

# DropMaster

## Print Automation



## Smart Printing Equals Value

Specifically developed for Mutoh's dual head ValueJet models, DropMaster is a revolutionary print automation technique which eliminates the need for cumbersome and time consuming media dependent head adjustments. Knowing the media thickness and consequently the drop-throw distance between print head and media surface, DropMaster is capable of automatically recalculating and adjusting the uni / bi-directional fire timings. It does this regardless of resolution and print speed.

**Regardless of the thickness of the media you are using and regardless of the speed you are printing at,**

### **DropMaster ...**

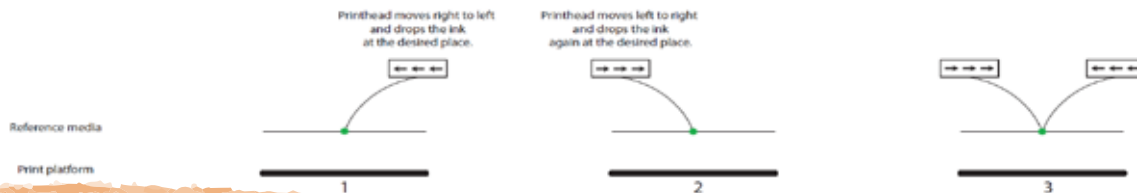
- Assures the highest dot placement accuracy both uni and bi-directionally
- Eliminates the need for individual head adjustments per individual media type
- Automatically recalculates and adjusts the drop throw distance between the print heads and the media surface once the media thickness has been entered by the operator

### **The result is:**

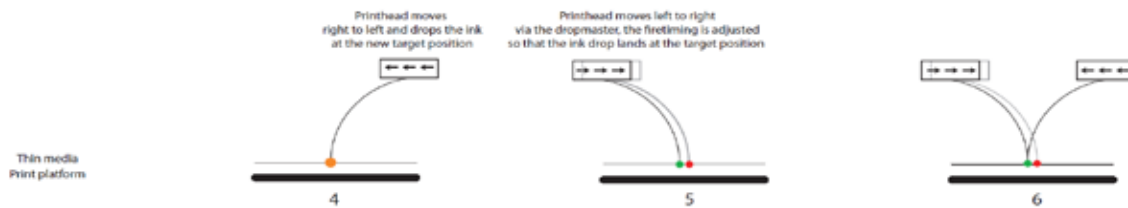
- An overall increase of image definition & smoothness
- Significant time savings

## DropMaster - How it works?

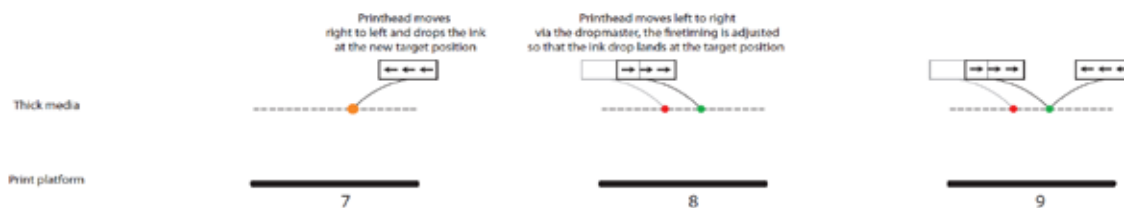
**First**, we consider a perfectly adjusted bi-directional printing situation. Looking from left to right in the illustrations below, first a droplet is fired as the carriage moves from right to left (FIG 1). During the return of the head shuttle, another drop is fired which has to land exactly on top of the first drop (FIG 2). Figure 3 shows how both droplets perfectly coincide. This calibration or reference adjustment previously had to be carried out using a powerful magnifier. Thanks to the new firmware, this adjustment has become extremely easy.



**Now** imagine that, instead of using the media thickness used as a calibration reference, we switch to a media which is thinner than the reference media (FIG 4). When using exactly the same timing, the droplet fired as the shuttle moves from left to right (FIG 5) will be fired too late. Its travelling time will be longer and it will land on the right side of its target position. Knowing the media thickness entered by the operator or sent by the RIP and the difference versus the reference calibration, DropMaster will automatically adapt the timing and advance the firing to ensure the 2 droplets are again coinciding (FIG 6). Red dot position moves to green dot position.



**Finally**, we switch to a media which is thicker than the reference media (FIG 7). When using exactly the same timing, the droplet fired as the shuttle moves from left to right (FIG 8) will be fired too early. Its travelling time will be shorter and it will land at the left side of its target position. Knowing the media thickness and the difference versus the reference calibration, DropMaster will now delay the firing to ensure the 2 droplets coincide (FIG 9). Red dot position goes to green dot position.



This is not the end of DropMaster's impressive power. Our ValueJet 1638(W)X machines can fire 9 sizes of droplets using 2 staggered heads. Since a different drop volume will experience a different resistance of the air during its trajectory, all 9 droplets show different "flying" characteristics. Still DropMaster handles all of this perfectly just by feeding it 1 single reference situation.