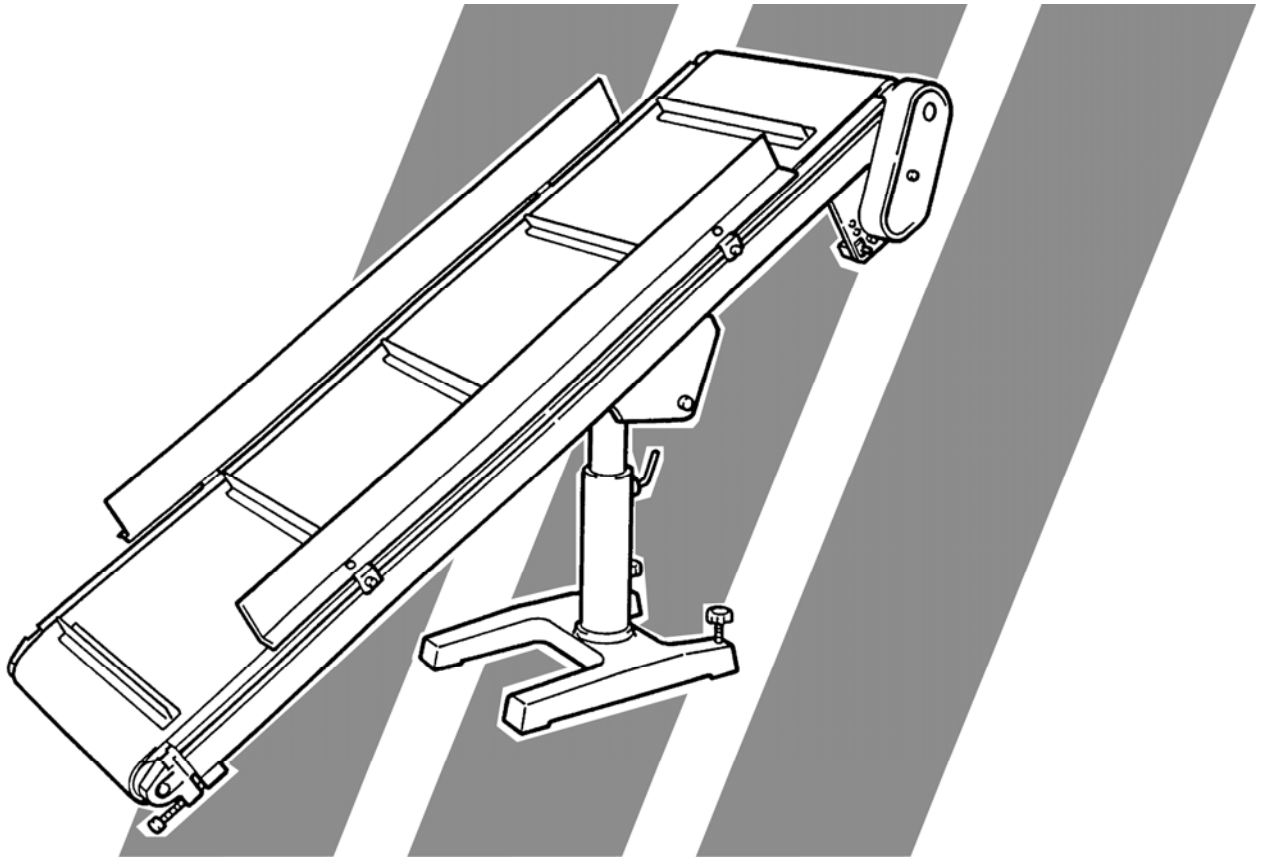


STAR
Quality First



RC Conveyer

RC-S

Instruction Manual



STAR SEIKI CO., LTD.

INTRODUCTION

Thank you for purchase of the Star Conveyer “RC Conveyer”. This manual describes the machine's functions and presents important information about operating methods and precautions. Please read through this manual carefully so that you will be able to use the machine safely and effectively. Keep this manual in a place of easy access.

Features

- You can adjust the angle and belt height easily.
 - Installing the unit just under the metal mold will prevent the molded parts from becoming scratched.
 - Connecting the unit to the molding machine chute will make it easy to transport the workpieces to the stock container.
-

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1. SAFETY-RELATED INFORMATION


1-1. Safety-Precaution Indications

■ Danger Level Symbols

The safety precautions in this manual are classified into the following three levels.

 DANGER	Failure to follow this safety precaution may result in great physical danger to the operator, or even death.
 WARNING	Failure to follow this safety precaution may result in great physical danger to the operator, or severe damage to the equipment.
 CAUTION	Failure to follow this safety precaution may result in injury to the operator, or damage to the equipment.

■ About Important Points

Important points on handling are indicated with  in the manual.

1-2. Safety Precautions



DANGER

PROHIBITING WORKER TO RIDE ON CONVEYER

Never attempt to ride on the conveyer. If the worker rides on the conveyer, it may cause the risk of making the conveyer unstable and so fall down, getting the worker injured.

DO NOT PERFORM MAINTENANCE WHILE CONVEYER IS RUNNING!

Never attempt to service or perform maintenance on the conveyer while it is running. Before carrying out maintenance, be sure to shut down the machinery as follows: (1) Shut down the air supply. (2) Switch off the POWER switch in the control box. (3) Cut the power breaker.



WARNING

Wear appropriate work clothes.

Do not wear bulky clothing and accessories when working at the conveyer, as these may be caught in the machinery, getting the worker seriously injured.

Do not attempt to modify the conveyer.

Do not redesign, rebuild, or otherwise modify the conveyer. The manufacturer cannot be responsible for accidents or damage caused by modified equipment.

Be sure to ground the conveyer.

Use a No.3 ground setup to help reduce the risk of electric shock at installation. Also, after moving the conveyer to another place or performing periodic inspection, make sure that the specified ground setup has been done.

Use a non-fuse circuit breaker.

To avoid the risk of fire due to overcurrent, include a non-fuse circuit breaker in the wiring leading to the power source.

Do not open the cover on the power box.

High voltages are present within the power box. Opening the cover may lead to serious electric shock.

Do not remove the chain cover for operation.

Operating the conveyer with the chain cover removed may cause the risk of getting the worker caught or pinched in the machinery.

Do not touch the conveyer belt while it is running.

Never put your hands inside the conveyer belt while it is moving. Doing so may cause the risk of getting your hands caught or pinched in the conveyer driving rollers.

Shut down operation during periods of frequent power outage.

The machinery should be shut down during times when power supply is frequently going off due to thunderstorm or other such external event. Operating with an irregular power supply may lead to equipment damage. If you cannot locate the cause of failure, please contact the engineering service personnel of our sales office.



CAUTION

Confirm mutual safety in the case of cooperated work.

When two or more persons jointly work together, be sure to clarify who is responsible and confirm safety by pointing the finger to all safety confirmation places and saying “O.K” if safe before getting operation started, in order to avoid accidents due to miss-operation or safety confirmation failure at manual adjustment.

Secure adequate maintenance space.

For safe operation, please leave at least 1 meter of maintenance space (with empty floor) around the circumference of the conveyer.

Work under bright illumination.

To ensure that work is done safely in setting the conveyer and performing service or maintenance, be sure to work under bright illumination.

Carry out daily maintenance inspections.

Check machinery daily to make sure it is in safe operating condition. Contact STAR SEIKI in the event of problem.

Stop working in the event of breakdown or other problems.

If you think that the conveyer is abnormal or malfunctioned, do not keep working based on your own thought. Simply stop operating it. Be sure to get operation started on the basis of appropriated instructions from our engineering service personnel.

Never touch the switches with wet or dirty hands.

Doing so may cause the risk of not only getting the conveyer malfunctioned but also accidents due to electric shock.






Stop all devices linked to the conveyer during operation.

Before carrying out inspection, repair, adjustment, cleaning or lubrication work in the conveyer's moving range, be sure to shut down not only the conveyer itself but also all devices linked to it, such as your molding machine, etc. A failure to do this may cause the risk of getting the worker seriously injured due to unexpected drive.





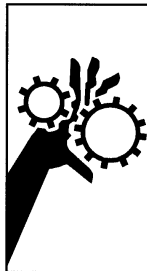



■ **Kinds of Caution Plates**

* Note that some of the caution plates given below are not used on the conveyer.

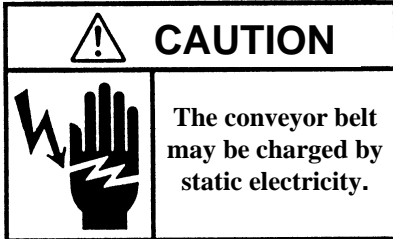
● **Caution for high voltage electrical shock**

 <table border="1"> <tr> <td data-bbox="480 521 703 645">  DANGER </td> </tr> <tr> <td data-bbox="480 645 703 775"> HIGH VOLTAGE. DISCONNECT POWER BEFORE SERVICING. </td> </tr> </table>	 DANGER	HIGH VOLTAGE. DISCONNECT POWER BEFORE SERVICING.	<p>Make sure to cut off the breaker of controller while maintenance work is being done. Especially during such work for inside the box, disconnect connecting cable with molding machine and cut off primary power supply of the factory.</p>
 DANGER			
HIGH VOLTAGE. DISCONNECT POWER BEFORE SERVICING.			
	<p>This label can be found at the locations (terminal block, etc.) where special attention is required in the range of high voltage warning.</p>		

● **Caution for danger of enfolding**

 <table border="1"> <tr> <td data-bbox="480 1200 695 1346">  WARNING </td> </tr> <tr> <td data-bbox="480 1346 695 1487"> DO NOT TOUCH! </td> </tr> </table>	 WARNING	DO NOT TOUCH!	<p>To work in moving zone for maintenance or other purposes, do not touch carelessly with such parts as motor, rotary axis, gear, pulley, belt which have danger of enfolding you. Cut off power supply and air pressure to work.</p>
 WARNING			
DO NOT TOUCH!			
 <table border="1"> <tr> <td data-bbox="480 1525 695 1671">  WARNING </td> </tr> <tr> <td data-bbox="480 1671 695 1794"> DO NOT TOUCH! </td> </tr> </table>	 WARNING	DO NOT TOUCH!	
 WARNING			
DO NOT TOUCH!			

● Caution for static electricity

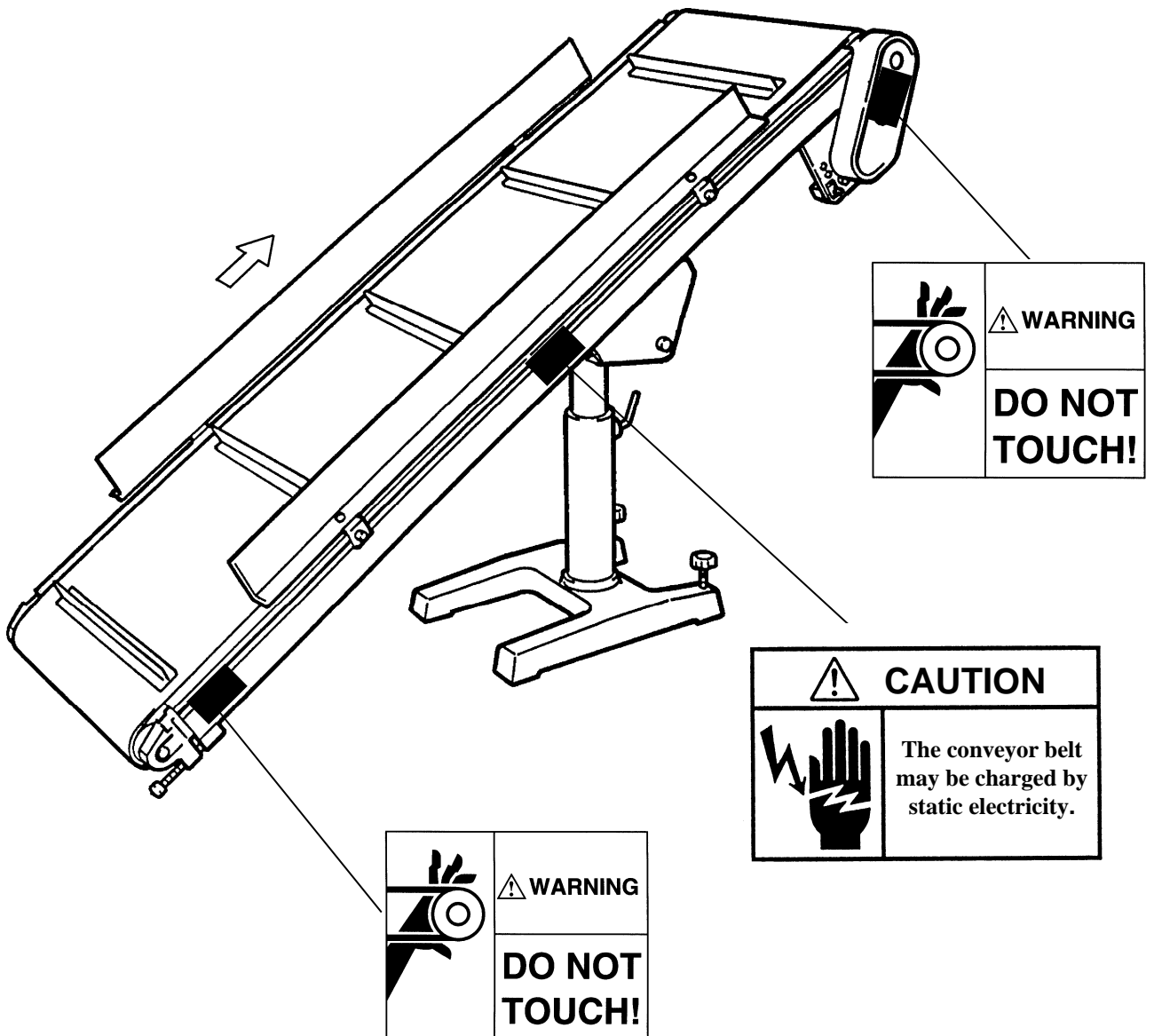


The conveyor belt or the product on the conveyor may be charged by static electricity. You may be shocked by electric when approaching.

1-3. Caution plates

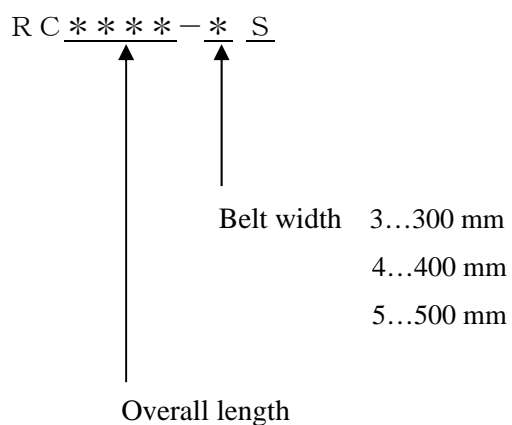
The following diagram shows the location and content of caution plates affixed to the conveyor.

■ Example of caution plates disposition



1-4. Specifications

Model



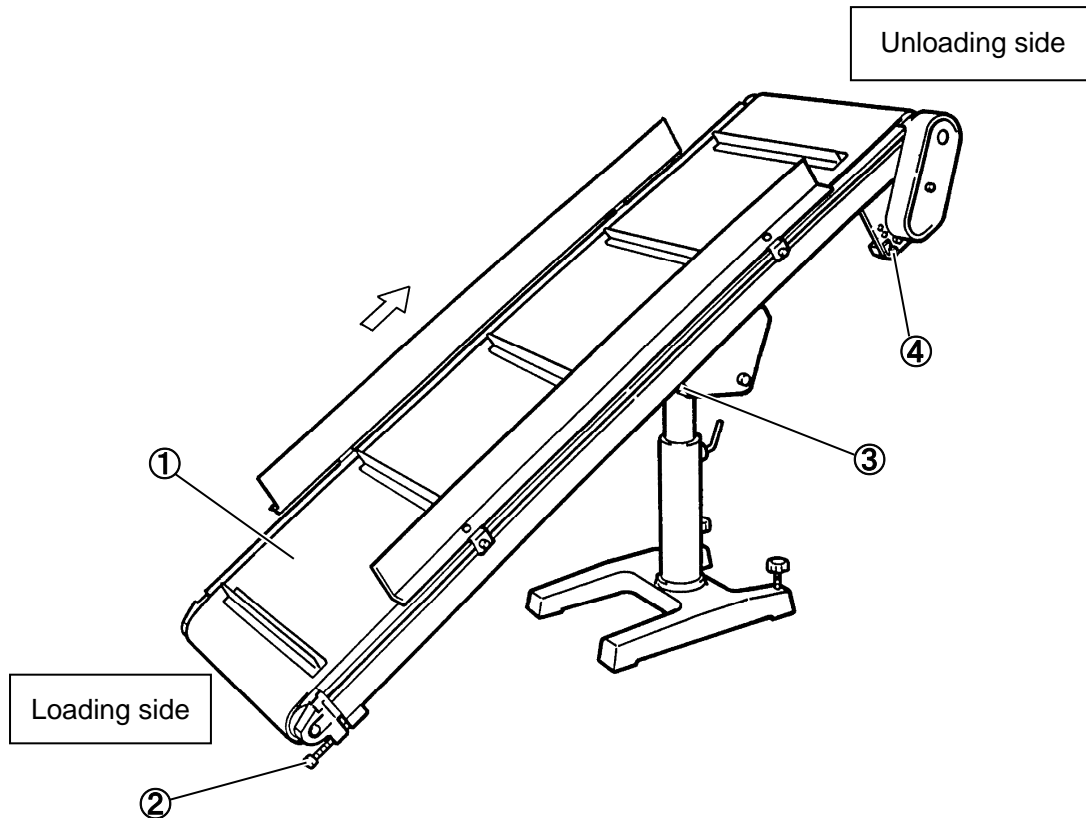
Height m/m	510~690
Angle adjustment	0~45°
Power consumption	AC 100V 15W
Speed	3 m/min (60HZ)
Maximum transport weight (horizontal position)[kg]	12
Overall weight [kg]	See accompanying table.
Optional specifications	1002-01 feet + variable speed specifications (1 to 3 m/min 60HZ)

●Overall weight (Kg)

Belt width \ Overall length	3S	4S	5S	6S
RC1200-	44	46	48	50
RC1500-	45	47	49	51

2. PARTS AND FUNCTIONS

2-1. Overview



① Conveyor belt

This belt is made from synthetic resin, which offers static-electricity prevention and oil/heat resistance.

② Tension adjustment bolt

Use this bolt to adjust the loosened conveyer belt. After adjustment, tighten the bolt securely.

* Do not adjust the belt too tightly.

* Adjust both bolts equally.

③ Angle adjustment bolt

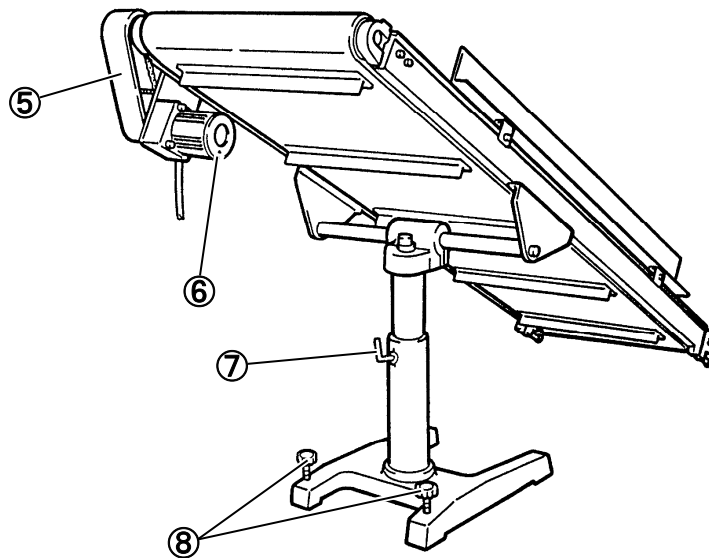
Loosen these two bolts to adjust the conveyer angle. After adjustment, tighten the bolt securely.

④ Power switch

Turns the power to the conveyer ON/OFF.

ON.....The conveyer operates continuously.

OFF.....The conveyer does not operate.



⑤ Chain cover

Remove the cover to adjust and check the chain sprocket.

⑥ Motor gear reduction unit

This is the drive source of the conveyor, with a speed of 9.84feet/min[3m/min] (standard type).

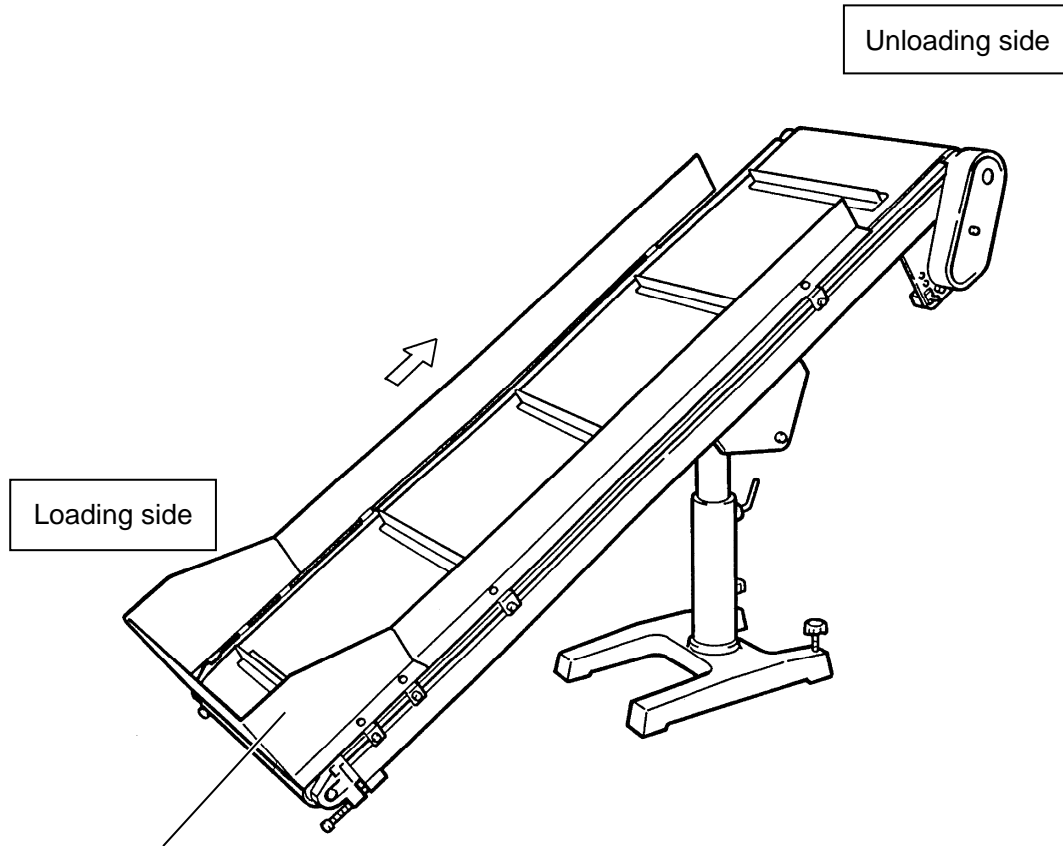
⑦ Height adjustment handle

Loosen this handle to adjust the height of the conveyor stand. Be sure to lock this handle after adjustment.

⑧ Adjuster bolt

After installation, use this adjuster bolt to adjust the level and stability.

Type: Basket on the loading end (Optional)

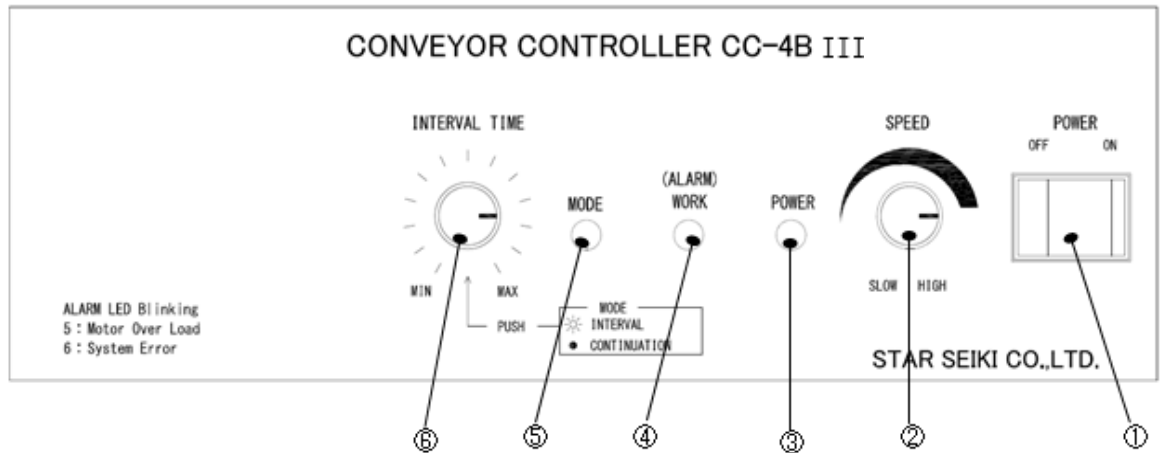


Basket on the loading end (optional)

This design prevents workpieces from dropping off the conveyer when they are loaded on the loading end.

2-2. Control box (Control panel)

Type: CC-4BⅢ (Option)



- ① Power indicator lamp
Lights up when the power is ON.
- ② Power switch
Turns ON/OFF the power supply to the conveyor.
- ③ Work indicator lamp (Alarm indicator lamp)
Light up while the conveyor is in operation.
When alarm occurs, it flashes on and off.
* Five times flashes.....motor thermal
* Six times flashes.....system abnormality
- ④ Work mode select switch
Every time this switch is pressed, an work mode is switched over.
 - INTERVALConveyor start signal is entered from unloading machine. The conveyor will run for a duration set by the timer.
 - CONTINUATIONOperates the conveyor continuously.

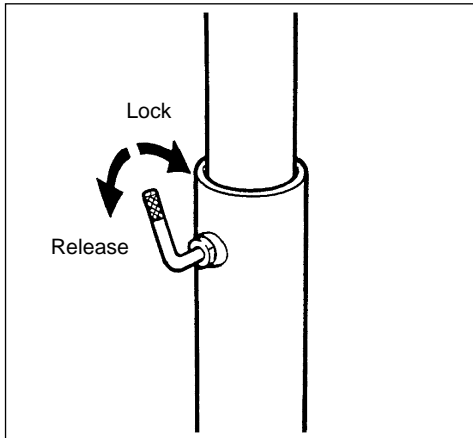
Product feed time set timer

If you choose the intermittent operation at 4 above, you may use this timer to set a period of time during which the conveyor conveys products.(Min0.5sec~Max50sec)
- ⑤ Work mode lamp
 - INTERVAL..... Lighting
 - CONTINUATION..... Lights out
- ⑥ Speed setting knob
Use this knob to set the product feed speed.
Conveyor speed specified range: 0.25 to 3 m/min (1 to 3 Recommended)
Note : The speed is for 60 Hz.

3. MECHANICAL ADJUSTMENTS

After the location of the unit has been determined, turn the adjuster bolt handle to adjust the level and stability.

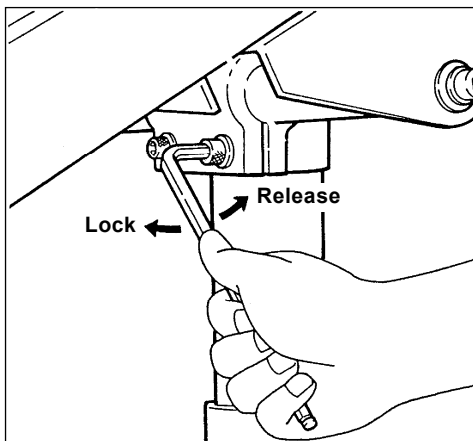
●Adjusting the height



Loosen the height adjustment handles located on each leg of the stand to adjust the height of the conveyer belt.

- * Loosening the adjustment handle may cause the conveyer belt to fall. Hold the conveyer while loosening the handle.
- * After adjustment, tighten the handles securely.

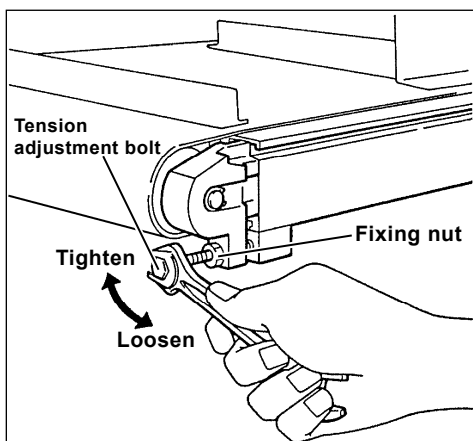
●Adjusting the slope angle



Loosen the slope angle adjustment bolts located on each leg of the stand using the hexagonal wrench to adjust the slope angle of the conveyer.

- * Loosening the slope angle adjustment bolt may cause the conveyer belt to tilt by itself. Hold the conveyer belt while loosening the bolt.
- * After adjustment, tighten the bolts securely.

●Adjusting the belt tension



Adjust the belt tension only when the conveyer belt weaves or when the conveyer driving roller is rotating without transporting the belt.

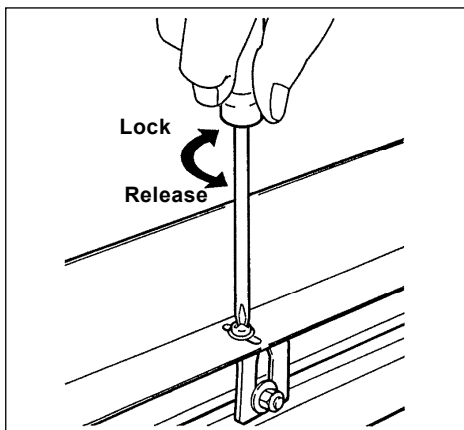
Otherwise, you do not need to adjust the belt tension.

Adjust the tension adjustment bolts on each side of the loading end.

- * Do not adjust the belt too tightly.
- * Adjust both bolts equally.
- * Tighten the fixing nut securely after adjustment.

3. MECHANICAL ADJUSTMENTS

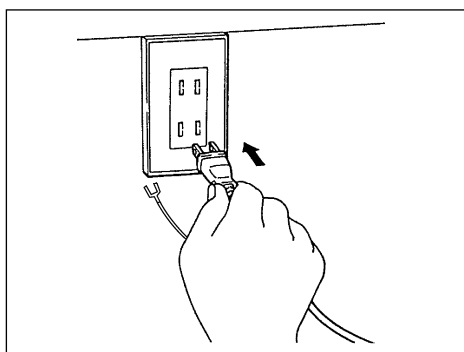
●Adjusting the guide



Loosen the installation bolt using a Philips screwdriver to adjust the width of the guide located on each side of the conveyer belt.

* After adjustment, tighten the installation bolt securely.

●After making the adjustments



●Standard type

Insert the power plug into the power outlet.

●Variable speed type (When CC-B is mounted (Optional))

① Wire the power and conveyer start signal.

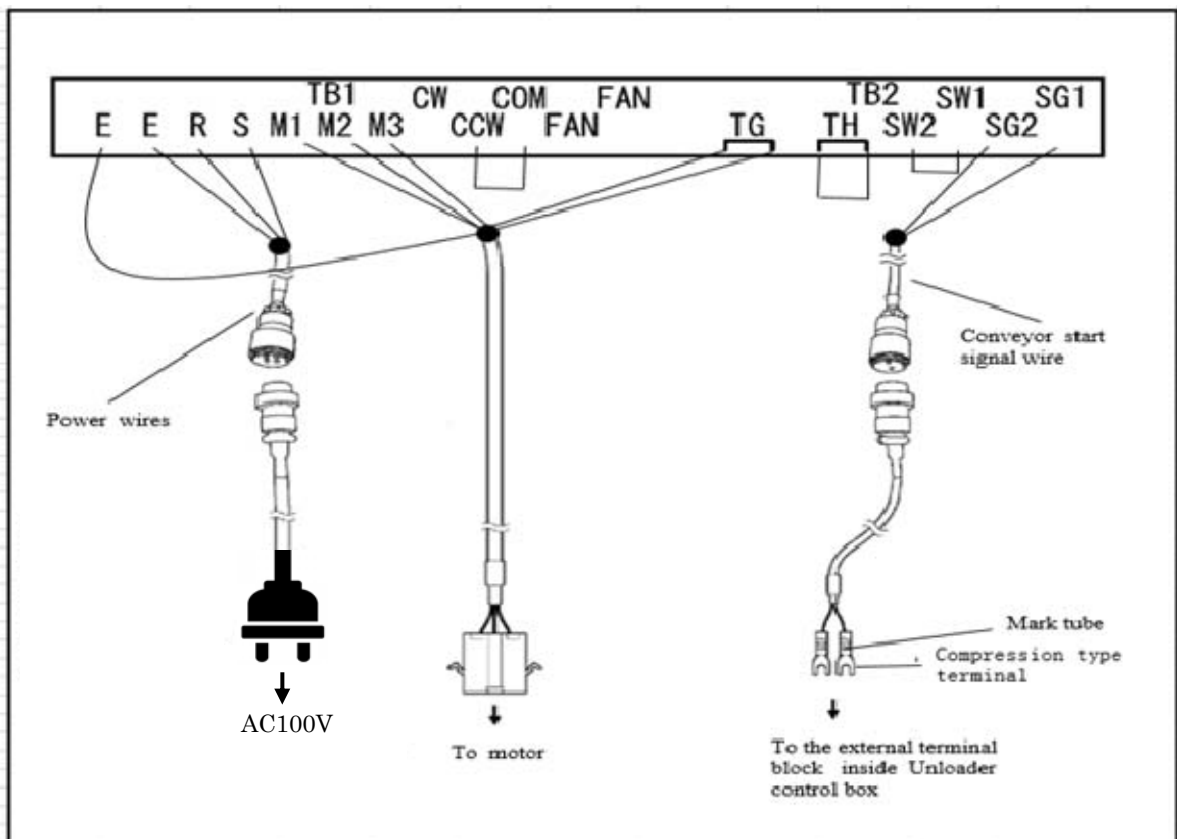
* Shut off the power on the supply side (primary side) during the wiring operation.

* Refer to the instruction manual that came with the control box of the unloading machine for the wiring of the conveyer start signal (SG1, SG2).

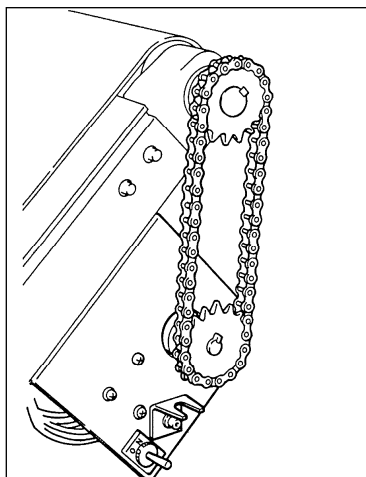
Consult the nearest Star office before you try to input the conveyer start signal from a machine other than a Star unloading machine.

② Insert the metal connectors to the rear panel of the control box.

* Shut off the power on the supply side (primary side) when removing/inserting the metal connectors.



●Maintenance



Remove the chain cover to apply grease to the chain once every six months.

* Install the chain cover after applying grease.

4. PARTS LIST

Product name		Model	Manufacture	Quantity	Code #
Single-state induction motor	Standard	M81X15G4L	Panasonic	1	122737
	Variable speed	M81X15GV4L	Panasonic	1	122738
Gear head (Standard)		MX8GA100B	Panasonic	1	123428
Conveyer belt		SL-S9131 ****_***	Bando	1	

5 . Warranty

1. Once the unit is delivered and accepted, a warranty period based on the agreement takes effect.

The warranty period is generally six months.

2. Any malfunction occurring during the warranty period (except for items excluded from the warranty) will be repaired free of charge.

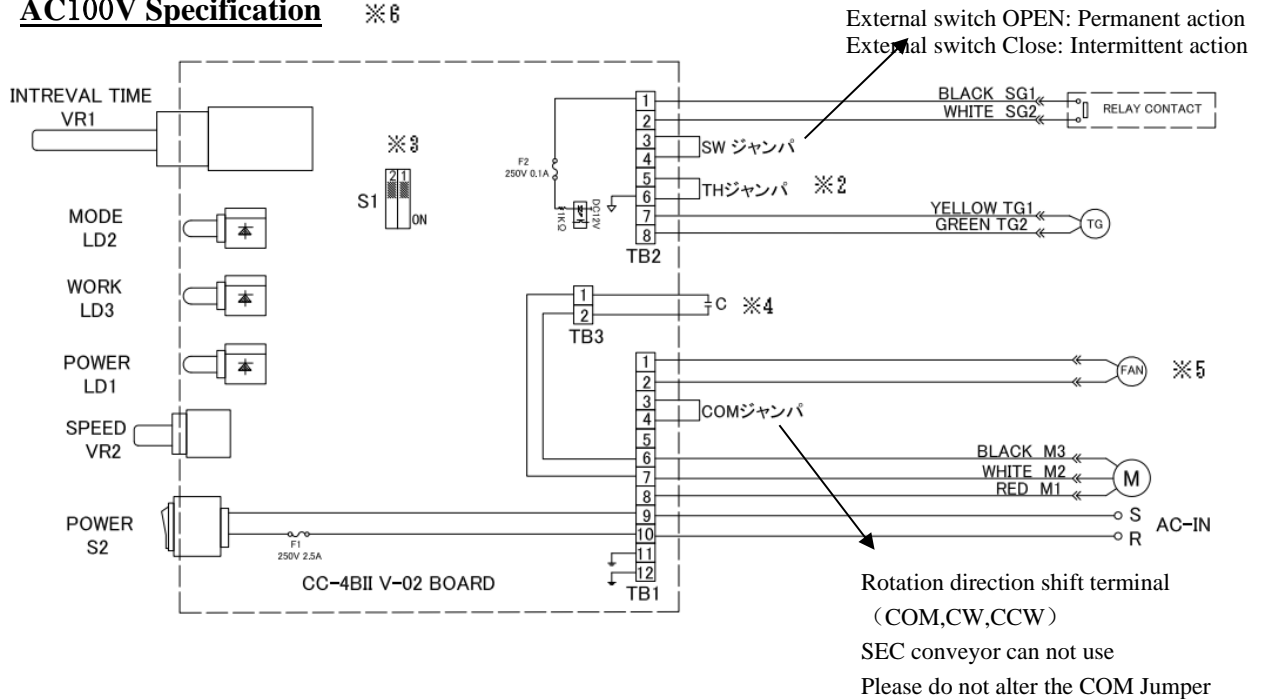
3. Items excluded from the warranty:

- Damages caused by negligence of the specified precautions.
- Damages caused by fire or natural disasters.
- Malfunction caused by worn parts.
- Damages caused by your own repair, adjustment, or modification.

6. ELECTRICAL CIRCUIT DIAGRAM

■ RC Conveyor (Optional specifications) ※1

AC100V Specification ※6



※1. Usage method of SW terminal

Under Intermittent action mode, if want to control the conveyor manually, please use SW terminal.
Please use B connection switch.

※2 Temperature fuse input terminal

RC conveyor can not use.

※3 Time selection

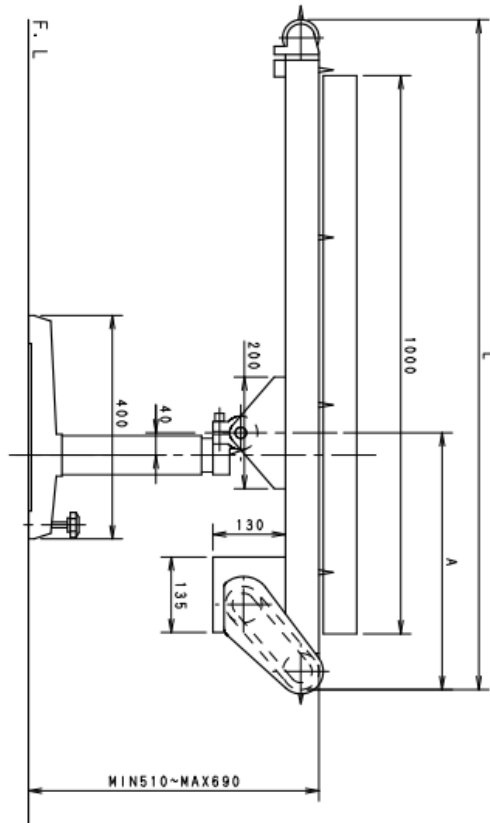
S1-2: OFF According to the setting time of Interval Time (VR1) to perform the action.(Standard Mode)

S1-2: ON Interval Time (VR1) is invalid, SG1 2 is ON, execute the action.
Unloader need to control the time of the action, please use S1-2 ON

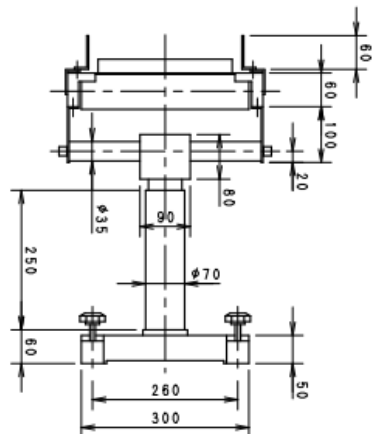
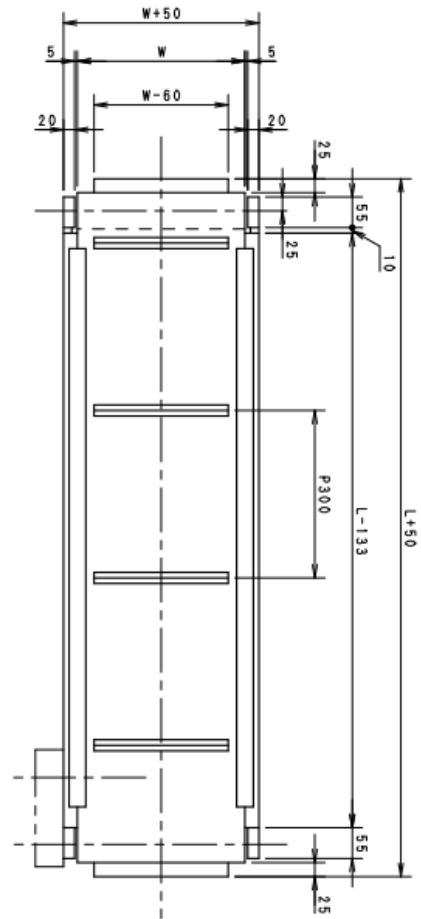
※4 If use 90W (Or above 90W) type of motor, need to connect the fan.

RC conveyor can not use.

7. OVERVIEW



機種 Model	全長 L (mm)	ベルト幅 W (mm)
RS1200-3S	1200	300
RS1200-4S		400
RS1200-5S		500
RS1500-3S	1500	300
RS1500-4S		400
RS1500-5S		500



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