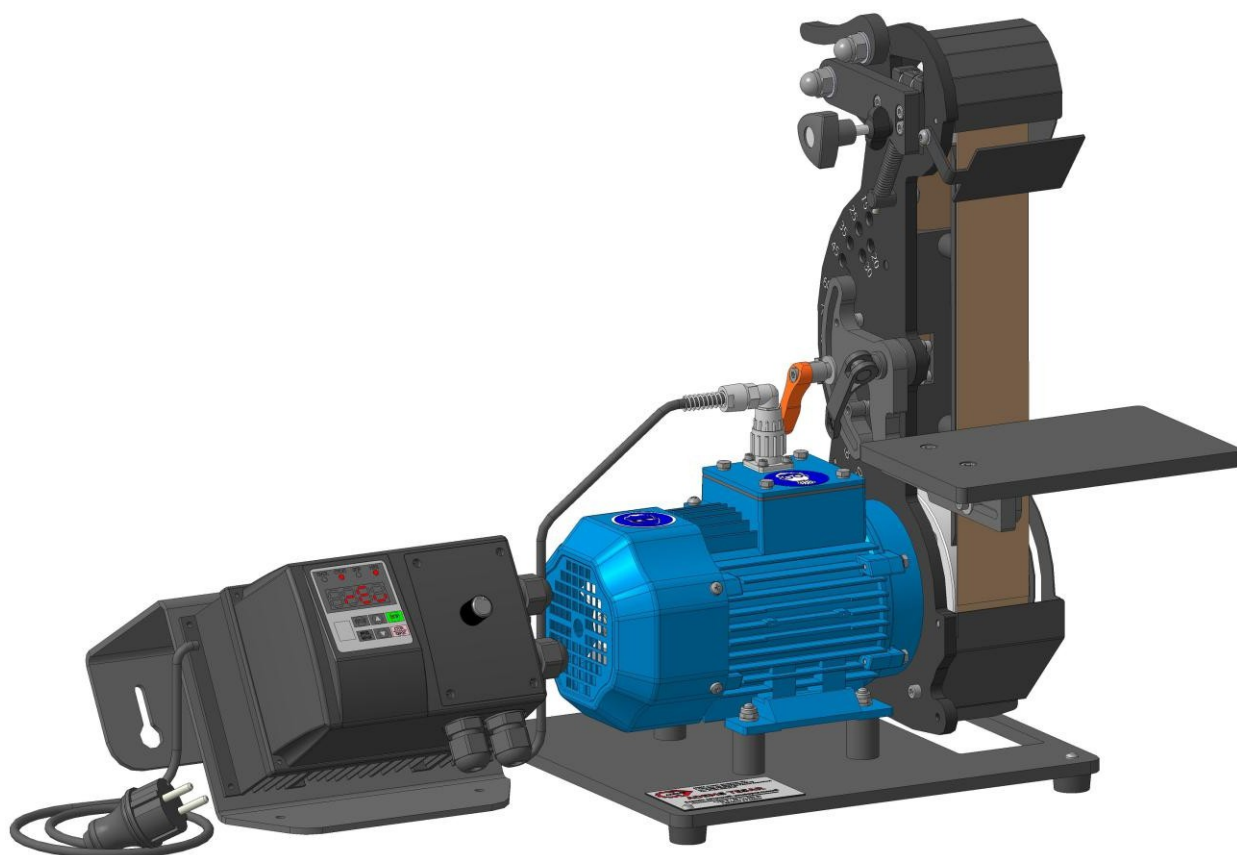


BELT GRINDING MACHINE

ADEMS Tesar

PASSPORT



Togliatti, 2023

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1. PURPOSE AND APPLICATION

ADEMS Tesar belt grinding machine is designed for deburring, stripping, grinding rough weld seams, flat grinding, for professional sharpening of carpentry, garden and kitchen tools. It allows grinding not only metal, but also wood, plastic and rubber.

2. DELIVERY SET

The ADEMS Tesar L915 Inv is included with the ADEMS Tesar L915 Inv:

- ADEMS Tesar belt grinding machine	- 1 pc;
- frequency converter rack	- 1 pc;
- work table	- 1 pc;
- protective screen	- 1 pc;
- hexagonal T-key #4	- 1 pc;
- abrasive belt P40 50x915	- 1 pc;
- abrasive belt P80 50x915	- 1 pc;
- abrasive belt P240 50x915	- 1 pc;
- Teflon self-adhesive 220x150 mm	- 1 pc;
- rubber support	- 4 pcs;
- passport	- 1 pc.

The ADEMS Tesar LX-R Inv is included in the scope of delivery:

- ADEMS Tesar belt grinding machine	- 1 pc;
- frequency converter rack	- 1 pc;
- work table	- 1 pc;
- work table with groove and locking screw	- 1 pc;
- protective screen	- 1 pc;
- hex key #3	- 1 pc;
- hexagon key #4	- 1 pc;
- hexagonal T-key #4	- 1 pc;
- ADEMS Tesar knife sharpening holder	- 1 pc;
- knife sharpening stop	- 1 pc;
- straight chisel sharpener	- 1 pc;
- chisel sharpening tool	- 1 pc;
- sharpening tool for sharpening semi-circular chisels	- 1 pc;
- planer blade sharpener	- 1 pc;
- abrasive belt P40 50x915	- 1 pc;
- abrasive belt P80 50x915	- 1 pc;
- abrasive belt P240 50x915	- 1 pc;
- Teflon self-adhesive 220x150 mm	- 1 pc;
- Teflon self-adhesive 220x120 mm	- 1 pc;
- rubber support	- 4 pcs;
- passport	- 1 pc.

ATTENTION

For more information about this product and to purchase ribbons, please contact our managers at tel. 8-800-77-57-163 (free of charge within Russia).



3. TECHNICAL CHARACTERISTICS

Types of sharpened tools	<ul style="list-style-type: none"> ✓ Straight chisels* ✓ Oblique chisels. ✓ Semi-circular chisels* ✓ Knives* ✓ Planing knives*
Sharpening methods	<ul style="list-style-type: none"> ✓ Draft ✓ Finishing ✓ polishing
Machine supply voltage, V.	220
Rated power consumption of electric motor, W, not more than	550
Belt speed, adjustable, m/sec.	0...18
Knife sharpening angle, degrees	12...45*
Abrasive belt size, mm.	50x915
Standard sharpening angles, deg.	15, 20, 25, 30, 35, 45, 60, 80, 90
Overall dimensions of the device, mm.	420x355x345
Weight, net, kg.	25
Weight in package, gross, kg.	28,5

*The sharpening tool for this tool is only available with the ADEMS Tesar LX-R Inv.

The above specifications are current at the time of publishing this manual. Since our company policy is to constantly develop and improve the equipment, the manufacturer reserves the right to make changes in specifications at any time without prior notice to the consumer, without assuming any obligation.



4. SAFETY TECHNOLOGY

ATTENTION

Before starting work, inspect the machine for obvious damage to the power cord, moving parts of the machine. It is forbidden to turn on the machine if such damage is detected until it is corrected.



It is recommended that the machine is only connected to a mains socket that has an earth connection.

Wear safety goggles and a respirator mask when working. The goggles only provide protection against suspended dust and abrasive particles and do not protect against flying parts.

5. WORK PREPARATION

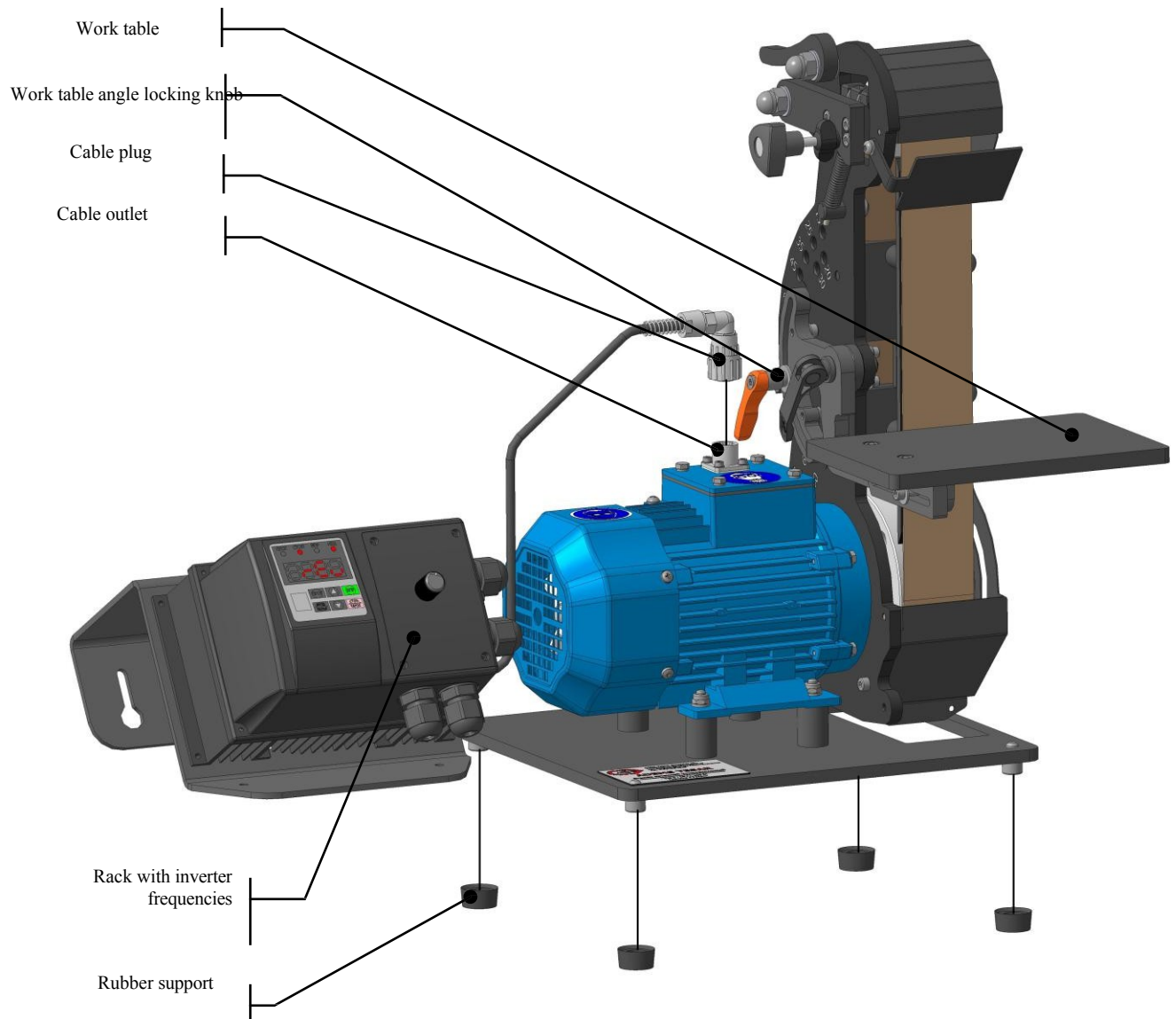


Fig.1 Assembly of the ADEMS Tesar machine

Remove the machine from its packaging and place it in its normal working position in close proximity to the power supply. Connect the cable plug of the frequency converter to the cable outlet on the motor. Place the frequency converter rack in any convenient location. The power cord should not be in a taut position: 20% of the length should run down the work bench.

ATTENTION

The rack with the frequency converter can be conveniently placed on the wall by hanging it on pre-fixed screws.

Insert the rubber supports on the screw heads under the mounting plate - the machine rests on the rubber supports. If necessary, the machine can be fixed to the workbench.

Loosen, but do not unscrew, the work table angle lock knob. Set the work table to the working position according to Fig. 1. Secure the work table position by tightening the work table angle lock knob

ATTENTION

If the machine is brought into a heated room from outdoors or from a cold room in winter, do not unpack or turn on the machine for 8 hours. The machine must warm up to the ambient temperature. Otherwise, the machine may malfunction when the machine is turned on due to condensation of moisture on the motor parts.

ATTENTION

The abrasive belt of the machine must rotate freely by hand. Make sure that nothing obstructs its rotation.

ATTENTION

To maintain the appearance of the work surface and to improve slip when working on the work table surface, it is recommended that self-adhesive Teflon be applied to the work table surface.

6. CONSTRUCTION

The device and principle of operation are described on the basis

of Fig.1 a)

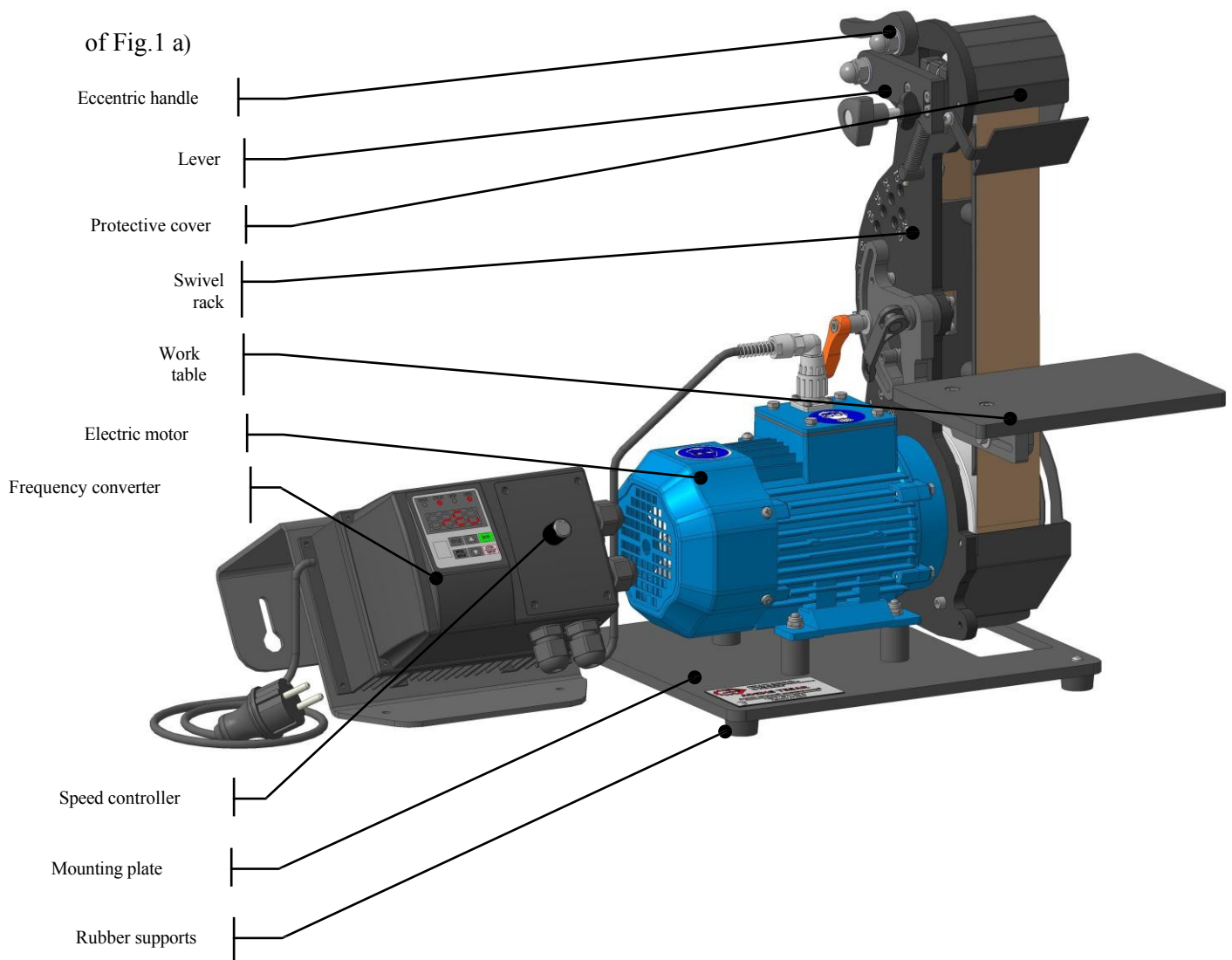


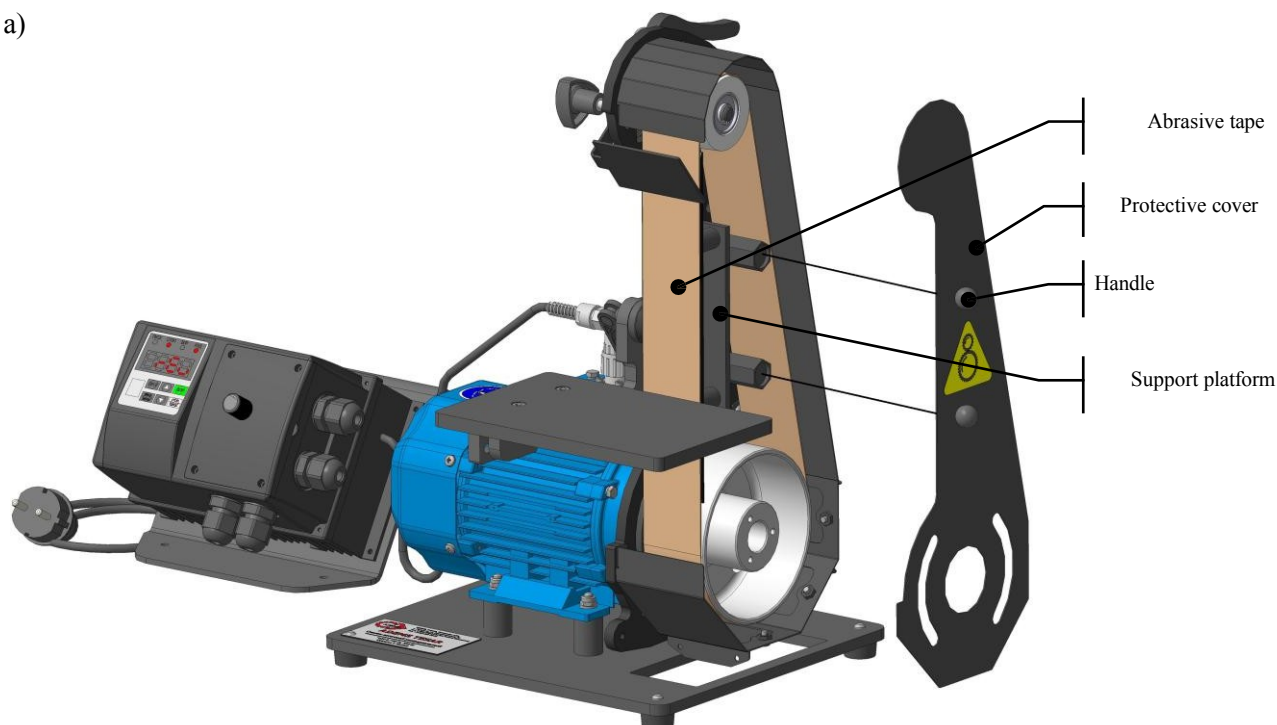
Fig.2 ADEMS Tesar belt grinding machine



7. PRINCIPLE OF WORK

STEP 1. Install and change the abrasive belt.

a)



b)

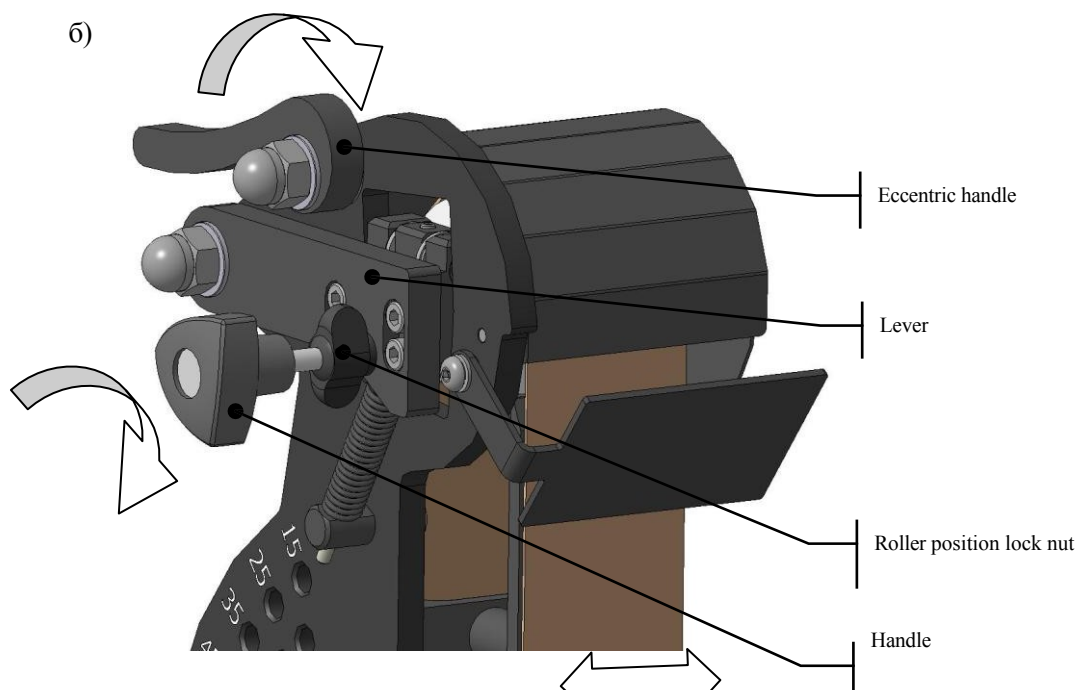


Fig.3 Installation of the abrasive belt

a) Dismantling the hood; b) Adjusting the position of the abrasive belt;

Pull the handles on the protective cover. Remove the protective cover.

Turn the eccentric knob as shown in Fig. 3 б). The eccentric lever will push down on the lever and lock the idler pulley in the down position, loosening the tension on the abrasive belt.

Slip the selected abrasive tape over all mating wheels.

ATTENTION

The abrasive belt must be centered on all mating wheels.

Return the eccentric knob to its original position and the abrasive belt will tighten.

Before operating the machine, the abrasive belt travel must be properly adjusted. Adjusting the stroke involves setting the position of the abrasive belt relative to the edge of the backing plate (the edges of the abrasive belt and the backing plate must be aligned).

Run the machine briefly at low speed, check that the edge of the belt is aligned with the edge of the backing plate. If the sliver has run off to one side relative to the backing plate, make an adjustment.

To do this, loosen the roller position lock nut.

Turning the knob to one side or the other will cause the abrasive belt to move to one side relative to the center of the rollers. Once you have selected the position of the abrasive belt, lock the idler by tightening the idler position lock nut.

STEP 2: Selecting and setting the work table tilt angle.

Follow these simple steps to change the angle of the work table. Loosen, but do not unscrew, the worktable angle lock knob.

Turn the eccentric knob, loosening the table lock.

Select the desired tilt angle of the worktable by aligning the tilt angle control edge with the corresponding mark on the turntable.

Secure the selected angle by tightening the work table angle locking handle and then the eccentric handle.

ATTENTION

The angle of rotation of the work table is 45 degrees in each direction.

For ease of operation, the table can be moved relative to the support pad (closer or farther away from the abrasive belt). To do this, loosen, but do not remove, the screw securing the table, using the supplied #4 hexagonal T-wrench. Slide the table toward or away from the support pad. Secure by tightening the screw.

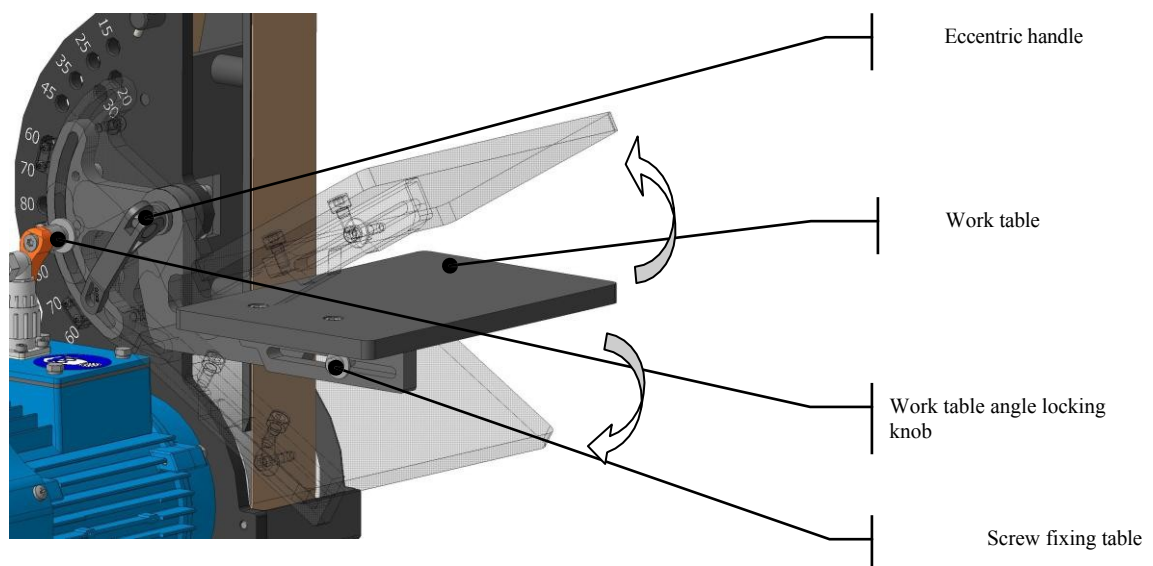


Fig.4 Changing the tilt angle of the work table

STEP 3. Setting the working position of the rotary stand.

When selecting a small tool sharpening angle, it may happen that the tool to be sharpened rests on the work table on which the machine is placed. In this case, the base can be rotated.



With the left hand holding the bed, and with the right hand using a #4 hexagonal T-wrench, loosen but do not remove the two screws securing the base to the motor flange. Turn the bed to the required angle and tighten the screws.

ATTENTION

To reach the screws, turn the drive wheel until the holes on the wheel align with the screws.

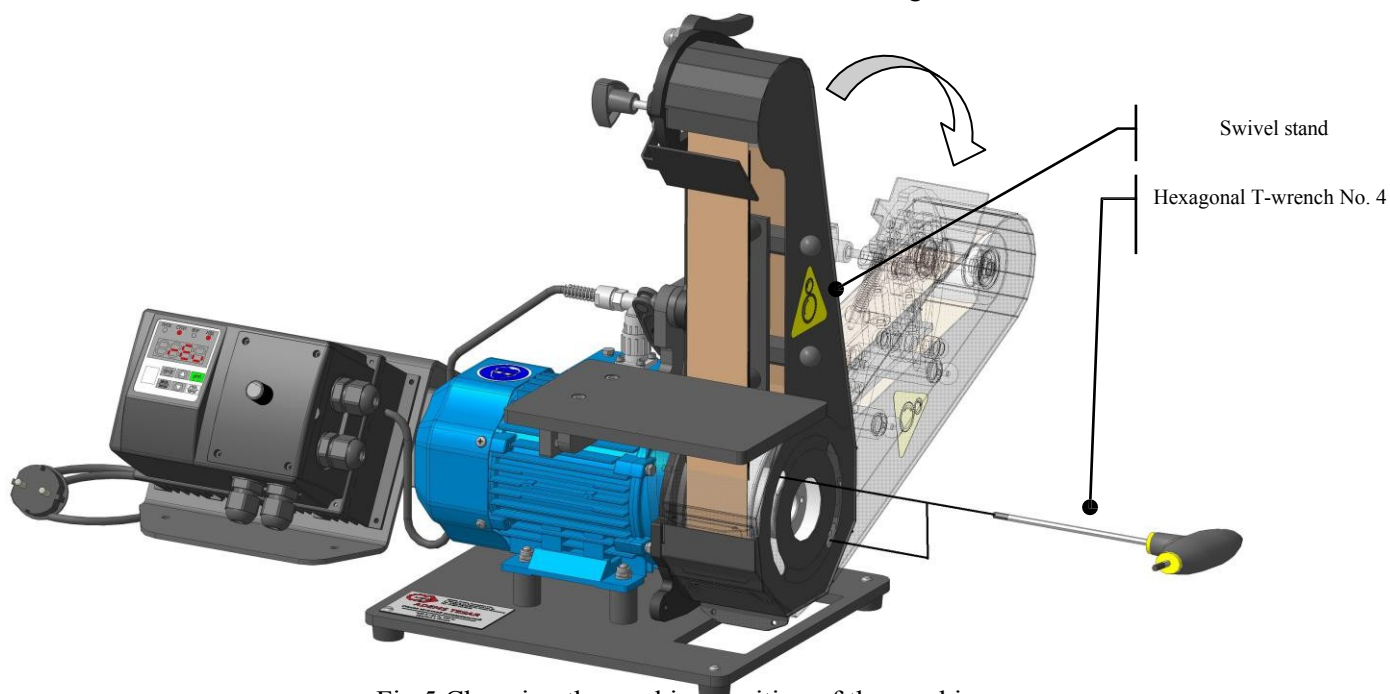


Fig.5 Changing the working position of the machine

RULES FOR SHARPENING TOOLS

SHARPENING CHISELS

STEP 1. Changing the work table.

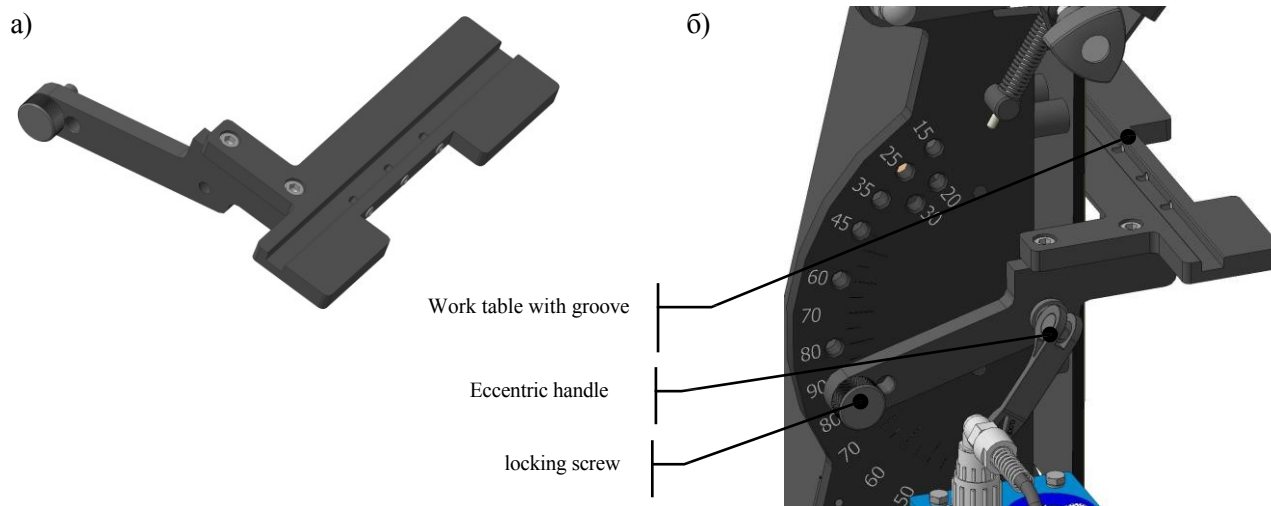


Fig.6 Working table for sharpening tools a) General view; b) Mounted on the machine tool

Remove the work table by unscrewing the work table angle lock knob and the eccentric knob b. Install the work table with groove in place of the removed work table by screwing in the eccentric knob.

STEP 2: Selecting and setting the tool sharpening angle.

The standard sharpening angles are already marked on the rotary stand for easy and quick selection of sharpening angles.

To change the sharpening angle, follow a series of simple steps.

Turn the eccentric knob, the table attachment is loosened.

Loosen but do not unscrew the locking screw (out of engagement with the pivot post). Select the required sharpening angle from the standard values.

Turn the work table to the desired angle and screw the locking screw into the corresponding hole.

Reverse the eccentric knob and the table will lock into place.

ATTENTION

To set the sharpening angle to "20" and "30" degrees, the locking screw should be used with the adjacent hole on the lever.

STEP 3. sharpening chisels.

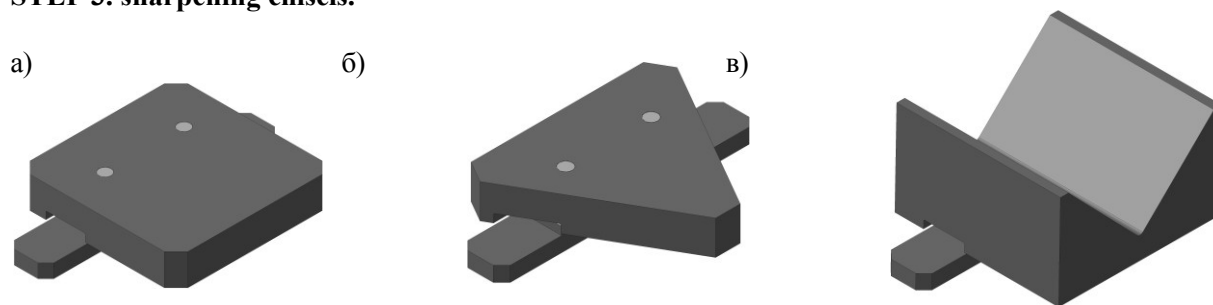
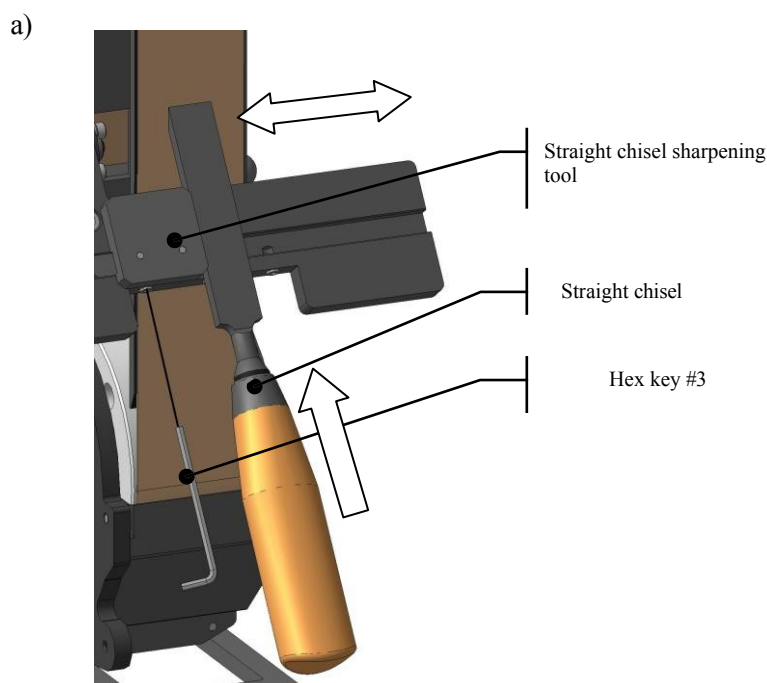


Fig.7 Tools for sharpening chisels a) straight; b) oblique; c) semicircular chisels

ATTENTION

Chisel sharpening accessories are only included with the ADEMS Tesar LX-R Inv.



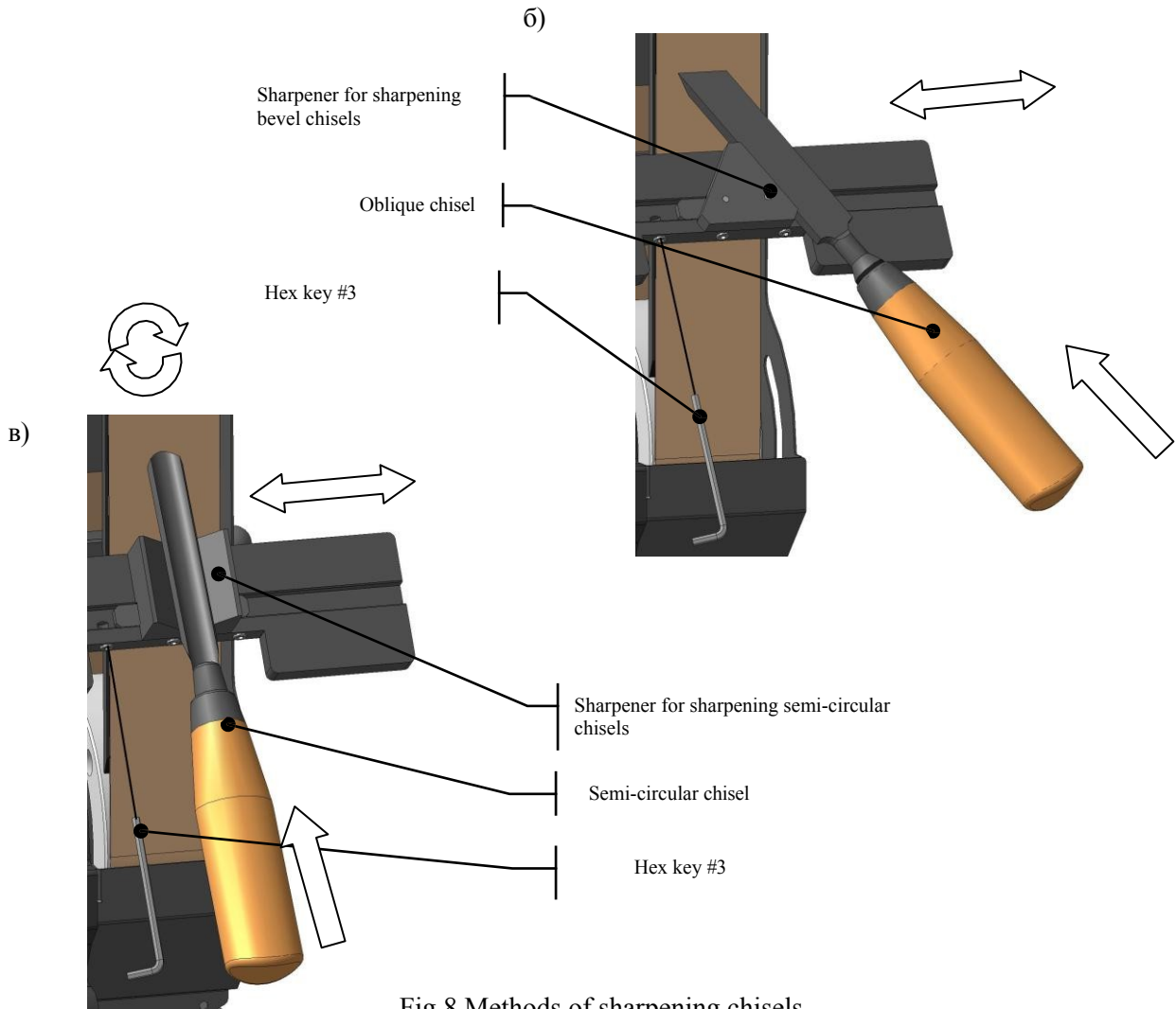


Fig.8 Methods of sharpening chisels
 a) Straight; b) Oblique c) Semicircular chisels

The sharpening of different chisels on the machine follows the same pattern with a slight difference. Select the chisel to be sharpened and the appropriate fixture from the delivery set. The selected tool grinding angle is set (see Selecting and setting the tool grinding angle). Place the selected fixture in the slot of the work table as shown in Fig. 8. Place the chisel on the fixture, leaning it against the abrasive belt. For convenience, the straight chisel can be positioned to the left and right of the fixture. The position of the oblique chisel depends on the bevel angle of the chisel. Adjust position chisel relative to center tape by moving the fixture along the groove of the work table. For convenient sharpening on the machine, the fixtures can be fixed on a table. Using a #3 Allen wrench, tighten one of the three screws on the end of the table, thereby securing the fixture.

A distinctive feature of sharpening semicircular chisels is that during sharpening you must make rotating movements with the tool in the prism of the sharpening tool over the entire surface of the sharpening jig

KNIFE SHARPENING

STEP 1: Prepare the machine.

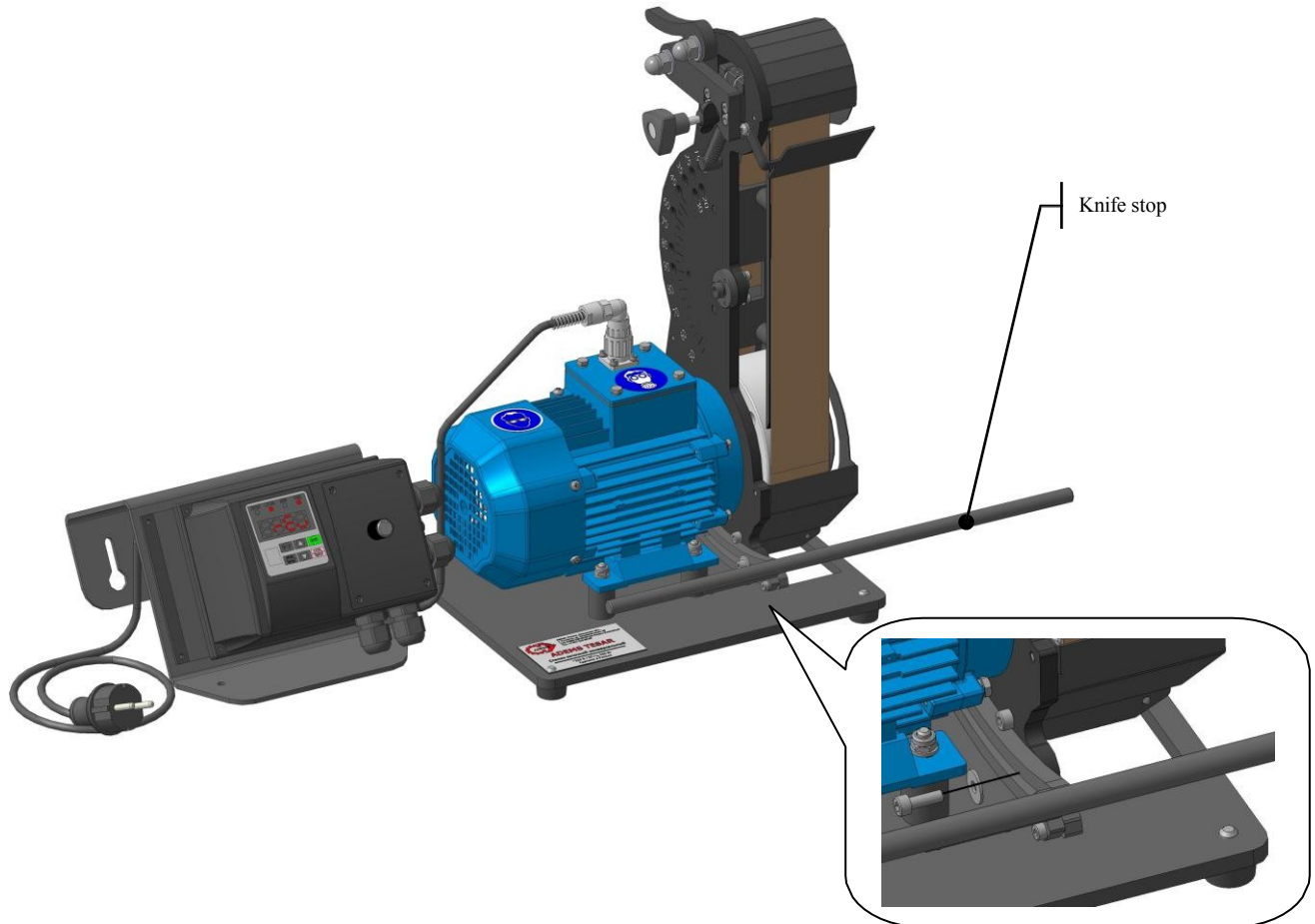


Fig.9 Installing the knife sharpening stop Unscrew

the screw with washer from its original position. Remove the work table from the machine. Install the knife stop as shown in Fig. 9. Secure the stop by tightening the screw.

STEP 2: Install the knife in the fixture.

Loosen using a #4 Allen wrench, but do not remove the two press screws in the knife sharpening fixture. Insert the knife to be sharpened into the gap between the jaws. Tighten the two clamping screws, securing the knife in the fixture.

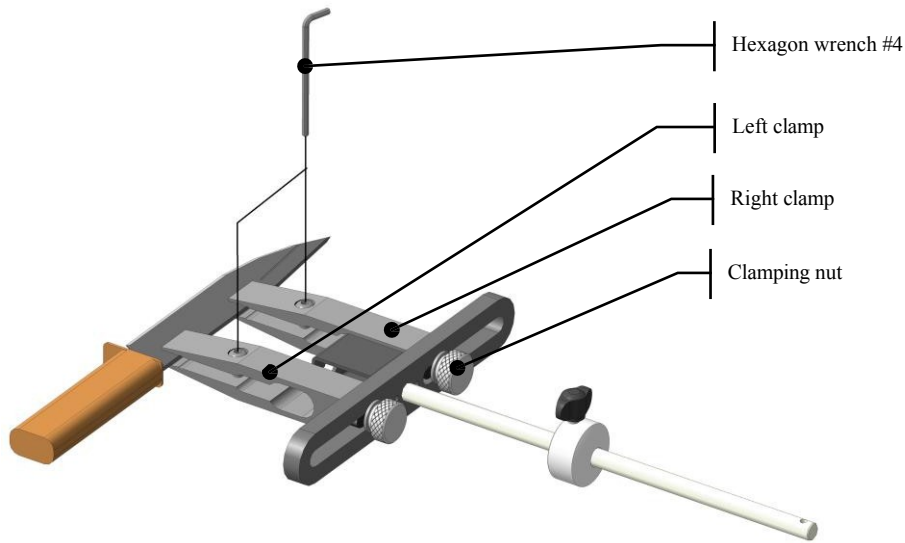


Fig.10 Clamping the knife into the fixture

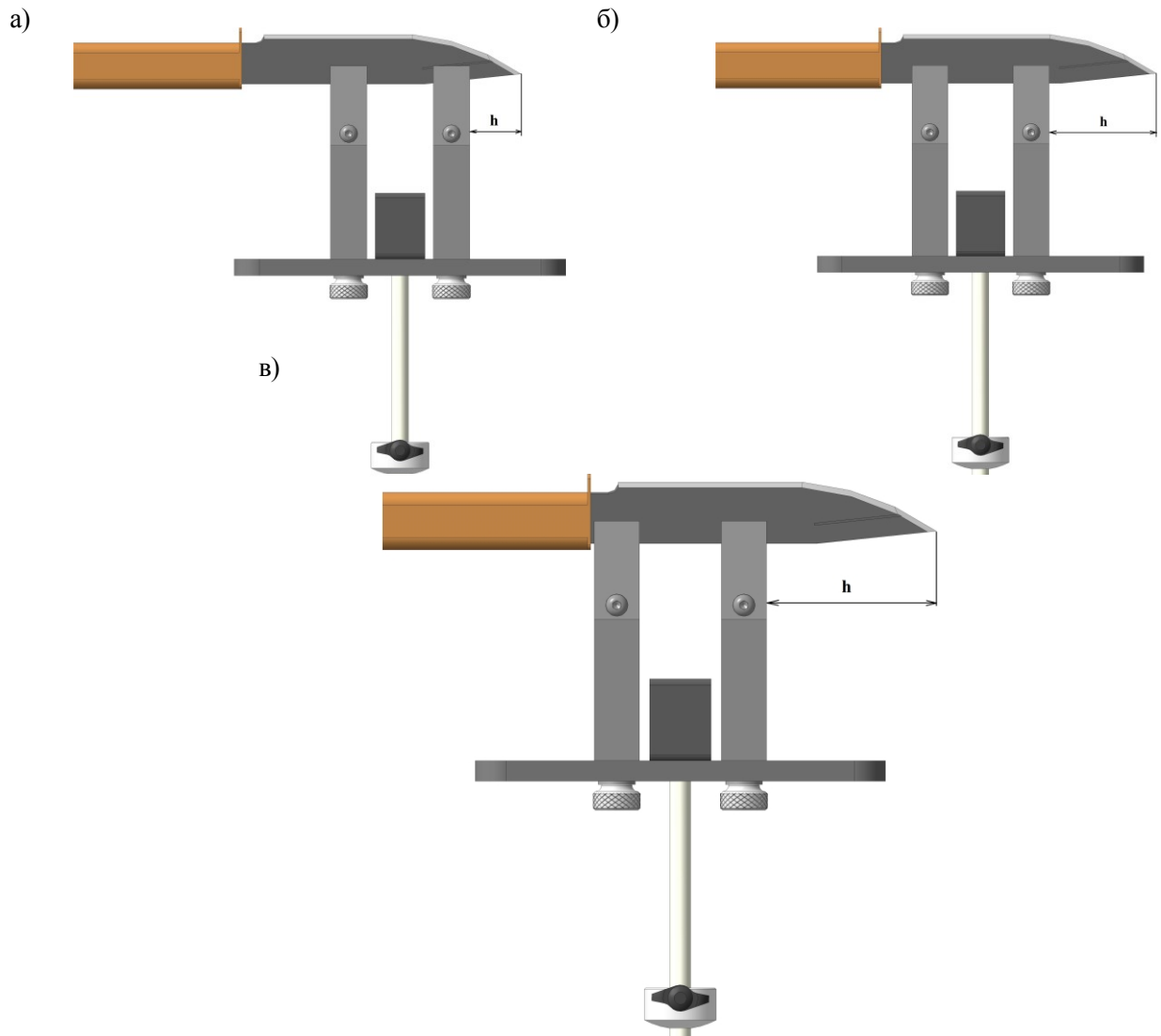


Fig.11 Shape of the edge angle during sharpening
a) large radius; b) normal radius; c) small radius

The edge angle at the end of the knife depends on where the clamp is installed (h). If the clamp is installed closer to the end of the knife, the edge angle at the end of the knife will increase. If the clamp is installed closer to the knife handle, the edge angle at the end of the knife will decrease. Proper clamping of the knife ensures the same bevel and edge angle along the entire blade.

ATTENTION

The distance from the jaws to the blade tip is at the discretion of the sharpener.

STEP 3: Adjusting the sharpening angle.

Install the fixture with the knife on the machine as shown in Figure 12. The spherical part of the bushing should rest on the axis of the blade stop and the blade should touch the abrasive belt. Place the electronic angle gauge on the fixture pad.

ATTENTION

The electronic angle gauge is not included in the scope of delivery and must be purchased separately by the customer.

The position of the bushing in relation to the fixture axis and of the knife stop in relation to the rotary stand determines the knife sharpening angle.

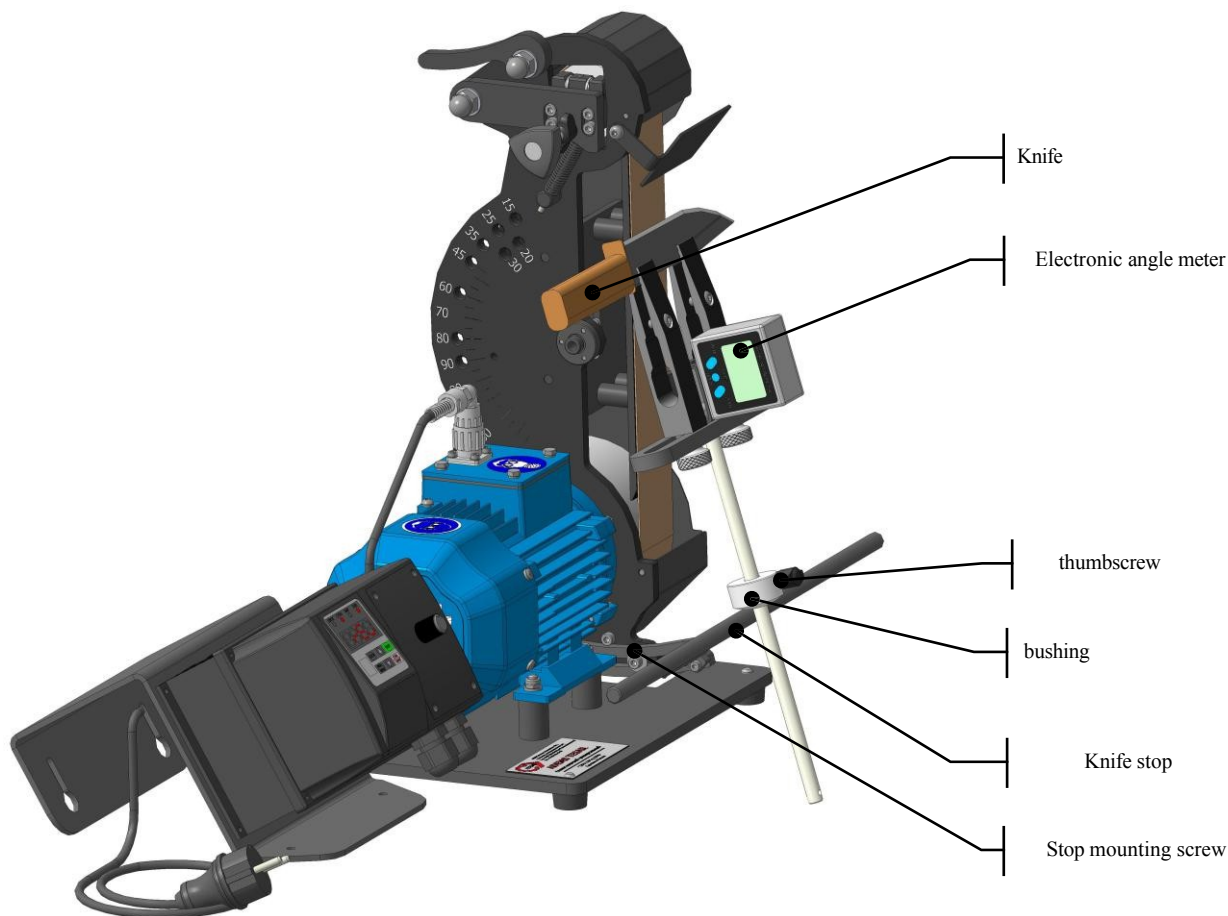


Fig.12 Setting the sharpening angle

STEP 4. sharpening technique.

The knife is sharpened from the handle: straight section of the cutting edge then rounding of the cutting edge.



Sharpening of the straight section of the cutting edge is carried out by moving the fixture along the axis of the stop until the cutting edge begins to round.

Next, add a rotary motion to the longitudinal movement when sharpening the cutting edge rounding.

After sharpening the cutting edge on one side, proceed to sharpening the reverse side by turning the fixture with the knife over.

The procedure for sharpening the cutting edge on the reverse side is similar.

ATTENTION

During sharpening, the sleeve must always be in contact with the axis of the knife

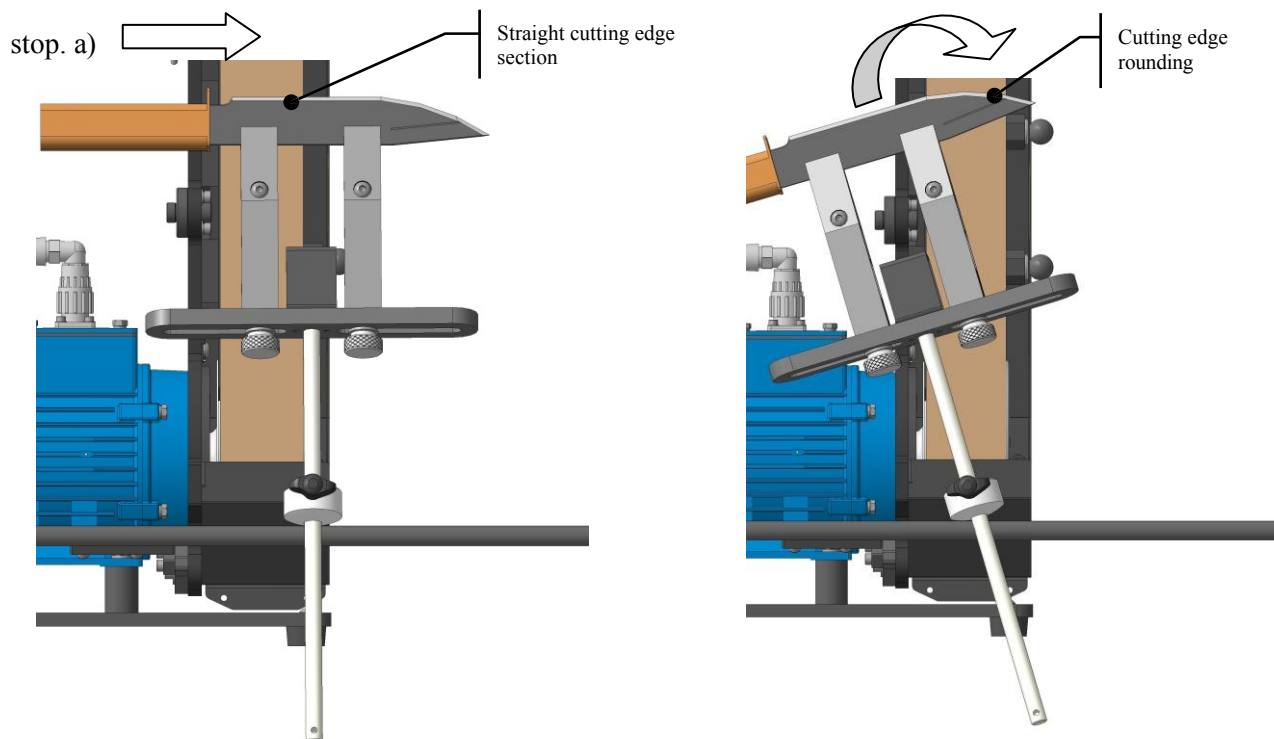


Fig.13 Knife sharpening technique

a) Sharpening of the straight section of the cutting edge; b) Sharpening of the rounded section of the cutting edge.

ATTENTION

To avoid wearing out the abrasive belt in a certain area, do not work the tool for too long in one place. Use the full width of the abrasive belt for machining.

Check the geometry of the tool being sharpened frequently to ensure an even shape. Continue sharpening the areas of the tool that need to be reshaped. Initial shaping of the tool is required only once. Shaping will take 10-20 minutes, depending on the initial shape of the tool and the amount of steel to be removed.

ATTENTION

If you press the tool with a certain amount of force during sharpening, the sharpening pressure depends on the size of the area in contact with the sharpening wheel. A smaller contact area increases the sharpening pressure. This is an important factor to consider because the sharpening pressure determines the intensity of sharpening of the tool and thus the burn of the cutting edge.

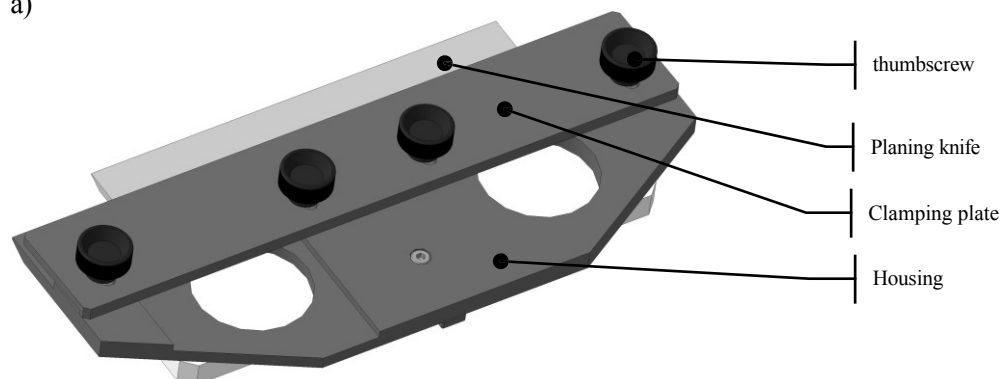
You must take care that the tool being sharpened is not pressed down too hard, especially when sharpening a small, delicate tool with a semi-circular shape

with an edge. Otherwise, the sharpening pressure will be very strong and this can lead to over-sharpening.

PLANER BLADE SHARPENING

STEP 1. Preparation for sharpening.

a)



b)

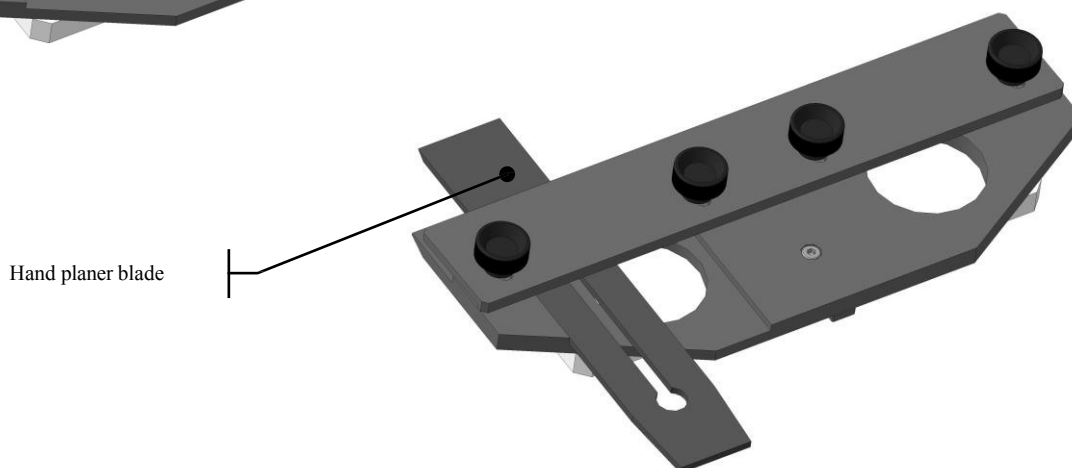


Fig.14 Sharpening device

a) Planer blade installed; b) Hand planer blade installed

Loosen but do not remove the thumbscrews on the attachment. Insert the planer knife into the resulting slot between the clamping plate and the housing until it stops in the shoulder.

If the width of the planer blade is not wide enough and its cutting edge is recessed when inserted into the housing until it stops at the shoulder, screw in the recessed stop screws to change the blade support surface.

ATTENTION

The #2 hex wrench for screws is not included and must be purchased separately by the customer.

After positioning the planer blade on the body, tighten the thumbscrews. The attachment with knife is ready for operation.

ATTENTION

The maximum length of the planer blade is 250 mm.

STEP 2. Sharpening.

Place the tab of the fixture into the groove of the work table. Smoothly move the knife with the top of the fixture toward the abrasive belt. Make reciprocating movements along the groove to sharpen the knife.



ATTENTION

When bringing the knife to the abrasive belt and making reciprocating movements, the knife must always be in contact with the abrasive belt to prevent deterioration of the belt.

a)



b)

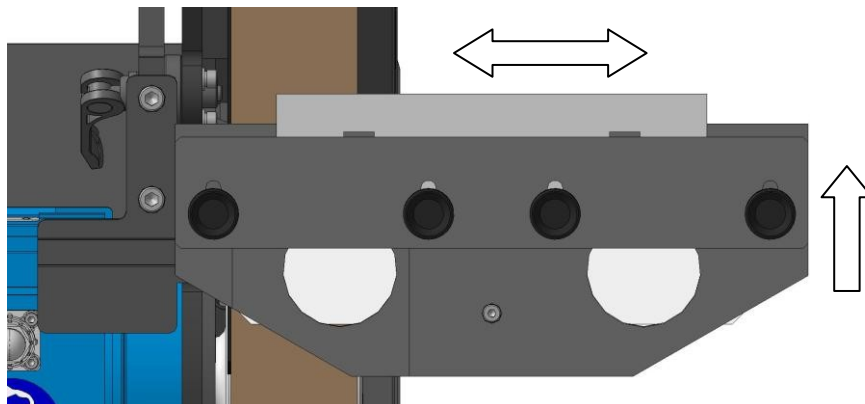


Fig.15 Grinding method for planer knives a) Stand position; b) Tool approach

ATTENTION

For ease of sharpening, rotate the abrasive belt rack so that the planer blade is parallel to the table.

8. ADJUSTMENT, SETTING, LUBRICATION

ATTENTION

Keep in mind that intense sharpening generates heat, so it will be necessary to have a tank of water nearby. This will keep the tool being sharpened cool enough to hold with your hands.

Sparks occur during the grinding process and personal protective equipment such as eye protection is required. Make periodic and regular inspections of the machine to ensure that the machine is properly set up and that the fixing screws are tightened,

the abrasive belt is in good condition. Keep the machine clean and prevent corrosion on the surfaces. Each time after finishing work, the machine must be thoroughly wiped with a rag to remove abrasive dust to prevent it from entering the rubbing elements. This will prevent premature backlash.

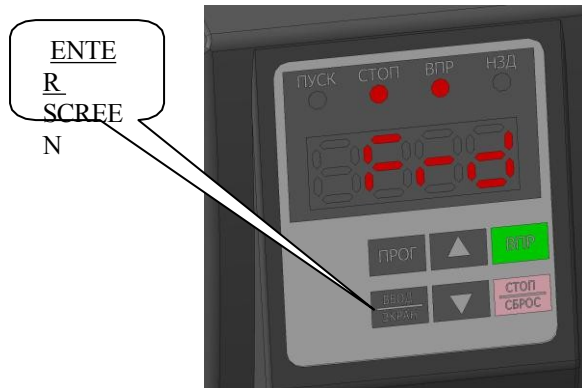
When installing the frequency converter, the frequency converter must be reconfigured for reversing. Follow the steps below to reconfigure the frequency converter:



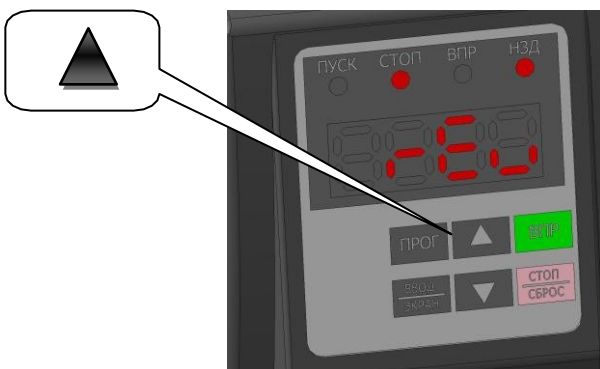
When you turn on the power supply, the electronic board looks like this.

ATTENTION

During normal driving, the display lights up { "VPR".



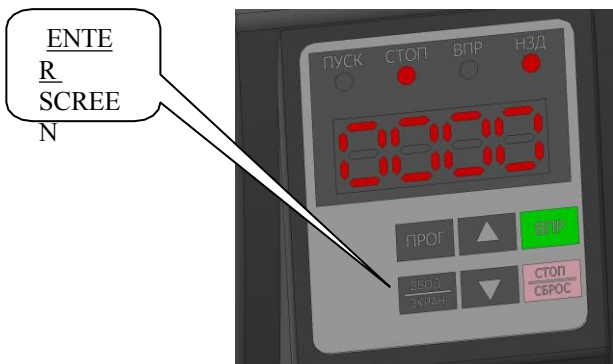
Press the "ENTER/ECRAN" button until "Frd" appears on the screen.



Press the "▲" button until "rEv" appears on the electronic display.

ATTENTION

In reversing movement The "NZD" indication lights up.



Press the "ENTER/ECRAN" button. The machine is ready for reversing operation.



To change the abrasive belt movement in normal mode, the procedure is the same.

ATTENTION

When engaging reverse motion, be sure to align the direction of the arrow on the belt with the direction of rotation of the drive wheel. Repositioning of the abrasive belt is required.

ATTENTION

Make sure the backing pad plate is flat - it wears out during use.

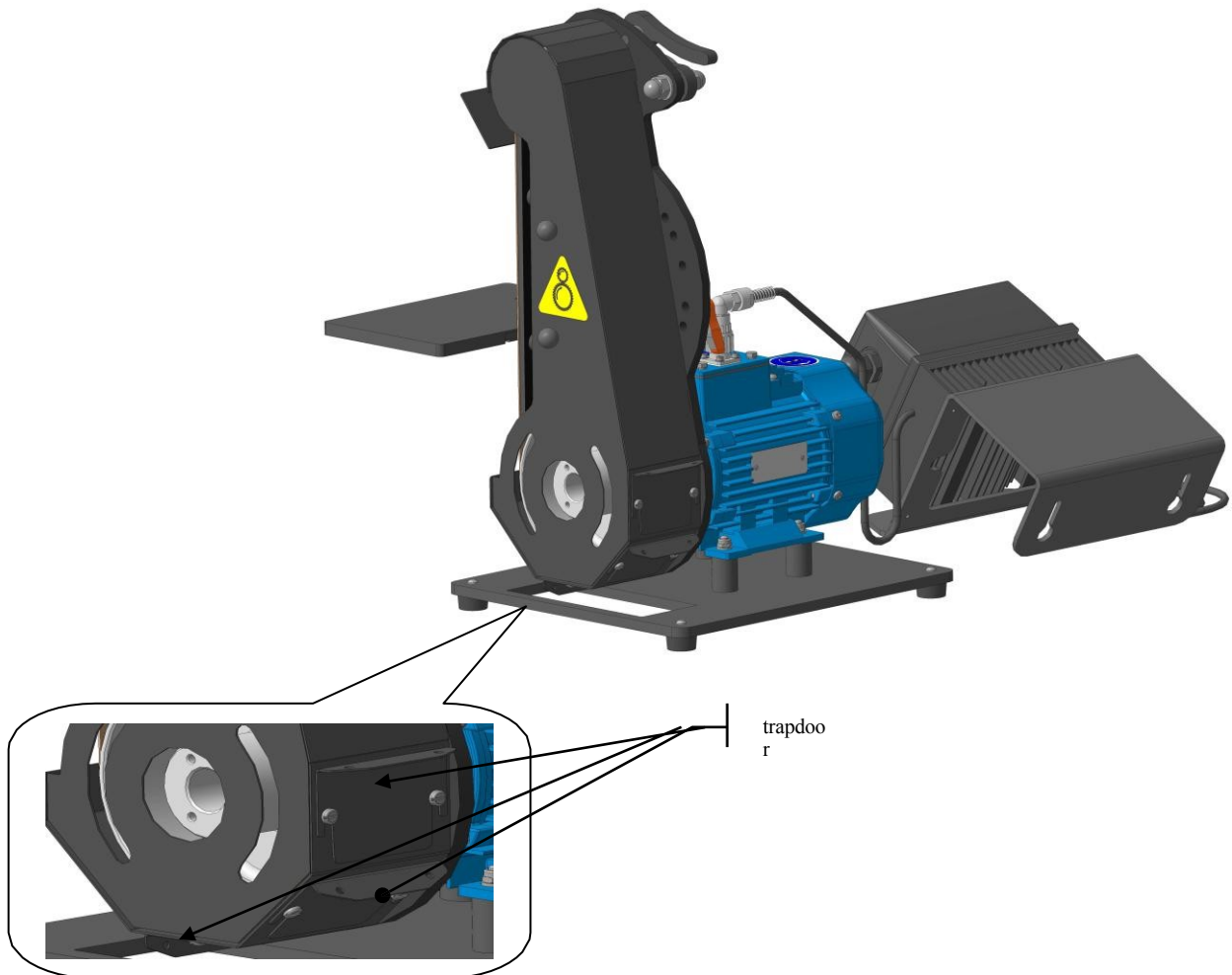


Fig.16 Dust discharge hatches

To ensure that the dust from the hood is removed strictly through the hole in the plate, use the hatches. Depending on the rotation of the stand with the abrasive belt, pull out the desired hatch so that the resulting hole is above the hole in the plate.

Our company is constantly working on the improvement of the machine, therefore there may be minor changes in the design that are not reflected in this data sheet.

9. OPTIONS

Set of grinding belts for sharpening knives on the ADEMS Tesar machine Article

No.: 48I70008



It is intended for removing defects, sharpening and grinding household, hunting, tourist, collector and other knives.

The package includes:

- grinding belt 50x915 P80 X80 XK 880 Y VSM CERAMICS- 1 pc;
- sanding belt 50x915 R200 (A100) 237AAA 3M TRIZACT- 1 pc;
- sanding belt 50x915 P280 (A65) 237AA 3M TRIZACT- 1 pc;
- sanding belt 50x915 R700 (A30) 237AAA 3M TRIZACT- 1 pc;
- sanding belt 50x915 R1100 (A16) 237AA 3M TRIZACT- 1 pc;
- sanding belt 50x915 R2500 (A6) 237AA 3M TRIZACT- 1 pc.

Set of grinding belts for sharpening planer and jointer blades on the ADEMS Tesar machine

Item No.: 48I70009



Designed for sharpening and grinding of planer, planer and jointer blades on the ADEMS Tesar machine.

The package includes:

- grinding belt 50x915 R40 X40 XK 870 X VSM CERAMICS- 1 pc;
- grinding belt 50x915 P80 X80 XK 880 X VSM CERAMICS- 1 pc;
- grinding belt 50x915 P120 XK 880 Y VSM CERAMICS- 1 pc.

Electronic angle gauge EQJH1-90

Item No.: 00L93006



Designed to control and measure the angle of the sharpened surface of hairdressing, manicure, grooming, medical tools, hunting tools, household knives, chefs knives.

10. WARRANTY TERMS

10.1. The warranty period is one year from the date of sale.

10.2. Warranty as well as post-warranty repairs are performed only by ADEMS specialists.

10.3. The warranty covers only manufacturing defects detected during operation of the equipment during the warranty period.

10.4. The equipment is accepted for warranty repair in the presence of properly executed documents: a free-form application to the General Director with filled in fields:

- equipment name;
- the date of purchase;
- cost of equipment;
- the reason for the warranty claim;
- was or wasn't used;
- buyer's signature;
- the factory number of the equipment, written out from the data sheet of this equipment.

10.5. The warranty does not apply to:

- Replacement accessories (accessories and consumables) such as: disks, abrasive belts, abrasive paper, oils, filters, etc;
- power cords, if the insulation is damaged, must be replaced without the owner's consent.

10.6. Warranty repairs will not be made in the following cases:

- missing, damaged or altered serial number on the equipment or in the passport to this equipment, as well as in case of their inconsistency;
- use of the equipment for purposes other than those specified in the operating instructions.
- failure due to overloading;
- mechanical damage to the equipment;
- occurrence of defects due to the actions of third parties, force majeure, natural disasters, unfavorable atmospheric effects and/or external effects of aggressive media and high temperatures;
- natural wear and tear of the equipment (complete or partial exhaustion of the resource, severe internal or external contamination, rust);
- Damage caused by non-compliance with the operating conditions specified in the operating instructions;
- equipment damage due to power surges in the power grid;
- ingress of foreign bodies into the equipment that are not waste accompanying the intended use;
- equipment damage due to non-compliance with storage and transportation rules.
- after attempts to independently open, repair, modify and lubricate the equipment during the warranty period, as evidenced by damaged stickers;
- breakdowns due to lack of maintenance of the equipment;
- partially or completely disassembled equipment;

10.7. Preventive maintenance of the equipment (cleaning, flushing and grease replacement) during the warranty period is a paid service.

10.8. The service life of the equipment is 3 years from the date of manufacture.

10.9. The owner will be informed about possible violations of the above warranty conditions after the equipment has been diagnosed by the company's specialists.

{ "ADEMS".

10.10 The owner of the equipment entrusts ADEMS to carry out the diagnostics in his absence.

10.11. In no event shall ADEMS be liable for:

- loss or damage which, at the time of purchase, cannot be attributed to ADEMS' breach of this warranty;
- losses caused by the owner's fault, loss of merchantability, lost profits or lost profits.

10.12. Service options, available spare parts and response times may vary from country to 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 parts with comparable equipment or parts to local standards.

ATTENTION

The warranty period is extended while the equipment is under warranty repair.



11. CERTIFICATE OF ACCEPTANCE

11.1. The belt grinding machine ADEMS Tesar, serial No. 48/ -2023 is recognized as fit for use. _____ - 2023 is recognized fit for operation.

11.2. The address of the manufacturing company:
Russia, 445043, Togliatti, 39, Kommunalnaya str.

11.3. Motor serial number _____.

11.4. Serial number of the frequency converter _____.

If you have any questions about equipment malfunction, please contact the Machine Warranty Department on WhatsApp, Viber +7 (964) 972-69-74. Or by leaving a request on the adems.ru website in the Buyers - Technical Support section.

ATTENTION

Changes in design or appearance not shown in this data sheet are possible.

Date of issue _____

Head of Quality Control _____

Date of purchase _____

Seller's name _____

Seller's signature _____ / _____ /
signature transcript

Print space _____

Affirmative, that when purchase equipment was tested, in good working order,
fully equipped and in perfect condition.

I am familiarized and agree with the terms and conditions of warranty service.

Buyer's signature _____ / _____ /
signature transcript

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adems63



adems.ru



oooademsst



12. REMARKS, COMMENTS, NOTES

