



IS 11708: 1986 – Hand, Mechanical

A **prosthetic hand** is essential for individuals with limb loss or impairment, enabling them to perform everyday tasks with greater independence and precision. It restores **functionality**, improves quality of life, and advances **rehabilitation**. An **artificial hand** must be simple and **durable** to use.

The Indian standard **IS 11708**, developed by the **Bureau of Indian Standards (BIS)**, specifies the design and quality requirements for **prosthetic** hands operated using simple **mechanical** system. It covers three types of hands: one with a thumb and two fingers (**fluck grip**), one with all fingers (**clasp grip**), and one with **movable thumb types** (pinch or grasp). The prosthetic hands are available in small, medium, and large sizes to suit different users.

The standard ensures that prosthetic hand is manufactured with materials chosen for strength and lightness. Rubber or flexible plastic is used to cover the fingers. The hand uses a spring-loaded cable system that allows users to open it by pulling on the cable. This cable system helps the hand open and close smoothly. It's strong enough to hold objects up to a certain diameter and weight without slipping, like a bottle or a light tool.

The hands are built to be **safe** and **reliable**, with rounded edges and a polished finish. They're tested for durability, with each hand going through thousands of open-close cycles to make sure it lasts. Further, the hand is also tested to lift a set amount of weight without failing.

Each hand is labelled with size and brand information to help users choose the right one. The standard also covers packaging and quality checks to make sure all hands meet the same high standards.