

IS 3521 (Part 1) : 2021- Personal fall arrest systems - Specification : Part 1 full body harness

The document is an Indian Standard (IS 3521 Part 1:2021) established by the Bureau of Indian Standards (BIS) to define specifications for **full-body harnesses (FBH)** used in personal fall arrest systems (PFAS). These harnesses are designed to protect individuals from fall-related injuries when working at heights or confined spaces. Full-body harnesses provide essential support to the user during a fall and are intended for single-person use with a maximum weight limit of 100 kg, including equipment.

Consumers expect full-body harnesses to meet high **safety and ergonomic** standards, ensuring:

- **Comfort and fit** for extended wear with adjustable straps and padding to reduce strain.
- **Reliability** in fall-arrest by distributing forces effectively and minimizing **injury risks**.
- Resistance to **corrosion** and wear, especially under industrial conditions or exposure to chemicals.
- **User-friendliness**, with straightforward instructions and clearly marked attachment points.

The standard ensures consumer expectations are met through:

- **Detailed Specifications:** It mandates materials, design, and construction criteria for **durability, strength, and comfort**, specifying webbing materials, buckle types, and attachment elements.
- **Testing Requirements:** Various tests such as static and dynamic strength tests, **corrosion resistance, and flammability** are outlined to validate the harness's ability to withstand impact forces, maintain integrity, and resist environmental factors.
- **Classification and Usage Guidance:** Harnesses are classified based on intended uses (e.g., fall arrest, work positioning). The standard includes instructions for proper **fitting, adjustment, and maintenance**.
- **Marking and Packaging:** Clear labelling requirements, including usage instructions, manufacturer identification, and **safety warnings**, are specified to ensure users can quickly understand and safely use the product.