

Manual

VFX-125-1

VFX-125-3



VFX-125-3



VFX-125-1

**READ THOROUGHLY BEFORE
USE
&
SAVE FOR SUBSEQUENT USE**

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1. INTRODUCTION

1.1 Preface

In general, the VFX-125-1 & VFX-125-3 slot cutting machines were designed for the cutting of recesses in cement finishing floors for heating, electricity cables and water pipes.

This manual was created by the users of the ADAMAS slot cutting machine VFX-125-1 (3). The manual contains information on the setting up, operation and maintenance of the VFX-125-1(3).

You can always ask the ADAMAS service department for additional information on the equipment described:

- telephone +31 174-511333
- telefax +31 174-511368

1.2 Applicability

This manual is applicable exclusively to slot cutting machine VFX-125-1 and VFX-125-3. The type indication is on the type plate.

1.3 Standards and declarations

This manual was drawn up in compliance with the requirements relating to the CE marking and the relevant technical requirements. Refer to the supplier's declaration on page 10.

2. GENERAL SAFETY

2.1 Introduction

The following safety measures relating to electrocution, injury and fire hazards must always be taken when using the equipment. Read the information and ensure that you pay close attention to the recommendations before using the equipment.

2.2 Basic rules

Prevent electrocution

All slot cutters are fitted with a plug socket.

For the VFX-125-1 (version 2.2KW 230V) the power cable must consist of a minimum of:

- 2+1 core 2.5qmm.

For the VFX-125-3 (version 3.5KW 400V) the power cable must consist of a minimum of:

- 3+1 core 1.5qmm.

Due to the area of application, both types of machine may only be used if the power supply system and the equipment are completely earthed and are connected to the mains with effective earth leakage protection (PRCD or earth leakage circuit breaker). The residual current in the earth leakage circuit breaker may not exceed 30 mA. Test the circuit breaker before use! If you have any doubts, ask a qualified electrician to check it.

Always stay alert

Always pay attention to the work, work sensibly and do not use the equipment if you cannot concentrate. Always ensure that you can switch the motor off quickly. Do not use equipment with inoperative on/off switches.

2.3 Personal protection

Wear suitable work clothing

Do not wear loose clothes or jewellery. They may become entangled in the moving parts. We recommend using rubber work gloves and shoes with profile soles when working with the slot cutting machine. Wear a hair net if you have long hair.

Use means of personal protection

Use gloves to protect against sharp parts and safety glasses to protect against flying debris and/or sparks. Use a dust mask when carrying out work that produces dust. We recommend wearing hearing protection for noise levels exceeding 80 dB(A), and this is compulsory for noise levels above 90 dB(A).

2.4 Equipment

Use the correct equipment and do not overload it

Only use equipment for its intended purpose.

Prevent accidental starting of the equipment

Pull the plug out of the socket (e.g. during maintenance or when changing parts). Check that the equipment is switched off before it is connected to the mains Voltage.

Maintain the tool with care

Keep the tool sharp and clean in order to work better and more safely. Follow the safety regulations. Keep the handles dry and free of oil and grease.

Check the equipment for damage

Check that moving parts function correctly: that they do not jam / that no parts are broken / that all parts are fitted correctly / that all other conditions that could affect the operation of the device are correct. Damaged parts must be replaced or repaired by a qualified professional.

Use of accessories and auxiliary devices

Only use accessories and auxiliary devices that are specified in the manual or the catalogue. Using accessories or auxiliary devices other than those specified can cause risk of injury.

Extension cable / cable

Only use an undamaged extension cable that is suitable for outdoor use and with a more than sufficient core diameter (see 2.2). Unroll reels completely to prevent overheating. Do not carry the machine by the cable and do not use the cable to pull the plug out of the socket. Protect the cable against heat, oil and sharp edges.

Repairing electrical tools

Electrical tools must comply with the relevant safety provisions. Repairs may therefore only be executed by a qualified expert electrician. Otherwise there is a risk of danger for the user.

2.5 Environment**Keep the workplace tidy**

A chaotic workplace can cause accidents. Do not allow unqualified persons (children) and animals to touch the equipment or enter the working area. After use, store the equipment safely in a dry and thoroughly secured room, out of reach of children.

Take account of the effect of the environment




Ensure that the workplace is well lit. Pay attention to the location of cables, pipes and reinforcing steel in the workplace. Do not use electrical tools in a damp environment (rain) or close to flammable materials.

Ensure that the workplace is safe

Before starting the equipment, check that all keys and other auxiliary tools are removed. Ensure that the protective covers are fitted and stay away from dangerous moving parts as much as possible. Avoid abnormal physical postures and ensure that you are stable and balanced.

2.6 Explanation of the symbols used.

In addition to the General Safety chapter in the manual, the following symbols are used to warn the user.

	IGNORING THIS INVOLVES A RISK OF PHYSICAL INJURY.
	IGNORING THE INSTRUCTIONS CAN DAMAGE THE MACHINE.
	FOLLOWING THIS RECOMMENDATION CAN RESULT IN MORE EFFICIENT USE.

3. DESCRIPTION OF THE EQUIPMENT

The ADAMAS VFX-125-1(3) is a slot cutting machine intended for cutting with a diamond milling cutter with a maximum diameter of 125 mm. The standard machines have a 2.2 kW/230 V 1-phase electric motor (VFX-125-1) or a 3.5 kW/400 V 3-phase electric motor (VFX-125-3). Progress takes place by pushing the machine forward with the steering arm.

3.1 Function

3.1.1 Motor

The ADAMAS slot cutting machine is fitted with:

VFX-125-1	2.2 kW/230 V 1 phase electric motor
VFX-125-3	3.5 kW/400 V 3 phase electric motor

3.1.2 Cutter

The cutter (shaft diameter 22 mm.) is fastened to the cutter shaft against the shaft collar with a M24 nut. It is possible to use a shim to create the desired width of the cutter. This shaft is then driven by the electric motor with the aid of a geared-belt transmission that is fitted with a safety cover. An exhaust hood fitted with brushes is fitted as standard.

3.1.3 Progress

The machine is easy to move because four castors and 1 runner are fitted under the frame. None of these wheels are fitted with brakes. This means that the machine can start to move independently if it is on a slope. The machine is pushed forward during cutting. This must be done using the steering arm.

3.1.4 Depth adjustment

The depth of the cutting disc can be adjusted by moving the handle on the side of the steering arm. You must stand behind the machine to do this. Pull the handle gently towards you with your left hand, then pull the pin (black button) out of the lock with your right hand. You can set the desired height by pulling the handle towards you (lower) or pushing it away from you (higher/free). Ensure that the pin is then re-inserted in the lock completely and in the correct manner.

3.1.5 Sights

The machine is fitted with sights (front of red exhaust hood). This enables you to follow the sawing line marked on the floor.

3.1.6 Emergency stop

The emergency stop is located on the thermal safety feature (red button, top of steering arm).

3.1.7 Start/stop switch + zero Voltage safety feature

The machine is fitted as standard with a start/stop switch and a zero Voltage safety feature. This is used to start the electric motor.

- Check that the motor has the correct direction of rotation (see arrow on motor cover and protective cover for the correct direction of rotation). If necessary, reverse 2 phases in the plug to the left of the steering arm that is fitted with a built-in phase changer. **(only for type VFX-125-3)**
- Start the cutter by pressing the start switch (green) on the thermal safety feature.

3.1.8 Thermal safety feature

The machine is fitted with a thermal safety feature to protect against overloads. The thermal safety feature switches off automatically after approximately 25 seconds. The machine can then be started again.

3.1.9 Dust extraction

Connect an extraction installation with sufficient power to extract any dust produced to the protective cover (red).

4. USING THE EQUIPMENT

This chapter provides a step-by-step description of how the equipment must be set up.



PULL THE PLUG OUT OF THE SOCKET BEFORE EXECUTING MAINTENANCE OR CHECKS.

4.1.1 *Disassembling the cutter*

- Disassemble the extraction fan (star button 2x). The cutter shaft must be in the lowest position to do this (pull the handle towards you).
- Loosen the nut with a 24 open-end spanner in the direction of rotation of the cutter. The cutter shaft can be resisted by placing the 24 open—end spanner against the recess of the cutter shaft.

4.1.2 *Fitting the cutter*

- Place a cutter with a bore diameter of \varnothing 22 mm on the cutter shaft, with the arrow on the cutter corresponding with that on the impeller cover of the motor.
- Place the open-end spanner on the flattened part of the cutter shaft.
- Grease the nut lightly, place it on the cutter shaft and tighten it with open-end spanner 24 against the direction of rotation of the cutter (use a shim to change the width of the cutter if desired).
- Place the extractor hood over the cutter and tighten with star button (2x).

4.1.3 *Replacing the geared belt*

- Disassemble the cutter, see 4.1.1.
- Disassemble the safety cover using 6x hexagonal bolt M6. (open-end/socket spanner 10).
- Loosen the hexagonal bolts M8 (4x, spanner 13), which are located behind the large geared belt disc, one turn.
- Now reduce the tension on the geared belt by first loosening the internal wrenching bolts (2x, Allen key 5) of the spindle on the stretching slide rails.
- Now turn the spindle to the left with spanner 19. This causes the motor to drop and allows you to remove the belt.
- Place the new geared belt between the edge discs of the small geared belt pulley and then around the large geared belt pulley.
- Carefully bring the geared belt to the correct tension by turning the spindle to the right and then securing it with the internal wrenching bolts.
- Put the safety cover back on (with 6x hexagonal bolt M6)
- Fit the cutter, see 4.1.2.



YOU MAY NEVER USE THE CUTTER WITHOUT FITTING THE PROTECTIVE COVER AND EXTRACTOR HOOD!

4.2 Starting the slot cutting machine

When the machine has been set up, the following actions must be taken when you wish to start the machine.

- Secure the workplace
- Check for hazards!

Electric motor

Connect the motor to the mains Voltage (with correctly functioning earth leakage switch). The mains Voltage must correspond with the information on the type plate of the machine.



CONNECTING THE MACHINE TO THE MAINS WITHOUT EARTHING AND AN EARTH LEAKAGE SWITCH CAN CAUSE FATAL ACCIDENTS

- Check that the motor has the correct direction of rotation (see arrow on the motor cover and protective cover for the direction of rotation). If necessary, reverse 2 phases in the plug that is located to the left of the steering arm and that is fitted with a built-in phase changer (**only for type VFX-125-3**)
- Start the cutter by pressing the start switch (green) on the thermal safety feature.

Attention!

The slot cutter may only be started when the operator is sure that there are no persons in the vicinity, or that they cannot be harmed in any way.

4.3 Stopping the slot cutting machine

- When the work has ended, press the (red) button on the thermal safety feature pull the plug out of the socket.

5. MAINTENANCE

In general, it can be stated that regular maintenance (inspection/cleaning/lubrication) has a positive effect on the safety and life span of the equipment.

The various points of maintenance and inspection are shown in Table 5-1. It is also indicated how frequently this must take place, assuming operation under normal conditions. Please specify the type and article number when parts.



Table 5-1

Maintenance/Inspection	Frequency
Clean the machine (when using a high-pressure cleaner, prevent spraying onto electrical parts and bearings)	daily
Check equipment for damage	
Clean the motor cooling fan	
Lubricate bearings of cutter shaft 4x	weekly
Hinge points (2x) depth adjustment	
Check geared belt tension	
Rotating ring+blocking device of the castors 4x	monthly

- When lubricating, remove excess grease immediately and thoroughly. Dispose of these substances in accordance with your internal company regulations.

Comments:

- A qualified electrician must check the machine for electrical safety every year.

MACHINE	COMMENT	PULLEY MOTOR SHAFT	PULLEY SAW SHAFT	TAPERLOCK	Geared belt
VFX-125-1(3)	ELECTRO	112-5M-15 (1610-28)	34-5M-15 (1008-20)	1610-28 1008-20	800-5M-15

6. GUARANTEE

6.1 Period

A guarantee period of 12 months commencing at the time of delivery applies for the VFX-125-1 and VFX-125-3. Guarantee claims must be indicated by submitting the purchase invoice.

6.2 Contents

The guarantee covers the repair of any faults that can be traced to material or manufacturing errors. The following are not covered by the guarantee:

- Faults or damage that occurs due to incorrect use or connection.
- Overloading the machine.
- When poor or incorrect maintenance is carried out.
- The information in the manual has not been followed correctly.
- The machine is used by unauthorised persons.
- If the machine is used for purposes for which it is unsuitable.
- The machine is repaired using non-original parts.
- If the machine coding is damaged or deleted.
- If faults are caused by fire and/or transport damage.

6.3 Provisions

In these cases, we request that you return the device. Consequent transportation and travelling costs are at your expense. Please accompany the shipment with a specification of the complaints. Ensure that the device is correctly packaged in order to prevent damage.

7. FAULTS

Table 7-1 lists the most general faults and their causes. There is also an explanation of how the faults can be resolved (also refer to the original manual of the motor).

Table 7-1

Fault	Cause	Solution
Cutter does not turn	Thermal safety feature is activated. One of the phases of the electric motor is not under Voltage (no phase on the zero!) Geared belt is broken.	Start the motor again after approximately 25 seconds and reduce the load. Check whether wires have become disconnected in the plug on the (extension) cable. Replace the geared belt.
Poor cutter performance	Worn cutter Play on the cutter shaft (bearings)	Replace the cutter Replace the bearings.

8. TECHNICAL SPECIFICATIONS

Slot cutting machine type:		VFX-125-1	VFX-125-3	
Cutter diameter	diameter		125	mm
	depth (maximum)		30	mm
	Bore diameter		22	mm
	RPM		9040	rev/min
Electrical motor	power	2.2	3.5	kW
	mains Voltage	230	400	V
	max. amperage	14	6,9	A
	standard RPM	2850	2850	rev/min
	protection level	IP55	IP55	
Dimensions	length	69	69	cm
	width	42	47	cm
	height	95	95	cm
Weight	frame (incl. motor)	64	80	kg
Noise level	constant	> 90	> 90	dB(A)

Noise level

The noise level depends on various factors, including the material to be sawn, the environment, the cutter diameter, cutter type, RPM, start and duration. The noise level at the workplace exceeds 90 dB(A).



WEAR HEARING PROTECTION

9. PARTS LIST



Separate parts can be ordered with the use of the parts list.

9.1 Ordering

To process orders, we require the following information from you:

- Always provide the type and article number when placing orders.

10. SUPPLIER'S DECLARATION

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	Declaration of conformity
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