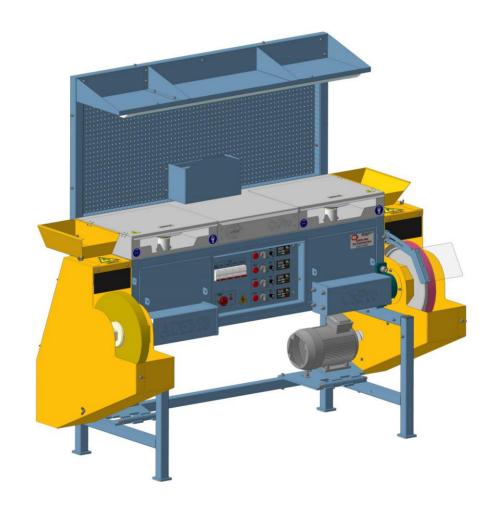
# UNIVERSAL SHARPENING MACHINE

# ADEMS Work Sharpening Station

# TECHNICAL CERTIFICATE





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## 1. FUNCTION AND PURPOSE

The multi-purpose machine ADEMS Work Sharpening Station (ADEMS WSS) suitable for compact installation in workshops, cargo beds and trailers is intended for professional sharpening of different tools:

- barber's scissors both with classic and convex-shaped blades;
- knife packages of automatic hair clippers;
- nail grooming and medical tools;
- carpenter, gardening and kitchen tools.

## 2. SCOPE OF DELIVERY

Scope of delivery includes:

the multi-purpose sharpening machine ADEMS Work Sharpening Station	- 1 pc;
alignment device Ø150 mm	- 1 pc;
metal wheels Ø150 mm	- 10 pcs.:
· Vibration mount	- 4 pc;
frame with a screen	- 1 pc;
shelf with light	- 1 pc;
tray for wheels	- 1 pc;
polishing wheel 350x15x35 mm.	- 2 pc
abrasive belt 40x1600 P150	- 3 pcs.;
wrench	- 1 pc
Technical Certificate	- 1 pc.

## 3. TECHNICAL SPECIFICATIONS

Machine power supply voltage, V.	220
Maximum power consumption, kW.	5,2
Machine dimensions, mm.	1705x765x1650
Net weight, kg.	250
Gross weight, kg.	285
Drive #1	
Types of sharpened tools	All types
Methods of sharpening	Polishing
Nominal motor power consumption of Drive #1, kW, not more than	2,2
Polishing fabric disc diameter (Dxhxd), mm.	250x40x32
Polishing disc material	Cotton sheeting
Peripheral wheel speed, m/s	055
Possibility of reverse motion	YES
- clockwise, position of run button	I
- anticlockwise, position of run button	II
Drive #2/ #3	
Types of sharpened tools	<ul> <li>✓ Household scissors</li> <li>✓ Classic barber's scissors</li> <li>✓ Convex barber's scissors</li> <li>✓ Manicure, pedicure nippers</li> <li>✓ Nail and medical scissors (microscissors)</li> <li>Knife packages of automatic hair cutter</li> <li>On the side with «K» indication:</li> <li>✓ Movable knife</li> <li>✓ Fixed knife</li> <li>On the side with «H» indication:</li> <li>✓ Meat grinder rotary knife</li> </ul>
Methods of sharpening	<ul><li>✓ Rough sharpening</li><li>✓ Finishing sharpening</li><li>✓ Polishing</li></ul>
Nominal motor power consumption, kW.	0,37
Adjustable wheel rotation speed, rpm.	01500
Replaceable wheel diameter, mm.	150
Reverse motion possibility	YES
-clockwise, run button position	I
-anticlockwise, run button position	II
Drive #4	
Types of sharpened tools	✓ Knifes ✓ Garden tools ✓ Carpenter tools
Methods of sharpening	<ul><li>✓ Rough sharpening</li><li>✓ Finishing sharpening</li><li>✓ Polishing</li></ul>

#### Technical Certificate for Universal Sharpening Machine ADEMS Work Sharpening Station

Nominal motor power consumption of Drive #1, kW, not more than	2,2	
Abrasive belt dimensions, mm.	40x1600	
Contact wheel dimensions (Dxhxd), mm.	350x40x35	
Shore hardness of the contact wheel rubber, unit	t wheel rubber, unit 50	
Adjustable belt, m/s	055	

The listed above specifications are valid at the time of the current Manufacturer's Certificate publication. Because policy of our company provides for constant development and refinement of equipment, the manufacturer reserves the right to introduce changes in technical specifications any time without prior notice and without assuming any obligations.

## 4. SAFETY PRECAUTIONS

#### ATTENTION



Before you start operation visually check the machine and ensure that power cord 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 grounding wire.



Be carefull. Drawing in rotation elements is possible. Always pay attention to the rotated elements. Operate only in special clothes.

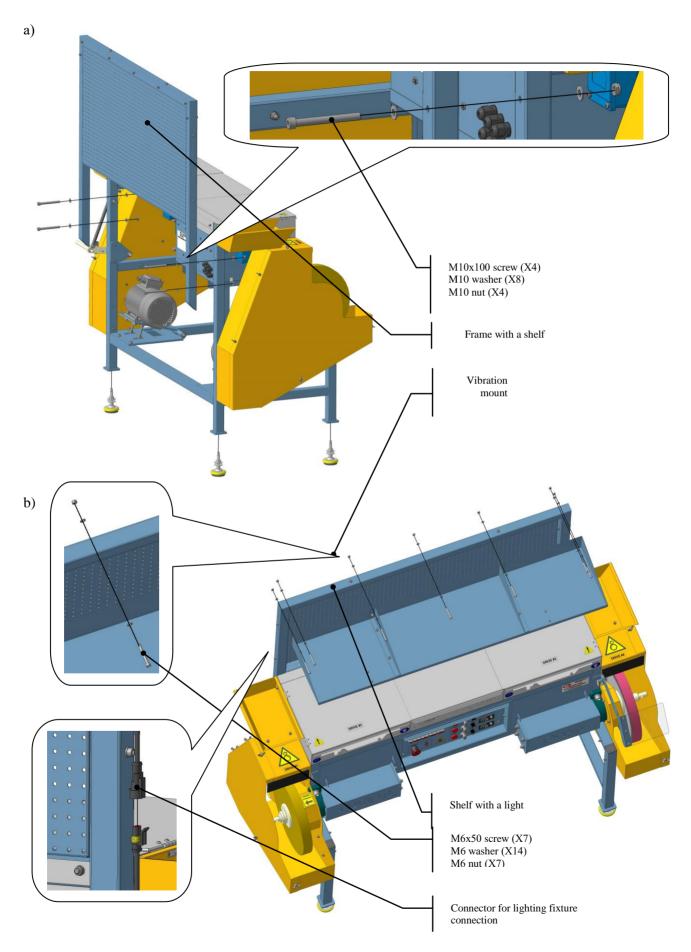


Use protective glasses and face respirator when you operate a machine. Glasses protect only against floating dust and grinding material particles but do not protect against flying debris.



The frequency of rotation of the felt disc shall not exceed 2100 rpm.

## 5. PRESTARTING PROCEDURES



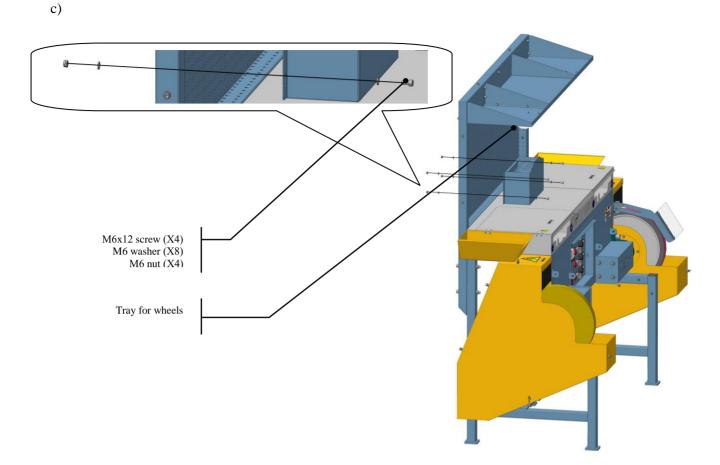


Figure 1 Assembly of the ADEMS WSS machine

a) Mounting of a frame with a shelf; b) Mounting of a shelf with the; c) Mounting of a tray for wheels

Unpack the machine. In case the machine was kept under low temperature for long period leave it in a room for 6 hours to warm it up to room temperature. In case the machine is partially disassembled first it is necessary to remove all packaging and sealing materials, then assemble it. Screw vibration mounts into machine feet. Install and screw the frame with a screen.

#### **ATTENTION**

Fasteners are located on parts to be installed in their standard places.

#### **ATTENTION**

Wrenches for the machine assembly are not included in the scope of delivery and the client should buy them separately.

Then install shelf with a light, screw it. Connect the socket and the plug connector for a light connection. Mount the tray for wheels on the screen, screw it. Put the machine to assigned working place close to mains socket. When connected to power source power cable should not be strained: 20% of the cable should lie on the floor. Adjust vibration mounts in such a way that worktable plane is horizontal.

Install double-section manipulator with the scissors' holder for operating on the device N = 2 and/or the device N = 3.

#### **ATTENTION**

The double-section manipulator with the holder may not be included to the scope of delivery.

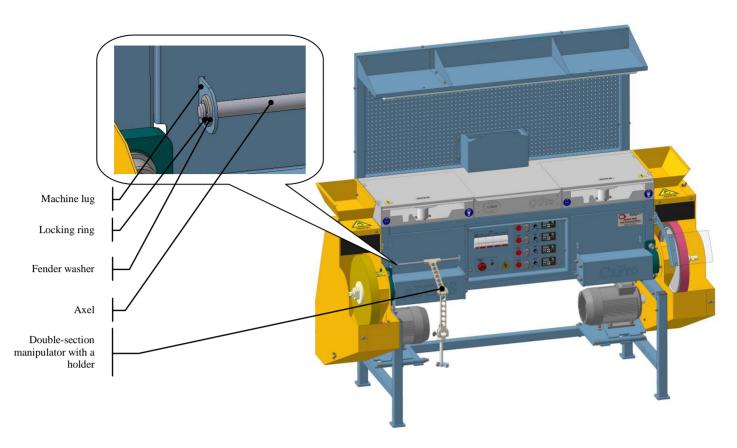


Figure 2 Installation of a double-section handling device with a holder

Insert the axle into one of the lugs of the machine, move aside, putting the lever of the manipulator on the axle, putting into the second lug of the machine. Put washers together with locking washers on the ends of the axle.

#### **ATTENTION**

Wrenches for mounting of the locking rings are not included in the scope of delivery and the client should buy them separately.

Check the levers of the double-section handling device, holder lever. They should rotate on their axles freely by hand without restrain, blocking or jamming.

Check the wheels on drives №2 and №3, nothing should prevent the rotation. The wheels should rotate by hand.

Check the polishing wheel and the contact wheel with the abrasive belt, they should rotate along the axles by hand with some force.

#### **ATTENTION**

Before connecting the power cable to a common voltage source, make sure that the power cord and plug are not damaged.

#### **ATTENTION**

Before connecting the power cable to the socket, make sure once again that local voltage is equal to 220 V.

## 6. DESIGN

Design and operating priciple are described on the basis of Figure 3.

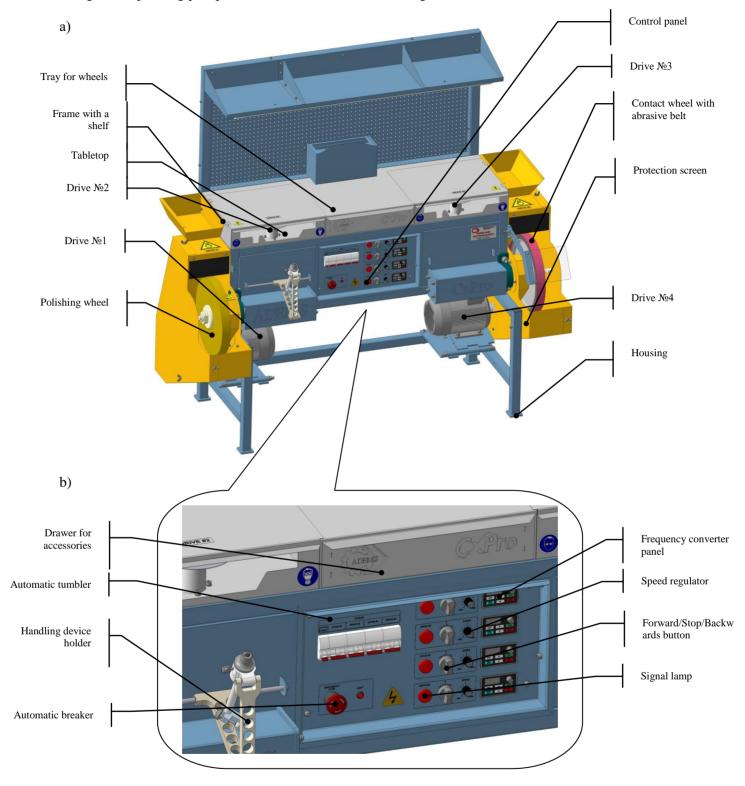


Figure 3 The Universal Sharpening Machine ADEMS WSS a) General view of the machine; b) Control panel

#### 7. OPERATION PRINCIPLE

At the beginning of operation, the machine is connected to 220 V / 50-60 Hz AC mains with power supply plug. In case local power supply network is 110 V, the machine should be connected via transformer\*.

#### ATTENTION

A step-down transformer is not included in the scope of delivery and should be bought by the client separately.

#### SHARPENING OF SCISSORS

Sharpening of scissors is performed on drives №2 and №3.

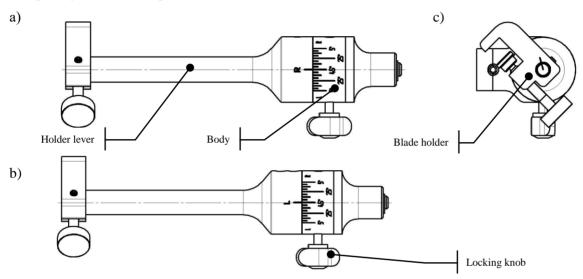


Figure 4 Holder of the scissors
a) Holder for the right scissors; b) Holder for the left scissors; c) Blade's holder.

#### STEP 1. Preparation for operation.

Prepare surface of metal wheels removing grease with acetone or solvent. Wait for the surface to dry Carefully apply the abrasive disc with the grinding material side up and the adhesive base to the metal disc, using the alignment device.

#### **ATTENTION**

The abrasive discs are not included in the scope of delivery and should be bought by the client separately.

#### **ATTENTION**

In case the abrasive sheets haven't an adhesive base, spray aerosol glue on the metal disc surface following the instructions for use on the label of the adhesive container.

### **ВНИМАНИЕ**

The aerosol adhesive is not included in the scope of delivery and should be bought by the client separately.

Press and align the grinding wheel with the edges of metal wheel. Use abrasive papers of those values that you need in every specific case. The approximate set for smooth transition of the abrasives 600, 800, 1000, 1200, 1500, 2000 grit. The scope of delivery includes 8 metal discs, so for convenience apply different values to each of the disks for quick replacement of abrasive when changing operations with the

sharpening tools.

#### **ATTENTION**

If the abrasive sheets don't coincides by shape and size with the disc cut the sheet off along the disc perimeter after drying.

Put the disc with the grinding material onto magnetic base of the machine wheel after 5-10 minutes. Center metal disc towards machine wheel.

#### STEP 2. Analysis of scissors

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

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

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

Make sure that scissors' edges are not damaged.

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

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

Wash the bolt hole.

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

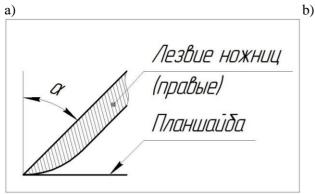
#### STEP 3. Setting of the angle.

## For the right-hand scissors

Make sure that the mark of the blade holder matches the mark on the holder lever as shown in Figure 4c, and the blade holder is securely fixed in the position because in case the blade holder is not fixed properly sharpening angle may be wrong.

Release the locking knob.

Turn the holder lever in such a way that "R" mark matches the mark of necessary sharpening angle (see Figure 4a). Herewith "45°" is the basic value for the angle reference (it is the angle between vertical plane and inner surface of the scissors' blade – see Figure 5). Thus, in order to set the angle of sharpening match the mark on the lever with necessary mark on the body. Увеличение угла заточки инструмента приводит к смещению к букве «R» на корпусе. Increase of the sharpening angle leads to shifting towards "R" mark on the body. Holding the holder lever in the selected position turn the handle clockwise until tight. Finally tighten the locking knob.



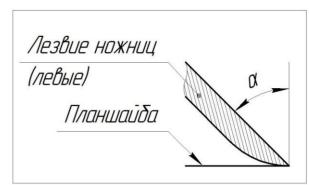


Figure 5 Sharpening angle a) left-hand scissors; b) right scissors

The sharpening angle in this example is given for illustration purposes. User should select the value of the angle for each scissors himself keeping in mind the design of the scissors under sharpening and degree of the cutting edge wear due to previous sharpening.

#### For the left-hand scissors

Release the locking knob. Turn the holder lever in such a way that "L" mark matches the mark of the necessary sharpening angle (see Figure 4b).

#### **ATTENTION**

When you sharpen the left-hand scissors only "45°" value will remain unchanged. Increase of the sharpening angle leads to shifting towards "L" mark on the body.

Then holding the holder lever in the selected position turn the handle anti-clockwise until tight. Finally tighten the locking knob.

#### ATTENTION

The right-hand scissors should be sharpened with the wheel rotating clockwise, the left-hand scissors – with the wheel rotating anti-clockwise!

#### STEP 4. Installation of the scissors into the clamp.

Take the holder lever with the right hand.

Take the scissors' blade with the left hand.

Insert the blade into the cavity of blades holder in such a way that all the cutting edge length is free for sharpening.

Rotating the locking knob with some force, fix the blade in the holder so it cannot turn.

Make sure that the blade is clamped securely.

#### **ATTENTION**

In order to avoid scratches and scores on the scissors' blades before you install the blade make sure that the screw has a supporting washer.

#### STEP 5. Sharpening of the classic scissors.

Place the metal disk with abrasive of selected grain on the magnetic base of the machine disk. Selection of the first wheel depends on the degree of wear of the scissors under sharpening.



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

#### **ATTENTION**

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

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

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

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

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

#### STEP 6. Sharpening of the convex scissors.

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

#### **ATTENTION**

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

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

#### ATTENTION

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

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

Smoothly touch the abrasive disk with the 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 similar movements.

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

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

Close hinged cover upon completion of work.



#### STEP 7. Refinement of blades.



Take the blade out from the holder and wet 6000 grit limescale.



Put the blade onto limescale 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 the axis in the area of a hole and draw the blade to yourself in order to remove burrs.



Remove moisture from the limescale and wet it again. Put the blade on the limescale at  $45^{\circ}$  again and shuttle until the cutting edge support line appears.

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

#### STEP 8. Polishing of the blade.

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

Install the metal wheel with 3000 grit grinding material and set maximum rotation speed of the wheel turning speed controller clockwise. If necessary apply a diamond paste to the grinding material. Turn the three-position switch to right position to start the machine. The wheel with the grinding material will start to rotate clockwise.

## ATTENTION

Make sure that you are sharpening the right-hand scissors!

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

Put the holder with the blade onto the grinding wheel. After the 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 the cutting edge make sure that when you rotate the holder you bring it to the extreme positions.



Continue the operation for about 30 seconds. Then lift the holder with the 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 the 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 the polished cutting edge surface depend on the skills of the sharpener.

## STEP 9. Assembly of the scissors.

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

#### STEP 10. Testing of the cut.

After you assembled the 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 the scissors after you closed it on a piece of a paper by 50%. Herewith continue to close the blades. Paper should be cut but not tear.

#### SHARPENING OF THE KNIFE PACKAGES OF BARBER'S HAIR CLIPPERS.

#### STEP 1. Preparation of the knife package.

Disassemble the hair clipper in order to remove the knife package. Make sure that the knife packages do not have rough nicks, dents or damages. Wash the knives in rubber solvent or kerosene.

#### STEP 2. Preparation of the machine for operation.

Faceplate has two sides marked "K" and "P".

"K" side has cone, "P" side has flat profile.

The sharpener chooses the faceplate side for sharpening at his/her own discretion.

In order to change the faceplate side unscrew the screw, take the faceplate off from the axis, turn it and put it back with necessary side. Grease the connection point of the axis and the faceplate with lubricating oil in order to facilitate next installation of the faceplate. Make sure that the faceplate fitted tightly down to the axis base. Fasten it with the screw. After you determined which side of the faceplate you will use, you may start filling the faceplate with an abrasive powder.

With a sprayer attached to a bottle of prepared grinding oil put thin layer of oil onto the faceplate covering the whole knurled surface.

Then rotating the wheel by hand apply the abrasive powder necessary for sharpening to the wheel surface. With the wooden spreader spread powder granules evenly over the wheel surface. Remove the powder surplus from the faceplate.

#### **ATTENTION**

The machine is equipped with the frequency converter that is why after power is supplied the indicator lights up on the machine's display. Actual speed value of the faceplate rotation will be demonstrated on the display (rpm). Turning the rheostat handle set optimal speed value.



#### **ATTENTION**

In order to avoid throwing of considerable amount of the abrasive powder from the surface during the first start after abrasive powder was applied to the faceplate it is not recommended to set high values of the faceplate rotation speed.

Depending on the faceplate rotation direction turn the start switch into "I" position to start the machine. When you turn the switch into "I" position, the faceplate rotates clockwise, when you turn the switch into "II" position, the faceplate rotates anti-clockwise. The wheel starts rotation. Actual speed of the faceplate will be demonstrated on the display. In order to change the faceplate rotation direction turn the start switch into corresponding position.

#### **ATTENTION**

Try not to operate the machine for a long time (more than 40 minutes without stop) at high speed (more than 1500 rpm). It is recommended to make a pause of 15 - 20 minutes after long operation of the machine at the top speed. Recommended faceplate rotation speed is 1200-1500 rpm.

#### **ATTENTION**

In order to avoid damaging of the machine surface make sure that the rags used for the machine cleaning does not contain chemical contaminants (solvents, etc.) and fine chips. Before you start to use the rags make sure that there is no abrasive material on the painted surfaces to be wiped. It will help you to keep an appearance of the machine for a long time.

#### STEP 3. Knife package assembly.

Assemble the knife package.

Turn the hair clipper on and check its operational integrity.

#### ATTENTION

After both faceplate surfaces were fully used it is necessary to resurfaced or replace the faceplate. To get a price information on resurfacing or replacement of the faceplate call in our service center 8-927-215-66-55.

## 8. INSTALLATION, ADJUSTMENT, SETTING-UP, GREASING

# THE ADJUSTMENT OF THE DOUBLE-SECTION HANDLING DEVICE WITH THE HOLDER.

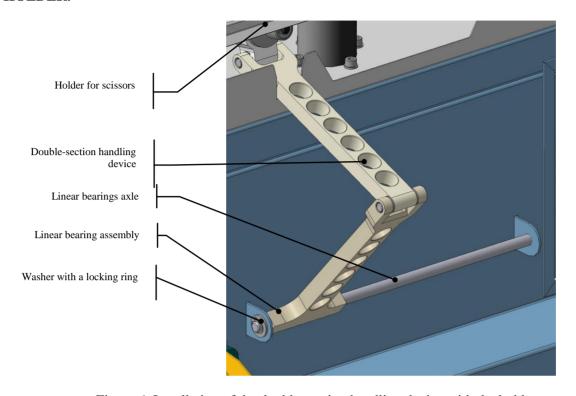


Figure 6. Installation of the double-section handling device with the holder

In case you did not buy an additional double-section handling device with the holder for the scissors, it is possible to reposition existing one to the another drive. Move the linear bearings axle to the one side in the machine lugs, after you dismantled a ring from the one end of the axle. Dismantle bearing assembly from the axle with care as shown in Figure 6. Please do not damage bearings' surfaces. Insert the linear bearings axle into the machine lugs at the other drive. Perform all the actions described above in the reverse sequence in the new place.

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

#### **ATTENTION**

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

#### FACEPLATE INSTALLATION.

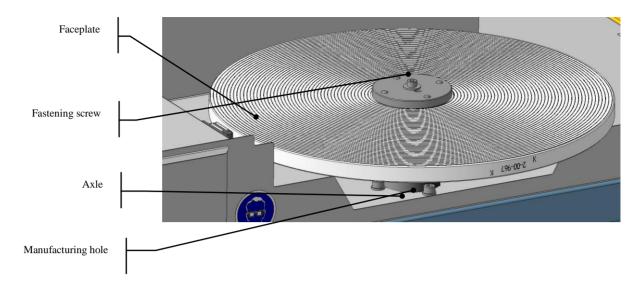


Figure 7. Faceplate installation

#### **ATTENTION**

The machine faceplate should rotate freely by hand. Make sure that nothing prevents its rotation!

Each time you finish working it is necessary to clean the abrasive dust off the surfaces thoroughly in order to avoid penetration of the dust into the rubbing components.

When removing the faceplate you have to unscrew the fastening screw, which fix the faceplate to the axle. In order to facilitate dismantling of the faceplate, put small amount of lubricating oil to the faceplate and the axle junction point. Wait until oil penetrates inside the faceplate and the axle junction point. Then dismantle the faceplate with the hands located on both sides in virtual axle center plane. The faceplate fit is rather tight that is why if you failed to dismantle the faceplate (in case of irregular dismantling) it is recommended to place the faceplate back with the hands or with light (up to 5 kg) hammering with the rubber hammer in the area of the screw hole in order to fit the faceplate against the stop on the axle. Then try to dismantle the faceplate again. Before you install the faceplate to its proper position make sure that the mounting face of the axle and the wheel mounting surfaces are free from the abrasive material, burrs or scratches; the dents on the axle face are not allowed also. Apply thin layer of a grease (LITOL or TSIATIM type) onto the axle mounting face and the faceplate hole. When installing the faceplate match the hole in the faceplate with the pin of the axle. For more accurate positioning of the axle against the faceplate a manufacturing hole is provided in the axle to lock it with expedients. Inserting an Allen key into the hole and holding it you will lock the axle against the faceplate. Repairing of damages such as dents and scratches is performed with not more than 1000 Grit abrasive sheets.

#### **ATTENTION**

Do not try to hammer the faceplate on the periphery. Use of a metal hammer is forbidden! Contact of the faceplate knurling with any metal objects directed to it forcefully for any purpose leads to helix deformation and as a consequence, the faceplate will cease meeting original requirements.

#### **ATTENTION**

Before you start the machine up after replacement of the faceplate make sure that the faceplate is in proper position and fastened with the screw. Rotate the faceplate by hand - make sure that there is no obvious runout and nothing impedes the faceplate movement.

#### IMPELLER AND POLISHING WHEEL INSTALLATION.



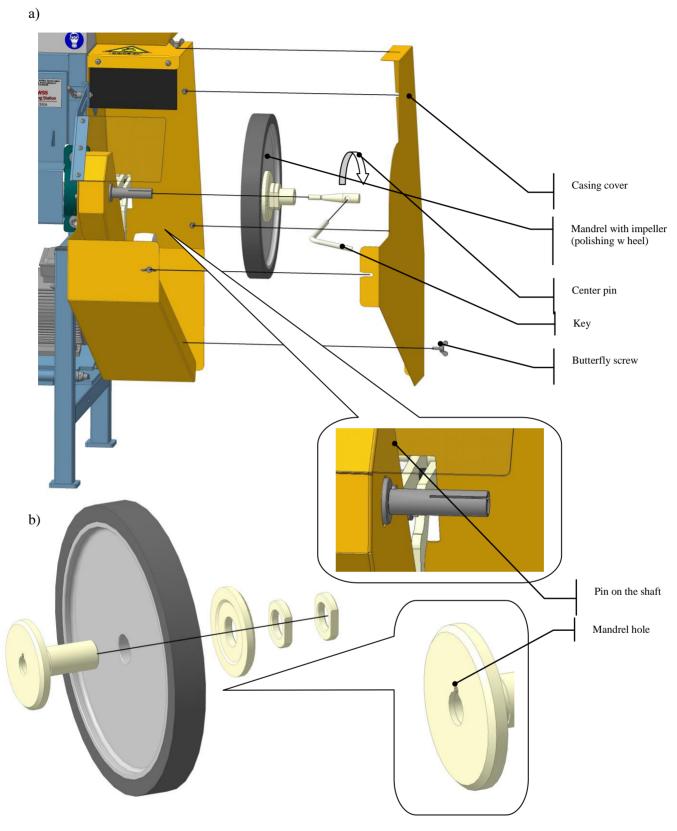


Figure 8. Installation of the impeller a) General installation view; b) Mandrel with the impeller

The impeller installation procedure includes the following sequence of operations (see Figure 8):

- loose the butterfly screws but do not take it out;

- remove the casing cover;
- put the mandrel with the impeller onto the shaft against stop matching the axial slot in the mandrel and pin of the shaft;
- insert the center pin into the shaft end and screw it in against stop. Use the hole in the center pin for screwing by key;
- put the casing cover in its place;
- tighten the butterfly screws.

#### ATTENTION

In order to avoid injuries do not leave the center pin screwing tool in the hole.

#### ABRASIVE BELT INSTALLATION.

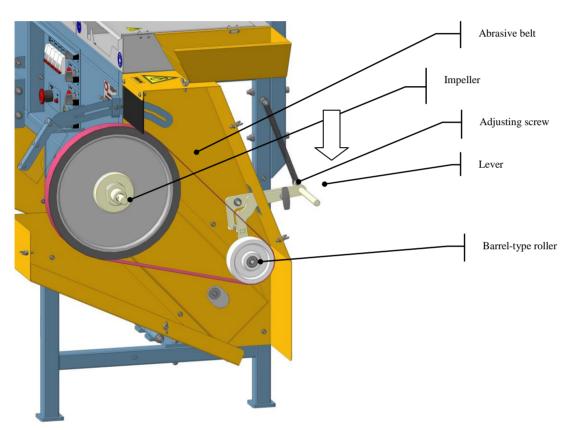


Figure 9. Installation and adjustment of the abrasive belt

Abrasive belt installation procedure includes the following sequence of operations:

- loose the butterfly screws but do not take it out;
- remove the casing cover;
- pull the lever, the abrasive belt will sag down;
- holding the lever with one hand put the abrasive belt onto the wheels as shown in Figure 9 (the abrasive belt should be located in the center of all interconnected wheels);

#### **ATTENTION**

The direction of the arrow indicated on the inside of the abrasive belt shall be the same as the direction of rotation of the contact wheel.

- release the lever.

#### THE ABRASIVE BELT TRAVEL ADJUSTMENT.



The abrasive belt travel should be properly adjusted before you start the machine operation. Travel adjustment means setting up of the belt position on interconnected wheels during rotation.

Please act as follows:

- first adjust the abrasive belt travel manually. When the machine is off turn the abrasive belt by hand. The belt should remain in the center of wheels;
- in case the belt is shifted to either side, turn the adjusting screw in one direction until the abrasive belt runs in the center;
- in case manual adjustment was successful switch the machine shortly on idle in order to make sure that the abrasive belt remains in the center of wheels during machine operation;
- if necessary perform the final adjustment of the abrasive belt travel using the adjusting screw.

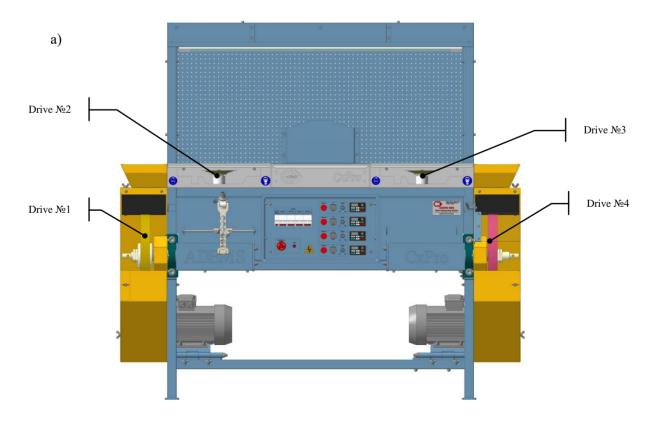
#### OPERATION WITH CONTROL PANEL.

The machine control panel is shown in Figure 10:

- before you start operation of the machine please select a drive;
- put correspondent automatic switches into up position. Indicating lamp of the drive you have chosen will light on;
- using control switch put the drive into operating position;
- change rotation speed using correspondent speed controller (rpm amount will be displayed in a corresponding control panel display).

#### **ATTENTION**

In order to avoid modification of frequency converters settings all buttons in the control panel are switched off.



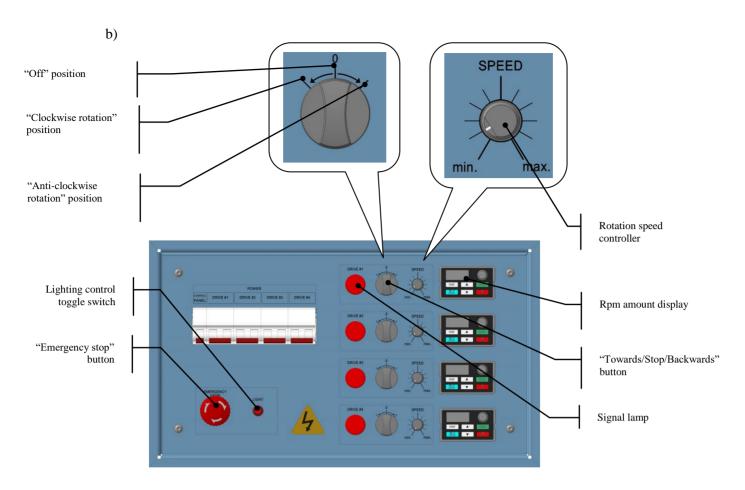


Figure 10 Machine controls a) General view of the machine; b) Control panel

Our company constantly improves machines that is why slight changes in machine design not mentioned in the the curent Technical certificate are posible.

#### 9. WARRANTY CONDITIONS

- 9.1. Warranty period -12 months from the date of purchase to the end-user.
- 9.2. Warranty and post-warranty repair is performed only by the ADEMS specialists.
- 9.3. This warranty covers only manufacturing defects that occur during the warranty period and under normal use conditions.
- 9.4. 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.
- 9.5. 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.
- 9.6. 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.
- 9.7. Preventive maintenance of equipment (cleansing, washing and relubrication) during warranty period is a paid service.
- 9.8. Equipment lifetime is 3 years from the date of manufacture.
- 9.9. Possible violations of the above warranty conditions are reported to the owner after diagnostics of the equipment by ADEMS specialists.
- 9.10 The owner of the equipment trusts to carry out diagnostics by ADEMS specialists in his absence.
- 9.11. 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.
- 9.12. 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.

## 10. ACCEPTANCE CERTIFICATE

10.1. The Universal Sharpening Machine AD as fit for operation. 10.2. Manufacturer's address:	DEMS WSS with serial number 49/	2021 is classified
39, Kommunalnaya Street, Togliatti, 445043, 10.3. Electric motor serial number	Russian Federation.	
	·	
10.4. Serial number of the frequency converted	r	
	·	
If in doubt of equipment integrity, please, con number by WhatsApp, Viber: +7 964-927-69-		the following phone
Date of manufacture		
QC Department Head		
Date of purchase		
Seller's name		
Seller's signature	/ / / Print full name	,
	Time run nume	
Stamp here		
I confirm that the equipment was checked, in when buying.  I have read and understood the terms of warra		indefectible exterior
Buyer's signature		
	Print full name	

# 11. NOTES, COMMENTS, REMARKS