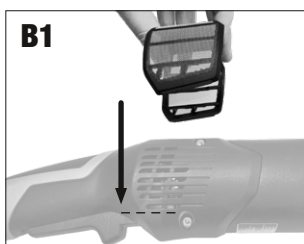
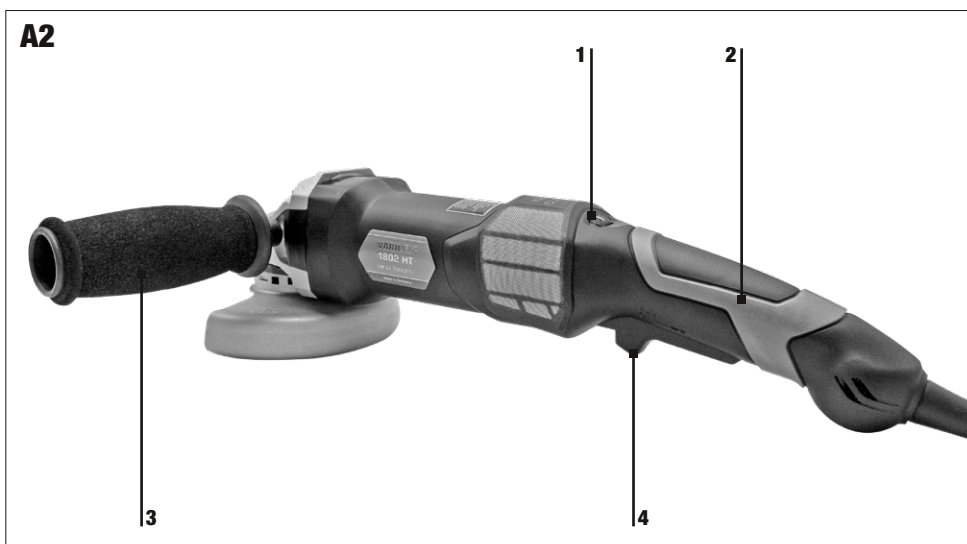
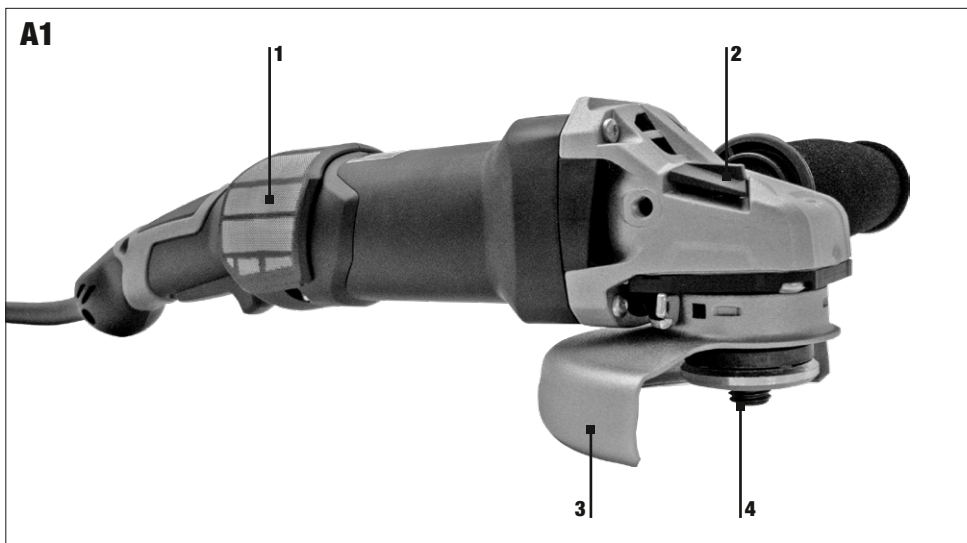
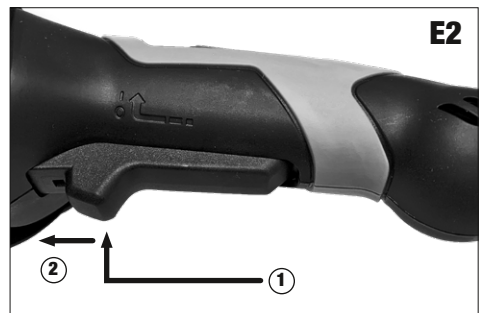
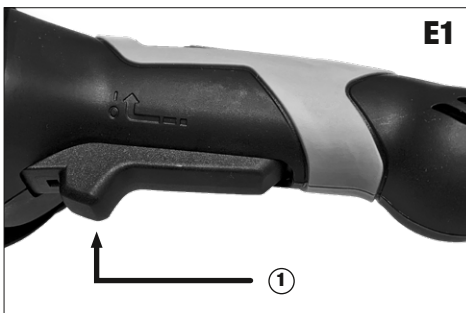
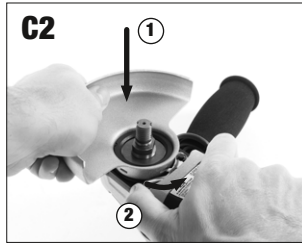
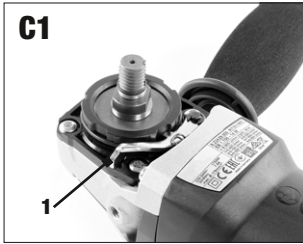




VARILEX® 1802 HT (110V)

EN Original instructions 4





English

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1. EC-Declaration of conformity

We declare under our sole responsibility that the product described under "7. Technical data", identified by type and serial number, fulfills all the relevant provisions of the directives 2011/65/EU (RoHS), 2004/108/EC (until April 19th 2016), 2014/30/EU (from April 20th 2016), 2006/42/EC and the following harmonized standards have been used:

EN 60745-1:2009+A11:2010
EN 60745-2-3:2011+A2:2013+A11:2014
+A12:2014

+A13:2015

EN 55014-1:2006+A1:2009+A2:2011
EN 55014-2:1997+A1:2001+A2:2008
EN 61000-3-2:2014
EN 61000-3-3:2013
EN 50581:2012

Geretsried, 2020-01-15



Gerd Eisenblätter,
CEO Gerd Eisenblätter GmbH

2. Specified conditions of use

The angle grinders are suitable for grinding, sanding, abrasive cutting-off operations and wire brushing metal, concrete, stone and similar materials without the use of water.

i Recommendation: For demanding polishing work in continuous use we recommend our angle polishers VARILEX® POLISHER HT and VARILEX® POLISHER AKKU.

It is for dry processing only.

The user bears sole responsibility for any damage caused by inappropriate use.

Generally accepted accident prevention regulations and the enclosed safety information must be observed.

3. Symbols



Warning of general danger



Warning of electric shock



Read the operating manual and safety instructions



Wear ear protection



Wear protective gloves



Wear a dust mask



Wear protective goggles



Wear sturdy shoes



Do not dispose of it with domestic waste



Tip, advice



CE marking: Confirms the conformity of the power tool with the European Community directives.

4. General safety information



WARNING – Read all safety warnings and instructions. Failure to follow all safety warnings

and instructions may result in an electric shock, fire and/or serious injury.

Keep all safety instructions and information for future reference.

Pass on your power tool only together with these documents.

The term “power tool” in the warnings refers to your mains-operated (corded) power tool.

Follow the enclosed brochure “General safety instructions for power tools”.

5. Special safety instructions

5.1 General Safety Recommendations for grinding, sanding, wirebrushing, polishing and cutting-off operations:

- This power tool is intended to function as a grinder, sander, wire brush or cut-off tool. Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.
- Operations such as polishing are not recommended to be performed with this power tool. Operations for which the power tool was not designed may create a hazard and cause personal injury.
- Do not use accessories which are not specifically designed and recommended by the tool manufacturer. Just because the accessory can be attached to your power tool, it does not assure safe operation.
- The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their rated speed can break and fly apart.
- The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool. Incorrectly sized accessories cannot be adequately guarded or controlled.
- Threaded mounting of accessories must match the sanding spindle thread. For accessories mounted by flanges, the arbour hole of the accessory must fit the locating diameter of the flange. Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If a power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute. Damaged accessories will normally break apart during this test time.
- Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
- Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.
- Hold the power tool by the insulated gripping surfaces only when performing an operation where the accessory may contact hidden wiring or its own cord. Cutting accessory contacting a „live“ wire may make exposed metal parts of the power tool „live“ and shock the operator.
- Position the cord clear of the spinning accessory. If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.
- Never lay the power tool down until the accessory has come to a complete stop. The spinning accessory may grab the surface and pull the power tool out of your control.
- Do not run the power tool while carrying it at your side. Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.

- Regularly clean the power tool's air vents. The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
- Do not operate the power tool near flammable materials. Sparks could ignite these materials.
- Do not use accessories that require liquid coolants. Using water or other liquid coolants may result in electrocution or shock.

5.2 Kickback and related warnings:

Kickback is a sudden reaction to a pinched or snagged sanding wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory's rotation at the point of the binding.

For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out.

The abrasive wheel may either jump toward or away from the operator, depending on direction of the disc's movement at the point of pinching. Abrasive wheels may also break under these conditions.

Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided if suitable precautionary measures are taken as described below.

- Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control torque reactions or kickback forces, if proper precautions are taken.
- Never place your hand near the rotating accessory. Accessory may kickback over your hand.
- Do not position your body in the area where the power tool will move if kickback occurs. Kickback will propel the tool in direction opposite to the grinding wheel's movement at the point of snagging.
- Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.
- Do not attach a saw chain woodcarving blade or toothed saw blade. Such blades create frequent kickback and loss of control.

5.3 Safety warnings specific for grinding and abrasive cutting-off operations:

- Use only wheel types that are recommended for your power tool and the specific guard designed for the selected wheel. Grinding tools for which the power tool was not designed cannot be adequately guarded and are unsafe.
- Cranked grinding wheels must be positioned so that the grinding surface is below the edge of the safety cover. An improperly mounted grinding disc that projects through the plane of the safety cover cannot be adequately protected.
- The safety cover must be securely attached to the power tool and positioned for maximum safety, so the least amount of abrasives is exposed towards the operator. The safety cover helps to protect operator from broken fragments and accidental contact with the abrasive and sparks which could ignite clothing.
- Abrasives must be used only for recommended applications. For example: do not grind with the side of a cutting disc. Cutting discs are intended for peripheral grinding, side forces applied to these discs may cause them to shatter.
- Always use undamaged clamping flanges of the correct size and shape for the flap disc you have selected. Suitable flanges support the flap disc and thus reduce the risk of flap disc breakage. Flanges for cutting discs may differ from the flanges for other flap discs.
- Do not use worn down flap discs from larger power tools. Flap discs for larger power tools are not designed for the higher speeds of smaller power tools and can break.

5.4 Further special safety instructions for cut-off grinding

- Do not "jam" the cutting disc or apply excessive pressure. Do not attempt to make an excessive depth of cut. Overstressing the cutting disc increases the loading and susceptibility to twisting or binding of the disc in the cut and the possibility of kickback or disc breakage.
- Do not position your body in line with and behind the cutting disc. When the cutting disc, at the point of operation, is moving away from your body, the possible kickback may propel the spinning disc and the power tool directly at you.

- When the cutting disc is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the disc comes to a complete stop. Never attempt to remove the cutting disc from the cut while the disc is in motion otherwise kickback may occur. Investigate and take corrective action to eliminate the cause of wheel binding.
- Do not restart the cutting operation in the workpiece. Let the disc reach full speed and carefully reenter the cut. The disc may bind, walk up or kickback if the power tool is restarted in the workpiece.
- Support panels or any oversized workpiece to minimize the risk of disc pinching and kickback. Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the disc.
- Use extra caution when making a "pocket cut" into existing walls or other blind areas. The protruding cutting disc may cut gas or water pipes, electrical wiring or objects that can cause kickback.

5.5 Safety warnings specific for sanding operations:

- Do not use excessively oversized sanding disc paper. Follow manufacturers recommendations when selecting sanding paper. Larger sanding paper extending beyond the sanding pad presents a laceration hazard and may cause snagging, tearing of the disc or kickback.

5.6 Safety warnings specific for wire brushing operations:

- Be aware that wire bristles are thrown by the brush even during ordinary operation. Do not overstress the wires by applying excessive load to the brush. The wire bristles can easily penetrate light clothing and/or skin.
- If the use of a guard is recommended for wire brushing, do not allow any interference of the wire wheel or brush with the guard. Wire wheel or brush may expand in diameter due to work load and centrifugal forces.

5.7 Additional safety instructions:



WARNING – Always wear protective goggles.

- Use elastic cushioning layers if they have been supplied with the grinding media and if required.
- Observe the specifications of the tool or accessory manufacturer!
- Accessories must be stored and handled with care in accordance with the manufacturer's instructions.
- Ensure that accessories are installed in accordance with the manufacturer's instructions.
- The tool continues running after the machine has been switched off.
- The workpiece must lay flat and be secured against slipping, e.g. using clamps. Large workpieces must be sufficiently supported.
- If accessories with threaded inserts are used, the end of the spindle may not touch the base of the hole on the sanding tool. Make sure that the thread in the accessory is long enough to accommodate the full length of the spindle.
- The thread in the accessory must match the thread on the spindle. See chapter 7. Technical data for more information on the spindle length and thread.
- Damaged, eccentric or vibrating tools must not be used.
- A damaged or cracked side handle must be replaced. Never operate a machine with a defective side handle.
- Only use the machine if the protective cover is in place.
- Always guide the machine with both hands on the handles provided.

5.8 Special safety instructions for mains powered machines:

- Pull the plug out of the socket before making any adjustments, changing tools, carrying out maintenance or cleaning.
- Before connecting the mains plug, make sure that the machine is switched off.
- Use of a fixed extractor system is recommended.
- Always install an RCD with a maximum trip current of 30 mA upstream. If the power tool is shut down via the RCD, it must be checked and cleaned. See chapter 13. Maintenance.

5.10 Reducing dust exposure:



Some of the dust created using this power tool

may contain chemicals known to cause cancer, allergic reaction, respiratory disease, birth defects or other reproductive harm. Some of these substances include: lead (in paint containing lead), mineral dust (from bricks, concrete etc.), additives used for wood treatment (chromate, wood preservatives), some wood types (such as oak or beech dust), metals, asbestos.

The risk from exposure to such substances will depend on how long you or bystanders are being exposed.

Do not let particles enter the body.

Do the following to reduce exposure to these substances:

- **Ensure good ventilation of the workplace and wear appropriate protective equipment, such as respirators able to filter microscopically small particles.**
- **Observe the relevant guidelines for your material, staff, application and place of application (e.g. occupational health and safety regulations, disposal).**
- **Collect the generated particles at the source, avoid deposits in the surrounding area.**
- **Use suitable accessories for special work (see chapter 8.), thus less particles enter the environment in an uncontrolled manner.**
- **Use a suitable extraction unit.**

Reduce dust exposure with the following measures:

- **Do not direct the escaping particles and the exhaust air stream at yourself or nearby persons or on dust deposits.**
- **Use an extraction unit and/or air purifiers.**
- **Ensure good ventilation of the workplace and keep clean using a vacuum cleaner. Sweeping or blowing stirs up dust.**
- **Vacuum or wash protective clothing. Do not blow, beat or brush.**

6. Product features

6.1. Power tool VARILEX® 1802 HT – see

page 2-3 (figures A1, A2, C1 and D1):

A1-1	Particulate matter protection cap
A1-2 / D1-1	Spindle locking button
A1-3	Safety cover
A1-4	Tool holder
A2-1	Speed adjusting wheel with electronics signal indicator
A2-2	Handle
A2-3	Additional handle
A2-4	Trigger switch
C1	Lever for safety cover attachment
D1-2	Spindle
D1-3	Support flange
D1-4	Clamping nut
D1-5	Clamping wrench

7. Technical data

Subject to change in accordance with technical progress.

Measured values determined in conformity with EN 60745.

Direct current (cordless machines)

Alternating current (mains powered machines)

Machine in protection class II (mains powered machines)

During operation the noise level can exceed 80 dB(A).



Wear ear protectors!

High-energy, high-frequency interferences can cause speed fluctuations. The fluctuations disappear, however, as soon as the interference fades away. The technical specifications quoted are subject to tolerances (in compliance with the relevant valid standards).



Emission values: These values make it possible to assess the emissions from the power tool and to compare different power tools. The actual load may be higher or lower depending on the operating conditions, the condition of the power tool or the accessories. Please allow for breaks and periods for assessment purposes when the load is lower. Arrange protective measures for the user, such as organisational measures based on the adjusted estimates.

Vibration total value (vector sum of three directions) determined in accordance with EN 60745:

			VARILEX® 1802 HT
Max. disc diameter	Ø D	mm (in)	150 (6)
Max. permitted thickness of the clamping shank on accessory when using clamping nut (A8-4/B12-4)	t _{max,1}	mm (in)	10 (³ / ₈)
Roughing disc/cutting disc: max. permitted disc thickness	t _{max,2}	mm (in)	7.1 (⁹ / ₃₂)
Spindle thread / length of grinding spindle	M / l	- / mm (in)	M 14 (5/8" - 11 UNC) / 20 (25/32)
No-load speed (maximum speed)	n	min ⁻¹ (rpm)	9,600
No-load speed (adjustable)	n _v		2,400
Rated input power	P ₁	W	1,750
Power output	P ₂	W	1,070
Weight without mains cable / Weight with smallest battery pack	m	kg (lbs)	2.6 (5.7)
Emission values:			
Vibration emission value (surface grinding) / uncertainty (vibration)	a _{h,SG} / K _{h,SG}	m/s ²	8.2 / 1.5
Vibration emission value (sanding with sanding plate) / uncertainty (vibration)	a _{h,DS} / K _{h,DS}	m/s ²	4.0 / 1.5
Typical A-effective perceived sound levels:			
Sound-pressure level / uncertainty	L _{pA} / K _{pA}	dB(A)	94 / 3
Acoustic power level / uncertainty	L _{WA} / K _{WA}	dB(A)	105 / 3

8. Accessories

Only use original Eisenblätter accessories.

Use only accessories that fulfil the requirements and specifications listed in these operating instructions.

Cutting disc cover clip / safety cover for cut-off grinding:
Designed for work with cutting disc and diamond cutting discs.
Once the cutting disc cover clip is fitted, the safety cover becomes a cutting safety cover.

Art. no.	Description
65028	Grinder Grip™ magnetic machine holder
65041	3D ball handle
65042	Safety cover Ø 125 mm
65043	Safety cover Ø 150 mm
65045	Cutting disc cover clip Ø 125 mm
65046	Cutting disc cover clip Ø 150 mm
65048	Protective suction cover Ø 125 mm

Use abrasive tools made from Eisenblätter for best work results, such as:

- Cutting discs and rough grinding discs
- Flap discs
- Fibre discs
- Cleaning discs
- Backing plates
- Quick-change systems for discs

Note: Accessories shown or described are not part of the standard delivery scope of the product. The complete program can be found on www.eisenblaetter.de or in the catalog.

9. Initial operation

9.1 Attaching the additional handle:

Always work with the additional handle (A2-2) attached! Attach the additional handle on the left or right of the machine and secure.

9.2 Attach the safety cover:

For safety reasons, always use the safety cover provided for the respective disc! See also chapter 8.Accessories.

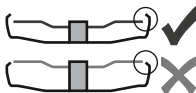
8.Accessories.

Safety cover for grinding:

Designed for work with rough grinding discs, flap sanding pads, diamond cutting discs.

See page 3, figures C1, C2 and C3.

- Push and hold the lever (C1-1). Place the safety cover (C2) in the position indicated.
- Release the lever and turn the safety cover until the lever engages.
- Push the lever and turn the safety cover until the closed section is facing the operator (C3).
- Make sure that the safety cover is placed securely: The lever must engage and you should not be able to turn the safety cover.



Use only grinding tools that are covered by at least 2 mm by the safety guard.

(Disassemble in reverse order.)



Before commissioning, check that the rated mains voltage and mains frequency, as stated on the type plate match your power supply.



Always install an RCD with a maximum trip current of 30 mA upstream.

The red electronics signal indicator (A2-1) lights up briefly when the mains plug is inserted in the socket, indicating readiness for operation.

Setting speed:

Set the recommended speed at the thumbwheel (A2-1). (Small number= small speed; large number = high speed)

1	2,800 min-1
2	4,150 min-1
3	5,500 min-1

4	6,850 min-1
5	8,200 min-1
6	9,600 min-1

Cutting disc, rough grinding disc, cup wheel, diamond cutting disc: high speed
Brush: medium speed
Sanding plate: low to medium speed

The VTC electronics make material-compatible work possible and an almost constant speed, even under load.

The best way to determine the ideal speed setting is by performing a test.

Particulate matter protection cap:



Always fit the particulate matter protection cap (A1-1) if the surroundings are heavily polluted.

Attachment: See page 2, figure B1/B2.

Fit the particulate matter protection cap as shown.

To remove: Slightly lift the particulate matter protection cap at the upper edges and remove it downwards.

10. Attaching the tools, working notes



Prior to any conversion work: Pull the mains plug from the socket. The machine must be switched

off and the spindle at a standstill.



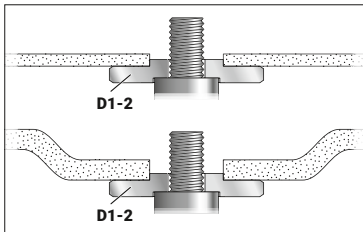
For reasons of safety, attach the cutting safety cover before performing cutting-off operations (see chapter 8. Accessories).

10.1 Locking the spindle:

- Press in the spindle locking button (A1-2 / D1-1) and turn the spindle by hand until the spindle locking button engages.

10.2 Placing the grinding disc in position:

- Fit the support flange (D1-3) on the spindle (D1-2). The flange should not turn on the spindle when properly attached. Screw support flange with clamping wrench (D1-5) so that the small collar is facing upwards.
- Place the grinding disc on the support flange (D1-3). The grinding disc must lay flat on the supporting flange.



10.3 Securing/releasing the clamping nut:

Securing the clamping nut:

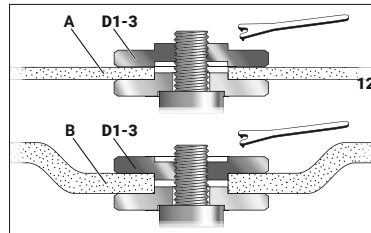
The 2 sides of the clamping nut (D1-4) are different. Screw the clamping nut onto the spindle (D1-2) as follows:

A) Forthin grinding discs:

Theedge o f the clamping nut (D1-4) faces upwards sothat the thin grinding wheel can be attached securely.

B) Forthick grinding discs:

Theedge o f the clamping nut (D1-4) faces downwards f the at the clamping nut can be attached securely to the spindle (D1-2).



Releasing the clamping nut:

Lock the spindle (see chapter 10.1). Turn the clamping nut (D1-4) anticlockwise using the clamping wrench (D1-5) to unscrew.

10.4 Working instructions:

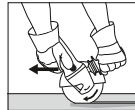
Grinding and sanding operations:

Press down the machine evenly on the surface and move back and forth so that the surface of the workpiece does not become too hot.

Rough grinding:

Position the machine at an angle of 30° – 40° for the best working results.

Cutting-off operations:



Always work against the run of the disc (see illustration). Otherwise there is the danger of the machine kicking back from the cut out of control. Guide the machine evenly at a speed

suitable for the material being processed. Do not tilt, apply excessive force or sway from side to side.

Wire brushing:

Press down the machine evenly.

11. Switching on and off



Always guide the machine with both hands.



Switch on first, then guide the accessory towards the workpiece.

Avoid inadvertent starts: always switch the tool off



when the plug is removed from the mains socket or if there has been a power cut.



The machine must not be allowed to draw in



additional dust and shavings. When switching the machine on and off, keep it away from dust deposits. After switching off the machine, only place it down when the motor has come to a standstill.

In continuous operation, the machine continues running if it is forced out of your hands.

Therefore, always hold the machine with both hands using the handles provided, stand securely and concentrate.

Torque activation (with dead man's lever):

Switching on: See page 3, figure E1.

Slide the trigger switch (A2-4) forwards and then push the trigger switch upwards.

Switching off: Release the trigger switch (A2-4).

Continuous operation:

Switching on: See page 3, figure E2.

Switch the machine on as described above. Now slide the trigger switch (A2-4) forwards again and release in the front position to lock the trigger switch (continuous operation).

Switching off: Push the trigger switch (A2-4) upwards and release.

12. Troubleshooting



The electronic signal indicator (A2-1) lights up and the load speed decreases.

There is too much load on the machine! Run the machine in

idling until the electronic signal indicator switches off.



The machine does not start. The electronic signal indicator (A2-1) flashes. The restart protection is active.

If the mains plug is inserted

with the machine switched on or if the power supply is restored following an interruption, the machine does not start up. Switch the machine off and back on again.

13. Maintenance

Disconnect the mains plug from the machine before starting any maintenance work.

It is possible that particles deposit inside the power tool during operation. This impairs the cooling of the power tool. Conductive build-up can impair the protective insulation of the power tool and cause electrical hazards.

The power tool should be cleaned regularly, often and thoroughly through all front and rear air vents using a vacuum cleaner or by blowing in dry air.

Prior to this operation, separate the power tool from the power source and wear protective goggles and a dust mask.

14. Repairs



Repairs to power tools must only be carried out by qualified electricians!

If the connection lead is damaged, it must be replaced by a special connection lead.

Contact CS UNITEC if you have Eisenblätter power tools requiring repairs:

**CS. UNITEC Inc.
22 Harbor Ave
Norwalk, CT 06850
USA**

**1-800-700-5919
info@csunitec.com
www.csunitec.com**

15. Environmental protection

The generated sanding dust may contain harmful substances: dispose of appropriately.

Observe national regulations on environmentally compatible disposal and on the recycling of disused tools, packaging and accessories.



Only for EU countries: never dispose of power tools in your household waste! In accordance with European Directive 2002/96/EC relating

to electrical and electronic waste and implementation of national law, used electrical tools must be collected separately and disposed of in an environmentally friendly manner at recycling centres.

[illegible]

[illegible]



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