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 fluid power, pneumatic fluid power, hydraulic equipment, pneumatic equipment, hydraulic cylinders, pneumatic cylinders, pressure, ratings.

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 3322 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*.

ISO 3322 was first published in 1975. This second edition cancels and replaces the first edition, clause 5 of which has been technically revised (a nominal pressure of 315 bar has been added).

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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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 5598, *Fluid power systems and components — Vocabulary.*

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 5598 and the following definition apply.

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.

4 Units

4.1 The pressure unit used is the bar:

1 bar = 100 kPa* ($\approx$ 14,5 lbf/in^2)

4.2 Nominal pressures shall be expressed as "pressure of . . . bar".

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

4.4 Any other values required shall be selected from ISO 2944.

5 Nominal pressures

The nominal pressures shall be selected from the following pressures expressed in bars:

6,3 — 10 — 16 — 25 — 40 — 63 — 100 — 160 — 250 — 315 — 400

6 Identification statement (Reference to this International Standard)

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

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

* 1 Pa = 1 N/m^2

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