

# KIROGN®

## OPERATORS MANUAL

### MINILEM®PROFILÉ



**ORIGINAL KIROGN ATTACHMENTS  
& CERTIFICATES**

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*Dear Customer,*

*You have just taken delivery of*

***KIROGN MINILEM® PROFILE cutting equipment***

*We thank you for having chosen our equipment and advice you to read this manual before using your machine.*

*This manual will give you a better understanding of your KIROGN cutting equipment and enable you to get the best possible service from it for many years.*

*You will find in this manual instructions for the operation, maintenance and servicing of this tool.*

*We would particularly bring to your attention , advice regarding safety.*

*If necessary, do not hesitate to contact the KIROGN company directly.*

# MINILEM® PROFILE

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# **GENERAL GUARANTEE CONDITIONS**

## **1/ Duration:**

The purchaser of new equipment benefits from a year's guarantee against defects in construction or material, as from the delivery date.

The date of delivery is the date of invoice from KIROGN showing the date of delivery to the user.

KIROGN must be advised of this delivery by the return of the guarantee card within eight days.

## **II/ Implementation:**

KIROGN provides a guarantee after the return of a completed guarantee card.

A Claim must be made within a maximum period of 30 days from the date of incident.

The guarantee is expressly limited to replacement or return of parts recognised as defective by our examiner. The user can never claim compensation for losses due to reason of machine immobilisation, accidents to personnel or those things which may arise as result of defect or fault in construction of the equipment sold. The carriage costs incurred by the exchange of parts is payable by the customer.

The exchange or discount document for spare parts does not extend the original guarantee period. Our guarantee is limited to parts made by ourselves. Those parts bought in from other manufacturers are guaranteed according to their manufacturers guarantees.

## **III/ Non implementation:**

KIROGN's guarantee does not apply to pieces which from their conception may be used on other types of machinery and by other manufacturers (e.g.PTO shafts, tyres etc...)

KIROGN's guarantee does not apply to pieces where normal wear and tear are expected (e.g. knives, sawblades, belts etc) nor to attachments which are mounted onto parts which no longer benefit from guarantee.

All guarantees are void in the case of default in payment of the equipment or the parts concerned.

Also, the guarantee is withdrawn and the constructor is absolved from all responsibility,

- a) when the equipment has been modified,
- b) when it has been repaired by those other than the constructor or his agents,
- c) when the original parts have been replaced by imitations,
- d) when damage is due to negligence (e.g. introduction of impurities into the hydraulic circuit) , bad use, excessive loading however brief, or the inexperience of the operator.

## **MODIFICATIONS AND IMPROVEMENTS**

We reserve ourselves the right to make improvement judged to be beneficial to our range without being obliged to make the same modifications to those already delivered.

## **JURISDICTION**

In case of dispute the sole and exclusive judgement is to be made by the Commercial Tribunal of Jonzac in the last resort, who rule on the conditions of sale and mode of payment.

Our payments or settlements of bills are made neither by substitution or can be overridden from this exclusive clause of competence.

## **TITLE**

**By conventional agreement, we reserve to ourselves title to the merchandise up to the last day prior the payment in full, conforming to the terms of French law N° 80.335 of 12 May 1980.**

# **WARNING**

## **IMPORTANT :**

Dear Sir,

Due to our introduction of interchangeable equipment called "adaptable" to the KIROGN cutting systems, we wish to share with you following information.

This particular activity may have nothing to do with the KIROGN company. For obvious reasons of SECURITY we bring to your attention the risks which such "adaptations" can bring : our company has no certificates of conformity for non KIROGN manufactured parts. Should non-original equipment be used, our responsibility as manufacturer, and our guarantee will be totally void.

For your satisfaction, only KIROGN and its agents are duly empowered to suggest equipment and "adaptations". These must be certified and of original KIROGN manufacture, conforming to the regulations to which our equipment is subject.

For your own safety and that of your employees, and in order to avoid all possible risks when using this "adaptation", we strongly impress on your supplier the need to print on delivery and invoice dockets :

### **"ORIGINAL KIROGN PARTS"**

KIROGN invented the cutting equipment with care and a continuing concern to offer equipment which gives high performance, economy and security.

This work continues for your benefit.

We are available to comment and give advice on this matter and will reply to your requests with the best price and service conditions and with respect to normal practices.

Yours sincerely,

**Yannick COLLARD**  
**Manager**







# Fédération des Industries Mécaniques

Direction des Affaires Juridiques et de l'Environnement

REEMPLACEMENT DE PIÈCES PAR DES PIÈCES « NON D'ORIGINE »

## MISE EN GARDE

aux utilisateurs d'équipements  
et aux fabricants ou vendeurs de pièces copiées

PIÈCES COPIÉES  
OU ADAPTABLES

## SUR LES RISQUES JURIDIQUES – SÉCURITÉ – CONTREFAÇON

1. LES REMPLACEMENTS, OU MODIFICATIONS, DE COMPOSANTS AUTRES QUE CEUX MONTÉS ET RECOMMANDÉS PAR LE CONSTRUCTEUR, PEUVENT REMETTRE EN CAUSE LES CONDITIONS INITIALES DE LA SÉCURITÉ DU MATÉRIEL.

Toute opération de ce type sur le matériel sera à la charge entière de celui qui sera intervenu et remettra en cause la validité du marquage CE délivré par le fabricant.

Dans ce cas, la déclaration CE de conformité devient caduque et LE FABRICANT DEGAGÉ SA RESPONSABILITÉ REGLEMENTAIRE.

2. LA CONTREFAÇON ET LA CONCURRENCE DÉLOYALE DE PIÈCES SONT CONDAMNÉES PAR LA LOI CIVILE ET PÉNALE.

La contrefaçon engage la responsabilité civile et pénale du fabricant, du revendeur, voire dans certains cas de l'utilisateur des pièces de contrefaçon.

La concurrence déloyale engage la responsabilité civile du fabricant, du revendeur d'une « copie servile », qui, tirant de cette opération un avantage injustifié, fausse les règles normales de la concurrence et réalise un acte de « parasitisme » en détournant les efforts de conception, de mise au point, de recherche de la meilleure adéquation, et le savoir-faire des constructeurs.

### Les fabricants des industries mécaniques

☞ **Mettent en garde les fabricants et revendeurs de pièces, reproduisant ou écoulant des pièces d'origine, sur le risque juridique de contrefaçon et de concurrence déloyale au titre de la fabrication et de la diffusion des copies serviles.**

☞ **Attirent l'attention des utilisateurs sur les risques de caducité de leur déclaration CE en cas de modification des conditions de sécurité initialement définies par le fabricant de l'équipement, et les appellent à ne pas participer au détournement et « pillage » de la propriété intellectuelle auxquels se livrent certains opérateurs indéliçats.**



# CERTIFICATE OF CONFORMITY

The manufacturer undersigned:

Ste KIROGN  
BP 127 - VILLEXAVIER  
17504 JONZAC Cedex  
France

Hereby declares that

MAKE:           **KIROGN**

TYPE:           **MINILEM® PROFILE**

Serial number:

Is conformed with the provisions of the "Machines" Directive (Directive 98/37/CE), modified to meet national requirements.

Otherwise, conforms of norm NF P 98-780.

Made in Villexavier,  
On

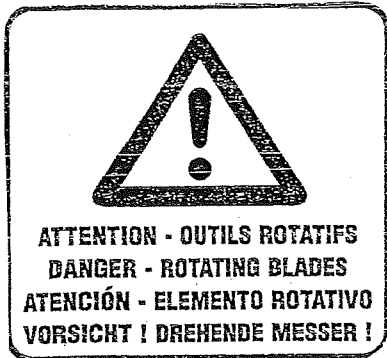
Yannick COLLARD  
Manager



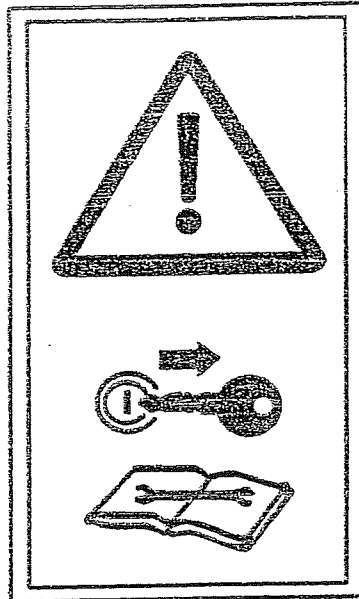
**1**

**SPECIFICATIONS**

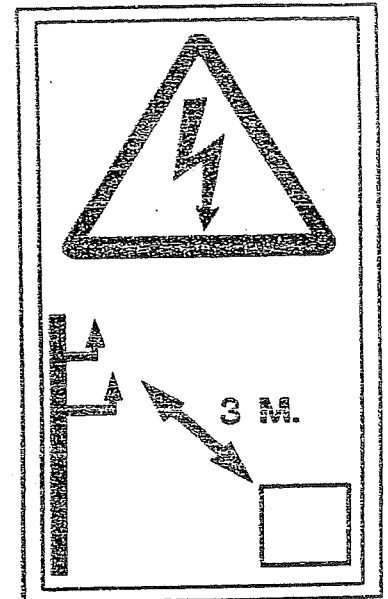
1) *Reminder of the advice signs*



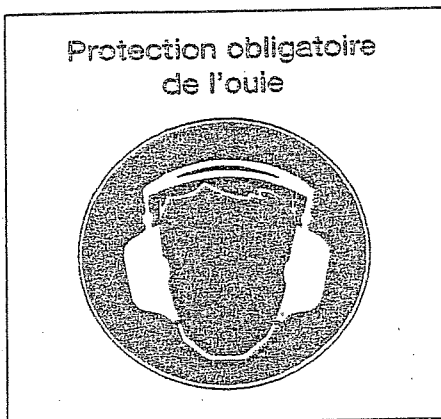
Cutting equipment have  
Saw blades or plates  
with mobile knives which  
Turn at high speed.



Never work on the machine  
when the engine of the tractor  
or carrier is running



The cutting blades can work  
at the height of the electric  
power lines, you must keep a  
minimum distance of 3 m  
away to avoid electrocution

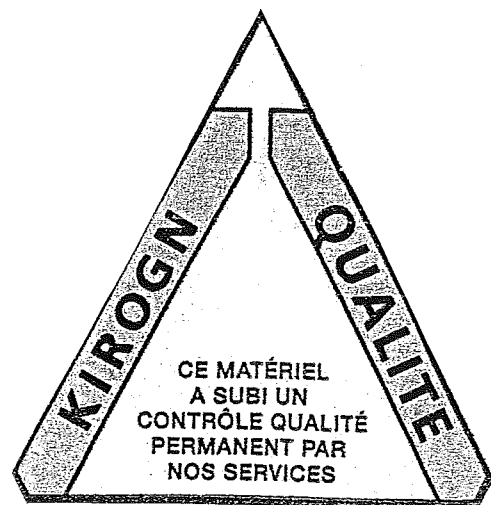


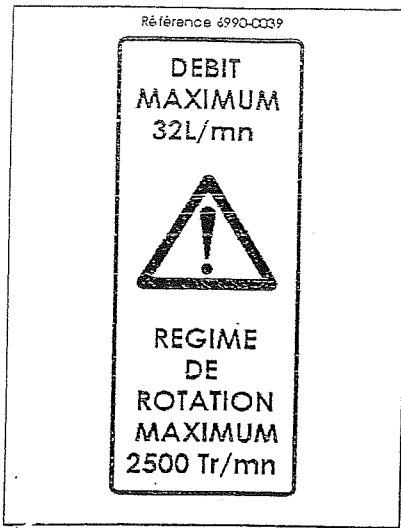
If the tractor does not  
Have a sound proofed cab,  
You have to use ear defenders  
Or another means to protect  
Your hearings

ROTATIONNAL SPEED OF BLADES OR DISHES	
Max :	2 500 rpm
Min :	2 500 rpm

In any case, the speed of blade  
rotation should not exceed 2500 rpm

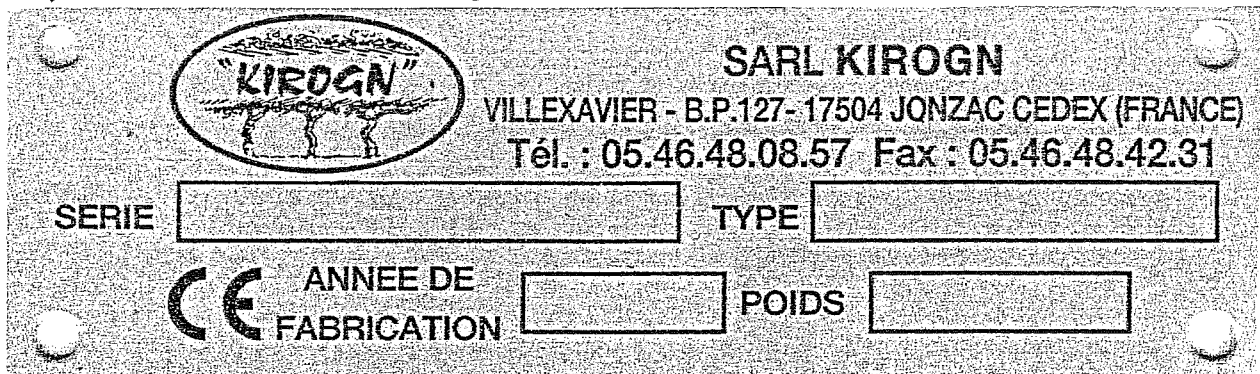
From the conception to the delivery,  
We will do our best to guaranty you  
The best service.





Cutting equipment MINILEM® PROFILE  
Is conceived for a rotational speed max. 2500 rpm

**2) Reminder about the conformity plate**



- 1- Address of the manufacturer
- 2- Serial number
- 3- Type number
- 4- Year of manufacture
- 5- Total weight

**Be CAREFUL:** the cutting head is modular, its weight depends on whether one or more modules have been taken off or added. You have to make absolutely sure that the weight of your KIROGN cutter head can be supported on the arm or carrying frame destined to receive the tool/

**Scrupulously respect the instructions of the constructor of the arm or carrying frame on this subject.**

**WEIGHT OF MINILEM PROFILE EQUIPPED WITH FLAILS ASSEMBLIES**

3 bearing blocks	36 kg
4 bearing blocks	44 kg

**WEIGHT OF MINILEM PROFILE EQUIPPED WITH SAW BLADES**

3 bearing blocks	42 kg
4 bearing blocks	52 kg



**2**

**SAFETY**

1) Safety instruction regarding the conception of the machine

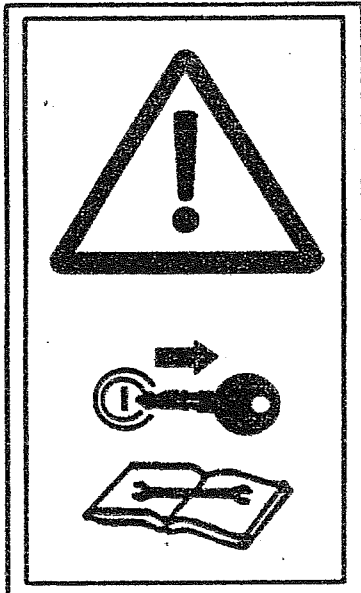
a) Signification of advice signs

**Caution!! Danger: saw blades and plates with mobile knives rotate at a high speed and not allow to see correctly the extremity of the cutter head.**



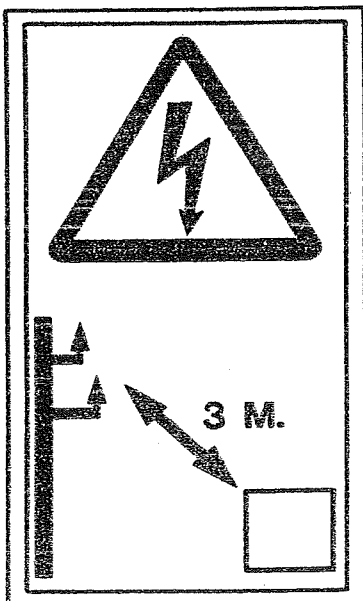
Cutting equipment have  
Saw blades or plates with  
mobile knives which turn at  
high speed.

**Caution!! Danger! Stop the machine and the blade unit before  
maintaining or repairing the tool.**



Never work on the machine  
when the engine of the tractor  
or carrier is running

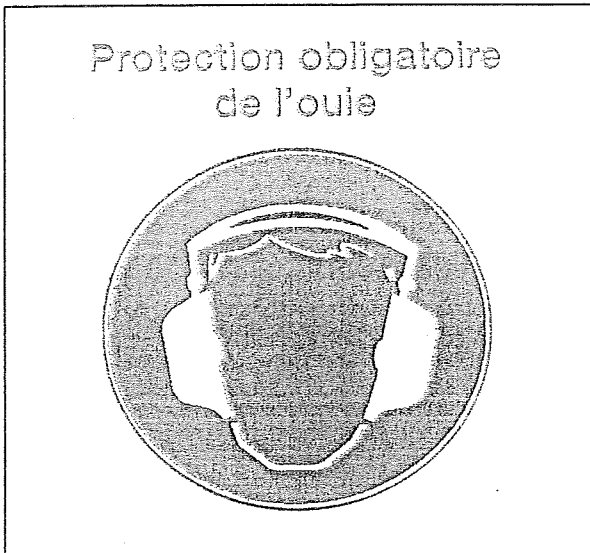
**Caution!! Danger! Electrocution risk: keep away from electrical power  
lines**



The cutting blades can work  
at the height of the electric  
power lines, you must keep a  
minimum distance of 3 m  
away to avoid electrocution

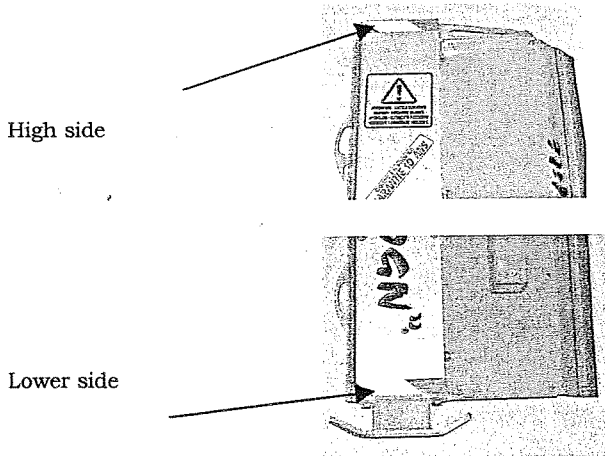


**Caution!! Compulsory hearing protection**



If the tractor does not  
Have a sound proofed cab,  
You have to use ear defenders  
Or another means to protect  
Your hearings

**Recognise the cutter head 's working position:**



The striped red and white marking at the extremities of the cutter head help the operator to view the head when working.

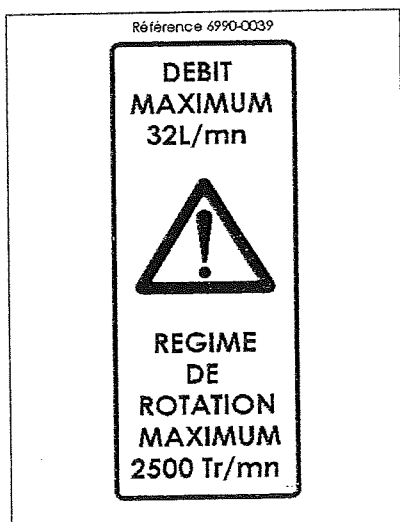
In particular when working in dense vegetation you must always be able to monitor the cutter head.

**Maximum rotational speed of the cutting tool:**

**Never go beyond this speed: 2 500 tr/mn.**

ROTATIONNAL SPEED OF BLADES OR DISHES	
Max :	2 500 rpm
Min :	2 200 rpm

**Caution: danger: maximum rotation speed to respect**



Hydraulic supply of the engine of MINILEM® PROFILE never have to exceed 32L/mn, to guaranty rotation speed less than 2500 rpm

***b) Protection against the risks associated with moving parts of the transmission***

This protection is assured by the presence of removable guards. A tool help removal allowing access to the transmission.

***c) Protection against accidental contact with the cutting head***

The cutting heads are provided with rigid deflectors which must always be kept in place during operation. Great care must be taken during operation and storage.

***d) Protection against vegetative projectiles and falling objects***

Protection in the working zone

There is always a risk of projection of objects during the cutting operation.

In order to plan against these risks, place signs on the road, far enough away in order to projectile or falling object cannot reach any one who should be closed to the cutting area.

Operator protection

Against vegetative projectiles: the operator should always wear glasses with lateral protections, or mask, following EN165 norm, conforming basic prescriptions and specifications (7.1-7.22.2 of EN 166 dated 1994).

Against falling branches: When the cutter is equipped with saw blades, the cut branches can be of very large diameter and found at an high height .If the tractor is in a zone of falling branches, the operator is therefore subject to risk of falling wood and by penetration of falling objects into the cab.

**In this case, it is necessary to use a cab equipped with a protective structure, against falling object which have to satisfy FOPS regulations, according to the ISO 8083 standard. It must also be protected, (on the cab side or where a risk exists against the penetration of objects into the cab), which must satisfy the FOPS regulations according to the NF ISO 8084 standards.**

***e) Protection against not allowed person in the working site***

During the cutting operation, cutting elements are not protected on the front and the sides, it is necessary to place signs on the working site, to prevent any person to be closed to the machine during its work.

***f) Protection against damage to the blades and their balance***

The rotating blades were designed and constructed to ensure good cutting, by the effect of centrifugal force, when used correctly, they do not stress, break or come apart.

The cutters work by impact (flail knives) and are balanced before delivery. The operator must be careful to ensure that they remain balanced. To do this, frequent checks of the blade condition must be made, and change them immediately (by diagonally opposing pairs) where they show signs of distortion, wear, or are chipped.

**NEVER SHARPEN WORN BLADES**

**Confirmation of safety:**

**KIROGN blades have been checked by severe impact tests, carried out according the EN 706 standard 1996, ensuring optimum security for the operator when used according to the operating conditions laid out by KIROGN.**

***c) You should never***

Make adjustment and repairs on cutting elements, PTO Engaged or tractor under operation.

Cut the hydraulic engine supply brutally. It is preferable to gradually slow down the speed of cutting elements until the extreme idle This is to keep in the circuit enough oil , so any oxidation will be avoid when the machine will be not used.

Authorise an inexperienced person to use the machine without monitoring

Use to machine without any safety protection.

Be under the saw blades or in its axis.

Brutally climb on to obstacles with the tractor

Use spare parts not manufactured by KIROGN

Grind the knives

Use the saw blades if any problems as vibrations

Remove the certification plate which states the machine n° and type.

Modify the structure or system designed by the manufacturer.

**This equipment is intended exclusively to cut the surplus of vegetation. Any other application as well as the non respect of the safety instructions could not engage the responsibility for the KIROGN Company as for incidents or accidents being able to occur.**

### **3 ) RISKS BEYOND CONTROL OF DESIGNER**

- Working speed and size of cutting site are not compatible
- 
- Dangerous position or excessive stress for the blade unit
- 
- Failure of supplying circuit with energy
- 
- Failure of the control system
- 
- Loss of stability
- 
- Not enough light in the working area
- 
- Not enough visibility from the cab
- 
- Bad movement from the user
- 

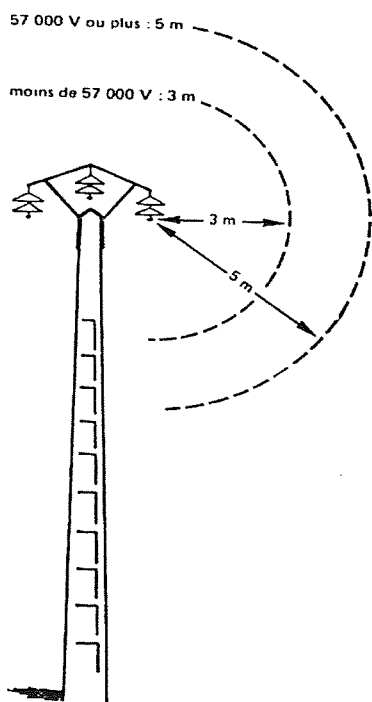
**This list is not exhaustive, but shows how it is important to respect safety rules when using this tool.**

#### 4) Disposition about electric lines

You must be absolutely sure that whilst preparing to use the cutting head and when working with it that there is no one in the proximity of the cutting equipment.

#### ARTICLE 172

- Every business manager planning work besides electric lines or installations must inform the power supply company, who will instruct their local representative from the energy distributor, or the line owner or public or private installation owner to ascertain the power level in the lines or installations, in order to provide assurance that when carrying out work, personnel will not be at risk with tools, machinery, engines which they use, or any part of their material. Keep away from the harmful conducting parts normally under tension, and particularly at a distance of less than:



- a) 3 meters for lines or installations with high tension (value efficient for alternating current) existing in a normal regime between any two conductors less than 57 000V ;
- b) 5 meters for lines or installations of high tension (value efficient for alternating currents) for any charge equal or larger than 57 000 V.

A calculation must be made to determine the minimum distance between the power lines and the part which may receive a shock, in all cases, off all possible movements of conducting lines under power in pipework or electrical installations and also all movements, shifting, swinging, surging (notably in case of a rupture of a component) or possible branch falls during work.





# **3**

## **STARTING THE MACHINE**

## **1) Start**

### **a) Application field**

The MINILEM® PROFILE is conceived to be adapted on a hydraulic equipment (KIROGN® if possible) allowing to move it. This set will be fixed to a tractor or microtractor having a hydrostatic transmission or having a crawling speed.

### **b) Description**

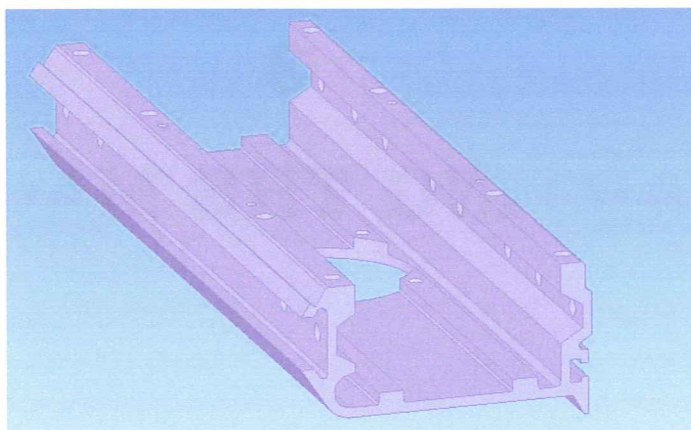
#### Configuration

Your cutting equipment consists of a basic module 2 bearing blocks with hydraulic engine and of simple or double successive extension head.

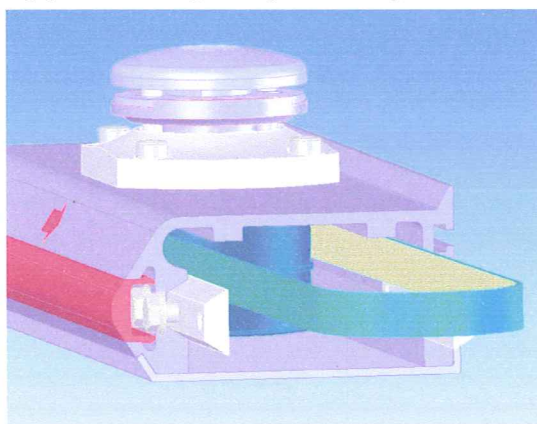
#### Main parts of the machine

The body, made of a profiled, anodised LIGHT alloy body whose strength structure is higher than steel, give to the mechanical structure an incomparable rigidity, and will resist to many impacts.

Its greater resistance will increase the life expectancy of your equipment, for your best satisfaction.



Bearing blocks are equipped with pulleys with plate belts.



## **2) Setting up procedure**

### **a) Fix the adapting bracket onto the arm**

Ensure the bracket complies with the make and type of hedgecutter. This piece supports the cutting tool and must therefore be checked by the user.

### **b) Fix the cutting head onto the bracket**

The cutting head is held by the mounting bracket, this piece can be adjusted along the square of the cutting head to obtain a satisfactory offset.

### **c) Connect the flexible hoses**

Ensure the flexible hose kit complies with the make and type of hedgecutter. The kit assures the feed between the cutter and the hedgecutter.

### **d) Check the running of the tools**

Check by stages the security of the pivot clamps and the cutting components, also the nuts and bolts of the cutting head.

Before going out to work with the tractor, the user must make sure that there is one near the machine.

### **e) Starting the blades**

Take off the blade protection guard then slowly turn the motor accelerating progressively.

### **f) Stopping the blades**

Do not cut the flow to the hydraulic motor at full power, better to slow down the engine progressively which will allow a reduction in the phenomenon of inertia.

**4**  
**USE**

## **1) Protection of the hydraulic circuit**

### **a) With machine delivered with distributor**

The MINILEM® PROFILE is fitted with a hydraulic engine (12cm<sup>3</sup>/hr), which allows to move itself.

The set will be mounted on a tractor or microtractor at the front or rear, but always respecting capabilities of the carrier.

Hydraulic distributor is supplied either by the tractor, either by adding a hydraulic supplier.

The oil flow is regulated, which limits the rotation speed of the cutting system to 2 500 rpm.

The oil flow cannot be > to 60l/mn.

### **b) With machine delivered without distributor**

Flow < 45l/mn: you can change the cubic capacity of the hydraulic motor as:

6 cm <sup>3</sup> /tr	13l/mn-15l/mn
12cm <sup>3</sup> /tr	24l/mn-32l/mn
18cm <sup>3</sup> /tr	36l/mn-45l/mn

Flow > 45l/mn

You have to provide a divider block flow to protect efficiently hydraulic circuit and cutting transmission.

This is mounted on a plate, near the hydraulic motor and is bind to it by 3 hoses.

The flow at the entry is 140L/mn max, for a pressure 160B. The regulated flow at exit is 32l/mn with a pressure 160B.

Dimensions of openings of entry and exits are in 3/4 BSP; location on the blocks letters P (pressure) and T (return).

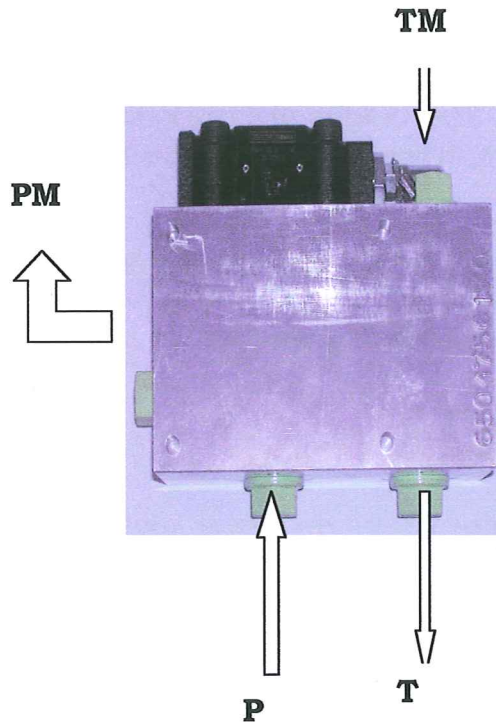
Dimensions of openings of supply and return hydraulic motor are en ½ BSP, location on the blocks letters PM (pressure motor) and TM (return motor).

**P:** hydraulic supply from the tractor, brush clearing, hedge cutter ....

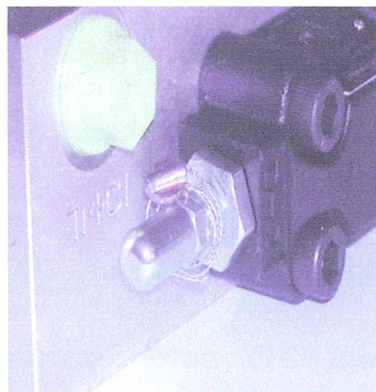
**T:** general return in hydraulic tank

**PM:** hydraulic supply of the cutting equipment motor

**TM:** return of hydraulic motor of the cutting equipment.



The flow rate block is settled in the factory on a hydraulic bench.



The flow of entrance, on opening P, should not exceed 140L/mn.  
The regulated flow in block exit (PM) is on average 32L/mn.

The pressure of entrance, on opening P, should not exceed 210B.

The pressure limiter is adjusted on 160b to protect all the transmission parts of the cutting equipment.

A filling of origin embed this settle to avoid any manipulation.

The guaranty of the tool would be cancelled if the filling of origin have been removed.

## **2) Methods of use : information:**

This machine is designed for pruning hedges and trees. The equipment has been especially designed for the removal of excess vegetation..

This operation is effective on old or annual growth.(cutting dry or green wood).

The machine is designed to accept circular saw blades or dishes with mobile knives, and these parts must be original KIROGN parts.

Do not use the cutters at soil level. The blades are only designed for pruning vegetation above ground level (hedges, trees, woodland boundaries ...).

### **a) Adapt the cutting tool according to the work site**

*We advise you to use the dishes with mobile knives for :*

- *Cutting green wood : maximum 20 mm*
- *Cutting dry wood : maximum 15 mm.*

*When cutting more than 20mm green or 15mm dry wood use the circular saw blades.*

### **IMPORTANT**

***We advise our clients to match the cutting tool to the size of branches to be cut. Good maintenance of the cutting tools is essential to achieve good work.***

### **b) Protection against falling branches**

It is necessary to use a cab equipped with a protective structure, against falling object which have to satisfy FOPS regulations.

### **c) Saw blades maintenance**

To optimise the output of your MINILEM® cutter, regular sharpening and aligning is necessary.

On average, depending on the various circumstances that you can meet, wood diameter, wood type, cutting period..., sharpening and condition checking may take place every 8 hours of work.

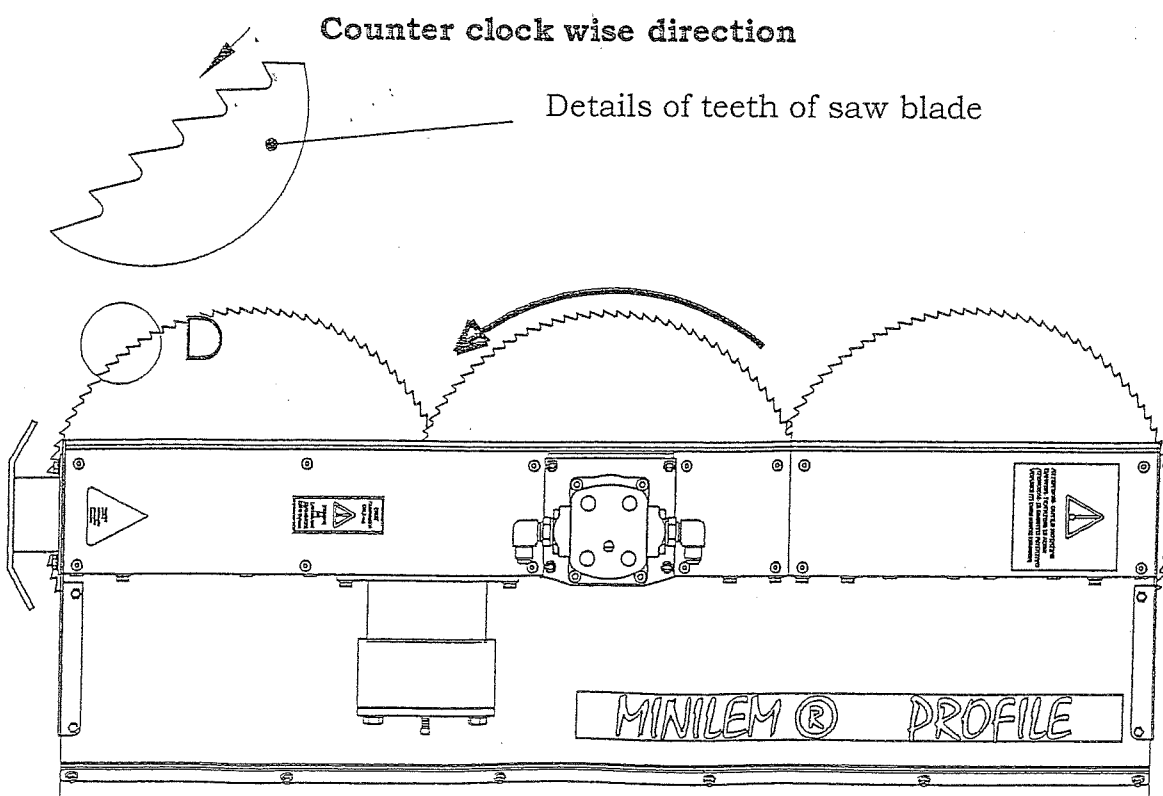
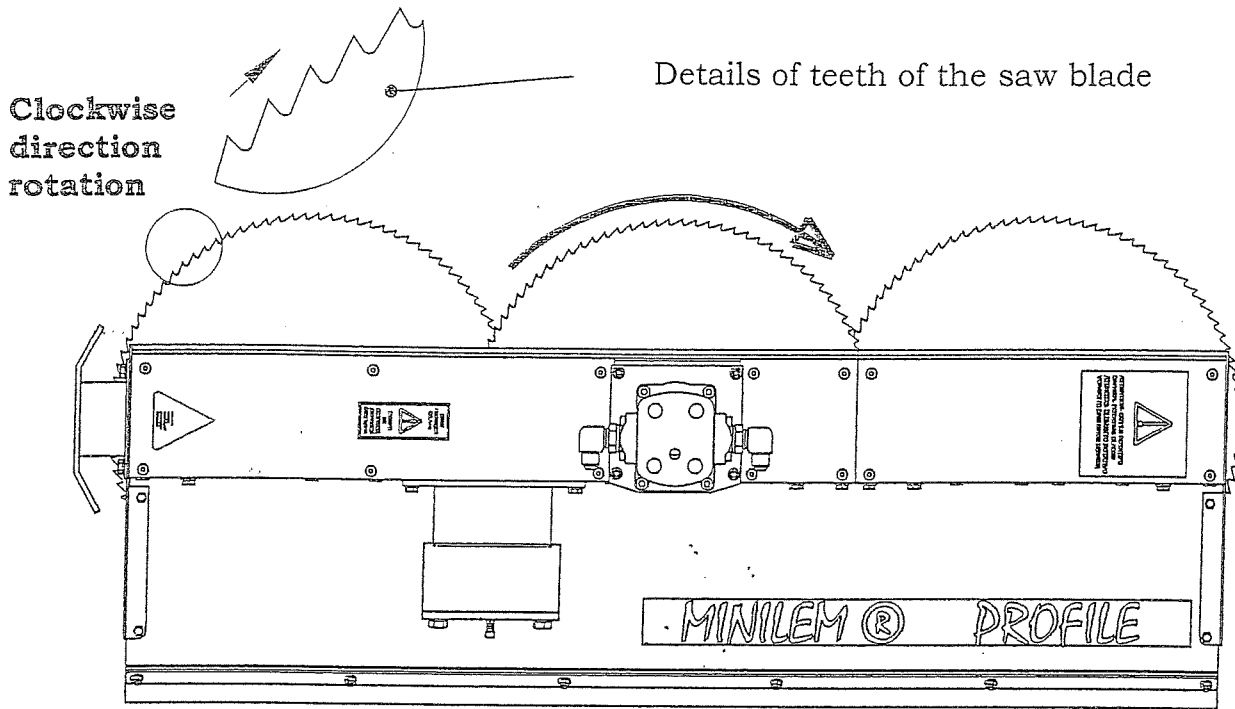
The saw blade can undergo deformation which will reduce performance. If this happens, ask a saw blade specialist to check the blades and service accordingly.



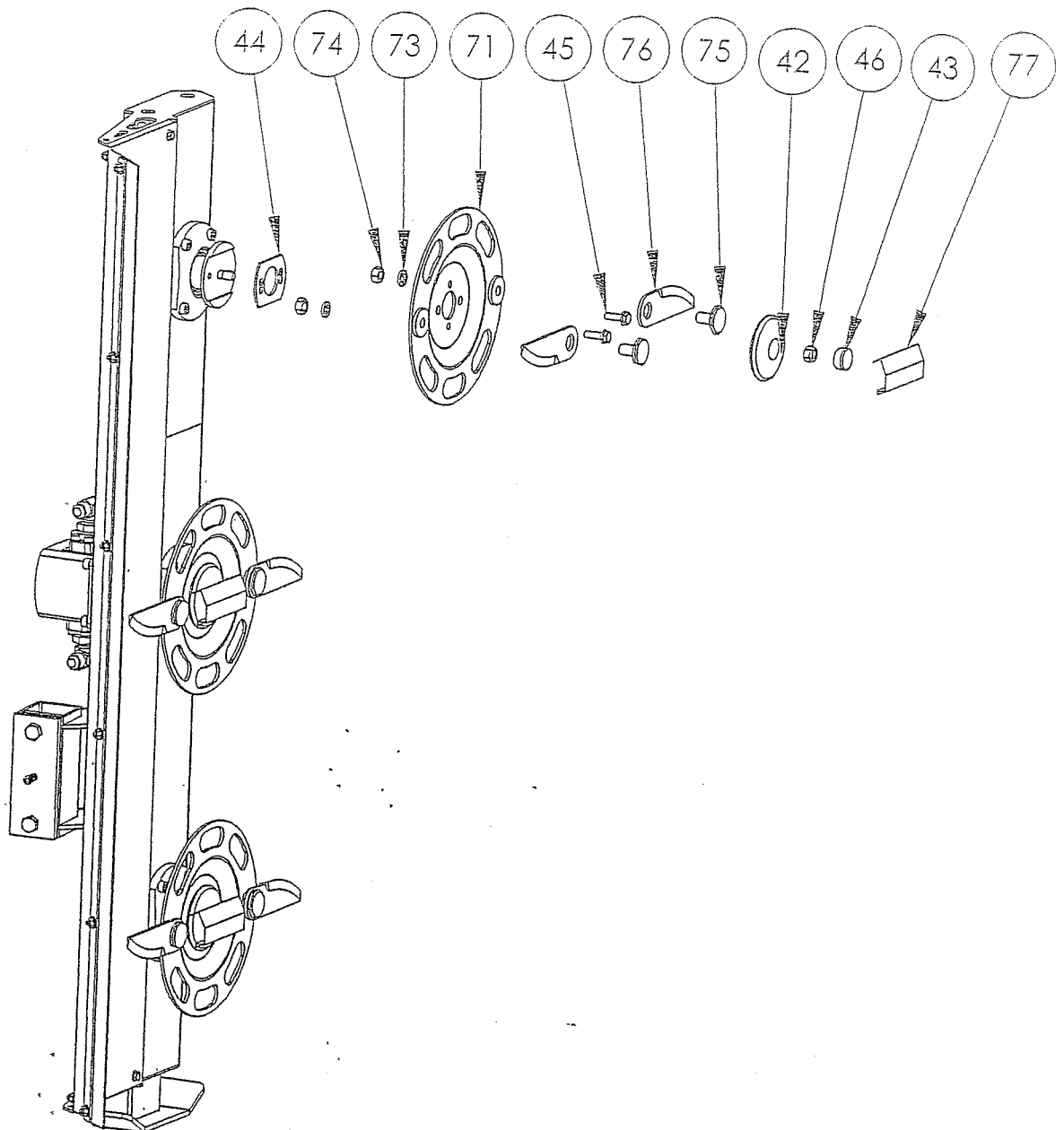
### 3) Mounting blades on 2 ways

All blades have to be mounted in the same way, but can turn into 2 rotation ways, according the assembly chosen.

In order to make the vegetation fall in a side or another, you will have to turn your blades consequently.

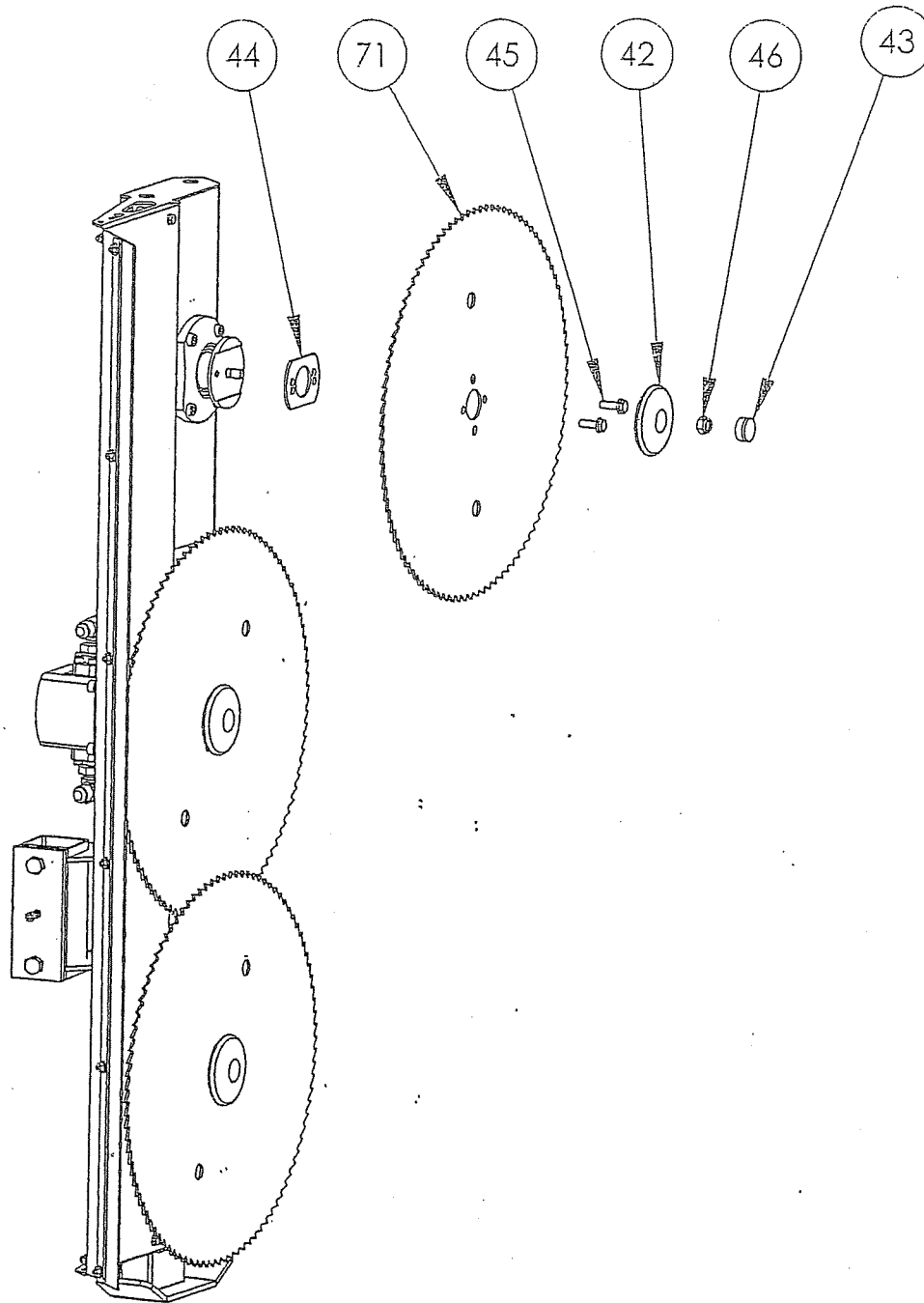


**a) Dish assembly with mobile knives**



Rep	NBR	REFERENCE	DESIGNATION
24	6	6555.1309	Tensilok bolt 8x20 zn
42	3	6555.1102	Valve spring retainer
43	3	6555.1418	Cover Ø26
44	3	6555.1103	Part for fixing the plate
45	6	6555.1412	Tensilok bolt M8x25 zn
46	3	6555.1422	Locknut M10
71	3	7160.0733	Plate Ø 200
73	6	6507.5201	Washer W7/16
74	6	6506.1101	Nut H,7/16.20NF Zn
75	6	7020.0601	Bichromated bolt 7/16
76	6	7030.0818	Polychrome knife lg 125
77	3	5001.1008	Knife protection

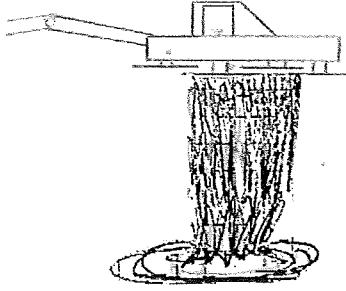
**b) Saw blade assembly**



Rep	NBR	REFERENCE	DESIGNATION
24	6	6555.1309	Tensilok bolt %8x20 zn
42	3	6555.1102	Valve spring retainer
43	3	6555.1418	Cover diam 26
44	3	6555.1103	Part for fix the flail
45	6	6555.1412	Tensilok bolt M8x25 zn
46	3	6555.1422	Locknut M10
71	3	7120.0226	Saw blade Ø 450- 96 teeth

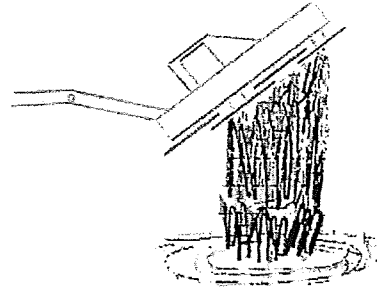
## ADDITIONAL ADVICE

**NO**



- The weight of cut branches exerts excessive pressure on the blades.
- Risk of projection towards the tractor.

**YES**



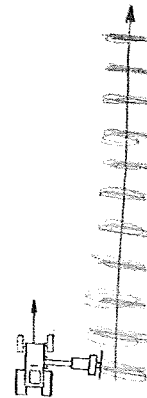
- The ejection of cut branches is easier.
- Reduction of projections toward the tractor.

**NO**



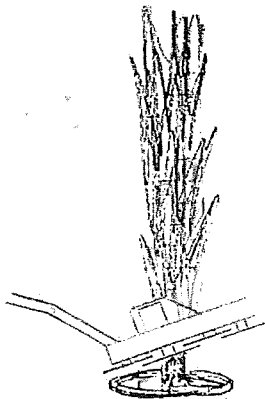
- Risk of blade deformation.

**YES**



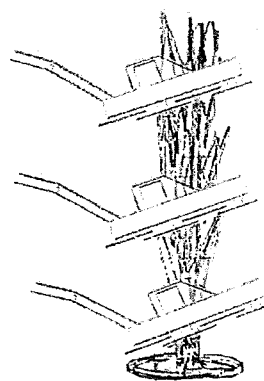
- The forward progression of the blades must mark out a straight line, not a succession of curves.

**NO**



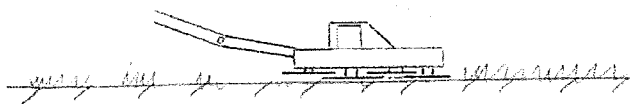
- Never cut a hedge or branch at its base.

**YES**



- If the hedge is more than 2 metres high lop it off in stages.

**NO**



- The cutter is not designed to work at soil level.

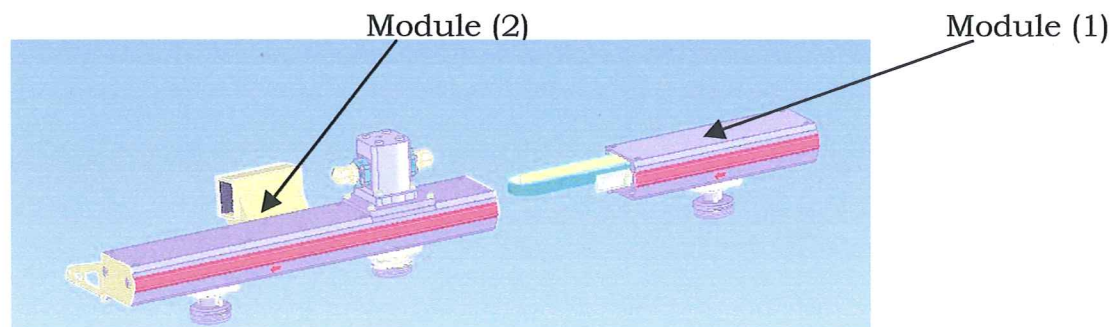
**5**  
**MODULARITY**  
**KIROGN EXCLUSIVE PROCESS**

## **1) What is the modular KIROGN Concept?**

It provides you with the ability to quickly adjust the length of the blade assembly to suit the needs of the area being pruned by adding 1,2 or 3 blades.

Thanks to a simple assembly design, it is easy to add or remove additional cutting modules, enabling you to turn 4 blades into 5 or 4 blades into 6 and so on.

Your cutter is made of a basic module equipped with a hydraulic motor (A) onto which you can add an additional module (B).



## **2) How to choose additional modules**

### Consult your retailer:

He will be able to advise you on the various solutions with regard to adding additional modules.

**SAFETY:** adding a module increases the weight and length of your MINILEM® PROFILE. Check that your hedgecutter or carrier arm is able to support this extra weight without changing the constructors safety and work requirements.

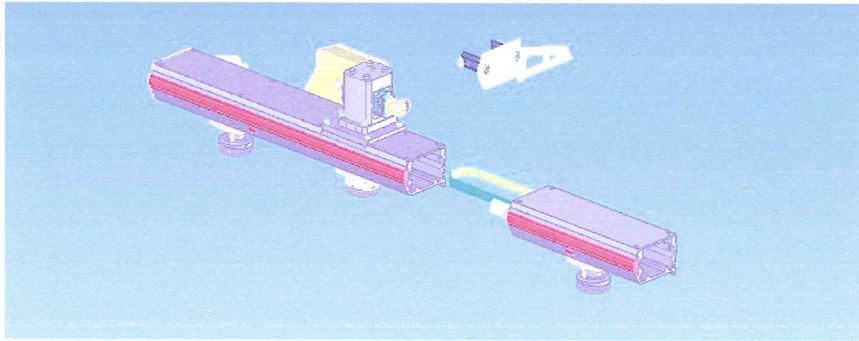
The constructor is the only one able to give this information. On request KIROGN will give you the module weight.

### How to choose the right module:

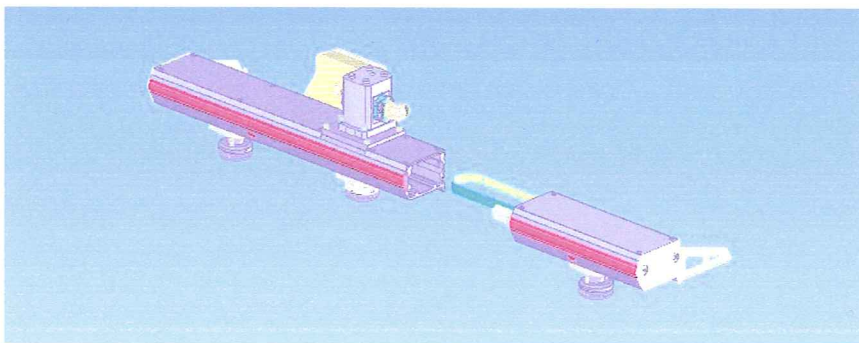
This decision depends on the type of work to be undertaken.  
The cutter must be comfortable in its workplace.

### 3) How to fit additional modules

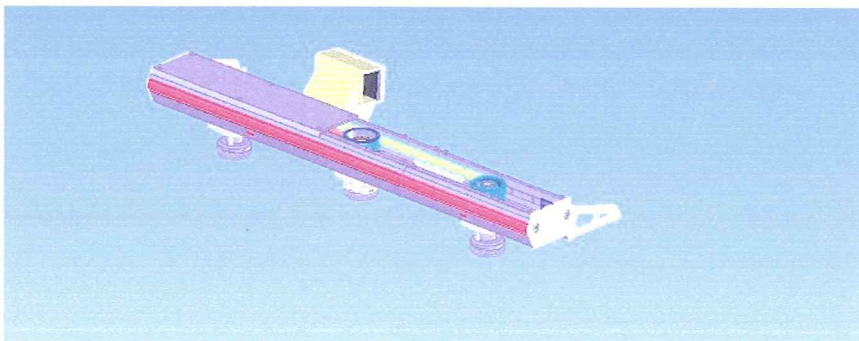
Unscrew the 4 bolts and take off the cover plate, and 2 positioning splices.



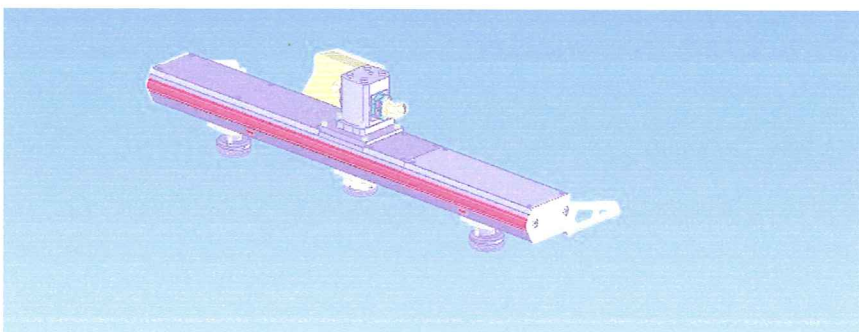
Fit with 4 bolts the cover plate and the 2 splices to the exterior module.



Screw the additional module, after having taking apart the sheet metal of above. So you can fit the belt tension.



Fit the metal sheets of above to achieve the assembly.







**6**

**MAINTENANCE**

## 1) Maintenance

### NEVER SERVICE WHEN MACHINE IS RUNNING

MAINTENANCE AND SERVICE INTERVALS	FREQUENCY OF SERVICE	MAINTENANCE	
		By user	By Specialist
Check hoses, nut and bolts	Every 2 hrs	x	
Clean interior and exterior completely	Every 8 hrs	x	
Lubricate the pulleys	Every 10 hrs	x	
Check belt tension	Every 8hs	x	
Check the movement of the dishes and swinging blades	Every 2 hrs	x	
Check the cutting blades	Every 1 hr	x	
Sharpen the saw blades	Every 8 hrs		x
Align the saw blades	After each sharpening		x
Check general blade condition	After 10 sharpenings		x

***This list is neither exhaustive or contractual, its only aim to help service your equipment, in any case , do not hesitate to contact our service department.***

#### ***a) Lubrication***

Lubrication conditions:

The cutter is lubricated when first made.

Lubrication intervals:

Every 10 hours of use

Type of lubricating product

We advise you to use: type **LITHIUM -NL GI3**

### ***b) Plate with mobile knives maintenance***

To optimise your return on the investment in KIROGN MINILEM® cutter, you have to take care about it.

All maintenance work have to be done, respecting this instructions: cutter stopped, power source off, and PTO disengaged.

Before each work period, check all bolts, screws and general condition of the machine.

Knives on dishes must be free from any marks in order to maintain a clean cut. If it is not the case, immediately change both blades per dish. We advise you to change blade carrier pins on the same time.

Never sharpen knives, they have been heat treated and are balanced as specified by KIROGN.

### ***c) Saw blade maintenance***

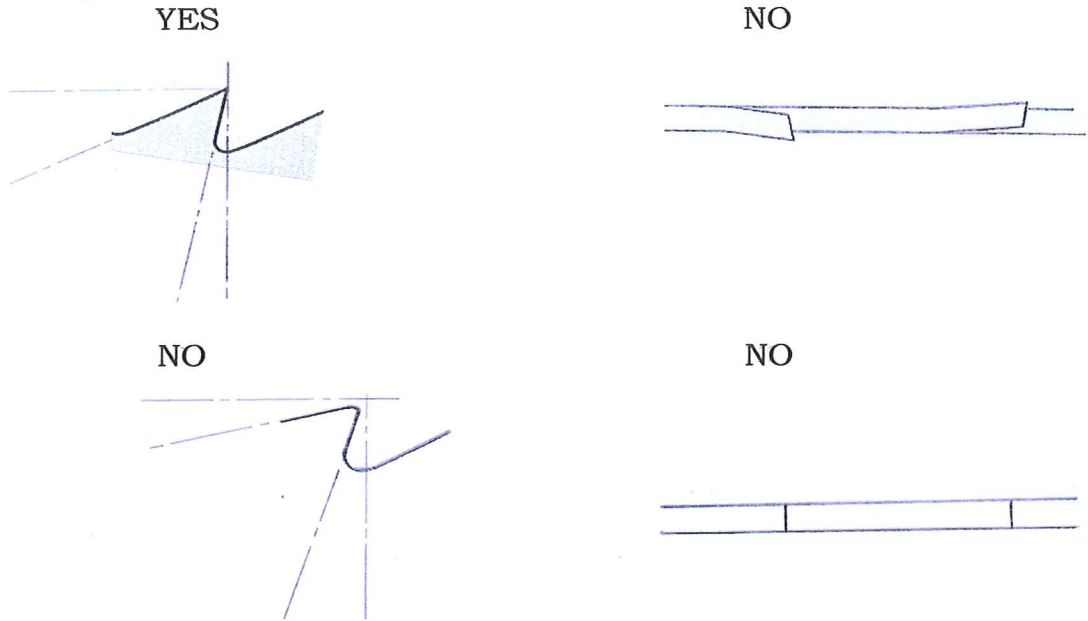
To optimise the output of your MINILEM® cutter, regular sharpening and aligning is necessary.

On average, depending on the various circumstances that you can meet, wood diameter, wood type, cutting period..., sharpening and condition checking may take place every 8 hours of work.

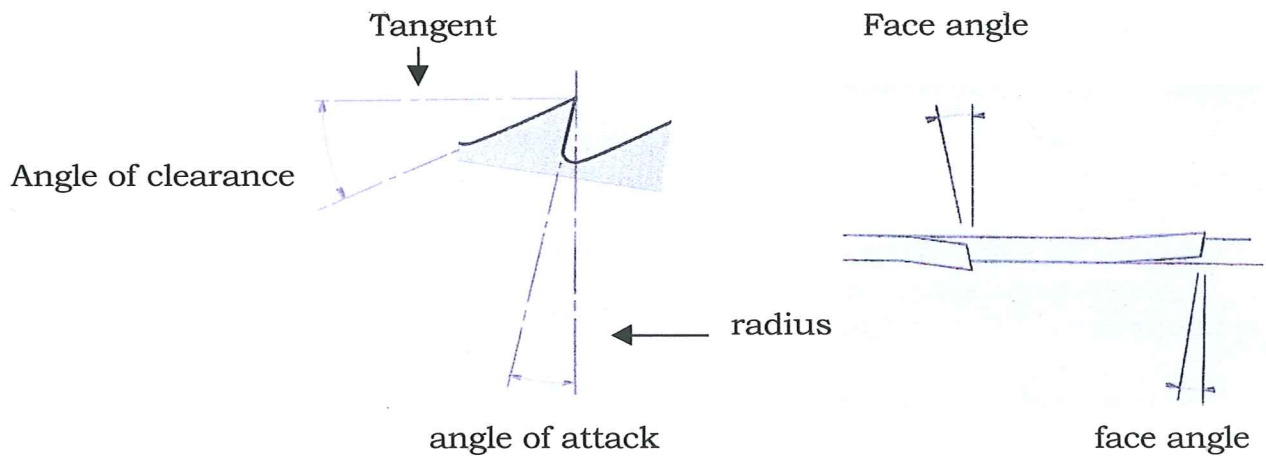
The saw blade can undergo deformation which will reduce performance. If this happens, ask a saw blade specialist to check the blades and service accordingly.

**d) Advises for maintaining saw blades**

- Sharpening:



The saw teeth are sharpened very precisely to a shape that is in proportion to the angle of attack and the angle of clearance.



The recommended angle of attack must be set between  $5^\circ$  for cutting hard wood and  $10^\circ$  for cutting green wood.

The recommended angle of clearance must be set between  $14^\circ$  for cutting hard wood and  $18^\circ$  for cutting green wood.

The recommended face angle with alternating chamfers have to be set between  $5^\circ$  for cutting hard wood and  $15^\circ$  for cutting green wood.

**The quality of the cut , and the length of life of the blade depends on a great extend on respecting these values.**

- The set

-

**Yes**

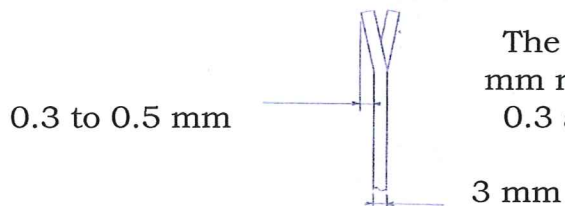


**no**



This feature allows the blade to clear a passage wider than the body of the saw. The alternating cutting faces also eject the saw dust away from the machine and enhance the work rate.

To obtain a clean cut and also to lessen the possibility of friction and vibration between the blade and the wood, the set is indispensable.



The blades Ø. 450 having a body width of 3 mm must have a set of between 0.3 and 0.5 mm to each side.

- Structural strength and stability

The two service operations of sharpening and setting will help to keep the blades in good condition. Vibration, bending and stretching can be avoided.

Servicing can be carried out by a specialist saw sharpening workshop.

As a first in the field check, lay a straight edge against the blade and look for contortions.

Secondly tap the blade with a hammer and listen to the ring note and length. It should ring like a bell, if not, further inspection is required.

**YES**



**NO**



## 2) Repairs

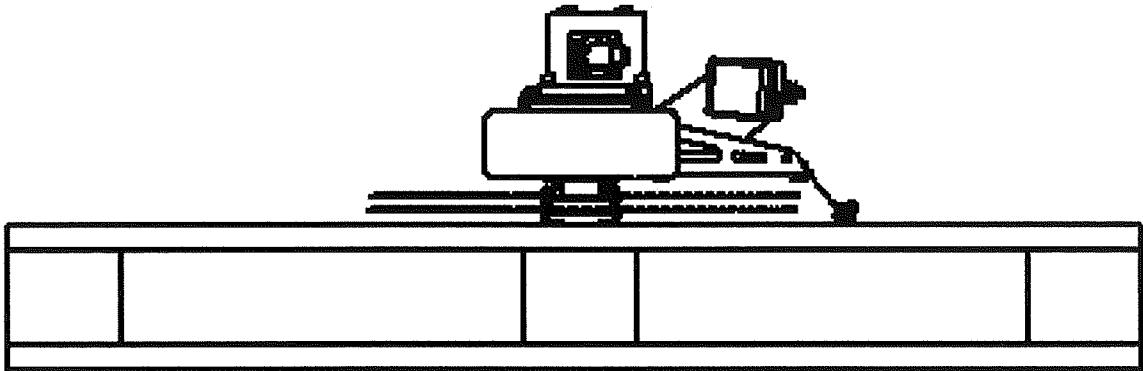
**NEVER WORK ON THE MACHINE WHEN MOTOR IS RUNNING**

- **a) Place the MINILEM cutter on the floor.**

All maintenance to be done with the MINILEM® cutter on a wooden pallet laying on a flat surface.

Use appropriate lifting devices.

Protect with gloves.



**Saw blades must never be in direct contact with the wooden pallet or the floor, otherwise you may bend them (the protective rear cover does not eliminate possible distortion of the blade).**

**b) Failure identifications**

<b>POSSIBLE FAILURES</b>	<b>CAUSES AND REMEDIES</b>
Hydraulic motor joint leaking	Change the joint after checking the drainage circuit (pressure max 0.7K in continuous flow)
Belt jumping	Tension belt as shown in manual
Regular purr	Check lubrications Change bearings.
Irregular “tac tac” with speed variations depending on rotation speed.	Check pulleys, check bearings
Numerous stops of the cutter while working	Check blade sharpness Check pressure on limiter “150 bar” Check rotation speed 2200 tr/min)
Heating up of the bearing blocks	Check that there are no foreign bodies in bearing blocks.
Noisy hydraulic motor with starting or stopping the cutter bar	Engage and disengage the motor at low speed

***This list is not exhaustive, nevertheless the aim is to facilitate detection of technical problems. Do not hesitate to consult our technical department.***





