



MCA Articulated arms



**Full flexibility -
Portable productivity**

MCA, the Manual Coordinate measuring Arm...

The Metris MCA, Manual Coordinate measuring Arm, is a precise, reliable and comfortable portable measuring system available in a 6- or 7-axis version. Wireless operation and battery powered, it feels perfectly at home in the metrology lab, on the shopfloor and in the field.

The MCA can be equipped with a wide range of probing systems for touch trigger measurements, continuous scanning and laser scanning. Its flexibility makes the Metris measurement arm the perfect partner for a wide range of measurement tasks.

ACCURACY FIRST

- Accuracy certified according to ASME B89.4.22 standard
- Quick accuracy verification for tactile measurements through conical calibration sockets

MEASURE ANYWHERE

- True portable system thanks to lightweight carbonfiber and aluminum alloy components
- Wireless data communication between arm and PC
- Battery operation provides > 3 hours of scanning autonomy
- Universal 3 1/2 " x 8 connection for quick and easy interfacing to a wide range of mounting options

ERGONOMIC DESIGN

- 6- or 7-axis version designed for tactile measurement and laser scanning measurement
- Electromagnetic brake blocks the lower segment of the arm thus partly bearing the arm weight
- Ergonomic position of all measurement buttons including brake activation button
- Automatic probe recognition retrieves key probe information and eliminates risk of human errors



Symmetrical balancing springs for lightweight operation

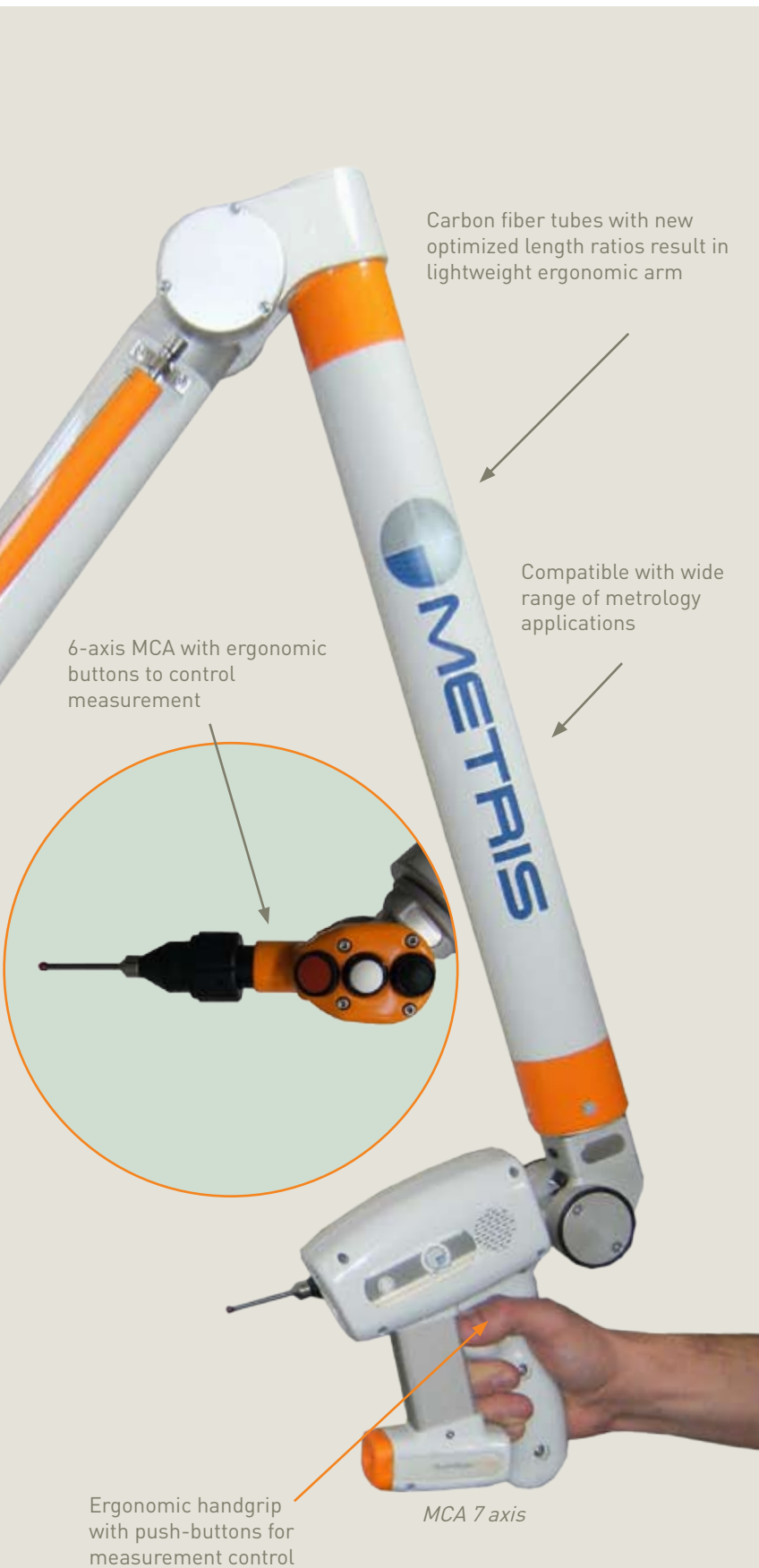
Operating temperature range +5 to +40°C

Wireless data communication

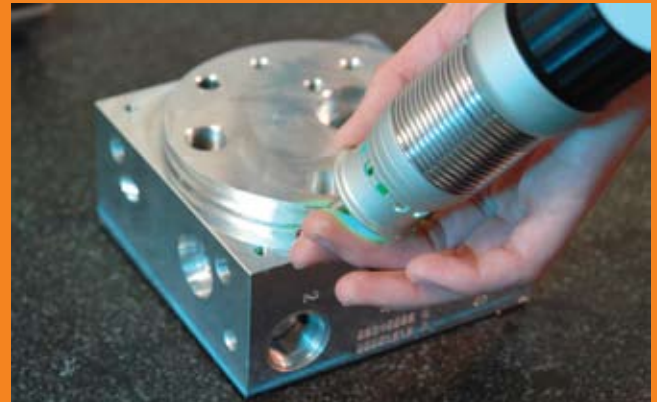
Electromagnetic brake guarantees effortless handling

Battery operation provides hours of measurement autonomy

... with flexible probing options



FLOATING TOUCH PROBE



With Metris' floating touch probe, the user manipulates the touch probe indirectly through a spring coil mounted around the probe. Red and green colored LEDs provide visual feedback on the contact force applied, resulting in highly accurate and repeatable measurements. The floating touch probe supports both touch trigger and continuous scanning measurement. As an option, a Renishaw LP2 probe can be used.

POWERFUL LASER SCANNER



The Metris ModelMaker D/C digital laser scanners are ideally configured with the 7-axis MCA version and generate a digital copy of the measurement object in no time. Laser scanning is ideally suited for reverse engineering, part-to-CAD comparison and inspection of soft or fragile components.

To suit every application the users can choose between 50mm stripe width for maximum accuracy, 100mm and 200mm stripe width for maximum productivity. ModelMaker scanners can digitize nearly all materials through Enhanced Sensor Performance (ESP2) and scan up to 80 stripes per second streaming directly to laptop.



Arm specifications

The MCA comes in a 6-axis and 7-axis version with two variants. The I6 and I7 variants are ideally suited for those applications where a quick verification of dimensions are needed. The M6 and M7 variants provide higher accuracy required for true metrology applications. Both variants come standard with the electromagnetic brake for optimal handling comfort, while the quick mount probe adapter facilitates the easy exchange of measurement probes.

Metrology grade MCA	Weight	Measurement diameter	S.P.A.T. ¹	Volumetric performance ¹
MCA 1800 M6	11.5kg/25.3lbs	1800mm/6ft	0.021mm/0.0008"	0.028mm/0.0011"
MCA 2400 M6	11.9kg/26.2lbs	2400mm/8ft	0.026mm/0.0010"	0.035mm/0.0014"
MCA 3000 M6	12.3kg/27.1lbs	3000mm/10ft	0.044mm/0.0017"	0.058mm/0.0023"
MCA 3600 M6	12.7kg/28.0lbs	3600mm/12ft	0.060mm/0.0024"	0.078mm/0.0031"
MCA 2400 M7	12.3kg/27.1lbs	2400mm/8ft	0.031mm/0.0012"	0.042mm/0.0017"
MCA 3000 M7	12.7kg/28.0lbs	3000mm/10ft	0.051mm/0.0020"	0.072mm/0.0028"
MCA 3600 M7	13.1kg/28.9lbs	3600mm/12ft	0.071mm/0.0028"	0.103mm/0.0041"

Industry grade MCA	Weight	Measurement diameter	S.P.A.T. ¹	Volumetric performance ¹
MCA 1800 I6	11.5kg/25.3lbs	1800mm/6ft	0.041mm/0.0016"	0.054mm/0.0021"
MCA 2400 I6	11.9kg/26.2lbs	2400mm/8ft	0.051mm/0.0020"	0.069mm/0.0027"
MCA 3000 I6	12.3kg/27.1lbs	3000mm/10ft	0.084mm/0.0033"	0.109mm/0.0043"
MCA 3600 I6	12.7kg/28.0lbs	3600mm/12ft	0.111mm/0.0044"	0.129mm/0.0051"
MCA 2400 I7	12.3kg/27.1lbs	2400mm/8ft	0.057mm/0.0022"	0.081mm/0.0032"
MCA 3000 I7	12.7kg/28.0lbs	3000mm/10ft	0.095mm/0.0037"	0.140mm/0.0055"
MCA 3600 I7	13.1kg/28.9lbs	3600mm/12ft	0.152mm/0.0060"	0.190mm/0.0075"

(1) Volumetric performance and SPAT (Single Point Articulation Test) according to ASME B89.4.22-2004 standard. Indicated numbers are (Max - Min)/2 numbers.

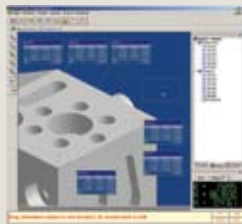
GENERAL SPECIFICATIONS

Operating temperature	5° to 40° C / 41° to 104° F
Humidity	95% non-condensing
Angular acceleration	Maximum 100 rad/sec ²
Power supply	220/110V auto-ranging or battery operated 14,4VDC
Connection to PC	USB / Wireless ethernet communication (IEEE802.11b/g 54Mbps)
Certifications	FCC Part 15 Class A Report using EN 55022 Class A test data CE compliant: EN55022 Class B, EN6100-3-2, EN61000-3-3, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, EN61010-1

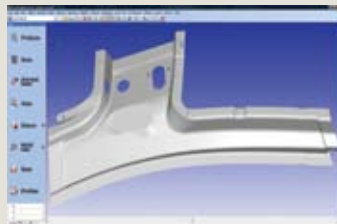
RELATED PRODUCTS



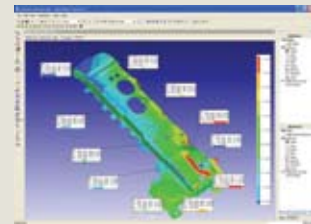
ModelMaker D/C
Digital handheld scanners



CMM-Manager
Portable CMM tactile measurement software



Focus Scan Handheld
Scanning software



Focus Inspection & RE Basics
Advanced 3D Inspection & Reverse engineering

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