ELECTRONICS
MANUFACTURING
EXPERIENCE FRANKLIN

MANUFACTURING

Franklin Electric remains at the forefront of product innovation by listening to its customers, adapting to the market, and continuing to invest in research and development. Its 25,000-square-foot, state-of-the-art, U.S. engineering test and prototyping facility challenges each product and mimics working environments to ensure optimum performance, which is critical in demanding markets and applications.

Our electronics design and manufacturing processes are vertically integrated. The SubDrive/MonoDrive, SubMonitor, SubMonitor Connect, Photon™ SolarPAK, and the Pumploc family products are designed from the ground up – from design validation to product manufacturing, all are executed within Franklin Electric water systems facilities.
ELECTRONICS DESIGN AND MANUFACTURING PROCESS

Design process is managed from start to finish at the Global Corporate Headquarters and Engineering Center of Excellence in Fort Wayne, Indiana including:

- Circuit simulation
- 3D mechanical modeling
- Thermal simulations

VALIDATION TESTING

- Rigorous in lab validation process
- 25,000+ square foot engineering test and prototyping facility challenges each product and mimics working environments to ensure optimum performance, which is critical in demanding markets and applications
- Performance testing includes:
  - Pressure regulation and motor control
  - EMC (conducted and radiated emissions)
  - Environmental and thermal
  - Audible noise
  - Rain test (NEMA 3R and NEMA 4)
- Field validation testing in various water system applications throughout all corners of the continent

CIRCUIT BOARD ASSEMBLY

- Highly-automated, precise soldering process ensures quality results
  - Surface mount
  - Through hole
  - Wave soldering
  - Selective soldering
- Automated optical inspection - Captures 3D photos of every component to ensure correct component and ideal soldering
**IN-CIRCUIT TESTING**
- High tech testing monitors proper function of the following:
  - Microcontroller
  - Power supplies
  - Sensors
  - Key circuits

**CONFORMAL COATING**
- Rubberized protective layering (SubDrive/MonoDrive family, Inline 1100, and Pumptec family) aids in product robustness and environmental protection to keep water, dust, etc. from damaging the electronics when enduring environmental elements.

**SCAN MATCH ASSEMBLY**
- Circuit board, accessories, and literature for each drive is barcoded via scan matching.
- Shipping carton labels are not released unless all scans match the components required for each unit.

**FINAL TEST**
- Before being packaged and shipped, each drive is required to successfully run a pump/motor and regulate pressure.
- Automated, computer-controlled test monitors pressure and thermal performance of each drive.