INTERNATIONAL STANDARD

ISO 10770-2

First edition
1998-05-15

Hydraulic fluid power — Electrically modulated hydraulic control valves —

Part 2:
Test methods for three-way directional flow control valves

Transmissions hydrauliques — Distributeurs hydrauliques à modulation électrique —

Partie 2: Méthodes d'essai pour distributeurs à trois voies

Reference number
ISO 10770-2:1998(E)

Contents

Page

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet central@iso.ch
X.400 c=ch; a=400net; p=iso; o=isocs; s=central

Printed in Switzerland

Annexes

Foreword

ISO (the International Organisation for Standardisation) 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 organisations, 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 standardisation.

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 10770-2 was prepared by Technical Committee ISO/TC 131, *Fluid power systems,* Subcommittee SC 8, *Product testing.*

This first edition of ISO 10770-2 together with ISO 10770-1 cancel and replace ISO 6404:1985, of which they constitute a technical revision. In particular, ISO 10770 is wider-ranging and more comprehensive, covering both servovalves and proportional valves.

ISO 10770 consists of the following parts, under the general title *Hydraulic fluid power — Electrically modulated hydraulic control valves*:

— *Part 1: Test methods for four-way directional flow control valves*

— *Part 2: Test methods for three-way directional flow control valves*

— *Part 3: Test methods for pressure control valves*

Annex A forms an integral part of this part of ISO 10770. Annexes B and C are for information only.

Introduction

In hydraulic fluid power systems, power is transmitted by a fluid under pressure from a hydraulic power source to one or several loads through electrically modulated hydraulic control valves.

These control valves are components which receive control signals in the form of an electrical signal, receive hydraulic power from a power source, and then, control the direction and amount of hydraulic flow to the load, depending upon the electrical input signal. There are a number of performance characteristics that must be known in order to successfully apply electrically modulated hydraulic control valves.

Hydraulic fluid power — Electrically modulated hydraulic control valves —

Part 2:
Test methods for three-way directional flow control valves

1 Scope

This part of ISO 10770 describes methods for production acceptance and type (or qualification) testing of electrically modulated hydraulic three-way directional flow control valves.

2 Normative references

The following standards contain provisions, which, through reference in this text, constitute provisions of this part of ISO 10770. 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 10770 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 4406:1987, *Hydraulic fluid power — Fluids — Method for coding level of contamination by solid particles.*

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

ISO 6743-4:1982, *Lubricants, industrial oils and related products (class L) — Classification — Part 4: Family H (Hydraulic systems).*

IEC 617, *Graphical symbols and diagrams.*

3 Definitions

For the purposes of this part of ISO 10770, the definitions given in ISO 5598 and the following definition apply.

3.1 electrically modulated hydraulic flow control valve: Valve that provides a degree of proportional flow control in response to a continuously variable electrical input signal.