VIPER MAXX PRETREATMENT MACHINE
PRETREATMENT SPRAY STEP TEST INSTRUCTIONS
For HMI5001 PLC3020

PRETREATMENT SPRAY STEP TEST

TO ACCESS THE ADVANCED FEATURES AND FUNCTIONS

1. From the MAIN screen, press the UTILITIES icon.
Then press the **SPRAY TEST** icon

![Spray Test Icon](image)

**NOTE:** On Versions HMI 5001 PLC3020 or higher the upper left corner icon may be different and show a SPRAY TEST icon instead of the PREVIOUS SCREEN icon. If this is the case, the STEP TEST is not available in these versions.

![Pretreatment Step Spray Test](image)

The Above Settings are the defaults for the Versions HMI 5001 and PLC 3020. This feature is NOT available on prior versions of HMI5001 PLC3020. However, the same feature can be accomplished using a bar code scanner and the PDF presets found at [http://www.viperxpt.com/wp-content/uploads/2019/11/Viper-MAXX-Bar-Code-STEP-TEST-for-Proper-Pretreatment-Application-10-35g.pdf](http://www.viperxpt.com/wp-content/uploads/2019/11/Viper-MAXX-Bar-Code-STEP-TEST-for-Proper-Pretreatment-Application-10-35g.pdf)

This control screen allows the user to create a variable zone STEP Spray Test for finding the correct amount of pretreatment to be used for the shirt currently being sprayed.

- This will spray 6 separate columns of pretreatment on the shirt
- Each column can be set to spray a specific amount of pretreatment.
- The SPRAY LENGTH can be set to any length

Typically this is used with STEP 1 being the least amount of pretreatment applied to the shirt, and then each subsequent STEPS 2-6 increase the amount of pretreatment applied to the shirt. The DEFAULT setting amounts seen above correlate approximately to 10-11 and then increase approximately 5 grams per STEP.
SAMPLE SETTINGS FOR 11-35 gram STEP Spray Test in 5 gram Increments
STEP 1 = Approximately 11 grams (0 Setting)
STEP 2 = Approximately 15 grams (33 Setting)
STEP 3 = Approximately 20 grams (52 Setting)
STEP 4 = Approximately 25 grams (68 Setting)
STEP 5 = Approximately 30 grams (78 Setting)
STEP 6 = Approximately 35 grams (84 Setting)

HOW THE SPRAY STEP TEST IS USED:
The user uses this STEP Spray Test to spray a shirt with preset values, cures the pretreatment, and then prints a white BOX across STEPS 1-6. The OPTIMAL amount of pretreatment to be applied to the shirt is the point where the white ink DOES NOT get any more opaque than the previous STEP. i.e. if STEP 4 and STEP 5 look optically the same (same amount of white opacity and ink coverage) then STEP 4 would be the optimal point – or a value between STEP 4 and STEP 5 (in this case a setting between 68% and 78% with the values above).

As can be seen below, the optimal amount of pretreatment to be applied for this particular shirt is STEP 5 (roughly a setting of 78% Value for SPRAY LAYDOWN VALUE or about 30g)

ADJUSTING THE VALUES OF EACH SPRAY STEP
The User can change each value for STEP 1-6 by pressing the Value and then entering the amount desired for that STEP via the touchscreen input. By DEFAULT the values installed on the Viper MAXX are approximately a STEP increase of 5 grams+. If desired the user could set the values to target a smaller “window” of pretreatment range such as 11-21 grams in 2 gram increments, as example, below:

SAMPLE SETTINGS FOR 11-21 gram STEP Spray Test in 2 gram Increments
STEP 1 = Approximately 11 grams (0 Setting)
STEP 2 = Approximately 13 grams (20 Setting)
STEP 3 = Approximately 15 grams (33 Setting)
STEP 4 = Approximately 17 grams (42 Setting)
STEP 5 = Approximately 19 grams (50 Setting)
STEP 6 = Approximately 21 grams (58 Setting)
This “tighter” range will allow for finding a more specific value for the optimal pretreatment needed for that particular shirt.

**NOTE:** The SPRAY STEP TEST will leave a small gap between each “column” or STEP. This allows you to more easily discern which step it is. When spraying the STEP TEST and the shirt is laying ON the platen, STEP 1 is on the right side of the platen and then each subsequent STEP is moved to the left. However, when you pull the shirt off the platen and look at the shirt as you would WEAR the shirt the STEPS 1 – 6 are from the LEFT side of the shirt to the RIGHT.

**FOR MORE INFORMATION AND INSTRUCTION:**
Please visit our website at [www.viperxpt.com/tech-support](http://www.viperxpt.com/tech-support) for more detailed information and links to videos showing how to use all of the features and settings on the Viper MAXX.