1. Digital Textile Printing Machine – Process Flow

Atexco 3180 DT is a reactive digital textile printing machine designed for printing on pretreated fabric. The machine's process flow is as follows:

Fabric Feeding: The prepared and pretreated white fabric is loaded onto the feeding system and introduced into the machine.
Automatic Fabric Feeding: The fabric feeding mechanism supplies the fabric continuously to the printing section.
Automatic Tension Control: The tension control system helps maintain consistent fabric tension and alignment during feeding and printing, minimizing wrinkles and fabric movement.
Digital Printing Section: The digital printing system applies the reactive ink design to the fabric according to the digital artwork and printing settings.
Integrated Drying System: After printing, the printed fabric passes through the machine's integrated drying section to dry the surface and prepare the fabric for subsequent processing.
Fabric Exit and Winding: The printed fabric exits the machine and can be collected through the installed take-up or winding arrangement, as configured.
The machine is currently operational. It has 32 printheads in total, with 24 heads in working condition, and is currently operating on 16 heads.

2. Complete Reactive Digital Textile Printing Process

For reactive printing, the overall production process generally involves the following stages:

Stage 1 – White Fabric Preparation and Pretreatment

Fabric inspection and preparation.
Pretreatment/coating of the white fabric using the appropriate chemicals, thickeners and auxiliaries.
Drying the pretreated fabric before digital printing.

Stage 2 – Digital Printing

Feeding the pretreated fabric into the Atexco 3180 DT.
Automatic feeding and tension control.
Digital printing using reactive inks.
Integrated drying of the printed fabric.
Winding or collection of the printed fabric.

Stage 3 – Steaming

The printed fabric is processed in a suitable steamer to fix the reactive dyes to the cotton or other compatible cellulosic fibres under controlled temperature, humidity and time conditions.

Stage 4 – Washing

The steamed fabric passes through the washing range.
Unfixed dyes, residual chemicals and other impurities are removed through the appropriate washing and rinsing sequence.

Stage 5 – Post-Washing Drying

The washed fabric is dried using suitable drying equipment.

Stage 6 – Finishing

The fabric may undergo stenter finishing, softening or other finishing treatments according to the required quality and end use.
A super press or calendaring machine may be used where required for the desired surface appearance and fabric finish.

Stage 7 – Final Fabric Collection

The finished fabric is inspected and collected through winding or plaiting, depending on the installed equipment and production requirements.

3. Additional Equipment and Line Configuration
Please note that the Atexco 3180 DT digital printing machine should be distinguished from the complete downstream reactive processing line.

The pretreatment/coating equipment, steamer, washing range, post-washing dryer, stenter, super press/calender, colour kitchen, ink preparation system and auxiliary equipment should be confirmed individually according to the actual installation. We do not wish to misrepresent any equipment as included unless it is verified as part of the sale.