



Safety guidelines all machine types



MADE
IN
GERMANY

ZSK STICKMASCHINEN MADE IN GERMANY

IMPORTANT INFORMATION

This documentation contains a summary of the safety-related information for all ZSK embroidery machine types. Further documents on the operation, use and maintenance of the machines as well as spare parts catalogs can be found on our website. The desired documents can be downloaded there.

IMPORTANT DOWNLOAD LINKS

T8-Software

<https://www.zsk.de/de/serviceleistungen/downloads-t8.php>

Operation manuals

<https://www.zsk.de/de/download/zsk-anwenderhandbuecher.php>

Spare parts catalogs

<https://www.zsk.de/de/download/zsk-ersatzteilkataloge.php>

ZSK Training Videos

<https://www.youtube.com/user/zskfilm/featured>

Subject to change!
Änderungen vorbehalten!

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Safety guidelines

This chapter contains a summary of the principal rules of behavior that must be observed in order to exclude the risk of injury to yourself and others. It is therefore essential that you read this chapter carefully and thoroughly.

The safety guidelines, together with the relevant regulations governing safety at work, must be observed by all personnel working with the embroidery machine.

Safety instructions in operator's guide

The operator's guide contains various remarks under the following headings: 'DANGER', 'WARNING', 'CAUTION' und 'NOTICE'.

These are differentiated as follows:



Safety instructions must be observed in order to avoid the risk of personal injury.



Risk of injury from electric shock.



Danger from suspended loads.



This symbol marks instructions in the operator's guide whose infringement can give rise to personal injury or damage to property.



Risk of crushing by moving machine parts.



Risk of piercing by moving mechanical parts (needles, borer).



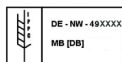
Risk of burning by hot components (magnets, motors).

NOTICE

Instructions labeled “Notice” must be observed to avoid malfunctions/operating errors.



Indicates waste disposal regulations and procedures.



When using hot air cutting devices (optional)



Do not install or remove the magnetic separator with your bare hands. It is necessary to use a suitable metal object.

Do not place any fingers in the cutting zone during hot air cutting!

Avoid contact with the protective screen of the cutting element.

Important Safety Warning! - magnetic hoops

Read before using the magnetic hoops

Disclaimer

ZSK Stickmaschinen GmbH neither assumes nor accepts any liability for damages resulting from the handling, use, or misuse of its products. With your purchase, the buyer confirms that you have read and understood the following warnings. The buyer agrees that he/she is responsible for all damages and injuries caused by the magnets and hoops, which include personal injuries, property damages and magnet damages. The buyer must agree with the terms before purchase and use of the product.

Please use caution and common sense, and please read and understand our safety warnings below! It is the responsibility of the purchaser to make sure all users of this product are made aware of the information in this letter. If the product is ever sold, transferred or given to a new owner, this warning letter should be provided to the new owner.

The following should not be construed as a complete and exhaustive list of hazards presented by magnetic materials. This document is provided for information only. Readers are responsible for checking the accuracy, completeness, currency and/or suitability of all information themselves. ZSK Stickmaschinen GmbH does not represent, guarantee or warranty the accuracy, completeness, currency, or suitability of the information in this document. ZSK Stickmaschinen GmbH specifically disclaims any and all liability for any claims or damages that may result from providing this document or the information it contains.

Pacemakers

Individuals with health issues which require that they wear electronics of any sort like pacemakers, defibrillators or other internal and external medical devices should use caution when handling strong magnets, such as the type included in the magnetic hoops. Pace-makers may be damaged or switch to „Test Mode“ in the presence of a strong magnetic force, if a pace-maker or other medical device is in use, magnetic fields may affect the operation of these devices. Consult your physician and the manufacturer of your medical device to determine its susceptibility to static magnetic fields prior to handling the magnetic hoops. All of our magnetic products should be kept at a safe distance from individuals with these devices.

Damage to magnetic media, electronics, and mechanical devices

The strong magnetic fields of neodymium magnets that are a part of this product can damage magnetic media such as floppy disks, hard drives, credit cards, magnetic I.D. cards, cassette tapes, video tapes or other such devices. They can also damage televisions, computers, cell phones, VCRs, computer monitors and other CRT displays. Never place neodymium magnets near electronic appliances, mechanical watches, hearing aids, or loud speakers.

Certain electronic devices are sensitive to magnetic fields and may be damaged permanently or temporarily disabled if exposed to a magnetic field that is too strong. Video screens and televisions will become distorted and/or discolored if exposed to a strong magnetic field. While damaged screens can usually be demagnetized, it's often tricky and may require qualified service technicians to do so. Other electronic devices like cell phones and pagers can also be damaged. Store your magnetic hoops in a safe place away from electronics of any kind.

Keep all magnetic hoops at least 24 inches away from all types of magnetic media.

Children

Children should not be allowed to handle the magnetic hoops or the neodymium magnets that are a part of the product as they can be dangerous. Children and adults should not ingest magnets or place magnets in any body orifice such the ear, nose or mouth. Ingestion of magnets is very hazardous. If magnets are ingested or aspirated to the lungs, immediate medical attention is required.

Pinch and Eye Hazard

The magnetic hoops and magnets included in this product can pose a serious pinch hazard due to their attractive force on each other and to any object containing iron. Usually surprise is an issue--they can jump out of your hands and snap together from a surprising distance before you realize what is happening.

Fingers and other body parts can get severely pinched between two attracting hoops or items. Keep items like scissors, pins, and any other items that contain metal out of your work area.

Disposal

The rare-earth magnets in this product should never be burned, as burning will create toxic fumes. Rare-earth magnets should be disposed of in compliance with local, state, and Federal law. All strong permanent magnets should be thermally demagnetized prior to disposal. Alternatively, all strong permanent magnets should be placed in a steel container prior to disposal so the magnets do not attract waste disposal equipment or refuse containers.

Prescribed use

The embroidery machine is designed for industrial use. It is intended for finishing textiles and similar materials by embroidering. If the machine is fitted with the requisite auxiliaries, it can also embroider sequins and cord, and execute boring patterns.

The machine can be used with textile fabrics and threads that are customary in embroidery. Our customer service organization will be pleased to advise you, and is also available for testing unfamiliar material combinations on your behalf.

On principle, do not use the machine for purposes other than described in the operator's guide. It must not be used, for example, as a support surface or in place of a step ladder. Utilization for other than the intended purpose can give rise to risks of personal injury and material damage.

The following conditions must be met for a safe operation of the machine:

- Ambient temperature from 15 ° C to 35 ° C.
- Relative humidity of 30% to 85% non-condensing.
- Direct sunlight on the machine should be avoided.

Electromagnetic compatibility



This machine is a class-A device. It can cause radio interference in residential areas; in such cases the operator may be required to take appropriate measures.

Operational safety

The embroidery machine is designed according to modern principles. Its electrical equipment complies with the stringent German VDE regulations. Numerous design provisions have been made to improve safety.



Design provisions cannot, however, exclude all risks. The embroidery machine must therefore be operated only by thoroughly instructed personnel familiar with the operators guide, safety guidelines and relevant accident prevention regulations.

Regulations concerning safety at work



In addition to the present safety guidelines, observe all the mandatory accident prevention regulations that apply in the country of use and at the operating location as well as the recognized technical rules for safe working practices.

The valid regulations must be known and accessible to all those entrusted with working at the machine.

All work at and with the machine



Wear close-fitting clothes and, if you have long hair, a hair net or suitable headgear when working at the machine. Do not wear jewelry. Wide sleeves, loose hair, rings or chains can become caught or entangled in moving machine parts.

Wear shoes with non-slip soles in order to avoid the risk of falls.

Cleaning and maintenance



Insofar as they are described in the operator's guide, cleaning and maintenance tasks must be carried out only by appropriately instructed personnel.

More extensive maintenance and repair tasks must always be carried out by service personnel that has been trained and accordingly equipped by ZSK Stickmaschinen GmbH because this work requires the application of special knowledge and resources.

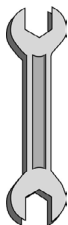


Always disconnect the power supply before carrying out cleaning and maintenance work.

The machine is at zero current only when the mains plug is pulled out **and after a delay of at least 30 seconds**.

Observe the regular servicing periods laid down in the operator's guide.

Repairs and modifications



Repair and modification work must be carried out only by service personnel that has been instructed and trained by ZSK Stickmaschinen GmbH. Note the following:

Use only genuine spare parts and accessories or parts that have been approved by ZSK Stickmaschinen GmbH.

The machine must not be started up until it is fully assembled with all safety covers and devices installed.

Independent changes and modifications to the machine are not permitted for safety reasons. Such alterations can invalidate the CE Conformity Declaration.

Modification work does **not** include the conversion tasks described in the operator's guide (e.g. changing between tabletop, cylinder arm and cap embroidery).

Main switch and emergency stop tubular arm machines

Main switch

The machine and control unit are switched on and off with the main switch.



1 and 2-head machines

The main switch of the 1 and 2-head machines also functions as the **EMERGENCY STOP** switch.



4 to 8-head machines

4 to 8-head machines are equipped with additional, separate **EMERGENCY STOP** buttons.



Before switching the machine on again, make sure that the cause of the EMERGENCY STOP has been eliminated.

All the operating elements described below only function when the main switch is switched on.

EMERGENCY STOP

The main switch also functions as an EMERGENCY STOP switch on 1 and 2-head machines; machines with a larger number of heads have EMERGENCY STOP buttons.



NOTICE

The main switch functions as the EMERGENCY STOP switch as well on 1 and 2-head machines.

NOTICE

If the EMERGENCY STOP button has been operated (illustration on right in *(Figure 1)*), it has to be reset by turning it clockwise. Before switching the machine back on, make sure that the cause of the EMERGENCY STOP has been rectified.

**EMERGENCY
STOP**

Not operated



Operated



Figure 1: EMERGENCY STOP button

NOTICE

All the operating elements described below operate only if the main switch is switched on.

Main switch and emergency stop flatbed machines

Main switch

The machine and control unit are switched on and off with the main switch.

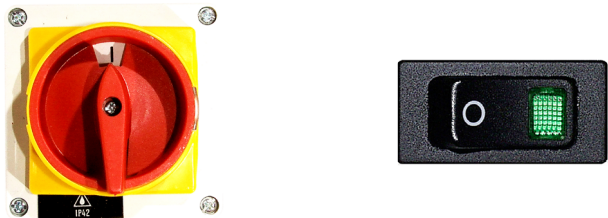


Figure 2: Main switch

EMERGENCY STOP

Variant 1

NOTICE

If the EMERGENCY STOP button has been operated (Figure 3), it has to be reset by turning it clockwise; the control unit then restarts the operating system.
Before switching the machine back on, make sure that the cause of the EMERGENCY STOP has been rectified.

EMERGENCY STOP



Figure 3: EMERGENCY STOP button
left: not operated

right: Operated

Variant 2

NOTICE

If the EMERGENCY STOP button has been operated (*Figure 4*), it has to be reset by turning it clockwise.

Before switching the machine back on, make sure that the cause of the EMERGENCY STOP has been rectified.

To restart the machine, switch the main switch OFF and then back ON.

EMERGENCY STOP

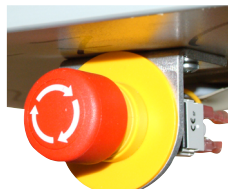


Figure 4: EMERGENCY STOP button

left: Not operated

right: Operated

NOTICE

All the operating elements described below operate only if the main switch is switched on.

Operation

The machine is to be operated only by thoroughly instructed personnel. For instruction purposes we recommend attending an operator training course run by ZSK Stickmaschinen GmbH. **In any case, before commencing work with the machine, make yourself familiar with the proper operating practices with reference to the operator's guide.**

NOTICE

Do not climb on the work table.

Essential operations before any manual work



Equipping and setting-up work, conversions (between tabletop, cylinder arm and cap embroidery on tubular system machines, for instance), eliminating needle and thread breaks:

As a matter of principle, carry out such tasks only when the machine is at a standstill. Certain tasks involve switching off the machine and removing the mains plug first. Ensure compliance with the relevant instructions in the operator's guide.

Before working on the stationary machine with the main switch on, switch on the pantograph positioning keys by pressing the ZSK key **(1)** (LED **(2)** next to the keys lights up).

In this setting, you can operate the pantograph manually, but cannot start the machine inadvertently.



Figure 5: Pantograph positioning

Embroidery mode serie Sprint



Do not remove any machine covers – they are provided for your safety.

As a general principle, operate the machine from the front long side. Each time before starting the machine, make certain that nobody is in the vicinity of its moving parts.

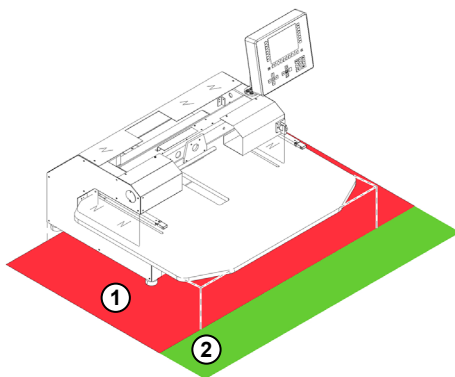


Figure 6: Work areas



Users are allowed to enter this area **(1)** **only** when the machine is switched off.

This area **(2)** can be entered for monitoring purposes while the machine is running.



Keep hands away from **moving parts** during embroidering. There is a risk of serious injury especially in the vicinity of the **needles, borers, take-up levers** and **rotary hooks**.

Stop the embroidery machine before all manual operating procedures at the machine, even when simply removing fluff or loose threads from the start of embroidery. Consider your own safety at all times.

Never thread the threads **while the machine is running**.

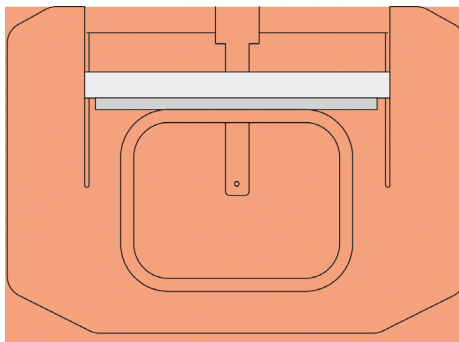


Figure 7: Working range of pantograph



Keep your hands well away from pantograph guide slot **(1)** because of the risk of injury. See **(Figure 8)**.

Do not support yourself by the work table.

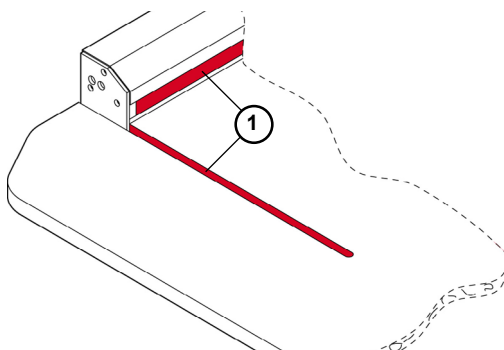


Figure 8: Risk of crushing, pantograph guide slot

Do not place any objects on the embroidery machine or work table. They could be pushed off the work table by movements of the pantograph. Objects that enter the pantograph guide slot can cause operating malfunctions or damage the machine.

To prevent unauthorized intervention, **never leave the embroidery machine running unsupervised.**

Embroidery tubular arm machines



Do not remove any machine protective covers - they are for your safety.

As a general principle, operate the machine from the front long side. **Each time before starting** the machine, make certain that nobody is underneath the embroidery machine or in the vicinity of its moving parts.

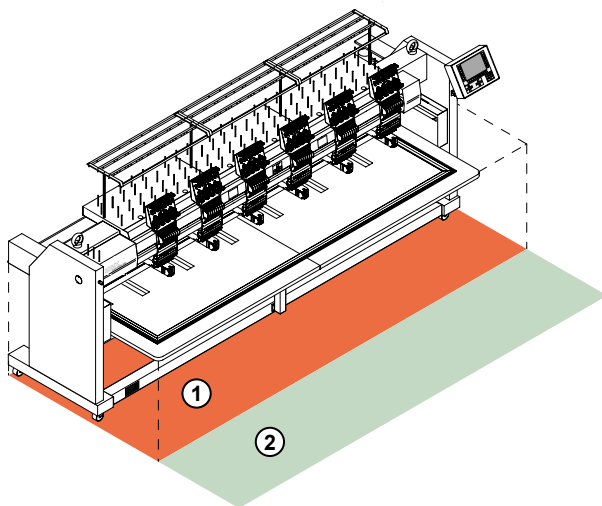


Figure 9: Work areas



Users are allowed to enter this area **(1)** **only** when the machine is switched off.

This area **(2)** can be entered for monitoring purposes while the machine is running.



Keep hands away from **moving parts** during embroidering. There is a risk of serious injury especially in the vicinity of the **needles, borers, take-up levers** and **rotary hooks**.

Stop the embroidery machine before all manual operating procedures at the machine, even when simply removing fluff or loose threads from the start of embroidery. Consider your own safety at all times

Never thread the upper threads **while the machine is running**.

Do not carry out any work at an embroidery unit even when it is switched off because the take-up lever, rotary hook and thread trimmer continue to operate.



- **Caution!** - The pantograph travels at a very high speed.
Do not rest on the work table or lean against the table recesses within the working range of the pantograph (Figure 10). A collision with the high-speed pantograph can cause bruising and injuries resulting from crushing or shear forces (Figure 11).

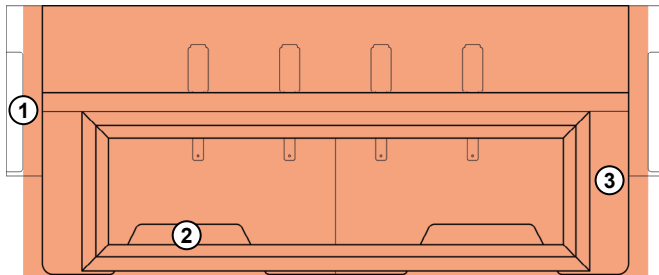


Figure 10: Working range of pantograph



Keep your hands well away from the insides of supports (1), the table recesses (2) and pantograph guide slot (3) because of the risk of injury. Also see (Figure 11).

Do not support yourself by the work table.

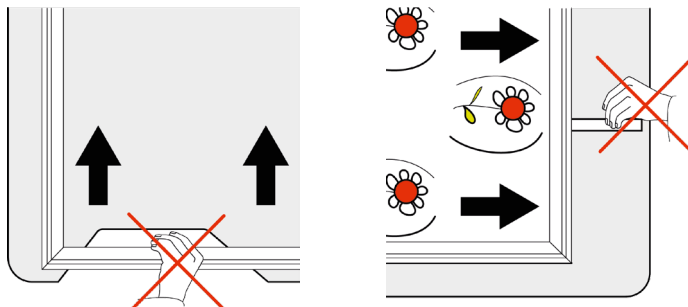


Figure 11: Risk of crushing against pantograph frame

left: Work table recess

right: Pantograph guide slot

Do not place any objects on the embroidery machine or work table. They could be pushed off the work table by movements of the pantograph. Objects that enter the pantograph guide slot can cause operating malfunctions or damage the machine.

To prevent unauthorized intervention, **never leave the embroidery machine running unsupervised.**

Embroidery mode flatbed machines



As a general principle, operate the machine from the front long side. **Each time before starting** the machine, make certain that nobody is underneath the embroidery machine or in the vicinity of its moving parts.

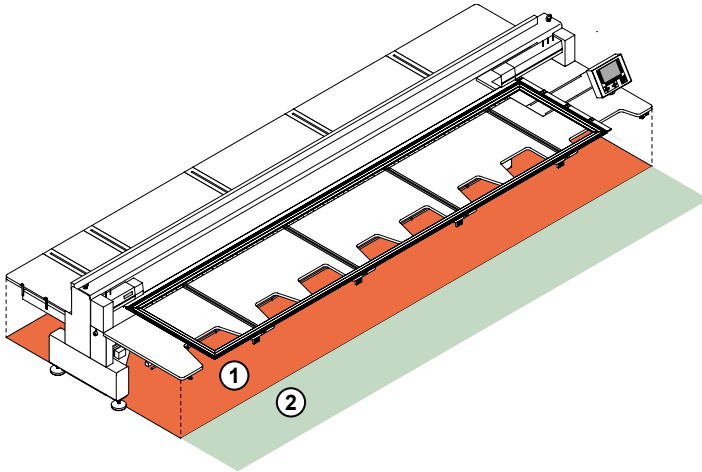


Figure 12: Work areas



Users are allowed to enter this area **(1)** **only** when the machine is switched off.

This area **(2)** can be entered for monitoring purposes while the machine is running.

Keep hands away from **moving parts** during embroidering. There is a risk of serious injury especially in the vicinity of the **needles, borers, take-up levers and rotary hooks**.



Keep hands away from **moving parts** during embroidering. There is a risk of serious injury especially in the vicinity of the **needles, borers, take-up levers and rotary hooks**.

Stop the embroidery machine before all manual operating procedures at the machine, even when simply removing fluff or loose threads from the start of embroidery. Consider your own safety at all times.

Never thread the upper threads **while the machine is running**.

Do not carry out any work at an embroidery unit even when it is switched off because the take-up lever, rotary hook and thread trimmer continue to operate.



- CAUTION! - The pantograph travels at a very high speed. Do not rest on the work table or lean against the table recesses within the working range of the pantograph (Figure 13). A collision with the high-speed pantograph can cause bruising and injuries resulting from crushing or shear forces (Figure 14).

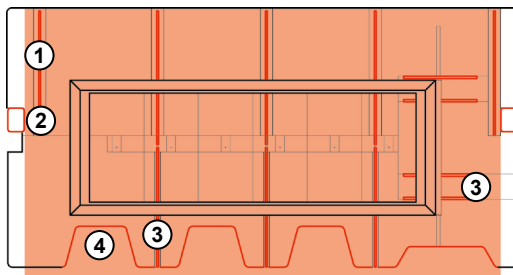


Figure 13: Working range of pantograph

Keep your hands well away from the insides of supports (2), the table recesses (4) and pantograph guide slot (1), (3) because of the risk of injury. Also see (Figure 14).

Do not support yourself by the work table.

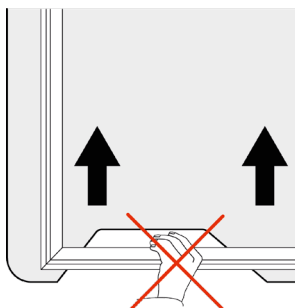
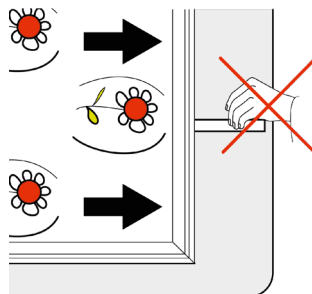


Figure 14: Risk of crushing against pantograph frame

left: Work table recess



right: Pantograph guide slot

Do not place any objects on the embroidery machine or work table. They could be pushed off the work table by movements of the pantograph. Objects that enter the pantograph guide slot can cause operating malfunctions or damage the machine.

To prevent unauthorized intervention, **never leave the embroidery machine running unsupervised.**



Unloading, unpacking and handling serie Sprint

For your safety



The machine is to be lifted only by 4 persons, each of whom can lift at least 25 kg.

Make certain that the table is capable of carrying the load (at least 300 kg). In case of doubt, please consult the manufacturer or supplier of the table.

Unloading

Consignments delivered in a transport crate



In view of its weight, lift the crate off the truck with a fork-lift truck or ropes and a crane only.

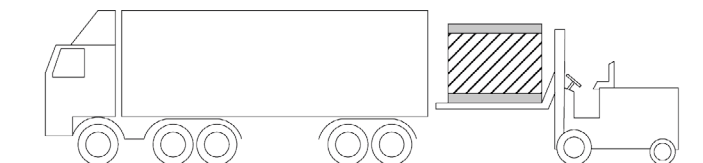
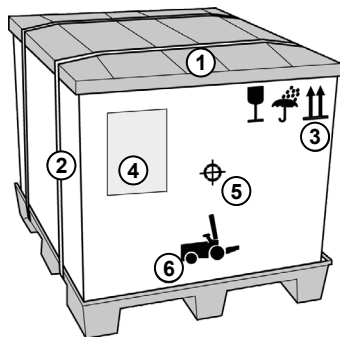


Figure 15: Unloading by fork-lift truck

Unpacking



- (1) Cover
- (2) Tension belts
- (3) Arrows point to the top
- (4) Unloading instructions
- (5) Symbol for approximate position of the center of gravity
- (6) Insertion points for forklift shoes

Figure 16: Transport box

- Remove the tensioning straps (2).
- Lift off the cover (1).
- Remove all individual parts.
- Remove the packaging material and the drying bag.



- (1) Underframe (optional)

Figure 17: Transport box, opened

Moving to the installation location



For safety reasons, if the machine is delivered in a transpor crate, move the machine to the installation location with a forklift or stacker truck before detaching it from the floor of the crate if possible.

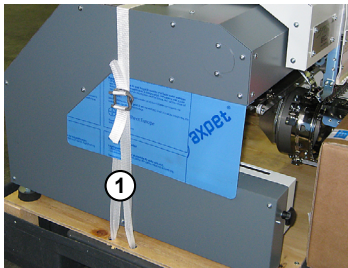


Figure 18: Removing lashing straps

Cut through and remove the lashing straps (1), that secure the control cabinet and machine to the pallet.

Attaching carrying handles (4x)

NOTICE

If the machine is being delivered in a transport crate, the machine carrying handles are detached for space reasons. The handles form part of the delivery scope.

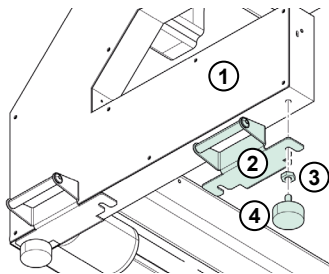
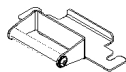


Figure 19: Installing carrying handles (view from below)

Slacken off nut (3) on machine foot (4) and create a gap between the nut and the frame.

Insert carrying handle (2) between frame (1) and nut (3) into contact with the frame.

Make nut (3) tight against the carrying handle.

Attach a carrying handle to each corner of the frame.

Casters (optional)

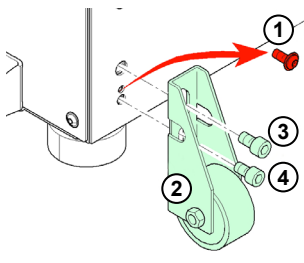


Figure 20: Installing casters, illustration: back of machine, left

Slacken off and remove bolt (1)

Attach caster (2) and loosely fasten screw (4).

Insert and tighten screw (3).

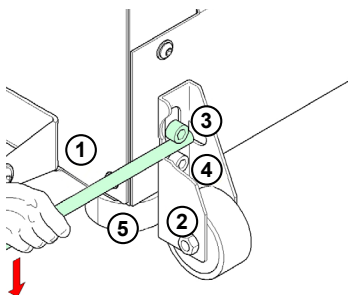


Figure 21: Aligning caster (section view)

Push bar (1) through the opening in the side of caster (2) so that it rests underneath the head of top screw (3).

Apply downward pressure to bar (1) until machine foot (5) is raised.

Tighten screw (4).

Repeat this procedure on the other side.

After moving the machine

Slowly slacken off screws (4).

⇒ The machine feet are lowered to the floor.

Detach screws (4), (5) and casters (2).

Insert bolt, see (Figure 20) item (1).

Unloading, unpacking, handling

Tubular arm machines/Fladbed machines

For your safety



Only appropriately trained personnel are to be entrusted with handling the machine. Ensure compliance with the relevant safety regulations for operating handling equipment.

In particular, make sure that no-one is standing in the danger area near the machine before each lifting operation.

Do not allow anyone to walk under the suspended load while it is being moved.

Unloading from a truck with box body

Using a crane and fork-lift truck

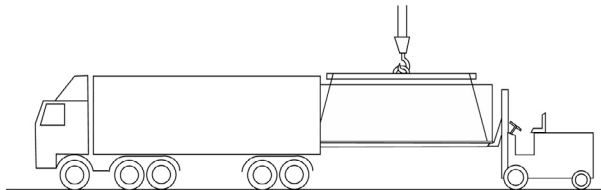


Figure 22: Unloading using a crane and fork-lift truck

Using a fork-lift truck



Make sure that the stand used to support the crate has an adequate load carrying capacity.

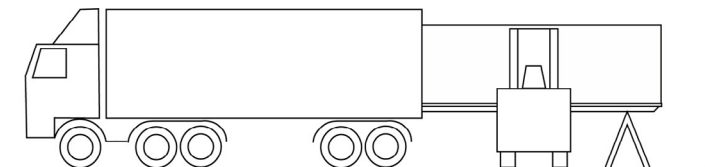


Figure 23: Correct way of unloading by fork-lift truck

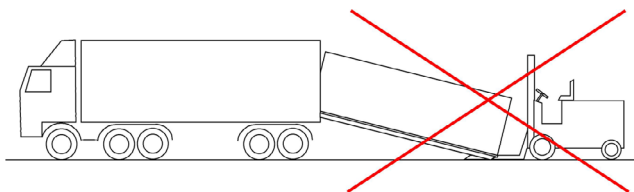


Figure 24: Incorrect way of unloading by fork-lift truck

Unpacking

Consignments delivered in a transport crate



Unloading and handling instructions are attached to the crate at the illustrated places (Figure 25).

Begin by opening and removing the crate lid.

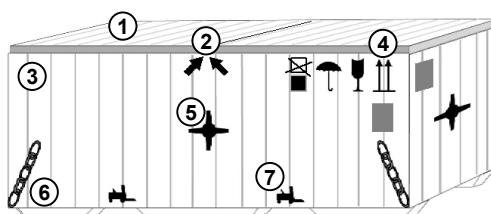


Figure 25: Transport crate Unloading instructions

- (1) Lid
- (2) Arrows indicating where lid is divided
- (3) Front of crate
- (4) Arrows indicating top of crate
- (5) Symbol indicating approximate position of center of gravity
- (6) Securing points for handling chains and cables
- (7) Insert locations for lifting forks

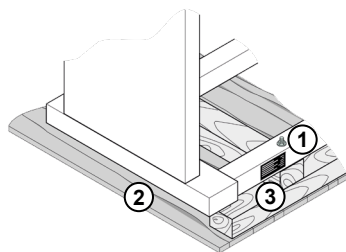
Remove the front panel and then (if necessary) the sides.

Remove the packing material and the desiccant sachets attached to the machine.

Remove all individually packed components situated on and underneath the work table.

Loosen the fastening screws with which the transport beams are fastened to the bottom of the box (Figure 26), (Figure 27).

Tubular arm machines

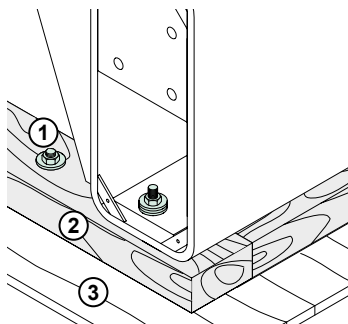


- (1) Fixing bolts
- (2) Floor of pallet/crate
- (3) Transit block

illustration

Figure 26: Machine mounted on wooden transit blocks,

Flatbed machines



- (1) Fixing bolts
- (2) Transit block
- (3) Floor of pallet/crate

Figure 27: Machine mounted on wooden transit blocks, illustration

Prohibited areas for fork-lift trucks



Do not lift the machine at the places indicated (Figure 28) with a fork-lift truck – the forks could damage the control cabinet(s).

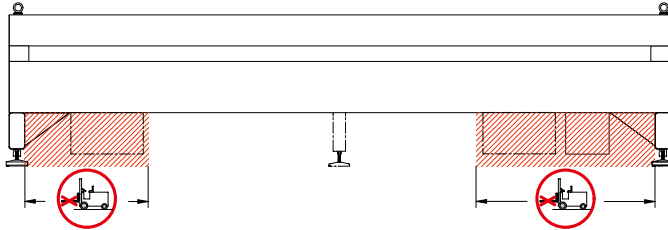


Figure 28: Prohibited areas for fork-lift trucks

NOTICE

The illustrated prohibited areas (control cabinet(s) and immediately adjacent areas) apply to flatbed machines and to embroidery machines with K or W heads that have additional control cabinet(s) (depending on number of heads) (control cabinets depicted by hatching).

If delivered on a pallet

Unloading and handling instructions are attached to the foil packaging.

NOTICE

Proceed as follows to unpack a machine delivered on a pallet:

Remove the foil packaging

Remove the desiccant sachets.

Remove all individually packed components situated on and underneath the work table.

Slacken off the fixing bolts securing the wooden transit blocks to the pallet.

See *(Figure 26)*, *(Figure 27)*.

Machines without casters

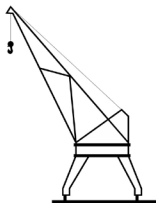


Do not detach the machine from the transit blocks until you install it in the working position. They are not replaced by the machine shoes until the machine is finally installed.

Moving to the installation location



Prevent the machine from tipping to one side. The machine is liable to tip because the center of gravity is not always in the middle. Personal injury or damage to property can result from the machine tipping over.



The machine is to be moved only by appropriately trained personnel familiar with the relevant safety regulations. Also observe the following points **before moving the machine**:

Prevent the machine from tipping to one side.

Commence lifting movements with care

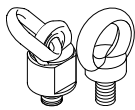
Moving by crane
(not 1-head machines)



Attach the handling chains or cables only at the eye bolts. The eyes of the eye bolts must be positioned parallel to the long side of the machine. See (Figure 29).



For instructions on handling 1-head machines, see Moving by forklift truck (only if the use of a crane is ruled out)



The 2 to 8-head machines are equipped with two eye bolts for handling the machine by crane.

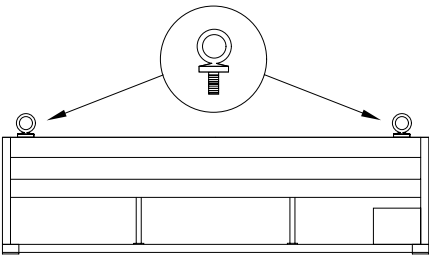


Figure 29: Eye bolts, illustration

The handling chains or cables should be as close to vertical as possible and must not exceed an angle from the vertical of 26° when the load is being lifted. For this reason, a cross-bar is generally necessary for handling purposes.

The dimensions refer to **(Figure 30)**:

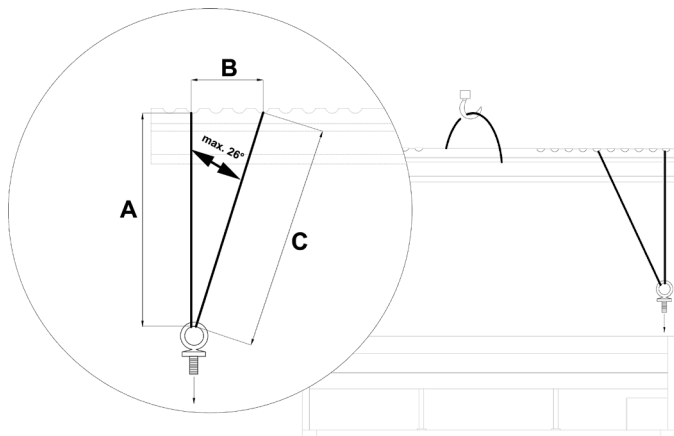
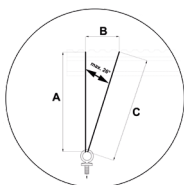


Figure 30: Moving by crane with cross-bar

NOTICE

The permitted value of 26° will not be exceeded if the dimensions shown in the tables in Fig. 2.9 are observed.



A [CM]	B [CM]	C [CM]
50	24	56
75	37	83
100	49	111
125	61	139
150	73	167
175	85	195
200	98	223
225	110	250
250	122	278

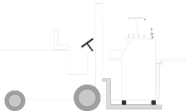
A [CM]	B [CM]	C [CM]
21	10	23
41	20	46
62	30	68
82	40	91
103	50	114
123	60	137
144	70	160
164	80	182
185	90	205
205	100	228
226	110	251

Moving by fork-lift truck
(only if the use of a crane is ruled out)



Before raising the forks, make certain that the two bottom cross beams of the embroidery machine are in full contact with and resting securely on the forks, otherwise the machine is likely to tip over and cause personal injury or damage to property.

In order to avoid personal injury and property damage, at least two people must always be present when the embroidery machine is being moved (the fork-lift operator and a marshal).



In ideal circumstances the embroidery machine is to be moved by a crane. Use a fork-lift truck only in the absence of a crane. The fork-lift truck must have sufficient lifting capacity to accommodate the weight of the machine, and a fork length that allows the bottom cross beam(s) of the embroidery machine to make full contact with the fork when the machine is raised. See (Figure 31), (Figure 32).



When introducing and raising the forks, make certain that they do not contact any part of the machine (cables, stepping motor etc.) except for the bottom cross beams.

Introduce the forks underneath the machine cross beams at the center from the back.

Raise the forks carefully until they make contact with the bottom cross beams of the machine. See (Figure 31), (Figure 32).

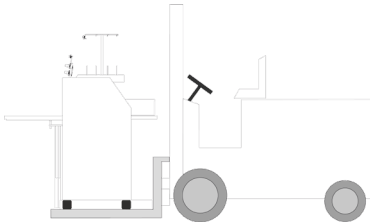


Figure 31: Fork-lift truck with machine tubular am machine

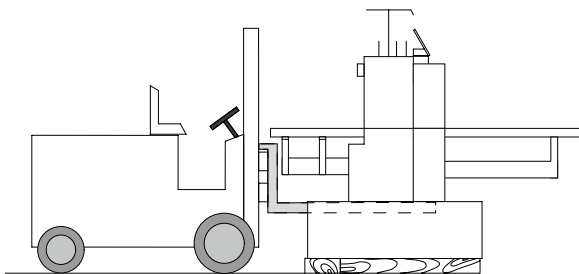


Figure 32: Fork-lift truck with flatbed machine

Handling on casters (option)

NOTICE

The casters are available as an option for all machine types. They make it easier to move the machine on site and are intended exclusively for this purpose. Remove the transit blocks before moving the machine for the first time.

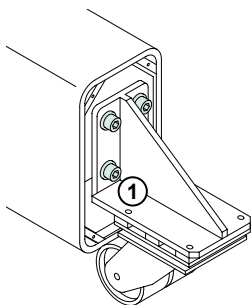
Installing casters

DANGER

Use only the bolts supplied together with the casters by ZSK Stickmaschinen GmbH. The bolts have to withstand the enormous load imposed by the machine weight; sub-standard bolts can shear when exposed to the weight of the machine and thus cause physical injury or damage to property.

NOTICE

You are recommended to lift the machine with a fork-lift truck when installing the casters. In doing so, ensure compliance with the „Prohibited areas for fork-lift trucks“ (Figure 28). No liability is accepted for physical injury or damage to property arising from the use of bolts other than those supplied by ZSK Stickmaschinen GmbH.



Install the casters in the envisaged positions with the four bolts (1) supplied for each caster.

Carefully lower the machine to the ground.

⇒ The machine can now be pushed to its installation location.

Figure 33: Transportrollen montieren (Flatbed machine)

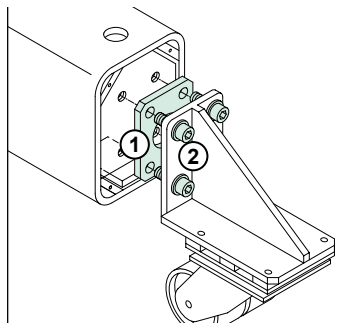


Figure 34: Installing casters (Flatbed machine)

Install the casters with adapter plate (1) in the envisaged positions with the four bolts (2) supplied for each caster.

Carefully lower the machine to the ground.

⇒ The machine can now be pushed to its installation location.

Detaching casters



WARNING

Detach the casters as soon as the machine arrives at its resting place. You are not allowed to operate the machine with the casters installed; they are intended exclusively for the purpose of moving the machine. No liability is accepted for physical injury or property damage arising because casters were still attached to the machine while it was embroidering.

NOTICE

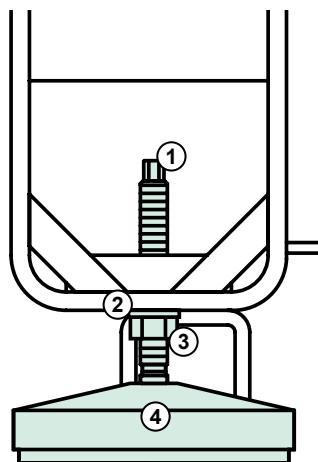
You are recommended to lift the machine with a fork-lift truck when detaching the casters. Pay attention to the „Prohibited areas for fork-lift trucks“. Once it is in position, the machine can be installed. See „Setting up and aligning Flatbed machines“.

For any further transport on transport rollers

NOTICE

Each time you wish to move the machine again on casters, you must detach the machine shoes before installing the casters.

Detaching machine shoes



Remove frame side wall panels.

Lift the machine with a fork-lift truck.

Remove machine shoe **(4)**.

Slacken off nut **(3)**.

Remove nut and washer **(2)**.

Unscrew and remove adjusting screw **(1)**.

Figure 35: Maschinenschuh entfernen

Setting up and aligning Series JAFARacer

Setting up machine



The machine is to be set up and installed by trained service personnel of ZSK or its agents only.



All the fastening elements (bolts, washers, cable ties etc.) are located together with the accessories.



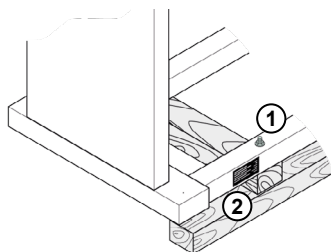
Only trained assembly personnel are allowed to set up the machine at its operating site.

Place the embroidery machine only on a solid surface of sufficient load carrying capacity. Make sure that the machine is standing securely.

Removing transit blocks



You are recommended to lift the machine with a fork-lift/stacker truck.



Detach transit block **(2)** from the machine by removing the bolts, washers and nuts **(1)**.

Figure 36: Removing transit blocks, illustration

Machine variants

There are two variants of the machines:

- Mounted on casters
- Mounted on machine shoes

Casters

Applying caster brakes



It is essential that you apply the caster brakes before starting up the machine, otherwise there is a risk of the machine rolling away.

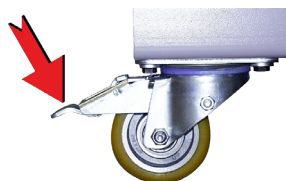


Figure 37: Brake Left: released, braking

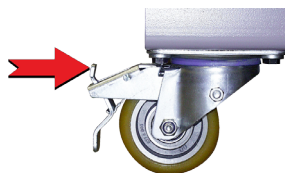


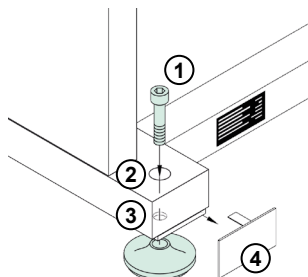
Figure 38: Right: **applied**, releasing

Machine shoes

Installing machine shoes

NOTICE

You are recommended to lift the machine with a fork-lift truck.

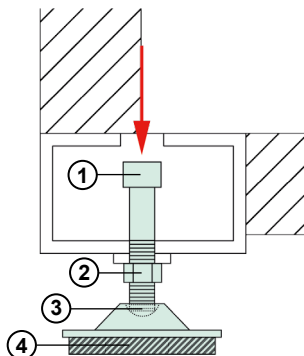


Take off cover (4).

Insert adjusting screw (1) in hole (2) from above.

Tighten the adjusting screw in tapped hole (3).

Figure 39: Installing machine shoe



Fasten nut (2) **tightly** on adjusting screw (1) from underneath.

Locate machine shoe (4) centrally underneath adjusting screw (1), so that the adjusting screw mates with the recess (3) in the machine shoe.

Continuously monitor the exact position of the machine shoes while slowly lowering the machine.

Replace cover (4).

Figure 40: Installing machine shoe, cross-section

NOTICE

Make sure that all 4 nuts (2) are tight and that the machine is standing securely before starting up the machine.

Setting up and aligning Flatbed machines

Setting up machine



The machine is to be set up and installed by trained service personnel of ZSK or its agents only.



All the fastening elements (bolts, washers, cable ties etc.) are located together with the accessories.



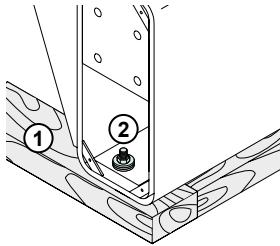
Only trained assembly personnel are allowed to set up the machine at its operating site.

Place the embroidery machine only on a solid surface of sufficient load carrying capacity. Make sure that the machine is standing securely.

Removing transit blocks



You are recommended to lift the machine with a fork-lift/stacker truck. In doing so, ensure compliance with the „Prohibited areas for fork-lift trucks“ (Figure 28)



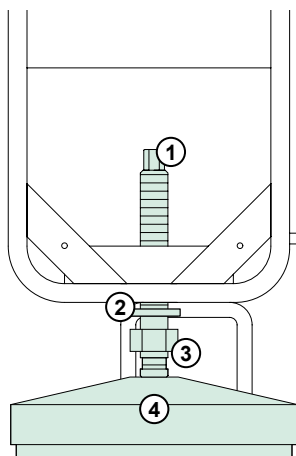
Detach transit block (1) from the machine by removing the bolts, washers and nuts (2)

Figure 41: Removing transit blocks

Installing machine shoes

NOTICE

You are recommended to lift the machine with a fork-lift/stacker truck. In doing so, ensure compliance with the „*Prohibited areas for fork-lift trucks*“ (Figure 28).



Remove covers.

Insert adjusting screw (1) in the tapped hole.

Place washer (2) on adjusting screw (1).

From below, lightly tighten nut (3) on adjusting screw (1).

Locate machine shoe (4) centrally underneath adjusting screw (1), so that adjusting screw (1) mates with the hole in machine shoe (4).

Figure 42: Installing machine shoes

Continuously monitor the exact position of the machine shoes while slowly lowering the machine.

Installing center support (from X series)

NOTICE

The center support (1) forms part of the delivery specification with X series machines and above. It improves the stability of the frame and is necessary in order to reduce the frame's vibration.

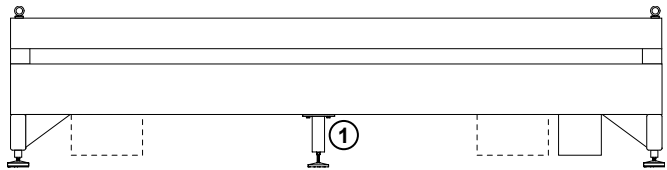
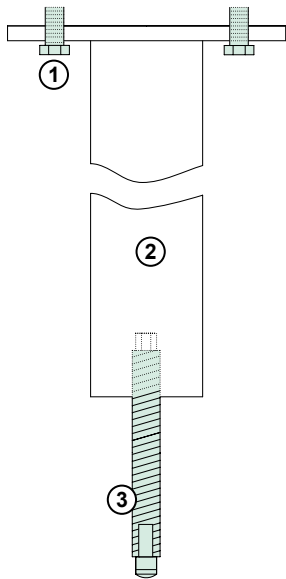


Figure 43: Center support, position



Secure square tube (2) by screwing in the envisaged bolts (1).

Insert adjusting screw (3) in the hole in the square tube.

Figure 44: Installing center support

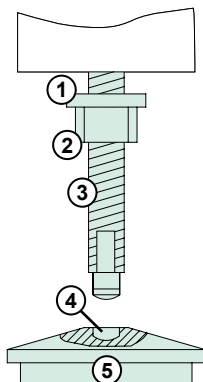


Figure 45: Installing center support

Place washer **(1)** on adjusting screw **(3)**.

From below, lightly tighten nut **(2)** on adjusting screw.

Locate machine shoe **(5)** centrally underneath the adjusting screw, so that the adjusting screw mates with the hole in machine shoe **(5)**.

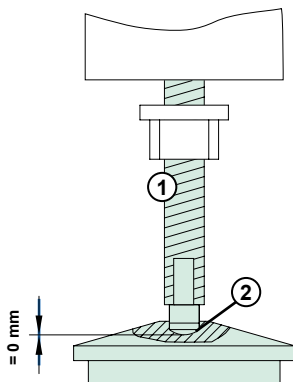


Figure 46: Installing center support

Insert adjusting screw **(1)** by hand in the hole in the machine shoe.

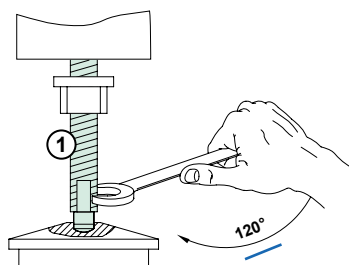


Figure 47: Installing center support

Slacken off adjusting screw **(1)** in the support by turning through **120°** (= 1/3 turn) using an open-ended wrench.

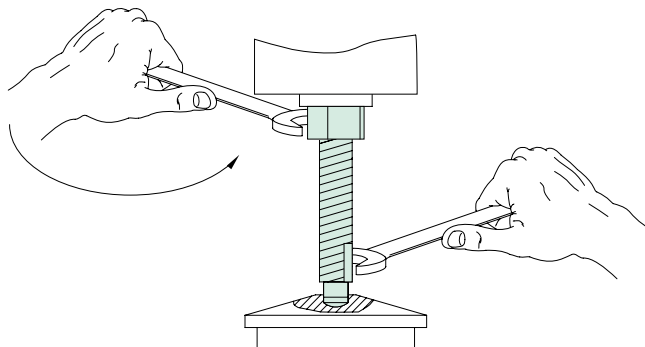


Figure 48: Installing center support

Lock the nut against the center support while at the same time preventing the adjusting screw from turning with the open-ended wrench.

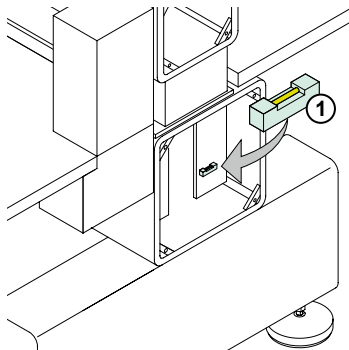
NOTICE

Work table supports are installed with series-Z machines with an embroidery field depth of 1000 mm and above. These are to be adjusted in the same way. If the work table still vibrates during embroidering, turn the adjusting screws slightly until the vibration ceases. The work tables must not be raised.

Aligning the machine

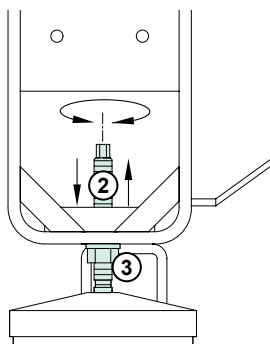
NOTICE

Each time it is installed, distribute the load between all the machine shoes and align the machine horizontally.



Remove frame side wall panels on both sides.

Figure 49: Aligning, spirit level



Align the machine horizontally by turning adjusting screw (2) and with the aid of spirit level (1).

Fully tighten nut (3).

Reattach **all** covers with the appropriate screws and nuts.

Figure 50: Aligning, adjusting screw

Installing all machine types

Comparing mains voltage



All installation and service work is to be carried out exclusively by trained experts.

The machine is at zero current only when the mains plug is pulled out and after a delay of at least 30 seconds.

The supply voltage of the machine is 230V AC (+/-15%) 50/60Hz.



Compare the mains voltage stated on the rating plate with the system voltage available at the machine location. If the values are not the same, do not start the machine, but contact our customer service department.

Mains connection

The machine is supplied with power cable and plug and may only be operated at a plug connector with a correctly connected grounding conductor, which has been setup according to the valid regulations. Compliance with applicable regulations and, in particular protective measures against electric shocks according to IEC 364/VDE 0100 or corresponding national and local safety regulations must be observed.



On completion of the installation work, run the connecting cable between the embroidery machine and mains socket-outlet in such a way that it is not an obstacle to foot traffic (risk of tripping).

Do not connect the machine to the power supply until it is fully assembled and the control cabinet is closed.

Fuses/automatic circuit breakers



Fuses and circuit-breakers are safety devices. Before starting up the machine again, the reason for the power loss has to be investigated in order to avoid the risk of damage or further production down-times.

NOTICE

Flatbed machines do not have their own fuses; they are also fused via the operator's mains supply.

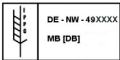
Disposing of packaging materials

NOTICE

Dispose of the materials in compliance with national and local law. Keep the parts that make up the crate in case required for service purposes.



The wooden packaging is made almost entirely from natural, non-toxic materials and can be disposed of accordingly. Other treatment guidelines apply in a small number of specific countries. Advice about these can be obtained locally from the relevant authorities.



Packaging paper and foil can be reused and should be recycled.

The desiccant bags contain a natural salt that can be disposed of together with domestic refuse.

Maintenance and troubleshooting

For your safety



Before undertaking any cleaning or maintenance work:

Make certain that the machine cannot be switched on unintentionally by unauthorized persons.

Covers have to be removed to perform some maintenance work. On no account is the machine to be restarted before you have reinstalled all covers properly.

Lubricants

The standard machine accessories include:

- ⇒ A spray can containing sewing machine oil
(JC W 35 Super Lubrifiant, ZSK order No. 750 081)
- ⇒ A grease cartridge
(Gleitmo 585M, ZSK order No. 667 055).

As far as possible, use only the original lubricants supplied with the machine when carrying out maintenance work. These lubricants are available from ZSK

NOTICE



Waste grease and oil are to be treated in compliance with the disposal regulations applicable in the country concerned or surrendered to a hazardous waste facility

Overview

NOTICE

The stated maintenance intervals are guidelines for conventional single shifts. In case of 2 or 3-shift duty cycles, the intervals are to be reduced accordingly.







Before applying grease or oil, remove dirt and old residual lubricant.



All installed lifting magnets are maintenance-free and must not be oiled.


More detailed maintenance instructions are contained in the Maintenance guide.



Do not apply an excessive amount of grease or oil, otherwise moving parts can hurl off lubricant or give rise to dripping. This could cause the work to be soiled.

Key to maintenance table			
	⇒ 1x (No. of shots)		every three months
	every day		every six months
	every month		every twelve months
~	as necessary		

Type	Maintenance - machine in general	Lubricant	Frequency
Tubular arm machines	Grease linear guide (pantograph control , grease side-to-side drive)	<i>Gleitmo 585M Fett</i>	
Flatbed machines	Grease linear guide (pantograph control , grease side-to-side drive)		

Type	Maintenance - control components	Frequency
All machine types	Clean control components	~
	Clean ventilation filter	

Troubleshooting

The following tables are designed to help you rectify faults caused by incorrect operation or minor damage.

Fault	Cause	Remedy
Pantograph offset	Pantograph adheres to work table as a result of using adhesive spray	<ul style="list-style-type: none"> • Clean work table • If possible avoid use of adhesive spray - use nonwoven fabric instead
	Parts of design lie outside embroidery field	<ul style="list-style-type: none"> • Position in such a way that entire design lies within embroidery field (framing)
	Design is defective	<ul style="list-style-type: none"> • Prepare new copy from original
	Clamped connections of toothed-belt pulleys are slack	<ul style="list-style-type: none"> • Check clamped connections, take up slack if necessary
Design offset	Embroidery material is clamped too slackly	<ul style="list-style-type: none"> • Clamp material taut
	Material distortion, especially with very fine material	<ul style="list-style-type: none"> • Reinforce embroidery material, e.g. with nonwoven fabric
	Embroidery frames not sufficiently secured	<ul style="list-style-type: none"> • Secure individual frames, mounting rails etc. well
	Upper and bobbin thread tension too high	<ul style="list-style-type: none"> • Set correct thread tension
	Punch faults (processing sequence not operating smoothly, especially with stitch-intensive designs)	<ul style="list-style-type: none"> • Obtain information from card manufacturer • Notify ZSK customer service
Machine runs irregularly	Belt tension too slack	<ul style="list-style-type: none"> • Tighten belts
	Components not running freely	<ul style="list-style-type: none"> • Notify ZSK customer service
Inaccurate stopping position	Belt tension too slack	<ul style="list-style-type: none"> • Tighten belts
	Drive belts coated with oil and slipping	<ul style="list-style-type: none"> • Degrease pulley • Renew drive belts
	Components not running freely	<ul style="list-style-type: none"> • Notify ZSK customer service
Machine does not start	Power supply interrupted	<ul style="list-style-type: none"> • Press ZSK-button on control panel (LED in start/stop switch group comes on) • Check fuse/automatic circuit breaker



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