

Custom Made

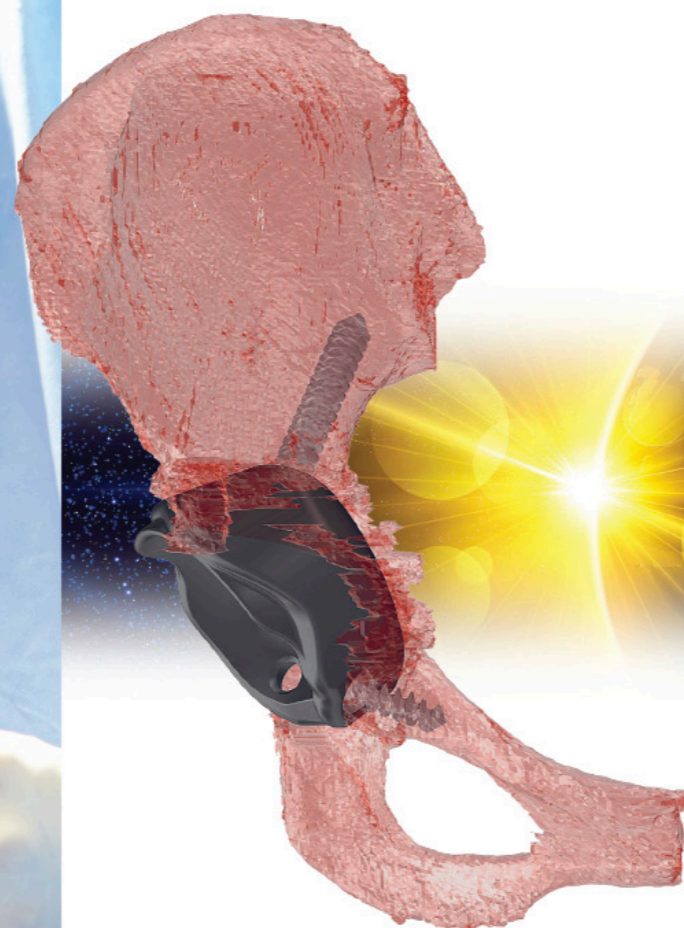
RECONSTRUCTIVE ORTHOPAEDICS



From project design to 3D prosthesis

Powder technology for custom made 3D prostheses

A team of specialists working in close partnership with the surgeon



www.adlerorthocustommade.com

Introducing a new web based custom process platform from Adler Ortho®; a company driven by innovation and highly experienced in the production of custom made 3D printed implants.

- 1) Web portal provides interactive link between the surgeon and Adler custom specialist team.
- 2) Processing, data exchange and 3D prototype visuals stored on portal.
- 3) Forms an archive for completed projects.

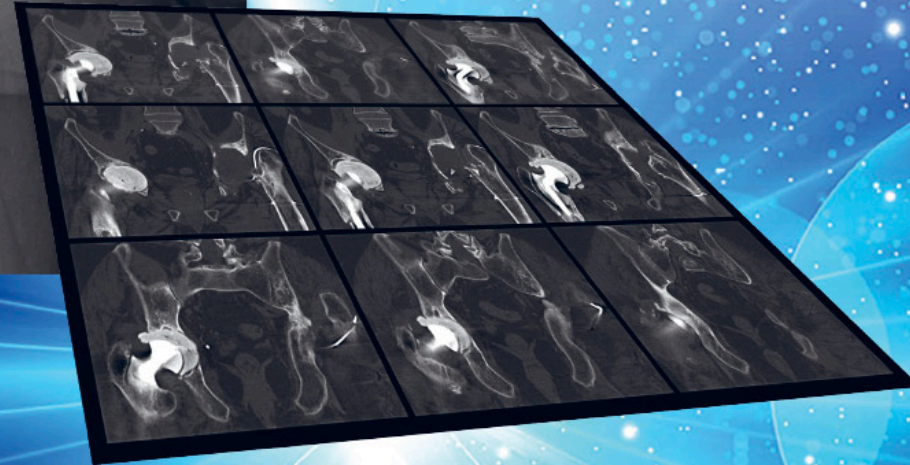


Adler Ortho® design platform
for Custom-made 3D prosthesis production



CAT scan followed by established protocol and data communication

CAT protocol:
- Pixel size: 0.4
- Slice increment: 2 mm
- Width: 512
- Height: 512
- Orientation: RAB



1

Three-dimensional reconstruction of the bone defect to be treated



2

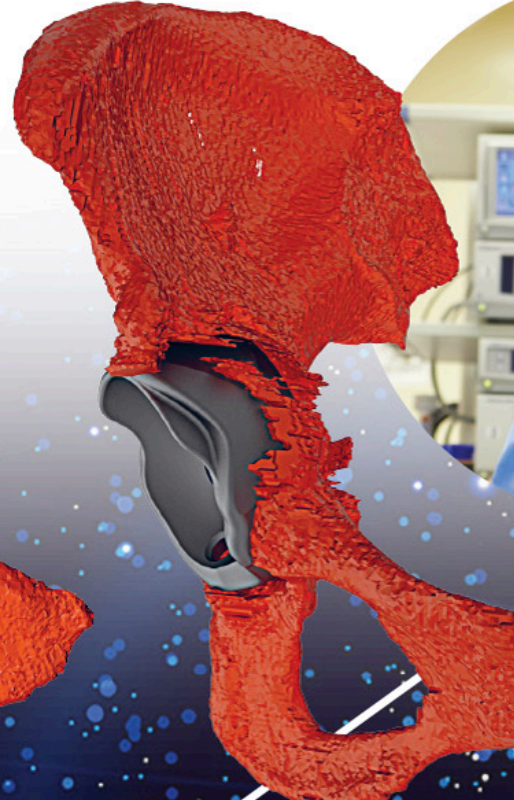
Three-dimensional reconstructural control check



3



4



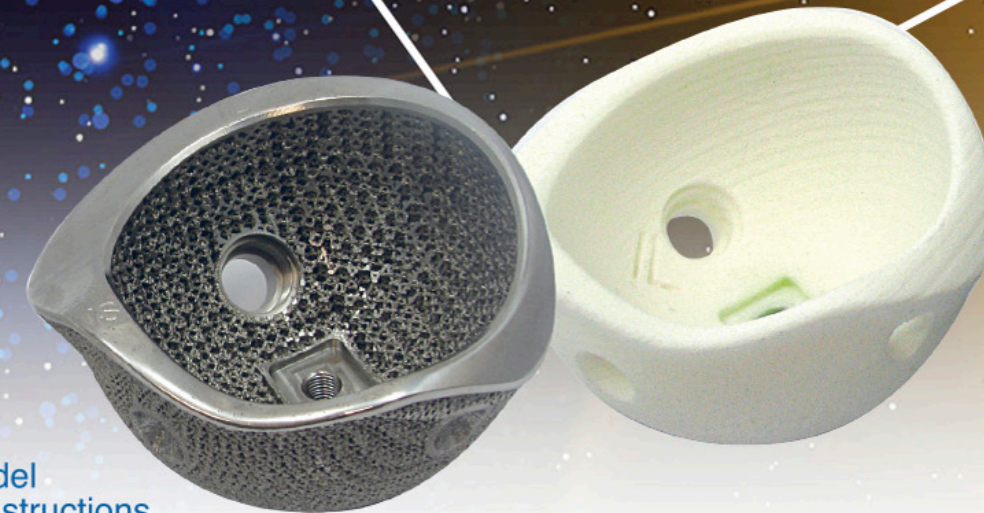
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Adler Ortho® guarantees the delivery of the implant and relative surgical instruments within 3 weeks of project validation by the surgeon



1) Trial implant validation
2) Drilling and instrument guide validation

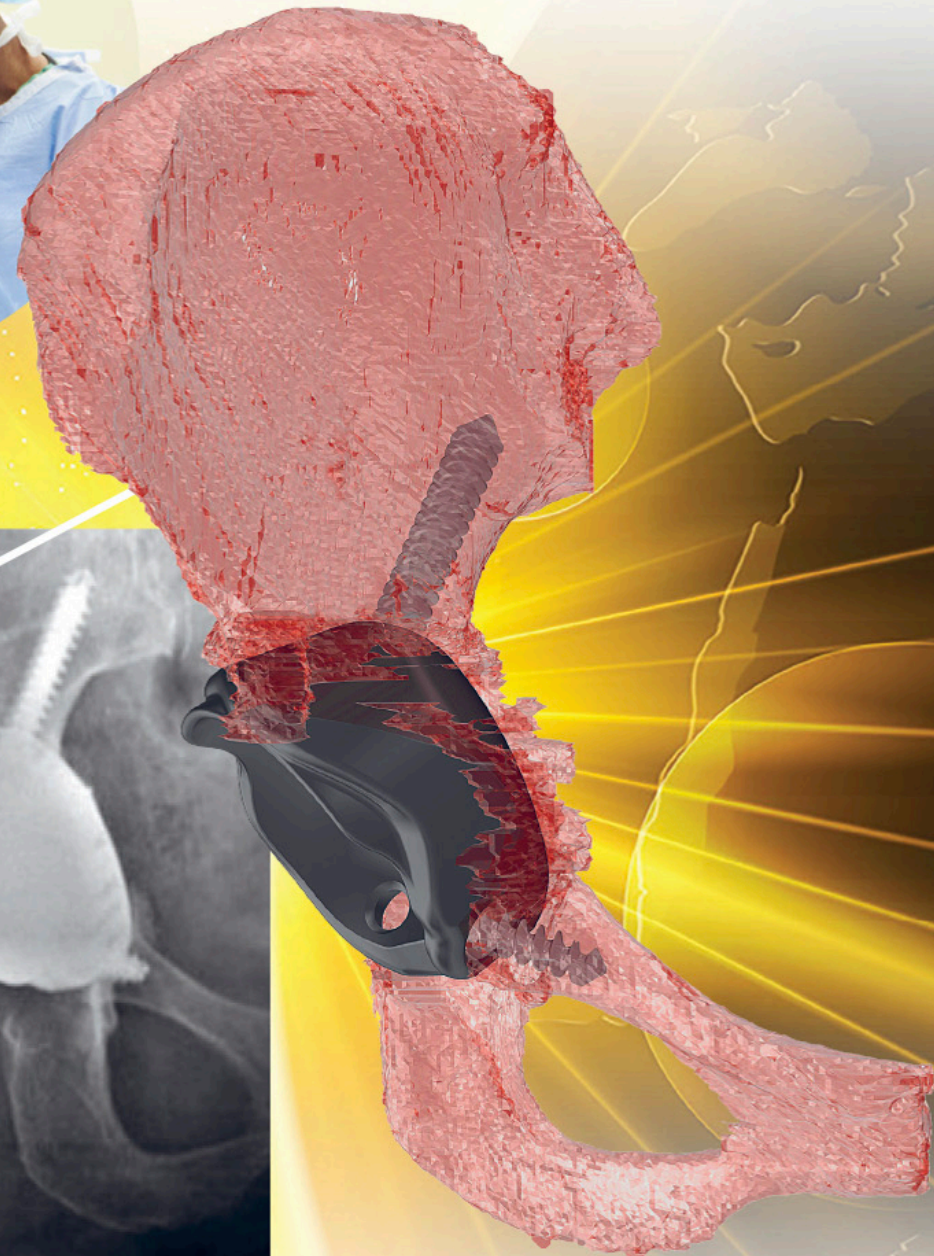
Production of the Implant and its specific instruments



6



Perfect X-ray match between project design and final implant



A journey in high technology. From project design to the 3D printed implant; the Adler team of custom implant specialists work in close collaboration with the surgeon



Fixation versatility: "MODULAR" PRESS-FIT TECHNIQUE

A custom augment fills the bone defect and restores the integrity of the acetabular cavity. A conventional cup is then implanted in the reconstructed acetabulum.

Courtesy of Dr. G. Burastero MIOS Albenga



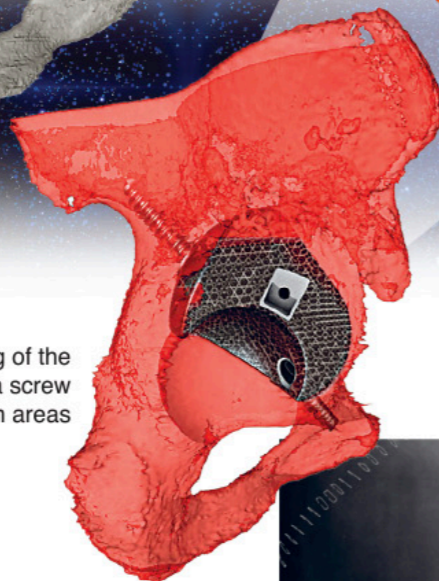
Pre-operative condition

- 77 year old patient
- 4 previous interventions
- Rheumatoid arthritis
- Septic loosening
- Paprosky IIIB defect

Three-dimensional reconstruction of the bone defect



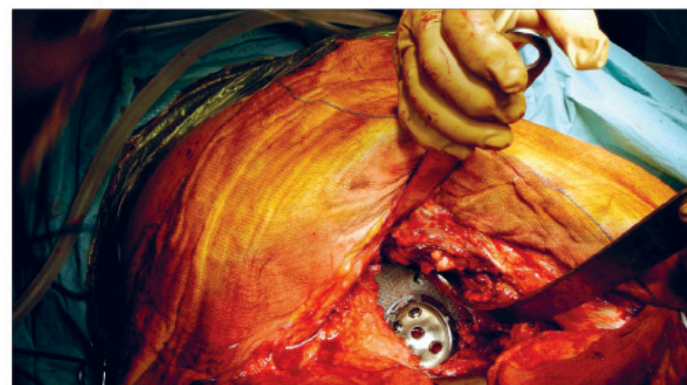
Intraoperative photo of custom augment fixation



Three-dimensional rendering of the custom augment fixed with a screw in the pubic and ilium areas

Post-operative control

Intra-operative photo
Final cup implant in the recreated acetabular cavity.



Fixation versatility: "PURE" PRESS-FIT TECHNIQUE

When the type of defect permits, it is possible to use the press-fit technique to fix the custom implant like a first implant cup.

Courtesy of Dr. G. Burastero MIOS Albenga



Pre-operative condition

- 47 year old patient
- Septic coxitis
- Haematogenous Enterococcus
- Ulcerative colitis
- Paprosky IIIA defect

Three-dimensional reconstruction of the bone defect



Three-dimensional rendering of the implanted custom cup



Image of the created custom implant



Post-operative control

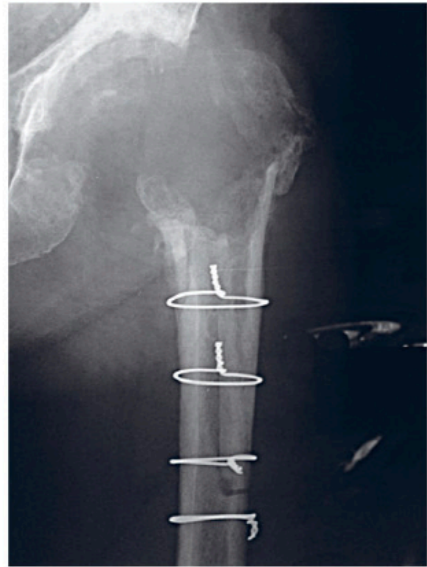


Fixation versatility: BULK TECHNIQUE

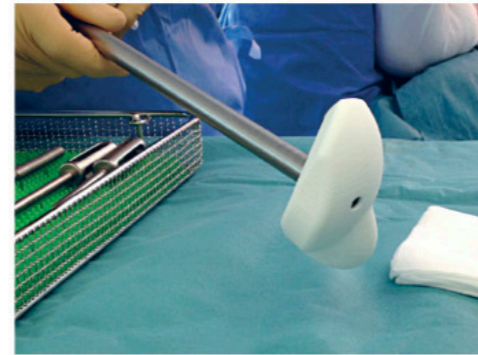
Acetabular reconstruction
using a custom implant to completely fill defect

Courtesy of Dr. G. Giordano Toulouse

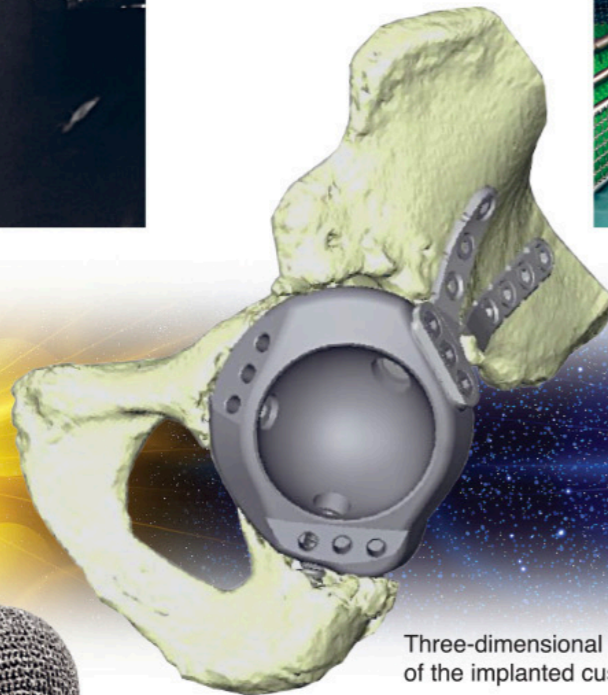
- 70 year old patient
- Previously underwent two revisions of prior hip prostheses
- Septic loosening
- Paprosky IIIB defect



Pre-operative X-ray



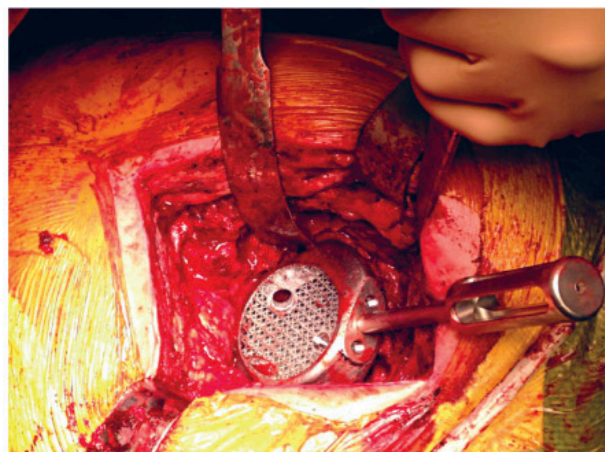
Trial implant



Three-dimensional rendering of the implanted custom cup



Rear view of the custom implant designed to fill the bone defect completely



Intra-operative photo



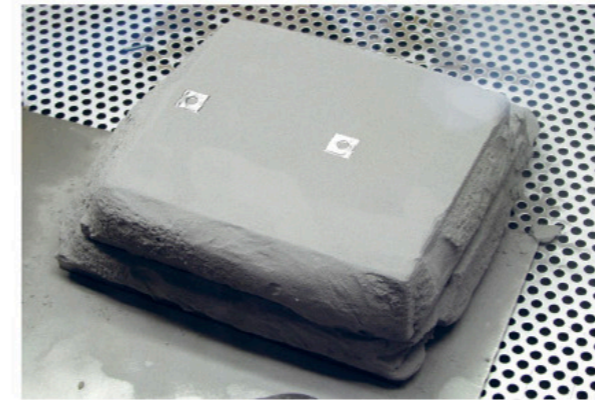
Post-operative X-ray

Simple, flexible, safe: POWDER TECHNOLOGY

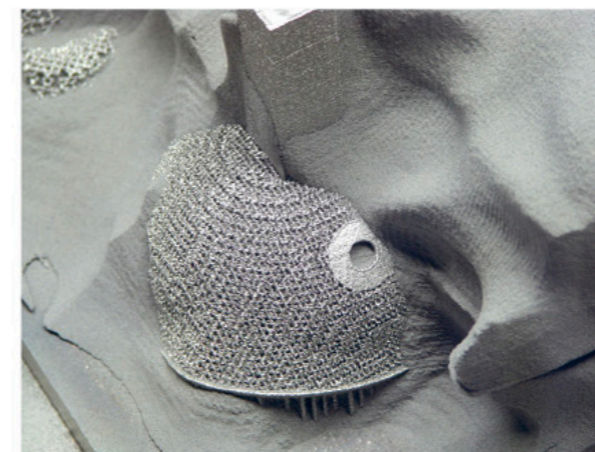
Construction of single-piece, three-dimensional, custom-made structures



The implant is produced directly from titanium powder using an innovative production technique introduced for the first time in orthopaedics by Adler Ortho®.



It is possible to produce single-piece three-dimensional structures, impossible to create with other methods.



The custom implant is produced in a single piece. Powder technology makes it possible to modulate the three-dimensional structure of the implant with complete freedom, adapting it to the load and functional needs of the various areas.

Simple

Implants are modelled on the three-dimensional reconstruction of the patient's CT image.

Flexible

Powder technology permits the construction of even very complex structures adapting the implant to the anatomy of the patient, and not vice versa.

Safe

The implant is designed and produced in close collaboration with the surgeon. The procedure, controlled at every stage, also provides for the production of specific, disposable, surgical instruments to guarantee maximum precision during the intervention.





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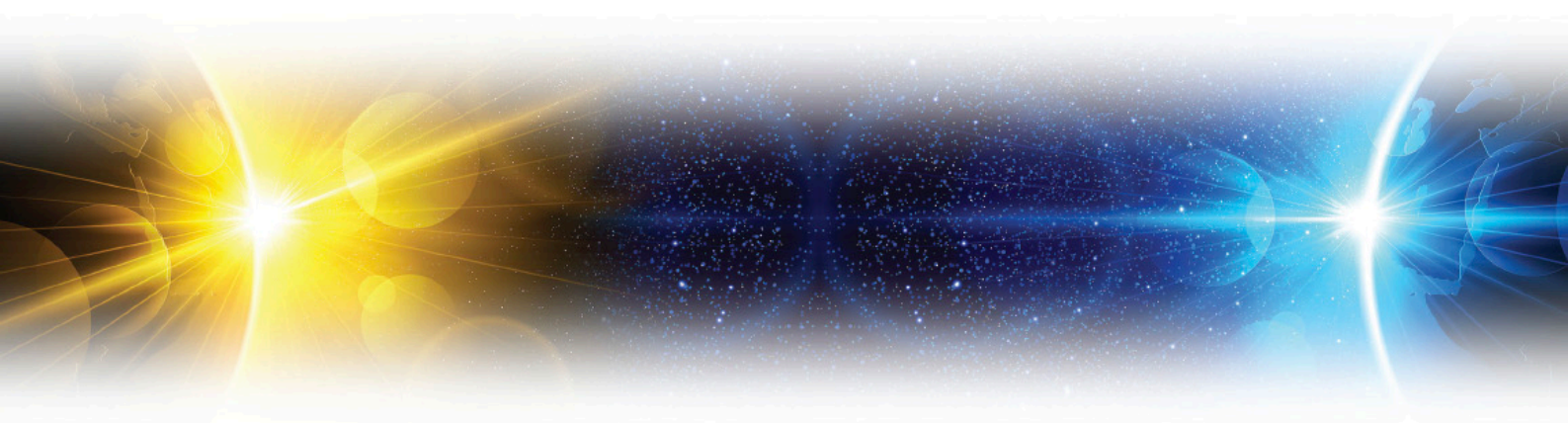
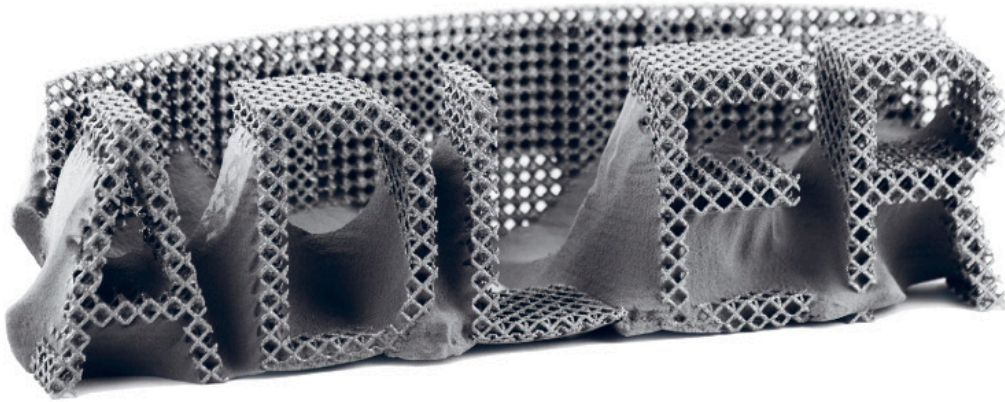
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