

# INTERNATIONAL STANDARD

ISO  
8430-2

First edition  
1988-12-01



INTERNATIONAL ORGANIZATION FOR STANDARDIZATION  
ORGANISATION INTERNATIONALE DE NORMALISATION  
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

## Resistance spot welding — Electrode holders —

### Part 2 : Morse taper fixing

iteh STANDARD PREVIEW  
(standards.iteh.ai)

*Soudage par points par résistance — Porte-électrodes —*

*Partie 2: Cône Morse de fixation*

ISO 8430-2:1988

<https://standards.iteh.ai/catalog/standards/sist/752cd4a3-4c32-46f5-b1f7-3b5ebae27029/iso-8430-2-1988>

Reference number  
ISO 8430-2: 1988 (E)

## 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 approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8430-2 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*.

ISO 8430 consists of the following parts, under the general title *Resistance spot welding — Electrode holders*:

- *Part 1: Taper fixing 1 : 10*
- *Part 2: Morse taper fixing*
- *Part 3: Parallel shank fixing for end thrust*

# Resistance spot welding — Electrode holders —

## Part 2 : Morse taper fixing

### 1 Scope

This part of ISO 8430 specifies the dimensions and tolerances of resistance spot welding electrode holders (type B) without offset and with a facility for cable clamping, and where a male Morse taper is used to fix the holder directly to the welding cylinder in multiple spot welding equipment.

### 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 8430. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 8430 are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1642 : 1987, *Plastics — Industrial laminated sheets based on thermosetting resins — Specification*.

ISO 5182 : 1978, *Materials for resistance welding electrodes and ancillary equipment*.

ISO 5183-1 : 1988, *Resistance spot welding — Electrode adaptors, male taper 1:10 — Part 1 : Conical fixing, taper 1:10*.

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

ISO 5822 : 1982, *Spot welding equipment — Taper plug gauges and taper ring gauges*.

ISO 5828 : 1983, *Resistance welding equipment — Secondary connecting cables with terminals connected to water-cooled lugs — Dimensions and characteristics*.

ISO 7285 : — <sup>1)</sup>, *Pneumatic cylinders for mechanized multiple spot welding*.

ISO 9313 : 1988, *Resistance spot welding equipment — Cooling tubes*.

### 3 Dimensions

The dimensions shall be those given in figure 1 and table 1.

### 4 Designation

The designations of electrode holders which comply with this part of ISO 8430 shall comprise the following information in the order given :

- the description block (i.e. "spot welding electrode holder");
- a reference to this part of ISO 8430;
- the type of electrode holder (type B);
- the reference diameter, in millimetres;
- the total length,  $l_4$ , in millimetres;
- the material of which the electrode holder is made, in accordance with ISO 5182.

Example:

A type B (Morse fixing) spot welding electrode holder, of reference diameter 16 mm, total length  $l_4 = 103$  mm and material type A 2/1, shall be designated as follows :

**Spot welding electrode holder**  
**ISO 8430-2-B-16 × 103-A 2/1**

### 5 Materials

The material of which the electrode holder is made shall be in accordance with ISO 5182, preferably group A, type 2.

The insulation shall be made of the following material: fabric base laminate ISO 1642-PFCC2.

### 6 Delivery conditions

The fixing shall be protected against damage, e.g. by a coating of synthetic resin.

### 7 Marking

Electrode holders complying with this part of ISO 8430 shall be marked with the designation laid down in clause 4, but excluding the description block and the reference number of this part of ISO 8430, for example :

**B-16 × 103-A 2/1**

<sup>1)</sup> To be published.

Technical drawing of a pipe plug assembly, showing three views: front view, side view, and cross-section A-A.

**Front View Dimensions:**

- Overall length:  $l_4$
- Distance from top to start of taper: 16
- Distance from start of taper to end:  $e$
- Maximum height of the main body: 32 max.
- Radius of the main body: 3,2
- Minimum distance from the bottom of the main body to the start of the taper: 40 min.
- Distance from the bottom of the main body to the start of the taper:  $l_3$
- Distance from the start of the taper to the end:  $d_2$
- Distance from the start of the taper to the end:  $d_1$
- Morse taper No.3
- Radius of the taper: 0,8

**Side View Dimensions:**

- Overall diameter: 38
- Distance from the top of the taper to the start of the main body: 30 ± 0,5
- Distance from the start of the main body to the end:  $l_1$
- Distance from the start of the main body to the end:  $l_2$
- Distance from the start of the main body to the end: 6
- Distance from the start of the main body to the end:  $t$
- Gauge

**Cross-section A-A Dimensions:**

- Distance from the top of the taper to the start of the main body:  $G \frac{1}{8}$
- Radius of the main body: 0,8
- Radius of the main body: 3,2
- Hexagon socket pipe plug
- Pipe plug

**Other Labels:**

- Insulation
- Water inlet
- Water outlet
- Designation mark

**ISO 8430-2:1988**  
<https://standards.iteh.ai/catalog/standards/sist/752cd4a3-4c32-46f5-b1f7-3b5ebae27029/iso-8430-2-1988>

\* For the taper gauge, see ISO 5822.

Table 1 — Dimensions

Dimensions in millimetres

Reference diameter <sup>1)</sup>	$d_1$	$d_2$	$e$	$l_1$	$l_2$	$l_3$	$l_4$	$t$	Total length of cooling tube <sup>2)</sup>
13	12,7	11,1	52	80	50	13	85	26	$l_5^{3)}$ + 15
16	15,5	13,5	52	80	50	13	85	26	$l_5^{3)}$ + 16
			70				103		
20	19	16,5	70	90	60	23	103	36	$l_5^{3)}$ + 26
			80				113		

1) The reference diameter corresponds to the electrode and electrode adaptor diameters.

2) See ISO 9313.

3) See ISO 5183-1.

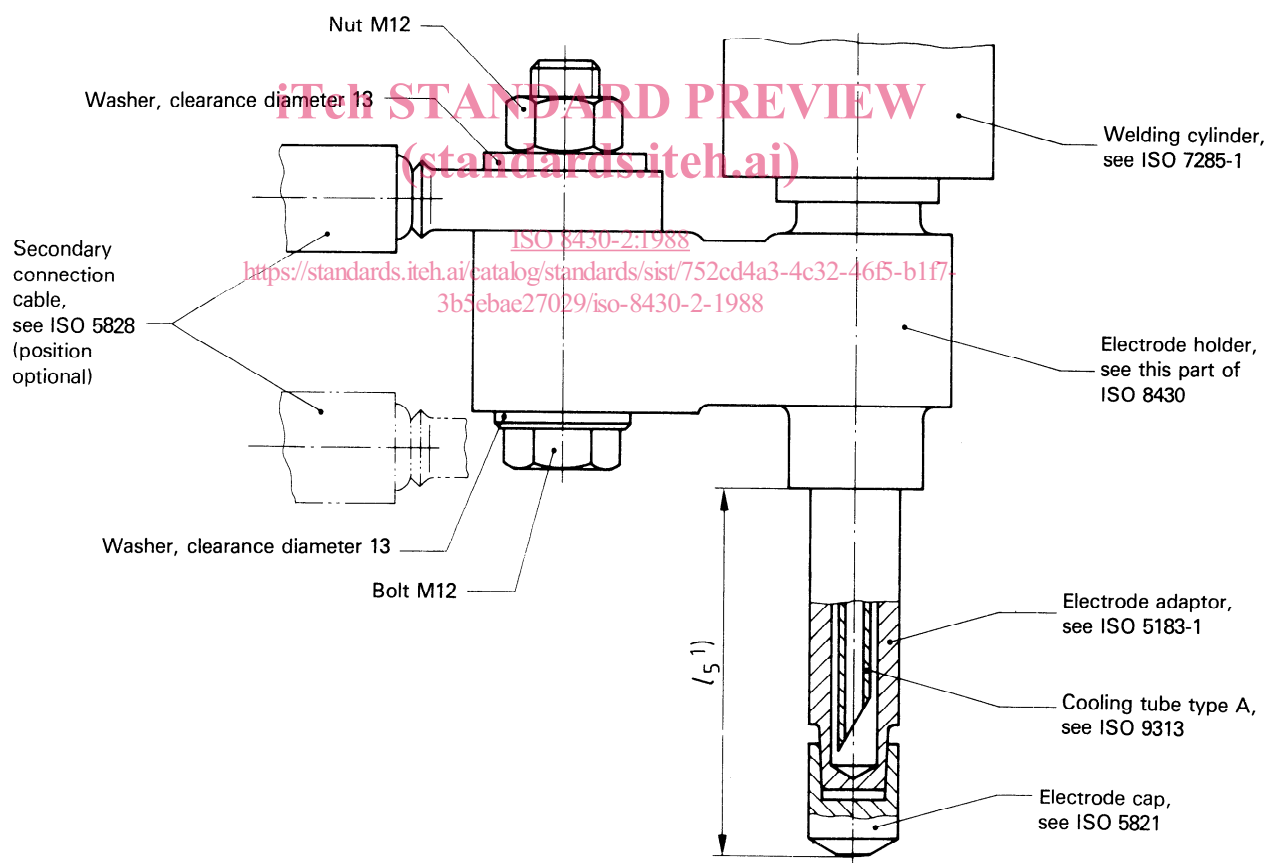


Figure 2 — Example of assembly

1) See ISO 5183-1.

# iTeh STANDARD PREVIEW

(standards.iteh.ai)

This page intentionally left blank

ISO 8430-2:1988

<https://standards.iteh.ai/catalog/standards/sist/752cd4a3-4c32-46f5-b1f7-3b5ebae27029/iso-8430-2-1988>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

This page intentionally left blank

ISO 8430-2:1988

<https://standards.iteh.ai/catalog/standards/sist/752cd4a3-4c32-46f5-b1f7-3b5ebae27029/iso-8430-2-1988>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

ISO 8430-2:1988

<https://standards.iteh.ai/catalog/standards/sist/752cd4a3-4c32-46f5-b1f7-3b5ebae27029/iso-8430-2-1988>

---

**UDC 621.791.763.1.039**

**Descriptors :** welding, resistance welding, spot welding, resistance welding electrodes, electrode holders, welding equipment, dimensions, designation.

Price based on 3 pages

---