



# DRAFT INTERNATIONAL STANDARD ISO/DIS 6301-1

ISO/TC 131/SC 5

Secretariat: **AFNOR**

Voting begins on:  
**2007-05-11**

Voting terminates on:  
**2007-10-11**

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## Pneumatic fluid power — Compressed-air lubricators —

### Part 1:

## Main characteristics to be included in supplier's literature and product-marking requirements

*Transmissions pneumatiques — Lubrificateurs pour air comprimé —*

*Partie 1: Principales caractéristiques à inclure dans la documentation des fournisseurs et exigences de marquage du produit*

[Revision of second edition (ISO 6301-1:1997)]

ICS 23.100.99

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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.

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ISO 6301-1 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 5, *Control products and components*.

This third edition cancels and replaces the second edition (ISO 6301-1:1997), 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 1:

### Main characteristics to be included in supplier's literature and product-marking requirements

#### 1 Scope

This part of ISO 6301 specifies which characteristics of compressed air lubricators are to be included in the supplier's literature.

It also specifies product-marking requirements for lubricators.

This part of ISO 6301 applies to compressed air lubricators constructed from light alloys (e.g. aluminium, etc.), zinc die cast alloys, brass, steel and plastic, with a rated pressure of 1600 kPa (16 bar<sup>1)</sup>) and a maximum rated temperature of 80 °C.

#### 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 7-1, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Dimensions, tolerances and designation*

ISO 1179-1<sup>2)</sup>, *Connections for general use and fluid power — Ports and stud ends with ISO 228-1 threads with elastomeric or metal-to-metal sealing — Part 1: Threaded ports*

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

ISO 5598<sup>3)</sup>, *Fluid power systems and components — Vocabulary*

ISO 6301-2:2006, *Pneumatic fluid power — Compressed air lubricators — Part 2: Test methods to determine the main characteristics to be included in supplier's literature*

ISO 16030, *Pneumatic fluid power — Connections — Ports and stud ends*

1) 1 bar = 100 kPa = 10<sup>5</sup> Pa

2) To be published

3) Under revision

### 3 Terms and definitions

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

#### 3.1

##### **compressed air lubricator**

component designed to introduce controlled quantities of lubricant into the compressed air stream.

NOTE There are two kinds of compressed air lubricators, based on two principles of operation; see 3.1.1 and 3.1.2.

#### 3.1.1

##### **non-recirculating lubricator**

compressed air lubricator that injects into the air flow all the lubricant passing through the lubricant feed mechanism.

#### 3.1.2

##### **recirculating lubricator**

compressed air lubricator that injects into the air flow only a portion of the lubricant observed passing through the lubricant feed mechanism.

#### 3.2

##### **rated pressure**

pressure, confirmed through testing, at which a component or piping is designed to operate for a number of repetitions sufficient to assure adequate service life.

[ISO 5598]

#### 3.3

##### **minimum operating flow rate for a lubricator**

minimum flow rate that, with the minimum lubricant level in the reservoir, provides a feed and atomization of the lubricant with a theoretical concentration when the lubricant feed mechanism is set at the maximum.

### 4 Technical requirements

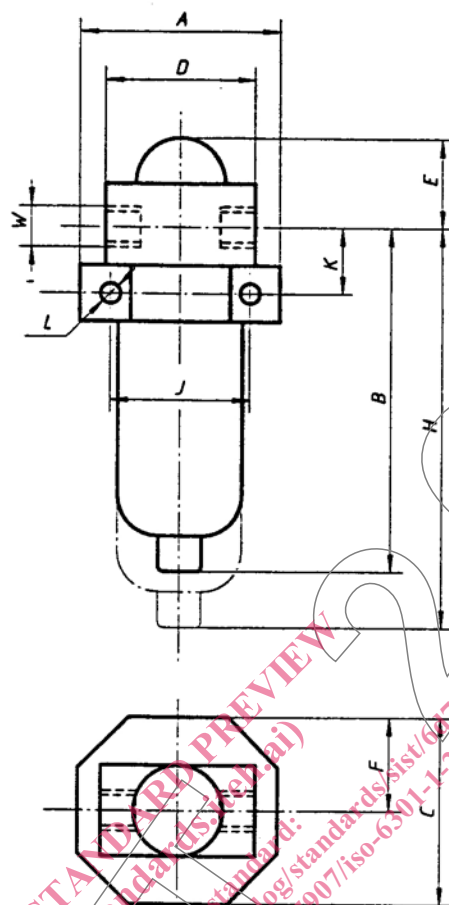
#### 4.1 General characteristics

The supplier's descriptive literature covering compressed air lubricators shall include the general characteristics specified in 4.1.1 through 4.1.4.

##### 4.1.1 General dimensions

The dimensions shown in Figure 1 shall be given in millimetres. For ports, see 4.1.2.



**Key**

- A Maximum overall width
- B Maximum installation height below the port centreline
- C Maximum overall depth
- D Distance between the faces of the compressed air connection (inlet and outlet)
- E Maximum height above the port centreline
- F Maximum installation depth from the port centreline (applies also for mounting brackets)
- H Minimum clearance from the port centreline to permit dismantling
- J Distance between mounting holes (this dimension only applies if the lubricator has provisions for mounting)
- K Distance between the port centreline and mounting holes (this dimension only applies if the lubricator has provisions for mounting)
- L Minimum diameter and length of mounting holes or recommended mounting screws (this dimension only applies if the lubricator has provisions for mounting)
- W Port description

**Figure 1 — Dimensions of lubricators****4.1.2 Port forms**

Port forms should be selected from ISO 16030 or ISO 1179-1 for ports with parallel threads, or for ports with tapered threads, thread forms in accordance with ISO 7-1 should be used.

The connecting interface for flange-mounted compressed air lubricators may be plain ported and counterbored to accept O-rings.

For certain applications and connections, other port forms may be employed.