



Pilot Plant Services

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MATRIC's world-class pilot plant facilities are unique structures offering uncommon infrastructure in today's chemical industry. This allows for technology demonstration and validation, data collection for scale-up to commercial operations, market development production, or other specialized testing.

Our primary pilot plant facility was built specifically for high pressure and highly reactive chemistry testing during the chemical industry's research and development heyday, but it has undergone several upgrades under MATRIC to modernize its capabilities. The building is equipped with 24 individual operating "cells," each separated by a concrete divider, a rear blowout wall, and a 12" thick concrete wall separating the processing areas from the building's occupied areas. The cells vary in size to suit various needs.

The building is equipped with many of the same utility services you would expect in a commercial plant. The processes are also operated from a centralized, state-of-the-art Siemens PCS7 distributed control system with safety features comparable to those found in commercial operations. Our control data is also written to a secure data historian. By giving our clients access to their portion of the data historian, they can not only access experimental data for analysis, but they can also view the data in real-time through a graphical interface. This allows clients to participate in the experimental programs

from anywhere in the world with an internet connection. A separate pilot facility offers four large scale, two-story hoods which can be used to build entire processes within a hood environment. This is valuable when dealing with particularly hazardous or odiferous compounds.

Our pilot facilities are enclosed allowing construction and operations to be completed in a controlled environment. This improves construction and operating efficiency by eliminating weather related delays or impacts.

Our staff consists of highly experienced technicians and engineers who have developed efficient work processes specifically for pilot plant design and construction. In most cases, the same technicians that build the pilot plant also operate the plant, so not only do they have an intimate knowledge of the plant layout on day one of operation, but they also provide valuable operating input during the design and construction phase.

MATRIC has the facilities, infrastructure and specialty knowledge in pilot plant operations to help you get your process to a pilot scale quickly with lower overall construction and infrastructure costs. This allows you to focus your time and money on the real value drivers, the plant and experimental program, versus the peripheral infrastructure.

Available Utilities and Infrastructure	Examples of Operating Experiences
Steam, nitrogen, plant air, 480V 3-phase power, city water, deionized water, reverse osmosis water, oxygen, natural gas, a distributed control system, and a catalytic converter for emissions control.	Batch and continuous reactions, batch and continuous distillation, extraction, crystallization, heterogeneous catalysis, hazardous chemical handling