

 **KASTRUP[®]**
WINDOWS

OPERATION AND MAINTENANCE | WOOD/ALUMINIUM
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5 Windows & doors



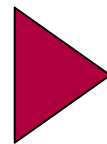
6 Ventilation



7 Kastrup



1 Preface



Congratulations on your new KASTRUP windows and doors.

Dear customer

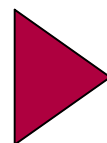
Thank you for choosing windows and doors from KASTRUP WINDOWS.

In order to maintain good and easy functioning, and to achieve years of service, it is important that the elements are cleaned and maintained on an ongoing basis. We have gathered the most important aspects regarding operation and maintenance in this guide.

We are proud to deliver a high quality product made in Denmark, and we expect you to enjoy these products for a long time to come.

Sincerely, KASTRUP WINDOWS

2 The DVV certificate



Is your guarantee for warranty, quality and durability.

Kastrup's windows and doors are DVV-certified (Danish Window Verification), which is requirement for all members of the Association of Danish Window Manufacturers. The DVV certification means that windows and doors are manufactured according to the Technical Requirements of the Association.

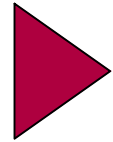
The Technical Requirements for the manufacture of windows and doors have been drawn up as an industry standard by the Association of Danish Window Manufacturers to ensure consumers a product meeting a number of minimum requirements for high quality.

The requirements describe and specify various requirements for the company's organisation, product information, product facilities, quality management, materials and execution as well as performance requirements for the finished product.

The requirements also contain rules for certification of the products. The purpose of the Requirements thus is to ensure that the product leaving the company is of such a high standard in regard to materials and execution that it at least corresponds to the Technical Requirements and the company's own description and labelling of the product.



3 Cleaning & maintenance



Normal maintenance, including cleaning and lubrication and inspection of the weather strips and glazing seal, should be performed on all windows and exterior doors of all types of materials.

Cleaning

Depending on orientation and placing, there will be soiling and dirt accumulation of external frame and sash surface. These should be cleaned regularly which is generally done in connection with pane cleaning, where aluminum frame and sash surfaces are washed with water and common detergent. Auto-shampoo and wax can also be used. Remember to clean exterior hardware. The exterior aluminum profiles should not be painted. We recommend cleaning the composite rebate with a cloth and detergent. The detergent **cannot** contain abrasives or solvents! Clean as necessary.

Weather strips and glazing seals

In connection with the annual lubrication, an inspection of the weather strips and glazing seals should also be performed. Ensure that the position and attachment of weather strips is correct, as well as the proper sealing function of the jamb liners. On most types of elements it is a fairly simple procedure to disassemble and reassemble the weather strips and should wherever possible be done in connection with maintenance of e.g. a surface treatment. Weather strips cannot be painted!

Interior maintenance of wooden surfaces

The interior wood parts are not exposed to wind and weather and do not in principle require paint. Nevertheless, it is important to maintain the interior wood so that it can withstand moisture and rain when the window is open.

Exterior maintenance of wooden surfaces (e.g. panelled doors)

Your new windows and doors have been surface treated with a water-based system from the factory. The system gives a weather-proofed, easy-to-clean and hard wearing surface with great outdoor performance, including gloss constancy and resistance to cracking.

Please note, that the tint may change over time following assembly, because the ultraviolet rays from the sun breaks down colour pigments resulting in a faded look. Dark colours will show a greater difference in nuance than light colours. The maintenance interval depends on the window's/door's exposure to the weather.

Any damages to the surface treatment must be remedied as soon as they are noticed in order to prevent moisture ingress resulting in further damage. Normal maintenance is performed as necessary but prior to any weathering and degradation of the surface. Normal maintenance consists of the following:

1. Washing the surface with clean water and subsequently drying.
2. Gently grinding (use a grinding sponge grit 220) and subsequently removing all grinding dust.
3. Afterwards apply 1-2 coats of vapour-permeable paint in a colour of your choice.

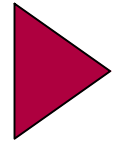
In case of flaking/scaling, please follow the procedure below:

1. Washing the surface with clean water and subsequently drying.
2. All raw wood areas are grinded back to unseasoned wood. On the rest of the surface treatment, perform a gentle grinding using a grinding sponge grid 220 and subsequently remove all grinding dust.
3. Raw wood is primed with transparent primer.
4. Afterwards stain the raw wood with paint in a colour of your choice and apply an additional 1-2 coats of painting.

Interior maintenance of wooden surfaces

The interior wood parts are not exposed to wind and weather and do not in principle require paint. Nevertheless, it is important to maintain the interior wood so that it can withstand moisture and rain when the window is open.

3 Cleaning & maintenance



Hardwood components

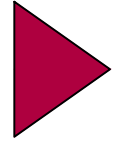
Due to its nature, hardwood is very durable but still needs maintenance in order to preserve the water repellent surface and warm glow of the wood. If regular maintenance with oil is not performed, the wood will fade and turn grey.

Your new hardwood windows and doors have been surface treated with a water-based hardwood oil. The hardwood oil is based on a watery alkyd oil with added pigments. The hardwood oil will effectively penetrate the wood and form a water repellent surface that will help preserve the wood for many years.

The hardwood oil has been applied industrially, which means that the oil has been applied once on every visible and invisible surface, for optimal protection of the wood. The hardwood oil is a basic treatment that will help protect the wooden surface during and immediately after assembly. We recommend applying at least 1-2 coats of oil immediately after assembly of the windows and doors. The number of treatments with hardwood oil necessary, depends on how dark you want the surface to be.

Oils for hardwood provide a comparatively thin treatment and requires regular maintenance with a hardwood oil of good quality in order to maintain warranty. To best maintain durability and water repellent effect, the wood must be oiled 2-4 times a year, depending on wear and tear of the surface due to sun, wind and rain. If the wood appears grey, overgrown by algae, discoloured or in any other way degraded, it must be grinded down to new fresh wood and treated until the surface appears saturated. In the event of fouling, please use a suitable wood cleaner.

4 Hardware, lubrication and adjustment



Hardware, lubrication and adjustment, in general.

Hardware must be maintained regularly, how often depends on local and weather conditions. Lubrication should be done as necessary, with a minimum of once a year.

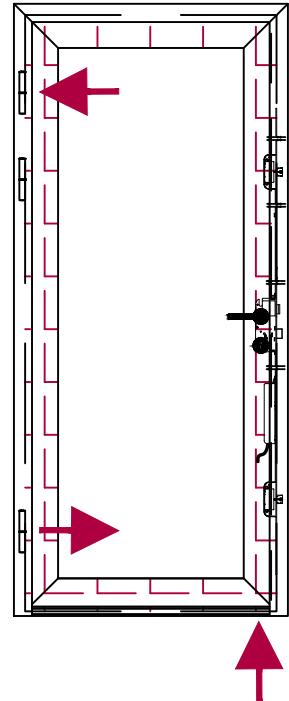
In special climatic conditions e.g. coastal and industrial areas, the high content of salt and acid in the air may require maintenance and lubrication to be performed more frequently. Lubrication and maintenance in exposed areas like these, should be performed more regularly than in areas with milder climatic conditions. In connection with assembly, it may be required to adjust the opening-type frames, wear and tear may also make adjustments necessary. The following pages specify where lubrication should be applied for each individual element type and how any adjustments are made.

Adjusting the hardware

Hardware must always be relieved of any weight during adjustment. The hinge can be relieved by putting a wedge or winbag under the frame in the handle-side, while the door is in a closed position with no activated handle. Alternatively, the door can be relieved using a crowbar and a wedge or the door can be lifted off.

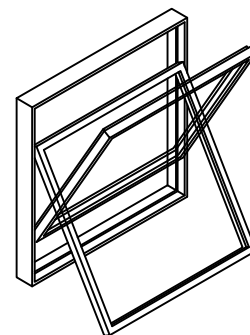
Handle operated brake

The handle operated brake is NOT an actual stop, but a means to hold the door or window frame in the desired position under normal wind conditions. We recommend, the brake is supplemented with an actual door stop or casement hook.

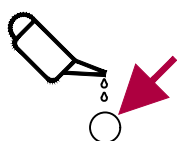
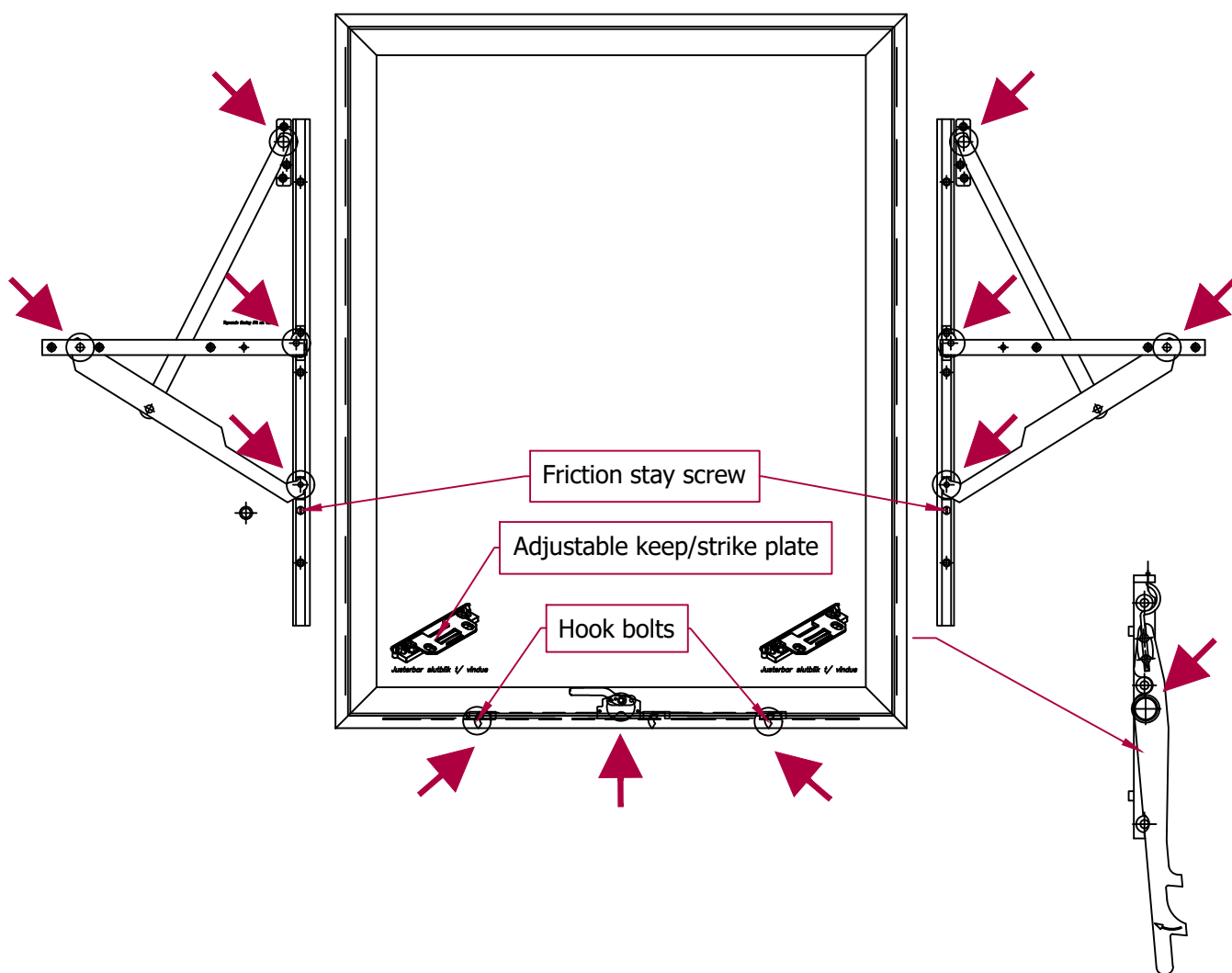


5 Reversible, Kastrup Energy

Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the window is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry. For optimal functionality, the hardware including rails must be kept clean and washed using a common detergent with a neutral PH value. Stay clear of the hardware, when painting or treating etc. the window.



Shown as reversible with friction.

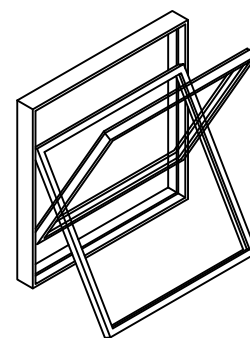


Lubrication		Adjustment
Points of assembly in hardware	YES	<ul style="list-style-type: none"> - The strike plate can be adjusted in/out $\pm 2,5$ mm with a T20 torx spanner. - The friction can be adjusted using a flat-head screwdriver on the friction stay screws in the side of the console. To achieve the best result, friction must be the same on both sides.
Espagnolette bolt	YES	
Safety catch/reversible catch	YES	

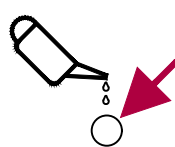
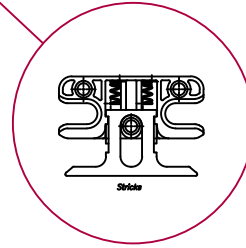
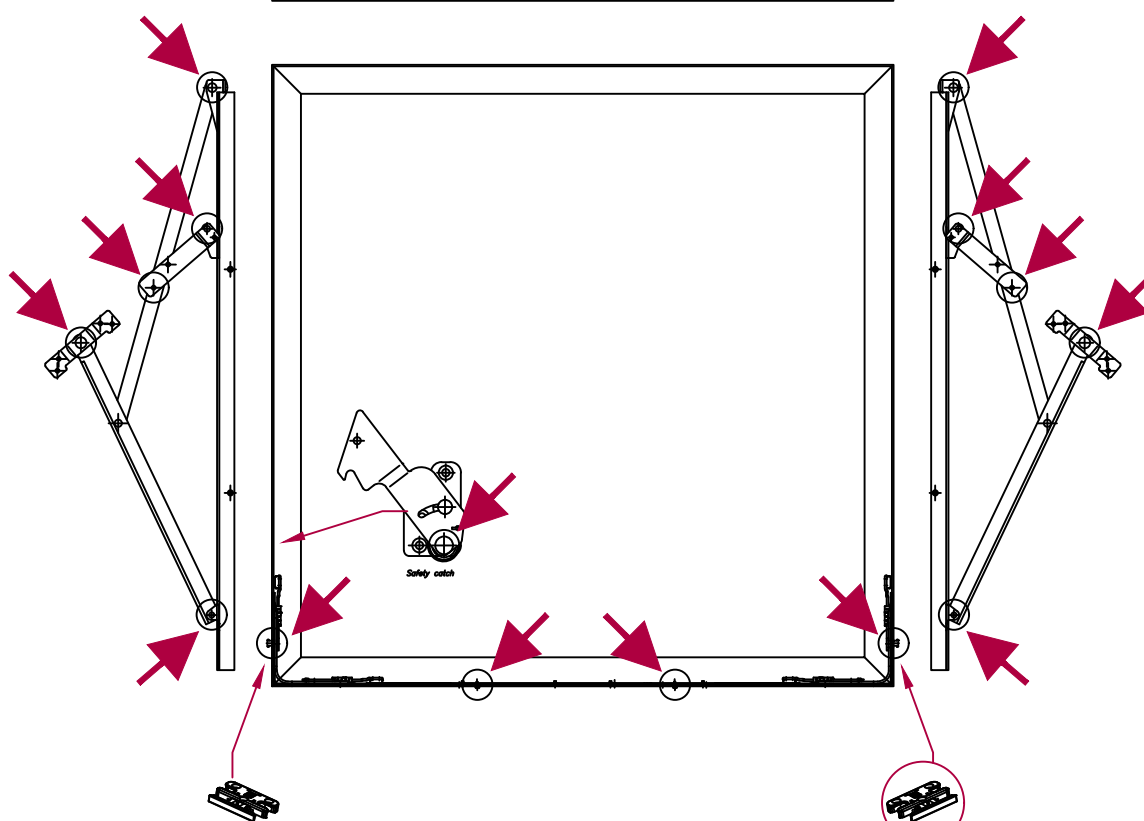
5 Reversible, INVI



Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the window is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry. For optimal functionality, the hardware including rails must be kept clean and washed using a common detergent with a neutral PH value. Stay clear of the hardware, when painting or treating etc. the window.



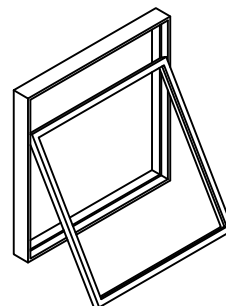
Shown as reversible with reversible catch.



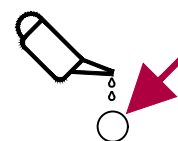
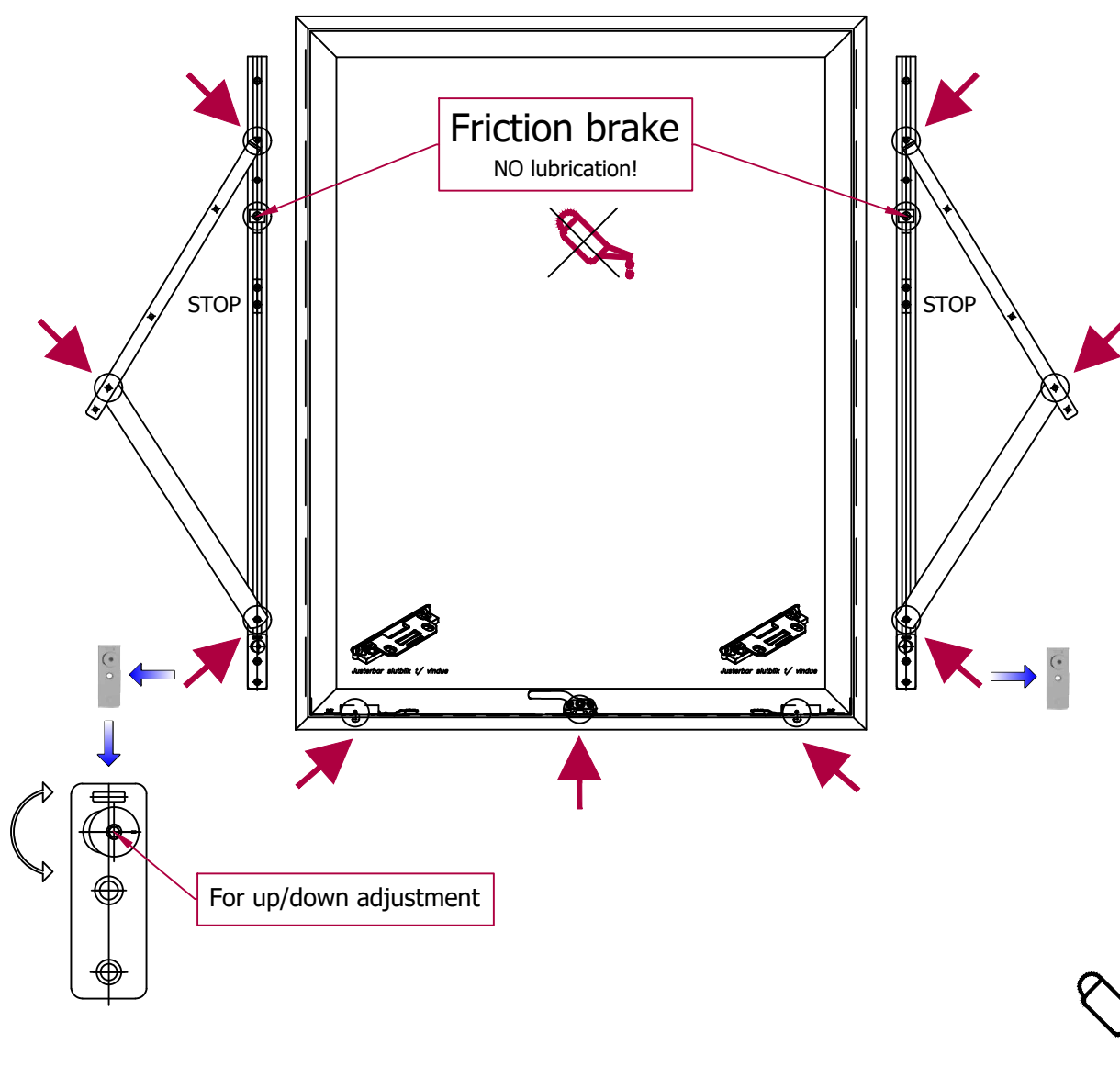
Lubrication		Adjustment
Points of assembly in hardware	YES	- Tightening of rollers can be adjusted ± 1 mm with a 11 mm fork spanner.
Mushroom bolts	YES	
Safety catch/reversible catch	YES	

5 Top guided, Kastrup Energy

Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the window is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry. For optimal functionality, the hardware including rails must be kept clean and washed using a common detergent with a neutral PH value. Stay clear of the hardware, when painting or treating etc. the window.



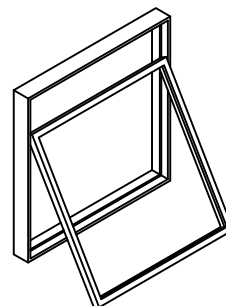
Shown with sliding hardware and friction brake.



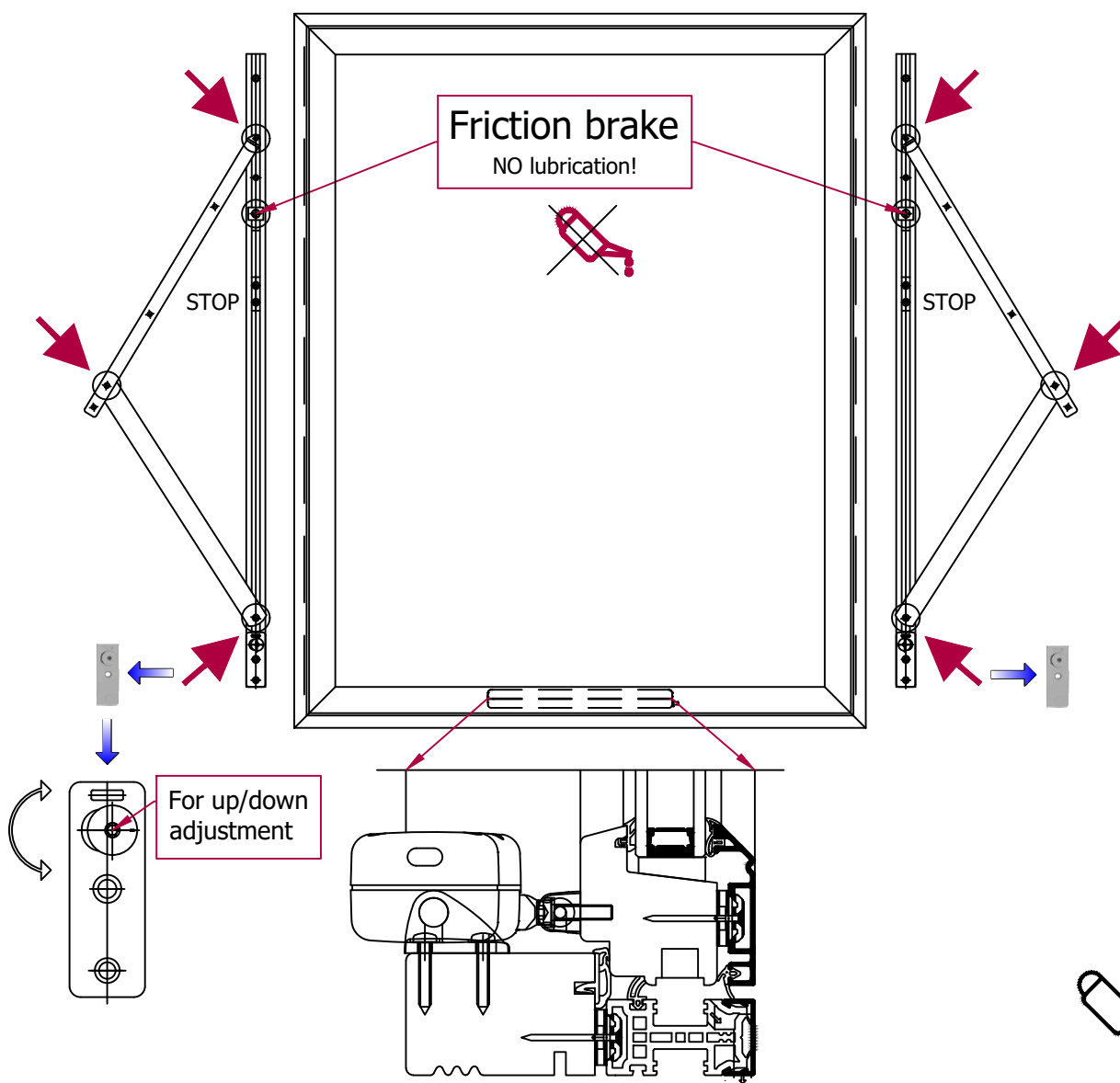
Lubrication		Adjustment	
Points of assembly in hardware	YES	-	The strike plate can be adjusted in/out $\pm 2,5$ mm with a T20 torx spanner.
Espagnolette bolt and internal bolts	YES	-	The sash can be adjusted $\pm 1,5$ mm up or down with a 4 mm Unbraco spanner in the eccentric dowel.
Friction brake	NO	-	The friction can be adjusted using the screw in the slide rail.
		-	To achieve the best result, friction must be the same on both sides.

5 Top guided, Kastrup Energi

Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the window is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry. For optimal functionality, the hardware including rails must be kept clean and washed using a common detergent with a neutral PH value. Stay clear of the hardware, when painting or treating etc. the window.



Shown with sliding hardware and friction brake.

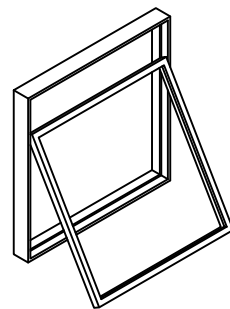


Lubrication		Adjustment
Points of assembly in hardware	YES	<ul style="list-style-type: none"> - The strike plate can be adjusted in/out $\pm 2,5$ mm with a T20 torx spanner. - The sash can be adjusted $\pm 1,5$mm up or down with a 4 mm Unbraco spanner in the eccentric dowel. - The friction can be adjusted using the screw in the slide rail.
Aluminum rail inside	YES	
Friction brake	NO	

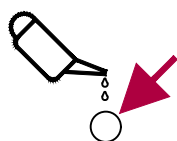
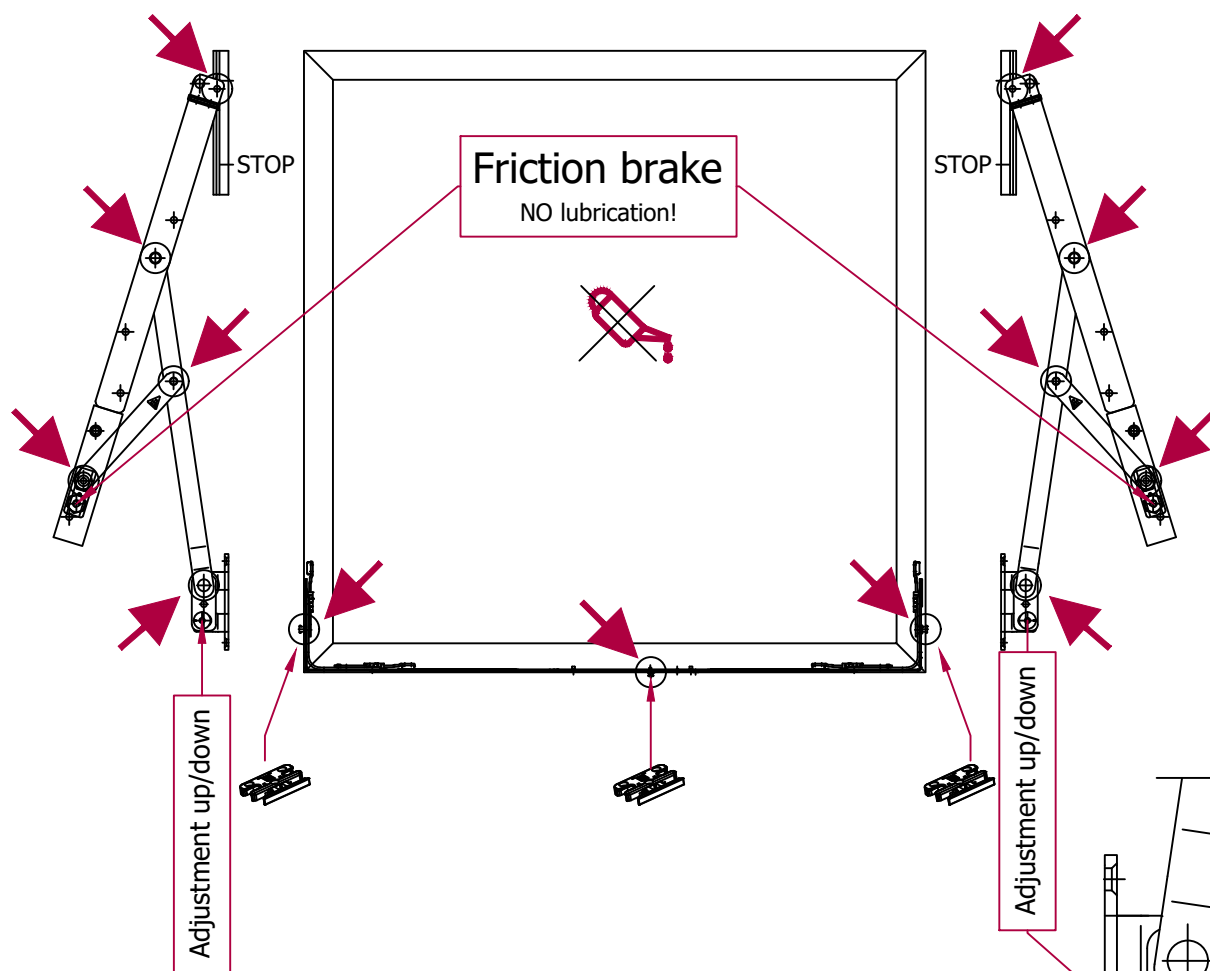
5 Top guided, INVI



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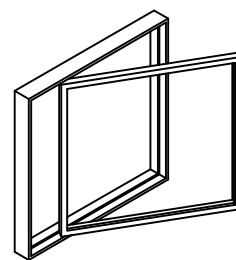
Shown with sliding hardware and friction brake.



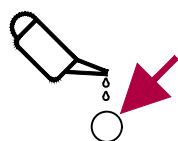
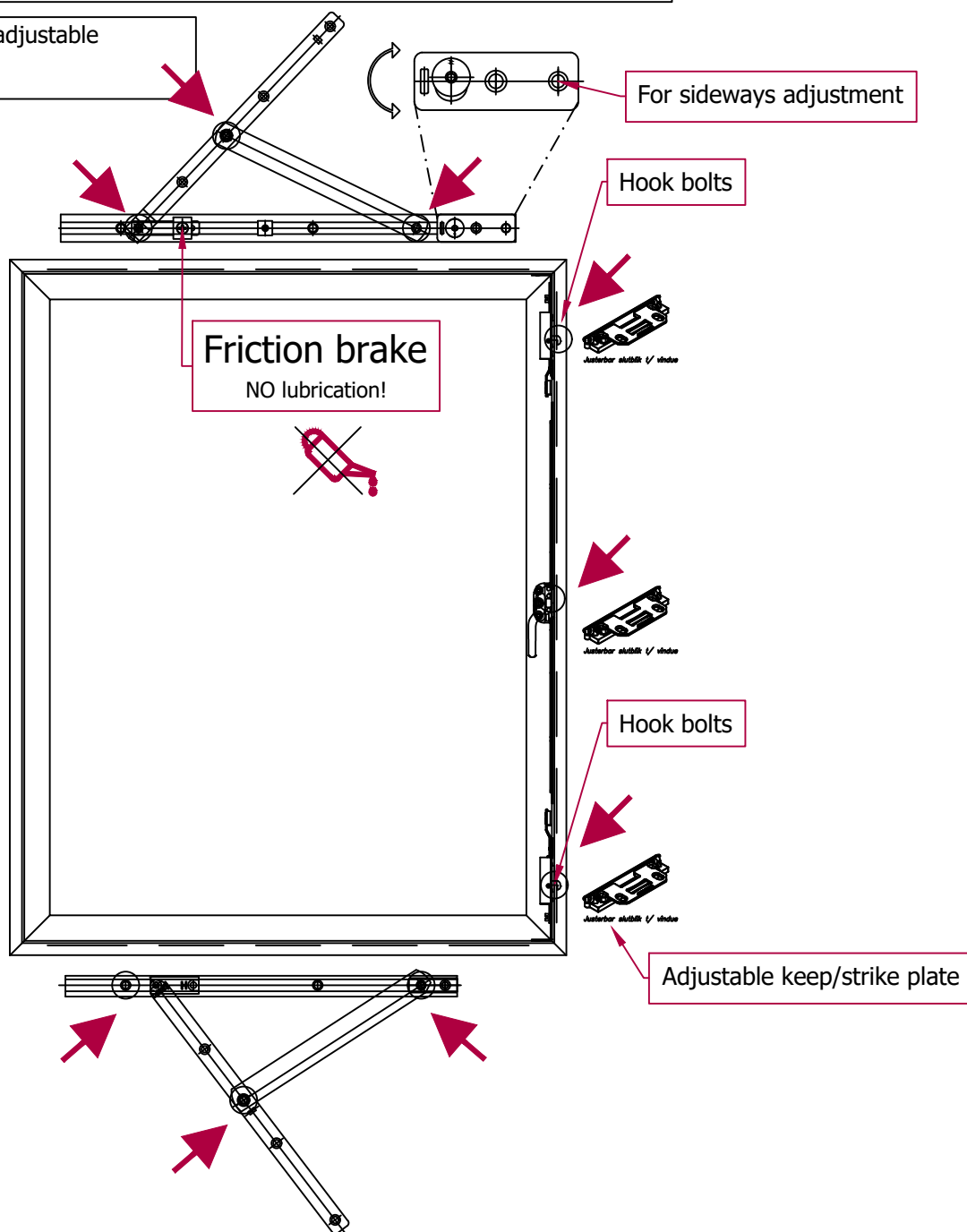
Lubrication		Adjustment
Points of assembly in hardware	YES	<ul style="list-style-type: none"> - The sash can be adjusted up or down $\pm 1,5$ mm with T20 torx driver by turning the eccentric dowel on the console. - The fiction can be adjusted with a T-20 torx spanner, for best result, the friction must be the same on both sides. - Tightening of the roller can be adjusted ± 1 mm with a 11 fork spanner.
Mushroom bolts	YES	
Friction brake	NO	

5 Side guided, Kastrup Energy

Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the window is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry. For optimal functionality, the hardware including rails must be kept clean and washed using a common detergent with a neutral PH value. Stay clear of the hardware, when painting or treating etc. the window.



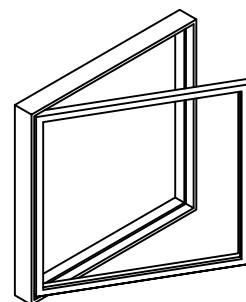
Shown with friction brake and adjustable keep/strike plate



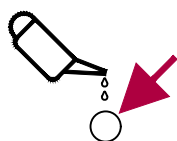
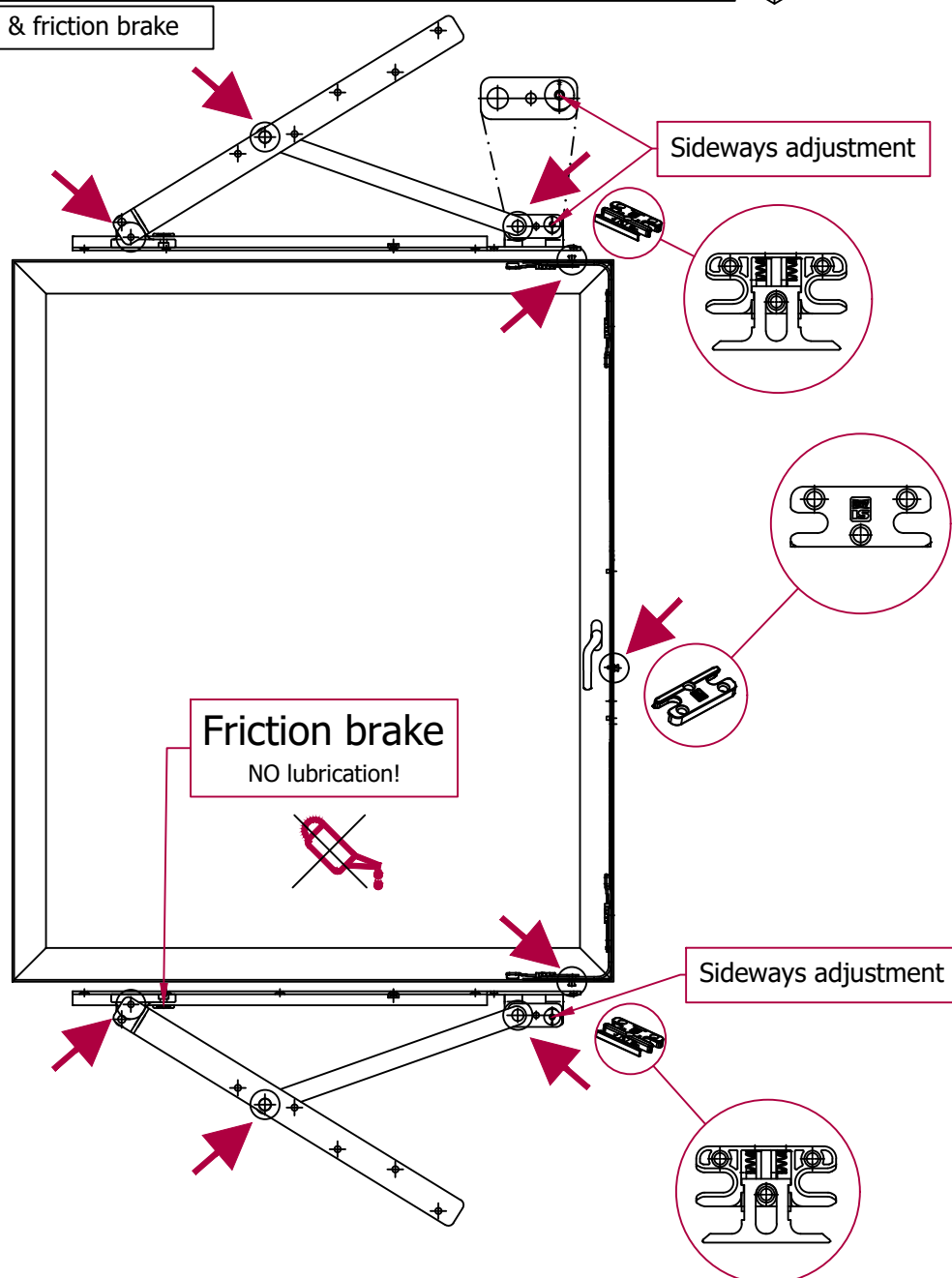
Lubrication		Adjustment	
Points of assembly in hardware	YES	<ul style="list-style-type: none"> - The strike plate can be adjusted in/out $\pm 2,5$ mm with a T20 torx spanner. - The air gab of the sash can be adjusted by displacing the top sash $\pm 1,5$ mm in relation to the sash using a T20 torx spanner. 	
Hook bolt espagnolette & rail	YES		
Friction brake	NO		

5 Side guided INVI

Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the window is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry. For optimal functionality, the hardware including rails must be kept clean and washed using a common detergent with a neutral PH value. Stay clear of the hardware, when painting or treating etc. the window.



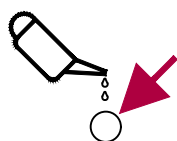
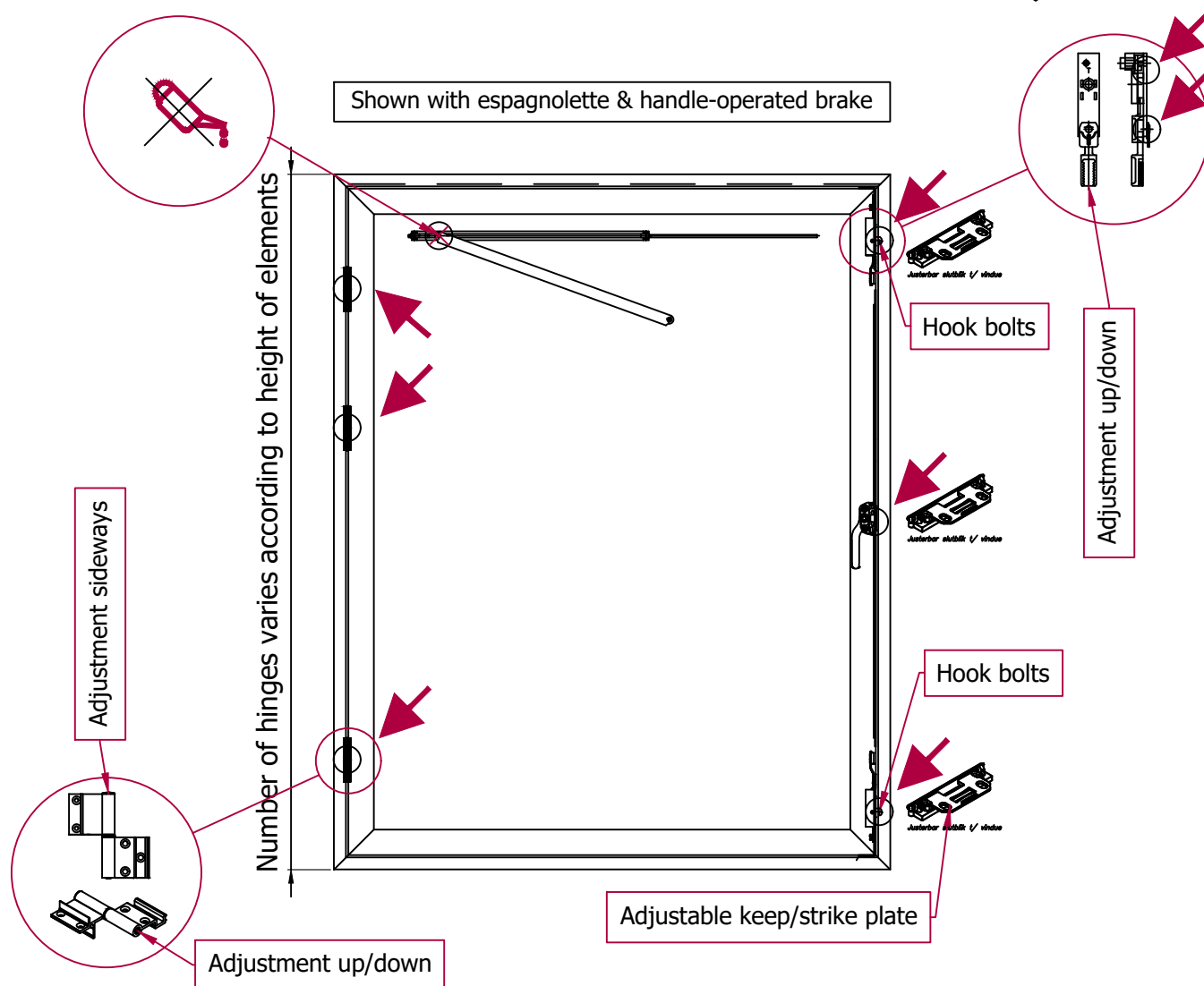
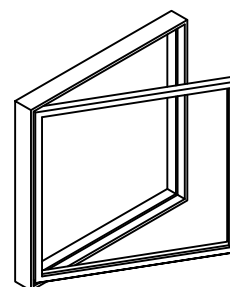
Shown with sliding hardware & friction brake



Lubrication		Adjustment
Points of assembly in hardware	YES	<ul style="list-style-type: none"> - The sash can be adjusted $\pm 1,5$ mm sideways with a T20 torx driver by turning the eccentric dowel assembly on the console. - The friction can be adjusted using the friction stay screw and a T20 spanner.
Mushroom bolts	YES	
Friction brake	NO	

5 Side hung with handle-operated brake

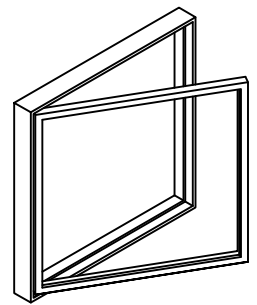
Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the window is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry. For optimal functionality, the hardware including rails must be kept clean and washed using a common detergent with a neutral PH value. Stay clear of the hardware, when painting or treating etc. the window.



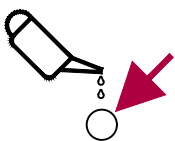
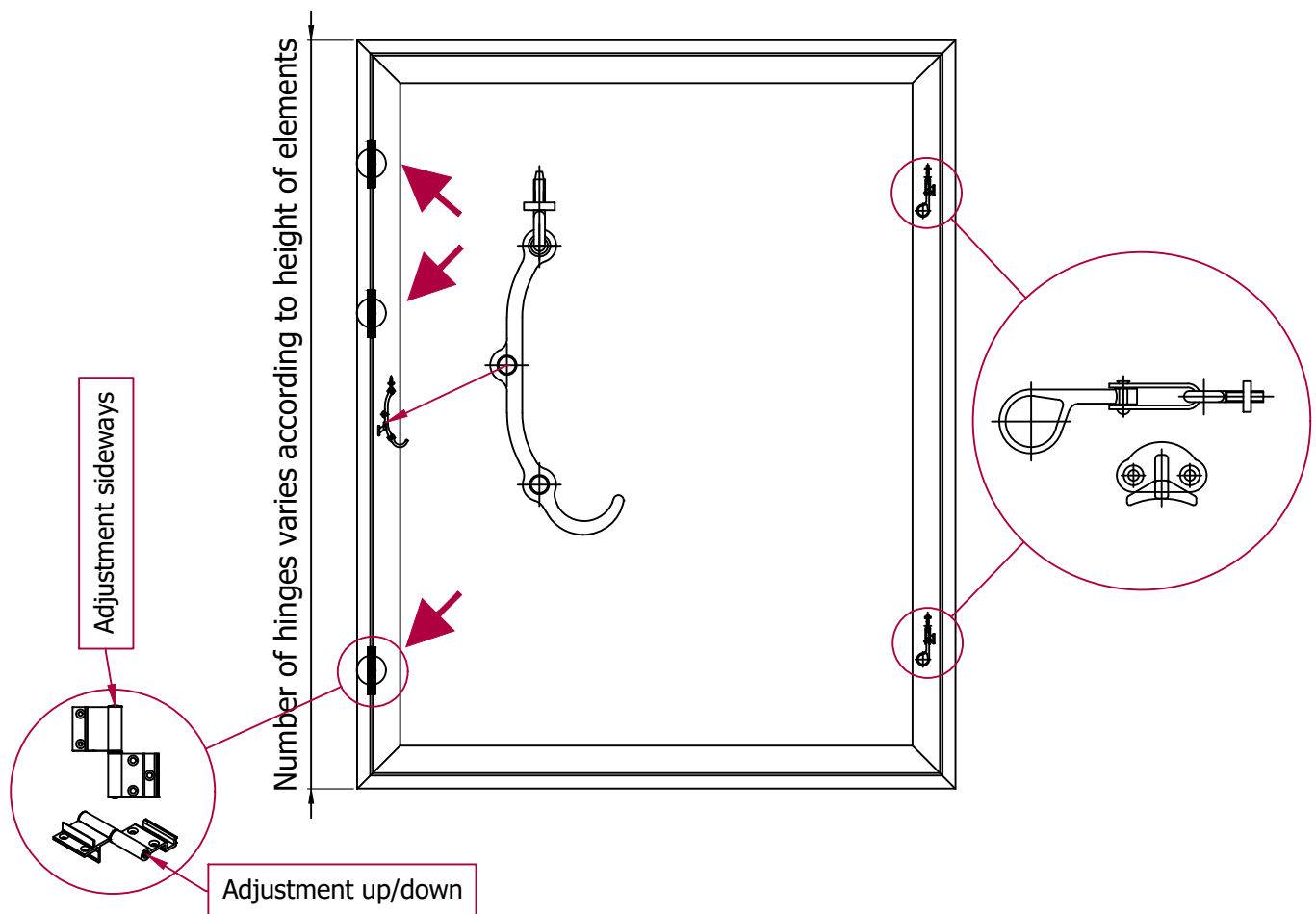
Lubrication		Adjustment
Hinges	YES	<ul style="list-style-type: none"> - The strike plate can be adjusted in/out $\pm 2,5$ mm with a T20 torx spanner. - The sash can be adjusted ± 4 mm up/down with a 6 mm Unbraco spanner & ± 1 mm sideways.
Espagnolette	YES	
Handle brake	NO	

5 Side hung with window stay & casement fasteners

Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the window is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry. For optimal functionality, the hardware including rails must be kept clean and washed using a common detergent with a neutral PH value. Stay clear of the hardware, when painting or treating etc. the window.



Shown with window stay & casement fasteners

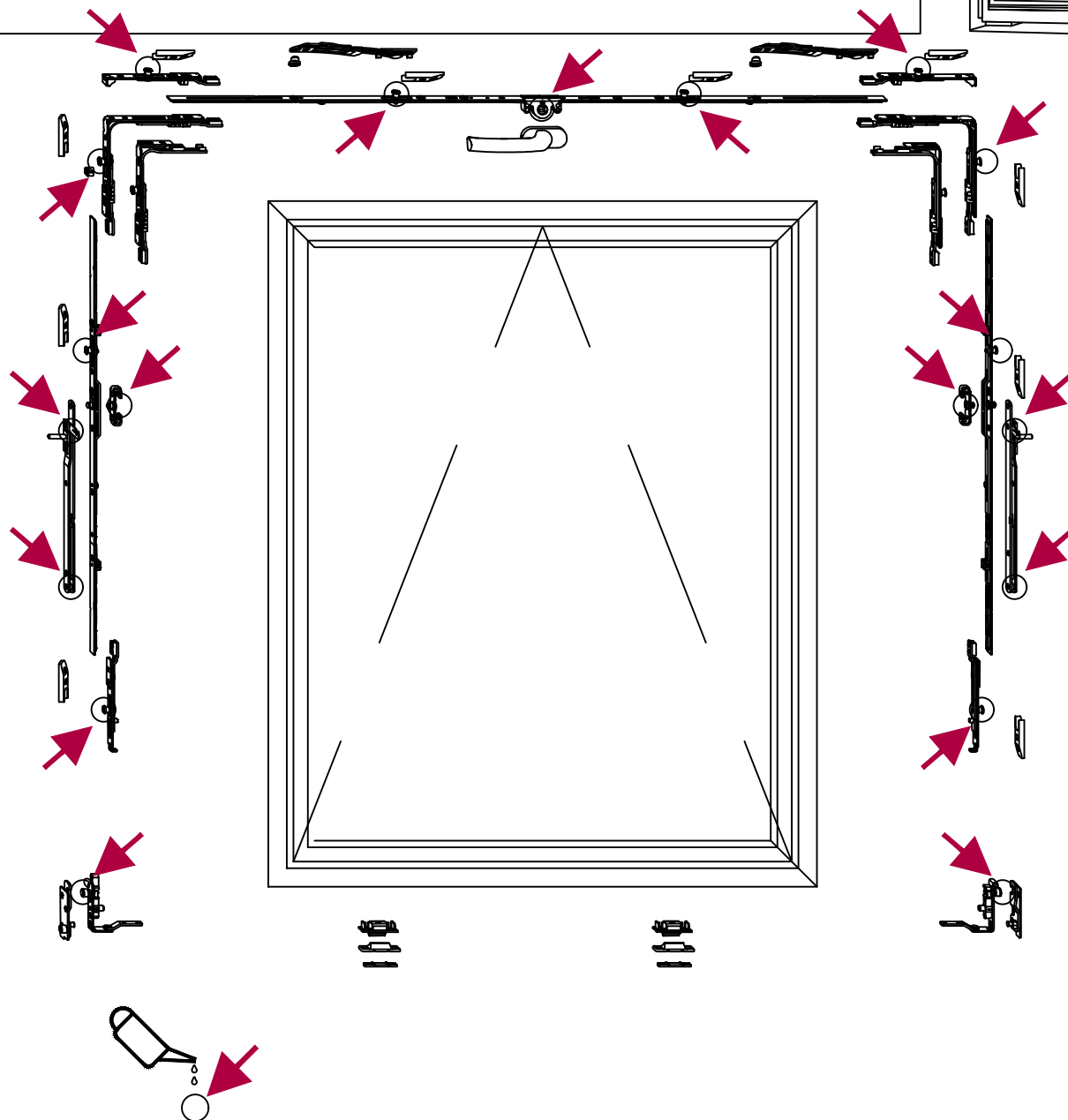
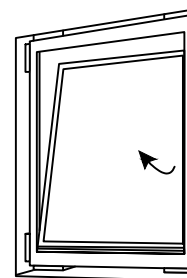


Lubrication		Adjustment	
Hinges	YES	-	The strike plate can be adjusted in/out $\pm 2,5$ mm with a T20 torx spanner.
-	-	-	The sash can be adjusted ± 4 mm up/down with a 6 mm Unbraco spanner & ± 1 mm sideways.
-	-	-	

5 Tilt window, Kastrup Energy



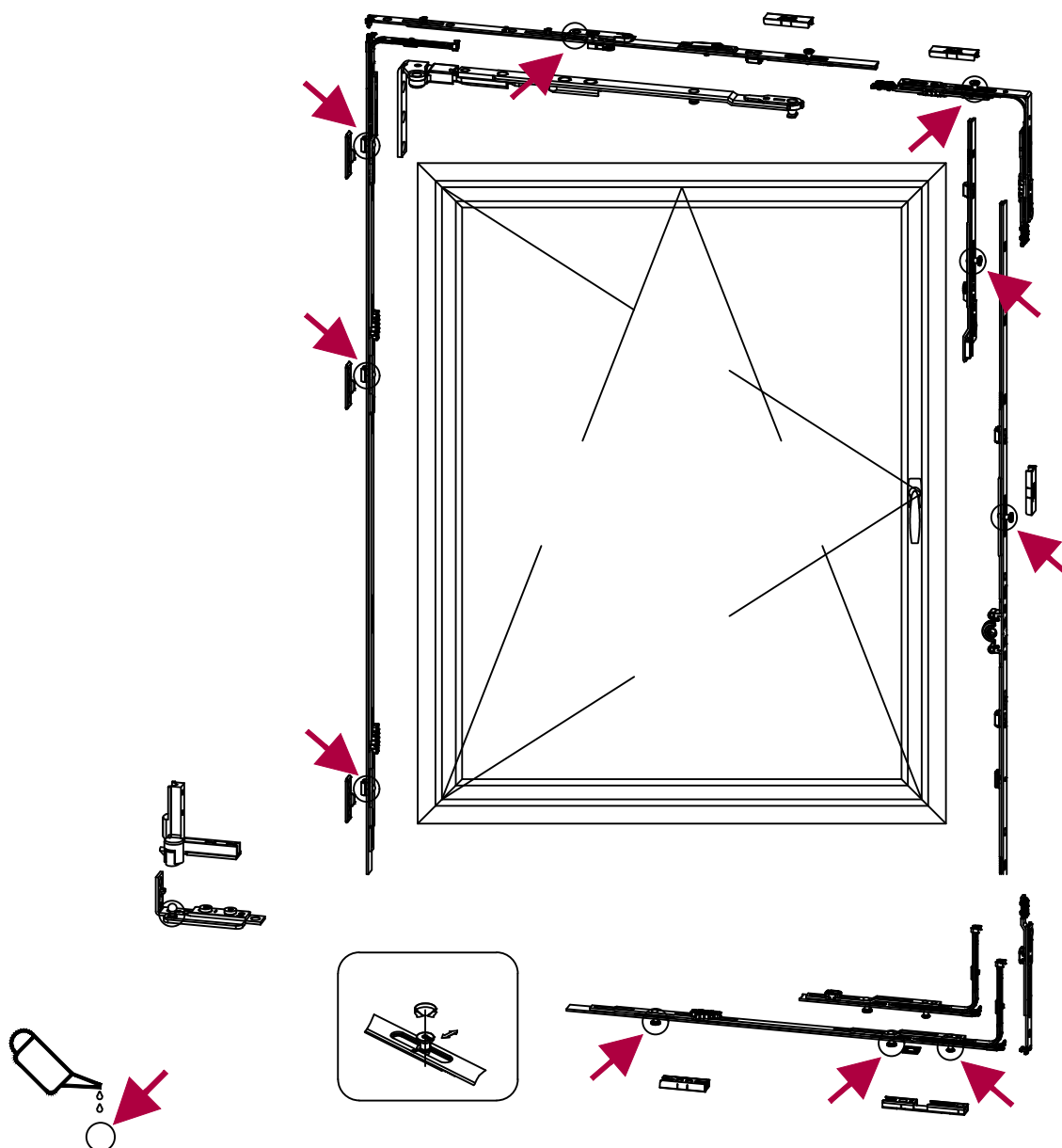
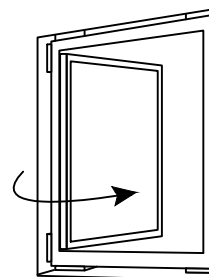
Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the window is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry. For optimal functionality, the hardware including rails must be kept clean and washed using a common detergent with a neutral PH value. Stay clear of the hardware, when painting or treating etc. the window.



Lubrication		Adjustment
All moveable parts	YES	<ul style="list-style-type: none"> The height of the bottom hinges can be adjusted +3,5 mm to -0,7 mm. Adjustment of attraction is ± 1 mm. with a T15 torx spanner. The safety roll can be adjusted sideways ± 1 mm and +2,5 mm in height with a 11 mm Unbraco spanner
-	-	
-	-	
-	-	
-	-	

5 Tilt and turn, Kastrup Energy

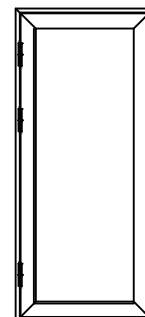
Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the window is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry. For optimal functionality, the hardware including rails must be kept clean and washed using a common detergent with a neutral PH value. Stay clear of the hardware, when painting or treating etc. the window.



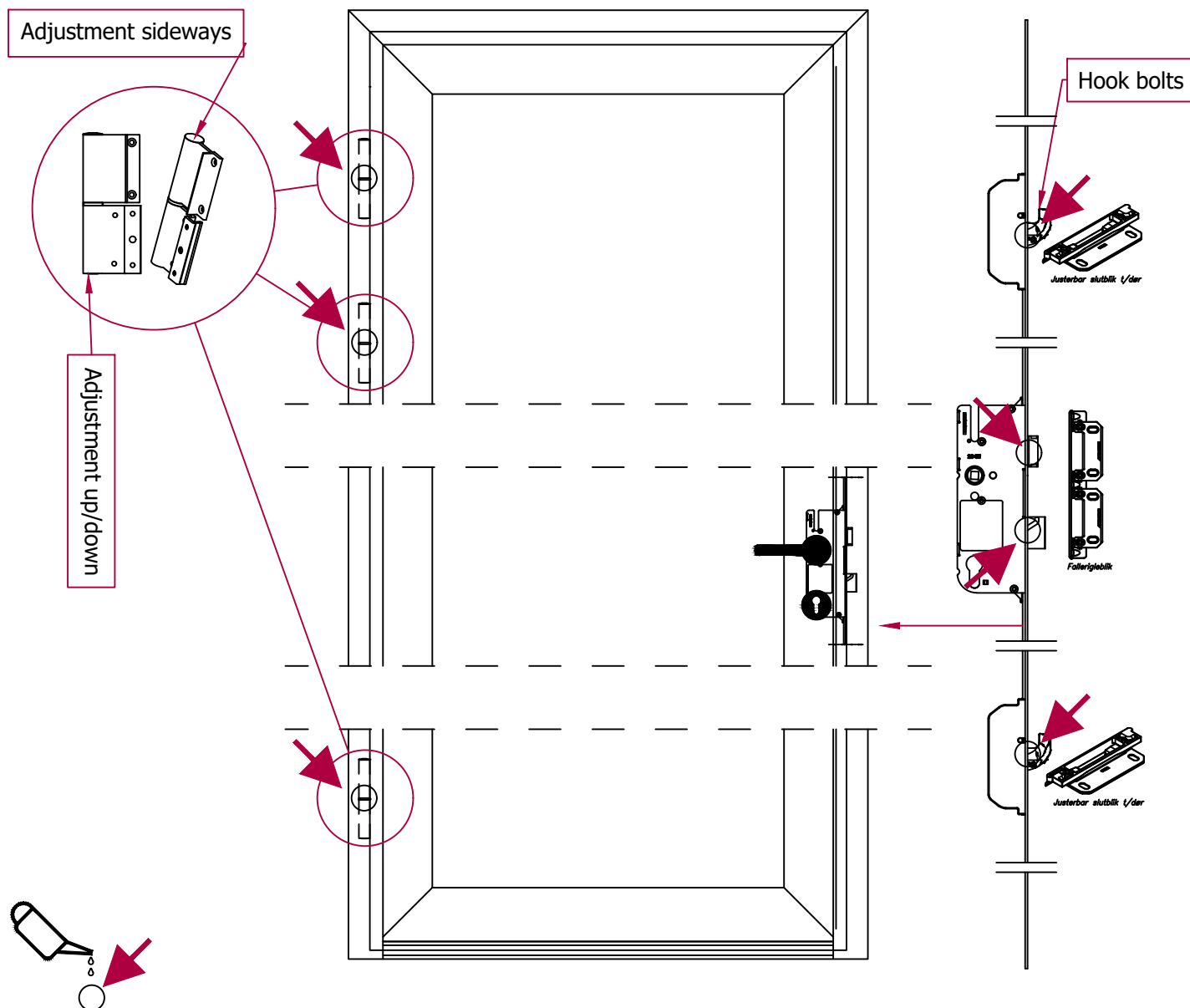
Lubrication		Adjustment
All moveable parts	YES	<ul style="list-style-type: none"> - The height of the bottom hinge can be adjusted +3,5 mm to -0,7 mm and +1,5 mm to -0,8 mm sideways. Adjustment of attraction is ± 1 mm with a T15 torx spanner. - The scissor can be adjusted sideways +2,5 mm and -1 mm with a 4 mm Unbraco spanner and adjusted of attraction is ± 1 mm with a 11 mm Unbraco spanner. - The safety roll can be adjusted ± 1 mm and +2,5 mm in height with a 11 mm Unbraco spanner. - The sash lifter can be adjusted +0,6 mm to -0,1 mm with a 4 mm Unbraco spanner.
-	-	
-	-	
-	-	
-	-	

5 Entrance door, in/out, double- and half-door

Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the door is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry.



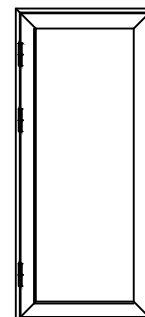
Shown as single inward door



Lubrication		Adjustment
Hinges	YES	<ul style="list-style-type: none"> The strike plate can be adjusted $\pm 2,5$ mm with a T20 torx spanner. The sash/door leaf can be adjusted ± 4 mm up/down with a 6 mm Unbraco spanner and ± 1 mm sideways.
Espagnolette with hook bolts	YES	
-	-	

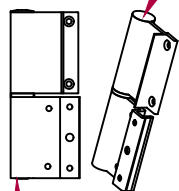
5 Entrance door, with automatic locking

Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the door is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry.



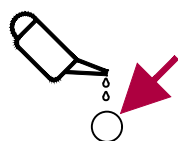
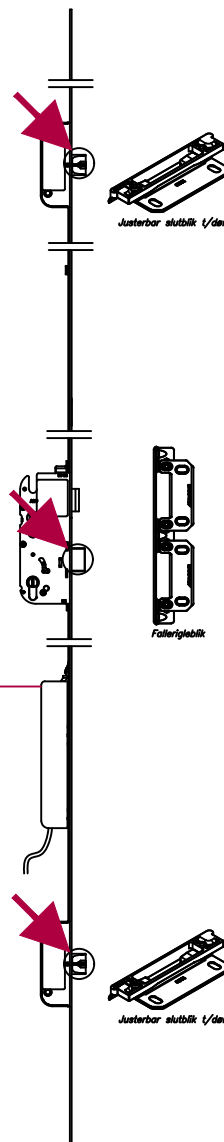
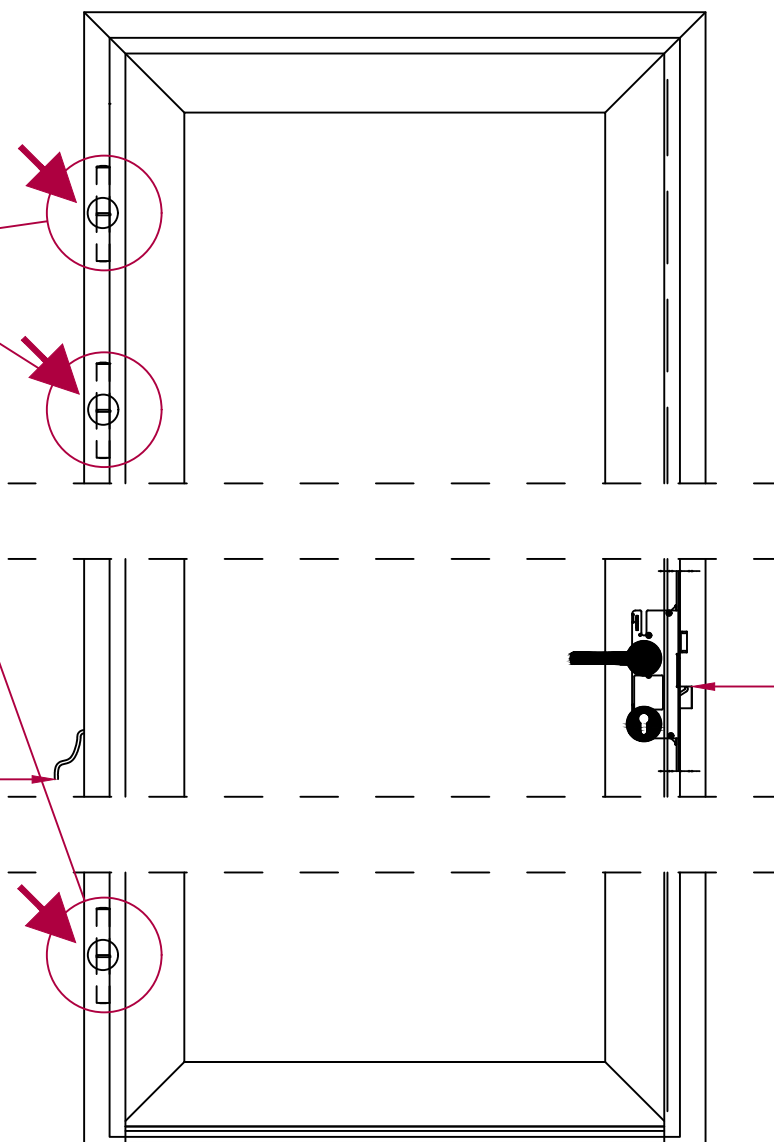
Shown as inward door with automatic locking

Adjustment sideways



Adjustment up/down

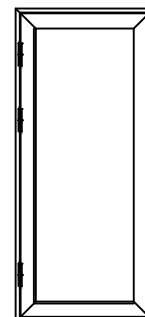
Cable loop



Lubrication		Adjustment	
Hinges	YES	-	The strike plate can be adjusted $\pm 2,5$ mm with a T20 torx spanner. The sash/door leaf can be adjusted ± 4 mm up/down with a 6 mm Unbraco spanner and ± 1 mm sideways.
Espagnolette with hook bolts	YES	-	
-	-	-	

5 Patio door, in/out & doublet door

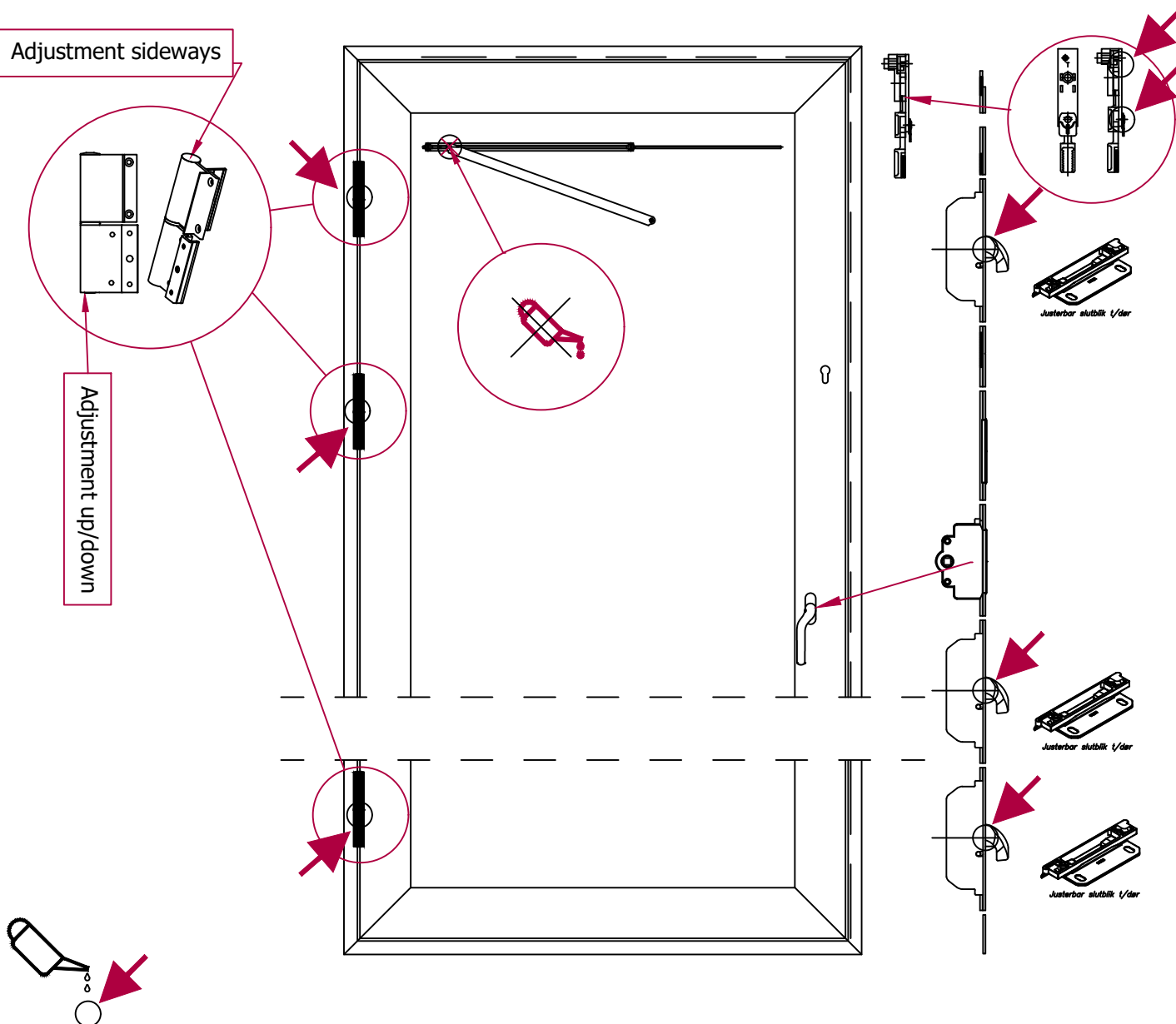
Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the door is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry.



Shown as inward door with handle operated brake

Adjustment sideways

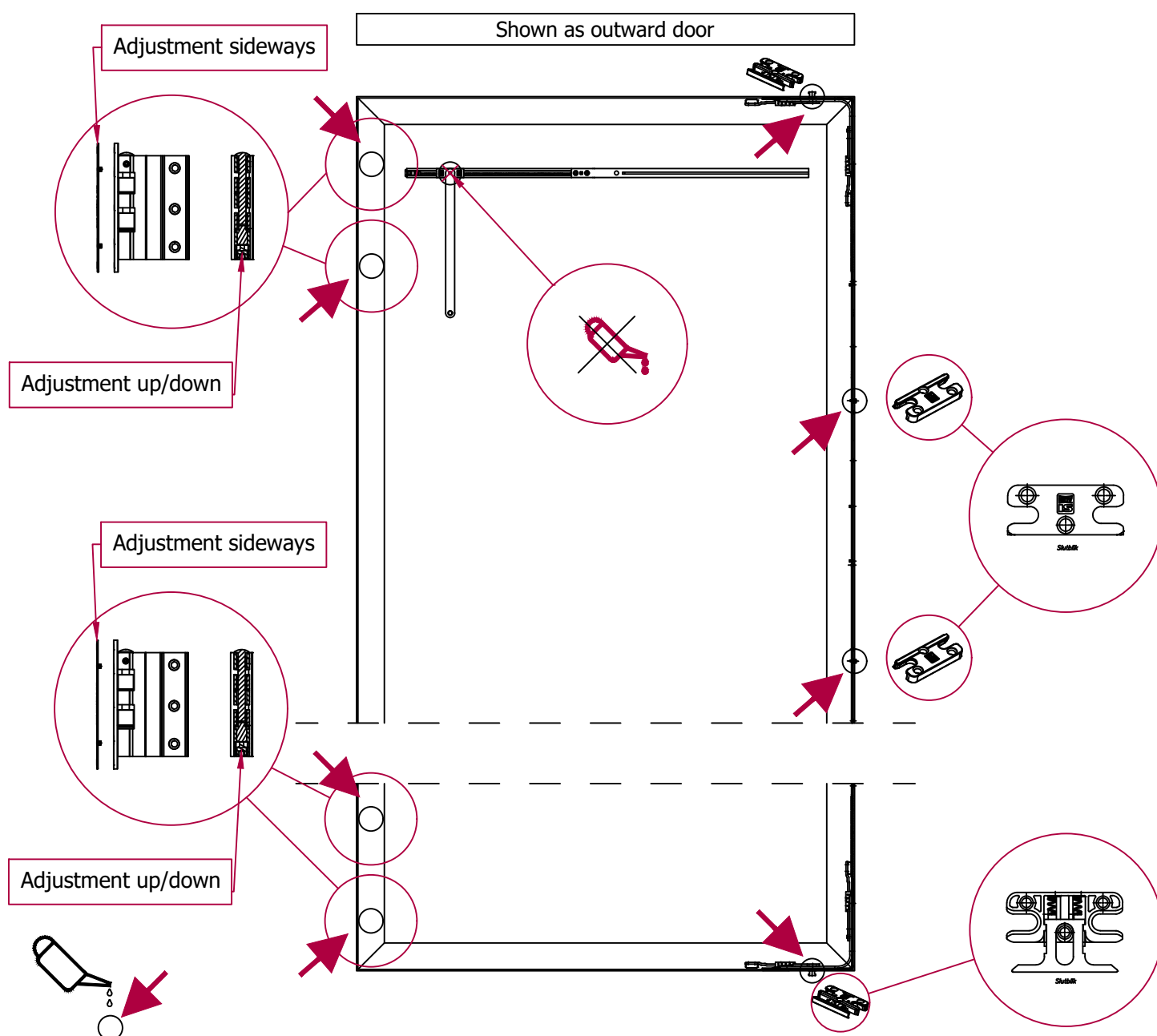
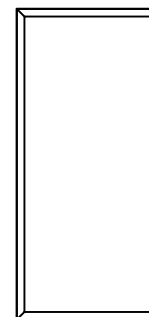
Adjustment up/down



Lubrication		Adjustment
Hinges	YES	<ul style="list-style-type: none"> The strike plate can be adjusted $\pm 2,5$ mm with a T20 torx spanner. The sash can be adjusted ± 4 mm up/down with a 6 mm Unbraco spanner and ± 1 mm sideways.
Espagnolette with hook bolts	YES	
Handle operated brake	NO	

5 Patio door & side hung window, INVI

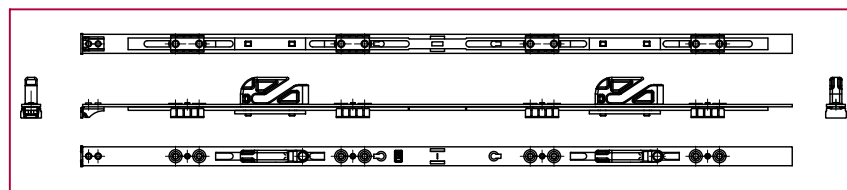
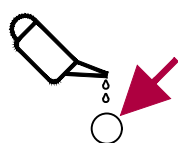
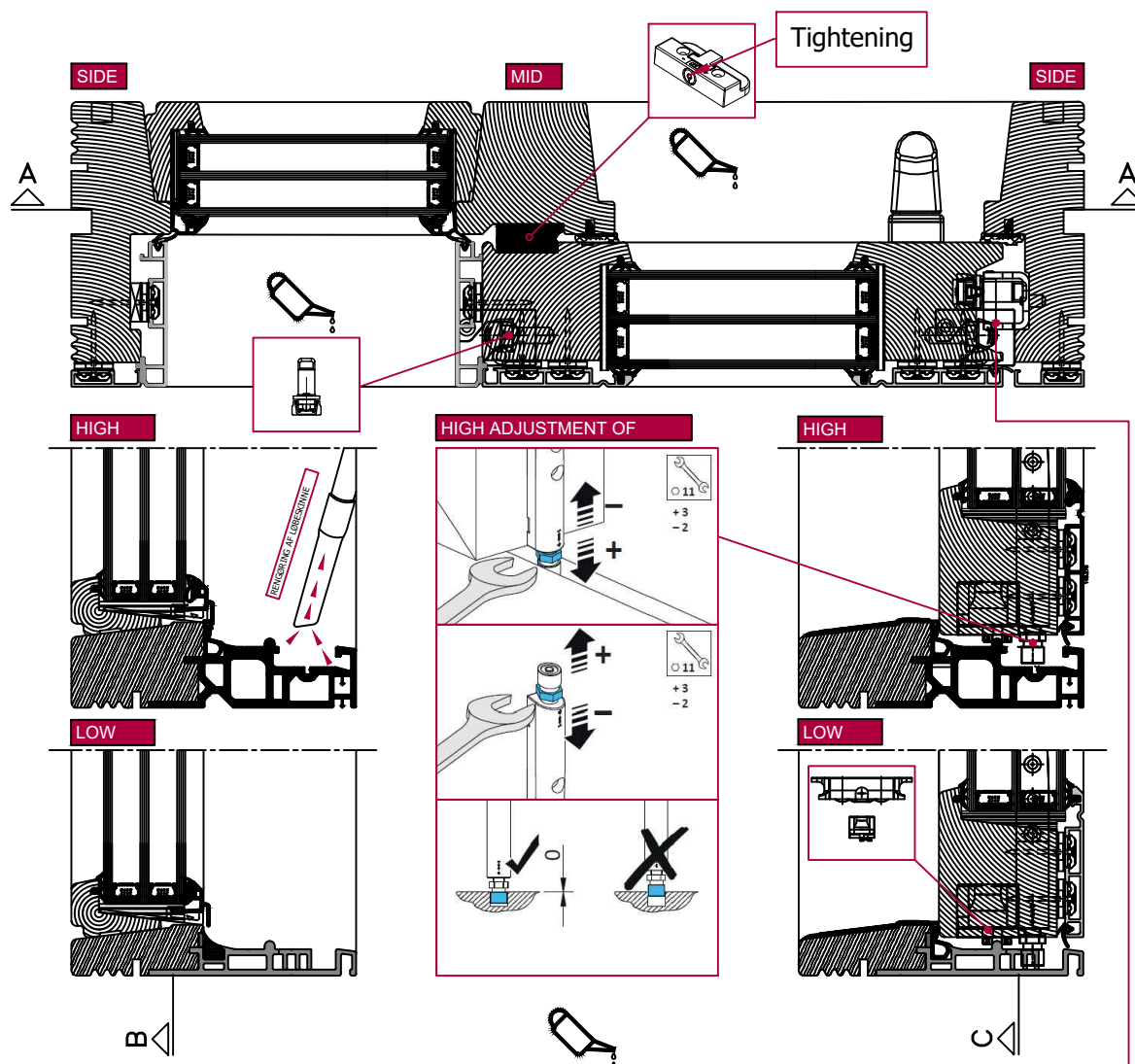
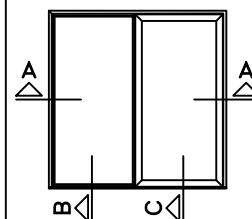
Hardware is lubricated with neutral oil under repeated operation. We recommend using neutral grease. Lubricate as necessary, with a minimum of once a year. The interval between lubrications is increased when the window is assembled in places with an aggressive environment e.g. by the sea or close to polluting industry. For optimal functionality, the hardware including rails must be kept clean and washed using a common detergent with a neutral PH value. Stay clear of the hardware, when painting or treating etc. the window.



Lubrication		Adjustment
Hinges	YES	- The sash can be adjusted ± 3.5 mm up with a mm Unbraco spanner. Sideways ± 1 mm adjustment is done by adding or removing the bed piece.
Mushroom bolt	YES	
Handle operated brake	YES	

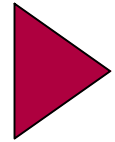
5 Sliding doors

As a general rule, all moving parts and locking points should be lubricated with neutral oil at least once a year. Lubrication can easily be done using an oil can, syringe or aerosol spray can with a straw or similar. It's important to keep the guide-groove free from dirt. We recommend washing the guide-groove with a waxy auto-shampoo. We recommend washing weather strips, external wooden parts and powder-coated aluminium surfaces with lukewarm water and a waxy auto-shampoo. This also applies to the pane and guide-groove.



Lubrication		Adjustment / maintenance	
Guide-pins	YES	-	Height adjustment of guide-pins in the top and bottom can be done with flat 11 fork spanner.
Door lock	YES	-	Tightening of vertical post can be done with a torx T20 spanner from the external side $\pm 2,5$ mm.
Roller in bottom and top centre closing point	YES		

6 Ventilation



The need for trickle vents depends on the size and function of the room. Especially in rooms such as bathrooms and utility rooms, where we wash and dry clothes, it may be a good idea to get windows with trickle vents. In buildings with mechanical ventilation systems, trickle vents are not usually required.

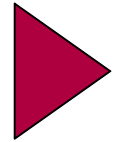
Trickle vents do not provide ventilation itself, but, as their name suggests, supply fresh air and help improve a home's indoor climate. Kastrup's trickle vents have a flow section of up to 40cm³.

Avoid condensation problems

To avoid condensation, you need to dispel moisture from your home. You can reduce condensation by:

- Ventilating regularly
- As far as possible, avoiding hanging laundry to dry inside your home
- Using the extractor fan when showering or taking a bath. If you do not have an extractor fan, immediately air the bathroom after each shower or bath.
- Opening 2-3 windows in the ventilation position or having fresh-air trickle vents fitted in windows to stay open all day.
- Making sure the air circulates around the home. Limit the number of houseplants on windowsills.

Poor, humid indoor climate can affect your health and destroy windows. Condensation running from the panes onto a window's wood can cause mould growth and the wood will start to rot.



WINDOWS & DOORS FROM DENMARK

Kastrup started in 1995 as a one-man business, manufacturing UPVC windows. Today Kastrup is the only supplier in Denmark to offer a range of materials for windows, doors and sliding doors in UPVC, wood and wood/aluminium. We are proud to be in charge of the entire process from design and production to delivery. The product program to UK and Ireland only contains wooden/aluminium products.

We are 100% Made in Denmark. Everything is manufactured at our two factories in West Jutland. It is essential for us to have complete control over the quality.

Innovation, design and quality

Our positive development in recent years makes us one of Denmark's fastest-growing window manufacturers. Our success is the result of our spirit of innovation, flexibility and passion for detail. We listen to our customers' needs and challenge ourselves to come up with the best solution. These challenges help us continuously to develop our products in terms of technology, quality and aesthetics. In new build, renovations and large-scale commercial projects, we have proven that our products are helping our customers.

An exciting future

What are our plans for the future? Day in and day out, we will improve the quality of our products and services, invest in new technologies and continue to maintain positive cooperation with our customers. Over the past three years, more than 1.800 corporate clients from 8 different countries have opted for Kastrup's windows and doors.

The co-owner, Lasse Kastrup is the second generation of our West Jutland family business, which has a workforce of 200 employees. Kastrup Windows is also part of IFN Holding AG, one of the largest family-owned window companies in Europe with subsidiaries like Internorm and GIG.

www.kastrupwindows.com

10 YEARS
WARRANTY



Enhanced
Security
Window

