DIA-STRON
DELIVERING MEASUREMENT SOLUTIONS

Contract Testing Services

Dia-Stron contract testing services provide an evidence-based claims support package, substantiating claims referring to the efficacy, benefits or improvements in hair attributes as a result of using your hair care products.

Our testing methodologies have been developed by experts with a wealth of practical experience in the hair care industry. If you have specific testing needs, we will work with you to create a methodology that fulfils your requirements whilst meeting the highest globally-accepted testing standards.

What's included in our contract testing service:

- You can either send us hair samples pre-treated with your products/device, or send a sample of the product/device for us to treat high quality hair sourced by Dia-Stron
- We will test hair tresses/fibres in line with pre-agreed methodologies that fulfil your requirements
- You will receive a full test report including statistical analysis
- Our industry experts can also provide additional feedback to help you evaluate your product's performance

Claims Support

Hair Tresses

- Ease of combing/conditioning
- Detangling
- Manageability
- Softness
- Curl retention
- Combability after styling
- Styling hold/flexibility

Single Hair Fibres

- Anti breaking/strength
- Damage prevention/repair
- Heat protection
- Elasticity
- Depilatory cream
- Thickening
- Hydration/moisturising claims

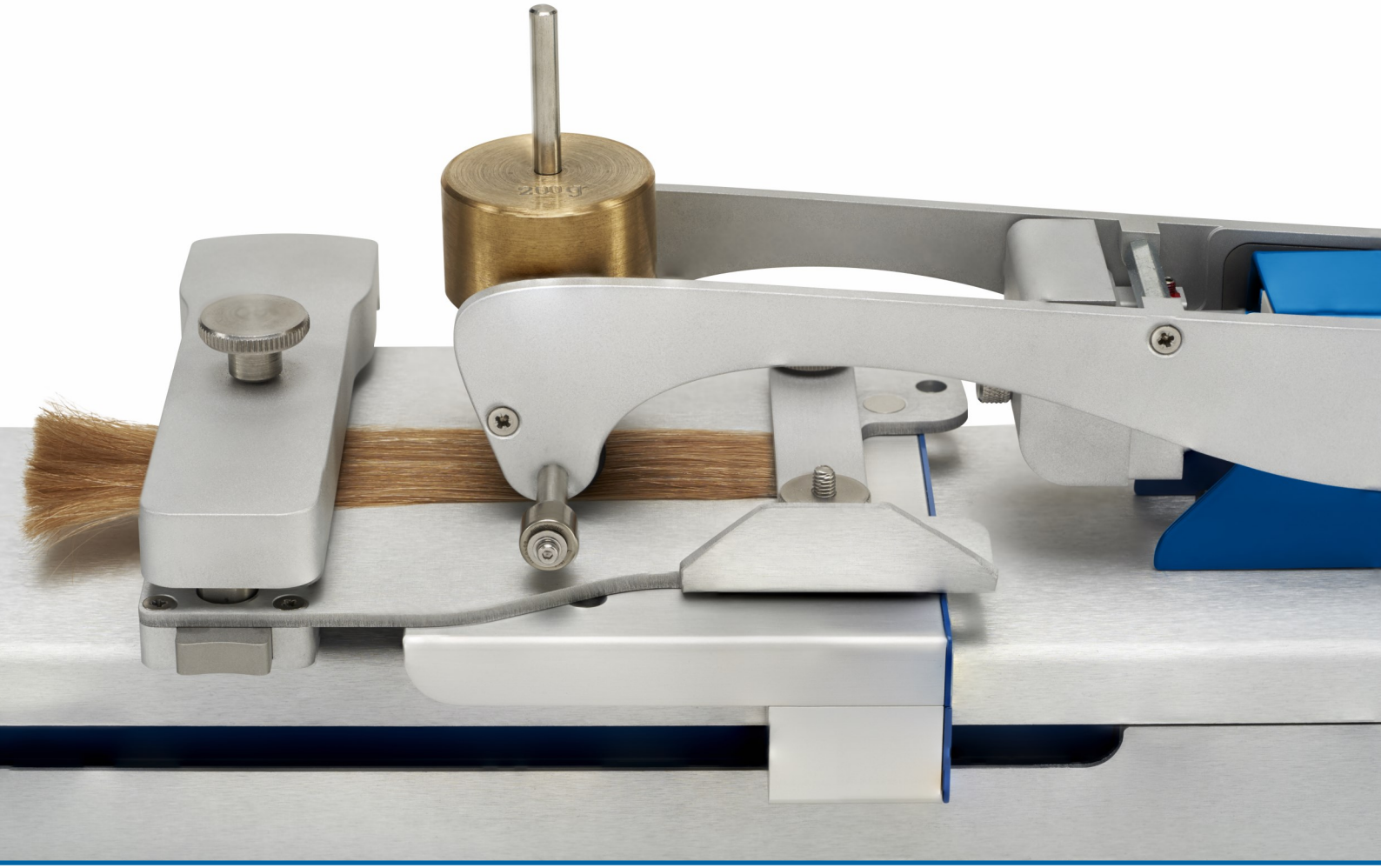

Tress Testing

Combing

Combing measurements provide invaluable information about the conditioning performance of a product, and can be performed on both wet and dry tresses. Hair combing properties correlate well with consumer attributes e.g. “ease of combing”, “manageability” or “detangling”.

3-point bending

3-point bending measures the flexural properties of hair tresses in a straight configuration, and is commonly used for styling claims such as “hold” or “stiffness” in the claims packages for styling polymers, hair gels and hair sprays.



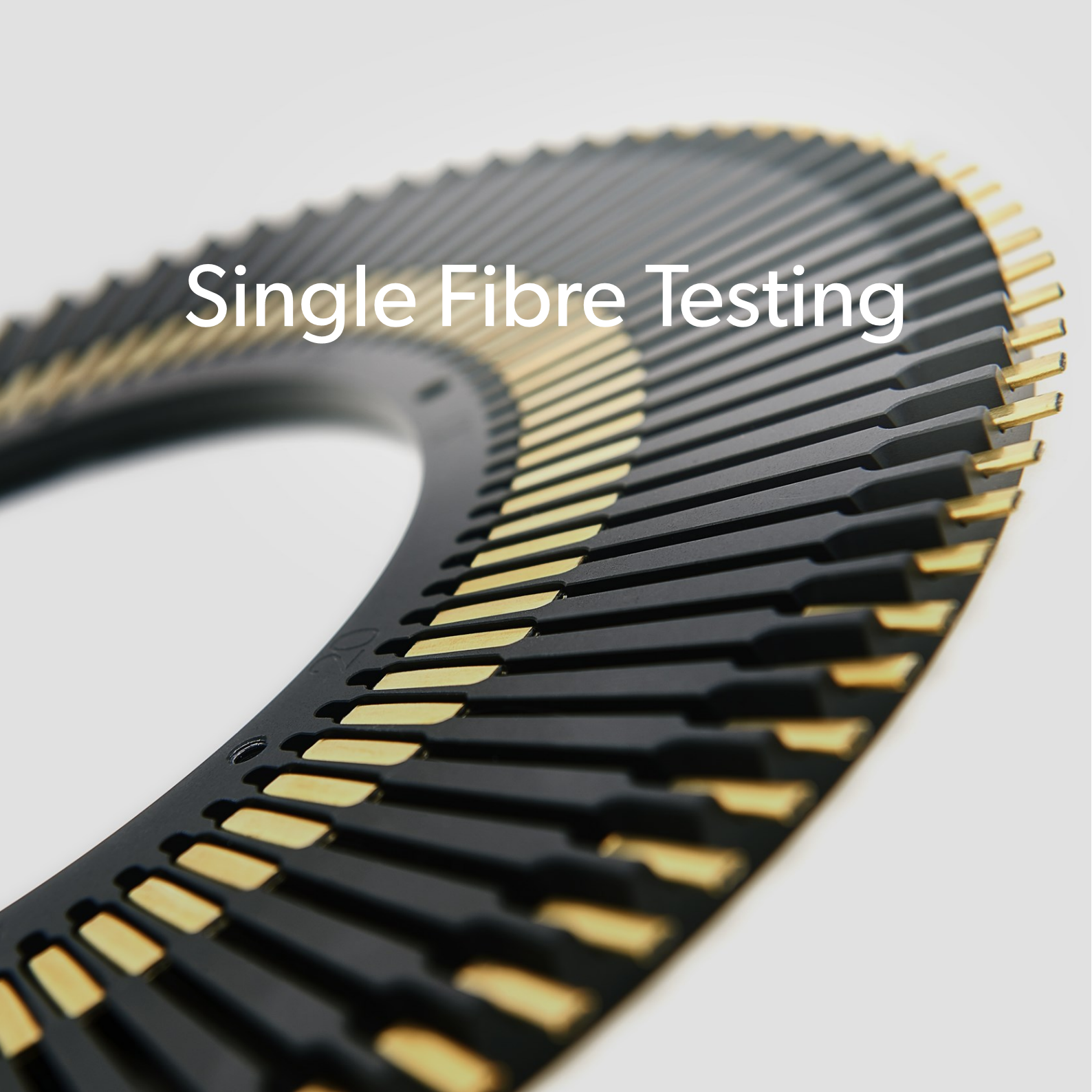
Friction

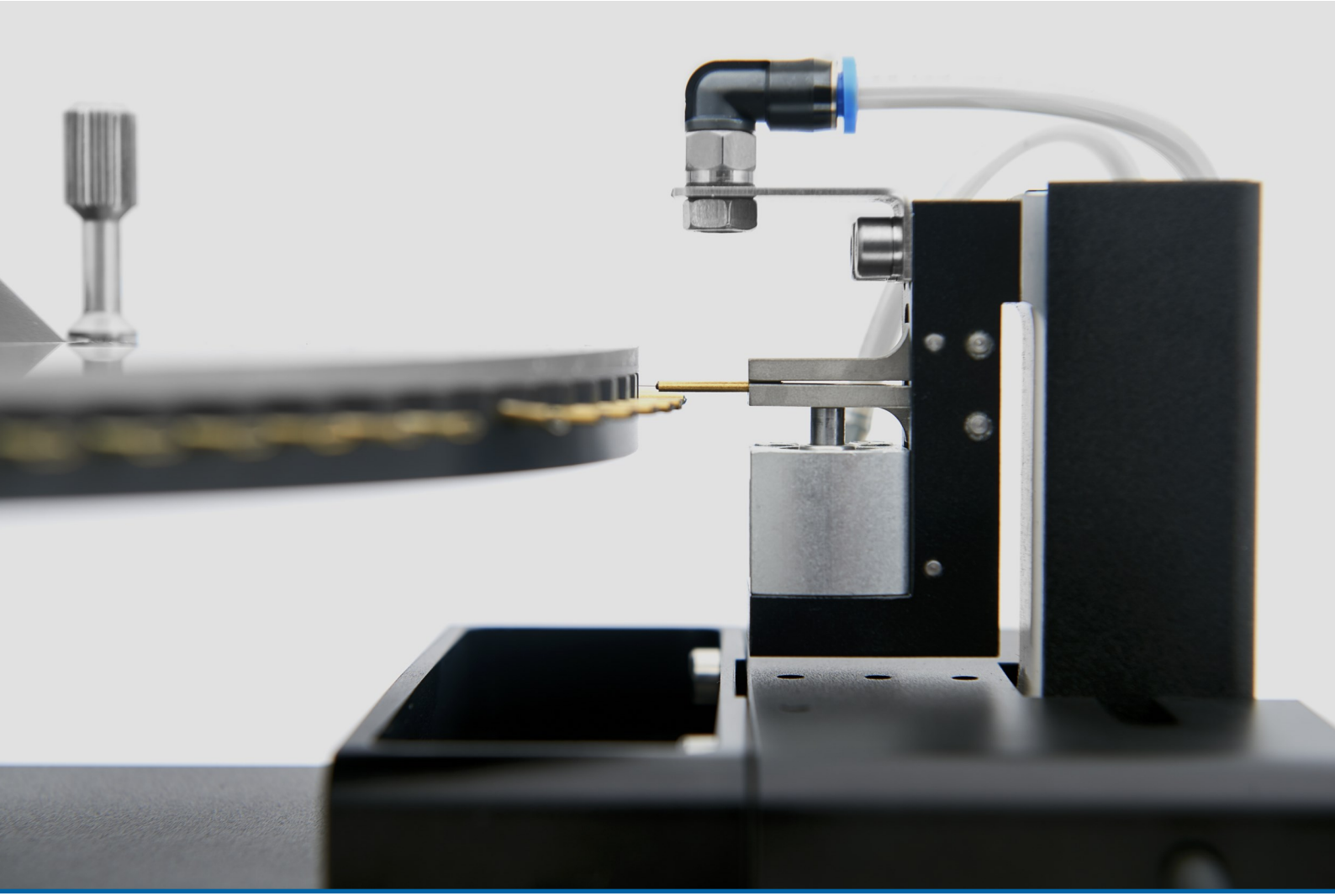
During a friction test the frictional force and work are measured, and the coefficient of friction calculated, by passing a rubber probe across the hair surface. Hair friction properties correlate well with consumer attributes such as “smoothness” or “surface damage” (e.g. heat, bleaching).

Curl compression

Curl compression measures the flexural properties of hair tresses formed into circular curls, performing measurements across a number of cycles. This method is perfect for “softness” or “curl retention” claims, for styling products such as hair gels, mousses, hair sprays, pomades as well as wash and care products.

Single Fibre Testing



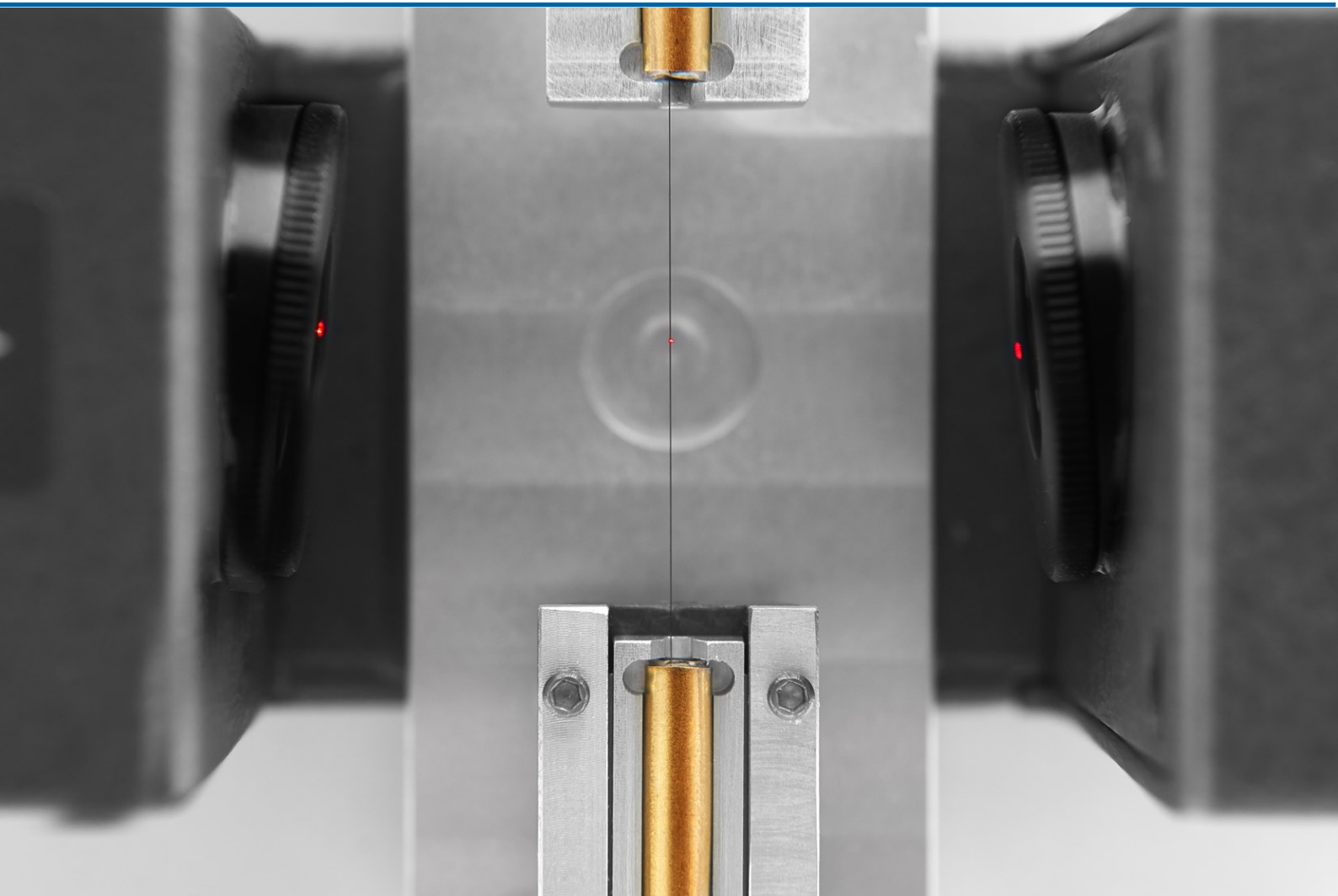


Tensile

Measuring the tensile properties of single hair fibres by stretching them to a specified percentage or to failure. These measurements can be performed on wet or dry fibres and are used to substantiate “strengthening”, “hydration”, “elasticity”, “moisture” and “damage repair” claims.

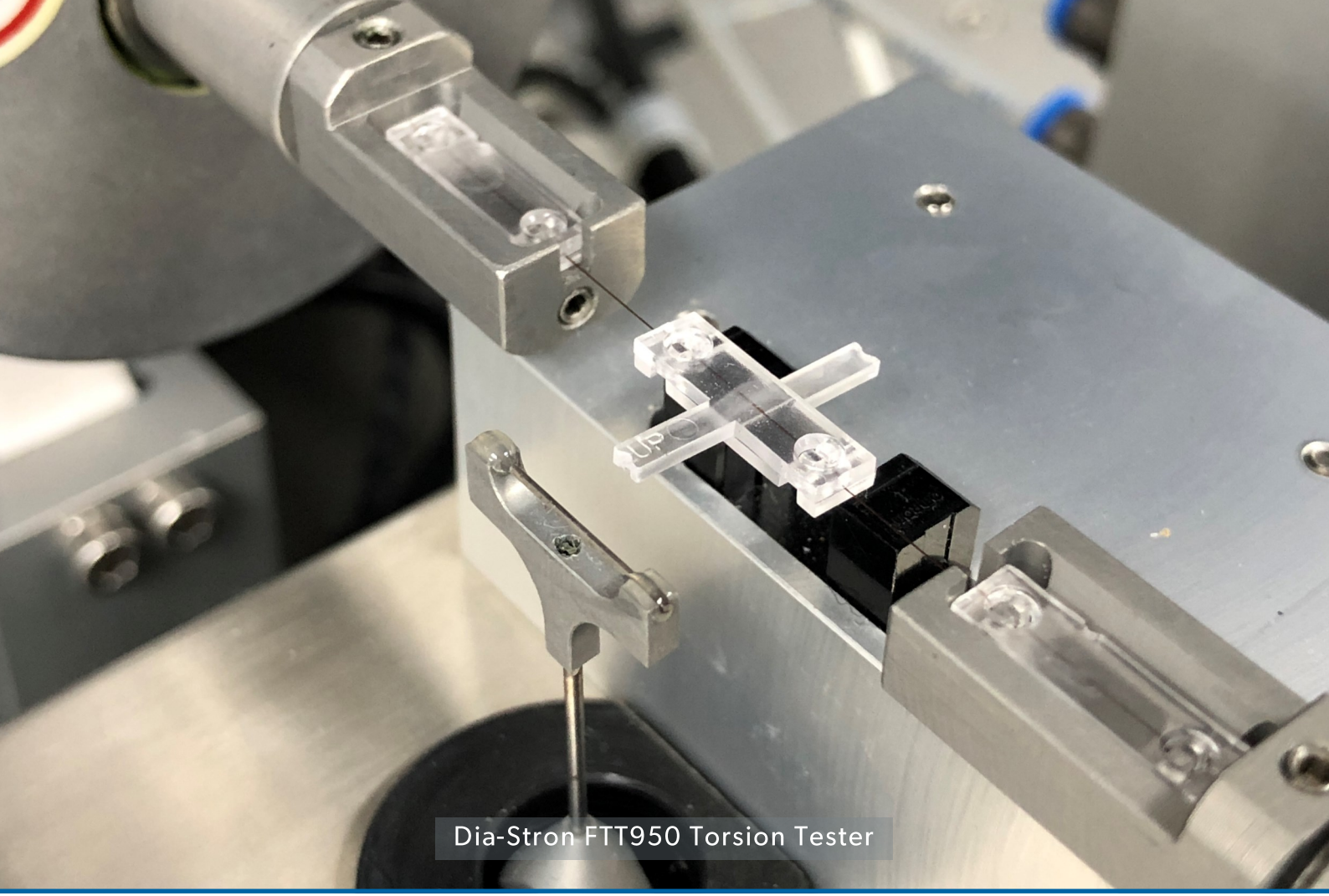
Dimensional

Dimensional properties of single hair fibres are measured using a laser scanning micrometer taking multiple readings as the fibre is rotated and translated. A Dynamic Swelling Module (DSM770) can be incorporated for swelling and wet diameter measurements. Used to normalise mechanical testing with fibre dimensions and to support “thickening” and damage related claims with swelling.



Cyclic Fatigue

Measures the dynamic strength of hair fibres by repeatedly extending them to lower levels than required to break, simulating repeated grooming. An ideal technique for evaluating the damage caused by treatments (such as heat or chemical damage), and for claims relating to “strengthening” or “damage protection/prevention”.



Dia-Stron FTT950 Torsion Tester

Alternative modes of deformation — bending and torsion

The FTT950 Torsion Tester pulls hair fibres taught and twists them up to 360° against a balance, directly measuring torsional properties. Torsion is particularly useful to measure the impact of products/treatments on the hair fibre cuticle layers and cortex matrix e.g. oil treatments.

The FBS900 Bending System is based on the single cantilever method, where the fibre is flexed against a pin and the bending force measured. Applications include measuring how cuticle damage affects hair bending stiffness, impact of styling products on fibre rigidity and formulation development for mascaras/shaving products.

Dia-Stron contract testing services are an **efficient, cost-effective way** to ensure you receive **valid, reliable and reproducible** results to support your product claims and benefit your customers. Whatever your needs, we can work with you to devise the most appropriate testing protocols for your requirements.

Our testing services are priced per group of samples, with prices varying according to the group quantity. Prices are fully inclusive of: provision of hair fibres or tresses, sample mounting and consumables, treatment and/or damage and all testing requested. Contact us today for a bespoke quotation and more information about our testing methods.

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