

# Certified Comparator Products For over 25 years, CCP has been the

leading optical comparator technology and service expert.





### CC-14L Optical Comparator

#### **High Performance at a Low Price**

The CC-14L is a small footprint optical comparator with advanced features you'd expect to find on a larger model. CC-14L offers a range of innovative options allowing you to configure a system to your specific needs.

- Shop floor tough cast mineral base provides a rigid foundation for the optics and stages.
- Conveniently angled screen reduces operator fatigue.
- Exclusive TruLight® all-LED illumination ensures a bright screen and adjustable light intensity for all light sources.



#### **New Technology for Increased Value**

**The CC-14** is a full-function optical comparator with the world's most advanced comparator technology.

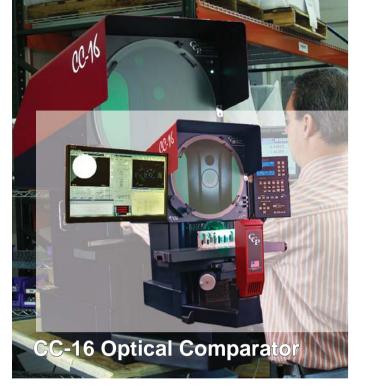
- Advanced optics offer a bright, evenly illuminated screen and upright, corrected image.
- TruLight® all-LED illumination with variable intensity control to set the light level exactly the way you like it.
- Rugged design and construction for years of trouble-free service.
- Optional VidiProbe<sup>™</sup> integral video measurement and eCAD<sup>®</sup> electronic chart gage systems transform CC-14 into a fully automatic measuring system.



#### Large Screen Performance at a Low Price

**The CC-16L** offers big screen performance in a compact, value-priced package.

- Advanced optics offer a bright, evenly illuminated screen and upright, corrected image.
- TruLight® all-LED illumination with variable intensity control profile, surface and oblique light sources are standard.
- Rugged cast mineral base construction ensures a rigid base for the optics and stages.



#### **High Performance and Quality**

The CC-16 offers the most advanced technology available in a benchtop optical comparator. CC-16 can be configured for manual, semi-automatic or fully automatic measurements.

- Motorized X,Y stages with manual fine position controls.
- Fully telecentric optics provide upright, corrected images.
- Internal quick change lens mount and lens storage rack.
- Optional VidiProbe<sup>™</sup> integral video measurement and eCAD® electronic chart gage systems transform CC-16 into a fully automatic measuring system.



#### **High Payload Capacity for Large Parts**

The **CC-20** combines the most advanced optics and high load carrying capacity for reliable shop floor operation.

- Heavy duty, motorized stages carry up to 300 pound payloads with precision and speed.
- Three mirror telecentric optics produce upright and un-reversed images.
- Standard TruLight® all-LED profile lighting is bright, cool and long lasting.
- Optional VidiProbe<sup>™</sup> integral video measurement and eCAD<sup>®</sup> electronic chart gage systems transform CC-20 into a fully automatic measuring system.



## High Capacity Optical Comparator

The **CC-30** is a large capacity optical comparator that offers a large, bright image and relatively compact footprint.

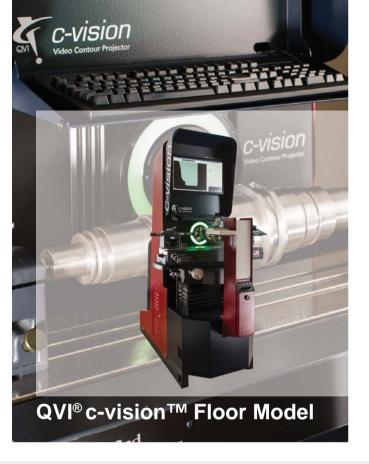
- Standard mercury-arc profile lighting and optional mercury-arc surface light allow a full range of measurement capabilities.
- Rigid construction and heavy duty components ensure years of trouble free service.
- Optional VidiProbe<sup>™</sup> integral video measurement and eCAD<sup>®</sup> electronic chart gage systems transform CC-30 into a fully automatic measuring system.



#### **Benchtop Video Contour Projector®**

**c-vision** is the ultimate shop floor measuring system. Its rugged, comparator design handles large, heavy parts, while advanced optics and digital image processing provide fully automatic measurements.

- Telecentric dual magnification optics offer a full 3-inch field-of-view - the same as a 30-inch comparator.
- Exclusive Zoom Anywhere<sup>™</sup> and digital image processing enable the most complex and precise measurements – automatically.
- Shop hardened design and construction for years of trouble free operation.



#### High Capacity Video Contour Projector®

**c-vision Floor Model** is a heavy duty system built for the shop floor. Its rugged design and 300 pound load capacity put automatic measurement capability to work where you need it.

- Heavy duty construction and stages for high load capacity with a open work envelope allows easy loading and unloading.
- Telecentric dual magnification optics offer a full 3-inch field-of-view - the same as a 30-inch comparator.
- Exclusive Zoom Anywhere<sup>™</sup> and digital image processing enable the most complex and precise measurements – automatically.

Automatic Edge Detection uses electronic image analysis to determine when an edge is aligned to the screen centerline. Edge detection provides fast, accurate, and repeatable measurements no matter how many operators. CCP offers a choice of two types of auto edge detection:



**Projectron®** edge detection operates with the Q-Check® DRO controller. Projectron is mounted inside the comparator so it stays aligned, unlike external edge detection.



EdgeScan™ operates with the Quadra-Chek DRO controllers. The EdgeScan sensor is mounted behind a high efficiency beam splitter that does not interfere with the image forming optics.

**eCAD**® is an industry-changing innovation that sets a new standard for inspection and measurement with an optical comparator.



Patented eCAD® projects an accurately magnified CAD model directly onto the comparator screen, presenting a virtual chart gage, including nominal dimensions and tolerance bands.



VidiProbe™ transforms the traditional optical comparator into a fully automatic inspection system using Measure-X® 2D software.

On CC-14 models a digital megapixel video camera is installed in the lens turret. When video measurement is needed, simply select the video lens position for fully automatic video measurements.

On CC-16 and CC-20 models, the video camera is internally mounted to enable simultaneous measurements using both the analog comparator screen and the digital video with Measure-X 2D.

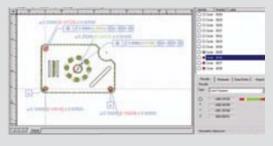




eChek provides full measurement and construction functionality for points, midpoints, angles, lines, arcs, circles, distances, widths, included angles, angle intersections, line/circle intersections, point-to-point distances, gage ball tangent to two lines, and gage ball between two non-parallel lines. Can be used manually or with automatic edge detection.



ImageCapture™ uses an internal camera that captures a precise image of the screen display which can be annotated and saved for quality record keeping, analysis and troubleshooting. Simple, manual measurements may be taken and recorded. Video Image Express™ software enables single or multiple scenes to be recorded as a video so that an entire measurement sequence can be played back.



**MeasureFit® Plus** solves composite XY profile fitting and GD&T analysis applications, and easily identifies trouble spots, trends, and potential assembly problems.

MeasureFit Plus imports and exports DXF files to create project files containing datum structures, GD&T tolerances, and material condition. Includes SmartReport® Powered by QC-CALC™ Real-time.



Certified Comparator Products has the world's largest inventory of PreOwned optical comparators. We accept older model comparators as trade-ins, and we buy surplus comparators. We also offer a search and locate service for clients to find a specific machine using our extensive network.

All CCP PreOwned comparators undergo an exhaustive service check, and come with our CCP Satisfaction Guarantee right to return for full credit policy.

Level 1: Certified PreOwned	Previously owned optical comparator in exceptional measuring condition, ready for sale as is     Installation and certification to original factory settings     Full 30-day warranty for parts and labor
Level 2: Certified Refurbished	- Includes all items in Level 1 - Rebuilt or new membrane panels or DRO - New illumination system - New or rebuilt axis drive system and linear glass scales on all measuring axes - Top and bottom table surfaces repaired (as required) - New optical surfaces (as required) - New glass chart - Paint touch-ups - Safety updates - Full 1 year warranty on parts and 90 days for labor
Level 3: Factory Certified	- Includes all items in Level 1 and 2 - Kodak, Excello, CCP or OGP models only - New machine wiring and electrical systems - New optical surfaces - Resurfacing of top and bottom worktable - New motion controls (for motorized units only)

New axis drive system
Complete tear-down and clean
Completely repainted
Upgraded specifications

- Full 1 year warranty on parts and labor



Proudly Designed and Manufactured in USA

#### **Certified Comparator Products**

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Authorized CCP Distributor



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