



**HYPE<sup>®</sup>**

Cementless  
acetabular Cup

**SURGICAL  
TECHNIQUE**





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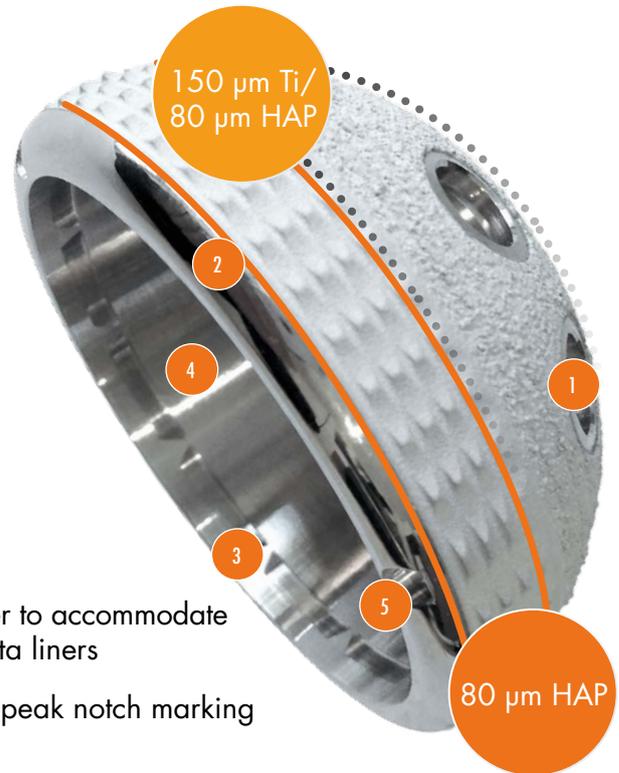
# Hype® range of acetabular cups

Besides the femoral stems, the **Hype®** range of implants includes an acetabular component intended for cementless use in primary hip joint arthroplasty.

This acetabular cup has been designed to support both BioloX® delta ceramic inserts and polyethylene liners. Various bearing options are thus available such as:

- ceramic/ceramic
- or polyethylene liner/metal head
- or polyethylene liner/ceramic head bearing constructs.

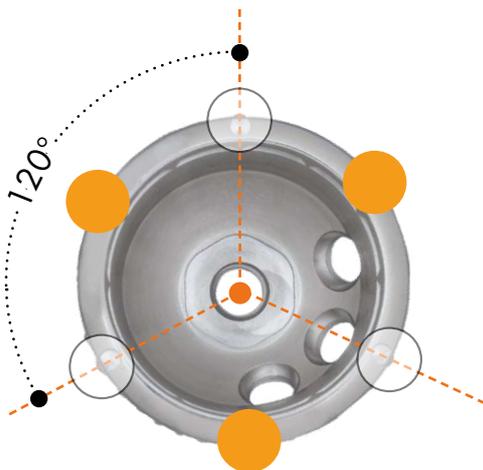
The acetabular cup can accept up to three fixation screws for enhanced bone anchorage.



- |                                    |   |
|------------------------------------|---|
| 1 Hole for fixation screw          | 4 Morse taper to accommodate BioloX® delta liners |
| 2 Mirror polished rim              | 5 Anchoring peak notch marking                    |
| 3 Polyethylene liner retentive rim |   |

The **Hype®** acetabular cup is made of a titanium alloy (TA6V) covered with a single coating (HAP) made of 80 µm hydroxyapatite on the macro-structures and a bilayer coating (Ti+HAP) of 150 µm titanium and 80 µm hydroxyapatite on the dome.

The cup is hemispherical in shape with a progressively flattened pole according to a large radius. The acetabular component has a highly polished equatorial rim.



Fixation of the **Hype®** acetabular cup is achieved through a mechanical anchorage based on 3 anatomical landmarks: the ischium, the ilium and the pubis. To ensure fixation at these 3 points, the **Hype®** acetabular cup features 3 peaks (higher of several tenths of a millimeter) distributed according to the acetabular cup division into 3 segments of 120° each.

The equatorial press-fit articulates around these three peaks. The height and thickness of the equatorial volume progressively increase within the range.

- Anchoring peaks      ● Intermediary press-fit



The **Hype**<sup>®</sup> acetabular cup ranges in size from 45 to 63 mm.

BioloX<sup>®</sup> Delta (HIC) liners can be used with the BioloX<sup>®</sup> femoral heads measuring:

- in Ø 28 mm for the cup Ø 45 mm
- in Ø 32 mm for the cup Ø 47 mm and 49 mm
- and in Ø 36 mm diameters for the cup Ø 51 mm to 63 mm.

Fixation screws (optional) are self-tapping Ø 6.5 mm and are made from implantable titanium alloy (TA6V). Screws are available in lengths 20 to 45 mm (with a 5 mm increments).



BioloX<sup>®</sup> delta



Inox



BioloX<sup>®</sup> delta

Lipped Polyethylene (UHMWPE) liners can be used:

- for femoral heads Ø 22.2 mm for all cup sizes
- for femoral heads Ø 28 mm from size 51 mm.

These polyethylene liners are designed to articulate with Stainless steel, Cobalt Chromium or even ceramic BioloX<sup>®</sup> delta femoral heads.

# Hype® implant references



Size  
(mm)

Designation

Reference

BioloX® delta liner (HIC)

UHMWPE liner (HIPER)

Ø 28 mm    Ø 32 mm    Ø 36 mm    Ø 22,2 mm    Ø 28 mm

Size (mm)	Designation	Reference	BioloX® delta liner (HIC)			UHMWPE liner (HIPER)	
			Ø 28 mm	Ø 32 mm	Ø 36 mm	Ø 22,2 mm	Ø 28 mm
Ø 45	HYPE 45 A	RM47010001	A - Ø 28 RM53400001			A - Ø 22,2 RM54500001	/
Ø 47	HYPE 47 B	RM47010002		B - Ø 32 RM53400002		B - Ø 22,2 RM54500002	/
Ø 49	HYPE 49 B	RM47010003					
Ø 51	HYPE 51 C	RM47010004			C - Ø 36 RM53400003	C - Ø 22,2 RM54500003	C - Ø 28 RM54500013
Ø 53	HYPE 53 C	RM47010005					
Ø 55	HYPE 55 D	RM47010006			D - Ø 36 RM53400004	D 55 to 59 Ø 22,2 RM54500004	D 55 to 59 Ø 28 RM54500014
Ø 57	HYPE 57 D	RM47010007					
Ø 59	HYPE 59 D	RM47010008					
Ø 61	HYPE 61 D	RM47010009					
Ø 63	HYPE 63 D	RM47010010				D 61 to 63 Ø 22,2 RM54500005	D 61 to 63 Ø 28 RM54500015

Nb: the letter A, B C or D given in the cup designation should match with the one provided in the liner designation to ensure their compatibility (e.g. Hype 47 **B** cup matches with BioloX® delta liner **B** - Ø 32 mm or with UHMWPE liner **B** - Ø 22,2 mm).



Self-tapping fixation screw

Length (mm)	Designation	Reference
20	VS 6.5X20	RM66000001
25	VS 6.5X25	RM66000002
30	VS 6.5X30	RM66000003
35	VS 6.5X35	RM66000004
40	VS 6.5X40	RM66000005
45	VS 6.5X45	RM66000006

# Surgical technique

## 1 Preoperative planning

To ensure that the implants are correctly positioned, an X ray evaluation using the implants' templates supplied (or using the available planning software) is recommended.

This planning must be used to select the adequate acetabular cup to implant in terms of size and orientation.

## 2 Acetabular reaming

The true bottom of the acetabulum is exposed by initially reaming with a small-sized reamer.

Reaming at 45° is then performed using a reamer at least 2 mm smaller than the femoral head diameter.

The final reamer should be the same diameter as the selected cup diameter.

## 3 Trials

A trial acetabular cup, that is the same size as the last reamer used, should be positioned to confirm proper fit and orientation of the cup.

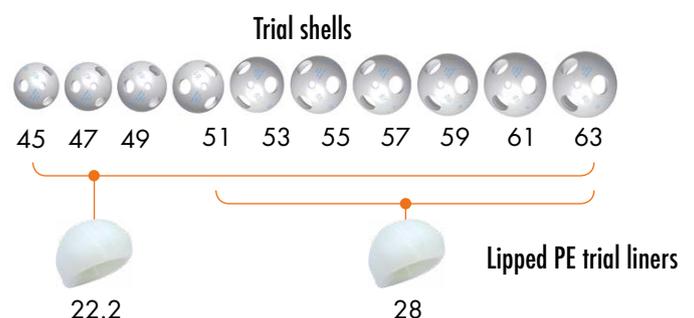
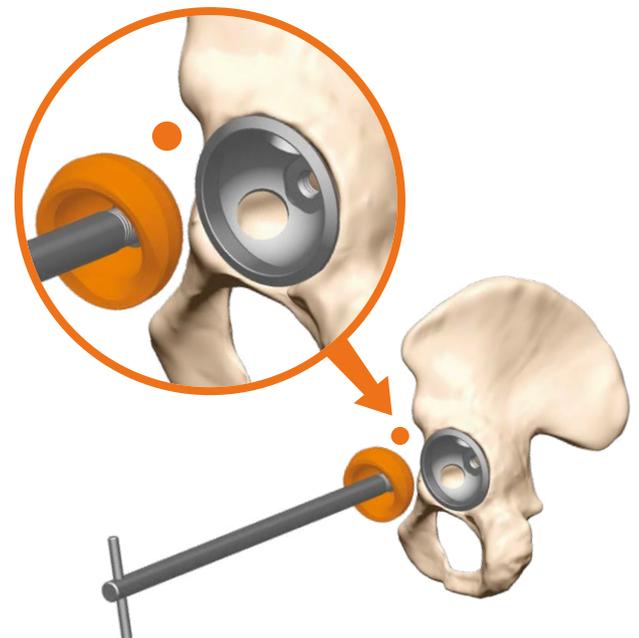
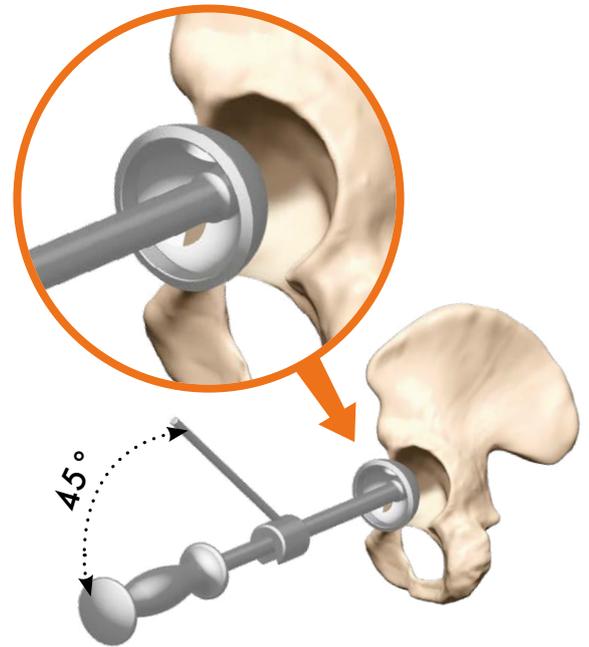
The alignment rod indicates the vertical axis with respect to the handle which is placed at an inclination angle of 45° (postero-medial surgical approach).

### Metal/polyethylene bearing trials (option on request)

#### Lipped polyethylene trial liners are to be used with trial shells only

Position the trial liner into the trial shell with the snap fit handle (a 1/4 turn bayonet connection).

Its orientation can be adjusted using the engraved markings on both components (trial liner and shell).



## 4

## Final cup implantation

Mount the handle onto the implant.

The 3 slightly more pronounced press-fit areas are positioned in 3 areas of dense bone.

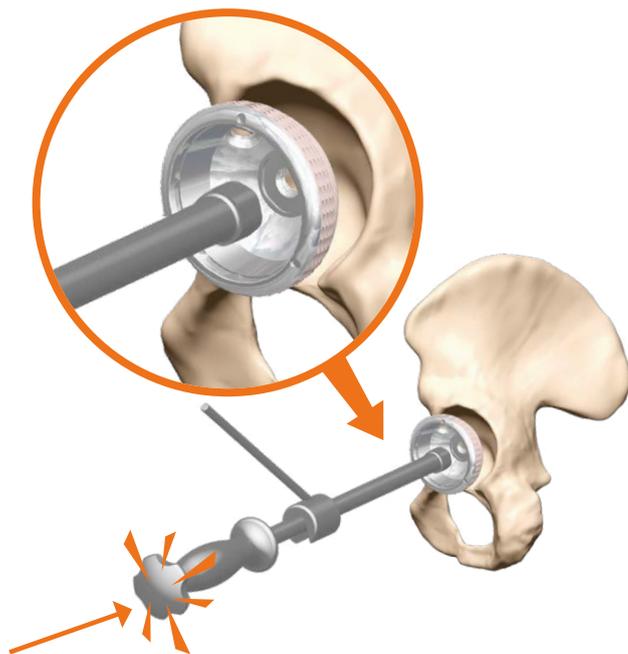
1 of the 3 notches located on the implant face must be oriented towards the roof of the acetabulum in relation to the screw holes.

The cup inclination should be set at about 45°.

It can be assessed using the alignment guide.

Anteversion must be checked prior to implant impaction.

Modifying the cup orientation after impaction is not advisable however priority should be given to complete burying of the acetabular component within the bony acetabulum.



## Ceramic-on-ceramic bearing trials

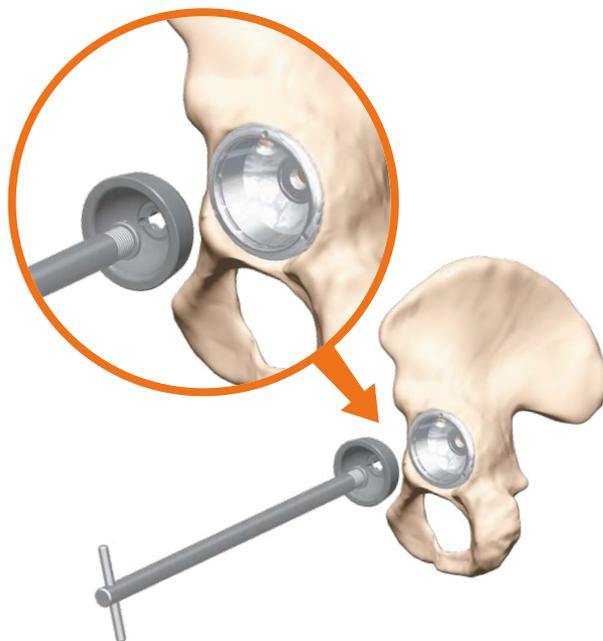
**The ceramic trial inserts are to be placed in the definitive acetabular cup only**

Position the trial liner into the trial shell with the snap fit handle (a 1/4 turn bayonet connection).

Hip reduction is then performed using the femoral implant or trial stem/broach associated with the femoral head and trial neck.

The final femoral head will be chosen accordingly.

Once trialing has been completed, the trial liner can be removed.



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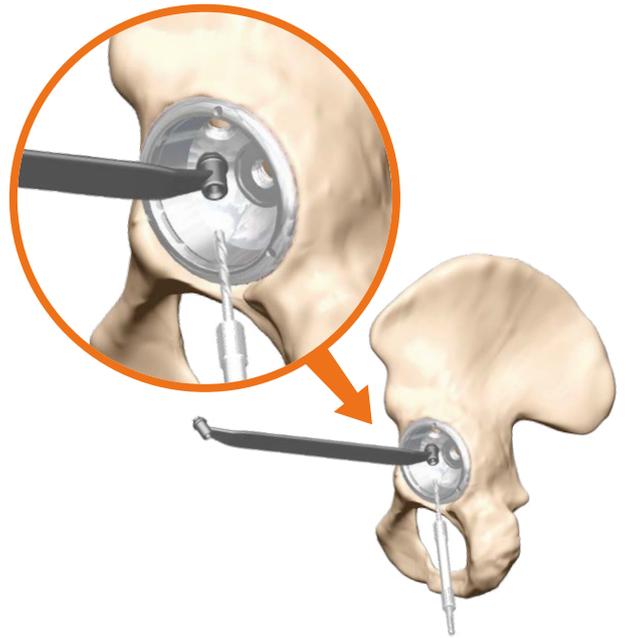
## Fixation screw insertion (optional)

A  $\varnothing$  3.2 mm drill bit, which length best suits the acetabular cup diameter and surgical site, is introduced into the drill guide prior to insertion of the assembly into the spherical housing.

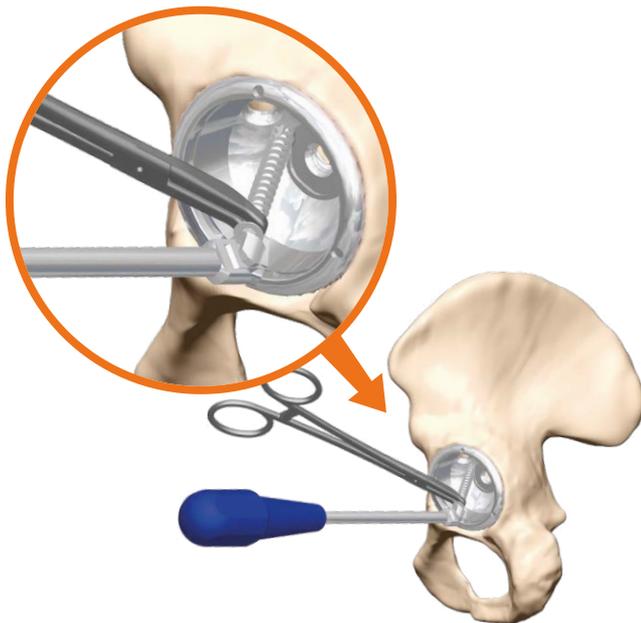
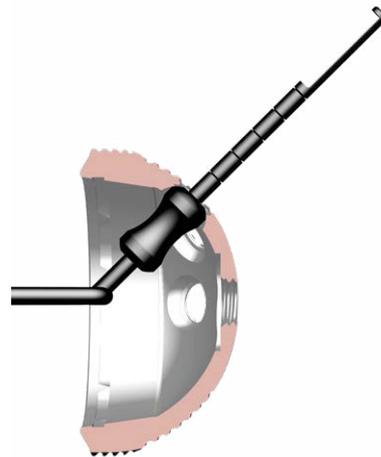
The screw axis should be  $15^\circ$ .

Drill a  $\varnothing$  3.2 mm diameter hole at the required depth.

A  $\varnothing$  3.2 mm drill bit may be partially passed through the  $\varnothing$  3.2 mm drill guide in cases where the bone is very dense.



Appropriate screw length is assessed using a small cursor.



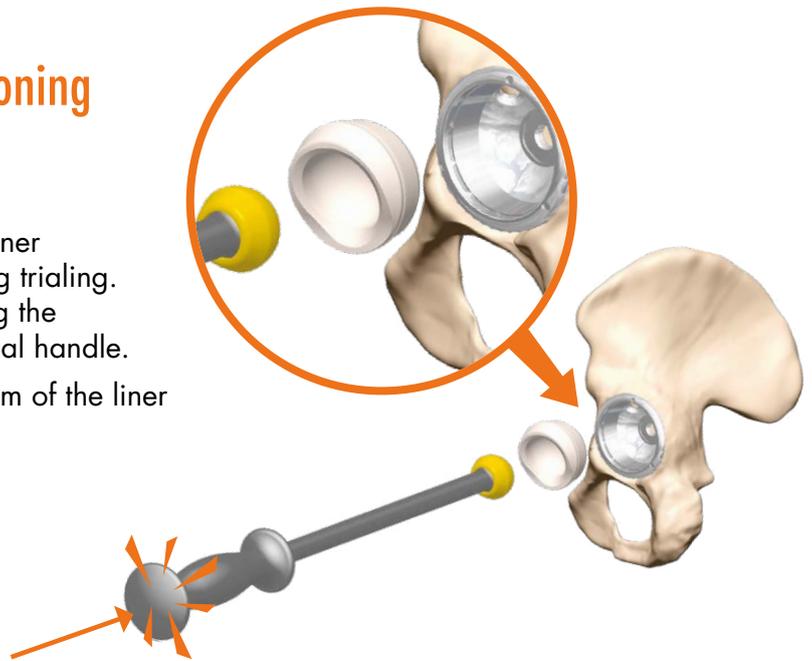
The length of the  $\varnothing$  6.5 mm self-tapping screws ranges from 20 to 45 mm in 5 mm increments. The screws are inserted using either the cardan-joint or flexible screwdriver and held with the screw forceps.

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## Polyethylene liner positioning and final impaction

Orientation of the definitive polyethylene liner is based on the landmarks identified during trialing. Liner impaction is performed by connecting the appropriate diameter liner pusher to the trial handle.

Once impacted, only the anti-dislocation rim of the liner should protrude from the metal-back.



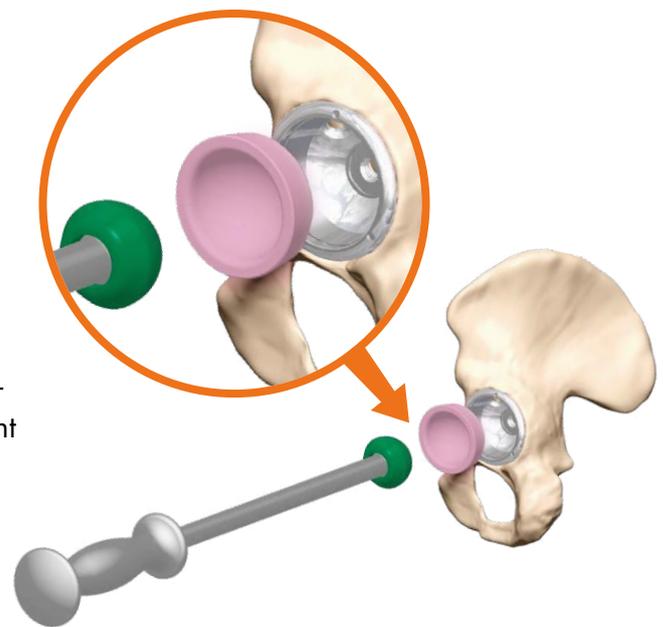
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## Bilox<sup>®</sup> delta liner insertion and final impaction

Care should be taken to clean and dry the implant surfaces prior to assemble.

The definitive liner is handled using the suction holder + suction pad and inserted by a screwing-in-movement until it sits flush with the final cup face.

Proper seating of the liner is manually confirmed by running a finger around the circumference of the liner/shell.



Impaction should be performed using the impactor handle equipped with the appropriate diameter plastic liner pusher to complete liner positioning.

## Liner extraction (in case of revisions)

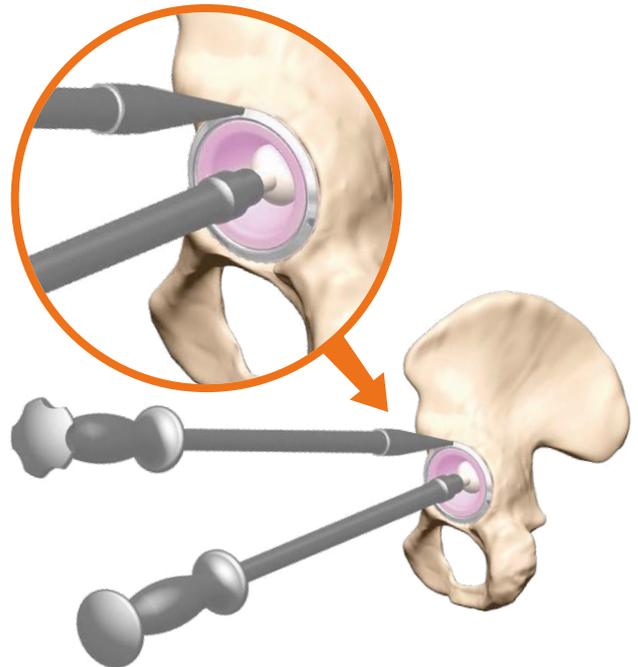
### Extraction of BioloX<sup>®</sup> delta ceramic liner

Apply the suction holder + suction pad onto the inner surface of the liner and pull slightly on the handle.

A few blows are given in the 3 peripheral notches of the definitive acetabular cup with the punch connected to the end of the impactor handle.

The liner can then be removed by pulling on the handle.

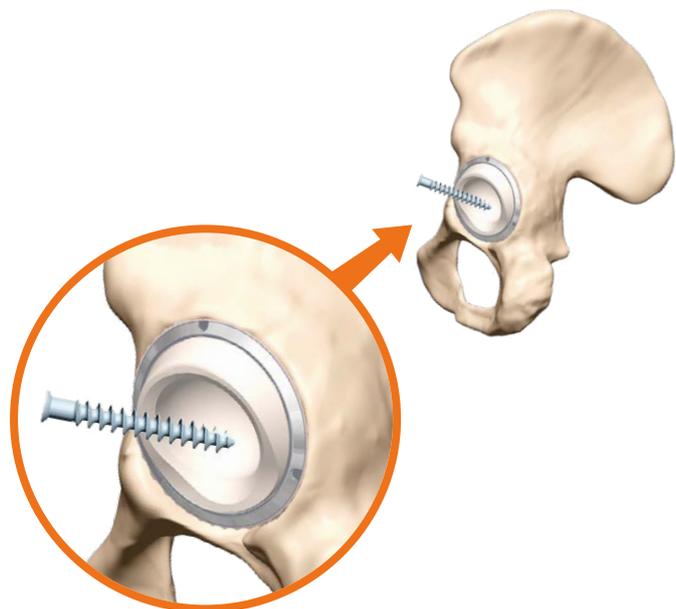
Do not strike the ceramic liner !



### Polyethylene liner extraction

A 3.2 mm diameter hole is drilled in the vertical axis of the inner sphere of the polyethylene liner.

Screw in a Ø 4.5 mm cortical screw using a screwdriver until the liner is disconnected from the cup.



## Extracting the acetabular cup

For any acetabular cup revision surgery, please contact SERF or your distributor.

# Instrumentation

## Hype® acetabular cup VARAHB01 - Tray 1

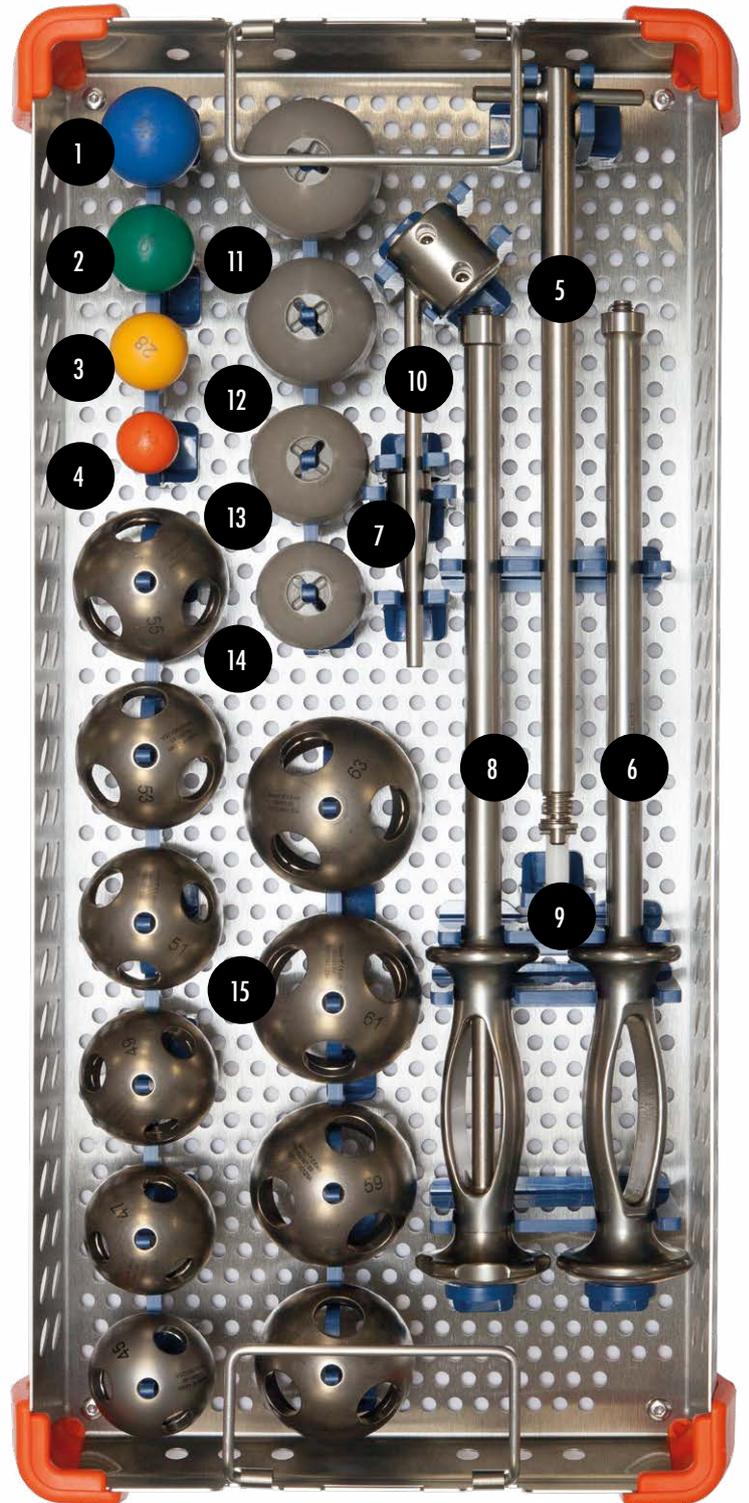
N°	Reference	Designation
1	FG 43	Snap fit reamer Ø 43 mm
2	FG 45	Snap fit reamer Ø 45 mm
3	FG 47	Snap fit reamer Ø 47 mm
4	FG 49	Snap fit reamer Ø 49 mm
5	FG 51	Snap fit reamer Ø 51 mm
6	FG 53	Snap fit reamer Ø 53 mm
7	FG 55	Snap fit reamer Ø 55 mm
8	FG 57	Snap fit reamer Ø 57 mm
9	FG 59	Snap fit reamer Ø 59 mm
10	FG 61	Snap fit reamer Ø 61 mm
11	FG 63	Snap fit reamer Ø 63 mm
12	TFE-2 or TFT-AO	Snap fit reamer handle



# Instrumentation

## Hype® acetabular cup VARAHB01 - Tray 2

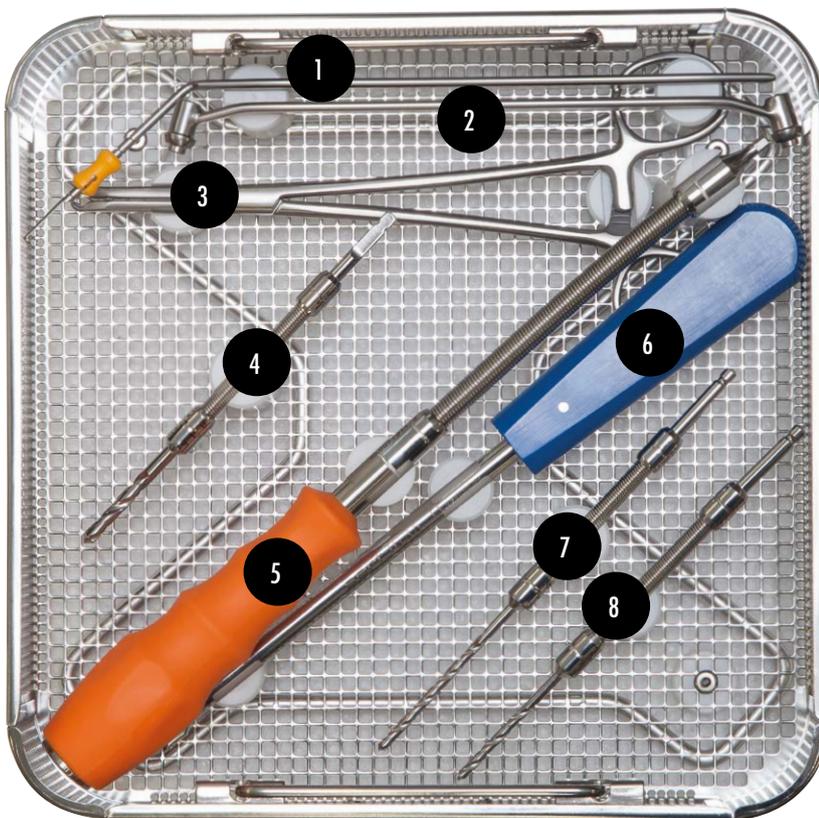
N°	Reference	Designation
1	EI013-36	Liner pusher (blue) Ø 36 mm
2	EI013-32	Liner pusher (green) Ø 32 mm
3	EI013-28	Liner pusher (yellow) Ø 28 mm
4	EI013-22	Liner pusher (orange) Ø 22 mm
5	EXTIQZ	Bayonet extractor
6	MAE001	Trial shell handle
7	EE001	Extraction tip
8	MIP001	Implant impactor handle
9	PVE001	Suction holder + suction pad
10	OR001	Alignment device
11	HIAL001 Ø 36-55/63	Ceramic trial liner on implant Ø 36-55/63 mm
12	HIAL001 Ø 36-51/53	Ceramic trial liner on implant Ø 36-51/53 mm
13	HIAL001 Ø 32-47/49	Ceramic trial liner on implant Ø 32-47/49 mm
14	HIAL001 Ø 28-45	Ceramic trial liner on implant Ø 28-45 mm
15	GQ001-45 to GQ001-63	Trial shell Ø 45 mm to Ø 63 mm



# Instrumentation

## Hype® Drilling kit VARAKPO1

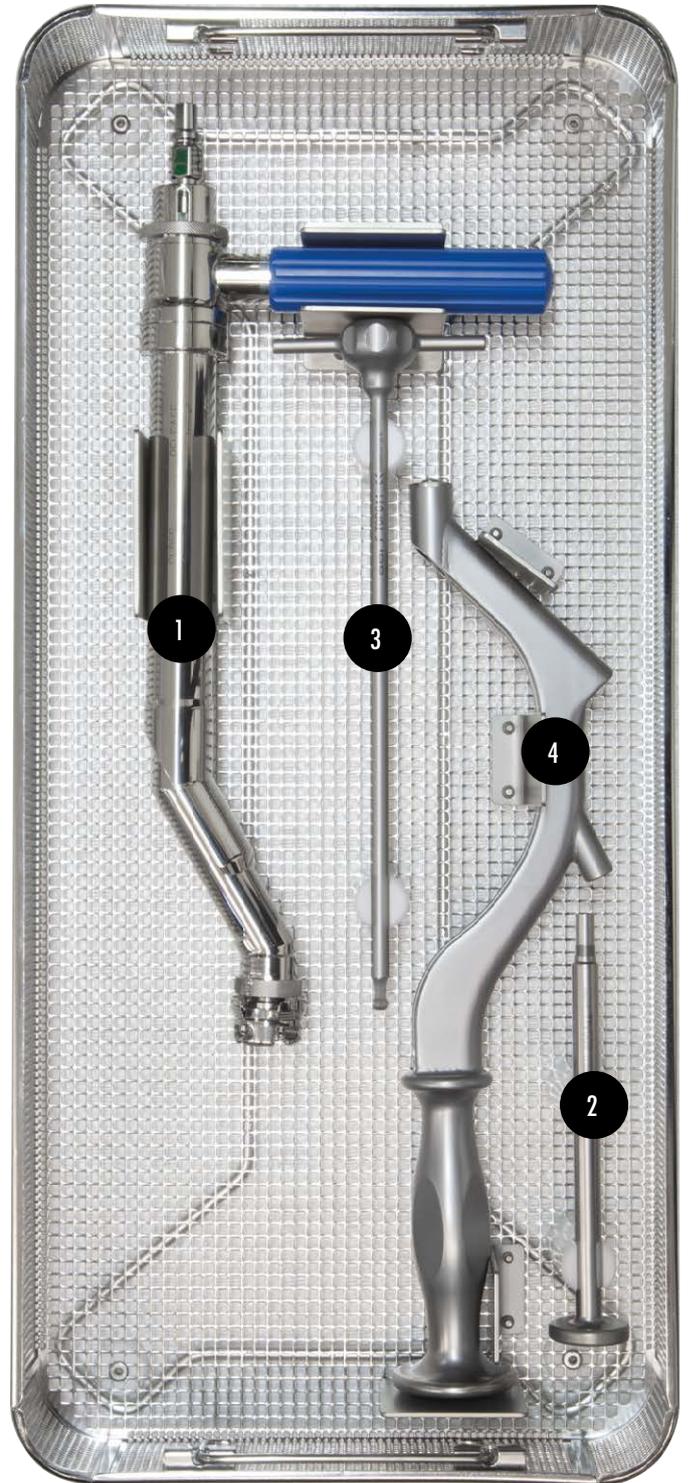
N°	Reference	Designation
1	JA001	Depth gauge
2	GP001	Ø 3.2 mm and Ø 4.5 mm drilling guide
3	PV001	Pliers for screw
4	FF 4,5-39	Flexible drill Ø 4.5 mm
5	TC 3,5	Gimbal screwdriver 3.5 mm
6	TF3,5	Flexible screwdriver Ø 3.5 mm
7	FF 3,2-59	Flexible drill Ø 3.2 mm
8	FF 3,2-44	Flexible drill Ø 3.2 mm



# Instrumentation

MIS instrument VARAQM01

N°	Libellé	Désignation
1	RA90670001	Mini invasive milling cutter handle
2	RA90460130	Threaded stem for mini invasive handle
3	RA90460130	Mini invasive handle
4	RA90460130	Mini invasive handle



# Access to the digital Instructions for Use

For each type of implant, SERF provides you with specific, regularly updated digital Instructions for Use that can be searched, downloaded, and printed according to your needs.

A hard copy of these Instructions for Use can be sent to you within 7 calendar days through a simple request to SERF.

In these Instructions for Use, you will find not only the regulatory information and technical features of our implants, but also valuable information on the indications, contraindications, compatibility between implants, permissible examinations and those to strictly avoid, etc.

These digital Instructions for Use, in Adobe® Acrobat® PDF format, can be accessed and downloaded in two ways:

- using a QR code on the implant's label, which can be read with a smartphone or tablet (internet connection required; 3G/4G, Wifi, etc.) and a suitable reading app (available to download for free from Google Play, Apple® Appstore and Windows® Store depending on the model of device used),
- using an internet connection on a computer, smartphone, or tablet, by typing the URL address indicated near the QR code directly into your usual internet browser.

Below are the QR code and URL address for the digital Instructions for Use covering the **Hype®** acetabular cup presented in this document:



<http://doc.serf.fr/0909.pdf>

## Operating system required for Acrobat Reader DC

### Windows

- 1.5 Ghz processor or faster
- Windows Server 2008 R2 (64 bits), 2012 R2 (64 bits)† or 2016 (64 bits); Windows 7 SP1 (32 and 64 bits), Windows 8, 8.1 (32 and 64 bits)† or Windows 10 (32 and 64 bits)
- 1 GB of RAM
- 380 MB of disk space available
- 1024x768 screen resolution
- Internet Explorer 11

### MacOS

- Intel processor
- Mac OS X v10.11, macOS v10.12, macOS v10.13, or macOS v10.14\*
- 1 GB of RAM
- 380 MB of disk space available
- 1024x768 screen resolution
- Safari 9.0, 10.0, or 11.0 (The external module for Safari is supported only by 64-bit systems with an Intel processor.)

### Mobile applications

- Adobe Acrobat Reader: HYPERLINK "<https://itunes.apple.com/fr/app/adobe-reader/id469337564?mt=8>" iOS, HYPERLINK "<https://play.google.com/store/apps/details?id=com.adobe.reader&hl=fr>" Android, HYPERLINK "<http://www.windowsphone.com/s?appid=134e363e-8811-44be-b1e3-d8a0c60d4692>" Windows Phone
- Adobe Scan: HYPERLINK "<https://itunes.apple.com/fr/app/adobe-scan/id1199564834?mt=8>" iOS, HYPERLINK "<https://play.google.com/store/apps/details?id=com.adobe.scan.android&hl=fr>" Android
- Adobe Fill & Sign: HYPERLINK "<https://itunes.apple.com/fr/app/id950099951>" iOS, HYPERLINK "<https://play.google.com/store/apps/details?id=com.adobe.fas&hl=fr>" Android









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- per Directive 93/42/CEE and its amendments for screws and instruments (except for orienters),
- per Regulation (EU) 2017/745 for **Hype**® acetabular cup and HIC/HIPER liners and OR001/OR001R orienters.

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CE 0459



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