GUNNAR RAPIDO

User Manual

By GUNNAR Weissenberger AG



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General information

Introduction

The information contained in this Document corresponds to the latest developments at the time of publication. Printing errors and mistakes cannot be excluded.

We reserve the right to make design modifications or to depart from the designs shown.

Safety advice

Please read the following safety advice before installing, operating, servicing or repairing the machine.

- The installation, servicing and repair of the machine should be carried out solely by a GUNNAR trained service engineer.
- Care should be taken to observe the technical data for the machine, and in particular the ambient conditions.
- The machine should be operated by trained personnel. Your GUNNAR distributor will provide training .
- Any unauthorized modification or opening of the controller will automatically render the product guarantee and the safety guarantee invalid.
- Contact your GUNNAR representative prior to installing accessories.
- For Security the machine can be served exclusively by one person.

Intended purpose

The RAPIDO has been designed exclusively for cutting cardboard for mounts.

Liability

Weissenberger AG will not assume any product liability in the event of incorrect handling or use of the Software, the machine or machine components. Weissenberger AG is additionally not responsible for any loss of data. We recommend that data be backed up on a regular basis.

Data protection

Weissenberger AG holds all the rights. Neither the machine data nor any of the Software may be made available to third parties.

Overview

Overall view of the RAPIDO, Fig.01



- 3. Z head
- 4. Table top
- 5. Clamps
- 6. Front cover

- Guide slot
- 9. Panel
- Horizontal stand 10.
- Protection 11.

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Panel, Fig.02



4.

5.

6.

Master switch

Machine-on indicator lamp

Emergency stop switch

- 1. Hose connection
- 2. Water trap
- 3. Pressure reduction for blade head
 - Diade near

Z Head, Fig.03



Article

- 1. Top casing
- 2. encoder

number

100026

RE30-2-100

3.	Compressed air cylinder	17701258
4.	Z motor	441.92901
5.	Screws for affixing Z head, 4x	DIN912 M5x55
6.	Screws for affixing top casing	BN11252 M5x10
7.	Screws for lateral fixing of Z head	DIN 912 M4x12 zn
8.	Axle for lateral fixing of Z head	100015
9.	Z base	100002
10.	Blade head	100024

11. Throttle for blade insertion

Blade head, Fig.04



3.	Pressure spring	WS9711.1203
4.	Locking screw	DIN 912 M5x18
5.	Depth adjustment screw	DIN913 M5x14

- 5. Depth adjustment screw
- 6. Sliding part

number

100058

100086

100054

Controller, Fig.05



	Label	description
1.	X	Motor
2.	Y	Motor
3.	Z	Motor
4.	IN/OUT	Valves
5.		Nameplate
6.	RESET	Push to reset controller
7.	INCR	X, Y and Z Digitizer (encoder)
8.	COM	Communication (RS232)
9.	TEST	Self-test
10.	FUSE6,3A	Main Fuse 230V 6.3A T
11.	115 / 230	Power supply selection switch
12.		Socket for current
13.		Control LED

Technical Data

Space requirements

RAPIDO M

The RAPIDO is operated from the front. The preferred cutting table configuration is in the horizontal position as follows.



The best alternative cutting table configuration in the vertical position is as follows.



RAPIDO XL



Electrical connection

The RAPIDO requires a flawless electrical installation with an earth connection (GND) at 115 or 230 volts before it can be connected.

 Main connection
 115 V, +13% -13%

 230 V, +13% -13%

NB: The power level must not fall short at any circumstances (not even for short terms).

Power supply voltage (Capture ,,Connecting up the RAPIDO" page 12) 230V

115V

Power consumption

max. 1000 VA

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Frequency

Relative humidity

PC connection / settings



The RAPIDO should be connected to COM2 if possible, using the RS232 cable supplied and, if necessary, the RS232 9 pole > 25 pole adapter (also supplied).

The PC must have at least one free COM interface with a FIFO UART 16550 module.

Operating system: Windows 95TM or Windows 98TM.

RAM Windows 95 TM	at least 8Mb and preferably 16Mb
RAM Windows 98 TM	at least 16Mb and preferably 24 MB
Screen resolution	min. 800 x 600 pixels

Pneumatic connection

Minimum line pressure	6 bar / 90psi
Maximum compressed air consumption	201/min

Environment

Ambient temperature10 - 35 °C / 50 - 95 °F

30 - 70 %

The Machine must be free of water contact. Furthermore, no explosive dust-air or gas-air mixture is allowed to reach the machine.

Cutting data

Max. cutting speed	300 mm (11.8 inches) / second
Max. cuttable cardboard thickness	3 mm (0.118 inches)
Min. cutting radius	1.5 cm (0.59 inches)

Installation

Installation of Horizontal stand

Assembly instructions are enclosed with the horizontal stand.

The horizontal stand is a robust tubular frame with a special collection unit for your cardboard waste. See (Fig. 01 No.10).

The RAPIDO horizontal stand may be obtained from your GUNNAR dealer.

Installation of vertical stand



Assembly instructions are enclosed with the vertical stand.

NB: The leveling feet must be removed before the RAPIDO is placed in the vertical stand. Do not put the RAPIDO on the short legs after removing the leveling feet.

The vertical stand is a robust structure which permits vertical installation of the RAPIDO (tilted by some 15°) to save space.

The vertical stand may be obtained from your GUNNAR dealer.

Installation of PC table

Assembly instructions are enclosed with the PC table.

The PC table is a sturdy, practical trolley with two locking castors. It provides enough space for a PC, monitor, keyboard, mouse and, if required, a printer.

The PC table may be obtained from your GUNNAR dealer.

Supplied with Machine

Article	Number
These instructions for use	
RAPIDO cutting table	
100 blades, 0.45mm thick	20012
5 blade holders	100086
1 hexagon socket screw key 1.3mm for blade holder	DIN911 1.3

1 hexagon socket screw key 4mm for changing the blade head	DIN911 4mm
1 clamping hose, short (spare)	100095
1 clamping hose, long (spare)	100096
1 main cable	12.03.6510
1 RS232 data cable	11.01.6218
1 RS232 9 pole > 25 pole adapter	GJ-001A
1 diskette with the machine settings (SPT32.INI)	
1 pack of program diskettes	

Accessories

The following accessories are available at extra cost.

Article	Number	
Horizontal stand	100013	
Vertical stand	100128	
PC table	845940	
Blade thick	A-20011	
Blade thin	A-20012	
Further information is available from your GUNNAR dealer or from the Internet,		

Further information is available from your GUNNAR dealer or from the Internet, under www.gunnar-europe.com.

Unpacking

- 1. Prepare the RAPIDO horizontal stand, the RAPIDO vertical stand or your own unit to mount the RAPIDO. If you use a unit of your own, this must be sufficiently stable and the RAPIDO mounted in such a way that it cannot slip. Your GUNNAR dealer will be pleased to give you further details.
- 2. Open the machine packaging and remove the box with accessories.
- 3. Check that the delivery is complete.
- 4. Lift the RAPIDO out of the box directly to the mounting device..
- 5. The original packaging should be kept for the duration of the guarantee period.

Installation of the RAPIDO

Horizontal Installation

- 1. Assemble the horizontal stand or the unit you have provided.
- 2. Unpack and insert the cutting table as described (in the instructions for the horizontal stand) or place it on and fasten it to the unit you have provided.

3. Allow for 2 inches of clearance around machine while operating the RAPIDO. The cutting table must be positioned in such a way that the Y arm does not brush against the back.

Vertical Installation

- 1. Assemble the vertical stand.
- 2. Unpack and insert the cutting table as described (in the instructions for the vertical stand).
- 3. Allow for 2 inches of clearance around machine while operating the RAPIDO.
- 4. Remove the head cover and mount it the other way around so the blue part is looking to the top (back).

Connecting up the RAPIDO

1. Connect the compressed air to the Ø8 mm connection sleeve (see Fig.02, No.01). The consumption and the necessary pressure are specified in the technical data.

NB: Before working on the controller, the main cable must first be unplugged in order to avoid electric shocks.

2. Check the main voltage. If the main voltage (Fig.05 No.11) is not already set to the standard voltage for your country, then you must change this now. First unscrew the cover plate (with "115" on the top and "230" on the bottom) and then move the switch. Following this; screw on the cover plate, the other way round.



NB: If the input voltage is incorrectly set, this can destroy the controller. Such damage is not covered by the guarantee.

- 3. Connect up the main voltage (Fig.05 No.12). using the main cable, article No. 12.03.6510, which is supplied (the plug required for your country must be affixed by a suitably qualified person).
- 4. Connect up the RS232 data cable, article No. 11.01.6218. Connect up the "COM" socket (Fig.05 No.08) on the **controller** to the COM interface on the PC (preferably COM2).

First Installation of the SPT32 Software

- 1. Open Win95 or Win98
- 2. Insert SPT32 installation diskette 1, which is supplied with the Machine.
- 3. Press the **Start** button
- 4. **Run**
- 5. Type in a:\setup
- 6. Enter
- 7. Follow the instructions in the setup program
- 8. The setup program will ask for the **"Machine adjustment"** Please insert this disk in to the floppy drive a:.

9. Please configure Windows "Chapter, PC connection / settings"

SPT32 Software Update

- 1. Open Win95 or Win98
- 2. Insert SPT32 installation diskette 1, which is supplied with the machine. The machine settings will not be overwritten.
- 3. Press the Start button
- 4. **Run**
- 5. Type in a:\setup
- 6. Enter
- 7. Follow the instructions in the Setup program
- 8. During the Installation, Setup will ask you for the "Machine adjustment" Disk. Do not fit the Disk in drive A:, just hit OK. (If you do insert a disk you will overwrite the actual machine setting)
- 9. The SPT32 readme.txt file in the "SPT32" directory contains special instructions. This informative text file must be read once the installation is complete.

Backup

Please to a periodical backup of you System to prevent from lost Data. Please consult the Win95/98 Manual the information on backing up data.



Operating the RAPIDO

Starting the SPT32 Software

Follow the following steps to start the SPT32 Software.

- 1. Start the PC.
- 2. After starting Windows 95 or Windows 98.
- 3. Click the **Start** button.
- 4. Then open Programs
- 5. Place the cursor over SPT32
- 6. Click SPT32 Professional mode
- 7. After the message "switch on controller now" start the RAPIDO by switching the master switch (Fig.02 No.04) from "0" to "I" and pulling out the emergency stop switch (Fig.02 No.06).

Operating instructions and register information for the SPT32 Software may be found in the SPT32 Help program. This can be started from inside SPT32 by pressing the "F1" key, or "?" for direct help. Without SPT32, the help program can be started from within the SPT32 program group.

Switching off the system

To switch off the system, proceed as follows.

- 1. To instantly exit SPT32 press the "Alt" + "F4" keys or via the menu, with End. "SPT32 Help, Chapter Switching off".
- Switch off the RAPIDO at the master switch (Fig.02 No.04) by placing it on (0).
- 3. Now close down WIN95 or WIN98.
- 4. Switch off the PC. Newer PCs may switch off automatically or be left on.
- 5. If the RAPIDO is not to be used for a considerable period of time, then the compressed air should similarly be switched off and machine covered.



NB: If the steps are not carried out in the order given, newer PCs might perform an automatic restart.

Insert cardboard

To cut cardboard, it is necessary to place a sheet of backing material underneath it. The most appropriate material to use is the same material that is being cut (leftovers and trim). If a poorer quality material is used, such as grey board or wood pulp board, this will shorten the service life of the cutting blade and impair the cutting quality.

The maximum cardboard thickness that can be cut is 3 mm (0.118 inches).

The maximum thickness that can be inserted is 4.5 mm. This means that, taken together, the backing cardboard and the cardboard being cut must not be more than 4.5 mm thick.

Hence, if cardboard 3 mm thick is to be cut, the backing cardboard may not be more than 1.5 mm thick.

The cardboard must touch the left-hand (X) and bottom (Y) side in order to be held properly in place. This will ensure that the dimensions are accurate.

The cardboard is automatically clamped in place when the cutting starts.

Changing blade

When SPT32 is running, press the "Ctrl" + "F5" keys to have the blade head moved into the "change blade head" position, making the clamping screw accessible. Turn the clamping screw anti-clockwise to release the blade. The blade can now be pulled out with the blade holder (Fig.04 No.02).



Press on the **tongue** (Fig.08 No.01) on the blade holder to pull the blade out of the blade holder and insert a new one.

Machine settings

Reading in the basic settings

The Software settings are supplied with the RAPIDO on a diskette labeled "Configuration". Instructions for reading in the data may be found in 🖫 "Chapter, Installation of SPT32 Software".

Basic settings

Instructions for implementing the basic settings are given in the Help program. See \square "Chapter, Start SPT32 Software".

Compressed air setting

The compressed air setting for the blade head can be adjusted via the pressure reduction (Fig.02 No.03). The basic setting is 4 bars. If excessively pronounced pressure marks are left on the cardboard during cutting, it is possible to reduce the blade head pressure to approximately 3 bars. If the blade does not fully cut through thick, hard cardboard at the start of a cut, the pressure can be increased to a maximum of 5 bars.

Blade depth setting

The blade depth must be set so that the **backing material is cut into** by **0.3 up to 0.5 mm**. To adjust the blade depth follow these instructions.

- 1. Make sure that the initial blade depth is not set too deep (turn set screw on holder in for a more shallow cut) for the first cut. This will avoid damaging the table top.
- 2. Now cut a rectangle.
- 3. Check the depth of cut in the backing material.
- 4. If the cut is too deep, use the 1.3 mm hexagon socket screw key supplied in your installation kit to adjust the blade holder. Turn the screw on holder in (clockwise) for a more shallow cut. If the cut is not deep enough, then unscrew the screw (anti-clockwise). One turn is a app. 0.4 mm (0.015 Inch) dept.
- 5. Repeat steps 2 to 4 until the cut is some 0.3 to 0.5mm deep.
- 6. It is customary to set up different blade holder for various cardboard thicknesses you may be cutting.

Throttle setting

In the case of circles and other shapes, where the blade cannot be inserted in a corner but only in a curve, use is made of the throttle. This ensures that the blade is inserted more slowly and does not leave any insertion marks on the mount.

Further information on this setting may be found in \square "SPT32 Help, Chapter Throttle".

Servicing

Cleaning



NB: All cleaning and maintenance work must be conducted with the machine switched off and the main plug pulled out. Just dry cleaning is allowed on the Machine.

General cleaning

Cleaning the RAPIDO is an essential part of servicing. The cleaner it is kept, the longer its service life will be. The RAPIDO should always be kept dust-free and free from bits of cardboard and fibres. This is best done by sucking up the dust. Dust should only be **blown out** when cleaning the **guides**. Please read the following chapter.

Cleaning the guide profiles

For everyday cleaning of the RAPIDO, the dust and remains of cardboard should be blown out of the guide rails through the slot (Fig.01 No.08). Always blow away from the trolley (arm or Z head), otherwise the dirt will be blown into the rollers where it can cause damage.

If the guides are very soiled, remove the covers (Fig.01 Nos.02+06) and



additionally clean the guides and rollers with a dry cloth.

NB: The guides on the RAPIDO must not be lubricated.

Table top

The table top can additionally be cleaned with a glass-cleaning agent or detergent.

Do not use solvents.

Water trap

The pneumatic water trap (Fig.02 No.02) must be emptied at regular intervals.

If there is any liquid in the transparent container, pull on the plastic nozzle (at the bottom of the container). Make sure that the compressed air system is under pressure.



NB: Not emptying the water trap can lead to corrosion in the pneumatic system and could potentially cause damage.

Replacing parts

NB: All cleaning and maintenance work must be conducted with the machine switched off and the main plug pulled out.

Clamping hose



- 1. Remove the compressed air source so that the pneumatic system is no longer under pressure.
- 2. Undo the hose locking screws (Fig.09 No.02).
- 3. Pull the **pressure application hose** (Fig.09 No.03) in the X and Y direction and out of the **clamping profile** (Fig.09 No.01).
- 4. Remove the black compressed air hose by pulling it hard.
- 5. Feed in the new pressure application hose by its rear end until it is flush and fix it with the screw (Fig.09 No.02).
- 6. Stretch the hose so that you can guide it down into the opening on the holder with your finger.
- 7. Now guide the connection piece into the holder as well until only the metal part is visible and tighten the screw (Fig.09 No.02).
- 8. Put the compressed air hose over the metal connector piece again.
- 9. Check that the hose is positioned correctly in the holder and secure.

Blade head

- 1. Shut the Machine off.
- 2. Turn the blade head and Undo the locking screw with the 4 mm hexagon socket screw key (Fig.04. No.04).
- 3. Pull the blade head down and insert the new one.
- 4. Tighten the locking screw again.

NB: Replacing the blade head can alter the boarder and opening dimensions on the mount. Check these dimensions and adjust them if necessary.

Sliding part





If the sliding part attains its **minimum thickness** of **2.5 mm** at the base, then it must be replaced as follows.

- 1. Remove the blade head as described in "Chapter, Blade head".
- 2. Undo the screw located in the sliding part (Fig.04. No.06).
- 3. Remove the sliding part and screw on the new one.
- 4. Attach the blade head again.

NB: Replacing the sliding part can alter the boarder and opening dimensions on the mount. Check these dimensions and adjust them if necessary.

Pressure spring

The pressure spring (Fig.04. No.03) is a part subject to wear. If it breaks, then it must be replaced. The procedure for replacing it is as follows.

- 1. Remove the blade head as in "Chapter, Blade head"
- 2. Pull out the broken spring and insert a new one. Take care to ensure that the spring is located in the recess provided for it.
- 3. Place the blade head again.



Fuse

NB: All cleaning and maintenance work must be conducted with the machine switched off and the main plug pulled out.

The **controller** is equipped with a **slow-blowing 6.3 A fuse**. If a defect is suspected, release the closure (Fig.05. No.10) with a screwdriver and pull it out. Replace the fuse and do up the closure again.

NB: If the fuse blows directly after the machine has been switched on again or blows frequently, kindly contact your GUNNAR dealer.

Repairs

Most repairs can be performed by the customer, simply by replacing parts.

If a service or a major repair is necessary, then this must be performed by a specialist. Contact your authorised GUNNAR dealer.



Guarantee

Guarantee provisions

The guarantee on the GUNNAR RAPIDO runs for one year as of the date of delivery or for a maximum of 50,000 mount cuts (holes). We provide a guarantee of six months on electronic components. The guarantee covers defects due to material faults or production errors.

Damage due to negligent and incorrect handling is not covered by the guarantee.

Normal wear is similarly excluded from the guarantee (assessment by us). Kindly observe our general terms and conditions in this respect. Within the guarantee period, repairs will be carried out at our expense, following prior agreement with us.

Glossary of terms

Leveling feet

Feet for adjusting the height and leveling out the RAPIDO. The bottom section can be screwed in or out. The leveling foot is mounted in the table leg (Fig.01 No.07).

Bit

Abbreviation for a binary unit. A bit is the basic unit employed for digital information. It is written as "1" or "0".

СОМ

A COM interface (also known as a serial interface) enables a PC to communicate with other equipment. Most PCs have a COM1 and a COM2 interface. One of them may be needed for operating the mouse. A USB (universal serial bus) may not be used.

FIFO UART 16550 module

A FIFO module (first in first out) is the basic electronic component in a COM interface.

Internet

Internet is a worldwide network of computers. We are also to be found in the Internet, under "**www.gunnar-europe.com**". For further information kindly contact your PC dealer.

Light-emitting diode

A light-emitting diode is a small lamp that lights up red or green on the RAPIDO.

Reset

The reset key is located on the **controller**. This is used to restart the control system if it has hung itself up, or to start the self-test.

SPT32

Step Partout **32** bit cutting Software. SPT32 takes in the entire system, such as Professional, Easy and Clipboard mode.

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Registry Form

GUNNAR - RAPIDO

Machine No.:		
Controller No.:		
Company name:		
Contact person:		
Street:		
City:		
Zip Code:		
Country:		
Fax-no:		
Email Address:		
Key number:		
	(You will get this number during the first start of SPT32)	

Please Mail or Fax this form to:

Weissenberger AG GUNNAR Staatsstrasse 119 CH-9445 Rebstein SWITZERLAND

Fax:

+41 71 775 82 29