



**SLOVENSKI STANDARD**  
**SIST EN ISO 5211:2017/oprA1:2022**

**01-november-2022**

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**Industrijski ventili - Pritrditve zasučnih pogonov na ventilih - Dopolnilo A1 (ISO 5211:2017/DAM 1:2022)**

Industrial valves - Part-turn actuator attachments - Amendment 1 (ISO 5211:2017/DAM 1:2022)

Industriearmaturen - Anschlüsse von Schwenkantrieben - Änderung 1 (ISO 5211:2017/DAM 1:2022)

Robinetterie industrielle - Raccordement des actionneurs à fraction de tour - Amendement 1 (ISO 5211:2017/DAM 1:2022)

**Ta slovenski standard je istoveten z: EN ISO 5211:2017/prA1**

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**ICS:**

23.060.01      Ventili na splošno                      Valves in general

**SIST EN ISO 5211:2017/oprA1:2022      en,fr,de**



# DRAFT AMENDMENT ISO 5211:2017/DAM 1

ISO/TC 153

Secretariat: AFNOR

Voting begins on:  
2022-09-21Voting terminates on:  
2022-12-14

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## Industrial valves — Part-turn actuator attachments AMENDMENT 1

*Robinetterie industrielle — Raccordement des actionneurs à fraction de tour*  
AMENDEMENT 1

ICS: 23.060.01

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Reference number  
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CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
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Published in Switzerland

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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](http://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).

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# Industrial valves — Part-turn actuator attachments

## AMENDMENT 1

*7.2, fourth paragraph*

Replace the fourth paragraph by the following:

The key dimensions shall comply with those given in Annex B.

*Annex B*

Add the following new normative Annex B.

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## Annex B (normative)

### Dimensions of keys and keyways

#### B.1 Basis for keys and keyways dimensioning

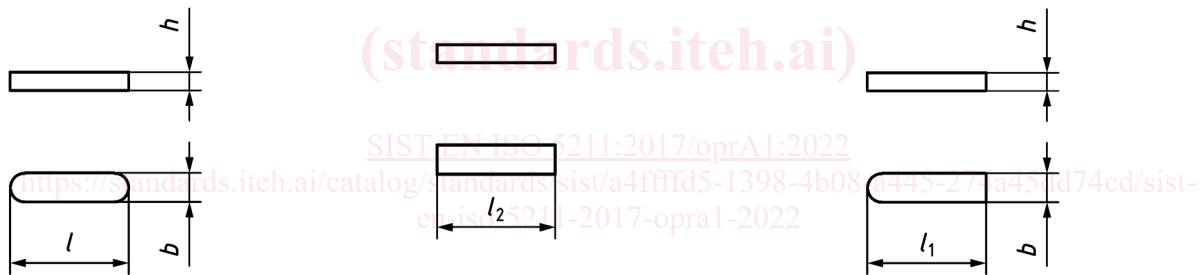
With ISO R773:1969 being withdrawn, there is currently no international standard defining keys and keyways available. Since for driven by key (see 7.2), keys and keyways are the means to transfer torque from the actuator to the valve, information on design and dimensions is given in Annex B.

#### B.2 Key and keyway forms

Forms for key and keyway shall fulfill the requirements given in Figure B.1 to Figure B.3.

Keys and keyways according to low patterns are not described in this Annex.

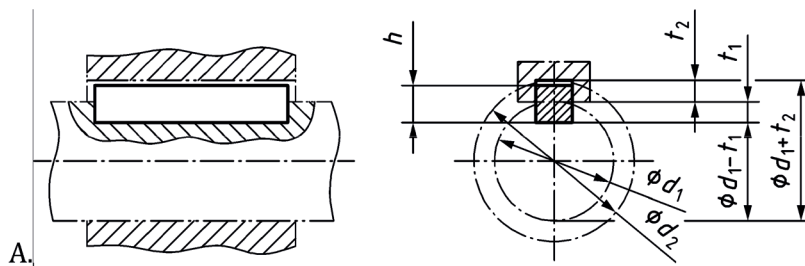
Bolts for retaining of keys, slants for disassembly of keys and holes for spiral pins are common with larger key sizes, but are not described in this Annex.



a) Form A round-ended

b) Form B square-ended

c) Form AB combination of A and B

d) Cross section through key and keyway connection, definition of the depths  $t_1$  and  $t_2$ 

NOTE  $l_2 = l - 2\left(\frac{b}{2}\right)$  and  $l_1 = l - \left(\frac{b}{2}\right)$ .

Figure B.1 — Key forms



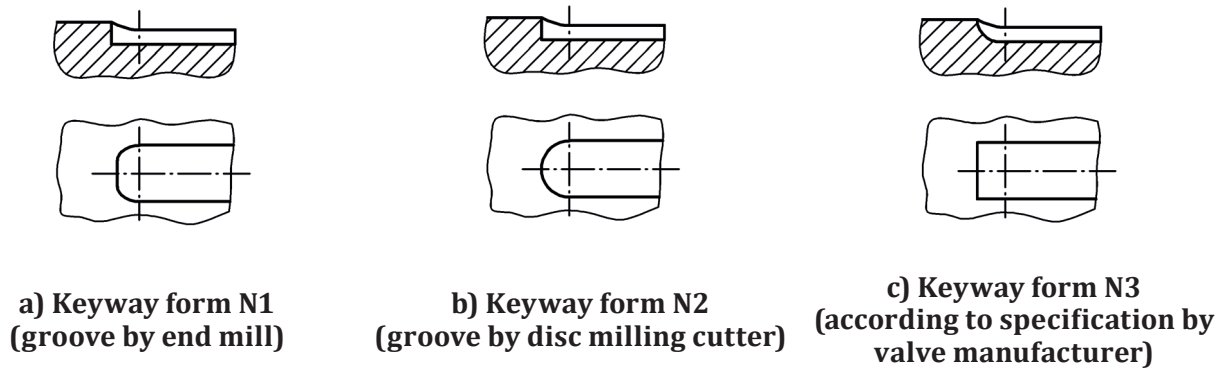
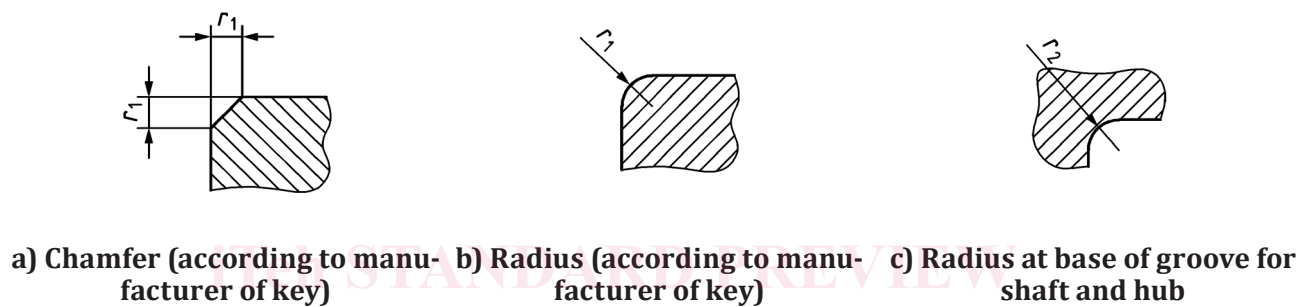


Figure B.2 — Keyway forms for valve shafts



NOTE Chamfer and radius [Figures B.3 a) and b)] are chamfered/rounded (at all edges).

Figure B.3 — Chamfering/rounding for key/rounding at base of groove

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### B.3 Dimensions and tolerances (cross section and design details)

The dimensions of the keys and keyways, as well as their acceptable deviations, shall be in accordance with those given in Tables B.1 and B.2.

Table B.1 — Dimensions and tolerances of keys, part 1

Key cross section	Width $b$														
	5	6	8	10	12	14	16	18	20	22					
For shaft diameter $d_1^a$	Height $h$	5	6	7	8	9	10	11	12	14	14	16	18	20	22
	Above	12	17	22	30	38	44	50	58	65	75	85	95	110	125
Shaft groove	Width $b^b$	5	6	8	10	12	14	16	18	20	22	25	30	35	40
	Depth $t_1^c$	3	3,5	4	5	5	5,5	6	7	7,5	9	10	11	12	14
Hub groove	with clearance	0,1													
	with interference	0,2													
Width $b^b$	tight fit P9	5	6	8	10	12	14	16	18	20	22	25	30	35	40
	loose fit JS9	2,3	2,8	3,3	3,3	3,3	3,8	4,3	4,4	4,9	5,4	6,4	7,4	8,4	9,4
Depth $t_2^c$	with clearance	0,1													
	with interference <sup>d</sup>	0,2													
$d_2$ minimum dimension <sup>e</sup>	accepted deviation	0,1													
	accepted deviation	0,2													
Chamfer or radius $r_1$	$d_1^+$	—	—	3	3	3	3,5	4	4,5	5	5,5	6,5	7,5	8,5	9,5
	min.	5	6	8	8	8	9	11	11	12	14	16	18	20	22
Radius at base of groove $r_2$	max.	0,25	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4
	min.	0,25	0,16	0,16	0,16	0,16	0,16	0,16	0,16	0,16	0,16	0,16	0,16	0,16	0,16
Length $l$	accepted deviation.	Weight (7 850 kg/m <sup>3</sup> ) for form B (kg/1 000 pieces) $\approx$													
	Key	Keyway													

<sup>a</sup> For mounting dimensions, especially for cylindrical shaft ends, the assignment of key cross sections to the shaft diameter is followed essentially. The assignment of key cross section for tapered shaft ends and the dimensions of the groove depths are not defined in this Annex.

<sup>b</sup> The tolerance zones for groove width are given as a rule for milled grooves. Other tolerance zones can be agreed between end-user and/or valve and actuator manufacturer. For the width of broached grooves the ISO quality IT8 instead of IT9 (e.g. P8 instead of P9, N8 instead of N9 and JS8 instead of JS9) is recommended. For sliding fit of the key, the tolerance zone H9 for the shaft groove and D10 for the hub groove are recommended.

<sup>c</sup> In manufacturing drawings the dimensions  $t_1$  and  $(d_1 - t_1)$  as well as  $t_2$  and  $(d_1 + t_2)$  can be recorded parallel, however in many cases the dimensions  $t_1$  and  $(d_1 + t_2)$  are sufficient. The tolerances and machining allowances of shaft and hub bore can be considered.

<sup>d</sup> The groove depth with oversize is meant exceptionally, if the key is fitted through reworking.

<sup>e</sup> The values for  $d_2$  correspond to the smallest diameter of parts, which are slid on concentrically over the key.