



QUICK CHANGE SYSTEM SPRINT

INSTALLATION GUIDE

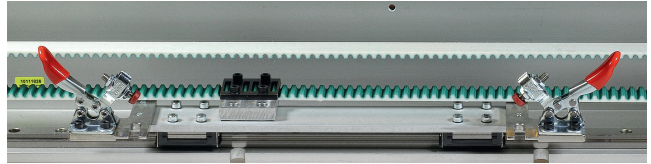


MADE
IN
GERMANY

ZSK STICKMASCHINEN MADE IN GERMANY

1. Quick change system for SPRINT Series

The task of the quick change system is to reduce the machine setup time when changing operation mode between border frame/cap/tubular. After converting the machine to the quick change system, accessories which have not been converted can be connected as customary to the quick change system.



The quick change system is designed solely for machines of the series SPRINT 6. A conversion can only be carried out for SPRINT 6 and SPRINT 5 machines.

The installation is not possible in case of the following machine types!

- SPRINT
- SPRINT 2-4
- SPRINT XL
- Jafa-/JNF-Serie
- L-/M-/S-/X-/Y-/Z-Serie

1.1 Scope of delivery

Add-on kit quick fastener SPRINT

	Quantity	Description	Sort term
	1	Add-on kit quick fastener SPRINT	360.998.901
	2	Clevis	360.010.207
	2	Horizontal barrel adjuster 205-U	574.103
	8	Cylinder head screw M3 x 6 DIN 912	307.002
	8	Washer B 3,2 DIN 9021	380.013
	4	Countersunk screw M4x8 DIN 965	335.008
	6	Centring device (optionally replaceable)	360.010.209
	6	Thrust washer 4x15x0,5 ZSK 5321 (optionally replaceable)	384.008

1.2 Preparations



Please read the description of the procedure carefully through. The description contains information which you have to be aware of before the installation.

Subassembly of the horizontal barrel adjuster



Fig. 1: Clamping screw with nut and washer

Screw one of the nuts on the clamping screw.

The end position of the nut should be approximately 3-4 mm above the screw head.

Slide one of the guide washers on the screw. The guides of the washer should be located on the far side of the head of the clamping screw.

Carry out the assembly with the second clamping screw as well.

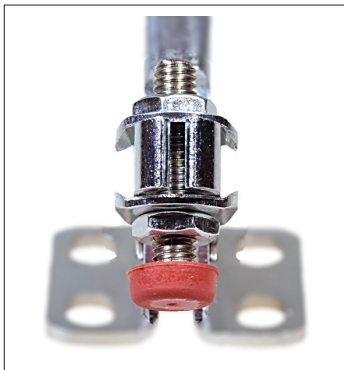


Fig. 2: Clamping fixture adaptor

Insert the prepared clamping screw from the bottom of the inclusion of the horizontal clamping fixture.

Slide the second guide washer above the clamping fixture adaptor from the top on the clamping screw.

The guides of the washer must be in the direction of the clamping fixture adaptor.



Fig. 3: Clamping fixture adaptor (side view)

Screw the second nut on the clamping screw and tighten slightly.

Run the installation described above with the second horizontal clamping fixture.



Fig. 4: Clamping fixture, right side (Fixing scheme)

Attach one of the pre-installed horizontal clamping fixtures with 4 screws and 4 washers on one of the clevis, as shown in (Fig. 4).

Thereby tightening the screws only slightly.



Fig. 5: Clamping fixture, left side

Attach the second horizontal clamping fixture mirror inverted on the second clevis.

Disassembly, conversion and assembly of the carriage



Fig. 6: Cover, Disassembly

Remove the cover of the pantograph drive for lateral movement.

Remove 2 screws with plastic washers on the top and the 3 screws with plastic washers on the back of the cover.

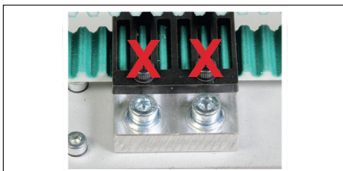


Fig. 7: Connecting drive belt, fastening

Do not loosen in any case the fastening of the drive belt on the connection (X)!

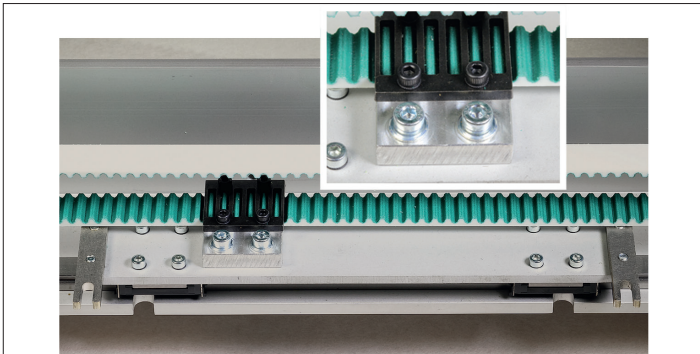


Fig. 8: Dismantling connection

Disconnect the carriage by removing two fastening screws.

NOTICE



On the bottom of the carriage the connection is fixed by 2 locknuts.

The drive belt is now loosened from the carriage and can be moved without barriers.



Fig. 9: Carriage, Disassembly

Rotate the drive belt carefully until you can reach the rear mounting screws of the carriage.

Remove the 8 mounting screws incl. the locking washers from the two movable pilot carriages and remove the carriage.

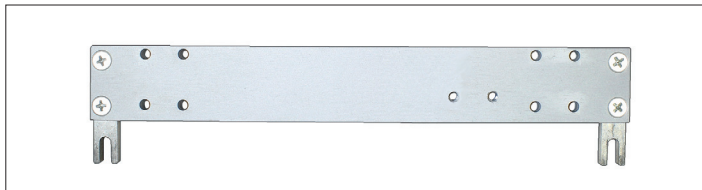


Fig. 10: Carriage (view from the bottom)



The countersunk screws are inserted with LOCTITE 290 and they are sitting tightly. Be careful, when removing the screws in order not to deform or destroy the cross slot.

Disassemble the two clevises by removing the 4 countersunk screws.

NOTICE

The countersunk screws are inserted with the glue LOCTITE 290. Due to the relatively high effort which is needed to remove the screws, it may, at the disassembly come to deformity of the screw heads. Use the new countersunk screws from the package to fasten the horizontal clamping fixture.

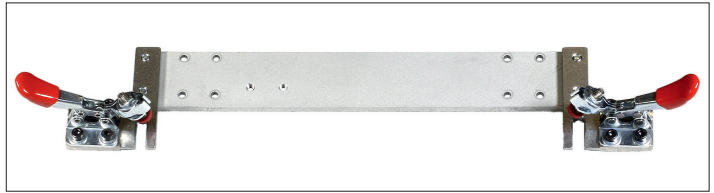


Fig. 11: Horizontal clamping fixture assembled, carriage (view from above)

Mount the two pre-assembled clevises with the horizontal clamping fixture on the carriage. Observe the mounting direction of the horizontal clamping screw.

Rotate the mounting screws ca. 1 turn in the thread.

Place a drop of Loctite 290 (or equivalent adhesive from another manufacturer) on the threads of the 4 mounting screws.

Only tighten the two screws securing the individual clevises firmly after both countersunk head of the screws are sitting in the intended cuts.

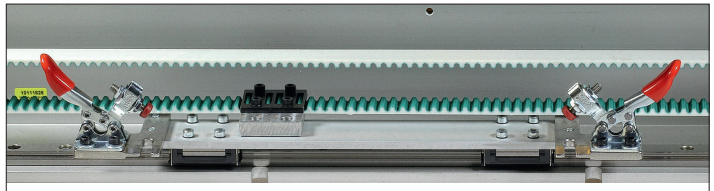


Fig. 12: Carriage, assembly

Assemble the carriage with the 8 mounting screws (incl. locking washer) on the two movable pilot carriages of the pantograph drive for lateral movement.

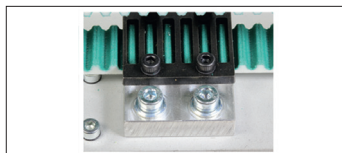


Fig. 13: Connection, assembly

Secure the connection with the two screws incl. the washer on the carriage.

NOTICE

On the bottom of the carriage the screw connection is countered by 2 lock nuts.



For securing the connection, screw the two lock nuts from below firmly on the screws.

⇒ So the transmission of motion of the pantograph drive for lateral movement is established again.

1.3 Settings of the quick change system

Horizontal clamping fixture, right side

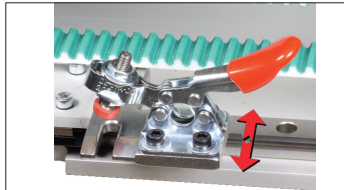


Fig. 14: Clamping fixture right side, adjustment

Distribute the horizontal clamping fixture on the clevis in the depth direction (arrow) evenly and **dexter** and align flush with the clevis.

Tighten the fastening screws firmly.

Horizontal clamping fixture, left side

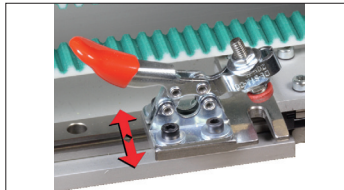


Fig. 15: Clamping fixture left side, adjustment

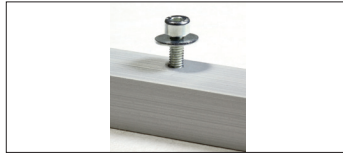
Distribute the horizontal clamping fixture on the clevis in the depth direction (arrow) evenly and **sinistral** and align flush with the clevis.

Tighten the fastening screws firmly.

Cylinder arm frame holder



The initial adjustment of the quick change system can only be executed with the cylinder arm frame holder.



Remove the two standard mountings of the cylinder arm frame holder.



Slide a thrust washer until it stops on the threads of the two centring devices.

Fig. 17: Centring device and thrust washer

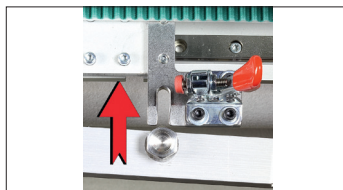


Place a drop of Loctite 290 (or equivalent adhesive from another manufacturer) on the threads of the two centring devices



Screw the two centring devices with the thrust washers **sturdy** in the threaded hole of the cylinder arm frame holder.

Fig. 18: Cylinder arm frame holder with centring device



Open the two horizontal clamping fixtures on the carriage completely.

Insert the cylinder arm frame holder with the centring device in the guides of the two clevises.

Fig. 19: Insert the centring device

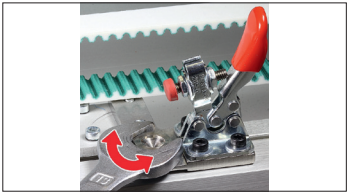


Fig. 20: Centring device, force setting

Using a suitable spanner set the absorbing energy of the system with which the tubular frame has to be pushed in the guides on the centring devices.

Check the setting by moving back and forth the cylinder arm frame holder
Change and check the settings of the absorbing energy until you find the appropriate setting.

Centring device	Impact
Setting tighter	higher effort
Setting looser	smaller effort

The setting is right if the cylinder arm frame holder slides into both clevises evenly under slight pressure.

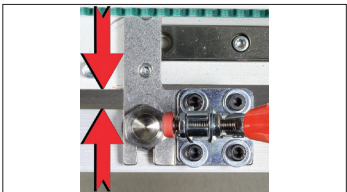


Fig. 21: Distance setting

Slide the cylinder arm frame holder with the centring devices in the guides of the two clevises.

Set a **parallel** distance of 6,0 mm $\pm 0,3$ between the carriages of the pantograph drive and the cylinder arm frame holder.

NOTICE

To facilitate the setting of the 6 mm distance a correspondingly thick gauge can be applied. This can be a metal strip, 2 screws or similar material of the appropriate strength.

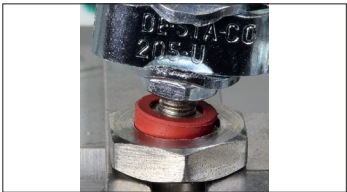
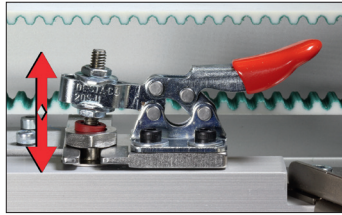


Fig. 22: Clamping screw in the centring device

Place the clamping screws of the two horizontal clamping fixtures centered in the recording of centering devices.



Set over the lower nuts of the two clamping screws the contact pressure of the two horizontal clamping fixture.

The adjustment of the thrust screw is countered with the upper nuts of the two clamping screws.

Fig. 23: Clamping screws, adjustment

Check the setting of the comprehensive force by repeatedly opening and closing the horizontal clamping fixture.

Close the horizontal clamping fixture completely.

The horizontal clamping fixtures are correctly adjusted when they can be completely closed with a **clear click-sound** and **not much effort**.

Contact pressure	Impact
to small	no click sound
correct	clear click sound
to high	effort when closing the clamp too high, horizontal clamping fixture is very difficult to close.

The basic setting of the quick change system is herewith concluded.

The cylinder arm frame holder can be used now with the quick change system.

Replace the cover of the pantograph drive for lateral movement. 2 screws with plastic sheaves on the top and the 3 screws with plastic sheaves at the back of the cover. See (**Fig. 6**).



Fig. 24: Tubular frame mounted



Checking the pantograph configuration (Tubular frame)

NOTICE

After each change to a different mode, you must adjust the settings of the pantograph within the T8 Software again!

Load an embroidery pattern in the machine.

While loading the pattern you will be asked to adjust the settings of the pantograph. Select the setting *Tubular frame*.

Confirm your selection with **[L8/R8] Confirm**.

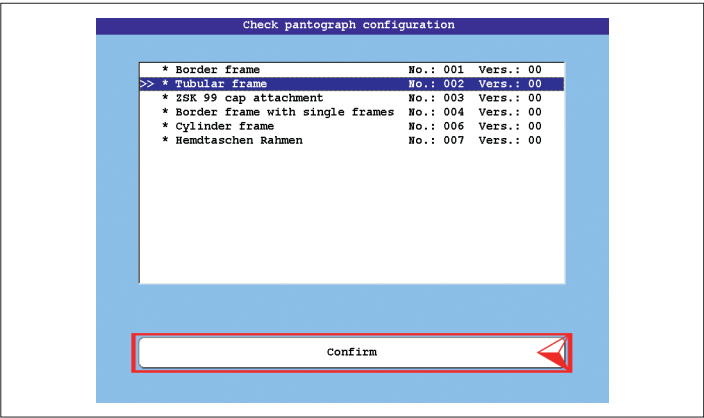


Fig. 25: Dialog: Check pantograph configuration, tubular frame

Cap attachment

NOTICE

The prerequisite for the subsequent description is that the default setting of the quick-change system has been fully implemented.

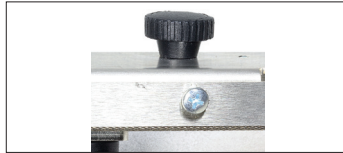


Fig. 26: Cap attachment, standard mounting

Remove the two standard mountings of the cap attachment.



Fig. 27: Centring device and thrust washer

Slide a thrust washer until it stops on the threads of the two centring devices.



Place a drop of Loctite 290 (or equivalent adhesive from another manufacturer) on the threads of the two centring devices.



Fig. 28: Kappeneinrichtung mit Zentrierung

Assemble the centring devices on the cap attachment.

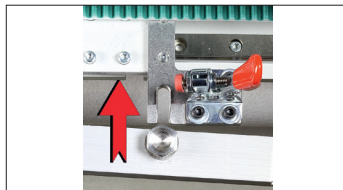


Fig. 29: Inserting the centring device

Open both horizontal clamping fixtures completely on the carriage.

Slide the cap attachment with the centring devices in the guides of the two clevises.

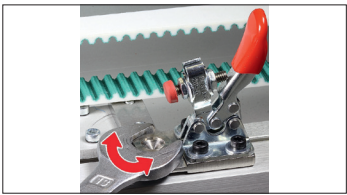


Fig. 30: Centring device, force setting

Using a suitable spanner set the absorbing energy of the system with which the cap attachment has to be pushed in the guides on the centring devices.

Check the setting by moving back and forth the cap attachment. Change and check the settings of the absorbing power until you find the appropriate setting.

Centring device	Impact
Setting tighter	higher effort
Setting looser	smaller effort

The setting is right if the cap attachment slides into both clevises evenly under slight pressure.

NOTICE

A new adjustment of the clamping screws on the horizontal clamping fixtures is not necessary.

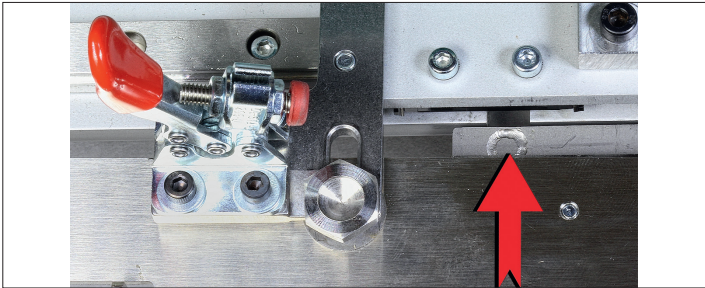
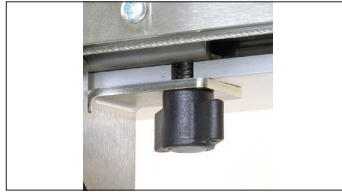


Fig. 31: Pantograph drive, cabinet slot

Please pay attention when inserting the centring devices in the clevis, that the lower clamping devices of the cap attachment are opened wide enough and that the threads of the lower clamping devices sit in the two slots of the cabinet on the pantograph drive for lateral movement.

If you can not position the cap attachment accordingly, the pantograph can move laterally and brought into position by means of the pantograph control.



Close both horizontal clamping fixtures.

Close the lower clamping device of the cap attachment by tightening the two wing bolts of the clamping device.

Fig. 32: Cap attachment, clamping device on the bottom

The cap attachment can be used now with the quick change system.

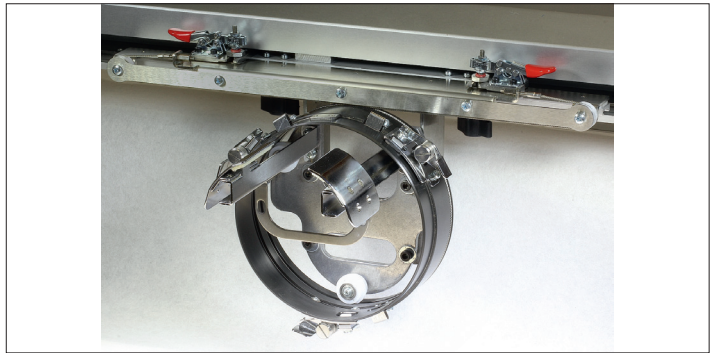


Fig. 33: Cap attachment mounted



Checking the pantograph configuration (cap attachment)

NOTICE

After each change to another operation mode you have to adjust the settings of the pantograph within the T8 Software!

Load an embroidery pattern in the machine.

While doing so, you will be asked to adjust the settings of the pantograph.
Choose the setting *ZSK 99 cap attachment*.

Confirm your selection with **[L8/R8] Confirm**.

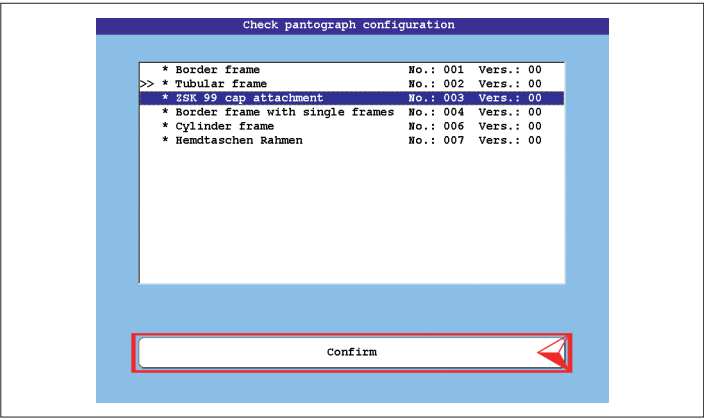


Fig. 34: Dialog: Checkpantograph configuration, ZSK 99 cap attachment

Border frame

NOTICE

The prerequisite of the subsequent description is that the basic setting of the quick change system has been fully implemented.

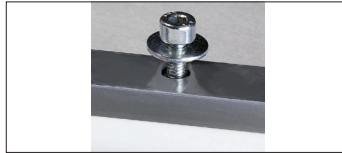


Fig. 35: Border frame, standard mounting

Remove the two standard fastenings of the border frame.



Fig. 36: Centring device and thrust washer

Slide a thrust washer until it stops on the threads of the two centerings.



Place a drop of Loctite 290 (or equivalent adhesive from another manufacturer) on the threads of the two centring devices.



Fig. 37: Border frame with centring device

Mount the centering devices on the border frame.

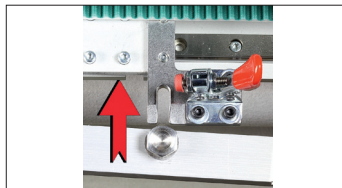


Fig. 38: Insert centring device

Open both horizontal clamping fixtures completely on the carriage.

Slide the border frame with the centring devices in the guides of the two clevises.

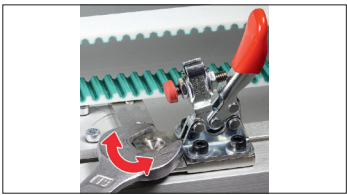


Fig. 39: Centring device, force setting

Using a suitable spanner set the absorbing energy of the system with which the border frame has to be pushed in the guides on the centring devices.

Check the setting by moving back and forth the border frame. Change and check the setting of the absorbing energy until you find the appropriate setting.

Centring device	Impact
Setting tighter	higher effort
Setting looser	smaller effort

The setting is right if the border frame slides into both clevises evenly under slight pressure.

NOTICE

A new setting of the clamping screws on the horizontal clamping fixture is not required.

The border frame can be used now with the quick change system.



Fig. 40: Border frame, assembled.

Checking the pantograph configuration (Border frame)

NOTICE

After each change to another operation mode you have to adjust the settings of the pantograph within the T8 Software

Load an embroidery design in the machine.

You will be asked to adjust the settings of the pantograph. Select **Border frames**.

Confirm your selection with **[L8/R8] Confirm**.

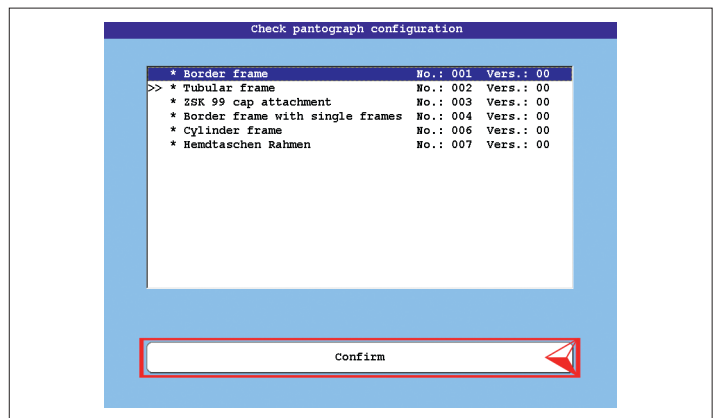


Fig. 41: Dialog:Check pantograph configuration, border frames





ZSK Stickmaschinen GmbH
Subject to change!
Änderungen vorbehalten!

© ZSK Stickmaschinen GmbH 2015
Printed in Germany

[GB] 02396V10
Version 1.0 • 08.04.2015/DC