

BEST KEPT SECRETS

Mini Well Ready



THE EXPERT

Spectacle independence is probably one of the most often discussed topics in elective ophthalmic surgery. LASIK, the first surgical intervention to use wavefront optimization to achieve spectacle independence,¹ is arguably the best-known elective procedure to enhance visual outcomes after corneal refractive surgery.² Yet wavefront analysis now can be used for other purposes than to optimize patient outcomes; today it can be used to create multifocality on the cornea.³

Recently, a new type of IOL, the Mini Well Ready (Sifi Medtech), has come on the market using wavefront technology to enhance range of vision and compensate for presbyopia in cataract surgery and refractive lens exchange.^{4,5} Early clinical results with this progressive multifocal IOL have demonstrated a wide range of vision in implanted patients. The IOL optic features three circular zones (Figure 1), each with a different aspheric profile. Therefore, this lens does not create the distinct focal points typical of diffractive IOLs; rather, it creates a range of focus to provide patients with spectacle independence at multiple distances.

The IOL is manufactured from a copolymer in a one-piece, four-point haptic fixation design. It can be delivered through an injector into a 2.2-mm incision. A coating on the injector cartridge enables the surgeon to implant the IOL with saline irrigation only, so that there is no need to remove any OVD after implantation.

REFRACTIVE RESULTS

The International Vision Correction Research Centre Network (IVCRC.net) is currently evaluating the Mini Well



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Ready IOL. To date, we have evaluated 47 eyes (30 patients) operated in five of our clinical research centers in Germany: Ahaus, Duesseldorf, Heidelberg, Kiel, and Rheine. The median patient age was 68 years (range, 43–79 years).

Thus far, refractive results from these research centers have been comparable with those of other research facilities presenting data at multiple international ophthalmic meetings (Table 1). In our series, 92.1% of implanted eyes achieved a postoperative spherical equivalent of ± 0.75 D. The functional outcomes are also promising, with median monocular UDVA, UNVA (40 cm), and UIVA (80 cm) of 0.22, 0.20, and 0.30 logMAR, respectively. The defocus curve (Figure 2) shows a visual acuity of greater than 0.3 logMAR from 0.50 to -2.25 D.

 The new design principle of the Mini Well Ready offers us another key option to treat presbyopia in our patients. Furthermore, the lack of diffractive

TABLE 1. REFRACTIVE RESULTS (MONOCULAR)

Parameter	Preoperative Median (Range)	3-Month Postoperative Median (Range)
Sphere (D)	0.75 (-5.25 to 8.00)	0.00 (-1.50 to 0.75)
Cylinder (D)	-0.75 (-2.25 to 0.00)	-0.50 (-2.25 to 0.00)
Spherical Equivalent (D)	0.31 (-4.63 to 7.38)	-0.13 (-1.25 to 0.50)

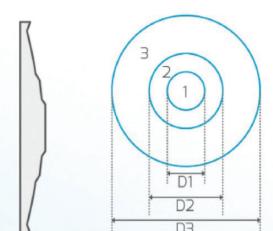


Figure 1. The progressive optic has a central distance zone (1), a surrounding distance zone (2) with spherical aberration of the opposite sign, and a peripheral distance zone (3) with monofocal characteristics.

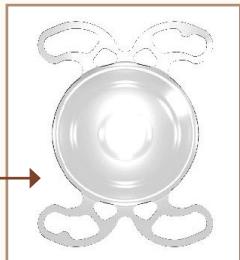


THE LENS

Mini Well Ready

SIFI MEDTECH

- First extended depth of focus (EDOF) IOL to exploit optical aberrations allowing good vision at all distances and good reading fluency
- Biconvex EDOF aspheric optic and double-square edge design
- Four haptics in closed double-C loop with 5° haptic angulation, helping to achieve perfect centration and capsular bag stability, even with capsular shrinkage
- No positive halos around light sources
- Overall diameter 10.75 mm; optic diameter 6 mm
- Available in powers from 0.00 to 30.00 D, with 0.50 D steps between 18.00 and 25.00 D



(Courtesy of Sifi Medtech)

For more information:

<http://www.sifimedtech.com/en/category/prodotti/area-chirurgica-prodotti/iolpremium/>

ring structures on the optical surface of the lens should reduce the rate of halos and glare significantly. At least in our clinical experience, comparing our Mini Well Ready patients to those implanted with diffractive IOLs, complaints of optical phenomena have been reported much less frequently.

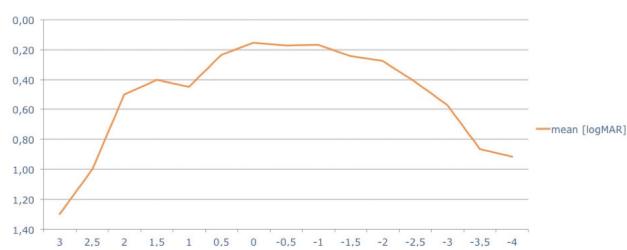


Figure 2. The monocular defocus curve shows no dropout at intermediate distances.

POINTERS AND PEARLS

IOL optics using wavefront technology might not be the right solution for every patient. In our patients with average corneal aberrations, those aberrations do not seem to influence outcomes; however, results in patients with corneal aberrations outside of normal limits have not yet been presented.

In my experience, the Mini Well Ready is especially suitable for patients with regular corneal aberrations and a mesopic pupil size between 3.5 and 5 mm. With this pupil size, patients are able to use all optical zones on the IOL. As the optical principle of this IOL type does not create distinct focal points but rather a progressive focal area, the lens is also my first choice in eyes with a higher risk of tilt or decentration. Although a patient's visual function might not be perfect if tilt or decentration occurs, the ability to see at multiple distances with a low risk for photic phenomena helps to achieve a high rate of patient satisfaction after implantation of this IOL.

The Sifi Mini Well Ready is a key tool in our toolbox, capable of treating presbyopia in any patient undergoing refractive lens exchange or cataract surgery. The wide defocus curve without gaps in the intermediate range is what makes this IOL unique compared with other presbyopia-correcting lens technologies. Still, patient selection and counseling are the most important factors in any presbyopia surgery.

Further investigations of this IOL model, including its functional performance with different degrees of corneal aberrations and variations depending on optical zones of the cornea, will have to be evaluated to define suitable patient populations. ■

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AT A GLANCE

- The Mini Well Ready IOL uses wavefront technology to enhance range of vision and compensate for presbyopia in cataract surgery and refractive lens exchange.
- Each of three circular zones of the IOL have a different aspheric profile, creating a range of focus that can provide patients with spectacle independence at multiple distances.