

# Gaging systems



# EQUATOR™

## the versatile gauge™

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

### Fast, repeatable and versatile

The EQUATOR™ system consists of a highly repeatable, “parallel kinematic” structure, machine coupled with a high-power, multi-axis universal controller and digital servo power amplifier. The resultant system is capable of high-speed, comparative gaging for inspection of high-volume manufactured parts, directly on the shop floor. Additionally, the optimized ratio of working envelope (300 mm × 300 mm × 300 mm\*) to machine footprint (~ 570 mm × 500 mm), means EQUATOR™ can be set to work in even the most crowded of factory spaces. The lightweight machine, weighing just 55 lbs, requires just single phase power and needs no costly air supply.

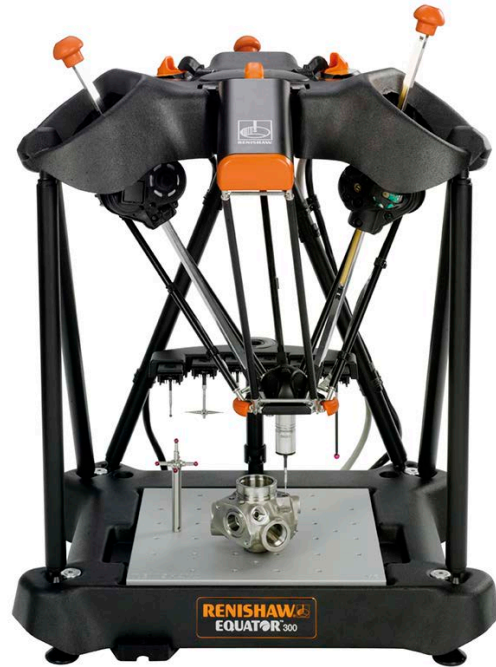
Re-configuration of the gaging system to cater for part design changes, or to measure new parts, is possible in a fraction of the time it would take with conventional custom gaging. An operator can switch between parts in seconds, perfect for flexible manufacturing processes or for accepting parts from multiple machines.

### Easy to use

The included, intuitive MODUS™ Organizer operator front-end software requires little or no training, while on the programmable system the comprehensive MODUS™ EQUATOR™ programming software allows engineers to rapidly create gaging routines for any part – simple or complex, prismatic or free-form – using industry-standard DMIS programming.

### Thermally “stable” – for shop floor use

Re-mastering is as swift as measuring a production part and immediately compensates both the machine and the part being measured, for temperature variations typical of a shop floor environment.



### Integrated stylus changing

Further versatility is offered by the included, EQUATOR™-specific stylus changing rack, allowing automated in-cycle changing of SM25 stylus modules. The SM25 modules couple to the industry-standard SP25 CMM probe, allowing EQUATOR™ users to swap the stylus configurations without re-qualifying each time. Up to six stylus combinations can be loaded into the rack at any time. These can be used on a single complex part or with multiple parts of varying geometries.

### Traceability to calibrated CMMs

Master parts do not need to be expensive custom parts like a traditional gage; take a production part and measure it on a CMM to establish feature variation from CAD or drawing nominals. The results from any CMM can be configured to be used directly within the EQUATOR™ software.

Effectively, the calibrated absolute accuracy of the CMM can be “extended” onto the shop floor to provide calibrated traceability to EQUATOR™ measurements. With the calibration file loaded into the EQUATOR™ software, measurements made in the EQUATOR™ system can be referred back to the CAD or drawing nominals. This allows true process control with SPC packages.

\* 300 mm Z measurement range available with module change to SM25-3, measuring external features only on an extended height Equator only. Z axis stroke is 150 mm.

## Machine kit

Includes: EQUATOR™ 300 machine  
EQUATOR™ 6-port rack  
SP25M scanning probe kit  
Calibration accessory kit  
Joystick (or 'E-stop' button)  
Cables

## Controller kit

Includes: EQUATOR™ controller  
Intuitive "front-end" software package



## EQUATOR™ tiles

Renishaw fixture plates (various options available).

## Regular height EQUATOR™ combination kits

### Operator's version

Description	Part number	Price
EQUATOR™ machine with 6-port rack and joystick, controller with Organizer software and M6 threaded fixture plate	A-EQ33-1J10	\$26,514
EQUATOR™ machine with 6-port rack and joystick, controller with Organizer software and 1/4 in R&R threaded fixture plate	A-EQ33-1J40	\$26,741
EQUATOR™ machine with 6-port rack and stop button, controller with Organizer software and M6 threaded fixture plate	A-EQ33-1S10	\$26,146
EQUATOR™ machine with 6-port rack and stop button, controller with Organizer software and 1/4 in R&R threaded fixture plate	A-EQ33-1S40	\$26,373

### Programmer's version

Description	Part number	Price
EQUATOR™ machine with 6-port rack and joystick, controller with Organizer and MODUS™ programming software and M6 threaded fixture plate	A-EQ33-2J10	\$29,514
EQUATOR™ machine with 6-port rack and joystick, controller with Organizer and MODUS™ software and 1/4 in R&R threaded fixture plate	A-EQ33-2J40	\$29,741

## Extended height EQUATOR™ combination kits

### Operator's version

Description	Part number	Price
Extended height EQUATOR™ machine with 6-port rack and joystick with Organizer software and 1/4 in R&R threaded fixture plate	A-EH33-1J40	\$27,941

### Programmer's version

Description	Part number	Price
Extended height EQUATOR™ machine with 6-port rack and joystick with Organizer and MODUS™ software and 1/4 in R&R threaded fixture plate	A-EH33-2J40	\$30,941

## Gaging systems

### Replacement equipment

#### Stop button

Part number: A-5504-0255

Price: \$215



#### Joystick kit

Part number: A-5504-0258

Price: \$691



#### Joystick cable only

Part number: A-5358-5016

Price: \$200

#### Autochange rack (6 ports)

Part number: A-5504-0250

Price: \$2,250



#### Rack port inserts for 6 off SH25

Part number: A-2237-1414

Price: \$156

#### Rack set-up tool

Part number: A-2237-0682

Price: \$48

#### Rack port clip for autochange rack alignment

6 required.

Part number: M-5358-2589

Price: \$2

#### MODUS™ EQUATOR™ dongle

Part number: A-5639-3000

Price: \$4,000

#### Power cables

Part number: P-EQ33-MAINS

Price: \$15



#### Fixturing plate (M6)

Part number: P-PCR-13300300-12-6

Price: \$550

#### Fixturing plate (¼-20 in)

Part number: PCR-501212-50-20

Price: \$550



#### Fixturing plate (M4)

Part number: PCR-13300300-10-4

Price: \$620

#### Fixturing plate (M8)

Part number: PCR-13300300-15-8

Price: \$550

#### Fixturing plate (single ¼-20 hole)

Part number: R-PEC-13300300-6

Price: \$245

**Fixturing plate spacer (50 mm)**

**Part number:** A-5504-0203

**Price:** \$600

**Fixturing plate spacer (150 mm)**

**Part number:** A-5504-0207

**Price:** \$600



## Optional equipment

**Digital I/O box (normally open)**

With Automation software

**Part number:** A-5923-0050

**Price:** \$4,500

**Additional I/O box only (normally open)**

**Part number:** A-5923-0259

**Price:** \$975



**Full 5-sphere calibration artifact only**

**Part number:** A-5504-0252

**Price:** \$600



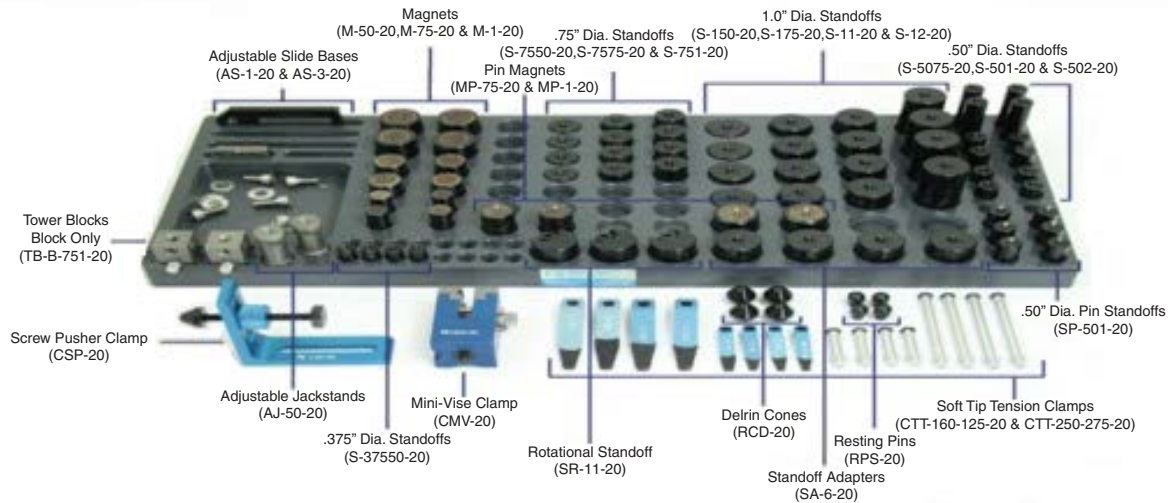
## Gaging systems

### Fixturing components

#### R&R component kit FSC-MCR-20 (¼-20 in)

Part number: FSC-MCR-20

Price: \$2,615



#### R&R component kit FSC-MCA-20 (¼-20 in)

Part number: FSC-MCA-20

Price: \$972

#### R&R component kit FSC-CA-20 (¼-20 in)

Part number: FSC-CA-20

Price: \$744

### Equator probe kits

#### Equator SP25-2 scanning kit with single calibration sphere

Part number: A-5504-0205

Price: \$3,750

#### Equator TP20 touch trigger kit with single calibration sphere

Part number: A-5504-0206

Price: \$3,750



### Equator stylus kits

#### Equator basic stylus kit

Part number: A-5504-0281

Price: \$730

#### Equator intermediate stylus kit

Part number: A-5504-0282

Price: \$1,385

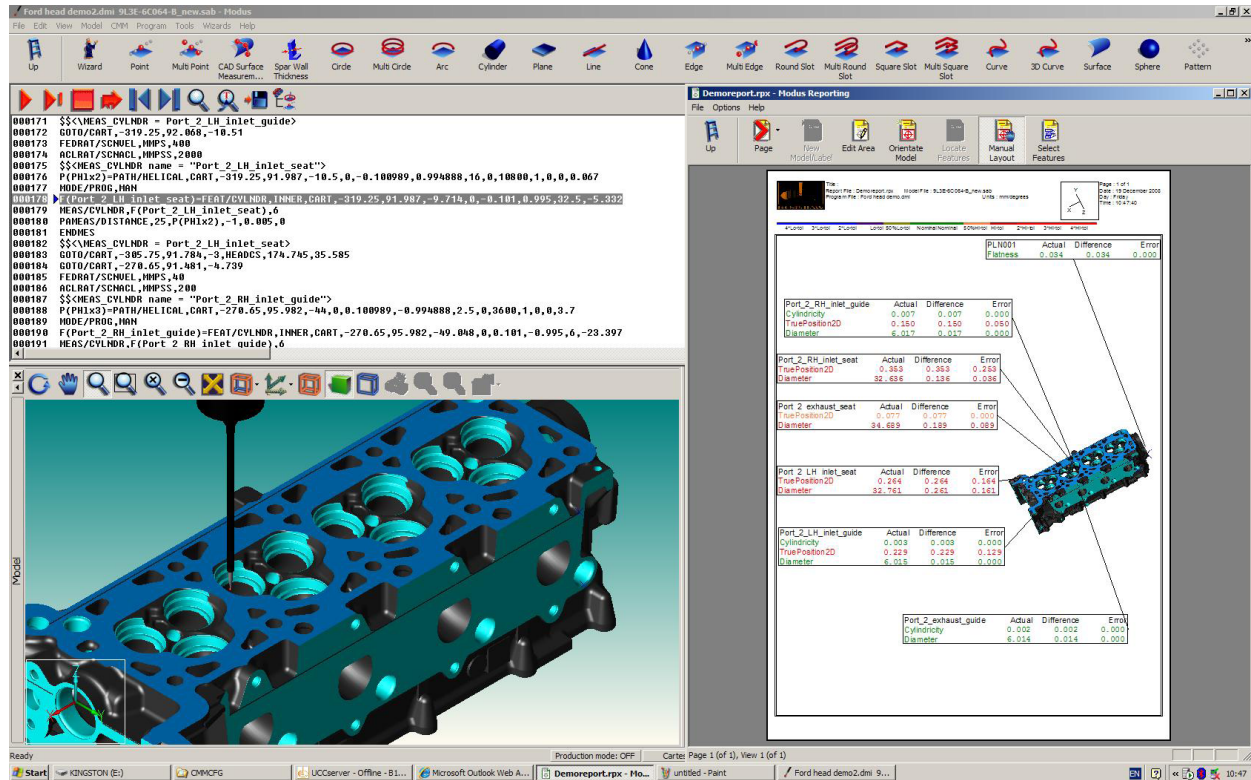
#### Equator advanced stylus kit

Part number: A-5504-0283

Price: \$2,715



## EQUATOR™ MODUST™ software training



### On site training (maximum 4 students)

Description	Part number	Price
EQUATOR™ MODUST™ scanning training (US travel) – 4 days	A-5639-1701-EQT	\$9,625
EQUATOR™ MODUST™ advanced training (US travel) – 2 days	A-5639-1702-EQT	\$5,775

### Training at Renishaw Inc\*

Description	Part number	Price
EQUATOR™ MODUST™ scanning training (US) – 4 days	A-5639-1701-EQ	\$3,000
EQUATOR™ MODUST™ advanced training (US) – 2 days	A-5639-1702-EQ	\$1,500

\* per student

### Equator training block

**Part number:** A-5504-0209 **Price:** \$600

### Equator 2nd year extended warranty

Now available.

**Part number:** Please ask your Renishaw representative **Price:** POA

