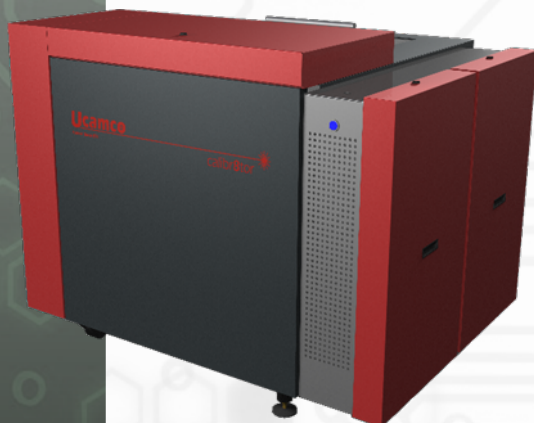# Ucamco
**Former Barco ETS**

| SOFTWARE | LASER PHOTO PLOTTERS | DIRECT IMAGERS |
|---|---|---|

# Calibr8tor 2000 & 2500

The global benchmark for plot speed and image accuracy

- Highest throughput of precision plots
- 16 resolutions up to 25,400 ppi
- Unequalled accuracy
- Load up to 3 film magazines
- 100% automatic operation
- "Wheel-in" integration
- Unrivalled uptime record

## MARKETS
Rigid PCB Mfr ✓
Flex PCB Mfr ✓
Flex-Rigid PCB Mfr ✓
HDI PCB Mfr ✓
PCB Masslam Mfr ✓
PCB Equipment Mfr
PCB Traders
PCB Designers
PCB Test Centers
IC Packaging ✓
Chemical Milling ✓
High Resolution Graphic Arts ✓
Flat Panel Display ✓

## PRODUCT FAMILIES
CAM
PreCAM and Engineering
Electrical Test
Equipment Front Ends
Format Converters & RIP's
OEM Software

Laser Photo Plotters ✓
Direct Imagers

### The global plotter benchmark
The latest calibr8tor 2000 series sets a new global benchmark for plot speed and image accuracy on features down to 12.7 µm. New optics, high-speed electronics and the new SmartRip double the plot speeds of our SilverWriter series. The high-speed load system converts this to the highest throughput of precision films in the market – without compromising accuracy or reliability. Up to 3 magazines can hold 450 sheets of film of 3 different sizes to give maximum plotting flexibility and cost control.

### Unequalled image quality
16 metric and imperial resolutions up to 25,400 ppi (1µm) give optimum settings for every image. Two unique imaging technologies, syntectic modulation and 200,000 ppi pixel-placement, ensure ultra-precise feature definition at every resolution, eliminate the pixel-jump errors found on conventional plotters, and tolerance line widths to less than 2µm.

### Pin-sharp edge definition
Ucamco has worked with leading film manufacturers to achieve the highest image quality possible on film. The result: pin-sharp edge-definition on the finished photo tools.

### Precise registration
Dynamic beam positioning accurate to 0.25µm and the patented stress-free film loader ensure an unrivalled geometric accuracy for exact registration for HDI & SBU boards.

### Reliable 24/7/52
The calibr8tor 2000 series is engineered for fully automatic operation 24/7/52. The granite bed, contactless linear motor, maintenance-free air-bearings and direct-drive drum deliver unrivalled long-term uptime – your guarantee of continuous high productivity and low whole life costs.

### Compatible and upgradeable
With its small footprint and ability to accept plot instructions directly in Gerber, DPF, ODB++, Image 5000 (Expert) or MDA formats, the calibr8tor 2000 series is a wheel-in replacement for conventional plotters. Install a new machine or field-upgrade a SilverWriter 8000: either way the calibr8tor 2000-HD series put you at the cutting edge of plotter technology.
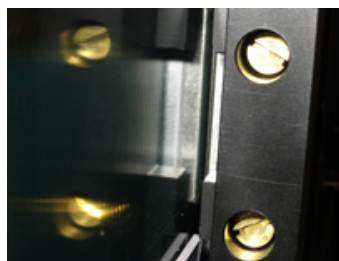
# Calibr8tor 2000 & 2500

**Technical Data**

For more information on any of our products or services please contact us:
By e-mail: info@ucamco.com
On the Web: www.ucamco.com

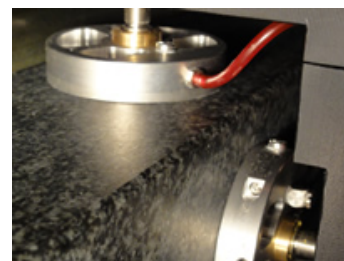| Resolutions | | |
|---|---|---|
| Imperial | 4,000 up to 25,000 ppi | |
| Metric | 6.25 µm up to 1 µm | |
| Min. line width | 0.5 mil | 12,7 µm |
| **Productivity for an 18" x 24" exposed** panel (*) | **Model 2000** | **Model 2500** |
| 4,000 ppi (in films / hour) | 29.1 | 29.1 |
| 8,000 ppi (in films / hour) | 20.3 | 20.3 |
| 16,000 ppi (in films / hour) | 12.7 | 12.7 |
| 20,000 ppi (in films / hour) | 9.7 | 10.7 |
| 25,000 ppi (in films / hour) | 6.7 | 8.9 |
| **Film Requirements** | **Imperial** | **Metrical** |
| Film format along the drum | 18" – 32" in ½" steps | 457 – 813 mm |
| Film format around the drum | 24" – 29" in 1" steps | 610 – 736 mm |
| Max. image format along the drum | 0.2" (5 mm) less than film format | |
| Max. image format around the drum | 0.9" (23 mm) less than film format | |
| Sheet tolerance | ± 0.02" | ± 0.5 mm |
| **Accuracy** | **Imperial** | **Metrical** |
| Geometric plotter accuracy | < 0.16 mil | < 4 µm |
| Geometric plotter repeatability | < 0.08 mil | < 2 µm |
| Global positioning accuracy | 0.01 mil | 0.25 µm |
| Geometric film accuracy - 3σ, FTF radial | < 0.4 mil | < 10 µm |
| Geometric repeatability on film | < 0.4 mil | < 10 µm |
| Line-width accuracy | < 0.08 mil | < 2 µm |
| Scaling adjustments | In steps of 0.2 µm | |
| Scaling adjustment range | ± 5% | |
| **Machine Characteristics** | **Imperial** | **Metrical** |
| Loading capacity | Up to 3 magazines. 150 sheets of film in each | |
| Light source | Red HeNe laser, 632.8 nm, 5 mW | |
| Dimensions (W x D) | 72.8" x 61" | 1850 x 1550 mm |
| Height | 54.3" | 1380 mm |
| Weight | 3300 lbs | 1500 kg |
| Room temperature during operation | 70° F ± 2° | 21° C ± 1° |
| Relative humidity during operation | 50% ± 2%, no condensation | |
| Relative humidity rate of change | Max 6% per hour | |
| Electrical Power Supply | 2 x 230 VAC, 2,000 VA | |
| Heat dissipation | 2,000 W (1,725 kcal/h) | |
| Compressed air supply | 87 – 145 PSI | 6 – 10 bar |
| Compressed air quality | Free of oil and water | 0.01 mg/m³ |
| Compressed air volume | 88 ft³/hour | 2500 l/hour |

(*) Assuming nominal plotting using factory settings


Linear scale


Linear motor


Air bearings

Ucamco NV
Bijenstraat 19, 9051 Gent, Belgium
Tel: +32 9 216 99 00 - Fax: +32 9 216 99 12
E-mail: info@ucamco.com - Web: www.ucamco.com