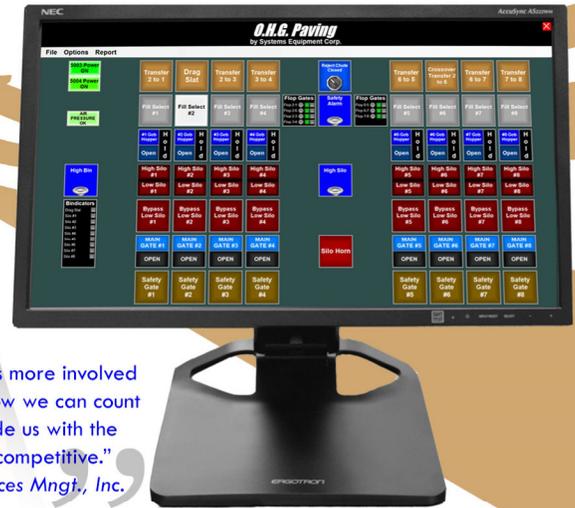




# TOTAL SYSTEM CONTROL

SYSTEMS' TSC is a Windows-based plant control program used to start, stop, and monitor motors used in plant operation, as well as to manually load from silos. TSC is designed for universal plant use, regardless of motors used and their functions.



"As making hot mix asphalt becomes more involved and complicated (and precise) I know we can count on SYSTEMS to adapt and provide us with the technologies we require to stay competitive."  
-Rick Moulton, Construction Resources Mngt., Inc.

## TSC | Motors Start/Stop Control

- Color, flat panel, resistive LCD touch screen in Windows® environment.
- 'Plain language' interlock programming.
- User programmable and easier than PLC ladder code.
- Easy to add/delete/modify/move any operator on the screen.
- Ammeters and zero speed shaft sensors are easily & cost effectively interfaced.
- Alternate action start/stop operators displayed on the screen as a labeled, colored square button. Buttons indicate motor status with different colors.
- A single button master start is included along with a recycle-system enable to allow one-button hot restarts of all process motors. A sequenced start allows the drum and other large motor loads to start before the other process motors are started.
- Operators available for: standard motor, forward/reversing motors, motors on soft starts, momentary contacts, 2-position maintains, 3-position switches, baghouse controls, solenoid & limit switches, 0-10V variable outputs, 1 to 3 indicators, 0-10V or mA inputs, and alarms with programmable logic.
- Distributed motor control switchgear can be located in a separate energy center, on the baghouse, at the silo system, and/or even at the feeders.
- The operating temperature for included I/O Device(s) is 32° to 131° F (0° to 55° C). Storage temperature is -4° to 158° F (-20° to 70° C).

## TSC | Silo Control

- Color, flat panel, resistive LCD touch screen in Windows® environment.
- Filling silo select logic can be programmed in plain English.
- Flop gate solenoids and limits can be wired direct. No more convoluted interlock wiring.
- Expandable from 1 to 12 silos.
- Low air indication.
- Momentary truck horn switch.
- Audible safety alarm typically connected to user's spout bindicator or slat amp alarm.
- Audible high silo alarm. Momentary alarm silence button.
- Manually set timer for control of each individual batcher's open/closed cycle. These timers have separately set open and closed intervals.
- Momentary batcher open button allows manual cycling of batcher independent of the batcher timer. Batcher open indicator light is typically connected to user's batcher gate actuated limit switch.
- High-, mid- and low-silo indicator lights. Interlocks to silo gate to prevent material from being drawn from a low silo without the deliberate use of the low silo bypass switch. A remote horn output is provided that is powered by activating the bypass switch.
- Momentary silo gate open operator. Silo gate actuation is interlocked to low air pressure sensor, low silo/bypass interlock, and safety gates.
- An additional switch and indicator light is provided for safety gates, a silo weigh hopper gate, or for On/Off control of heat if required by the installation.
- Slat and transfer motor amperage indication.
- The operating temperature for included I/O Device(s) is 32° to 131° F (0° to 55° C). Storage temperature is -4° to 158° F (-20° to 70° C).

## TSC | Enclosure

- Pre-assembled and wired enclosure(s) provided with terminal strips to isolate and protect the field I/O from transient voltages and provide easy wire termination.
- All outputs buffered with relays. Contacts are rated at 250 VAC @ 8A.
- All inputs buffered with MOVs rated at 200 V.
- All breakers and terminal strips mounted and wired.
- Termination points labeled with documented number scheme.
- Relays include NO and NC contacts for operation flexibility.
- 24 V DC Field I/O outputs to the relay boards.
- Ample wireways to encourage clean installs.

