- **Joint cutters**
- Diamond drilling
- Table saws
- Wall saws
- Wire saws
- Hydraulic power packs
- Special machinery

CF-22 E.800

Change index 000 Issue date 17/05/2019
Translation of the original operating manual

Operating Manual
Maintenance Manual
and Safety Notes

ENGLISH

This operating manual addresses specialists, users with comparable training and users trained by specialists!

Read this operating manual carefully before commissioning and clarify any open questions with **CEDIMA®** !

This operating manual is an essential part of the machine, it must be handed over with the machine and always be kept at hand at the operating location of the machine!

The displayed and listed tools (workshop equipment) and the diamond saw blades are not part of the standard scope of delivery of the joint cutter!

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– Technical documentation

Translation of the original operating manual

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EC Declaration of Conformity

Manufacturer
CEDIMA® Diamantwerkzeug- und Maschinenbaugesellschaft mbH
Lärchenweg 3, D-29227 Celle

Collection and storage of the technical documentation:

Technical documentation of
CEDIMA® Diamantwerkzeug- und Maschinenbaugesellschaft mbH,
Siedemeierkamp 5, D-29227 Celle

Machine description:

Joint Cutter CF-22 E.800

Walk-behind hand-guided for wet cutting in asphalt and concrete as well as similar abrasive construction materials with diamond saw blades up to 800 mm in diameter. Cutting drive motor driven by V-belts connected to a 7.5 kW electric motor. Max. cutting depth 320 mm, steplessly adjustable via motor cutting shaft rocker and threaded rod. Right- or left-side cutting possible. Compressed water supply via GEKA connection and adjustable shut-off valve. Can be dismantled into 3 modular parts for transport.

Measured sound pressure level: L_{WA} = 94 dB (A)

Guaranteed sound pressure level: $L_{WA(d)}$ = 98 dB (A)

Procedure of conformity evaluation: RL 2000/14 EC, Annex V

Hereby we confirm that in the sense of EC Directive 2006/42/EC, Annex II A dated 2006-05-17 (modifications inclusive) of the European Parliament and the Council

The joint cutter **CF-22 E.800** as of year of manufacture 2019

complies with the following harmonised standards and EU Directives:

EN ISO 12100–1, EN ISO 12100–2, EN 13862, EN ISO 14121-1, EN 60204-1, 2000/14/EG, 2002/96/EG

In regard to dangers due to electricity, according to Annex I No. 1.5.1 of the Machinery Directive 2006/42/EC, the protective aims of the Low Voltage Directive 2006/95/EC (formerly 73/23/EEC) are met.

In regard to dangers due to radiation, according to Annex I No. 1.5.10 of the Machinery Directive 2006/42/EC, the protective aims of the EMC Directive 2004/108/EC (formerly 89/336/EEC) are met.

This declaration of conformity immediately becomes invalid if changes are incorporated into the machine which have not been approved by us!

CE

Celle, 14 May 2019

Bob Siemsen (CEO)

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1.0 Technical data and accessories of the CEDIMA® joint cutter CF-22 E.800

1.1 Technical data

Drive motor Max. output Rotational speed Tensioning Fusing Ignition device	Electric motor 7.5 kW 2900 min^{-1} 400 V / 50 Hz 16 amperes Star-delta switch
Protection class	IP 54
Saw blade receptacle Support taps (Ø)	right and left 25.4 mm
Driver pin Ø	8.0 mm
Max. saw blade mounting width	10.0 mm
RPM cutting shaft	2240 min^{-1}
Max. saw blade-Ø	800 mm
Max. cutting depth	320 mm
Cutting depth adjustment	Manual/spindle (crank handle)
Feed	Manual
Water supply	Compressed water at GEKA connection
Dimensions Length/width/height	 1420 mm / 650 mm / 1025 mm
Weight Separable in: Rocker with motor and cutting shaft Chassis Blade guard	126 kg 77 kg 33 kg 16 kg
Sound pressure level at the work place * Sound pressure level *	L_{PA} = 78 dB (A) L_{WA} = 94 dB (A)

* During cutting work, higher values can occur.

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1.2 Vibration acceleration values, hand-arm vibration

Equivalent total vibration value $a_{hv, eq}$	< 2.50 m/s²
Measurement uncertainty K	m/s²

The given values can vary depending on the operating conditions (material to be cut, state of the machine, handling, user, diamond tools in use, etc.).

When determining the daily vibration load A (8) acc. to DIN EN ISO 5349-2, the real effective time that can be significantly influenced (reduced) by idle times must be considered. Idle times include times for fuelling, water supply, tool change, machine set-up and transport, securing the location of operation/use.

Measurement uncertainty acc. to DIN EN 12096.

DANGER

Risk of injury when exceeding the daily maximum vibration load!

When working continuously with the CF-22 E.800, the maximum daily limit is not reached (LärmVibrationsArbSchV).

1.3 Accessories supplied

1 x open-ended spanner size 36

1 x open-ended spanner size 18

1 x open-ended spanner size 13

1 x operating manual

For damage resulting from using accessories that are not in accordance with CEDIMA®, we will refuse any liability.

For information about selecting the correct diamond saw blade, refer to the current price list and the current joint cutter brochure.

For special applications, please ask CEDIMA® directly.

For further accessories, refer to the current CEDIMA® price list.

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2.0 Description of the joint cutter CF-22 E.800

The electrically driven CF-22 E.800 is suitable as a joint cutter for wet cutting with diamond saw blades in places where, due to exhaust and/or noise protection regulations, machines with combustion engines may not be used (e.g. closed rooms).

Despite its compact design, the CF-22 E.800 achieves a cutting depth of 320 mm, thus enabling even more demanding cutting operations.

The 3 transport-friendly assemblies enable fast transport, e.g. in a hatchback car, and allow the CF-22 E.800 to be assembled directly at locations that are difficult to access. The assemblies can be put together and taken apart in a few simple steps, without requiring additional tools.

Figure 2.1

The arrangement of all components of the CF-22 E.800 joint cutter with the resulting weight distribution provides sufficient contact pressure on the diamond saw blade while at the same time being easy to handle during transportation and set-up.

The modular design facilitates cleaning, maintenance and, if necessary, repair.

Separated into three assemblies

Figure 2.2

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The cutting shaft, and with it the saw blade, is driven by an electric motor via V-belts.

The blade can be mounted on the right or left side.
The blade guard can be repositioned for this purpose.

Feed is achieved by pushing the adjustable push handle.

The saw blade is lowered and raised by means of a lockable hand crank and a trapezoidal threaded spindle.

The cutting depth can be progressively adjusted up to 320 mm.

The cutting shaft is mounted in two self-aligning pedestal bearings. The precision-engineered shaft has a 25.4 mm diameter blade mounting flange.

The front pointer is mounted on the joint cutter frame. It enables the user to cut accurately along a line.

The diamond saw blade is supplied with pressurized water via the Geka coupling and an adjustable shut-off valve.

The drive unit and cutting shaft's speed have been designed to provide the best possible conditions for cutting with **CEDIMA**® diamond saw blades.

For cutting, we recommend **CEDIMA**® diamond saw blades which ensure protection of the joint cutter due to their ease of cutting and their smooth movement.

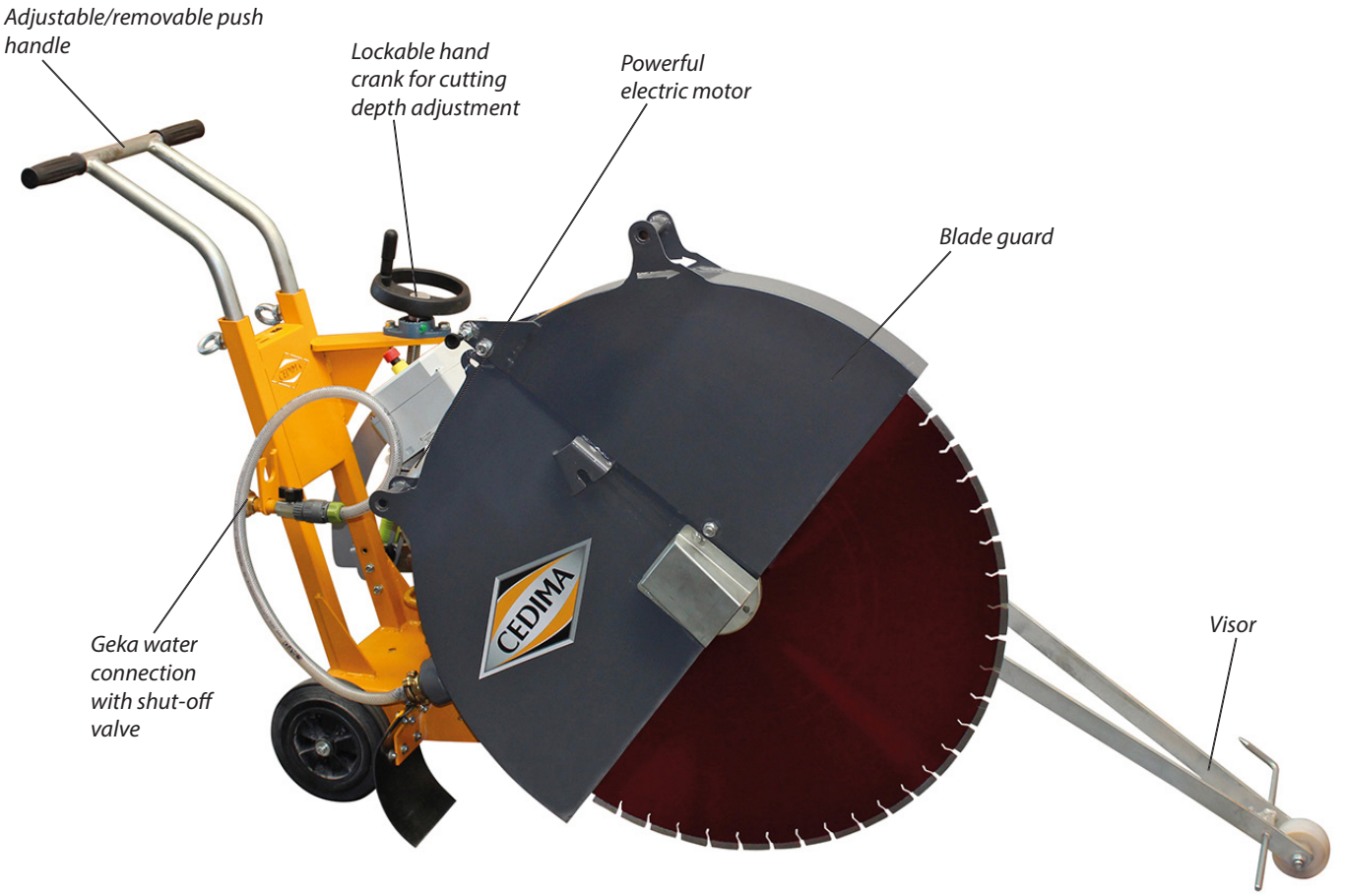


Figure 2.3

ENGLISH

3.0 Basic safety instructions

ATTENTION

Read and observe all operating manuals pertaining to the joint cutter!

3.1 Icons, symbols, notes

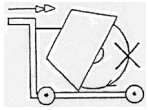
The following signs and symbols are used on the joint cutter for information of special importance:

DANGER

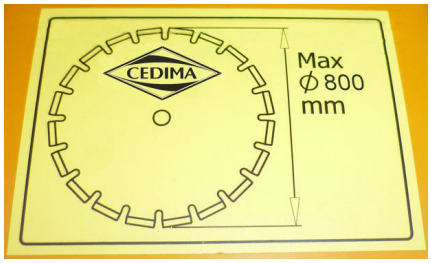
Warning of a hazard area!

DANGER

Warning of cutting shaft, saw blade!

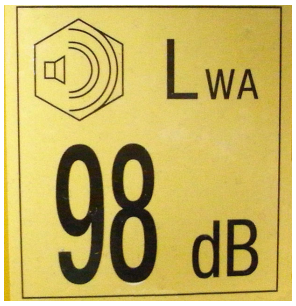


To move the joint cutter beyond the cutting area, stop the tool!



Maximum mountable saw blade diameter!

Direction of rotation of saw blade / cutting shaft



Guaranteed sound pressure level

Read the operating manual!

Use eye protection!

Use hearing protection!

Use foot protection!

Use hand protection!

Use light breathing protection!

The operating manual uses the following terms and symbols for important information:

Note

Special information regarding the economic use. Messages marked with the symbol "Note" contain important information, and it is separated from other text.

ATTENTION

is used for particular comments or statements concerning accident prevention (i.e. when something is compulsory or prohibited). The text following the "ATTENTION" symbol provides instructions which must be precisely observed to avoid damage to the machine or material and injuries to the user or a third party.

DANGER

used for crucial statements concerning accident prevention (i. e. when something is compulsory or prohibited) in order to avoid injuries to the user or a third party as well as considerable damage to the machine or material. The text following the "DANGER" symbol warns the reader that the user or a third party is likely to be injured if the instruction given is not observed or if the user does not proceed as described.

Important statements are printed in italics.

Statements concerning safety are printed in bold and italics

3.2.1 Designated use, predictable misuse

3.2.1.1 The joint cutter CF-22 E.800, in the following referred to as "the machine", is exclusively to be used as a walk-behind hand-guided floor cutting machine for cutting by means of diamond saw blades in wet cutting operation of firmly installed components made of asphalt, concrete and abrasive construction material as used e.g. in roadwork, hall floors and runways! Using the machine for purposes other than those mentioned above is considered contrary to its designated use; in particular the use of the machine with cutting tools other than those approved by the manufacturer/distributor is prohibited. The manufacturer/distributor cannot be held liable for any damage resulting from such use. The risk of such misuse lies entirely with the user!

3.2.1.2 The machine is not approved for other use than the one specified herein; this constitutes improper use!

3.2.1.3 Operating the machine within the limits of its designated use also involves observing the instructions set out in this operating manual and complying with the inspection and maintenance directives.

3.2.1.4 The machine has been designed in accordance with state-of-the-art standards and recognized safety rules. Nevertheless, its use may constitute a risk to life and limb of the user or of third parties, or cause damage to the machine or other material property!

3.2.1.5 The machine must only be used in technically perfect condition in accordance with its designated use, the instructions set out in the operating manual and the relevant national safety regulations, and only by safety-conscious persons who are fully aware of the risks involved in operating the machine! Any functional disorders, especially those affecting the safety of the machine, must therefore be rectified immediately!

3.2.2 Organizational measures

3.2.2.1 This operating manual must always be at hand at the place of use of the machine and must be accessible to the personnel operating the machine.

3.2.2.2 In addition to this operating manual, all other generally applicable legal and other mandatory regulations relevant to accident prevention and environmental protection must be observed. Such obligations may also comprise the handling of hazardous materials, provisioning and/or wearing of personal protective equipment, or road traffic regulations!

3.2.2.3 This operating manual must be supplemented by instructions covering the duties involved in supervising and notifying special organizational features, such as job organization, work flows or the personnel entrusted with the work.

3.2.2.4 Personnel entrusted with work on the machine must have read the operating manual, in particular the chapter "Safety instructions" prior to taking up work! This applies especially to persons working only occasionally on the machine, e. g. during set-up or maintenance activities!

3.2.2.5 Check -at least from time to time- whether the personnel is carrying out the work in compliance with the operating manual and paying attention to risks and safety-relevant factors!

3.2.2.6 For reasons of safety, long hair must be tied back or otherwise secured, garments must be close-fitting and no jewellery -including rings- may be worn! Severe injury may result from being caught by moving parts of the machine!

3.2.2.7 Personal protective equipment must be used wherever required by the circumstances or by law (e. g. safety glasses, ear protectors, safety boots, suitable safety clothing). Depending on the operating conditions of the machine, other personal safety equipment might be required! Observe the regulations for the prevention of accidents!

3.2.2.8 Observe all safety precautions and warnings attached to the machine and always keep them in good and perfectly legible condition.

3.2.2.9 In the event of safety-relevant modifications or changes in the behaviour of the machine, stop the machine immediately and report the malfunction to the competent authority/person.

3.2.2.10 Do not remove or render inoperative any safety devices the machine is equipped with!

3.2.2.11 Never make any modifications, additions or conversions which might affect safety without the manufacturer's/distributor's prior consent. This also applies to the installation and adjustment of safety devices as well as to welding work on supporting structures!

3.2.2.12 Damaged or worn parts of the machine must be replaced immediately! Only use original spare parts!

3.2.2.13 All spare parts and tools must comply with the technical requirements specified by the manufacturer/distributor. With original spare parts, this is always ensured!

3.2.2.14 Adhere to the legally prescribed preventive maintenance and inspection intervals or those specified in this operating manual!

3.2.2.15 Hydraulic hose pipes must be replaced at prescribed and/or appropriate intervals even if no safety-relevant defects have been detected!

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3.2.2.16 All maintenance and repair activities must be performed by skilled personnel using suitable tools and other suitable workshop equipment in a suitable environment for the work (sufficient space around the machine)!

3.2.2.17 Observe the fire alarm and fire fighting measures. The personnel must be made familiar with the location and handling of fire extinguishers.

3.2.3 Selecting qualified staff

3.2.3.1 Any work on and with the machine must be executed by reliable personnel only. Statutory minimum age limits must be observed!

3.2.3.2 The machine must be operated or serviced by trained or properly instructed personnel only! Clearly define the individual responsibilities of the personnel for operation, set-up, maintenance and repair!

3.2.3.3 Make sure that only authorized personnel work on or with the machine.

3.2.3.4 Define the machine operator's responsibilities -also with regard to observing road traffic regulations-, providing the operator with the authority to refuse instructions by third parties that are contrary to safety.

3.2.3.5 Do not allow persons to be trained or instructed or persons taking part in a general training course to work on or with the machine without being permanently supervised by an experienced person.

3.2.3.6 Work on the electrical system and equipment of the machine must be carried out only by a skilled electrician or by properly instructed persons working under the supervision and guidance of a skilled electrician and in accordance with electrical engineering rules and regulations.

3.2.3.7 Work on the hydraulic system must be carried out only by personnel with special knowledge and experience of hydraulic equipment!

3.2.4 Safety precautions regarding specific operational phases

I. Normal operation

3.2.4.1 Before you start working, familiarize yourself with the surroundings and circumstances of the site! This includes obstacles which might impede work, the soil bearing capacity and the required safety measures, e.g. barriers separating the work site from public traffic and the possibility to render first aid in case of accidents!

3.2.4.2 Assemble the machine on an even, hard and stable surface! The stability is to be ensured! Remove any obstacle which could impede the functioning of the machine!

3.2.4.3 Ensure you work on even, firm and stable surfaces and that you maintain your balance at all times!

3.2.4.4 Never use the machine in a way that might be contrary to safe working practices!

3.2.4.5 Machines which are driven by a combustion engine must only be filled with the fuel recommended by the manufacturer! Pay attention to the danger of fire and explosion when filling the tank! Do not spill fuel onto hot machine parts!

3.2.4.6 Heed to the conditions specified by the manufacturer concerning the connections for power, water and other auxiliaries!

3.2.4.7 Make sure that the machine is used only when it is in a safe and reliable condition.
Operate the machine only if all protective and safety-related devices (e. g. blade guard, V-belt guard, emergency shut-off equipment, sound-proofing elements, etc.) are in place and fully operative!

3.2.4.8 Each time before you start working and at least once per shift, check the machine for obvious damage and defects. Any changes (including changes in the performance or behaviour of the machine) must be reported to the competent authority/person immediately! If required, shut down the machine immediately and secure it!

3.2.4.9 In the event of malfunctions or changes in the machine's behaviour, stop the machine immediately and secure it against restarting! Have any defects rectified immediately!

3.2.4.10 The following must be checked before starting cutting operations:
- the saw blade for compatibility to the directions given by the manufacturer regarding the cutting method (wet or dry cut) and the kind of work to be performed
- the proper condition of the diamond saw blade (no deformation, damage, ...)
- the diameter of the diamond saw blade, approved by the manufacturer
- the cutting speed (RPM) of the diamond saw blade approved by the manufacturer (max. speed of the machine)
- the compatibility of direction of rotation of the diamond saw blade and the machine
- the compatibility of the diamond saw blade to the tool receptacle (stem hole, flange)
- that the saw blade clamping tools (spanners) have been removed
- that the saw blade is securely attached (fitted according to the manufacturer's specifications, using original connecting elements)!

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3.2.4.11 For machines driven by rotary electric power, adhere to the direction of rotation of the tool as specified by the manufacturer to avoid the loosening of the tool!

3.2.4.12 During start-up and shut-down procedures always watch the indicators in accordance with the operating manual.

3.2.4.13 Before you start up the machine or set it to motion, make sure that the starting or running machine does not create any hazard to other persons' health.

3.2.4.14 The driver/ operator position is only to be filled by the user. Keep third parties away from the machine!

3.2.4.15 Start and operate the machine only from the control location (CF-22 E.800, behind the machine)!

3.2.4.16 It must be ensured that the operator has an unobstructed view of the work area at all times and that he can intervene at any time in the working process.

3.2.4.17 Before you start working with the machine, check that the braking, steering, signaling and lighting systems are fully functional!

3.2.4.18 Hydraulic and water hoses as well as electric lines must be laid in such a way that damage by crossing or by the tool cannot occur!

3.2.4.19 The cutting operation must be performed using the wet cutting method in order to prevent the formation of hazardous clouds of fine dust and to increase the service life of the cutting tool.

3.2.4.20 When using the wet-cutting method, always make sure that there is enough water at the proper places. Make sure there is enough cooling water at the cutting groove!

3.2.4.21 When using the dry-cutting method, make sure there is enough suction to remove the dust!

3.2.4.22 If substances can emerge during the work which are health-damaging or explosive, e.g. dust, slurry, the national health- and safety rules apply!

3.2.4.23 Moving the machine outside the workplace is only allowed without saw blade!

3.2.4.24 When operating the machine on public roads, ways and places always observe the traffic regulations in force and, if necessary, make sure beforehand that the machine complies with the relevant road vehicle regulations.

3.2.4.25 Always control the accident-proof accommodation of the accessories before the transport of the machine!

3.2.4.26 Never travel across slopes exceeding 5%.

3.2.4.27 Always use safety ropes when operating the machine on sloping terrain exceeding 15%!

3.2.4.28 Before leaving the machine always secure it against inadvertent movement and unauthorized use!

II Special tasks when using the machine and during upkeep work as well as troubleshooting in daily operation; disposal

3.2.4.29 Observe the adjustment, maintenance and inspection activities and intervals set out in the operating manuals, including information on the replacement of parts or assemblies! These activities may be performed by skilled personnel only!

3.2.4.30 Brief the operating personnel before initiating special repair or maintenance activities! Appoint a person to supervise such activities!

3.2.4.31 In any work concerning the operation, adaptation to production requirements, conversion or adjustment of the machine and its safety-oriented devices or any work related to inspection, maintenance and repair, always observe the start-up and shut-down procedures described in the operating manual as well as the instructions on maintenance activities!

3.2.4.32 If necessary, secure a large area around the location where maintenance of the machine is to be performed.

3.2.4.33 Service and repair work may only be carried out with a fully lowered blade shaft/frame or through securing the frame by means of approved trestles! Hydraulic valves for raising the frame must be opened (pressure relief)!

3.2.4.34 Maintenance and repair work may be carried out only if the machine is placed on level and solid ground and secured against inadvertent movement!

3.2.4.35 If the machine is completely shut down for maintenance or repair work, it must be secured against inadvertent restarting:
– remove the key and/or disconnect the power supply
– attach a warning sign at the main switch.

3.2.4.36 When using a lifting gear for replacing individual parts or large assemblies make sure that the parts/ assemblies are carefully attached to the lifting gear and secured in place to avoid hazardous conditions! Use only suitable and technically perfect lifting gear and suspension systems with adequate lifting capacity! Never work or stand under suspended loads!

3.2.4.37 The fastening of loads and the instructing of crane/industrial truck operators should be entrusted to experienced persons only! The instructor must be within sight or sound of the operator!

3.2.4.38 Before performing any maintenance/repair activities clean the machine, especially the connectors and screwed joints, and remove any oil, dirt and preservative agents! Never use aggressive detergents! Use lint-free cleaning rags!

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3.2.4.39 Before cleaning the machine with water or other cleaning agents cover or tape up all openings which -for safety and functional reasons- must be protected against the ingress of water/steam/cleaning agents! Special care must be taken with bearings, electric motors and electronic systems! Pay attention to the protection classes!

3.2.4.40 After cleaning, remove the covers/tapes completely!

3.2.4.41 After cleaning, check all cable connection for leaks, loose connections, chafe marks and damage! Have any defects found rectified immediately!

3.2.4.42 Always retighten any screwed connections that have been loosened during maintenance/repair activities!

3.2.4.43 Any safety devices removed for set-up, maintenance or repair purposes must be refitted and checked immediately upon completion of the set-up, maintenance or repair work!

3.2.4.44 Always keep a sufficient distance from the edges of excavations, ditches and slopes!

3.2.4.45 Avoid any operation that might affect the stability of the machine!

3.2.4.45 Before leaving the machine always secure it against inadvertent movement and unauthorized use!

3.2.4.46 Ensure that all process materials and replaced parts are disposed of safely and with minimum environmental impact!

3.2.5 Information about special risks related to electric energy

3.2.5.1 Electric connections are only permitted in CE-approved mains networks with appropriate fusing and fault current safety switch!

3.2.5.2 Observe the relevant VDE regulations or national standards!

3.2.5.3 Electrical connections must always be kept free from dirt and moisture!

3.2.5.4 Use only original fuses with the specified rating! Switch off the machine immediately if trouble occurs in the electric power supply!

3.2.5.5 Avoid physical contact with grounded parts e.g. pipelines (danger of electric shock)!

3.2.5.6 When a live high-voltage line has been touched or cut:
- Do not touch the machine, but do not leave it alone!
- Drive the machine (saw blade) out of the hazardous location if that is possible without danger for the user!
- Warn others not to come near or touch the machine!
- Have someone switch off the electric power supply to the line!
- Leave the machine only when you can be sure that the touched or cut power line has been switched off!

3.2.5.7 When operating the machine always keep a safe distance from electric lines! If work is to be carried out in the vicinity of electric lines, make sure that the working equipment is always kept well away from such lines!

DANGER FOR YOUR LIFE!

Familiarize yourself with the prescribed safety distances!

3.2.5.8 Work on the electrical system or equipment may only be carried out by a qualified electrician or by properly instructed personnel working under the supervision of a qualified electrician and in accordance with the applicable electrical engineering rules!

3.2.5.9 If provided for in the relevant regulations, the power supply to machine parts, on which inspection, maintenance or repair work is to be carried out, must be cut off! First check that the disconnected parts are no longer live, ground and bridge them and make sure that any live parts which are near them are insulated!

3.2.5.10 The electrical equipment of the machine must be inspected and checked at regular intervals! Any defects such as loose connections, scorched cables or defective plugs must be rectified immediately!

3.2.5.11 If it is necessary to carry out work on live parts, a second person must be present to cut off the power supply in case of emergency by actuating an emergency shut-off or main power switch! Secure the working area with a red-and-white safety chain and a warning sign! Use voltage-insulated tools only!

3.2.5.12 When work has to be carried out on high-voltage components, switch off the power supply, disconnect the concerned parts from the power supply, connect the supply cable to earth and short-circuit the components - e. g. capacitors - with a grounding rod!

3.2.5.13 If mobile electrical equipment, connecting cables and/or extension/appliance cords with plug connectors are used, ensure that such equipment, cables and cords are checked for correct function at least once every six months by a qualified electrician or -if suitable testing equipment is available- by a properly instructed person!

3.2.5.14 Protective installations with fault-current protection units used in non-stationary equipment must be checked for correct operation at least once a month by a properly instructed person!

3.2.5.15 Fault-current and fault-voltage protection units must be checked for correct operation by actuating the testing facility
- once on every working day in the case of mobile equipment,
- at least once every six months in the case of stationary equipment!

3.2.6 Gas, dust, steam, smoke

3.2.6.1 Do not perform any welding, flame-cutting and grinding work on the machine unless such work is expressly permitted, as there may be a risk of fire or explosion (consult CEDIMA®)!

3.2.6.2 Before carrying out welding, flame-cutting or grinding operations, clean the machine and its surroundings from dust and flammable material and make sure that the premises are sufficiently ventilated (risk of fire or explosion)!

3.2.6.3 When working in small or narrow rooms, observe the relevant national safety regulations (if any)!

3.2.6.4 Internal combustion engines must be operated in sufficiently ventilated rooms only! Never leave the engine running in enclosed or confined spaces! Exhaust gases contain carbon monoxide!

3.2.6.5 All pipes, hoses and screwed joints must be checked for leaks and visible damage at regular intervals! Clear any defect immediately or have the defect rectified immediately!

3.2.7 Noise

3.2.7.1 Make sure that all sound-proofing equipment is in place while operating the machine!

3.2.7.2 Use the prescribed ear protectors!

3.2.8 Lighting

3.2.8.1 The machine is designed for use in daylight environments! When working in unlighted areas the driver/operator must ensure sufficient illumination of the site.

3.2.9 Information about the handling of fluids, lubricants and other chemical substances

3.2.9.1 When handling pressure fluids, lubricants, greases or conservation agents (hereinafter referred to as fluids or lubricants), observe the product-related safety regulations!

3.2.9.2 Avoid any prolonged contact between fluids or lubricants and your skin! Carefully clean your skin to remove all fluids or lubricants adhering to it!

3.2.9.3 Be careful when handling pressure liquids (hydraulic fluids)! Risk of serious injuries caused by high pressure leaks! Do not manipulate the hydraulic system!

3.2.9.4 Be careful when handling hot fluids or lubricants; risk of serious injuries or burns! Especially when handling fluids or lubricants with temperatures exceeding 60 °C make sure to avoid any contact between the fluid and your skin!

3.2.9.5 If fluids or lubricants have come into contact with your eyes, rinse your eyes immediately and thoroughly with clean drinking water and consult a doctor! Then consult a physician!

3.2.9.6 Spilled fluids or lubricants must be removed immediately using binding agents!

3.2.9.7 Fluids or lubricants must not penetrate into the soil or public sewage system!

3.2.9.8 Used fluids or lubricants must be collected, stored and disposed of properly!

3.2.9.9 Follow all relevant legal instructions and provisions regarding the handling and disposal of fluids or lubricants! In case of doubt, contact the competent authorities for detailed information!

3.2.10 Transporting the machine

3.2.10.1 Regard and follow all regulations, standards and directives such as BGV A1, BGI 523, 90/269/EEC, 2001/45/EEC, ArbStätt V, Lasthandhab V!

3.2.10.2 Use hoisting tools and floor-level conveyors with loads > 25 kg

3.2.10.3 Use only suitable means of transport and lifting gear of sufficient capacity when loading or transporting the machine!

3.2.10.4 Specify an expert instructor for the lifting process!

3.2.10.5 Always observe the instructions given in the operating manual when lifting the machine (use only the prescribed lifting eyes for attaching the lifting gear)!

3.2.10.6 Only use a suitable transport vehicle with sufficient lifting force!

3.2.10.7 The diamond saw blade must be dismounted for transport!

3.2.10.8 Always control the accident-proof accommodation of the accessories before the transport of the machine!

3.2.10.9 Always store or transport the standing machine horizontally, otherwise fuel and oil can leak out!

3.2.10.10 Secure the load carefully. Use suitable attachment points!

3.2.10.11 Before loading the machine or parts of it, secure the machine/parts against inadvertent movement! Attach a suitable warning sign! Before using the machine again, make sure that such protection material or devices are properly removed!

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3.2.10.12 Parts that need to be disassembled for transport purposes must be mounted and fastened carefully before recommissioning!

3.2.10.13 Even when the transport of the machine only involves a minor relocation, disconnect it from all external power supply lines! Before using the machine again, make sure that the connection to such external supply lines is reestablished properly!

3.2.10.14 The recommissioning procedure must be carried out strictly in accordance with the operating manual! Observe the instructions given in the operating manual when reassembling and operating the machine!

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ENGLISH

4.0 Erection and operation

4.0.1 To be checked on delivery

First check the completeness and intactness of your **CEDIMA**® joint cutter CF-22 E.800. You will find the scope of the delivery in the chapter "Technical specifications and accessories".

The joint cutter can be put into operation without special efforts or installation. However, when setting up and operating the machine the following notes as well as the general safety instructions must be observed.

4.1 Transporting the joint cutter

4.1.1 Assembling/dismantling the joint cutter

Assembly:

- Grease all connecting elements before each assembly.
- Place rocker with motor and cutting shaft down into the bearing on the trolley
- Insert the central bolt and secure by means of the spring pin.
- Fix the connecting plate for the height adjustment onto the rocker using the ring bolt. The connecting plate must be located in the upper section of the threaded spindle.
- Attach the blade guard.

Dismantling:

- Proceed in reverse order to Assembling

Arm extension of the height adjustment
Central bolt
Rocker with motor and cutting shaft

Spring pin
Bearing on the trolley frame
Blade guard

Figure 4.1

4.1.2 Adjusting the push handle

Release the ring bolts and pull out the push handle appropriate to your height until you can move the joint cutter comfortably.

Lock the push handle in the desired position by means of the ring bolts.

Push handle

Ring bolts

Figure 4.2

4.1.3 Checking the V-belt tension

Check the tension of the V-belts daily.

V-belt tension with sealing stopper

Figure 4.3

The tension of the V-belts is checked as follows:

Disconnect the joint cutter from the mains by pulling the plug!

Remove the plug of the V-belt cover during motor standstill. The plug is located on top of the belt cover. Check the now-accessible V-belts through the control opening by pressing the belts with your fingers. It should only be possible to press the belts about 10 mm downwards. If they can be pressed down further, they need to be retightened.

The tensioning and changing of the V-belts is described in chapter "Maintenance and care".

4.2 Securing the parking brake

To park the machine and prevent it from rolling away unintentionally, set the cutting shaft to the highest position using the hand crank.

In this position, the left rear wheel is blocked.

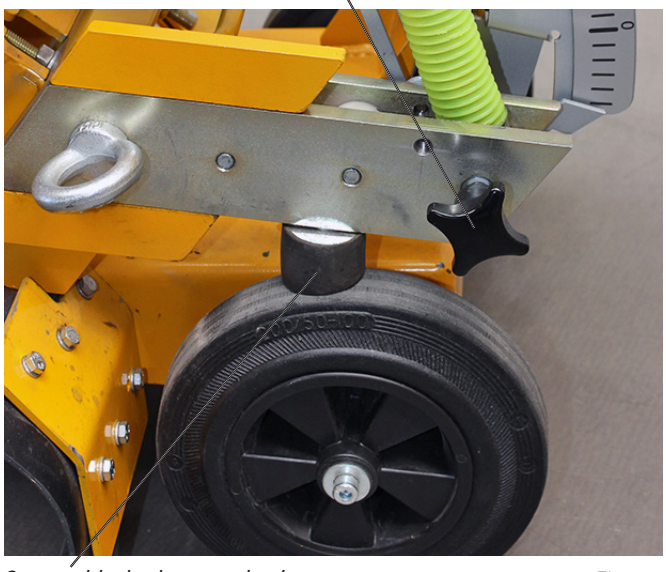


Fig. 4.8

On strongly sloping terrain, the machine must be additionally secured against rolling away.

Replace worn stoppers in a timely fashion to preserve the braking effect!

4.3 Mounting the diamond saw blade

4.3.1 General information

The drive unit and cutting shaft's speed have been designed to provide the best possible conditions for cutting with **CEDIMA**® diamond saw blades.

Select the saw blade type according to the material to be cut.

Observe the diameter of the saw blade receptacle and the blade shaft!

Please refer to chapter "Technical specifications and accessories" for details.

The maximum permissible saw blade diameter is 800 mm!

Ask **CEDIMA**® about the correct saw blade type and the reducer ring.

CEDIMA® will refuse any warranty in case of improper use of the saw blades!

Complaints about delivered **CEDIMA**® saw blades can only be accepted if there is a remaining diamond segments' height of 20 %!

4.3.2 Lifting the cutting shaft

DANGER!

Make sure that the joint cutter can not be started unintentionally by isolating the motor from the power supply!

The diamond saw blade can be lowered and lifted using a crank handle with threaded spindle.

Loosen the star-knob screw which locks the lifting spindle.

Turn the spindle by means of the hand crank until the blade arm reaches its maximum height. At the same time, the machine is braked by the stopper.

Figure 4.4

4.3.3 Mounting the saw blade

1. Loosen the clamping screw on the blade guard, then lilft and remove it.

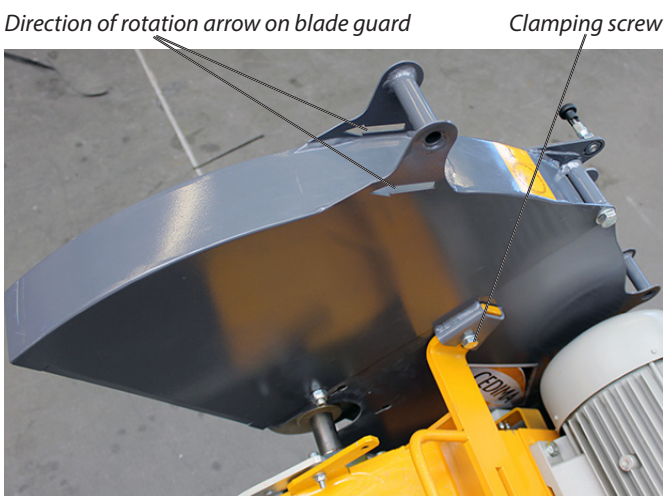


Figure 4.5

2. Loosen and remove the cutting shaft nut using the double open-ended wrench supplied as an accessory.

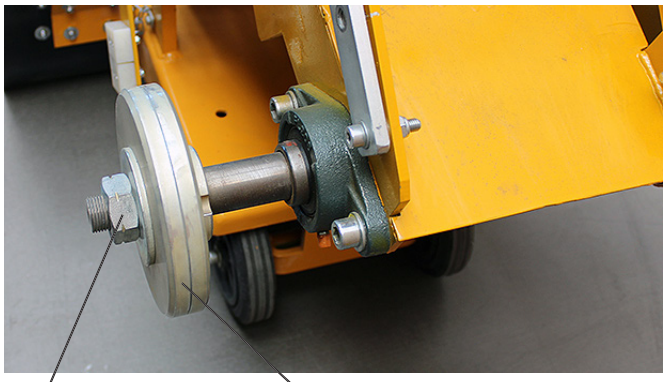


Figure 4.6

3. Remove the air filter cover.
4. Make sure that the cutting shaft and the blade flanges are clean. If necessary, remove any dirt with a lint-free cloth!

DANGER!

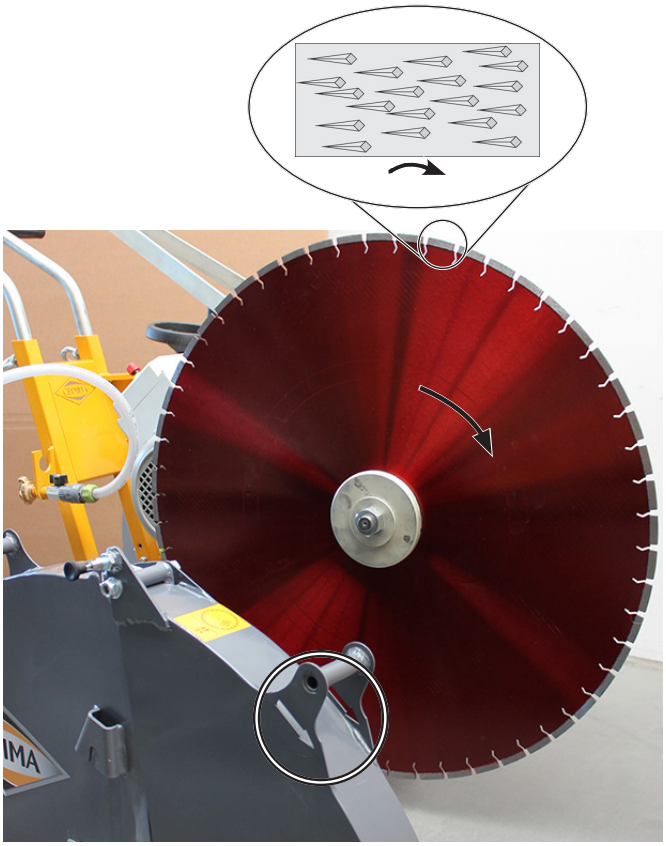
Before mounting, check the true running accuracy of the diamond saw blade and make sure it is not damaged!

The diamond should not be used in case of damaged or missing diamond segments or if it runs out of true!

The direction of rotation of the cutting shaft must match the direction of rotation of the saw blade!

The sense of rotation of the cutting shaft is marked by an arrow on the blade guard (Fig. 4.7).

Imprinted on the saw blade is an arrow for the cutting direction. If this arrow is not visible, the cutting direction of the saw blade can be determined as follows: During cutting, a "tail" is formed behind the diamond; therefore, the diamond is always in front of the "tail" (direction of rotation).



Diamond saw blade mounted in the correct direction of rotation Fig. 4.7

5. Mount the diamond saw blade and the clamping flange onto the cutting shaft and tighten the cutting shaft nut securely.
   Make sure that the drive pin is properly inserted into the clamping flange.
6. Replace the blade guard and tighten it with the clamping screw.

After the cutting shaft nut has been tightened on the opposite side, the cutting shaft guard must be assembled.

DANGER!

Operation of the machine is not permitted without saw blade guard and cutting shaft guard!

Diamond saw blades are designed to sharpen themselves during operation (while cutting). However, if cutting often into strong steel reinforcements or hard material with low abrasion, they can become blunt. They can be re-sharpened by cutting into abrasive material such as limestone or asphalt.

ATTENTION!

Remove the diamond saw blade before transport to avoid damaging the tool!

4.4 Adjusting and using the front pointer

DANGER

Risk of pinching or crushing when swivelling the front visor!

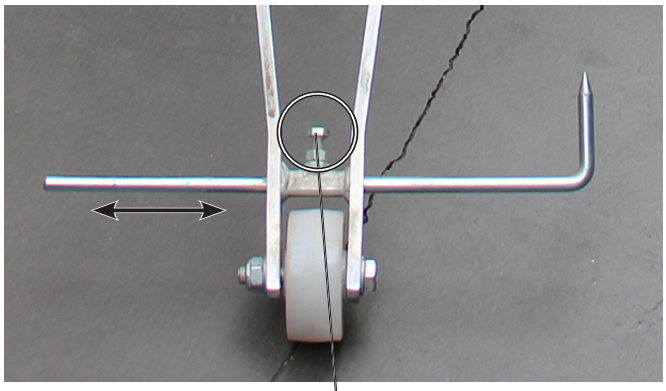
Careful with hands and fingers!

Alignment of the pointer is carried out with the motor stopped and with the diamond saw blade fitted.

Loosen locking pin and swivel front pointer down Fig. 4.9

Aligning the front pointer for right and left-hand cuts

Pull out the locking bolt and swivel down the front pointer. Align laterally with a guide line or guide rail in direct alignment with the diamond saw blade so that the tip of the visor rod is directly aligned with the cutting line. To do this, turn/move the visor rod accordingly if necessary.



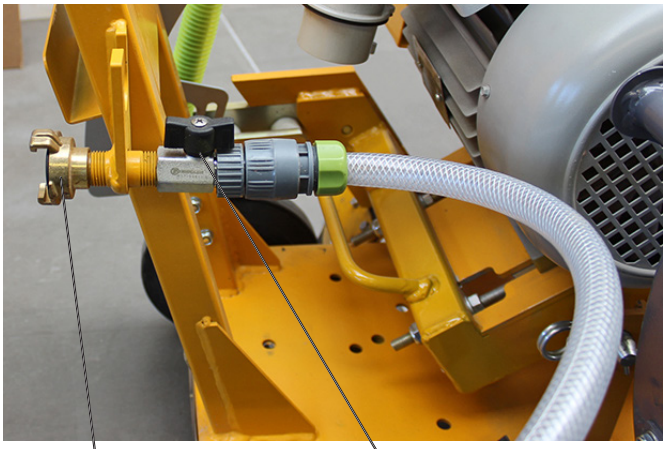
Move the visor rod accordingly by loosening the screw.

Fig. 4.10

4.5 Connecting the water supply

The **CEDIMA®** joint cutter CF-22 E.800 is supplied with water via a GEKA coupling.

The water shut-off valve located behind it allows you to stop or reduce the supply of water.



Geka water coupling *with shut-off valve* Fig. 4.11

Only use water for cutting that is free of coarse impurities to prevent blockages of the water supply.

ATTENTION!

Diamond tools designed for wet cutting mode must never be operated without water! This also leads to an inevitable loss of segments!

4.6 Electric connection

DANGER

Risk of injury due to electric short-circuit!

Never plug or unplug the power cable while the electric supply is switched on or the saw blade drive motor (system under electrical voltage) is running!

Lay the mains cable in such a way that there is no risk of danger or damage and so that it cannot be pulled in or wound up!

Do not expose the joint cutter to direct water jet and/or extreme humidity! The joint cutter is splash-proof when standing horizontally on its wheels! All electrical connections must be kept free from moisture!

ATTENTION

Observe the corresponding safety precautions!

Chapter 3, in particular section 3.2.5!

ENGLISH

ATTENTION!

Make sure to establish electric connections properly!

Work on electrical supply lines and electric motors may only be carried out by qualified electricians or by properly instructed personnel under the direction and supervision of a qualified electrician in accordance with the applicable electrical engineering regulations!

Observe the valid national rules and regulations!

The connection must be established via a properly installed socket with earthing contact!

The connection socket (CEE) must be fused by a residual current circuit breaker (RCCB) conforming to standard! Only that will ensure protective grounding and separation from the mains as required for safety reasons!

In operation on construction sites, the connection to the building site main cabinet must be established according to IEC (EN) 61439 and 60364-7-704!

Observe the relevant safety regulations and standards for operation of electric equipment, e.g. the directives of the employer's liability insurance association DGUV 3 of the BGHW and the standard EN 60204 part 1!

ATTENTION

Observe the risks when connecting to a current generator!

If the joint cutter is connected to a current generator, the user bears the risk in the event of defects, e.g. voltage fluctuations!

When operating the CF-22 E.800 *on a current generator, first switch the joint cutter OFF and disconnect it from the electrical supply line and only then switch the current generator OFF! Otherwise voltage surges can damage the electric system of the joint cutter!*

ATTENTION

Observe the specifications when connecting the mains cable!

The mains cable and the cable drum must be approved for the connection values and for outside work!

Never connect the mains cable while it is still wound in the cable drum because the heat resistance will cause power loss of the joint cutter!

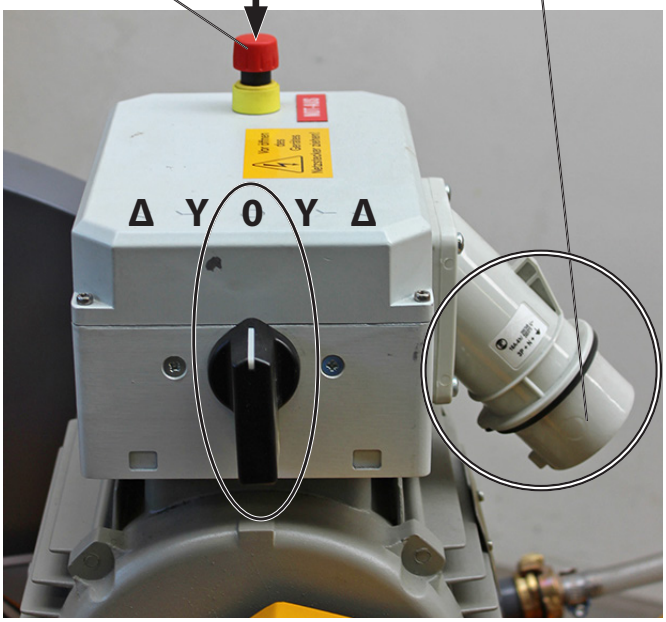
From 50 m onwards, the joint cutter will show distinct power loss!

From 100 m cable length onwards, the power loss will increase significantly!

The power loss can be compensated to some extent by selecting appropriate cable cross sections:

Recommended cable cross-sections:
up to 20 m -> 5 x 4 mm²
up to 50 m -> 5 x 6 mm²
up to 100 m -> 5 x 10 mm²

EMERGENCY STOP button *Mains cable socket outlet*



CF-22 E.800 switched off Fig. 4.12

4.7 Starting, stopping the joint cutter engine

4.7.1 Starting the engine

DANGER!

When starting the engine, the cutting shaft with any mounted saw blade will start rotating immediately!

Make sure that the starting cutting shaft (saw blade) cannot constitute a danger!

Keep the danger area clear, especially before and behind the cutting direction (saw blade)!

As a basic principle the joint cutter has to be transported to its place of operation with the motor at a standstill!

Transporting and moving the joint cutter with the saw blade rotating freely is forbidden!

Ear protection must be worn!

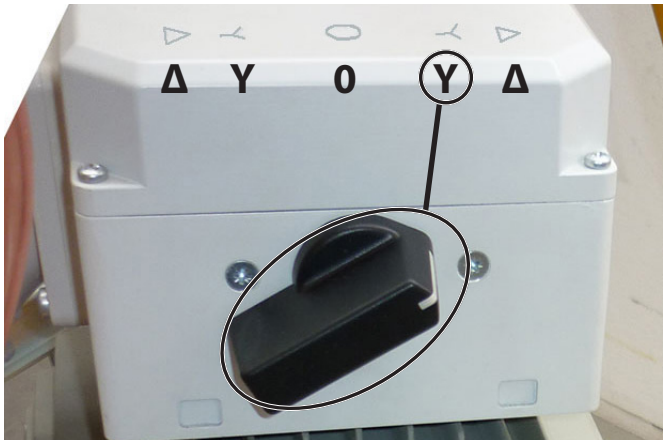
ATTENTION

Once mounted, the diamond saw blade must be able to rotate freely!

1. Lift the saw blade off the surface (to be cut) and/or out of the cut and tighten the cutting depth locking mechanism!

Start the engine using the star-delta reversing switch on the switch box.

2. Turn the star-delta reversing switch right to the **Y** position until the saw blade begins to turn.



Star-delta reversing switch in Y position Fig. 4.13

ATTENTION

Observe the rotational sense of saw blade.

The rotational sense of the saw blade must correspond to the direction indicated by the arrow on the blade guard (Fig. 4.7)! (the rotational sense of the ventilator wing on the motor must correspond to the arrow on the ventilator cover)

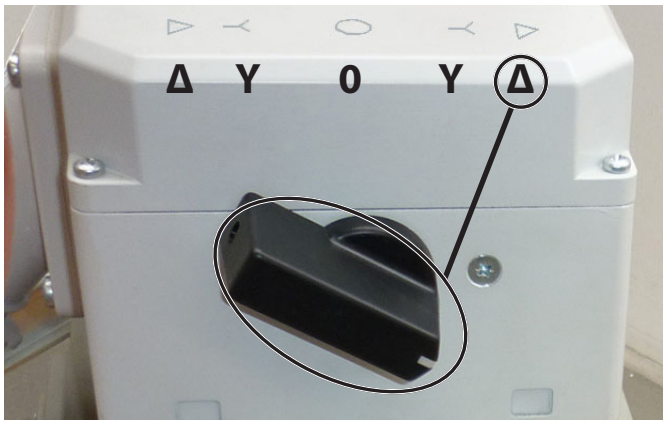
3. If the direction of rotation of the saw blade is incorrect, switch the star-delta reversing switch to **0** and allow the motor to come to a standstill!

   Then turn the reversing switch in the opposite direction to the **Y** position (for the first start)! Once the rated speed is reached, switch to position **Δ**.

4. If the direction of rotation of the saw blade is correct, the switch is switched to the **Δ** position after the rated speed has been reached.

ATTENTION

Do <u>not</u> operate the motor in the Y position!



Star-delta reversing switch in Δ position Fig. 4.14

4.7.2 Stopping the motor

1. Raise the diamond saw blade out of the cut so that it can turn freely!

2 Turn the star-delta reversing switch to position **0** (Fig. 4.12)!

The engine and thus the diamond saw blade will come (spin) to a stop!

4.8 Cutting depth 0 position

Before starting to cut, the cutting depth setting must be set to 0 (depending on the diameter of the saw blade).

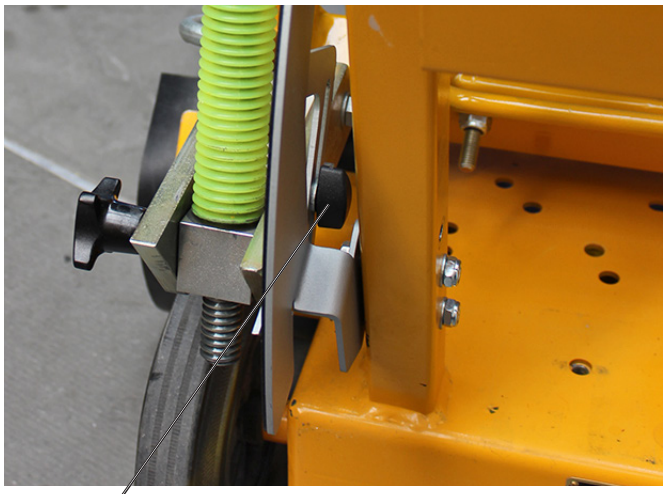
Fig. 4.15

1. Mount the diamond saw blade.

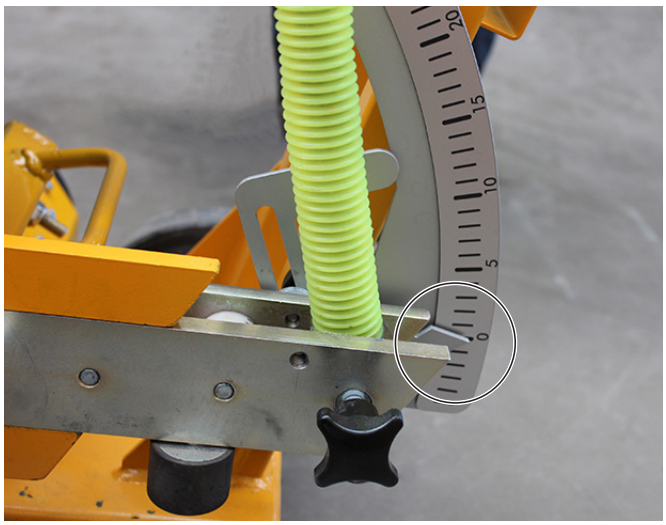
2. Lower the saw blade by turning the hand crank until it "scratches" the floor.

Scratching with the diamond saw blade Fig. 4.51

3. Loosen the clamping screw of the cutting depth display, set the display to 0 and retighten the clamping screw.



Clamping screw of the cutting depth display Fig. 4.17



Pointer of the cutting depth display set to 0 Fig. 4.18

4. The cutting depth can be read off the cutting depth display during cutting.
5. Once the saw blade has been lowered to the desired cutting depth, the spindle must be locked against unintentional adjustment with the aid of the star-knob screw located on the cutting arm (Figs. 4.4 and 4.15).

4.9 Cutting operation

- Align the machine with the cutting line.
- Open the water shut-off valve and set the amount of water required.
- Move the diamond saw blade to the 0 position.
- Slowly lower the saw blade to the desired cutting depth by actuating the cutting depth adjustment spindle. Hold the joint cutter firmly during this process.
- Make deep cuts in several passes!
  Cutting depth per cut:
  – Asphalt up to a depth of 10 cm
  – Concrete up to a depth of 6 cm
- After lowering the diamond saw blade to the desired depth, the cutting depth adjustment is locked.
- The motor should remain approximately at its rated speed.
- Feed is generated by pushing the machine. Slowly start the machine and continue pushing it at a steady speed. Select the cutting feed so that the speed of the motor is slightly reduced.

4.10 Finishing cutting operations

- Move the joint cutter backwards slightly in order to allow the diamond saw blade to turn freely in the cut.
- Release the hand crank and raise the diamond saw blade out of the cut while the machine is running. Keep the machine in position. Now secure the spindle against unintentional displacement.
- Apply the parking brake as described in section 4.3.
- Shut off the water supply!
- Switch off the blade drive motor using the star-delta reversing switch.

ATTENTION

The joint cutter is additionally equipped with an emergency stop button which enables its quick separating of the motor from the power supply in case of danger. The emergency stop button is located on the control box of the star-delta reversing switch.

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4.11 Replacing the diamond saw blade

The diamond saw blade has to be changed:

– after complete wear of the diamond segments

– in case of changes in the material to be cut

The diamond saw blade absolutely must be changed:

– if it is worn down unevenly

– if diamond segments are damaged or have broken off.

When mounting a new diamond saw blade, proceed as described in section 4.2.

4.12 Work to be performed after use

for cleaning and care of the machine, please refer to the chapter "Maintenance and care".

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5.0 Maintenance and care

DANGER

Risk of injury! Switch off the joint cutter during cleaning and maintenance/repair work! Make sure that the joint cutter will not start unintentionally or roll away

The "Basic safety instructions" in Chapter 3 of this operating manual must be observed!

DANGER

Risk of injury due to electric short-circuit!

Disconnect the mains connection (pull out the mains plug) before cleaning and maintenance work!

The workplace for cleaning, maintenance, care and any required repair work must be clean (dust-free) and suitably equipped for the work!

- Place the joint cutter on a horizontal and stable ground so that you have sufficient space for cleaning, maintenance, care and repair!

ATTENTION

Perform the maintenance work described in section 5.5 in the specified cycles (table 5.7 "Maintenance intervals").

Check and, if necessary, replace or adjust wear parts that are not subject to maintenance intervals!

Strictly adhere to maintenance and inspection intervals and have the work done by **CEDIMA®***!*

This will extend the service life of your joint cutter!

ATTENTION

Use original spare parts!

Only original spare parts can ensure the operational safety of the joint cutter!

5.1 Cleaning

Clean the joint cutter after each use and before any maintenance or repair!

5.1.1 Cleaning agents

ATTENTION

Never use aggressive detergents!

Aggressive cleaning liquids (e.g. solvents) as well as cleaning with liquids with a temperature above 30 °C is not permitted!

ATTENTION

Do not use high pressure or steam cleaners!

For reasons of safety and functionality, no water, detergent or steam may enter the combustion engine, air filter, electric components (e.g. electric motors, switch boxes, plug connections, etc.)!

5.1.2 Notes about dry cleaning

- Remove dust and dirt with a slightly damp cloth!
- Use lint-free cleaning cloths!
- Remove tenacious deposits with a (non-abrasive) brush, if required!

5.1.3 Notes about wet cleaning

- Cover/glue shut all vulnerable openings, housings, plug connections, etc. before wet cleaning.
- Use a "soft" water beam and a non-abrasive brush to remove dirt and residue!
- Be especially careful at critical spots (e.g. switches, motor, ...)!

The electric motor and all electrical components may not come into contact with the water spray!

- Do not flush any bearings, otherwise there is a risk they will dry out!
  The joint cutter bearings are permanently lubricated!
- After cleaning, remove the covers/tapes completely

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5.2 Re-lubrication, corrosion protection

- After cleaning, apply as required a thin film of grease (rust protection) or corrosion protection oil to the metal sliding parts (spindle, Figure 4.15)! All other metal bearings and moving parts should also never run dry, but be lubricated/greased (sparingly) with standard multipurpose oil.

Excessive oiling and greasing promotes further wear due to adhering dust!

- Check all connections and connecting elements between the components and retighten any loosened screw connections (see section 5.4)!

5.3 Maintenance and care of the motor

The electric motor does not require any special maintenance and care!

ATTENTION

Adhere to safety and functional tests!

See section 5.6!

5.4 Tightening torques

Coarse-pitch thread acc. to DIN ISO 262	**Tightening torque [Nm] matching the strength class**	
	8.8	**10.9**
M 4	2,25	3,31
M 5	4,61	6,77
M 6	7,80	11,5
M 8	19,1	28,0
M 10	38,0	55,8
M 12	66,5	97,7
According to VDI directive 2230		

Keep the safety and warning signs attached to machine/ system clean so that they remain readable even after longer periods of time!

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5.5 Maintenance intervals for the CEDIMA® joint cutter CF-22 E.800

	Before each start-up	After end of work	every work day	First time after 10 h	Weekly	Monthly	after 3 - 6 months	Annually	In case of faults	In case of damage
Entire machine	3	1						3	3	
Electrical system (switches, ...)			7		7	7	7	7	3	4
Tool receptacle (flanges and saw blade receptacle)	1. 3	1. 2							3, 5	4
Tool (diamond saw blade)	3. 6	1								4
Operating elements (handles, crank handle, ...)	3	1								4
Water system (hoses, shut-off valve, ...)	3	1							1. 3. 5	4**
V-belts	3			3. 5	3			4	3	4*
Threaded spindle					1. 3. 2				3. 4*	4**
Engine housing	3	1								
Engine	3. 7								1. 3. 4*. 5	4*
Parking brake	3								3, 5	4*
Reachable connecting elements (nut, screws, ...)					5					
Wheels	3	1							1. 3. 4*. 5	4**

h = operating hours *) Depending on load, conditions, condition **) Depending on severity (extent) of damage

1 clean
2 grease, lubricate, oil, corrosion protection
3 check (visual, function)
4 replace, exchange
5 Retighten, adjust, replace wear parts
6 Replace if required
7 Statutory safety test (see section 5.6)

You will find the description of the maintenance work in the following and corresponding chapters of this operating manual!
The table can be updated by **CEDIMA®** *at any time (e.g. to comply with technical necessities and developments)! Please inquire about it with* **CEDIMA®***!*

5.6 Security check of the electric equipment acc. to BGV A3 §5, implementing regulations paragraph 1 No. 2

Table 1 A: Recurrent tests of stationary electrical installations and equipment

System/equipment	Test period	Type of test	Inspector
Electric systems and stationary equipment	4 years	for proper condition	electrician
Electrical equipment and stationary electric equipment in "special installations or locations" (DIN VDE 0100 group 700)	1 year		
Portable residual current devices	1 month	for efficiency	Electrician or person trained in electric equipment using suitable measurement and testing equipment
Circuit breakers, differential current and fault voltage safety switches – in stationary equipment – in mobile equipment	 6 months every work day	for correct operation by actuating the testing facility	User

Table 1 B: Recurrent tests of non-stationary electrical equipment

System/equipment	Test period standard and maximum values	Type of test	Inspector
– mobile electric equipment (if used) – extension and device connection cords with plugs – connecting lines with plugs – movable lines with plugs and fixed connection	Standard value 6 months, on construction sites 3 months. If the tests yield a fault rate < 2%, the test period can be extended accordingly. Maximum values: at **construction sites**, in **production sites** and **shops** or under similar conditions one year, in **offices** and under similar conditions two years.	for proper condition	Electrician or person trained in electric equipment using suitable measurement and testing equipment

For more information see BG information "Selection and operation of electric equipment on construction sites and at assembly locations" (BGI 608)

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5.7 Maintenance works

ATTENTION!

Observe the safety instructions in these operating instructions!

ATTENTION!

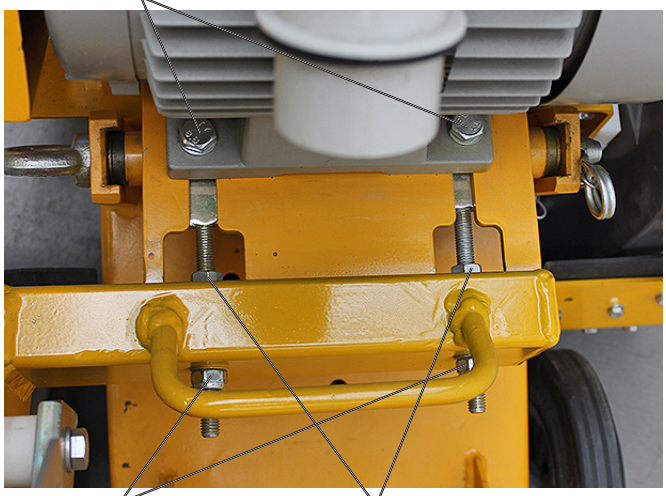
Only use original parts!

The operational safety of the CF-22 E.800 is only guaranteed when the original components (spare parts) are used!

5.7.1 Tensioning V-belts

To tighten the CF-22 E.800 V-belts, loosen the motor fastening screws (Figure 5.1) slightly and pull the motor back using the two clamping screws attached to the rear of the motor. Check the V-belt tension constantly while doing this. After completing this work, retighten the lock nuts of the tensioning screws and the screws of the motor mounting.

Motor fastening screws



Clamping nut *Locknuts*

Figure 5.1

ATTENTION!

Tighten the nuts of the V-belt tensioning screws evenly!

Uneven tightening of the clamping screw nuts will cause the motor mounting plate to jam and with it the motor and the V-belt pulley on the motor shaft!

The V-belts will then slide off the edges of the V-belt pulleys and wear out faster! A sudden crack with negative consequences for the diamond saw blade, the motor, ...cannot be ruled out in this case!

Note

To tighten the clamping screw nuts evenly, tighten them alternately, one turn at a time!

– Check the V-belt tension (see section 4.1.3)!

5.7.2 Replacing the V-belt

The V-belts should or must be replaced when another tensioning is not possible any more and/or the V-belts are damaged (frayed, porous, ...)!

DANGER!

Risk of pinching and crushing!

Careful with hands and fingers when replacing the V-ribbed belt.

Note

The V-belts should be changed together to ensure uniform tensioning and power transmission!

1. Lift out the cutting shaft (saw blade).
2. To replace the CF-22 E.800 V-belts, first remove the blade guard or the cutting shaft cover, depending on cutting side (right or left) (Fig. 4.3).
3. Remove the V-belt guard; the V-belt drive is exposed.

Cutting shaft cover *V-belt guard*

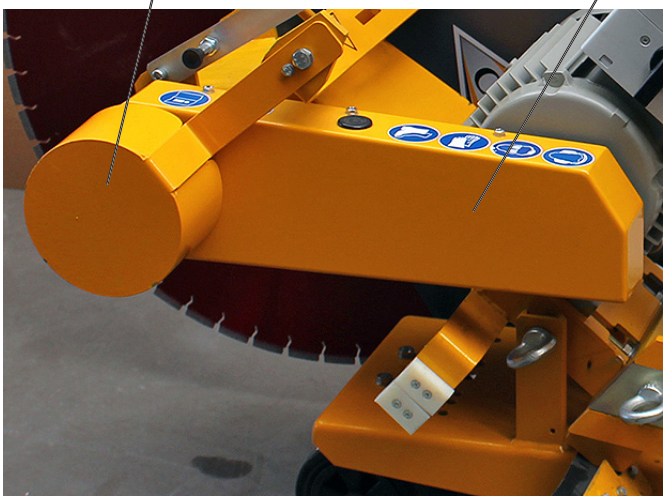


Figure 5.2

4. Release the tension of the V-belts as described in section 5.7.1, remove the old V-belts and install the new V-belts!
5. Tension the cutting shaft V-belts as described in section 5.7.1.

6. Install the V-belt guard, blade guard and cutting shaft cover.

ATTENTION!

Do not use sharp or pointed objects to pull on the V-belts!

This will prevent damage to the V-belts which could lead to their destruction!

Note

Turn the cutting shaft and motor V-belt pulley and move the V-belts diagonally over the belt pulley grooves until all V-belts lie parallel to one another!

ATTENTION!

Do not overstretch the V-belts (1.5 % wear limit)! Otherwise the joint cutter cutting shaft bearings and motor bearings will be destroyed!

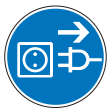
ATTENTION!

The new V-belts must be checked for correct tension after 10 hours of operation at the latest and retightened if necessary!

5.8 Transporting the CF-22 E.800 joint cutter

DANGER!

Risk of injury! The joint cutter is to be shut down before transport and to be secured against unexpected starting and rolling away!



Disconnect the mains, pull mains plug!

- Uncouple the external pressurized water hose and completely drain the cooling and flushing system, allowing it to run out!
- Dismount the diamond saw blade!

Do not transport the joint cutter with the diamond saw blade mounted!

- Transport the joint cutter upright and horizontally!
- Swivel the front pointer (cantilever) upwards!
- Crank down the cutting shaft to the stop!
- Push in and lock the push handle!

ATTENTION!

The push handle is <u>not</u> designed to be transported by crane!

- Ensure that all components of the joint cutter (on-board tools, ...) are firmly attached!
- Lash the complete joint cutter to the push handle receptacles and to the motor, cutting shaft and rocker!
- Disassemble the joint cutter into the intended (3) parts (see section 4.1.1)!

After transporting and completely assembling the joint cutter, check all screws and plug connections for tight fit!

5.9 Longer periods of non-service/storage

- Observe the previously mentioned issues about transport!
- Observe the maintenance intervals and perform maintenance work!
- Release the V-belt!
- Approx. once monthly, turn (by hand) the cutting shaft (engine) a few revolutions!
- Run the functions of the joint cutter approx. once monthly!
- Unload the joint cutter wheels (e.g. with wood under the frame)!
- Store the joint cutter in a dry and frost-free location. Also protect it against dust, strong sunlight and strong vibrations and any other negative physical and chemical impact!
- Check all assemblies and connecting elements for correct (firm) seating!

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ENGLISH

6.0 Return of machines / disposal

CEDIMA® commits to take the equipment back for disposal of the joint cutter CF-22 E.800.
The equipment can be delivered free of charge at **CEDIMA**® or at a point of acceptance appointed by **CEDIMA**®.

7.0 Troubleshooting the joint cutter CF-22 E.800

7.1 Starting problems (motor)

Problem	Possible cause	Remedy
The motor does not start	Mains cable not properly connected	Connect the mains cable correctly
	Mains cable, plug, socket defective	Check mains cable, plug, socket; replace if necessary
	Star-delta switch defective	Check star-delta switch, replace if necessary
	Loose electric contact in the electrical system	Check or replace engine if necessary
	Engine defective	Have the entire electrical system of the machine checked by a qualified electrician
	Cutting shaft blocked, cutting shaft with saw blade not lifted from the ground or out of the cut	Check cutting shaft for free movement Lift cutting shaft (saw blade) from the ground / out of the cut
	Mains fuse(s) tripped	Eliminate cause, use fuses
	Motor not yet cooled down after overload	Allow engine to cool down
No output when cutting	Mains cable incorrectly dimensioned, too long, wound up	Connect the appropriate mains cable, keep the mains cable as short as possible, unroll the cable drum
	Power grid insufficient	Observe prescribed connection data
	Star-delta reversing switch not fully switched over, motor still running in Y mode	Move the star-delta switch fully into the Δ position.
	Motor no longer maintaining its speed of rotation	Check the motor, repair / replace if necessary
Engine stops	Cutting pressure too high (overload protection)	Reduce cutting pressure (feed, cutting depth) or let the motor cool down (with free-rotating saw blade)
	Motor overload trip defective	Check by a qualified electrician and have replaced if necessary
	Damage to the electric system	Have the electric system checked by a qualified electrician

7.2 Problems with cutting

Problem	Possible cause	Remedy
Saw blade wobbles	Saw blade flange dirty and/or defective	Clean, check saw blade flanges, replace if necessary
	Cutting shaft nut has become loose	Tighten cutting shaft nut
	Bad saw blade tension	Return saw blade to manufacturer
Saw blade has horizontal and/or vertical "wobble"	Saw blade is damaged, bent	Have the saw blade straightened Have the diamond segments soldered to a new saw blade core Use a new saw blade
	Saw blade flange(s) dirty, defective	Clean, replace saw blade flange(s)
	Cutting shaft bent and/or bearing defective	Replace cutting shaft and/or bearing

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Faults and troubleshooting – CF-22 E.800
What if ...

Problem	Possible cause	Remedy
Diamond segments become detached	Saw blade too hot	Solder diamond sections on again Adjust the cooling water supply
Excessive diamond segment wear	Incorrect saw blade type	Use harder saw blade type
	Cutting shaft is bent	Replace bearing and/or cutting shaft
	Saw blade too hot	Adjust the cooling water supply
No output when cutting, saw blade not cutting	Saw blade mounted against direction of rotation	Mount saw blade according to the cutting shaft direction of rotation
	Saw blade not adjusted to the material to be cut (possibly too hard)	Use correct saw blade type
	Saw blade not matched to the machine performance	Use correct saw blade type
	Diamond segments are blunt	Sharpen the saw blade
Cracks in steel core of saw blade	Saw blade is too hard	Use a "softer" saw blade
Cutting line is not optimal	Bad saw blade tension (steel core)	Return saw blade to manufacturer
	Saw blade is too heavily loaded	Reduce the feed (cutting depth)
	Diamond segments are blunt	Sharpen the saw blade
Saw blade has rotated on the cutting shaft	Driver pin defective, missing	Replace, insert driver pin
Diamond saw blade stops under load	V-belt slips	Tensioning V-belts
	V-belt defective (torn)	Replace V-belts
	Driver pin defective, missing	Replace, insert driver pin
Saw blade is discoloured	Saw blade got too hot due to insufficient cooling water	Adjust the cooling water supply
	Side friction of saw blade too high	Reduce the feed Do not tilt saw blade in the cut
Chafe marks on the saw blade	Feed line not parallel to saw blade	Do not tilt saw blade in the cut
	Saw blade is too heavily loaded	Reduce the feed
	Bad saw blade tension	Return saw blade to manufacturer
Eccentric wear on the diamond segments	Cutting shaft has shrunk	Replace cutting shaft
	Support of the saw blade is worn out (cutting shaft, saw blade hole)	Turn the saw blade location bore and let a ring be fit in
	Too much bearing play of the cutting shaft	Replace bearing or cutting shaft
Low or no cooling water flow	Water supply sub-optimal	Adapt the pressurized water supply
	Water hoses clogged, defective, off, kinked	Clean, check, connect or replace water hoses
	Shutoff valve clogged, defective, not open	Clean, check, open or replace shutoff valve

The problems and their possible causes are mostly a result of natural wear and tear and in the incorrect handling of the joint cutter or the diamond saw blade)!

Therefore you should read this operating manual thoroughly!

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8.0 Warranty conditions for construction equipment such as drilling and sawing machines as well as associated assemblies

1. The supplier must be notified in writing of any evident defects in the machine within 14 days of receipt. If this period has expired or if the machine in question has been operated or worked on, the machine shall be considered as accepted by the purchaser. Hidden defects are to be notified in writing immediately on discovery, at the latest however within 6 months of receipt of the machine.

2. We guarantee the agreed usability of the device delivered by us for a period of 12 months. This term begins on the day the device arrives with the buyer. Irrespective of this, our obligation shall be considered as fulfilled as soon as the goods are dispatched from our works/warehouse. In no case do we assume a manufacturer's guarantee. The mandatory regulations of the law for product liability remain unaffected.

3. Wearing parts are subject to a limited warranty. Wearing parts are parts subject to operation-related wear during proper use of the device. The rate of wear cannot be uniformly defined and differs according to the intensity of use. The wearing parts must be adjusted, maintained and, if necessary, replaced for the specific device in accordance with the manufacturer's operating manual. Operation-related wear is not a reason for claims to defects.

Wearing parts for the construction devices mentioned in the operating manual such as core drilling and sawing machines and special machinery as well as related general assemblies (if available):

- Feed and drive elements such as toothed racks, gearwheels, pinions, spindles, spindle nuts, spindle bearings, wires, chains, sprockets, belts
- Seals, cables, hoses, packings, plugs, couplings and switches for pneumatic, hydraulic, water, electricity, fuel systems
- Guide elements such as guide strips, guide bushes, guide rails, rollers, bearings, sliding protection supports
- Clamping elements for quick-release systems
- Flushing head seals
- Slide and roller bearings that do not run in an oil bath
- Shaft oil seals and sealing elements
- Friction and safety clutches, braking devices
- Carbon brushes, collectors / armatures
- Consumable operating materials
- Easy-release rings
- Control potentiometers and manual switching elements
- Securing elements such as dowels, anchors, screws and bolts
- Fuses and lamps
- Bowden cables
- Disks
- Diaphragms
- Spark plugs, glow plugs
- Parts of the reversing starter such as the starting rope, starting pawl, starting roller and return spring
- Sealing brushes, rubber seals, splash protection cloths
- Filters of all types
- Drive and guide wheels/pulleys and associated rubber tyres
- Cable wire protection elements
- Drive and travel wheels
- Water pumps
- Cut-material transport rollers
- Drilling, separating and cutting tools
- Energy storage devices

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4. In case of a justified complaint, we can choose to repair the device and/or to provide a replacement against return of the device. Replaced parts or devices become our property.

5. Complaints are to be notified in writing stating the serial number of the machine, invoice number and date.

6. As a rule, repairs will be carried out at the supplier. The purchaser shall bear any additional costs of mechanics and helpers arising from repair work carried out on his premises at his request. The warranty does not cover any repair carried out in the workshop of a third party without the prior consent of the supplier.

7. If the supplier expressly gives his consent to the replacement of assemblies or parts by the purchaser or a third party, the supplier will only accept claims for compensation asserted by the purchaser, if justified, after the assemblies or parts in question have been returned to us and examined by us.

8. According to the statutory regulations, the buyer is only entitled to cancel a contract if we refuse improvements or the supply of replacements acc. to No. 4 even though a defect has been proven, or a deadline that we have been given has elapsed unfulfilled. If only a minor defect has occurred, the buyer is merely entitled to an abatement of the purchase price, which in any other case is excluded.

We are not liable for compensation on account of a defect or damages subsequent to a defect, unless these occur on account of an intention or a negligence which we are responsible for.

9. The warranty does not cover damage arising for the following reasons:
a) deficient installation,
b) improper use or overloading,
c) extended overloading resulting in damage to the windings of the armature or coil,
d) external effects such as damage in transit or through environmental effects or other natural phenomena,
e) the use of add-on equipment or accessories not intended for use with the machine.

10. Any diamond cutting tool that gives cause for complaint must be immediately removed from the machine! To protect the purchaser's rights and to be able to carry out a proper inspection, the amount of the diamond segments remaining must be at least 20% of the full height. The purchaser's claim for compensation cannot be considered if he does not observe this requirement.

11. If any warranty claims are satisfied by the supplier, the warranty period shall neither be extended nor a new warranty period for the machine be started. The warranty period for installed replacement parts expires no earlier and no later than the warranty period for the original machine.

12. In addition to the above, our general terms and conditions of sale and delivery apply in full.

13. The place of fulfilment and exclusive place of jurisdiction for both parties is Celle.

CEDIMA® Diamantwerkzeug- und Maschinenbaugesellschaft mbH, Celle

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• DIAMOND SAW BLADES

for wet and dry cutting in concrete, reinforced concrete, asphalt, natural stone;
Saw blade diameter from 110 to 2200 mm

• DIAMOND DRILL BITS

for wet and dry drilling in concrete, reinforced concrete, asphalt, natural stone;
drill bit diameter 12 to 1200 mm

• DIAMOND TOOLS

grinding discs for hand and floor grinders, diamond saw wires,
chamfering discs, diamond saw chains, diamond segments

• JOINT CUTTERS

with petrol, diesel or electric motor, with or without automatic feed; cutting depths from 120 to 900 mm

• CORE DRILL MACHINES

hand or drill rig machines with electric or hydraulic
drilling motor; drill diameter from 12 to 1250 mm

• WALL AND WIRE SAWS

electric, hydraulic and electro-hydraulic wall saws with a cutting depth up to 730 mm; wire saw machines, circular saws

• TABLE SAWS

to cut tiles, general construction material or
large-format stones; cutting depth from 25 to 425 mm

• SPECIAL MACHINERY

reinforced concrete breakers, floor grinders, surface mills, crack mills, brush machines, chain saws, hand saws, slurry separators

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