LivaNova

Health innovation that matters

MEMO 3D RECHORD™

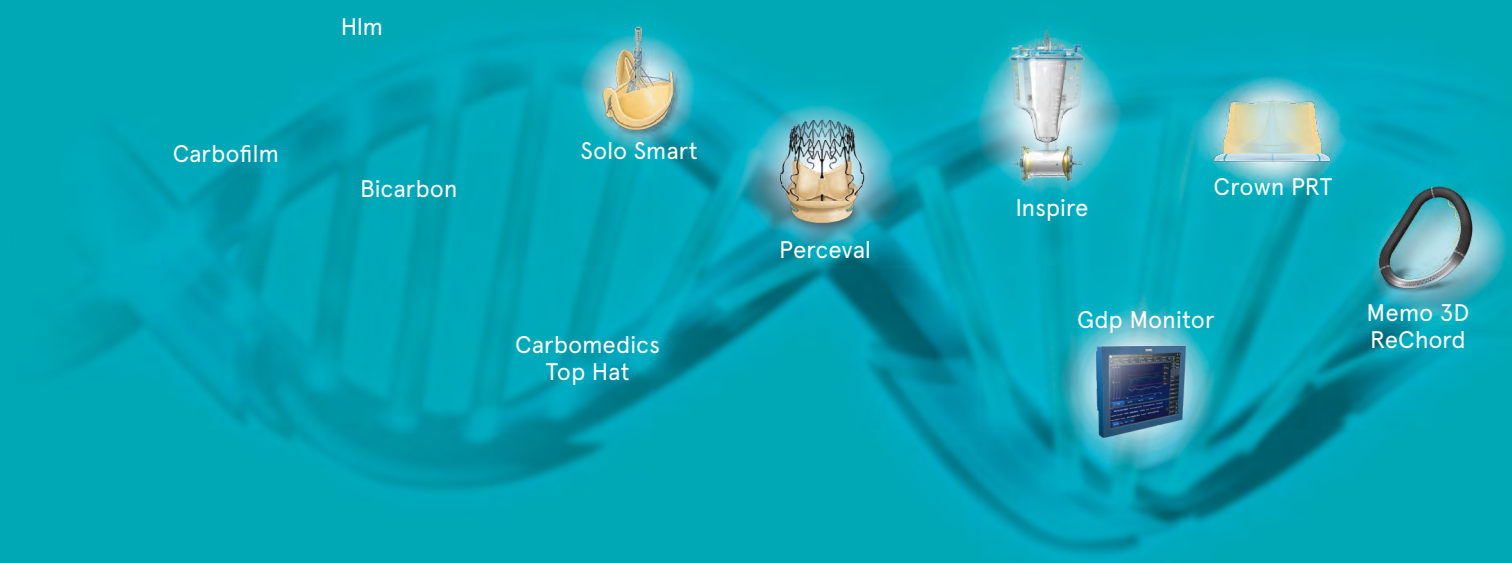
Ready to repair

Guiding standards in Mitral valve repair

CARDIAC SURGERY SOLUTIONS

A 45-year long history of innovative records in cardiac surgery

LivaNova's relentless commitment to providing innovative solutions through advanced technologies and breakthrough therapeutic treatments for cardiovascular diseases is an innate trait of its DNA and has brought the company to become world leader in the field of cardiac surgery.



MEMO 3D RECHORD™

LivaNova offers a portfolio of solutions to all types of mitral valve disease

Its latest innovation is **Memo 3D ReChord™**, the ultimate repair device designed to deliver better patient outcomes while facilitating the surgical procedure. Memo 3D ReChord™ is every surgeon's invaluable partner, its innovative chordal guiding system makes artificial chordae replacement a routine procedure[1].

1. Glauber et al., Ann Cardiothorac Surg. 2015;4 (3):298-300

MITRAL SOLUTIONS

“ Mitral valve repair is now the most frequently performed surgical procedure for mitral valve disease…but repair and replacement may be applied to different subsets of patients. ”

(Daneshmand et al., Ann Thorac Surg 2009;88:1828–37)

Each patient requires a tailored care, and every surgeon needs in his hands the best solution to meet this expectation. Therefore to address the surgical need to have the best solution fitting each patient and surgeon requirements, only a truly and integrated offering can respond. LivaNova Mitral Solutions offers a full range of devices for each and every need: flexible, rigid and semirigid annuloplasty rings for mitral repair and both biological and mechanical prostheses for mitral valve replacement.




Memo 3D ReChord

Memo 3D

Sovering

Sovering Band

Sovering Tricuspid Band

Sovering Mini Band

Carbomedics Annuloflex

Carbomedics Annuloflo

Bicarbon Fitline

Carbomedics Optiform

Carbomedics Standard Pediatric

Pericarbon More

Innovation rings true

Introducing MEMO 3D

LivaNova Memo 3D annuloplasty ring has been engineered with the aim
to create a unique and optimal solution across
the entire spectrum of mitral valve repair.
The unique core of Memo 3D provides a firm support to the mitral annulus
while allowing the natural physiological 3D motion
that truly reflects the native mitral annulus.
The innovative design of Memo 3D provides reproducible results,
predictable outcomes, and superior performance
combined with enhanced hemo and biocompatibility.

DESIGN

Unique to its core

Unique super-elastic alloy core

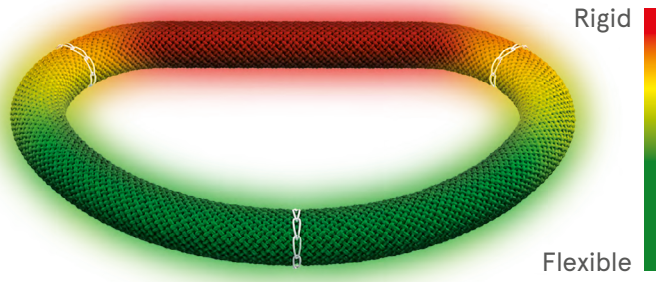
The exclusive alloy core cell design is a laser-cut one-piece structure that allows truly physiological annular dynamics.
The precision laser-cutting technology is also used to obtain LivaNova's innovative Perceval sutureless aortic prosthesis.

Shape Memory

The superelastic alloy core "remembers" a prefixed shape after geometric deformation and can be flexed back and forth without losing its original form.
Memo 3D's shape memory provides consistent recovery of the systolic profile and restores the natural systolic diameter ratio.

The Right Balance of Rigidity and Flexibility to Support any Repair

Memo 3D, semi-rigid annuloplasty ring, is truly the only ring you'll ever need whether you're looking for stability to support the annulus or flexibility of movement.
The innovative superelastic alloy cell structure is optimized to provide a progressive degree of flexibility from the anterior to posterior portions of the ring to allow physiological, three-dimensional motion to accommodate native mitral annulus dynamics and to reduce stress on the repair.

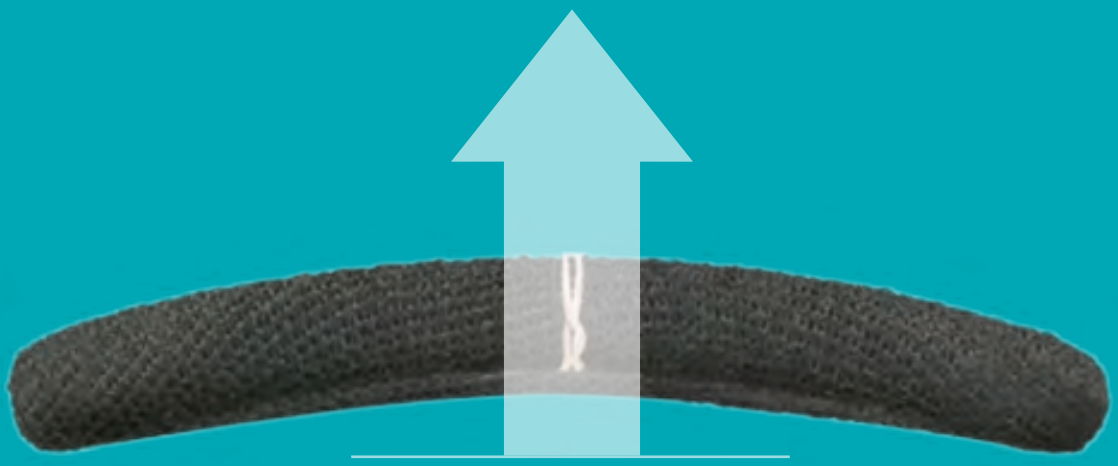


Three layer structure

Ease of implant with superior visualization, placement and attachment while ensuring a perfect annular fit. The oval silicone sheath provides easy suturability with conformable needle penetration.

PERFORMANCE

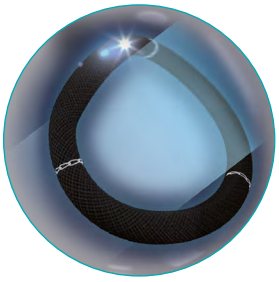
The true reflection of the mitral annulus



Systolic remodeling and diastolic dynamics concept

Truly physiological three-dimensional motion of the mitral annulus with a natural anterior/posterior to lateral/lateral relationship to maximize blood flow,[2,3,4] even after more than five years from implantation.[5]

Systolic Remodelling
Maximized Coaptation and Reduced Stress
Nishi et al.
Circulation. 2013;128:A16940



Diastolic Dynamics
Maximized Hemodynamics
Ryomoto et al.
Ann Thorac Surg. 2014 Feb;97(2):492-7

Physiologic saddle shaping concept

The true physiological 3D motion of the ring during the cardiac cycle preserves the natural non-planar saddle shape geometry of the annulus. Recent clinical data has demonstrated that Memo 3D is able to accommodate the physiological saddle shape of the mitral annulus throughout the cardiac cycle upon implantation.[2,3,4]

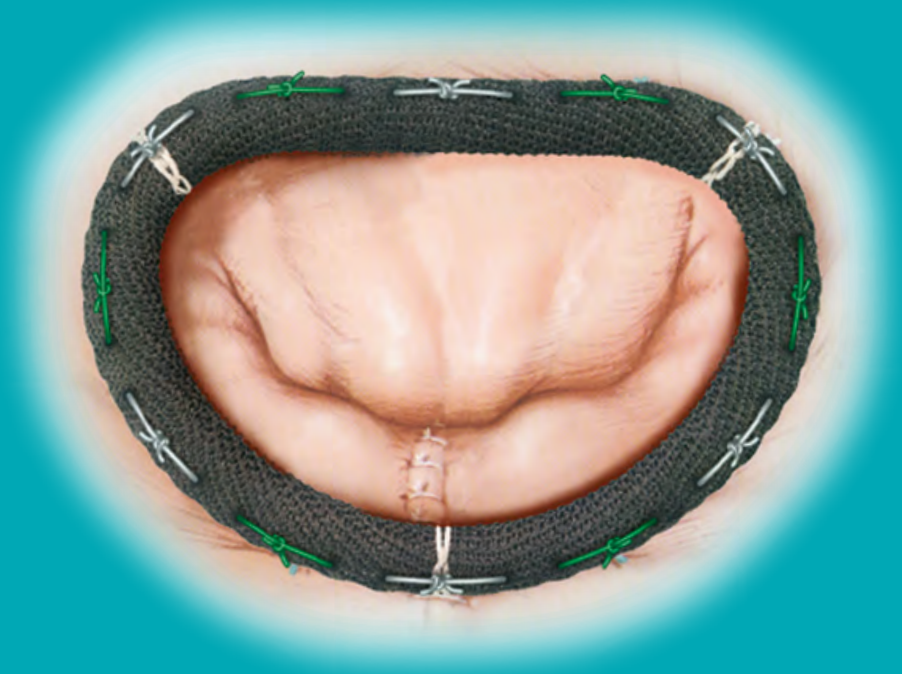
Carbofilm™ coating

The bio/hemocompatible properties of the unique Carbofilm™ coating allows complete endothelialization, prevents inflammatory reaction and scar tissue formation. Designed to maintain physiological dynamics in the long term.[5,6]

2. Ryomoto et al., Ann Thorac Surg 2014;97:492–8
3. Nishi et al., Circulation 2013; 128: A16940
4. Wan et al., Ann Cardiothorac Surg 2015;4(3):261-265
5. Santarpino G, Pfeiffer S, Fischlein T, Int J Cardiol. 2011 Dec 14
6. Della Barbera et al., Cardiovascular Pathology 14 (2005) 96-103

IMPLANTATION

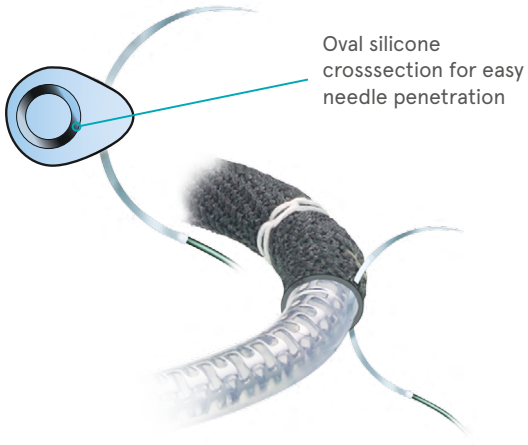
Ease of use and implant

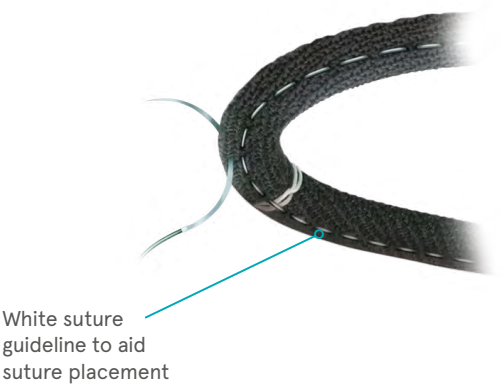


PERFECT ANNULAR FIT AND VISUALIZATION:

Silicone ring for easy needle penetration and white sutures as guidelines

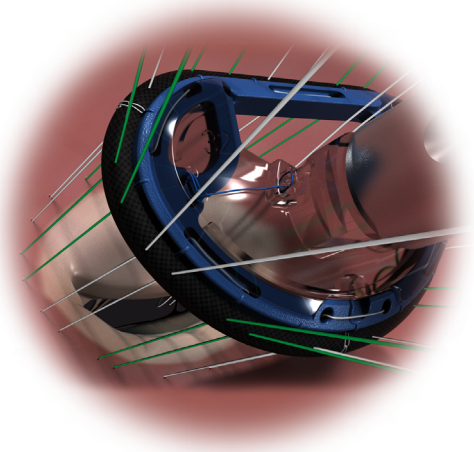
The Memo 3D semirigid annuloplasty ring facilitates easier implantation with superior visualization, placement, and attachment. The oval cross section of the silicone sheath provides more material for easier needle penetration. White suture guidelines on the underside of Memo 3D provide an excellent visual reference point for easier suturing.





New holder

The new, versatile holder has been designed to facilitate the implantation procedure. The ring is attached to a template that can be removed together with the holder or temporarily left in position to be removed after knot tying.



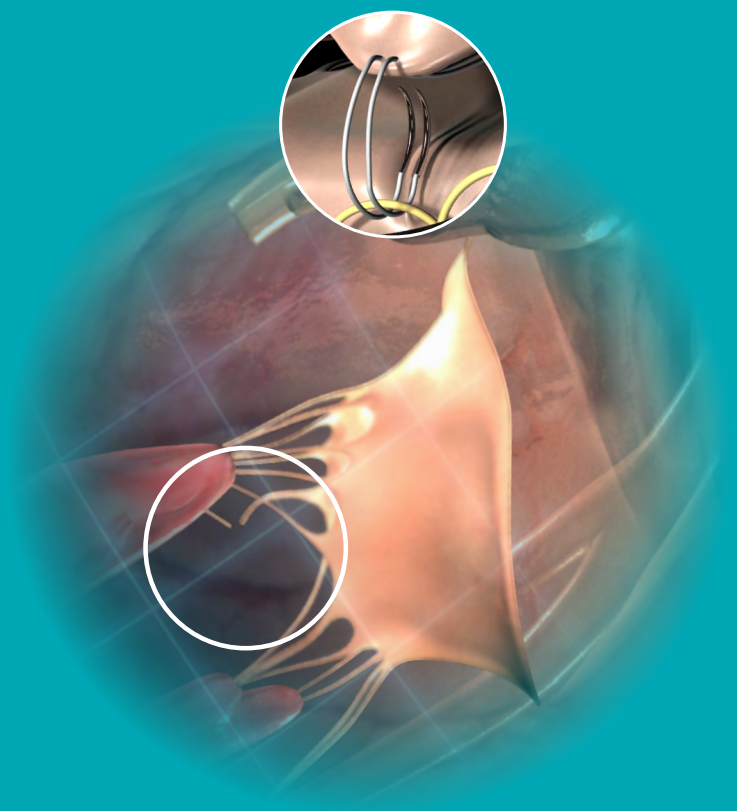
New MICS sizers

The new set of sizers have been specifically designed to optimize sizing also during minimally invasive procedures where surgical site visualization is compromised.

INNOVATION

Guiding Standards

MEMO 3D ReChord™ is the ultimate Repair device technology designed to deliver better patient outcomes while facilitating the surgical procedure, thanks to its innovative chordal guiding system that makes artificial chordae replacement a routine procedure.
MEMO 3D ReChord™ incorporates a series of loops in the posterior region that act as temporary reference elements for easier sizing of chords length.
The innovative chordal guiding system promotes standardized chord replacement, offering reproducible results while accelerating procedure times.[1]



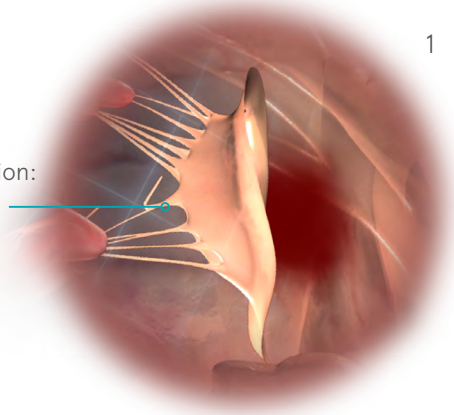
Facilitating and standardizing the implantation procedure to promote reproducible results.

1. Glauber et al., Ann Cardiothorac Surg. 2015;4 (3):298-300

Implantation procedure

1

Mitral regurgitation:
chordal rupture



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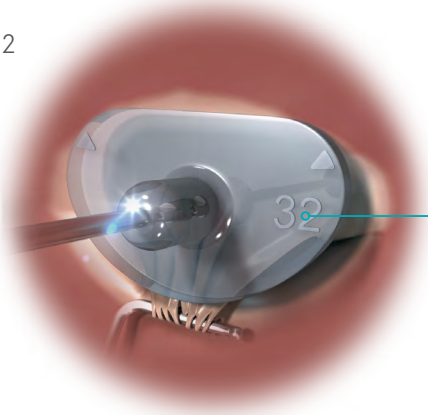
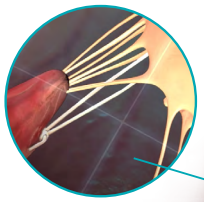
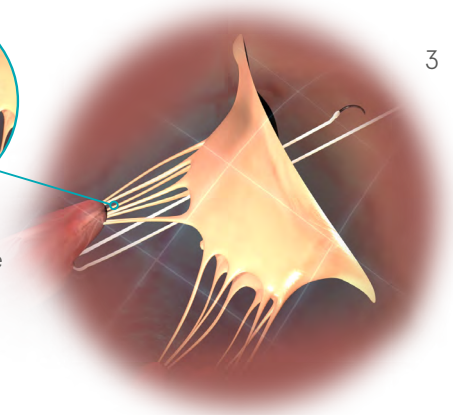


Annuloplasty
ring sizing



3

Anchoring of the
artificial chord



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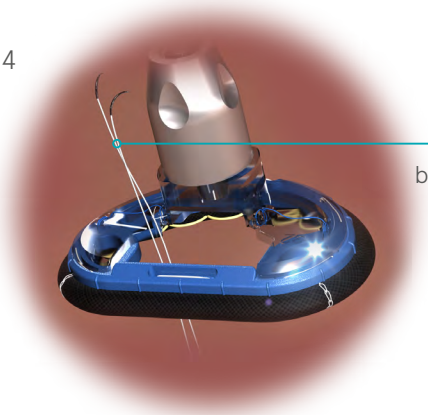
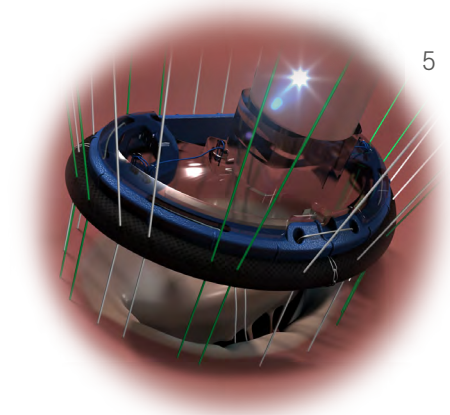


Chord should
be passed through
the window

5

Ring parachuting
and implantation



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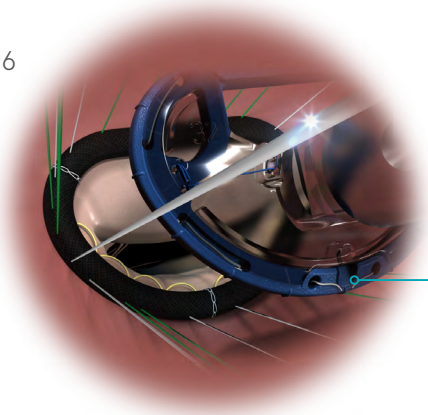
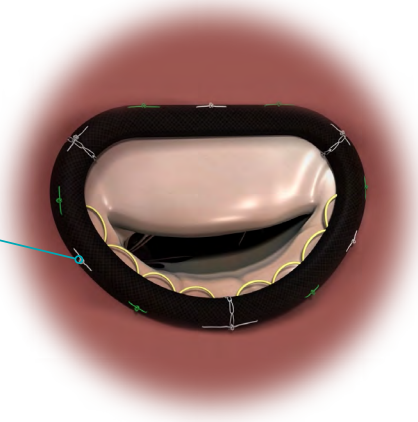


Cut
at the P2 area
and remove
the holder

Implantation procedure

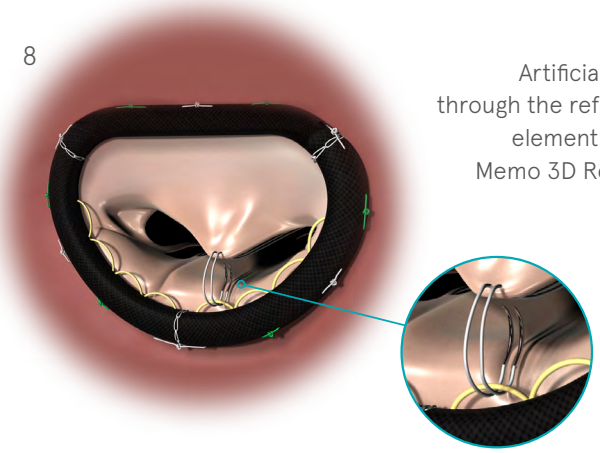
7

Tie the knots tight



8

Artificial chord through the reference element on the Memo 3D Rechord



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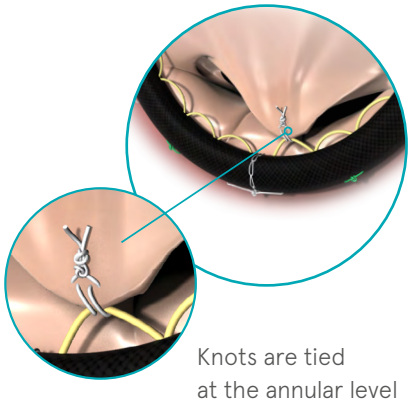
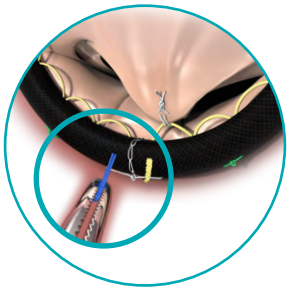


Knots are tied at the annular level

10

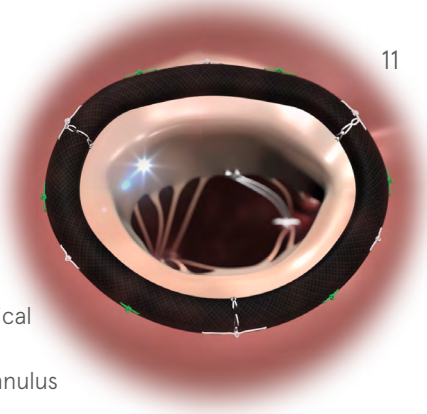


Step 1: pull the blue thread first

Step 2: then pull the yellow thread

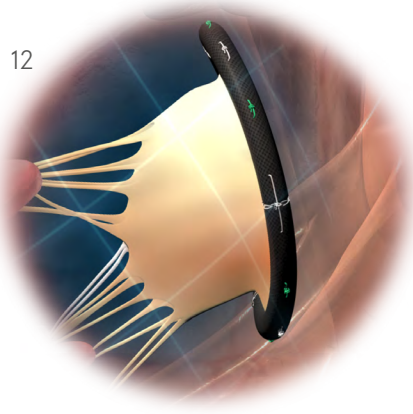
No cutting is needed

11



Truly physiological 3D motion of the mitral annulus

12



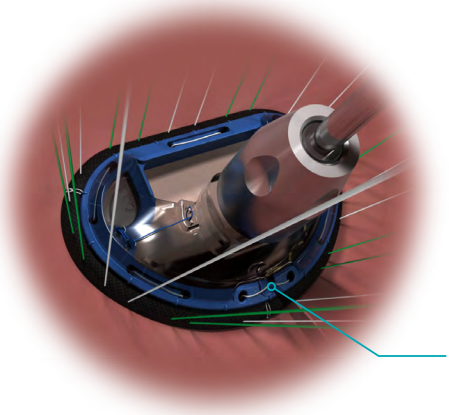
Fast, reproducible procedures for durable patient outcomes

New holder

One-step removal

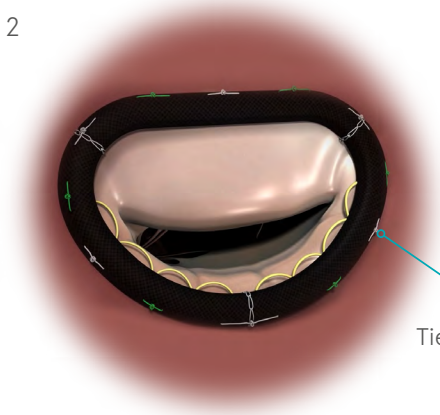
Remove all with one single cut: fast removal, user friendly (one cut only at the P2 area).

1



Cut and remove the holder

2



Tie the knots tight

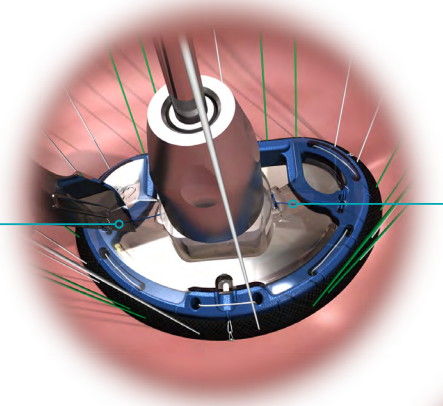
Two-step removal

For those that prefer to have a rigid frame when tying the knots (avoid purse string effect and stress on the structure) and to protect the loops from the knotpusher when addressing the valve in MICS. Specifically designed handle for an easy removal of the LOW PROFILE TEMPLATE with forceps.

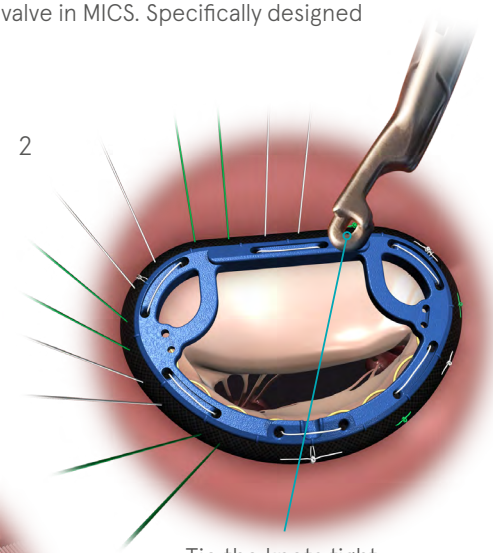
1

Cut

Cut

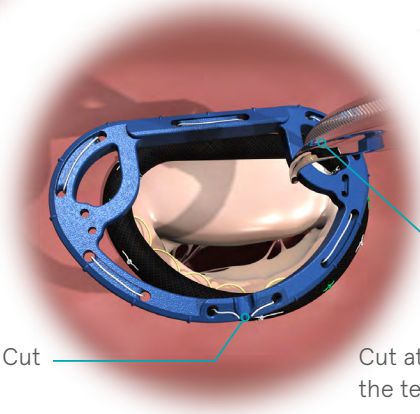


2



Tie the knots tight

3



Cut

Cut at the P2 area and remove the template with forceps

Clinical highlights from the first published experience[1]

“The length of the neochordae obtained will exactly match the plane of the native annulus at the coaptation point.”

“This is a simple and reproducible technique, suitable for both anterior and posterior leaflet prolapse, which restores leaflet motion and ensures a large surface of coaptation.”

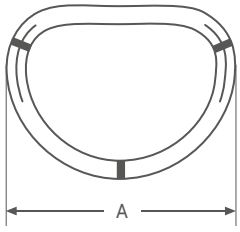
“According to our experience, the temporary chordal guide system allows a correct implantation of PTFE neochordae without the need for chordal measurement, short operative times and doesn't require a long learning process. In our opinion, its use might standardize the “respect rather than resect” mitral valve repair technique, further facilitating a MIMV surgical approach”

1. Glauber et al., Ann Cardiothorac Surg. 2015;4 (3):298-300

Product ordering information

Memo 3D ReChord™ semirigid annuloplasty ring: superelastic alloy core covered by silicone and polyester fabric coated with Carbofilm™

Ordering Number	Size	A (mm)	Orifice area (cm^2)
ICV1330	24	24	2.30
ICV1331	26	26	2.78
ICV1332	28	28	3.28
ICV1333	30	30	3.78
ICV1334	32	32	4.39
ICV1335	34	34	4.98
ICV1336	36	36	5.67
ICV1337	38	38	6.34



Accessories ordering information (not provided sterile)

Catalog Number	Name	Description
ICV0664	Uni Handle	Universal Bendable Handle
ICV1342	Extended Uni Handle	Universal Bendable Handle for MICS
ICV1340	Annuloplasty Ring Sizer Set	Complete Sizer Set (24 to 38 mm)
ICV1343	Annuloplasty Ring Accessory Tray	Empty Instrument Tray

Instrument Set

Memo 3D Rechord Sizer Standard and MICS

LivaNova

Health innovation that matters

www.livanova.com

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12/15 RE0210203/C

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info.cardiacsurgery@livanova.com

Please always refer to the Instructions For Use (IFU) manual provided with each product for detailed information, warnings, precautions and possible adverse side effects.