

## Core Correlation

1. Once the peaked location on the mat cools, cut a core from the mat and determine the in place density at the lab.
2. Compare the core result to the PQI 380 measurement at that location and calculate the difference.
3. If there is a difference, follow the steps above to adjust the correlation offset one last time.

**Now that the PQI 380 has been correlated to the core you should not need to change the offset for the rest of the job.**

## Other Helpful Hints

- Charge the PQI 380 after each use.
- Clean the sensor on the PQI 380 with WD-40 or citrus cleaner.
- Have a towel with the PQI 380 at all times to keep the sensor dry.



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**PQI 380+**  
Pavement Quality Indicator

**Non-Nuclear Asphalt  
Density Gauge  
Correlation Cheat Sheet**

## Correlating the PQI 380 to the Mix

Correlate the PQI 380 during the first hours of paving to the screed and then peak out the mat with a roller.

### Example:

Based on the MTD for the mix, estimate what the screed is providing as a percentage of compaction. A good rule of thumb is 88%.

### Use This Calculation:

$$\text{MTD} \times .88 = \text{Screed Density}$$

### Therefore:

$$158.6 \times 0.88 = \mathbf{139.6 \text{ lbs/ft}^3}$$

If you are working in international units

$$2540 \times 0.88 = \mathbf{2236 \text{ kg/m}^3}$$

Use the PQI 380 to measure five locations behind the screed before the break down roller, then write down the density value shown on the PQI 380 screen for each location.

### Let's Say:

124.0, 124.1, 124.5, 124.0, 124.2 lbs/ft<sup>3</sup>  
or 1987, 1988, 1995, 1987, 1990 kg/m<sup>3</sup>  
Compute the average of the five readings behind the screed.

### So That:

$$\text{Average} = \mathbf{124.1 \text{ lbs/ft}^3} \text{ or } \mathbf{1989 \text{ kg/m}^3}$$

Compute the difference between the estimated screed density and average PQI 380 reading behind the screed.

### Finally:

$$139.6 - 124.1 = \mathbf{15.5 \text{ lbs/ft}^3} \text{ or}$$

$$2236 - 1989 = \mathbf{247 \text{ kg/m}^3}$$

**15.5 lbs/ft<sup>3</sup>** is the correlation offset you need to enter into the PQI 380 to read **139.6 lbs/ft<sup>3</sup>**, or 88% behind the screed. If you are working in international units, your offset is 247 kg/m<sup>3</sup> that makes the PQI 380 read 2236 kg/m<sup>3</sup> or 88%.

### Enter the correlation offset into the PQI 380 (Refer to the PQI 380 Quick Start Guide)

Now take the "Screed Correlated PQI" and work with a roller to "Peak the mat".

## Peaking the Mat

1. Pick a location and measure the density with the PQI 380.
2. Use the roller and roll that part of the mat.
3. Measure again with the PQI 380 and note the increase in density.
4. Continue this process until the density on the PQI 380 does not go any higher.
5. This peak or maximum value is the density you need to achieve on your finished mat.