



OGP COBRA



Laser Profile Scanner

Fast, inexpensive,
and accurate
non-contact
surface profiles

OGP Cobra is an economical, non-contact measurement system for quickly scanning virtually any part or surface to produce high resolution two- or three-dimensional profiles. Cobra gives you speed and precision at a great price.

The combination of laser technology, a computer-controlled moving sensor, and dedicated metrology software, makes Cobra an extremely versatile profile scanner. Interchangeable DRS™ sensors allow measurement of polished or diffuse materials with Z-axis height resolutions to 0.125 µm.

The compact unit moves the DRS sensor up to 50 mm across the surface in the Y axis while it accumulates data about the profile in the Z axis. Cobra3D adds a motorized stage to also move the sample in the X axis, allowing parallel linear profiles to generate a three dimensional image. The Cobra unit and the stage are secured to a granite plate, creating an extremely stable integrated measurement system.

Cobra connects to the parallel port of a PC-compatible computer. Use OGP's ScanX™ metrology software's intuitive graphical user-interface to control data acquisition and display the part profile as the part is scanned.

- Use on benchtop, in-line, or place directly on the component being scanned.
- Perfect for non-destructive measurement of fragile or pliable parts.
- Connect Cobra directly to OGP video machines for results to complement video measurements.

2D 3D

● Standard ● Option

- ● **Maximum scan length (Y):** 50 mm
- ● **Maximum scan length (X):** 100 mm
- ● **Measuring range (Z):** varies by model of DRS (see chart below)
- ● **Measuring unit dimensions (approx DWH):** 425 x 220 x 315 mm, 10.5 kg
- ● **Measuring unit dimensions, including granite plate (approx DWH):** 610 x 510 x 390, 80 kg
- ● **Z axis adjustment range:** 50 mm
- ● **Minimum X and/or Y step size:** 1 μ m
- ● **Scanning speed (nominal):** 5 mm/second at 30 μ m spacing on a specular surface

- ● **Power requirements:** 115/230 vac, \pm 5%, 50/60 Hz, 1 ϕ , 400 W
- ● **Rated environment:** 18-23° C \pm 2° C/hr, 30-80% humidity (non-condensing), vibration <0.002g below 15 Hz
- ● **Operating environment:** 15-30° C

- ● **Metrology software:** OGP ScanX™
- ● **Computer:** Minimum configuration required for Cobra system; Pentium® class CPU with 64 MB RAM, CD-ROM, 1 parallel port, monitor/VGA card capable of 1024 x 768 resolution, keyboard, mouse; with Microsoft® Windows™ 98 or 2000 operating system
(User may supply appropriately configured computer, or available from OGP)
- ● **Software:** AutoScan™ (for creating automated scanning routines in Visual Basic™), MeasureFit™
Surfer® (for 3D mapping)

Straightness of travel:

- ● **Y axis:** \pm 1 μ m within 25 mm
- ● **X axis:** \pm 1 μ m within 25 mm

Sensor*	Type	Capture Range	Z Accuracy within Capture Range	Dynamic Resolution	Spot Size	Standoff**
● ● DRS-300	Specular	300 μ m	1.0 μ m	0.125 μ m	7-12 μ m	17 mm
● ● DRS-500	Specular	500 μ m	1.0 μ m	0.125 μ m	16-23 μ m	17 mm
● ● DRS-2000	Diffuse	2000 μ m	10 μ m	1.0 μ m	32-48 μ m	31.5 mm
● ● DRS-8000	Diffuse	8000 μ m	40 μ m	4.0 μ m	60-85 μ m	50 mm

*One DRS sensor included with base Cobra2D or Cobra3D system. Additional sensors can be used with either system.
** Standoff is the distance in Z from the lowest point on the sensor to the middle of the capture range.

- ● **Warranty:** One year
- ● **Accessories:** Certified step standards for calibration verification
- ● **Service:** Service and support contracts



Safety Considerations

This system is classified as a Class II laser device by the Center for Devices and Radiological Health (CDRH) and IEC 825 (1983). **Do not stare directly into the laser source.**



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