MICRO
INCISION
CATARACT
SURGERY

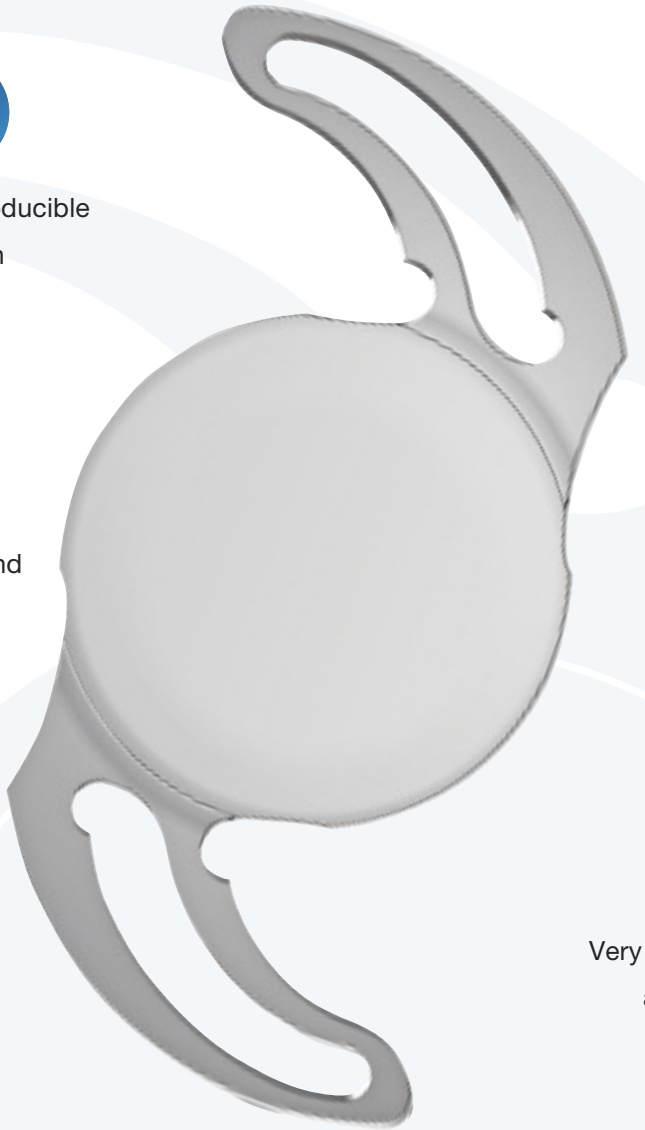
MATERIAL & DESIGN
MAKE THE DIFFERENCE

3! FLEX
HL

Digitally signed by Bolocan Vladimir
Date: 2019.03.28 10:05:46 EET
Reason: MoldSign Signature
Location: Moldova

MEDICONTUR
Vision of Expertise

First-in-class material & unique patented design make the difference



01
Easy and reproducible injection

02
Even at 1.8 mm micro-incision

03
Long-term axial, radial and torsional stability

04
Precise and stable refractive results

05
Improved PCO prevention

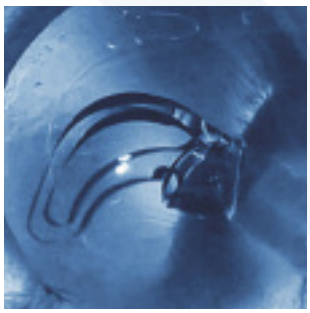
06
Very low chromatic aberration

Bi! FLEX HL

MATERIAL & DESIGN
MAKE THE DIFFERENCE

A first-in-class material for easy implantation even at 1.8 mm incision

Only a material with specific rheological properties
is suitable for optimal micro-incision surgery (MICS).



Bi-Flex HL is manufactured from
a long-time proven 25% hydrophilic copolymer material

- optimally combining hydrophilic and hydrophobic monomers
- offering rheological properties required for MICS:
  ELASTICITY · SOFTNESS · SHAPE MEMORY
- creating optimal conditions for MICS.

- **Smooth continuous gliding of the IOL inside the cartridge, low injection force.**
- **Immediate, symmetric and atraumatic unfolding inside the capsular bag.**

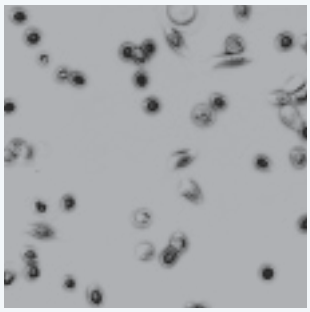
for permanent optic quality & improved safety

Only an IOL made of first-in-class material can offer constant optic quality & improved safety.

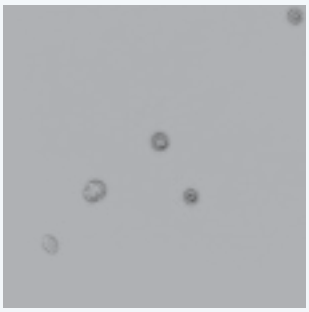
Bi-Flex HL material offers permanent optic quality as a result of

- unequaled transparency
- very low chromatic aberration thanks to high Abbe number.

In vitro experiment of cells adhesion



26% Hydrogel · MMA



Bi-Flex HL · 25% copolymer

Bi-Flex HL material
offers improved safety with

- optimized biocompatibility
- low ionicity surface for minimized rates of cells adhesion.

MEDICONTUR

A unique & patented 360° square edge that deserves its name for improved PCO prevention

Only a real square edge can stop cells migration.

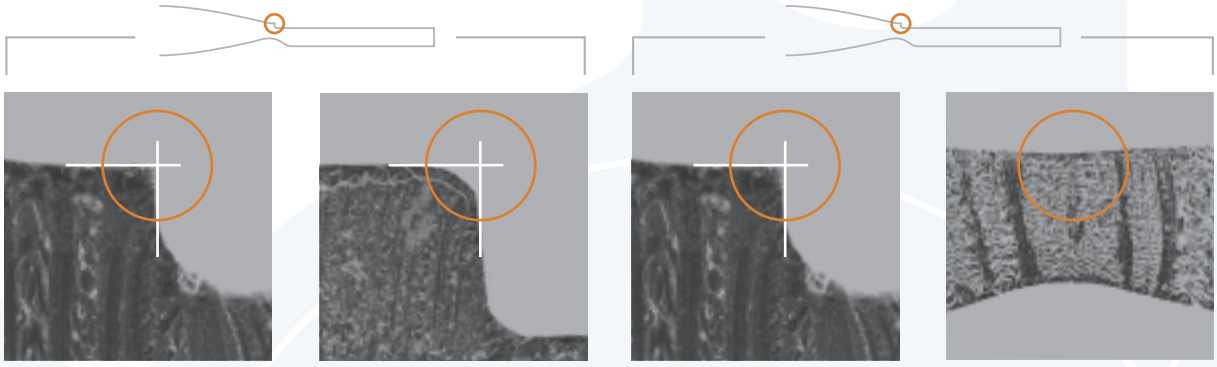
Studies [1] [2] have highlighted the essential role of the optics profile design – especially the existence of a square edge all around the optic – to control cell migration.

Specific polish-free process manufacturing and patented design characterize all Bi-Flex IOLs with

- a sharp square edge
- all over 360° including the optic-haptic junction zone.

A highly protective "edge effect" against lens epithelial cell migration.

Comparative scanned images of IOLs marketed with "sharp edge" at the optic-haptic junction



Medicontur polish-free Bi-Flex:

Competitor A:

Medicontur polish-free Bi-Flex:
Real square edge over 360°

Competitor B:
No square edge over 360°

Medicontur Bi-Flex HL is the only lens which has a real square edge over 360° even at the optic-haptic junction.

[1] Werner L, Mamalis N, Pandey SK, et al. Posterior capsule opacification in rabbit eyes implanted with hydrophilic acrylic IOLs with enhanced square edge. · J Cataract Refract Surg 2004; 30:2403-2409 · [2] Tetz M., Wildeck A. Evaluating and defining the sharpness of intraocular lenses. Part 1: Influence of optic design on the growth of the lens epithelial cells in vitro. · J Cataract Refract Surg 2005; 31:2172-2179

A unique & patented design for ultimate centration & long-term stability

Only a specific design offering a large contact angle and adequate haptics resistance can provide long-term centration and stability.

Bi-Flex HL benefits from all assets of the Bi-Flex platform design characteristics

- **for reproducible centration of the IOL**
- **for axial, radial and rotational stability.**

These unique characteristics are

the largest contact angle between haptics and capsular bag equator among all IOLs

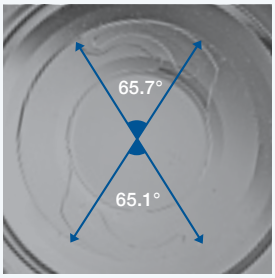
2 x 90° = Total 180°contact angle

the Dolphin zone & the double haptics specific design

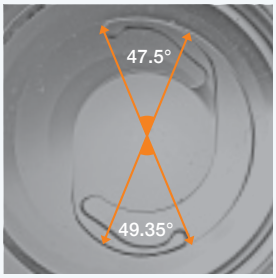
- **for immediate and symmetric unfolding**
- **for optimized compressibility & resistance against capsular bag compression force.**

Experimental simulator of different capsular bag diameters

Capsular bag diameter: 10mm

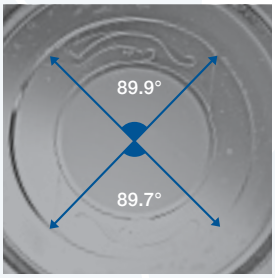


Bi-Flex HL · Average arc of contact angle: 65°

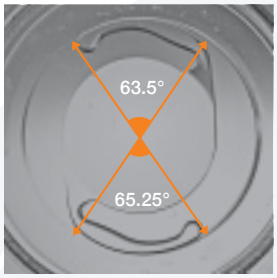


Competitor A · Average arc of contact angle: 49°

Capsular bag diameter: 9mm



Bi-Flex HL · Average arc of contact angle: 90°



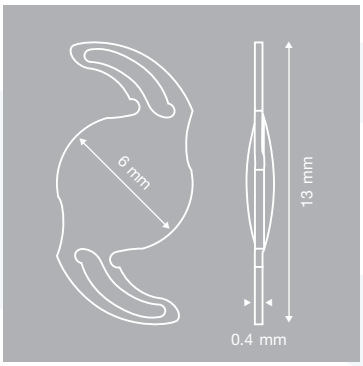
Competitor A · Average arc of contact angle: 65°

In both cases, Bi-Flex HL arc of contact with capsular bag equator is larger.

Bi-Flex HL

MATERIAL & DESIGN
MAKE THE DIFFERENCE

A unique & patented design offering additional assets



- **A 0° angulation**
  to easily remove all viscoelastic gel
  from behind the IOL after the surgery
  to improve refraction stability.
- **An aspheric optical design**
  to limit optical aberrations
  to improve patients' visual comfort.
- **A full 6mm optic**

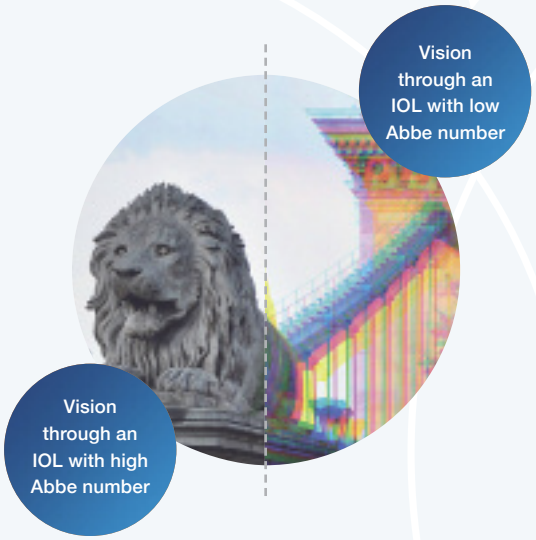
A first-in-class material with a high Abbe number

Bi-Flex HL material & the Abbe number

The Abbe number is a measure of a transparent material's dispersion in relation to the refractive index.

The higher the Abbe number the lower the chromatic aberration.

Bi-Flex HL benefits from a very high Abbe number value: 58.



A natural yellow filter for optimized protection against “blue light”

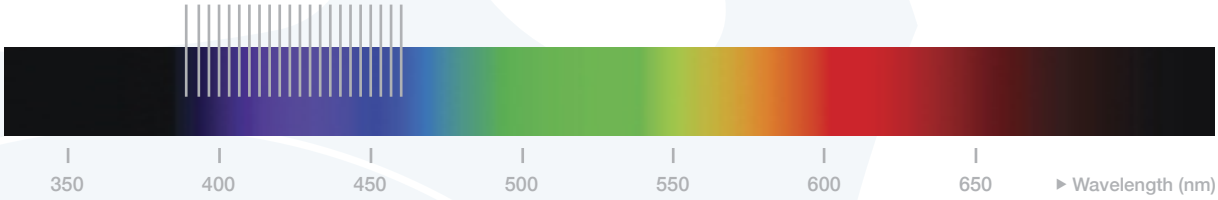
Only a natural yellow filter can offer the required protection while preserving quality vision.

Violet and blue light corresponds to visible light wavelengths between 390 and 495 nanometers (nm). It is known that short wavelengths are potentially harmful to the macula. On the other hand we know that blue light is important for the scotopic vision (night driving).

Medicontur natural yellow filter cuts from 390 nm to 470 nm

- covering the most critical “high energy” portion of visible light
- preserving the low energy portion of blue light to maintain scotopic vision capacity, colour and contrast sensitivity.

Medicontur natural yellow filter range



Bi-Flex natural yellow filter

No yellow filter at all

Bi-Flex HL natural yellow filter

Non-natural yellow filter

Bi-Flex natural yellow filter:
Filtering as much as necessary. Preserving as much as possible.






EA-BMCBEN 06 201603

Vision of expertise

An independent European company, ever growing and evolving since 25 years.
Consistent high quality with more than 4 million intraocular implants manufactured and implanted.
The most diverse portfolio of Intraocular Lenses, both hydrophilic and hydrophobic, all premium categories, state of the art preloaded systems.
A team of more than 200 dedicated professionals constantly pushing the limits of quality.

Facilities located near Geneva (Switzerland),
near Budapest (Hungary) & Brno (Czech Republic).

Distribution in more than 60 countries with a growing share worldwide.

MEDICONTUR
Vision of Expertise

Medicontur
Medical Engineering Ltd
export@medicontur.com
www.medicontur.com

Head Office
Herceghalmi Road
2072 Zsámbék
Hungary

International Office
Chemin des Aulx 18
1228 Plan-les-Ouates
Switzerland

CE 0120