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Hydraulic fluid power — Cylinders — Dimensions and tolerances of housings for single-acting piston and rod seals in reciprocating applications

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In the event of any doubts arising as to the contents,
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Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Fluid Power Association (JFPA)/Japanese Standards Association (JSA) with a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act applied mutatis mutandis pursuant to the provision of Article 16 of the said Act. This edition replaces the previous edition (**JIS B 8396** : 2018), which has been technically revised.

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Introduction

This Japanese Industrial Standard has been prepared based on ISO 5597 : 2018, Edition 3, with some modifications of the technical contents.

The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standard. A list of modifications with the explanations is given in Annex JA.

1 Scope

This Standard establishes the preferred range of nominal dimensions and associated tolerances for hydraulic cylinder piston and rod seal housings for reciprocating applications in the following range of dimensions:

— for cylinders of 16 mm to 500 mm;

— for rods of 6 mm to 450 mm.

An additional range of seal housings is detailed in this Standard to meet the requirements of the single rod, 16 MPa series of JIS B 8367-2; these smaller section seals require stricter piston rod and cylinder bore tolerances. The range of dimensions is as follows:

— for cylinders of 25 mm to 200 mm;

— for rods of 12 mm to 140 mm.

This Standard does not give details of seal design, since the manner of construction of seals varies with each manufacturer. The design and material of the seal and any incorporated anti-extrusion rings are determined by conditions such as temperature and pressure.

This Standard applies to the following four types of housing:

— Type A

Piston seal housings designed to retain an elastic seal by grooves or retaining plates (see Figure 1 and Table 1)

— Type B

Piston seal housings designed to retain an elastic seal by grooves and a mating configuration (single rod, 16 MPa series of JIS B 8367-2) (see Figure 2 and Table 2)

— Type C