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Distance spectacles and reading spectacles

What are the key points to remember when choosing single vision lenses?

Reading and distance spectacles are the most common ways of improving vision. So what is it that makes these single vision lenses so special? And what are the key points to remember when choosing the best pair for you?

Single vision lenses – the most widely used spectacle lenses

Single vision lenses are spectacle lenses that only have one dioptric power throughout the entire lens. They can be used to correct poor vision in either near or far viewing situations, which is why single vision lenses form the basis of both distance spectacles and reading spectacles. As well as offering different powers, these two popular types of spectacles also differ in their appearance: single vision lenses for long-sighted wearers are slightly thicker at the centre of the lens, while single vision lenses for short-sighted wearers are slightly thicker at the edges.

But whatever your prescription, modern ZEISS technology can produce extraordinarily flat and lightweight lenses, even for high prescriptions. And with a choice between four different quality performance tiers, you can pick the solution that best matches your individual vision needs and reading habits. This means that you will benefit from single vision spectacles that give you perfect vision – and a perfect appearance! You can find out more in the section on the [ZEISS single vision lens portfolio](#) further down this page.

The ZEISS Online Vision Check

How well do you see contrast and colour? Check your vision quickly and simply here!

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Reading spectacles – the best answer for tired eyes



Once people hit the age of 40, their close-up vision tends to deteriorate, and reading can become a challenging task, with words blurring together on the page. That's when reading spectacles help.

> [Reading spectacles](#) are made by tailoring single vision lenses to the wearer's individual reading distance, which is generally between 30 and 40 cm. As well as making life easier for people who enjoy curling up with a book, they can also be used to read the small text sizes often found on smart phones and tablets. Specially adjusted to each wearer's visual habits and typical reading distance, they restore people's ability to enjoy relaxed, fatigue-free vision at close distances – whatever their prescription.

Why 'ready reader' spectacles are best avoided

They may be cheap, but that's just about the only point in their favour. Ready reader spectacles are now available from numerous supermarkets and other retailers, but these ready-made spectacles for reading fall far short of the standards required for a proper pair of spectacles. They are only available in 0.25 diopter increments – with the same strength for both eyes – and they are not tailored to the wearer's unique visual needs, which means they fail to take into account factors such as the distance between a person's eyes. That can cause prismatic effects and in some cases even prompt further deterioration in the wearer's vision, ultimately leading to strained eyes, headaches, nausea and even migraines. The fact is that off-the-shelf reading spectacles can never supply the optimum correction of your vision that you would typically expect from a qualified optician. There's no doubt that it's worth investing in a professionally fitted pair of reading spectacles – not just to benefit from your full vision potential, but also to improve your overall sense of well-being.

Long-sighted eye





How do I know if I need distance spectacles?

As their name implies, distance spectacles enable wearers to see distant objects more clearly. People generally start using them before they reach the age of 40. After this point the eye's ability to change its focus from one distance to another, known as the amplitude of accommodation, is no longer sufficient to see clearly at all distances. This results in a diminished ability to focus on near

objects, a condition experts call presbyopia. Different solutions are then required to meet these contrasting needs, either by switching between distance spectacles and reading spectacles, or by switching to bifocal or [progressive lenses](#).

Short-sighted eye









The ZEISS portfolio of single vision lenses

With four different classes of quality and performance available – Spherical, Aspheric, Optimal and Individual – you can be sure of finding the best single vision product to meet your vision needs, whether for distance vision or reading. Each performance tier includes all the benefits of the preceding.

Quality class 1: Spherical – the traditional lens

This performance tier comprises single vision lenses with a spherical lens design which are a popular choice for single vision reading spectacles. ZEISS introduced the first spherical lenses with a design known as point focal imagery – ZEISS Punktal® – in 1912. Available in both plastic and glass, they can be used for both high and low prescriptions. The optimised lens surface ensures precise imagery – so even at this basic level of quality you can be sure of enjoying outstanding vision.

Plastic single vision lenses are the perfect way of achieving comfortable vision for people with the low prescription powers typical of reading glasses. Plastic single vision lenses are therefore particularly suitable for low to moderate myopia (short-sightedness) and low hyperopia (long-sightedness). Offering perfect vision, these spherical single vision lenses have been designed to minimise peripheral blur. Wearers also benefit from modern manufacturing methods which have made these lenses exceptionally lightweight. Plastic single vision lenses can reduce the weight of spectacles by up to 40 percent when compared to glass lenses. Plastic lenses are also highly resistant to breakage, which makes them the perfect choice of spectacle for children and sporting activities.

For people who are very short-sighted, however, single vision lenses made from glass are still the best choice. Depending on the refractive index required, it's now possible to produce extremely thin and aesthetically appealing lenses even for high prescriptions. In addition, an anti-reflective coating significantly reduces the unsightly 'power rings' that occur with high refractive indices, making the wearer's eyes look much more natural. Careful selection of the right frame size and shape also has an impact on the subsequent lens thickness and thus on the overall weight of the spectacles. As always, the best approach is to seek expert advice from your optician.

Quality class 2: Aspheric – a good choice if you are long-sighted

Single vision lenses within this performance tier have an aspheric design and are most suitable for lenses in the plus range, in other words for spectacle wearers who are long-sighted. The advantage they have over the spherical performance design is that aspheric lenses are typically up to 20 percent lighter and thinner than their spherical counterparts with the same power and have a significantly flatter front curvature – whilst always maintaining the same outstanding visual performance. The result is that the wearer's eyes are less magnified than with conventional lenses. Aspheric single vision lenses are a good choice for spectacle wearers with high prescriptions who are looking for visually appealing spectacles that offer superb vision.

Quality class 3: Point-by-point optimization with freeform technology

Clarity that will astound you! Single vision lenses in this performance tier are produced with cutting-edge ZEISS freeform technology, achieving even greater visual comfort across the entire surface of the lens and virtually eliminating the distortions at the lens periphery that are found in conventional single vision lenses. Single vision lenses in this quality class take more aspects of the individual wearer's prescription into account in the production process including sphere, cylinder, axis, prism and prism base. The lens design is extremely thin and flat, and everything appears clearer and more natural. Learn more about [ZEISS freeform technology](#)

Quality class 4: As unique as a fingerprint – the top of the range

If you are looking for the very best, then this performance tier is for you! Single vision lenses in quality class 4 offer the ultimate experience for your eyes. Incorporating all the data measured by your eye care professional and using cutting-edge production methods, these lenses offer superb visual clarity in all directions right to the edge of the lens – even with high prescriptions. At the same time, these highly individualized lenses ensure extraordinarily high wearer tolerance, even with high cylinders and prismatic prescriptions. This performance tier is particularly recommended for wearers with a condition known as associated heterophoria which requires the use of a prismatic power. This quality class offers the ultimate in lens individualisation.

Don't forget: ZEISS plastic lenses in all four quality and performance tiers always come with a hard coating to ensure that you can enjoy perfect vision through scratch-free lenses for a long time to come! In addition, both our plastic and glass single vision lenses are available with the option of i.Scription® technology which offers better night vision, enhanced contrast and richer colours! Please consult your optician for more details. [> Learn more...](#)

Choosing between plastic and glass lenses – what are the advantages and disadvantages?



Deciding which lens material is most suitable for you depends on a number of factors including the prescription powers you need, your wearing habits, and your personal taste in frame designs. Nowadays, however, the majority of spectacle buyers choose plastic lenses. Glass lenses have become the exception, though they continue to have a loyal following thanks to certain key attributes.

Lenses made from glass – or 'mineral glass' as it is sometimes called – are particularly valued for their exceptional resistance to scratching. Another advantage of glass lenses is their relative thinness even with high prescriptions and that their clarity thanks to their minimal colour dispersion (high Abbe number).

Lenses made from plastic, also known as 'organic glass', are suitable for all types of spectacles and are particularly popular for sports and children's spectacles. They are extremely lightweight and therefore comfortable to wear, they don't splinter, and they are highly resistant to breakage – up to a hundred times more resistant than glass depending on the material used. One disadvantage is that plastic lenses are less resistant to scratches than glass lenses. However, this can be at least partially remedied with a hard lens coating – something that ZEISS offers as standard on all its lenses! Plastic lenses also have the edge when it comes to style: while glass lenses can only be made in a few different colours and are relatively difficult to tint, plastic lenses can be produced in virtually any colour. So if you're looking for spectacles with coloured lenses as a fashion accessory, then plastic is definitely the way to go! Plastic lenses are available in special contrast-enhancing colours ([> ZEISS Skylet®](#)) either with or without polarisation filters and in self-tinting versions ([> ZEISS PhotoFusion](#)). [> Find out more about plastic and glass lenses...](#)

As always, your optician is the best person to provide you with detailed information on which lens material is most suitable for you.

Tip for drivers: When it comes to choosing the best spectacles for driving, plastic lenses are always the best choice because they are resistant to breakage and cannot splinter, which means they are less likely to cause injury in unexpected circumstances such as an airbag inflating.

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Determine your personal visual habits now and find your individualised lens solution.

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