

This is a preview of "DS/EN 13126-6:2018". [Click here to purchase the full version from the ANSI store.](#)

Bygningsbeslag – Beslag til vinduer og dørhøje vinduer – Krav og prøvningsmetoder – Del 6: Glidebeslag med variabel geometrisk indstilling (med eller uden friktion)

Building hardware – Hardware for windows and door height windows – Requirements and test methods – Part 6: Variable geometry stay hinges (with or without a friction stay)

DANSK STANDARD
Danish Standards Association

Göteborg Plads 1
DK-2150 Nordhavn

Tel: +45 39 96 61 01

Tel: +45 39 96 61 01

dansk.standard@ds.dk

www.ds.dk

This is a preview of "DS/EN 13126-6:2018". Click here to purchase the full version from the ANSI store.

DS projekt: M312536

ICS: 91.190

Første del af denne publikations betegnelse er:

DS/EN, hvilket betyder, at det er en europæisk standard, der har status som dansk standard.

Denne publikations overensstemmelse er:

IDT med: EN 13126-6:2018

DS-publikationen er på engelsk.

Denne publikation erstatter: [DS/EN 13126-6:2009](#)

DS-publikationstyper

Dansk Standard udgiver forskellige publikationstyper.

Typen på denne publikation fremgår af forsiden.

Der kan være tale om:

Dansk standard

- standard, der er udarbejdet på nationalt niveau, eller som er baseret på et andet lands nationale standard, eller
- standard, der er udarbejdet på internationalt og/eller europæisk niveau, og som har fået status som dansk standard

DS-information

- publikation, der er udarbejdet på nationalt niveau, og som ikke har opnået status som standard, eller
- publikation, der er udarbejdet på internationalt og/eller europæisk niveau, og som ikke har fået status som standard, fx en teknisk rapport, eller
- europæisk præstandard

DS-håndbog

- samling af standarder, eventuelt suppleret med informativt materiale

DS-hæfte

- publikation med informativt materiale

Til disse publikationstyper kan endvidere udgives

- tillæg og rettelsesblade

DS-publikationsform

Publikationstyperne udgives i forskellig form som henholdsvis

- fuldttekstpublikation (publikationen er trykt i sin helhed)
- godkendelsesblad (publikationen leveres i kopi med et trykt DS-omslag)
- elektronisk (publikationen leveres på et elektronisk medie)

DS-betegnelse

Alle DS-publikationers betegnelse begynder med DS efterfulgt af et eller flere præfikser og et nr., fx **DS 383**, **DS/EN 5414** osv. Hvis der efter nr. er angivet et **A** eller **Cor**, betyder det, enten at det er et **tillæg** eller et **rettelsesblad** til hovedstandard, eller at det er indført i hovedstandard.

DS-betegnelse angives på forsiden.

Overensstemmelse med anden publikation:

Overensstemmelse kan enten være IDT, EQV, NEQ eller MOD

- **IDT:** Når publikationen er identisk med en given publikation.
- **EQV:** Når publikationen teknisk er i overensstemmelse med en given publikation, men præsentationen er ændret.
- **NEQ:** Når publikationen teknisk eller præsentationsmæssigt ikke er i overensstemmelse med en given standard, men udarbejdet på baggrund af denne.
- **MOD:** Når publikationen er modificeret i forhold til en given publikation.

This is a preview of "DS/EN 13126-6:2018". [Click here to purchase the full version from the ANSI store.](#)

EUROPÄISCHE NORM

August 2018

ICS 91.190

Supersedes EN 13126-6:2008

English Version

Building hardware - Hardware for windows and door
height windows - Requirements and test methods - Part
6: Variable geometry stay hinges (with or without a
friction stay)

Quincaillerie pour le bâtiment - Exigences et
méthodes d'essai des ferrures de fenêtres et
portes-fenêtres - Partie 6 : Compas à géométrie
variable (avec ou sans système de friction)

Baubeschläge - Beschläge für Fenster und
Fenstertüren - Anforderungen und Prüfverfahren
- Teil 6: Scheren mit veränderlicher Geometrie
(mit oder ohne Friktionsystem)

This European Standard was approved by CEN on 30 April 2018.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, 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: Avenue Marnix 17, B-1000 Brussels

This is a preview of "DS/EN 13126-6:2018". [Click here to purchase the full version from the ANSI store.](#)

Contents

Page

European foreword	4
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Classification	7
4.1 General	7
4.2 Durability (1 – first box)	8
4.3 Mass (2 – second box)	8
4.4 Corrosion resistance (3 – third box)	8
4.5 Test sizes (4 – fourth box)	8
4.6 Application (5 – fifth box)	9
4.7 Example of classification for variable/parallel geometry stay hinges	9
5 Requirements	10
5.1 Dangerous substances	10
5.2 Integrated restrictors	10
5.3 Durability	10
5.4 Pull-in and pull-in abuse test	10
5.5 Parallelism test	10
5.6 Friction test (where applicable)	11
5.7 Obstructed track test	11
5.8 Ease of sash movement test	11
5.9 Durability test	12
5.10 Simulated negative pressure test	12
5.11 Static load test	13
5.12 Additional load test	13
5.13 Corrosion resistance	13
6 Test equipment and preparation for the test	13
6.1 Test-rig	13
6.2 Specimen	13
6.3 Mounting of specimen	14
6.4 Additional equipment	14
6.4.1 Block for pull-in abuse test	14
6.4.2 Steel cross for simulated negative pressure test	14
7 Test procedures	14
7.1 Samples	14
7.2 General	15
7.3 Adjusting the sash-mass	15
7.4 Lubrication and adjustment of hardware	15
7.5 Pull-in test	15
7.5.1 General	15
7.5.2 Pull-in test procedure	16
7.5.3 Acceptance criteria	16
7.6 Friction test	16
7.6.1 General	16
7.6.2 Friction test procedure	16
7.6.3 Acceptance criteria	17
7.7 Obstructed track test	17
7.7.1 Procedure – side hung and top hung windows	17
7.7.2 Procedure – parallel opening windows	17
7.7.3 Acceptance criteria	17
7.8 Pull-in abuse test	17
7.8.1 General	17

This is a preview of "DS/EN 13126-6:2018". [Click here to purchase the full version from the ANSI store.](#)

7.8.2	Procedure – pull-in abuse test	18
7.8.3	Acceptance criteria	18
7.9	Ease of sash movement test.....	18
7.9.1	Procedure – side and top hung opening windows.....	18
7.9.2	Procedure – parallel opening windows.....	19
7.9.3	Acceptance criteria	19
7.10	Durability test.....	19
7.10.1	Procedure – top hung and side hung windows	19
7.10.2	Procedure – parallel opening windows.....	19
7.10.3	Cycles	19
7.10.4	Egress easy clean side hung windows.....	20
7.10.5	Acceptance criteria	20
7.11	Simulated negative pressure test (excluding parallel windows).....	20
7.11.1	Procedure.....	20
7.11.2	Acceptance criteria	21
7.12	Static load test procedure.....	21
7.12.1	Procedure.....	21
7.12.2	Acceptance criteria	21
7.13	Additional load test.....	21
7.13.1	Procedure.....	21
7.13.2	Acceptance criteria	22
7.14	Parallelism test.....	22
7.14.1	Procedure – closed position.....	22
7.14.2	Procedure – open position	22
7.14.3	Acceptance criteria	22
7.15	Corrosion resistance	22
8	Marking.....	22
	Annex A (informative) Types of variable/parallel geometry stay hinges.....	24
	Annex B (informative) Test method diagrams.....	26
	Annex C (informative) Flow chart of test procedures	35
	Annex D (informative) Window types	37
	Bibliography	41

This is a preview of "DS/EN 13126-6:2018". [Click here to purchase the full version from the ANSI store.](#)

European foreword

This document ([EN 13126-6:2018](#)) 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 2019, and conflicting national standards shall be withdrawn at the latest by February 2019.

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 13126-6:2008](#).

This European Standard is one of a series of European Standards for building hardware products for windows and door height windows. This European Standard is independent of part 1 of [EN 13126](#).

The performance tests incorporated in this European Standard are considered to be reproducible and as such will provide a consistent and objective assessment of the performance of these products throughout CEN Member States.

A list of all parts in the [EN 13126 series](#) can be found on the CEN-CENELEC website.

In comparison with [EN 13126-6:2008](#), the following significant changes were made:

- [EN 13126-6](#) now is independent from [EN 13126-1](#); all necessary information is included without the need of any further information from part 1;
- several editorial changes in the wording for a better understanding and to cover variable/parallel geometry stay hinges in the whole standard;
- under [Clause 1](#) 'Scope', variable/parallel geometry stay hinges (with or without a friction system) added; former Note 1 deleted;
- under term number [3.2](#), definition added for parallel geometry stay hinge (with or without a friction system);
- the term 'parallelism' added under term number [3.7](#);
- the term 'egress easy clean' added under term number [3.8](#);
- terms 'sample', 'specimen' and 'test-rig' added under term numbers [3.9](#), [3.10](#) and [3.11](#);
- under [4.1](#), classification system changed completely; former digits 1 (Category of use), 4 (Fire resistance), 5 (Safety in use), 7 (Security) and 8 (Applicable part) deleted; former digit 2 changed into box 1 (Durability), former digit 3 changed into box 2 (Mass), former digit 6 changed into box 3 (Corrosion resistance), former digit 9 changed into box 4 (Test sizes) and former digit 8 (application) transferred into box 5 (application);
- under [4.2](#), new grades for the number of cycles defined; H1 (5 000), H2 (10 000) and H3 (20 000) with the same number of cycles for the tilt and the turn cycles; refer also to [5.3](#);
- under [4.7](#), new example added for the new classification;
- under [4.5](#), new [Table 5](#) added with "Test window size for parallel geometry opening stay hinges";
- under [5.5](#), 'Parallelism test' added;
- under [5.9](#), [Table 8](#) 'Durability test sequence' amended;
- under [Clause 6](#), 'Test equipment and preparation for the test' additional information added for the test rig ([6.1](#)), the specimen ([6.2](#)), the mounting of the specimen ([6.3](#)), additional equipment ([6.4](#));

This is a preview of "DS/EN 13126-6:2018". [Click here to purchase the full version from the ANSI store.](#)

- under [7.2](#), 'General' additional information added for the testing procedure;
- under [7.3](#), 'Adjusting the sash-mass' information added, mainly from the current version of part 1;
- under [7.4](#), 'Lubrication and adjustment of hardware', mainly from the current version of part 1;
- under [7.7.2](#), 'Procedure – parallel opening windows' added for the obstructed track test ([7.7](#));
- under [7.9.2](#), 'Procedure – parallel opening windows' added for the ease of sash movement test ([7.9](#));
- [Annex A](#) and [Annex B](#) amended with figures regarding parallel geometry opening stay hinges;
- new flowcharts added in [Annex C](#);
- new informative [Annex D](#) with window types.

A full contribution to the preparation of this European Standard has been made by the European manufacturer's organization 'ARGE' and National Standards institutions.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

This is a preview of "DS/EN 13126-6:2018". [Click here to purchase the full version from the ANSI store.](#)

1 Scope

This part of [EN 13126](#) specifies requirements and test methods for durability, strength, security and function of mechanically operated variable/parallel geometry stay hinges (with or without a friction system) whether fitted, with integral restrictors or not, in accordance with common application as shown in informative [Annex D](#).

By means of this standard, the user of recognized tested hardware can assume that with correct usage, the variable/parallel geometry stay hinges (with or without a friction system) for windows conform to prescribed requirements.

NOTE 1 — Balancing stay arms/hinges do not represent a friction system.

NOTE 2 — For the purposes of this standard, the friction system is achieved by friction pads or similar.

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*

[EN 13126-5](#), *Building hardware - Hardware for windows and door height windows - Requirements and test methods - Part 5: Devices that restrict the opening of windows and door height windows*