
INTERNATIONAL STANDARD



3322

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

Fluid power systems and components — Cylinders — Nominal pressures

Transmissions hydrauliques et pneumatiques — Vérins — Pressions nominales

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Descriptors : hydraulic equipment, pneumatic equipment, hydraulic cylinders, pneumatic cylinders, pressure, ratings.

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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 3322 was drawn up by Technical Committee ISO/TC 131, *Fluid power systems and components*, and circulated to the Member Bodies in December 1973.

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It has been approved by the Member Bodies of the following countries :

Australia	Hungary	Switzerland
Austria	India	Thailand
Belgium	Italy	Turkey
Brazil	New Zealand	United Kingdom
Czechoslovakia	Romania	U.S.A.
Egypt, Arab Rep. of	South Africa, Rep. of	U.S.S.R.
Finland	Spain	Yugoslavia
Germany	Sweden	

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The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

France
Ireland
Japan
Poland

Fluid power systems and components – Cylinders – Nominal pressures

0 INTRODUCTION

In fluid power systems, power is transmitted and controlled through a fluid (liquid or gas) under pressure within an enclosed circuit. Systems and components are generally designed and marketed for a specific fluid pressure.

One component of such systems is the fluid power cylinder. This is a device which converts power into linear mechanical force and motion. It consists of a movable element, i.e. a piston and piston rod, operating within a cylindrical bore.

1 SCOPE AND FIELD OF APPLICATION

This International Standard provides a selection of nominal pressures for hydraulic and pneumatic fluid power cylinders.

2 REFERENCES

ISO 2944, *Fluid power systems and components – Nominal pressures.*

ISO . . . , *Fluid power – Vocabulary.**

3 DEFINITIONS

3.1 nominal pressure: A pressure value assigned to a component or a system for the purpose of convenient designation.

NOTE – This definition is the same as that used in ISO 2944 and is intended solely to complete this document. A more comprehensive definition for general purposes may be established subsequently.

3.2 For definitions of other terms used, see ISO . . .

4 UNITS

4.1 The pressure unit used is the bar.

$$1 \text{ bar} = 100 \text{ kPa}^{**} \approx 14.5 \text{ lbf/in}^2$$

4.2 Express nominal pressures as "pressure of . . . bar".

4.3 Assume the nominal pressure to be "gauge" pressure (i.e. the pressure above atmospheric) when no modifier is given.

4.4 Select any other values required from ISO 2944.

5 NOMINAL PRESSURES

Select from values in the table.

TABLE 1
Nominal pressures – Gauge pressures in bars

6,3
10
16
25
40
63
100
160
250
400

6 IDENTIFICATION STATEMENT (Reference to this International Standard)

Use the following statement in test reports, catalogues and sales literature when complying with this International Standard :

"Nominal pressures determined in accordance with ISO 3322, *Fluid power systems and components – Cylinders – Nominal pressures.*"

* In preparation.

** 1 Pa = 1 N/m²

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