भारतीय मानक **IS 1056 : 2024**

Indian Standard

व्यावसायिक बाट — विशिष्टि

(चौथा पुनरीक्षण)

COMMERCIAL WEIGHTS — SPECIFICATION

(Fourth Revision)

ICS 01.060

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FOREWORD

This Indian Standard (Fourth Revision) was adopted by the Bureau of Indian Standards on the recommendation of the Weights and Measures Sectional Committee and approval of the Production and General Engineering Division Council.

This standard was originally published in 1957 on the recommendations of the Standing Metric committee setup by the Government of India to formulate and implement the programme of changeover to metric system. This standard was subsequently revised in 1965, 1993 and 2004.

This fourth revision has been brought out to align the standard with the latest technological developments and international practices.

The major changes in this revision are as follows:

a) MPE for bullion and non-bullion weights have been defined as per latest international conventions;
b) Figures have been updated; and
c) References have been updated.

The basic series of weights adopted in this standard is 5,2,2,1 and therefore, for making complete sets, one additional weight of relevant decimal multiple of two will be necessary in addition to denominations of different series prescribed under **3**. Indenters should bear this in mind when placing orders.

This standard prescribes hexagonal shape for cast iron and forged mild steel weights. In the case of brass or bronze weights, two shapes have been prescribed as follows:

a) Cylindrical, with a knob on top for the general bullion trade; and
b) Flat cylindrical, with straight side, for goldsmiths.

This standard does not prescribe the classes of trade for which different types of weights maybe used. The following information may, however, serve as illustrations:

a) *General trader's weights* — These are made of cast iron or forged mild steel. They are generally used for weighing materials, such as grains, salt, flour, pulses, seeds, spices, nuts, fruits, jaggery, ghee, butter, vegetables, oils, including edible oils and hydrogenated oil, sweet-meat, fish, fuel, non-precious metals, etc.
b) *Bullion and precision metal weights* — These are made in the solid form from brass or bronze and in the sheet form from stainless steel, aluminium, brass or nickel-silver. These are generally used for weighing bullion and precious metals.
c) *Apothecary's and chemist's weights* — These are solid weights made of brass or bronze and sheet metal weights made of stainless steel, aluminium, brass or nickel-silver, and are used by apothecaries, and in similar trades.

The dimensions for weights of different types and denominations have been calculated by assuming a specific gravity of 7.15 g/cm^3 for cast iron and 8.40 g/cm^3 for brass and bronze. Further, it has been assumed that the weights have been adjusted by filling in one third of the loading hole with lead having specific gravity of 11.38 g/cm^3.

In the preparation of this standard, considerable assistance has been derived from Standards of Weights& Measures (General) Rules, 1987.

The composition of the Committee, responsible for the formulation of this standard will be given at Annex A.

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 or analysis, shall be rounded off in accordance with IS 2 : 2022 ‘Rules for rounding off numerical values (*second revision*).’ The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Draft Indian Standard

COMMERCIAL WEIGHTS — SPECIFICATION

(*Fourth Revision of* IS 1056)

1 SCOPE

1.1 This standard prescribes the requirements of the following categories of solid and sheet metal weights intended for use in normal commercial transactions:

a) Iron weights, hexagonal (50 kg to 50 g);
b) Brass and bronze weights (10 kg to 1 g); and
c) Sheet metal weights (500 mg to 1 mg).

1.2 It does not cover proportional weights that are used, for instance, in certain types of weighing machines, weigh-bridges, etc.

2 REFERENCES

The following standards contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

IS / Other publication	*Title*
210 : 2009	Grey iron castings — Specification (*fifth revision*)
292 : 1983	Leaded brass ingots and castings (*second revision*)
306 : 1983	Tin bronze ingots and castings (*third revision*)
319 : 2007	Free cutting brass bars, rods and sections — Specification (*fifth revision*)
410 : 1977	Cold rolled brass sheet, strip and foil (*third revision*)
737 : 2008	Wrought aluminium and aluminium alloy sheet and strip for general engineering purposes — Specification (*fourth revision*)
1570 (Part 5) : 1985	Schedules for wrought steels: Part 5 Stainless and heat resisting steels (*second revision*)
15911 : 2010	Structural steel (ordinary quality) — Specification

3 DENOMINATIONS OF WEIGHTS

3.1 The denominations of the different types of weights shall be as follows.

3.1.1 *Solid Metal Weights*

Kilogram (kg) Series	
Iron and Steel Weights	Brass and Bronze Weights
50	10
20	5
10	2

5	1
2	
1	

Gram (g) Series

Iron and Steel Weights	Brass and Bronze Weights
500	500
200	200
100	100
50	50
	20
	10
	5
	2
	1

3.1.2 *Sheet Metal Weights*

3.1.2.1 *Milligram (mg) series*

500, 200, 100, 50, 20, 10, 5, 2 and 1.

3.1.3 The actual series to be used in practice shall consist of two weights of denominations 2, 20 and 200.

4 IRON AND STEEL WEIGHTS

4.1 Hexagonal Weights

4.1.1 *Denominations*

The denominations, shall be as given in **3.1.1.**

4.1.2 *Material*

4.1.2.1 Weights of 50kg down to and including 5 kg shall be made of cast iron only. Cast iron weights may preferably be made from material conforming to grade FG 150 of IS 210.

4.1.2.2 Weights of 2 kg down to and including 50 g shall be made either of cast iron or of forged mild steel as specified by the purchaser. Mild steel weights may preferably be made from material conforming to steel Designation E 170 of IS 15911.

4.1.3 *Shapes and Dimensions*

The shapes and dimensions of cast iron weights shall conform to Fig. 1 and Fig. 2 read with Tables 1 and 2 and those of mild steel shall conform to Fig. 2 read with Table 2.

4.1.4 *Cast-in Handles*

Handles of denominations of 50 kg down to and including 5 kg shall be provided with cast-in handles made of mild steel, which may conform to steel Designation E 170 of IS 15911.

4.1.5 *Nesting of Weights*

Weights of denominations of 2 kg down to and including 50 g shall nest with each other.

4.1.6 *Loading Holes*

Weights of denominations of 50 kg down to and including 5 kg with cast-in handles (*see* Fig. 1) shall have one rectangular loading hole on the under surface, tapering outwards along the width. While nesting, weights (*see* Fig. 2) of denominations of 2 kg down to and including 50 g shall have one round loading hole tapering outwards in the centre of the underside.

4.1.7 *Permissible Errors*

The errors in excess permissible for adjusted new weights shall not exceed the following limits:

Denominations	**Permissible Errors in Excess***
50 kg	8000 mg
20 kg	3000 mg
10 kg	1600 mg
5 kg	800 mg
2 kg	300 mg
1 kg	160 mg
500 g	80 mg
200 g	30 mg
100 g	16 mg
50 g	10 mg

* Equivalent to Class M_2 of OIML 111-1

4.2 Brass and Bronze Weights

4.2.1 *Denominations*

The denominations shall be as given in **3.1.1.**

4.2.2 *Materials*

The weights shall be made of cast brass or cast bronze or pressed or turned from brass rods. The cast brass and brass rods may preferably conform to Designation LCB 2 of IS 292 and IS 319. Cast bronze may preferably conform to IS 306.

4.2.3 *Shapes and Dimensions of Weights*

4.2.3.1 Weights of denominations of 10 kg down to and including 1 g shall be cylindrical in shape, with a knob. Shapes and dimensions shall conform to Fig. 3 read with Table 3 and Table 4 respectively. Bullion weights of 10 kg down to and including 200 g shall be marked on the knob with the words 'Bullion' and 'बुलियन' within a 'diamond' and weights of 100 g down to and including 1 g shall be marked on the body with only a 'diamond' as shown in Fig. 4.

4.2.3.2 Weights of denominations 1 kg down to and including 1 g shall be flat cylindrical in shape (without a knob) and shall nest with each other. Shapes and dimensions shall conform to Fig. 4 read with Table 5. Weights of 1 kg down to and including 20 g shall be marked with the words 'Bullion' and 'बुलियन' within a 'diamond' as shown in Fig. 4 and weights of 10 g and below down to and including 1 g shall be marked with only a 'diamond'.

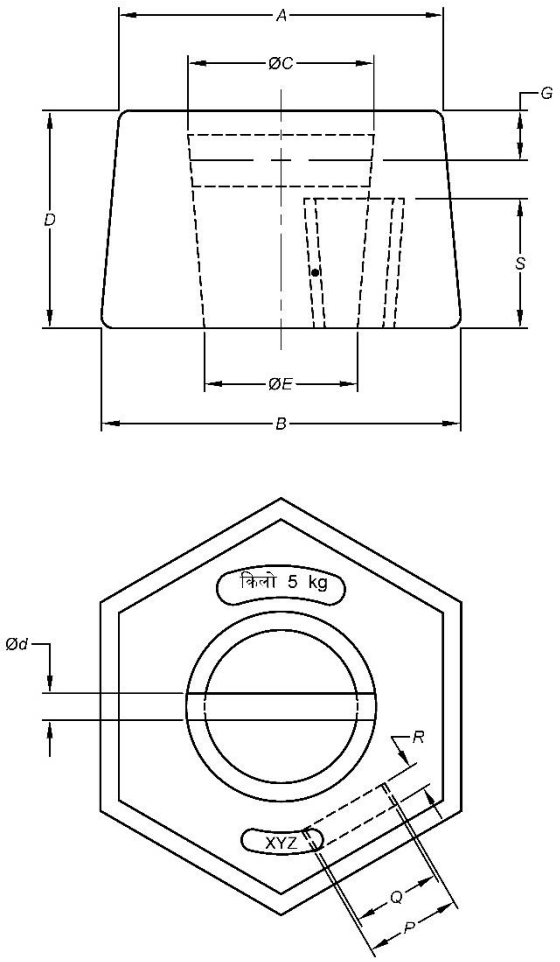


FIG. 1 CAST IRON WEIGHT WITH CAST-IN HANDLE

Table 1 Dimensions for Cast Iron Weights with Cast-in Handle
(*Clause* 4.1.3, and *Fig.* 1)

All dimensions are in millimetres.

SI. No.	Denominations kg	*A*	*B*	*C*	*D*	*E*	*G*	*P*	*Q*	*R*	*S*	*d*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
i)	50	236	253	134	170	100	27	58	48	24	102	32
ii)	20	188	200	112	113	90	21	44	38	19	66	22
iii)	10	152	161	92	88	74	18	36	30	15	54	19
iv)	5	125	132	75	65	62	15	29	25	12	40	16

NOTE — Tolerance on all dimensions shall be ± 5 percent.

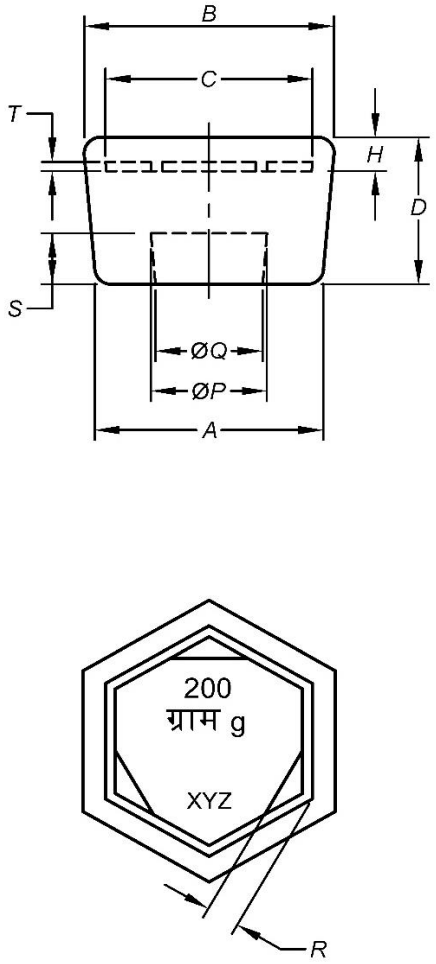


FIG. 2 CAST IRON OR FORGED MILD STEEL WEIGHT

Table 2 Dimensions for Cast Iron Weight or Forged Mild Steel Weights
(*Clause* 4.1.3, and *Fig.* 2)

All dimensions are in millimetres.

SI. No.	**Denominations**	***A***	***B***	***C***	***D***	***H***	***P***	***Q***	***R***	***S***	***T***
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
i)	2 kg	94	101	78	41	10	34	30	9	18	4
ii)	1 kg	73	79	62	34	8	32	28	8	16	4
iii)	500 g	57	62	47	27	6	23	20	6	13	3
iv)	200 g	42	48	38	21	6	22	20	4	9	3
v)	100 g	33	38	31	17	5	18	16	3	7	2.5
vi)	50 g	27	31	24	12	3	16	14	3	5	2

NOTE — Tolerance on dimensions:

a) For weights above 1 kg, ± 5 percent.

b) For weights 1 kg and below, ± 10 percent.

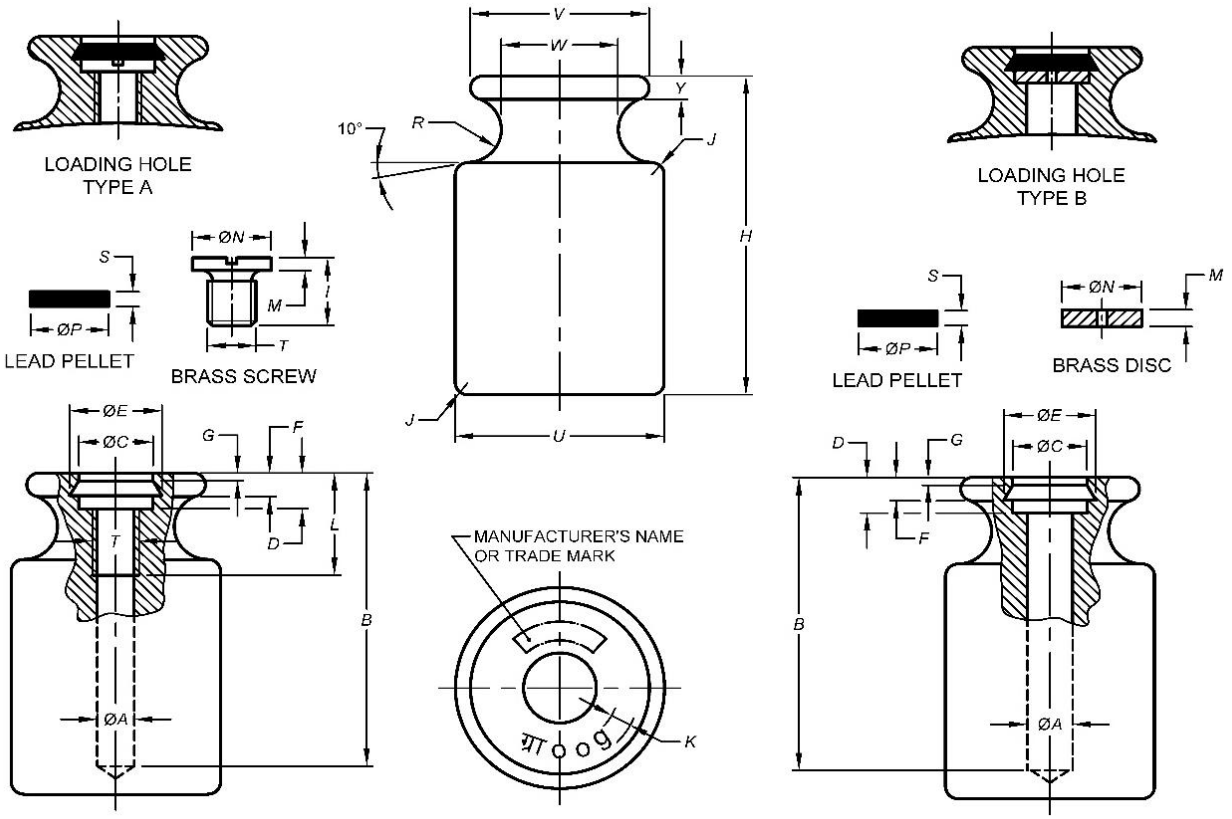


FIG. 3 CYLINDRICAL, KNOB TYPE WEIGHTS

Table 3 Dimensions for Cylindrical Bullion Weights-with Knob
(*Clause* 4.2.3.1, and *Fig*. 3)

All dimensions are in millimetres.

SI. No.	Denominations	*U*	*V*	*W*	*H*	*Y*	*R*	*J*	*K*	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
i)	10 kg	100	90	58		17	15	3	10	
ii)	5 kg	80	72	46		13	12	2	10	
iii)	2 kg	60	54	36		10	9	2	5	
iv)	1 kg	48	43	27		8	7	2	5	
v)	500 g	38	34	22		6	5.5	1.5	3.2	
vi)	200 g	28	25	16	According to material	4.5	4	1.5	3.2	
vii)	100 g	22	20	13		4	3.5	1	2	
viii)	50 g	18	16	10		3	2.5	1	2	
ix)	20 g	13	11.5	7.5		2	1.8	0.5	1.5	
x)	10 g	10	9	6		1.6	1.5	0.5	1	Without loading hole
xi)	5 g	8	7	4.5		1.4	1.25	0.5	1	
xii)	2 g	6	5.5	3		1	0.9	0.5	1	
xiii)	1 g	6	5.5	3		1	0.9	0.5	1	

NOTE — Tolerance on dimensions:

a) For weights above 1 kg, ±5 percent.

b) For weights 1 kg and below, ±10 percent.

Table 4 Cylindrical Knob Type Weights — Dimensions for Landing Hole Varieties I and II

(*Clause* 4.2.3.1, and *Fig*. 3)

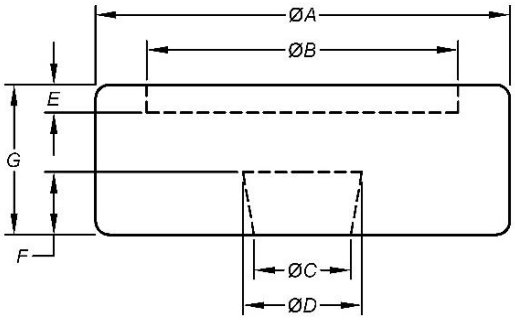
All dimensions are in millimetres.

Sl. No.	**Denominations**	***A***	***B***	***C***	***D***	***E***	***F***	***G***	***L***	***T***	***I***	***M***	***N***	***P***	***S***
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
i)	20 g	3	18	5.5	2.5	6.5	1.5	1	9	M4 × 0.5	5	1	5	5	1
ii)	50 g	4.5	25	7.5	3.5	9	2	1	10	M6 × 0.5	5	1.5	7	7	1.5
iii)	100 g	4.5	30	7.5	3.5	9	2	1.5	10	M6 × 0.5	5	1.5	7	7	1.5
iv)	200 g	7	40	10.5	4.5	12	2.5	1.5	15	M8 × 1	8	2	10	10	2
v)	500 g	7	50	10.5	4.5	12	2.5	2.5	15	M8 × 1	8	2	10	10	2
vi)	1 kg	12	65	18.5	7	20	4	2.5	20	M14 × 1.5	13	3	18	18	3
vii)	2 kg	12	80	18.5	7	20	4	2.5	20	M14 × 1.5	13	3	18	18	3
viii)	5 kg	18	120	24.5	8	26.5	4	2.5	35	M20 × 1.5	18	4	24	24	3
ix)	10 kg	18	160	24.5	8	26.5	4	2.5	35	M20 × 1.5	18	4	24	24	3

NOTE — Tolerance on dimensions:

a) For weights above 1 kg, ± 5 percent.

b) For weights 1 kg and below, ± 10 percent.



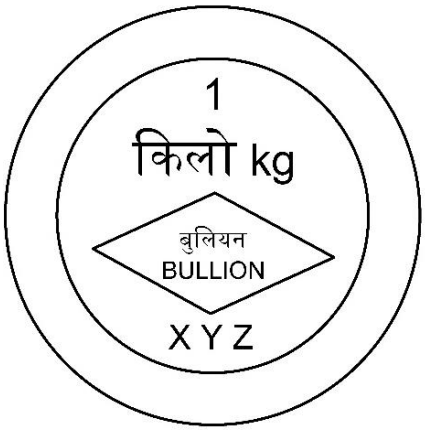


FIG.4 FLAT CYLINDRICAL BULLION WEIGHT

Table 5 Dimensions for Flat Cylindrical Bullion Weights
(*Clause* 4.2.3.2, and *Fig.* 4)

All dimensions are in millimetres.

Sl. No.	**Denominations**	***A***	***B***	***C***	***D***	***E***	***F***	***G***
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
i)	1 kg	80	61.5	20	23	4.0	12	26.6
ii)	500 g	61	48.5	16	19	2.5	10	22.5
iii)	200 g	48	37.5	14	16	2.0	7	14.8
iv)	100 g	37	28.5	12	14	2.0	6	12.7
v)	50 g	28	21.5	10	11	1.5	5	11.0
vi)	20 g	21	16.5	9	10	1.5	3	8.4
vii)	10 g	16	12.5	-	-	1.5	-	6.9
viii)	5 g	12	9.5	-	-	1.0	-	5.9
ix)	2 g	9	7.0	-	-	1.0	-	4.4
x)	1 g	6.5	-	-	-	-	-	3.6

NOTE— Tolerance on all dimensions, ± 10 percent.

4.2.4 *Loading Hole*

4.2.4.1 Weights of denominations 10 g to 1 g, both inclusive, shall be solid, integral weights without a loading hole.

4.2.4.2 Weights of denominations 10 kg to 20 g, both inclusive, shall be solid, integral weights without a loading hole.

4.2.4.3 The loading hole of cylindrical knob type shall be cylindrical and pass through the axis of the weight open out on the upper surface of the knob and have wider diameter at its upper end as shown in Fig. 3.

4.2.4.4 The loading hole shall be closed either by means of a threaded brass plug or a flat brass disc (*see* Fig. 3).

NOTES

1 The thread used shall be that commonly known as 'ISO' metric.
2 Threaded plug shall have a slot for adjusting it by means of a screw driver.
3 The flat disc shall be provided with a suitable hole in the centre to facilitate handling.

4.2.4.5 The plug or the flat disc shall be closed by means of lead pellet pressed firmly into the circular groove in the wider part of the loading hole.

4.2.4.6 Weights without a loading hole shall be adjusted by matching or grinding.

4.2.4.7 Weights with loading hole shall be adjusted with heavy metallic materials such as lead shots.

4.2.4.8 In the case of new weights about two thirds of the depth of the loading hole shall remain empty after adjustment.

4.2.5 *Permissible Errors*

The errors in excess permissible for adjusted new weights shall not exceed the following limits:

Denominations	Permissible Errors in Excess	
	Other than Bullion Weights mg[1)]	Bullion Weights mg[2)]
(1)	(2)	(3)
10 kg	1 600	500
5 kg	800	250
2 kg	300	100
1 kg	160	50
500 g	80	25
200 g	30	10
100 g	16	5.0
50 g	10	3.0
20 g	8.0	2.5
10 g	6.0	2.0
5 g	5.0	1.6
2 g	4.0	1.2
1 g	3.0	1.0

[1)] Equivalent to Class M_2 of OIML 111-1

[2)] Equivalent to Class M_1 of OIML 111-1

4.3 Sheet Metal Weights

4.3.1 *Denominations*

Denominations, shall be as given in **3.1.2**.

4.3.2 *Materials*

Sheet metal weights shall be made of stainless steel, aluminium, brass or nickel-silver sheets. The aluminium and brass weights may preferably conform to designation 64430 condition O of IS 737 and alloy designation CuZn40 of IS 410 respectively.

4.3.2.1 *Nickel silver steel*

Nickel silver sheet should preferably have the following composition:

Constituent	**Percent by Weight**
Copper	63.0 to 66.5
Nickel	17.5 to 19.5
Zinc	Remainder

4.3.2.2 *Stainless steel sheet*

Stainless steel sheet may preferably conform to designation X07Cr18Ni9 of IS 1570 (Part 5).

4.3.3 *Shapes and Dimensions*

4.3.3.1 *Other than bullion weights*

After bending along one of the sides (*see* Fig. 5) the weights shall have the dimensions given in Table 6 and the following shapes:

Denomination mg	Shape
500, 50, 5	Hexagon
200, 20, 2	Square
100, 10, 1	Triangle

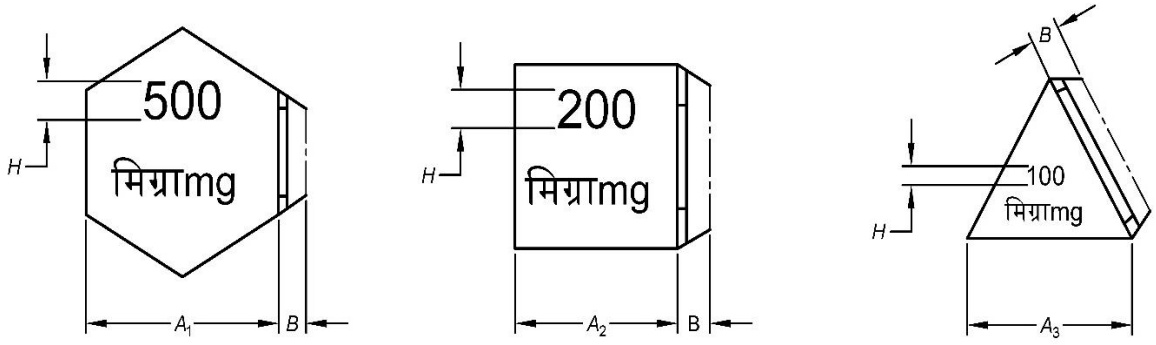


FIG.5 SHEET METAL WEIGHTS

Table 6 Dimensions for Sheet Metal Weights
(*Clause* 4.3.3.1, and *Fig*. 5)

All dimensions are in millimetres.

SI. No.	Denomination	A_1	A_2	A_3	B	H
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	500 mg	14.0	-	-	2.0	3.0
ii)	200 mg	-	12.0	-	2.0	3.0
iii)	100 mg	-	-	12.0	2.0	2.5
iv)	50 mg	8.0	-	-	1.5	2.5
v)	20 mg	-	7.0	-	1.5	2.5
vi)	10 mg	-	-	7.0	1.5	2.5
vii)	5 mg	4.5	-	-	1.0	2.0
viii)	2 mg	-	4.0	-	1.0	2.0
ix)	1 mg	-	-	4.0	1.0	2.0

NOTE— Tolerance on all dimensions ± 10 percent.

4.3.3.2 *Bullion weights*

When intended for use in the bullion trade sheet metal weights shall, after bending, have circular shape; their diameters shall be as given in Fig. 6 read with Table 7.

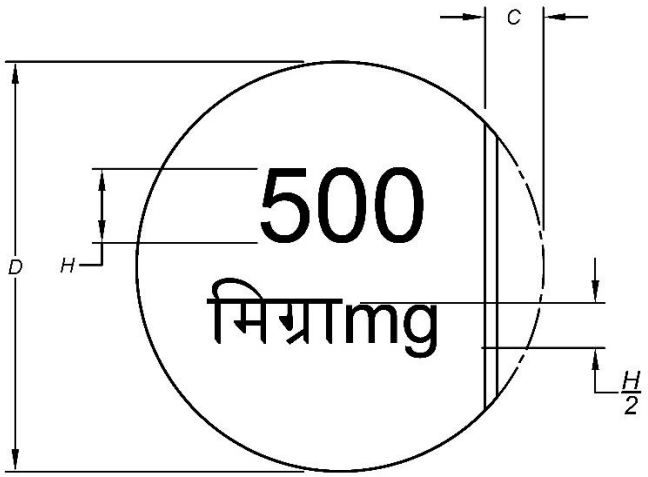


FIG. 6 SHEET METAL BULLION WEIGHT

Table 7 Dimensions for Sheet Metal Weights (Bullion)
(*Clause* 4.3.3.2, and *Fig*. 6)

All dimensions are in millimetres.

SI. No.	Denomination mg	D	C	H
(1)	(2)	(3)	(4)	(5)
i)	500	15	2.0	3.0
ii)	200	13	2.0	3.0
iii)	100	11	2.0	2.5
iv)	50	9	1.5	2.5
v)	20	8	1.5	2.5
vi)	10	7	1.5	2.5
vii)	5	6	1.0	2.0
viii)	2	5	1.0	2.0
ix)	1	4	1.0	2.0

NOTE — Tolerance on all dimensions, ± 10 percent.

4.3.4 *Permissible Errors*

The errors in excess permissible for new weights shall not exceed the following limits:

Denomination	Permissible Errors in Excess	
mg	Other than Bullion Weights mg	Bullion Weights mg[2)]
500	2.5[1)]	0.8
200	2.0[1)]	0.6

100	1.6[1)]	0.5
50	1.2	0.4
20	1.0	0.3
10	0.8	0.25
5	0.6	0.20
2	0.6	0.20
1	0.6	0.20

[1)] Equivalent to Class M_2 of OIML 111-1

[2)] Equivalent to Class M_1 of OIML 111-1

5 MANUFACTURE AND FINISH

5.1 General

When the weights are cast, the castings shall be reasonably smooth and free from dross, pits, and blowholes and other defects. When the weights are made by machining or forging, the surface shall be reasonably smooth. Sheet metal weights shall be clearly sheared and shall be free from burrs. Cast iron and forged weights shall be coated with a thin film of suitable black paint or varnish.

5.2 The raised marking on weights shall be clean and legible. The stamped markings on sheet metal weights shall be legible and deep enough to ensure indelibility over a long period, but not so deep as to crack the sheet (*see* also 6).

5.3 When lead is used in adjusting weights, it shall be so fitted as to ensure that it does not dislodge itself under normal conditions of use (*see also* 6).

5.4 The handles of the weights shall be rigidly fixed.

6 MARKING

6.1 Every weight except weights of 20 g and lower denominations shall have the manufacturer's name and or trade-mark indelibly cast or stamped on it.

6.2 The denominations shall be indicated in an indelible manner, with the abbreviations 'kg' and 'किलो' to indicate kilogram, 'g' and 'ग्राम' to indicate gram, and 'mg' and 'मिग्राम' to indicate milligram. The size of numerals and letters (letters need not be stamped on weights 50 mg and below and on bullion weights with knobs of denominations 5 g and below) indicating denominations of weights shall be at least twice the size of letters indicating the manufacturer's name or trade-mark. The numerals used in the denominations shall be indicated in the international form of Indian numerals.

6.3 The smallest weight which can be stamped fully are the 10 g cylindrical knob type weights and 2 g flat cylindrical bullion weights. All weights from 10 g cylindrical knob type and 2 g flat cylindrical and above, shall be stamped with all 3 stamps. Weights of 20 mg shall be stamped with one stamp only, that is, the date stamp. Weights of 10 mg and below shall not be stamped at all. If they are contained in a box, the box shall be stamped and certified. If there is no box, the weights shall be authenticated by a certificate of verification.

NOTE — Abbreviation 'किलो' or 'किग्रा' may be indicated in the regional script.

6.4 BIS Certification Marking

The product may also be marked with the Standard Mark. If it is not possible to put the Standard Mark on the product then it may be marked on packing or packing box in which the product is packed.

6.4.1 The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the standard mark.

7 ADJUSTMENTS

The weights provided with loading holes shall be adjusted by pouring the required weighed quantity of molten lead into the loading hole and pressing the lead firmly. The approximate distance of the lead, from the surface shall be not less than 20 percent of the minimum thickness of the weight when new.

ANNEX A

(*Foreword*)

COMMITTEE COMPOSITION

Weights and Measures Sectional Committee, PGD 26

Organization	*Representative(s)*
Bhabha Atomic Research Centre, Mumbai	DR D. K. ASWAL (***Chairperson***)
Accurate Electronics, Coimbatore	SHRI R. SARAVANAN
Avery India Limited, Ballabhgarh	SHRI VISHAL SHAKHER SHRI MANISH RAKHEJA (*Alternate*)
Bharat Petroleum Corporation Limited, Mumbai	SHRI C.V. RAVIKUMAR SHRI JOJY SEBASTIAN (*Alternate*)
Capital Innotech Private Limited, Udaipur	SHRI AKHIL TAYAL SHRI UJJWAL BANSAL (*Alternate I*) SHRI SUNDEEP RASTOGI (*Alternate II*)
Chi Energie Private Limited, Gurugram	SHRI AJAY KHANDELWAL
Consumer Education and Research Centre, Ahmedabad	SHRI ANINDITA MEHTA
Controller of Legal Metrology, Department of Weights and Measures, Ministry of Defence, Hyderabad	SHRI AKHIL TAYAL SHRI UJJWAL BANSAL (*Alternate*)
Controller of Legal Metrology (Weights and Measures) Government of Andhra Pradesh	SHRI P. SUDHAKAR SHRI T. SHALEM RAJU (*Alternate*)
CSIR - National Physical Laboratory, New Delhi	DR. NIDHI SINGH DR. SHIV KUMAR JAISWAL (*Alternate I*) SHRI GAUTAM MANDAL (*Alternate II*)
Directorate General of Quality Assurance, New Delhi	SHRI P. P. MAHESHKAR
Fluid Control Research Institute, Palakkad	SHRI C. B. SURESH SHRI P. UNNIKRISHNAN (*Alternate*)
GAIL (India) Limited, New Delhi	SHRI PANKAJ GUPTA
Genus Power Infrastructures Limited, Jaipur	SHRI UPENDRA SHARMA SHRI PRAMOD MOTILALJI KARWA (*Alternate I*) SHRI ARJUN LAL DOODI (*Alternate II*)
Gujarat Gas Company Limited, Ahmedabad	SHRI UPENDRA SHARMA SHRI KUNAL BHADWAR (*Alternate I*) SHRI SAMIR ASHTIKAR (*Alternate II*)
Hyderabad Tulaman Limited, Hyderabad	SHRI NARNE PRABHAKAR SHRI AJAY NARNE (*Alternate*)
Mahanagar Gas Limited, Mumbai	SHRI BHATTIPROLU RAM SUDHEER SMT NEHA KHARYA (*Alternate I*) SHRI PRATAP AYAREKAR (*Alternate II*)
Ministry of Consumer Affairs, Food and Public Distribution, Department of Consumer Affairs, New Delhi	SHRI ASHUTOSH AGARWAL SHRI M. K. NAIK (*Alternate I*) SHRI DINESH SAGAR (*Alternate II*)
Natural Gas Society, Noida	SHRI VIPIN CHANDRA CHITTODA SHRI D. V. SHASTRY (*Alternate*)
Neogi Technologies and Research Private Limited, Kolkata	SHRI SAMEER KUMAR NEOGI
Oil and Natural Gas Corporation Limited, New Delhi	SHRI S. M. AGARWAL SHRI NIRAJ KUMAR (*Alternate*)

Pietro Fiorentini DB India Private Limited, Pune	SHRI SATISH KADIRVELU SHRI KAPIL CHATURVEDI (*Alternate*)
Raychem RPG Private Limited, Chennai	SHRI KAUSHIK PAITANDI SHRI AYUSH JAIN (*Alternate*)
Satruc Appliances Private Limited, Hyderabad	SHRI DINESH BHUTADA
Secure Meters Limited, Gurugram	SHRI RAJNEESH AMETA SHRI PATRANJAN BHATTACHARYA (*Alternate I*) SHRI MUKESH HINGAR (*Alternate II*)
Yadav Measurements Private Limited, Udaipur	SHRI BALMUKUND M. VYAS SHRI SUNIL HARKAWAT (*Alternate I*) SHRI GANESH BADOLA (*Alternate II*)
In Personal Capacity	SHRI K. G. SIVAPRAKASH
In Personal Capacity	SHRI SANJAY YADAV
BIS Directorate General	SHRI R. R. SINGH, Scientist 'F'/ SENIOR DIRECTOR AND HEAD (PRODUCTION AND GENERAL ENGINEERING), [REPRESENTING DIRECTOR GENERAL (*Ex-officio*)]

Member Secretary
SHRI KUNDAN GIRI
SCIENTIST 'D'/JOINT DIRECTOR
(PRODUCTION AND GENERAL ENGINEERING), BIS