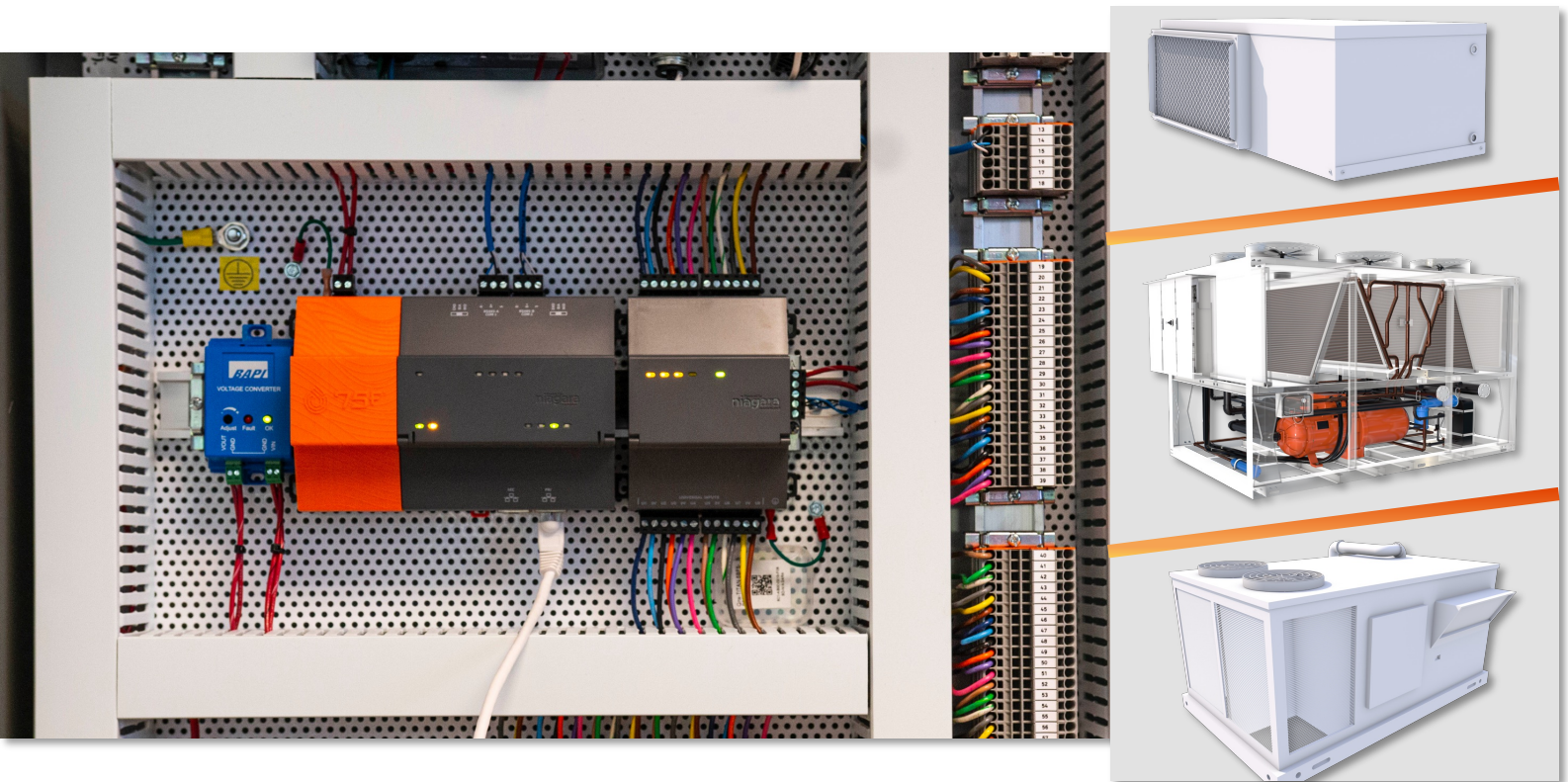


75F[®] Control Panel

Plug-and-Play Panels for Boiler / Chiller Plants,
Water-Source Heat Pump Plants & Advanced AHU



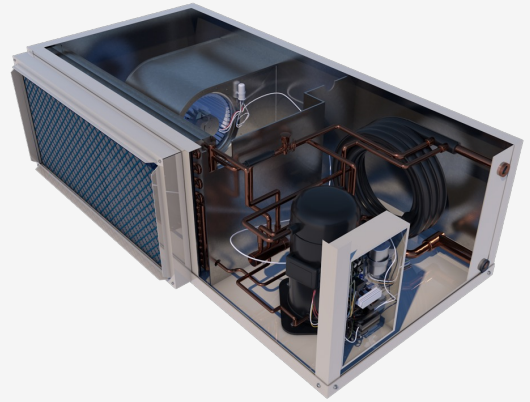
- Complete engineering services provided
- Uniformity across the installation, from panel layout to sequences of operation and user interface
- Built-in sequences for ASHRAE Guideline 36
- Panel pre-assembled and programmed for out-of-the-box installs
- All components provided completely new for optimal reliability

75F® Design & Implementation Services

Control Panel

Ever encountered different panel layouts, sequences of operation, and user interfaces, even though the equipment they controlled were identical? Even when programmed by the same person?

This common problem lays the groundwork for major user, support, and integration headaches down the road. 75F's Control Panel is the cure. Our packages are designed with input and approval, pre-programmed, pre-assembled, and come with complete engineering services for uniform customized installations.



OVERVIEW

75F will fully develop custom solutions for complex implementations, complete with ASHRAE Guideline 36-compliant sequences, detailed submittals, instructions, standardized naming conventions, and provide all devices for a complete and uniform install.

KEY FEATURES

- 75F provides complete engineering services for your project, including design, programming, remote checkout and commissioning, and one year of optimization services
- Sequences are based on and compliant with ASHRAE Guideline 36, the industry's most advanced and optimized sequences for energy efficiency
- All sensors, control relays, panels, and control components are provided new for accuracy and reliability
- New panels arrive completely assembled and programmed for easy installation — it's as simple as mounting, power, and terminating for full optimization

ADDITIONAL FEATURES

- Panels UL508A certified
- Local user interface as well as access to our cloud-based user portal, 75F® Facilisight™
- Equipments can be controlled hardwired and/or with integrated points via BACnet MS/TP or IP
- Industry-accepted programming tool so any Niagara-certified tech can troubleshoot
- Guaranteed remote support within eight business hours

AVAILABLE IMPLEMENTATIONS

- Central Chiller Plant / Boiler Plant
- Water-Source Heat Pump Plant
- Advanced Air Handling Unit
- Implementations include up to eight equipments, with a plant expansion available for up to four more equipments

INCLUDED

Design services

Complete documentation

Programming

All hardware, including pre-assembled UL 508A panel

Wire labels

Animated Niagara Front End

Integration with 75F® Facilisight™

Remote startup assistance

Remote support for one year

First year license fees

Optional site walkthrough with added cost

Optional on-site startup assistance with added cost



75F® Design & Implementation Services

Control Panel

TRADITIONAL BMS SOLUTION

Programming by contractor

Panel designed by contractor — typically a retrofit (non-UL) and inconsistent

Equipment controllers can only be viewed and edited on site

Requires reboot after any sequence adjustments

Requires large serial and IP networks to support data transport to on-premise server

Requires external IP address and DNS managed by building/contractor

Software updates by contractor on site

Requires server:
— Server operating system management/updates
— SSL certificate management
— Cyber security hardening by contractor
— Complex user management
— Usually located in facility manager's office

Historical data storage limited by server storage space and reliant on local hard drive

Complex user management by site

Custom user interface creation on new sites and every time new equipment or points are added

Each alert must be custom-created individually and routed to the server

User interface only has current data

Dashboards created from scratch and limited to contractor ability

Each site has different IP address, individual user management, and license management

75F CONTROL PANEL

Programming by manufacturer

UL 508A panel with 24VAC 200VA power and 24VDC 36-watt power, prewired internally. Contractor mounts, powers with (1) 20A circuit, and terminates field connections per 75F design

Remote access to all sequences and points by contractor and 75F. Troubleshooting and adjustments to sequences happen over the internet

Reboot not required after sequence adjustments

Requires (1) data drop to each panel. Data is transported directly to the cloud

Requires a generic internet connection. DNS purchase/management not required

Software updates by 75F over the air

Does not have a server

Unlimited historical data in the cloud

Simple user management in cloud portal, Facilisight

User interfaces are created automatically and are consistent

Alerts are configured in the cloud via query. One alert sequence automatically applies to all similar equips/points

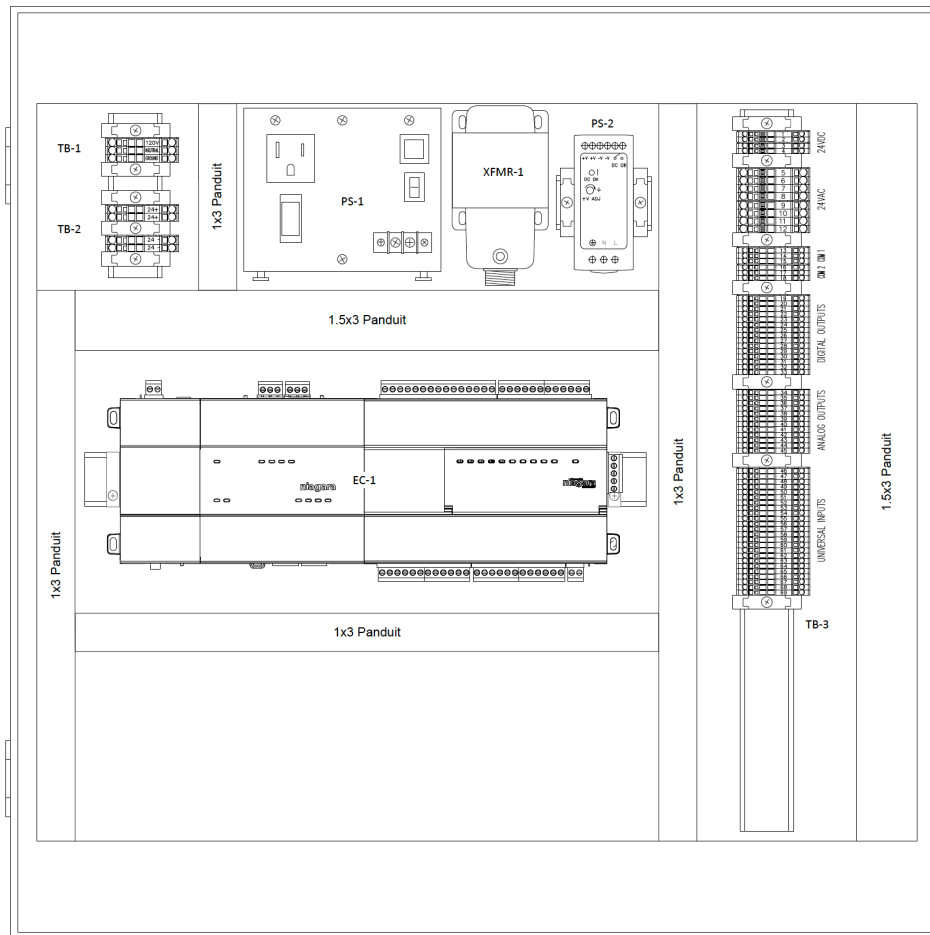
User interface has current and historical data

Highly customized dashboards created in simple queries

Single pane of glass for all sites with one DNS web address

75F® Design & Implementation Services

Control Panel



PANEL SIZES

Standard: 24" x 24"

Super: 24" x 30"

PANEL COMPONENTS

JACE-834 Equip. Cntl. with I/O Exp, 2 Ethernet, 2 RS-485, 16UI, 8AO, 10DO

Standardized UL 508A Custom Control Panels

(1) Perforated backplate, 22" x 20"

(1) Panel mount 100VA power supply, 120VAC to 24VAC

(1) Din Rail mount 40W Power Supply, 120VAC to 24VDC

(1) Transformer 100VA, 120VAC to 24VAC, class 2 with circuit breaker

(15) Two conductor feed through terminal block 20A rating, (61) 10A rating

(4) 2-Way Push in Type Jumper Bar for Terminal Block

(14) Din rail end clip

Din rail

Wire duct 1.5" x 3" and 1" x 3" with cover

75F® Design & Implementation Services

Control Panel

SUPPORTED CONFIGURATIONS: CHILLER PLANTS

Parallel chillers, variable primary distribution, constant speed CW pumps, and headered pumps

Parallel chillers, variable primary distribution, constant speed CW pumps, and dedicated pumps

Parallel chillers, Water Side Economizer, variable primary distribution, variable speed CW pumps, and headered pumps

Series chillers, constant primary distribution, constant speed condenser water pumps, and headered pumps

Series chillers with water side economizer, variable primary distribution, variable speed condenser water pumps, and headered pumps

Parallel chillers, primary-secondary distribution, constant speed condenser water pumps, dedicated primary chilled water pumps, and headered condenser water pumps

Parallel chillers, primary-secondary distribution, constant speed condenser water pumps, and headered pumps

Parallel chillers with waterside economizer, primary-secondary distribution, variable speed condenser water pumps, and headered pumps

Parallel chillers, primary-distributed secondary distribution (chilled water side only)

SUPPORTED CONFIGURATIONS: HOT WATER PLANTS

Condensing boilers, variable primary distribution, and headered pumps

Non-condensing boilers, primary-secondary distribution, and dedicated primary pumps

Non-condensing boilers, primary-secondary distribution, and headered primary pumps

Non-condensing or condensing boilers, primary-distributed secondary distribution, and headered primary pumps

Non-condensing and condensing boilers (hybrid plant) and separate non-condensing and condensing primary loops

SUPPORTED CONFIGURATIONS: PLANTS SERVING WATER-SOURCE HEAT PUMPS

For heating mode, all configurations are supported

For cooling mode: Single speed, multiple speed, or variable speed cooling towers; two position and variable position bypass valves; constant and variable speed spray pumps; constant and multiple speed primary pumps
