

Coordinate measuring machines are no small investment; yet, ask any manufacturer and you'll likely hear that their CMM paid for itself a thousand times over. These manufacturers know that without CMMs, they couldn't possibly ensure the quality of their products.

CMMs have been around for several decades now and are constantly being improved as new technologies arise and others evolve. Modern CMMs are equipped with all the features a shop floor might necessitate—temperature compensation, contact and noncontact probes, graphically driven software, and even laser- and vision-based components.

The Quality Sourcebook's CMM Manufacturers Directory includes a number of companies that specialize in video- and laser-based products as well as those that manufacture traditional CMMs. *Quality Digest* will continue to monitor innovations in CMM technology, so look for future articles discussing the latest developments.

This directory is not meant to endorse or exclude a particular organization. Rather, it should be used as the starting point in the data-gathering process. Readers are encouraged to contact the companies directly for more information and to ask for—and check—references.

CMM Guide

CMM Manufacturers Directorypage 35

This directory of CMM manufacturers includes the company name, address, phone and fax numbers, and Web address. Brief company descriptions, if provided, can be found on our Web site at www.qualitydigest.com/directories.

Glossary

Accuracy—the deviation of a part or measuring system from a known standard. The quantitative measure of the degree of conformance to recognized standards of measurement

Actual value—the measured value of a feature

Deviation—the difference between the actual measured dimension and the nominal dimension

Linear accuracy—accuracy of the instrument when measuring along a single axis. This data is often integrated with the volumetric accuracy.

Nominal—the standard or desired dimension or size of a feature. The print values for the measurement as opposed to the measured values

Range—the X, Y or Z distance the CMM can travel while measuring a part. For articulating arms, the laser trackers and other nontraditional CMMs, this dimension may be represented as a sphere.

Repeatability—a measure of the ability of an instrument to produce the same measured value when sequentially sensing the same quantity under similar measurement conditions

Resolution—the smallest distance that can be measured by the instrument

T comp.—Many instruments provide a means for temperature compensation. Temperature data can be manually input, read from a sensor mounted on the part being measured, read from sensors mounted on the instrument itself or gathered from any combination of these methods.

Throughput—describes how many points per minute an instrument can measure. This number tends to be much higher for noncontact measurement systems than for contact measurement systems.

True position—the exact location of a point, line or plane with respect to a datum or other feature

VDI, B89 or ISO—accuracy standards to which instruments conform

Volumetric accuracy—accuracy of the instrument when measuring along all axes simultaneously

The information contained in Quality Digest directories, plus some additional information, is available online at www.qualitydigest.com/directories.

Absolute Clarity & Calibration LLC

109 Main St.
Terryville, CT 06786
Ph. 860-583-0502 Fax 860-314-1851
www.absoluteclarity.com

Accurex Measurement Inc.

200 Grove Road
West Deptford, NJ 08066
Ph. 800-535-5798 Fax 856-251-3141
www.accurexmeasure.com

Acu-Gage Systems

P.O. Box 6178
Manchester, NH 03108
Ph. 800-422-2283 Fax 603-626-1277
www.acu-gage.com

Advanced Metrology Solutions

712 N. Fairfield Road
Dayton, OH 45434
Ph. 937-320-9500 Fax 937-320-9600
www.advancedmetrology.com

Air Gage Co.

12170 Globe Road
Livonia, MI 48150
Ph. 734-853-9220 Fax 734-853-2435
www.airgage.com

American Calibration Inc.

4410 Route 176, Ste. 14
Crystal Lake, IL 60014
Ph. 815-356-5839 Fax 815-356-5851
www.americancalibration.com

American SIP Corp.

Skyport Business Park
2379 Progress Drive
Hebron, KY 41048
Ph. 859-534-5201 Fax 859-534-5212
www.amersip.com

American Technica Inc.

P.O. Box 111
Glen Head, NY 11545
Ph. 516-671-6719 Fax 516-671-6723
www.styliheadquarters.com

Apollo Research Corp.

2300 Walden Ave., Ste. 200
Buffalo, NY 14225
Ph. 800-418-1718 Fax 716-206-2302
www.cnmntouchprobe.com

Automated Precision Inc.

15000 Johns Hopkins Drive
Rockville, MD 20850
Ph. 800-537-2720 Fax 301-990-8648
www.apisensor.com

Bobier Tool Supply Inc.

G-4163 Corunna Road
Flint, MI 48532
Ph. 800-288-2871 Fax 810-732-3909
www.bobiertool.com

Brown & Sharpe

200 Frenchtown Road
North Kingstown, RI 02852
Ph. 800-766-4673 Fax 401-886-2727
www.brownandsharpe.com

Brown & Sharpe TESA

200 Frenchtown Road
North Kingstown, RI 02852
Ph. 800-283-3600 Fax 401-886-2553
www.brownandsharpe.com

Carbide Probes Inc.

1328 Research Park Drive
Dayton, OH 45432
Ph. 800-347-4980 Fax 937-429-2103
www.carbideprobes.com

CE Johansson

Allée du Clos des Charmes
Collegien France
Ph. +33 1 64628085 Fax +33 1 60174056
www.cejohansson.com

Cincinnati Precision Instruments

253 Circle Freeway Drive
Cincinnati, OH 45246
Ph. 800-686-3730 Fax 513-874-2536
www.cpi1stop.com

Dimensional Control Systems Inc.

580 Kirts Blvd., Ste. 309
Troy, MI 48084
Ph. 248-269-9777 Fax 248-269-9777
www.dscs.com

Dorsey Metrology International

53 Oakley St.
Poughkeepsie, NY 12601
Ph. 845-454-3111 Fax 845-454-3888
www.dorseymetrology.com

Electronic Measuring Devices Inc.

199 Route 46 E.
Budd Lake, NJ 07828
Ph. 973-691-4755 Fax 973-691-4745
www.emdsceptre.com

ETC

2320 D Walsh Ave.
Santa Clara, CA 95051
Ph. 408-980-1734 Fax 408-988-4482
www.micro-metric.com

Fabreeka International Inc.

1023 Turnpike St.
Stoughton, MA 02072
Ph. 800-322-7352 Fax 781-341-3983
www.fabreeka.com



FARO Technologies Inc.

125 Technology Park
Lake Mary, FL 32746
Ph. 800-736-0234 Fax 407-333-4181
www.faro.com/qd

Geodetic Systems Inc.

1511 Riverview Drive
Melbourne, FL 32901
Ph. 321-724-6831 Fax 321-724-9253
www.geodetic.com

GKS Inspection Services Inc.

37100 Plymouth Road
Livonia, MI 48150
Ph. 800-346-3898 Fax 734-953-9635
www.gks3d.com

Helmel Engineering Products Inc.

6520 Lockport Road
Niagara Falls, NY 14305
Ph. 800-237-8266 Fax 716-297-4045
www.hemel.com

International Metrology Systems Inc.

47007 Five Mile Road
Plymouth, MI 48170
Ph. 734-927-9800 Fax 734-927-9804
www.ins-cmm.com

itpstyli LLC

1265 Research Blvd.
St. Louis, MO 63132
Ph. 877-478-9587 Fax 314-432-3107
www.itpstyli.com

Kurt Manufacturing Co.

5800 Main St.
Fridley, MN 55432
Ph. 800-343-9884 Fax 763-574-8368
www.kurt.com

Labtek

91 Lost Lake Lane
Campbell, CA 95008
Ph. 408-871-7700 Fax 408-871-7800
www.labtek.net



Leica Geosystems, Metrology Division

4855 Peachtree Industrial Blvd.
Norcross, GA 30092
Ph. 800-367-9453 Fax 770-734-1394
www.leica-geosystems.com/metrology

Lightway Systems Corp.

59 Wellandvale Road
St. Catharines, ON L2S 3Y2 Canada
Ph. 905-688-7102 Fax 905-688-7102
www.lightwaysystems.com

LK Metrology Systems Inc.

12701 Grand River
Brighton, MI 48116
Ph. 810-220-4360 Fax 810-220-4300
www.lk-cmm.com

LMI Technologies Inc.

1673 Cliveden Ave.
Delta, BC V3M 6V5 Canada
Ph. 604-636-1011 Fax 604-516-8368
www.lmint.com



Mahr Federal Inc.

1144 Eddy St.
Providence, RI 02905
Ph. 800-333-4243 Fax 401-784-3246
www.mahr.com

Measure-All Inc.

447 Nilles Road
Fairfield, OH 45014
Ph. 800-758-2376 Fax 513-829-1105
www.measure-all.com

Measurement Center Corp.

1081-F N. Shepard St.
Anaheim, CA 92806
Ph. 714-632-8511 Fax 714-632-3628

MetricVision

8500 Cinder Bed Road, Ste. 150
Newington, VA 22122
Ph. 703-541-2623 Fax 703-550-2949
www.metricvision.com

Metris USA

1577 Star Batt Drive
Rochester Hills, MI 48309
Ph. 248-853-6907 Fax 248-853-6945
www.metris.com

Micro-Metric Inc.

1050 Commercial St., Ste. 102
San Jose, CA 95112
Ph. 800-490-3333 Fax 408-452-8412
www.micro-metric.com

Micro-Vu Corp.

7909 Conde Lane
Windsor, CA 95492
Ph. 707-838-6272 Fax 707-838-3985
www.microvu.com

Miic America Inc.

41208 Capital
Canton, MI 48187
Ph. 734-453-2188 Fax 734-453-2216
www.miicamerica.com

C M M F I X T U R I N G

TE-CO Offers a Complete Line of Components for CMMs

featuring our newly expanded line which includes CMM fixturing kits, locators, positioners, clamps for CMM applications, plastic clamp kits, tooling balls, and tapped hole location gages.

TE-CO
WORKHOLDING TECHNOLOGY

109 Quinter Farm Rd.
Union, OH 45322-9796
800-543-4071
Fax: 937-832-1274
E-mail: info@te-co.com

Call today for your **FREE CATALOG**
800-543-4071
or go to
www.te-co.com

Mitutoyo America Corp.

965 Corporate Blvd.
Aurora, IL 60504
Ph. 630-820-9666 Fax 630-820-7403
www.mitutoyo.com

Mycrona of North America Inc.

1750 B Todd Farm Drive
Elgin, IL 60123
Ph. 847-531-7500 Fax 847-531-7501
www.mycrona.net

NDI

103 Randall Drive
Waterloo, ON N2V 1C5 Canada
Ph. 877-634-6340 Fax 519-884-5184
www.ndigital.com

Nikon Instruments Inc.

1300 Walt Whitman Road
Melville, NY 11747
Ph. 800-526-4566 Fax 631-547-8559
www.nikonusa.com

Omni Structures International

4900 37th St.
Grand Rapids, MI 49512
Ph. 616-977-0333 Fax 616-954-0153
www.omnistructures.com

Operations Technology Inc. (OPTEK)

P.O. Box 408
Blairstown, NJ 07825
Ph. 800-606-7835 Fax 908-362-5966
www.optek.net



Optical Gaging Products Inc.

850 Hudson Ave.
Rochester, NY 14621
Ph. 800-647-4243 Fax 585-544-8092
www.ogpnet.com

Optodyne Inc.

1180 Mahalo Place
Compton, CA 90220
Ph. 800-766-3920 Fax 310-635-6301
www.optodyne.com

Paul W. Marino Gages Inc.

21300 MacArthur Blvd.
Warren, MI 48089
Ph. 800-528-9785 Fax 586-759-2423
www.pmarginage.com

Prior Scientific Inc.

80 Reservoir Park Drive
Rockland, MA 02370
Ph. 800-877-2234 Fax 781-878-8736
www.prior.com

Productivity Quality

15200 25th Ave. N.
Plymouth, MN 55447
Ph. 800-772-0620 Fax 763-249-8150
www.pqi.net

Quality Control Solutions Inc.

43339 Business Park Drive, No. 101
Temecula, CA 92590
Ph. 888-355-7274 Fax 909-676-8970
www.qc-solutions.com

R & R Sales

P.O. Box 161
Grand Haven, MI 49417
Ph. 800-847-6045 Fax 616-847-6082
www.cmmfixture.com

RAM Optical Instrumentation Inc., a QVI Co.

615 S. Madison Drive
Tempe, AZ 85281
Ph. 480-505-3506 Fax 480-966-7117
www.ramoptical.com

Renishaw Inc.

5277 Trillium Blvd.
Hoffman Estates, IL 60192
Ph. 847-286-9953 Fax 847-286-9974
www.renishaw.com

ROMER CimCore

27240 Haggerty Road, Ste. E-20
Farmington Hills, MI 48331
Ph. 800-218-7125 Fax 248-324-0525
www.romer.com

Sheffield Measurement Inc.

660 S. Military Road
Fond Du Lac, WI 54935
Ph. 800-535-1236 Fax 920-906-7700
www.sheffieldmeasurement.com

The L.S. Starrett Co.

121 Crescent St.
Athol, MA 01331
Ph. 800-784-2887 Fax 978-249-8495
www.starrett.com

VideoGage Inc.

8960 Glenoaks Blvd.
Sun Valley, CA 91352
Ph. 800-226-6522 Fax 800-411-8949
www.videogageinc.com

View Engineering Inc.

1650 N. Voyager Ave.
Simi Valley, CA 93063
Ph. 877-767-8439 Fax 805-578-5249
www.vieweng.com

Visicon Inspection Technologies LLC

870 Napa Valley Corporate Way, Ste. H
Napa, CA 94558
Ph. 707-259-1300 Fax 707-259-1366
www.visicontech.com

Vision Engineering Inc.

570 Danbury Road
New Milford, CT 06776
Ph. 800-644-7264 Fax 860-355-0712
www.visioneng.com

Wenzel America Ltd.

28287 Beck Road, Building D-1
Wixom, MI 48393
Ph. 866-596-1193 Fax 248-596-1194
www.wenzelamerica.com



Werth Inc.

8 Custom Drive
Old Saybrook, CT 06475
Ph. 860-399-2445 Fax 860-399-6784
www.werthinc.com



Carl Zeiss IMT Corp.

6250 Sycamore Lane N.
Maple Grove, MN 55369
Ph. 800-752-6181 Fax 763-533-0219
www.zeiss.com/imt

THE ONLY CORRECT WAY TO MEASURE THE TRUE POSITION OF A TAPPED HOLE

TRU-POS

AN ESSENTIAL COMPLEMENT OF ANY CMM PACKAGE

TRU-POS™ Locators . . . imperative, accurate, efficient, easy-to-use . . . achieve a faster thru-put on the CMM. In stock . . . over 200 sizes of English, metric, pipe and Helicoil® locators are available in two styles—straight thread for flat surfaces and tapered for irregular or cast surfaces. Custom . . . specific threads, sizes and configurations or stock component variations are available fast through special order.

*Comply with ANSI Y14.5M-1994, meet geometric tolerances correctly every time.

SELECTION & PRICING GUIDE . . . FAST RESPONSE . . .

TOLL FREE 800-323-1772 IN IL 630-582-1230 FAX 630-582-1238

WEBSITE WWW.LAVEZZI.COM E-MAIL LPI@LAVEZZI.COM

LAVEZZI
Quality . . . Above All Else.

LaVeZZi Precision, Inc. ■ 999 Regency Drive ■ Glendale Heights, Illinois 60139-2281