

PROXXON

Ihr Gerät funktioniert nicht ordentlich? Dann bitte die Bedienungsanleitung noch einmal genau durchlesen. Ist es tatsächlich defekt, senden Sie es bitte an:

PROXXON Zentralservice
D-54518 Niersbach

PROXXON Zentralservice
A-4224 Wartberg/Aist

Wir reagieren prompt und zuverlässig! Über diese Adresse können Sie auch alle erforderlichen Ersatzteile bestellen.

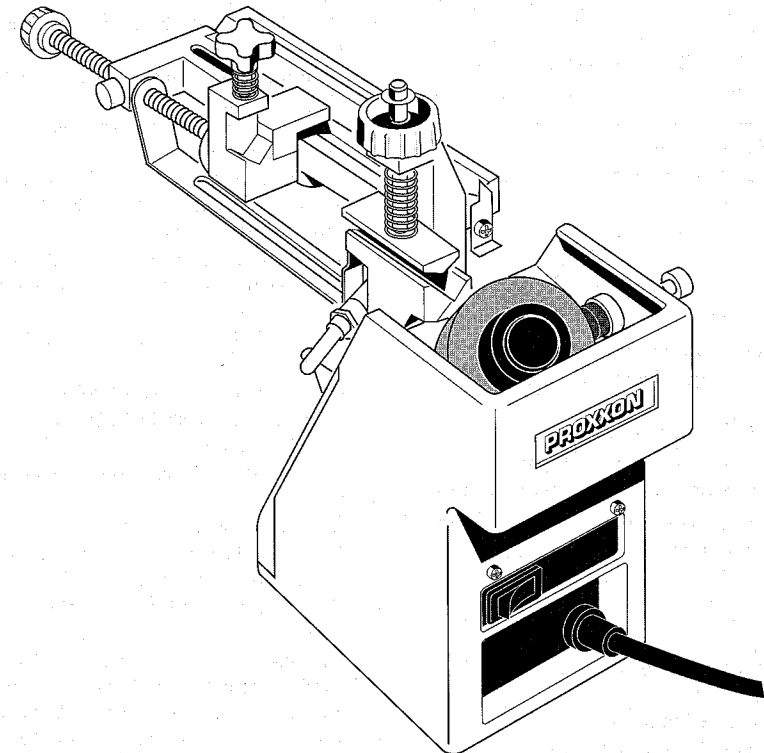
Wichtig: Eine kurze Fehlerbeschreibung hilft uns, noch schneller zu reagieren. Bei Rücksendungen innerhalb der Garantiezeit bitte Kaufbeleg beifügen.

Änderungen im Sinne des technischen Fortschritts behalten wir uns vor.

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PROXXON

BSG 220



Manual

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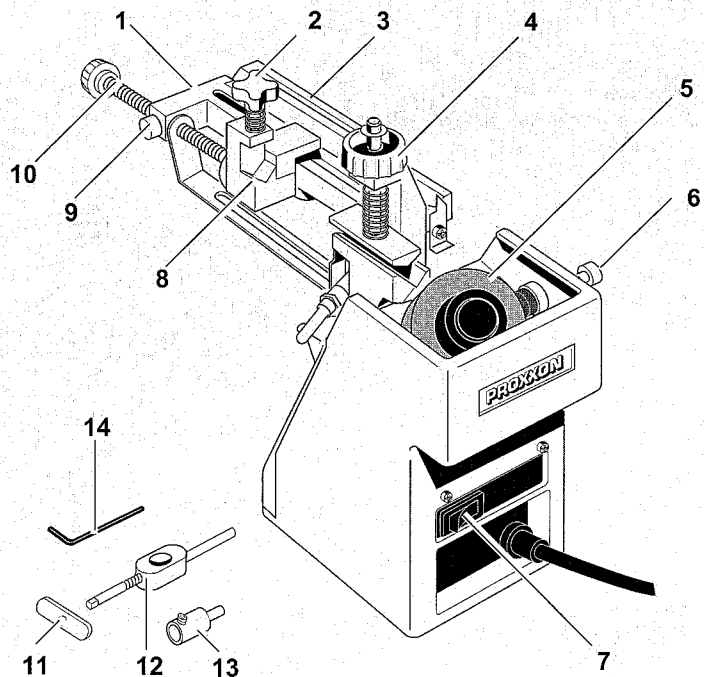


Fig. 1

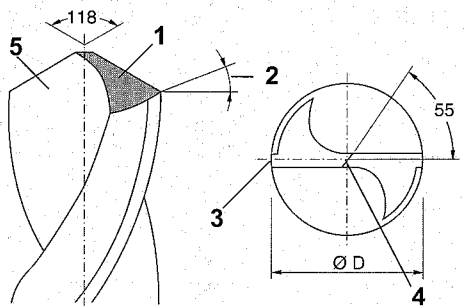


Fig. 2

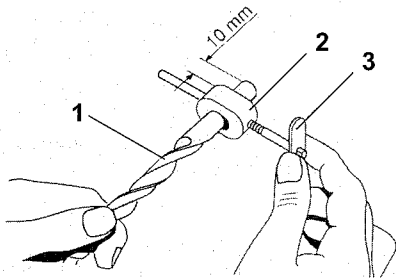


Fig. 3

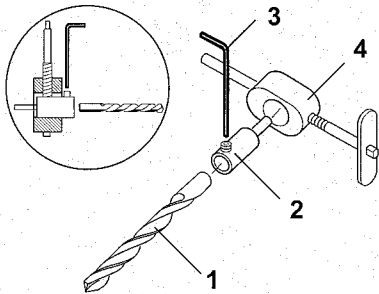


Fig. 4

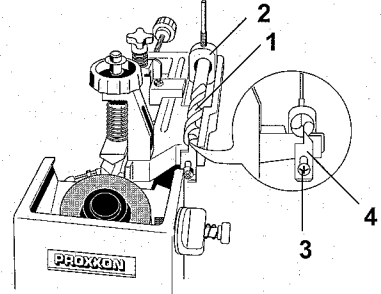


Fig. 5

D Bedienungsanleitung Bohrerschärfgerät BSG 220

Sehr geehrter Kunde!
Das PROXXON Bohrschärfgerät BSG 220 ist ein kompaktes und dennoch leistungsstarkes Gerät mit hervorragender Schleifleistung.

Die vorliegende Anleitung umfasst:

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Die Benutzung dieser Anleitung

- **erleichtert** es, das Gerät kennen zu lernen.
- **vermeidet** Störungen durch unsachgemäße Bedienung und
- **erhöht** die Lebensdauer Ihres Gerätes.

Halten Sie diese Anleitung immer griffbereit.
Bedienen Sie dieses Gerät nur mit genauer Kenntnis und unter Beachtung der Anleitung.

PROXXON haftet nicht für die sichere Funktion des Gerätes bei:

- Handhabung, die nicht der üblichen Benutzung entspricht,
- anderen Einsatzzwecken, die nicht in der Anleitung genannt sind,
- Missachtung der Sicherheitsvorschriften.

Sie haben keine Gewährleistungsansprüche bei:

- Bedienungsfehlern,
- mangelnder Wartung.

Beachten Sie zu Ihrer Sicherheit bitte unbedingt die Sicherheitsvorschriften.
Nur Original PROXXON - Ersatzteile verwenden.
Weiterentwicklungen im Sinne des technischen Fortschrittes behalten wir uns vor. Wir wünschen Ihnen viel Erfolg mit dem Gerät.

Sicherheitsvorschriften:

- Unordnung im Arbeitsbereich vermeiden.
- Gerät eben und sicher auf einem festen Untergrund befestigen.
- Gerät vor Benutzung auf Beschädigung überprüfen (Anschlusskabel, Schutzeinrichtungen, etc.), defekte Teile von einem Fachmann auswechseln lassen.
- Dieses Gerät entspricht den einschlägigen Sicherheitsbestimmungen. Reparaturen (z.B. Auswechseln der Netzleitung) dürfen nur von einer Elektrofachkraft ausgeführt werden (gilt nicht für 12 V-Geräte).
- Niemals ohne die vorgesehenen Schutzeinrichtungen arbeiten.
- Elektrowerkzeuge nicht im Regen, in feuchter Umgebung oder in der Nähe von brennbaren Flüssigkeiten oder Gasen benutzen. (Hinweis: Mit unseren 12 V-Geräten sind teilweise auch Bearbeitungen wie Nassschliff möglich).
- Keine beschädigten oder verformten Schleifscheiben verwenden.
- Anschlusskabel vor Hitze und scharfen Kanten schützen und so verlegen, dass es nicht beschädigt werden kann.
- Kabel nicht benutzen, um den Stecker aus der Steckdose zu ziehen.
- Gerät nicht am Kabel hochheben.
- Kinder und unbeteiligte Personen vom Arbeitsbereich fernhalten.
- Unbenutzte Werkzeuge kindersicher aufbewahren.
- Überlasten Sie Ihr Werkzeug nicht.
- Benutzen Sie Ihr Werkzeug nicht für Arbeiten, für die es nicht bestimmt ist.
- Verbrauchte Schleifscheibe rechtzeitig auswechseln.
- Einsatzwerkzeuge vor jeder Inbetriebnahme durch Sichtkontrolle auf ihre Unversehrtheit und Eignung für den Anwendungszweck prüfen.
- Werkstück sicher befestigen oder festspannen.
- Nach der Arbeit Gerät gründlich reinigen (Netzstecker ziehen).
- Bei Nichtgebrauch, vor Wartung, Werkzeugwechsel oder Reparatur Netzstecker ziehen.

GB Operating instructions Drill grinder BSG 220

Dear customer!

The PROXXON drill grinder BSG 220 is a compact but powerful machine offering excellent grinding power.

The following instruction manual includes:

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Using these instructions will

- **help you** to become acquainted with the machine.
- **avoid** malfunction caused by inappropriate operation and
- **prolong** the lifetime of your machine.

Always keep this manual close at hand.

Operate this machine only with exact knowledge and in compliance with these instructions.

PROXXON will not assume liability for the safe function of the machine if:

- it is handled in a way that does not comply with the usual modes of operation,
- it is used for purposes other than the ones mentioned in this manual,
- the safety regulations are neglected.

No warranty claims can be lodged for faults resulting from:

- operating errors,
- inadequate maintenance.

For your own safety you should always comply with the safety regulations.

Use only genuine PROXXON spare parts.

We reserve the right for modifications resulting from the technical development. We wish you successful work with your machine.

Safety regulations:

- Keep your work place clean and tidy.
- Fasten the machine horizontally and safely on a solid base.
- Check the machine for damage (connecting cable, protections etc) before starting work, have defective parts replaced by a specialist.
- This machine complies with the generally applicable safety regulations. Repairs (e.g. replacing the power supply cable) must only be performed by a skilled electrician (this does not apply for 12 V equipment).
- Do not work without the specified safety devices.
- Do not use electric power tools in rain, in moist environments or in the vicinity of combustible fluids or gases. (Note: Our 12 V units can partly be used for wet grinding applications).
- Do not use any damaged or deformed grinding wheels.
- Protect mains supply cables against heat and sharp edge and route them protected against damage.
- Do not use the cable to pull the plug out of the socket.
- Do not lift the machine by the cable.
- Keep children and uninvolved persons away from the working area.
- Keep tools out of the reach of children when not in use.
- Do not overload your tool.
- Do not use your tool for work it is not intended for.
- Replace worn grinding wheels in due time.
- Before starting work check any visually for any damage and their suitability for the application.
- Fix or clamp the work piece properly.
- Thoroughly clean the machine after work (pull out the mains plug).
- Always pull out the mains plug if the machine is not in use, before maintenance, tool change or repair work.

- Plug in the mains plug only when the machine is switched off.
- Always wear goggles (risk of tool breakage)
- If necessary wear a breather mask.
- Wear only suitable working clothes (no wide arms, ties, jewellery).
- Cover long hair with a hair net.
- Use only accessories and spare parts recommended by PROXXON (observe the max. permissible rotary speed).
- Use a dust extractor if required (use only suitable vacuum cleaners / risk of fire by sparks).
- Do not use this tool if you are lacking concentration or under the influence of alcohol.
- Keep your fingers away from rotating or fast moving tools (grinding wheel, etc.).
- Store the operating instructions in a safe place.

Overall view (Fig. 1):

1. Swivel arm
2. Clamp screw for drill shank
3. Positioning prism
4. Knurled screw with spring pressure hold-down
5. Grinding wheel
6. Dressing device for grinding wheel
7. ON - OFF switch
8. Clamping prism
9. Index knob for rapid length adjustment
10. Drill feed spindle
11. Spanner to clamp the spiral drill
12. Clamp for drill guide
13. Adapter for adapter with diameter smaller than 3 mm
14. Allen key for adapter

Description of machine:

With the PROXXON drill grinder BSG 220 you can perfectly grind all spiral drills with a diameter between 3 and 13 and a standard angle (118°, DIN 1412). The drill may be of HSS, CrV or WS (tool steel), but may also be carbide tipped. With the swivel movement around two axes during the grinding process the correct „relief“ for optimal drilling is achieved. The integrated dressing stone the special fused alumina grinding wheel can be perfectly cleaned and smoothed after longer use.

Scope of delivery:


1 pcs.	Drill grinder
1 pcs.	Spare grinding wheel
2 pcs.	Adapter for drill < ø3 mm
1 pcs.	Clamp compl.
1 pcs.	Allen key, small
1 pcs.	Allen key, big

Technical data:

Motor:

Voltage:	220 - 240 V, 50 Hz, ~
Power:	85 Watt
Speed:	8000 rpm
Noise level:	< 70 dB(A)
Protection class II device	<input type="checkbox"/>

Machine:

Grinding wheel:	Special fused alumina, 50 x 13 x 27 mm
Dimensions:	290 x 200 x 110 mm
Weight:	approx. 1.7 kg
For use in dry environments only	
Working range:	
Drill diameter:	3 - 13 mm
Length of drill:	approx. 55 - 170 mm

Fastening the drill grinder:

Before starting work fasten the drill grinder with two wood screws to a stable wooden board. The base plate of the machine is provided with the necessary bores. The wooden plate can then be fastened to a table with screw clamps.

Operation:

Before grinding:

Note!

Broken off drills must be manually pre-ground on a buffing machine.

Attention!

Only correctly ground drills will achieve perfect results. Therefore please observe the special information and tables in this manual.

Fig. 2 shows the essential drill data:

- 1) Main cutting edge
- 2) Relief angle
- 3) Chamfer
- 4) Chisel edge
- 5) Chip channel

1. Insert drill 1 (Fig. 3) into the bore of clamp 2. Let the drill shank protrude for approx. 10 mm at the rear so that it can be fixed in the clamping prism. Do not yet tighten clamp screw 3.
2. Lay drill 1 (Fig. 5) with clamp 2 into the positioning prism, push forward against the stop and align, as shown in Fig. 5 (cutting edges vertical).
3. Slacken screw 3 and adjust adjustment bar 4 accordingly.
4. Fasten the drill in clamp 2 using Allen key 1 (Fig. 7).

Note!

After this vertical alignment the drill must now be adjusted according to the drill diameter as per table (Fig. 6). Incorrect alignment of the drill will result in a poor grinding result.

Drills with diameter of less than 3 mm:

Drills with a diameter of less than 3 mm must be clamped in the adapter 13 (Fig. 1) supplied for this purpose.

Adapters for spiral drill diameters 1.5/1.6/2.0/2.4/2.5 and 3.0 mm are available as accessories.

In this case proceed as follows:

Insert drill 1 (Fig. 4) into the adapter 2 and fasten with the Allen key 3. The shank of the adapter has a diameter of 10 mm. Insert the drill with the adapter into clamp 4. The machine must then be adjusted as previously described for a drill with a 10 mm diameter.

Grinding the drill:

Danger!

Always wear goggles when performing grinding work!

Wear only suitable working clothes (no wide arms, ties, jewellery).

1. Turn knurled screw 1 (Fig. 8) in direction B to open the positioning prism.
2. Lay the drill into the positioning prism and insert a guide pin 2 of the clamp into the slot 3 in the swivel arm.
3. Turn knurled screw 1 in direction A to close the positioning prism.
4. Fix the drill shank in clamping prism 5. For this purpose press index knob 4, move the clamping prism forward and slightly clamp the drill shank with screw 6.

Note!

In case of small or too short drills clamping with screw 6 (Fig. 8) is not necessary. In any case ensure exact axial stop and guidance in the clamping prism 5 (Fig. 8)!

5. Turn spindle 1 (Fig. 9) until the drill 2 slightly contacts the grinding wheel 3. Read the scale value 4 and turn the spindle 1 exactly one turn back. The clearance between drill 2 and grinding wheel is now 1 mm.
6. Switch the machine on by the ON – OFF switch 7 (Fig. 1).

Note!

Remember the position on scale 4 (Fig. 9)! After grinding the first cutting edge the drill is turned around in the positioning prism and at this point it must have the same distance to the grinding wheel as before the first cutting edge was ground. Otherwise the drill will be asymmetric.

7. Move the swivel arm smoothly and evenly to the right against the stop while advancing the feed spindle 1 (Fig. 10) slowly in direction B. Repeat this process, until the cutting edge of the drill is sharp.

Note!

A drill is normally correctly sharpened after 4-5 swivelling movements. Remember the position on the scale!

8. Return feed spindle 1 (Fig. 11) to the previously remembered scale value 4.
9. Switch the machine off by the ON – OFF switch 7 (Fig. 1).
10. Turn knurled screw 3 (Fig. 11) in direction A and slacken clamp screw 2 so that the drill can be removed from the clamp.

Attention!

At this point do not loosen the clamp!

11. Turn the drill with the clamp for 180°, lay it into the positioning prism and fasten it in the clamping prism, as described for grinding the first cutting edge.
12. Switch the machine on by the ON – OFF switch 7 (Fig. 1) and grind the second cutting edge of the drill.

Attention!

When grinding the second cutting edge stop the feed at exactly the same position at which the first grinding process was finished. Otherwise the drill will be asymmetric.

Relief angle adjustment:

Note!

The relief angle is generally adjusted by the positioning in the clamp (Fig. 5). The relief angle setting is factory set for the drill diameters from 3 to 13 mm and should only be adjusted in exceptional cases.

Adjust hexagon nut 1 (Fig. 13) of the adjustment spindle according to table (Fig. 12).

Dressing the grinding wheel:

Note!

If grooves have formed or if the grinding wheel is blocked it must be dressed, in order to achieve good grinding results.

Attention!

Wear goggles!

1. Switch the drill grinder on by the ON – OFF switch 7 (Fig. 1).
2. Press knob 1 (Fig. 14) slightly down and move the pressing part 2 several times up and down, until the complete front face of the grinding wheel has been processed.

Replacing the grinding wheel:

Attention!

Replace the grinding wheel once it has reached a diameter of less than 45 mm. A spare grinding wheel Part-No.: 21200-58 is delivered with the machine.

1. Pull out the mains plug.
2. Remove cap 1 (Fig. 15) with a screwdriver or similar.
3. Unscrew socket head cap screw 2 (Fig. 15), remove washer 3 and grinding wheel 5 with clamping flange 4.
4. Mount the new grinding wheel 5 with clamping flange 4 and washer 3. Tighten socket head cap screw 2 and plug in cap 1. Plug in the main plug.

Care and maintenance:

The drill grinder is almost maintenance free. For a long lifetime you should clean the machine after each use with compressed air and a soft cloth, because the grinding dust is very aggressive.

EC Declaration of Conformity:

Name and address of manufacturer:

PROXXON S.A.
6-10, Häreberg
L-6868 Wecker

Product name:

Drill grinder BSG 220
Article number: 21200

We declare in sole responsibility that this product complies with the following standards and normative documents:

EC machine regulation 98/037/EWG
Applied standards:
EN 61029-1 2000
IEC 61F(CO)91 1992

EC-EMC regulation 89/336/EWG
Applied standards:
EN 55014-1: 1999
EN 55014-2: 1997
EN 61000-3 –2: 1995,
EN 61000-3-3:1995

Date: 13.01.2002
Dipl.-Ing. Jörg Wagner

PROXXON S.A.
Sphere of activity Machine safety

Ersatzteilliste:

Ersatzteile bitte schriftlich beim PROXXON Zentral-service bestellen (Adresse auf der Rückseite der Anleitung)

PROXXON Bohrerschärfgerät BSG 220

ET - Nr.: Benennung

21200-01	Gehäuse
21200-02	Andruckprisma
21200-04	Motorhalter
21200-05	Motor
21200-06	Ein-/Ausschalter
21200-10	Schiebeknopf
21200-11	Druckfeder
21200-12	Druckknopf
21200-13	Druckfeder für Andruckprisma
21200-14	Rändelmutter
21200-16	Befestigungsschrauben
21200-17	Befestigungsplatte
21200-18	Bügel für Axialdrehung
21200-19	Halterung für Klemmschraube
21200-20	Prisma für Bohrerschaft
21200-21	Rändelschraube
21200-22	Spindel
21200-23	Sterngriff
21200-24	Druckfeder
21200-25	Druckknopf
21200-26	Druckfeder
21200-27	Adapter komplett
21200-29	Innensechskantschlüssel klein
21200-30	Gehäuseschraube
21200-31	Justieranschlag
21200-33	Klemmeisen
21200-34	Klemmeisenspindel
21200-35	Schlüssel für Klemmeisen
21200-37	Sechskantmutter
21200-39	Abdeckung
21200-42	Kugelstück
21200-44	Innensechskantschlüssel gross
21200-46	Befestigungsschraube
21200-47	Gewindestift
21200-48	Halteschraube, Kugelkopf
21200-49	Befestigungsschraube
21200-50	Befestigungsschraube

21200-51	Zugentlastung
21200-52	Skalienscheibe
21200-54	Unterlegscheibe
21200-55	Abdeckscheibe
21200-56	Abdeckkappe
21200-57	Innensechskantschraube
21200-58	Schleifscheibe (Zubehör)
21200-60	Kugelkopf, links
21200-61	Stellschraube
21200-62	Kugelkopf, rechts
21200-63	Stift
21200-64	Befestigungsschrauben
21200-66	Prismenhalter
21200-67	Unterlegscheibe
21200-68	Befestigungsschraube
21200-70	Abziehstein
21200-71	Halter für Abziehstein
21200-72	Halter Kabel/Platine
21200-73	Halteböckchen
21200-74	Stützblech
21200-75	Scheibe
21200-76	Kugellager
21200-78	Ring
21200-79	Buchse
21200-85	Schwenkarm
21200-86	Stab
21200-89	Bolzen
21200-90	Abdeckkappe für Schalter
21200-94	Ferrite
21200-95	Netzkabel
21200-98	Artikelverpackung
21200-99	Bedienungsanleitung

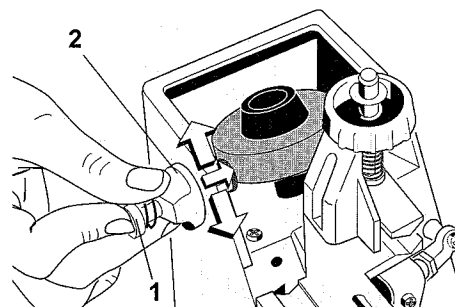


Fig. 14

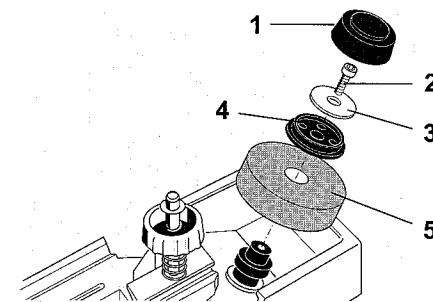


Fig. 15

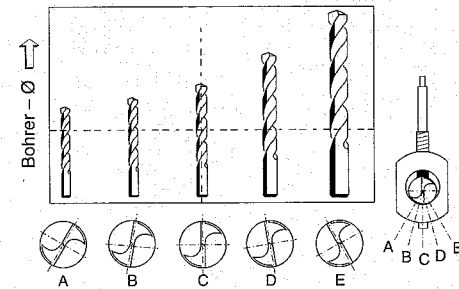
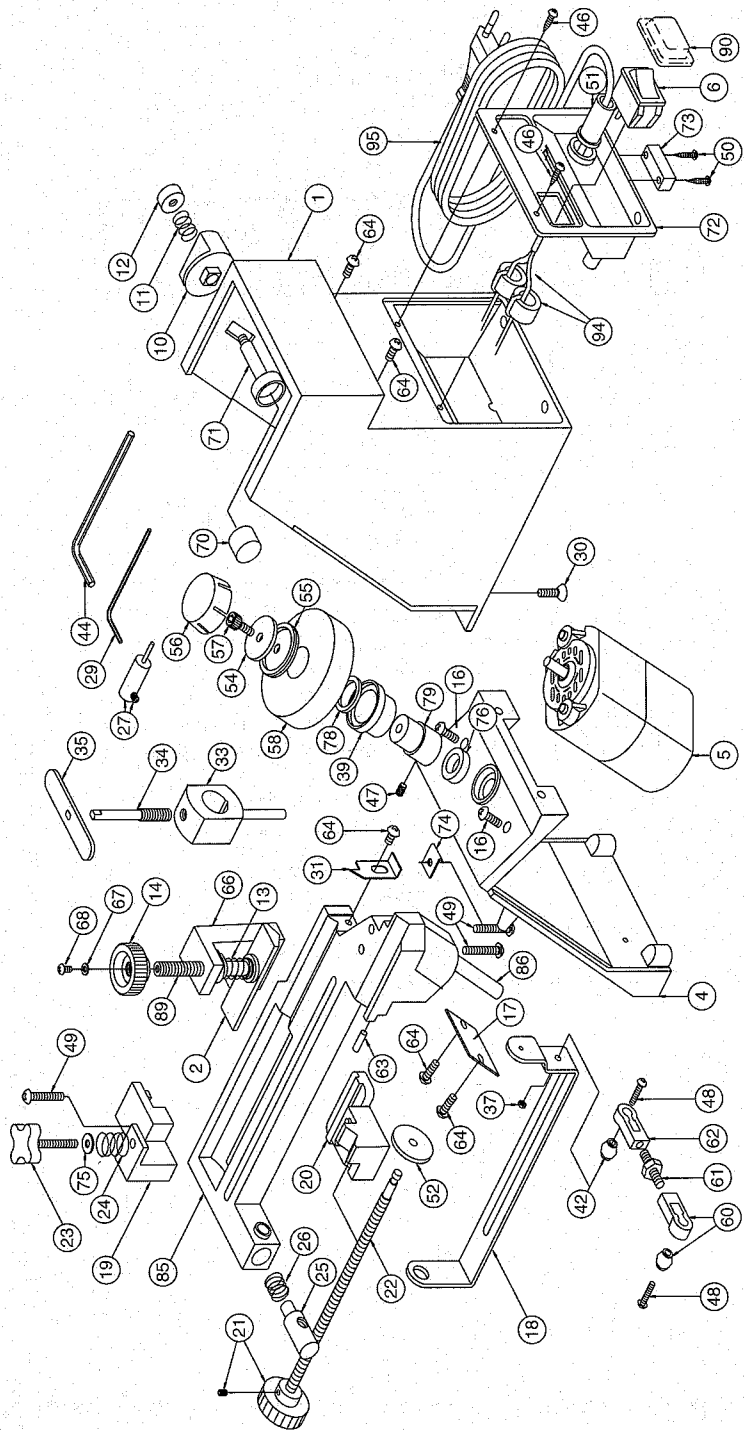


Fig. 6

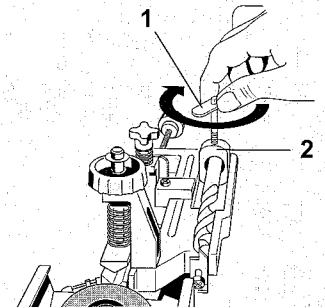


Fig. 7

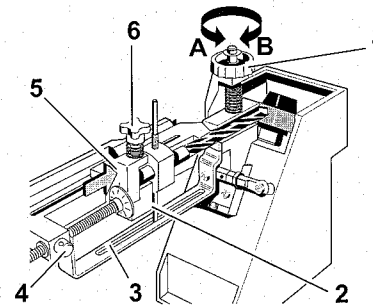


Fig. 8

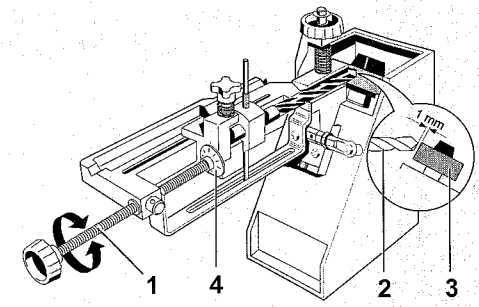


Fig. 9

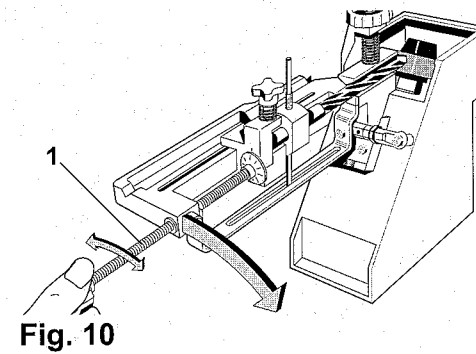


Fig. 10

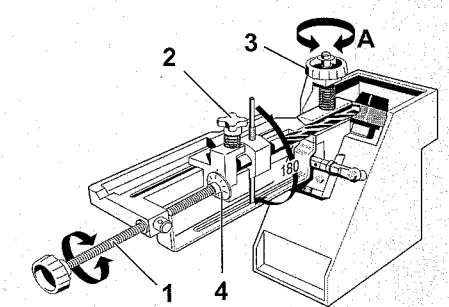


Fig. 11

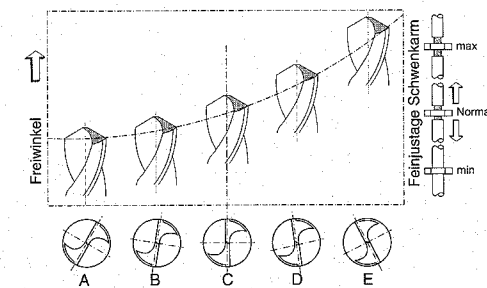


Fig. 12

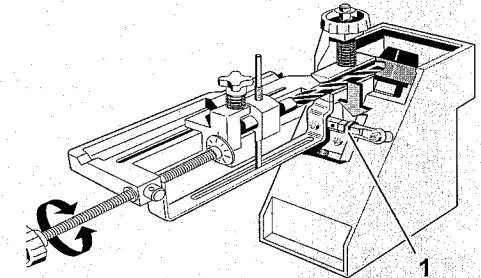


Fig. 13