

# FACTORY ACCEPTANCE TESTING "FAT"

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Users of Process Equipment know the "trials and tribulations" of installing and starting-up process equipment. Most processes involve using a combination of components that may require electrical wiring, compressed air, plumbing, dry bulk handling, liquid addition and PLC controls. Each system has its own requirement that many times has only been tested on a small scale. Equipment is purchased, engineered, and fabricated to meet the requirements of the system based on the best available data. Until the equipment is installed and running it is impossible to work out all the "bugs". Installing equipment on site with contractors for electrical, plumbing, rigging, and controls is a delicate balancing act with the end goal to have equipment fully operational by a critical date. The larger the process system the more potential for problems. These problems may be minor, but since contractors are on site and waiting for a fix, many man-hours can be lost to minor issues. Time = money. Hence the value of the "FAT".

Young Industries offers Factory Acceptance Testing (FAT) for our components and systems. We have a dedicated "FAT" facility specifically for installing and testing our equipment before it ships to the job-site.

**ADVANCED  
TECHNOLOGY  
PROVEN DESIGN**

S-100-105.00



## HOW DOES THE "FAT" SAVE TIME AND MONEY?

During the set-up and testing of the equipment at Young Industries Test Facility, the customer usually has project leaders on site to witness set-up, testing and tear-down. Those Project leaders know when the equipment is sent to the jobsite that all components will properly fit and perform as specified. This eliminates guess work and streamlines equipment installation and start-up. For those Project leaders that have been involved in starting up new processes, they can appreciate the old saying "a nickel holding up a dollar". Small problems can hold up equipment start up for multi-million-dollar processes. The "FAT" eliminates this.

Young Industries is proud to offer our Factory Acceptance Testing "FAT" for components or systems that we manufacture. We work hand in hand with our customers to simplify equipment installation and start-up by offering this value-added service.

### **"FAT" TEST FACILITY**

Area of Test Facility - 5000 sq. ft.

Ceiling Height - 25 ft.

Electrical Available - 230/460 volts, 3 phase, 60hz.  
110 volts single phase

Compressed Air - 100 PSIG Available

Dust Collection - Central dust collection system for dust collection of St-1 and St-2 dusts

# FACTORY ACCEPTANCE TESTING “FAT”



## PLANNING AND CONDUCTING AN “FAT”

Common steps when planning a Factory Acceptance Test are listed below:

1. During the engineering stage of the project Young Industries creates system arrangement drawings with our SolidWorks 3D modeling system. Critical dimensions and clearances are established at this stage of the project. Drawings are reviewed and finalized prior to start of fabrication.
2. The equipment purchaser and Young Industries define critical data:
  - a. Characteristics of the products being handled are determined
  - b. Convey rates of mechanical or pneumatic convey systems established
  - c. Accuracies of batch or rate feeding equipment defined.
  - d. Safety requirements are established, and criteria set
  - e. Ergonomics of the equipment are evaluated in the design
  - f. Establish a method to feed the system or components for the testing.
3. After equipment is manufactured it is installed in our “FAT” room to the fullest extent possible, including electrical wiring, compressed air/gas, control systems, and liquid addition if needed.
4. During installation if there are any dimensional conflicts, ergonomic or safety issues, they are resolved prior to the actual testing.
5. With the equipment fully assembled, all motors are bumped to verify rotation, actuators, switches. Solenoids, etc. are tested and verified their function
6. Powder and other ingredients as required are then loaded into the system. The process is then started to verify that rates, accuracies, and any other critical requirements are met.
7. With the testing completed, equipment is cleaned, disassembled, and shipped to the customers site.