

# MAHLO PAPERCONTROL

MD basis weight and moisture control unit for paper and board machines with Fourdrinier wires

**Independant control unit with MAHLO 15" TFT touchscreen IPC and SIEMENS S7 PLC, providing outputs for basis weight and moisture control in paper and board machines.**



A standard feature of every QCS for the paper industry is the ability to effectively monitor and control the MD (Machine Direction) profile of the paper basis weight and moisture.

The high impact of such a control on both the paper quality and

the machine efficiency is the main reasons why using a QCS systems can be seen as the industry standard for modern paper and board machines, also with respect to the high production cost for paper in a very competitive market environment today.

MAHLO's PaperControl unit was designed with the goal to provide a both powerful and reliable solution for this task, providing excellent control results in combination with high operation safety.

The unit is operated from a standard MAHLO Industrial PC with a

15" TFT touchscreen monitor, following the MAHLO philosophy to provide its customers with high quality control and automation equipment, which is very easy to use.



All control parameters are fully accessible for the customer, but password protected to avoid control malfunction caused by user interference.

The unit is typically shipped in a self contained cabinet for either desktop placement or wall mounting, but special versions

are available on customer request. For very hot environments a climatization unit for the cabinet is available, and the same applies to the TFT touchscreen.

Measurement

Control

Automation

# MAHLO PAPERCONTROL

## Technical Details

A **SIEMENS S7-300™ PLC** will provide suitable output signals to control both paper moisture and basis weight, according to the deviations of the actual measurement data from the target value as defined in the product recipe. This information is provided to the control unit by the **MAHLO QMS10 A** and transmitted by a safe, self monitoring **Profibus DP™** interface link.

The moisture control output will typically be a 4 - 20 mA analog output into standard automatic steam valves, adjusting the amount of steam into the groups of drying cylinders.

Up to six steam valves can be controlled, two of them automatic (pre- and postdryer) and four of them manually.

For basis weight control, the unit offers an advanced type of control technology, allowing to compensate any effects of consistency fluctuations caused by the stock preparation, before they can affect the paper basis weight.

This type of **cascaded control loop**, requiring a reliable and stable consistency and flow mea-

surement (typically provided by BTG™), is more commonly known in the paper industry as **feedforward basis weight control**.

By using an independent PLC, operated over a standard MAHLO IPC with 15" TFT touchscreen monitor, the full functionality of the manual control is available even if the QCS should be offline for maintenance reasons.

