

# Equator 300 gauging system

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



## Equator™ – the versatile gauge™

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

### System components

#### Equator 300 gauging system

3-axis Equator 300 machine:

- supplied with 6 port stylus changing rack
- supplied with SP25 probe system
- supplied with controller
- supplied with one fixture plate
- supplied with stop button or joystick kit

#### Equator 300 Controller options

- Equator 300 Controller with MODUS Organiser
- Equator 300 Controller with MODUS Organiser and MODUS Equator

#### Equator 300 accessories

- Fixture plate
- Fixture plate spacer
- Signal tower
- I/O interface unit

### System features

Working volume	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
Machine weight		25 kg

\* The process of measuring on an Equator involves defining a series of gauge points on the component surface. Periodic calibration of a master part on a CMM establishes datum values for each gauge point. The same gauge 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 a 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.

# Equator 300 gauging system

## Equator 300 probing module

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

Equator 300 comes packaged with two SH25 stylus holders and two styli:

- One straight stylus with 21 mm length and 5 mm ball diameter
  - One straight stylus with 75 mm length and 8 mm ball diameter
- Many other styli options are available on request.

For more information on styli configuration, please visit:  
[www.renishaw.com/styli](http://www.renishaw.com/styli)



## Equator 300 software

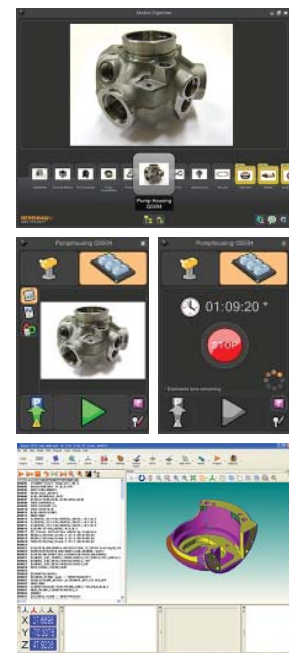
Equator 300 Controller can be ordered pre-loaded with two different levels of software:

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

**MODUS Organiser** is the user-friendly software that shop floor operators use to control the Equator gauging system with little or no training. A customised user interface is created for each part from where the inspection is started with one operation. The DMIS program 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.



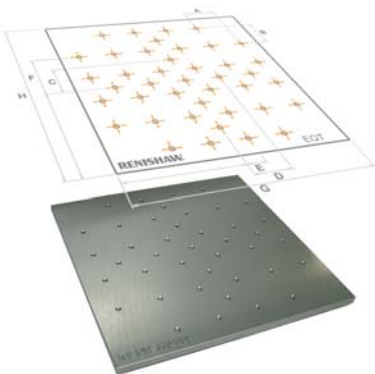
### Equator 300 stylus changing rack

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 gauge complex parts with multiple tool tips. The Equator rack makes it possible to gauge 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 UCCserver software to allow for easy setup and use of the system, and implements the powerful I++ command protocol.



### Equator 300 fixture plates

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

PLATE	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 ¼ in.	50.8 (2 in.)	25.4 (1 in.)	76.2 (3 in.)	305 (12 in.)	¼ in.



#### I/O interface unit

Allows Equator to be connected to compatible machine tool controls, industrial robots for part loading, etc.



#### Fixture plate spacer

The plate spacer raises the kinematic location of the fixture plate 55 mm. Ideal if you are gauging very small parts or using short styli.



#### Signal tower kit

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

## Equator 300 specifications

Working volume	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	100-240 V AC ±10%, 50-60 Hz
Maximum power consumption**	190 W
Typical power consumption***	80-100 W
Probe type	Renishaw 3 axes SP25 analogue scanning
Fixture plate	305 mm x 305 mm aluminium
Maximum workpiece weight	25 kg
Machine weight	25 kg
Machine dimensions (W x D x H)	570 mm x 500 mm x 700 mm

\*\* Peak consumption at power up

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

## Equator 300 ordering

	<b>A - EQ 3 3 - 1 S 1 1 A</b>
<b>Part number type</b>	_____
A = Assembly	
<b>Series</b>	_____
EQ = Equator	
<b>Working volume</b>	_____
3 = 300 mm diameter	
<b>Number of axes</b>	_____
3 = 3 axes	
<b>Controller standard</b>	_____
1 = Controller kit with MODUS Organiser	
2 = Controller kit with MODUS Organiser and MODUS Equator	
<b>Manual functions</b>	_____
S = Stop button	
J = Joystick kit	
<b>Fixture plate hole size</b>	_____
1 = M6	
2 = M8	
3 = Imperial ¼ in.	
<b>Premium support cover</b>	_____
0 = Without cover	
1 = With cover	
<b>Power cable</b>	_____

A = UK; B = EU & Korea; C = USA, Mexico, Canada, Japan & Taiwan; D = China; E = South Africa & India;  
F = Switzerland; G = Denmark; H = Australia; I = Israel; J = Italy & Chile; K = Brazil

**For worldwide contact details, please visit our main website at**  
**www.renishaw.com/contact**

