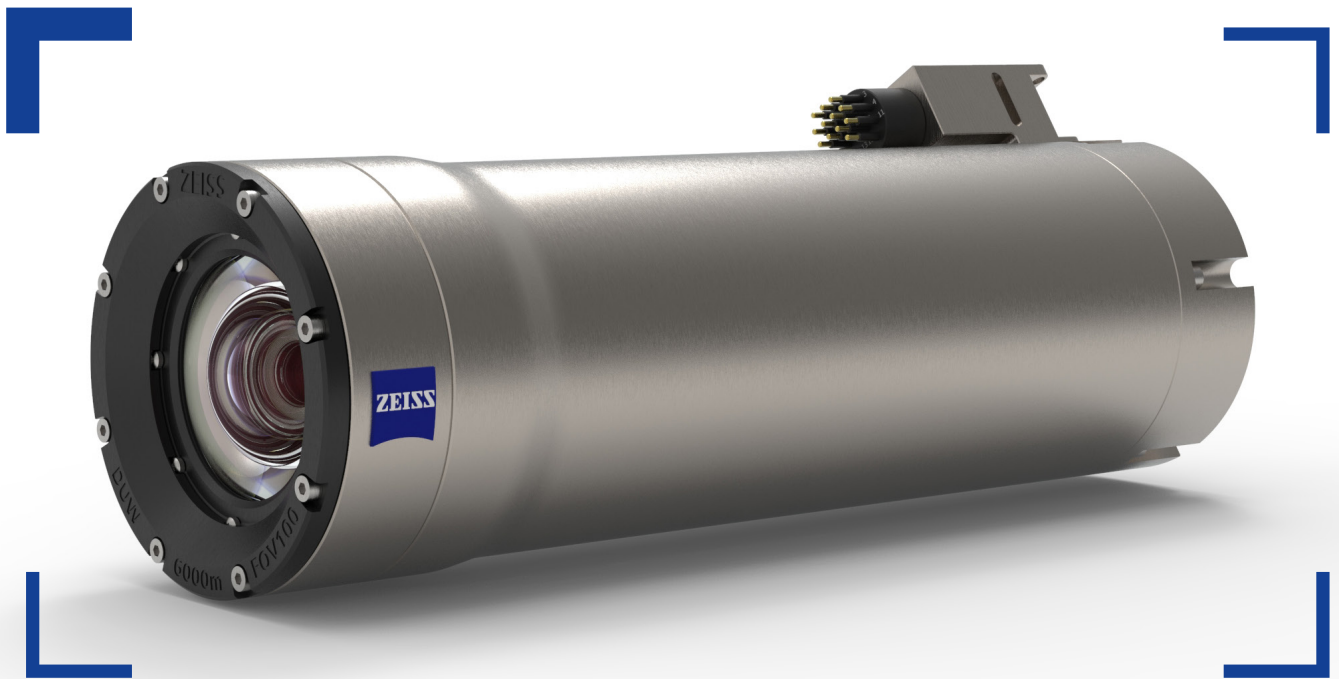


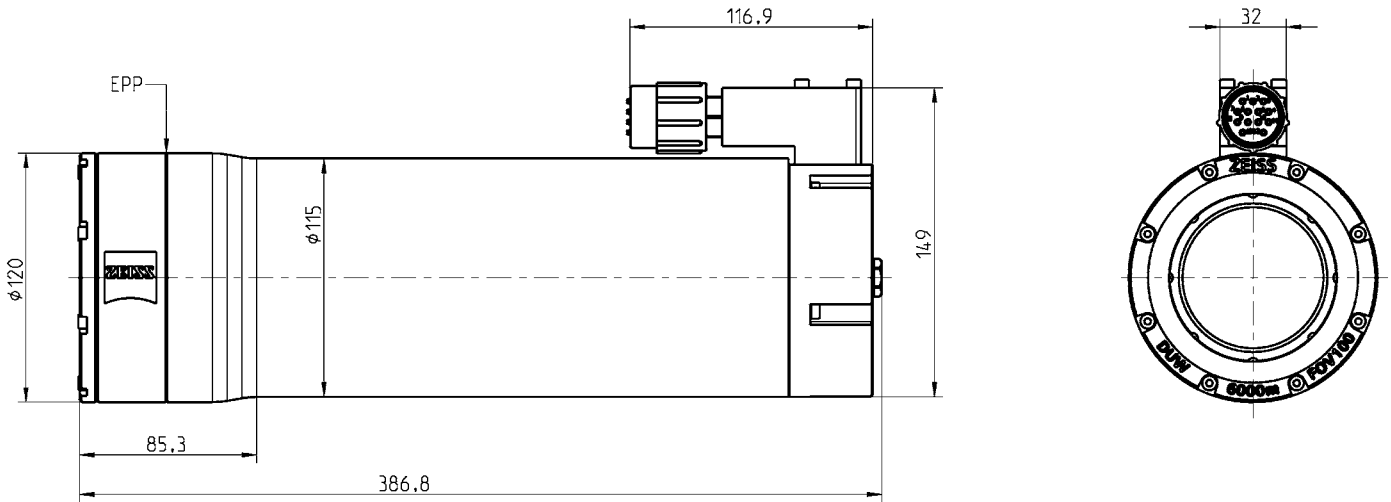
# Enabling outstanding Underwater Inspection and Mapping



**ZEISS DUW DISTAGON**



# Dimensions



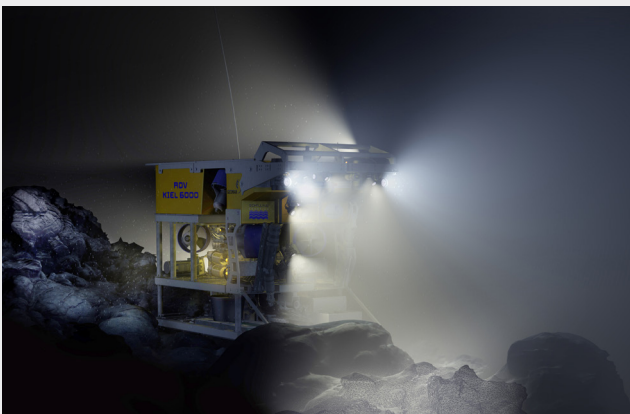
## Features

**An outstanding underwater optical performance, rated to 6000m working depth and a large field of view of 100°.**

- 100° FOV
- 6000m working depth
- front lens in direct contact with seawater (no flat or dome port)
- enables up to 8K resolution and digital zoom
- extremely high light sensitivity at 100° FOV
- corrected field curvature and chromatic aberration – Plot [1]
- optimized distortion – Plot [2]
- sun shield optimized for straylight reduction
- camera sensor recommendation 2/3" to 1"

## Specifications

Field of view	100°
F-Number	f/4,0 – f/22
Focal length	4,2 mm
Distortion	< 3 % Plot [2]
Relative Illumination	> 60%
Image diameter	13 mm
Object distance	0,5 m – ∞
Entrance pupil position (EPP)	36,3 mm ± 0,5 mm
Spectral range	Visible spectrum
Camera mount	C-MOUNT
Material	Titanium



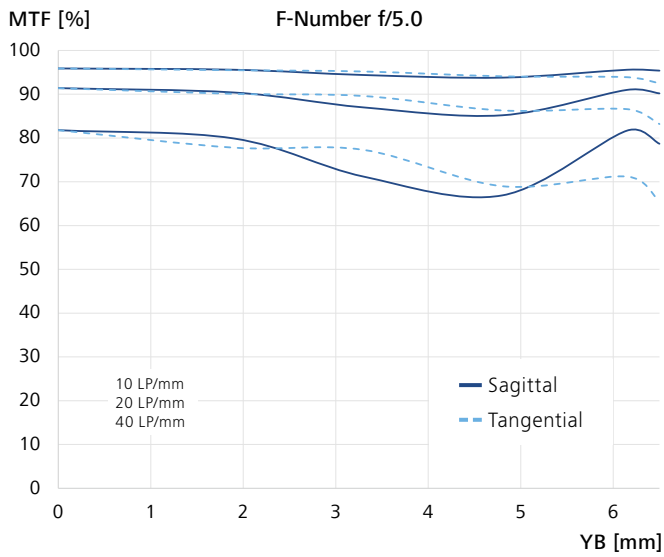
## Project Partner



**//** In autumn 2020 we used the first series of ZEISS DUW DISTAGON lenses at depths beyond 5000 m. First results exceeded the current state of the art in underwater imaging. They elevate our pioneering work in deep-sea visual mapping to industrial scales.

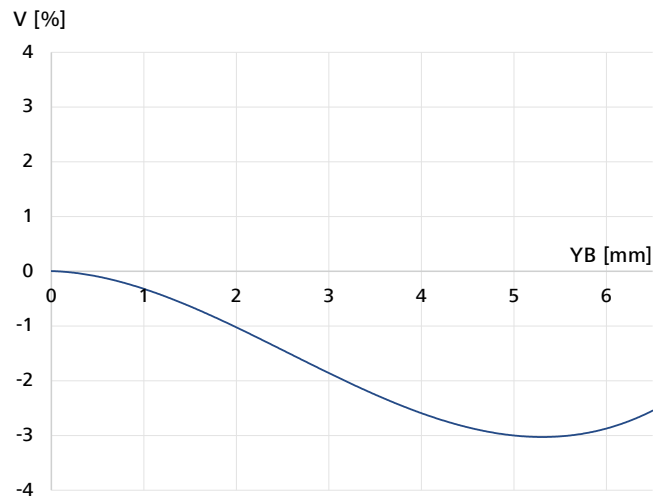
*Dr. Tom Kwasnitschka, GEOMAR Helmholtz Centre for Ocean Research Kiel*

# Polychromatic MTF



**Plot [1]:** Modulation transfer MTF as a function of the image height (YB). Visible spectrum from 430nm to 680nm. Spatial frequencies 10, 20 and 40 LP/mm.

# Distortion



**Plot [2]:** The relative distortion shows in percent the deviation of the actual from the ideal image height.

# ZEISS OEM Customized Solutions

Platform Version	Platform Characteristics	Housing and Electronics	Availability	Price
V1	Complete aligned optical lens system with mechanical front frame and camera sensor	Platform Housing and electronics not included – Here, ZEISS offers a defined interface for customer’s own housing and camera electronics.	December 2020	on request
V2	Complete aligned optical lens system with mechanical front frame, camera sensor, tube with cover (housing), electrical connector and valve	Platform Housing included – Here, ZEISS offers a defined interface for customer’s camera electronics.	December 2020	on request
V3	Complete aligned optical lens system with mechanical front frame, camera sensor, tube with cover (housing), electrical connector, valve and ready to use electronics developed by GEOMAR	Platform Housing and electronics included	Release Q3 2021	on request

## Contact

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