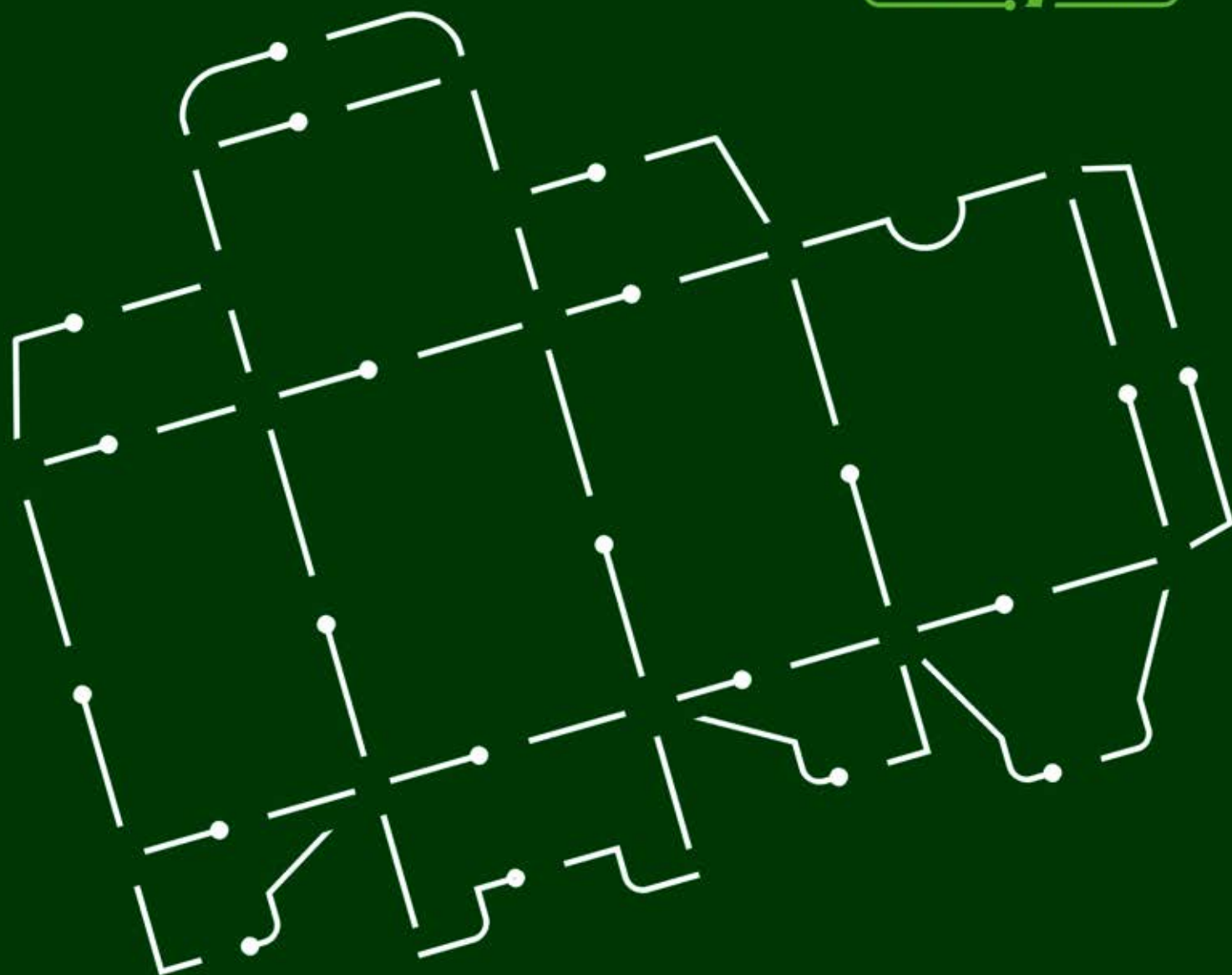


环保刀模





The doubts of Printing & Packaging Enterprise

1. Is there any die board that is low cost but can die cut high-quality printing products?
2. Is there any die board which doesn't drop out the blade easily?
3. Is there any die board which is fit for long orders or big orders and can be replaced its blade easily, but cutting precision can keep the same quality?
4. Is there any die board that can substitute for the costly "sandwich die board" ?
5. Is there any die board that doesn't come with black edge, and can be convenient for marking, stocking and finding?
6. Is there any die board that has locating slots or holes even without special processing?
7. Is there any die board that doesn't get rusty easily after a long time stocking?



The Problems & Worries of Die Board Manufacturer

1. **Laser die board cutting machine is popular with many people, and it is getting more and more rat race between die board manufacturers and laser one.**

Have you ever thought to get different die boards to make yourself outstanding among the competition?

2. **Some problems have been improved to the kerf verticality and clamping on laser cutting , such as changing double laser heads into single heads, changing low power into higher power, and changing normal laser machine into pulse laser machine. But these problems haven' t been solved yet.**

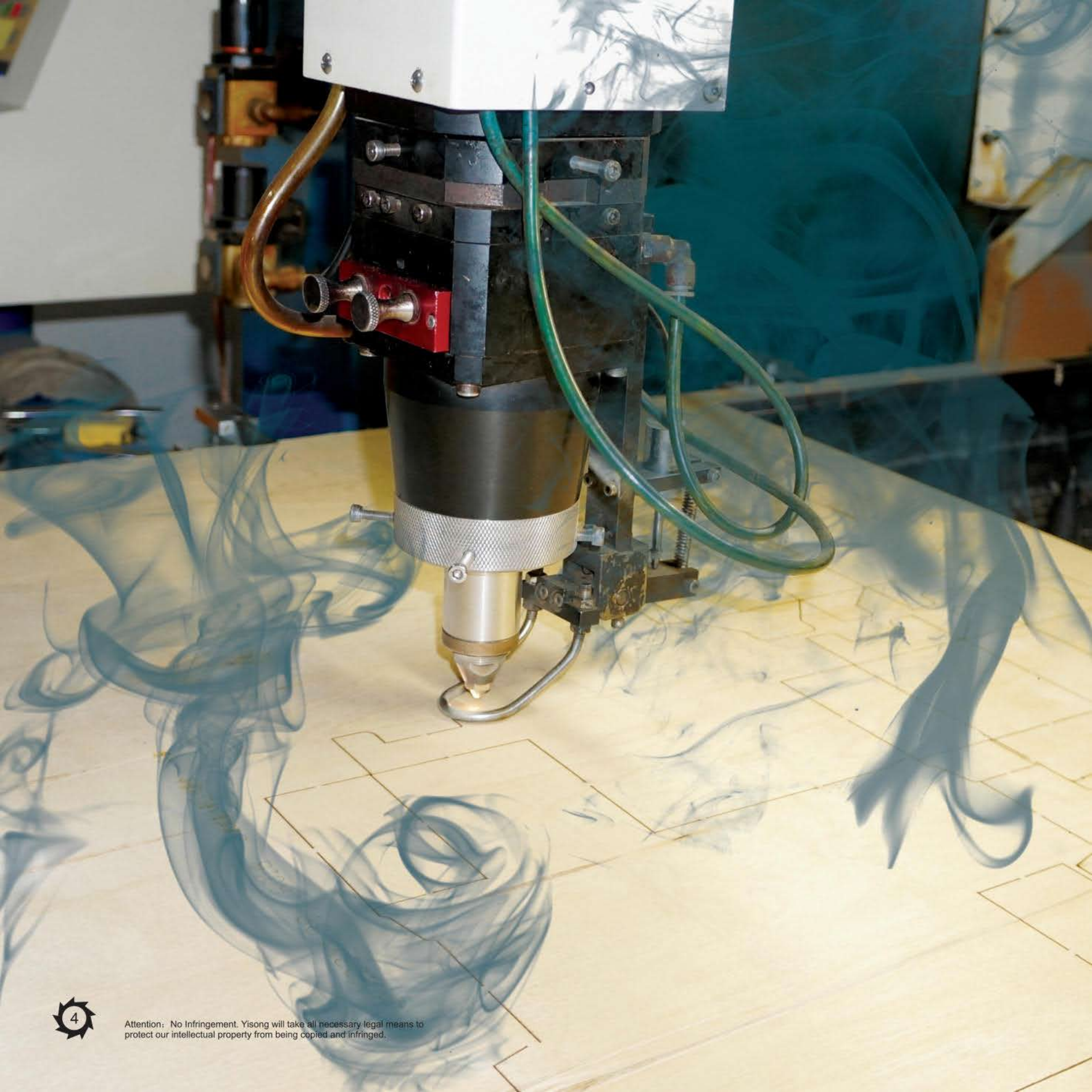
Have you ever thought to get a machine which can completely overcome these problems and meet customers' demands perfectly?

3. **Material and labor cost has been increasing while the price of the die board has been decreasing. The profit space is tiny.**

Have you ever thought to own high quality die boards with low cost, which promote the profit and strengthen your competitive edges?

4. **The government advocates environment protection, and communities are sensitive to smoke and waste discharging, employees pay more attention to health.**

Have you ever thought to get a die board processing machine which is environmentally friendly, high quality and low cost?



Die Board Industry Development & Current Situation

Die board industry develops with technological progress and gets breakthrough. Since the nineties, die board have been widely used while the accuracy needs is getting higher. The industry development required both of automation and high precision. Traditional die board industry was in the crossroad. People tended to use Numerical Control Technology to realize automation and high precision. However, during that period numerical control technology was not advanced enough to support their blueprint. Then people turned their eyes to laser technology which was already mature, that is why laser die cutting came into being.

Laser die cutting changed the industries, brought forth good result on automation and high precision and accelerated the development in industry. Nevertheless, with laser cutting machine being widely used by die board industry, it also causes environmental pollution, accuracy limits and high cost problems.

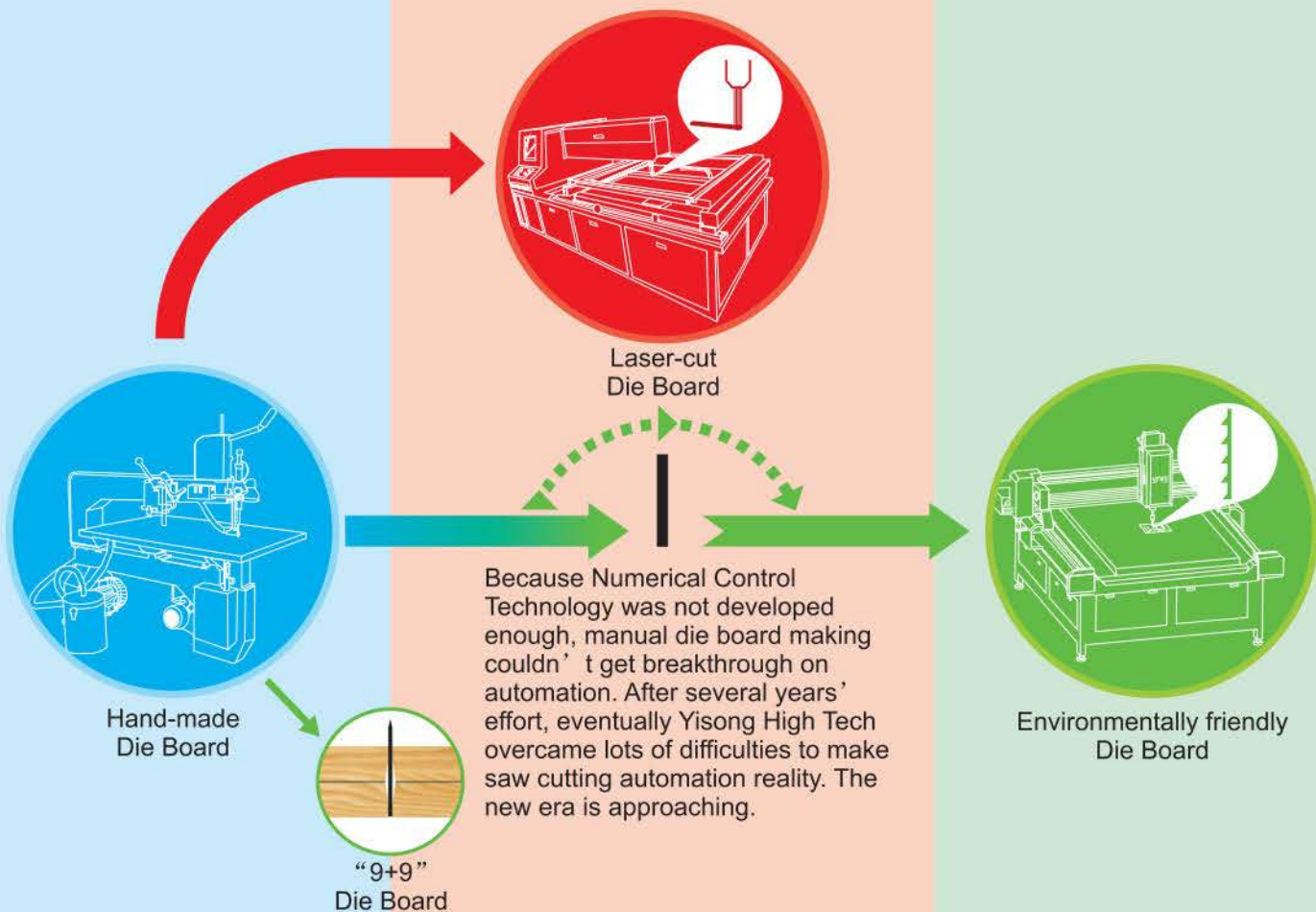
Even after almost 30 years' development, those problems have got some improvement but haven't been solved yet. Now environment protection is concerned by everyone, industries also require higher accuracy on die cutting. In the face of these severe problems, people are thinking how to choose and where to go with laser cutting technology.

Die Board Industry's Development & Changes in Demands

1. Manual operation;
2. Low requirements on accuracy and quality;
3. Basic demands could be met;

1. Automatic operation;
2. High requirements on accuracy and quality;
3. Achieve mass die cutting production;

1. Environmental Protection
2. More cost-saving, more energy-saving
3. Automatic and intelligent operation
4. Further improvement on accuracy, precision and quality.
5. Can realize mass production and matching processing production needs.



Why must die cutting industry still use laser die board cutting machine

Although laser cutting has lots of shortcomings and problems, it's still used by industry widely, and the trend of number is peaking. The reasons are as below.

Firstly, industry's development and standards decide the "depth-to-width ratio" of the die board kerf is much more than 10 times(such as the normal wooden die board's thickness is 18 mm, the normal width of the kerf should be 0.71mm; for plastic board, the board thickness is 6mm, while the kerf's width is 0.45mm), which determines that people can't apply drilling or milling to handle the die board.

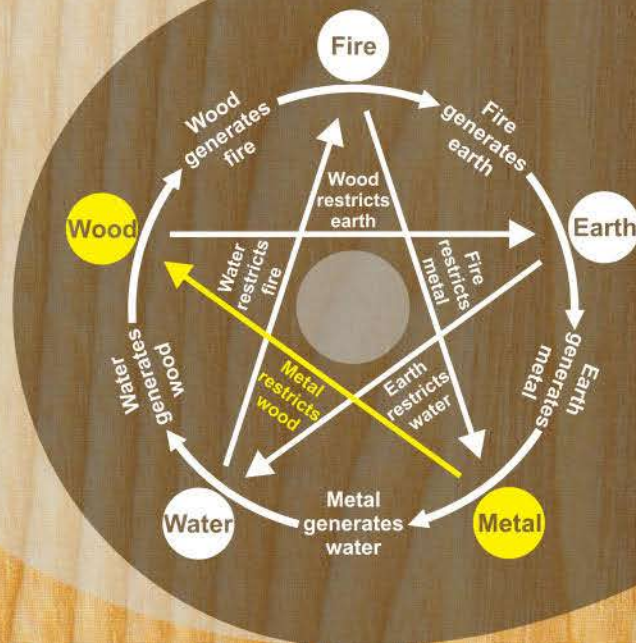
Some people made some efforts to avoid this problem, such as milling 2 piece of 9mm's die board and then combining them together to reach 18mm; or milling processing "Sandwich die board". These methods avoid using laser machine, but they also have some defects, like "9+9 die board" can't be used on kerf-intensive boards, "sandwich die board" is too expensive with slow efficiency.

Laser cutting machines producers also made some improvements, such as applying pulse laser to increase the clamping and precision; tamping in the kerf to improve the clamping force; using Finland board to ensure better processing performance etc. However, problems still can't be solved from the source. Also air pollution and poisoned smoke can't be removed completely even some filter are installed.

People have to use laser cutting because they have no better choice.

After more than 5 years' research and development, Yisong invented eco-friendly automatic die board sawing machine. We provide you with new and better choice.

Follow the law of nature, pursue green and healthy life



What is environmentally friendly die board?

1. Without using laser, automatic bridging, processing over 18mm⁺ s die board at one time. High accuracy, high verticality, high clamping, no black edge no toxic smoke and smelly air. Based on above features, we call it “environmentally friendly die board” .
2. The equipment which processes “environmentally friendly die board” is called “environmentally friendly die board sawing machine” .
3. Yisong die board sawing machine demonstrates the essence of “metal restricts wood” . In Chinese traditional culture, “five elements” theory is widely known as it demonstrates the law of nature.. “Five elements” include metal、wood、water、fire and earth , they mutually reinforce and neutralize each other. The essence of environmentally friendly die board is “metal restricts wood” . Only metal tools (saw, planner, cutter, driller, miller etc) can process wood but won’ t change wood’ s nature. Laser is fire and burns wood and change wood’ s nature into wood charcoal.
4. The development of environmentally friendly die board should avoid using laser. People had to choose mature laser technology because numerical control technology was not advanced enough. Nowadays, Yisong environmentally friendly die board sawing machine has found the root of “metal restricts wood” and returned to the right direction. Yisong die board sawing machine can not only remove all the problems laser cutting causes, but also improve the cutting precision and accuracy.



**Environmentally friendly
Energy-saving
High quality**

Yisong High Technology is committed to industries' problems solving, making efforts on industries' upgrading and promoting healthy and sustainable development for die board industry.

R&D Milestone of Our Environmentally Friendly Die Board Sawing Machine

- In 2012 Yisong High Technology was established and determined to contribute to R&D and producing environmentally friendly, energy-saving, automatic and intelligent CNC machinery.
- In 2013 Researched and developed “strong-straight” function die board and related CNC machines
- In 2014 Researched and developed the “Rotary die board” and related CNC machines
- In 2014 Researched and developed “9+9” die board and related CNC machines
- In 2014 Invented “Eco-friendly die board” and “Eco-friendly die board saw cutting machine”, adapted numerical control technology to realize the full-automatic saw processing way in die cutting industry.

Yisong High Tech has invested a lot of financial, manpower and material resources into technologies R&D. We have our own production base and independent world-class R&D center. Also, we have obtained dozens of core invention patents.

“Environmentally-friendly die board saw cutting machine” is the world first “Environmentally-friendly die board” processing equipment invented by Yisong High Tech, which aims to make lots of contributions on die board industry,

“Committed to industries’ problems solving, making efforts on industries’ upgrading and promoting healthy and sustainable development for die board industry.” is our philosophy.

“Professional, Integrity, Cooperation” are our faith which guides us to provide satisfactory and quick-response service. We are looking forward to building up good and long-term cooperation with all customers worldwide!



Kerf Verticality and Width Comparison



**Environmentally-
friendly Die Board**

VS

**Laser-cutting
Die Board**

1 Avoid the quality defects caused by laser cutting

Cutting precision, width and verticality of the kerf and clamping force are all much better than laser die board since we adapted saw tension force monitoring system to ensure the kerf straight and vertical. This is one of patented technologies which completely solve laser die board quality problem.

2 Improve the tightness and clamping force of the kerf

It is different from laser cutting die cutter which will leave carbonized layer surface on the kerf wall. Environmentally friendly die board only has wood fiber on the side of the kerf wall, these fiber will add the friction to keep the steel blade tightly, even after many times processing, the clamping force of the kerf to blade won't change.

3 Control and adjust the kerf width precisely

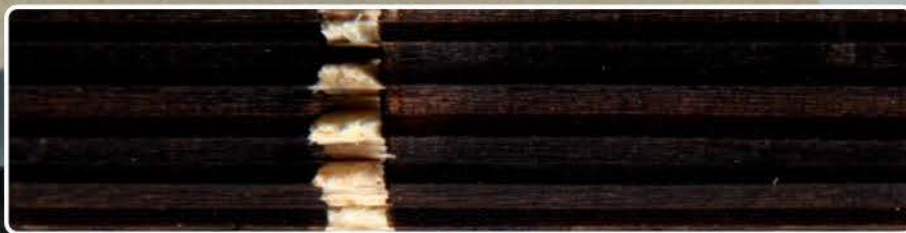
Laser cutting accuracy depends on if the operator is experienced or not. Environmentally friendly die board saw cutting machine applies saw to cut the die board. We precisely control the kerf's width by controlling the saw's width and processing speed. Human factor is avoided.

4 Ensure steady processing accuracy and precision

For laser cutting, the output power's current is directly related to laser generator, laser tube and laser mirror. But these parts easily ages, which affects the laser output power's stability, and make a bad impact on the kerf cutting performance, might result in unstable die board quality. Yisong die board sawing machine applies saw blade to cut the kerf. The saw is too thin to affect the kerf width while processing. It can ensure stable processing accuracy and precision.



Wooden Fiber Kerf Surface and Carbonized Kerf Surface Comparison



**Environmentally-
friendly Die Board**

VS

**Laser-cutting
Die Board**

5 Solve the problem of bell-mouth and improve the verticality

Laser cutting die cutter will make a bell mouth on the board which will not only affect the precision of die cutting, but also affect the working life of the die mold. Yisong die board sawing machine uses fixed width saw cutting, therefore bell mouth will not be caused, the verticality of the steel rule blade will not only ensure the precision of die cutting, but also ensure the working life of the die board.

6 Reduce distortion of die board

Compared with laser cutting, saw cutting won't make the die board be out of shape because saw cutting is a cold processing technique. It is a serious quality defect for high precision die board. The general solution at present is using high-end die board, like Finland board, but it will increase the manufacturing cost, and the cost will be passed to the customers. Using ordinary wood will increase the deformation and cause a bad impact on steel die blade's installation.

Environmentally friendly die board sawing machine uses saw to cut, which won't make the die board out of shape and keep high accuracy. It doesn't need high quality die wood, which will greatly reduce material cost. Therefore it can enhance competitive edges and increase the profit. Meanwhile it is easy to install and replace the blade, which is good for production and no bidding time.

7 Solve the problem of laser trailing

Environmentally-friendly die board sawing machine adapts saw blade to cut the board. There is each saw on the top and in the bottom, they work simultaneously, so it will not cause trailing problem.

8 No black edges on die board

Laser cutting machine will burn the board, the kerf and edge will turn black, it is not only affect the appearance, but also make your hands dirty. However Environmentally friendly die board uses sawing process, it will keep wood's nature, make the die board clean and tidy, and it will be more acceptable to the customer.



Benefits Printing & Packaging Companies Can Get From Environmentally-friendly Die Board

- Higher precision and accuracy, Higher quality of printing & packaging product
- Die cutting blade is more anti-rust die cutting blade, good for stocking.
- Die cutting blade is replaceable, which is suitable for big quantity and long-term orders.
- An ideal substitute for “Sandwich die board” to make high-end printing & packaging products.
- Easier to be classified, preserved and found according to the file number on the edge of the die board.
- Can be used to handle positioning holes or positioning slots
- The edge and slots are wooden, which is clean and tidy.
- Printing & packaging factory can build up their own die board making workshop, and the environmental problem of the laser die board can be avoided.

Competitive Edges Die Board Factories Can Gain From Making and Selling Environmentally-friendly Die Board

Avoid to be inspected by government environmental protection department

1. Don't have to worry about environmental pollution complains and report by surrounding communities.
2. No need to install Smoke filtering and purifier device.
3. Factories can be set up in more convenient locations.

Improve the competitiveness of die board factory

1. Much low manufacturing cost than laser die board cutting machine.
2. Better precision than laser die board.
3. Better clamping than laser die board, die board using life can be longer.
4. Without black edge, it will be more acceptable to the customers.

Help die board manufacturers expand their business scope

1. Help die board producers' manufacture high-end die board with lower cost, to grow their business.
2. No start bidding time, can deal with urgent orders and small orders.
3. Unique advantages make eco-friendly die board manufacturers more outstanding and it will benefit business development.

Decrease the manufacturing cost for die board factory

1. The whole production cost is 1/5 of laser die board cutting machine.
2. Saw blade is the only consumable item, which is cheap and easy to get replaced.
3. The electricity consumption is 1/10 of high-power laser cutting machine.
4. Using normal plywood also can meet high production standards.
5. Gas and cooling system are not necessary.
6. Reduce the hidden cost and indirect expense for long.
7. No start bidding time, you can run it anytime.
8. Smaller space needed for machine layout, much lower rental cost.

Reduce the cost of maintenance and installation

1. Eco-friendly die board saw cutting machine only consists of CNC sawing machine and an air compressor. It's different from the laser die board cutting machine's configuration:

(1) CNC machine	✓
(2) laser generator	×
(3) Special power supply system	×
(4) laser control system	×

To bring many benefits for your customers (printing and packaging companies) is our most important value

- (5) gas supply system ✗
- (6) cooling system ✗
- (7) air compressor ✓
- 2. Laser cutting machine needs complicated configuration and costs a lot for maintenance; only cutting table needs to be maintained with lower cost for saw board cutting machine
- 3. Low cost for easy installation, no need to concern below problems of laser cutting machine installation
 - (1) big and extra spared space is needed for safety consideration;
 - (2) Open fires may be caused when using high-pressure gas, plant ventilation needs to be considered;
 - (3) Burning smell generated by laser cutting may impact on surrounding community; environmental complaint may be received;
 - (4) Waste discharge equipment needs to be installed;
 - (5) Different component system needs to be installed separately
 - (6) Laser machine consists of complex parts, huge project & long period for installation; not convenient for factory relocation

Improve security guarantee for employees & enterprises

1. Reduce enterprise' s risk and eliminate safety hazard thoroughly caused by laser beam & compressed gas.

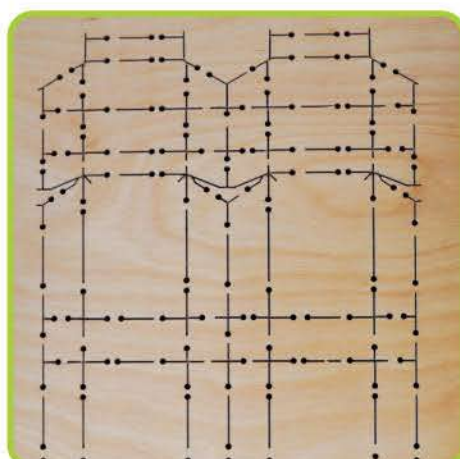
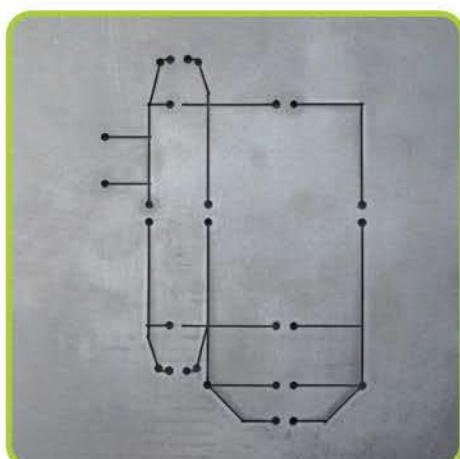
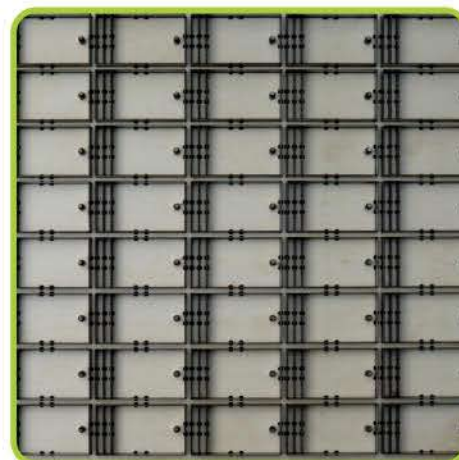
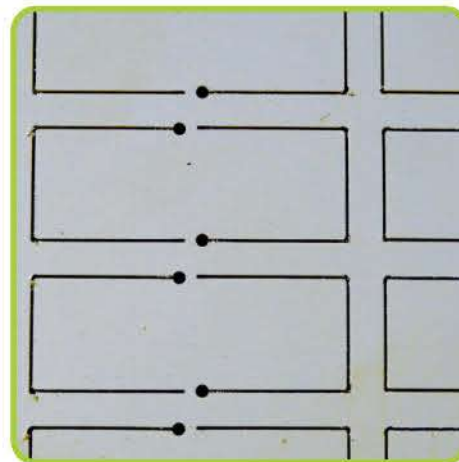
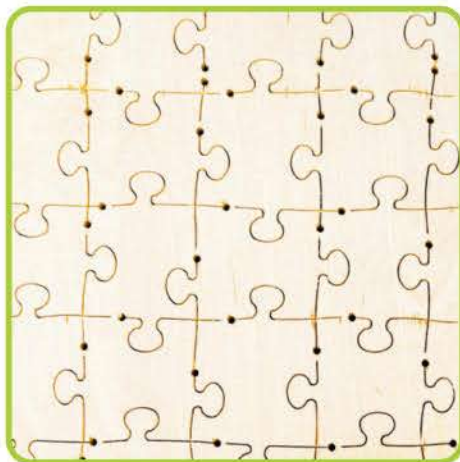
2. Easy to get young employees retained when safety guaranteed

Easy-operating, easy-learning and easy-training, technician would like the machine better.

1. It' s easy to get new staff trained for machine' s simple operation
2. No need experienced operator to adjust and set up the machine when compared with laser cutting
3. Staff may be fond of the way to debug machine by only moving the mouse and pressing buttons

Eliminate environmental pollution & health impacts

1. With no emission of toxic gas and irritating smoke, no harm to surrounding environment.
2. No harm to Die Board business owner?s health for long period.
3. No harm to machine operator?s health, easy to get excellent staff retained



Other Industries that Environmentally-friendly Die Board Can Be Applied to

Handle Electronic Plastic die board

1. No offensive smell and no environmental complaint problems;
2. No toxic gas generated by plastic die board processing, no harm to surrounding community;
3. Steel rule blade not easy to get rusted when compared with laser plastic die board;
4. No corrosion gas;
5. No need to use non-water rubber sheet;
6. No bad effect on machine's using life.

Handle Large-size Photoelectric “Finland board” Die Board

1. Be used to process large-size photoelectric die board, no need import high end laser cutting machine;
2. No need to remove black edge;
3. Kerf quality is much better than laser cutting die board;

Handle Leather Goods Transparent Acrylic Die Board

1. No offensive smell and no environmental complaint problems;
2. No toxic gas generated during acrylic die board processing, no harm to surrounding community;
3. Steel rule blade not easy to get rusted when compared with laser acrylic die board;
4. No corrosion gas;
5. No bad effect on machine's using life.

Handle PVC High Density Board Die Board

Handle Matching Bottom Die

Can process stripping plate

Can be installed with drilling tools, milling tools etc



Patent Number

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201510091647.4
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Patent Protection

President Jin Ping Xi advocates patent protection and stated ‘Punishment should be strengthened to intellectual property infringements’. In recent years, the country thinks highly of the national protection of intellectual property, and punish to intellectual property infringement has been strengthened. To response national innovation strategy, Yisong successfully developed Saw Board Cutting Machine series, which lasted for several years. Yisong brings global first die mold processing solution for die board industry, with advantages of eco-friendly, energy saving, high precision, great quality, lower cost etc.

Patents pool has been established for Yisong Saw Board Cutting Machine. Yisong machine has received more than 10 related invention patents, over 20 applied late-model patents, meanwhile, there are over 10 patents being applied. In addition, our core technologies had been applied for international patents in many countries via PCT (Patent Cooperation Treaty).

Industry peers are welcomed to discuss with us regarding related technologies or development issues of eco-friendly die board & saw board cutting machine. We have determined to take legal means to protect our patents and intellectual property.

We hereby declare: any enterprises or individuals are not allowed to copy the Yisong’ s machine and our patented technology; any infringement to our intellectual property rights would seriously be held accountable by us with all the legal means!

Beijing Liu Shen Law Office (the most powerful, historical and experienced patent law firm) and its global partners are authorized by us to handle intellectual property affairs of patent use obtaining or rights protection. The unauthorized use of our patents and infringement of our intellectual property rights, should be held accountable for all legal liabilities, including but not limited to criminal liability, civil liability and administrative liability



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