
**Resistance welding equipment — Angles
for mounting spot welding electrodes**

*Équipement de soudage par résistance — Angles utilisés pour le montage
d'électrodes de soudage par résistance par points*

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[ISO 12145:1998](https://standards.iteh.ai/catalog/standards/sist/27585761-9122-4b86-bbbe-fb7b0574e76c/iso-12145-1998)

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 12145 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 6, *Resistance welding*.

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Resistance welding equipment — Angles for mounting spot welding electrodes

1 Scope

This International Standard specifies angles for angular adjustment of electrode caps, adaptors and point adaptors.

The angles are applicable when straight fixed electrodes cannot be used to obtain the correct position for welding a single spot.

For examples of application see figure 1.

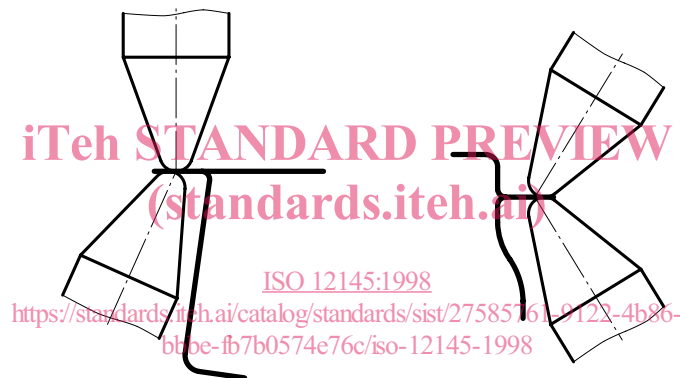


Figure 1 — Application of electrode adaptors with caps in an angular position

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 5821:1979, *Resistance spot welding electrode caps*.

ISO 5830:1984, *Resistance spot welding – Male electrode caps*.

3 Angles

A preferred angle α for shape of electrode caps, electrode adaptors and point adaptors for male electrode caps are 5°, 10°, 15°, 22,5° and 30°.

Figures 2 to 5 show examples of the angles.

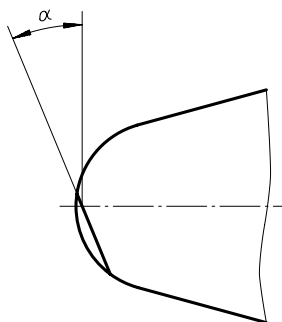


Figure 2 — Example of shape of electrode caps – concentric load

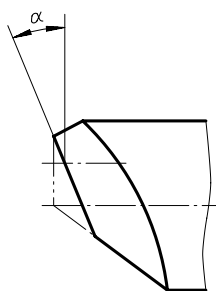


Figure 3 — Example of shape of electrode caps – eccentric load

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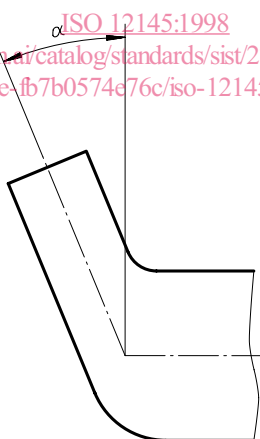


Figure 4 — Electrode adaptors, male taper: 1:10

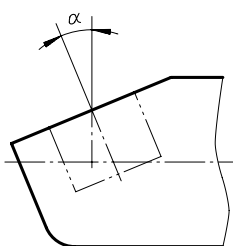


Figure 5 — Point adaptors for male electrode caps

4 Designation

For electrode caps type E and D in accordance with ISO 5821 and male electrode caps type L in accordance with ISO 5830, the designation shall include the marking of the relevant International Standard.

EXAMPLE

A male electrode cap in accordance with ISO 5830 with angle 5°, diameter 16 mm and length 25 mm is designated as follows:

ISO 12145/5830 - L 16 × 25 - 5°

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ICS 25.160.30

Descriptors: electric welding, spot welding, resistance welding, welding equipment, resistance welding electrodes, positioning, adjustment, angles (geometry), designation, marking.

Price based on 3 pages
