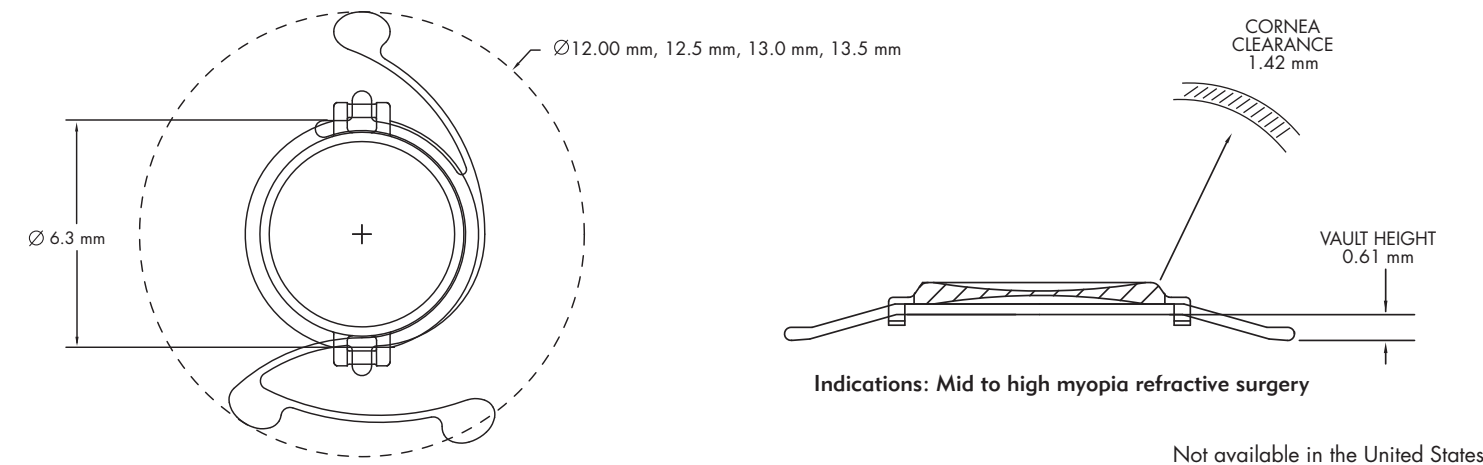


# Kelman Duet Implant Model 712



Not available in the United States

## Additional Specifications

- The KELMAN DUET IMPLANT Model 712 is a small incision anterior chamber angle placement Phakic Intraocular Lens with two separate parts: An independent PMMA haptic available in four different overall diameters: 12.0 mm, 12.5 mm, 13.0 mm and 13.5 mm (special order) and a 6.3 mm (includes a 0.3 mm Glare-Shield) monofocal biconcave silicone optic with UV absorber. Refractive Index = 1.430 @ 35° C
- Diopter powers are available from -6.0D to -20.0D by 1.0D steps
- The standard package includes one (1) silicone optic and three (3) haptics, 12.0 mm, 12.5 mm, 13.0mm
- The KELMAN DUET IMPLANT is injected through a < 2.0 mm incision. The optic is affixed to the haptic by way of optic eyelets and haptic tabs using a Sinsky type hook. (See procedure on backside)

## Determination of overall diameter

It is strongly recommended to evaluate the anterior chamber structure pre-operatively using Optical Coherence Tomography (OCT) or with corresponding other technologies that are able to measure angle-to-angle distance (3). This distance will be used to select the overall diameter of the KELMAN DUET IMPLANT. The measurement of the horizontal "white-to-white" distance and adding 0.5mm to the value may lead to a higher incidence of pupil ovalization (1, 2).

## Power calculation

To calculate the power of the KELMAN DUET IMPLANT, the surgeon will need the following information:

- The corneal power: Measured with a keratometer
- The anterior chamber depth of the patient
- The pre-operative refractive power
- The spectacle vertex distance of the refraction (normally 14 mm)

The other parameter is the surgeon factor, using a term proposed by Dr. Jack Holladay (4). This is the distance from plane of iris root to the principle plan of the PIOL in the anterior chamber. This value is derived from the theoretical value and the vault of the haptics. Recommended surgeon factor is 0.9 mm. It is recommended to use the Van de Heijde formula for the calculation, see below, if emmetropia is desired.

(1) AA = 3.74	(2) ELP = AA + SF	(3) IOL = $\frac{1336}{\frac{1336}{1000} - \text{ELP}} - \frac{1336}{\frac{1336}{1000} - V}$
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(where K is the keratometer reading and V is the Spectacle Vertex distance)

(1) Corneal diameter measurements by corneal topography and angle-to-angle measurements by optical coherence tomography: evaluation of equivalence, Piñero DP, Plaza Puche AB, Alió JL: J Cataract Refract Surg. 2008 Jan;34(1):126-31  
(2) Anterior segment biometry with 2 imaging technologies: very-high-frequency ultrasound scanning versus optical coherence tomography, Piñero DP, Plaza AB, Alió JL: J Cataract Refract Surg. 2008 Jan;34(1):95-102  
(3) Internal anterior chamber diameter using optical coherence tomography compared with white-to-white distances using automated measurements. Kohnen T, Thomala MC, Cichocki M, Strenger A.: J Cataract Refract Surg. 2006 Nov;32(11):1809-13  
(4) Refractive Power Calculation for Intraocular Lens in the Phakic Eye, Holladay, J.T.: Am. J. Ophthalmol. 116:63-66, 1993



Haptic snaked into anterior chamber

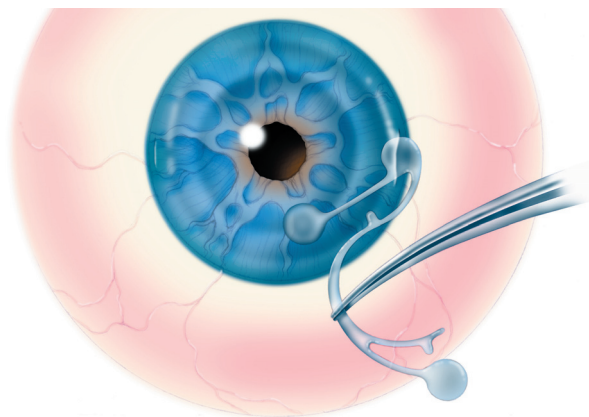


Figure 1

Verify correct angle placement with gonioscopy

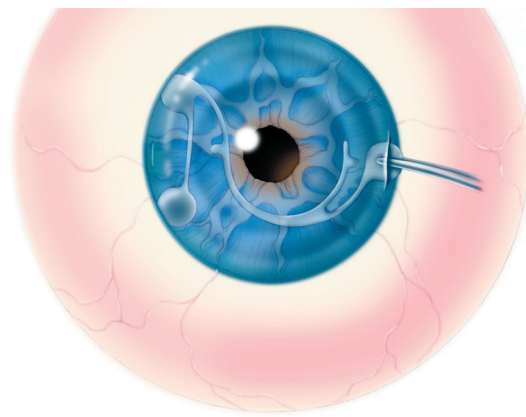


Figure 2

Folded optic is injected through a 2.0 mm cartridge

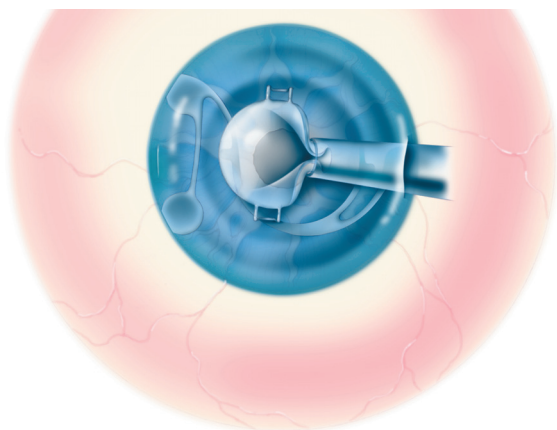


Figure 3

Tabs engaged

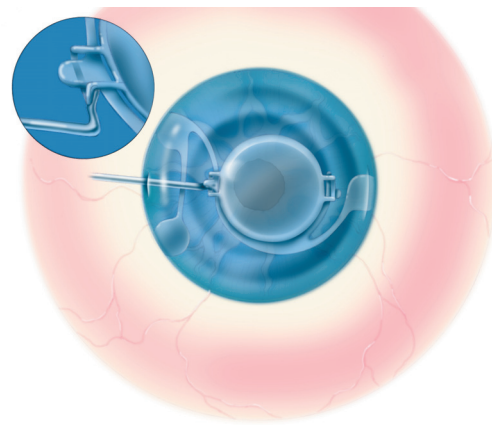


Figure 4

# TEKIA