

DSE4100VD — update your system with new software for density compensation

DSE41XX family of moisture measurement system for cranes, are basically measuring the amount of water molecules between the transmitter and receiver. This is calculated into a percentage of water based on a fixed dry density and transmitted to the crane.

With the new High Density bales coming into the market, some plants starts to see big variations in the received bale density, resulting in an uncertainty in the moisture readings.

DSE4100VD PC control software

With the new DSE4100VD software the system is able to take the density into account when calculating the moisture value, based on information from the crane about the weight, length and type of bales.

The DSE4100VD software uses predefined but configurable bale types eg. Hesston (120x120), Midi (90x120) and Compact (70x120) regarding the height and width. More bale types can be added.

To define the bale density, the crane must deliver information about:

- The average weight of the bales in the yoke
- The bale type
- The length of the bales. If this is not available from the crane, then a standard length can be defined for each bale type eg. 245 cm

Other new features are:

- Moisture values can be transmitted with one digit resolutions (configurable)
- Password protection of setups
- Windows 10 compliance

Measurement range @ Hesston bales / DM 120kg / M3

DSE4100 can measure moisture up to 30%. A hardware update for the DSE4100 sensors is available. This is the DSE4100ER with added 3% to the measurement range.

The new DSE4130 sensor can measure up to 35% moisture and DSE4140 up to 40%.

Increasing the bale density reduces the maximum measurement range *)

The reduction in the measurement range is as follows:

Dry density kg/M3	DSE4100 **)	DSE4100ER **)	DSE4130	DSE4140
120	30.0%	33.0%	35.0%	40.0%
130	28.1%	30.8%	32.7%	37.3%
140	26.4%	29.0%	30.7%	35.0%
150	25.0%	27.4%	29.0%	33.0%
160	23.8%	26.0%	27.5%	31.3%
170	22.6%	24.8%	26.2%	29.7%
180	21.7%	23.7%	25.0%	28.3%
190	20.8%	22.7%	23.9%	27.1%
200	20.0%	21.8%	23.0%	26.0%

*) The DSE41XX can only measure a certain amount of water molecules. When the density of the bales increases the range of measured moisture content will go down. See table.

***) Only available as update to existing DSE4100 or DSE4100ER systems.