

Work Life 16-Oct-2017

## Spectacles for pilots – perfect vision even above the clouds

Whether professional or amateur, pilots need spectacles that allow them to see clearly, even in extreme lighting and weather conditions.

**Spectacles for pilots have a demanding job: more so than in almost any other application, they have to perfectly optimise the wearer's vision and compensate for extreme visibility conditions. For sailing, amateur pilots, hang-gliding, paragliding and aerospace professionals: BETTER VISION with the perfect spectacles for pilots.**

Pilots require spectacles that always guarantee good vision, both at distance and close range. This is no easy task, as visibility and lighting conditions above the clouds are extreme, and can change at a moments notice. Pilots need to be able to see objects such as towers and air traffic properly, while at the same time reading details such as cockpit instruments perfectly and perceiving colours accurately in order to understand signals clearly and correctly.

### Ideal spectacles for pilots: tinted lenses with ZEISS Skylet®

With Skylet® sun protection lenses, ZEISS has developed special technology for these exacting requirements that guarantees perfect vision for all altitudes and lighting conditions, for amateur and professional pilots alike. Skylet® sun protection lenses have 100% UV protection, reduce inconvenient glare and also improve contrast vision in extreme light conditions. This is not only convenient – it also contributes enormously to greater safety.

One option that is particularly suitable for pilots is the "fun" variant of the Skylet® sun protection lenses: Skylet® fun with 70% light reduction – the brightest Skylet® prescription spectacle lens with an aesthetically appealing, red-brown tint. These squeeze the highest possible colour contrast out of the lens at medium ambient brightness – ideal for hazy light conditions.

For those who prefer darker tints, we recommend the ZEISS Skylet "road" variant with an 80% tint in aesthetic brown – ideal for the medium-strength sunlight of a typical central European summer. However, pilots should not wear spectacles darker than this: in order to avoid excessive impairment of their ability to distinguish between colours, the German Federal Aviation Office advises against using lenses with a tint density that exceeds 85%.

## The ZEISS Online Vision Check

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

[Start Eyesight Test Now!](#)

### Important: why pilots should avoid polarisation filters for their spectacles

Sunglasses or prescription spectacle lenses with [polarisation filters](#) are not suitable for the majority of pilots. Such filters normally provide protection against reflections, but they should always be avoided by pilots, as the special structure of many cockpit screens combined with the effect of polarising lenses can quickly impair a pilot's vision, occasionally preventing them from noticing certain signals at all. In certain weather conditions some aircraft can be difficult to visibly detect, or only recognisable by the sunlight reflecting off their outer shell. If this reflection is blocked by an additional polarisation filter in their spectacles, the pilot may not see the other aircraft at all presenting a hazardous situation... Also, depending on the position of the pilot's head, LCD displays (instruments, navigation devices etc.) may be impossible to read through such lenses, or be perceived simply as black surfaces.

### Perfect for pilots: ZEISS gradient lenses

When choosing their sunglasses, pilots should always look for neutral lens tints (your ZEISS ophthalmic optician will be happy to advise you on the wide range of options). ZEISS Skylet® sun protection lenses are especially designed for applications where increased UV and glare protection and high-contrast vision are important. In this case, "high contrast" means being able to differentiate better between colours, so that a green meadow far in the distance is clearly – and unmistakably – perceived as green. This also enables pilots to "read" weather conditions better, especially cloud changes. As such, any impairment of the pilot's ability to recognise colours is largely eliminated so that all the instruments can be read perfectly and reliably – as with the ZEISS Skylet® "fun" and "road" variants.

Many tinted sunglasses or spectacles with prescription lenses, which mainly filter the blue portion of the light spectrum, impair this colour perception. This is why authorities such as the German Federal Aviation Offices clearly advise against such lenses. However, for those who still value a little colour, the new ZEISS gradient lenses offer a safe variant specifically suited for use within aircrafts. For example, the top section of the lens can be tinted dark brown and the bottom section a lighter colour that makes it easier to read the cockpit instruments. Spectacle lenses with optimum light reduction, a neutral colour pallet and 100% UV protection, match the strict lens requirements set for professional pilots by the authorities and pilots' associations.

**By the way:** pilots should avoid self-tinting or photochromic lenses. Self-tinting sunglasses always need a few seconds to adjust to changes in light and UV conditions.

## Safety and comfortable vision with progressive lenses

Sooner or later, it catches up with most pilots who wear spectacles: they can no longer see objects in the distance and those at close range with the same sharpness. For pilots this is more than an inconvenience – it is also presents a potential hazard. > [Progressive lenses](#) have been tried and tested for combatting this problem in aircraft applications. They are adapted perfectly to fit the wearer – like a tailor-made suit – and allow pilots razor-sharp vision both for distance objects (towers and air traffic) and at close range (e.g. instrument displays in the cockpit or cards). Combined with Skylet® sun protection lenses, these are the perfect spectacles for pilots.

## What matters when choosing spectacle frames?

All-round coverage is important. Spectacle frames that are good for pilots include wrap-around styles with curved lenses: these are gently contoured around the face to effectively dampen distracting stray light that would otherwise get into the wearer's eyes from the side or behind. The temples should be thin and not too far away from the head, so that the pilot's headset can function properly. As a basic rule, spectacle frames for pilots should be comfortable to wear for long periods, not tight against the head. > [This is easy if you observe a few rules.](#)

*Tip: if you take your headset with you to the optician, they will be able to take its size into account when recommending the perfect spectacle frames. If you really want to be on the safe side, ask if you can borrow the frames to test them out. Your ZEISS ophthalmic optician will be happy to help you with this.*

### By the way:

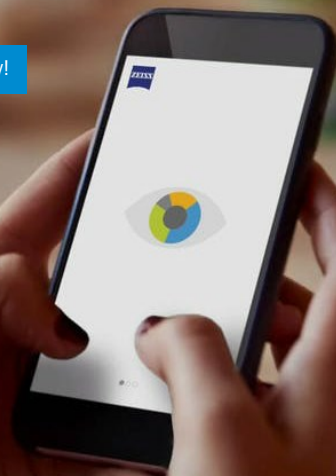
many pilots round off their spectacles with a powerful lens finish such as > [DuraVision® Platinum from ZEISS](#), in order to protect them against scratches and other damage from their surroundings.

*Image: i.stockphoto.com © Stacey Newman*

### My Vision Profile

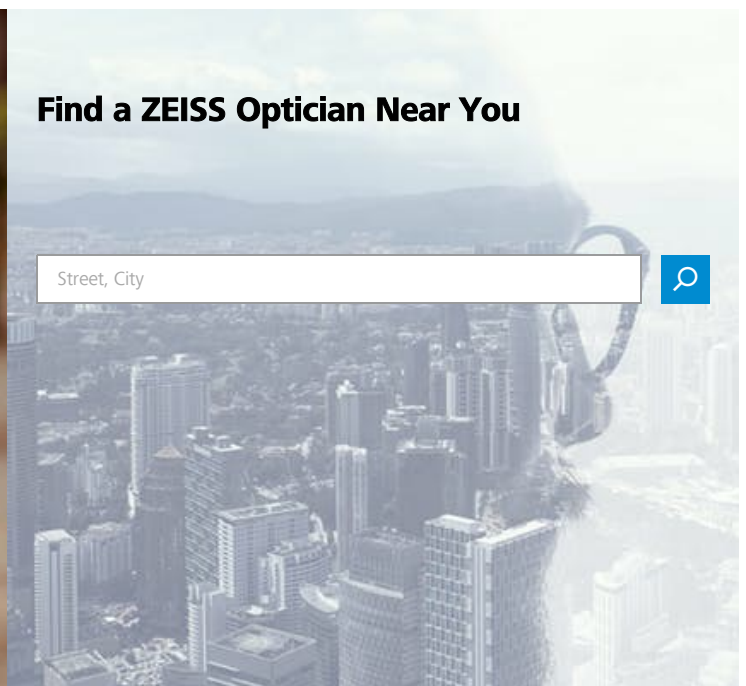
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