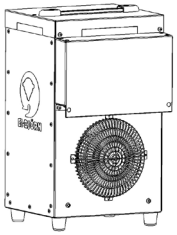
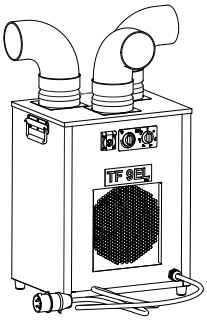
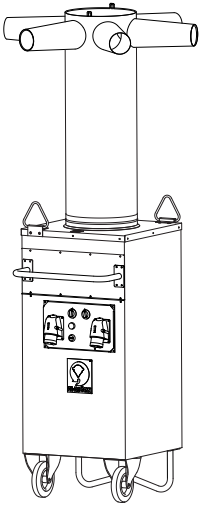
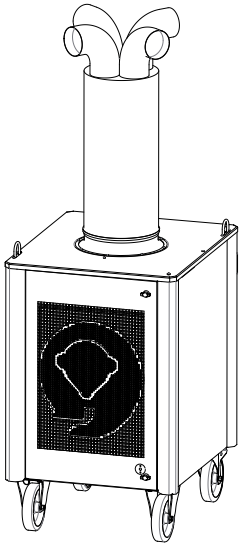
Manual

TF3, TF9EL, TF18 (Legacy), TF36 (Legacy)









SAFETY

Read the instruction manual carefully and ensure you understand the content before using the TF3, TF9EL, TF18 Legacy or TF36 Legacy heater. The manufacturer guarantees that this product fulfils safety requirements in accordance with the relevant EU directives and standards. EU Declara-tion of Conformity, see **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
- Use only approved extension cables that are marked for outdoor use.
- Connect the machine to a power distribution box with a residual current device.
- The machine must be turned off before installing the El-Björn air distributor.
- Make sure the distance between the machine and the wall is at least 0.5 m (including fabric distributor).
- Do not use the machine close to showers, baths, pools etc.

Safety during use
- The TF18 Legacy/TF36 Legacy must always be connected to an El-Björn air distributor. The air distributor on the TF36 Legacy must be screwed securely to the machine.
- The machine must never be covered during operation.
- The wheels on the TF36 Legacy must be locked during operation.
- Hatches must be closed.
- Keep your work area tidy. Untidy workplaces and machines invite accidents.
- Take care not to damage the electrical cable. Do not jerk the electrical cable out of the supply socket. Do not expose it to high temperatures, oil, or sharp edges.
- Make sure the machine is standing on a firm, level surface.

– 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. Always disconnect the power supply before opening any of the hatches on the machine.

PERSONAL PROTECTIVE EQUIPMENT
Use a respirator and gloves when replacing the air filter (does not apply to TF 3EL). Put the spent filter in a bag and close it.

MINIMUM EXPERTISE REQUIRED
Any servicing and installation work must be performed by a 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

DESCRIPTION

The TF 3EL, TF 9EL and TF 18EL are constructed from galvanised and powder-coated sheet metal. Inside the chassis are electric elements, a fan and a control box.

The TF 36EL has a galvanised and powder-coated sheet metal framework with impact-resistant aluminium profiles at the corners. The machine has partially insulating material on the inside to reduce the noise level. Inside the chassis are electric elements, a fan and a control box.
The air is drawn through the filter (not TF 3EL) into the fan and then through the electric elements, which heat the air. Finally, the air is forced out through the machine. The machine is designed to pressurise the air inside the machine so that the heated air is thrown over a long distance.

NOTE!
(TF3, TF9EL, TF18 Legacy and TF36 Legacy are referred to in this section as the heater).
The section on safety must be read and understood by everyone who uses or repairs the heater.
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 professional or the manufacturer. The instructions describe all necessary safety features and must be read and understood by the user before connecting the heater 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 heater 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 as quickly as possible in order to ensure the greatest possible safety when using the heater.
The heater may only be used for the purposes described in these instructions.
The manufacturer reserves the right to make changes.

APPLICATION AREA
TF3 - TF9EL - TF18 Legacy - TF36 Legacy are intended for drying and heating buildings where there is a need for temporary heating, drying or air circulation.

	TF 3 230 VAC	TF 3 110 VAC	TF9EL 400 VAC	TF18 Legacy 400 VAC	TF36 Legacy 400 VAC
H incl. air distributor	500 mm	500 mm	900 mm (90° spiral elbow)	2150 mm	2250 mm
H excl. air distributor	467 mm	467 mm	655 mm	1260 mm	1300 mm
W	295 mm	295 mm	495 mm	530 mm	760 mm
D	300 mm	300 mm	390 mm	660 mm	940 mm
Weight	12 kg	13,2 kg	19 kg	72 kg	160 kg
Noise level	60.9 dB(A)	60.9 dB(A)	65 dB(A)	65 dB(A)	76 dB(A)
Rated power	3000 W	3000 W	9000 W	18000 W	36000 W
Rated current	11,5 A	24 A	13 A	28 A	50 A
Fuse	13 A	32 A	16 A	32 A (2x3-phase, 16 A)	63 A
Rated voltage	1N~230 V	110V	3N~400 V	3N~400 V	3N~400 V
Encapsulation class	IP44	IP44	IP44	IP44	IP44
Motor and air side					
Fan voltage	1N~230 V	110V	1N~230 V	1N~230 V	3~400 V
Fan power	102 W	105 W	0.17 kW	0.58 kW	1.6 kW
Fan current	0.45 A	0.93 A	0.5 A	2.4 A	2.5 A
Air flow	450 m³/h	450 m³/h	1250 m³/h	1700/2300 m³/h	2700/3900 m³/h
Temperature rise	35 °C	35 °C	26 °C	34/25 °C	42/29 °C
Electric heating					
Electric elements	2 x 1.4 kW	2 x 1.4 kW	6 x 1.5 kW	6 x 3 kW	24 x 1.5 kW

EU Declaration of Conformity, see **www.elbjorn.com**.

Power selector operation

TF3 110 VAC

Setting	Power	Phase current, amps	L1	L2
✱	105 W	0.93 A	0.93	0.93
✱●	2.8 kW	24 A	24	24

TF3 230 VAC

Setting	Power	Phase current, amps	L1
✱	102 W	0.45 A	0.45
✱●	2.8 kW	11.5 A	11.5

TF9EL

Setting	Power	Phase current, amps		
		L1	L2	L3
✱	0.17 kW	0.5	0	0
✱◖	4.5 kW	7	6.5	6.5
✱●	9 kW	13	12.5	12.5

TF 18EL 9 kW connection

Setting	Power	Phase current, amps		
	kW	L1	L2	L3
◖	5 kW	0	14	11
●	9 kW	12.5	14	12.5
✱●	9 kW	12,5	15	12,5

TF18 Legacy

Setting	Power	Phase current, amps		
	kW	L1	L2	L3
◖	5 kW	0	14	11
●	18 kW	26	28	26
✱●	18 kW	26	28	26

TF36 Legacy

Fan m³/h	Power	Phase current, amps		
		L1	L2	L3
2700 = Low	1.2 kW	1	1	1
3900 = High	1.6 kW	2	2	2
Heating				
18	18 kW	26	26	26
27	27 kW	38	38	38
36	36 kW	50	50	50

INSTALLATION
CHECK BEFORE USE:

That the machine is protected by a residual current device.
That a filter is fitted and that it is clean and undamaged (TF18 Legacy and TF36 Legacy).
That cables and connectors are undamaged and in good condition.
That the air distributor is correctly fitted and unobstructed (TF18 Legacy and TF36 Legacy).
That the spiral spring is correctly fitted to the air distributor on the TF18 Legacy.
That the wheels are locked.
That the machine is positioned at least 0.5 m away from the wall (including the fabric distributor).
That the machine always stands on a firm, level surface.

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 is 0.5 m (including the fabric distributor). The machine should only be used upright, with its wheels/feet at the lowest point. If the machine is to be suspended, use the lifting eyes/bracket provided. Check that these are not damaged or deformed. The lifting eyes are only designed to support the weight of the machine itself.

TF 3EL: Position the machine in its designated place. Connect the power cable to a single-phase socket fused for 13 A 230 VAC or 32 A 110 VAC and protected by a residual current device. The fan will start up. To start heating, turn the thermostat to the desired setting. The working range of the thermostat is +5–35 °C.

TF9EL – TF18 Legacy: Position the machine in its des-ignated place. Remove the transport strap from the air distributor (TF 18EL). Connect the power cable to a fused 3-pin 32 A socket that is protected by a residual current device. Start the machine by turning the control switch to the desired setting. Set the thermostat to the desired temperature. The working range of the thermostat is approximately +8–32 °C.
On a TF18 Legacy with 2 x 16 A inlets, the left inlet must always be connected. This supplies the fan motor, con-trol system and 9 kW of heating. The right inlet supplies a further 9 kW of heating.

TF36 Legacy: Position the machine in its designated place. Lock the wheels on the machine. Attach the sheet metal El-Björn air distributor. Connect the power cable to a fused 3-pin 63 A socket that is protected by a residual current device. Start the machine by turning the control switch to the desired air flow, then set the desired heat output by turning the heating switch to 18, 27 or 36 kW. The working range of the thermostat is approximately +8–32 °C. The thermostat is located inside the filter hatch.

OPERATION

HANDLING DURING NORMAL OPERATION

Adjusting the indoor temperature

For maximum temperature, turn the thermostat knob as far clockwise as it will go.
TF3: The thermostat is on the underside of the electrical box. Working range +5–35 °C.
TF9EL/TF18 Legacy: The thermostat is the knob on the left side of the front panel.
Working range +8–32 °C.
TF36 Legacy: The thermostat is located inside/ behind the filter hatch. Working range +8-32 °C.

Starting the machine

TF3: Start the machine by inserting the plug into a socket. Then select the desired heating output using the thermostat.
TF9EL/TF18 Legacy: Start the machine by turning on the control switch. To stabilise the air distributor, start the machine at the maximum fan speed (TF18 Legacy). Then select the desired heating output.
TF36 Legacy: Start the machine by turning the control switch to the desired air flow. The machine will check the motor before starting up. A red light will come on for a few seconds before the machine starts working.

Then select the desired heating output (18, 27 or 36 kW). It is recommended that a slower fan speed (TF18 Legacy and TF36 Legacy) is used when starting up in cold spaces, and the speed is then increased to give a longer throw. If a high air flow is used when the am-bient temperature is low it may feel as if the machine is blowing cold air.

Replacing the ilter

Replace the filter every 4 weeks or when the yellow indicator lamp (TF36 Legacy) shows that it needs replac-ing. When the filter is clogged the air distributor will sag (TF18 Legacy).

TF3: No filter is fitted.

TF9EL/TF18 Legacy: Switch off the heater by turning the thermostat knob to the 0 position and let the fan run for around 5 minutes (see Cooling down) before turning the control switch to the 0 position.
TF36 Legacy: Switch off the heater by turning the kW (heating) switch to the 0 position and let the fan run for around 5 minutes (see Cooling down) before turning the control switch to the 0 position – this allows the electric elements to cool down and prolongs the life of the machine.

Disconnect the power cable and open the hatch. Replace the filter. The arrow on the filter show which way round it goes. The arrow should point into the machine. Close the hatch and connect the power cable. Restart the machine.

HANDLING DURING ABNORMAL OPERATION

Resetting the overheating protector

TF3/TF9EL: The overheating protector is reset automatically. When the machine has cooled down it resets itself and the heater is switched back on (the fan does not stop).
TF18 Legacy/TF36 Legacy: A red light comes on when the overheating protector has tripped. This can be reset by pressing the blue RESET button on the control panel. If the fault occurs repeatedly, check the filter and the air distributor. If this does not fix the problem contact a qualified professional or the manufacturer.
TF36 Legacy: Red motor check light comes on. This indicates a fault in the fan motor. This may be due to overheating of the motor or some other electrical fault. Switch off the machine and allow the motor to cool down. Restart the machine when it has cooled down. The motor protector is reset automatically. If this does not remedy the problem contact a qualified professional or the manufacturer.

Cooling down
IMPORTANT!
The electric elements get very hot (about 300 °C), so it is vital that they cool down after use in order to maximise the machine's lifespan. This must be done every time the machine is turned off prior to filter replacement or before the machine is moved.

TF9EL/TF18 Legacy/TF36 Legacy: Turn the switch/thermostat (heating) to the 0 position and let the fan run for about 5 minutes, then turn the fan control switch to the 0 position – this allows the electric elements to cool down.

TF3: Turn the thermostat to the 0 position (fully anticlockwise) and let the fan run for around 5 minutes before unplugging the machine from the socket.

DEINSTALLATION

TF3: Turn the thermostat to the 0 position (fully anticlockwise) and let the fan run for around 5 min-utes (see Cooling down) before unplugging the machine from the socket.

TF9EL/TF18 Legacy: Turn the thermostat to the 0 position (fully anticlockwise) and let the fan run for around 5 minutes (see Cooling down) before turning the control switch to the 0 position. The machine can now be transported.

TF36 Legacy: Turn the kW (heating) switch to the 0 position and let the fan run for around 5 minutes (see Cooling down) before turning the control switch to the 0 position. The machine can now be transported.

SERVICE

MAINTENANCE
Day-to-day maintenance should be performed on site by an appointed operator.
NOTE! After the first season of use it is especially important to tighten electrical connections, the fan motor mounting and the electric element nuts and connections.
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.

- Keep the machine in good condition by servicing it regularly.
- Before using the machine, always check the operation of the main components (contactor, fan and electric elements).
- Check and tighten the electric elements.
- 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.
- The filter should be replaced every 4 weeks if the machine is in continuous operation or when the filter is full and the air flow has significantly reduced.On the TF36 Legacy a yellow lamp shows when the filter needs to be replaced.
- Never use a machine that is damaged.
- Always mark a defective machine with "Not to be used" until it has been repaired.

Cleaning
- Always replace the filter after use.
- Clean externally with a mild soap solution and a damp cloth.
- Air-blow the inside of the machine carefully, then wipe with a damp cloth.
- Never use inflammable or combustible solvents near the machine.

NOTE!
All repairs to electrical parts must be performed by a qualified professional or the manufacturer.

TROUBLESHOOTING/CHECK LIST

The machine does not start

- Check that the fuses in the electrical cabinet are intact.
- Check whether the residual current device in the nearest electrical cabinet has tripped.
- Check that the left inlet on TF18 Legacy machines with 2 x 16 A is connected.
- Check that the fuses in the machine (TF36 Legacy) have not tripped. They are located behind the fan hatch under the electrical box.

NOTE! On some variants of the TF18 Legacy (32 A, 230/400 V or 4-pin) the control circuit is independently fused. This fuse is located inside the electrical box. The TF3/110 V also has a separate internal fuse.

The machine emits too little air

- Check that the air distributor/vents are not blocked.
- Check that the air inlet and filter are not clogged.

There is no hot air supply

- Make sure that the thermostat knob or kW switch is not in the 0 position.
- Check that the fuses in the TF36 Legacy have not tripped. They are located behind the fan hatch under the electrical box.
- Check that the fuses in the TF18 Legacy (32 A, 230/400 V or 4-pin) have not tripped. They are located at the bottom of the electrical box.
- Turn the heat control knob to max. (Inside filter hatch on TF36 Legacy.)
- Check whether the overheating protector has tripped. This turns on a red light (TF18 Legacy/ TF36 Legacy). If a red light is lit, the overheating protector has tripped – correct the fault and then press the blue RESET button.
- If the overheating protector on the TF3/ TF9EL has tripped it will be reset automatically when the machine cools down. The fan motor continues running.If this fault occurs, contact a qualified professional or the manufacturer.

TRANSPORTATION/STORAGE

The machine must always be transported upright. Before transporting the machine, remove the air distributor if necessary (TF36 Legacy). During transportation, the machine must be anchored to the transport vehicle. The two lifting eyes on top of the machine must be used to lift it.
When the machine is not in use, store it indoors where it is dry and there is no risk of freezing.

SCRAPPING

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

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 after 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 (only applicable to products registered on the website).
In other respects, the provisions of NL 09 apply.

To obtain this extended warranty, you must register within 14 days after purchasing the products.

El-Björn UK Ltd
Unit 5 Beacon Hill Logistics Park, Beacon Hill Road,
Church Crookham, Fleet, Hampshire, GU52 8DY
(+44) 01252 423 512, info@elbjorn.com, www.elbjorn.co.uk

EL-BJÖRN

TF EL GB / 241020