

# JAPANESE INDUSTRIAL STANDARD

Translated and Published by Japanese Standards Association

JIS B 2401-2:2012

(JFPA/JSA)

O-rings — Part 2: Housing dimensions and sizes

ICS 23.100.60;83.140.50

Reference number: JIS B 2401-2:2012 (E)

B 2401-2:2012

Date of Establishment: 2012-03-21

Date of Public Notice in Official Gazette: 2012-03-21

Investigated by: Japanese Industrial Standards Committee

Standards Board

**Technical Committee on Machine Elements** 

JIS B 2401-2: 2012, First English edition published in 2012-11

Translated and published by: Japanese Standards Association 4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

In the event of any doubts arising as to the contents, the original JIS is to be the final authority.

© JSA 2012

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan KA/HN

## Contents

		Pag	ţе
Introduction ····································			
1	Scope ·····		
2	Normative referen	ces ······ 1	
3	Terms and definiti	ons2	
4	Symbols ·····	2	
5 5.1	Cross-sectional shaplications	sions of housings	
5.2 5.3 5.4	Decision of necessi Shape and dimens	ty of back-up ring	
5.5 5.6 5.7	Shape and dimens Shape and dimens Basic dimensions	ions of housings for static (plane) applications	
<ul><li>5.8</li><li>5.9</li></ul>	Design standard f applications Determination of	or housings for O-rings for hydraulic and pneumatic  the proper O-ring dimensions for custom housings I surface seal and plane seal applications	
6 6.1 6.2 6.3	Matters to be considered concerning the installation of O-rings ········18 Cross-sectional shape of housings for cylindrical surface applications ······18 Chamfering of the installation part ········19 Installation when the O-ring passes through a threaded part or other acute angle ·······20		
Annex	x A (informative)	Determination of the proper O-ring dimensions for custom housings used for cylindrical surface seal and plane seal applications	
Annex	x JA (normative)	Basic dimensions of housings for ISO O-rings for general industrial applications (Series F)28	
Annex	x JB (informative)	Design standard for housings for O-rings for hydraulic and pneumatic applications46	
Annex	x JC (informative)	Comparison table between JIS and the corresponding International Standard	

## Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal for establishment of Japanese Industrial Standard submitted by Japan Fluid Power Association (JFPA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

Consequently JIS B 2406:1991 has been withdrawn and replaced with this Standard.

This **JIS** document is protected by the Copyright Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public or utility model right. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public or the utility model right.

JIS B 2401 series consists of the following 4 parts under the general title "O-rings":

Part 1: O-rings

Part 2: Housing dimensions and sizes

Part 3: Quality acceptance criteria

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

# O-rings — Part 2: Housing dimensions and sizes

JIS B 2401-2: 2012

#### Introduction

This Japanese Industrial Standard has been prepared based on the first edition of ISO 3601-2 published in 2008 with some modifications of the technical contents which reflect the demands of the Japanese market.

The portions given continuous sidelines or dotted underlines are the matters in which the contents of the original International Standard have been modified. A list of modifications with the explanations is given in Annex JC. Annex JA and Annex JB contain matters that are not given in the corresponding International Standard.

## 1 Scope

This Standard specifies the shapes and dimensions of housings for O-rings used for general machinery applications (hereafter referred to as the "housings"), with or without back-up rings. The basic housing dimensions for ISO O-rings for general industrial applications (Series F) specified in ISO 3601-2 are given in Annex JA.

For shapes and dimensions of O-rings, see JIS B 2401-1.

- NOTE 1 Housing dimensions for special applications shall be as agreed between the purchaser and the manufacturer.
- NOTE 2 The design standard for O-ring housings for hydraulic and pneumatic applications is given in Annex JB.
- NOTE 3 The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 3601-2: 2008 Fluid power systems — O-rings — Part 2: Housing dimensions for general applications (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 0142 Fluid power systems and components — Vocabulary

NOTE: Corresponding International Standard: **ISO 5598**: 2008 Fluid power systems and components — Vocabulary (MOD)

JIS B 2401-1 O-rings — Part 1: O-rings

NOTE: Corresponding International Standard: ISO 3601-1 Fluid power sys-