

| | | |
|------------|--|--|
| STN | Priemyselné ventily Pohony Časť 5: Pneumatické lineárne pohony priemyselných ventilov Základné požiadavky | STN EN 15714-5 13 3006 |
|------------|--|--|

Industrial valves - Actuators - Part 5: Pneumatic linear actuators for industrial valves - Basic requirements

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/22

Obsahuje: EN 15714-5:2022

135340

EUROPEAN STANDARD

EN 15714-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2022

ICS 23.060.20

English Version

Industrial valves - Actuators - Part 5: Pneumatic linear actuators for industrial valves - Basic requirements

Robinetterie industrielle - Actionneurs - Partie 5 :
Actionneurs linéaires pneumatiques - Prescriptions de
base

Industriearmaturen - Antriebe - Teil 5: Pneumatische
Antriebe - Grundanforderungen

This European Standard was approved by CEN on 20 April 2022.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, 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: Rue de la Science 23, B-1040 Brussels

EN 15714-5:2022 (E)

| Contents | Page |
|--|-------------|
| European foreword | 4 |
| 1 Scope | 5 |
| 2 Normative references | 5 |
| 3 Terms and definitions | 5 |
| 4 Classification/designation | 7 |
| 4.1 Duty classification | 7 |
| 4.1.1 General..... | 7 |
| 4.1.2 On-off duty..... | 7 |
| 4.1.3 Modulating duty | 7 |
| 4.2 Action | 8 |
| 4.2.1 Double acting (DA) | 8 |
| 4.2.2 Single acting (SA) | 8 |
| 5 Motive energy | 8 |
| 5.1 Operating medium..... | 8 |
| 5.2 Quality..... | 8 |
| 5.3 Pressure | 8 |
| 6 Actuator performance data | 9 |
| 6.1 Minimum moving pressure | 9 |
| 6.2 Operating time | 9 |
| 6.3 Displacement volume..... | 9 |
| 6.4 Dimensions and performances for double acting version..... | 9 |
| 6.5 Dimensions and performances for single acting version..... | 11 |
| 7 Basic design requirements | 12 |
| 7.1 Safety requirements | 12 |
| 7.2 Linear actuator attachment | 12 |
| 7.3 Nominal stroke | 13 |
| 7.4 Endurance of linear actuators..... | 13 |
| 7.5 Leakage..... | 14 |
| 7.6 Environmental conditions..... | 15 |
| 7.6.1 Ambient temperature..... | 15 |
| 7.6.2 Enclosure protection | 15 |
| 7.6.3 Corrosion protection | 15 |
| 7.7 Pressure connections | 17 |
| 7.7.1 General..... | 17 |
| 7.7.2 Remotely mounted pilot valves | 17 |
| 7.7.3 Direct mounted pilot valves..... | 18 |
| 7.8 Structural safety factors | 19 |
| 8 Optional equipment | 20 |
| 8.1 Ancillaries..... | 20 |
| 8.2 Manual operation device..... | 20 |
| 8.3 Mechanical end stop adjustment..... | 20 |
| 8.4 Position indication | 21 |
| 8.5 Bracket..... | 21 |
| 8.6 Anti-rotation device | 21 |

| | | |
|-------------|--|-----------|
| 9 | Conformity assessment | 21 |
| 9.1 | General | 21 |
| 9.2 | Type tests | 21 |
| 9.3 | Control of production process | 22 |
| 10 | Marking | 24 |
| 10.1 | Mandatory marking | 24 |
| 10.2 | Optional marking | 24 |
| 11 | Documentation | 25 |
| 12 | Linear actuator selection guidelines | 25 |
| | Annex A (normative) Endurance test procedure | 26 |
| | Annex B (informative) Actuator selection guidelines | 28 |
| | Bibliography | 31 |

EN 15714-5:2022 (E)**European foreword**

This document (EN 15714-5:2022) has been prepared by 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 November 2022, and conflicting national standards shall be withdrawn at the latest by November 2022.

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.

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

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document provides basic requirements for piston type pneumatic linear actuators for industrial valve, both double acting and single acting, used for on-off and modulating control duties.

It includes criteria, method and guidelines for design, qualification, corrosion protection, control and testing.

It does not apply to diaphragm actuators and to pneumatic actuators which are integral parts of control valves.

Other requirements, or conditions of use, different from those indicated in this document, are subject to agreement, 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.

EN ISO 286-2, *Geometrical product specifications (GPS) - ISO code system for tolerances on linear sizes - Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts (ISO 286-2)*

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

EN 12570, *Industrial valves - Method for sizing the operating element*

EN 15714-1, *Industrial valves - Actuators - Part 1: Terminology and definitions*

EN 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*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN