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# ACETABULAR REVISION IMPLANTS

INFO PRODUCT

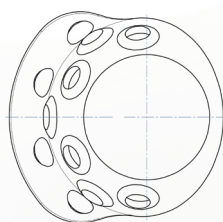
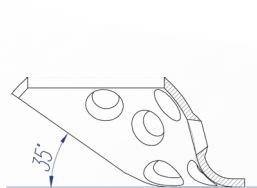
OPERATING TECHNIQUE





# ACETABULAR REVISION IMPLANTS

The reinforcement rings and cages are indicated in case of revision of the acetabular component and in case of insufficient bone stock, such as not to allow an effective and safe anchoring of a normal cemented cup to the acetabulum.



## REINFORCEMENT CAGE

Available in 8 sizes: 44, 46, 48, 50, 52, 54, 56

## MATERIAL

Stainless steel (ISO 5832-1) sandblasted on the internal and external surface



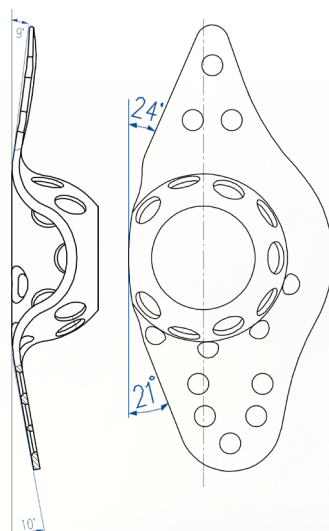
## FIXATION

Fixation with cancellous screws to the acetabular roof.

## LATERAL RIM

The ring is provided with a lateral rim for fixation in the ischium with of cancellous bone threaded screws diam. 6.5mm





### ACETABULAR CAGE

Consisting of a concave central part associated with a multi-hole proximal flange, and a multi-hole distal blade.

Available in two sides: right and left.

In seven sizes for laterality: 44, 48, 50, 52, 54, 56, 58.

It can also be modeled with plate bending pliers.

### CEMENTED CUP POSITIONING

Ring and cage allow you to position the cup, using cement, in the desired position: it is possible, in fact, to obtain an optimal anteversion, regardless of the inclination of the cage and / or ring.

### MATERIAL

Stainless steel (ISO 5832-1) sandblasted on the internal and external surface

### SCREW HOLES

Fully threaded cancellous screws diam. 6.5mm, stainless steel (ISO 5832-1)



### FLANGE AND NOSE

The cage is equipped with a distal nose and a proximal flange, both of which can be molded to allow adaptation to the anatomy of each patient.

The proximal flange is designed for fixation in the ilium, the distal nose for stabilization in the ischium.

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# ACETABULAR REVISION IMPLANTS

## OPERATING TECHNIQUE

### REINFORCEMENT CAGE

#### 1 Preoperative Planning

Preoperative assessment of the size and position of the reinforcement cage will help to avoid and predict possible intraoperative complications.

Antero-posterior (A/P) and medio-lateral (M/L) radiographs are required for x-ray evaluation and for pre-operative planning.

#### 2 Preparing the acetabulum

Expose the acetabulum to allow adequate visualization of the area. Remove soft tissues and possible osteophytes; if present, remove the previous implant.

Start reaming the acetabular roof and floor, using a small diameter reamer and continue, reaming the articular cartilage, until reaching the cancellous bone.

#### 3 Filling of cavity defects

In the event that cavity defects are present, it is possible to reconstruct the acetabulum through bone grafts, to ensure adequate primary stability and prevent mobilization.

#### 4 Positioning the screws in distal nose for stabilization

The acetabular reinforcement cage can be modeled to adapt to the patient's anatomy with a plate bender. It is advisable to avoid excessive deformation of the distal nose in order not to damage its integrity and cause it to break.

Place the cage in place.

Fixation of the distal nose can be done in two ways.

It is possible to insert the distal nose inside the ischio-pubic branch: create a cavity with a chisel and empty as much as necessary of the cancellous bone, so that the nose penetrates into place. The adherence of the cage to the inside of the acetabulum is synonymous of correct insertion and positioning of the nose. If it is not possible to insert the nose, it is possible to fix the cage distally with screws.

Insert the drill guide (Ref. 110388701) in one of the three holes on the distal nose and drill with the tip (Ref. 340085060).

Determine the length of the screws with the Depth Gauge (Ref. 340085138). Pick up the cancellous bone screw (Diam. 6.5mm) chosen with Screw Holder Forceps (Ref. 110381681) and screw it with the screwdriver (Ref. 340085045).

#### 5 Positioning the screws in proximal nose for fixation at the Ilium

Proceed with the insertion of the screws in the proximal nose. Insert the drill guide into one of the holes on the proximal nose and drill with the tip.

Determine the length of the screws with the Depth Gauge. Pick up the cancellous bone screw (Diam. 6.5mm) chosen with Screw Holder Forceps (Ref. 110381681) and screw it with the screwdriver (Ref. 340085045).

For mechanical reasons it is suggested to implant no more than 3-4 screws.

#### 6 Cemented cup implant

Spread the PMMA bone cement into the acetabulum.

Position the cemented cup in place: the size of the cup to be implanted can be the same as the cage, but, depending on the amount of cement used, it can be one size smaller. For example, if the cage size is 52mm, the cemented cup will be size 52mm or 50mm.

Once the cup is in position, immediately remove any cement residue that is between the positioner and the final cup.

When the cement has completely hardened, gently remove the positioner from the cup.

Make sure that the cup remains in place.





## REINFORCEMENT RING

### 1 Preoperative Planning

Preoperative assessment of the size and position of the reinforcement cage will help to avoid and predict possible intraoperative complications.

Antero-posterior (A/P) and medio-lateral (M/L) radiographs are required for x-ray evaluation and for pre-operative planning.

### 2 Preparing the acetabulum

Expose the acetabulum to allow adequate visualization of the area. Remove soft tissues and possible osteophytes; if present, remove the previous implant.

Ream the acetabulum starting with the smallest reamer suitable for the cavity. Gradually widen the acetabulum by incrementally reaming the articular cartilage until reaching the cancellous bone.

### 3 Positioning of the reinforcement ring

In the event that cavity defects are present, it is possible to reconstruct the acetabulum through bone grafts, to ensure adequate primary stability and prevent mobilization. Check that the bone stock is sufficient, especially in the areas close to the points where the screws will be inserted.

The size of the ring to be implanted is 4mm lower than the diameter of the last drill used.

For example, if the last drill used has a diameter of 58mm, a size 54 reinforcement ring will be implanted.

### 4 Positioning the screws

Once the ring has been positioned, proceed with the insertion of the cancellous bone screws with a diameter of 6.5mm.

Starting from one of the medial holes, insert the drill guide (Ref. 110388701) and drill with the tip (Ref. 340085060). Determine the length of the screws with the Depth Gauge (Ref. 340085138). Pick up the cancellous bone screw (Diam. 6.5mm) chosen with Screw Holder Forceps (Ref. 110381681) and screw it with the screwdriver (Ref. 340085045).

Screw the other screws in the same way: from 3 to 6 screws can be implanted.

### 5 Cemented cup implant

Spread the PMMA bone cement into the acetabulum.

Position the cemented cup in place: basically the size of the cup to be implanted is the same as the cage, but, depending on the amount of cement used, it can be one size smaller. For example, if the cage size is 52mm, the cemented cup will be size 52mm or 50mm.

Once the cup is in position, immediately remove any cement residue that is between the positioner and the final cup.

When the cement has completely hardened, gently remove the positioner from the cup.

Make sure that the cup remains in place.



Pre-op xrays



Post-op xrays

## CAGES AND RINGS INSTRUMENT CODES

### OPTIONAL ON REQUEST

DESCRIPTION	REF.	QNT
Drill guide 3.2-4.5mm	110388701	1
Hex screwdriver 4.5-6.5 L.240mm	340085045	1
Depth gauge for screws 2.7-4	340085138	1
Drill bit Diam. 3.2mm ao/jacobs	340085060	1
Screw holder	110381681	1

DESCRIPTION	REF.	QNT
BIOCEMIUM I Packaging 40gr	110410030	1
BIOCEMIUM III Packaging 40gr	110410035	1
BIOGENT I Packaging 40gr	110410040	1
BIOGENT III Packaging 40gr	110410045	1

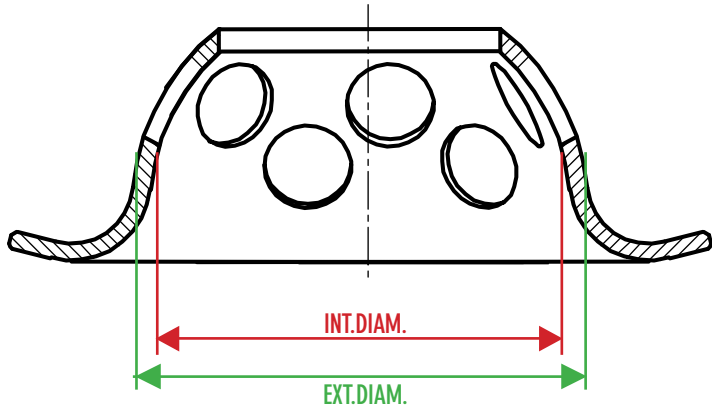
## CAGES AND RINGS CODES

CAGE SIZE	INT. DIAM.	CEMENTED CUP SIZE	EXT. DIAM.
44	44mm	42; 44	48mm
48	48mm	46; 48	52mm
50	50mm	48; 50	54mm
52	52mm	50; 52	56mm
54	54mm	52; 54	58mm
56	56mm	54; 56	60mm
58	58mm	56; 58	62mm

RING SIZE	INT. DIAM.	CEMENTED CUP SIZE	EXT. DIAM.
44	44mm	42; 44	48mm
46	46mm	44; 46	50mm
48	48mm	46; 48	52mm
50	50mm	48; 50	54mm
52	52mm	50; 52	56mm
54	54mm	52; 54	58mm
56	56mm	54; 56	60mm
58	58mm	56; 58	62mm

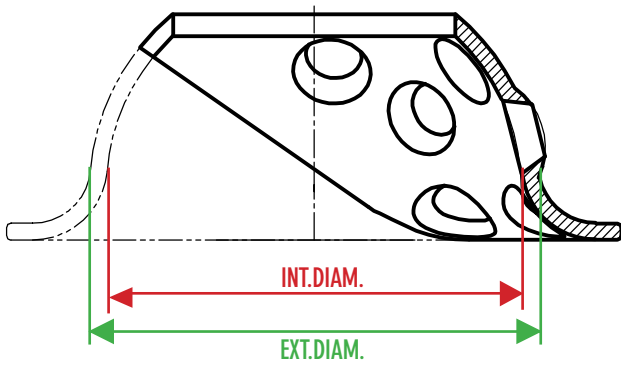






REINFORCEMENT CAGE

REF.	SIZE	SIDE	INT. DIAM.	EXT. DIAM.
110349344	44	R	44mm	48mm
110349348	48	R	48mm	52mm
110349350	50	R	50mm	54mm
110349352	52	R	52mm	56mm
110349354	54	R	54mm	58mm
110349356	56	R	56mm	60mm
110349358	58	R	58mm	62mm
110349444	44	L	44mm	48mm
110349448	48	L	48mm	52mm
110349450	50	L	50mm	54mm
110349452	52	L	52mm	56mm
110349454	54	L	54mm	58mm
110349456	56	L	56mm	60mm
110349458	58	L	58mm	62mm



REINFORCEMENT RING

REF.	SIZE	INT. DIAM.	EXT. DIAM.
110349144	44	44mm	48mm
110349146	46	46mm	50mm
110349148	48	48mm	52mm
110349150	50	50mm	54mm
110349152	52	52mm	56mm
110349154	54	54mm	58mm
110349156	56	56mm	60mm
110349158	58	58mm	62mm

CANCELLOUS SCREW

REF.	LENGTH	DIAM.
200100020	20	6.5mm
200100025	25	6.5mm
200100030	30	6.5mm
200100035	35	6.5mm
200100040	40	6.5mm
200100045	45	6.5mm
200100050	50	6.5mm
200100055	55	6.5mm
200100060	60	6.5mm

## Web site

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Use the QR-Code to visit Gruppo Bioimpianti website



## IFU

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Use the QR-Code to view complete product informations, including instructions for use, indications and contraindications, precautions and warnings



**INDICATIONS:** The indications are tied to hip pathologies that require an arthroplasty to reduce or eliminate pain and/or improve joint function. The general guidelines are: Non-inflammatory degenerative joint disease such as primary or secondary osteoarthritis; Aseptic necrosis of the femoral head; Rheumatoid Arthritis; Post-traumatic Arthritis; Correction of functional deformity; Outcomes of fractures of the femoral neck; Outcomes of traumatic dislocations of the hip; Failures of osteotomy; Outcomes of arthrodesis.

**CONTRAINDICATIONS:** The hip joint surgery is absolutely contraindicated in cases of: systemic or local infection, sepsis, and osteomyelitis. It is relatively contraindicated in case of: Osteoporosis; Patient uncooperative or suffering from neurological disorders, unable to follow directions; Systemic disorders and/or metabolic problems that lead to a progressive deterioration of bone support; Neurological or neuromuscular disorders that could create an unacceptable risk to the prostheses instability or lead to a failure of prostheses fixation; Osteomalacia; Active infection or suspected latent infection in the hip joint; Distant focus of infection that could spread to the implant site; Vascular insufficiency, muscular atrophy, neuromuscular diseases; Incomplete or insufficient presence of soft tissue around the knee joint; Obesity; Inadequate bone stock for the prostheses support or fixation; Skeletal immaturity; Local or disseminated neoplastic diseases; Incurable severe deformities.

This surgical technique is exclusively intended for medical professionals, especially physicians and surgeons.

This document does not constitute medical advice, it does not dispense medical recommendations and it does not convey any diagnostic or therapeutic information.

Informations and techniques presented in this document were compiled by a team of medical experts and Gruppo Bioimpianti's specialists; however Gruppo Bioimpianti excludes any liability for improper use of informations.

For any information or enquires about this publication or anything else, contact GRUPPO BIOIMPIANTI.



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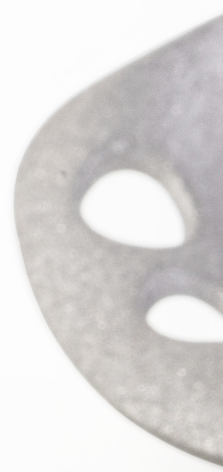
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IMPACTDAREV-01 REV 00 2023