DÜRKOPP ADLER

52Xi
52Xi-75

Operating Instructions

IMPORTANT

READ CAREFULLY BEFORE USE

KEEP FOR FUTURE REFERENCE

1 About these instructions

These instructions have been prepared with utmost care.
They contain information and notes intended to ensure long-term and reliable operation.

Should you notice any discrepancies or if you have improvement requests, then we would be glad to receive your feedback through **Customer Service** (🕮 *str. 101*).

Consider the instructions part of the product and store them in a place where they are readily available.

1.1 For whom are these instructions intended?

These instructions are intended for:

- Operators:
  This group is familiar with the machine and has access to the instructions. Specifically, chapter **Operation** (🕮 *str. 33*) is important for the operators.
- Specialists:
  This group has the appropriate technical training for performing maintenance or repairing malfunctions. Specifically, the chapter **Setup** (🕮 *str. 69*) is important for specialists.

Service Instructions are supplied separately.

With regard to minimum qualification and other requirements to be met by personnel, please also follow the chapter **Safety** (🕮 *str. 9*).

1.2 Representation conventions – symbols and characters

Various information in these instructions is represented or highlighted by the following characters in order to facilitate easy and quick understanding:

Proper setting

Specifies proper setting.

Disturbances

Specifies the disturbances that can occur from an incorrect setting.

Cover

Specifies which covers must be disassembled in order to access the components to be set.

Steps to be performed when operating the machine (sewing and equipping)

Steps to be performed for service, maintenance, and installation

Steps to be performed via the software control panel

The individual steps are numbered:

1. First step
2. Second step

... The steps must always be followed in the specified order.

- Lists are marked by bullet points.

Result of performing an operation

Change to the machine or on the display/control panel.

Important

Special attention must be paid to this point when performing a step.

Information
Additional information, e.g. on alternative operating options.

Order

Specifies the work to be performed before or after a setting.

References

Reference to another section in these instructions.

Safety Important warnings for the user of the machine are specifically marked. Since safety is of particular importance, hazard symbols, levels of danger and their signal words are described separately in the chapter **Safety** (*str. 9*).

Location information If no other clear location information is used in a figure, indications of **right** or **left** are always from the user's point of view.

1.3 Other documents

The machine includes components from other manufacturers. Each manufacturer has performed a hazard assessment for these purchased parts and confirmed their design compliance with applicable European and national regulations. The proper use of the built-in components is described in the corresponding manufacturer's instructions.

1.4 Liability

All information and notes in these instructions have been compiled in accordance with the latest technology and the applicable standards and regulations.

Dürkopp Adler cannot be held liable for any damage resulting from:

- Breakage and damage during transport
- Failure to observe these instructions
- Improper use
- Unauthorized modifications to the machine
- Use of untrained personnel
- Use of unapproved parts

Transport

Dürkopp Adler cannot be held liable for breakage and transport damages. Inspect the delivery immediately upon receiving it. Report any damage to the last transport manager. This also applies if the packaging is not damaged.

Leave machines, equipment and packaging material in the condition in which they were found when the damage was discovered. This will ensure any claims against the transport company.

Report all other complaints to Dürkopp Adler immediately after receiving the product.

2 Safety

This chapter contains basic information for your safety. Read the instructions carefully before setting up or operating the machine. Make sure to follow the information included in the safety instructions. Failure to do so can result in serious injury and property damage.

2.1 Basic safety instructions

The machine may only be used as described in these instructions.

The instructions should be available at the machine's location at all times.

Work on live components and equipment is prohibited. Exceptions are defined in the DIN VDE 0105.

For the following work, switch off the machine at the main switch or disconnect the power plug:

- Replacing the needle or other sewing tools
- Leaving the workstation
- Performing maintenance work and repairs
- Threading

Missing or faulty parts could impair safety and damage the machine. Only use original parts from the manufacturer.

Transport Use a lifting carriage or forklift to transport the machine. Raise the machine max. 20 mm and secure it to prevent it from slipping off.

Setup The connecting cable must have a power plug approved in the relevant country. The power plug may only be assembled to the power cable by qualified specialists.

Obligations of the operator Follow the country-specific safety and accident prevention regulations and the legal regulations concerning industrial safety and the protection of the environment.

All the warnings and safety signs on the machine must always be in legible condition. Do not remove!
Missing or damaged warnings and safety signs must be replaced immediately.

Requirements to be met by the personnel

Only qualified specialists may:

- set up the machine
- perform maintenance work and repairs
- perform work on electrical equipment

Only authorized persons may work on the machine and must first have understood these instructions.

Operation

Check the machine during operating for any externally visible damage. Stop working if you notice any changes to the machine. Report any changes to your supervisor. Do not use a damaged machine any further.

Safety equipment

Safety equipment should not be removed or deactivated. If it is essential to remove or deactivate safety equipment for a repair operation, it must be assembled and put back into operation immediately afterward.

2.2 Signal words and symbols used in warnings

Warnings in the text are distinguished by color bars. The color scheme is based on the severity of the danger. Signal words indicate the severity of the danger.

Signal words

Signal words and the hazard they describe:

Signal word	Meaning
DANGER	(with hazard symbol) If ignored, fatal or serious injury will result
WARNING	(with hazard symbol) If ignored, fatal or serious injury can result

CAUTION	(with hazard symbol) If ignored, moderate or minor injury can result
CAUTION	(with hazard symbol) If ignored, environmental damage can result
NOTICE	(without hazard symbol) If ignored, property damage can result

Symbols The following symbols indicate the type of danger to personnel:

Symbol	Type of danger
	General
	Electric shock
	Puncture
	Crushing
	Environmental damage

Examples Examples of the layout of warnings in the text:

DANGER

Type and source of danger!
Consequences of non-compliance.
Measures for avoiding the danger.

↳ This is what a warning looks like for a hazard that will result in serious injury or even death if ignored.

WARNING

Type and source of danger!
Consequences of non-compliance.
Measures for avoiding the danger.

↳ This is what a warning looks like for a hazard that could result in serious or even fatal injury if ignored.

CAUTION

Type and source of danger!
Consequences of non-compliance.
Measures for avoiding the danger.

↳ This is what a warning looks like for a hazard that could result in moderate or minor injury if the warning is ignored.

NOTICE

Type and source of danger!

Consequences of non-compliance.

Measures for avoiding the danger.

↳ This is what a warning looks like for a hazard that could result in property damage if ignored.

CAUTION

Type and source of danger!

Consequences of non-compliance.

Measures for avoiding the danger.

↳ This is what a warning looks like for a hazard that could result in environmental damage if ignored.

3 Machine description

- A flatbed single-needle machine.
- It sews a double-thread zig-zag lockstitch.
- It has a bi-directional drop feed.
- The machine is equipped with a horizontal hook.
- Wick lubrication.
- There is an automatic bobbin winder on the machine arm.
- According to the selected class, the machine has a manual or automatic control by solenoid including thread trimming device.

Subclass 523i

Stitching of laces, ribbons, and tacking of ready-made ladies underwear and ladies clothes. The sewn material must not be thicker than 4 mm when pressed down under the presser foot. Zig-zag stitch width max. 6 mm.

Subclass 524i

Stitching of undercollars in jacket neckholes. Stitching of top collars on the undercollar overhang. Stitching of lining collar in upper part of trousers. Seaming of edges and similar operations in ready-made overgarment when sewing woolen, cotton, synthetic, and mix materials. The sewn material must not be thicker than 4 mm when pressed down under the presser foot. Zig-zag stitch width max. 10 mm.

Subclass525i

Ornamental (shape) stitching in ready-made overgarment and ladies underwear made of elastic materials. Ornamental stitching in textile footwear. Shoe sewing: stitching of quarters and linings, topstitching of tongues, sewing of home slippers, ornamental stitching. Joining of leather and textile materials in leather industry.The sewn material must not be thicker than 4 mm when pressed down under the presser foot. Zig-zag stitch width max. 10 mm.

Subclass 527i

Shoe sewing: stitching of quarters and linings, topstitching of tongues, sewing of home slippers, ornamental stitching. Joining of leather and textile materials in leather industry. The sewn leather must not be thicker than 4 mm; the sewn textile must not be thicker than 8 mm when pressed down under the presser foot. Zig-zag stitch width max. 10 mm.

3.1 Proper use

WARNING

Risk of injury from live, moving and cutting parts as well as from sharp parts!

Improper use can result in electric shock, crushing, cutting and punctures.

Follow all instructions provided.

NOTICE

Non-observance will lead to property damage!

Improper use can result in material damage at the machine.

Follow all instructions provided.

The machine may only be used with sewing material that satisfies the requirements of the specific application at hand.

The machine is intended only for use with dry sewing material. The sewing material must not contain any hard objects.

The needle thicknesses permissible for the machine are listed in the **Technical Data** (📖 *p. 105*) chapter.

The seam must be completed with a thread that satisfies the requirements of the specific application at hand.

The machine is intended for industrial use.

The machine may only be set up and operated in dry conditions on well-maintained premises. If the machine is operated on premises that are not dry and well-maintained, then further measures may be required which must be compatible with DIN EN 60204-31.

Only authorized persons may work on the machine.

Dürkopp Adler cannot be held liable for damages resulting from improper use.

3.2 Subclasses

3.2.1 Machine with short arm

Class and subclass	Hook			Foot lifting		Thread trimming		Backtacking	
	small (standard)	large	with increased thread supply	knee lever	with solenoid	without thread trimmer	with thread trimmer	with hand lever	with solenoid
523i 411001	X			X		X		X	
523i 447001	X				X		X		X
524i 811001		X		X		X		X	
524i 847001		X			X		X		X
525i 811001		X		X		X		X	
525i 847001		X			X		X		X
525i 911001			X	X		X		X	
525i 947001			X		X		X		X
527i 811001		X		X		X		X	
527i 847001		X			X		X		X
527i 911001			X	X		X		X	
527i 947001			X		X		X		X

3.2.2 Machine with long arm

Class and subclass	Hook			Foot lifting		Thread trimming		Backtacking	
	small (standard)	large	with increased thread supply	knee lever	with solenoid	without thread trimmer	with thread trimmer	with hand lever	with solenoid
525i 811201 525i-811-75		X		X		X		X	
525i 847201 525i-847-75		X			X		X		X
525i 811202 525i-811-75-66		X		X		X		X	
525i 847202 525i-847-75-66		X			X		X		X

3.3 Sewing equipment

3.3.1 Machine with short arm

E-Nr. E-No. Abb.-Nr. Fig.No.	For Subclass / Für Unterklasse Use / Verwendungszweck	Material Nr./Material No.	Throat plate Stichplatte			Feed dog Transporteur ④				Foot Fuß ②						
			Stitch hole size/Stichlochgröße mm	③	⑦	⑧	Tooth pitch/Zahnabstand mm	Serrated/Sägeverzahnt mm	Serrated, oblique/Säge-schrägverzahnt mm	Cross toothed/Kreuzverzahnt mm	Roof-shaped/Dachverzahnt mm	Compensating hinged/Gelenkausgleichfuß	Hinged with front thread slit/ Gelenkfuß mit Fadenschlitz von vorne	Hinged with side thread slit/ Gelenkfuß mit Fadenschlitz seitlich	Top roller/Rollfuß	⑤	⑥	①
			Throat plate complete/Stichplatte komplett													Guide/Nadelführung	Needle holder/Nadelhalter	Needle system / -size /Nadelsystem/-dicke
			Throat plate/Stichplatte															
			Throat plate insert/Stichplatteneinsatz															
523 E 069	523i 411001; 523i 447001 Sewing equipment, 3-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 6 mm, for light weight material.	S791 124069 35	7,8 x 1,5		S080 811636		1,0						S980 031649					134/100
523 E 070	523i 411001; 523i 447001 Sewing equipment, 4-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 6 mm, for light weight material.	S791 124070 35	7,8 x 1,5		S080 811701		1,5	S080 651473					S980 031586					134/100
525 E 003	525i 811001; 525i 847001; 525i 911001; 525i 947001; 527i 811001; 527i 847001; 527i 911001; 527i 947001 Sewing equipment for two needle sewing, needle gauge 3 mm, 4 mm and 5 mm, needle size Nm 80-110, stitch length max. 5 mm, for light and medium weight material.	S791 630003															see Fig./siehe Abb.	134/100
525 E 032	524i 811001; 524i 847001; 525i 811001; 525i 847001; 525i 911001; 525i 947001 Sewing equipment, 4-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 10 mm, for light and medium weight material.	S791 124032 35	11,6 x 1,2		S080 811641		1,0	S080 651504						S980 031603					134/80
525 E 033	524i 811001; 524i 847001; 525i 811001; 525i 847001; 525i 911001; 525i 947001 Sewing equipment, 3-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 10 mm, for light and medium weight material.	S791 124033 35	11,8 x 1,5		S080 811637		1,8		S080 651336					S980 031603					134/110

Note: Sewing equipment is illustrated in the spare parts list.

E-Nr. E-No. Abb.-Nr. Fig.No.	Für Unterklasse / For Subclass Verwendungszweck / Use	Material Nr./Material No.	Throat plate Stich platte			Feed dog Transporteur ④				Foot Fuß ②						
			Stitch hole size/Stichlochgröße mm	Throat plate complete/Stichplatte komplett ③	Throat plate/Stichplatte ⑦	Throat plate insert/Stichplatteneinsatz ⑧	Tooth pitch/Zahnabstand mm	Serrated/Sägeverzahnt mm	Serrated, oblique/Säge-schrägverzahnt mm	Cross toothed/Kreuzverzahnt mm	Roof-shaped/Dachverzahnt mm	Compensating hinged/Gelenkausgleichfuß	Hinged with front thread slit/ Gelenkfuß mit Fadenschlitz von vorne	Hinged with side thread slit/ Gelenkfuß mit Fadenschlitz seitlich	Top roller/Rollfuß	Guide/Nadelführung ⑤	Needle holder/Nadelhalter ⑥	Needle system / -size /Nadelsystem/ -dicke ①
525 E 075	524i 811001; 524i 847001; 525i 811001; 525i 847001; 525i 911001; 525i 947001 Sewing equipment, 4-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 10 mm, for medium weight material.	S791 224075 35	11,6 x 1,5		S080 811699		1,5	S080 651472					S980 031603					134/110
525 E 076	524i 811001; 524i 847001; 525i 811001; 525i 847001; 525i 911001; 525i 947001; 527i 811001; 527i 847001; 527i 911001; 527i 947001 Sewing equipment, 4-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 10 mm, for medium weight material.	S791 224076 35	11,6 x 1,5		S080 811699		1,0	S080 651504				S980 031652						134/110
527 E 023	525i 811001; 525i 847001; 525i 911001; 525i 947001; 527i 811001; 527i 847001; 527i 911001; 527i 947001 Sewing equipment for sewing butt seams, 3-lined feed dog, needle size Nm 110-130, stitch length max. 5 mm, throw width max. 10 mm, for medium heavy weight material.	S791 400023	11,8 x 1,7	S980 022282	S080 811633	S980 049443	1,8		S080 651428				S980 031762					134/110
527 E027	525i 811001; 525i 847001; 525i 911001; 525i 947001; 527i 811001; 527i 847001; 527i 911001; 527i 947001 Sewing equipment for sewing butt seams, 3-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 10 mm, for light and medium heavy weight material.	S791 400027	11,8 x 1,7	S980 052103	S080 811633	S980 059081	1,8	S080 651428					S980 031762					134/80
527 E 028	524i 811001; 524i 847001; 525i 811001; 525i 847001; 525i 911001; 525i 947001; 527i 811001; 527i 847001; 527i 911001; 527i 947001 Sewing equipment for sewing butt seams, 3-lined feed dog, needle size Nm 110-130, stitch length max. 5 mm, throw width max. 10 mm, for medium heavy weight material.	S791 400028	11,8 x 1,7	S980 052103	S080 811988	S980 052101	1,8	S080 651428					S980 031762					134/110
527 E 048	525i 811001; 525i 847001; 525i 911001; 525i 947001; 527i 811001; 527i 847001; 527i 911001; 527i 947001 Sewing equipment for two needle cordin seams with or without filler cord, 3-lined feed dog, needle size Nm 120-160, stitch length max. 5 mm, needle gauge 7 mm, for medium and heavy weight material.	S791 430048 35	9 x 2,5	S980 022840			1,8	S080 651499							S980 022839		S080 394203		134/130

Note: Sewing equipment is illustrated in the spare parts list.

E-Nr. E-No. Abb.-Nr. Fig.No.	Für Unterklasse / For Subclass Verwendungszweck / Use	Material Nr./Material No.	Throat plate Stich platte			Feed dog Transporteur ④			Foot Fuß ②				
			Stitch hole size/Stichlochgröße mm	Throat plate complete/Stichplatte komplett ③	Throat plate/Stichplatte ⑦	Throat plate insert/Stichplatteneinsatz ⑧	Tooth pitch/Zahnabstand mm	Serrated/Sägeverzahnt mm	Serrated, oblique/Säge-schrägverzahnt mm	Cross toothed/Kreuzverzahnt mm	Roof-shaped/Dachverzahnt mm	Compensating hinged/Gelenkausgleichfuß	Hinged with front thread slit/ Gelenkfuß mit Fadenschlitz vorn vorne	Hinged with side thread slit/ Gelenkfuß mit Fadenschlitz seitlich	Top roller/Rollfuß	Guide/Nadelführung ⑤	Needle holder/Nadelhalter ⑥	Needle system / -size /Nadelsystem/-dicke ①
527 E 060	525i 811001; 525i 847001; 525i 911001; 525i 947001; 527i 811001; 527i 847001; 527i 911001; 527i 947001 Sewing equipment for two needle cordin seams with or without filler cord, 3-lined feed dog, needle size Nm 110-130, stitch length max. 5 mm, needle gauge 4 mm, for medium heavy weight material.	S791 430060 35	6 x 2,1	S980 022867			1,8								S980 022839				
527 E 061	525i 811001; 525i 847001; 525i 911001; 525i 947001; 527i 811001; 527i 847001; 527i 911001; 527i 947001 Sewing equipment for two needle cordin seams with or without filler cord, 3-lined feed dog, needle size Nm 110-130, stitch length max. 5 mm, needle gauge 5 mm, for medium heavy weight material.	S791 430061 35	7 x 2,3	S980 022868			1,8								S980 022839		S080 394159	134/110	
527 E 461	525i 811001; 525i 847001; 525i 911001; 525i 947001; 527i 811001; 527i 847001; 527i 911001; 527i 947001 Sewing equipment, 3-lined feed dog, needle size Nm 100-130, stitch length max. 5 mm, throw width max. 10 mm, for medium heavy weight material.	S791 124061 35	11,8 x 1,8		S080 811634		1,8		S080 651428					S980 031603					
528 E 027	525i 811001; 525i 847001; 525i 911001; 525i 947001; 527i 811001; 527i 847001; 527i 911001; 527i 947001 Sewing equipment, 3-lined feed dog, needle size Nm 110-130, stitch length max. 5 mm, throw width max. 10 mm, for medium weight material.	S791 124027 35	11,8 x 1,8		S080 811557		1,8		S080 651336				S980 031602						
528 E028	525i 811001; 525i 847001; 525i 911001; 525i 947001; 527i 811001; 527i 847001; 527i 911001; 527i 947001 Sewing equipment, 3-lined feed dog, needle size Nm 120-160, stitch length max. 5 mm, throw width max. 10 mm, for heavy weight material.	S791 124028 35	12,2 x 2,2		S080 811772		1,8		S080 651336				S980 031648			S080 271530		134-35/160	
																	134-35/120	134/110

Note: Sewing equipment is illustrated in the spare parts list.

3.3.2 Machine with long arm

E-Nr. E-No. Abb.-Nr. Fig.No.	For Subclass / Für Unterklasse Use / Verwendungszweck	Material Nr./Material No.	Throat plate / Stichplatte			Feed dog / Transporteur ④				Foot / Fuß ②						
			Stitch hole size/Stichlochgröße mm	Throat plate complete/Stichplatte komplett ③	Throat plate/Stichplatte ⑦	Throat plate insert/Stichplatteneinsatz ⑧	Tooth pitch/Zahnabstand mm	Serrated/Sägeverzahnt mm	Serrated, oblique/Säge-schrägverzahnt mm	Cross toothed/Kreuzverzahnt mm	Roof-shaped/Dachverzahnt mm	Compensating hinged/Gelenkausgleichfuß	Hinged with front thread slit/ Gelenkfuß mit Fadenschlitz vorne	Hinged with side thread slit/ Gelenkfuß mit Fadenschlitz seitlich	Top roller/Rollfuß	Guide/Nadelführung ⑤	Needle holder/Nadelhalter ⑥	Needle system / -size /Nadelsystem/-dicke ①
525 E003	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment for two needle sewing, needle gauge 3 mm, 4 mm and 5 mm, needle size Nm 80-110, stitch length max. 5 mm, for light and medium weight material.	S791 630003														see Fig./siehe Abb.	134/100
525 E032	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment, 4-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 10 mm, for light and medium weight material.	S791 124032 35	11,6 x 1,2		S080 811641		1,0	S080 651504					S980 031603					134/80
525 E033	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment, 3-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 10 mm, for light and medium weight material.	S791 124033 35	11,8 x 1,5		S080 811637		1,8		S080 651336				S980 031603					134/110
525 E 075	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment, 4-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 10 mm, for medium weight material.	S791 224075 35	11,6 x 1,5		S080 811699		1,5	S080 651472					S980 031603					134/110
525 E 076	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment, 4-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 10 mm, for medium weight material.	S791 224076 35	11,6 x 1,5		S080 811699		1,0	S080 651504				S980 031652						134/110

Note: Sewing equipment is illustrated in the spare parts list.

E-Nr. E-No. Abb.-Nr. Fig.No.	Für Unterklasse / For Subclass Verwendungszweck / Use		Throat plate Stich platte			Feed dog Transporteur ④			Foot Fuß ②					
		Material Nr./Material No.	Stitch hole size/Stichlochgröße mm	Throat plate complete/Stichplatte komplett ③	Throat plate/Stichplatte ⑦	Throat plate insert/Stichplatteneinsatz ⑧	Tooth pitch/Zahnabstand mm	Serrated/Sägeverzahnt mm	Serrated, oblique/Säge-schrägverzahnt mm	Cross toothed/Kreuzverzahnt mm	Roof-shaped/Dachverzahnt mm	Compensating hinged/Gelenkausgleichfuß	Hinged with front thread slit/ Gelenkfuß mit Fadenschlitz von vorne	Hinged with side thread slit/ Gelenkfuß mit Fadenschlitz seitlich	Top roller/Rollfuß	Guide/Nadelführung ⑤	Needle holder/Nadelhalter ⑥	Needle system / -size /Nadelsystem/-dicke ①
527 E 023	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment for sewing butt seams, 3-lined feed dog, needle size Nm 110-130, stitch length max. 5 mm, throw width max. 10 mm, for medium heavy weight material.	S791 400023	11,8 x 1,7	S980 022282	S080 811633	S980 049443	1,8											
527 E027	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment for sewing butt seams, 3-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 10 mm, for light and medium heavy weight material.	S791 400027	11,8 x 1,7		S080 811633	S980 059081	1,8		S080 651428				S980 031604					
527 E 028	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment for sewing butt seams, 3-lined feed dog, needle size Nm 110-130, stitch length max. 5 mm, throw width max. 10 mm, for medium heavy weight material.	S791 400028	11,8 x 1,7	S980 052103	S080 811988	S980 052101	1,8		S080 651428				S980 031604					
527 E 048	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment for two needle cordin seams with or without filler cord, 3-lined feed dog, needle size Nm 120-160, stitch length max. 5 mm, needle gauge 7 mm, for medium and heavy weight material.	S791 430048 35	9 x 2,5	S980 022840			1,8		S080 651499				S980 031604	S980 022839		S080 394203	134/130	
																	134/110	

Note: Sewing equipment is illustrated in the spare parts list.

E-Nr. E-No. Abb.-Nr. Fig.No.	Für Unterklasse / For Subclass Verwendungszweck / Use	Material Nr./Material No.	Throat plate Stich platte			Feed dog Transporteur ④			Foot Fuß ②				
			Stitch hole size/Stichlochgröße mm	Throat plate complete/Stichplatte komplett ③	Throat plate/Stichplatte ⑦	Throat plate insert/Stichplatteneinsatz ⑧	Tooth pitch/Zahnabstand mm	Serrated/Sägeverzahnt mm	Serrated, oblique/Säge-schrägverzahnt mm	Cross toothed/Kreuzverzahnt mm	Roof-shaped/Dachverzahnt mm	Compensating hinged/Gelenkausgleichfuß	Hinged with front thread slit/ Gelenkfuß mit Fadenschlitz von vorne	Hinged with side thread slit/ Gelenkfuß mit Fadenschlitz seitlich	Top roller/Rollfuß	Guide/Nadelführung ⑤	Needle holder/Nadelhalter ⑥	Needle system / -size /Nadelsystem/-dicke ①
527 E 060	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment for two needle cordin seams with or without filler cord, 3-lined feed dog, needle size Nm 110-130, stitch length max. 5 mm, needle gauge 4 mm, for medium heavy weight material.	S791 430060 35	6 x 2,1	S980 022867			1,8		S080 651509						S980 022839		S080 394158	134/110
527 E 061	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment for two needle cordin seams with or without filler cord, 3-lined feed dog, needle size Nm 110-130, stitch length max. 5 mm, needle gauge 5 mm, for medium heavy weight material.	S791 430061 35	7 x 2,3	S980 022868			1,8		S080 651510						S980 022839		S080 394159	134/110
527 E 461	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment, 3-lined feed dog, needle size Nm 110-130, stitch length max. 5 mm, throw width max. 10 mm, for medium heavy weight material.	S791 124061 35	11,8 x 1,8		S080 811634		1,8		S080 651428					S980 031603				134/110
528 E 027	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment, 3-lined feed dog, needle size Nm 110-130, stitch length max. 5 mm, throw width max. 10 mm, for medium weight material. Näheinrichtung, 3-Reihentransporteur, Nadelstärke Nm 110-130, Stichlänge max. 5 mm, Stichbreite max. 10 mm, für mittelschweres Nähgut.	S791 124027 35	11,8 x 1,8		S080 811557		1,8		S080 651336			S980 031602						134-35/120
528 E 028	525i 811-75; 525i 847-75; 525i 811-75-66; 525i 847-75-66 Sewing equipment, 3-lined feed dog, needle size Nm 120-160, stitch length max. 5 mm, throw width max. 10 mm, for heavy weight material.	S791 124028 35	12,2 x 2,2		S080 811772		1,8		S080 651336			S980 031648				S080 271530		134-35/160

Note: Sewing equipment is illustrated in the spare parts list.

E-Nr. E-No. Abb.-Nr. Fig.No.	Für Unterklasse / For Subclass Verwendungszweck / Use	Material Nr./Material No.	Throat plate Stich platte			Feed dog Transporteur ④			Foot Fuß ②				
			Stich hole size/Stichlochgröße mm	③	⑦	⑧	Tooth pitch/Zahnabstand mm	Serrated/Sägeverzahnt mm	Serrated, oblique/Säge-schrägverzahnt mm	Cross toothed/Kreuzverzahnt mm	Roof-shaped/Dachverzahnt mm	Compensating hinged/Gelenkausgleichfuß	Hinged with front thread slit/ Gelenkfuß mit Fadenschlitz von vorne	Hinged with side thread slit/ Gelenkfuß mit Fadenschlitz seitlich	Top roller/Rollfuß	⑤	⑥	①
				Throat plate complete/Stichplatte komplett	Throat plate/Stichplatte	Throat plate insert/Stichplatteneinsatz										Guide/Nadelführung	Needle holder/Nadelhalter	Needle system / -size /Nadelsystem/-dicke
525 E081	525i 847-75; 525i 847-75-66 Puller - S981 009060, S981 009061, S981 009064, S981 009065 Sewing equipment for sewing butt seams, 3-lined feed dog, needle size Nm 110-130, stitch length max. 5 mm, throw width max. 10 mm, for medium heavy weight material.	S791 224081 35	12,2 x 2,2		S080 811772		1,8		S080 651336				S980 031713			S080 271530		134-35/160
525 E082	525i 847-75; 525i 847-75-66 Puller - S981 009060, S981 009061, S981 009064, S981 009065 Sewing equipment, 3-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 10 mm, for light and medium weight material.	791 224082 35	11,8 x 1,5		S080 811637		1,8		S080 651336				S980 031713					134/110
525 E083	525i 847-75; 525i 847-75-66 Puller - S981 009060, S981 009061, S981 009064, S981 009065 Sewing equipment, 4-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 10 mm, for medium weight material.	S791 224083 35	11,6 x 1,5		S080 811699		1,0	S080 651504					S980 031732					134/110
525 E084	525i 847-75; 525i 847-75-66 Puller - S981 009060, S981 009061, S981 009064, S981 009065 Sewing equipment, 3-lined feed dog, needle size Nm 110-130, stitch length max. 5 mm, throw width max. 10 mm, for medium weight material.	S791 224084 35	11,8 x 1,8		S080 811634		1,8		S080 651428				S980 031713					134/110
525 E087	525i 847-75; 525i 847-75-66 Puller - S981 009060, S981 009061, S981 009064, S981 009065 Sewing equipment, 4-lined feed dog, needle size Nm 80-110, stitch length max. 5 mm, throw width max. 10 mm, for medium weight material.	S791 224087 35	11,6 x 1,5		S080 811699		1,5	S080 651472					S980 031713					134/110

Note: Sewing equipment is illustrated in the spare parts list.

3.4 Optional equipment

3.4.1 Machine with short arm

Order No.	Optional equipment	523i-411	523i-447	524i-811	524i-847	525i-811	525i-847	525i-911	525i-947	527i-811	527i-847	527i-911	527i-947
S794 222013	Sewing light diode including transformer	O	O	O	O	O	O	O	O	O	O	O	O
S981 069440	Knee lever	●	O	●	O	●	O	●	O	●	O	●	O
S980 035456	Gauge	O	O	O	O	O	O	O	O	O	O	O	O
S980 031586	Foot cpl. ZZ 6 mm	O	O	O	O	O	O	O	O	O	O	O	O
S980 031652	Foot cpl. ZZ 10 mm			O	O	O	O	O	O	O	O	O	O
S791 149001	Whip stitching equipment	O	O	O	O	O	O	O	O	O	O	O	O
9800 330009	Control panel V810												
9800 330010	Control panel V820												
S080 836491	Control panel V810 or V820 bracket		O		O		O		O		O		O
S980 008253	Hook R253					O	O						O
S980 008256	Hook R256							O	O				
S080 811768	Throat plate					O	O	O	O				
S791 235002	Unwinding device					O	O	O	O				
S980 000293	Unwinding device A-M 293					O	O	O	O	O	O	O	O
S980 000294	Unwinding device A-M 294					O	O	O	O	O	O	O	O
S980 000312	Edge hemming set A-M 312					O	O	O	O	O	O	O	O
S072 500100	Stand cpl.	O	O	O	O	O	O	O	O	O	O	O	O
S615 000316	Table top	O	O	O	O	O	O	O	O	O	O	O	O

● = standard equipment

O = optional equipment

3.4.2 Machine with long arm

Order No.	Optional equipment	525i-811-75	525i-847-75	525i-811-75-66	525i-847-75-66
S794 222013	Sewing light diode including transformer	O	O	O	O
S981 069441	Knee lever	●	O	●	O
S980 035456	Gauge	O	O	O	O
S980 031586	Foot cpl. ZZ 6 mm	O	O	O	O
S980 031652	Foot cpl. ZZ 10 mm	O	O	O	O
S791 149001	Whip stitching equipment	O	O	O	O
9800 330009	Control panel V810	O	O	O	O
9800 000010	Control panel V820	O	O	O	O
S080 836491	Control panel V810 or V820 bracket	O	O	O	O
S980 008253	Hook R253	O	O	O	O
S080 811768	Throat plate	O	O	O	O
S791 235002	Unwinding device	O	O	O	O
S980 000293	Unwinding device A-M 293	O	O	O	O
S980 000294	Unwinding device A-M 294	O	O	O	O
S980 000312	Edge hemming set A-M 312	O	O	O	O
9780 000108	WE-8, maintenance unit	O	O	O	O
0797 003031	Part set pneumatic	O	O	O	O
S981 009060	Puller, rubber feed roller width 45 mm				O
S981 009061	Puller, rubber feed roller width 45 mm		O		
S981 009064	Puller, rubber feed roller width 9 or 15 mm		O		
S981 009065	Puller, rubber feed roller width 9 or 15 mm				O
0933 005736	Feed roller steel/88 teeth- width 9 mm		O		O

Order No.	Optional equipment	525i-811-75	525i-847-75	525i-811-75-66	525i-847-75-66
0933 005737	Feed roller steel/88 teeth- width 15 mm		O		O
0933 005738 A	Feed roller steel/44 teeth- width 15 mm		O		O
S981 052125	Foot lift and backtacking pneum.		O		O
S981 052126	Needle cooling - only for machine with Puller		O		O
S072 500101	Stand cpl.	O	O		
S080 910334	Table top 1700 x 730	O	O		
S072 500102	Stand cpl.			O	O
S080 910334	Table top 1600 x 600			O	O
S080 910337	Table top 1500 x 600	O	O		
S080 910339	Table top 1500 x 600			O	O

● = standard equipment

O = optional equipment

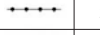
Cams for shape sewing for machine 525i

Commercial Marking	Order number	Quantity sewing points/ 1 cam turn	Quantity sewing points/pattern Stitch length	Pattern width	Single-needle		Double-needle	
					Max. machine speed st/min	Pattern	Max. machine speed st/min	Pattern
525 Z 037	S080 674219	12		-	4400		3800	
525 Z 038	S080 674113	12	4 1-3	4,5 - 10	3800		3400	
525 Z 039	S080 674114	12	12 1-3	4,5 - 10	3800		3400	
525 Z 040	S080 674115	12	6 1,5-3	3,5 - 6	3800		3400	
525 Z 041	S080 674116	12	12 1,5-5	4,5 - 10	3800		3800	
525 Z 042	S080 674117	12	3 1,5-4	3,5 - 6	3800		3400	
525 Z 043	S080 674118	12	4 1-3	4 - 6	3800		3400	
525 Z 044	S080 674119	12	6 1-3	4 -10	3800		3400	
525 Z 045	S080 674120	12	12 1,5-3	2 - 5	3800		3400	
525 Z 046	S080 674121	12	12 1,5-3	2 - 5	3800		3400	
525 Z 047	S080 674122	12	2 1-3	3,5 - 6	3800		3400	
525 Z 048	S080 674123	12	12 1-3	4,5 - 10	3800		3400	
525 Z 049	S080 674124	12	6 1-3	4,5 - 10	4400		3800	
525 Z 050	S080 674125	12	4 1-3	2 - 6	3800		3400	
525 Z 051	S080 674221	12	6 1,5-3	3,5 - 6	3800		3400	
525 Z 052	S080 674226	12	2 1-3	2 - 4,5	3800		3400	
525 Z 053	S080 674227	12	2 1-3	1 - 2,4	3800		3400	
525 Z 054	S080 674228	12	2 1-3	1,5 - 4	3800		3400	
525 Z 055	S080 674229	12	3 1,5-4	3,5 - 6	3800		3400	
525 Z 058	S080 674235	12	2 1-3	4 - 10	2000		2000	

Cams for shape sewing for machine 525i-75

Commercial Marking	Order number	Quantity sewing points/ 1 cam turn	Quantity sewing points/pattern Stitch length	Pattern width	Single-needle		Double-needle	
					Max. machine speed st/min	Pattern	Max. machine speed st/min	Pattern
525 Z 037	S080 674219	12		-	2500		2500	
525 Z 038	S080 674113	12	4 1-3	4,5 - 10	2500		2500	
525 Z 039	S080 674114	12	12 1-3	4,5 - 10	2500		2500	
525 Z 040	S080 674115	12	6 1,5-3	3,5 - 6	2500		2500	
525 Z 041	S080 674116	12	12 1,5-5	4,5 - 10	2500		2500	
525 Z 042	S080 674117	12	3 1,5-4	3,5 - 6	2500		2500	
525 Z 043	S080 674118	12	4 1-3	4 - 6	2500		2500	
525 Z 044	S080 674119	12	6 1-3	4 -10	2500		2500	
525 Z 045	S080 674120	12	12 1,5-3	2 - 5	2500		2500	
525 Z 046	S080 674121	12	12 1,5-3	2 - 5	2500		2500	
525 Z 047	S080 674122	12	2 1-3	3,5 - 6	2500		2500	
525 Z 048	S080 674123	12	12 1-3	4,5 - 10	2500		2500	
525 Z 049	S080 674124	12	6 1-3	4,5 - 10	2500		2500	
525 Z 050	S080 674125	12	4 1-3	2 - 6	2500		2500	
525 Z 051	S080 674221	12	6 1,5-3	3,5 - 6	2500		2500	
525 Z 052	S080 674226	12	2 1-3	2 - 4,5	2500		2500	
525 Z 053	S080 674227	12	2 1-3	1 - 2,4	2500		2500	
525 Z 054	S080 674228	12	2 1-3	1,5 - 4	2500		2500	
525 Z 055	S080 674229	12	3 1,5-4	3,5 - 6	2500		2500	
525 Z 058	S080 674235	12	2 1-3	4 - 10	2000		2000	

Cams for shape sewing for machine 525i-75-66

Commercial Marking	Order number	Quantity sewing points/ 1 cam turn	Quantity sewing points/pattern Stitch length	Pattern width	Single-needle		Double-needle	
					Max. machine speed st/min	Pattern	Max. machine speed st/min	Pattern
525 Z 037	S080 674219	12		-	2000		2000	
525 Z 038	S080 674113	12	4 1-3	4,5 - 10	2000		2000	
525 Z 039	S080 674114	12	12 1-3	4,5 - 10	2000		2000	
525 Z 040	S080 674115	12	6 1,5-3	3,5 - 6	2000		2000	
525 Z 041	S080 674116	12	12 1,5-5	4,5 - 10	2000		2000	
525 Z 042	S080 674117	12	3 1,5-4	3,5 - 6	2000		2000	
525 Z 043	S080 674118	12	4 1-3	4 - 6	2000		2000	
525 Z 044	S080 674119	12	6 1-3	4 -10	2000		2000	
525 Z 045	S080 674120	12	12 1,5-3	2 - 5	2000		2000	
525 Z 046	S080 674121	12	12 1,5-3	2 - 5	2000		2000	
525 Z 047	S080 674122	12	2 1-3	3,5 - 6	2000		2000	
525 Z 048	S080 674123	12	12 1-3	4,5 - 10	2000		2000	
525 Z 049	S080 674124	12	6 1-3	4,5 - 10	2000		2000	
525 Z 050	S080 674125	12	4 1-3	2 - 6	2000		2000	
525 Z 051	S080 674221	12	6 1,5-3	3,5 - 6	2000		2000	
525 Z 052	S080 674226	12	2 1-3	2 - 4,5	2000		2000	
525 Z 053	S080 674227	12	2 1-3	1 - 2,4	2000		2000	
525 Z 054	S080 674228	12	2 1-3	1,5 - 4	2000		2000	
525 Z 055	S080 674229	12	3 1,5-4	3,5 - 6	2000		2000	
525 Z 058	S080 674235	12	2 1-3	4 - 10	2000		2000	

3.5 Declaration of Conformity

The machine complies with European regulations ensuring health, safety, and environmental protection as specified in the declaration of conformity or in the declaration of incorporation.

CE

4 Operation

The operating sequence consists of several different steps. Fault-free operation is necessary in order to achieve a good sewing result.

4.1 Preparing the machine for operation

WARNING

Risk of injury from moving, cutting and sharp parts!

Crushing, cutting and punctures are possible.

If possible, make preparations only when the machine is switched off.

Complete the following steps in preparation of sewing before starting to work:

- Inserting/changing the needle
- Threading the needle thread
- Inserting and winding on the hook thread
- Setting the thread tensions

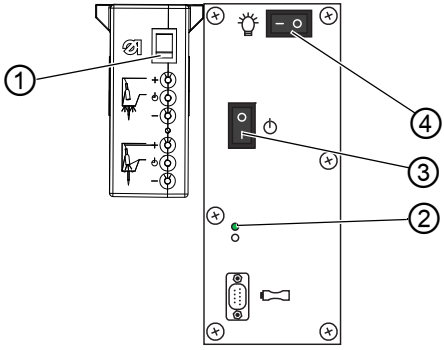
4.2 Switching on and off the machine

For switching on/off use the main switch (3).

Important

When you switch on the machine must not be under the foot presser sewn material!

Pic. 1: Switching on and off the machine and sewing lamp



(1) - Switch for dimmable sewing lamp
(2) - Indicator
(3) - Main switch
(4) - Sewing lamp switch

Switching on the machine

1. Press to switch (3) to the **I** position.

Switching off the machine

1. Press to switch (3) to the **0** position.

Switching on the dimmable sewing lamp

1. Press switch (4) to the left to position **I**.
2. Press switch (1) up to position **I**.

↳ Dimmable sewing lamp illuminates.

Switching off the dimmable sewing lamp

1. Press switch (1) down to position **0**.
2. Press switch (4) to the right to position **0**.

4.3 Inserting/replacing the needle

WARNING

Risk of injury from needle and moving parts!

Switch off the machine before you insert or replace the needle.

Do not touch the tip of the needle.

Order

Adjust the distance between the needle and the hook point after replacing to a different needle thickness (🕮 *Service Instructions*).

NOTICE

Damage to the machine, needle breakage, or thread damage is possible due to incorrect distance between the needle and hook point.

A false orientation of the needle may damage the hook point.

Check the distance to the hook point after inserting a needle with a different thickness. Reset distance if necessary.

Disturbance by an incorrect hook clearance

After inserting a thinner needle:

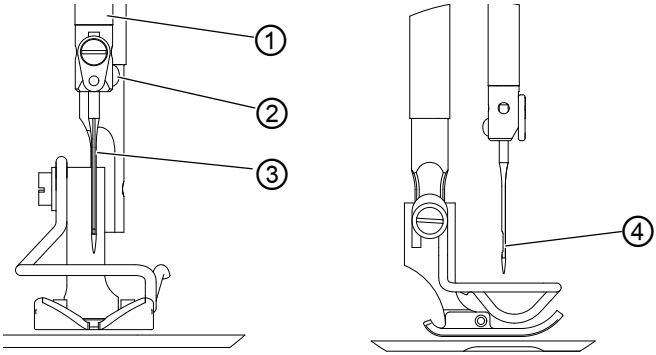
- missing stitches
- thread damage

After inserting a thicker needle:

- damage to the hook point
- damage to the needle

4.3.1 Machine 523i, 524i, 525i - needle system 134

Pic. 2: Needle inserting/replacing



(1) - Needle bar
(2) - Screw
(3) - Needle
(4) - Scarf

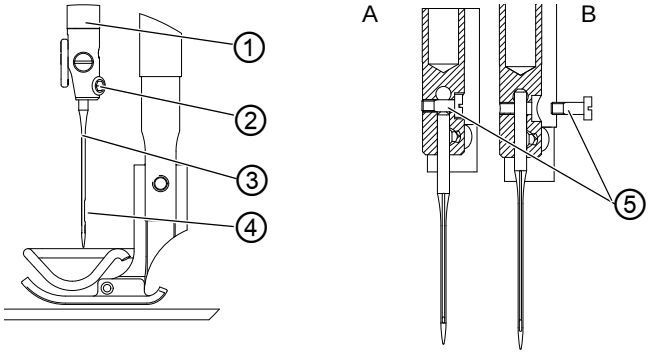
1. Turn the handwheel until the needle bar (1) reaches the upper end position.
2. Loosen the screw (2).
3. Pull the needle (3) out towards bottom.
4. Insert the new needle.

Important: Align the needle ins such a way that the scarf (4) faces the hook.

5. Tighten the screw (2).

4.3.2 Machine 527i - needle system 134; 134-35

Pic. 3: Needle inserting/replacing



(1) - Needle bar
(2) - Screw
(3) - Needle
(4) - Scarf
(5) - Screw

1. Turn the handwheel until the needle bar (1) reaches the upper end position.
2. Loosen the screw (2).
3. Pull the needle (3) out towards bottom.
4. Insert the new needle 134 according to picture (A).
5. Unscrew the screw (5) and insert a new needle 134-35 according to picture (B).

Important: Align the needle ins such a way that the scarf (4) faces the hook.

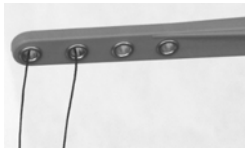
6. Tighten the screw (2).

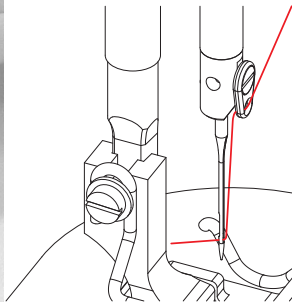
4.4 Threading the needle thread

WARNING

Risk of injury from needle and moving parts!
Switch off the machine before threading the thread.

Pic. 4: Threading the needle thread





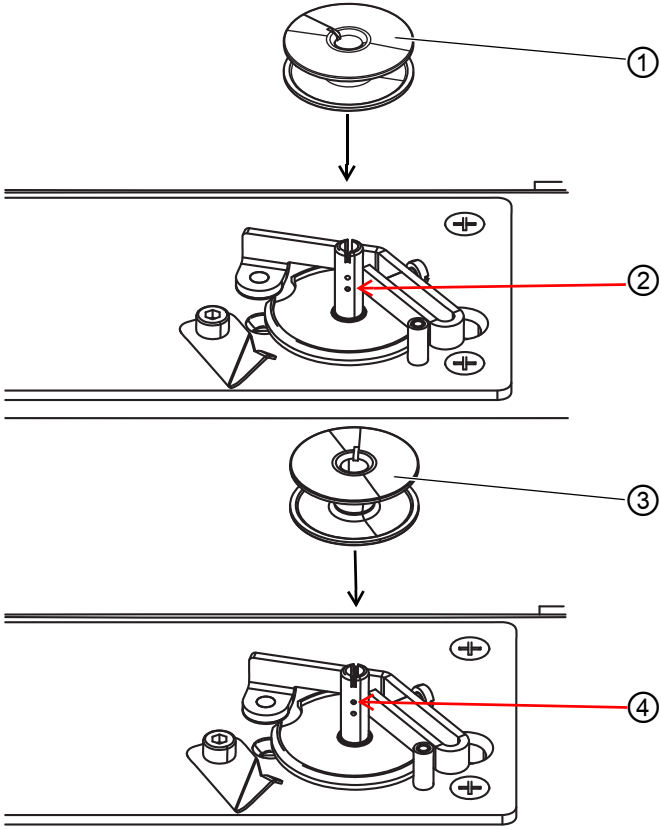
1. Fit the thread reel to the reel stand.
2. Threading the thread according to the picture.

4.5 Winding the hook thread

Proper setting

- Safety spring for bobbin (1) must be in hole (2).
- Safety spring for bobbin with increased thread supply (3) must be in hole (4).

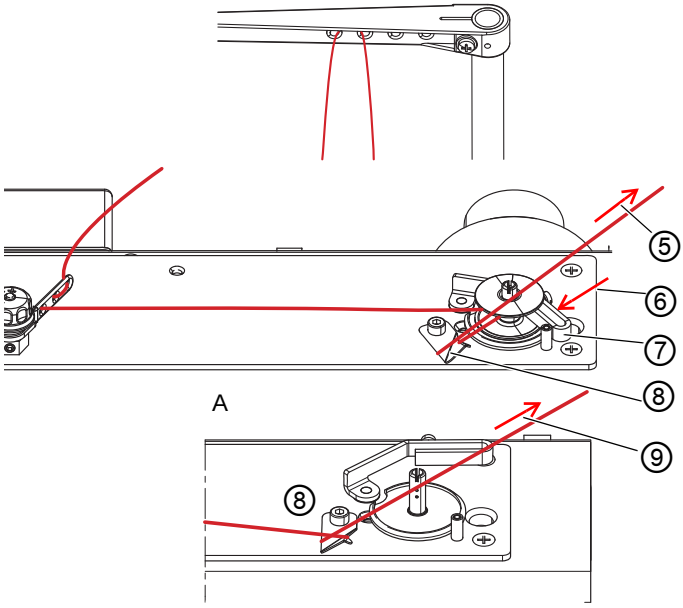
Pic. 5: Winding the hook thread 1



(1) - Bobbin
(2) - Lower hole
(3) - Bobbin with increased thread supply
(4) - Upper hole

1. Insert bobbin (1) and (3) on the bobbin shaft according to the proper setting.

Pic. 6: Winding the hook thread 2



(5) - Arrow
(6) - Arrow
(7) - Winder lever
(8) - Knife
(9) - Arrow

1. Fit the thread reel to the reel stand.
2. Feed the thread according to the picture and wind 5 times around the bobbin.
3. Insert the thread under the knife (8) and tear off by pulling in the arrow direction (5).
4. Pull the lever (7) in the arrow direction (6).
5. Start the machine up.
6. After the bobbin winding, wind the thread round knife (8) according to the picture (A) and tear off by pulling in the arrow direction (9).
7. Fit another bobbin immediately and prepare its winding during the sewing.

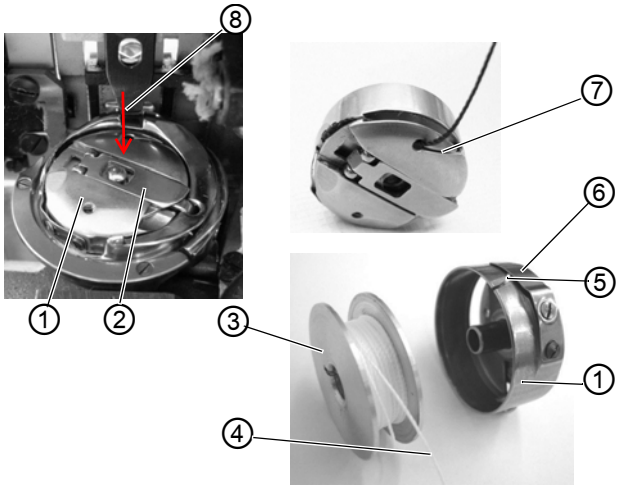
4.6 Changing the bobbin and thread hook threading

WARNING

Risk of injury from needle and moving parts!

Switch off the machine before changing the bobbin.

Pic. 7: Changing the bobbin and thread hook threading



(1) - Bobbin case
(2) - Flap
(3) - Bobbin
(4) - Thread end
(5) - Slot
(6) - Spring
(7) - Slot
(8) - Arrow

1. Tilt the flap (2) and pull the bobbin case (1) out of the hook.
2. Put the bobbin (3) in the bobbin case (1) with the thread end (4) oriented according to the picture.
3. Draw the thread end (4) through the slot (5), pull under the spring (6) and pull into the slot (7).
4. Insert the bobbin case (1) back in the hook and press it down in the arrow direction (8) till the lock inside the case clicks and secures it against falling out.
5. Make one stitch without the sewn material, and pulling of the needle thread end, pull the hook thread end outwards above throat plate.

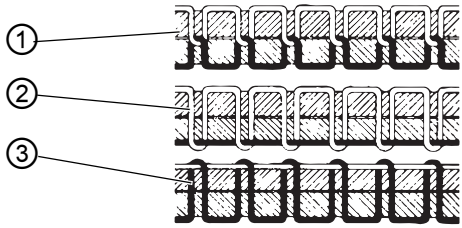
4.7 Thread tension

Together with the hook thread tension, the needle thread tension influences the final seam pattern. With thin sewing material, excessive thread tension can lead to undesired gathering and thread breakage.

Proper setting

If the tension of needle thread and hook thread is identical, the thread interlacing lies in the middle of the sewing material.
Set the needle thread tension so that the desired seam pattern is achieved with the lowest possible tension.

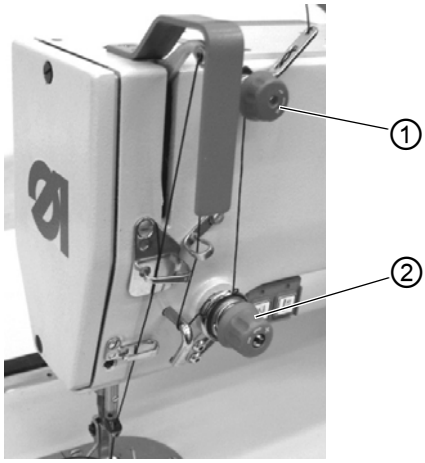
Pic. 8: Thread tension



(1) - Identical needle thread and hook thread tension
(2) - Hook thread tension higher than needle thread tension
(3) - Needle thread tension higher than hook thread tension

4.7.1 Setting the needle thread tension

Pic. 9: Setting the needle thread tension



(1) - Auxiliary tensioner *(2) - Main tensioner*

Increasing the tension:

1. Turn the regulating knob clockwise.

Reducing the tension:

2. Turn the regulating knob counterclockwise.

Setting the auxiliary tensioner (1)

Adjust the auxiliary tensioner (1) so that it has as small tension as possible, but high enough so as the thread cannot be pulled out from tensioner (1) at the material removing after previous trimming (when the tensioner (2) is opened - switched off).

Information
Auxiliary tensioner (1) is never switched off.

Setting the main tensioner (2)

Regulate the thread tension with the tensioner (2) until you achieve a good interlacing of the threads (📖 *p. 42*).

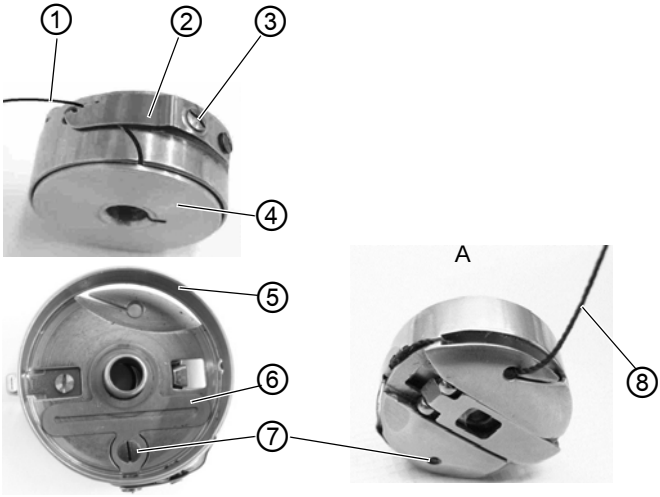
4.7.2 Setting the hook thread tension

WARNING

Risk of injury from needle and moving parts!

Switch off the machine before setting the hook thread tension.

Pic. 10: Setting the hook thread tension



(1) - Thread end
(2) - Spring
(3) - Screw
(4) - Bobbin
(5) - Bobbin case
(6) - Spring
(7) - Screw
(8) - Thread end

The hook thread tension depends on the adjustment of springs (2) and (6).

Increasing the tension:

1. Turn the screws (3), (7) clockwise.

Reducing the tension:

1. Turn the screws (3), (7) counterclockwise.

Setting the tension spring (2)

1. Remove the bobbin case (5) from the machine and insert a full-wound bobbin (4).
2. Do a complete threading according to picture (A).
3. Regulate the spring (2) pressure with a screw (3) so that the thread tension is in balance with the case and bobbin weight.

↳ When hung down on the thread end (1) the case is dropping slowly with its own weight.

Setting of bobbin brake spring at the thread trimming (6)

Important

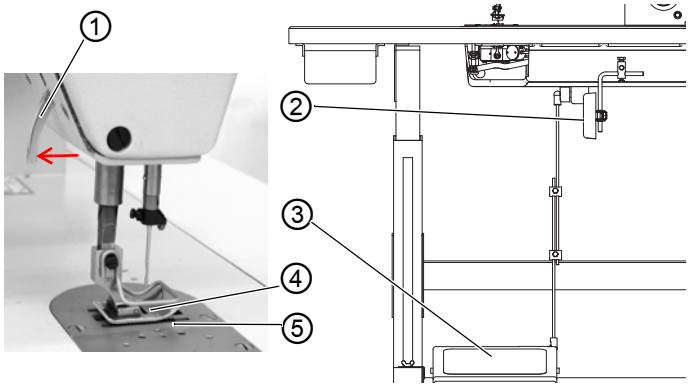
Bobbin braking should be as small as possible because it causes difference of tensions of full and empty bobbin and subsequently of thread interlacing in the stitch (defective look of the seam).

1. Regulate the bobbin braking with a screw (7) and watch the bobbin unwinding after the thread trimming: remove the case (5) from the machine, grip it so that the bobbin can not turn and pull out the thread end (8).

↳ At a correct adjustment, approx. 10 mm of thread will be pulled out of the case.

4.8 Foot lifting

Pic. 11: Foot lifting



(1) - Hand lever
(2) - Knee lever
(3) - Pedal
(4) - Foot
(5) - Throat plate

Foot lifting with a hand lever:

1. Press on the hand lever (1) to a stop in the arrow direction.

↳ The foot (4) lifts and remains lifted.

2. Lower the foot by returning the lever (1) to initial position or by pressing the knee lever (2) - if there is any and by its subsequent releasing or by the automatic foot lifting by means of the pedal and subsequent pedal releasing.

Information
After the foot lifting by hand lever, the machine may be started up (e.g. when winding the hook thread).

Foot lifting with a knee lever (if there is any):

1. Press on the knee lever (2).

↳ The foot (4) is lifted.

2. Release the knee lever (2).

↳ The foot (4) is lowered on the throat plate (5).

Foot lifting automatic - with solenoid - with pedal:

Applies to subclasses with the positioning motor and automatic control.

1. Press the pedal (3) to position -1 (📖 *p. 53*).

↳ The foot (4) is lifted.

Information
Automatic foot lifting after trimming can be pre-selected (📖 *p. 53*).

2. Press the pedal (3) to the position +1 (📖 *p. 53*).

↳ The foot is lowered.

WARNING

Risk of the machine destruction!
At the foot lifting with the knee lever or automatically the machine must not run.

CAUTION

Risk of injury from moving parts!
Risk of crushing when lowering the foot.
Do not reach under the foot.

4.9 Setting the foot pressure

Regulate the foot pressure by means of screwdriver (1), which is supplied with the machine accessories.

Proper setting

The foot pressure should be as small as possible, but strong enough so that the feeding is reliable even at a high sewing speed. The sewing material does not slip and is correctly transported.

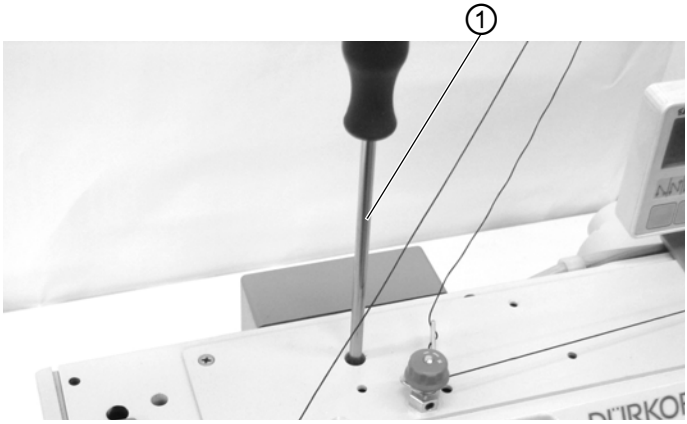
The correct pressure depends on the sewing material:

- Lower pressure for soft materials, e.g. cloth
- Higher pressure for harder materials, e.g. leather

Disturbance from incorrectly set foot pressure:

- Excessively high pressure: Tearing of the sewing material
- Excessively low pressure: Slipping of the sewing material

Pic. 12: Foot pressure setting



(1) - Screwdriver

Increasing the foot pressure:

1. Turn the screwdriver (1) clockwise.

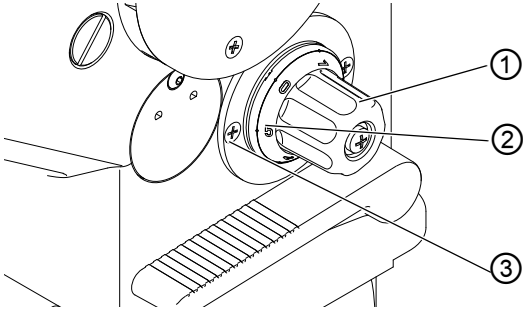
Reduce the foot pressure:

2. Turn the screwdriver (1) counterclockwise.

4.10 Setting the stitch length

The stitch length can be adjusted continuously to 0 - 5 mm.

Pic. 13: Stitch length



(1) - Knob
(2) - Number
(3) - Screw

The number (2), which indicating the required stitch length in mm is opposite the screw (3).

Reducing the stitch length:

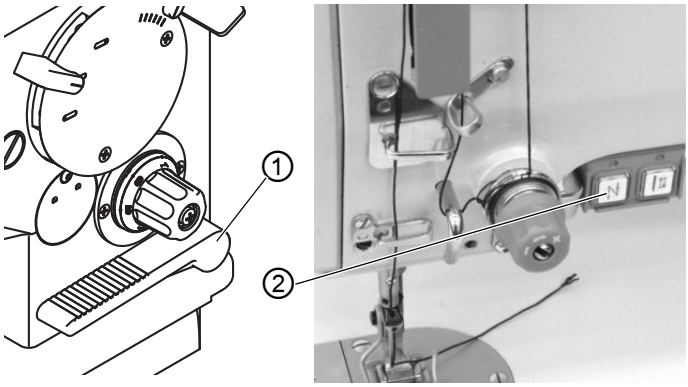
1. Turn the knob (1) clockwise.

Increasing the stitch length:

1. Turn the knob (1) counterclockwise.

4.11 Backtacking (reverse feed, closing up)

Pic. 14: Backtacking



(1) - Hand lever *(2) - Micro-switch*

Backtacking with a hand lever:

Applies to manually controlled subclasses.

1. Press the lever (1) downwards.

↳ The machine will feed in the reverse direction until you release the lever.

Backtacking with a micro-switch:

Applies to automatically controlled subclasses.

1. Press the micro-switch (2).

↳ The machine will be feed in the reverse direction until you release the grip.

Automatic backtacking (bar sewing, bartacking):

On machines equipped with the positioning motor and automatic control the automatic backtacking can be pre-selected with a pre-selected number of reverse stitches both at the beginning and at the end of the seam. At the beginning of the seam (after previous thread trimming) after the pedal treading forwards the machine will sew the pre-selected bar and continue the sewing. At the end of the seam it will sew the pre-selected bar at the pedal treading in position -2 (📖 *p. 53*).

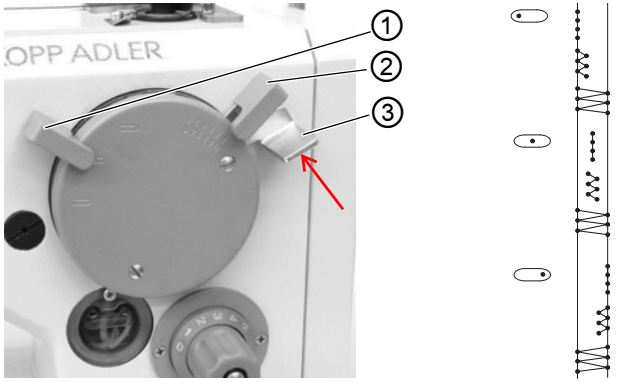
4.12 Setting of zig-zag stitch width for machines 523i, 524i, 527i and a zig-zag stitch position for machines 523i, 524i

VAROVÁNÍ

Risk of the needle breaking!

At setting the zig-zag stitch width and position the needle must not be inside the sewn material.

Pic. 15: Setting of zig-zag stitch width and position



(1) - Lever
(2) - Lever
(3) - Arresting lever

Setting the zig-zag width

1. Press the arresting lever (3) in the arrow direction until it strikes the lever (2).

   ↳ The arrest of lever (2) and lever (1) is released.

2. Grip both levers (3) and (2) at the same time and set the zig-zag stitch width by turning the lever (2) against the selected number indicating the stitch width.
3. Arrest the lever (2) position by turning the arresting lever (3) against the arrow direction.

Setting the zig-zag stitch position

1. Press the arresting lever (3) in the arrow direction until it strikes the lever (2).

↳ The arrest of lever (2) and lever (1) is released.

Important

Make sure that the lever (2) setting does not change at the arrest switching off.

1. Press the lever (1) and turn it at the same time up to the stop (inside the machine) against the respective symbol indicating the zig-zag stitch position. Only the middle position of the lever is arrested with a lock.
2. After the lever (1) setting, carry out arresting with the lever (3).

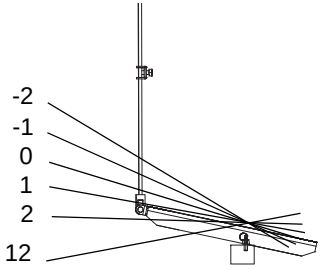
Information

In picture there are examples of setting the zig-zag stitch width and position from which it is visible that the zig-zag stitch width does not change at the position change.

4.13 Machine control

4.13.1 Pedal control

Pic. 16: Pedal control



The pedal position is scanned with a proximity switch which distinguishes 16 levels.

Pedal position	Pedal motion	Meaning
-2	Heel fully backwards	Command tor thread trimming (seam finish)
-1	Heel slightly backwards	Command for foot lifting
0	Neutral position	See note
1	Slightly forwards	Sewing at minimum speed (1 gear)
2	Further forwards	Sewing - 2 speed gear
:	:	:
12	Fully forwards	Sewing maximum speed (12 gear)

Information
The needle position can be pre-selected for the neutral position (needle down/up) as well as for the foot position (down/up) at the seam-stop (by putting the pedal in the neutral position), and for the foot position (down/up) after the seam finishing (by treading the pedal with heel fully backwards and putting the pedal in the neutral position).

4.13.2 Key control panel

Pic. 17: Key control panel

(1) - Hand backtacking *(2) - Needle position*

Key	Function
1	**Hand backtacking** When the key is pressed at sewing, the sewn material is feed backwards.
2	**Needle positioning in upper or bottom position** By the parameter the key function can be defined: 1 = needle up/down 2 = needle up 3 = one stitch (factory setting is 1)

4.14 Puller

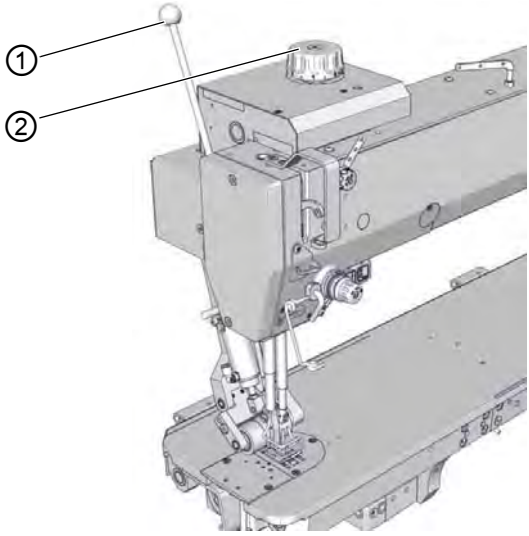
WARNING

Risk of injury from moving parts!
Do not reach under the foot and under the puller feed rollers.

The feed length of the Puller can be variously adjusted to the lower feed up to maximum 7 mm with the help of the setting wheel (2).

4.14.1 Control with hand lever

Pic. 18: Puller 1



(1) - Hand lever *(2) - Setting wheel*

Puller lifting:

1. Swivel the hand lever (1) in the direction of the operating personnel.

↳ Puller raised of the operating range and does not have any function.

Puller lowering:

1. Swivel the hand lever (1) in the direction from operating personnel.

↳ Puller is lowered into the operating range.

Important

If the Puller is not needed for a long time, then the feed length should be adjusted to the minimum value with the help of the setting wheel (2), in order not to unnecessarily load the mechanics.

4.14.2 Puller electropneumatic control

For the electro-pneumatic rising and lowering of Puller, there is a function module on the control unit of the sewing motor that can be activated using a parameter (for set values, see parameter table).

Function module „Rising/Lowering of the Puller“

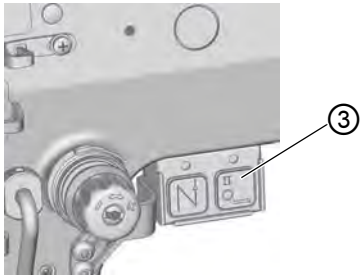
Function module is a part of the control unit that controls an equipment feature of the machine, such as e.g. the rising and lowering of the Puller.

Each function module is composed of the following hardware:

- Output (A and/or B) e.g. for switching operation of a magnetic valve
- Input (A and/or B) e.g. for connecting a button
- Output for a light-emitting diode (A and/or B), which e.g. shows a switching status

Each function module can switch over to various functions with the help of the software. For each function module, there are additional parameters, e.g. for activating counting processes or for switching between functions after thread cutting.

Pic. 19: Puller 2



(3) - Button - Puller

Setting and function

- Puller is lowered/raised by pushing the button (3).
- If the mode for automatic raising of the Puller is set to option 3 then the following applies:
  - If the presser foot is lifted with lowered Puller (by pedal in position 1), then the Puller is raised
  - If manual backtack is activated with lowered Puller, then Puller is raised during manual backtack. After manual backtack is Puller lowered.
  - In end backtack or thread trimming process is Puller raised.

Parameter table

DAC Classic parameter	Function
t 51 22 - 8 t 11 00 - 5	Activate function module “Puller raise/lower”
t 14 00	Mode for automatic Puller raising 0 = do not raise 1 = wit presser foot lift 2 = during backtacking 3 = during backtacking and when presser foot is lifted

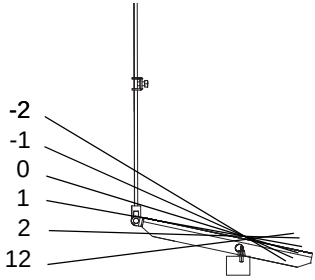
4.15 Sewing

WARNING

Risk of injury from the needle if sewing is started unintentionally!

Do not press the pedal when you fingers are in the area of the needle tip.

Pic. 20: Sewing



Initial position:

- Pedal in position 0.

↳ Machine is at a standstill, needle is up and presser foot down.

Positioning the sewing material:

1. Press the pedal halfway back (position -1):

↳ Presser foot is lifted.

2. Position the sewing material.

Sewing:

1. Press the pedal forwards (position 1) and keep it there:

↳ Machine sews.
Sewing speed is increased the further pedal is pressed (2 -12).

Stop sewing:

1. Release the pedal (position 0):

↳ Machine stops, needle and presser foot are down.

Continue the sewing process:

1. Press the pedal forwards (position 1):

↳ Machine continues to sew.

At seam end:

1. Press the pedal fully back (position -2) and keep it there:

↳ Thread is cut.
Machine stops, needle and presser foot are up.

2. Remove the sewing material.

5 Maintenance

WARNING

Risk of injury from sharp parts!

Punctures and cutting possible.

Prior to any maintenance work, switch off the machine.

WARNING

Risk of injury from moving parts!

Crushing possible.

Prior to any maintenance work, switch off the machine.

This chapter describes maintenance work that needs to be carried out on a regular basis to extend the service life of the machine and achieve the desired seam quality.

Maintenance intervals

Work to be carried out	Operating hours			
	8	40	160	500
Check the bobbins for wear and damage and replace them if necessary			●	
Cleaning				
Removing lint and threads remnants	●			
Lubricating				
Lubricating the head machine	●			
Lubricating the hook		●		

5.1 Cleaning

WARNING

Risk of injury from flying particles!

Flying particles can enter the eyes, causing injury.

Wear safety goggles.
Hold the compressed air gun so that the particles do not fly close to people.
Make sure no particles fly into the oil pan.

NOTICE

Property damage from soiling!

Sawing dust and thread residues can impair the operation of the machine.

Clean the machine as described.

NOTICE

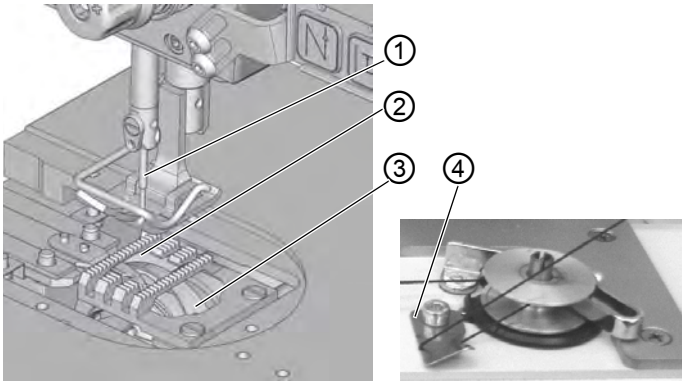
Property damage from solvent-based cleaners!

Solvent-based cleaners will damage paintwork.

Use only solvent-free substances for cleaning.

Sewing dust and thread residues should be removed after every 8 operating hours using a compressed air gun or a brush. If very fluffy sewing material is being sewn the machine must be cleaned more frequently.

Pic. 21: Cleaning



(1) - Area around the needle
(2) - Area the throat plate
(3) - Hook
(4) - Knife on the winder

Area particularly susceptible to soiling:

- Area around the needle (1)
- Area under the throat plate (2)
- Hook (3)
- Knife on the winder for the hook thread (4)

1. Remove any dust and thread residues using a compressed air gun or a brush.

5.2 Lubricating

CAUTION

Risk of injury from contact with oil!

Oil can cause a rash if it comes into contact with skin.

Avoid skin contact with oil.
If oil has come into contact with your skin, wash the affected areas thoroughly.

NOTICE

Property damage from incorrect oil!

Incorrect oil types can result in damage to the machine.

Only use oil that complies with the data in the instructions.

CAUTION

Risk of environmental damage from oil!

Oil is a pollutant and must not enter the sewage system or the soil.

Carefully collect up used oil.
Dispose of used oil and oily machine parts in accordance with national regulations.

The machine is equipped with a central oil-wick lubrication system. The bearings are supplied from the oil reservoir.

For topping off the oil reservoir, use only lubricating oil **DA 10** or oil of equivalent quality with the following specifications:

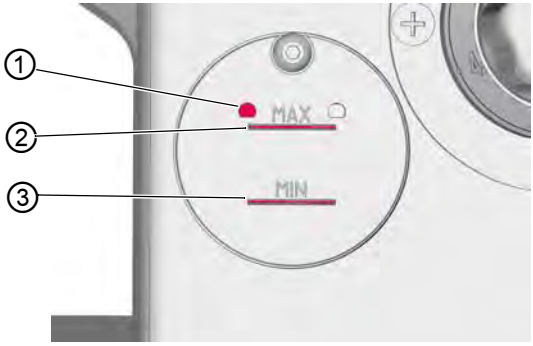
- Viscosity at 40 °C: 10 mm²/s
- Flash point: 150 °C

You can order the lubricating oil from our sales offices using the following part numbers:

Container	Part No.
250 ml	9047 000011
1 l	9047 000012
2 l	9047 000013
5 l	9047 000014

5.2.1 Lubricating the machine head

Pic. 22: Lubricating the machine head



(1) - Oil filler opening
(2) - MAX marking
(3) - MIN marking

Proper setting

The oil level must not raise above the MAX marking (2) or drop below the MIN marking (3).

1. Fill oil through the oil filler opening (1) up to the MAX marking (2).

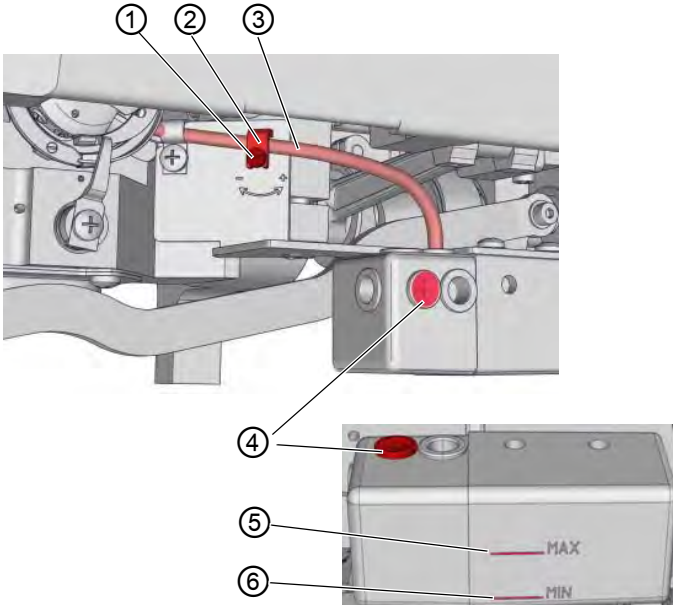
5.2.2 Hook lubrication

The optimal oil quantity for hook lubrication is specified by the factory. Hold a piece of blotting paper next to the hook and step on the pedal.

Proper setting

1. The regulating screw (1) must be tightened so that the clamp (2) lightly grips the hose with lubricating wick (3).
2. After sewing a path of approx. 1 m long, the blotting paper is evenly sprayed with a thin layer of oil.
3. The oil level must not raise above the MAX marking (5) or drop below the MIN marking (6).

Pic. 23: Hook lubrication



(1) - Regulating screw
(2) - Clamp
(3) - Tube with lubricating wick
(4) - Oil filler opening
(5) - MAX marking
(6) - MIN marking

1. Tilt the machine.
2. Turn the regulating screw (1):
3. Releasing more oil: turn counterclockwise (+)

4. Releasing less oil: turn clockwise (-)
5. Fill oil through the oil filler opening (4) up to the MAX marking (5).

Important

The released amount of oil does not change until the operating time has run a few minutes. Sew for several minutes before you check the setting again.

5.3 Parts list

A parts list can be ordered from Dürkopp Adler.
For more information visit our website:

www.minerva-boskovice.cz

www.duerkopp-adler.com

6 Setup

WARNING

Risk of injury from cutting parts!

Cutting injuries may be sustained while unpacking and setting up the machine.

Only qualified specialists may set up the machine.
Wear safety gloves.

WARNING

Risk of injury from moving parts!

Cutting injuries may be sustained while unpacking and setting up the machine.

Only qualified specialists may set up the machine.
Wear safety shoes.

6.1 Checking the scope of delivery

The scope of delivery depends on your specific order. Check that the scope of delivery is correct after taking delivery.

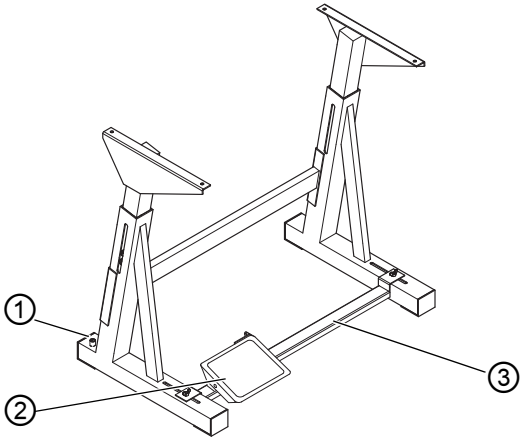
6.2 Removing the transports locks

Remove all transport locks before setting up the machine:

- Lashing straps and wooden bocks from the machine head the table top and the stand

6.3 Assembling the stand

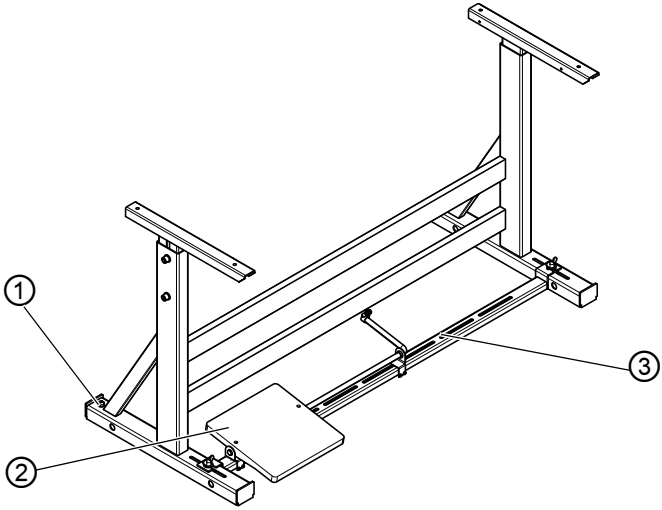
Pic. 24: Assembling the stand - machine with short arm



(1) - Screw
(2) - Pedal
(3) - Cross strut

1. Assemble the stand according to the picture.
2. Fit the pedal (2) to the cross strut (3). Its position will be adjusted after the whole machine is complete.
3. Adjust the screw (1) so that the stand is stable.

Pic. 25: Assembling the stand - machine with long arm



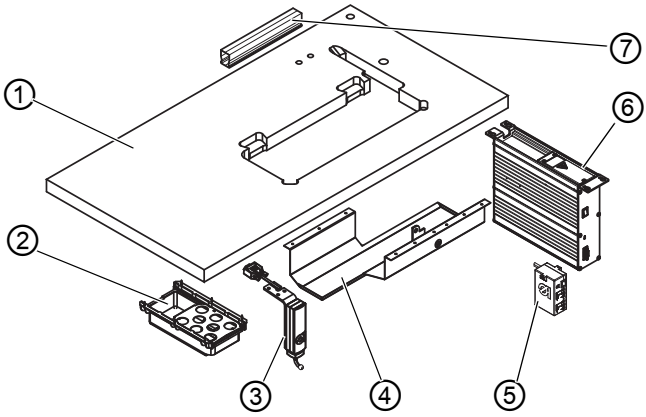
(1) - Screw
(2) - Pedal
(3) - Cross strut

6.4 Table top

Ensure that the table top has sufficient load-bearing capacity and strength. If you want to make your own table top, use the dimensions given in the diagram z **Appendix** (📖 *p. 107*), as template.

Drawings for completing the table top are also available in the **Appendix** (📖 *p. 107*).

Pic. 26: Completing the table top 1 - machine with short arm

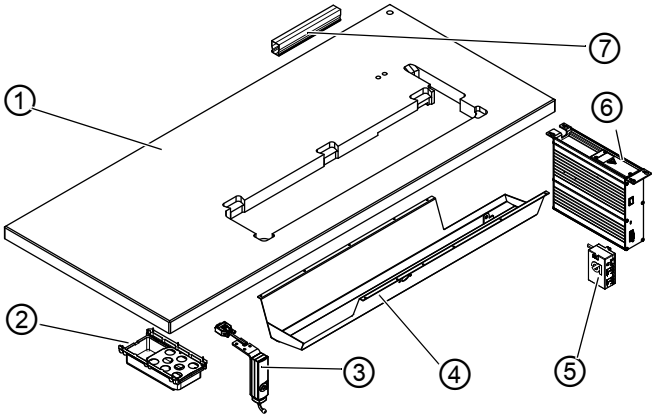


(1) - Table top
(2) - Drawer
(3) - Set value sensor
(4) - Oil pan
(5) - Transformer
(6) - Control box
(7) - Cable canal

1. Turn the table top (1) upper side down.
2. Screw the drawer (2).
3. Set the oil pan (4) so that the oil tray inside aligns with the recess in the table top and screw it.
4. Screw micro-switch (if there is any).
5. Screw the motor control box (6).
6. Screw the set value sensor (3).
7. Screw the lighting transformer (5) - the lighting 2-LEDs.

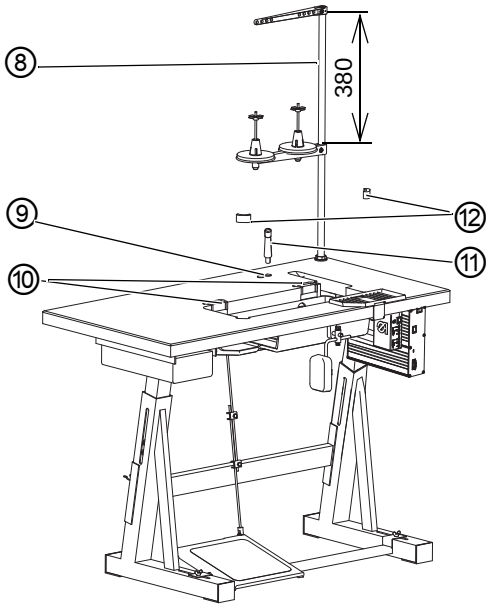
8. Screw the cable canal (7).
9. Mount the electric cables (📖 *p. 86*) and fix them to the table top with clamps.
10. Screw the stand frame to the table top - pre-drilled holes.
11. Turn the stand to the normal position.

Pic. 27: Completing the table top 1 - machine with long arm



(1) - Table top
(2) - Drawer
(3) - Set value sensor
(4) - Oil pan
(5) - Transformer
(6) - Control box
(7) - Cable canal

Pic. 28: Completing the table top *2*



(8) - Yarn stand
(9) - Support blinds
(10) - Rubber hinge bottoms
(11) - Support pin
(12) - Rubber corners

12. Mount the yarn stand (8) according to the picture, insert it into the hole in the table top and fix it with a nut with washer.
13. Fix the support blinds (9) for machine Classic or the support blind (9) and support pin (11) for machine Eco.
14. Stick rubber hinge bottoms (10) and rubber corners (12) with a suitable contact glue. Stick horizontal fitting surfaces of the hinge bottoms only. You can also fix the hinge bottoms by means of wood screws which must be then screwed down so deep so that there is no contact of the wood screws and the machine head.

6.5 Stand height setting

WARNING

Risk of crushing from the moving parts!

The table top can sink under its own weight when the screws on the stand bars are loosened. Crushing possible.

Ensure that your hands are not jammed when loosening the screws.

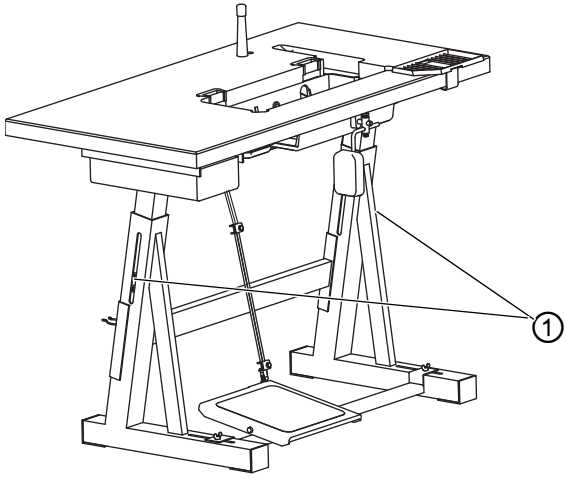
CAUTION

Risk of musculoskeletal damage from incorrect setting!

The operator can sustain musculoskeletal damage of failing to comply with the ergonomic requirements.

Adjust the working height to the body height of the person who will operate the machine.

Pic. 29: Stand height setting



(1) - Screws

The stand height is adjustable between 750 and 900 mm.

1. Loosen the screws (1).
2. Set the table top to the desired height. To do so, make use of the scale on the stand feet.

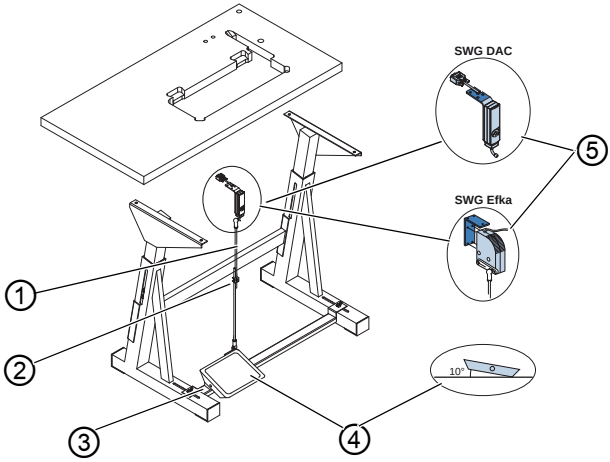
Important

Pull out or push in the table top evenly at both sides to prevent it from jamming.

3. Tighten the screws (1).

6.6 Setting the pedal and set value sensor

Pic. 30: Setting the pedal and set value sensor



(1) - Pedal rod
(2) - Screw
(3) - Cross strut
(4) - Pedal
(5) - Set value sensor

1. Align the pedal (4) in such a way that the middle of the pedal is in under the needle. The cross strut (3) has elongated holes to allow for the alignment of the pedal.
2. Tighten the pedal (4) on the cross strut (3).
3. Attach the pedal rod (1) with the ball sockets to the set value sensor (5) and to the pedal (4).
4. Pull the pedal rod (1) to the correct length:

   Proper setting: 10° inclination with pedal (4) released.
5. Tighten the screw (2).

6.7 Inserting the machine head

WARNING

Risk of injury from moving parts!

The machine head is very heavy.
Crushing possible.

Ensure that your hands are not jammed when inserting the machine head.

NOTICE

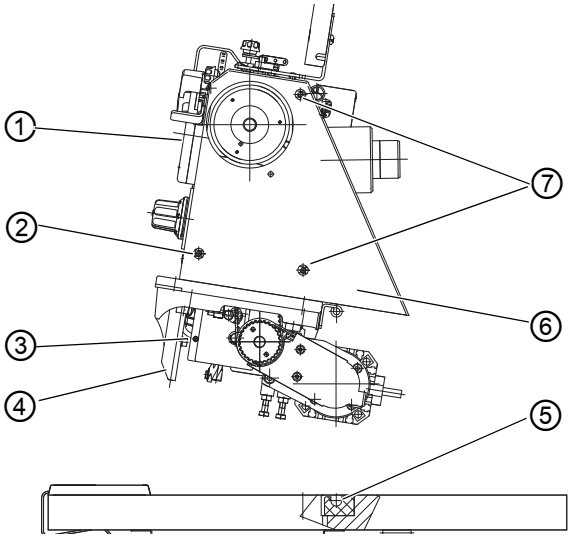
Property damage may occur!

Cable may sustain damage and impair the operation of the machine.

Always lay the cables so as not to create any chafing or pinching points.

6.7.1 Motor integrated on the machine head

Pic. 31: Motor integrated on the machine head

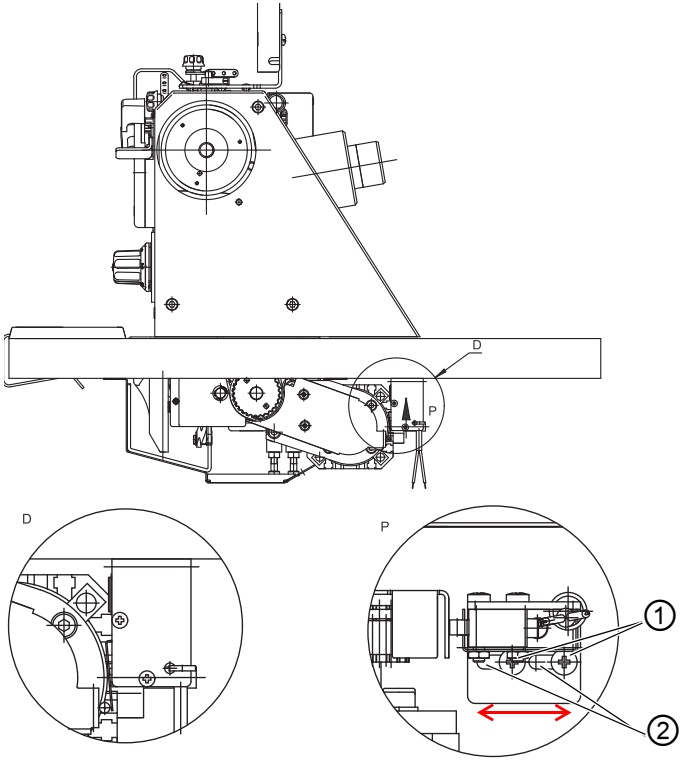


(1) - Machine head
(2) - Screw
(3) - Screw
(4) - Prop
(5) - Insert
(6) - Belt cover
(7) - Screws

1. Tilt the machine head (1) slightly and insert it into the slot in the table top.
2. After inserting the machine head (1) into the inserts (5) /tilt position/ loosen the screw (3) and slide the prop (4) up to a stop and tighten the screw (3).
3. Partly screw two screws (7) in the machine head (1).
4. Fix the belt cover (6), screw the screw (2) and slightly tighten all fastening screws.

6.7.2 Setting of machine blocking switch

Pic. 32: Setting of machine blocking switch



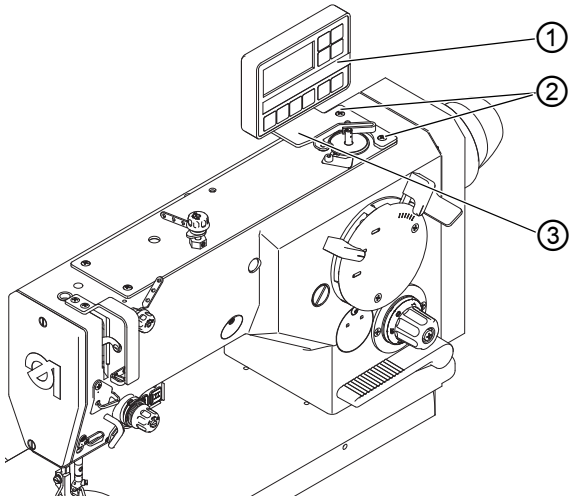
(1) - Screws

(2) - Groove

1. Set the machine so that, the microswitch must be switched on in the machine working position.
2. Loosen the screws (1), shift the microswitch in groove (2) until the sound of the switch switching (a click) is heard.
3. Tighten the screws (1).

6.8 Assembling of control panel

Pic. 33: Assembling of control panel - machine with short arm

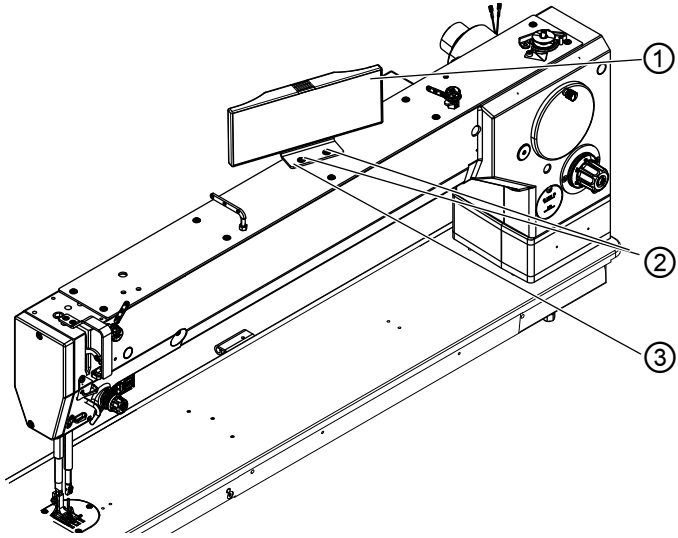


(1) - Control panel
(2) - Screws
(3) - Control panel holder

The illustrated control panel (1) has Efka V810 marking. Also a more comfortable panel V820 can be mounted on the same holder. In the equal way will be mounted also the panel OP1000 of the DAC drive (picture in the spare parts list).

1. Screw out two screws (2) and subsequently screw by them the holder (3).
2. Screw the panel (1) on the holder (2) and pull its cable under the table top and subsequently through the cable canal to the motor control.

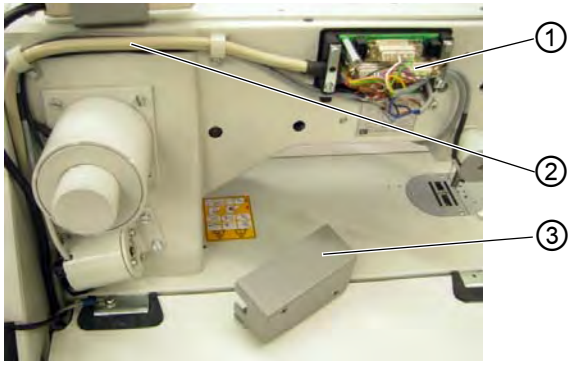
Pic. 34: Assembling the control panel - machine with long arm



(1) - Control panel
(2) - Screws
(3) - Control panel holder

6.9 Assembling of connecting cable

Pic. 35: Assembling of connecting cable



(1) - Connector
(2) - Connecting cable
(3) - Distribution case cover

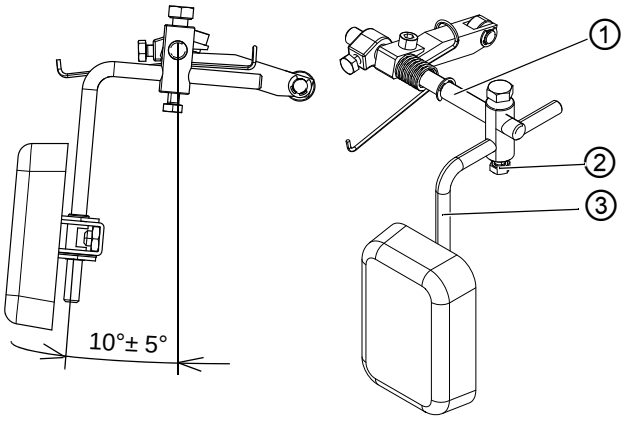
If the machine is equipped with the positioning motor, the machine head is electrically connected to the motor control box by means of a connecting cable (1). The connecting cable is included in the motor kits.

1. Remove the distribution case cover (3).
2. Install the connecting cable (2) according to the picture.
3. Connect the connector (1).
4. Mount the distribution case cover back again.
5. Pull the connecting cable (2) under the table top according to the picture and connect it to the motor control box.

6.10 Assembling the knee lever

Information
Knee lever is standard for Eco machines and optional for Classic machines.

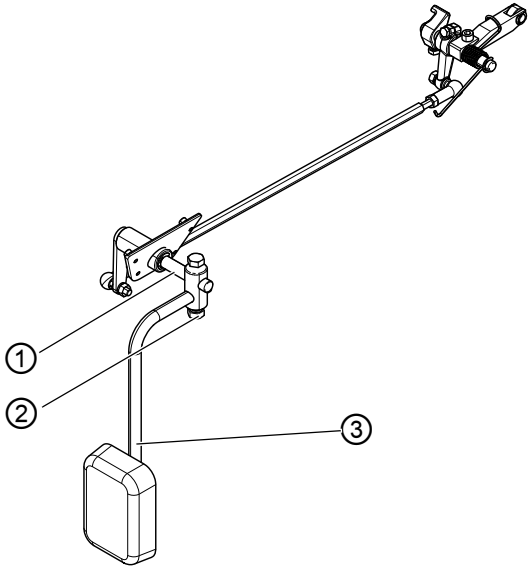
Pic. 36: Assembling the knee lever - machine with short arm



(1) - Shaft
(2) - Screw
(3) - Rod

1. Tilt the head machine.
2. Assemble the knee lever according to the picture.
3. Fit the shaft (1) into the oil pan.
4. Fasten the rod (3) with the screw (2) according to the picture.

Pic. 37: Assembling the knee lever - machine with long arm



(1) - Shaft
(2) - Screw
(3) - Rod

7 Electrical connection

DANGER

Risk of death from live components!

Unprotected contact with electricity can result in serious injuries of death.

Only qualified specialists may perform work on electrical equipment.

7.1 Machine connection to low voltage network

Important

The voltage on the type plate of the sewing motor must correspond to the mains voltage.

A low voltage circuit includes the following items:

- supply cable
- motor
- lighting transformer (optionally)
- cables

DANGER

Risk of electric injury!

The motors may be operated only with a protective conduit connected to a protective system capable of function complying with prescriptions and decrees to prevent personal injuries due to electric current or fire.

The motor operation becomes dangerous if the protective conduit inside or outside the motor is disrupted. The protection must not be broken by means of e.g. an extension cord without the protective conduit.

The sewing drive can be operated in electrical networks of the type IT, TN, TT. Specific connection examples are listed on the drive manufacturer's website www.efka.net, www.duerkopp-adler.com.

7.2 Lighting transformer connection to network voltage

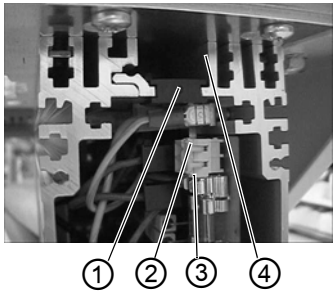
DENGER

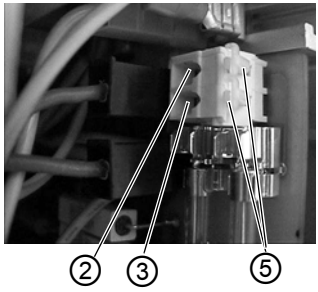
Risk of electric injury!

The lighting transformer is not switched-off by the main switch (EN 60 204-31)! At the lighting installation and repair works in the transformer box, e.g. a fuse replacement, the network plug must be disconnected from the network unconditionally.

The machine is equipped with Efka DC1550/DA321G

Pic. 38: Efka control





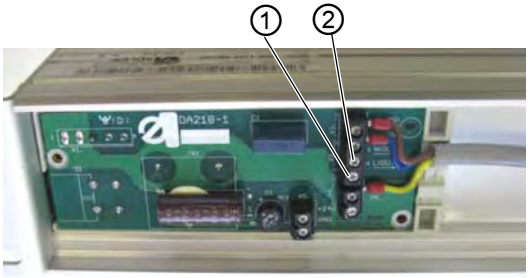
(1) - Rubber bushing
(2) - Upper terminal
(3) - Lower terminal
(4) - Cable canal
(5) - Terminal openers

1. Pull the network plug form the socket.
2. Screw out 4 screws on the front plate of the control box.
3. Remove the front plate.
4. Pull the cable of the lighting transformer through the canal (4) in the control box.
5. Take out the black rubber bushing (1).
6. Pierce the bushing with a screwdriver.
7. Pull the lighting transformer cable through the arisen hole.
8. Put the rubber bushing back again.

9. Gradually push the terminal openers (5) with a small screwdriver until the terminals (2) and (3) open.
10. Connect the blue wire to the terminal (2) and brown wire to the terminal (3).
11. Screw the front plate back again.
12. Fix the lighting transformer cable against plucking out (e.g. with a stick tape to the network supply cord).

The machine is equipped DAC control

Pic. 39: DAC control



(1) - Connector *(2) - Connector N*

1. Pull out the net plug from the electric socle!
2. Unscrew the power supply cover on the control box.
3. Screw the light power supply to the terminal board (connectors L, N).
4. Screw the power supply cover back.

7.3 Grounding

Pic. 40: Grounding

(1) - Grounding wire *(2) - Plug*

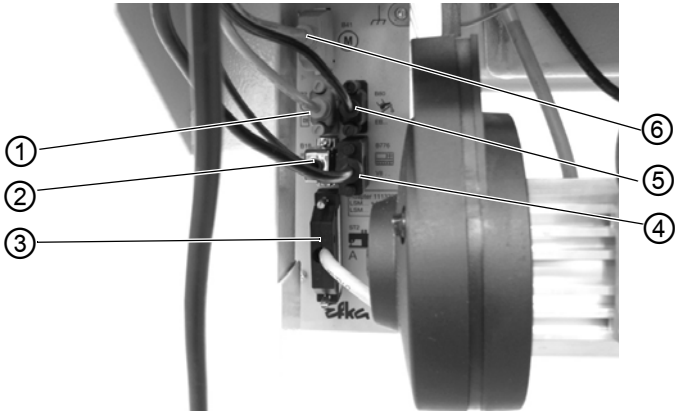
1. The grounding wire (1) is included in the machine accessories.
2. Connect the wire (1) to the plug (2) and pull its opposite end under the table top.
3. Screw the opposite end of the grounding wire to the respective grounding point of the motor (marked ⏚).
4. Fasten the wire to the bottom side of the table top with clamp.

Important

Ensure that the grounding wire does not touch the driving V-belt (if there is any).

7.4 Machine head connection to Efka DC1550/ DA321G

Pic. 41: Machine head connection to Efka

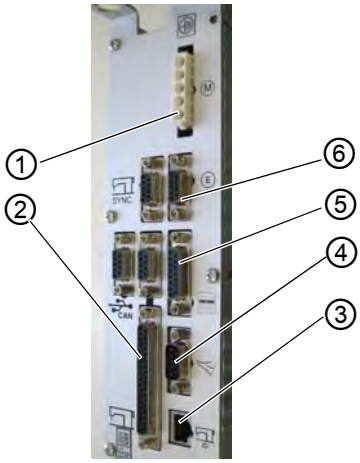


(1) - Connector B2
(2) - Connector B18
(3) - Connector - machine head
(4) - Connector - control panel
(5) - Connector - set value sensor
(6) - Connector drive

1. Connect the machine head connecting cable to the connector (3).
2. Connect the control panel to the connector (4).
3. connect the position sensor connector in the motor to the connector B2 (1).
4. Connect the motor connector to the connector (6).
5. Connect the set value sensor to the connector (5).
6. Connect the proximity switch to the connector B18 (2).

7.5 Machine head connecting to DAC

Pic. 42: Machine head connecting to DAC



(1) - Connector M
(2) - Connector - machine head
(3) - Connector ID
(4) - Connector - set value sensor
(5) - Connector - control panel
(6) - Connector E

1. Connect the sewing head connection cable into the connector (2) signed with the machine symbol.
2. Connect the control panel into the connector (5) signed with the panel symbol.
3. Connect the motor encoder connector into the connector (6).
4. Connect the motor connector into the connector (1).
5. Connect the set value sensor to the connector (4) signed with the pedal symbol.
6. Connect “machine identification” to the connector ID.

8 Setting of positioning motor

The function of the positioning motor is determined by its program, setting of the motor parameters and the machine stop positions.

If the sewing machine is supplied as disassembled, the motor setting must be performed by the purchaser. If the sewing machine is supplied as complete, the motor is already set by the sewing machine manufacturer.

8.1 Setting of motor parameters

WARNING

Risk of machine damage!

Change of the parameter values must be performed responsibly and with consideration.

Important

Through the so-called reset all parameter values can be set up back to the pre-set values.
Detail informations are listed on the drive manufacturer's website:

- Efka control - www.efka.net, Operating Instructions in section Downloads/DC-drives
- DAC control - www.duerkopp-adler.com, Operating Instructions in the section Support/Download/DAC-basic / DAC-classic

8.1.1 Parameter values - DC 1550/DA321G

The description of parameter entering is in the publication attached by the motor manufacturer “Efka Operating Instructions” or on the website www.efka.net.

For machines with gear rate 1:1 and with the toothed belt

Parame-ter	Original value	New value	Parameter description
290*	0	19	Machine class
270	6	0	Choice of sensor type
111	1000	-	Sewing speed maximum
170	-	-	Reference position
190	170	120	Switch on angle of thread trimmer
192	160	140	Delay angle of tensioner release
272	1063	1000	Gear rate

For machines with another gear rate and wit another belt

Parame-ter	Original value	New value	Parameter description
290*	0	19	Machine class
111	1000	-	Sewing speed maximum
170	-	-	Reference position
190	170	120	Switch on angle of thread trimmer
192	160	140	Delay angle of tensioner release

* Parameter necessary to be entered as the first.

Important

To set parameters higher than 200 it is necessary to enter the control with a programmer’s authorization (through code 3112). The access is then enabled to parameters lower than 200.

8.1.2 Parameters values - DAC classic

The machine class and subclass choice will be optioned in the mean time of the SW installation from the external device “DONGLE”.

The parameter input description you will find in the publication given by the “DAC eco/classic Operating manual” producer or on the website www.duerkopp-adler.com.

To be the machine function regular is to be set up the “reference position” and sewing speed maximum.

Parameter	Value	Parameter description
T08 00	*	Sewing speed maximum (rpm)
T08 10	-	Reference position

* depends on the type and machine equipment

8.2 Setting of machine positioning

8.2.1 Position definition

Position 1

The needle is down at seam-stop. The needle thread loop is caught with the hook. The needle is high enough so that it is possible to lift the foot to the height 12 mm.

Position 2

The needle is up after trimming. At the foot lifting to the height 12 mm the needle point must not protrude from the foot fitting surface.

Reference position

On the needle motion downwards, the needle point is at the throat plate level. This position is used to carry out the positioning motor basic setting. The above mentioned positions are derived from this as well as other positions not mentioned here.

8.2.2 Setting of machine positioning

For the machine positioning the proximity switch on the hand wheel is used together with the incremental sensor inside the motor. These sensors permanently measure the angle between the actual position of the upper shaft and its reference position.
The reference position is set up according to the accompanying Instructions manual. For the machine good function it is necessary to set up the reference position in the most accurate way possible.

8.2.3 Checking of set up positions

Position 1

- Switch the network switch on
- Tread the pedal forwards shortly and release. The machine stops in position 1 (📖 *p. 94*).

Position 2

- Tread the pedal forwards shortly first and then with heel fully backwards until the machine stops. The machine stops in position 2 (📖 *p. 94*).

9 Checking the lubrication

Before starting up the machine must be properly lubricated with oil (📖 *p. 64*).

10 Performing a test run

When setup is complete, perform a test run to check the functionality of the machine.

.

WARNING

Risk of injury from moving, cutting and sharp parts!

Switch off the machine before you replace the needle, threading the thread, insert the bobbin and adjust the hook thread tension.

Sewing test

1. Insert the needle (📖 *p. 35*).
2. Wind on the hook thread (📖 *p. 39*).
3. Insert the bobbin and thread hook thread (📖 *p. 41*).
4. Thread needle thread (📖 *p. 38*).
5. Set the thread tension to the sewing material being sewn (📖 *p. 42*).
6. Set the foot pressure to the sewing material being sewn (📖 *p. 48*).
7. Set the foot stroke to the sewing material being sewn (📖 *p. 46*).
8. Set stitch length (📖 *p. 49*).
9. Start the sewing test at low speed.
10. Gradually increase the speed until the working speed is reached.

11 Decommissioning

WARNING

Risk of injury from a lack of care!

Serious injuries may occur.

ONLY clean the machine when it is switched off. Allow ONLY trained personnel to disconnect the machine.

CAUTION

Risk of injury from contact with oil!

Oil can cause a rash if it comes into contact with skin.

Avoid skin contact with oil.
If oil has come into contact with your skin, wash the affected areas thoroughly.

You need to perform a number of activities if the machine is to be shut down for a longer period of time or completely decommissioned.

To decommission the machine:

1. Switch off the machine.
2. Unplug the power plug.
3. If applicable, disconnect the machine from the compressed air supply.
4. Remove residual oil from the oil pan using a cloth.
5. Cover the control panel to protect it from soiling.
6. Cover the control to protect it from soiling.
7. Cover the entire machine if possible to protect it from contamination and damage.

12 Disposal

CAUTION

Risk of environmental damage from improper disposal!

Improper disposal of the machine can result in serious environmental damage.

ALWAYS comply with the national regulations regarding disposal.

The machine must not be disposed of in the normal household waste.

The machine must be disposed of in a suitable manner in accordance with all applicable national regulations.

When disposing of the machine, be aware that it consists of a range of different materials (steel, plastic, electronic components, etc.). Follow the national regulations when disposing these materials.

13 Troubleshooting

13.1 Customer Service

Contact for repairs and issues with the machine:

MINERVA BOSKOVICE, a.s.

Sokolská 1318/60
680 01 Boskovice
Czech Republic

Tel.: +420 516 494 211
e-mail: sales@minerva-boskovice.com
Internet: www.mineva-boskovice.cz

13.2 Errors in the sewing process

Error	Possible causes	Remedial action
Unthreading at seam beginning	Needle thread tension is too firm	Check needle thread tension
Thread breaking	Needle thread and hook thread have not been threaded correctly	Check the threading path
	Needle is bent or sharp-edged	Replace the needle
	Needle is not inserted correctly into the needle bar	Insert the needle correctly into the needle bar
	The thread used is unsuitable	Use the recommended thread
	Thread tensions are too tight for the thread used	Check the thread tensions
	Thread-guiding parts are sharp-edged	Check the threading path
	Throat plate or hook have been damaged by the needle	Have parts reworked by qualified specialists
Missing stitches	Needle thread and hook thread have not been threaded correctly	Check the threading path
	Needle is blunt or bent	Replace the needle
	Needle is not inserted correctly into the needle bar	Insert the needle correctly into the needle bar
	The needle strength used is unsuitable	Use the recommended needle strength
	The reel stand is installed incorrectly	Check the assembly of the reel stand
	Thread tensions are too tight	Check the thread tensions
	Throat plate or hook have been damaged by the needle	Have parts reworked by qualified specialists

Error	Possible causes	Remedial action
Loose stitches	Thread tensions are not adjusted to the sewing material, the sewing material thickness or the thread used	Check the thread tensions
	Needle thread and hook thread have not been threaded correctly	Check the threading path
Needle breakage	Needle strength is unsuitable for the sewing material or the thread	Use the recommended needle strength

14 Technical parameters

Technical data	Unit	523i 411001 523i 447001	524i 811001 524i 847001	525i 811001 525i 811201 525i 811202 525i 847001 525i 847201 525i 847202 525i 911001 525i 947001	527i 811001 527i 847001 527i 911001 527i 947001
Zig-zag stitch max. width	[mm]	6	10		
Maximum sewing speed for stitch width 6 mm **	[rpm]	4000	4000	according to cams used	3400
Maximum sewing speed for stitch width 8 mm **	[rpm]	-	4000	according to cams used	2500
Maximum sewing speed for stitch width 10 mm **	[rpm]	-	3500	according to cams used	2000
Standard sewing speed *	[rpm]	3500	3500	3500	2000

* The machine is set up to the standard sewing speed in the factory.

** Mentioned speed's value of sewing must not be exceed with a respect to the machine's lifetime. Can not be guaranteed her achievement under any conditions. Usually is necessary to do reduction her speed's value according to used thread, needle and sewn material.

Stitch type	double thread zig-zag lockstitch
Stitch length	maximum 5 mm
Foot lifting with hand lever	5.5 mm
Foot lifting with knee lever or solenoid	12 mm
Needle system	134; 134-35; 134-35 LR
Manually controlled subclass	DC motor - positioning motor without further functions
Solenoid controlled subclass	DC motor (AC servo) - positioning motor with reverse run after thread trimming
Sewing head weight	42 kg 61 kg (525i-75); 68 kg (525i-75-66)
Sewing machine with stand complete weight	78 kg 133 kg (525i-75); 140 kg (525i-75-66)
Thread length after trimming	maximum 20 mm
Machine head clear workspace	267 x 117 mm 750 x 117 mm (525i-75) 750 x 183 mm (525i-75-66)
Machine bed plate dimension	178 x 476 mm 186 x 960 mm (525i-75; 525i-75-66)
Rated standby power	12 W
Rated power when sewing (3000 rpm)	250 W
Short-term power	1500 VA
Machine floor plan dimensions (including stand)	1060 x 550 mm 1700 x 730 mm (525i-75) 1600 x 600 mm (525i-75-66)
Machine height (including thread stand)	42 kg 61 kg (525i-75); 68 kg (525i-75-66)
Acoustic pressure equivalent level of a separate machine at workplace at 20% machine utilization under standard sewing conditions in a shift	78 kg 133 kg (525i-75); 140 kg (525i-75-66)

15 Appendix

Fig. 43: Table top drawing for short machine

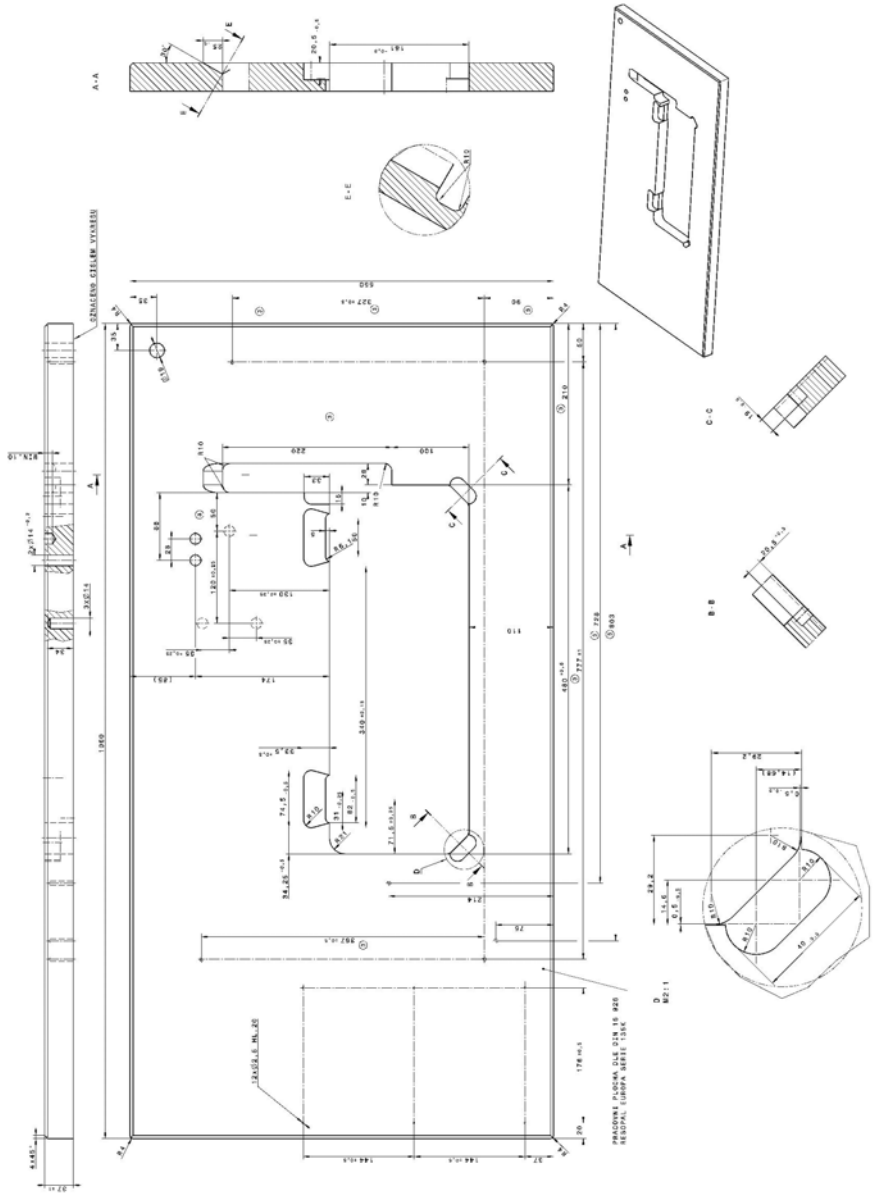


Fig. 44: Component layout on underside of table top 1

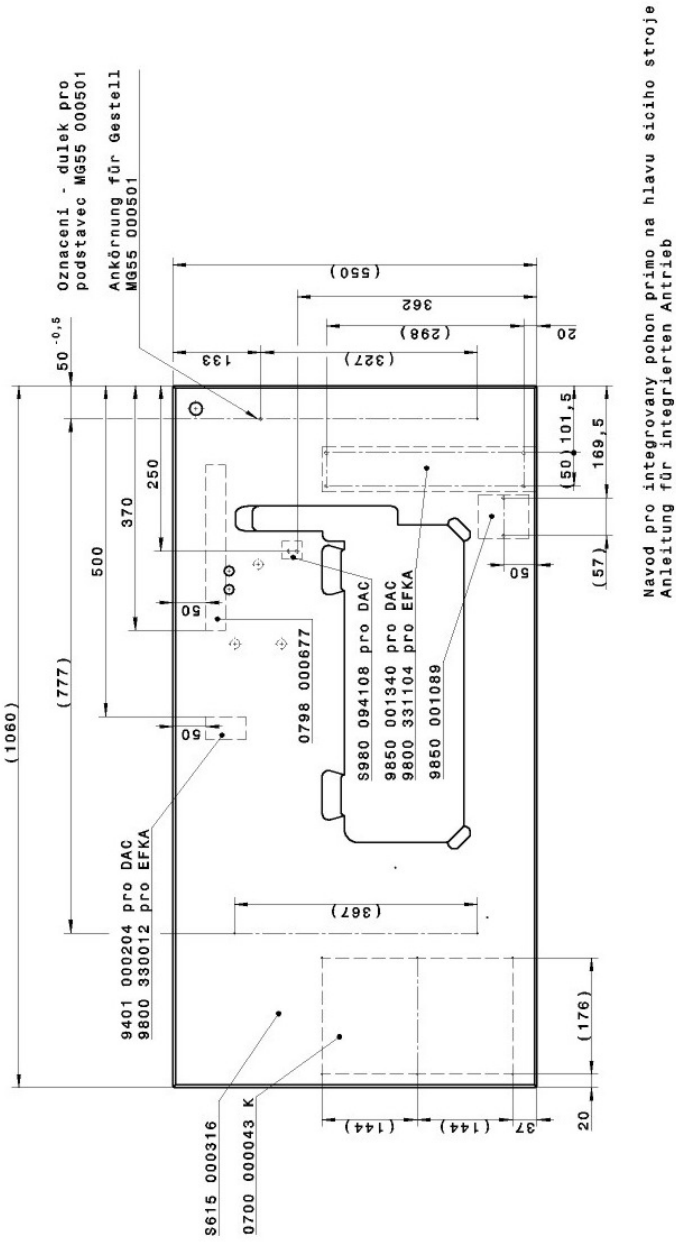


Fig. 45: Component layout on underside of table top 2

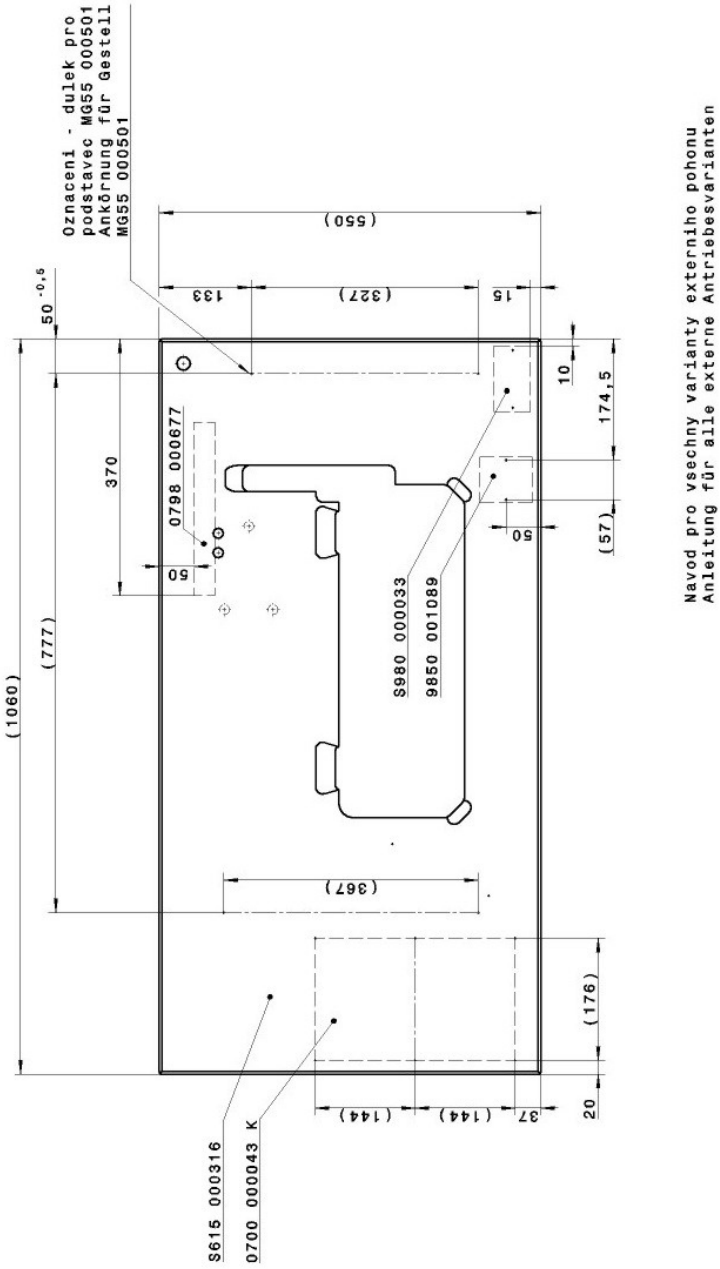


Fig. 46: Table top drawing for long machine

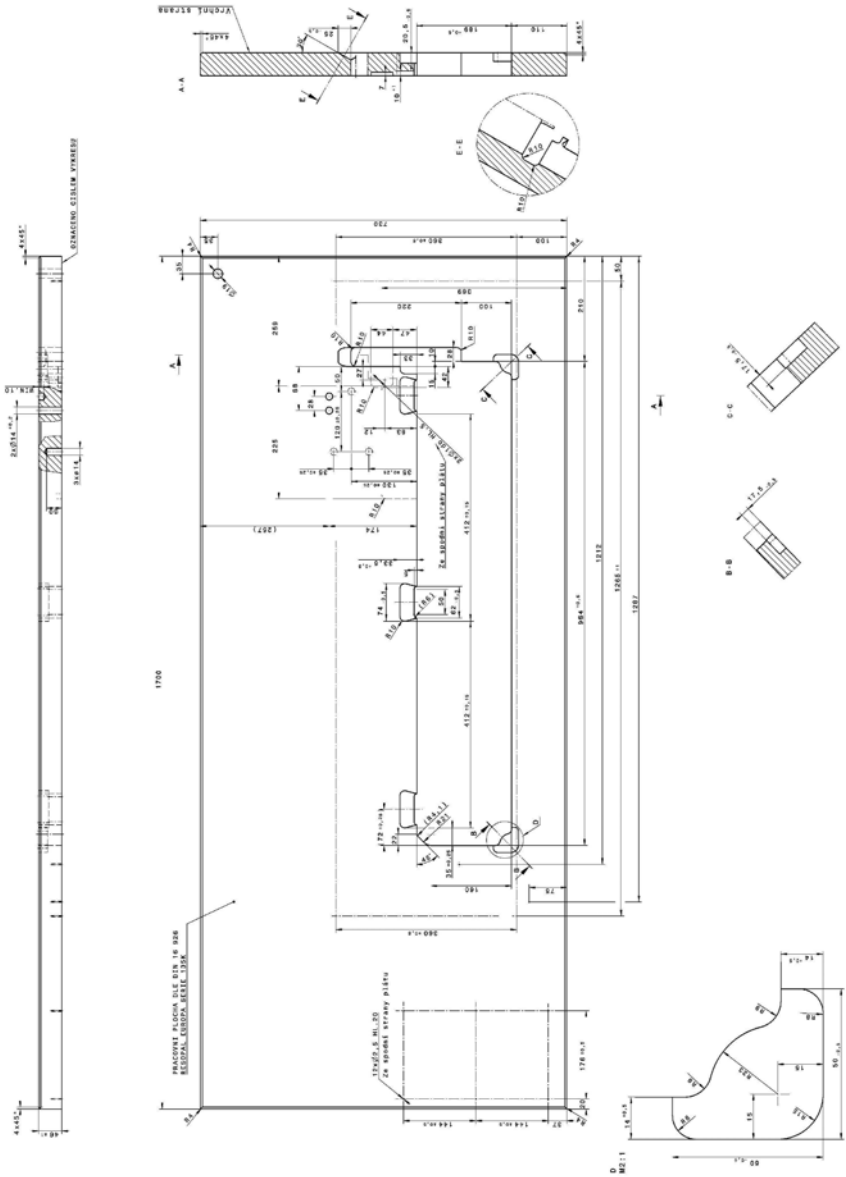


Fig. 47: Table top drawing for long and higher machine

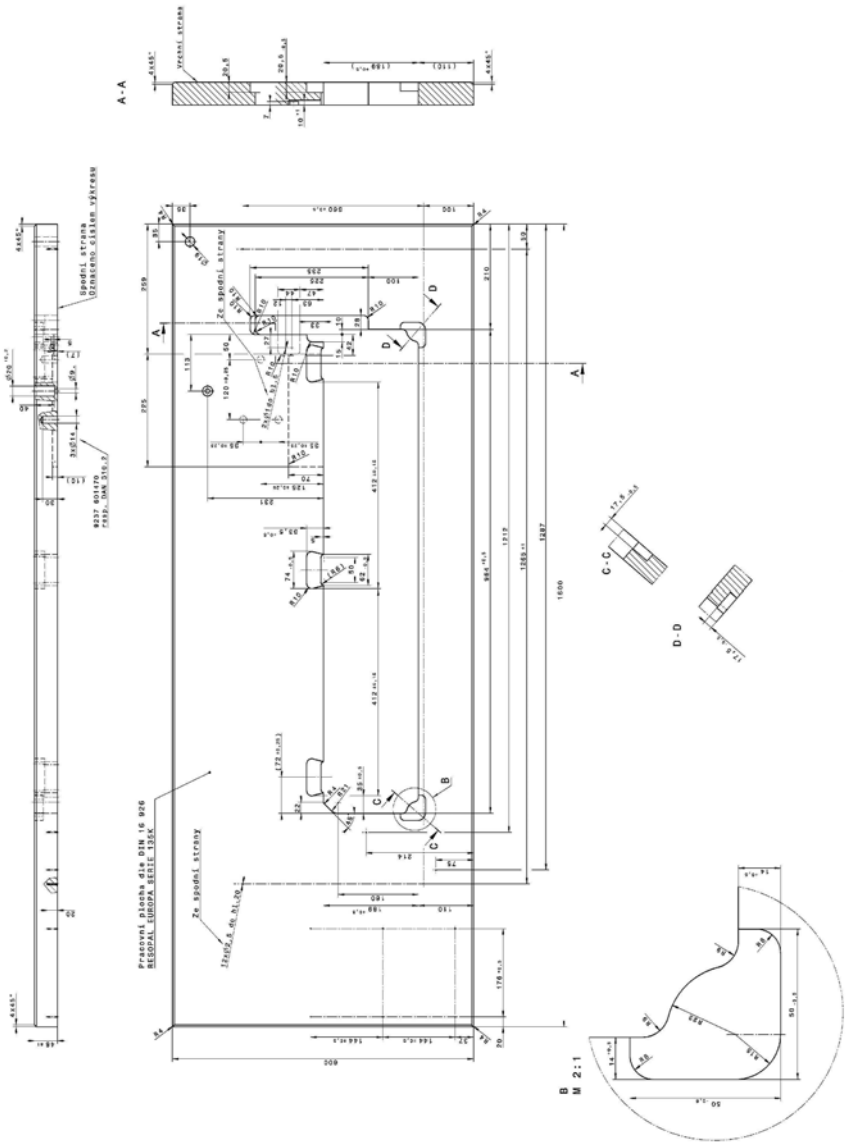
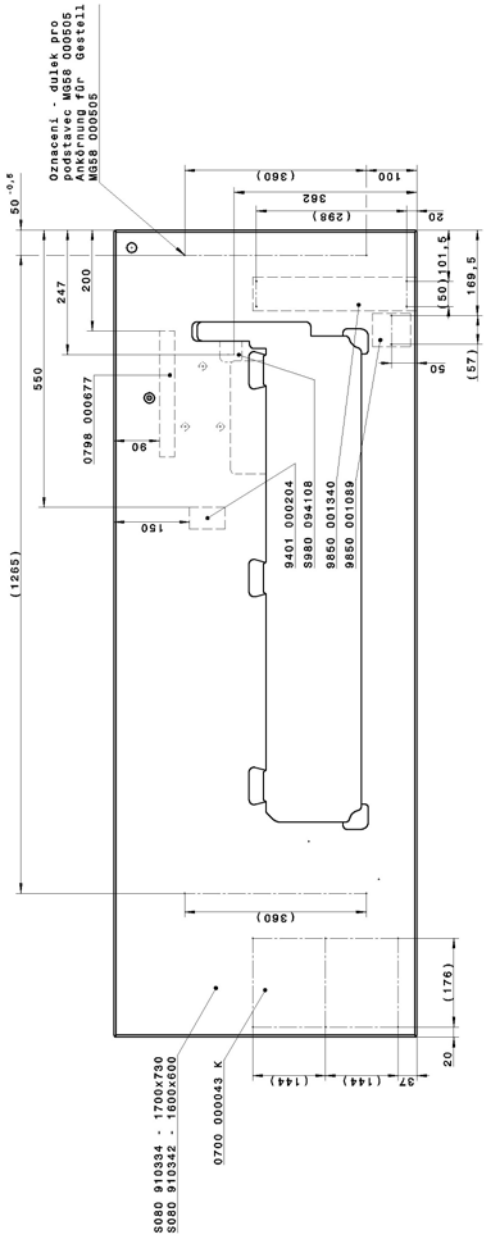


Fig. 48: Component layout on underside of table top for long machine



DÜRKOPP ADLER GmbH
Potsdamer Str. 190
33719 Bielefeld
Germany
Telefon: +49 (0) 521 925 00
e-mail: service@duerkopp-adler.com
www.duerkopp-adler.com