

Quality Digest

2001 Quality Sourcebook Coordinate Measuring Machines Guide

The Quality Sourcebook's CMM Guide features information on almost 50 CMM manufacturers' and distributors' products. Our guide provides the critical specifications of each company's CMM to help you narrow your choices. To avoid duplicating manufacturer and distributor entries, repeated product specifications appear only in the manufacturer's listing. Distributor listings indicate which manufacturers each distributes for and show product specifications from manufacturers not otherwise listed.

Our guide includes a number of video- and laser-based products in addition to traditional CMMs. As new technologies arise, look for more of these nontraditional CMMs. Laser- and vision-based machines are performing CMM functions in places that CMMs can't reach and on very large objects, such as aircraft wings. Although these CMMs function differently from traditional CMMs, for this buyers guide, the manufacturers have done their best to translate their specifications into traditional CMM specifications.

New technologies are also improving the performance and versatility of traditional CMMs. Advances in temperature compensation techniques are allowing CMM manufacturers to move their products to the shop floor and still maintain a high degree of accuracy. Advances in and standardization of software protocols, such as DMIS, are allowing CMMs to communicate directly with CAD systems for reverse engineering, design verification, CMM offline programming, and real-time part-to-CAD measurement.

This buyers guide reflects some of these new technologies, but to stay informed of the latest in metrology tools, look for technology articles in *Quality Digest*.

CMM Guide

CMM Manufacturers Matrix51

This matrix of CMM manufacturers and distributors features the company name and product names, machine type, range, resolution, linear accuracy, temperature range, volumetric accuracy, repeatability, throughput, guide method, probe type, control method and temperature compensation. Except where otherwise indicated, units of measure for a particular specification are as shown at the top of each column.

CMM Manufacturers Directory58

This directory of CMM manufacturers includes the company name, address, phone and fax numbers, Web address, and a brief description of the company's products and services. (Please note that not all companies provided us with descriptions.)

As with all *Quality Digest* guides, the CMM Guide is in no way meant to endorse or exclude a particular organization. Rather, it's meant to 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. Please be sure to mention you saw their listings in *Quality Digest*'s 2001 Quality Sourcebook!

We appreciate any feedback you have on our CMM Guide. If you have any suggestions for how we can improve this guide for next year, e-mail them to sourcebook@qualitydigest.com.

Glossary

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

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

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 any combination of these.

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.

VDI, B89 or ISO—accuracy standards to which the instrument conforms.

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

CMM Guide

Company/Product

A.A. Jansson Inc. Ph. 248-674-4811 Fax 248-674-1234	Horiz. Arm	Call	60	40	400	•	2,000	2,000	3X=5,000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																</
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Company/Product

Lambda	Gantry	130-640	130-254	101-162	40	•				68 ± 1.8	3X=400 + 140L-640 + 250L		Air					•			
Micro PCR	Meas. Robot	9	8	15		•				68 ± 1.8	4X=400	40	Air		•			•		•	
MicroXcel	Bridge-Vert.	30	26	20	4	•				68 ± 1.8	3X=400	160	Air		•			•		•	
MicroXcel PFX	Bridge-Vert.	30	26	20	40	•				68 ± 1.8	3X=400	120	Air		•			•		•	
Mistral	Bridge-Vert.	28-60	26-40	18-34	20	•				68 ± 1.8	3X=240-440				•			•		•	
Mistral ACTIV	Bridge-Vert./Slant	28	26	18		•				64-82	3X=280		Air		•			•		•	
PCR	Meas. Robot	20-60	12-20	12-40	40	•				68 ± 1.8	4X=600-900	200	Recirc. Packs		•			•		•	
PFXCell	Bridge-Vert.	18-30	20-26	16-20	40	•				68 ± 1.8	3X=400	120	Air		•			•		•	
PMM-C	Fixed Bridge	47-95	39-47	28-39	2	ISO				63-73	(1.0L/400)µm-(1.8L/300)µm				•			•		•	
PMM Gantry Series	Gantry	118-256	79-150	63-138	4	•				68 ± 1.8	3X=120 + L/0.15		Air		•			•		•	
PMM Series	Fixed Bridge	16-48	12-40	8-24	4	•				64-82	3X=350		Air		•			•		•	
Scirocco ACTIV	Bridge-Vert.	55	34	26		•				68 ± 3.6	3X=200-260				•			•		•	
Scirocco Record	Bridge-Vert.	55-59	34-39	26-34		•				3X=300		40	Air		•			•		•	
Scirocco Series	Bridge-Vert.	40-100	34-52	26-40	20	•				68 ± 3.6	3X=240-280	60	Mechanical		•			•		•	
Scirocco TRAX Series	Bridge-Vert./Slant	39-79	34-39	24-31		•				59-104	3X=350		Air		•			•		•	
SF ACTIV	Bridge-Vert.	23	17	19		•				160	160				•			•		•	
SIRIO	Horiz. Arm	24	32-48	32	4	•				40 + L/0.3					•			•		•	
SM PCR	Horiz. Arm	60-200	20-60	28-80		•						80	Roller		•			•		•	
Typhoon	Bridge-Vert.	80-132	60	32-52	40	•				68 ± 1.8	3X=2,400		Recirc. Packs		•			•		•	
Vento Series	Bridge-Vert.	236	55-63	63-102		•				68 ± 9	3X=520 + 100L-930 + 160L		Air/Mech.		•			•		•	
Xcel	Bridge-Vert.	26-35	39-47	26-33	4	•				140-280		100-140	Air		•			•		•	
Burton distributes International Metrology Systems																					
Burton Precision Ph. 800-358-4266 Fax 616-784-4368																					
Davis Metrology & Mfg. Co. Ph. 270-443-7843 Fax 270-443-7894																					
DAV-AX-3	Bridge-Vert.	24	18	12	10	•				68 ± 1	3X=100	40	Air		•			•		•	
Magnum 3000	Horiz. Arm	120	40	75	10	•				68 ± 1	3X=600/4X=1,100	100	Air		•			•		•	
Magnum 7000	Horiz. Arm	226	70	100	10	•				68 ± 0.5	3X=800/4X=1,300	100	Air		•			•		•	
Sturdibilt 116C	Horiz. Arm	116	76	56	10	•				68 ± 1	3X=900/4X=1,200	100	Recirculating		•			•		•	
Sturdibilt 36C	Horiz. Arm	36	36	36	10	•				68 ± 1	3X=500/4X=700	100	Recirculating		•			•		•	
Sturdibilt 56C	Horiz. Arm	56	56	56	10	•				68 ± 1	3X=500/4X=800	100	Recirculating		•			•		•	
Sturdibilt 76C	Horiz. Arm	76	56	56	10	•				68 ± 1	3X=700/4X=1,000	100	Recirculating		•			•		•	
Electronic Measuring Devices Inc. Ph. 973-691-4755 Fax 973-691-4745																					
Legend Series	Horiz. Arm	12-14	12-22	12	4	•				68 ± 2	3X=40 + L/0.5	20	Air		Scanning			•		•	
ELM Systems Ph. 847-526-5003 Fax 847-526-5022																					
Alliance	Gantry	36-84	60-168	18-60	20					68 ± 1.8	3X=800	200	Air		•			•		•	
EQ	Horiz. Arm	24-120	24-48	24-48	20					68 ± 1.8	3X=1,000	200	Air		•			•		•	
Equalizer	Horiz. Arm	24-240	24-84	24-96	20	•				68 ± 1.8	3X=1,000 + L/0.6	200	Mechanical		•			•		•	
Talon ELM-282818	Bridge	28	28	18	20	•				68 ± 4	3X=400	100	Air		•			•		•	
Talon ELM-282824	Bridge	28	28	24	20	•				68 ± 4	3X=400	100	Air		•			•		•	
Talon ELM-284024	Bridge	28	40	24	20	•				68 ± 4	3X=400	100	Air		•			•		•	
Talon ELM-404824	Bridge	40	48	24	20	•				68 ± 4	3X=500	100	Air		•			•		•	

CMM Guide

Company/Product

Machine Type	Range			Resolution (µin)	Linear Accuracy				Temp. Range (°F)	Volumetric Accuracy	Repeatability (µin)	Throughput (points/min)	Guide Method	Probe Type						Control		T° Comp.	
	X-axis (inches)	Y-axis (inches)	Z-axis (inches)		Accord. To	X-axis (µin)	Y-axis (µin)	Z-axis (µin)						Analog	Switching	Laser	Contact	Vision System	Manual	D.C.C.	Manual Input	Part Sensor	Machine Sensor
Talon ELM-408040 Talon ELM-484824 Talon ELM-486024 Talon ELM-489640 Talon ELM-606040 Talon ELM-6010040 Titan LCM	40	80	40	20	•	300	500	250	68±4	3X=600	100	60	Air	•	•	•	•	•	•	•	•	•	•
	48	48	24	20	•	300	300	200	68±4	3X=500	100	60	Air	•	•	•	•	•	•	•	•	•	•
	48	60	24	20	•	300	500	250	68±4	3X=700	100	60	Air	•	•	•	•	•	•	•	•	•	•
	48	96	40	20	•	300	600	250	68±4	3X=750	100	60	Air	•	•	•	•	•	•	•	•	•	•
	60	60	40	20	•	300	500	250	68±4	3X=700	100	60	Air	•	•	•	•	•	•	•	•	•	•
	60	100	40	20	•	400	700	250	68±4	3X=750	100	60	Air	•	•	•	•	•	•	•	•	•	•
Horiz. Arm	24-720	24-96	24-108	40	•	500	500	500	68±1.8		100		Mechanical	•	•	•	•	•	•	•	•	•	•
FARO Technologies Inc. Ph. 800-736-0234 Fax 407-333-4181																							
FarArm Gold Series																							
Giddings & Lewis—Sheffield Measurement Ph. 920-921-7100 Fax 920-906-7669				100	•	1,000-6,600			32-113	6X=1,000	1,000	5,400		•	•	•	•	•	•	•	•	•	•
Cordax Discovery D-8	20	24	16	40	•	200	200	180	40-104	3X=510	100	60	Recirc. Ball	•	•	•	•	•	•	•	•	•	•
Cordax Discovery D-12	20	36	16	40	•	280	280	180	40-104	3X=510	100	60	Recirc. Ball	•	•	•	•	•	•	•	•	•	•
Cordax Discovery D-28	30	40	24	40	•	240	300	200	40-104	3X=510	100	60	Recirc. Ball	•	•	•	•	•	•	•	•	•	•
Endeavor 9.9.7	36	36	26	4	•	120	120	100		3X=320	100	60-100	Porous Graphite	•	•	•	•	•	•	•	•	•	•
Endeavor 9.12.7	36	48	26	4	•	120	160	100		3X=340	100	60-100	Porous Graphite	•	•	•	•	•	•	•	•	•	•
Endeavor 9.15.7	36	60	26	4	•	120	200	100		3X=360	100	60-100	Porous Graphite	•	•	•	•	•	•	•	•	•	•
Endeavor 9.12.10	36	48	40	4	•	160	160	140		3X=400	100	60-100	Porous Graphite	•	•	•	•	•	•	•	•	•	•
Endeavor 9.15.10	36	60	40	4	•	160	200	140		3X=420	100	60-100	Porous Graphite	•	•	•	•	•	•	•	•	•	•
Endeavor 12.15.10	48	60	40	4	•	180	200	140		3X=480	100	60-100	Porous Graphite	•	•	•	•	•	•	•	•	•	•
Endeavor 12.20.10	48	80	40	4	•	180	220	140		3X=520	100	60-100	Porous Graphite	•	•	•	•	•	•	•	•	•	•
Endeavor 12.25.10	48	100	40	4	•	180	240	140		3X=560	100	60-100	Porous Graphite	•	•	•	•	•	•	•	•	•	•
Endeavor 12.30.10	48	120	40	4	•	200	280	160		3X=600	100	60-100	Porous Graphite	•	•	•	•	•	•	•	•	•	•
Helmel Engineering Products Inc. Ph. 716-297-8644 Fax 716-297-9405																							
Checkmaster Model 112-102	12	12	10	20	•	180 + 6µ"/in			68±2	3X=360	160		Mechanical	•	•	•	•	•	•	•	•	•	•
Checkmaster Model 216-142	16	20	14	20	•	180 + 6µ"/in			68±2	3X=380	120		Mechanical	•	•	•	•	•	•	•	•	•	•
Microstar L Model 1260-401 DCC	60	120	40	40	•	200 + 9-10µ"/in			68±2	3X=1,100	200		Mechanical	•	•	•	•	•	•	•	•	•	•
Microstar L Model 845-401 DCC	45	80	40	40	•	200 + 9µ"/in			68±2	3X=900	200		Mechanical	•	•	•	•	•	•	•	•	•	•
Microstar Model 220-162	20	20	16	20	•	180 + 6µ"/in.			68±2	3X=440	160		Mechanical	•	•	•	•	•	•	•	•	•	•
Microstar Model 320-162	20	30	16	20	•	180 + 6µ"/in.			68±2	3X=440	160		Mechanical	•	•	•	•	•	•	•	•	•	•
Microstar Model 430-202	30	40	20-25	20	•	200 + 8µ"/in			68±2	3X=700	160		Mechanical	•	•	•	•	•	•	•	•	•	•
Microstar Model 640-252	40	60	20-25	20	•	250 + 10µ"/in			68±2	3X=800	200		Mechanical	•	•	•	•	•	•	•	•	•	•
Microstar Model 850-252	50	80	25	20	•	250 + 10µ"/in			68±2	3X=800	200		Mechanical	•	•	•	•	•	•	•	•	•	•
PcVM	20	16	16	40	•	180 + 6µ"/in			68±2	3X=400	150		Mechanical	•	•	•	•	•	•	•	•	•	•
PcMM Plus	20	30	16	40	•	180 + 7µ"/in			68±2	3X=450	150		Mechanical	•	•	•	•	•	•	•	•	•	•
International Metrology Systems Inc. Ph. 734-591-3800 Fax 734-591-3850																							
Impact	20	24	18	20	•				68±2	3X=2.5 + L/300	100	480	Air	•	•	•	•	•	•	•	•	•	•
Impact II	30	30	22	20	•				68±2	3X=30 + L/300	100	480	Air	•	•	•	•	•	•	•	•	•	•
IMPEL	40-240	30-80	40-100	20	•				68±2	3X=23 + 22L/1,000	200	480	Air/Mechanical	•	•	•	•	•	•	•	•	•	•
Merlin 750 Series	30	44-88	20-30	20	•				68±2	3X=3 + L/300	100	480	Air	•	•	•	•	•	•	•	•	•	•
Merlin 1100 Series	44	44-120	30-40	20	•				68±2	3X=4 + L/300	100	480	Air	•	•	•	•	•	•	•	•	•	•

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Company/Product

Merlin 1400 Series Merlin 1600 Series Merlin XL Series Umpire Umpire II Umpire III Umpire S	Bridge-Vert.	55	60-120	30-50	20	•	•	•	68±2	3X=5 + L/300	100	Air	•	•	•	•	•	•	•	•	•	•
	Bridge-Vert.	63	88-120	40-50	20	•	•	•	68±2	3X=6 + L/300	140	Air	•	•	•	•	•	•	•	•	•	•
	Gantry	60-200	120-375	44-80					68±2	3X=10 + 5L/1,000	200	Air	•	•	•	•	•	•	•	•	•	•
	Bridge-Vert.	14	14	12	20	•	•	•	68±2	3X=3 + L/250	100	Linear Guides	•	•	•	•	•	•	•	•	•	•
	Bridge-Vert.	20	20	16	20	•	•	•	68±2	3X=3.5 + L/250	100	Linear Guides	•	•	•	•	•	•	•	•	•	•
	Bridge-Vert.	30	20	16	20	•	•	•	68±2	3X=3.5 + L/200	100	Linear Guides	•	•	•	•	•	•	•	•	•	•
	Bridge-Vert.	20	14	12	20	•	•	•	68±2	3X=3 + L/250	100	Linear Guides	•	•	•	•	•	•	•	•	•	•
JMAP Precision Systems Inc. Ph. 818-700-8977 Fax 818-700-8984																						
AV50	Fixed Bridge	4	4	6	Manual	•	0.2	0.2	0.2	68±2		Cross Roller										
Lumina	Fixed Bridge	12-24	12-20	6	4	•	100	100	200	68±2	10	45	Linear Way									
Mirage	Fixed Bridge	10	4	2	4	•	100	100	200	68±2	10	30	Cross Roller									
JMC Technology Group Ph. 317-791-4450 Fax 317-781-2466																						
CE Johansson Ruby	Cantilevered	16	16	16	4	•				59-104	3X=390	Linear							•	•	•	•
CE Johansson Saphir (14 Models)	Bridge-Vert.	28-40	18-80	18-40	4					59-86	3X=390-600	100	Air						•	•	•	•
CE Johansson Topaz (14 Models)	Bridge-Vert.	28-40	18-80	18-40	4					68 ± 1	3X=430-640	60	Air						•	•	•	•
Laser Design Inc. Ph. 612-884-9648 Fax 612-884-9653																						
DS Series	Fixed Bridge	20-60	16-120	16-40	40	•			220-320	68 ± 3	3X=600-1,000	240-280	864,000	Recirc. Bearings					•	•		
LK Metrology Systems Inc. Ph. 810-220-4360 Fax 810-220-4300																						
G90C 6.5.4	Bridge-Vert.	24	20	16	4	•	160	160	160	68 ± 3.5	3X=310	80	Air		•	•			•	•	•	•
G90C 8.7.6	Bridge-Vert.	32	28	24	4	•	180	180	170	68 ± 3.5	3X=330	90	Air		•	•			•	•	•	•
G90C XX.10.8	Bridge-Vert.	40-160	40	32	4	•	200	200	180	68 ± 3.5	3X=350	100	Air		•	•			•	•	•	•
G90C XX.12.10	Bridge-Vert.	40-160	48	40	4	•	220	200	200	68 ± 3.5	3X=390	110	Air		•	•			•	•	•	•
G90C XX.15.10	Bridge-Vert.	40-160	60	40	4	•	240	200	200	68 ± 3.5	3X=430	120	Air		•	•			•	•	•	•
G90C XX.15.12	Bridge-Vert.	40-160	60	48	4	•	240	216	216	68 ± 3.5	3X=490	140	Air		•	•			•	•	•	•
G90C XX.15.15	Bridge-Vert.	40-160	60	60	4	•	240	240	240	68 ± 3.5	3X=560	150	Air		•	•			•	•	•	•
HC90 XX.16.16	Horiz. Arm	160-320	64	64	4	•	248	248	248	68 ± 3.5	3X=870	230	Air		•	•			•	•	•	•
HC90 XX.16.20	Horiz. Arm	160-320	64	80	4	•	248	280	280	68 ± 3.5	3X=1,020	310	Air		•	•			•	•	•	•
HC90 XX.16.25	Horiz. Arm	160-320	64	100	4	•	248	320	320	68 ± 3.5	3X=1,020	310	Air		•	•			•	•	•	•
LY90 XX.16.16	Horiz. Arm	79-315	64	64	4	•	1,040	1,040	1,040	68 ± 3.5	3X=2,532	1,020	Mechanical		•	•			•	•	•	•
LY90 XX.16.20	Horiz. Arm	79-315	64	80	4	•	1,040	1,200	1,200	68 ± 3.5	3X=2,532	1,020	Mechanical		•	•			•	•	•	•
LY90 XX.16.25	Horiz. Arm	79-315	64	100	4	•	1,040	1,400	1,400	68 ± 3.5	3X=2,932	1,400	Mechanical		•	•			•	•	•	•
LY90 XX.20.16	Horiz. Arm	79-315	80	64	4	•	1,200	1,040	1,040	68 ± 3.5	3X=3,332	1,600	Mechanical		•	•			•	•	•	•
LY90 XX.20.20	Horiz. Arm	79-315	80	80	4	•	1,200	1,200	1,200	68 ± 3.5	3X=3,332	1,600	Mechanical		•	•			•	•	•	•
LY90 XX.20.30	Horiz. Arm	79-315	80	120	4	•	1,200	1,600	1,600	68 ± 3.5	3X=3,732	1,800	Mechanical		•	•			•	•	•	•
ULTRA 10.10.8	Bridge-Vert.	40	40	32	4	•	110	110	94	68 ± 3.5	3X=140	20	Air		•	•			•	•	•	•
ULTRA 15.10.8	Bridge-Vert.	60	40	32	4	•	150	110	94	68 ± 3.5	3X=150	20	Air		•	•			•	•	•	•
ULTRA 20.10.8	Bridge-Vert.	80	40	32	20	•	195	115	99	68 ± 3.5	3X=160	20	Air		•	•			•	•	•	•
ULTRA 25.10.8	Bridge-Vert.	100	40	32	4	•	235	115	99	68 ± 3.5	3X=180	20	Air		•	•			•	•	•	•

Note 1: Atomic Force Microscope

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Company/Product

Mahr Federal Inc.—Multisensor Division Ph. 800-969-1331 Fax 513-489-2020	C-400	18	12	8	4	•																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				</
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Company/Product

Signum H.A. Multi-Sensor 300 Signum Multi-Sensor 400 Signum H.A. Multi-Sensor 400	Fixed Bridge	12	12	6-12	2	•	1.2 + L/400 µm	3X=2.2 + L/300 µm	0.2 µm	60+	Air	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•</
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CMM Guide

Company/Product

Aurora RGDC6440-24 Premis HCC 2018-16 Premis HCC 2024-16 Premis HCC 3024-18 Premis HGDC 2018-16 Premis HGDC 2024-16 Premis HGDC 3024-18 Rapid Check 2 Vanguard RGDC4848-40 Vanguard RGDC6448-40 Vanguard RGDC8048-40 Vanguard 120-48-40	Moving Bridge	40	64	24	20	•	300	400	200	68 ± 2 3X=600	100	90	Air	•	•	•	•	•	•	•	•	•	•
	Moving Bridge	20	18	16	20	•	150	150	150	68 ± 2 3X=300	100		Air	•	•	•	•	•	•	•	•	•	•
	Moving Bridge	20	24	16	20	•	150	200	150	68 ± 2 3X=400	100		Air	•	•	•	•	•	•	•	•	•	•
	Bridge-Vert.	24	30	18	20	•	200	250	150	68 ± 2 3X=450	100		Air	•	•	•	•	•	•	•	•	•	•
	Moving Bridge	20	18	16	20	•	200	200	200	68 ± 2 3X=300	100	90	Air	•	•	•	•	•	•	•	•	•	•
	Moving Bridge	20	24	16	20	•	200	200	200	68 ± 2 3X=300	100	90	Air	•	•	•	•	•	•	•	•	•	•
	Bridge-Vert.	24	30	18	20	•	200	250	150	68 ± 2 3X=450	100		Air	•	•	•	•	•	•	•	•	•	•
	Gantry	24	24	18		•	200	200	150	68 ± 2 3X=400	120				•	•	•	•	•	•	•	•	•
	Moving Bridge	48	48	40	20	•	300	400	240	68 ± 2 3X=550	100	90	Air	•	•	•	•	•	•	•	•	•	•
	Moving Bridge	48	64	40	20	•	300	500	240	68 ± 2 3X=600	100	90	Air	•	•	•	•	•	•	•	•	•	•
	Moving Bridge	48	80	40	20	•	300	600	240	68 ± 2 3X=750	100	90	Air	•	•	•	•	•	•	•	•	•	•
	Moving Bridge	48	120	40	20	•	300	800	240	68 ± 2 3X=300	100		Air	•	•	•	•	•	•	•	•	•	•
TechTran Development Corp. Ph. 201-816-8185 Fax 201-567-7470																							
NexGen	Bridge-Vert.	20-60	80-200	20-50	100					50-80	200	120	Mech. & Air	•	•	•							
View Engineering Inc. Ph. 805-578-5000 Fax 805-578-5249																							
Pinnacle View Voyager V6 x 12 View Voyager V12 x 12 View Voyager V18 x 18 View Voyager V18 x 24	Column, Vertical	10	7	4	0.1µm	•	XY-axis 1.5-H/200 µm	Z-axis 2.5-H/100 µm	62-90				Linear recirculating	•	•	•	•	•	•	•	•	•	•
	Column, Vertical	12	6	6	0.1µm	•	4-H/100 µm	5-H/150 µm	63-73				Cross roller	•	•	•	•	•	•	•	•	•	•
	Column, Vertical	12	12	6	0.1µm	•	2-H/200 µm	2.5-H/100 µm	63-73				Linear recirculating	•	•	•	•	•	•	•	•	•	•
	Fixed Bridge	18	18	6	0.1µm	•	2-H/200 µm	2.5-H/100 µm	63-73				Linear recirculating	•	•	•	•	•	•	•	•	•	•
	Fixed Bridge	18	24	6	0.1µm	•	2-H/200 µm	2.5-H/100 µm	63-73				Linear recirculating	•	•	•	•	•	•	•	•	•	•
WENZEL America Ltd. Ph. 914-347-7822 Fax 914-347-7881																							
LAF LH Series LH µStar Series LHF	Horiz. Rail	157-236	62	70	20	•	140 + L/0.20			64-72 3X=200 + L/0.15	70	50	Air	•	•	•	•	•	•	•	•	•	•
	Bridge-Vert.	25-120	29-160	19-80	20	•	80 + L/0.35			68±2 3X=100 + L/0.25	40	240	Air	•	•	•	•	•	•	•	•	•	•
	Bridge-Vert.	25-120	29-160	19-80	20	•	60 + L/0.45			68±2 3X=80 + L/0.45	28	8,000	Air	•	•	•	•	•	•	•	•	•	•
	Bridge-Vert.	98-118	157-236	66-78	20	•	148 + L/0.30			64-72 3X=168 + L/0.25	74	50	Air	•	•	•	•	•	•	•	•	•	•
	Dual Horiz. Arm	216-472	118	70-98	20	•	800 + L/0.07			60-75 3X=1200 + L/0.04	400	70	Linear	•	•	•	•	•	•	•	•	•	
	Horiz. Rail	157-236	40-63	48-83	20	•	600 + L/0.07			60-75 3X=800 + L/0.05	300	70	Linear	•	•	•	•	•	•	•	•	•	•
	Horiz. Arm	80-180	40-64	48-96	20	•	590 + L/0.06			68±4 3X=750 + L/0.03	350	120	Roller Bearing	•	•	•	•	•	•	•	•	•	•
	Dual Horiz. Arm	180-480	88-120	72-96	20	•	1,180 + L/0.04			68±4 3X=1,570 + L/0.02	600	50	Roller Bearing	•	•	•	•	•	•	•	•	•	•
Carl Zeiss IMT Corp. Ph. 612-533-9990 Fax 612-533-0219																							
CARMET	Horiz. Arm	79-197	47-107	59-83	40	•				62-75 3X=0.894 + L/50			Air	•	•	•	•	•	•	•	•	•	•
Contura	Fixed Bridge	28	39	24	20	•				63-95 3X=0.000106 + L/300,000			Bearings	•	•	•	•	•	•	•	•	•	•
ECLIPSE	Bridge-Vert.	28-40	28-84	20-24	20	•	114 + L/0.25			64-79 3X=138 + L/0.25	80		Air	•	•	•	•	•	•	•	•	•	•
ECLIPSE 550	Bridge-Vert.	20	22	24	20	•	2.4 + L/250 µm			65-78 3X=219 + L/250 µm	80		Air	•	•	•	•	•	•	•	•	•	•
Prismo-VAST	Bridge-Vert.	28-63	35-118	20-39	20	•	0.035 + L/400			64-82 3X=0.055 + L/350			Air	•	•	•	•	•	•	•	•	•	•
SCANMAX	Artic. Arm	34	16	16-19	20	•	787 + L/0.12			60-95 3X=0.00019 + L/50,000		200	Bearings	•	•	•	•	•	•	•	•	•	•
SMC	Horiz. Arm	71-165	39-53	59-94	40	•	787 + L/0.12			68±5.4 3X=1,181 + L/0.1			Air	•	•	•	•	•	•	•	•	•	•
SMM	Horiz. Arm	39-472	39-63	47-94	40	•	1,180 + L/0.025			68±7.2			Air	•	•	•	•	•	•	•	•	•	•
UPMC 850 CARAT	Bridge-Vert.	22-45	20-59	18-39	8	•	20 + L/0.9			68±3.6 3X=31 + L/0.6			Air	•	•	•	•	•	•	•	•	•	•
Vista	Bridge-Vert.	16	20	14		•	95 + L/0.25			63-95 3X=144 + L/0.25	80		Air	•	•	•	•	•	•	•	•	•	•

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www.faro.com

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Provider of optical measuring and inspection equipment and systems. Products include the Nikon Veritas and Nexiv CNC 3-D multisensor measuring systems, optical comparators, toolmakers' measurescopes, stereo microscopes and digital image analysis, and archiving/annotation systems. Services include maintenance and calibration (ISO/IEC Guide 25 and A2LA-accredited).

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CMM Manufacturers Directory



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