
International Standard



7744

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Hydraulic fluid power — Filters — Statement of requirements

Transmissions hydrauliques — Filtres — Spécification des conditions d'emploi

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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 7744 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*.

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.

Hydraulic fluid power — Filters — Statement of requirements

0 Introduction

In hydraulic fluid power systems, power is transmitted and controlled through a liquid under pressure within an enclosed circuit. Filters maintain fluid cleanliness by removing insoluble contaminants.

The filter element is the porous device which performs the actual process of filtration.

1 Scope and field of application

This International Standard defines a statement of requirements for filters in hydraulic systems.

A statement of requirements (SOR) is defined as a document to be provided by a user to specify his requirements to a manufacturer. A model SOR is described below to enable a user to define his requirements fully, without ambiguity and in standard form so that the supplier can meet the requirements as accurately as possible.

Only the main features of a filter are to be defined in the SOR, but it will be understood that many variations and refinements are available which will influence the final choice. The response by manufacturers to the SOR will enable an initial choice to be made from those products which meet the main features defined in the SOR.

It is unlikely that a manufacturer will meet all features defined in the SOR exactly from his standard range of products. He may offer his nearest standard product which might be beyond the limits laid down in the SOR. It is the responsibility of the user to determine the acceptability of features outside the stated requirements.

2 References

ISO 4406, *Hydraulic fluid power — Fluids — Method for coding level of contamination by solid particles.*¹⁾

ISO 4572, *Hydraulic fluid power — Filters — Multi-pass method for evaluating filtration performance.*

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 definitions apply.

3.1 rated pressure: Maximum working pressure, expressed in bar (MPa)²⁾, in the line to which the filter is fitted.

3.2 clean pressure drop: The difference between inlet and outlet pressure, expressed in bar (MPa)²⁾, across a filter assembly, fitted with a clean filter element, when passing maximum flow, expressed in litres per minute, under specified conditions.

3.3 maximum pressure drop: The permitted difference between inlet and outlet pressure, expressed in bar (MPa)²⁾, across a filter assembly, when the filter element has become clogged and passing maximum flow, expressed in litres per minute, under specified conditions.

3.4 fluid type: Fluid described by the suppliers' designation.

3.5 kinematic fluid viscosity: Viscosity, expressed in centistokes, at a temperature of 40 °C.

3.6 temperature range: Range defined by three temperatures — minimum, maximum and normal — expressed in degrees Celsius.

1) At present at the stage of draft.

2) 1 bar = 0,1 MPa = 10⁵ Pa; 1 Pa = 1 N/m²