



NSAI
Standards

Irish Standard
I.S. EN ISO 9974-1:2000

Connections for general use and fluid power – Ports and stud ends with ISO 261 threads with elastomeric or metal-to-metal sealing – Part 1: Treaded ports (ISO 9974-1:1996)

I.S. EN ISO 9974-1:2000

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English version

Connections for general use and fluid power - Ports and stud ends with ISO 261 threads with elastomeric or metal-to-metal sealing - Part 1: Treaded ports (ISO 9974-1:1996)

Raccordements pour applications générales et transmissions hydrauliques et pneumatiques - Orifices et éléments mâles à filetage ISO 261 et joints en élastomère ou étanchéité métal sur métal - Partie 1: Orifices filetés (ISO 9974-1:1996)

Leitungsanschlüsse für Fluidtechnik und allgemeine Anwendung - Einschraublöcher und Einschraubzapfen mit Gewinde nach ISO 261 und Elastomerdichtung oder metallener Dichtkante - Teil 1: Einschraublöcher (ISO 9974-1:1996)

This European Standard was approved by CEN on 8 April 2000.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of the International Standard from Technical Committee ISO/TC 5 "Ferrous metal pipes and metallic fittings" and ISO/TC 131 "Fluid power systems" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee EC/ISS/TC 29 "Steel tubes and fittings for steel tubes", the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2000, and conflicting national standards shall be withdrawn at the latest by November 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 9974-1:1996 has been approved by CEN as a European Standard without any modification.

**INTERNATIONAL
STANDARD**

**ISO
9974-1**

First edition
1996-04-15

**Connections for general use and fluid
power — Ports and stud ends with ISO 261
threads with elastomeric or metal-to-metal
sealing —**

Part 1:
Threaded ports

*Raccordements pour applications générales et transmissions hydrauliques
et pneumatiques — Orifices et éléments mâles à filetage ISO 261 et joint
en élastomère ou étanchéité métal sur métal —*

Partie 1: Orifices filetés



Reference number
ISO 9974-1:1996(E)

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.

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.

International Standard ISO 9974-1 was prepared jointly by Technical Committees ISO/TC 5, *Ferrous metal pipes and metallic fittings*, Subcommittee SC 5, *Threaded or plain end butt-welding fittings, threads, gauging of threads*, and ISO/TC 131, *Fluid power systems*, Subcommittee SC 4, *Connectors and similar products and components*.

ISO 9974 consists of the following parts, under the general title *Connections for general use and fluid power — Ports and stud ends with ISO 261 threads with elastomeric or metal-to-metal sealing*.

- Part 1: *Threaded ports*
- Part 2: *Stud ends with elastomeric sealing (type E)*
- Part 3: *Stud ends with metal-to-metal sealing (type B)*

The performance requirements, dimensions and designs are defined for port and stud end connections for the L and S series in ISO 9974-2 and for the LL, L and S series in ISO 9974-3. Significant testing over more than 30 years of use has confirmed the performance requirements of these port and stud end connections.

Stud ends conforming to ISO 9974-2 and 9974-3 are identical to those conforming to DIN 3852-1. ISO 9974-2 stud ends are used on ISO 8434-1 and ISO 8434-4 fittings, and ISO 9974-3 stud ends are used on ISO 8434-1 fittings.

Annex A of this part of ISO 9974 is for information only.

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Introduction

In fluid power systems, power is transmitted and controlled through a fluid (liquid or gas) under pressure within an enclosed circuit. In general applications, a fluid may be conveyed under pressure.

Components are connected through their threaded ports by fluid conductor fittings to tubes and pipes or to hose fittings and hoses.

Ports are an integral part of fluid power components, such as pumps, motors, valves, cylinders, etc.

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Connections for general use and fluid power — Ports and stud ends with ISO 261 threads with elastomeric or metal-to-metal sealing —

Part 1: Threaded ports

1 Scope

This part of ISO 9974 specifies dimensions for ports with ISO 261 threads and elastomeric (type E) or metal-to-metal (type B) sealing for general use and in fluid power applications with the stud ends detailed in ISO 9974-2 and ISO 9974-3. It also specifies test methods and the designation of these ports.

Ports in accordance with this part of ISO 9974 may be used at working pressures up to 63 MPa (630 bar¹⁾). The permissible working pressure depends upon the port size, materials, design, working conditions, application, etc.

For threaded ports and stud ends specified in new designs in hydraulic fluid power applications, only ISO 6149 is to be used. Threaded ports and stud ends in accordance with ISO 1179, ISO 9974 and ISO 11926 are not to be used for new designs in hydraulic fluid power applications.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 9974. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 9974 are encouraged to investigate the possibility of applying the most recent editions of the

standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 261:—²⁾, *ISO general-purpose metric screw threads — General plan.*

ISO 5598:1985, *Fluid power systems and components — Vocabulary.*

ISO 9974-2:1996, *Connections for general use and fluid power — Ports and stud ends with ISO 261 threads with elastomeric or metal-to-metal sealing — Part 2: Stud ends with elastomeric sealing (type E).*

ISO 9974-3:1996, *Connections for general use and fluid power — Ports and stud ends with ISO 261 threads with elastomeric or metal-to-metal sealing — Part 3: Stud ends with metal-to-metal sealing (type B).*

3 Definitions

For the purposes of this part of ISO 9974, the definitions given in ISO 5598 apply.

4 Dimensions

Ports shall conform to the dimensions shown in figure 1 and given in table 1.

1) 1 bar = 0,1 MPa = 10⁵ Pa; 1 MPa = 1 N/mm²

2) To be published. (Revision of ISO 261:1973)

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