

User's Manual  
and Spare Parts Book

**GARUDAN**<sup>®</sup>

**GPS/G-3525**



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## 1) SPECIFICATION

<b>Model</b>	GPS/G-3525G general material GPS/G-3525H heavy material GPS/G-3525XH extra extra heavy material GPS/G-3525__-xx/xx/xx feeding frame type (1-piece =20/ 2-piece =22/; Options, e.g. Measuring of lower thread winding = BC, Barode reader = BR, Control of the machine through buttons = HC, Laser pointer =LP, Needle cooler =NC, Rotary hook =RH, Thread holder TH, Programmable height of presser foot =PP, Safety curtain =SC
<b>Sewing area</b>	350 x 250 mm
<b>Max. sewing speed</b> (for stitch length up to 3mm) *for rotary hook	2600/3000* spm (for GPS/G-3525G and GPS/G-3525H) 1000 spm (for GPS/G-3525XH) (see table on page na 31)
<b>Stitch length</b>	0,1 – 12,7 mm
<b>No. of needles</b>	GPS/G-3525G 135x17 Nm. 80-120 GPS/G3525H 135x17 Nm. 120-160 GPS/G-3525XH 190 Nm. 140-200
<b>Hook</b>	Double capacity shuttle hook / Extra large capacity rotary hook
<b>Lift of Presser Foot max.</b>	20 mm (stroke: 0 -7 mm)
<b>Lift of feeding frame</b>	Standard 35 mm
<b>Thread Trimmer</b>	Standard
<b>Memory Device</b>	USB port- all devices USB compatible
<b>Communication interface</b>	USB port
<b>No. of stitches in memory</b>	Unlimited
<b>No. of patterns in memory</b>	Unlimited
<b>Driving unit</b>	750 W servomotor
<b>Power supply</b>	1-fáze 220 V÷ 240 V, 50/60Hz (power input 2 kW)
<b>Air consumption</b>	0,6 Mpa (6 kg/cm <sup>2</sup> )
<b>Ambient temperature</b>	5°C~40°C

## 2) DESCRIPTION

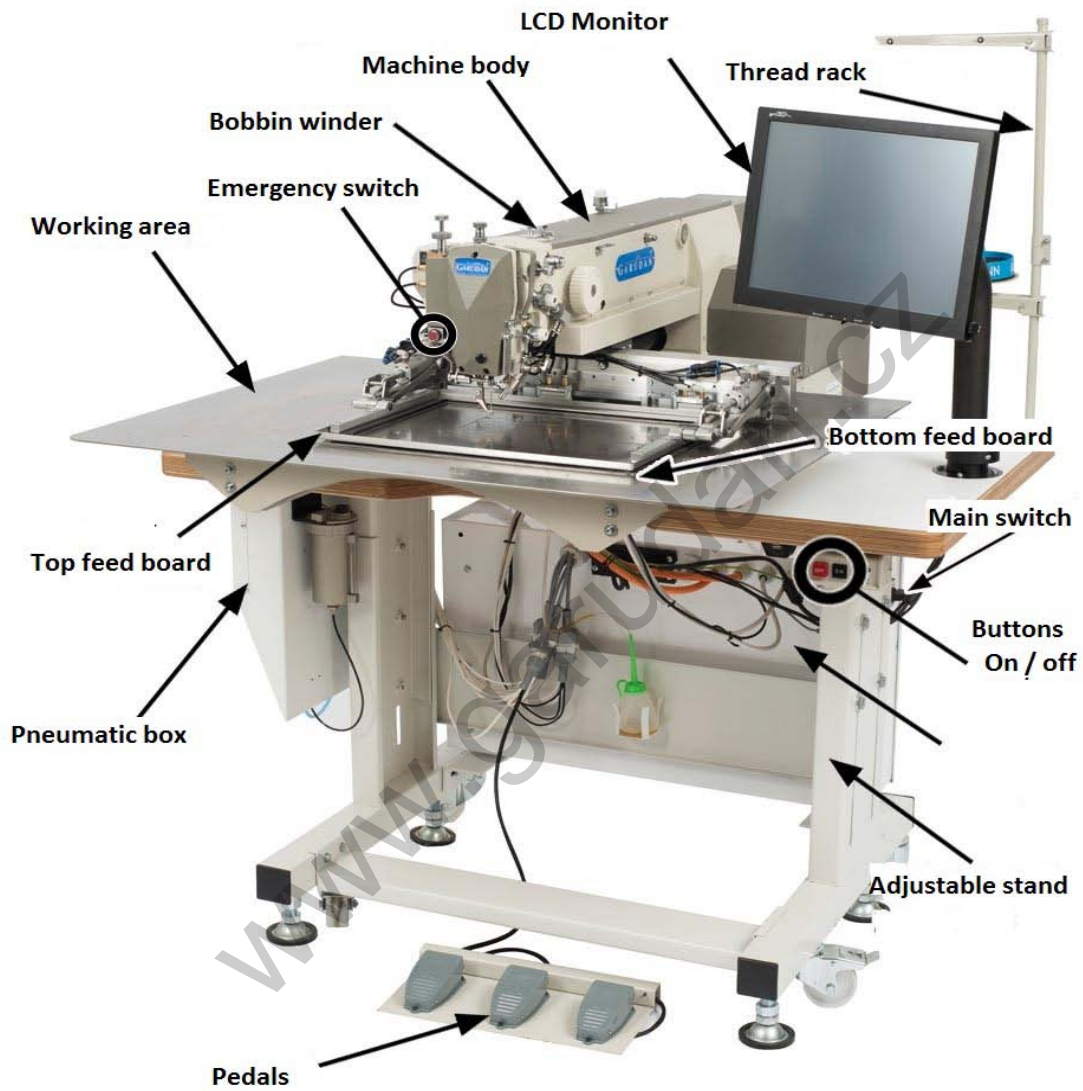


Fig. 1

### 3) SAFETY INSTRUCTIONS

1. Read this manual carefully before start and make sure all you understand all concerning machine operation.
2. When maintenance is needed for the machine, only authorized or trained staff should perform this task.
3. Please, pay attention to the notes about max. voltage on the lables.
4. The machine should be grounded.
5. **Air consumption is from 0,55 to 0,6 MPa.**
6. Use buttons on/off or main switch (see fig. 1) in following situations:
  - 1) Connection/disconnection of cables on operation panel or control box
  - 2) Before threading
  - 3) Before performance of mechanical adjustment
  - 4) When you finish machine operation
7. Maintenance should be performed by authorized staff only.
8. Use only original parts supplied by manufacturer

For position of operation safety components see fig. 2.

**A** Stop switch. Use it in emergency situation. For machine re-start follow notes on LCD monitor

**B** Thread take up cover.

**C** Motor cover.

**D** Finger guard.

**E** Safety label on switch board: for preventiv against electric injuries

**F** Safety guard: eye protection.

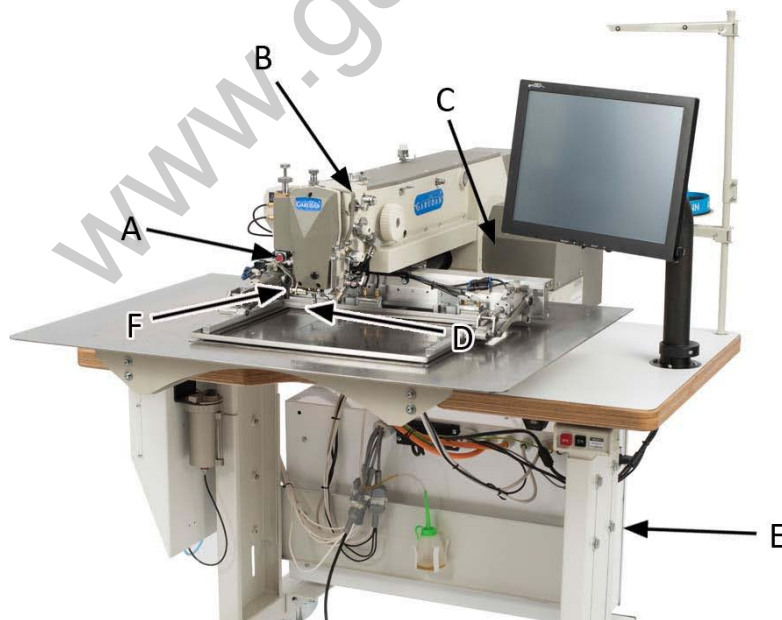


Fig. 2

#### 4) SAFE INSTALLATION

All installation and service work have to be done without power supply.

- A. The machine cannot be used if voltage is 10% above or 10% below the formal voltage.
- B. Check if there is correct air pressure in the pneumatic system.
- C. For safe operation, please, use the machine in accordance with following conditions:
  - The ambient operation temperature is from 5 to 40°C
  - The ambient storage temperature is from -10 to 60°C
- D. Humidity is between 20 – 80% (relative humidity)

#### 5) ELECTRIC DEVICE SETTING

- A. Power voltage
  - The voltage should be within the range of +-10% of the formal voltage.
  - Power frequency should be within the range of +-1% of the formal frequency (50/60Hz).
- B. Electromagnetic wave noise
  - The power should not be adjacent to strong magnetic field or high frequency stuff.
- C. The liquid such as water is prevented from flowing into the adjusting box or motor

#### 6) DISPOSAL INSTRUCTIONS

Please, hand the machine over to Anita B, s.r.o. after end of machine operational life.

**7) BEFORE MACHINE OPERATION**

**1. LUBRICATION**

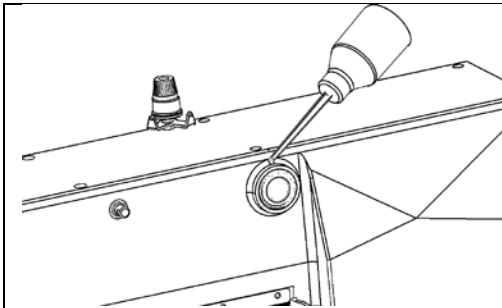


Fig. 3

Check the amount oil in the oil gauge window.

Fill up the oil  
Fig. 3, 4

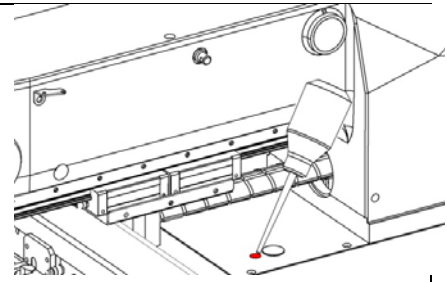


Fig. 4

Machine should be lubricated before its first use or if reused after a long period of idleness.

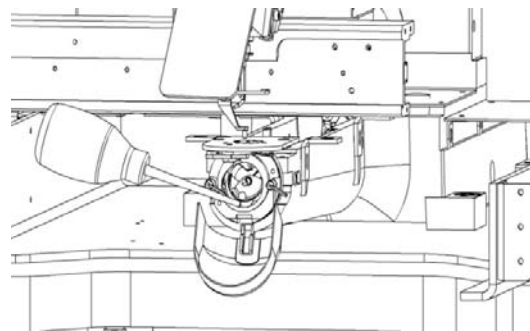


Fig. 5

Open the shuttle lid, and fully lubricate the shuttle, then put on the hook lid.

Fig. 5, valid for shuttle hook.  
For lubrication of rotary hook see chapter 20

For safety, the hook lid should be closed during operation.

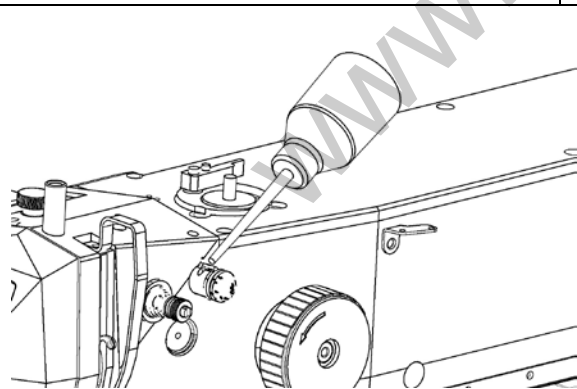


Fig. 6

In case of need, add silicon oil in the cup of the bracket for lubrication of upper thread.



**2. NEEDLE INSERTION**

Loosen the screw of needle holder (1), fully insert the needle (2) into the needle socket in needle holder while keeping the needle slot (3) facing tip of the hook, then tighten it with the screw (1)

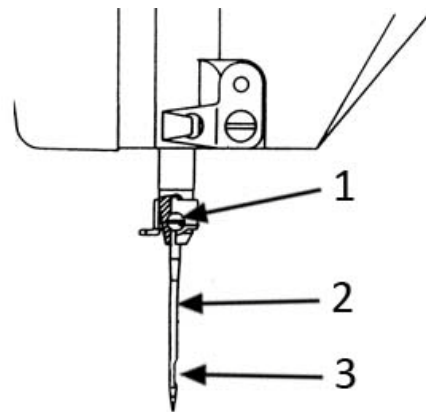


Fig. 7

**3. UPPER THREADING**

Lead the thread as the figure 8 shows and put the thread take-up lever in upper stop position to prevent slipping of the thread. You will find detailed description in fig. 29

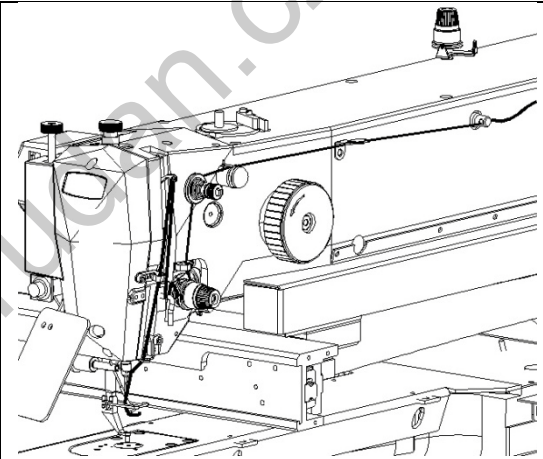


Fig. 8

**4. BOBBIN THREADING**

- A. Put bobbin (1) into bobbin case (2) as the fig. 9 shows (the shuttle rotates in clockwise direction).
- B. Bobbin thread is led through the bobbin case spring and bobbin case hole (3)
- C. The remain of bobbin thread end should be kept about 25mm long.

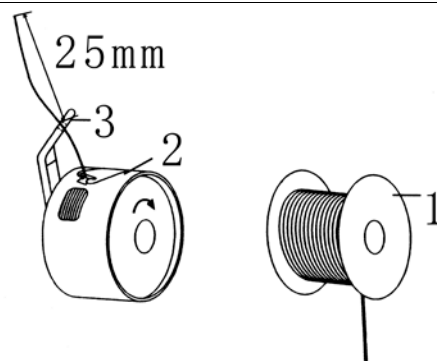


Fig. 9

### 5. INSTALLING AND REMOVING THE SHUTTLE CASE

Hold out lever of the the shuttle case and insert the the bobbin case until its lock fits in the groove of the shaft, ending up clicking, see fig. 10.

[Notice]

If the shuttle is not correctly installed, machine can be damaged during operation

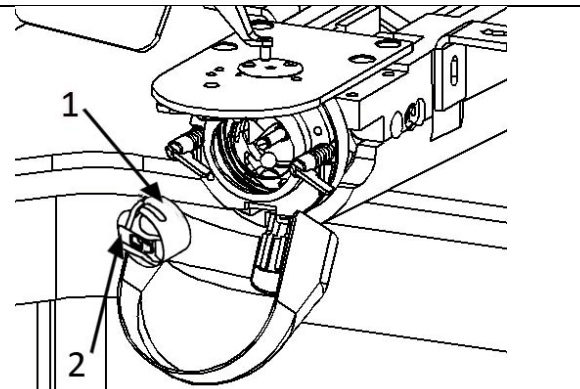


Fig. 10

### 6. THREAD TENSION ADJUSTMENT

A. Needle thread tension adjustment, fig. 11:  
As the Figure shows, turn screw (1) of the main tensioner clockwise to increase the tension, while counterclockwise to reduce the tension. Additional tensioner (2) is used for final adjustment of the end of needle thread after trimming.

B. Bobbin thread tension adjustment, fig. 12:  
As the figure shows, turn screw 1 clockwise to increase the tension, while counterclockwise to reduce the tension.

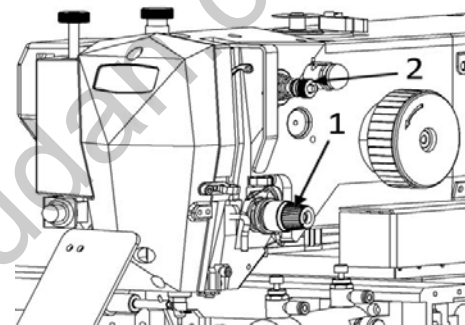


Fig. 11

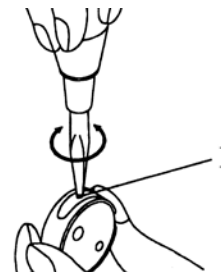


Fig. 12

**7. BOBBIN WINDING**

- A) Insert the bobbin (3) on bobbin winder shaft (1).
- B) Press the winder lever (2) to activate the operation and start the machine.
- C) When the bobbin is fully wound with thread, the winder lever releases the bobbin. Cut the thread by knife (4), see fig. 13

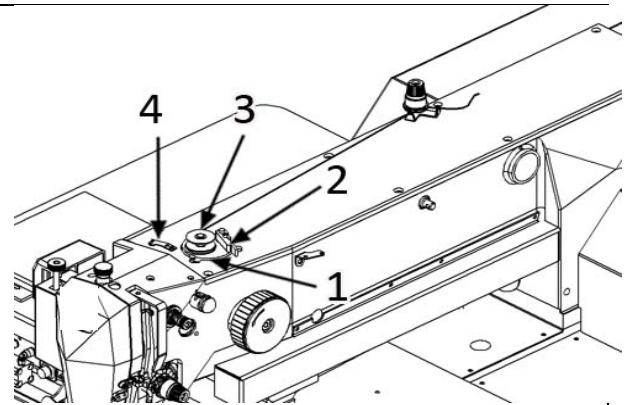


Fig. 13

**8. ADJUSTING HEIGHT OF PRESSER FOOT**

- A. Loosen screw of the presser foot (1) in the lower end position and set the height of the foot so the foot tip is approximately 0.5mm above the surface of the sewn material, then tighten screw, fig. 14

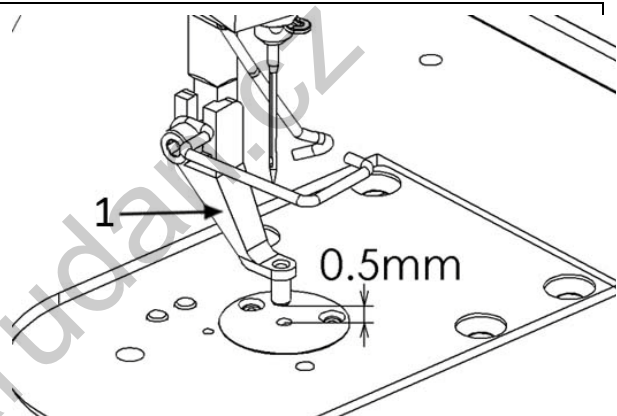


Fig. 14

**9. USED OIL DISPOSAL**

The oil container (1) attached under the base table should be taken away for cleanup after it is full with oil.

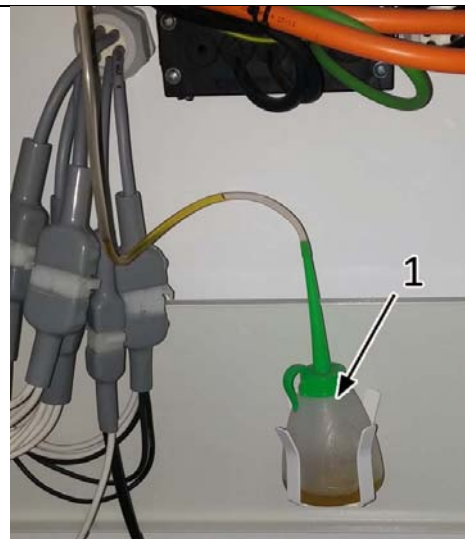


Fig. 15

## 8) MECHANICAL MAINTENANCE

### 1. ADJUSTMENT OF BOTTOM SHAFT: SHUTTLE HOOK, FIGURE 16,17

- A. Loosen both screws (2) at the bottom side of baseplate. By this the eccentric of segment gear is loosen.
- B. By the screwdriver (3) set the play of shuttle driver (7) in value 0,1mm or lower by turning of the eccentric.
- C. Check if there is no axial movement of the eccentric - ring (4) must be without any play with the casting of baseplate.
- D. Tighten both screws (2).

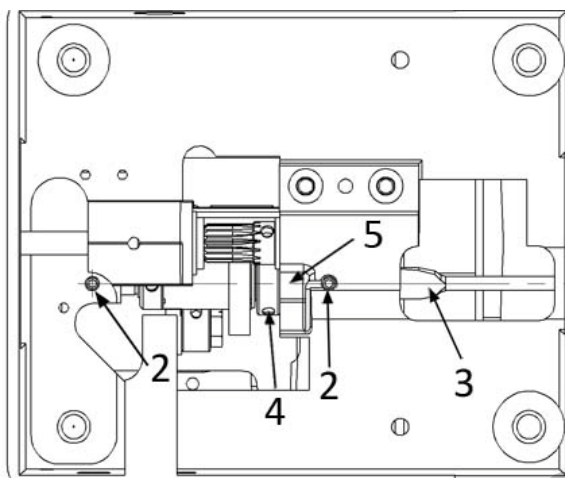


Fig. 16

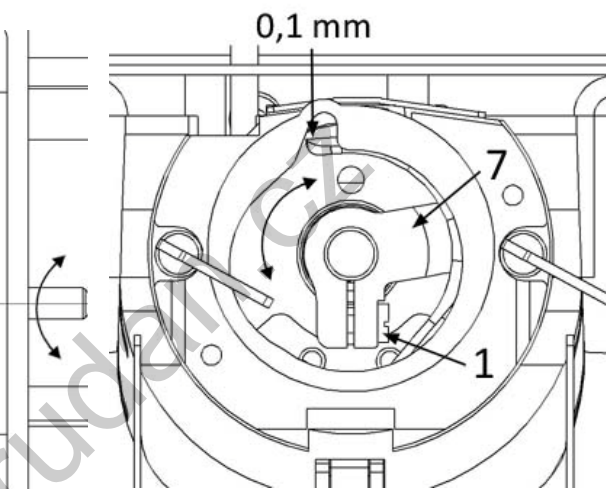


Fig. 17

### 2. A. ADJUSTMENT OF NEEDLE AND HOOK: SHUTTLE HOOK (CB)

The hook in connection with the needle must be set so that the edge is in the position of lower relief of needle when the hook is taking the loop of upper thread. Figure 20, detail A.

Recommended process, Figure 18,19,20:

- A. Set the needle into the lower reversal point by turning the hand wheel. Put the stop sleeve (2) on needle bar and insert the scale (4) between stop sleeve and bushing (3). Tighten the screw (5) so that there is no play between the bushing, stop sleeve and scale. The thickness of the scale for shuttle hook is 2.5mm.
- B. Remove the scale (4) and pull the scale (2) onto the bushing (3) by turning the hand wheel.
- C. In this position the edge of the hook must be in the axe of the needle. Loosen the screw (1) (Fig. 18) and turn with the shuttle driver (7) (Fig. 20) to the position so that the hook (8) touches the shuttle driver by turning in clockwise. In this position the edge of the hook must be in the axe of the needle. The screw (7) is loosen so there is necessary to set this screw in contact with the needle, Figure 20, detail B. It is used as protection of the hook.
- D. Loosen the screw (1) now and move with the needle bar so that the edge of the hook (8), which is in the axe of the needle, is placed just above of lower edge of hook relief (1), Fig. 22. Tighten screw (1).

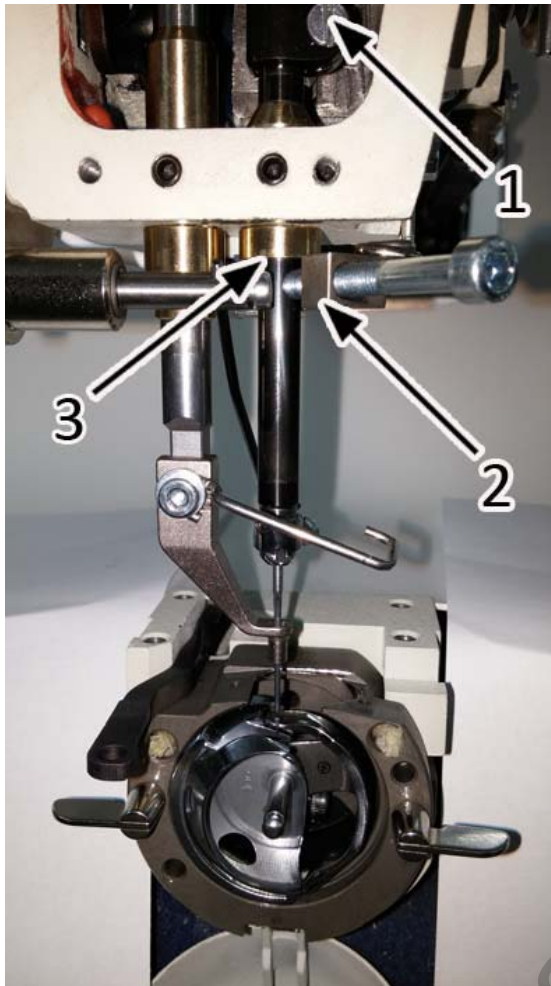


Fig. 18

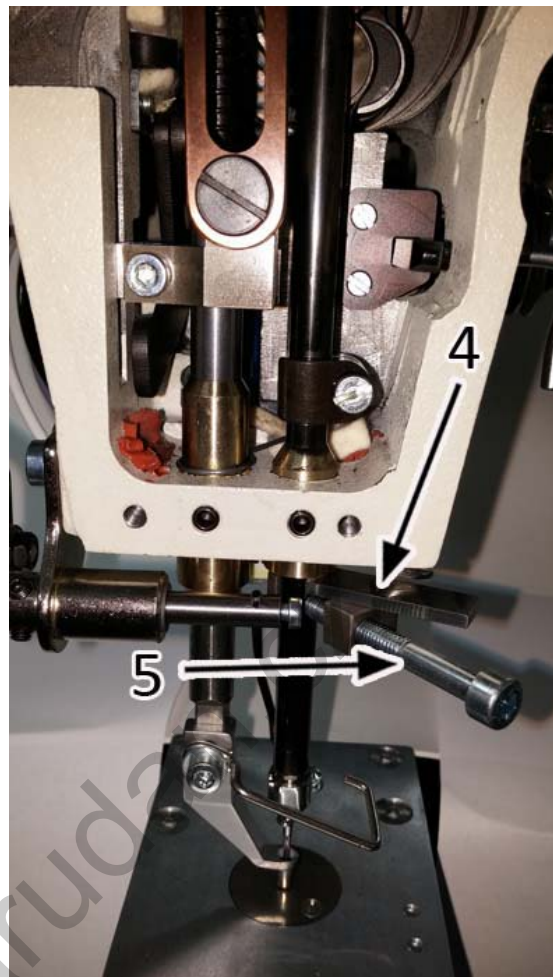


Fig. 19

- E. Turn safety levers (2), Fig. 20 and remove the ring of the hook (3) from the hub (4).
- F. Loosen the screw (5) and set the edge of the hook in distance of 0.05 - 0.1mm from the hook relief (9) by turning the eccentric. Figure 20, detail A.
- G. After that set the distance from the axe of the needle and the edge of hub of hook relief (4) in value 7,5mm.
- H. Put the ring of the hook (3), lock safety levers (2) to vertical position and check if all screws are tightened carefully.
- I. As this process is not so easy and there is necessary to do more operations, at the same time, it is recommended to check all values after adjustment or do it once again.

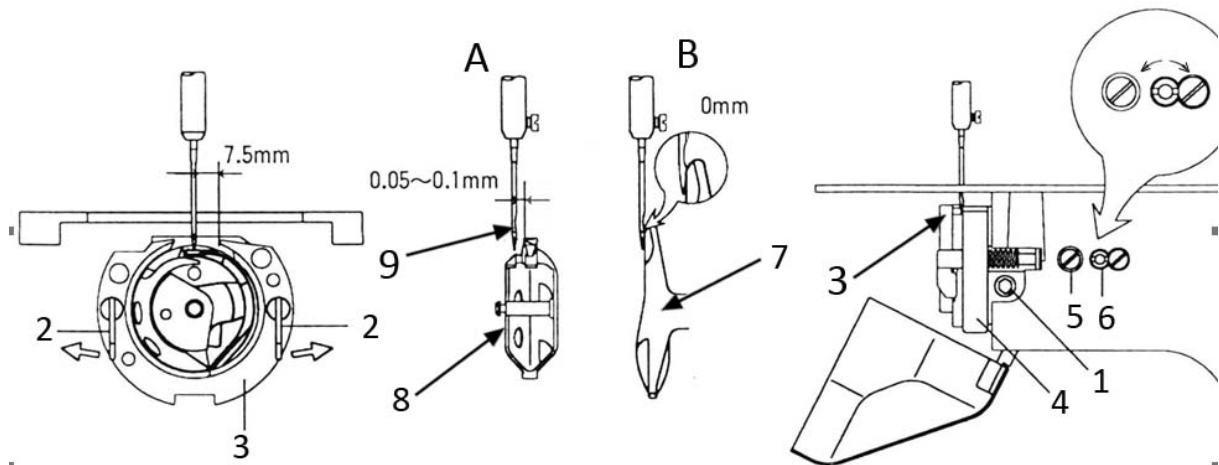


Fig. 20

## 2. B. ADJUSTMENT OF NEEDLE AND HOOK: ROTARY HOOK (RH)

The hook in connection with the needle must be set so that the edge is in the position of lower relief of needle when the hook is taking the loop of upper thread. Figure 19,21,22,23.

Recommended process:

- A. Set the needle into the lower reversal point by turning the hand wheel. Put the stop sleeve (2) on needle bar and insert the scale (4) between stop sleeve and bushing (3), Figure 19. Tighten the screw (5) so that there is no play between the bushing, stop sleeve and scale. The thickness of the scale for rotary hook is 2mm for medium and 2.5mm for heavy materials.
- B. Remove the scale (4) and pull the scale (2) onto the bushing (3) by turning the hand wheel.
- C. In this position the edge of the hook must be in the axe of the needle  
Loosen screws (5), Fig. 23 on the ring of the hook (4) and set the edge to the axe of the needle (6).
- D. Loosen the screw (1), Fig. 21 now and move with the needle bar so that the edge of the hook, which is in the axe of the needle, is placed just above of lower edge of hook relief (1), Fig. 21. Tighten screw (1).
- E. Set the edge of the hook in distance of 0.05 - 0.1mm from the hook relief (1) at the same time, Fig. 22. Tighten screws (5) on the ring of the hook (4), Fig. 23.
- F. As this process is not so easy and there is necessary to do more operations, at the same time, it is recommended to check all values after adjustment or do it once again.

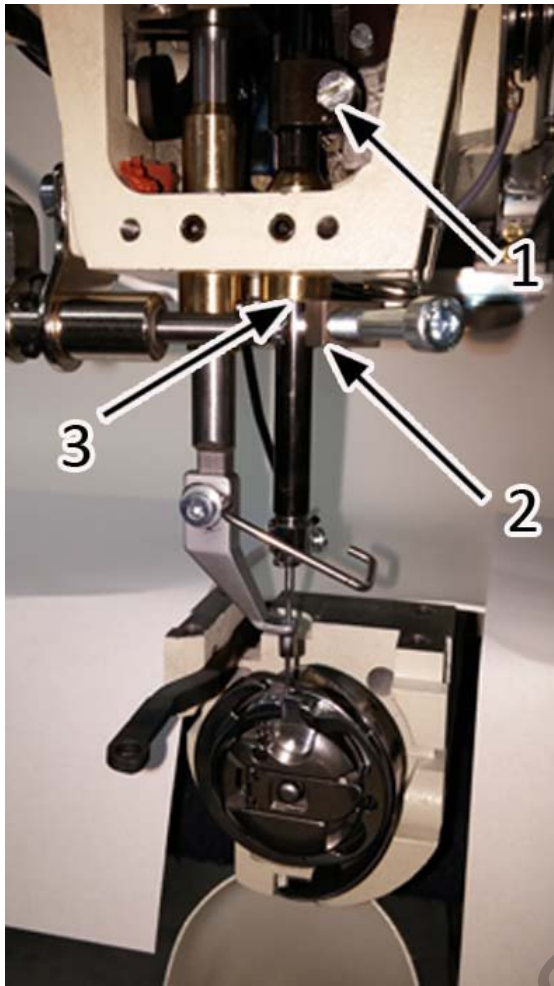


Fig. 21

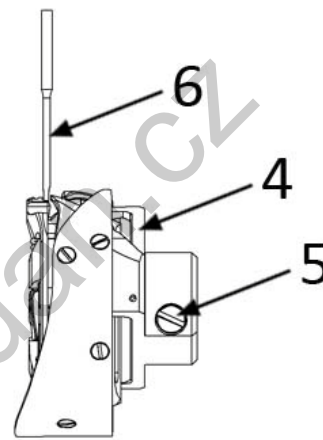
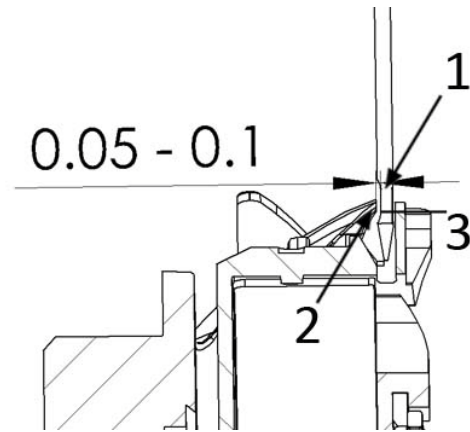


Fig. 22, 23

### 3. ADJUSTING THE SHUTTLE SPRING POSITION

- A. Remove the needle plate, loosen screws (2) of a base (1), Fig. 24.
- B. Set the position of base towards the the needle (3), as same as in the Figure, tighten screws (2).

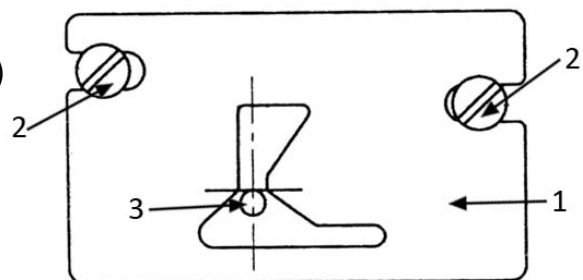


Fig. 24

**4. ADJUSTMENT OF SUB PRESSER FOOT**

- A. Set the needle bar to the lower reversal point by turning hand wheel. Loosen screws (2) of the eccentric (1) and set this eccentric to the position where the screw (2) is in upper position. The eccentric (1) is placed on the main shaft (3), Fig. 26.

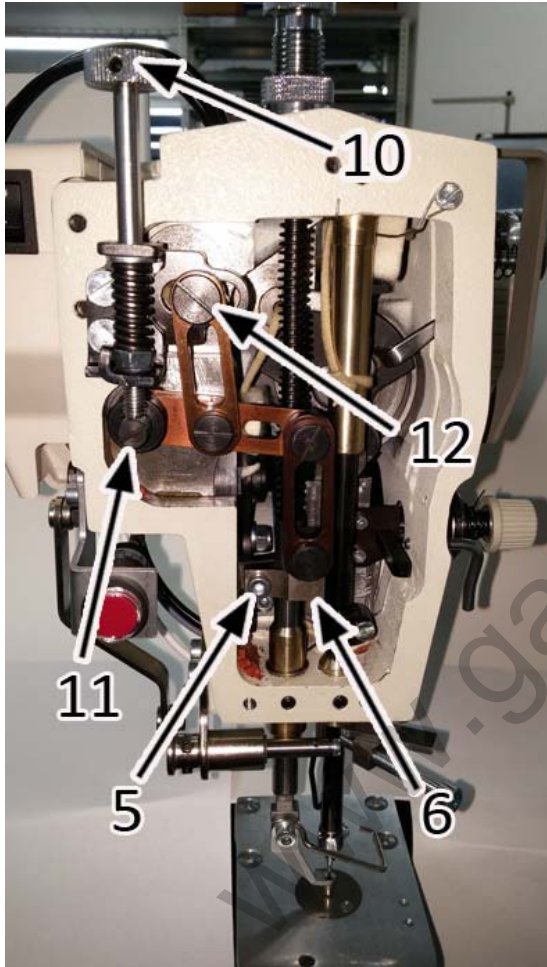


Fig. 25

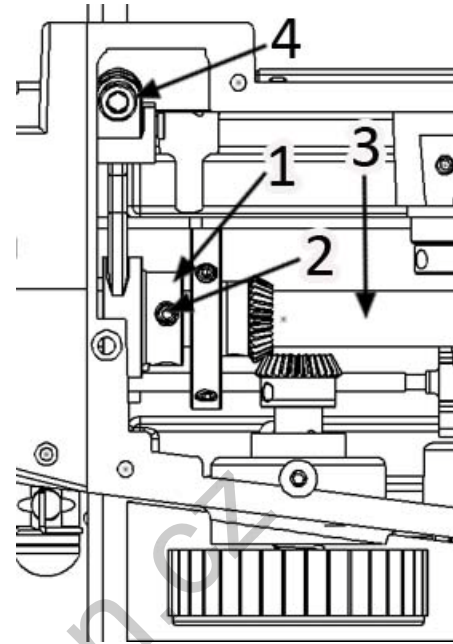


Fig. 26

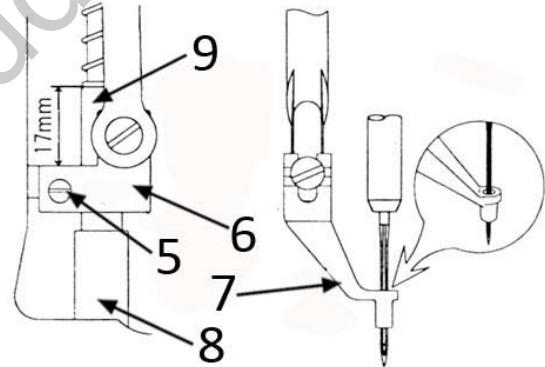


Fig. 27



- B. Set the position of the driver (6) in value 17mm from the edge of presser bar (9). At tightening the screw (5) check the position of the needle in the middle of sub presser foot (7), Fig. 25, 27.
- C. Loosen safety screw (4), Fig. 26 and set the screw (12) to the end right position in round slot of the lever, Fig. 25.
- D. Set the screw (11) so that there is touch with stopper of hand screw (10), Fig. 25.
- E. Set the play between driver of presser bar (6) and bushing of presser bar (8) in value 9mm, Fig. 27. After that tighten the screw (4), Fig. 26.
- F. Tighten all screws carefully.
- G. Set needed height of the stroke of sub presser foot (7). This is done by moving of the screw (12) in round slot of the lever, Fig. 25.
- H. The height of presser foot (7) is set in comparison with thickness of the material by hand screw (10).

Summary: sub presser foot (7) should be moved with delay in value 5mm of trace of the needle in moving from lower reversal point. The sub presser foot may not be in touch with the materials at movement of the material when the needle is over the material.

#### 5 . PROGRAMMABLE PRESSER FOOT

The machine could be equipped by programmable presser foot

-parameter 34 ON/OFF.

The parameter is controlled by pneumatic valve (1).

The height of presser foot is set by screw (2).

The height of programmable presser foot is set by screw (3), Fig. 28.

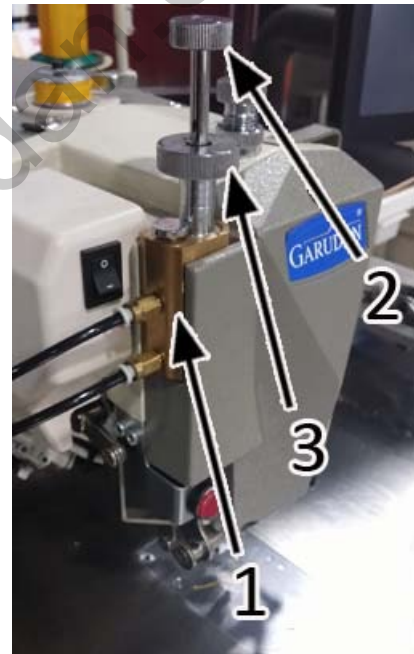


Fig. 28

#### 6. THREADING OF UPPER THREAD

Lead the thread from thread stand to guides (1) on the head of the machine. After that thread through silicon oil bottle for lubrication. After that thread through tensioner (3), guide (4), tensioner (5) and spring (6), guide (7) which is under the spring (6), needle lever (8), guides (9) and (10) and guide (11) to the needle. Please keep the direction to the needle (12), Fig. 29.

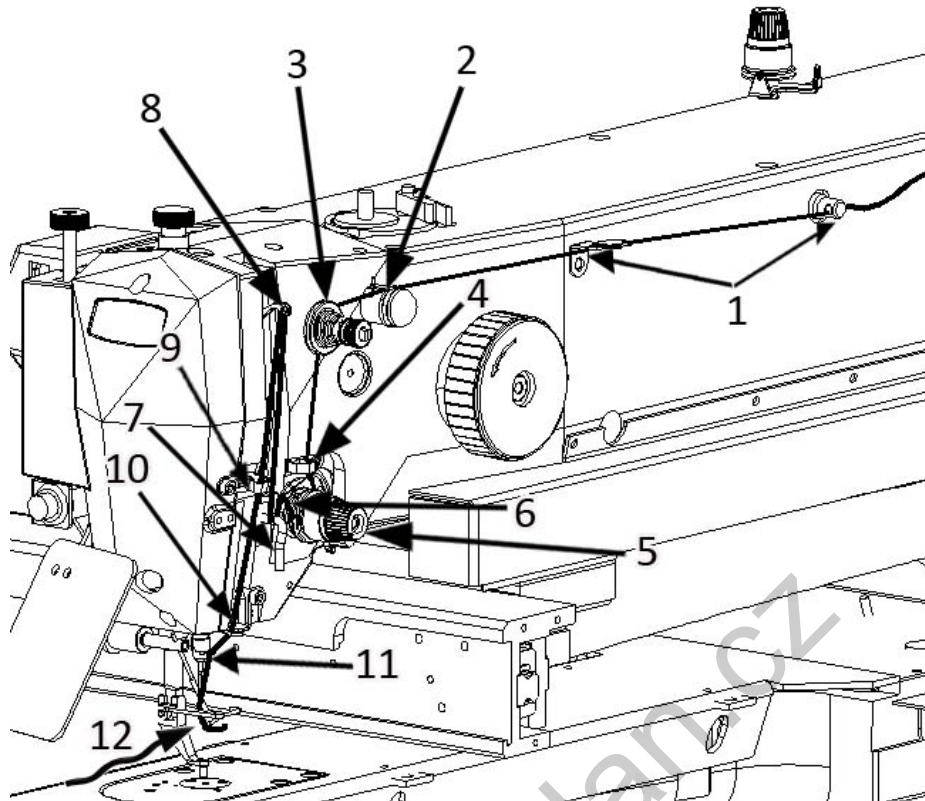


Fig. 29

#### 7. ADDITIONAL TENSIONER FOR EXTRA HEAVY MATERIALS XH

This tensioner (1) is helpful with sewing of two thicknesses of materials. It divides the tension of the thread in combination with main tensioner. By this the stitch composition is perfect and setting of tension is easier, Fig. 30.

It is pneumatically actuated, parameter 51 ON/OFF.

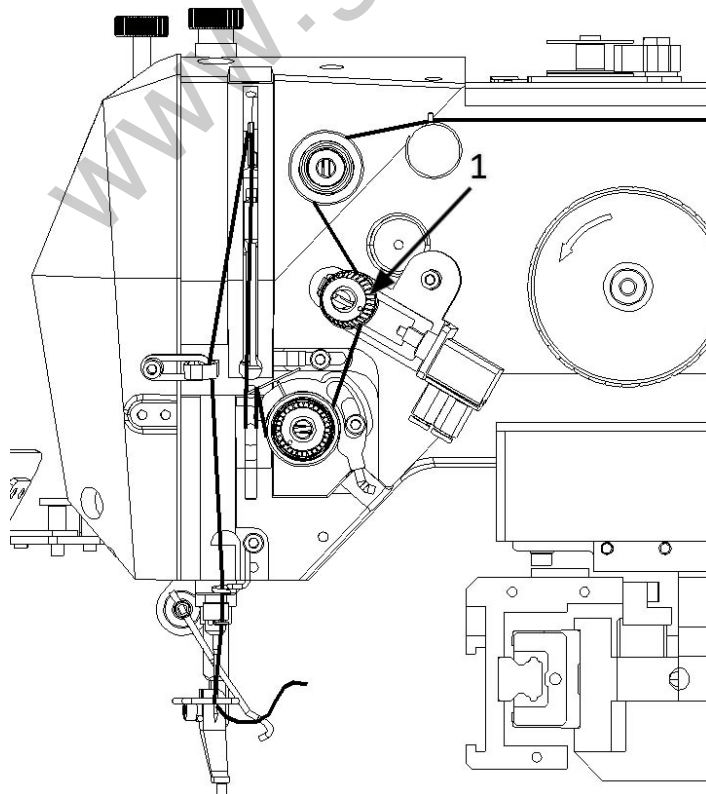


Fig. 30

## 8. ADJUSTING THE MECHANISM OF OPENING OF UPPER THREAD

Opening of plates (3) of main tensioner is actuated by pneumatic valve (1) which is connected with rod (2), Fig. 31. This valve is controlled by parameter 16. This parameter indicates the position of the needle when the plate is opened. These plates are opened at last trimming movement. It ensures sufficient length of upper thread after trimming so that the first stitch with next sewing operation is done properly and there is no risk of removal of the thread.

Correct movement and size of opening of plates is set by position of rod (2) when the control pin of main tensioner (4), Fig. 32 is in touch of stagnation area of rod (2). We are oriented by distance from the edge (6) of stagnation area (5) with adjustment of point of touch of pin (4). This point of touch affects the size of opening of plates.

Set the value in 0.6mm for general materials and 0.8-1mm for heavy materials.

It is done by loosening nut (7) and turning of piston rod of pneumatic cylinder. Finally tighten the nut (7).

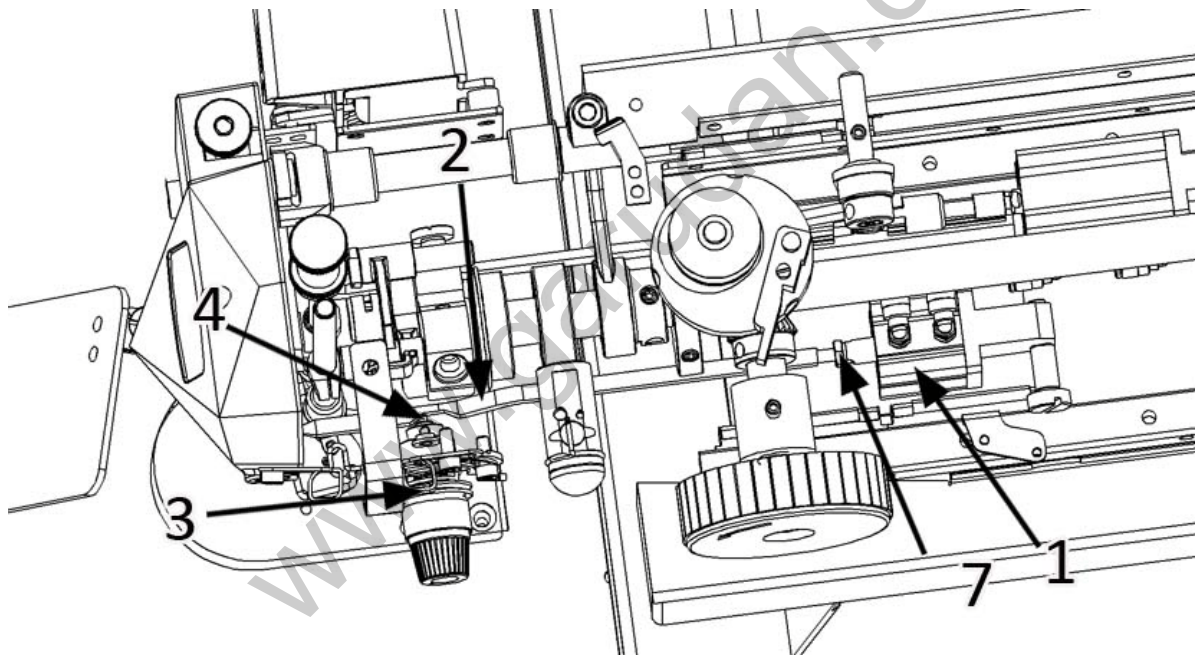


Fig. 31

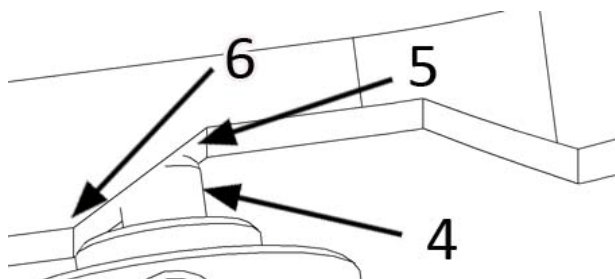


Fig. 32

### 9. ADJUSTMENT OF WIPER

Adjustment of the position of wiper, Fig. 33. Its Function is to take out upper thread after the trimming. Make sure that the upper thread ends are on the reverse side of material when starting new section of sewing after the trimming.

- A. Loosen the screw (5) on the shaft of wiper (4). Set the height of wiper so that it must go through the space between needle and presser foot. The needle is in stopping position of the machine. The distance from the needle is 1mm.
- B. Press the lever (3) in the direction of the arrow and loosen the screws (1). Set the play of wiper from the axe of presser foot in value 10mm in extreme position. Tighten screw (1).



Fig. 33

- C. Turning ON and OFF of wiper  
Use the button (1) on the cover of solenoid for turning ON/OFF, Fig. 34.

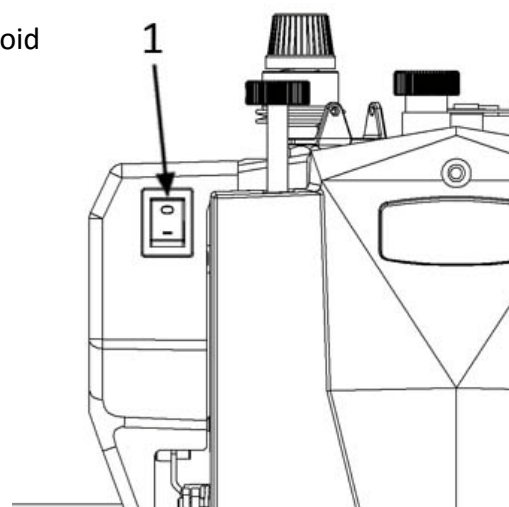


Fig. 34

**10. A. ADJUSTMENT OF TRIMMING MECHANISM: SHUTTLE HOOK**

Adjustment of fixed and moving knife, Fig. 35.

- A. Move with needle bar to the upper position
- B. Set the position of fixed knife (1) so that the sharp is in distance of 1,5-2mm from the edge of the insert of needle plate (2).
- C. Loosen the screw (4) and set the position of moving knife (3) so that the distance of knife blade (5) is 1-2mm from the blade of fixed knife, Fig. 36.
- D. Check the function of trimming.

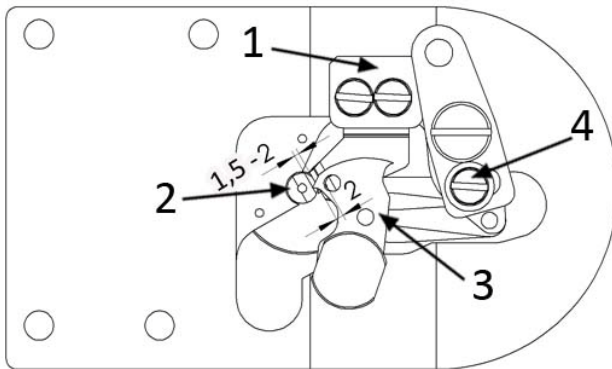


Fig. 35

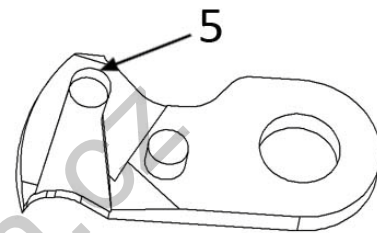


Fig. 36

**10. B. ADJUSTMENT OF TRIMMING MECHANISM: ROTARY HOOK RH**

Adjustment of fixed and moving knife, Fig. 37

- A. Move with needle bar to the upper position
- B. Set the position of fixed knife (1) so that the blade is in distance of 1,5-2mm from the edge of the insert of needle plate (2).
- C. Loosen the screw (4) and set the position of moving knife (3) so that the distance of blade 7 is 1-2mm from the blade of fixed knife, Fig. 38.
- D. Check the function of trimming.
- E. Set the lock (5) of rotary hook so that the cam is in the position of the axe of the hole of insert (2) of needle plate. Final setting of the lock (5) of rotary hook is done after installation of trimming mechanism.

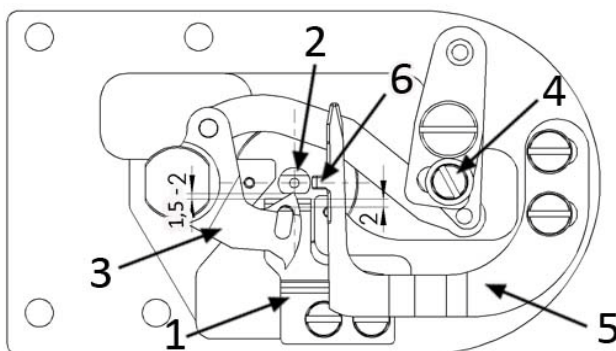


Fig. 37

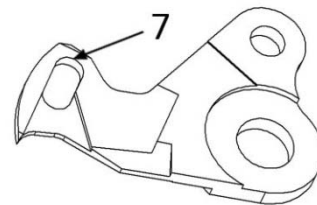


Fig. 38

### 11. ADJUSTMENT OF SPEED OF MOVEMENT OF THE TRIMMING LEVER

Correct function of pneumatic cylinder of trimming is done by air pressure in value 0.55 - 0.6 MPa. Regular length of bottom thread after trimming is 25mm.

The trimming is controlled by below parameters:

-*parameter 21* – decelerate stitch. It indicates the number of stitches before trimming.

Default value is 2 stitches.

-*parameter 22* – decelerate speed – trimming speed, 1 movement. default value is 400 rpm.

-*parameter 41* – turning ON feed dog (starting time of thread feeder). It sets the position of the needle when the moving knives is taking the needle.

Default value if 400 for shuttle hook and 550 for rotary hook.

-*parameter 42* – turning OFF feed dog (operating time of thread feeder). It sets the position of needle bar when the moving knife is cutting the thread.

Default value is 100 for shuttle and rotary hook.

The speed of movement of the rod is decisive for correct moment of taking the thread by moving knife. It is usually adjusted with change of trimming speed, parameter 22. Short end of bottom thread after trimming or cranking of bottom thread is done by high speed of movement of moving knife. The thread is not taken by low speed of the knife.

Increasing or decreasing of the speed of knife is done by the valve (1) on the pneumatic cylinder (2) which is placed under that must be the cover in the baseplate. The rod is connected with pneumatic cylinder by hinge bearing (3), Fig. 39.

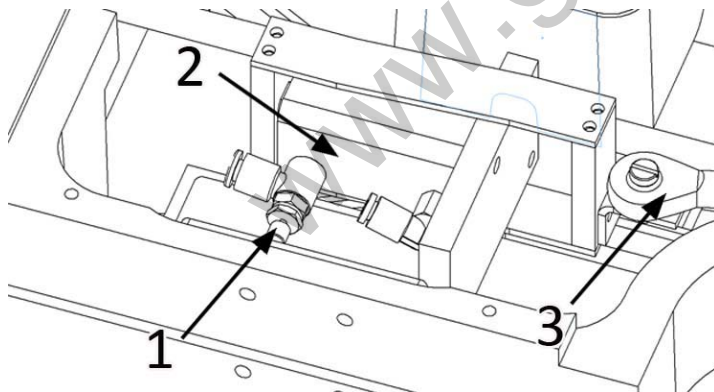


Fig. 39

## 12. SETTING OF HAND WHEEL

- A. Press the hand wheel (1) in the direction of the arrow and turn the wheel until the roller leans against longer side of the bushing (3). See fig. 40.
- B. Set the correct clearance on conical gearwheels of the main shaft (4) and hand wheel shaft (5).
- C. Turn the hand wheel (1) until the roller (2) sinks into short side of the bushing (3), thus making the required clearance between the gearwheels and enabling sewing operation of the machine.

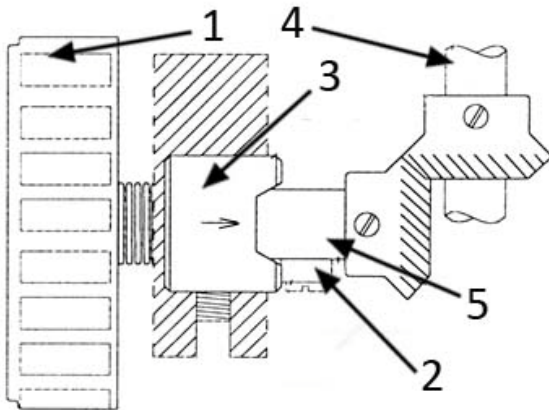


Fig. 40

## 13. SETTING OF BOBBIN WINDER

Setting amount of wound thread (fig. 41)

- A. Loosen screw (2) on the stopper lever (3).
- B. Movement of stopper lever (3) in the direction of arrow (A) increases capacity of bobbin thread and vice versa.
- C. Tighten the screw (2).

Machine can be equipped with the device BC (bobbin counter - measuring of lower thread)  
This function is controlled by *parameter 43* (on/off)

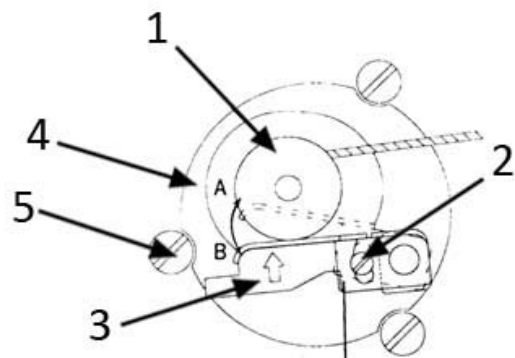


Fig. 41

Setting of driving mechanism of the bobbin winder:

- A. Remove 3 screws (5) - fig. 41, and take out the bobbin winder (4), reaching access to the driving wheel (6), fig.42.
- B. Loosen screws (7) and set the wheel (6) by moving on the main shaft (8) until it is in the required contact with the driving ring of the winder (4).

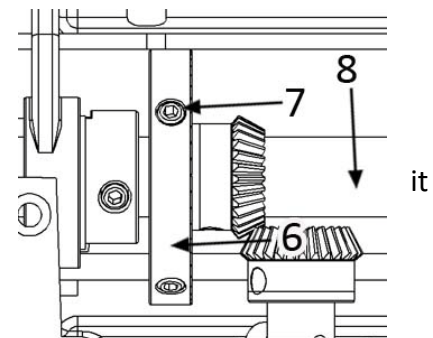


Fig. 42

#### 14. SENSORS FOR INITIAL POSITION OF X, Y AND Z AXIS

Default setting for initial position of X and Y axis initial point and position of Z axis (needle) is set in the production plant.

- A. Sensors are placed on the machine arm, under left cover of the linear railway (fig. 43).
  - B. X axis movement position can be set by moving sensor plate (2) against the sensor (1)
  - C. X axis movement position can be set by moving sensor plate (3) against the sensor (4)
- For setting of initial points on X and Y axes move the feeding plate to its central position in both axes. Initial point refers to the actual center position of the feeding plate towards the needle. In this position the edges of sensor plates 2 and 4 are in line with the middle of sensors 1 and 3 (like the edge of sensor plate on fig. 44)
- D. Sensor of Z axis is located in the machine head and it can be reached after taking off cover of the machine head. Revolving sensor plate 5 is located on the main shaft. Put the needle in the lower stop position and make the setting of the sensor plate 5 located on the ring as is illustrated on the figure 44 – the sensor plate is in the middle of the body of the sensor 6.

Clearance between sensor and sensor plate should be set for the value 0.3 - 0,5 mm.

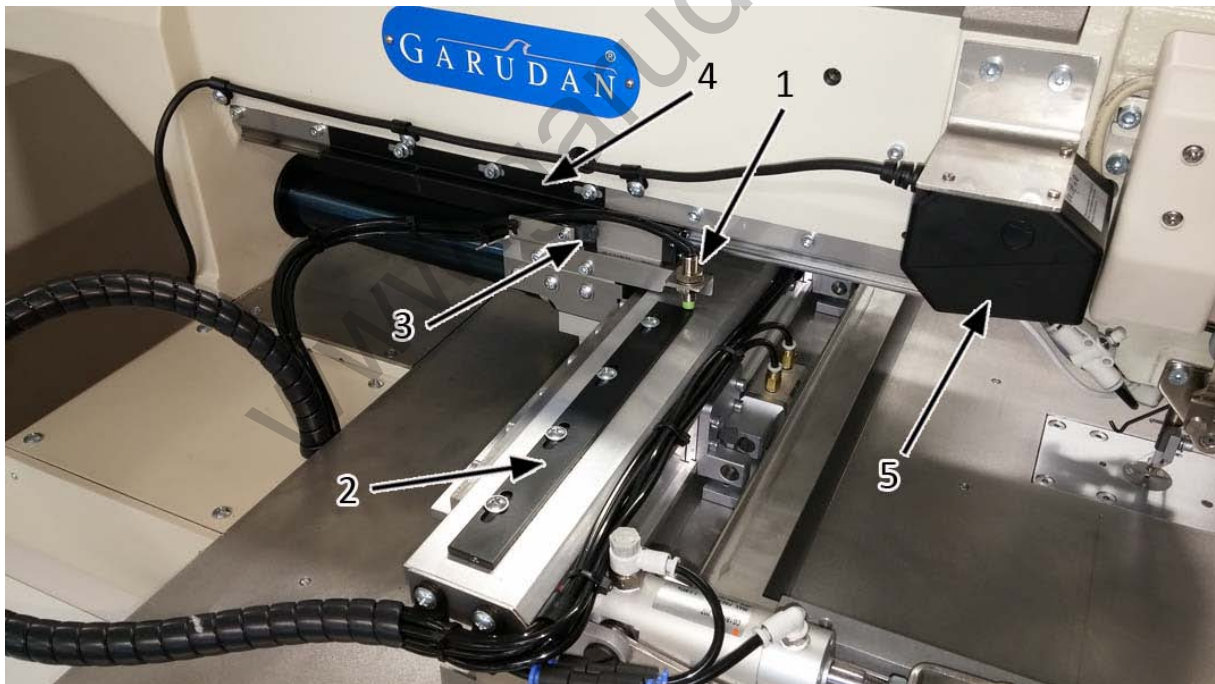


Fig. 43



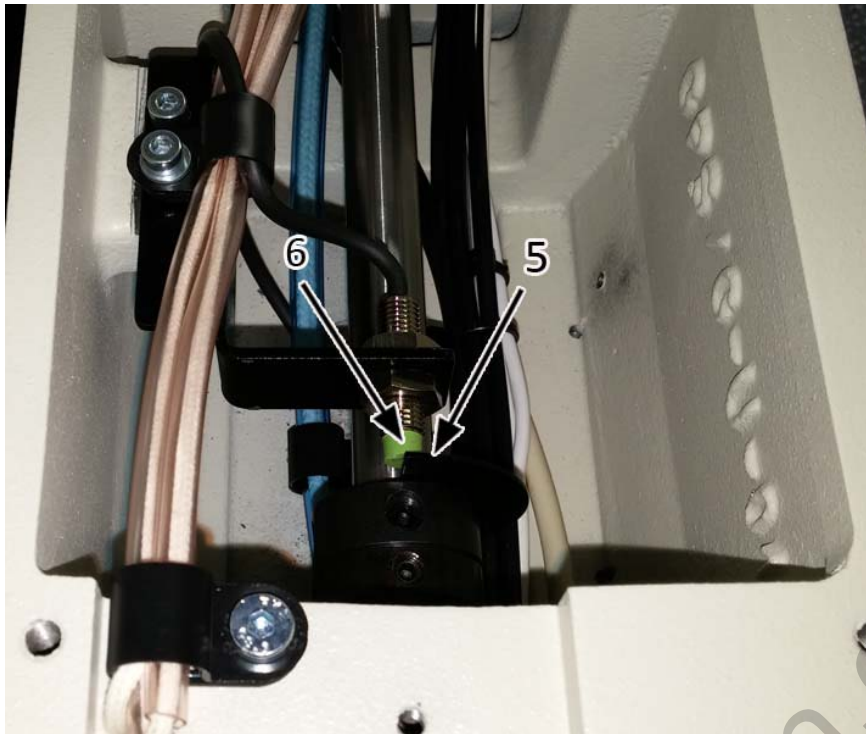


Fig. 44

#### 15. BARCODE READER

Fig. 43 shows position of the barcode reader (5) on the machine.

#### 16. FEEDING FRAME

If the machine is not supplied with special feeding frame or feeding frame with pneumatically actuated fixing manufactured by special order, standard solution mounted on the machine is compact feeding frame consisting of one-piece upper presser frame (1) and one-piece lower feeding frame (5), see fig. 44.

- A. Speed of the upper frame (1) down movement can be adjusted by valves (2) on both pneumatic cylinders
- B. Pressing force can also be regulated by pressure gauge (6), see fig. 53.
- C. For disassembly of the upper frame (1), remove 6 screws (3) on right and left holders. At the same time, it is necessary to disconnect pneumatic hose nipples (4).

*Parameter 05* – operation of presser frame - down/up

*Parameter 06* – type of presser frame

*Parameter 07* – test of presser frame – checking position – down/up.

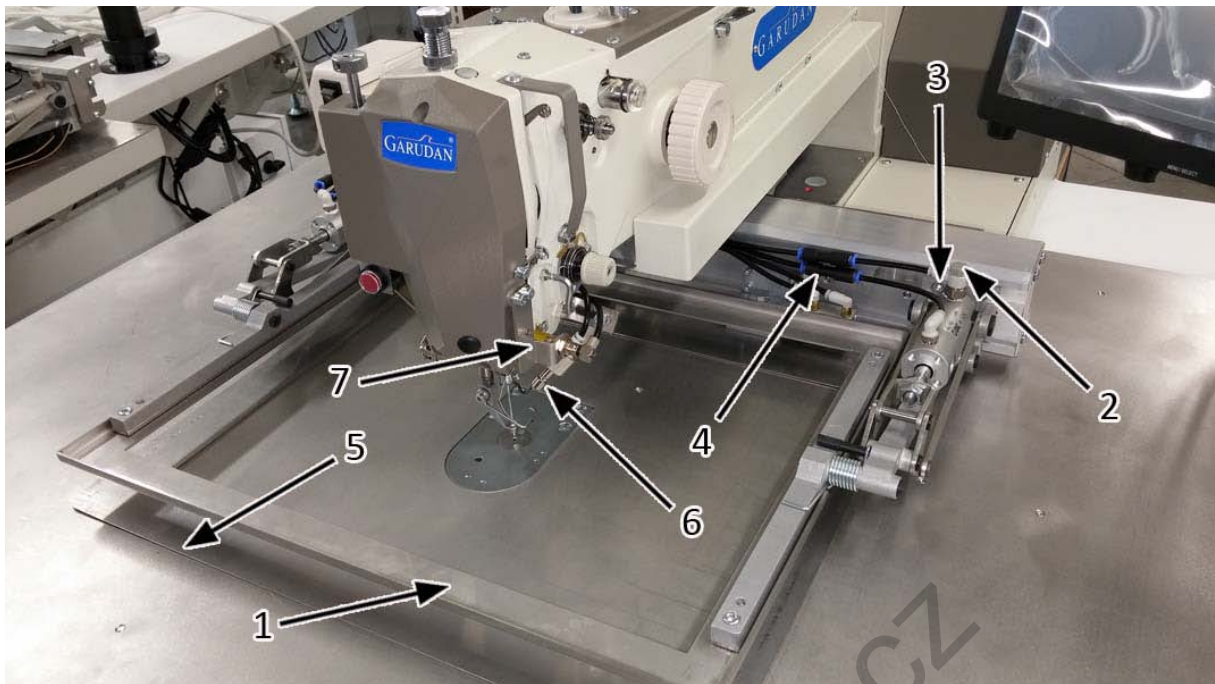


Fig. 45

#### 17. THREAD HOLDER

Fig. 45 shows position of the thread holder (7). This device is activated by *parameter 32*. Default value is 100 for oscillating shuttle hook and 700 for rotary hook.

#### 18. NEEDLE COOLING

Fig. 45 shows position of of nozzle (6) used for needle cooling. This function is activated by *parameter 31*.

Fig. 46 shows valve (3) for adjustment of the amount of air supplied to the cooling nozzle.

#### 19. LOWER FEED FRAME LOCK

Lower feed frame, which is removable, is connected with the X-axis movement mechanism by means of lock (1), see fig. 46. It is necessary to lubricate the locks by spray lubricant with teflon as indicated by arrow (2) approximately once a week.

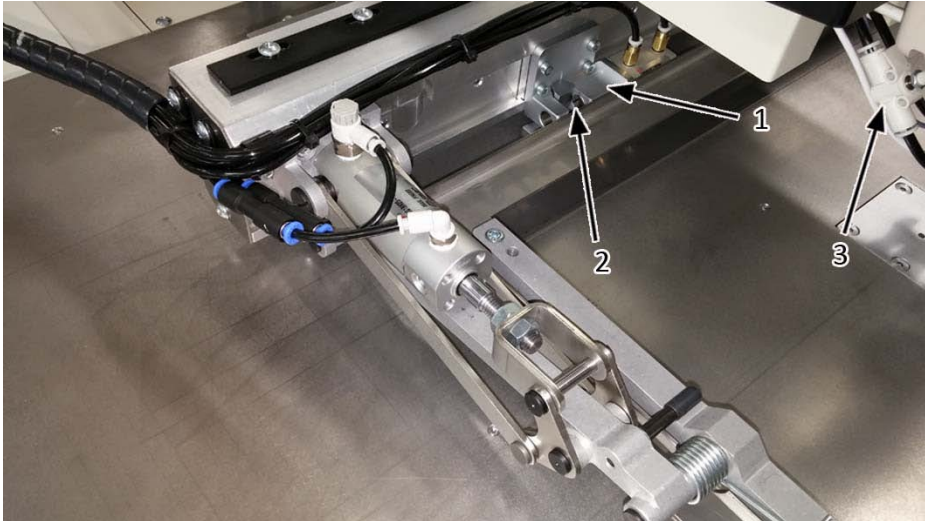


Fig. 46

## 20. LUBRICATION OF ROTARY HOOK (RH)

Unlike oscillating shuttle hook, which is lubricated by central wick feed lubrication system from the central oil reservoir, rotary hook is lubricated by aerosol spray oil injected into the hook trajectory together with the flow of air (fig. 50). The machine stand (fig. 47) holds oil reservoir. It is necessary to check regularly the oil level in the transparent oil gauge window and to fill-up the oil if necessary.

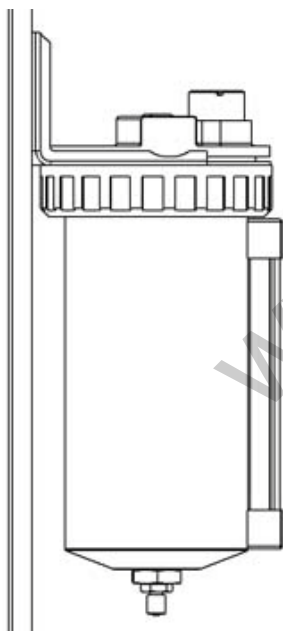


Fig. 47

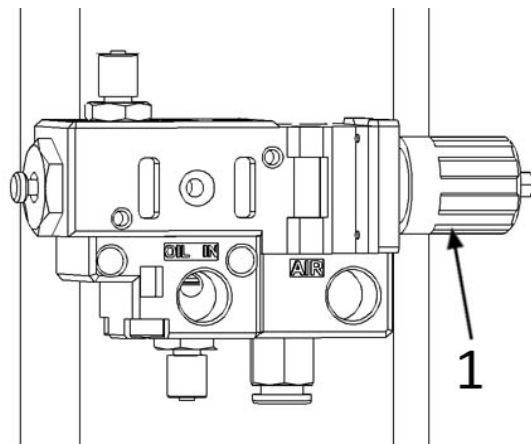


Fig. 48

The oil is transported to the nozzle by diaphragm pump (fig. 48). Membrane is driven by air pressure. Amount of oil is regulated manually by screw (1). Correct amount of oil corresponds to 1.5 revolution of the screw (1) from the closed position. Check the amount of oil by inserting a piece of paper between the nozzle and the hook (fig. 50). The paper should not be dry, nor should it be full of oil. There should be evenly spreaded small particles of oil on the paper.

Oil is transported to the mixing valve (fig. 49) which enables correct ratio between air and oil in the aerosol. Lack of air can result in spreading of whole drops of oil while lack of oil can result in insufficient lubrication of the hook.

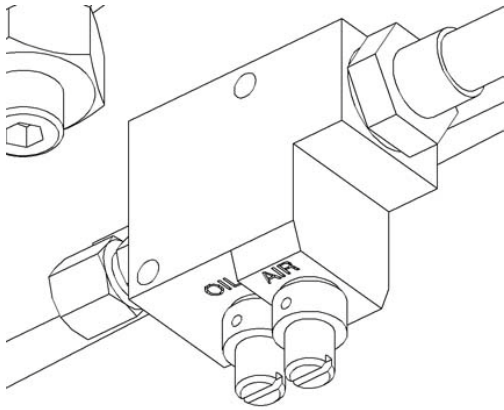


Fig. 49

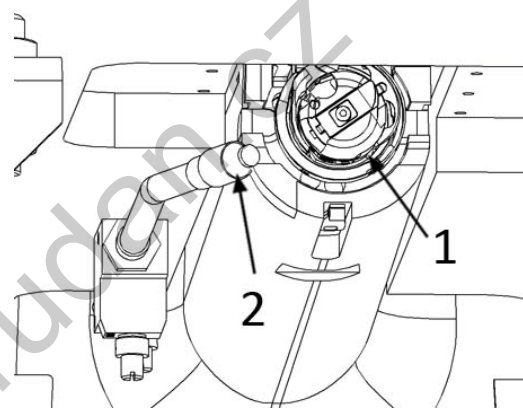


Fig. 50

Oil is mixed with air in the nozzle (2) - see fig. 50, which is directed towards the point of hook lubrication. The whole mechanism is adusted from the production plant, however, it is recommended to make regular check-up of the setting to ensure correct function and long operation life of the hook.

## 21. LUBRICATION OF BALL SCREW SHAFT BEARING

Ball screw shaft ensures movement of the feed frame in the X and Y axis.

Unscrew the screws of the back cover (1) (two screws from back side and 3 screws on each side) and remove the cover (fig.51).

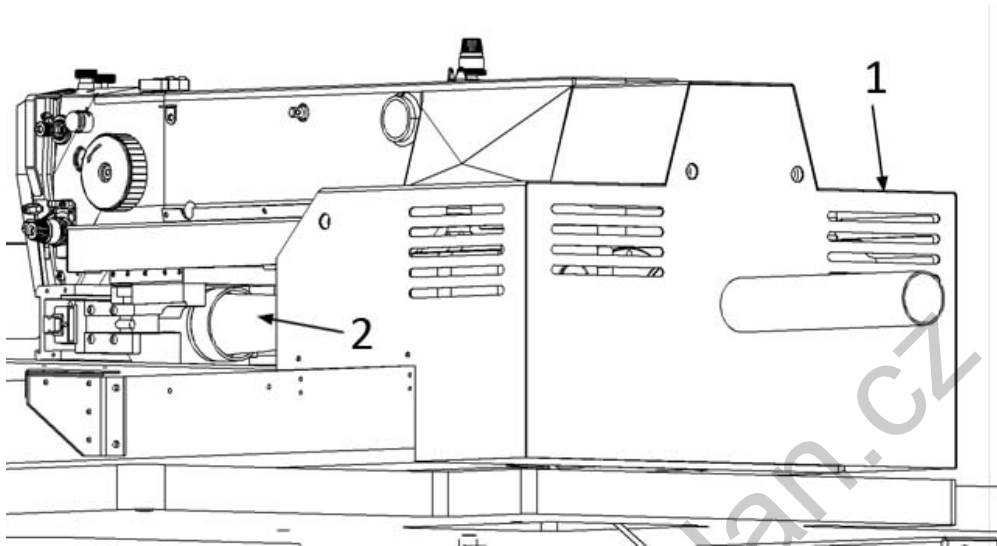


Fig.51

Now you have access to lubricating head (2) on the flange of the bearing (1), see fig. 52. Then apply the lubricant by means of manual press. Lubrication is recommended to be performed at least once per year according to frequency of machine operation. Besides the bearings, it is recommended to lubricate also the ball screw shaft under the telescopic cover (2), see fig. 51. Recommended lubricant is *Multipurpose Grease EP-2*.

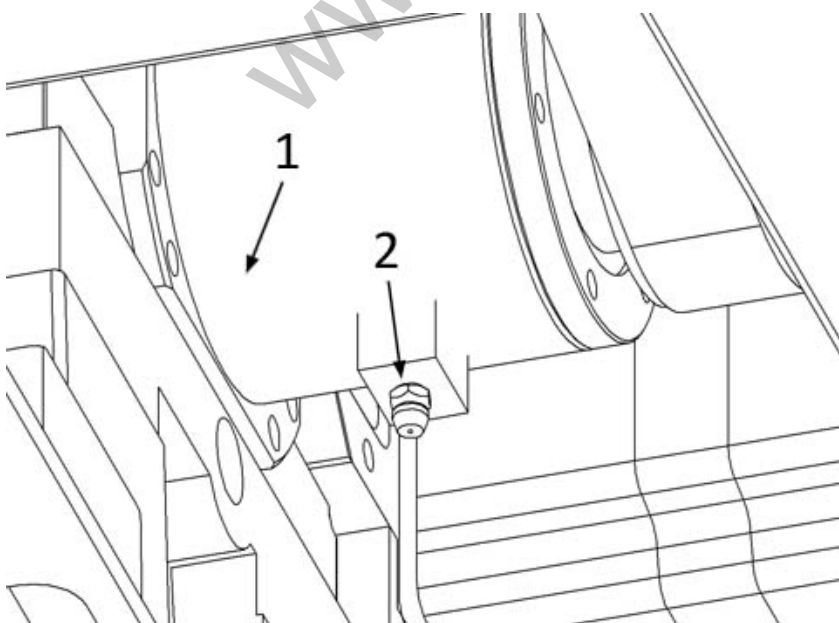


Fig.52

## 22. CONNECTION TO AIR SUPPLY

- A. Connect air hose to nipple (1) on the entry unit (2), see fig. 53.
- B. Open air valve (3).
- C. By turning the knob (4) on the entry unit set the pressure for the value 0,55 - 0,6 MPa. Check the correct air pressure value on the manometer gauge
- D. Make sure that the liquid in the separator (5) is regularly emptied. Neglecting of this point can cause presence of the humidity in the system and thus wrong function of the thread trimming!

Notice: If the pressure drops below the minimum level, the machine displays the error and stops. Setting of this function is done from the production plant.

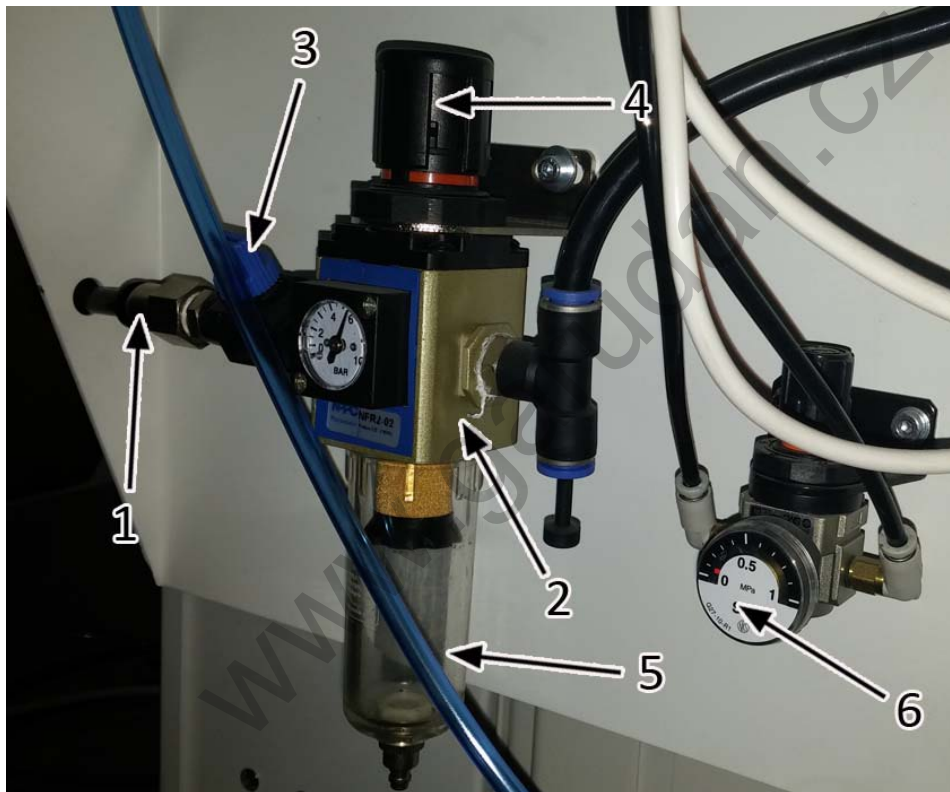


Fig. 53

Auxiliary manometer (6) is used for regulation of upper feed frame pressure (see chapter.16)

**23. OPERATION OF PEDALS**

- A. Function of pedals can be defined according to requirement of operator by parameters 8,9 and 10.
- B. For machine with 2 pedals standard setting is described in chart 1 below (parameter 6 *Feed plate type* is set for value 2 – *Upper and bottom* – right pedal is used for lifting and pressing the upper feed plate and left pedal is used for start of the sewing. Operation of feed plates is further influenced by setting of parameters 5,6 and 7).

Chart 1: standard setting of machine pedals (2 pedals)

<i>Parameter</i>	<i>Value</i>
6 Feed plate type	2 Upper and bottom
8 Signal of pedal 1 (left)	1 Start sewing
9 Signal of pedal 2 (middle)	0 Disable
10 Signal of pedal 3 (right)	4 Both feed plates

- C. If the machine has 3 pedals and the middle pedal is not used, you can use the standard setting for machine with 2 pedals (see chart 1)
- D. For some applications it is more suitable to use independent pattern frames (pallets). This type of frames enables usage of 3 pedals accordingly: right pedal is used for locking and unlocking of the pallet, middle pedal is used for pressing down the upper frame and left pedal is used for start of the sewing of selected pattern. This setting is described in chart 2.

Chart 2: setting for operation with 3 pedals

<i>Parameter</i>	<i>Value</i>
6 Feed plate type	1 Two feed plate
8 Signal of pedal 1 (left)	1 Start sewing
9 Signal of pedal 2 (middle)	2 Left feed plate
10 Signal of pedal 3 (right)	3 Right feed plate

The above setting is only standard setting which user can change according to his requirements.

**24. TABLE OF MAXIMUM SEWING SPEEDS**

The chart defines maximum sewing speeds with relation to different stitch lengths. Sewing speed can be lower than the maximum speed but should not exceed the maximum speed defined for the respective stitch length.

Straight stitch			ZigZag stitch		
Stitch length (mm)	Shuttle hook (spm)	Rotary hook (spm)	Stitch length (mm)	Shuttle hook (spm)	Rotary hook (spm)
2.5	2600	3000	2.5	2000	2000
3	2600	3000	3	2000	2000
3.5	2500	2500	3.5	1600	1600
4	2300	2300	4	1600	1600
5	1700	1700	5	1400	1400
6	1400	1400	6	1200	1200
7	1100	1100	7	1000	1000
8	1000	1000	8	900	900
9	900	900	9	800	800
10	800	800	10	800	800
11	800	800	11	700	700
12	700	700	12	600	600
>12	700	700	>12	600	600



## 9) TROUBLESHOOTING

No.	Type of the problem	Cause of the problem	Solution
1	Error of control system or machine driving unit	Error message on the display of needle motor driver for X or Y axis	Inform manufacturer about the type of error message
		Fuse is short-cut	Check fuses in the switchboard
		Switched-off circuit breaker	Check position of the circuit breaker in the switchboard
		Error message on the machine display	Act in accordance with type of error message and information from the operation manual
2	Wrong needle upper stop position	Wrong setting of parameter for needle upper stop position angle or parameter of reverse angle	Check correct setting of following parameters: 25 Reverse angle 26 Up stop position angle 35 Reverse angle before wiper
		Wrong position of needle motor sensor or sensor plate	Check position of needle motor sensor plate and the sensor function
		Fault of needle motor or motor driver	Exchange motor for needle driving mechanism or respective driver in the switchboard
3	Wrong position of feed frame	Loosen screws leading to slipping of driving toothed wheels of X and Y axis	Check if screws of feed frame driving wheel mechanism are properly tightened
		Wrong fixing of the sewn product	Correct proper fixing of the sewn material inside the template
		Loss of X- or Y- motor steps	Lower the sewing speed and check if there are not any mechanical obstacles preventing motor or feed frame from fluent movement
4	Fault of needle	Damaged needle (bent, broken or worn-out)	Exchange the needle
		Wrong position of needle	Re-install correct position of the needle
		Contact of needle and position	Set correct clearance between needle and hook and check if the hook is not damaged

5	Broken thread	Wrong threading of upper thread	Make correct threading
		Wrong position of needle	Set correct position of needle
		Damaged needle	Exchange needle
		Wrong tension of upper or lower thread	Re-install correct thread tension
		Wrong tension and rigidity of thread tension spring	Re-install correct tension and rigidity of thread tension spring
		Damage of hook upper spring	Exchange hook upper spring and check if the hook is not mechanically damaged
6	Thread skips or falls off the needle eye	Bent needle	Exchange the needle
		Thread thickness is not in correspondence with needle size	Exchange the needle
		Wrong position of needle	Re-install correct needle position
		Wrong timing of motion between needle and hook	Re-adjust correct timing between needle and hook
		Too big clearance between needle and hook	Re-adjust correct clearance between needle and hook
		Wrong tension of thread take-up spring	Adjust correct tension of the spring
7	Wrong function of thread breakage detector	Thread take-up spring is not well linked with thread sensor plate	Clean the thread take-up spring and the sensor plate and adjust the correct mutual position
		The wire of thread sensor plate is not well linked	Check the correct wiring
8	Bad quality of thread tension	Tension of needle thread is not sufficient	Adjust correct tension of needle thread
		Tension of bobbin thread is not sufficient	Adjust correct tension of bobbin thread
		Wrong timing of the motion between needle and hook	Adjust correct timing of the motion between needle and hook
9	Trimming error occurs	The cross tension between movable and fixed knife is loose	Adjust the tension of the fixed knife
		Blades of movable or fixed knife are damaged or worn-out	Replace movable or fixed knife
		Wrong trimming speed or speed of the knife	Adjust the trimming speed or speed of the knife - see chap.11

Katalog náhradních dílů  
Spare Parts List

**GARUDAN**<sup>®</sup>

**GARUDAN GPS/G-3525**  
**Including Rotary Hook/RH**



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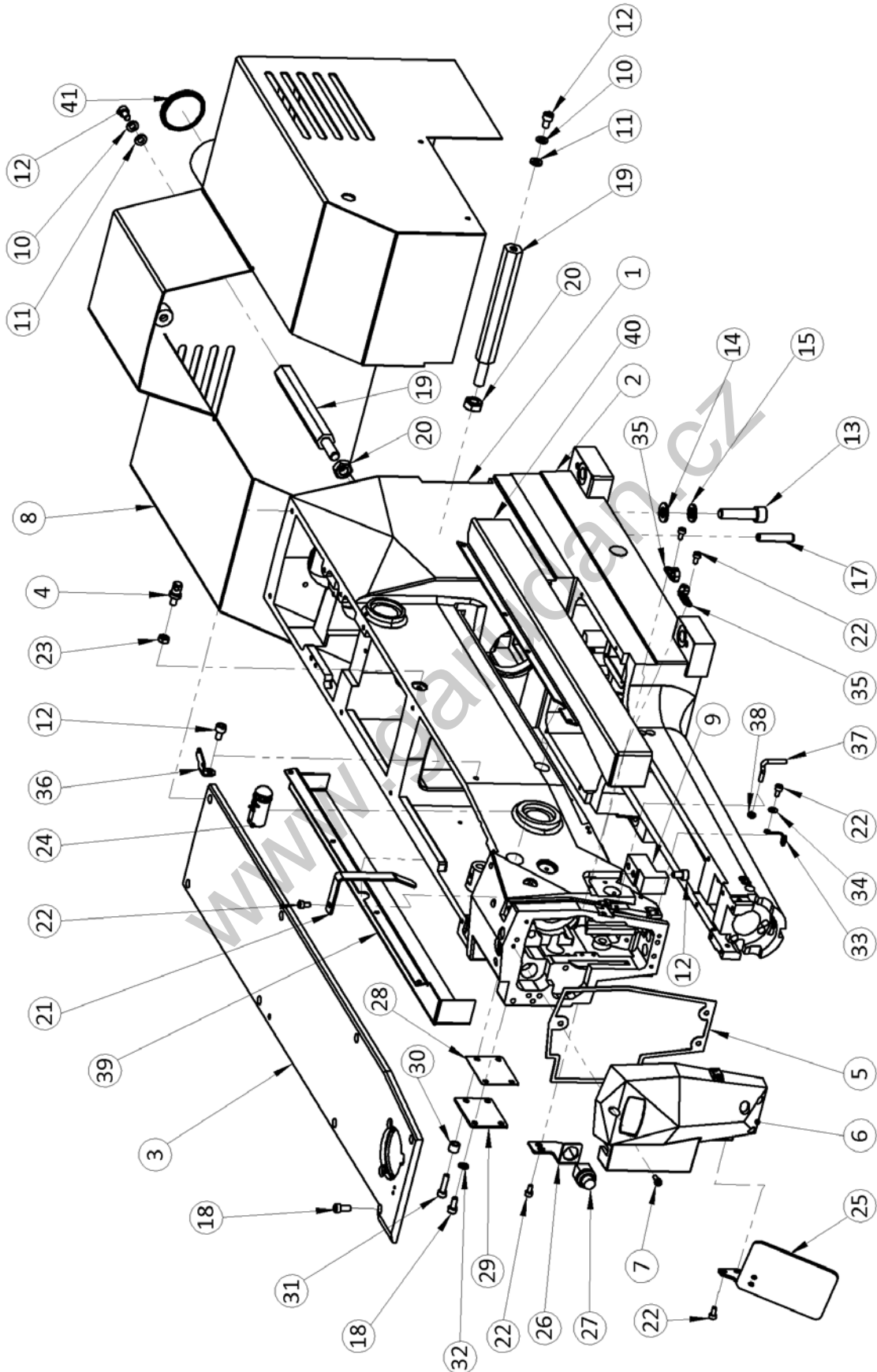
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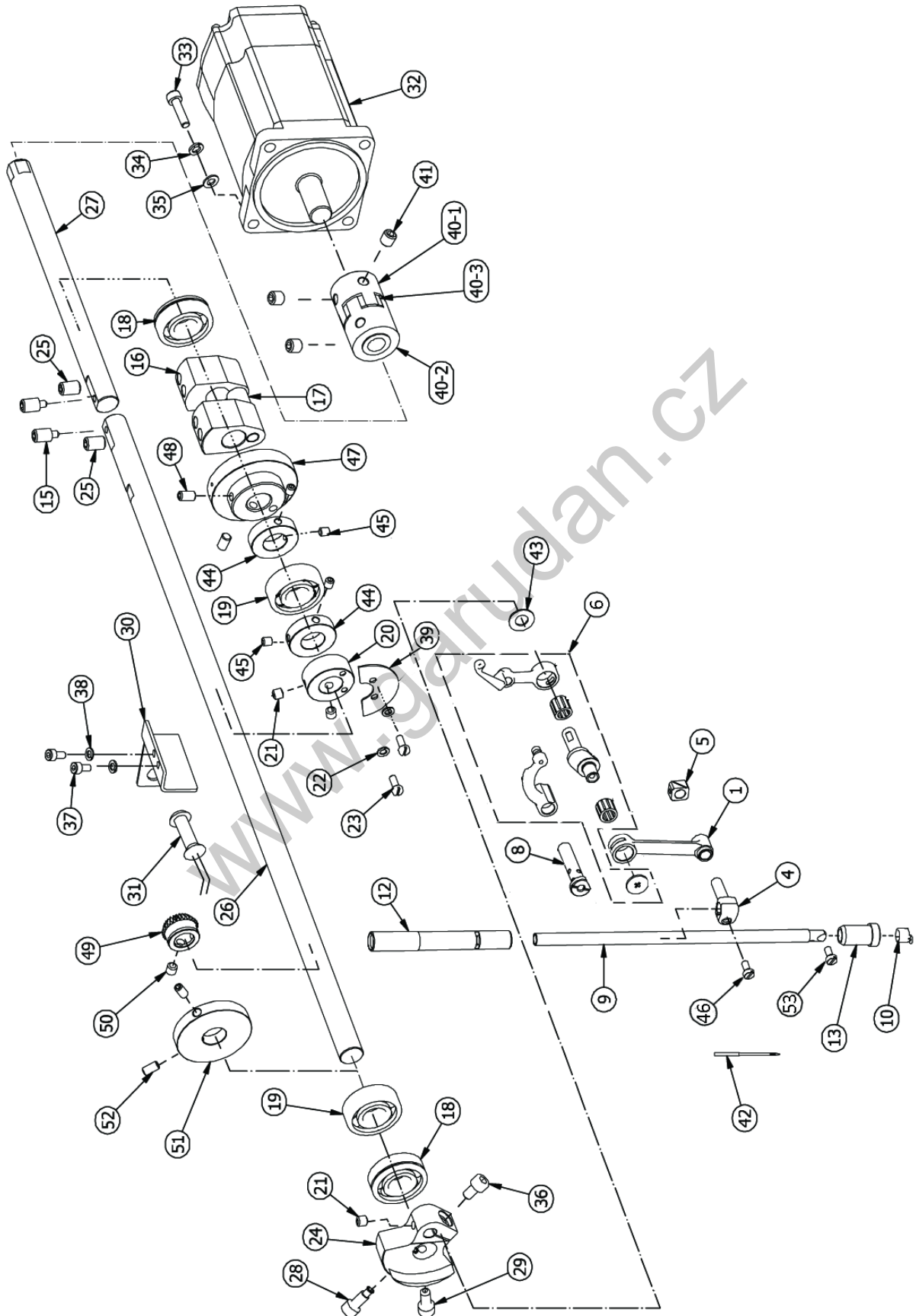
**A. FRAME AND MACHINE BODY PARTS  
ODLITKY, KRYTY A DÍLY**





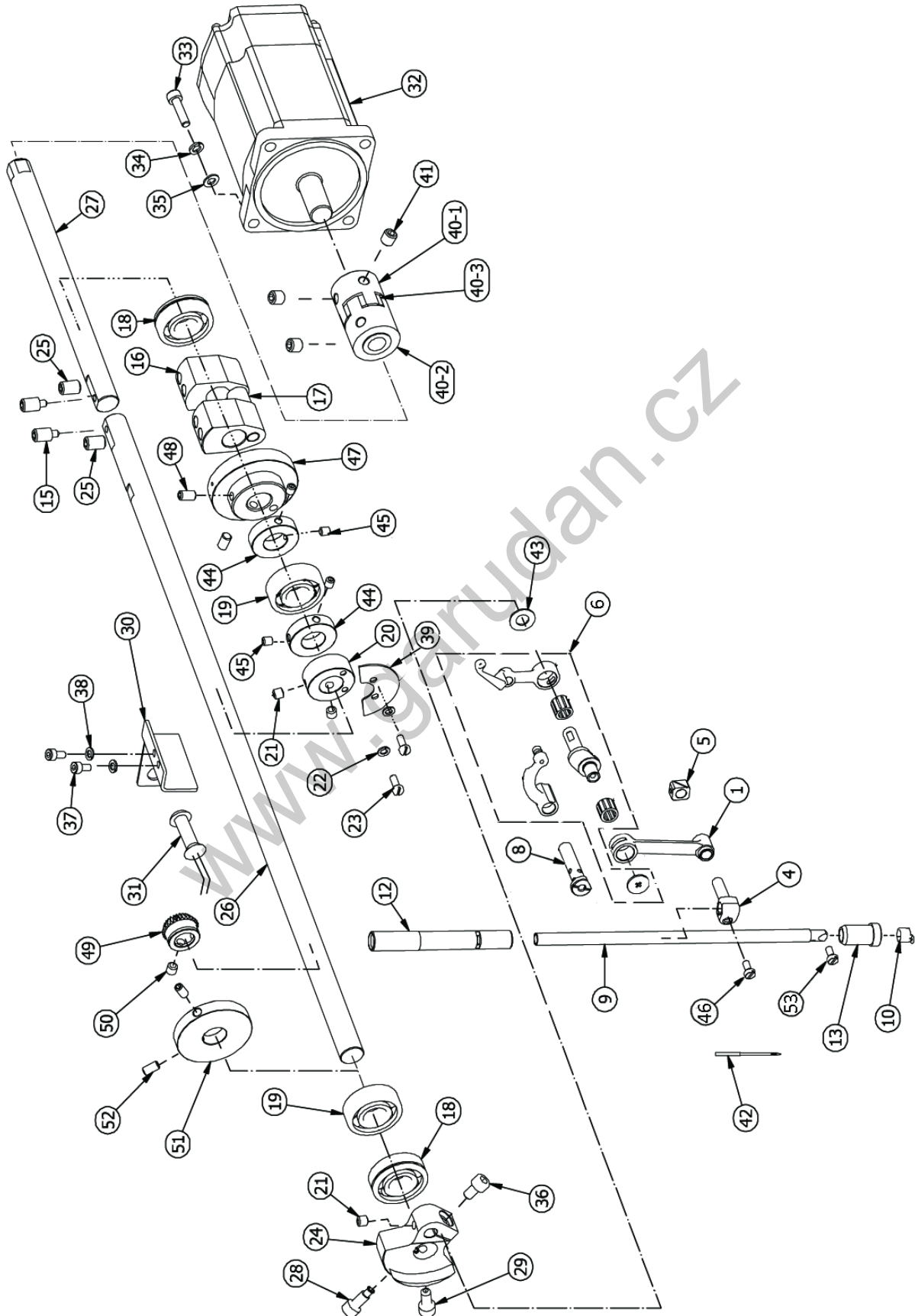
A. FRAME AND MACHINE BODY PARTS					
ODLITKY, KRYTY A DÍLY					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
A-1	A0103525	Arm	Rameno	1	
A-2	A0206032	Bedplate	Základní deska	1	
A-3	A0306032	Top cover	Kryt horní	1	
A-4	A1001507	Thread Guide	Vodič nitě	1	
A-5	A0401507	Face Plate Gasket	Těsnění čelního krytu	1	
A-6	A0301507	Face cover	Kryt čelní	1	
A-7	A1006032	Screw	Šroub	3	
A-8	AnB-3525-040	Back Cover	Zadní kryt	1	
A-9	A6103525-2	Distance Bracket	Doraz	1	
A-10	A4706032	Spring washer	Podložka pružná	2	
A-11	A4806032	Washer	Podložka	2	
A-12	A4606032	Screw	Šroub	5	
A-13	A0506032	Screw	Šroub	4	
A-14	A0706032	Washer	Podložka	4	
A-15	A0606032	Spring washer	Podložka pružná	4	
A-17	A0826032	Parallel pin	Kolík pružný	2	
A-18	A1106032	Screw	Šroub	9	
A-19	AnB-3525-064	Distance baracket	Držák krytu	1	
A-20	A1406032	Nut	Matice	2	
A-21	A9156032	Thread take up cover	Kryt nitěové páky	1	
A-22	A1606032	Screw	Šroub	6	
A-23	A4106032	Nut	Matice	1	
A-24	A2701507	Silicon Tank	Olejevá nádobka	1	
A-25	P2701507	Safety Plate Ass'y	Chráníč očí	1Set	
A-26	A2401507	STOP Switch Bracket	Držák STOP tlačítka	1	
A-27	A2301507	STOP Switch	STOP tlačítko	1	
A-28	A2001507	Left Cover Gasket	Těsnění levého krytu	1	
A-29	A1901507	Left Cover	Kryt levý	1	
A-30	A5106032	Distance ring	Kroužek	1	
A-31	A5206032	Screw	Šroub	1	
A-32	A5006032	Spring washer	Podložka pružná	1	
A-33	H9601048	Thread guide	Vodič nitě	1	
A-34	A5606032	Washer	Podložka	1	
A-35	A3301507	Thread Guide	Vodič nitě	2	
A-36	A1401507	Thread Guide	Vodič nitě	1	
A-37	A5306032	Thread guide	Vodič	1	
A-38	A5406032	Nut	Matice	1	
A-39	AnB-3525-028	Cover	Kryt	1	
A-40	AnB-3525-063	Cover	Kryt	1	
A-41	A4326032	Cover	Kryt	1	

**B. UPPER SHAFT AND MAIN SHAFT MECHANISM (1/2)**  
**HORNÍ HŘÍDEL A PODÁVACÍ MECHANISMUS (1/2)**



<b>B. UPPER SHAFT AND MAIN SHAFT MECHANISM (1/2)</b>					
<b>HORNÍ HŘÍDEL A PODÁVACÍ MECHANISMUS (1/2)</b>					
<b>REF. NO</b>	<b>PARTS NO.</b>	<b>NAME OF PARTS</b>	<b>POPIS</b>	<b>QTY</b>	<b>NOTE</b>
B-1	B0106032	Needle bar crank rod	Ojnice	1	
B-4	B0406032	Needle bar holder	Držák jehelní tyče	1	
B-5	B0506032	Guide	Kostka vodící	1	
B-6	B0606032	Take up lever coplete	Níťová páka úplná	1	
B-8	B0806032	Take up shaft	Hřídel	1	
B-9	B0906032	Needle bar	Jehelní tyč	1	
B-10	C2501507	Thread Guide For Needle Bar	Vodič nitě	1	
B-12	B1206032	Needle bar bushing	Pouzdro jehelní tyče	1	
B-13	B1306032	Needle bar bushing	Pouzdro jehelní tyče	1	
B-15	B1506032	Set screw	Šroub	2	
B-16	B1606032	Upper shaft crank	Klika	2	
B-17	B1706032	Upper shaft pin	Kolik	1	
B-18	B1806032	Bearing	Ložisko	2	
B-19	B1906032	Bearing	Ložisko	2	
B-20	B2006032	Sensor collar	Kroužek	1	
B-21	B2106032	Screw	Šroub-červ	5	
B-22	B2206032	Spring washer	Podložka	2	
B-23	A1006032	Screw	Šroub	2	
B-24	B2406032	Link cam	Vačka	1	
B-25	B2506032	Screw	Šroub-červ	2	
B-26	B2606032	Upper shaft front	Hřídel	1	
B-27	B2706032	Upper shaft back	Hřídel	1	
B-28	B2806032	Screw	Šroub	1	
B-29	B2906032	Screw	Šroub	1	
B-30	B3006032	Z-senzor bracket	Držák snímače z	1	
B-31	K4001507	Sensor GPS	Snímač GPS	1	
B-32	C4601507	Main Motor (750W)	Hlavní motor (750W)	1	
B-33	A5206032	Screw	Šroub	4	
B-34	B3406032	Washer	Podložka	4	
B-35	A5006032	Spring washer	Podložka pružná	4	
B-36	A4606032	Screw	Šroub	1	
B-37	A1606032	Screw	Šroub	2	
B-38	B2206032	Spring washer	Podložka	2	
B-39	B3906032	Screen	Clonka	1	
B-40-1	B4016032	Coupling	Spojka	1	
B-40-2	B4026032	Coupling	Spojka	1	
B-40-3	B4036032	Elastic element	Pružný element	1	

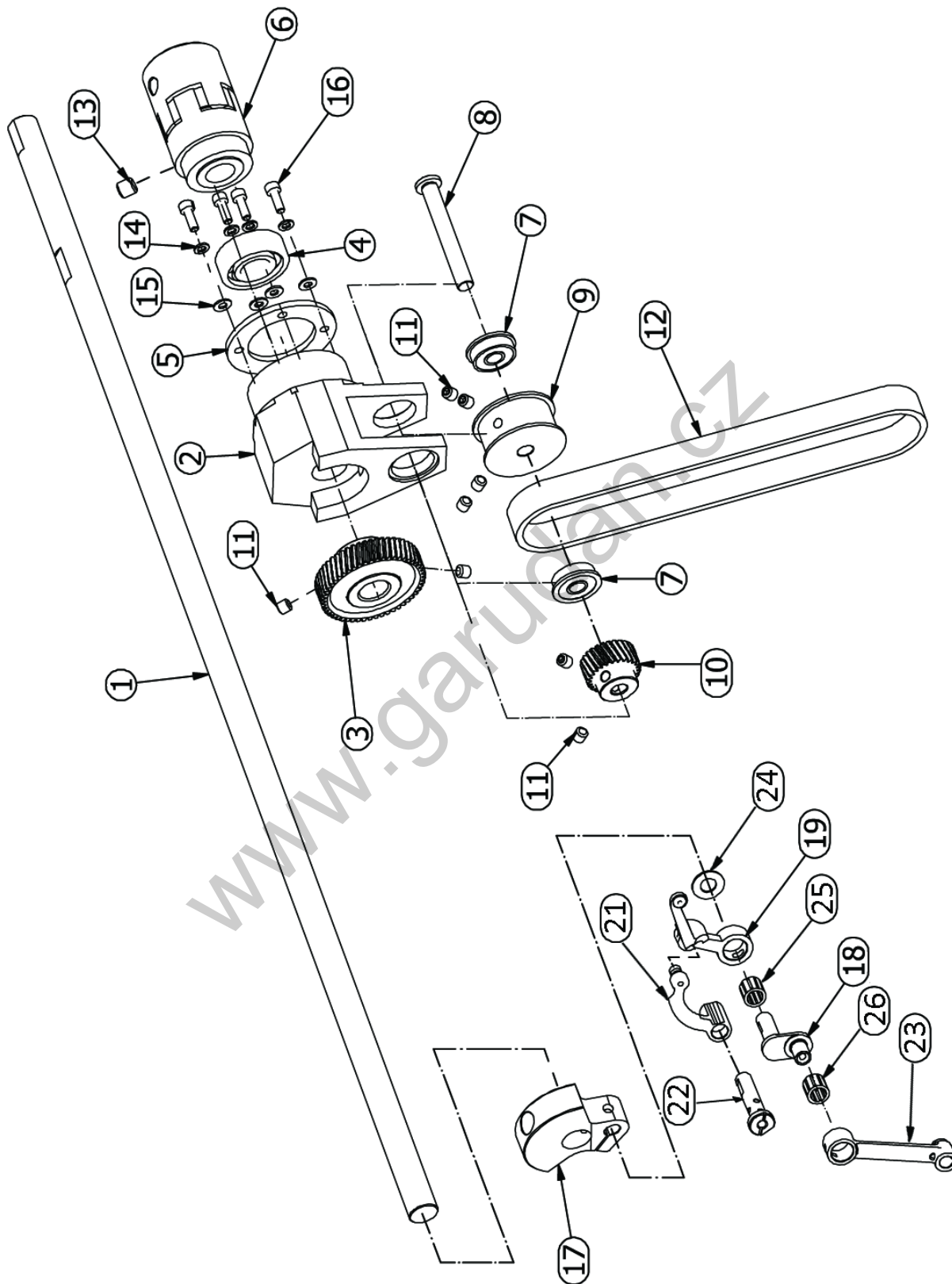
**B. UPPER SHAFT AND MAIN SHAFT MECHANISM (2/2)**  
**HORNÍ HŘÍDEL A PODÁVACÍ MECHANISMUS (2/2)**



**B. UPPER SHAFT AND MAIN SHAFT MECHANISM (2/2)****HORNÍ HŘÍDEL A PODÁVACÍ MECHANISMUS (2/2)**

REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
B-41	B4106032	Screw	Šroub-červ	4	
B-42	135x17 (Nm 110/18)	Needle (DPx17#18)	Jehla (135x17/110)	1	
B-43	B4306032	Washer	Podložka	1	
B-44	B4406032	Ring	Kroužek	2	
B-45	B4506032	Screw	Šroub-červ	4	
B-46	B4606032	Screw	Šroub	1	
B-47	E0906032NEW	Thread trimming cam	Vačka	1	
B-48	E1006032	Screw	Šroub-červ	2	
B-49	K2306032	Hand Pulley Gear	Ozubené kolo	1	
B-50	C3201507	Screw	Šroub	2	
B-51	K1106032	Bobbin winder driving wheel	Kolo	1	
B-52	K0506032	Screw	Šroub	2	
B-53	B5303525	Screw	Šroub	1	

**B9. FOR ROTARY HOOK ONLY  
PRO ROTAČNÍ CHAPAČ**



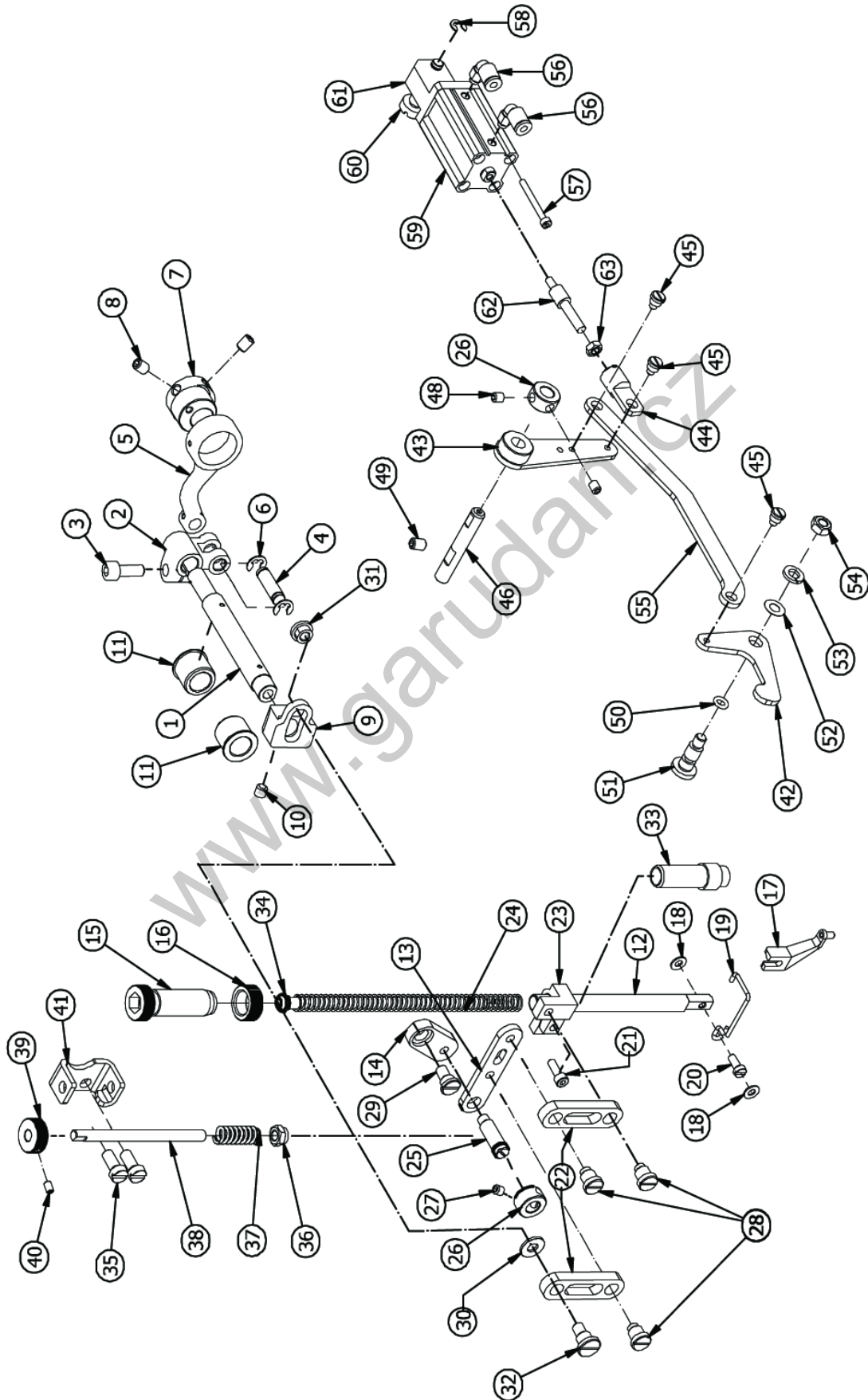
<b>B9. FOR ROTARY HOOK ONLY</b>					
<b>PRO ROTAČNÍ CHPAČ</b>					
<b>REF. NO</b>	<b>PARTS NO.</b>	<b>NAME OF PARTS</b>	<b>POPIS</b>	<b>QTY</b>	<b>NOTE</b>
B9-1	B9016032	Upper Shaft	Hřídel	1	/RH
B9-2	B9026032	Bracket	Držák	1	/RH
B9-3	B9036032	X-drive gear	Kolo ozubené osa x	1	/RH
B9-4	B1906032	Bearing	Ložisko	1	/RH
B9-5	B9056032	Fixing washer	Podložka	1	/RH
B9-6	B9066032	Coupling	Spojka	1	/RH
B9-7	B9076032	Bearing	Ložisko	2	/RH
B9-8	B9086032	Pin	Čep	1	/RH
B9-9	B9093525	Timing pulley	Kurtové kolo	1	/RH
B9-10	B9106032	X-drive gear	Kolo ozubené osa x	1	/RH
B9-11	B2106032	Screw	Šroub-červ	8	/RH
B9-12	B9123525	Timing belt	Ozubený řemen	1	/RH
B9-13	B4106032	Screw	Šroub-červ	2	/RH
B9-14	B2206032	Spring washer	Podložka	4	/RH
B9-15	A5606032	Washer	Podložka	4	/RH
B9-16	B9166032	Screw	Šroub	4	/RH
B9-17	B9176032	Link cam	Vačka	1	/RH
B9-18	B9186032	Needle bar crank	Klika	1	/RH
B9-19	B9196032	Take up lever	Niřová páka	1	/RH
B9-20	B9206032	Take up lever crank	Páka	1	/RH
B9-21	B0606032	Take up lever crank	Niřová páka úplná	1	/RH
B9-22	B0806032	Take up shaft	Hřídel	1	/RH
B9-23	B0106032	Needle bar crank rod	Ojnice	1	/RH
B9-24	B4306032	Washer	Podložka	1	/RH
B9-25	B1106032	Needle Bearing	Jehlové ložisko	1	/RH
B9-26	B1406032	Needle Bearing	Jehlové ložisko	1	/RH





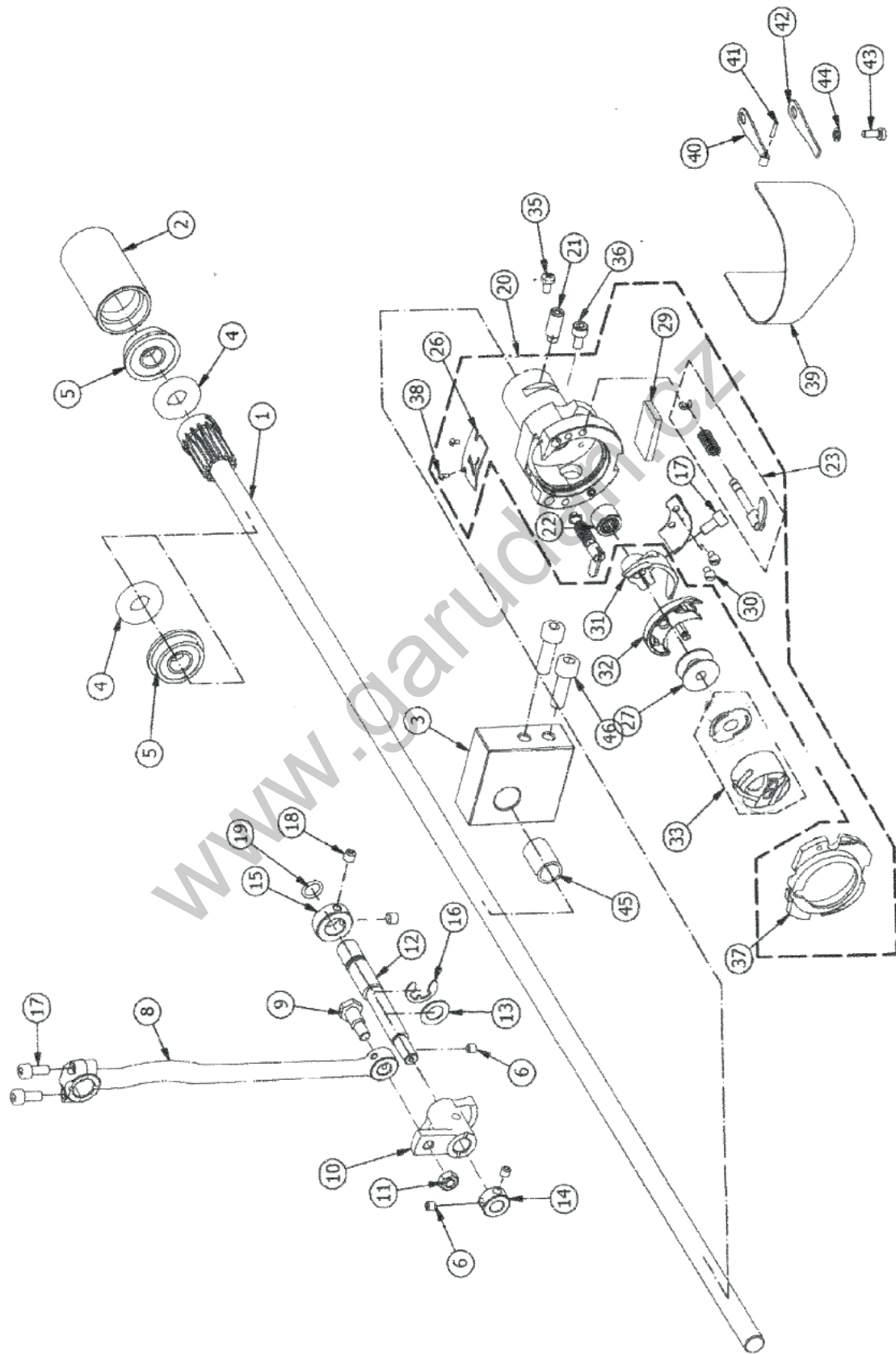
C. PRESSER FOOT MECHANISM (1/2)					
MECHANISMUS PATKY (1/2)					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
C-1	C0106032	Presser shaft	Hřídel	1	
C-2	C0206032	Fork crank	Klika	1	
C-3	C0306032	Screw	Šroub	1	
C-4	C0406032	Connection pin	Kolík	1	
C-5	C0506032	Connecting rod	Ojnice	1	
C-6	C0606032	Retaining washer	Pojistný kroužek	2	
C-7	C0706032	Presser cam	Excentr	1	
C-8	C0806032	Screw	Šroub-červ	2	
C-9	C0906032	Lever	Páka	1	
C-10	B2106032	Screw	Šroub-červ	1	
C-11	C1106032	Bearing	Ložisko	2	
C-12	C1206032	Presser bar	Tyč přítlačná	1	
C-13	C1306032	Driving link	Páka	1	
C-14	C1406032	Position link	Páka	1	
C-15	C1506032	Adjusting spring screw	Šroub	1	
C-16	C1606032	Adjusting spring nut	Matice	1	
C-17	F6101507	Presser foot with needle hole 2,2mm	Patka (otvor pro jehlu 2,2mm)	1	
	C1726032	Presser foot with needle hole 3,6mm	Patka (otvor pro jehlu 3,6mm)		option
C-18	A5606032	Washer	Podložka	2	
C-19	C1906032	Finger guard	Chráníč prstů	1	
C-20	A1006032	Screw	Šroub	1	
C-21	M4x12	Screw DIN 912 M4x12	Šroub	1	
C-22	C2206032	Link connecting rod	Páka	2	
C-23	C2306032	Bar holder	Držák	1	
C-24	F5601507	Presse adjusting spring	Pružina	1	
C-25	C2506032	Fix hinge screw	Šroub	1	
C-26	C2606032	Collar	Kroužek	2	
C-27	C2706032	Screw	Šroub	2	
C-28	C2806032	Hinge screw	Šroub	3	
C-29	C2906032	Hinge screw	Šroub	1	
C-30	C3006032	Washer	Podložka	1	
C-31	C3106032	Nut	Matice	1	
C-32	C3206032	Hinge screw	Šroub	1	
C-33	C3306032	Presser bar bushing	Puzdro tlakové tyče	1	
C-34	C3406032	Adjusting bar	Tyč	1	
C-35	C3506032	Screw	Šroub	2	
C-36	C3606032	Nut	Matice	1	
C-37	F7001507	Position link stopper spring	Pružina	1	
C-38	C3806032	Rod	Tyč	1	

C. PRESSER FOOT MECHANISM (2/2)  
MECHANISMUS PATKY (2/2)



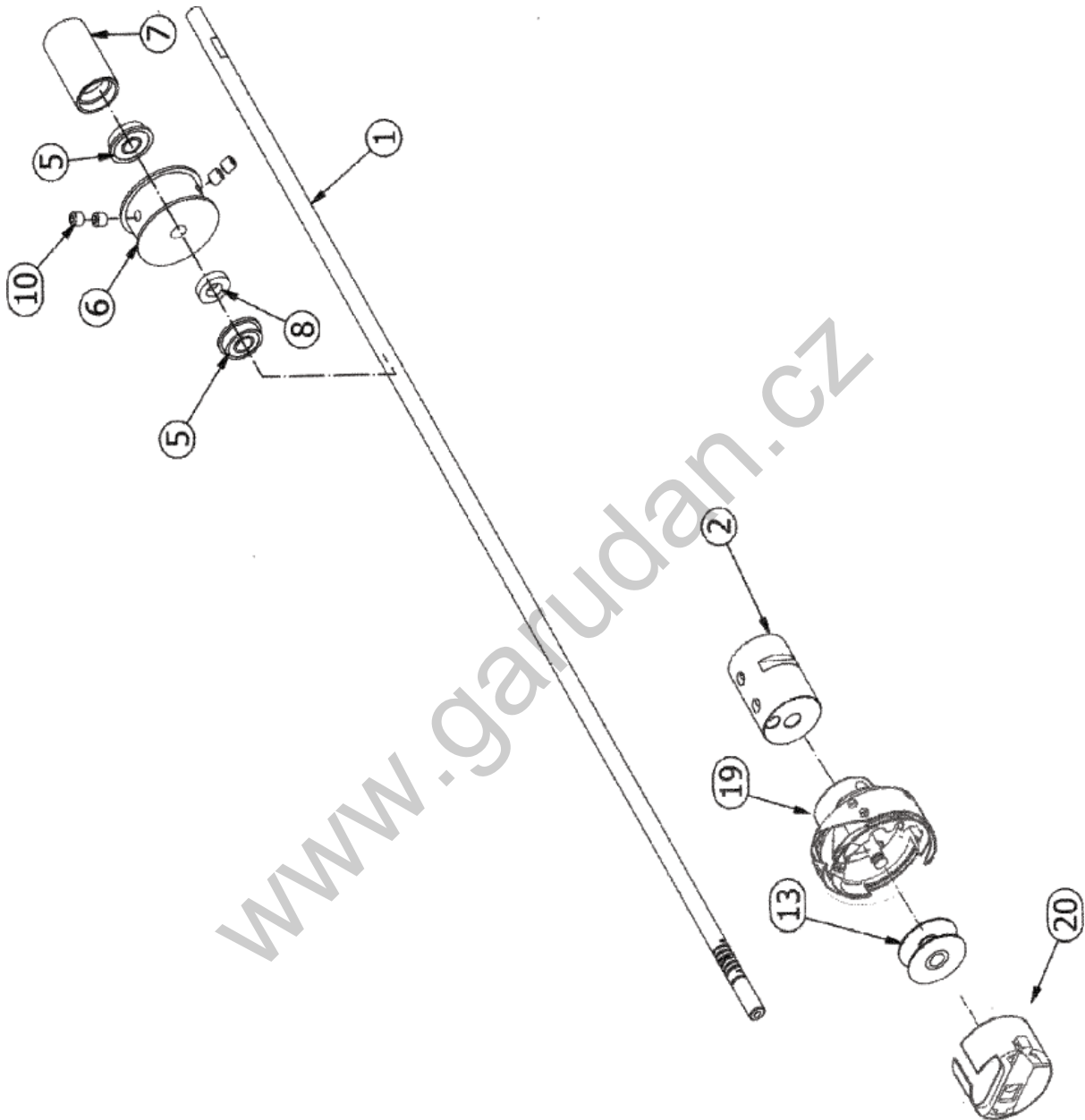
C. PRESSER FOOT MECHANISM (2/2)					
MECHANISMUS PATKY (2/2)					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
C-39	C3906032	Adjusting collar	Kolečko	1	
C-40	C4006032	Screw	Šroub	1	
C-41	C4106032	Stopper bracket	Držák	1	
C-42	C4206032	Lift link	Páka	1	
C-43	C4306032	Connecting level	Ojnice	1	
C-44	C4406032	Knuckle nut	Kloub	1	
C-45	C4506032	Hinge screw	Šroub	3	
C-46	C4606032	Pin	Čep	1	
C-48	B4506032	Screw	Šroub-červ	2	
C-49	C4906032	Screw	Šroub-červ	1	
C-50	C5006032	O-ring	O-kroužek	1	
C-51	C5106032	Stud	Čep	1	
C-52	C5206032	Shim ring	Podložka	1	
C-53	A4706032	Spring washer	Podložka pružná	1	
C-54	C5406032	Nut	Matice	1	
C-55	C5506032	Connecting link	Páka	1	
C-56	KQ2L04-M5	Hose nipple	Nástrčná spojka	2	
C-57	C5706032	Screw	Šroub	4	
C-58	C5806032	Retaining washer	Pojistný kroužek	1	
C-59	CQ2B16-30D	Pneumatic cylinder	Kompaktní válec	1	
C-60	C6006032	Screw	Šroub	1	
C-61	C6106032	Bracket	Držák	1	
C-62	C6206032	Screw	Šroub	1	
C-63	C6306032	Nut	Matice	1	

**D. LOWER SHAFT AND SHUTTLE MECHANISM**  
**SPODNÍ HŘÍDEL A CHAPAČ**



D. LOWER SHAFT AND SHUTTLE MECHANISM					
SPODNÍ HŘÍDEL A CHAPAČ					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
D-1	D0106032N	Lower shaft complete	Hřídel spodní kompletní	1	
D-2	D9076032N	Bushing	Pouzdro	1	
D-3	D0306032	Bracket	Držák	1	
D-4	D9086032N	Distance Ring	Distanční kroužek	2	
D-5	D9056032	Ball Bearing	Ložisko	2	
D-6	C2706032	Screw	Šroub	3	
D-8	E1001507	Crank rod	Ojnice	1	
D-9	E1201507	Crank rod hinge screw	Šroub	1	
D-10	E1601507	Oscillator shaft gear	Pohaněč	1	
D-11	E1301507	Nut	Matice	1	
D-12	D1206032	Shaft	Hřídel	1	
D-13	D1306032	Washer	Podložka	1	
D-14	D1406032	Collar	Kroužek	1	
D-15	D1506032	Collar	Kroužek	1	
D-16	D1606032	Retaining washer	Pojistný kroužek	1	
D-17	M5x12	Screw DIN 912 M5x12	Šroub	3	
D-18	B2106032	Screw	Šroub-červ	2	
D-19	M5x5	Screw DIN 913 M5x5	Šroub-červ	3	
D-20	E2681507	Shuttle complete (H)	Chapačová dráha kompletní (H)	set	model H
D-21	D2106032	Adjusting shaft	Excentr	1	
D-22	D2206032	Bearing NK8/12	Ložisko NK8/12	1	
D-23	E3201507	Inner Hook Presser Shaft Ass'y	Páka - kompletní	2	
D-26	E3801507	Plate for separating upper thread (H)	Chránící plech chapače (H)	1	model H
D-27	E2301507	Bobbin (H)	Cívka (H)	1	model H
D-29	44S046S-306H	Shuttle lubrication felt	Mazací plst	1	
D-30	D3006032	Screw	Šroub	2	
D-31	E2501507	Shuttle Driver (H)	Unašeč chapače (H)	1	model H
D-32	E2401507	Shuttle (H)	Chapač (H)	1	model H
D-33	E2201507	Bobbin Case Ass'y (H)	Pouzdro cívky (H)	1	model H
D-35	D3506032	Screw	Šroub	1	
D-36	A4906032	Screw	Šroub	1	
D-37	E2101507	Shuttle Race Ring (H)	Kroužek chapače (H)	1	model H
D-38	D3806032	Screw	Šroub	2	
D-39	E3301507	Hook cover ass'y	Kryt chapače	1	
D-40	E3701507	Spring	Držák krytu chapače	1	
D-41	E3401507	Spring pin (2x20)	Kolík (2x20)	1	
D-42	E3601507	Spring	Pero	1	
D-43	A1006032	Screw	Šroub	1	
D-44	B2206032	Spring washer	Podložka	1	
D-45	D4506032	Bushing	Pouzdro	1	
D-46	D4606032	Screw	Šroub	2	

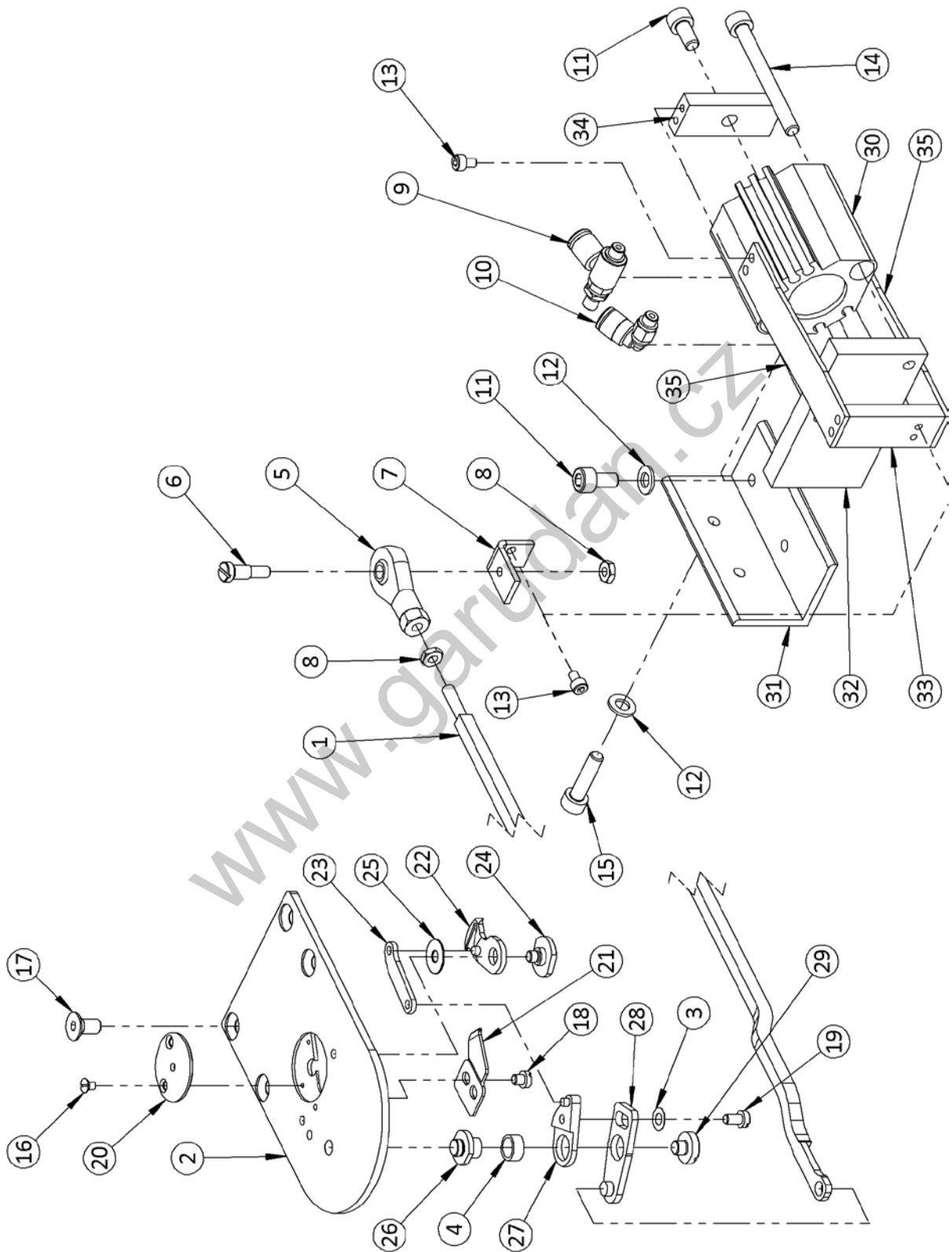
**D9. FOR ROTARY HOOK ONLY  
PRO ROTAČNÍ CHAPAČ**



<b>D9. FOR ROTARY HOOK ONLY</b>					
<b>PRO ROTAČNÍ CHAPAČ</b>					
<b>REF. NO</b>	<b>PARTS NO.</b>	<b>NAME OF PARTS</b>	<b>POPIS</b>	<b>QTY</b>	<b>NOTE</b>
D9-1	D9016032	Lower shaft	Hřídel spodní	1	RH
D9-2	D9026032	Bushing	Pouzdro	1	RH
D9-5	D9056032	Bearing	Ložisko	2	RH
D9-6	D9063525	Timing pulley	Kolo kurtové	1	RH
D9-7	D9076032N	Bushing	Pouzdro	1	RH
D9-8	D9086032N	Distance ring	Kroužek distanční	1	RH
D9-10	B2106032	Screw	Šroub-červ	4	RH
D9-13	D9136032	Bobbin for GPS/RH	Cívka pro GPS/RH	1	RH
D9-19	D91936032	Hook-Light and Medium Material	Chapač pro lehké a středně silné šití	1	RH
	D91946032	Hook-Heavy Material	Chapač pro těžké šití	1	RH
D9-20	D9206032	Bobbin case	Pouzdro cívky	1	RH

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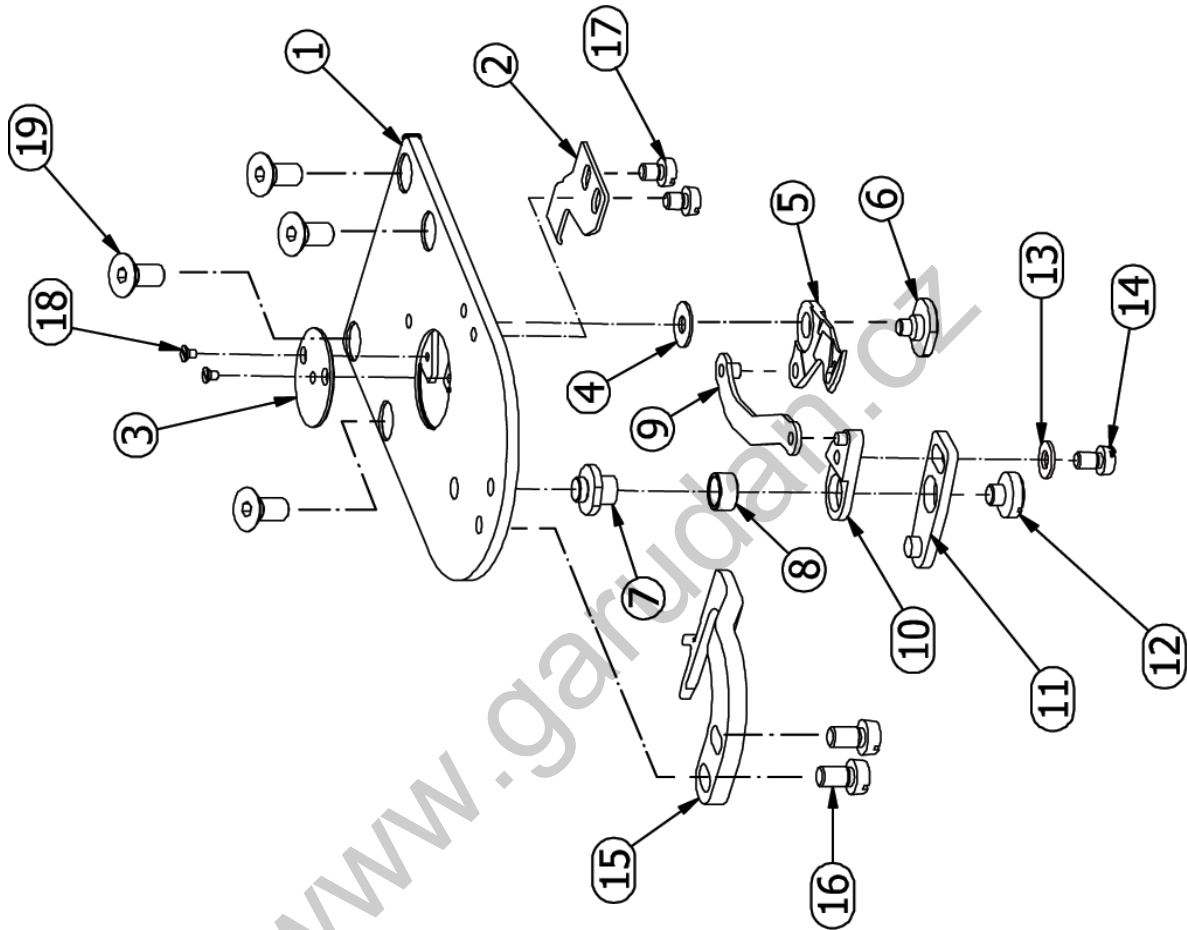
**E. THREAD TRIMMING MECHANISM  
ODSTŘIHOVÝ MECHANISMUS**





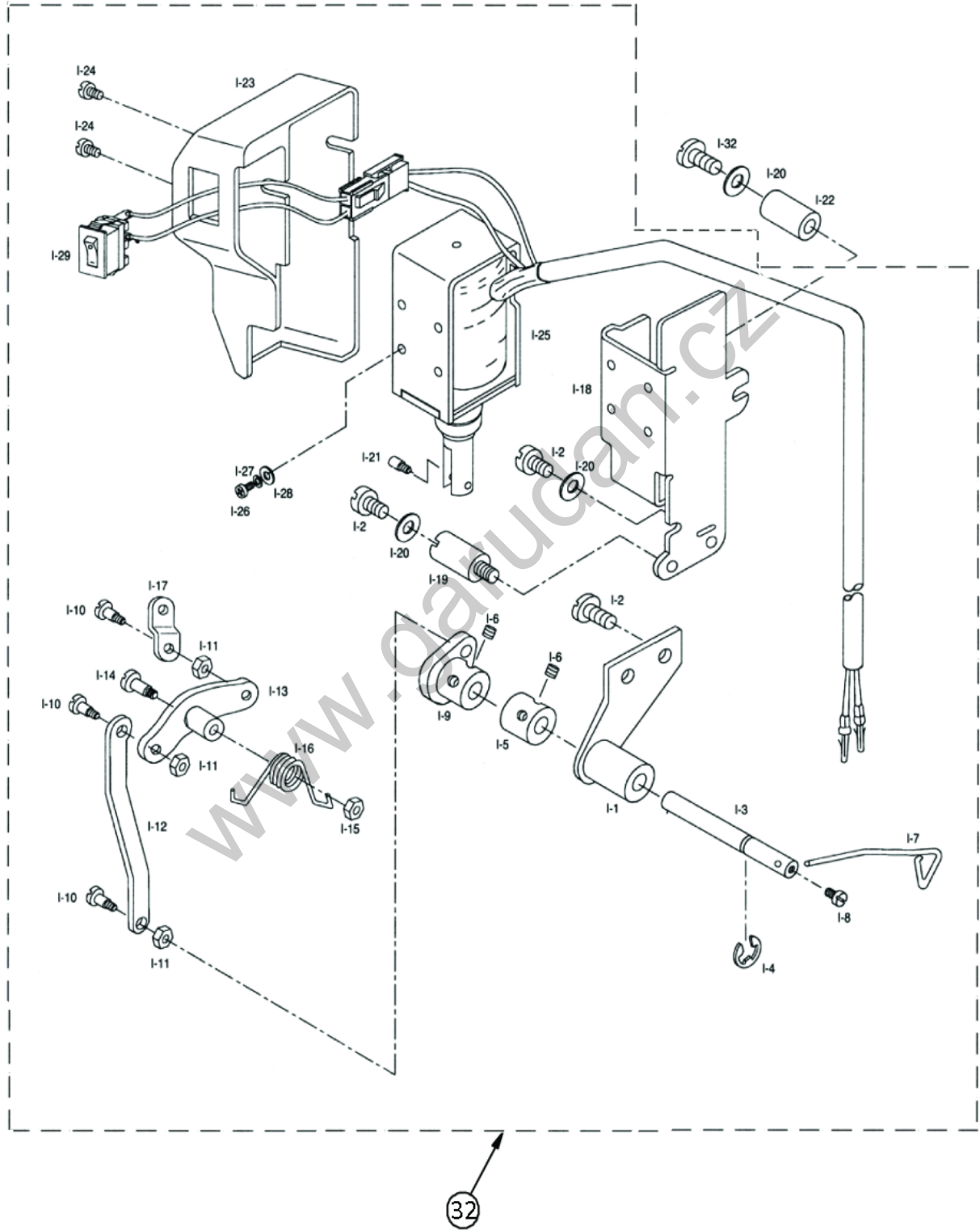
E. THREAD TRIMMING MECHANISM					
ODSTŘIHOVÝ MECHANISMUS					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
E-1	E3403525	Connectin Bar	Táhlo odstříhu	1	
E-2	E3506032	Needle plate	Stehová deska	1	
E-3	A4	DIN 125 Washer A4	DIN 125 podložka A4	1	
E-4	E4906032	Collar	Kroužek	1	
E-5	E2306032	Rod end bearing	Kloub	1	
E-6	E2406032	Hinge screw	Šroub	1	
E-7	E6506032	Holder	Držák	1	
E-8	C6306032	Nut	Matice	2	
E-9	AS1201F-M5-06	Choke Valve	Škrťící ventil	1	
E-10	KQ2L04-M5	Hose nipple	Nástrčná spojka	1	
E-11	A4906032	Screw	Šroub	3	
E-12	B3406032	Washer	Podložka	4	
E-13	E1303525	Screw	Šroub	10	
E-14	E1403525	Screw	Šroub	2	
E-15	A5206032	Screw	Šroub	2	
E-16	SS-1060210-TP	Screw	Šroub vložky stehové desky	2	
E-17	E3606032	Screw	Šroub	4	
E-18	10011499	Screw	Šroub	2	
E-19	E9146032	Screw	Šroub	1	
E-20	J4021507	Needle Plate Cover (hole for needle 2,4mm)	Vložka stehové desky (otvor pro jehlu 2,4mm)	1	
	J4031507	Needle Plate Cover (hole for needle 3,0mm)	Vložka stehové desky (otvor pro jehlu 3,0mm)	-	option
	J4001507	Needle Plate Cover (hole for needle 2,0mm)	Vložka stehové desky (otvor pro jehlu 2,0mm)	-	option
E-21	J43S1507	Fixed knife	Nůž pevný	-	
E-22	J4501507	Moving knife	Nůž pohyblivý	1	
	J45S1507	Moving knife	Nůž pohyblivý	-	option
E-23	J4801507	Moving lever	Páka	1	
E-23-1	J48S1507	Moving lever for J45S1507	Páka pro J45S1507	-	option
E-24	J4601507	Hinge screw	Šroub	1	
E-25	J4741507	Washer (t=0,4mm)	Podložka (t=0,4mm)	-	
E-25-1	J4751507	Washer (t=0,5mm)	Podložka (t=0,5mm)	-	
E-25-2	J4761507	Washer (t=0,6mm)	Podložka (t=0,6mm)	-	
E-26	J4801507	Thread cutter lever shaft	Čep	1	
E-27	J5201507	Moving knife driving lever assembly	Čep	1	
E-28	E9116032	Moving knife driving lever assembly	Páka	1	
E-29	J5401507	Screw	Šroub	1	
E-30	CDQ2B20-15DZ	Air Cylinder	Kompaktní válec	1	
E-31	E6106032	Bracket	Úhelník	1	
E-32	E6206032	Holder	Držák pneuválce	1	
E-33	E6606032	Strut A	Sloupek A	1	
E-34	E6406032	Strut B	Sloupek B	1	
E-35	E6306032	Plate	Plech	2	

**E9. FOR ROTARY HOOK ONLY  
PRO ROTAČNÍ CHAPAČ**



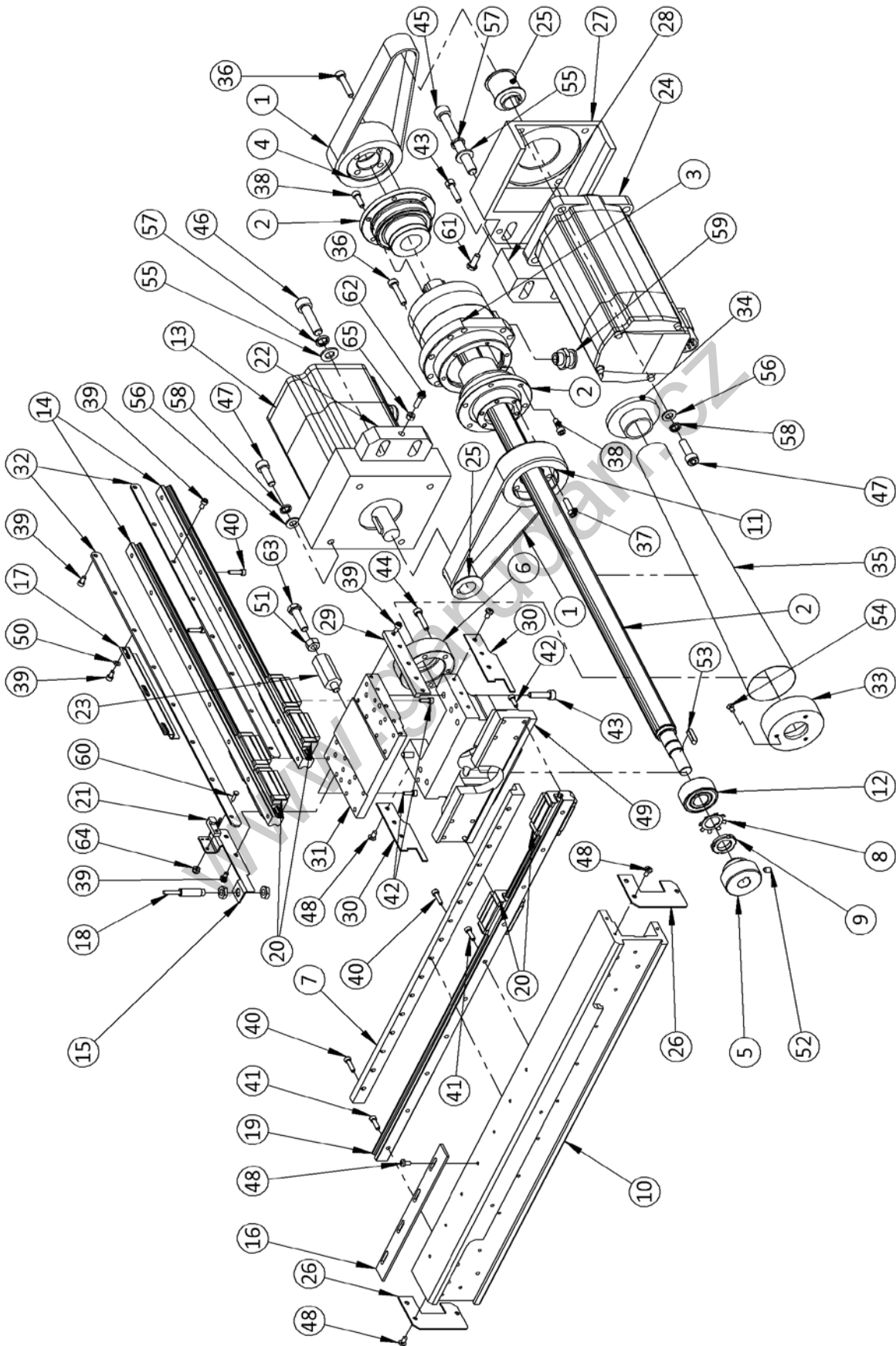
E9. FOR ROTARY HOOK ONLY					
PRO ROTAČNÍ CHAPAČ					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
E9-1	E9016032	Needle plate	Stehová deska	1	RH
E9-2	E9026032	Fixed mes	Nůž pevný	1	RH
E9-3	E9316032	Needle Plate Cover (hole for needle 2,0mm)	Vložka stehové desky (otvor pro jehlu 2,0mm)	-	RH
	E9036032	Needle Plate Cover (hole for needle 3,0mm)	Vložka stehové desky (otvor pro jehlu 3,0mm)	1	RH/option
E9-4	E9046032	Distance washer	Podložka distanční	1	RH
E9-5	E9056032	Moving knife	Nůž pohyblivý	1	RH
E9-6	E4206032	Hinge screw	Šroub	1	RH
E9-7	E5006032	Lever shaft	Čep	1	RH
E9-8	E4906032	Ring	Kroužek	1	RH
E9-9	E9096032	Moving link	Páka	1	RH
E9-10	E9106032	Thread trimming lever	Čep	1	RH
E9-11	E9116032	Thread trimming lever A	Čep	1	RH
E9-12	E4606032	Screw	Šroub	1	RH
E9-13	A4	DIN 125 Washer A4	DIN 125 podložka A4	1	RH
E9-14	E9146032	Screw	Šroub	1	RH
E9-15	E9156032	Bobbin stopper-Light and Medium Material	Držák středního dílu chapače-lehké a střed. šití	1	RH
	E91526032	Bobbin stopper-Heavy Material	Držák středního dílu chapače-těžké šití	1	RH/option
E9-16	M5x8	Screw DIN M5x8	Šroub	2	RH
E9-17	M4x4	Screw DIN M4x4	Šroub	2	RH
E9-18	E9186032	Screw	Šroub	2	RH
E9-19	E3606032	Screw	Šroub	4	RH

**F. WIPER MECHANISM  
MECHANISMUS ODHAZOVAČE NITĚ**



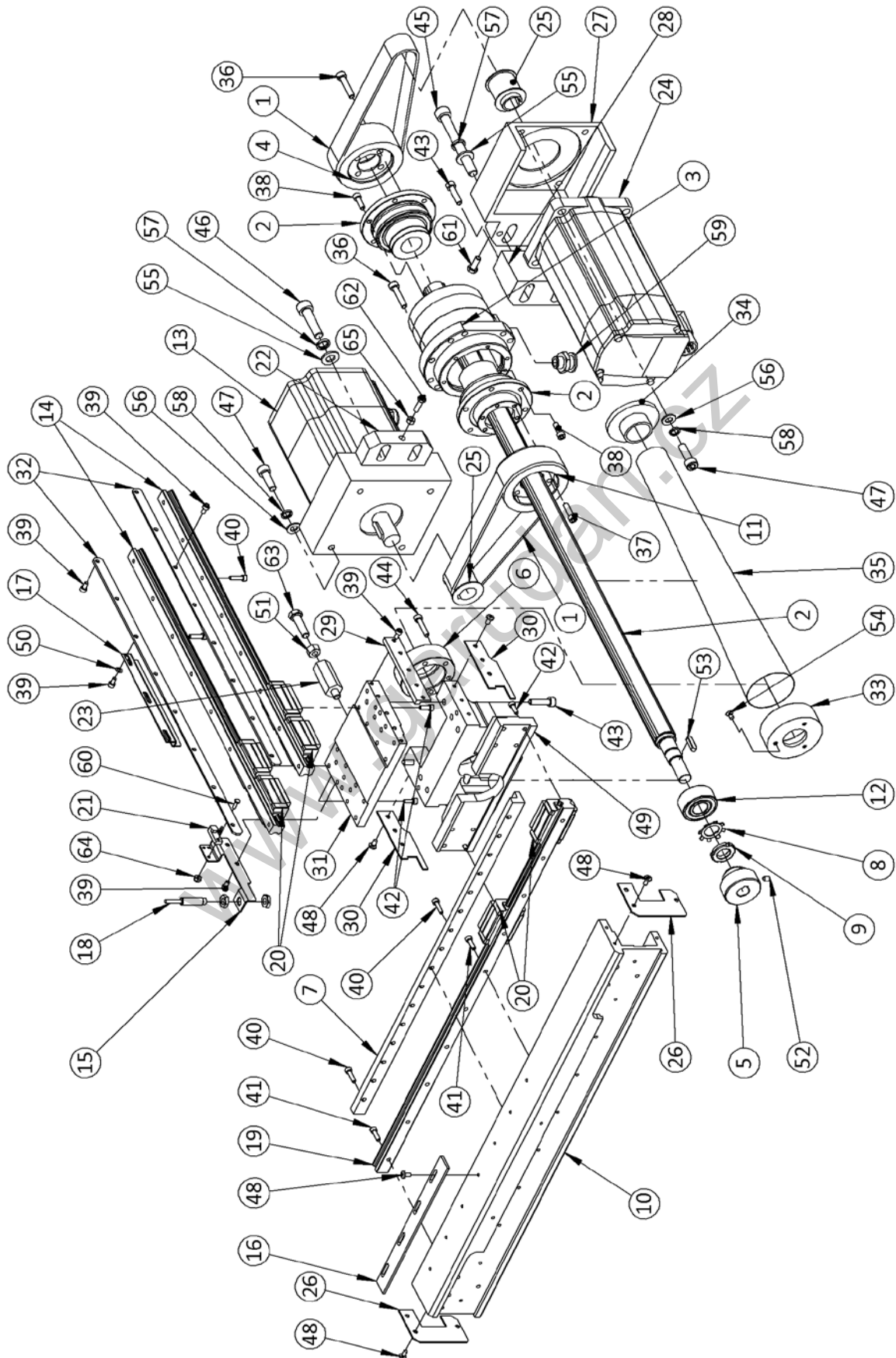
F. WIPER MECHANISM					
MECHANISMUS ODHAZOVAČE NITĚ					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
F-1	I0101507	Wiper Bracket Ass'y	Plech	1Set	
F-2	A0501507	Screw	Šroub	4	
F-3	F0306032	Wiper Rotation Shaft	Hřídel	1	
F-4	F3801507	E-Ring	Pojistný kroužek	1	
F-5	I0701507	Wiper	Odhazovač nitě	1	
F-6	I0801507	Screw	Šroub	1	
F-7	I0901507	Wiper Crank Ass'y	Kroužek	1Set	
F-8	I1001507	Hinge Screw	Šroub	3	
F-9	H3201507	Nut	Matice	3	
F-10	F1006032	Wiper Rod	Páka	1	
F-11	I1301507	Wiper Rock Link Ass'y	Páka	1	
F-12	I1401507	Hinge Screw	Šroub	1	
F-13	F1901507	Nut	Matice	1	
F-14	I1601507	Wiper Spring	Pružina	1	
F-15	I1701507	Wiper Solenoid Connecting Link	Plech	1	
F-16	I1801507	Wiper Base	Držák	1	
F-17	I1901507	Wiper Base Joint	Šroub	1	
F-18	C4901507	Washer	Podložka	3	
F-19	I3201507	Screw	Šroub	1	
F-20	I2201507	Wiper Base Collar	Kroužek	1	
F-21	I2301507	Wiper Cover	Kryt	1	
F-22	I0801507	Screw	Šroub	2	
F-23	I2501507	Wiper Solenoid Ass'y	Elektromagnet	1Set	
F-24	I2601507	Screw	Šroub	4	
F-25	I2701507	Washer	Podložka	4	
F-26	I2801507	Spring washer	Pružná podložka	4	
F-27	I2901507	Wiper On/Off Switch Ass'y	Vypínač	1	
F-28	I0601507	Screw	Šroub	4	
F-29	I2101507	Screw	Šroub	1	
F-30	I0501507	Wiper Rotation Shaft Collar	Kroužek	1	
F-31	E1801507	E-Ring	Pojistný kroužek	1	
F-32	F0106032	Wipper Assy	Odhazovač nitě - sestava	1	

**G. X-Y MOVING MECHANISM (1/2)**  
**MECHANISMUS POHYBU OSY X A Y (1/2)**



<b>G. X-Y MOVING MECHANISM (1/2)</b>					
<b>MECHANISMUS POHYBU OSY X A Y (1/2)</b>					
<b>REF. NO</b>	<b>PARTS NO.</b>	<b>NAME OF PARTS</b>	<b>POPIS</b>	<b>QTY</b>	<b>NOTE</b>
G-1	G2506032	T. belt	Řemen ozubený GT3	2	
G-2	G8903525	Ball Screw Shaft	Hřídel Kuličková Úplná	1	
G-3	G7503525	Bushing	Pouzdro	1	
G-4	G7603020	Driven Pulley	Ozubená řemenice GT	1	
G-5	G3506032	Driven Gear	Kolo ozubené	1	
G-6	G7803525	Bushing	Pouzdro	1	
G-7	G803525	Axis Rack	Hřeben ozubený	1	
G-8	G8803020	Washer MB3	Podložka MB3	1	
G-9	G8703020	Nut KM3	Matice KM3	1	
G-10	G8203525	X Axis Moving Frame	Dural. profil -jezdec osy X	1	
G-11	G8103020	Driven Pulley	Ozubená řemenice GT	1	
G-12	G7203020	Bearing	Ložisko	1	
G-13	G7403525	Step motor	Krokový motor	1	
G-14	G1403525	Linear Motion Y	Lineární vedení Y	2	
G-15	AnB-3525-004	X,Y Sensor Bracket	Držák snímačů X,Y	1	
G-16	AnB-3525-012	X Sensor Plate	Clonka X	1	
G-17	AnB-3525-005	Y Sensor Plate	Clonka Y	1	
G-18	K400 1507	X Sensor	Snímač X	1	
G-19	G1903525	Linear Motion X	Lineární vedení X	1	
G-20	G2003525	Railway of linear guide	Vozík lineárního vedení	6	
G-21	GX-F8A	Y Sensor	Snímač Y	1	
G-22	G0213525	Motor Bracket	Držák motoru	1	
G-23	H4306032	Distance Screw	Doraz	1	
G-24	G0116032	Servo Motor	Servo motor	1	
G-25	G0506032	Timing Pulley	Ozubená řemenice GT	2	
G-26	G6206032	Cover	Kryt	2	
G-27	G0206032	Motor Bracket	Držák motoru	1	
G-28	G8503020	Bracket	Držák	1	
G-29	G8603525	Shim	Příložka	1	
G-30	G9423525	Cover	Kryt	2	
G-31	AnB-3525-001N	Plate	Deska	1	
G-32	G8403525	Cover	Kryt	2	
G-33	AnB-3525-018	Cover Flange 1	Příruba spirálového krytu 1	1	
G-34	AnB-3525-019	Cover Flange 2	Příruba spirálového krytu 2	1	
G-35	035-0500-040	Spiral Cover	Spirálový kryt	1	
G-36	G3603525	Screw	Šroub	13	
G-37	G3703525	Screw	Šroub	6	
G-38	G3906032	Screw	Šroub	12	
G-39	G3903525	Screw	Šroub	23	

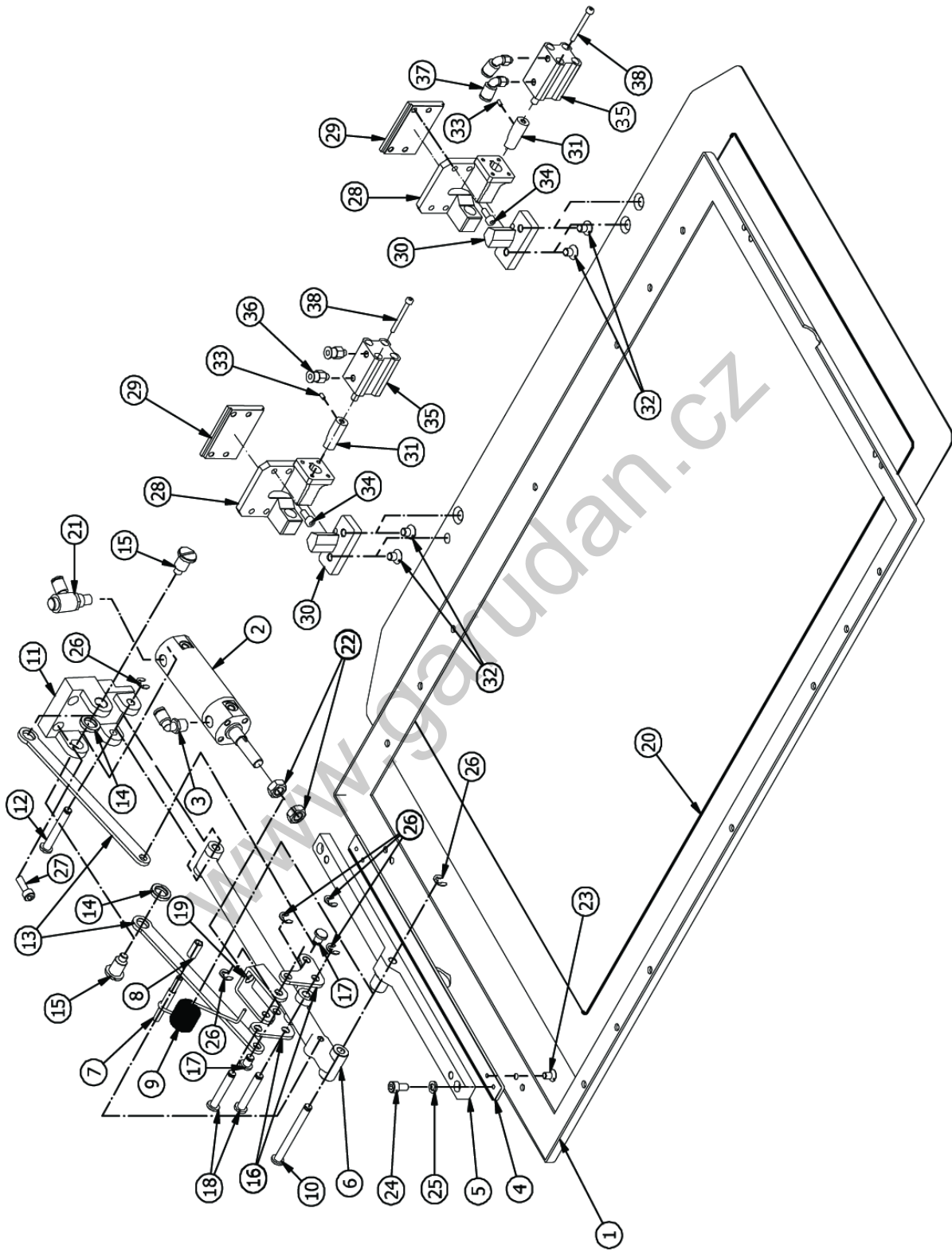
**G. X-Y MOVING MECHANISM (2/2)**  
**MECHANISMUS POHYBU OSY X A Y (2/2)**





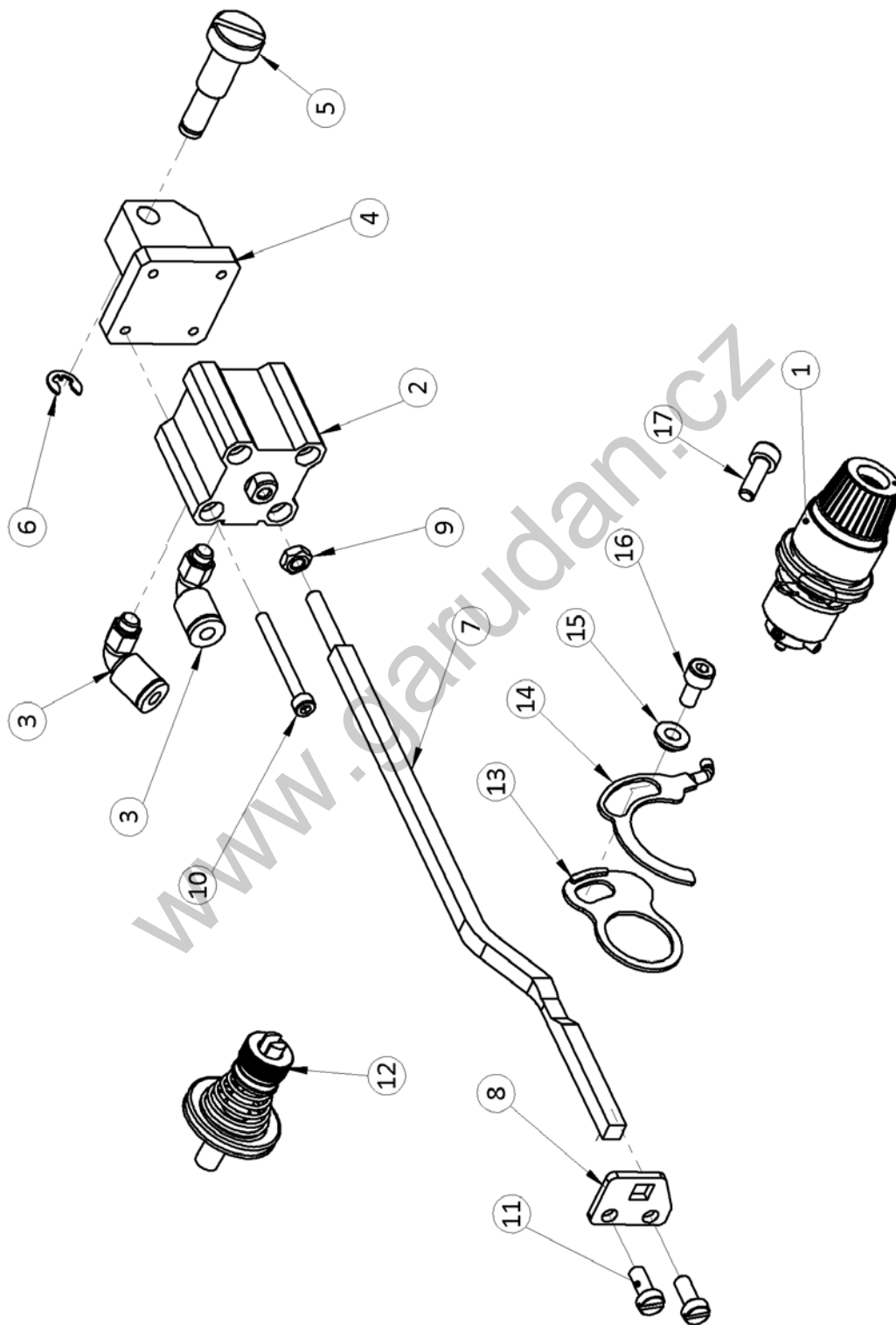
<b>G. X-Y MOVING MECHANISM (2/2)</b>					
<b>MECHANISMUS POHYBU OSY X A Y (2/2)</b>					
<b>REF. NO</b>	<b>PARTS NO.</b>	<b>NAME OF PARTS</b>	<b>POPIS</b>	<b>QTY</b>	<b>NOTE</b>
G-40	G4003525	Screw	Šroub	32	
G-41	G4103525	Screw	Šroub	10	
G-42	G4203525	Screw	Šroub	24	
G-43	G4203525	Screw	Šroub	8	
G-44	G2306032	Screw	Šroub	6	
G-45	G4503525	Screw	Šroub	2	
G-46	A0506032	Screw	Šroub	2	
G-47	H0806032	Screw	Šroub	8	
G-48	G4803525	Screw	Šroub	16	
G-49	AnB-3525-024N	Bracket	Držák	8	
G-50	G5003525	Washer	Podložka	3	
G-51	G5103525	Nut	Matice	1	
G-52	G5203525	Screw	Šroub stavěcí	2	
G-53	G3406032	Tongue	Pero	1	
G-54	G5403525	Screw	Šroub	3	
G-55	A0706032	Washer	Podložka	4	
G-56	H2306032	Washer	Podložka	8	
G-57	G1106032	Spring Washer	Pružná podložka	4	
G-58	H2206032	Spring Washer	Pružná podložka	8	
G-59	G5903525	Grease Head	Mazací hlava	1	
G-60	G6003525	Screw	Šroub	1	
G-61	G6103525	Screw	Šroub	1	
G-62	G0906032	Screw	Šroub	1	
G-63	G6303525	Screw	Šroub	1	
G-64	G6403525	Nut	Samojistící matice	1	
G-65	C6306032	Nut	Matice	1	

I. FEED FRAME MECHANISM  
PODÁVACÍ RÁMEČEK



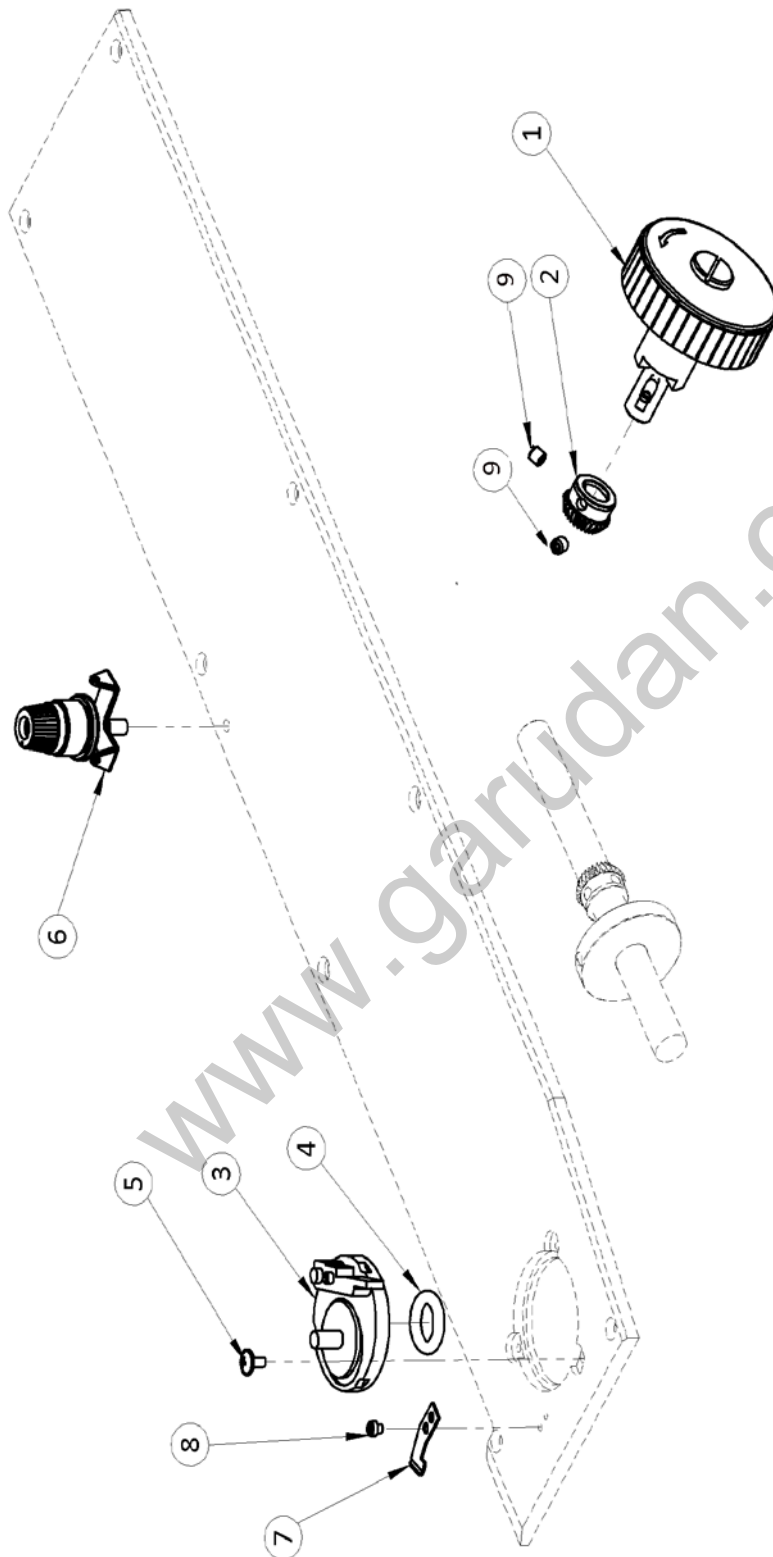
I. FEED FRAME MECHANISM					
PODÁVACÍ RÁMEČEK					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
I-1	I0103525	Upper feed plate	Rámeček GPS-3525- horní	1	
I-2	CG1BN25-20	Pneumatic cylinder	Válec pneumatický	2	
I-3	CQ2B12-20DM	Hose nipple	Nástrčná spojka	2	
I-4	I0406032	Upper feed plate bracket	Plech	2	
I-5	I0506032	Upper feed plate bracket	Držák horní	2	
I-6	I0603525	Uper clampdrive link	Držák horní	6	
I-7	I0706032	Spring pin	Kolík	2	
I-8	I0806032	Spring pin rubber	Trubička plastová	2	
I-9	I0916032	Spring L	Pružina L	1	
	I0926032	Spring P	Pružina P	1	
I-10	I1006032	Upper feed plate link shaft	Hřídel	2	
I-11	I1106032	Upper clamp bracket	Držák	2	
I-12	I1206032	Hinge shaft	Hřídel	2	
I-13	I1303020	Upper clamp link A	Táhlo	4	
I-14	I1406032	Washer	Podložka	4	
I-15	I1506032	Hinge stud for cylinder	Čep	4	
I-16	I1606032	Upper clamp link A	Táhlo	4	
I-17	I1706032	Upper clamp link shaft	Hřídel	4	
I-18	I1806032	Upper clamp link shaft A	Hřídel	4	
I-19	I1906032	Cylinder knuckle	Kloub	2	
I-20	I2003525	Feed plate lower	Rámeček GPS-3525 - spodní plech	1	
I-21	AS2201F-01-04S	Choke	Škrtící ventil se z.v.	2	
I-22	H5406032	Nut	Matice	4	
I-23	I2306032	Screw	Šroub	4	
I-24	A4906032	Screw	Šroub	4	
I-25	A5006032	Spring washer	Podložka pružná	4	
I-26	I2606032	Retaining washer	Pojistný kroužek	12	
I-27	G3906032	Screw	Šroub	6	
I-28	I2806032	Bracket	Deska upínací	2	
I-29	I2906032	Bracket plate	Deska	2	
I-30	I3006032	Block stopper	Držák rámečku	2	
I-31	I3106032	Knuckle pin	Čep upínací	2	
I-32	I3206032	Screw	Šroub	4	
I-33	I3306032	Pin	Kolík	2	
I-34	I3406032	Screw	Šroub	8	
I-35	CQ2B12-20DM	Pneumatic cylinder	Kompaktní válec	2	
I-36	KQ2H04-M5	Hose nipple	Nástrčná spojka	2	
I-37	KQ2L04-M5	Hose nipple	Nástrčná spojka	2	
I-38	I3806032	Screw	Šroub	8	

**J. THREAD TENSION MECHANISM  
HLAVNÍ A POMOCNÝ NAPÍNAČ NITÍ**



<b>J. THREAD TENSION MECHANISM</b>					
<b>HLAVNÍ A POMOCNÝ NAPÍNAČ NITÍ</b>					
<b>REF. NO</b>	<b>PARTS NO.</b>	<b>NAME OF PARTS</b>	<b>POPIS</b>	<b>QTY</b>	<b>NOTE</b>
J-1	H0101507	Thread Tension Adjusting Ass'y	Napínač nitě -kompletní	1Set	
J-2	CQ2B16-10D	Pneumatic cylinder	Kompaktní válec	1	
J-3	KQ2L04-M5	Hose nipple	Nástrčná spojka	2	
J-4	C6106032	Bracket	Držák	1	
J-5	C6006032	Screw	Šroub	1	
J-6	C5806032	Retaining washer	Pojistný kroužek	1	
J-7	J0706032	Thread release action bar	Páka	1	
J-8	J0806032	Bar guide	Vodič	1	
J-9	A5406032	Nut	Matice	1	
J-10	H1501507	Second Thread Tension Adjusting Ass'y	Napínač nitě -kompletní	1Set	
J-11	J1706032	Screw	Šroub	2	
J-12	J1006032	Second Thread Tension Adjusting Ass'y	Napínač nitě -kompletní	1	
J-13	H4401507	Thread detecting plate guide	Podložka	1	
J-14	H4601507	Thread detecting plate	Plech detekční	1	
J-15	H4501507	Thread detecting plate Ring	Plastový kroužek	1	
J-16	M4x8	Screw DIN 912 M4x8	Šroub	4	
J-17	M4x12	Screw DIN 912 M4x12	Šroub	2	

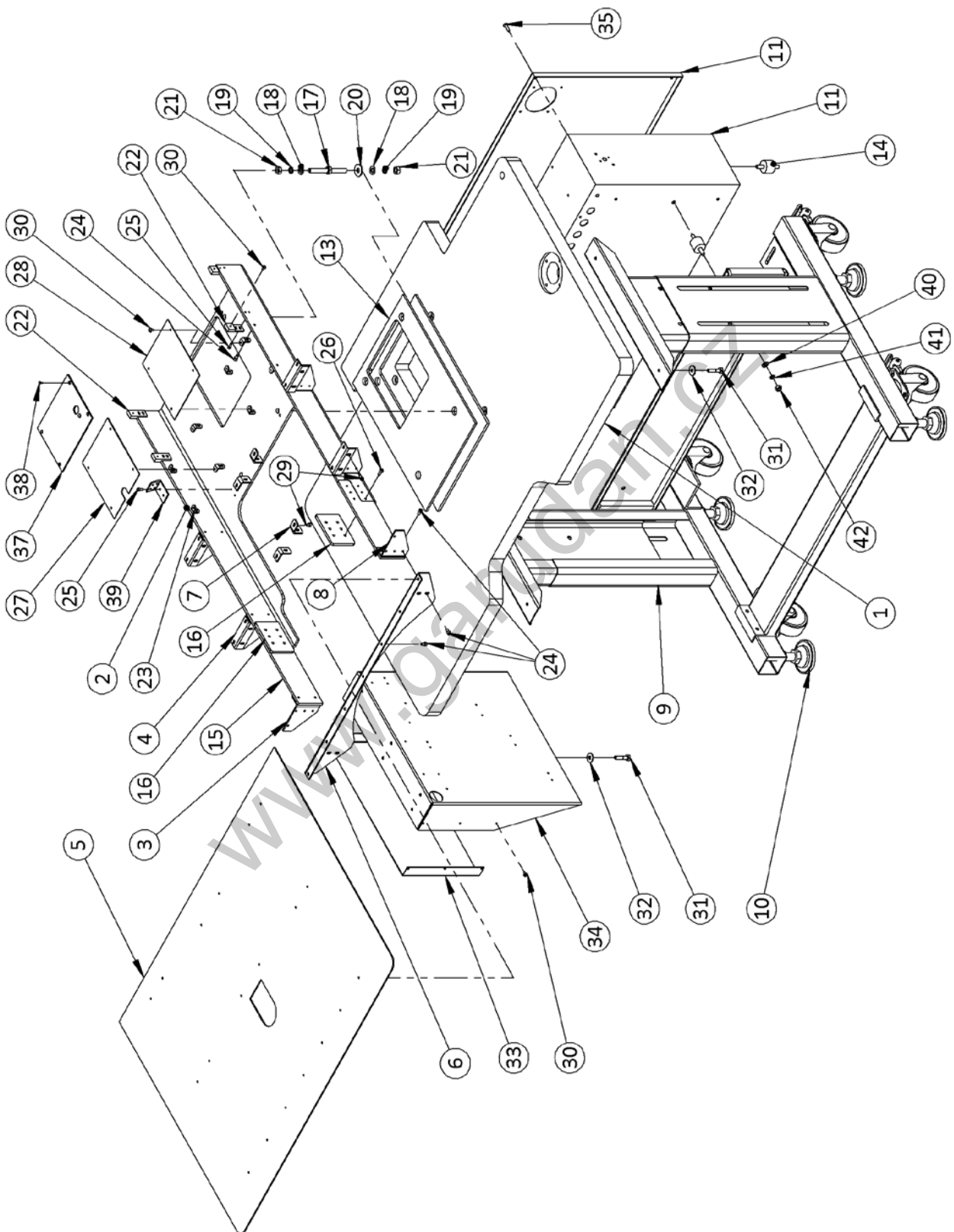
**K. BOBBIN WINDER AND HAND PULLEY  
NAVÍJEČ A RUČNÍ KOLO**



K. BOBBIN WINDER AND HAND PULLEY					
NAVÍJEČ A RUČNÍ KOLO					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
K-1	K0106032-SET	Hand pulley - SET	Ruční kolo - set	1	
K-2	K1006032	Hand pulley gear	Kolo ozubené	1	
K-3	D4401505	Bobbin Winder	Navíječ	1	
	K2406032	Bobbin Winder	Navíječ	1	/RH
K-4	941048-1	O Ring	Kroužek navíječe	1	
K-5	M4x8	Screw DIN 84 M4x8	Šroub	1	
K-6	K0806032	Second Thread Tension Adjusting Ass'y	Napínač nitě	1	
K-7	D3301507	Thread Winder Mes	Nůž navíječe niti	1	
K-8	M3,5x5	Screw DIN 84 M3,5x5	Šroub	1	
K-9	M6x6	Screw DIN 913 M6x6	Šroub	1	

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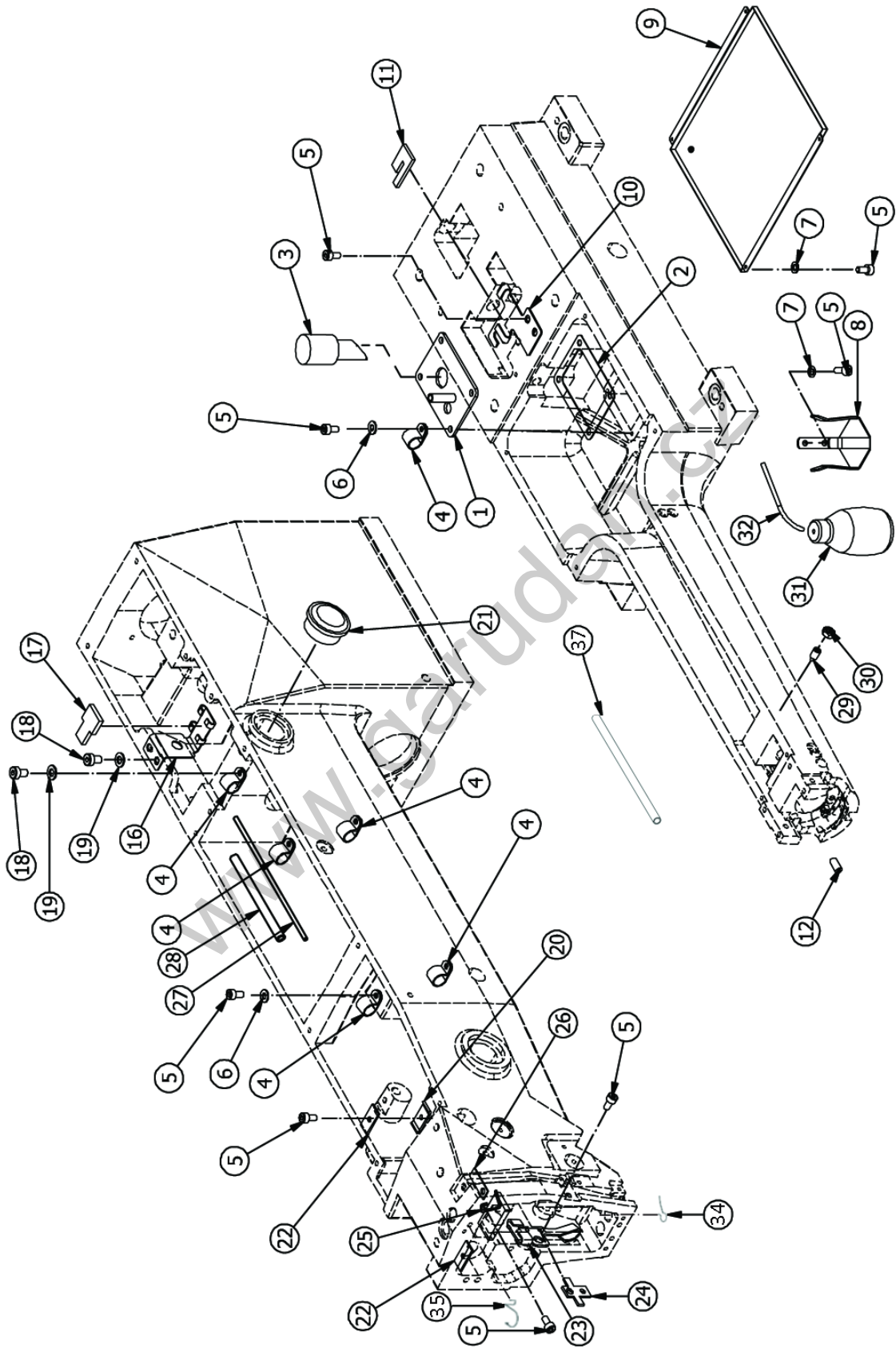
**L. STAND AND TABLE**  
**STOJAN A PRACOVNÍ DESKY**





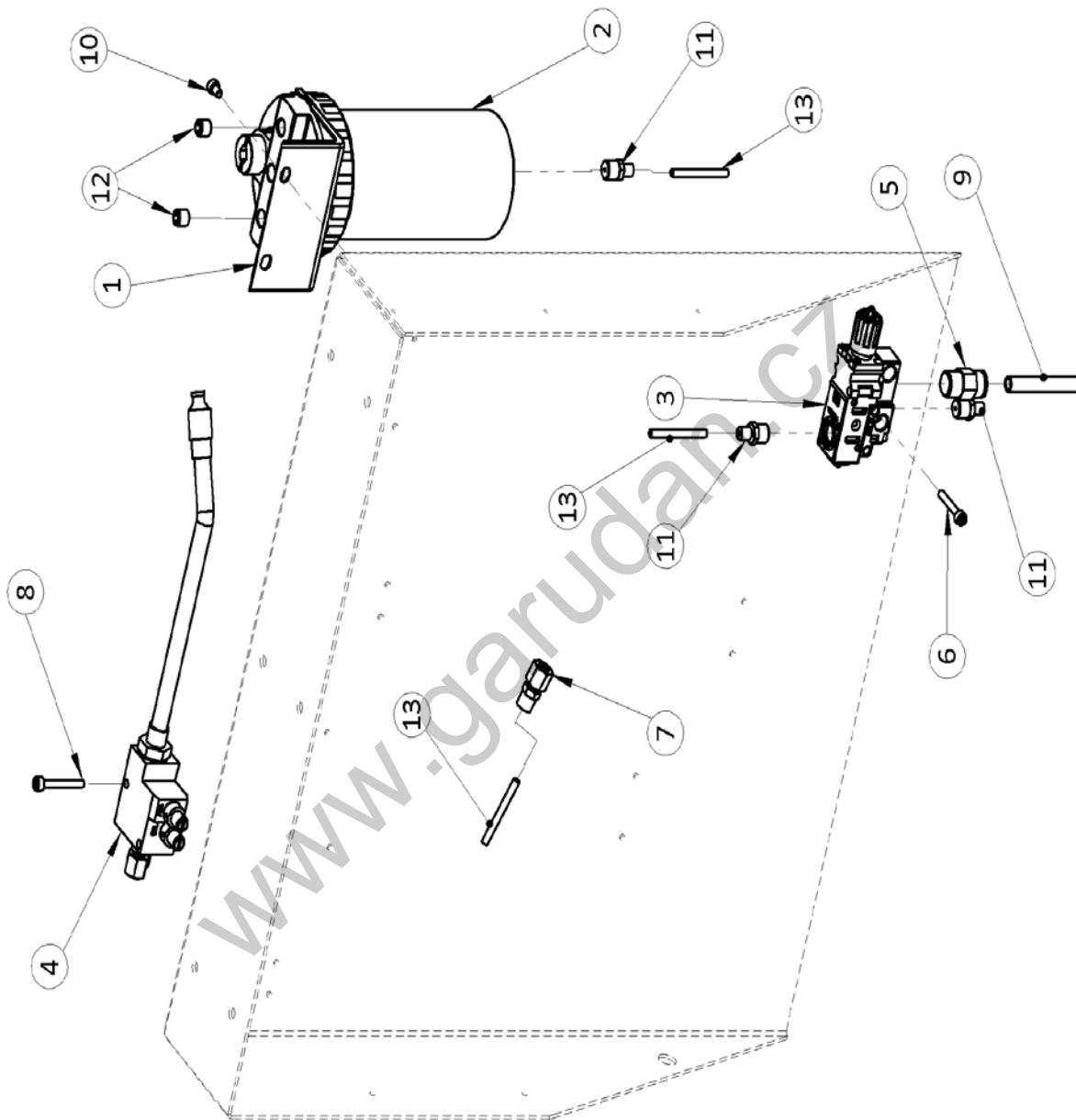
L. STAND AND TABLE					
STOJAN A PRACOVNÍ DESKY					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
L-1	Plát CZ B007	Table	Plát CZ GPS 3525	1	
L-2	AnB-3525-029	Frame	Rám nosný	1	
L-3	AnB-3525-032	Left Holder	Držák levý	3	
L-4	AnB-3525-035	Holder	Držák	4	
L-5	L0403525	Table Rustfree	Stůl nerezový	1	
L-6	AnB-3525-031	Front Sheet	Plech přední	1	
L-7	AnB-3525-045	Holder	Držák	4	
L-8	AnB-3525-061	Rigt Holder	Držák pravý	3	
L-9	JAM-10	Stand	Kostra stojanu	1	
L-10	FJGN20-100	Adjustable Foot	Noha stavitelná	4	
L-11	Roz3525	Control Box	Rozvaděč	1	
L-13	L0903525	Rubber Underlay	Podložka gumová	2	
L-14	T69321	Silentblock	Silentblok	4	
L-15	AnB-3525-314	Support	Nosník	2	
L-16	AnB-3525-315	Plate	Příložka	2	
L-17	L0803525	Screw	Šroub	4	
L-18	A0706032	Washer	Podložka	8	
L-19	A0606032	Spring washer	Podložka pružná	8	
L-20	L2003525	Washer	Podložka	4	
L-21	L2103525	Nut	Matice	8	
L-22	AnB-3525-048	Holder	Držák	4	
L-23	S0206032	Holder	Držák	8	
L-24	A4906032	Screw	Šroub	31	
L-25	I3406032	Screw	Šroub	6	
L-26	A1106032	Screw	Šroub	12	
L-27	AnB-3525-037	Cover	Kryt	1	
L-28	AnB-3525-043	Cover	Kryt	1	
L-29	N0206032	Screw	Šroub	12	
L-30	L3003525	Screw	Šroub	14	
L-31	L3103525	Wood Screw	Vrut	14	
L-32	L3203525	Washer	Podložka	14	
L-33	AnB-3525-034	Cover	Kryt	1	
L-34	AnB-3525-033	Case	Skříň pneumatického rozvaděče	1	
L-35	L3503525	Screw	Šroub	4	
L-37	L1806032	Cover	Kryt	1	
L-38	L3803525	Screw	Šroub	4	
L-39	N2806032	Tube Holder	Držák hadic	1	
L-40	H2306032	Waher	Podložka	8	
L-41	H2206032	Spring Washer	Pružná podložka	8	
L-42	H5406032	Nut	Matice	4	

M. LUBRICATION PARTS  
MAZÁNÍ



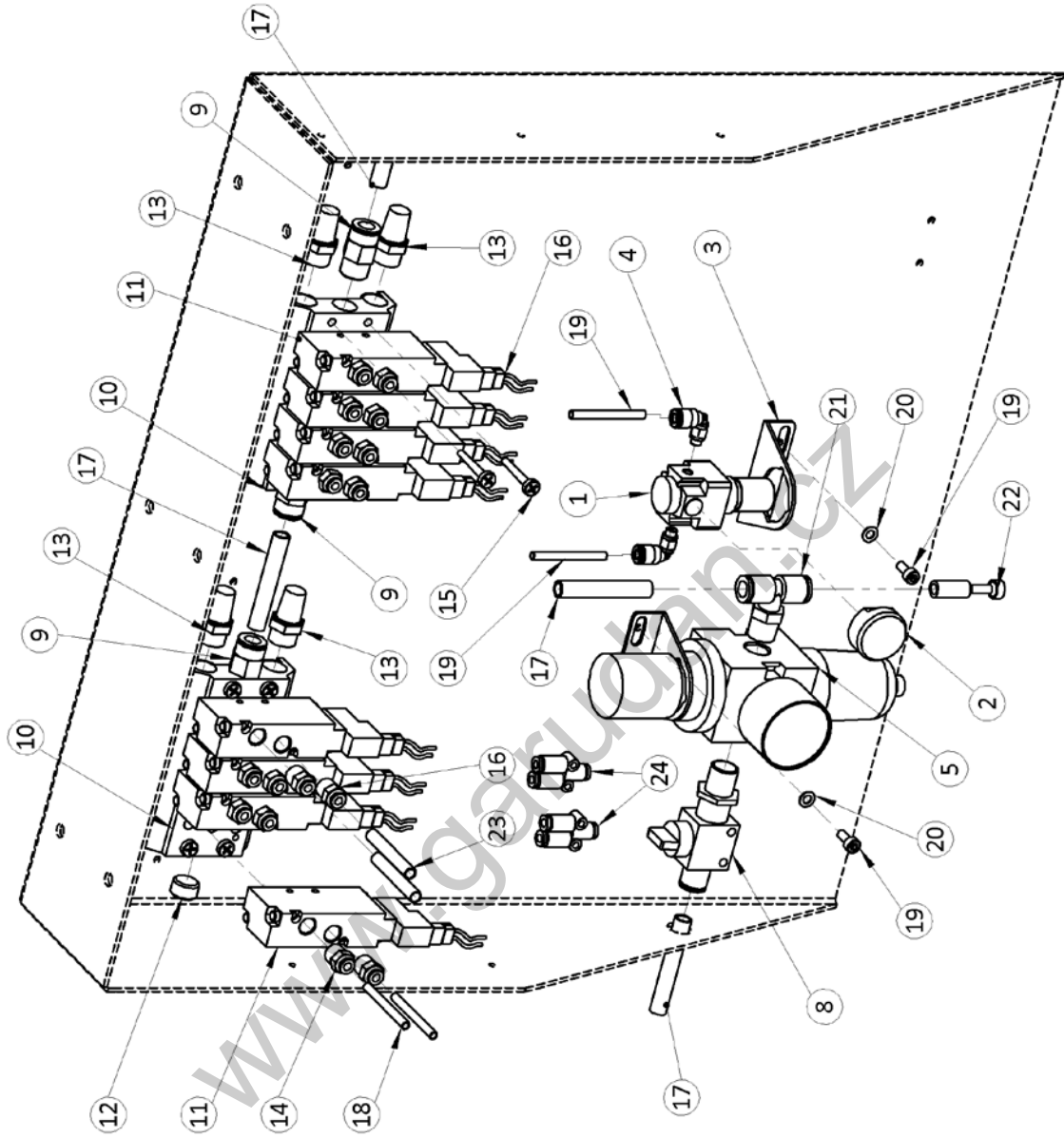
M. LUBRICATION PARTS					
MAZÁNÍ					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
M-1	M0106032	Cover	Kryt	1	
	M0106040	Cover	Kryt	1	6040
M-2	M0206032	Cover gasket	Těsnění fibrové	1	
M-3	M0306032	Oil tank gauge	Olejoznak	1	
M-4	HEYMAN 3376	Holder 9,5	Příchytka 9,5	1	
M-5	A1606032	Screw	Šroub	18	
M-6	A5606032	Washer	Podložka	14	
M-7	B2206032	Spring washer	Podložka	6	
M-8	M0806032	Holder of oil cap	Držák olejničky	1	
M-9	M0906032	Oil pan	Olejová vana	1	
M-10	M1006032	Lubrication plate	Držák	1	
	M10206032	Lubrication plate	Držák	1	/RH
M-11	M1106032	Lubrication felt	Mazací plst	1	
	M11026032	Lubrication felt	Mazací plst	1	/RH
M-16	M1606032	Lubrication plate	Držák	1	
M-17	M1706032	Lubrication felt	Mazací plst	1	
M-18	G6606032	Screw	Šroub	3	
M-19	B3406032	Washer	Podložka	1	
M-20	M2006032	Lubrication plate	Držák	1	
M-21	M2106032	Oil observator complete	Olejoznak	1	
M-22	M2206032	Lubrication plate	Držák	3	
M-23	M2306032	Lubrication plate	Držák	1	
M-24	M2406032	Lubrication felt	Mazací plst	1	
M-25	M2506032	Oil wick holder	Držák	1	
M-26	M2606032	Oil plate	Plech	1	
M-27	M2706032	Wick	Knot 3mm	10m	
M-28	M2806032	Tube	Hadička 4/6mm	5m	
M-29	M2906030			1	/RH
M-30	C6306032	Nut	Matice	1	/RH
M-31	M3106032	Oil Tank	Nádržka na olej	1	
M-32	M2806032	Tube	Trubička 4/6	1	
M-34	M3406032	Holder of oil plate - down	Držák maz. manžety spodní	1	
M-35	M3506032	Holder of oil plate - up	Držák maz. manžety horní	1	
M-37	M3706032	Silikon Tube 4x0.5m	Hadička silikonová 4x0,5 m	1	RH

**M9. FOR ROTARY HOOK ONLY  
PRO ROTAČNÍ CHAPAČ**



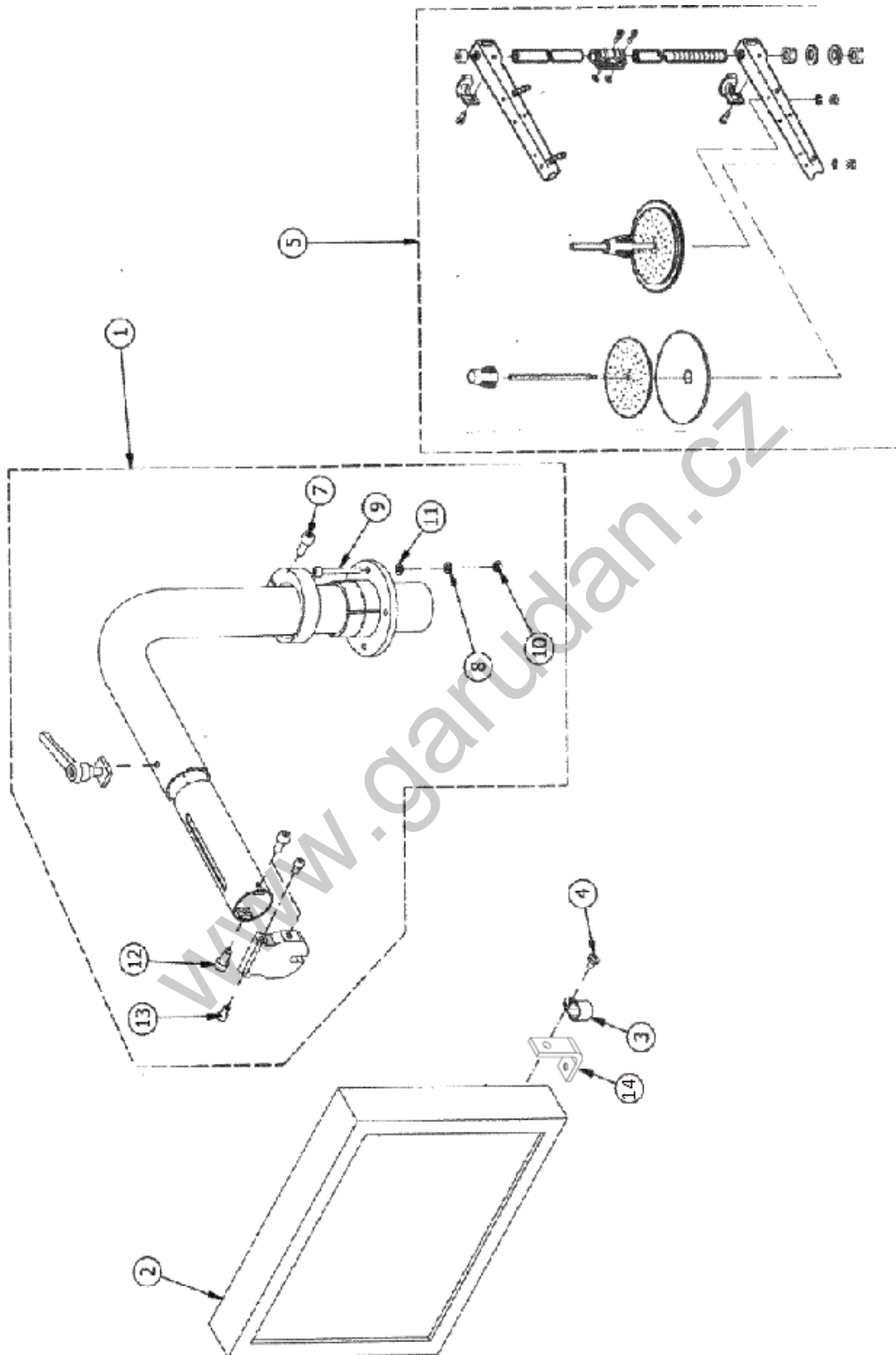
<b>M9. FOR ROTARY HOOK ONLY</b>					
<b>PRO ROTAČNÍ CHAPAČ</b>					
<b>REF. NO</b>	<b>PARTS NO.</b>	<b>NAME OF PARTS</b>	<b>POPIS</b>	<b>QTY</b>	<b>NOTE</b>
M9-1	ALT10	Bracket	Držák	1	
M9-2	ALT10-S1	Oil tank	Maznice olejová s hladinoměrem	1	
M9-3	ALIP100-1	Pulse Lubricator	Maznice pulzní	1	
M9-4	LMV220-20	Mixing Valve with Jet	Ventil směšovací s tryskou	1	
M9-5	KQ2H06	Hose nipple	Nástrčná spojka	3	
M9-6	M9603525	Screw	Šroub	2	
M9-7	PG6-4	Reduction	Nástrčná spojka - redukce	1	
M9-8	M9803525	Screw	Šroub	2	
M9-9	TU0604B-20	Tube 6mm	Hadice 6mm	0.4m	
M9-10	M9103525	Screw	Šroub	2	
M9-11	M -1H-4	Miniatur Fitting	Šroubení miniaturní	4	
M9-12	TB00094	Plug	Ucpávka	2	
M9-13	U1301507	Tube 4mm	Hadička 4mm	2m	

**N. AIR CONTROL PARTS  
PNEUMATICKÉ KOMPONENTY**



N. AIR CONTROL PARTS					
PNEUMATICKÉ KOMPONENTY					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
N-1	AR10-M5H	Regulator of pressure	Regulátor tlaku	1	
N-2	G27-10-R1	Manometer	Manometr	1	
N-3	AR10P-270AS	Holder	Upevňovací úhelník pro AR10	1	
N-4	KQ2L04-M5	Hose nipple	Nástrčná spojka	2	
N-5	U0301507	Filter Regulator	Filtr s regulátorem tlaku	1	
N-8	U0201507	Finger Valve	Ruční ventil	1	
N-9	U0401507	Clutch	Nástrčná spojka	3	
N-10	U0831507	Plate	Rozvodná deska	2	standard
N-11	Tv25110-06	Magnetic Valve	Ventil elektromagnetický	8	standard
N-12	U1001507	Plug	Ucpávka	1	
N-13	U0901507	Silencer	Tlumič hluku	4	
N-14	U1201507	Clutch	Nástrčná spojka	14	
N-15	U1401507	Screw	Vrut	8	
N-16	PC6-01	Clutch	Nástrčná spojka	2	
N-17	U0601507	Tube 8mm	Hadice 8mm	0.4m	
N-18	U1301507	Tube 4mm	Hadice 4mm	30m	
N-19	A1606032	Screw	Šroub	4	
N-20	A5606032	Washer	Podložka	4	
N-21	U0701507	Clutch	Nástrčná spojka T	1	
N-22	U0501507	Plug	Zátka	1	
N-23	TU0604B-20	Tube 6mm	Hadice 6mm	3.2m	
N-24	PY4	Pipe Fitting	Nástrčná spojka rozdvojka	2	

**Q. OPERATION UNIT AND THREAD STAND**  
**DOTYKOVÝ MONITOR A NIŤOVÝ STOJÁNEK**

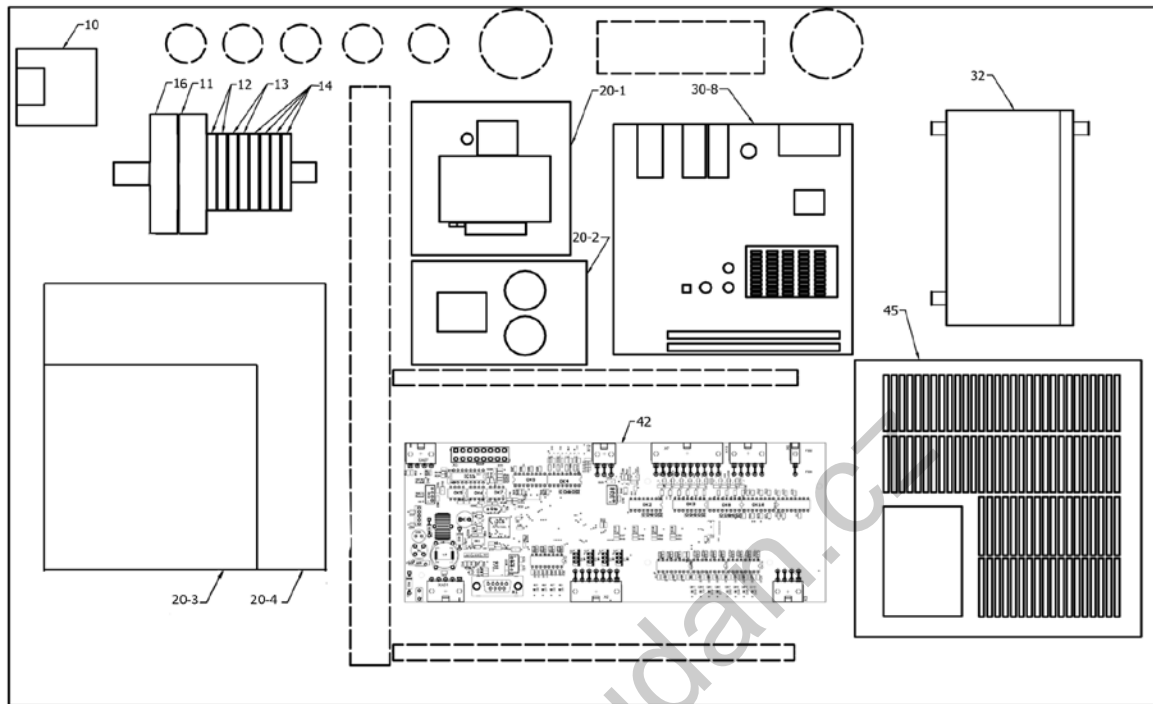




Q. OPERATION UNIT AND THREAD STAND					
DOTYKOVÝ MONITOR A NIŤOVÝ STOJÁNEK					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
Q-1	O2201507	Holder LCD	Držák LCD	1set	
Q-2	O2101507	Touch LCD 15"	Dotykový LCD monitor 15"	1	
Q-3	HEYMAN 3376	Holder 9.5	Držák pera-přichytka 9.5	1	
Q-4	Q4003525	Screw	Šroub	1	
Q-5	D1601507	Thread Stand Assy	Niřový stojánek	1	
Q-7	Q0706032	Screw	Šroub	1	
Q-8	Q0806032	Spring Washer	Pružná podložka	4	
Q-9	Q0906032	Screw	Šroub	4	
Q-10	Q1006032	Hex Nut	Matice	4	
Q-11	Q1106032	Washer	Podložka	4	
Q-12	Q1206032	Screw	Šroub	2	
Q-13	Q1306032	Screw	Šroub	2	
Q-14	Q02801507	Holder of pen	Držák pera	1	

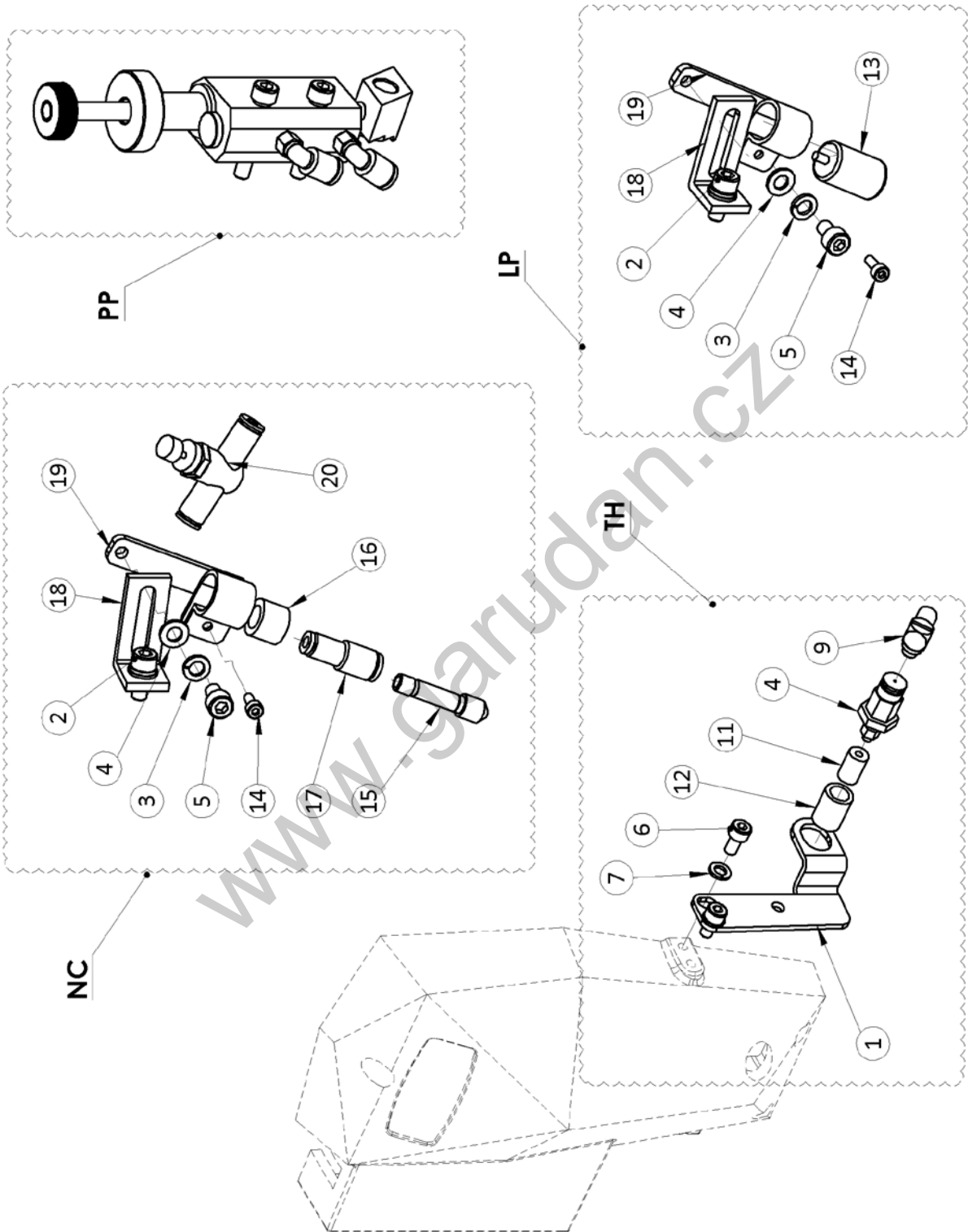
R. CONTROL BOX  
ROZVADĚČ

version G / verze G



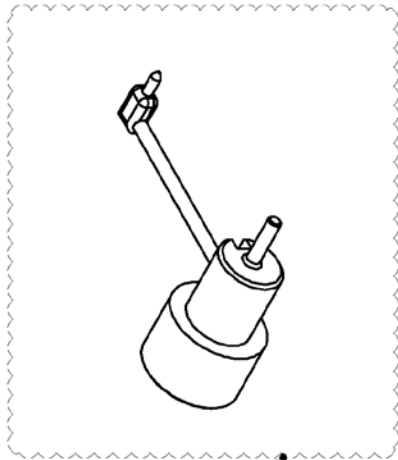
R. CONTROL BOX					
ROZVADĚČ					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
R-10	R1001507	Master Switch	Vypínač 20A	1	
R-11	R1101507	Circuit breaker	Jistič D10	1	
R-12	R1201507	Terminal board (white)	Svorka (bílá)	2	
R-13	R1301507	Terminal board (blue)	Svorka (modrá)	2	
R-14	R1401507	Terminal board (yellow-green)	Svorka (žlutozelená)	4	
R-16	R1601507	Surge suppressors	Svodič přepětí	1	
R-20-1	R2011507	Energy transducer	Transformátor	1	
R-20-2	R2021507	Board	Karta trafo	1	
R-20-3	R2053525	Converter	Měnič pro krok. motor	1	
R-20-4	R2056032	Converter	Měnič pro motor servo	1	
R-30	R3001507	PC modul F	PC modul F	1	
R-30-8	R3081507	PC modul G	PC modul G	1	
R-32	R3201507	Power supply ATX	Zdroj ATX	1	
R-40	R4001507	Board A	Karta řízení A	1	
R-41	R4101507	Board C	Karta převod C	1	
R-42	R4201507	Board B	Karta řízení B	1	
R-45	C4611507	Driver for Motor Teco	Řídicí jednotka k motoru TECO	1	

**S1. OPTION  
VYBAVENÍ NA OBJEDNÁVKU**

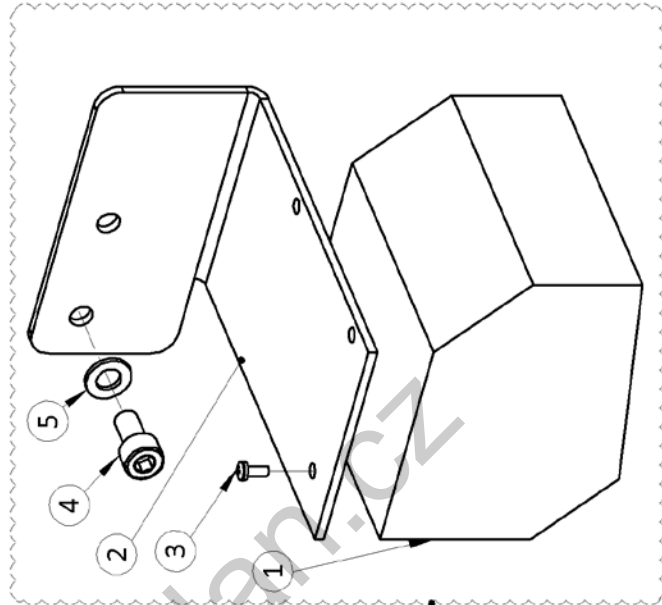


S1. OPTION					
VYBAVENÍ NA OBJEDNÁVKU					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
	TH Optional	Thread Holder	Přidržovač nitě		
S1-1	S0106032	Bracket	Držák	1	
S1-2	A1106032	Screw	Šroub	2	
S1-3	A5006032	Spring washer	Podložka pružná	4	
S1-4	B3406032	Washer	Podložka	4	
S1-5	N0206032	Screw	Šroub	2	
S1-6	A1606032	Screw	Šroub	2	
S1-7	B2206032	Spring washer	Podložka	2	
S1-8	A5606032	Washer	Podložka	1	
S1-9	M-5HL-4	Hose nipple	Šroubení miniaturní	1	
S1-10	CJPB6-5	Pneumatic cylinder mini	Válec miniaturní	1	
S1-11	09-003C-5030	Knuckle for pin cylinder	Váleček	1	
S1-12	62-007G-12HA	Knuckle cap	Guma	1	
	LP Optional	Laser pointer	Laser pro kontrolu umístění vzoru		
S1-13	IE75-05P/F	Laser	Laser	1	
S1-14	S2106032	Screw	Šroub	2	
	NC Optional	Needle Cooler	Chlazení jehly		
S1-15	KN-Q06-100	Jet	Tryska Dm1.0mm	1	
S1-16	NC0106032	Ring	Mezikroužek	1	
S1-17	KQ2H04-06	Hose nipple	Nástrčná spojka	1	
S1-18	S1816032	Holder of cooling needle	Držák chlazení jehly	1	
S1-19	S1806032	Holder of cooling needle	Držák chlazení jehly	1	
S1-20	AS2001F-04	Choke	Škartící ventil	1	
	PP Optional	Programable Presser Foot Mechanism	Mechanismus programovatelné patky úplný		

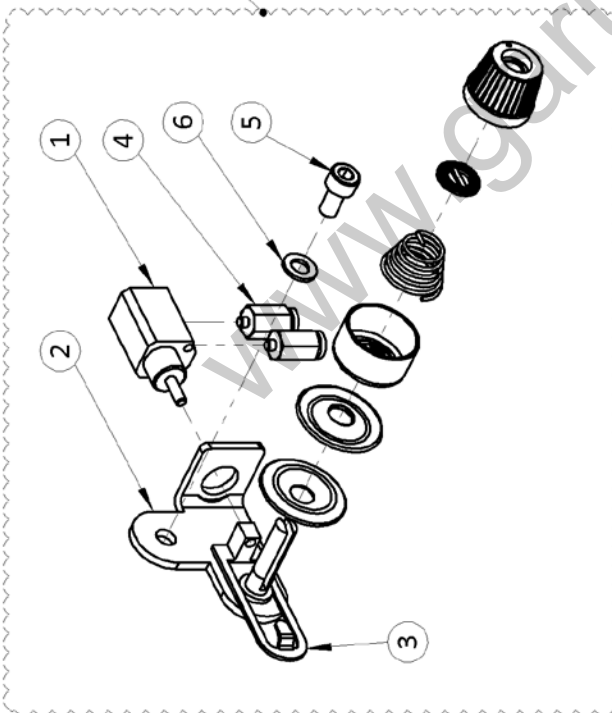
**S2. OPTION  
VYBAVENÍ NA OBJEDNÁVKU**



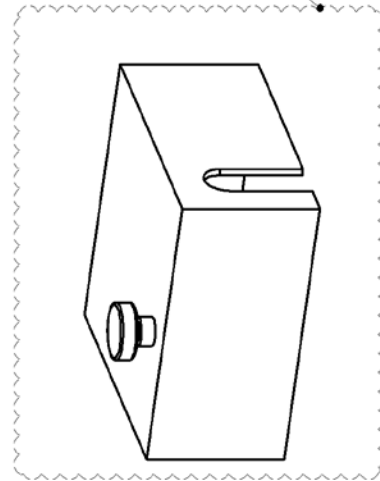
LN



AT



BR



BC

S2. OPTION					
VYBAVENÍ NA OBJEDNÁVKU					
REF. NO	PARTS NO.	NAME OF PARTS	POPIS	QTY	NOTE
	AT Optional	Additional Tensioner	Přídavný napínač		
S2-1	CJP2B6-5D	Pneumatic Cylinder	Pneuválec	1	
S2-2	NP0203020	Holder	Držák	1	
S2-3	NP0103020	Opening Hook	Otvírací hák	1	
S2-4	KJH04-M3	Fitting	Nástrčná spojka	2	
S2-5	A4906032	Screw	Šroub	1	
S2-6	B3406032	Washer	Podložka	1	
	LN Optional	Needle Laser	Jehelní laser		
	BC Optional	Measuring of Lower Thread Winding	Měření návinnu spodní nitě		
	BR Optional	Barcode Reader	Čtečka čárového kódu		
S2-1	MS3580	Barcode Reader	Čtečka čárového kódu	1	
S2-2	S3016032	Holder	Držák ČTEČKY	1	
S2-3	S2303525	Screw	Šroub	3	
S2-4	A4906032	Screw	Šroub	2	
S2-5	B3406032	Washer	Podložka	2	