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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 du fournisseur et exigences de marquage du produit

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/131, *Fluid power systems*, Subcommittee SC 5, *Control products and components.*

This fourth edition cancels and replaces the third edition (ISO 6301-1:2009), which has been technically revised.

A list of all parts in the ISO 6301 series can be found on the ISO website.

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.

Pneumatic fluid power — Compressed-air lubricators —

Part 1:
Main characteristics to be included in supplier's literature and product-marking requirements

1 Scope

This document 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 document is applicable to compressed-air lubricators constructed from light alloys (e.g. aluminium), zinc die-cast alloys, brass, steel and plastic, with a maximum rated pressure of 1 600 kPa (16 bar [1]) or less and a maximum rated temperature of 80 °C or less.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 2944, *Fluid power systems and components — Nominal pressures*

ISO 5598, *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*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
compressed-air lubricator
component designed to introduce controlled quantities of lubricant into the compressed-air stream

Note 1 to entry: There are two kinds of compressed-air lubricators, based on two principles of operation; see 3.1.1 and 3.1.2.

Note 2 to entry: Adapted from ISO 5598:2008, 3.2.117.

1) 1 bar = 100 kPa = 10^5 Pa.

3.1.1
non-recirculating lubricator
compressed-air lubricator that injects into the air flow all the lubricant passing through the lubricant feed mechanism

Note 1 to entry: Adapted from ISO 5598:2008, 3.2.467.

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

Note 1 to entry: Adapted from ISO 5598:2008, 3.2.602.

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 ensure adequate service life

[SOURCE: ISO 5598:2008, 3.2.597]

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 from 4.1.1 to 4.1.4.

4.1.1 General dimensions

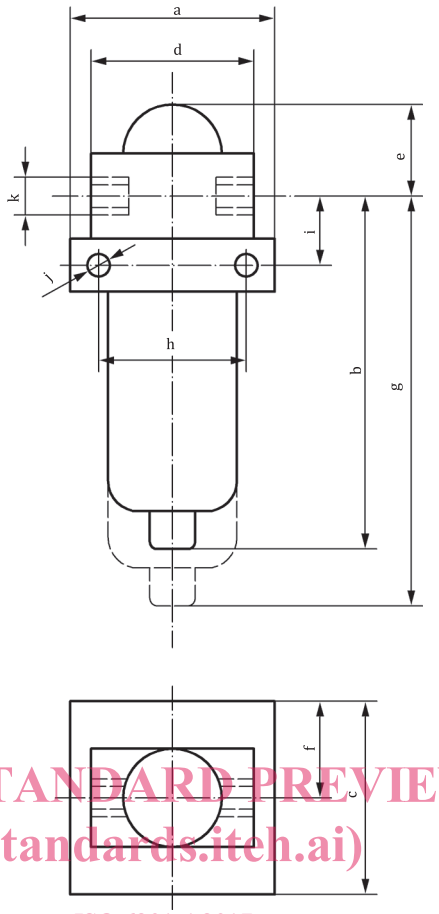
The dimensions shown in Figure 1 shall be given in millimetres. For ports, see 4.1.2.

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 (see Annex A).

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.



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).

g Minimum clearance from the port centreline to permit dismantling.

h Distance between mounting holes (this dimension only applies if the lubricator has provisions for mounting).

i Distance between the port centreline and mounting holes (this dimension only applies if the lubricator has provisions for mounting).

j Minimum diameter and length of mounting holes or recommended mounting screws (this dimension only applies if the lubricator has provisions for mounting).

k Port description.

Figure 1 — Dimensions of lubricators

4.1.3 Rated pressure

Compressed-air lubricators shall be classified according to a pressure selected from the preferred nominal pressures listed in ISO 2944.

The rated pressure shall be verified using the test procedure specified in ISO 6301-2:2006, Clause 6.