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Interested committees:

Title: Draft BS EN ISO 23097 Industrial valves — Pneumatic part-turn actuators — General requirements.

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Introduction

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT International Standard

ISO/DIS 23097

Industrial valves — Pneumatic part-turn actuators — General requirements

*Robinetterie industrielle — Actionneurs pneumatiques à fraction
de tour — Prescriptions générales*

ICS: 23.060.01

ISO/TC 153

Secretariat: **AFNOR**

Voting begins on:
2025-09-11

Voting terminates on:
2025-12-04

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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*.

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.

Industrial valves — Pneumatic part-turn actuators — General requirements

1 Scope

This document specifies basic requirements for pneumatic part-turn valve actuators, both double acting and single acting, used for on-off and modulating control duties.

It includes guidelines, recommendations and methods for enclosure and corrosion protection, control and testing.

It does not apply to pneumatic actuators which are integral parts of control valves and to pneumatic actuators designed for permanent immersion in fresh or sea water.

Other requirements, or conditions of use, different from those indicated in this document, are expected to be subject to negotiations, between the purchaser and the manufacturer/supplier, prior to order.

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 5211, *Industrial valves — Part-turn actuator attachments*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

ISO 5599-2, *Pneumatic fluid power — Five-port directional control valves — Part 2: Mounting interface surfaces with optional electrical connector*

ISO 8573-1:2010, *Compressed air — Part 1: Contaminants and purity classes*

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

part-turn actuator

actuator which transmits torque to the valve for a rotation of one revolution or less; and does not have to withstand axial thrust

Note 1 to entry: Part-turn actuators are classified by action and duty.

3.2

cycle

movement of the valve obturator from the fully closed position to the fully open position and back to the fully closed position, or vice versa

[SOURCE: ISO 12490:2011, 4.8, modified — The word "continuous" at the beginning of the definition has been removed.]

3.3

travel

movement of the actuator in driving a valve obturator, defined in terms of output, angular movement or a percentage thereof

3.4

stroke

travel (3.3) of the valve obturator from the fully closed position to the fully open position, or vice versa

EXAMPLE End of stroke is predefined as the fully closed or fully open position.

[SOURCE: ISO 12490:2011, 4.25, modified — The example has been added and the word "movement" has been substituted by "travel".]

3.5

end stop

mechanical part designed to stop the actuator movement at an end position

Note 1 to entry: End stop can be fixed or adjustable.

3.6

torque

3.6.1

output torque

minimum torque delivered by the actuator, in both directions, at specified supply pressure conditions as provided by the manufacturer/supplier

Note 1 to entry: Where the output torque varies with the stroke, in a linear or nonlinear relationship with pressure, tabulated data and/or torque versus stroke diagram shall be provided at significant pressure values for each direction of movement.

3.6.2

maximum allowable stem torque

MAST

maximum torque as defined by the valve manufacturer/supplier, that can be applied to a valve stem or shaft without causing permanent deformation or mechanical damage to the stem or any other components of the valve

3.6.3

rated torque

torque value developed by the actuator when powered with maximum allowable working pressure, as indicated by the actuator manufacturer/supplier

3.6.4

nominal torque

3.6.4.1

double acting version

minimum output torque of the actuator, at any point of the stroke, with nominal pressure