



**Tailored for today's cinema and beyond.**  
ZEISS Compact Prime CP.3 and CP.3 XD lenses



# Enabling creativity through technology.

ZEISS CP.3 and CP.3 XD Lenses

// INNOVATION  
MADE BY ZEISS





## High performance cine lenses that keep pace with technology

Digital technologies have transformed traditional filmmaking and refashioned the market. New and innovative technologies in both production and post-production have paved the way for a more versatile, cost effective and advanced workflow. The ZEISS CP.3 family is the latest contribution from ZEISS to support creative and progressive filmmaking with an affordable, future-proof and premium quality lens set.



### Proven ZEISS quality

The ZEISS CP.3 lenses offer the perfect combination of high image quality and reliable usability. They exhibit the clean, crisp characteristics ZEISS is known for, together with an interchangeable mount system and full-frame coverage. CP.3 lenses are compatible with a wider range of cameras and mount types than any other cine lens on the market.



### New ZEISS eXtended Data technology

The ZEISS CP.3 XD version features innovative and ground-breaking lens data technology to speed-up and simplify the workflow on set and in post-production. ZEISS eXtended Data unifies two data sets: key lens data based on the open /s/ Technology standard and supported by a wide range of cameras and accessories, plus ZEISS specific lens data that contains precise lens characteristics.





## Efficiency throughout the entire production process, thanks to the ZEISS CP.3 XD lenses

While on set, the ZEISS eXtended Data feature enables members of the crew to monitor lens settings in real-time, pre-visualize modified images and to use new, automated search functions within data wrangling. In post-production, ZEISS eXtended Data offers numerous benefits such as image fine-tuning, editing and color grading, visual effects, virtual and augmented reality, multi-cam live productions, projection or 3-D imaging. An additional plug-in provided by ZEISS allows an easy implementation of ZEISS eXtended Data in a number of leading software tools.



### Thinking big

With the ZEISS CP.3 XD lenses, even small productions on a limited budget gain access to the advanced techniques common in state-of-the-art, big budget films, commercials and television shows.



## Unifying image quality, usability and innovation

### Product features

#### True cine look

- Clean and crisp ZEISS look which matches perfectly with other ZEISS cinema lenses
- Color matching and covering full frame across the full range of focal lengths from 15 to 135 mm
- Special lens coatings support high-dynamic range projects

#### Ultimate cine ergonomics

- Standardized positioning of the focus rings and a consistent 95 mm front diameter allows for fast and easy changeover while on set
- Extraordinarily smooth focus rotation even in extreme temperature conditions thanks to a new, sophisticated construction design
- Consistent T-stops simplify lighting on set and exposure compensations (T2.9 for 15 to 21 mm and T2.1 for 25 to 135 mm)



#### **Compact design for the new digital workflow**

- The compact and light-weight design is ideal for handheld, gimbal, drone and Steadicam applications
- Consistent size and weight across most of the focal lengths enables quick change of lenses when used on drones and gimbals
- The ultra-smooth focus rotation allows use of small focus motors

#### **Mastering the digital cinema workflow**

- The ZEISS eXtended Data is a unique technology that provides information about the lens' distortion and shading characteristics in real-time
- The lens settings are digitally captured on every frame, avoiding the need to manually record the lens settings for every shot
- Documentation of the lens' characteristics enhances creativity by allowing more complex shots to be handled in post-production





## Expanding your possibilities

### ZEISS eXtended Data

The ZEISS eXtended Data technology adds new opportunities to simplify and increase the accuracy of the image capture and processing workflow. It will accelerate and improve the cinematography workflow no matter if it is a small production on a limited budget, or a major TV or commercial feature with more resources. ZEISS eXtended Data reduces workflow costs and facilitates the exchange of lens information between the production and post-production departments. ZEISS eXtended Data unifies two data sets:

#### Key lens data

The ZEISS eXtended Data technology is based on the open *lens*® Technology and is supported by a wide range of cameras and accessories. Key lens data provides frame-accurate information about:

- Lens name, type and focal length
- Calibrated focusing distance
- Calibrated T-stop value
- Depth-of-field data in real time and hyperfocal distance
- Horizontal field-of-view
- Entrance pupil position

#### ZEISS specific lens data

The ZEISS CP.3 XD lenses enable trailblazing, one-click correction of images, never before possible in motion picture workflow. ZEISS specific lens data provides frame accurate information about:

- Lens distortion characteristics based on the focal point
- Lens shading\* characteristics based on the focal point and effective T-stop

*\* Shading in this case refers to the darkened corners of the captured image on sensor, due to illumination loss towards the outside of the image field. The ZEISS CP.3 XD lenses contain the data for this characteristic, enabling higher precision of post processing and greater creative freedom in post-production. The shading effect can also be intensified for creative purposes. Shading does not refer to color shading, which is a phenomenon that sometimes accompanies color shifting, resulting in darker corners with magenta, green and purple color casts. Shading does not refer to vignetting, which is caused when the lens' image circle is smaller than the image sensor, or by the inaccurately sized matte boxes and/or multiple filter stages in front of the lens, which blocks the optical path of the light into the lens.*



# Providing an end-to-end solution

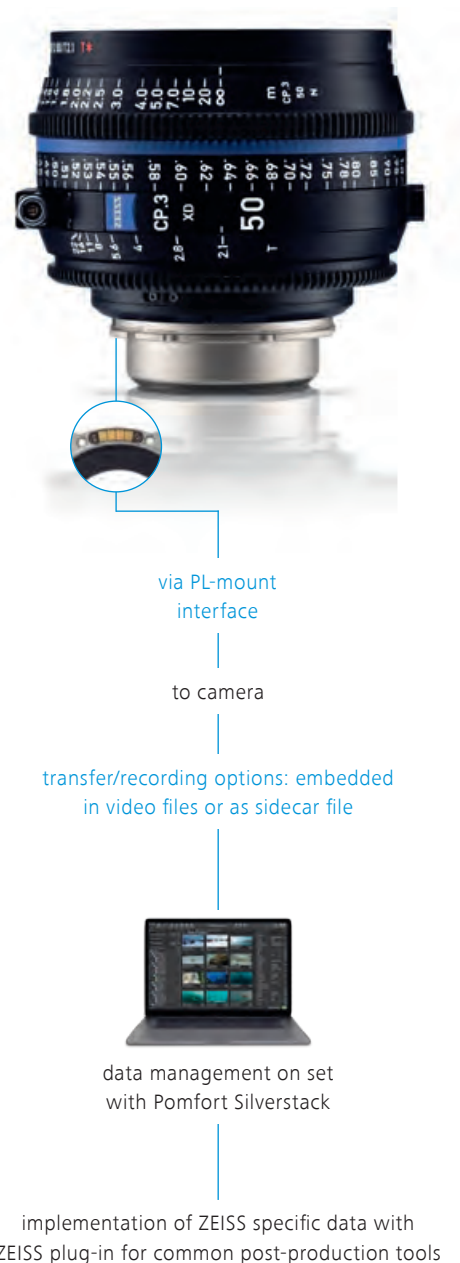
## Processing options of ZEISS eXtended Data

The ZEISS CP.3 XD provides an end-to-end solution for recording and feeding data for onset application and in post-production. ZEISS eXtended Data is processed in real-time and recorded frame accurate. The data can be transferred in one of two ways. Either to any supported equipment via an external LEMO™ interface or directly to any camera compatible with the /S® Technology standard via a 4-pin interface (PL-mount). With the additional ZEISS plug-in for leading compositing and editing software tools, the lens' characteristics can be removed and/or reapplied to the footage.

### Recording ZEISS eXtended Data via external LEMO™ interface



### Recording ZEISS eXtended Data via internal camera interface



# A professional toolset, offering many benefits

## Connecting production and post-production workflows

No matter the size of the production or the number of people on the team, the ZEISS CP.3 XD lenses benefit large teams or solo-operations. ZEISS eXtended Data technology will accelerate the workflow and facilitates the collaboration between the production and post-production departments.

### On set

#### \* Camera Operator / Camera Assistants

- Real-time display of T-stop, focus distance and depth-of-field supported on lens control systems, cameras and monitors
- Automatic detection of the lens, which enables the focus scale without calibration on a lens control system

#### \* Script Continuity

- Lens settings can be viewed at a glance on a monitor for continuity log sheets or transferred wirelessly to supported device apps

#### \* Data Wrangler / Digital Imaging Technician

- Classification and search functions for specific shots (e.g. correct lens settings for a re-shoot)
- Automatic options for quality check procedure (e.g. pre-selection of critical shots for visual check in real-time)
- Statistical analysis of lenses used in the production and the lens' settings

#### \* Director of Photography

- Lens settings at a glance on monitor or viewfinder
- Defining the final look by previsualizing color grading, shading and distortion and transferring it to post-production.

#### \* Video Engineer

- Pre-visualization of corrected images in live grading or VFX previews (e.g. live-key)
- Distortion corrected pre-visualization of CGI Live-Rendering





## Post-production

### \* Editing

- Classification and search functions for specific shots
- Automated image correction speeds up the process of image optimization

### \* Color Grading

- Automated image correction accelerates the color grading process and saves valuable time for more intense fine-tuning

### \* Dailies

- Quick supply of dailies to head-of departments due to automated image pre-correction and faster sorting options

### \* Virtual Reality Productions

- Stitching and matching of multiple images

### \* Visual Effects

- Removing or adding distortion for stitching and CGI integration
- Removing or adding shading while matching shots
- Key lens data for Match Moving, calculation of defocus and bokeh with CGI integration, stitching, manipulation of motion blur

### \* Augmented Reality Productions

- Corrections for CGI integration





## eXtended Data today and beyond

### Upgradable options on CP.3 XD lenses

#### **Lens characteristics processed through ZEISS eXtended Data**

CP.3 XD lenses house encoder chips to deliver ZEISS eXtended Data, currently assigned to two data sets:

- Key lens data (focal length, focus distance and iris position) based on the  $\frac{1}{s}$ ® Technology, which is supported by a wide range of existing equipment.
- ZEISS specific lens data, which contains precise information about distortion and shading.



The ZEISS eXtended Data technology is planned to be expanded in future to offer additional features. Therefore ZEISS will offer lens firmware upgrades.

#### **ZEISS eXtended Data software compatibility**

Lens characteristics can be applied and previewed on set using Pomfort LiveGrade Pro. To apply recorded lens characteristics in post-production ZEISS provides an OFX-plugin. Initially the plug-in works with the grading software Blackmagic Design DaVinci Resolve. Support for other grading, editing and compositing software will be available in future.



"I used the ZEISS CP.3 XD lenses in a recent project and it really sped-up the production time. Their similar weight and size provides the advantage of changing lenses quickly while on set. Using the ZEISS eXtended Data shortens post-production time, because you can decide on the final look while shooting."

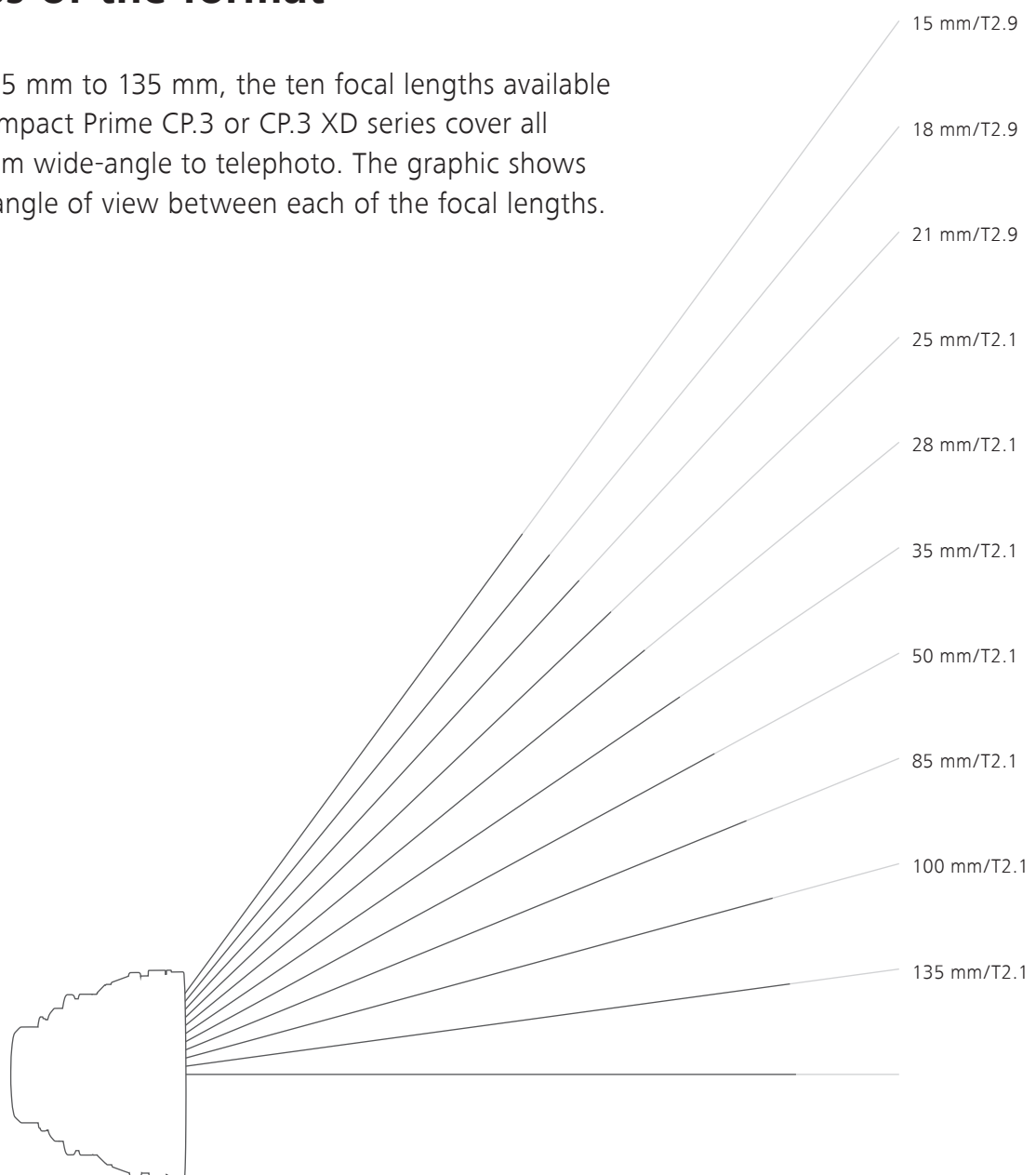
Adi Geisegger, cinematographer  
[www.adigeisegger.com](http://www.adigeisegger.com)





## Wide range of coverage, regardless of the format

Ranging from 15 mm to 135 mm, the ten focal lengths available in the ZEISS Compact Prime CP.3 or CP.3 XD series cover all applications from wide-angle to telephoto. The graphic shows the horizontal angle of view between each of the focal lengths.







## Adding greater depth to your images

### Ready for HDR-projects

The ZEISS CP.3 lenses feature advanced lens coatings, painted lens rims and special light traps within the barrel to eliminate unwelcome veiling glare and flares. The result is higher contrast, richer blacks and more saturated colors, enabling shooting in High Dynamic Range (HDR) modes with subtly nuanced differences in deep shadows and bright highlights in the same scene. With the ZEISS CP.3 lenses, there is a greater depth to the images than ever before.



- Supporting pictures with a high dynamic range thanks to special lens coatings
- High resolution and contrast
- Great flare suppression through T\*® anti-reflex coating and internal light traps
- Excellent color rendition
- Color matched



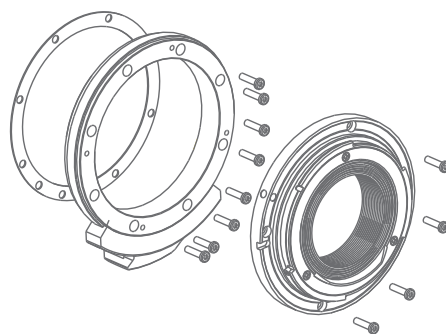
Learn more at [www.zeiss.com/cine/ims](http://www.zeiss.com/cine/ims)

## Interchangeable mount system

### A future-proof solution

The ZEISS CP.3 lenses are equipped with an easy-to-operate, interchangeable mount system. It enables a quick change from the typical cine-style PL-mount to four other mount options (Canon EF, Nikon F, Sony E or MFT). This proven feature offers tremendous flexibility and future-proof investment in today's rapidly changing camera market. There are two versions of the PL-mount, one equipped with an electronic interface for recording lens data on the ZEISS CP.3 XD lenses via the internal camera interface and the other without the electronic interface for the standard ZEISS CP.3 lenses.

#### User Interchangeable Lens Mounts



- Allows a mix of professional cine cameras, for maximum flexibility on set
- No loss of image quality due to adapter solutions
- Five different mounts available (PL, EF, E, F and MFT)
- User Interchangeable Lens Mounts





ZEISS Compact Prime CP.3  
Image Circle

Super 35

RED Helium 8K

Fullframe

RED Weapon 8K VV

## Future proof performance with full-frame coverage

ZEISS Compact Prime CP.3 lenses feature exquisite, high performing optics in a robust and durable package – two characteristics that will remain desirable for decades to come. Thanks to the interchangeable lens mounts, the Compact Prime CP.3 and CP.3 XD lenses offer the possibility to upgrade to any number of existing or future cine cameras without investing in a new set of lenses. They all cover a full-frame image format without vignetting.



- Full-frame coverage (24 mm x 36 mm) for all focal lengths from 15 mm to 135 mm
- Common T2.9 aperture for the 15 mm to 21 mm focal lengths and T2.1 for the lenses ranging from 25 mm to 135 mm.
- Interchangeable lens mount
- Robust, cine-style housing
- 300 degree focus rotation angle
- Calibrated focus scales
- Circular 14-blade aperture, provides a cinematic look and natural looking out of focus highlights





## Accessories

### Safety and flexibility for your equipment

The premium PELI™ Air Case provides protective storage for the ZEISS CP.3 lenses while on set and when travelling between shooting locations.

Molded from Pelican's™ next generation HPX<sup>2</sup> resin, it is up to 40% lighter than other polymer cases, while being enormously shock-proof at the same time. The weather sealed design keeps dust and water away from the ZEISS CP.3 lenses in rough shooting environments.

The transport case will fit up to five lenses, with a perfect cut-out for each focal length. The foam material is specially designed to prevent scratches and undesired movement during transit. Recesses between the cut-outs leave enough space to easily grip and remove the lenses. The lenses are stored horizontally, making it easy to view the focal length and iris settings at a quick glance. Additional cut-outs provide space for small accessories.



- Well-designed interior for convenient access to the lenses
- Super lightweight and compact (51.8 x 28.4 x 18.3 cm / 20.4 x 11.2 x 7.2 inches)
- Meets international airline standards for carry-on luggage
- Dust and waterproof
- Retractable handle extension and rubber padded handle
- Soft-sided wheels with stainless steel bearings
- Robust, double-throw latches and stainless steel hasp protectors
- Removable card holder with front or side placement

# Technical Data

## ZEISS Compact Prime CP.3 and CP.3 XD lenses

	Aperture	Close Focus <sup>1</sup>	Length <sup>2</sup>	Front diameter	Weight	Horizontal Angle of View					
						Full-Frame <sup>3</sup>	APS-H <sup>4</sup>	Super 35 <sup>5</sup>	Normal 35 <sup>6</sup>	APS-C <sup>7</sup>	MFT <sup>8</sup>
<b>CP.3 &amp; CP.3 XD</b> <b>15 mm</b> <b>T2.9</b>	T 2.9 to T 22	0.3 m 12"	83.7 mm 3.30"	95 mm 3,7"	0.87 kg 1.9 lbs	100°	90°	79°	73°	73°	60°
<b>CP.3 &amp; CP.3 XD</b> <b>18 mm</b> <b>T2.9</b>	T2.9 to T22	0.3 m 12"	83.7 mm 3.30"	95 mm 3,7"	0.86 kg 1.9 lbs	89°	80°	69°	63°	64°	51°
<b>CP.3 &amp; CP.3 XD</b> <b>21 mm</b> <b>T2.9</b>	T 2.9 to T 22	0.24 m 10"	83.7 mm 3.30"	95 mm 3,7"	0.82 kg 1.8 lbs	81°	71°	61°	55°	56°	45°
<b>CP.3 &amp; CP.3 XD</b> <b>25 mm</b> <b>T2.1</b>	T 2.1 to T 22	0.26 m 10"	83.7 mm 3.30"	95 mm 3,7"	0.82 kg 1.8 lbs	72°	62°	53°	47°	48°	38°
<b>CP.3 &amp; CP.3 XD</b> <b>28 mm</b> <b>T2.1</b>	T 2.1 to T 22	0.24 m 10"	83.7 mm 3.30"	95 mm 3,7"	0.84 kg 1.9 lbs	65°	57°	48°	43°	43°	34°
<b>CP.3 &amp; CP.3 XD</b> <b>35 mm</b> <b>T2.1</b>	T 2.1 to T 22	0.3 m 12"	83.7 mm 3.30"	95 mm 3,7"	0.80 kg 1.8 lbs	54°	47°	39°	35°	35°	28°
<b>CP.3 &amp; CP.3 XD</b> <b>50 mm</b> <b>T2.1</b>	T 2.1 to T 22	0.45 m 18"	83.7 mm 3.30"	95 mm 3,7"	0.77 kg 1.7 lbs	40°	34°	28°	25°	25°	20°
<b>CP.3 &amp; CP.3 XD</b> <b>85 mm</b> <b>T2.1</b>	T 2.1 to T 22	1 m 3'3"	83.7 mm 3.30"	95 mm 3,7"	0.88 kg 1.9 lbs	24°	20°	17°	15°	15°	12°
<b>CP.3 &amp; CP.3 XD</b> <b>100 mm</b> <b>T2.1</b>	T 2.1 to T 22	0.7 m 2'6"	126.5 mm 4.98"	95 mm 3,7"	1.01 kg 2.2 lbs	20°	17°	14°	13°	13°	10°
<b>CP.3 &amp; CP.3 XD</b> <b>135 mm</b> <b>T2.1</b>	T 2.1 to T 22	1 m 3'3"	126.5 mm 4.98"	95 mm 3,7"	1.15 kg 2.5 lbs	15°	13°	11°	9°	9°	7°

<sup>1</sup> Close focus distance is measured from the image plane

<sup>2</sup> Front to PL mount flange

<sup>3</sup> Horizontal angle of view for a full-frame camera (aspect ratio 1:1.5, dimensions 36 mm x 24 mm / 1.42" x 0.94")

<sup>4</sup> Horizontal angle of view for an APS-H camera (aspect ratio 1:1.81, dimensions 30.2 mm x 16.7 mm / 1.19" x 0.66")

<sup>5</sup> Horizontal angle of view for an ANSI Super 35 Silent camera (aspect ratio 1:1.33, dimensions 24.9 mm x 18.7 mm / 0.98" x 0.74")

<sup>6</sup> Horizontal angle of view for a Normal 35 Academy camera (aspect ratio 1:1.37, dimensions 22 mm x 16 mm / 0.87" x 0.63")

<sup>7</sup> Horizontal angle of view for an APS-C camera (aspect ratio 1:1.50, dimensions 22.3 mm x 14.9 mm / 0.88" x 0.59")

<sup>8</sup> Horizontal angle of view for a Micro 4/3 (MFT) camera (aspect ratio 1:1.33, dimensions 17.3 mm x 13 mm / 0.68" x 0.51")

**Carl Zeiss AG**  
Camera Lenses  
73446 Oberkochen  
Germany

[www.zeiss.com/cine](http://www.zeiss.com/cine)

**LENSPIRE**   

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