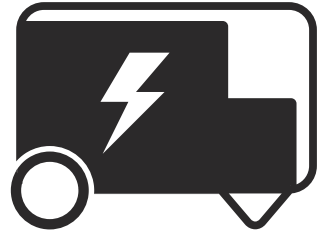




 **Husqvarna**[®]



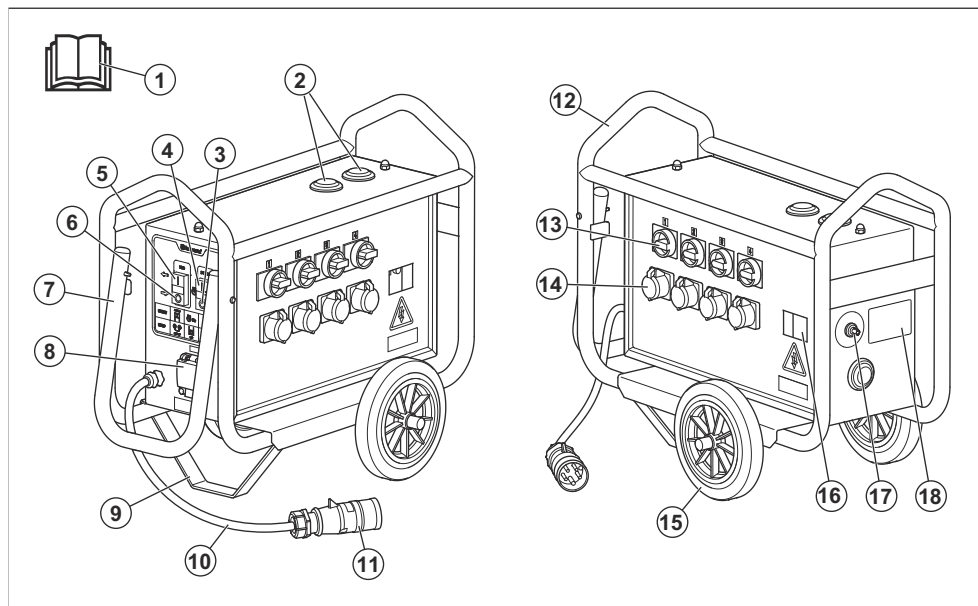
CF 85 AS

Contents

Introduction.....	2	Troubleshooting.....	8
Safety.....	4	Error codes.....	10
Operation.....	6	Transportation, storage and disposal.....	11
Maintenance.....	7	Technical data.....	13

Introduction

Product overview



1. Operator's manual
2. Air outlet vents
3. OFF button
4. ON button
5. ON button for the variable frequency drive (VFD)
6. OFF button for the variable frequency drive (VFD)
7. Handle
8. Main breaker (MCB)
9. Support
10. Power cord
11. Power plug
12. Protective frame
13. Output switch (MPCB)
14. Power outlets
15. Wheel
16. Frequency display window
17. Frequency variation knob

18. Rating plate

Product description

The product is an adjustable frequency converter that is used to supply electric concrete vibrators with adjustable frequency and correct voltage. The frequency converter is connected to a mains power supply and functions as an isolating transformer to make the operation safer.

The product has a display for frequency indication and displays errors during overload or any fault condition. The product has overload protection for concrete vibrators.

Intended use

The product is for professional operation only. The product is used together with a concrete vibrator as equipment for concrete vibration. Do not use the product for other tasks.

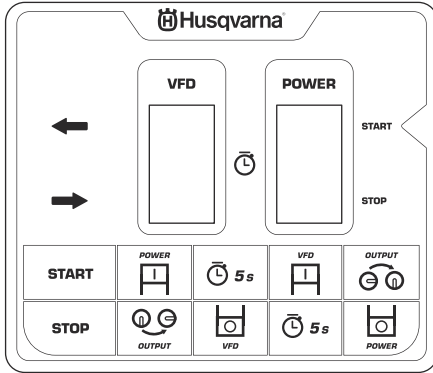
Symbols on the product



WARNING: This product can be dangerous and cause serious injury or death to the operator or others. Be careful and use the product correctly.



Read the operator's manual carefully and make sure that you understand the instructions before you use the product.



Decal with instructions for how to start and stop the product.



Lifting point



CAUTION: Risk of electric shock. Use proper PPE precautions.



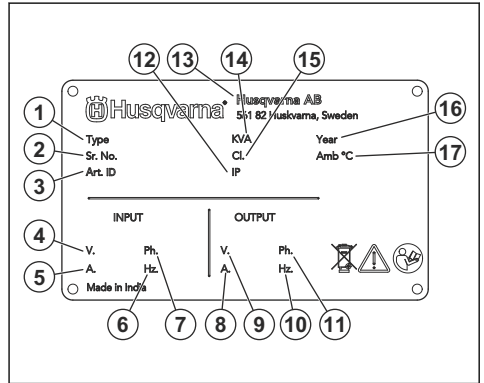
Use approved protective gloves.



Disconnect the plug from the power supply and wait 5 minutes before you do maintenance.

Note: Other symbols/decals on the product refer to special certification requirements for some markets.

Rating plate



1. Product type
2. Serial number
3. Article ID
4. Input voltage, V
5. Input current, A
6. Input frequency, Hz
7. Input phase
8. Output voltage, V
9. Output current, A
10. Output frequency, Hz
11. Output phase
12. IP classification
13. Manufacturer
14. Kilovolt-ampere, KVA
15. Insulation class
16. Production year
17. Maximum ambient temperature

Product damage

We are not responsible for damages to our product if:

- the product is incorrectly repaired.
- the product is repaired with parts that are not from the manufacturer or not approved by the manufacturer.
- the product has an accessory that is not from the manufacturer or not approved by the manufacturer.
- the product is not repaired at an approved service center or by an approved authority.

Safety

Safety definitions

Warnings, cautions and notes are used to point out specially important parts of the manual.



WARNING: Used if there is a risk of injury or death for the operator or bystanders if the instructions in the manual are not obeyed.



CAUTION: Used if there is a risk of damage to the product, other materials or the adjacent area if the instructions in the manual are not obeyed.

Note: Used to give more information that is necessary in a given situation.

General safety instructions



WARNING: Read the warning instructions that follow before you use the product.

- This product is a dangerous tool if you are not careful or if you use the product incorrectly. This product can cause serious injury or death to the operator or others. Before you use the product, you must read and understand the contents of this operator's manual.
- This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.
- Save all warnings and instructions.
- Comply with all applicable laws and regulations.
- The operator and the employer of the operator must know and prevent the risks during operation of the product.
- Do not let a person operate the product unless they read and understand the contents of the operator's manual.
- Do not operate the product unless you receive training before use. Make sure that all operators receive training.
- Do not let a child operate the product.
- Only let approved persons operate the product.
- The operator is responsible for accidents that occur to other persons or their property.
- Do not use the product if you are tired, ill, or under the influence of alcohol, drugs or medicine.
- Always be careful and use your common sense.

- This product produces an electromagnetic field during operation. This field can under some circumstances interfere with active or passive medical implants. To decrease the risk of serious injury or death, we recommend persons with medical implants to speak to their physician and the medical implant manufacturer before operating this product.
- Keep the product clean. Make sure that you can clearly read signs and decals.
- Do not use the product if it is damaged.
- Do not make modifications to this product.
- Do not operate the product if it is possible that other persons have made modifications to the product.

Safety instructions for operation



WARNING: Read the warning instructions that follow before you use the product.

- Make sure that you know how to stop the product quickly in an emergency.
- The operator must have the physical strength that is necessary to operate the product safely.
- Use personal protective equipment. Refer to *Personal protective equipment on page 5*.
- Make sure that only approved persons are in the work area.
- Keep the work area clean and bright.
- Make sure that you are in a safe and stable position during operation.
- Make sure that there is no risk that you or the product can fall from a height.
- Make sure that there is no grease or oil on the handle.
- Do not use the product in areas where fire or explosions can occur.
- Make sure that all persons in the work area use approved personal protective equipment.
- Remove loose objects from the work area.
- Before you go away from the product, stop the product and disconnect the power source.
- Make sure that the power outlet voltage agrees with the voltage that is given on the rating plate of the product.
- Make sure that clothes, long hair and jewelry do not get caught in moving parts.
- Do not sit on the product.
- Do not hit the product.
- Make sure that you or other persons cannot get caught in and fall on cables, hoses and shafts in the work area.
- Before you start the product, find out if there are hidden wires, electrical cables or other sources of

electricity. Do not operate the product unless you know that it is in a safe work area.

- Before you start the product, make sure that the product is in a vertical and stable position to prevent it from overturning, sliding away or falling.

Noise safety



WARNING: Read the warning instructions that follow before you use the product.

- High noise levels and long-term exposure to noise can cause noise-induced hearing loss.
- To keep the noise level to a minimum, do maintenance on and operate the product as given in the operator's manual.
- Use approved hearing protection while you operate the product.
- Listen for warning signals and voices when you use hearing protection. Remove the hearing protection when the product is stopped, unless hearing protection is necessary for the noise level in the work area.

Electrical safety



WARNING: Read the warning instructions that follow before you use the product.

- The power plug must agree with the power outlet. Do not do modifications to the plug. Do not use adapter plugs with grounded products. Power plugs without modifications, and correct power outlets decrease the risk of electrical shock.
- Do not pull the power cord to move the product.
- Pull the power plug to disconnect the power cord. Do not pull the power cord.
- Make sure that the power cord does not catch in doors, fences or equivalent obstacles that can cause damage to the power cord.
- Do a check that the power cord and the power plug are in good condition and not damaged.
- Do not connect a damaged power cord to the product.
- Do not touch the power cord if it becomes damaged during operation of the product. Disconnect the power cord from the power outlet.
- Keep the power cord away from water, oil, sharp edges and moving parts.
- Keep the product away from rain and wet conditions. The risk of electrical shock increases if water goes into the product.
- Use a power supply with RCD (residual-current device) protective devices that have rated residual current of <30mA, if you operate the product in a moist environment. An RCD decreases the risk of electrical shock.

- Do not start all 4 power outlets on the product at the same time.
- Only let a qualified electrician do a safety check of and repair the power plug.

Personal protective equipment



WARNING: Read the warning instructions that follow before you use the product.

- Always use approved personal protective equipment when you operate the product. Personal protective equipment cannot fully prevent injury but it decreases the degree of injury if an accident does occur. Let your dealer help you select the correct personal protective equipment.
- Regularly do a check of the condition of the personal protective equipment.
- Use an approved protective helmet.
- Use approved hearing protection.
- Use approved respiratory protection.
- Use approved eye protection with side protection.
- Use protective gloves.
- Use boots with steel toe-cap and non-slip sole.
- Use approved work clothing or equivalent close-fitting clothing that has long sleeves and long legs.

Fire extinguisher

- Keep a fire extinguisher near during operation.
- Use a powder fire extinguisher of "ABE" class or a carbon dioxide fire extinguisher of "BE" type.

Safety devices on the product



WARNING: Read the warning instructions that follow before you use the product.

- Do not use a product with safety devices that are damaged or do not operate correctly.
- Do a check of the safety devices regularly. If the safety devices are damaged or do not operate correctly, speak to your Husqvarna servicing dealer.
- Do not make modifications to safety devices.

Output switch (MPCB)

The motor protection circuit breakers give protection against electrical faults.



CAUTION: If a motor protection circuit breaker releases, do not try to set the output switch back to ON immediately. To prevent motor damage, it is necessary to let the motor become cool. The output switch cannot be set to ON before the motor is cool. If you try to set the output switch to

ON by force, the motor and the switch can become damaged.

- Always use original accessories and spare parts. Accessories and spare parts that are not approved by the manufacturer, can cause serious injury or death.
- Replace damaged, worn or broken parts.
- Only do the maintenance as given in this operator's manual. Let an approved service agent do all other servicing.
- If the replacement of the supply cord is necessary, this has to be done by the manufacturer or his agent in order to avoid a safety hazard.
- After maintenance, do a check of the vibration level in the product. If it is not correct, speak to an approved service agent.
- After maintenance and repair jobs, do a check of the safety devices in the product. All safety devices must be installed correctly to ensure grounded conductor continuity.
- Let an approved service agent do servicing on the product regularly. The product must be checked by a Husqvarna service agent at least once each 6 months and repaired if it is necessary.
- Do not use high pressure washer to clean the product.

Mains breaker (MCB)

The mains breaker gives protection against damage from overload or short circuit.

Safety instructions for maintenance



WARNING: Read the warning instructions that follow before you use the product.

- If the maintenance is not done correctly and regularly, the risk of injury and damage to the product increases.
- Use personal protective equipment. Refer to *Personal protective equipment on page 5*.
- Clean the product to remove dangerous material before you do the maintenance.
- Disconnect the product from the power source and wait 5 minutes to let the electric circuit discharge before you do the maintenance.
- Do not change the product. Modifications that are not approved by the manufacturer can cause serious injury or death.

Operation

Introduction



WARNING: Read and understand the safety chapter before you use the product.

loads. This is to get a good amplitude by running at 200 Hz.

- If there is form-work resonance, lower the frequency from 0 to 10 Hz to find non-resonance point and keep that frequency.

To do before you operate the product

- Read the operator's manual carefully and make sure that you understand the instructions.
- Do the daily maintenance. Refer to *Daily maintenance on page 7*.
- Make sure that the installation of the product agrees with local safety regulations.
- Make sure that the mains voltage agrees with the rating plate on the product.
- Make sure that the cable installation agrees with IP classification shown on the rating plate of the product.

To start the product



CAUTION: Read the electrical specifications in *Technical data on page 13* or on the rating plate of the product before you connect a concrete vibrator.

1. Set the output switch for the power outlets to the OFF position.
2. Connect the product to a grounded power supply.
3. Put the power plug of the concrete vibrator into a power outlet on the product.

Frequency adjustment recommendation

- For external vibrators, do not start with a frequency less than 190 Hz. You can adjust the frequency during the operation if it is necessary.
- For external vibrators, if you want to use a frequency less than 180 Hz for a long period of time, adjust the centrifugal weights so they can operate with lower



CAUTION: Make sure that there is no risk of accidental start of the concrete vibrator when you connect it to the product.

4. Make sure that the MCB is in the ON position.
5. Push the ON button on the product, wait for 5 seconds and then push the ON button for the VFD.

6. Adjust the output frequency with the frequency variation knob.
7. Set the power switch (MPCB) for the power outlet of the connected concrete vibrator to the ON position.
8. Push the ON button on the connected concrete vibrator if there are pokers.
9. If it is necessary, adjust the frequency of the connected concrete vibrator with the frequency variation knob.

Maximum number of connected concrete vibrators



CAUTION: If you use internal vibrators, make sure that the frequency is 200 Hz.



CAUTION: The power consumption of the connected concrete vibrators must not be more than the output capacity of each power outlet. Refer to the table below for more information.

Type	No of output
AX 36	4
AX 40	4

Type	No of output
AX 48	4
AX 56	4
AX 65	4
Vibrastar 40	4
Vibrastar 50	4
Vibrastar 60	4
ER 407B	4

Note: MPCB limit setting: Max. 21A on each outlet

To stop the product

1. If there are pokers, push the OFF button of the poker.
2. Set the output switch for the power outlet of the connected concrete vibrator to the OFF position.
3. Push the OFF button for the VFD and wait for 5 seconds.
4. Push the OFF button.

Maintenance

Daily maintenance



WARNING: Disconnect the product from the electrical power supply before you do maintenance on the product.

- Clean the external surface with a moist cloth.

- Make sure that the ON/OFF buttons operate correctly.
- Make sure that the air outlet vents are clean.
- Make sure that the electrical connections and the power cord are in good condition and not damaged.
- Make sure that screws on the front panel and gland are tightened.

Troubleshooting

Problem	Cause	Solution
The product does not start.	The power plug is not connected.	Connect the power plug to a power outlet.
	The power switch releases when you push the green ON button.	Let an electrician do a check of the input voltage. The input voltage must be between +10 to -10% nominal. The frequency must be $\pm 2\%$.
	There is no power in the power outlet.	Speak to an approved Husqvarna service agent.
	The power cord is damaged.	Let a Husqvarna service agent replace the power cord.
	There is an error on the display.	Refer to <i>Error codes on page 10</i> .
	MCB does not reset to the ON position after the previous fault operation.	Speak to an approved Husqvarna service agent.
	The product has not been started correctly.	Start the product in the correct way.

Problem	Cause	Solution
The concrete vibrator stops after a while.	There is overload in the product.	Make sure that the total nominal consumption of the connected concrete vibrators is lower than the nominal output from the power outlet.
	The outlet switch (MPCB) trips.	Make sure that the total nominal consumption of the connected concrete vibrator is lower than the nominal output from the product.
		Speak to an approved Husqvarna service agent.
	The mains breaker (MCB) trips.	Let an electrician do a check of the input voltage. The input voltage must be between +10 to -10% nominal. The frequency must be $\pm 2\%$.
	The concrete vibrator is damaged and the amperage consumption is too high.	Replace the concrete vibrator.
	The load is too high for the product because the vibrator head is too large.	Make sure that the diameter of the product is adapted to the space between the rebars. The vibrator head must not touch the rebars.
	The load is too high for the product because the external vibrator is too small for the job.	Use appropriate external vibrator based on load.
		Speak to an approved Husqvarna service agent.
	Resonance in form work.	Lower the frequency.
		Do a check of all clamps of vibrators.
		Speak to an approved Husqvarna service agent.
The power outlets on the product or the power plugs on the concrete vibrators are damaged.	Speak to an approved Husqvarna service agent.	
The product becomes too hot.	Make sure that the air outlet vents are not blocked and let the product become cool before you start it again.	
	Speak to an approved Husqvarna service agent.	

Problem	Cause	Solution
The vibration speed in the concrete vibrator is too low.	There is overload in the product.	Make sure that the total nominal consumption of the connected concrete vibrators is lower than the nominal output from the product.
	The concrete vibrator is damaged and the amperage consumption is too high.	Replace the concrete vibrator.
	The product does not give sufficient power.	Let an electrician do a check of the input voltage. The input voltage must be between +10 to -10% nominal. The frequency must be $\pm 2\%$.
	The product is connected to the incorrect network frequency.	Use the correct product for the given frequency.
	The frequency variation setting is incorrect.	Set the correct frequency variation.

Error codes

Error code	Problem	Cause	Solution
SC	Surge current or short circuit.	There is a short circuit in the phases of the motor.	Do a check on the concrete vibrator connected to power outlet.
		Surge current or short circuit.	Do a check on the concrete vibrator connected to power outlet. If the concrete vibrator operates correctly but the error code still shows, speak to an approved Husqvarna service agent.
		There is an internal error of the power module.	Speak to an approved Husqvarna service agent.
OE-4	There is an over-voltage when the product is off.	There is a voltage surge from the power supply.	Let an electrician do a check of the power supply.
UE-1	There is an undervoltage when the product is on.	The ON/OFF sequence is not followed correctly.	Push the OFF button, wait for 20 seconds and start the product.
		There is a power failure.	Let an electrician do a check of the power supply.
		The main circuit capacitor is damaged.	Speak to an approved Husqvarna service agent.
IPH.L	Input phase loss.	The connections of the frequency converter from the power supply are damaged.	Let an electrician do a check of the power supply.
		There is a broken fuse.	Replace the broken fuse.
		There is an imbalance in the phases of the power supply.	Let an electrician do a check of the power supply.
		The main circuit capacitor is damaged.	Speak to an approved Husqvarna service agent.

Error code	Problem	Cause	Solution
OPH.L	Output phase loss.	The connections of the frequency converter from the power supply are damaged.	Let an electrician do a check of the power supply.
		There is an imbalance in the phases of the power outlets on the product.	Do a check on the concrete vibrator connected to power outlet.
ESS	There is an error in the soft starter.	There is a power failure.	Do a check of the power supply.
		The soft start resistor value has changed.	Speak to an approved Husqvarna service agent.
		There is a loss in the input phase when the product starts.	
		The main circuit capacitor is damaged.	
OL-1	The load is larger than 85 A.	The output Switch (MPCB) is damaged.	Speak to an approved Husqvarna service agent.
		The mains voltage is too low.	Do a check of the power supply.
OH	The temperature in the converter is too high.	The temperature in the frequency converter is too high.	Use the product in the correct temperature. Make sure that there is sufficient air flow in the work area. Decrease the work load if it is necessary.
FF	Fan failure.	The fan is damaged.	Speak to an approved Husqvarna service agent.
OL-2	The load is larger than 85 A.	The motor in the concrete vibrator is jammed.	Do a check of the motor in the concrete vibrator.
		The concrete vibrator runs continuously at low speed.	Increase the output frequency on the frequency converter. Decrease the work load.
idE	There is an internal error in the converter.	-	Speak to an approved Husqvarna service agent.
idP	There is an internal error in the parameter.		

Transportation, storage and disposal

To lift the product

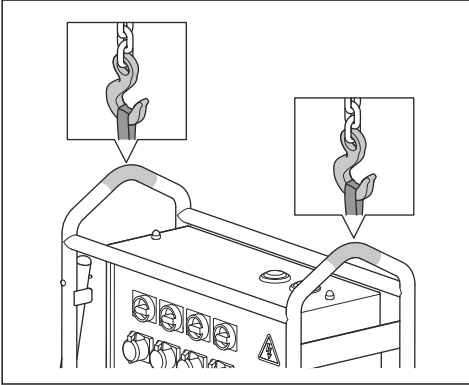


WARNING: Make sure that the lifting equipment has the correct specification to lift the product safely. The type plate on the product shows the product weight.



WARNING: Do not walk or stay below or near a lifted product.

- Attach the lifting equipment at the lifting point of the safety frame. A label on the product identifies the correct position.



WARNING: Do not use metal hooks, chains or other lifting equipment with rough edges that can cause damage to the lifting eye.

Storage

- Clean the product before storage.
- Keep the product in a dry and frost-free area.
- Keep the product in a locked area to prevent access for children or persons that are not approved.
- Store the product in temperature between -10 °C and 40 °C.

Disposal of the product

- Obey the local recycling requirements and applicable regulations.
- When the product no longer is used, send it to the dealer or discard it at a recycling location.

Technical data

Technical data

Technical data	
Weight, kg/lb	81/179
Height, mm/in.	380/15
Length, mm/in.	645/25.4
Width mm/in.	265/10.4
Input voltage, V	415
Phases	3
Input frequency, Hz	50
Input current, A	13
Output voltage	42
Output frequency, Hz	100–200
Output power, kVA	6.2
Output current, A	85
Maximum output current on each outlet, A	21
Wheels	Yes
Number of outlets	4
IP classification	IP44
Primary voltage tolerance	±10 %
Ambient temperature, °C/°F	-10–40/14–104
Maximum operating temperature, °C/°F	40/104

Noise emissions	
Sound pressure level, dB(A)	<70

Noise and vibration declaration statement

These declared values were obtained by laboratory type testing in accordance with the stated directive or standards and are suitable for comparison with the declared values of other products tested in accordance with the same directive or standards. These declared values are not suitable for use in risk assessments and values measured in individual work places may be higher. The actual exposure values and risk of

harm experienced by an individual user are unique and depend upon the way the user works, in what material the product is used, as well as upon the exposure time and the physical condition of the user, and the condition of the product.



www.husqvarnaconstruction.com

Original instructions



1144162-26



2024-10-29