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**SPECIFICATION FOR
BARBELL SET**

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

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Indian Standard

SPECIFICATION FOR BARBELL SET

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Indian Standard

SPECIFICATION FOR BARBELL SET

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 27 May 1968, after the draft finalized by the Sports Goods Sectional Committee had been approved by the Consumer Products Division Council.

0.2 As the performance of a weight lifter is dependent to a large extent on the equipment he uses and the equipment that is made available in competitions, formulation of a national standard was considered very essential.

0.3 This standard, dealing with the barbell set, is one of a series of Indian Standards on sports goods, prepared on the recommendations of the Sports Goods Export Promotion Council, New Delhi. Other standards published so far in the series are listed on fourth cover page.

0.4 In preparing this standard, considerable assistance has been derived from the following:

TGL 10 508 : 1961 Barbell set. Deutsche Demokratische Republik
Rules of games and sports. Sixteenth Edition. YMCA Publishing
House, Calcutta

0.5 Clause 8.1 calls for an agreement between the purchaser and the supplier or permits the purchaser to use his option for selection to suit his requirements.

0.6 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard lays down material, dimensional, manufacturing, workmanship and finish, and performance requirements of barbell set.

*Rules for rounding off numerical values (*revised*).

2. MATERIAL

2.1 Bars — The bars shall be made from steel capable of satisfying the performance test given in **6.1**.

2.2 Discs — The discs shall be made from iron castings.

3. SHAPE AND DIMENSIONS

3.1 Typical shape of the barbell is given in Fig. 1. The dimensions shall conform to those given in the figure. Recommended weights of bar, collars and discs are given in Table 1.

4. MANUFACTURE

4.1 The bar of the barbell set shall be manufactured from steel which satisfies the performance test given in **6.1** and disc weights shall be cast from cast iron. Means shall be provided on the bar for maintaining the minimum distance between the two sets of discs. For holding the discs in position, wrenchless collars (adjusters and tighteners) with adjustable extensions to prevent disc rattling shall be employed over the sleeves. For keeping the sleeves in position, the ends of the bars shall be threaded to a length of at least 25 mm to receive domed cap-nuts. Means shall be provided for permanent locking of the end-nuts to the bar, such as grub screw, but it shall be seen that the grub screw does not project beyond the outer surface of the end-nut. The diameter of the end-nut shall approximately be that of the sleeve. For better grip, portions of the rod as shown in Fig. 1 shall be knurled. When in use, it shall be possible to rotate the bar keeping the disc weights unaffected.

4.1.1 The weight of the bar used shall always be a multiple of 2.5 kg.

5. WORKMANSHIP AND FINISH

5.1 The bar shall be comfortable to hold in hands and the discs shall be free from casting defects. All the sharp edges shall be rounded off.

5.2 The bar, collars (adjusters and tighteners) and sleeves shall be chromium plated over nickel according to Grade B of IS : 1068-1958*. The plating shall be free from pin-holes, cracks and such other defects which may impair its serviceability.

6. PERFORMANCE TEST

6.1 The bar with all the discs in position (*see* Fig. 1), weighing approximately 175 kg shall be lifted to a height of 2.5 m and dropped free on the ground normally used for weight lifting. After completion of the test, the bar or any disc shall show no sign of cracking or permanent deformation.

*Specification for copper, nickel and chromium electroplated coatings.

TABLE 1 RECOMMENDED WEIGHTS OF BAR, COLLARS AND DISCS

(Clause 3.1)

ITEM	NUMBER OF PIECES	WEIGHT OF EACH PIECE	TOLERANCE ON EACH PIECE	TOTAL WEIGHT
		kg	kg	kg
Bar (including 2 sleeves)	1 } 2 }	25·000 (Bar 20·000 kg + two 2·500-kg collars)	+ 0·070	25·000
Collar				
Disc	4	20·000	+ 0·030	80·000
Disc	2	15·000	+ 0·010	30·000
Disc	2	10·000	+ 0·010	20·000
Disc	2	5·000	+ 0·010	10·000
Disc	2	2·500	+ 0·010	5·000
Disc	2	1·250	+ 0·010	2·500
Disc	4	0·500	+ 0·010	2·000
Disc	2	0·250	+ 0·010	0·500
Grand Total				175 kg

7. MARKING

7.1 Each bar and disc shall be marked with the manufacturer's name, initials, identification mark or registered trade-mark. In addition, each disc shall be marked with its weight in kilograms.

7.1.1 The barbell set may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

8. PACKING

8.1 The barbell set shall be packed as agreed to between the purchaser and the supplier.

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*Sales Office in Calcutta is at 5 Chowringhee Approach, P. O. Princep Street, Calcutta 700072

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