
**Industrial valves — Part-turn actuator
attachments**

*Robinetterie industrielle — Raccordement des actionneurs à fraction
de tour*



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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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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 5211:2017), 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 [7.2](#);
- 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.

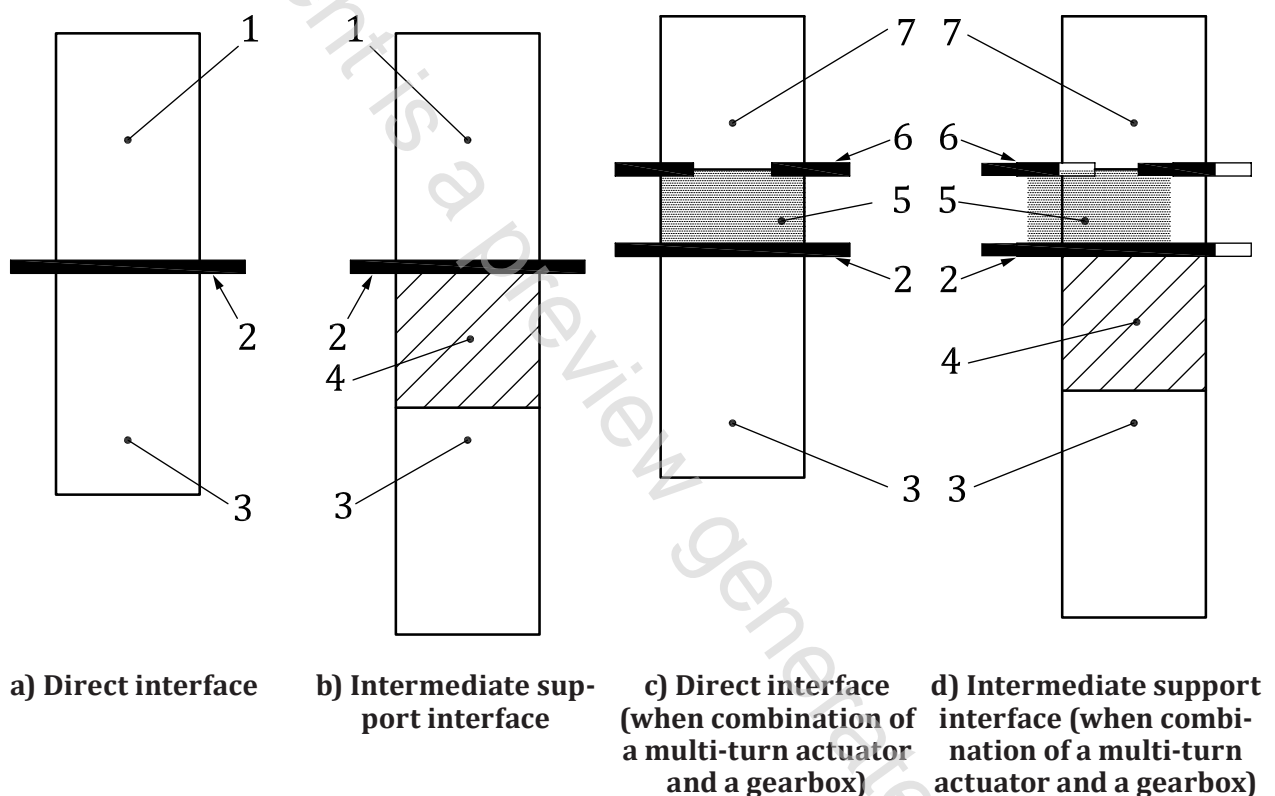
Introduction

The purpose of this document is to establish certain basic requirements for the attachment of part-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 part-turn gearbox is coupled to form a part-turn actuator, the multi-turn attachment to the gearbox is in accordance with ISO 5210:2023, Figures 1 c) and 1 d). A combination of a multi-turn actuator with integral part-turn gearbox supplied as a part-turn actuator is in accordance with [Figures 1a](#)) and [1b](#)).



Key

- 1 part-turn actuator
- 2 interface (see this document)
- 3 valve
- 4 intermediate support

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

Figure 1 — Interface between part-turn actuator and valve

Industrial valves — Part-turn actuator attachments

1 Scope

This document specifies requirements for the attachment of part-turn actuators, with or without gearboxes, to industrial valves.

The attachment of part-turn actuators to control valves in accordance with the requirements of this document is subject to an agreement between the supplier and the purchaser.

This document specifies:

- flange dimensions necessary for the attachment of part-turn actuators to industrial valves [see [Figures 1 a\)](#) and [1 c\)](#)] or to intermediate supports [see [Figures 1 b\)](#) and [1 d\)](#)];
- driving component dimensions of part-turn actuators necessary to attach them to the driven components;
- reference values for torques for interfaces and for couplings having the dimensions specified in this document.

The attachment of the intermediate support to the valve is out of the scope of 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*

ISO 4156-1, *Straight cylindrical involute splines — Metric module, side fit — Part 1: Generalities*

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* ([3.5](#)) and/or thrust.