



JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

---

JIS B 1584-3 : 2010

(JSME/JSA)

**Plain bearings—Wrapped bushes—  
Part 3: Lubrication holes, grooves  
and indentations**

---

ICS 21.100.10

Reference number : JIS B 1584-3 : 2010 (E)

PROTECTED BY COPYRIGHT

 **Documents**  
Document Sharing Hub

9 5

Date of Establishment: 2010-12-20

Date of Public Notice in Official Gazette: 2010-12-20

Investigated by: Japanese Industrial Standards Committee  
Standards Board

Technical Committee on Machine Elements

---

JIS B 1584-3 : 2010, First English edition published in 2011-03

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 2011

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

PROTECTED BY COPYRIGHT

## Contents

|                                                                                                       | Page |
|-------------------------------------------------------------------------------------------------------|------|
| Introduction .....                                                                                    | 1    |
| 1 Scope .....                                                                                         | 1    |
| 2 Normative references .....                                                                          | 1    |
| 3 Terms and definitions .....                                                                         | 2    |
| 4 Symbols and units .....                                                                             | 2    |
| 5 Common matters on lubrication holes, grooves and indentations .....                                 | 2    |
| 6 Shape and dimensions of lubrication holes .....                                                     | 2    |
| 7 Lubrication grooves .....                                                                           | 3    |
| 7.1 General .....                                                                                     | 3    |
| 7.2 Shapes and dimensions of lubrication grooves .....                                                | 4    |
| 8 Lubrication indentations .....                                                                      | 7    |
| Annex A (informative) Shapes and dimensions of lubrication indentations .....                         | 8    |
| Annex JA (informative) Comparison table between JIS and corresponding<br>International Standard ..... | 11   |

## 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 of establishing a Japanese Industrial Standard submitted by The Japan Society of Mechanical Engineers (JSME)/Japanese Standards Association (JSA) with a draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

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, utility model right or application for registration of utility model after opening to the public which have technical properties. 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, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

**JIS B 1584** series consists of the following 3 parts under the general title “*Plain bearings — Wrapped bushes*”:

*Part 1: Dimensions*

*Part 3: Lubrication holes, grooves and indentations*

*Part 4: Materials*

# Plain bearings — Wrapped bushes — Part 3: Lubrication holes, grooves and indentations

## Introduction

This Japanese Industrial Standard has been prepared based on the second edition of **ISO 3547-3** published in 2006 with some modifications of the technical contents in response to the actual situation in Japan.

The portions given 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 JA.

## 1 Scope

This Standard specifies the shapes and dimensions of lubrication holes and lubrication grooves, and the shapes of lubrication indentations of wrapped bushes.

NOTE : The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

**ISO 3547-3** : 2006 *Plain bearings — Wrapped bushes — Part 3: Lubrication holes, grooves and indentations* (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) listed below shall be applied.

JIS B 0162-1 *Plain bearings — Terms, definitions and classification — Part 1: Design, bearing materials and their properties*

NOTE : Corresponding International Standard : **ISO 4378-1** *Plain bearings — Terms, definitions and classification — Part 1: Design, bearing materials and their properties* (MOD)

JIS B 0163-2 *Plain bearings — Symbols — Part 2: Applications*

JIS B 1584-1 *Plain bearings — Wrapped bushes — Part 1: Dimensions*

NOTE : Corresponding International Standard : **ISO 3547-1** *Plain bearings — Wrapped bushes — Part 1: Dimensions* (MOD)

ISO 3547-7 *Plain bearings — Wrapped bushes — Part 7: Measurement of wall thickness of thin-walled bushes*

### 3 Terms and definitions

For the purposes of this Standard, the terms and definitions given in **JIS B 0162-1** and **JIS B 0163-2** shall apply.

### 4 Symbols and units

For the purposes of this Standard, the symbols and the units shall be as given in table 1.

**Table 1 Symbols and units**

| Symbol     | Definition                               | Unit |
|------------|------------------------------------------|------|
| $B$        | Width of the bush                        | mm   |
| $D_i$      | Inside diameter of the bush              | mm   |
| $d_L$      | Diameter of the lubrication hole         | mm   |
| $e$        | Distance between the lubrication grooves | mm   |
| $n_1, n_2$ | Width of lubrication groove              | mm   |
| $R$        | Radius of lubrication groove             | mm   |
| $s_3$      | Wall thickness                           | mm   |
| $s_4$      | Residual wall thickness                  | mm   |

### 5 Common matters on lubrication holes, grooves and indentations

Common matters on lubrication holes, grooves and indentations shall be as follows.

- Lubrication holes, grooves and indentations may be worked in the flat strip prior to forming.
- Dimensional changes in lubrication holes, grooves and indentations caused by the forming of the strip are permissible.
- Marks of lubrication grooves and indentations produced by stamping may appear on the back of bush.
- Small cracks in the bearing material in lubrication grooves and indentations are permissible, provided that no pieces of bearing material become detached.
- Dimensions not specifically specified shall be upon the agreement between the parties concerned with delivery.
- Shapes and dimensions of lubrication holes and grooves shall be as given in table 2 to table 6.

### 6 Shape and dimensions of lubrication holes

The shape and dimensions of lubrication hole shall be as given in table 2. Lubrication holes in the hatched area shown in **b)** of table 2 should be avoided as far as possible.