BRITISH STANDARD

BS 876:1995

Incorporating Amendments Nos. 1 and 2

Specification for

Hand hammers

ICS 25.140.30

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee MTE/15, Hand tools, upon which the following bodies were represented:

British Coal Corporation
British Telecommunications plc
Consumer Policy Committee of BSI
Federation of British Hand Tool Manufacturers
Handle Manufacturers' Association
Institute of Carpenters
Institute of Trading Standards Administration
Ministry of Defence

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

Birmingham City Council
British Engineers Cutting Tools Association
Department of Trade and Industry
Home Office
London Borough of Barking and Dagenham

This British Standard, having been prepared under the direction of the Engineering Sector Board, was published under the authority of the Standards Board and comes into effect on
15 September 1996

© BSI 10-1999

First published October 1939
Second edition December 1949
Third edition September 1957
Fourth edition November 1964
Fifth edition October 1979
Sixth edition March 1981
Seventh edition September 1995

The following BSI references relate to the work on this standard:
Committee reference MTE/15
Draft for comment 93/702605 DC

ISBN 0 580 24265 X

Amendments issued since publication

Amd. No.	Date	Comments
9199	December 1996	
10693	October 1999	Indicated by a sideline

标准分享网 www.bzfxw.com 免费下载

Contents

© BSI 10-1999

© BSI 10-1999

标准分享网 www.bzfxw.com 免费下载

Foreword

This British Standard has been prepared by Technical Committee MTE/15, Hand tools. It supersedes BS 876:1981 which is now withdrawn.

The current revision has been prepared in order to keep abreast of improvements in manufacture and design, to seek improvements in the standards of hammers and to ensure that current types in demand are included.

The British Standards Institution has always appreciated the element of risk attached to the use of striking tools, and in this respect it has continued to work to establish a standard of manufacture in order to ensure that safe tools are available to the user.

However, it is strongly recommended that users should in their own interest ensure that these tools are used only for the purposes for which they are intended.

Particular emphasis is placed on the need to observe caution when striking objects that may have a hardness near to or above that of the hammer head, and to avoid striking glancing blows. In both instances the user may be hit by fragments from the hammer or the object being struck.

The importance of maintaining hammers in a safe condition cannot be overstressed and the user should ensure that striking-faces comply with the requirements of this specification and that handles remain firmly fixed and in a satisfactory condition.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 34, an inside back cover and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

Sidelining in this document indicates the most recent changes by amendment.

© BSI 10-1999

blank

标准分享网 www.bzfxw.com 免费下载

1 Scope

This British Standard specifies dimensions, forms and materials for hammers of the following types, together with the dimensions of the handles where appropriate:

— joiners' (or Warrington) hammers;
— engineers' ball pein-hammers;
— engineers' cross-pein hammers;
— boiler-scaling hammers;
— double-face sledgehammers;
— straight-peined sledgehammers;
— clubhammers;
— railway track keyinghammers;
— cross and ball-pein pinhammers;
— welders' chippinghammers;
— adze-eye clawhammers;
— brickhammers;
— steel-shafted clawhammers.

Tests for hammers are also included. Guidance on safe use is given in Annex A.

2 Normative references

This British Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate points in the text and the cited publications are listed on the inside back cover. For dated references, only the edition cited applies; any subsequent amendments to or revisions of the cited publication apply to this British Standard only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

3 Material

All hammer heads shall be manufactured from fully killed forging quality steel, within the following basic analysis range (see Table 1):

Table 1 — Basic analysis range

	C	Mn	Si	P	S
Min.	0.50	0.50	0.10	—	—
Max.	0.60	0.90	0.40	0.050	0.050

The steel shall have a controlled grain size within the range 5 to 8 (McQuaid Ehn).

NOTE 1 Steels conforming to 060 A52, 080 A52, 060 A57, 080 A57, or 070 M55 as specified in BS 970-1:1988 are generally suitable.

NOTE 2 It is recommended that, for heads of mass over 1.8 kg the material specification should include a chromium content of 0.20 % (*m*/*m*) to 0.30 % (*m*/*m*).

4 Forms and dimensions

The forms of the hammer heads shall be as shown in Figure 3 to Figure 19. The eye shall be centrally located in the width of the head, its F axis (see Figure 1) shall be within ± 3° (twist) and its J axis at an angle of 90° ± 1° to both axes of the head.

The eye for wooden-handled hammers shall be drifted from one or both sides as illustrated in Figure 1, to leave a central waist. The sizes shall be as given in Table 3 to Table 34. The waist of oval eyes shall be approximately proportional to dimensions *E* and *F*, as shown in Figure 1. The dimensions given for *E* and *F* shall, except where otherwise shown, be subject to a tolerance of ± 5 %.

NOTE Where handles made from materials other than wood are fitted by the manufacturer, the design and the dimensions of the eyes and the techniques employed in the fitting may be modified, provided that the assembly withstands the relevant tests.

5 Forgings

Hammer heads shall be cleanly forged or stamped. They shall be well shaped and free from flaws and seams. All fins and flashes shall be trimmed to surface level. Forgings shall be manufactured in accordance with BS 4114:1967.

6 Heat treatment and hardness

6.1 All hammer heads shall be normalized and the striking-faces shall be dressed to remove decarburization prior to hardening.

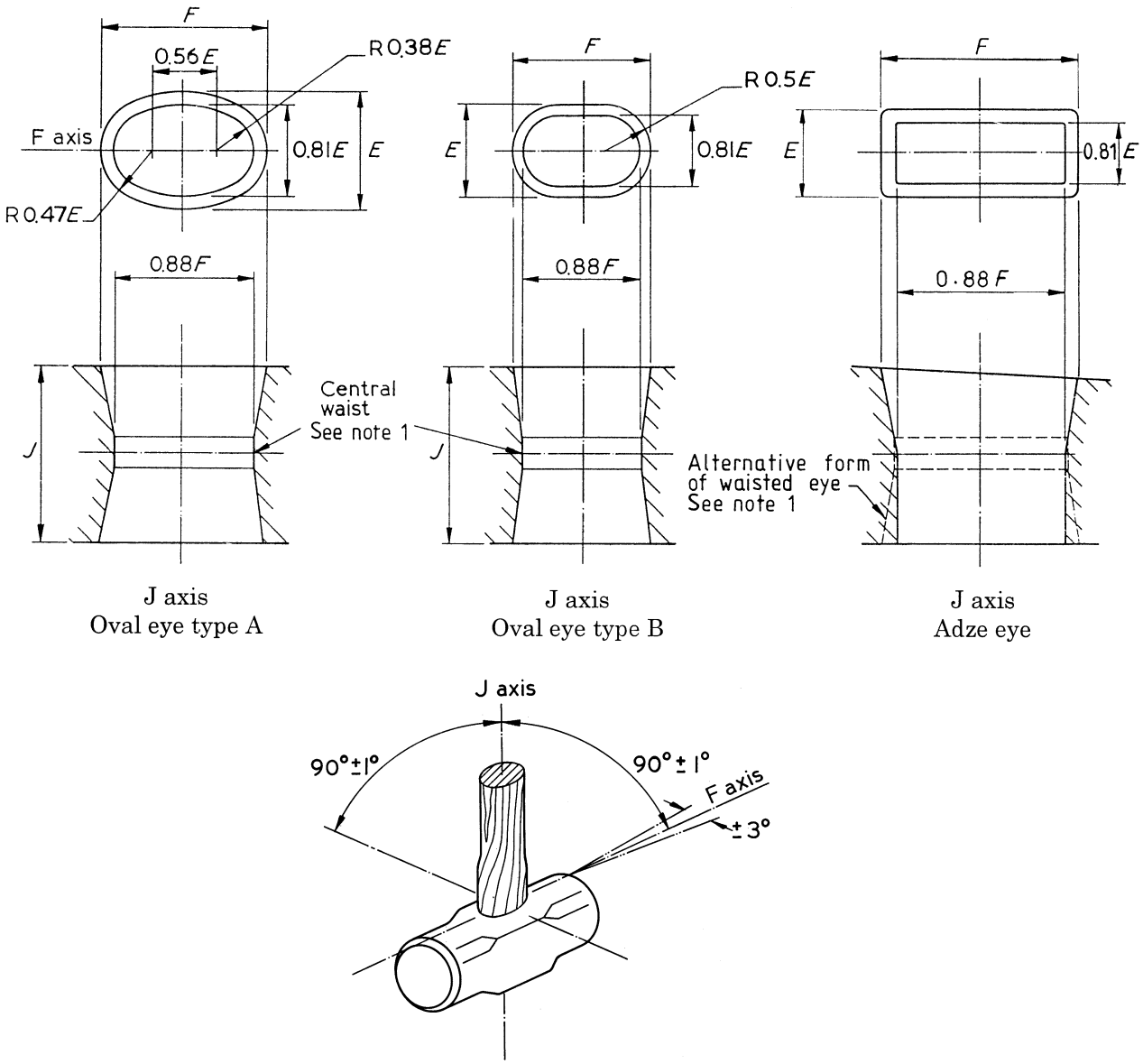
6.2 After normalizing the heads shall be hardened on the striking-faces and peins in order to achieve a martensitic structure.

After hardening the heads shall be tempered to reduce the "as hardened" hardness by a minimum of 4 points HRC. The hardness after tempering shall be not less than 50 HRC and not more than 58 HRC.

6.3 The hardened zone of the striking-face, (except for ball pein-hammer ball-ends) when measured from any point on the face shall extend to a minimum depth of 3 mm, at which depth the hardness after tempering shall be not less than 46 HRC and be not more than that of the surface.

In the case of ball pein-hammer ball-ends, the 3 mm depth of hardness shall apply only at the centre of the ball along the centre line X-X of Figure 5, tapering towards the ball perimeter to avoid the hardened zone extending into the neck (see Figure 2).

© BSI 10-1999



NOTE The depth of the central waist should be a minimum of 0.125 *J* (12 %) and a maximum of 0.33 *J* (33 %).

Figure 1 — Forms and proportions of eyes for the fitting of a handle

© BSI 10-1999

标准分享网 www.bzfxw.com 免费下载

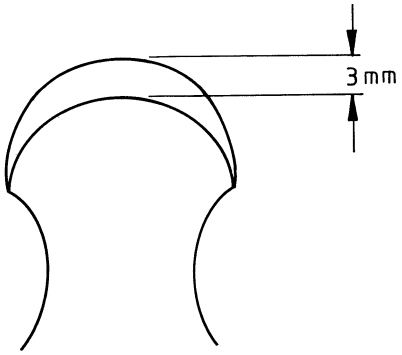


Figure 2 — Hardness pattern for the ball-end of a ball-pein hammer

6.4 The hardened zones shall not extend into a neck or, where there is no neck, to more than half-way to the near edge of the eye.

6.5 Claws shall be hardened and tempered to conform to **13.3**. The hardness shall diminish from the claw tip to the crotch and the hardened zone shall not reach nearer the eye than 12 mm.

6.6 Striking-points and edges shall be hardened and tempered to conform to **13.1.4**.

7 Finish

The hammer heads shall be free from material faults, i.e. hardening cracks, surface cracks and shrinkages. Striking-faces, peins and outer faces of the claws as appropriate, shall be smooth and have a bright finish.

NOTE The finish applied to the remainder of the head should be agreed between the purchaser and the supplier.

Striking-faces shall be convex with a maximum convexity of 250 mm radius through the central longitudinal axis.

The striking-face shall have a chamfer at an angle of approximately 45° all round the circumference. The width of chamfer shall be approximately 8 % of the diameter of the striking-face when measured across the chamfer as illustrated in Figure 3.

Clawhammers shall have a chisel-edge ground on the underside of the claw as illustrated in Figure 14.

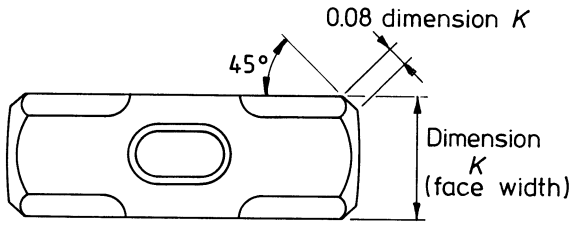


Figure 3 — Chamfers

8 Mass

The nominal mass of the hammer heads shall be as given in Table 2 to Table 34. All masses shall be subject to the tolerances given in Table 2.

Table 2 — Tolerances on mass (all hammers)

Mass of head M g	Tolerance on mass of head
Up to 200	$\pm 0.1M$
Over 200 to 1 000	$\pm (0.05M + 10)$
Over 1 000 to 2 000	$\pm (0.04M + 20)$
Over 2 000	$\pm (0.035M + 30)$

NOTE For example, for a 1 000 g hammer, the tolerance $= \pm (0.05M + 10)$ g
$= \pm (50 + 10)$ g
$= \pm 60$ g

9 Marking

Every hammer head shall be clearly and indelibly marked with the following:

a) the manufacturers' name, initials or trademark, for traceability purposes;

b) the nominal mass of the hammer head;

c) the number of this standard, i.e. BS 876:1995[1)].

In order to avoid stress concentration, all markings shall be applied to the unhardened part of the head.

Additionally, an appropriate durable mark or adhesive label, giving guidance on safe usage of the hammer (see Annex A) shall be affixed to the hammer handle.

[1)] Marking BS 876:1995 on or in relation to a product represents a manufacturer's claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is solely the claimant's responsibility. Such a declaration is not to be confused with third party certification of conformity, which may also be desirable.

10 Handles

10.1 General

When tested in accordance with **13.3** to **13.9** handles shall show no sign of flaws or defects and the hammer head shall remain firmly fixed to the handle.

10.2 Wooden handles

Where solid natural wooden handles are used, they shall be hickory or ash.

NOTE It is strongly recommended that, for added safety, hickory handles should be used for all clawhammers and hammers used for heavy duty.

Handles shall be graded in accordance with BS 3823:1990. All wooden handles shall have a chamfer at the heel.

10.3 Steel handles

Where steel handles are used, they shall be one of the following:

a) a forged or welded extension of the head;

b) a seamless or welded steel tube;

c) another suitable form;

and shall be securely fastened to the head in such a manner that they will not loosen under normal working conditions. There shall be no opening at the eye end of the handle tube when in position in the hammer head.

With the exception of welders' steel hammers, the butt end of steel handles shall have, securely fixed, a grip made of a suitable material that will suffer only minimal deterioration as a result of the action of oil and grease. The minimum length of such grips shall be 165 mm. Their section shall be similar to those specified for wooden handles.

10.4 Glass fibre reinforced plastics handles

Glass fibre reinforced plastics handles shall be moulded in thermosetting type plastics containing a minimum of 60 % glass fibre by mass. They shall be finely finished and well proportioned. Glass fibres shall be continuous, unidirectional and longitudinal. Handles shall be fixed to the head by a chemical adhesive or other means so that they will not loosen.

NOTE A grip may be fitted to the butt end of the shaft, similar to that specified for steel handle. Alternatively a sleeve may be fitted along the full length of the shaft.

11 Fitting and finish of handles

All handles shall be positively and securely fixed and shall be visually square to the head.

All handles shall be smoothly finished and wooden handles shall be lacquered, varnished, or smooth sanded.

Wooden handles shall fully fit the eye.

NOTE When handles of materials other than wood do not fully fit the eye, a ferrule, adaptor or similar device may be used to mask the gap between the handle and the eye opening.

If wedges are used as a means of fixing, either initially or for a replacement handle, the handle shall be wedged and cross-cleated so that the eye of the shaft is spread into the head in all directions. If wooden wedges are used, they shall be as hard as, or harder than, the handle material. Where wedges are used as the means of fixing, the material in the eye should remain clearly visible for any subsequent inspection.

NOTE It is important to understand that the conditions relating to wooden shafts apply at the point of manufacture. Due to the nature of the material and storage conditions (see Annex A), wooden shafts may deteriorate.

All handles shall have a smooth finish at the point where they join the head.

12 Dimensions of handles

The general dimensions of wooden handles shall be those given in Table 4, Table 6, Table 8, Table 10, Table 12, Table 14, Table 16, Table 18, Table 20, Table 23, Table 25, Table 27, Table 29, Table 31 and Table 33.

NOTE Although lengths are not specified for handles made of materials other than wood, such handles should still conform to **10.1**.

13 Tests

13.1 Hardness tests

13.1.1 *General*

Hardness tests shall be carried out in one of the following ways:

a) in accordance with BS 891, using a machine that has been verified in accordance with BS 891;

b) using an alternative method in conjunction with tables for comparison of hardness scales given in BS 860.

13.1.2 *Hardness of striking-faces and peins*

The striking faces and peins of every hammer shall be tested in accordance with **13.1.1**.

When tested in accordance with **13.1.1** the faces and peins of hammers shall conform to the hardness specified in **6.2**. The test shall be made approximately in the centre of the face.

13.1.3 *Claw hardness*

The hardness of claws shall be tested in accordance with **B.1**. Following this test, visual examination shall reveal no damage to the claw.

13.1.4 *Hardness of striking points and edges*

When tested in accordance with **B.2** the striking points and edges of the hammer head shall show no sign of flaw or defects and the head shall be firmly fixed to the handle.

© BSI 10-1999

标准分享网 www.bzfxw.com 免费下载

13.1.5 ***General hardness***

The hammer shall conform to the hardness requirements of clause **6**.

13.2 Crack test

All hammers shall be inspected for cracks and shall be free from deleterious defects when tested along each axis using magnetic particle flaw detection methods in accordance with BS 6072:1981. The current values used shall be for general engineering applications.

13.3 Soundness and assembly test

When tested in accordance with **B.2** all hammers shall show no sign of flaw or defects and the head shall be firmly fixed to the handle.

Following the test in **B.2**, hammers shall be crack tested in accordance with **13.2**.

13.4 Handle overstrike test

The hammer shall be tested in accordance with **B.3**.

Following the test in **B.3**, each sample hammer shall be tested in accordance with **B.2** after which it shall show no visual sign of flaw or defects and the head shall be firmly fixed to the handle.

13.5 Pull apart test

When tested in accordance with **B.4** the head/handle fitment shall not pull/push apart or loosen during the application or after the specified test load is reached.

Prior to testing, each sample hammer shall have been subjected to the tests described in **B.2** and shall show visual sign of flaw or defects and the head shall be firmly fixed to the handle.

13.6 Handle bending test

When tested in accordance with the test of **B.5**, glass fibre reinforced plastics or steel handles shall show no signs of defects.

13.7 Grip adhesion test

Handle grips shall be so fixed that, after the appropriate cure for any adhesive used, they shall withstand a torque load of 10 N·m. At the end of the test the grip shall remain firmly bonded to the handle.

13.8 Handle clearance test for clawhammers

Clawhammers shall be tested in accordance with **B.6**.

13.9 Nail extraction for clawhammers

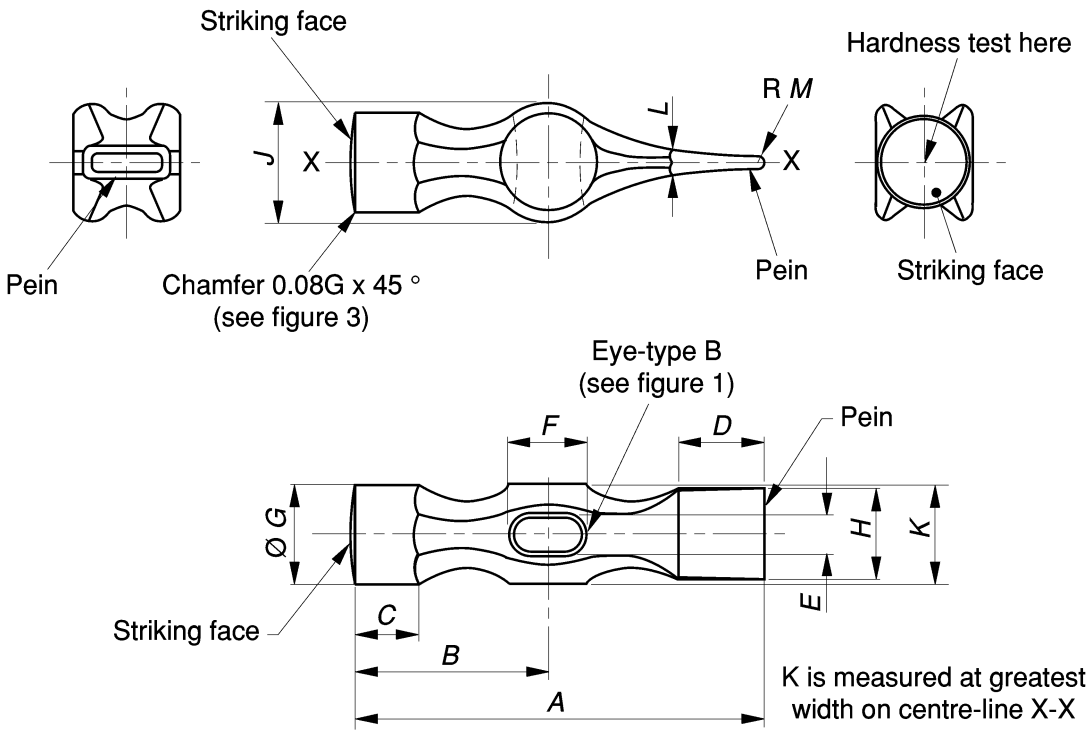
When tested in accordance with **B.7** the claw shall show no signs of wear or damage and the handle shall be undamaged.

Table 3 — Dimensions of heads for joiner's or Warrington hammers

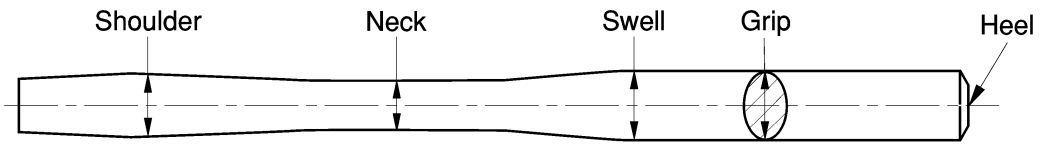
Nominal mass of head	Dimensions of head											
	A	*B*	*C*	*D*	*E* ±5 %	*F* ±5 %	*G*	*H*	*J*	*K* min.	*L*	*M*
g	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
170	97	44	16	19	13	19	21	19	24	22	7	4
225	105	51	19	19	13	19	22	21	25	25	8	4
285	114	54	19	22	16	24	25	22	29	27	9	4
340	121	57	19	22	16	24	25	24	32	29	10	4
395	121	57	22	25	19	29	27	24	32	30	10	4
455	124	57	22	27	19	29	29	27	35	30	10	4

NOTE Except for *E*, *F* and *K*, dimensions of head are mean nominal values calculated to give mass within the tolerances of clause **8**.

© BSI 10-1999



a) Head



b) Handle

Figure 4 — Joiner's or Warrington hammer

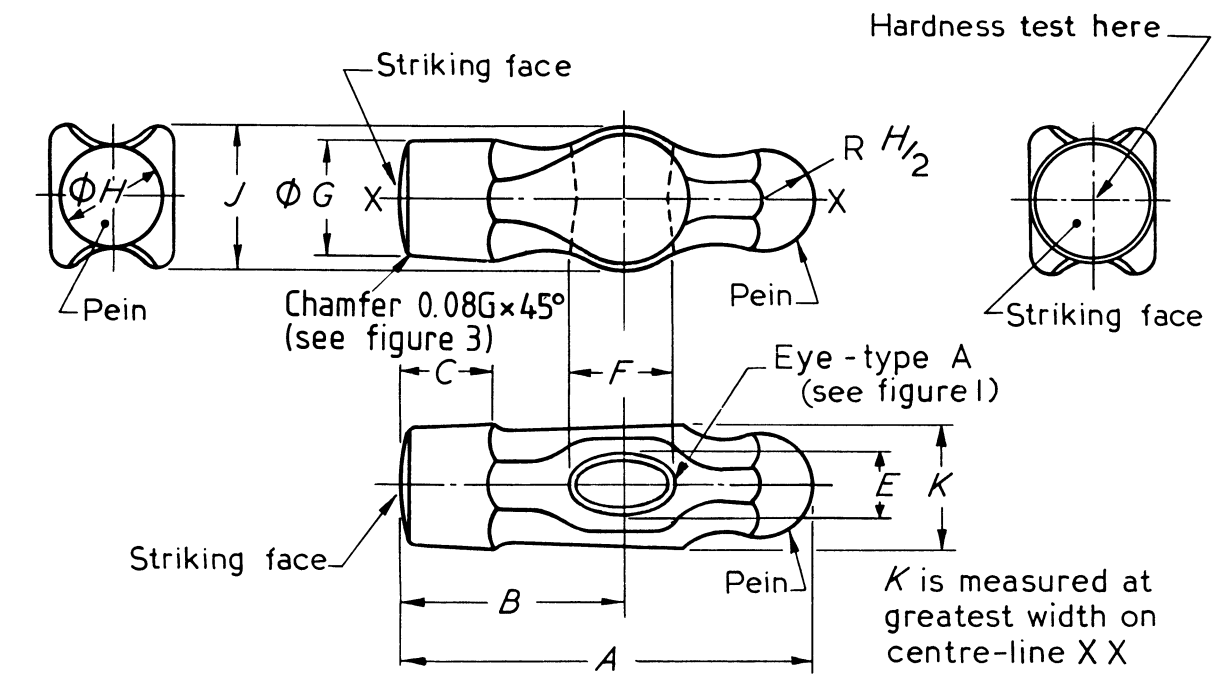
© BSI 10-1999

标准分享网 www.bzfxw.com 免费下载

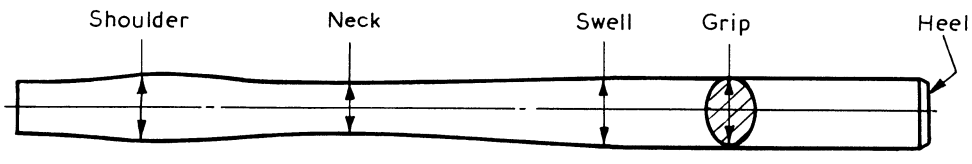
Table 4 — Dimensions of wooden handles for joiner's or Warrington hammers

Mass g	Length mm	F × E mm	Shoulder mm	Swell mm	Grip mm	Heel mm
170	275	19 × 13	22 × 16	26 × 20	23 × 17	26 × 20
225	275	19 × 13	22 × 16	26 × 20	23 × 17	26 × 20
285	300	24 × 16	27 × 19	30 × 24	27 × 21	30 × 24
340	300	24 × 16	27 × 19	30 × 24	27 × 21	30 × 24
395	325	29 × 19	32 × 22	32 × 25	29 × 22	32 × 25
455	325	29 × 19	32 × 22	32 × 25	29 × 22	32 × 25

NOTE 1 The minimum dimensions at the shoulder shall be 3 mm larger than the appropriate dimensions for *E* and *F*.
NOTE 2 The overall length shall apply after the fitting of the head and shall/should be to a tolerance of $^{+5}_{-15}$ mm.
NOTE 3 The grip dimensions shall apply approximately 60 mm from the heel.
NOTE 4 The dimensions of the heel and the swell shall be not less than those of the grip and shall be not more than 3 mm greater.
NOTE 5 The length from the outer end to the shoulder shall be equal to the maximum dimension for *J* according to the nominal mass of the hammer plus an amount sufficient to ensure that wedging is adequate and that the head does not reach to the shoulder.
NOTE 6 The *E* and *F* dimensions for the wooden handles shall be equal to the central waist dimensions of the head eye as specified in Figure 1.
NOTE 7 Unless specified otherwise all handle dimensions shall be subject to a tolerance of $^{+3}_{0}$ mm.



a) Head



b) Handle

Figure 5 — Engineer's ball-pein hammer

Table 5 — Dimensions of heads for engineer's ball-pein hammers

Nominal mass of head	Dimensions of head								
	A	*B*	*C*	*E* ±5 %	*F* ±5 %	*G*	*H*	*J*	*K* min.
g	mm	mm	mm	mm	mm	mm	mm	mm	mm
115	65	35	13	10	15	19	16	24	18
225	83	48	19	14	20	24	21	29	22
340	92	51	19	17	25	27	24	35	25
455	102	59	22	17	25	30	25	37	29
680	114	64	25	20	30	35	30	45	33
910	124	70	25	21	32	38	33	49	37
1 135	133	75	29	22	33	41	35	51	41
1 360	140	76	32	22	33	45	38	54	41

NOTE Except for *E*, *F* and *K*, dimensions of head are mean nominal values calculated to give mass within the tolerances of clause **8**.

Table 6 — Dimensions of wooden handles for engineer's ball-pein hammers

Mass	Length	F × E	Shoulder	Swell	Grip	Heel
g	mm	mm	mm	mm	mm	mm
115	275	15 × 10	18 × 13	25 × 19	22 × 16	25 × 19
225	300	20 × 14	23 × 17	28 × 22	25 × 19	28 × 22
340	325	25 × 17	28 × 20	32 × 25	29 × 22	32 × 25
455	350	25 × 17	28 × 20	32 × 25	29 × 22	32 × 25
680	375	30 × 20	33 × 23	35 × 27	32 × 24	35 × 27
910	400	32 × 21	35 × 24	38 × 28	35 × 25	38 × 28
1 135	425	33 × 22	36 × 25	41 × 32	38 × 29	41 × 32
1 360	425	33 × 22	36 × 25	41 × 32	38 × 29	41 × 32

NOTE 1 The minimum dimensions at the shoulder shall be 3 mm larger than the appropriate dimensions for *E* and *F*.

NOTE 2 The overall length shall apply after the fitting of the head and shall be to a tolerance of $^{+5}_{-15}$ mm up to 400 mm length and $^{+15}_{-15}$ mm above.

NOTE 3 The grip dimensions shall apply approximately 60 mm from the heel.

NOTE 4 The dimensions of the heel and the swell shall be not less than those of the grip and shall be not more than 3 mm greater.

NOTE 5 The length from the outer end to the shoulder shall be equal to the maximum dimension for *J* according to the nominal mass of the hammer plus an amount sufficient to ensure that wedging is adequate and that the head does not reach to the shoulder.

NOTE 6 The *E* and *F* dimensions for the wooden handles shall be equal to the central waist dimensions of the head eye as specified in Figure 1.

NOTE 7 Unless specified otherwise all handle dimensions shall be subject to a tolerance of $^{+3}_{0}$ mm.

© BSI 10-1999

标准分享网 www.bzfxw.com 免费下载

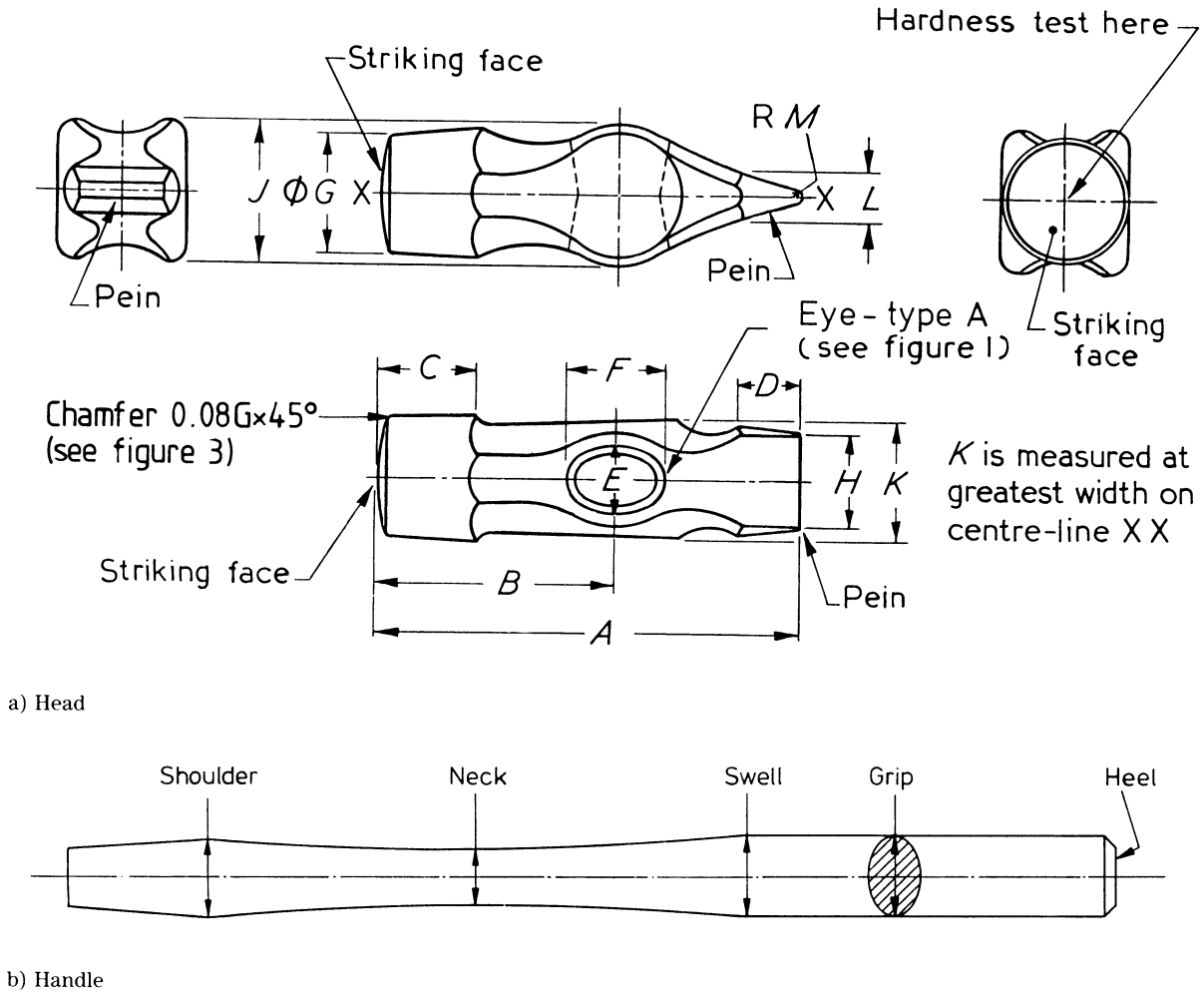


Figure 6 — Engineer's cross-pein hammer

Table 7 — Dimensions of heads for engineer's cross-pein hammers

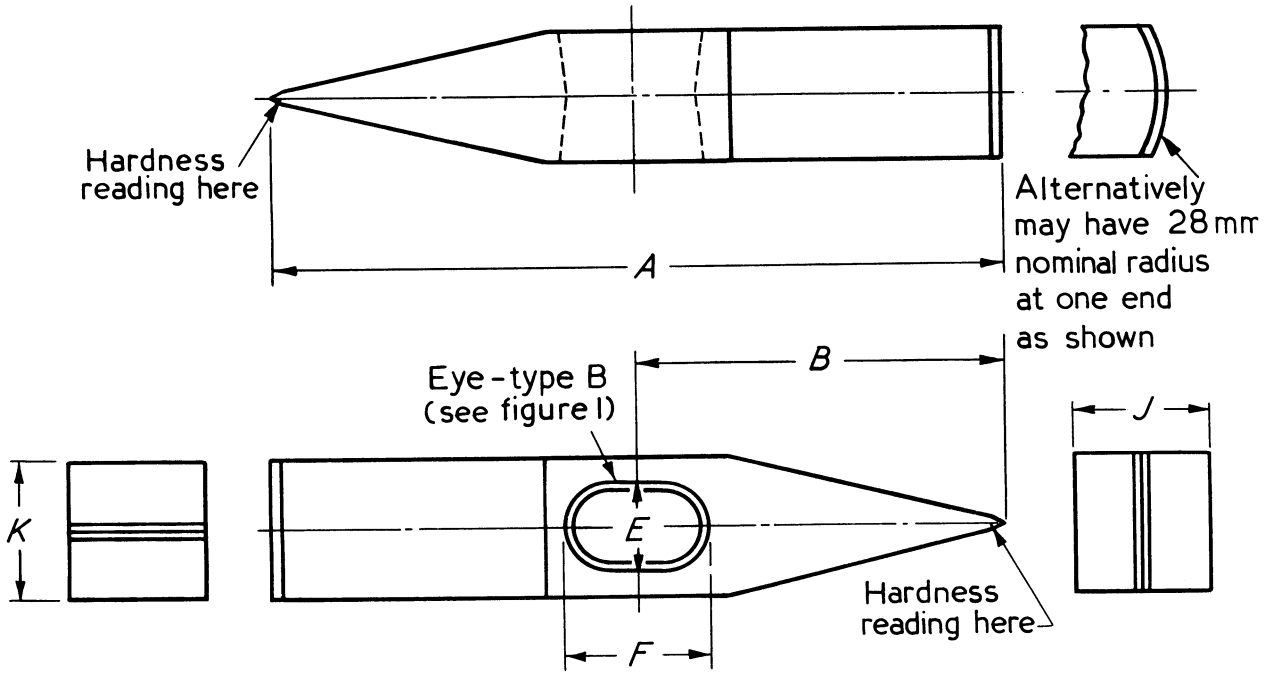
Nominal mass of head	Dimensions of head											
	A	*B*	*C*	*D*	*E* ±5 %	*F* ±5 %	*G*	*H*	*J*	*K* min.	*L*	*M*
g	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
225	86	48	19	13	14	20	24	21	29	22	10	2
455	105	59	22	19	17	25	30	27	37	29	13	3
680	118	64	25	19	20	30	35	32	45	33	16	4
910	127	70	25	22	21	32	38	35	49	37	16	4

NOTE Except for *E*, *F* and *K*, dimensions of head are mean nominal values calculated to give mass within the tolerances of clause **8**.

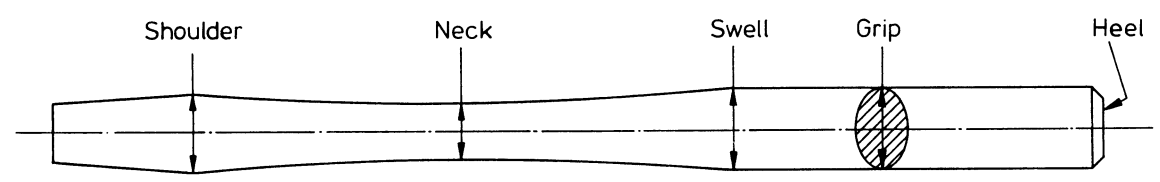
Table 8 — Dimensions of wooden handles for engineer's cross-pein hammers

Mass g	Length mm	F × E mm	Shoulder mm	Swell mm	Grip mm	Heel mm
225	300	20 × 14	23 × 17	28 × 22	25 × 19	28 × 22
455	350	25 × 17	28 × 20	32 × 25	29 × 22	32 × 25
680	375	30 × 20	33 × 23	35 × 27	32 × 24	35 × 27
910	400	32 × 21	35 × 24	38 × 28	35 × 25	38 × 28

NOTE 1 The minimum dimensions at the shoulder shall be 3 mm larger than the appropriate dimensions for *E* and *F*.
NOTE 2 The overall length shall apply after the fitting of the head and shall/should be to a tolerance of $^{+\ 5}_{-\ 15}$ mm.
NOTE 3 The grip dimensions shall apply approximately 60 mm from the heel.
NOTE 4 The dimensions of the heel and the swell shall be not less than those of the grip and shall be not more than 3 mm greater.
NOTE 5 The length from the outer end to the shoulder shall be equal to the maximum dimension for *J* according to the nominal mass of the hammer plus an amount sufficient to ensure that wedging is adequate and that the head does not reach to the shoulder.
NOTE 6 The *E* and *F* dimensions for the wooden handles shall be equal to the central waist dimensions of the head eye as specified in Figure 1.
NOTE 7 Unless specified otherwise all handle dimensions shall be subject to a tolerance of $^{+\ 3}_{0}$ mm.



a) Head



b) Handle

Figure 7 — Boiler-scaling hammer

© BSI 10-1999
标准分享网 www.bzfxw.com 免费下载

Table 9 — Dimensions of heads for boiler-scaling hammers

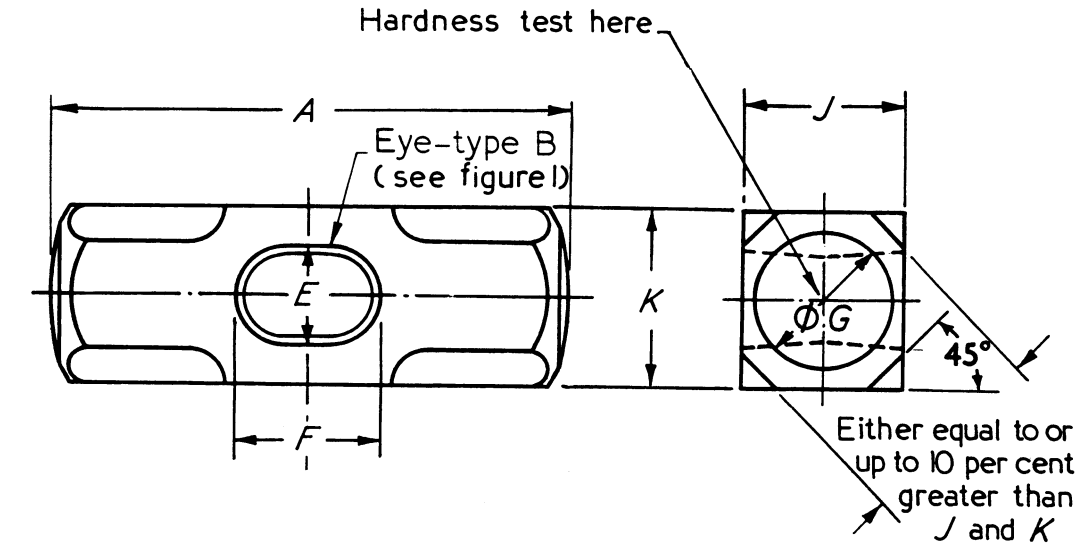
Nominal mass of head	Dimensions of head					
	A	*B*	*E*	*F*	*J*	*K*
			±5 %	±5 %		min.
g	mm	mm	mm	mm	mm	mm
455	130	65	17	28	25	29
680	152	76	19	29	29	32

NOTE Except for *E*, *F* and *K*, dimensions of head are mean nominal values calculated to give mass within the tolerances of clause **8**.

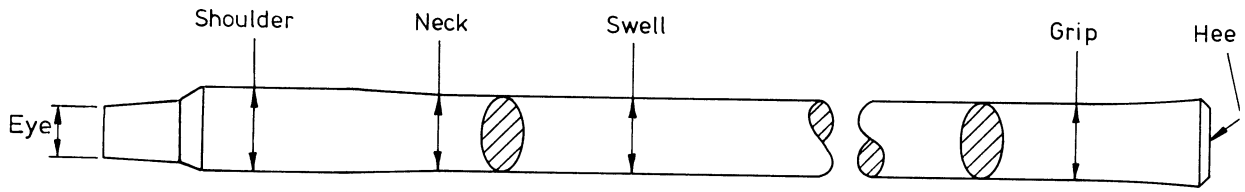
Table 10 — Dimensions of wooden handles for boiler-scaling hammers

Mass	Length	F × E	Shoulder	Swell	Grip	Heel
g	mm	mm^2	mm^2	mm^2	mm^2	mm^2
455	275	28 × 17	31 × 20	33 × 27	30 × 24	33 × 27
680	275	29 × 19	32 × 22	33 × 27	30 × 24	33 × 27

NOTE 1 The minimum dimensions at the shoulder shall be 3 mm larger than the appropriate dimensions for *E* and *F*.
NOTE 2 The overall length shall apply after the fitting of the head and shall/should be to a tolerance of $^{+\ 5}_{-\ 15}$ mm.
NOTE 3 The grip dimensions shall apply approximately 60 mm from the heel.
NOTE 4 The dimensions of the heel and the swell shall be not less than those of the grip and and shall be not more than 3 mm greater.
NOTE 5 The length from the outer end to the shoulder shall be equal to the maximum dimension for *J* according to the nominal mass of the hammer plus an amount sufficient to ensure that wedging is adequate and that the head does not reach to the shoulder.
NOTE 6 The *E* and *F* dimensions for the wooden handles shall be equal to the central waist dimensions of the head eye as specified in Figure 1.
NOTE 7 Unless specified otherwise all handle dimensions shall be subject to a tolerance of $^{+\ 3}_{0}$ mm.



a) Head



b) Handle

Figure 8 — Double-face sledgehammer

Table 11 — Dimensions of heads for double-face sledgehammers

Nominal mass of head	Dimensions of head					
	A	$E\ ^{0}_{-10}$ %	$F\ ^{0}_{-10}$ %	G	J	K min.
kg	mm	mm	mm	mm	mm	mm
1.8	133	22	33	38	46	46
3.2	158	25	38	46	54	54
4.5	178	27	40	50	63	63
6.3	193	27	40	57	68	68

NOTE Except for E, F and K, dimensions of head are mean nominal values calculated to give mass within the tolerances of clause 8.

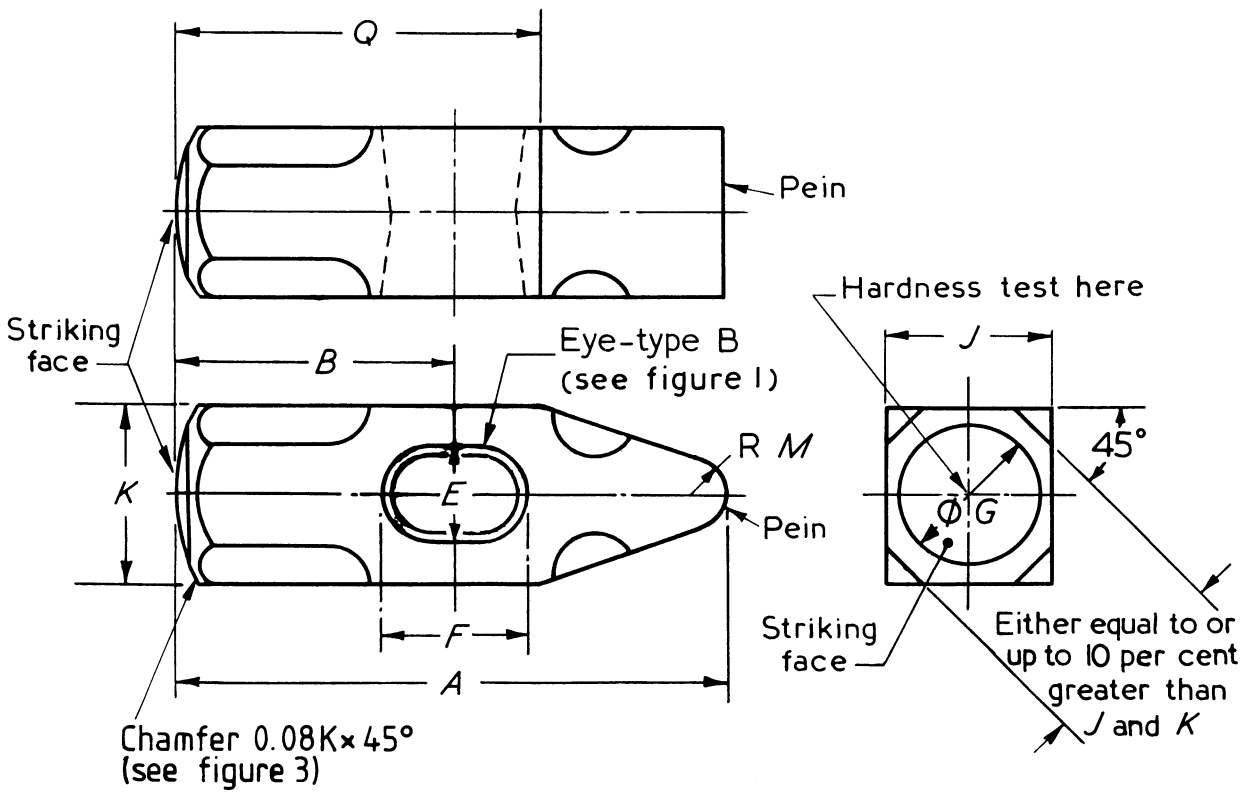
© BSI 10-1999

标准分享网 www.bzfxw.com 免费下载

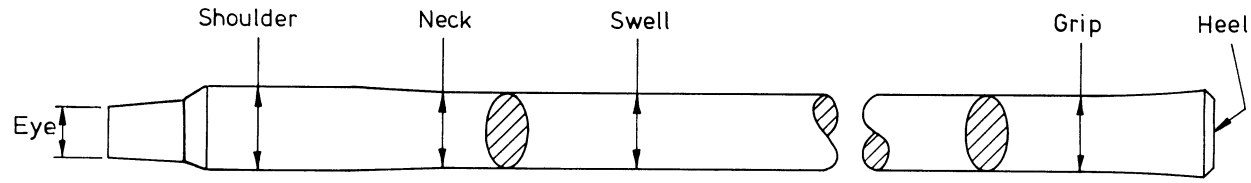
Table 12 — Dimensions of wooden handles for double-face sledgehammers

Mass kg	Length mm	F × E mm	Shoulder mm	Neck mm	Swell mm	Grip mm	Heel mm
1.8	600	33 × 22	39 × 28	33 × 25	38 × 30	36 × 28	38 × 30
3.2	750	38 × 25	43 × 30	36 × 28	38 × 30	36 × 28	38 × 30
4.5	900	40 × 27	43 × 30	38 × 28	40 × 30	38 × 28	40 × 30
6.3	900	40 × 27	43 × 30	38 × 28	40 × 30	38 × 28	40 × 30

NOTE 1 The overall length shall apply after the fitting of the head and shall be to a tolerance of $^{+\ 5}_{-\ 15}$ mm.
NOTE 2 The tolerance on dimensions of handle shall be to a tolerance of $^{+\ 3}_{0}$ mm.
NOTE 3 The 1.8 kg mass of head may be fitted with a 750 mm handle if required.
NOTE 4 The grip dimensions shall apply approximately 60 mm from the heel.
NOTE 5 The *E* and *F* dimensions for the wooden handles shall be equal to the central waist dimensions of the head eye as specified in Figure 1.



a) Head



b) Handle

Figure 9 — Straight-pein sledgehammer

Table 13 — Dimensions of heads for straight-pein sledgehammers

Nominal mass of head	Dimensions of head								
	A	*B*	E_{-10}^{0} %	F_{-10}^{0} %	*G*	*J*	*K* min.	*M*	*Q*
kg	mm	mm	mm	mm	mm	mm	mm	mm	mm
3.2	173	98	25	38	48	54	54	15	130

NOTE Except for *E*, *F* and *K*, dimensions of head are mean nominal values calculated to give mass within the tolerances of clause 8.

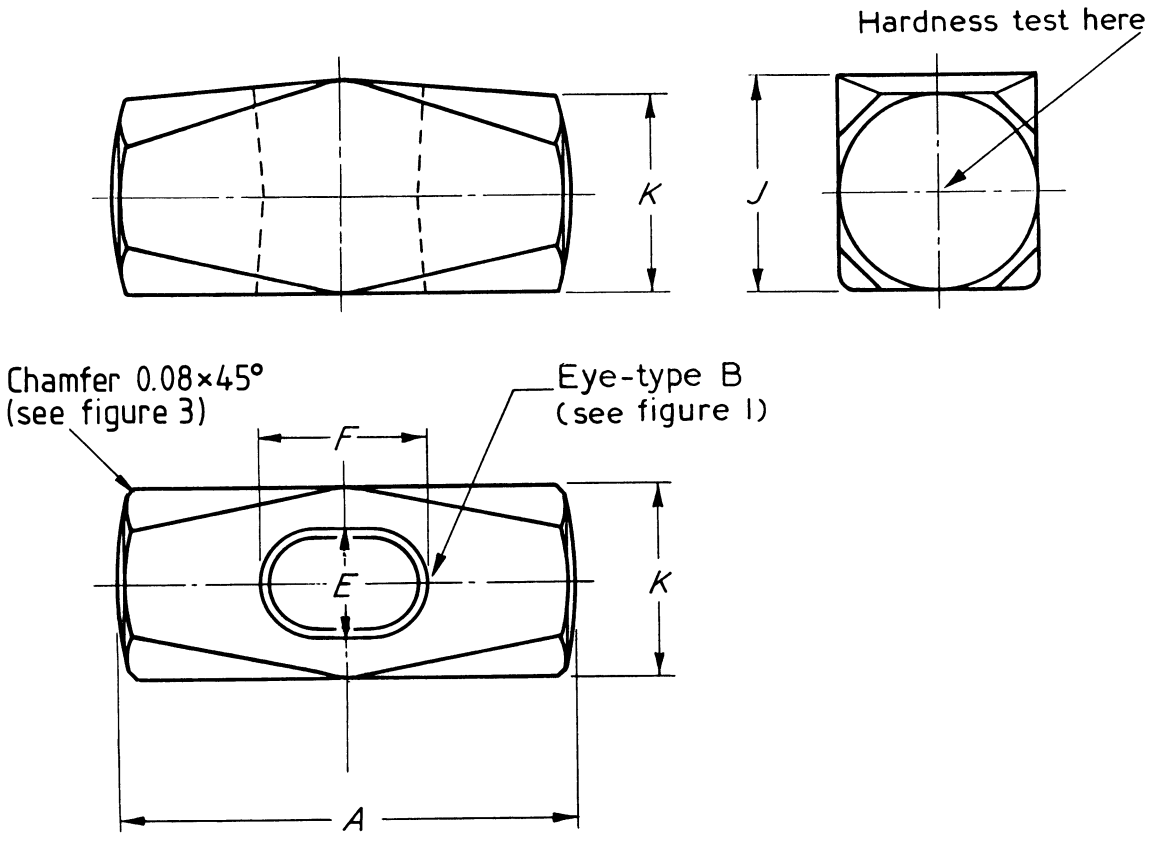
© BSI 10-1999

标准分享网 www.bzfxw.com 免费下载

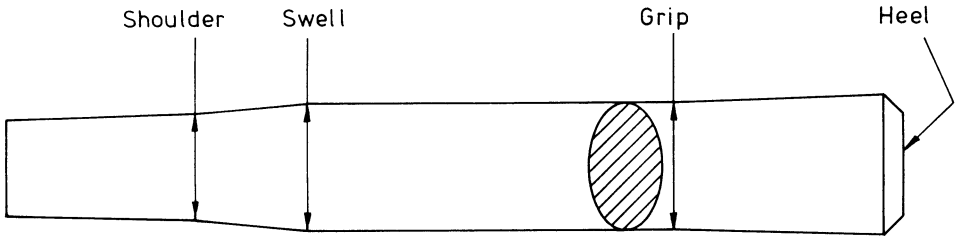
Table 14 — Dimensions of wooden handles for straight-pein sledgehammers

Mass kg	Length mm	F × E mm	Shoulder mm	Neck mm	Swell mm	Grip mm	Heel mm
3.2	750	38 × 25	43 × 30	36 × 28	38 × 30	36 × 28	38 × 30

NOTE 1 The overall length shall apply after the fitting of the head and shall be to a tolerance of $^{+\ 15}_{-\ 15}$ mm.
NOTE 2 The tolerance on dimensions of handle shall be to a tolerance of $^{+\ 3}_{0}$ mm.
NOTE 3 The grip dimensions shall apply approximately 60 mm from the heel.
NOTE 4 The *E* and *F* dimensions for the wooden handles shall be equal to the central waist dimensions of the head eye as specified in Figure 1.



a) Head



b) Handle

Figure 10 — Clubhammer

Table 15 — Dimensions of heads for clubhammers

Nominal mass of head	Dimensions of head				
	A	*E*	*F*	*J*	*K*
		±5 %	±5 %		min.
kg	mm	mm	mm	mm	mm
1.1	90	22	32	47	43
1.4	102	22	32	49	44
1.8	106	22	32	52	49

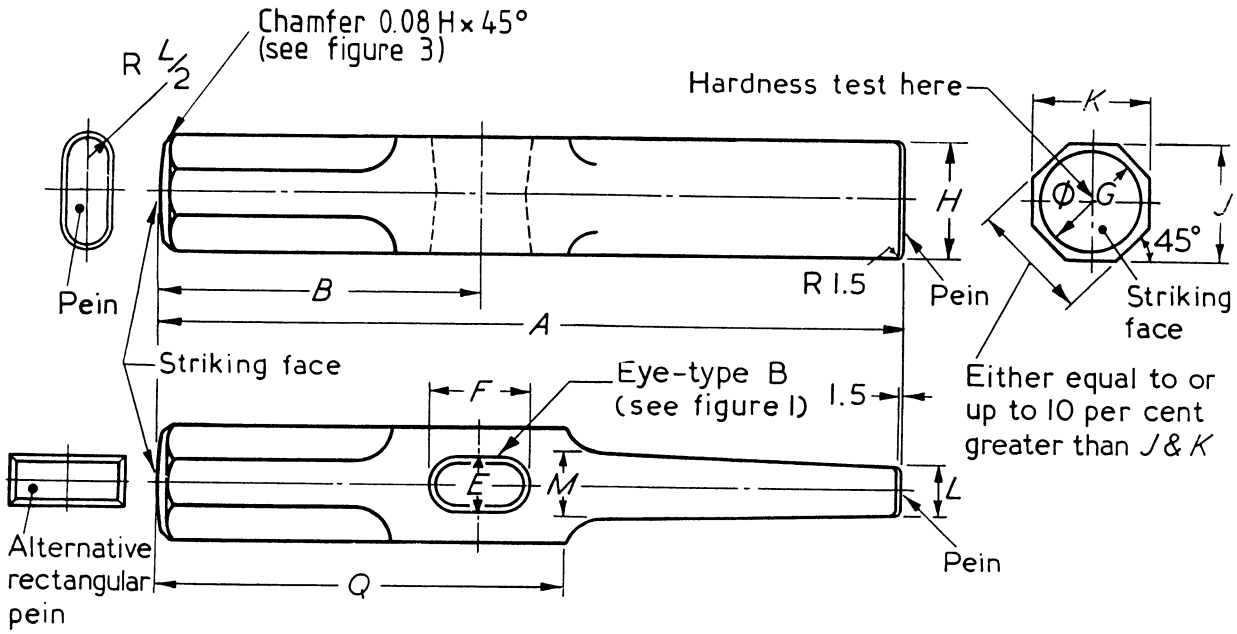
NOTE Except for *E*, *F* and *K*, dimensions of head are mean nominal values calculated to give mass within the tolerances of clause 8.

Table 16 — Dimensions of wooden handles for clubhammers

Mass	Length	F × E	Shoulder	Swell	Grip	Heel
kg	mm	mm	mm	mm	mm	mm
1.1	250	32 × 22	34 × 24	38 × 28	36 × 26	39 × 29
1.4	250	32 × 22	34 × 24	38 × 38	36 × 26	39 × 29
1.8	250	32 × 22	34 × 24	38 × 28	36 × 26	39 × 29

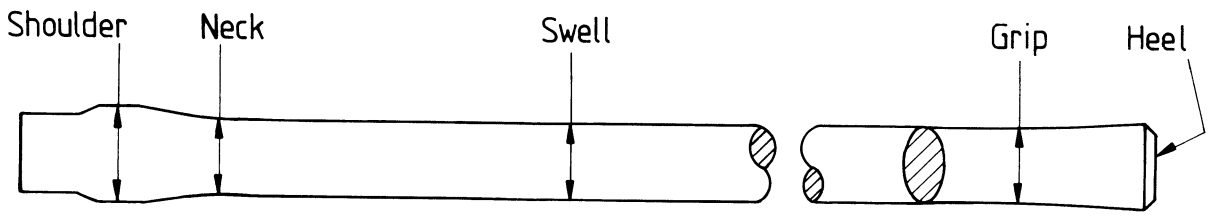
NOTE 1 The overall length shall apply after the fitting of the head and shall be to a tolerance of $^{+\ 5}_{-\ 15}$ mm.
NOTE 2 The tolerance on dimensions of handle shall be to a tolerance of $^{+\ 3}_{0}$ mm.
NOTE 3 The grip dimensions shall apply approximately 60 mm from the heel.
NOTE 4 The *E* and *F* dimensions for the wooden handles shall be equal to the central waist dimensions of the head eye as specified in Figure 1.

© BSI 10-1999
标准分享网 www.bzfxw.com 免费下载



Linear dimensions in millimetres.

a) Head



b) Handle

Figure 11 — Railway track keyinghammer

Table 17 — Dimensions of heads for railway track keyinghammers

Nominal mass of head	Dimensions of head									
	A	*B*	*E* $^{0}_{-7.5}$ %	*F* $^{0}_{-7.5}$ %	*G*	*H*	*J, K* min.	*L*	*M*	*Q*
kg	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
2.7	250	100	22	35	38	45	45	20	25	130
4.5	325	140	25	44	45	50	50	20	28	175

NOTE Except for *E*, *F* and *K*, dimensions of head are mean nominal values calculated to give mass within the tolerances of clause 8.

Table 18 — Dimensions of wooden handles for railway track keyinghammers

Mass kg	Length mm	F × E mm	Shoulder mm	Neck mm	Swell mm	Grip mm	Heel mm
2.7	900	35 × 22	38 × 25	33 × 25	35 × 27	35 × 27	40 × 32
4.5 k	900	44 × 25	46 × 27	33 × 25	35 × 27	35 × 27	40 × 32

NOTE 1 The overall length shall apply after the fitting of the head and shall be to a tolerance of $^{+15}_{-15}$ mm.
NOTE 2 The tolerance on dimensions of handle shall apply $^{+3}_{0}$ mm.
NOTE 3 The grip dimensions shall apply approximately 60 mm from the heel.
NOTE 4 The *E* and *F* dimensions for the wooden handles shall be equal to the central waist dimensions of the head eye as specified in Figure 1.

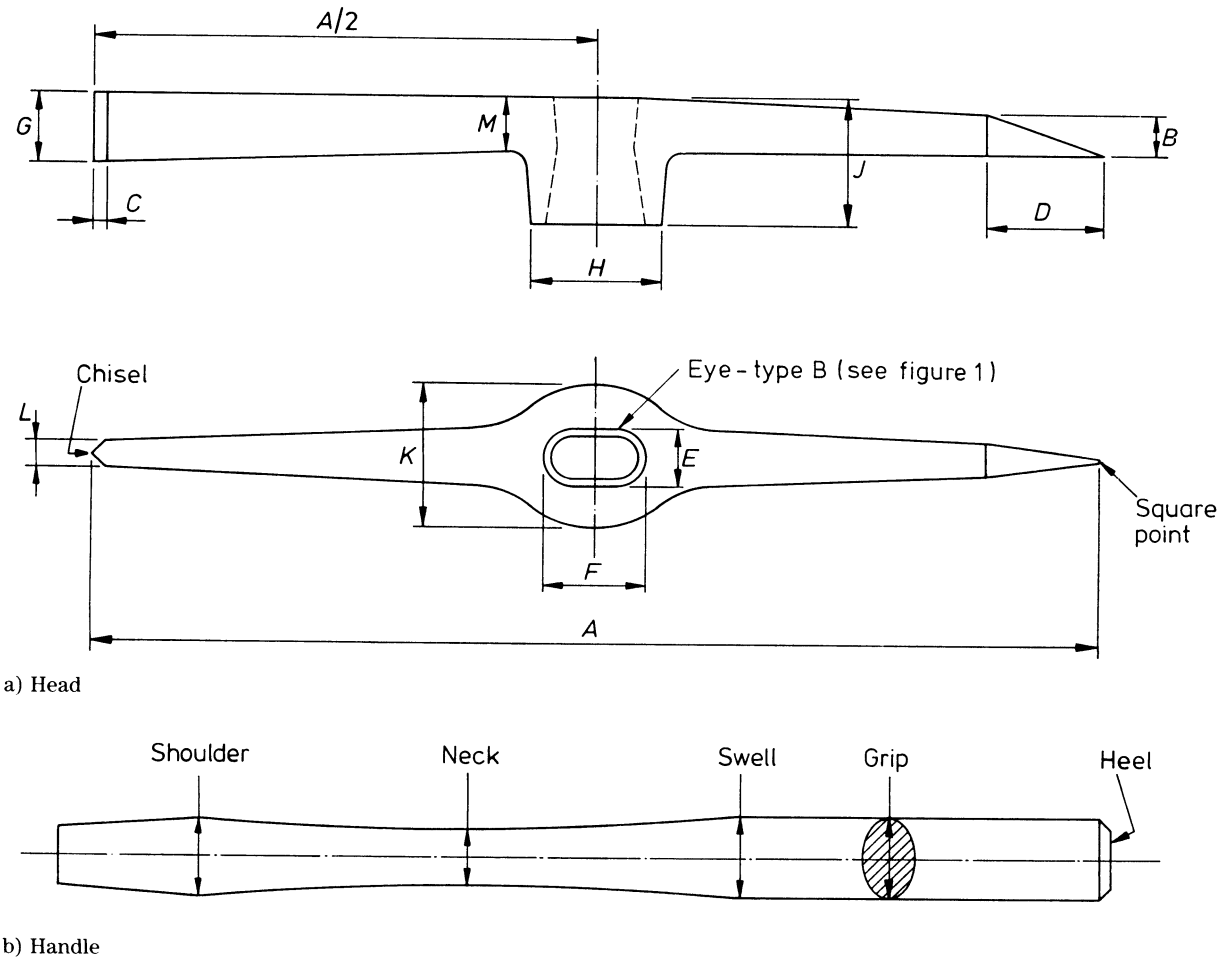


Figure 12 — Welder's chippinghammer (type A)

© BSI 10-1999
标准分享网 www.bzfxw.com 免费下载

Table 19 — Dimensions of heads for welder's chippinghammers (type A)

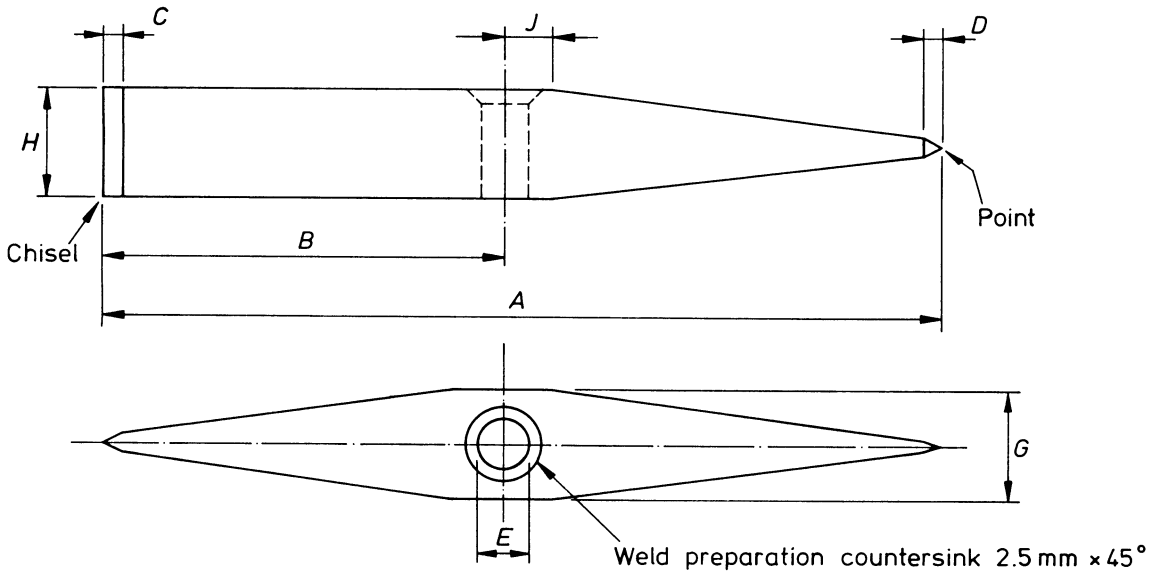
Nominal mass of head	Dimensions of head											
	A	*B*	*C*	*D*	*E* ±5 %	*F* ±5 %	*G*	*H*	*J*	*K* min.	*L*	*M*
g	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
340	230	10	3	26	16	24	16	29	29	34	8	13

NOTE Except for *E*, *F* and *K*, dimensions are mean nominal values calculated to give mass within the tolerances of clause **8**.

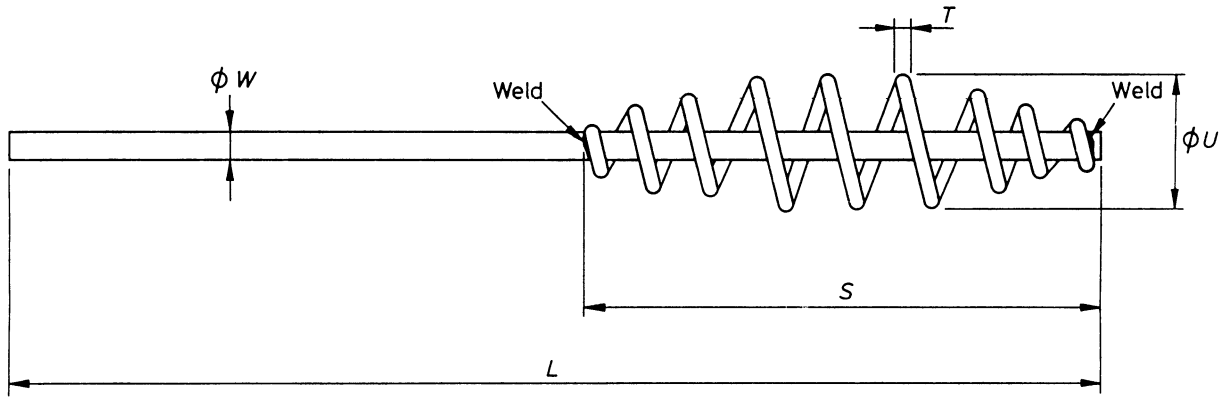
Table 20 — Dimensions of wooden handles for welder's chippinghammers

Mass	Length	F × E	Shoulder	Swell	Grip	Heel
g	mm	mm	mm	mm	mm	mm
340	300	24 × 16	27 × 19	30 × 24	27 × 21	30 × 24

NOTE 1 The minimum dimensions at the shoulder shall be 3 mm larger than the appropriate dimensions for *E* and *F*.
NOTE 2 The overall length shall apply after the fitting of the head and shall be to a tolerance of $^{+\ 5}_{-\ 15}$ mm.
NOTE 3 The grip dimensions shall apply approximately 60 mm from the heel.
NOTE 4 The dimensions of the heel and the swell shall be not less than those of the grip and shall be not more than 3 mm greater.
NOTE 5 The length from the outer end to the shoulder shall be equal to the maximum dimension for *J* according to the nominal mass of the hammer plus an amount sufficient to ensure that wedging is adequate and that the head does not reach to the shoulder.
NOTE 6 The *E* and *F* dimensions for the wooden handles shall be equal to the central waist dimensions of the head eye as specified in Figure 1.
NOTE 7 Unless specified otherwise all handle dimensions shall be subject to a tolerance of $^{+\ 3}_{0}$ mm.



a) Head



b) Steel handle

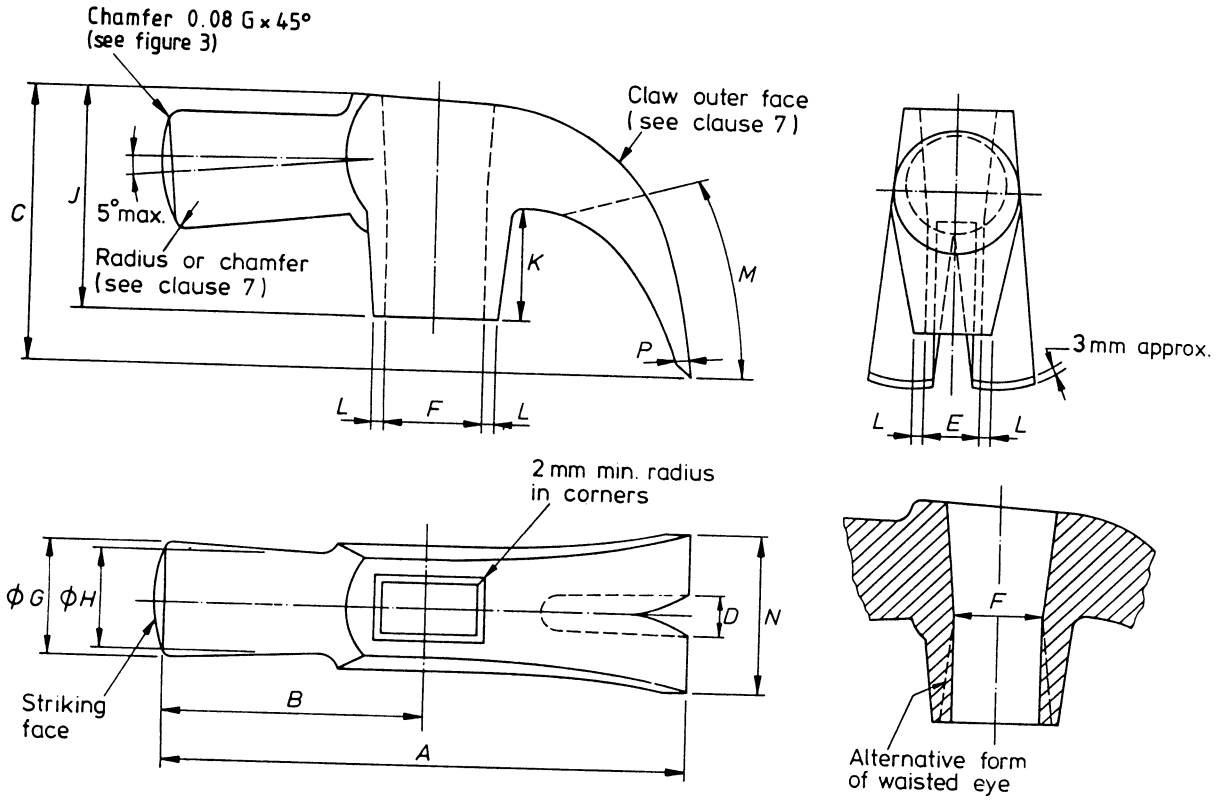
Figure 13 — Welder's chippinghammer (type B)

Table 21 — Dimensions of heads for welder's chippinghammers (type B)

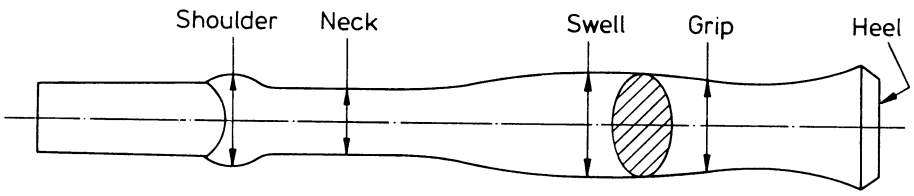
Nominal mass of head	Dimensions of head								Nominal dimensions of steel handles				
	A	*B*	*C*	*D*	*E* dia.	*G*	*H*	*J*	*U* dia.	*T*	*L*	*S*	*W* dia.
g	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
200	146	79	3	3	8	18	14	10	30	3	260	115	8

NOTE 1 Handle material and spring material shall be bright drawn steel.
NOTE 2 Spring shall be in accordance with manufacturer's requirements.
NOTE 3 Overall length shall be to a tolerance of ±6 mm.

© BSI 10-1999
标准分享网 www.bzfxw.com 免费下载



a) Head



b) Handle

Figure 14 — Adze-eye clawhammer

Table 22 — Dimensions of heads for adze-eye clawhammers

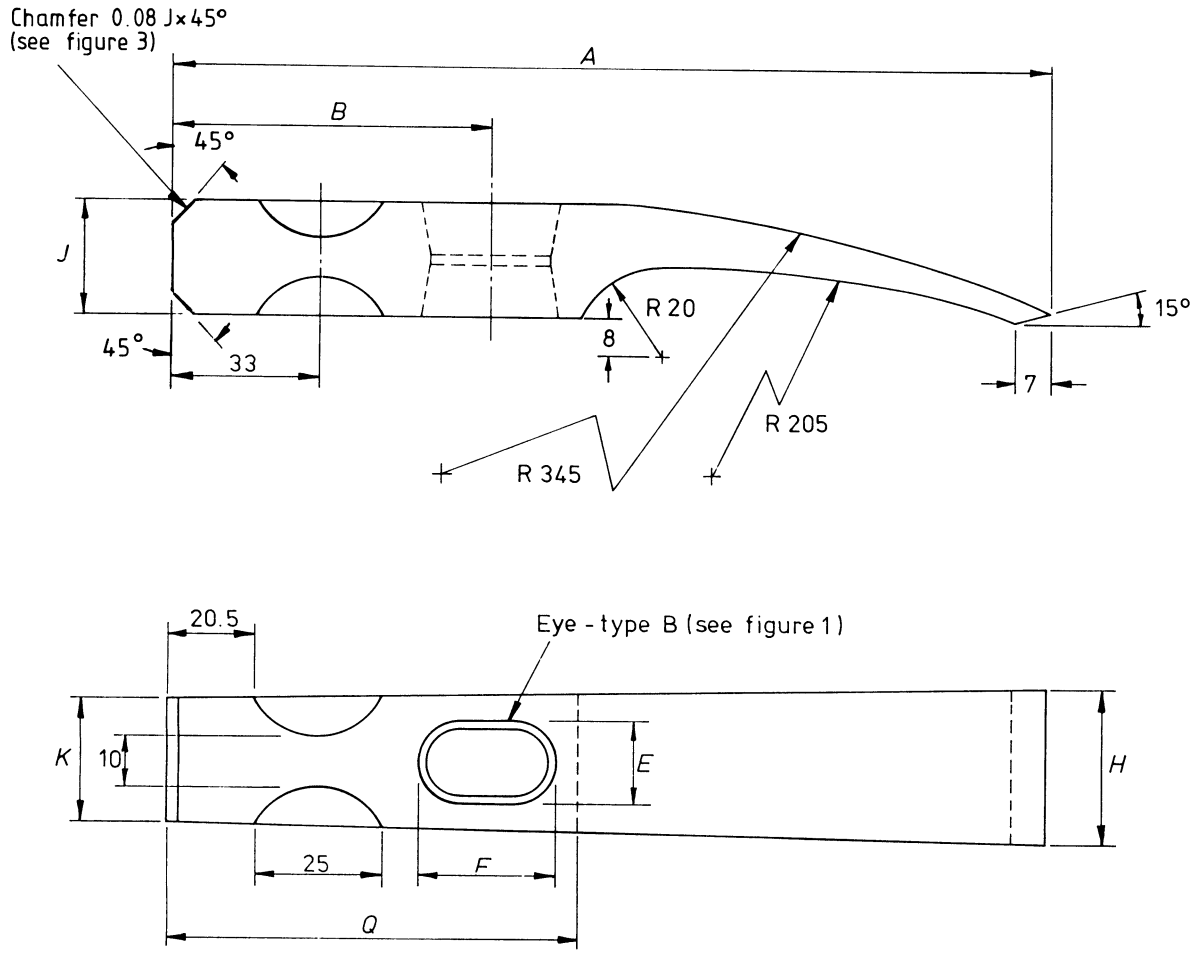
Nominal mass of head	Dimensions of head													
	A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*J*	*K*	*L*	*M*	*N*	*P*
	±3	±3	±6	±1	$^{-3}_{0}$	$^{-3}_{0}$	dia. ±2	dia. ±2	±3	max.	min.	min.	min.	min.
g	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
455	118	60	57	8	14	26	27	22	51	27	2	35	29	2
565	124	63	68	8	14	28	29	24	56	29	2	38	32	2
680	133	65	73	9	14	28	30	25	62	32	2	41	35	2

Table 23 — Dimensions of wooden handles for adze-eye clawhammers

Mass	Length	F × E	Shoulder	Neck	Swell	Grip	Heel
g	mm	mm	mm	mm^2	mm	mm	mm
455	325	26 × 14	29 × 17	275	35 × 29	32 × 26	35 × 29
565	350	28 × 14	31 × 17	295	37 × 29	34 × 26	37 × 29
680	350	28 × 14	31 × 17	295	37 × 29	34 × 26	37 × 29

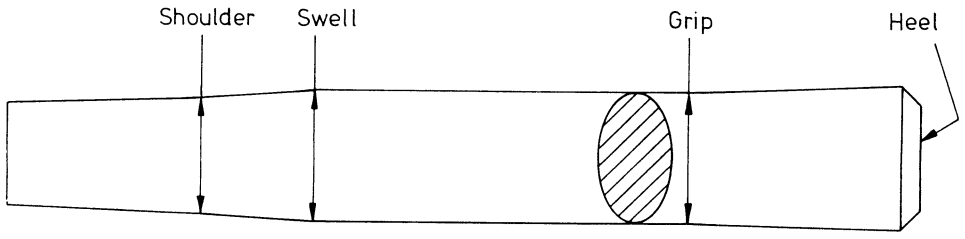
NOTE 1 The minimum dimensions at the shoulder shall be 3 mm larger than the appropriate dimensions for *E* and *F*.
NOTE 2 The overall length shall apply after the fitting of the head and shall be to a tolerance of $^{+5}_{-15}$ mm.
NOTE 3 The grip dimensions shall apply approximately 60 mm from the heel.
NOTE 4 The dimensions of the heel and the swell shall be not less than those of the grip and they shall be up to 3 mm greater.
NOTE 5 Unless specified otherwise all handle dimensions shall be to a tolerance of $^{+3}_{0}$ mm.

© BSI 10-1999
标准分享网 www.bzfxw.com 免费下载



Linear dimensions in millimetres.

a) Head



b) Handle

Figure 15 — Brickhammer (type A)

Table 24 — Dimensions of heads for brickhammers (type A)

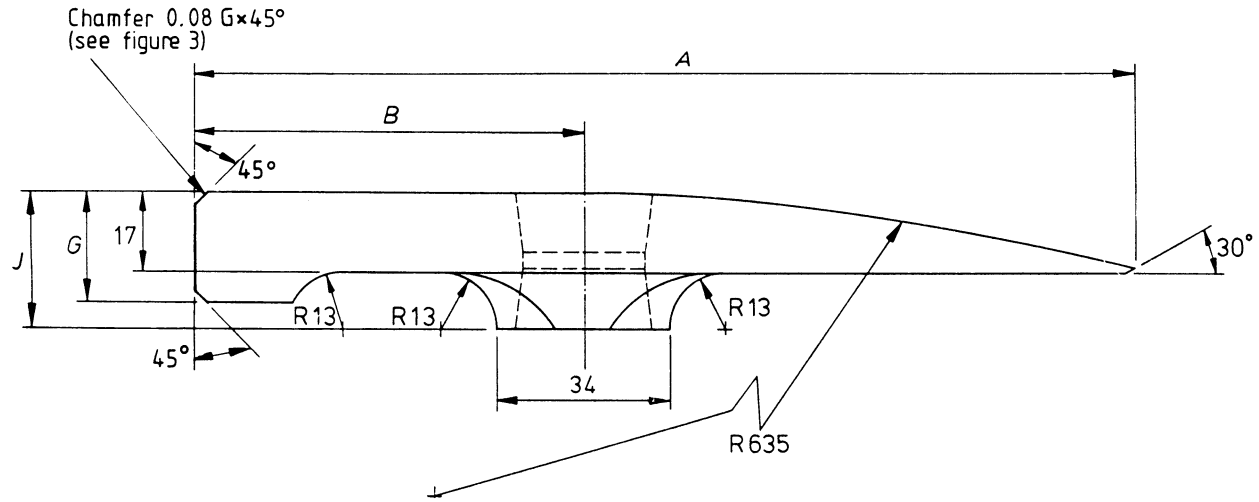
Nominal mass of heads	Nominal Dimensions of head							
	A	*B*	*E* ±5 %	*F* ±5 %	*H*	*J*	*K*	*Q*
g	mm	mm	mm	mm	mm	mm	mm	mm
680	200	69	19	29	35	26	26	88

Table 25 — Dimensions of wooden handles for brickhammers (type A)

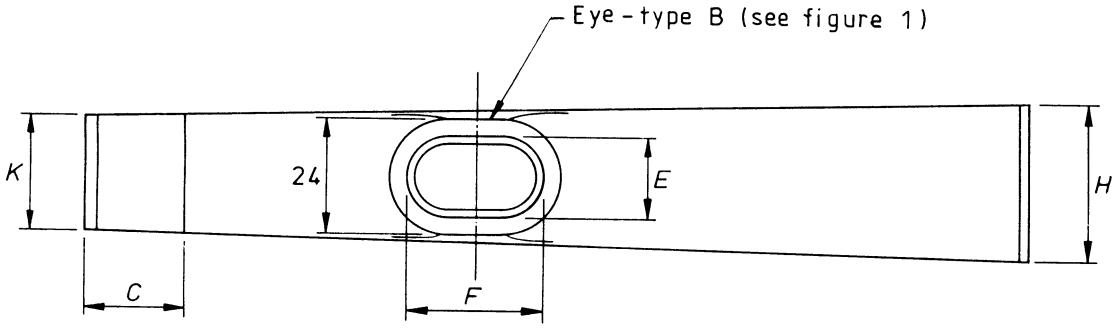
Mass	Length	F × E	Shoulder	Grip	Heel
g	mm	mm	mm	mm	mm
680	250	29 × 19	34 × 26	29 × 21	37 × 29

NOTE 1 The centre of gravity is along the line of shaft axis.
NOTE 2 The overall length shall apply after fitting of the head and shall be to a tolerance of $^{+\ 5}_{-\ 15}$ mm.
NOTE 3 The grip dimensions shall apply approximately 60 mm from the heel.
NOTE 4 The *E* and *F* dimensions for the wooden handles shall be equal to the central waist dimensions of the head eye as specified in Figure 1.
NOTE 5 Unless specified otherwise all handle dimensions shall be to a tolerance of $^{+\ 3}_{0}$ mm.

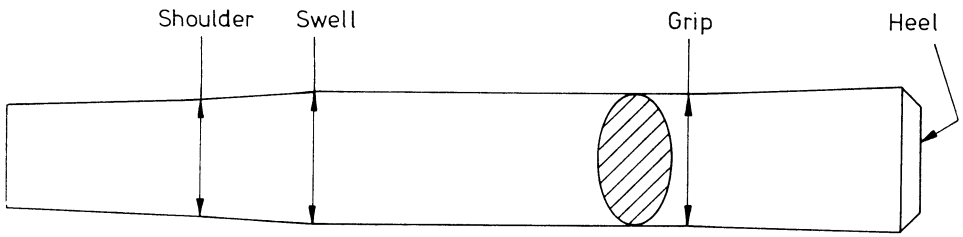
© BSI 10-1999
标准分享网 www.bzfxw.com 免费下载



Linear dimensions in millimetres.



a) Head



b) Handle

Figure 16 — Brickhammer (type B)

Table 26 — Dimensions of heads for brickhammers (type B)

Nominal mass of head	Nominal Dimensions of head								
	A	*B*	*C*	*E* ±5 %	*F* ±5 %	*G*	*H*	*J*	*K*
g	mm	mm	mm	mm	mm	mm	mm	mm	mm
680	200	83	24	19	29	25	35	38	24

Table 27 — Dimensions of wooden handles for brickhammers (type B)

Mass	Length	F × E	Shoulder	Swell	Grip	Heel
g	mm	mm	mm	mm	mm	mm
680	250	29 × 19	29 × 19	34 × 26	30 × 22	36 × 28

NOTE 1 The centre of gravity is along the line of shaft axis.
NOTE 2 The overall length shall apply after the fitting of the head and shall be to a tolerance of $^{+\ 5}_{-\ 15}$ mm.
NOTE 3 The grip dimensions shall apply approximately 60 mm from the heel.
NOTE 4 The *E* and *F* dimensions for the wooden handles shall be equal to the central waist dimensions of the head eye as specified in Figure 1.
NOTE 5 Unless specified otherwise all handle dimensions shall be to a tolerance of $^{+\ 3}_{0}$ mm.

Table 28 — Dimensions of heads for brickhammers (type C)

Nominal mass of head	Nominal Dimensions of head							
	A	*B*	*E* ±5 %	*F* ±5 %	*G*	*H*	*J*	*K*
g	mm	mm	mm	mm	mm	mm	mm	mm
680	195	75	14	26	27	34	45	27

Table 29 — Dimensions of wooden handles for brickhammers (type C)

Mass	Length	F × E	Shoulder	Grip	Heel
g	mm	mm	mm	mm	mm
680	250	26 × 14	36 × 28	30 × 22	38 × 30

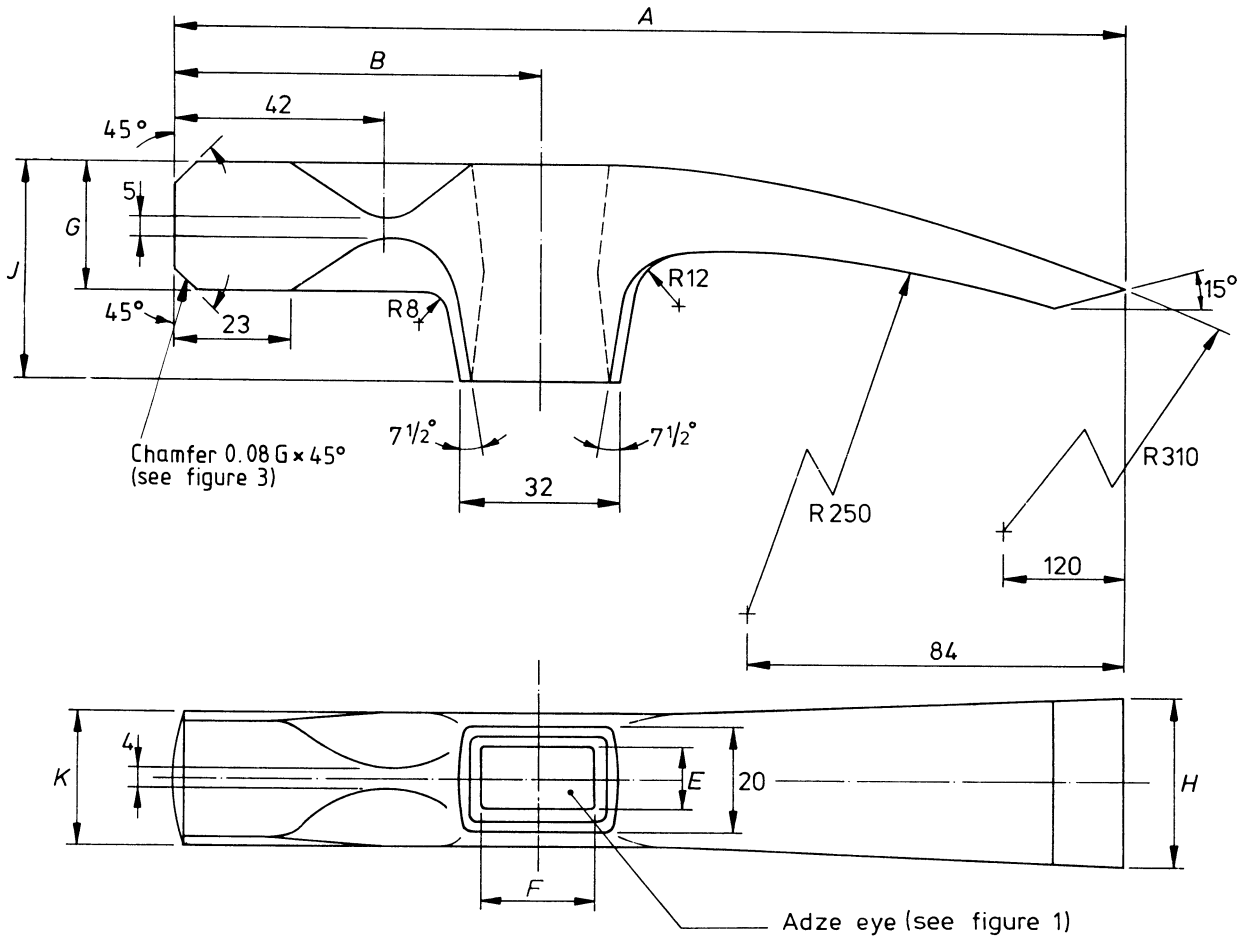
NOTE 1 The centre of gravity is along the line of shaft axis.
NOTE 2 The overall length shall apply after the fitting of the head and shall be to a tolerance of $^{+\ 5}_{-\ 15}$ mm.
NOTE 3 The grip dimensions shall apply approximately 60 mm from the heel.
NOTE 4 Unless specified otherwise all handle dimensions shall be to a tolerance of $^{+\ 3}_{0}$ mm.

Table 30 — Dimensions of heads for cross-pein pinhammers

Nominal mass of head	Dimensions of head											
	A	*B*	*C*	*D*	*E* ±5 %	*F* ±5 %	*G*	*H*	*J*	*K* min.	*L*	*M* min.
g	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
100	102	51	21	21	11	16	14	14	19	19	5	2

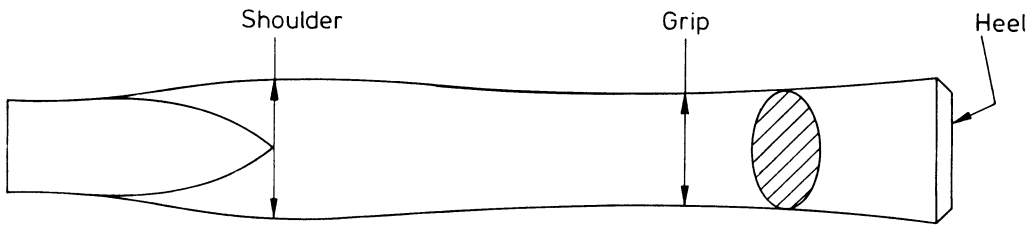
NOTE Except for *E*, *F*, and *K*, dimensions of head are mean nominal values calculated to give mass within the tolerances of clause 8.

© BSI 10-1999
标准分享网 www.bzfxw.com 免费下载



Linear dimensions in millimetres.

a) Head



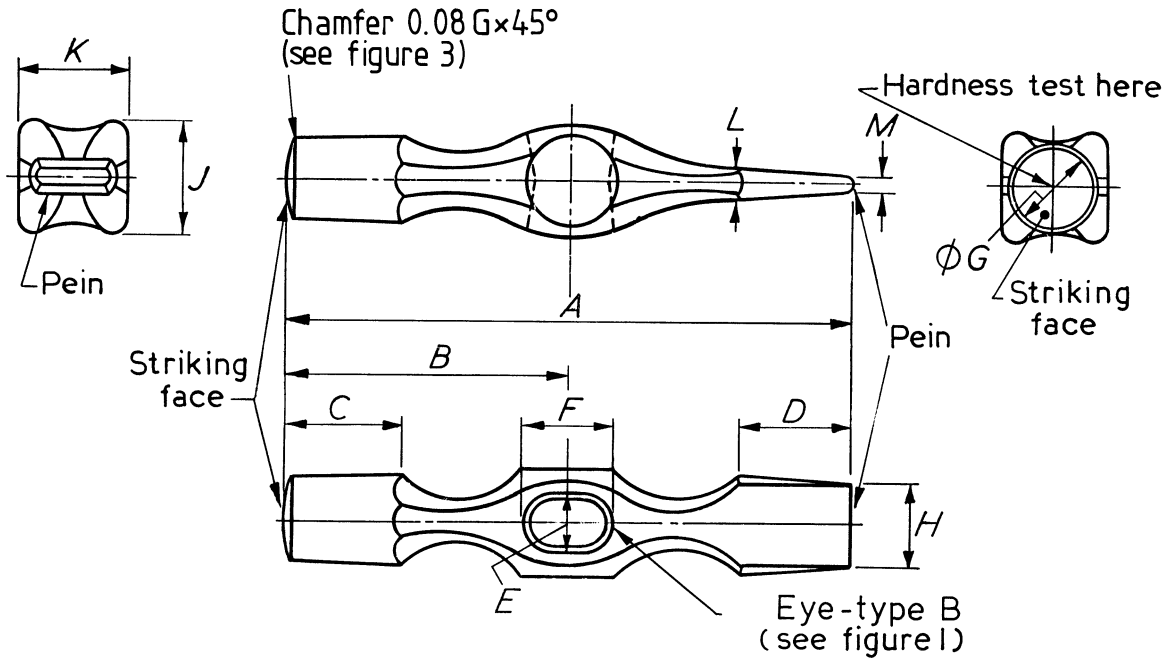
b) Handle

Figure 17 — Brickhammer (type C)

Table 31 — Dimensions of wooden handles for cross-pein pinhammers

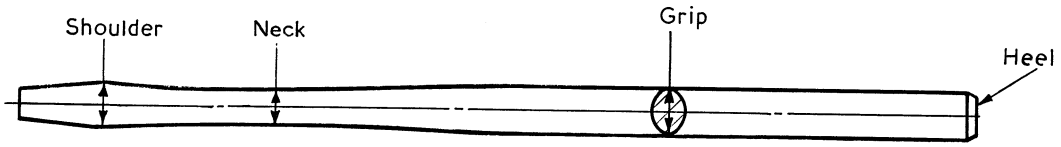
Mass g	Length mm	F × E mm	Shoulder mm	Grip mm
115	325	16 × 11	19 × 14	21 × 16

NOTE 1 The overall length shall apply after the fitting of the head and shall be to a tolerance of $^{+\ 5}_{-\ 15}$ mm.
NOTE 2 The grip dimensions shall apply approximately 115 mm from the heel.
NOTE 3 The *E* and *F* dimensions for the wooden handles shall be equal to the central waist dimensions of the head eye as specified in Figure 1.
NOTE 4 Unless specified otherwise all handle dimensions shall be to a tolerance of $^{+\ 3}_{0}$ mm.



Linear dimensions in millimetres.

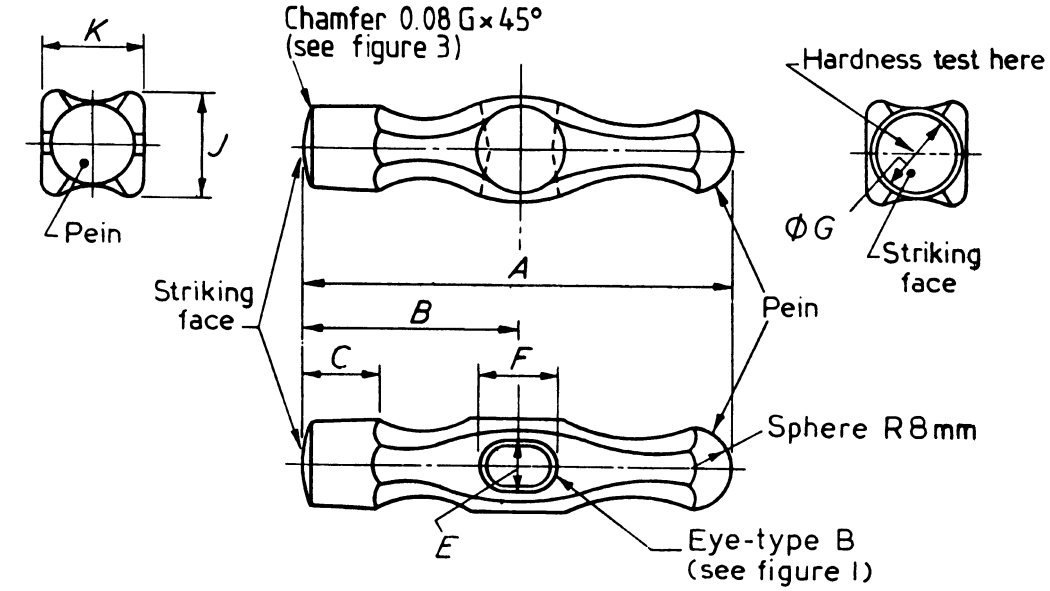
a) Head



b) Handle

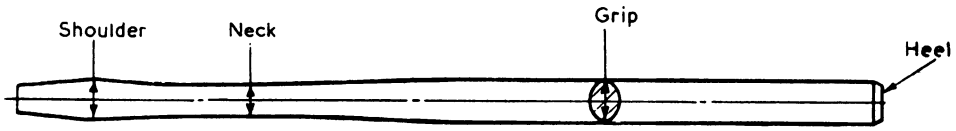
Figure 18 — Cross-pein pinhammer

© BSI 10-1999
标准分享网 www.bzfxw.com 免费下载



Linear dimensions in millimetres.

a) Head



b) Handle

Figure 19 — Ball-pein pinhammer

Table 32 — Dimensions of heads for ball-pein pinhammers

Nominal mass of head	Dimensions of head							
	A	*B*	*C*	*E* ±5 %	*F* ±5 %	*G*	*J*	*K* min.
g	mm	mm	mm	mm	mm	mm	mm	mm
115	86	43	16	11	16	17	19	19

Table 33 — Dimensions of wooden handles for ball-pein pinhammers

Mass	Length	F × E	Shoulder	Grip
g	mm	mm	mm	mm
115	325	16 × 11	19 × 14	21 × 16

NOTE 1 The overall length shall apply after the fitting of the head and shall be to a tolerance of $^{+\ 5}_{-\ 15}$ mm.
NOTE 2 The grip dimensions shall apply approximately 115 mm from the heel.
NOTE 3 The *E* and *F* dimensions for the wooden handles shall be equal to the central waist dimensions of the head eye as specified in Figure 1.
NOTE 4 Unless specified otherwise all handle dimensions shall be to a tolerance of $^{+\ 3}_{0}$ mm.

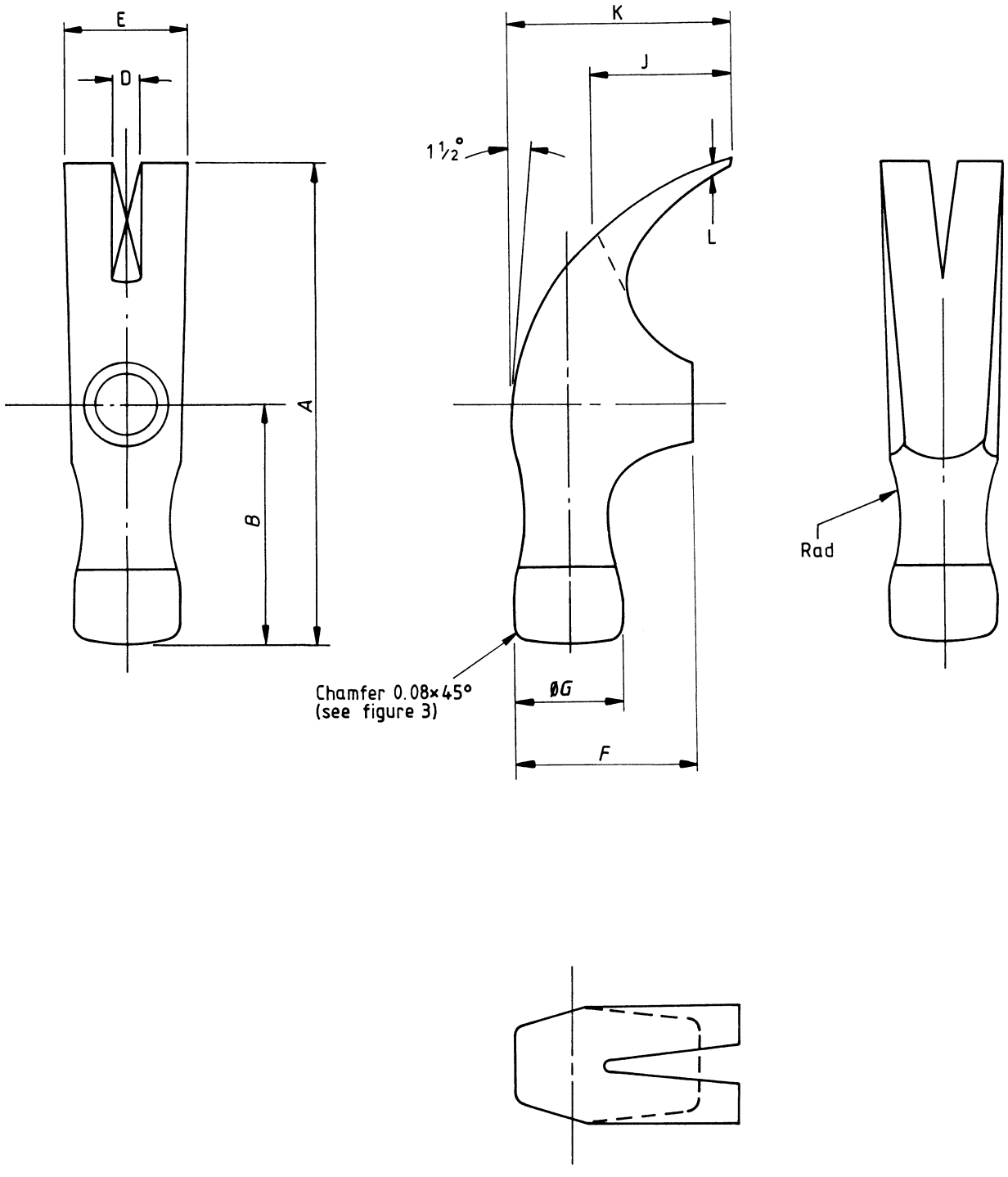


Figure 20 — Head for steel-shafted clawhammer

© BSI 10-1999
标准分享网 www.bzfxw.com 免费下载

Table 34 — Dimensions of heads for steel-shafted clawhammers

Nominal mass of head	Dimensions							
	A ±4	*B* ±3	*D* ±1	*E* min.	*F* ±3	*G* dia. ±2	*J* min.	*K* ±6
g	mm	mm	mm	mm	mm	mm	mm	mm
455	124	63	8	32	46	27	35	57
565	133	65	10	36	50	29	38	68

Annex A (informative)
Guidance on the safe use of hammers

A.1 Always select a suitable hammer, of the appropriate type, size and weight, for the job concerned.

A.2 When striking chisels, punches, wedges, etc., the striking-face of the hammer should be larger than the head of the tool being struck (e.g. a 12 mm cold chisel-head requires at least a 25 mm hammer face).

A.3 Always wear safety goggles when using a hammer. This is especially important when hammering hard materials and in circumstances where materials are likely to chip and fly.

A.4 Masonry nails, which are hardened, should only be struck with a lump or clubhammer and it is essential that safety goggles are worn when driving these nails.

A.5 Always strike squarely and avoid glancing blows. Never strike with the side cheek of a hammer head and never strike a material which is harder than the hammer head. Never strike two hammer head faces together.

A.6 Never use a hammer with a loose or damaged handle and discard any hammer if the head shows any sign of excessive wear, mushrooming, chipping, dents, etc. Never attempt to refurbish hammer faces.

Attention is drawn to the use of light hammers with elongated heads, such as the welder's chippinghammer, since, whilst handle tests and assembly are appropriate to the mass of the tool, the mode of use can be particularly prone to loosening of handles.

A.7 Always store wooden handled hammers at ambient temperatures and do not store in a heated warehouse or storage place as this is a significant cause of loose hammer heads, due to the drying out of the wooden handles.

A.8 Inspect hammers regularly to ensure they are fit for purpose. If in doubt, seek specialist advise or contact the manufacturer.

Annex B (normative)
Tests

B.1 Claw hardness

Grip a 100 mm bright steel nail, conforming to BS 1202-1:1974, in a steel-jawed vice with the protruding end bent forward.

Grip the nail firmly in the claws and work the hammer handle so that a sliver of metal is removed from either side of the nail.

B.2 Soundness and assembly test

B.2.1 *Hammers up to 2 kg head weight*

Strike, with a normal grip of the handle, 50 full sharp consecutive blows, commensurate with the hammer weight and usage, with the face, pein, point or edge but not the claws, on to a rigidly supported bar or anvil block of steel that has been heat-treated to an initial hardness in the range 36/40 HRC, see Figure B.1.

Strike a further 50 sharp blows, commensurate with the hammer weight and usage, varying the angle of delivery to bring as much as possible of the periphery of the face or pein into contact with the anvil, see Figure B.1.

Following these pounding tests, hammers tested shall be crack detected in accordance with **13.2**.

B.2.2 *Hammers over 2 kg head weight*

Apply 20 full swinging blows per test in accordance with **B.2.1**.

B.3 Handle overstrike test

NOTE This test is designed to assess the effect of foul blows on the strength of glass fibre handles.

Strike, with a normal grip of the handle, 25 full sharp and consecutive blows with the hammer on to the edge of a steel block while aiming the point of impact on to the shaft in the immediate area under the head.

B.4 Pull apart test

Hold the head and handle securely in a tensile testing machine or any other suitable device and apply a tensile load from Table B.1 or Table B.2 gradually (compressive load for reverse assembled glass fibre shafted hammers), see Figure B.2.

Table B.1 — Loads for pull-apart test for steel and fibreglass handle hammers

Weight of head		Applied load (minimum)
From kg	To kg	N
—	0.35	3 400
0.35	1.25	9 800[a]
1.25	6.00	12 000
6.00	12.00	15 000

[a] For all hammers with eyeholes of 26 nominal depth or lower (the "J" axis) the load applied shall be 6 000 N.

© BSI 10-1999
标准分享网 www.bzfxw.com 免费下载

Figure B.1 — Types of hammer blow

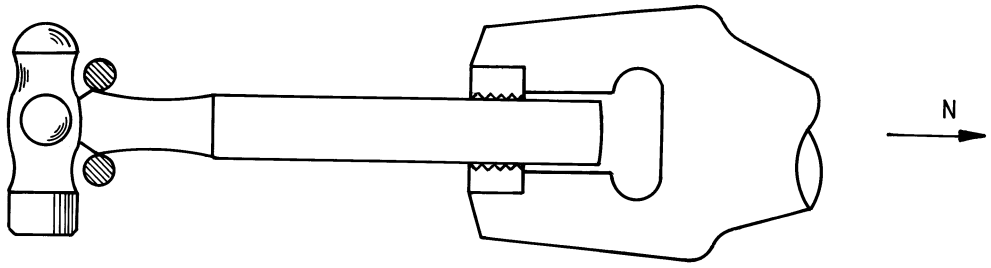


Figure B.2 — Pull test

B.5 Handle bending test

Hold the hammer head firmly in an upright position in a holding fixture, with the axis of the handle parallel to the platen of a vertical hydraulic press.

At a point on the handle 250 mm from the top of the head apply the following minimum load to the hammer handle:

a) steel handles: claw type: 700 N for all head masses;

b) glass fibre reinforced plastics handles: as shown in Table B.3 and Table B.4.

Start applying the load at zero and increase at a constant rate. Hold the specified load for not less than 10 s prior to release.

Table B.2 — Loads for pull-apart test for wooden-handle hammers

Weight of head		Applied load (minimum)
From kg	To kg	N
—	0.10	400
0.10	0.40	1 600
0.40	0.70	4 000[a]
0.70	1.25	6 000
1.25	2.00	7 000
2.00	6.00	8 000
6.00	12.00	9 000

[a] For the brickhammer, type A, Figure 15, the applied load shall be 3 500 N.

Table B.3 — Loads for bending test for glass fibre reinforced plastics handles for clawhammers

Mass of head for claw hammer kg	Minimum applied load on handle N
0.455	900
0.565	1 350
0.680	1 350

© BSI 10-1999

Table B.4 — Bending test for glass fibre reinforced plastics handles for non-claw type hammers

Mass of head for non-claw type hammer	Minimum applied load on handle	Mass of head for non-claw type hammer	Minimum applied load on handle
kg	N	kg	N
0.100[a]	300	0.910	1 775
0.115[a]	300	1.100	1 775
0.170[a]	300	1.135	1 775
O.200[a]	300	1.360	1 775
0.225[a]	450	1.400	1 775
0.285[a]	450	1.800	1 775
0.340[a]	675	2.700	2 700
0.395[a]	675	3.200	2 700
0.455[a]	900	4.500	2 700
0.680[a]	1 350	6.300	2 700

[a] For all hammers up to 680 g the head mass with eyeholes of 26 mm depth or lower (the "J" axis), the applied load shall be 675 N or the load specified in the table for the head weight concerned if this is lower.

B.6 Handle clearance test for clawhammers

Drive a round chequered-headed nail in accordance with BS 1202-1:1974 into a flat soft wooden board. The head has to protrude sufficiently to permit engagement of the tips of the claws. With the hammer claw engaged under the head of the nail, a minimum clearance of 45 mm is necessary between the heel of the handle and the surface of the board.

B.7 Nail extraction (clawhammers)

Drive three bright steel oval wire, brad head nails 60 mm × 3.75 mm × 2.36 mm in accordance with Table 12 of BS 1202-1:1974 into a sound pine board, 25 mm thick.

Drive the heads flush with the board.

Grip the protruding ends of the nails in the claw and lever the handle quickly and forcibly, to pull the head of the nail through the board (see Figure B.3).

As each withdrawal is commenced, ensure the face of the claw is in contact with the surface of the board and maintain this contact for subsequent strokes.

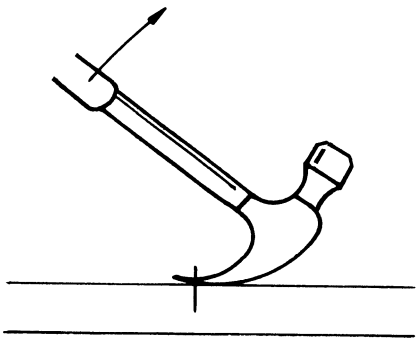


Figure B.3 — Nail extraction using a clawhammer

© BSI 10-1999

标准分享网 www.bzfxw.com 免费下载

List of references (see clause 2)

Normative references

BSI publications
BRITISH STANDARDS INSTITUTION, London

BS 860:1967 (1989), *Tables for comparison of hardness scales.*

BS 891, *Methods for hardness test (Rockwell method) and for verification of hardness testing machines (Rockwell method).*

BS 891-1:1989, *Methods for hardness test (Rockwell method) and for verification of hardness testing machines (Rockwell method).*

BS 970:1991, *Specification for wrought steels for mechanical and allied engineering purposes.*

BS 970-1:1991, *General inspection and testing procedures and specific requirements for carbon, carbon manganese, alloy and stainless steels.*

BS 970-2:1988, *Requirements for steels for the manufacture of hot formed springs.*

BS 1202:1974, *Specification for nails.*

BS 1202-1:1974, *Steel nails.*

BS 3823:1990, *Grading of ash and hickory wood handles for hand tools.*

BS 4114:1967, *Specification for dimensional and quantity tolerances for steel drop and press forgings and for upset forgings made on horizontal forging machines.*

BS 6072:1981, *Method for magnetic particle flaw detection.*

© BSI 10-1999

BSI — British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover. Tel: 020 8996 9000. Fax: 020 8996 7400.

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services. Tel: 020 8996 9001. Fax: 020 8996 7001.

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact the Information Centre. Tel: 020 8996 7111. Fax: 020 8996 7048.

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration. Tel: 020 8996 7002. Fax: 020 8996 7001.

Copyright

Copyright subsists in all BSI publications. BSI also holds the copyright, in the UK, of the publications of the international standardization bodies. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI.

This does not preclude the free use, in the course of implementing the standard, of necessary details such as symbols, and size, type or grade designations. If these details are to be used for any other purpose than implementation then the prior written permission of BSI must be obtained.

If permission is granted, the terms may include royalty payments or a licensing agreement. Details and advice can be obtained from the Copyright Manager. Tel: 020 8996 7070.

BSI
389 Chiswick High Road
London
W4 4AL

标准分享网 www.bzfxw.com 免费下载