



IS 1971:2023 – Crop Protection Equipment: Hand-Operated Stirrup-Type Sprayers

Efficient crop protection is essential to prevent losses caused by pests, weeds, and diseases. Stirrup-type sprayers provide an affordable and accessible solution for small and medium-scale farmers. Simple manual operation makes it accessible to users with limited technical skills or resources. These sprayers are vital for small-scale and targeted agricultural practices, offering an economical, efficient, and reliable solution for crop protection.

Hand-operated stirrup-type sprayers are used for

- **Pesticide Application:** Controlling pests in various crops such as cereals, vegetables, and fruits.
- **Herbicide Spraying:** Managing weed growth in fields and plantations.
- **Fertilizer Application:** Applying liquid fertilizers for enhanced crop nutrition.
- **Horticulture and Gardening:** Effective for protecting flowers, ornamental plants, and small-scale gardens.

Hand-Operated Stirrup-Type Sprayers should have simple manual operation. It should ensure uniform distribution of chemicals, minimizing waste and enhancing effectiveness. It should have a lightweight design and allow easy transportation and use across different fields. It should be constructed to withstand agricultural conditions, ensuring reliable performance over time. It should also adhere to the standard to ensure safety for the user during chemical application.

Indian Standard IS 1971:2023 specifies the material and constructional requirements, performance parameters (discharge rate, volumetric efficiency, endurance tests) and testing methods for hand-operated stirrup-type sprayers used in crop protection and ensures the sprayers meet specific quality, durability, and operational efficiency criteria, enabling safe and effective application of agricultural chemicals.

IS 1971:2023 provides a framework for ensuring the quality and performance of hand-operated stirrup-type sprayers. The standard ensures that farmers have access to safe, durable, and user-friendly equipment, ultimately contributing to improved agricultural productivity and sustainability. ISI Marked Stirrup-type sprayers provide an affordable and accessible solution for small and medium-scale farmers.