



## **Indian Standard IS 4630:1972 – Specification for BARBELL SET**

The barbell is a bar with adjustable weighted discs attached to each end that is used for exercise and in weight lifting, it is a longer version of the dumbbell that is used for free weight training and competitive sports, such as powerlifting, Olympic weight lifting, and CrossFit. Many exercises can be done using the barbell, such as bicep curl, bench press, Olympic weightlifting, overhead press, deadlift, and squat.

It is desirable that the Barbell Set used for training and competitive sports should be **Robust**, bars should be **comfortable to hold in hands**, weight values should be easily **recognizable** from distant location may be through colour coding and should be **accurate, discs or floor are not damaged** while putting down the barbell set, **proper locking system of discs on bars and no sharp edges**.

The Indian Standard IS 4630 ensures the above and specifies the requirements of material of construction, dimensions and weight of Bars, Discs and Collars. For Bars the ISS prescribes material of construction as **chromed steel, machined with knurling in grip section ensuring comfortable to hold in hands** and **satisfying performance test** in which bars with all discs in position weighing 190 kg is dropped freely on the ground which normally used for weight lifting, from a height of 2.5 m without any damage to bars or discs which **guarantees the robust and rigid construction of bars and discs**. The bars used by Men weigh 20 kg and bars used by women weigh 15 kg.

The standard suggests that for discs the material of construction can be mild steel, Plastics or cast iron. **The discs weighing more than 10 kg shall be covered with rubber or plastic**, thereby ensuring that the discs and floor do not get damaged. Standard classifies the discs as competition discs and training discs meeting the requirement of weight, width, diameter and colour of discs as **Red for 25 kg and 2.5 kg, Blue for 20 kg and 2.0 kg, Yellow for 15 kg and 1.5 kg, Green for 10 kg and 1.0 kg and White for 5 kg and 0.5 kg** with corresponding width and diameter of discs, it makes the user to recognize the weights from colour coding from distant location. The standard also specifies that competition discs shall be coloured wholly on both sides whereas training discs shall be either coloured wholly or full black colour with a rim of the corresponding colour and shall be marked as 'Training'.

The standard further specifies that for holding the discs on the bar, each bar shall be equipped with **two collars which shall be made from chrome steel having weight 2.5 kg each, diameter of hole 50mm and width 70mm which ensures proper locking of the discs**. The standard also ensures that the discs are free from casting defects, **all sharp edges are rounded off**, the chrome plating is free from pin holes, cracks and other defects, thereby meeting ones expectations.