

From DReAM: The Industrial Textile Solution

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Fi. Ind. Holding owns diverse companies in the mechanical sector. Three in the mechanics textile sector: MTS S.p.A., Jaeggli-Meccanotessile s.r.l. and Reggiani Macchine S.p.A.

Reggiani Macchine S.p.A. is a world leader building machines exclusively in the textile sector for the last 50 years. This extensive experience in the textile sector makes Reggiani Macchine S.p.A. a trustworthy partner to the most important textile manufacturers at a world class level.



Figure 1. Reggiani Macchine S.p.A. rotary screen printing machine

Reggiani Macchine S.p.A. values strength in innovation and a high quality product, industry standards are benchmarked by our initiatives and our after sales support is unequalled. We have successfully installed 1000 rotary printers and 400 flat screen printers.

Goal of the DReAM project

There has been a dramatic change in the global trends of textile manufacturing over the past decade. Average production runs have been reduced to 1,000 square meters per design and less. An industrial inkjet printing machine as the Reggiani DReAM is ideal because it ensures the high-quality and cost-effective production demanded by the market. The new digital technology is in fact appropriate for applications requiring high quality printing for short to medium productions runs. It is suitable for printing top fashion apparel, including high-end fashion niche markets, as well as home furnishing applications, flags and banners, swimsuits, technical textiles as well as new applications.

Until now, digital printing of fabrics has in fact been confined to extremely short runs of 10-20 square meters, producing strike-offs and samples of new designs, and occasionally small production runs of up to 50 square meters. For anything approaching production volumes, banks of these printers must work in parallel. This

approach is dated and impractical; the other and more innovative one is simply to use a faster machine.

For this reason, a collaboration has been established between three leading international technology companies: Reggiani, providing extensive knowledge of textile handling and print machine manufacturing; Scitex Vision, which has wide experience of digital printing on different substrates, providing the print engine, using its proprietary Aprion technology, unique piezo-electric drop-on-demand print heads for the DReAM printer; Ciba Specialty Chemicals, with its wide expertise and long-standing experience in chemicals and the pioneering role it has played in inkjet printing, has developed suitable inks especially designed for the Aprion print heads, thus ensuring accurate performance.

Reggiani Macchine and the DReAM partners are clearly bridging the gap between analogue and digital realities in the printing industry thanks to the integration of preparation and finishing machinery, quality control and cutting instruments and the correct chemistry to ensure a high quality product at an industrial production level.



Figure 2. Reggiani Macchine S.p.A. DReAM printing machine

The Reggiani DReAM is the first and unique digital printing system perfect to work on an industrial scale with high resolution (600 dpi), a new collection can be printed in a couple of days. With current ink jet plotters, roughly 20 machines and several weeks are required to achieve the same production output. The Reggiani DReAM inkjet printer is effective from creation to production, and facilitates the production of highly differentiated, added-value printed fabrics.

Digital Printing Business

These are only few examples of the successful applications of the DReAM: carpets/carpet tiles, sampling and proofing, swimwear, garments, short-run apparel printing, automotive fabrics, flags and banners. The marketing

strategy of our customers can be different, depending on the kind of production.

Reactive Dyes on Cotton:

- sample production digitally for runs between 50 – 100 mts to precisely match traditional production. Develop new business by offering short run production of photographic type prints.
- Develop a more effective way to print samples digitally with the DReAM, get approvals/orders and then go to production on Reggiani rotary machines in order to more efficiently deliver quality home furnishing internationally.

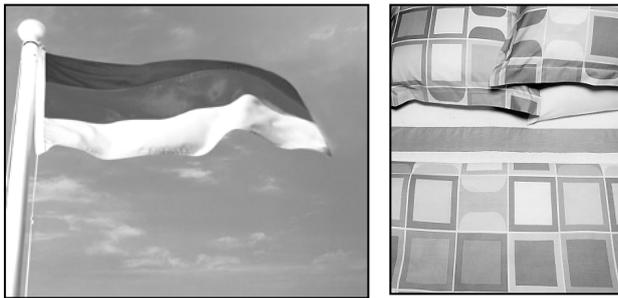


Figure 3. DReAM applications

Acid dyes on leather: develop a new market in the area of garments and accessories for the leather industry. Working closely with the top names in the Italian high fashion industry to develop new possibilities using leather as a canvas for true color designs was never before possible at a production level.

Disperse dyes on polyester: save costs and deliver a better quality product with quicker turn around for the flags and banners industry. With an inline fixation unit this client manages to go from the file presented by the client to finished product in a matter of minutes. This new production line saves about 35% in labour costs alone. new production line saves about 35% in labour costs alone.

The Digital Technological Center (DTC)

The DTC, Digital Technological Center is a recent realization by Ciba Specialty Chemicals and Reggiani Macchine S.p.A., aimed at furthering industrial digital printing. Established on March 01, 2004 in Grassobbio (Bergamo) c/o Reggiani Macchine S.p.A., the DTC is an independent organisation and the result of a common project between the two partners. This modern structure is dedicated to the study and research of the digital workflow, production process and the pre / post treatment of digital printing.



Figure 4. Digital Technological Center (DTC)

The DTC is specifically geared to: developing new inks and pre- and post-treatment systems; supporting Reggiani in the development of software & hardware, color calibration, CAD driver releases, upgrades and work flow research; coordinating and hosting events and conferences to foster the spread of industrial digital printing; validation of customers industrial printing trials; print quality & colors performances; supporting textile universities in promoting industrial digital printing.

The center will contribute to new business development by offering clients extensive assistance with their industrial needs, as well as helping them attain the know-how necessary to set a benchmark for digital printing internationally.

It offers services including sampling, printer driver acceptance for third parties, short run production, collection development, color calibration, pre- and post-treatment know-how, on-line technological support, education, client start-up, and the set-up of “turnkey” industrial textile processes.

The DTC provides value-added service, offering clients greatly enhanced digital printing performance supported with a high level of service. The DTC team comprises highly qualified personnel offering a wide range of experience that is unmatched in the industry. The staff includes experts in machine engineering, industrial textiles, inks, chemistry, software and colorimetric science.

Biography

Marco Fontana graduated in mechanical engineering with specialization in textile industries at the Politecnico of Milan. He worked for years in the technical departments of various companies belonging to the textile machinery field. Then, for more than 20 years as a Technical Department Manager of an important textile printing company located in Como, Italy. Since 2002 he has been in charge of the digital printing project DReAM for Reggiani Macchine S.p.A.