The Art of Laminating Part 3 - Making the investment

Before you make the investment, you have to consider both your present needs and your future needs. The purchase of a laminator is similar to that of purchasing a car. A lot of decisions need to be made as to what bells and whistles come with the various models.

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Like an automobile, with proper care, this machine can get you 10 to 15 years down the road. So, do you look at the luxury edition or the economy version? If you are unsure, you can always test the waters by subcontracting the lamination to a nearby source, preferably someone that will give you a wholesale price. It may be that the lamination cost is just passed on to the client and you make no profit on the laminate portion of the project. Although, you have to keep in mind that you have just provided that client with a better product and the chances of repeat business have just increased tenfold! Remember that those with the equipment have already made the investment and have to make a profit too!

What do you look for in a film laminator?

Safety first
Above all else, you should look at the safety features. Even the most experienced operator will tell you that these machines can hurt you. I don't know of any incidents of a laminator causing death, just pain. There are stories of the operators getting their tie (been there...done that!), articles of clothing and jewelry caught in between the rollers of the laminator, but the number one item is fingers (did this too!). Remember that a laminator uses pressure to apply the laminates, so the damage being inflicted can range from a pinch to broken bones.

Many of the high-end laminators are equipped with optical sensors that will stop the machine if anything gets too close to the rollers besides the prints. Most new laminators are equipped with at least an emergency stop button. So whatever you do, don't wear lose clothing or jewelry while operating a laminator.

Size or width
Underestimating the width of the laminator needed is a common mistake made by those that are about to purchase one. Many of those people that are just starting out may purchase a 24" digital printer along with a 30" laminator. There is nothing wrong with that and you have to start somewhere. Those that are serious about growing their digital printing market soon learn that the client wants a print larger than what can be printed

on the 24" machine. So, the next investment turns out to be a larger printer. What about the laminator? Now you are forced to look into a larger laminator. A glance into the future of your business may be the deciding factor to the original purchase. Granted, your budget is the final say in this matter.

The laminator width should always be equal to or larger than the widest printable material that can be run through your printer. If you have any indication that a 50"+ wide printer is in your future, consider a 60" laminator. Keep in mind that you may be providing lamination and mounting services other than what is printed by your printer and the larger laminators can use a smaller width roll of laminate.

Adjustable roller height
Besides laminating, there are many occasions to where prints will need to be mounted to some type of board. The boards may vary from a 1/16" up to 1" in thickness. Look at how easy it is to adjust the roller height and how much of a space between the rollers is possible. Keep in mind that the mounting aspect of the laminator is just as important as laminating itself. A laminator can be a great time saver once you get the hang of it.

Feeding the laminator
More than half of the damaged laminated prints are caused by how the print was inserted into the laminator in the first place. Once a print is fed in, there is no stopping without damaging the print anyway. Some laminators have a plate that the print is placed under prior to reaching the rollers. This is to attempt to keep the print flat as it is feeding in. The best innovation for this process has been a vacuum plate, which sucks the print down to keep it flat as it is feeding into the laminator.

Pressure
Pressure is the key to most laminates and not all laminates use the same amount. What you will find in the least expensive laminators are rollers that are spring loaded for pressure. A spring can only place so much pressure on an object, so if this is the style of laminator you wish to purchase make sure to ask the salesperson about pressure and the types of laminates that can be used.

The more advanced laminators use rollers where the pressure is controlled by an air ram with an air compressor. In most cases this type of setup can place up to 100 pounds of pressure on the roller. Higher pressures are needed at times when a thick pressure sensitive (cold) laminate is used such as a 15 mil lexan.

Hot or cold rollers
There are three different configurations for the roller setup.

1.) Cold rollers both top & bottom, which means that only cold laminates can be used.

2.) Top roller is heated and the bottom roller is not (cold only), which means that you can use the less expensive hot laminates on one side. The only disadvantage would be encapsulation in which hot laminates are commonly used. You would need to laminate one side, and then flip the print over to laminate the other side. In other words, you run the print through twice.

3.) Both top & bottom rollers are heated in which encapsulation can be performed in one pass using hot laminates. Having at least the top roller as heated can be an advantage for being able to use either hot or cold laminates.

One-man operation
Laminating in most cases is a two-man process, one to feed items in and one to accept the items coming out. You may not always have the luxury of assigning two people to the laminator, so any feature that can assist in a one-man operation is worthwhile.

Replacement costs
A well built laminator can last as long or longer than your car and like your car there are parts that will need to be replaced, mainly the rollers. Find out from the salesperson or manufacturer what the cost would be to replace the parts and about their average life expectancy. Good maintenance practices can extent the life and you may never have to replace them. The best advice that anyone can provide is “keep sharp objects away from the rollers!”

What do you look for in a liquid laminator?

The liquid laminator, though similar in purpose, is quite different from the above film laminator. Its sole purpose is to add a protective coating to the digital print and cannot be used as a means of mounting or applying transfer tape. Pressure-heated rollers are not used at all, but rather a micro thin layer of liquid laminate is applied as the print passes through the machine. This liquid is either applied by means of a gravity feed system or a mechanical pump/sprayer type system. This device was designed to accommodate the lamination process for the large and grand format solvent based ink printers, but can also be used on the aqueous (water) based inks too.

Many of the film laminator requirements can also apply to the liquid laminator, such as safety features, size and/or width and one-man operation features. Some the differences include:

Adjustable liquid application thickness
The materials and their use may govern the application thickness of the liquid laminate being applied. For example, adhesive backed vinyl that is to be used for vehicle graphics may require a thicker coating than what would be needed for a vinyl banner. The vehicle graphics will undergo more abuse than the banner, thus a thicker coating may be required. It is very important to have this feature.

Feed system
Because of the nature of this device a roll feed system is typical. The print(s) are typically rolled onto a core/tube and placed on the laminator's core holder. The material is then fed into a set of pinch rollers that then guide it through the laminator.

Drying system
The drying system is usually an add-on feature that is a must for those that intend to have a large volume of prints laminated. The faster the prints dry, the faster they can get out the door! After the laminate is applied the material would then run through the drying system and onto the next phase.

Take-up system
The take-up system is typically another add-on feature. Rather than the material spooling out onto the floor, a roll take-up system can be used. This adds a roll-to-roll feature and keeps the material from collecting dirt/dust and helps to eliminate kinks and/or creases in the material. It also makes it more convenient to move the product into a finishing area for trimming and/or sewing.

Recycling system
Waste may be a factor in your choice of liquid laminators. Since not all of the liquid will get applied to the material, ask as to whether or not it can be re-used. This may be a manual method or an automatic method. If it cannot be re-used, what is the process for disposal?

Replacement and maintenance costs
Routine maintenance will keep the machine in top running condition, but parts do eventually wear out. Determine the maintenance procedures and the time frame required for this maintenance. Remember that time is money too! Determine which parts commonly need to be replaced and their cost. Can you perform the replacement or is an authorized technician required? What is the cost associated with the answer?

Liquid laminate change-out
Whether you are using a gloss or matte finish liquid laminate or intend to switch back and forth from a solvent ink liquid laminate to an aqueous ink liquid laminate, you need to ask about the procedures, time frame and any changes that would have to be made to the machine in order to do so.

What we know
What we do know is that liquid laminates are less expensive than most film laminates and that not all materials can accept a liquid. A liquid laminate generally contains a higher UV rating than most film laminates. This might play a major part of your decision if the print is intended for outdoor use conditions. You may be asking yourself "which is better...film or liquid lamination?" Your goals and/or operation may govern which is best to use, but it would not be uncommon to use both!