
International Standard



5597/1

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Hydraulic fluid power — Cylinder rod and piston seals for reciprocating applications — Dimensions and tolerances of housings — Part 1 : Normal series

Transmissions hydrauliques — Joints d'étanchéité pour tiges de piston et pistons de vérins hydrauliques à piston — Dimensions et tolérances des logements — Partie 1 : Série normale

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5597/1 was developed by Technical Committee ISO/TC 131, *Fluid power systems and components*, and was circulated to the member bodies in November 1977.

It has been approved by the member bodies of the following countries :

Australia	Germany, F.R.	Romania
Austria	Hungary	South Africa, Rep. of
Belgium	India	Spain
Brazil	Ireland	Sweden
Bulgaria	Italy	Turkey
Chile	Japan	United Kingdom
Czechoslovakia	Mexico	USA
Finland	Netherlands	USSR
France	Poland	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Canada
Switzerland



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Hydraulic fluid power — Cylinder rod and piston seals for reciprocating applications — Dimensions and tolerances of housings — Part 1 : Normal series

ERRATUM

Cover page

The title of this International Standard should read :

“Hydraulic fluid power — Cylinders — Housings for piston and rod seals in reciprocating applications — Dimensions and tolerances

Transmissions hydrauliques — Vérins — Logements de joints d’étanchéité pour pistons et tiges de pistons — Dimensions et tolérances”

Page 1 and page 3 (clause 10)

Replace the title of this International Standard by the English title above.

In addition, the reference number of this International Standard should read “ISO 5597” not “ISO 5597/1” wherever it appears.

Hydraulic fluid power — Cylinder rod and piston seals for reciprocating applications — Dimensions and tolerances of housings —

Part 1 : Normal series

0 Introduction

In hydraulic fluid power systems, power is transmitted and controlled through a liquid under pressure within an enclosed circuit. Sealing devices are used to contain the pressurized fluid within components having elements with linear motion, i.e. hydraulic cylinders. These sealing devices are used with both cylinder rod and piston seal housings.

This International Standard is one of a series of standards covering dimensions and tolerances of housings.

1 Scope and field of application

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

- for cylinders of 16 to 400 mm;
- for rods of 6 to 360 mm.

It 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 component are determined by conditions such as temperature and pressure.

2 References

ISO 286, *ISO System for limits and fits — Part 1 : General, tolerances and deviations.*¹⁾

ISO 468, *Surface roughness — Parameters, their values and general rules for specifying surfaces.*²⁾

ISO 3320, *Fluid power systems and components — Cylinder bores and piston rod diameters — Metric series.*

ISO 4394/1, *Fluid power systems and components — Cylinder barrels — Part 1 : Requirements for steel tubes with specially finished bores.*

1) At present at the stage of draft. (Revision of ISO/R 286-1962.)

2) At present at the stage of draft. (Revision of ISO/R 468-1966.)