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UNIC®
REVISION

SURGICAL TECHNIQUE

TABLE OF CONTENTS

Disclaimer

This document is intended to be read only by experienced orthopaedic surgeons and staff familiar with the application of shoulder arthroplasty, and by individuals related to or acknowledged by Evolutis company.

This publication is intended as the recommended procedure for using the Evolutis UNIC Shoulder System. It offers guidance only. Evolutis is the manufacturer of the device. As such and claiming no medical skill, Evolutis does not recommend a specific use of a product or a technique.

Each surgeon should consider the particular needs of the patient and make appropriate adjustments where necessary.

For any additional information related to the products, the indications and contra indications, the warnings and precautions of use, and the adverse effects, please refer to the INSTRUCTION FOR USE leaflet included in the packaging of implants. For further advice please contact your local representative.

Removal of UNIC® primary components

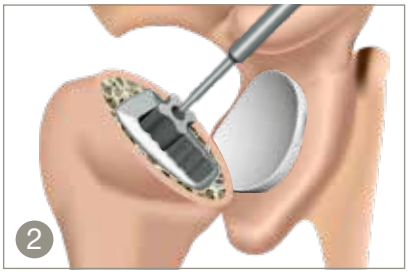
Humeral head removal:

Place the humeral head extractor between the head and the stem ❶

Do not lever.

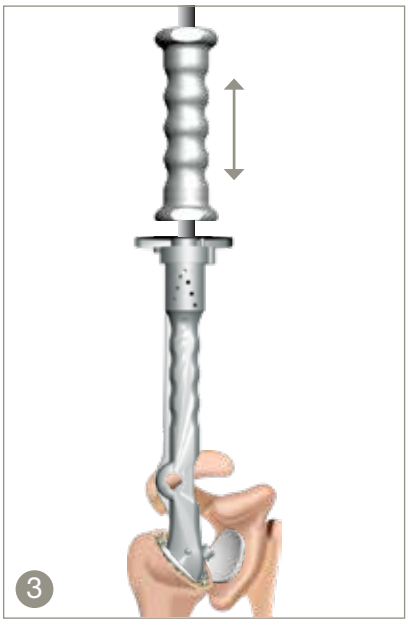
Impact the extractor so that the wedge moves into the space between the head and the stem.

Module extractor	E28 015
Broach and implant holder	E28 028
Slap hammer	H01 015
Humeral head extractor	E28 128
M6 impaction shaft	S01 026
Glenoid sphere extractor	E28 211



Removal of the connection modules:

Thread the module extractor through the hole in the module ❷, all the way until it comes into contact with the humeral stem. Continue the screwing motion until the module is pulled out of the stem.



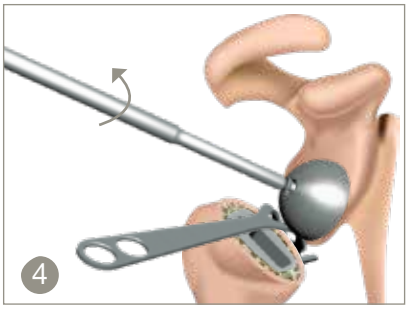
Removal of the humeral stem:

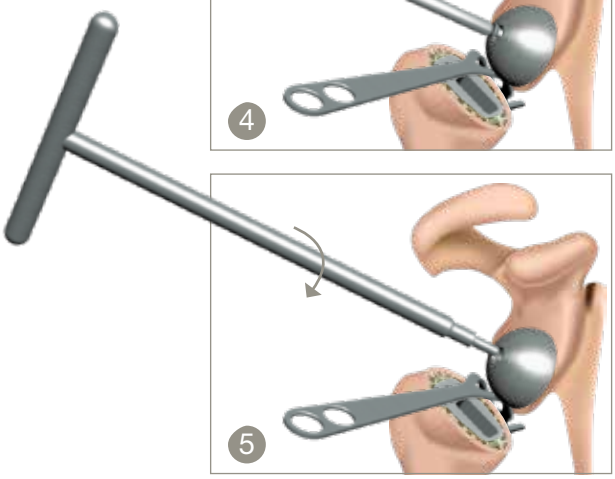
After having removed the connection module, place the broach and implant holder in the stem and lock it. The slap hammer can be screwed onto the stem holder and used to extract the stem ❸.

Removal of the glenoid sphere:

Unscrew the security screw of the glenoid sphere ❹.

Screw the glenoid sphere extractor into the glenoid sphere until it pulls out ❺.





WARNING

In cases of removal of a ceramic glenosphere use the specific extractor E28 214.

Implantation of a Revision Humeral stem

INFOS

Implantation of a revision stem requires use of the Reverse Shoulder set of instruments (E28 9105) plus the revision Shoulder set of instruments (E28 9102).

Size 0 revision broach	E28 R000
Size 1 revision broach	E28 R001
Size 2 revision broach	E28 R002
Size 3 revision broach	E28 R003
Size 4 revision broach	E28 R004
Broach and implant handle	E28 028
Securing fixation screw	E28 019
Distal targeting jig	E28 020
Crossbar	E28 023
M7 yellow locknut	S01 038
M6 T shaped locknut	S01 029
Large sleeve guide	H38 052
4.5mm - 132mm long drill guide	H38 060
4.5mm drill, length 195mm	H38 054
Locking pin depth gauge	H38 055
Screw holder	S01 011

The procedure is identical for a cementless HA coated humeral stem, and for a cemented shiny-polished humeral stem.

After removal of the implants previously in situ, place the 0 size revision broach on the broach and implant handle. Start broaching and incrementally increase broach size until correct medullary fill, stability and rotation are achieved ❶.

During broaching and when implanting the definitive stem, control of the retroversion can be made using the E28 007 orientation guide (see page 8 of Anatomic or Reverse UNIC primary surgical technique).

Implant the definitive stem chosen using the broach and implant handle.

When implanting a cemented humeral stem, introduce first a cement restrictor, then the bone cement with a syringe in a retrograde manner. Next, introduce the definitive stem until final seating, and leave still until the bone cement is fully set.

Distal locking of the locked revision stem:

Leave the stem holder on the stem.

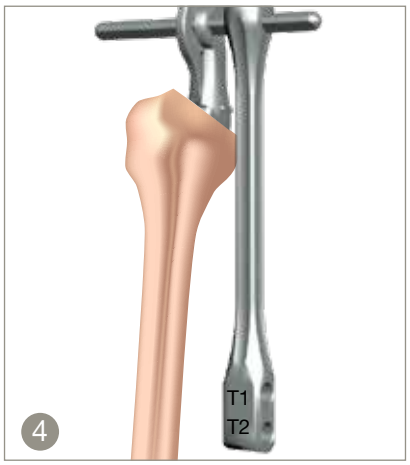
Stability can be augmented by using the fixation screw securing the handle and stem together. ❷ Attach the distal targeting jig on the crossbar.

Check orientation as follows ❸ :

- The distal jig is reversible.
- One way for stem sizes 1 and 2.
- The other way around for size 3 and 4.
- The size required should face laterally ❹.

WARNING

Size 0 cannot be distally fixed as the diameter is too narrow.



Slide the crossbar with jig into the handle as close to the humerus as possible.

Lock it with the yellow M7 locknut. ❺

Lock the distal jig onto the crossbar with the M6 locknut. Introduce the large sleeve guide into the most proximal hole of the distal jig and push it until it comes into contact with the humeral cortex ❻.

Slide the 4.5mm - 132mm long drill guide into the large sleeve guide. ❼ Mount the 4.5mm drill, length 195mm on a powertool and drill through both first and second cortex ❽. The graduations on the drill allow for instant reading of drill depth.

Remove the drill and drill guide.

Check the length of the locking pin with the depth gauge ❾.

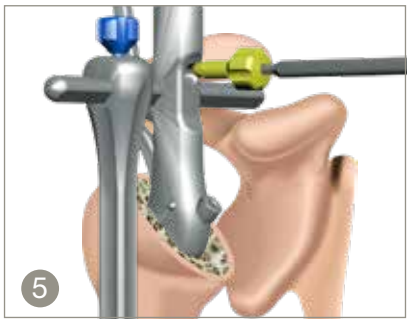
Select the appropriate length of locking pin.

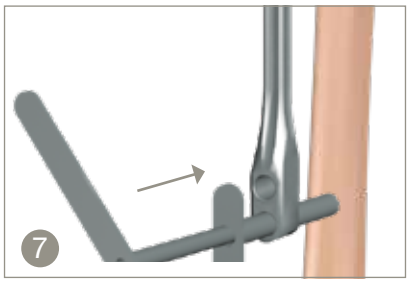
Put the screw holder onto the 3.5mm screwdriver.

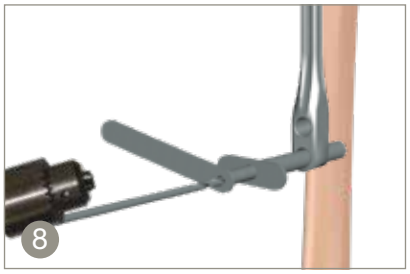
Place the hexagonal part of the screwdriver into the locking pin head, and screw the screw holder over the thread on the locking pin head. The locking pin is now held firmly by the screwdriver and holder.

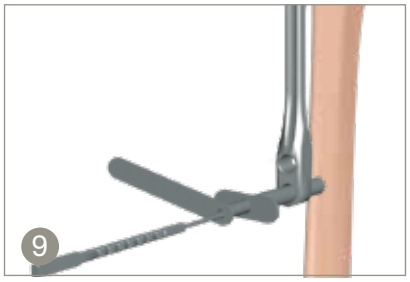
Slide both into the large sleeve guide previously left in place ❿.

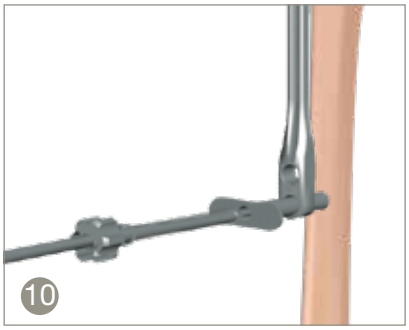
Screw the locking pin into the humerus but not tight, and then withdraw the screwdriver leaving the locking pin and holder in place. This gives more stability whilst preparing the most distal pin ⓫.

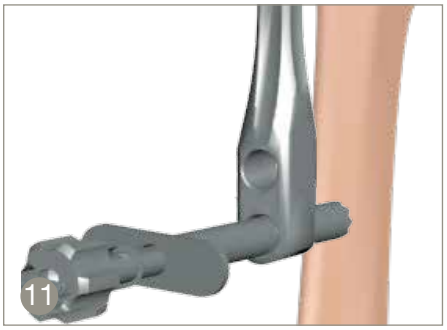


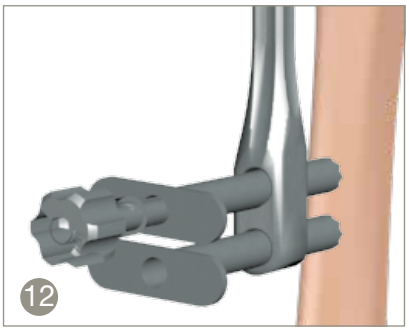




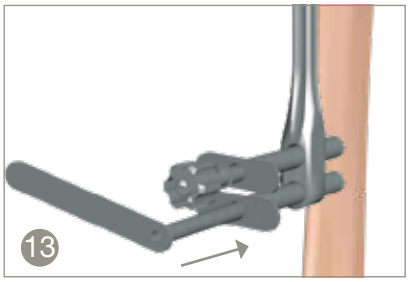








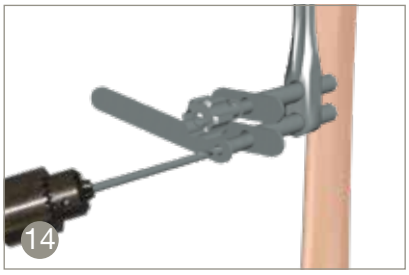
Introduce the 2nd large sleeve guide into the most distal hole of the distal jig and push it until it comes into contact with the humeral cortex [12].



Slide the 4.5mm - 132mm long drill guide into the large sleeve guide [13]. Mount the 4.5mm drill, length 195mm on a powertool and drill through both first and second cortex. The graduations on the drill allow for instant reading of drill depth [14].

Remove the drill and drill guide.

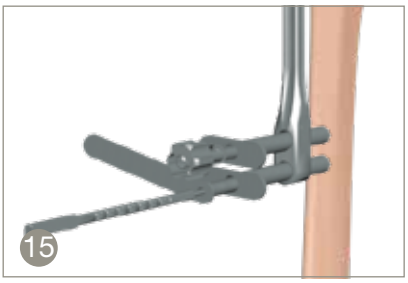
Check the length of the locking pin with the depth gauge [15].



Select the appropriate length locking pin. Mount it onto the screwdriver and holder and screw it into place until firm cortical contact [16].

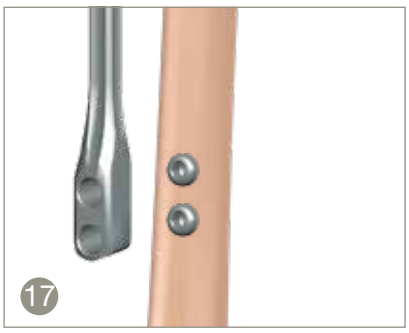
Remove the screwdriver and large sleeve guide.

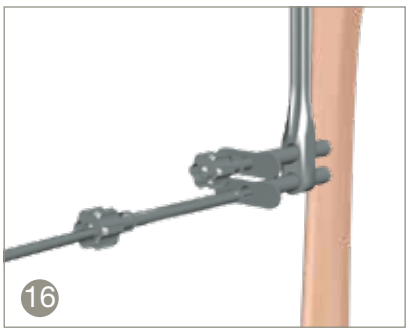
Remove the locking pin holder from the proximal large sleeve guide, taking care to unscrew it from the locking pin head.



Finish tightening the proximal locking pin up to firm cortical contact.

Remove the holder, large sleeve guide and the jig [17].





Glenoid revision

INFOS

Implantation of a revision glenoid requires use of the Reverse Shoulder set of instruments (E28 9105) plus the Glenoid revision set of instruments (E28 9103).

Glenoid guide pin sleeve	E28 236
Revision glenoid trial right	S01 026
Revision glenoid trial left	E28 238
M6 impaction shaft	E28 239
2.5mm pin length 150mm	E28 150
30mm glenoid reamer	E28 121
Conical drill for revision peg	E28 234
Back and forth reamer	E28 009
Reamer shaft	E28 120
T handle	E28 235
20mm trial revision peg	E28 242
25mm trial revision peg	E28 243
30mm trial revision peg	E28 244
Helical baseplate impactor	E28 210
Head impaction endpiece	E28 108
3.2mm, 35mm drill	S01 002
Flexible AO attachment	S01 033
3.2mm guide	E28 232
Depth gauge	6006-0071

Assemble the glenoid guide pin sleeve on the Revision glenoid trial of the appropriate side and onto the M6 impaction shaft 1.

Position the guide over the patients' glenoid 2.

Mount a 2.5mm pin length 150mm onto a powertool and drill it through the guide pin sleeve into the bone 3.

Remove the assembly leaving the guide pin in place 4.

If necessary the concavity of the glenoid can be reamed using the 30mm reamer.

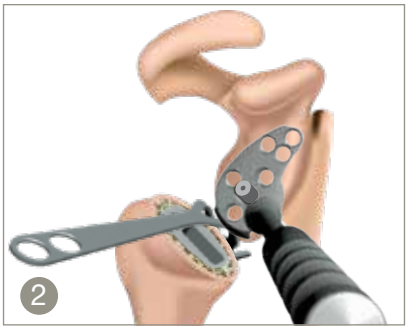
Mount the conical drill for revision peg onto a powertool.

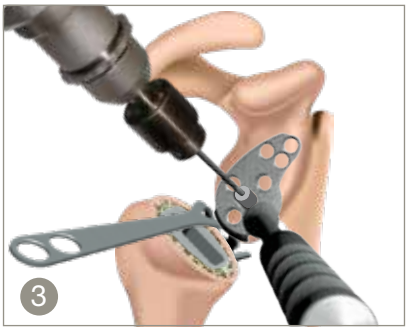
Place the conical drill over the guide pin and drill the glenoid 5.

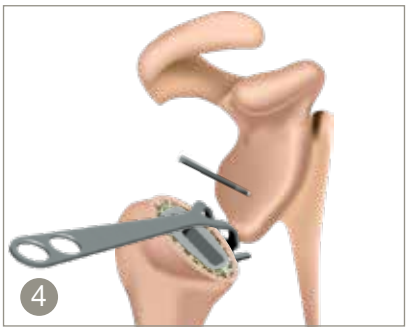
The drill can be either drilled to a depth of 20mm, 25mm or 30mm: 6

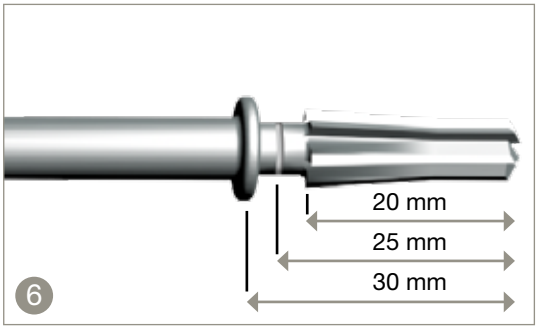
- 20mm stopping at the end of the flutes.
- 25mm stopping at the groove
- 30mm stopping at the stop.

Remove the conical drill and guide wire.



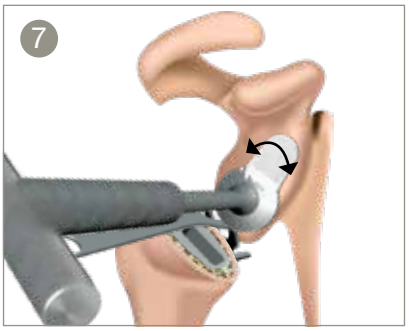






Introduce the back and forth reamer into the conically drilled hole, and ream the glenoid surface with alternative clockwise anticlockwise movements 7.

Assemble the trial revision peg of the length previously determined (20, 25 or 30mm) onto the trial glenoid of the selected side 8.



Test for bone cover and stability 9.

Remove the definitive implant of selected side and length of peg from its packaging.

Maintain the polyethylene morse taper protection in place.

Assemble the implant onto the baseplate impactor (E28 210).

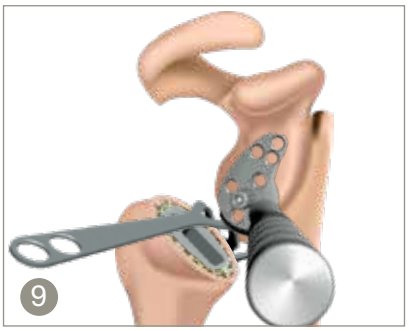
The plate may be shortened by cutting between the most proximal Holes if necessary to adapt to morphology.

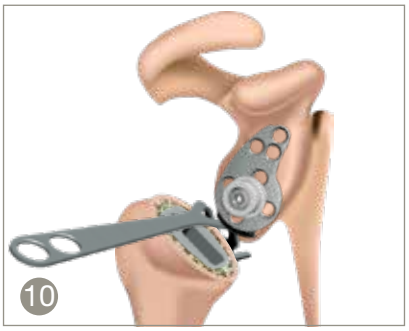
Bone graft can be used behind the baseplate or between the peg and inferior lip, dependent on the condition of the bone.

Implant the glenosphere as for the reverse primary shoulder (page 17 of the UNIC Reverse Surgical Technique E28 494).

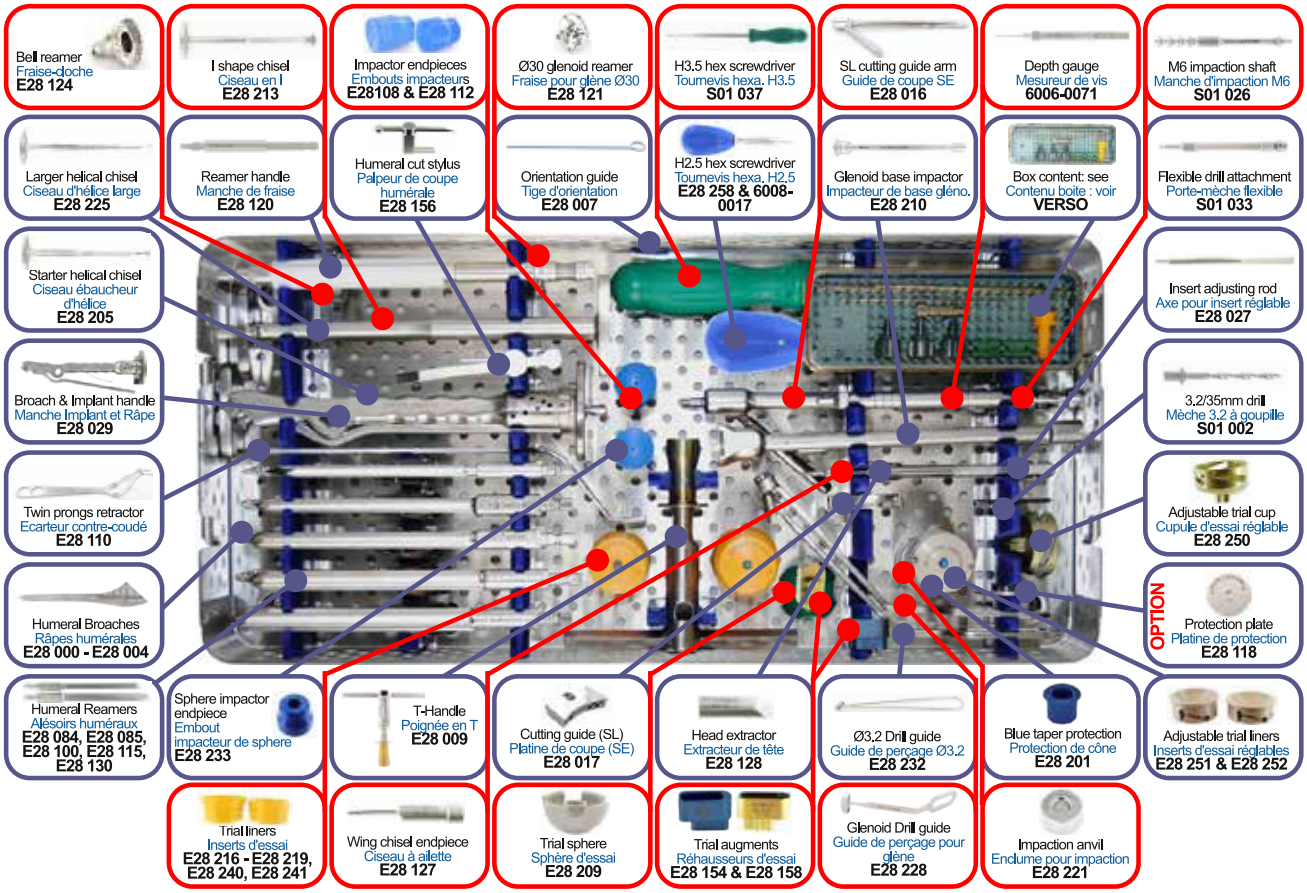
Complete the fixation with screws.

Note that the diameters of screws are different for the superior plate holes (Ø4.3mm « RS » references screws) and for the base plate (Ø5.0mm).

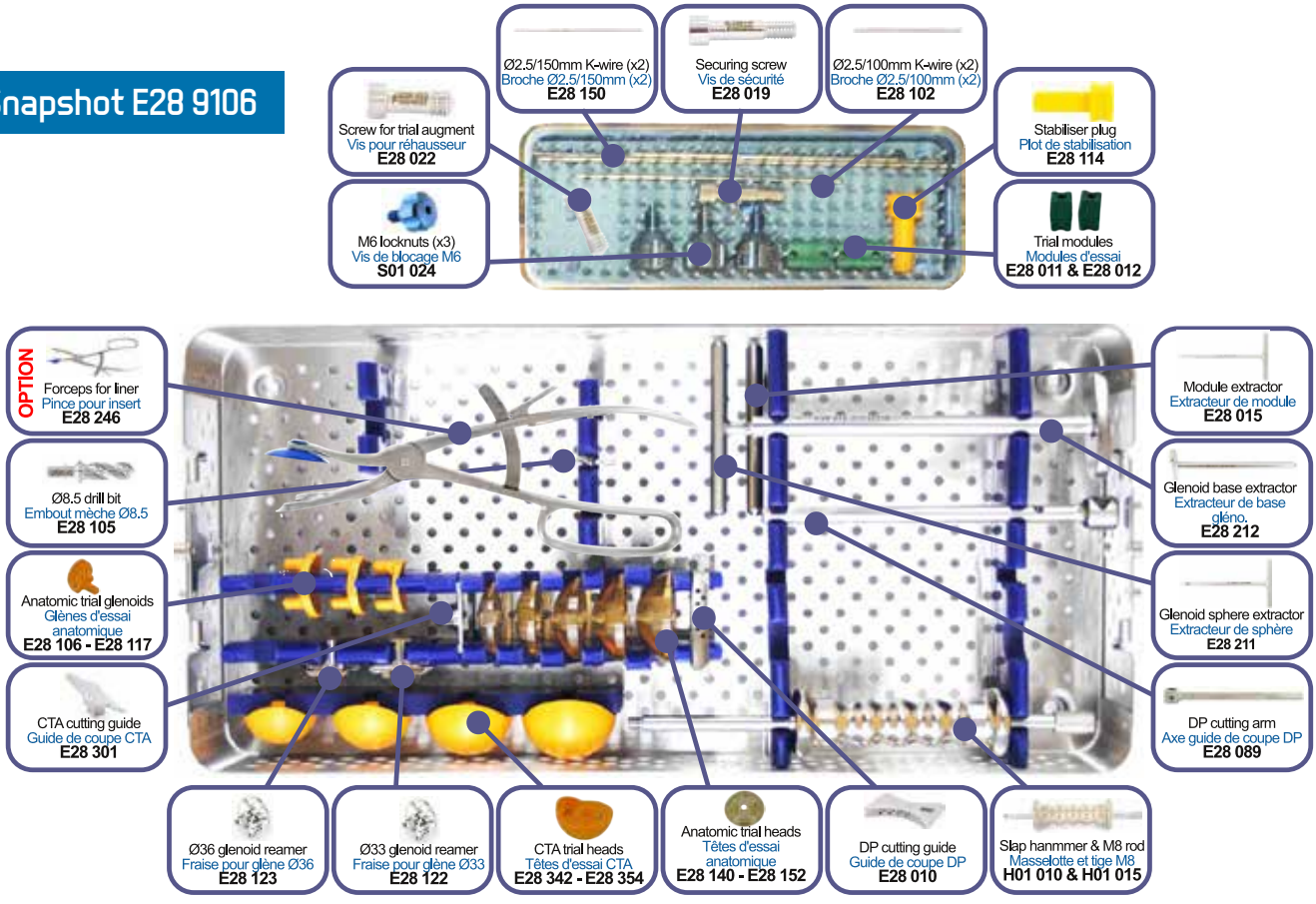




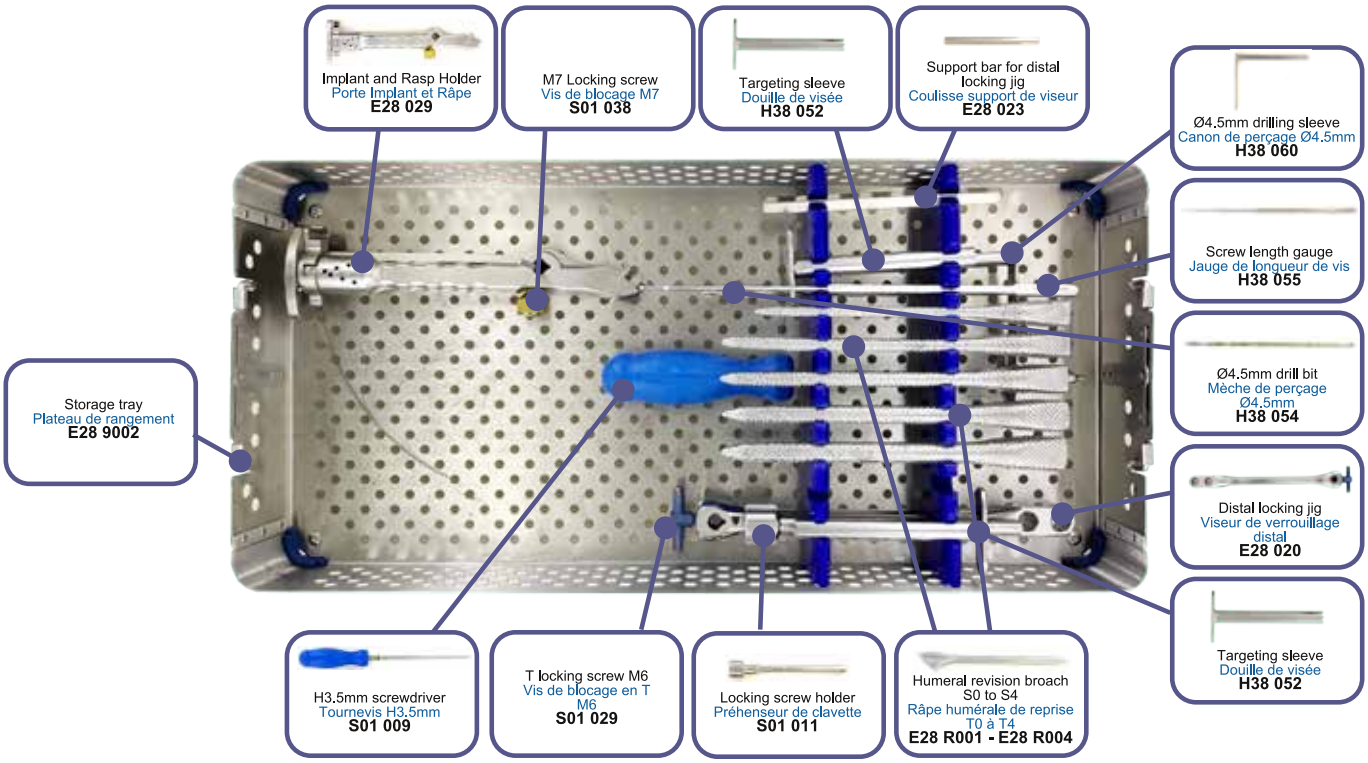
Snapshot E28 9105



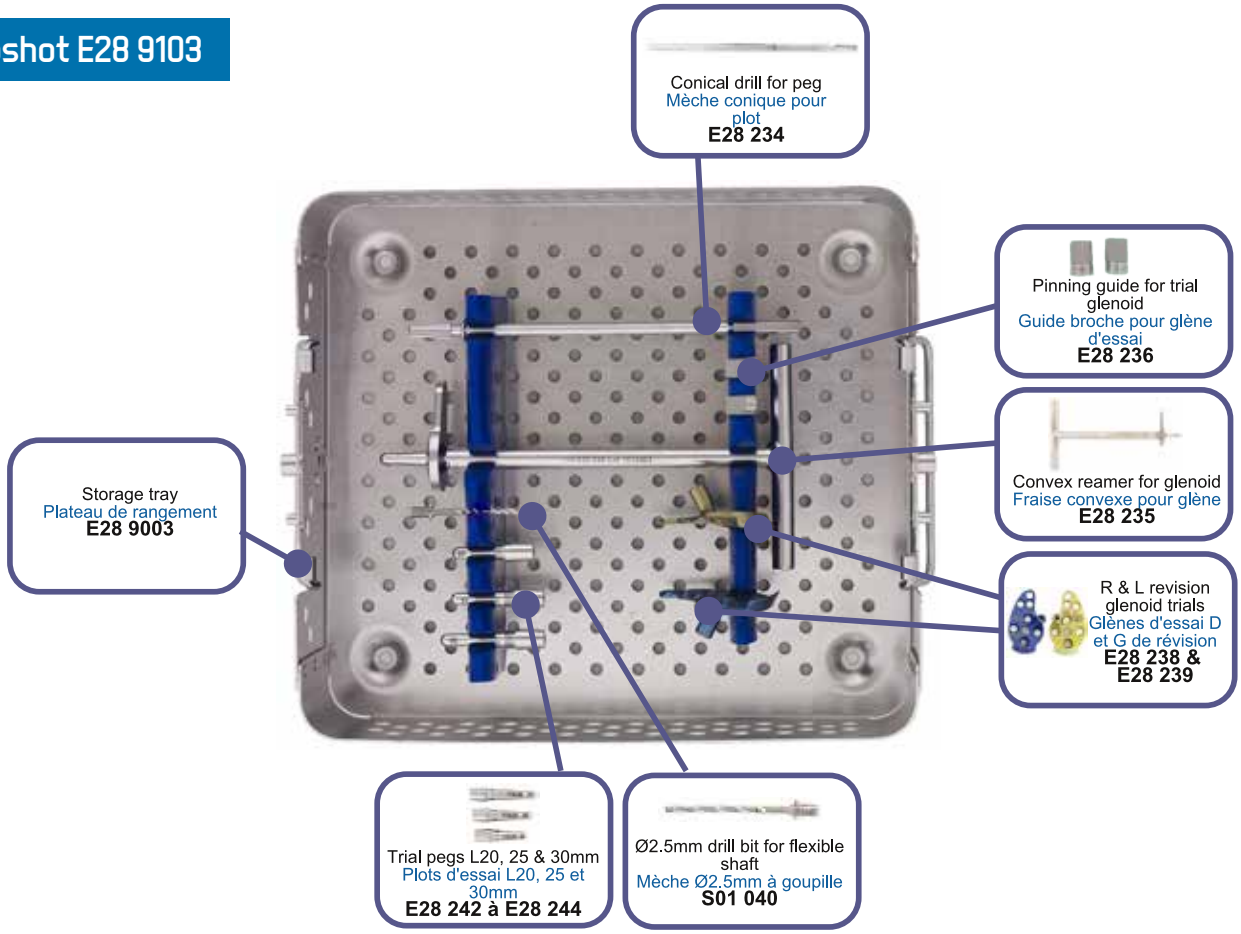
Snapshot E28 9106



Snapshot E28 9102



Snapshot E28 9103



Revision Shoulder instrument set	E28 9102	Q
Size 0 revision broach	E28 R000	1
Size 1 revision broach	E28 R001	1
Size 2 revision broach	E28 R002	1
Size 3 revision broach	E28 R003	1
Size 4 revision broach	E28 R004	1
Broach and implant holder	E28 028	1
Distal targeting jig	E28 020	1
Crossbar	E28 023	1
M7 yellow locknut	S01 038	1
M6 T shaped locknut	S01 029	1
Large sleeved guide	H38 052	2
4.5mm - 132mm long drill guide	H38 060	1
4.5mm drill, length 195mm	H38 054	1
Locking pin depth gauge	H38 055	1
Screw holder	S01 011	1
Hexagonal screwdriver	S01 009	1
Tray with lid	E28 9002	1

Revision Glenoid instrument set	E28 9103	Q
Revision glenoid trial right	E28 238	1
Revision glenoid trial left	E28239	1
Conical drill for revision peg	E28 234	1
Back and forth reamer	E28 235	1
20mm trial revision peg	E28 242	1
25mm trial revision peg	E28 243	1
Glenoid pinning guide	E28 236	2
Tray with lid	E28 9003	1

Humeral Revision stem			
Size	Length	Cemented	Dual coating
00	179	E27 R020XS*	E27 R000XS*
0	180	E27 R020	E27 R000
1	200	E27 R021	E27 R101
2	200	E27 R022	E27 R102
3	200	E27 R023	E27 R103
4	200	E27 R024	E27 R104

Locking pin

Description	Length	Cat. N°
Ø6.0/Ø4.5	20	H15 SC6020
	25	H15 SC6025
	30	H15 SC6030
	35	H15 SC6035
	40	H15 SC6040

Glenoid Revision Base		
Side	Length	Cat. N°
Right	20	E27 200RD1
Right	25	E27 200RD2
Right	30	E27 200RD3*
Left	20	E27 200RG1
Left	25	E27 200RG2
Left	30	E27 200RG3*

Cancellous screws

Description	Length	Cat. N°
For Ø26 and revision glenoid base	15	E27 415RS*
	17.5	E27 417RS*
	20	E27 420RS*
	22.5	E27 422RS*
	25	E27 425RS*
For Ø30 glenoid base	15	E27 515
	20	E27 520
	25	E27 525
	30	E27 530
	35	E27 535
	40	E27 540
	45	E27 545

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DESIGNED & MADE IN FRANCE

CE 2797

Nov 2019 / EN_UNIC REVISION STC E28 (E28 497) - www.oz-media.com