NWD™ Profiling System

Narrow Web Decurler

Applications
The NWD profiling system controls machine direction and cross machine direction curl and moisture. Achieve consistent predictable curl results and moisture control in paper-based applications without web contact.

Features
- Coanda flow technology using low-pressure steam
- Counter flow steam applied to the web
- Removal of insulating air boundary layer
- Heated jacket - no dripping and instant-on capability
- Precise flow control and cross machine profile

Benefits
- Controllable and repeatable results
- Permanent reset of paper curl
- Reduced scrap and increased production

Predictable results
Curl has long been one of the major problems facing narrow web printers due to the extensive drying involved in this process. This results in increased scrap and poor runnability.

The NWD profiling system selectively and precisely controls the amount of steam across the width of the web, providing both cross-machine direction and machine-direction curl control. At the heart of the system is the Coanda nozzle that applies steam counter and parallel to the web in the gap created between the web and the NWD profiling system. The Coanda method of applying steam maximizes the uniformity and efficiency of heat transfer by increasing the time of steam engagement and minimizing the insulating layer of entrained air travelling with the web.

When steam is applied to a sheet, it condenses, imparting both heat and moisture to the web. This combination of heat and moisture softens and relaxes the fibers in addition to loosening the fiber bonds. Subsequent growing of the fibers and evaporation resets the curl memory state of the restrained sheet.