

AS Spilka Industri

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Spilka Opus

Product Data Sheet

Windows with Spilka Opus™ hinges are opened by means of a handle on the lower part of the sash and can be closed and secured in a ventilation position via an espagnolette locking system. Spilka Opus™ hinges incorporate a safety lock as a standard, this limits the initial opening of the window to a maximum 80mm at the bottom of the sash.

For cleaning purposes, the window can be turned 180°, which will engage the safety device and hold the sash securely. The sash does not intrude into the room, curtains and plants on the windowsill are not disturbed.

Spilka Opus™ is specifically made to maintain a flush outside surface. This makes it very well suited for production of windows with aluminium cladding.

The Spilka Opus system solution is described in reference item 1.1 in "table A".

Product Information:

Spilka Opus is available in six sizes, with the designations A1 – A6. The smallest window height is about 430mm and the tallest is 1588mm. The maximum sash weight for Spilka Opus is 55kg. However, we have in 2016 introduced a heavy-duty version which allows windows up to 80kg. These hinges are delivered in the hinge sizes A5 and A6 only.

The “table A”, item 1.2 it is a link to the Opus sash weight calculator for indicating the recommended window sizes (heights and widths) and the appropriate hinge sizes.

Application:

Windows with the Spilka Opus system solution are opened by means of a handle on the lower part of the sash which operates an espagnolette system. Spilka Opus™ hinges incorporate a safety lock as a standard, this limits the initial opening of the window to a maximum of 80mm.

Maintenance and correct use are important to maintain functionality and useful life for both hinges and windows. An overview of the maintenance is shown in chapter “Maintenance” on page 7.

Profile description and interface information:

The “table A”, item 1.3 give references to the profile design and interface instructions for Spilka Opus.

Surface treatment:

Opus hinges in steel have been surface treated with electrolytic zinc and given a passivation coating of Chrome (Cr) in trivalent form and thereafter a sealer. Chromium in trivalent form is more environmentally friendly than in a hexavalent form. The passivation coating bonds with the top layer of the zinc and along with the sealer the hinge becomes more corrosion resistant. The surface treatment leaves the hinges with a light grey color. An overview of the corrosion protection is shown in chapter “Corrosion resistance” on page 5.

Maintenance (FDV)

Hinges are used in windows in the facades of the buildings and to maintain functionality and desired service life, correct use and maintenance are required. We have prepared an overview with recommendations for what is needed in terms of continuous maintenance, but we emphasize that

local conditions such as weather, proximity to the sea/water etc. are decisive for how often such maintenance must be repeated. An overview of the FDV is shown in chapter "Repair and Maintenance" on page 6–8.

Interface documentation:

The "table A" give references to relevant technical documentation for the Spilka Opus hinge.

Item	Description	Document no:
1.1	Opus hinge system solution	4-46-05 Opus hinge system solution
1.2	Opus size and capacity overview	Opus sash weight calculator
		4-67-87 Opus size and capacity overview
1.3	Profile design and interface instruction	220714 Construction manual Spilka Opus
		220714 Monteringsanvisning Spilka Opus
1,4	Products and Accessories for Opus Hinges	PDS-Spilka Product and Accessories Opus-v01-2022

Table A

Products and Accessories:

Spilka can offer a variety of products and accessories together with the hinge system, item 1.4 in "table A" give references to the available products and accessories for door and windows.

such as:

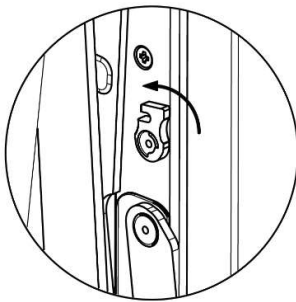
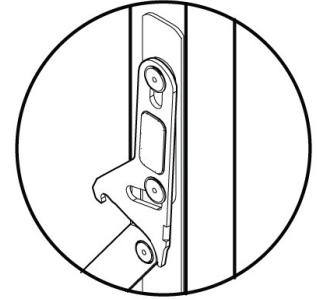
Operation and Functionality:

OPERATION

Certain hardware components require manual operation:

Opening restrictor/ safety catch

Fitted to the left-hand hinge (viewed from outside) this device limits initial opening to 80 mm and automatically re-engages when the sash is reversed for cleaning. It is operated by slightly closing the sash after it has opened out against the restrictor and then lifting the restrictor catch up to release the sash for further opening.



"Blowback restrictor"

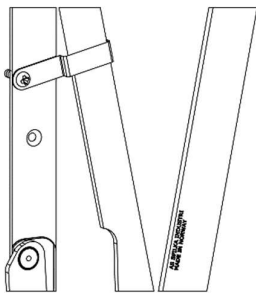
The left-hand hinge (as viewed from outside) has an integrated restrictor located under the safety catch which can be used to stop the window blowing closed in windy conditions. When the sash is opened against the limit of the safety catch, the restrictor is lifted into position against the hinge arm; to close the sash the restrictor may be released manually or by pulling the sash closed. The blowback restrictor is fitted to the larger Opus hinges A3–A6 but is not fitted to sizes A1 and A2.

Height adjustment

On each hinge, left and right, you will find an eccentric screw that allows a vertical adjustment of the hinge position by ± 1 mm. Before the eccentric screw is adjusted all other screws must be removed. The screw that is placed in the slotted screw hole can be loosened but does not have to be removed.

When the adjustment is completed, fasten all screws back in place.

Please make sure you take necessary safety measures to prevent the sash falling out.



Ventilation device

In certain situations, it may not be possible for the sash to be reversed into the washing position and for the safety catch to fully re-engage. We have developed a component, which is screwed to the right-hand hinge (as viewed from outside) and is manually hooked over the upper hinge arm when a wider opening is required; it is manually disengaged before the sash is closed. The device may be factory fitted by the window producer or on-site by the builder or householder.

Spilka Hardware – Corrosion Resistance:

Spilka is a supplier of hinges for windows. The Norwegian window manufacturers have their window certificated in a control organization called NDVK (Norwegian Door and Window Control).

These manufacturers are only allowed to use “approved” hinges. This means that the hinges must satisfy standard NS-EN 1670 grade 3.

Standard NS-EN 1670: Corrosion resistance specifies the requirements for the corrosion resistance of hardware for windows:

4 Classification

Grade (class) 3: High resistance

The requirement of corrosion for NDVK is grade (class) 3.

5.4 Electrodeposited zinc on iron or steel

If coated with electroplated zinc on iron or steel, the requirements of the appropriate classification code of ISO 2081 plus a chromate conversion coating meeting the requirements of the class of ISO 4520 specified to match that classification, shall be as follows:

– Grade (class) 3:

ISO 2081 classification code Fe/Zn 12 + ISO 4520 class 2C or 2D.

Spilka Classic hinges are made of steel with the following corrosion protection: Zinc electroplated, thickness min. 15 µm.

Passivated with bright chromate Cr (III).

Sealer.

This treatment satisfies EN 1670.

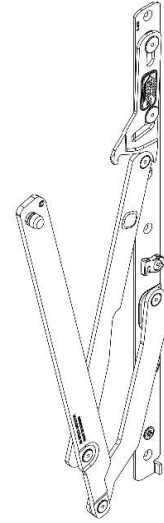
Spilka Industri is certificated according to our Quality System that complies with NS-EN ISO 9001- 2015

Spilka Opus Hardware – Repair and Maintenance:

These are guidelines for the repair and maintenance of Spilka Opus window hardware, including hinges, centre sash assemblies, u-profiles and head slides. Instructions are provided for the replacement or repair of damaged items and those needing replacement through wear and tear.

Material and Environment

Hinges are produced from standard grade steel of which 50 % is from recycled iron and the hinges may themselves be continuously recycled. Surfaces are treated with zinc, chromate, and sealer. Because of this treatment the hardware needs no special handling or considerations.



Quality Assurance and Guarantees

Spilka hardware is produced under a quality control system in accordance with requirements for the NDVK (Norwegian Door- and window control) and AS Spilka Industri has a license from their control body. Below are details of relevant requirements and qualities.

Strength

Opening the sash until the hinges are fully extended tests the window/hardware. A vertical load of 50 kg is then applied to the top of the sash while the bottom is held fixed. This gives a total loading on the hinges of up to 3 times the maximum sash weight. Our hardware is designed to accept these loadings to provide a considerable safety margin in operation and longevity in service.

NOTE! Damage may be caused to the safety restrictor if exceptional force is applied before it is lifted to allow the sash to reverse. Damage caused in this way would not be covered by our guarantee.

Wear and tear

Windows are tested by opening and closing over 20 000 cycles with their maximum sash weight, this should correspond with the daily opening of a window over its lifetime.

NOTE! Damage may be caused if relevant maintenance is not carried out, or by opening the safety restrictor with excessive force. Damage caused in this way will not be covered by our guarantee.

Corrosion

The requirement for surface treatment is a minimum of 12 µm thickness of zinc and passivated with chrome. According to the NDVK this gives a performance level as follows: "Fittings in Class 3 are suitable for use in wet or polluted environments and also salt, acid or alkaline conditions. This includes special humid conditions inside buildings and most external conditions".

NOTE! Hardware life expectancy before corrosion will depend on climate conditions and material contacts, which can cause corrosive reactions. Maintenance, including painting or staining is very important in aggressive situations and conditions.

Maintenance:

Hardware is used in window constructions and thereby as a part of a building facade. It is important that all items receive relevant initial treatment and that correct maintenance is carried out to sustain functionality and to achieve desired lifetime. Maintenance requirements may vary depending on local conditions and should be increased as appropriate

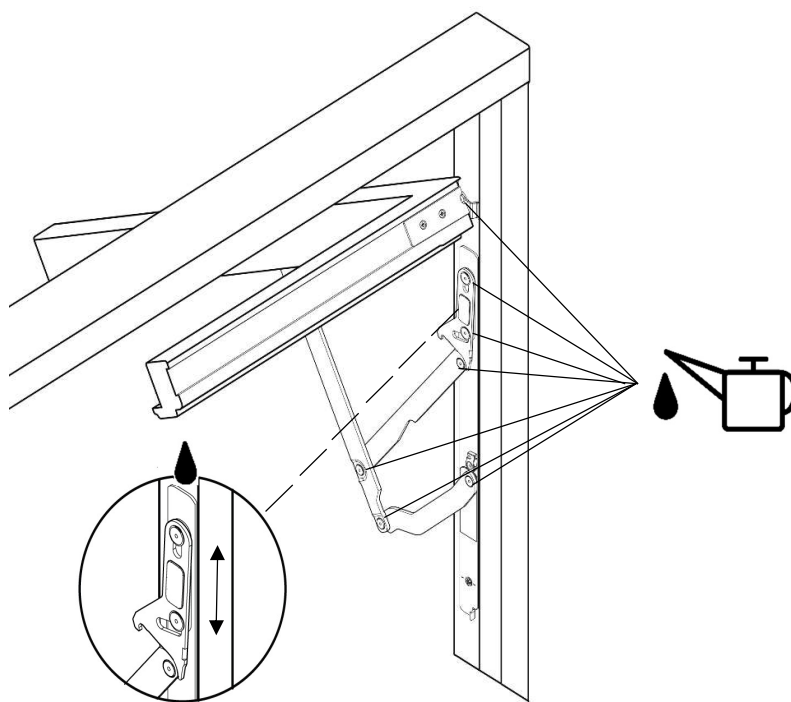
Lubrication of safety catch

Place a few drops of oil behind the catch and slide it up and down to ensure that the oil spreads between the steel surfaces. Also lubricate the hook which engages with the catch, to reduce friction when closing the window.

Lubrication of head slides and u-channel

Completely open the sash and place a few drops of oil on the white plastic part of each head slide as far as possible within the u-channel. Also lightly lubricate the pivot point on the head slide before turning the sash several times to ensure smooth operation. It is important that paint or stain is not introduced into the u-channel during decoration.

Application of oil between every surface and movable part must be carried out more frequently in corrosive environments.



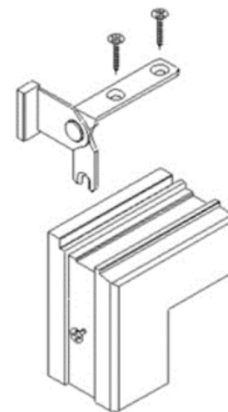
Repairs and Replacements:

Damaged components should usually be replaced. Fitting instructions may be found on our website and these details may be used to order replacement items by their descriptions and part numbers.

Head slides

Open the window wide enough to loosen or remove the screw(s) from the groove in the side of the sash. Then remove the screws holding the head slide onto the top of the sash. Pull or press the head slide off the sash and out of the u-channel before fitting the new component and replacing all screws.

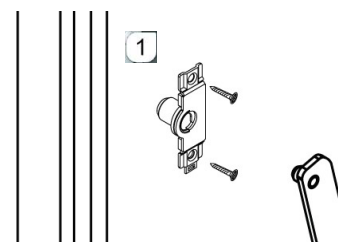
Please make sure you take necessary safety measures to prevent the sash falling out.



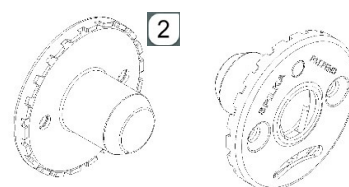
Hinges

Personnel with relevant skills should generally carry this out, as it may be difficult and potentially dangerous dependent on the situation and health and safety requirements.

The sash is reversed almost to the washing position and a block is wedged between the lower sash (now reversed) and the windowsill section. The (reversed) lower sash is then secured against the frame head. The sash weight will now be off the hinges.



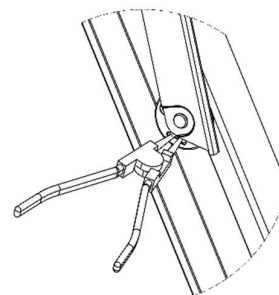
The hinge is fitted to the sash through a center sash assembly. Spilka offers two different center sash assemblies – 1) with a locking slide, 2) with a secured string, also known as the Rondo.



When using the center sash assembly alternative 1), its locking slide is released by removing its retaining screw. Once released, the hinge pivot point is pulled free.

For windows with center sash assembly alternative 2), the hinge pivot point is simply released by using a thin thong to release its spring.

The hinge is fixed to the frame by a screw, this can now be removed, and the replacement hinge may then be fitted. Only one hinge should be replaced at a time 'in-situ'.



NOTE! It is vital to replace the relevant pins and screws before the sash is reversed again to ensure the sash does not fall out

Profile Materials:

Material types:

Windows with Spilka Side-hung hinges can be produced with the same timber profiles used for our Classic, Opus and Swing hardware options.

Our R&D Department will give a quick clarification as to whether our hinge variants can be used directly in your current window profile.

Side hung windows can also be produced in PVCu, fibre glass and aluminium – dependent on the relevant profile construction.

Spilka Side-hung hinges are stocked in white (RAL 9010), grey (RAL 7035) and black (RAL 9011). They have flat end caps in a durable plastic material. We also provide decorative knobs in the same quality plastic. Use of knobs require that the flat end caps are removed manually.

Wood:

Windows made of wood continue to be the predominant choice in Scandinavia. Softwood (pine) is the most common wood where a large part should be heart wood for a more solid profile. Laminated profiles ensure a more stable construction, and it is common to use spruce for the outer lamina (layers) – which is more durable as it has a closed cell structure.

An increasing number of wooden windows are now delivered with aluminium cladding, and Spilka can assist with the design and delivery of such aluminium profiles.

PVC (vinyl):

Window frame and connecting profiles of extruded PVCu, also known as vinyl or plastic, can be used in the production of windows with Spilka's system solutions.

Aluminium:

Aluminium is a well-known material which has many applications and is a light metal with great strength in relation to its weight. Aluminium is a good choice due to its durability, minimal complications linked to corrosion and its flexible profile design possibilities.