EquipSolutions™

Tempest 2.0

Liquid Polymer Feed and Control Station

- New State of the Art Controller
- On Board to any Cloud Based Portal
- Customizable Expanded I/O
- On Screen Data Logging and Graphing
- Versatile Comms Protocols
- Cloud Based Remote Monitoring
- Critical Performance Data Collection
- Multi-Mode Operation Tailored to Application
- Local and Remote Operation
- Standby/ Redundant Pump Option
- Integrated Batch System Program
- Proven Motorless, Multi-Stage Mixing
- Rapid Availability—In Stock
- Pre-Programmed—Plug and Play Option

Tempest 2.0 is an updated design of the polymer feed system that has proven to be an economical solution to the numerous challenges encountered in a broad range of industrial and municipal applications. Our customers have experienced real measurable benefits from our original design features. Many of our customers responded to our request for their opinions and suggestions for future Tempest versions. We incorporated their feedback in the Basis of Design for the Tempest 2.0.

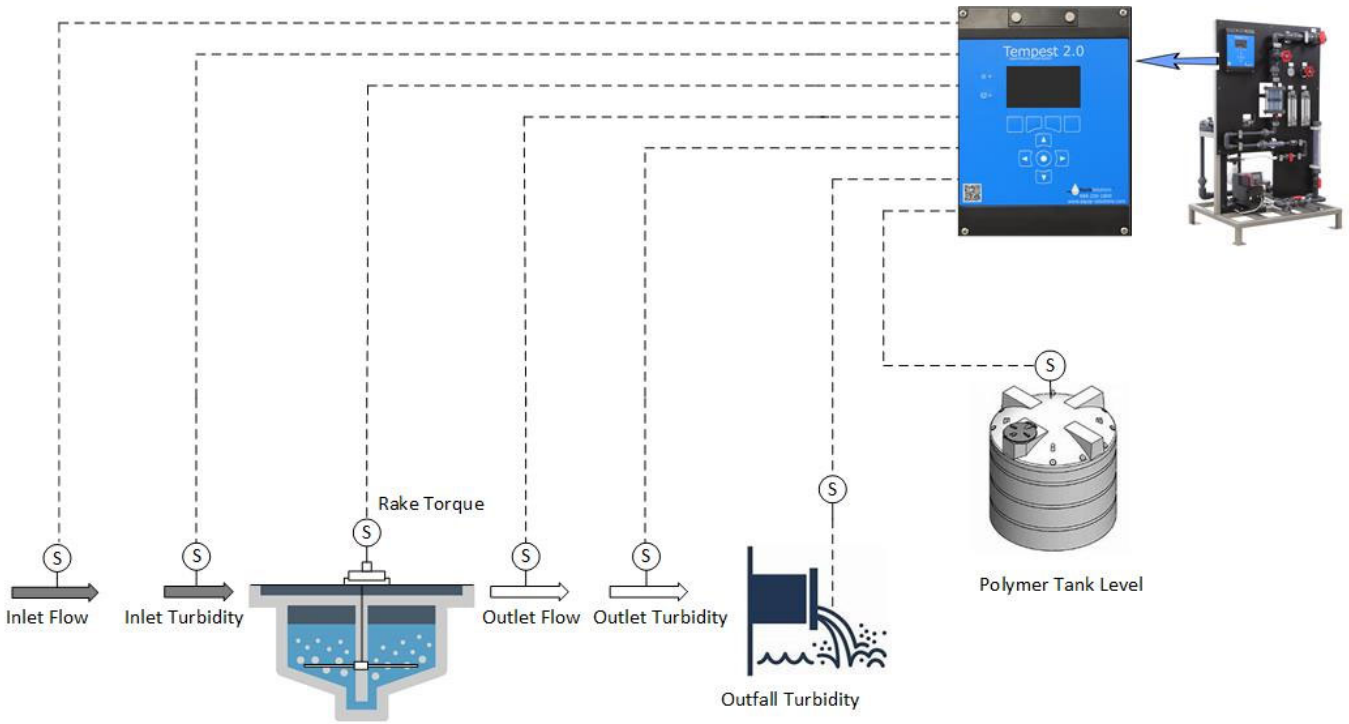
This new design integrates leading edge control technologies, expanded application capabilities, greater available I/O and seamless access to any cloud-based data acquisition system.

The Tempest 2.0 provides maximized polymer performance without the hassles and headaches these applications cause for water treatment professionals.

The Tempest T2 Controller offers significant enhancements over the original Tempest controller. Upgrades include enhanced programming options and simpler menu navigation, expanded I/O, additional communications protocols, datalogging (onboard SD card for easy data transfer), and on-screen functionality including a digital operational manual, wiring diagrams and graphing. Also new is batch tank system programming capability, tank level monitoring, and access to any third-party cloud-based portal.

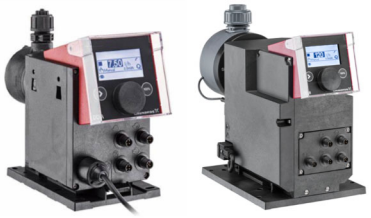
Additional features include an E&H magnetic flow meter with totalizer to precisely control flowrates, and a Grundfos DDA Series pump (a redundant pump option is available) as standard. However we can provide whichever pump our customers prefer.

Tempest 2.0 Expandable Monitoring Tools Improve Performance



Tempest 2.0 Selection Guide

The use of the Grundfos Smart DDA metering pumps allows for the consolidation of models and maximum application flexibility. The standard Tempest 2.0 series offers a neat polymer feed range of .02– 15.8 gph. All Tempest pumps have spring loaded checks and a PVDF head for maximum compatibility. The standard pumps have a turn-down of 1000:1 and can handle very high viscosities via the slow mode feature.



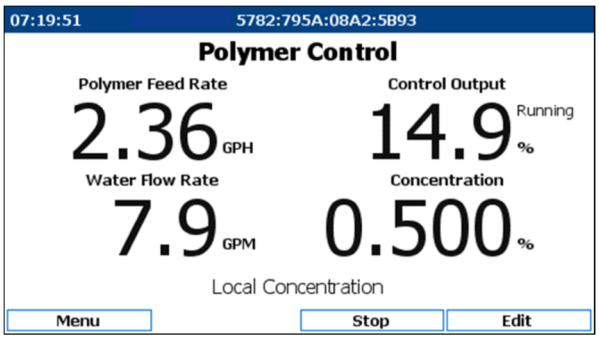
	Primary Dilution Water Range			Neat Polymer Range	
Model Number	Rated GPH	Min GPH	Max Inlet Pressure	Min GPH	Max GPH
TP2-300-2	300	30	100 PSI	0.02	4.5
TP2-600-4.5	600	60	100 PSI	0.02	4.5
TPS-1200-4.5	1200	120	100 PSI	0.04	4.5
TPSG-1200-15.8	1200	120	100 PSI	0.02	15.8

	Connections			
Model Range	Water Inlet	Polymer Inlet	Solution Outlet	VAC
TP2-300	1" FNPT	1/2" FNPT	1" FNPT	110
TP2- 600 & 1200	1-1/2" FNPT	1/2" FNPT	1-1/2" FNPT	110

- **Simpler Programming Via Superior Menu Navigation**
- **Greatly Expandable I/0 – Customize to Application**
- **On-Board Digital Manual**
- **On-Screen Digital Wiring Diagram for each I/O**
- **One Minute Frequency Data Logging – 90 Days Includes SD Card Easily Transferred to PC**
- **Versatile Comms Protocol Options**

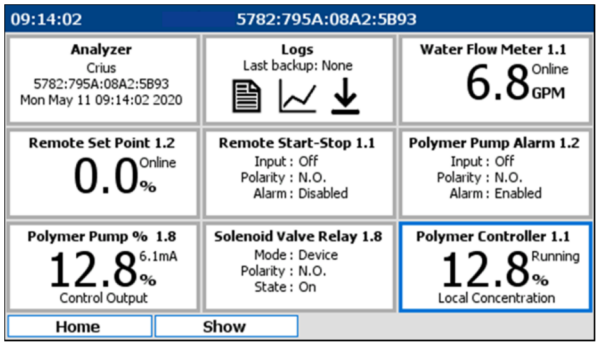
Level 1: Standard I/O

- AI 4-20mA Flow Meter Dilution Water
- AI 4-20mA - Remote % Concentration / Rate Input
- DI Remote Start / Stop
- DI Polymer Pump Alarm
- Two (2) DI Batch Control
- Four (4) DI Spares
- AO 4-20mA - Pump Feed Rate Control
- Two (2) Relay Outputs—Solenoid and General Alarm
- Six (6) Spare Relay Outputs



Level 2: More I/O and Comms Options

- Two (2) Additional Analog / Sensor Inputs
- Three (3) Additional Analog Outputs
- Four (4) Communication Options

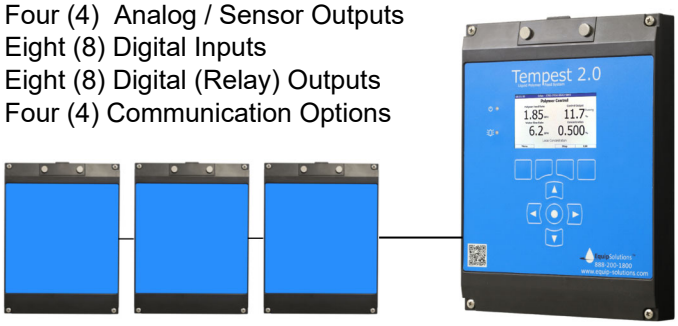


Level 3: Expansion Modules:

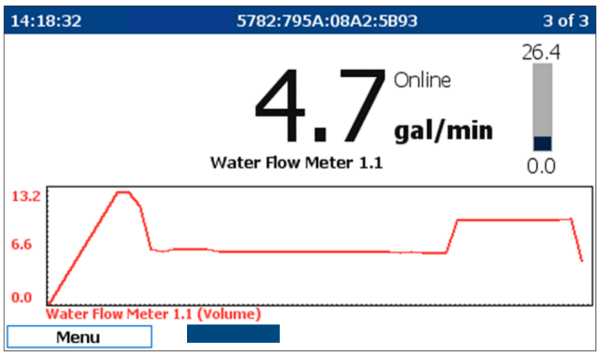
Expansion allows the incorporation of multiple parameter monitoring such as flow, pH, turbidity, suspended solids, temperature, chemical flow, chemical usage, alarms and tank level monitoring.

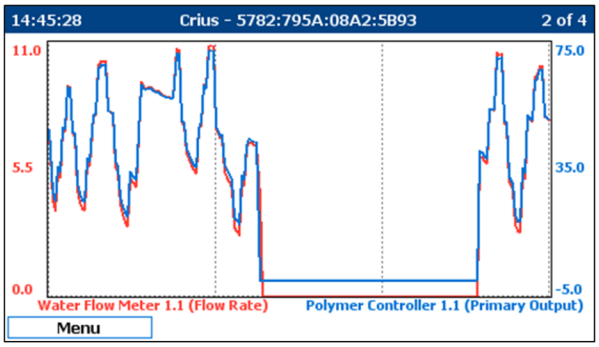
Expansion Modules may include any combination of the following:

- Four (4) Analog / Sensor Inputs
- Four (4) Analog / Sensor Outputs
- Eight (8) Digital Inputs
- Eight (8) Digital (Relay) Outputs
- Four (4) Communication Options



Each Controller can incorporate three (3) complete expansion modules





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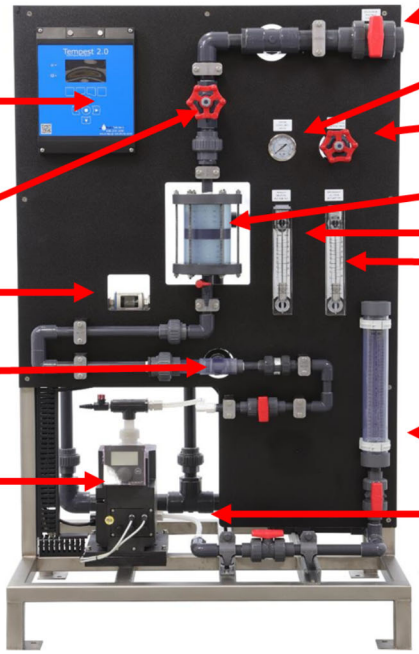
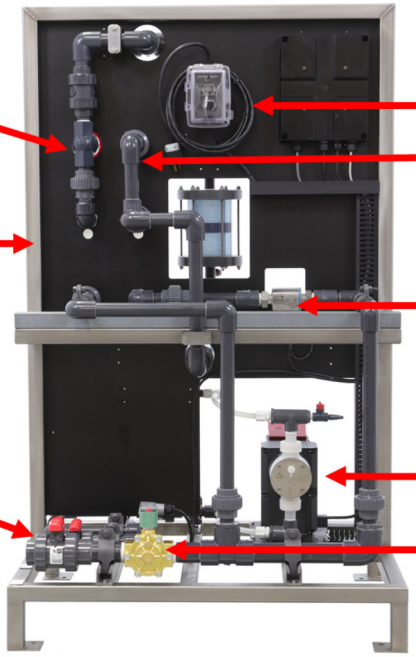




Wetted Materials:

- Water : PVC, brass, bronze, buna N, Acrylic, 316 SS
- Polymer: PVC, Acrylic, PTFE, PP, 316 SS

Electrical:

- 110 VAC Single Phase 60 Hz

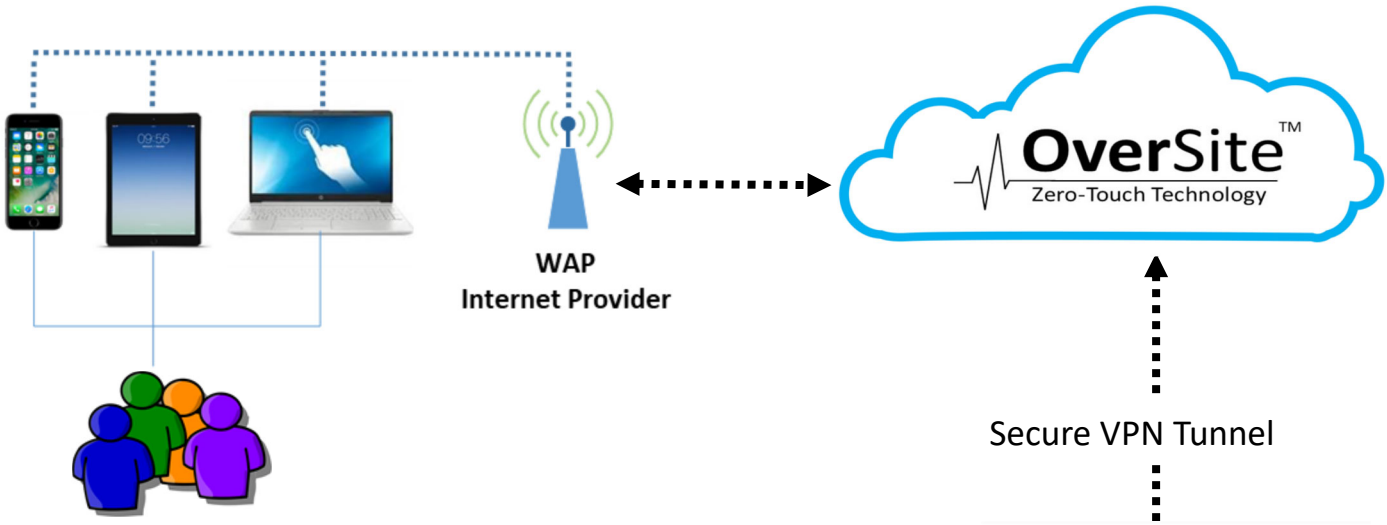
Dimensions:

- 30W" x 36D" x 60H"

Weight:

- Tempest 2.0 Unit Weight: 190 lbs.
- Total Packaged Weight: 260 lbs.

OverSite™ is a device agnostic, cloud-based data acquisition and process management portal. Users can log on to the highly secure website from anywhere in the world to view, store and manipulate all of their process data and critical parameters. Our Zero-Touch Technology makes onboarding easy, as a true Cloud Solution, it can be commissioned, run and supported remotely. This enables EquipSolutions to onboard new clients to our OverSite™ portal or any third party portal remotely without any hassle. Our analysts can gather all of the information needed to build a client profile remotely. We can enter application data, and establish site parameters for the Tempest 2.0 or any other third party end point devices without having to be onsite.



Tempest 2.0

Secure VPN Tunnel

EquipConnect 2.0 Modem Package with Pre-activated Multi-Carrier Agnostic SIM Card

OverSite™ includes automatic and manual report generation and delivery. All reports include critical parameter data with stoplight status display, graphs and the ability for custom data entry. Reports are fully customizable and can be tailored to the users preference.

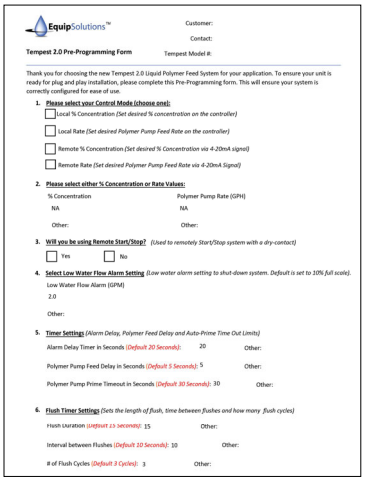
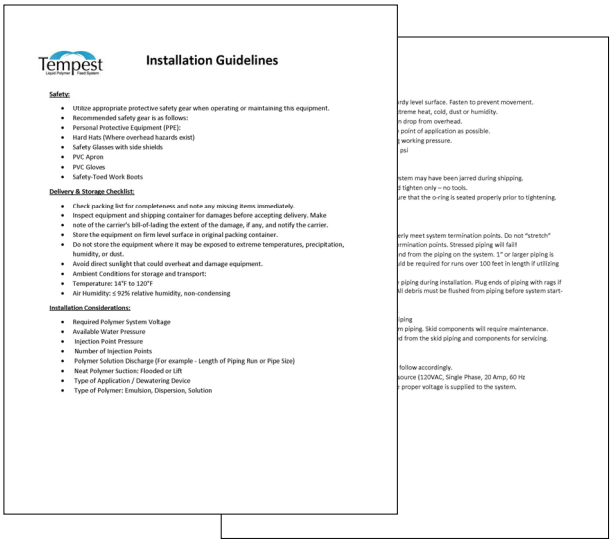
Critical alarms, alerts and notifications can be sent to any device via text, email or IM instantaneously.

The OverSite™ Report Management tool will allow the user to access all past reports generated in both PDF and Excel format.

Tempest 2.0 Documentation and Support

The Tempest 2.0 documentation and support materials provide the detailed reference information required to install, program, operate and service the Tempest 2.0 system. A new innovation, our Pre-Programming Support Program allows our customers to relay application specifics to our support team in advance of fabrication, testing and delivery.

By pre-selecting the preferred Mode of Operation, desired feed rates and solution concentration along with settings for alarms, flushing frequency and other operating parameters, the unit is pre-programmed and fully tested prior to delivery. This makes start-up and treatment program implementation simply Plug and Play!

The form and all the support tools are available on-line on our web site and can be emailed for maximum convenience.

- Promo Video YouTube
- Power Point Presentation
- Product Bulletin / Data Sheet
- Controller Manual
- Installation Guidelines
- Start Up Video YouTube
- Programming Guide
- Operational Manual
- Discovery / Application Pre-Programming Sheet