





# CF 11M, CF 25M, CF 25T, CF 67T, CF 67TCI4P

EN Operator's manual

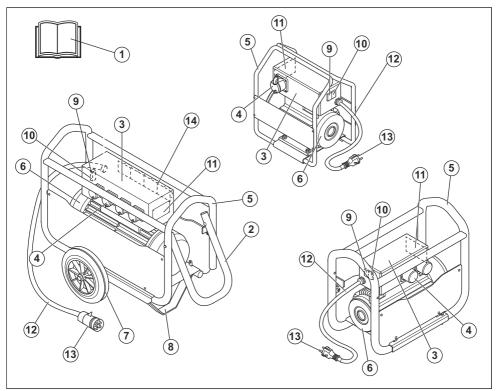
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## Introduction

#### **Product overview**



- 1. Operator's manual
- 2. Handle
- 3. Connection box
- 4. Power outlet
- 5. Protective frame
- 6. Generator
- 7. Wheel
- 8. Support
- 9. ON button, green

- 10. OFF button, red
- 11. Rating plate
- 12. Power cord
- 13. Power plug
- 14. Motor protection circuit breakers (MPCB). Model CF67TCl4P only.

#### **Product description**

The product is a frequency converter that is used as a power supply for the AX and Vibrastar electric concrete

vibrators. The product is used connected to a power outlet. The product operates as a transformer to make sure that the operation of the concrete vibrators is safe.

The green and red buttons on the product have an overload protection. The product stops automatically if the load is too high.

The model CF 67T has thermal winding protection to prevent overload in the electrical motor.

The power outlets on model CF67TCl4P can be adjusted between 10–18 A.

#### Intended use

The product is for professional operation only. The product, together with the AX and Vibrastar concrete vibrators, is used 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.



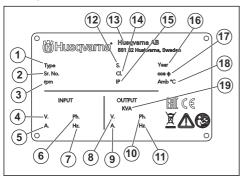
The product or package of the product is not domestic waste. Recycle it at an approved disposal location for electrical and electronic equipment.



This product is in compliance with applicable EC directives.

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

#### Rating plate



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

#### **Product liability**

As referred to in the product liability laws, we are not liable for damages that our product causes 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.
- · 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 defective.
- Do not do modifications to this product.
- Do not operate the product if it is possible that other persons have done 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.
- The product can cause objects to eject at high speed. 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 operate 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.

#### 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.
- Examine the muffler for damages and defects. Make sure that the muffler is correctly attached to the product.
- 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) protection if you operate the product in a moist environment. An RCD decreases the risk of electrical shock.

#### 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 closefitting 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 defective safety devices.
- Do a check of the safety devices regularly. If the safety devices are defective, speak to your Husqvarna service agent.

#### Motor protection circuit breakers (MPCB) (CF 67TCI4P)

The motor protection circuit breakers give protection against electrical faults.



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

#### 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 before you do the maintenance.
- Do not change the product. Modifications that are not approved by the manufacturer can cause serious injury or death.
- 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.
- Let an approved service agent do servicing on the product regularly.

### Operation

#### Introduction



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

#### 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 9* or on the rating plate of the product before you connect a concrete vibrator.

- 1. Push the red OFF button on the product.
- 2. Connect the product to a grounded power outlet.
- 3. Make sure that the concrete vibrator is off.
- 4. Put the power plug of the concrete vibrator into a power outlet on the product.
- 5. Push the green ON button on the product.



**CAUTION:** Do not start the product with a connected concrete vibrator in ON position.

6. Push the ON button on the connected concrete vibrator.

# Maximum number of connected concrete vibrators



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

Туре	CF11 M	CF25 M	CF25T	CF67T	CF67T CI4P
AX36	1	2	2	4	4
AX40	1	2	2	4	4
AX48	1	2	2	4	4
AX56	N/A	2	2	4	4
AX65	N/A	N/A	1	3	N/A
AX90	N/A	N/A	1	3	N/A
Vibra- star 40	1	2	2	4	4
Vibra- star 50	1	2	2	4	4
Vibra- star 60	1	2	2	4	4

#### To stop the product

- 1. Push the OFF button on the connected concrete vibrator.
- 2. Push the red OFF button.

#### Maintenance

#### Daily maintenance

- Clean the external surface.
- Tighten cable connections fully.
- Make sure that the ON/OFF buttons operate correctly.
- Make sure that the cold air openings are clean.
- Make sure that the cover for the cooling fan and other protective covers are correctly installed.
- Make sure that the electrical connections and the power cord are in good condition and not damaged.

• Make sure that screws and glands are sealed against water.

#### Maintenance after long-term storage

Let a service agent do a check of the insulation between the phases and between the phase and ground. Use a 500VCC mega-ohm meter or equivalent. The measured value must be more than 10 mega-ohms at temperatures lower than  $100^{\circ}C/212^{\circ}F$ .

### Troubleshooting

Problem	Cause	Solution
The product does not	The power plug is not connected.	Connect the power plug to a power outlet.
start.	The power switch releases when you push the green ON button.	Let an electrician do a check of the input volt- age. The input voltage must be between +10 to -5% nominal. The frequency must be $\pm 2\%$ .
	There is no power in the power outlet.	Replace or repair the power outlet.
	The power cord is defective.	Let a service agent replace the power cord.
	Some of the motor protection circuit breakers are released (CF67TCl4P only).	Make sure that the switches for all the motor protection circuit breakers are set to OFF.
The product stops af- ter a while.	There is overload in the product.	Make sure that the total nominal consump- tion of the connected concrete vibrators is lower than the nominal output from the prod- uct.
	The motor protection circuit breakers release (CF67TCI4P only).	Let an electrician do a check of the input voltage. The input voltage must be between +10 to $-5\%$ nominal. The frequency must be $\pm 2\%$ .
	The concrete vibrator is defective 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 bearings in the product are worn out.	Replace the bearings.
	The power outlets on the product or the pow- er plugs on the concrete vibrators are dam- aged.	Let a service agent replace the damaged parts.
	The product becomes too hot.	Let the product become cool for 30 minutes and start it again. Make sure that the cooling fan operates correctly. Remove concrete from the heatsinks on the casing.

Problem	Cause	Solution
The vibration speed in the concrete vibra- tor is too low.	There is overload in the product.	Make sure that the total nominal consump- tion of the connected concrete vibrators is lower than the nominal output from the prod- uct.
	The concrete vibrator is defective 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 -5% nominal. The frequency must be $\pm 2\%$ .
	The product is connected to the incorrect network frequency.	Use the correct product for the given fre- quency and voltage.
The product makes	The bearings are worn out or broken.	Replace the bearings.
much noise.	The input voltage or frequency is too high.	Let an electrician do a check of the input voltage. The input voltage must be between +10 to -5% nominal. The frequency must be $\pm 2\%$ .

# Storage and disposal

#### 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.

#### 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

	CF67T, CI4P, 400 V	CF67T, CI4P, 440 V	CF67T, CI4P, 380 V
Weight, kg/lb	70/154	70/154	70/154
Height, mm/in.	690/19.60	690/19.60	690/19.60
Length, mm/in.	775/18.11	775/18.11	775/18.11
Width, mm/in.	460/18.89	460/18.89	460/18.89
Input voltage, V	400	440	380
Phases	3	3	3
Input frequency, Hz	50	50	60
Input current, A	10.5	9.5	11
Output voltage	42	42	42
Output frequency, Hz	200	200	180
Output current, A	65	65	65
Output power, kVA	4.7	4.7	4.7
Wheels	Yes	Yes	Yes
Number of outlets	4	4	4
IP classification	IP55	IP55	IP55
Primary voltage tolerance	±10%	±10%	±10%
Ambient temperature, °C	-10 to +40	-10 to +40	-10 to +40

	CF25T, 400 V	CF25T, 440 V	CF25T, 380 V	CF25M
Weight, kg/lb	31/68	31/68	31/68	31/68
Height, mm/in.	430/16.92	430/16.92	430/16.92	430/16.92
Length, mm/in.	500/19.68	500/19.68	500/19.68	500/19.68
Width, mm/in.	255/10.03	255/10.03	255/10.03	255/10.03
Input voltage, V	400	440	380	230
Phases	3	3	3	1
Input frequency, Hz	50	50	60	50
Input current, A	4.6	4.2	4.9	9.5
Output voltage	42	42	42	42
Output frequency, Hz	200	200	180	200

	CF25T, 400 V	CF25T, 440 V	CF25T, 380 V	CF25M
Output current, A	25	25	25	25
Output power, kVA	1.8	1.8	1.8	1.8
Wheels	Yes (optional)	Yes (optional)	Yes (optional)	Yes (optional)
Number of outlets	2	2	2	2
Protection index	IP55	IP55	IP55	IP55
Primary voltage tolerance	±10%	±10%	±10%	±10%
Ambient temperature, °C	-10 to +40	-10 to +40	-10 to +40	-10 to +40

	CF11M
Weight, kg/lb	18/40
Height, mm/in.	390/15.35
Length, mm/in.	330/12.99
Width, mm/in.	175/6.88
Input voltage, V	230
Phases	1
Input frequency, Hz	50
Input current, A	7
Output voltage	42
Output frequency, Hz	200
Output current, A	11
Output power, kVA	0.8
Wheels	No
Number of outlets	1
Protection index	IP55
Primary voltage tolerance	±10%
Ambient temperature, °C	-10 to +40

Noise emissions	CF11M	CF25M	CF25T	CF67T	CF67T CI4P
Sound power level $L_W$ measured, dB(A) rel $1 \mu W^1$				96	96

<sup>&</sup>lt;sup>1</sup> Measured sound power level Lw according to EN ISO 3744 in accordance with directive 2000/14/EC. Uncertainty ±3 dB.

Noise emissions	CF11M	CF25M	CF25T	CF67T	CF67T CI4P
Sound pressure level $L_{\rm P}$ at the operators ear, $dB(A)^2$	76	80	80	85	85

# 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.

<sup>&</sup>lt;sup>2</sup> Sound pressure level Lp according to EN ISO 11201, EN 500-4. Uncertainty K<sub>pA</sub> 3.0 dB(A).

## EC Declaration of Conformity

#### EC Declaration of Conformity

We, **Husqvarna AB**, SE-561 82 Huskvarna, Sweden, tel: +46-36-146500, declare on our sole responsibility that the product:

Description	Concrete Vibrator Equipment
Brand	Husqvarna
Type/Model	CF 11M, CF 25M, CF 25T, CF 67T, CF 67TCl4P + AX 36, AX 40, AX 48, AX 56, AX 65, AX 90, Vibrastar 40, Vibrastar 50, Vibrastar 60
Identification	Serial numbers dating from 2019 and onwards

complies fully with the following EU directives and regulations:

Directive/Regulation	Description	
2006/42/EC	"relating to machinery"	
2014/30/EU	"relating to electromagnetic compatibility"	

and that the following harmonized standards and/or technical specifications are applied;

EN 60204-1:2006+A1:2009

EN 60034-1:2011

EN 61558-1:2005+A1:2009

EN 12649:2008+A1:2011

Partille, 2020-02-28

Mahille

Martin Huber R&D Director, Concrete Surfaces & Floors Husqvarna AB, Construction Division Responsibe for technical documentation

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Original instructions



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