
Fluid power systems — O-rings —
Part 1:
Inside diameters, cross-sections,
tolerances and designation codes
AMENDMENT 1

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Transmissions hydrauliques et pneumatiques — Joints toriques —
Partie 1: Diamètres intérieurs, sections, tolérances et codes
d'identification dimensionnelle

ISO 3601-1:2012/Amd 1:2019

AMENDEMENT 1

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Published in Switzerland

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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

A list of all parts in the ISO 3601 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Fluid power systems — O-rings —

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

AMENDMENT 1

Page 1, Scope

Replace the Scope with the following:

This document specifies the inside diameters, cross-sections, tolerances and designation codes for O-rings used in fluid power systems for general industrial and aerospace applications.

The ISO 3601 series of standards basically addresses O-rings with moulded cross-sections without a radial joint. The dimensions and tolerances specified in this document are suitable for any elastomeric material, provided that suitable tooling is available.

NOTE The tooling most commonly available is based on 70 IRHD NBR shrinkage rates (see ISO 48). For materials that shrink differently from this standard NBR compound, a special mould can be required to maintain the mean diameters and the tolerance limits listed.

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Page 31, Table A.1

Replace [Table A.1](#) with the following (three tolerance ranges for non-standard O-rings with cross section diameters $d_2 > 8,4$ mm have been added):

Table A.1 — Tolerances of cross-section diameters for non-standard O-rings

Cross-section d_2 mm	Tolerance mm	Cross-section d_2 in	Tolerance in
$0,80 \leq d_2 \leq 3,15^a$	$\pm 0,08$	$0,031 \leq d_2 \leq 0,124^a$	$\pm 0,003$
$0,80 \leq d_2 \leq 2,25^b$	$\pm 0,08$	$0,031 \leq d_2 \leq 0,089^b$	$\pm 0,003$
$2,25 < d_2 \leq 3,15^b$	$\pm 0,09$	$0,089 < d_2 \leq 0,124^b$	$\pm 0,004^c$
$3,15 < d_2 \leq 4,50$	$\pm 0,10$	$0,124 < d_2 \leq 0,177$	$\pm 0,004^c$
$4,50 < d_2 \leq 6,30$	$\pm 0,13$	$0,177 < d_2 \leq 0,248$	$\pm 0,005$
$6,30 < d_2 \leq 8,40$	$\pm 0,15$	$0,248 < d_2 \leq 0,331$	$\pm 0,006$
$8,40 < d_2 \leq 10,00^d$	$\pm 0,20$	$0,331 < d_2 \leq 0,394^d$	$\pm 0,008$
$10,00 < d_2 \leq 12,00^d$	$\pm 0,25$	$0,394 < d_2 \leq 0,472^d$	$\pm 0,010$

^a Applies to class A only.

^b Applies to class B only.

^c Differences between tolerance values are due to conversion of dimensions from metric to inch and rounding rules.

^d Tolerances apply to O-rings with inside diameters $d_1 \leq 660$ mm (25,98 in). Tolerances for diameters $d_1 > 660$ mm (25,98 in) shall be agreed upon between customer and manufacturer.

Table A.1 (continued)

Cross-section d_2 mm	Tolerance mm	Cross-section d_2 in	Tolerance in
$12,00 < d_2 \leq 14,00^d$	$\pm 0,28$	$0,472 < d_2 \leq 0,551^d$	$\pm 0,011$
<p>^a Applies to class A only.</p> <p>^b Applies to class B only.</p> <p>^c Differences between tolerance values are due to conversion of dimensions from metric to inch and rounding rules.</p> <p>^d Tolerances apply to O-rings with inside diameters $d_1 \leq 660$ mm (25,98 in). Tolerances for diameters $d_1 > 660$ mm (25,98 in) shall be agreed upon between customer and manufacturer.</p>			

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