top of the broach teeth and the implant is stable. If the stem stops moving with moderate slotted hammer blows and is greater than 2mm above the desired seating position, remove the implant and repeat the reaming and broaching steps. Excessive forces should not be needed to seat the stem.

Note: When inserting the Harmony stem, take care to ensure the HA coating is not damaged by metal insertion instrumentation.

Parameter

双涂层柄

REF No.	Specification	Stem length (mm)	Offset	Neck shaft angle
710346	09	134	38	130 °
710347	10	140	38	
710348	11	145	40	
710349	12	151	40	
710350	13	156	44	
710351	14	162	44	
710352	15	168	46	
710353	16	173	46	
710354	17	178	48	

粗糙面柄

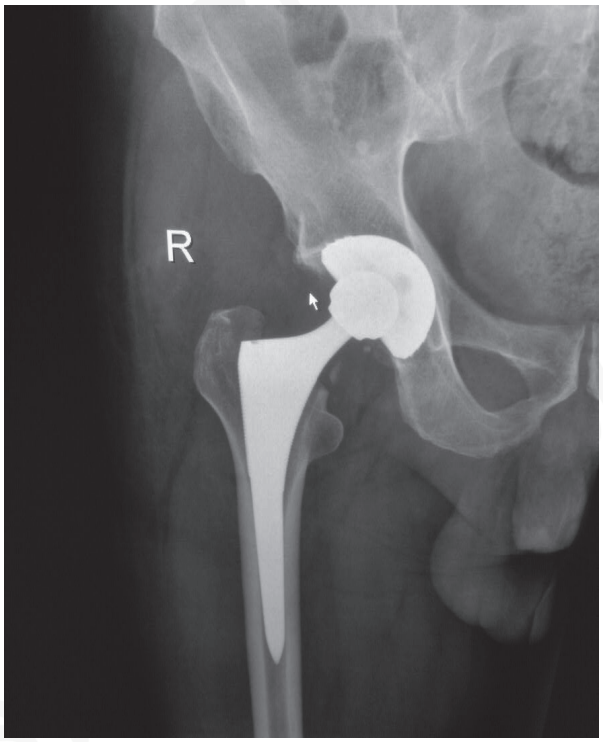
REF No.	Specification	Stem length (mm)	Offset	Neck shaft angle
710286	09	134	38	130 °
710287	10	140	38	
710288	11	145	40	
710289	12	151	40	
710290	13	156	44	
710291	14	162	44	
710292	15	168	46	
710293	16	173	46	
710294	17	178	48	

大气微孔柄

REF No.	Specification	Stem length (mm)	Offset	Neck shaft angle
710270	09	134	38	130 °
710271	10	140	38	
710272	11	145	40	
710273	12	151	40	
710274	13	156	44	
710275	14	162	44	
710276	15	168	46	
710277	16	173	46	

X ray film

Preoperative



Postoperative

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Tel：+86 22 2339 9501　　Mobile：+86 150 2277 3540(Whatsapp)

Web：www.just-ortho.com

E-mail：sales@justmedical.cn