# Verification Proceedure for model SMUse SiloPatrol

The SMUse is a distance measuring device. When installed on top a silo the SMUse measures the distance that the plumb bob weight travel before it touches a solid surface. It is this distance-to-product measurement that is the basis for all other (i.e. vol, wt, etc..) calculations.

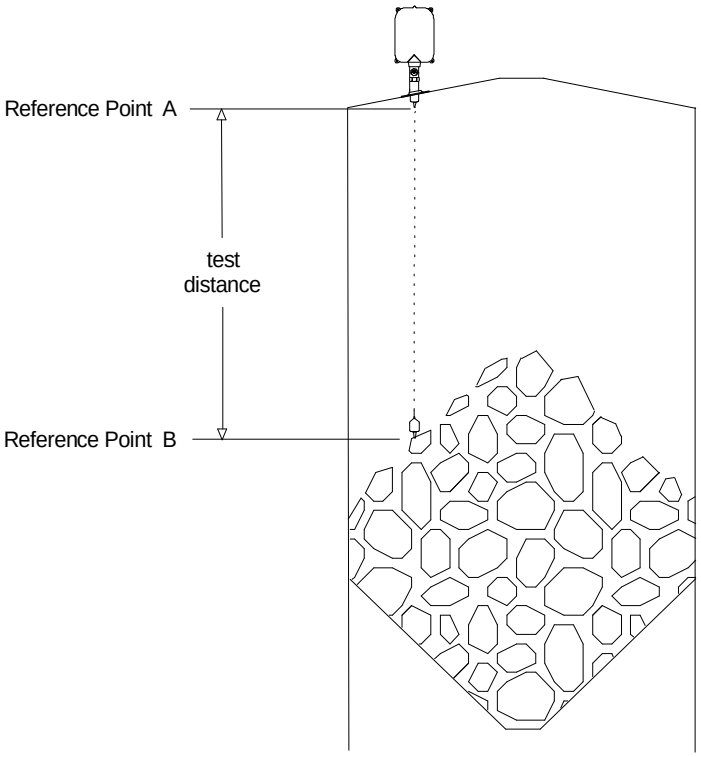
Verification can be accomplished by comparing two distance measurements. One, taken through the SiloPatrol system and the second taken manually. The manual measurement is made by dropping a measuring tape into the silo. The two measurements must be made while the material level remains undisturbed. Also care must be exercised to insure that the manual measurement reference point is identical to that of the SMUse SiloPatrol unit. If the SMUse is located close to an access hatch this exercise will be manageable. Otherwise it may be necessary to remove the SMU and conduct the test under more manageable conditions (e.g. test stand). At the factory an elevated testing platform is used.

SiloPatrol system distance measurements and the hand tape measurements should agree within 0.1 inch.

There are no user accessible adjustments inside the 'smart' RS-485 version of SMU SiloPatrol Unit which will affect calibration. If the SMU SiloPatrol is found not to be operating properly the fault will have to be identified and repaired.

**NOTE:**
It is important to remember that level, weight, and volume are calculated values. The SMU is simply a distance measuring device. When installed on top a storage vessel the SMU measures the distance from the plumb bob 'home' position to the spot on the material surface directly below. This distance measurement can be applied to vessel geometry and material bulk density to achieve weight and volume readings. Weight and volume values can be calculated by the HMI control console if the end user had entered vessel dimension and density information into the HMI program. The resulting calculation will only be as accurate as the information programmed into the HMI.

If it determined that the SMU is accurately conducting a distance-to-product measurement but weight and / or volume discrepancies are still experienced the vessel dimensions and material bulk density information data programmed into the HMI or SiloTrack should be reexamined.

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