



RolloGuard™

RolloGuard Wheel User Manual

Applicable for wheel versions 5AAWR01 and 5AAWL01
with Frame Adapter Kit 5AAFK02



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CAUTION

This product contains neodymium magnets. Neodymium magnets must be handled with care to avoid personal injury.

Heart pacemakers

Neodymium magnets can have a dangerous effect on medical implants such as pacemakers. Please ensure the Protective Setting Inserts are never in close proximity to any such device.

Children

All Neodymium magnets should be kept away from children at all times as swallowing or direct contact carry significant health hazards.

**NOTE**

This manual describes the RolloGuard Wheel. The manual does not describe warnings, cautions, or the like related to the Rollator itself. Please refer to the Rollator user guide.

1. Precautions

To ensure safe use of the RolloGuard Wheel, we ask that you kindly read this User's Manual and use this product properly with a full understanding of the warnings and cautions related to product handling, product features, and the like.

Requirements related to proper handling are marked with the symbols below.

**CAUTION**

Indicates that incorrect handling may cause **injury** and/or **property damage**.

**WARNING**

Indicates that incorrect handling may cause **death** or **severe injury**.

1.1 Prior to use

**CAUTION**

- Check if string or the like is coiled around a tire or wheel. If so, prior to product use, slowly remove the obstruction while being careful not to pinch your fingers.

**WARNING**

- Do not remove and install the RolloGuard Wheel onto another Rollator or device. Doing so may lead to an accident.
- In the event the RolloGuard Wheel operates abnormally or produces an abnormal sound, do not use the Rollator. If repair is required, be sure to contact the dealer.

1.2 During use



CAUTION

- Moving the Rollator backwards and then immediately forwards can cause the RolloGuard Wheel to activate unintentionally. After deactivation, wait a short moment before walking again.
- Be careful of bumpy and uneven surfaces as the RolloGuard Wheel may activate bringing the wheels to an instant halt or slow down.
- Always pay attention to the wheels and if they are in a locked position. This may cause accidents and excessive tire wear. If a wheel is locked, please stop the Rollator, move it carefully in reverse, wait for a short while and then move forwards pushing gently with both hands.



WARNING

- Use only the Rollator in accordance with Approved Use (see section 2.7). Other uses may result in serious accidents.
- Be sure to use the RolloGuard Wheel with the hubcap installed. If debris or water enters the interior, the predetermined brake configuration will not be achieved, resulting in the risk inadequate brake force. If the hubcap continues to come off or loosen, contact the dealer and stop using the Rollator.
- Refrain from using the Rollator on a wet surface. Doing so may lead to slipping and poor friction between tire and surface, resulting in an accident.
- Do not use the Rollator on steep sloping surfaces.
- Use both hands when pushing the Rollator forward. Using only one hand might result in only one wheel braking and doing so may lead to an accident.

1.3 During repair and inspection



CAUTION

- Do not remove the RolloGuard Wheel hubcap. If debris or water enters the interior, the brake may not activate or apply proper brake force, resulting in the risk of falling or ability to protect against fall.
- Never apply grease or oil to the RolloGuard Wheel. Doing so may lead to an inadequate brake activation or brake force, resulting in falling or ability to protect against fall.



WARNING

- Do not loosen, disassemble, or modify parts connected by bolts and nuts. When disassembly or repair is required, always request an authorized dealer or certified technician to perform the task.

1.4 During storage



CAUTION

- Do not carry the Rollator itself by holding the tires. Doing so results in the risk of fingers getting pinched between the tire and frame.



WARNING

- Do not store the Rollator or the RolloGuard Wheel in a location exposed to water, wind, or rain. Doing so may lead to poor operation and/or device failure, resulting in an accident.
- If water enters the brake device, apply the brake at minimum five times prior to use to verify that the brake functions. If the brake still does not function, apply the brake several additional times, verify brake force recovery, and then use the product. In case the brake does not function after several brake attempts, do not use the Rollator and contact the dealer.
- Do not store the Rollator or the RolloGuard Wheel in the trunk of a car or any location that reaches high temperatures. Doing so may lead to poor operation and/or device failure, resulting in an accident.

2. Device functionality and approved use

2.1 Approved use

When a user is walking safely with a Rollator, the RolloGuard Wheel is not interfering. It is only when the user starts to fall, walks over uneven surfaces or walk too hastily as it will automatically activate. How quickly the RolloGuard Wheel activates is determined by the base safety level configuration. The RolloGuard Wheel can also be manually activated by quickly pushing the Rollator forwards with both hands.

Make sure to always use both hands when using the Rollator. Pushing the Rollator forwards with one hand might result in only one of the RolloGuard Wheels activating. This is expected behavior and depends on several factors such as the Rollator weight and the individual pushing force of each hand.

As the RolloGuard Wheel reacts to change in speed (acceleration), moving the Rollator backwards and then immediately forwards, can cause the brake to activate unintentionally. After deactivation, wait a short moment before moving forwards again.

Moving quickly over uneven surfaces such as bumpy roads or sidewalks, or quickly over a door step might activate the RolloGuard wheel unit. Make sure to walk slowly and with caution on and over uneven surfaces and if possible choose a different and safer route.



Push quickly forward using both hands without moving your feet to manually activate the RolloGuard wheels



Deactivate the RolloGuard wheels by gently moving the rollator backwards approximately 1 cm.



WARNING

Do NOT use the RolloGuard Wheels as a replacement for the mandatory brakes on the rollator (parking brake and slowdown brake) as this might lead to an accident.

2.2 Device functionality

The RolloGuard Wheel is a technology used to protect against fall accidents and minimize injuries using walking aids such as a Rollator or wheeled walker.

When using the Rollator normally and safely, you will not notice the RolloGuard Wheel functionality. It is not until a dangerous movement is detected, or you chose to manually activate the RolloGuard Wheel, as you will notice the intended functionality.

The RolloGuard Wheel is designed to easily replace existing wheels on a Rollator without changing the Rollator design, purpose or intended use.



Picture: The RolloGuard Wheel configured as a STOP brake.

The RolloGuard Wheel comes in two different models and each with different built-in best practise default configurations:

STOP Brake - Instantly stops the RolloGuard Wheel from rotating once activated.

SLOW DOWN brake - Instantly slows down the RolloGuard Wheel once activated.

The RolloGuard Wheel reacts to increase in Rollator speed (acceleration) and instantly activates when the speed increases above a predefined threshold. The RolloGuard Wheel does not react to speed itself, and is currently the only solution on the market activated solely by acceleration.

Before using a Rollator equipped with RolloGuard Wheels, it is important to remember that it:

- Reacts to unintentional acceleration (automatic protection)
- Reacts to intentional acceleration (manual protection)
- Activates when the Rollator acceleration is larger than the predefined threshold (m/s^2)
- Prevents the wheel from rotating forwards once activated (STOP brake)
- Reduces wheel speed once activated (SLOW DOWN brake)
- Wheel stays in activated position as long as there is forwards motion (torque)
- Deactivation is performed by moving the Rollator carefully in reverse



CAUTION

In its default configuration, the RolloGuard Wheel does NOT provide protection when moving the Rollator in reverse.

2.3 Default protection

The Stop and Slow Down Brake comes with two default protection levels: HOME and CARE. These protection levels have carefully been designed and developed in cooperation with healthcare professionals and users.

- HOME protection level is suitable for users with an active lifestyle primarily using their Rollator at home, both indoor and outdoor.
- CARE protection level is suitable for users in a care environment and users with a larger need for protection.

Changing protection level is done by replacing the safety plugins, and you can easily switch between HOME and CARE.



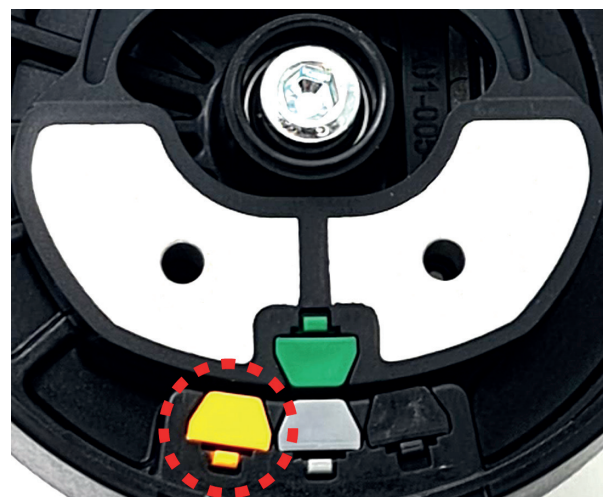
Picture: The RolloGuard hubcap removed revealing the safety plugin configuration.

Adapting the RolloGuard Wheel to the individual need is done by changing the activation and fine-tuning plugins. The activation safety plugin controls how quick the RolloGuard Wheel will react to changes in speed, and the fine-tuning plugin controls the sensitivity to unevenness on the surface - such as doorsteps and cobble stone as well as jerky gait.



Picture: Activation. These two safety plugins set and configure the acceleration threshold (m/s^2).

NOTE: Changing the base configuration can only be performed with the hubcap removed.



Picture: Fine-tuning. This safety plugin set and configure the acceleration duration (m/s^3) also referred to as jerk control.

NOTE: Changing the fine tuning can be performed after removing the safety plugin cover.

2.4 Protection levels

The RolloGuard wheel is designed to be as versatile and user friendly as possible without sacrificing functionality or safety. It is easy for a professional to quickly perform a first-time safety level configuration and follow up with individual user fine-tuning.

The RolloGuard Wheel comes with best practise safety level configuration developed together with Swedish healthcare professionals and users. These best practises provides a good starting point when deciding the safety level a user should have. These best practises are outlined below. NOTE: These settings can be used in other scenarios or for other illnesses.



HOME Normal

Users at home mainly walking indoors



HOME Active

Active users at home walking in- and outdoors



HOME Rehab

Recovering users at home



CARE Normal

Care users with hasty gait



CARE Active

Active care users



CARE Rehab

Recovering care users



WARNING

If the safety plugins are not inserted according to the above best practise or not inserted properly, the RolloGuard Wheel might stop functioning resulting in an increased risk of accident.

2.5 Safety fine tuning



Picture: Remove the safety plugin cover using your fingernail or a small screwdriver.

Once the fine tuning plugin is removed, please insert the new safety plugin pushing it gently with your finger. Make sure it is inserted correctly.

Repeat on the other RolloGuard Wheel, making sure both wheels have the same configuration before using the Rollator.

To change the RolloGuard Wheel fine tuning safety plugin, you need to remove the safety plugin cover and use a small flat headed screwdriver to carefully take out the fine tuning safety plugin. **DO NOT** use excessive force when removing the safety plugin.

The safety plugin cover can normally be removed using your finger nail. If you find this difficult, please carefully use the screwdriver.

It is strongly recommended to use the RolloGuard Toolkit to ensure proper removal of the safety plugins.

Re-insert the safety plugin covers on both RolloGuard Wheels.



Picture: Remove the safety plugin carefully using a small screwdriver.



WARNING

If both RolloGuard Wheels are not configured exactly the same way, the RolloGuard Wheel will not function as intended, increasing the risk for an accident.

2.6 Change safety activation



Picture: Remove the activation safety plugin carefully using a small screwdriver.

To change the RolloGuard Wheel default activation, you need to remove the hubcap and use a small flat headed screwdriver to carefully take out the activation plugin (see picture to the left). DO NOT use excessive force when removing the activation safety plugin.

It is strongly recommended to use the RolloGuard Toolkit to ensure proper removal of the safety plugins.

NOTE: you can only use a Green or Yellow safety plugin in the activation plugin slot.

When the safety plugin has been replaced, reattach the hubcap making sure it is properly installed.



WARNING

NOTE: It is not allowed to remove or replace the Grey safety plugin on the RolloGuard Wheel. It is reserved for future use.

Removing or replacing the Grey safety plugin will render the RolloGuard wheel inoperable.



Picture: The red safety plugin is only allowed to be used in the fine tuning plugin slot.

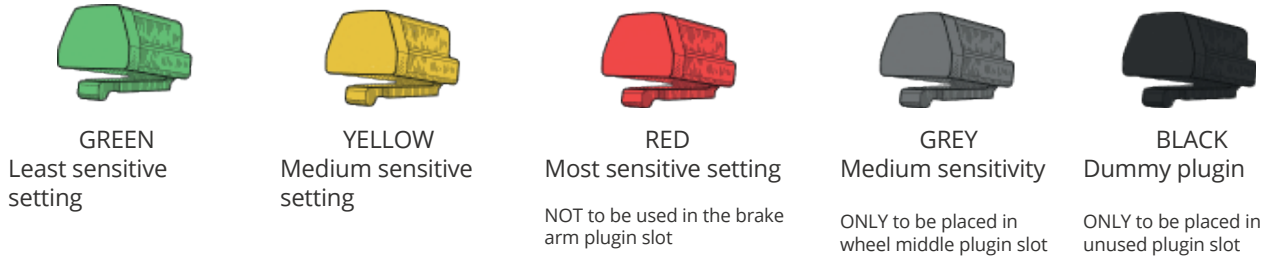


Picture: Grey safety plugin is not allowed to be removed or replaced.

DO NOT use a Red safety plugin in any slot other than the fine tuning slot as it will make the RolloGuard Wheel brake in both directions.

Please consult your RolloGuard expert for configurations with the Red safety plugin placed in the activation plugin slot.

There is a variety of RolloGuard safety plugins, each with a specific safety level configuration controlled by magnetic force. Higher magnetic force equals to a less sensitive brake. By using these safety plugins, the RolloGuard Wheel can be adapted to any user need, now and in the future. Currently there are 5 different safety plugins to chose from:



CAUTION

The safety plugins contains neodymium magnets. Neodymium magnets must be handled with care to avoid personal injury.

2.7 Change wheel direction

The RolloGuard Wheel can be mounted on both sides of the Rollator. The hubcap position determines if it is configured to be a right or a left wheel. The protruding plastic tip just below the plugin cover, must be inserted in the corresponding slot on the wheel marked with (R) for right and (L) for left.



LEFT configuration

The hubcap protruding plastic tip inserted in the slot marked with an (L) on the wheel rim.



RIGHT configuration

The hubcap protruding plastic tip inserted in the slot marked with an (R) on the wheel rim.



WARNING

If the hubcap is placed in the wrong slot, the wheel will not brake in the desired direction. If the hubcap is not placed correctly in a slot, the brake might not work at all and could cause an accident.

2.8 Change brake pad



Picture: The RolloGuard Wheel removed exposing the brake drum and Frame Assembly Kit.

To change the RolloGuard Wheel brake pad, you need to safely remove the wheel in accordance with the RolloGuard Wheel Assembly Guide. Once the wheel is removed, gently take notice of how the Frame Adapter Kit with its bushings and washers is assembled.

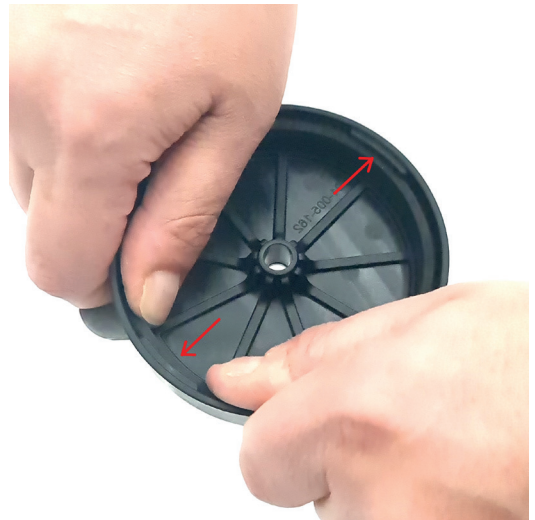


Picture: Removing the brake drum



Picture: Removing the brake pad

Remove the brake pad by grabbing it between your fingers. Insert the new brake pad making sure it is correctly placed under the brake 4 pad holders.



Picture: Firmly place the new brake pad under the 4 brake pad holders.

Make sure the new brake pad is firmly pressing against the whole circumference of the brake drum.

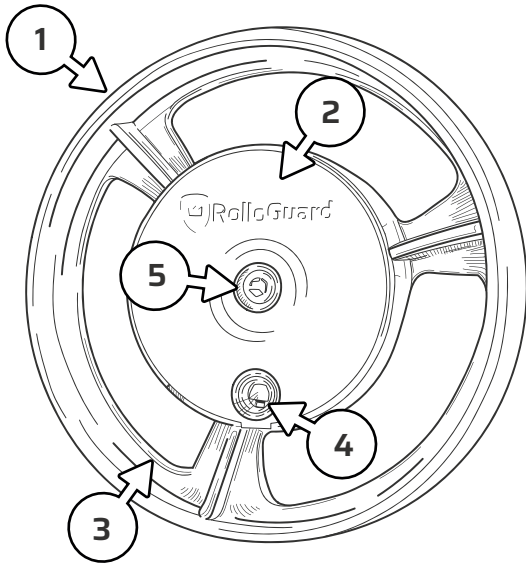
Re-assemble the wheel according to the RolloGuard Wheel Assembly Guide.



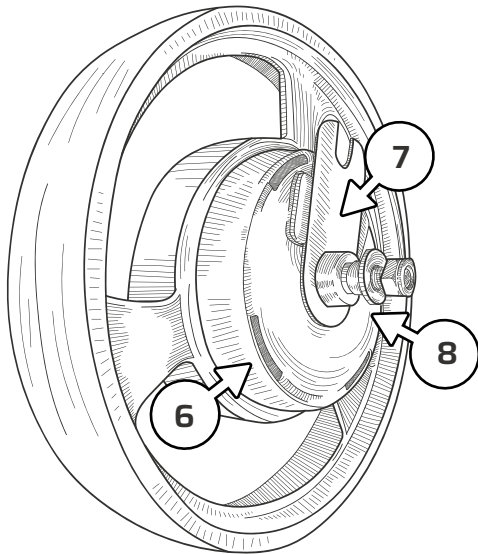
WARNING

If the brake pad is not installed correctly, the wheel might not function as intended rendering the brake system unusable which could lead to an accident.

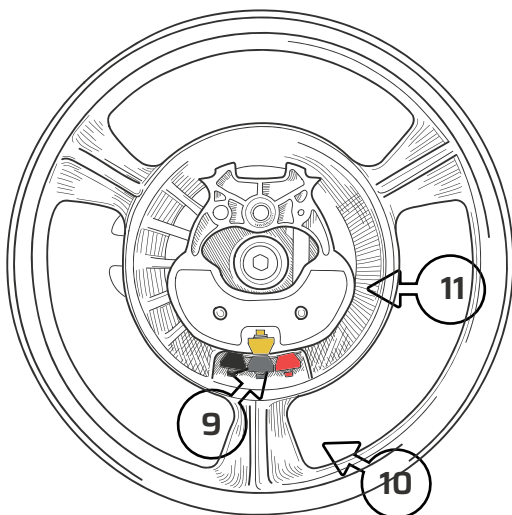
3. Components and materials



ID	Component	Material	Type
1	Tire	Thermo-plastic	TPE
2	Hubcap	Plastic	Polyamide - PA
3	Wheel rim	Plastic	Polypropylene - PP 15% fiber glass
4	Cap for finetuning plugin	Plastic	Polypropylene - PP
5	Axle	Metal	Steel galvanized



ID	Component	Material	Type
6	Brake drum	Plastic	Polyamide - PA6 50% fiber glass
7	Adapter	Metal	Magizink
8	Adapter kit	Plastic/ metal	Steel galvanized PA6



ID	Component	Material	Type
9	Safety plugins	Polyoxi-methylene/ Magnets	POM-C Neodym magnets
10	Directional indicators	-	-
11	Brake arm	Plastic/ Metal	Polyamide - PA6 30% fiber glass Zinc
-	Brake pad STOP	Rubber	EPDM
-	Synchronizer	Plastic	ABS

4. Care and recycling

4.1 Daily inspections



CAUTION

- Do not loosen, disassemble, or modify parts connected by bolts and nuts. When disassembly or repair is required, always request the dealer to perform the task.
- When taking care of the RolloGuard unit, do not pour water on the unit. Wipe down the unit with a damp cloth using fresh water.
- Do not apply grease or oil to the RolloGuard unit. Doing so may lead to an inadequate brake force or prevent the brake to activate properly, resulting in falling or reduced ability to protect against fall.
- Do not use soapy water or oil-based cleaners. Doing so may lead to liquid entering the interior and, as a result, failure to exhibit an adequate brake force or prevent the brake to activate properly, resulting in falling or reduced ability to protect against fall.



WARNING

- In the event an abnormality is found during the inspections below, stop using the Rollator and contact the dealer.

Performing regular inspections ensures increased safety during product use.

4.2 Basic inspection details

- Are there any cracks or deformations in the tires or wheels?
- Does the brake work well?
- During use, does the RolloGuard unit produce any abnormal noise?
- During use, do the wheels shake significantly?
- Are any wheel installation nuts or main body installation bolts loose?
- Is the hub cap loose or does it come off easily?

4.3 Care



CAUTION

- When taking care of the Rollator, do not pour water on the RolloGuard unit. Wipe down the unit with a damp cloth using only fresh water.
- If water enters the RolloGuard unit, apply the brake at minimum five times prior to use to verify that the brake function properly. If the brake does not work, apply the brake several times, verify brake force recovery, and then use the Rollator. In case the brake does not work after several brake attempts, do not use the Rollator, and promptly contact the dealer.
- Do not apply grease or oil to the RolloGuard unit. Doing so results in the risk of an inadequate brake activation or brake force, resulting in falling or reduced ability to protect against fall.
- Do not use soapy water or oil-based cleaners. Doing so may lead to liquid entering the interior and, as a result, failure to produce adequate brake activation or brake force, resulting in falling or reduced ability to protect against fall.
- Wipe down the tires, wheels, etc., with a damp cloth using only fresh water.

4.4 Environment and recycling



The RolloGuard wheel consists of plastic parts, rubber, zinc, steel metals such as ball bearings and bolts. In addition, the safety plugs contain neodymium magnets. These meet the requirements of the RoHS Directive 2011/65/EU and the REACH Regulation 1907/2006/EC.



In section 3 *RolloGuard wheel components and materials* you will find information about the materials of the components so that you can manage the recycling in the best possible way. When your product is to be disposed of, dispose of it in accordance with your country's legal requirements. Contact your local government for more information.

Products manufactured by RolloGuard AB are designed to have as little negative impact on the environment as possible. The products are specially designed to allow disassembly and recycling of the used product components. Longer life cycles for the products protects our sensitive environment and make them more environmentally friendly.

5. Troubleshooting

5.1 Problems during usage



WARNING

- If an abnormality exists, do not use the Rollator.
- If you sense that something is abnormal during use, immediately stop using the Rollator and promptly contact the dealer.
- Do not disassemble or modify the RolloGuard wheel unit. When disassembly or repair is required, always request the dealer to perform the task.
- Do not apply grease or oil to the RolloGuard wheel unit. Doing so may lead to an inadequate brake activation or brake force, resulting in falling or reduced ability to protect against fall.

Conduct investigations according to each condition, following the descriptions below. If the abnormality still exists, contact the dealer.

Condition	Investigation	Action
The wheels remain locked	<ul style="list-style-type: none"> • Did a foreign object obstruct the wheel? • Is the Rollator parking brake activated? 	<ul style="list-style-type: none"> • Remove any foreign object • Release the Rollator parking brake
The brake is not working well	Do you have the correct brake adjustment level?	If you need a higher or lower brake adjustment level, contact the dealer
The product produces an abnormal sound	Is something caught in the wheel?	Remove any caught objects. If the problem remains, contact the dealer
The wheels does not brake at all	Is the hub cap placed in the appropriate slot?	Gently place the hub cap tip in the correct slot
The wheel shakes significantly	Is a bolt or nut loose?	Check the bolt and/or nut connections. If the problem remains, contact the dealer

6. Data

6.1 RolloGuard wheel specification

Dimensions	Outer wheel diameter: 200 mm. Wheel width: 35 mm.
Weight	Approximately 0.65 kg including wheel rim and tire.
Maximum Rollator user weight	150 kg (including loaded objects, such as bags).
Activation & jerk control	Activation estimated between 1.5 m/s ² to 2.5 m/s ² Jerk control estimated between 0.2 m/s ³ to 0,5 m/s ³
Brake locking force	35 Nm (STOP brake in locked position).
Brake activations	Tested for 30 000 STOP brake activations and wheel without changed functionality or excessive wear.
Slow down brake pad wear	Tested for 2 hours use per day in 18 months.

The RolloGuard wheel has been developed and tested in accordance with ISO 11199-2:2021.

7. Warranty

RolloGuard AB offers a 24 month manufacturer warranty for damage caused by production failures or material defects. The warranty does not apply to the intended repair or use of the product. Parts that are subject to normal wear and tear are not covered by the warranty. If product changes are made without written approval from RolloGuard AB, the CE-marking and product warranty do not apply.

Notify your dealer or RolloGuard AB directly of product damage covered by this warranty.

The warranty does not cover transportation costs and does not include compensation for personal injury or failure to use the product. The warranty does not cover damage caused by non compliance with the user manual.

Version 2022.12

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