

ВАЛЕРИЙ С&М ГРУП АД

ИНСТРУМЕНТИ В БЪЛГАРИЯ



ELECTRIC CHAIN SAW RTR max , model: RTM 904 ORIGINAL INSTRUCTION MANUAL

1. SAFETY INSTRUCTIONS:

- > Always Винаги изключвайте захранването, преди да извършвате почистване или поддръжка.
- > Use extensor Използвайте удължител със същите характеристики: Voltage: 230 V.
- Minimal cross section of the wires: 1,5 mm². Maximum length of the cable: 30 m.
- Clean properly the chain saw.

WARNING!

- > Chain saws are dangerous! A moment of inattention and irregular use may result in serious personal injury or death!
- > Before start operating with the chain saw, read the instruction manual and make sure that you do understand it.
- > Always use: Approved helmet.
- > Protective hearing defenders which are approved
- > Protective glasses or face mask and protective gloves which are approved.
- > Do not expose the chain saw to rain and wet conditions.
- > If the mains cable is damaged pull the mains plug.
- > Check the saw and the guide bar are properly assembled and adjusted.
- > The incorrect tensioning of the chain increase the wear of the chain, chain wheel and guide bar and may cause damages to these parts.
- > Never cut before plenty amount of oil reach the chain.

WARNING!

The chain saw must not be modified by no means and by no circumstances without permission of the producer. Use only original accessories. The forbidden modification and/or unapproved accessories may cause serious personal injury or death to the operator and other people.

The chain saw must not be modified any way and circumstances without permission of the manufacturer. Use only original accessories. Forbidden modification and/or unapproved accessories could cause serious personal injury or death of the operator or other persons.



Old electrical devices should not be treated as ordinary waste. It must be hand over to the recycle station for electric and electronic equipment. Disposal or recycling of parts of them should be in places with the appropriate equipment. For information on collection and use of old electrical equipment, contact your local authorities or dealer.

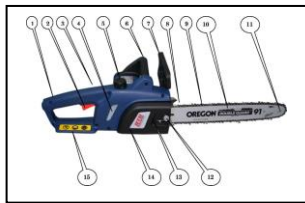
Ensuring product's proper disposal, you help to prevent negative consequences for environment and human health, which could appear if the product is disposal irregularly.

2. TECHNICAL DATA

1. Voltage rated 230 V AC
2. Frequency 50 Hz
3. Power rated 2000 W
4. Weight 5,13 kg
5. Oil tank capacity 0,15 l
6. Approximate oil consumption liters 0,15/20 mg
7. Sound power level 107,6 dB(A)
8. Vibrations
- 28.1. Front handle 4,123 m/s²
- 28.2. Back handle 4,467 m/s²
29. Advisable length of the guide bar inches/cm 12/30 inches/cm 14/35
210. Speed of the loose chain 14,8 m/sec
211. Speed of the chain with nominal power 12,1 m/sec
212. Chain pitch
213. Depth
214. Number of the leading links inches/mm 12"/14"/16" 3/8 inches/mm 0,050/1,3 45/52/56

3. PARTS OF THE CHAIN SAW:

1. Back handle
2. Starting lever
3. Lock of the starting lever
4. Oil tank level
5. Oil tank of the chain
6. Front handle
7. Kickback stop
8. Chain tension aid
9. Chain
10. Guide bar
11. Nose of guide bar
12. Guide bar nut
13. Chain wheel which is hidden in the clutch-housing of chain transmission
14. Clutch-housing of chain transmission
15. Right hand safety guard



4. INSTRUCTIONS FOR SAFETY USAGE

WARNING!

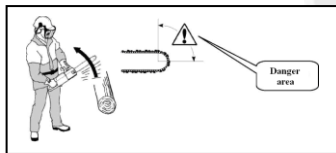
- 4.1. Never hold the chain saw by one hand during work. This may cause serious personal injury to the operator, helpers and other people. Electric chain saws are design for work with both hands.
- 4.2. Wear safety equipment. Wear tight clothes which do not limit free movement. Do not wear loose clothing or jewellery which can be caught in moving parts. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts. It is recommended to use approved safety gloves and fir shoes which provides stability (helpers must wear same equipment).
- 4.3. Approved protective face mask or glasses.
- 4.4. Approved protective hearing defenders
- 4.5. Approved protective helmet
- 4.6. Approved firm protective boots with steel shoe top and non-slippery sole.
- 4.7. Approved protective firm gloves
- 4.8. Always keep at hand a bag for fire aid! Make sure that the other people keep distance when chain run. Observe children and animals which must be away from working area.
- 4.9. Do not allow inexperienced persons to hold the saw or mains.
- 4.10. Keep work area clean and well lit. Do not operate the chain saw on wet and moist conditions close to water or rain or snow. Water entering a power tool will increase the risk of electric shock.
- 4.11. Be careful and reasonable. Never use the chain saw when you are tired or under influence of alcohol or medication, which could make worse your vision, judgment or physical control.

- 4.12. Protect all body parts from the chain till the engine work. Preserve your self from electric shock. Do not touch Hmetal objects.
- 4.13. Never use the mains cable to lift up and carrying or unplugging the chain saw. Keep the mains cable from water, oil and sharp objects. Do not press it to doors, fences and other metal objects which are electric conductors.
- 4.14. Before use check the chain saw and mains cable. Repair should be carried out by an authorized customer service. Handles must be clean, dry and without any grease or oil.
- 4.15. Check if the extension cord is in good condition and it is suitable for outdoor. The voltage of the extension cord must agree with the value given on the chain saw.
- 4.16. When you carry the chain saw turn off the engine, remove finger from the starting switch and turn the saw with guide bar pointed back and away from your body.
- 4.17. Your electric chain saw is double isolated for more protection from electric shock. Observe the same protective measures, which are put into practice for all electric appliances.
- 4.18. Do not try to cut plastic, masonry and other construction materials, which are not made from wood.
- 4.19. Make sure that you can move free and to stand in safety. When you move, be aware for roots, stones, holes, heaps and etc. When you work on a slope, you must be more careful. Cut the wood keeping it in right fixed between you and the guide bar.
- 4.20. Do not exert any pressure when you cut. If the chain is adjusted properly you will need only slight pressure. If you press the chain saw at the end of cut you may lose control when the wood falls.
- 4.21. Before start cutting set firmly short logs.
- 4.22. Be really careful when you cut small branches. Do not cut at once all bushes. Small branches may hook the chain and one jerky pull could cause serious personal injury.
- 4.23. It is recommended the diameter of the tree to be no longer than length of the guide bar, so saw through and cutting could be done with one move. (See technical specifications for recommended guide bar length for your model).
- 4.24. Chain will keep rotate for few minutes after you release the start lever.
- 4.25. Chain saw is in accordance with all safety norms. All repairs should be carried out by an authorized customer service.

- 4.26. Before use check the chain saw for damaged parts to avoid fault and to guarantee safety and efficient work. Make sure all moving parts are correctly placed and regulated. Store the chain saw on safe and dry place, out of reach of children, disconnect from the power source and with ground case. Use the chain saw to cut only woods.

5. Daily control and maintenance

- 5.1. Check the mains cable and plug if there is any damage. Mains cable and plug damages must be replaced.
- 5.2. Clean ventilation vent.
- 5.3. Check chain automatic lubrication.
- 5.4. Periodically turn the chain so that it could wear evenly on the bout sides. Check is the oil groove clear. Clean guide bar groove.
- 5.5. Check chain tension and make sure that the chain is rotating.
- 5.6. Check chain gear for wear and if it is necessary replace it.
6. Preserve from kickback. Kickback is jerky movement as a result the chain saw fling back because the nose of guide bar has touched an object. Kickback direction is always in the same plain as the guide bar. Most of the time guide bar and chain saw kickback up and back to the operator. Direction of chain saw kickback can be different depending on his position at the moment of kickback. Kickback is happening suddenly and without warning. Kickback can be so strong to send the chain saw back to the operator. If the chain is running at that moment it could cause serious personal injury or death. Operators must know the reasons for appearing of kickback because they must be careful and to work in a way preventing kickbacks. Incorrect sharpen blades and wrong combination of chain and guide bar increase kickback risk. Chain must not touch ground and other objects. Wire fences are extremely dangerous, because of risk for kickback. Observe all safety norms to prevent kickback and other accidents which can cause personal injury.



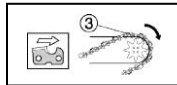
reduce the force of kickback and the chain saw will remain under control.

- 6.2. Be really careful when you cut logs lower level with chain nose. Chain saw moves back from the force of chain's run and if the operator does not hold firmly the chain saw danger area of guide bar may enter in the cut and provoke kickback. Chain saw moves forward when you are cutting with chain's bottom part the upper part of the tree. This press firmly the power head-stock to the tree which give firm fulcrum and more control over the chain saw respectively over the danger area.
- 6.3. Observe maintenance instructions and remove the chain and guide bar. If you change the chain and the guide bar use only recommended combinations.
- 6.4. Most accidents casual by kickback happened during cutting branches. Make sure that you are standing stable and there are no objects near by in which you can trip up or lose balance. If you do not watch out danger area can contact branches, hand or other object and cause kickback.
- 6.5. Never cut on a level higher than shoulder and with the nose of the guide bar.
- 6.6. During cut keep maximum speed.

7. Chain brake with kickback stop

- Chain saw have chain brake designed to stop immediately the chain in kickback. Chain brake could decrease the risk of accident but only the operator is the one who can prevent accidents. Be really careful during work with the chain saw. Chain brake put in to motion manually (with left hand) or by inertia force. The saw supercharge if the chain stops when the engine work. Let the pressure till the chain run again. If the chain saw remains in a tree immediately turn it off and pull it out.
- 7.1. Test of the Kickback stop

Check the kickback stop for damages such as cracks and breakdowns. Move the kickback stop back-ward-forward to check does it move free without being loosened. If the chain brake does not work properly, repair should be carried out by an authorized service.



8. SAW CHAIN ASSEMBLY and TENSION ADJUSTMENT

- 8.1. Assembly
- Put the chain (3) around the nose of the guide bar so that the upper cutters rest turned forward.

WARNING!

If the chain is loose, during work the chain could jump out from the guide bar and may cause serious personal injury or death.

Put the kickback stop (1) back to the front handle to be sure that the chain brake is not activated.

Open the guide bar cover (6) and loosen the nut (5).

8.2. Tension adjustment

Tighten the chain and turn the tension screw clockwise with top of the screw-driver (7).

When tightening the chain properly, be careful because the chain must be able to be easily rotated by hand. Use gloves to rotate the saw chain by hand.

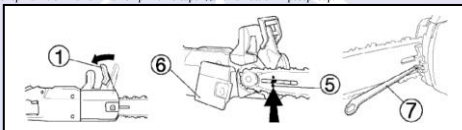


Often check the chain extension because new saw chains lengthen during the usage.

Regularly continue to check the tension to guaranty good work and long live.

При износване от употреба апарата сваа по-често. Regular tension is important so the warm could be compensated.

Превъртайте огъна най-малко при всяко зареждане на масления резервоар.



Cutting teeth must be always sharpen properly. Observe instructions and use recommended file leading. Damaged or irregular supported chain increases the risk of accident.

9. Oil lubrication of the saw chain

9.1. Saw chain oil

The chain and the guide bar are lubricated trough lubrication system. We recommend you to use only chain oil which have good viscosity and could be used on warm and cold weather. It is important to use the most appropriate viscosity for the season.

When you can not find chain oil you may use oil for a cars gear-box EP90. Never use old and used machine oil! Used machine oil contains impurity which could damage the guide bar and the chain. Check the oil groove of the guide bar and if it is necessary clean it.

9.2. Checking oil lubrication system

Turn on the chain saw and turn the guide bar to fixed light object on a distance about 20 cm. When the saw works for about a minute the light surface must be splashed with oil.

When the tank is full it could work 20 minutes without break.

9.3. Every day check the chain for. Visible cracks on the rivets and links. Non typical wear of the rivets and links. Minimum 3mm (1/8") horizontal length of the blade.

If any of these indexes have a diversion means that the chain is wear which must be replaced.

10. Saw chain sharpening

If you have to press the saw with effort this means that the chain is worn out. It is very difficult to sharp the chain correctly, without needed instruments. We recommend you to use file leading, so that you can ensure best results during cutting without possibility of kickback.

10.1. Remove the blades. To sharpen the saw chain, use round chain file and file leading.

Sharpen only when the chain is properly tense. The loose chain does climb down and make difficult sharpening. Always sharpen the chain from the inside out. On the way back lift up the file.

First remove one side of the blades. Then turn the saw and sharpen the blades from the other side.

Make sure that all the blades are similarly long. When the horizontal length of the teeth reaches 3 mm (1/8"), means that the chain is worn out and must be replaced.

WARNING!

When having wrong sharpened blades, there may occur a higher danger of kickback! Cutting solid branches concern all principals of the crosswise cutting. Cut the hard branches by stages.

You must be stable in every moment, regardless if you move or stand on one place. When you work the wood always must be on your right side.

WARNING!

If the chain remains in the section, stop the chain saw!

Do not try to pull out the saw. The chain may get hurt if it suddenly got free. Instead of that, lift it up to get it out.

12. Felling trees

Felling demands great experience. Do not felling trees if you do not have any experience.

Don't do any work for which you feel unprepared!

WARNING!

Beginners in work with chain saw must start cut wooden peaces on a sawhorse or other similar stand.

We advise operators with little experience to do not cut, whose diameter exceeds the length of the guide bar.

12.1. Danger area.

The danger area around one tree is twice and a half much as high of the tree. When felling the tree be sure that there is no one in the danger area.

12.2. Direction of incidence

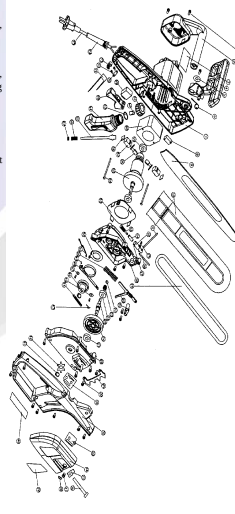
When felling a tree you must try to fall it down on a place where the cutting branches and falling will not be prevented from objects or rocky ground. It is exceptionally important to move free and to remain stable. It is really important not to prepare a tree to another tree. Propped trees are extremely dangerous. When you decide where want to fell down the tree, you must see in which direction it will fall down by it self. That depends from the right shape and tree's slope, direction of the wind, position of the branches and presence of snow which pull down the tree.

When you weight up all these factors it may seems that you do not have other choice except felling the tree in his natural

№	Part name	№	Part name	№	Part name
1	Bolt	26	Gear	51	Lever
2	Front handle	27	Bearing	52	Blocking ring
3	Sign	28	Cover	53	Safety guard
4	Kickback stop	29	Cog buffer	54	Bolt
5	Wheel 3	30	Bolt	55	Rotor
6	Spiral spring	31	Red disk 1	56	Brushes
7	Left corpus	32	Back handle	57	Brush holders
8	Switch	33	Red disk 2	58	Brush holders cover
9	Guide bar	34	Chain cover	59	Bearing
10	Case	35	Regulation bolt	60	Stator
11	Oil pipe	36	Inside disk	61	Cap
12	Oil pump corpus	37	Mandrel	62	Rubber capsule
13	Oil pump	38	Nut	63	Gasket
14	Bush	39	Sign	64	Oil tank
15	Bolt	40	Safety symbols	65	Rubber oil hose
16	Oil pipe 1	41	Circclip	66	Spring 2
17	Rivet	42	Gear	67	Nozzle
18	Box	43	Spiral spring 2	68	Starting lever
19	Chain	44	Spring	69	Switch
20	Articulated brake	45	Wheel 2	70	Cable disk
21	Interlock brake	46	Gear	71	Disk
22	Circclip	47	Wheel 1	72	Bolts
23	Bush	48	Brake	73	Cable clamp
24	Wheel	49	Pin	74	Safety hose
25	Mandrel	50	Spring 1	75	Main cable

direction of fall, because you may not succeed to do it in the way you want it.

Other important factor which is not related with the falling direction but it does concern personal safety is the appearance of dry branches which could brake as long as you felling the tree.



Инструкция за употреба на електрически верижен трион RTR max, модел RTM 904



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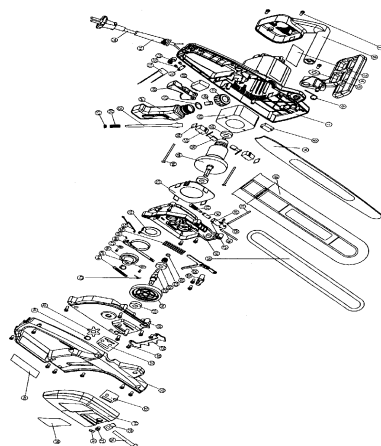
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ВАЛЕРИЙ C&M ГРУП АД

ИНСТРУМЕНТИТЕ В БЪЛГАРИЯ



№	Описание	№	Описание	№	Описание
1	Болт	26	Зъбно колело	51	Лост
2	Предна дръжка	27	Лагер	52	Замонтиран пръстен
3	Табела	28	Капак	53	Предизпител
4	Откатен ограничител	29	Назъбен буфер	54	Болт
5	Шайба 3	30	Болт	55	Ротор
6	Спирална пружина	31	Червена пластина 1	56	Четки
7	Лин корнус	32	Задна дръжка	57	Четкокожухи
8	Прекъсвач	33	Червена пластина 2	58	Капак на четкокожух
9	Шина	34	Капак верига	59	Лагер
10	Калъф	35	Регулиращ болт	60	Статор
11	Тръба за масло	36	Вътр. пластина	61	Капачка
12	Корпус М. Помпа	37	Шпиндел	62	Тумена капсула
13	Масл. Помпа	38	Гайка	63	Уплътнение
14	Втулка	39	Табела	64	Резервоар за масло
15	Болт	40	Символи безопасн.	65	Тумен пълнах масло
16	Тръба за масло 1	41	Зетерка	66	Пружина 2
17	Пит	42	Зъбно колело	67	Лост
18	Кутин	43	Спирална пружина 2	68	Пусков лост
19	Верига	44	Пружина	69	Преклочател
20	Шарнир спиратка	45	Шайба 2	70	Пластина за кабела
21	Блокатор спиратка	46	Зъбно колело	71	Пластина
22	Зетерка	47	Шайба 1	72	Болчета
23	Втулка	48	Спиратка	73	Схемка за кабела
24	Шайба	49	Шифт	74	Предпазен пълнах
25	Шпиндел	50	Пружина 1	75	Защитващ кабел



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