



KGK-60

Knife Grinders Operation Manual



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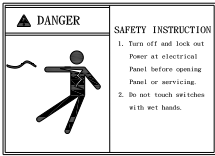
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3 SAFETY REAGULATIONS

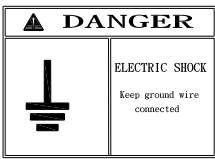
3.1 Explanation of symbols

The warning signs on the machine must be maintained in a legible condition.

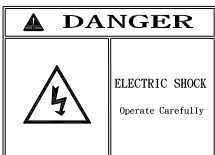
The following warning signs are attached to the machine :



Turn off the power before repair !
Do not touch the switch with a wet hand !



Connect to the ground wire !



High voltage !
Operate with care and avoid electric shock !



Warning - hazardous electrical voltage



Always wear isolating rubber shoes !



Safety gloves must be worn !



Safety goggles must be worn !

3.2 Machine operation

The machine meets national safety standards. However, injury or damages may occur in certain circumstances.

1. Operate the machine in normal conditions, follow the instructions and safety rules in the operation manual.
2. Take care of general safety rules other than those specified in the operation manual.
3. Immediately repair mechanical failure that may cause injury.

3.2.1 Operating mode

Operate the machine on the control panel with all the safety devices activated.

1. Familiarize yourself with the function keys before the operation.
2. Do not enter dangerous areas in manual operation.

3.2.2 Safety devices

Ensure all the safety devices are normal before the operation.

1. Do not modify, add or convert any safety device.
2. Wear goggles and gloves while operation if necessary.
3. All the warning signs have to be clearly seen on the machine.

3.2.3 Personnel

Only qualified personnel are allowed to operate and repair the machine. Operators must have the knowledge of potential hazards.

3.3 Maintenance, Repair and Trouble Shooting

1. More risks are involved in maintenance and repair than normal operation. Therefore, always turn off the main power and lock the switch to avoid accidental start.
2. Maintenance and repair can only be done by qualified personnel.
3. Follow the instructions in the operation manual.

3.3.1 Power

1. The electric system must be done by qualified electricians and comply with related regulations.
2. Periodically check the electric system and immediately re-connect any loosen wires or plugs.
3. Employ fuses according to safety rules.

3.3.2 Tools / Replace the tools

Employ a clamp or wear gloves to avoid injury.

3.3.3 Chemicals and oils

1. Avoid contact with eyes or swallowing. Apply ointment or wear gloves before handling with hands.

2. Follow the safety rules on the packing.
3. Use No.00 grease for lubrication.

3.4 Purposes and Applications

1. This machine is designed and manufactured as automatic knife grinder only and is NOT applicable for any other purposes.
2. The user is solely responsible for injury or damages caused by improper operation.
3. The user has to follow the instructions for operation and maintenance.

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4 REQUIRMENT AT THE INSTALLATION SITE

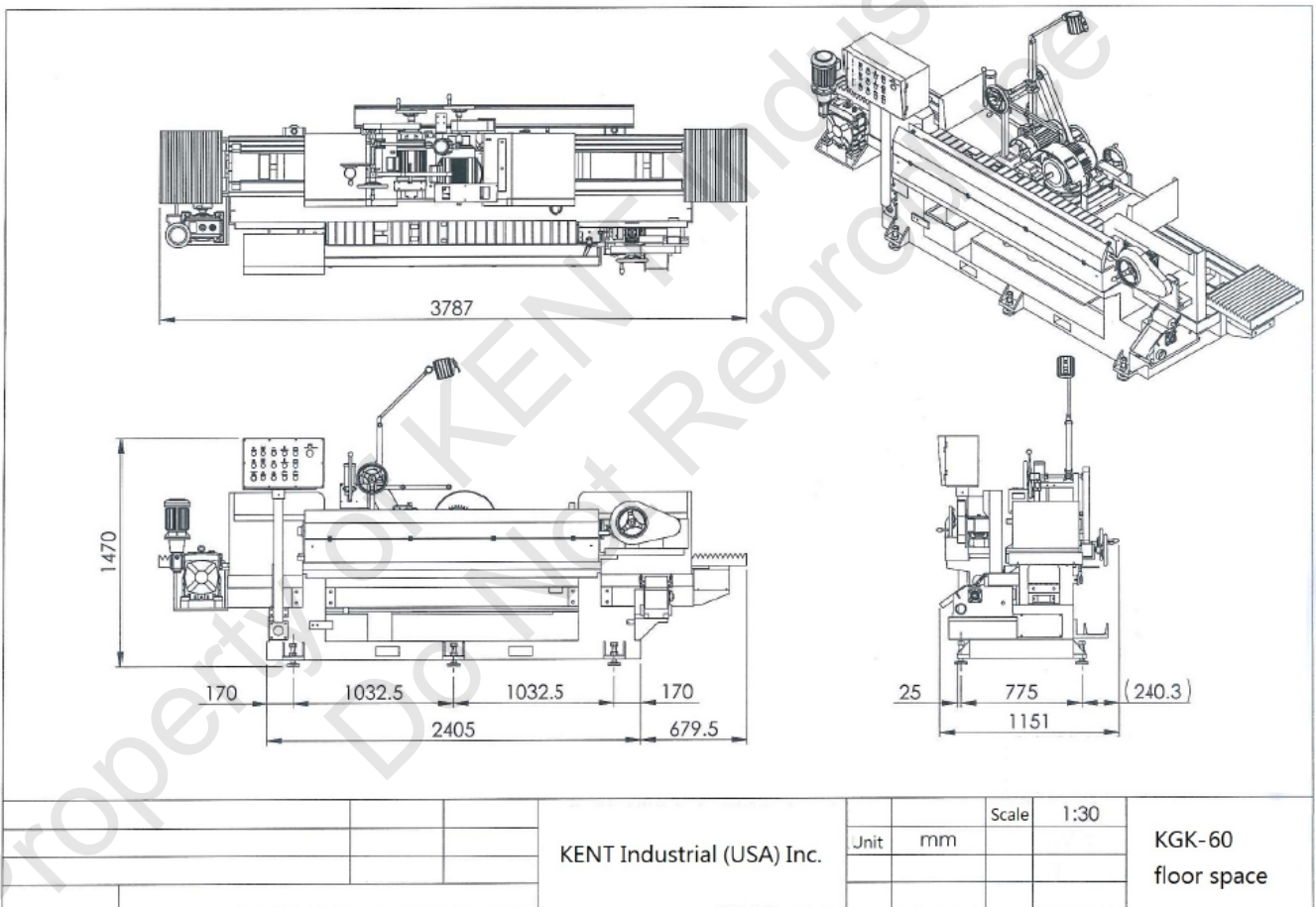
4.1 Foundation / Floor

1. Test static load carrying capacity of the floor (or the ceiling) by specialists appointed by the customer and submit the certificate if necessary.

2. Other machinery or tools have no effects on performance of this machine (ex. vibration).

4.2 Space Requirement

Allow sufficient space around the machine for proper operation, maintenance and repair; the doors are to be opened freely.



5 TRANSPORTATION AND INSTALLATION

5.1 Packaging

1. The machine is delivered in a complete assembly.
 2. Employ a crane to handle the machine.
 3. Remove the packing materials and check the contents; submit a written report immediately.
- ⊙ **Caution** : Lift the pallet by the marked lifting points
- ⊙ **Warning**: Remove the packing materials on a firm work table.

5.2 Transportation

5.2.1 Employ a crane

1. Employ a crane with sufficient carrying capacity.
2. Ensure sufficient cable length to lift and move the machine horizontally.
3. Employ wooden blocks or boards to avoid cables falling on the machine frame or adjustable parts.

5.2.2 Employ a fork lifter or rollers

1. Secure the machine on the pallet while being handled by a fork lifter unless the machine has holes for handling by a fork lifter.
2. Ensure sufficient carrying capacity of the fork lifter; gently lift the machine from the wooden pallet and handle with care; avoid shaking or strong vibration.
3. Rollers are recommended for the ground in poor conditions; ensure sufficient number of rollers; keep the machine from tilting or sliding; avoid shaking or vibration.

5.3 Storage

1. Carefully store the machine that is not in use temporarily. Protect the machine with a dust cover to keep it from dust and humid.
2. Special anti-rust agent is applied to protect the machine within 3 months in normal humidity; new anti-rust treatment is required for high humidity or being stored too long.

5.4 Remove Anti-rust Agent

1. Anti-rust agent is harmless to the environment and health.
 2. Soak soft cloth in petroleum or solution of sodium to remove anti-rust agent. Do not use a scraper or any sharp tools.
 3. Wear gloves when contacting with anti-rust agent for too long. Apply grease on unpainted parts after removing anti-rust agent.
- ⊙ **Warning** : No axial movement is allowed before removing anti-rust agent.

5.5 Install the Machine

1. Place the machine horizontally and avoid tilting.
2. Check the parallelism with a level.

©**Note:** Do not remove the protective locking device before the machine arrives its destination.

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6 PREPARATIONS FOR START-UP

6.1 Connection to the main power

1. Attention to comply with local electric rules and loading capacity.
2. The main power terminals can be seen after opening the door of electric box; do proper wiring as instructed in the circuit diagram.
3. Keep the circuit diagram in a bag inside the electric box.

⊙**Warning:** The electric system can only be done by qualified electricians.

6.2 Coolant(*Option)

1. The cooling water for grinding (mixture) is mixed solution of coolant and water at the ratio of 1:25 to 1:30 (0.4L to 0.33L coolant with 10L of water).
2. Our environment friendly coolant is recommended, which does not contain mineral oil and nitrites in accordance with national standard for environmental protection.
3. This environment friendly coolant is not categorized as hazardous liquid.

⊙**Warning:** The coolant tank can be filled with cooling water only.

⊙**Note :** The manufacturer is not responsible for any damages caused by unqualified coolant.

6.2.1 Mixing

1. Drinking water with hardness 10 to 20 degrees DH (hydrotimeter) is the most proper for making stable mixed solution.
2. Data of water hardness is available from local water company.
3. Pour water of normal temperature (Max. +30°C) into a clean container.
4. Add in coolant (Min. +10°C) and keep stirring.

⊙**Note1 :** Do not reverse the mixing procedure, i.e., do not add water into coolant.

⊙**Note2 :** Do not store the mixed solution in a leaded container.

⊙**Note3 :** Do not mix concentrated solutions of different sources.

6.2.2 Add in coolant

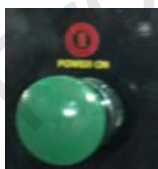
1. Remove the cooling water tank bracket and add in mixed solution of coolant.
2. Remove the coolant motor, move the water tank under the machine and then restore the coolant motor.

7. Mechanical control panel & Controller Magnetizer



A 【Power Lamp】

When press the button of “Power On”, the main power is ON.



B 【Power On】

The main power of machine — ON



C 【Power Off】

The main power of machine — OFF



D 【Table On】
Grinding wheel shaft set starts right-left moving.



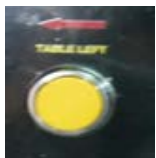
E 【Table Off】
Grinding wheel shaft set stops right-left moving.



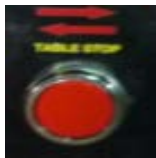
F 【Work Lamp】
Switch ON/OFF the work lamp.



G 【Table Right】
Grinding wheel shaft set starts rightward moving.



H 【Table Left】
Grinding wheel shaft set starts leftward moving.



I 【Table Stop】
Grinding wheel shaft set stops right-left moving.



J 【Coarse Wheel On】
Coarse grinding wheel starts rotating.



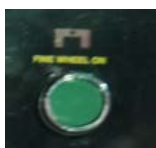
K 【Coarse Wheel Off】
Coarse grinding wheel stops rotating.



L 【Coolant On】 Water pump starts working.



O 【Coolant Off】 Water pump stops working.



M 【Fine Wheel On】 Fine grinding wheel starts rotating.



N **【Fine Wheel Off】** Fine grinding wheel stops rotating.



【The rotation fast or low speed of fine/coarse】

Switch turns left is low speed and turns right is fast speed.

Grinding speed of coarse grinding wheel is maintain 1700RPM .

But grinding speed of fine grinding wheel can change two speeds for 1700/3400R.P.M



Magnetize the knife onto the holder.



OFF (None of magnetization)



Take the knife off the holder. (Please make sure the knife holder is turned forward and faceup.)

8. Controlled Magnetizer



◎Function key description :

A : DC Amperes indicator

Description : The indicator shows the DC Amperes when the electromagnetic working.

B : Magnetic intensity

Description : The indicator shows the electromagnetic force.

C : Chuck-Control Power ON/OFF

Description : Press the switch to Power ON or OFF the chuck-control.

D : Set up electromagnetic status

Description : Turn the switch to set the electromagnetic status.



Demagnetize the force.

Take the knife off the holder. (Please make sure the knife holder is turned forward and faceup.)



OFF (None of magnetization)



Magnetize the knife onto the holder.

E : Magnetic force

Description : Adjust the magnetic force.

F : Demagnetization time

Description : Rotate the knob to set the demagnetization time. The longer time means the demagnetization is getting slow that remains the magnetic force longer.

Step Description

1. Please turn on the Controller Demagnetizer

2. Please turn on the power.



3. Put on the knife

4. Magnetic on



5. After grinding the knife, if you would like to take off the knife, please press magnetic stop button first, then press the magnetic off.

6. For safety personal protective equipment, if you didn't turn on the controller demagnetizer, worktable cannot move and the wheel as well.

Note: the order about press magnetic on/off button in green. (**circle mean works, X mean didn't work**)

1. Magnetic on -> stop -> magnetic off ○

2. Magnetic off-> stop-> magnetic on ○

3. Magnetic on -> magnetic off X

4. Magnetic off-> magnetic on X

9. Electromagnetic Chuck Operation Panel



【Forward】

Electromagnetic chuck rotates forward.



【Backward】

Electromagnetic chuck rotates backward.



【Stop】

Electromagnetic chuck stops rotating.

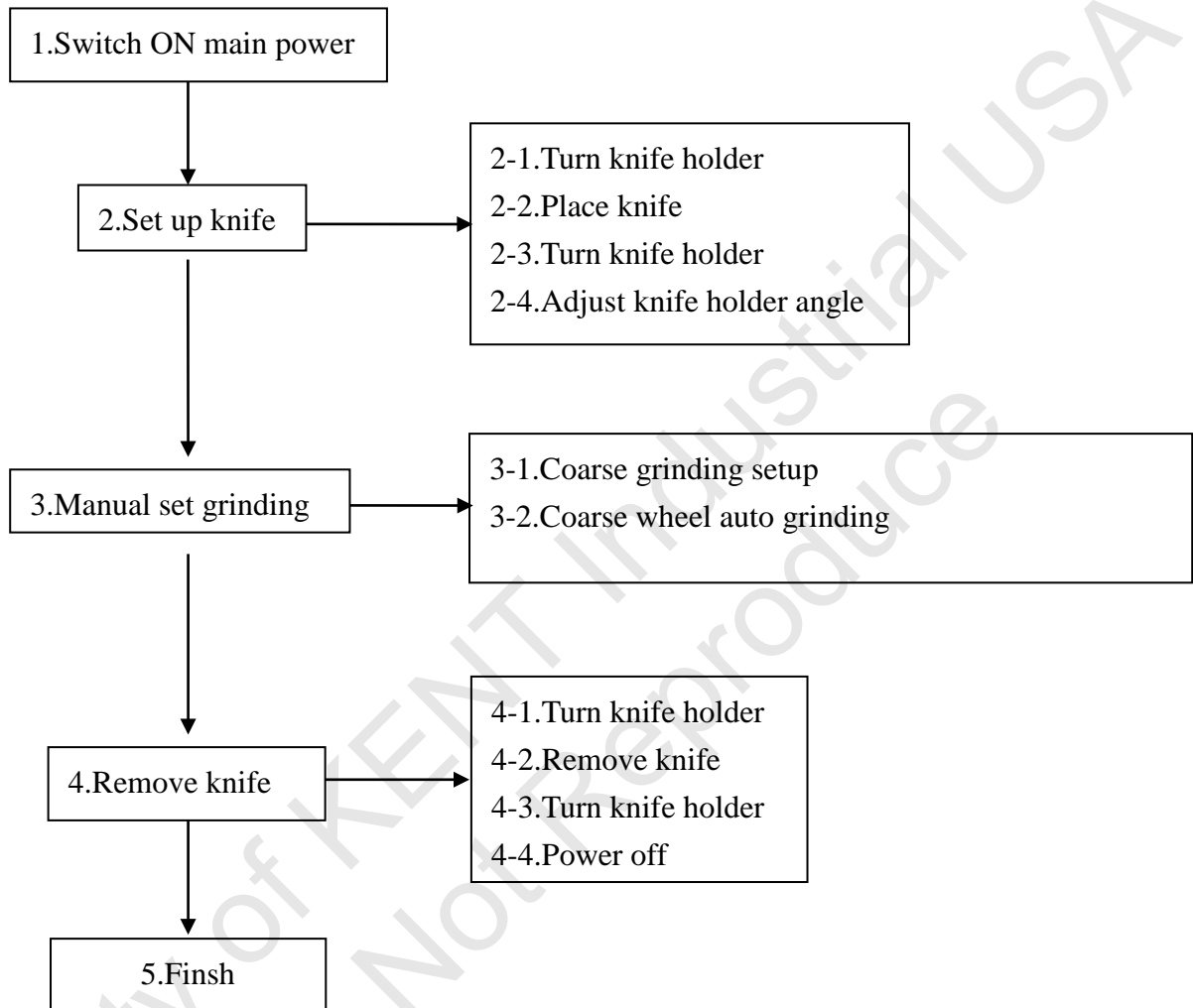


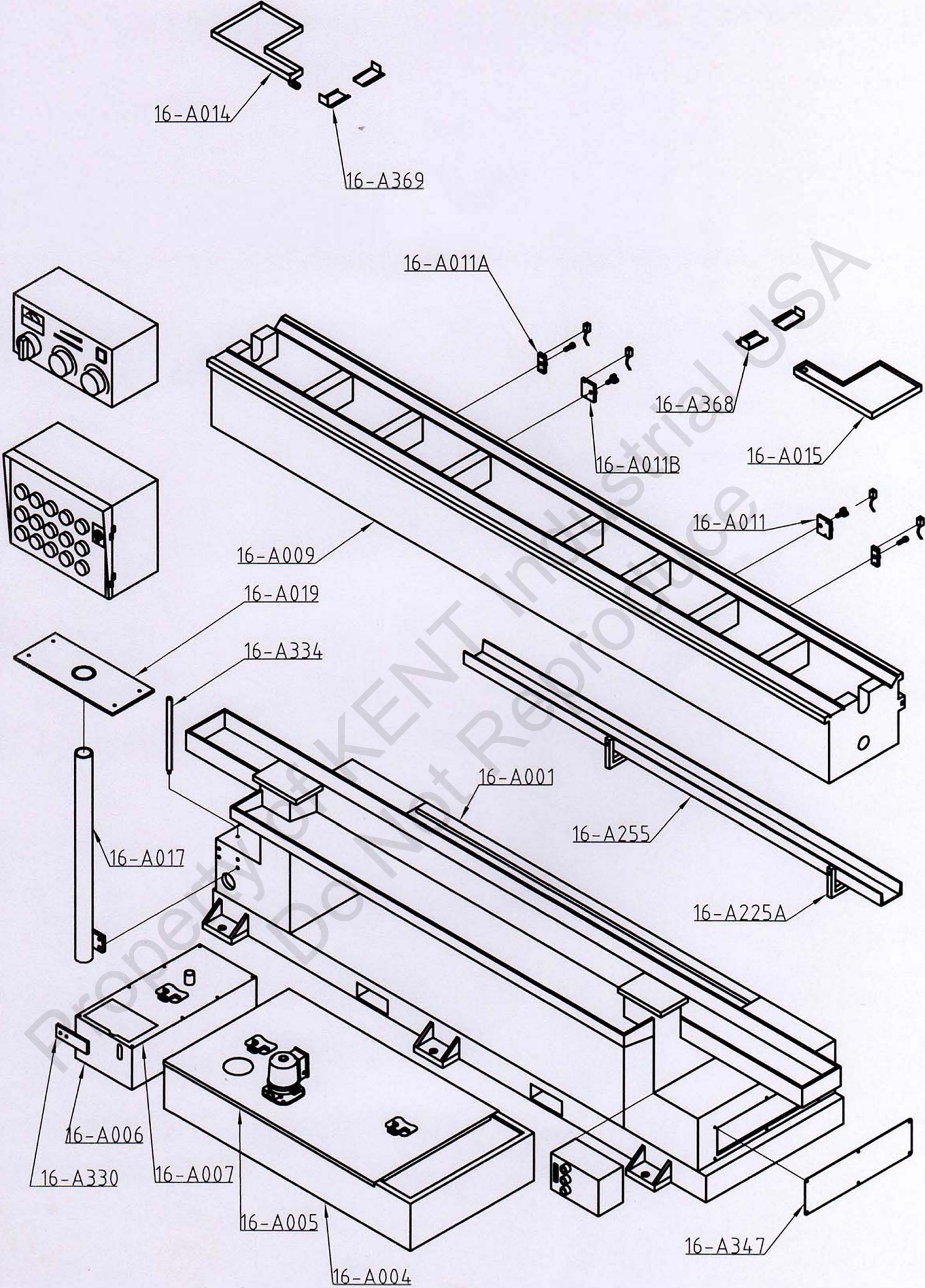
【Safety Lamp】

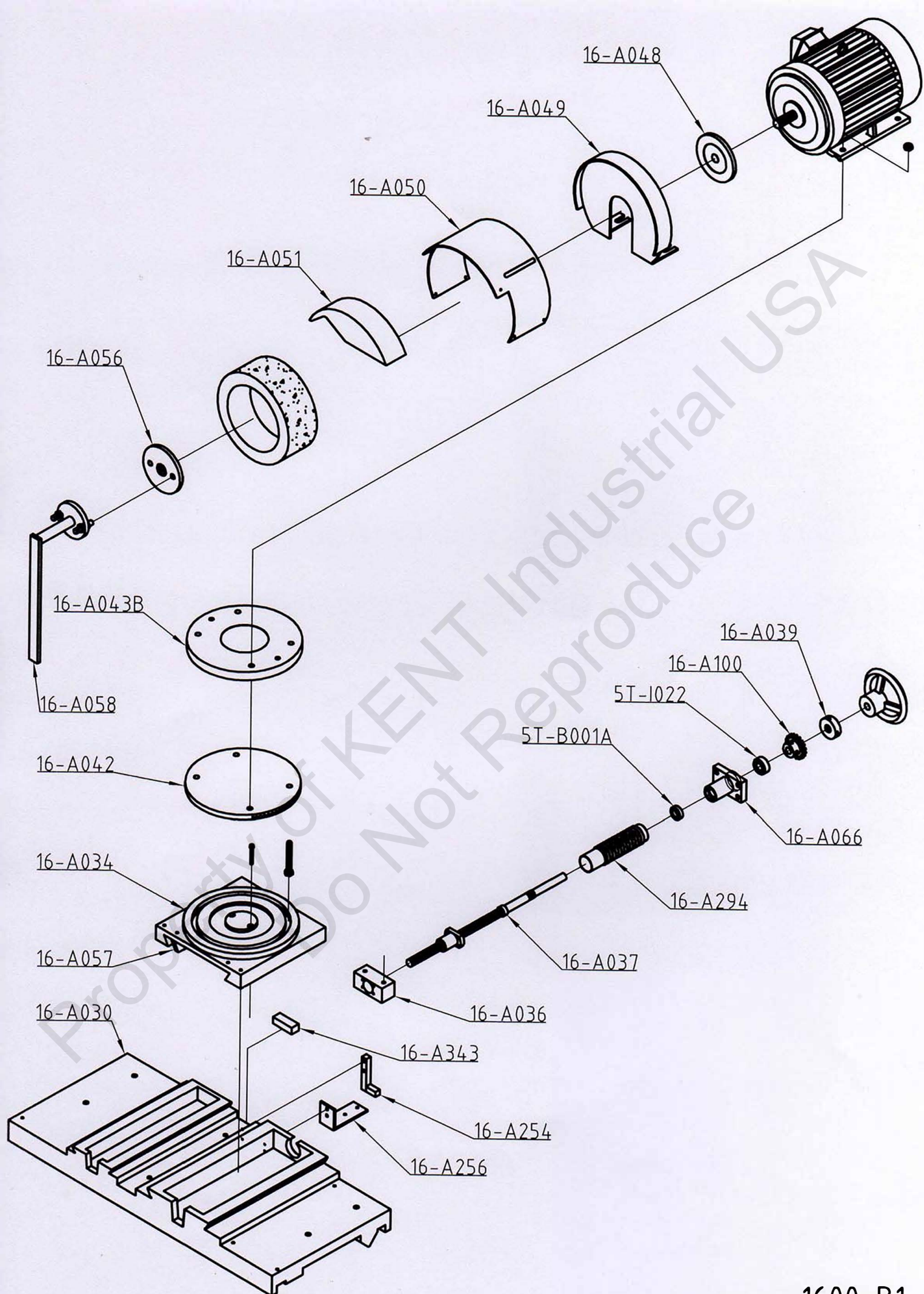
When the indicator of the electromagnetic chuck lights up, it means the electromagnetic chuck can be moved forward or backward.

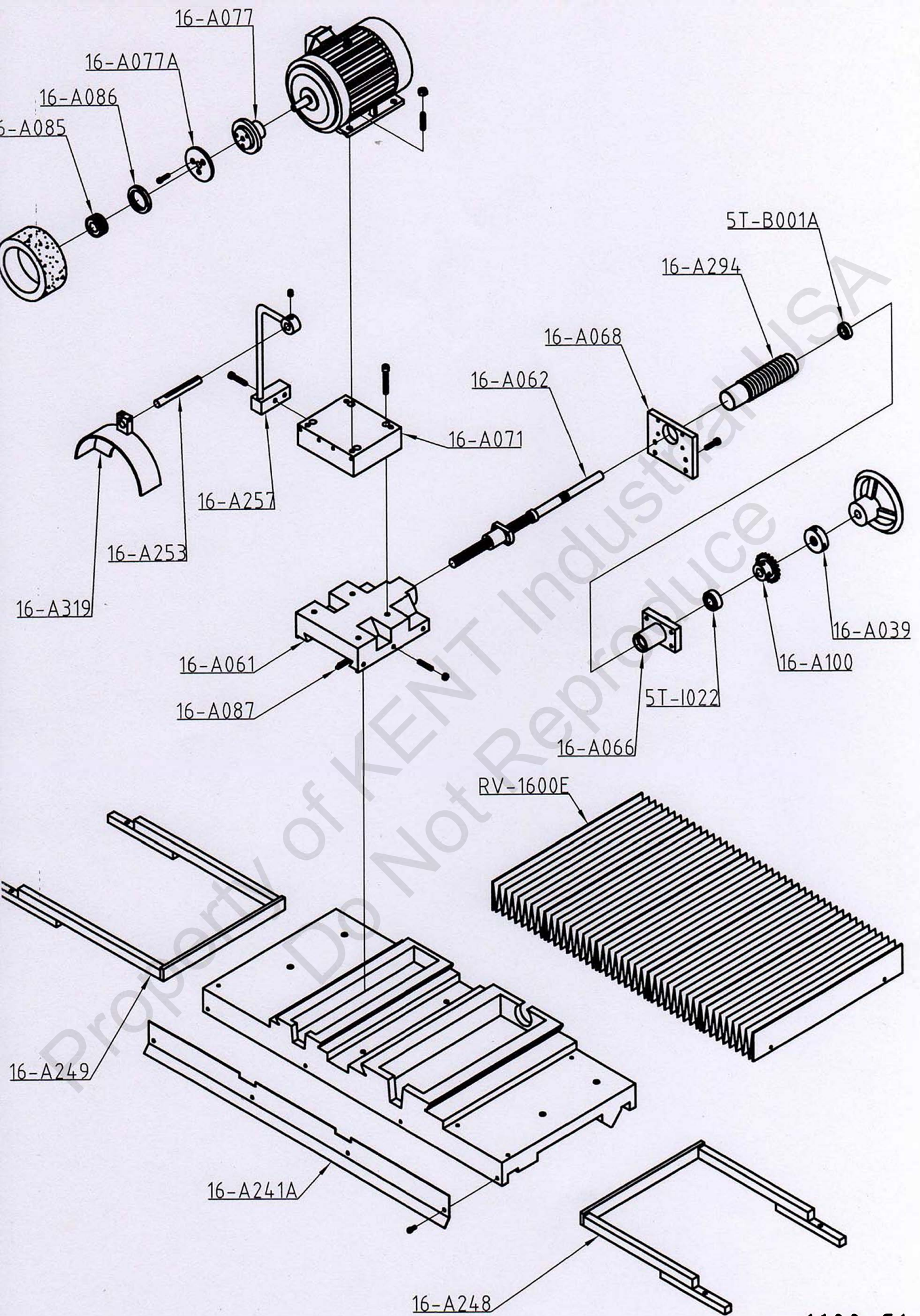
10. INSTRUCTIONS FOR OPERATION

10 .1 Operation flow chart

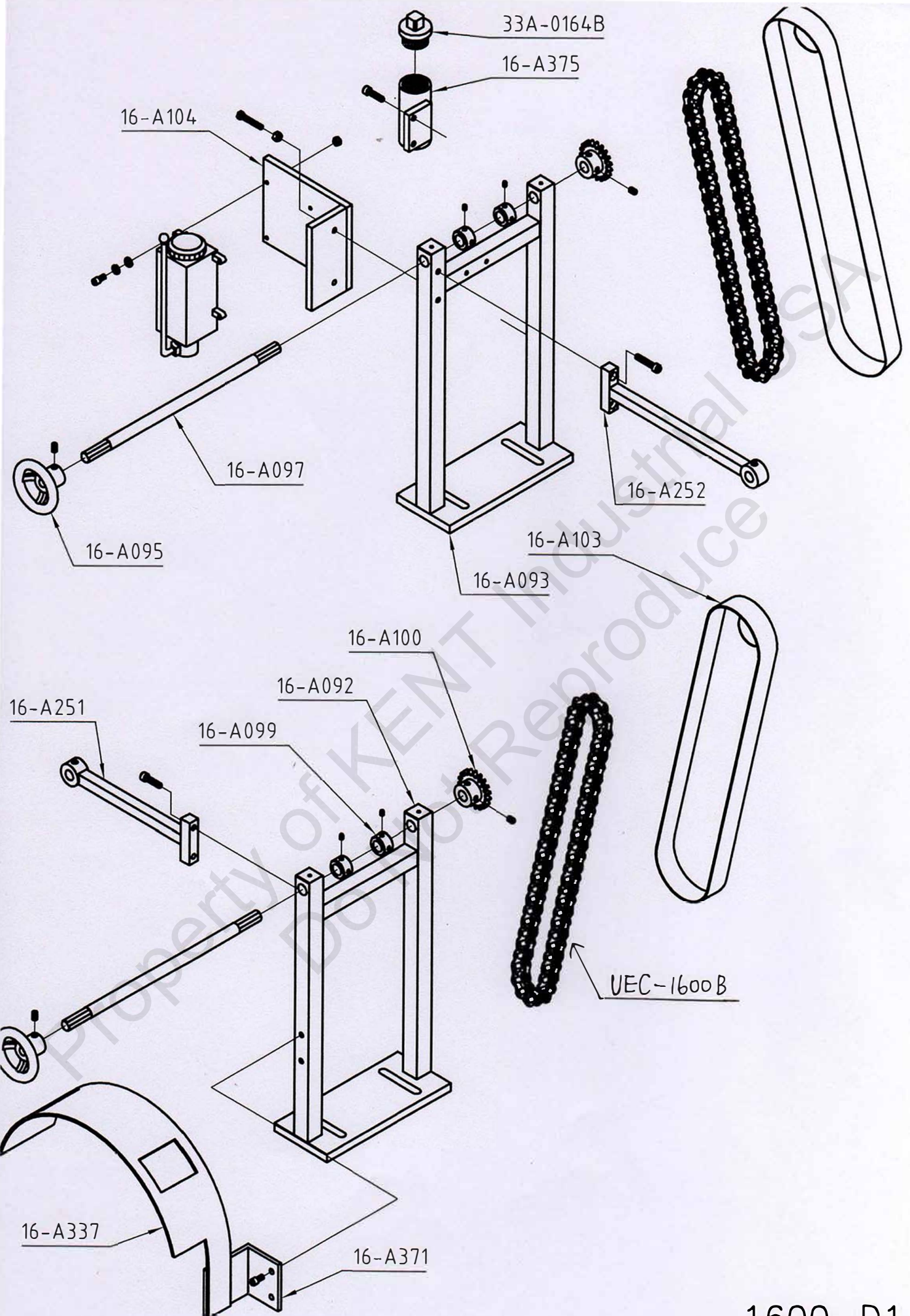


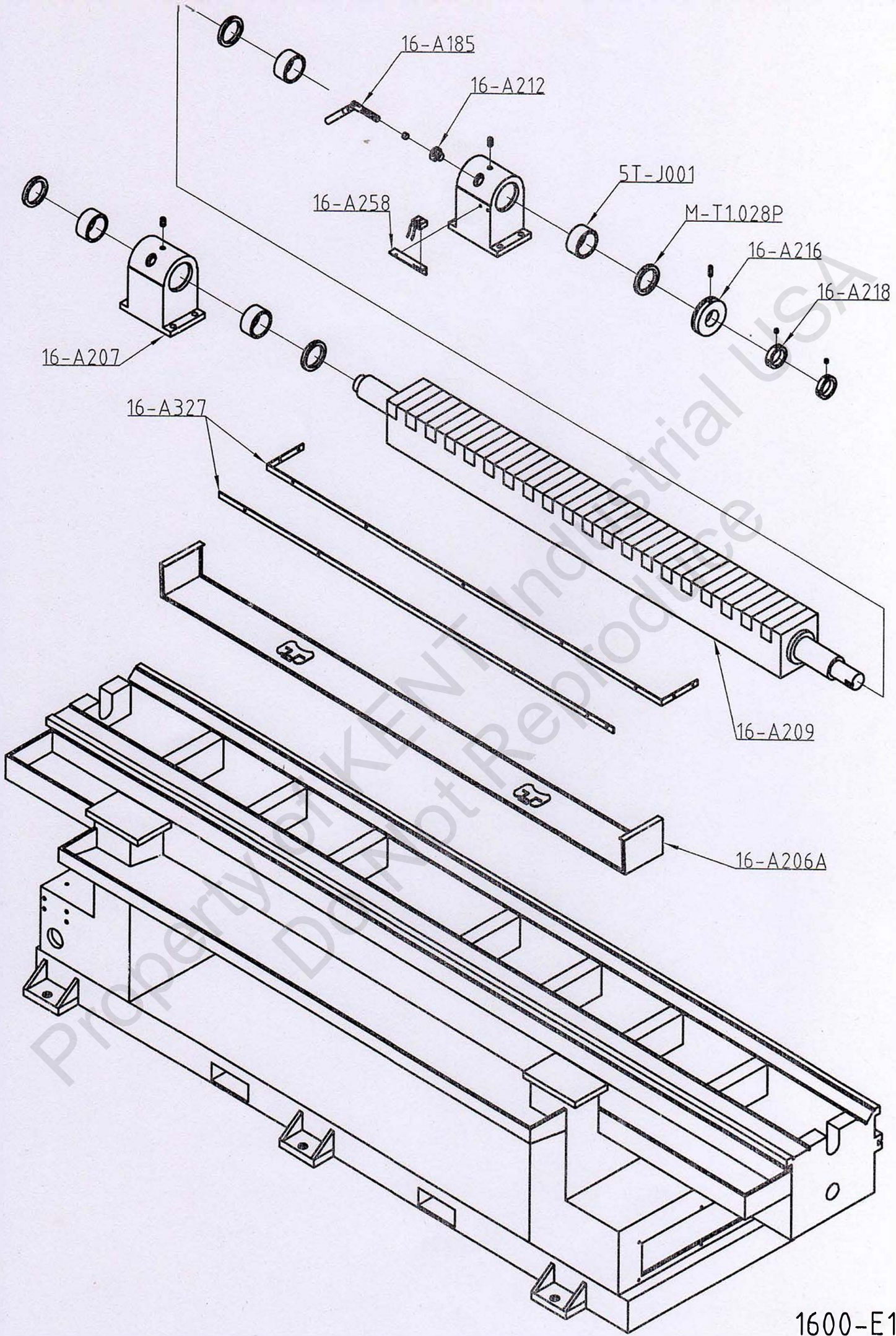


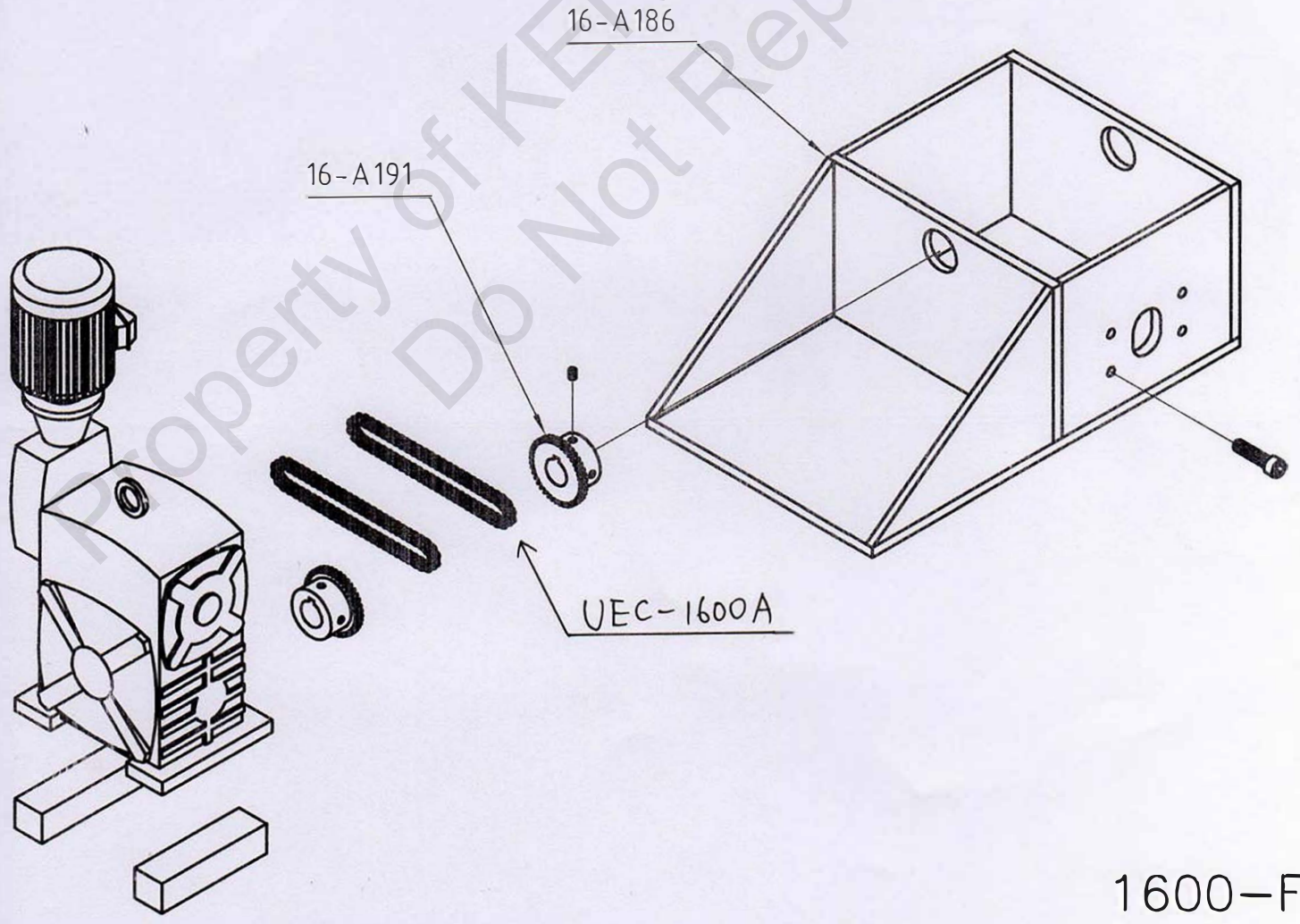
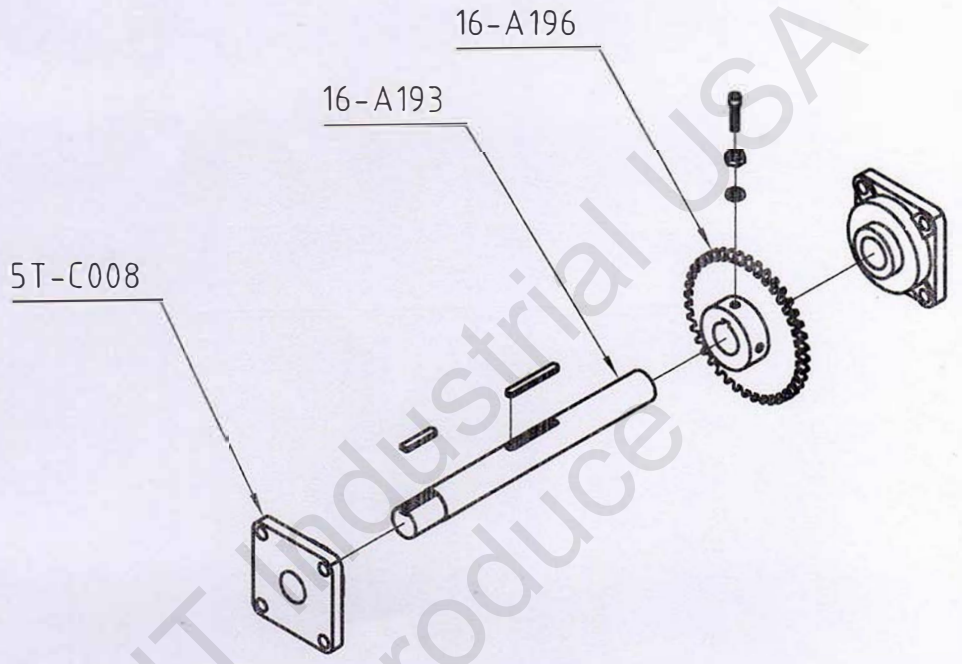
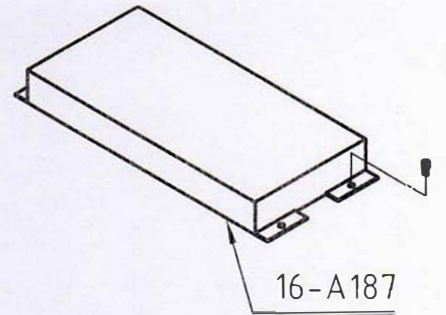


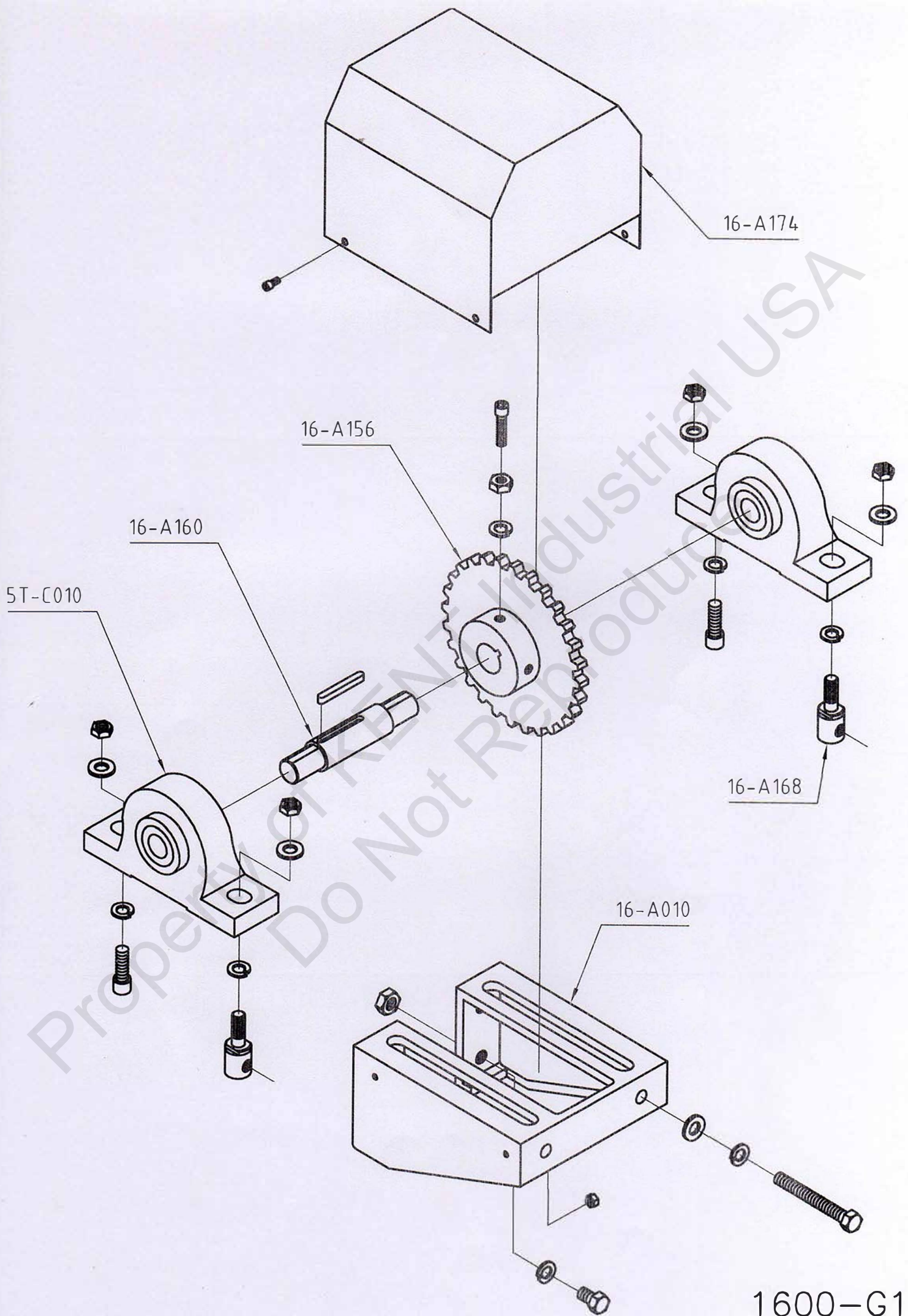


1600-C1

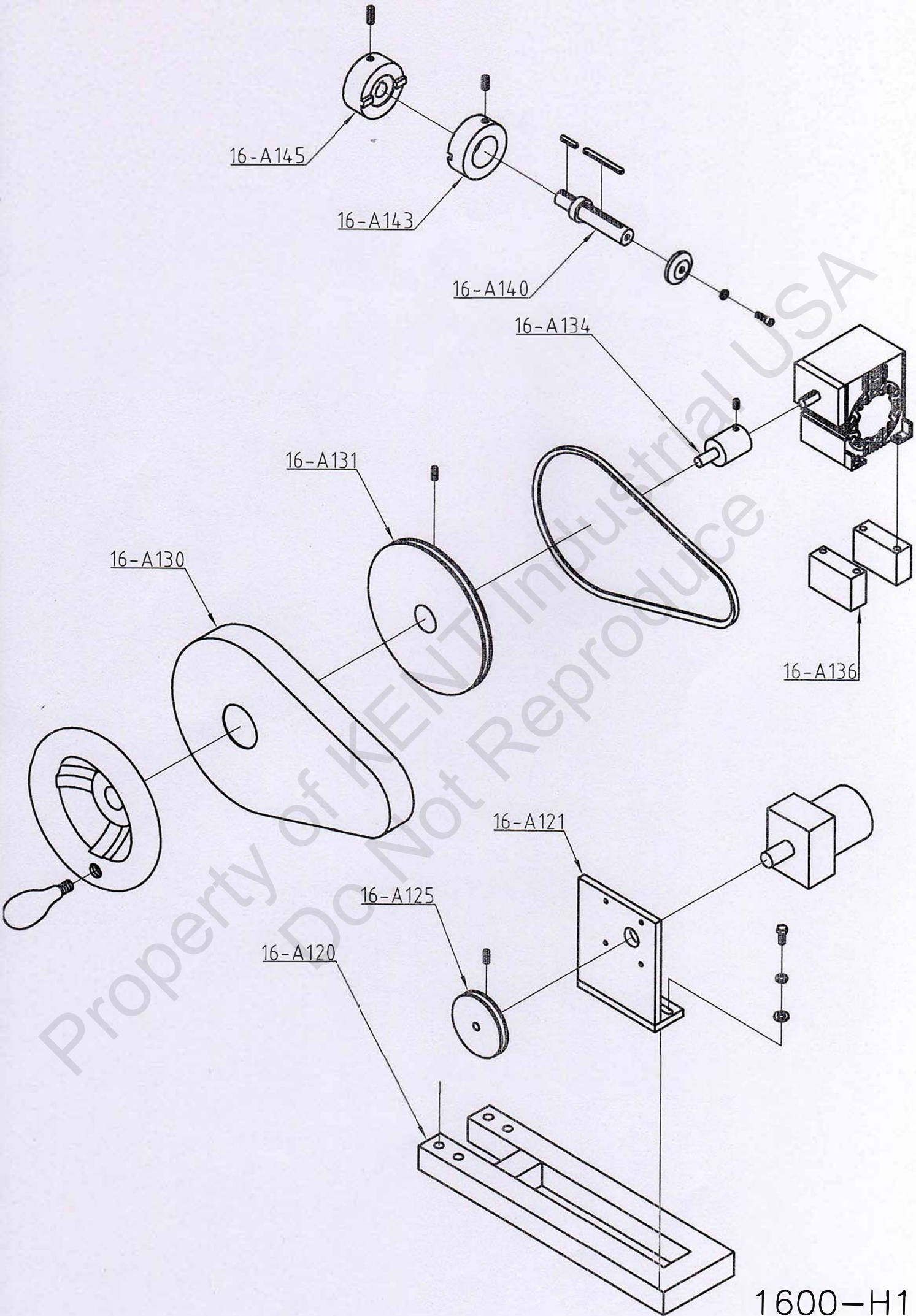




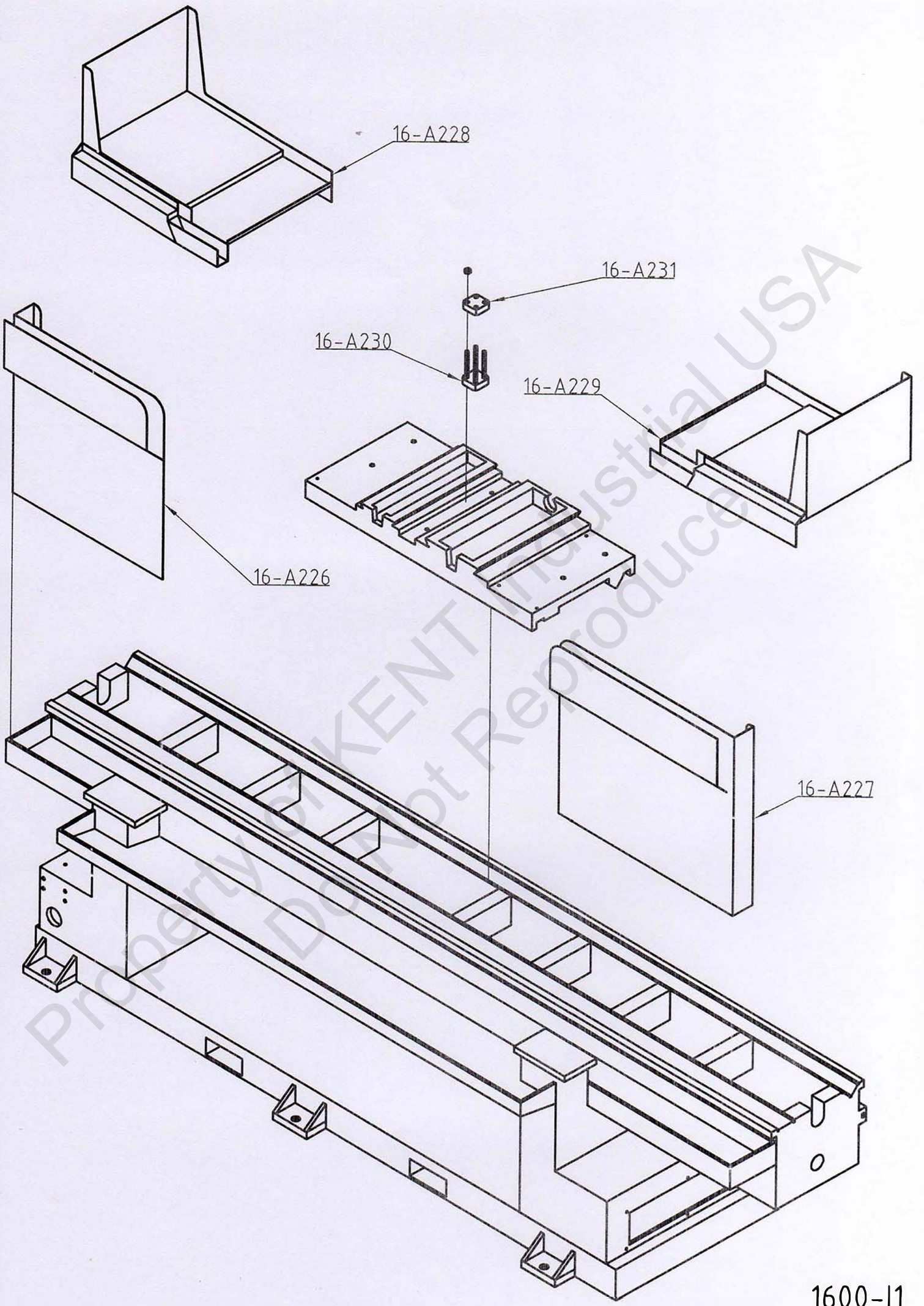




1600-G1



1600-H1



PART LIST

1600-A1			
PART NO	PART NAME	QTY	REMARKS
16-A001	Machine base	1	
16-A255	Fixing tank	1	
16-A225A	Fixing tank	2	
16-A347	Base door plate	1	
16-A004	Water tank	1	
16-A005	Water tank cover	1	
16-A006	Oil tank (A)	1	
16-A007	Oil tank cover	1	
16-A330	Oil tank fixing plate	1	
16-A017	Control box fixing seat A	1	
16-A019	Control box fixing seat B	1	
16-A334	Electric cord fixing lever	1	
16-A009	Saddle seat	1	
16-A014	Left recycle tank	1	
16-A369	Guard cover	2	
16-A011A	Horizontal limit switch plate	2	
16-A011B	Horizontal limit switch plate	1	
16-A011	Horizontal limit switch plate	1	
16-A368	Guard cover	2	
16-A015	Right recycle tank	1	

PART LIST

1600-B1			
PART NO	PART NAME	QTY	REMARKS
16-A030	Work table	1	
16-A057	Longitudinal slide seat wedge	1	
16-A034	Longitudinal slide seat	1	
16-A042	Motor rotary seat	1	
16-A043B	Coarse wheel height block	1	
16-A048	Wheel fixing ring	1	
16-A049	Coarse wheel cover support seat	1	
16-A050	Wheel guard cover	1	
16-A051	Coarse wheel front cover A	1	
16-A056	Wheel nut	1	
16-A058	Wheel nut handle	1	
16-A256	Transmission fixing block	1	
16-A254	Horizontal stop block	1	
16-A036	Coarse wheel longitudinal fixing nut	1	
16-A037	Shaft	1	
16-A294	Micro adjust screw dust cover	1	
5T-B001A	Thrust bearing	1	51104
16-A066	Longitudinal rod screw seat	1	
5T-I022	Roller bearing	1	32004J
16-A100	Hand chain wheel	1	
16-A039	Fixing nut	1	
16-A343	Fence	1	

PART LIST

1600-C1			
PART NO	PART NAME	QTY	REMARKS
16-A241A	Work table inner fence	1	
16-A249	Left dust cover fixing seat	1	
16-A248	Right dust cover fixing seat	1	
RV-1600E	Dust cover	2	
16-A087	Left slide seat wedge	1	
16-A061	Fine motor seat A	1	
16-A071	Fine wheel height block	1	
16-A257	Fine wheel cover fixing seat	1	
16-A253	Fine wheel cover adjust lever	1	
16-A319	Fine wheel guard cover	1	
16-A077	Fine wheel fixing seat	1	
16-A077A	Fine wheel washer	1	
16-A086	Motor nut pipe (A)	1	
16-A085	Motor nut (A)	1	
16-A062	Shaft (A)	1	
16-A068	Fine wheel front fixing plate	1	
16-A294	Micro adjust screw dust cover	1	
5T-B001A	Thrust bearing	1	51104
16-A066	Longitudinal rod screw seat	1	
5T-I022	Roller bearing	1	32004J
16-A100	Hand chain wheel	1	
16-A039	Fixing nut	1	

