

MATERIAL & DESIGN
MAKE THE DIFFERENCE

3! FLEX

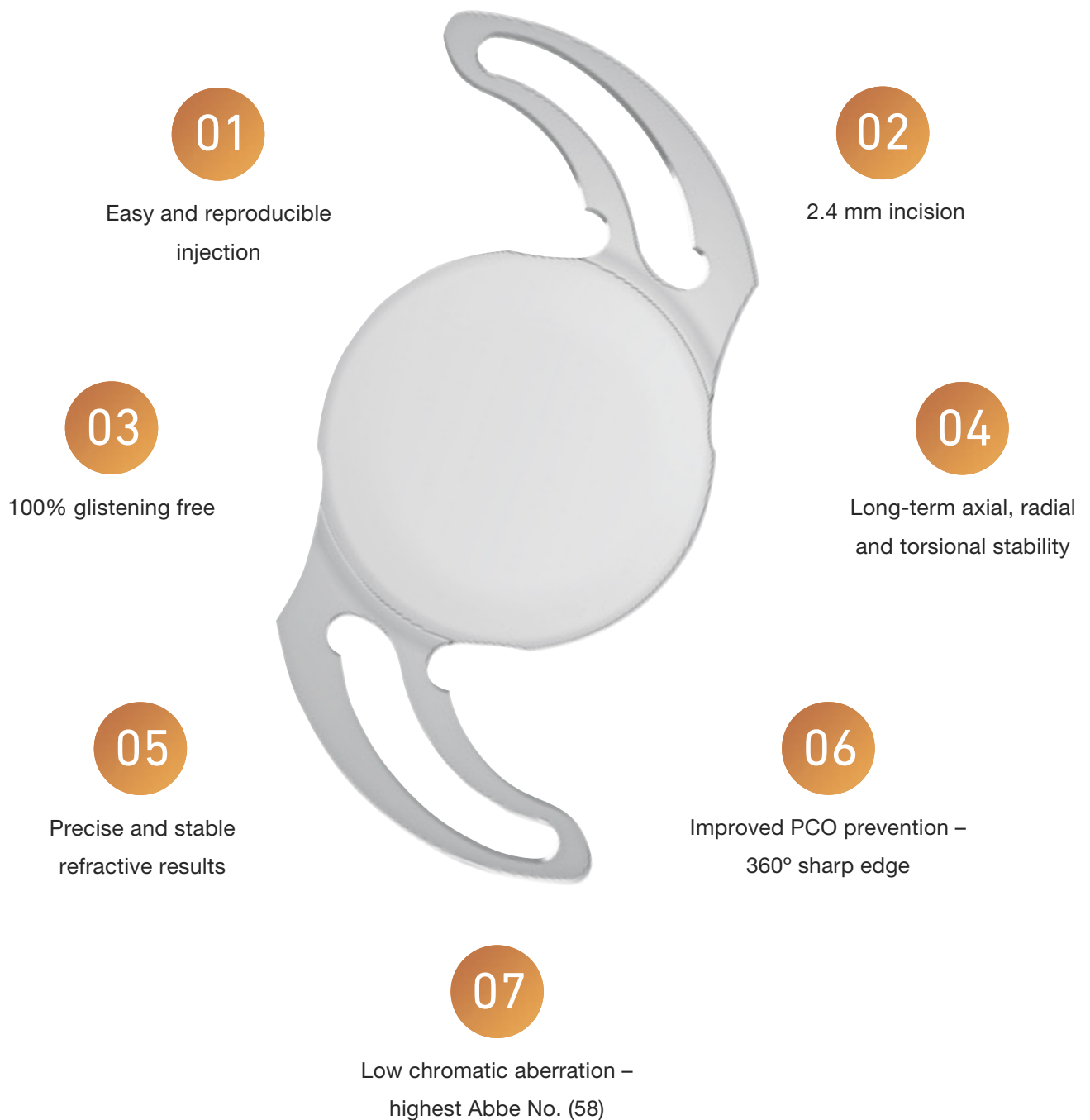


MEDI  **NTUR**

Vision of Expertise



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





A first-in-class material Easy implantation – 2.4 mm incision

SEMTE – An exceptional innovative hydrophobic material



Bi-Flex HB is manufactured from a long-time proven SEMTE hydrophobic co-polymer material.

- A co-polymer with reduced tackiness compared to other hydrophobic materials
- Improved mechanical and rheological properties at room temperature – optimal glass transition temperature (T_g) at 4°C
- Excellent pseudo-plasticity for quick centration and positioning of the injected lens
- Low rate of cell adhesion – enhanced PCO prevention

Suitable for optimal 2.4 mm mini-incision surgery.



- MEDJET MX injector as the suitable hydraulic injection system.

ELASTICITY · SOFTNESS · SHAPE MEMORY

- Smooth continuous gliding of the IOL inside the cartridge, low injection force
- Gentle but quick, symmetric and atraumatic unfolding in the capsular bag (“like hydrophilic IOLs”)



First-in-class material for an excellent optic quality and improved safety

100% glistening free

- Hydrophobic acrylic IOLs do not need to be packed & stored in water.
- SEMTE's refractive index (1.47) closer to the physiological refractive index of the aqueous humor.
- Medicontur hydrophobic IOLs are lathe cut – not molded.

Why accept materials with a low Abbe number?

Bi-Flex HB material & the Abbe number

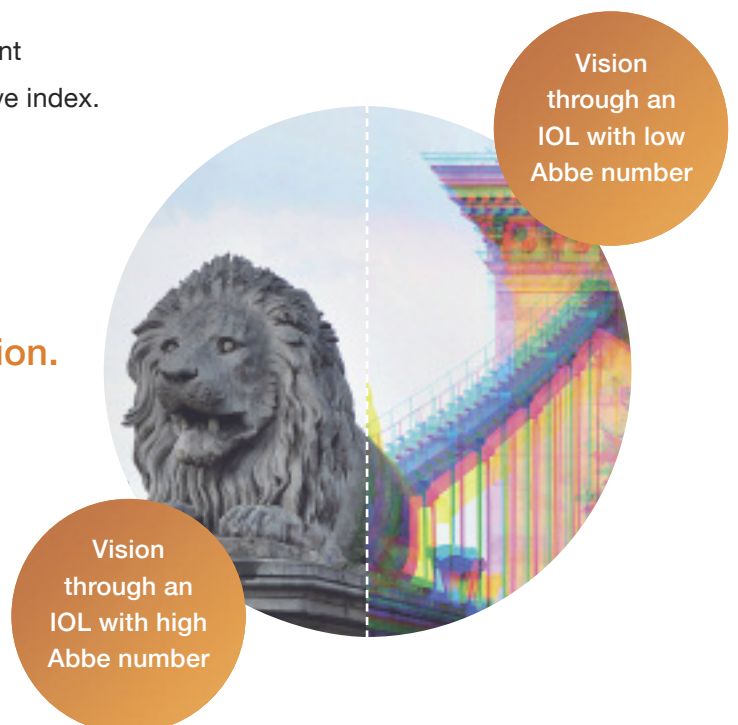
The Abbe number is a measure of a transparent material's dispersion in relation to the refractive index.

**The higher the Abbe number,
the lower the chromatic aberration.**

Chromatic aberration reduces image quality in visible white light because each of its color wavelengths refracts differently.

Excellent optical performance

Bi-Flex HB presents the highest **Abbe number: 58**



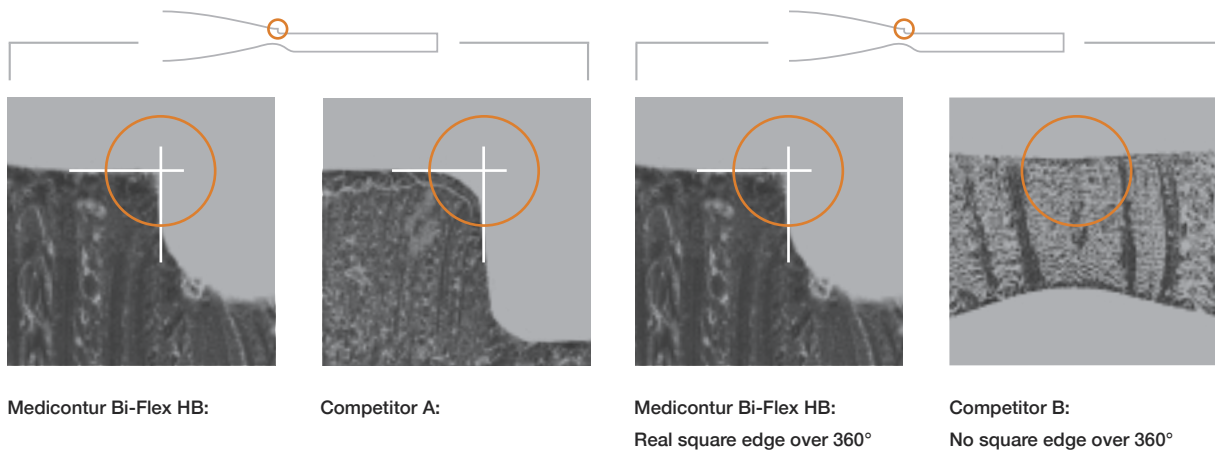


A unique & patented 360° square edge that deserves its name

Many IOLs labeled "Sharp Edge" actually do NOT have a sharp edge. A sharp edge is defined by a radius smaller than 10µm.

Studies^{[1][2]} have highlighted the essential role of the optics profile design – especially the existence of a square edge all around the optic: only a real square edge can stop cell migration.

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



Medicontur Bi-Flex HB:

Competitor A:

Medicontur Bi-Flex HB:

Real square edge over 360°

Competitor B:

No square edge over 360°

Specific process manufacturing and patented design characterize all Bi-Flex IOLs with a sharp square edge all over 360° including the optic-haptic junction zone.

Prospective comparative study with hydrophobic IOLs conducted between 2009–2012

70 eyes, 35 patients · Gábor Scharioth, MD, PhD, Recklinghausen, Germany

	Alcon AcrySof	Medicontur hydrophobic
PCO inside optic		
• 12 months	8	0
• 24 months	16	16
YAG capsulotomy		
• 12 months	1	0
• 24 months	5 (14%)	3 (8%)

By courtesy of Gábor Scharioth, MD (ESCRS 2012)

[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 perfect centration & long-term stability

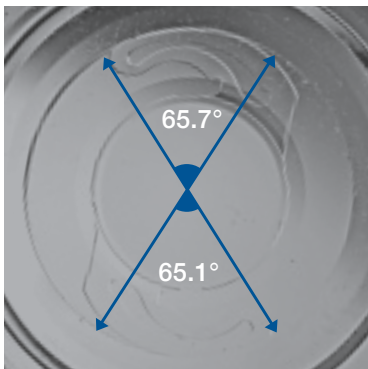
An arc of contact as large as possible and perfectly balanced haptic forces result in long-term centration and stability.

Bi-Flex HB benefits from the MediconTur Flex-IOL platform design characteristics:

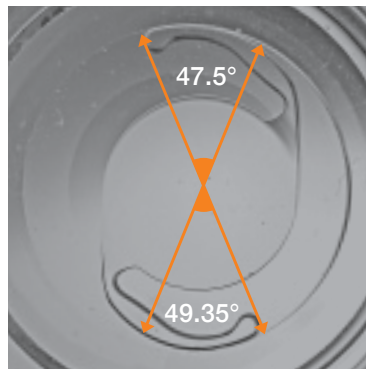
- **Reproducible centration** • **Axial, radial and rotational stability** • $2 \times 90^\circ = 180^\circ$ arc of contact

Experimental simulation of different capsular bag diameters:

Capsular bag diameter: 10 mm



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

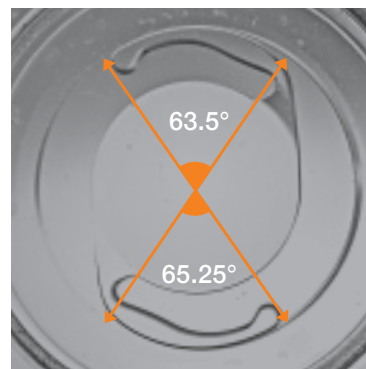


Competitor A · Average arc of contact angle: 49°

Capsular bag diameter: 9 mm



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



Competitor A · Average arc of contact angle: 65°

Bi-Flex HB arc of contact with capsular bag equator is superior by far.



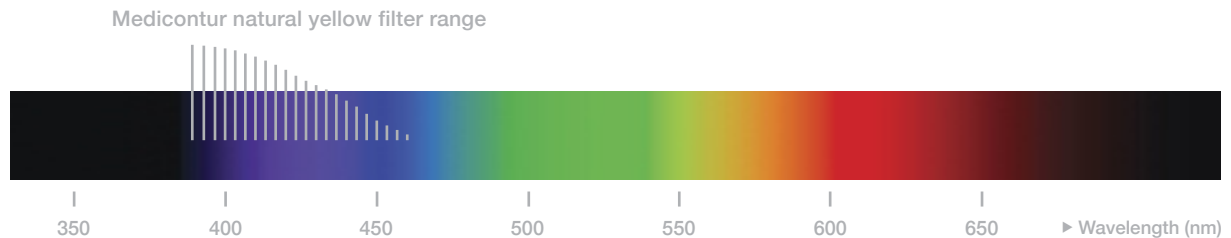
Medicontur Natural Yellow Filter

The natural yellow filter offers the required protection while preserving the quality of vision.

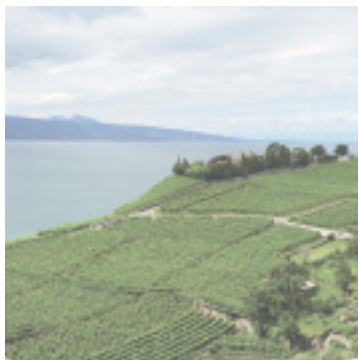
Violet and blue light corresponds to visible light wavelengths between 390 and 495 nanometers. It is known that short wavelengths are potentially harmful to the macula. On the other hand we know that blue light is important for the scotopic vision (night driving).

Medicontur natural yellow filter cuts from 390 nm to ca. 450 nm

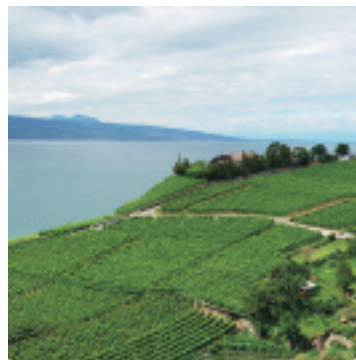
- Covering the most critical “high energy” portion of visible light.
- Preserving some of the “low energy” portion of blue light to maintain scotopic vision capacity, colour and contrast sensitivity.



Medicontur natural yellow filter



No yellow filter at all



Bi-Flex HB natural yellow filter



Non-natural yellow filter

Medicontur natural yellow filter: Filtering as much as necessary. Preserving as much as possible.



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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.

Focused on your vision!