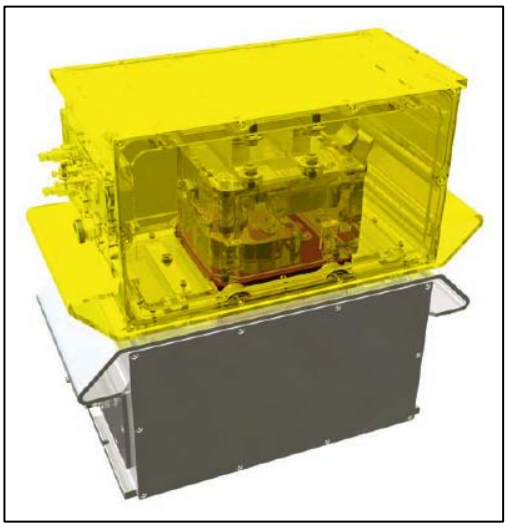
Mahlo introduces the revolutionary DFI Beta Sensor as part of their new QMS-12 Web Gauging System Platform.

Beta gauges have stayed pretty much the same since their introduction 60 years ago. Until now. The Mahlo DFI (**D**ynamic **F**lutter **I**ndependent) Beta Sensor uses a revolutionary new sensing technique that allows:

- Complete insensitivity to web flutter throughout the entire measurement gap,
- The smallest beta sources and the highest measurement performance,
- Very fast scanning speeds with ultra-narrow web defect detection,
- Long-term trouble free, cost effective operation in even the harshest environments.



Virtually all web processes have problems with maintaining consistent flatness. Cast, extruded and calendered film and sheet exhibit ripples and flutter due to line tension changes, static electricity or in-line vibration. Paper and coating converters must deal with baggy substrates, edge curl and distances of unsupported web. Nonwovens and textile manufacturers see variations in the loft, density and thickness of their webs which result in center of mass changes.

All of these conditions result in measurement errors with traditional transmission sensors like x-ray or beta gauges. Backscatter sensors like gamma or x-ray are even more sensitive to web movement and some are even required to contact the web!

The new Mahlo patented DFI Beta Sensor is not affected by web flutter, passline change, ripples, sag or edge curl. The DFI measures accurately throughout changes in loft, density or thickness.

How do we do it?

Older beta gauge designs must use heavy absorbers on their beta detectors to reduce the effects of web position change in the measurement gap. This wastes a large percentage of the measurement signal and still allows only a relatively small tolerance to web flutter. In order to compensate for the significant loss of measurement signal, large radiation sources are used which add significant cost, shielding and potential hazards to the line operators. We have seen Kr85 sources offered as high as 1,250 and even 1,500mCi!!

The Mahlo DFI uses a multiple detector technique that captures the full measurement signal regardless of where the web is within the gap. The resulting measurement is determined only by the basis weight, not by the position of the web in the measurement gap. This solution is quite simple and industrially rugged, but it is completely effective. So effective in fact, that Mahlo has been awarded international patents for the DFI.

No heavy absorbers or highly radioactive sources are necessary. Mahlo supplies its Kr85 DFI with only 260mCi or smaller sources, yet the accuracy, speed and resolution of the Mahlo DFI are the best yet offered.

An additional advantage of the Mahlo DFI is that measurement gaps can now be substantially increased without worrying about additional web movement. Soft, easily damaged webs, or wet coatings no longer need to run the risk of contacting the sensor due to a narrow gap. The Kr85 DFI can use measurement gaps of 2 inches and more while measuring even light weight webs!

The Mahlo DFI Beta Sensor is only one of the many innovations within the new QMS-12 system of sensors, scanners and display, control and reporting packages. For all of your measurement needs: basis weight, thickness, moisture, coat weight ~ either isotope-based or a full suite of non-nuclear techniques, please contact Mahlo America at (864) 576-6288 to experience the 21st century of safe, affordable Web Gauging solutions.
http://www.mahloamerica.com