

Specification for

Hand hacksaw frames

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Machine, Engineers and Hand Tools Standards Policy Committee (MTE/-) to Technical Committee MTE/15, upon which the following bodies were represented:

- British Coal Corporation
- British Telecommunications plc
- Consumer Policy Committee of BSI
- Electricity Supply Industry in England and Wales
- Federation of British Engineers' Tool Manufacturers
- Federation of British Hand Tool Manufacturers
- Handle Manufacturers' Association
- Institute of Carpenters
- Institute of Trading Standards Administration
- Institution of Production Engineers
- Ministry of Defence

The following body was also represented in the drafting of the standard, through subcommittees and panels:

- Building Employers' Confederation

This British Standard, having been prepared under the direction of the Machine, Engineers and Hand Tools Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 28 February 1991

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Contents

	Page
Committees responsible	Inside front cover
Foreword	ii
1 Scope	1
2 Definitions	1
3 Hand hacksaw frames	1
4 Miniature hand hacksaw frames	4
5 Finish	4
6 Marking	5
Appendix A Performance tests for hand hacksaw frames	6
Appendix B Performance tests for miniature hand hacksaw frames	7
Appendix C Restrictions on the use of materials for hacksaw frames for use underground and in other potentially dangerous atmospheres	8
Appendix D Safe usage of hacksaws	8
Figure 1 — Typical hand hacksaw frame	2
Figure 2 — Typical designs of miniature hand hacksaw frames	3
Figure 3 — Test rig for hand hacksaw frames	6
Figure 4 — Test rig for miniature hand hacksaw frames	7
Figure 5 — Tensile test rig for miniature hand hacksaw frames	8
Publication(s) referred to	Inside back cover

Foreword

This British Standard has been prepared under the direction of the Machine, Engineers and Hand Tool Standards Policy Committee. It takes into account the specific requirements of the Ministry of Defence and of the British Coal Corporation. Performance tests are given for both hand hacksaw and miniature hand hacksaw frames.

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.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This British Standard specifies requirements for the design, dimensions, and performance of hand hacksaw frames to take blades of nominal length 300 mm complying with BS 1919 and of miniature hand hacksaw frames to take blades of nominal length 146 mm complying with BS 6271.

NOTE 1 Materials are at the discretion of the manufacturer provided that design and performance criteria are met. Normally the working parts are in steel and the handles in either die cast alloy, plastic injection mouldings or shaped wood.

NOTE 2 Restrictions on the use of materials for use underground and in other potentially explosive atmospheres are given in Appendix C.

NOTE 3 The titles of the publications referred to in this standard are given on the inside back cover.

2 Definitions

For the purposes of this British Standard the following definitions apply.

2.1 hacksaw frames

frames designed to take hacksaw blades of nominal length 300 mm

NOTE Typical hacksaw frames are shown in Figure 1 which also identifies important parts.

2.2 throat depth

the distance between the toothed edge of the hacksaw blade and the lower edge of the bow of the frame (see Figure 1 and Figure 2 for hacksaw frames and miniature hacksaw frames respectively)

2.3 tension pieces

those components which link the frame to the blade and through which the tensioning force is applied (see Figure 1)

2.4 pin hole

the hole at each end of the blade by means of which the blade is held and tensioned when inserted into a hand hacksaw frame (see Figure 1)

2.5 frame

- 1) of hacksaw frames. That component which incorporates a handle and tensioning pieces into which the blade is fitted (see Figure 1).
- 2) Of miniature hacksaw frames. That component which incorporates a handle and blade anchorage slots (see Figure 2).

2.6 blade retaining pin

the pin of the tensioning pieces which enters the pin hole of the blade thus enabling blade location and via which the tension is applied via the tensioning mechanism (see Figure 1)

2.7 handle

the piece by which the frame is gripped and through which the major cutting forces are applied (see Figure 1 and Figure 2 for hacksaw frames and miniature hacksaw frames respectively)

2.8 miniature hacksaw frames

frames designed to take miniature hacksaw blades of nominal length 146 mm

NOTE Typical frames are illustrated in Figure 2 which also identifies important parts.

2.9 blade anchorage slots/blade retainers

the means by which the blade pins are secured to the frame for tensioning (see Figure 2)

2.10 blade tensioning

the means by which the miniature hacksaw blade is tensioned in the frame (see Figure 2)

2.11 blade pin

the pin at each end of the miniature hacksaw blade by means of which it is held and tensioned in use

3 Hand hacksaw frames

NOTE This clause applies to hand hacksaw frames for use with a hand hacksaw blade of nominal length 300 mm as specified in BS 1919:1983.

3.1 Design

3.1.1 The frame shall provide a secure location for the blade parallel to the centre line axis of the frame. The tension pieces shall provide for this alignment along the whole length of the blade thus avoiding blade twist.

3.1.2 The handle shall provide a comfortable grip and isolate the hand from the throat area of the frame.

3.1.3 The frame shall provide a minimum tension of 450 N to the blade achieved within the elastic limit of the frame.

3.1.4 There shall be no rotation of the tension pieces when the blade is loaded to minimum tension.

3.1.5 The frame shall be protected against corrosion and rusting.