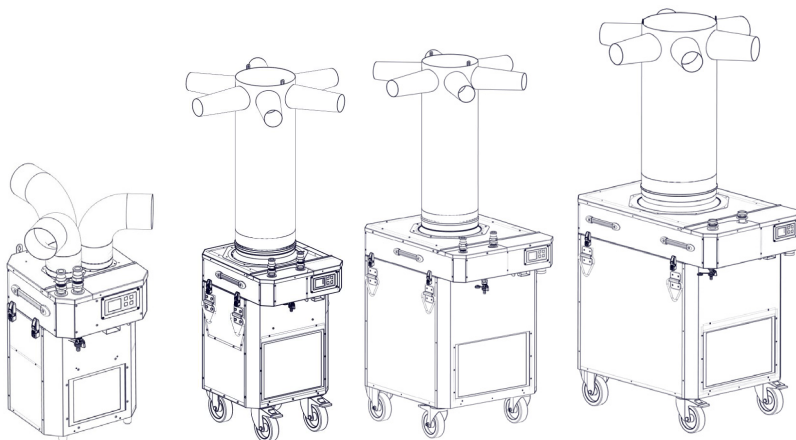


Manual

EN



# TF 15HW, TF 30HW, TF 50HW, TF 100HW EBC



*This product is only suitable for well-insulated areas or occasional use.*

## SAFETY



Read the instruction manual carefully and ensure you understand the content before using the product.

The manufacturer guarantees that this product fulfils safety requirements in accordance with the relevant EU directives and standards.

EU Declaration of Conformity, see [www.elbjorn.com](http://www.elbjorn.com).

### Warning signs on the product.

If these are missing they must be replaced with new ones as soon as possible. These are available from the El-Björn website.

### Safety during assembly

- If extension cables are used: Only use approved extension cables that are marked for outdoor use.
- Connect the machine to a power distribution box with a residual current device.
- Check the electrical box, water connections, hoses and electrical cables before start-up/disconnection. Replace any defective parts.
- If a water hose is used: Only use hoses that can handle at least 100°C and at least 10 bar operating pressure. Only use original connectors.
- The machine must be turned off before installing an El-Björn air distributor.
- Make sure the distance between the machine and the wall is at least 0.5 m.
- Do not use the machine close to showers, baths, pools etc.

### Safety during use

- The machine must always be connected to an El-Björn air distributor.
- The machine must never be covered during operation.
- The wheels must be locked during operation
- The cover must be fitted to the electrical box.
- The 4 lever lock fasteners must be locked with a spanner throughout operation.
- Keep the machine and working area clean.
- Follow the instructions regarding the risk of freezing of the heat exchanger.
- Do not touch hoses or couplings. These con-

tain hot water.

- Take care not to damage the electrical cable. Do not jerk the electrical cable out of the electrical inlet/outlet. Do not expose it to high temperatures, oil, or sharp edges.
- Make sure the machine is standing on a firm, level surface.
- Important: Do not try to lift the machine using the carrying handle for Module 2 (heating module).
- Do not allow children under the age of 3 near the equipment unless they are constantly supervised.
- Children between the ages of 3 and 8 should only be allowed to turn the machine on/off if it is installed in its normal position and they have been instructed how to use it safely and understand the risks. Children between the ages of 3 and 8 must not be allowed to plug in, adjust or carry out maintenance on the machine.
- This equipment may be used by children aged 8 upwards and by persons with reduced physical ability, impaired judgement or mental capacity, or lack of experience and knowledge, providing that they have been shown or instructed in the safe use of the equipment and they understand the risks. Children must not play with the equipment. Children may not clean or perform maintenance on the device without supervision.

**WARNING: Parts of this equipment can get very hot and could cause burns. Take special care when children or vulnerable people are present.**

### Safety during service/maintenance

The machine must be isolated from the electrical supply before servicing/maintenance.

### PERSONAL PROTECTIVE EQUIPMENT

Use a respirator and gloves when replacing the air filter. Put the spent filter in a bag and close it.

### MINIMUM EXPERTISE REQUIRED

Any servicing and installation work must be performed by a qualified service technician, qualified professional or the manufacturer.

## RISK ASSESSMENT

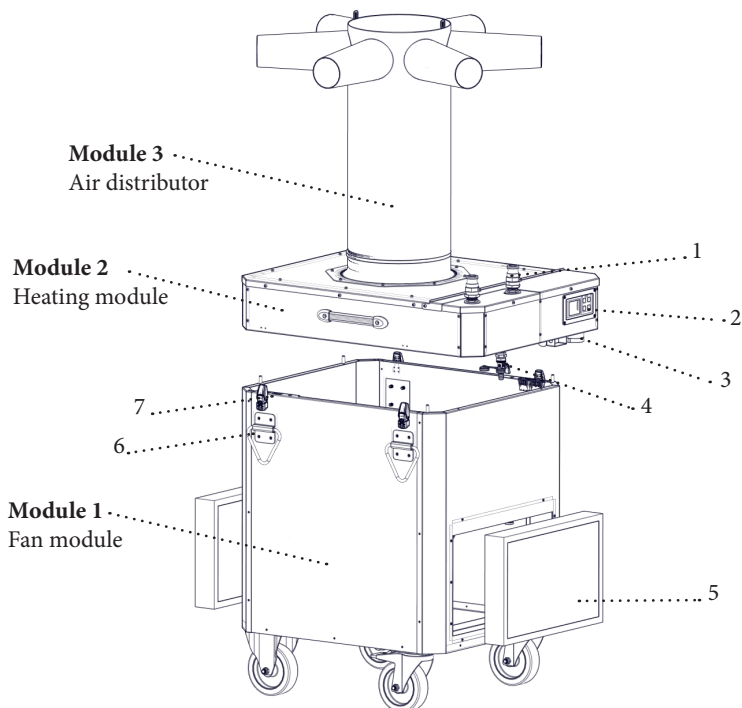
Using spare parts or accessories that have not been recommended by El-Björn increases the risk of injury or damage to the machine.

The machine is only intended for temporary drying and heating of rooms. When using electrical machinery, basic safety regulations shall always be followed, in order to reduce the risk of fire, electric shocks, burns or other personal injury.

**Read the instructions before starting the machine and save the instructions for safe operation.**

---

## INTRODUCTION



1. Camlockanslutningar
2. Display
3. Inlet
4. Drain tap
5. Filter
6. Lifting eyes
7. Lever lock fastener

## DESCRIPTION

The entire product is constructed from powder-coated, corrosion-resistant, galvanized sheet steel.

The machine comprises 3 main modules.

Module 1. (Fan module) includes wheels, filter, fan and lifting eyes.

Module 2. (Heating module) including display/control card, inlet, water drain tap, heat exchanger and camlock connectors.

Module 3. Air distributor.

### Module 1.

- 4 x heavy-duty wheels for moving machine, 2 of which are lockable.
- 4 x lifting eyes for moving machine or suspending it from ceiling.
- 2 x filters with additional pre-filter for extended life (TF 30HW, TF 50HW, TF 100HW).
- 1 x filters with additional pre-filter for extended life (TF 15HW).

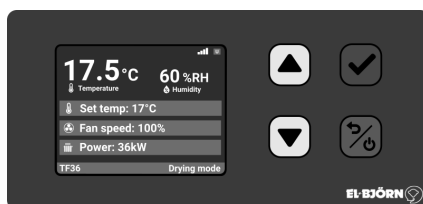
### Module 2.

- Inlet, drain tap and temperature/humidity sensors are well protected beneath overhang.
- Removable cover on top for electrical box. Accessible only by qualified service technician.
- All machine controls are provided on the display. See instructions for display.

### Module 3.

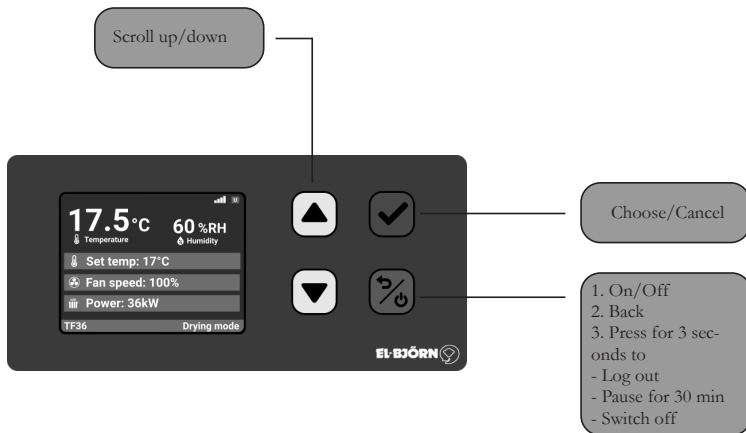
Air distributor.

The air is drawn in through 2 filters (one filter TF 9EL) (Module 1). This acts like an intake noise attenuator as air pressure builds up in the fan compartment. The air is heated (Module 2) by the heat exchanger and flows out through the textile air distributor (Module 3) which propels the warm, dry air over a long distance.

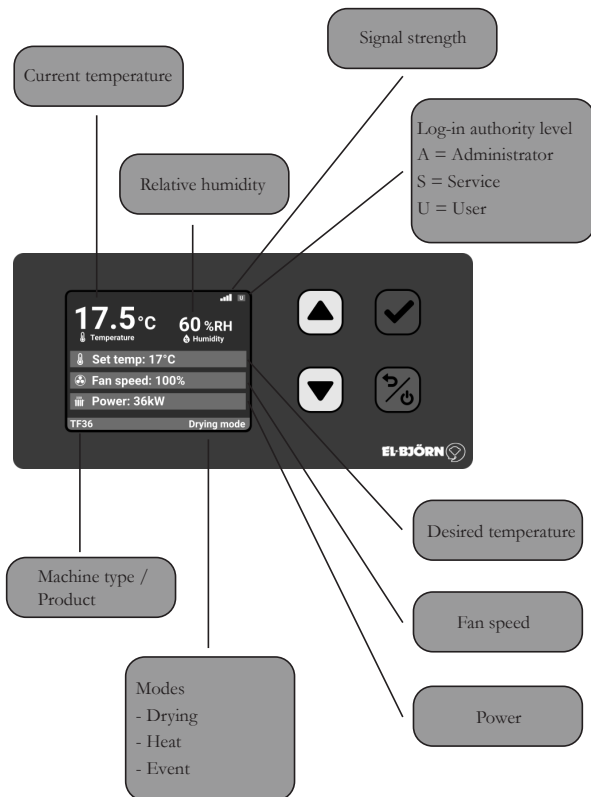


Display

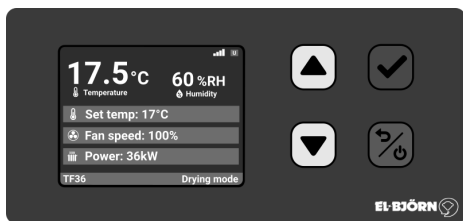
## DESCRIPTION OF DISPLAY DESCRIPTION OF BUTTONS



## MENU DESCRIPTION



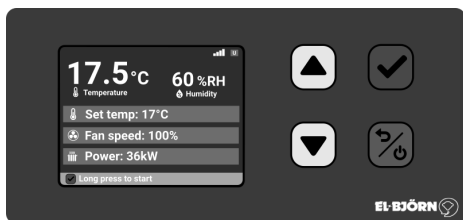
## STARTING/STOPPING THE DRYING FAN IN DRYING MODE



1. To turn on the display, press the RED ON BUTTON on the control panel for 1 second.
2. The above menu will appear in the display.
3. The drying fan is pre-set by default to drying mode.
4. To start the drying fan, press and hold the GREEN BUTTON for 2 seconds (the fan will start).
5. To switch off the drying fan, press and hold the RED BUTTON for 3 seconds.

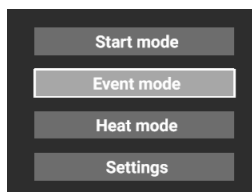
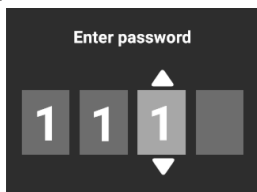
The following options are available:

- Log out
- Pause drying fan for 30 minutes
- Switch off



## CHANGING THE DEFAULT SETTING TO HEAT/EVENT

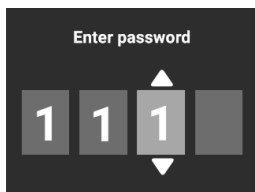
1. To log in, press and hold the tick button for 1 second, the window below will appear.
2. Use the arrows to enter your password, and press the GREEN button to confirm.
3. There are two levels of authorisation: Administrator and Service.  
(If no change is made to the display within 60 seconds you will be logged out automatically.)
4. To access the various menu options, press the RED button for 1 second and the window below will appear.
5. Use the arrows to select the default mode, then confirm by pressing the GREEN button.



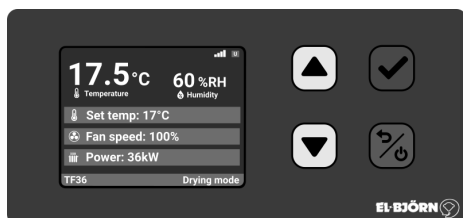
## CHANGING DEFAULT SETTINGS

### DESIRED TEMPERATURE, FAN SPEED, POWER (ELECTRIC DRYING FAN)

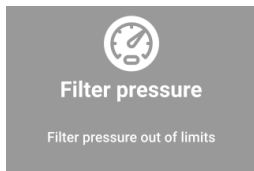
1. To log in, press and hold any button for 1 second, the window below will appear.
2. Use the arrows to enter your password, and press the GREEN button to confirm.
3. There are two levels of authorisation: Administrator and Service.  
(If no change is made to the display within 60 seconds you will be logged out automatically.)



4. To change the default settings, press the up arrow up or down arrow to choose a setting. The chosen setting will then be highlighted in orange.
5. To change the selected setting, press the GREEN button to confirm.
6. Use the up/down arrows to adjust the desired setting, then press the GREEN button to confirm.

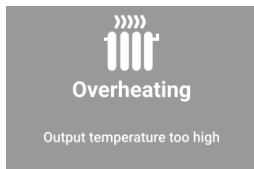


## LIST OF ALARMS

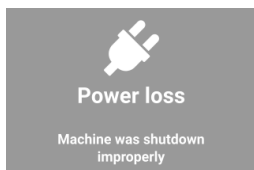


Time to replace filter:

- To cancel the alarm, press the green button
- The alarm symbol will shrink, but will stay on until the filter is replaced

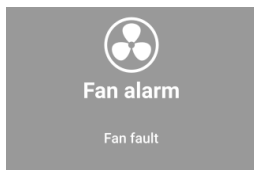


The product has overheated for some reason



The product has not been switched off correctly:

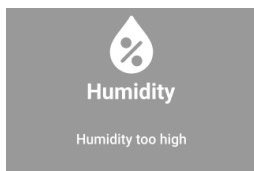
- Power cut
- Power cord failure
- Fuse has tripped



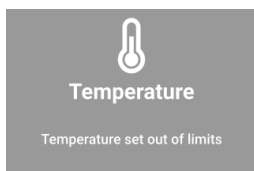
Electrical fault in fan



Frost guard, water temperature below critical level, risk of heat exchanger freezing. The fan stops if the water temperature drops below 5 degrees Celsius, and restarts automatically when the water tem-



Indication that relative humidity of surroundings is above 50%



Temperature is outside pre-set temperature range



## TECHNICAL DATA

	TF 15HW 230 VAC	TF 30HW 230 VAC	TF 50HW 400 VAC	TF 100HW 400 VAC
H incl. air distributor	945mm	1950mm	2150 mm	2170 mm
H excl. air distributor	745mm	1000mm	1222 mm	1250 mm
W	435mm	550mm	740 mm	740 mm
D	475mm	645mm	935 mm	1110 mm
Total weight (top section, bottom section, distributor)	35kg (17) (16) (2)	67kg (24,5) (42,5) (11,5)	117.5 kg (40) (77.5)	153.5 kg (57) (96.5)
Total heat output	15*	33*	57*	115*
Noise level	61 dB(A)	65 dB(A)	70 dB(A)	72 dB(A)
Camlock water connector	25mm typ A	25mm typ A	25 mm type A	32 mm type A
Rated current	1,4A	2,2A	2.6 A	7.0 A
Rated voltage	1N~230V	1N~230V	3N~400 V	3N~400 V
Encapsulation class	IP 44	IP 44	IP44	IP44
Seasonal average efficiency ( $\eta_s$ )	36%	36%	36%	36%
<b>Motor and air side</b>				
Fan voltage	1N~230V	1N~230V	3N~400 V	3N~400 V
Fan power	170W	500W	1700 W	4500 W
Fan current	1,4A	2,2A	2.6 A	7.0 A
Air flow	800m <sup>3</sup> /h	2500m <sup>3</sup> /h	4200 m <sup>3</sup> /h	6500 m <sup>3</sup> /h

\* 80–50 water and +5°C in air

EU Declaration of Conformity, see [www.elbjorn.com](http://www.elbjorn.com).

**NOTE!**

The section concerning safety must be read and understood by everyone who uses or services this machine. The instructions describe operation and maintenance measures that can be performed by the operator. More detailed maintenance or troubleshooting may only be performed by a qualified service technician, qualified professional or the manufacturer. The instructions describe all necessary safety features and must be read and understood by the user before connecting the machine to the electrical supply. In other words, the first action after delivery is to read through the operating instructions.

There are symbols and warning labels on the machine that are mentioned in the section on “Safety”. If any of the warning signs on the heater have become damaged or worn, new signs must be ordered and fitted as quickly as possible in order to ensure the greatest possible safety when using the machine.

The machine may only be used for the purposes described in this instruction.

The manufacturer reserves the right to make changes.

**APPLICATION AREA**

The TF model is intended for drying and heating buildings where there is a need for temporary heating, drying or air circulation.

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**INSTALLATION****CHECK BEFORE USE**

That the machine is protected by a residual current device.

That the filter is fitted and is clean and undamaged.

That cables and connectors are undamaged and in good condition.

That the air distributor is correctly connected and unobstructed.

That the wheels are locked.

Check that the machine is positioned at least 0.5 m away from the wall.

That the machine always stands on a firm, level surface.

its feet. If the machine is to be suspended, use the 4 lifting eyes provided. Check that these are not damaged or deformed. The lifting eyes are only designed to support the weight of the machine itself.

Place the machine in a suitable location. Remove the transport strap from the air distributor. Connect the electrical cable (16A) to a power distribution box with a residual current trip. See the display instructions for starting and setting up the machine.

**INSTALLATION**

In order to achieve the best drying and heating performance, the machine should be positioned as centrally in the room as possible. The machine must run continuously in order to achieve optimal results. Minimum distance from wall: 0.5 m. The machine should only be used upright, standing on

## OPERATION

### HANDLING DURING NORMAL OPERATION

#### TVS

If you want to use antifreeze in a hot water system, use polypropylene glycol with the right freezing point. This is normally approx. -20°C.

#### Start & stop

See instructions for display

#### For adjustment, temperature and fan modes.

See instructions for display

#### Replacement of filter

- Replace the filter when the filter alarm appears. The filter must be fitted so that the arrow on the filter points inwards towards the machine. Always use original filters from El-Björn.
- Turn off the machine using the display and replace the filter.
- Restart the machine.

**NOTE!** Use a respirator and gloves when replacing the air filter. Put the spent filter in a bag and close it.

### HANDLING DURING ABNORMAL OPERATION

#### The machine does not start

Check that the fuses in the nearest electrical cabinet have not blown and that the residual current device has not tripped

Check that the heated battery temperature is >5°C. The frost guard prevents starting when the temperature is below 5°C, and this is indicated on the display.

Internal electrical fault. Contact a qualified service technician.

#### The machine emits too little air

Check the fan speed on the display.

#### There is no hot air supply

Check the supply water temperature.

Check the control valve.

Check the water flow.

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## ASSEMBLY AND DISASSEMBLY

### Assembly

Position the machine in its designated place. Release the air distributor. Lock the wheels on the machine so that it cannot roll away. The minimum distance from a wall is 0.5 m. Connect the inlet hose and return hose to the machine. Fill the system with water and pressurise it. **NOTE!** It is important to bleed the water system.

Connect the electrical cable to a power distribution box with a residual current trip.

The machine is started from the display. (See instructions for display.)

The machine has a frost guard which turns off the fan if the return water temperature drops below +5°C. This is indicated on the display.

### Disassembly

When disassembling: Turn off incoming water. Disconnect the machine from the electrical supply. Start by draining the water from the drain tap. Once the pressure has dropped, loosen the hoses from the incoming water. Fill with antifreeze if required, see "Transportation and storage".

**NOTE!** Be aware of the risk for freezing. Be very careful when draining out the water. The machine can now be transported.

**NOTE!** All repair of electrical parts must be performed by authorised electrical staff.

## SERVICE MAINTENANCE

Day-to-day maintenance should be performed on site by an appointed operator.

### Warning!

**To eliminate the risk of injury, always disconnect from the electrical supply before starting any service work. The following points must be checked by the operator.**

- Never use a machine that is damaged.
- Always mark a defective machine with “Not to be used” until it has been repaired.
- Keep the machine in good condition by servicing it regularly.
- Always replace the filter after use. Always use original filters from El-Björn.
- Replace the filter when the filter alarm appears on the display.
- Before using the machine, always check the operation of the main components (contactor, fan and heat exchanger).
- Check and tighten water connections.
- Check and tighten electrical connections on the machine.
- Check that there are no loose screws and that all parts are properly attached.
- Make sure there are no defective parts that could compromise safety.
- In the event of abnormal noise or vibrations, switch off the machine immediately and make sure the fault is repaired.
- Service the fan or clean inside by opening the four locks on the side (spanner required) and lift Module 2 off Module 1. Electrical connections between the modules are provided by the chassis connections and the 4 keyed guide pins that ensure correct alignment of the modules. See the service manual.
- Self-testing is carried out as described in the service manual on the website.

### Cleaning

- Clean externally with a mild soap solution and a damp cloth. The display can be cleaned with glass cleaner and a soft cloth.
- Air-blow the inside of the machine carefully, then wipe with a damp cloth.
- Never use inflammable or combustible solvents near the machine.
- Flush the heat exchanger with clean water.

**NOTE! All repairs to electrical parts must be carried out by service technicians or qualified professionals**

### TROUBLESHOOTING/CHECK LIST

#### The machine does not start

- Check that the fuses in the nearest electrical cabinet are intact.
- Check whether the residual current device in the nearest electrical cabinet has tripped.
- Check that the temperature of the heat exchanger is above 5°C. The frost guard prevents starting when the temperature is below 5°C. This is indicated on the display. See the display instructions.

#### The machine emits too little air

- Check that the air inlet and filter are not clogged.

#### There is no hot air supply

- Feel the temperature of the incoming water hose. If it is cold, try releasing a small amount of water through the drain tap at the bottom of the heat exchanger, to aid circulation and vent any air.
- If there is still no hot water, check the heat source.
- Make sure there are no kinks in the hose that could restrict water flow.

If this fault occurs, contact a qualified professional or the manufacturer.

## TRANSPORTATION/STORAGE

### Transportation

The machine must always be transported upright. During transportation, the machine must be anchored to the transport vehicle. The machine should only be lifted using the 4 lifting eyes on Module 1 of the machine.

If the heat exchangers have not been completely emptied and you want to protect the machines from damage, the heat exchangers should be filled with ethylene glycol before transport. In most cases the ethylene glycol should be mixed to give a freezing point of around -20°C.

### Storage

The water heater in each unit should be drained and purged with air before storing in a frost-free storage area. If the units are stored in an area where there is a risk of frost, the water heaters must be protected from freezing.

- It is recommended to use ethylene glycol with the right concentration, depending on the required freezing point. The freezing point should be at least -20°C.
- A pH value below 7 indicates that the antifreeze is starting to become acidic, which could damage the heat exchangers. Metals are likely to corrode in liquid with a low pH.
- It is also recommended that ethylene glycol is stored in a closed container. Fresh ethylene glycol is recommended. If antifreeze is to be reused it should be stored in a container that is filled to the brim then sealed (to eliminate air). When antifreeze is exposed to air/oxygen it reduces the effectiveness of the corrosion inhibitor in the antifreeze. It is recommended that the freezing point is checked with a refractometer.

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## SCRAPPING



Take the machine to a recycling station according to state or local regulations.

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## WARRANTY

El-Björn AB's products and deliveries are regulated by Standard Agreement NL 09. Under these provisions, El-Björn AB is responsible for faults arising within one year from delivery.

The provisions of NL 09 also apply for professional parties who register according to the instructions below, although with the following modification:

El-Björn AB is liable for faults arising within five years after delivery; this only applies to products registered on the website.

In other respects, the provisions of NL 09 apply.









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