Preface

The machine **HEGNER-Unimax**
is suitable for both professional and private use.

The machine has been designed exclusively for sawing parts made of wood, plastics, non-ferrous metals using fretsaw blades with an overall length of 70 mm.

These Operating Instructions have been drawn up to provide you with the necessary knowledge relating to installation, commencing operation and working with the machine.

You will also find in these Instructions important notes for your safety when working with the machine.

Please read through the Operating Instructions carefully and pay particular attention to the notes and warnings.

The machine manufacturer's warranty is rendered null and void if the machine is not handled properly or if the warning notes and descriptions given in the Operating Instructions are not observed.

Should you have any questions in this respect after reading through these operating instructions, please contact your dealer.

Hegner Präzisionsmaschinen GmbH

Symbols and their meaning :

Texts marked with this symbol contain very important information including the **avoidance of health hazards.**
Please pay special attention to these texts.

Wear safety goggles.

⇒ This symbol refers to a section, page or illustration.

Contents:

1.0 Delivery of the machine

After receiving the machine check:

- the packaging for damage (if there is any damage notify the supplier immediately);

- that everything has been received (see delivery note);

- that all small parts have been unpacked.

2.0 Intended use

- The machine has been designed solely for cutting parts made of wood, plastics, non ferrous metals using fretsaw blades with a length of 70 mm.
- Workpieces must be securely mounted and guided before being cut.

- If the machine is used in any other way it is not in compliance with the intended use.
- The machine may be used, set-up and maintained only by persons who are fully familiar with it and who have been instructed about the hazards involved.

- The relevant accident prevention regulations as well as all other generally recognised rules concerning safety and working health must be observed.

3.0 Safety

3.1 General safety information

Keep other people away from the machine. Children must not be allowed to work on the machine unless properly supervised.

– Do not touch any moving parts with your fingers.

3.2 Commencing operation

– Check that the voltage given on the motor plate corresponds to the voltage of the power supply.
– Connect dust extractor

⟹ **Section 12**

3.3 The user

– In order to avoid the risk of accident when using this machine, read through the Operating Instructions carefully.
– Never work when under the influence of drugs, alcohol or medication.
– Wear close-fitting clothes and safety goggles.

3.4 Before starting work

– Check that the machine is switched off.

⟹ **Section 10**

– Check that the fitted saw blade is suitable for the work.
– Check that all protective fixtures are in position.

3.5 During work

- Remove residual material and chips only when the machine is switched off.
- In the event of power failure, put the on/off switch in position **0**.

3.6 After work

- Switch off the machine and remove the mains plug from the power supply.

4.0 Remaining risks

Even when the machine is used properly and all relevant safety regulations are observed, the following risks still remain.

- Touching the fretsaw blade

- Breakage of the fretsaw blade

- Touching live parts due to
  - damaged terminal box
  - damaged capacitor
  - damaged power cable

- Breathing in health-hazardous dusts.

5.0 Technical data	**with upper guide**	**without upper guide**
Max. cutting height in soft wood	12 mm	6 mm
Max. cutting height in hard wood	8 mm	5 mm
Max. cutting height in soft metals	2 mm	2 mm
Max. cutting height in plastics	6 mm	3 mm
Saw blade stroke	7 mm	
Length of fretsaw blades	70 mm	
Table size	280 x 435 mm (width x length)	
Gooseneck	340 mm	unlimited
Motor	110V / 60Hz	1700 rpm 100 W
Dust extractor port	35 mm dia.	

6.0 Unpacking the machine

Hold machine by the table top and cautiously lift it out of the packaging.
(**Do not hold the machine by the yellow arm.**)

Place the machine on a firm foundation and fasten it with 3 bolts. If the machine is not to be bolted down, you can affix to the under side the 3 adhesive rubber pads supplied.

7.0 Fretsaw blades

Fretsaw blades with an overall length of 70 mm are used. (**Fig. 1**) Grades : No.3, No.5, No.7 and No.9 .
(**Use HEGNER fretsaw blades**!)

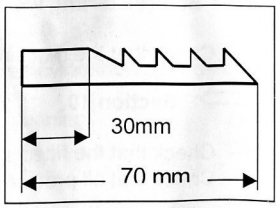


Fig. 1

8.0 Ceramic guide

The ceramic guide keeps the fretsaw blade safely in position and is not subject to wear. The guide has two slots.

1. Slot for fretsaw blades size No. 3 and No. 5.
2. Slot for fretsaw blades size No. 7 and No. 9.

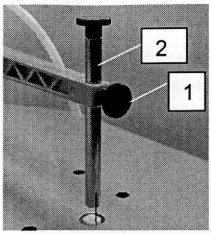


Fig. 2

8.1 Setting the ceramic guide

⚠ **Unplug the machine from the mains electricity supply!**

Slacken the knurled screw (1). Push the upper guide (2) upwards. **(Fig. 2)**.
Slacken the star knob (3) and tip protecting hood (4) forward. **(Fig. 3)**

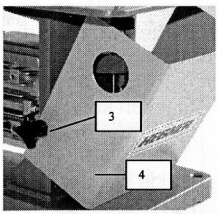


Fig. 3

Using the hexagon wrench (5) supplied, slacken the ceramic guide until it can be rotated. **(Fig. 4)**

Align the ceramic guide according to the saw blade being used, so that the relevant guide slot points towards the front. Retighten the ceramic guide.

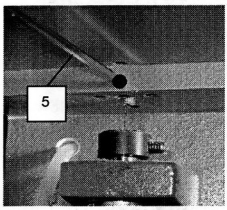


Fig. 4

9.0 Fitting the fretsaw blade

Unplug the machine from the mains electricity supply!

Slacken the knurled nut (1) and push the upper guide (2) upwards.

⇒ **Fig. 2**

Slacken the star knob (3) and tip protecting hood (4) downward.

⇒ **Fig. 3**

Using the hexagon wrench supplied, slacken the clamping bush (5). **(Fig. 5)**

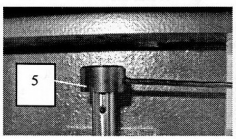


Fig. 5

Introduce the fretsaw blade vertically from the top into the slot of the ceramic guide until it reaches the stop and then tighten it with the clamping bush (5). **(Fig. 6)**

⚠ **Make sure that teeth of the saw blade look downwards.**

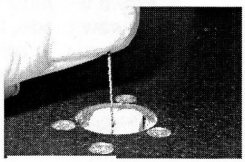


Fig. 6

10.0 Switching the machine on and off

Switching on the machine
Push switch into position **on**. (**Fig. 7**)

Switching off the machine
Push switch into position **off**. (**Fig. 7**)

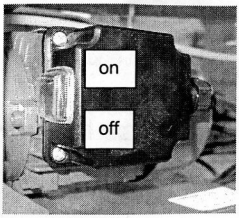


Fig. 7

11.0 Inside cuts

Switch off machine

⟹ Section 10
Slacken knurled screw (1) and push upper guide (2) upwards. (**Fig. 8**)

Guide workpiece through the hole onto the fretsaw blade. Push upper guide (2) onto the workpiece and fasten with the knurled screw (1). (**Fig. 8**)

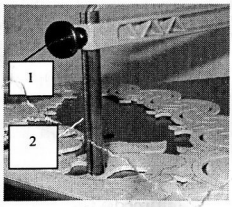


Fig. 8

12.0 Extraction port

The extraction port on the machine is designed for a house hold vacuum cleaner. Insert the connection piece of the vacuum cleaner into the opening (6) of the port ensuring that it is located firmly. (**Fig. 9**)

If no vacuum cleaner is connected, the machine may only be used for working in the open air. In indoor rooms, a vacuum cleaner must always be connected when the machine is in use.

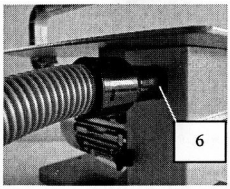


Fig. 9

13.0 Attaching and removing the upper guide arm

If, because of the size of the workpiece, the gooseneck of 340 mm is not sufficient, workpieces with a thickness of up to 6 mm in wood can be cut without the upper guide.

13.1 Removing the upper guide

First loosen the fixing screw (1a) then slacken the 2 screws (1) on the table top using the hexagon wrench supplied and then remove the guide arm (2).

⟹ **Fig. 10**

When working without the upper guide for the fretsaw blade, the feed pressure must not be too great as otherwise the fretsaw blade can bend towards the back.

⟹ **Section 14.3 Feed pressure**

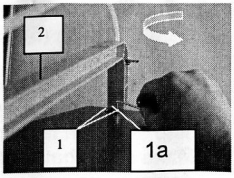


Fig. 10

13.2 Attaching the upper guide arm

Fasten the upper guide with the 2 screws so that it can still be moved easily. Align it in such a way that the vee of the upper guide (3) is lined up with the fretsaw blade (4). Then securely tighten the screws (1) then the fixing screw (1a).

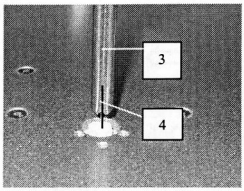


Fig. 11

⇒ **Fig. 11**

14.0 Application tips

14.1 Examples of saw blade selection for specific materials

Material :	Thickness:	with upper saw blade guide Saw blade:	without
Soft wood	up to 2 mm	No. 3 + No. 5	No. 5
Hard wood	up to 2 mm	No. 3 + No. 5	No. 5
Soft wood	up to 6 mm	No. 5	No. 5 + No. 9
Hard wood	up to 6 mm	No. 5 + No. 7	No. 5 + No. 9
Soft wood	up to 12 mm	No. 7 + No. 9	
Hard wood	up to 8 mm	No. 7 + No. 9	
Plastics	up to 6 mm	No. 5 + No. 7	
Soft metals (Al, Ms,Cu)	up to 2 mm	No. 3 + No. 5	

14.2 Working with plastics

To prevent the material from melting while sawing, cover the scored line with adhesive PVC film or tape.

14.3 Feed pressure

The feed pressure to be applied to the workpiece must always be directed towards the vee of the upper guide. **When working without upper guide, the feed pressure must be adjusted to suit the workpiece in order to prevent the fretsaw blade from being bent towards the back.**

⇒ Fig. 12

Do not press the workpiece towards the side!

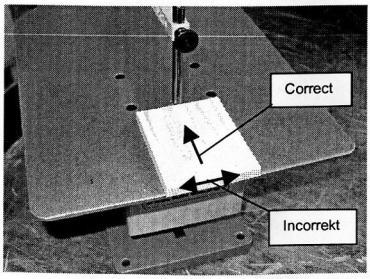


Fig. 12

15.0 Maintenance / cleaning

⇒ **Fig. 13**

The machine requires little maintenance.
Only the guide bush (1) needs oiling at regular intervals (approx. every 10 operating hours) with a fine oil which is not resin based (e.g. sewing machine oil).

Remove any dust that might have settled at the lubrication point.

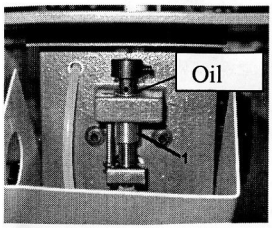


Fig. 13

15.1 Maintenance – visual examination

⚠ **With the machine switched off, make a visual examination at regular intervals and check the various parts of the machine for damage - in particular:**

- **the mains plug**
- **the power supply cable**
- **the mains switch box**

If damage has occurred, shut the machine down immediately and in particular disconnect it from the electric supply. Arrange for a skilled person to carry out the repair using original HEGNER spare parts.

15.2 Cleaning

- The extent to which the machine must be cleaned will depend on how dirty it is.
- No dust or chips must be allowed to settle in or on the machine.

15.2.1 Switch off the machine

⇒ **10.0 Switching the machine on and off**

15.2.2 Clean the machine

- Clean the machine by extracting dust and chips with a vacuum cleaner.
- Now and again, also take off the lower cover and remove any dust that has settled there.
- Use a small brush to remove chips, dust and swarf.

⚠ **Do not use cleansers that are**
- **combustible,**
- **caustic, or**
- **abrasive**

16.0 Repair/spare parts

These Operating Instructions are not accompanied by instructions for repair!
Repair and/or exchange of parts is at the user's risk.

Please observe the following:

16.1 Repairs

⚠

- **Never repair (defective) electrical machine parts.**
- **These parts must be replaced by original spare parts from the manufacturer.**

- **The exchange of electrical machine parts may be performed only by the manufacturer/authorised dealers or by specialists who have received proper training (e.g. electricians).**

If the user performs inexpert and unauthorised work or manipulates electrical the person responsible for initiating such action is liable for any ensuing damage to people and/or property.

Defective mechanical machine parts
- should only be exchanged by the manufacturer/authorised dealer or by specialists who have received proper training.

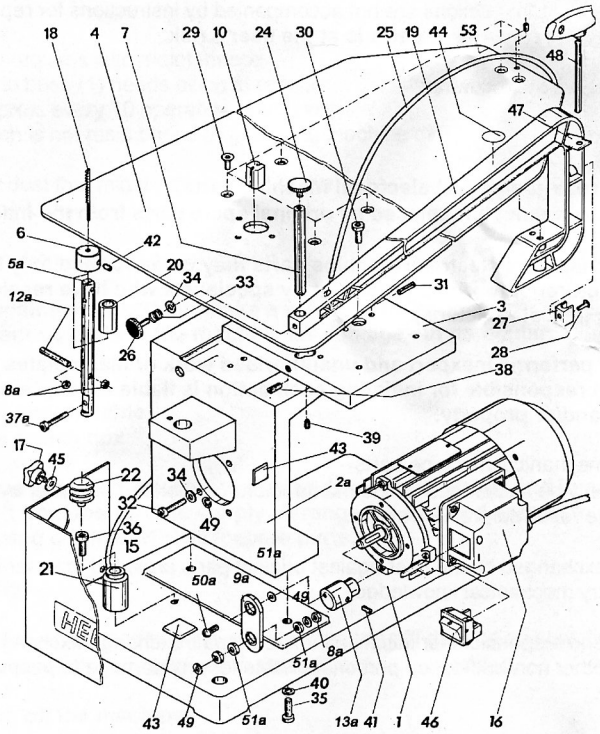
- can be exchanged by the user against original parts provided the user has the necessary mechanical knowledge.

- The person responsible for initiating inexpert repair/exchange/exchange work by the user or other non-authorised persons is liable for any damage to people and/or property.

If you nonetheless want to repair the machine yourself:

⚠ - **first switch off the machine at the main on/off switch (Section 10) and remove the mains plug from the power socket.**

17. Parts explosion



1	Baseplate
2a	motor carrier
3	guide holder
4	table plate
5a	spoolrod
6	clamping sleeve
7	upper guide
8a	nut
9a	connector
10	saw blade guide
12a	connector for pump bellow
13a	eccentric
15	cover
16	motor
17	clamping lever
18	saw blade no. 5
19	guide arm
20	sintered bearing
21	pump base
22	pump bellow

24	knurled screw
25	hose
26	knurled screw
27	hose clamp
28	rivet for hose clamp (grooved pin)
29	countersunk screw
30	hexagon socket screw
31	spring dowel sleeve
32	hexagon socket screw
33	compression spring
34	washer
35	hexagon socket screw
36	hexagon socket screw
37a	hexagon socket screw
38	set screw
39	set screw
40	lock washer
41	set screw
42	set screw
43	bumper
44	sticker

45	washer
46	On/off switch
47	socket wrench holder
48	socket wrench
49	lock washer
50a	screw
51a	washer
53	set screw