

CAMERA CALIBRATION CERTIFICATE

CAMERA TYPE : RC 30
LENS TYPE : 30/4 NAT-S
LENS NO. : 17114

Calibration date: 15.02.2000

SwissOptic AG, Heerbrugg

 **swissoptic**
SwissOptic AG
Heinrich-Wild-Strasse
CH-9435 Heerbrugg
Schweiz


10187

Aperture: 4.0
 Filter on goniometer: VIS (400 - 700 NM)
 Filter on camera: --
 Principal distance for focussing distance 850 m : 303.348 mm

Radial distortion (micrometers) referred to principal point of symmetry (PPS)
 (Positive values denote image displacement away from center)

Radius mm	Half - Sides				Mean
	1	3	2	4	
10	0.4	0.1	0.2	0.3	0.2
20	0.1	0.1	-0.1	0.1	0.0
30	0.4	0.5	0.6	0.0	0.3
40	0.3	1.4	0.4	0.8	0.7
50	0.5	1.4	0.5	1.0	0.8
60	0.1	1.8	0.7	1.2	0.9
70	0.8	1.6	0.6	0.9	0.9
80	0.3	1.8	0.7	0.8	0.9
90	0.6	1.2	-0.2	0.0	0.4
100	-0.2	0.2	-0.3	-1.0	-0.3
110	-0.4	-1.1	-0.9	-1.4	-0.9
120	0.0	-0.6	-1.6	-1.5	-0.9
130	-0.6	-1.2	-1.3	-1.6	-1.1
140	-0.9	-0.9	-1.5	-1.5	-1.2
148	1.9	1.5	1.0	1.5	1.4

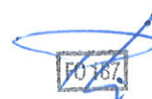
Photographic resolution (line pairs per millimeter)

International 3-line test-chart, contrast (log) : 2.0

Aperture: 4.0
 Filter: 450 NM
 Film: KODAK PANATOMIC X 2412
 Developer: KODAK HC110

Angle (deg)	0	5	10	15	20	25
Radial:	83	83	104	127	124	96
Tangential:	83	117	114	110	117	97

AWAR (Area weighted average resolution) in lp/mm: 114



**Principal point of autocollimation (PPA) and
principal point of symmetry (PPS)**

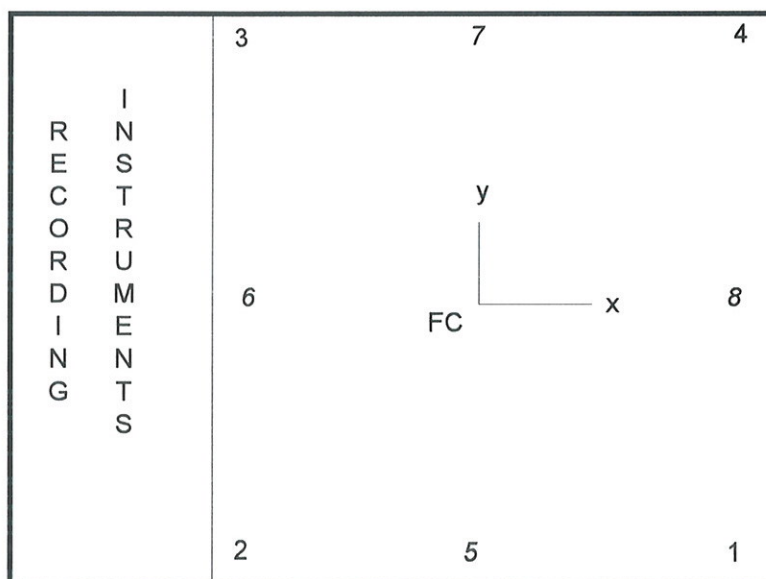
referred to central cross (FC), see diagram

	x (mm)	y (mm)
PPA	-0.006	0.015
PPS	-0.001	0.007

Fiducial marks, referred to central cross (FC)

	x (mm)	y (mm)		x (mm)	y (mm)
1	106.001	-105.999	5	-0.003	-111.998
2	-106.003	-106.004	6	-111.994	0.003
3	-106.004	106.002	7	0.001	111.999
4	106.002	106.002	8	112.002	0.002

Measured on:

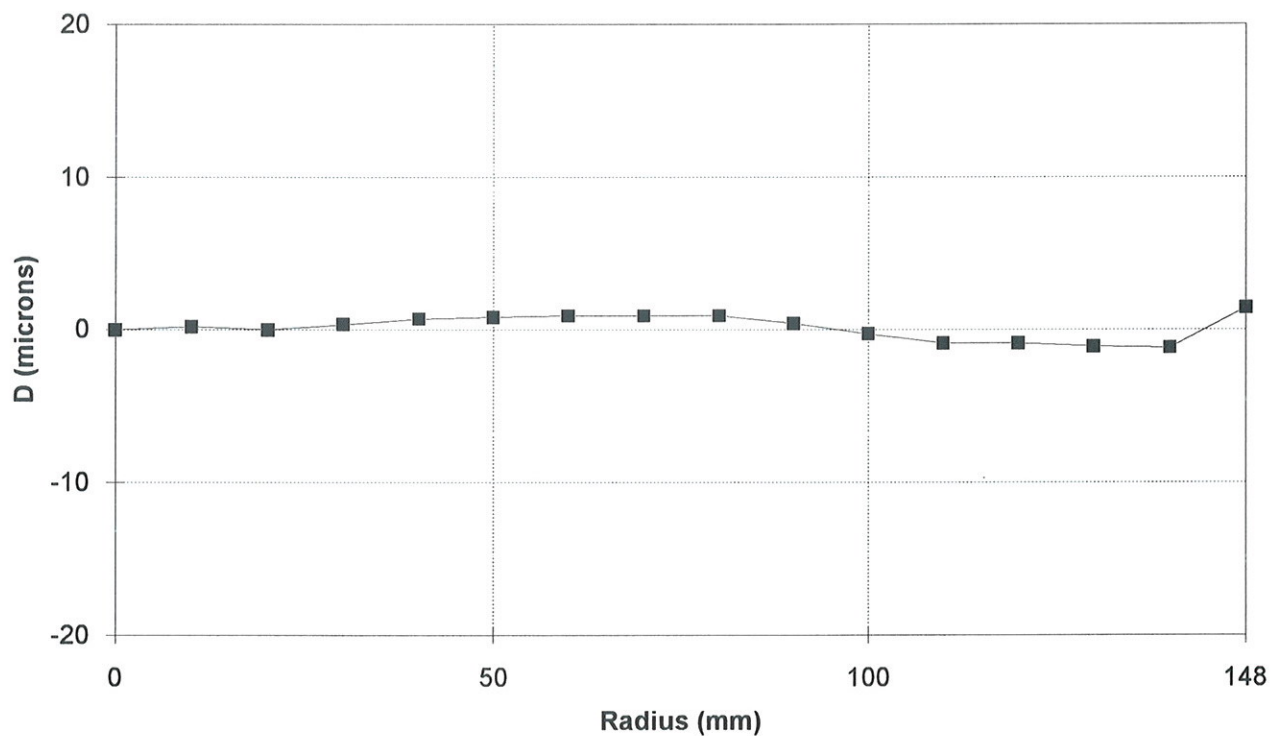


as seen on focal plane frame

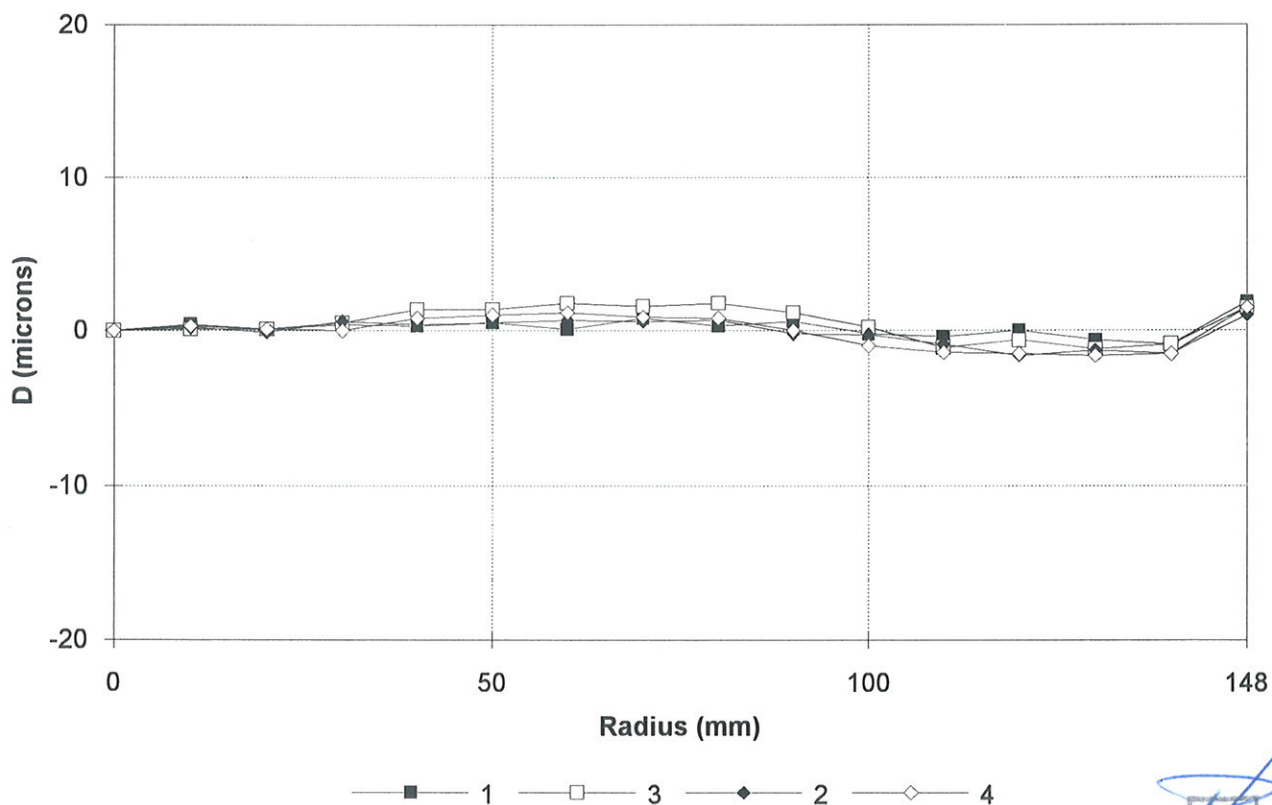


Aperture: 4.0
Filter on goniometer: VIS (400 - 700 NM)
Filter on camera: --
Principal distance for focussing distance 850 m : 303.348 mm

Mean radial distortion



Radial distortion for semi-diagonals referred to PPS



RC 30

Camera Calibration Certificate

(Cover sheet)

Object

Camera Type	Lens Type	Lens-No (Serial-No)	Remarks
RC 10 ☐			
RC 10A ☐			
RC 20 / RC 30 (RC 20) ☐			
RC 30 ☒	30/4 NAT-S	17114	

Acceptance

Characteristics	Acceptance	Remarks
Radial distortion	yes	
Photographic resolution	yes	
Principal point of autocollimation [PPA]	yes	
Principal point of symmetry [PPS]	yes	
Fiducial marks	yes	
Mean radial distortion	yes	
Radial distortion for semi-diagonals referred to PPS	yes	

Inspection

Signature / Remarks		
Calibration Date	14.02.2000	Signature: 
Inspector Name	Paul Wild	
Position	Supervisor	
Inspection stamp-No	FO 187	
Inspection plan	563450 14.4.1989	(Identification-No) (Version)
Lens cone calibration process specification	870105 19.01.2000	(Identification-No) (Version)

Maintenance

		Remarks
The last date, when service/overhaul of this lens cone was performed.		
Recommendation	→	To avoid any malfunctions / damages, it is recommended to perform a complete service / overhaul as soon as possible. See „Lens calibration process specification“ or „Technical Reference Manual“