



Case-study Istanbul – combined cooling system for UV drying. The water cooling for machine 1 (left) is linked to the fountain solution and ink temperature control, whilst the water cooling for machine 2 (right) is achieved via an outdoor cooler, air cooling through a central cross-flow heat exchanger.

Practical Example for Large and Small UV Systems

The examples (in which, upon requests of the companies, the respective names have been changed) demonstrate the frequently complex problems of working out cooling systems.

The Brillante printing shop in Buenos Aires invested in a medium-format sheet-fed offset press with six printing units, which is equipped with four UV intermediate dryers and three UV end-of-press dryers, enabling a range of printing products. As an entrepreneur, Señor Carlos Brillante does not think about single budgets, but rather considers overall costs. Therefore, he wonders which cooling system would be the most cost-effective solution for his printing shop overall.

Together with Grafix, an optimal cooling system was designed, based on an outdoor cooler for the water cooling of the UV system and re-cooling the cylinder's cold air blowers, in addition to an air-air-plate heat exchanger for the outgoing UV air.

The external cooling system not only convinced Carlos Brillante in light of the short additional costs amortisation period of twelve months, which, as a result of increased energy costs, were reduced to just eleven months, but also the resulting reduction in air movement and noise in the printing hall.

This solution also saved him the task of having to upgrade the existing printing hall air conditioning system.

The Glossy Group supplied its franchise partner in Istanbul with a 72-inch sheet-fed offset press with small UV facilities (two end-of-press dryers), in order to deal with the increasing demand for high-quality printing results from the copy sector. Grafix was asked to deal with the UV equipment. Despite all the advantages, the external cooling system did not prove to be optimal in this case, due to the required amortisation period of three years, but the UV cooling was able to be linked to the Grafix Con-

temp fountain solution and ink temperature control unit, which led to a significant reduction in costs.

Business is going well for the franchise partner in Istanbul, and Glossy Group has now set up a second press in a small side room. The first press' chiller unit has still sufficient capacity to meet the requirements of the second press' ink temperature control, for the water cooling of the second UV device an outdoor cooler is in planning. This is because the limited size of the printing hall would mean that a standard water-air-heat exchanger cooling system would lead to excessive air circulation and noise production.

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Grafix Cooling Technology

Grafix has been thinking about energy-efficient system technology long before the oil prices reached a record high. As an integral system provider, the company strives to go further, even where other companies prefer to stay back. For instance, in the background of the printing hall, there where the complete drying system and its cooling devices are interlinked with the building technology.

Accordingly, development tasks not only include product technology, but also the further development of the whole cooling process – concerning both energetic and economic aspects. Through the entrepreneurial integration of Contemp ink temperature control and fountain solution systems, coherent and comprehensive cooling solutions are now on offer from the same source. In light of the versatile range of influential parameters in cooling technology, close cooperations with printing press manufacturers ensure individual solutions. Energy costs have an ever-increasing influence on system planning. As a result, Grafix is dedicated to constantly challenging modern technology.