

# Schneider Kreuznach C-Mount Compact Lenses As small and robust as high definition can be.



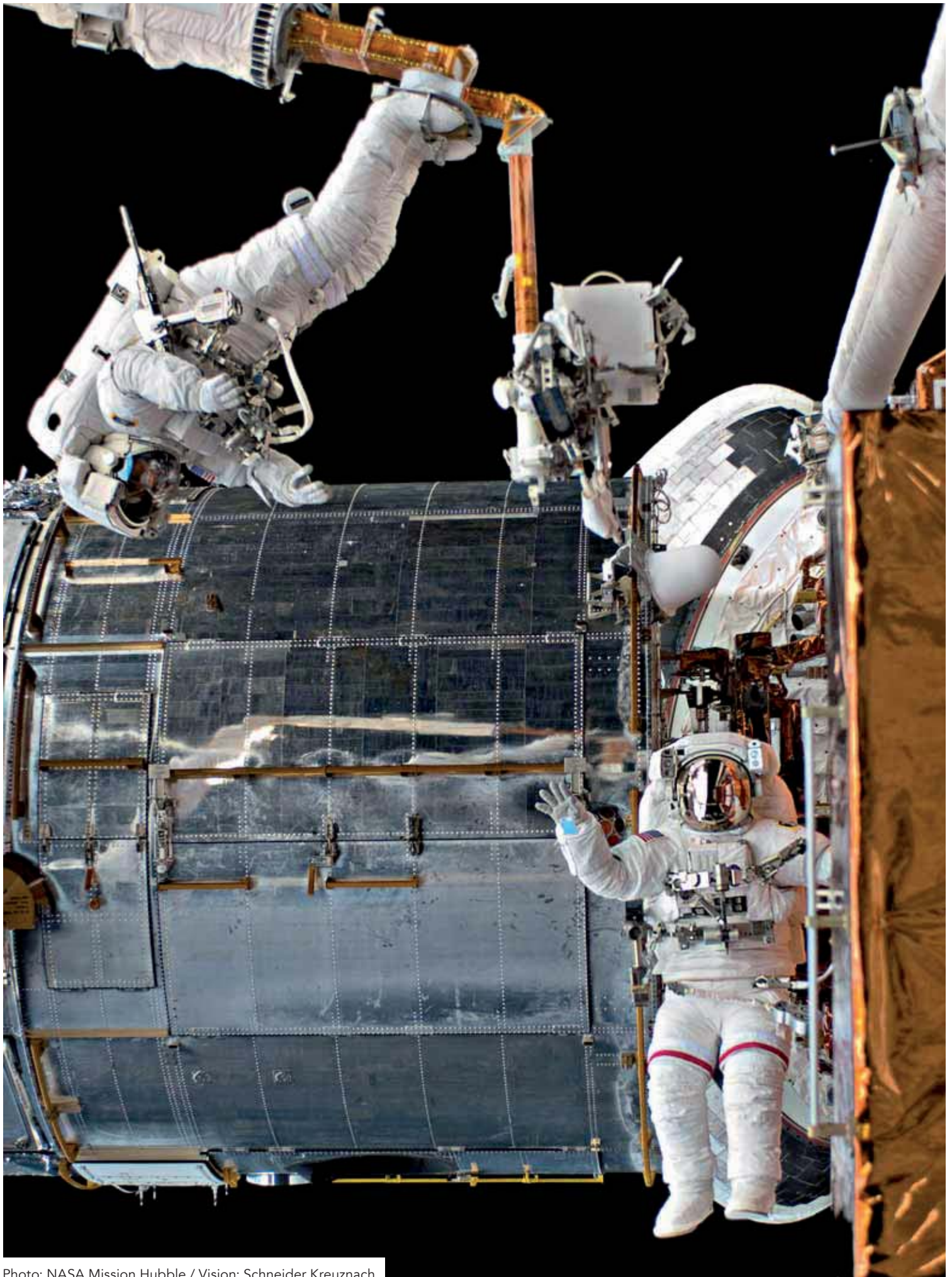


Photo: NASA Mission Hubble / Vision: Schneider Kreuznach

For quality control  
we work at the  
speed of light – even in  
outer space.

And also back down on Earth for machine vision, medical application, transport and traffic control, tube and inline inspection, defect detection and classification, 2D/3D measurement, robot vision, security and last but not least automotive crash tests. Our robust and high-definition C-Mount Compact Series works across the board with professional features including: high definition, broadband coating, compact design, industrial-strength mount, precision-focus fine thread, click-stop-free iris, iris lock with knurled screw, vibration resistant, and antishading in use with a 1.3" sensor. Together these C-Mount Compact professional properties are perfect for the success of your business and your workflow.

In addition to the many technical benefits for these and other applications, outstanding features include the lenses' long service life, consistently high image quality, and low maintenance.

Due to the high quality of the lenses, machine downtimes can be reduced and necessary maintenance intervals extended.

# Trust is good. Compact, robust and high-definition control is better.

## 2/3" lenses with an image circle diameter of 11 mm

- High-resolution optics
- Broadband coating (400–1000 nm)

## 2/3" 5 megapixel lenses

- Optics for maximum resolution, suitable for pixel sizes from 2.5  $\mu\text{m}$
- Excellent MTF across the entire sensor size
- Broadband coating (400–1000 nm)

## 1" lenses

- High resolution optics 400–700 nm (VIS) / 700–1000 nm (NIR)

## 1.3" lenses

- High resolution optics 400–700 nm (VIS) / 700–1000 nm (NIR)

## 1.3" anti-shading lenses

- High resolution optics 400–700 nm (VIS) / 700–1000 nm (NIR)
- Anti-shading with an image circle of 24 mm

## SWIR lenses

- Transmission 800–1800 nm (SWIR)
- Available on request

## Motorized iris

- Motorized iris with stepper motor is optionally available for many lenses

## Examples of application areas in which these features can be crucial to success:

- Machine vision
- Medical
- Traffic control and surveillance
- 2D / 3D measurements
- Robot vision
- Security
- Packaging
- Defect detection and classification
- Food processing
- Web inspection
- Biometrics
- Aerospace
- Crash tests

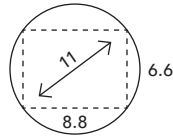
## Benefits

- Highest optical imaging performance even with smallest pixel sizes
- Vibration insensitivity for stable imaging performance
- Precise focusing via fine thread for perfect focus adjustment
- Focus lock and fixed iris, securing of optical features
- Infinitely adjustable iris, ensures longterm stability settings
- Robust industrial design according to ISO 9022
- Industrial-strength metal mounting
- Use of glass lenses, precise and constantly excellent optical quality
- 100 % quality control guarantees reliable and constant quality
- Low maintenance, high MTBF
- Compact design, low space requirement



C-Mount Compact Lenses

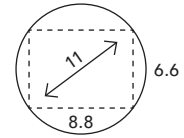
**2/3" lenses**  
**3 megapixel lenses**



**2/3"**

C-Mount Compact Lenses

**5 megapixel lenses**



**2/3"**

Tailored optically and mechanically to the specific requirements of industrial image processing, these lenses are an integral part of sophisticated measuring and testing systems. Working in close cooperation with customers and sales partners, we develop and optimize standard products as well as customized solutions.

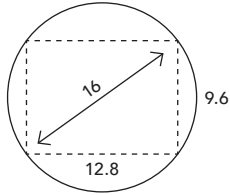
In accordance with the sensitivity of modern 2/3" CCD and CMOS sensors, the 3 megapixel lenses are corrected and broadband-coated for the spectral range of 400 – 1000 nm (VIS+NIR). Even under production and other extreme conditions, the robust mechanical design with lockable focus and iris setting mechanism guarantees reliable continuous use in which the set optical parameters remain in place.

The 5 megapixel high-performance lenses of the C-Mount compact series are extremely robust and insensitive to rough ambient conditions, with the result that the lenses retain their high optical imaging performance in industrial environments. The secure locking of the iris and focus settings and the broadband coating of 400 – 1000 nm is standard for all lenses.



C-Mount Compact Lenses

1" lenses

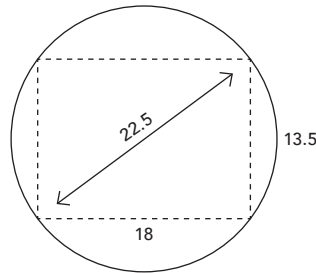


1"

The lenses for larger-sized sensors up to a diagonal of 16 mm are broadband coated and can be used in the visible range 400 – 700 nm or near infrared range 700 – 1000 nm. To perform challenging testing and measuring tasks, C-Mount cameras with larger, high-resolution sensors are frequently used. The lenses with an image circle of 16 mm cover, for example, sensor formats of 9.6 × 12.8 mm and thus allow use of the full potential of such sensors.

C-Mount Compact Lenses

1.3" lenses

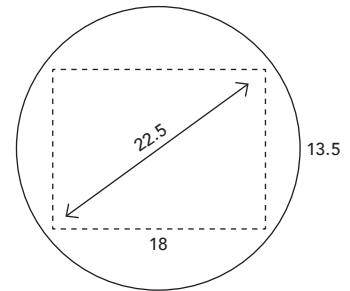


1.3"

The lenses for larger-sized sensors up to 22 mm diagonal are broadband coated and can be used in the visible range 400 – 700 nm or near infrared 700 – 1000 nm. Also for smaller image sensors these lenses are always the first choice when very evenly lit and low-distortion image results are required.

C-Mount Compact Lenses

Anti-shading  
8 megapixel lenses



1.3"

Ø image circle 24 mm

These high-resolution, wide-open lenses are optimized for the use of 8 megapixel 1.3" sensors with micro-lenses on the sensor surface. The special optical design prevents unwanted shading on the sensor. This makes it much easier to combine a homogeneous luminance distribution with high imaging performance. At 24 mm the image circle is very large for a C-Mount lens. With a 1.3" sensor, the relatively short focal length allows a large coverage range at a short working distance. The lenses are also broadband coated and can be used in the visible range 400 – 700 nm or the near infrared range 700 – 1000 nm.



2/3 inch

| Article name | k/f'      | Type  | Iris     | Working distance | Length (mm) | Diameter max. (mm) | Image circle (mm) | Filter thread | Weight (g) | Article no. |
|--------------|-----------|-------|----------|------------------|-------------|--------------------|-------------------|---------------|------------|-------------|
| Cinegon      | 1.8 / 4.8 | -0902 | 1.8 – 11 | ∞ – 0.0 mm       | 47.6        | 37.3               | 11                | M 62 × 0.75 * | 90         | 1001955     |
| Cinegon      | 2.1 / 6   | -0901 | 2.1 – 16 | ∞ – 0.0 mm       | 49.5        | 37.3               | 11                | M 62 × 0.75 * | 110        | 1055691     |
| Cinegon      | 1.4 / 8   | -0902 | 1.4 – 11 | ∞ – 0.0 mm       | 37.5        | 34                 | 11                | M 30.5 × 0.5  | 90         | 1001919     |
| Cinegon      | 1.4 / 12  | -0906 | 1.4 – 11 | ∞ – 12 mm        | 48.5        | 34                 | 11                | M 30.5 × 0.5  | 99         | 1001951     |
| Xenoplan     | 1.4 / 17  | -0903 | 1.4 – 11 | ∞ – 42 mm        | 37.8        | 34                 | 11                | M 30.5 × 0.5  | 85         | 1001957     |
| Xenoplan     | 1.4 / 23  | -0902 | 1.4 – 11 | ∞ – 82 mm        | 40.4        | 34                 | 11                | M 30.5 × 0.5  | 94         | 1001917     |
| Xenoplan     | 1.9 / 35  | -0901 | 1.9 – 16 | ∞ – 246 mm       | 38.5        | 34                 | 11                | M 30.5 × 0.5  | 92         | 1001960     |
| Tele-Xenar   | 2.2 / 70  | -0902 | 2.2 – 32 | ∞ – 560 mm       | 77.8        | 42                 | 11                | M 40.5 × 0.5  | 200        | 1014593     |

5 megapixel

| Article name | k/f'     | Type  | Iris     | Working distance | Length (mm) | Diameter max. (mm) | Image circle (mm) | Filter thread | Weight (g) | Article no. |
|--------------|----------|-------|----------|------------------|-------------|--------------------|-------------------|---------------|------------|-------------|
| Apo-Xenoplan | 1.4 / 23 | -0903 | 1.4 – 11 | ∞ – 86 mm        | 44.2        | 34                 | 11                | M 30.5 × 0.5  | 115        | 1012344     |
| Apo-Xenoplan | 1.8 / 35 | -0901 | 1.8 – 16 | ∞ – 160 mm       | 64          | 34                 | 11                | M 30.5 × 0.5  | 150        | 1057564     |

1 inch

| Article name | k/f'     | Type  | Iris     | Working distance | Length (mm) | Diameter max. (mm) | Image circle (mm) | Filter thread | Weight (g) | Article no. |
|--------------|----------|-------|----------|------------------|-------------|--------------------|-------------------|---------------|------------|-------------|
| Cinegon      | 1.9 / 10 | -0901 | 1.9 – 22 | ∞ – 0.0 mm       | 50.2        | 37.3               | 16                | M 62 × 0.75 * | 136        | 1001978     |
| Cinegon      | 1.8 / 16 | -0901 | 1.8 – 22 | ∞ – 20 mm        | 44.8        | 34                 | 16                | M 30.5 × 0.5  | 102        | 1001482     |

1.3 inch

| Article name | k/f'     | Type  | Iris     | Working distance | Length (mm) | Diameter max. (mm) | Image circle (mm) | Filter thread | Weight (g) | Article no. |
|--------------|----------|-------|----------|------------------|-------------|--------------------|-------------------|---------------|------------|-------------|
| Xenoplan     | 2.0 / 28 | -0901 | 2.0 – 16 | ∞ – 174 mm       | 38          | 34                 | 22                | M 30.5 × 0.5  | 78         | 1001972     |

Anti-shading

| Article name | k/f'     | Type  | Iris     | Working distance | Length (mm) | Diameter max. (mm) | Image circle (mm) | Filter thread | Weight (g) | Article no. |
|--------------|----------|-------|----------|------------------|-------------|--------------------|-------------------|---------------|------------|-------------|
| Apo-Xenoplan | 2.0 / 20 | -0003 | 2.0 – 16 | ∞ – 165 mm       | 62.9        | 48                 | 24                | M 35.5 × 0.5  | 450        | 1056472     |
| Apo-Xenoplan | 2.0 / 24 | -2001 | 2.0 – 16 | ∞ – 76 mm        | 41.7        | 40                 | 24                | M 37 × 0.75   | 80         | 1006215     |
| Apo-Xenoplan | 2.0 / 28 | -0004 | 2.0 – 16 | ∞ – 127 mm       | 46.5        | 46                 | 24                | M 39 × 0.5    | 215        | 1054732     |
| Apo-Xenoplan | 2.0 / 35 | -2001 | 2.0 – 22 | ∞ – 388 mm       | 55.8        | 41                 | 24 (28.7)         | M 37 × 0.75   | 160        | 1006219     |
| Xenoplan     | 2.8 / 50 | -0902 | 2.8 – 22 | ∞ – 530 mm       | 52.7        | 34                 | 22                | M 30.5 × 0.5  | 135        | 1001976     |

\* separate adapter with filter thread required  
 k = relative aperture  
 f' = focal length