

Pneumatic cylinders for mechanized multiple spot welding (ISO 7285:1995)

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NATIONAL FOREWORD

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ICS 25.160.30

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EUROPEAN STANDARD

EN ISO 7285

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2021

ICS 25.160.30

English Version

Pneumatic cylinders for mechanized multiple spot welding (ISO 7285:1995)

Vérins pneumatiques pour soudage multipoints
mécanisés (ISO 7285:1995)

Pneumatik-Schweißzylinder für
Vielpunktschweißeinrichtungen (ISO 7285:1995)

This European Standard was approved by CEN on 6 December 2020.

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of ISO 7285:1995 has been prepared by Technical Committee ISO/TC "Welding and allied processes" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 7285:2021 by Technical Committee CEN/TC 121 "Welding and allied processes" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2021, and conflicting national standards shall be withdrawn at the latest by July 2021.

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Endorsement notice

The text of ISO 7285:1995 has been approved by CEN as EN ISO 7285:2021 without any modification.

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International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

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 7285 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 6, *Resistance welding*.

Annexes A, B and C form an integral part of this International Standard. Annex D is for information only.

Pneumatic cylinders for mechanized multiple spot welding

1 Scope

This International Standard specifies the requirements of the geometrical and mechanical characteristics of pneumatic cylinders used for multiple spot welding machines and their manufacturing, delivery and test specifications.

These cylinders for a nominal air pressure of 1 MPa (10 bar) are double-acting, with two piston stages in series for the advance during the operational stroke and the force, and a single piston stage for the return.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was 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 edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4394-1:1980, *Fluid power systems and components — Cylinder barrels — Part 1: Requirements for steel tubes with specially finished bores.*

3 Nominal characteristics

The cylinders covered by this International Standard are characterized by their nominal stroke, their nominal force and their outside dimensions.

3.1 Nominal strokes

The nominal strokes standardized, in millimetres, are

25 — 31,5 — 40 — 50 — 63 — 80 — 100 — 125 — 160

3.2 Nominal forces

The nominal forces standardized, in kilonewtons, for a pressure of 1 MPa (10 bar) are

2,19 — 2,86 — 3,61 — 4,61 — 5,92 — 7,60 — 9,74

4 Fixing the cylinder

The cylinder is mounted on the machine by one of the methods A to H described in annex A.

5 Dimensions

5.1 Outside dimensions

Depending on the method of mounting the cylinder, the nominal force and the nominal stroke, the cylinders shall have the dimensions indicated in the drawings in annex C taking into account the characteristics of the electrode holder attachment indicated in annex B.

The nominal values of the maximum outside dimensions, in millimetres, are

46 — 51 — 56 — 63 — 71 — 80 — 90

5.2 Bore diameter

The recommended dimensions, in millimetres, are

40 — 45 — 50 — 56 — 63 — 71 — 80

Tolerances shall be in accordance with ISO 4394-1 — H12.