
**Plastics pipes and fittings — Equipment for
fusion jointing polyethylene systems —**

**Part 2:
Electrofusion**

*Tubes et raccords en matières plastiques — Appareillage pour
l'assemblage par soudage des systèmes en polyéthylène —*

Partie 2: Électrosoudage



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this part of ISO 12176 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 12176-2 was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 4, *Plastics pipes and fittings for the supply of gaseous fuels*.

ISO 12176 consists of the following parts, under the general title *Plastics pipes and fittings — Equipment for fusion jointing polyethylene systems*:

- Part 1: *Butt fusion*
- Part 2: *Electrofusion*
- Part 3: *Operator's badge*
- Part 4: *Traceability coding*

Annexes A, C and D form a normative part of this part of ISO 12167. Annex B is for information only.

Plastics pipes and fittings — Equipment for fusion jointing polyethylene systems —

Part 2: Electrofusion

1 Scope

This part of ISO 12176 specifies the main performance requirements for electrofusion control units for use with PE electrofusion fittings, conforming to ISO 8085-3, for gas distribution systems. The control units are divided into two input voltage classes: SVLV [safety, very low voltage (0 V to 50 V)] and LV [low voltage (50 V to 240 V)].

This part of ISO 12176 is applicable to electrofusion control units designed for use in the construction of joints between polyethylene (PE) pipes and fittings conforming to ISO standards for gas distribution systems, where the normal operating temperature of the control unit is in the range of $-10\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$. If temperatures outside this range are expected, suitable operating limits will have to be agreed between manufacturer and purchaser.

This part of ISO 12176 is applicable to control units with current or voltage control for fitting systems based on standard resistance wire heating technology.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 12176. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 12176 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of ISO and IEC maintain register of currently valid International Standards.

ISO 8085-3:—¹⁾, *Polyethylene fittings for use with polyethylene pipes for the supply of gaseous fuels — Metric series — Specifications — Part 3: Electrofusion fittings*.

ISO/TR 13950:1997, *Plastics pipes and fittings — Automatic recognition systems for electrofusion*.

IEC 60068-2-27:1987, *Environmental testing — Part 2: Tests — Test Ea and guidance: Shock*.

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*.

IEC 60742:1983, *Isolating transformers and safety isolating transformers — Requirements*, and its Amendment No. 1:1992.

1) To be published.