STANDARD 4392-3

First edition
1993-12-15

Hydraulic fluid power — Determination of characteristics of motors —

Part 3:
At constant flow and at constant torque

Transmissions hydrauliques — Détermination des caractéristiques des moteurs —

Partie 3: Essai à débit constant et couple constant

Reference number
ISO 4392-3:1993(E)

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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 4392-3 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Sub-Committee SC 8, *Product testing and contamination control*.

ISO 4392 consists of the following parts, under the general title *Hydraulic fluid power — Determination of characteristics of motors*:

— *Part 1: At constant low speed and at constant pressure*

— *Part 2: Startability*

— *Part 3: At constant flow and at constant torque*

Annexes A and B form an integral part of this part of ISO 4392.

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Introduction

In hydraulic fluid power systems, power is transmitted and controlled through a fluid under pressure within an enclosed circuit.

Hydraulic motors are units which transform hydraulic energy into mechanical energy, usually with a rotary output.

Hydraulic fluid power — Determination of characteristics of motors —

Part 3:
At constant flow and at constant torque

1 Scope

This part of ISO 4392 describes a method of determining the low-speed characteristics of positive-displacement rotary fluid power motors under constant flow and constant torque conditions. Motors may be of either the fixed or variable-displacement type.

The method involves testing at slow speeds, which may generate frequencies having a significant influence upon the steady continuous torque output of the motor and affect the system to which the motor would be connected.

The accuracy of measurement is divided into three classes, A, B and C, which are explained in annex A.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 4392. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 4392 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1219-1:1991, *Fluid power systems and components — Graphic symbols and circuit diagrams — Part 1: Graphic symbols.*

ISO 3448:1992, *Industrial liquid lubricants — ISO viscosity classification.*

ISO 4391:1983, *Hydraulic fluid power — Pumps, motors and integral transmissions — Parameter definitions and letter symbols.*

ISO 4409:1986, *Hydraulic fluid power — Positive displacement pumps, motors and integral transmissions — Determination of steady-state performance.*

ISO 5598:1985, *Fluid power systems and components — Vocabulary.*

ISO 8426:1988, *Hydraulic fluid power — Positive displacement pumps and motors — Determination of derived capacity.*