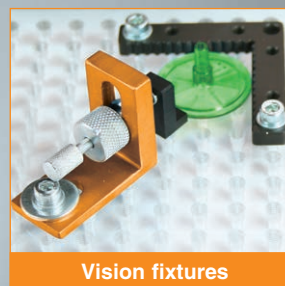
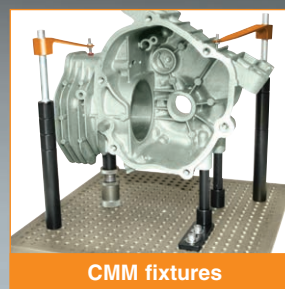
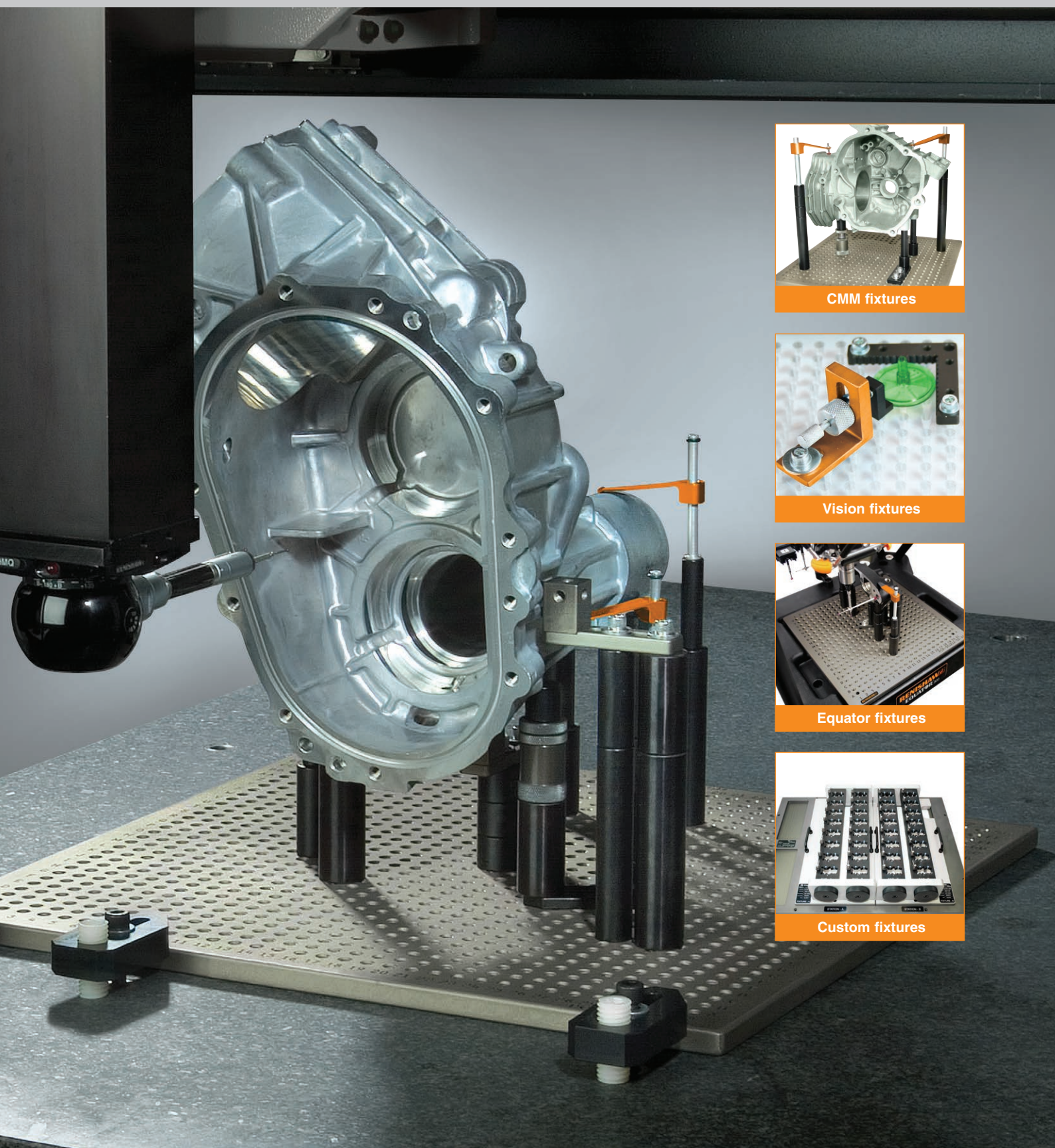


Renishaw fixtures

Your single source for metrology fixturing



Renishaw CMM fixtures

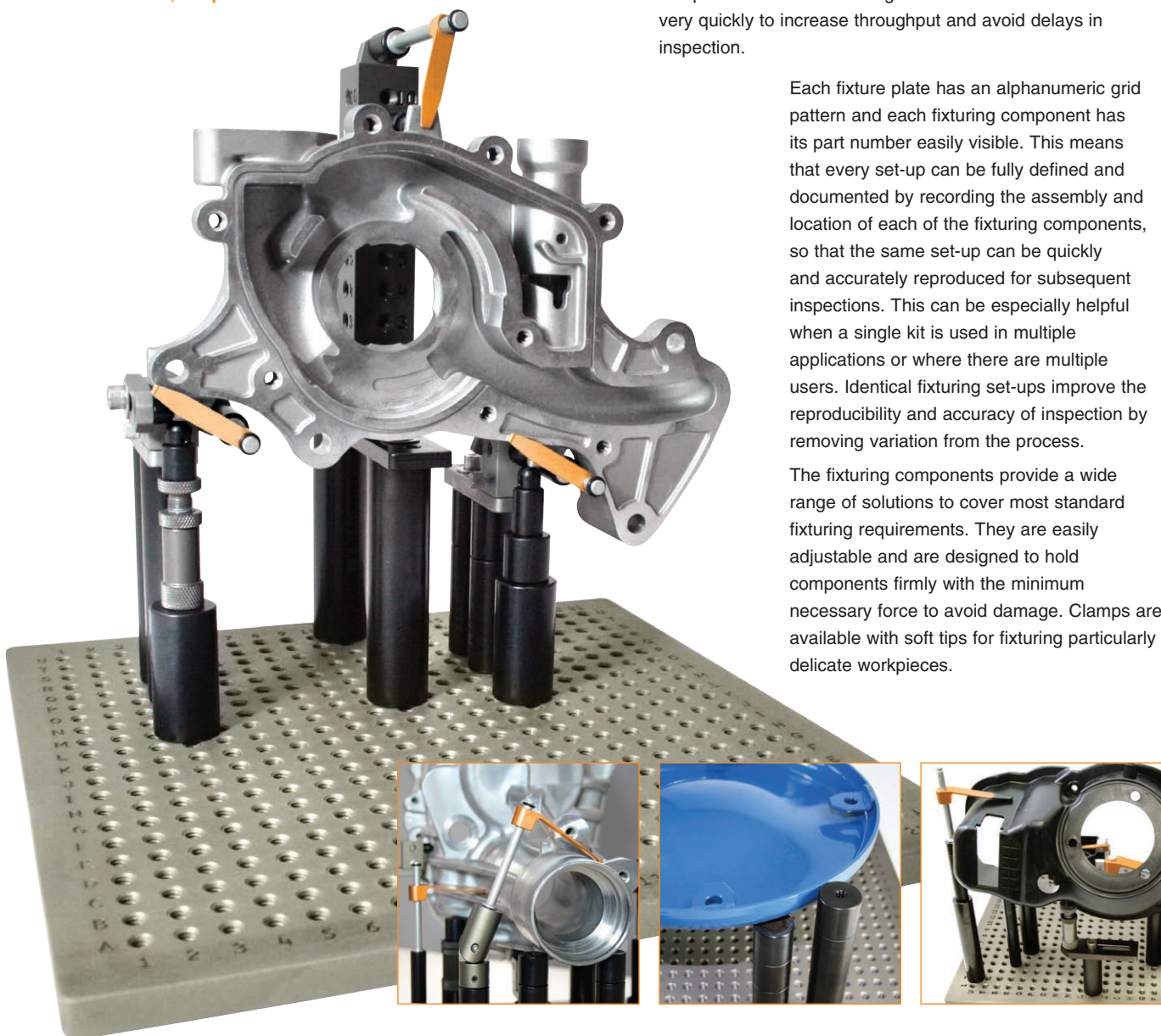
Modular fixturing for your CMM

Renishaw CMM fixtures can improve the throughput, reproducibility and accuracy of your inspection process by providing quick and repeatable fixturing set-ups for your components. Renishaw CMM fixtures are modular and can be expanded with your requirements to provide a complete fixturing solution for any part regardless of its size, shape or material.

Whether you are inspecting parts for aerospace, automotive, electronics, industrial or medical applications, Renishaw CMM fixtures can provide a full solution to your CMM fixturing requirements. The range includes fixture plates with M4, M6 or M8 threaded fittings in a wide choice of standard sizes, and an extensive selection of easy-to-use modular fixturing components. Perfect fixturing solutions can be assembled very quickly to increase throughput and avoid delays in inspection.

Each fixture plate has an alphanumeric grid pattern and each fixturing component has its part number easily visible. This means that every set-up can be fully defined and documented by recording the assembly and location of each of the fixturing components, so that the same set-up can be quickly and accurately reproduced for subsequent inspections. This can be especially helpful when a single kit is used in multiple applications or where there are multiple users. Identical fixturing set-ups improve the reproducibility and accuracy of inspection by removing variation from the process.

The fixturing components provide a wide range of solutions to cover most standard fixturing requirements. They are easily adjustable and are designed to hold components firmly with the minimum necessary force to avoid damage. Clamps are available with soft tips for fixturing particularly delicate workpieces.



CMM plates

Renishaw CMM fixtures are available with a wide selection of fixture base plate sizes designed to allow fixturing of all workpieces, from very small delicate parts, up to large, heavy industrial components. Single standard base plates range in size from 150 mm x 150 mm up to 3000 mm x 1500 mm.

Key features:

- Solid cast aluminium plate, hardcoat anodised for durability
- Available with M4, M6 or M8 threaded fittings
- Alphanumeric grid pattern for defining and documenting set-ups

M4 threaded standard plate sizes (mm)

13 mm thick plates	150 x 150	300 x 300
M4 threaded holes 10 mm on centre		

M6 threaded standard plate sizes (mm)

13 mm thick plates	300 x 300	450 x 450		
19 mm thick plates	600 x 600	750 x 750	750 x 1000	900 x 1200
M6 threaded holes 12.5 mm on centre (25 mm optional)				

M8 threaded standard plate sizes (mm)

13 mm thick plates	300 x 300	450 x 450		
19 mm thick plates	600 x 600	750 x 750	750 x 1020	900 x 1200
M8 threaded holes 15 mm on centre (30 mm optional)				

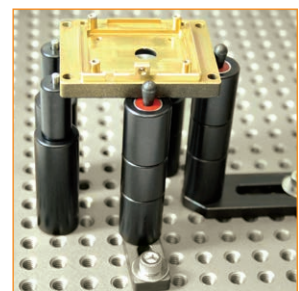
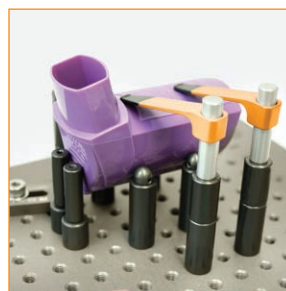
Plate thread options as shown:

- M4
- M6
- M8



CMM fixturing components

The Renishaw CMM fixtures component range includes adjustables, clamps, magnets, standoffs, towers, suction cups and other miscellaneous components. They can be hand tightened together and do not require any special tools. These components can be purchased within a kit or individually.



CMM fixturing kits

Renishaw CMM fixtures are sold in preconfigured kits to make it easy to get started. A kit consists of one base plate and a comprehensive set of components. All kits include a component tray for organising and holding the components. Additional components can be purchased to expand the collection.



M8 CMM magnetic and clamping kit with M8 plate

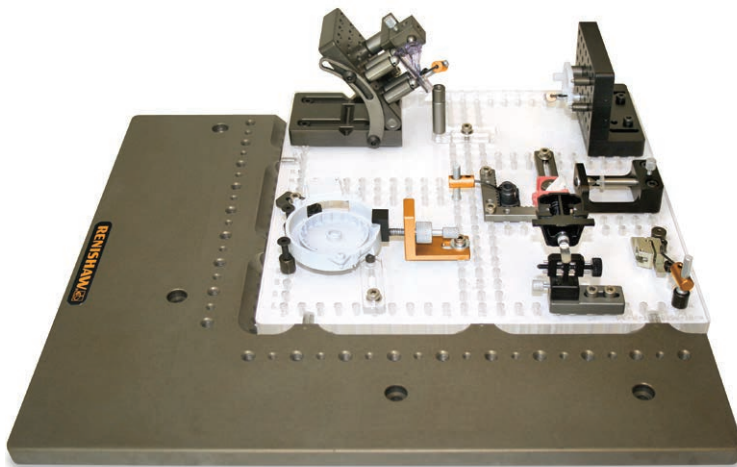
Renishaw vision fixtures

Modular fixturing for your vision system

Renishaw vision fixtures are designed for use with vision systems or multi-sensor machines, creating a fast, repeatable way to fixture a part consistently each and every time you inspect it.

Each vision fixture is made with a precision acrylic base plate that allows for use of backlighting and a clear view of the part on your vision system. Once you have fixtured the part, you can record the set-up and create documentation of it in your vision system programme.

Available in two options that fit your specific machine:



OPTION 1:

Quick load corner (QLC)

For vision systems 400 mm x 400 mm or smaller

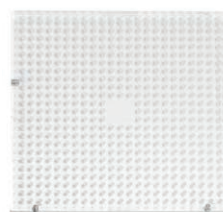
Load multiple and different types of parts onto the multi-hole or multi-window base plates using Renishaw's various fixturing components to lightly secure parts. Plates are alphanumerically labelled for documenting part set-ups and snap into the magnetic QLC fixture for easy and repeatable positioning.



Multi-window vision plates

More windows for the clearest view of small parts without any obstructions.

Base plate size (mm)	Threading	Window openings
13 x 200 x 200	M4	5
13 x 250 x 150	M4	3
13 x 250 x 250	M4 or M6	5
13 x 400 x 400	M4 or M6	7



Multi-hole vision plates

More holes to set up and check as many parts as possible at one time. Clear area in the middle.

Base plate size (mm)	Threading
13 x 150 x 150	M4 or M6
13 x 200 x 200	M4
13 x 250 x 150	M4
13 x 250 x 250	M4 or M6

Adding multiple plates reduces downtime between inspections

■ Custom plate sizes available upon request.

■ Window size varies depending on size of fixture plate.

■ Custom plate sizes available upon request.

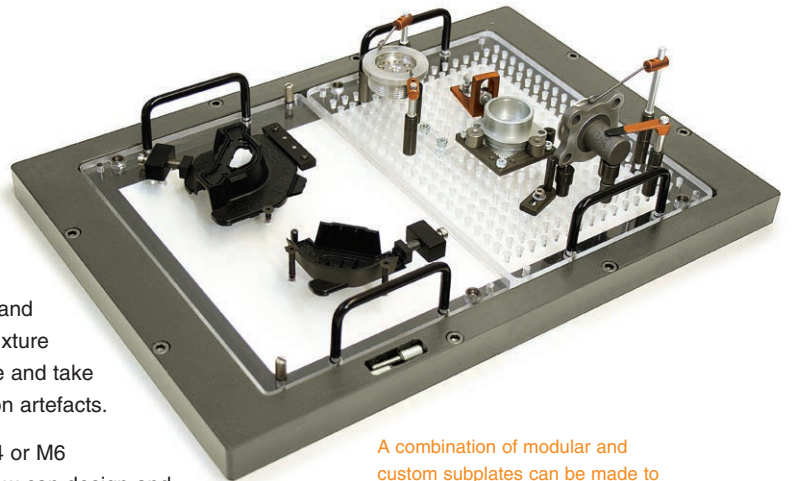
OPTION 2:

Interchangeable vision fixture (IVF)

For vision systems 450 mm x 450 mm or larger

Renishaw's IVF frame and subplates provide an easy and efficient turnkey fixturing method for holding parts. Fixtured subplates can be exchanged in seconds, eliminating downtime and allowing continuous inspection and repeatability. The anodised aluminium frame and acrylic fixture plates are custom-made to fit your specific vision machine and take into account the mounting of the probe rack and calibration artefacts.

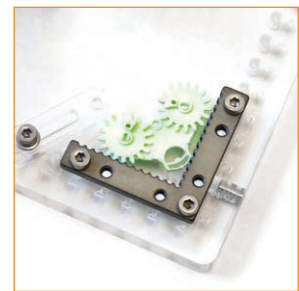
Interchangeable fixture subplates can be modular with M4 or M6 threaded holes (10 mm or 12.5 mm on centre) or Renishaw can design and build a custom fixture subplate for your application.



A combination of modular and custom subplates can be made to fit the same IVF frame.

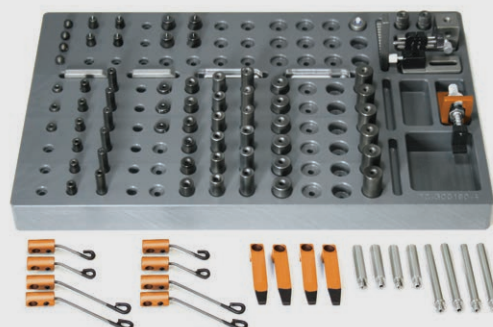
Vision components

Renishaw vision components are small and can be arranged within a close proximity to hold and view the smallest of parts. Each component is labelled with a part number for easy identification and documentation. All components use minimum contact holding force and consist of various adjustables, clamps, magnets and standoffs. Non-marring components are available for eliminating scratching or damaging of parts.



Vision fixturing kits

Renishaw IVF kits are comprised of an acrylic base plate and comprehensive set of components stored within a tray for easy access and organisation. Each kit includes a set of components for holding small parts and additional components are available for purchase separately.



M4 QLC vision kit with multi-hole plate

Renishaw Equator™ fixtures

Modular fixturing for your Equator

Renishaw Equator fixturing enables quick and easy fixture set-ups to be created regardless of the size, geometry or material of the part.

The loading and positive engagement of the Renishaw Equator fixtures base plate allows for a quick changeover of parts, on and off the Equator, within seconds. Each fixture is repeatably located and securely held in place with a 6-point kinematic system. Renishaw's Equator fixturing utilises a variety of modular fixturing components enabling you to set up an unlimited number of parts. Every fixture set-up can be documented and recorded manually for further inspections of that part.



Fixture plates

Base plate size (mm)	Threading
13 × 300 × 300	M4
13 × 300 × 300	M6
13 × 300 × 300	M8

Equator fixturing kits

Included in each Equator fixture kit is a component tray with an assortment of components for holding and clamping parts along with a kinematic base plate. Prearranged kits come with everything you need to fixture an unlimited number of parts.



M6 Equator kit with M6 plate

Renishaw custom fixtures

Custom fixtures for your inspection and gauging systems

If Renishaw's standard range of modular fixturing does not meet your requirements, Renishaw can provide you with special details and fixtures for your CMM, vision systems or Equator.

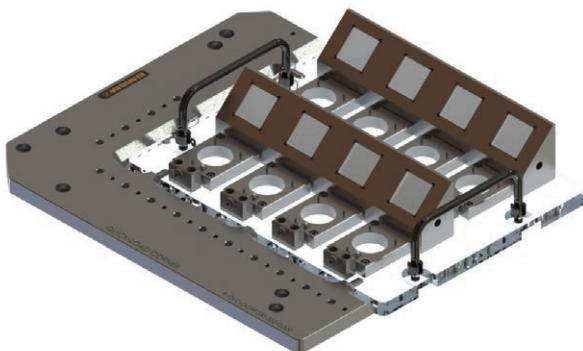
Renishaw's team of in-house design engineers will take the fixture design from concept to build, considering all aspects of the specific task. To enable us to provide the best solution, you can submit your pictures, parts, prints, or CAD files for review.



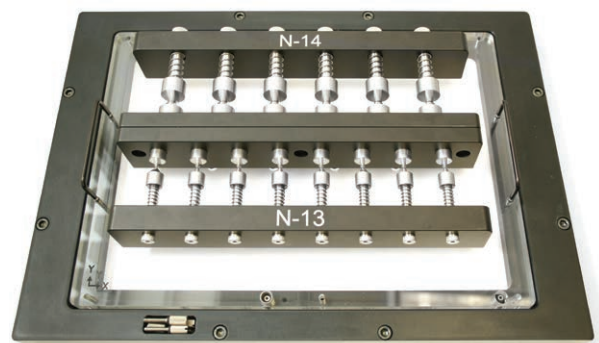
Linear rails allow for multiple parts with varying lengths.



Custom fixture for holding a family of parts in multiple sizes at one time.



Custom QLC fixture for holding multiple parts for measurement using backlight.



Custom IVF for fixturing parts with different diameters.

For further information on Renishaw fixtures, please contact your local sales office.

About Renishaw

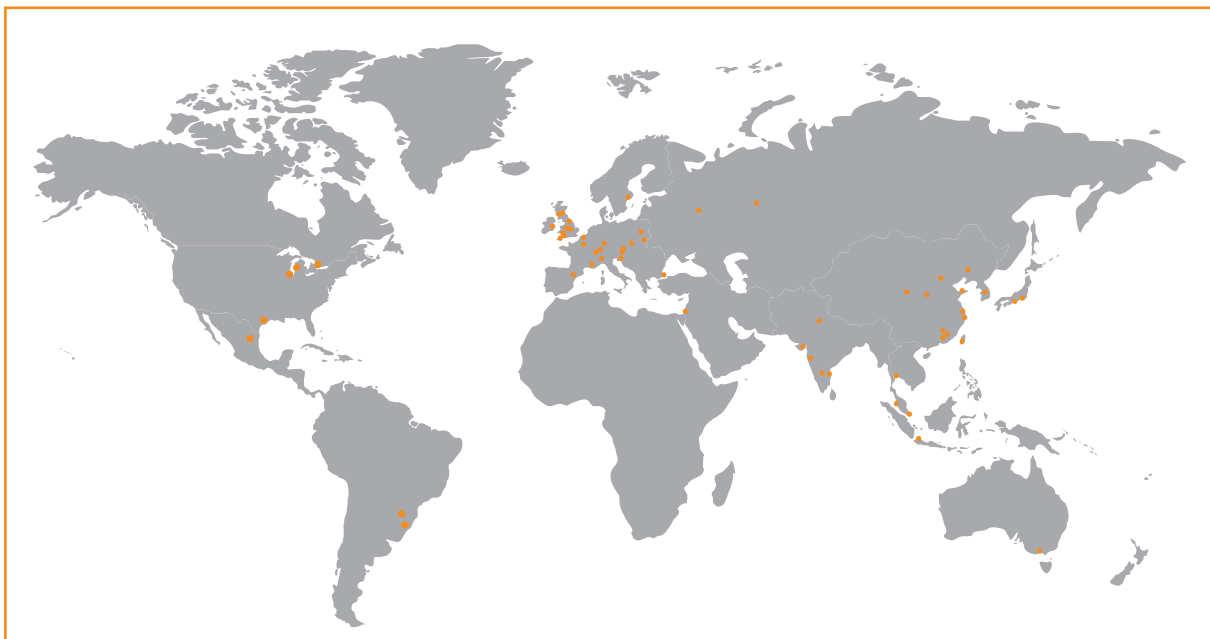
Renishaw is an established world leader in engineering technologies, with a strong history of innovation in product development and manufacturing. Since its formation in 1973, the company has supplied leading-edge products that increase process productivity, improve product quality and deliver cost-effective automation solutions.

A worldwide network of subsidiary companies and distributors provides exceptional service and support for its customers.

Products include:

- Additive manufacturing, vacuum casting, and injection moulding technologies for design, prototyping, and production applications
- Advanced material technologies with a variety of applications in multiple fields
- Dental CAD/CAM scanning and milling systems and supply of dental structures
- Encoder systems for high accuracy linear, angle and rotary position feedback
- Fixturing for CMMs (co-ordinate measuring machines) and gauging systems
- Gauging systems for comparative measurement of machined parts
- High speed laser measurement and surveying systems for use in extreme environments
- Laser and ballbar systems for performance measurement and calibration of machines
- Medical devices for neurosurgical applications
- Probe systems and software for job set-up, tool setting and inspection on CNC machine tools
- Raman spectroscopy systems for non-destructive material analysis
- Sensor systems and software for measurement on CMMs
- Styli for CMM and machine tool probe applications

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



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