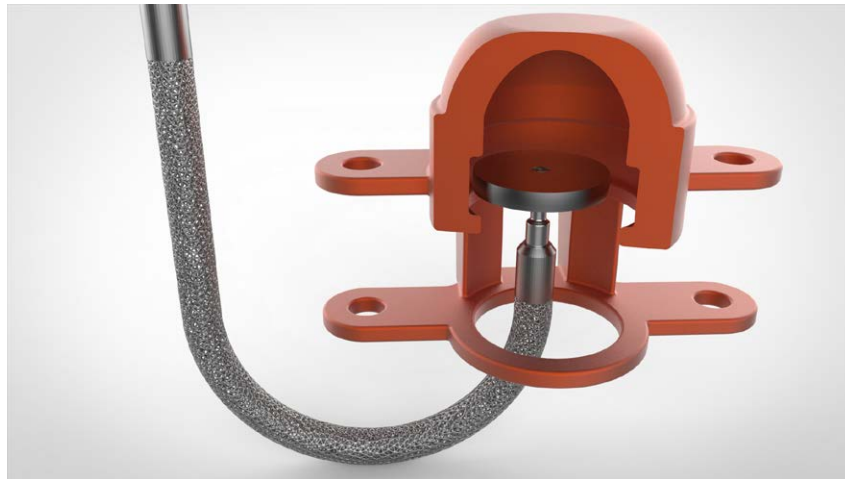


# Additively manufactured styli



**Custom stylus for Equator gauging application**



**Custom stylus for 5-axis CMM inspection**

Using additive manufacturing (AM), also known as metal 3D printing, Renishaw is able to offer complex turn-key styli solutions which could not be produced using 'traditional' manufacturing techniques.

The metal powder bed fusion process used in the manufacture of special custom styli presents new opportunities to create complex shapes and structures. The lightweight and robust titanium-structured styli enable the inspection of previously inaccessible features, across a wide range of metrology applications.

Specially-designed lattice structures and tubular shapes reduce total mass whilst maintaining structural integrity, thereby enabling maximum size to weight ratios. Female threads (M2/M3/M4/M5) can be included to allow the fitment of any additional stylus from Renishaw's extensive range of standard styli.

Using AM technology, styli are manufactured using the minimum number of parts – and therefore joints – required, significantly improving robustness. Each stylus is designed to ensure optimum weight, balance and stiffness.

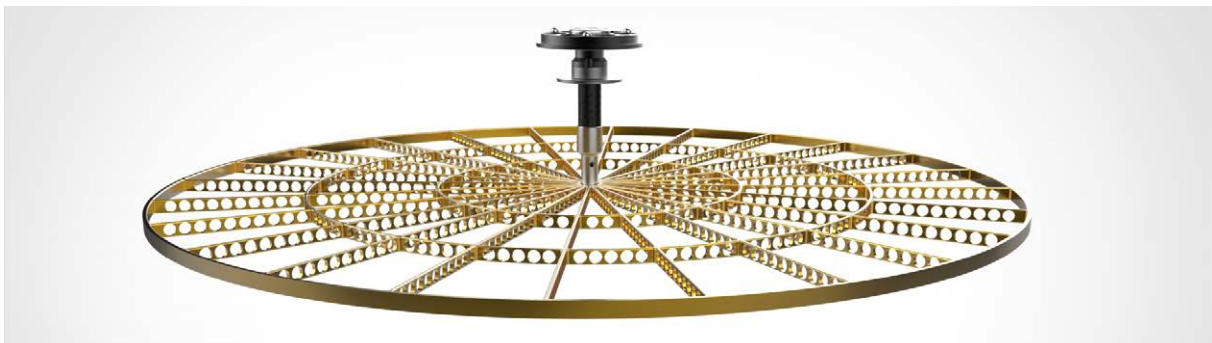


**'Traditional' manufacturing processes: a 9-joint configuration**



**AM technology: a seamless lattice structure**

Previously, the diameter of disc styli was restricted by the added weight caused by any increase in size. The spoke design enabled by AM technology reduces the weight of the stylus whilst maintaining structural integrity, allowing Renishaw to offer a wider range of diameters suitable for a variety of applications.



**Enabling larger diameters: a 200 mm diameter disc**

AM custom styli are available to suit a wide range of customer requirements. Pricing and delivery for these custom products can be obtained by submitting a **Custom stylus request form** to [sfpd@renishaw.com](mailto:sfpd@renishaw.com).

**For worldwide contact details, visit [www.renishaw.com/contact](http://www.renishaw.com/contact)**

