

# THE PHYSIOLOGIC CHOICE

SimuForm™ Annuloplasty Ring



Medtronic

# HYBRID SHAPE

The SimuForm ring provides semi-rigid posterior remodeling while offering a flexible anterior portion to accommodate motion.

The mitral valve annulus changes shape in the cardiac cycle. SimuForm rings do not have a fixed saddle shape, and also change shape in systole and diastole.

SimuForm rings are available in a full size range of 24–40 mm.

## Saddle Shaped in Systole

- Flexible anterior portion which accommodates natural motion
- The saddle has been shown to increase leaflet coaptation and curvature,<sup>1-3</sup> reduce annular forces,<sup>3,4</sup> and reduce leaflet and chordal stresses<sup>4-6</sup>

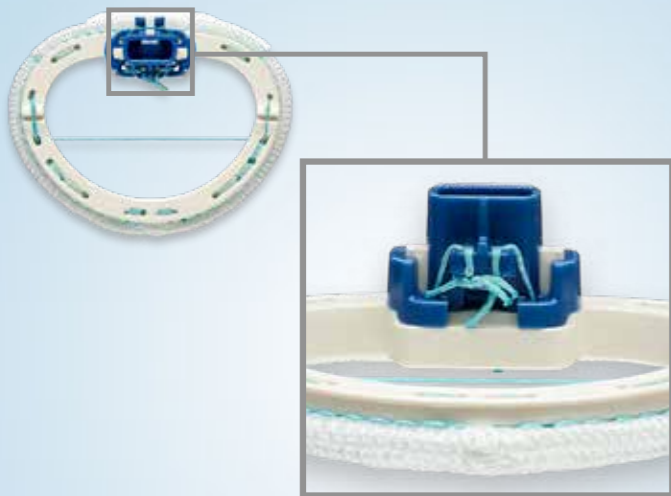


## Planar "O" Shaped in Diastole

SimuForm rings are not fixed into a saddle shape — flatten to an "O" shape to accommodate diastolic filling dynamics.

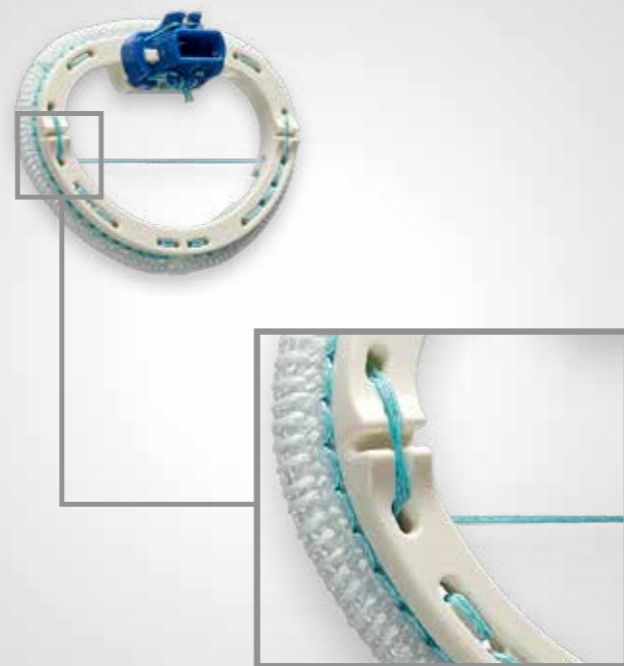


## ACCESSORY ENHANCEMENTS



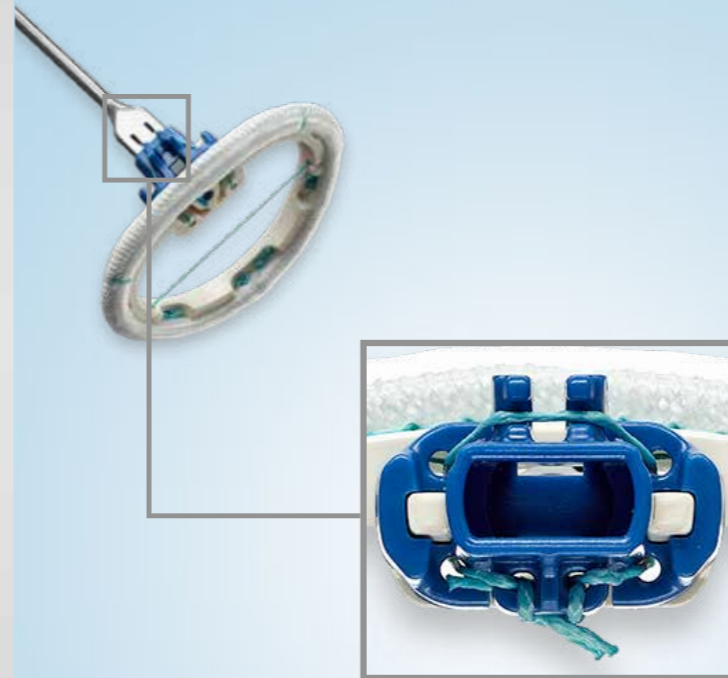
### Low-profile Open Holder

Place sutures along the entire semi-rigid ring while fully accessing anatomy.



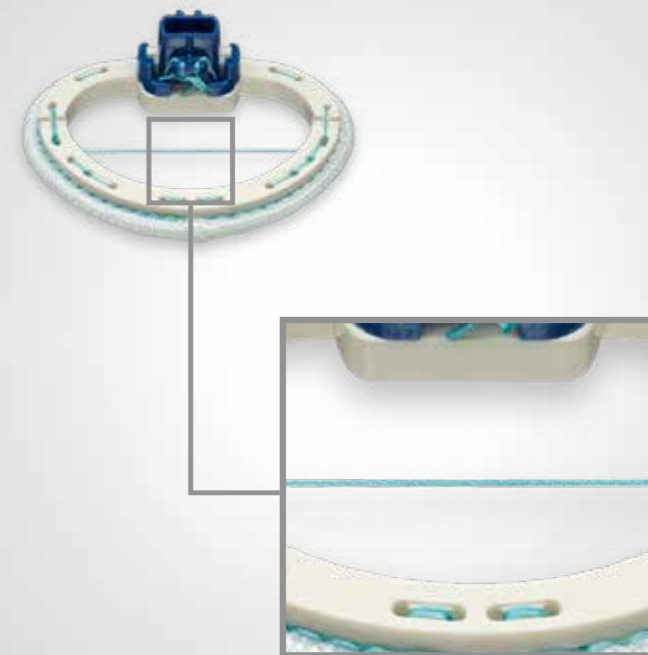
### Clearly Marked Cut Towers

Easily identify the two cut towers on the holder, which enables quick release of the ring.



### Stable Handle-to- holder Connection

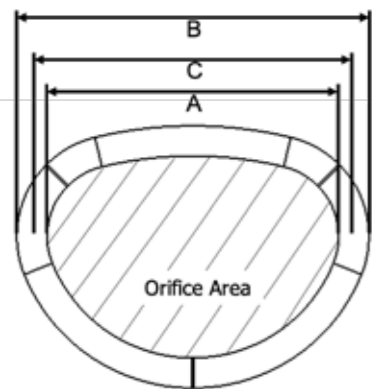
Allows for low-force, single-cut release, and remains securely attached during suturing.



### Visual Chordal Reference Line

Provides visual reference of annular plane when performing chordal repair.

### SIMUFORM RING PRODUCT INFORMATION



**A:** Inner Ring Diameter  
**B:** Outer Ring Diameter  
**C:** Inner Stiffener Diameter

Size (mm)	Product Codes	"A" (mm)	"B" (mm)	Orifice Area (mm <sup>2</sup> )	Stiffener Assembly Inner Diameter (mm)
24	7800RR24	23.1	31.0	290	24.6
26	7800RR26	25.0	32.9	340	26.5
28	7800RR28	26.9	34.9	390	28.5
30	7800RR30	28.9	36.8	460	30.4
32	7800RR32	30.7	38.7	480	32.3
34	7800RR34	32.7	40.6	560	34.2
36	7800RR36	34.6	42.6	640	36.2
38	7800RR38	36.6	44.5	730	38.1
40	7800RR40	38.5	46.4	810	40.0

### SIMUFORM RING ORDERING INFORMATION

Order Number	Components & Accessories
T7800P	SimuForm Accessory Tray
7800PS	Set of 9 SimuForm Polysulfone Sizers
7686 7686L 7686XL	Annuloplasty Handles in Assorted Lengths



SimuForm™  
Sizers Tray

## References

- <sup>1</sup> Jensen MO, Jensen H, Levine RA, et al. Saddle-shaped Mitral Valve Annuloplasty Rings Improve Leaflet Coaptation Geometry. *J Thorac Cardiovasc Surg*. September 2011;142(3):697-703.
- <sup>2</sup> Ryan LP, Jackson BM, Hamamoto H, et al. The Influence of Annuloplasty Ring Geometry on Mitral Leaflet Curvature. *Ann Thorac Surg*. September 2008;86(3):749-760.
- <sup>3</sup> Vergnat M, Jackson BM, Cheung AT, et al. Saddle-shape Annuloplasty Increases Mitral Leaflet Coaptation After Repair for Flail Posterior Leaflet. *Ann Thorac Surg*. September 2011;92(3):797-803.
- <sup>4</sup> Jimenez JH, Liou SW, Padala M, et al. A Saddle-Shaped Annulus Reduces Systolic Strain on the Central Region of the Mitral Valve Anterior Leaflet. *J Thorac Cardiovasc Surg*. December 2007;134(6):1562-1568.
- <sup>5</sup> Padala M, Hutchison RA, Croft LR, et al. Saddle shape of the mitral annulus reduces systolic strains on the P2 segment of the posterior mitral leaflet. *Ann Thorac Surg*. November 2009;88(5):1499-1504.
- <sup>6</sup> Pierce EL, Bloodworth CH, Imai A, et al. Mitral Annuloplasty Ring Flexibility Preferentially Reduces Posterior Suture Forces. *J Biomech*. June 25, 2018;75:58-66.

See the device manual for detailed information regarding the instructions for use, the implant procedure, indications, contraindications, warnings, precautions, and potential adverse events. For further information, contact your local Medtronic representative and/or consult the Medtronic website at [www.medtronic.eu](http://www.medtronic.eu).

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Manuals can be viewed using a current version of any major internet browser.  
For best results, use Adobe Acrobat® Reader with the browser.

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# Medtronic

## Europe

Medtronic International Trading Sàrl.  
Route du Molliau 31  
Case postale  
CH-1131 Tolochenaz  
Tel: +41 (0)21 802 70 00  
Fax: +41 (0)21 802 79 00

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