

9 Steps for Calibration

STEP 1

To perform the calibration it is essential that the averaged Unscaled value is recorded as the material is passing the sensor. At the same time a sample of the material needs to be collected. Samples should be taken as close to the sensor as possible this will ensure that the sample collected is a true representation of the material the sensor was measuring.

STEP 2

To perform the calibration the Average Unscaled value can be obtained by either triggering the Average/Hold input by applying 24v to the digital input or manually selecting start averaging using Hydro-Com. The optimum installation is one where the digital input is wired into the control system. When the bin opens, the Averaging will start and when closed the averaging will stop, the value will be held until the averaging is started again. Averaging must be triggered by the main dose of material, any jogging of material should not activate the sensor digital input.

STEP 3

Once the material has started to flow consistently the averaging should start. Collect at least 10 sample increments from the flow to yield a bulk sample of at least 5kg of material in the container. The material MUST be collected at a position close to the sensor so that the sensor reading relates to the particular batch of material that has been collected.

STEP 4

Stop the material flow. Record the Average Unscaled value from the sensor.

STEP 5

Thoroughly mix the collected sample to create a homogenous mix. This sample should be sealed in an air tight bag and kept out of the sun until it is ready to be analysed. It is very important that the moisture in the sample is not allowed to escape.

STEP 6

Take 3x1kg samples of the material collected and perform a laboratory test on each. Ensure all moisture is removed. Some materials, such as Grain, will require grinding before drying, see the appropriate industrial standards for the material for more details.

STEP 7

All three samples should be completely dried and the results compared. Use the moisture calculator to calculate the moisture %. If the results differ by more than 0.3% moisture then the samples should be discarded and the calibration process repeated. This can indicate an error in the sampling process or the lab tests.

STEP 8

Use the average moisture of the three samples to correlate to the Average Unscaled value.

STEP 9

This process should be repeated for additional calibration points. Ideally calibration points should be collected that represent the full working moisture range of the material.