



SLOVENSKI STANDARD
SIST EN ISO 11064-1:2002
01-september-2002

9f[cbca g_c`bU flcj Ub^_fa]b\ `Wb^fcj `!`%`XY.`BU YUnUbU flcj Ub^_fa]b\
Wb^fcj `fGC`%/\$* (!%&\$\$\$L

Ergonomic design of control centres - Part 1: Principles for the design of control centres
(ISO 11064-1:2000)

iTeh STANDARD PREVIEW

Conception ergonomique des centres de commande - Partie 1: Principes pour la
conception des centres de commande (ISO 11064-1:2000)

[SIST EN ISO 11064-1:2002](https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2c1cca75c634/sist-en-iso-11064-1-2002)

Ta slovenski standard je istoveten z: **EN ISO 11064-1:2000**

ICS:

13.180	Ergonomija	Ergonomics
25.040.10	X^ [] ^!`æ\`á d[lã	Machining centres

SIST EN ISO 11064-1:2002 en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 11064-1:2002](https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002)

<https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 11064-1

December 2000

ICS 13.180; 25.040.10

English version

Ergonomic design of control centres - Part 1: Principles for the design of control centres (ISO 11064-1:2000)

Conception ergonomique des centres de commande -
Partie 1: Principes pour la conception des centres de
commande (ISO 11064-1:2000)

Ergonomische Gestaltung von Leitzentralen - Teil 1:
Grundsätze für die Gestaltung von Leitzentralen (ISO
11064-1:2000)

This European Standard was approved by CEN on 15 December 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 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 Management Centre 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.

[SIST EN ISO 11064-1:2002](https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002)

<https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002>



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Corrected 2001-04-04

Foreword

The text of the International Standard ISO 11064-1:2000 has been prepared by Technical Committee ISO/TC 159 "Ergonomics" in collaboration with Technical Committee CEN/TC 122 "Ergonomics", the secretariat of which is held by DIN.

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 June 2001, and conflicting national standards shall be withdrawn at the latest by June 2001.

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 11064-1:2000 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

ITEH STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 11064-1:2002](https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002)
<https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002>

Annex ZA (normative)
**Normative references to international publications
with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

Publication	Year	Title	EN	Year
ISO 6385	1990	Ergonomic principles of the design of work systems	ISO 6385	1981
ISO 11064-3	1999	Ergonomic design of control centres - Part 3: Control room layout	ISO 11064-3	1999

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 11064-1:2002](https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002)

<https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 11064-1:2002

<https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002>

INTERNATIONAL
STANDARD

ISO
11064-1

First edition
2000-12-15

**Ergonomic design of control centres —
Part 1:
Principles for the design of control centres**

Conception ergonomique des centres de commande —

Partie 1: Principes pour la conception des centres de commande

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 11064-1:2002](https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002)

<https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002>



Reference number
ISO 11064-1:2000(E)

© ISO 2000

ISO 11064-1:2000(E)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 11064-1:2002](https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002)

<https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002>

© ISO 2000

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.ch
Web www.iso.ch

Printed in Switzerland

Contents

	Page
Foreword.....	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 General considerations and principles of ergonomic design.....	3
5 Framework for an ergonomic design process.....	6
6 Phase A: Clarification.....	8
7 Phase B: Analysis and definition	10
8 Phase C: Conceptual design	17
9 Phase D: Detailed design	19
10 Phase E: Operational feedback.....	24
Annex A (informative) Examples of systems	26
Annex B (informative) Basic requirements and constraints to be clarified in clause 6.....	27
Bibliography	30

[SIST EN ISO 11064-1:2002](https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002)
<https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002>

ISO 11064-1:2000(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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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 part of ISO 11064 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 11064-1 was prepared by Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 4, *Ergonomics of human-system interaction*.

ISO 11064 consists of the following parts, under the general title *Ergonomic design of control centres*:

- *Part 1: Principles for the design of control centres*
- *Part 2: Principles for the arrangement of control suites*
- *Part 3: Control room layout*
- *Part 4: Layout and dimensions of workstations*
- *Part 5: Displays and controls*
- *Part 6: Environmental requirements for control rooms*
- *Part 7: Principles for the evaluation of control centres*
- *Part 8: Ergonomic requirements for specific applications*

Annex A and B of this part of ISO 11064 are for information only.

Introduction

Driven by demands for safer, more reliable and efficient operations, innovations in information technology have led to the increased use of automation and centralized supervisory control in the design of user-system interfaces and their associated operational environments. Notwithstanding these developments, the operator has retained a critical role in monitoring and supervising the behaviour of these complex automated systems. As the scale of automated solutions has grown, so have the consequences of equipment and human failures.

The job of the operator can at times be very demanding. The consequences resulting from inappropriate operator action in control rooms, such as acts of omission, commission, timing, sequence and so on, can be potentially disastrous. Accordingly, this part of ISO 11064 has been prepared to set up a generic framework for applying requirements and recommendations relating to ergonomic and human factors in designing and evaluating control centres with the view to eliminating or minimizing the potential for human errors.

A specific control centre project is often part of a design project for a larger system. The design of the control centre should not be developed separately from the objectives and goals associated with the context of this wider system. Consequently, it is necessary to view the ergonomic aspects of a control room design in relation to issues which, at first sight or by tradition, may seem to fall outside the scope of ergonomic design projects. These judgements will need to be taken on a case by case basis and are not necessarily resolved by a prescriptive approach.

This part of ISO 11064 includes requirements and recommendations for a design project of a control centre in terms of philosophy and process, physical design and concluding design evaluation, and it can be applied to both the elements of a control room project, such as workstations and overview displays, as well as to the overall planning and design of entire projects. Other parts of ISO 11064 deal with more detailed requirements associated with specific elements of a control centre.

[SIST EN ISO 11064-1:2002](https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002)

<https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 11064-1:2002](#)

<https://standards.iteh.ai/catalog/standards/sist/9e8752c7-ef7c-4a42-be6f-2efcca75eb34/sist-en-iso-11064-1-2002>

Ergonomic design of control centres —

Part 1: Principles for the design of control centres

1 Scope

This part of ISO 11064 specifies ergonomic principles, recommendations and requirements to be applied in the design of control centres, as well as in the expansion, refurbishment and technological upgrades of control centres.

It covers all types of control centres typically employed for process industries, transportation and logistic control systems and people deployment services.

Although this part of ISO 11064 is primarily intended for non-mobile control centres, many of the principles specified in this document could be applicable to mobile control centres, such as those found on ships and aircraft.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 11064. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 11064 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 6385, *Ergonomic principles in the design of work systems*.

ISO 11064-3, *Ergonomic design of control centres — Part 3: Control room layout*.

3 Terms and definitions

For the purposes of this part of ISO 11064, the following terms and definitions apply.

3.1

control centre

combination of control rooms, control suites and local control stations which are functionally related and all on the same site

[ISO 11064-3:1999, definition 3.1]

3.2

control room

core functional entity, and its associated physical structure, where operators are stationed to carry out centralized control, monitoring and administrative responsibilities

[ISO 11064-3:1999, definition 3.4]

3.3

control suite

group of functionally related rooms, co-located with the control room and including it, which houses the supporting functions to the control room, such as related offices, equipment rooms, rest areas and training rooms

[ISO 11064-3:1999, definition 3.6]