

# FormingSens

## Water weight measurement in the former



### **Measuring the water weight**

Water weight and corresponding dry content at the end of the forming section are important parameters for optimum former operation. These values are usually recorded sporadically using handheld devices. However, as different parameters influencing the process in the former – such as the settings of the vacuum elements or the condition of forming fabrics – change permanently, the water weight should be measured continuously. This is why Voith Paper has developed a sensor that measures the water weight continuously using microwave technology with a highest level of accuracy.

### **More efficiency and reliability**

With the real-time measurement of the water weight, an optimum water weight can be defined to ensure sustainable process improvements. For example, couching of single layers in multi-ply machines is improved by defining a set point for the water weight. This enhances runnability.

The measurement values provided by the sensor allow optimum dewatering performance over the entire service life of the forming fabrics, as the vacuum systems can be systematically adapted. This saves energy.

Due to completely harmless microwave technology, there is no need for radioactive sources as used in many handheld measuring devices. Contrary to those handheld devices, on-line measurement does not expose the operator to any risks. This enhances work safety.

### Product features

FormingSens can be used for almost all grammages and former types. The mounting position within the former is arbitrary according to requirements, as long as the expected water weight does not exceed the measurement ranges. The contact surface of FormingSens comprises smooth, low-abrasion ceramic material. Long-term tests in the field have shown that the sensor does not cause any wire wear or leave marks on the paper. A combination of up to five sensors within one measurement system enables the simultaneous and coordinated optimization of single layers in multi-play machines.

### Perfect fit for optimum dewatering

In the past, the combination of FormingSens and H- and I-series forming fabrics has shown very good results regarding dewatering efficiency.

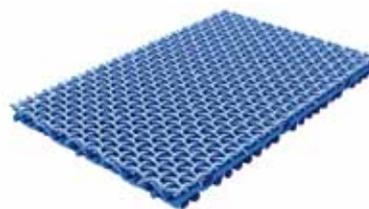
### Forming Fabrics H- and I-Series

Runnability and paper quality are highly influenced by efficient dewatering in the forming section. Dewatering plays a key role in the formation, drive load, dry content and paper strength in addition to many other quality parameters. The H- and I-Series SSB forming fabrics contribute significantly to dewatering efficiency with their balanced weave and design. The fine paper side and relatively coarse wear side is ideal for paper-makers who desire improved quality and extended life potential as well as directional stability. The combination of high open area and an excellent fiber support allow for a wider range of operating possibilities for the H- and I- Series forming fabrics.

### Technical specifications

Measuring principle	Microwave resonator, basis frequency 2GHz
Material of resonator	Al <sub>2</sub> O <sub>3</sub> , roughness Ra < 0.5 µm; Rz < 2.5 µm
Measuring range	100 to 10,000 g/m <sup>2</sup>
Reproducibility	± 0.1 % of measured value
Ambient temperature	20° C to 80° C
Protection class	IP67
Measuring head diameter	50 mm

### PrintForm HCW H-Series



### PrintForm ISW I-Series



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### Further Information



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