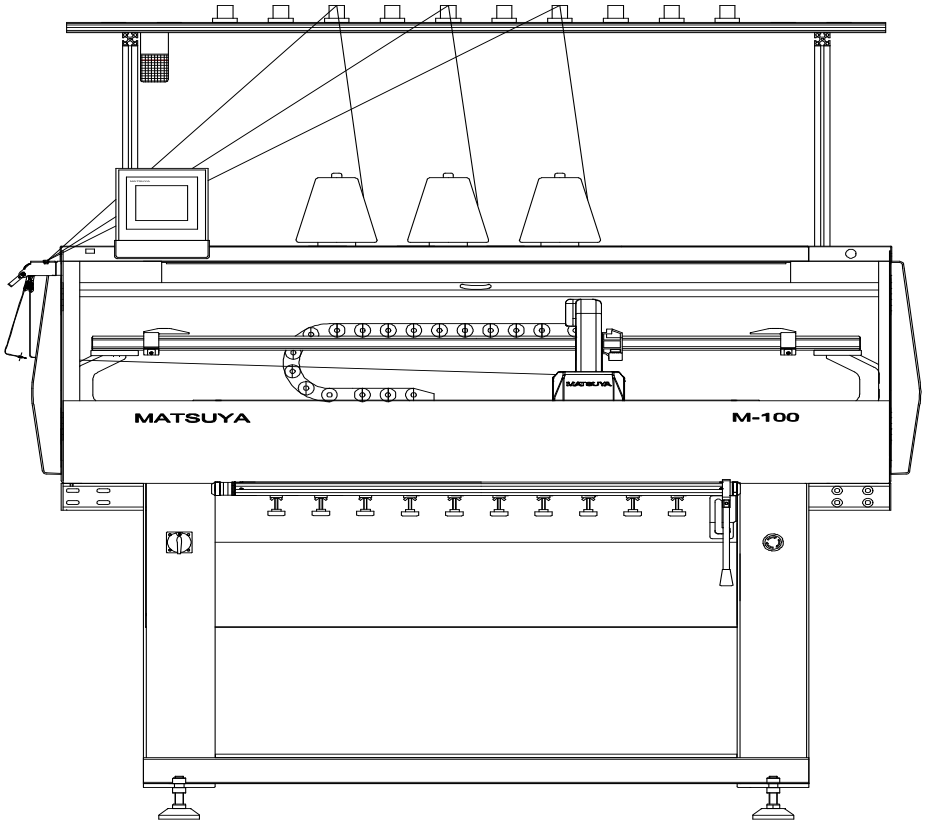
M-100

Computerized Flat Knitting Machine

OPERATION MANUAL



松 谷

MATSUYA

KNIT TO THE FUTURE

2010.12

PREFACE

WE THANK YOU YOUR PURCHASE OF OUR M SERIES COMPUTERIZED FLAT KNITTING MACHINE.

THIS INSTRUCTION MANUAL GIVES THE EXPLANATION ON HOW TO OPERATE THE MACHINE & WHAT PRECAUTIONS SHOULD BE DONE.

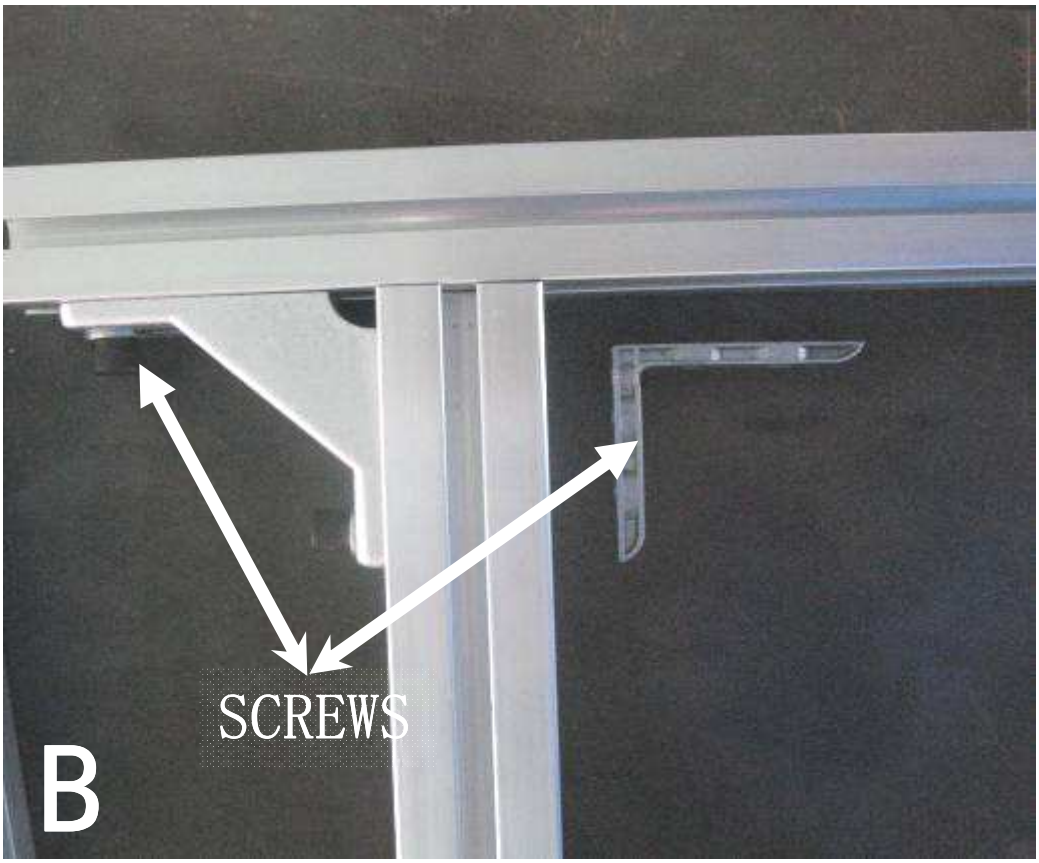
PLEASE READ THIS MANUAL THOROUGHLY IN ORDER FOR MAXIMUM OPERATION OF THE MACHINE PERFORMANCE.

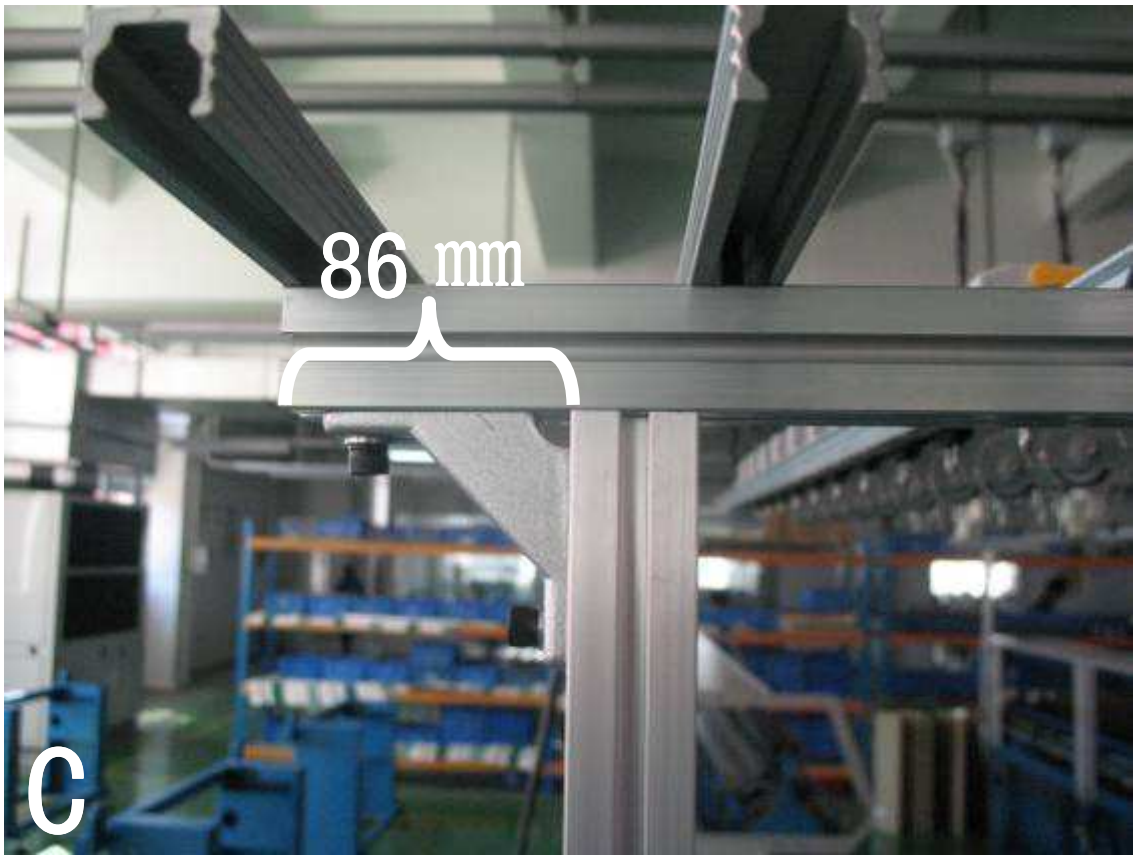
CONTENT PAGE

CONTENT PAGE

1. INSTALLATION

1. INSTALLATION OF TOP TENSIONER.



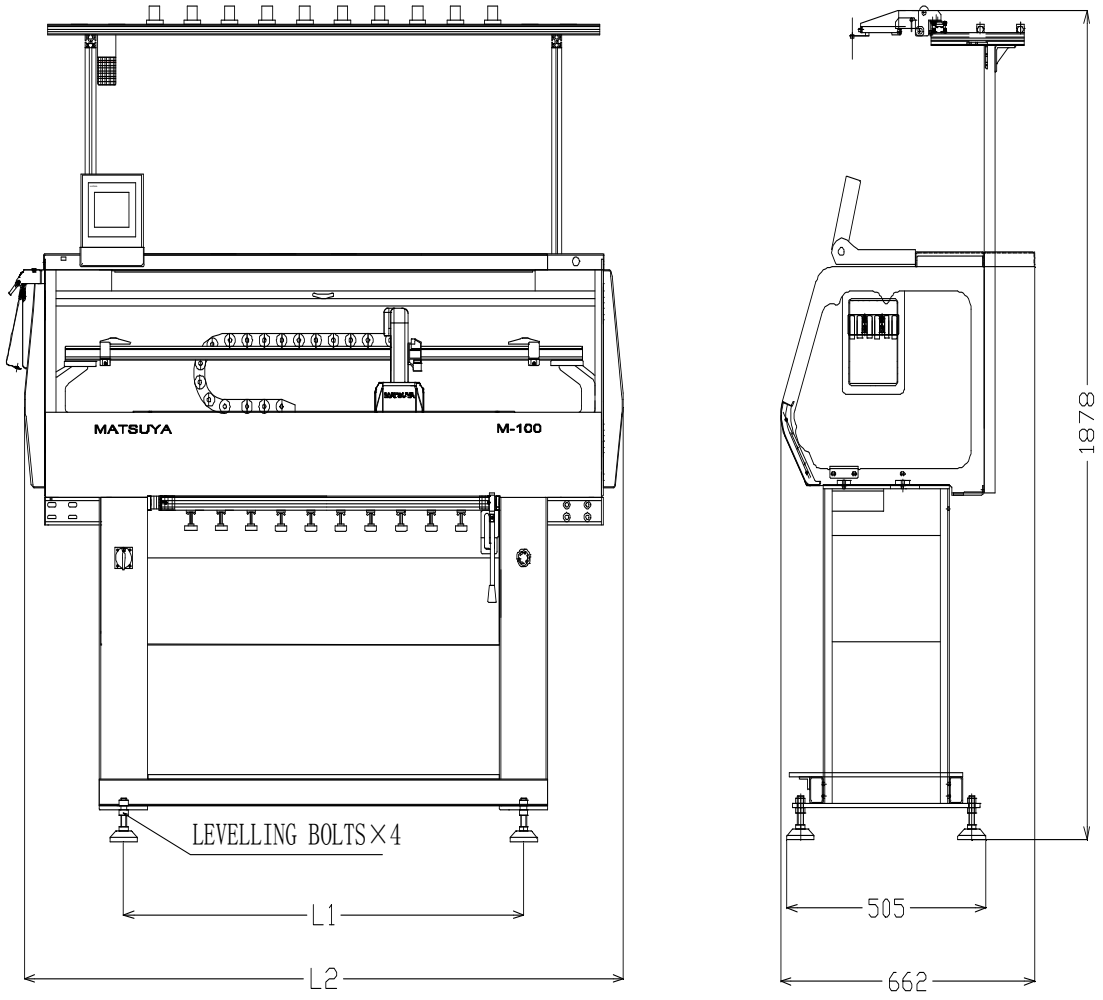


A THE PITCTURE IS BEFORE INSTALLATION.

B LOOSE THE SCREWS AND ADJUST THE POSITION OF THE TOP TENSION SATND.

C THIS PITURRE IS AFTER INSTALLATION.

2. PLACE THE MACHINE ON THE FLAT GROUND TO MAKE SURE THERE IS NO VIBRATION WHEN MACHINE IS OPERATING.
3. LEVEL THE MACHINE WITH THE 4 LEVELLING BOLTS
4. MACHINE VOLTAGE: 220V, SINGLE-PHASE (TRANSFORMER IS REQUIRED FOR DIFFERENT VOLTAGE)

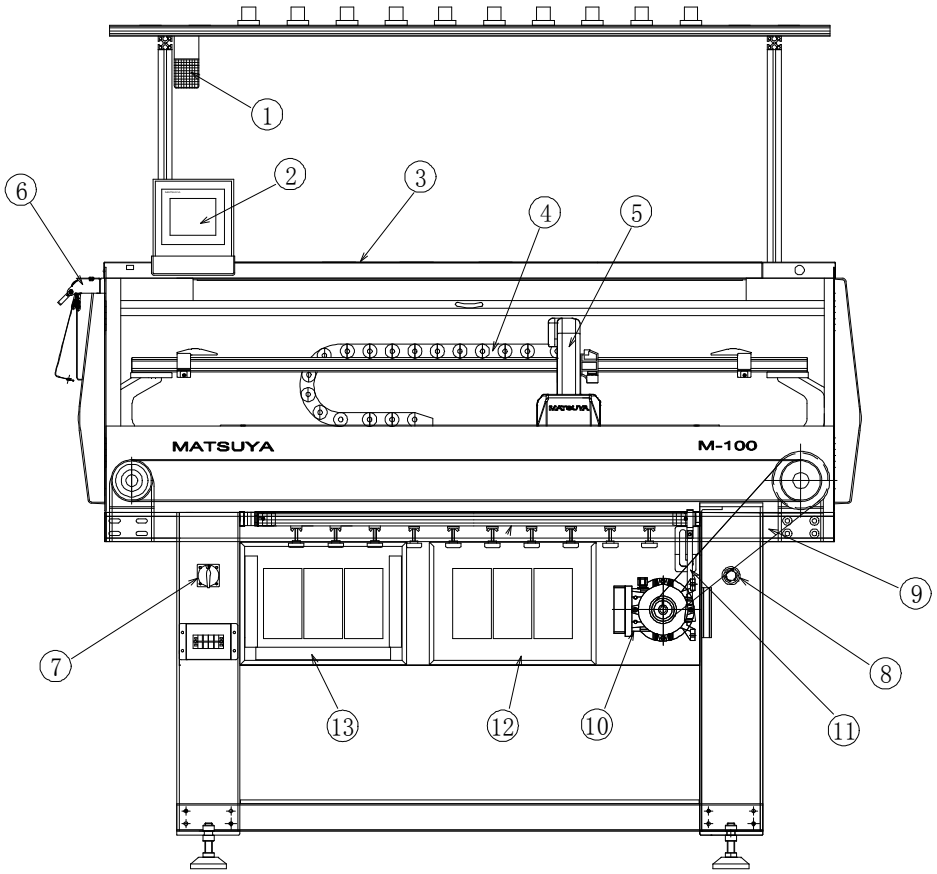


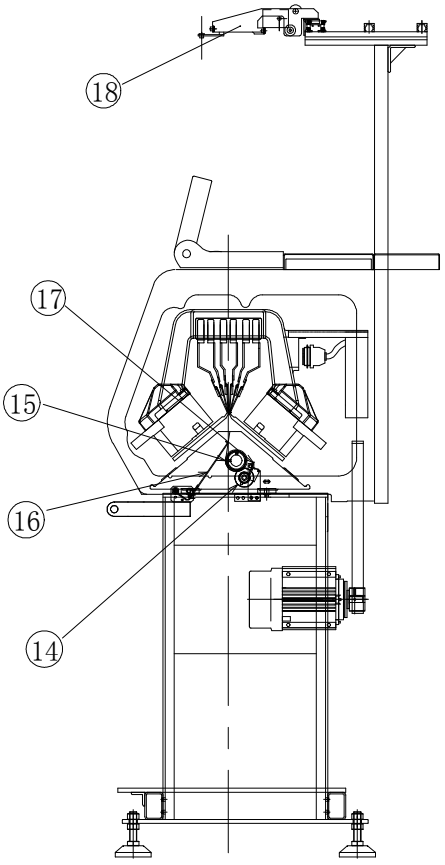
MODEL	K N I T T I N G W I D T H	L1(mm)	L2(mm)	WEIGHT(KG)
M-100	40″ (1016mm)	1162	1705	356

NOTE:

TAKE MOST CAUTION WHEN TRANSPORTING THE MACHINE.

2. NAME OF EACH PARTS





① PILOT
② DISPLAY
③ YARN BOBBIN TABLE
④ CATERPILLAR
⑤ CARRIAGE
⑥ SIDE TENSIONER
⑦ SYSTEMSWIFT
⑧ EMERGENCY STOP
⑨ RACK MOTOR
⑩ DRIVE MOTOR
⑪ TAKE-DOWN SET LEVER
⑫ TRANSFORMER
⑬ ELECTRONIC BOX
⑭ AUX. ROLLER
⑮ TAKE-DOWN ROLLER
⑯ FABRIC DROP DETECTOR
⑰ FABRIC ROLL-IN DETECTOR
⑱ MAIN TENSIONER

3. SAFETY REGULATIONS

RULESIBIT

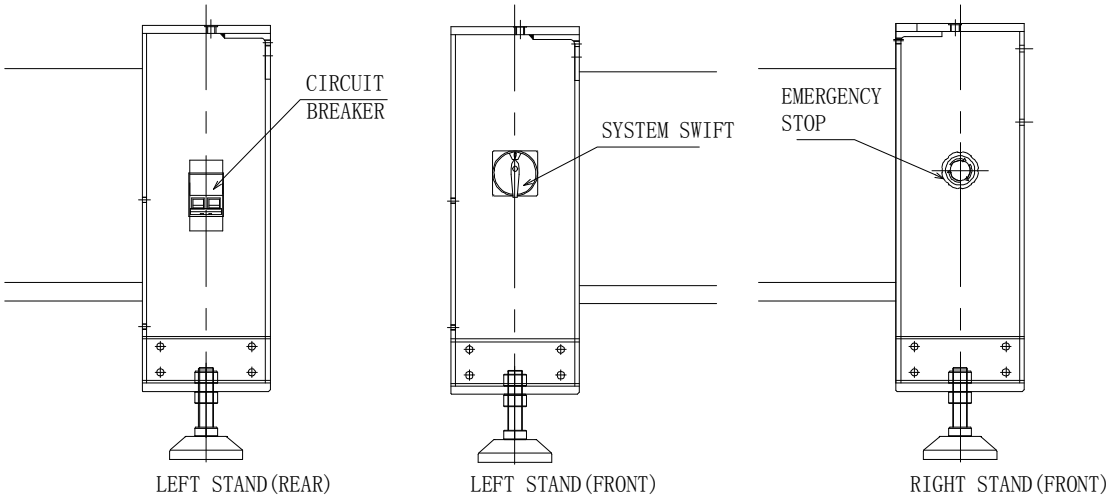
1. PLEASE FOLLOW THE PROCESS IN THE OPERATION MANUAL AND THE WARNINGS.
2. IT IS A MUST TO PRECEDE THE PROCESS OF ALL SAFETY REGULATIONS.
3. IT IS A MUST TO KEEP THE MACHINE CLEAN AT ALL TIMES.
4. PLEASE SHUT DOWN THE MACHINE POWER BEFORE CLEANING THE MACHINE.
5. PLEASE SHUT DOWN THE MACHINE POWER BEFORE DOING MAINTENANCE.

PROHIBITS

1. DO NOT RUN THE MACHINE WITHOUT FULLY UNDERSTAND THE OPERATION.
2. DO NOT LEAVE THE MACHINE WHEN NOT SURE THAT THE MACHINE IS NOT AT SAFE CONDITION.
3. DO NOT REMOVE THE SAFETY DEVICES OF THE MACHINE.
4. DO NOT WEAR LOOSE CLOTHES, LONG HAIR AND LONG NECKLACES OR HAND CHAINS WHEN OPERATING THE MACHINE.
5. DO NOT RUN THE MACHINE DURING LIGHTNING OR THUNDER. THIS MAY EASILY DAMAGE THE ELECTRONIC SYSTEMS.

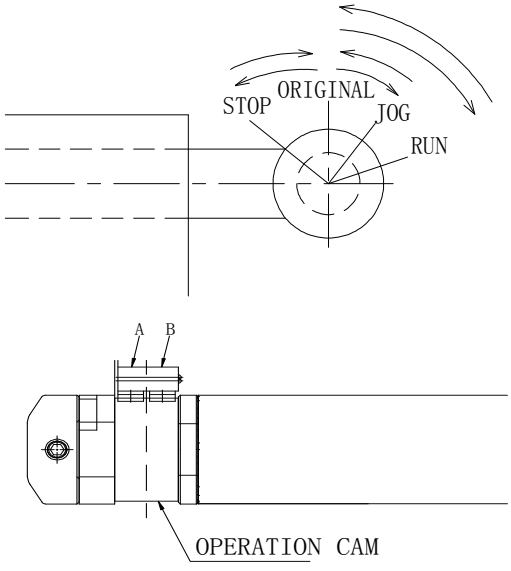
4. MACHINE OPERATION AND ADJUSTMENT

4.1 MACHINE POWER

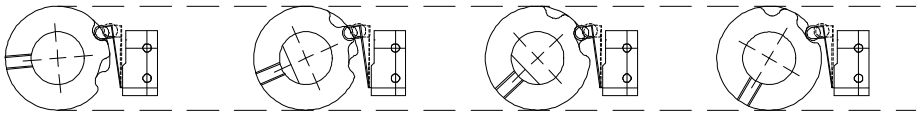


1. MAKE SURE THE CARRIAGE IS AT THE LEFT END BEFORE SWITCHING ON THE MACHINE.
2. TURN OFF THE MACHINE POWER DURING MACHINE REPAIRING OR LONG-TERM STOPPING OF THE MACHINE.
3. MACHINE SYSTEM SWITCH IS AT THE FRONT LEFT STAND OF THE MACHINE. TURN CLOCKWISE FOR “ON”.
4. IT IS ADVISABLE TO KEEP 30 SECONDS TIME LAP BEFORE STARTING THE MACHINE AGAIN AFTER TURNING OFF THE MACHINE TO PREVENT DAMAGING THE P.C. BOARDS.
5. MACHINE WILL STOP WHEN EMERGENCY STOP BUTTON IS PRESSED.

4.2 SWITCH BAR & CARRIAGE MOVEMENT



STATE	A	B
STOP	ON	OFF
ORIGIN	OFF	OFF
JOG	OFF	ON
RUN	ON	ON



NOTE:

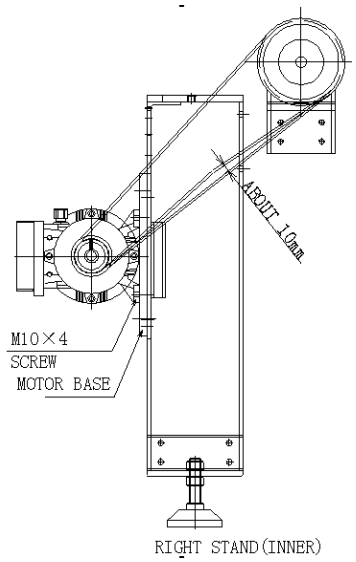
1. MAKE SURE THE SWITCH BAR IS ALWAYS AT THE NEUTRAL POSITION.
2. CARRIAGE SHOULD ALWAYS BE AT LEFT SIDE WHEN USING "WTE" OR "ORI" KEYS.
3. TAKE-DOWN MOTOR SHOULD ALWAYS BE AT REST POSITION WHEN THE MACHINE IS STOPPED . THIS IS TO PREVENT THE TAKE-DOWN ROLLER FROM CONSTANT ROTATING. TO RESTART THE MACHINE, TURN THE SWITCH BAR TO STOP POSITION FIRST TO INITIATE THE TAKE-DOWN MOTOR BEFORE TURNING TO "RUN" POSITION.

WARNING:

BEFORE STARTING THE MACHINE, THE SWITCH BAR SHOULD BE TURNED TO THE "STOP" POSITION IN ORDER TO INITIATE THE TAKE-DOWN MOTOR FOR SUFFICIENT TAKE-DOWN FORCE TO ENTER EITHER "JOG" OR "RUN" CONDITION. THIS IS TO PREVENT INSUFFICIENT TAKE-DOWN FORCE FROM CAUSING UPRAISING OF THE FABRIC WHICH MAY RESULT IN THE DAMAGING OF NEEDLES.

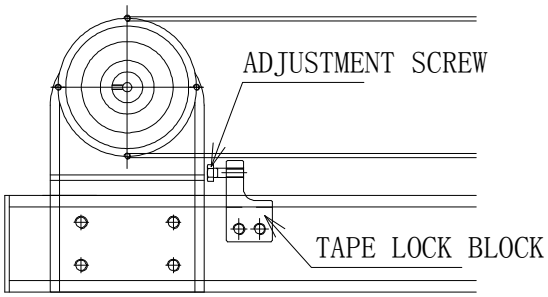
4.3 DRIVE MECHANISM

4.3.1 ADJUSTMENT OF MOTOR TIMING BELT:



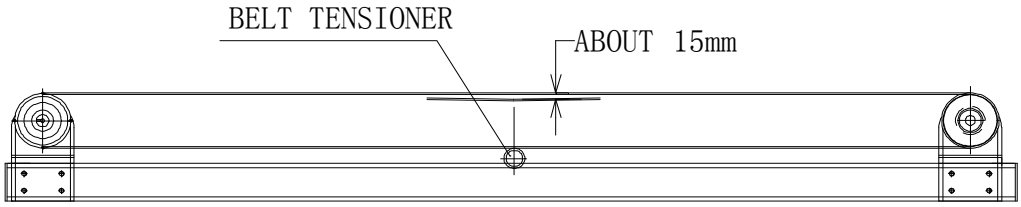
AS SHOWN IN LEFT DIAGRAM, LOOSEN THE 4 SCREWS AT THE MOTOR BASE, ADJUST THE TIMING BELT TO ENABLE PRESS DOWN OF ABOUT 10MM. AFTER ADJUSTMENT, FASTEN THE 4 SCREWS.

4.3.2 ADJUSTMENT OF CARRIAGE TIMING BELT:



MACHINE LEFT POSITION

METHOD TO ADJUST:
LOOSEN THE M8 SCREW TO ADJUST THE TENSION OF THE BELT TO ENABLE PRESS DOWN OF ABOUT 15MM. AFTER ADJUSTMENT, FASTEN THE SCREW.

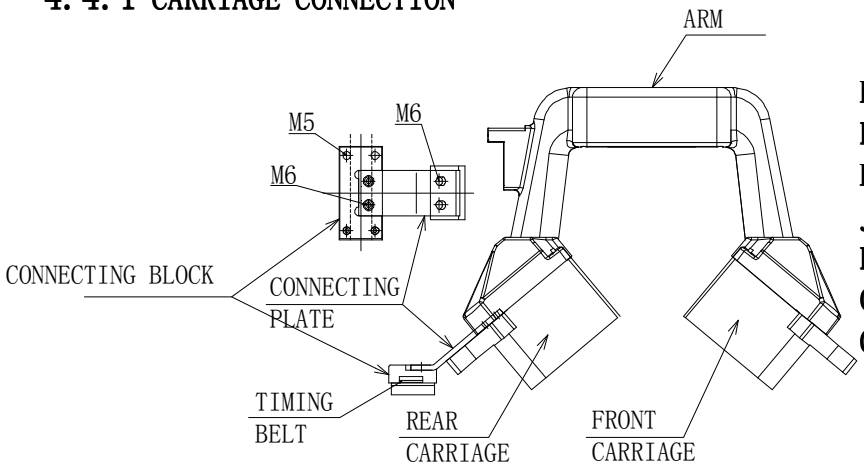


TIMING BELT

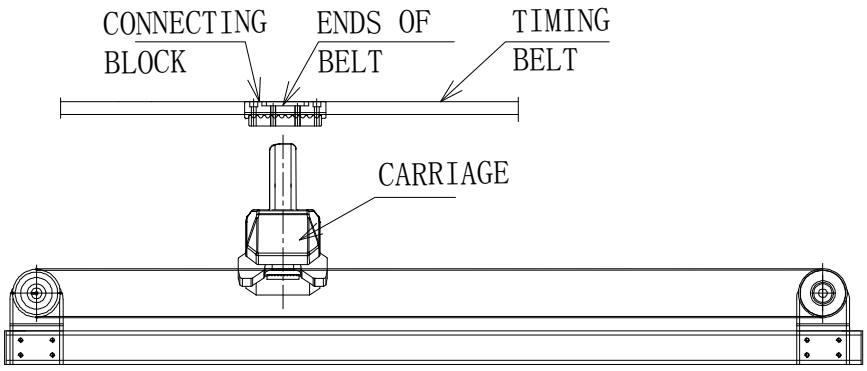
IF THE BELT IS A LITLE TOO STRETCH, MOVE UPWARD THE BELT TENSION ROLLER FOR ADJUSTMENT.

4.4 CARRIAGE

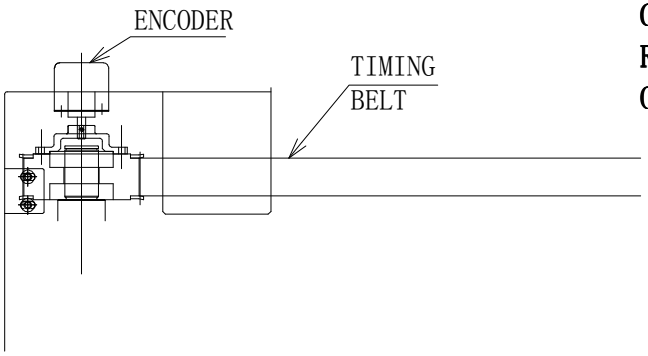
4.4.1 CARRIAGE CONNECTION



DRIVE TIMING BELT IS FIXED TO THE CONNECTING BLOCKS WHERE THEY ARE JOINED TO THE CONNECTING PLATE AT ONE END, WITH THE OTHER END JOINED TO THE REAR CARRIAGE.

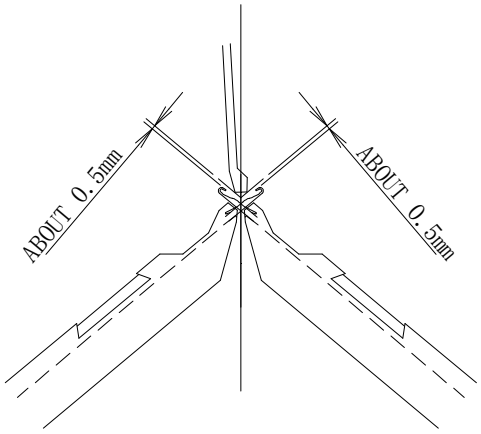


4.4.2 ENCODER



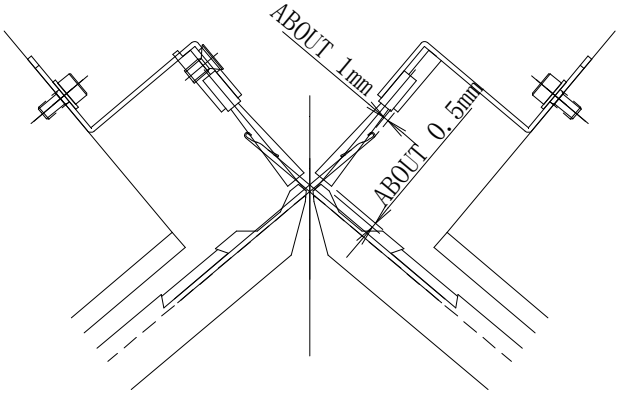
ENCODER READS THE POSITION OF THE CARRIAGE. OPTIMUM ORIGIN SETTING IS REQUIRED TO ASSURE THE CORRECT OPERATION FOR EACH MOVEMENT.

4.4.3 YARN FEEDER ADJUSTMENT



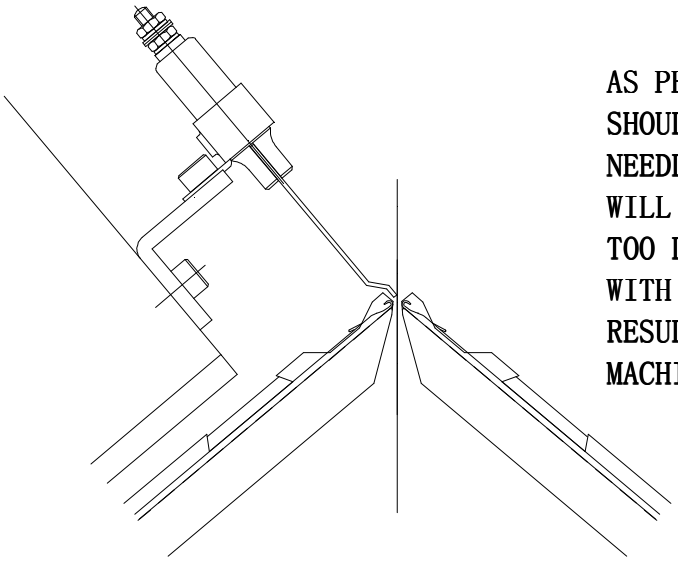
THERE ARE 6 YARN FEEDERS (1-6) IN THIS MACHINE. AS PER DRAWING, ALL FEEDERS ARE TO BE ADJUSTED TO HAVE THE 0.5MM CLEARANCE WITH THE NEEDLES. TOO LOW THE POSITION WILL RESULT IN BENDING THE LATCH OF THE NEEDLES.

4.4.4 BRUSH ADJUSTMENT



AS PER DRAWING, MOUNT THE BRUSH PARALLELTO THE CARRIAGE.
BAD ADJUSTMENT WILL LEAD TO DROP STITCH.

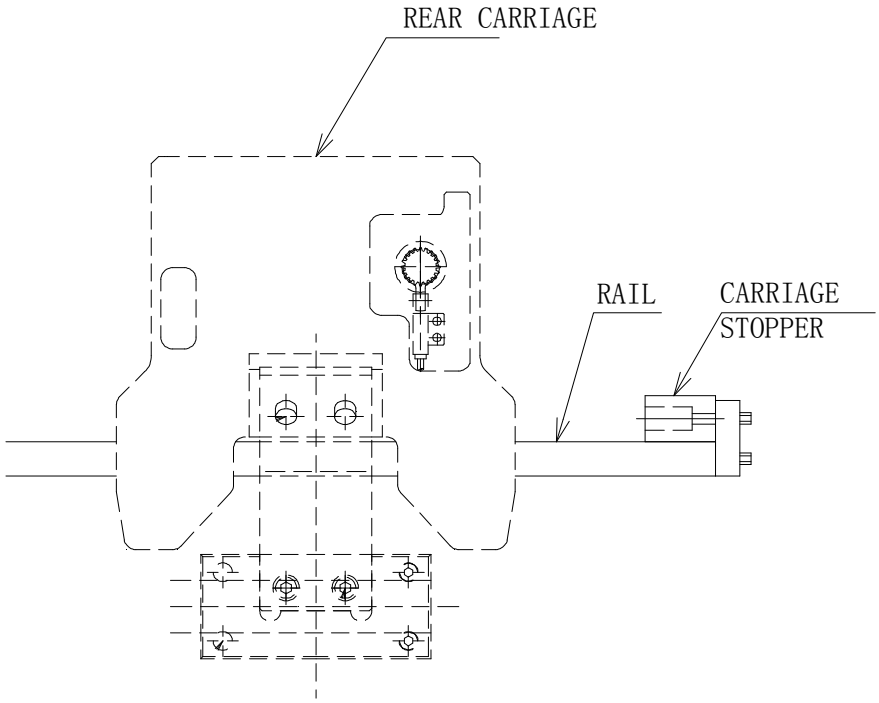
4.4.5 NEEDLE DETECTOR ADJUSTMENT



AS PER DRAWING, TIP OF THE DETECTOR SHOULD BE SET BETWEEN THE FRONT & REAR NEEDLE BEDS. TOO HIGH THE POSITION WILL CONTACT WITH THE YARN FEEDER AND TOO LOW THE POSITION WILL CONTACT WITH THE REST YARN. BOTH SITUATION RESULTS IN FREQUENT STOPPAGE OF THE MACHINE.

4.4.6 ADJUSTMENT OF CARRIAGE STOPPER (BOTH SIDES)

AS PER BELOW DRAWING, THE POSITION OF THE CARRIAGE STOPPER SHOULD BE ADJUSTED CORRECTLY FOR SAFETY OPERATION.



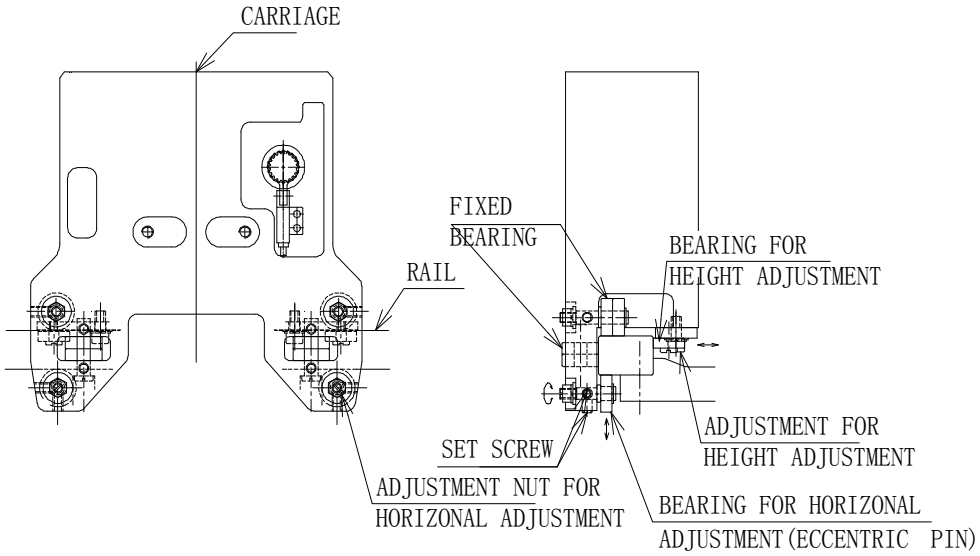
4.4.7 BEARING ADJUSTMENT

HORIZONTAL ADJUSTMENT OF THE BEARING:

SLIGHTLY LOOSEN THE 2 M6 SCREW AND NUTS. THEN, TURN THE ECCENTRIC PIN WITH A SCREWDRIVER UNTIL THE BEARING SLIGHTLY CONTACTS WITH THE RAIL. AFTER THIS, FASTEN THE NUTS & SCREWS.

VERTICAL ADJUSTMENT OF THE BEARING:

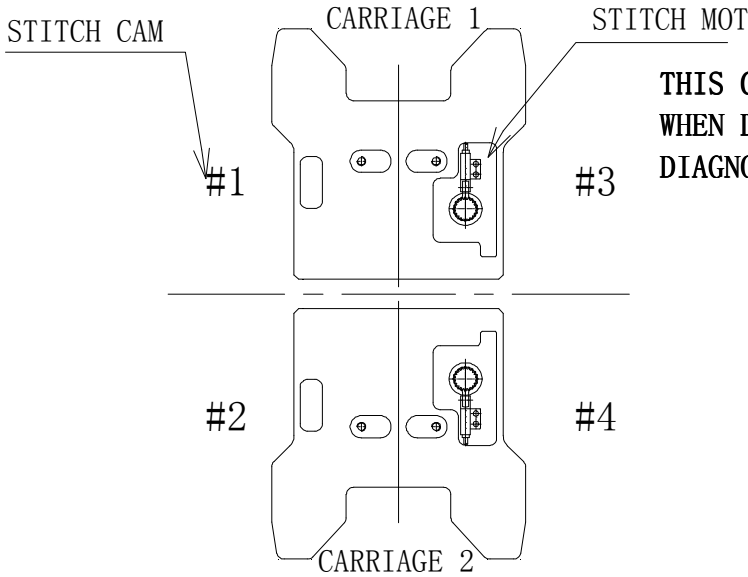
SLIGHTLY LOOSEN THE 2 M6 SCREW UNTIL THE BEARING SLIGHTLY CONTACTS WITH THE RAIL. AFTER THIS, FASTEN THE M6 SCREWS.



NOTE:

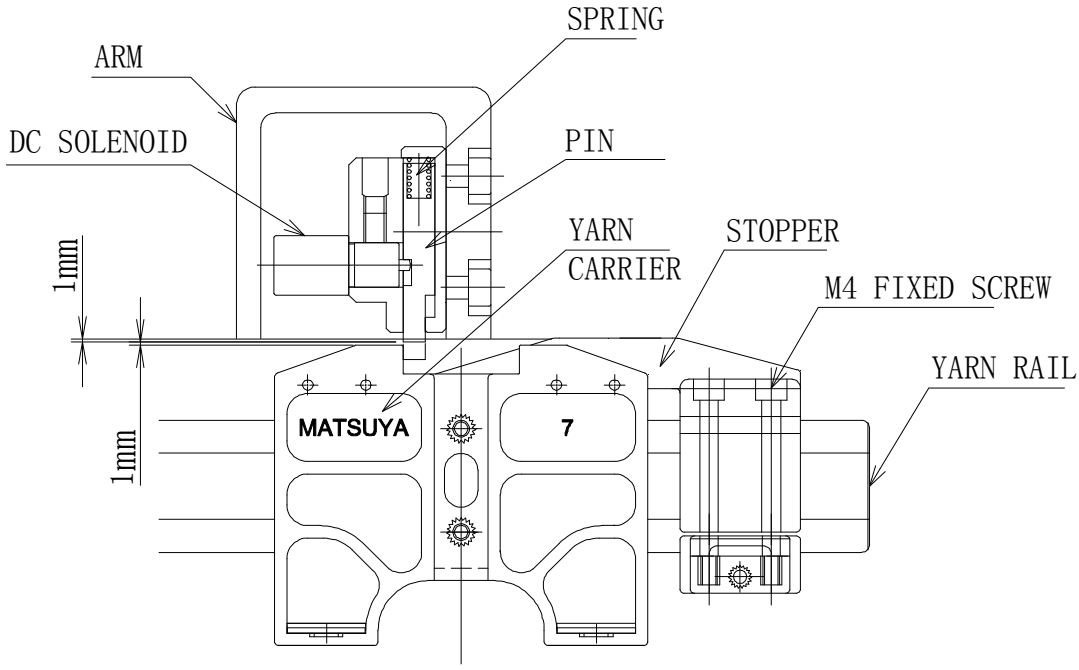
IT WILL DAMAGE THE BEARING WHEN CONTACT WITH THE RAIL IS TOO STRONG.

4.4.8 CARRIAGE NO.

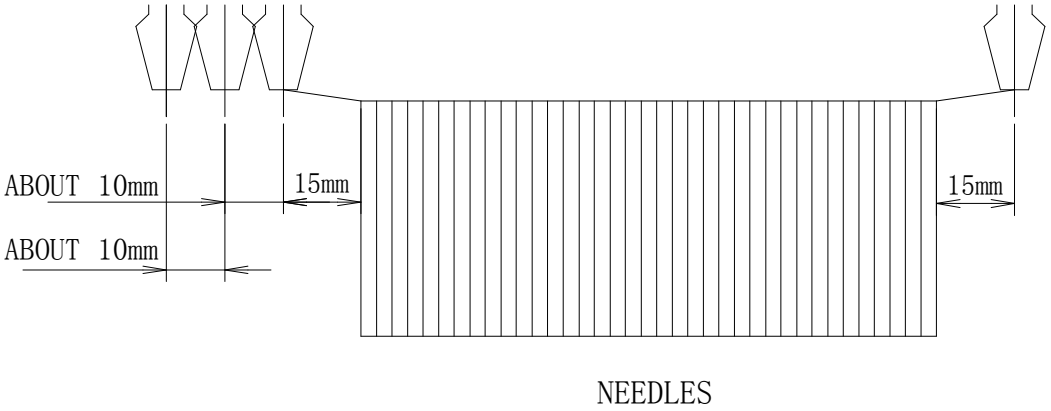


THIS CARRIAGE NO. IS REQUIRED WHEN DOING MAINTENANCE OR SELF DIAGNOSIS PROCESS.

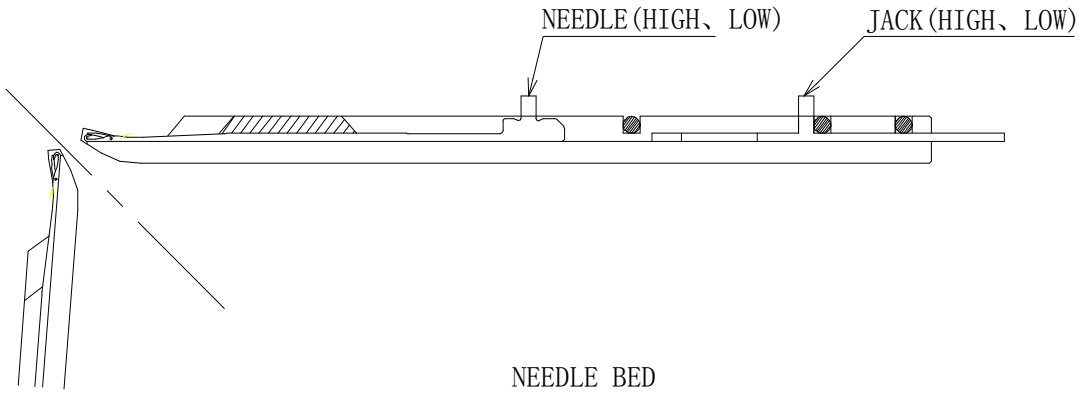
4.4.9 YARN CHANGE DEVICE



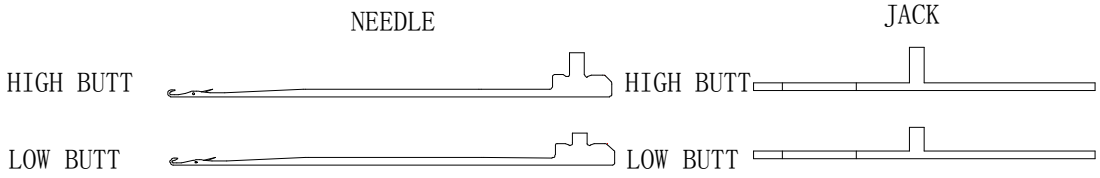
YARN CHANGE IS EXERCISED BY THE SOLENOIDS INSIDE THE ARM. SET THE CLEARANCE AS SHOWN IN BELOW DIAGRAM. THE STOPPER SHOULD BE SET TO AVOID OVERLAPPING OF THE YARN FEEDERS.



4.5 NEEDLE BEDS

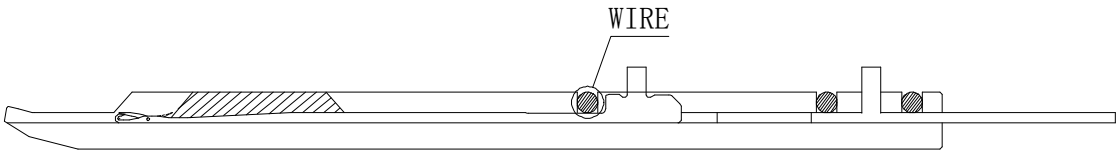


4.5.1 TYPES OF NEEDLES



AS PER ABOVE DIAGRAM, THERE ARE 2 TYPES OF NEEDLES AND JACKS IN THIS MACHINE. COMBINATION OF JACKS AND NEEDLES TO MAKE VARIOUS PATTERNS.
NEEDLE (HIGH, LOW) 、JACK (HIGH, LOW)

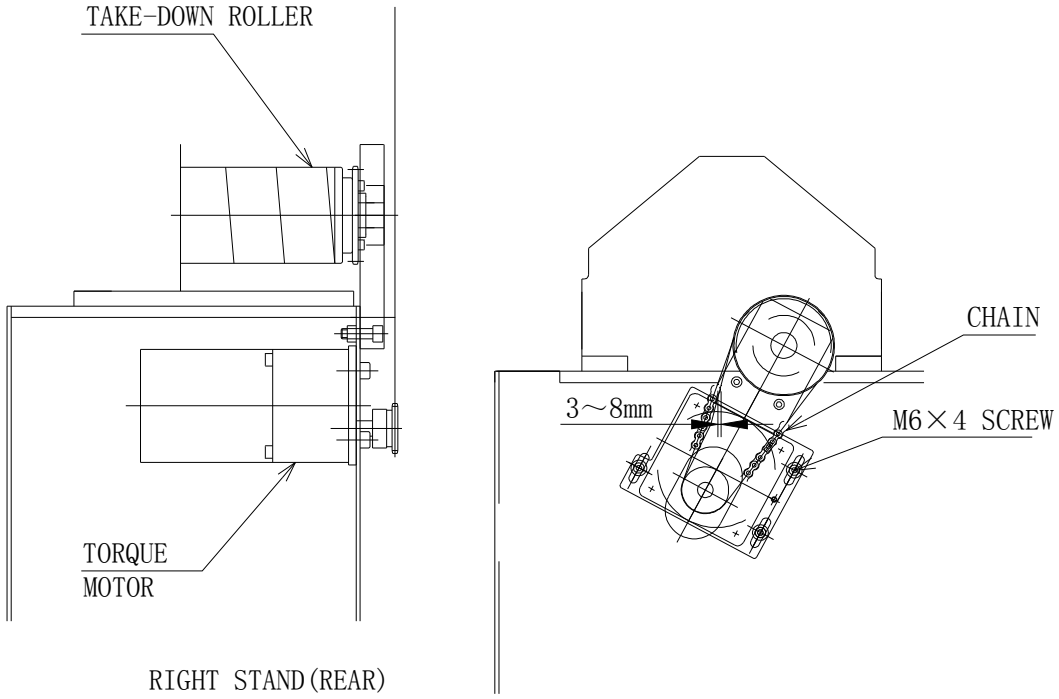
4.5.2 BRIEF DIAGRAM OF REST NEEDLE



THERE IS NO NEED TO TAKE OUT THE NEEDLES THAT ARE NOT USED. REMOVE THE WIRES AND PUSH DOWN THE NEEDLES AND JACKS TO THE POSITION AS INDICATED IN ABOVE DIAGRAM. AFTER THIS, PUT BACK THE WIRE TO ITS ORIGINAL POSITION.

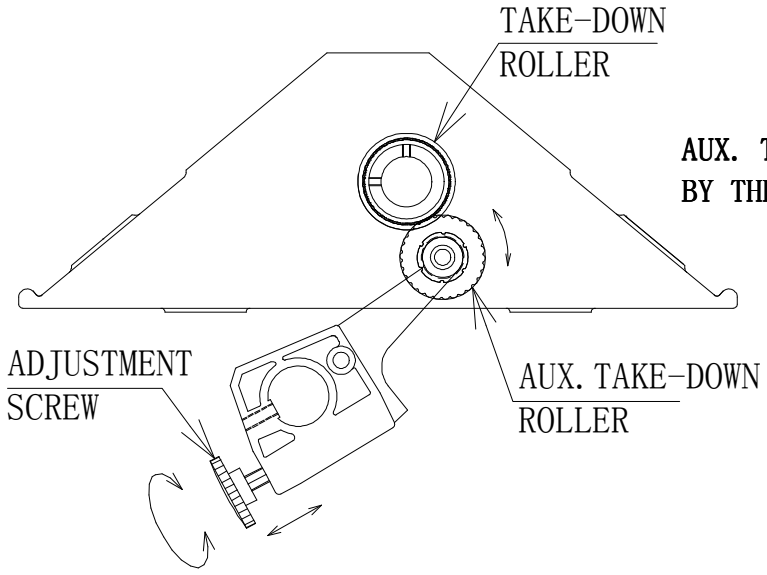
4.6 TAKE-DOWN DEVICE

4.6.1 TAKE-DOWN MOTOR



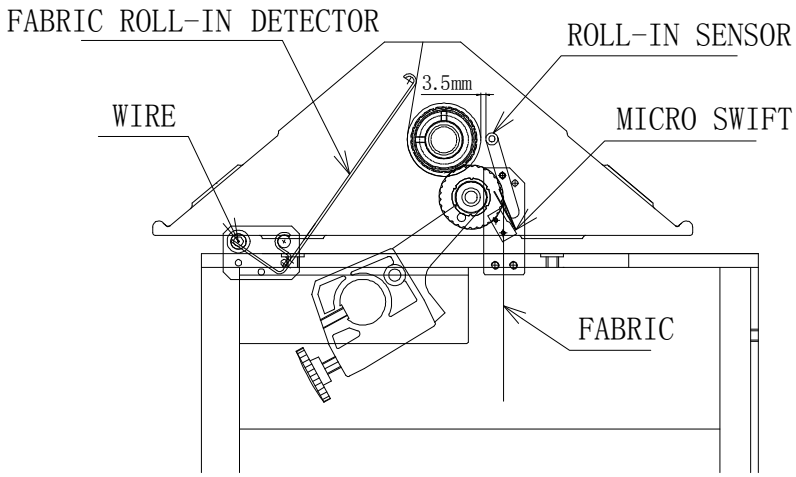
TAKE-DOWN MOTORA CAN BE FOUND INSIDE THE RIGHT STAND. AFTER ADJUSTING THE TIMING BELT TO ENABLE PRESS DOWN OF ABOUT 3-8MM, FASTEN THE 4 M6 SCREWS.

4.6.2 AUX. TAKE-DOWN ROLLER



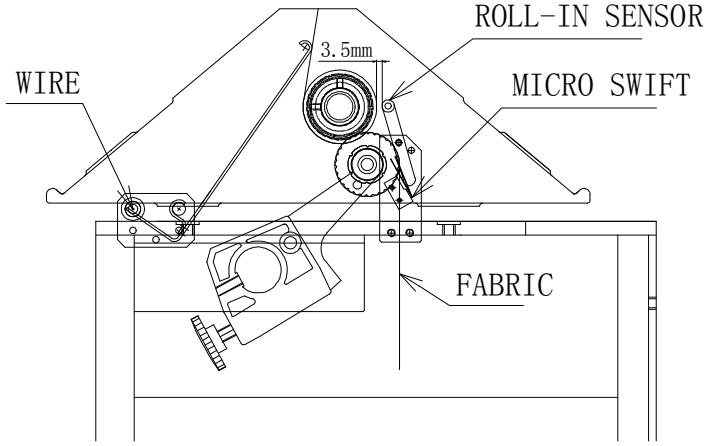
AUX. TAKE-DOWN ROLLER CAN BE ADJUSTED BY THE ADJUST SCREWS.

4.6.3 FABRIC DROP DETECTOR



ADJUST THE POSITION OF THE SENSOR ACCORDING TO THE KNITTING WIDTH.

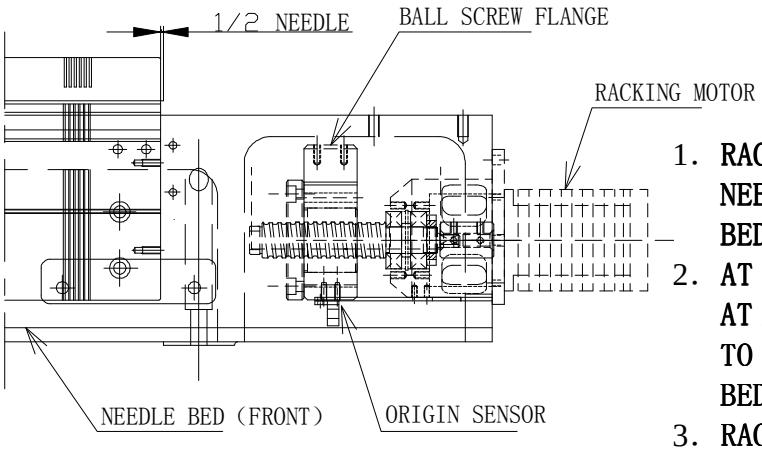
4.6.4 FABRIC ROLL-IN DETECTOR



DURING FABRIC ROLL-IN, THE ANTI ROLL-IN SENSOR ROD WILL MOVE TO THE REAR TO CLOSE THE MICRO SWITCHES AT BOTH ENDS FOR STOPPING THE MACHINE OPERATION.

4.7 RACKING DEVICE

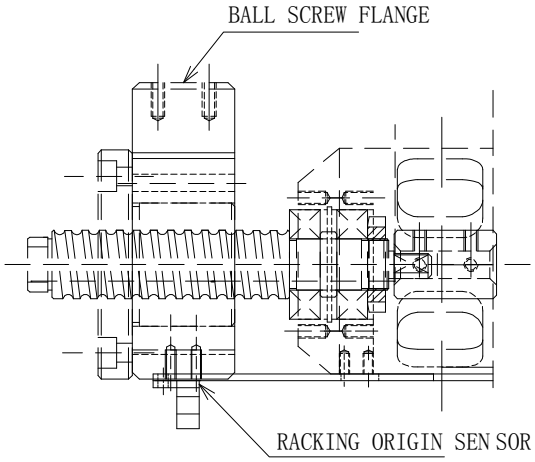
4.7.1 RACKING MECHANISM



NEEDLE BED (SIGHT SIDE)

1. RACKING DEVICE IS AT RIGHT SIDE OF NEEDLE BED. RACKING OF REAR NEEDLE BED IS EXERCISED BY THE BALL SCREW.
2. AT ORIGIN POSTION, THE EDGE NEEDLE AT FRONT NEEDLE BED IS LEFT 1/2 PITCH TO THE EDGE NEEDLE OF THE REAR NEEDLE BED.
3. RACKING OF REAR NEEDLE BED AT CENTER POSITION IS POSSIBLE FOR 3½P RACKING.

4.7.2 ADJUSTMENT OF RACKING ORIGIN SENSOR



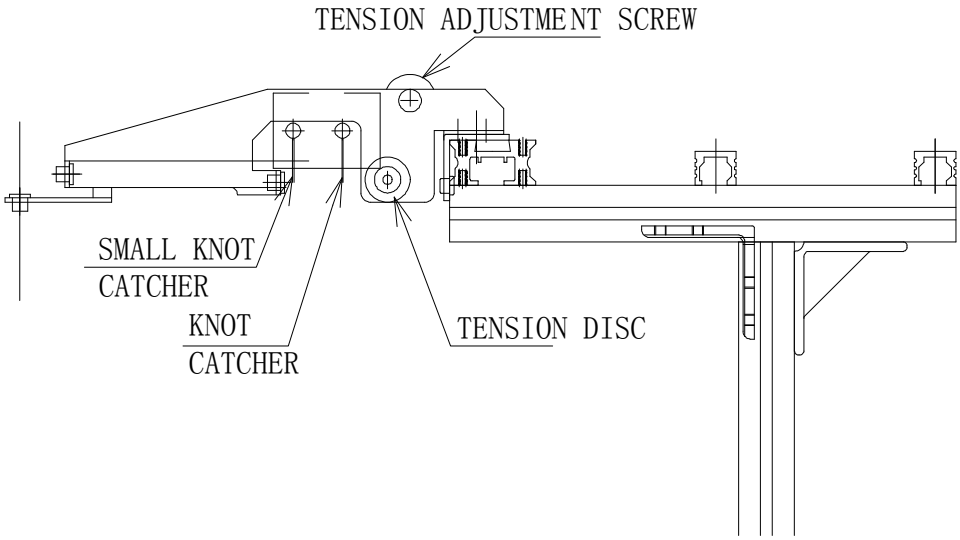
1. AT ORIGIN POSITION, FRONT BED SHOULD
   BE LEFT 1/2 PITCH TO REAR NEEDLE BED.
2. HERE, AFTER LOOSENING THE FIXED SCREW, MOVE THE RACKING ORIGIN SENSOR TO THE CORRESPONDENT POSITION OF THE SENSING PLATE. WHEN THE LIGHT IS OFF, CONFIRM WHETHER THE FRONT NEEDLE BED IS LEFT 1/2 PITCH TO THE REAR NEEDLE BED.

NOTE:
1. NEEDLE BED RETURNS TO ITS ORIGINAL POSITION AFTER EACH ONE PIECE KNITTING.
2. AFTER ORIGIN RESET, THE SYSTEM WILL AUTOMATICALLY DETECT TO RESET THE NEEDLE BED TO ITS ORIGIN POSITION.
3. AFTER RACKING MANUALLY, IT IS A MUST TO DO RACKING RESET. (FOR 2P OR MORE RACKING, PLEASE TAKE CAUTION THAT THE NEEDLES MAY BEND.) 。

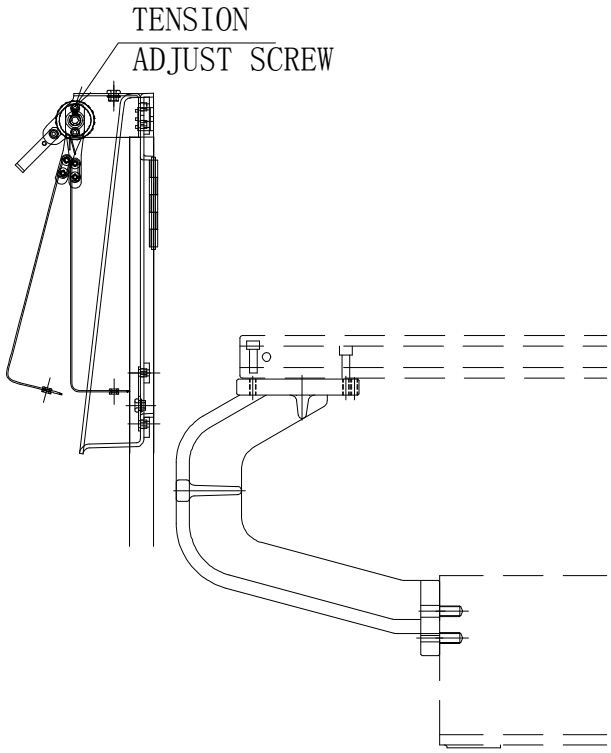
4.8 ADJUSTMENT OF YARN TENSIONER

4.8.1 MAIN TENSIONER

PROPER TENSION ADJUSMENT IS MOST IMPORTANT IN KNITTING.

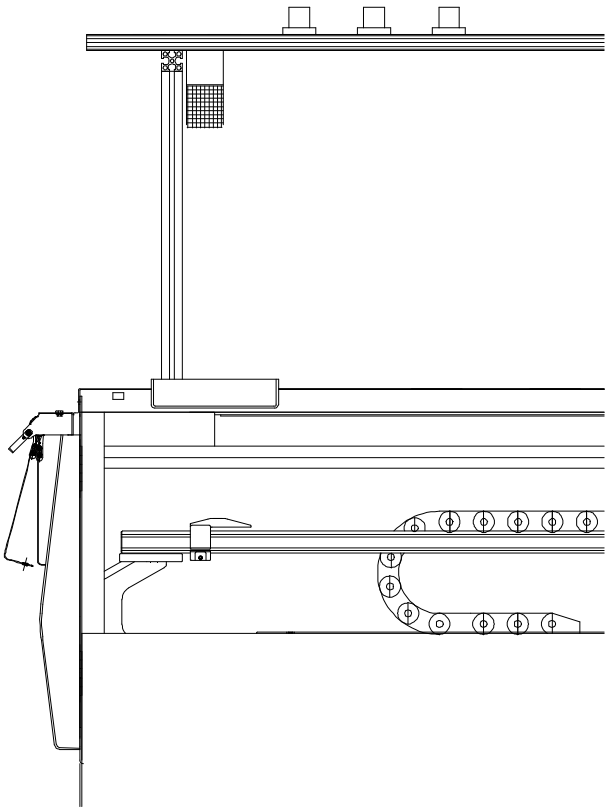


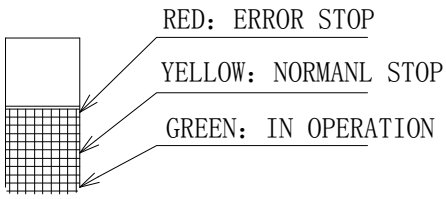
4.8.2 SIDE TENSIONER



THERE ARE SIDE TENSIONERS AT BOTH RIGHT & LEFT SIDES. ADJUST THE TENSION PROPERLY ACCORDING TO THE FABRIC.

4.8.3 PILOT LAMP





WHEN MACHINE IS STOPPED BY SWITCH BAR, RED LAMP WILL NOT LIGHT UP. YELLOW LAMP LIGHTS UP.

5 MACHINE MAINTENANCE

5.1 CLEANING (EVERY SHIFT)

CLEAN THE MACHINE WITH CLOTH FILLED WITH LOW VISCOSITY LUBRICATION OIL. ESPECIALLY,

1. NEEDLE BEDS
2. CARRIAGE RAILS
3. YARN RAILS

5.2 OILING (EVERY SHIFT)

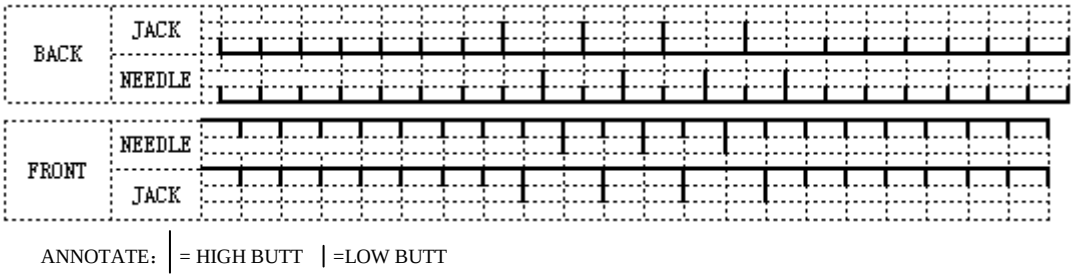
OILING HAS TO BE DONE AFTER CLEANING. ESPECIALLY:

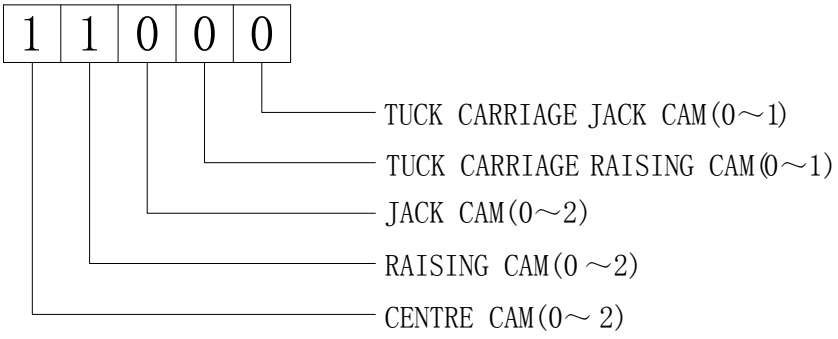
1. CARRIAGE BEARING
2. YARN RAILS
3. YARN PISTONS

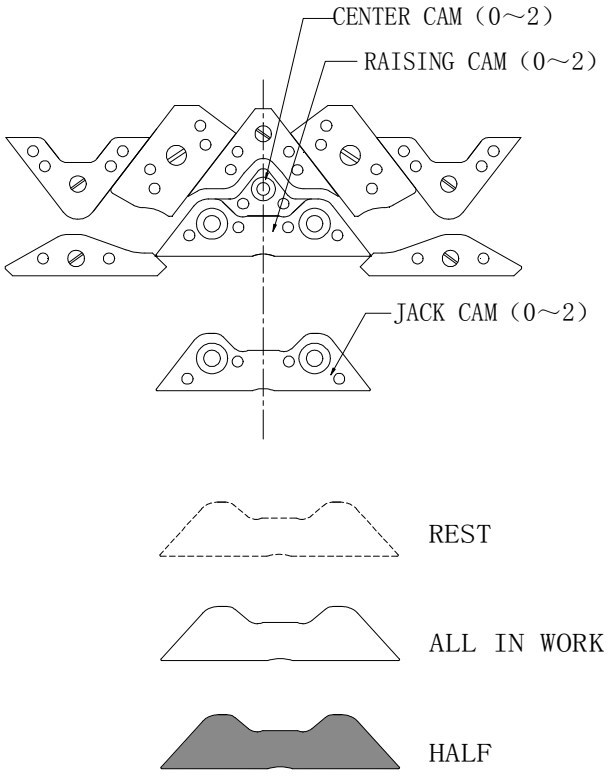
NOTE: NEVER DO OILING TO THE TRANSMISSION BELTS.

6 PATTERN DESIGN

6.1 EXPLANATION OF CAM DATA







CENTER CAM（0~2）

0：REST

1：ALL IN WORK

2：HALF POSITION

RAISING CAM（0~2）

0：REST

1：ALL IN WORK

2：HALF POSITION

JACK CAM（0~2）

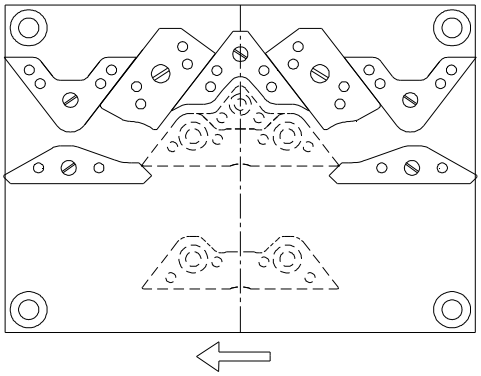
0：REST

1：ALL IN WORK

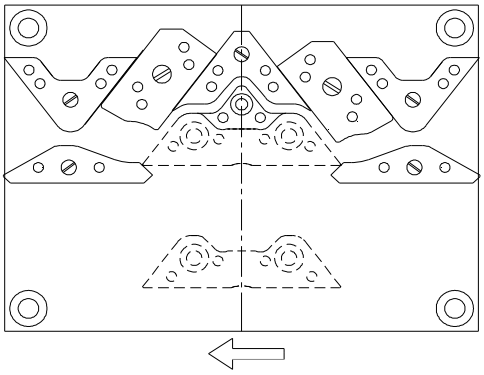
2：HALF POSITION

6.2 CAM DRAWINGS INDICATING THEIR POSITIONS

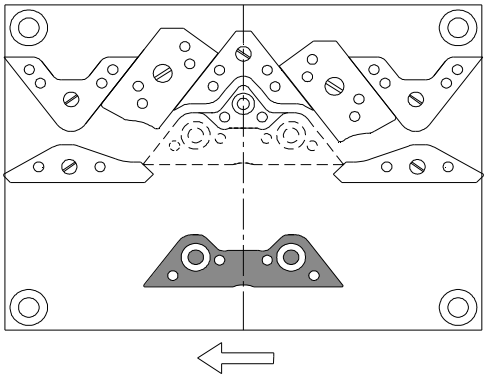
1、REST 0 0 0 0 0



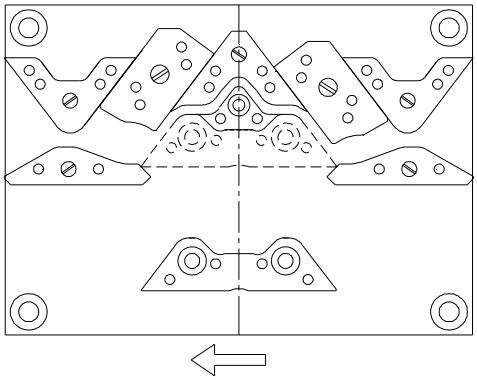
2、CENTER CAM DOWN 1 0 0 0 0



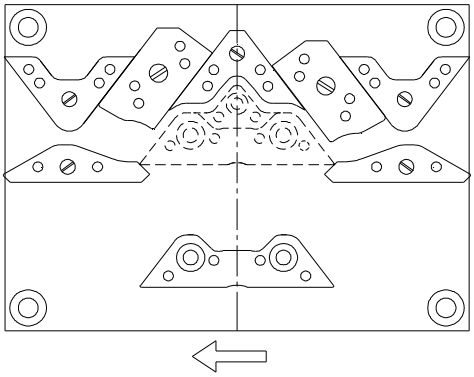
3、HIGH BUTT JACK KNIT 1 0 2 0 0



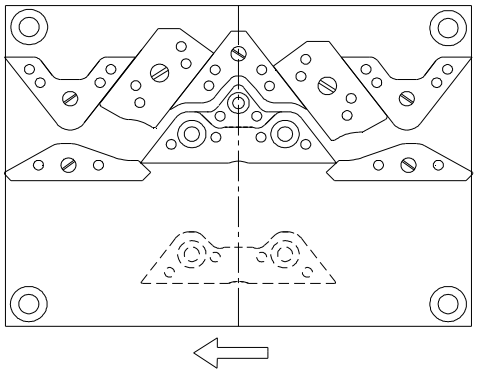
4、ALL JACK KNIT 1 0 1 0 0



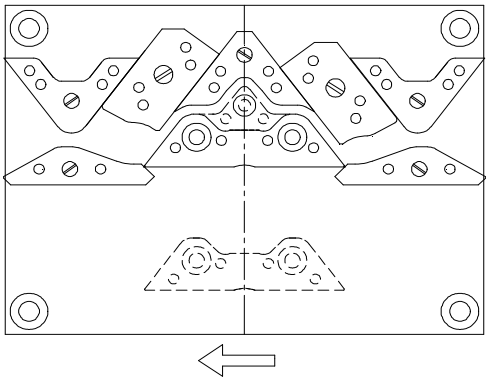
5、ALL JACK TUCK 0 0 1 0 0



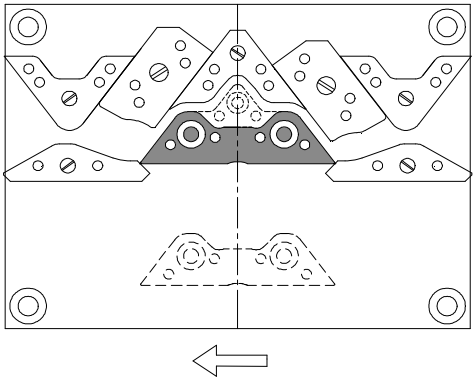
6、ALL NEEDLE KNIT 1 1 0 0 0



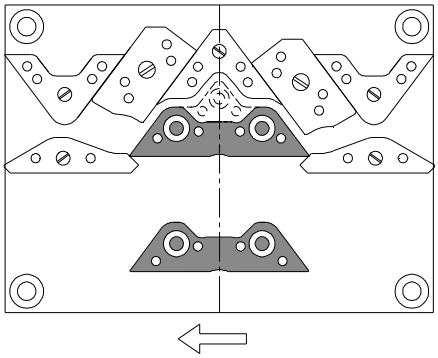
7、ALL NEEDLE TUCK 0 1 0 0 0



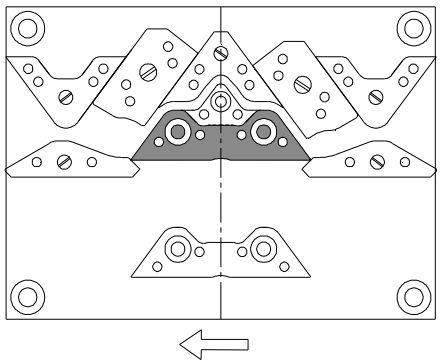
8、HIGH BUTT NEEDLE TUCK 0 2 0 0 0



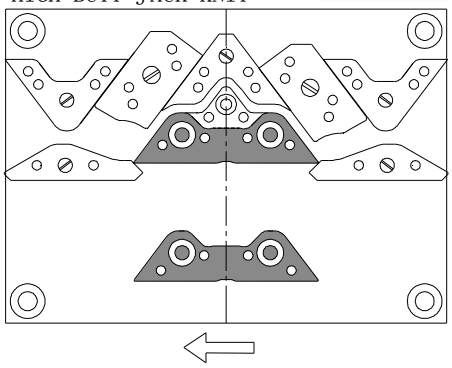
9、HIGH BUTT NEEDLE TUCK+
HIGH BUTT JACK TUCK 0 2 2 0 0



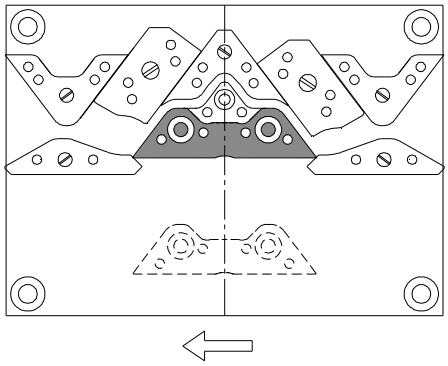
10、HIGH BUTT KNIT+
ALL JACK KNIT 1 2 1 0 0



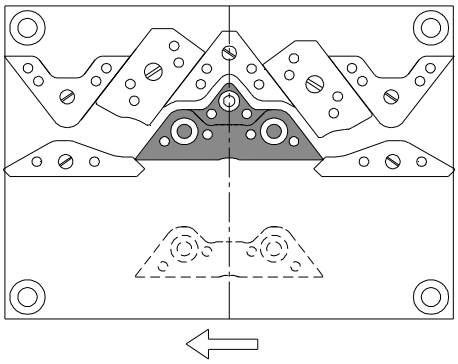
11、 HIGH BUTT NEEDLE KNIT+
HIGH BUTT JACK KNIT 1 2 2 0 0



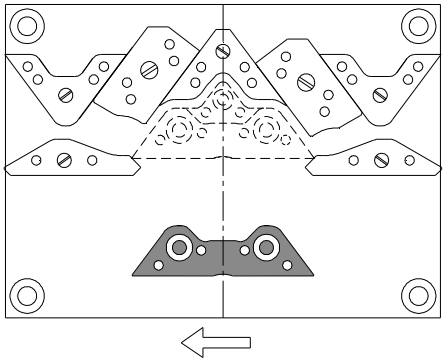
12、HIGH BUTT NEEDLE KNIT 1 2 0 0 0



13、HIGH BUTT NEEDLE KNIT 2 2 0 0 0



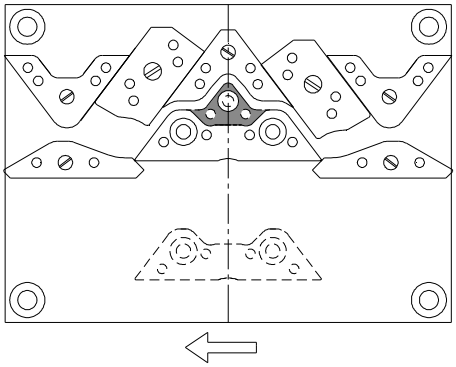
3A、HIGH BUTT JACK TUCK 1 0 2 0 0



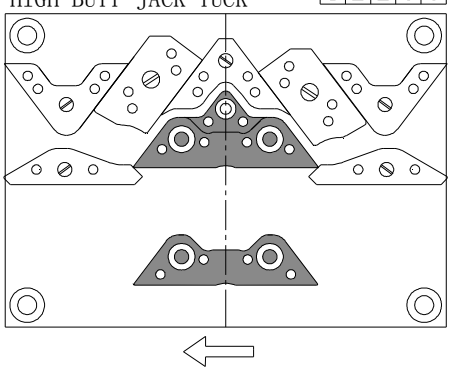
SPECIAL SAMPLES:

ADD SHIM TO CENTER CAM

7A、HIGH BUTT NEEDLE KNIT+
LOW BUTT NEEDLE TUCK 0 1 0 0 0



11A、 HIGH BUTT NEEDLE KNIT+
HIGH BUTT JACK TUCK 1 2 2 0 0



REMOVE SHIM FROM CENTER CAM

ADD SHIM TO CENTER CAM

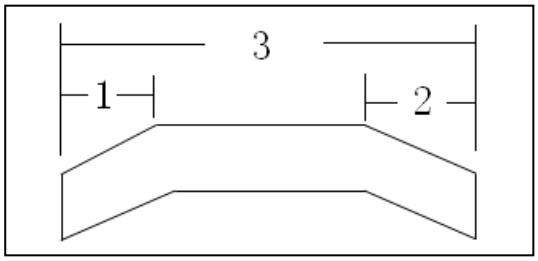
6．3 PATTERN SAMPLE

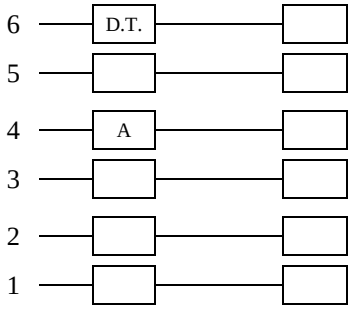
M-100 CONTROL SCHEME

DESIGN NO. ： NT001　　CUSTOMER：　　PAGE：1/1

DESIGN DESCRIPTION：FULL CARDIGAN RACK　　DATE：　　PRODUCE BY：

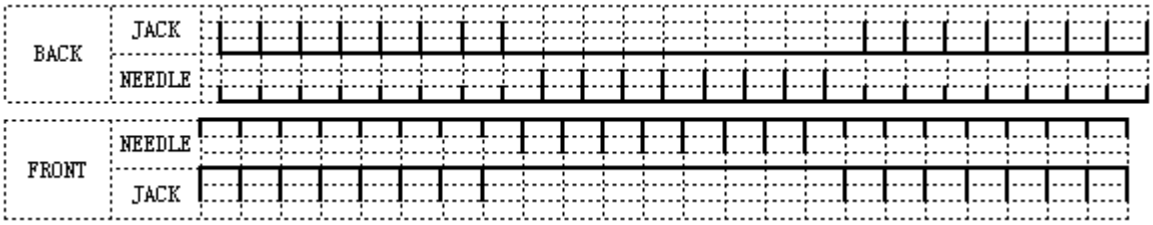
DESIGN DRAFT





18G

32s COTTON×3



ANNOTATE：|= HIGH BUTT　|=LOW BUTT

COURSE NO.	DIREC-TION	STITCH	CAM	YARN	RACK	SPEED	STRKE	TAKE DOWN
1	→	65	1 1 0 0 0	3	0	45	5	3	5
		65	1 1 0 0 0						
		J				-		=	
2	←	65	1 1 0 0 0	3	0	45	5	3	5
		65	1 1 0 0 0						
		J				-		=	
3	→			3	0	45	5	3	5
		85	1 1 0 0 0						
		J				-		=	
4	←	85	1 1 0 0 0	3	0	45	5	3	5
		J		0	0 3	-	0 0 4	=	0 0 1
5	→	65	1 1 0 0 0	6	0	45	5	3	5
		65	1 1 0 0 0						
		J				-		=	
6	←	85	1 1 0 0 0	6	0	45	5	3	5
		J				-		=	
7	→			0	0	45	5	3	5
		85	1 1 0 0 0						
		J				-		=	
8	←			0	0	45	5	3	5
		85	1 1 0 0 0						
		J				-		=	
9	→	40	1 1 0 0 0	3	0	45	3	3	5
		40	1 1 0 0 0						
		J				-		=	
10	←			3	0	45	4	3	5
		85	1 1 0 0 0						
		J				-		=	
11	→	60	1 0 1 0 0	3	0	34	5	1	5
		52	0 0 1 0 0						
		J				-		=	

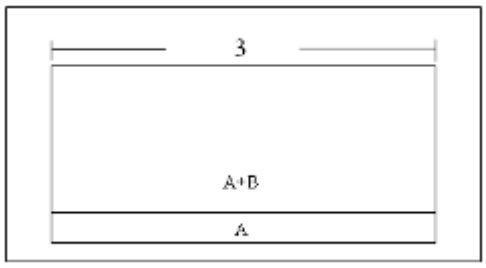
COURSE NO.	DIREC-TION	STITCH	CAM	YARN	RACK	SPEED	STRKE	TAKE DOWN
12	←			3	0	34	5	1	5
		J				-		=	
13	→	60	2 2 0 0 0	3	0	45	5	3	5
		52	0 2 0 0 0						
		J				-		=	
14	←			3	0	45	5	2	5
		J				-		=	
15	→	60	1 0 1 0 0	3	0	45	5	2	5
		52	0 0 1 0 0						
		J				-		=	
16	←	52	0 0 1 0 0	3	0	34	5	2	5
		60	1 0 1 0 0						
		J				-		=	
17	→			3	0	34	5	2	5
		J				-		=	
18	←	52	0 2 0 0 0	3	0	45	5	3	5
		60	2 2 0 0 0						
		J				-		=	
19	→			3	0	45	5	1	5
		J				-		=	
20	←	52	0 0 1 0 0	3	0	45	5	1	5
		60	1 0 1 0 0						
		J		0	1 1	-	0 2 0	=	0 8 0
21	→			3	0	45	5	3	5
		85	1 1 0 0 0						
		J				-		=	
22	←	85	1 1 0 0 0	3	0	45	5	3	5
		J				-		=	

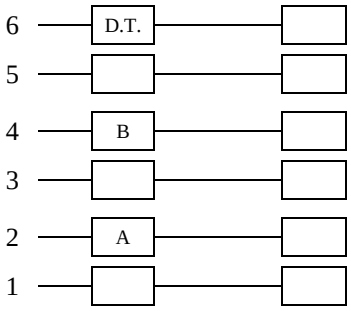
M-100 CONTROL SCHEME

DESIGN NO. ： NT002　　CUSTOMER：　　PAGE：1/1

DESIGN DESCRIPTION：BIRD'S EYE　　DATE：　　PRODUCE BY：

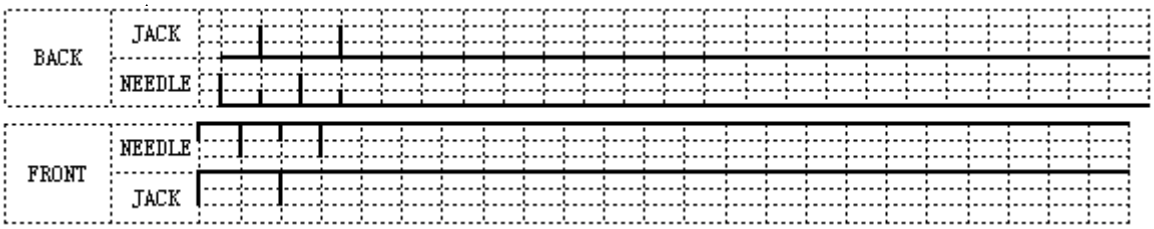
DESIGN DRAFT





18G

32s COTTON×3



ANNOTATE：|= HIGH BUTT　|=LOW BUTT

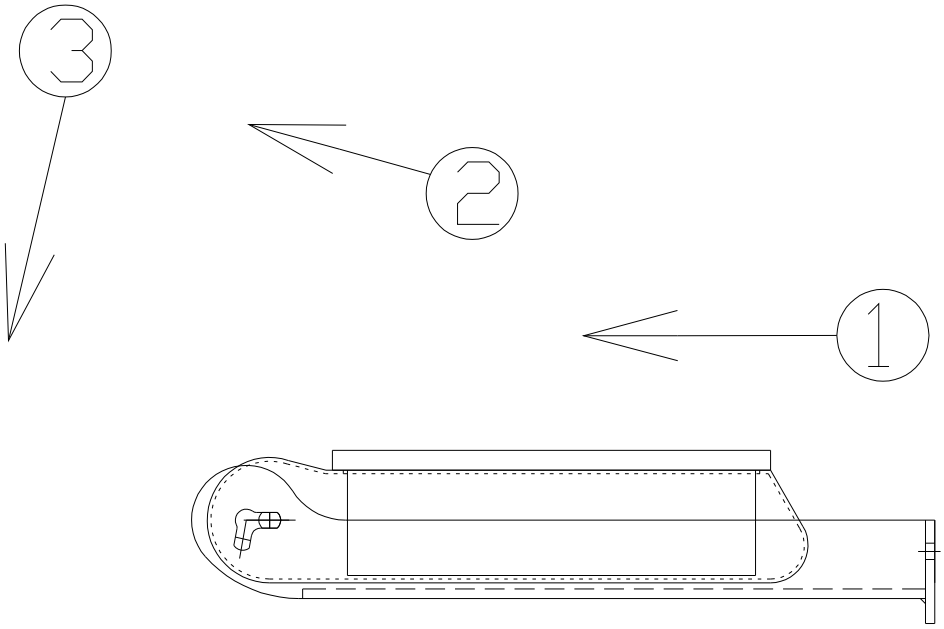
COURSE NO.	DIREC-TION	STITCH	CAM	YARN	RACK	SPEED	STRKE	TAKE DOWN
1	→	65 65	1 1 0 0 0 1 1 0 0 0	2 0	45	5	3	5
		J	| | | - | | | = | | |					
2	←	65 65	1 1 0 0 0 1 1 0 0 0	2 0	45	5	3	5
		J	| | | - | | | = | | |					
3	→	85	1 1 0 0 0	2 0	45	5	3	5
		J	| | | - | | | = | | |					
4	←	85	1 1 0 0 0	2 0	45	5	3	5
		J	0 0 3 - 0 0 4 = 0 0 1					
5	→	65 65	1 1 0 0 0 1 1 0 0 0	6 0	45	5	3	5
		J	| | | - | | | = | | |					
6	←	85	1 1 0 0 0	6 0	45	5	3	5
		J	| | | - | | | = | | |					
7	→	85	1 1 0 0 0	0 0	45	5	3	5
		J	| | | - | | | = | | |					
8	←	85	1 1 0 0 0	0 0	45	5	3	5
		J	| | | - | | | = | | |					
9	→	40 30	1 1 0 0 0 1 1 0 0 0	2 0	45	3	3	5
		J	| | | - | | | = | | |					
10	←	96	1 1 0 0 0	2 0	45	3	3	5
		J	| | | - | | | = | | |					
11	→	87	1 1 0 0 0	2 0	45	3	3	5
		J	| | | - | | | = | | |					

COURSE NO.	DIREC-TION	STITCH	CAM	YARN	RACK	SPEED	STRKE	TAKE DOWN
12	←	96	1 1 0 0 0	2 0	45	5	3	5
		J	| | | - | | | = | | |					
13	→	87	1 1 0 0 0	2 0	45	5	3	5
		J	0 1 2 - 0 1 3 = 0 0 3					
14	←	65 65	1 1 0 0 0 1 1 0 0 0	2 0	45	5	3	5
		J	| | | - | | | = | | |					
15	→	85 85	1 0 1 0 0 1 0 1 0 0	2 0	4	5	3	5
		J	| | | - | | | = | | |					
16	←				4	5	3	5
		J	| | | - | | | = | | |					
17	→	85 85	2 2 0 0 0 2 2 0 0 0	4 0	4	5	3	5
		J	| | | - | | | = | | |					
18	←	85 85	2 2 0 0 0 2 2 0 0 0	2 0	4	5	3	5
		J	| | | - | | | = | | |					
19	→				4	5	3	5
		J	| | | - | | | = | | |					
20	←	85 85	1 0 1 0 0 1 0 1 0 0	4 0	4	5	3	5
		J	0 1 5 - 0 2 0 = 0 4 7					
21	→							
		J	| | | - | | | = | | |					
22	←							
		J	| | | - | | | = | | |					

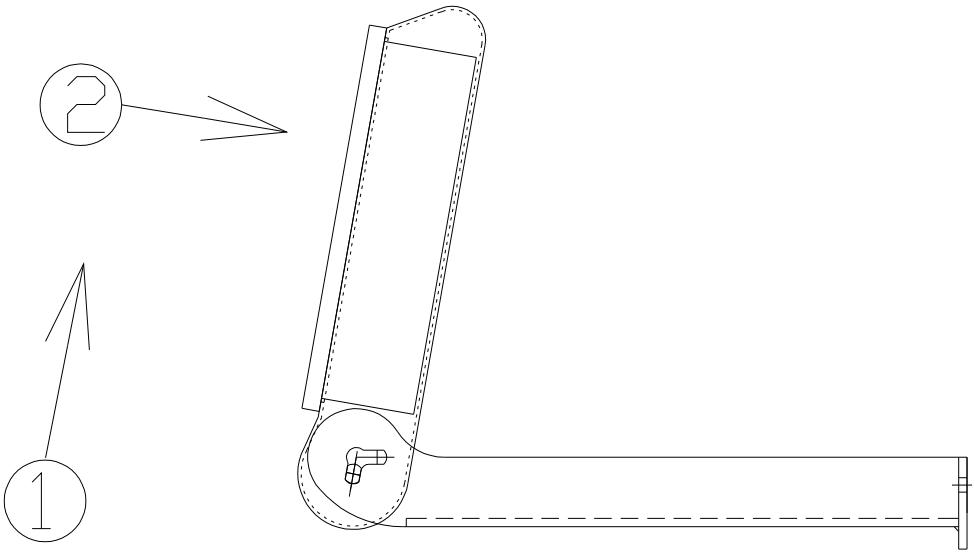
7 EXPLANATION OF CONTROL PANEL

7. 1 ～ PROCEDURE TO STAND THE TOUCH PANEL TO ITS VERTICAL POSITION

PROCEDURE TO STAND THE TOUCH PANEL:

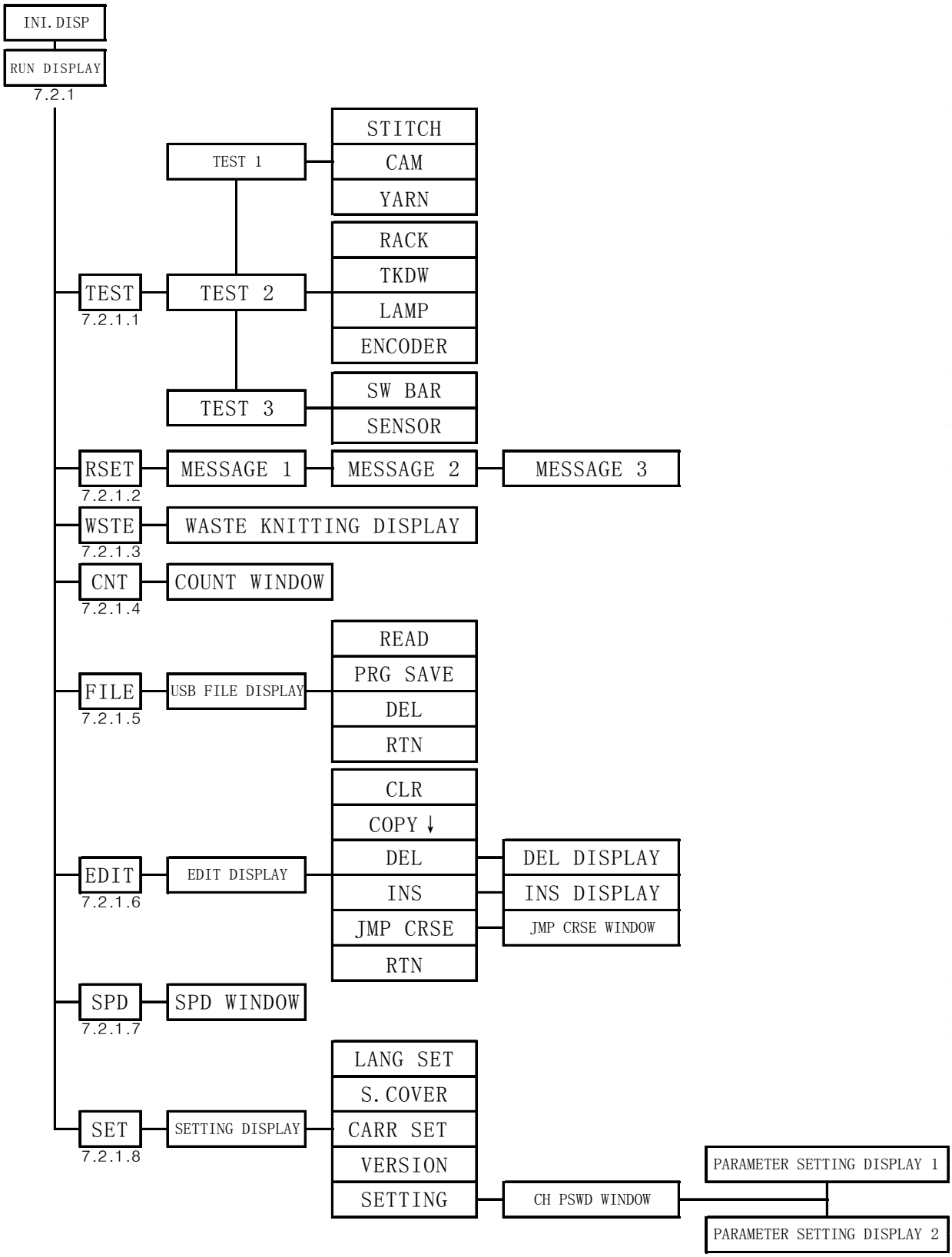


PROCEDURE TO LOWER DOWN THE TOUCH PANEL:

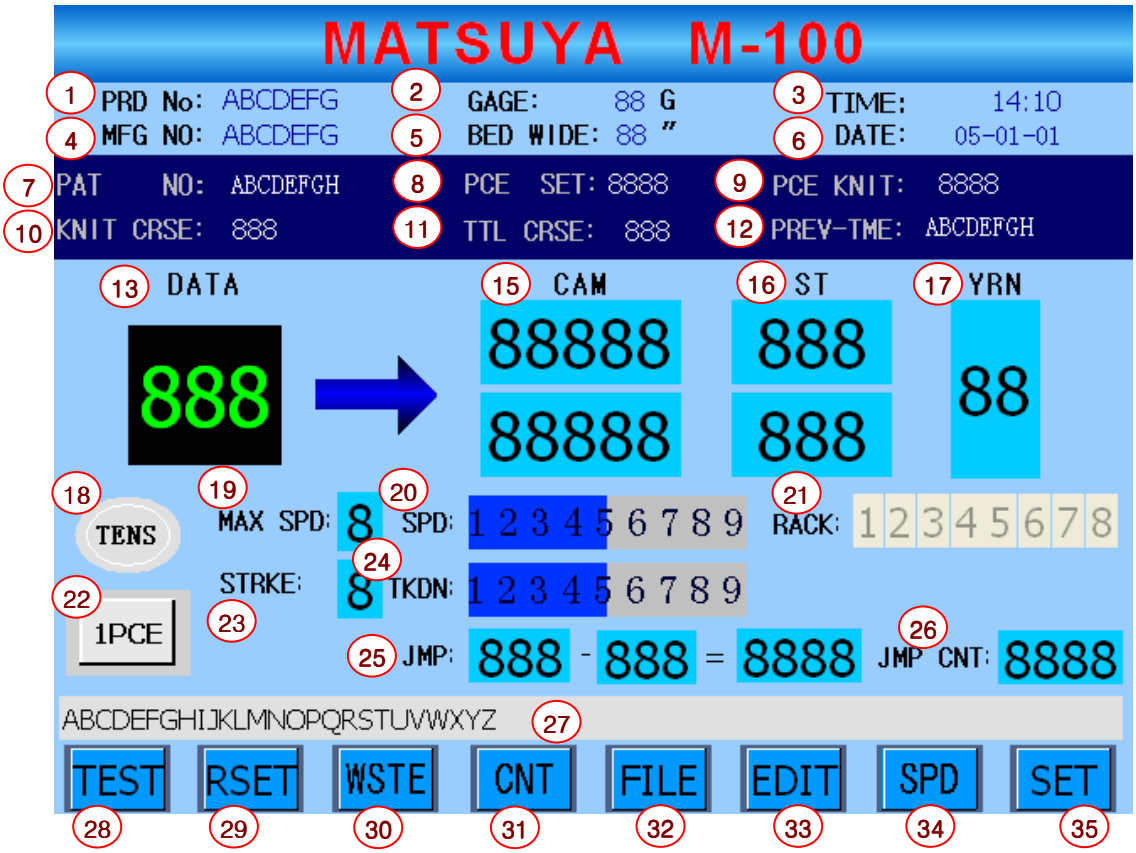


7.2 ～ CONFIGURATION OF M-100 CONTROL DISPLAY

CONFIGURATION OF M-100 CONTROL DISPLAY



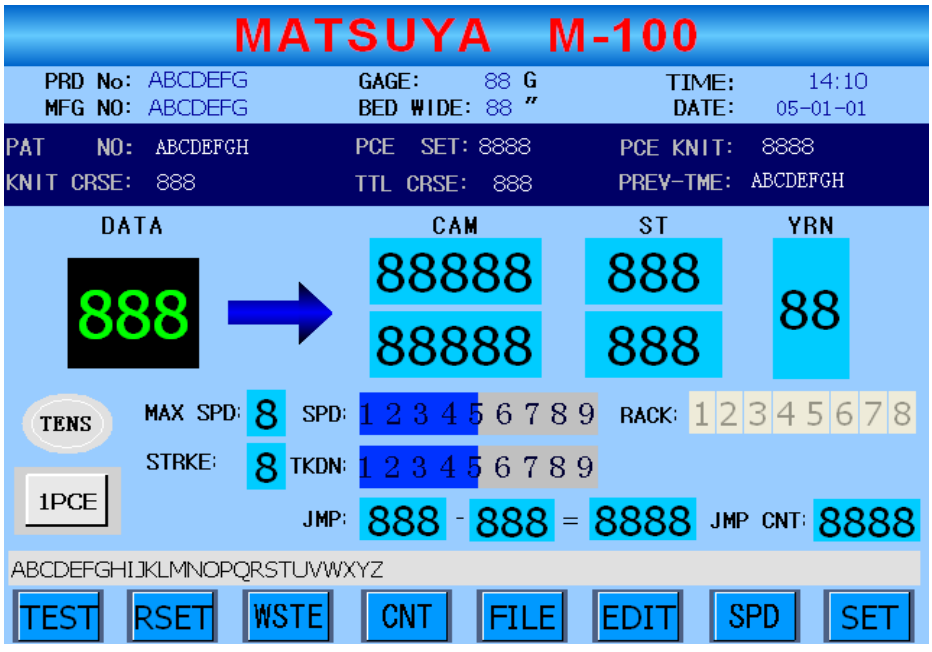
7.2.1 ～ RUN DISPLAY



NO.	TITLE	ALTERATION RIGHTS	EXPLANATION OF DISPLAY
1	PRD. NO.	CUSTOMER	MACHINE NO. DESIGNATED BY THE CUSTOMER. FACTORY ORIGINAL SETTIN : “0000”
2	GAGE	MATSUYA	INDICATION OF MACHINE GAUGE
3	TIME	CUSTOMER	INDICATION OF PRESENT TIME
4	MFG NO.	MATSUYA	MACHINE MANUFACTURING NO.
5	BED WIDE	MATSUYA	INDICATION OF MACHINE BED WIDTH
6	DATE	CUSTOMER	INDICATION OF PRESENT DATE
7	PAT NO	CUSTOMER	INDICATION OF PATTERN NAME
8	PCE SET	CUSTOMER	INDICATION OF NO. OF PCS. TO BE KNITTED
9	PCE KNIT	PROGRAM DATA	INDICATION OF NO. OF PCS. KNITTED
10	KNIT CRSE	PROGRAM DATA	INDICATION OF ACTUAL KNITTING COURSES
11	TTL CRSE	PROGRAM DATA	INDICATION OF TOTAL NO. OF COURSES FOR 1 PCE.
12	PREV-TIME	PROGRAM DATA	INDICATION OF PREVIOUS KNITTING TIME
13	DATA	PROGRAM DATA	INDICATION OF PRESENT KNITTING COURSE
14	→, ←	PROGRAM DATA	INDICATION OF PRESENT CARRIAGE DIRECTION
15	CAM	PROGRAM DATA	INDICATION OF PRESENT CAM MOVEMENT
16	ST	PROGRAM DATA	INDICATION OF PRESENT STITCH ADDRESS
17	YRN	PROGRAM DATA	INDICATION OF PRESENT YARN FEEDER NO.

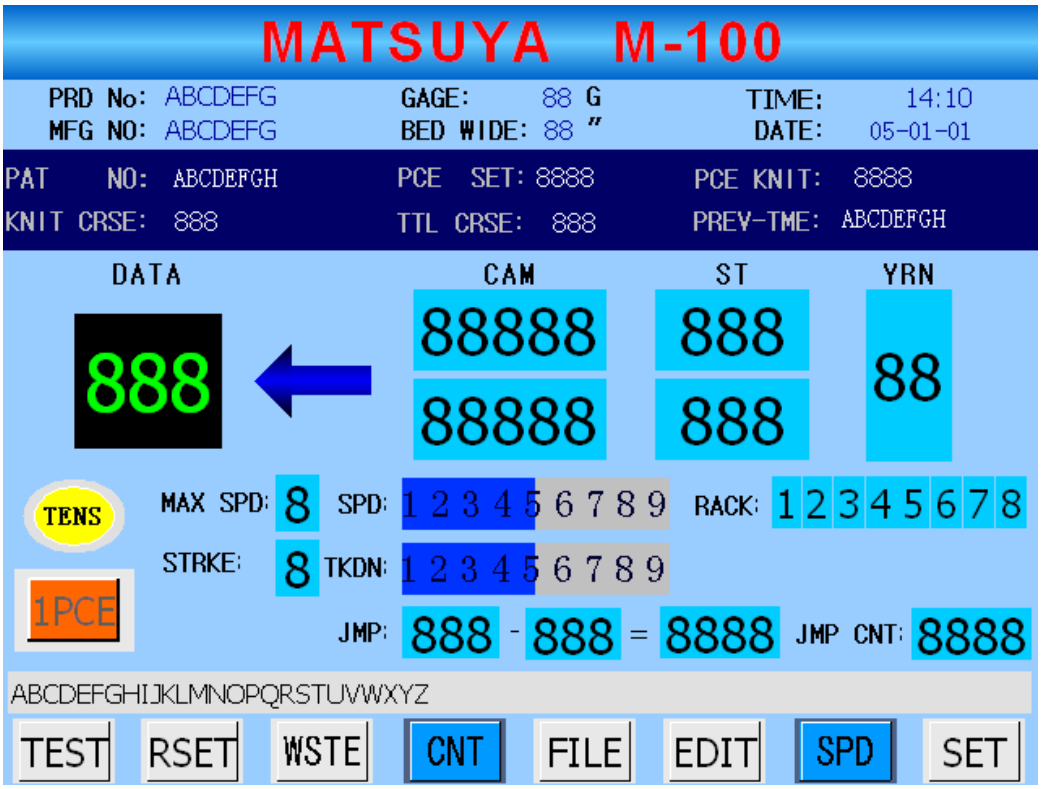
NO.	TITLE	ALTERATION RIGHTS	EXPLANATION OF DISPLAY
18	TENS	NIL	PILOT LAMP: INDICATING PRESENT SLOW SPEED KNITTING CONDITION
19	MAX SPD	CUSTOMER	INBDICATION OF MAX SPEED SETTING
20	SPD	PROGRAM DATA	INDICATION OF PRESENT SPEED ADDRESS
21	RACK	PROGRAM DATA	INDICATION OF PRESENT NEEDLE BED POSITION
22	1 PCE	CUSTOMER	SETTING OF ONE PIECE KNITTING
23	STRKE	PROGRAM DATA	INDICATION OF PRESENT STROKE SETTING
24	TKDN	PROGRAM DATA	INDICATION OF PRESENT TAKE-DOWN ADDRESS
25	JMP	PROGRAM DATA	INDICATION OF JUMP SETTING & NO. OF TIMES
26	JMP CONT	PROGRAM DATA	INDICATION OF NO. OF JUMP COMPLETED
27	MSG DISPLAY	NIL	INDICATION OF SYSTEM MESSAGE
28	TEST	NIL	PRESS TO ENTER “TEST” DISPLAY
29	RSET	NIL	PRESS TO EXERCISE MACHINE ORIGIN RESET
30	WSTE	NIL	PRESS TO ENTER “WASTE” DISPLAY
31	CNT	NIL	PRESS TO ENTER POP-UP WINDOW FOR COUNT
32	FILE	NIL	PRESS TO ENTER “FILE” DISPLAY
33	EDIT	NIL	PRESS TO ENTER “EDIT” DISPLAY
34	SPD	NIL	PRESS TO ENTER POP-P WINDOW FOR SPEED
35	SET	NIL	PRESS TO ENTER PARAMETER SETTING DISPLAY
36	MATSUYA M-100	NIL	INDICATION OF MACHINE MODEL

＊NOTE: ① AFTER POWER ON & MACHINE RESET, TOUCH PANEL INDICATES THE OPERATION AREA AS BELOW:



AT THIS OPERATION AREA, ALL KEYS CAN BE EXERCISED.

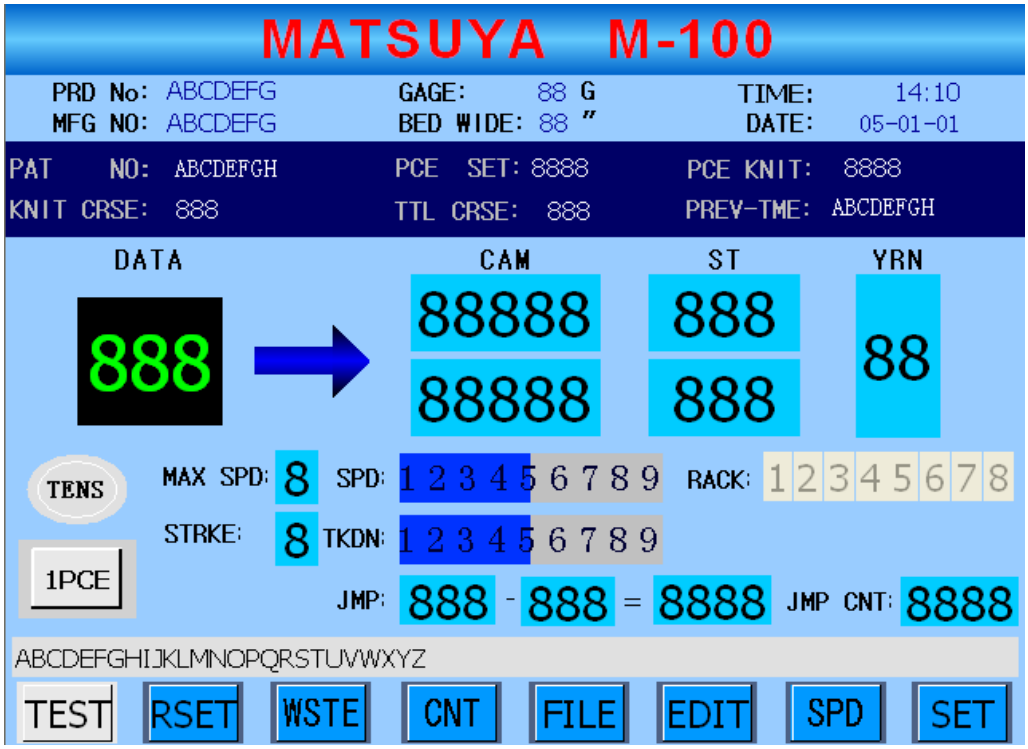
② DURING MACHINE NORMAL OPERATION, TOUCH PANEL INDICATES BELOW OPERATION AREA:



※ A【SPD】、【CNT】KEYS CAN BE EXERCISED DURING MACHINE OPERATION, WHEREAS

※ B【TEST】、【RSET】、【WSTE】、【FILE】、【EDIT】、【SET】KEYS CANNOT BE EXERCISED.

③ WHEN MACHINE STOPS DURING OPERATION, (EX. SWITCH BAR TURNS TO “STOP” ETC), TOUCH PANEL INDICATES THE OPERATION AREA AS BELOW:



※ AFTER SWITCH BAR IS TURNED TO “STOP”：

A【CNT】、【EDIT】、【SPD】、【SET】KEYS CAN BE EXERCISED TO CHANGE DATA. AFTER THAT, TURN SWITCH BAR TO “RUN” AND MACHINE WILL OPERATE UNDER NEW DATA.

B【TEST】KEY CANNOT BE EXERCISED. MACHINE RESET HAS TO BE DONE TO DO SO.

C【FILE】KEY CAN READ DATA. HOWEVER, MACHINE RESET “RSET” HAS TO BE DONE FOR OPERATION.

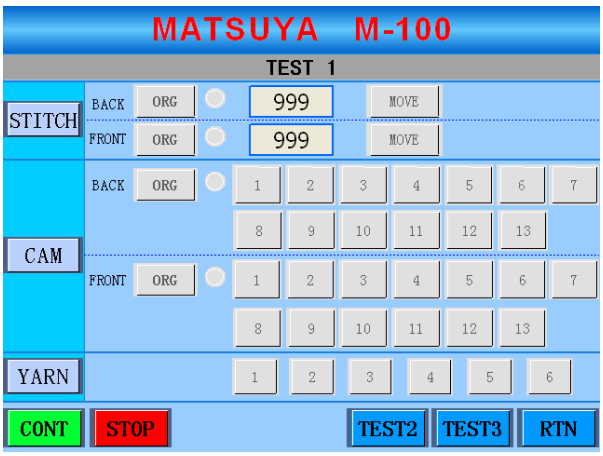
7.2.1.1 ～ TEST DISPLAY

TEST ： TESTING OF MOTOR SOLENOIDS & SENSORS ETC. {ENTER THE “TEST” DISPLAY FROM” RUN” DISPLAY（TOTAL 3 PAGES）}

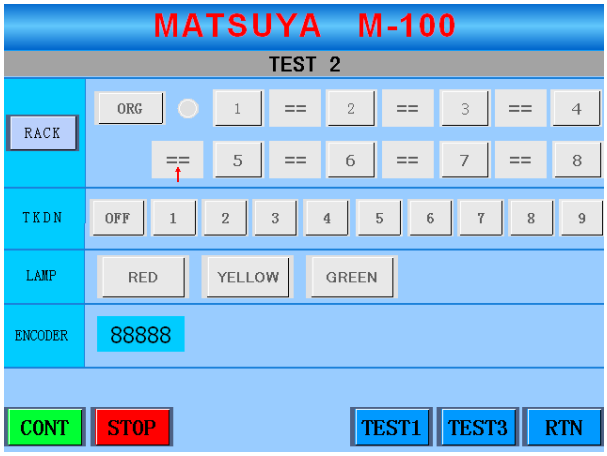
※TESTS CAN BE EXECUTED ONLY UNDER BELOW CONDITIONS：

① AFTER MACHINE RESET.

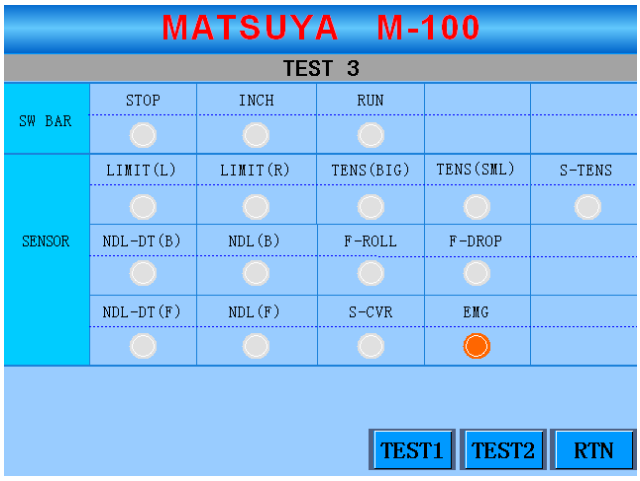
② MACHINE IS STOPPED WITH CARRIAGE AT LEFT END POSITION



（TEST DISPLAY 1）



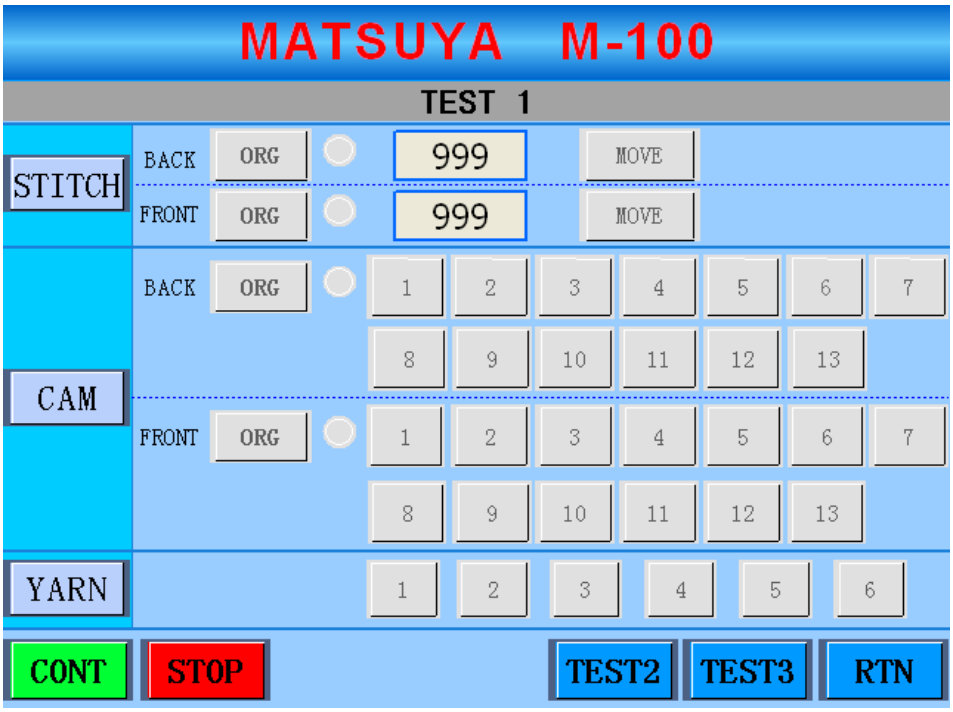
（TEST DISPLAY 2）



（TEST DISPLAY 3）

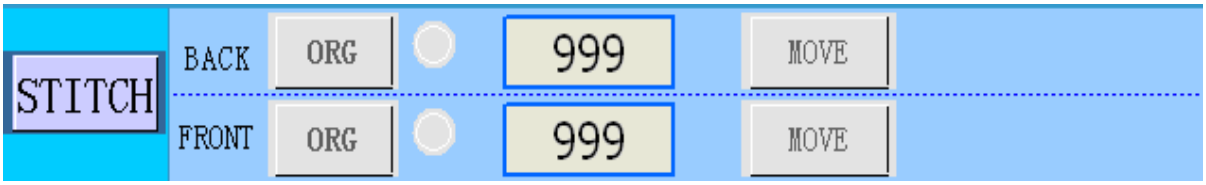
EXPLANATION:

CLICK  【TEST】TO ENTER 【TEST DISPLAY 1】



（TEST DISPLAY 1）

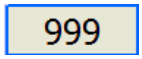
STITCH MOTOR: TESTING THE MOVEMENT OF STITCH MOTOR



NOTE: PRESS 【ORG】KEY TO ENTER THIS TEST.

THERE ARE 3 WAYS OF DOING THIS TEST:

1 

: CLICK 

OF THE RELEVANT STITCH MOTOR (FRONT OR REAR) TO BE TESTED, ENTER THE STITCH DATA (-182° ～ 182°) AND PRESS 【**MOVE**】KEY. THE MOTOR WILL THEN ROTATE TO THE DESIGNATED POSITION.

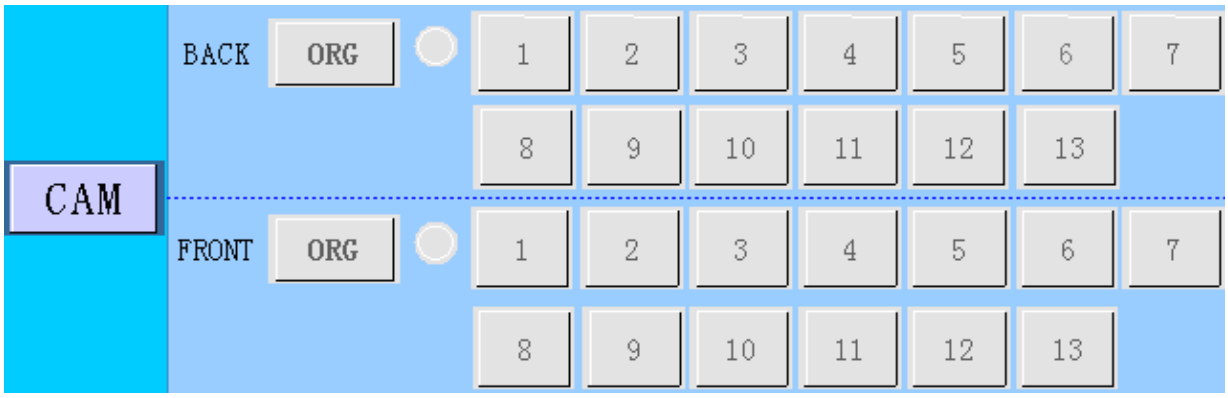
2 【**STITCH**】+【**CONT**】+【**STOP**】 : CLICK【**STITCH**】 AND THEN【**CONT**】KEYS AND THE STITCH MOTOR WILL MOVE FROM PRESENT POSITION BACK TO ITS ORIGIN POSITION FOLLOWED BY CONTINUOUS TESTING OF THE STITCH MOTOR. PRESS【**STOP**】TO END THIS CONTINUOUS TESTING.

3 CLICK【**ORG**】KEY (FRONT OR REAR) TO TEST THE STITCH MOTOR ORIGIN. (NOTE: 

& 

TO BE ORIGIN LAMPS WHICH WILL TURN TO ORANGE COLOR AT ORIGIN POSITION)

CAM: TESTING OF THE CAM POSITION(NO.1～13)



NOTE: PRESS 【ORG】KEY TO ENTER THIS TEST.

THERE ARE 3 WAYS TO DO THIS TEST:

1. CLICK ANY ONE OF **【1】～【13】** FOR INDIVIDUAL CAM POSITION TEST. WHEN PRESSING THAT PARTICULAR KEY, IT WILL TURN BLUE COLOR AND THE REST WILL STAY IN GRAY COLOR.
2. **【CAM】 + 【CONT】 + 【STOP】** COMBINATION OF THESE 3 KEYS FOR CONTINUOUS TESTING. CLICK **【CAM】** KEY, THEN **【CONT】** KEY FOR CONTINUOUS TESTING OF FRONT & REAR CAM POSITION. PRESS **【STOP】** KEY TO STOP THE TESTING AND CAMS WILL RETURN TO THEIR ORIGIN POSITION.
3. CLICK **【ORG】** KEY (FRONT OR REAR) TO TEST THE CAMS ORIGIN POSITION. AT THIS TIME, THE ORIGIN LAMP WILL TURN ORANGE COLOR. (NOTE: 

& 

TO BE FRONT & REAR CAM ORIGIN KEY & ORIGIN LAMP. WHEN THE CAM RETURNS TO ITS ORIGIN POSITION, THE ORIGIN LAMP WILL TURN ORANGE COLOR.)

YARN FEEDER SOLENOID: TESTING OF YARN FEEDER SOLENOIDS

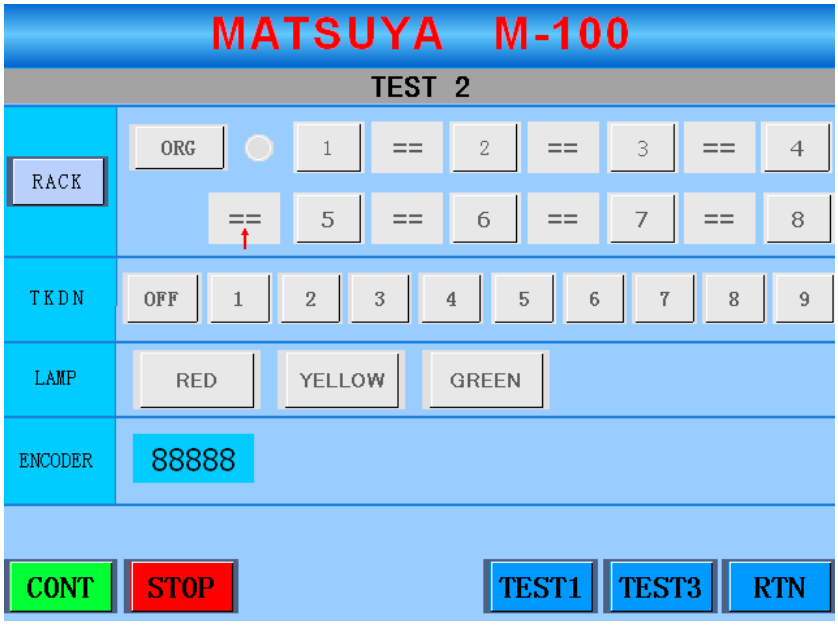
NOTE: PRESS 【1】～【6】 (YARN FEEDER SOLENOIDS) TO TEST NO. 1～6 YARN FEEDER.

THERE ARE 2 WAYS FOR THIS TEST:

1 CLICK ANY ONE OF **【1】～【6】** KEY AND THE YARN FEEDER SOLENOID WILL MOVE 5 TIMES. WHEN THE PLUNGER COMES DOWN, USE YOUR FINGER TO PUSH BACK THE PLUNGER TO NON-WORK POSITION.

2 COMBINATION OF **【YARN】 + 【CONT】+ 【STOP】** KEYS FOR CONTINUOUS TESTING. FIRST CLICK **【YARN】**, THEN **【CONT】** KEY FOR THIS TEST. PRESS **【STOP】** KEY TO STOP THE TEST.

CLICK 【TEST 2】TO ENTER【TEST DISPLAY 2】



（TEST DISPLAY 2）

RACK: TESTING OF THE RACKING MOTOR

NOTE: 【1】 ～ 【8】KEY REPRESENTS NEEDLE TO NEEDLE POSITION.; == (TO BE KEYS) INDICATING NEEDLE TO TOOTH POSITION BETWEEN ADJACENT 2 NEEDLES. THE KEY BETWEEN【4】&【5】 WHEN " == " LIGHTS UP, IT INDICATES RACKING ORIGIN POSITION.

NOTE: AFTER CLICKING 【ORG】KEY TO DO FOLLOWING TESTS: (AT THIS TIME, NEEDLE BED WILL RETURN TO ITS ORIGIN POSITION AND ORIGIN LAMP WILL LIGHT UP)

THERE ARE 3 WAYS TO DO THE TEST:

1. CLICK INDIVIDUAL KEY FOR TESTING THE POSITION OF CERTAIN RACKING MOTOR.
2. COMBINATION OF【RACK】 + 【CONT】 + 【STOP】KEYS FOR CONTINUOUS TESTING. FIRST CLICK【RACK】 KEY, THEN【CONT】KEY TO RETURN THE RACKING MOTOR FROM THE PRESENT POSITION TO ORIGIN POSITION AND THEN TESTING OF CONTINUOS MOVEMENT. PRESS【STOP】TO STOP THE TEST.
3. CLICK【ORG】 KEY FOR THE RACK MOTOR ORIGINAND THE ORIGIN LAMP WILL TURN ORANGE COLOR.

TAKE-DOWN：TESTING THE TORQUE OF THE TAKE-DOWN MOTOR

CLICK ANY ONE OF【1】～【9】KEY FOR TESTING THE TORQUE OF THE TAKE-DOWN MOTOR.

CLICK【OFF】KEY TO STOP THE TEST.

NOTE：LOOSEN THE TAKE-DOWN DEVICE BEFORE THE TEST TO AVOID DAMAGING THE DEVICE.

PILOT LAMP：TESTING THE CONTROL SIGNAL OF THE PILOT LAMP

TESTING OF THE PILOT LAMP. THE COLOR OF THE KEY CHANGES ACCORDING TO THE KEY PRESSED.

NOTE：RED LAMP：MACHINE STOPS DUE TO PROBLEM.(EX: KNOT, YARN/NEEDLE BREAKAGE…)

YELLOW LAMP：MACHINE STOPS AT NORMAL CONDITION

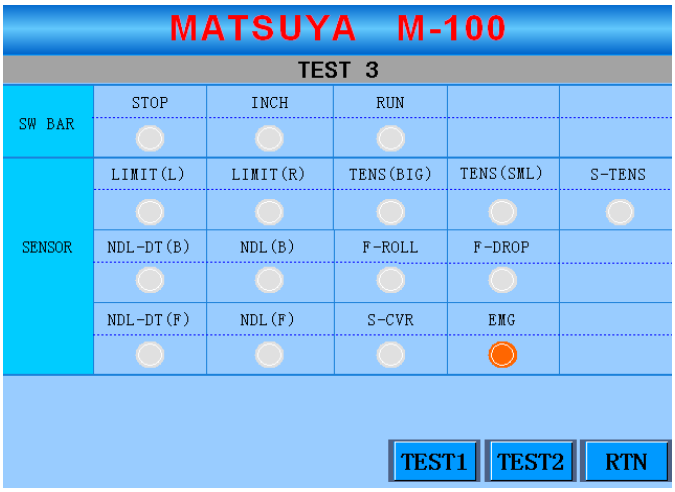
GREEN LAMP：MACHINE IN OPERATION

ENCODER：TESTING THE SIGNAL OF THE ENCODER

1 THE VALUE OF THE CARRIAGE ORIGIN IS “0”.

2 READING :CARRIAGE MANUALLY PUSH TO THE RIGHT-INCREASE; TO THE LEFT-DECREASE

CLICK 【TEST 3】KEY TO ENTER 【TEST DISPLAY 3】



(TEST DISPLAY 3)

SWITCH BAR : TESTING THE SIGNAL OF THE SWITCH BAR

SW BAR	STOP	INCH	RUN
	○	○	○

ABOVE INDICATION LAMPS:THE RELEVANT LAMP WILL CHANGE TO ORANGE COLOR WHEN SWITCH BAR IS TURNED TO THAT PARTICULAR POSITION.

NOTE: 1. WHEN SWITCH BAR IS AT ORIGIN POSITION, ALL LAMPS DO NOT LIGHT UP.

2. WHEN SWITCH BAR TURNS TO "RUN", THE "RUN" LAMP CHANGES TO ORANGE COLOR.

3. WHEN SWITCH BAR TURNS TO "STOP" FROM ORIGIN, "STOP" LAMP CHANGES TO ORANGE COLOR.

4. WHEN SWITCH BAR TURNS TO "JOG", THE "JOG" LAMP CHANGES TO ORANGE COLOR.

5. AT TESTING CONDITION, MACHINE WILL NOT FOLLOW THE MOVEMENT OF SWITCH BAR.

SENSORS : TESTING OF SENSORS

SENSOR	LIMIT(L)	LIMIT(R)	TENS(BIG)	TENS(SML)	S-TENS
	○	○	○	○	○
	NDL-DT(B)	NDL(B)	F-ROLL	F-DROP	
	○	○	○	○	
	NDL-DT(F)	NDL(F)	S-CVR	EMG	
	○	○	○	●	

※ THE LAMPS ARE GRAY IN COLOR WHEN ENTER THE TEST DISPLAY. WHEN TESTING MANUALLY CERTAIN SENSOR, THE RELEVANT INDICATION LAMP WILL CHANGE TO ORANGE COLOR.

CLICK 【RTN】KEY TO RETURN BACK TO "RUN" DISPLAY.

7.2.1.2 ～ RESET MESSAGE

CLICK 【RSET】KE, THE BELOW MESSAGE ① WILL POP-UP ON THE "RUN" DISPLAY:

(MESSAGE ①: RESET READY,PLEASE TURN SWITDH BAR)

MANUALLY TURN THE SWITCH BAR TO “RUN” AND THE MESSAGE ② POP-UP AS BELOW:

(MESSAGE ② :UNDER RESET)

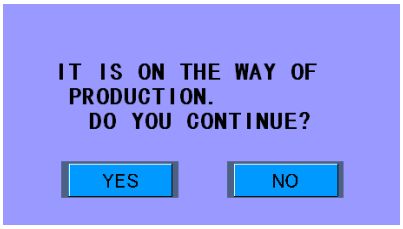
AFTER MACHINE FINISHES THE ORIGIN RESET PROCEDURE, MESSAGE ③ POP-UP AS BELOW:

(MESSAGE ③ : RESET FINISHED)

AFTER COMPLETION OF RESET, THE MESSAGE “RSET FIN” WILL APPEAR WAITING FOR NEXT INSTRUCTION ON OPERATION. IF NO INSTRUCTION IS GIVEN IN 3 SECONDS, THE MESSAGE WILL DISAPPEAR FROM THE SCREEN.

MANUALLY TURN THE SWITCH BAR FOR ENTERING TO “RUN DISPLAY” TO START KNITTING.

WHEN THERE IS ELECTRIC FAILURE DURING OPERATION, TURN ON THE POWER AND CLICK 【RSET】KEY . THE FOLLOWING WINDOW WILL APPEAR ON THE SCREEN::



1. CLICK 【YES】KEY AND THE WINDOW WILL DISAPPEAR TO ENTER “RUN” DISPLAY. THIS “RUN” DISPLAY WILL SHOW THE PREVIOUS DATA AT THE TIME WHEN THE MACHINE SHUT DOWN. THE MACHINE WILL CONTINUE ITS OPERATION ACCORDING TO THE PREVIOUS DATA BY TURNING THE SWITCH BAR.
2. CLICK 【NO】KEY TO LEAVE THE WINDOW AND MESSAGE ① WILL APPEAR ON THE SCREEN. (REPEATING THE PROCEDURE FOR MESSAGE ①～③)

NOTE: MESSAGE AND WINDOW WILL NOT APPEAR FOR MORE THAN 3 SECONDS. THEY WILL DISAPPEAR FROM THE SCREEN WHEN THERE IS NO FURTHER INSTRUCTION AFTER 3 SECONDS.

NOTE:

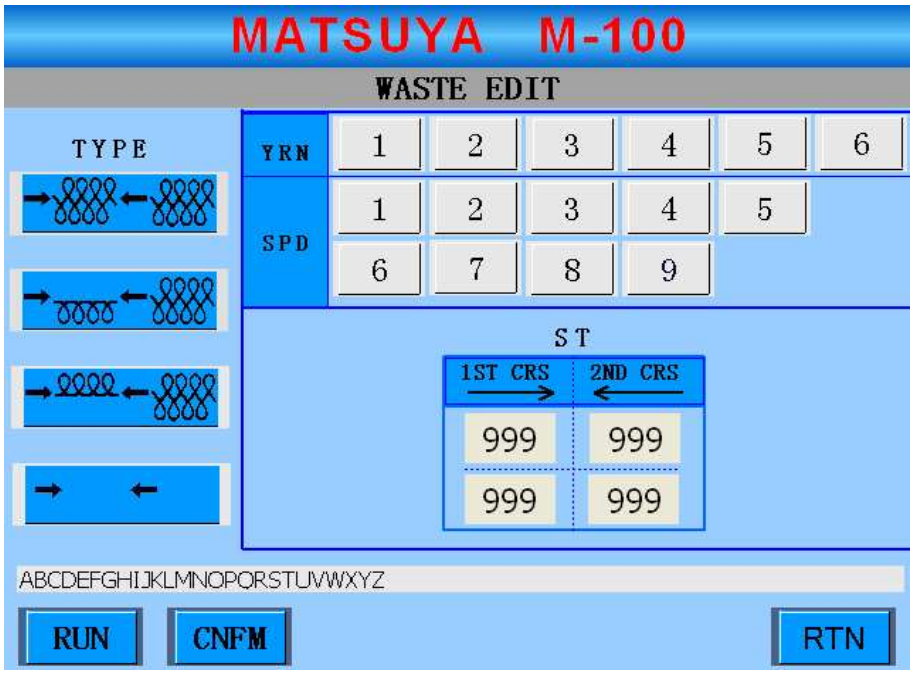
※ RESET OPERATION CANNOT BE DONE DURING MACHINE OPERATION (AT THIS TIME, THE 【RSET】KEY ON THE ” RUN” DISPLAY CANNOT BE EXERCISED., HOWEVER, WHEN THE CARRIAGE RUNS OUT OF THE KNITTING AREA AND STOPS, THE【RSET】KEY CAN BE OPERATED. THEN TURN SWITCH BAR TO “STOP” TO STOP KNITTIN

※ STOPPING THE MACHINE DURING OPERATION TO DO MACHINE RESET WILL RESULT IN SEVERE DAMAGE. (EX. NEEDLE BREAKAGE, FABRIC DROP……)

※ WHEN THERE IS MACHINE PROBLEM DURING MACHINE RESET, ERROR MESSAGE WILL APPEAR ON THE “RUN” DISPLAY. PLEASE READ THE ERROR MESSAGE LIST TO CONFIRM THE ERROR POSITION. AFTER CLEARING THE PROBLEM, REDO THE MACHINE RESET PROCEDURE.

7.2.1.3 ～ WASTE KNITTING DISPLAY

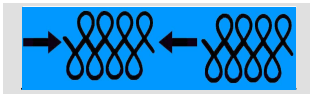
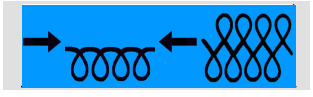
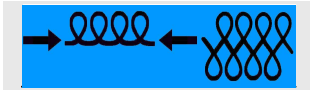
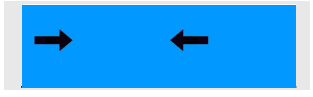
CLICK  【WSTE】KEY AT “RUN” DISPLAY TO ENTER WASTE KNITTING DISPLAY AS BELOW:



(WASTE KNITTING DISPLAY)

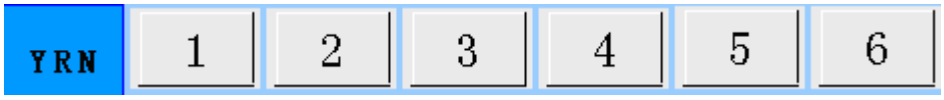
EXPLANATION: CARRIAGE MUST RETURN TO LEFT POSITION TO ENTER THIS TEST

KINDS OF WASTE : THERE ARE 4 KINDS OF WASTE KNITTING

KINDS OF WASTE KNITTING	STRUCTURE	MAKER’S SET VALUE					
		YARN	SPEED	STITCH	TKDN	RACK	STRKE
	RIB	NO. 3	3	80	5	45	3
	PLAIN (FRONT)+ RIB	NO. 3	3	PLAIN 110 RIB 80	5	45	3
	PLAIN (REAR) + RIB	NO. 3	3	PLAIN 110 RIB 80	5	45	3
	DRY RUN	NIL	5	55	5	45	3

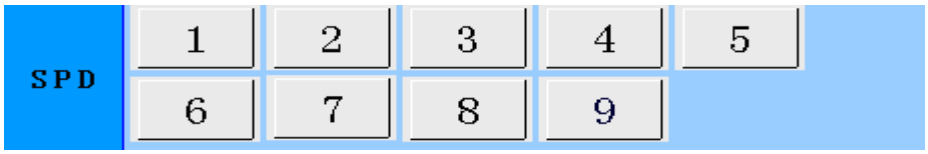
※ NOTE: CLICK THE KEY FOR ANY WASTE KNITTING METHOD AND THE DATA FOR YARN, SPD AND STITCH WILL BE THE MAKER’S SET VALUE AS SHOWN ABOVE. THESE VALUES CAN BE ALTERED ACCORDING TO KNITTING YOUR CONDITION.

YARN：THE YARN FEEDERS APPLIED DURING WASTE KNITTING



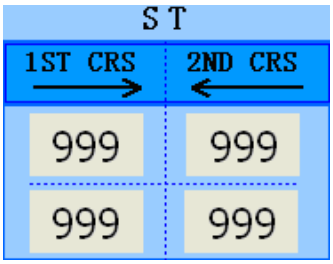
ABOVE NO. 1 TO NO. 6 REFERS TO THE 6 YARN FEEDERS.

SPD：THE SPEED APPLIED DURING WASTE KNITTING



ABOVE SHOWN 9 DIFFERENT SPEEDS, 1 TO BE “SLOWEST”, 9 TO BE “FASTEST”.

STITCH：THE STITCH APPLIED DURING WASTE KNITTING



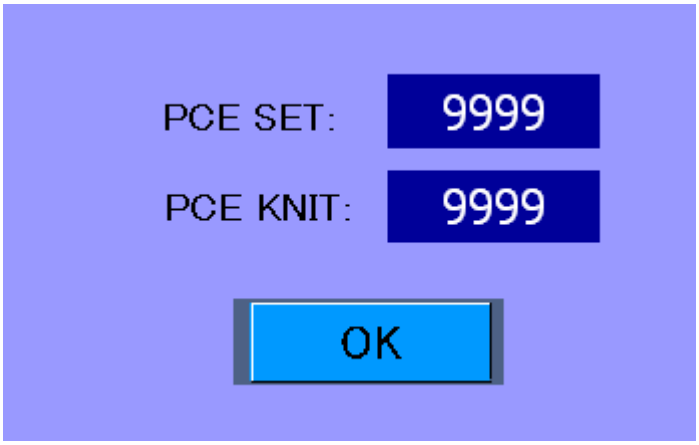
THE ARROWS “ →、← ” REFER TO THE DIRECTION OF THE CARRIAGE.

NOTE：

- A FOR RETIRING FROM WASTE KNITTING, CLICK【RTN】KEY TO RETURN TO “RUN” DISPLAY.
- B ENTER WASTE KNITTING DISPLAY TO ALTER THE MAKER’S SET VALUE FOR YARN, SPEED, STITCH ETC. AFTER ALTERATION, CLICK【CNFM】AND 【RUN】KEYS, THE CARRIAGE WILL RESET AND MOVE TO THE LEFT TO KNIT THE FIRST WASTE KNITTING COURSE. AT THE SAME TIME, THE WASTE KNITTING DISPLAY WILL RETURN TO “RUN” DISPLAY. TURN THE SWITCH BAR TO “RUN” TO START THE WASTE KNITTING. IF NO ALTERATION ON MAKER’S SET VALUE, CLICK DIRECTLY 【RUN】KEY AND THE CARRIAGE WILL RESET AND MOVE TO THE LEFT TO START THE FIRST COURSE OF WASTE KNITTING. THE WASTE KNITTING DISPLAY WILL RETURN TO “RUN” DISPLAY. TURN THE SWITCH BAR TO “RUN” TO START THE WASTE KNITTING.
- C TO CHANGE THE WASTE KNITTING METHOD, YARN, STITCH ETC DURING WASTE KNITTING PROCEDURE, WAIT TILL THE CARRIAGE RETURNS TO THE LEFT POSITION, TURN THE SWITCH BAR TO **“STOP”** AND CLICK 【RSET】. AGAIN TURN THE SWITCH BAR TO “STOP”. THE DISPLAY WILL RETURN TO WASTE KNITTING DISPLAY. AFTER ALTERING THE DATA, CLICK 【CNFM】KEY AND 【RUN】 KEY. THE MACHINE WILL KNIT WASTE KNITTING ACCORDING TO THE NEWLY ALTERED DATA.
- D TO RETURN TO NORMAL KNITTING FROM WASTE KNITTING, WHEN CARRIAGE IS AWAY FROM THE KNITTING AREA, TURN THE SWITCH BAR TO **“STOP”**, CLICK【RSET】KEY , AGAIN TURN THE SWITCH BAR TO **“STOP”** TO RETURN TO WASTE KNITTING CONDITION.

7.2.1.4 ～ PIECE COUNT WINDOW

CLICK  【CNT】AND COUNT WINDOW WILL POP UP ON “RUN” DISPLAY:



PCE SET: SETTING RANGE - 0～9999

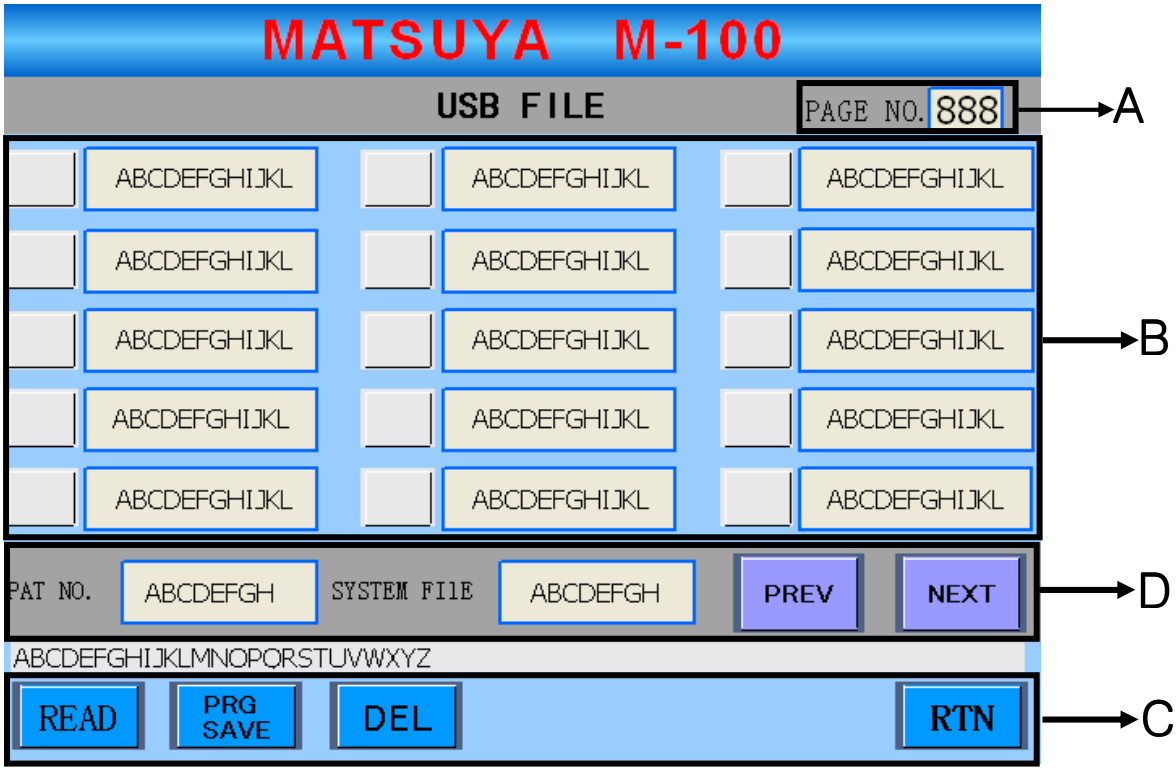
PCE KNIT : NO. OF PCS KNITTED

※ NOTE: THIS DISPLAY CAN BE OPERATED DURING MACHINE OPERATION.

AFTER CLICKING【CFM】KEY, NEW DATA IS PROMPTLY EFFECTIVE AND RETURN TO “RUN” DISPLAY

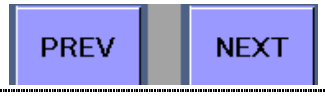
7.2.1.5 ～ FILE DISPLAY

CLICK  【FILE】KEY TO ENTER FILE DISPLAY (USB FILE, AS BELOW) :



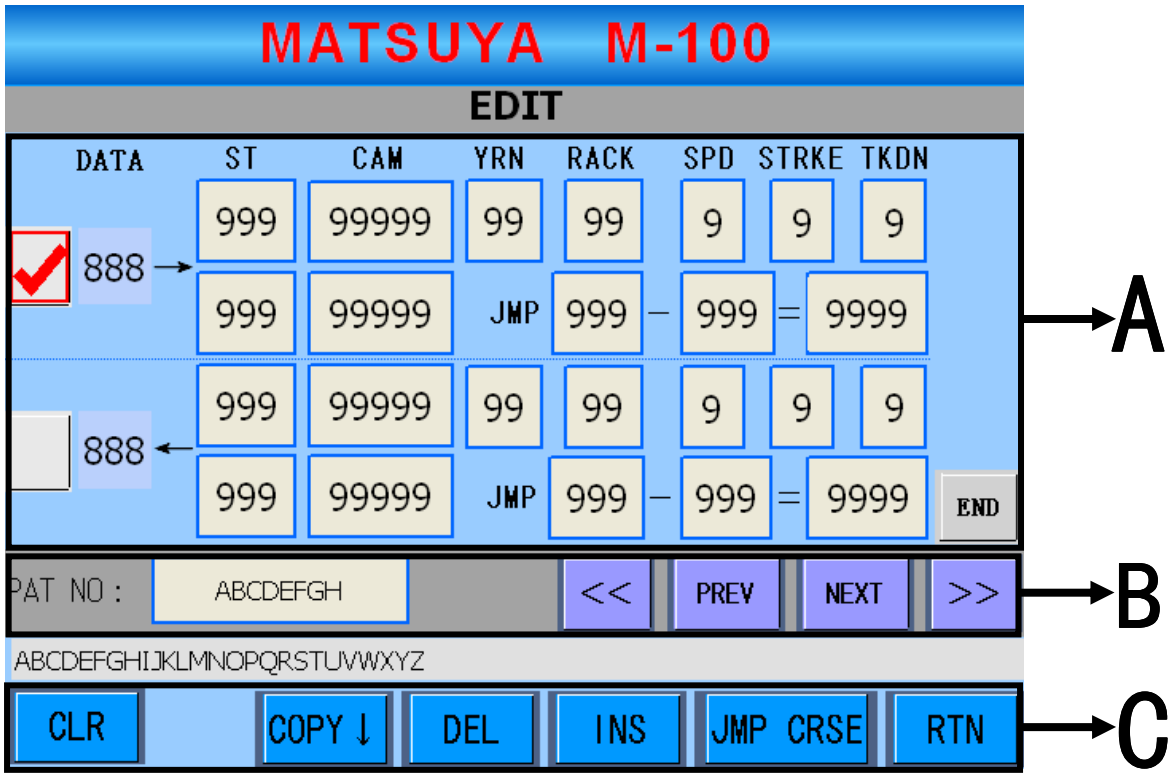
(FILE DISPLAY)

EXPLANATION:

A		INDICATING THE PRESENT PAGE
B	THE FILE INSIDE THE USB	
C		INDICATING THE PRESENT PATTERN NAME
		INDICATING THE SYSTEM FILE NAME.
		CLICK TO CHANGE TO PREVIOUS OR NEXT PAGE.
D		CLICK THE KEY  BEFORE THE TARGET READ FILE NAME AND THE KEY BECOMES  . PRESS "READ" TO READ THE DATA INTO THE MACHINE. (NOTE: ONLY 1 FILE CAN BE READ AT ONE TIME TO THE USB. PREVIOUS FILE IN THE MACHINE WILL BE DELETED)
		CLICK【**PRG SAVE**】KEY TO SAVE THE MACHINE FILE TO THE USB. **NOTE:** WHEN THE FILE NAME IS SAME AS THAT IN THE USB, POP UP WINDOW AS SHOWN APPEARS. PRESS【**YES**】KEY TO OVERLAP THE DATA IN THE USB. IN THE CASE NEW FILE NAME IS TO BE INPUT, CLICK【**NO**】KEY AND INPUT FILE NAME TO THE **"PAT NO."** 
		CLICK THE KEY  BEFORE THE TARGET FILE NAME TO BE DELETED AND THE KEY BECOMES  . PRESS "DEL" TO DELETE THE FILE。 **NOTE:** MORE THAN 1 FILE CAN BE DELETED. THE DELETED FILE(S) TO BE BE THE FILE(S) INSIDE THE USB.
		CLICK THIS KEY TO RETURN TO "RUN" DISPLAY.

7.2.1.6 ～ EDIT DISPLAY

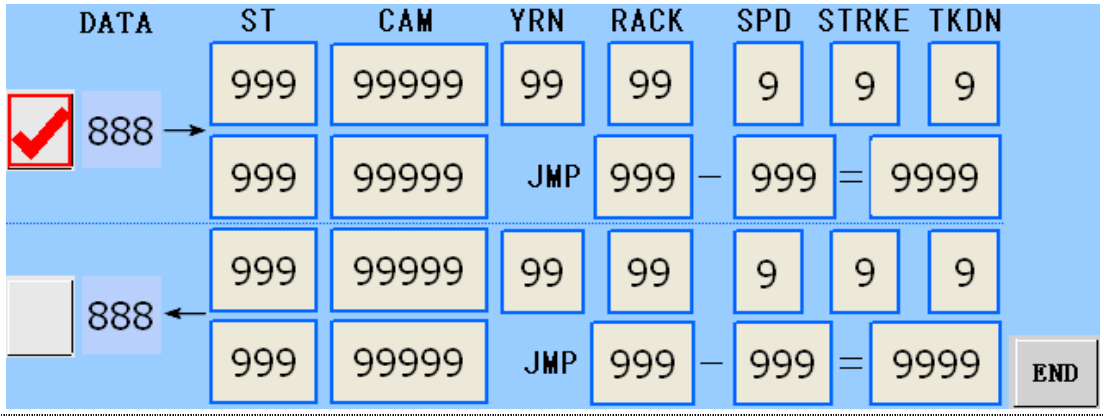
CLICK  【EDIT】 TO ENTER EDIT DISPLAY AS SHOWN BELOW.



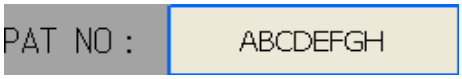
(EDIT DISPLAY)

EXPLANATION:

EDIT DISPLAY SHOWS 2 COURSES (A), ("→, ←" TO BE 1 ROTATION; I.E. 2 COURSES=1 ROTATION):

A	
	EDIT DATA MOSTLY ARE "STITCH、CAM、YRN、RACK、SPD、STRKE、TKDN、JMP". CLICK ANY WHITE KEY AS SHOWN ABOVE AND A WINDOW WILL POP UP. INPUT THE REQUIRED DATA AND THEN PRESS 【YES】. TO END THE PROCESS, PRESS【END】TO RETURN TO NORMAL KNITTING.

B



AFTER EDITING, CLICK THE WHITE COLOR SPACE NEXT TO THE PAT NO. AND A WINDOW WILL POP UP. ENTER THE PATTERN NAME.

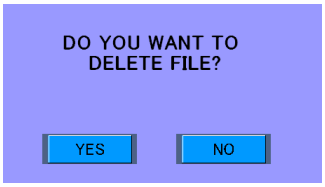
PREV NEXT : CHANGING 1 PAGE A TIME

<< >> : CHANGING 10 PAGES A TIME

C

CLR

CLEAR ALL EDIT DATA TO ZERO (INCLUDING STITCH, CAM, YRN, RACK, SPD, STRKE, TKDN, JMP). POP-UP WINDOW FOR CONFIRMATION.



COPY ↓

COPY THE TARGET COURSE TO THE NEXT COURSE. (EX: CLICK ☐ → ☑ KEY, THEN CLICK【**COPY ↓**】 TO EXERCISE THE MOVEMENT.

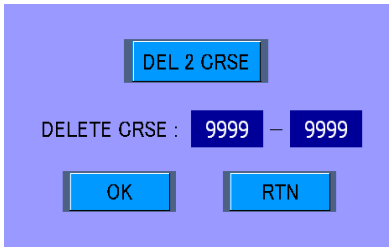
DEL

SELECT THE COURSE TO BE DELETED (☐ → ☑), THEN CLICK【**DEL**】 AND POP-UP WINDOW WILL APPEAR AS BELOW. FOR DELETING 2 COURSES, CLICK【**DEL 2 CRSE**】. FOR DELETING MORE COURSES, INPUT THE FIRST & LAST COURSE AND THEN CLICK 【**YES**】. TO END JUST PRESS【**RTN**】. PLEASE CHECK JUMP VALUE TO EXERCISE DELETE PROCEDURE.

NOTE: THERE ARE 2 SITUATIONS FOR INPUT OF FIRST & LAST COURSE:

1 FIRST COURSE:ODD NO., LAST COURSE: EVEN NO. 2 FIRST COURSE: EVEN NO. AND LAST COURSE: ODD NO.

EITHER METHOD WILL NOT RESULT IN WRONG CARRIAGE DIRECTION.

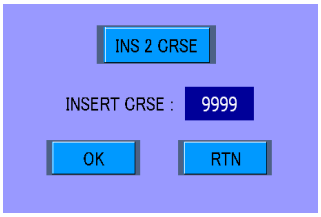


INS

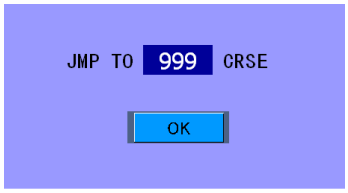
SELECT THE TARGET INSERT COURSE (EX ☐ → ☑), CLICK【**INS**】KEY AND POP-UP WINDOW APPEARS):

1【INS 2CRSE】KEY: ADD 2 COURSES TO THE NEXT COURSE OF THE SELECTED TARGET COURSE

2 INSERT CRSE : 9999 : INPUT COURSES TO BE INSERTED AND PRESS【**YES**】.

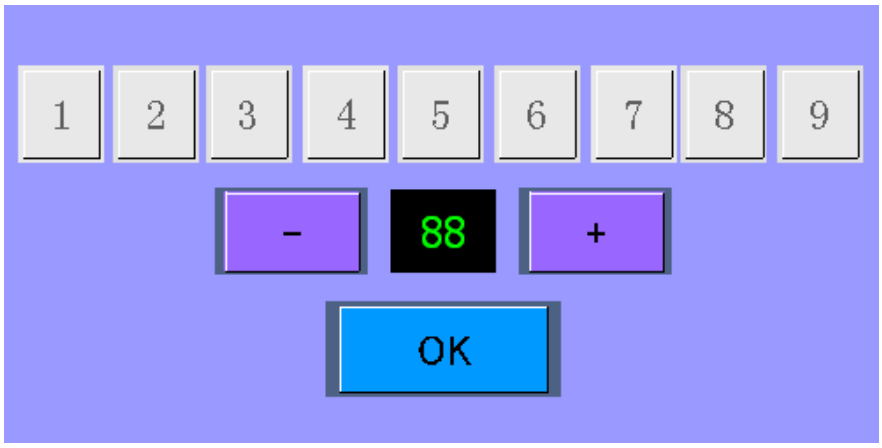


NOTE: THE COURSE TO BE INSERTED MUST BE EVEN NO. (EX. 2、4…) ; PLEASE CHECK THE JUMP VALUE IN THE PROGRAM TO AVOID ERROR.

C	JMP CRSE	FOR RAPID APPROACH TO TARGET COURSE, CLICK【JMP】AND WINDOW POP UP. INPUT THE COURSE NO. TO BE JUMPED AND PRESS 【YES】 
	RTN	TO LEAVE EDIT DISPLAY AND RETURN TO “RUN” DISPLAY

7.2.1.7 ～ SPEED WINDOW

CLICK  【SPD】KEY AND BELOW WINDOW WILL APPEAR ON “RUN” DISPLAY:



(SPEED WINDOW)

EXPLANATION:

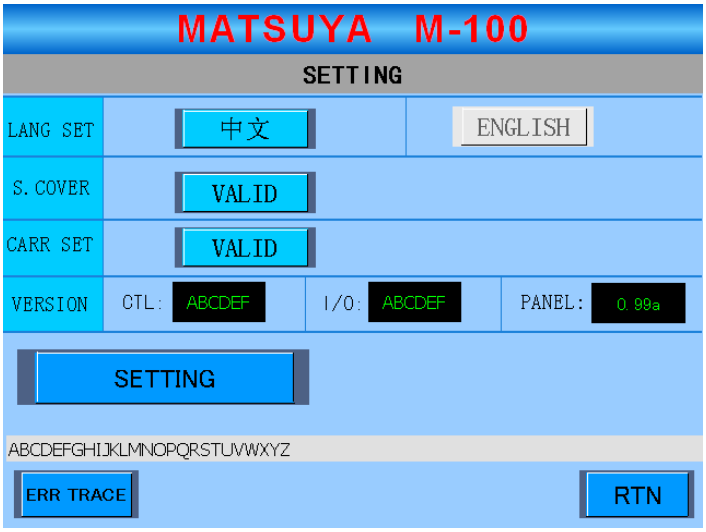
	THESE ARE THE 9 DIFFERENT SPEED THAT COMPULSORY CHANGE THE PRESENT SPEED. WHEN PRESS CERTAIN SPEED KEY (COLOR CHANGES TO BLUE AS ) THE PREVIOUS KEY CHANGES BACK TO GRAY COLOR. THIS PRESET SPEED TO BE THE MACHINE MAXIMUM SPEED.
	INCREASING/DECREASING OF SPEED FROM PRESENT SPEED (RANGE:-3～3. HOWEVER, THERE WILL BE NO CHANGE IN THE SPEED IN THE PROGRAM)
	PRESS THIS KEY AND THE DATA EDITED BECOMES EFFECTIVE IMMEDIATELY.

※ NOTE:

WHEN ENTERING SPEED WINDOW, THE DATA SHOWN AT FIRST TO BE THE PREVIOUS SET DATA.

7.2.1.8 ～ DISPLAY FOR SETTING

CLICK  【SET】KEY TO ENTER THE DISPLAY FOR SETTING AS BELOW DIAGRAM:



(DISPLAY FOR SETTING)

EXPLANATION:

SETTING OF LANGUAGE: SETTING OF THE LANGUAGE FOR MACHINE OPERATION

MACHINE SET WITH FOLLOWING 2 LANGUAGES: CHINESE / ENGLISH

CLICK【CHINESE】OR【ENGLISH】KEY TO CHANGE TO THE DESIRED LANGUAGE.

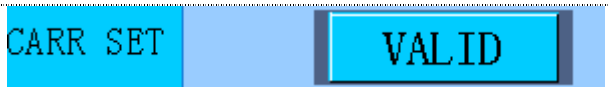
SAFETY COVER: SETTING THE WORKING CONDITION FOR SAFETY COVER

THERE ARE 2 WORKING CONDITIONS: 【VALID】AND【INVALID】

1 SELECT【VALID】AND MACHINE WILL STOP AT ANY WORKING CONDITIONS WHEN THE SAFETY COVER IS OPENED.

2 SELECT【INVALID】AND MACHINE WILL NOT STOP WHEN SAFETY COVER IS OPENED.

CARRIAGE SETTING: SETTING OF WORKING CONDITION FOR LEFT/RIGHT CARRIAGE



CARRIAGE CAM WORKING CONDITION: 【VALID】AND【INVALID】

1 SELECT【VALID】 AND ALL CARRIAGE CAMS WILL COME OUT (WORKING CONDITION)

2 SELECT【INVALID】AND ALL CARRIAGE CAMS WILL NOT COME OUT. (AT REST CONDITION)

SOFTWARE VERSION: SETTING THE VERSION FOR CTL、I/O BOARDS & TOUCH PANEL

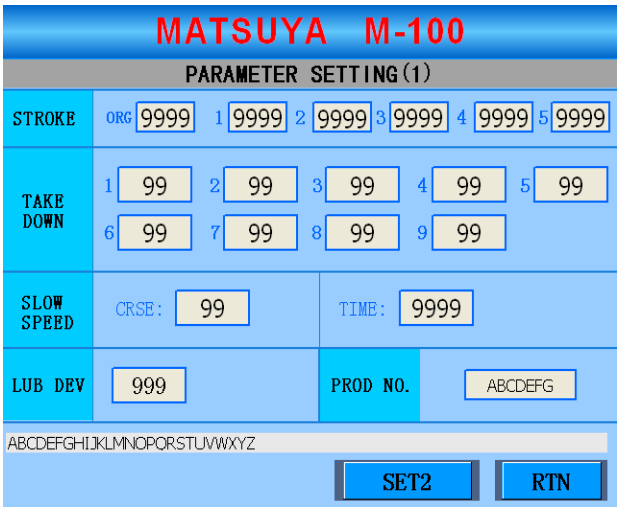
THE BLACK COLOR AREA INDICATES THE VERSION NO.

EX: CTL: V103F　　I/O: V103F　　TOUCH PANEL: 0.99a

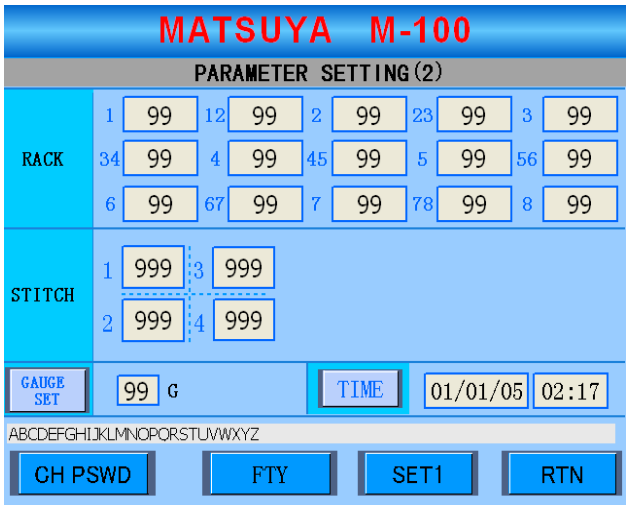
SETTING: SETTING OF PARAMETER

CLICK【**SET**】KEY AND WINDOW POP UP. INPUT THE CORRECT PASSWORD IN ORDER TO ENTER THE 【PARAMETER SETTING】DISPLAYS.

1 ENTER PASSWORD **"9226"** (FACTORY SET PASSWORD) TO ENTER PARAMETER SETTING DISPLAY 1、2



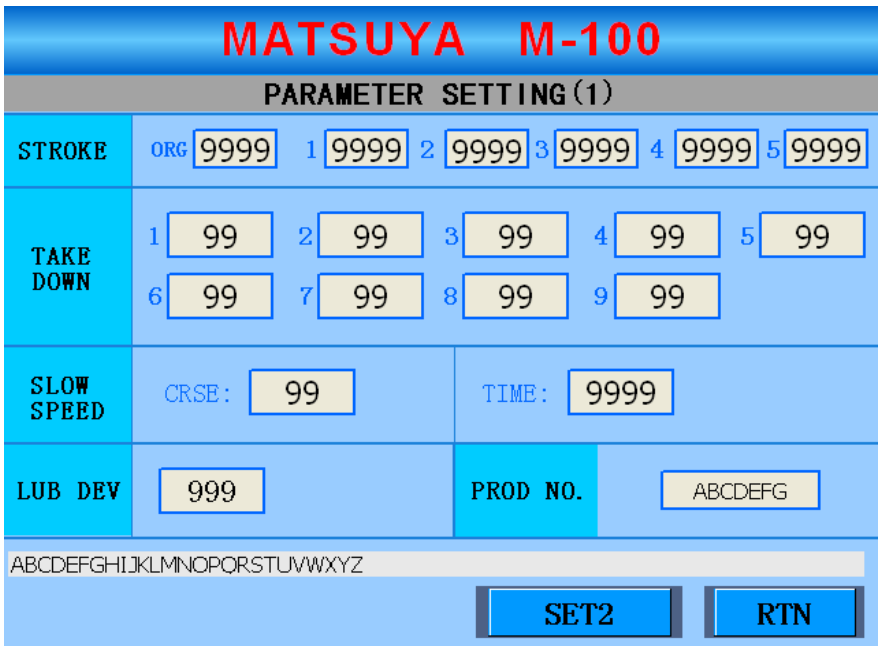
(PARAMETER SETTING 1)



(PARAMETER SETTING 2)

PARAMETER SETTING DISPLAY (1、2)

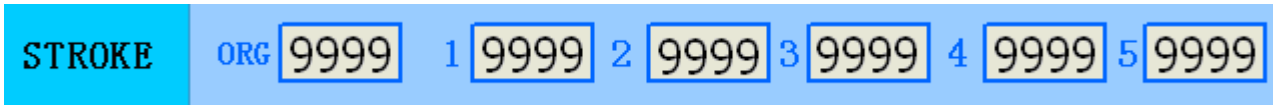
INPUT THE PASSWORD "9226" (FACTORY SET PASSWORD) TO ENTER PARAMETER 1 DISPLAY



(PARAMETER SETTING 1 DISPLAY)

EXPLANATION:

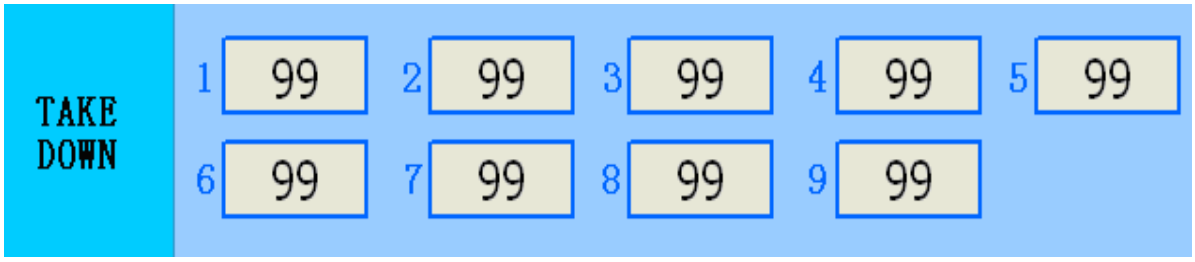
SETTING OF STROKE: SETTING OF KNITTING STROKE



UNIT: NO. OF NEEDLES

"ORG" :SETTING TO START-UP NEEDLE
"1" :LEFT 1ST GROUP "SMALL STROKE"
"4" :LEFT 2ND GROUP "SMALL STROKE"
"3" : KNITTING WIDTH(TOTAL NO. OF NEEDLES OF FABRIC)
"2" :RIGHT 1ST GROUP "SMALL STROKE"
"5" :RIGHT 2ND GROUP "SMALL STROKE"

SETTING OF TAKE-DOWN: SETTING THE TORQUE PARAMETER OF TAKE-DOWN MOTOR



SETTING RANGE: **0-99**

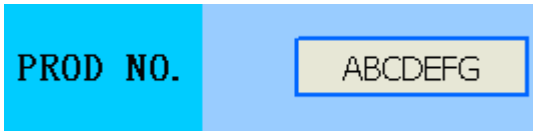
SLOW SPEED SETTING: SETTING OF SLOW SPEED

"CRSE": THE COURSES SETTING FOR SLOW SPEED **"TIME":** TIME SETTING FOR SLOW SPEED(M/S)

LUBRICATION DEVICE: SETTING THE TIME FOR LUBRICATION DEVICE

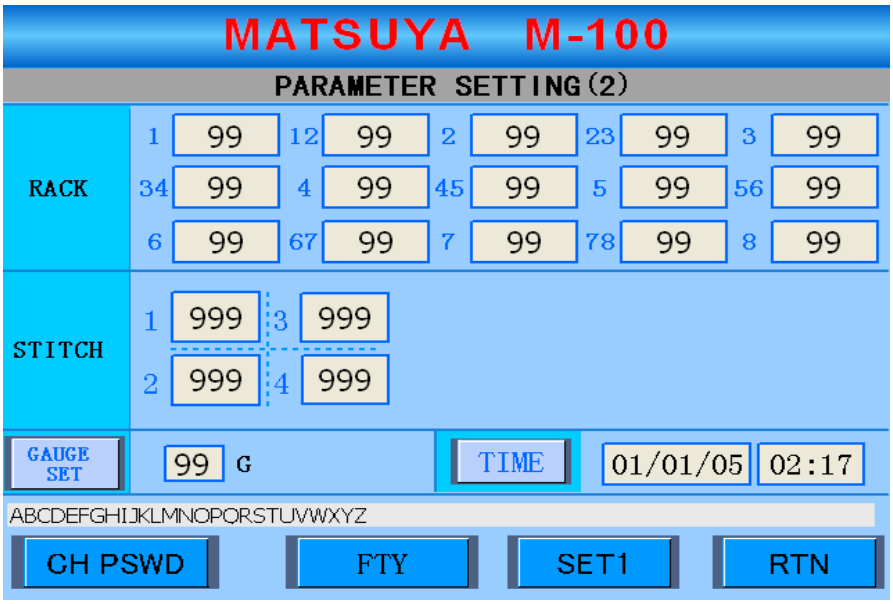
SETTING IS BY THE **"HOUR".** AFTER REACHING THE PRESET TIME, CARRIAGE RUNS AT SLOW SPEED TO THE LEFT ORIGIN POSITION PASSING THE LUBRICATION DEVICE. THEN, THE CARRIAGE WILL TURN TO ENTER THE KNITTING AREA AT NORMAL KNITTING AND SPEED.

PROD NO.: THE PRODUCTION MACHINE NO. SET BY THE CUSTOMER



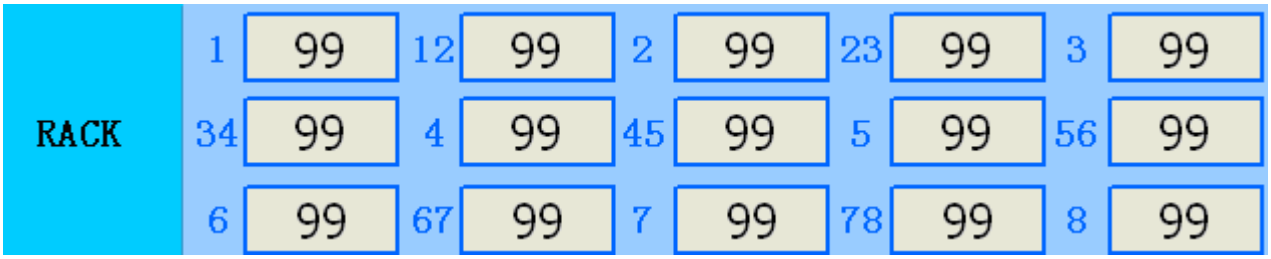
THE CUSTOMER THEMSELVES SET THE MACHINE PRODUCTION NO. IN THEIR FACTORIES.

CLICK【**PARAMETER SETTING 2**】 TO ENTER PARAMETER SETTING 2 DISPLAY AS BELOW:



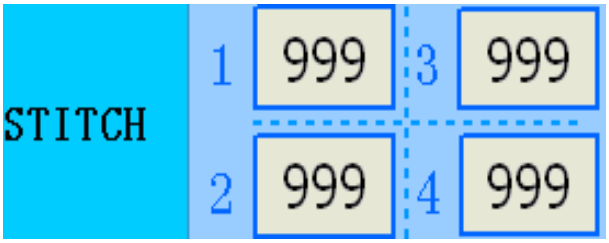
(PARAMETER SETTING 2 DISPLAY)

RACK ADJUST： SETTING THE RACKING ADJUSTMENT



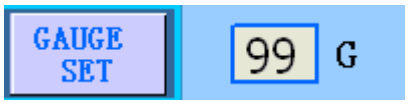
UNIT: EACH ONE STEP OF RACKING MOTOR

STITCH ADJUST： SETTING OF STITCH ADJUSTMENT



UNIT: EACH ONE SET OF STITCH MOTOR

SETTING OF MACHINE GAUGE： SETTING THE MACHINE GAUGE

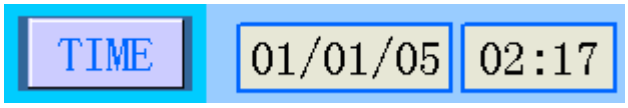


CLICK【**GAUGE SET**】KEY TO INPUT CORRECT PASSWORD IN ORDER TO SET MACHINE GAUGE

NOTE：PLEASE KEEP TIGHT THE PASSWORD AND NEVER CHANGE THE GAUGE UNLESS AT GAUGE CONVERSION.

EX：14G , 18G …。

SETTING OF TIME： SETTING THE TIME ON THE TOUCH PANEL

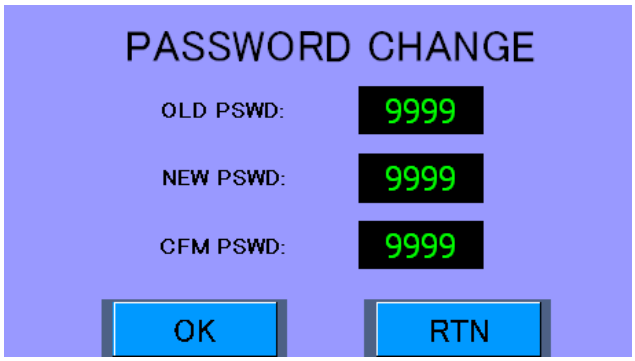


CLICK【**TIME SET**】KEY TO INPUT THE TIME AND DATE.

CHANGE OF PASSWORD: CHANGE OF PASSWORD (FACTORY SET PASSWORD)

NOTE: ENTER【PARAMETER SETTING DISPLAY】AND INPUT PASSWORD.

CLICK THIS KEY AND POP UP WINDOW APPEARS AS BELOW:



OLD PASSWORD: ENTER "PARAMETER SETTING" DISPLAY

NEW PASSWORD: CUSTOMER SET NEW PASSWORD

NOTE: NEW PASSWORD IS 4-DIGIT FIGURE (0～9)

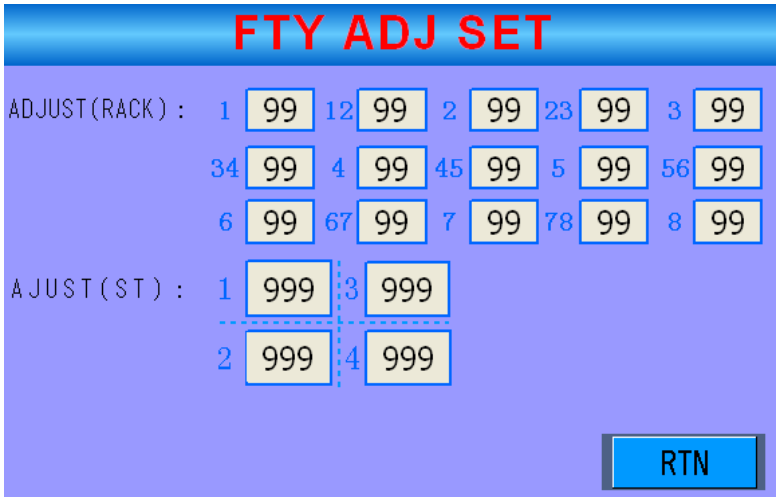
NEW PASSWORD: INPUT ONCE AGAIN THE NEW PASSWORD

【OK】: CONFIRM TO EXECUTE THE NEW PASSWORD

【RTN】: DO NOT SET NEW PASSWORD & RETURN BACK TO THE DISPLAY FOR SETTING.

FACTORY ADJUSTMENT SETTING: INDICATES THE FACTORY ADJUSMENT SETTING

CLICK **【FTY ADJUST SET】** KEY TO ENTER PARAMETER SETTING DISPLAY. THIS DISPLAY SHOWS THE VARIOUS ADJUSTMENT SETTING BY THE MANUFACTURER. THIS IS ONLY FOR REFERENCE BY THE CUSTOMER. THIS IS ONLY USED BY THE CUSTOMER WHEN THEY LOST THE DATA.



(FACTORY ADJUSTMENT SETTING DISPLAY)

CLICK **【PARAMETER SETTING1】** KEY TO RETURN TO PARAMETER SETTING 1 DISPLAY.;

CLICK **【RTN】** KEY TO RETURN TO THE DISPLAY OF SETTING.

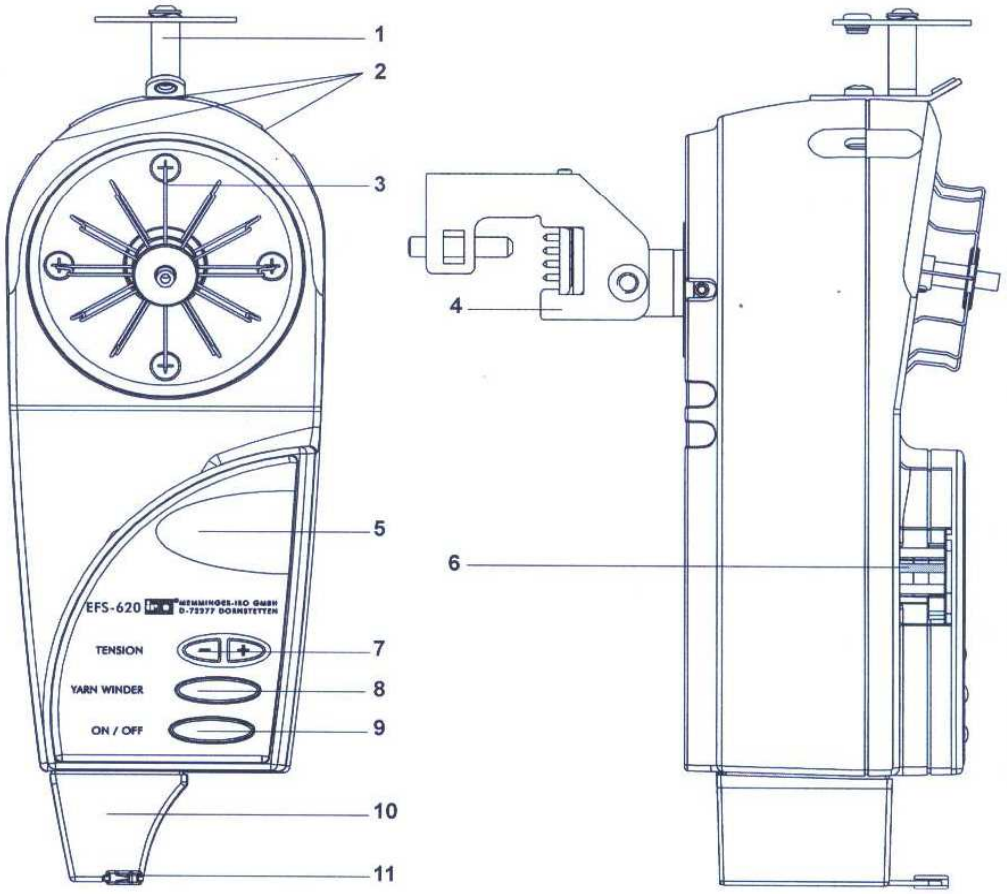
7. 3 TROUBLE SHOOTING

TROUBLE SHOOTING		
※ MACHINE ※	1	Needle Break Left Front!
	2	Needle Break Right Front!
	3	Needle Break Left Back!
	4	Needle Break Right Back!
	5	Shock Error Front!
	6	Shock Error Back!
	7	Limit Error Left!
	8	Limit Error Right!
	9	Emergency Stop!
	10	Safety Cover Error!
	11	Top Tension Error!
	12	Side Tension Error!
	13	Fabric Rollin Error!
	14	Fabric Drop Error!
	15	Main Motor Encoder Error!
	16	Racking Motor Error!
	17	Racking Origin Error!
	18	Cam Motor Error!
	19	Cam Origin Error!
※ SYSTEM ※	1	File Select Error!
	2	File Open Error!
	3	File Read Error!
	4	File Write Error!
	5	System Error!
	6	Cam Data Error Left Front!
	7	Cam Data Error Right Front!
	8	Cam Data Error Left Back!
	9	Cam Data Error Right Back!
	10	Yarn Carrier Data Error!
	11	Stroke Data Error!
	12	Rack Data Error!
	13	Jump Data Error!
	14	Insert Crse Set Error!
	15	Delete Crse Set Error!

CONSTANT YARN TENSION FEEDER— MEMMINGER

恒张力进给装置 —— 美名格

1. EFS 620



1. ····· Barrel tensioner 筒型纱线预张力装置
2. ····· Tensioner installation positions 纱线预张力装置的安装位
3. ····· Yarn wheel 送纱转轮
4. ····· Universal clamp 泛用型夹钳
5. ····· LED display 发光二极体显示屏幕
6. ····· Sensor 传感器
7. ····· Buttons for yarn tension adjustment 纱线张力调整按键
8. ····· “YARN WINDER”button “送纱转轮储纱”按键
9. ····· “ ON/OFF ” button“开/关”按键
10. ····· Signal lamp 讯号指示灯
11. ····· Output eyelet 出纱瓷导

2. Operation 操作过程：

2.1 Press “ ON/OFF ” button [9]
按“开/关”键 [9]，开启送纱器。

2.2 Lead the yarn through the barrel tensioner [1] and the input eyelet.
引纱线穿过筒型预张力 [1] 装置和入纱瓷导孔。

2.3 Place the yarn on the left side of the yarn wheel [3] hub and lead it through the output eyelet.
将纱导引至送纱转轮 [3] 的左侧并沿下到出纱瓷导。

2.4 Hold the yarn.By briefly pressing the YARN WINDER [8] button,5 windings are wound around the yarn wheel in clockwise direction
将纱线撑着，轻按“送纱转轮储纱” 键[8]，使送纱转轮以顺时针方向转动5圈储纱。

2.5 Place the yarn on the sensor [6] and lead it to the yarn guide through the output eyelet.
将纱引至传感器 [6] 上并引纱线穿过出纱瓷导。

2.6 Adjust the desired yarn tension by preesing the “ - “or“ + ”button [7]
按键“-”或“+” [7] 调整所需设定张力。

NOTE: 注意：

1) If the EFS 620 is shut down due to a yarn break.only the stop lampis illuminated.The display shows the adjusted yarn tension.
断纱引发的停机，指示灯亮起，显示屏幕设定张力值。

2) If the EFS 620 is shut down due to stalled motor protection or overload,the stop lamp is illuminated.the figure “ 88 ” flashes on the display.
动机保护设定或电动机超负荷引发的停机，指示灯亮起，显示屏幕显示数字“88”。

3) The shutdown function is only reset after the fault message has been acknowledged by pressing the “ON/OFF”button.
引发停机，错误讯息必须在被解读后，再按“开/关”键才完成复位。

4) The EFS 620 will switch off the machine in case of a yarn break only when the yarn tension is set at 0.7cNor higher.
只有在张力值设定在0.7cN或以上时，遇断纱才会停机。

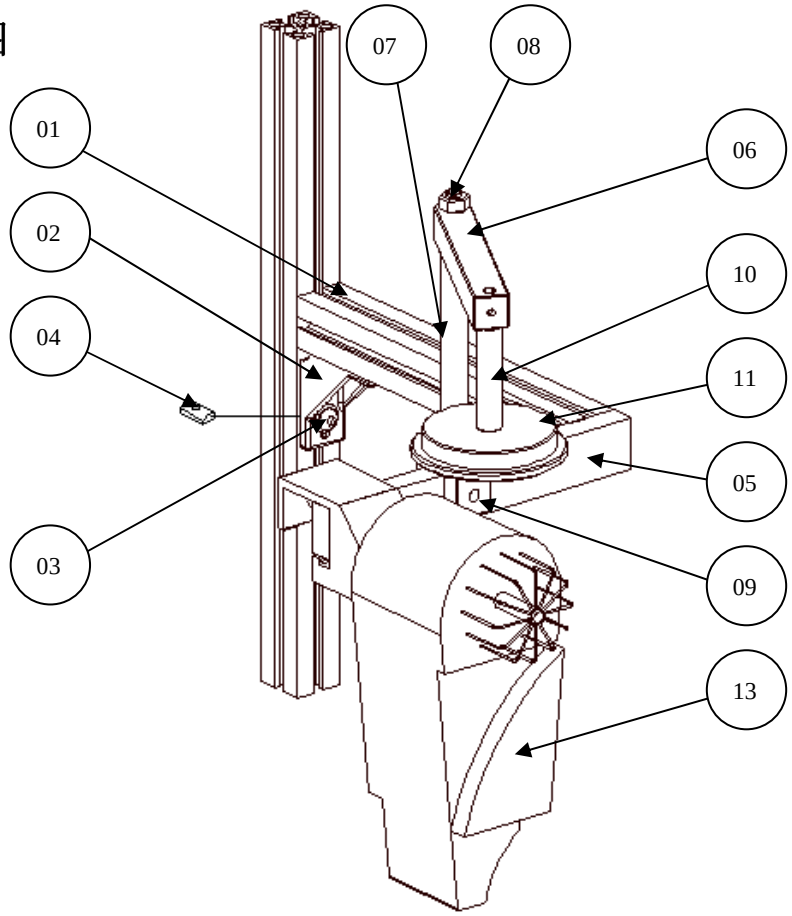
3. Technical date 技术资讯

3.1	Electrical power	电源	35VA	35VA
3.2	Supply voltage	供应电压	24VAC or 35V DC	24V AC 或 35V DC
3.3	Max.current	最大电流	1.45A	1.45A
3.4	Max.yarn speed	最大纱速度	1500 m/min	1500 米/分
3.5	Yarn tension range	张力值范围	0.3cN to 50Cn	0.3cN 到 50Cn
3.6	Processable yarns	适用纱种	elastic yarns	弹性纱
3.7	Weight	重量	1.2kg	1.2 公斤
3.8	Ambient temperature	环境温度	+10℃ to +50℃	+10℃到+50℃
3.9	Storage temperature	储存温度	+0℃ to +70℃	+0℃到+70℃

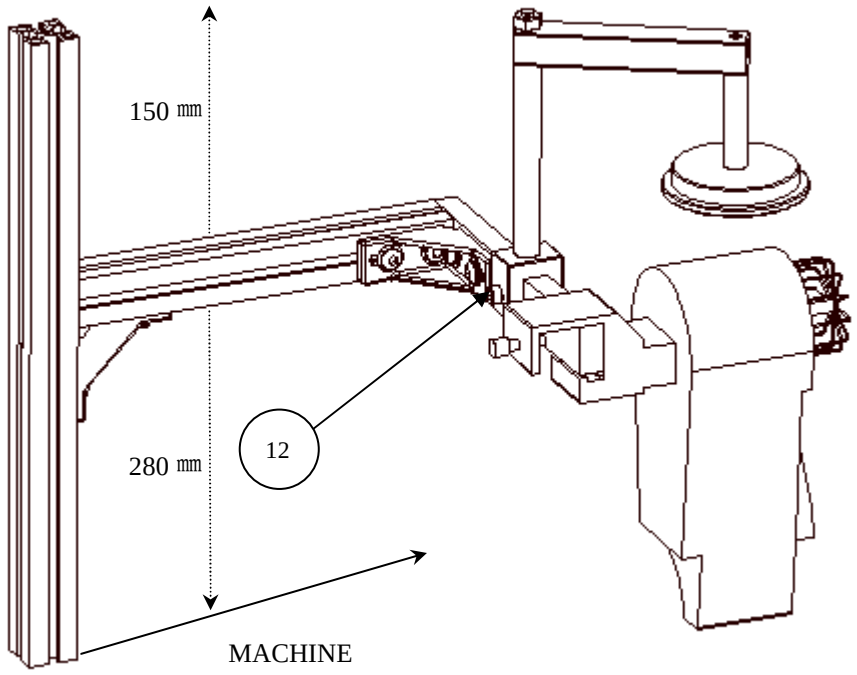
4. Trouble shooting 故障排除

Fault 错误	Possible causes 可能原因	Rectification 矫正
The EFS 620 does not operate. The three red points are not visible on the display. 送纱器无法操作，显示屏幕上的3条红点不见了。	*The unit has not been properly connected to the power supply. *Faulty fuse in the EFS 620. *送纱器电流没接通。 *送纱器的保险丝烧坏。	*Check the input power supply unit as per the connection diagram . Check whether the power supply unit is switched on and whether voltage is applied to the EFS 620. *Replace the fuse. *依线路图示检查电源供应箱的输入电源。电源供应箱的开关是否开启和电流是否通过送纱器。 *更新保险丝。
The EFS 620 does not operate. The three red points are visible on the display. 送纱器无法操作，但显示屏幕上的3条红点可见。	*The EFS 620 is switched off. *送纱器被关闭。	*Switch on the EFS 620 *开启送纱器。
The EFS 620 does not operate. After ON/OFF, the display immediately turns dark . Only the three red points are visible. 送纱器无法操作，按“开/关”键后显示屏幕立即变暗，但可见显示屏幕上的3条红点。	*EFS 620 cannot be balanced. *送纱器安装不平衡。	*Change the mounting position and retry. If required, you have to replace the unit. *改正安装角度及位置再试。如果不行，更换一个送纱器
The EFS 620 does not operate. The figure “88” flashes on the display. 送纱器无法操作，数字“88”闪烁于显示屏幕上。	*Shutdown of the EFS 620 due to stalled motor or overload protection. *关闭送纱器，可能是电动机保护启动了或是电动机超负荷	*Check the yarn guidance. *检查送纱器所有纱道是否取纱时受阻力。

5. 安装示意图

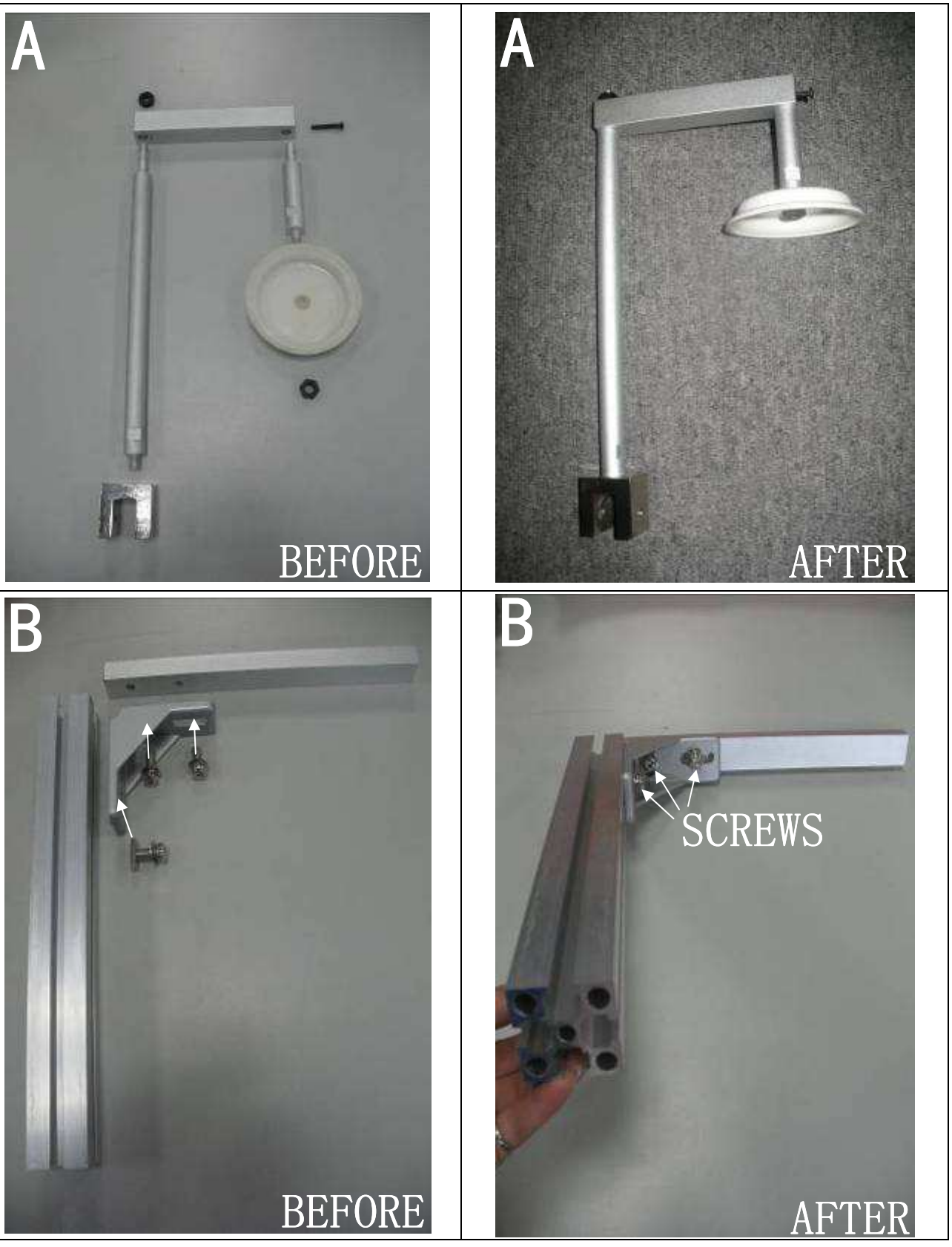


THE MEMMINGER UNIT INSTALL IN THE LEFT SIDE OF THE MACHINE, AND FACE TO THE USER.



M-100/132 PART LIST

NO.	PART NO.	PART NAME	QYI
01	KS0102	INSTALLALTAION LEVER	1
02	MJA0086	ANGLE SUPPORT	2
03	SSB0616-B	SCREW M6X16	8
04	NTY0013	NUT	6
05	KS0104	MEMMINGER INSTALL BLOCK	1
06	KS0015	CONNECTING BLOCK	1
07	KS0018	BRACING SHAFT	1
08	S6343	M8 NUT	1
09	KS0016	INSTALLATION HOLDER BLOCK	1
10	KS0019	AUX. BRACING SHAFT	1
11	KS0020	YARN PLATE	1
12	S6116	M6X10 SCREW	1
13	KS0004	MEMMINGER UNIT	1


A
BEFORE
A
AFTER
B
BEFORE
B
SCREWS
AFTER


C
M8×12
FINISH


C
M5×12
FINISH