

Troubleshooting

If you detect a problem or have a question regarding the machine, take necessary measures by referring to the applicable description on the following table.

If no clear answer can be obtained, contact us.

(1) There are problems.

Anticipated Cause	Countermeasures
The power cannot be turned on.	Check that the power cord is not disconnected or the wires are not broken.
	By referring to the section Fuse (P15), check that the fuse is not blown. If it is blown, check for improper connection of grounding (earth) and replace the fuse. When the power cannot be turned on and the fuse blows after taking the above procedures, the Oscillator may have failed.
No oscillation	If oscillation occurs by pressing the test switch, check that the external connection receptacle may have failed or the external device may be defectively connected. When oscillation will not occur even by operating the test switch, the oscillator may have failed.
	The Amplitude Volume may have set to the minimum level. Increase the volume level.
No ultrasonic oscillation	The ultrasonic oscillation cannot be confirmed visually. Hold the transducer with a hand and compare the cutting performance between oscillation OFF and ON.
Something is wrong with ultrasonic oscillation.	The ultrasonic oscillation cannot be confirmed visually. Check the symptom, unusual sound and the cutting state, and contact us.
Cutting cannot be done cleanly. Cutting is not possible.	The ultrasonic cutter is not a machine that is capable of cutting anything. Basically, it can cut the materials that can be cut with regular cutters. For cutting metals or glass, the oscillation resonate with the material, and the cutting may become difficult (This is not applicable to glass fibers).
	Refer to the section "Knack of Cutting the Work (P23)" and ensure optimum adjustment for cutting.
Ultrasonic waves are noisy. Buzzing sound is heard.	The ultrasonic cutter is literally the cutter that cuts things with oscillation utilizing ultrasonic waves. It is said that ultrasonic waves (implying the frequency of 20 kHz or above) is not audible to human beings, but for those who have excellent hearing capability may catch them. Ultrasonic oscillation are harmless if the end parts of transducer are robustly fixed and cutting is not affected.
Sounds other than ultrasonic waves are heard. Such sounds as squawking, rasping and hissing sounds are generated.	The parts may be vibrated. The end parts of transducer may become loose. If they are not, there is no problem. If you feel uneasy, contact us.

<p>Sounds other than ultrasonic waves are heard.</p> <p>Such sounds as crackling sounds are generated.</p>	<p>Electric short-circuiting may have occurred in the unit inside the transducer.</p> <p>Immediately stop using the machine and contact us.</p>
<p>The tip of transducer is loose.</p>	<p>The flange that supports the transducer and the housing may have been deteriorated or worn.</p> <p>Since the flange is not replaceable, it must be repaired. Contact us.</p>
<p>The transducer was dropped.</p>	<p>The transducer is a precision machine. It may break down due to shocks.</p> <p>Check the operations and, if unusual sound is detected or the parts are loose, contact us.</p>
<p>The blade was broken.</p>	<p>The blade is a consumable part. When the blade is worn, the load (burden) applied to the blade becomes large, sometimes resulting in breakage. Replace the blade according to the section "Maintenance of Transducer (P18)."</p> <p>When a brand-new blade is broken soon, check the work material and the operating state of the end parts, and contact us.</p>
<p>The blade is vibrating to the level that the image lag is visible.</p>	<p>You cannot visibly check the ultrasonic oscillation. If vibrations are clearly visible, the blade may be vibrating unusually.</p> <p>Replace the parts other than the blade at the same time according to the section "Maintenance of Transducer (P18)" and check the operations.</p>
<p>I want to change the model of blade.</p>	<p>Even when the transducer is mounted on the blade, the adjustment of oscillator may not fit the blade. If this is the case, contact us.</p>
<p>I want to operate the machine with the self-made blade attached.</p>	<p>The blades and the parts that are not of the genuine parts of our company cannot be used. Neglecting this caution will lead to the case where the conditions for ultrasonic oscillation cannot be satisfied, resulting in improper use.</p> <p>We manufacture custom-made parts and blades that satisfy the customer requirements. Contact us for such parts and blades.</p>
<p>The blade fixing screw was broken.</p>	<p>The blade fixing screw is a consumable part. It is deteriorated as it is used, and the load will be higher and the screw is likely to be broken.</p> <p>Use the Blade Fixing Screw (Model: 7522), and it is recommended that the screw should be replaced for every two blade replacements.</p>
<p>I want to additionally process or grind down the holder.</p> <p>The holder was chipped.</p>	<p>Not only the blade, but also the holder is vibrated by ultrasonic oscillation.</p> <p>As a result of additional processing, the conditions for ultrasonic oscillation cannot be satisfied, resulting in improper use. Never execute additional processing.</p> <p>If the holder is slightly chipped due to contact, etc., be sure to perform the operation check.</p> <p>Continued use of the machine may result in system failure. Be sure to prepare spare holders and carefully use them.</p>
<p>The holder was cracked or broken.</p>	<p>The holder is a consumable part. Check the airflow rate according to the section "Cooling Air (P17)."</p> <p>If a brand-new holder is subjected to cracking or breakage soon, check the work material and the operating state of the end parts, and contact us.</p>

<p>The holder was discolored or burnt.</p>	<p>Not only the blade, but also the holder and the blade fixing screw are subjected to ultrasonic oscillation. They may become hot and get discolored due to the friction heat generated by vibrations.</p> <p>Check the airflow rate according to the section "Cooling Air (P17)."</p>
<p>The cord was broken or ruptured.</p> <p>Power cord</p> <p>Transducer connection cord</p>	<p>Immediately stop using the machine and contact us.</p> <p>Neglecting this caution may result in electric shock hazard or system failure.</p>
<p>The transducer was immersed in water or oil.</p>	<p>The transducer is a precision machine. Immediately stop using the machine and contact us.</p>
<p>The transducer housing was distorted.</p>	<p>The housing can be used even if it is slightly dented. If you detect a problem, contact us.</p>
<p>Smoke is coming out of the machine.</p>	<p>If smoke comes out of the oscillator or the transducer body, immediately stop using the machine and contact us.</p>
<p>Smoke is coming out at the tip of transducer or from the work.</p>	<p>Smoke may have come out in between the work and the blade due to the friction heat of ultrasonic oscillation.</p> <p>Check the operation state and execute cutting that fits the purpose according to the section "Knack of Cutting the Work (P23)."</p>
<p>Error</p>	<p>If the error lamp illuminates, there is a possibility of "disconnection", "overheating" or "overloading." Take necessary measures.</p> <p>Check that there is no problem regarding the transducer connection or check that there is no heat generation from the oscillator and the transducer.</p> <p>For overloading, refer to the section "Machine in Overload Stoppage (P28)" and refer to the section "Maintenance of Transducer (P18)", as required.</p>
<p>I want to reset the error.</p>	<p>Error resetting can be done by turning on the power again. Do not try to execute error resetting operations in a row. Do it with a five-second interval.</p>
<p>The lamp of oscillator does not illuminate.</p>	<p>The lamp of the oscillator may be broken down. Contact us.</p>

(2) Machine in Overload Stoppage

Check that the condition at the time when the overloading occurred falls under the following anticipated causes.

If execution of the countermeasures will not rectify the overloading state, contact us.

Anticipated Cause	Countermeasures
Work that cannot be cut with the machine The material is a metal or glass. Alternatively, such materials are contained in the work.	Due to the properties of ultrasonic waves, metals and glass are hard to cut. Even if they can be cut, the blade and the parts are likely to be worn.
Conditions for cutting are severe. The feeding speed is fast.	As the feed speed increases, the load to be applied on the transducer becomes larger. Reduce the feed speed for use.
The blade direction does not fit the travel (feed) direction of transducer.	The blade chucking part of blade may not be working correctly, thus resulting in higher load. Check the transducer mounting and adjust it before use.
The blade contacts the jig or the frame.	Check that the blade does not contact any object other than the work. Operate the machine, paying attention that the blade does not contact such parts.
The holder or the blade fixing screw contacts the work.	Check that no scrape or melt of work adheres on the end parts. Operate the machine, paying attention that they do not contact the work.
The blade is defective. Cracks, chipping of blade or wear exist on the blade.	Check the blade condition and execute maintenance of the transducer, if required, according to the section "Maintenance of Transducer (P18)."
Stain (residue) of work adheres on the blade.	The resonance of ultrasonic oscillation is affected by changes in weight or shape of the blade. Remove the foreign materials adhered on the blade on a regular basis.
The parts are defective. Cracks or wear exists on the parts.	Check that there is no problem with the end parts of the transducer and execute maintenance of the transducer, if required, according to the section "Maintenance of Transducer (P18)."
The holder or the blade fixing screw is improperly fixed. Mixing of foreign materials; Improper tightening	The tightening torque is specified for each part. Execute maintenance of the transducer according to the section "Maintenance of Transducer (P18)."
The blades, tools or parts other than those authorized by our company are mounted.	The blades and the parts that are not of the genuine parts of our company cannot be used. Neglecting this caution will lead to the case where the conditions for ultrasonic oscillation cannot be satisfied, resulting in improper use. We manufacture custom-made parts and blades that satisfy the customer requirements. Contact us for such parts and blades.