

Surgical technique

Affinis

Anatomic shoulder prosthesis

Preservation in motion



For healthcare professional use only. The illustrated image does not represent a connection between the use of the medical device described, nor its performance.

*Building on our heritage
Moving technology forward
Step by step with our clinical partners
Towards a goal of preserving mobility*



Preservation in motion

As a Swiss company, Mathys is committed to this guiding principle and pursues a product portfolio with the goal of further developing traditional philosophies with respect to materials or design in order to address existing clinical challenges. This is reflected in our imagery: traditional Swiss activities in conjunction with continuously evolving sporting equipment.

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Remark

Please make yourself familiar with the handling of the instruments, the product-related surgical technique and the warnings, the safety notes as well as the recommendations of the instruction leaflet before using an implant manufactured by Mathys Ltd Bettlach. Make use of the Mathys user training and proceed according to the recommended surgical technique.

Introduction

The Affinis total shoulder endoprosthesis, with its double eccentricity – a movable cone and eccentric head – allows the centre of rotation of the head to be restored in a simple and anatomical manner.^{1,2} Less polyethylene wear can be anticipated in combination with the vitamys glenoid components than with the UHMWPE components.³

The Affinis prosthesis is also ideal for treating post-traumatic malpositions.¹ It can be easily adjusted to the anatomic conditions, which facilitates restoration of the centre of rotation.² Through the movable cone and the eccentric head, the proximal humerus can be anatomically reconstructed.^{1,2}

The simple instrumentation enhances the advantages of this shoulder endoprosthesis: Resection is performed under retrotorsion monitoring, the rasps are used as test prostheses and the reconstruction of the centre of the head is simple and logical.^{1,2}

The Affinis stem is available in cemented and uncemented versions.

Advantages

- Adjustment for restoration of the centre of rotation¹
- Simple instrumentation³
- Suitable for adaptation to post-traumatic malpositions¹

¹ Irlenbusch, U., et al., Prospective study of double-eccentric hemi shoulder arthroplasty in different aetiologies: midterm results. *Int Orthop*, 2011. 35(7): p. 1015-23.

² Irlenbusch, U., S. End, and M. Kilic, Differences in reconstruction of the anatomy with modern adjustable compared to second-generation shoulder prosthesis. *Int Orthop*, 2011. 35(5): p. 705-11.

³ Data on file. Mathys Ltd Bettlach

Surgeon design Team – **Affinis**

The Affinis total shoulder prosthesis and associated surgical technique provide anatomic reconstruction of the proximal humerus with a simple instrumentation.¹ This system was developed in cooperation with the following group of European shoulder specialists:

Affinis Total Shoulder

Prosthesis design and surgical technique



Dr Georges Blatter
Switzerland



Prof. Ulrich Irlenbusch
Germany



Prof. Wolfgang
Schwägerl
Austria



Dr Peter Zenz
Austria

Affinis Glenoid vitamys

Prosthesis design and surgical technique



Prof. Ulrich Irlenbusch
Germany



Dr Thierry Joudet
France



Dr Georges Kohut
Switzerland



Dr Richard Nyffeler
Switzerland

¹ Data on file. Mathys Ltd Bettlach

1. Indications and contraindications

Indications

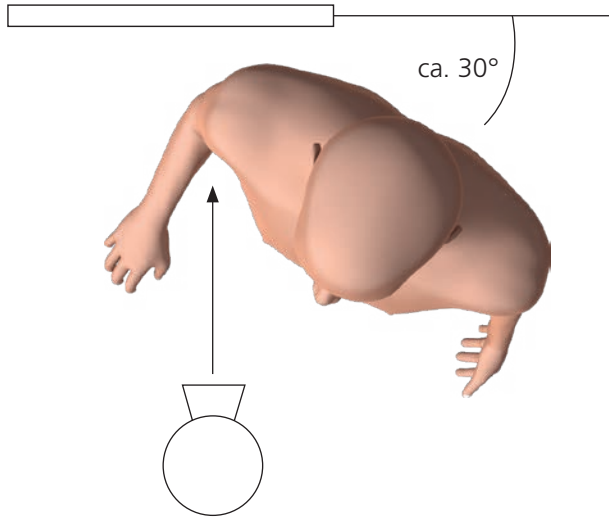
- Primary osteoarthritis
- Secondary osteoarthritis:
 - Posttraumatic osteoarthritis
 - Cuff tear arthropathy (Hamada grade III or IV) with well centred humeral head in younger patients
 - Metabolic joint destruction
- Rheumatoid arthritis
- Fracture sequelae
- Avascular necrosis of the humeral head

Contraindications

- Severe soft tissue, nerve or vessel insufficiency that endangers the function and long-term stability of the implant
- Bone loss or insufficient bone substance which cannot provide adequate support or fixation for the implant
- Local, regional or systemic infection
- Hypersensitivity to materials used

For further information, please refer to the instructions for use or ask your Mathys representative.

2. Preoperative planning



It is strongly advised to perform preoperative planning to determine the adequate implant sizes and position.

Digital and transparent templates of the implants are available in the usual scale of 1.10:1 for preoperative determination of the implant size (for details see chapter 7).

The following imaging studies of the affected shoulder are recommended:

- Anterior-Posterior (a. p.) X-ray centred on the joint cavity
- Axial X-ray
- CT scan or MRI

The recommended orientation is the true a. p. view.



If very dense, sclerotic bone is expected, consider the use of a stemless anatomic implant.

3. Surgical technique



Fig. 1

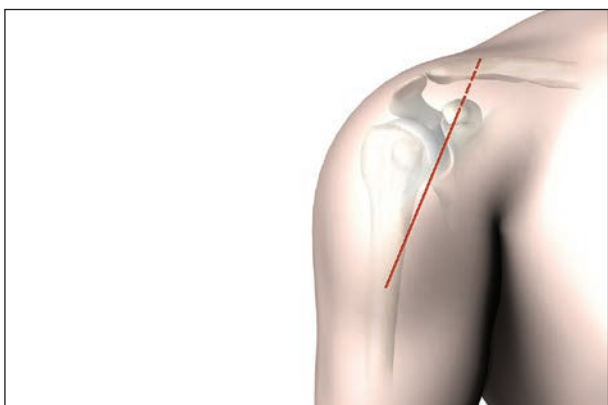


Fig. 2

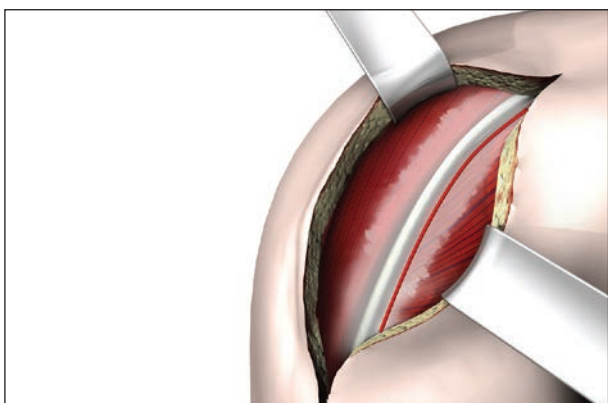


Fig. 3

3.1 Positioning

The ideal position of the patient is in a half-sitting position (beach-chair position), with the shoulder that is to be operated upon projecting over the operating table. Make sure that the medial border of the scapula is still supported by the table.

It is important to be able to adduct the arm in extension.

3.2 Approach

In this surgical technique only the deltopectoral approach is described.

The standard instrumentation for humeral head resection is for the deltopectoral approach. Optional instruments for the lateral approach are also available.

The deltopectoral skin incision should be made from the tip of the coracoid process, along the anterior edge of the deltoid muscle, to the insertion on the shaft of the humerus. If necessary, the skin incision can be extended to the lateral third of the clavicle (as indicated by the broken line).

Other approaches are possible at the surgeon's discretion.

The lateral skin flap is mobilised and the fascia is incised over the cephalic vein. This vein is usually retracted laterally, together with the deltoid muscle.

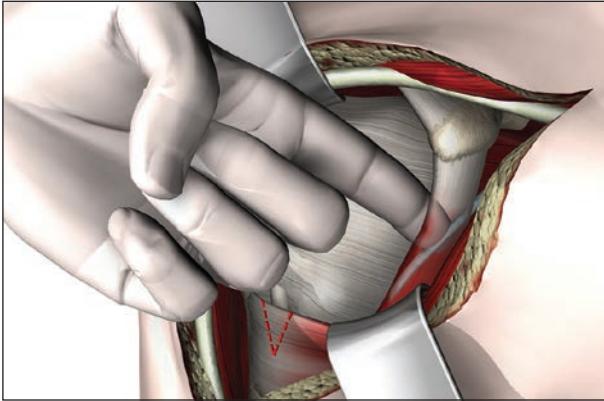


Fig. 4

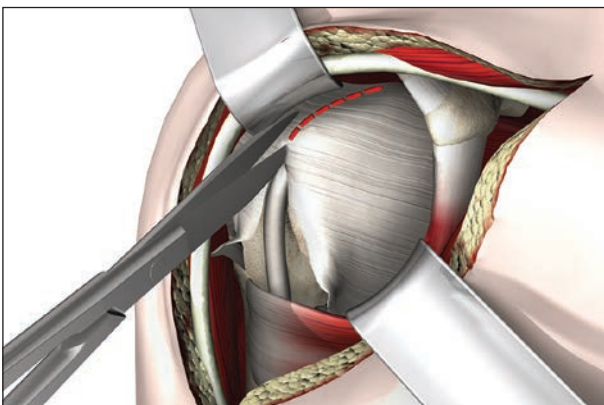


Fig. 5

This is followed by the vertical incision of the clavicular fascia.

After mobilisation of the coracobrachial tendon group in a medial direction, the musculocutaneous nerve is palpated posteromedial to the tendons. The nerve should be held to the side with the tendons.

For better exposure, the insertion of the pectoralis major muscle can be incised close to the humerus (for a distance of approx. 2 cm). Marking the most proximal point of its insertion beforehand will facilitate its use as a reference point for later reattachment or repair.

Additionally, the coracoacromial ligament can be incised.

Split the rotator cuff in the interval up to the base of the coracoid process.

The biceps tendon may be tenotomised and/or tenodesed on the proximal shaft (sulcus area). The intra-articular stump is resected.

After that, the axillary nerve can be palpated at the anterior and lower side of the subscapularis.

Identification can be difficult in the case of revisions, older fractures or adhesions.

The axillary nerve must be protected throughout the entire operation.

The subscapularis tendon is tenotomised approximately 1 cm from its insertion and is marked with stay sutures. In shoulders with contracted musculature, the tendon and muscle can be released distally when the joint capsule is released from the humerus (calcar).

Good exposure of the humeral head can be reached through antero-superior dislocation by externally rotating the extended and adducted limb.

Make sure that the humerus is displaced cranially during the next step to avoid traction injury of the brachial plexus.



Fig. 6



Fig. 7

3.3 Humeral head resection

Open the medullary cavity using the Awl at the highest point of the humeral head, centred and parallel on the shaft axis.

Insert the Medullary Reamer 6 using the Handle. Ream the intramedullary cavity beginning with the 6 mm Medullary Reamer and continue with 9 and 12 mm Medullary Reamers depending on the diameter of the cavity.

Leave the final Medullary Reamer in place and remove the Handle.

The resection instruments differ depending upon the approach you are using. If you are performing a delto-pectoral or lateral approach, refer to the appropriate section of this surgical technique guide.

3.3.1 Deltopectoral approach

Assemble the resection guide for the right or left side. Use the 130° angled Glider Resection Guide component.

The final assembly consists of the following components:

No.	Item no.	Description
1	502.06.01.05.0	Affinis cutting block
2	502.06.01.06.0	Affinis screw for resection guide
3	60.02.0002	Affinis holder for resection guide
4	502.06.01.03.0	Affinis glider for resection guide
5	61.34.0210	Affinis Alignment Rod, Gen 2



Fig. 8

Place the resection guide on the Medullary Reamer. Place a Kirschner Wire into the hole corresponding to the desired retroversion as needed. Adjust the desired retroversion by aligning the Alignment Rod or the Kirschner Wire to the forearm.

The square sliding post of the Holder for Resection Guide indicates 0° of retroversion.

Use the Stylus to fine-tune the retroversion and resection height according to the anatomical conditions. The Alignment Rod locks the resection guide to the Medullary Reamer.



Fig. 9

Predrill 3.2 mm pinholes through at least two distal holes of the Cutting Block. Insert two 3.2 mm pins through the predrilled holes. Alternatively, directly insert two 3.2 mm drill pins.

In certain anatomic situations, interference between the Pins and Medullary Reamer rod cannot be avoided. In this situation, remove the Medullary Reamer before fully inserting the Pins.

Loosen the Screw for Resection Guide and the Alignment Rod and remove the assembly including the Medullary Reamer. Leave the Cutting Block in place.

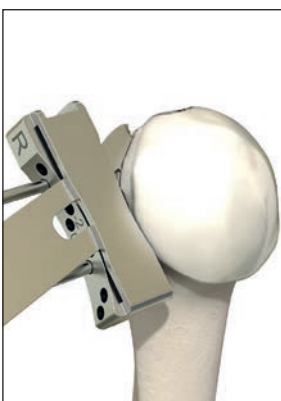


Fig. 10



Fig. 11

Use the Stylus to recheck the resection height and the retroversion.

Resect the humeral head through the slot of the Cutting Block with a sawblade of 0.89 mm thickness.

If a re-resection is necessary, transfer the Cutting Block onto the pins using the proximal holes (2 mm re-resection).



Fig. 12

3.3.2 Lateral approach

Assemble the resection guide marked «lateral».

Use the 130° angled Glider Resection Guide Lateral component.

The final assembly consists of the following components:

No.	Item no.	Description
1	61.34.0252	Cutting Block lateral, Gen 2
2	502.06.01.06.0	Affinis screw for resection guide
3	61.34.0253	Holder for Resection Guide lateral, Gen 2
4	61.34.0254	Glider for Resection Guide lat 130°, Gen 2
5	61.34.0210	Affinis Alignment Rod, Gen 2



Fig. 13

Place the resection guide on the Medullary Reamer. Place a Kirschner Wire into the hole corresponding to the desired retroversion as needed. Adjust the desired retroversion by aligning the Alignment Rod or the Kirschner Wire to the forearm.

Use the Stylus to fine-tune the retroversion and resection height according to the anatomical conditions.

The Alignment Rod locks the resection guide to the Medullary Reamer.

Predrill 3.2 mm pinholes through at least two distal holes of the Cutting Block. Insert two 3.2 mm pins through the predrilled holes. Alternatively, directly insert two 3.2 mm drill pins.



Fig. 14

Loosen the Screw for Resection Guide and the Alignment Rod and remove the assembly including the Medullary Reamer. Leave the Cutting Block in place.



Fig. 15

Use the Stylus to recheck the resection height and the retroversion.



Fig. 16

Resect the humeral head through the slot of the Cutting Block with a sawblade of 0.89 mm thickness.



Fig. 17

If a re-resection is necessary, transfer the Cutting Block onto the pins using the proximal holes (2 mm re-resection).

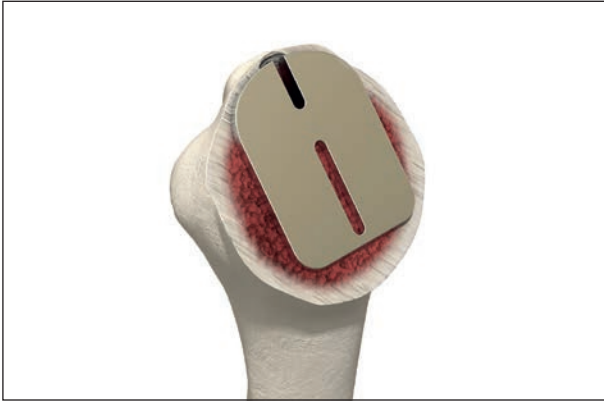


Fig. 18



Fig. 19



Fig. 20

3.4 Humeral preparation

Insert the Retrotorsion Guide and use the lateral and medial slots to mark the correct alignment of the Rasp.

Screw the Positioner firmly into the Rasp. Screw the Alignment Rod into the Positioner. Align the Alignment Rod parallel to the patient's forearm to achieve 30° of retroversion. Ream the medullary cavity step-by-step (beginning with the smallest size Rasp).

Make sure the Positioner is correctly placed and fixed firmly to the Rasp during impaction.

The correct depth has been reached when the open face of the rasp is in line with the resection plane.

Stem dimensions:

Rasp size	Uncemented Stem	Cemented Stem
6.0	6.0 mm	6.0 mm
7.5	7.5 mm	
9.0	9.0 mm	9.0 mm
10.5	10.5 mm	
12.0	12.0 mm	12.0 mm
13.5	13.5 mm	
15.0	15.0 mm	15.0 mm



Fig. 21



Remove the Positioner but leave the Rasp in the humerus.

If the resection and rasp plane do not concur, use the saw to correct the osteotomy plane with the rasp in place. If a hemiprosthesis is desired, proceed directly to chapter 3.6.



Fig. 22

Place an appropriately sized Cover Disc on the rasp to protect the resected humerus. Proceed with preparation and placement of a glenoid implant.

Instrument set	 Affinis Glenoid vitamys (62.34.0050–62.34.0053)	 Affinis PE glenoid (102.07.02.31.0–102.07.02.43.0)
Affinis Glenoid vitamys Instruments (61.34.0146A)	OK	OK
Affinis Glenoid Instruments (60.01.0003A)	Forbidden	OK

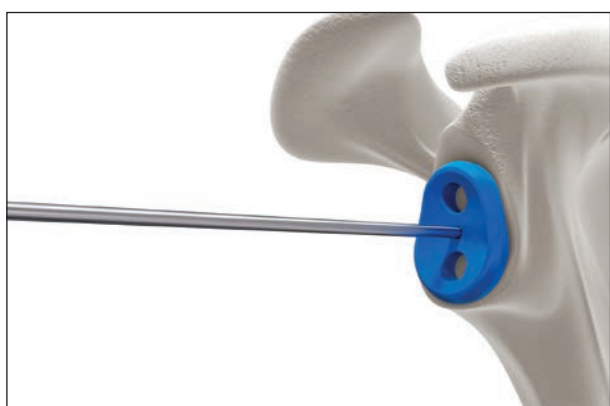


Fig. 23

3.5 Glenoid placement

Depending upon the instrumentation and implants available in your region, Affinis Glenoid implants can be implanted with different instrument sets.

Affinis Glenoid vitamys Instrumentation Set can be used for implantation of both Affinis Glenoid vitamys or Affinis PE glenoid. These instruments are used to describe the standard technique below.

Affinis Glenoid Instrumentation Set can only be used for implantation of Affinis PE glenoid. These instruments are used to describe the optional technique below where it differs from the standard technique.

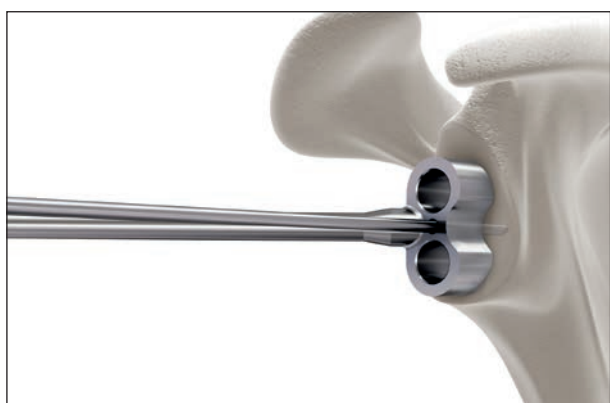


Fig. 24

The size of the implant may be determined with the Glenoid vitamys Templates.

The template is not meant for correct aiming and insertion of the Kirschner Wire, but for marking of the entry point in consideration of the implant size.

Insert the Kirschner Wire 2.5/150 centrally into the face of the glenoid or at your marked point. For guidance, use the drill guide in the correct inclination and version.

The Kirschner Wire serves as a guide for the Reamer and Drill Guide.

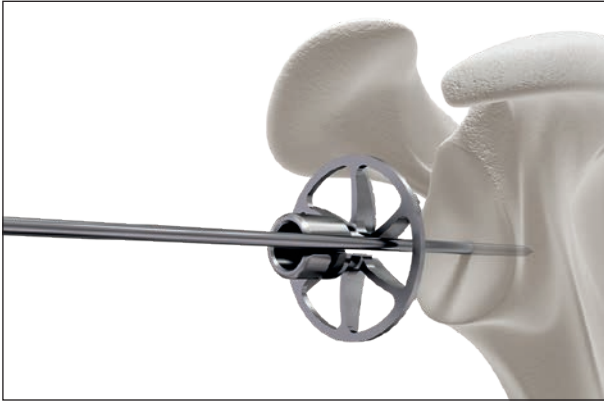


Fig. 25



Fig. 26

Modular Reamers – Affinis Glenoid vitamys Instruments

Choose the Reamer size that corresponds to the size of the planned Glenoid implant. Sizes are listed in the table below.

Affinis Glenoid reamer size	Affinis Glenoid implant size
1	1
2	2
3	3
4	4

The modularity of the reamer allows inserting it even in very narrow situations without removing or bending the Kirschner Wire.

Insert the reamer eccentrically over the Kirschner Wire and centre it on the face of the glenoid.

Slide the Handle Glenoid Reamer over the Kirschner Wire and connect it with the reamer. Ream the glenoid. Stay in the subchondral bone. It is recommended to avoid reaming into the cancellous bone.

While reaming, irrigate with saline solution to prevent heat build-up, which may lead to thermal damage of the surrounding bone.

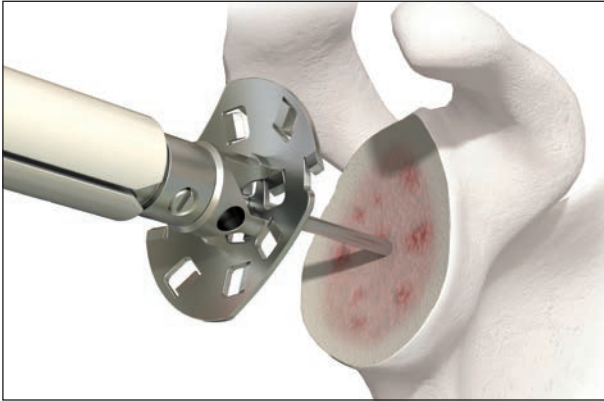


Fig. 27



Fig. 28



Fig. 29

Monoblock Reamers – Affinis Glenoid Instruments

Choose the Reamer size that corresponds to the size of the planned Glenoid implant. Sizes are listed in the table below.

Glenoid Reamer Ø	Glenoid size
32 mm	1
36 mm	2
44 mm	3 + 4

Slide the Reamer over the Kirschner Wire. Ream the glenoid. Stay in the subchondral bone. It is recommended to avoid reaming into the cancellous bone.

While reaming, irrigate with saline solution to prevent heat build-up, which may lead to thermal damage of the surrounding bone.

Position the Drill Guide over the Kirschner Wire and correctly align the guide. The drill guide must be aligned in the longitudinal axis of the glenoid.

Use the Drill Bit to drill the first peg hole.

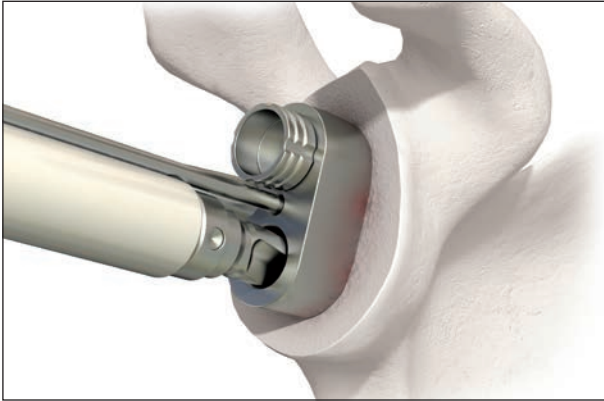


Fig. 30

Remove the drill bit. Fix the drill guide with the fixation peg.
Use the drill bit to drill the second peg hole.

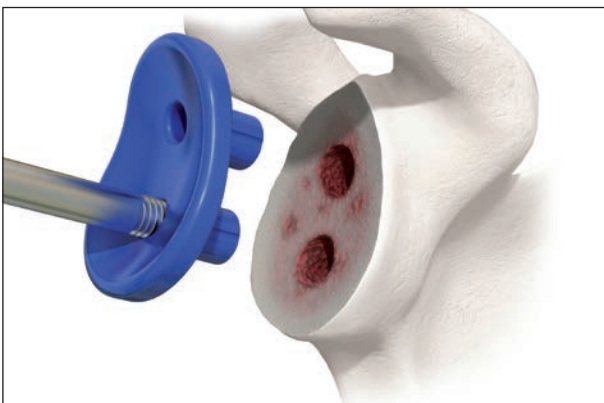



Fig. 31

Remove all instruments.
Select and insert the appropriate Glenoid Trial. The trial can be held using the Alignment Rod, Gen2. Trial reduction may be performed once the humeral head reconstruction is complete.


The tables on the right indicate the radius mismatch of the Affinis Glenoids vitamys/PE with the Affinis Heads. The light blue areas show the best fitting pairings. The non-fitting pairings are marked red (head radius greater than glenoid radius).

Mismatch table for the Affinis Head with the Affinis Glenoid vitamys



Glenoid size	Affinis Head size (Bionit / CoCr)							
	39	41	43	45	47	49	51	53
1								
2								
3								
4								
Colour code				OK	congruent		forbidden	

Mismatch table for the Affinis Head with the Affinis PE glenoid



Glenoid size	Affinis Head size (Bionit / CoCr)							
	39	41	43	45	47	49	51	53
1								
2								
3								
4								
Colour code				OK	congruent		forbidden	

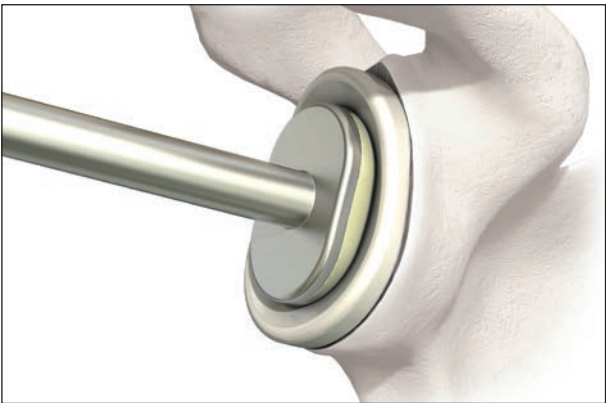


Fig. 32

Remove any Glenoid Trials. Fill the drilled peg holes with bone cement and put a small amount of cement on the backside of the glenoid. Insert the cemented Affinis Glenoid vitamys or Affinis PE glenoid. Carefully use the Glenoid Impactor to drive the pegs into the peg holes to achieve a thin continuous cement mantle on the backside of the implant. Carefully remove the surplus cement. Press the impactor on the cemented implant surface until the cement is cured.



Fig. 33

3.6 Humeral head reconstruction

Determine the head size by making a comparative measurement of the resected humeral head using the trial heads. If the resected head size lies between two implant head sizes, the smaller size is recommended.



It is imperative to review the mismatch table for Affinis Heads with Affinis Glenoids in the previous chapter of this surgical technique.

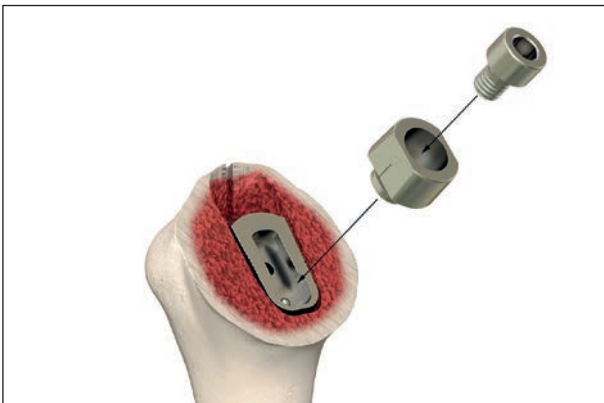


Fig. 34

Place the rasp cone and rasp screw into the rasp.

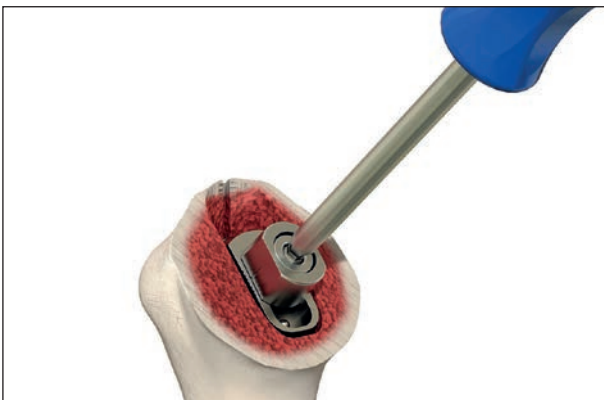


Fig. 35

Lightly tighten the screw with the Screwdriver 5.0 so that the cone can still translate within the groove of the rasp.



Fig. 36

Place the trial head onto the cone of the rasp. With the Screwdriver 5.0 and Affinis push-on sleeve for trial head turn the head and translate the cone of the rasp to find the appropriate position. Remove the push-on sleeve and lock the cone with the screwdriver 5.0. Perform a trial reduction, check the mobility as well as the articular tension, and correct both the size and the position of the head, if the result is not satisfactory.



Fig. 37

Read and make note of the eccentric position of the head relative to the lateral fin of the rasp. Use the head extractor to remove the trial head and the Positioner to remove the rasp.

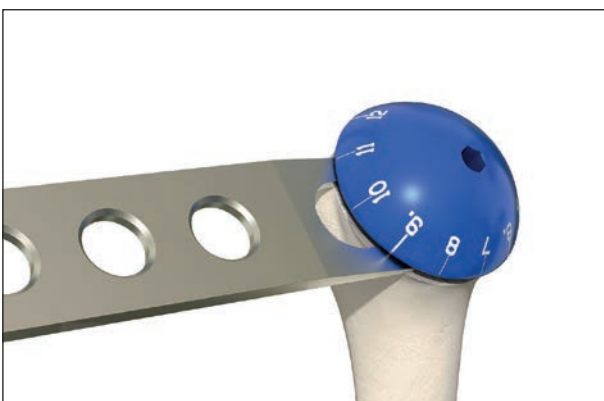


Fig. 38

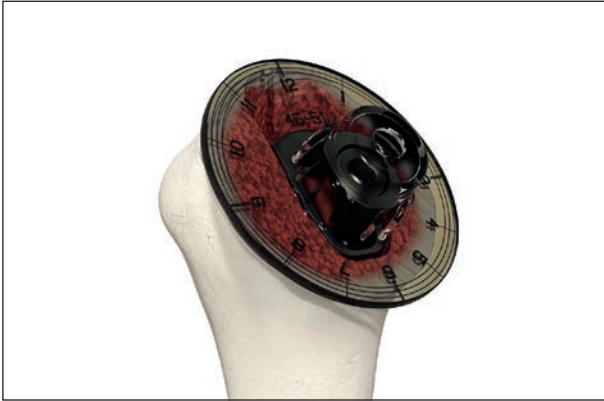


Fig. 39

Optional technique

Place the appropriate head adjusting screen, size 39–43 or 45–51 onto the cone to determine the anatomical position of the head. Turning the adjusting screen and pushing the cone in a mediolateral direction can predetermine the medial and posterior offset and the optimal head size.

Lock the cone with the Screwdriver 5.0.



Fig. 40

After trial reduction, make a note of the following information:

- Head size (39–53)
- Eccentric position of the trial head (1–12) relative to the lateral fin of the rasp
- Cone position relative to the stem of the rasp, (-3 to +3).

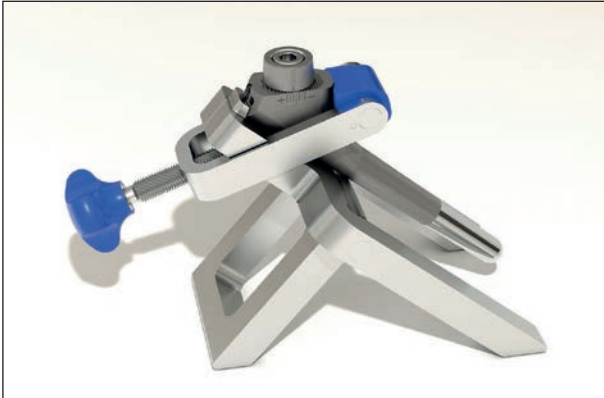


Fig. 41

3.7 Humeral implant assembly and implantation

Insert the final Affinis stem implant into the Assembly Device.

Tighten the prosthesis into the assembly device by turning the Screw for Assembly Device.

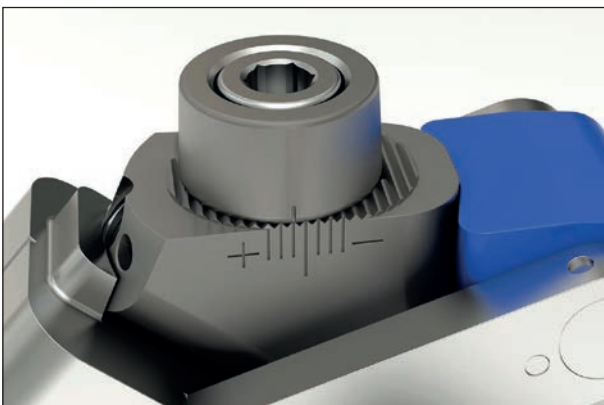


Fig. 42

Place the stem cone to the previously noted rasp-cone position.



Fig. 43

Use the Torque wrench to tighten the cone/stem connection. Tighten until the pointer of the Torque wrench moves to the outside edge of the wrench handle.



It is imperative to review the mismatch table for Affinis Heads with Affinis Glenoids in the previous chapter of this surgical technique.



Fig. 44

Place the final Affinis Head implant onto the cone of the stem in accordance with the previously noted position.

Align the appropriate eccentric marking with the lateral fin of the implant and the corresponding marking on the assembly device.



Make sure that both the cone of the stem and the recess of the head are absolutely clean and dry.



Fig. 45

Use the head impactor to connect the head with the cone/stem applying one blow in the direction of the cone axis.



Fig. 46

If a cemented stem is chosen, the use of extensive rinsing or Jet Lavage followed by insertion of a cement restrictor is recommended. Introduce bone cement into the medullary cavity in a retrograde manner. Place the implant into the bone cavity and impact it with the head impactor. The introduction of the prosthesis is performed without the Positioner. Carefully remove the surplus cement.

Perform the reduction and verify the function. Reconstruct the rotator cuff, soft tissues, and the wound.

4. Revision



Fig. 47

4.1 Humeral implant removal

Use the head extractor to remove the prosthesis head. Axial hammer blows along the handle of the extractor will separate the prosthesis head from the stem.



The head extractor must not be used as a lever.



Fig. 48

Position the counter-wrench to secure the implant against rotation. Insert the Torque wrench and loosen the screw and cone.



The use of the counter-wrench is mandatory.



Fig. 49

Screw the Affinis stem adapter into the prosthesis stem. Use the Slide Hammer to remove the stem. Extract the stem parallel to the axis of the humeral shaft.

For revision options please contact your local Mathys representative.



Fig. 50

4.2 Glenoid removal

To remove the Affinis Glenoid, loosen the component with cutting instruments and extract it with a pair of pliers. In order to facilitate the loosening of the Glenoid, the process below may be used.

Align the appropriate Glenoid vitamys Template over the implanted glenoid component. Mark the centre of the glenoid pegs.

Starting with a 2.5 mm drill bit, drill out the centre of the implant pegs to a depth of 15 mm. Use progressively bigger drill bit sizes, up to a maximum diameter of 7.5 mm, to destroy the implant pegs.



Be vigilant to retrieve any implant debris, including both implant contrast markers at the medial tip of the implant pegs. There are 2 contrast markers per peg.

5. Implants



Affinis CoCr head

Item no.	Description (Ø/height/-)
102.02.00.13.0	Affinis CoCr head 39/13/1
102.02.00.14.0	Affinis CoCr head 41/14/1
102.02.00.15.0	Affinis CoCr head 43/15/2
102.02.00.16.0	Affinis CoCr head 45/16/2
102.02.00.17.0	Affinis CoCr head 47/17/3
102.02.00.18.0	Affinis CoCr head 49/18/3
102.02.00.19.0	Affinis CoCr head 51/19/4
102.02.00.20.0	Affinis CoCr head 53/20/4

Material: CoCrMo



Affinis stem, cemented

Item no.	Description (Ø)
102.00.00.06.0	Affinis stem 6 cem.
102.00.00.09.0	Affinis stem 9 cem.
102.00.00.12.0	Affinis stem 12 cem.
102.00.00.15.0	Affinis stem 15 cem.

Material: Ti6Al4V



Affinis stem, uncemented

Item no.	Description (Ø)
102.00.01.06.0	Affinis stem 6 uncem.
102.00.01.07.0	Affinis stem 7.5 uncem.
102.00.01.09.0	Affinis stem 9 uncem.
102.00.01.10.0	Affinis stem 10.5 uncem.
102.00.01.12.0	Affinis stem 12 uncem.
102.00.01.13.0	Affinis stem 13.5 uncem.
102.00.01.15.0	Affinis stem 15 uncem.

Material: Ti6Al4V



Affinis stem, cemented

Item no.	Description (Ø / length)
60.20.0009	Affinis stem 9/200 cem.
60.20.0012	Affinis stem 12/200 cem.

Material: Ti6Al4V



Affinis revision cone with screw

Item no.	Description
62.34.0031	Affinis revision cone with screw

Material: Ti6Al4V



Affinis Glenoid vitamys, cemented

Item no.	Description
62.34.0050	Affinis Glenoid vitamys 1 cem.
62.34.0051	Affinis Glenoid vitamys 2 cem.
62.34.0052	Affinis Glenoid vitamys 3 cem.
62.34.0053	Affinis Glenoid vitamys 4 cem.

Material: Vitamin E highly cross-linked polyethylene (VEPE) / FeCrNiMoMn



Affinis PE glenoid, cemented

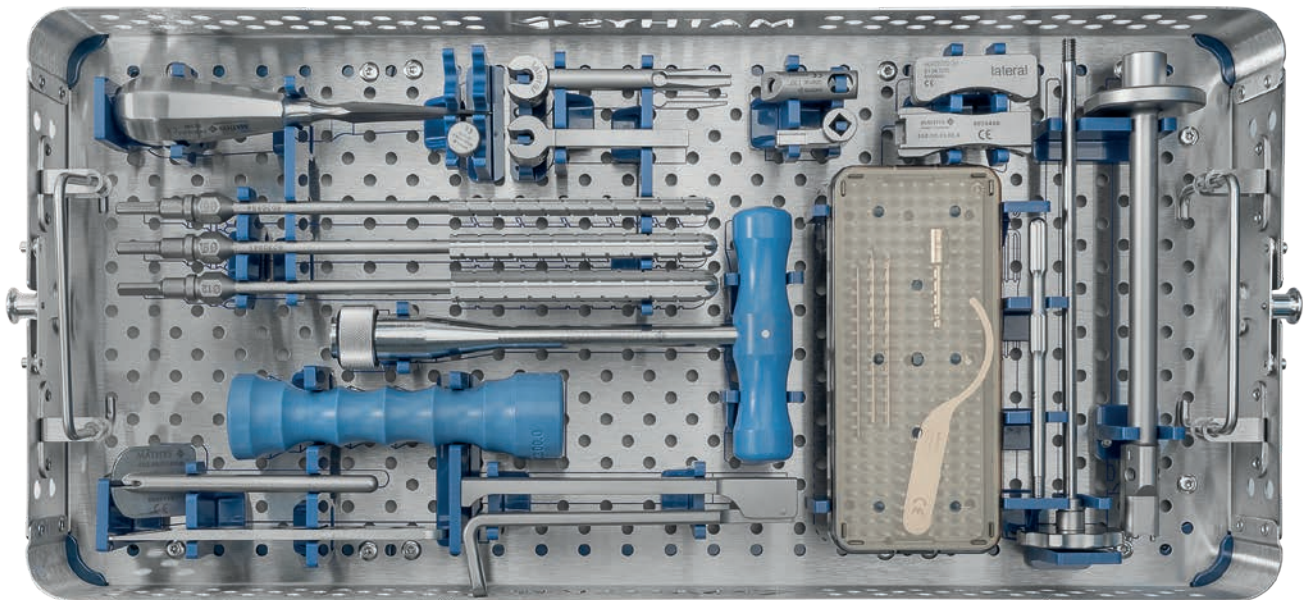
Item no.	Description
102.07.02.31.0	Affinis PE glenoid 1 cem.
102.07.02.35.0	Affinis PE glenoid 2 cem.
102.07.02.39.0	Affinis PE glenoid 3 cem.
102.07.02.43.0	Affinis PE glenoid 4 cem.

Material: UHMWPE / FeCrNiMoMn

6. Instruments

6.1 SMarT Instruments

Affinis Resection SMarT Instrument Set 61.34.0242A



Item no.	Description
61.34.0227	Affinis Lid
61.34.0237	Affinis Tray 1

Item no.	Description
504.99.02.01.0	Affinis Awl

Item no.	Description
5241.00.3	Handle

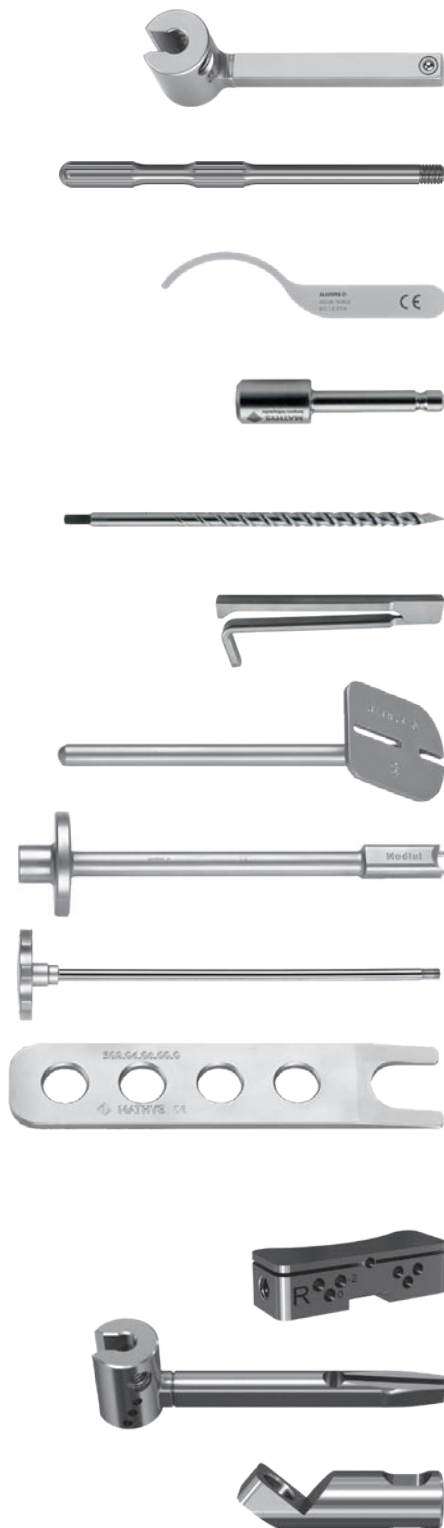
Item no.	Description
502.06.10.06.0	Affinis Medullary Reamer 6
502.06.10.09.0	Affinis Medullary Reamer 9
502.06.10.12.0	Affinis Medullary Reamer 12

Item no.	Description
502.06.01.03.0	Affinis Glider for Resection Guide

Item no.	Description
502.06.01.05.0	Affinis Cutting Block

Item no.	Description
502.06.01.06.0	Affinis Screw for Resection Guide





Item no.	Description
60.02.0002	Affinis Holder for Resection Guide

Item no.	Description
61.34.0210	Affinis Alignment Rod, Gen 2

Item no.	Description
502.06.16.00.0	Affinis Stylus

Item no.	Description
71.34.0787	Quick Coupling Square 2.25

Item no.	Description
71.34.0647	Drill Pin 3.2/89/2.25

Item no.	Description
3020-INNO	Pin Extractor

Item no.	Description
502.06.07.00.0	Affinis Retroversion Guide

Item no.	Description
502.06.02.11.1	Affinis Sleeve for Positioner

Item no.	Description
502.06.02.12.1	Affinis Rod for Positioner

Item no.	Description
502.06.08.00.0	Affinis head extractor

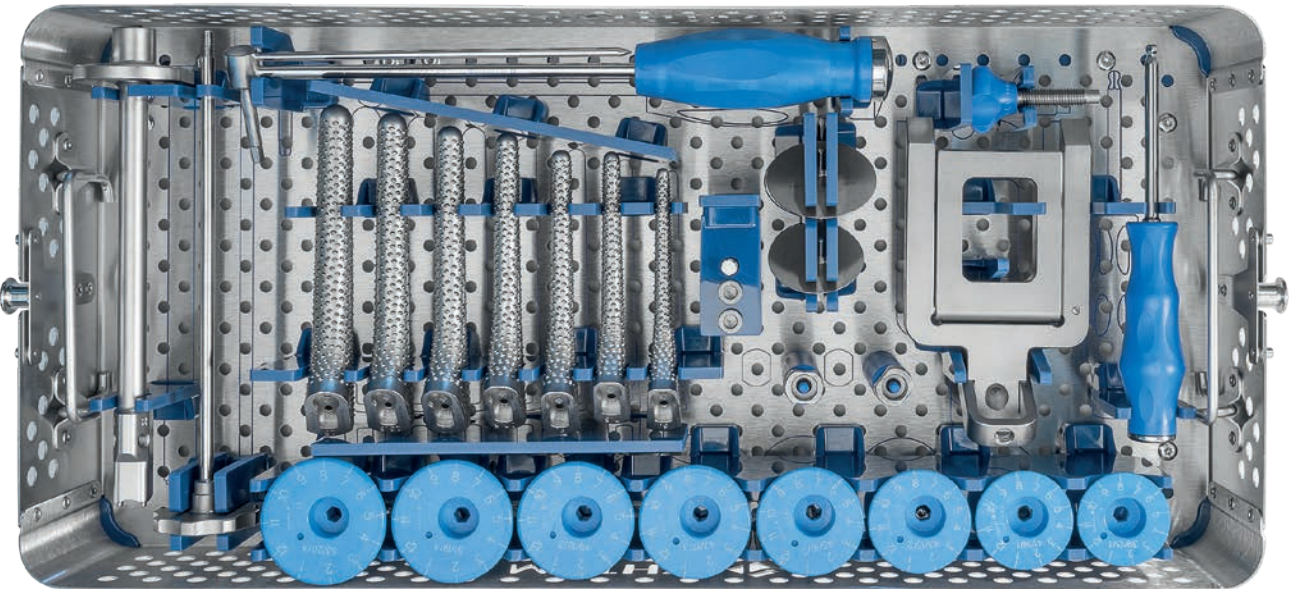
Optional Instruments

Item no.	Description
61.34.0252	Cutting Block lateral, Gen 2

Item no.	Description
61.34.0253	Holder for Resection Guide lateral, Gen 2

Item no.	Description
61.34.0254	Glider for Resection Guide lat 130°, Gen 2

Affinis Humeral Preparation SMarT Instrument Set 61.34.0243A



Item no.	Description
61.34.0227	Affinis Lid
61.34.0238	Affinis Tray 2



Item no.	Description
502.06.05.06.0	Affinis rasp 6
502.06.05.07.0	Affinis rasp 7.5
502.06.05.09.0	Affinis rasp 9
502.06.05.10.0	Affinis rasp 10.5
502.06.05.12.0	Affinis rasp 12
502.06.05.13.0	Affinis rasp 13.5
502.06.05.15.0	Affinis rasp 15



Item no.	Description
502.06.02.11.1	Affinis Sleeve for Positioner



Item no.	Description
502.06.02.12.1	Affinis Rod for Positioner



Item no.	Description
502.06.18.41.0	Affinis cover disc 41
502.06.18.47.0	Affinis cover disc 47



Item no.	Description
502.03.00.13.0	Affinis trial head 39/13/1
502.03.00.14.0	Affinis trial head 41/14/1
502.03.00.15.0	Affinis trial head 43/15/2
502.03.00.16.0	Affinis trial head 45/16/2
502.03.00.17.0	Affinis trial head 47/17/3
502.03.00.18.0	Affinis trial head 49/18/3
502.03.00.19.0	Affinis trial head 51/19/4
502.03.00.20.0	Affinis trial head 53/20/4

Item no.	Description
502.06.06.01.0	Affinis rasp cone

Item no.	Description
502.06.06.02.0	Affinis rasp screw

Item no.	Description
504.99.04.00.0	Affinis Screwdriver 5.0

Item no.	Description
60.02.0001	Affinis push-on sleeve f/trial head

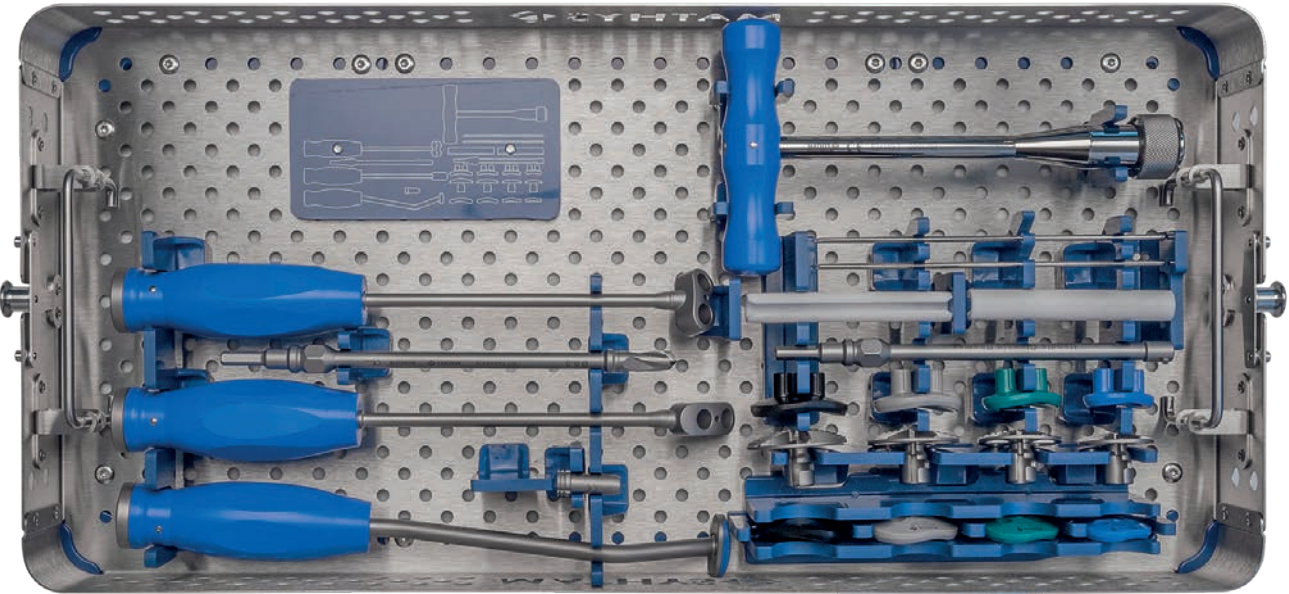
Item no.	Description
502.06.15.01.0	Affinis assembly device

Item no.	Description
504.09.01.08.0	Affinis screw for assembly device

Item no.	Description
6020.00	Torque wrench

Item no.	Description
502.06.03.00.0	Affinis head impactor

Affinis Glenoid vitamys Instrument Set 61.34.0146A



Item no.	Description
61.34.0149	Affinis Glenoid vitamys Lid
61.34.0148	Affinis Glenoid vitamys Tray

Item no.	Description
61.34.0161	Affinis Glenoid vitamys Template 1
61.34.0162	Affinis Glenoid vitamys Template 2
61.34.0163	Affinis Glenoid vitamys Template 3
61.34.0164	Affinis Glenoid vitamys Template 4

Item no.	Description
292.250	Kirschner wire 2.5/150

Item no.	Description
5241.00.3	Handle

Item no.	Description
61.34.0155	Affinis Holder Glenoid Reamer



Item no.	Description
61.34.0165	Affinis Glenoid vitamys Reamer 1
61.34.0166	Affinis Glenoid vitamys Reamer 2
61.34.0167	Affinis Glenoid vitamys Reamer 3
61.34.0168	Affinis Glenoid vitamys Reamer 4



Item no.	Description
61.34.0171	Affinis Glenoid vitamys Drill Guide DP



Item no.	Description
61.34.0172	Affinis Glenoid vitamys Drill Guide lat.



Item no.	Description
61.34.0169	Affinis Glenoid vitamys Drill Bit



Item no.	Description
61.34.0170	Affinis Glenoid vitamys Sleeve Handle



Item no.	Description
502.08.05.01.0	Affinis glenoid fixation peg



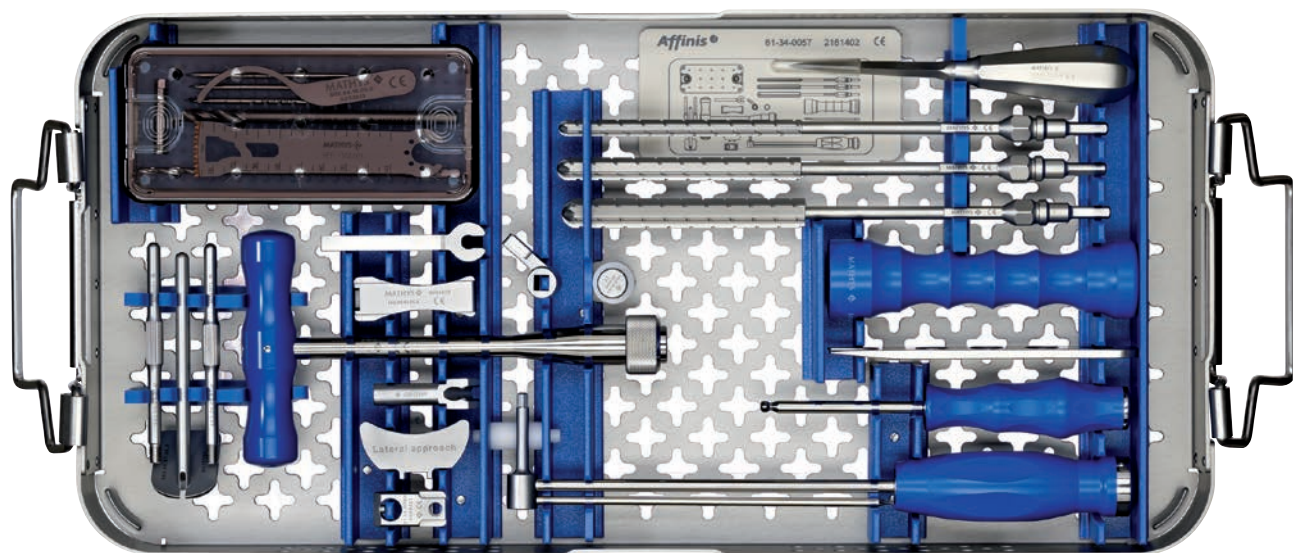
Item no.	Description
61.34.0173	Affinis Glenoid vitamys Trial 1
61.34.0174	Affinis Glenoid vitamys Trial 2
61.34.0175	Affinis Glenoid vitamys Trial 3
61.34.0176	Affinis Glenoid vitamys Trial 4



Item no.	Description
502.08.07.00.0	Affinis glenoid impactor

6.2 Standard Instruments

Affinis Basic Instrumentation 61.34.0076A



Item no.	Description
61.34.0058	Affinis basic instruments lid
61.34.0057	Affinis basic instruments tray
60.03.0005	Affinis small-instrument case

Item no.	Description
504.99.02.01.0	Affinis Awl

Item no.	Description
5241.00.3	Handle

Item no.	Description
502.06.10.06.0	Affinis Medullary Reamer 6
502.06.10.09.0	Affinis Medullary Reamer 9
502.06.10.12.0	Affinis Medullary Reamer 12

Item no.	Description
502.06.01.03.0	Affinis Glider for Resection Guide





Item no.	Description
502.06.01.05.0	Affinis Cutting Block

Item no.	Description
502.06.01.06.0	Affinis Screw for Resection Guide

Item no.	Description
60.02.0002	Affinis Holder for Resection Guide

Item no.	Description
502.06.02.07.0	Affinis alignment rod

Item no.	Description
502.06.16.00.0	Affinis Stylus

Item no.	Description
315.310	AO Drill bit 3.2

Item no.	Description
503.08.07.75.0	Affinis pin 3.2/75

Item no.	Description
502.06.07.00.0	Affinis Retroversion Guide

Item no.	Description
504.99.04.00.0	Affinis Screwdriver 5.0

Item no.	Description
60.02.0001	Affinis push-on sleeve f/trial head

Item no.	Description
6020.00	Torque wrench

Item no.	Description
502.06.03.00.0	Affinis head impactor

Item no.	Description
502.06.08.00.0	Affinis head extractor



Optional Instruments

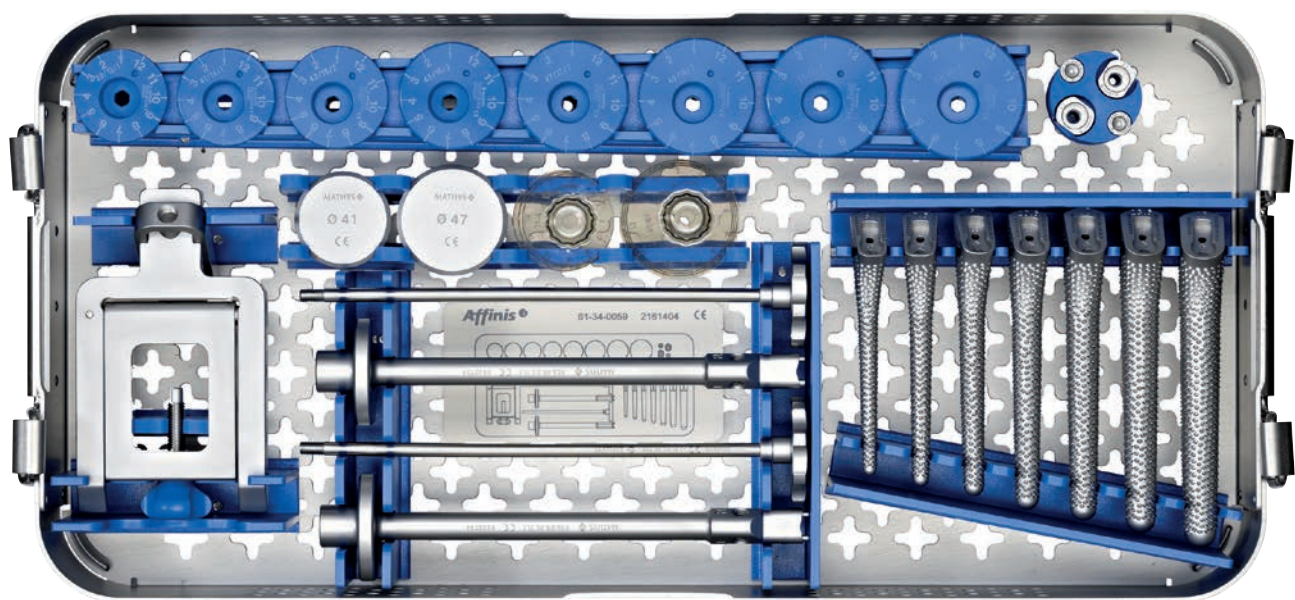
Item no.	Description
61.34.0041	Affinis medullary reamer 7.5 dia.
61.34.0042	Affinis medullary reamer 10.5 dia.
61.34.0043	Affinis medullary reamer 13.5 dia.

Item no.	Description
61.34.0044	Holder for resection guide lateral

Item no.	Description
61.34.0045	Affinis cutting block lateral

Item no.	Description
61.34.0046	Glider resection guide lateral 130°

Affinis Instrumentation 61.34.0077A



Item no.	Description
61.34.0059	Affinis tray
61.34.0060	Affinis lid



Item no.	Description
502.06.05.06.0	Affinis rasp 6
502.06.05.07.0	Affinis rasp 7.5
502.06.05.09.0	Affinis rasp 9
502.06.05.10.0	Affinis rasp 10.5
502.06.05.12.0	Affinis rasp 12
502.06.05.13.0	Affinis rasp 13.5
502.06.05.15.0	Affinis rasp 15



Item no.	Description
502.06.02.11.1	Affinis Sleeve for Positioner



Item no.	Description
502.06.02.12.1	Affinis Rod for Positioner



Item no.	Description
502.06.18.41.0	Affinis cover disc 41
502.06.18.47.0	Affinis cover disc 47



Item no.	Description
502.03.00.13.0	Affinis trial head 39/13/1
502.03.00.14.0	Affinis trial head 41/14/1
502.03.00.15.0	Affinis trial head 43/15/2
502.03.00.16.0	Affinis trial head 45/16/2
502.03.00.17.0	Affinis trial head 47/17/3
502.03.00.18.0	Affinis trial head 49/18/3
502.03.00.19.0	Affinis trial head 51/19/4
502.03.00.20.0	Affinis trial head 53/20/4



Item no.	Description
502.06.06.01.0	Affinis rasp cone



Item no.	Description
502.06.06.02.0	Affinis rasp screw



Item no.	Description
502.06.15.01.0	Affinis assembly device



Item no.	Description
504.09.01.08.0	Affinis screw for assembly device



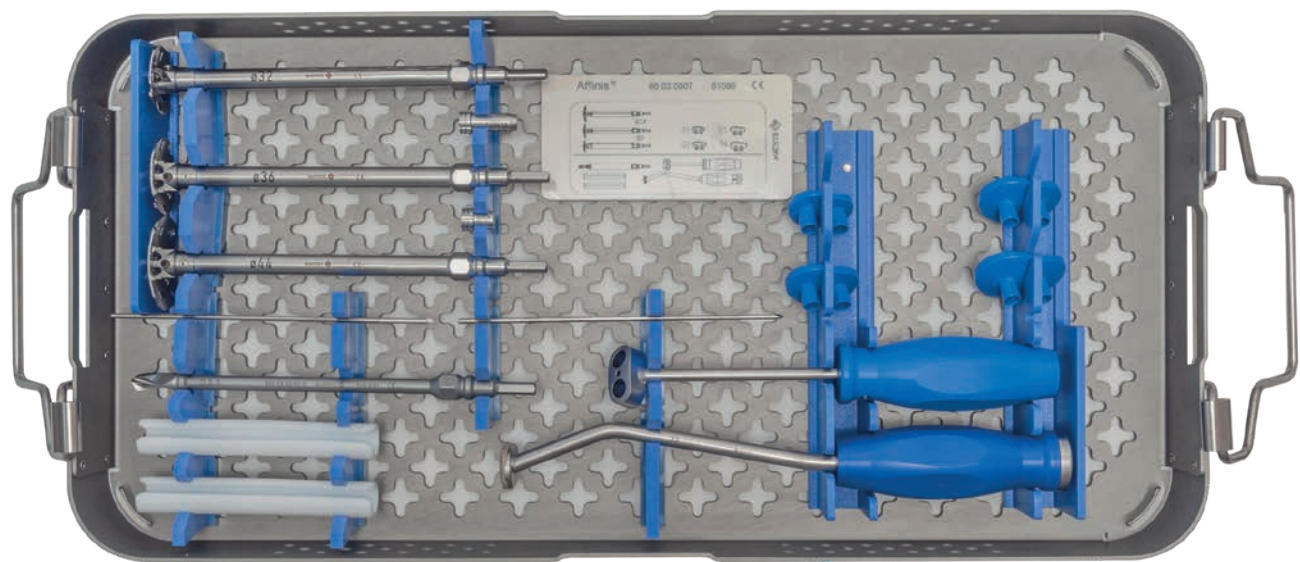
Optional Instruments

Item no.	Description
502.03.00.39.0	Affinis head adjusting screen 39–43
502.03.00.45.0	Affinis head adjusting screen 45–51



Item no.	Description
502.06.13.00.0	Affinis counter-wrench

Affinis Instrumentation for Glenoid 60.01.0003A



Item no.	Description
60.03.0007	Affinis tray f/glenoid
60.03.0008	Affinis lid f/glenoid

Item no.	Description
292.250	Kirschner wire 2.5/150

Item no.	Description
502.08.01.30.0	Affinis glenoid reamer 32
502.08.01.36.0	Affinis glenoid reamer 36
502.08.01.42.0	Affinis glenoid reamer 44

Item no.	Description
502.08.09.00.0	Affinis sleeve handle

Item no.	Description
502.08.10.00.0	Affinis glenoid drill guide

Item no.	Description
502.08.12.00.0	Affinis glenoid drill sleeve





Item no.	Description
502.08.02.00.0	Affinis glenoid drill bit



Item no.	Description
502.08.05.01.0	Affinis glenoid fixation peg



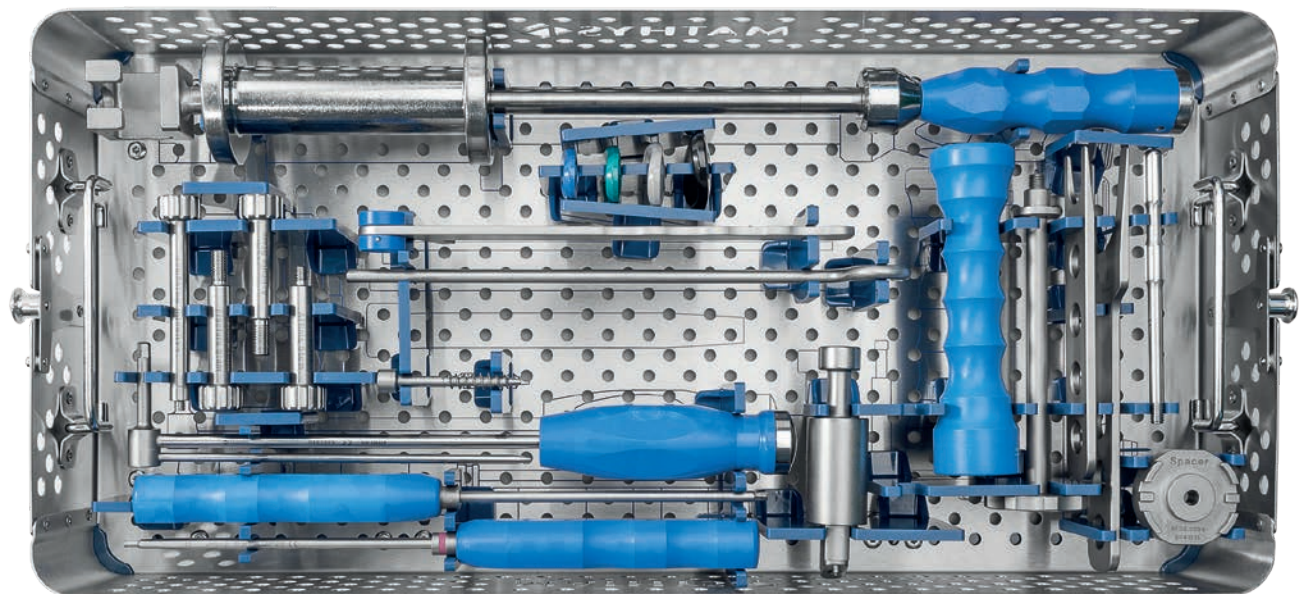
Item no.	Description
502.08.11.31.0	Affinis trial glenoid no. 1
502.08.11.35.0	Affinis trial glenoid no. 2
502.08.11.39.0	Affinis trial glenoid no. 3
502.08.11.43.0	Affinis trial glenoid no. 4



Item no.	Description
502.08.07.00.0	Affinis glenoid impactor

6.3 Revision Instruments

Affinis Revision Instrument Set 61.34.0250A



Item no.	Description
61.34.0239	Affinis Revision Tray
61.34.0227	Affinis Lid

Item no.	Description
502.06.08.00.0	Affinis head extractor

Item no.	Description
502.06.13.00.0	Affinis counter-wrench

Item no.	Description
6020.00	Torque wrench

Item no.	Description
61.34.0052	Affinis stem adapter

Item no.	Description
61.34.0050	Affinis slide hammer

Item no.	Description
61.34.0161	Affinis Glenoid vitamys Template 1
61.34.0162	Affinis Glenoid vitamys Template 2
61.34.0163	Affinis Glenoid vitamys Template 3
61.34.0164	Affinis Glenoid vitamys Template 4

6.4 Sawblades

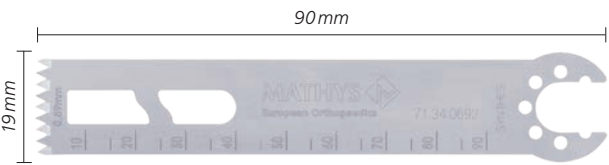
The following sawblades are compatible with the **Affinis** instruments:

Standard Sawblades (Single use)



Sawblade sterile 90x22x0.89

Item no.	Connection	Dimension
71.02.3111	DePuy Synthes	90x22x0.89

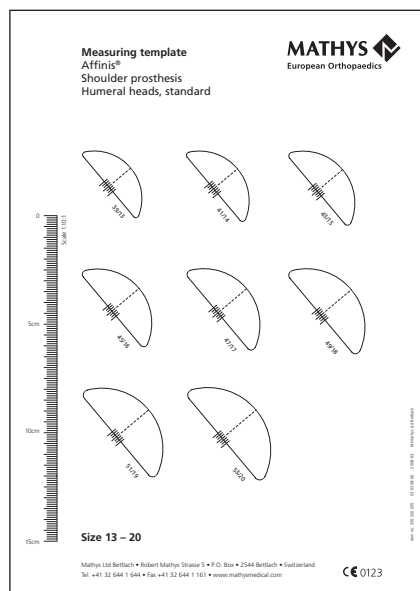


Sawblade sterile 90x19x0.89

Item no.	Connection	Dimension
71.34.0692	DePuy Synthes	90x19x0.89

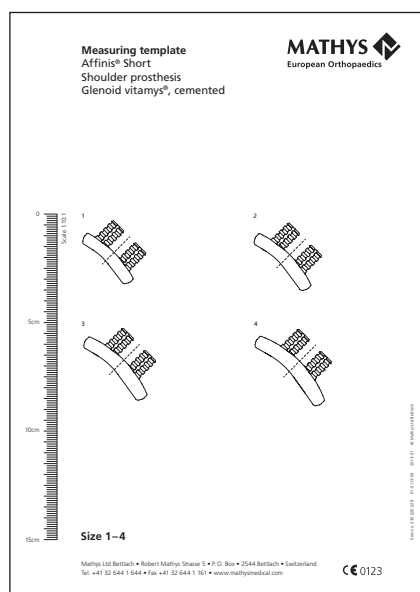
The shoulder sawblades are all sterile and individually packed.

7. Measuring template



The item code for the seven part Affinis shoulder prosthesis Measuring Template is 330.020.005.

Item no.	Description
330.020.005	Affinis shoulder prosthesis Template



The item code for the one part Affinis glenoid vitamys Measuring Template is 330.020.029.

Item no.	Description
330.020.029	Affinis glenoid vitamys Template

8. Symbols



Manufacturer



Caution

Australia	Mathys Orthopaedics Pty Ltd Artarmon, NSW 2064 Tel: +61 2 9417 9200 info.au@mathysmedical.com	Italy	Mathys Ortopedia S.r.l. 20141 Milan Tel: +39 02 4959 8085 info.it@mathysmedical.com
Austria	Mathys Orthopädie GmbH 2351 Wiener Neudorf Tel: +43 2236 860 999 info.at@mathysmedical.com	Japan	Mathys KK Tokyo 108-0075 Tel: +81 3 3474 6900 info.jp@mathysmedical.com
Belgium	Mathys Orthopaedics Belux N.V.-S.A. 3001 Leuven Tel: +32 16 38 81 20 info.be@mathysmedical.com	New Zealand	Mathys Ltd. Auckland Tel: +64 9 478 39 00 info.nz@mathysmedical.com
France	Mathys Orthopédie S.A.S 63360 Gerzat Tel: +33 4 73 23 95 95 info.fr@mathysmedical.com	Netherlands	Mathys Orthopaedics B.V. 3001 Leuven Tel: +31 88 1300 500 info.nl@mathysmedical.com
Germany	Mathys Orthopädie GmbH «Centre of Excellence Sales» Bochum 44809 Bochum Tel: +49 234 588 59 0 sales.de@mathysmedical.com «Centre of Excellence Ceramics» Mörsdorf 07646 Mörsdorf/Thür. Tel: +49 364 284 94 0 info.de@mathysmedical.com «Centre of Excellence Production» Hermsdorf 07629 Hermsdorf Tel: +49 364 284 94 110 info.de@mathysmedical.com	P. R. China	Mathys (Shanghai) Medical Device Trading Co., Ltd Shanghai, 200041 Tel: +86 21 6170 2655 info.cn@mathysmedical.com
		Switzerland	Mathys (Schweiz) GmbH 2544 Bettlach Tel: +41 32 644 1 458 info@mathysmedical.com
		United Kingdom	Mathys Orthopaedics Ltd Alton, Hampshire GU34 2QL Tel: +44 8450 580 938 info.uk@mathysmedical.com

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