

**Masinate ohutus. Kuvarite ja
juhtseadiste konstruktsiooni
ergonoomianõuded. Osa 3:
Juhtaktivaatorid**

Safety of machinery - Ergonomics requirements for
the design of displays and control actuators - Part 3:
Control actuators

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 894-3:2000 sisaldab Euroopa standardi EN 894-3:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 12.09.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 894-3:2000 consists of the English text of the European standard EN 894-3:2000.</p> <p>This document is endorsed on 12.09.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

<p>Käsitlusala:</p> <p>This European standard gives recommendation on the selection, design and location of control actuators, so that they are adapted to the requirements of the operators and take account of the circumstances of their use. It applies to manual control actuators used in equipment for occupational and private use. It is particularly important to observe the recommendations in this European standard where operating a control actuator may lead to injury or damage to health, either directly or as a result of a human error.</p>	<p>Scope:</p> <p>This European standard gives recommendation on the selection, design and location of control actuators, so that they are adapted to the requirements of the operators and take account of the circumstances of their use. It applies to manual control actuators used in equipment for occupational and private use. It is particularly important to observe the recommendations in this European standard where operating a control actuator may lead to injury or damage to health, either directly or as a result of a human error.</p>
--	--

ICS 13.110, 13.180

Võtmesõnad:

ICS 13.110; 13.180

English version

Safety of machinery

**Ergonomic requirements for the design of displays
and control actuators**

Part 3: Control actuators

Sécurité des machines – Exigences
ergonomiques pour la conception
des dispositifs de signalisation et des
organes de service – Partie 3:
Organes de service

Sicherheit von Maschinen – Ergo-
nomische Anforderungen an die
Gestaltung von Anzeigen und
Stellteilen – Teil 3: Stellteile

This European Standard was approved by CEN on 2000-02-03.

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.

The European Standards exist 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, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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

Contents

	Page
Foreword	2
1 Scope	3
2 Normative references	3
3 Terms and definitions	4
4 Selection procedure	6
5 Task evaluation and information collection	6
6 Intermediate selection of control families	19
7 Identification of suitable control types	24
8 Additional information for the design of manual control actuators	36
Annex A (informative) Example of the use of this standard	38
Annex ZA (informative) Relationship between this European Standard and the EU Directive for Machinery	42

Foreword

This European Standard has been prepared by 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 September 2000, and conflicting national standards shall be withdrawn at the latest by September 2000.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this standard.

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.

1 Scope

This European Standard gives guidance on the selection, design and location of control actuators so that they are adapted to the requirements of the operators, are suitable for the control task in question and take account of the circumstances of their use.

It applies to manual control actuators used in equipment for occupational and private use. It is particularly important to observe the recommendations in this European Standard where operating a control actuator may lead to injury or damage to health, either directly or as a result of a human error.

2 Normative references

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).

EN 292-1	Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology.
EN 292-2	Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications.
EN 574	Safety of machinery - Two hand control devices -Functional aspects - Principles for design
EN 614-1	Safety of machinery - Ergonomic design principles - Part 1: Terminology and general principles.
EN 894 - 1	Safety of machinery - Ergonomics requirements for the design of displays and control actuators - Part 1: General principles for human interactions with displays and control actuators.
EN 894 - 2	Safety of machinery - Ergonomics requirements for the design of displays and control actuators - Part 2: Displays.
prEN 1005-3	Safety of machinery - Human physical strength - Part 3: Recommended force limits for machinery operation.
EN 1050	Safety of machinery - Risk assessment.
ISO 447	Machine tools - Direction of operation of controls.
IEC 60447	Man-machine interface (MMI) - Actuating principles.