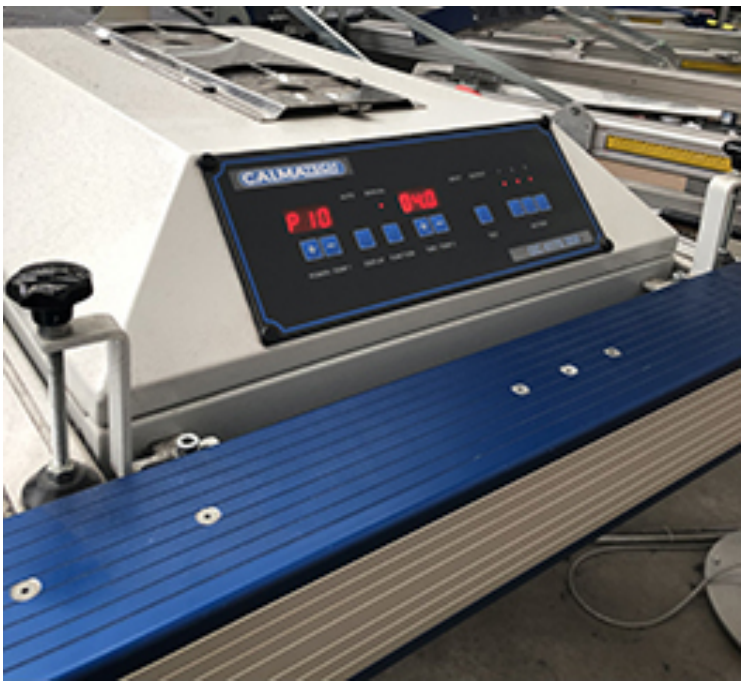
Wet on Wet!

Flashes – Spots – Dryers – Heaters



These wonderful additions to a printer's arsenal are valuable assets to control but are they always used correctly?
When printing on a manual carousel, flashing every colour takes no extra time and it is arguably more difficult not to flash, but on an automatic machine the addition of a flash can actually cause more problems than it solves.

Why Flash?

The number one use of flash curers is to dry the base white layer, this will ensure the colours which lay down on top remain bright and make the shirt "pop". A base layer is applied onto the fabric and gelled, the base white should be touch dry but not cured. The base should resemble a tomato! Firm to the touch but still wet and squishy underneath. Many problems occur from an over flashed base layer, plastisol ink has a gel temperature which it hits first, it then becomes wet again as the temperature rises until it hits its second phase which is the curing phase, it is very difficult to tell from touching if a base layer has been over cured or under cured as both feel wet to the touch. Many print shops are now using multiple flashes on dark and even light shirts,

is the use of these flash curers necessary or are they being used as an expensive cure to a problem that can be addressed early in the path from design to press.

Multi-colour printing

So, we have laid down our pristine white base layer using the high-tension mesh with a superb EOM coating and the fancy new composite blade, we apply the flash and get it just dry enough to start laying down the 12 colours on top. It is at this point most of us reach for the coffee pot, put on the lucky shirt and try to figure out the intricacies of a multi-colour job on a dark shirt, should we have said yes to this job? Should we have argued with the customer to change it to a two-colour silhouette design? should we have gone down the DTF route? The design has toned edges but surely the addition of a garment colour bleed would be ok? Maybe this is the perfect job to get the DTG machine finally paying for itself? No, it seems that the whole of the multiverse is working against you because the run size is 3000, the shirts are a great vintage purple colour with just enough man made fibres in them to make them almost allergic to anything but multi-colour direct print. Nothing else for it you just must knuckle down and get it printed.

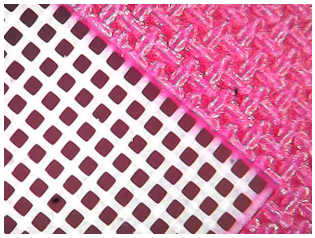
Fail to prepare, prepare to fail.

We approach the press with our lucky shirt on, the one from the batch of 1000 that we stayed up all night printing and packing, delivered to the event and secured the next order for 10,000. (we are printers, we rely on superstition more than logic!).
11 more screens to place in the press, we frantically work out how many heads we have and where we can put the five flash cure units we have, disaster strikes!, to run this job we must remove four of the flash cure units and use them as print heads if we want to keep a cooling station after the base flash.
The prospect of running a 12-colour job with only one flash now strikes fear into your experienced bones, will it smudge? Will it pick off? Will it pinhole? Do you have lots of silicone spray on hand maybe you still have a tub of flow thinner from 1987! That will help right?
The truth is that most problems with a multi-colour job can be solved before they happen.

Get your ducks in a row.

Colour order is important and can help a job to look cleaner and run easier, try to use the old technique of smallest area to largest area, this is a guide and should be manipulated according to brightness, design intricacies and the use of tones to create the appearance of more colours , as if 12 wasn't enough!!

Mesh counts



Why is that part of the design on that mesh count? Is it because that is all you had clean? What's the tension?
High mesh counts with high tension are a necessary part of multi-colour prints and allowing for a little personal preference and of course adapting to the level of detail or line count I would not go lower than a 90, the strength of the colour comes from that pristine base that goes down first. Using the higher mesh count allows us to control ink deposit while also stopping the ink from smudging on the base white. The last colour can use a lower mesh count as nothing else is going over the top, perfect for keeping whites bright or yellows super opaque.

Choose your blade!

Which blade to use? Most common blade selection is made by the age old tried and tested method that has served print professional for decades- "which ones are clean?"
The hardness (shore) of the squeegee blade is of extreme importance when printing wet on wet as it controls two elements, the amount of ink placed down and the amount of force applied on wet ink to avoid pick up from the previous screen.
Start with a your hardest blade and work your way to the end getting softer and softer, the last colour should have the softest blade in your shop as this blade will be pressing down on 11 colours sitting atop a solid white base that is designed specifically for the purpose of making plastisol run along it and make that mmpppaahh sound that all printers hate.(similar to your Granny's toothless kiss)

A different angle

Progressive angles are a key factor in reducing the blurriness (real word?) and maintaining the flow of a job which does not use multiple flash curers. Start with that rock hard blade in the first colour and use a straight angle of around 5 degrees, it won't hurt anything because you will be printing onto that pristine tomato skin base white, progressively add angle until the last colour with the softest blade has the steepest angle 25 degree or more.

Keep up the pressure

Squeegee pressure plays an integral part in the finely tuned print setup currently on press, using the same theory as the progressive blade selection and the progressive angle application, pressure should also be progressive, try to reduce the pressure pressing down on these wet colours by backing off to the point where the ink does not clear the mesh and then adding just one turn of pressure, avoid double stroking as this will add more ink than you need and it may look nice when it first goes down, but once it has been pressed by another five sets of blades it will run along the base white faster than the catcher runs for the door at the end of the shift.

Keep your cool

Multi-colour printing can be difficult and demanding, I have certainly felt like throwing the squeegee blades through the closest window and just sitting in a dark corner of the screen room and gently rocking myself back to normality when a multi-colour job starts to get too hot on the press. Heat management is a large proportion of ensuring a print job runs smoothly, let it go cold and the ink starts

to go sticky, keep adding heat and the ink starts to go sticky, too hot and the boards leave a little battle scar burn on the belly of the loaders.
Keep cool and persist, solve the problems before they hit the press and then sit back and watch the machine knocking out beautiful little works of art destined, to be worn by students on a pub crawl, so what if they end up covered in sick and smelling of cheap white lightning cider and kebab with chilli sauce? take great pride in knowing that you printed those little masterpieces using one flash and progressive angles (be prepared to be ostracised from social groups if you see one of these shirts worn in public and persist in telling the wearer of the advantages of 30 newton screens and a 65/90/65 composite blade)