

# Smart-Fill Calibration Procedure...

## Principles...

The Smart-Fill counts the number of pulses received while delivering fluid, and converts the number of pulses to a volume in Litres as each pulse is received. The method of adjusting the calibration is by adjusting a number which is simply known as a 'K factor'. Adjusting the K factor upwards makes the Smart-Fill read higher compared to the amount of fluid dispensed.

An access code is required to change the K factor, the access code is written as the "ID number" on the MENU key for the Smart-Fill, the number is different on all systems.

You can use a known size measuring container (known simply as a measure, and usually 15 or 200 Litres in size), or you can use the display on the meter or dispenser if fitted.

The calibration of the unit is a simple procedure. Depending on the number of pulses per litre, the calibration may be adjusted from 1 to 65000.

The measuring vessel size or amount delivered should be as large as possible. It is preferred to use a minimum 200 Litre measuring vessel for High Flow diesel dispensing pumps.

## If you have a known size measuring container...

1. Accurately fill the measuring container.
2. Look at the Smart-Fill display and note the Litres recorded.

## If you have a display on the dispenser/meter...

Before adjusting the Smart-Fill K factor by using the display on a dispenser or meter, the meter should be calibrated with a measure to ensure that it is delivering the amount actually shown.

1. Fill a container or vehicle fuel tank.
2. Record the Litres recorded on both the Smart-Fill and the dispenser.

The formula for calculating the new K factor is as follows:

$$\text{The new K factor} = \text{existing K factor} \times \frac{\text{amount delivered into measure or shown on the dispenser/meter display.}}{\text{amount shown on Smart-Fill display}}$$

example:      the existing K factor is 1000  
                  the measure size is 15.0 Litres  
                  the amount shown on the Smart-Fill display was 15.6 Litres  
                  new K factor =  $1000 \times 15.0 / 15.6$   
                  answer, new K factor is 961

## To view the existing K factor on a Smart-Fill system...

1. Touch the MENU key to sensors to start the menu system.
2. When "Settings" or "View settings" appears, press ENTER.
3. The display will scroll through the settings, record the K factor when it is shown.

## To change the K factor...

1. Touch the MENU key to sensors to start the menu system.
2. When "Cal" or "Calibrate" appears, press ENTER.
3. Enter the access code (ID number on MENU key tag), and press ENTER.
4. Enter the required K factor and press ENTER.
5. **For multiple pumps only.** Enter the pump number, then press ENTER.

## Repeat the process until measurement is consistently accurate.

**IMPORTANT** – As stated above, a large delivery of fluid creates a more accurate calibration. A small delivery of fluid can result in substantial accuracy errors. The recommended minimum amount is the amount delivered at full flow after 1 minute.