INTERPACK
PACKAGING SYSTEMS

# USC 2020-TB/3”

METRIC

UM697TW

OPERATION MANUAL

&

PARTS LISTS

This Manual Covers Machines With Serial Numbers Starting With
TM 697
For All Other Serial Number, Please Contact Customer Service @800-474-8273

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# GENERAL SAFETY RULES

1. **Read and understand the entire instruction manual before operating the machine. Know it's limitations, as well as the specific potential hazards peculiar to it.**

2. **Make certain the machine is properly grounded.**

3. **Before operating the machine, remove ties, rings, watches, other jewelry, and roll up sleeves above the elbows. Remove all loose clothing and confine long hair. Do not wear gloves.**
4. **Keep the floor around the machine clean.**

5. **Keep machine guards in place at all times when the machine is in use.**

6. **Do not over reach. Maintain a balanced stance at all times so that do not fall or lean against blades or other moving parts.**

7. **Make all machine adjustments or maintenance with the machine unplugged from the power source.**

8. **Replace warning labels if they become obscured or removed.**

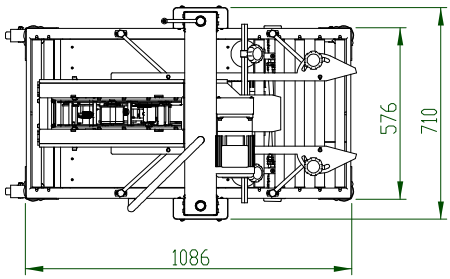
9. **Make sure the power source switch is in the OFF position before connecting the machine to the power source.**

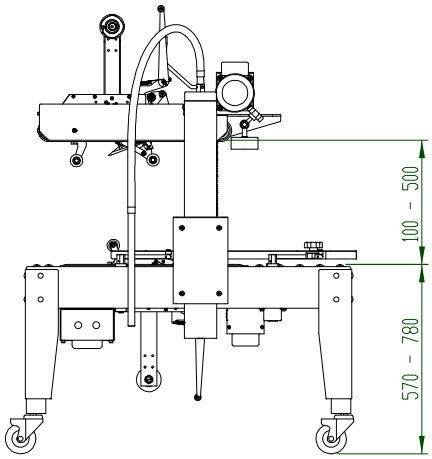
10. **Make a habit of checking to see that the keys and adjusting wrenches are removed before turning on the machine.**

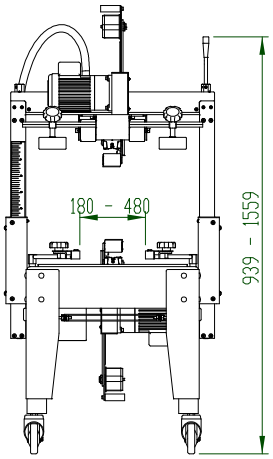
11. **Keep belt guard and blade guards in place and in working order.**

12. **Failure to comply with all of these warning could lead to serious injury.**

# DIMENSIONAL DRAWING

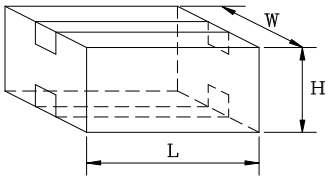


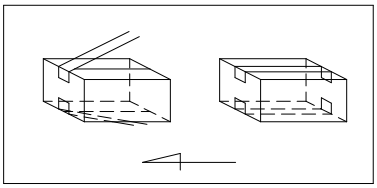



# SPECIFIACTIONS :

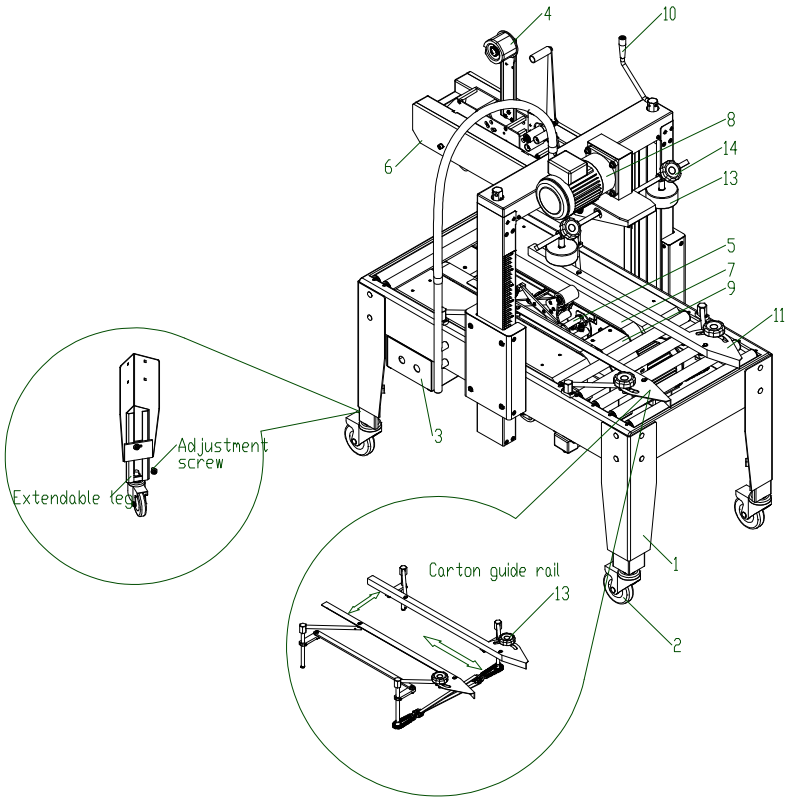
| | |
|---|---|
| **Range of box dimensions** | **Length 150-unlimited mm**<br>**Width 180-480 mm**<br>**Height 100-500 mm** |
| **Tape width** | **3” (75mm)** |
| **Driving belt speed** | **22m/min (60Hz power source)**<br>**18m/min (50Hz power source)** |
| **Box driving device** | **Top and bottom driving motor** |
| **Height of roller conveyor table** | **570-780mm (adjustable)** |
| **Motor** | **1/4HP (Upper belt)**<br>**1/4HP (Lower belt)** |
| **Machine dimensions** | **1086(L) x 710(W) x 1559(H)mm** |
| **Power source** | **single phase 100/110/220V**<br>**there phase 220/380V** |
| **Net weight** | **118 kgs** |
| **Gross weight** | **148 kgs** |



# LEGEND OF THE MACHINE

**1. Leveling and adjustment screw**
**2. Caster**
**3. Control box**
**4. Upper tape head mechanism**
**5. Lower tape head mechanism**
**6. Upper tape head driving belt**
**7. Lower tape head driving belt**
**8. Upper tape head driving motor**
**9. Lower tape head driving motor**
**10. Height adjustment crank handle**
**11. Carton guide rail**
**12. Width adjustment knob**
**13. Guide wheel**
**14. Guide wheel adjustment knob**



# POWER SOURCE WIRING

1. **Before connecting, make sure the voltage is the same for both the machine and the power source.**

   **All electrical informational (such as voltage) has been wired before shipment, and is Indicated on the electrical instruction label.**

2. **Connect the power source wires to the "R.S.T." connection points.**

   **The machine must be properly grounded to prevent possible damage from electric shocks. ( 3 phase only)**

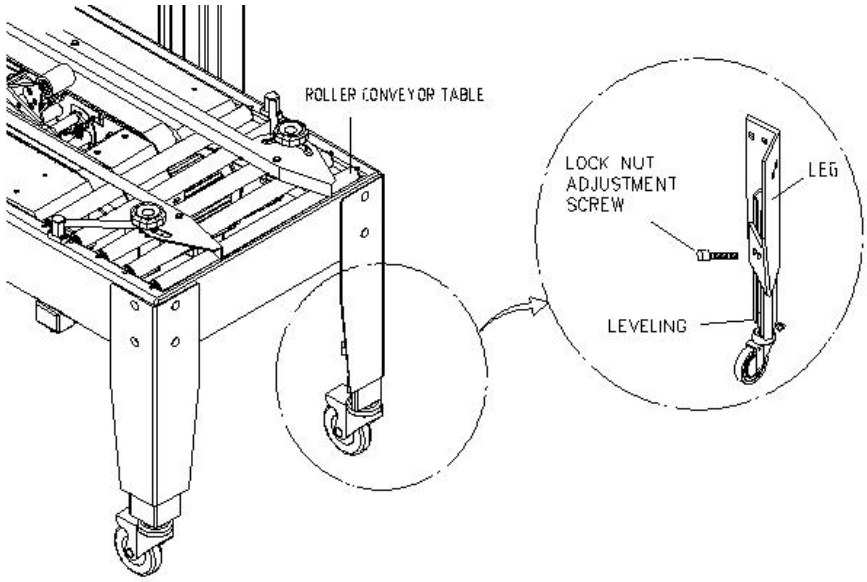
3. **After the power source wires have been connected, check to see if the wires are connected to the correct points by the running direction of the left and right driving belts. If the driving belts run in the correct direction, then the power source wires are connected to the correct points. If the driving belts run in the opposite direction, cut off the power source and change any two of the three power source wires to obtain the correct running direction. ( 3 phase only)**

# LEVELING ADJUSTMENT
# FOR ROLLER CONVEYOR TABLE

**Once the machine has been located at the work site, there needs to be a proper leveling Adjustment for the roller conveyor table to suit your production line.**

**The leveling adjustment screws are located at the bottom of the 4 legs. Make the leveling Adjustment by simply turning the leveling adjustment screws. Loosen the lock nut before you do it . Tighten-up the lock nut after the level has been properly adjusted.**

**Fix the machine in place after the leveling adjustment. Press the caster lock pedal for fixing the machine on work site.**



# BOX WIDTH ADJUSTMENT

1. **Loosen the guide wheel fixing knob.**

2. **Move the guide wheel directly with your hands until the distance between guide wheels is about 30-50mm wider than the width of the box.**

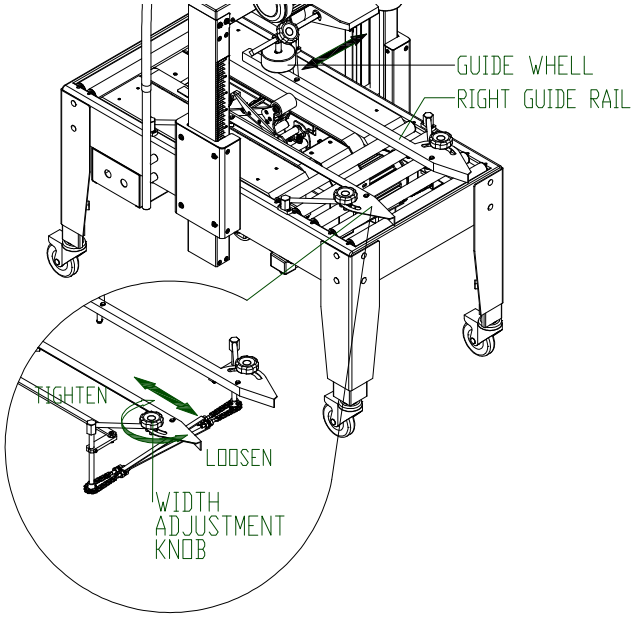
3. **Loosen the width adjustment knob, move right/left clamping guide rail outward until the distance between the right and left rails is wider than the width of the box.**

4. **Place a box onto the roller conveyor table is proper position (see page 4) with the top and bottom covers folded. Move the right and left rails so that they properly press against both sides of the box. Tighten the width adjustment knob.**

5. **Adjust the box height.**

6. **Move the guide wheels so that they touch both top sides of the box.**

7. **Tighten the guide wheel fix knobs.**

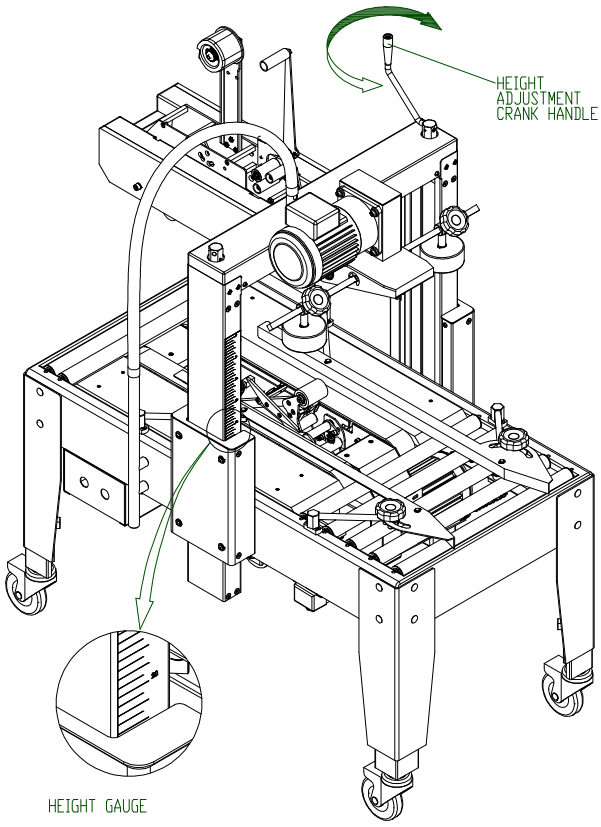


# BOX HEIGHT ADJUSTMENT

**1. Make sure the box height.**

**2. Turn the height adjustment crank handle until the top driving belt holds down the box.**

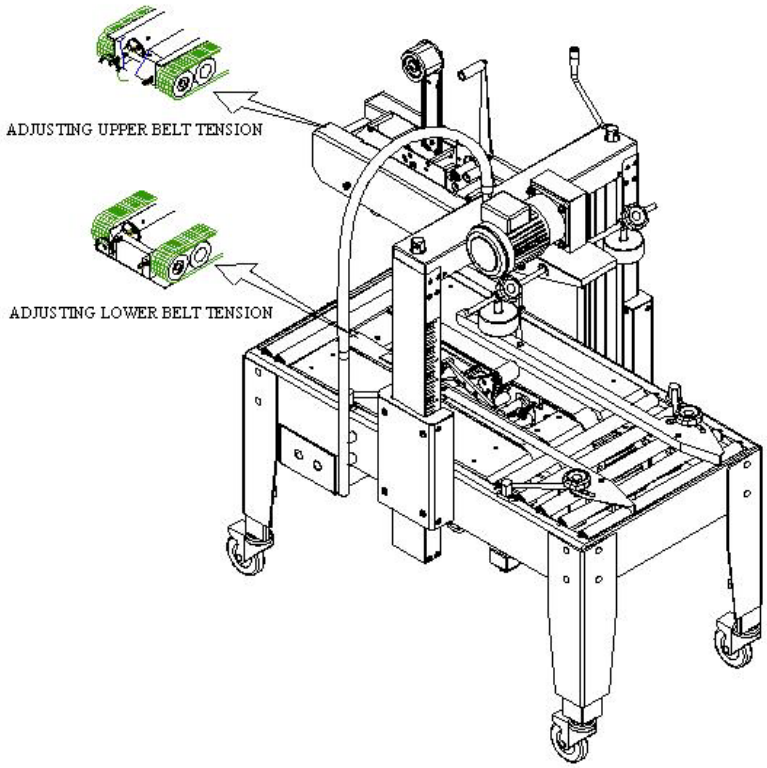
**3. The box height can be read on the height gauge attached to the left frame of the machine.**



# ADJUSTING UPPER AND LOWER DRIVING BELT TENSION

**In case the driving belt is too loose to drive the carton, simply adjust the belt tension.**

**To do this, loosen the belt tension fix nut, and move the screw clockwise to tighten the belt tension until proper tension is obtained, then tighten the belt tension fix nut, (Both sides of the screw should be adjusted simultaneously)**



# IDENTIFICATION BEFORE OPERATION

1. **Make sure the voltage level is correct.**

2. **Check to see if the driving belts run in the correct direction. ( 3 phase only)**

3. **Is width and height for box size correctly adjusted?**

4. **Keep all guards in place and in working order.**

5. **Make sure the tape has been properly installed.**

# OPERATION PROCEDURES

1. **Place the box to be sealed onto the roller conveyor table.**

2. **Adjust the width of right and left driving belt.**

3. **Adjust the height of top driving belt.**

4. **Adjust the width of the guide wheel.**

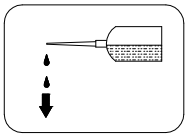
5. **Start the driving belt to feed the box forward.**

6. **Check to see if the box feeds smoothly. Make proper adjustment in accordance with Procedures (2) (3) (4) if necessary.**

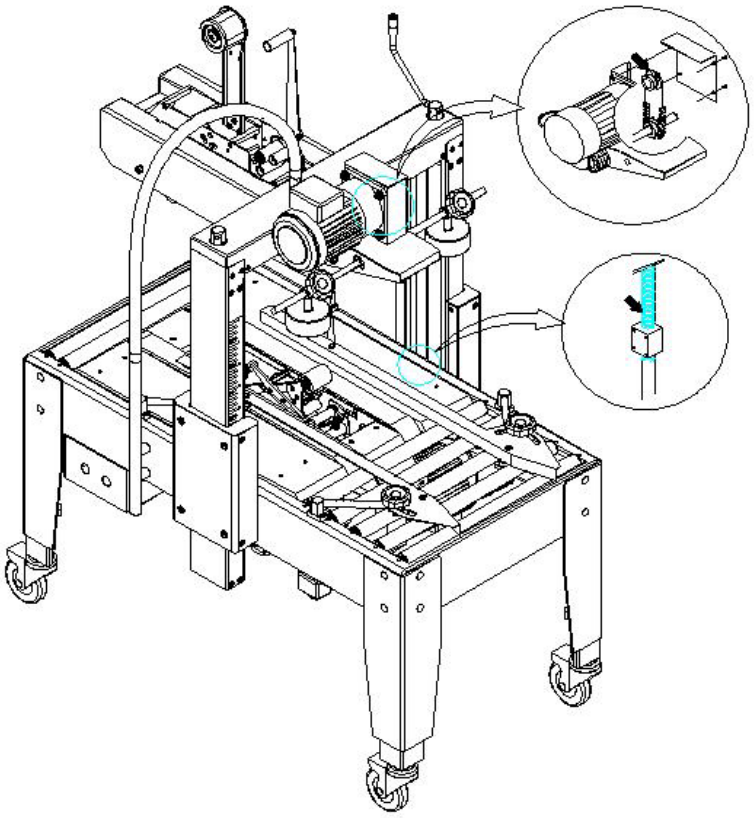
7. **Then feed the box into the inlet end of the driving belt. The box will automatically Move through the tape heads for sealing operations on the top and bottom of the box.**

# MAINTENANCE AND LUBRICATION

**To ensure the service life of the machine, lubricate periodically all moving points as instructed by the arrowhead on the figures below：**



LUBRICATION OF TAPE HEAD MECHANISM
(Refer to Tape Head manual)



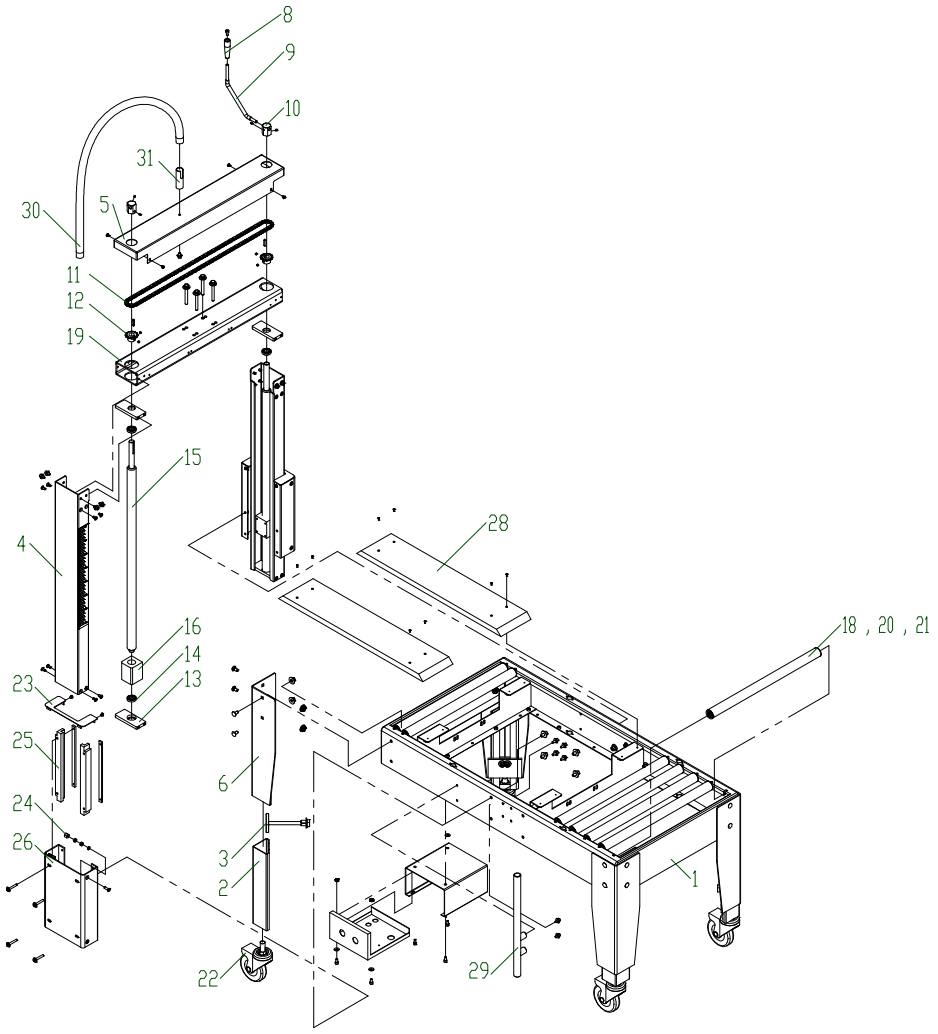
# TROUBLE SHOOTING

| TROUBLE | PROBABLE CAUSES | REMEDY |
|---|---|---|
| **Tape isn't being cut-off** | *Knife is not sharp enough<br>*Knife tip is jammed with adhesive | *Replace with a new knife<br>*Clean the knife with Volatile solvent |
| **A trailing of tape after cut-off motion** | *Unsmooth motion of knife holder due to choke<br>*Knife holder extension spring fatigue. | *Check if the Knife holder screws are loose. Lubricate when necessary.<br>*Replacement. |
| **Tape is not fully adhering to the box.** | *Main spring too loose<br>*The roller shafts which tape run over are not effected due to accumulated tape adhesive.<br>*Tape wheel adjustment nut too tight. | *Tighten the main spring<br>*Lubricate those roller shafts<br>*Loosen it. |
| **Box choked on the way** | *Improper Box Height adjustment.<br>*Main spring too tight. | *Re-adjust the height.<br>*Loosen the main spring. |
| **Tape broken during sealing on box** | *Knife protrudes too far. | *Lower the knife position |
| **Tape can't travel smoothly** | *Tape adhesion is not even<br>*The roller shafts which tape runs over art not effected due to accumulated tape adhesive.<br>*Irreversible roller is not affected.<br>*Tape loaded incorrectly<br>*Tape wheel adjustment nut | *Replace with a new tape roll<br>*Lubricate those roller shafts<br>*Replacement.<br>*Correct tape loading so that adhesive side faces upward.<br>*Loosen it. |

| | | |
|---|---|---|
| | too<br>tight. | |
| **Tape mistakes frequently** | *Irreversible roller is not affected. | *Replace |
| * **Tape is off central application** | *Both Guide wheels give uneven<br>pressure on the box. | *Re-adjust the distance between<br>both Guide wheels. |

# TROUBLE SHOOTING

| PROBLEM | PROBABLE CAUSES | REMEDY |
|---|---|---|
| **Tape end wrinkling on the carton.** | * Tape wheel assembly (A) is too tight.<br>* Inside tape wheel assembly with sharp edges & dust.<br>* Tape dose not travel smoothly.<br>* Knife is not sharp enough or is jammed with tape adhesive.<br>* The knife holder is not functioning smoothly<br>* Bronze roller (irreversible roller) is not functioning. | * Loosen tape wheel assembly spring.<br>* Remove tape wheel washer sharp edges and keep it clean.<br>Grease the tape wheel.<br>* Lubricate the roller shafts which the tape runs over.<br>* Clean the knife with alcohol (Volatile solvents).<br>* Check and lubricate to ensure that it functions smoothly. Adjust the knife holder's spring tension.<br>* Replace it. |
| **NOTE : Clean the knife daily with a toothbrush and alcohol.** | | |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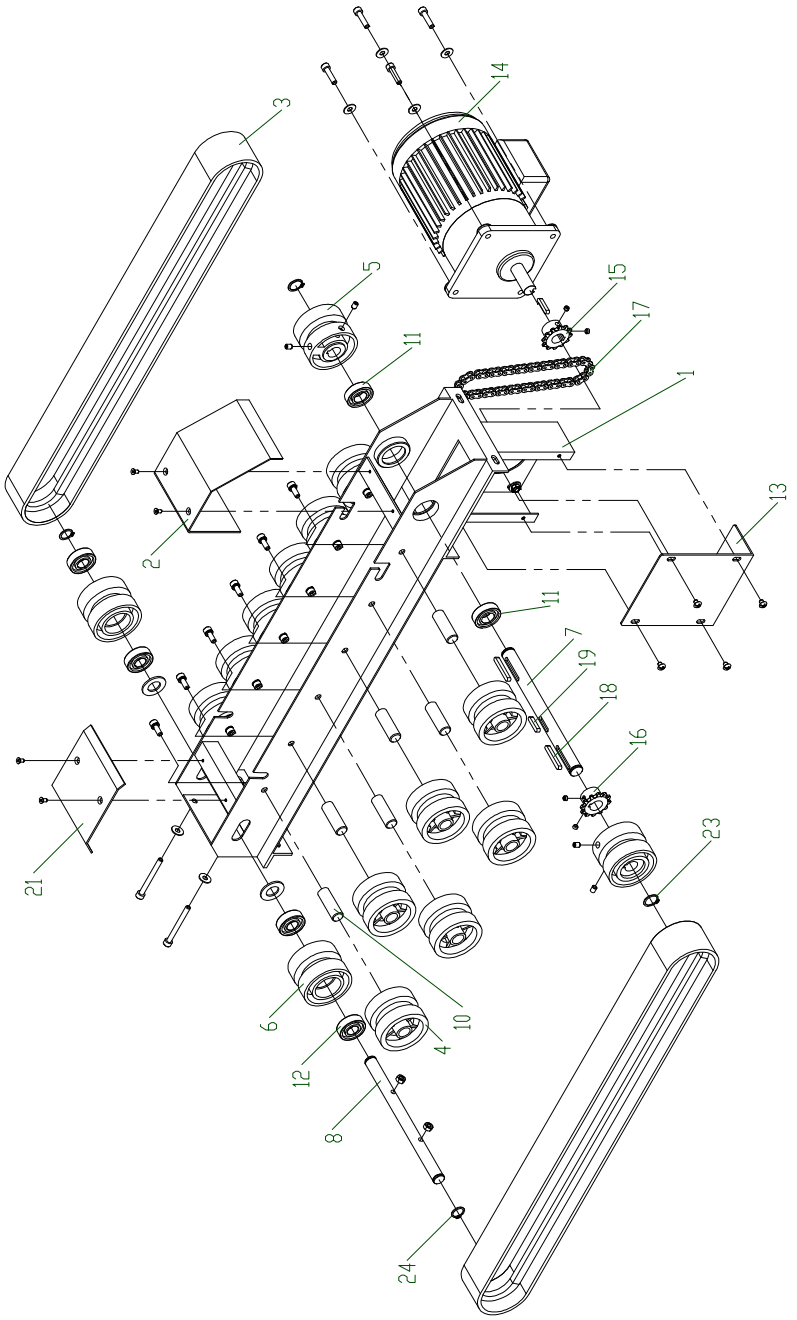
# BASE, FRAME AND ELEVATION ASSEMBLY

| NO. | ITEM NUMBER | DESCRIPTION | Q'TY |
|---|---|---|---|
| 1. | BA73-101A | Base | 1 |
| 2. | E00-1020 | Extension leg | 4 |
| 3. | E00-1030 | Leg fixing piece | 4 |
| 4. | BA73-103 | Frame | 2 |
| 5. | BA73-108A | Top beam | 1 |
| 6. | BA73-102 | Machine leg | 4 |
| 7. | | | |
| 8. | E00-1080 | Crank handle knob | 1 |
| 9. | E00-1090 | Crank handle | 1 |
| 10. | E00-1100 | Bush | 2 |
| 11. | RS-35 | Chain | 1 |
| 12. | RS131217 | Chain sprocket | 2 |
| 13. | BA73-113 | Bearing mounting plate | 4 |
| 14. | 6903ZZ | Ball bearing | 4 |
| 15. | BA73-107 | Elevation screw | 2 |
| 16. | E72-2040 | Nut | 2 |
| 17. | | Rule gauge | 1 |
| 18. | ROL-0494 | Roller | 6 |
| 19. | BA73-106 | Top Beam | 1 |
| 20. | E00-1200 | Plastic bush | 12 |
| 21. | ROS-509 | Roller shaft | 6 |
| 22. | E00-1280 | Caster | 4 |
| 23. | BA73-109 | Mast holder | 2 |
| 24. | E71-PL28A | Block | 8 |
| 25. | BA73-105 | Column Block | 4 |
| 26. | BA73-104 | Outer Column | 2 |
| 27. | | | |
| 28. | BA73-116B | 3” Table Cover (left, right) | 2 |
| 29. | E00-1232 | Power wire guard pipe | 1 |
| 30. | E00-1240 | Flexible pipe | 1 |
| 31. | E00-4251 | Power wire guard pipe | 1 |
| 32. | | | |
| 33. | BA73-110 | Block Fix Plate | 4 |
| 34. | BA73-114 | Upper frame (Control Box) | 1 |
| 35. | BA73-115 | Lower frame (Control Box) | 1 |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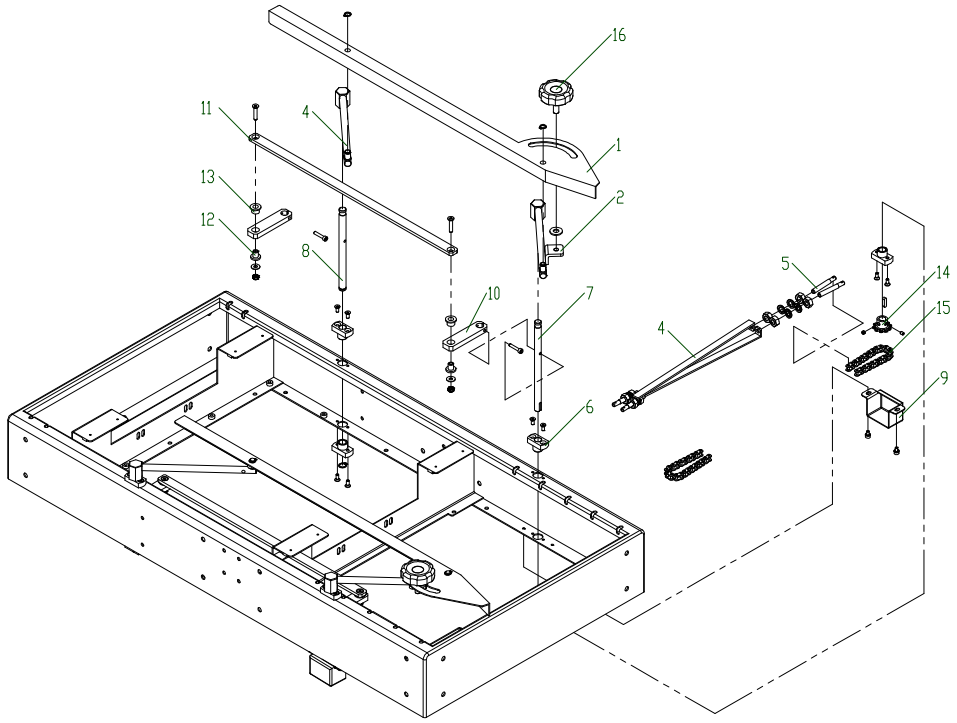
| NO. | ITEM NUMBER | DESCRIPTION | Q'TY |
|---|---|---|---|
| 1. | 73WS2010 | Lower tape head frame (3”) | 1 |
| 2. | 73WS2020 | Lower gear guard (3”) | 1 |
| 3. | E00-4030 | Driving belt (50x1334) | 2 |
| 4. | E00-4040 | Plastic pulley | 12 |
| 5. | 73WS4050 | Driving aluminum pulley | 2 |
| 6. | 73WS4060 | Driven aluminum pulley | 2 |
| 7. | E00-4160 | Driving pulley shaft (3”) | 1 |
| 8. | E00-4170 | Driven pulley shaft (3”) | 1 |
| 9. | | | |
| 10. | E00-4190 | Plastic pulley shaft(2) | 12 |
| 11. | 6003ZZ | Ball bearing | 2 |
| 12. | 6202ZZ | Ball bearing | 4 |
| 13. | E72-4080 | Lower chain wheel guard | 1 |
| 14. | E00-2080 | Motor (1/4HP, 1:18) | 1 |
| 15. | E00-4100 | Driving chain sprocket RS#35, 12T, ☛16 | 1 |
| 16. | E00-4090 | Driven chain sprocket RS#35,12T, ☛17 | 1 |
| 17. | RS-35 | Chain | 1 |
| 18. | K540 | Round end key | 2 |
| 19. | K525 | Round end key | 2 |
| 20. | 73WS2030 | Rear cover plate, bottom belt base (3”) | 2 |
| 21. | | | |
| 22. | | | |
| 23. | C-S17 | "C" circlet | 2 |
| 24. | C-S15 | "C" circlet | 2 |
| 25. | | | |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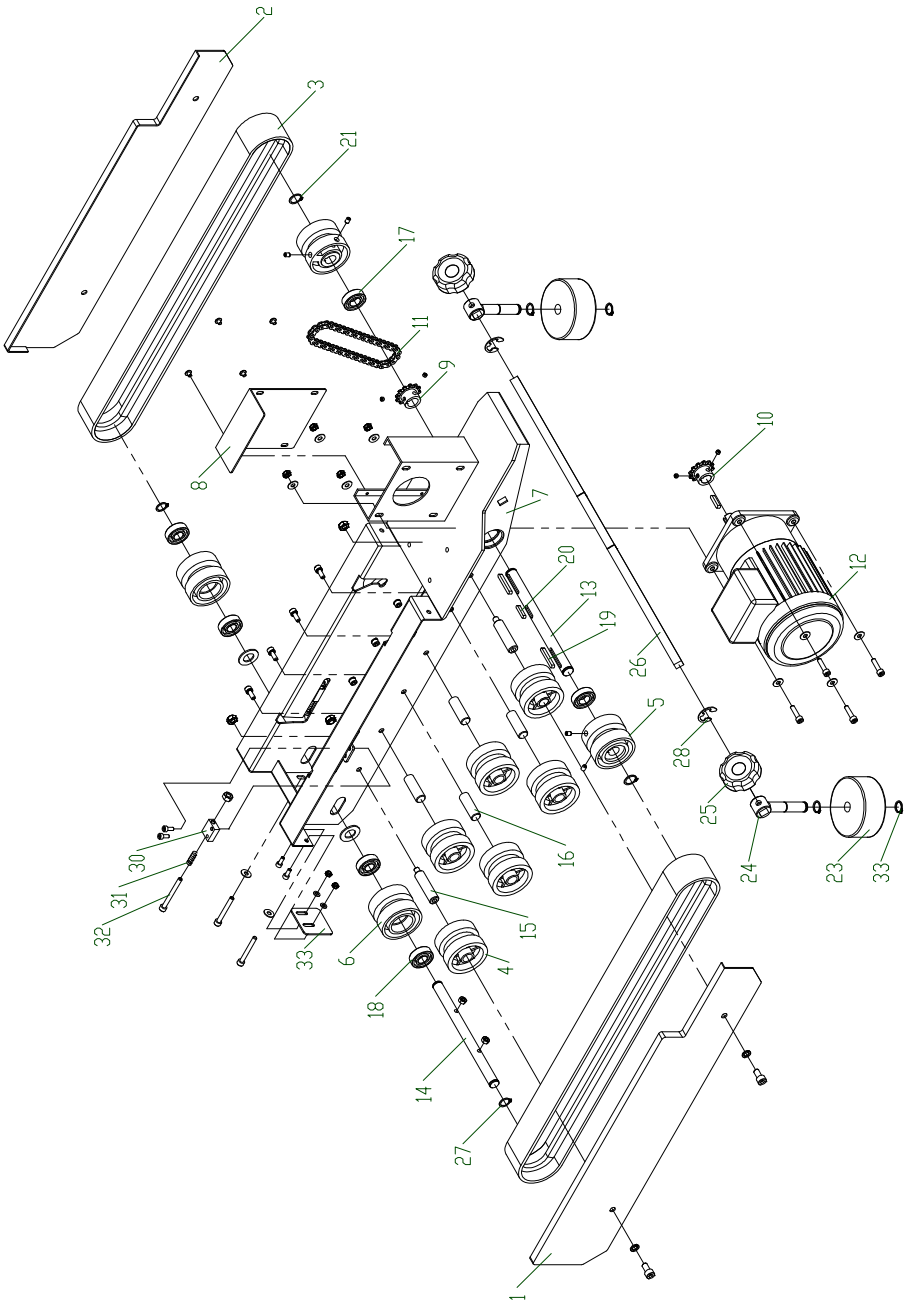
| NO. | ITEM NUMBER | DESCRIPTION | Q'TY |
|---|---|---|---|
| 1. | E73-3010(B) | Box clamping guide rail( L & R) | 2 |
| 2. | L70-3030 | Guide rail connection rod (front) | 2 |
| | E3-044 | Connection rod fix piece | 1 |
| | L70-3030A | Connection rod | 2 |
| | E1-027 | Rotary shaft | 2 |
| | E1-028 | Fix bolt, connection rod | 2 |
| | BA73-3040 | Guide rail connection rod (rear) | 2 |
| 3. | L70-3030A | Connection rod | 2 |
| | E1-027 | Rotary shaft | 2 |
| | E1-028 | Fix bolt, connection rod | 2 |
| 4. | L70-3100 | Adjustment piece | 2 |
| 5. | E20-0230 | Adjustment screw | 4 |
| 6. | BA73-311 | Collar | 8 |
| 7. | BA73-312 | Connection rod shaft (rear) | 2 |
| 8. | BA73-313 | Connection rod shaft (front) | 2 |
| 9. | BA73-314A | Guard | 2 |
| 10. | BA73-315 | Connection rod | 4 |
| 11. | BA73-316 | Driving rod | 2 |
| 12. | BA73-317 | Connection rod shaft | 4 |
| 13. | EZ-030C | Brass bushing | 4 |
| 14. | RS13100A | Chain sprocket RS#35, 10T, ☛12.7 | 2 |
| 15. | RS35 | Chain | 2 |
| 16. | E72-4310 | Guide wheel fix knob | 2 |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| NO. | PART NO. | DESCRIPTION | Q'TY |
|---|---|---|---|
| 1. | BA73-405 | Upper side guard (right) | 1 |
| 2. | BA73-405 | Upper side guard (left) | 1 |
| 3. | E00-4030 | Driving belt (50x1334mm) | 2 |
| 4. | E00-4040 | Plastic pulley | 12 |
| 5. | 73WS4050 | Driving aluminum pulley | 2 |
| 6. | 73WS4060 | Driven aluminum pulley | 2 |
| 7. | BA73-407C | Upper tape head frame | 1 |
| 8. | E72-4080 | Upper chain guard | 1 |
| 9. | E00-4090 | Driven chain sprocket | 1 |
| 10. | E00-4100 | Driving chain sprocket | 1 |
| 11. | E00-4110 | Chain RS#35 | 1 |
| 12. | E00-2080 | Motor (1/4HP, 1:18) | 1 |
| 13. | E00-4160 | Driving pulley shaft (3”) | 1 |
| 14. | E00-4170 | Driven pulley shaft (3”) | 1 |
| 15. | E00-4180 | Plastic pulley shaft (1) | 6 |
| 16. | E00-4190 | Plastic pulley shaft (2) | 6 |
| 17. | 6003ZZ | Ball bearing | 2 |
| 18. | 6202ZZ | Ball bearing | 4 |
| 19. | K540 | Round end key | 2 |
| 20. | K525 | Round end key | 2 |
| 21. | C-S17 | "C" circlip | 2 |
| 22. | | | |
| 23. | E72-4290 | Guide wheel | 2 |
| 24. | E72-4300 | Guide wheel arbor | 2 |
| 25. | E72-4310 | Guide wheel fix knob | 2 |
| 26. | 73WS4321 | Square shaft | 1 |
| 27. | C-S15 | "C" circlip | 4 |
| 28. | E-E15 | "E" circlip | 2 |
| 29. | E00-4350 | Pointer | 1 |
| 30. | M4119R0A | Spring holder | 2 |
| 31. | UPM1068 | Tape head spring | 2 |
| 32. | M4x60L | Hexagonal socket head screw | 2 |
| 33. | BA73-408 | Safety Guard (L & R) | 2 |