



SLOVENSKI STANDARD SIST EN 1527:2019

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Stavbno okovje - Okovje za drsna in zgibna vrata - Zahteve in preskusne metode

Building hardware - Hardware for sliding doors and folding doors - Requirements and test methods

Schlösser und Baubeschläge - Beschläge für Schiebetüren und Falttüren - Anforderungen und Prüfverfahren

Quincaillerie du bâtiment - Quincaillerie pour portes coulissantes et portes pliantes - Exigences et méthodes d'essai

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91.190 Stavbna oprema Building accessories

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EUROPEAN STANDARD

EN 1527

NORME EUROPÉENNE

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Building hardware - Hardware for sliding doors and folding doors - Requirements and test methods

Quincaillerie du bâtiment - Quincaillerie pour portes coulissantes et portes pliantes - Exigences et méthodes d'essai

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This European Standard was approved by CEN on 7 July 2019.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 1527:2019) has been prepared by Technical Committee CEN/TC 33 “Doors, windows, shutters, building hardware and curtain walling”, 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of an identical text or by endorsement, at the latest by February 2020, and conflicting national standards shall be withdrawn at the latest by February 2020.

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.

This document supersedes EN 1527:2013.

Compared with EN 1527:2013, the following major change has been made:

- a new category was added: Cantilever gates (Clause 4) and test methods accordingly (Clause 6).

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.

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EN 1527:2019 (E)**1 Scope**

This document specifies requirements for the design manual system sliding doors, sliding corner doors and folding doors of the bi-fold type and multi-panel folding doors but excluding doors and panels. Cycle tests, static load, initial friction and corrosion resistance tests are included for fittings and track only.

This document covers door gear for all industrial, commercial and residential sliding doors and folding doors.

This document does not cover the rollers for horizontal sliding and building hardware for inward or outward sliding folding windows (types N Q, R and S) in accordance with EN 13126-15, building hardware for Lift and Slide windows (type P) in accordance with EN 13126-16 and building hardware for Tilt and Slide windows (type T) in accordance with EN 13126-17.

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 1670, *Building hardware — Corrosion resistance — Requirements and test methods*

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>
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3.1 door

building product which closes an opening, moving via the methods described in this specification, including not limited to doors, gates, garage doors and cantilever gates

3.2 aligner

fitting which retains a folding door in a flat and aligned closed position

Note 1 to entry: See Figure 1, point 8 of the key.

3.3 bottom guide

fitting which, with a bottom guide channel, controls the lateral movement of a sliding or folding top hanging door

3.4 bottom guide channel

channel section fitted either to the base of a structure or the bottom edge of a door to accommodate the bottom guide

3.5**bottom pivot**

axis fitted to the bottom of a folding door which turns in a bottom pivot socket

Note 1 to entry: See Figure 1, point 6 of the key.

3.6**bottom pivot socket**

fixed component in which the bottom pivot of a folding door is located

Note 1 to entry: See Figure 1, point 7 of the key.

3.7**bottom track**

track fixed to the base of a structure or floor, on which bottom rollers run

3.8**bottom roller**

fitting attached to the bottom of a door which allows it to run on a bottom track

3.9**folding door, bi-fold type**

door formed by two panels connected by hinges and operating on pivots running in a top track with guide

3.10**heavy sliding door, bottom rolling**

door of mass 100 kg or more with bottom rollers running on a bottom track fixed to the base of the structure or floor, and with a top guide

3.11**heavy sliding door, top hanging**

door of mass 200 kg or more which is suspended by top hangers running in a top track fixed to an overhead structural component, and with a bottom guide

3.12**hinge**

fitting connecting two panels of a folding door

Note 1 to entry: See Figure 1, point 5 of the key.

3.13**light sliding door, top hanging**

door of mass less than 200 kg which is suspended by top hangers running in a top track fixed to an overhead structural component, and with a bottom guide

3.14**light sliding door, bottom rolling**

door of mass less than 100 kg with bottom rollers running on a bottom track fixed to the base of the structure or floor, and with a top guide

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3.15

multi-panel folding door

door formed by two or more panels connected by hinges and suspended by top hangers running in a top track fixed to an overhead structural component, or running on bottom rollers with a top guide in a top track

3.16

stop

fitting used to stop a sliding door at the end of its run

3.17

damping device

device, with or without additional functions, which allows shocks to be absorbed during the final movement operation of a sliding door (and which prevents a sliding system being damaged)

3.18

test cycle

all operations from the closed position, to open the test door to the required position and close it again to the closed position

3.19

bracket

support used to carry a top track and secure it to the structure of a building

Note 1 to entry: Brackets can be side-wall fixing or ceiling fixing, adjustable or non-adjustable.

3.20

top guide

fitting which, with a top guide track, controls the lateral movement of a bottom rolling sliding door

3.21

top guide track

track fixed to the top of the structure in which a top guide runs

3.22

top hanger

roller fixed to a top hanging sliding door which allows it to move laterally

3.23

top pivot

axis fitted to the top of a folding door, which turns in a top pivot socket

Note 1 to entry: See Figure 1, point 4 of the key.

3.24

top pivot socket

fixed component in which the top pivot is located

Note 1 to entry: See Figure 1, point 2 of the key.

3.25

top track

section that carries the hangers of sliding and folding top hanging doors

Note 1 to entry: See Figure 1, point 1 of the key.

3.26**cantilever gate**

slide door used outside that is supported from track that is fixed below the structure and hangers that are fixed to the ground in the cleared part of the bay and with a top guide

3.27**bottom rolling gate**

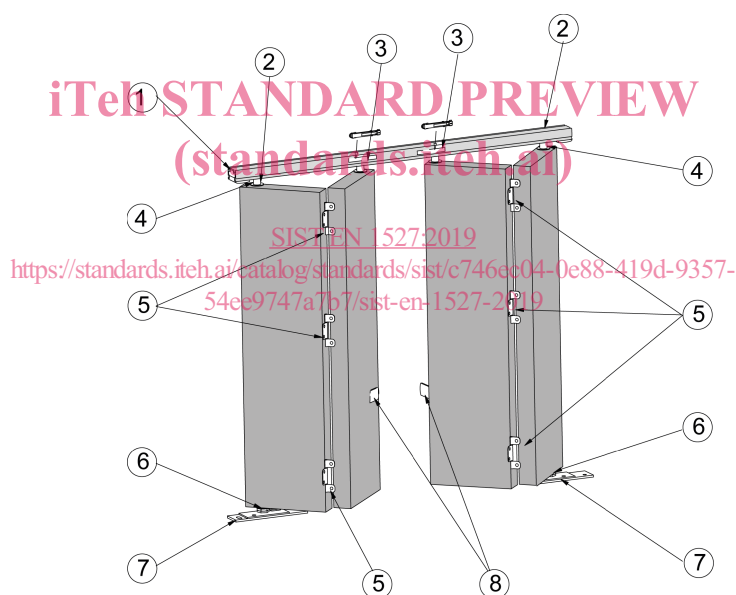
door used outside with bottom rollers fixed below the structure, with a bottom track fixed on the ground, and a top guide the bottom track is in the bay width

3.28**design system**

collection of components from which a “kit” may be created for subsequent installation in the works

Note 1 to entry A “design system” can, for example, be presented in a supplier’s catalogue, from which the purchaser/specifier can make a choice

Note 2 to entry A “design system” can give rise to one or many different “kits” (i.e. construction products, defined below). A “design system” cannot be a construction product, because it is possible only to buy one “kit” at a time from the “system”; the “system” itself cannot be bought

**Key**

- 1 top track
- 2 top pivot socket
- 3 top hanger
- 4 top pivots
- 5 hinges
- 6 bottom pivots
- 7 bottom pivot sockets
- 8 aligners

Figure 1 — Definitions

EN 1527:2019 (E)**4 Classification****4.1 General**

For the purposes of this document, sliding doors and folding doors and their building hardware shall be classified according to the nine digit coding system described in 4.2 to 4.10.

4.2 Category of door (1st digit)

Three grades are identified for door category:

- grade 1 = sliding door;
- grade 2 = folding door (bi-fold type) and sliding corner door;
- grade 3 = multi-panel folding door (see Figure 8) and sliding door for cantilever gates.

4.3 Door mass (2nd digit)

Four grades are identified for door mass:

- grade 1 = door \leq 50 kg;
- grade 2 = door > 50 kg;
- grade 3 = door > 100 kg;
- grade 4 = door > 200 kg.

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4.4 Size of Test Panel Used (3rd digit) [SIST EN 1527:2019](https://standards.iteh.ai/catalog/standards/sist/c746ec04-0e88-419d-9357-54ee9747a7b7/sist-en-1527-2019)

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4.4.1 General

Four grades are identified for door panel size:

4.4.2 For sliding doors

- grade 2 = the test panel size shall be 2 m high by 0,80 m wide;
- grade 4 = the test panel size shall be 2 m high by 2 m wide.

4.4.3 For sliding corner doors and folding doors of the bi-fold type and multi-panel folding doors

- grade 1 = the test panels size shall be 2 m high by 0,50 m wide;
- grade 2 = the test panel size shall be 2 m high by 0,80 m wide;
- grade 3 = the test panels size shall be 2 m high by 1,00 m wide;
- grade 4 = the test panel size shall be 2 m high by 2 m wide.

4.4.4 For cantilever gate

The test panel size of the leaf shall be 2 m high by 2,5+2 m wide (see Figure 2).

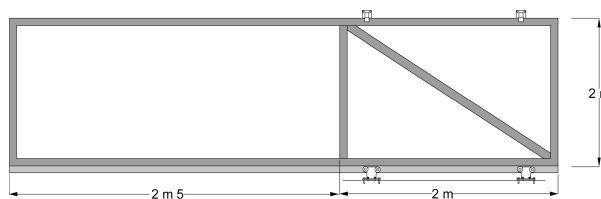


Figure 2 — Cantilever gate dimensions

4.5 Corrosion resistance (4th digit)

Products shall be classified from 1 to 5 according to the six grades defined in EN 1670. Grade 0 is for products not tested.

4.6 Slam test resistance (5th digit)

Three grades are identified for slam test resistance:

Grade	Grade 1	Grade 2	Grade 3
(mb)	2 kg	3 kg	4 kg

4.7 Horizontal static load test resistance (6th digit)

Three grades are identified for horizontal static load test resistance:

Grade	Grade 1	Grade 2	Grade 3
(F)	150 N	200 N	250 N

4.8 Static load test resistance (7th digit)

Products are classified 0 (not tested or not met) or 1 (test requirements met).

4.9 Initial friction maximum permitted value (8th digit)

Three grades are identified, as shown in Table 1.

Table 1 — Initial friction maximum values permitted

Door mass	From 0 kg to 50 kg	From 51 kg to 100 kg	From 101 kg to 200 kg	Over 201 kg
Grade 1	50 N	80 N	90 N	5 % of the mass
Grade 2	30 N	50 N	60 N	3 % of the mass
Grade 3	10 N	20 N	30 N	2 % of the mass