

MACHINE FOR PROFESSIONAL SHARPENING OF
BARBER'S TOOLS

ADEMS Full Drive

TECHNICAL CERTIFICATE



Togliatti, 2022

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1. FUNCTION AND PURPOSE

ADEMS Full Drive domestic machine is intended for professional sharpening of barber's classic scissors and scissors with convex blades.

2. SCOPE OF DELIVERY

Scope of delivery includes:

- ADEMS Full Drive domestic machine - 1 piece;
- power cable - 1 piece;
- double-section handling device with multi-purpose holder - 1 piece;
- metal wheels 150 mm. - 5 pieces;
- set of grinding wheels 150 mm.
(240, 320, 600 grit) - 3 pieces of each type;
(800, 1000, 1200, 1500, 2000 grit) - 2 pieces of each type;
- optional multi-purpose clamp for nippers - 1 piece;
- rubber pad - 4 pieces;
- cover - 1 piece;
- fastener puck for diamond cup wheel - 1 piece;
- oil to grease scissors - 1 piece;
- hexagon wrench №2 - 1 piece;
- hexagon wrench №3 - 1 piece;
- glue aerosol - 1 piece;
- technical certificate - 1 piece.

3. TECHNICAL SPECIFICATIONS

Types of sharpened tools	Household scissors	
	Classic barber's scissors	Convex barber's scissors
Methods of sharpening	✓	Rough sharpening
	✓	Finishing sharpening
	✓	Polishing
Motor power supply voltage, V	220	
Bias lighting power supply voltage, V	12	
Nominal motor power consumption, W, not more than	250	
Adjustable frequency of wheel revolution, rpm	0...3000	
Replaceable wheel diameter, mm	150	
Machine dimensions, mm	250x220x285	
Net weight, kg	16	
Gross weight, kg	17	

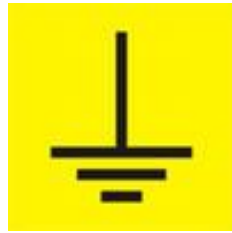


4. SAFETY PRECAUTIONS

ATTENTION



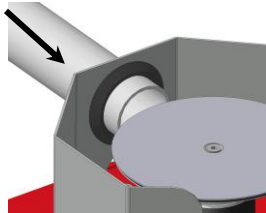
Before you start operation visually check the machine and ensure that power cable and moving parts of the machine are not damaged. It is forbidden to switch the machine on in case there are such damages without eliminating it.



It is recommended to connect the machine to mains socket equipped with earthing wire.



Use protective glasses and face respirator when you operate the machine. Glasses protect only against floating dust and grinding material particles but do not protect against flying debris.



In order to draw floating dust and grinding material off it is recommended to connect dust removal device to the hole of machine dust protection system.

5. ASSEMBLY PROCEDURE

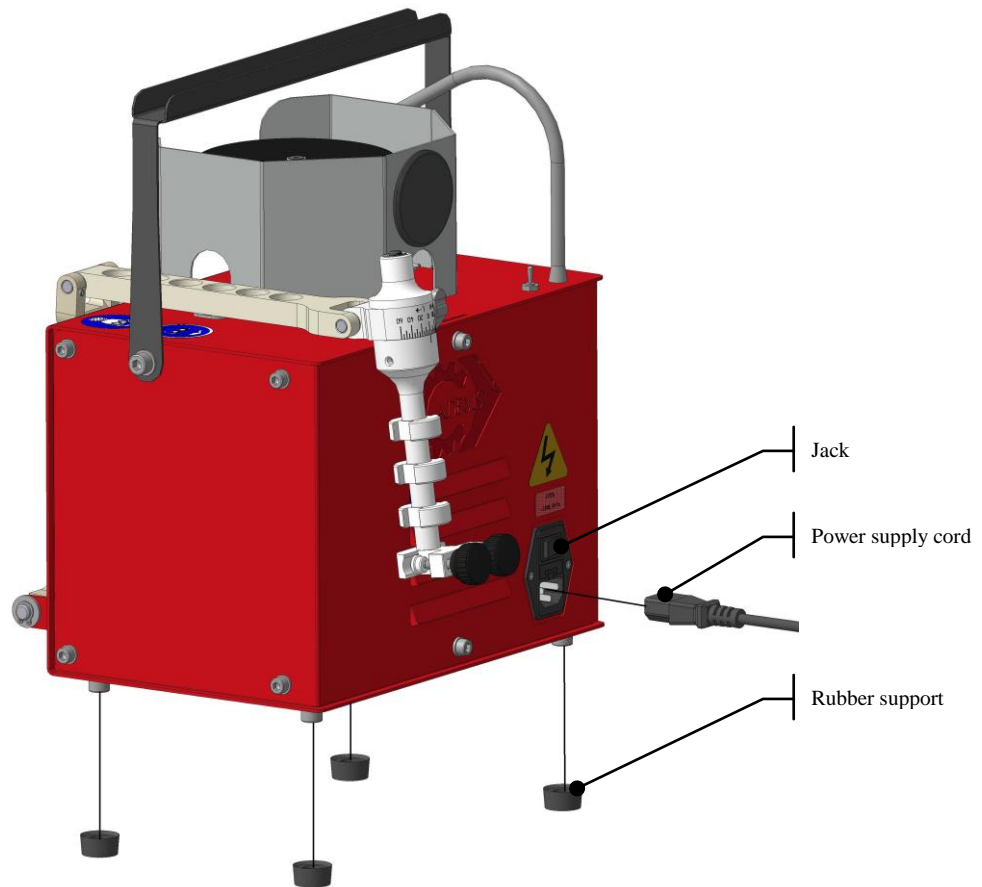


Figure 1 Prestarting procedures

Withdraw machine from packaging and put it into assigned workplace in close proximity to power source. Connect the power supply cord into appropriate jack on the back side of the machine. Power supply cord should not be strained: 20% of its length should rest on the working table. Put rubber supports onto screw heads under the machine body.

ATTENTION

In case in wintertime you bring a machine into heated room from outside or from cold room, do not unpack the machine and do not switch it on for 8 hours. The machine should warm up to ambient air temperature. Otherwise the machine can break down when it is switched on due to moisture condensed on motor parts.

ATTENTION

The machine disk should rotate free by hand. Make sure nothing prevents its rotation.

ATTENTION

Before connecting the power cord to the general voltage supply ensure that power cord of the machine is not damaged. Перед подключением сетевого шнура к общему источнику напряжения, убедитесь, что сетевой шнур не поврежден.

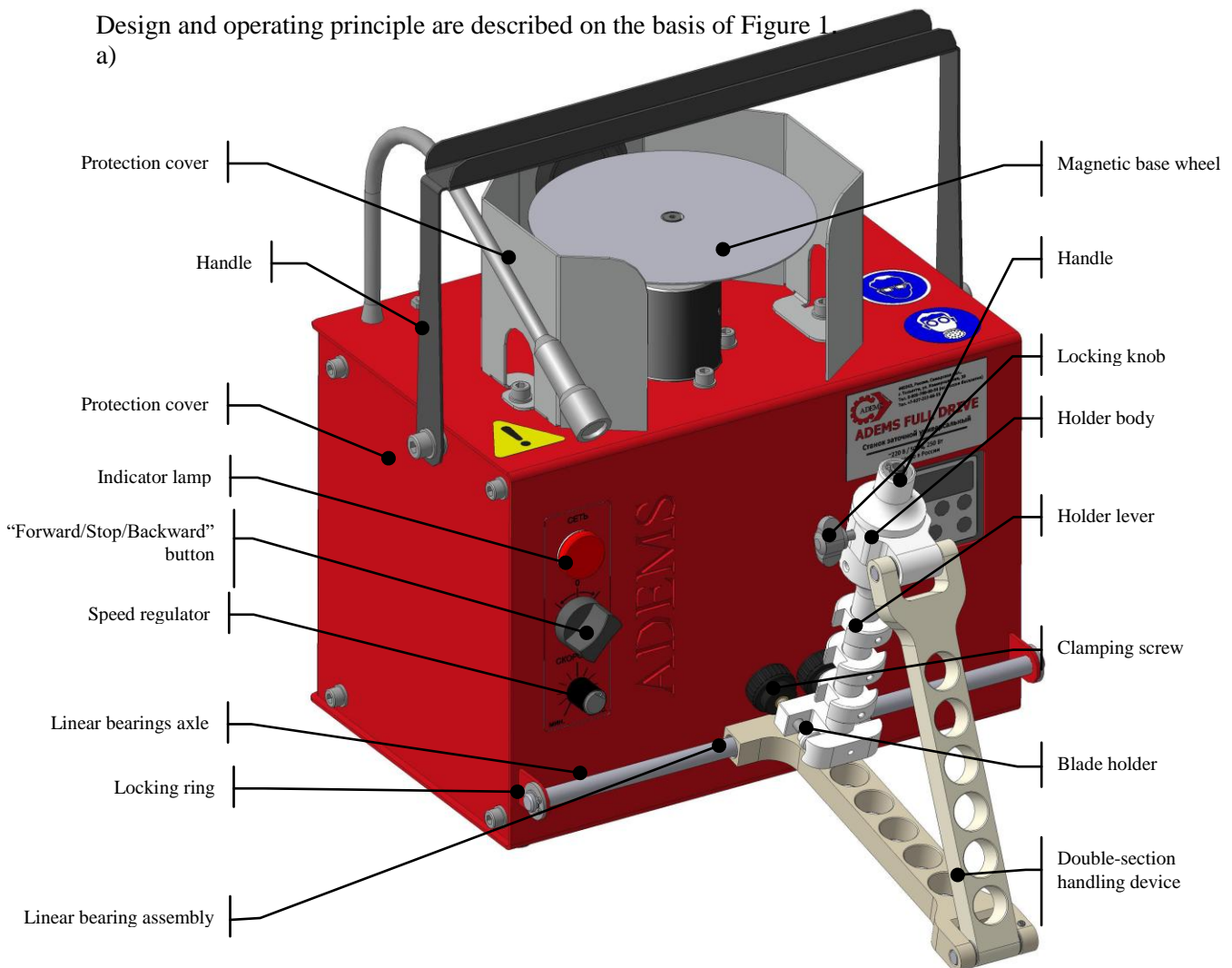
Connect the power cord



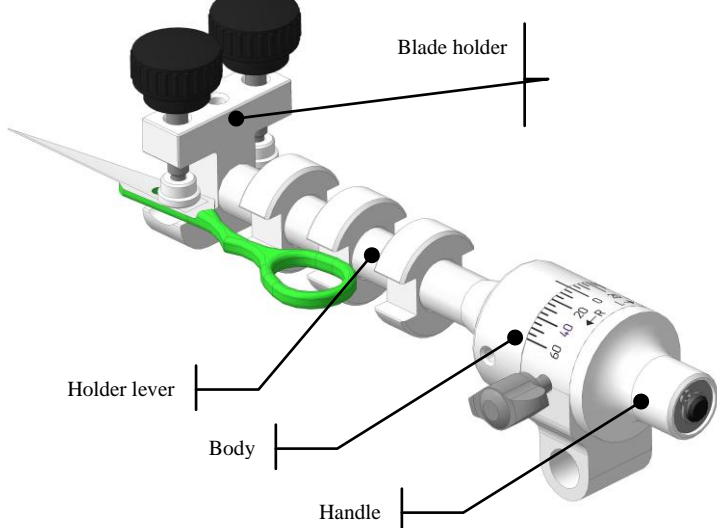
6. DESIGN

Design and operating principle are described on the basis of Figure 1

a)



b)



c)

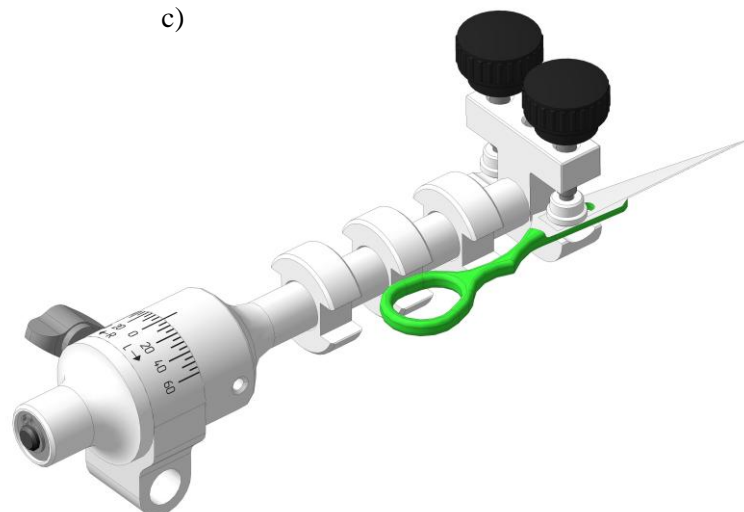


Figure 2 Sharpening machine ADEMS Full Drive
 a) General view of the machine; b) Holder for right scissors;
 c) Holder for left scissors



7. OPERATING PRINCIPLE

Connect the machine to 220V, 50-60Hz AC mains with power supply plug.

STEP 1. Preparation for operation.

Prepare surface of metal wheels removing grease with acetone or solvent. Carefully apply grinding material wheel that was cut out to glued surface of metal wheel with grinding material side up. Press and align the grinding wheel with edges of metal wheel. Use abrasive papers of those values that you need in every specific case. Scope of delivery includes grinding material sheets with the following values: 240, 320, 600, 800, 1000, 1200, 1500 and 2000 grit. Scope of delivery includes 5 metal wheels, that is why apply abrasive paper of different values to each metal wheel in order to ensure fast replacement of grinding material when you change operations during sharpening of tools. 5-10 minutes later put wheel with grinding material onto magnetic base of the machine wheel. Center metal wheel towards machine wheel.

STEP 2. Evaluation of scissors.

First of all check if scissors subjected to sharpening were ever sharpened before. Also pay attention to the shape of blades: classic or convex.

Then check visually if there are nicks on cutting edges of blades. Fully open throat of scissors trying to feel resistance existing due to nicks.

Check, how scissors tips are closing, if there is a gap between tips or tips are overlapping.

Check cutting of scissors visually.

Make sure that scissors' edges are not damaged.

Make sure that there are no any other damages on blades and screw of the scissors.

Disassemble the scissors and check blades. Wash blades, screw, nut and other components to remove accumulated dirt. Put all the scissors' components into a separate container in order not to lose anything.

Wash bolt hole.

Check cutting edges and the line supporting cutting edge of scissors in order to determine how much metal should be removed during sharpening.

STEP 3. Angle adjustment.

For right-hand scissors

Make sure that when pressing the bottom of the scissors holder to the surface of the metal disc, the risk on the handle of the holder coincides with the risk "0" on the body as shown in Figure 2b, and the blade holder is securely fixed in this position, since the sharpening angle may be incorrect if the fixation is weak.

Loosen but do not unscrew the locking knob on the body. Turn the handle counterclockwise to the desired sharpening angle. Fix the angle by tightening the locking knob.

The sharpening angle is indicated for illustration in this example. The angle for each shear is selected by the master independently, guided by the design of the sharpened scissors and the degree of wear of the cutting edge from previous sharpening.



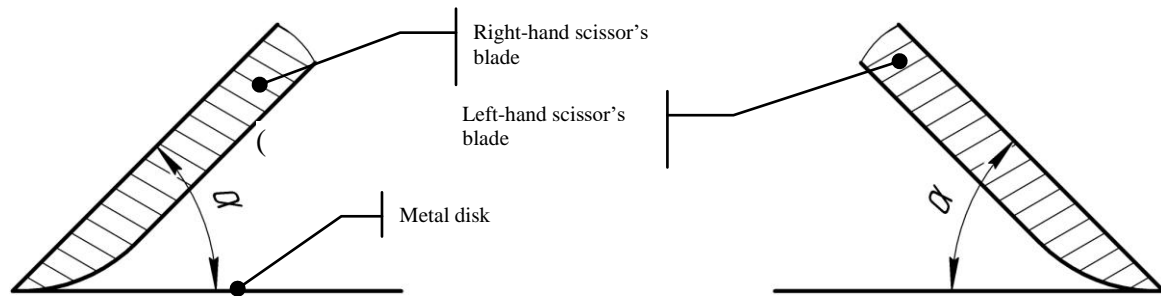


Figure 3 Sharpening angle

For left-hand scissors

Loosen but do not unscrew the locking knob on the body. Turn the handle clockwise till the desired sharpening angle. Fix the angle by tightening the locking knob.

ATTENTION

Right-hand scissors should be sharpened with a disk rotating clockwise, left-hand scissors – with a disk rotating anti-clockwise.

STEP 4. Installation of scissors into clamp.

Take holder lever with your right hand.

Take scissors' blade with your left hand.

Insert the blade of the right-handed scissors into the slot of the double holder on the left side.

ATTENTION

The blade of the left-handed scissors is inserted into the slot of the double holder on the right side.

Position the blade of the scissors so that the cutting edge is parallel to the axis of the holder. Insert the blade into the mounting section of the blade holder so that the entire length of the cutting edge is free for sharpening.

By rotating the clamping screw, fix the blade in the holder with force so as to prevent turning.

Make sure that the blade is clamped securely.

ATTENTION

Before installation of the blade make sure that the screw has a support washer to prevent scratches on the scissors blades.

STEP 5. Sharpening of classic scissors.

Place metal wheel with 600 grit grinding material onto magnetic base of machine wheel.

ATTENTION

Selection of the first wheel depends on degree of wear of the scissors under sharpening.

Make sure that rheostat handle is in "min" position. Turn the machine on, placing three-position switch into left position. Smoothly put rheostat handle into position corresponding to necessary amount of revolutions. Herewith wheel will rotate clockwise.

ATTENTION

Make sure that you sharpen right-hand scissors! In case of left-hand scissors wheel should rotate anti-clockwise. When sharpening left-hand scissors, put three-position switch into right position.

Increase wheel revolution speed up to 1000 rpm (frequency converter reading in its digital display).

Smoothly touch grinding wheel with blade. With manual effort hold the holder in extreme position in order to ensure constant angle of scissors' blade cutting edge. Herewith it is necessary to move the whole holder smoothly from outside toward the center of the wheel. Make several movements.

Lift the holder up and visually make sure that cutting edge is being formed in correct way. In case there is deviation from the existing cutting edge it is necessary to increase or decrease holder angle value (see STEP 3).

After you are sure that angle is correct, continue to sharpen as necessary. Upon completion of work stop the machine placing three-position switch into central (vertical) position. After wheel stops remove metal wheel with 600 grit grinding material and put a wheel with grinding material with the next grain size. Center it and repeat the operation. In order to compact underlying metal of cutting edge we recommend to perform 3 to 5 changes of wheels increasing grinding material grain size.

STEP 6. Sharpening of convex scissors.

Place metal wheel with 600 grit grinding material onto magnetic base of machine wheel.

ATTENTION

Selection of the first wheel depends on degree of wear of the scissors under sharpening.

Turn the machine on, placing three-position switch into left position. Herewith the wheel will rotate clockwise.

ATTENTION

Make sure that you sharpen right-hand scissors! In case of left-hand scissors wheel should rotate anti-clockwise. When sharpening left-hand scissors, put three-position switch into right position.

Increase disk revolution speed up to 1000 rpm (frequency converter reading in its digital display).

Smoothly touch abrasive disk with blade. Make rotational movements with the holder moving it along its axis from extreme right to extreme left position. Herewith it is necessary to move the whole holder smoothly from outside toward the center of wheel. Make several movements.

Lift the holder up and visually make sure that cutting edge is being formed in correct way. In case there is deviation from the existing cutting edge it is necessary to increase or decrease holder angle value (see STEP 3).

After you are sure that angle is correct, continue to sharpen as necessary. Upon completion of work stop the machine placing three-position switch into central (vertical) position. After the wheel stops remove metal wheel with 600 grit grinding material and put a wheel with grinding material with the next grain size. Center it and repeat the operation. In order to compact the underlying metal of cutting edge we recommend to perform 3 to 5 changes of wheels increasing grinding material grain size

STEP 7. Refinement of blades.



Take blade out from the holder and wet 6000 Grit water stone (not included into delivery scope).



Put blade onto water stone at 45° in such a way that cutting edge is directed away from you



Put your hands on the blade and apply force of 10 – 12 kg under axis in the area of a hole and draw the blade to yourself in order to remove burrs.



Remove moisture from water stone and wet it again. Put the blade on the water stone at 45° again and shuttle until cutting edge support line appears.

Repeat 5-8 times. Perform the same operations with the second blade.

STEP 8. Polishing of blades.

After you have got necessary angle of cutting edge and supporting plane of cutting edge, put one blade into a holder again.

Install metal wheel with 2000 grit grinding material and set maximum rotation speed of the wheel turning speed regulator clockwise. If necessary apply additional diamond paste to grinding material. Put three-position switch to right position to start the machine. Wheel with grinding material will start to rotate clockwise.

ATTENTION

Make sure that you are sharpening right-hand scissors.

In order to start the machine with anti-clockwise rotation of wheel, put three-position switch into right position.

Put holder with blade onto grinding wheel. After blade touches the wheel start to move the holder smoothly from outside toward the center of the wheel.

In order to provide correct polishing of cutting edge make sure that when you rotate the holder you bring it to extreme positions.

Continue the operation for about 30 seconds. Then lift holder with blade up and inspect the blade visually to ensure that the majority of scratches are removed. Then check it with your hand.

Upon completion of surface polishing repeat the same procedure with the second blade.

ATTENTION

Ideally polished cutting edge is not always good for a barber. Everything depends on the barber. That is why we recommend asking barbers, what type of edge finish should be performed. All these actions as well as quality of polished cutting edge surface depend on skills of sharpener.

STEP 9. Assembly of scissors.

ATTENTION

It is recommended to demagnetize the blades before assembling the scissors.

Now it's time to assemble scissors. Be careful tightening the screw and applying force when you connect blades. Don't forget to grease connection point.



STEP 10. Testing of cut.

After you assembled scissors it is necessary to check if sharpening is correct.

One of the most widely spread tests is performed with a sheet of wet multi-layer toilet paper. Pull scissors after you closed it on a piece of paper by 50%. Herewith continue to close blades. Paper should be cut but not tear.

8. ADJUSTMENT, SETTING-UP, GREASING

Take a machine out of package box. In case the machine was kept under low temperature for long time, leave it in a room for 1 – 2 hours in order to heat it up to ambient temperature. Put the machine to assigned workplace very close to power source (within 0.9 m). When connected to power source power cable should not be strained: 20% of the cable should lie on a table.

Make sure that electric grid capacity in your country correspond to parameters mentioned in the machine nameplate (voltage – 220 V, frequency – 50 Hz).

Move bearing assembly axle in the machine eyeholes to one side. In order to do it, remove one of rings in one axle end. Pass bearing assembly together with handling device through as shown in Figure 1. Be careful do not damage bearing glands. Move bearing assembly to initial position. Put ring into axle slot from the outside of machine eyehole (see Figure 4).

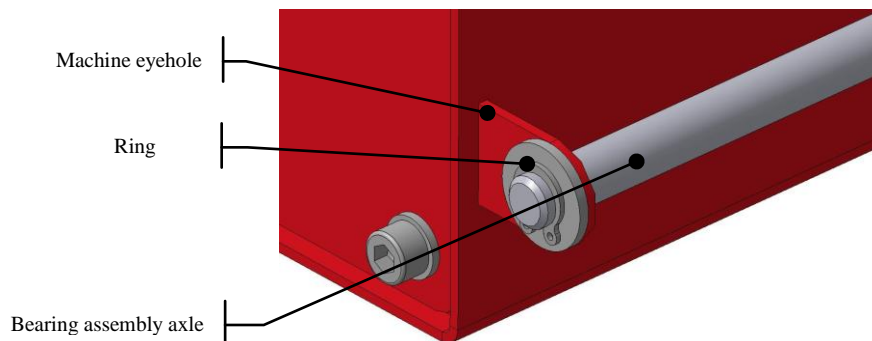


Figure 4 Ring on bearings assembly axle

Double-section handling device sections and holder lever should rotate on their axles by hand without restrain, blocking or jamming! Bearing assembly should move along the axle without jamming. If necessary, grease rubbing parts with LITOL or CIATIM-201 grease. In order to avoid accumulation of abrasive dust remove excess grease thoroughly with rags.

ATTENTION

In order to extend service life of bearings it is necessary to remove abrasive dust from axle and bearing glands regularly.

Each time you finish working with the machine, please, wipe it with rags thoroughly in order to remove abrasive dust and prevent getting the dust inside rubbing parts. In case machine is not used for long time (more than 2 days) it is necessary to cover it with a dust guard.

Our company constantly works on improvement of the machine. That is why there may be minor modifications in the design that are not covered by the Technical Certificate.

9. OPTION

9.1. Consumable materials ADEMS FULL DRIVE set for 3 months.

Scope of delivery includes:

- set of grinding wheels 150 mm.
(240, 320, 600 grit) - 10 pieces of each type;
- set of grinding wheels 150 mm.
(800, 1000, 1200, 2000 grit) - 5 pieces of each type;
- metal wheels 150 mm. - 5 pieces;
- polishing wheel leather 150 mm. - 1 piece;
- glue aerosol - 1 piece;
- diamond paste ASM 1/0 (final polishing) - 1 piece;
- diamond plate 125x10x2x16x32 12A220 80/63 - 1 piece;
- proof bar - 1 piece;
- set of waterproof danding paper sheets
(500, 800, 5000 grit) - 5 pieces of each type



Figure 5 Consumable materials set for 3 months

9.2. Consumable materials ADEMS FULL DRIVE set for 6 months.

Scope of delivery includes:

- set of grinding wheels 150 mm.
(240, 320, 600 grit) - 20 pieces of each type;
- set of grinding wheels 150 mm.
(800, 1000, 1200, 2000 grit) - 10 pieces of each type;
- metal wheels 150 mm. - 5 pieces;
- polishing wheel leather 150 mm. - 1 piece;
- glue aerosol - 2 pieces;
- diamond paste ASM 1/0 (final polishing) - 1 piece;
- diamond plate 125x10x2x16x32 12A220 80/63 - 2 pieces;
- proof bar - 1 piece;
- set of waterproof danding paper sheets
(500, 800, 5000 grit) - 5 pieces of each type





Figure 6 Consumable materials set for 6 months

9.3. Consumable materials ADEMS FULL DRIVE set for 12 months.

Scope of delivery includes:

- set of grinding wheels 150 mm. (240, 320, 600 grit) - 40 pieces of each type;
- set of grinding wheels 150 mm. (800, 1000, 1200, 2000 grit) - 20 pieces of each type;
- metal wheels 150 mm. - 5 pieces;
- polishing wheel leather 150 mm. - 1 piece;
- glue aerosol - 3 pieces;
- diamond paste ASM 1/0 (final polishing) - 1 piece;
- diamond plate 125x10x2x16x32 12A220 80/63 - 3 pieces;
- proof bar - 1 piece;
- set of waterproof danding paper sheets (500, 800, 5000 grit) - 5 pieces of each type



Figure 7 Consumable materials set for 12 months



9.4. Scissors' blade dressing device.

Blade trueing is necessary in case paper jams in some areas of a blade appear during cutting test.

Scope of delivery includes:

- scissors' blade dressing device

- 1 piece.

Disassemble scissors if it is possible.

Check scissors' blade bending degree with a proof bar.

ATTENTION

Proof bar is not included into the scope of supply.

Scissors' blade made of carbon steel or alloy-treated steel should be flattened using a copper hammer tapping with local heating. In case of inexpensive household scissors it is allowed to flatten blades using a fixture for scissors' blade flattening.

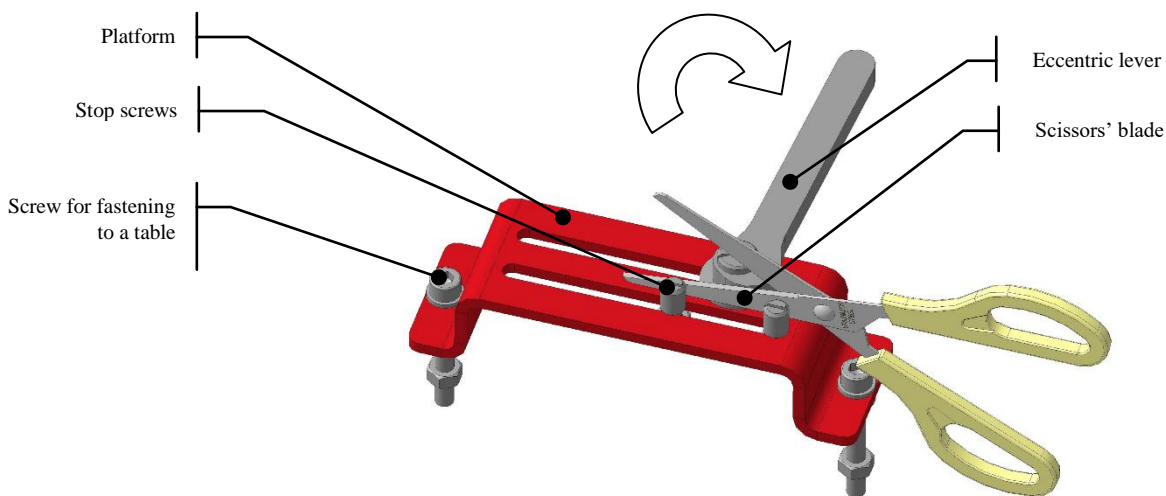


Figure 8 Scissors' blade flattening

Adjust stop screws according to flattening point. Place eccentric lever between stop screws. Insert scissors' blade between stop screws and eccentric lever with butt-end facing the platform.

Turn eccentric lever smoothly cambering scissors' blade.

ATTENTION

Sharpener chooses eccentric lever turn angle and cambering of scissors' blade at his/her own discretion.

It is necessary to swap stop screws and eccentric lever around in order to ensure that scissors' blade cambers in the right direction with its butt-end downwards.

9.5. The set of abrasives fast change and fixation with 200 mm diameter.

The set is intended for fast change and fixation of abrasive and polishing materials during working, excluding axic and radial runout when sharpening tools over 15 cm.

Scope of delivery includes:

- magnet aluminum disk 190 mm - 1 pc.;
- metal disk 200 mm - 3 pcs.;
- faceplate case - 1 pc.;
- set of waterproof sanding paper sheets 230x280 mm (240, 600, 1000 Grit) - 3 pcs. of each type;
- aerosol glue 400 ml - 1 pc.;
- allen key №3 - 1 pc.;
- allen key №5 - 1 pc.

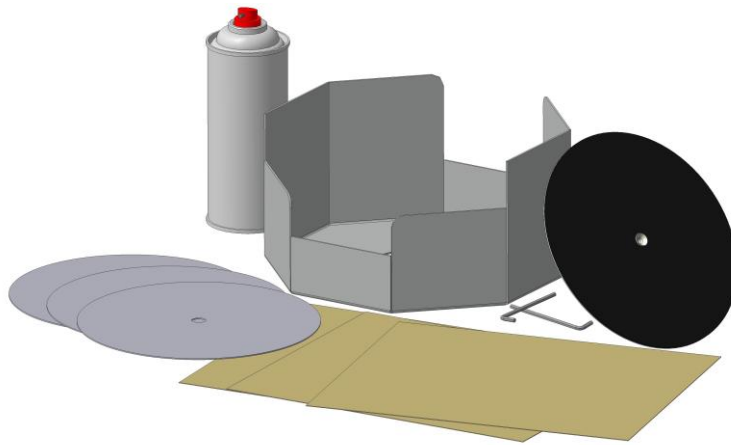


Figure 9 The set of abrasives fast change and fixation with 200 mm diameter

9.6. Set for the knives and meat grinder plates sharpening.

In order to expand the functionality of the machine the set for sharpening knives and grates of hand and electric meat cutters is proposed.

Scope of delivery includes:

- faceplate with the diameter of 220 mm. - 1 piece;
- faceplate cover - 1 piece;
- grinding oil for sharpening (concentrate which should be diluted with hot distilled water (70 degrees 50/50) 500 ml. - 1 piece;
- grinding powder (silicon carbide F220 – 100 gr.) - 3 pieces;
- grinding powder (aluminum oxide F240 – 100 gr.) - 2 pieces;
- brush deburrer set - 1 piece;
- sprayer - 1 piece;
- magnet - 1 piece;
- lube oil for scissors - 1 piece;
- allen key № 4 - 1 piece;
- allen key № 5 - 1 piece;
- screw M5x16 DIN 912 - 1 piece;
- washer 5 DIN 9021 - 1 piece.



Figure 9 Set for the knives and meat grinder plates sharpening

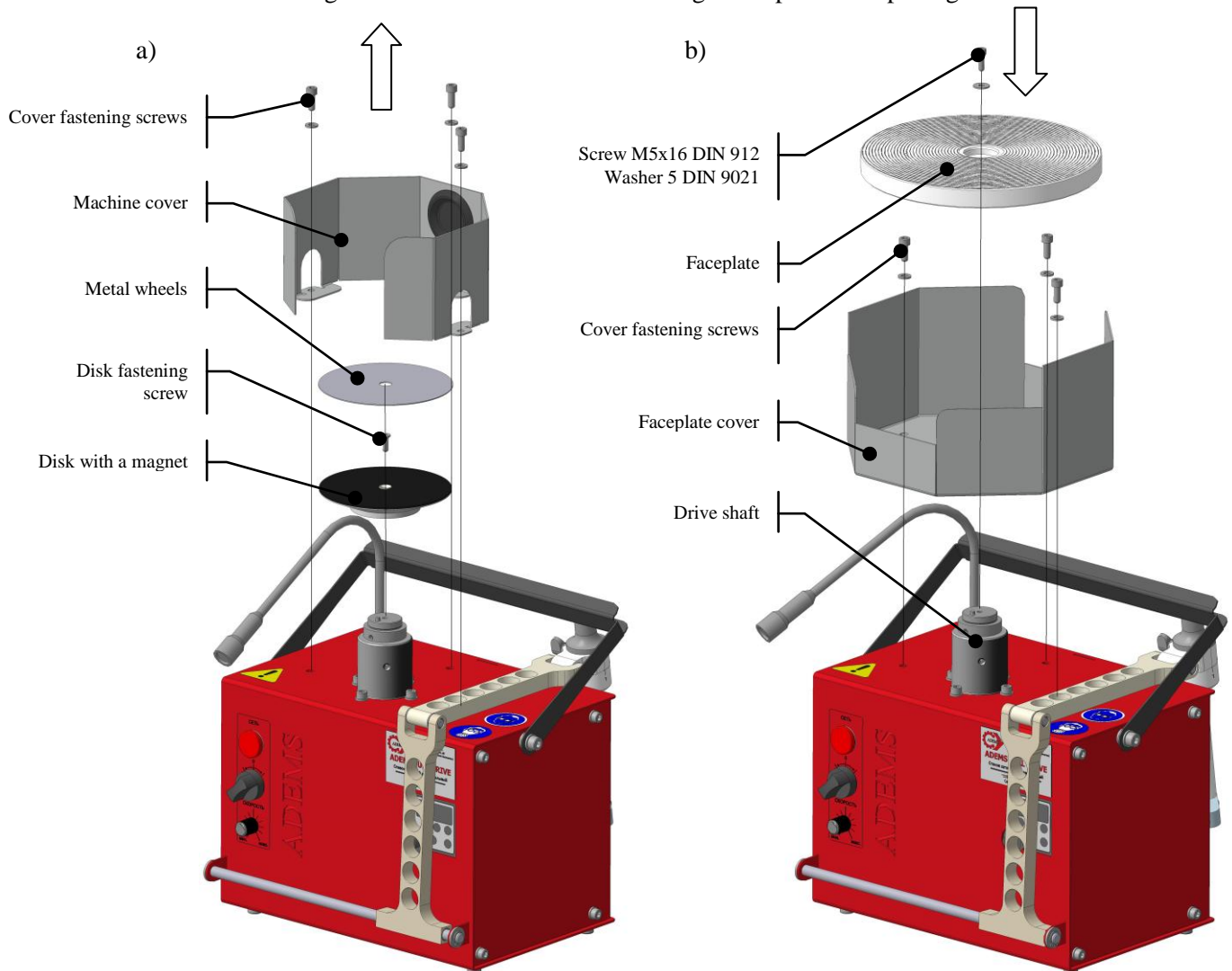


Figure 10 Preparation of the knives and meat grinder plates sharpening machine
a) Dismantling of disk with a magnet; b) Faceplate installation

To prepare the machine for knives and meat grinder plate sharpening perform several actions. Unscrew disk fastening screw using Allen key No 4. Dismantle disk with a magnet from drive shaft. Unscrew 3 cover fastening screws using Allen key No 5 and then dismantle the cover. Install faceplate cover instead of dismantled machine cover. Fasten the faceplate cover using machine cover screws.



Put small amount of machine oil onto shaft in the place of junction with faceplate in order to ensure more comfortable faceplate installation. Install faceplate onto drive shaft aligning hole in the faceplate with a pin on the drive shaft. To facilitate positioning of the pin and the hole put Allen key into side hole of the drive shaft. Make sure that faceplate settled tightly down to shaft end. Fix the faceplate with a fastening screw.

ATTENTION

Spiral groove parameters, plane or cone of grinding surface as well as faceplate cone angle depends on customer order.



10. WARRANTY CONDITIONS

10.1. Warranty period – 12 months from the date of purchase to the end-user.

10.2. Warranty and post-warranty repair is performed only by the ADEMS specialists.

10.3. This warranty covers only manufacturing defects that occur during the warranty period and under normal use conditions.

10.4. The equipment is accepted for warranty repair if correct documents are attached: Application in free form to the CEO with fields filled in:

- equipment name;
- date of purchase;
- equipment value;
- warranty reason;
- was or was not in use;
- Customer signature;
- serial number indicated on the equipment certificate.

10.5. This warranty does not cover:

- consumable items such as disks, abrasive belts, sandpaper, oil, filters and etc.;
- power cords; in case of insulation damage must be replaced without the owner 's consent.

10.6. Warranty repair is not performed in the following cases:

- serial number appearing on the product or in equipment certificate has being altered, defaced or removed, as well as does not match each other;
- operating and handling that does not comply within the user manual;
- failure due to overload;
- the product was mechanically damaged;
- damage caused by actions of third parties, Acts of God, natural disasters, adverse environment and/or external effects of aggressive media and high temperatures;
- wear-out or damage caused by common use (total or partial resource utilization, severe internal or external contamination, rust);
- damage causes by use contrary to the operating instruction;
- equipment damage due to power surge;
- ingress of foreign bodies into the equipment, which are not wastes accompanying the intended application;
- damages resulting from storage and transportation under conditions that do not comply with ADEMS specifications or normal use;
- any unauthorized repairs, alterations or modifications or any attempt to open the good during the warranty period, as proved by damaged stickers;
- lack of maintenance;
- partial or total disassembly of the product.

10.7. Preventive maintenance of equipment (cleansing, washing and relubrication) during warranty period is a paid service.

10.8. Equipment lifetime is 3 years from the date of manufacture.

10.9. Possible violations of the above warranty conditions are reported to the owner after diagnostics of the equipment by ADEMS specialists.

10.10 The owner of the equipment trusts to carry out diagnostics by ADEMS specialists in his absence.

10.11. ADEMS is not liable under no circumstances for:

- losses or damages that cannot be attributed to ADEMS' violation of the terms of this warranty at the time of purchase of the equipment;
- losses due to owner's fault, loss of marketable state, loss of profit or lost advantage.

10.12. Service options, available spares and standby time may vary depending on the country. If service is required in a country where ADEMS does not have an Authorized Supplier, the number of service options may be limited. If international service is available, ADEMS may repair or replace equipment and spare parts with comparable equipment or spare parts in accordance with local standards.



ATTENTION

The warranty period is extended for the time the equipment is in warranty repair.



11. ACCEPTANCE CERTIFICATE

11.1. Domestic machine for professional sharpening of barber's scissors
ADEMS Full Drive with serial number 1/_____-2022 is classified as fit for operation.

11.2. Manufacturer's address:

39, Kommunalnaya Street, Togliatti, 445043, Russian Federation.

11.3. Electric motor serial number _____.

11.4. Serial number of the frequency converter _____.

If in doubt of equipment integrity, please, contact Machines Warranty Department on the following phone number by WhatsApp, Viber: +7 964-927-69-74.

Date of manufacture _____

QC Department Head _____

Date of purchase _____

Seller's name _____

Seller's signature _____ / _____ /

Print full name

Stamp here _____

I confirm that the equipment was checked, in good condition, packaged and has an indefectible exterior when buying.

I have read and understood the terms of warranty service.

Buyer's signature _____ / _____ /

Print full name



12. NOTES, COMMENTS, REMARKS

