



Efficient quality assurance of turned parts  
thanks to flexible, optical shaft measuring systems  
**Opticline CS series**

## Economic quality control of turned parts

### Opticline CS series optical shaft measuring systems

The devices from the new CS series are rigorously designed for production-related applications and are optimized to meet special requirements relating to the production and quality assurance of rotating parts.

The high-quality measuring instruments of the Opticline CS series offer an optimized price-performance ratio and ideally meet the demands of customers with medium tolerance requirements.

#### Your advantages

- Robust design for use in production
- Easy, fast and flexible measurements
- User-independent results
- Mechanisms for device self-monitoring
- Automated measuring runs
- Easy to operate and program
- Statistics capable and conclusive reporting

„All-in-one“ measuring system  
Dimension, form, position etc.

Easy changing of the workpiece  
Flexible measuring system  
For varying parts

Jenoptik technology  
At an attractive price  
Optimized for turned parts

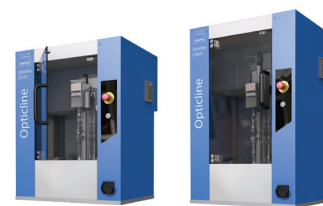
Compact design  
Easy to operate  
User-independent measurement

User-friendly software  
Numerous analysis functions  
Conclusive reporting  
Retraceable quality control

Secure measuring runs  
Clear measurement results  
Reliable quality assurance

Use in production environment for operator-controlled inspections  
Fast feedback of the measurement results into the production process  
Increase in productivity





## Technical data

Opticline <sup>1)</sup>	CS155	CS305	CS308
<b>Measuring capacity [mm]</b>			
Diameter	50	50	80
Length <sup>2)</sup>	150	300	300
<b>Workpiece capacity</b>			
Diameter [mm]	90	90	90
Length <sup>2)</sup> [mm]	150	300	300
Workpiece weight <sup>3)</sup> [N]	100	150	150
<b>Resolution</b>	≤0.2 μm, high precision scales, CCD high speed camera		
Diameter, length	0.0018°		
Rotation			
<b>Temperature compensation</b>	included, multiple temperature probes with intelligent compensation system		
Measuring system	optional (manual only)		
Workpiece			
<b>Maximum permissible error<sup>4)</sup> MPE<sub>EI</sub></b>			
Diameter	(2.0+D[mm]/100) μm		
Length	(5.0+L[mm]/100) μm		
<b>Repeatability (4s, n=25)<sup>5)</sup></b>			
Diameter	0.5 μm		
Length	3.0 μm		
<b>Speed</b>	automatically optimized: 10 – 80 mm/s		
Measuring	1 rps		
Measuring rotation	200 mm/s		
Positioning	1 rps		
Positioning rotation	depending on type and quantity of test features, typical 3...30 s		
Measuring cycle			
<b>Dimensions [mm]</b>			
Measuring system [WxDxH]	690 x 570 x 920	690 x 570 x 1070	690 x 570 x 1070
<b>Weight (depending on setup)</b>			
Measuring system [kg]	110	120	125
<b>Clamping tool interfaces</b>			
Morse taper headstock	MT2		
Morse taper tailstock	MT2		
Clamping stroke tailstock	manual, 20 mm		
<b>Measurement computer</b>	measurement and evaluation computer, external		
Hardware	Windows 10 64Bit		
Operating system			
<b>Power supply</b>			
Connection	AC – PH, N, PE		
Voltage	200 – 240/100 – 120 V (127 V on request)		
Power frequency   consumption	50/60 Hz   1.5 kVA		
Fuse	16 A		
<b>Emission sound pressure level</b>	≤70 dB(A)		

1) Environmental conditions: not chemically aggressive, not explosive and not radioactive. Temperature range from +10° C to +40° C, max. relative humidity 85 % without condensation. Dust aerosol values according to TRGS 900.

2) Between tips from the standard scope of delivery. Length may be reduced depending on the clamping devices.

3) Workpiece positioning without knocks or strong lateral forces. Max. mass moment of inertia: 0.04 kg/m<sup>2</sup>. Improper workpiece positioning may damage the headstock or bearings.

4) MPE according to EN ISO 10360 / VDI/VDE 2617, verified with calibrated masters. Environmental conditions according to VDI/VDE 2627 at +18° C to +22° C, class 3 conditions (gradient 1 K/h, 2K/24h, 0.5 K/m).

Mechanical ambient conditions according to EN 60721-3-3 class 3M1.

5) Typical range over 25 repeat measurements on ground workpiece surfaces. In accordance with VIM, International Dictionary of Metrology.



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