



# TOTAL LEVEL NEWS



The Direction In Level Detection

January 2008

Winter Edition 2

## LM2D

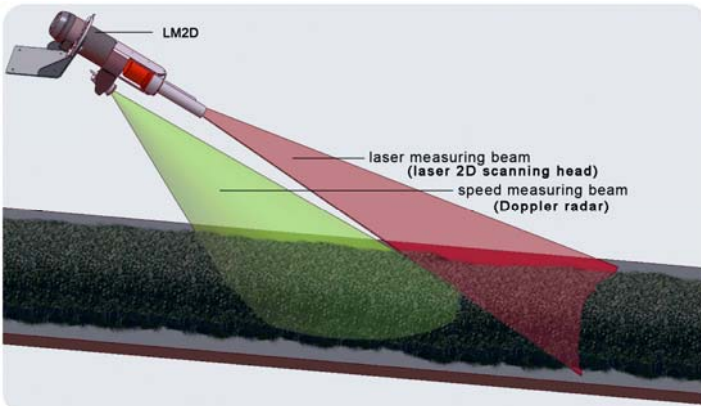
### Conveyor Belt Scanner

- Non-contact Belt Scales Replacement Alternative
- Non-contact Conveyor Volume and Speed Measurement
- Quick and Simple Installation During Conveyor Operation



The Conveyor Belt Scanner measures the volume of material flowing along a conveyor belt. It uses non-contact laser and radar technology to map the profile of the material lying on the belt while simultaneously monitoring the belt speed.

The product of the cross-sectional area of the material and belt speed gives the material flow rate in units of cubic meters or cubic feet per minute. This is output on a 4-20mA channel.



## LM3D

### Volumetric Measurements Silos and Stock Piles

- Three Dimensional Scanner Profile
- Non-contact Volumetric Three Dimensional Measurement of Dry Materials in Silos and Stock Piles
- Quick and Easy Inventory Control



The 3D Volumetric Scanner measures the volume of material in a silo or on a stock pile. It uses non-contact laser technology with rotating laser scanner head to map the surface profile of the material. The dimensions of silos, bunkers and walled vessels are stored inside the Scanner so that an accurate comparison can be made between the measured volume and the empty container. The difference between the measured volume and the empty volume gives the material volume in cubic meters or cubic feet.

In the case of a stock pile a "virtual boundary wall" is created that represents the furthest extent of the material. A volumetric measurement or "scan" is initiated using an External Trigger input or after a preset Volume update time. During the scanning cycle the Scanner Busy relay is activated. The result of a scan is output on 4-20mA Channel #2. The Scanner can also produce a continuous level output. This is called the Single Point measurement. This level is updated at a rate determined by the Single Point update time and the result is output on 4-20mA Channel #1. Other 4-20mA channels are available for customized outputs such as the Highest point on the scanned surface that is output on Channel#3 and mass output on channel #4.

## In This Issue...

- LM2D and LM3D Laser Scanners
- LM2D Success at Largest Fertilizer Producer in Russia
- Find a Local Representative

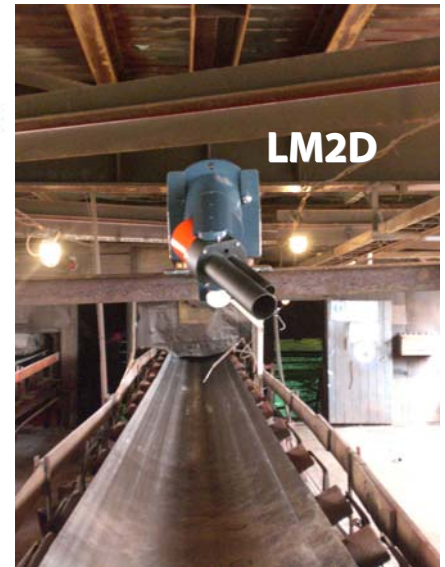
**MORE DETAILS [CLICK HERE](#)**

## LM2D SUCCESS AT LARGEST FERTILIZER PRODUCER IN RUSSIA



**A** large fertilizer producer in Russia had a problem with its inventory measurement system which was based on the use of conventional belt scales. The existing belt scales were considered “high maintenance” items. The relatively light potassium fertilizer (bulk density less than 60lbs/ft<sup>3</sup> / 0.96g/cm<sup>3</sup>) created another challenge. These conditions produced inaccurate final product inventory control and a high maintenance cost.

K-TEK provided a solution to this problem – the LM2D Laser based, non-contact conveyer belt scanner as an alternative replacement of the company’s conventional belt scales.



The **LM2D** was installed on the final product conveyer line. After the first few hours of operation, the **LM2D** Belt conveyer scanner showed volumetric and weight measurement accuracy of better than 0.5%. Due to its non-contact nature, the **LM2D** proved to be easy and quick to install, with no maintenance and no requirement for routine calibration. There was no need to stop the conveyer belt during **LM2D** installation and no special installation crew was needed to install the unit.

The company is the largest potassium fertilizer producer in Russia, with main export markets in China, India, Latin America, Europe and USA. Russian Federation controls 33% of the world reserve of potash (potassium or also known as potassium chloride). With Canada first (38% of global reserve), Russia is the biggest exporter in Europe of potash and a formidable player in the world fertilizer market.



### Find a Local K-TEK Representative

CLICK ON THE GLOBE

