
International Standard



2728

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Woodworking tools — Plane irons

Outils pour le travail du bois — Fers de rabots

Second edition — 1982-11-01

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Descriptors : tools, woodworking, planers, blades, characteristics, dimensions.

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2728 was developed by Technical Committee ISO/TC 29, *Small tools*.

This second edition was submitted directly to the ISO Council, in accordance with clause 6.11.2 of part 1 of the Directives for the technical work of ISO. It cancels and replaces the first edition (i.e. ISO 2728-1973), which had been approved by the member bodies of the following countries :

| | | |
|---------------------|-----------------------|----------------|
| Austria | India | Sweden |
| Belgium | Israel | Thailand |
| Czechoslovakia | Italy | Turkey |
| Egypt, Arab Rep. of | Romania | United Kingdom |
| France | South Africa, Rep. of | |
| Hungary | Spain | |

The member body of the following country had expressed disapproval of the document on technical grounds :

Germany, F. R.

Woodworking tools – Plane irons

1 Scope and field of application

This International Standard specifies the characteristics of plane irons used in wooden bodied planes and metal bodied planes.

2 Reference

ISO/R 80, *Rockwell hardness test (B and C scales) for steel.*

3 Nomenclature

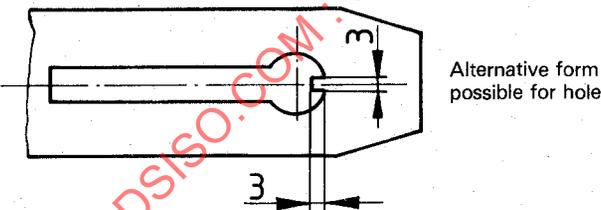
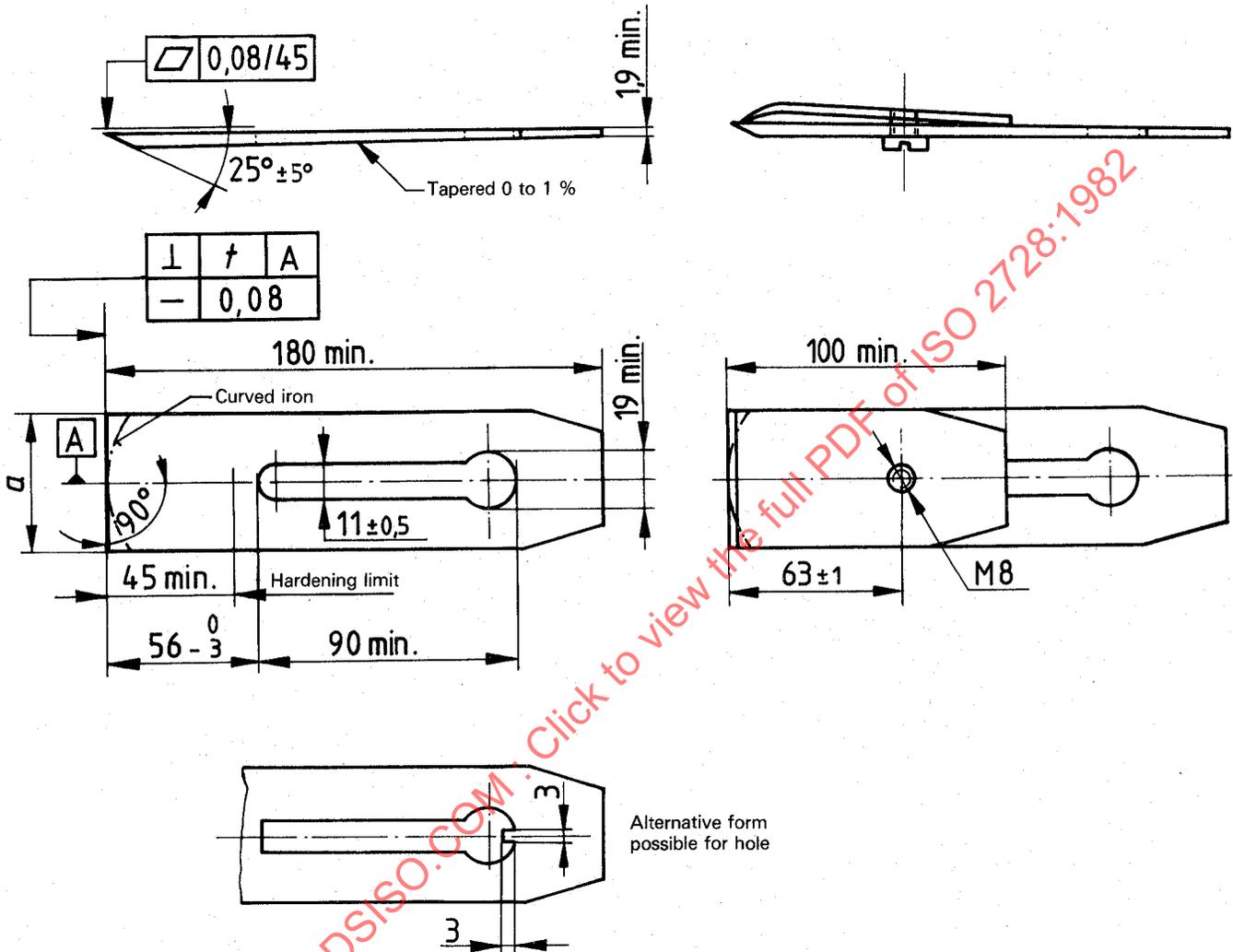
| No. | Denomination | No. | Denomination |
|-----|-------------------|-----|----------------|
| 1 | Single uncut iron | 6 | Slot (or hole) |
| 2 | Single cut iron | 7 | Cap iron |
| 3 | Cutting edge | 8 | Screw |
| 4 | Face | 9 | Double iron |
| 5 | Back | | |

| Type | Figures | Use |
|--|---------|---|
| Plane iron with tapered section, single (or with parallel section) | | Wooden bodied planes |
| Plane iron with tapered section, double | | Wooden bodied planes |
| Plane iron with parallel section, double | | Metal bodied planes (also wooden bodied planes) |

4 Dimensions

4.1 Tapered irons, irons with parallel section and cap irons (for wooden bodied planes)

Dimensions in millimetres



Recommended dimensions

| a j_s14 | | t |
|----------------|-------|------|
| mm | in | mm |
| 33 | — | 0,30 |
| 42 | — | 0,35 |
| 45 | 1 3/4 | 0,40 |
| 48 | — | 0,40 |
| 51 | 2 | 0,45 |
| 54 | 2 1/8 | 0,45 |
| 57 | — | 0,50 |

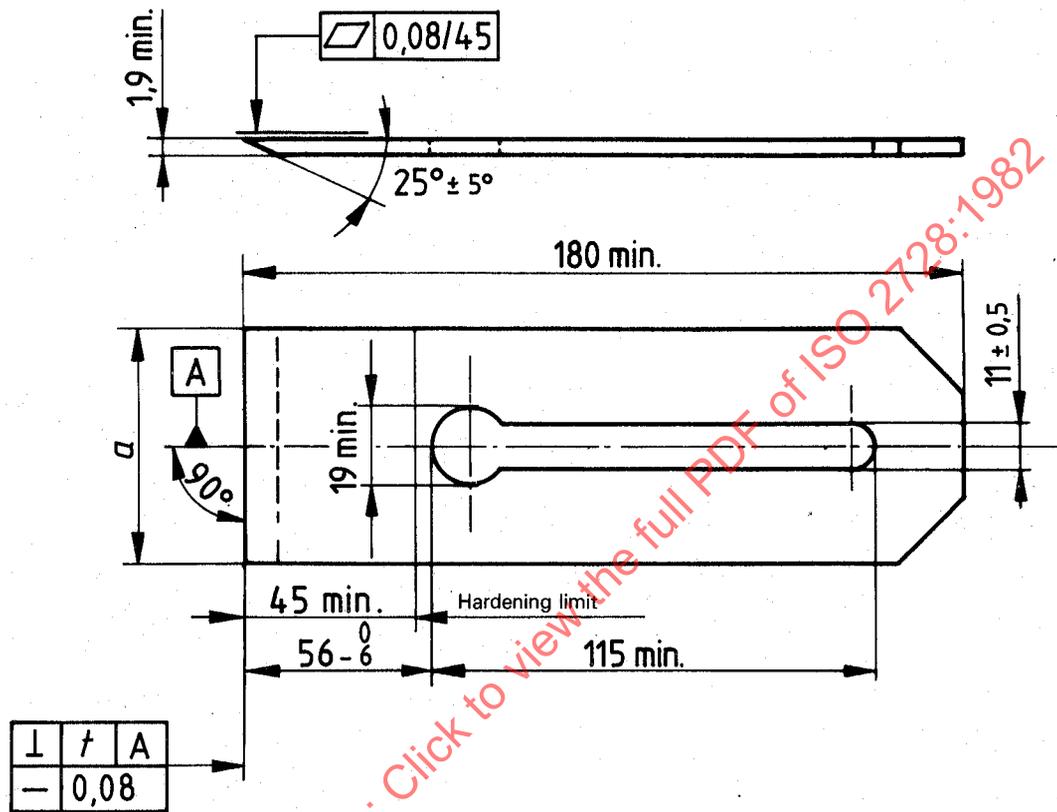
Provisional dimensions

| a j_s14 | | t |
|----------------|----|------|
| mm | in | mm |
| 36 | | 0,30 |
| 38 | | 0,35 |
| 40 | | 0,35 |
| 44 | | 0,40 |
| 46 | | 0,40 |
| 50 | | 0,45 |
| 60 | | 0,50 |

Figure 1 — Shape and dimensions

4.2 Parallel irons for metal bodied planes

Dimensions in millimetres



Dimensions in millimetres

| a | t |
|----------|------|
| $j_s 14$ | |
| 45 | 0,40 |
| 51 | 0,45 |
| 60 | 0,50 |

Figure 2 — Shape and dimensions

5 Technical specifications

Cut irons and cap irons of planes shall have dimensions in conformity with those given in 4.1 and 4.2. Their manufacture shall be such that they can withstand loads to which they are subjected during normal use.

5.1 Plane iron

5.1.1 Material

The cutting edge of the iron specified in this International Standard shall be manufactured from a material which, taking into account the stated hardness, gives a cutting edge quality the same as, or higher than, that of a tool steel of the following analysis, given for guidance.

| Limit | C | Si | Mn | P | S |
|-------|--------|--------|--------|---------|---------|
| min. | 1,05 % | 0,15 % | 0,25 % | | |
| max. | 1,25 % | 0,25 % | 0,4 % | 0,035 % | 0,035 % |

After heat treatment, the hardness of the part from the cutting edge to the hole (see figures) shall be a minimum of 60 HRC, in accordance with ISO/R 80.

5.1.2 Cutting edge

The cutting edge shall be ground sharp and ready for final honing.

5.1.3 Finish

Front, back and edge sides shall be ground or have an equivalent finish.

After finishing, a suitable protection shall be applied to prevent rusting.

5.2 Cap iron

The cap iron shall be manufactured from a material which, after or without heat treatment, has sufficient strength for satisfactory use. It shall be ground or have an equivalent finish and be protected against oxidation.

The tightening of the screw shall cause no deflections that might adversely affect use.

The locating edge shall be square relative to the centre line of the cap iron, with a tolerance of $\pm 1^\circ$.

When the screw is tightened, the cap iron and the cutter shall close together absolutely tightly at the extreme edge of the cap iron (line AB of figure 3), in order to avoid any intrusion of a shaving.

The cutter and cap iron assembly shall be wedge-shaped with edges of equal thickness, such as $CC' = DD'$, with a maximum difference of 0,3 mm.

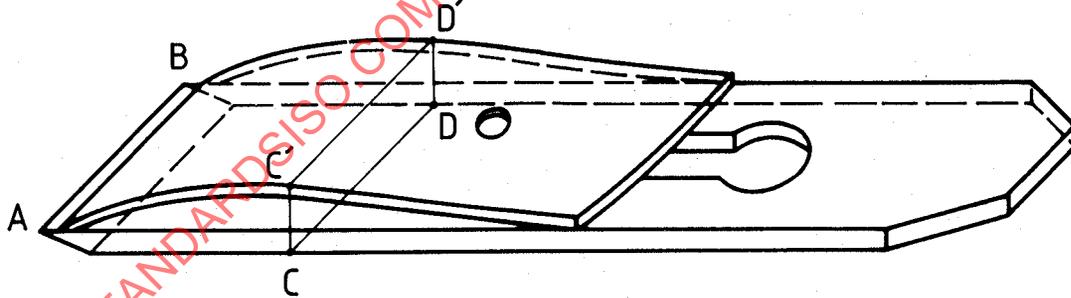


Figure 3 — Specification of cap iron