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Hydraulic fluid power — Determination of derived displacement of positive displacement pumps and motors —

Part 2: Zero-pressure intercept method

Transmissions hydrauliques — Détermination de la cylindrée calculée des pompes et moteurs volumétriques —

Partie 2: Méthode d'interception à pression nulle

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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This document was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 8, *Product testing*.

This first edition of ISO 8426-2 cancels and replaces the second edition (ISO 8426:2008), which has been technically revised.

A list of all parts in the ISO 8426 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

In hydraulic fluid power systems, power is transmitted and controlled through a liquid under pressure within an enclosed circuit. Two types of components of such systems are the positive displacement pumps and motors. One of the technical parameters of these components is the derived displacement, also known as derived capacity. This document is intended to describe the zero-pressure intercept method for determining the derived displacement of hydraulic fluid power positive displacement pumps and motors. The term derived displacement is preferred over derived capacity.

Hydraulic fluid power — Determination of derived displacement of positive displacement pumps and motors —

Part 2: Zero-pressure intercept method

1 Scope

This document specifies the zero-pressure intercept method for the determination of the derived displacement of hydraulic fluid power positive displacement pumps and motors under steady state conditions. A single value for the derived displacement is determined from measurements at a single shaft speed.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4409:2019, *Hydraulic fluid power — Positive-displacement pumps, motors and integral transmissions — Methods of testing and presenting basic steady state performance*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5598 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
unit
hydraulic positive displacement pump or motor

4 Symbols and units

The symbols used throughout this document are based on ISO 4391 and shown in Table 1. Graphical symbols are depicted in accordance with ISO 1219-1.