

Irish Standard I.S. EN ISO 6149-1:2019

Connections for hydraulic fluid power and general use - Ports and stud ends with ISO 261 metric threads and O-ring sealing - Part 1: Ports with truncated housing for O-ring seal (ISO 6149-1:2019)

 $\ensuremath{\mathbb C}$ CEN 2019 $\hfill No copying without NSAI permission except as permitted by copyright law.$

I.S. EN ISO 6149-1:2019

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on: EN ISO 6149-1:2019 *Published:* 2019-05-15

This document was published under the authority of the NSAI and comes into effect on:

2019-06-02

ICS number:

23.100.40

NOTE: If blank see CEN/CENELEC cover page

NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
Northwood, Santry	E standards@nsai.ie	F +353 1 857 6729
Dublin 9	W NSAI.ie	W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN ISO 6149-1:2019 is the adopted Irish version of the European Document EN ISO 6149-1:2019, Connections for hydraulic fluid power and general use - Ports and stud ends with ISO 261 metric threads and O-ring sealing - Part 1: Ports with truncated housing for O-ring seal (ISO 6149-1:2019)

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This is a free page sample. Access the full version online.

This page is intentionally left blank

This is a free page sample. Access the full version online. I.S. EN ISO 6149-1:2019

EUROPEAN STANDARD

EN ISO 6149-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2019

ICS 23.100.40

Supersedes EN ISO 6149-1:2007

English Version

Connections for hydraulic fluid power and general use -Ports and stud ends with ISO 261 metric threads and Oring sealing - Part 1: Ports with truncated housing for Oring seal (ISO 6149-1:2019)

Raccordements pour transmissions hydrauliques et applications générales - Orifices et éléments mâles à filetage métrique ISO 261 et joint torique - Partie 1: Orifices à joint torique dans un logement tronconique (ISO 6149-1:2019) Leitungsanschlüsse für Fluidtechnik und allgemeine Anwendung - Einschraublöcher und Einschraubzapfen mit metrischem Gewinde nach ISO 261 und O-Ring-Abdichtung - Teil 1: Einschraublöcher mit Ansenkung für O-Ring-Abdichtung (ISO 6149-1:2019)

This European Standard was approved by CEN on 26 April 2019.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword	

European foreword

This document (EN ISO 6149-1:2019) has been prepared by Technical Committee ISO/TC 131 "Fluid power systems" in collaboration with Technical Committee CEN/TC 459/SC 10 "Steel tubes, and iron and steel fittings" 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 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.

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

This document supersedes EN ISO 6149-1:2007.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 6149-1:2019 has been approved by CEN as EN ISO 6149-1:2019 without any modification.

This is a free page sample. Access the full version online.

This page is intentionally left blank

INTERNATIONAL STANDARD

ISO 6149-1

Third edition 2019-04

Connections for hydraulic fluid power and general use — Ports and stud ends with ISO 261 metric threads and O-ring sealing —

Part 1: **Ports with truncated housing for O-ring seal**

Raccordements pour transmissions hydrauliques et applications générales — Orifices et éléments mâles à filetage métrique ISO 261 et joint torique —

Partie 1: Orifices à joint torique dans un logement tronconique



Reference number ISO 6149-1:2019(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Fax: +41 22 749 09 47 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Page

Contents

Forew	ordiv
Introd	uctionv
1	Scope1
2	Normative references 1
3	Terms and definitions1
4	Dimensions 2
5	Interchangeability warning 4
6	Test methods
7	Designation of ports
8	Identification 4
9	Identification statement (reference to this document)
Biblio	graphy

This is a free page sample. Access the full version online. I.S. EN ISO 6149-1:2019

ISO 6149-1:2019(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.

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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of 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 <u>www.iso</u> .org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 4, *Connectors and similar products and components*.

This third edition cancels and replaces the second edition (ISO 6149-1:2006), which has been technically revised.

The main change since the last version is the addition of a warning statement about the hazards of intermixing of stud ends with the various port types and a change to the port o-ring gland on sizes M8 and M10 to improve maximum volume fill.

A list of all the parts in the ISO 6149 series, can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at <u>www.iso.org/members.html</u>.

Introduction

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

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

Ports are an integral part of fluid power components, i.e. pumps, motors, valves, cylinders.

For threaded ports and stud ends specified in new designs in hydraulic fluid power applications, ISO/ TC 131/SC 4 recommends that the ISO 6149 series be used because these International Standards specify ports and stud ends with metric threads and O-ring sealing and because the subcommittee would like to help users by recommending one preferred system. ISO/TC 131/SC 4 further recommends that threaded ports and stud ends in accordance with the ISO 1179 series, the ISO 9974 series and the ISO 11926 series not be used for new designs in hydraulic fluid power applications; these International Standards are maintained because they specify ports and stud ends that are currently used in hydraulic systems worldwide

This is a free page sample. Access the full version online. I.S. EN ISO 6149-1:2019

Connections for hydraulic fluid power and general use — Ports and stud ends with ISO 261 metric threads and O-ring sealing —

Part 1: **Ports with truncated housing for O-ring seal**

1 Scope

This document specifies dimensions for metric ports for use with the adjustable and non-adjustable stud ends as described in ISO 6149-2 and ISO 6149-3.

Ports in accordance with this document can be used at working pressures up to 63 MPa [630 bar¹] for non-adjustable stud ends and 40 MPa (400 bar) for adjustable stud ends. The permissible working pressure depends upon port size, materials, design, working conditions, application, etc. See ISO 6149-2 and ISO 6149-3 for pressure ratings.

NOTE The Introduction of this document gives recommendations for ports and stud ends to be used for new designs in hydraulic fluid power applications.

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 261, ISO general purpose metric screw threads — General plan

ISO 965-1, ISO general purpose metric screw threads — Tolerances — Part 1: Principles and basic data

ISO 2306, Drills for use prior to tapping screw threads

ISO 5598, Fluid power systems and components — Vocabulary

ISO 6149-2, Connections for hydraulic fluid power and general use — Ports and stud ends with ISO 261 metric threads and O-ring sealing — Part 2: Dimensions, design, test methods and requirements for heavyduty (S series) stud ends

ISO 6149-3, Connections for hydraulic fluid power and general use — Ports and stud ends with ISO 261 metric threads and O-ring sealing — Part 3: Dimensions, design, test methods and requirements for lightduty (L series) stud ends

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5598 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 <u>https://www.iso.org/obp</u>

1) 1 bar = 0,1 MPa = 10^5 Pa; 1 MPa = 1 N/mm².



This is a free preview. Purchase the entire publication at the link below:

Product Page

S Looking for additional Standards? Visit Intertek Inform Infostore

> Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation