

# Equator 300 gaging system

[www.renishaw.com/gaging](http://www.renishaw.com/gaging)



## Equator™ – the versatile gage

The new Renishaw Equator is a versatile alternative to custom gaging, offering inspection of an unprecedented variety of manufactured parts.

### System components

#### Equator 300 gaging system

- 3-axis Equator 300 machine
- supplied with 6 port stylus changing rack
- supplied with SP25 probe system
- supplied with controller
- supplied with one base tile
- supplied with stop button kit or joystick kit

#### Equator 300 controller options

- Equator 300 Controller with MODUS Organiser
- Equator 300 Controller with MODUS Organiser and MODUS Equator
- Equator 300 controller with no application software

#### Equator 300 accessories

- Base tile
- Tile spacer kit
- Beacon
- I/O interface unit

### System features

Working envelope	XY	Ø300 mm
	Z	150 mm
Comparison uncertainty*		+/- 0.002 mm
Scanning rate		1000 points/s
Fixturing requirement		1 mm
Air supply requirement		No air required
System weight		25 kg

\* The process of measuring on an Equator involves defining a series of gage points on the component surface. Periodic calibration of a master part on a CMM establishes datum values for each gage point. The same gage points on the same master part are measured on Equator, 'mastering', to establish a correlation with the certified CMM. Subsequently, a regular 're-mastering' process is used to account for changing environmental conditions.

Size and position measurements made immediately following re-mastering will have an comparison uncertainty of +/- 0.002 mm relative to the certified measurements of the master part. This specification applies where each part is fixtured to within 1 mm relative to the master part.

## Data sheet

### Equator 300 gaging system

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## Equator 300 probing module

All Equator 300 gaging systems are supplied with the industry standard SP25 3 axis analogue scanning probing module.

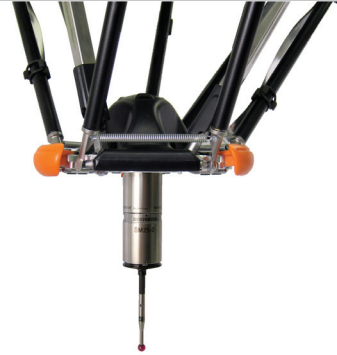
Equator 300 comes packaged with two Renishaw styli.

- One straight stylus with 21 mm length and 5mm ball diameter
- One straight stylus with 75 mm length and 8mm ball diameter

Many other styli options are available on request.

For more information on styli configuration, please go to:

[www.renishaw.com/styli](http://www.renishaw.com/styli)



## Equator 300 software

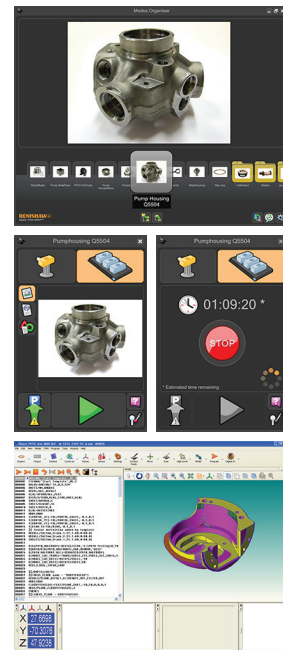
Equator 300 Controller can be ordered pre-loaded with two different levels of software.

- MODUS Organiser – for shop floor operation
- MODUS Equator – for programmers

**MODUS Organiser** is the user-friendly software that shop floor operators use to control the Equator gaging system with little or no training. A customized user interface is created for each part from where the inspection is started with one operation. The DMIS script file is easily accessible for review.

**MODUS Equator™** is a powerful metrology software package developed by Renishaw. It enables programmers to develop and run part programs on Equator 300.

**MODUS Equator™** provides a comprehensive suite of 3-dimensional metrology functions, delivered via an intuitive user interface that features full graphical display of measurement routines. Wizards provide a quick and easy way to specify common measurement tasks, ensuring good practice is applied, without the need for specialist programming skills.



## Equator 300 accessories

The measurement capabilities of the Equator can be further enhanced with a wide range of accessories.



### MCULite-2 joystick

Easily moves the probe within the working volume. Functionality includes speed override and the ability to lock movement.



### Stop button

The stop button is an alternative configuration to the joystick. It is easily attached to the front of the Equator.



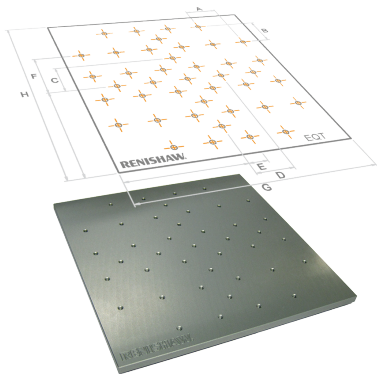
### Equator 300 stylus changing rack

The Equator is supplied with an auto change rack with six positions for the opportunity to automatically change tools while retaining full repeatability. The automatic stylus changing rack with six ports increases the versatility of your Equator in order to gage complex parts with multiple tool tips. The Equator rack makes it possible to gage different parts in sequence without the need for probe calibration between jobs.



### Equator 300 controller

The Equator controller is a versatile machine controller capable of driving the Equator at high speed and with high repeatability. The controller is extremely efficient, allowing the real time machine control to run alongside the metrology software interface. This means only one set of hardware is required, saving both floor space and energy. It uses the proven UCC Server software to allow for easy setup and use of the system, and implements the powerful I++ command protocol.



### Equator 300 base tiles

The Equator 300 comes with one of the following tiles based on each customer's individual requirement.

TILE	DIMENSIONS [MM]				
	A/B/C/D	E	F	G/H	Hole size
M6	50	25	75	305	M6
M8	50	25	75	305	M8
Imperial 1/4"	50.8 (2")	25.4 (1")	76.2 (3")	305 (12")	1/4"



#### I/O interface unit

Allows Equator to be connected to compatible machine tool controls for offset updates and industrial robots for part loading.



#### Tile spacer

The tile spacer raises the kinematic location of the base tile 55 mm. Ideal if you are gaging very small parts or using short styli.



#### Beacon kit

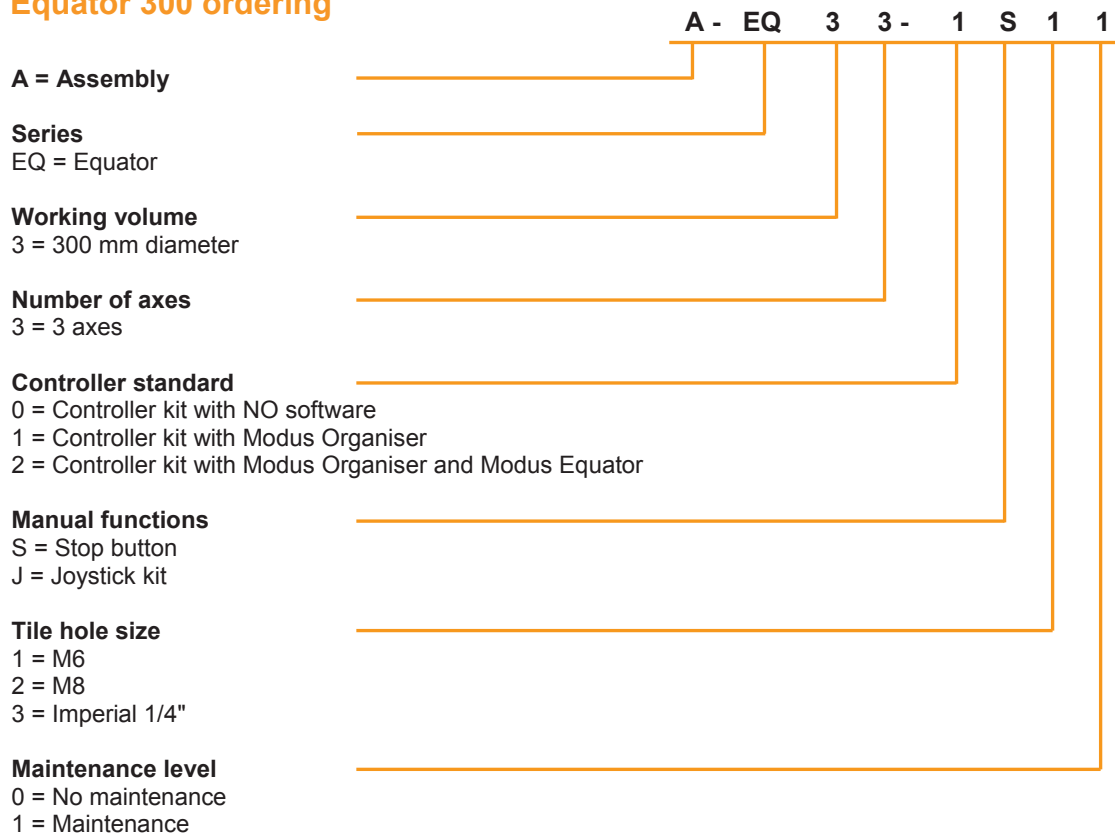
An indication of the state of the Equator will improve both efficiency and safety.

## Equator 300 specifications

Axis travel	X Y Ø 300 mm
	Z 150 mm
Comparison uncertainty	+/- 0.002 mm
Maximum scanning speed	100 mm/s
Maximum movement speed	500 mm/s
Scanning rate	1000 points/s
Scale resolution	0.0002 mm
Fixturing requirement	1 mm
Machine air supply requirement	no air required
Operating temperature	+10 °C to +40 °C
Storage temperature	-25 °C to +70 °C
Relative humidity operating range	20 to 80 % RH
Machine electrical supply requirements	90-264 V AC, 47-63 Hz
Maximum power consumption	600 W
Typical power consumption**	110 W
Probe type	Renishaw 3 axes SP25 analogue scanning
Base tile	305 mm * 305 mm aluminium
Maximum workpiece weight	25 kg
Machine weight	25 kg
Machine dimensions (w * d * h)	570 mm * 500 mm * 700 mm

\*\* 3 axis system taking touch points under DCC control

## Equator 300 ordering



For worldwide contact details, please visit our main website at  
[www.renishaw.com/contact](http://www.renishaw.com/contact)

