BI-MENTUM™

Dual Mobility System

Surgical Technique

DePuy Synthes

THE ORTHOPAEDICS COMPANY OF Johnson & Johnson

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Templating and Pre-operative Planning

The primary goal of total hip arthroplasty is the anatomic reconstruction of the hip joint, resulting in favorable prosthetic joint load and function.

Mechanically, the goals are to create a stable articulation with an optimized range of motion, restore biomechanics for muscular efficiency and equalize limb lengths. Meeting these goals begins with a thorough analysis of the hip with comparison to the contralateral side in anteroposterior (A/P) and lateral projections.

The desired magnification for all imaging should be 20%, which corresponds to the templates provided for the BI-MENTUM™ Dual Mobility Cup (Figure 1). Magnification markers taped to the patient's leg at the level of the trochanter will assist in determining actual magnification.

For the A/P projection, place both lower limbs in 15° of internal rotation to position the head and neck parallel to the coronal plane. Centre the beam on the symphysis pubis and ensure the proximal femoral shaft is included in the radiograph.

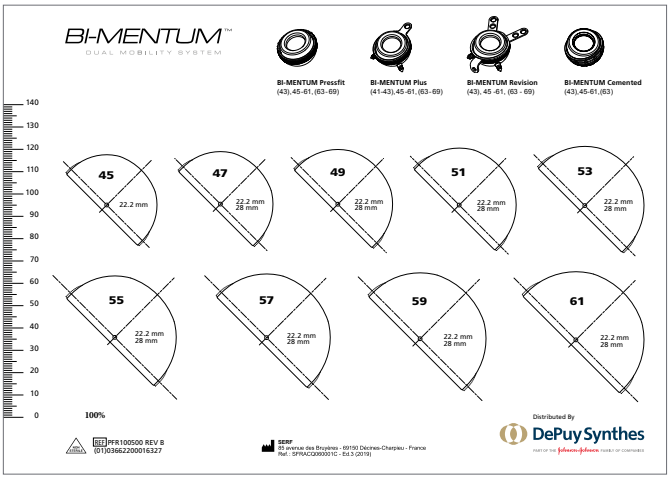


Figure 1. BI-MENTUM X-ray Template

The radiographs should clearly demonstrate the acetabular configuration and the endosteal and periosteal contours of the femoral head, neck and proximal femur (Figure 2).

Frequently, the affected hip is fixed in external rotation, which leads one to underestimate the amount of offset present. In this situation it may be helpful to template the normal hip. Take into consideration any anatomical anomaly, dysplasia, previous fracture or leg length discrepancy.

The BI-MENTUM Dual Mobility Cup X-ray Templates are oriented at 45° and allow measurement of any hip that can be accommodated by the BI-MENTUM Dual Mobility Cup components. Including; BI-MENTUM Press-Fit Cups (43 mm – 69 mm), BI-MENTUM Plus Cups (41 mm – 69 mm), BI-MENTUM Revision Cups (43 mm – 69 mm) and BI-MENTUM Cemented Cups (43 mm – 63 mm)

Using the A/P radiograph, position the template 40° – 45° to the inter–teardrop or interischial line so that the inferomedial aspect of the cup abuts the teardrop and the superior–lateral cup is not excessively uncovered (Figure 3).

Figure 2. Acetabulum with good lateral coverage

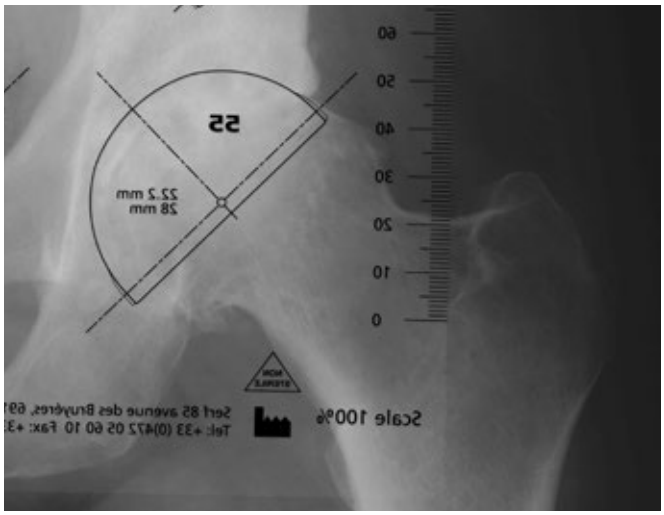


Figure 3. Properly positioned acetabular x-ray template

Acetabular Reaming

The goal of acetabular reaming is to restore the center of the original acetabulum. BI-MENTUM implants are designed to be implanted into a cavity of the matching diameter.

Initially employ a reamer at least 2 mm smaller than the diameter of the femoral head. Ream medially to find the acetabular floor (Figure 4) with the first reamer then subsequent reaming should proceed in 2 mm increments with the reamer oriented at an inclination of 45° (Figure 5). Where the acetabulum is reamed often determines where the cup will seat, it is important to orient the acetabular reamers in the same way as the implant is intended to be positioned. When doing this, a part of the acetabular reamer head may be visible on the superolateral rim.

Use a curette to remove cysts or fibrous tissue from the acetabular margin. Pack any defects densely with cancellous bone.

It is important to understand that the acetabular reamers offered in BI-MENTUM instrumentation have the same shape as the cup (Figure 6). They have a 3 mm cylindrical extension to the hemisphere which must be buried in the bone during reaming. Using acetabular reamers other than those provided in the BI-MENTUM instrument sets is not recommended to avoid any risk of imperfect preparation of the acetabulum and incomplete implantation of the final cup.

Figure 4. Ream medially to find the acetabular floor

Figure 5. Subsequent reaming should proceed in 2 mm increments with the reamer oriented at an inclination of 45°

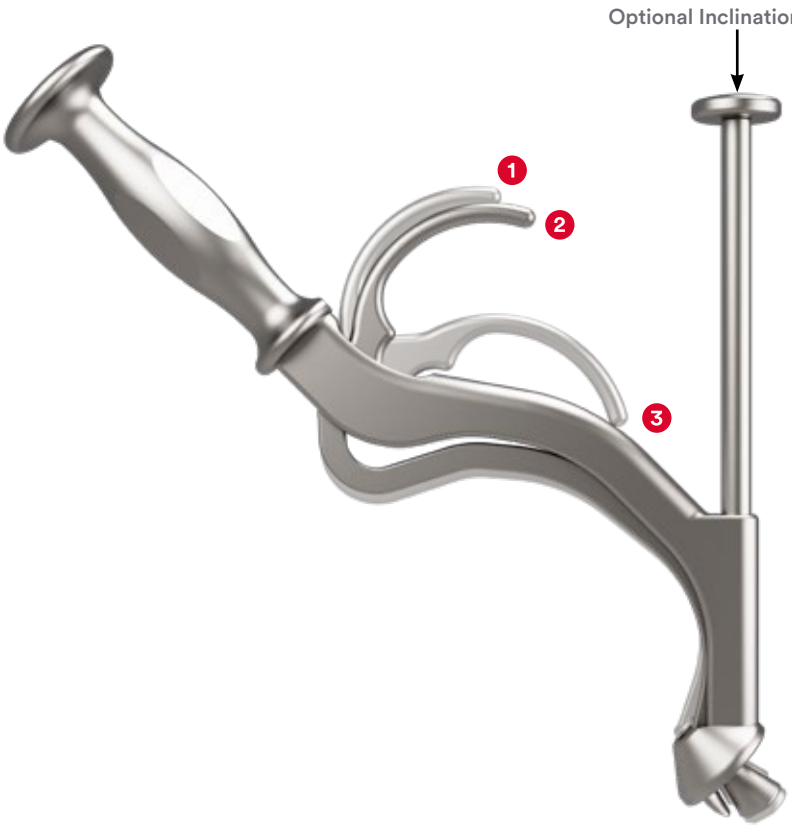
A 49 mm reamer reams for a 49 mm cup

A 49 mm trial cup is 49 mm in diameter

The definitive implant is slightly larger around the equator to ensure press fit. A 49 mm BI-MENTUM cup should be used with a 49 mm reamer

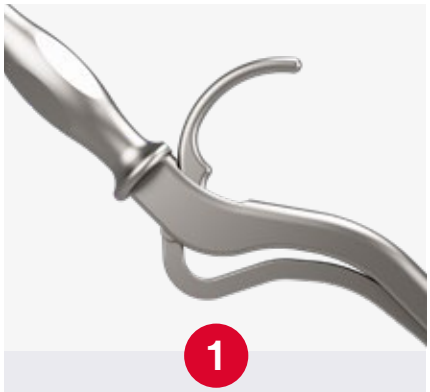
Figure 6. Relationship between reamer, trial cup and definitive cup

BI-MENTUM Cup Impactor



The BI-MENTUM Cup Impactor (Figure 7) has a curvature to accommodate anterior hip approaches and MIS approaches. It is used to hold the trial implant and to orientate and impact the definitive implant.

An optional inclination guide indicates the vertical axis or 45° angle compared to the cup face.

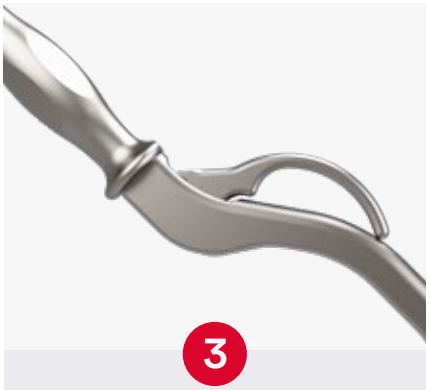


1

Unlocked position for placing the size specific BI-MENTUM cup holder adapter

2

Neutral position



3

Locked position securely grips the trial cup and final implant for insertion to the acetabulum

Figure 7. BI-MENTUM cup impactor with optional inclination guide

Placement of the Cup Holder Adapter

Once assembled to the BI-MENTUM cup impactor handle, the size specific cup holder adaptors allow the cup trial or final implant to be held securely. Its characteristics are as follows (Figure 8):

- A Notch designed to be positioned next to the mark on the edge of the BI-MENTUM Cup.
- B 2 windows to check what depression in the acetabulum of the trial implant and / or the definitive implant.

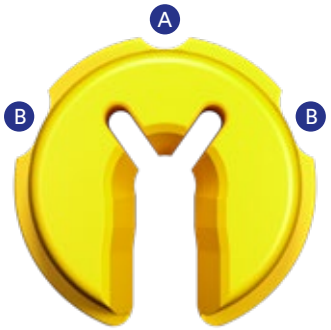


Figure 8. Cup holder adaptor key characteristics

The cup holder adaptor is assembled to the impactor handle following the sequence shown in Figure 9.

Assemble the cup holder adaptor that equates to the diameter of the last reamer used to the cup impactor handle by pulling the lever towards the grip 1.

Releasing the lever will allow it to return to position 2, holding the cup holder adaptor in place.

The mark on the impactor indicates the correct orientation for the adaptor.

Figure 9. Assembling the cup holder adaptor to the cup impactor handle

Trial Cup

A trial of the same size as the reamer allows assessment of the fit and position of the cup. Key characteristics of the cup trial are shown in Figure 10. Follow the sequence shown in Figure 11 to assemble the cup trial to the cup holder adaptor.

Figure 10. Figure 10. Cup trial key characteristics

A The notch shows the position of the flange for the BI-MENTUM Plus Cup. When assembling to the Cup Impactor Handle, it must be positioned in front of the Notch on the cup holder adaptor.

B External peripheral groove represents the start of the 3 mm cylindrical extension to the hemisphere.

C Two holes indicate the position of the Pegs for the BI-MENTUM Plus and Revision Cups.

D The lower opening provides visualization of the acetabular notch position.

E Two upper engraving lines indicate the location of the flanges of the BI-MENTUM Revision Cup.

F Lower engraving line indicates the location of the hook of the BI-MENTUM Revision Cup.

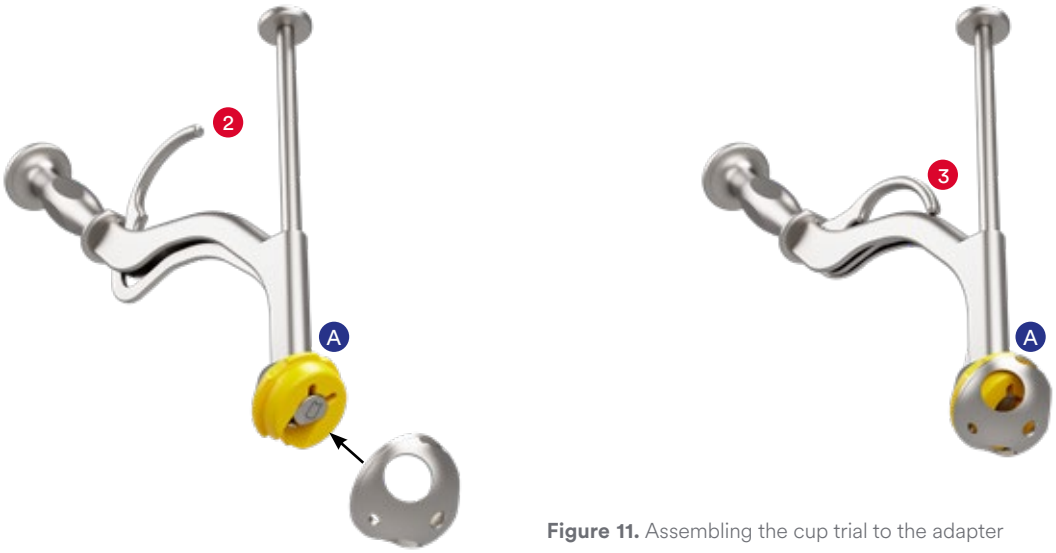


Figure 11. Assembling the cup trial to the adapter

With the lever in position 2, place the cup trial on the cup holder adaptor and lock it in place by pushing it towards position 3.

Trial Cup Impaction

Impact the trial cup into the acetabulum, taking note of the pre-operatively planned inclination and anteversion (Figure 12). It is also important to take note of the location of the orientation marks (A to F) as described on page 7.

Unlike the final cup, the cup trial does not have an equatorial press-fit so if the trial is stable within the acetabulum then the size of the final implant can be confirmed.

At this stage, it is possible to carry out a trial reduction. Simply remove the impactor handle from the cup trial by releasing the lever to position 2.

Figure 12. Impact the trial into the acetabulum and remove the handle to perform a trial reduction

Trial Reduction

Trial reduction can be performed with the trial head. Mount the trial liner on the trial femoral head and reduce the hip to test joint stability. Repeat as required to select the correct offset for the definitive head. (Figure 13).

Figure 13. Trial reduction

The yellow liner trials are used with heads of Ø 28 mm. To carry out trialling with Ø 22.2 mm heads, it is necessary to combine the yellow liner trial and the orange liner trial adaptor Ø 22.2 / Ø 28 (Figure 14).

Figure 14. Assembling the trial adaptor

Once the head diameter and neck length have been determined, remove the liner trial with forceps (use the peripheral groove as the grip area, Figure 15).

Figure 15. Remove the trial using forceps

BI-MENTUM Press-Fit Cup Implantation

It is recommended that the instrument is used to pick up the cup directly from the inner packaging.

Assemble the BI-MENTUM Press-Fit Cup to the cup impactor (the size should be the same as that of the final reamer).

The BI-MENTUM Press-Fit Cup is presented in front of the acetabular cavity.

The notch on the cup holder adaptor (A) makes it possible to visualize the mark on the face of the implant which must be positioned towards the roof of the acetabulum.

The inclination of the cup should be set to approximately 45° and anteversion (between 15° and 20°) should be checked before impaction (Figure 16).

Proceed with impaction and open the handle to release the implant.

To complete the impaction of the implant, it is possible to use the impaction shaft and cup impactor tip.

It is recommended to place a swab between the cup impactor tip and the polished surface of the cup.

Should it be necessary to re-orientate the cup, make sure it is re-impacted after establishing desired orientation, it's not recommended to correct the inclination / abduction of the cup after impaction, however it will be fully seated in the acetabulum.

The convex cup impactor tip has a notch that can be seated on the periphery of the cup should re-orientation be required (Figure 17).

Figure 16. Impacting the cup

Figure 17. Re-orientation of the cup using the cup impactor tip

BI-MENTUM Plus and BI-MENTUM Revision Cup Implantation

The flange on the cup is pre-contoured.

Should adjustment be necessary, it is possible to bend the flange by locating the flange in the slot on the handle of the peg extractor instrument (Figure 18).

Repeated bending is not recommended as it may weaken the flange.

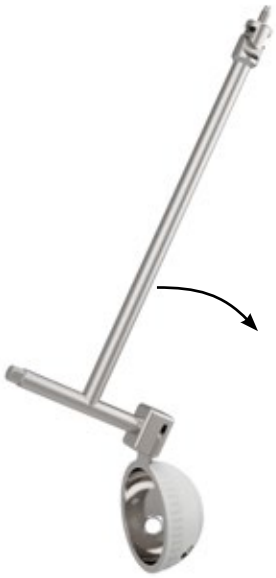


Figure 18. The flange can be bent using the peg extractor as shown. Repeated bending is not recommended.

Assembling the acetabular cup to the impaction handle

The correctly sized cup holder adaptor should already be assembled to the handle.

Check that the viewing window is correctly aligned with the implant then close the lever to lock the cup onto the handle (Figure 19).

Figure 19. Check that the viewing window A is correctly aligned with the implant

Definitive Cup Orientation

Example:

For a left side in a lateral view, the flange of the cup should be positioned at noon, plus or minus an 30° so that the holes of the pegs are respectively in front of the ischium and the pubic horn (Figure 20).

The flange (BI-MENTUM Plus) or flanges (BI-MENTUM Revision) will be applied against the iliac bone.

Impact the cup and then open the lever to release the implant.

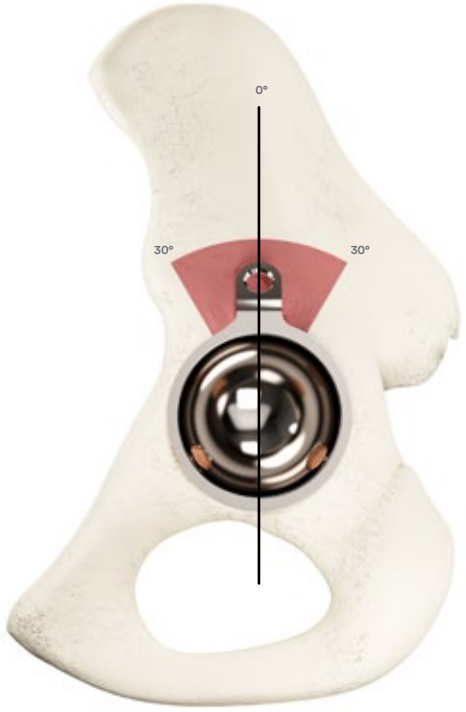


Figure 20. Recommended orientation for the screw flange

Impacting the Anchoring Pegs

Place the flexible drill on the guide.

Locate the guide on the peg holes.

Both holes should be prepared at the same time. Drill through the guide up to the stop, using the drill guide to ensure that drill is centralized in the hole and at the correct angle relative to the bearing surface (Figure 21).

Figure 21. Place the flexible drill on the guide and drill both holes at the same time

Forceps are provided to allow the anchoring pegs to be held securely during insertion.

Introduce and partially insert each peg to ensure correct alignment. Both anchoring pegs should then be fully seated using either the straight or curved impactor (Figure 22).

Figure 22. Assembling the pegs to the cup

It is important to check that the anchoring pegs do not stand proud of the inner surface of the shell (Figure 23).

Figure 23. Check that the anchoring pegs do not stand proud of the inner surface

Implanting the Superior Cortical Bone Screws

The condition of the drill must be checked before it is used; a high rotation speed must be used (approximately 1,000 rpm). Drilling must be done carefully, particularly in relation to the inner bone cortex. Redirection of the drill is possible after penetrating the outer cortex.

Use the drill guide to centralize the drill in the hole (Figure 24), The guide must be oriented superiorly (at a 45° angle in relation to the horizontal plane) and posteriorly at an angle as obliquely as the iliac crest enables, ensuring that the screws are directed towards the safe zone (Figure 25).

Drill to the opposite cortex, remove the drill and measure the depth with the depth gauge.

Select the length of 5.0 mm cortical bone screw that best matches the measured depth of the hole without penetrating the medial cortex and insert it either manually or under power, taking care not to over-tighten the screw.

The pegs must be re-impacted after the cortical screws have been inserted.

Figure 24. Use the drill guide to centralize the drill in the hole

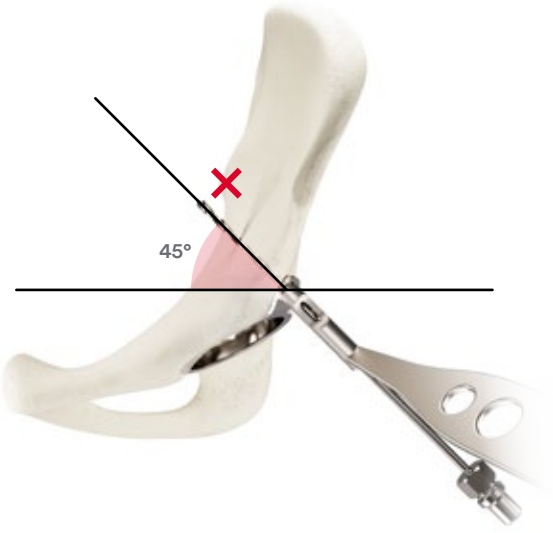


Figure 25. The drill should be aimed superiorly and posteriorly

Trial Reduction

Trial reduction can be performed in the final cup (Figure 26).

Mount the trial liner on the trial femoral head and reduce the hip to test joint stability. Repeat as required to select the correct offset for the definitive head.

Once the correct head offset has been identified, remove all trial components.

Figure 26. Trial reduction can be performed in the final cup.

BI-MENTUM Cemented Cementing Technique

When preparing the acetabulum for cemented cup implantation, over-reaming by 1-2 reamer sizes (2-4 mm) is recommended. Once the acetabulum has been reamed to size, further preparation is required to ensure cement penetration into the bone is maximized.

Using the supplied acetabular prep drill, holes should be distributed around the ilium, ischium and pubis walls of the acetabulum (Figure 27). At this stage any cysts in the acetabulum can be packed with bone graft from acetabular reaming. No holes should be made in the medial wall (acetabular floor) due to the risk of breaching the pelvis. Care should be taken if drilling anteriorly as there is a risk of vascular damage.

Figure 27. Holes should be distributed around the walls of the acetabulum

The acetabulum should then be cleaned of all bone debris and any remaining soft tissue using a Charnley Ring Curette.

Use pulse or continuous lavage (Figure 28) within the acetabulum to remove fat and debris from the cancellous bone interface. Employ suction and dry swabs to clean and dry the bone surface.

Figure 28. Lavage the acetabulum to remove fat and debris

When the acetabular surface is dry and the bone surface is open, pack the socket with swabs. These will prevent blood clots adhering to the bone and leave the surface ready for cement introduction.

A clean pair of gloves should be worn during cementing to avoid contamination of the cement during handling. A 20g or 40g mix (according to acetabulum size) of high viscosity cement should be prepared according to the manufacturer's instructions. Suitable cements include the fast setting DePuy Synthes CMW 2 and DePuy Synthes CMW 2G gentamicin bone cements or longer working time SMARTSET® HV and SMARTSET GHV gentamicin bone cements. A quantity of cement should be introduced into the dry acetabulum and pressurized using the pressurizer (slightly larger than the final reamer used) and T-handle (Figure 29).

Figure 29. The pressuriser should be slighly larger than the final reamer used

Only if absolutely necessary should surgical gloves be lightly wetted with sterile water or normal saline during this process to prevent cement from sticking to the gloves. Excessive moisture must be avoided as it may reduce the strength of the cement. During pressurization, force should be applied superiorly to maximize interdigitation into the predrilled holes.

BI-MENTUM Cemented Cup Implantation

The time of introduction of the implant is at the discretion of the surgeon and will vary according to the cement used and the ambient conditions. The surface of the cement should be dull as opposed to shiny and it should not stick excessively to the surgeon's gloves. If the cement has cured to the point where it will no longer stick to itself then it is too late to introduce the implant.

The Cemented cup comes with a loose single-use polyethylene impaction plate.

Mount the disposable impactor on the gripper/impactor handle (Figure 30).

Position the Cemented cup in the acetabular cavity.

The inclination/abduction of 45° and the anteversion (between 15° and 20°) should be checked prior starting impaction.

Position the gripper (along with the disposable impactor that came with the cup) on the edge of the implant to hold in place during cement polymerisation.

This impaction plate is not stuck into the cup to prevent micromovements of the cup in the cement while it is hardening.

The single-use impactor also prevents cement coming into contact with the polished surface of the Cemented cup.

Once cement polymerisation is complete, remove the straight impactor handle and the impaction plate.

Figure 30. Disposable impactor mounted on the handle

BI-MENTUM Cemented Reinforcement Plate

The cemented reinforcement plates are provided in left and right configurations in multiple sizes. Ensure the correct configuration is selected to avoid the medial flange protruding beyond the acetabular margin.

Use the reinforcement plate trials to select the size that fits best in the patient's acetabulum. Aim to bring as much of the plate into contact with the remaining bone as is practical. It is important to hold the obturator hook securely against the superior margin of the obturator foramen.

During trialling, the trials should be assembled to the plate positioner using the threaded hole. Use of the orientation guide, assembled to the plate positioner, is recommended to give a visual reference that can be replicated during insertion of the definitive implant (Figure 31).

Once the appropriate size and orientation has been selected with the trial. Attach the definitive plate implant to the plate positioner and locate and orient the implant. Then screw it in place using the technique described on page 16 (Figure 32).

Secure fixation of the upper flange is critical and it is strongly recommended that all four screw holes are used.

Once the reinforcement plate is stable, fill defects with bone graft before cementing the BI-MENTUM cemented cup into the reinforcement plate using the technique described on page 19.

Figure 32. Positioning the plate

Figure 31. Preparing the screw holes

Trial Reduction

Trial reduction can be performed in the final cup (Figure 33).

Mount the trial liner on the trial femoral head and reduce the hip to test joint stability. Repeat as required to select the correct offset for the definitive head. Once the correct head offset has been identified, remove all trial components.

Figure 33. Trial reduction

Cemented Cup Size Selection

The size of the cemented cup to be used alongside the Reinforcement Plate depends of the size of the latter. i.e. cup size 53 for a Reinforcement plate sized 53/60 60 being the external diameter of the plate 53 being the diameter of the cup to be combined.

Liner Assembly to Head

Two options are possible:

- A Assembly on table
- B Assembly in situ.

■ **Note:** A DePuy Synthes 12/14 ARTICUL/EZE™ modular head must be used.

▲ **Warning:** not compatible reference 1365-28-740.

▲ **Important:** In both cases remove any liquid from the surface of the head and inside the liner prior to assembly, as this may render the snap fit over the head impossible.

A. Table Assembly

Screw the support cone and the clamping ring together, ensuring that they are centered on the fork (Figure 34).

Hold the head-liner press vertically on the table.

Place the head on the support cone and position the liner on the head.

Squeeze the handles to reduce the liner onto the head while maintaining the liner in the axis of the support cone of the press during the descent of the piston (Figure 35).

During assembly of the liner onto the head, the user will feel resistance increase twice and hear two successive noises as the head passes the retentive bore and then air escapes from the bearing. Correct assembly is confirmed when the liner rotates freely around the head.

Femoral Head Impaction

Clean and dry the stem taper carefully to remove any particulate debris.

Place the femoral head onto the taper and lightly tap the head-liner assembly using the head-liner inserter (Figure 36).

Ensure bearing surfaces are clean and avoid any damage to the bearing surface during reduction.

Figure 34. Assembling the support cone and clamping ring

Figure 35. Maintain alignment of the liner to the axis of the support cone

Figure 36. Figure 36. Femoral head impaction

B. Assembly in situ

Position the press fork around the stem neck and under the implant head (Figure 37).

Align the liner to the neck axis during assembly, ensuring that the alignment is maintained until complete assembly is achieved.

Position the liner on the head.

Squeeze the handles to reduce the liner onto the head while maintaining the liner in the axis of the support cone of the press during the descent of the piston (Figure 36).

During assembly of the liner onto the head, the user will feel resistance increase twice and hear two successive noises as the head passes the retentive bore and then air escapes from the bearing. Correct assembly is confirmed when the liner rotates freely around the head.

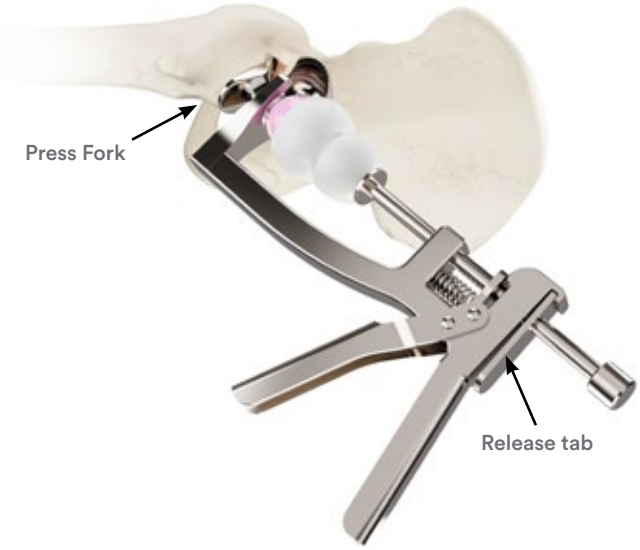


Figure 37. In situ assembly

Removing the Liner Assembly Press

Once the liner is assembled to the head, unlock the press by pressing the release tab (Figure 37).

Before reduction ensure that there is free movement between head and liner. Residual air may prevent this from happening, in which case re-compress to release any trapped air. Repeat assembly steps.

Final reductions instructions and tests

Then, perform hip joint reduction, applying an axial traction on the leg and pushing the liner into the acetabulum bottom using the cup impactor mounted on the impactor shaft. Stability, range of motion and leg length tests have to be performed.

Implant Removal

Removal of the Liner

Place the matching cup trial on the liner.

Rotate the liner away from the notch on the trial, and insert the liner remover.

Use a downward force to lever the liner off the head (Figure 38).

▲ **Important:** The liner cannot be re-used after removal.

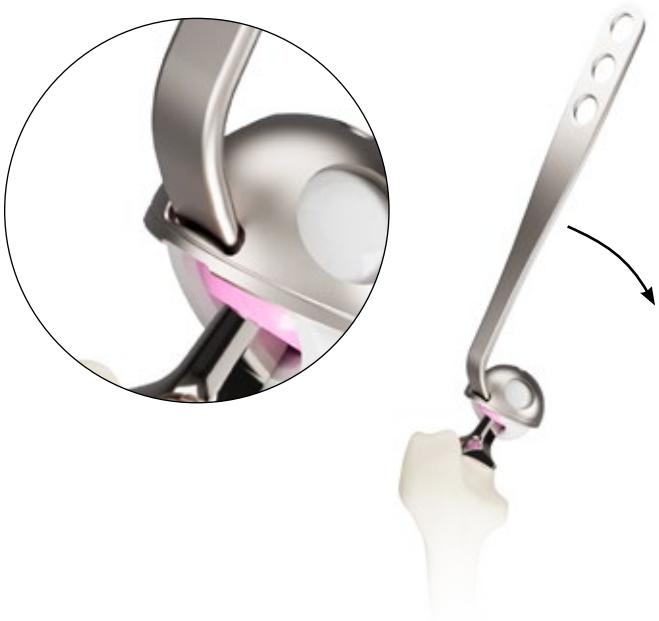


Figure 38. Removal of the liner

Removal of Anchoring Pegs

Screw the peg extractor into the thread inside the peg. Keep turning, the extractor will pull the peg out (Figure 39).

Repeat for the second anchor peg.

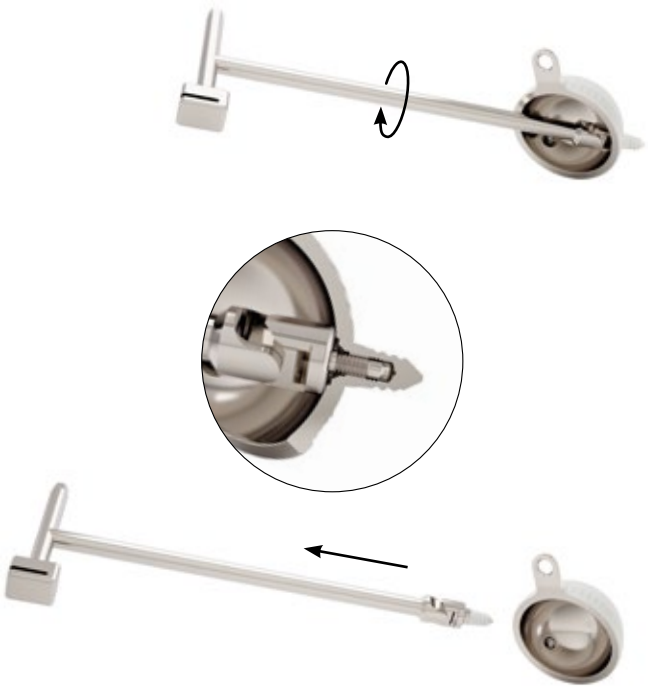


Figure 39. Removal of anchoring pegs

Acetabular Cups

BI-MENTUM Press-Fit Cups

DPS Code	Description
DS45320043	Press-Fit Cementless Acetabular Cup 43 mm
DS45320045	Press-Fit Cementless Acetabular Cup 45 mm
DS45320047	Press-Fit Cementless Acetabular Cup 47 mm
DS45320049	Press-Fit Cementless Acetabular Cup 49 mm
DS45320051	Press-Fit Cementless Acetabular Cup 51 mm
DS45320053	Press-Fit Cementless Acetabular Cup 53 mm
DS45320055	Press-Fit Cementless Acetabular Cup 55 mm
DS45320057	Press-Fit Cementless Acetabular Cup 57 mm
DS45320059	Press-Fit Cementless Acetabular Cup 59 mm
DS45320061	Press-Fit Cementless Acetabular Cup 61 mm
DS45320063	Press-Fit Cementless Acetabular Cup 63 mm*
DS45320065	Press-Fit Cementless Acetabular Cup 65 mm*
DS45320067	Press-Fit Cementless Acetabular Cup 67 mm*
DS45320069	Press-Fit Cementless Acetabular Cup 69 mm*

*Optional sizes, available on request with affiliate instruments

BI-MENTUM Plus Cups

DPS Code	Description
DS5050041	Plus Cementless Acetabular Cup 41 mm*
DS5050043	Plus Cementless Acetabular Cup 43 mm
DS5050045	Plus Cementless Acetabular Cup 45 mm
DS5050047	Plus Cementless Acetabular Cup 47 mm
DS5050049	Plus Cementless Acetabular Cup 49 mm
DS5050051	Plus Cementless Acetabular Cup 51 mm
DS5050053	Plus Cementless Acetabular Cup 53 mm
DS5050055	Plus Cementless Acetabular Cup 55 mm
DS5050057	Plus Cementless Acetabular Cup 57 mm
DS5050059	Plus Cementless Acetabular Cup 59 mm
DS5050061	Plus Cementless Acetabular Cup 61 mm
DS5050063	Plus Cementless Acetabular Cup 63 mm*
DS5050065	Plus Cementless Acetabular Cup 65 mm*
DS5050067	Plus Cementless Acetabular Cup 67 mm*
DS5050069	Plus Cementless Acetabular Cup 69 mm*

*Optional sizes, available on request with affiliate instruments

BI-MENTUM Revision Cups

DPS Code	Description
DS45360043	Revision Cementless Acetabular Cup 43 mm
DS45360045	Revision Cementless Acetabular Cup 45 mm
DS45360047	Revision Cementless Acetabular Cup 47 mm
DS45360049	Revision Cementless Acetabular Cup 49 mm
DS45360051	Revision Cementless Acetabular Cup 51 mm
DS45360053	Revision Cementless Acetabular Cup 53 mm
DS45360055	Revision Cementless Acetabular Cup 55 mm
DS45360057	Revision Cementless Acetabular Cup 57 mm
DS45360059	Revision Cementless Acetabular Cup 59 mm
DS45360061	Revision Cementless Acetabular Cup 61 mm
DS45360063	Revision Cementless Acetabular Cup 63 mm*
DS45360065	Revision Cementless Acetabular Cup 65 mm*
DS45360067	Revision Cementless Acetabular Cup 67 mm*
DS45360069	Revision Cementless Acetabular Cup 69 mm*

*Optional sizes, available on request with affiliate instruments

BI-MENTUM Cemented Cups

DPS Code	Description
DS4901043	Cemented Acetabular Cup 43 mm
DS4901045	Cemented Acetabular Cup 45 mm
DS4901047	Cemented Acetabular Cup 47 mm
DS4901049	Cemented Acetabular Cup 49 mm
DS4901051	Cemented Acetabular Cup 51 mm
DS4901053	Cemented Acetabular Cup 53 mm
DS4901055	Cemented Acetabular Cup 55 mm
DS4901057	Cemented Acetabular Cup 57 mm
DS4901059	Cemented Acetabular Cup 59 mm
DS4901061	Cemented Acetabular Cup 61 mm
DS4901063	Cemented Acetabular Cup 63 mm*

*Optional sizes, available on request with affiliate instruments

Polyethylene Liners

BI-MENTUM Liners for 22.2 mm Heads

DPS Code	Description
DS10004122	22.2 mm Liner x 41*
DS10004322	22.2 mm Liner x 43
DS10004522	22.2 mm Liner x 45
DS10004722	22.2 mm Liner x 47
DS10004922	22.2 mm Liner x 49
DS10005122	22.2 mm Liner x 51
DS10005322	22.2 mm Liner x 53
DS10005522	22.2 mm Liner x 55
DS10005722	22.2 mm Liner x 57
DS10005922	22.2 mm Liner x 59
DS10006122	22.2 mm Liner x 61
DS10006322	22.2 mm Liner x 63*
DS10006522	22.2 mm Liner x 65*
DS10006722	22.2 mm Liner x 67*
DS10006922	22.2 mm Liner x 69*

*Optional sizes, available on request with affiliate instruments

BI-MENTUM Liners for 28 mm Heads

DPS Code	Description
DS10004728	28 mm Liner x 47
DS10004928	28 mm Liner x 49
DS10005128	28 mm Liner x 51
DS10005328	28 mm Liner x 53
DS10005528	28 mm Liner x 55
DS10005728	28 mm Liner x 57
DS10005928	28 mm Liner x 59
DS10006128	28 mm Liner x 61
DS10006328	28 mm Liner x 63*
DS10006528	28 mm Liner x 65*
DS10006728	28 mm Liner x 67*
DS10006928	28 mm Liner x 69*

*Optional sizes, available on request with affiliate instruments

Implants

BI-MENTUM Reinforcement Plates

DPS Code	Description
DS30005043	Right Side Reinforcement Plate 43 X 50
DS30005245	Right Side Reinforcement Plate 45 X 52
DS30005447	Right Side Reinforcement Plate 47 X 54
DS30005649	Right Side Reinforcement Plate 49 X 56
DS30005851	Right Side Reinforcement Plate 51 X 58
DS30006053	Right Side Reinforcement Plate 53 X 60
DS40005043	Left Side Reinforcement Plate 43 X 50
DS40005245	Left Side Reinforcement Plate 45 X 52
DS40005447	Left Side Reinforcement Plate 47 X 54
DS40005649	Left Side Reinforcement Plate 49 X 56
DS40005851	Left Side Reinforcement Plate 51 X 58
DS40006053	Left Side Reinforcement Plate 53 X 60

BI-MENTUM 5.0 mm Cortical Bone Screws

DPS Code	Description
DS50000520	5.0 mm Bone Screw x 20 mm
DS50000525	5.0 mm Bone Screw x 25 mm
DS50000530	5.0 mm Bone Screw x 30 mm
DS50000535	5.0 mm Bone Screw x 35 mm
DS50000540	5.0 mm Bone Screw x 40 mm
DS50000545	5.0 mm Bone Screw x 45 mm
DS50000550	5.0 mm Bone Screw x 50 mm
DS50000555	5.0 mm Bone Screw x 55 mm
DS50000560	5.0 mm Bone Screw x 60 mm
DS50000565	5.0 mm Bone Screw x 65 mm
DS50000570	5.0 mm Bone Screw x 70 mm

Instruments

BI-MENTUM Primary Full Kit Tray 1

DPS Code	SERF Code	Description
DS9002245	RA90190702	BI-MENTUM Liner Trial 22 mm 45 mm
DS9002847	RA90190705	BI-MENTUM Liner Trial 28 mm 47 mm
DS9002849	RA90190706	BI-MENTUM Liner Trial 28 mm 49 mm
DS9002851	RA90190707	BI-MENTUM Liner Trial 28 mm 51 mm
DS9002853	RA90190708	BI-MENTUM Liner Trial 28 mm 53 mm
DS9002855	RA90190709	BI-MENTUM Liner Trial 28 mm 55 mm
DS9002857	RA90190710	BI-MENTUM Liner Trial 28 mm 57 mm
DS9002859	RA90190711	BI-MENTUM Liner Trial 28 mm 59 mm
DS9002861	RA90190712	BI-MENTUM Liner Trial 28 mm 61 mm
DS9002222	RA90190700	BI-MENTUM Liner Trial Adaptor
DS80045	RA90390945	BI-MENTUM Cup Trial 45 mm
DS80047	RA90390947	BI-MENTUM Cup Trial 47 mm
DS80049	RA90390949	BI-MENTUM Cup Trial 49 mm
DS80051	RA90390951	BI-MENTUM Cup Trial 51 mm
DS80053	RA90390953	BI-MENTUM Cup Trial 53 mm
DS80055	RA90390955	BI-MENTUM Cup Trial 55 mm
DS80057	RA90390957	BI-MENTUM Cup Trial 57 mm
DS80059	RA90390959	BI-MENTUM Cup Trial 59 mm
DS80061	RA90390961	BI-MENTUM Cup Trial 61 mm

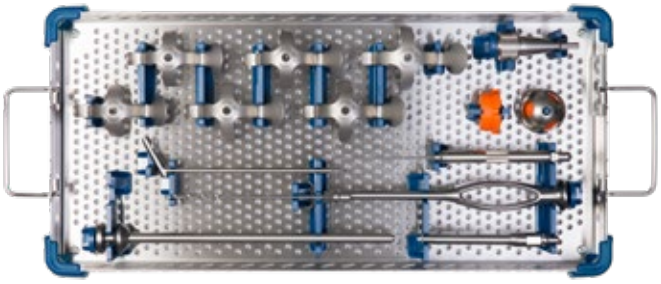
DPS Code	SERF Code	Description
DS70045	RA90590145	BI-MENTUM Cup Holder Adaptor 45 mm
DS70047	RA90590147	BI-MENTUM Cup Holder Adaptor 47 mm
DS70049	RA90590149	BI-MENTUM Cup Holder Adaptor 49 mm
DS70051	RA90590151	BI-MENTUM Cup Holder Adaptor 51 mm
DS70053	RA90590153	BI-MENTUM Cup Holder Adaptor 53 mm
DS70055	RA90590155	BI-MENTUM Cup Holder Adaptor 55 mm
DS70057	RA90590157	BI-MENTUM Cup Holder Adaptor 57 mm
DS70059	RA90590159	BI-MENTUM Cup Holder Adaptor 59 mm
DS70061	RA90590161	BI-MENTUM Cup Holder Adaptor 61 mm
DS50021	RA90460129	BI-MENTUM Cup Impaction Handle
DS50022	RAMA030090	BI-MENTUM Version Guide
DS50016	RA90430155	BI-MENTUM Impaction Shaft
DS50014	RA90250223	BI-MENTUM Cup Impactor
DS50015	RA90250222	BI-MENTUM Head-liner Inserter
DS50011	RA90510007	BI-MENTUM Peg Forceps
DS50012	RA90430072	BI-MENTUM Liner Head Press
DS50017	RA90130305	BI-MENTUM Angled Wrench
DS50010	RA90310022	BI-MENTUM Liner Remover
DS100100	RA99990091	BI-MENTUM Primary Tray

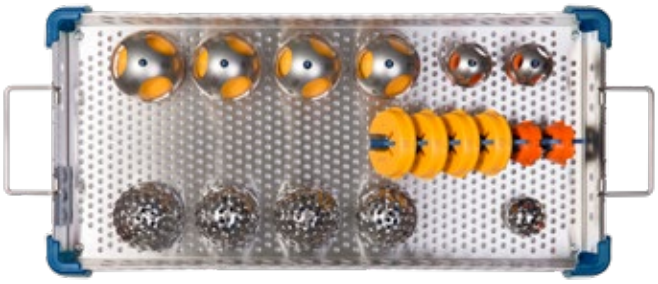
BI-MENTUM Primary Full Kit Tray 2

DPS Code	SERF Code	Description
DS60043	RA90370243	BI-MENTUM Reamer 43 mm
DS60045	RA90370245	BI-MENTUM Reamer 45 mm
DS60047	RA90370247	BI-MENTUM Reamer 47 mm
DS60049	RA90370249	BI-MENTUM Reamer 49 mm
DS60051	RA90370251	BI-MENTUM Reamer 51 mm
DS60053	RA90370253	BI-MENTUM Reamer 53 mm
DS60055	RA90370255	BI-MENTUM Reamer 55 mm
DS60057	RA90370257	BI-MENTUM Reamer 57 mm
DS60059	RA90370259	BI-MENTUM Reamer 59 mm
DS60061	RA90370261	BI-MENTUM Reamer 61 mm
DS50019	RA90670085	BI-MENTUM Reamer Handle
DS50020	RA90270002	BI-MENTUM Reamer Adaptor
DS100200	RA99990092	BI-MENTUM Reamer Tray

BI-MENTUM Drill Full Kit

DPS Code	SERF Code	Description
DS5001	RA90310180	BI-MENTUM Peg Extractor
DS5002	RA90430004	BI-MENTUM Straight Peg Impactor
DS5003	RA90430020	BI-MENTUM Curved Peg Impactor
DS5004	RA90450030	BI-MENTUM Depth Gauge
DS5005	RA90710040	BI-MENTUM Manual Screwdriver
DS5006	RA90410037	BI-MENTUM Drill Guide
DS5007	RA90710035	BI-MENTUM Motor Screwdriver
DS5008	RA90350001	BI-MENTUM Screw Drill
DS5009	RA90470022	BI-MENTUM Peg Drill
DS100500	RA99990093	BI-MENTUM Drill Kit Tray





BI-MENTUM Plate Full Tray

DPS Code	SERF Code	Description
DS2005043	RA90280050	BI-MENTUM Plate Trial 50 mm 43 mm
DS2005245	RA90280052	BI-MENTUM Plate Trial 52 mm 45 mm
DS2005447	RA90280054	BI-MENTUM Plate Trial 54 mm 47 mm
DS2005649	RA90280056	BI-MENTUM Plate Trial 56 mm 49 mm
DS2005851	RA90280058	BI-MENTUM Plate Trial 58 mm 51 mm
DS2006053	RA90280060	BI-MENTUM Plate Trial 60 mm 53 mm
DS2002000	RA90460002	BI-MENTUM Plate Positioner
DS5004	RA90450030	BI-MENTUM Depth Gauge
DS5005	RA90710040	BI-MENTUM Manual Screwdriver
DS5006	RA90410037	BI-MENTUM Drill Guide
DS5007	RA90710035	BI-MENTUM Motor Screwdriver
DS5008	RA90350001	BI-MENTUM 3.2 mm Drill Screws
DS70043	RA90590143	BI-MENTUM Cup Holder Adaptor 43 mm
DS80043	RA90390943	BI-MENTUM Cup Trial 43 mm
DS9002243	RA90190701	BI-MENTUM Liner Trial 22 mm 43 mm
DS100900	RA99990094	BI-MENTUM Plate Tray
DS50020	RA90270002	BI-MENTUM Reamer Adaptor

BI-MENTUM Expansion Full Tray

DPS Code	SERF Code	Description
DS60041	RA90370241	BI-MENTUM Reamer 41 mm
DS60063	RA90370263	BI-MENTUM Reamer 63 mm
DS60065	RA90370265	BI-MENTUM Reamer 65 mm
DS60067	RA90370267	BI-MENTUM Reamer 67 mm
DS60069	RA90370269	BI-MENTUM Reamer 69 mm
DS70041	RA90590141	BI-MENTUM Cup Holder Adaptor 41 mm
DS70043	RA90590143	BI-MENTUMCup Holder Adaptor 43 mm
DS70063	RA90590163	BI-MENTUM Cup Holder Adaptor 63 mm
DS70065	RA90590165	BI-MENTUM Cup Holder Adaptor 65 mm
DS70067	RA90590167	BI-MENTUM Cup Holder Adaptor 67 mm
DS70069	RA90590169	BI-MENTUM Cup Holder Adaptor 69 mm
DS80041	RA90390941	BI-MENTUM Cup Trial 41 mm
DS80043	RA90390943	BI-MENTUM Cup Trial 43 mm
DS80063	RA90390963	BI-MENTUM Cup Trial 63 mm
DS80065	RA90390965	BI-MENTUM Cup Trial 65 mm
DS80067	RA90390967	BI-MENTUM Cup Trial 67 mm
DS80069	RA90390969	BI-MENTUM Cup Trial 69 mm
DS9002241	RA90190720	BI-MENTUM Liner Trial 22 mm 41 mm
DS9002243	RA90190701	BI-MENTUM Liner Trial 22 mm 43 mm
DS9002863	RA90190713	BI-MENTUM Liner Trial 28 mm 63 mm
DS9002865	RA90190714	BI-MENTUM Liner Trial 28 mm 65 mm
DS9002867	RA90190715	BI-MENTUM Liner Trial 28 mm 67 mm
DS9002869	RA90190716	BI-MENTUM Liner Trial 28 mm 69 mm
DS100800	RA99990095	BI-MENTUM Expansion Tray

BI-MENTUM X-ray Templates and Bone Cements and Accessories

BI-MENTUM Cup X-ray Templates

DPS Code	Description
PFR100500	100% BI-MENTUM Cups 41 mm - 69 mm
PFR100600	115% BI-MENTUM Cups 41 mm - 69 mm
PFR100700	120% BI-MENTUM Cups 41 mm - 69 mm

BI-MENTUM Reinforcement Plate X-ray Templates

DPS Code	Description
PFR100920	100% BI-MENTUM Reinforcement Plates
PFR100930	115% BI-MENTUM Reinforcement Plates
PFR100940	120% BI-MENTUM Reinforcement Plates

DePuy Synthes Bone Cement

3095020	SMARTSET GHV Gentamicin 20g
3095040	SMARTSET GHV Gentamicin 40g
3025020	DePuy CMW 2 Gentamicin 20g
3025040	DePuy CMW 2 Gentamicin 40g
3092020	SMARTSET HV 20g
3092040	SMARTSET HV 40g
3322020	DePuy CMW 2 20g
3322040	DePuy CMW 2 40g

DePuy Synthes Bone Cement Instruments

9626-29-000	Acetabular Prep Drill
3206045	Acetabular Pressurizer 5 x 45 mm
3206052	Acetabular Pressurizer 5 x 52 mm
3206055	Acetabular Pressurizer 5 x 55 mm
3206060	Acetabular Pressurizer 5 x 60 mm
3206065	Acetabular Pressurizer 5 x 65 mm
2015-25-000	Pressurizer Handle Long

Access to the dematerialised Instructions For Use

For each type of implant, SERF provides you with specific electronic instructions for use which are regularly updated, searchable, downloadable and printable according to your needs.

In these instructions, you will find not only the required information and technical characteristics of our implants, but also invaluable information on the indications, contraindications, compatibility between implants, the possible investigations and those to be strictly avoided, etc.

The IFU can also be sent in printed paper format, within 7 calendar days upon request to SERF.

These electronic instructions, in the Adobe® Acrobat® PDF format, can be accessed and downloaded in two ways:
- using a QR code given on the packaging of the implant, which can be read with a smartphone or a tablet (internet connection required; 3G/4G, Wi-Fi, etc.) and an appropriate reading app (available as a free download on Google Play, Apple® Appstore and Windows® Store depending on the peripherals model used).
- via the internet connection of a computer, a smartphone or a tablet, be entering the URL address stated underneath the QR code directly into your usual internet browser.

Please find below the QR code and the URL address for the electronic instructions for use covering the BI-MENTUM™ product range presented in this document:

Intructions for use
BI-MENTUM™ Acetabular Cups

http://doc.serf.fr/0500.pdf

Intructions for use
BI-MENTUM™ Reinforcement Plate

http://doc.serf.fr/0501.pdf

Intructions for use
BI-MENTUM™ Cortical Screws

http://doc.serf.fr/0502.pdf

Intructions for use
BI-MENTUM™ Instruments

http://doc.serf.fr/0503.pdf

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Windows
- 1.5 GHz processor or faster
- Windows Server 2008 R2 (64 bit), 2012 (64 bit), 2012 R2 (64 bit)† or 2016 (64 bit); Windows 7 SP1 (32 and 64 bit), Windows 8, 8.1 (32 and 64 bit)† or Windows 10 (32 and 64 bit)
- 1 GB of RAM memory
- 380 MB of free space on the disk
- Screen resolution 1024x768
- Internet Explorer 11

MacOS
- Intel processor
- Mac OS X v10.11, macOS v10.12, macOS v10.13 or macOS v10.14*
- 1GB of RAM memory
- 380 MB of free space on the disk
- Screen resolution 1024X768
- Safari 9.0, 10.0 or 11.0 (the external module for Safari is only managed by 64-bit systems with an Intel processor)

Applications mobiles
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- 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
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