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*Innovation was a key theme at Texcare 2016. Tony Vince examines some of the latest generation of drycleaning machines*

New technologies now provide the professional textile care industry with a broad range of drycleaning machines and cutting-edge solvents.

With the growth of alternatives to chlorinated solvents such as perchloroethylene, forward-looking industry professionals can now view the options, assess consumer trends for themselves and determine the best cleaning solution to meet the specific requirements of their business and its future development. Each cleaner can develop a strategy for their business and choose a system that specifically suits that strategy.

The recent introduced solvents are Ktex, Arcaclean, HIGlo, Intense and Sensene. These solvents are available besides established solvents like perc, hydrocarbon solvent (HCS), Solvon K4 and GreenEarth.

One of the major differences between perc and the alternative solvents is the flammability. Perc is a non-flammable solvent while the other solvents are flammable, requiring Class 111A equipment with safety precautions.

Perc has been around for many decades and is the most widely used solvent on the market, according to Dow.

One considerable contribution towards high-quality and cost-efficient textile cleaning with perc that is compliant with REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) is the development of "The New Standard". This was developed by Safechem Europe, a subsidiary of The Dow Chemical Company, for the sustainable future use of perc. This complete solution consists of specially developed products and services for textile cleaners and is supported by the leading machine manufacturers. The standard encompasses products like the Safe-Tainer system that applies a closed-loop solution based on Dowper Pure Power to manage product-specific risks.

Now, in addition to having perc in its portfolio, Dow has developed Sensene, in partnership with Safechem, which is based on modified alcohols. From the beginning, Safechem closely co-operated with iLSA Multimatic who contributed with its machine technology. Customer field trials confirmed the excellent cleaning results. With its special formulation the solvent is able to dissolve and remove both oil and water-based contaminations. Sensene therefore has a cleaning performance that not only matches the best values of established and alternative solvents, but even significantly outperforms them in some cases. This also applies to the stain dissolving power characteristic for the new solvent. Many substances can be removed easily by Sensene during the machine cleaning process, while other solvent cleaning technologies involve manual treatment using a pre- or post-spotting agent, requiring a great deal of effort and cost. "Initially I was very sceptical about whether modified alcohols would work in textile cleaning. But the results of the extensive cleaning trials have convinced me. The new formulation could be a breakthrough for modified alcohols in textile cleaning," explains Dr Manfred Huppertz, industry expert and former head of research and development at Büfa.

This also confirms a recent research by the French institute CTTN IREN, in which Sensene was compared with perc and hydrocarbon solvents. The study

published on 24 May, 2016, concluded that the textile cleaning process using Sensene shows an excellent cleaning performance. The cleaning results are rated as generally better in comparison with perc and hydrocarbon processes.

Despite the extraordinary cleaning power, the treatment of the textiles is gentle and protective. The solvent can therefore be used for a variety of fabrics and materials – even for delicate garments, while supporting the colour stability and colour brilliance of the fabric. Trials according to the EN ISO 105-A05 tests for colour fastness show a very good results. In addition, the cleaned clothing has a fresh, clean smell and a pleasant touch.

Also at Texcare 2016, Renzacci set up an Innovation Centre to promote its latest range of drycleaning machines designed to use new alternative solvents. Renzacci's Marco Niccolini believes there is a lot more choice out there in terms of solvents and many new formulae is being produced.

Multisolvent drycleaning machines in the Excellence 2.0 range have been developed with and without a distillation unit and are equipped with the Nature Care System to significantly reduces water and energy consumption.

These machines allow drycleaners to choose from a wide range of solvents, such as hydrocarbon, silicone, Solvon K4 and GreenEarth and new solvents such as Intense and Hi-Glo.

In addition, Renzacci's Nebula 2.0 is the first drycleaning machine to use the company's patented Combiclean system so that users can select from several different cleaning systems as the Nebula can be adapted to work with a wide range of solvents.

Union is another Italian manufacturer of commercial drycleaning machines that is fully prepared to invest heavily in research and development.

The company produces over 60 different drycleaning machine models, for use with perc and alternative solvents such as hydrocarbon and GreenEarth.

Visitors to Texcare International 2016 saw a range of innovative machines designed for easy use, improved performance and reduced running costs. All machines easily meet existing norms on emissions, guaranteeing almost zero solvent consumption.

Union presented its full range of XL-XP 8000 and L-P 800 machines designed for use with perc, available in 10, 12, 15, 18, 20, 25, 32, 40, 60 or 80kg capacities, as well as a complete range of accessories from automatic still cleaning to automatic solvent temperature control for better cleaning of delicate garments.

For alternative solvents to perc, Union demonstrated a full range of machines from 10 to 80kg load capacities, including its successful Nova series. The Nova Series is designed for Class IIIA solvents (hydrocarbon and GreenEarth).

Union also presented its HLM8000 drycleaning machines, with a new design soft-mount basket to achieve high extract speed extract without the need to bolt the machine on the floor.

Union also presented Cloud, a cleaning system that is suitable for cleaning all types of fabrics in a totally safe and ecological way. First shown at Expo Detergo 2014, the Cloud system is described as a true alternative to cleaning with solvents and wetcleaning with water. Cloud is completely eco-compatible, without any unpleasant odours, and without any toxic or combustible substances. It is also silent and easy to install and to use in total safety, without any disposable residues.

Garments are treated inside the drum in a controlled atmosphere environment, with low oxygen content thus avoiding oxidation, leaving colours brilliant. A low temperature steam cloud penetrates the garments in order to obtain the delicate, yet effective, treatment of colours, without compromising the fibres.

Cleaning cycles are short, between 30 and 45 minutes depending on the programme selected and the results required. At the end of the cycle the garments come out dry, ready to be hung up or ironed.

All Union models can be fitted with I-Connect, the company's latest remote controlling system using a PC or tablet, which allows access to the machine for technical monitoring.

This reduces in costs in locations where immediate on-site technical intervention is not possible.

Maestrelli also had an array of machines in a variety of sizes, engineered to take the new solvents from hydrocarbon to silicon alongside traditional perc machines ranging in size from 6kg to 80kg capacity industrial models. Like most manufacturers it has both perc machines and those for alternative solvents. Its DreamClean multi-solvent machine is available in 11– 45kg sizes with or without distillation. The range covers the "newer generation" of solvents and includes a dedicated K4 machine.

Maestrelli believes customers are looking for reliable and easy to use machines with a wide range of programs already set-up on the computer. Its Enjoy-Tech computer for example, is easy to operate, fully programmable and intuitive.

Energy efficient performance is important, a key factor in customer choice. Maestrelli's research and development is very much focused on that, in the development of ranges such as the its Energy line for perc and Dream Clean line for multi-solvent. Research aims to provide machines that have a shorter and shorter cleaning cycle, saving time, electricity/steam and solvent. Maestrelli's hard-mounted multi-solvent machines for example, are equipped with shock absorbers that allow for a higher speed extraction. Drying time becomes shorter by around 10/15 minutes (Dream Clean HS & RS lines). Its multi-solvent machines without distillation (Dream Clean H & R lines) can reduce consumption of water, electricity and solvent in comparison to any machines with distillation.

Italclean has re-designed its Drytec hydrocarbon machine which is available in hard or soft-mount styles and available with or without distillation. The company adds however that non-distillation machines are a growing trend and says its Drytec non-distillation machine is the most requested in Western Europe.

Alternative solvents are a trend throughout the market but companies often have specific talking point.

At Firbimatic in Italy, its F-Series Saver Editions multisolvent machines are notable for a design that allows the machine to work entirely without water, a particular advantage in certain areas of the world. It also uses a nebuliser cleaning system that enhances and speeds the process.

The company has also introduced innovation in another area, machine aesthetics. Its decorative machine wraps help shops to distinguish themselves from their competitors. Designs can be chosen from a standard range or the company can customise wraps.

Alex Arrighi, international sales & marketing director for Bøwe views the the global market as definitely looking better. There is consolidation in some countries like Belgium, Turkey, China and the Emirates, while the company has been successful in supplying its new cost-effective iLine range of machines to countries like Brazil, Macao and China. In his opinion, modern drycleaning is moving to a combination of multisolvent and wet wash systems that complement each other and offer the all-in-one solutions required today. While new solvents offer a much wider possibility compared with five years ago, many plants and traditional cleaners globally and in Europe still opt for perc unless they have specific local restriction or specific applications. France and the US are now a 100% multisolvent market for new machines and that means that within the next 18 months many existing perc machines been replaced. Bøwe

North America expects sales to increase for its Premium Line Multisolvant machines and maybe also the cost-effective machines should the market require them too.

Many customers purchase a Böwe Premium Line machines because the machine can be switched from running on perc and converted to multisolvant use by retrofitting the company's MultiKit. If already operating on multisolvant, the machine can be switched to different systems the market offers without having to replace the machine.

Control in drycleaning is important. Böwe has upgraded its PLC controls and introduced touch screen controls with iconic symbols and features that will be familiar to older customers. The company has worked with Siemens engineers and can offer HMI control on its Premium Line machines. This allows remote access from tablets and I pads as well as a renewed multi-language platform and multi-maintenance programs selection.



*DRYCLEANING:  
Innovation is providing  
greater options*



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