TransTech Systems, Inc.

PQI 380+

Pavement Quality Indicator

Quick Start Guide

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Table of Contents

Contents

Fold open compartment contents

Charger
AC Cord
DC Cord
Handle

Slot for PQI 380 and Standardization Plate

Case

PQI 380 Plus

DC Cord

AC Cord

Handle

Charger

Battery Charging & Care

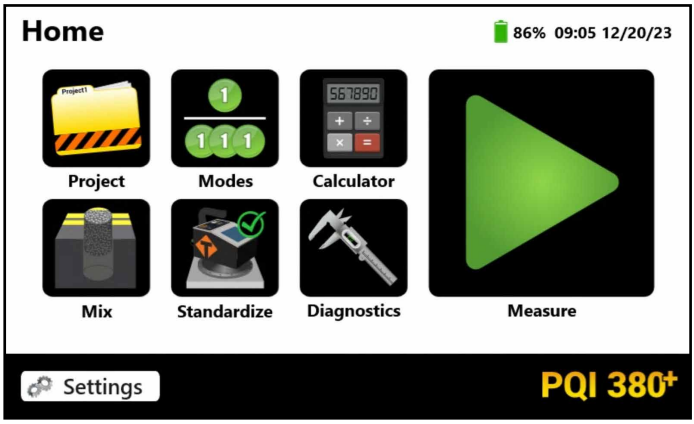
1. Turn the PQI 380+ unit OFF.
2. Connect the charger to the charger connector located on the back of the PQI 380+.
3. Plug the charger into a standard AC outlet.
4. The red indicator lamp will turn green to indicate that the batteries are charged. (approx. 4hrs)
5. Unplug the charger from the power source before disconnecting the charger from the PQI 380+.

Battery Care

- Whenever uncertain about the battery charge level or condition, recharge it
- The battery will self-discharge and should be recharged at least every 30 days
- An occasional complete discharge followed by a full recharge is recommended
- **NEVER** drop the battery as this can damage the internals
- **DO NOT** store in freezer or expose to extreme heat
- Battery should be fully charged before use

Starting the Software

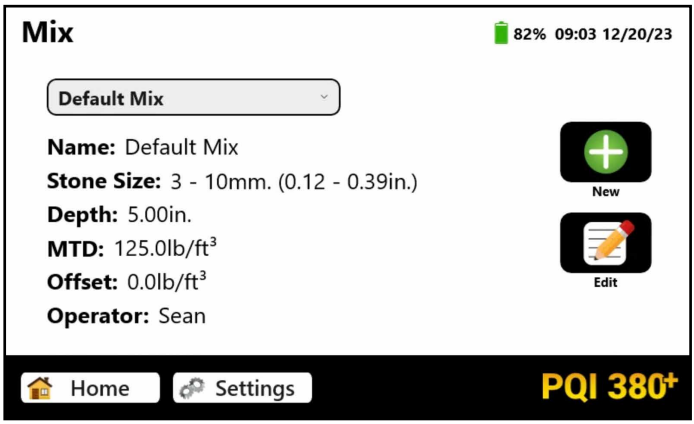
After powering on, the PQI 380+ initializes for a few minutes while displaying multiple splash screens. At the end of boot up the home screen is displayed.



Mix Details

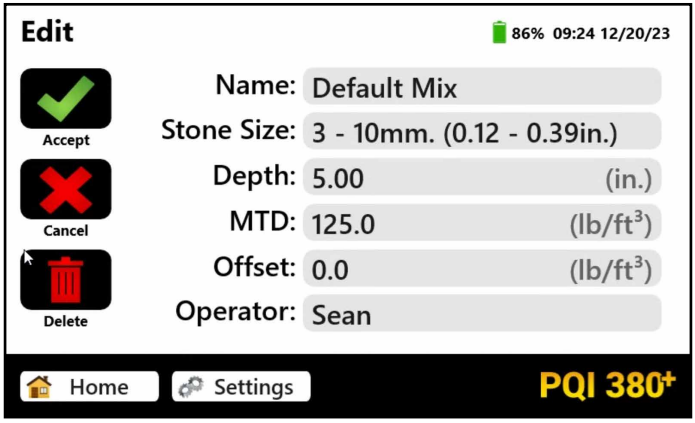
From the Home screen, tap **Mix**. The mix listed in the drop down menu on the left is displayed in detail directly below. To edit the details of this mix, tap **Edit**.

Note: Readings taken prior to accurately setting up the mix details will result in incorrect density and compaction results.



Edit Mix - Name

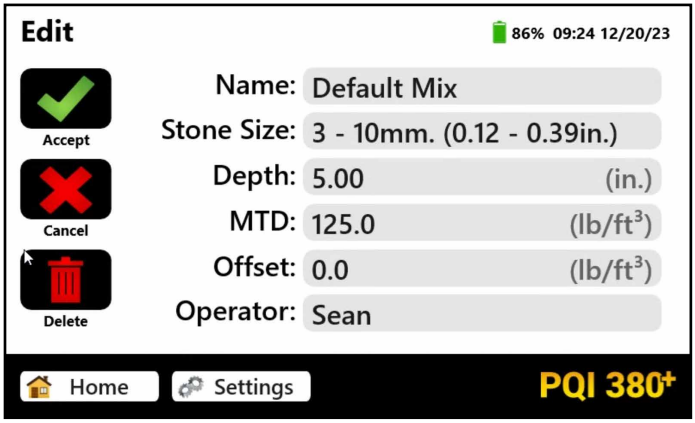
In the Edit Mix screen there are six fields labeled **Name, Stone Size, Depth, MTD, Offset** and **Operator**. By tapping one of these fields, you will enter the corresponding screen which will allow you to edit and save information for that mix value. For example tap the gray shaded **Name** field.



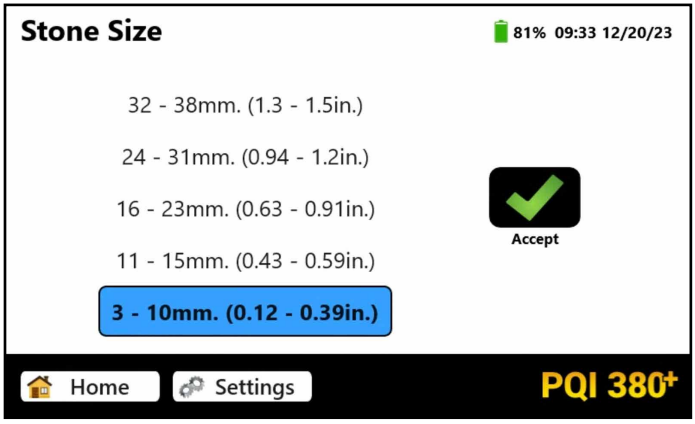
The keyboard will pop up allowing you to change the mix name. Tap the **"x"** on the right side of the field if you would like to start over with a new name. Tap the **Up Arrow** to toggle from lowercase to uppercase letters. Once editing has been completed, tap **Accept** to return to the Edit Mix screen.

Edit Mix - Stone Size

Tap the **Stone Size** field. There are five options of aggregate sizes listed in millimeters (inches). If, however, you do not see your specific stone size listed choose the closest stone size available.

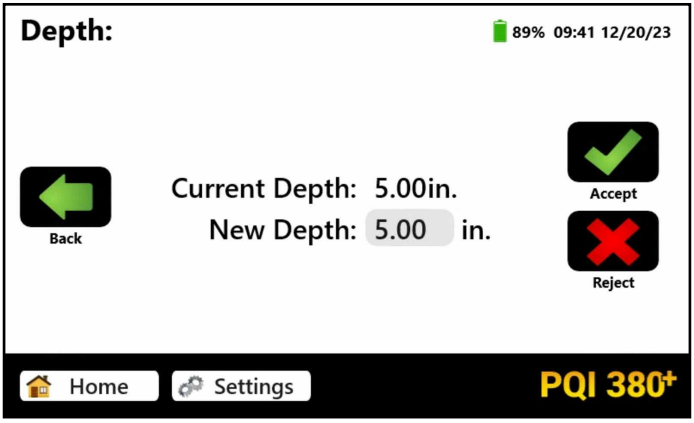


For example, if your mix has an aggregate size of 20mm (0.79in), select **16mm - 23mm (0.63 - 0.91in.)**. Tap **Accept** after you made your selection to return to the Edit Mix screen.

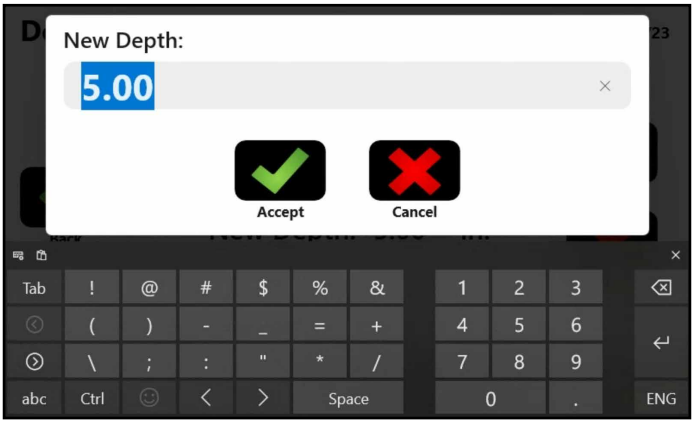


Edit Mix - Depth

Tap the **Depth** field from the Edit Mix screen to enter the Depth screen, then tap the **New Depth** field.



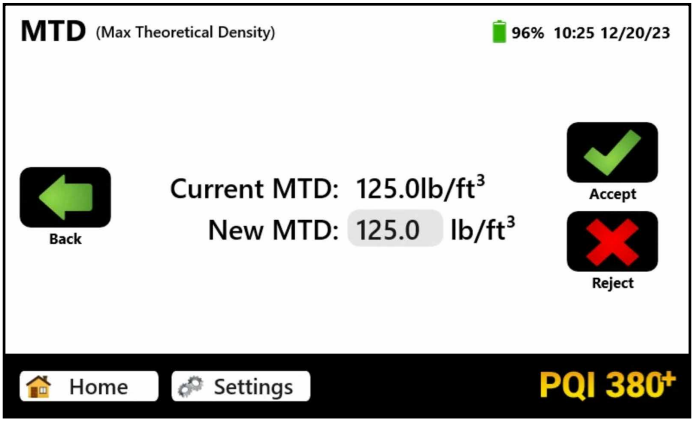
Enter the depth of the asphalt mat on the numeric keypad in the units you previously selected for the depth. Once the correct value has been entered, tap **Accept** to return to the Depth screen.



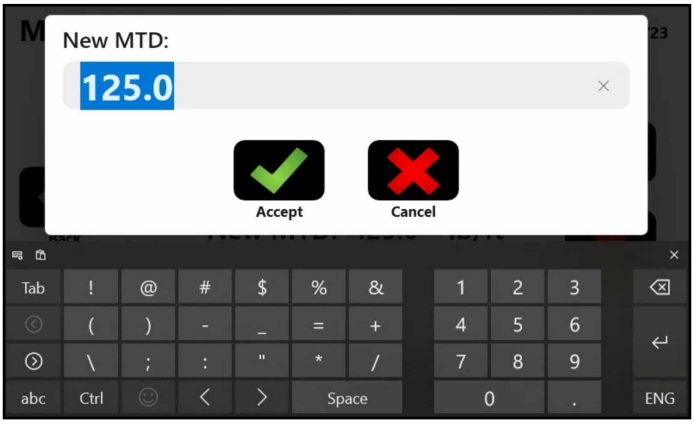
An out of range Warning will display for depths entered outside of the following range: 0.75in - 6.0in (19.05mm - 152.4mm)

Edit Mix - MTD (Max Theoretical Density)

Tap the **MTD** field from the Edit Mix screen to enter the MTD screen, then tap the **New MTD** field.



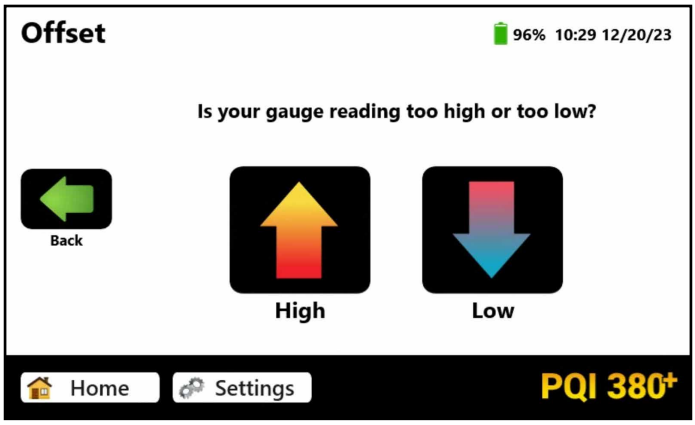
Enter the **Maximum Theoretical Density (MTD)** of the mix on the numeric keypad in the units you previously selected. The MTD is provided from the asphalt mix designer and is a key value in determining the percent compaction. Once the correct value has been entered, tap **Accept** to return to the MTD screen.



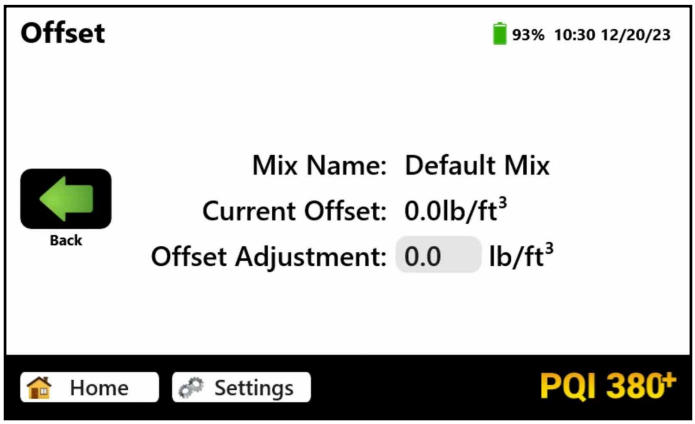
An out of range Warning will display for an MTD entered outside of the following range: 100lb/ft³ - 200lb/ft³ (1601.8kg/m³ - 3203.7kg/m³)

Edit Mix - Offset

The offset for the mix can be adjusted at a later time. **Measurements taken prior to adjusting the offset will not include the offset.**



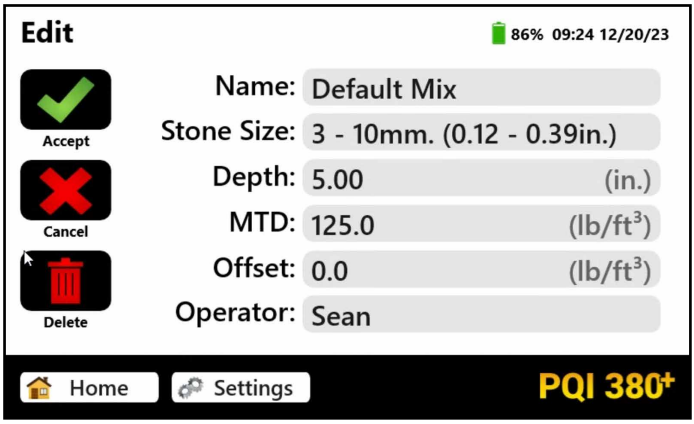
You will need to take a measurement to determine the offset. The offset feature will be revisited later in the **calculating the offset** section of this quick start guide.



Edit Mix - Operator

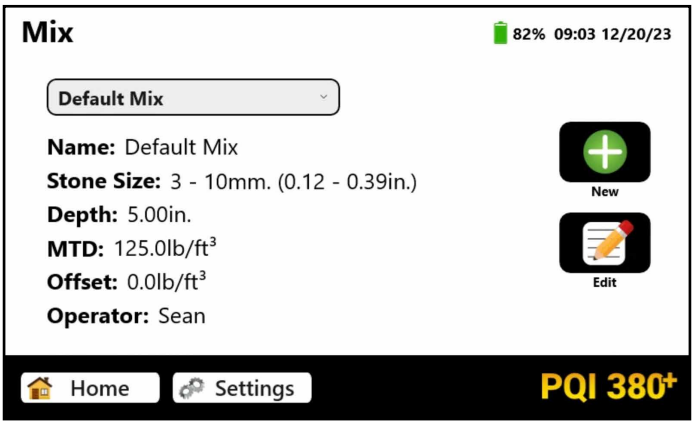
Tap the **Operator** field from the Edit Mix screen. The keyboard will pop up allowing you to change the operator's name. Enter your name as the operator of the gauge, then tap **Accept** to return to the Edit Mix screen.

Verify all of the mix information on this screen. Once you have verified the results of the mix and are satisfied with the values, tap **Accept** to save the mix.

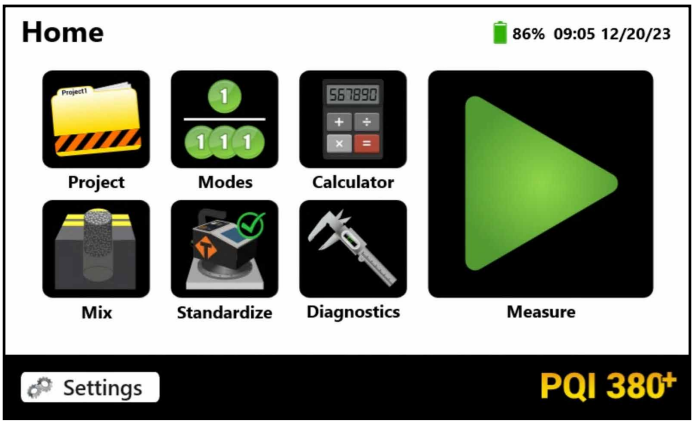


Edit Mix

After exiting the Edit Mix screen, the PQI 380+ will return to the Mix screen. Here you can tap the **New** button to create a new mix, tap the **Edit** button to edit the currently selected mix or use the drop down menu to select a previously created mix.



The mix shown is the **CURRENT MIX** that the gauge will use when taking readings. Prior to exiting this screen, be sure this is the mix you want and the information been verified. Tap **Home** on the task bar to return to the Home screen. If the gauge is shutdown, the current mix prior to shutdown will remain the current mix when started back up.



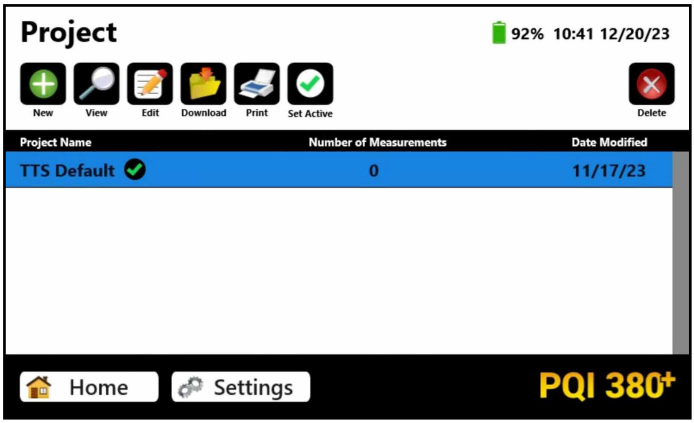
Project Details

The PQI 380+ is configured to store unlimited unique projects that are identified by user entered descriptions. You may revisit each project at any given time to continue taking readings.

Data from readings taken within each project will be saved in the order of which they were taken. The default project saved in a new PQI 380+ will have the name **TTS Default**. The blue highlighted project is the **CURRENT PROJECT**. Readings taken will save on a dat file using the **CURRENT PROJECT NAME**. If the gauge is shutdown, the current project prior to shutdown will remain the current project when the gauge is started back up.

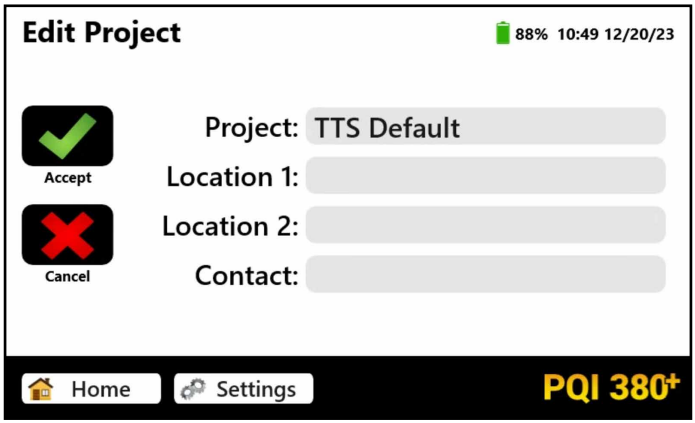
Editing Project Details

From the Home screen, tap **Project** to enter the Project screen. The blue highlighted project is currently selected and active. To edit the details of the selected project, tap **Edit**.

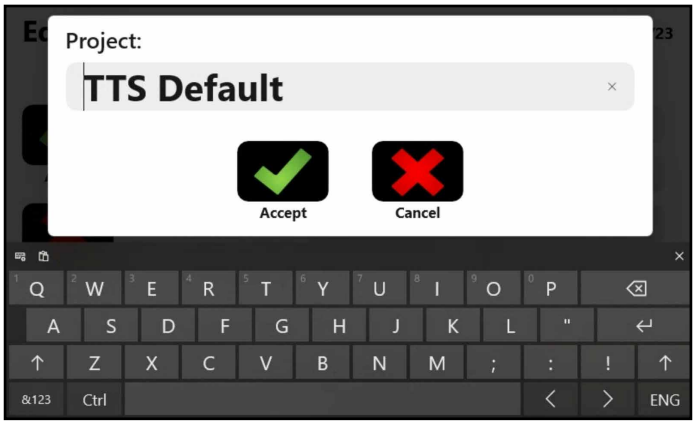


Editing Project Details

There are four fields labeled **Project, Location 1, Location 2,** and **Contact**. By tapping one of these labeled fields, the keyboard will pop up allowing you to edit and save information for that field.



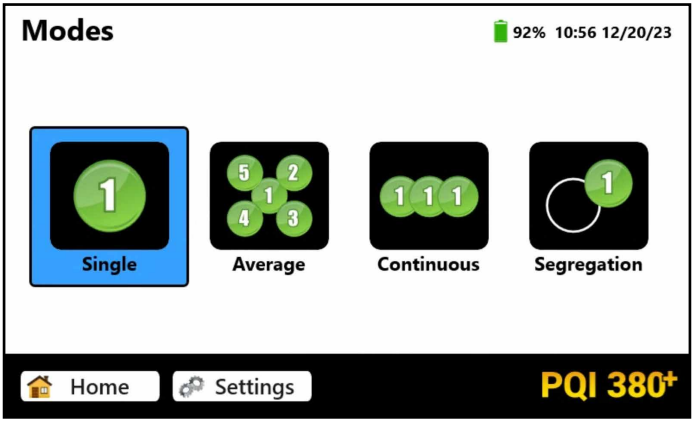
Tap the **Project** field, the keyboard will pop up allowing you to change the default name. Once editing has been completed, tap **Accept** to return to the Edit Project screen.



From the Edit Project screen tap **Accept** to save all project information and return to the Project screen. **Always take note of the project and mix names displayed on your reading mode screens.**

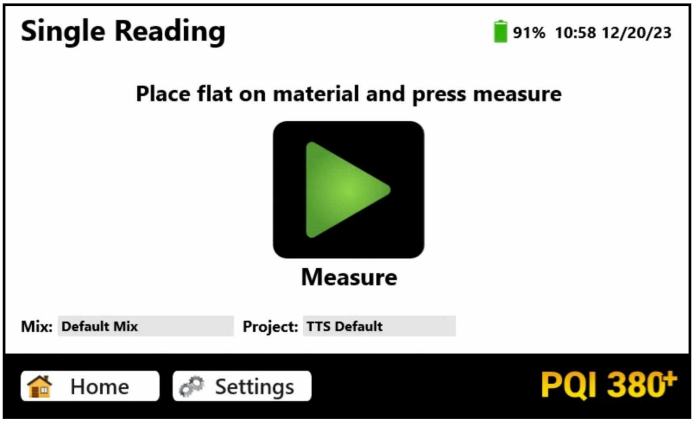
Reading Modes

The PQI 380+ has four reading modes - **Single, Average, Continuous** and **Segregation**. **Continuous and Segregation mode will not save data.** To select or change a reading mode from the Home screen, tap **Modes**. Tap the button of the mode you would like to use. The active mode button will appear highlighted in blue. For example, Single mode has been selected in the example below. Once your selection has been made, tap **Home** on the task bar to return to the Home screen.



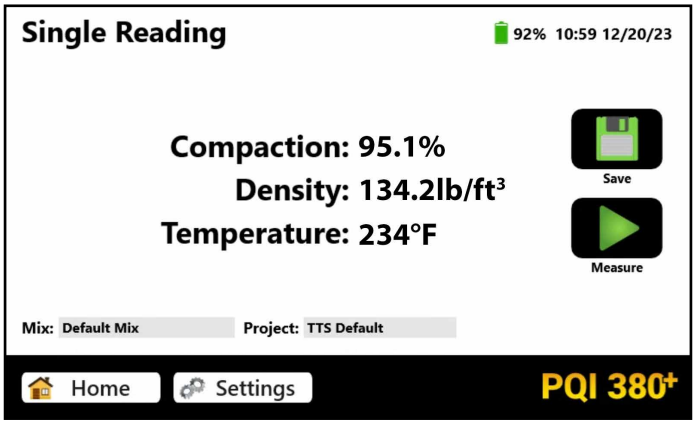
Reading Modes - Single

From the Home screen, tap **Measure**. The heading of the screen will display the active mode (Single, Average, Continuous, Segregation).

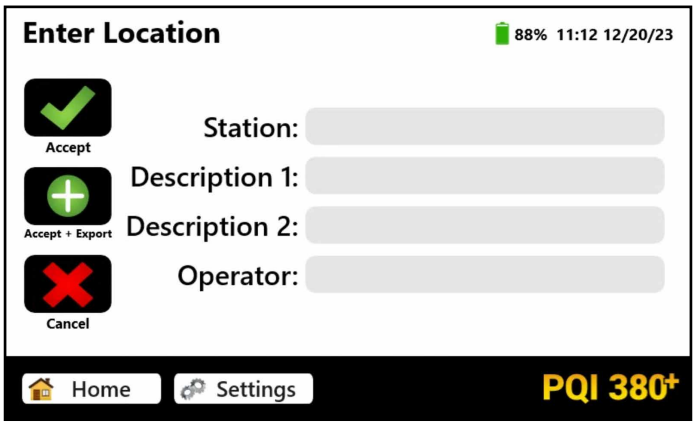


Reading Modes - Single

Tap **Measure,** the PQI 380+ will display the results.To save the result tap the **Save** button. To retake the measurement without saving **(previous measurement will be lost)** tap the **Measure** button.

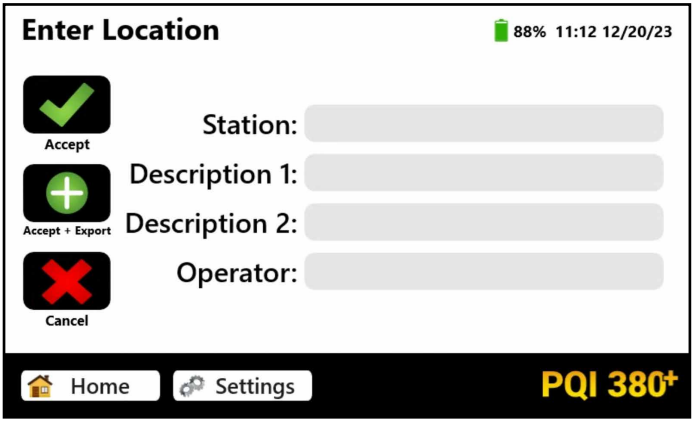


After tapping the **Save** button the Enter Location screen will display which will allow specific information to be stored for that reading. Tap **Accept** to immediately bypass this screen or when you have finished entering information for that reading.

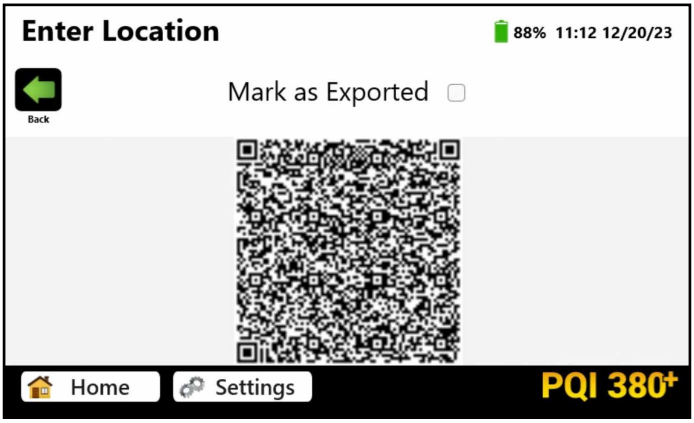


TransTech Connect

You also have the option to use our TransTech Connect feature and upload your data to the cloud using the TransTech Connect App available on Google Play and the Apple Store. Press the Accept + Export button and you will be presented with a QR code.



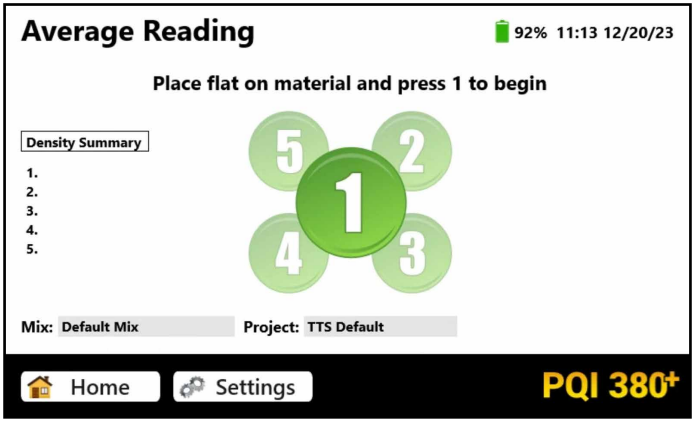
Scan the QR code from the TransTech Connect app and your density reading will immediately be uploaded to the cloud for your team to reveiew remotely.



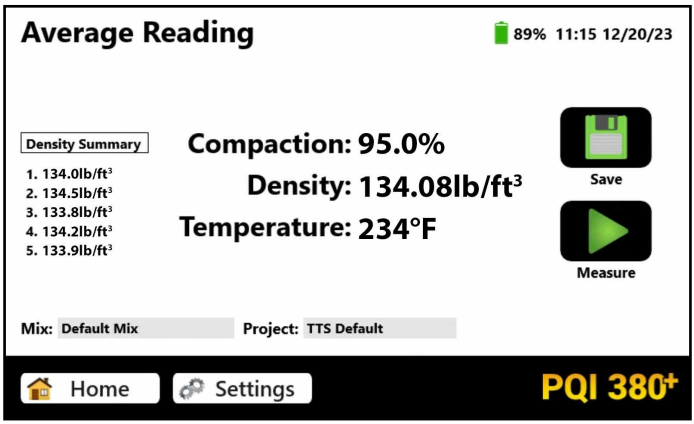
To learn more about this innovative new feature please visit **transtechconnect.com**

Reading Modes - Average

Five readings are taken in a clover leaf format. The gauge will highlight the reading number as well as the position of the gauge. Once the gauge is positioned on a flat surface, tap **1**. When reading one is complete, the density summary list will begin to populate and the gauge will prompt you to move to location 2. Move the gauge to position 2 and tap **2** to continue. Repeat these steps for the remaining three measurements.

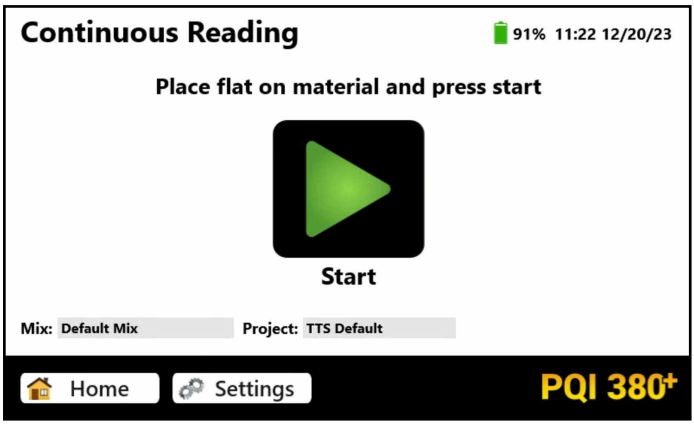


After the fifth reading the PQI 380+ will list the five individual readings under the density summary. An average of the compaction, density and temperature displayed in the center of the screen.

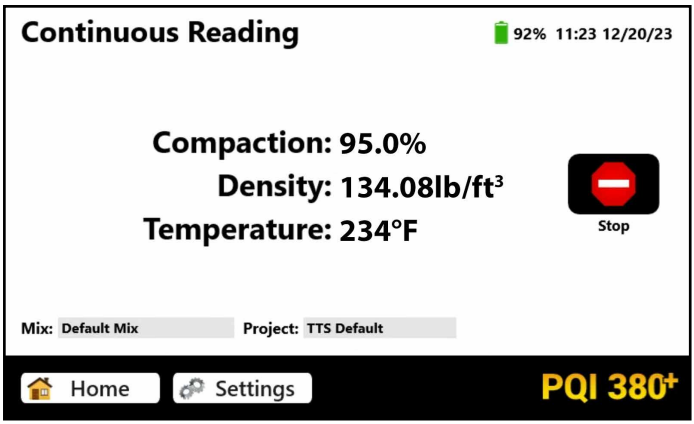


Reading Modes - Continuous

Data will NOT be saved for this mode. Tap **Measure** to begin.

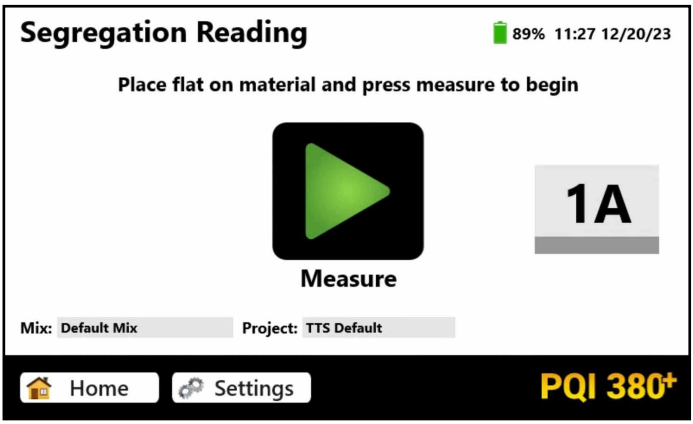


Once the measure button has been tapped, the continuous mode will continuously update the compaction, density and temperature until the **STOP** button is tapped.

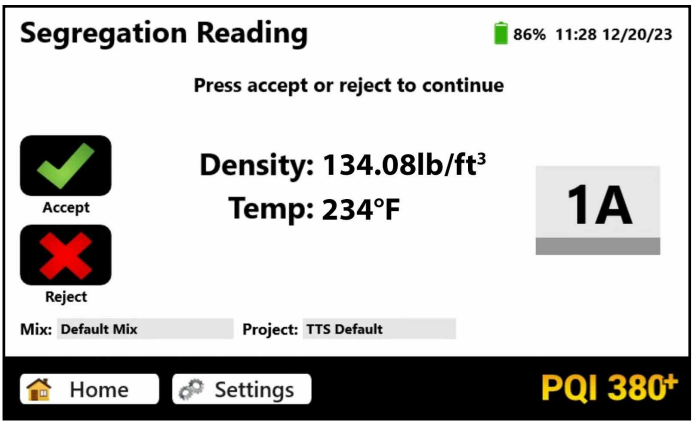


Reading Modes - Segregation

Data will NOT be saved for this mode. Tap **Measure** to begin. Two readings (A and B) are taken for each location. For every reading taken the option to **Accept** or **Reject** will be given.

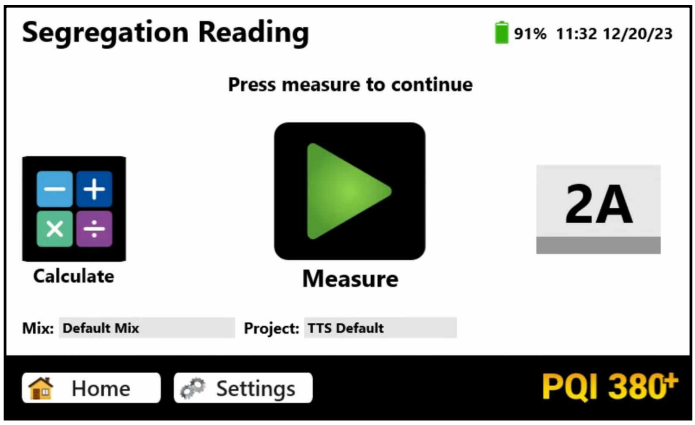


If satisfied with the first reading, tap **Accept** to continue.

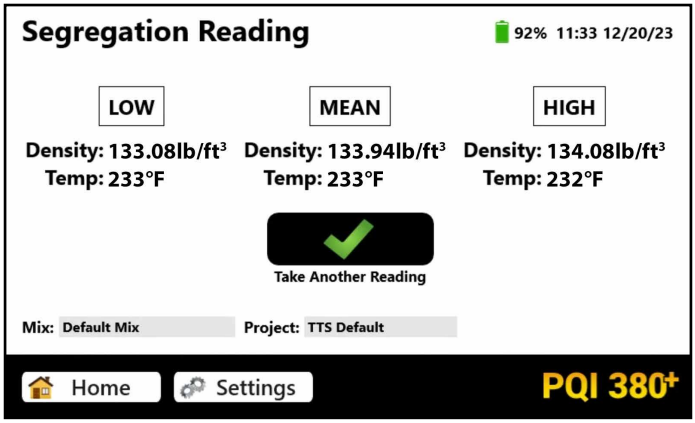


Reading Modes - Segregation

After the last pair of readings has been accepted, tap **Calculate**.



The gauge will display density and temperature for the lowest, highest and mean readings.



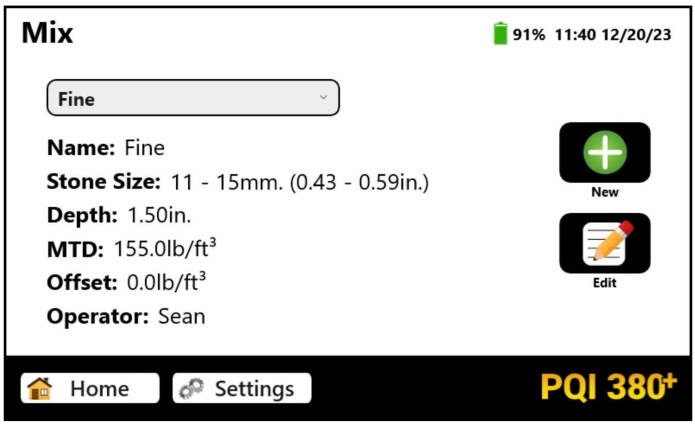
Calculating the Offset

Direct percent compaction of the test mat is achieved by obtaining physical samples (cores) from the locations previously tested. Calculate the difference between the average PQI 380+ readings and the core density values. This difference will be the Offset for that specific mix that will be stored in the gauge for that mix. Therefore, you will be adjusting the value of the PQI 380+ readings by that amount in order for the gauge to read the same as the core(s).

Once the numeric difference is calculated, determine whether the PQI 380+ is reading **too high** or **too low**. For example, if the PQI 380+ reads **155lb/ft³**, and you would like it to read **150lb/ft³**, the PQI 380+ is reading too high and **the adjusted value for the offset is 5**.

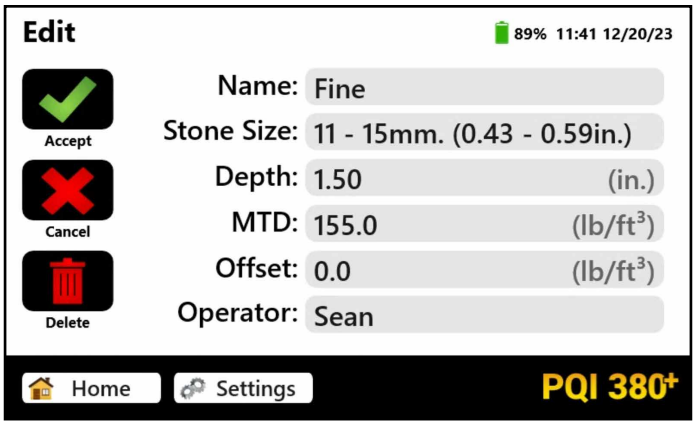
PQI 380+ Offset Setup

From the Home screen, tap **Mix**. **Be sure that the selected mix is the mix you wish to add the offset to.**

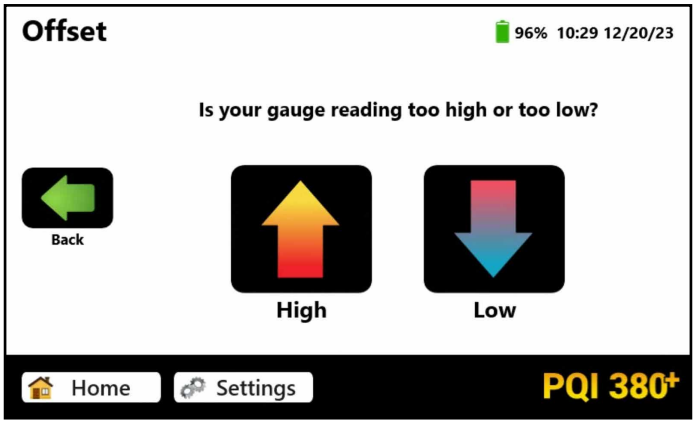


PQI 380+ Offset Setup

Tap **Edit**, then tap the gray shaded **Offset** field.

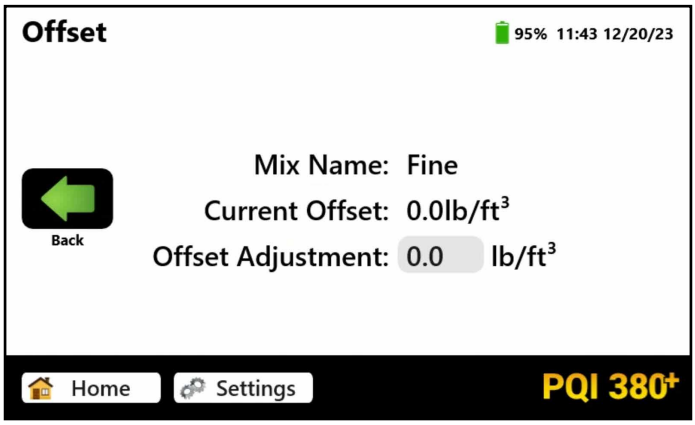


In the previous step we determined that the PQI 380+ is reading too high and the adjusted value for the offset is 5. Tap **HIGH** to continue.

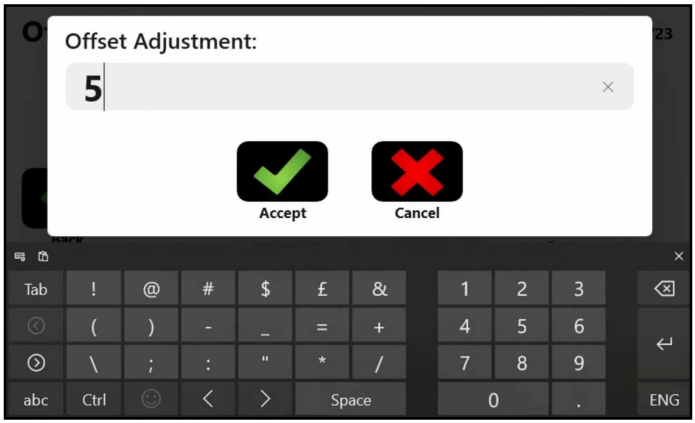


PQI 380+ Offset Setup

The offset adjustment will display the selected mix name and the current offset value.

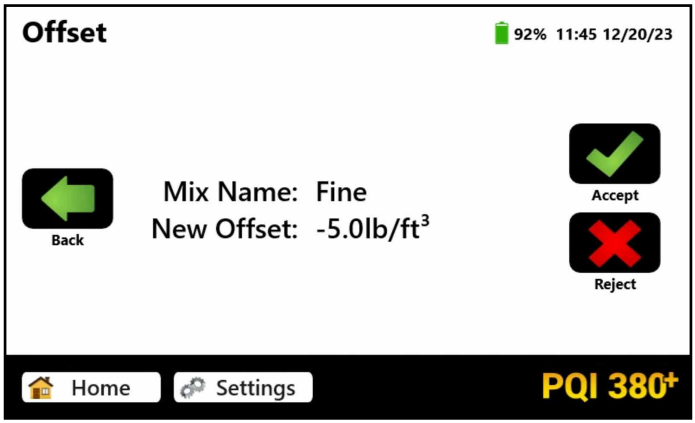


Tap the **Offset Adjustment** field, the keyboard will pop up. Enter the adjusted value for the offset which we previously determined would be 5, then tap **Accept**.

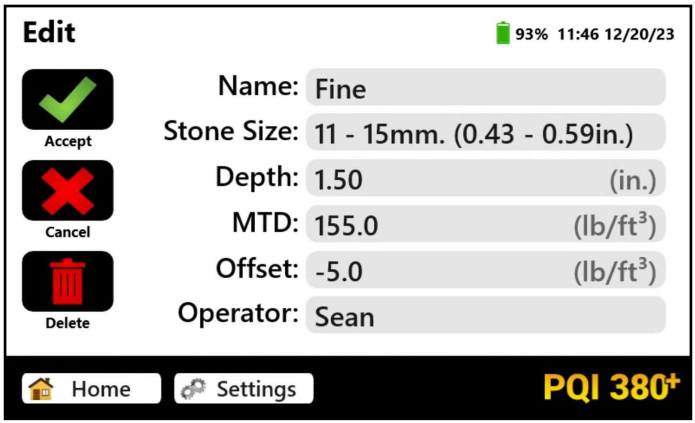


PQI 380+ Offset Setup

The adjusted value and new offset will be the same if the current offset was originally zero. If the current offset had been -1 and the adjusted value 5, then the new offset would be -6 for a PQI 380+ that was reading too high. Review your new offset then tap **Accept** to return to the Edit Mix screen.



In the Edit Mix screen, verify the updated offset information for that mix. Once satisfied, tap **Accept** again to save your results and return to the Mix screen, then tap **Home** on the task bar return to the Home screen.



The offset for each mix can be adjusted at any time. Readings taken prior to a specific adjustment will not reflect that adjustment. Data files will record each offset used to calculate density for each reading.

Replacement Parts

For a listing of replacement parts visit our website or contact your local distributor.

Warranty

Product Warranty

TransTech Systems, Inc. (the Company) warrants to the Purchaser that the product delivered hereunder will be free from defects in material or workmanship and be the kind and quality designated or specified in the contract or purchase order. This warranty shall apply only to defects appearing within one (1) year from the date of shipment by the Company.

If the product delivered hereunder does not meet the above warranty and if the Purchaser promptly notifies the Company, the Company shall thereupon correct any defect, including nonconformance with the specifications, either (at the Company's option) by repairing any defective or damaged parts of the product, replacing the product, or by making available the necessary repaired or replacement parts.

The liability of the Company under this warranty, for any loss, whether the claim is based on contract or negligence, shall not in any case exceed the cost of correcting defects in the product as herein provided, and upon the expiration of the warranty period, all such liability shall terminate. The foregoing shall constitute the exclusive remedy of the Purchaser and the exclusive liability of the Company. The foregoing warranty is exclusive and in lieu of all other warranties, whether written, oral, implied or statutory.

No warranty of merchantability or of fitness for purpose shall apply. Unauthorized service shall void this warranty.

Warranty

TransTech Systems Product Non-Warranty Return Policy

Non-warranty returns for TransTech Systems Inc. products must be made within ten (10) days from the original date of shipment, unless otherwise indicated. Returned products must be in the original packaging, unused and in undamaged condition. Proof of purchase is required. Upon receipt of the product TransTech will inspect the product to the above mentioned criteria.

Unused products will be issued a credit to the Purchaser's account that was used to purchase the product. TransTech will not credit prepaid shipping cost. The original packing slip or invoice is required to be sent back with the product to be returned.

The Purchaser is responsible for shipping the product back to TransTech Systems, carefully package the item(s) and include the packing slip and return manufacturing authorization number on the package. Prepay shipping is required – TransTech will not accept C.O.D.s.

Returns will be credited within 10 working days.

Proper Process of Warranty or Non-Warranty Shipments to TransTech Systems

For product returns (warranty or non-warranty), please follow the instructions below to assure prompt handling:

Contact TransTech Systems by phone, email or through our website to request a Repair Ticket and detailed return shipping procedures.

Indicate the reason for returning the product.

For Warranty Returns, Purchaser is responsible for shipping to TransTech's office. TransTech will pay ground shipping return to the Purchaser.

TransTech Systems, Inc.

900 Albany Shaker Road, Suite 2
Latham, NY 12110
Phone: 518-370-5558
Toll Free: 1-800-724-6306
Fax: 518-370-5538
Email: inquiries@transtechsys.com
Web: www.transtechsys.com

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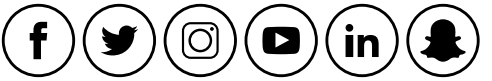

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