

## TESTING AND CERTIFICATION OF PERSONAL PROTECTIVE EQUIPMENT

TUV NEL has extensive experience of inspecting, assessing and testing protective equipment, particularly fall arrest systems and devices. As a UKAS-approved test house, TUV NEL is accredited to conduct tests to EN standards. TUV NEL has also obtained notified body status for conducting CE Approvals under Article 10 of the PPE Directive and Product Surveillance under Article 11.

### Test Facilities

TUV NEL's purpose-built fall arrest PPE testing facility features multiple dynamic test rigs which are used for routine tests as well as research programmes. A range of static test machines is also available that can be



configured to apply tensile, compressive or cyclic loading, as required. Horizontal safety line testing can be performed on a horizontal test facility. A particular feature of TUV NEL's PPE test facility is that it offers a maximum fall height of 7 m thus providing clients with the opportunity to have their products tested under realistic conditions.

Full-body and stub-limb anthropometric dummies are available for use in fall arrest tests. These can be instrumented with tri-axial accelerometers to measure spinal acceleration and can be used in conjunction with high-speed video filming to provide a detailed insight into human effects.

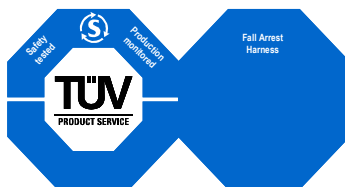
An 11 m high outdoor tower is available for testing larger scale multi-user PPE and for general load testing. The tower features a hydraulic actuator with dual hydraulic quick release hooks to enable drop snatch and static testing to be

### CE Marking and Product Surveillance

TUV NEL is a notified body for undertaking CE marking and product surveillance of fall arrest equipment under the PPE European Directive 89/686/EC.

### TÜV Marking

As part of the TÜV SÜD Group, TUV NEL can award TÜV marking for products assessed against more rigorous test requirements. Unlike the CE mark, the TÜV mark is a product safety marking that:



- Demonstrates a clear commitment to safety
- Adds value to a product
- Provides product differentiation

This objective, third-party safety marking is trusted by industry and enjoys worldwide recognition. The TÜV mark is particularly beneficial for:

- Non-complex PPE, which is not subject to independent inspections to ensure conformity of production
- Non-Directive PPE, which is exempt from the CE marking process
- Products destined for mainland Europe, where the TÜV mark is widely accepted

## Current Services

NEL is currently accredited to perform tests in accordance with the following standards:

- BS EN 341 Descender Devices
- BS EN 353-1 Fall Arrest—Vertical Rigid Systems
- BS EN 353-2 Fall Arrest—Vertical Flexible Systems
- BS EN 354 Fall Arrest Lanyards
- BS EN 355 Fall Arrest Energy Absorbers
- BS EN 358 Work Positioning Harnesses and Lanyards
- BS EN 360 Retractable Fall Arresters
- BS EN 361 Fall Arrest Full Body Harnesses
- BS EN 362 Connectors
- BS EN 795-Class A1 Anchor: Structural Anchors
- BS EN 795-Class A2 Anchor: Roof Anchors
- BS EN 795-Class B Anchor: Transportable Temporary Anchors
- BS EN 795-Class C Anchor: Horizontal Flexible Anchor Lines
- BS EN 795-Class D Anchor: Horizontal Rigid Anchor Rails
- BS EN 795-Class E Anchor: Deadweight Anchors
- BS EN 813 Sit Harnesses
- BS EN 1095 Deck Safety Harnesses and Lanyards
- BS EN 1496 Rescue Lifting Devices
- BS EN 1497 Rescue Harnesses
- BS EN 1498 Rescue Loops



In addition, TUV NEL can conduct other types of general testing of a range of products to customers' own requirements and to other recognised standards. Examples of products that can be tested are:

- Guard rails for roof edge protection
- Vehicle tow ropes
- Cargo ratchet restraint lashings
- Yachting components
- Scaffolding components
- Pole chokes
- Crash mats for fall protection in the construction industry



## Research and Development

Manufacturers of PPE can obtain important benefits by becoming involved in collaborative research and development programmes at TUV NEL. These programmes assist equipment manufacturers to improve the design and performance of their products and maintain a competitive advantage. Partners in these programmes can gain access to TUV NEL's specially instrumented test rigs and analytical capability, including powerful finite element analysis software.

## Consultancy

NEL offers a wide range of consultancy services that are of benefit to manufacturers of personal protective equipment. These services range from theoretical modelling to assistance with product design and in-service troubleshooting. Advice can be provided on certification issues, technical files and preparation of product test specifications.

The preparation of product technical files can also be undertaken on behalf of clients.

Studies are undertaken for regulatory bodies, often in response to particular issues that have arisen within the industry. These often involve the investigation of the performance of items of equipment and the results of these studies are used to develop policy and to improve product design and performance.



## Test Witnessing

For customers preferring to perform their own testing, TUV NEL can provide support in the form of expert witness, test simulation advice and report vetting.

