

IS 4003 (Part 2): 1980

IS 4003 (Part 2):1986 specifies the requirements for **heavy-duty pipe wrenches**, a tool used to securely grip and turn pipes or circular objects. These wrenches are used in various areas where temporary joining of pipes etc. are called for like exploration and mining. They have adjustable jaws and hard/strong make to handle high torques/bending moment and resist wear.

In simple terms pipe wrench is an adjustable wrench (with adjustable jaw) which is used for tightening/loosening of threaded pipes of iron, steel etc. It has hook jaw, nut, body, pin, heel jaw etc. as its component.

From perspective of consumers (which are generally heavy industries workmen) following should be the expected characteristics heavy-duty pipe wrenches to meet stringent performance and durability criteria. These include **Material Strength, Efficient Operation, Precision and Safety, Resistance to Wear & Marking and Identification**.

This standard covers the dimension and other requirement of heavy duty pipe wrench. This is a tool which requires greater reliability not only for its intended performance but also for ensuring the safety of user.

The parameters which the product should comply for its performances are its load bearing capacity (checked through static load test).

The product shall be free from flaws, cracks, rust etc. for safety of worker and jaw should move easily to ensure proper adjustments and it should release freely when pressure is reversed.

There are various sizes of product ranging from 200 mm to 1200 mm, as per need of work, covering wide range of applications like plumbing / maintenance of pipes, vessels, etc. and mechanical industries.

Seeing the criticality of product, Government Quality Control order dated 17.09.2024 on hand tools mandates that all products shall comply with IS 4003 (part 2): 1980 and shall display BIS standard Mark. The order will come into effect from March 2025.