AU DU PONT DE LUTTRE
74-1190 BRUSSELS – BELGIUM
PHONE: 322 34 83 162
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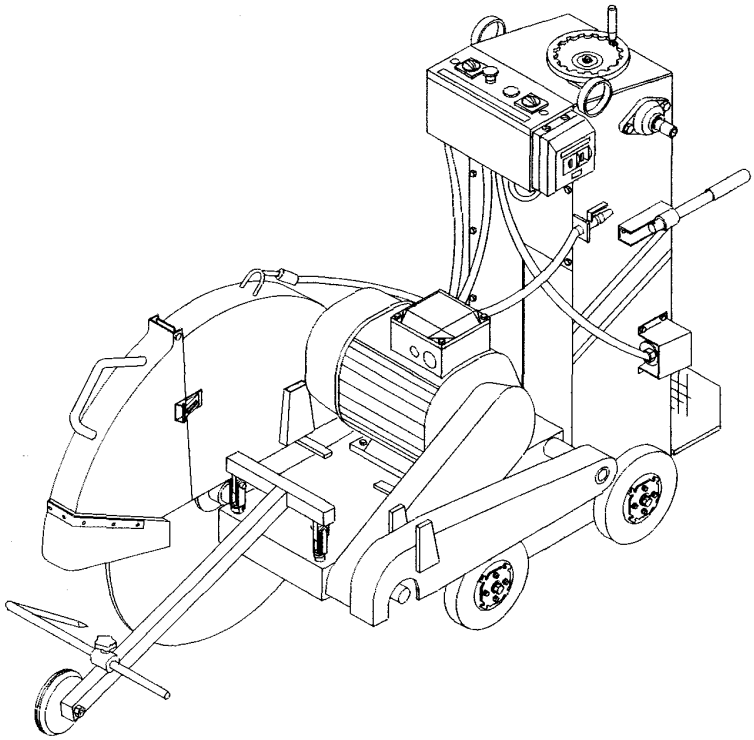
OPERATING MANUAL

Electric Fully Automatic Floor Saw

ELECTRIC FLOOR SAW

FS 1015 EA



Made especially for Diamant Boart by:
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Stamphusvn. 13, N-7374 Røros, Norway
Phone: (+47) 7240 92 40
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DIATECHNIK CONSTRUCTION PRODUCTS

DECLARATION DE CONFORMITE

CE 95

Le constructeur soussigné: DIATECHNIK AS
Stamphusveien 13
N-7460 Röros

Déclare que le matériel neuf désigné ci-après: **Scie à sols: GS-GSA-GXL** est conforme aux dispositons de la Directive "Machines" modifiée **89/392/CEE - 73/23/CEE - 89/336/CEE** et aux législations nationales la transposant.

KONFORMITÄTSERKLÄRUNG

Der Unterzeichnete Hersteller: DIATECHNIK AS
Stamphusveien 13
N-7460 Röros

Erklärt hiermit daß folgendes Produkt: **Fugenschneider: GS-GSA-GXL** den Bestimmungen der Maschinenrichtlinie **89/392/EWG - 73/23/EWG - 89/336/EWG** entspricht.

DECLARATION OF CONFORMITY

The undersigned manufacturer: DIATECHNIK AS
Stamphusveien 13
N-7460 Röros

Declares that this product: **Floor Saw: GS-GSA-GXL** is in conformity with the Euopean Machinery Directive **89/392/EEC - 73/23/CEE - 89/336/CEE**

KONFORMITEITSVERKLARING

De ondergetenkende fabrikant: DIATECHNIK AS
Stamphusveien 13
N-7460 Röros

Verklaart hierbij dat het volgende produkt: **Vloerenzaagmachine: GS-GSA-GXL** konfor is aan de bepalingen van de machinenrichtlijn **89/392/EEG - 73/23/EEG - 89/336/EEG**

DICHIARAZIONE DI CONFORMITA

Il construttore: DIATECHNIK AS
Stamphusveien 13
N-7460 Röros

Dichiara che il prodotto: **Sega da suolo: GS-GSA-GXL** è conforme alle prescrizioni della Direttiva Macchine **89/392/CEE - 73/23/CEE - 89/336/CEE**

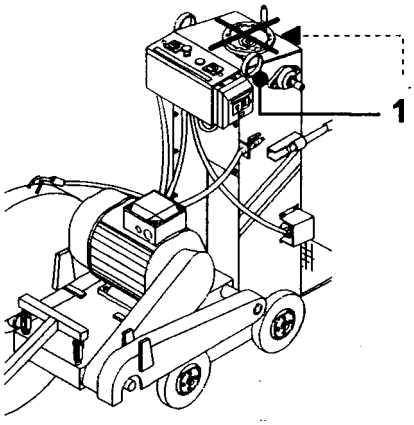
Röros, 21.03.1995

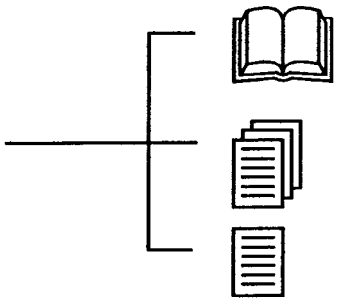
Jostein Bekkos

Jostein Bekkos
Product Manager Machines Europe

Enclosed in the machine you will find the following documents. They should be read and understood by any person installing or using the machine!

The manual should always be available at the place of work. The obligatory technical regulation in force in the country where the machine is used must also be adhered to for maximum safety.





Operating Manual

Spare Part List

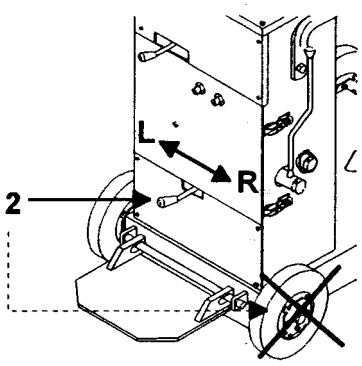
Electrical Schematic

Diagram

Machine card

CE-documentation

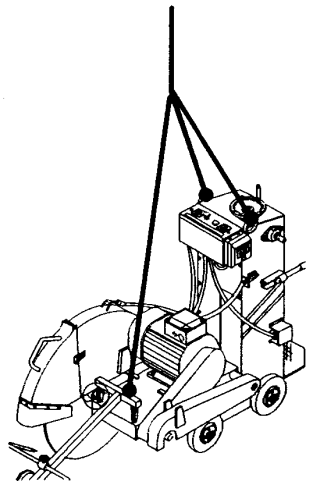
The screw feeding system for manual lowering and raising the blade have a brake that locks the spindle. To operate the system, open handle (1).



Hand brake and transport security lock.

The Automatic feeding gear system are connected to the rear wheel, and activated when handle (2) is in right position. The wheels are thereby locked and the machine cannot be moved without electricity.

To employ manual moving and unlock the wheels, turn the handle (2) to the left position.



For transportation by vehicle or by any kind of hoist, 3 lashing or hoisting lugs are provided: Two at the upper steering handles and one at the front. During transportation, rest the front of the machine towards a block of wood.

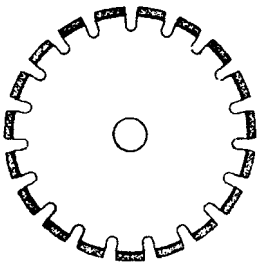
1.0 Technical information

Standard Version

This model has a 15 kW electric motor and a blade shaft capacity of 1150 Rpm. The model is well suited for Diamond blades between Ø 600 mm and Ø 1000 mm.

Low Speed Model

This model has a 15 kW electric motor and a blade shaft capacity of 950 Rpm. The model is well suited for Diamond blades between Ø 800 mm and Ø 1200 mm.



All Diamant Boart floor saw machines are designed for using wet cutting Diamond blades.

When ordering Diamond blades, contact your dealer and refer to the technical data listed below. Be sure to use correct type of blades. Incorrect blade may cause bad or non-cutting results. Incorrect use may also result in vibration, damaged parts and overheating of the engine.

Do not use diameter of the blade larger than necessary for the actual job situation. We recommend pre-cutting with an Ø 800 mm blade, segment width 5 mm, before using Ø 1000 mm or Ø 1200 mm.

Technical data		**Standard**	**Low Speed**
Motor output	kW/HP	15/20	15/20
Electricity	*	*	*
Blade guard	Ø	1000	1200
Cutting depth (maximum)	mm	420	520
Blade shaft Rpm		1150	950
Blade flange connection	Ø/mm	Combi 25,4/60	Combi 25,4/60
L x W x H	cm	118x80x107	118x80x107
Weight	kg	385	395

* Different electric systems possible see separate machine card and electric form.

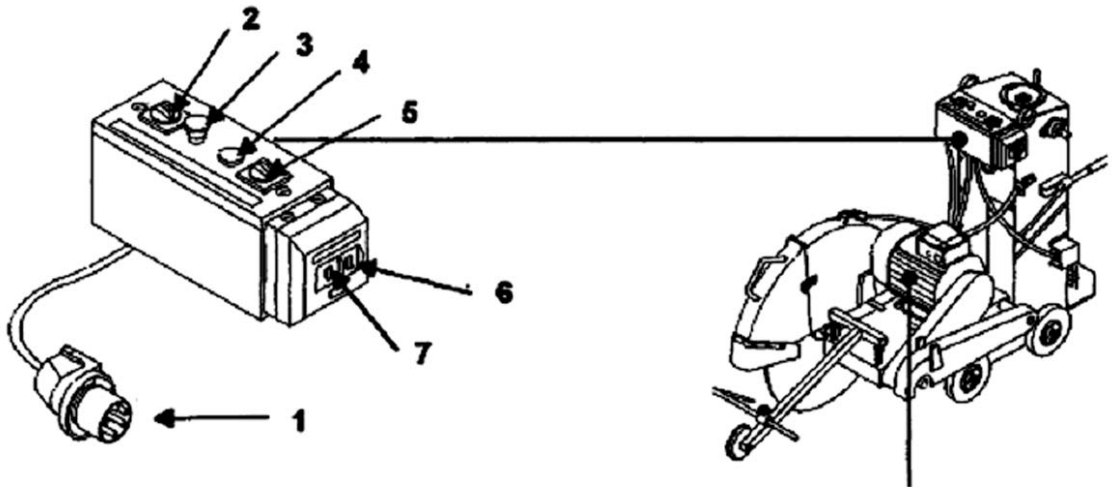
2.0 Electrical system

This electric floor saw is available with different electrical systems.

Be absolutely sure that you have ordered and received the correct system on your machine. It must correspond with the electrical power supply in your working area.

The electrical data will be found on the switch box, machine card and electrical diagram. If you have got incorrect electrical system on your machine, take immediate action, and contact your Diamant Boart dealer!

Do not improvise: Electricity is very dangerous!



1. Input Plug
2. Star/delta Starter
3. Emergency Stop
4. Phase Reverse Switch
5. Start Feeding Motor
6. Stop Feeding Motor

Electric Motor
Always keep the motor clean in order to get maximum effect.
Too much dust and concrete may reduce the air-cooling and cause overheating.

IMPORTANT!

- Do not touch anything on the switch box before you have carefully read the instructions and carried out the test procedures listed under point 2.2.
- Do not attach any tools to the blade shaft before the test!
- Bring the machine to a stable position in a clear area.
- Be sure that all covers and guards are safely locked on the machine.
- Any person not involved in the work should leave the area nearby the machine.

2.1 How to operate the electric switch box

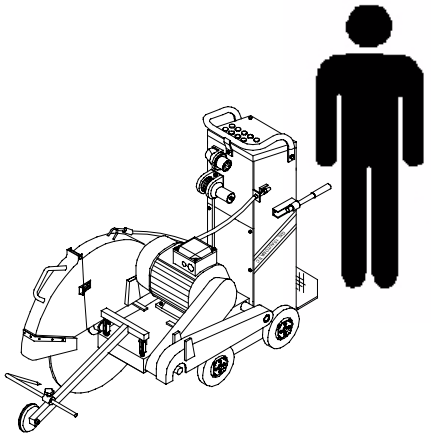
Test procedures for start and stop:

Always make this test of the electric system if you:

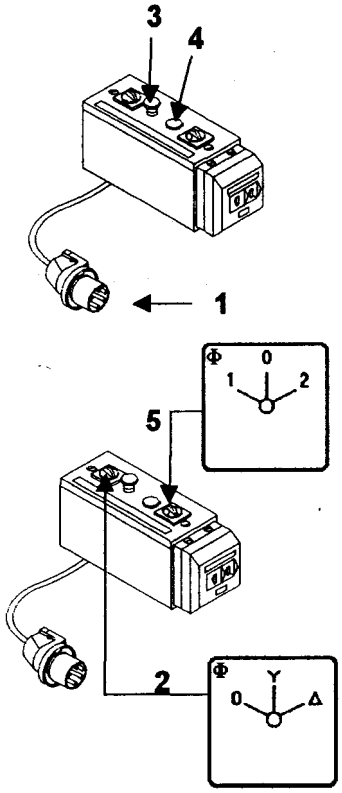
- Have never operated a similar machine before, or
- Have moved to a new working area with new electrical power supply.

Check before test procedure:

- That all covers and guards are in place
- That no blade is mounted
- That the Movable frame is lowered to the ground



Always stand behind the machine when testing or working with the saw



Connect power supply to the **in-put plug (1)** under the switch box. Be sure to use a safety cable with undamaged plugs.

The **control lamp (4)** lights and indicates correct power supply.

Standard: Pull the **emergency stop (3)** to operating position. For models with "Dead Man Switch", ensure that the clip is in right position

Turn the reversing switch (5) to position "1" which indicates that you have chosen an unknown running direction for the motor. Only following the next step of the start procedure will show you which way the motor is running.

Do not change the rotation when motor is running!

The **star/delta switch (2)** has three positions. Y is start position, and Δ is the working position. Follow next instructions for correct use. **Never turn the switch directly from 0 to Δ position!**

2.2 Test procedure

1) Turn the star/delta switch (2) to position Y to start the machine. Keep the switch in this position. Wait 5 - 10 seconds until the motor has reached the maximum speed.

2) Turn the star/delta switch (2) to △, which is the working position. Let the motor run for a while. Look and listen to ensure that everything works perfectly.

   Note which way the motor and blade shaft are running!

3) Turn the star/delta switch (2) back to 0 position. The motor stops.

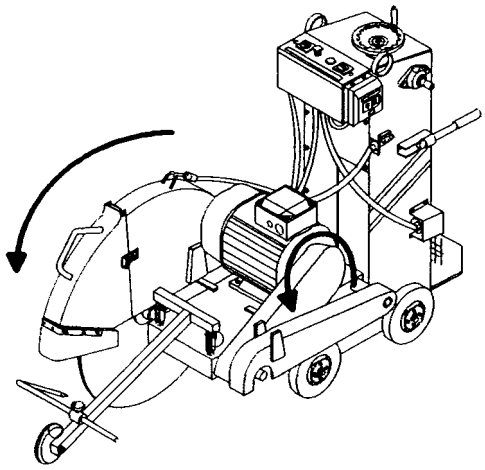
4) Turn the reversing switch (5) to position 2, and do the same start/stop procedure again. The motor and blade shaft are now running the other way. Control this with reference to what you noted the first time.

5) To check the emergency stop, start the machine for the third time. When the machine is running, push down the emergency stop button (4). The machine stops immediately, and the emergency stop is confirmed safe. For models with "Dead Man": pull the wire until the dip releases. The machine stops.

If you have problems with this test, please call for professional assistance. Do not try to open the electric system. Touching the components inside the electric system can be very dangerous!

3.0 Correct motor running direction

The control procedure of which way the motor is running must ALWAYS be carried out without ANY blade mounted on the blade shaft!



The motor and blade shaft must always run forward, as shown by the illustration!

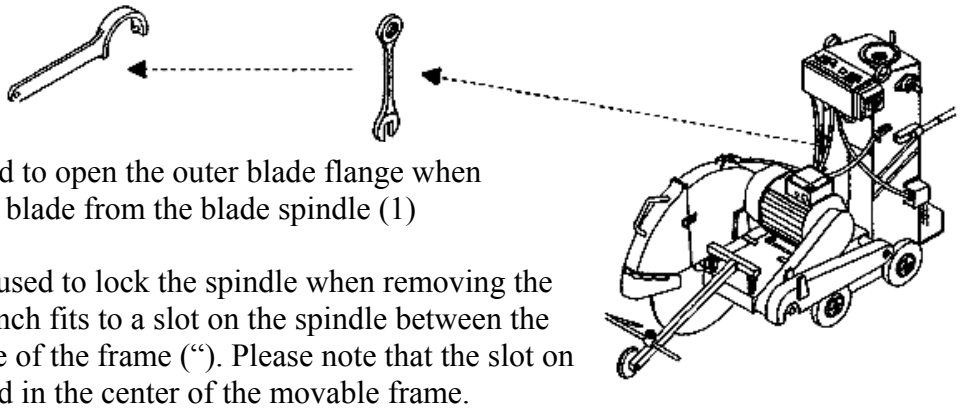
Every element of the start and stop procedures above must be employed every time you control which way the motor and blade shaft are running!

Carry out the control procedure:

- When you have been connecting electricity to the switch box, and
- When you have moved to another working site with another electrical power supply.

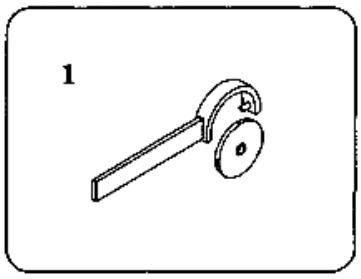
4.0 Tools

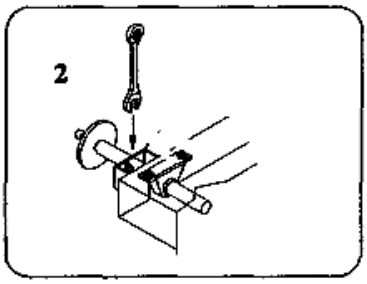
The tools are placed in a separate tool holder inside the saw frame:



The ”C” wrench is used to open the outer blade flange when removing the diamond blade from the blade spindle (1)

The 36 mm wrench is used to lock the spindle when removing the blade flange. This wrench fits to a slot on the spindle between the blade and the right side of the frame (“). Please note that the slot on some models is situated in the center of the movable frame.



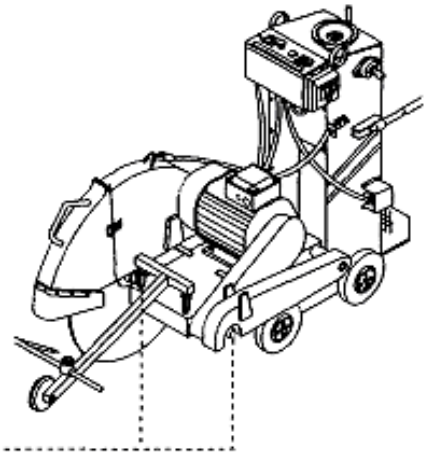


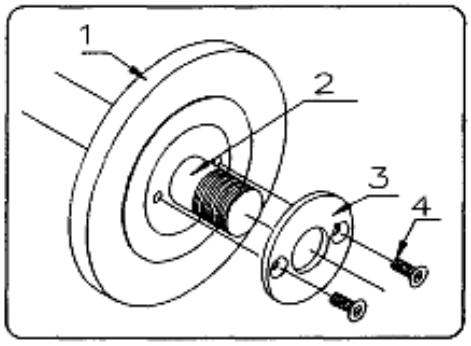
5.0 Inner blade flange

The blade shaft is designed with an inner blade flange in both ends for mounting Diamond blades with both Ø 25, 4 mm and Ø 60 mm centre holes.

Diamant Boart delivers the machine adjusted for Ø 60 mm centre hole. If Ø 25, 4 mm centre hole

1. Inner Blade Flange
2. Spindle for Ø 24,5 mm center hole
3. Distance washer for Ø60 mm center hole
4. Screws

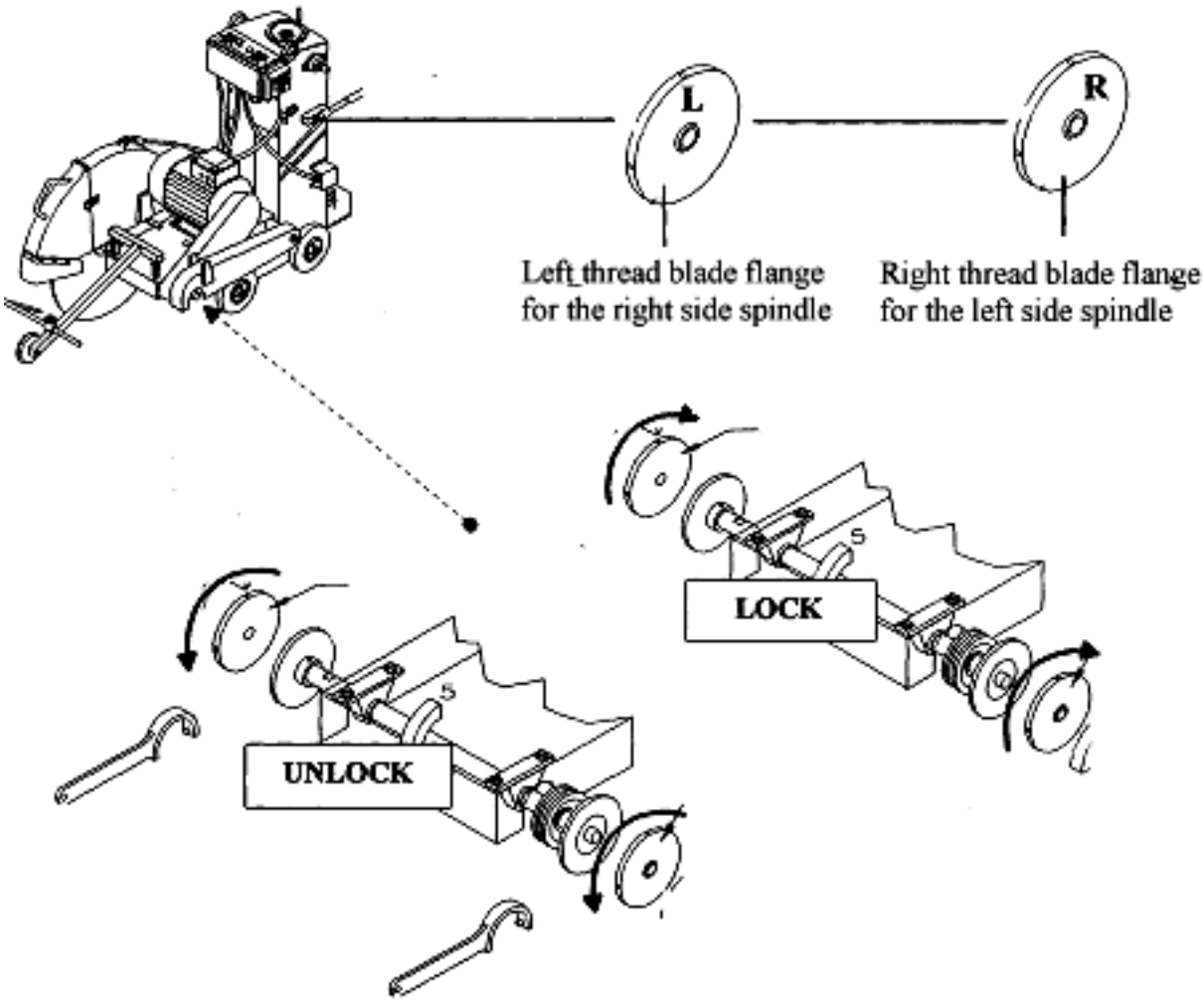




is required, simply replace the distance washer (3).

6.0 Blade flanges

The blade flange for mounting the Diamond blade to the blade shaft is placed in a flange holder inside the saw frame. The right side flange has left thread, and the left side flange has right thread, these are respectively marked L and R below.

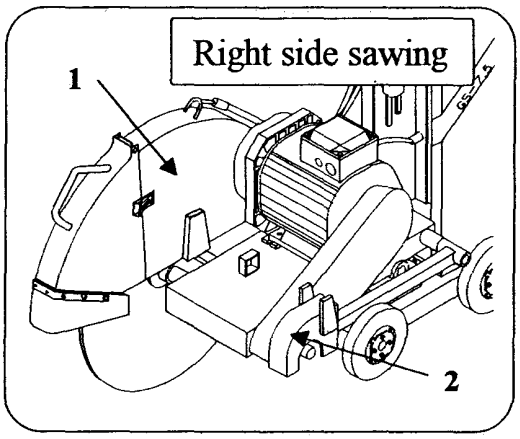


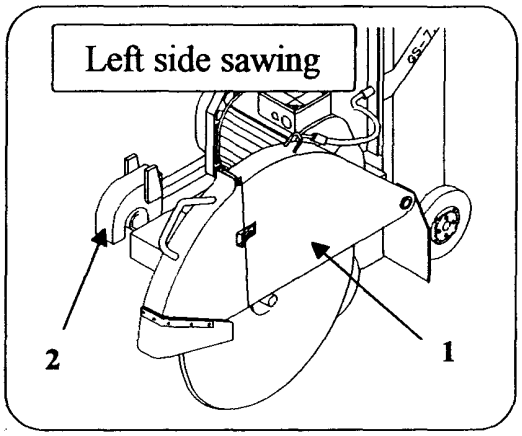
Note that when you unlock the flange, the C-wrench has to be turned the same way for both the left and the right side. See arrows on the above illustration.

- Never let blade flanges that are not in use stay mounted to the blade shaft
- After use, always place the blade flanges back to the flange holder inside the frame.
- Never leave or store the saw with tools or blade flanges mounted to the machine.
- Always keep the flange systems clean. Damaged parts must be replaced immediately.

7.0 Blade guard

The saw has two main guards; blade guard (1) and flange guard (2). These two guards can be used on the left side as well as on the right side of the saw. The blade and guards have to be moved from one side, to the other, and back again several times in order to cut against walls and all 4 corners. This is especially the case indoors.



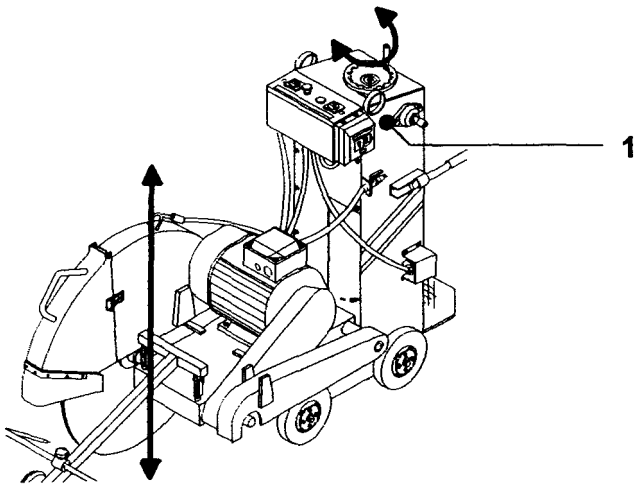


Never operate the saw without guards. Be sure that both guards are always correctly mounted.

8.0 Manual feeding systems

The machine has a manual screw feeding system for lowering and raising the blade.

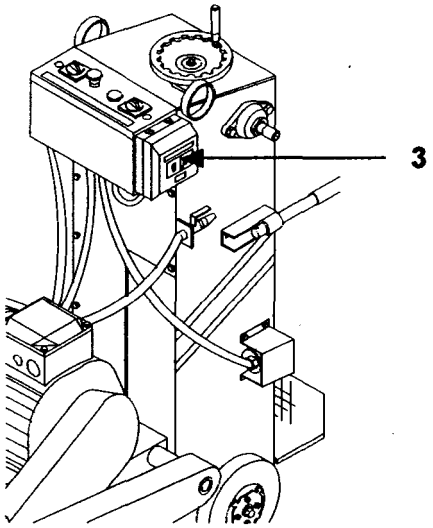
To operate the upper feeding wheel, open the lock handle (1)

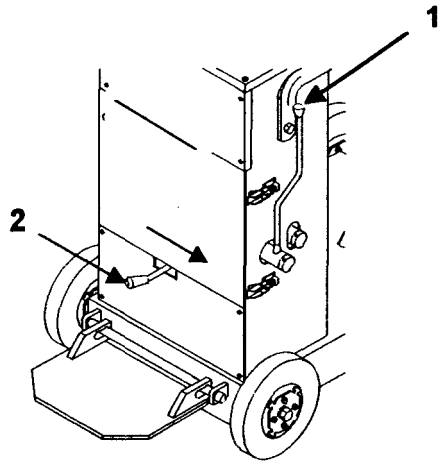


With the blade in a ready top position, lower smoothly until the blade touches the concrete. Keep on slowly until the blade has made at least a 2 cm cut. Then you can raise the feeding pressure.

9.0 Automatic feeding system

The machine has an Electric Hydrostatic feeding system offering you fully adjustable speed control both forward as well as backwards from “0” position.

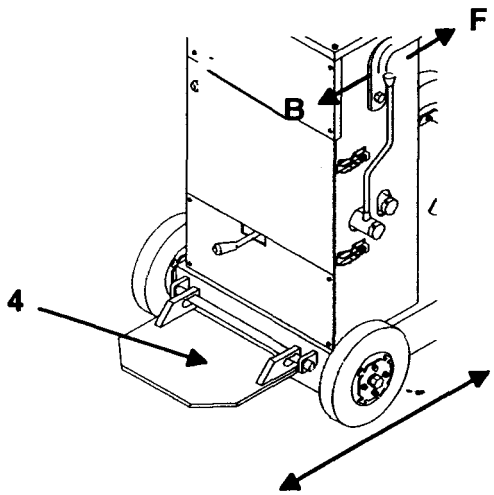




Place the operating handle (1) at upright position.

Move handle (2) over to right position and the feeding gear is connected to the rear wheels.

Start the feeding system by pushing the electrical start button (3) on the operating panel.



Stand on the step-plate behind the machine to put pressure on the rear wheel. Push the operating handle (1) forward or backward for movement.

10.0 Maintenance and inspection

For the safety of yourself and others, always keep the machine in good condition. Missing and damaged parts have to be replaced or repaired immediately.

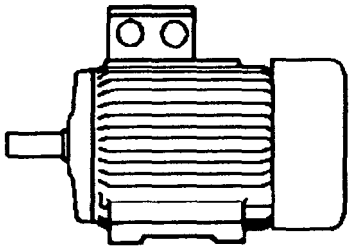
Important!

Unplug the machine before all forms of maintenance, inspection and repairs!

It is very important to clean the machine after use because of the thick layer of concrete that will be left on the machine. This layer will keep moisture for a long time, which in turn will cause a corrosive attack. The layer may also prevent the machine from working properly.

Cleaning the electric motor is especially important since a layer of concrete reduces the motors air-cooling ability, which may cause overheating, overload and failure.

Motor - loss of output



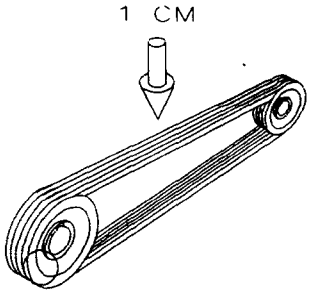
The motor has a maximum output limit. In addition to the output required for the sawing, the total output is used for:

- Running the motor and the ball bearing friction,
- Friction in the V-belts, and
- Friction in the shaft bearing.

If the V-belt and/or shaft bearings are not properly adjusted, this may cause a significant loss of output left for the sawing. Therefore, keep these parts in good condition and change shaft bearings when it shows signs of wear.

Control the V-belts

In the beginning, V-belts must be checked after one day of use, and if necessary tightened properly.



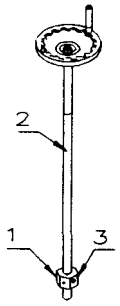
Check the V-belts periodically. Loose V-belts will cause wear and tear, and skidding causes loss of output for the sawing spindle.

If one V-belt breaks, change all of them. Missing V-belts or uneven V-belt sets causes loss of output.

When changing V-belts, make sure that the spindle, pulley and the motor is adjusted perfectly on the centre line. Non-parallel V-belts cause wear and tear on the new V-belts.

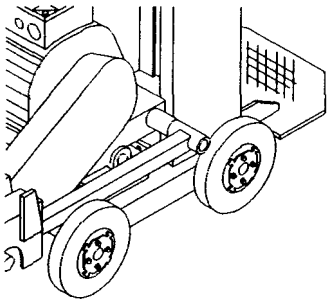
11.0 Maintenance and inspection

Control the feeding system



The screw feeding nut (1) and the screw feeding spindle (2) are the parts on the saw which are most heavily used, and are therefore subject to frequent replacement. To reduce this wear and tear, it is important to lubricate the nut and spindle frequently. A worn feeding system is hard to discover without doing the right control.
Lift the front part of the movable frame as you watch the screw-feeding nut (1). If there is a large amount of slack between the spindle and the nut you should replace one or all parts. Normally you would change 2-3 nuts before the spindle needs to be replaced. Note that vibrations in the saw are often caused by wear and tear in this system.

Wear and tear of wheels and tyres

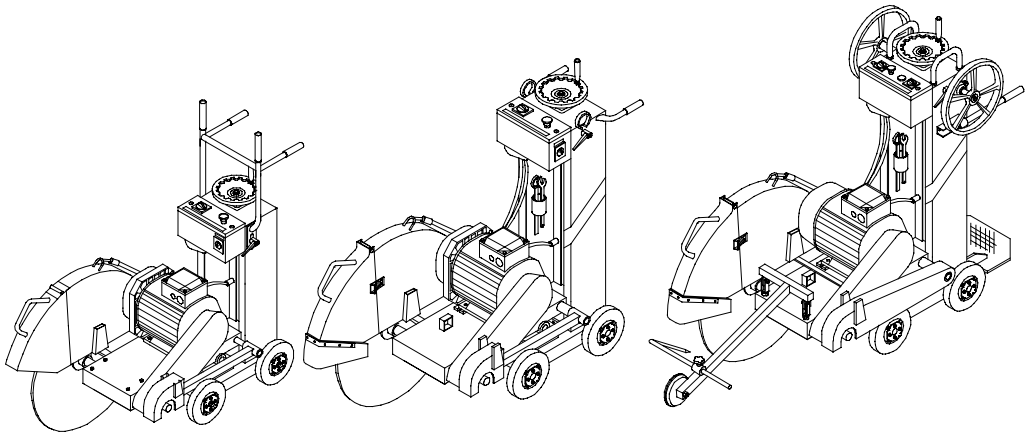


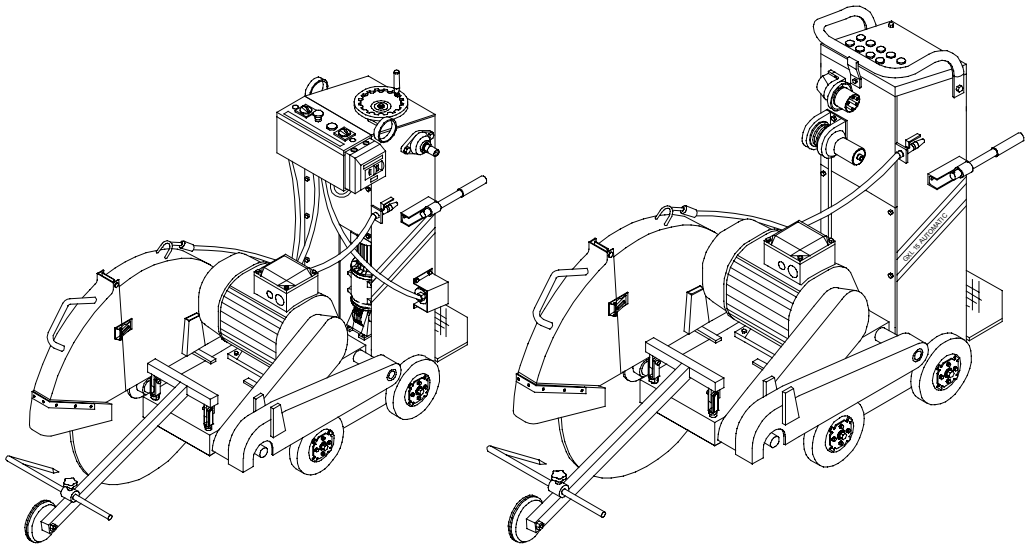
All our saws have solid rubber wheels with a flat tyre for stable and good contact with the floor or the ground. Uneven concrete floors, nails, rebars and other influences cause the rubber to be worn. This, in turn, causes the saw to be unbalanced. Wheels and tyres are therefore periodically subject to change.

NEVER DO MAINTENANCE THE MACHINE
WHILE THE ELECTRICITY IS CONNECTED!

DIAMANT BOART

TARGET®





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