
**Pneumatic fluid power — Compressed-air
lubricators —**

**Part 2:
Test methods to determine the main
characteristics to be included in
supplier's literature**

Transmissions pneumatiques — Lubrificateurs pour air comprimé —

*Partie 2: Méthodes d'essai pour déterminer les principales
caractéristiques à inclure dans la documentation du fournisseur*



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Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
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Foreword

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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 6301-2 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 5, *Control products and components*.

This second edition cancels and replaces the first edition (ISO 6301-2:1997), which has been technically revised.

ISO 6301 consists of the following parts, under the general title *Pneumatic fluid power — Compressed-air lubricators*:

- Part 1: *Main characteristics to be included in supplier's literature and product-marking requirements*
- Part 2: *Test methods to determine the main characteristics to be included in supplier's literature*

Introduction

In pneumatic fluid power systems, power is transmitted and controlled through air under pressure within a circuit. Where lubrication of the air media is desired, compressed air lubricators are components designed to introduce the required quantity of lubricant into the air stream.

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Pneumatic fluid power — Compressed-air lubricators —

Part 2:

Test methods to determine the main characteristics to be included in supplier's literature

1 Scope

This part of ISO 6301 specifies tests, procedures and a method of presenting the results concerning the parameters that define the main characteristics to be included in the supplier's literature of lubricators conforming to ISO 6301-1.

This part of ISO 6301 can be applied

- to facilitate the comparison of lubricators by standardizing test methods and presentation of test data;
- to assist in the proper application of lubricators in compressed-air systems.

The tests specified are intended to allow comparison between the different types of lubricators; they are not production tests to be carried out on each lubricator manufactured.

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 3, *Preferred numbers — Series of preferred numbers*

ISO 1000, *SI units and recommendations for the use of their multiples and of certain other units*

ISO 1219-1¹⁾, *Fluid power systems and components — Graphic symbols and circuit diagrams — Part 1: Graphic symbols for conventional use and data-processing applications*

ISO 2944, *Fluid power systems and components — Nominal pressures*

ISO 3448, *Industrial liquid lubricants — ISO viscosity classification*

ISO 5598²⁾, *Fluid power systems and components — Vocabulary*

ISO 6301-1:1997, *Pneumatic fluid power — Compressed-air lubricators — Part 1: Main characteristics to be included in supplier's literature and product-marking requirements*

1) To be published. (Revision of ISO 1219-1:1991)

2) To be published. (Revision of ISO 5598:1985)

ISO 6358:1989, *Pneumatic fluid power — Components using compressible fluids — Determination of flow-rate characteristics*

ISO 8778, *Pneumatic fluid power — Standard reference atmosphere*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5598 and ISO 6301-1 apply.

4 Units and symbols

Units from ISO 1000 are generally used in pneumatic fluid power systems, in particular:

- gauge pressure, expressed in kilopascal (bar);
- temperature, expressed in degrees Celsius;
- air flow rate, expressed in litres per second or cubic decimetres per second (ANR) (see ISO 8778).

The graphical symbols used in Figure 1 are in accordance with ISO 1219-1.

5 Test conditions and samples

5.1 Temperature

The temperature of the processed air, the equipment and the ambient air temperature shall be maintained at $23\text{ °C} \pm 5\text{ °C}$ for all tests.

5.2 Pressures

The specified pressures shall be held to within $\pm 2\%$. The preferred test pressures are those given in 4.2.1 of ISO 6301-1:1997 or from ISO 2944. Where other test pressures are required, the value shall be selected from series R5 of preferred numbers, according to ISO 3.

5.3 Test samples

Test a minimum of three random samples in each of Clauses 6, 7, 8, 9 and use the average of the results.

6 Test procedure to verify rated pressure

6.1 Perform this test with a proposed rated pressure for the product.

6.2 In this test, the product-sealing means may be modified to prevent leakage and allow structural failure to occur, but modifications shall not increase the structural strength of the pressure-containing envelope.

6.3 Fill samples with liquid whose viscosity does not exceed ISO VG 32, in accordance with ISO 3448, and install them in the temperature environment described in 5.1.

6.4 After stabilizing the temperature, pressurise slowly to a level of 1,5 times the proposed rated pressure. Hold at this level for 2 min and observe for leakage or failure (as defined in 6.6).