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Fluid power systems — O-rings —

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

AMENDMENT 1

Transmissions hydrauliques et pneumatiques — Joints toriques —

Partie 1: Diamètres intérieurs, sections, tolérances et codes d'identification dimensionnelle

AMENDEMENT 1

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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.

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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.

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]	±0,08	$0{,}031 \leq d_2 \leq 0{,}124$[a]	±0,003
$0{,}80 \leq d_2 \leq 2{,}25$[b]	±0,08	$0{,}031 \leq d_2 \leq 0{,}089$[b]	±0,003
$2{,}25 < d_2 \leq 3{,}15$[b]	±0,09	$0{,}089 < d_2 \leq 0{,}124$[b]	±0,004[c]
$3{,}15 < d_2 \leq 4{,}50$	±0,10	$0{,}124 < d_2 \leq 0{,}177$	±0,004[c]
$4{,}50 < d_2 \leq 6{,}30$	±0,13	$0{,}177 < d_2 \leq 0{,}248$	±0,005
$6{,}30 < d_2 \leq 8{,}40$	±0,15	$0{,}248 < d_2 \leq 0{,}331$	±0,006
$8{,}40 < d_2 \leq 10{,}00$[d]	±0,20	$0{,}331 < d_2 \leq 0{,}394$[d]	±0,008
$10{,}00 < d_2 \leq 12{,}00$[d]	±0,25	$0{,}394 < d_2 \leq 0{,}472$[d]	±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]	±0,28	$0{,}472 < d_2 \leq 0{,}551$[d]	±0,011

[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.