

Drop-in Replacement Control System for Sartorius Reactors up to 40L



AFC 2000 Fermenter & Bioreactor Control System Keep Your Existing Stainless Steel Tanks

The AFC 2000 provides **replacement controls for existing Sartorius steel reactors up to 40L**. Capitalize on existing steel by modernizing outdated control hardware in a cost-effective way when compared to the expense of purchasing and installing new reactor systems.

The AFC 2000 is based upon modern control hardware and integrates with existing instrumentation and control elements. ILS can customize the AFC 2000 to fit specific needs including updating reactors with modern instrumentation and control elements.

All ILS controllers are fully integrated into our Batch Expert+ software, allowing local and remote operation of our systems.

Why Choose an ILS Controller?

Value

A replacement controller is less than half the cost of a new system and allows you to reuse your existing stainless steel tank.

Functionality

ILS has invested 1000s of programming hours to create the most versatile and flexible system for cell culture and fermentation processes.

Flexibility

AFC systems work with most existing sensors as well as devices like pumps, load cells, and scales. The controllers and software are designed to be able to integrate future technology.

Implementation

Each system is built to user specifications and is fully tested before leaving our facility. With proper planning, changeover can be as little as one week.

Integration

To provide a complete solution, ILS controllers are coupled with our Batch Expert+ software. BE+ provides user control from anywhere and includes a true SQL data historian, intelligent alarming, batch recipe management, and support for all major controller vendors.



AFC 2000 bioreactor controller designed to work with 40L Sartorius Biostat C reactor

ILS Design Principles

- ✓ Quality components are **non-proprietary**, commercially available, industrial, and rugged
- ✓ Equipment is designed to be **serviceable** by the customer
- ✓ Systems are tailored to the customer's requirements
- ✓ Software and interfaces are **customized** to meet the lab's operating requirements
- ✓ Complete documentation and source code are provided
- ✓ ILS provides ongoing, personal **support and technology upgrades** for our customers & products

Specifications

The AFC 2000/3000 Series Supports

Supports probes & sensors from Hamilton Visiform, Mettler-Toledo ISM, Aber, BlueSens, & Broadley James

Technologies include Digital and Analog pH, Optical DO, Polargraphic DO, Dissolved CO₂, Redox, Capacitance probes, and Conductivity probes

RS485 or RS232 for multiple Mettler-Toledo, Sartorius, Ohaus scales, along with most other brands

Direct digital communications with Alicat Scientific gas flow controllers, as well as analog control of most other brands

Integration of existing control elements for temperature, pH, DO, and gas control

Automated Steam-in-Place

Multiple PID control loops including temperature, pH, DO cascade, & pressure

Built-in Watson Marlow variable speed pumps for pH control and nutrient feeds. Built-in control of external pumps as required.

Valve control elements including AC or DC solenoid valves, and a proportional control valve (PCV) for pressure control

Replacement stirrer motor provided

Built-in Modern OPC-UA Server software



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AFC 3000 Control System

Fully Customized Solutions For Larger Reactors

The **AFC 3000** series is designed to replace retired, failing, and outdated controllers of larger SIP/CIP systems. Let ILS customize your controls with open, non-proprietary, commercially available quality components.

ILS will work with you to evaluate your existing reactor and design a replacement system that fits the needs of your lab.

Designs Typically Include:

- ✓ Custom Stainless Steel Enclosure
- ✓ New Variable Frequency Drive controls and motors
- ✓ Integration of automated valves
- ✓ Customized SIP Cycles
- ✓ Integration of existing sensor along with newer, current technology
- ✓ Full Integration with Batch Expert+



AFC 3000 semi-custom 1500L bioreactor controller

