

TORNATECH
FIRE PUMP CONTROLLERS

Presence - Solution - Service
Worldwide



**Reliable Fire Pump Controllers
protecting lives and properties
worldwide since 1985**



www.tornatech.com



ABOUT US...

Since Tornatech was founded in 1985, one thing has remained unchanged: Our commitment to staying focused on building solid, reliable fire and industrial pump controllers. This commitment is reflected in our mission. We are dedicated to continuously improve our products to more than meet and fully satisfy our customers' needs and expectations. That's what we're all about.

CUSTOMER SATISFACTION

At Tornatech, we have taken every means available to obtain an ultimate degree of confidence and trust from you, our customer. As your pump controller supplier we work behind the scenes in many ways:

RESPONSIVE INTERACTION

- Awareness of consulting engineer requirements
- Close contact to the market needs
- Educational sessions provided to the trade

EXTENSIVE CUSTOMER SERVICE AND SUPPORT

Because we understand the need for customer support and especially when fire protection is involved, we provide our customers with extensive assistance.

To further provide you with the feeling of security, our technical representatives are trained to help you with any field installation and have access to a hassle free emergency replacement part system.

Our extensive knowledge of the industry is supported by our involvement with NFPA, NEMA, UL, FM and CSA.

QUALITY

We are proud of our ISO 9001 registered quality system. "Quality is our common Goal" is not just our slogan, but also our way of life. Our attention to quality is evident in every phase of our business. From the moment an order is received to the time that it is shipped to our customer, every detail is handled by a trained team member that understands his purpose and responsibility to our final objective of producing a first rate quality product each and every time.

PLANNING

Daily monitoring of delivery schedule with all department supervisors.

SALES

A dynamic customer oriented sales team insuring total order satisfaction.

ENGINEERING

Experienced engineering group dedicated to fulfill all specified requirements.

PRODUCTION

Multiple production departments working together to supply diversified top quality products.

INSPECTION

In progress inspection / testing of prefabricated modules to maintain a top quality level.

TEST

Extensive final inspection and functional testing to insure conformity to relevant Standards and Certifications.

RANGE OF PRODUCTS

At Tornatech we completely understand the needs of the pump industry. We are focused almost exclusively on this industry.

Pump systems hold no secrets for our engineering team. Whatever your application needs, Tornatech will work with you to achieve your requirements.

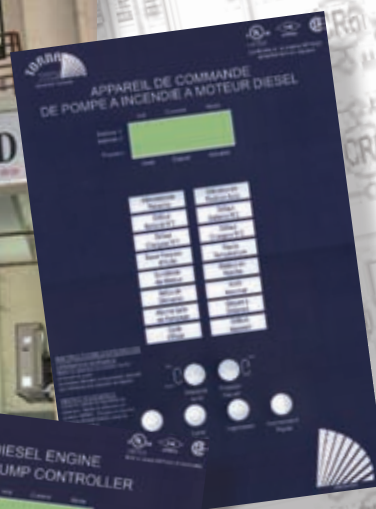
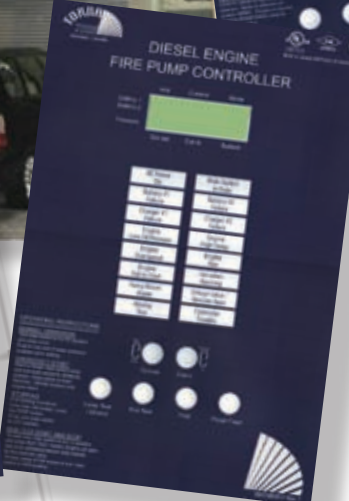
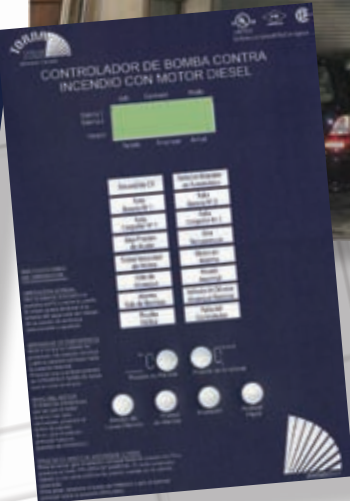
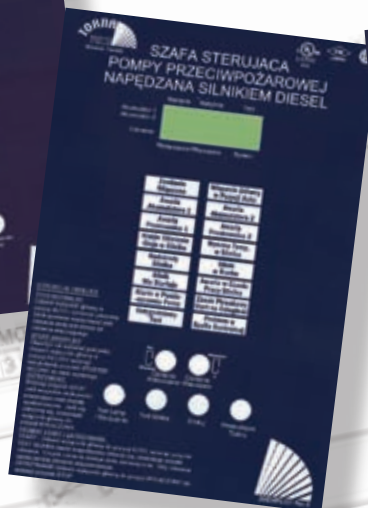
You can choose from different lines of fire pump controllers built to latest NFPA 20 Standard depending on the market needs: UL, FM, ULC or NFPA non-approved, many fire pump accessory controllers, such as jockey pump, alarm panels and also industrial pump control panels.

MANUFACTURING FACILITIES

Streamlined and efficient manufacturing facilities in Montreal Canada and Singapore.

COMMUNICATION

- Many languages spoken
- Website in English, French and Spanish- Catalog in hard copy or CD
- Specifications in English, French and Spanish
- Technical literature



GPx SERIES

ELECTRIC FIRE PUMP CONTROLLERS

Micro-processor Based



MAIN FEATURES:

- NEMA 2 enclosure
- Door front mounted: (accessible without opening main door)
 - Digital indication of individual phase to phase voltage and current
 - Pressure setting adjustments and system pressure reading
- 7-day Pressure/15-Day Event recorder
- Bottom gland plate for power and/or motor leads entrance



STANDARD FEATURES:

MANUAL OPERATORS (FLANGE MOUNTED)

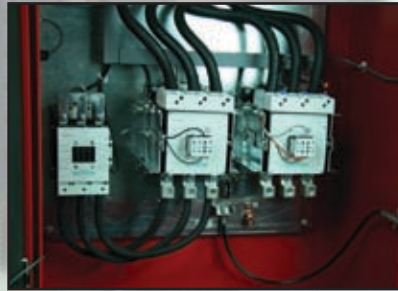
- Single operator for both isolating switch and circuit breaker door interlocked in the "ON" position complete with interlock defeater screw
- Emergency manual start handle providing for manual across-the-line starting
- Start and Stop pushbuttons

ELECTRICAL FEATURES

- Molded case isolation switch
- Molded case circuit breaker
- Motor starter HP rated
- 3 phase voltage surge suppressor

CONTROL FEATURES

- Micro-processor logic based
- Factory set (no field programming)
- Locked rotor protection
- Phase sequence / loss
- Provision for remote or deluge valve start
- Automatic start sequence
- Pressure transducer (0-300psi)
- Manual and emergency control circuit independant of micro-processor



DRY ALARM CONTACTS - 8A. - 250VAC

- Power or phase failure and/or circuit breaker in open position - DPD
- Phase reversal - DPDT
- Pump run - 1N/O - 1N/C
- Trouble (alarm conditions) - DPDT



BOTTOM GLAND PLATE

For ease of power and motor lead entrance



Automatic Power Transfer Switch

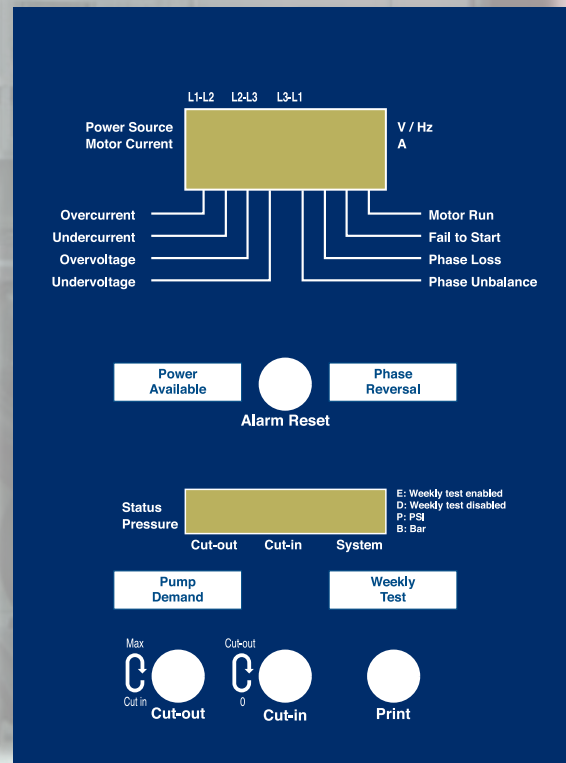
- Model GPG for generator emergency power
- Model GPU for second utility emergency power

ANNUNCIATOR AND LCD DISPLAY

Voltage and amperage module

Provides for:

- Phase sequence / Loss monitoring & alarms
- Individual phase-to-phase voltage indication
- Individual phase current indication
- True elapsed run time
- Motor run visual indication
- Over & under current visual indication
- Over & under voltage visual indication
- Fail to start visual indication
- Phase loss visual indication
- Phase unbalance visual indication
- Power available LED
- Phase reversal LED



Pressure and Sequencer module

Provides for:

- Cut-In & Cut-Out pressure setting
- System pressure indication
- Run period timer
- Sequential start timer
- Weekly test setting
- Pressure recording
- Alarm & events recording
- Pump on demand LED
- Weekly test LED
- USB (slave) communication port
- Printer (optional)
- Modem (optional)

GPD MODEL

DIESEL ENGINE FIRE PUMP CONTROLLER Micro-processor Based



TORNA
TECH
Montreal, Canada

**DIESEL ENGINE
FIRE PUMP CONTROLLER**

Built to latest NFPA20 STANDARD

	Volt.	Current	Mode
Battery 1			
Battery 2			
Pressure			
	Cut-out	Cut-in	System

AC Power On	Main Switch in Auto
Battery #1 Failure	Battery #2 Failure
Charger #1 Failure	Charger #2 Failure
Engine Low Oil Pressure	Engine High Temp.
Engine Overspeed	Engine Run
Engine Fail to Start	Fail when Running
Pump Room Alarm	Deluge Valve / Remote Start
Weekly Test	Controller Trouble

OPERATING INSTRUCTIONS

NORMAL OPERATION
Turn main switch to AUTO position and close door.
Engine may start if water pressure is below cut-in setting.

EMERGENCY START
Open or break switch cover and turn main switch to MANUAL position. Press either or both MANUAL CRANK buttons until engine starts.

STOPPING
If all starting conditions have been eliminated, press the STOP button.
If not, turn main switch to OFF position.

RUN TEST START AND STOP
To start, turn main switch to AUTO position and press RUN TEST button. Engine will start due to an artificial pressure drop created by the solenoid valve.
To stop, press STOP button or turn main switch to OFF position.

Max Cut In Cut Out

Lamp Test / Silence Run Test Print Paper Feed

Digital display

- Individual charger voltmeter and ammeter readout
- Individual charger mode indication
- Individual cut-in, cut-out and system pressure readout

Annunciator and display panel

- 16 annunciator points c/w super bright red led

Pressure setting field adjustments

- Accessible with main door closed
- Live settings adjustments visible on display

Manual operators

- Lamp test / silence push button
- Run test push button
- Print push button
- Paper feed push button



Diesel Engine Fire Pump Controller Micro-processor based

The model GPD fire pump controller for a diesel engine driven fire pump is built to the latest NFPA20 standard, UL218 listed, FM approved and provides for:

- Manual starting of the engine by two (2) independant manual crank push buttons.
- Automatic starting of engine on pressure drop as detected by a built in 304 stainless steel 0-300psi rated pressure transducer.
- Crank cycle of three (3) fifteen (15) second start attempts per battery with fifteen (15) second rest periods in between the starting attempts. A Failure to Start alarm is initiated if engine does not start after this crank cycle.
- Automatically programmed exercising of engine as initiated by a real time clock energizing a drain solenoid on the pressure sensing line.
- Manual exercising of the engine as initiated by the Run Test push button
- Manual stop of engine by Stop push button.
- Automatic stop of engine by a minimum run period timer which can be enabled if required or disabled if not required.
- Engine Overspeed shut down and alarm (manual reset).
- Engine Low Oil Pressure and High Engine Temperature alarm (manual reset) and shutdown only during automatic exercise.



DIESEL ENGINE
FIRE PUMP CONTROLLER



- Two independent fully automatic battery chargers rated for 10 A. continuous charge, 12 or 24 VDC c/w AC input filter, current limiter, over current shutoff, 500 mA trickle charge, dead cell detection, low battery voltage alarm.



- Remote alarm circuits rated 8A. 220VAC for
 - Engine run (DPDT).
 - Master Selector Switch in Off or Manual (1 N/O).
 - Master Selector Switch in Auto (1 N/O).
 - Engine Trouble (1 DPDT).
 - Overspeed, fail to start, low oil pressure, high coolant temperature, fail when running
- Controller trouble (1 DPDT):
 - Battery 1 or 2 failure, charger 1 or 2 failure, pressure line failure
- Pump room alarms (1 DPDT):
 - Low suction, low fuel level, water reservoir low, water reservoir empty, low pump room temperature, high fuel level, AC failure



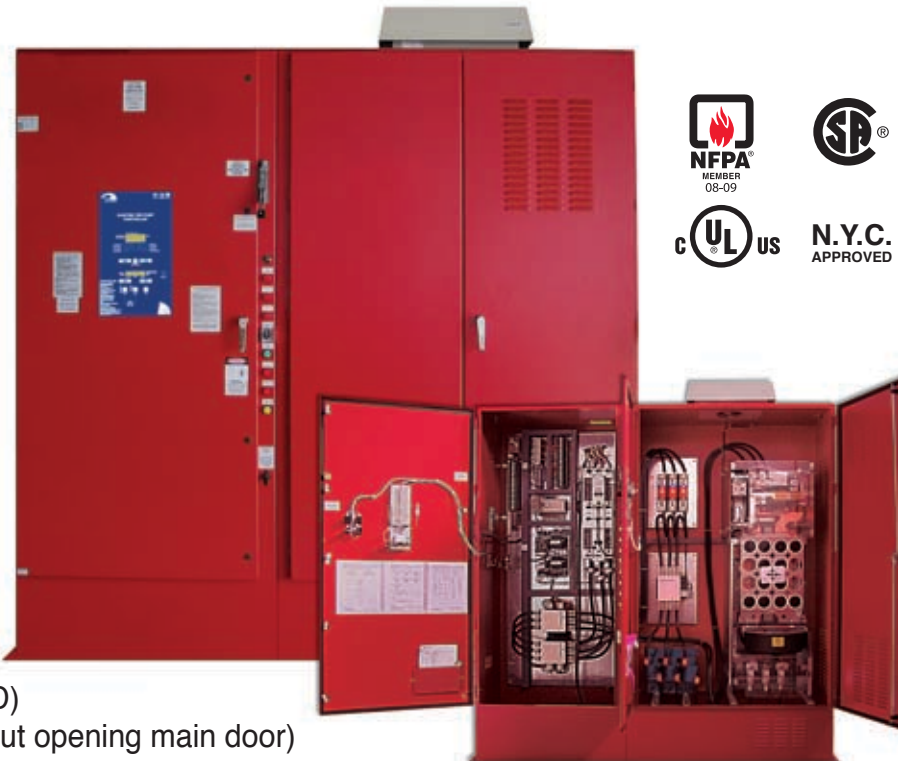
- 304 stainless steel pressure transducer raited for 0-300 PSI
- Drain solenoid valve for weekly exercise

VPx SERIES

FULL SERVICE PRESSURE LIMITING ELECTRIC FIRE PUMP CONTROLLER Micro-processor Based

MAIN FEATURES:

- NEMA type 2
- Built in Variable Frequency Drive (VFD)
- Door front mounted: (accessible without opening main door)
 - Digital indication of individual phase to phase voltage and current
 - Pressure setting adjustments and system pressure reading
- Across-the-line or reduced voltage by-pass contactor
- Variable-Preset-Bypass speed mode selector switch
- Pressure transducer set (2) for reading of discharge pressure
- Also available with transfer switch Model VPG for generator set or Model VPU for second utility power.



N.Y.C.
APPROVED

MPA MODEL

MEDIUM VOLTAGE ELECTRIC FIRE PUMP CONTROLLER Micro-processor Based

MAIN FEATURES:

- NEMA 2 enclosure
- Door front mounted: (accessible without opening main door)
 - Digital indication of individual phase to phase voltage and current
 - Pressure setting adjustments and system pressure reading
- 7-day Pressure/15-Day Event recorder
- Full voltage across the line starting
- Voltages between 2300 volts and 7200 volts and horsepower's ranging from 100 to 5000 HP.
- Three compartments with individual doors for main disconnect switch, starter (fuses and vacuum contactor) and control circuit.



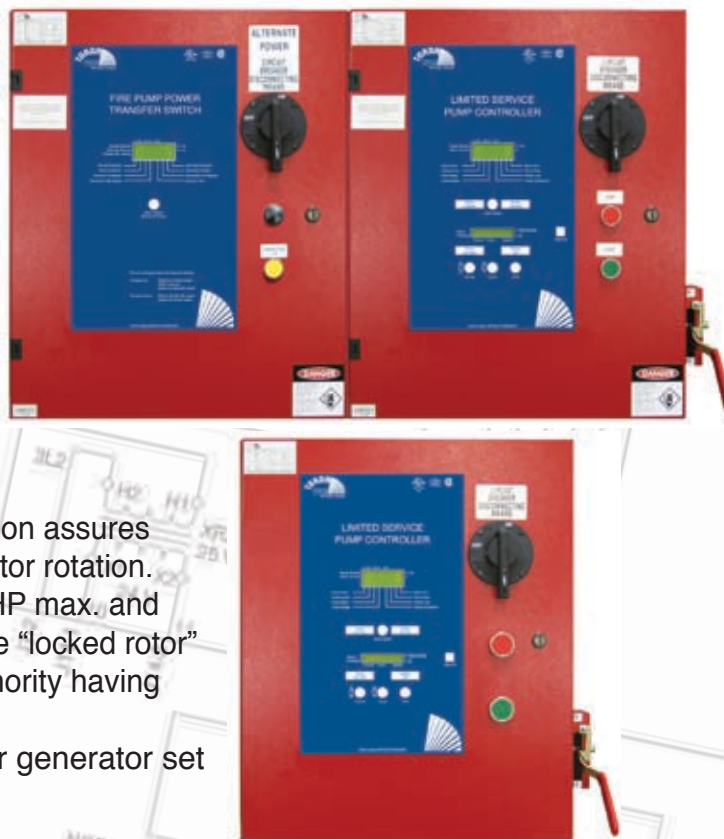
GPL MODEL

LIMITED SERVICE PUMP CONTROLLER

Micro-processor Based

MAIN FEATURES:

- NEMA 2 enclosure
- Door front mounted: (accessible without opening main door)
 - Digital indication of individual phase to phase voltage and current
 - Pressure setting adjustments and system pressure reading
- 7-day Pressure/15-Day Event recorder
- 3-phase - 3-wire or 1-phase - 2-wire motor connection assures error free field installation and simple change of motor rotation. The limited service pump controller is limited to 30HP max. and across-the-line starting. It does not provide accurate "locked rotor" protection and is subject to acceptance by the "authority having jurisdiction".
- Also available with transfer switch Model GLG for generator set or Model GLU for second utility power.



Jockey Pump Controllers Alarm & Lockout Panels

Jockey pump controllers are specifically designed to maintain the appropriate water pressure in fire pump serviced systems and prevent short cycling of the fire pump due to small leaks.

Model JP: Single pump controller with an across-the-line starter.

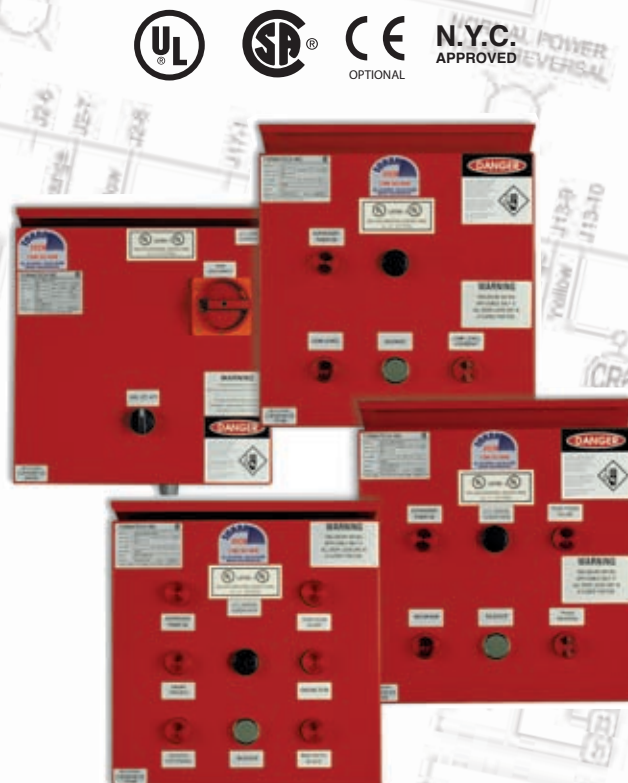
Model JPY: Single pump controller with a wye-delta open transition starter.

Model APD: Diesel fire pump alarm panel provides annunciation of alarm conditions monitored by the Tornatech diesel fire pump controller Model GPD.

Model APE: Electric fire pump alarm panel provides annunciation of alarm conditions monitored by the Tornatech electric fire pump controller Series GPx.

Model LPS: Low suction pressure shutdown panel prevents automatic start of the fire pump and stop an automatically started fire pump (requires approval from the "Authorities having jurisdiction")

Model LPL: Low level lockout panel prevents automatic start of the fire pump and stop an automatically started fire pump. (requires approval from the "Authorities having jurisdiction")



BOOSTER

PUMP CONTROLLERS SIMPLEX - DUPLEX - TRIPLEX

Booster pump controllers are installed to automatically start and stop pump motor(s) on system demand in order to maintain a constant pressure in a pressurized water supply system. System demand can be detected by pressure (standard) or current sensing (option).



OIL

PUMP CONTROLLERS SIMPLEX - DUPLEX

Oil pump controllers are installed to automatically start and stop pump motor(s) in order to fill fuel day tanks for generators. Automatic level control is provided by start and stop float switch. A lead pump failure pilot light and a manual or automatic alternation selector switch is standard on the duplex units.

BOILER

PUMP CONTROLLERS SIMPLEX - DUPLEX

Boiler feed pump controllers are installed to automatically start and stop pump motor(s) in order to provide water to a boiler. Automatic level control is provided by a start and stop float switch. Provisions for a low water cut off float switch, make up control float switch and solenoid valve are standard on both simplex and duplex units.

CONDENSATE

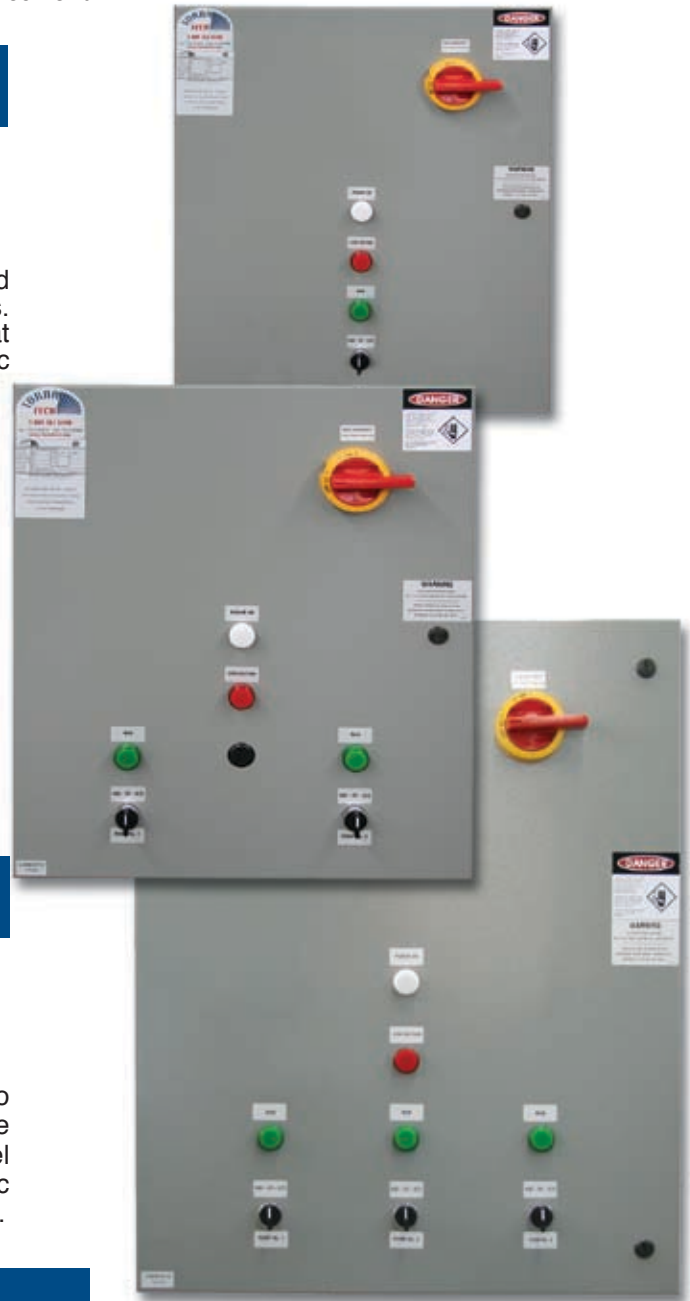
PUMP CONTROLLERS SIMPLEX - DUPLEX

Condensate return pump controllers are installed to automatically start and stop pump motor(s) in order to remove liquid accumulated in a condensate return tank. Automatic level control is provided by start and stop float switch. Automatic alternation is provided as standard on duplex pump controllers.

SEWAGE

PUMP CONTROLLERS SIMPLEX - DUPLEX - TRIPLEX

Sewage pump controllers are installed to automatically start and stop pump motor(s) in order to remove liquid accumulated in a sump pit or sewage lift station. Automatic level control is provided by start and stop float switches. Automatic alternation is provided on duplex and triplex sewage pump controllers.



Broad Product Offering

Tornatech offers the broadest line of Electric and Diesel Fire Pump Controllers in the industry.

- Series GPx UL & FM listed micro processor based electric fire pump controllers
- Series VPx UL listed variable speed micro processor based electric fire pump controllers
- Series GFx Non listed micro processor based electric fire pump controllers
- Model GPD Diesel engine fire pump controller
- Model GFD Non listed diesel engine fire pump controller
- Model GPL Limited service electric pump controller
- Fire pump auxiliary controllers including jockey pump controllers and alarm and lockout panels
- Industrial pump controllers



Quality is...
...our common Goal



N.Y.C.
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Quality is...our common Goal !

OUR TEAM

At Tornatech, we believe that employee pride is the driving force in everything that we do. Tornatech employees are proud to work by the following principles:

Service is our first priority

Since 1985, our sense of purpose has been to provide complete customer satisfaction.

Quality is our common Goal

Total Quality Management principles are applied on a daily basis. Each team member is aware of the importance of their contribution in providing quality products and services to our customers.

Committed to customer satisfaction

We are committed to our customer. Everyone is instilled with a sense of purpose and responsibility that is reflected on the products and services that we provide.



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