Industrial valves - Multi-turn valve actuator attachments (ISO 5210:2017)



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 5210:2017 sisaldab Euroopa standardi EN ISO 5210:2017 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 5210:2017 consists of the English text of the European standard EN ISO 5210:2017.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 26.04.2017.	Date of Availability of the European standard is 26.04.2017.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile <u>standardiosakond@evs.ee</u>.

ICS 23.060.01

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega: Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD

EN ISO 5210

NORME EUROPÉENNE EUROPÄISCHE NORM

April 2017

ICS 23.060.01

Supersedes EN ISO 5210:1996

English Version

Industrial valves - Multi-turn valve actuator attachments (ISO 5210:2017)

Robinetterie industrielle - Raccordement des actionneurs multitours aux appareils de robinetterie (ISO 5210:2017)

Industriearmaturen - Anschlüsse von Drehantrieben für Armaturen (ISO 5210:2017)

This European Standard was approved by CEN on 1 March 2017.

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: Avenue Marnix 17, B-1000 Brussels

European foreword

This document (EN ISO 5210:2017) 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 October 2017, and conflicting national standards shall be withdrawn at the latest by October 2017.

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

This document supersedes EN ISO 5210:1996.

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 5210:2017 has been approved by CEN as EN ISO 5210:2017 without any modification.

Co	ontents		Page
Fore	reword		iv
Intr	roduction		v
1	Scope		1
2			
3	Terms and definitions		2
4	Maximum torques and thrust	S	3
5			
6	Designation		6
7	 7.1 General 7.2 Dimensions for assembli 7.3 Dimensions for assembli 7.4 Dimensions for assembli 7.5 Dimensions for assembli 	es capable of transmitting both torque and thrust: Group A es capable of transmitting torque only: Group B es capable of transmitting torque only: Group C es capable of transmitting torque only: Group D es capable of transmitting thrust only: Group Linear actuator	6 8 9
Ann	nex A (informative) Explanation of	calculations	13
Bibl	oliography		15
		calculations	
© ISO	SO 2017 – All rights reserved		iii

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 on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 153, Valves.

This second edition cancels and replaces the first edition (ISO 5210:1991), which has been technically revised with the following changes:

- extension of flange sizes; a)
- introduction of groups C and D for assemblies capable of transmitting torque, in 7.4 and 7.5;
- introduction of linear actuator in 7.6.

Introduction

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

S, in etween t. This document has, in general, to be considered in conjunction with the specific requirements which may be agreed between the parties concerned.

Industrial valves — Multi-turn valve actuator attachments

1 Scope

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

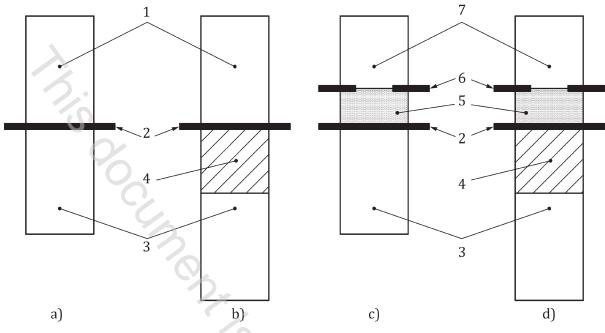
Throughout this document, "actuator" may be understood as "actuator and/or gearbox" providing a multi-turn and/or linear output.

It specifies:

- flange dimensions necessary for the attachment of actuators to industrial valves [see <u>Figure 1</u> a)] or to intermediate supports [see <u>Figure 1</u> 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.

NOTE 1 In this document, the term "valve" may 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).



- a) Direct interface b) Intermediate support interface
- c) Direct interface (when combination of a multi-turn actuator and multiturn/linear gearbox)
- d) Intermediate support interface (when combination of a multiturn actuator and a multi-turn/linear gearbox)

Key

- 1 multi-turn/linear actuator
- 2 interface (see ISO 5210)
- 3 valve
- 4 intermediate support

- 5 gearbox
- 6 interface (see ISO 5210)
- 7 multi-turn actuator

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

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 terminological databases for use in standardization at the following addresses:

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