★国家高新技术企业 ★中国驰名商标 ★江苏名牌产品

LONGXING

Computerized flat knitting machine

Operating Instructions

SUZHOU FANZHOU TECHNOLOGY CO ., LTD

Content

1 About Instruction

1.1 The use of this instruction

This operation instructions include LONG-XING computerized flat knitting machine installation, operation, maintenance and maintenance all information.

1.2 The requirements of relevant person.

Relevant person：Person in charge of machine site selection and installation, operator, technician.

It is need person in charge understand this instruction use and precautions, including following chapters：

1 About instruction

2 Safety precautions

It is need operator understand the computerized flat knitting machine basic theory, including following chapters：

3 Machine performance and structure

4 Machine carry and installation

5 Machine test

6 Parameter setting

7 File management

8 Program edit

9 Pattern edit

10 Ready before knitting

11 Formal knitting guidance

12 Machine maintenance

13 Machine repair

Technician should understand electrician safety rules and got the professional training on textile, including all chapters.

1.3 The instruction content

This operation instructions include LONG-XING computerized flat knitting machine

installation, operation, maintenance and maintenance all information.The details as following:

1 About instruction:

Introduce the use of instruction, requirements of relevant persons and the instruction content.

2 Safety precautions

Introduce the safety precautions when use machine.

3 Machine performance and structure

Introduce machine main knitting parameter and machine structure.

4 Machine carry and installation

Introduce the correct machine carry and installation ways and requirements.

5 Machine test

Introduce each parts of machine test ways.

6 Parameter setting

Introduce each parameter function ,and how to setting .

7 File management

Introduce each option function and operation ways.

8 program edit

Introduce each option function and operation ways.

9 pattern edit

Introduce pattern edit menu simple operation ways

10 Ready before knitting

Introduce machine operations procedure, read knitting file, feed the yarn and relevant adjustments.

11 Formal knitting guidance

Introduce the basic operations of formal knitting, and each option function on knitting menu.

12 Machine maintenance

Introduce machine maintenance.

13 Machine repair

Introduce the way of machine repair.

Other service information,you can get from following ways:

- Training in our company training center
- Consult our after-sales department
- Contact with the location salesperson

（Note: the instruction take KSC062 machine for example ）

2 Safety Precautions

2.1 Safety instructions

Safety warning sign: warning signs have been always maintain complete revelant state.

Cover Caution：The machine movement forbids to open to protect a cover and avoid circulating medium machine injury body.

Set-up Caution：Forbid to move a cloth plank in the machine movement, avoid bumping shot or cut off.

Yarn Feeder Caution：Yarn Feeder to forbid touch's sending yarn Gun in the operation, avoid inhalation and tie up to round.

Electric Caution ：Dangerous electrical voltage,careful operation.

Keep suitable environment,insist on clean and add oil, this is the key to keep high quality and high efficiency.

2.2 Safety Precautions

Use of this control system, to eliminate the risk of person accident injury, should strictly abide by the following basic safety precaution.

1Power and environmental conditions:

① This machine can be used product nameplate indicating powertype. Electric network fluctuation more than 10%, must be equipped with power voltage.

② Power into line according to provisions of fixed and safety protective measures, can't bear any reaction.

③ The equipment must be connected grounding wires, grounding bad will cause personnel electrical shock and affect the safety and reliability of the products of the operation.

④ Prohibit direct input/output loop controller insulation test, otherwise will directly cause electrical equipment damage.

⑤ This control system should be clean and ventilated environment. Control box around don't debris piled up, so as to facilitate the heat dissipation and should be regularly clean dust.

⑥ Stop the operation of electric equipment in damp, dust, corrosive gas, inflammable and explosive gas place, otherwise it may cause personnel electric shock or fire.

2 Comply with the following specification when make machine maintenance or machine repair :

① Forbid unprofessional person check and repair, avoid to expand the fault even causing injuries and property losses.

② Prohibit the electrical professionals to electrical parts repair, commissioning, avoid to reduce the safety equipment performance, expand the fault even causing injuries and property losses.

③ When the machine is running, prohibit contacting any motion component. Otherwise it may caused the personnel of damage.Change control cabinet inside of electrical components, must ensure that in the situation of power, to ensure operation safety of personnel.

④ Malfunction should by professional personnel to check and repair, and follow this manual repair norms.

⑤ Change control cabinet inside of electrical components, must ensure that in the situation of power, to ensure operation safety of personnel.

⑥ Instead of using the company provides the spare parts, extremely easy to cause fire, electrocution and seriously damaged consequences.

⑦ Please strictly according to the product specification replacing the fuse the marked, so as to ensure the safety of personnel and property.

⑧ Forbid dis-board or change safety parts and electronic circuit intentionally. These actions maybe cause serious bodily injury or machine damage.

○1 After machine maintenance, please keep the parts have been moved back to correct position.

○2 In order to keep machine running well,please keep machine clean. Please stop machine before clean work.

○3 Please stop machine run before machine parts test in a power-on state, and adjust to the relevant test menu, then start the test work.

3 Machine operation should observe followed specification :

① Don't operate machine before understand machine well.

② Before starting the machine machine at boot, please pay attention to machine the periphery other personnel, prevent the occurrence of harm!

③ Operator with lone hair must put the hair up,and ensure hair no hanging during the work , avoid your hair be nipped by the machine carriage in running state.

④ Don't wear the cloth or jewelry with thin and long accessory ,avoid be nipped by the machine carriage in running state.

⑤ Before starting the machine machine at boot, please check the needle bed knitting pressure ruler, choose sutural pressure ruler and choose sutural whether is in the correct position to ensure that each a medal for knitting and choose the pins were pressure feet, and choose the pins pinned the tail not bulge needle bed 0.5 mm!

⑥ Second-ranking machine runtime around safety shield must be completely covered. Safety shield opened, the operation of the carriage might hit the operators and make it hurt!

⑦ When machine running abnormally, please stop machine, and consultour service person.

⑧ Second-ranking machine in energized, forbidden to open the back part of the electrical box machines, lest electric shock risk!

⑨ Don't use machine when thunderstorm weather, avoid machine damaged.

⑩ Avoid machine longtime running unattended .

2.3 Other precautions

1 Second-ranking operations and maintenance machine personnel must be professionally

trained skilled worker or have the relevant professional qualifications level certificate of professionals!

2 Second-ranking machine Settings yarn plate except placed yarn cone outside, not place other objects, such as knitting, pins, screw, lest machine runtime will these objects slide off to needle bed, causing aytomatically! Damage machine!

3 At any time, before and after the second-ranking carriage needle bed guideway and yarn mouth guide must keep it clean, tidy, cannot have sundry, prevent machine caused damage!

4 Please must choice JINLONG parts or the parts authorized by JINLONG when change parts.

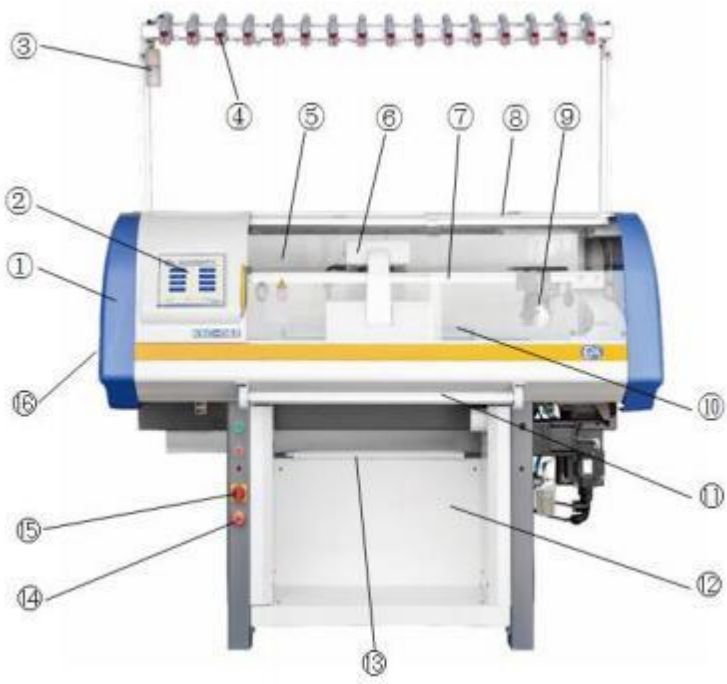
3 Machine performance and structure

3.1 Machine performance

Model	KSC062 ； KSC072 ； KSC082/083 ； KSC092/093 ； KSC122 ； KSC132
Gauge	12G、14G、14.8G
Knitting width	61cm（24inch）； 71cm（28inch）； 81cm（32inch）； 91cm（36inch）； 122cm（48inch）； 132cm（52inch）
Knitting speed	36 levels of speed. Max 1.2m/s
Carriage	Single carriage , double system
Main driver	AC servo motor,carriage adjust course according to knitting width automatically
Stitch density	36 levels of independent selection with 0-180 degree slight adjustment on each section
Cam system	Preliminary selecting system, cam system with 3 knitting status technology
Yarn feeder	4 guide bar.2*8 PCS yarn feeder can be adjustment
Racking	Controlled by servo-motor, maximum 2 inch racking range, back racking
Takedown	Top roller,24 sections , 0-100degree slight adjustment
Operation lamp	Green-- Normal operation Green flicker-- Normal stop Red-- Abnormal stop
Safety equipment	Safety cover, emergency stop switch, emergency power off, equipment abnormal stop and alarm with light and sound
Safety cover	Whole machine safety cover
Lighting device	Controllable operation lighting
Packing dimension 『length×width×height』	2.7m×1.0m×1.7m
Weight (net/gross weight)	590/670kg
Power supply	1 phase AC 220V, 50/60HZ,1KVA
Machine memory	128MB
Pattern memory	1024 needles×6144 rows

Data input	USB memory interface; network interface (optional)
Display screen	10.4 inch touch screen LED, include Chinese and English language
Language interface	English and Chinese exchange

3.2 Machine structure and function



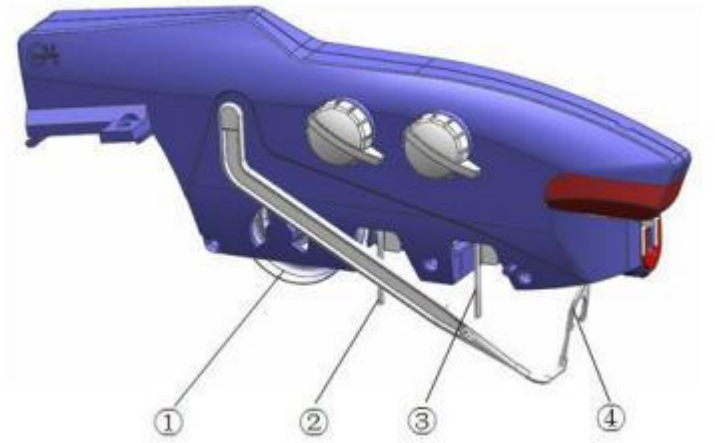
Serial number	Name	Function
1	Side cover	Operation process of the lateral protection device
2	Operation panel	Machine woven material of display and edit
3	Warning lights	it color reflects the workings of the machine
4	Tension Switch	Yarn tension control device
5	Former cover	Machine operation process of the front of protection device， convenient for observation running
6	Carriage	Control knitting yarn and Yarn Feeder work device
7	Carrier Rall	Yarn Feeder seat in days work on poles
8	Placed yarn	Placed yarn
9	Yarn guide device	Will yarn into knitting
10	Yarn feeder	Weaken yarn tension
11	Bed	Support needle bed and staffing agencies
12	Needle bed	Knitting needle boards groove in the work
13	Plate	Make cloth slide to below
14	Operation lever	Control carriage stopped or operation
15	Cutter	Clipping or cut the yarn device

16	Thread clamp frame	To control the yarn, yarn breaking stop, adjust send yarn tension

Main parts introduction:

一、Part of yarn guide

1、Electronic antennas



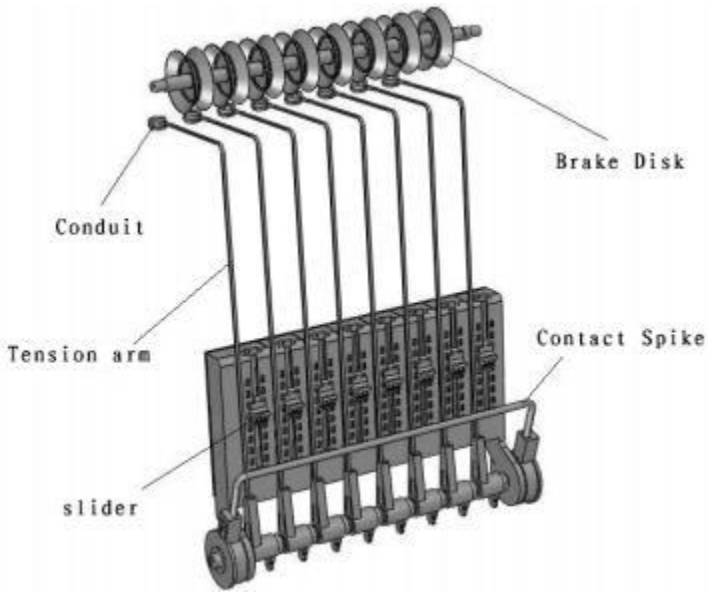
①yarn brake disk knob ②big knot knob ③small knot knob ④yarn broke device

Rotating brake disk knob can adjust thread clamp dish clamping force.

Rotating antenna knob can adjust antenna tension.

Rotating knot claw knob can adjust allow through yarn knot of size.

2、side antenna



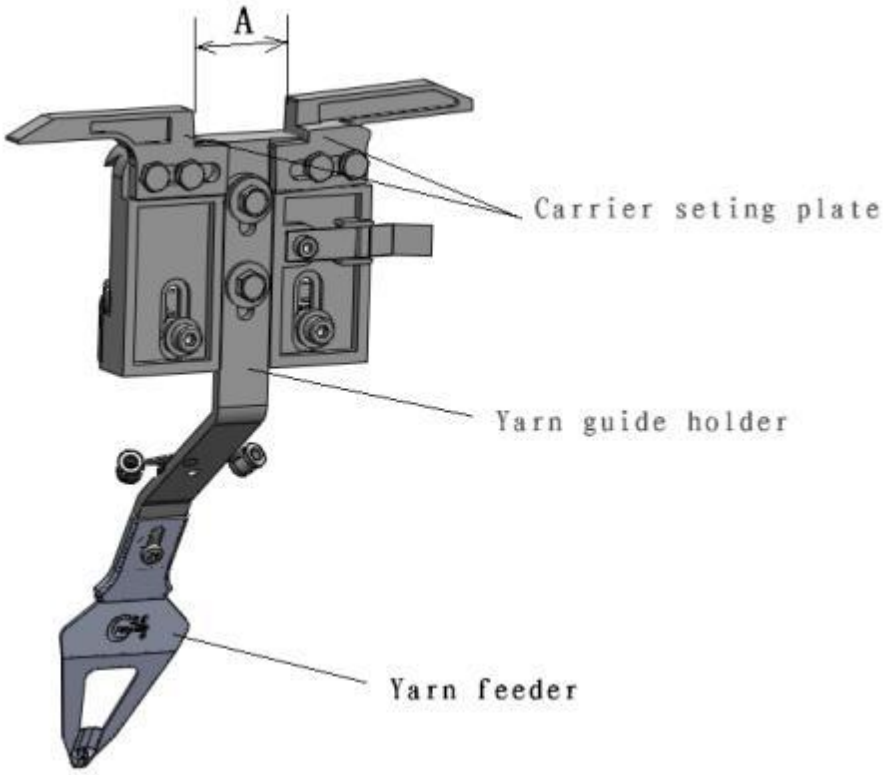
Lateral antenna structure are shown below

Change above precision slider position can regulate lateral antenna tension

Change the position of contact spike can adjust the lateral antenna yarn breaking springback alarm

when the position (side antenna and conductive great phase contact alarm)

3、 Yarn feeder

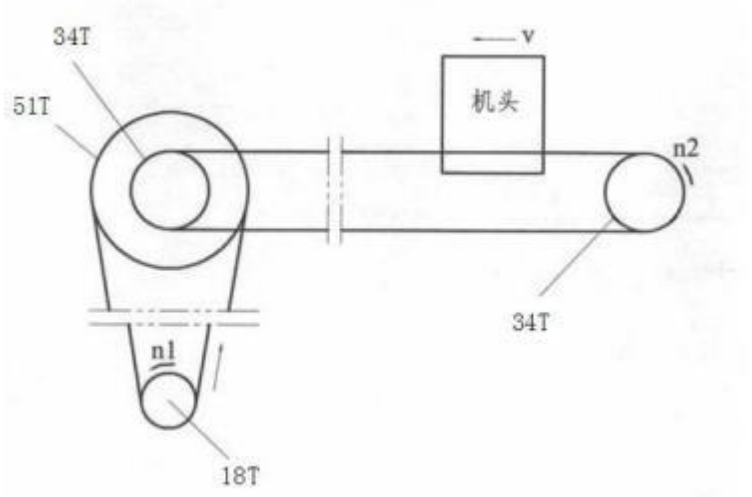


Pushed by machine carriage , take the yarn to the needle.

二、 Carriage

1、 Drive train

Machine drive train drove by servo motor take the belt, so the stroke can be controlled by program, changed following the knitting width’s change, the speed also controlled by program.



Drive train schematic

2、Stroke system

Main drive train made by following parts:

（1）Main motor and drive equipment:take the carriage reciprocate ;

（2）Carriage zero position sensor: make the carriage know the start position;

（3）Carriage return sensor:make the carriage know the return position;

（4）Over stroke stop device: when carriage over stroke in abnormal situation,the carriage press down this device, and carriage stop running.

（5）Over stroke protect device:in case over stroke stop device no work, contact in the end of machine,stop machine running by physical collision, avoid carriage roll away.

3、Cam system

KSC062 have following knitting states:

①no knitting ②knitting ③tuck④knitting and tuck ⑤ transfer ⑥ get

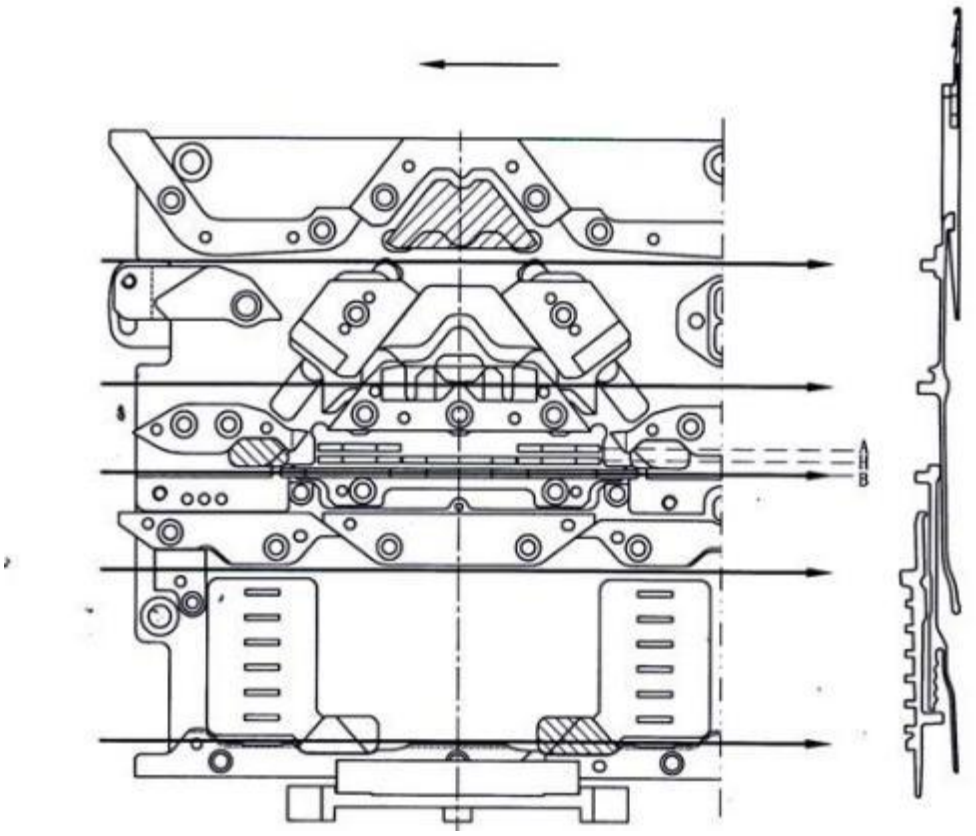
⑦ transfer 、get（front and back transfer together ）

Following track photos explain the work principle.

①No knitting

KSC062 no knitting track

Carriage running to left side,actuator no work, selection Jack no selected, needle keep in initial position, not go into knitting track.



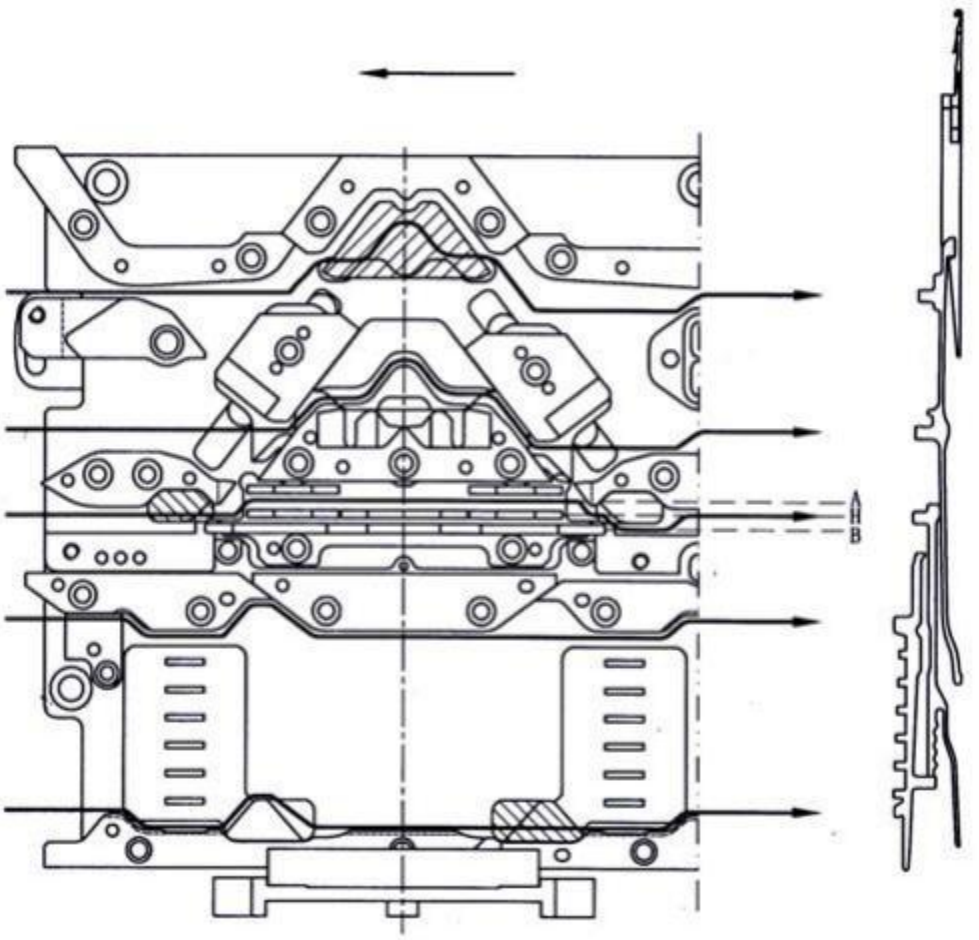
KSC062 no knitting track

Note:shadow position pinch in carriage board

② knitting

KSC062 knitting track

Machine running to left side, cam R,cam L,transfer cam all pinch in carriage board.second density cam L,R in position ,left actuator select relevant selection Jack, cam L push selection Jack to highest position, and push relevant spring jack to position ,then the selection Jack return back by cam B and selection Jack reset cam, right actuator select the needle Jack which will work on second system,the Jack rise to position H by cam D; at the same time, the Jack in position A will back to position B by cam B-C,the selection Jack selected by right actuator will push relevant spring jack to position ; Jack take the needle to tuck position,and follow the cams track finish loop-clearing,the follow the cam R ,C finish knitting.

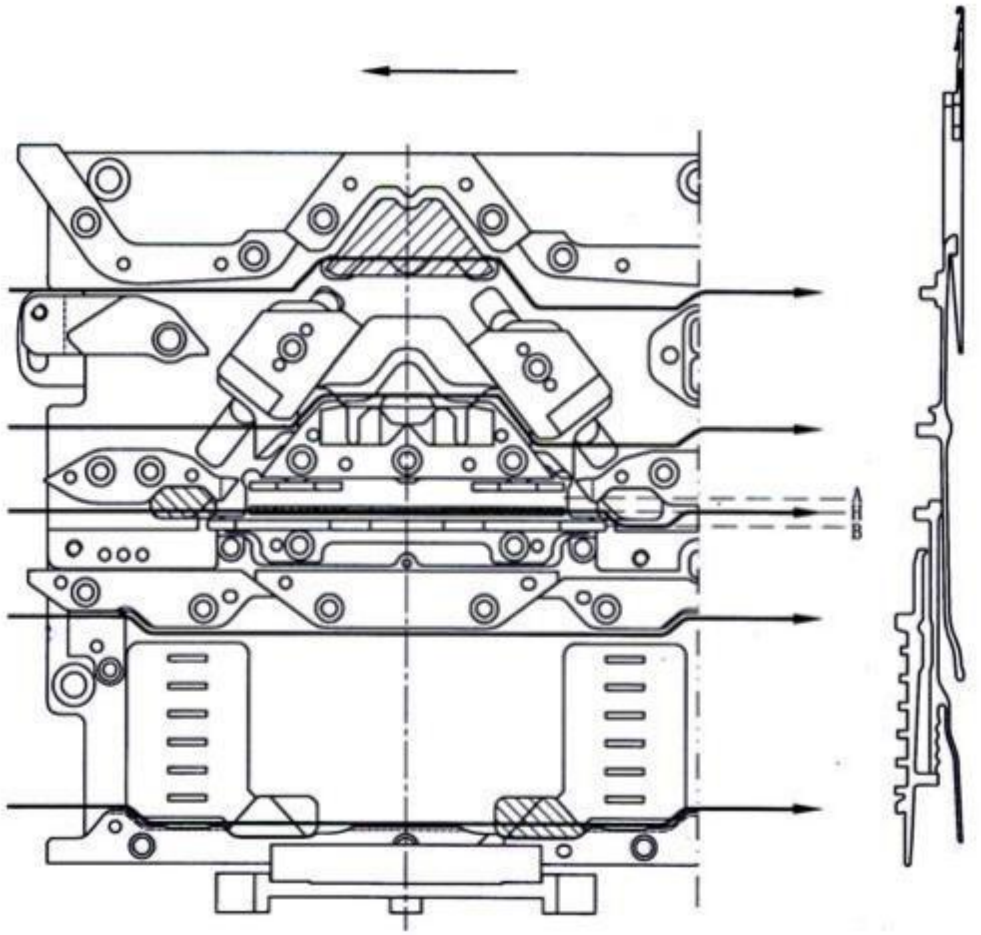


KSC062 knitting track

Note:shadow position pinch in carriage board

③ Tuck

KSC062 tuck track



KSC062 tuck track

Note:shadow position pinch in carriage board

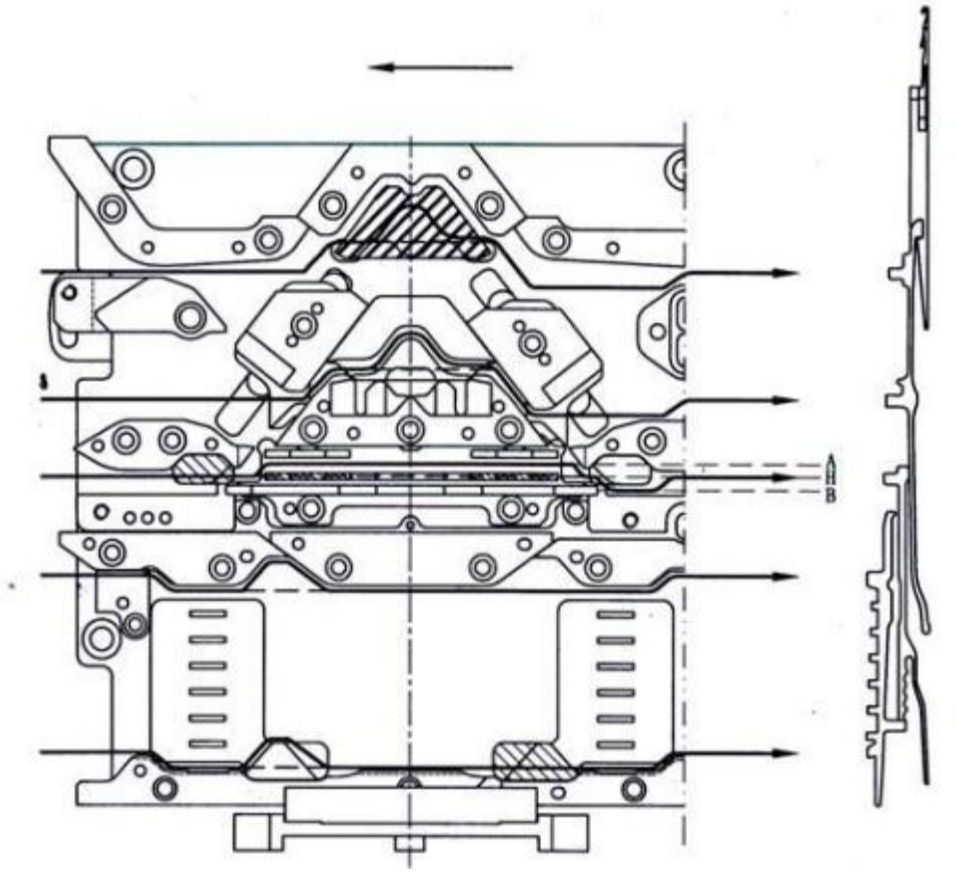
Carriage running to left side,cam R,L,transfer cam all pinch in carriage board, second density cam L,R to position A, cam L,R pinch in carriage board,left actuator no work, selection Jack no up,when pass the right actuator , the actuator select the relevant selection Jack,selection Jack follow cam D push spring jack to position H;At the same time,the spring jack in position H pass the tuck cam, the spring jack be pressed down ,then follow cam R back to position B, the selection Jack selected by right actuator push the relevant striking Jack to position H again;Jack take take the needle to tuck position, because tuck cam press down relevant striking Jack ,the Jack also be press down,so the Jack can't rise up knitting position,only keep in the tuck position ,follow cam R,C , finish tuck .

④Knitting and tuck

In the same row, some needles knit , and some needles tuck,if have some needles

no knit, there are three different knit status: knit, tuck, no knit, called “3 knitting status” knitting.

KSC062 knit and tuck track (active line means knit, dotted line means tuck)



KSC062 knit and tuck track

Note: shadow position pinch in carriage board

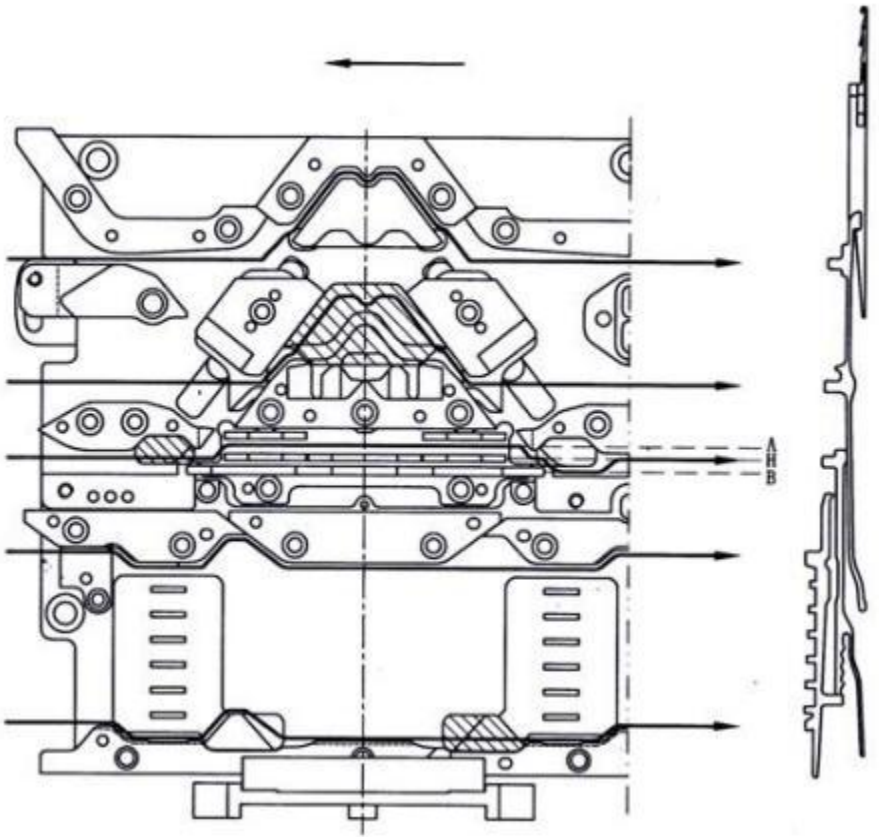
Carriage running to left side, each cam status same as tuck track, left actuator select relevant selection Jack which knitting, cam L push the selection Jack to highest position, the selection Jack push striking Jack to position, then the selection Jack follow cam B, reset cam back to initial position, right actuator select the selection Jack which will work on second system, selection Jack follow cam D push relevant striking cam to position H; at the same time, the relevant striking Jack for knit pushed to position A, and the striking Jack for tuck be pushed to position H, the spring jack for no knit keep in position B, and the spring jack in position A follow cam B-C, R back to position B, the spring jack in position H follow cam R back to position B, then right actuator select selection Jack and push the striking Jack to position H; the needle for knit follow relevant cams finish

knit,the needle for tuck follow relevant cams finish tuck.

⑤Transfer （transfer ）

KSC062 transfer（transfer ）track.

Carriage running to left,cam R,cam L,and elevating cam all pinch in carriage board,second density cam L,R to position A,left actuator select selection Jack,cam L push selection Jack to highest position, and selection Jack push relevant spring jack to position A,then selection Jack follow cam B,selection Jack reset cam to initial position,right actuator select the selection Jack which will work on second system,selection Jack follow cam D up and push spring jack to position H,at the same time,the spring jack in position A follow cam B-C,cam R and back to position ,the selection Jack selected by right actuator push spring jack to position ;Jack take needle follow the cam to tuck position, Jack upper heel follow the transfer cam up, and finish transfer follow the transfer cam track,and follow cam R , cam C back to initial position.



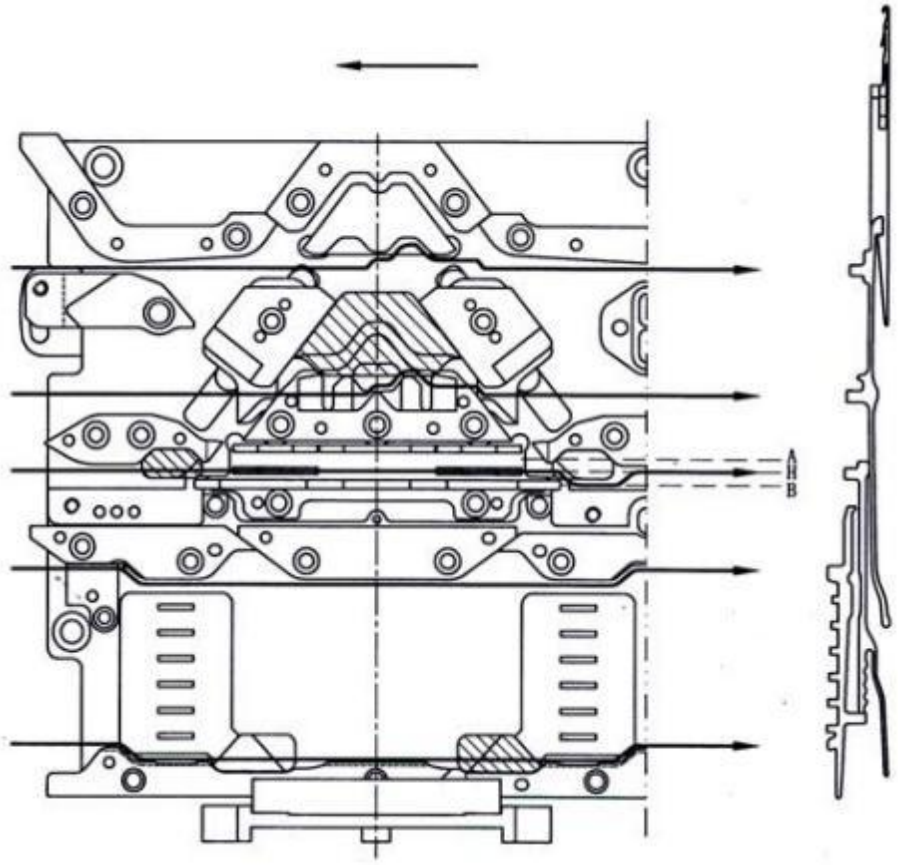
KSC062 transfer （transfer ）track

Note:shadow position pinch in carriage board

⑥ Transfer （get）

KSC062 transfer （get） track.

Machine carriage running to left, cam R,L ,elevating cam all pinch in carriage board,second density cam L,R to position , tuck cam to position , left actuator no selection,selection Jack no up, and when pass right actuator , this actuator select the selection Jack which will work in second system, selection Jack follow cam D push the relevant spring jack to position H;At the same time,the spring jack in position H,when pass cam L,spring jack be pressed down, and up when pass tuck cam(tuck cam in position H),and when pass cam R be pressed down again,then follow clean cam R back to initial position , the selection Jack selected by right actuator push relevant spring jack to position ;Jack also be pressed down following the relevant spring jack,can’t raise follow the cam, and will be release following the spring jack release when pass the tuck cam,and follow the raise cam up to get stitch position, then the upper heel of Jack follow transfer cam lower right finish get stitch, then Jack follow knitting cam R,cam C back to initial position.



KSC062 transfer （get ）track

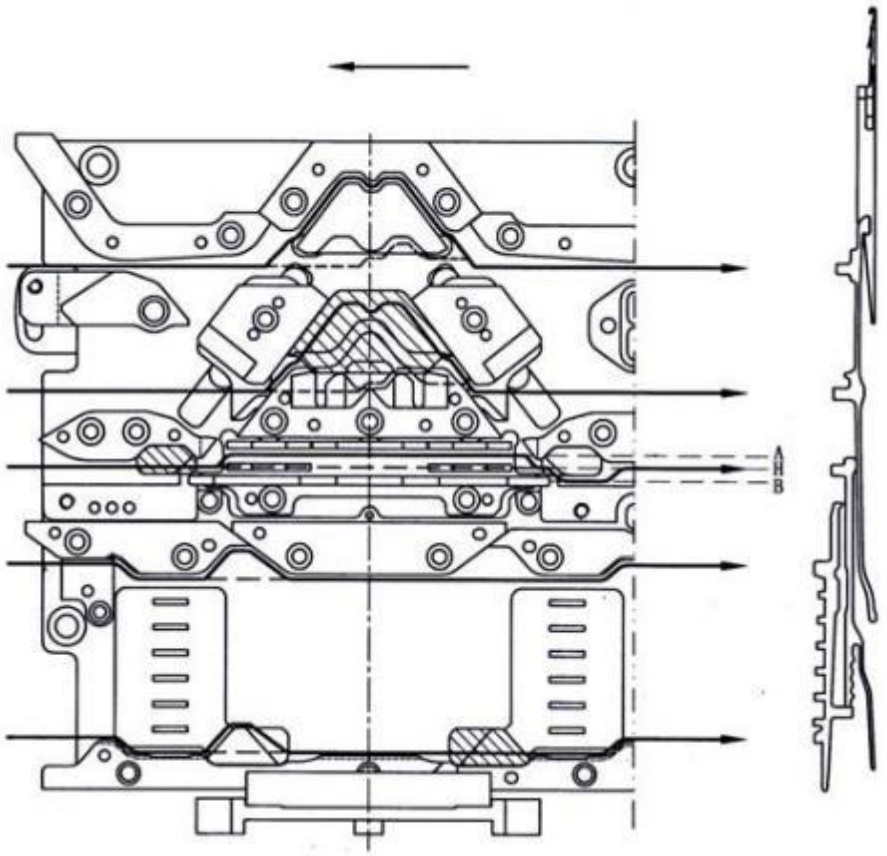
Note:shadow position pinch in carriage board

⑦ Transfer and get （front and back transfer together ）

Transfer and get means in the same needle bed,some needle transfer,some needle get, also called as front and back needle bed transfer together.

KSC062front and back needle bed transfer together track.here each cam status is same as get,left actuator select the selection Jackson which for transfer,and cam L push the selection Jack to highest position,the selection Jack push relevant spring jack to position A,then selection Jack follow cam B, selection Jack reset cam back to initial position, right actuator select the selection Jack which for knitting,selection Jack follow cam D push relevant spring jack to position ;at the same time, the needle for transfer up to position , and the needle for get keep in position H,the spring jack in position A follow cam B-C, cam R back to initial position B, the spring Jack in position H follow cam R back to initial position B,then the selection Jack selected by right actuator push relevant spring Jack to position ;the Jack for transfer follow raise cam ,transfer cam ,transfer guide needle cam finish transfer stitch, then follow stitch cam R,cam C back to initial position, the Jack for get follow above get track and get the stitch , then follow cam R,cam C back to initial position.

The active line in photo means transfer track,the dotted line means get track.

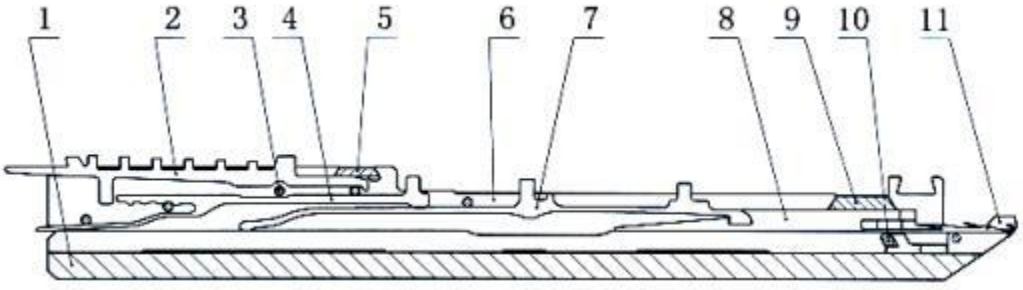


KSC062 front and back needle bed transfer together

Note:shadow position pinch in carriage board

三、Needle bed

1、Structure of needle bed

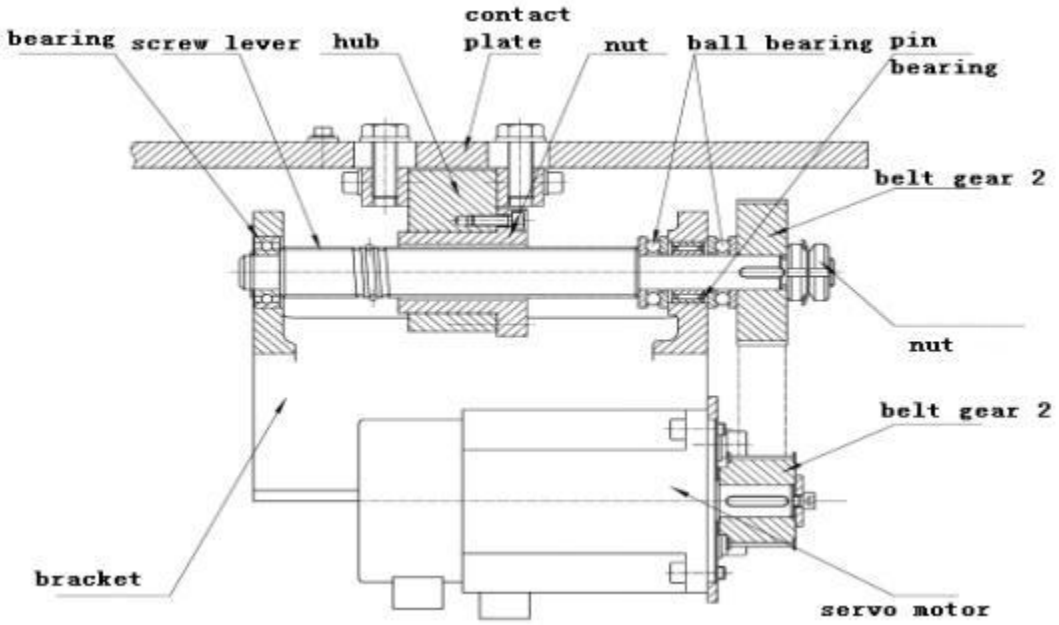


1. needle bed. 2.selection Jack. 3. 2mm steel wire 4.spring Jack 5. selection Jack pressure bar 6. nose bar 7.Jack . 8.needle 9. needle pressure bar 10.2.5mm steel wire 11. tooth blade

Front needle bed keep on the needle bed base by screws and straight pin,back needle bed can be moved by rack device.

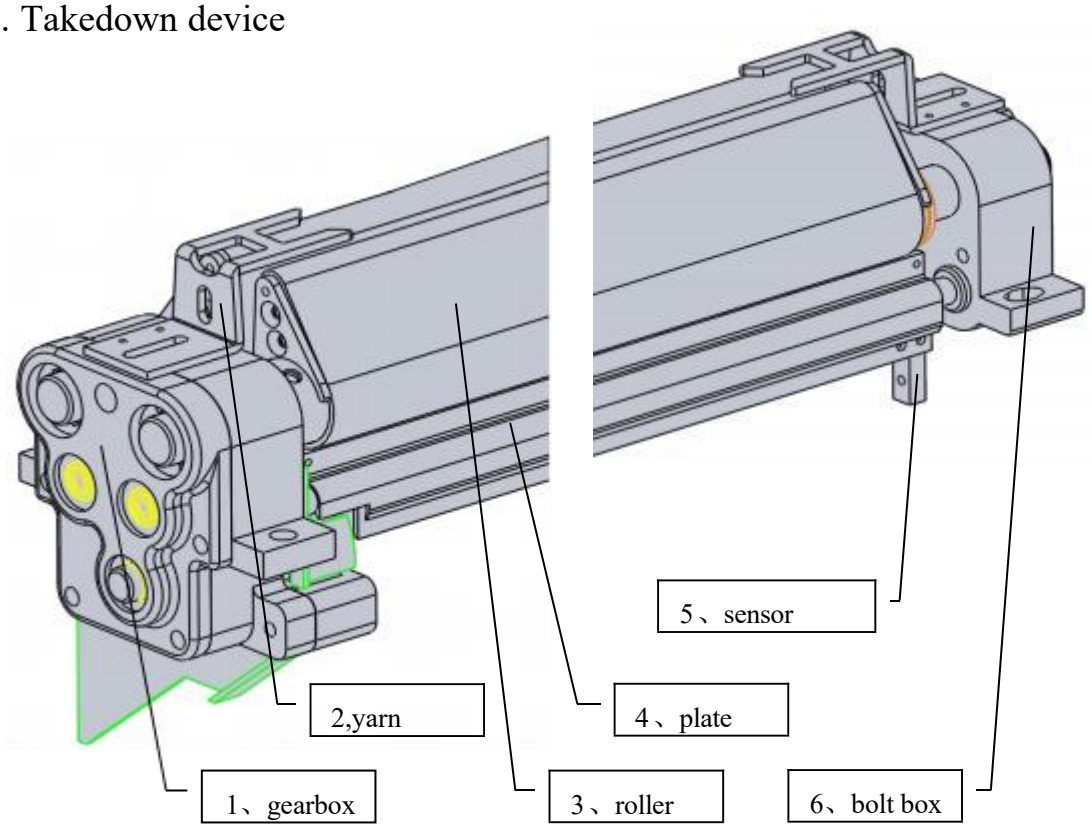
Needle and selection Jack can be moved,and the space limited by needle and selection pressure bar,when change needle or selection Jack, it is need professional tool to take out the pressure bar.

2、Rack device



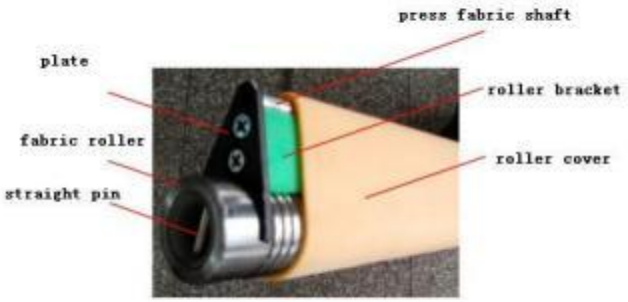
It is need front and back needle bed move to get the oblique stitch patterns (twill,cable,punch lace,transfer etc),through change the relative position of two needle bed,change the needle correspondence, get the patterns's change.As now, computerized flat knitting machine control the needle bed move by screw lever,finish the front needle bed and back needle bed relative movement, transfer needle and get stitch needle pinpointing ,get the oblique stitch patterns. KSC series machine is back rack type,the range is left and right each 1 inch(25.4mm).

四. Takedown device



NO.	Name	Function
1	Gearbox	Roller power device
2	Yarn guide plate	Avoid yarn run into roller
3	Roller	Under the needle bed
4	Rewind plate	For fabric rewind alarm
5	Sensor	Sensibility can be adjust
6	Bolt box	Support the roller device

Structure of roller：



五. Display and operation

①Power switch device

KSC062 series power switch device:

- **Turn on power**

the main machine left the power switch handle clockwise (right) to rotate it 90 ° , open the mains.

- **Turn off power**

(1) hold red button 1 second above, closed servo power supply.
(2)the mains switch switch handle counterclockwise (left) rotate it 90 ° , shut off the main power supply.

- **Emergency switch**

Stop machine when emergency situation.

② Joystick operation

Joystick can backward (clockwise) or forward (counterclockwise) rotation, and go all out to restore to its original position.

There are three operating location joystick: stop, slow operation, quick run

Stop: hold lever forward (counterclockwise) turn to the limit bits (about 40 °) stop running carriage. Low speed running: hold lever backward (clockwise) rotation is about 16 ° , the carriage with low speed way operation.

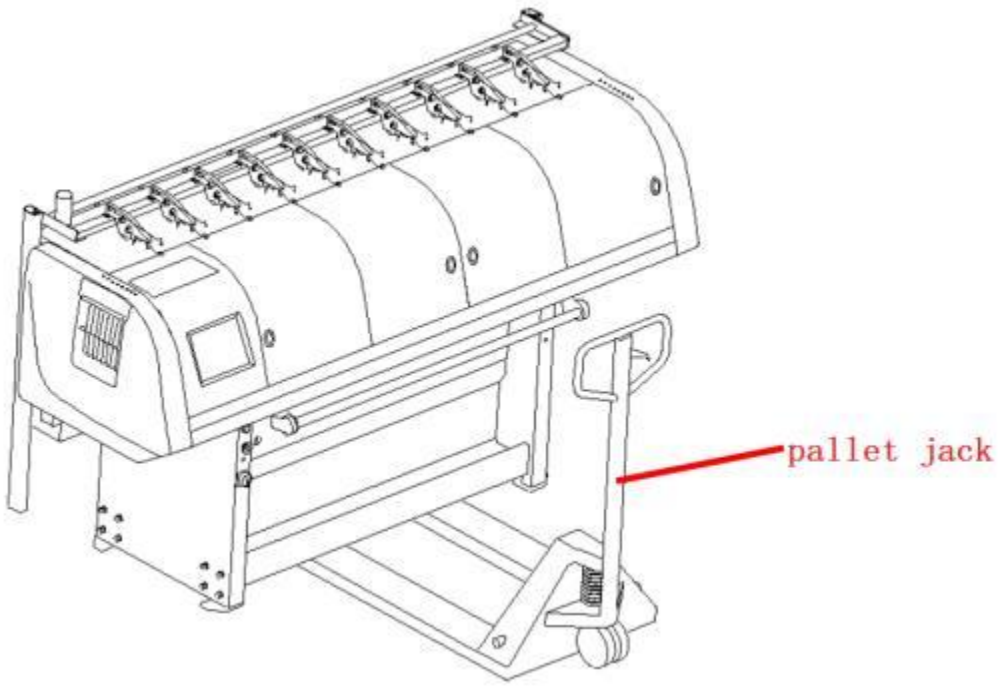
High-speed operation: hold lever backward (clockwise) turn to the limit bits (about 40 °) at high speed running carriage way.

4Machine carry and lifting

4.1Machine carry and lifting

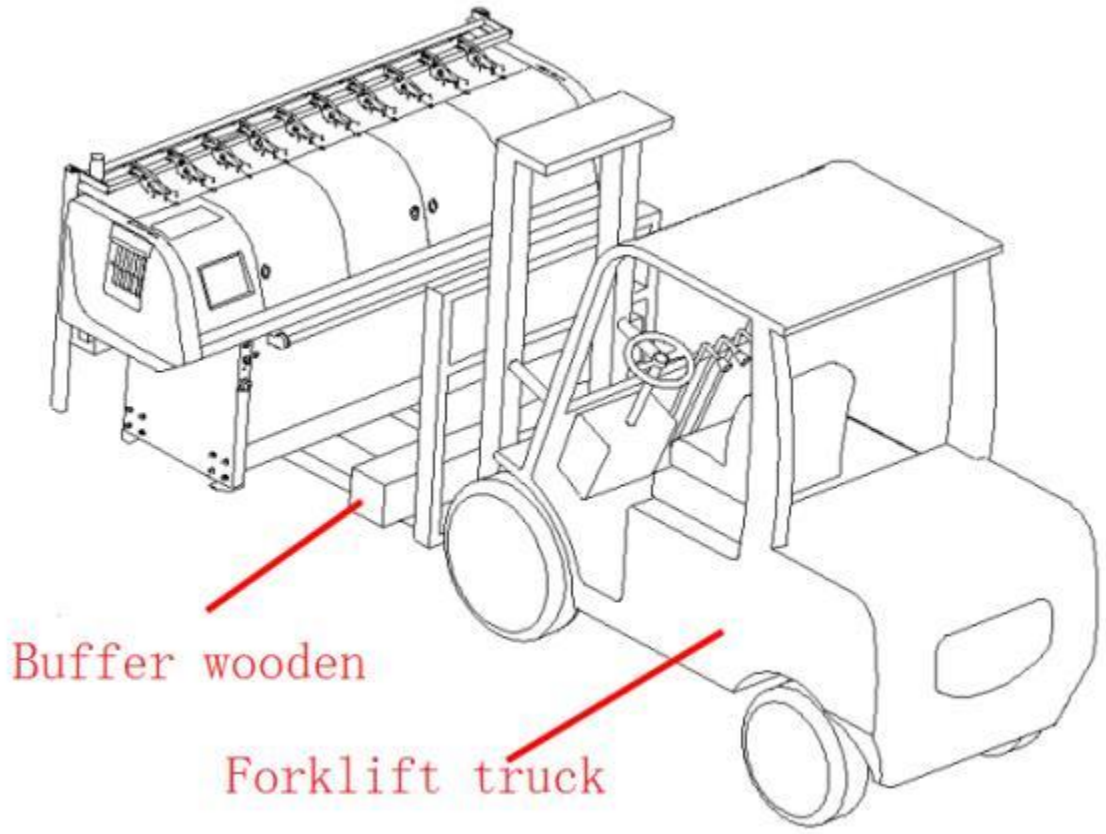
1,Indore short distance move

Move tools:pallet jack,Omni-directional wheel



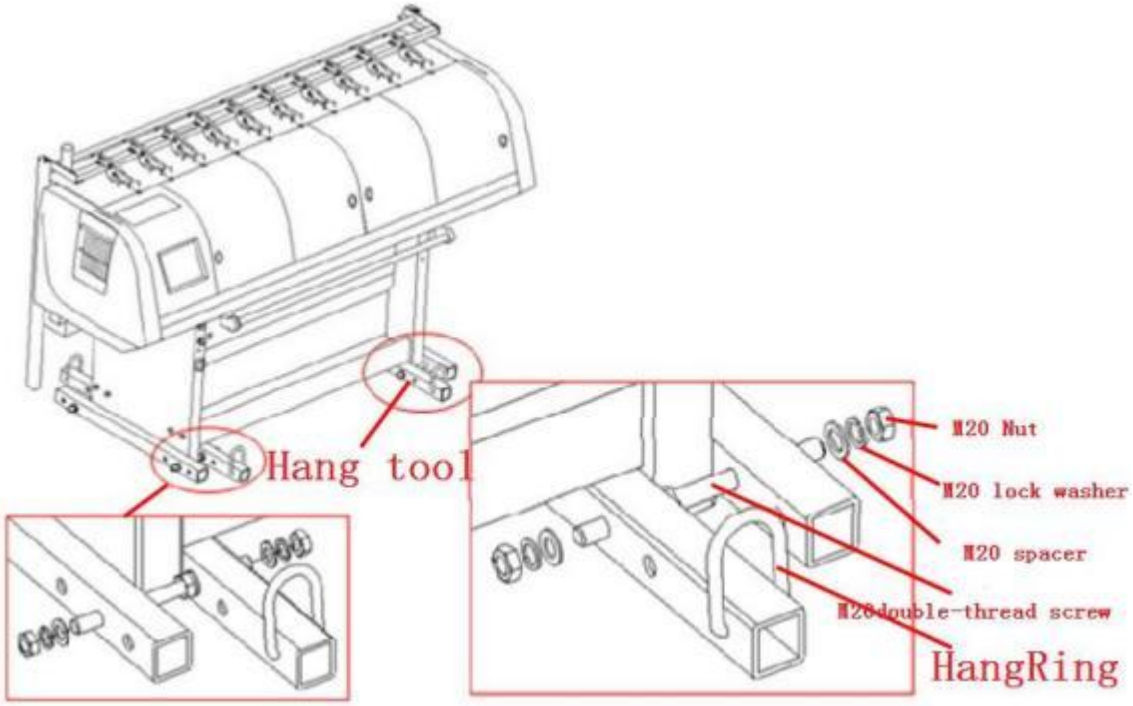
2,Outdoor long distance move

Tools :Forklift truck



3,Hang high level

Tools:Hang tools,



chine carry and lifting

4.2 **Installation environment**

(1) temperature: 0 ~ 35 degrees Celsius

(2) humidity: relative humidity 30 % ~ 80 %

(3) attention

Do not install the machine in direct sunlight or near heat source sites, such as heater or radiator.
Do not install the machine in temperature change too fast or very damp places.

Do not install the machine near air conditioning, heating and ventilation equipment outlet position.
Do not install the machine in chemical smoke or sea breeze blowing places.

Do not install the machine when filled with dust and dirt of places.

Do not install the machine in vulnerable to vibrate of places.

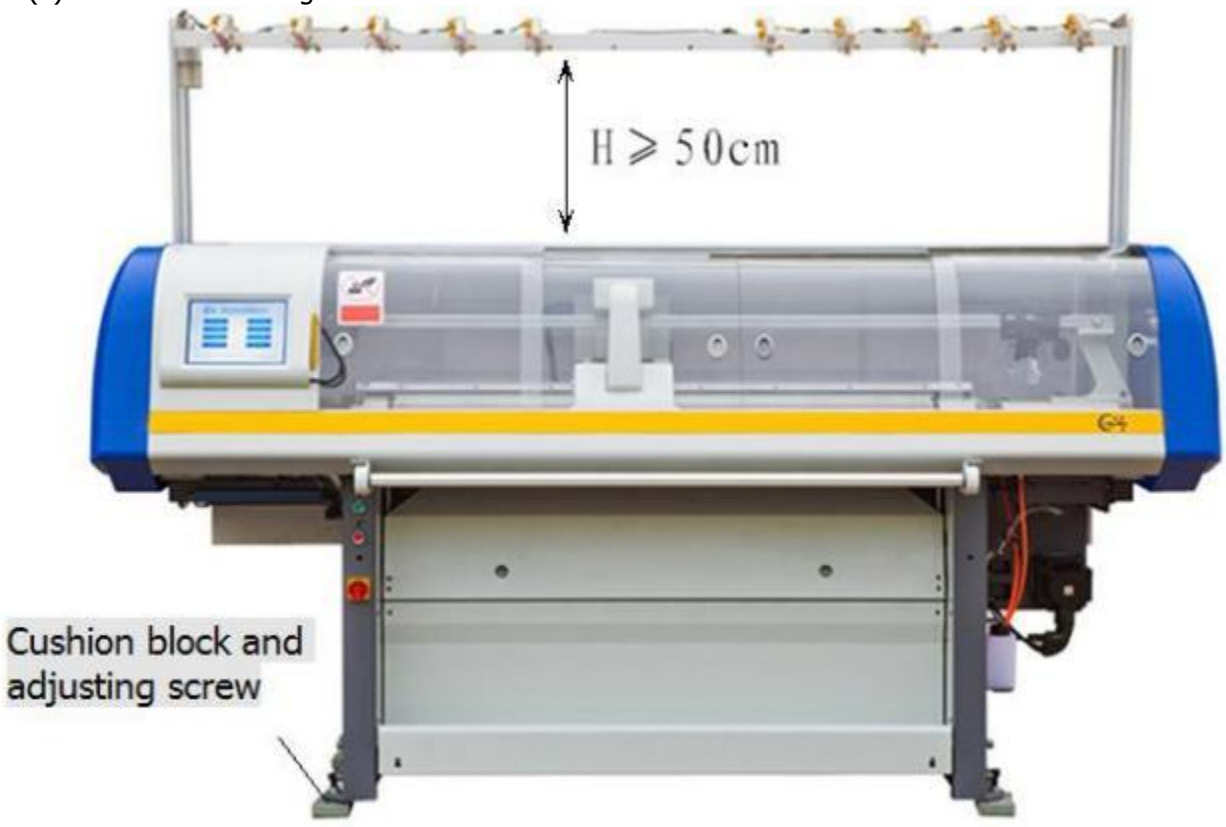
Do not put machine is installed on a slope or uneven places.

4.3nstallation method

(1) will be placed in the random attached to the machine, level adjusting cushion block, and ensure that each spacers are adjusting screw press a prison.

(2) the yarn rise to the normal work of height (antenna sets from buy yarn board not less than 50 ㎝) and lock screw, the antenna automatic stop device transmission line plug connection.

(3) machine land line grounded.



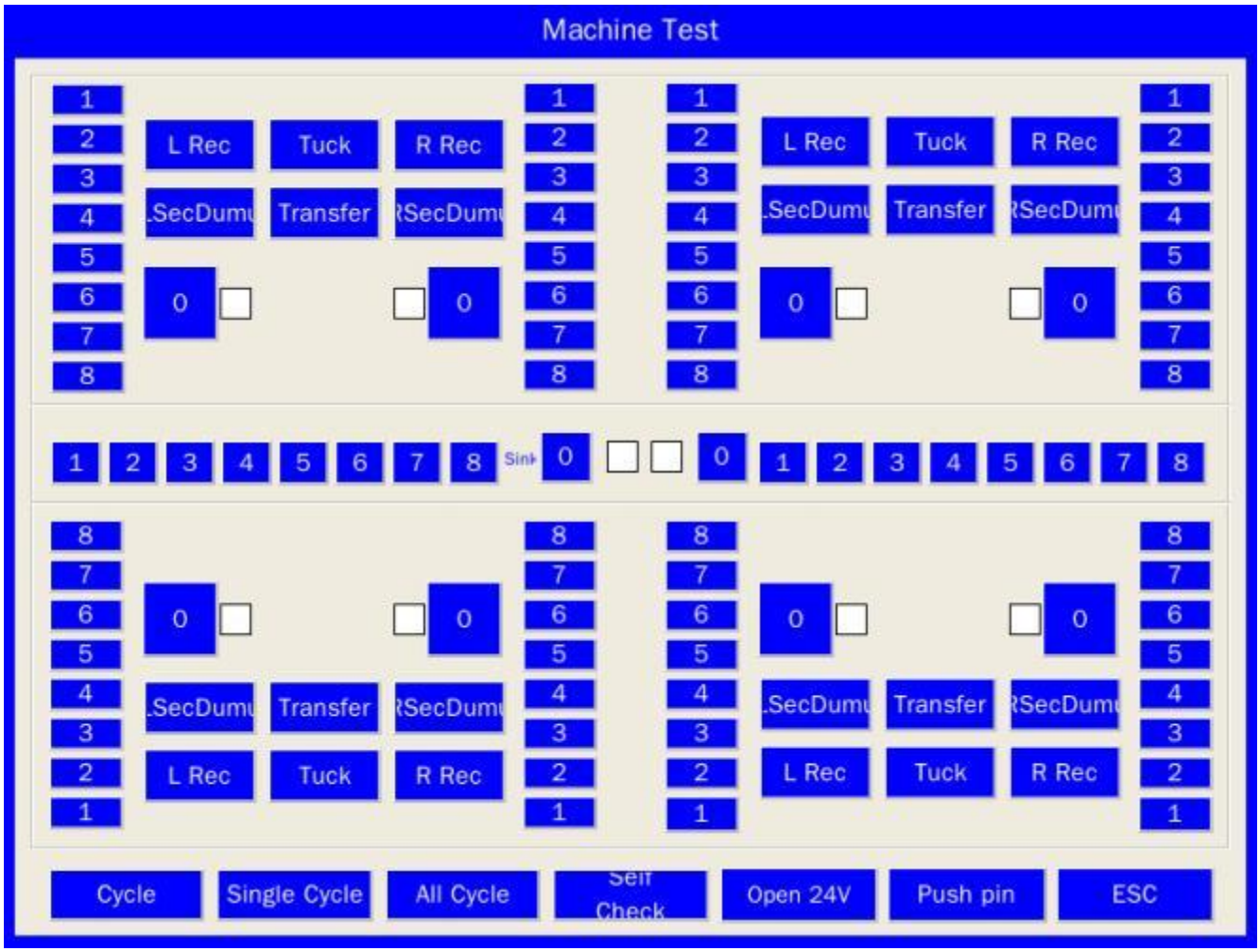
4.4**Power requirements**

Power supply voltage, frequency 50HZ alternating currents of 220V voltage fluctuation, less than 10 %, voltage fluctuation if more than 10 %, must use stabilizer.

5 Machine test

5.1Part test

Part of each actuator when tested the running situation of the tested. In the main menu choice "Machine Test" Enter part test menu . Following figure :



Part test menu can test the carriage all the actuators, including density mesh stepping motor, letter grams of stepping motor, the carriage electromagnet triangle electromagnet yarn, needle selection electromagnet, etc.

Operation method： Touch directly click on various electric touch pen iron tested . Display red action, blue reset, click density mesh motor once step, once go 45 degrees.

Cycle: Touching pen click proper place group electromagnets circulation action, again click cancel.

Single Cycle: Touching pen click proper place system with carriage triangle electromagnet yarn electromagnet or degrees density movements, circulation again click cancel.

All Cycle: All systems with carriage triangle electromagnet yarn electromagnet or degrees density movements, circulation again click cancel

5.2System test

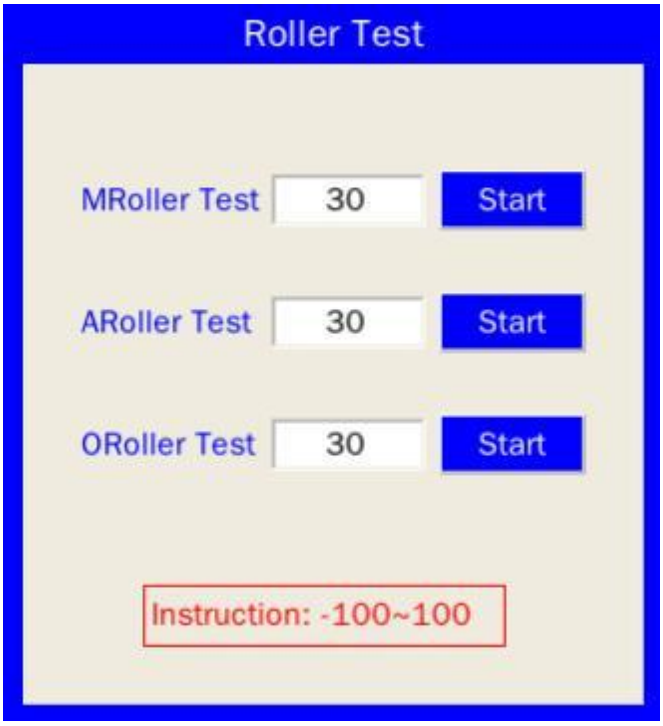
Host-testing including input signal test, the output signal test

(1) The input signal is testing jig, all kinds of the sensor's working response. Test method is operating frame or make can sensor. To test whether its are normal.

(2) The output signal testing is to test whether can export control signals normal operating equipment.

1. L Supplier R Supplier :Test yarn supplying is working correctly.
2. Red Light : Test red light.
3. Green Light :Test green light.

4. Roller Test :Test roller is normal rotation.

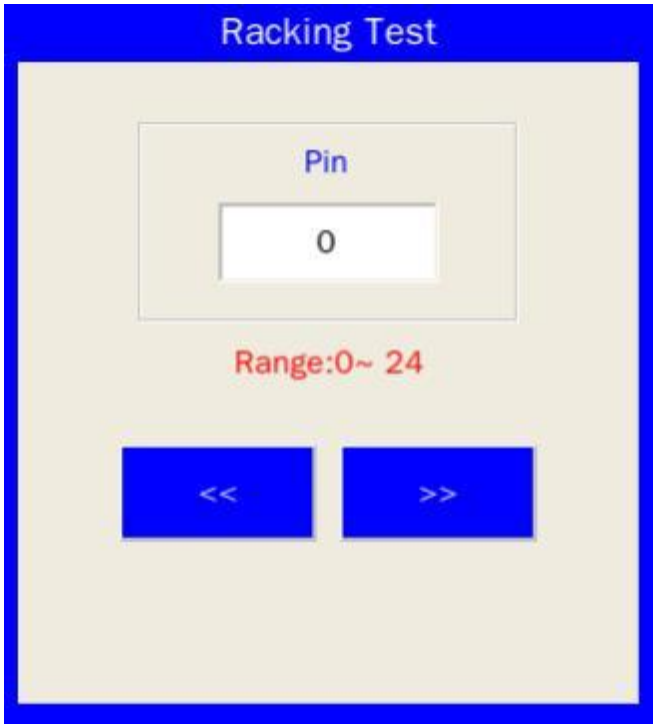


As above, can install roller tension value (range - 100 ~ 100, the specification for inversion), then click the startup roller action

5. Moving Test : Test carriage can run normally.

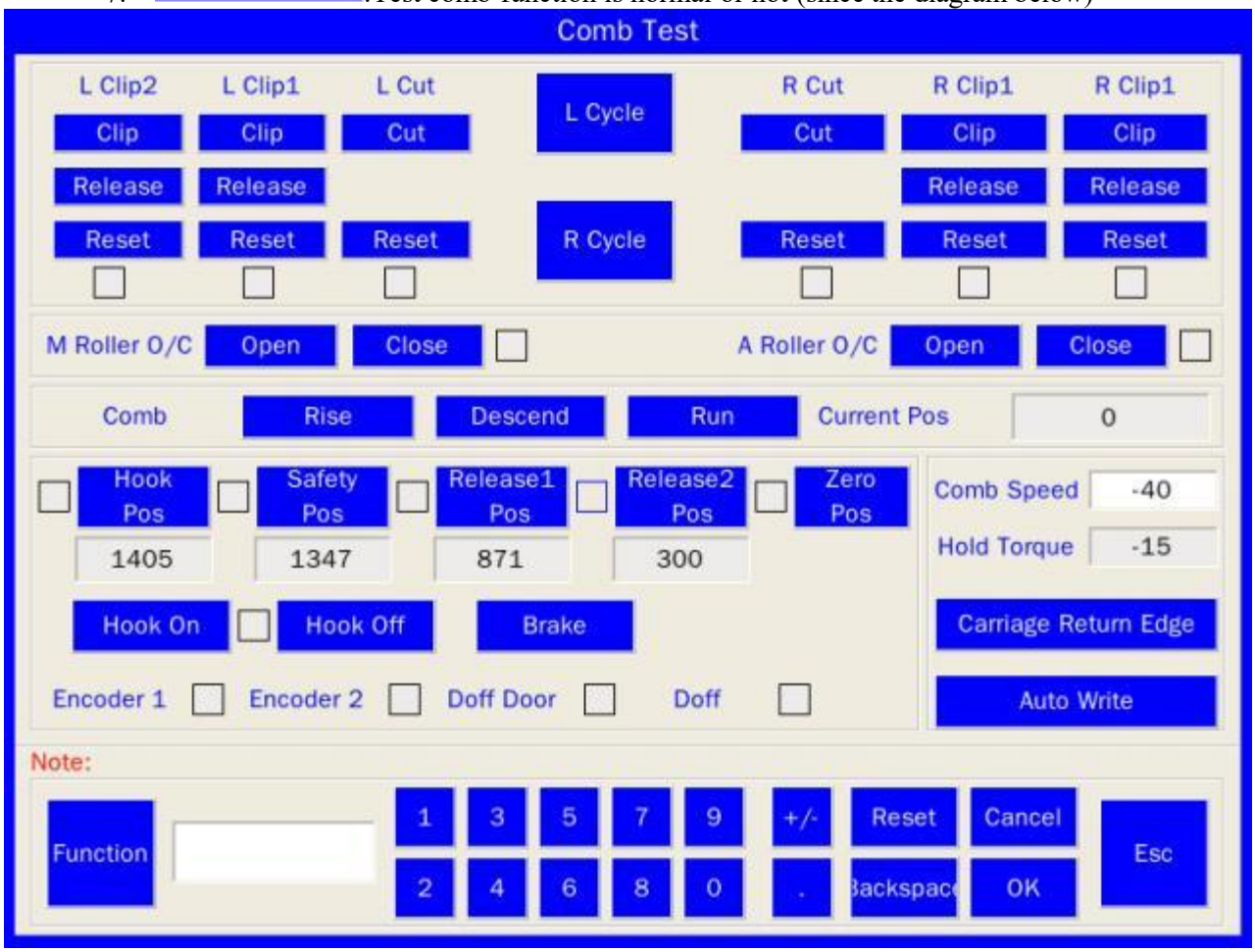
As above, input carriage speed (range 5-15), click the left bank or competent, click start, the carriage will move, click stop too carriage to stop moving.

6. Racking Test :Test racking servo motor

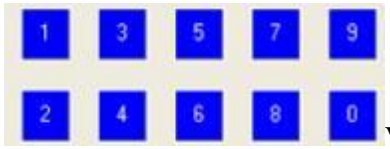


As above, set racking pin number (range 0-8 needles), instruction needle bed to move right or left.

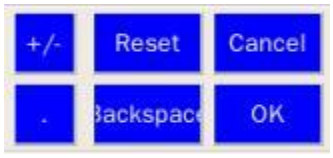
7. Comb Test :Test comb function is normal or not (since the diagram below)



Operating Instructions：As for the operation of the keypad

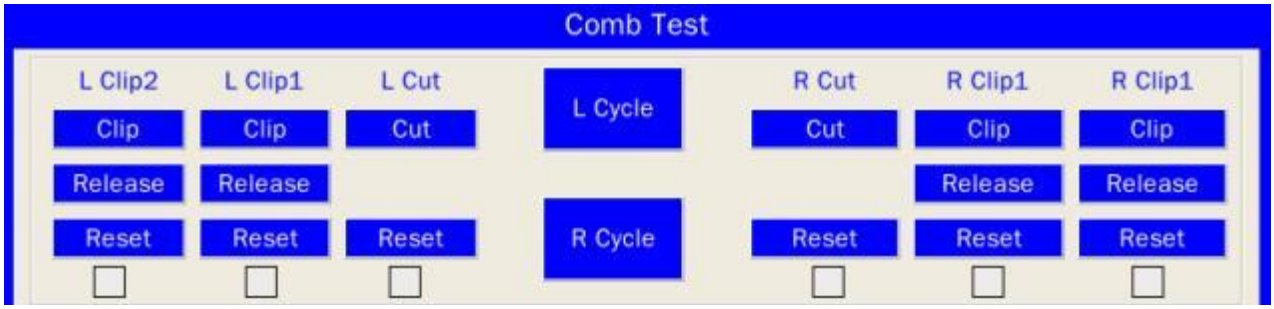


Value input area,

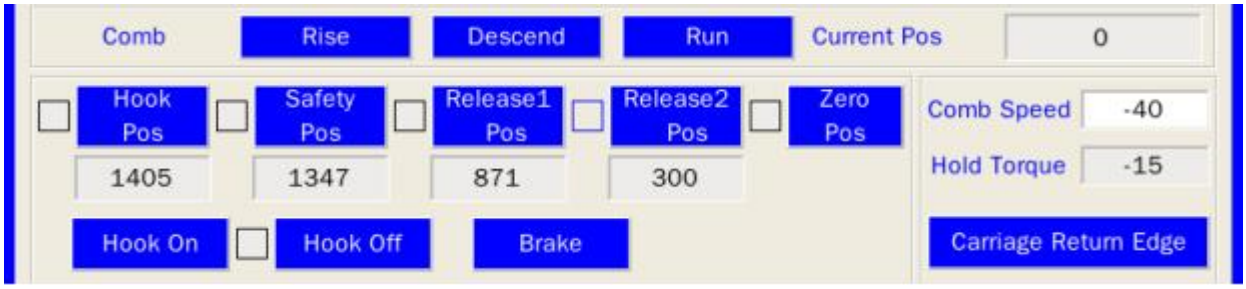


Numerical operating area

四 Handwriting input with automatic input switching key.



Test clip scissors, reset indicator, click left circulation left clip clip gauze and scissors action again, right click circulation right clip clip yarn scissors action again.



Setting up comb speed after (range - 100 ~ 100), click "run" they may comb this speeds up, and after hook yarn bits, put yarn 1,put yarn 2, zero, its corresponding light will be lighted.

Comb parking torque: stop when comb keep pulling force torque, this parameter can't here Settings.

Comb needle: click the "length", instructions are lighted.

Fall cloth sensor light, said some fell cloth.

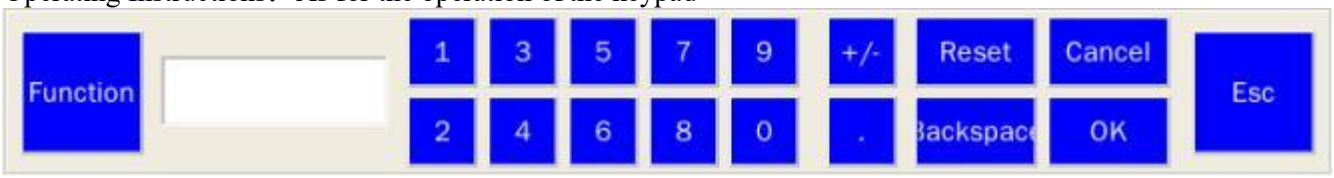
Fall cloth door sensor instructions on the light, said fall cloth door open

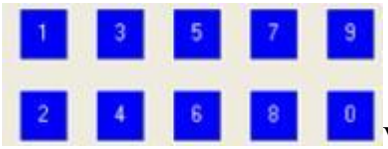
6 Parameter setting

6.1 System parameter

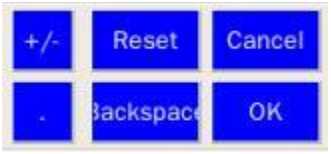
System parameters affect the completely machine performance, which are set by the completely machine mechanical parameters. This parameter is tested by the computerized flat knitting machine manufacturers,and confirmed when ex factory. Users generally do not need to modify. If need modified, it must be carried out by professionals. To enter into system parameter settings, you should enter into the password. Usually the password is 8888 .

Operating Instructions：As for the operation of the keypad





Value input area,



Numerical operating area

四 Handwriting input with automatic input switching key.

1. Needle number per inch: That is setting gauge range(5-16G) of the machine.
2. Needle bed total needle number: Set the needle bed total needle number
3. Needle plate total pulse value: Set the pulses numeric value of the total needle number when knitting. Move the machine carriage to the left side of the needle bed, Align the carriage left lateral of the first needle of the needle bed, press numeric key "1", the left pulse value is automatically input. Move the machine carriage to the right side of the needle bed, Align the carriage left lateral of the first needle of the needle bed, press numeric key "2", the right pulse value is automatically input. Press the number key "3" again, the left and right pulse difference value will be automatically calculated, and be filled into the needle bed total pulses number.

4. Needle zero position: Move the machine carriage to the left side of the needle bed, Align the carriage left lateral of the first needle of the needle bed ,press numeric key 

, the needle zero position value is automatically input.
5. Yarn feeder right zero position for the Left system: Set the distance value of yarn when running right whit left system(pin number).Move one yarn to the first needle slot, move the machine carriage until the right side of Yarn carriagein the left system aim at the right side of the yarn,and then press 

to confirm.
6. Yarn feeder left zero position for the Left system: Set the distance value of yarn when running left whit left system(pin number).Move one yarn to the first needle slot, move the machine carriage until the left side of Yarn carriagein the left system aim at the left side of the yarn,and then press 

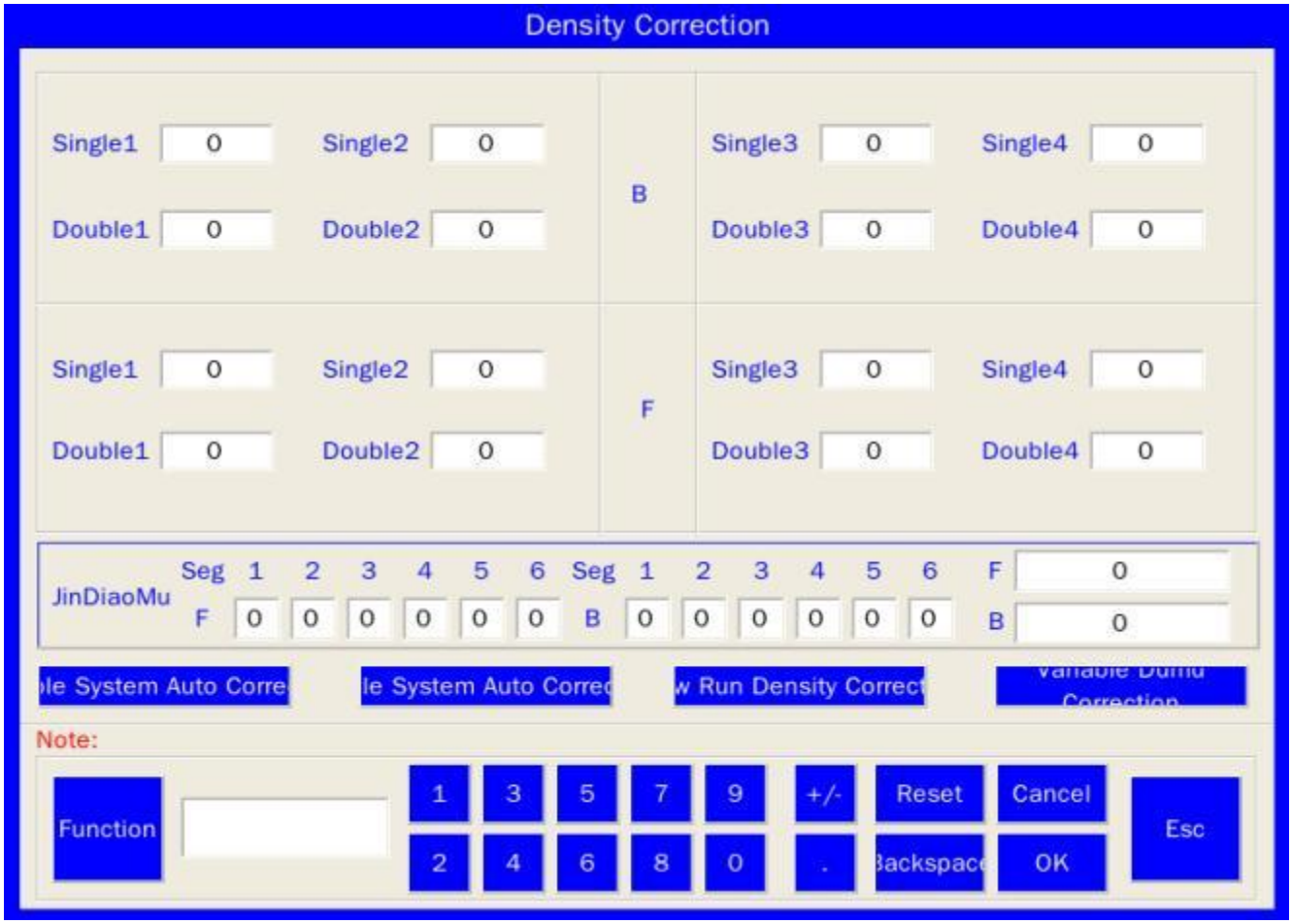
to confirm.
7. Yarn feeder right zero position for the right system: Set the distance value of yarn when running right whit right system(pin number).Move one yarn to the first needle slot, move the machine carriage until the right side of Yarn carriagein the right system aim at the right side of the yarn,and then press 

to confirm.
8. Yarn feeder left zero position for the right system: Set the distance value of yarn when running left whit right system(pin number).Move one yarn to the first needle slot, move the machine carriage until the left side of Yarn carriagein the right system aim at the left side of the yarn,and then press 

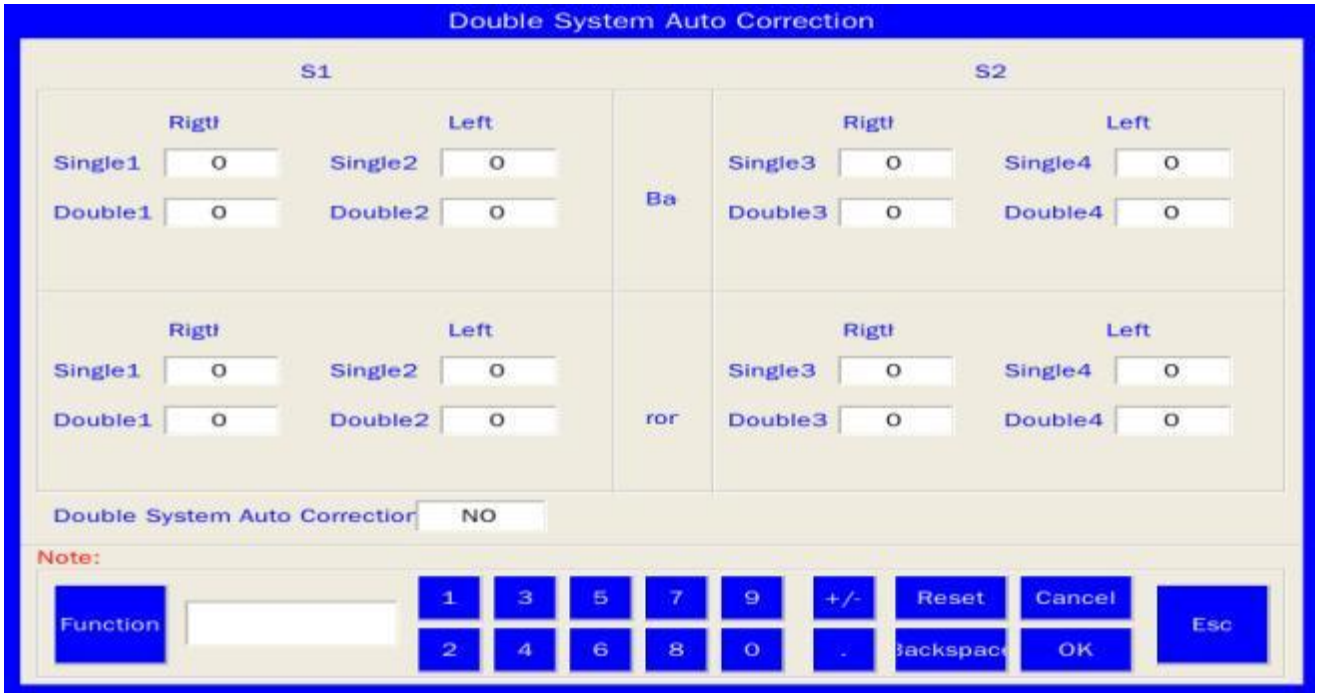
to confirm.
9. Needle selector right direction adjustment :Set the needle selector lead value when running right.
10. Needle selector left direction adjustment :Set the needle selector lead value when running left.
11. Carriage left limited：The distance value between the arriage lift limited and the origin. Move the machine carriage to the left until the light left limited turning on,and then press 

to confirm(Negative integers).
12. Carriage right limited：The distance value between the arriage lift limited and the origin. Move the machine carriage to the left until the light right limited turning on, and then press 

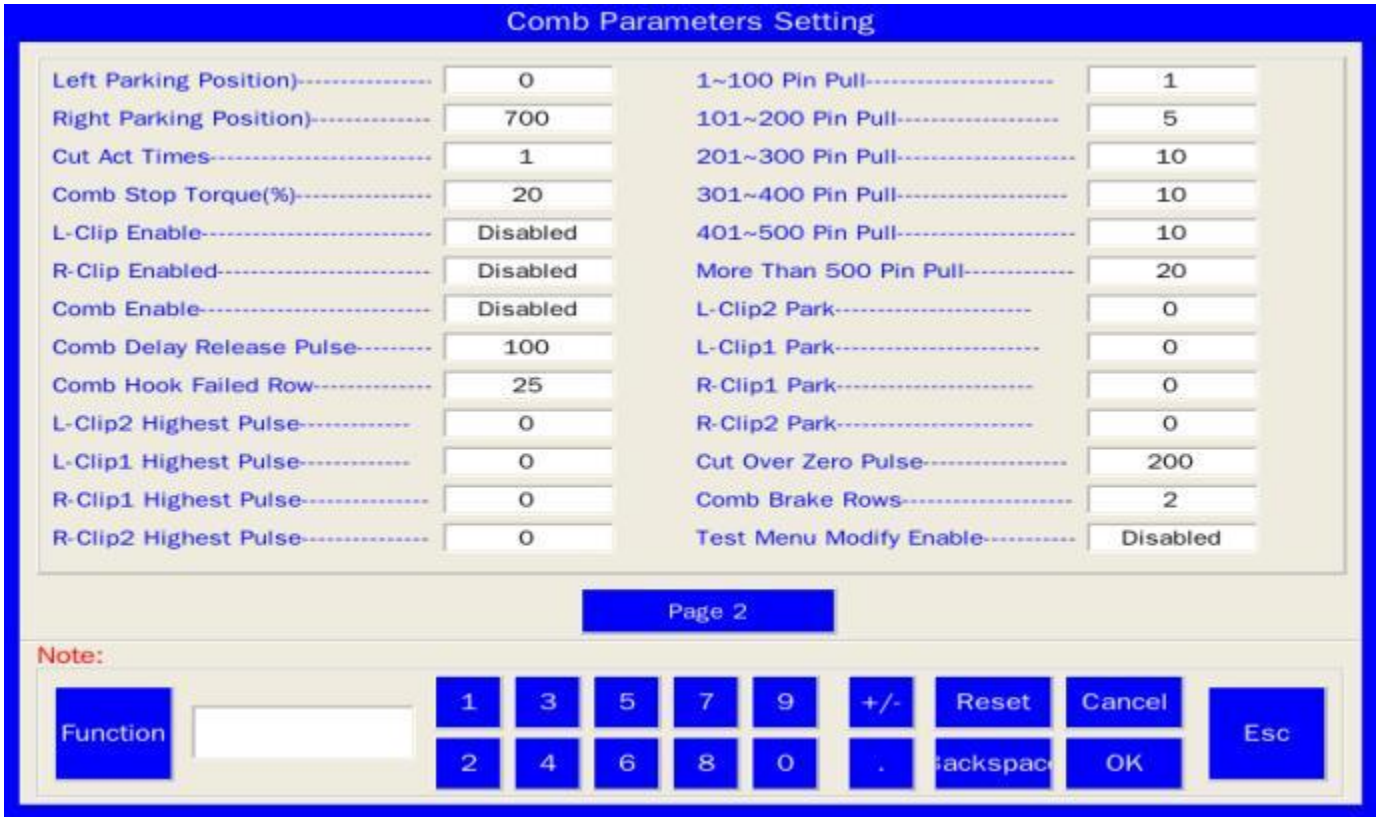
to confirm(Positive integer).
13. Sinker enabled:1-enable\0-disable
14. Density adjustment:



Press ble System Auto Corre:(1—enable，0—disabled）



15. Comb parameters: set the function and the parameter of comb



Important parameter specifies:

(1)"Left parking position":Move the left yarn to the left starting point, Move the machine carriage to the left until the Yarn carriagecatch the left yarn,and then enter the value(needles).

(2) "Right parking position":Move the right yarn to the left starting point, Move the machine carriage to the right until the Yarn carriagecatch the right yarn,and then enter the value(needles).

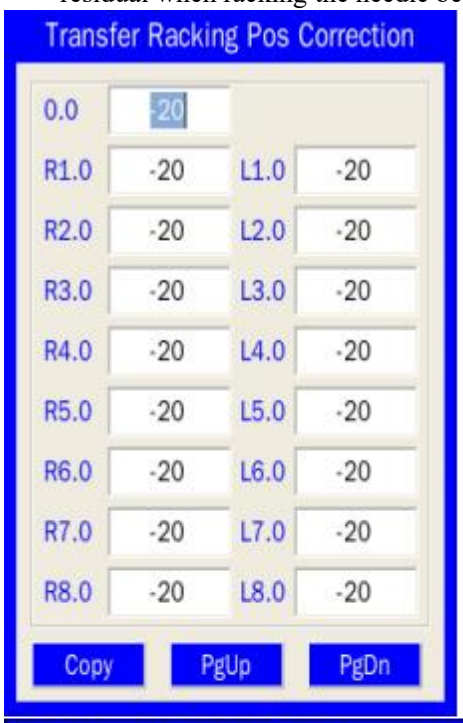
(3)"Comb stop torque":The comb tensile force on the starting position. range 0~50.

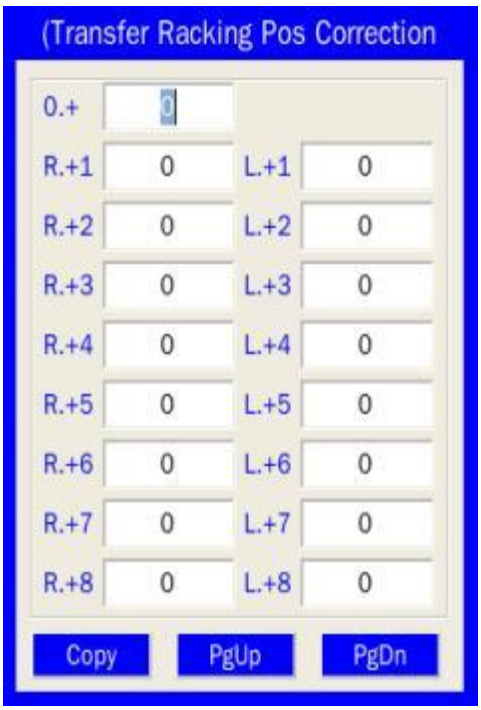
(4)"Comb delay release pulse":The lines comb hook the yarn when it reach the unhook position.

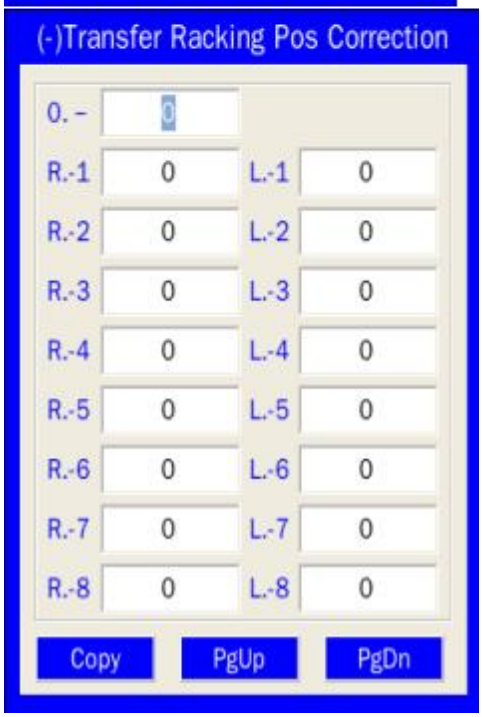
(5)"Comb hook failed row" In the several of line value,the combreach the unhook position,then alarm.

16. Racking Pos Correction :Fix the residual when racking the needle bed,Range:-100~100

17. Transfer Racking Pos Correction | (+)Transfer Racking Pos Correction | (-)Transfer Racking Pos Correction : Fix the residual when racking the needle bed(transfer),Range:-100~100,







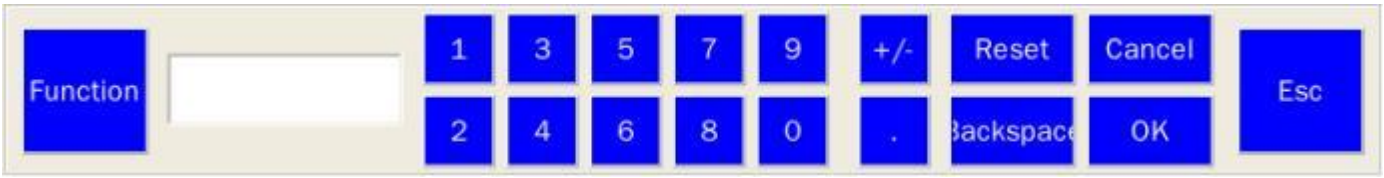
18. Clock Setting :First lint-year\month\day,second line-time.

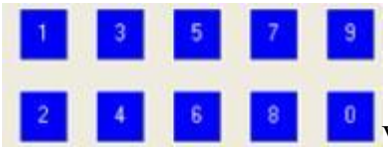
19. System Param Input Stroge: Write the system parameter to the memory.
20. Read Storage System Param: Access the system parameter from the memory.
21. Initializate System Param: The system parameter reset to factory defaults.

6.2 Working parameter

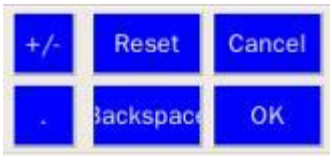
Working parameters is related to the work of computerized flat knitting machine.

Operating Instructions：As for the operation of the keypad





Value input area,



Numerical operating area

四 Handwriting input with automatic input switching key.

Working parameters operating methods is the same as the system parameters

1. Main motor highest speed limit - In status of knitting, set the highest percentage between the high-speed mode of the main motor and the full speed, range: 20 ~ 100.
2. Main motor lowest speed limit - In status of knitting, set the highest percentage between the low-speed mode of the main motor and the full speed, range: 20 ~ 60.
3. Main motor handle low speed - In status of handle low speed, set the knitting speed of the main motor and the full speed, range: 5 ~ 30.
4. Main motor reset speed - In status of original reset, set the knitting carriage speed between the full speed, range: 5 ~ 15.
5. Sensitivity of needle-bed collision:Set the sensor sensitivity when the needle collision sensor strike , range: 0~100, the greater the value, the more sensitive .
6. The carriage rotation distance is the default :Set the head at both ends of the knitting patterns for fine-tuning the torque when the (pin), range: 5 ~ 50
7. Marin roller stop machine torque:Set the tensile force of marin roller when stop,range:0-50
8. Auxiliary roller stop machine torque:Set the tensile force of auxiliary roller when stop,range:0-50
9. Marin roller operating mode:0- Turns both side， 1- Turns continuously
10. Yarn carriage advance:set the lead needles of yarn carriage when knitting,range:0-50
11. Auto clear pieces:The system clear automatic,range:0-100(0- non-return-to-zero）
12. Set screen savers time:range:1--60
13. Friction feed wheel enabled:1-enable,0-disable.
14. Knot low speed lines:The system low speed running lines when meeting smaller yarn knot,range:0-10.
15. Working Param Input Storage: Write the work parameter to the memory.
16. Storage Read Working Param: Access the work parameter from the memory.

17. Initial Working Param :The work parameter reset to factory defaults.

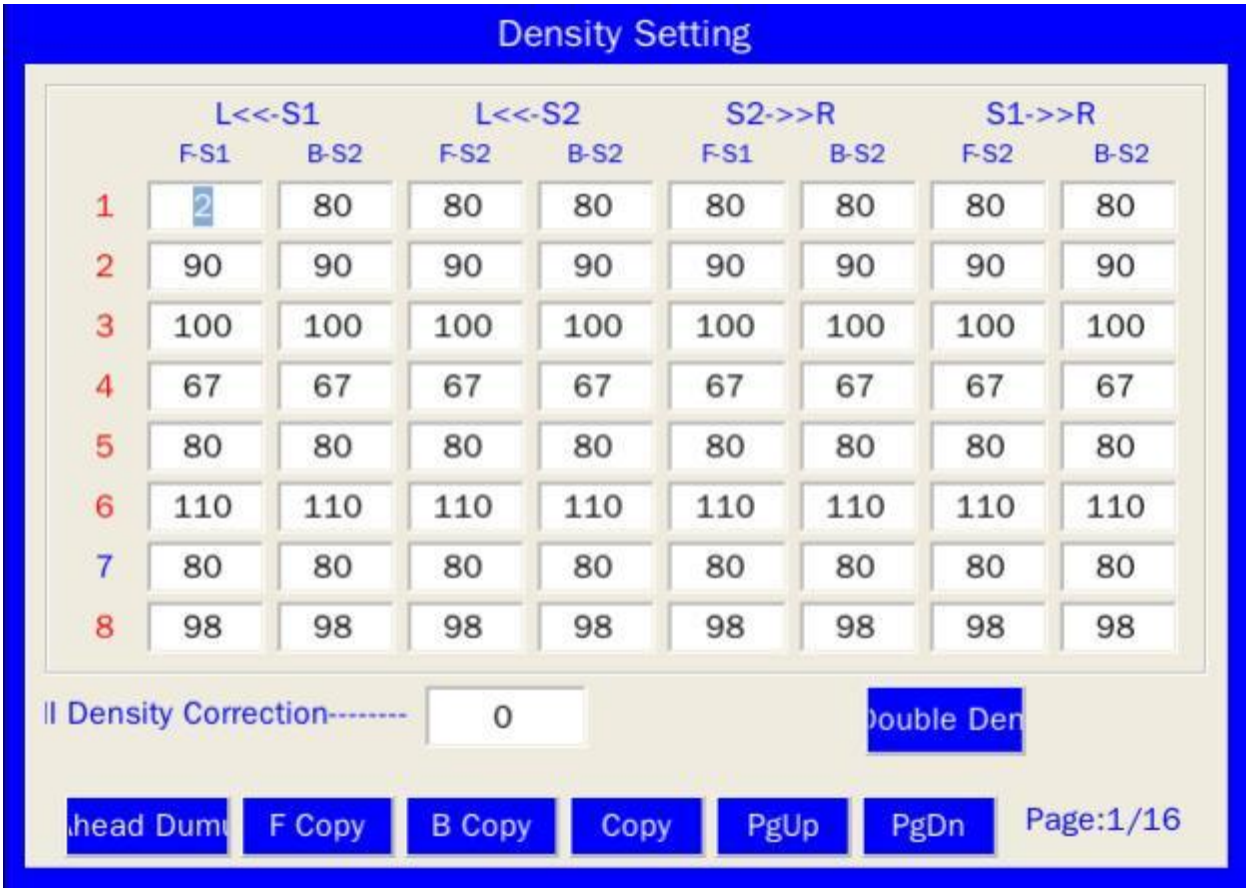
18. Initial Knitting Param : The knit parameter reset to factory defaults.

6.3 Knitting patterns

Knit running interface

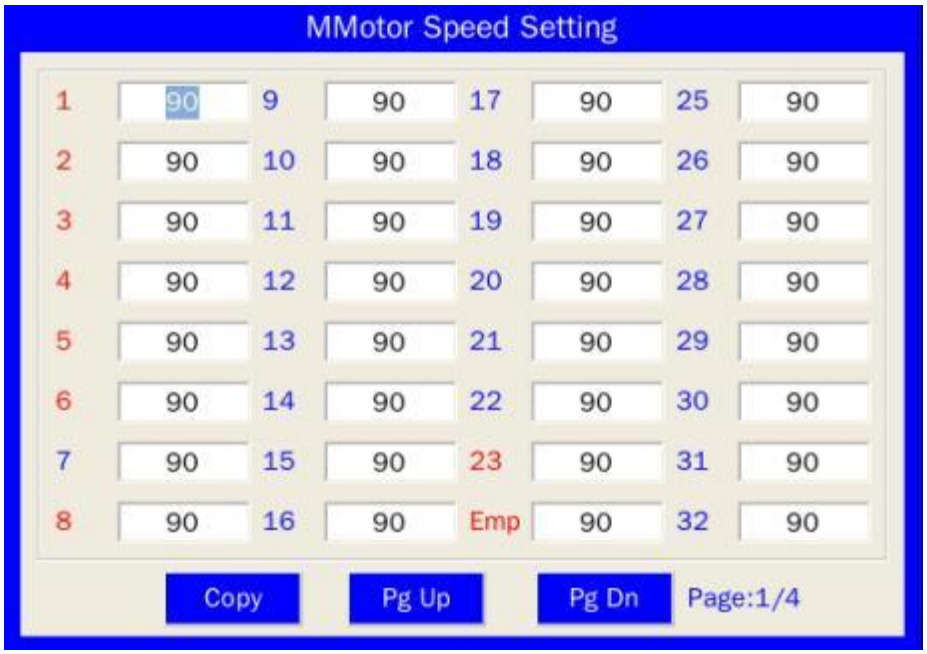
1. Density

Total 36 sections, each page display 12 sections. After finishing setting, the knitting interface will show the stitch sections no of this pattern version line. The scope: 0~180



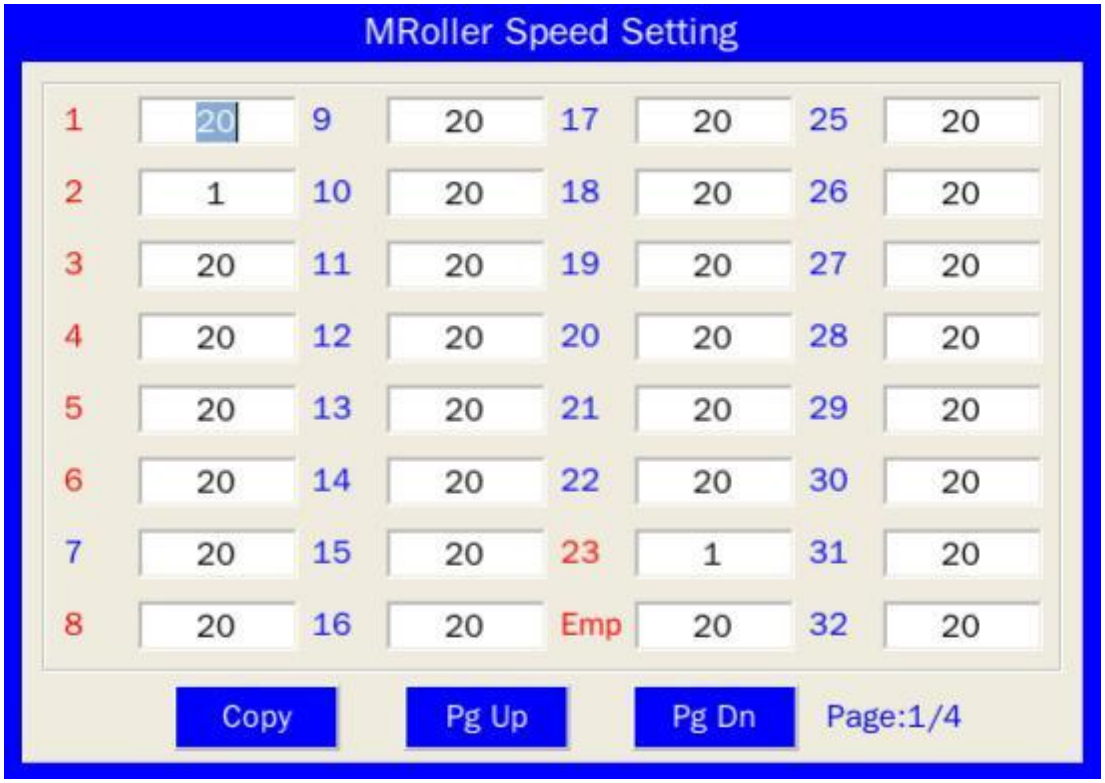
2. Speed

Total 24 sections, After finishing setting, the knitting interface will show the main motor speed sections no of this pattern version line. The scope: 0~100



3. Main roller

Total 36 sections, After finishing setting, the knitting interface will show the main roller speed sections no of this pattern version line. The scope: 0~100



4. Assistant roller

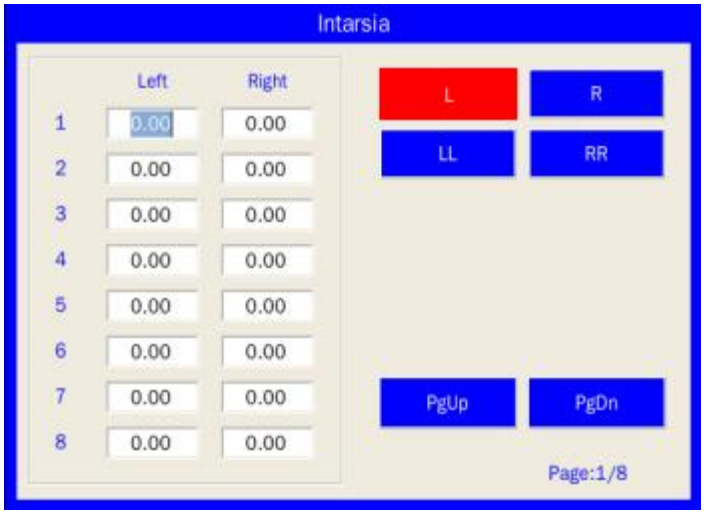
Total 36 sections, After finishing setting, the knitting interface will show the sub roller speed sections no of this pattern version line. The scope: 0~100

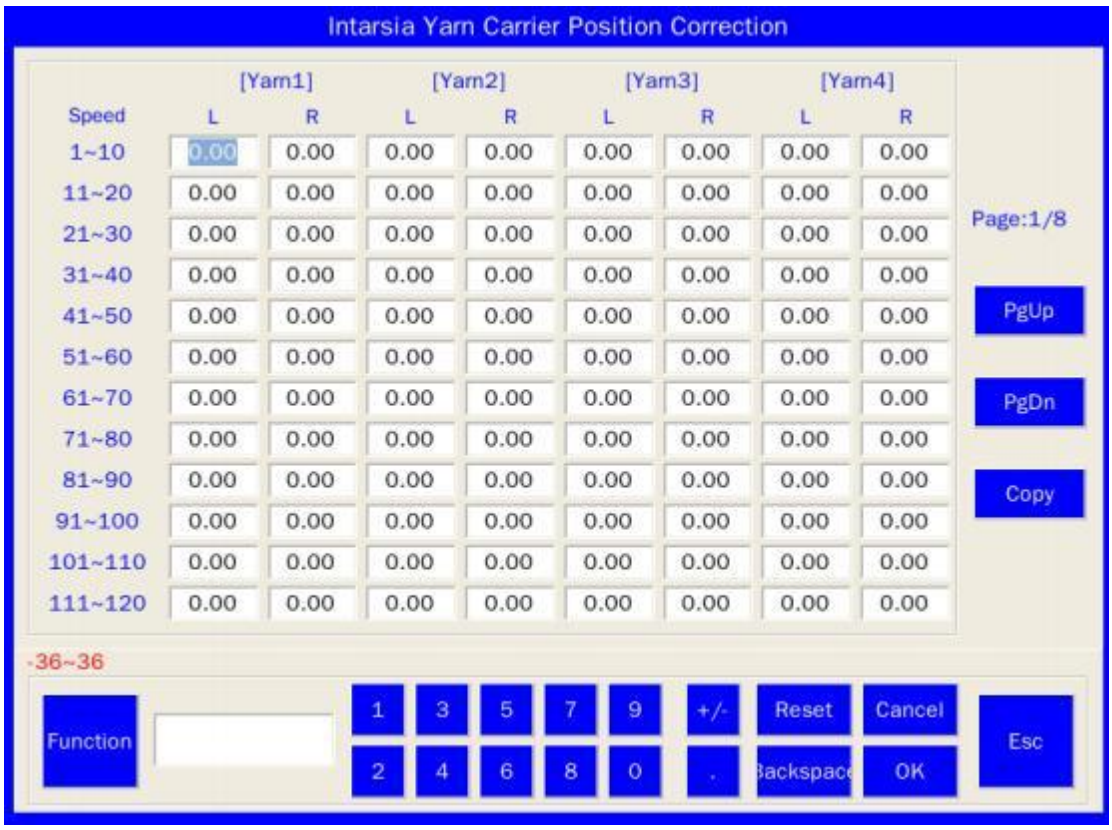
5. Set-up comb

Total 36 sections, After finishing setting, the knitting interface will show the set-up comb speed sections no of this pattern version line. The scope: 0~100

6. Yarn feeder stop position

The common yarn feeder total 8 groups, each group display 8 yarn feeder stop position. After finishing setting, the knitting interface will show the yarn feeder stop position group no. ,Intarsia yarn feeder total 8 pcs, you can correct the yarn feeder stop position according to correcting the intarsia yarn feeder position.Unit: needle.Range: 0~100





Click the textbox, you can set the stop position of the yarn feeder and intarsia yarn feeder

Note: The function keys mentioned above, can be modified during the knitting process in real time, the new modified parameters can be automatically updated in the next course knitting.

7. Runing menu function key introduction

Reset: After Clickine Reset key, the pull lever operate the reset action of the machine,the carriage move to the zero position, and each solenoid return back to thereset status.

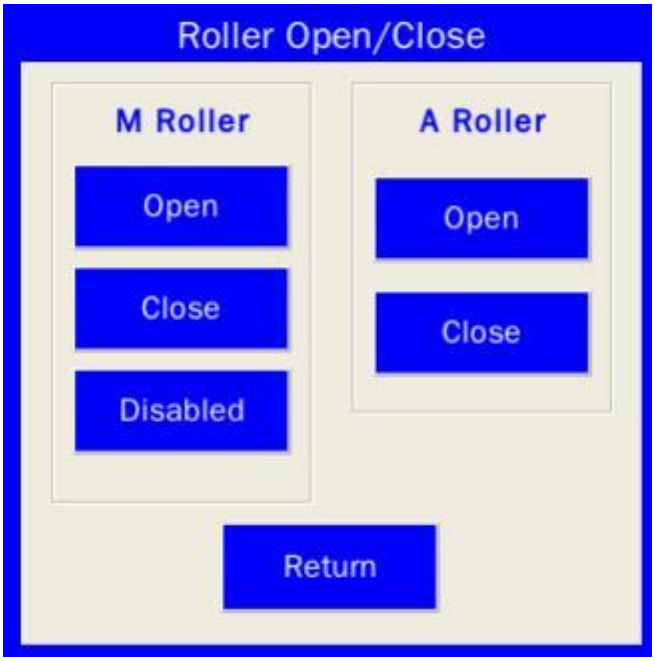
Course setting:Cycles knit patterns of the 1 and 2 courses

Single piece stop: Set whether stop the machine after finishing single piece

Alam setting:Set whether alam when the machine have some fault

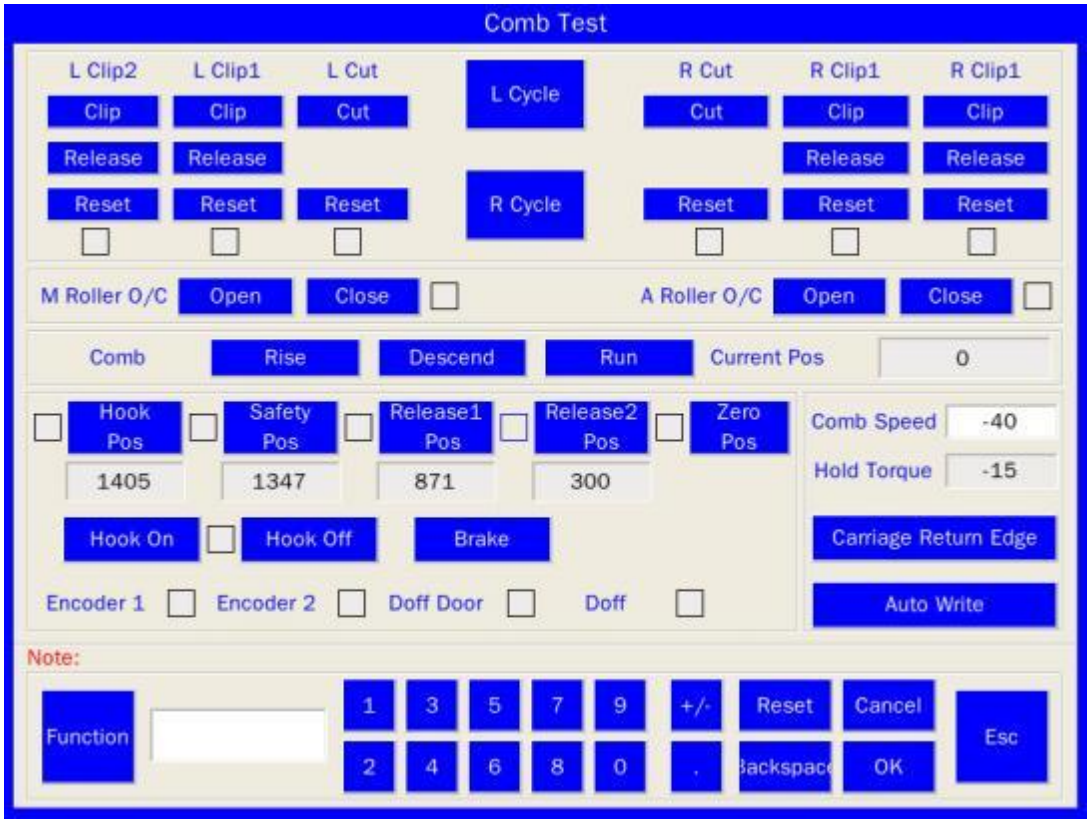
Yarn feeder lift: The current yarn feeder solenoid lift, put down

Roller: Popup roller operation menu, perform roller open and close action



Piece expand: Pop up piece expand setting interface, the following fig. Display the using yarn feeder setting when the piece expanding

Set-up comb operation: Pop up set-up operation menu to perform set-up comb operation. Check each indicator status



Working parameter: Popup the working parameter interface

Setup piece:Setup knitting pieces

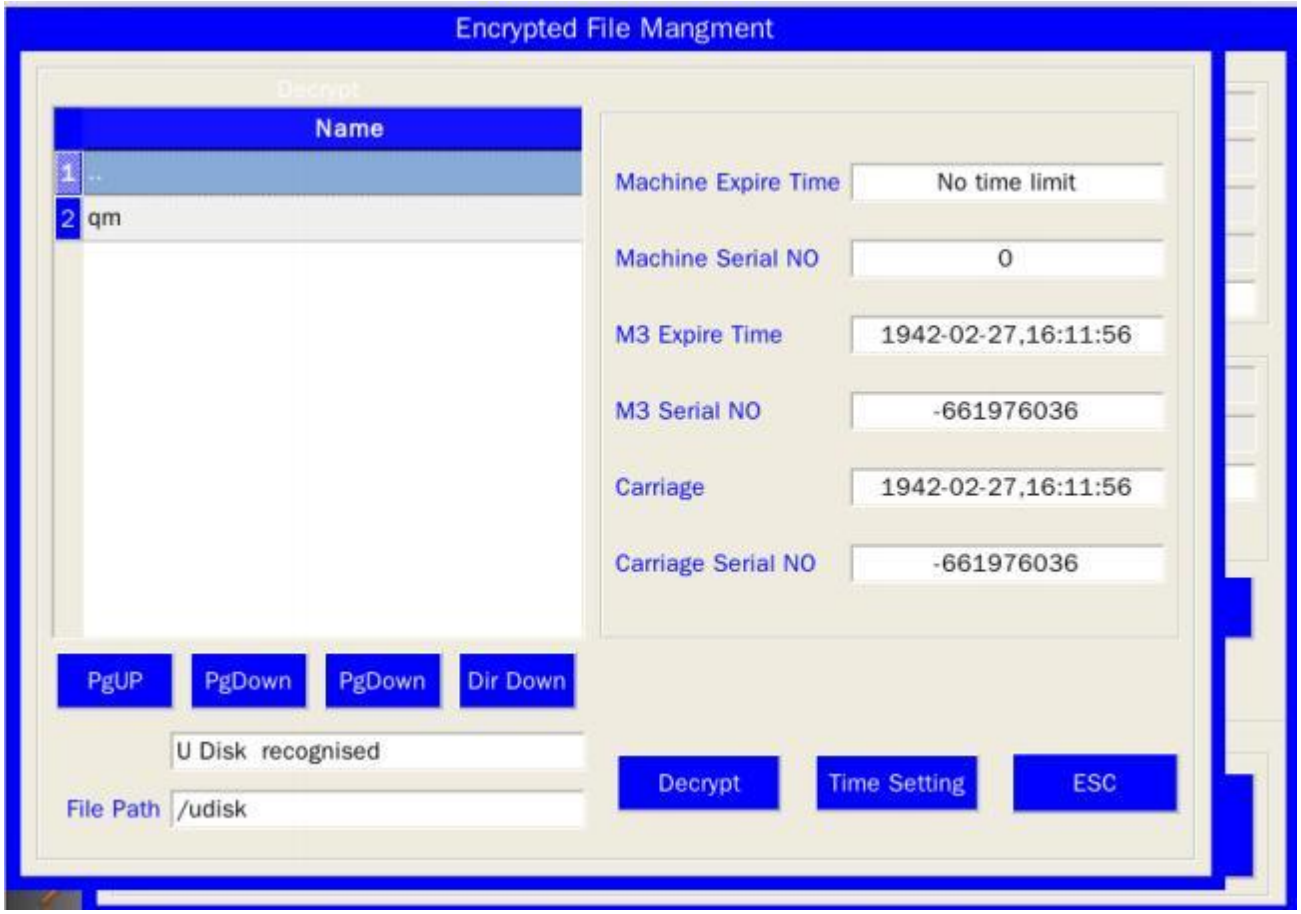
6.4 Machine parameter setting

Long touch LONGXING logo, and input the password


江苏金龙科技股份有限公司
JIANGSU JINLONG TECHNOLOGY CO., LTD.
Knitting
Program Edit
Pattern Edit
File Management
System Parameters
Working Parameters
Carriage Test
System Test
Shutdown
Current Temp:0
LXC121SC_F4000
2015-11-12 09:57:48
WWW.RAYNEN.COM

Most of the parameter is factory setting,unprofessional person,please don't change!

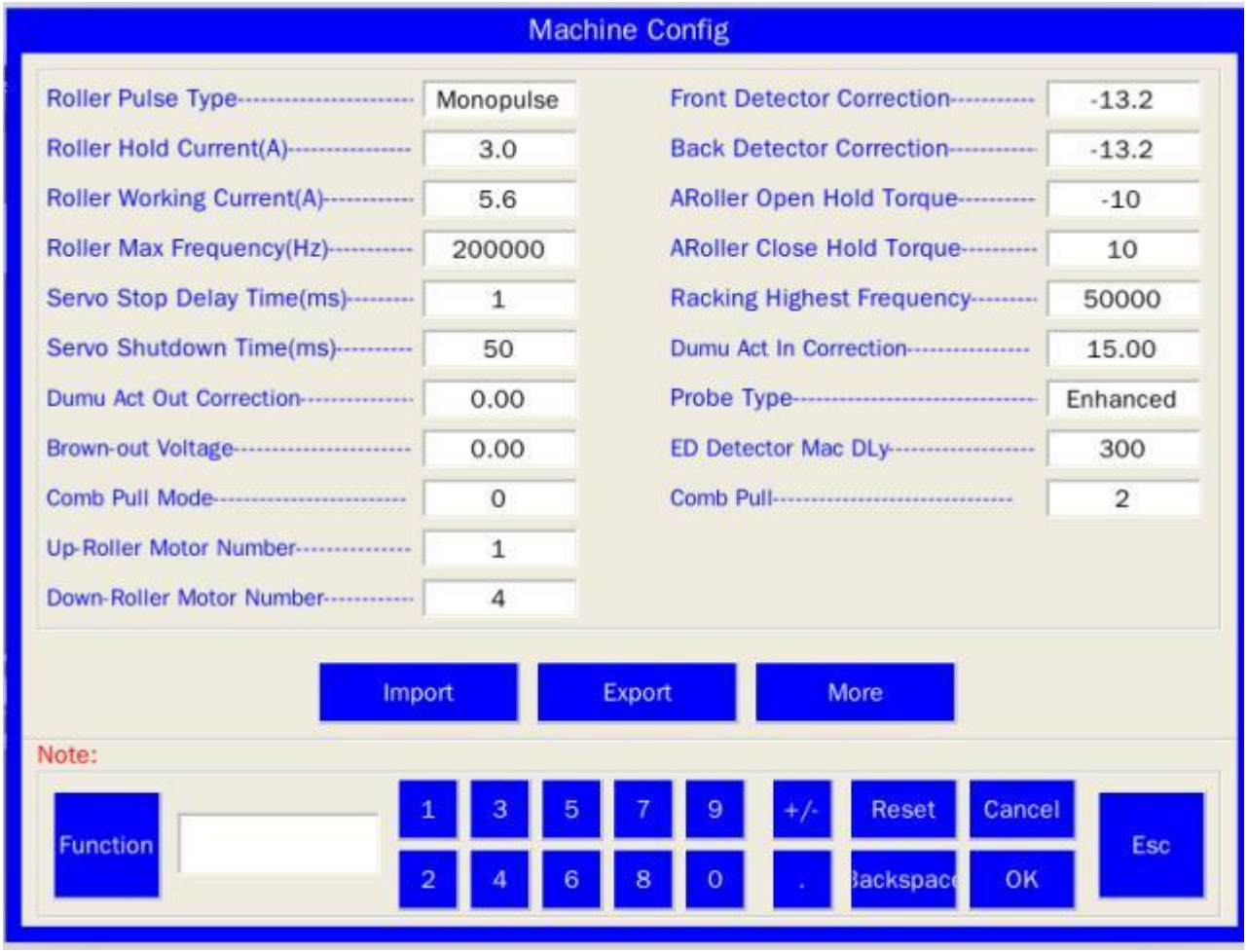
- Set password：set system parameter,parameter change password
- Initial parameter ：the machine parameter back to factory setting
- Read code file：read code file,unlock machine,contact with manufacturer.



- Version update：system update

- Initial parameter ： Initial machine running parameter
- Read lock file：use for installment

- Machine parameter 2：



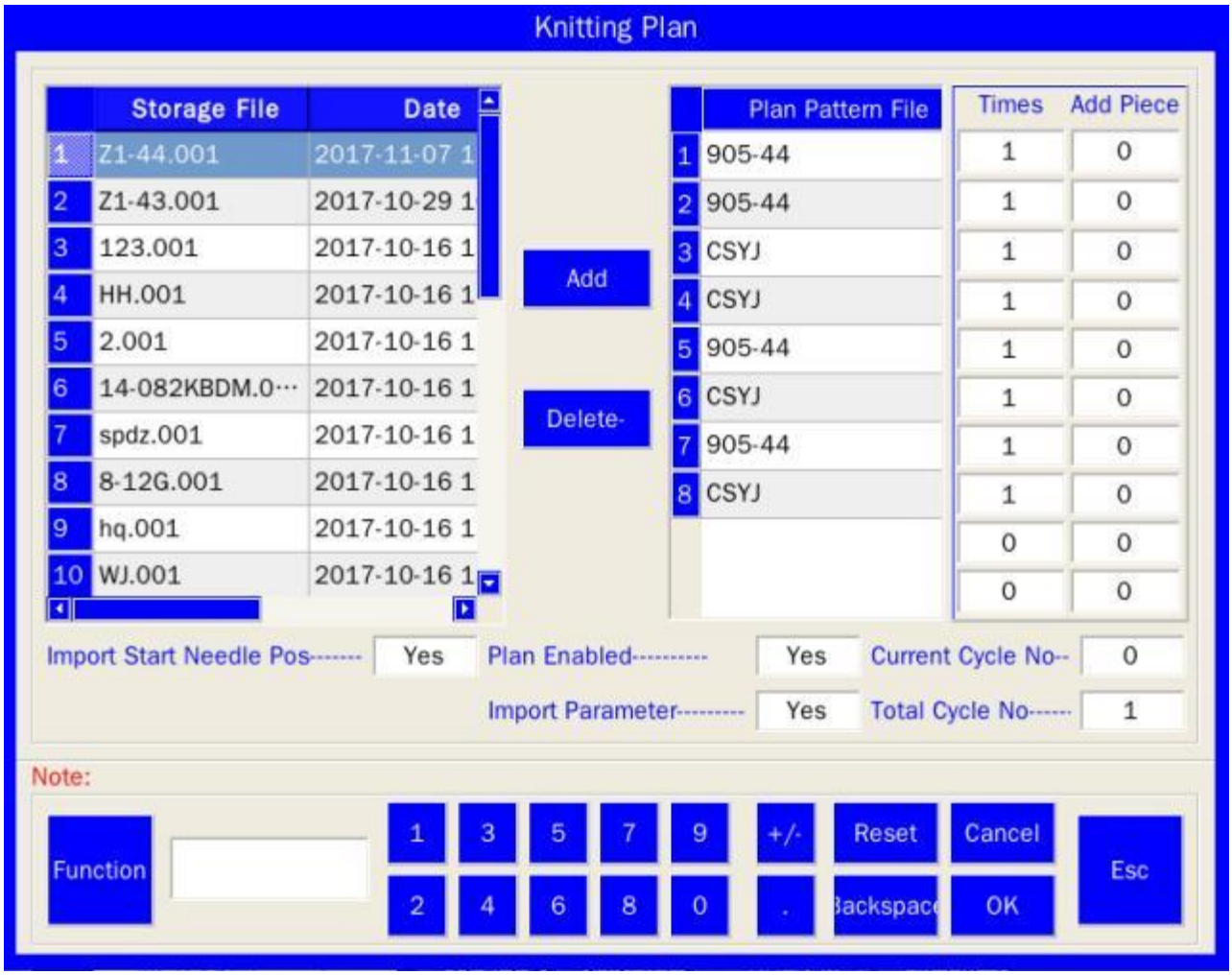
Machine parameter is factory settled,unprofessional person, please don’t change.

7File Management

Click on 

to enter into the File Management,realize the management of pattern file and parameter,such as read, save,delete etc.

1. Select Storage File :the right list disply the available pattern name in the storage.Click on the name of pattern can choose ready to knit.
2. Delete Storage File :Delete the chosen design.
3. Storage File Save To UDisk :Save the design in the memory to U disk.
4. Delete Storage File :Clear the memory.
5. UDisk File Save To Storage :Read design from U disk.
6. Parameter Import To Storage :Load the parameters from U disk.
7. Parameter import To UDisk : Save the parameters to U disk.
8. Knitting Plan Setting : Click Knitting Plan to set a variety of knitting patterns, as shown below

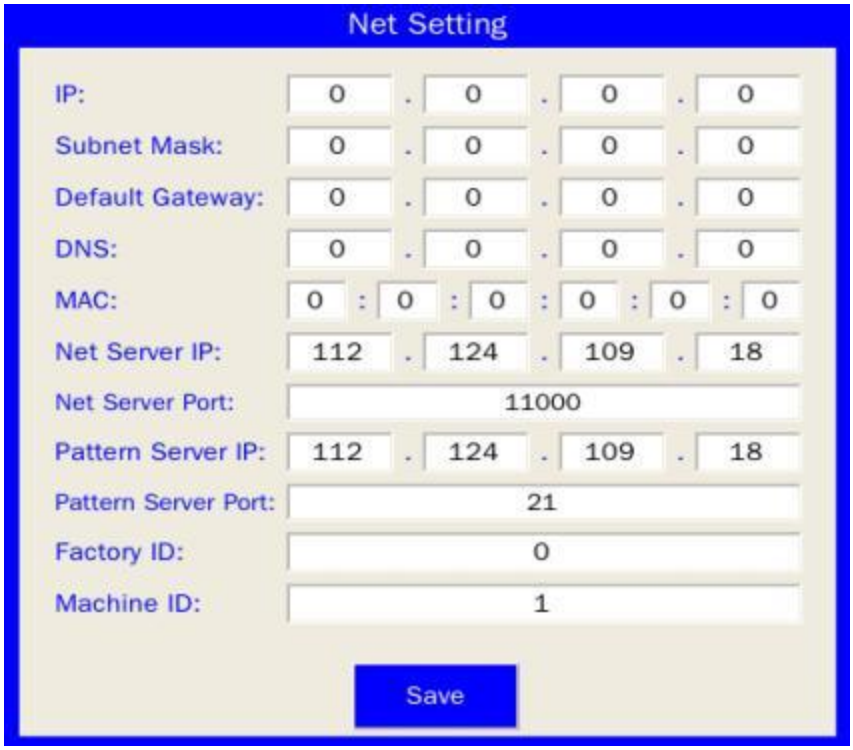


Memory: display all the pattern in the memory.
Knitting Plan: The patterns in the knitting plan.

planEnabled……yes:1-enable the plan,0-disable the plan

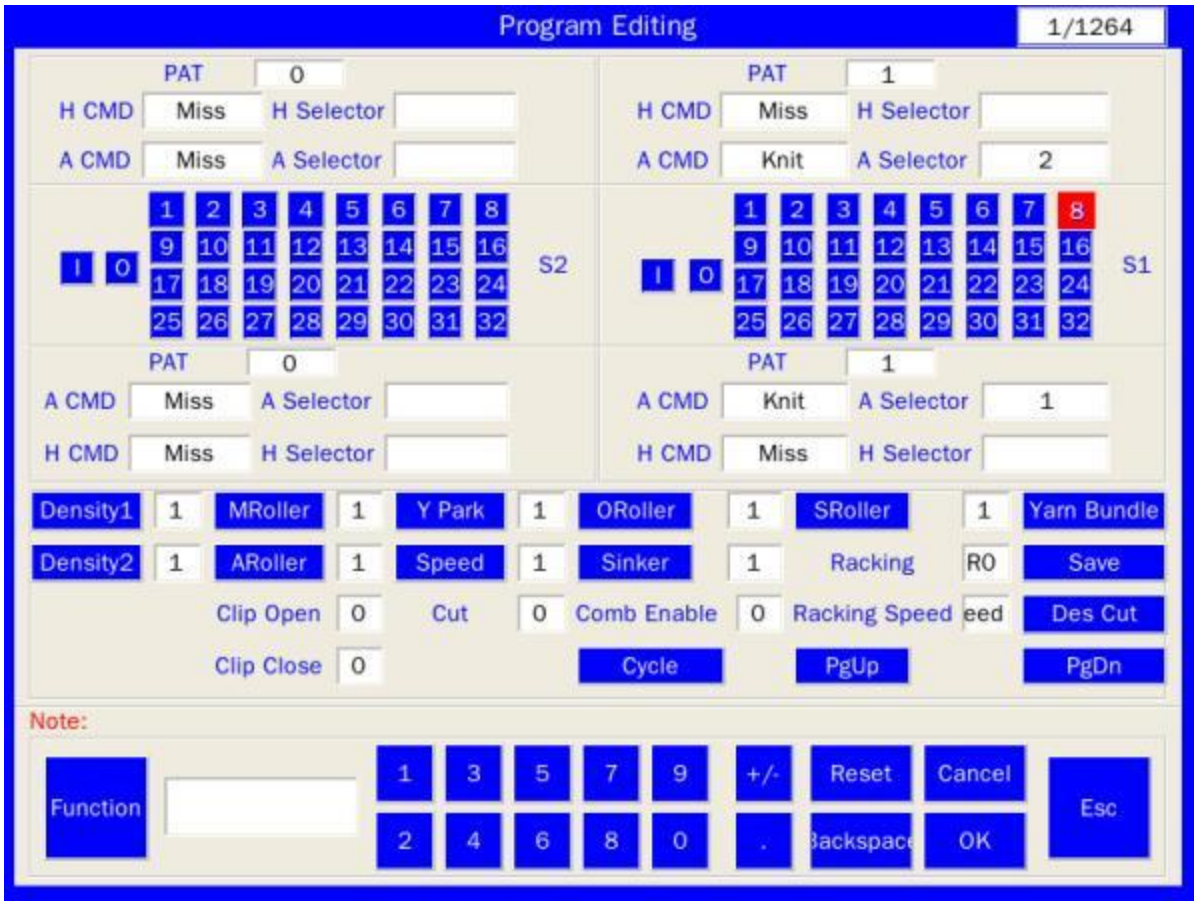
mpotparameter……yes: Whether import the parameters of the pattern.

9. Internet Setting:

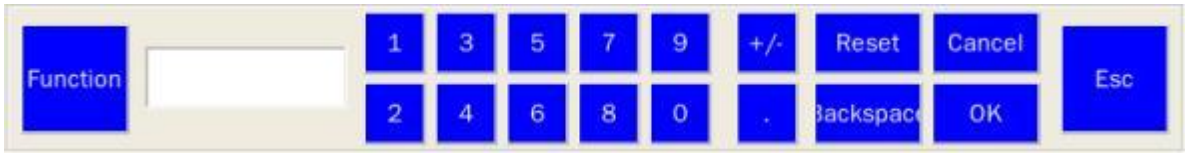


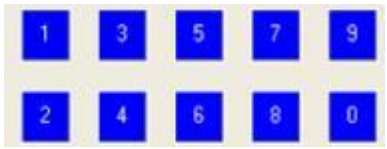
8 Program edit

Edit the current pattern control material

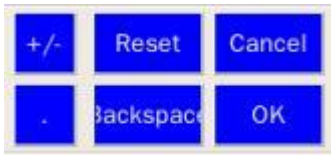


Operating Instructions：As for the operation of the keypad





Value input area,



Numerical operating area

Handwriting input with automatic input switching key.

Operational processes:

1.Press 

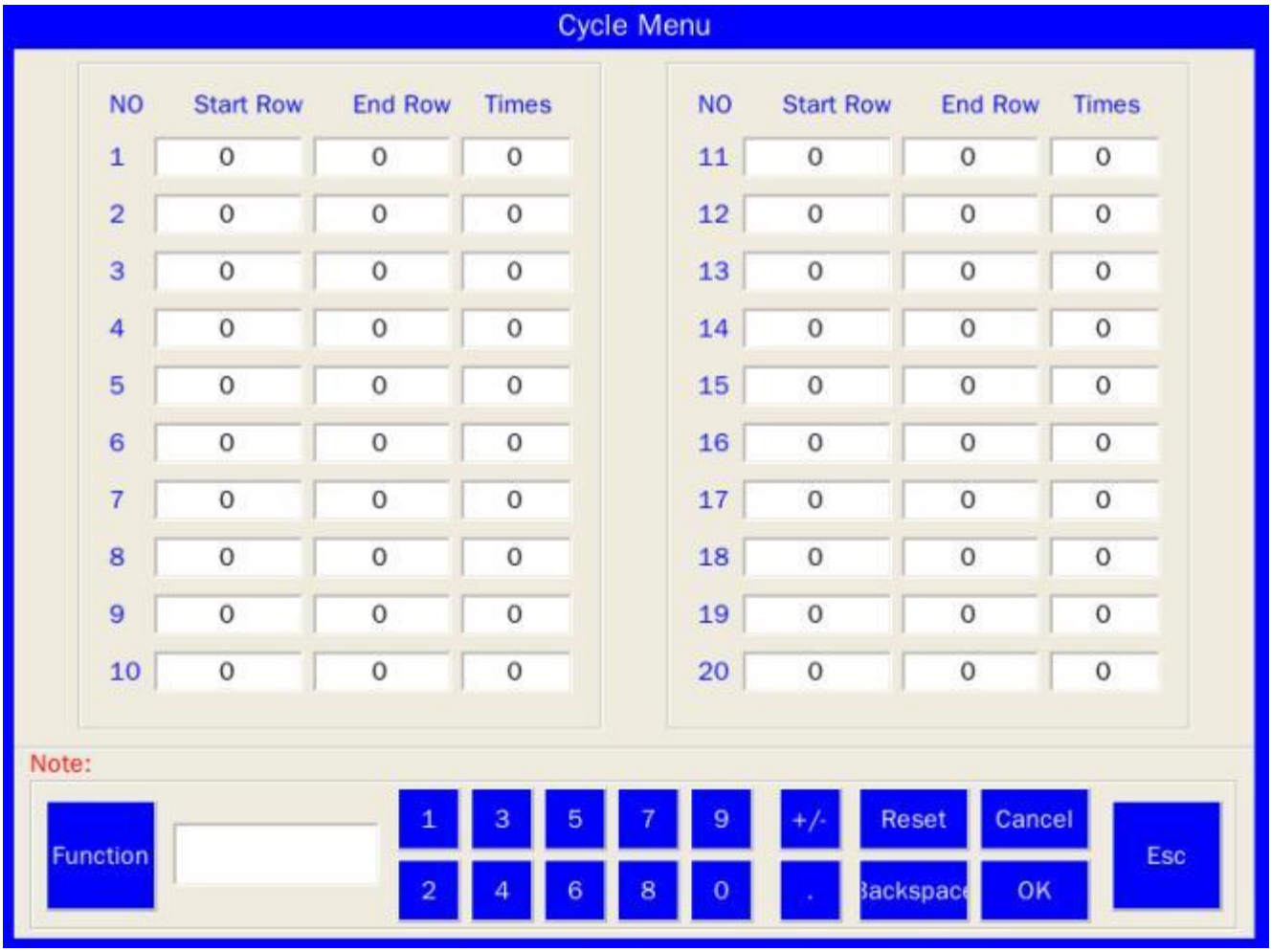
to chose page.

2. Click on the Text box, according to the note enter the parameter values,and then press 

to

confirm..

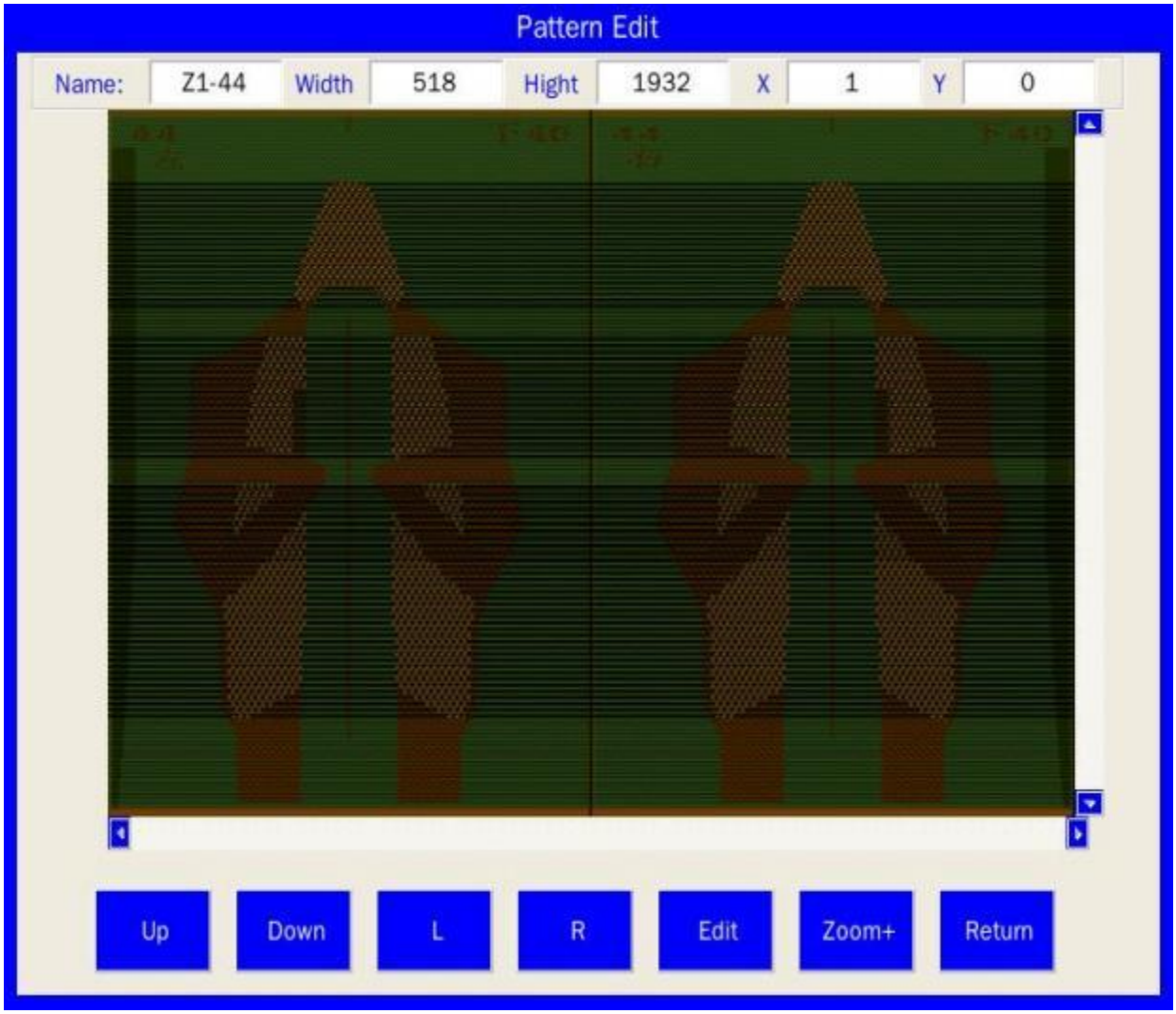
3 . Cycle menu can set the cycle parameters



1. Note: Start line must be smaller than end line,and the next start line must be greater than the previous line end line.

9 Pattern edit

In the main menu choice “Design edit”, Can check pattern graphics, and can easily modified. Can "UP, DOWN, LEFT, RIGHT" move. Press "move pattern" change the way for mobile content. Convenient check pattern graphics.



10 Ready before knitting

10.1 Operation process introduction

Knitting Draft

↓

LONE

↓

U-disk file copy to machine

↓

Select machine file

Start

Yarn feeder setting(change,exchange)

Yes Knitting parameter setting Density

Speed

Roller

Reset

Comb (only for design with comb)

Locking （design without comb）

Knit as sample

If not change design

No

Production

10.2 Read work file

1 Work file load to machine

① File management

② U-disk file copy to machine memory

Machine remind “input U-disk”

③ U-disk contact on right side of display

Display show “meet the U-disk”

④ Select the work file

Note ： same name file,no have file,can’t get recognition of U-disk

2 Storage file selection

① File management

② Click “select storage file”

Click “select storage file”,the display will show the storage file already load to machine.

③ Select the file

Click the file for knit.when storage file too much,the display can’t show all,it is need click slipper and slide down .

④ Select file finish,click ESC.

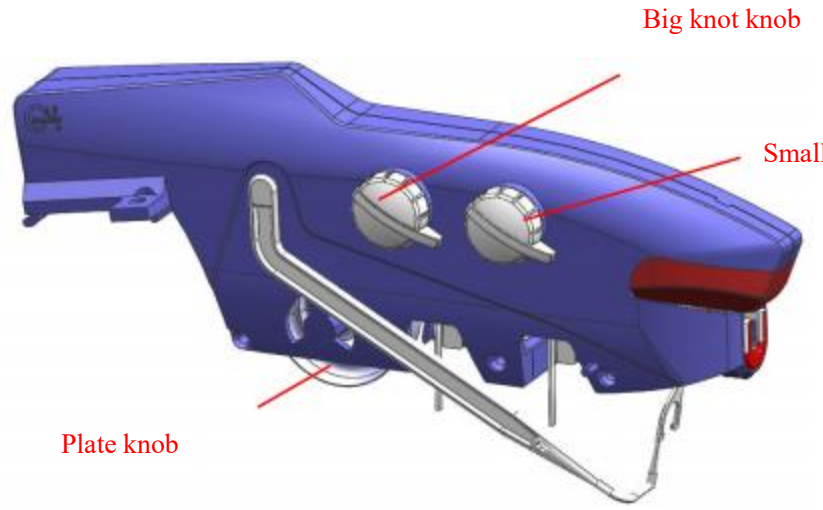
10.3 Knitting parameter setting

Knitting parameter setting, the details please check 6 parameter setting

10.4 Feed the yarn and relevant adjustments

The order of feed the yarn：antennas —yarn feeder—side antenna—yarn guide

1. Antenna



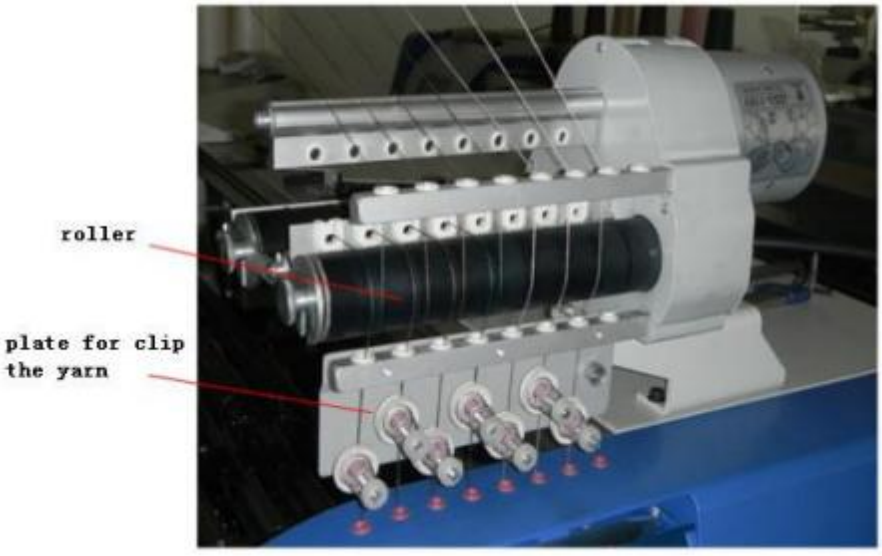
Antenna of machine structure are shown below

Rotating brake disk knob can adjust thread clamp dish clamping force.

Rotating antenna knob can adjust antenna tension.

Rotating knot claw knob can adjust allow through yarn knot of size.

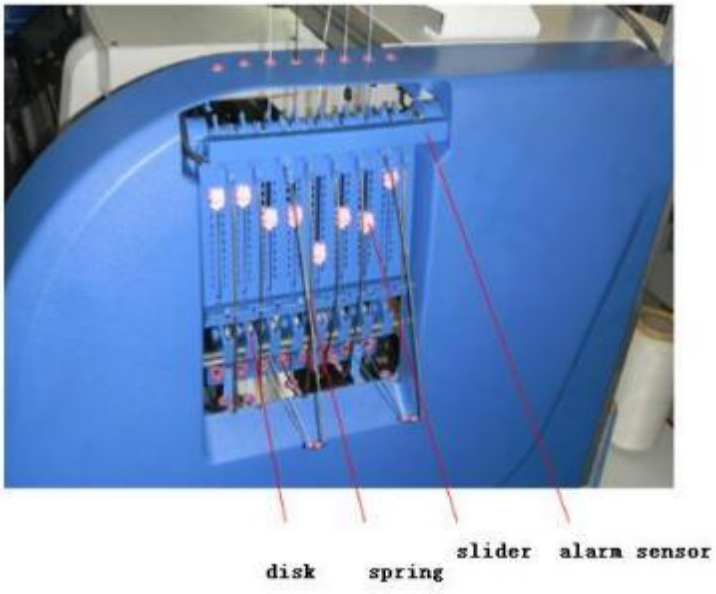
2. Yarn roller machine



The roller for send the yarn running in a fixed speed,provide the maximum yarn consumer. In order to yarn feed near the actual yarn consumer, it is need adjust the yarn feed angle. If increase the yarn feed angle,friction will be bigger,the machine will send more yarn. So the yarn sent by yarn roller should be a little more than the yarn for yarn guide, also the yarn clip

plate can adjust the yarn tension.

3. Side antenna



Lateral antenna structure are shown below

Change above precision slider position can regulate lateral antenna tension

Change the position of contact spike can adjust the lateral antenna yarn breaking springback alarm when the position (side antenna and conductive great phase contact alarm)

4. Yarn Guider

Machine carriage take the yarn guider, feed the yarn to needle.

Above parts together called machine yarn feed device,the yarn feed device have following functions:

1、Feed the knitting yarn：①send the yarn from cone to yarn roller；②reduce friction；③ avoid different yarn cross；

2、Control the yarn ,avoid：①yarn finish ；②yarn broken ；③knot；

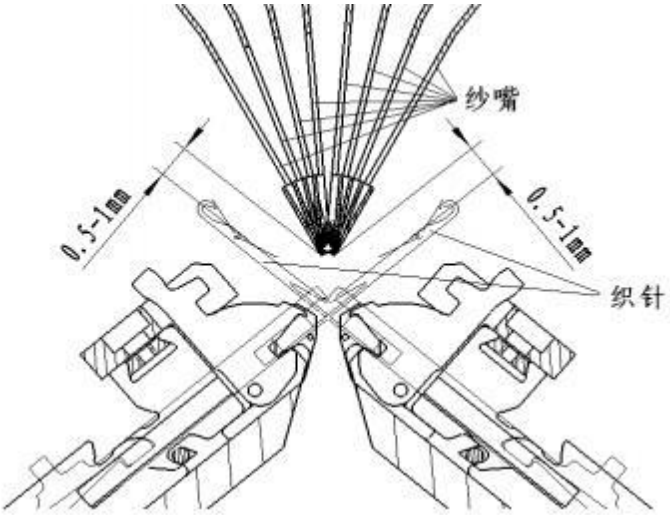
3、Control yarn tension

4、Supply yarn tension, avoid yarn droop.

◯1Height of yarn feeder adjustment

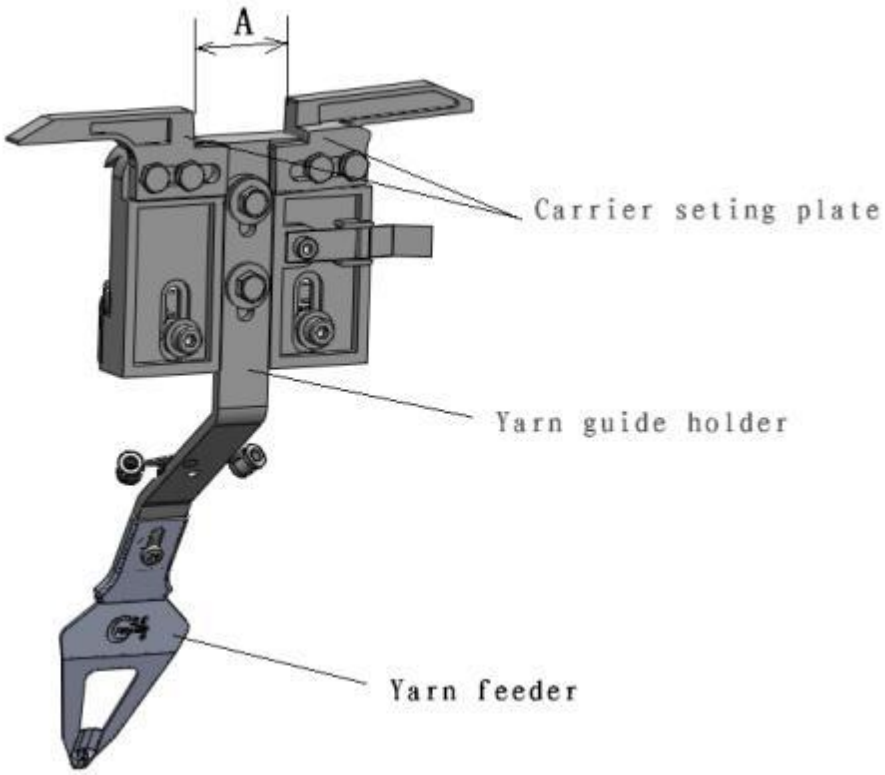
Yarn feeder should adjust the center of knit needle fore and behind, knitting yarn lips mouth edge from the height of yarn, before and after knitting vertical distance is about 5 0. ㎜

~ 1 ㎜ as shown in the diagram below.



②Yarn feederseat width adjustment:

KSC062series configuration adjustable yarn, its mouth seat width of yarn mouth seat (FIG. A size position) can be adjusted as necessary, namely carrier seting plate between width can be adjusted. Below is yarn mouth seat map. The proposal presses the following data to adjust: normal knitting yarn mouth, pushing block with the interval between A 31 for mm, Cover yarn braided hair with mouth (wide mouth), pushing block yarn, the interval between A 45 mm.



11 Knit running interface

11.1 Basic operation

Reset: After Clickine Reset key, the pull lever operate the reset action of the machine,the carriage move to the zero position, and each solenoid return back to thereset status.

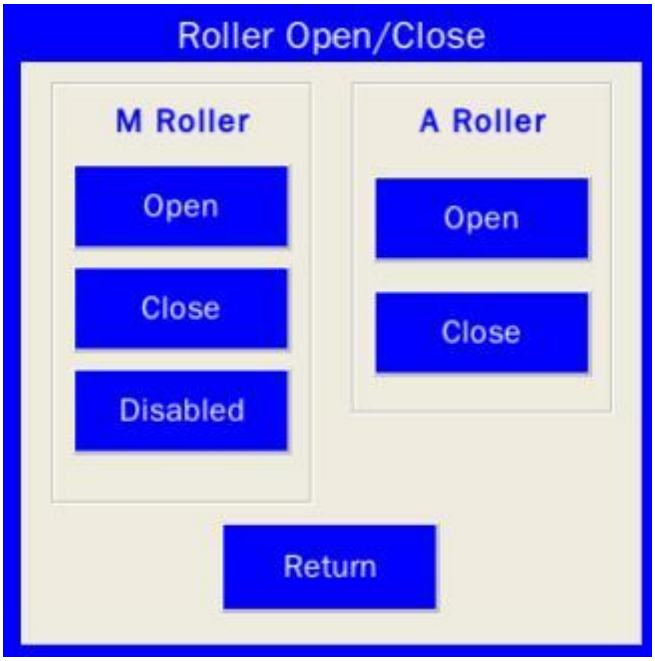
Course setting:Cycles knit patterns of the 1 and 2 courses

Single piece stop: Set whether stop the machine after finishing single piece

Alam setting:Set whether alam when the machine have some fault

Yarn feeder lift: The current yarn feeder solenoid lift, put down

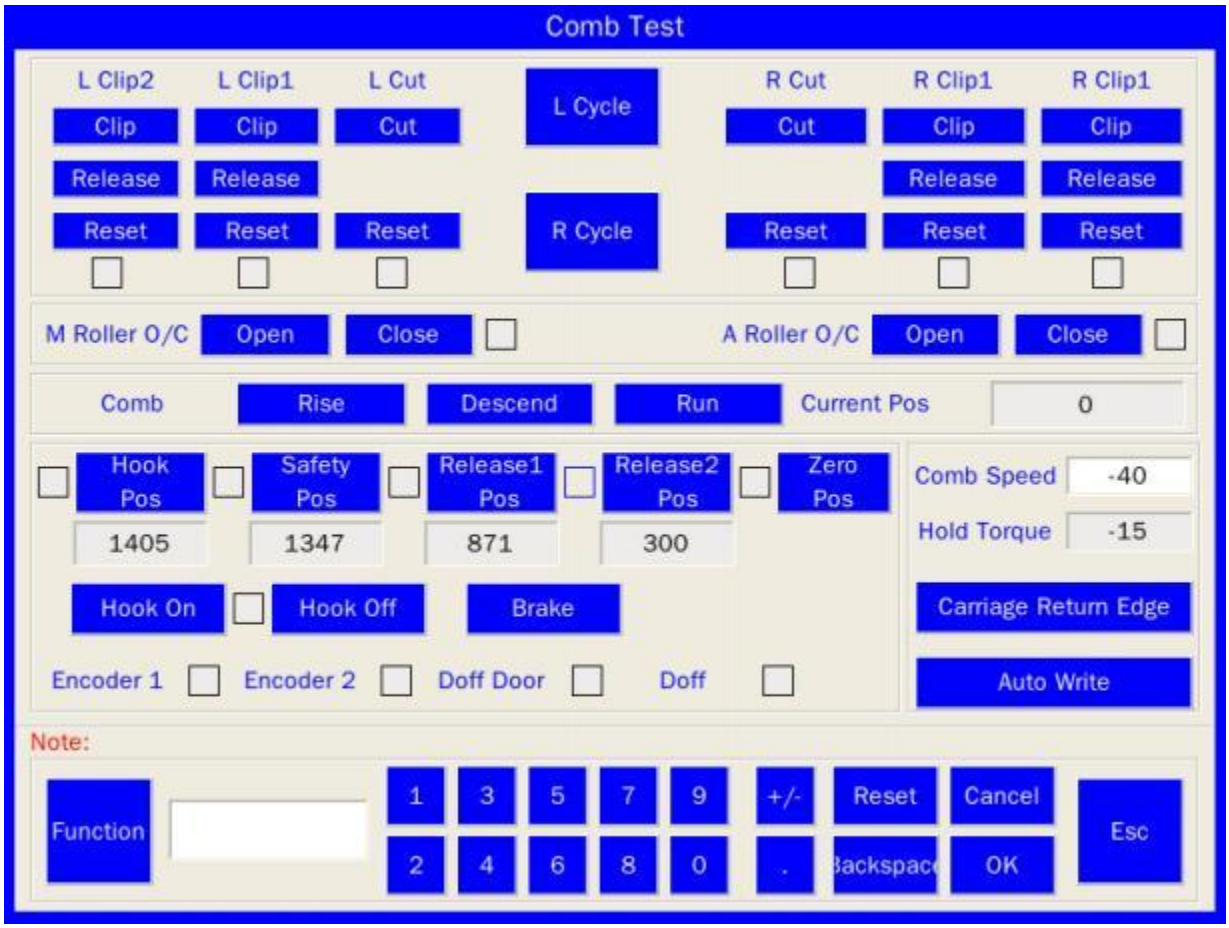
Roller: Popup roller operation menu, perform roller open and close action



11.2 Function key introduction

Piece expand: Pop up piece expand setting interface, the following fig. Display the using yarn feeder setting when the piece expanding

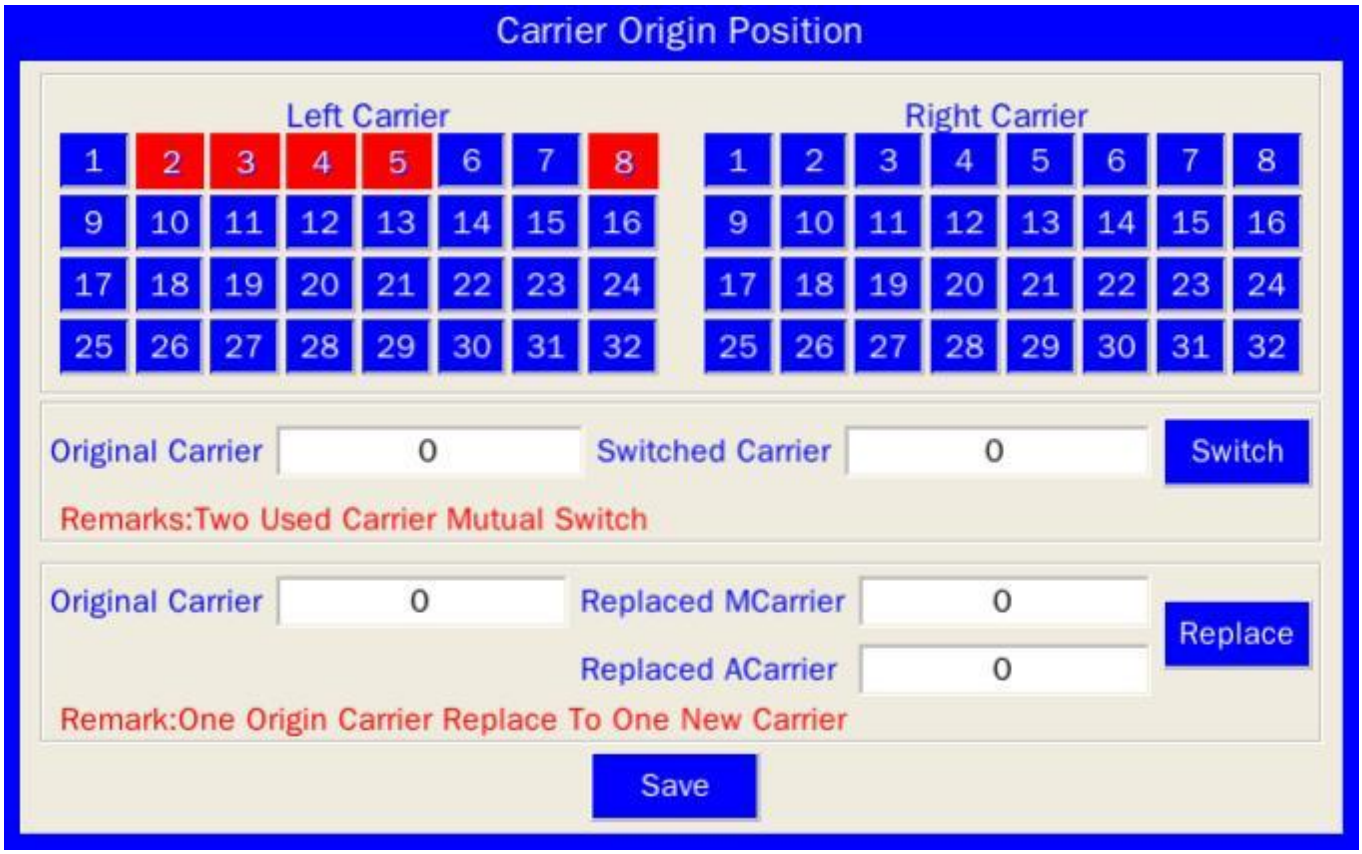
Set-up comb operation: Pop up set-up operation menu to perform set-up comb operation. Check each indicator status



Working parameter: Popup the working parameter interface

Setup piece:Setup knitting pieces

Yarn feeder: Press this key can view the yarn feeder and start position of the current knitted pattern



Skip row: You can input any course to start knitting .

12 Machine maintenance

12.1 Reduce abrasion

All the parts of machine manufactured or selected prudently by our company. Nonetheless, these parts still have abrasion. It is necessary make Periodical Lubrication ,clean and check,keep the parts in minimum abrasion.

Wearing parts	The reason for excessive abrasion
Skin roller	① Speed too big ② Installation wrong ③ The yarn easy break the roller skin ④ Fabric over batching
Brush	Wrong installation
Needle	① Yarn feed too low ② Brush wrong installation ③ Fabric over batching ④ Roller speed too big ⑤ Yarn too thick ⑥ Yarn bad quality
Yarn feed device	Yarn too thick or the yarn have plastic sheet
Actuator	Actuator higher than needle bed,carriage board no clean
Belt	Belt too tight,easy break bearing,belt too loose ,easy miss exactly position

In order machine keep in good work status, please must make machine maintenance regularly.Machine maintenance including machine clean and lubrication.

12.2 Machine clean

Please clean following parts step by step

- 1 Antenna and side antenna

  Every 8-12hours, use air gun clean the antenna , side antenna and porcelain bead.

- 2 The yarn plate

  Every 8-12 hours, use cotton rag clean.

- 3 Yarn feeder

  Every 8-12 hours, use air gun clean the yarn feeder.

- 4 Needle bed and sinker bed

Every 8-12 hours, use air gun clean the yarn waste on the needle bed and sinker bed, especially the place of tooth blade.

Every 12-26 Weeks, must make thorough clean work on the needle bed. If the needle bed be not made thorough clean, because needle move no smoothly, the fabric will be unevenness when production.

Needle bed thorough clean :

① Take out needle pressure gar

② Take out the needle and Jack

③ Use brush clean out the dust

④ Use air gun blow away the dust

⑤ Ensure the needles and jacks no broken

⑥ Add oil on the needles and jacks

⑦ Installation again

6 Carriage and brush

Every 8-12 hours , use air gun clean carriage and brush.

- 7 Distributor box

Clean the distributor box every week, must power off machine before clean work. Open the box cover, use air gun blow away the dust and yarn waste. After clean, install cover well.

12.3 Machine lubrication

In order to keep machine in good performance and good quality fabric ,it is necessary make machine lubrication regularly. Machine lubrication means add oil on each part of machine. Before add oil, must stop machine and power off. Please use the oilcan(there is small brush on the oilcan) supplied by our company. Please use “KLUBER”oil, customer can buy from our company.

Pleaseadd oil as following：

Part name	Oil brand	The way of add oil	Cycle	Operator
Guider bar	“KLUBER” lube	Brush over	8-12hours	operator
Carriage track	“KLUBER” lube	Brush over	8-12hours	operator
Rack slider	“KLUBER” lube	Brush over	8-12hours	operator
Jack heel	“KLUBER” lube	Brush over	8-12hours	operator
Sinker heel	“KLUBER” lube	Brush over	8-12hours	operator
Chain	“KLUBER” lube	Brush over	One month	technician
Comb needle open and close device	“KLUBER” lube	Brush over	Three month	technician
Rack screw lever	“KLUBER” lube	Brush over	Half year	technician
The move parts in carriage	“KLUBER” lube	Brush over	One year	technician

13 Machine repair

13.1 Change parts

13.1.1**Remove carriage**

Starting from the ￥machine to the right or left of the removed. Remove the carriage when please take the following steps:

1、Shut off the power.

2、Cut side of the yarn.

3、Unplug the lateral antenna and send the yarn machine wires connecting terminals.

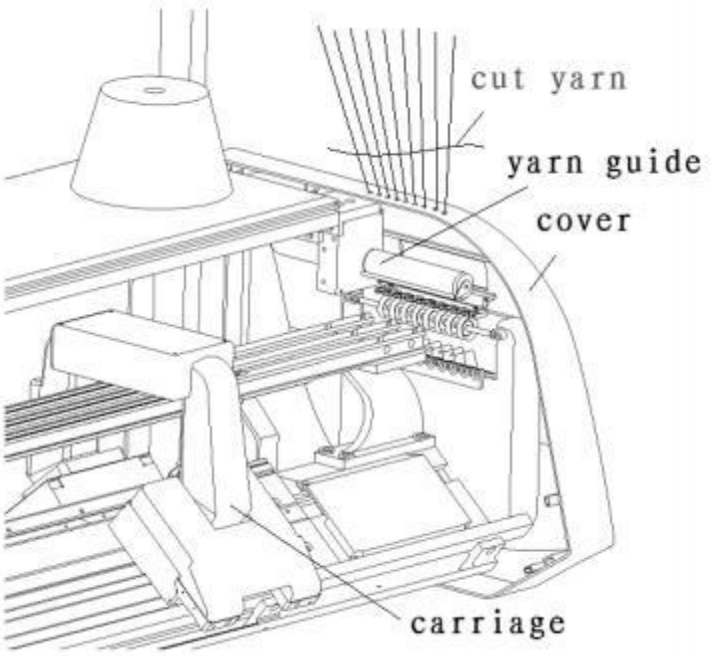
4、Dismantling the lateral shield.

5、Tear open next send yarn machine.

6、Loosen the nut, carriage line plug plucked carriage line plug.

7、Loosen the carriage drive plate on the two nuts, will carriage drive plate from carriage diverted.

8、Carefully remove carriage will head toward placed on mountain board. Remove helicopter recommended by two people together to achieve, please be careful not to be moving finger carriage clip tightly.



13.1.2 **Pack to return carriage**

Pack to return carriage when please click "move-out helicopter steps" reverse order of installation. Head pack to return after please check the plug and fixed screw/nut, confirmed only after they again boots.

13.1.3**Replace brush**

1、Replace brush please take the following steps:

2、Loosen the brush clamp piece on the two screws and took out the old brush. With the new brush, lock brush clamp chip the two screws.

13.1.4Replace needle selection device

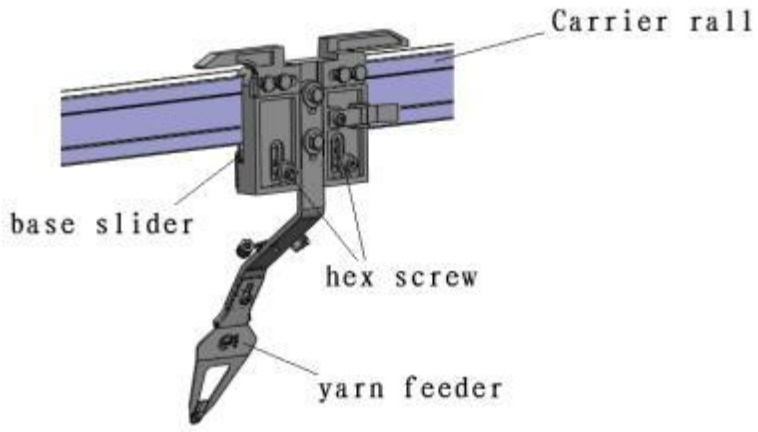
Replace choose needle changer please take the following steps:

1、Dismantling the helicopter shield.
2、Unplug the need to change the needle selection sensor plug.
3、Loosen needle selection is the two screws.
4、Remove selected needle changer.
5、Lock two fixed screw.
6、Insert needle selection device plugs.
7、Cover carriage shield.

13.1.5Replace carrier

Replace yarn mouth seat steps:

1、loose two hex screws on carrier base slider.
2、the next move yarn mouth seat slider, taken down carrier from Carrier Rall.
3、new carrier on Carrier Rall.
4、the slider carrier adjustments to the appropriate location and tighten the screws.
5、move around gauze mouth, check whether installed firmly.



13.2The use, maintenance and troubleshooting methods of Skin roller

13.2.1Structure characteristics：

Skin roller is by stepping motor driver side of the gear case, two axis end connection box side a group of main roller: Lord roll by main pres roller, bracket and pressed on cloth shaft, belt composition: belt tightly bag Lord pres roller, pressed on cloth shaft, allowing to anchor and stent, the main pres roller and stent by belt bag force the influence of friction in friction under the action of forces, anchor mutually close scratching stress, belts in the main pres roller turn's effects brought tension, will fabric compaction

and down force.

13.2.2Using and maintenance note:

1、While using, according to weave organization, set the appropriate placement of speed, pull speed cannot too fast, lest cause lead force is not stable, and accelerate skin surface wear.

2、When add lubricant for needle bed，don't make any lubricant grease from needle bed mouth to leak into the skin surface.

3、When using ，please check smeary clean face, and often maintain holster surface dry, clean, prevent pollution pattern or make skin surface increases viscous produce tangled yarn.

4、At any time, remove tangled yarn clearing thrum.

5、Replacement holster methods：

① First， make prevent rewind board, to insert axial direction to push, make body positioning pin from gear case, except under prevent rewind board.

② Loosen inserted axle gear mass screws, will block block pull up remove plug shaft, remove PiGun combination.

③ Replace be over, in the reverse order leather pack to return.

13.2.3Common faults and eliminating methods

Serial number	common fault	fault reason	elimination method
1	Fabric tilt	Both ends localization screws has failed to make positive，roller deflection when press fit	Adjustment screw roller cloth ends localization axial compression close contact consistent
		Not installed correctly, skin Laura and needle plate is not parallel	Adjust body skin Laura and around needle boards parallel
		Both ends localization screws large clearance, skin Laura swinging Excessive. Pressure cloth shaft or main pres roller deformation	Adjust ends localization screws, remove swinging. Straightening, or replace pressure cloth axis and the Lord pres roller
		Skin surface dirt not dry, skin Laura tangled yarn	Clean holster, remove grease, leather surface besmear evenly talcum powder
		Holster localized wear	Transposition use, replace holster
		Pressure cloth axial local deformation	Straightening, or replace pressure cloth axis
		Leather surface oily serious, leather ageing, tense-lax different	Replacement holster
2	Tangled yarn	Leather surface not clean, leather surface oily serious	Clean leather surface, remove grease
		Leather surface not dry, ageing	Strengthen day-to-day maintenance using talcum powder daub leather surface, replacing old holster

		Holster edge is not smooth	Dressing edge
		Holster there are gaps, remove tangled yarn scratch or cracking when	Replacement holster
		Thrum too long	Edit weaving process, reduce Thrum
3	Yarn breaking	Pull Too fast	Adjust matching speed
4	Fabric curly	One side of pressure cloth axial deformation	Straightening, or replace pressure cloth axis