

JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

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**JIS B 4118** : 2005  
(JCTMA/JSA)

**Solid hardmetal ball-nosed end mills  
with cylindrical shank—Dimensions**

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ICS 73.120

Reference number : JIS B 4118 : 2005 (E)

## 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 from Japan Cemented Carbide Tool Manufacturers' Association (JCTMA)/ Japanese Standards Association (JSA), with a draft of Industrial Standard based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

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Date of Establishment: 2005-03-20

Date of Public Notice in Official Gazette: 2005-03-22

Investigated by: Japanese Industrial Standards Committee  
Standards Board  
Technical Committee on Machine Elements

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JIS B 4118:2005, First English edition published in 2006-07

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

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In the event of any doubts arising as to the contents,  
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Printed in Japan

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## Solid hardmetal ball-nosed end mills with cylindrical shank—Dimensions

**1 Scope** This Japanese Industrial Standard specifies the shape and the dimensions of solid hardmetal ball-nosed end mills with cylindrical shank (hereafter referred to as “end mills”).

**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 0172 *Glossary of terms for milling cutters*

Remarks : **ISO 3855:1977** *Milling cutters—Nomenclature* is equivalent to the said standard.

JIS B 0401-2 *ISO system of limits and fits—Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts*

Remarks : **ISO 286-2:1988** *ISO system of limits and fits—Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts* is identical with the said standard.

JIS B 4053 *Application of hard cutting materials for machining by chip removal—Designation of the main groups of chip removal and groups of application*

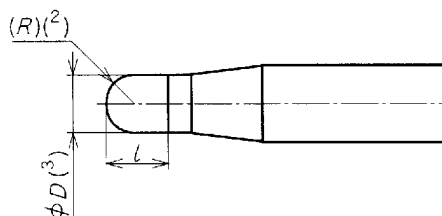
Remarks : **ISO 513:1991** *Application of hard cutting materials for machining by chip removal—Designation of main groups of chip removal and groups of application* is equivalent to the said standard.

**3 Types** End mills shall be classified into four types shown in table 1, according to the cutter length  $l$  and whether the recess<sup>(1)</sup> is provided or not.

Note (1) This designates the clearance in the diametrical direction at the neck.

**Table 1 Types of end mill**

**Type 1 and Type 3**



**Type 2 and Type 4**

