

Industrial valves - Multi-turn valve actuator
attachments (ISO 5210:2023)

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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|---|---|
| <p>See Eesti standard EVS-EN ISO 5210:2023 sisaldab Euroopa standardi EN ISO 5210:2023 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 04.10.2023.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p> | <p>This Estonian standard EVS-EN ISO 5210:2023 consists of the English text of the European standard EN ISO 5210:2023.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 04.10.2023.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p> |
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EUROPEAN STANDARD

EN ISO 5210

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN ISO 5210:2017

English Version

Industrial valves - Multi-turn valve actuator attachments (ISO 5210:2023)

Robinetterie industrielle - Raccordement des
actionneurs multitours aux appareils de robinetterie
(ISO 5210:2023)

Industriearmaturen - Anschlüsse von Drehantrieben
für Armaturen (ISO 5210:2023)

This European Standard was approved by CEN on 9 September 2023.

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

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

European foreword

This document (EN ISO 5210:2023) has been prepared by Technical Committee ISO/TC 153 "Valves" in collaboration with Technical Committee CEN/TC 69 "Industrial valves" the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by April 2024, and conflicting national standards shall be withdrawn at the latest by April 2024.

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 5210:2017.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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Endorsement notice

The text of ISO 5210:2023 has been approved by CEN as EN ISO 5210:2023 without any modification.

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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).

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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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 153, *Valves*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 69, *Industrial valves*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 5210:2017), which has been technically revised.

The main changes are as follows:

- dimensions and tolerances for keys and keyways were added in a new [Annex B](#);
- a reference to the new [Annex B](#) was added in [7.3](#) and [7.5](#);
- editorial changes were made.

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 www.iso.org/members.html.

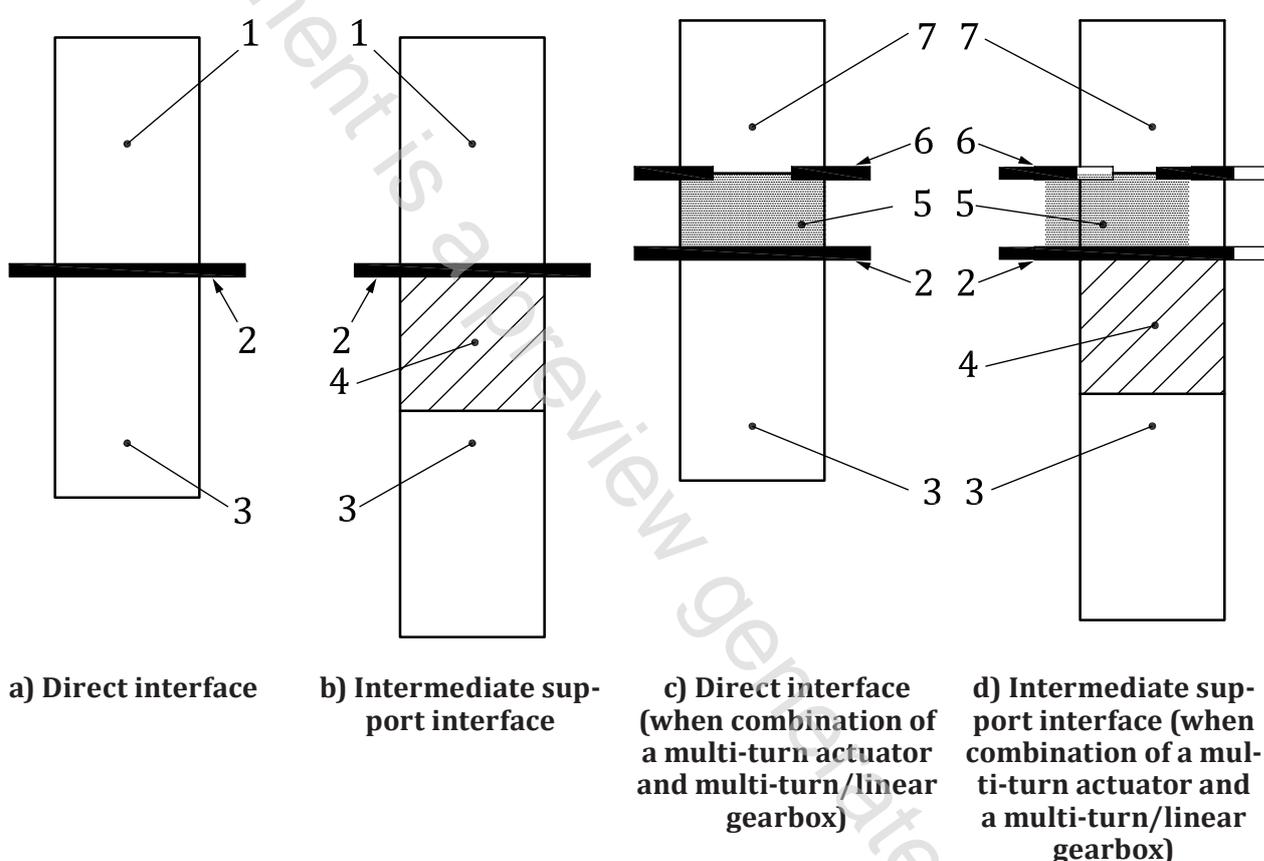
Introduction

The purpose of this document is to establish certain basic requirements for the attachment of multi-turn actuators, in order to define the interface between actuator and valve.

This document is, in general, considered in conjunction with the specific requirements which may be agreed between the parties concerned.

NOTE 1 In this document, the term “valve” can also be understood to include “valve with an intermediate support” [see [Figure 1 b](#)].

NOTE 2 When a combination of a multi-turn actuator and separate multi-turn/linear gearbox is coupled to form an actuator, the multi-turn attachment to the gearbox is in accordance with this document [see [Figures 1 c](#) and [1 d](#)]. A combination of a multi-turn actuator with integral multi-turn/linear gearbox supplied as an actuator is in accordance with [Figures 1 a](#) and [1 b](#)).



Key

- | | | | |
|---|----------------------------|---|--------------------------|
| 1 | multi-turn/linear actuator | 5 | gearbox |
| 2 | interface (see ISO 5210) | 6 | interface (see ISO 5210) |
| 3 | valve | 7 | multi-turn actuator |
| 4 | intermediate support | | |

Figure 1 — Interface between multi-turn/linear actuator and valve

Industrial valves — Multi-turn valve actuator attachments

1 Scope

This document specifies the requirements for the attachment of multi-turn actuators to valves.

Throughout this document, “actuator” can be understood as “actuator and/or gearbox” providing a multi-turn and/or linear output.

It specifies:

- flange dimensions necessary for the attachment of actuators to industrial valves [see [Figure 1 a](#)] or to intermediate supports [see [Figure 1 b](#)];
- those driving component dimensions of actuators which are necessary to attach them to the driven components;
- reference values for torque and thrust for flanges having the dimensions specified in this document.

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 273, *Fasteners — Clearance holes for bolts and screws*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

actuator

any device designed for attachment to a general-purpose industrial valve in order to provide for the operation of the valve

Note 1 to entry: The device is designed to operate using motive energy which may be electrical, pneumatic, hydraulic, manual, etc., or a combination of these. Movement is limited by travel, *torque* ([3.4](#)) and/or *thrust* ([3.5](#)).

3.2

multi-turn actuator

actuator ([3.1](#)) which transmits *torque* ([3.4](#)) to the valve for at least one revolution and may be capable of withstanding *thrust* ([3.5](#))

Note 1 to entry: An actuator may be a combination of a multi-turn actuator and multi-turn gearbox.