INTERNATIONAL STANDARD

ISO 3601-4

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Fluid power systems — O-rings —

Part 4: Anti-extrusion rings (back-up rings)

Transmissions hydrauliques et pneumatiques — Joints toriques —

Partie 4: Bagues anti-extrusion

Reference number
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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 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 3601-4 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 7, *Sealing devices*.

ISO 3601 consists of the following parts, under the general title *Fluid power systems — O-rings*:

— *Part 1: Inside diameters, cross-sections, tolerances and designation codes*

— *Part 2: Housing dimensions for general applications*

— *Part 3: Quality acceptance criteria*

— *Part 4: Anti-extrusion rings (back-up rings)*

— *Part 5: Suitability of elastomeric materials for industrial applications*

Introduction

In fluid power systems, power is transmitted and controlled through a fluid (liquid or gas) under pressure within an enclosed circuit. Where high pressures are encountered, it is recommended that an anti-extrusion ring (back-up ring) be incorporated within the O-ring housing to limit extrusion of the O-ring between the metal parts (e.g. cylinder bore and piston or rod and housing).

Fluid power systems — O-rings —

Part 4: Anti-extrusion rings (back-up rings)

1 Scope

This part of ISO 3601 specifies dimensions and tolerances for five types of anti-extrusion rings, which are also known as back-up rings:

a) spiral type (T1);

b) angle cut type (T2);

c) solid type (T3);

d) angle cut concave type (T4);

e) solid concave type (T5).

These anti-extrusion rings are for use with selected O-ring sizes as specified in ISO 3601-1 and the relevant housing dimensions specified in ISO 3601-2.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3601-1[1)], *Fluid power systems — O-rings — Part 1: Inside diameters, cross-sections, tolerances and designation codes*

ISO 3601-2:2008, *Fluid power systems — O-rings — Part 2: Housing dimensions for general applications*

ISO 5598, *Fluid power systems and components — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5598 apply.

1) To be published. (Revision of ISO 3601-1:2002)