
**Hydraulic fluid power — Filter
elements — Verification of collapse/burst
pressure rating**

*Transmissions hydrauliques — Éléments filtrants — Vérification de la
pression d'écrasement/éclatement*



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

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 2941 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 6, *Contamination control*.

This second edition cancels and replaces the first edition (ISO 2941:1974), of which Clauses 5 and 6 have been technically revised and to which informative Annexes A, B and C have been added.

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Introduction

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

Filters maintain the cleanliness of fluid in a fluid power system by removing insoluble contaminants. A filter element is the porous device that performs the actual process of filtration.

The capability of the filter element to maintain a specified fluid cleanliness level depends on its performance and structural integrity and its ability to withstand non-steady-state conditions (e.g. cold starts and decompression surges). The filter element's resistance to collapse or burst is a measure of its ability to withstand such effects.

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Hydraulic fluid power — Filter elements — Verification of collapse/burst pressure rating

1 Scope

This International Standard specifies a method for verifying the collapse/burst pressure rating of a hydraulic fluid power filter element, i.e. the capability of a filter element to withstand a designated differential pressure at the normal (i.e., intended direction of) flow, by means of pumping contaminated fluid through the filter element until either collapse/burst occurs or the maximum expected differential pressure is reached without element failure.

2 Normative references

The following referenced documents are indispensable for the application 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 1219-1, *Fluid power systems and components — Graphic symbols and circuit diagrams — Part 1: Graphic symbols for conventional use and data-processing applications*

ISO 2942, *Hydraulic fluid power — Filter elements — Verification of fabrication integrity and determination of the first bubble point*

ISO 2943, *Hydraulic fluid power — Filter elements — Verification of material compatibility with fluids*

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

ISO 12103-1, *Road vehicles — Test dust for filter evaluation — Part 1: Arizona test dust*

3 Terms and definitions

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

4 Graphic symbols

Graphic symbols used in this International Standard are in accordance with ISO 1219-1.

5 Test circuit and equipment

5.1 Test circuit

Figure 1 shows the arrangement of a typical circuit for the collapse/burst test described in Clause 6.