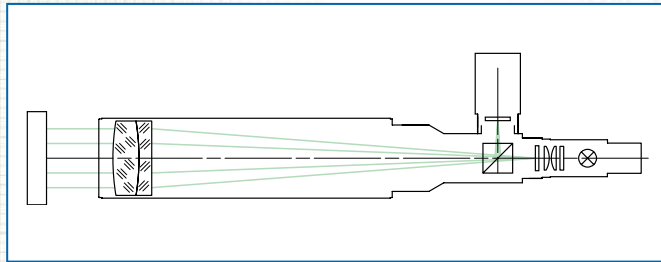


# AUTOCOLLIMATORS WITH CCD-CAMERA MOUNT

## Description:

For a general description of the principle of functioning see page 42.

The principle, function and layout resemble the autocollimator with 90°-viewing (see page 46). The eyepiece and the eyepiece reticle are replaced by a mount for a CCD-camera and the autocollimation image is directly imaged on the camera chip when the camera is mounted. With no eyepiece reticle the displacement of the return image is measured on a video monitor or using a computer, frame grabber and software (see page 106).



## Application areas:

- Measurement of angular tilt
- Measurement of parallelism of plane plates
- Adjustment of optical elements
- Qualitative testing of the imaging properties of optical elements and systems

## Notes on ordering:

- One Reticle and 6V/5W illumination w/cord are included.

## More notes on ordering:

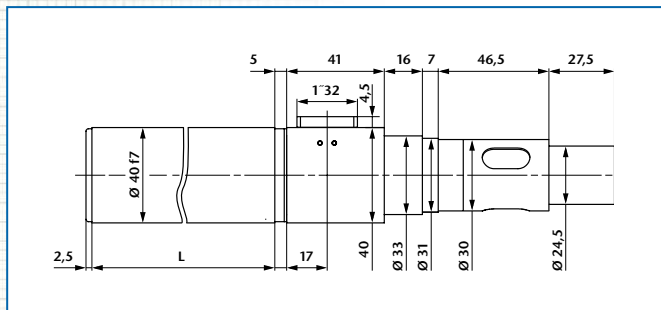
- **CCD-camera and computer hardware/software are NOT included.**
- As this type of autocollimator does not have an eyepiece reticle a direct measurement of the reticle displacement is impossible. Additional computer with software and frame grabber is needed.
- For angular measurement the autocollimator should be equipped with a negative crosshair reticle (see page 83). For testing of imaging quality use resolution target or Siemens Star (see page 87).
- If not specified otherwise, the autocollimator is adjusted to infinity at 546 nm wavelength. Adjustment to other distances or wavelengths is also possible on demand.
- The nomenclature of the autocollimators with CCD-camera mount is as follows:

Example: **AK R 50/ 40/ CCD**

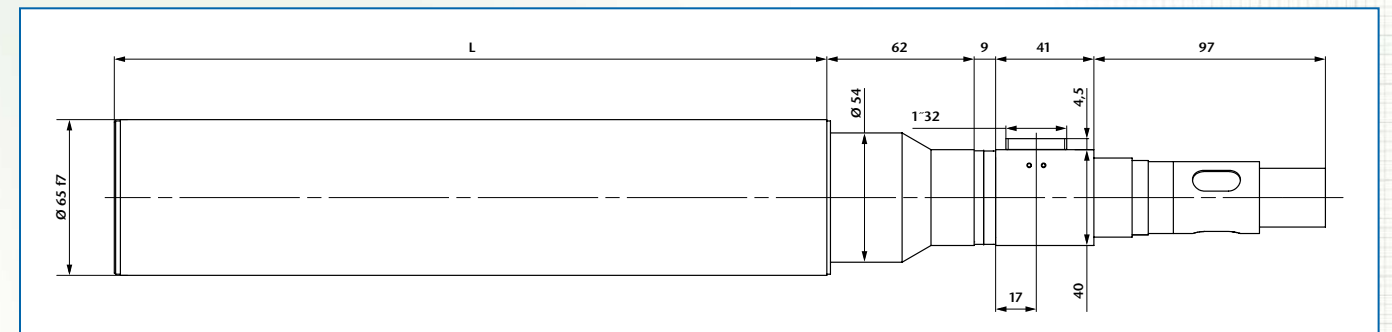
Autocollimator  
90° viewing  
Focal length  
Tube diameter  
CCD-Camera mount

## Important:

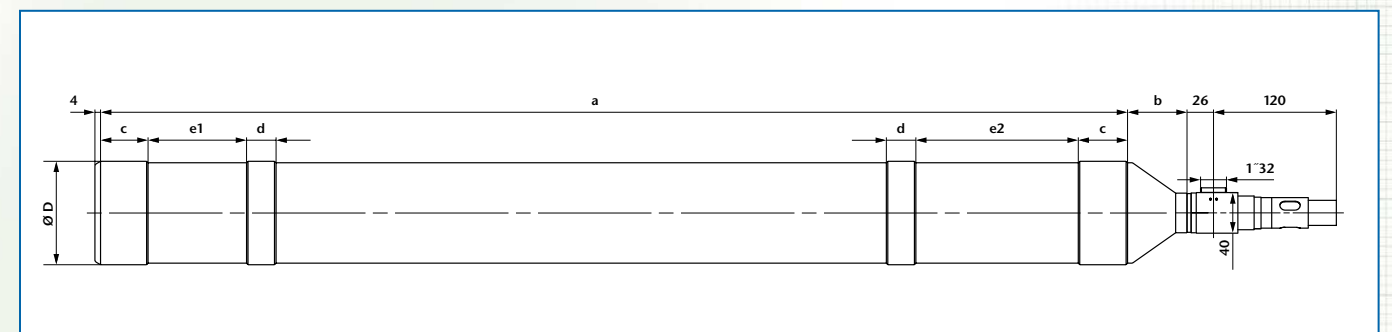
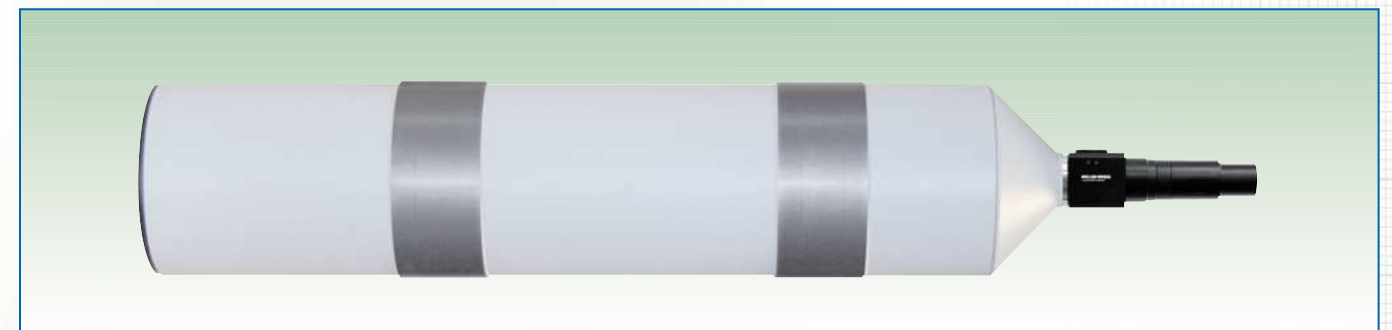
Please specify collimator reticle (see page 82) as well as illumination (LED-, bulb- or cold light, see page 81) when ordering.



| Ord.-No. | Description    | Focal length | Free aperture | Meas. range*    | L   |
|----------|----------------|--------------|---------------|-----------------|-----|
| 229 421  | AKR 50/40/CCD  | 50           | 10            | x:4,50° y:3,20° | 65  |
| 229 422  | AKR 90/40/CCD  | 90           | 16            | x:2,50° y:1,80° | 65  |
| 229 423  | AKR 140/40/CCD | 140          | 28            | x:1,60° y:1,20° | 118 |
| 229 424  | AKR 200/40/CCD | 200          | 28            | x:1,10° y:0,80° | 173 |
| 229 425  | AKR 300/40/CCD | 300          | 28            | x:0,75° y:0,60° | 274 |
| 229 426  | AKR 500/40/CCD | 500          | 28            | x:0,45° y:0,30° | 474 |



| Ord.-No. | Description     | Focal length | Free aperture | Meas. range*    | L   |
|----------|-----------------|--------------|---------------|-----------------|-----|
| 229 427  | AKR 300/65/CCD  | 300          | 50            | x:0,75° y:0,60° | 233 |
| 229 428  | AKR 500/65/CCD  | 500          | 50            | x:0,45° y:0,30° | 415 |
| 229 429  | AKR 500T/65/CCD | 500          | 50            | x:0,45° y:0,30° | 233 |



| Ord.-No. | Description      | Focal length | Free aperture | Meas. range*    | D        | a    | b  | c  | d  | e1  | e2  |
|----------|------------------|--------------|---------------|-----------------|----------|------|----|----|----|-----|-----|
| 229 432  | AKR 600/128/CCD  | 600          | 100           | x:0,35° y:0,25° | Ø 128 f7 | 530  | 46 | -  | 58 | 154 | 78  |
| 229 433  | AKR 1100/105/CCD | 1100         | 78            | x:0,20° y:0,15° | Ø 105 f7 | 1045 | 66 | 50 | 30 | 165 | 100 |

\* with 2/3" CCD-Kamera