

Digital Lenses for a Connected World

Essilor Eyezen

WRITER April Petrusma

Progressives were originally designed in the late 1950s as a solution for removing the seg line in a bifocal. The goal was to create something that was cosmetically more attractive, not to enhance intermediate vision.

Technically, intermediate vision was provided by default, due to the necessity of the design to graduate from distance to near. Fast forward 60-plus years, our world has changed dramatically, and so too has our reliance on seeing things clearly at mid-range, with our desire to have it corrected following suit.

Today we have a multitude of options available to correct our patients' vision at almost any specified working distance. There is an array of indoor occupational designs on offer to meet our demands for clear intermediate vision and to improve our digital experience. The range is excellent for specific working distances where a traditional progressive lens simply can't perform to the same standard. Tiarn Barrie-Moore from CR Surfacing explained that the company's Australis I-Tech lens

offers a “+40% increase in peripheral vision compared to a regular progressive design”.

A VERITABLE CHOICE

Depending on the wearer's individual needs, the choices in design vary greatly. From degressive, to progressive-based designs, and those made from an exact biometric eye model, there is something to suit almost every requirement. The more traditional degressive, which decreases in power from a near focal length of around 40cm at the bottom of the lens to a focal length of your choosing at the



The average person spends almost seven hours on their screens every day. Despite so much time spent focussed on digital devices, there's still a surprising lack of awareness when it comes to occupational lenses and the expectation that progressives will be an all-in-one solution for presbyopes.

top, has been around for several decades. However, the technology and corridor areas have improved significantly. Designs like Opticare's Clearpro Office now come in nine different shifts with shift select assistance available through the free VRC App.

For those seeking a bit more flexibility, there is now the option for progressive-based designs that cater primarily for intermediate and near, offering reduced eye fatigue and improved ergonomics. This approach offers manufacturers the ability to customise

the lens and more easily meet focal length requirements. As just one example, Jessica Kingsley from Zeiss said in the Zeiss Office Lens, the upper section of the progressive lens is converted to an intermediate functional area.

"Since the distribution of the viewing zones over the lens surface only involves the intermediate and near zones, it delivers much larger and clearer viewing zones," she said.

MAKING DECISIONS EASIER

With so many options available when selecting a lens design, there are times when it can feel like our industry is saturated with choices. So, how can the optical dispenser hone in and find the best indoor occupational lens for the wearer?

Product knowledge is, of course, one important piece of the puzzle. However, understanding the wearer's true lifestyle needs is imperative.

Appropriate questions to gain insight into a patient's life are just as important as the prescription when it comes to dispensing indoor occupational lenses. It allows the optical dispenser to gain a full understanding of the day-to-day impact that the wearers' ocular conditions have on their lives. It is this understanding that makes or breaks a successful visual outcome for the wearer.

Asking the wearer to estimate the distance they sit from their screen as opposed to simply asking "Do you use a computer?" can make all the difference. In the Harris interactive *Home Office and Indoor Glasses Survey 2021* (conducted for Hoya) only one surveyed person in Australia said they sat more than 100cm from their screen versus 27 who said they sat 30-40cm away. This seemingly minor detail is important. This is where the dispenser must ask themselves, "What if that one person is my patient and I don't ask the questions to find that out. Would they comfortably wear the same lens design as the other 27 people?" The answer is obviously no.

The type of digital device used, the distance from the screen, the number of screens, hobbies, current problems – these are all gold mine questions for helping to make the best recommendations and ultimately setting the optical dispenser up for dispensing success.

The other key factor, as previously mentioned, is the optical dispenser's level of product knowledge. A thorough understanding of lens design solutions currently available to your practice, coupled with the ability to identify the wearer's visual needs, enables you to use a process of elimination to determine the most appropriate design.

Most large manufacturers have families within their indoor occupational lens designs to cater for individual wearer requirements. Knowing what these are instantly gives the optical dispenser a head start in recommending a perfectly suited, functional lens. Hoya's premium occupational lens, Hoyalux iD

"there is now the option for progressive based designs that cater primarily for intermediate and near, offering reduced eye fatigue and improved ergonomics"

WorkStyle 3 is a perfect example of this, with the lens offered in three individual designs – Close, Screen and Space – from which the dispenser can select based on the wearer's visual preferences. To assist with this, Hoya's Ulli Hentschel said, "Hoya has a large range of resources available for anyone wanting to update their existing product knowledge including the Hoya Hub – an online platform where you can access product information and marketing materials along with gaining access to the Hoya Learning Centre."

POST-SELECTION MEASUREMENTS

Once the most appropriate selection has been made, the journey continues with precise frame and facial measurements required. Getting this wrong can have devastating results for the wearer, so it is always recommended that the optical dispenser asks the manufacturer for the fitting requirements for each lens design.

Some require a lot more data than just mono PDs and pupil centre heights to function at full capacity, with many suppliers even offering their own digital measuring devices. Rodenstock's Ergo range offers the first high-precision lens made from an exact biometric eye model, based on individual measurements with the DNEye Scanner. The 'impression' category is 100% individual and considers the individually measured real position of wear of the glasses in front of the eyes of the spectacle wearer.

Nicola Peaper of Rodenstock explained that this personalisation is "calculated using frame parameters of corneal vertex distance, pantoscopic tilt, and face form angle".

DIGITAL LENSES FOR PRE-PRESBYOPES

With all this in mind, it shouldn't be forgotten that indoor occupational lenses are designed to provide better clarity and a wider field of vision for close to intermediate range distances – they don't cater for everyday activities. It is important for the dispenser to

set this expectation and recommend them as a second pair to readers or progressive lenses.

Neither should we forget that they aren't a solution for pre-presbyopic digital users. That's not to say there isn't a solution

"A thorough understanding of lens design solutions... coupled with the ability to identify the wearer's visual needs, enables you to use a process of elimination to determine the most appropriate design"

here too. This is where anti-fatigue or accommodative lens designs, and even contact lenses, play their part.

In the decades leading up to presbyopia, spending extended time in front of the computer or using a smartphone leaves us constantly straining our ciliary muscle. This is the muscle used to focus by contracting when we observe close-up objects. When over worked, it can leave us with sore and tired eyes, headaches, and blurred vision – a process known as digital eyestrain. To combat this, various manufacturers have designed lenses that incorporate a slight additional power at the bottom of the lens to assist in the focus of nearby objects when gazing down.

Justin Chiang from Tokai Optical explained that Tokai's Rest Series was designed for this exact purpose.

"Rest lenses are accommodative lenses offering a choice of four assist powers; +0.50D, +0.75D, +1.00D and +1.25D. They are designed for the pre-presbyope who spends a lot of time using digital devices, at a desk or completing close work."

The lower portion of the REST lens contains the small additional power which facilitates accommodation when switching from far to near vision. The outcome is less contraction required by the ciliary muscle, resulting in reduced digital eyestrain symptoms.

CONTACT LENS OPTIONS

With so many perfected spectacle lenses on the market for digital use, it is no wonder that they have historically been the preferred choice for screens. In recent years however, contact lens companies have also identified our need to stay connected, productive, educated, and entertained through the digital world. To meet these demands, there are now many contact lenses available that better cater for the dry, irritated and tired eyes many experience while glued to a screen. CooperVision's Biofinity Energys monthly contact lens for instance, has been specifically designed for using digital devices and according to Shannon Morrow, from CooperVision, they are "the world's only contact lenses with Digital Zone Optics lens design". This design technology helps ease ciliary muscle stress and accommodative burden so wearers can shift focus from on-screen to off-screen with less effort. For wearers who are "highly connected to their smartphones, or who spend a large part of their day looking at a computer screen, Biofinity Energys helps the wearers' eyes feel less tired, while seamlessly shifting focus from their digital devices to their everyday activities and back".

April Petrusma is the CEO of Optical Dispensers Australia and a Senior Lecturer at the Australasian College of Optical Dispensing. She is a qualified Optical Dispenser, Trainer, and Business Manager with a degree in Visual Communication.

Spectacle Lenses for a Digital World

Hoya Sync III and iD Workstyle 3

Hoya Sync III is designed to relieve the symptoms of digital eyestrain via a near boost in the lower portion of the lens. Children and young adults through to pre-presbyopes can benefit from this lens technology, which incorporates Hoya's patented Binocular Eye model and the option for individual fitting parameters.

Three boost zone options of +0.57, +0.95 and +1.32 help to prevent or relieve eyestrain, enhancing visual comfort during prolonged up-close activities. Ultra Boost zones provide extra accommodation support for a viewing distance of 20cm and enhance visual comfort for smart phone use.

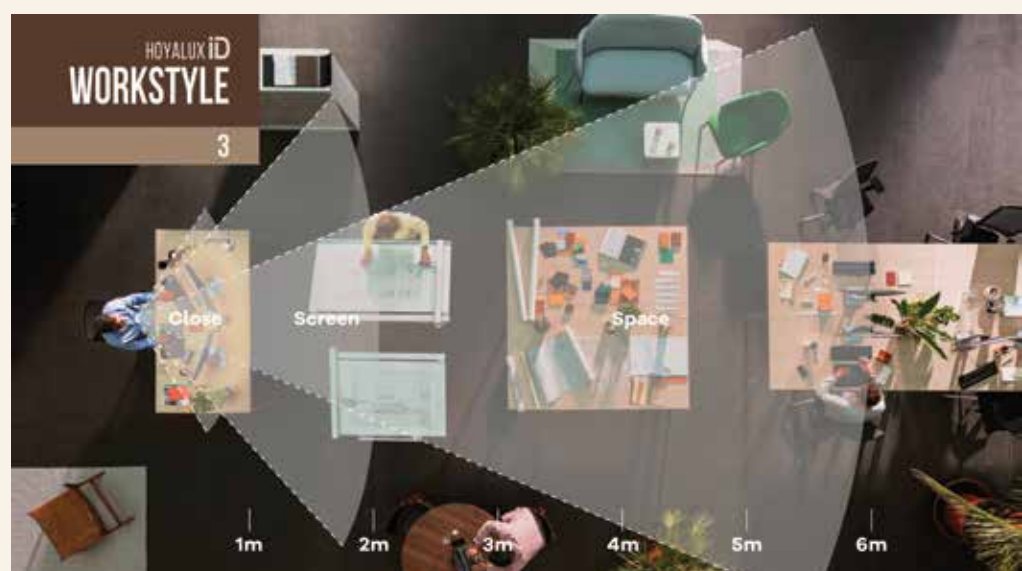
The iD Workstyle 3 is designed to alleviate eyestrain for presbyopes while at work or at home.

iD Workstyle 3 + Space, Screen and Close can be customised to the individual's working conditions and to enhance posture while using laptops and screens.

Full Control is the perfect complement to these lenses. This four-in-one lens coating provides resistance to scratches and bacterial growth on lenses, protection

from UV light, and more relaxed vision when viewing digital devices.

Contact: Hoya Lens (AUS) 02 9698 1577



New

SENSITY

FAST



Fastest light adaptive lenses*

Fades back to a fully clear lens indoors¹ & reaches the half clear state in seconds²

Sensity Fast lenses are the fastest light adaptive lenses available*. They're ideal for patients with busy lifestyles who move indoors and outdoors frequently.

- **Convenient 2 in 1 solution:** Sensity Fast lenses darken to a sunglass lens tint outdoors and fade back to fully clear prescription lenses indoors¹
- **Comfortable when using digital devices³:** Modular Blue Light Control helps to control both outdoor and indoor blue light³
- **Provide 100% protection:** against UV rays⁴
- **Available in 2 attractive colour options⁶:** Grey and Brown

Ask your HOYA Sales Consultant about new Sensity Fast lenses.

*¹²³⁴⁵⁶ For Sensity Fast performance details visit <http://bit.ly/3HYtmeh>.

HOYA
FOR THE VISIONARIES



Australis I-Tech

The Australis I-Tech adapts to the wearer's needs, offering intermediate and near vision for every digital setting. With an

intermediate peripheral field over 40% wider than a regular progressive lens, the Australis I-Tech design helps improve postural ergonomics by reducing unnecessary head and neck movements.



MauiPassport

CR Labs states that unlike other digital and occupational designs, the Australis I-Tech has no set focal lengths. This means the optometrist and dispenser have complete flexibility to customise the range of power to the patient's visual requirements and digital set-up.

Patented HyperThin technology maximises aesthetics and minimises centre thickness, while Eye Harmony delivers sharper peripheral vision and better fusion of lateral images with minimal adaption periods.

Contact: CR Labs (AUS) 1800 334 867

MauiPassport Boost

MauiPassport Boost combines the benefits of an anti-fatigue lens in the near field with the experience of wearing a single vision lens at distance. This advanced single vision lens design helps reduce the fatigue experienced when a person's eyes are constantly refocussing as they shift between various digital devices. Boost power built into the lens (with two options) is designed to reduce eyestrain and headaches related to near-distance focussing. Overall, Maui Jim says this enhanced single vision technology results in improved readability of small fonts and details on digital devices.

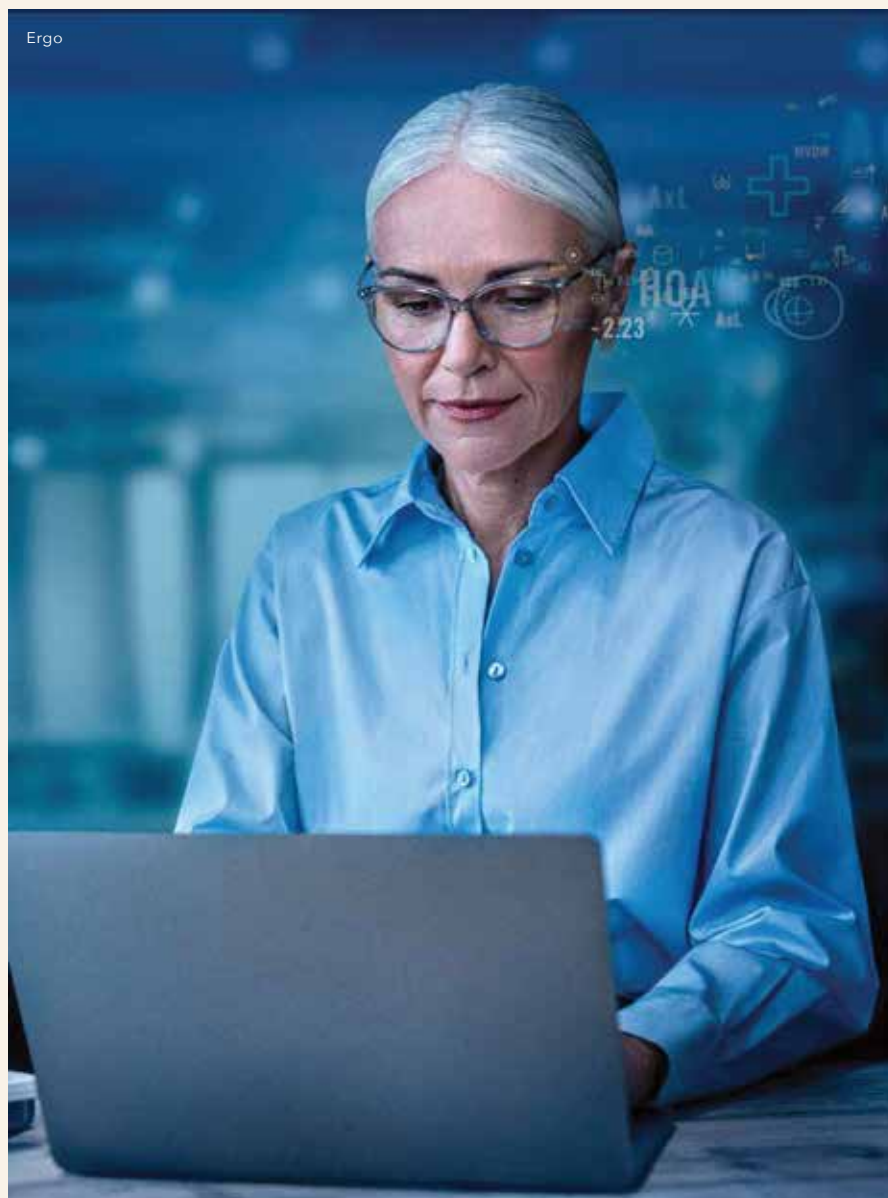
Contact: Maui Jim (AUS) 1800 010 244

Ergo

Individual computer lenses based on Rodenstock's biometric model provide a solution to dry eyes, headaches, or strained neck and shoulder muscles caused by long hours on devices.

Biometric intelligent spectacle lenses are available in several variations, dependent upon workplace and individual requirements, and with the specialised anti-reflection coating – Solitaire Protect Balance 2 – which is designed to reduce blue light by reflecting it away from the eyes.

Contact: Rodenstock (AUS) 02 9748 0988



Ergo

PULSEO

Dynamic Lenses for a Digital Life

With Activ' Boost™ technology, Pulseo reduces eye fatigue and improves your focus when using screens for extended periods of time

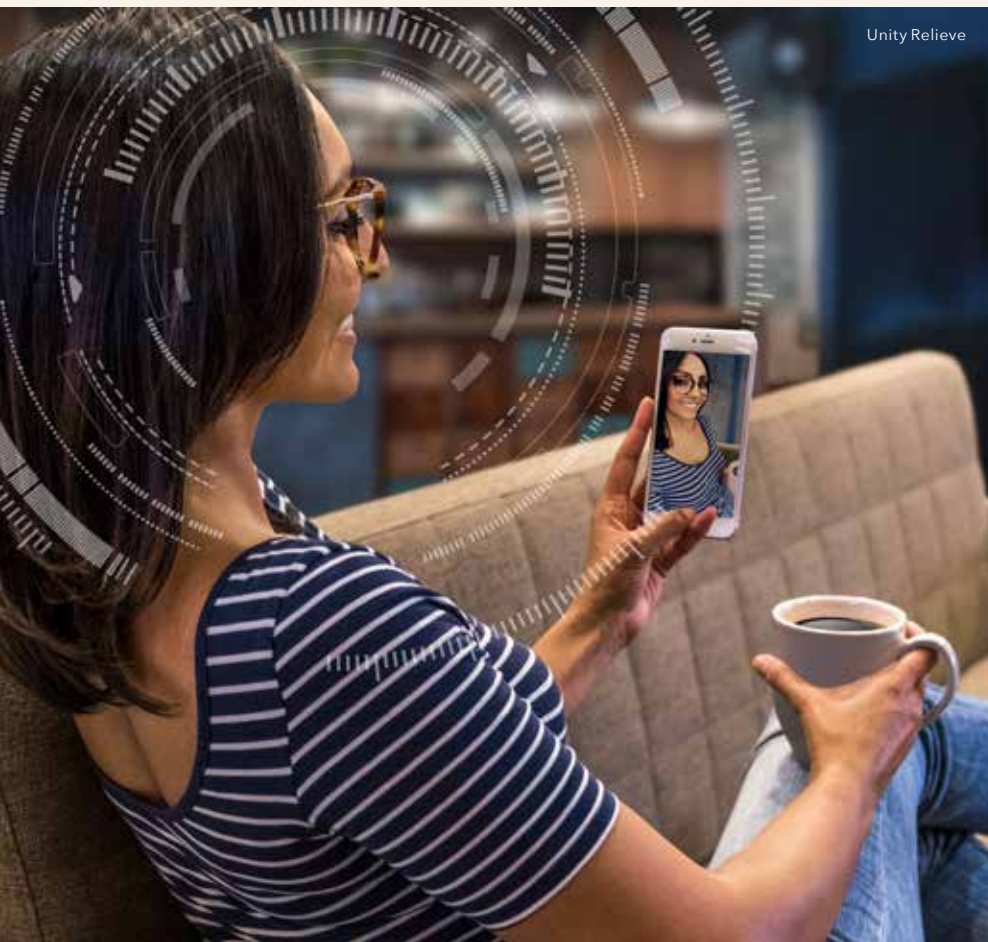
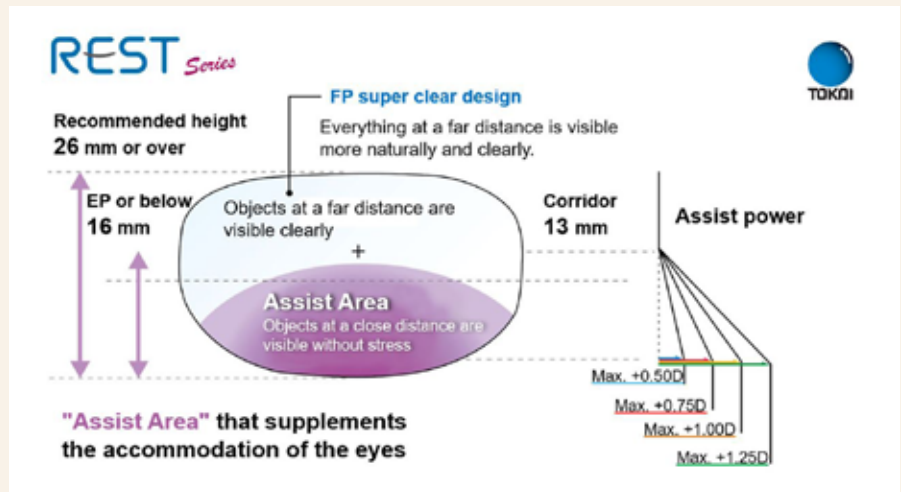
**To find out more about Pulseo
contact your OSA Account Manager
or visit osalens.com.au**



Eye Assist Rest

Tokai Optical's Eye Assist Rest series features an aspheric design that considers left/right eye movements to achieve a more comfortable field of vision. Additionally, this lens has Tokai Optical's FP Super Clear Design for distance vision and an Assist area for amplitude of accommodation of the eyes. Tokai's Rest series offers four shifts that accommodate the needs of moderate to constant digital device users. As an option, when combined with Tokai's Lutina material, the Rest series absorbs 94% high energy violet light between 400nm to 420nm for visual comfort and clarity.

Contact: Tokai Optical (AUS) 1800 864 886



Unity Relieve

Combining unrestricted distance vision, a slight power boost in the near, and available blue light defence using TechShield Blue, VSP Optics says Unity Relieve offers single-vision wearers precision, comfort, clarity, and relief from digital eyestrain symptoms.

Unity Relieve is available in two lens choices that are designed to accommodate different digital lifestyles and eyestrain symptoms.

Contact: VSP Optics (AUS) 1800 251 025



SmartLife Digital Lenses

Zeiss SmartLife Digital Lenses are designed for people with perceived eyestrain. Single-vision wearers or emmetropes are accustomed to unrestricted distance vision that is free from blur and distortion, so this lens offers a large distance zone.

Wearers still have sufficient accommodation available for clear mid-range vision and usually tilt their head for near vision tasks. Therefore, the lens design has a compressed corridor.

One of the distinct features is the large range of addition powers available from 0.5 to 1.25D. Zeiss SmartLife Digital Individual 3, now with Zeiss Intelligence augmented design technology is built on 12.5 million data points.

Contact: Zeiss Vision (AUS) 1800 882 041



THE TOTAL¹™ FAMILY OF CONTACT LENSES IS NOW COMPLETE

TOTAL¹™ for Astigmatism is designed for patients who want a premium lens wearing experience – where outstanding comfort¹ meets excellent stability^{1,2}



3 UNIQUE TECHNOLOGIES



Approaches 100% water at the surface, so all that touches your patient's eye is a cushion of moisture^{3,4}



Featuring phosphatidylcholine (PC) to help address contact lens related dryness through lipid layer stabilisation⁵



A proven lens design that provides the on-eye stability astigmats need for consistent vision⁶

MORE THAN ONE REASON TO SAY YES TO TOTAL¹™ CONTACT LENSES

- ✓ Outstanding comfort¹
- ✓ Excellent oxygen transmissibility^{6,7}
- ✓ A reduction in contact lens induced dryness symptoms⁶
- ✓ Hydration, even on your patients' longest days⁸
- ✓ 99% first fit success²
- ✓ Excellent stability²



NOW AVAILABLE FOR ASTIGMATISM

ALWAYS FOLLOW THE DIRECTIONS FOR USE.

¹Based on lens movement, centration, and rotation at initial fitting. TOTAL¹™ Dk/t = 127 (@-3.00/-1.25 x 180°).

References: **1.** Alcon data on file, 2021. In a clinical trial to assess overall performance of DAILIES TOTAL¹™ for Astigmatism lenses where n=134 patients; Pg 4–6. [CLO870-E004]. **2.** Alcon data on file, 2020. In a clinical trial to evaluate stability of axis orientation of DAILIES TOTAL¹™ for Astigmatism lenses where n=47; Pg 5. [CLO870-C003]. **3.** Thekveli S *et al.* Structure-property relationship of delectafilcon A lenses. *Contact Lens Anterior Eye* 2012;35(Suppl 1):e14. **4.** Angelini TE *et al.* Viscoelasticity and mesh-size at the surface of hydrogels characterized with microrheology. *Invest Ophthalmol Vis Sci* 2013;54:E-abstract 500. **5.** Pitt WG *et al.* Loading and release of a phospholipid from contact lenses. *Optom Vis Sci* 2011;88(4):502–506. **6.** Alcon data on file, 2020. Thickness Maps and Dk/T Plots for PRECISION¹™ Toric and DAILIES TOTAL¹™ Toric; Pg 11–14. [A01440-REP-191825]. **7.** Alcon data on file, 2010, 2013, 2016. Based on *in vitro* measurement of thickness profiles of unworn lenses. [CLM-DTI-GLB-0032]. **8.** Maissa C *et al.* Evaluation of the lubricity of delectafilcon A daily disposable contact lenses (DAILIES TOTAL¹™) after wear. Poster presented at the American Academy of Optometry Annual Conference; Nov. 2014, Denver, CO.

Eyezen

Eyezen lenses are designed to relax the eyes and reduce digital eyestrain. Eyezen lenses are available with Crizal, Eye Protect System and in Transitions.

Eyezen Start

Using DualOptim Technology, Eyezen Start enhances acuity, especially for digital devices, by maintaining the wearer's prescription across more of the lens. It requires no power boost to reduce visual fatigue with better comfort, contrast, and clarity for single vision wearers.

Eyezen Boost

Eyezen Boost lenses have a power boost to support accommodation for patients who need help viewing handheld and portable digital devices. Three different boosts 0.40D, 0.60D, and 0.85D cover the needs of younger patients with accommodation issues, whether they require a distance prescription or not.

Contact: Essilor Account Manager



ClearPro Relax

ClearPro Relax is designed to help reduce the effects of digitally-induced eyestrain and near visual stress. It can be prescribed for young myopes and hyperopes. An available upgrade is the Blue Guardian coating, which blocks blue light and all other UVA and UVB rays to 420nm. Also recommended is Opticare's anti-glare Skye Multicoat.

Contact: Opticare (AUS) 1800 251 852



Shamir

Shamir's improved occupational lenses are designed to meet the needs of a modern workforce.

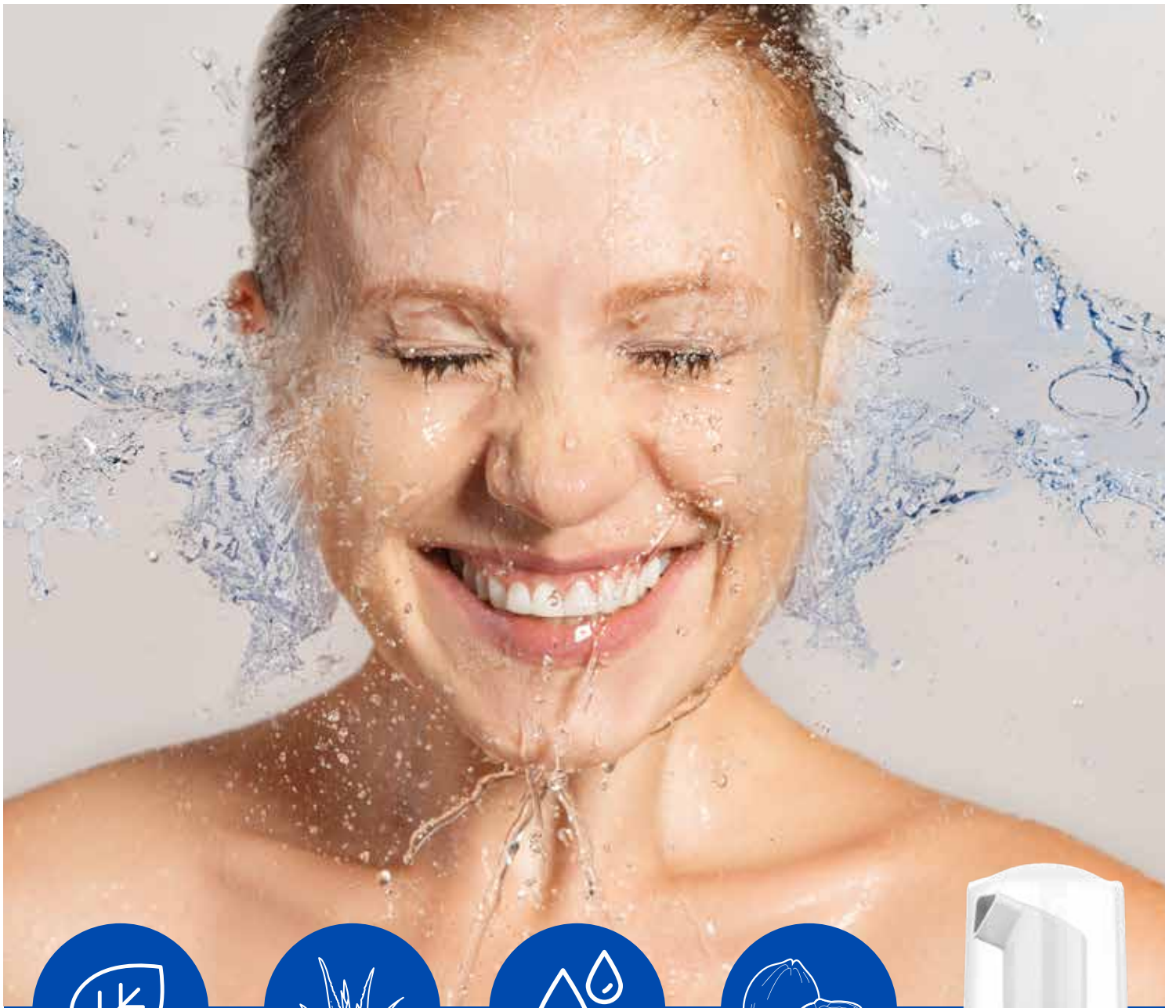
Shamir Vocational Digital lenses are ideal for near and mid distance work with three dynamic shifts. Shamir Computer provides a wider field of view up to 1.5m, while Shamir Workspace offers a greater depth of field (up to 3m), allowing for movement within the workspace.

Shamir Smart Office delivers a personalised digital freeform lens that provides flexibility and focus through multiple viewing zones.

Visit: shamir.com.au

Eyezen





*No Junk
In This*



 **CLCA**
CONTACT LENS CENTRE AUSTRALIA

1800 125 023
admin@clcaustralia.com.au

Contact Lenses for a Digital World

Bausch & Lomb

Bausch & Lomb's Ultra One Day contact lens with ComfortFeel technology provides the eye with health ingredients required to maintain ocular homeostasis. The Ultra One Day's high definition optics feature delivers clearer vision, eliminating spherical aberrations during long hours on digital devices. A recent survey showed that 86% of wearers agreed that the Ultra One Day lenses provided clear vision when working for long hours at a computer.

Contact: Bausch & Lomb
(AUS) 1800 251 150



Bausch & Lomb



NaturalVue

NaturalVue Multifocal 1 Day

The NaturalVue Multifocal 1 Day contact lens, with innovative Neurofocus Optics for Myopia Control, is a centre distance design with patented extended depth of focus (EDOF) optics.

The EDOF design works naturally with the brain to produce a continuous range of clear vision and stereopsis, comparable to spectacle wear, with an effective add up to +3.00Ds. Available in 0.25D steps from +4.00 to -12.25Ds, the design has a rapid, continuous, and uninterrupted progression in plus power from the centre of the lens through the optic zone. This creates a virtual aperture¹ with relative plus in the

Biofinity



challenging environments. It provides sharper, brighter, clearer vision with exceptional comfort.¹ Available with correction for near and farsighted prescriptions, this contact lens has a unique tear-infused design with highly breathable silicone that integrates with the wearer's tear film each day.²


Contact: Johnson & Johnson Vision Care Account Manager

References

1. JJV Data on File 2017. Visual Performance of Acuvue Oasys Brand 1-Day Contact Lenses with HydraLuxe Technology - Consumer Use Claims.
2. JJV Data on File 2016. Acuvue Oasys Brand Products Comparison.

Biofinity Energys

The Biofinity Energys contact lens is ideal for all existing and potential wearers of spherical monthly and two-weekly lenses; patients who are highly connected to their smartphone; and patients who spend a large part of their day looking at a computer screen.

Contact: CooperVision Account Manager 

periphery, and is clinically proven to slow the progression of myopia.²

Contact: Contact Lens Centre Australia
(AUS) 03 9543 1811

References

1. VTI Data on file, 2015. N=59. Data assessed after one week of wear. Preference based on those who expressed a preference among brands tested.
2. Cooper J., O' Connor B., Watanabe R., et al. Case series analysis of myopic progression control with a unique extended depth of focus multifocal contact lens. Eye & Contact Lens: Science & Clinical Practice. 2017;44(5): e16-e24.

Acuvue Oasys 1-Day

Acuvue Oasys 1-Day is a daily contact lens for those who demand high performance, use digital screens frequently, or work in



Acuvue