RingJect

RingJect Model 375 I Model 375 US	
CTR	Model 275 12/10
Compression	From 12 mm to 10 mm
Material	PMMA I Flexible Ring
Overall Ø	12 mm

RingJect Model 376 I Model 376 US	
CTR	Model 276 13/11
Compression	From 13 mm to 11 mm
Material	PMMA I Flexible Ring
Overall Ø	13 mm

Features & Benefits	
Preloaded	**Self-loading, single packaging** a valuable addition to your surgical armamentarium
Injector	• **Easy to use** • **Total control** includes action/retraction mechanism • **Implantation - clockwise or counter clockwise** indicators on injector • **Long small tip** Especially convenient in cases of deep set eyes • **Beveled tip** For easy entry into the incision
Capsular Tension Ring	• Circular expansion and stabilization of the capsular bag • Safe IOL centration in eyes with zonular dehiscence • Prevents IOL decentration after capsular shrinking • Stabilized conditions during Phaco-emulsification surgery • Reduced risk of capsular fibrosis • Improves visual acuity when implanted along with premium IOL

Preloaded Capsular Tension Ring in a single use injector

The RingJect system is an Ophtec preloaded Capsular Tension Ring (CTR) in a single use injector. The CTR is prepositioned in the injector and is designed to be self-loading for the surgeon's convenience. The Ophtec CTR is a high precision medical device for insertion in the capsular bag and made from highly flexible compression molded polymethylmethacrylate (PMMA). Clockwise or counterclockwise insertion is possible. The RingJect system is provided in a sterile blister, ready for use.

Ophtec Capsular Tension Rings are indicated for the stabilization of the capsular bag in the presence of weakened or compromised zonules.

IOL centration at 12 months postoperative
→ Centered 97.80% [1)]

- ✓ CTR is made of unique Compression molded PMMA: extremely flexible and strong.
- ✓ The ends of the rings are gradually formed to 'tip-up' like a ski tip - this allows the CTR to be easily guided in the capsular bag.
- ✓ CE and FDA approved.

1) Interim Results of the United States Investigational Device Study of the Ophtec Capsular Tension Ring. Francis W. Price et al. Ophthalmology 2005 Mar;112(3):460-5

ophtec

Ophtec bv
Schweitzerlaan 15, 9728 NR Groningen, The Netherlands, +31 (0)50 525 1944, info@ophtec.com

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RingJect

Preloaded Capsular Tension Ring in a single use injector

Key Opinion Leaders from around the world routinely use Capsular Tension Rings (CTRs) with all premium IOLs

ophtec.com

Key opinion leaders

Prof. J.L. Alió, Spain

"I routinely use CTRs in my premium IOL, cataract and lens surgery. The reasons for this are 4:

1. Better outcomes
We have been able to demonstrate in two different intraocular lenses (Acrylisa Zeiss and Mplus Oculentis), that the use of a CTR creates a better outcome for far and near vision. These results are related to the better performance of multifocal intraocular lenses as the lens is better placed in the eye.

2. More stable IOL, less induction of aberrations
IOL malpositioning is one of the reasons for dysphotopsia related problems. On clinical observation at the slit lamp, small tilts or decentrations cannot be easily observed especially in refractive optics such as the Mplus. In these cases, the CTR makes the lens exactly placed in the frontal plane avoiding the induction of position induced aberrations and subjective symptoms.

3. Explanting and substituting IOL in the bag
A second chance for the patient is that you are unlucky and the patient is unable to tolerate the multifocal image (failure of neuroadaptation), something that happens seldomly today but still has to be considered, to explant the IOL and substitute it with a monofocal lens is feasible with a CTR even after 2 or 3 years, as in my experience. However, without a CTR, to reopen a capsular bag and to explant the lens, especially a plate haptic one, is associated the major complications, visual loss and can compromise the future of the eye.

4. Delayed posterior capsule opacity
The use of CTRs has been associated to delayed PCO. PCO is one of the main reasons for light scattering and when it happens it very early and negatively affects the outcome of the multifocal IOL. Such a delay is very much welcome in these cases.

For all these reasons, I strongly recommend the use of CTR in every premium intraocular lens. It might be possible that every IOL, multifocal or not, should benefit from a CTR implant but definitely our premium patients will find a much better outcome and a much better future in case of optical related complications if they have a CTR implanted jointly with the premium IOL."

References:
Alió JL, Plaza-Puche AB, Piñero DP. Rotationally asymmetric multifocal IOL implantation with and without capsular tension ring: refractive and visual outcomes and intraocular optical performance. J Refract Surg. 2012 Apr;28(4):253-8
Alió JL, Plaza-Puche AB, Javaloy J, Ayala MJ, Vega-Estrada A. Clinical and optical intraocular performance of rotationally asymmetric multifocal IOL plate-haptic design versus C-loop haptic design. J Refract Surg. 2013 Apr;29(4):252-9
Alió JL, Elkady B, Ortiz D, Bernabeu G. Microincision multifocal intraocular lens with and without a capsular tension ring: optical quality and clinical outcomes. J Cataract Refract Surg. 2008 Sep;34(9):1468-75

Dr F. Wiley, USA

"I use Ophtec CTRs regularly on my premium lens cases, CTRs allow for short and long term rotational stability for toric IOLs, and positional stability for presbyopic IOLs. Furthermore CTRs give extra assurance in the rare instance a toric IOL has to be adjusted or presbyopic IOL needs to be exchanged.

For these reasons, I have never regretted a prophylactic placement of a CTR."

Dr E. Mertens, Belgium

"I use CTRs with all of my Premium IOLs. I have tried different types of CTR, but my favorite one is the Ophtec CTR, which is easy to implant and gives the best results."

Prof. C.K Joo, Korea

"Positioning of multifocal IOLs is important as a tilt or decentration can degrade the quality of vision and produce photic phenomena, causing subjective symptoms and decreased patient satisfaction. Perfect centration of multifocal IOLs is crucial to their optimum optical functioning and to preventing problems related to decentration and tilt, especially night-vision complaints. Capsular tension rings were developed to stabilize the capsular bag.

They have been shown to inhibit posterior capsule opacification, may play a role in the stability and positioning of multifocal IOLs, and may prevent IOL rotation caused by capsular bag contraction, thus providing good centration. The more complex the optics, the greater the need for perfect IOL positioning and centration, which the use of a CTR may help achieve. And some studies show that CTR can help achieve a postoperative refraction close the planned refraction without the need to augment the planned postoperative refraction. This supports the hypothesis that the CTR plays a role in stabilizing the IOL and improving outcomes.

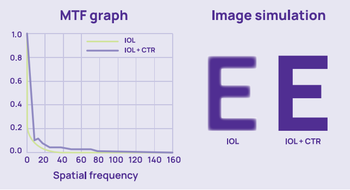
Ophtec CTR provides an easy self-loading for the surgeon's convenience. The unique feature associated with the Rinject product is the proprietary manufacturing process used to manufacture each Ringject capsular tension ring - compression moulding. This process provides a tension ring with total flexibility which ensures that each ring can be manipulated during surgery without the fear of snapping, unlike most other tension rings which can be brittle and can snap when inserted under stress. And we can easily control the speed and the action/retraction of the CTR injection. Also, it's very convenient in case of deep set eyes because it has long small tip."

Prof. S. Shah, UK

"I use CTRs routinely for my premium IOL patients as I believe this ensures good centration and prevents late movement from capsule contraction. In the rare occurrence that the lens needs to be explanted, it also facilitates surgery as the bag opens up very easily.

I prefer Ophtec CTR because they are preloaded, relatively pliable out of injector so they insert without any additional tension on bag and they unhook without manipulation. Hence they add no significant time on for the surgical procedure"

CTR with all premium IOLs - Improved quality of vision

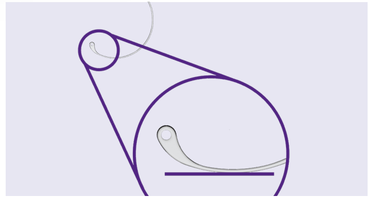


An image simulation using the actual modulation transfer function of an eye with a multifocal lens (left) and one with both lens and a capsular tension ring (right) show an increase in sharpness in the latter eye.

Compression Molding Technology

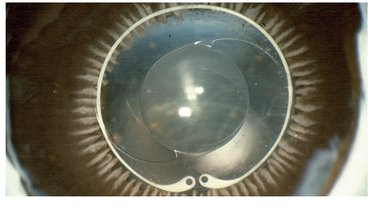
Ophtec has developed a unique production process for the manufacturing of CTRs: Compression Molding Technology. During the compression molding process the molecular structure of PMMA is enhanced by redistributing the molecules into longer chains, resulting in a much stronger material.

ONLY Ophtec has the unique "ski tip" feature



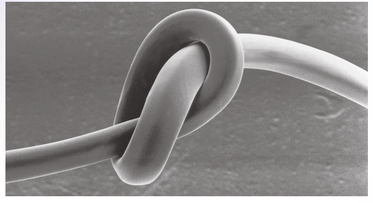
The ends of the rings are gradually formed to "tip-up" like a ski tip - this allows the CTR to be easily guided in the capsular bag as the ring is dialed-in. The 'ski tips' allow the tips to flow unimpeded in the capsular bag and not become 'snagged'.

The image below shows Ophtec's capsular tension ring



Note: perfectly circular capsular bag. Ophtec tension rings are designed to be more flexible and not deform the capsular bag.

Ophtec's unique and proprietary process



Ophtec unique and proprietary process allows our CTR to be extremely flexible with incredible strength. ONLY Ophtec can tie its tension rings in a knot.

Compression

The Pre-compression shape (oval)becomes perfect circle under full compression. The circular shape keeps the capsular bag perfectly symmetrical.

Videos

Prof. C.K. Joo, Korea
'Effects of a preloaded CTR on stability of intraocular lens with hydrophilic and hydrophobic acrylic materials'

Prof. S. Shah
'Ringject Preloaded CTR'