



YIBODA Computer-controlled Quilting Embroidery Machine

Instruction Manual



DONG GUAN YIBODA INDUSTRIAL CO.,LTD

Catalogue

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Chapter 1 : Brief Introduction

Welcome to use YIBODA Brand quilting embroidery machine. Before your operation , pls read the instruction manual of quilting embroidery machine, and AC Servo User manual carefully.

1. 1 Machine Application

YIBODA computerized quilting embroidery machine belongs to the type of industrial home textile machinery. It's widely used for making home textile, garment, case and bag..ect .Used for making diversified garment fabric as single-layer fabric, leathers, organdy (lace fabric)..ect, it can be quilted or embroidered different pattern to meet your needs perfectly.

1. 2 Product feature and function

- (1) Computerized machine, quilting and embroidery completed simultaneously.
- (2) Driving by roller system. Continuously quilting in Y direction, save the time of changing fabric and improve the quality efficiency.
- (3) Auto-stopping function when thread broken.
- (4) Auto return for patch-up embroidery function
- (5) Any head can be chosen for quilting or embroidery function.
- (6) Quilting unique patterns continuously.
- (7) Main axis, X axis, Y axis are driven by Servo motors to ensure high speed and accuracy.
- (8) Keep fabric smoothly by Tensile Motor
- (9) Auto-cutting device can be installed.
- (10) Tajima, Barudan, ZSK, and SWF format can be readable.
- (11) A great deal of prepared patterns for you choice.

1.3 Product Parameter

| Model | YBD333 | YBD325 | YBD168 | YBD146 |
|--------------------|---|--------|---------|---------|
| Heads | 33 | 25 | 34 | 23 |
| Head interval | 101.6mm | 135mm | 101.6mm | 152.4mm |
| Needle distance | 101.6mm | 135mm | 50.8mm | 76.2mm |
| X axis movement | 310mm | | | |
| Needle stitch | 0.5~12.7mm | | | |
| Needle type | 9~18# | | | |
| Max quilting width | 3352mm | 3375mm | 3454mm | 3530mm |
| color | 3 | 3 | 1 | 1 |
| Rotation speed | 700~850R.P.M | | | |
| Power | AC220/380;2&3 Phases;50Hz | | | |
| Machine size | L5200m*W1300mm*H1510mm (YBD146 L5270mm) | | | |

1.5 Safety Instruction

For the safety of the operator, please comply with below basic safety precautions strictly.

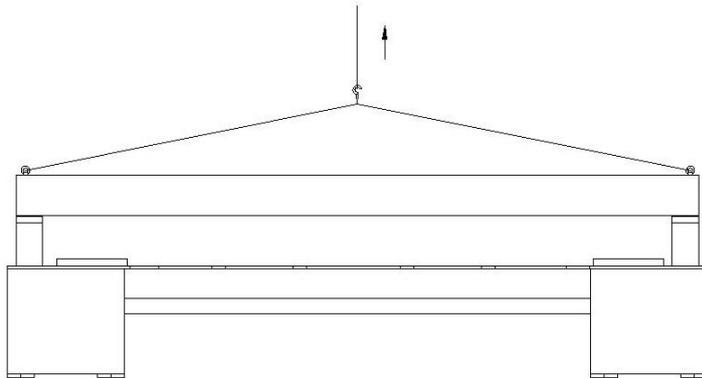
- (1) Installing and maintaining the machine by professional technician, which will increase the life span of machine and avoid some possible damage toward your staff and property.
- (2) Using the spare parts authorized by YIBODA
- (3) Machine should not be placed in the environment with moisture, bug dust, aggressive gas, inflammable and explosive substance.
- (4) Replace protective tube according to the instruction book strictly. .
- (5) The switch control box of servo motor have the current protection. If it's in the current protection, It will not work until 3 min later.
- (6) Connected the USB drive in a right direction; in the process of reading , breaking out the USB drive will incur its damage.
- (7) Keeping the working environment clean and ventilation will be helpful for machine giving out of the heat.
- (8) The machine should not be altered without YIBODA's permission or you will bear the full responsibility for the consequences caused by that.

Chapter 2 Machine lifting, Transportation, Installation

2.1 Machine lifting

- (1) For the convenience of transportation and installation, it's designed the construction of lifting. Supplementary tools including: loop wheel machine, hoisting cable, hoisting strap..ect.
- (2) Before lifting, look over the swinging ring, and other supplementary tools carefully, make sure all of them are in good condition.
- (3) The swinging strap and swinging ring should be linked fast and correctly.
Hitching at the central of swinging strap by hoisting cable hook (the machine's

Gravitational balance), to ascend in slow paced, make the machine keep balance always when lifting. See below drawing :



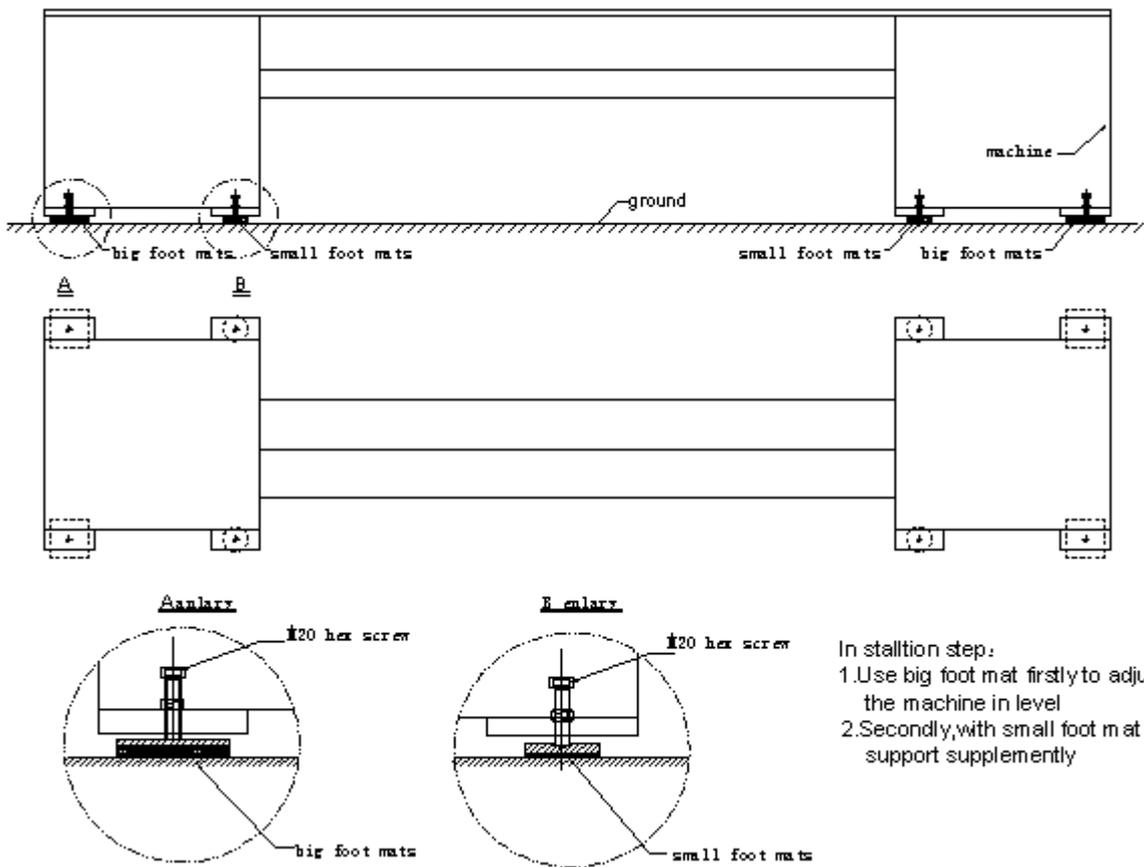
2.2 Machine Installation

2.2.1 Required environment for installation

- 1) Hard ground surface
- 2) Avoid direct sunlight
- 3) Permit light and air to enter
- 4) Pay attention to the environment hygiene, avoid dust.
- 5) Spatial temperature: 5—40°C
- 6) Relative Humidity (RH): 30—95%
- 7) Reserve some space for machine maintenance and repairing

2.2.1 Installation step

- (1) The machine should be placed on relative hard ground surface.
- (2) Put the foot pad at the bottom of each machine foot, the other 4 big pad should be put at lateral. Use gradienter to adjust screw rod of machine foot, making the machine in a level surface. Putting the other 4 small foot pad at the inboard, Screw down the adjusted screw rod of small pad in properly (with the function of supplementary and support).
- (3) After lifting done, the machine should be looked over thoroughly to make sure all of the spare parts in good condition. No damage caused during the lifting.
- (4) Clean the machine surface, lubricify the slide unit.
- (5) Using adjusted wheel to run the main axis, if there is some exceptional sound, pls power off the machine and contact our technician for help.
- (6) The type of power should be matched the machine construction, and the power of outlet must be matched with the machine outlet.
- (7) The electronic power source should contain ground wires. The requirement of ground wire can be found in computer-controlled manual)



Machine installation sketch

Chapter 3 Machine alignments

3.1 Precautions of machine alignments.

Machine alignments should be done by professional technician. Reading carefully about the instruction manual and computer control manual is needed.

3.2 Main axis (including upper main axis & lower main axis) moving.

Turn on the machine switch, make the speed to reach 200 round/min, lubricate at the inner side of machine head, and also oiling 5# white oil on the rotary hook, press the accelerator button, enhance the speed at 650 round per min. Running about 10 min is enough.

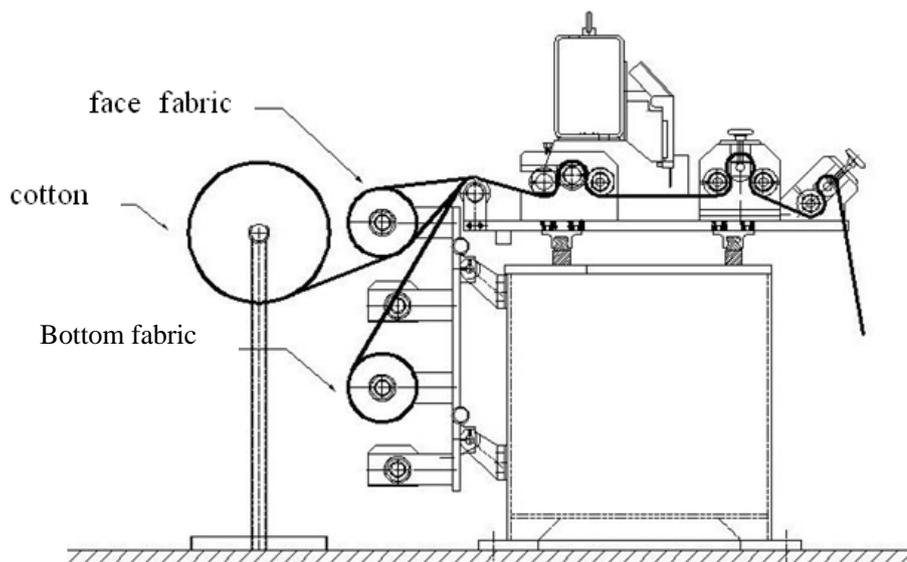
3.3 X axis moving

- 1) check the lead limit switch and inductive chip carefully, and make sure it's ok. If the controlling function of working route out of work, turn off the machine at once, or it would be cause the machine damage or even worse.
- 2) According to the computer control manual, working the related roller system in direction of x axis, the working route is controlled by two travel switch (left travel switch, and the right one). When roller assembly move to the limited position, the travel switch will make it stopped. "X axis spacing" will be displayed on LCD, which will be canceled by press" back board"

3.4 Feeding and loading fabric in Y direction

3.4.1 Feeding fabric at I axis

The Y axis of machine adopt the way of roller system to feeding and fabric outputting, the working route is limitless. Under the control of Servo Motor, roller running positively or negatively to lead the fabric moving forward and backward. See below sketch.



3.4.2 Loading fabric

- 1) Above drawing for loading fabric. If you need to load two piece of fabric, make it separated and loading it into two fabric guiding respectively, for more fabric, the way of loading is similar.
- 2) Rolling fabric to stainless steel tube by cloth rolling machine, and next to related fabric guide, and fixed it by upper cap bag (shipped together with machine)
- 3) Firstly, loading the upper and bottom fabric on roller, keep the fabric surface neatly.
- 4) Click the “Y” direction which will lead all the fabric into the front roller, and then put the filling into roller (filling would be placed between upper fabric and bottom fabric). Click the “Y” direction again, the upper and bottom fabric will lead the filling into roller.
- 5) Check the fabric and filling carefully, make sure all of them are neat.

(Note: It's a bit dangerous to load fabric. Operated carefully in order to avoid your hand stuck by roller)

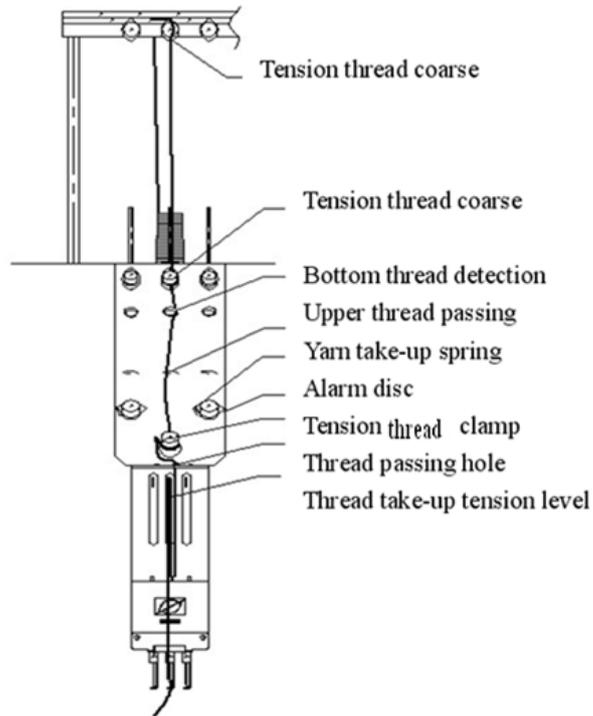
3.5 Moment motor adjusting

- 1) At each side of fabric guide, there are moment motor, and also moment adjuster, press the adjuster clockwise, the power will be higher, if adjust it counter-clockwise, power would be low.
- 2) Adjusting moment knob to make the fabric in a proper tension condition. Adjustment method: Press the “Y” direction key and moving, the motor will strain the fabric.

Normally, higher ratio of the fabric flex, higher power; more design stitch, higher power as well;

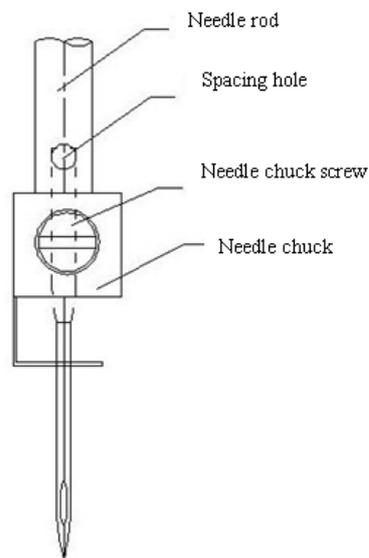
3.6 Needle threading

- (1) Needle threading should be follow below drawing
- (2) After threading, hold the thrum of thread with proper pulls. Using “ tension thread coarse” to adjust if the pulls too big, or too small.
- (3) Only left direction twirled thread can be worked. (The method to judge the direction of twirled thread: use your both hand to hold each ends of a thread, twirling the thread in front of your body by your right hand, if the thread can be tighten up, it's the left-direction twirled thread.



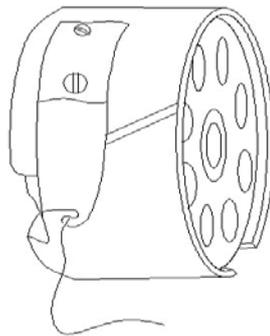
3.7 The installation of machine needle.

- (1) Needle type 9#-18#, choose needle properly according to different quilting fabric.
- (2) On the basis of limited hold, all of needles should be on the same level.
- (3) Standing in front of the eyelet, needle tray, and then screw down the “ needle chuck screw”



3.8 Rotary hook thread installation

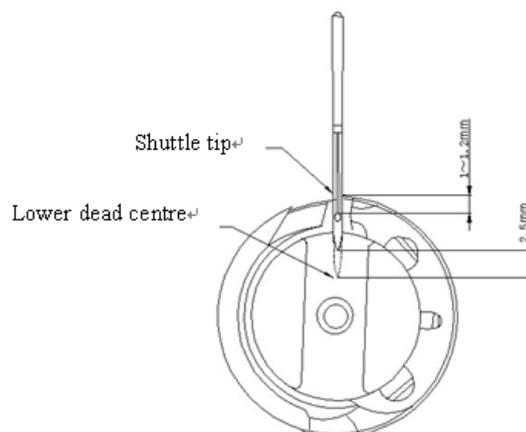
- 1) With bobbin winder machine, coiling up thread on shuttle core. Make the thread of shuttle core neatly, with round in shape.
- 2) Put the core in shuttle shell, the thrum should be thread through of the small hole over its cannellure.
- 3) Pulling thrum to make the shuttle core rotate smoothly. It's the clockwise the core turned in the view of face side of core installed.
- 4) With screwdriver, adjust screw, adjust the tensile force.
- 5) Install the shuttle core with thread on rotary hook of machine, reserve length of 50mm thread outside of rotary hook. More than 50mm is easy to be stuck or thread broken.



3.9 Dial needle position

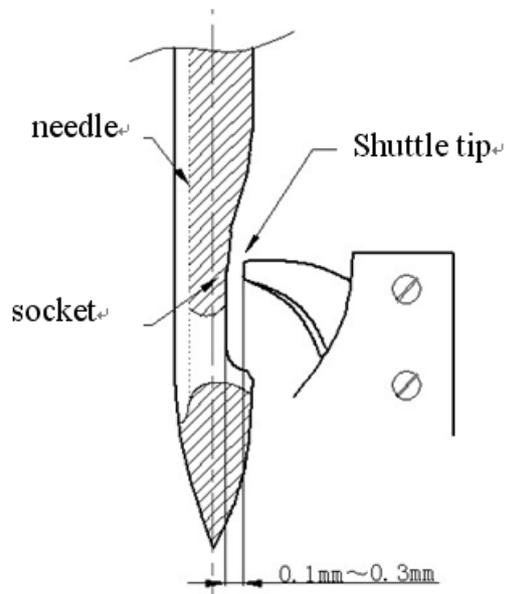
- 1) When the machine stopping, with: $100^{\circ} \pm 2^{\circ}$
- 2) Needle bottom dead center: 172°
- 3) When the needle ascend to 2.5mm start from bottom dead center, needle position should be: 195°

(At that time, It's 1 ~ 1.2mm from shuttle tip to needle hole coboundary)



3.10 Space between needle and rotary hook

In order to avoid thread jumping or broken, the space between needle and rotary hook should be kept at 0.1-0.3mm, as below picture showing:



Chapter 4 Machine maintenance and repairing

4.1 Standard requirement for every day

- (1) Make a cleaning each day for the whole machine before use.
- (2) Check the power circuit to make sure it running smoothly.
- (3) Before running the machine, make sure no other sundry around it, in order to avoid something like that stuck or damage the machine.
- (4) Clean the thrum or hairs..around the rotary hook.
- (5) If the machine have any trouble, power off the machine firstly, Only if the problem solved, can it be allowed to be run.
- (6) Remove oil stain in case it make the fabric dirty.
- (7) Keep airy around the machine working environment, which will be helpful for machine to heat yield.

4.2 Lubricate

Please follow below instruction to lubricate for related machine parts:

| Parts | Lubricate type | Lubricate cycle | Remarks |
|------------------------------|----------------------|-----------------|--|
| Rotary hook | 5# vash oil | 6 hours | |
| Needle bar | 5# vash oil | 60 hours | Adding optimal oil in case it will make the fabric dirty |
| Transmission shaft | 22# ~ 46# engine oil | 12 hours | |
| Other working parts | 22# ~ 46# engine oil | 24 hours | |
| Ball screw set | 2# li grease | 1 week | |
| Linear Roller Guide complete | 2# li grease | 1 week | |

Chapter 5 Machine

5.1 Maintenance precautions

In process of production, it should be repaired by professional technician for any damage of machine spare parts or other machine stoppages. The renewal parts should be provided by YIBODA, Any damager caused by unauthorized maintenance or replacing spare parts will at your own risk.

5.2 machine trouble solving

1.thread-broken

| Item | cause | Maintenance method |
|------|--|---|
| 1 | the intensity strength of thread is too weak to be snap | Check it and replace the thread |
| 2 | Thread broken caused by thick fabric with thin thread or small needle for thick thread | Redistribute the proper thread |
| 3 | forcing press of tension thread clamp is too heavy, causing thread transport badly , and thread broken | check and adjust the tension thread clamp |
| 4 | wronged assembly for needle rod and shuttle | Correct the position |
| 5 | the route of passing thread have burrs (hold of needle board, shuttle shell, shuttle core..ect) | Polishing and repairing |
| 6 | bottom thread rolling badly | straighten out or re-rolling its thread. |
| 7 | needle distance too close, unreasonable pattern | Revise pattern |

2.needle floating

| tem | Cause | Maintenance methods |
|-----|---|--|
| 1 | inaccurate location between rotary hook and needles | Adjust the position |
| 2 | The scraggling of twirl will cause thread eye deflection | Replace with highly quality thread |
| 3 | choose unmatched needle, thread, fabric, such as: thick needle with thin thread.. | Make the needle, thread, fabric matched. |
| 4 | shuttle tip have been worn, cannot hook up the thread socket | replace it or polishing the shuttle tip |

| | | |
|---|--|--------------------------------------|
| 5 | needle tray filled with darts, influence the thread socket | Clean the needle tray |
| 6 | needle rod and need eyelet have burrs | polish it or replace with new needle |

3. needle-broken

| item | cause | Maintenance method |
|------|---|--------------------------------------|
| 1 | needle distorted, needle point failed | Replace with new needle |
| 2 | needle, thread, fabric mismatched | choose the matched thread and needle |
| 3 | locating hook of shuttle race installed improperly. | Correct the installation |
| 4 | the space between shuttle tip and needle too tight | Adjust the space |

4. Floating thread

| item | cause | Maintenance method |
|------|--|---|
| 1 | (floating face thread) intention clamp with weak force. | screw down the intention thread clamp a little. |
| 2 | weak spring force of take-up-thread | Adjust it or replace another one |
| 3 | (floating bottom thread) shuttle fur cocked or with dirts inside | clean the dirty, screw down screw |
| 4 | (floating bottom thread) bottom thread too thick | Replace with a new one |

5. Pattern distorted

| Item | Cause | Maintenance method |
|------|--|---|
| 1 | roller fabric too tight or lose | adjust roller, compress the screw |
| 2 | Improper tensile force of torque motor | Adjust its tensile force |
| 3 | the route of patter incorrect or overlapped too much | Re-make the pattern |
| 4 | Plenty of stretch for the fabric | make the fabric in tension or computer compensate |

6. thread broken without warning

| Item | cause | Maintenance methods |
|------|--|---------------------------|
| 1 | circuit board for testing thread broken have been damaged or in poor contact | Repaired it or replace it |
| 2 | yarn take-up spring and alarm disc have dust or oil pollution will cause it poor contact | Clean the dirty |

| | | |
|---|---|--|
| 3 | yarn take-up spring is stuck or cannot be contact with alarm disc | repairing it or replace the related spare parts with a new one |
|---|---|--|